

NAVAL POSTGRADUATE SCHOOL

Monterey, California

AD-A220 034



THESIS

THE EFFECT OF RANDOM VARIATIONS OF RADIOSONDE
DATA ON THE PREDICTED FLIR PERFORMANCE
CALCULATED BY THE PROGRAM UFLR

by

Rodolfo Reategui

September 1989

Thesis Advisor:

Edmund A. Milne

Approved for public release; distribution is unlimited.

DTIC
ELECTE
MAR 29 1990
S B D

REPORT DOCUMENTATION PAGE

1a REPORT SECURITY CLASSIFICATION UNCLASSIFIED		1b RESTRICTIVE MARKINGS	
2a SECURITY CLASSIFICATION AUTHORITY		3 DISTRIBUTION AVAILABILITY OF REPORT Approved for public release; distribution is unlimited.	
2b DECLASSIFICATION/DOWNGRADING SCHEDULE			
4 PERFORMING ORGANIZATION REPORT NUMBER(S)		5 MONITORING ORGANIZATION REPORT NUMBER(S)	
6a NAME OF PERFORMING ORGANIZATION Naval Postgraduate School	6b OFFICE SYMBOL (If applicable)	7a NAME OF MONITORING ORGANIZATION Naval Postgraduate School	
6c ADDRESS (City, State, and ZIP Code) Monterey, California 93943-5000		7b ADDRESS (City, State, and ZIP Code) Monterey, California 93943-5000	
8a NAME OF FUNDING SPONSORING ORGANIZATION	8b OFFICE SYMBOL (If applicable)	9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
8c ADDRESS (City, State, and ZIP Code)		10 SOURCE OF FUNDING NUMBERS	
		PROGRAM ELEMENT NO	PROJECT NO
		TASK NO	WORK UNIT ACCESSION NO
11 TITLE (Include Security Classification) THE EFFECT OF RANDOM VARIATIONS OF RADIOSONDE DATA ON THE PREDICTED FLIR PERFORMANCE CALCULATED BY THE PROGRAM UFLR. (Unclassified)			
12 PERSONAL AUTHOR(S) Reategui, Rodolfo (NMI)			
13a TYPE OF REPORT Master's Thesis	13b TIME COVERED FROM TO	14 DATE OF REPORT (Year, Month, Day) September 1989	15 PAGE COUNT 341
16 SUPPLEMENTARY NOTATION The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.			
17 COSATI CODES		18 SUBJECT TERMS (Continue on reverse if necessary and identify by block number)	
FIELD	GROUP	SUB GROUP	
		UFLR is a model for the airborne forward looking infrared system (FLIR) performance prediction.	
19 ABSTRACT (Continue on reverse if necessary and identify by block number) The lack of correlation between the Airborne Forward Looking Infrared Detector predicted performance by the program UFLR and the actual performance due to meteorological fluctuations was examined. Calculated performances for the detection, classification and identification of four surface targets using actual radiosonde profiles were compared to the performances using radiosonde data affected by random atmospheric variations of pressure, temperature and relative humidity. A total of 192 performances were created using this method. A visual display and a statistical analysis of the actual and simulated performances was performed. Error margins were determined in the predicted detection ranges for height levels of 1,500 ft., 5,000 ft. and 10,000 ft.. It was also determined that the FLIR performance may be degraded up to 10 nautical miles for a height level of 5,000 ft., and up to 12 nautical miles for a height level of 10,000 ft. due to the random atmospheric variations.			
20 DISTRIBUTION AVAILABILITY OF ABSTRACT ☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT ☐ DTIC USERS		21 ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED	
22a NAME OF RESPONSIBLE INDIVIDUAL Edmund A. Milne		22b TELEPHONE (Include Area Code) (408) 646-2886	22c OFFICE SYMBOL

Approved for public release; distribution is unlimited.

The Effect of Random Variations of Radiosonde Data
on the Predicted FLIR Performance Calculated
by the Program UFLR

by

Rodolfo Reategui
Lieutenant Commander, Peruvian Navy

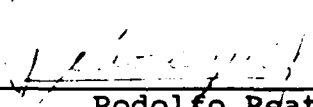
Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN SYSTEMS ENGINEERING
(ELECTRONIC WARFARE)

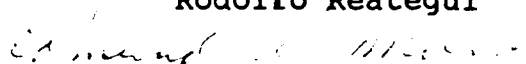
from the

NAVAL POSTGRADUATE SCHOOL
September 1989

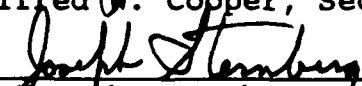
Author:


Rodolfo Reategui

Approved by:


Edmund A. Milne, Thesis Advisor


Alfred W. Cooper, Second Reader


Joseph Sternberg, Chairman
Electronic Warfare Academic Group

ABSTRACT

The lack of correlation between the airborne Forward Looking Infrared Detector predicted performance by the program UFLR and the actual performance due to meteorological fluctuations was examined. Calculated performances for the detection, classification and identification of four surface targets using actual radiosonde profiles were compared to the performances obtained using radiosonde data affected by random atmospheric variations of pressure, temperature and relative humidity. A total of 192 performances were created using this method. A visual display and a statistical analysis of the actual and simulated performances was performed. Error margins were determined in the predicted detection ranges for height levels of 1,500 ft., 5,000 ft. and 10,000 ft.. It was also determined that the FLIR performance may be degraded up to 10 nautical miles for a height level of 5,000 ft., and up to 12 nautical miles for a height level of 10,000 ft. due to the random atmospheric variations.

iii



Accession For	
NTIS GRA&I	☒
DTIC TAB	☐
Unannounced	☐
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	THEORY SECTION	4
	A. FLIR FUNDAMENTALS	4
	1. General	4
	2. Minimum Detectable Temperature Difference	6
	B. IR RADIATION THROUGH THE ATMOSPHERE	7
	1. Absorption	8
	2. Scattering	8
	3. Refractivity	9
	4. Turbulence	10
	C. OPERATIONAL PERFORMANCE MODELING	11
	1. Definitions	11
	2. UFLR Program Description	13
	D. STATISTICAL ANALYSIS	25
	1. Test for Normality	25
	2. Different Between Means	27
III.	EXPERIMENTAL PROCEDURE	29
	A. THE FLIR PERFORMANCE PREDICTION BY THE UFLR MODEL	29
	B. GENERATION OF ATMOSPHERIC DATA AFFECTED BY RANDOM VARIATIONS	31

C.	INPUT OF RADIOSONDE DATA TO THE UFLR PROGRAM	35
1.	Input of Actual Radiosonde Data to the UFLR Program	35
2.	Input of Radiosonde Data Affected by Atmospheric Variations	35
D.	TEST FOR NORMALITY	36
E.	DIFFERENCE BETWEEN ACTUAL AND DITHERED PERFORMANCE MEANS	40
IV.	RESULTS SECTION	43
A.	RESULTED DIFFERENCES BETWEEN ACTUAL AND DITHERED PERFORMANCES	43
B.	ANALYSIS OF VARIANCE	53
C.	ERROR MARGIN ON THE PREDICTED PERFORMANCES .	62
D.	GRAPHICAL DISPLAY OF THE ACTUAL AND PREDICTED PERFORMANCES	68
E.	CONCLUSIONS AND RECOMMENDATIONS	68
	APPENDIX 1 - COMPUTER PROGRAM UFLR	71
	APPENDIX 2 - COMPUTER PROGRAM UFLRATM	84
	APPENDIX 3 - UNDITHERED RADIOSONDE ATMOSPHERIC PROFILES	86
	APPENDIX 4 - DITHERED RADIOSONDE ATMOSPHERIC PROFILES	88
	APPENDIX 5 - UFLR PREDICTED PERFORMANCES FOR UNDITHERED ATMOSPHERIC PROFILES	105
	APPENDIX 6 - UFLR PREDICTED PERFORMANCES FOR DITHERED ATMOSPHERIC PROFILES	108
	APPENDIX 7 - COMPUTER PROGRAM UFLRPLT	115
	APPENDIX 8 - SELECTED PERFORMANCE DATA FOR HEIGHT LEVELS TESTED	117

APPENDIX 9 - CORRELATION RESULTS FOR NORMALITY TEST . .	136
APPENDIX 10 - GRAPHICAL DISPLAY OF DITHERED AND UNDITHERED PROFILE PERFORMANCES BY THE PROGRAM UFLR . .	138
LIST OF REFERENCES	332
BIBLIOGRAPHY.	333
INITIAL DISTRIBUTION LIST	334

LIST OF FIGURES

Figure 2.1	FLIR System Block Diagram	4
Figure 2.2	Profile Subroutine Flowchart	15
Figure 2.3	Aerosol Extinction Coefficient Subfunction Flowchart	16
Figure 2.4	Effective Earth Radius Subfunction Flowchart	17
Figure 2.5	Transmittance Subroutine Flowchart	19
Figure 2.6	Integration Subroutine Flowchart	20
Figure 2.7	Index Subfunction Flowchart	21
Figure 2.8	Taylor Series Subroutine Flowchart	23
Figure 2.9	Total Band Average Molecular Extinction Subfunction Flowchart	24
Figure 2.10	Minimum Detectable Temperature Difference (MDTD) Subfunction Flowchart .	26
Figure 3.1	Example of a typical UfLR output	30
Figure 3.2	Example of probability plots	39

I. INTRODUCTION

In the recent years, Naval surveillance has been improved by the use of airborne threat warning receivers employing scanned IR detectors for purposes of military intelligence, maritime traffic control, to watch illegal activities, and for the prevention of oil pollution on the sea. IR reconnaissance overcomes the limitation of sensors in the visible spectrum being usable only during daylight hours. The advances in microprocessors and support components, together with new methods of signal and data processing have allowed the realization of reliable IR systems. The practicality of such systems is supported by the well developed sensor technology acquired by the Forward Looking IR Receiver (FLIR) system.

With present technology, a FLIR system may be designed and evaluated using computer aids. The system performance may be modeled and tested giving an output in a form which can be directly related to the requirements. Unfortunately, due to the complex nature of the atmosphere, the result of this modelling may often be in error. In general, the performance of an electro-optical system is degraded and often limited by atmospheric propagation effects such as absorption and scattering due to atmospheric gases, particles and hydrometeors or atmospheric turbulence.

As part of the IR system design activity, it is necessary to run trials in order to achieve the performance requirements. Over the past several years, various FLIR performance prediction codes have been developed by the Naval Ocean Systems Center and later revised by the Naval Environmental Prediction Research Facility and also by a group at the Naval Postgraduate School. As a result, it was found that the correlation between the predicted and the actual performance has been poor at best, presumably because of meteorological fluctuations in both time and position.

The objective of this research is the comparison of the predicted FLIR performance calculated by the program UFLR for different radiosonde profiles affected by random atmospheric variations.

The complete process includes three stages:

- The generation of simulated radiosonde data representing random atmospheric variations performed by the computer program UFLRATM. Radiosonde profiles for height levels from 0 to 28,000 feet were dithered about the actual values of the pressure (millibars), temperature (degrees) and relative humidity (percent), multiplied by a Gaussian random number generator (0,1), as shown:

PRES =	PR + SIGMAP * R
TEMP =	TE + SIGMAT * R
RELH =	RE + SIGMARH * R

where:

PRES = dithered pressure at a specific elevation.

TEMP = dithered temperature at a specific elevation.

RELH = dithered relative humidity at a specific elevation.

SIGMAP = estimated standard deviation of the pressures in radiosonde measurements for a given elevation.

SIGMAT = estimated standard deviation of the temperatures in radiosonde measurements for a given elevation.

SIGMARH = estimated standard deviation of the relative humidities in radiosonde measurements for a given elevation.

R = Gaussian variant.

The created environmental profiles serve as the input to the UFLR program.

- The use of the computer program UFLR to provide a capability to assess the effects that environmental conditions have on the propagation of IR radiation from a target and the display of these effects in terms of a range at which a FLIR system could detect that target with a 50% probability at a specified flight altitude. The different input atmospheric profiles will give different predicted performance values for the same target. Up to four target parameters will be processed at the same time.
- Further work is continuing into the analysis of the variance of the predicted performance compared to the variance of the measured performance. Visual information of these is provided by the plot of the UFLR program output, using the computer program UFLRPLT.

II. THEORY SECTION

A. FLIR FUNDAMENTALS

1. General

When early airborne thermal imaging systems were pointed down to the sea surface and used to view objects in the near horizontal plane, the term FLIR or Forward Looking Infrared was introduced. FLIRs operate in the 3-5 and 8-14 micrometer wavelength ranges, and achieve the detection of the radiance distribution of a scene under observation by scanning the field of view. A typical FLIR system block diagram is shown in Figure 2.1.

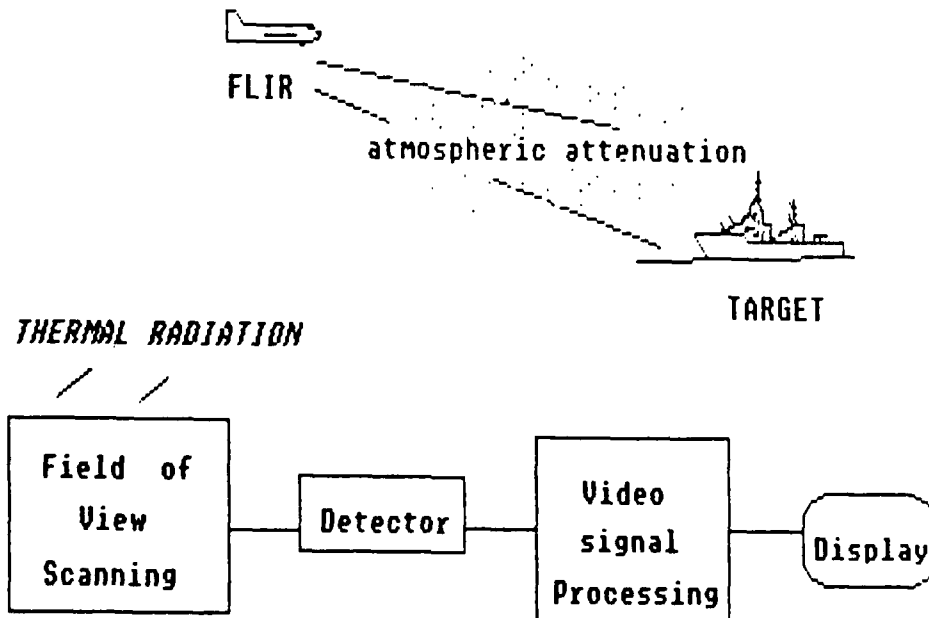


Figure 2.1. FLIR System Block Diagram

The incident electromagnetic field from the scene produces a disturbance within the detector proportional to the energy transported by the field. The electromagnetic field is converted to an electrical signal by the FLIR system and then processed for a video display. The detector is characterized by two parameters: the Responsivity (R), which is the gain of the detector expressed in volts of output signal per watt of input signal; and the specific Detectivity (D) which is the detector output signal-to-noise ratio for one watt of input signal, normalized to a unit sensitive detector area and a unit electrical bandwidth. [Ref. 1]

$$R = V_s / (H * A_d) \quad (\text{volt/watt})$$

$$D = (R / V_n) (A_d \Delta v)^{1/2}$$

where:

V_s = detector signal voltage

H = distribution of irradiance on the detector

A_d = detector area

V_n = rms noise voltage in the detector bandwidth

Δv = detector bandwidth

The radiation received from a target is compared with that of an equivalent area of the background. The detectability of that target by a FLIR is determined by the distribution of temperature over its surface in contrast with the temperature distribution of the background.

2. Minimum Detectable Temperature Difference

The minimum detectable target-to-background temperature difference indicates the FLIR performance. This is often referred to as the Minimum Detectable Temperature Difference (MDTD). For the calculation of a detection range, it is necessary to know the MDTD of the FLIR system as a function of range.

For a target assumed as a square against a large uniform background, the average signal-to-rms noise ratio per frame per line in the image is: [Ref. 1]

$$\text{SNR} = \frac{\overline{I(X,Y)} \Delta T}{\text{NETD} \left[\frac{\text{Displayed Noise Bandwidth}}{\text{Equivalent Filter Noise Bandwidth}} \right]^{1/2}}$$

where:

- $\overline{I(X,Y)}$ = image of the square target normalized to unity amplitude
- ΔT = target-to-background temperature difference = $T_t - T_b$
- NETD = Noise equivalent temperature difference, which is the ability of the FLIR system to discriminate small signals in noise.

The NETD is given by:

$$\text{NETD} = T / (V_s / V_n)$$

where:

- V_s = Signal Voltage
- V_n = Noise Voltage

The Perceived signal-to-noise ratio $(S/R)_p$ is necessary to achieve a detection and is expressed by:

$$(S/N)_p = (S/N)_t [T_{eff}/MDTD]$$

where:

$$(S/N)_t = \text{experimentally determined SNR for 0.5 probability of detection}$$

$$T_{eff} = \text{Effective Target-to-background temperature difference affected by the total atmospheric transmittance } (\tau)$$

$$T_{eff} = \tau * T_{actual}$$

The MDTD of a FLIR system changes depending upon atmospheric conditions influence on radiant exchanges (i.e., sun, sky, clouds), and with thermal convection between the sea and the air. [Ref. 1]

$$MDTD = \frac{r_s 1.5 \sqrt{2} MRTD}{I(X, Y)}$$

where:

$$MRTD = \text{minimum resolvable temperature difference}$$

$$r_s = \text{overall system Modulation Transfer Function}$$

Since each FLIR system has its own MDTD, it is preferable to consider a previously defined value for modeling purposes, designed on the basis of blackbody-sea background.

B. IR RADIATION THROUGH THE ATMOSPHERE

To reach the FLIR detector, the radiant flux from the target has to pass through the atmosphere. The earth's atmosphere is filled with absorbing agents, components of the

atmosphere which extract energy from the supply of radiation. Also, the small particles suspended in the atmosphere cause scattering and emission of the IR radiation in all directions.

At a specific wavelength, and for a specific atmospheric state, the atmospheric transmittance (τ) is given by the Lambert-Beer law:

$$\tau = \exp \{-\mu Z\}$$

where:

Z = path length or range

μ = linear extinction coefficient

$\mu = \mu_{ma} + \mu_{ms} + \mu_{aa} + \mu_{as}$

μ_{ma} = molecular absorption

μ_{aa} = aerosol absorption

μ_{ms} = molecular scattering

μ_{as} = aerosol scattering

1. Absorption

Water vapor, carbon dioxide and ozone are the main atmospheric components which absorb the infrared radiation. FLIR performance is seriously reduced by rain, snow, fog, clouds, haze and smoke. These effects are extremely difficult to predict because they depend upon particle size, density, location, and discontinuous altitude distributions.

2. Scattering

Scattering is produced by molecules of the air and aerosol particles suspended in it.

Maritime aerosols are composed mainly of sea salt due to the evaporation of sea spray. Scattering depends on the size of these particles. The concentration and size distribution of the particles are strongly dependent on wind speed and relative humidity. The particle size number density decreases rapidly above 500 meters altitude.

Resonance occurs when the wavelength of the radiation matches the radius of the particle.

$$\text{The size parameter } (\alpha) = 2\pi r / \lambda$$

where:

r = radius of the particle

λ = wavelength

$$\text{Resonance occurs when } r / \lambda = 7 / 2\pi \approx 1$$

3. Refractivity

Refractive index (n) describes the change in the propagating characteristics of the radiation due to the medium.

$$n = c/v$$

where:

c = velocity in the free space

v = velocity in the medium

Refractive index (n) becomes a complex quantity because a phase shift occurs at the interaction of the wave with the medium, changing speed of propagation. The real part describes the phase velocity of the wave, and the imaginary part is the extinction coefficient and represents the wave

absorption at the resonant frequency. The refractive index of the atmosphere depends on molecular resonance, and can be expressed by:

$$n - 1 = 77.6p / T \{1 + 0.0075 / \lambda^2\} \times 10^{-6}$$

where:

λ = wavelength in micrometers

p = pressure in milibars

T = temperature in °C

The refraction (n-1), is directly proportional to the pressure and inversely proportional to the temperature. Pressure and temperature fluctuations produce variations on the index of refraction of the atmosphere.

4. Turbulence

The atmospheric turbulence also affects the performance of a FLIR system by decreasing the resolution. The modulation transfer function (MTF), which is the modulus of the optical transfer function (OTF) is highly affected by the atmospheric turbulence.

The parameter of interest for the optical properties of the atmosphere due to the turbulence is expressed by the index of refraction turbulence structure constant (C_n).

$$C_n = 79 \times 10^{-6} (p / T^2) C_t$$

where:

C_t = temperature turbulence structure constant

In order to know the vertical distribution of moisture and aerosols on the environment, a radiosonde reading is required.

The vertical profiles of temperature, pressure and relative humidity are used as input to the UFLR program.

The predicted UFLR performance obtained allows one to estimate the range in nautical miles for the detection, classification and identification of a particular surface target by an airborne FLIR system for different height levels.

C. OPERATIONAL PERFORMANCE MODELING

1. Definitions

The operational performance for FLIRs is measured in terms of Detection, Classification and Identification of different size targets. The size of the image on the display screen (number of picture elements) depends on the range to the given target and the focal length of the optics.

a. Detection

To achieve a Detection, at least one picture element above the threshold is required. The performance is described in terms of the Noise Equivalent Temperature Difference (NETD).

b. Classification

A Classification is achieved when the detected image allows one to discern the class or type of the target.

c. Identification

A target is identified when the image is composed of large number of pixels and allows one to identify the target with great detail.

d. Probability of Detection

The probability of detection (just a target's presence), for a FLIR can be expressed in the terms of the perceived signal-to-noise ratio $(S/N)_p$, by [Ref. 2]:

$$P(\text{det}) = Q [(S/N)_p - (S/N)_t]$$

where:

Q is the standard Normal distribution

$$Q(x) = 1/2\pi \int_{-\infty}^x e^{(-t^2/2)} dt$$

$$(S/N)_p = (S/N)_t * \text{Teff}/\text{MDTD}$$

The Detection with 0.5 probability occurs at a range

where:

$$(S/N)_p = (S/N)_t \quad ; \text{ or } \quad P(\text{det}) = Q [0.0] = 0.5.$$

At this range: $\text{Teff} = \text{MDTD}$.

The UFLR program considers the targets as rectangular blocks of fixed dimensions and will display detection ranges for the following four target sizes:

TYPE	LENGTH	HEIGHT
Destroyer "Coontz" class ("Sovremenny")	155 m.	16 m.
Frigate "Knox" class ("Krivak")	130 m.	14 m.
Corvette "Pegasus" class ("Osa")	40 m.	8 m.
Surfaced SS	20 m.	5 m.

And for the following flight altitudes: 500 Ft., 1000 Ft., 1500 Ft., 2000 Ft., 2500 Ft., 3000 Ft., 3500 Ft., 4000 Ft., 5000 Ft., 7500 Ft., 10000 Ft., 15000 Ft., 20000 Ft., 25000 Ft. and 30000 Ft.

2. UFLR Program Description

The UFLR program was designed for the prediction of the FLIR performance in terms of flight altitude versus maximum range for detection, classification and identification of various sized surface targets, as a part of the Tactical Environmental Support System (TESS).

The program consists of the following subroutines:

a. Profile Subroutine

This subroutine creates profiles of height, absolute humidity, electro-optic m-units and molecular absorber density. It requires as input data: the atmospheric pressure (mb), temperature (°C) and relative humidity (%),

for the preselected radiosonde height levels, the radiosonde launch height, and the pressure (mb) at that height. See Figure 2.2)

b. Aerosol Extinction Coefficient Subfunction

It computes the aerosol extinction coefficient for a particular height as a function of surface wind speed (m/sec), relative humidity, horizontal visibility (Km), altitude (Km) and wavelength (μm). The transmittance model included as a part of the UFLR program was developed by Katz B. (1979). (See Figure 2.3)

c. Effective Earth Radius Subfunction

It computes the effective earth radius. IR propagation is considered in a cylindrical coordinate frame, ignoring all earth curvature and refractive effects. The atmosphere is assumed to consist of concentric, stratified layers. The refractive index is considered to vary linearly with altitude. It requires as input data the height array, the aerosol extinction coefficient array and the number of elements of both. (See Figure 2.4)

d. Transmittance Subroutine

This subroutine computes an integrated molecular absorber amount and an integrated extinction coefficient for each height level along a set of predefined rays preselected to provide adequate flight altitude/range resolution for the FLIR field of view.

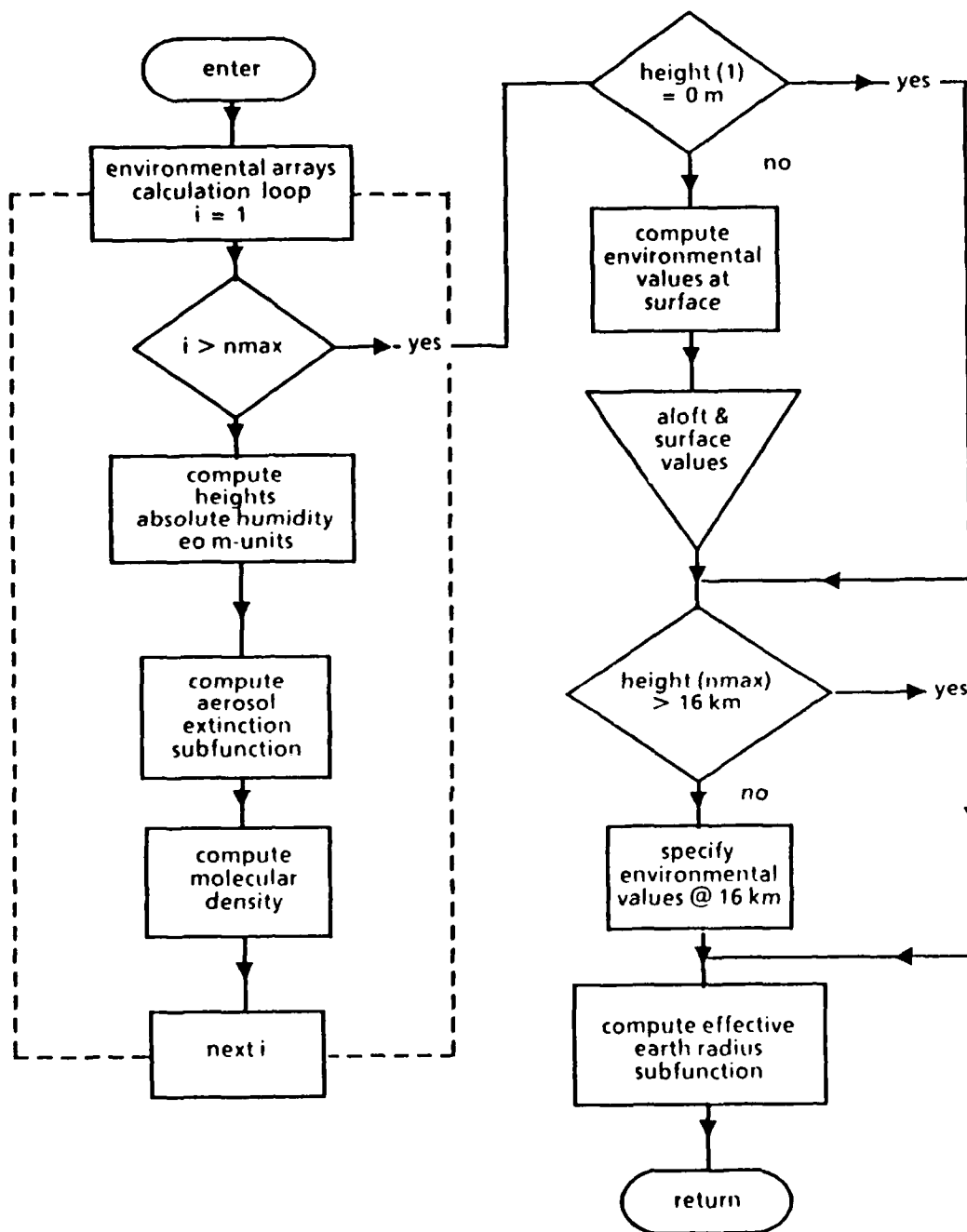


Figure 2.2 Profile Subroutine Flowchart

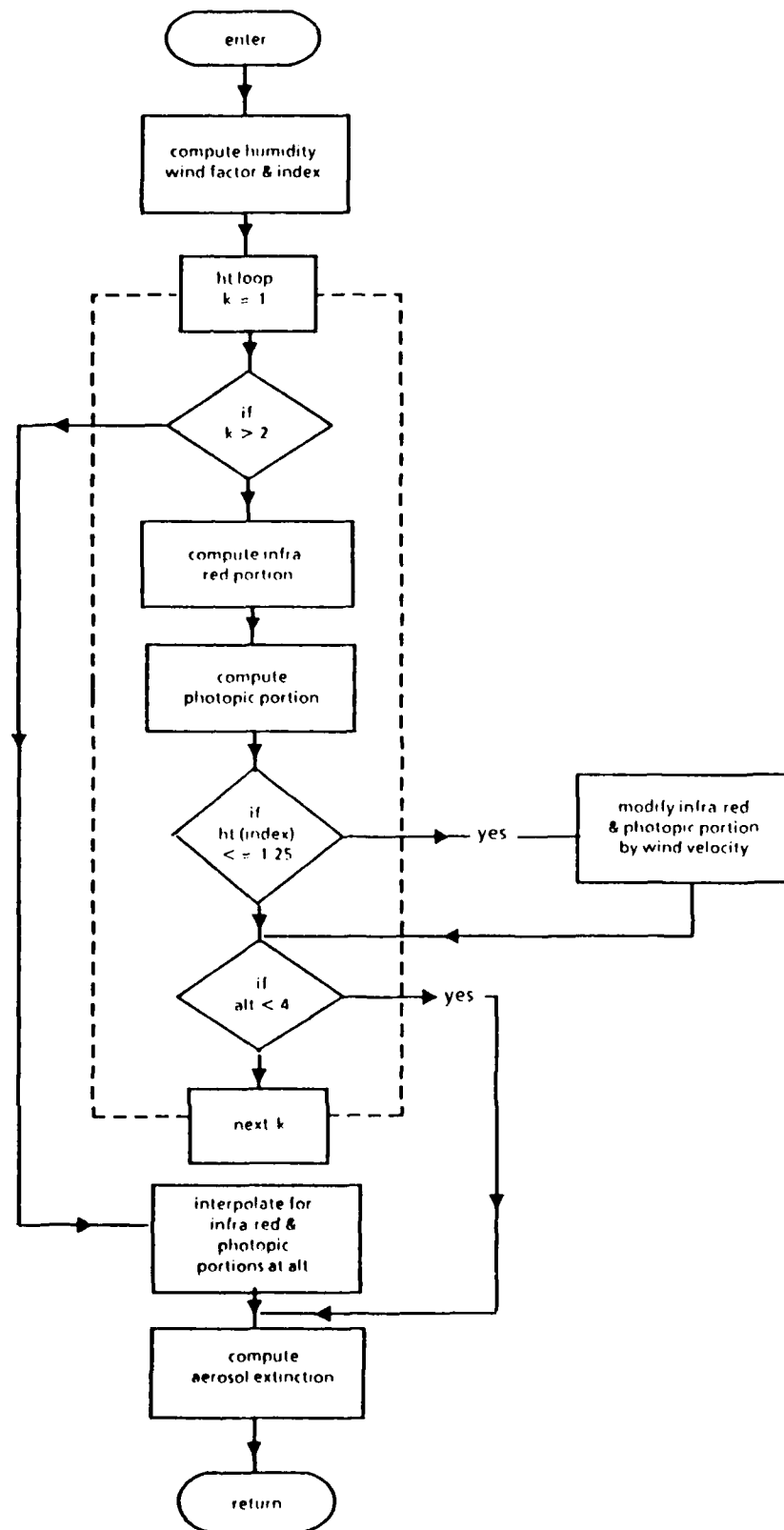


Figure 2.3 Aerosol Extinction Coefficient Subfunction Flowchart

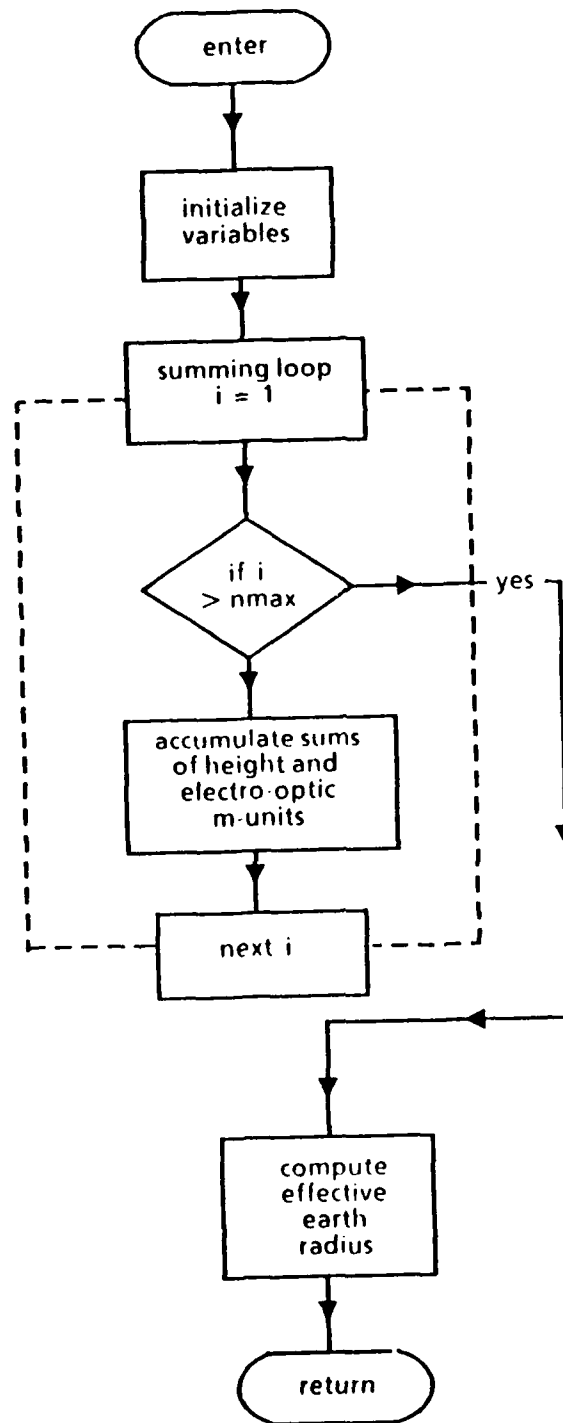


Figure 2.4 Effective Earth Radius Subfunction Flowchart

After these computations, the transmittance is calculated for each of the flight altitude/ray pair. It requires as input: the selected altitudes array, the selected ray launch angle array, an accumulated slant-path range over the incremental path of integration and the total band average molecular extinction. (Figure 2.5)

e. Integration Subroutine

This subroutine integrates the molecular absorber density or aerosol extinction along the ray path. The following inputs were required by this subroutine: Heights of lower and upper integration bounds, a ray's launch angle, a molecular absorber density array, aerosol extinction coefficient array, an interpolated value of molecular density or aerosol extinction, the effective earth radius and integration increments of range over the slant-path. (Figure 2.6)

f. Index Subfunction

This auxiliary subfunction finds the first element of an array greater than a specified value and determines the corresponding array index number. It uses as input: the environmental height array, an integration height and the specified environmental height. (Figure 2.7)

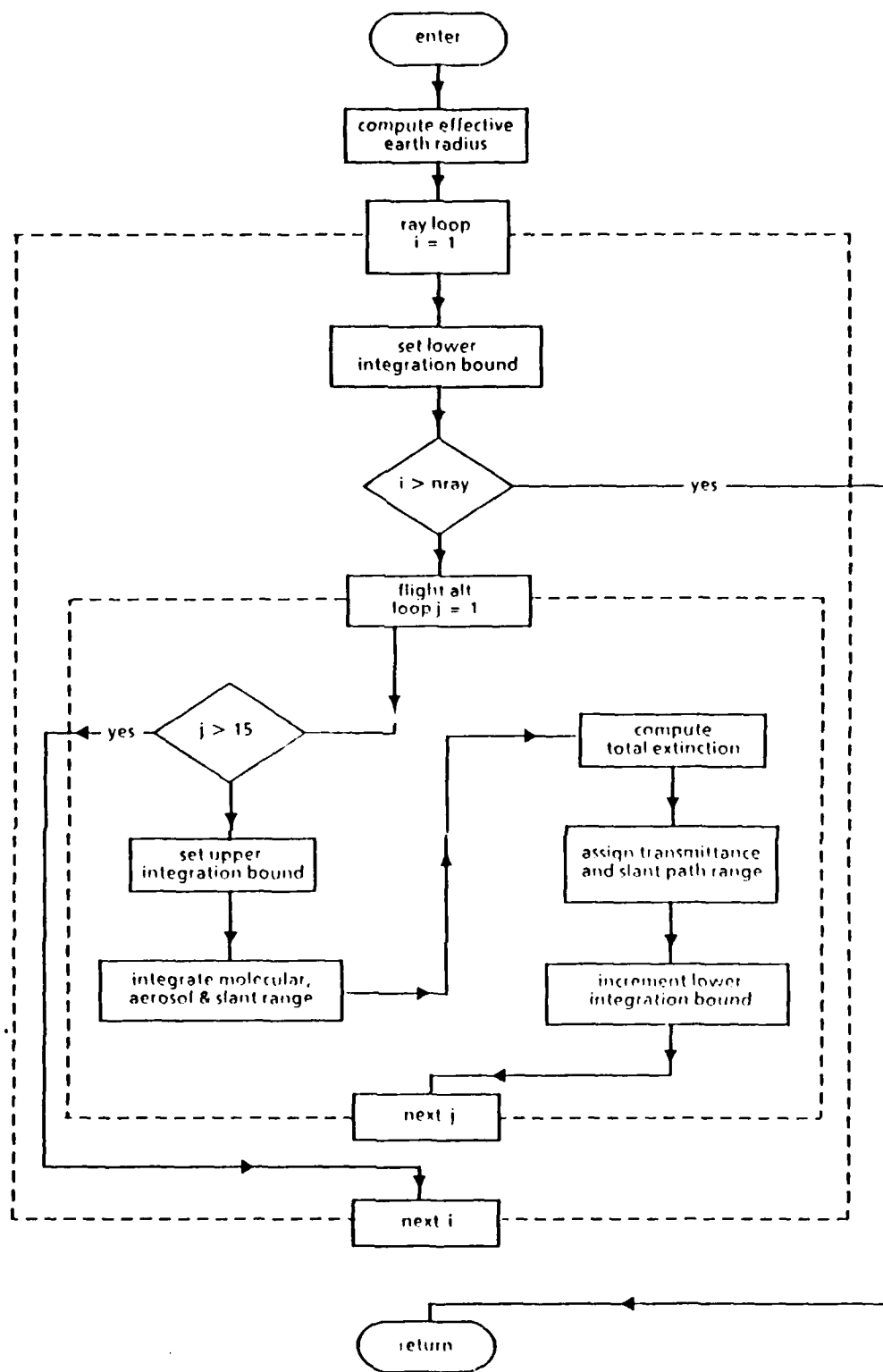


Figure 2.5 Transmittance Subroutine Flowchart

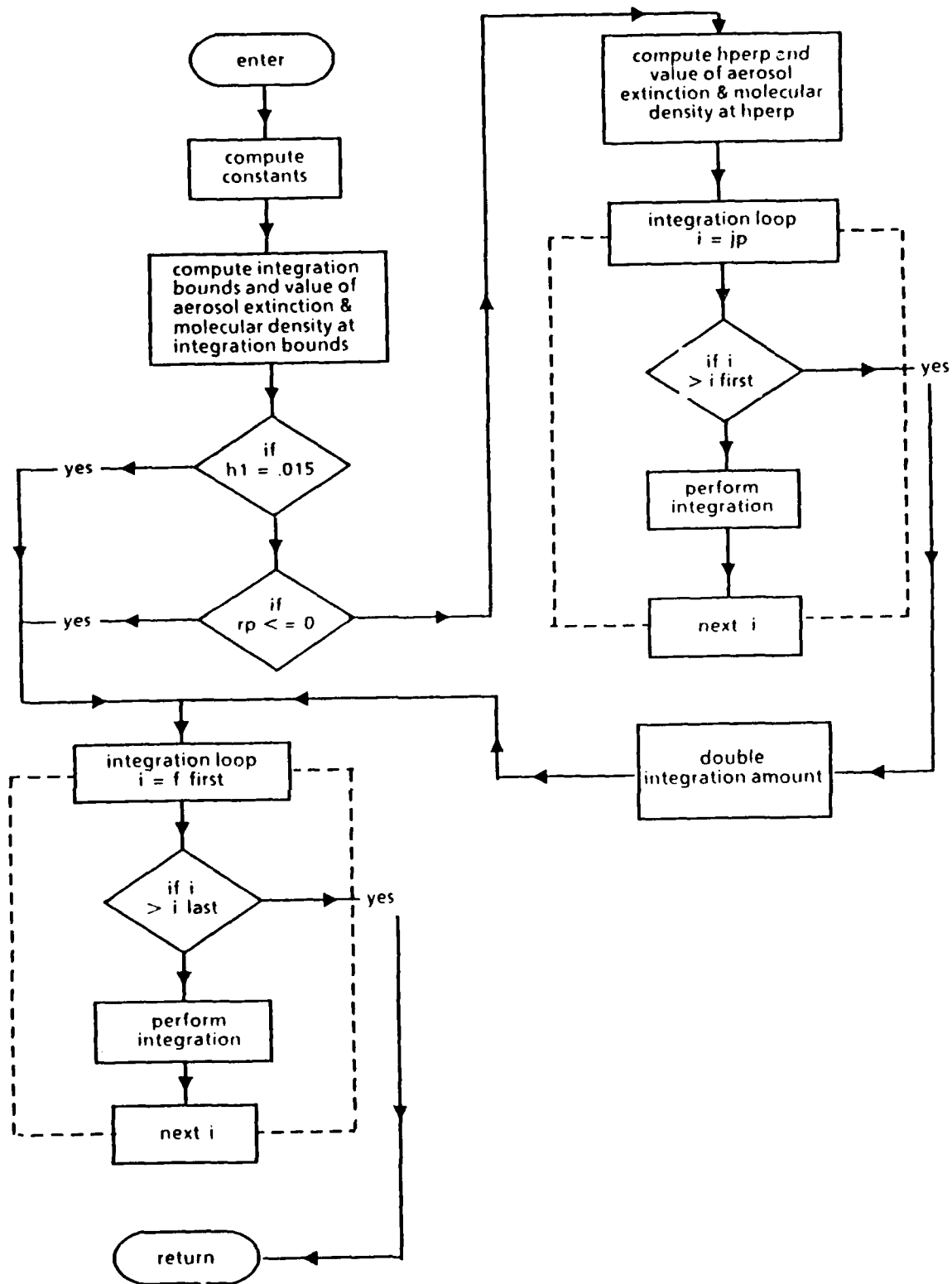


Figure 2.6 Integration Subroutine Flowchart

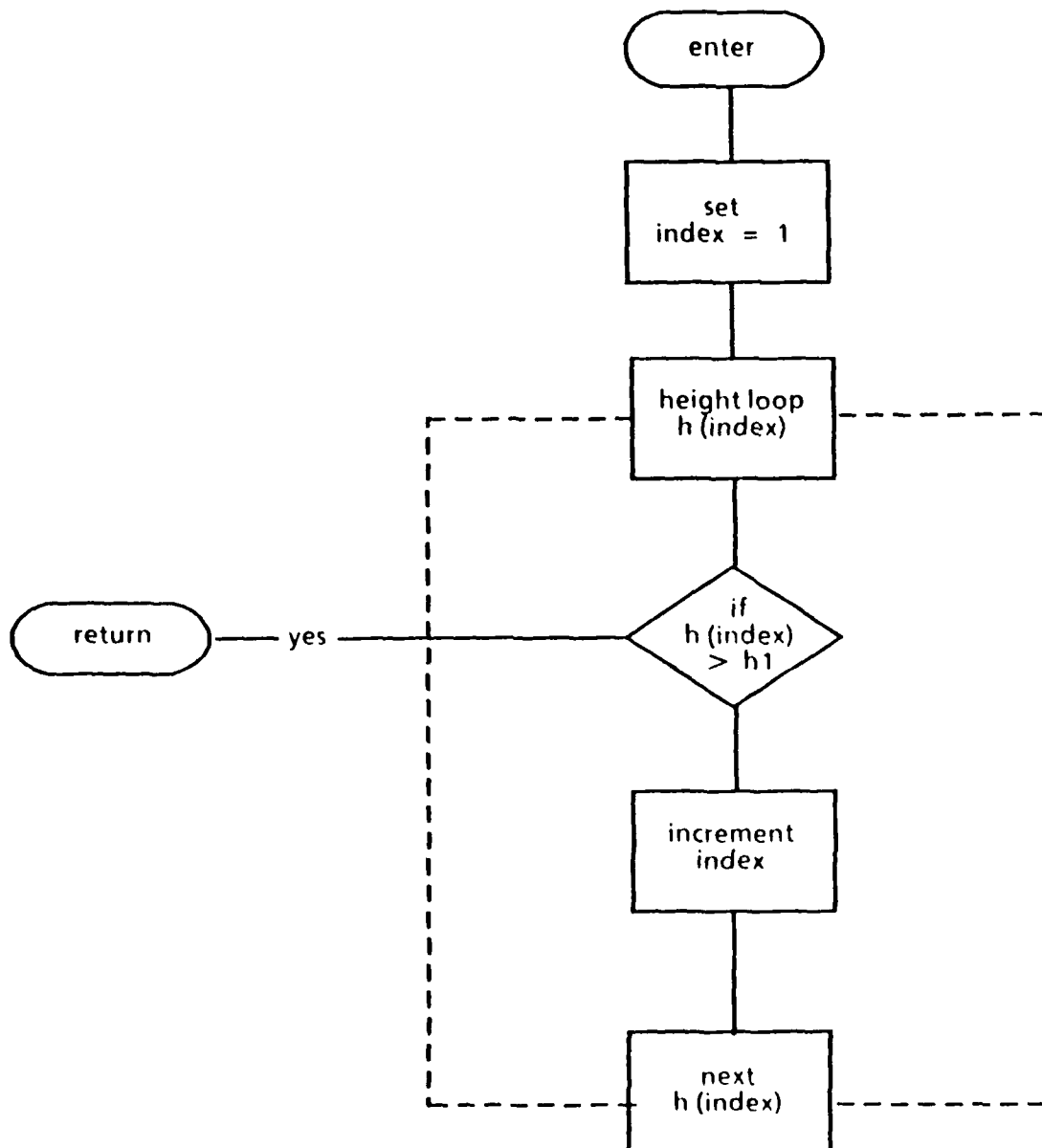


Figure 2.7 Index Subfunction Flowchart

g. Power Law Subfunction

It is used to interpolate a value between the elements of an array. This subfunction requires as input: the aerosol extinction coefficient array, the molecular absorber density array, an environmental height array, an integration height and an array index number.

h. Taylor Series Subroutine

This subroutine computes the Taylor series expansion about the midpoint of an integration interval, thus determines an incremental integration amount. The input to this subroutine were the left and right height interval limits, the corresponding integrand values and the effective earth radius. (Figure 2.8)

i. Total Band Average Molecular Extinction Subfunction

It computes the molecular absorber density and the total band averaged molecular extinction equation by calculating the transmittances for several slant paths. (Figure 2.9)

j. Performance Subroutine

This subroutine calculates a 0.5 probability of detection of a particular sized target by a FLIR system expressing it in terms of range for a specific flight altitude.

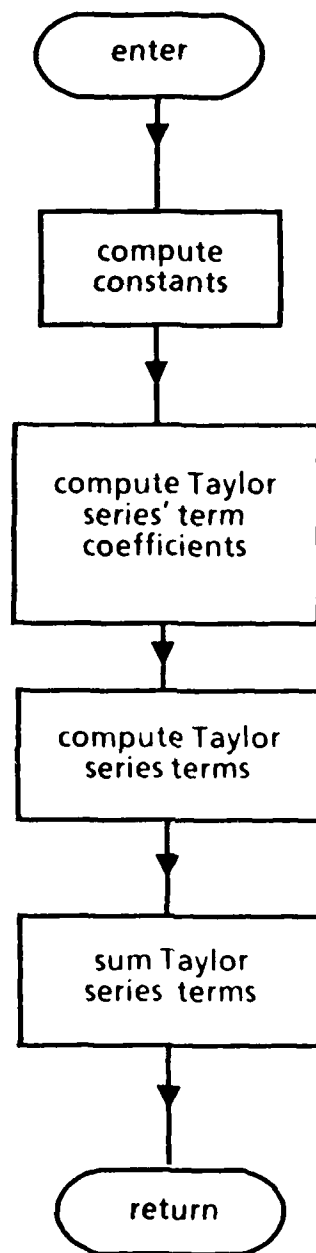


Figure 2.8 Taylor Series Subroutine Flowchart

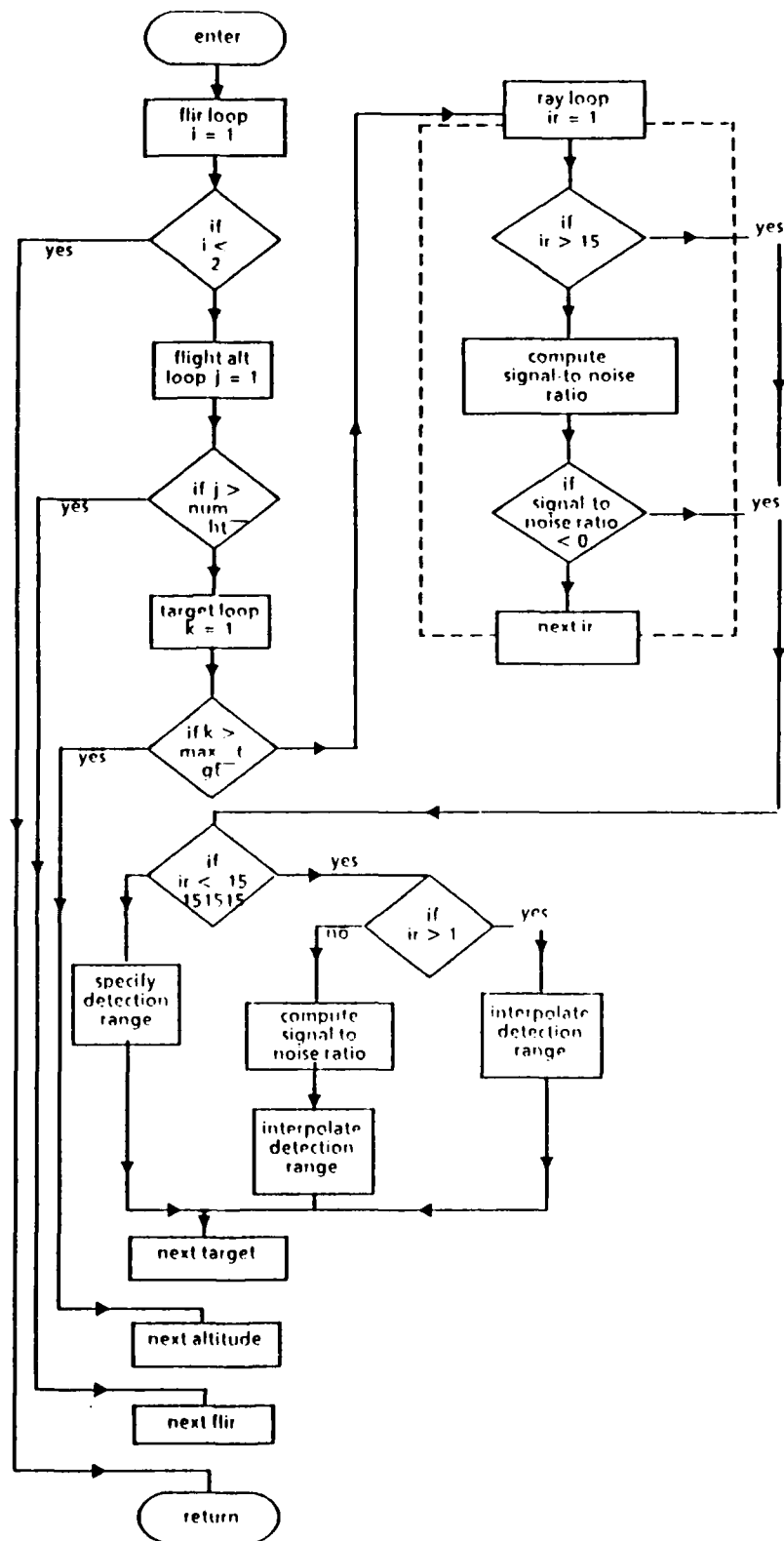


Figure 2.9 Total Band Average Molecular Extinction Subfunction Flowchart

This subroutine requires as input: the selected flight altitude array, the number of targets, the dimensions of the targets (length and height), the target to background temperature differences, the minimum detectable temperature difference, the transmittance array, the slant-path array and a detection range.

k. Minimum Detectable Temperature Difference Subfunction

It computes the MDTD associated with the FLIR/target combination. This subfunction has as input the length and height of the target, the slant-path range from the FLIR to the target and the FLIR system characteristics. (Figure 2.10)

l. Display Subfunction

This subfunction displays the detection, classification and identification ranges for each flight altitude. It requires as input: the surface wind velocity and the horizontal visibility.

D. STATISTICAL ANALYSIS

1. Test for Normality

The actual atmospheric profiles were dithered for different combinations of pressure, temperature and relative humidity standard deviations simulating random atmospheric variations.

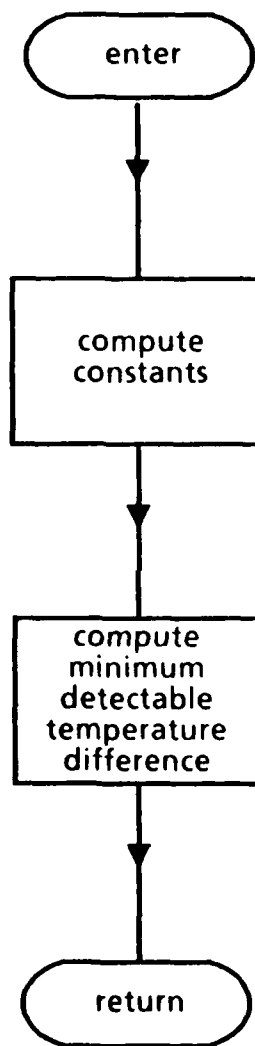


Figure 2.10 Minimum Detectable Temperature Difference (MDTD) Subfunction Flowchart

Processed by the UFLR program, the dithered profiles gave different performances for each of the four target sizes (range vs flight altitude). The population distribution of the data collected was analyzed using the MINITAB program of the Naval Postgraduate School's main frame. A numerical summary of the results was completed.

2. Difference Between Means

a. Single Factor Analysis of Variance

When the output of the UFLR program was graphically displayed by the program UFLRPLT, the variance of the dithered performance was given in a form of spread curves within the actual predicted performance.

After determining that the population distribution of the dithered profiles was normal, the FLIR predicted performance for the actual radiosonde data was compared to the performance obtained for the simulated data by applying a one-way analysis of variance (ANOVA), to the data sampled from both populations.

An F-test statistic at a 0.05 significance level (α), was performed to determine if both populations had a common mean value (actual mean = simulated mean).

b. Difference Between Means

A second analysis was performed by taking three testing points (three different height levels), and applying a two-sample t test. A 95% confidence interval for the difference between the two means was calculated.

For a normal population, the probability of an observed value within three standard deviations (3σ) of the mean (μ) is equal to 0.9974. By using the standard deviation values obtained from the experimental section, one could estimate a spread in nautical miles within which the range for detection, classification and identification of the same target about the predicted values for a selected operational flight altitude could be located with a given level of confidence.

III. EXPERIMENTAL PROCEDURE

A. THE FLIR PERFORMANCE PREDICTION BY THE UFLR MODEL

The UFLR model used for this research was the P.C. version by John Cook (September 1987), which was modified for the Naval Postgraduate School main frame computer system (Appendix 1).

The inputs for the UFLR model are the radiosonde data (pressure, temperature and relative humidity), aerosol parameters, FLIR system parameters, target parameters and the effective temperature differences (ΔT).

It is important to mention that the FLIR system parameters used are not those of operational systems, since this is classified information.

The output of the model is expressed in terms of flight altitude (feet) versus maximum range (nmi) for the detection, classification and identification of different sized targets.

The output can be graphically displayed by plotting the above values. The graph in Figure 3.1 shows an example of a typical UFLR output. This graph consists of three curves corresponding to the identification, classification and detection for each target.

TARGET	1			2			3			4		
Alt Feet	Det	Class (nmi)	ID	Det	Class (nmi)	ID	Det	Class (nmi)	ID	Det	Class (nmi)	ID
500	7.2	1.6	0.7	9.7	3.0	1.3	12.5	5.3	2.5	15.2	8.7	4.5
1000	7.1	1.6	0.6	9.6	3.0	1.3	12.3	5.3	2.5	15.0	8.7	4.5
500	7.3	1.6	0.6	9.9	3.0	1.2	12.6	5.3	2.5	15.4	8.8	4.6
2000	7.5	1.5	0.7	10.2	3.0	1.2	13.2	5.4	2.5	16.1	9.0	4.6
2500	7.5	1.4	0.7	10.3	3.0	1.2	13.4	5.4	2.4	16.4	9.1	4.6
3000	7.7	1.4	0.7	10.5	2.9	1.2	13.6	5.5	2.3	16.7	9.1	4.6
3500	7.8	1.5	0.7	10.7	2.8	1.3	13.9	5.4	2.3	17.1	9.2	4.6
4000	7.9	1.5	0.7	10.9	2.8	1.3	14.2	5.5	2.3	17.5	9.3	4.7
5000	8.3	1.6	0.0	11.4	2.7	1.3	15.0	5.6	2.3	18.6	9.6	4.5
7500	9.3	1.6	0.0	13.1	2.9	1.4	17.4	5.4	2.6	22.0	10.1	4.4
10000	10.4	1.7	0.0	14.6	3.2	0.0	19.6	5.4	2.6	25.1	10.5	4.5
15000	12.3	0.0	0.0	16.7	3.2	0.0	23.0	5.8	2.7	29.8	10.4	5.1
20000	13.3	0.0	0.0	18.8	0.0	0.0	25.1	6.2	0.0	33.0	10.4	5.2
25000	14.3	0.0	0.0	21.0	0.0	0.0	28.0	6.3	0.0	37.4	10.9	5.3
30000	15.0	0.0	0.0	23.1	0.0	0.0	31.3	6.4	0.0	41.7	11.5	5.3

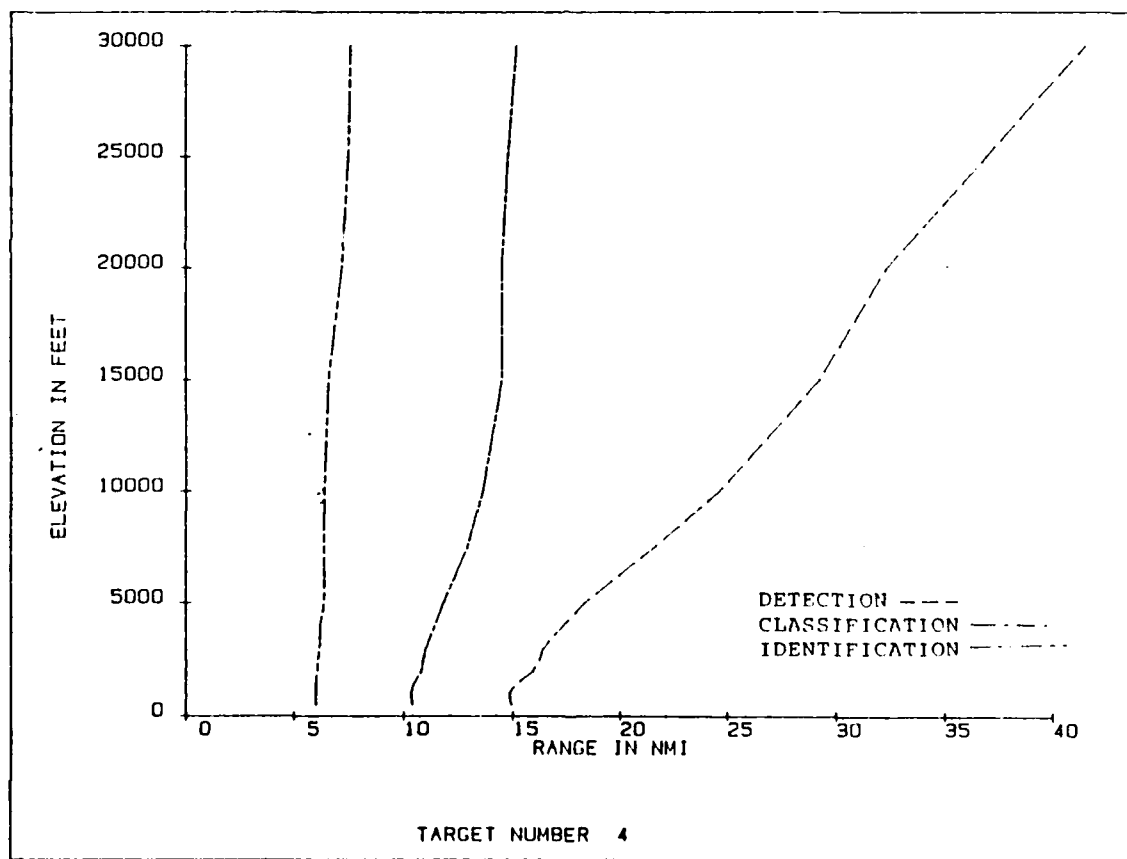


Figure 3.1. Typical UFLR output

B. GENERATION OF ATMOSPHERIC DATA AFFECTED BY RANDOM VARIATIONS

The generation of radiosonde data affected by random atmospheric variations was performed using the computer program UFLRATM (Appendix 2).

The actual data consisted of eight radiosonde profiles taken along the California coast (Latitude = 36° N, Longitude = 122° W), within 3 days in the spring of 1989.

The pressure (in millibars), temperature (in degrees), and relative humidity (in percentage), were extracted from each profile corresponding to the height levels from sea level to 28,000 ft. (for every 1,000 ft.). The eight extracted files were named: cal1, cal2, cal3, cal4, cal5, cal6, cal7 and cal8 (see profiles in Appendix 3). The actual values of pressure, temperature and relative humidity of the 3 day radiosonde data (the 8 profiles), were averaged and observed level by level, in order to determine coherent standard deviation values for the simulation of more atmospheric profiles about the actual data.

The following results were obtained:

	Max S.dev.	Min. S.dev
pressure	3.49	1.20
temperature	4.01	0.77
rel. humidity	22.5	7.08

Using the information above, the following standard deviation values were selected for the pressure (SIGMAP),

temperature (SIGMAT), and relative humidity (SIGMARH):

SIGMAP = 1.5, 2.5

SIGMAT = 1.0, 2.0, 4.0

SIGMARH= 8.0

The values above, were selected considering that the available data was very small, from a short period of time and for a particular location. The objective of this thesis was the performance of the FLIR system at slightly different times and locations, and this simulation of the variation of the environmental parameters was based on the limited set of radiosonde data available.

The range of the pressure standard deviations (SIGMAP), was within the range actually observed, same for the temperature (SIGMAT); But, in the case of the relative humidity (SIGMARH), the only value for which the simulated data did not appear unreasonable was used.

The standard deviation values were combined in all possible ways (six different combinations), as shown:

COMBINATION	SIGMAP	SIGMAT	SIGMARH
A	2.5	1.0	8.0
B	2.5	2.0	8.0
C	2.5	4.0	8.0
D	1.5	1.0	8.0
E	1.5	2.0	8.0
F	1.5	4.0	8.0

The eight extracted files cal1, cal2, cal3, ..., cal8; were input to the program UFLRTRAM which dithered the actual values simulating the random atmospheric variations by using a Gaussian random number generator (0,1), multiplied by the six different combinations of standard deviation values of SIGMAP, SIGMAT and SIGMARH.

The UFLRATM program was designed for ten (10) replications for each of the 6 different combinations. This gave a total of 60 different dithered profiles (six groups of ten) just for that particular file, and a grand total output of 480 different dithered profiles (48 output files), for the 8 California coast atmospheric files. These output files (see examples Appendix 4), were named as follows:

FILE	COMBINATION	OUTPUT FILE
cal1	A	cal 1A
	B	cal 1B
	C	cal 1C
	D	cal 1D
	E	cal 1E
	F	cal 1F
cal2	A	cal 2A
	B	cal 2B
	C	cal 2C
	D	cal 2D
	E	cal 2E
	F	cal 2F
cal3	A	cal 3A
	B	cal 3B
	C	cal 3C
	D	cal 3D
	E	cal 3E
	F	cal 3F

FILE	COMBINATION	OUTPUT
cal4	A	cal 4A
	B	cal 4B
	C	cal 4C
	D	cal 4D
	E	cal 4E
	F	cal 4F
cal5	A	cal 5A
	B	cal 5B
	C	cal 5C
	D	cal 5D
	E	cal 5E
	F	cal 5F
cal6	A	cal 6A
	B	cal 6B
	C	cal 6C
	D	cal 6D
	E	cal 6E
	F	cal 6F
cal7	A	cal 7A
	B	cal 7B
	C	cal 7C
	D	cal 7D
	E	cal 7E
	F	cal 7F
cal8	A	cal 8A
	B	cal 8B
	C	cal 8C
	D	cal 8D
	E	cal 8E
	F	cal 8F

C. INPUT OF RADIOSONDE DATA TO THE UFLR PROGRAM

1. Input of Actual Radiosonde Data to the UFLR Program

The extracted files cal1, cal2, cal3, cal4, cal5, cal6, cal7, and cal8, without any modification, were input to the UFLR program.

The predicted FLIR performances obtained from this actual data for the detection, classification and identification of a surfaced submarine (target No. 1), a missile corvette (target No. 2), a frigate (target No. 3) and a destroyer (target No. 4), served as the reference for further comparison purposes (appendix 5).

2. Input of Radiosonde Data Affected by Atmospheric Variations

The UFLR program was modified in order to process the dithered profiles obtained in paragraph B. above, in groups of ten (10) replications, one per every simulated profile.

The output was 480 different predicted performances grouped in 48 files of ten performances each (see examples in Appendix 6).

INPUT (48 files)	OUTPUT (48 files)

cal1A	file1A
cal1B	file1B
.	.
.	.
cal1F	file1F
cal2A	file2A
.	.
.	.
cal8E	file8E
cal8F	file8F

The above output was graphically displayed by the program UFLRPLT (Appendix 7). The dithered performances appeared as a spread of curves for detection, classification and identification of every target and for the six different atmospheric variation combinations. The spread was found to be greatest for the detection curves and particularly for the largest target.

D. TEST FOR NORMALITY

Next, an analysis was made to determine the normal distribution of the spread of predicted ranges for a particular height level and for every target. The test was performed concentrating on height levels of 1,500 ft., 5,000 ft. and 10,000 ft. and for the detection range curves, where the spread was widest.

Starting with the height level of 1,500 ft. and for the combination A, the whole row of data corresponding to this height level was extracted from the dithered performances output files: file1A, file2A, file3A, file4A, file5A, file6A, file7A and file8A. The same procedure was followed for all the other combinations. The result was six arrays of 80 rows and 12 columns each, which were the input data for the normality test. Since the test was concentrated on the detection range data, the columns of interest of the array were the c1 (detection ranges for target No. 1), c4 (detection

ranges for target No. 2), c7 (detection ranges for target No. 3) and c10 (detection ranges for target No. 4).

The six combinations and three height levels gave a total of 18 arrays for testing purposes (Appendix 8).

The test used [Ref. 3; p.574], consisted of the use of probability plots and sample correlation coefficient (r). The more the r value deviates from 1, the less the probability plot resembles a straight line. The straighter the probability plot, the more plausible is a normal distribution.

A critical value (c_α) of 0.9757, for a 0.1 significance level (α) was used.

The null hypotheses (H_0): "the population is normal", is rejected if $r \leq c_\alpha$.

The sample correlation coefficient (r) for the n pairs (x_i, y_i)...(x_n, y_n) is given by:

$$r = \frac{n \sum x_i y_i - (\sum x_i)(\sum y_i)}{\sqrt{n \sum x_i^2 - (\sum x_i)^2} \sqrt{n \sum y_i^2 - (\sum y_i)^2}}$$

n = 80, the size of the sample

x_i = sample values ordered from smallest to largest

y_i = sample percentile of a population distribution

$$Y_i = \Phi^{-1} \left[\frac{i - 0.375}{n + 0.25} \right]$$

The test was performed using the statistical MINITAB program. To illustrate the test for the combination A and height level of 1,500 ft.:

	<u>Comments</u>
MTB \ READ 'FILENAME' C1 - C12	(80 rows x 12 c. read)
MTB \ SET C13	
MTB \ LET C13 = C13 - 0.375	
MTB \ LET C13 = C13 / 80.25	
MTB \ SORT C1 C1	(orders the sample)
1MTB \ INVCDF C13 C14;	
SUBC \ NORMAL	
MTB \ PLOT C14 C1	(probability plot)
MTB \ CORR C14 C1	(finds r value)
correlation of C14 and C1 (r) = 0.982	

Since r is greater than $c_\alpha = 0.9757$, the null hypotheses is not rejected and the population distribution is assumed to be normal.

Continuing the same procedure for columns c4, c7, and c10, produced the following results (Figure 3.2):

correlation of C14 and C4 (r)	=	0.983
correlation of C14 and C7 (r)	=	0.983
correlation of C14 and C10 (r)	=	0.984

Following the same procedure for the other five combinations, the results were favorable and the normality was proven for all cases. The summary of the results is found in Appendix 9.

E. DIFFERENCE BETWEEN ACTUAL AND DITHERED PERFORMANCE MEANS

A one-way analysis of variance was performed for the data selected on the 18 arrays (Appendix 7). Starting with the height level of 1,500 ft, one could compare the predicted detection range values assuming the random atmospheric combinations as six different treatments, and the predicted performance for the actual data as a seventh treatment.

The null hypothesis (H_0) stated that the means were identical for all the treatments (I):

$$H_0 = \mu_1, \mu_2 \dots \mu_7$$

versus the alternative hypothesis (H_a) that at least two of the μ 's were different.

The null hypothesis is rejected for a $F \geq F_\alpha$, for a significance level α of 0.05.

The computations are summarized on the ANOVA table:

Source of Variation	d.f.	Sum of Squares	Mean Square	F
Treatments	I-1	SSTr	MSTr=SSTr/(I-1)	MSTr
Error	I(J-1)	SSE	MSE=SSE/I(J-1)	MSE
Total	IJ-1	SST		

where:

$$SST = \text{Total Sum of squares} = \sum_{i=1}^I \sum_{j=1}^J X_{ij}^2 - 1/IJ X^2 \dots$$

$$SSTr = \text{Treatment Sum of squares} = 1/J \sum_{i=1}^I X_i^2 - 1/IJ X^2 \dots$$

$$SSE = \text{Error Sum of Squares} = \sum_{i=1}^I \sum_{j=1}^J X_{ij}$$

$X_{i.}$ = sum of numbers in the i th row of the table

$X \dots$ = sum of all the X_{ij} 's

The test was performed using the MINITAB statistical program, and the same procedure was followed for the other three targets and for the other two selected height levels of 5,000 ft. and 10,000 ft.

In addition, a 95% confidence interval for the difference between the means of the performances of the actual and dithered radiosonde profiles was determined by the t-interval [Ref. 3]:

$$X - Y \pm t_{\alpha/2, m+n-2} \cdot Sp \sqrt{1/m + 1/n}$$

for 95% = 100 (1- α) confidence interval

where:

X = sample mean of the dithered values

Y = sample mean of the actual values

m = size of the dithered sample

n = size of the actual sample

m + n - 2 = degrees of freedom

SP = pooled estimator of the common variance

$$Sp^2 = \frac{1}{(m + n - 2)} \left[\sum (Xi - X)^2 + \sum (Yj - Y)^2 \right] .$$

The above procedure was applied for the 18 files (arrays) tested earlier (Appendix 7).

The output of the calculations above allowed one to determine the difference in nautical miles between the predicted ranges using the undithered radiosonde data and the mean predicted ranges for the dithered radiosonde data.

IV. RESULTS SECTION

A. RESULTED DIFFERENCES BETWEEN ACTUAL AND DITHERED PERFORMANCES

The FLIR performances predicted by the program UFLR for the eight actual (undithered) atmospheric profiles are shown in Appendix 5. The following were the predicted detection ranges of the four targets, for the height levels of 1,500 ft., 5,000 ft., and 10,000 ft.:

1. Height = 1,500 Ft.

Profile	Target No. 1	Target No. 2	Target No. 3	Target No. 4
cal1	6.4 nmi.	7.5 nmi.	8.8 nmi.	9.0 nmi.
cal2	9.5	11.5	14.1	14.6
cal3	6.9	8.0	9.5	9.8
cal4	9.1	10.9	13.3	13.7
cal5	10.7	13.0	16.1	16.7
cal6	10.2	12.3	15.3	15.8
cal7	9.0	10.8	13.2	13.6
cal8	10.3	12.4	15.5	16.0
Mean:	9.01	10.80	13.22	13.65
S.dev:	1.57	2.03	2.72	2.84

2. Height = 5,000 Ft.

Profile	Target No. 1	Target No. 2	Target No. 3	Target No. 4
cal1	10.8	13.2	16.5	17.1
cal2	13.2	16.4	21.0	21.8
cal3	11.5	14.1	17.8	18.4
cal4	14.0	17.5	22.5	23.4
cal5	13.7	17.0	21.7	22.6
cal6	13.8	17.2	22.0	23.0
cal7	12.5	15.4	19.5	20.3
cal8	14.5	18.3	23.8	24.8
Mean:	13.0	16.13	20.6	21.42
S.dev:	1.29	1.76	2.47	2.63

3. Height = 10,000 Ft.

Profile	Target No. 1	Target No. 2	Target No. 3	Target No. 4
cal1	14.6	18.8	23.9	25.0
cal2	16.0	20.2	26.6	27.8
cal3	15.0	18.8	24.6	25.7
cal4	17.0	21.7	28.8	30.1
cal5	15.7	19.7	25.6	26.7
cal6	16.1	20.3	26.6	27.8
cal7	14.7	18.8	23.7	24.7
cal8	17.2	22.1	29.5	30.9
Mean:	15.78	20.05	26.16	27.33
S.dev:	0.98	1.29	2.15	2.27

The following were the average of the predicted detection ranges of the four targets for the height levels of 1,500 ft., 5,000 Ft. and 10,000 Ft.; obtained from the six different dithered atmospheric profiles (six different combinations of SIGMAT, SIGMAP and SIGMARH):

Combination	SIGMAP	SIGMAT	SIGMARH
A	2.5	1.0	8.0
B	2.5	2.0	8.0
C	2.5	4.0	8.0
D	1.5	1.0	8.0
E	1.5	2.0	8.0
F	1.5	4.0	8.0

a. Height = 1,500 Ft.

	Target No. 1		Target No. 2		Target No. 3		Target No. 4	
	ave	Sdev	ave	Sdev	ave	Sdev	ave	Sdev
Comb.								
A	8.85	1.74	10.61	2.24	12.94	2.97	13.35	3.12
B	8.87	1.76	10.62	2.26	12.95	2.99	13.36	3.14
C	8.85	1.93	10.58	2.47	12.91	3.27	13.32	3.42
D	8.85	1.74	10.60	2.23	12.93	2.96	13.34	3.10
E	8.86	1.76	10.60	2.26	12.85	3.21	13.27	3.31
F	8.83	1.91	10.56	2.44	12.90	3.24	13.30	3.39

b. Height = 5,000 Ft.

	Target No. 1		Target No. 2		Target No. 3		Target No. 4	
	ave	Sdev	ave	Sdev	ave	Sdev	ave	Sdev
Comb.								
A	12.77	1.61	15.83	2.17	20.20	3.06	20.99	3.24
B	12.75	1.66	15.82	2.25	20.17	3.14	20.98	3.33
C	12.71	1.86	15.76	2.49	20.09	3.49	20.89	3.68
D	12.73	1.60	15.79	2.17	20.12	3.05	20.92	3.22
E	12.75	1.65	15.81	2.23	20.16	3.12	20.96	3.30
F	12.70	1.81	15.74	2.45	20.70	3.43	20.87	3.62

c. Height = 10,000 Ft.

	Target No. 1		Target No. 2		Target No. 3		Target No. 4	
	ave	Sdev	ave	Sdev	ave	Sdev	ave	Sdev
Comb.								
A	15.42	1.33	19.39	1.87	25.33	2.76	26.44	2.93
B	15.43	1.36	19.41	1.91	25.35	2.81	26.46	2.97
C	15.36	1.50	19.32	2.09	25.23	3.07	26.34	3.25
D	15.41	1.33	19.37	1.86	25.32	2.75	26.43	2.90
E	15.43	1.35	19.40	1.89	25.36	2.78	26.4	1.94
F	15.36	1.48	19.32	2.06	25.23	3.03	26.07	4.06

Using the data above, the following were the results of the t-tests performed to determine 95% confidence intervals for the difference between the mean of the actual (undithered) performances and the mean of the performance obtained for every dithered atmospheric profile:

a. Height = 1,500 Ft.

Combination A

Target No.	Pooled variance	Interval(nmi)
1	1.72	$-1.42 < \Delta \mu < 1.19$
2	2.23	$-1.82 < \Delta \mu < 1.45$
3	2.95	$-2.45 < \Delta \mu < 1.89$
4	3.09	$-2.57 < \Delta \mu < 1.98$

Combination B

Target No.	Pooled variance	Interval(nmi)
1	1.74	$-1.42 < \Delta \mu < 1.15$
2	2.24	$-1.83 < \Delta \mu < 1.46$
3	2.97	$-2.45 < \Delta \mu < 1.92$
4	3.12	$-2.58 < \Delta \mu < 2.01$

Combination C

Target No.	Pooled variance	Interval(nmi)
1	1.91	$-1.56 < \Delta \mu < 1.24$
2	2.43	$-2.00 < \Delta \mu < 1.58$
3	3.23	$-2.68 < \Delta \mu < 2.07$
4	3.38	$-2.81 < \Delta \mu < 2.16$

Combination D

Target No.	Pooled variance	Interval(nmi)
1	1.73	$-1.43 < \Delta\mu < 1.12$
2	2.21	$-1.82 < \Delta\mu < 1.43$
3	2.94	$-2.45 < \Delta\mu < 1.88$
4	3.08	$-2.57 < \Delta\mu < 1.96$

Combination E

Target No.	Pooled variance	Interval(nmi)
1	1.74	$-1.43 < \Delta\mu < 1.13$
2	2.24	$-1.84 < \Delta\mu < 1.45$
3	3.17	$-2.70 < \Delta\mu < 1.97$
4	3.28	$-2.78 < \Delta\mu < 2.04$

Combination F

Target No.	Pooled variance	Interval(nmi)
1	1.89	$-1.56 < \Delta\mu < 1.21$
2	2.41	$-2.00 < \Delta\mu < 1.54$
3	3.20	$-2.67 < \Delta\mu < 2.04$
4	3.35	$-2.81 < \Delta\mu < 2.12$

b. Height = 5,000 Ft.

Combination A

Target No.	Pooled variance	Interval(nmi)
1	1.59	$-1.40 < \Delta \mu < 0.94$
2	2.14	$-1.87 < \Delta \mu < 1.28$
3	3.02	$-2.62 < \Delta \mu < 1.82$
4	3.19	$-2.77 < \Delta \mu < 1.92$

Combination B

Target No.	Pooled variance	Interval(nmi)
1	1.63	$-1.87 < \Delta \mu < 1.38$
2	2.21	$-1.94 < \Delta \mu < 1.32$
3	3.09	$-2.7 < \Delta \mu < 1.85$
4	3.27	$-2.85 < \Delta \mu < 1.97$

Combination C

Target No.	Pooled variance	Interval(nmi)
1	1.82	$-1.63 < \Delta \mu < 1.05$
2	2.44	$-2.16 < \Delta \mu < 1.43$
3	3.41	$-3.02 < \Delta \mu < 2.01$
4	3.59	$-3.17 < \Delta \mu < 2.12$

Combination D

Target No.	Pooled variance	Interval(nmi)
1	1.58	$-1.43 < \Delta \mu < 0.9$
2	2.14	$-1.91 < \Delta \mu < 1.23$
3	3.01	$-2.69 < \Delta \mu < 1.74$
4	3.18	$-2.83 < \Delta \mu < 1.84$

Combination E

Target No.	Pooled variance	Interval(nmi)
1	1.62	$-1.44 < \Delta \mu < 0.95$
2	2.20	$-1.93 < \Delta \mu < 1.30$
3	3.07	$-2.69 < \Delta \mu < 1.82$
4	3.25	$-2.84 < \Delta \mu < 1.94$

Combination F

Target No.	Pooled variance	Interval(nmi)
1	1.77	$-1.59 < \Delta \mu < 1.00$
2	2.40	$-2.11 < \Delta \mu < 1.38$
3	3.36	$-2.38 < \Delta \mu < 2.58$
4	3.55	$-3.15 < \Delta \mu < 2.06$

c. Height = 10,000

Combination A

Target No.	Pooled variance	Interval(nmi)
1	1.30	$-1.31 < \Delta \mu < 0.60$
2	1.83	$-1.99 < \Delta \mu < 0.68$
3	2.72	$-2.82 < \Delta \mu < 1.17$
4	2.89	$-3.00 < \Delta \mu < 1.24$

Combination B

Target No.	Pooled variance	Interval(nmi)
1	1.34	$-1.33 < \Delta \mu < 0.64$
2	1.87	$-2.01 < \Delta \mu < 0.74$
3	2.76	$-2.83 < \Delta \mu < 1.23$
4	2.92	$-3.01 < \Delta \mu < 1.29$

Combination C

Target No.	Pooled variance	Interval(nmi)
1	1.47	$-1.49 < \Delta \mu < 0.67$
2	2.04	$-2.23 < \Delta \mu < 0.77$
3	3.00	$-3.13 < \Delta \mu < 1.29$
4	3.18	$-3.33 < \Delta \mu < 1.36$

Combination D

Target No.	Pooled variance	Interval(nmi)
1	1.30	$-1.32 < \Delta \mu < 0.59$
2	1.82	$-2.04 < \Delta \mu < 0.63$
3	2.70	$-2.82 < \Delta \mu < 1.15$
4	2.85	$-2.99 < \Delta \mu < 1.20$

Combination E

Target No.	Pooled variance	Interval(nmi)
1	1.33	$-1.32 < \Delta \mu < 0.63$
2	1.84	$-2.00 < \Delta \mu < 0.71$
3	2.73	$-2.81 < \Delta \mu < 1.21$
4	2.89	$-2.98 < \Delta \mu < 1.275$

Combination F

Target No.	Pooled variance	Interval(nmi)
1	1.44	$-1.47 < \Delta \mu < 0.64$
2	2.01	$-2.21 < \Delta \mu < 0.75$
3	2.96	$-3.10 < \Delta \mu < 1.26$
4	3.94	$-4.15 < \Delta \mu < 1.64$

The pooled variance is the resulted estimated value of the common variance for the undithered and dithered distributions for each of the combinations.

Also the range interval ($\Delta \mu$) in nautical miles, indicates how far apart the mean of each particular dithered performance may appear with respect to the actual predicted performance mean.

B. ANALYSIS OF VARIANCE

The following were the results of the F-test (for $\alpha = 0.05$) performed on three different height levels to determine if the population means were the same for all of the performances obtained from the six random atmospheric profiles, and the performance obtained for the actual atmospheric profiles (altogether):

a.Height: 1,500 Ft.

Target No. 1

Source	d.f.	Sum of squares	Mean Square	F
treatments	6	1.72	0.29	0.10
error	553	1559.59	2.82	
Total	559	1561.32		

Since F was less than $F_{\alpha,6,553}=2.1$, Accept $H_0: \mu_1=\mu_2=\dots=\mu_7$

Level	N	Mean	St. Dev.
combination A	80	8.856	1.742
combination B	80	8.874	1.763
combination C	80	8.850	1.939
combination D	80	8.855	1.747
combination E	80	8.859	1.764
combination F	80	8.834	1.917
actual atm	80	9.010	

Target No. 2

Source	d.f.	Sum of squares	Mean Square	F
treatments	6	2.89	0.48	0.10
error	553	2554.00	4.62	
Total	559	2556.89		

Since F was less than F_{α} , Accept $H_0: \mu_1 = \mu_2 = \dots = \mu_7$

Level	N	Mean	St. Dev.
combination A	80	10.612	2.247
combination B	80	10.619	2.260
combination C	80	10.587	2.470
combination D	80	10.602	2.232
combination E	80	10.607	2.261
combination F	80	10.569	2.446
actual atm	80	10.800	

Target No. 3

Source	d.f.	Sum of squares	Mean Square	F
treatments	6	6.72	1.12	0.13
error	553	4597.25	8.31	
Total	559	4603.97		

Since F was less than F_{α} , Accept $H_0: \mu_1 = \mu_2 = \dots = \mu_7$

Level	N	Mean	St. Dev.
combination A	80	12.946	2.970
combination B	80	12.957	2.999
combination C	80	12.916	3.276
combination D	80	12.935	2.965
combination E	80	12.857	3.216
combination F	80	12.904	3.242
actual atm	80	13.220	

Target No. 4

Source	d.f.	Sum of squares	Mean Square	F
treatments	6	7.57	1.26	0.14
error	553	5019.44	9.08	
Total	559	5027.01		

Since F was less than F_{α} , Accept H_0 : $\mu_1 = \mu_2 = \dots = \mu_7$

Level	N	Mean	St. Dev.
combination A	80	13.356	3.119
combination B	80	13.365	3.148
combination C	80	13.324	3.428
combination D	80	13.341	3.103
combination E	80	13.277	3.317
combination F	80	13.302	3.394
actual atm	80	13.650	

b. Height = 5,000 Ft.

Target No. 1

Source	d.f.	Sum of squares	Mean Square	F
treatments	6	4.99	0.83	0.33
error	553	1376.62	2.49	
Total	559	1381.60		

Since F was less than F_{α} , Accept H_0 : $\mu_1 = \mu_2 = \dots = \mu_7$

Level	N	Mean	St. Dev.
combination A	80	12.770	1.615
combination B	80	12.757	1.664
combination C	80	12.711	1.861
combination D	80	12.735	1.606
combination E	80	12.754	1.651
combination F	80	12.702	1.811
actual atm	80	13.000	

Target No. 2

Source	d.f.	Sum of squares	Mean Square	F
treatments	6	8.17	1.36	0.30
error	553	2508.91	4.54	
Total	559	2517.08		

Since F was less than F_{α} , Accept $H_0: \mu_1 = \mu_2 = \dots = \mu_7$

Level	N	Mean	St. Dev.
combination A	80	15.831	2.177
combination B	80	15.821	2.251
combination C	80	15.766	2.494
combination D	80	15.791	2.172
combination E	80	15.812	2.235
combination F	80	15.745	2.454
actual atm	80	16.130	

Target No. 3

Source	d.f.	Sum of squares	Mean Square	F
treatments	6	15.49	2.58	0.29
error	553	4931.79	8.92	
Total	559	4947.27		

Since F was less than F_{α} , Accept $H_0: \mu_1 = \mu_2 = \dots = \mu_7$

Level	N	Mean	St. Dev.
combination A	80	20.200	3.066
combination B	80	20.174	3.148
combination C	80	20.094	3.491
combination D	80	20.126	3.057
combination E	80	20.164	3.127
combination F	80	20.077	3.437
actual atm	80	20.600	

Target No. 4

Source	d.f.	Sum of squares	Mean Square	F
treatments	6	16.71	2.79	0.28
error	553	5498.87	9.94	
Total	559	5515.59		

Since F was less than F_{α} , Accept $H_0: \mu_1 = \mu_2 = \dots = \mu_7$

Level	N	Mean	St. Dev.
combination A	80	20.995	3.240
combination B	80	20.980	3.331
combination C	80	20.897	3.681
combination D	80	20.924	3.225
combination E	80	20.969	3.307
combination F	80	20.876	3.623
actual atm	80	21.420	

c. Height = 10,000 Ft.

Target No. 1

Source	d.f.	Sum of squares	Mean Square	F
treatments	6	9.95	1.66	0.99
error	553	927.72	1.68	
Total	559	937.67		

Since F was less than F_{α} , Accept H_0 : $\mu_1 = \mu_2 = \dots = \mu_7$

Level	N	Mean	St. Dev.
combination A	80	15.421	1.334
combination B	80	15.435	1.369
combination C	80	15.369	1.509
combination D	80	15.414	1.331
combination E	80	15.436	1.358
combination F	80	15.366	1.481
actual atm	80	15.780	

Target No. 2

Source	d.f.	Sum of squares	Mean Square	F
treatments	6	32.35	5.39	1.65
error	553	1808.32	3.25	
Total	559	1840.67		

Since F was less than F_{α} , Accept $H_0: \mu_1 = \mu_2 = \dots = \mu_7$

Level	N	Mean	St. Dev.
combination A	80	19.392	1.873
combination B	80	19.414	1.918
combination C	80	19.320	2.096
combination D	80	19.374	1.861
combination E	80	19.402	1.890
combination F	80	19.320	2.068
actual atm	80	20.050	

Target No. 3

Source	d.f.	Sum of squares	Mean Square	F
treatments	6	51.02	8.50	1.20
error	553	3910.27	7.05	
Total	559	3961.29		

Since F was less than F_{α} , Accept $H_0: \mu_1 = \mu_2 = \dots = \mu_7$

Level	N	Mean	St. Dev.
combination A	80	25.334	2.769
combination B	80	25.357	2.813
combination C	80	25.237	3.071
combination D	80	25.324	2.751
combination E	80	25.360	2.781
combination F	80	25.237	3.031
actual atm	80	26.160	

Target No. 4

Source	d.f.	Sum of squares	Mean Square	F
treatments	6	71.97	11.99	1.36
error	553	4878.97	8.82	
Total	559	4950.94		

Since F was less than F_{α} , Accept $H_0: \mu_1 = \mu_2 = \dots = \mu_7$

Level	N	Mean	St. Dev.
combination A	80	26.449	2.939
combination B	80	26.467	2.978
combination C	80	26.345	3.258
combination D	80	26.439	2.905
combination E	80	26.475	2.948
combination F	80	26.076	4.063
actual atm	80	27.330	

C. ERROR MARGIN ON THE PREDICTED PERFORMANCES

The earlier experimental procedure allowed one to estimate how far apart (in nautical miles) the real FLIR performances might be from the performances predicted by the UFLR model, due to random atmospheric variations of pressure, temperature and relative humidity.

The following intervals about the actual predicted performance, indicate the spread within which the true range may be localized with a probability of 0.9974 (3 standard deviations), for the height levels and atmospheric variations shown :

a. Height = 1,500 Ft.

combination target No.	A	B	C (nmi)	D	E	F
1	± 5.2	± 5.3	± 5.8	± 5.2	± 5.3	± 5.7
2	± 6.7	± 6.8	± 7.4	± 6.7	± 6.8	± 7.3
3	± 8.9	± 9.0	± 9.8	± 8.8	± 9.6	± 9.7
4	± 9.3	± 9.4	±10.3	± 9.3	± 9.9	±10.2

b. Height = 5,000 Ft.

combination target No.	A	B	C (nmi)	D	E	F
1	± 4.8	± 5.0	± 5.6	± 4.8	± 4.9	± 5.4
2	± 6.5	± 6.7	± 7.5	± 6.5	± 6.7	± 7.3
3	± 9.2	± 9.4	±10.5	± 9.2	± 9.4	±10.3
4	± 9.7	±10.0	±11.0	± 9.6	± 9.9	±10.8

c. Height = 10,000 Ft.

combination target No.	A	B	C (nmi)	D	E	F
1	± 4.0	± 4.1	± 4.52	± 3.99	± 4.07	± 4.4
2	± 5.61	± 5.75	± 6.28	± 5.58	± 5.67	± 6.2
3	± 8.3	± 8.43	± 9.21	± 8.25	± 8.34	± 9.1
4	± 8.81	± 8.93	± 9.77	± 8.71	± 8.84	±12.2

The following intervals about the mean of each dithered profile, indicate the estimated errors on the predicted detection ranges (3 standard deviations), for the height levels of 1,500 ft., 5,000 ft. and 10,000 ft. The intervals were calculated by averaging each of the 48 UFLR output files (see chapter III, paragraph C.2. Also see appendix 8):

a. Height = 1,500 Ft.

Combination A

FILE	target No.1		No.2		No.3		No.4	
	ave	Err	ave	Err	ave	Err	ave	Err
file1A	6.2	1.81	7.2	2.26	8.48	2.85	8.68	3.00
file2A	9.1	1.92	10.9	2.50	13.38	3.30	13.81	3.50
file3A	6.4	1.38	7.5	1.72	8.89	2.33	9.10	2.44
file4A	8.8	1.99	10.64	2.58	12.96	3.34	13.35	3.47
file5A	11.26	2.62	13.71	3.51	17.06	4.67	17.70	4.87
file6A	10.17	2.14	12.30	2.83	15.2	3.82	15.72	4.03
file7A	9.19	1.51	11.03	1.92	13.47	2.59	13.90	2.67
file8A	9.57	2.22	11.51	2.91	14.13	3.91	14.59	4.17

Combination B

File	target No.1		No.2		No.3		No.4	
	ave	Err	ave	Err	ave	Err	ave	Err
file1B	5.65	2.0	7.27	0.96	8.54	3.65	8.72	3.76
file2B	9.12	1.95	10.95	2.47	13.38	2.34	13.79	3.49
file3B	6.48	1.68	7.54	2.16	8.88	2.75	9.10	2.94
file4B	8.90	2.37	10.66	3.00	12.96	4.09	13.38	4.31
file5B	11.24	2.69	13.67	3.55	17.00	4.80	17.65	5.03
file6B	10.17	2.87	12.26	2.87	15.15	3.96	15.68	4.17
file7B	9.22	1.80	11.05	2.25	13.51	3.00	13.95	3.17
file8B	9.61	2.43	11.55	3.16	14.21	4.21	14.65	4.43

Combination C

File	target No.1		No.2		No.3		No.4	
	ave	Err	ave	Err	ave	Err	ave	Err
file1C	6.30	3.75	7.33	4.68	8.63	5.96	8.84	6.19
file2C	9.11	3.00	10.93	3.87	13.33	5.18	13.79	5.47
file3C	6.43	2.92	7.50	3.60	8.84	4.63	9.04	4.81
file4C	8.89	3.93	10.60	4.93	12.93	6.54	13.30	6.85
file5C	11.16	3.68	13.55	4.72	16.89	6.48	17.47	6.77
file6C	10.08	3.33	12.17	4.34	15.00	5.79	15.53	6.14
file7C	9.21	3.30	11.05	4.13	13.50	5.60	13.95	5.82
file8C	9.62	3.74	11.56	4.72	14.19	6.35	14.64	6.63

Combination D

file1D	6.18	1.66	7.18	2.06	8.42	2.73	8.63	2.76
file2D	9.13	1.86	10.96	2.39	13.39	3.23	13.83	3.37
file3D	6.45	1.41	7.53	1.68	8.88	2.28	9.07	2.34
file4D	8.84	1.83	10.59	2.34	12.87	3.12	13.27	3.27
file5D	11.25	2.58	13.66	3.43	17.04	4.59	17.62	4.80
file6D	10.16	2.14	12.26	2.76	15.14	3.78	15.67	4.00
file7D	9.22	1.45	11.07	1.79	13.53	2.41	13.97	2.51
file8D	9.61	2.09	11.57	2.68	14.21	3.63	14.62	3.57

Combination E

file1E	6.21	2.17	7.2	2.67	8.48	3.42	8.68	3.50
file2E	9.15	1.82	10.97	2.38	13.41	3.13	13.83	3.32
file3E	6.45	1.66	7.54	2.00	8.87	2.63	7.00	2.75
file4E	8.84	2.19	10.59	2.86	12.89	3.70	13.30	3.88
file5E	11.24	2.69	13.67	3.55	17.03	4.81	17.65	5.00
file6E	10.13	2.20	12.23	2.84	15.13	3.87	15.63	4.00
file7E	9.22	1.79	11.00	2.27	13.57	3.00	14.00	3.19
file8E	9.63	2.41	11.58	3.00	14.24	4.00	14.71	4.29

Combination F

file1F	6.24	3.58	7.28	4.40	8.57	5.77	8.76	5.96
file2F	9.13	3.00	10.96	3.74	13.39	5.00	13.82	5.27
file3F	6.44	2.85	7.49	3.54	8.85	4.46	9.05	4.65
file4F	8.82	3.70	10.55	4.75	12.85	6.22	13.25	6.53
file5F	11.13	3.50	13.50	4.57	16.83	6.26	17.41	6.47
file6F	10.06	3.12	12.13	3.97	15.00	5.66	15.50	5.95
file7F	9.23	3.23	11.00	4.00	13.54	5.50	13.96	5.74
file8F	9.62	3.61	11.53	4.64	14.21	6.16	14.68	6.48

b. Height = 5,000 Ft.

Combination A

File	target No.1		No.2		No.3		No.4	
	ave	Err	ave	Err	ave	Err	ave	Err
file1A	10.63	4.09	13.00	5.53	16.23	7.68	16.82	8.10
file2A	12.60	2.55	15.60	3.43	19.89	4.92	20.65	5.15
file3A	10.78	2.59	13.17	3.52	16.47	4.78	17.05	5.10
file4A	13.50	3.15	16.78	4.34	21.48	6.13	22.35	6.51
file5A	14.54	2.50	18.24	3.45	23.60	5.00	24.60	5.25
file6A	13.82	2.44	17.24	3.47	22.17	5.00	23.08	5.28
file7A	12.85	2.11	15.87	2.80	20.25	4.00	21.04	4.20
file8A	13.44	3.36	16.75	4.72	21.50	6.87	22.37	7.31

Combination B

file1B	10.45	3.60	12.76	4.80	15.90	6.68	16.46	6.96
file2B	12.63	2.63	15.61	3.52	19.89	4.95	20.69	5.27
file3B	10.81	2.92	13.19	4.00	16.49	5.42	17.08	5.70
file4B	13.50	3.45	16.80	4.68	21.49	6.52	22.35	6.93
file5B	14.50	2.70	18.27	3.81	23.61	5.32	24.63	5.65
file6B	13.84	2.65	17.26	3.74	22.19	5.26	23.13	5.59
file7B	12.84	2.42	16.00	3.24	20.28	4.48	21.08	4.78
file8B	13.46	3.58	16.77	5.04	21.54	7.16	22.42	7.57

Combination C

file1C	10.47	4.95	12.78	6.65	15.92	9.22	16.50	9.66
file2C	12.49	3.84	15.56	4.41	19.79	6.25	20.58	6.57
file3C	10.77	3.98	13.14	5.40	16.40	7.39	17.00	7.76
file4C	13.45	4.46	16.71	6.00	21.39	8.28	22.25	8.75
file5C	14.51	3.50	18.18	4.92	23.52	6.89	24.51	7.29
file6C	13.77	3.42	17.18	4.78	22.07	6.72	22.99	7.12
file7C	12.82	3.45	15.88	4.64	20.24	6.54	21.03	6.93
file8C	13.41	4.49	16.70	6.22	21.42	8.76	22.32	9.23

Combination D

file1D	10.39	2.93	12.67	3.91	15.76	5.40	16.32	5.68
file2D	12.62	2.46	15.62	3.36	19.89	4.81	20.67	5.07
file3D	10.78	2.42	13.19	3.35	16.45	4.57	17.03	4.80
file4D	13.44	3.02	16.72	4.21	21.39	5.93	22.26	6.24
file5D	14.52	2.40	18.21	3.45	23.55	4.86	23.05	5.25
file6D	13.82	2.42	17.24	3.46	22.15	5.04	23.05	5.25
file7D	12.85	2.04	15.91	2.85	20.28	3.95	21.09	4.16
file8D	13.46	3.28	16.77	4.64	21.54	6.65	22.42	7.04

Combination E

File	Target	No.1	No.2	No.3	No.4
	ave	Err	Ave	Ave	Ave
			Err	Err	Err
file1E	10.42	3.42	12.70	15.84	16.40
file2E	16.63	2.55	4.60	6.26	6.72
file3E	10.79	2.74	13.20	19.92	20.71
file4E	13.47	3.28	3.79	5.18	5.33
file5E	14.54	2.69	16.73	21.42	22.28
file6E	13.83	2.53	4.52	6.33	6.67
file7E	12.88	2.39	18.27	23.61	24.63
file8E	13.47	3.50	3.81	5.32	5.65
			17.24	22.17	23.07
			3.65	5.15	5.49
			15.93	20.32	21.14
			3.23	4.52	4.80
			16.79	21.56	22.45
			4.90	7.00	7.44

Combination F

file1F	10.45	4.74	12.71	15.85	16.44
file2F	12.58	3.26	6.40	8.87	9.33
file3F	10.76	3.87	15.56	19.83	20.60
file4F	13.40	4.26	4.29	6.11	6.46
file5F	14.49	3.39	13.14	16.40	17.00
file6F	13.76	3.27	5.12	7.12	7.42
file7F	12.82	3.36	16.65	21.29	22.16
file8F	13.39	4.34	5.68	7.95	8.36
			18.17	23.49	24.47
			4.75	6.61	7.06
			17.17	22.06	22.97
			4.60	6.50	6.87
			15.88	20.26	21.04
			4.57	6.39	6.75
			16.68	21.44	22.33
			6.03	8.48	9.03

c. Height = 10,000 Ft.

Combination A

File	target	No.1	No.2	No.3	No.4
	ave	Err	ave	ave	ave
			Err	Err	Err
file1A	13.92	3.86	17.38	22.45	23.41
file2A	15.24	2.57	5.00	7.47	7.89
file3A	13.94	3.07	19.09	24.90	26.00
file4A	16.31	2.96	3.75	5.69	6.02
file5A	16.77	1.75	17.38	22.38	23.31
file6A	16.15	2.10	4.07	6.19	6.58
file7A	15.16	1.61	20.63	27.09	28.30
file8A	15.88	3.39	4.65	6.97	7.44
			21.27	28.05	29.33
			2.56	3.87	4.20
			20.37	26.75	27.95
			3.34	5.09	5.41
			18.96	24.69	25.75
			2.46	3.73	3.92
			20.06	26.36	27.54
			5.24	7.99	8.54

Combination B

file1B	13.95	4.23	17.42	22.54	23.48
file2B	15.25	2.49	5.63	8.35	8.82
file3B	13.93	3.34	19.09	24.92	25.98
file4B	16.31	3.14	3.58	5.52	5.75
file5B	16.79	1.76	17.38	22.37	23.32
file6B	16.15	2.25	4.38	6.57	6.96
file7B	15.19	1.92	20.62	27.08	28.30
file8B	15.90	3.46	4.69	6.98	7.47
			21.37	28.07	29.34
			2.68	4.04	4.37
			20.38	26.76	27.93
			3.40	5.22	5.49
			18.98	24.74	25.81
			2.70	4.07	4.25
			20.07	26.38	27.58
			5.30	8.03	8.54

Combination C

File	Target No.1		No.2		No.3		No.4	
	ave	Err	Ave	Err	Ave	Err	Ave	Err
file1C	13.93	5.37	17.42	7.42	22.54	10.80	23.48	11.46
file2C	15.17	2.81	19.00	3.92	24.76	5.92	25.84	6.20
file3C	13.85	4.14	17.25	5.40	22.27	8.03	23.18	8.44
file4C	16.23	3.60	20.50	5.20	26.92	7.75	28.12	8.19
file5C	16.72	2.26	21.21	3.41	27.96	5.07	29.23	5.42
file6C	16.08	2.74	20.27	4.06	26.59	6.10	27.80	6.48
file7C	15.14	2.68	18.94	3.72	24.64	5.40	25.70	5.75
file8C	15.83	3.94	19.97	5.81	26.22	8.84	27.41	9.42

Combination D

file1D	13.88	3.71	17.33	4.80	22.40	7.11	23.35	7.52
file2D	15.24	2.52	19.08	3.70	24.94	5.65	26.02	5.97
file3D	13.93	3.00	17.36	3.90	22.35	5.98	23.31	6.33
file4D	16.27	3.03	20.56	4.59	26.99	7.01	28.22	7.29
file5D	16.75	1.68	21.26	2.63	28.03	3.94	29.29	4.19
file6D	16.14	2.20	20.36	3.41	26.75	5.15	27.93	5.05
file7D	15.17	1.76	18.97	2.55	24.74	3.78	25.81	3.94
file8D	15.93	3.34	20.07	5.10	26.40	7.86	27.58	8.37

Combination E

file1E	13.90	4.13	17.38	5.40	22.47	8.00	23.46	8.49
file2E	15.26	2.45	19.12	3.57	24.95	5.41	26.03	5.72
file3E	13.95	3.15	17.37	4.12	22.39	6.24	23.33	6.70
file4E	16.30	3.01	20.58	4.61	27.04	6.80	28.25	7.33
file5E	16.79	1.76	21.29	2.63	28.07	4.04	29.34	4.37
file6E	16.17	2.23	20.37	3.43	26.75	5.25	27.93	5.54
file7E	15.19	1.93	19.01	2.77	24.78	4.11	25.86	4.32
file8E	15.93	3.39	20.10	5.20	26.43	7.88	27.60	8.44

Combination F

file1F	13.92	5.18	17.37	7.01	22.47	10.42	23.41	10.96
file2F	15.16	2.76	19.02	3.92	24.79	5.81	25.89	6.11
file3F	13.87	4.02	17.28	5.30	22.27	7.80	23.22	8.28
file4F	16.21	3.41	20.49	5.10	26.89	7.53	28.07	8.00
file5F	16.71	2.22	21.19	3.27	27.95	4.90	29.22	5.26
file6F	16.09	2.64	20.28	4.03	26.63	6.01	27.81	6.38
file7F	15.13	2.63	18.95	3.66	24.67	5.40	25.73	5.64
file8F	15.84	3.88	19.98	5.73	26.23	8.70	27.41	9.26

D. GRAPHICAL DISPLAY OF THE ACTUAL AND PREDICTED PERFORMANCES

Appendix 10 contains the plots of the UFLR predicted performances obtained for the different dithered atmospheric profiles. A graphical comparison between the actual (undithered) and the dithered performances by the program UFLR, for the detection of the four different sized targets is shown.

E. CONCLUSIONS AND RECOMMENDATIONS

It has been demonstrated that the predicted performance by the program UFLR is affected by random atmospheric variations of pressure, temperature and relative humidity, as a consequence of changes in the actual meteorological conditions.

The comparison of the predicted FLIR performances obtained from the simulated atmospheric profiles (dithered profiles), with the performance obtained from the actual atmospheric profiles (undithered profiles), allowed one to conclude that the detection of a given surface target for a given flight altitude may vary in range due to random atmospheric variations.

The plot of the dithered performances appeared as a spread of curves around the undithered performance. A normal distribution of the spread of predicted detection ranges of four different sized targets for the height levels of 1,500 ft., 5,000 ft. and 10,000 ft. was found.

It is recommended before starting FLIR surveillance operations, to perform atmospheric simulations along with the radiosonde readings to estimate changes on the atmospheric conditions in time and position for the given operational area during the operation hours.

It is also recommended that a statistical analysis be performed using a large number of radiosonde profiles and more replications for the dithered FLIR performances, otherwise the data used may not show the true variability. A large amount of data available, could improve the precision on the mean and the estimated error ranges about the predicted values.

APPENDIX 1

COMPUTER PROGRAM UFLR

C	PROGRAM UFLR	UFL00010
	CHARACTER*20 INAME,ONAME	UFL00020
	COMMON /COMPPER/ RA(18,15),TRANS(18,15)	UFL00030
	COMMON /COMPPNT/ PREDHT(15)	UFL00040
	COMMON /ENVIRO/ Z(55),P(55),T(55),RH(55),VIS,HT0,PRO,FF	UFL00050
	COMMON /MISCELL/ ANGLE(18),NMAX,NRAY	UFL00060
	COMMON /PERFPNT/ PERFR(3,5,15)	UFL00070
	COMMON /SUBPERF/ NUMHT,TDI(5),TGTX(5),TGTY(5),NUMTGT	UFL00080
	COMMON /LUNITS/ LUIN, LUERR, LUOUT	UFL00090
	OPEN (LUERR,FILE='UFLR.OUT',STATUS='unknown')	UFL00100
	IOS = 0	UFL00110
34	WRITE (*,*) ' ENTER INPUT RADIOSONDE FILENAME : '	UFL00120
	READ (*,'(A)') INAME	UFL00130
	OPEN (LUIN,FILE=INAME,STATUS='OLD',ERR=3,IOSTAT=IOS)	UFL00140
3	IF (IOS.NE.0) THEN	UFL00150
	WRITE (*,*) ' OPEN ERROR - FILENAME MUST EXIST'	UFL00160
	GO TO 34	UFL00170
	ENDIF	UFL00180
	OPEN (UNIT = 9,FILE ='UFFFF',STATUS ='OLD')	UFL00190
C		UFL00200
C	MAIN LOOP	UFL00210
C	*****	UFL00220
	DO 88 NREP = 1,10	UFL00230
	CALL FLIRIN (INAME,ONAME)	UFL00240
	CALL ATMOS (LUIN,NMAX)	UFL00250
	CALL PROFILE	UFL00260
	CALL TRNSMTA	UFL00270
	CALL PERFORM	UFL00280
	CALL MSGOUT (VIS,FF,LUOUT,INAME,ONAME)	UFL00290
	REWIND 9	UFL00300
88	CONTINUE	UFL00310
	STOP	UFL00320
	END	UFL00330
C		UFL00340
C		UFL00350
	SUBROUTINE FLIRIN (INAME,ONAME)	UFL00360
C	*****	UFL00370
C		UFL00380
	COMMON /ENVIRO/ Z(55),P(55),T(55),RH(55),VIS,HT0,PRO,FF	UFL00390
	COMMON /MISCELL/ ANGLE(18),NMAX,NRAY	UFL00400
	COMMON /SUBPERF/ NUMHT,TDI(5),TGTX(5),TGTY(5),NUMTGT	UFL00410
	COMMON /LUNITS/ LUIN, LUERR, LUOUT	UFL00420
	COMMON /FLIRPAR/ A1(3),A2(3),EX(3),EY(3),CRIT(3)	UFL00430
	CHARACTER*20 INAME,ONAME	UFL00440
	DO 2 I=1,24	UFL00450
	WRITE (*,*) ' '	UFL00460
2	CONTINUE	UFL00470
	WRITE (*,*) ' P R O G R A M U F L R '	UFL00480
	WRITE (*,*)	UFL00490
	&' COMPUTES FLIR SYSTEM PERFORMANCE FROM P, T, AND RH SOUNDINGS'	UFL00500
97	WRITE(*,*)' ENTER OUTPUT FILE NAME '	UFL00510
	READ(*,'(A20)') ONAME	UFL00520
	OPEN (LUOUT,FILE=ONAME,STATUS='NEW',ERR=99)	UFL00530
	GO TO 98	UFL00540
99	WRITE(*,*)' OUTPUT FILE ALREADY EXISTS! ENTER NEW NAME '	UFL00550
	GO TO 97	UFL00560
98	WRITE (*,*) ' '	UFL00570
	WRITE (*,*) ' '	UFL00580
	WRITE (*,*) ' '	UFL00590
	WRITE (LUOUT,'(///',' INPUT FILENAME: ','A20)') INAME	UFL00600
	WRITE (LUOUT,'(' OUTPUT FILENAME: ','A20)') ONAME	UFL00610
C	WRITE (LUOUT,104)	UFL00620
C	WRITE (LUOUT,103) (I,P(I),T(I),RH(I),I=1,NMAX)	UFL00630
	DO 6 I=1,3	UFL00640
	A1(I) = 0	UFL00650
	A2(I) = 0	UFL00660
	EX(I) = 0	UFL00670
	EY(I) = 0	UFL00680
6	CONTINUE	UFL00690
	DO 7 I=1,5	UFL00700
	TDI(I) = 0	UFL00710
	TGTX(I) = 0	UFL00720

	TGT(I) = 0	UFL00730
7	CONTINUE	UFL00740
	NUMTGT = 0	UFL00750
	FF = 0	UFL00760
	VIS = 0	UFL00770
	PRO = 0	UFL00780
	HTO = 0	UFL00790
	WRITE (*,*) ' '	UFL00800
	WRITE (*,*) ' '	UFL00810
	WRITE (*,*) ' '	UFL00820
	WRITE (*,*) ' '	UFL00830
	WRITE (*,*) ' '	UFL00840
	WRITE (*,*) ' *****'	UFL00850
	WRITE (*,*) ' *'	UFL00860
	WRITE (*,*) ' *'	UFL00870
	WRITE (*,*) ' * AEROSOL MODEL INPUTS	UFL00880
	WRITE (*,*) ' *'	UFL00890
	WRITE (*,*) ' *'	UFL00900
	WRITE (*,*) ' *****'	UFL00910
	WRITE (*,*) ' '	UFL00920
	WRITE (*,*) ' '	UFL00930
	WRITE (*,*) ' '	UFL00940
12	WRITE (*,*) ' ENTER RADIOSONDE LAUNCH HEIGHT (M) : '	UFL00950
	READ (9,*) HTO	UFL00960
	IF (HTO.LT.0.0) GO TO 12	UFL00970
	WRITE (*,*) ' '	UFL00980
13	WRITE (*,*) ' ENTER RADIOSONDE LAUNCH PRESSURE (MB) : '	UFL00990
	READ (9,*) PRO	UFL01000
	IF (PRO.LT.0.0) GO TO 13	UFL01010
	WRITE (*,*) ' '	UFL01020
14	WRITE (*,*) ' ENTER SURFACE WIND SPEED (M/S) : '	UFL01030
	READ (9,*) FF	UFL01040
	IF (FF.LT.0.0) GO TO 14	UFL01050
	WRITE (*,*) ' '	UFL01060
	WRITE (*,*) ' ENTER VISIBILITY (KM) (-1 IF UNKNOWN) : '	UFL01070
	READ (9,*) VIS	UFL01080
	WRITE (*,*) ' '	UFL01090
	WRITE (LUOUT,106)	UFL01100
	WRITE (LUOUT,107) HTO,PRO,FF,VIS	UFL01110
	WRITE (*,*) ' '	UFL01120
	WRITE (*,*) ' '	UFL01130
	WRITE (*,*) ' '	UFL01140
	WRITE (*,*) ' '	UFL01150
	WRITE (*,*) ' '	UFL01160
	WRITE (*,*) ' *****'	UFL01170
	WRITE (*,*) ' *'	UFL01180
	WRITE (*,*) ' *'	UFL01190
	WRITE (*,*) ' * FLIR PARAMETERS	UFL01200
	WRITE (*,*) ' *'	UFL01210
	WRITE (*,*) ' *'	UFL01220
	WRITE (*,*) ' *****'	UFL01230
	WRITE (*,*) ' '	UFL01240
	WRITE (*,*) ' '	UFL01250
	WRITE (*,*) ' '	UFL01260
20	WRITE (*,*) ' ENTER A1 ARRAY (A1(DET), A1(CLASS), A1(ID)) : '	UFL01270
	READ (9,*) A1(1),A1(2),A1(3)	UFL01280
	IF (A1(1).LE.0.0 .OR. A1(2).LE.0.0 .OR. A1(3).LE.0.0) GO TO 20	UFL01290
	WRITE (*,*) ' '	UFL01300
21	WRITE (*,*) ' ENTER A2 ARRAY (A2(DET), A2(CLASS), A2(ID)) : '	UFL01310
	READ (9,*) A2(1),A2(2),A2(3)	UFL01320
	IF (A2(1).LE.0.0 .OR. A2(2).LE.0.0 .OR. A2(3).LE.0.0) GO TO 21	UFL01330
	WRITE (*,*) ' '	UFL01340
22	WRITE (*,*) ' ENTER EX ARRAY (EX(DET), EX(CLASS), EX(ID)) : '	UFL01350
	READ (9,*) EX(1),EX(2),EX(3)	UFL01360
	IF (EX(1).LE.0.0 .OR. EX(2).LE.0.0 .OR. EX(3).LE.0.0) GO TO 22	UFL01370
	WRITE (*,*) ' '	UFL01380
23	WRITE (*,*) ' ENTER EY ARRAY (EY(DET), EY(CLASS), EY(ID)) : '	UFL01390
	READ (9,*) EY(1),EY(2),EY(3)	UFL01400
	IF (EY(1).LE.0.0 .OR. EY(2).LE.0.0 .OR. EY(3).LE.0.0) GO TO 23	UFL01410
	WRITE (*,*) ' '	UFL01420
	WRITE (LUOUT,109)	UFL01430
	WRITE (LUOUT,105) (A1(I),A2(I),EX(I),EY(I),I=1,3)	UFL01440

```

WRITE (*,*) ' '
WRITE (*,*) ' '
WRITE (*,*) ' '
WRITE (*,*) ' '
WRITE (*,*) ' '
WRITE (*,*) ' *****'
WRITE (*,*) ' *'
WRITE (*,*) ' *'
WRITE (*,*) ' *'
WRITE (*,*) ' *'
WRITE (*,*) ' *'
WRITE (*,*) ' *'
WRITE (*,*) ' *'
WRITE (*,*) ' *****'
WRITE (*,*) ' '
WRITE (*,*) ' '
WRITE (*,*) ' '
30 WRITE (*,*) ' ENTER NUMBER OF TARGETS TO PROCESS (I <= 4) : '
READ (9,*) NUMTGT
IF (NUMTGT.LT.1.OR.NUMTGT.GT.4) GO TO 30
DO 10 I=1,NUMTGT
WRITE (*,*) ' '
31 WRITE (*,*) ' ENTER TARGET('',I1,'') LENGTH (M) : ''') I
READ (9,*) TGTX(I)
IF (TGTX(I).LT.0.0) GO TO 31
WRITE (*,*) ' '
32 WRITE (*,*) ' ENTER TARGET('',I1,'') HEIGHT (M) : ''') I
READ (9,*) TGTY(I)
IF (TGTY(I).LT.0.0) GO TO 32
WRITE (*,*) ' '
33 WRITE (*,*) ' ENTER TARGET('',I1,
& '') EFFECTIVE DELTA T (DEG C) : ''') I
READ (9,*) TDT(I)
IF (TDT(I).LT.0.0) GO TO 33
10 CONTINUE
WRITE (*,*) ' '
WRITE (LUOUT,111)
WRITE (LUOUT,103) (I,TGTX(I),TGTY(I),TDT(I),I=1,NUMTGT)
RETURN
103 FORMAT (I3,3F9.2)
104 FORMAT (/,' LEV P(MB) T(C) RH(%)')
105 FORMAT (1X,4F9.4)
106 FORMAT (/,' HT0 PR0 FF VIS')
107 FORMAT (4F9.2)
109 FORMAT (/,' A1 A2 EX EY')
111 FORMAT (/,' I TX TY TDT')
END
C
SUBROUTINE ATMOS(LUIN,NMAX)
*****
C
COMMON /ENVIRO/ Z(55),P(55),T(55),RH(55),VIS,HT0,PR0,FF
DO 1 I=1,55
Z(I) = 0
P(I) = 0
T(I) = 0
RH(I) = 0
1 CONTINUE
C *****
K = 1
DO 25 I= 1,5
READ (LUIN,'(A1)')
25 CONTINUE
DO 59 I=1,29
READ (LUIN,*,ERR=59)Z(I),P(I),T(I),RH(I)
C PRINT *, Z(I),P(I),T(I),RH(I)
K = K+1
59 CONTINUE
NMAX = K-1
RETURN
END
C
SUBROUTINE MSGOUT (VIS,WIND,LUOUT,INAME,ONAME)
*****

```

C

```

COMMON /COMPPHT/ PREDHT(15)
COMMON /PERFPNT/ PERFR(3,5,15)
COMMON /SUBPERF/ NUMHT,TDI(5),TGTX(5),TGTY(5),NUMTGT
CHARACTER*20 INAME,ONAME
CHARACTER*17 LABEL(2)
CHARACTER*3 CONT
INTEGER Q
Q = LUOUT
CKMTOFT=3280.84
CMPSTKNT=1.94262
CKMTNMI=0.53961
LABEL(1) = 'DET CLASS ID '
LABEL(2) = ' (NMI) '

```

```

WRITE (*, '( " INPUT RADIOSONDE: ', A20)') INAME
WRITE (*, '( " WIND VELOCITY: ', F6.1, 1X, 'KNOTS', 5X,
*      ' VISIBILITY: ', F6.1, 1X, 'NMI', /)')
*      WIND*CKMSTKNT, VIS*CKMTNMI
WRITE (Q, '( /, " WIND VELOCITY: ', F6.1, 1X, 'KNOTS', /,
*      ' VISIBILITY: ', F6.1, 1X, 'NMI', /)')
*      WIND*CKMSTKNT, VIS*CKMTNMI
WRITE (*, '( " TARGET ', 4(6X, 11, 10X))') (I, I=1, NUMTGT)
WRITE (Q, '( " TARGET ', 4(6X, 11, 10X))') (I, I=1, NUMTGT)
WRITE (*, '( /, " ALTITUDE ', 4A17)') (LABEL(1), I=1, NUMTGT)
WRITE (*, '( " FEET ', 4A17)') (LABEL(2), I=1, NUMTGT)
WRITE (Q, '( /, " ALTITUDE ', 4A17)') (LABEL(1), I=1, NUMTGT)
WRITE (Q, '( " FEET ', 4A17)') (LABEL(2), I=1, NUMTGT)
DO 1 I=1, NUMHT
WRITE (*, 200) NINT(PREDHT(I)*CKMTOFT),
*      ((PERFR(L, J, I)*CKMTNMI, L=1, 3), J=1, NUMTGT)
WRITE (Q, 200) NINT(PREDHT(I)*CKMTOFT),
*      ((PERFR(L, J, I)*CKMTNMI, L=1, 3), J=1, NUMTGT)

```

```

1 CONTINUE
WRITE (Q, '( /)')
WRITE (Q, *) CHAR(12)
WRITE (*, *) ' '
WRITE (*, *) 'TYPE <RETURN> TO CONTINUE '
READ (*, '(A)') CONT
RETURN
200 FORMAT (2X, I5, 4(2X, 3(1X, F4.1)))
END

```

C

```

SUBROUTINE TRNSMTA
*****

```

C

C

```

COMMON /SUBPERF/ NUMHT,TDI(5),TGTX(5),TGTY(5),NUMTGT
COMMON /ENVIRO/ HEIGHT(55),P(55),T(55),RH(55),VIS,HT0,PRO,FF
COMMON /CALVALS/ AH(55),BAERO(55),EH(55),EOMUNIT(55)
COMMON /COMPPER/ RA(18,15),TRANS(18,15)
COMMON /COMPPHT/ PREDHT(15)
COMMON /MISCELL/ ANGLE(18),NMAX,NRAY
DOUBLE PRECISION SUMEH,H1,H2,RE
REAL H(30)
RE = FNERAD (HEIGHT, EOMUNIT, NMAX)
DO 1000 I = 1, NMAX
H(I) = HEIGHT(I) * 0.001
1000 CONTINUE
DO 3000 I = 1, NRAY
ANGL = ANGLE(I)
H1 = .015
SUMEH = 0.
BS = 0.
SLNTRNG = 0.
DO 2000 J = 1, NUMHT
H2 = PREDHT(J)

```

C

C

C

```

CALL INTGRTE (H1, H2, ANGL, TSR, EH, H, RE, QTY, NMAX)
=====
SUMEH = SUMEH + QTY
CALL INTGRTE (H1, H2, ANGL, TSR, BAERO, H, RE, QTY, NMAX)

```

UFL02170
 UFL02180
 UFL02190
 UFL02200
 UFL02210
 UFL02220
 UFL02230
 UFL02240
 UFL02250
 UFL02260
 UFL02270
 UFL02280
 UFL02290
 UFL02300
 UFL02310
 UFL02320
 UFL02330
 UFL02340
 UFL02350
 UFL02360
 UFL02370
 UFL02380
 UFL02390
 UFL02400
 UFL02410
 UFL02420
 UFL02430
 UFL02440
 UFL02450
 UFL02460
 UFL02470
 UFL02480
 UFL02490
 UFL02500
 UFL02510
 UFL02520
 UFL02530
 UFL02540
 UFL02550
 UFL02560
 UFL02570
 UFL02580
 UFL02590
 UFL02600
 UFL02610
 UFL02620
 UFL02630
 UFL02640
 UFL02650
 UFL02660
 UFL02670
 UFL02680
 UFL02690
 UFL02700
 UFL02710
 UFL02720
 UFL02730
 UFL02740
 UFL02750
 UFL02760
 UFL02770
 UFL02780
 UFL02790
 UFL02800
 UFL02810
 UFL02820
 UFL02830
 UFL02840
 UFL02850
 UFL02860
 UFL02870
 UFL02880

C	=====	UFL02890
	BS = BS + QTY	UFL02900
	TAUA = EXP(-BS)	UFL02910
	IF (TAUA.LT.1.E-7) TAUA = 1E-7	UFL02920
	TAUM = FNPOLY(SUMEH)	UFL02930
	IF (TAUM.LT.1.E-7) TAUM = 1E-7	UFL02940
	TAU = TAUM * TAUA	UFL02950
	TRANS(I,J) = TAU	UFL02960
	SLNTRNG = SLNTRNG + TSR	UFL02970
	RA(I,J) = SLNTRNG	UFL02980
	H1 = H2	UFL02990
2000	CONTINUE	UFL03000
3000	CONTINUE	UFL03010
	RETURN	UFL03020
	END	UFL03030
C	FUNCTION AEROSOL (HUMIDTY,WIND,VIS,HEIGHT,HMAX,J)	UFL03040
C	*****	UFL03050
C		UFL03060
	DIMENSION HUMIDTY(55),HEIGHT(55)	UFL03070
	COMMON /SUBAERO/ HT(10),RHCT(6,10),RHC5(6,10),VCT(6,10),VC5(6,10)	UFL03080
	COMMON /CALVALS/ AH(55),BAERO(55),EH(55),EOMUNIT(55)	UFL03090
	REAL BETAH(2)	UFL03100
	REAL BE5(2)	UFL03110
	ALT = HEIGHT(J) * 0.001	UFL03120
	REL = HUMIDTY(J)	UFL03130
	IF (REL.LT.35.) REL = 35.	UFL03140
	IF (WIND.LT.4.) THEN	UFL03150
	V = 0.5	UFL03160
	ELSE	UFL03170
	V = WIND - 3.5	UFL03180
	ENDIF	UFL03190
	I = 1	UFL03200
1000	CONTINUE	UFL03210
	IF (.NOT.(ALT.GE.HT(I).AND. 1.NE.10)) GOTO 1100	UFL03220
	I = I + 1	UFL03230
	GOTO 1000	UFL03240
1100	CONTINUE	UFL03250
	IF (I.EQ.1) I = 2	UFL03260
	DO 1200 K = 1,2	UFL03270
	TERM1 = RHCT(1,I) + RHCT(2,I)*REL + RHCT(3,I)*REL**2	UFL03280
	TERM2 = RHCT(4,I)*REL**3 + RHCT(5,I)*REL**4 + RHCT(6,I)*REL**5	UFL03290
	CRT = TERM1 + TERM2	UFL03300
	TERM1 = VCT(1,I) + VCT(2,I)*V + VCT(3,I)*V**2	UFL03310
	TERM2 = VCT(4,I)*V**3 + VCT(5,I)*V**4 + VCT(6,I)*V**5	UFL03320
	CVT = TERM1 + TERM2	UFL03330
	TERM1 = RHC5(1,I) + RHC5(2,I)*REL + RHC5(3,I)*REL**2	UFL03340
	TERM2 = RHC5(4,I)*REL**3 + RHC5(5,I)*REL**4 + RHC5(6,I)*REL**5	UFL03350
	CR5 = TERM1 + TERM2	UFL03360
	TERM1 = VC5(1,I) + VC5(2,I)*V + VC5(3,I)*V**2	UFL03370
	TERM2 = VC5(4,I)*V**3 + VC5(5,I)*V**4 + VC5(6,I)*V**5	UFL03380
	CV5 = TERM1 + TERM2	UFL03390
	BAVG = CVT * CRT	UFL03400
	BETA5 = CR5 * CV5	UFL03410
	IF (HT(I).LE.1.25) THEN	UFL03420
	IF (I.LE.2.AND.WIND.LE.4.) BAVG = BAVG * 1.2	UFL03430
	IF (I.EQ.3.AND.WIND.LE.4.) BAVG = BAVG * 1.1	UFL03440
	IF (I.LE.3.AND.WIND.GT.10.) BETA5= BETA5*(.95+(WIND-10.)*.006)	UFL03450
	ENDIF	UFL03460
	BETAH(K) = BAVG	UFL03470
	BE5(K) = BETA5	UFL03480
	IF (ALT.GE.4.) GOTO 1300	UFL03490
	I = I - 1	UFL03500
1200	CONTINUE	UFL03510
	DH = HT(I+2) - HT(I+1)	UFL03520
	DZ = ALT - HT(I+1)	UFL03530
	BAVG = BETAH(1) * (BETAH(2)/BETAH(1))**(DZ/DH)	UFL03540
	BVIS = BE5(1) * (BE5(2)/BE5(1))**(DZ/DH)	UFL03550
	GOTO 1400	UFL03560
1300	CONTINUE	UFL03570
	BAVG = BETAH(K)	UFL03580
	BVIS = BE5(K)	UFL03590
		JFL03600

1400	CONTINUE	UFL03610
	AEROSOL = BAVG	UFL03620
	IF (VIS.GT.0.) THEN	UFL03630
	AEROSOL = AEROSOL * (3.91/BVIS)/VIS	UFL03640
	ELSE	UFL03650
	IF (J.EQ.1) VIS = 3.91/BVIS	UFL03660
	ENDIF	UFL03670
	RETURN	UFL03680
	END	UFL03690
C	REAL FUNCTION EXPINT (H1, H, X, IFIRST, NMAX)	UFL03700
C	*****	UFL03710
C	DOUBLE PRECISION HT,H1,H2	UFL03720
	INTEGER IFIRST	UFL03730
	REAL H(30),X(30)	UFL03740
	I1 = IFIRST - 1	UFL03750
C	PRINT *, IFIRST,I1	UFL03760
	IF (IFIRST.GT.1) THEN	UFL03770
	HT = (H1 - H(I1)) / (H(IFIRST) - H(I1))	UFL03780
C	PRINT *, X(IFIRST),X(I1)	UFL03790
	XT = X(IFIRST) / X(I1)	UFL03800
	EXPINT = X(I1) * XT*HT	UFL03810
	ELSE	UFL03820
	EXPINT = X(1)	UFL03830
	ENDIF	UFL03840
	RETURN	UFL03850
	END	UFL03860
C	REAL FUNCTION FNINTRP (YIN, X, Y, I)	UFL03870
C	*****	UFL03880
C	INTEGER I, I1	UFL03890
	REAL F, X(18), Y(18), YIN	UFL03900
	I1 = I - 1	UFL03910
	IF (I.GT.1) THEN	UFL03920
	F = (YIN - Y(I1)) / (Y(I) - Y(I1))	UFL03930
	FNINTRP = X(I1) + (X(I) - X(I1)) * F	UFL03940
	ELSE	UFL03950
	FNINTRP = X(1)	UFL03960
	ENDIF	UFL03970
	RETURN	UFL03980
	END	UFL03990
C	REAL FUNCTION FNPOLY (TERM1)	UFL04000
C	*****	UFL04010
C	DOUBLE PRECISION TERM1,TERM,A	UFL04020
	TERM = TERM1 * 100.	UFL04030
	A = -1.7476382E-10 * TERM	UFL04040
	A = TERM * (A + 6.6253610E-8)	UFL04050
	A = TERM * (A - 9.4287655E-6)	UFL04060
	A = TERM * (A + 6.2482967E-4)	UFL04070
	A = TERM * (A - 4.6695454E-2)	UFL04080
	FNPOLY = A - 1.3993507E-2	UFL04090
	FNPOLY = 10**FNPOLY	UFL04100
	RETURN	UFL04110
	END	UFL04120
C	INTEGER FUNCTION INDXFN (H1,H,NMAX)	UFL04130
C	*****	UFL04140
C	DOUBLE PRECISION H1,H2	UFL04150
	REAL H(30)	UFL04160
	INDXFN = 1	UFL04170
1000	CONTINUE	UFL04180
	IF (.NOT.(H(INDXFN).LE.H1 .AND. INDXFN .LT. NMAX)) GOTO 1100	UFL04190
	INDXFN = INDXFN + 1	UFL04200
	GOTO 1000	UFL04210
1100	CONTINUE	UFL04220
	RETURN	UFL04230
	END	UFL04240
		UFL04250
		UFL04260
		UFL04270
		UFL04280
		UFL04290
		UFL04300
		UFL04310
		UFL04320

C	SUBROUTINE INTGRTE (H1,H2,ANG, SR, X, H, RE, QTY, NMAX)	UFL04330
C	*****	UFL04340
C	DOUBLE PRECISION H1,H2,RE,HPERP,ASQUARE,RHOP,RHOO	UFL04350
	*SINT,COST,SLANTR,QH1,QH2,QHP,HT1,HT2	UFL04360
	INTEGER INDXFN, IFIRST, ILAST, JP	UFL04370
	REAL ANG, EXPINT,H(30),X1,X2	UFL04380
	REAL INTG, QEXP, QTY,RP	UFL04390
	REAL SR, SRT, X(30)	UFL04400
	SRT = 0.	UFL04410
	QEXP = 0.	UFL04420
	SINT = SIN(ANG / 57.2958)	UFL04430
	COST = COS(ANG / 57.2958)	UFL04440
	RHOO = RE + 0.015	UFL04450
	ASQUARE = (SINT * RHOO) ** 2	UFL04460
	IFIRST = INDXFN (H1, H, NMAX)	UFL04470
	QH1 = EXPINT (H1, H, X, IFIRST, NMAX)	UFL04480
	ILAST = INDXFN (H2, H, NMAX)	UFL04490
C	PRINT *, IFIRST, ILAST	UFL04500
	QH2 = EXPINT (H2, H, X, ILAST, NMAX)	UFL04510
	IF (H1.NE.0.015) GOTO 1200	UFL04520
	RP = -RHOO * COST	UFL04530
	IF (RP.LE.0.) GOTO 1200	UFL04540
	RHOP = RHOO * SINT	UFL04550
	HPERP = RHOP - RE	UFL04560
	IF (HPERP.GT.0.) GOTO 1000	UFL04570
	HPERP = 1.E-4	UFL04580
1000	CONTINUE	UFL04590
	JP = INDXFN (HPERP, H, NMAX)	UFL04600
	QHP = EXPINT (HPERP, H, X, JP, NMAX)	UFL04610
	X1 = QHP	UFL04620
	HT1 = HPERP	UFL04630
	DO 1100 I = JP, IFIRST	UFL04640
	X2 = X(I)	UFL04650
	HT2 = H(I)	UFL04660
	IF (I.EQ.IFIRST) THEN	UFL04670
	X2 = QH1	UFL04680
	HT2 = H1	UFL04690
	ENDIF	UFL04700
C	CALL TAYLOR (HT1,HT2,RE, ASQUARE, X1, X2, INTG, SLANTR)	UFL04710
C	=====	UFL04720
	QEXP = QEXP + INTG	UFL04730
	SRT = SRT + SLANTR	UFL04740
	X1 = X2	UFL04750
	HT1 = HT2	UFL04760
1100	CONTINUE	UFL04770
	QEXP = 2. * QEXP	UFL04780
	SRT = 2. * SRT	UFL04790
1200	CONTINUE	UFL04800
	X1 = QH1	UFL04810
	HT1 = H1	UFL04820
	DO 1300 I = IFIRST, ILAST	UFL04830
	X2 = X(I)	UFL04840
	HT2 = H(I)	UFL04850
	IF (I.EQ.ILAST) THEN	UFL04860
	X2 = QH2	UFL04870
	HT2 = H2	UFL04880
	ENDIF	UFL04890
C	CALL TAYLOR (HT1,HT2,RE, ASQUARE, X1, X2, INTG, SLANTR)	UFL04900
C	=====	UFL04910
	QEXP = QEXP + INTG	UFL04920
	SRT = SRT + SLANTR	UFL04930
	X1 = X2	UFL04940
	HT1 = HT2	UFL04950
1300	CONTINUE	UFL04960
	QTY = QEXP	UFL04970
	SR = SRT	UFL04980
	RETURN	UFL04990
	END	UFL05000
		UFL05010
		UFL05020
		UFL05030
		UFL05040

C		UFL05050
	SUBROUTINE PROFILE	UFL05060
C	*****	UFL05070
C		UFL05080
	LOGICAL GRID	UFL05090
	COMMON /ENVIRO/ HEIGHT(55),PRESSUR(55),TEMP(55),HUMIDTY(55),	UFL05100
	* VIS,HTZERO,PRZERO,HIND	UFL05110
	COMMON /CALVALS/ AH(55),BAERO(55),EH(55),EOMUNIT(55)	UFL05120
	COMMON /MISCELL/ ANGLE(18),NMAX,NRAY	UFL05130
	COMMON /LUNITS/ LUIN,LUERR,LUOUT	UFL05140
	DOUBLE PRECISION HT1	UFL05150
	VAPOR(T,P)=(1.0007+(3.46E-6*P))*6.1121*EXP(17.502*T/(240.97+T))	UFL05160
	STAR(T,E)=T*(1.0+0.378*E/(P-E))	UFL05170
	ABSOLUT(E,T)=E/(4.651E-3*T)	UFL05180
	HT0=HTZERO	UFL05190
	PRO=PRZERO	UFL05200
	DO 1000 I=1,NMAX	UFL05210
	PR1=PRESSUR(I)	UFL05220
	TA=TEMP(I)	UFL05230
	ES=(1.0007+(3.46E-6*PR1))*	UFL05240
8	6.1121*EXP(17.502*TA/(240.97+TA))	UFL05250
	EA=HUMIDTY(I)*ES/100.0	UFL05260
	TA=TA+273.15	UFL05270
	TSTAR1=STAR(TA,EA,PR1)	UFL05280
	IF (I.EQ.1) TSTAR0=TSTAR1	UFL05290
	HT1=HT0+29.286*ALOG(PRO/PR1)*(TSTAR1+TSTAR0)*0.5	UFL05300
	IF (ABS(HT1).LT.0.1) HT1=0	UFL05310
	HEIGHT(I)=HT1	UFL05320
	AH(I)=ABSOLUT(EA,TA)	UFL05330
	EOMUNIT(I)=77.53*PR1/TA-0.043*EA+HT1/6.356776	UFL05340
	BAERO(I)=AEROSOL(HUMIDTY,WIND,VIS,HEIGHT,NMAX,I)	UFL05350
	B=6.08*(296.0/TA-1.0)	UFL05360
	PN=PRESSUR(I)-EA	UFL05370
	EH(I)=(EA*EXP(B)+2.E-3*PN)/1013.0	UFL05380
	EH(I)=EH(I)*AH(I)*0.1	UFL05390
	HT0=HT1	UFL05400
	PRO=PR1	UFL05410
	TSTAR0=TSTAR1	UFL05420
C	1000 CONTINUE	UFL05430
	IF (HEIGHT(1).EQ.0.) GOTO 1200	UFL05440
	TA1=TEMP(1)+273.15	UFL05450
	PR1=PRESSUR(1)	UFL05460
	EA=VAPOR((TA1-273.15),PR1)*HUMIDTY(1)*0.01	UFL05470
	TSTR1=STAR(TA1,EA,PR1)	UFL05480
	TA=TA1+.0065*HEIGHT(1)	UFL05490
	IF (PRZERO.EQ.PRESSUR(1).OR.HTZERO.EQ.0.) THEN	UFL05500
	TSTR=TSTR1	UFL05510
	ELSE	UFL05520
	C=14.643*ALOG(PRZERO/PRESSUR(1))	UFL05530
	A=(HTZERO-2.*HEIGHT(1)+2.*C*TSTR1)/(2.*C)	UFL05540
	B=TSTR1*HTZERO/(2.*C)	UFL05550
	D=1.-4.*B/A**2	UFL05560
	IF (D.LT.0.) D=0.	UFL05570
	TSTR=A*(SQRT(D)-1.0)/2.0	UFL05580
	ENDIF	UFL05590
	PS=PRZERO*EXP(HTZERO/(29.286*TSTR))	UFL05600
	A=HTZERO+29.286*TSTR*ALOG(PRZERO/PS)	UFL05610
	IF (A.NE.0.) TSTR=-HTZERO/29.286/ALOG(PRZERO/PS)	UFL05620
	A=PS*(TSTR-TA1)/(TSTR-0.622*TA)	UFL05630
	RHS=100.*A/VAPOR((TA-273.15),PS)	UFL05640
	NMAX=NMAX+1	UFL05650
	DO 1100 I=NMAX,2,-1	UFL05660
	HEIGHT(I)=HEIGHT(I-1)	UFL05670
	AH(I)=AH(I-1)	UFL05680
	EOMUNIT(I)=EOMUNIT(I-1)	UFL05690
	EH(I)=EH(I-1)	UFL05700
	BAERO(I)=BAERO(I-1)	UFL05710
	PRESSUR(I)=PRESSUR(I-1)	UFL05720
	TEMP(I)=TEMP(I-1)	UFL05730
	HUMIDTY(I)=HUMIDTY(I-1)	UFL05740
1100	CONTINUE	UFL05750
	HEIGHT(1)=0.	UFL05760

```

A = HEIGHT(3) - HEIGHT(2)
B = BAERO(3) / BAERO(2)
BAERO(1) = BAERO(2) * B** (HEIGHT(2)/A)
B = EH(3) / EH(2)
EH(1) = EH(2) * B** (HEIGHT(2)/A)
AH(1) = ABSOLUT(A,TA)
EOMUNIT(1) = 77.53*PS/TA - 0.043*A
PRESSUR(1) = PS
TEMP(1) = TA - 273.15
HUMIDTY(1) = RHS
1200 CONTINUE
C
CALL PRINTI (HTZERO,HUMIDTY,PRESSUR,PRZERO,TEMP,WIND,
& VIS,HEIGHT,NMAX,LUERR)
C
=====
RETURN
END
C
SUBROUTINE TAYLOR (HT1,HT2,RE,ASQUARE, X1, X2, INTG, SLANTR)
C
*****
C
DOUBLE PRECISION RH01,RH02,RE,RBAR,RHOB,ASQUARE,TEMP
*R1,R2,DELH,SLANTR,XB,HT1,HT2
REAL ALPHA,FBAR,FDEL2BA,FDEL4BA
REAL INTG,IT1,IT2,IT3
REAL XR,X1,X2
DELH = HT2 - HT1
RH02 = RE + HT2
RH01 = RE + HT1
TEMP = RH01**2 - ASQUARE
IF (TEMP .LT. 1.0) PRINT '(' AT R1 ',' ,3G15.7)',RH01,ASQUARE,TEMP
IF (TEMP .GT. 0.) THEN
R1 = SQRT (TEMP)
ELSE
R1 = 0.
ENDIF
TEMP = RH02**2 - ASQUARE
IF (TEMP .LT. 1.0) PRINT '(' AT R2 ',' ,3G15.7)',RH02,ASQUARE,TEMP
IF (TEMP .GT. 0.) THEN
R2 = SQRT (TEMP)
ELSE
R2 = 0.
ENDIF
SLANTR = R2 - R1
RHOB = 0.5 * (RH01 + RH02)
RBAR = SQRT (RHOB**2 - ASQUARE)
XB = SQRT (X1 * X2)
XR = X2/X1
ALPHA = ALOG(XR) / (RH02 - RH01)
FBAR = RHOB * XB / RBAR
FDEL2BA = ALPHA**2 * FBAR - ASQUARE * XB * (2 * ALPHA - 3 * RHOB
* / RBAR**2) / RBAR**3
FDEL4BA = 5 * RHOB * (3 + 4 * ALPHA * RHOB - 7 * RHOB**2/RBAR**2
* ) / RBAR**2
FDEL4BA = 3 * (ALPHA * (4 + 6 * ALPHA * RHOB) - FDEL4BA) /
* RBAR**2
FDEL4BA = ALPHA**4 * FBAR - ASQUARE * XB * (4 * ALPHA**3 -
* FDEL4BA) / RBAR**3
IT1 = FBAR * DELH
IT2 = FDEL2BA * DELH**3 / 24
IT3 = FDEL4BA * DELH**5 / 1920
INTG = IT1 + IT2 + IT3
RETURN
END
C
REAL FUNCTION FMDDTD (X, Y, R, A, B, EX, EY, C)
C
*****
C
REAL EX,EY,FF,X
DATA SQ7I /0.377964473/
IF (C .GT. 1.0) THEN
FF = C * (R * EX / X) * (R * EY / Y) * 0.3927

```

```

UFL05770
UFL05780
UFL05790
UFL05800
UFL05810
UFL05820
UFL05830
UFL05840
UFL05850
UFL05860
UFL05870
UFL05880
UFL05890
UFL05900
UFL05910
UFL05920
UFL05930
UFL05940
UFL05950
UFL05960
UFL05970
UFL05980
UFL05990
UFL06000
UFL06010
UFL06020
UFL06030
UFL06040
UFL06050
UFL06060
UFL06070
UFL06080
UFL06090
UFL06100
UFL06110
UFL06120
UFL06130
UFL06140
UFL06150
UFL06160
UFL06170
UFL06180
UFL06190
UFL06200
UFL06210
UFL06220
UFL06230
UFL06240
UFL06250
UFL06260
UFL06270
UFL06280
UFL06290
UFL06300
UFL06310
UFL06320
UFL06330
UFL06340
UFL06350
UFL06360
UFL06370
UFL06380
UFL06390
UFL06400
UFL06410
UFL06420
UFL06430
UFL06440
UFL06450
UFL06460
UFL06470
UFL06480

```

```

      IF (FF .GT. 80.0) FF = 80.0
      FNMDTD = A + B * R * SQ7I * EXP(FF) / SQRT(X * Y / C)
    ELSE
      TX = SQRT(1.0 + (R * EX / X)**2)
      TY = SQRT(1.0 + (R * EY / Y)**2)
      FNMDTD = A + B * R * SQRT (TX * TY) / SQRT (X * Y)
    ENDIF
  RETURN
END

C
REAL FUNCTION FNERAD (HEIGHT, EOMUNIT, NMAX)
C
C *****
  INTEGER      NMAX
  REAL         EOMUNIT(55), HEIGHT(55), S1, S2, S3, S4, SLOPE
  S1 = 0.
  S2 = 0.
  S3 = 0.
  S4 = 0.
  DO 1000 I = 1, NMAX
    H = HEIGHT(I)
    EM = EOMUNIT(I)
    S1 = S1 + H
    S2 = S2 + H*H
    S3 = S3 + EM
    S4 = S4 + EM*H
  1000 CONTINUE
  FNERAD = 1000.*(NMAX*S2 - S1*S1)/(NMAX*S4 - S3*S1)
  RETURN
END

C
SUBROUTINE PERFORM
C
C *****
  COMMON /PERFPNT/ PERFR(3,5,15)
  COMMON /COMPPER/ RA(18,15), TRANS(18,15)
  COMMON /COMPPNT/ PREDHT(15)
  COMMON /FLIRPAR/ A1(3), A2(3), EX(3), EY(3), CRIT(3)
  COMMON /MISCELL/ ANGLE(18), NMAX, NRAY
  COMMON /SUBPERF/ NUMHT, TDT(5), TGT(5), TGTX(5), TGTY(5), NUMTGT
  REAL TRANDDUM(18)
  REAL SHRPDET(18)
  REAL MDTD
  REAL RADUM(18)
  DO 1400 J=1, NUMHT
    DO 1000 K=1, NRAY
      RADUM(K) = RA(K,J)
      TRANDDUM(K) = TRANS(K,J)
  1000 CONTINUE
    DO 1300 M=1, NUMTGT
      DO 1200 L=1, 3
        IR = 1
  1100 CONTINUE
        DELT = TDT(M)
        TI = DELT * TRANDDUM(IR)
        R = RADUM(IR)
        MDTD = FNMDTD
        & (TGTX(M), TGTY(M), R, A1(L), A2(L), EX(L), EY(L), CRIT(L))
        SHRPDET(IR) = ALOG10(TI/MDTD)
        SH RPDET(IR) = ALOG10(TI/MDTD)
        IF (SHRPDET(IR) .LT. 0.0) GOTO 1150
        IR = IR + 1
        IF (IR .LE. NRAY) GOTO 1100
  1150 CONTINUE
        IF (IR .LE. 1) SR = 0.0
        IF (IR .GE. 2 .AND. IR .LE. NRAY) THEN
          SR = FNINTRP (0.0, RADUM, SHRPDET, IR)
        ENDIF
        IF (IR .GT. NRAY) SR = RADUM(NRAY)
        IF (SR .LT. PREDHT(J)) SR = 0.0
        PERFR(L,M,J) = SR
  1200 CONTINUE

```

```

UFL06490
UFL06500
UFL06510
UFL06520
UFL06530
UFL06540
UFL06550
UFL06560
UFL06570
UFL06580
UFL06590
UFL06600
UFL06610
UFL06620
UFL06630
UFL06640
UFL06650
UFL06660
UFL06670
UFL06680
UFL06690
UFL06700
UFL06710
UFL06720
UFL06730
UFL06740
UFL06750
UFL06760
UFL06770
UFL06780
UFL06790
UFL06800
UFL06810
UFL06820
UFL06830
UFL06840
UFL06850
UFL06860
UFL06870
UFL06880
UFL06890
UFL06900
UFL06910
UFL06920
UFL06930
UFL06940
UFL06950
UFL06960
UFL06970
UFL06980
UFL06990
UFL07000
UFL07010
UFL07020
UFL07030
UFL07040
UFL07050
UFL07060
UFL07070
UFL07080
UFL07090
UFL07100
UFL07110
UFL07120
UFL07130
UFL07140
UFL07150
UFL07160
UFL07170
UFL07180
UFL07190
UFL07200

```

1300	CONTINUE	UFL07210
1400	CONTINUE	UFL07220
	RETURN	UFL07230
	END	UFL07240
C		UFL07250
C	SUBROUTINE PRINT1 (ZSFC,RH,P,PSFC,T,WINDSFC,VISFC,Z,HLEV,Q)	UFL07260
C	*****	UFL07270
	CHARACTER*24 LOCAT1,SHAME1,DTG1	UFL07280
	INTEGER Q	UFL07290
	DIMENSION RH(HLEV),P(HLEV),T(HLEV),Z(HLEV)	UFL07300
	LOCAT1 = 'FROM UFLR'	UFL07310
	DTG1 = 'SOUNDING FILE FOR PREOS'	UFL07320
	WRITE (Q,100)	UFL07330
	WRITE (Q,100)	UFL07340
	WRITE (Q,100)	UFL07350
	WRITE (Q,200) LOCAT1	UFL07360
	WRITE (Q,200) DTG1	UFL07370
	WRITE (Q,100)	UFL07380
	WRITE (Q,300)	UFL07390
	WRITE (Q,100)	UFL07400
	WRITE (Q,100)	UFL07410
	WRITE (Q,400) WINDSFC	UFL07420
	WRITE (Q,500) VISFC	UFL07430
	WRITE (Q,100)	UFL07440
	WRITE (Q,100)	UFL07450
	WRITE (Q,100)	UFL07460
	WRITE (Q,100)	UFL07470
	WRITE (Q,600) ZSFC	UFL07480
	WRITE (Q,700) PSFC	UFL07490
	WRITE (Q,100)	UFL07500
	WRITE (Q,100)	UFL07510
	WRITE (Q,100)	UFL07520
	WRITE (Q,100)	UFL07530
	WRITE (Q,100)	UFL07540
	WRITE (Q,800)	UFL07550
	WRITE (Q,900)	UFL07560
	DO 1 I=1,HLEV	UFL07570
	WRITE (Q,1000) I,Z(I),P(I),T(I),RH(I)	UFL07580
1	CONTINUE	UFL07590
	RETURN	UFL07600
100	FORMAT ('*****')	UFL07610
200	FORMAT (A24)	UFL07620
300	FORMAT ('M',3X,'E',4X,'U')	UFL07630
400	FORMAT (F16.1,' METERS PER SECOND FOR WIND VELOCITY')	UFL07640
500	FORMAT (F16.1,' KILOMETERS FOR HORIZONTAL SURFACE VISIBILITY')	UFL07650
600	FORMAT (F16.1,' METERS RADIOSONDE LAUNCH HEIGHT')	UFL07660
700	FORMAT (F16.1,' MILLIBARS RADIOSONDE LAUNCH PRESSURE')	UFL07670
800	FORMAT (2X,'I',4X,'Z',18X,'P',8X,'T',5X,'RH')	UFL07680
900	FORMAT ('1***5***10***15***20***25***30***35***40***45***50')	UFL07690
1000	FORMAT (1X,I2,1X,F7.1,13X,F6.1,3X,F5.1,2X,F5.1)	UFL07700
	END	UFL07710
C		UFL07720
C		UFL07730
	BLOCK DATA UNITS	UFL07740
C	*****	UFL07750
	COMMON /LUNITS/ LUIN, LUERR, LUOUT	UFL07760
	DATA LUIN/2/, LUERR/3/, LUOUT/10/	UFL07770
	END	UFL07780
C		UFL07790
	BLOCK DATA BLCKDAT	UFL07800
C	*****	UFL07810
C		UFL07820
	COMMON /MISCELL/ ANGLE(18),NMAX,HRAY	UFL07830
	COMMON /SUBAERO/ HT(10),RHCT(6,10),RHC5(6,10),VCT(6,10),VC5(6,10)	UFL07840
	COMMON /SUBPERF/ HUMHT,TDI(5),TGTX(5),TGTY(5),HUMTGT	UFL07850
	COMMON /COMPNT/ PREDHT(15)	UFL07860
	DATA HRAY / 18/	UFL07870
	DATA HUMHT / 15/	UFL07880
	DATA HT /0.0, 0.25, 0.5, 0.75, 1.0, 1.5, 2.0, 2.5, 3.0, 4.0/	UFL07890
	DATA ANGLE /0.5,25.,45., 62., 82., 85., 86., 87., 87.5, 88.,	UFL07900
	* 88.5, 89., 89.25, 89.5, 89.65, 89.8, 89.9, 90.1/	UFL07910
	DATA PREDHT / .1524, .3048, .4572, .6096, .7620, .9144,	UFL07920

```

*      1.0668, 1.2192, 1.5240, 2.2860, 3.0480, 4.5720, 6.0960,
*      7.6200, 9.1440/
DATA RHCT /
* -2.45940E+00, 2.31733E-01, -8.42434E-03, 1.49617E-04,
* -1.29971E-06, 4.43136E-09, -1.86198E+00, 1.75467E-01,
* -6.37961E-03, 1.13312E-04, -9.84377E-07, 3.35632E-09,
* -1.43224E+00, 1.34935E-01, -4.90491E-03, 8.70970E-05,
* -7.56429E-07, 2.57831E-09, -1.11195E+00, 1.04754E-01,
* -3.80769E-03, 6.76104E-05, -5.87156E-07, 2.00119E-09,
* -8.71668E-01, 8.21378E-02, -2.98632E-03, 5.30380E-05,
* -4.60703E-07, 1.57051E-09, -5.72775E-01, 5.39713E-02,
* -1.96234E-03, 3.48527E-05, -3.02745E-07, 1.03202E-09,
* -4.15996E-01, 3.91913E-02, -1.42486E-03, 2.53035E-05,
* -2.19755E-07, 7.48903E-10, -3.30701E-01, 3.11432E-02,
* -1.13193E-03, 2.00957E-05, -1.74480E-07, 5.94448E-10,
* -2.83120E-01, 2.66638E-02, -9.69172E-04, 1.72068E-05,
* -1.49401E-07, 5.09007E-10, -2.46425E-01, 2.32047E-02,
* -8.43381E-04, 1.49715E-05, -1.29969E-07, 4.42687E-10/
DATA VCT /
* 3.86190E-02, 1.31683E-01, -5.17218E-02, 1.06845E-02,
* -8.16258E-04, 2.32638E-05, 6.62653E-02, 1.31835E-01,
* -5.19959E-02, 1.06615E-02, -8.12327E-04, 2.30867E-05,
* 1.02555E-01, 1.29651E-01, -5.13495E-02, 1.04779E-02,
* -7.97276E-04, 2.26217E-05, 1.48991E-01, 1.24613E-01,
* -4.94785E-02, 1.00658E-02, -7.65523E-04, 2.17177E-05,
* 2.04277E-01, 1.19998E-01, -4.77106E-02, 9.63302E-03,
* -7.30607E-04, 2.06831E-05, 3.41840E-01, 1.06789E-01,
* -4.26887E-02, 8.46758E-03, -6.37369E-04, 1.79116E-05,
* 5.03343E-01, 8.60082E-02, -3.45636E-02, 6.75406E-03,
* -5.05127E-04, 1.41102E-05, 6.60760E-01, 6.11932E-02,
* -2.46867E-02, 4.78597E-03, -3.57129E-04, 9.95953E-06,
* 7.85007E-01, 4.19189E-02, -1.68488E-02, 3.20705E-03,
* -2.37354E-04, 6.57239E-06, 9.28120E-01, 1.42177E-02,
* -5.78919E-03, 1.10629E-03, -8.23232E-05, 2.29040E-06/
DATA RHC5 /
* -6.94393E+00, 6.59361E-01, -2.39796E-02, 4.26102E-04,
* -3.70361E-06, 1.26383E-08, -6.00926E+00, 5.70437E-01,
* -2.07531E-02, 3.68912E-04, -3.20778E-06, 1.09499E-08,
* -5.43463E+00, 5.15297E-01, -1.87411E-02, 3.33003E-04,
* -2.89403E-06, 9.87226E-09, -4.95916E+00, 4.69858E-01,
* -1.70866E-02, 3.03556E-04, -2.63765E-06, 8.99549E-09,
* -4.65080E+00, 4.40152E-01, -1.59982E-02, 2.84052E-04,
* -2.46658E-06, 8.40612E-09, -4.27454E+00, 4.03999E-01,
* -1.46790E-02, 2.60517E-04, -2.26116E-06, 7.70140E-09,
* -4.04180E+00, 3.81728E-01, -1.38689E-02, 2.46133E-04,
* -2.13632E-06, 7.27600E-09, -3.92516E+00, 3.70591E-01,
* -1.34638E-02, 2.38915E-04, -2.07329E-06, 7.05968E-09,
* -3.85834E+00, 3.64325E-01, -1.32402E-02, 2.35020E-04,
* -2.04011E-06, 6.94847E-09, -3.81896E+00, 3.60510E-01,
* -1.31008E-02, 2.32530E-04, -2.01835E-06, 6.87378E-09/
DATA VC5 /
* 4.23048E-01, 2.80934E-02, -2.55180E-05, 1.16505E-03,
* -1.31793E-04, 4.53123E-06, 4.99859E-01, 2.23627E-02,
* 6.78339E-04, 9.19860E-04, -1.09556E-04, 3.85300E-06,
* 5.75766E-01, 2.00378E-02, -1.21409E-04, 9.10420E-04,
* -1.02268E-04, 3.49763E-06, 6.48294E-01, 1.82058E-02,
* -5.62497E-04, 8.08765E-04, -8.77535E-05, 2.96501E-06,
* 7.13230E-01, 1.67557E-02, -1.07838E-03, 7.35784E-04,
* -7.57756E-05, 2.50340E-06, 8.19816E-01, 9.58017E-03,
* -4.06924E-04, 4.41230E-04, -4.73987E-05, 1.58518E-06,
* 8.94962E-01, 6.05276E-03, -4.75565E-04, 2.93650E-04,
* -2.98501E-05, 9.69720E-07, 9.43653E-01, 2.78353E-03,
* 7.26492E-05, 1.05978E-04, -1.30613E-05, 4.63702E-07,
* 9.68667E-01, 1.65996E-03, -1.01433E-04, 9.07833E-05,
* -9.61713E-06, 3.08901E-07, 9.90584E-01, -7.77846E-05,
* 1.56731E-04, -1.99247E-06, -6.92168E-07, 3.13041E-08/
END
BLOCK DATA CLASDAT
*****
COMMON /FLIRPAR/ A1(3),A2(3),EX(3),EY(3),CRIT(3)
DATA CRIT/ 1.0, 67.0, 400.0/

```

```

UFL07930
UFL07940
UFL07950
UFL07960
UFL07970
UFL07980
UFL07990
UFL08000
UFL08010
UFL08020
UFL08030
UFL08040
UFL08050
UFL08060
UFL08070
UFL08080
UFL08090
UFL08100
UFL08110
UFL08120
UFL08130
UFL08140
UFL08150
UFL08160
UFL08170
UFL08180
UFL08190
UFL08200
UFL08210
UFL08220
UFL08230
UFL08240
UFL08250
UFL08260
UFL08270
UFL08280
UFL08290
UFL08300
UFL08310
UFL08320
UFL08330
UFL08340
UFL08350
UFL08360
UFL08370
UFL08380
UFL08390
UFL08400
UFL08410
UFL08420
UFL08430
UFL08440
UFL08450
UFL08460
UFL08470
UFL08480
UFL08490
UFL08500
UFL08510
UFL08520
UFL08530
UFL08540
UFL08550
UFL08560
UFL08570
UFL08580
UFL08590
UFL08600
UFL08610
UFL08620
UFL08630
UFL08640

```

APPENDIX 2

COMPUTER PROGRAM UFLRATM

C	PROGRAM UFLRATM	UFL00010
C	=====	UFL00020
C	*** PURPOSE ***	UFL00030
C	THE FOLLOWING PROGRAM IS USED TO SIMULATE RADIOSONDE PROFILES BY	UFL00040
C	TAKING ACTUAL PRESSURE, TEMPERATURE AND RELATIVE HUMIDITY FOR	UFL00050
C	HEIGHT LEVELS FROM 0 TO 28,000 FT., AND DITHERING THESE VA-	UFL00060
C	LUES EVERY 1,000 FT. USING A GAUSSIAN RANDOM NUMBER GENERATOR.	UFL00070
C		UFL00080
C		UFL00090
C	*** VARIABLE DEFINITIONS ***	UFL00100
C		UFL00110
C	NR = THE DESIRED NUMBER OF REPLICATIONS	UFL00120
C	SIGMAP = STANDARD DEV. APPLIED TO PRESSURE DATA GENERATION	UFL00130
C	SIGMAT = STANDARD DEV. APPLIED TO TEMPERATURE DATA GENERATION	UFL00140
C	SIGMARH = STANDARD DEV. APPLIED TO REL. HUMIDITY DATA GENERATION	UFL00150
C	R = GAUSSIAN RANDOM DEVIATE GENERATOR	UFL00160
C	PR = DITHERED PRESSURE AT A SPECIFIC ELEVATION	UFL00170
C	TE = DITHERED TEMPERATURE AT A SPECIFIC ELEVATION	UFL00180
C	RE = DITHERED REL HUMIDITY AT A SPECIFIC ELEVATION	UFL00190
C	NDATA = NUMBER OF HEIGHT LEVELS	UFL00200
C		UFL00210
C		UFL00220
C	*** VARIABLE DECLARATION ***	UFL00230
C	REAL*8 DSEED	UFL00240
C	INTEGER NREP, COUNT, IC, NDATA, N, NR, I	UFL00250
C		UFL00260
C	REAL SIGMAP, SIGMAT, SIGMARH, PR(29), TE(29), RE(29), R(120), PRESS0,	UFL00270
C	*TEMP, RELH, HEIGHT, PRES	UFL00280
C	DATA NREP/10/, COUNT/0/, NDATA/29/, N/0/, SIGMAP/1.5/, SIGMAT/4./,	UFL00290
C	*SIGMARH/8/	UFL00300
C		UFL00310
C	*** MAIN PROGRAM ***	UFL00320
C		UFL00330
C	OPEN(UNIT=10, FILE='CALL PRE', STATUS='OLD')	UFL00340
C	OPEN(UNIT=11, FILE='CALIF OUT ', STATUS='NEW')	UFL00350
C	DSEED = 123457.D0	UFL00360
C	DO 10 N = 1, NREP	UFL00370
C	DO 5 J = 1, NDATA	UFL00380
5	READ (10,*) PR(J), TE(J), RE(J)	UFL00390
	COUNT = COUNT + 1	UFL00400
	I = 1	UFL00410
	IC = 0	UFL00420
	HEIGHT = 0.0	UFL00430
C	'INTRODUCE HERE THE ACTUAL PRESSURE AT SEA LEVEL = PRESS0'	UFL00440
	PRESS0 = 1015.4	UFL00450
	WRITE(11,200) COUNT	UFL00460
200	FORMAT(' ', ' RESULTS OF THE REPLICATION #', I3)	UFL00470
	WRITE(11,400)	UFL00480
400	FORMAT(' =====', '.,,	UFL00490
*	'	UFL00500
*	' HEIGHT PRESSURE TEMPERATURE REL HUMID', '.,,	UFL00510
*	')	UFL00520
		UFL00530
	NR = 116	UFL00540
	CALL GGNML (DSEED, NR, R)	UFL00550
	DO 20 IC = 1, NDATA	UFL00560
	PRES = PR(IC) + SIGMAP * R(2*I - 1)	UFL00570
	TEMP = TE(IC) + SIGMAT * R(2*I)	UFL00580
	RELH = RE(IC) + SIGMARH * R(2*I + 1)	UFL00590
	I = I + 2	UFL00600
	IF(RELH .GT. 100.) RELH = 98.0	UFL00610
	IF(RELH .LT. 0.0) RELH = 2.0	UFL00620
	IF(PRES .GT. PRESS0) PRES = PR(IC) - 1.0	UFL00630
	WRITE (11,600) HEIGHT, PRES, TEMP, RELH	UFL00640
600	FORMAT(1X,F7.1,5X,F6.1,7X,F6.1,8X,F5.1)	UFL00650
	HEIGHT = HEIGHT + 1000.0	UFL00660
	PRESS0 = PRES	UFL00670
		UFL00680
20	CONTINUE	UFL00690
	REWIND 10	UFL00700
10	CONTINUE	UFL00710
	STOP	UFL00720
	END	

APPENDIX 3

UNDITHERED RADIOSONDE ATMOSPHERIC PROFILES

FILE: CAL1	PRE	FILE: CAL2	PRE	FILE: CAL3	PRE	FILE: CAL4	PRE				
1016.3	22.6	86	1016.8	16.3	95	1013.5	21.7	91	1017.0	14.9	95
981.6	21.9	90	983.7	18.8	63	978.7	19.8	85	981.6	15.1	89
950.2	21.8	37	946.5	20.7	36	944.9	21.0	35	947.2	22.2	18
916.5	20.3	38	914.5	20.6	30	911.4	21.2	28	914.9	20.9	30
880.7	19.1	37	883.8	18.6	37	880.5	19.3	30	882.2	19.8	25
851.1	17.3	35	852.0	17.1	36	849.3	17.4	31	851.8	18.4	18
824.0	16.2	32	821.7	15.2	32	821.1	15.7	27	823.5	16.0	22
795.3	14.4	31	793.7	13.4	32	790.8	13.0	30	794.5	13.3	26
766.7	12.1	27	764.3	11.1	34	764.3	10.5	35	766.1	10.4	37
739.3	9.5	25	737.9	8.9	40	732.3	7.6	42	738.2	7.9	38
709.8	8.3	19	709.4	6.6	39	708.0	5.9	47	710.5	5.5	39
683.9	5.7	15	683.1	4.6	36	682.1	3.6	45	686.9	4.0	23
658.8	4.7	5	659.3	2.7	29	658.2	2.4	32	658.4	2.1	18
636.4	2.4	7	635.9	2.2	8	633.4	0.5	31	634.4	0.6	14
610.1	-0.4	6	611.0	-0.3	8	609.8	-1.3	16	611.1	-0.5	14
590.4	-2.5	10	587.8	-3.0	11	586.3	-3.6	20	588.1	-3.2	15
565.0	-5.2	11	565.7	-4.8	5	563.8	-5.8	21	566.3	-5.5	17
544.7	-7.0	4	545.1	-7.0	4	542.6	-8.1	21	544.1	-7.3	42
525.0	-8.2	7	522.3	-9.5	13	522.2	-9.8	19	522.6	-9.8	34
505.4	-10.8	8	502.9	-11.8	14	501.0	-11.6	12	503.1	-12.4	33
486.3	-12.8	11	483.8	-14.1	18	481.0	-14.1	15	482.4	-14.6	31
464.2	-15.4	11	463.9	-16.9	20	461.4	-16.5	14	463.2	-16.8	32
446.7	-17.2	6	445.9	-18.2	18	443.1	-18.8	16	445.8	-19.2	32
428.8	-19.0	8	428.3	-20.3	8	425.3	-21.2	64	427.5	-20.9	15
411.1	-21.8	41	409.5	-23.1	23	407.9	-23.4	40	415.0	-22.6	5
395.5	-24.3	50	393.9	-25.3	47	391.8	-25.9	16	391.8	-25.9	2
378.3	-27.1	48	377.5	-26.6	32	375.2	-28.6	11	377.6	-27.2	2
362.7	-29.7	42	362.2	-29.1	29	359.3	-30.2	4	362.2	-29.4	3
347.6	-32.0	58	346.3	-31.6	57	344.7	-32.7	5	346.1	-31.5	2

FILE: CAL5	PRE	FILE: CAL6	PRE	FILE: CAL7	PRE	FILE: CAL8	PRE				
1015.8	14.3	100	1014.8	14.6	98	1017.5	15.1	99	1018.6	15.1	92
979.7	21.1	35	979.9	19.8	46	984.0	14.6	80	984.0	13.5	86
948.6	23.2	30	949.3	21.6	38	948.1	19.6	33	949.3	19.7	27
913.6	21.6	28	913.4	21.9	20	915.4	18.5	38	915.4	18.2	31
884.2	20.5	23	882.2	20.4	23	882.0	17.2	34	883.3	16.3	46
852.2	18.8	26	851.4	18.4	33	853.0	15.8	34	852.0	15.1	34
819.5	15.8	30	821.3	16.1	30	822.7	14.4	35	821.5	13.1	37
792.0	13.4	32	792.8	13.6	31	793.4	12.0	39	793.4	11.1	43
764.5	10.7	36	764.1	11.3	31	765.4	9.2	45	765.4	8.9	38
737.9	8.2	39	736.6	8.4	39	736.1	7.0	46	734.4	6.2	45
709.8	6.6	24	709.3	5.8	40	703.7	4.6	50	709.3	4.1	52
684.9	4.6	19	684.2	4.7	9	631.9	1.8	44	683.2	1.8	49
660.1	2.7	24	658.0	1.8	19	657.4	0.0	29	657.4	-0.9	54
635.3	1.2	16	634.2	0.0	6	631.7	-1.3	36	633.6	-2.7	34
610.2	-1.0	16	609.5	-1.9	6	610.1	-2.5	16	609.3	-3.8	62
587.0	-2.4	30	586.4	-3.4	5	586.0	-4.8	24	586.3	-4.4	78
565.7	-4.6	37	564.8	-5.5	5	563.9	-7.5	28	563.9	-7.0	85
543.7	-6.9	28	543.1	-7.2	12	543.1	-9.6	56	541.7	-8.6	81
523.7	-9.2	20	521.9	-9.5	26	521.2	-11.0	85	520.7	-10.6	74
503.3	-11.6	41	501.7	-11.4	27	500.4	-13.1	87	500.6	-12.3	56
480.6	-14.2	10	482.6	-13.7	28	481.8	-14.9	85	480.8	-13.8	24
464.2	-15.5	19	463.2	-16.6	49	462.4	-16.5	80	462.4	-16.0	41
445.8	-17.8	49	443.9	-18.9	68	443.0	-17.3	52	444.4	-18.4	42
428.3	-20.3	34	426.4	-20.9	74	425.2	-19.8	55	425.6	-20.9	44
410.1	-22.5	8	409.1	-22.5	81	408.2	-22.1	50	408.5	-22.7	25
394.1	-24.6	6	392.1	-24.8	81	392.6	-24.6	54	392.4	-25.2	17
376.7	-27.1	8	375.7	-27.3	82	376.4	-26.8	46	376.0	-27.8	23
362.2	-29.6	34	360.9	-29.1	68	359.7	-29.3	51	359.8	-30.3	39
346.7	-31.6	53	345.7	-31.0	45	345.5	-31.9	55	345.7	-32.4	27

APPENDIX 4

DITHERED RADIOSONDE ATMOSPHERIC PROFILES

FILE: CAL1A

RESULTS OF THE REPLICATION # 1
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	22.0	91.8
1000.0	984.1	20.2	98.0
2000.0	953.4	21.5	19.8
3000.0	916.4	19.3	31.6
4000.0	877.3	18.8	33.8
5000.0	851.5	18.6	30.6
6000.0	822.1	14.5	36.4
7000.0	790.7	15.6	30.6
8000.0	767.7	13.0	26.2
9000.0	740.3	8.5	25.1
10000.0	711.0	8.9	18.7
11000.0	684.1	5.9	19.8
12000.0	663.0	3.0	2.0
13000.0	639.9	1.5	13.1
14000.0	615.1	1.3	2.0
15000.0	592.1	-1.3	18.5
16000.0	567.9	-4.0	9.0
17000.0	541.9	-6.0	10.6
18000.0	526.2	-9.2	2.0
19000.0	505.8	-11.6	3.0
20000.0	488.8	-13.5	27.2
21000.0	462.0	-15.3	2.0
22000.0	443.0	-17.3	6.8
23000.0	427.4	-19.7	2.0
24000.0	409.5	-22.1	30.9
25000.0	399.3	-23.8	47.5
26000.0	380.5	-26.3	50.1
27000.0	363.2	-28.6	57.5
28000.0	346.0	-31.2	41.4

RESULTS OF THE REPLICATION # 2
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	23.0	99.0
1000.0	980.9	22.9	86.3
2000.0	946.4	20.9	54.8
3000.0	919.3	20.2	31.4
4000.0	884.1	20.8	37.5
5000.0	851.3	19.4	30.8
6000.0	819.6	17.5	23.1
7000.0	798.5	13.2	33.9
8000.0	768.5	12.2	34.2
9000.0	738.6	9.3	27.2
10000.0	709.8	9.3	7.3
11000.0	686.0	6.7	16.2
12000.0	655.8	6.0	2.0
13000.0	639.3	0.3	2.0
14000.0	610.0	-0.3	1.7
15000.0	591.7	-3.4	15.2
16000.0	562.9	-4.9	20.1
17000.0	543.1	-5.6	2.7
18000.0	526.7	-9.1	9.7
19000.0	507.6	-10.3	0.5
20000.0	491.1	-14.8	9.0
21000.0	464.3	-15.9	2.0
22000.0	444.6	-18.4	21.0
23000.0	429.7	-18.4	12.3
24000.0	413.7	-21.9	45.0
25000.0	395.7	-23.6	33.5
26000.0	379.9	-27.4	46.7
27000.0	367.8	-29.8	45.2
28000.0	347.2	-30.9	53.3

RESULTS OF THE REPLICATION # 3
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1014.4	22.8	86.9
1000.0	985.3	22.5	87.5
2000.0	952.8	21.0	25.3
3000.0	915.3	20.3	50.8
4000.0	878.5	19.8	36.2
5000.0	852.6	17.5	39.4
6000.0	825.2	15.1	14.8
7000.0	793.3	15.2	35.5
8000.0	768.4	10.5	28.0
9000.0	739.4	11.1	31.1
10000.0	707.3	8.2	9.0
11000.0	684.0	6.1	17.5
12000.0	659.7	3.2	25.9
13000.0	634.3	3.8	3.2
14000.0	613.4	-1.6	2.0
15000.0	592.0	-3.1	9.1

16000.0	566.9	-5.7	26.5
17000.0	540.6	-6.3	2.0
18000.0	531.4	-10.1	11.0
19000.0	505.2	-11.0	12.0
20000.0	484.5	-13.2	13.5
21000.0	468.1	-15.5	17.5
22000.0	445.7	-17.8	1.9
23000.0	430.2	-16.9	17.7
24000.0	406.9	-22.7	54.2
25000.0	397.4	-23.7	54.7
26000.0	379.5	-28.2	42.3
27000.0	362.4	-30.6	28.2
28000.0	350.0	-32.4	54.1

RESULTS OF THE REPLICATION # 4
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	23.5	79.5
1000.0	978.2	21.8	93.3
2000.0	949.2	22.3	47.8
3000.0	915.4	21.0	28.2
4000.0	880.0	19.7	32.4
5000.0	854.9	17.7	23.7
6000.0	826.9	15.9	33.6
7000.0	792.3	12.9	45.4
8000.0	768.0	12.0	30.8
9000.0	737.5	8.6	25.7
10000.0	709.8	9.4	27.1
11000.0	686.0	7.1	3.4
12000.0	655.1	4.5	2.0
13000.0	640.2	2.2	12.3
14000.0	610.1	-0.1	6.8
15000.0	586.3	-2.4	2.0
16000.0	562.6	-4.1	1.8
17000.0	543.9	-5.5	8.2
18000.0	523.3	-8.8	14.8
19000.0	503.8	-13.1	9.8
20000.0	485.0	-12.8	11.4
21000.0	465.7	-15.1	5.1
22000.0	451.5	18.3	0.4
23000.0	429.3	-18.7	4.2
24000.0	411.4	-22.2	42.4
25000.0	397.3	-25.6	59.8
26000.0	379.6	-27.1	57.7
27000.0	361.2	-30.9	50.0
28000.0	347.4	-31.2	67.4

RESULTS OF THE REPLICATION # 5
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	21.7	91.8
1000.0	981.7	23.4	77.4
2000.0	950.5	21.1	26.8
3000.0	910.7	19.2	41.2
4000.0	883.9	18.9	40.8
5000.0	855.4	17.1	37.0
6000.0	822.5	16.2	49.4
7000.0	793.1	14.2	32.5
8000.0	768.1	11.8	19.1
9000.0	742.2	7.8	20.4
10000.0	712.4	9.7	28.2
11000.0	682.7	6.3	11.4
12000.0	658.6	4.5	11.3
13000.0	635.5	1.2	7.5
14000.0	611.0	0.3	16.7
15000.0	590.8	-1.9	22.8
16000.0	562.6	-5.5	18.4
17000.0	542.3	-6.5	6.9
18000.0	524.2	-5.3	2.0
19000.0	505.9	-9.9	7.1
20000.0	484.6	-12.7	7.2
21000.0	462.2	-14.7	19.6
22000.0	444.7	-18.4	15.2
23000.0	429.6	-17.9	12.5
24000.0	411.2	-20.8	43.3
25000.0	393.2	-24.6	57.2
26000.0	378.6	-26.4	51.8
27000.0	358.1	-27.2	46.2
28000.0	343.7	-31.0	63.2

RESULTS OF THE REPLICATION # 6
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1014.8	22.6	93.3
1000.0	983.7	20.4	98.0
2000.0	949.0	20.5	15.7

3000.0	914.6	21.5	33.8	16000.0	562.7	-4.9	15.9
4000.0	880.6	21.0	48.7	17000.0	546.0	-6.8	2.4
5000.0	851.9	17.7	42.4	18000.0	524.8	-9.1	2.0
6000.0	821.6	16.5	18.5	19000.0	504.4	-11.1	9.7
7000.0	796.8	15.1	36.4	20000.0	483.8	-14.7	3.5
8000.0	767.7	11.8	26.1	21000.0	461.7	-15.6	5.2
9000.0	744.1	7.7	16.1	22000.0	447.1	-17.2	3.5
10000.0	710.5	9.7	2.0	23000.0	421.4	-20.4	5.0
11000.0	682.5	3.8	16.5	24000.0	410.4	-20.5	51.3
12000.0	659.8	5.6	8.4	25000.0	389.7	-24.5	48.9
13000.0	639.1	3.7	2.0	26000.0	382.7	-26.6	58.4
14000.0	614.3	0.1	14.0	27000.0	358.4	-27.8	44.9
15000.0	590.6	-2.2	2.0	28000.0	348.7	-33.6	58.7
16000.0	566.4	-4.8	5.4	RESULTS OF THE REPLICATION # 9			
17000.0	543.7	-6.3	1.8	=====			
18000.0	529.6	-8.3	10.5	HEIGHT	PRESSURE	TEMPERATURE	REL HUMD
19000.0	503.2	-12.4	2.0	0.0	1015.3	22.4	93.3
20000.0	489.9	-12.0	9.0	1000.0	983.5	22.6	83.7
21000.0	466.0	-14.8	11.7	2000.0	949.4	22.7	29.3
22000.0	454.4	-16.7	4.0	3000.0	918.5	19.5	37.0
23000.0	431.0	-18.3	20.3	4000.0	878.1	18.5	46.7
24000.0	410.5	-21.3	44.8	5000.0	850.7	18.8	37.6
25000.0	392.2	-23.3	54.1	6000.0	819.9	15.4	24.1
26000.0	378.2	-27.4	39.2	7000.0	798.0	14.1	25.3
27000.0	363.9	-29.0	48.6	8000.0	768.1	10.5	39.7
28000.0	346.3	-31.2	63.7	9000.0	740.7	11.7	31.1
RESULTS OF THE REPLICATION # 7				10000.0	708.3	8.2	12.2
=====				11000.0	682.5	6.2	9.4
HEIGHT	PRESSURE	TEMPERATURE	REL HUMD	12000.0	658.8	5.3	17.7
0.0	1015.3	23.9	90.9	13000.0	638.6	1.6	9.7
1000.0	984.1	19.5	93.9	14000.0	609.1	0.2	5.8
2000.0	949.2	21.0	43.3	15000.0	591.1	-1.5	2.0
3000.0	921.8	19.5	36.9	16000.0	566.6	-5.6	18.2
4000.0	880.9	18.7	37.7	17000.0	541.1	-7.1	10.3
5000.0	848.4	16.5	37.7	18000.0	531.7	-7.8	12.0
6000.0	823.0	16.3	38.0	19000.0	505.2	-10.7	4.1
7000.0	797.6	11.8	28.7	20000.0	483.5	-12.4	16.3
8000.0	767.0	10.3	28.3	21000.0	462.5	-16.8	16.8
9000.0	742.9	10.2	34.5	22000.0	451.3	-14.9	22.5
10000.0	705.0	7.1	24.6	23000.0	424.0	-17.8	17.2
11000.0	681.0	5.9	23.2	24000.0	410.8	-21.6	37.4
12000.0	661.2	4.5	12.1	25000.0	397.9	-24.6	69.8
13000.0	638.7	0.5	7.4	26000.0	378.1	-28.2	39.0
14000.0	608.5	0.0	9.8	27000.0	362.8	-30.1	46.5
15000.0	590.2	-4.9	16.9	28000.0	347.0	-32.2	64.1
16000.0	568.1	-6.4	13.9	RESULTS OF THE REPLICATION # 10			
17000.0	543.2	-7.3	7.1	=====			
18000.0	524.2	-8.4	22.4	HEIGHT	PRESSURE	TEMPERATURE	REL HUMD
19000.0	509.7	-9.9	11.9	0.0	1015.3	24.6	87.7
20000.0	483.0	-13.7	10.3	1000.0	934.6	19.9	98.5
21000.0	462.1	-16.1	6.8	2000.0	953.2	22.5	29.7
22000.0	446.0	-16.5	6.5	3000.0	915.9	20.3	28.4
23000.0	431.9	-17.8	0.9	4000.0	878.0	18.4	49.8
24000.0	410.6	-23.7	45.6	5000.0	854.8	15.8	34.5
25000.0	396.3	-21.9	64.2	6000.0	824.9	17.8	43.6
26000.0	373.8	-28.7	42.3	7000.0	796.0	15.0	24.7
27000.0	359.9	-30.5	61.9	8000.0	767.0	11.9	29.2
28000.0	348.7	-31.4	60.9	9000.0	741.0	9.3	21.0
RESULTS OF THE REPLICATION # 8				10000.0	708.4	9.2	15.0
=====				11000.0	685.3	6.5	18.0
HEIGHT	PRESSURE	TEMPERATURE	REL HUMD	12000.0	662.5	3.0	2.0
0.0	1014.2	24.4	97.4	13000.0	635.3	2.4	4.8
1000.0	978.5	22.3	93.8	14000.0	606.2	0.4	3.2
2000.0	950.2	20.5	47.5	15000.0	589.4	-1.4	5.0
3000.0	914.2	20.1	44.2	16000.0	568.3	-4.2	2.0
4000.0	879.7	18.6	48.4	17000.0	544.3	-7.7	2.8
5000.0	851.4	16.3	29.0	18000.0	525.7	-8.9	12.7
6000.0	823.1	15.0	20.1	19000.0	504.0	-11.4	1.3
7000.0	795.9	13.5	33.9	20000.0	484.4	-13.9	6.3
8000.0	764.1	11.1	28.3	21000.0	471.1	-17.3	2.0
9000.0	740.2	10.2	18.6	22000.0	444.3	-18.0	1.1
10000.0	712.6	7.3	17.2	23000.0	424.8	-19.7	2.0
11000.0	683.5	5.7	12.2	24000.0	411.3	-21.8	43.2
12000.0	661.5	3.1	2.0	25000.0	394.4	-24.9	54.1
13000.0	636.7	1.9	32.4	26000.0	380.1	-27.7	49.3
14000.0	609.7	0.7	2.0	27000.0	360.1	-30.6	35.4
15000.0	589.8	-2.4	12.7	28000.0	344.0	-32.4	57.0

FILE: CAL1B

RESULTS OF THE REPLICATION # 1

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	21.3	91.8
1000.0	984.1	18.5	98.0
2000.0	953.4	21.2	19.8
3000.0	916.4	18.4	31.6
4000.0	877.3	18.6	33.8
5000.0	851.5	19.8	30.6
6000.0	822.1	12.8	36.4
7000.0	790.7	16.8	30.6
8000.0	767.7	14.0	26.2
9000.0	740.3	7.6	25.1
10000.0	711.0	9.4	18.7
11000.0	684.1	6.1	19.8
12000.0	663.0	1.3	2.0
13000.0	639.9	0.5	13.1
14000.0	615.1	2.9	2.0
15000.0	592.1	-0.1	18.5
16000.0	567.9	-2.9	9.0
17000.0	541.9	-5.0	10.6
18000.0	526.2	-10.2	2.0
19000.0	505.8	-12.4	3.0
20000.0	488.8	-14.3	27.2
21000.0	462.0	-15.2	2.0
22000.0	443.0	-17.4	6.8
23000.0	427.4	-20.5	2.0
24000.0	409.5	-22.4	30.9
25000.0	399.3	-23.4	47.5
26000.0	380.5	-25.5	50.1
27000.0	363.2	-27.5	57.5
28000.0	346.0	-30.5	41.4

RESULTS OF THE REPLICATION # 2

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	23.4	99.0
1000.0	980.9	23.8	86.3
2000.0	946.4	20.1	54.8
3000.0	919.3	20.2	31.4
4000.0	884.1	22.6	37.5
5000.0	851.3	21.5	30.8
6000.0	819.6	18.9	23.1
7000.0	798.5	11.9	33.9
8000.0	768.5	12.3	34.2
9000.0	738.6	9.1	27.2
10000.0	709.8	10.2	7.3
11000.0	686.0	7.7	16.2
12000.0	655.8	7.3	2.0
13000.0	630.3	-1.9	2.0
14000.0	610.0	-0.2	1.7
15000.0	591.7	-4.2	15.2
16000.0	562.9	-4.6	20.1
17000.0	543.1	-4.2	2.7
18000.0	526.7	-10.1	9.7
19000.0	507.6	-9.8	0.5
20000.0	491.1	-16.8	9.0
21000.0	464.3	-16.3	2.0
22000.0	444.6	-19.6	21.0
23000.0	429.7	-17.9	12.3
24000.0	413.7	-22.0	45.0
25000.0	395.7	-23.0	33.5
26000.0	379.9	-27.8	46.7
27000.0	367.8	-29.9	45.2
28000.0	347.2	-29.7	53.3

RESULTS OF THE REPLICATION # 3

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1014.4	23.1	86.9
1000.0	985.3	23.0	87.5
2000.0	952.8	20.1	25.3
3000.0	915.3	20.3	50.8
4000.0	878.5	20.6	36.2
5000.0	852.6	17.8	39.4
6000.0	825.2	14.0	14.8
7000.0	793.3	16.1	35.5
8000.0	768.4	8.8	28.0
9000.0	739.4	12.8	31.1
10000.0	707.3	8.0	9.0
11000.0	684.0	6.5	17.5
12000.0	659.7	1.7	25.9
13000.0	634.3	5.3	3.2
14000.0	613.4	-2.8	2.0
15000.0	592.0	-3.7	9.1

16000.0	566.9	-6.2	26.5
17000.0	540.6	-5.6	2.0
18000.0	531.4	-11.9	11.0
19000.0	505.2	-11.2	12.0
20000.0	484.5	-13.6	13.5
21000.0	468.1	-15.5	17.5
22000.0	445.7	-18.4	1.9
23000.0	430.2	-14.7	17.7
24000.0	406.9	-23.7	54.2
25000.0	397.4	-23.1	54.7
26000.0	379.5	-29.3	42.3
27000.0	362.4	-31.5	28.2
28000.0	350.0	-32.8	54.1

RESULTS OF THE REPLICATION # 4

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	24.4	79.5
1000.0	978.2	21.7	93.3
2000.0	949.2	22.8	47.8
3000.0	915.4	21.7	28.2
4000.0	880.0	20.3	32.4
5000.0	854.9	18.2	23.7
6000.0	826.9	15.6	33.6
7000.0	792.3	11.5	45.4
8000.0	768.0	11.9	30.8
9000.0	737.5	7.6	25.7
10000.0	709.8	10.4	27.1
11000.0	686.0	8.6	3.4
12000.0	655.1	4.3	2.0
13000.0	640.2	2.0	12.3
14000.0	610.1	0.3	6.8
15000.0	586.3	-2.4	2.0
16000.0	562.6	-3.1	1.8
17000.0	543.9	-3.9	8.2
18000.0	523.3	-9.3	14.8
19000.0	503.8	-15.4	9.8
20000.0	485.0	-12.8	11.4
21000.0	465.7	-14.8	5.1
22000.0	451.5	-19.4	0.4
23000.0	429.3	-18.3	4.2
24000.0	411.4	-22.7	42.4
25000.0	397.3	-26.9	59.8
26000.0	379.6	-27.1	57.7
27000.0	361.2	-32.1	50.0
28000.0	347.4	-30.3	67.4

RESULTS OF THE REPLICATION # 5

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	20.9	91.8
1000.0	981.7	24.9	77.4
2000.0	950.5	20.5	26.9
3000.0	910.7	18.1	41.2
4000.0	883.9	18.6	40.8
5000.0	855.4	16.9	37.0
6000.0	822.5	16.3	49.4
7000.0	793.1	14.0	32.5
8000.0	768.1	11.5	19.1
9000.0	742.2	6.1	20.4
10000.0	712.4	11.1	28.2
11000.0	682.7	6.9	11.4
12000.0	658.6	4.4	11.3
13000.0	635.5	-0.1	7.5
14000.0	611.0	1.1	16.7
15000.0	590.8	-1.2	22.8
16000.0	562.6	-5.9	18.4
17000.0	542.3	-6.1	6.9
18000.0	524.2	-2.4	2.0
19000.0	505.9	-9.1	7.1
20000.0	484.6	-12.6	7.2
21000.0	462.2	-14.1	19.6
22000.0	444.7	-19.5	15.2
23000.0	429.6	-16.7	12.5
24000.0	411.2	-19.8	43.3
25000.0	393.2	-24.9	57.2
26000.0	378.6	-25.8	51.8
27000.0	358.1	-24.6	46.2
28000.0	343.7	-29.9	63.2

RESULTS OF THE REPLICATION # 6

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1014.8	22.5	93.3
1000.0	983.7	19.0	98.0
2000.0	949.0	19.3	15.7

3000.0	914.6	22.6	33.8	16000.0	562.7	-4.5	15.9
4000.0	880.6	22.8	48.7	17000.0	546.0	-6.6	2.4
5000.0	851.9	18.0	42.4	18000.0	524.8	-10.1	2.0
6000.0	821.6	16.8	18.5	19000.0	504.4	-11.5	9.7
7000.0	796.8	15.9	36.4	20000.0	483.8	-16.6	3.5
8000.0	767.7	11.5	26.1	21000.0	461.7	-15.7	5.2
9000.0	744.1	5.9	16.1	22000.0	447.1	-17.2	3.5
10000.0	710.5	11.0	2.0	23000.0	431.4	-21.8	5.0
11000.0	682.5	1.9	16.5	24000.0	410.4	-19.2	51.3
12000.0	659.8	6.5	8.4	25000.0	389.7	-24.7	48.9
13000.0	639.1	5.1	2.0	26000.0	382.7	-26.1	58.4
14000.0	614.3	0.7	14.0	27000.0	358.4	-26.0	44.9
15000.0	590.6	-1.8	2.0	28000.0	348.7	-35.2	58.7
16000.0	566.4	-4.3	5.4	RESULTS OF THE REPLICATION # 9			
17000.0	543.7	-5.6	1.8	=====			
18000.0	529.6	-8.3	10.5	HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
19000.0	503.2	-13.9	2.0	0.0	1015.3	22.2	93.3
20000.0	489.9	-11.1	9.0	1000.0	983.5	23.2	83.7
21000.0	466.0	-14.1	11.7	2000.0	949.4	23.6	29.3
22000.0	454.4	-16.2	4.0	3000.0	918.5	18.7	37.0
23000.0	431.0	-17.6	20.3	4000.0	878.1	17.8	46.7
24000.0	410.5	-20.8	44.8	5000.0	850.7	20.3	37.6
25000.0	392.2	-22.4	54.1	6000.0	819.9	14.6	24.1
26000.0	378.2	-27.8	39.2	7000.0	798.0	13.8	25.3
27000.0	363.9	-28.4	48.6	8000.0	768.1	8.9	39.7
28000.0	346.3	-30.3	63.7	9000.0	740.7	13.9	31.1
RESULTS OF THE REPLICATION # 7				10000.0	708.3	8.1	12.2
=====				11000.0	682.5	6.8	9.4
HEIGHT	PRESSURE	TEMPERATURE	REL HUMID	12000.0	658.8	6.0	17.7
0.0	1015.3	25.2	90.9	13000.0	638.6	0.8	9.7
1000.0	984.1	17.2	93.9	14000.0	609.1	0.7	5.8
2000.0	949.2	20.2	43.3	15000.0	591.1	-0.6	2.0
3000.0	921.8	18.8	36.9	16000.0	566.6	-6.1	18.2
4000.0	880.9	18.3	37.7	17000.0	541.1	-7.3	10.3
5000.0	848.4	15.7	37.7	18000.0	531.7	-7.4	12.0
6000.0	823.0	16.4	38.0	19000.0	505.2	-10.6	4.1
7000.0	797.6	9.1	28.7	20000.0	483.5	-12.0	16.3
8000.0	767.0	8.4	28.3	21000.0	462.5	-18.1	16.8
9000.0	742.9	11.0	34.5	22000.0	451.3	-12.7	22.5
10000.0	705.0	5.9	24.6	23000.0	424.0	-16.6	17.2
11000.0	681.0	6.2	23.2	24000.0	410.8	-21.3	37.4
12000.0	661.2	4.3	12.1	25000.0	397.9	-24.8	69.8
13000.0	638.7	-1.4	7.4	26000.0	378.1	-29.2	39.0
14000.0	608.5	0.5	9.8	27000.0	362.8	-30.5	46.5
15000.0	590.2	-7.4	16.9	28000.0	347.0	-32.4	64.1
16000.0	568.1	-7.7	13.9	RESULTS OF THE REPLICATION # 10			
17000.0	543.2	-7.6	7.1	=====			
18000.0	524.2	-8.5	22.4	HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
19000.0	509.7	-9.0	11.9	0.0	1015.3	26.6	87.7
20000.0	483.0	-14.6	10.3	1000.0	984.6	18.0	98.5
21000.0	462.1	-16.8	6.8	2000.0	953.2	23.2	29.7
22000.0	446.0	-15.8	6.5	3000.0	915.9	20.2	28.4
23000.0	431.9	-16.7	0.9	4000.0	878.0	17.8	49.8
24000.0	410.6	-25.6	45.6	5000.0	854.8	14.3	34.5
25000.0	396.3	-19.5	64.2	6000.0	824.9	19.3	43.6
26000.0	373.8	-30.3	42.3	7000.0	796.0	15.5	24.7
27000.0	359.9	-31.3	61.9	8000.0	767.0	11.7	29.2
28000.0	348.7	-30.9	60.9	9000.0	741.0	9.1	21.0
RESULTS OF THE REPLICATION # 8				10000.0	708.4	10.0	15.0
=====				11000.0	685.3	7.4	18.0
HEIGHT	PRESSURE	TEMPERATURE	REL HUMID	12000.0	662.5	1.3	2.0
0.0	1014.2	26.1	97.4	13000.0	635.3	2.5	4.8
1000.0	978.5	22.6	93.8	14000.0	606.2	1.1	3.2
2000.0	950.2	19.2	47.5	15000.0	589.4	-0.3	5.0
3000.0	914.2	19.9	44.2	16000.0	568.3	-3.1	2.0
4000.0	879.7	18.2	48.4	17000.0	544.3	-8.3	2.8
5000.0	851.4	15.3	29.0	18000.0	525.7	-9.6	12.7
6000.0	823.1	13.7	20.1	19000.0	504.0	-12.0	1.3
7000.0	795.9	12.6	33.9	20000.0	484.4	-14.9	6.3
8000.0	764.1	10.1	28.3	21000.0	471.1	-19.2	2.0
9000.0	740.2	10.9	18.6	22000.0	444.3	-18.8	1.1
10000.0	712.6	6.4	17.2	23000.0	424.8	-20.4	2.0
11000.0	683.5	5.6	12.2	24000.0	411.3	-21.8	43.2
12000.0	661.5	1.5	2.0	25000.0	394.4	-25.5	54.1
13000.0	636.7	1.5	32.4	26000.0	380.1	-28.3	49.3
14000.0	609.7	1.8	2.0	27000.0	360.1	-31.6	35.4
15000.0	589.8	-2.4	12.7	28000.0	344.0	-32.9	57.0

FILE: CALIC
RESULTS OF THE REPLICATION # 1
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	20.0	91.8
1000.0	984.1	15.1	98.0
2000.0	953.4	20.6	19.8
3000.0	916.4	16.5	31.6
4000.0	877.3	18.0	33.8
5000.0	851.5	22.4	30.6
6000.0	822.1	9.5	36.4
7000.0	790.7	19.2	30.6
8000.0	767.7	15.9	26.2
9000.0	740.3	5.7	25.1
10000.0	711.0	10.5	18.7
11000.0	684.1	6.5	19.8
12000.0	663.0	-2.2	2.0
13000.0	639.9	-1.4	13.1
14000.0	615.1	6.3	2.0
15000.0	592.1	2.3	18.5
16000.0	567.9	-0.5	9.0
17000.0	541.9	-3.0	10.6
18000.0	526.2	-12.2	2.0
19000.0	505.8	-13.9	3.0
20000.0	488.8	-15.7	27.2
21000.0	462.0	-15.0	2.0
22000.0	443.0	-17.6	6.8
23000.0	427.4	-21.9	2.0
24000.0	409.5	-23.0	30.9
25000.0	399.3	-22.5	47.5
26000.0	380.5	-23.9	50.1
27000.0	363.2	-25.4	57.5
28000.0	346.0	-28.9	41.4

RESULTS OF THE REPLICATION # 2
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	24.3	99.0
1000.0	980.9	25.7	86.3
2000.0	946.4	18.4	54.8
3000.0	919.3	20.1	31.4
4000.0	884.1	26.1	37.5
5000.0	851.3	25.7	30.8
6000.0	819.6	21.5	23.1
7000.0	798.5	9.5	33.9
8000.0	768.5	12.5	34.2
9000.0	738.6	8.7	27.2
10000.0	709.8	12.2	7.3
11000.0	686.0	9.7	16.2
12000.0	655.8	9.9	2.0
13000.0	639.3	-6.1	2.0
14000.0	610.0	0.1	1.7
15000.0	591.7	-5.9	15.2
16000.0	562.9	-4.0	20.1
17000.0	543.1	-1.4	2.7
18000.0	526.7	-12.0	9.7
19000.0	507.6	-8.8	0.5
20000.0	491.1	-20.9	9.0
21000.0	464.3	-17.2	2.0
22000.0	444.6	-22.1	21.0
23000.0	429.7	-16.7	12.3
24000.0	413.7	-22.2	45.0
25000.0	395.7	-21.6	33.5
26000.0	379.9	-28.4	46.7
27000.0	367.8	-30.1	45.2
28000.0	347.2	-27.5	53.3

RESULTS OF THE REPLICATION # 3
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1014.4	23.6	86.9
1000.0	985.3	24.2	87.5
2000.0	952.8	18.4	25.3
3000.0	915.3	20.3	50.8
4000.0	878.5	22.0	36.2
5000.0	852.6	18.3	39.4
6000.0	825.2	11.9	14.8
7000.0	793.3	17.7	35.5
8000.0	768.4	5.5	28.0
9000.0	739.4	16.1	31.1
10000.0	707.3	7.7	9.0
11000.0	684.0	7.2	17.5
12000.0	659.7	-1.3	25.9
13000.0	634.3	8.1	3.2
14000.0	613.4	-5.1	2.0
15000.0	592.0	-4.9	9.1

16000.0	566.9	-7.2	26.5
17000.0	540.6	-4.1	2.0
18000.0	531.4	-15.6	11.0
19000.0	505.2	-11.7	12.0
20000.0	484.5	-14.4	13.5
21000.0	468.1	-15.6	17.5
22000.0	445.7	-19.6	1.9
23000.0	430.2	-10.5	17.7
24000.0	406.9	-25.5	54.2
25000.0	397.4	-21.9	54.7
26000.0	379.5	-31.4	42.3
27000.0	362.4	-33.3	28.2
28000.0	350.0	-33.5	54.1

RESULTS OF THE REPLICATION # 4
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	26.3	79.5
1000.0	978.2	21.5	93.3
2000.0	949.2	23.7	47.8
3000.0	915.4	23.0	28.2
4000.0	880.0	21.5	32.4
5000.0	854.9	19.0	23.7
6000.0	826.9	15.1	33.6
7000.0	792.3	8.6	45.4
8000.0	768.0	11.7	30.8
9000.0	737.5	5.8	25.7
10000.0	709.8	12.5	27.1
11000.0	686.0	11.5	3.4
12000.0	655.1	3.8	2.0
13000.0	640.2	1.6	12.3
14000.0	610.1	0.9	6.8
15000.0	586.3	-2.2	2.0
16000.0	562.6	-0.9	1.8
17000.0	543.9	-0.9	8.2
18000.0	523.3	-10.4	14.8
19000.0	503.8	-20.0	9.8
20000.0	485.0	-12.9	11.4
21000.0	465.7	-14.2	5.1
22000.0	451.5	-21.5	0.4
23000.0	429.3	-17.7	4.2
24000.0	411.4	-23.5	42.4
25000.0	397.3	-29.6	59.8
26000.0	379.6	-27.1	57.7
27000.0	361.2	-34.5	50.0
28000.0	347.4	-28.7	67.4

RESULTS OF THE REPLICATION # 5
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	19.2	91.8
1000.0	981.7	27.9	77.4
2000.0	950.5	19.2	26.8
3000.0	910.7	15.8	41.2
4000.0	883.9	18.1	40.8
5000.0	855.4	16.6	37.0
6000.0	822.5	16.3	49.4
7000.0	793.1	13.5	32.5
8000.0	768.1	10.9	19.1
9000.0	742.2	2.8	20.4
10000.0	712.4	13.8	28.2
11000.0	682.7	8.2	11.4
12000.0	658.6	4.0	11.3
13000.0	635.5	-2.6	7.5
14000.0	611.0	2.6	16.7
15000.0	590.8	0.0	22.8
16000.0	562.6	-6.5	18.4
17000.0	542.3	-5.1	6.9
18000.0	524.2	3.3	2.0
19000.0	505.9	-7.4	7.1
20000.0	484.6	-12.5	7.2
21000.0	462.2	-12.7	19.6
22000.0	444.7	-21.9	15.2
23000.0	429.6	-14.5	12.5
24000.0	411.2	-17.9	43.3
25000.0	393.2	-25.5	57.2
26000.0	378.6	-24.5	51.8
27000.0	358.1	-19.6	46.2
28000.0	343.7	-27.9	63.2

RESULTS OF THE REPLICATION # 6
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1014.8	22.5	93.3
1000.0	983.7	16.0	98.0
2000.0	949.0	16.7	15.7

3000.0	914.6	24.9	33.8
4000.0	880.6	26.6	48.7
5000.0	851.9	18.8	42.4
6000.0	821.6	17.4	18.5
7000.0	796.8	17.3	36.4
8000.0	767.7	11.0	26.1
9000.0	744.1	2.4	16.1
10000.0	710.5	13.7	2.0
11000.0	682.5	-1.8	16.5
12000.0	659.8	8.3	8.4
13000.0	639.1	7.8	2.0
14000.0	614.3	1.7	14.0
15000.0	590.6	-1.2	2.0
16000.0	566.4	-3.4	5.4
17000.0	543.7	-4.1	1.8
18000.0	529.6	-8.4	10.5
19000.0	503.2	-17.1	2.0
20000.0	489.9	-9.4	9.0
21000.0	466.0	-12.8	11.7
22000.0	454.4	-15.2	4.0
23000.0	431.0	-16.3	20.3
24000.0	410.5	-19.8	44.8
25000.0	392.2	-20.5	54.1
26000.0	378.2	-28.4	39.2
27000.0	363.9	-27.1	48.6
28000.0	346.3	-28.7	63.7

RESULTS OF THE REPLICATION # 7

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	27.8	90.9
1000.0	984.1	12.5	93.9
2000.0	949.2	18.5	43.3
3000.0	921.8	17.2	36.9
4000.0	880.9	17.5	37.7
5000.0	848.4	14.0	37.7
6000.0	823.0	16.6	38.0
7000.0	797.6	3.8	28.7
8000.0	767.0	4.8	28.3
9000.0	742.9	12.4	34.5
10000.0	705.0	3.5	24.6
11000.0	681.0	6.7	23.2
12000.0	661.2	3.8	12.1
13000.0	638.7	-5.1	7.4
14000.0	608.5	1.3	9.8
15000.0	590.2	-12.2	16.9
16000.0	568.1	-10.1	13.9
17000.0	543.2	-8.2	7.1
18000.0	524.2	-8.9	22.4
19000.0	509.7	-7.2	11.9
20000.0	483.0	-16.4	10.3
21000.0	462.1	-18.2	6.8
22000.0	446.0	-14.4	6.5
23000.0	431.9	-14.4	0.9
24000.0	410.6	-29.5	45.6
25000.0	396.3	-14.7	64.2
26000.0	373.8	-33.5	42.3
27000.0	359.9	-32.8	61.9
28000.0	348.7	-29.7	60.9

RESULTS OF THE REPLICATION # 8

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1014.2	29.6	97.4
1000.0	978.5	23.3	93.8
2000.0	950.2	16.6	47.5
3000.0	914.2	19.6	44.2
4000.0	879.7	17.3	48.4
5000.0	851.4	13.3	29.0
6000.0	823.1	11.3	20.1
7000.0	795.9	10.8	33.9
8000.0	764.1	8.0	28.3
9000.0	740.2	12.4	18.6
10000.0	712.6	4.5	17.2
11000.0	683.5	5.6	12.2
12000.0	661.5	-1.7	2.0
13000.0	636.7	0.5	32.4
14000.0	609.7	4.1	2.0
15000.0	589.8	-2.2	12.7

16000.0	562.7	-3.9	15.9
17000.0	546.0	-6.2	2.4
18000.0	524.8	-12.0	2.0
19000.0	504.4	-12.2	9.7
20000.0	483.8	-20.5	3.5
21000.0	461.7	-16.0	5.2
22000.0	447.1	-17.1	3.5
23000.0	431.4	-24.6	5.0
24000.0	410.4	-16.6	51.3
25000.0	389.7	-25.0	48.9
26000.0	382.7	-25.0	58.4
27000.0	358.4	-22.3	44.9
28000.0	348.7	-38.5	58.7

RESULTS OF THE REPLICATION # 9

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	21.7	93.3
1000.0	983.5	24.6	83.7
2000.0	949.4	25.5	29.3
3000.0	918.5	17.1	37.0
4000.0	878.1	16.6	46.7
5000.0	850.7	23.2	37.6
6000.0	819.9	13.1	24.1
7000.0	798.0	13.2	25.3
8000.0	768.1	5.7	39.7
9000.0	740.7	18.3	31.1
10000.0	708.3	8.0	12.2
11000.0	682.5	7.8	9.4
12000.0	658.8	7.3	17.7
13000.0	638.6	-0.8	9.7
14000.0	609.1	1.8	5.8
15000.0	591.1	1.3	2.0
16000.0	566.6	-6.9	18.2
17000.0	541.1	-7.6	10.3
18000.0	531.7	-6.7	12.0
19000.0	505.2	-10.4	4.1
20000.0	483.5	-11.1	16.3
21000.0	462.5	-20.8	16.8
22000.0	451.3	-8.1	22.5
23000.0	424.0	-14.3	17.2
24000.0	410.8	-20.9	37.4
25000.0	397.9	-25.4	69.8
26000.0	378.1	-31.3	39.0
27000.0	362.8	-31.3	46.5
28000.0	347.0	-32.9	64.1

RESULTS OF THE REPLICATION # 10

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	30.7	87.7
1000.0	984.6	14.1	98.5
2000.0	953.2	24.7	29.7
3000.0	915.9	20.2	28.4
4000.0	878.0	16.4	49.8
5000.0	854.8	11.3	34.5
6000.0	824.9	22.4	43.6
7000.0	796.0	16.6	24.7
8000.0	767.0	11.4	29.2
9000.0	741.0	8.7	21.0
10000.0	708.4	11.7	15.0
11000.0	685.3	9.0	18.0
12000.0	662.5	-2.2	2.0
13000.0	635.3	2.5	4.8
14000.0	606.2	2.7	3.2
15000.0	589.4	2.0	5.0
16000.0	568.3	-1.1	2.0
17000.0	544.3	-9.6	2.8
18000.0	525.7	-11.0	12.7
19000.0	504.0	-13.2	1.3
20000.0	484.4	-17.1	6.3
21000.0	471.1	-23.0	2.0
22000.0	444.3	-20.5	1.1
23000.0	424.8	-21.8	2.0
24000.0	411.3	-21.7	43.2
25000.0	394.6	-26.8	54.1
26000.0	380.1	-29.5	49.3
27000.0	360.1	-33.4	35.4
28000.0	344.0	-33.7	57.0

FILE: CALID
RESULTS OF THE REPLICATION # 1
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	22.0	91.8
1000.0	983.1	20.2	98.0
2000.0	952.1	21.5	19.8
3000.0	916.5	19.3	31.6
4000.0	878.7	18.8	33.8
5000.0	851.3	18.6	30.6
6000.0	822.9	14.5	36.4
7000.0	792.5	15.6	30.6
8000.0	767.3	13.0	26.2
9000.0	739.9	8.5	25.1
10000.0	710.5	8.9	18.7
11000.0	684.0	5.9	19.8
12000.0	661.3	3.0	2.0
13000.0	638.5	1.5	13.1
14000.0	613.1	1.3	2.0
15000.0	591.4	-1.3	18.5
16000.0	566.7	-4.0	9.0
17000.0	543.0	-6.0	10.6
18000.0	525.7	-9.2	2.0
19000.0	505.6	-11.6	3.0
20000.0	487.8	-13.5	27.2
21000.0	462.9	-15.3	2.0
22000.0	444.5	-17.3	6.8
23000.0	428.0	-19.7	2.0
24000.0	410.1	-22.1	30.9
25000.0	397.8	-23.8	47.5
26000.0	379.6	-26.3	50.1
27000.0	363.0	-28.6	57.5
28000.0	346.6	-31.2	41.4

RESULTS OF THE REPLICATION # 2
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	23.0	99.0
1000.0	981.2	22.9	86.3
2000.0	947.9	20.9	54.8
3000.0	918.2	20.2	31.4
4000.0	882.8	20.8	37.5
5000.0	851.2	19.4	30.8
6000.0	821.4	17.5	23.1
7000.0	797.2	13.2	33.9
8000.0	767.8	12.2	34.2
9000.0	738.9	9.3	27.2
10000.0	709.8	9.3	7.3
11000.0	685.2	6.7	16.2
12000.0	657.0	6.0	2.0
13000.0	638.1	0.3	2.0
14000.0	610.0	-0.3	1.7
15000.0	591.2	-3.4	15.2
16000.0	563.8	-4.9	20.1
17000.0	543.8	-5.6	2.7
18000.0	526.0	-9.1	9.7
19000.0	506.7	-10.3	0.5
20000.0	489.2	-14.8	9.0
21000.0	464.3	-15.9	2.0
22000.0	445.4	-18.4	21.0
23000.0	429.3	-18.4	12.3
24000.0	412.7	-21.9	45.0
25000.0	395.6	-23.6	33.5
26000.0	379.3	-27.4	46.7
27000.0	365.8	-29.8	45.2
28000.0	347.3	-30.9	53.3

RESULTS OF THE REPLICATION # 3
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.2	22.8	86.9
1000.0	983.8	22.5	87.5
2000.0	951.8	21.0	25.3
3000.0	915.8	20.3	50.8
4000.0	879.4	19.8	36.2
5000.0	852.0	17.5	39.4
6000.0	824.7	15.1	14.8
7000.0	794.1	15.2	35.5
8000.0	767.7	10.5	28.0
9000.0	739.4	11.1	31.1
10000.0	708.3	8.2	9.0
11000.0	684.0	6.1	17.5
12000.0	659.3	3.2	25.9
13000.0	635.2	3.8	3.2
14000.0	612.1	-1.6	2.0
15000.0	591.4	-3.1	9.1

16000.0	566.2	-5.7	26.5
17000.0	542.2	-6.3	2.0
18000.0	528.9	-10.1	11.0
19000.0	505.3	-11.0	12.0
20000.0	485.2	-13.2	13.5
21000.0	466.5	-15.5	17.5
22000.0	446.1	-17.8	1.9
23000.0	429.6	-16.9	17.7
24000.0	408.6	-22.7	54.2
25000.0	396.6	-23.7	54.7
26000.0	379.0	-28.2	42.3
27000.0	362.5	-30.6	28.2
28000.0	349.0	-32.4	54.1

RESULTS OF THE REPLICATION # 4
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	23.5	79.5
1000.0	979.5	21.8	93.3
2000.0	949.6	22.3	47.8
3000.0	915.8	21.0	28.2
4000.0	880.3	19.7	32.4
5000.0	853.4	17.7	23.7
6000.0	825.8	15.9	33.6
7000.0	793.5	12.9	45.4
8000.0	767.5	12.0	30.8
9000.0	738.2	8.6	25.7
10000.0	709.8	9.4	27.1
11000.0	685.2	7.1	3.4
12000.0	656.6	4.5	2.0
13000.0	638.7	2.2	12.3
14000.0	610.1	-0.1	6.8
15000.0	587.9	-2.4	2.0
16000.0	563.6	-4.1	1.8
17000.0	544.2	-5.5	8.2
18000.0	524.0	-8.8	14.8
19000.0	504.5	-13.1	9.8
20000.0	485.5	-12.8	11.4
21000.0	465.1	-15.1	5.1
22000.0	449.6	-18.3	0.4
23000.0	429.1	-18.7	4.2
24000.0	411.3	-22.2	42.4
25000.0	396.6	-25.6	59.8
26000.0	379.1	-27.1	57.7
27000.0	361.8	-30.9	50.0
28000.0	347.5	-31.2	67.4

RESULTS OF THE REPLICATION # 5
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	21.7	91.8
1000.0	981.6	23.4	77.4
2000.0	950.4	21.1	26.8
3000.0	913.0	19.2	41.2
4000.0	882.6	18.9	40.8
5000.0	853.7	17.1	37.0
6000.0	823.1	16.2	49.4
7000.0	794.0	14.2	32.5
8000.0	767.5	11.8	19.1
9000.0	741.0	7.8	20.4
10000.0	711.4	9.7	28.2
11000.0	683.2	6.3	11.4
12000.0	658.7	4.5	11.3
13000.0	635.9	1.2	7.5
14000.0	610.6	0.3	16.7
15000.0	590.7	-1.9	22.8
16000.0	563.5	-5.5	18.4
17000.0	543.3	-6.5	6.9
18000.0	524.5	-5.3	2.0
19000.0	505.7	-9.9	7.1
20000.0	485.3	-12.7	7.2
21000.0	463.0	-14.7	19.6
22000.0	445.5	-18.4	15.2
23000.0	429.3	-17.9	12.5
24000.0	411.1	-20.8	43.3
25000.0	394.1	-24.6	57.2
26000.0	378.5	-26.4	51.8
27000.0	360.0	-27.2	46.2
28000.0	345.3	-31.0	63.2

RESULTS OF THE REPLICATION # 6
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.4	22.6	93.3
1000.0	982.9	20.4	98.0
2000.0	949.5	20.5	15.7

3000.0	915.4	21.5	33.8	16000.0	563.6	-4.9	15.9
4000.0	880.7	21.0	48.7	17000.0	545.5	-6.8	2.4
5000.0	851.6	17.7	42.4	18000.0	524.9	-9.1	2.0
6000.0	822.6	16.5	18.5	19000.0	504.8	-11.1	9.7
7000.0	796.2	15.1	36.4	20000.0	484.8	-14.7	3.5
8000.0	767.3	11.8	26.1	21000.0	462.7	-15.6	5.2
9000.0	742.2	7.7	16.1	22000.0	446.9	-17.2	3.5
10000.0	710.2	9.7	2.0	23000.0	430.3	-20.4	5.0
11000.0	683.1	3.8	16.5	24000.0	410.7	-20.5	51.3
12000.0	659.4	5.6	8.4	25000.0	392.0	-24.5	48.9
13000.0	638.0	3.7	2.0	26000.0	381.0	-26.6	58.4
14000.0	612.6	0.1	14.0	27000.0	360.1	-27.8	44.9
15000.0	590.5	-2.2	2.0	28000.0	348.3	-33.6	58.7
16000.0	565.9	-4.8	5.4	RESULTS OF THE REPLICATION # 9			
17000.0	544.1	-6.3	1.8	=====			
18000.0	527.8	-8.3	10.5	HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
19000.0	504.1	-12.4	2.0	0.0	1015.3	22.4	93.3
20000.0	488.4	-12.0	9.0	1000.0	982.7	22.6	83.7
21000.0	465.3	-14.8	11.7	2000.0	949.7	22.7	29.3
22000.0	451.3	-16.7	4.0	3000.0	917.7	19.5	37.0
23000.0	430.1	-18.3	20.3	4000.0	879.1	18.5	46.7
24000.0	410.7	-21.3	44.8	5000.0	850.9	18.8	37.6
25000.0	393.5	-23.3	54.1	6000.0	821.5	15.4	24.1
26000.0	378.3	-27.4	39.2	7000.0	796.9	14.1	25.3
27000.0	363.4	-29.0	48.6	8000.0	767.5	10.5	39.7
28000.0	346.8	-31.2	63.7	9000.0	740.1	11.7	31.1
RESULTS OF THE REPLICATION # 7				10000.0	708.9	8.2	12.2
=====				11000.0	683.0	6.2	9.4
HEIGHT	PRESSURE	TEMPERATURE	REL HUMID	12000.0	659.8	5.3	17.7
0.0	1015.3	23.9	90.9	13000.0	637.7	1.6	9.7
1000.0	983.1	19.5	93.9	14000.0	609.5	0.2	5.8
2000.0	949.6	21.0	43.3	15000.0	590.8	-1.5	2.0
3000.0	919.7	19.5	36.9	16000.0	565.9	-5.6	18.2
4000.0	880.8	18.7	37.7	17000.0	542.6	-7.1	10.3
5000.0	849.5	16.5	37.7	18000.0	529.0	-7.8	12.0
6000.0	823.4	16.3	38.0	19000.0	505.3	-10.7	4.1
7000.0	796.7	11.8	28.7	20000.0	484.6	-12.4	16.3
8000.0	766.9	10.3	28.3	21000.0	463.2	-16.8	16.8
9000.0	741.5	10.2	34.5	22000.0	449.4	-14.9	22.5
10000.0	706.9	7.1	24.6	23000.0	425.9	-17.8	17.2
11000.0	682.1	5.9	23.2	24000.0	410.9	-21.6	37.4
12000.0	660.2	4.5	12.1	25000.0	396.9	-24.6	69.8
13000.0	637.8	0.5	7.4	26000.0	378.1	-28.2	39.0
14000.0	609.1	0.0	9.8	27000.0	362.8	-30.1	46.5
15000.0	590.3	-4.9	16.9	28000.0	347.2	-32.2	64.1
16000.0	566.9	-6.4	13.9	RESULTS OF THE REPLICATION # 10			
17000.0	543.8	-7.3	7.1	=====			
18000.0	524.5	-8.4	22.4	HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
19000.0	508.0	-9.9	11.9	0.0	1015.3	24.6	87.7
20000.0	484.3	-13.7	10.3	1000.0	983.4	19.9	98.5
21000.0	462.9	-16.1	6.8	2000.0	952.0	22.5	29.7
22000.0	446.3	-16.5	6.5	3000.0	916.1	20.3	28.4
23000.0	430.7	-17.8	0.9	4000.0	879.1	18.4	49.8
24000.0	410.8	-23.7	45.6	5000.0	853.3	15.8	34.5
25000.0	396.0	-21.9	64.2	6000.0	824.5	17.8	43.6
26000.0	375.6	-28.7	42.3	7000.0	795.7	15.0	24.7
27000.0	361.0	-30.5	61.9	8000.0	766.9	11.9	29.2
28000.0	348.3	-31.4	60.9	9000.0	740.3	9.3	21.0
RESULTS OF THE REPLICATION # 8				10000.0	709.0	9.2	15.0
=====				11000.0	684.7	6.5	18.0
HEIGHT	PRESSURE	TEMPERATURE	REL HUMID	12000.0	661.0	3.0	2.0
0.0	1015.0	24.4	97.4	13000.0	635.7	2.4	4.8
1000.0	979.7	22.3	93.8	14000.0	607.8	0.4	3.2
2000.0	950.2	20.5	47.5	15000.0	589.8	-1.4	5.0
3000.0	915.1	20.1	44.2	16000.0	567.0	-4.2	2.0
4000.0	880.1	18.6	48.4	17000.0	544.4	-7.7	2.8
5000.0	851.3	16.3	29.0	18000.0	525.4	-8.9	12.7
6000.0	823.4	15.0	20.1	19000.0	504.6	-11.4	1.3
7000.0	795.7	13.5	33.9	20000.0	485.1	-13.9	6.3
8000.0	765.1	11.1	28.3	21000.0	468.4	-17.3	2.0
9000.0	739.9	10.2	18.6	22000.0	445.2	-18.0	1.1
10000.0	711.5	7.3	17.2	23000.0	426.4	-19.7	2.0
11000.0	683.6	5.7	12.2	24000.0	411.2	-21.8	43.2
12000.0	660.4	3.1	2.0	25000.0	394.8	-24.9	54.1
13000.0	636.6	1.9	32.4	26000.0	379.4	-27.7	49.3
14000.0	609.8	0.7	2.0	27000.0	361.1	-30.6	35.4
15000.0	590.0	-2.4	12.7	28000.0	345.4	-32.4	57.0

FILE: CALIE

RESULTS OF THE REPLICATION # 1
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	21.3	91.8
1000.0	983.1	18.5	98.0
2000.0	952.1	21.2	19.8
3000.0	916.5	18.4	31.6
4000.0	878.7	18.6	33.8
5000.0	851.3	19.8	30.6
6000.0	822.9	12.8	36.4
7000.0	792.5	16.8	30.6
8000.0	767.3	14.0	26.2
9000.0	739.9	7.6	25.1
10000.0	710.5	9.4	18.7
11000.0	684.0	6.1	19.8
12000.0	661.3	1.3	2.0
13000.0	638.5	0.5	13.1
14000.0	613.1	2.9	2.0
15000.0	591.4	-0.1	18.5
16000.0	566.7	-2.9	9.0
17000.0	543.0	-5.0	10.6
18000.0	525.7	-10.2	2.0
19000.0	505.6	-12.4	3.0
20000.0	487.8	-14.3	27.2
21000.0	462.9	-15.2	2.0
22000.0	444.5	-17.4	6.8
23000.0	428.0	-20.5	2.0
24000.0	410.1	-22.4	30.9
25000.0	397.8	-23.4	47.5
26000.0	379.6	-25.5	50.1
27000.0	363.0	-27.5	57.5
28000.0	346.6	-30.5	41.4

RESULTS OF THE REPLICATION # 2
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	23.4	99.0
1000.0	981.2	23.8	86.3
2000.0	947.9	20.1	54.8
3000.0	918.2	20.2	31.4
4000.0	882.8	22.6	37.5
5000.0	851.2	21.5	30.8
6000.0	821.4	18.9	23.1
7000.0	797.2	11.9	33.9
8000.0	767.8	12.3	34.2
9000.0	738.9	9.1	27.2
10000.0	709.8	10.2	7.3
11000.0	685.2	7.7	16.2
12000.0	657.0	7.3	2.0
13000.0	638.1	-1.9	2.0
14000.0	610.0	-0.2	1.7
15000.0	591.2	-4.2	15.2
16000.0	563.8	-4.6	20.1
17000.0	543.8	-4.2	2.7
18000.0	526.0	-10.1	9.7
19000.0	506.7	-9.8	0.5
20000.0	489.2	-16.8	9.0
21000.0	464.3	-16.3	2.0
22000.0	445.4	-19.6	21.0
23000.0	429.3	-17.9	12.3
24000.0	412.7	-22.0	45.0
25000.0	395.6	-23.0	33.5
26000.0	379.3	-27.8	46.7
27000.0	365.8	-29.9	45.2
28000.0	347.3	-29.7	53.3

RESULTS OF THE REPLICATION # 3
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.2	23.1	86.9
1000.0	983.8	23.0	87.5
2000.0	951.8	20.1	25.3
3000.0	915.8	20.3	50.8
4000.0	879.4	20.6	36.2
5000.0	852.0	17.8	39.4
6000.0	824.7	14.0	14.8
7000.0	794.1	16.1	35.5
8000.0	767.7	8.8	28.0
9000.0	739.4	12.8	31.1
10000.0	708.3	8.0	9.0
11000.0	684.0	6.5	17.5
12000.0	659.3	1.7	25.9
13000.0	635.2	5.3	3.2
14000.0	612.1	-2.8	2.0
15000.0	591.4	-3.7	9.1

16000.0	566.2	-6.2	26.5
17000.0	542.2	-5.6	2.0
18000.0	528.9	-11.9	11.0
19000.0	505.3	-11.2	12.0
20000.0	485.2	-13.6	13.5
21000.0	466.5	-15.5	17.5
22000.0	446.1	-18.4	1.9
23000.0	429.6	-14.7	17.7
24000.0	408.6	-23.7	54.2
25000.0	396.6	-23.1	54.7
26000.0	379.0	-29.3	42.3
27000.0	362.5	-31.5	28.2
28000.0	349.0	-32.8	54.1

RESULTS OF THE REPLICATION # 4
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	24.4	79.5
1000.0	979.5	21.7	93.3
2000.0	949.6	22.8	47.8
3000.0	915.8	21.7	28.2
4000.0	880.3	20.3	32.4
5000.0	853.4	18.2	23.7
6000.0	825.8	15.6	33.6
7000.0	793.5	11.5	45.4
8000.0	767.5	11.9	30.8
9000.0	738.2	7.6	25.7
10000.0	709.8	10.4	27.1
11000.0	685.2	8.6	3.4
12000.0	656.6	4.3	2.0
13000.0	628.7	2.0	12.3
14000.0	610.1	0.3	6.8
15000.0	587.9	-2.4	2.0
16000.0	563.6	-3.1	1.8
17000.0	544.2	-3.9	8.2
18000.0	524.0	-9.3	14.8
19000.0	504.5	-15.4	9.8
20000.0	485.5	-12.8	11.4
21000.0	465.1	-14.8	5.1
22000.0	449.6	-19.4	0.4
23000.0	429.1	-18.3	4.2
24000.0	411.3	-22.7	42.4
25000.0	396.6	-26.9	59.8
26000.0	379.1	-27.1	57.7
27000.0	361.8	-32.1	50.0
28000.0	347.5	-30.3	67.4

RESULTS OF THE REPLICATION # 5
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	20.9	91.8
1000.0	981.6	24.9	77.4
2000.0	950.4	20.5	26.8
3000.0	913.0	18.1	41.2
4000.0	882.6	18.6	40.8
5000.0	853.7	16.9	37.0
6000.0	823.1	16.3	49.4
7000.0	794.0	14.0	32.5
8000.0	767.5	11.5	19.1
9000.0	741.0	6.1	20.4
10000.0	711.4	11.1	28.2
11000.0	683.2	6.9	11.4
12000.0	658.7	4.4	11.3
13000.0	635.9	-0.1	7.5
14000.0	610.6	1.1	16.7
15000.0	590.7	-1.2	22.8
16000.0	563.5	-5.9	18.4
17000.0	543.3	-6.1	6.9
18000.0	524.5	-2.4	2.0
19000.0	505.7	-9.1	7.1
20000.0	485.3	-12.6	7.2
21000.0	463.0	-14.1	19.6
22000.0	445.5	-19.5	15.2
23000.0	429.3	-16.7	12.5
24000.0	411.1	-19.8	43.3
25000.0	394.1	-24.9	57.2
26000.0	378.5	-25.8	51.8
27000.0	360.0	-24.6	46.2
28000.0	345.3	-29.9	63.2

RESULTS OF THE REPLICATION # 6
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.4	22.5	93.3
1000.0	982.9	19.0	98.0
2000.0	949.5	19.3	15.7

3000.0	915.4	22.6	33.8	16000.0	563.6	-4.5	15.9
4000.0	880.7	22.8	48.7	17000.0	545.5	-6.6	2.4
5000.0	851.6	18.0	42.4	18000.0	524.9	-10.1	2.0
6000.0	822.6	16.8	18.5	19000.0	504.8	-11.5	9.7
7000.0	796.2	15.9	36.4	20000.0	484.8	-16.6	3.5
8000.0	767.3	11.5	26.1	21000.0	462.7	-15.7	5.2
9000.0	742.2	5.9	16.1	22000.0	446.9	-17.2	3.5
10000.0	710.2	11.0	2.0	23000.0	430.3	-21.8	5.0
11000.0	683.1	1.9	16.5	24000.0	410.7	-19.2	51.3
12000.0	659.4	6.5	8.4	25000.0	392.0	-24.7	48.9
13000.0	638.0	5.1	2.0	26000.0	381.0	-26.1	58.4
14000.0	612.6	0.7	14.0	27000.0	360.1	-26.0	44.9
15000.0	590.5	-1.8	2.0	28000.0	348.3	-35.2	58.7
16000.0	565.9	-4.3	5.4				
17000.0	544.1	-5.6	1.8				
18000.0	527.8	-8.3	10.5				
19000.0	504.1	-13.9	2.0				
20000.0	488.4	-11.1	9.0				
21000.0	465.3	-14.1	11.7				
22000.0	451.3	-16.2	4.0				
23000.0	430.1	-17.6	20.3				
24000.0	410.7	-20.8	44.8				
25000.0	393.5	-22.4	54.1				
26000.0	378.3	-27.8	39.2				
27000.0	363.4	-28.4	48.6				
28000.0	346.8	-30.3	63.7				

RESULTS OF THE REPLICATION # 7

=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	25.2	90.9
1000.0	983.1	17.2	93.9
2000.0	949.6	20.2	43.3
3000.0	919.7	18.8	36.9
4000.0	880.8	18.3	37.7
5000.0	849.5	15.7	37.7
6000.0	823.4	16.4	38.0
7000.0	796.7	9.1	28.7
8000.0	766.9	8.4	28.3
9000.0	741.5	11.0	34.5
10000.0	706.9	5.9	24.6
11000.0	682.1	6.2	23.2
12000.0	660.2	4.3	12.1
13000.0	637.8	-1.4	7.4
14000.0	609.1	0.5	9.8
15000.0	590.3	-7.4	16.9
16000.0	566.9	-7.7	13.9
17000.0	543.8	-7.6	7.1
18000.0	524.5	-8.5	22.4
19000.0	508.0	-9.0	11.9
20000.0	484.3	-14.6	10.3
21000.0	462.9	-16.8	6.8
22000.0	446.3	-15.8	6.5
23000.0	430.7	-16.7	0.9
24000.0	410.8	-25.6	45.6
25000.0	396.0	-19.5	64.2
26000.0	375.6	-30.3	42.3
27000.0	361.0	-31.3	61.9
28000.0	348.3	-30.9	60.9

RESULTS OF THE REPLICATION # 8

=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.0	26.1	97.4
1000.0	979.7	22.6	93.8
2000.0	950.2	19.2	47.5
3000.0	915.1	19.9	44.2
4000.0	880.1	18.2	48.4
5000.0	851.3	15.3	29.0
6000.0	823.4	13.7	20.1
7000.0	795.7	12.6	33.9
8000.0	765.1	10.1	28.3
9000.0	739.9	10.9	18.6
10000.0	711.5	6.4	17.2
11000.0	683.6	5.6	12.2
12000.0	660.4	1.5	2.0
13000.0	636.6	1.5	32.4
14000.0	609.8	1.8	2.0
15000.0	590.0	-2.4	12.7

RESULTS OF THE REPLICATION # 9

=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	22.2	93.3
1000.0	982.7	23.2	83.7
2000.0	949.7	23.6	29.3
3000.0	917.7	18.7	37.0
4000.0	879.1	17.8	46.7
5000.0	850.9	20.3	37.6
6000.0	821.5	14.6	24.1
7000.0	796.9	13.8	25.3
8000.0	767.5	8.9	39.7
9000.0	740.1	13.9	31.1
10000.0	708.9	8.1	12.2
11000.0	683.0	6.8	9.4
12000.0	658.8	6.0	17.7
13000.0	637.7	0.8	9.7
14000.0	609.5	0.7	5.8
15000.0	590.8	-0.6	2.0
16000.0	565.9	-6.1	18.2
17000.0	542.6	-7.3	10.3
18000.0	529.0	-7.4	12.0
19000.0	505.3	-10.6	4.1
20000.0	484.6	-12.0	16.3
21000.0	463.2	-18.1	16.8
22000.0	449.4	-12.7	22.5
23000.0	425.9	-16.6	17.2
24000.0	410.9	-21.3	37.4
25000.0	396.9	-24.8	69.8
26000.0	378.1	-29.2	39.0
27000.0	362.8	-30.5	46.5
28000.0	347.2	-32.4	64.1

RESULTS OF THE REPLICATION # 10

=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	26.6	87.7
1000.0	983.4	18.0	98.5
2000.0	952.0	23.2	29.7
3000.0	916.1	20.2	28.4
4000.0	879.1	17.8	49.8
5000.0	853.3	14.3	34.5
6000.0	824.5	19.3	43.6
7000.0	795.7	15.5	24.7
8000.0	766.9	11.7	29.2
9000.0	740.3	9.1	21.0
10000.0	709.0	10.0	15.0
11000.0	684.7	7.4	18.0
12000.0	661.0	1.3	2.0
13000.0	635.7	2.5	4.8
14000.0	607.8	1.1	3.2
15000.0	589.8	-0.3	5.0
16000.0	567.0	-3.1	2.0
17000.0	544.4	-8.3	2.8
18000.0	525.4	-9.6	12.7
19000.0	504.6	-12.0	1.3
20000.0	485.1	-14.9	6.3
21000.0	468.4	-19.2	2.0
22000.0	445.2	-18.8	1.1
23000.0	426.4	-20.4	2.0
24000.0	411.2	-21.8	43.2
25000.0	394.8	-25.5	54.1
26000.0	379.4	-28.3	49.3
27000.0	361.1	-31.6	35.4
28000.0	345.4	-32.9	57.0

FILE: CALIF

RESULTS OF THE REPLICATION # 1
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	20.0	91.8
1000.0	983.1	15.1	96.0
2000.0	952.1	20.6	19.8
3000.0	916.5	16.5	31.6
4000.0	878.7	18.0	33.8
5000.0	851.3	22.4	30.6
6000.0	822.9	9.5	36.4
7000.0	792.5	19.2	30.6
8000.0	767.3	15.9	26.2
9000.0	739.9	5.7	25.1
10000.0	710.5	10.5	18.7
11000.0	684.0	6.5	19.8
12000.0	661.3	-2.2	2.0
13000.0	638.5	-1.4	13.1
14000.0	613.1	6.3	2.0
15000.0	591.4	2.3	18.5
16000.0	566.7	-0.5	9.0
17000.0	543.0	-3.0	10.6
18000.0	525.7	-12.2	2.0
19000.0	505.6	-13.9	3.0
20000.0	487.8	-15.7	27.2
21000.0	462.9	-15.0	2.0
22000.0	444.5	-17.6	6.8
23000.0	428.0	-21.9	2.0
24000.0	410.1	-23.0	30.9
25000.0	397.8	-22.5	47.5
26000.0	379.6	-23.9	50.1
27000.0	363.0	-25.4	57.5
28000.0	346.6	-28.9	41.4

RESULTS OF THE REPLICATION # 2
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	24.3	99.0
1000.0	981.2	25.7	86.3
2000.0	947.9	18.4	54.8
3000.0	918.2	20.1	31.4
4000.0	882.8	26.1	37.5
5000.0	851.2	25.7	30.8
6000.0	821.4	21.5	23.1
7000.0	797.2	9.5	33.9
8000.0	767.8	12.5	34.2
9000.0	738.9	8.7	27.2
10000.0	709.8	12.2	7.3
11000.0	685.2	9.7	16.2
12000.0	657.0	9.9	2.0
13000.0	638.1	-6.1	2.0
14000.0	610.0	0.1	1.7
15000.0	591.2	-5.9	15.2
16000.0	563.8	-4.0	20.1
17000.0	543.8	-1.4	2.7
18000.0	526.0	-12.0	9.7
19000.0	506.7	-8.8	0.5
20000.0	489.2	-20.9	9.0
21000.0	464.3	-17.2	2.0
22000.0	445.4	-22.1	21.0
23000.0	429.3	-16.7	12.3
24000.0	412.7	-22.2	45.0
25000.0	395.6	-21.6	33.5
26000.0	379.3	-28.4	46.7
27000.0	365.8	-30.1	45.2
28000.0	347.3	-27.5	53.3

RESULTS OF THE REPLICATION # 3
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.2	23.6	86.9
1000.0	983.8	24.2	87.5
2000.0	951.8	18.4	25.3
3000.0	915.8	20.3	50.8
4000.0	879.4	22.0	36.2
5000.0	852.0	18.3	39.4
6000.0	824.7	11.9	14.8
7000.0	794.1	17.7	35.5
8000.0	767.7	5.5	28.0
9000.0	739.4	16.1	31.1
10000.0	708.3	7.7	9.0
11000.0	684.0	7.2	17.5
12000.0	659.3	-1.3	25.9
13000.0	635.2	8.1	3.2
14000.0	612.1	-5.1	2.0
15000.0	591.4	-4.9	9.1

16000.0	566.2	-7.2	26.5
17000.0	542.2	-4.1	2.0
18000.0	528.9	-15.6	11.0
19000.0	505.3	-11.7	12.0
20000.0	485.2	-14.4	13.5
21000.0	466.5	-15.6	17.5
22000.0	446.1	-19.6	1.9
23000.0	429.6	-10.5	17.7
24000.0	408.6	-25.5	54.2
25000.0	396.6	-21.9	54.7
26000.0	379.0	-31.4	42.3
27000.0	362.5	-33.3	28.2
28000.0	344.0	-33.5	54.1

RESULTS OF THE REPLICATION # 4
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	26.3	79.5
1000.0	979.5	21.5	93.3
2000.0	949.6	23.7	47.8
3000.0	915.8	23.0	28.2
4000.0	880.3	21.5	32.4
5000.0	853.4	19.0	23.7
6000.0	825.8	15.1	33.6
7000.0	793.5	8.6	45.4
8000.0	767.5	11.7	30.8
9000.0	738.2	5.8	25.7
10000.0	709.8	12.5	27.1
11000.0	685.2	11.5	3.4
12000.0	656.6	3.8	2.0
13000.0	638.7	1.6	12.3
14000.0	610.1	0.9	6.8
15000.0	587.9	-2.2	2.0
16000.0	563.6	-0.9	1.8
17000.0	544.2	-0.9	8.2
18000.0	524.0	-10.4	14.8
19000.0	504.5	-20.0	9.8
20000.0	485.5	-12.9	11.4
21000.0	465.1	-14.2	5.1
22000.0	449.6	-21.5	0.4
23000.0	429.1	-17.7	4.2
24000.0	411.3	-23.5	42.4
25000.0	396.6	-29.6	59.8
26000.0	379.1	-27.1	57.7
27000.0	361.8	-34.5	50.0
28000.0	347.5	-28.7	67.4

RESULTS OF THE REPLICATION # 5
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	19.2	91.8
1000.0	981.6	27.9	77.4
2000.0	950.4	19.2	26.8
3000.0	913.0	15.8	41.2
4000.0	832.6	18.1	40.8
5000.0	853.7	16.6	37.0
6000.0	823.1	16.3	49.4
7000.0	794.0	13.5	32.5
8000.0	767.5	10.9	19.1
9000.0	741.0	2.8	20.4
10000.0	711.4	13.8	28.2
11000.0	683.2	8.2	11.4
12000.0	658.7	4.0	11.3
13000.0	635.9	-2.6	7.5
14000.0	610.6	2.6	16.7
15000.0	590.7	0.0	22.8
16000.0	563.5	-6.5	18.4
17000.0	543.3	-5.1	6.9
18000.0	524.5	3.3	2.0
19000.0	505.7	-7.4	7.1
20000.0	485.3	-12.5	7.2
21000.0	463.0	-12.7	19.6
22000.0	445.5	-21.9	15.2
23000.0	429.3	-14.5	12.5
24000.0	411.1	-17.9	43.3
25000.0	394.1	-25.5	57.2
26000.0	378.5	-24.5	51.8
27000.0	360.0	-19.6	46.2
28000.0	345.3	-27.9	63.2

RESULTS OF THE REPLICATION # 6
=====

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.4	22.5	93.3
1000.0	982.9	16.0	98.0
2000.0	949.5	16.7	15.7

3000.0	915.4	24.9	33.8	16000.0	563.6	-3.9	15.9
4000.0	880.7	26.6	48.7	17000.0	545.5	-6.2	2.4
5000.0	851.6	18.8	42.4	18000.0	524.9	-12.0	2.0
6000.0	822.6	17.4	18.5	19000.0	504.8	-12.2	9.7
7000.0	796.2	17.3	36.4	20000.0	484.8	-20.5	3.5
8000.0	767.3	11.0	26.1	21000.0	462.7	-16.0	5.2
9000.0	742.2	2.4	16.1	22000.0	446.9	-17.1	3.5
10000.0	710.2	13.7	2.0	23000.0	430.3	-24.6	5.0
11000.0	683.1	-1.8	16.5	24000.0	410.7	-16.6	51.3
12000.0	659.4	8.3	8.4	25000.0	392.0	-25.0	48.9
13000.0	638.0	7.8	2.0	26000.0	381.0	-25.0	58.4
14000.0	612.6	1.7	14.0	27000.0	360.1	-22.3	44.9
15000.0	590.5	-1.2	2.0	28000.0	348.3	-38.5	58.7
16000.0	565.9	-3.4	5.4				
17000.0	544.1	-4.1	1.8				
18000.0	527.8	-8.4	10.5				
19000.0	504.1	-17.1	2.0				
20000.0	488.4	-9.4	9.0				
21000.0	465.3	-12.8	11.7				
22000.0	451.3	-15.2	4.0				
23000.0	430.1	-16.3	20.3				
24000.0	410.7	-19.8	44.8				
25000.0	393.5	-20.5	54.1				
26000.0	378.3	-28.4	39.2				
27000.0	363.4	-27.1	48.6				
28000.0	346.8	-28.7	63.7				

RESULTS OF THE REPLICATION #

HEIGHT	PRESSURE	TEMPERATURE	REL HUMD
0.0	1015.3	27.8	90.9
1000.0	983.1	12.5	93.9
2000.0	949.6	18.5	43.3
3000.0	919.7	17.2	36.9
4000.0	880.8	17.5	37.7
5000.0	849.5	14.0	37.7
6000.0	823.4	16.6	38.0
7000.0	796.7	3.8	28.7
8000.0	766.9	4.8	28.3
9000.0	741.5	12.4	34.5
10000.0	706.9	3.5	24.6
11000.0	682.1	6.7	23.2
12000.0	660.2	3.8	12.1
13000.0	637.8	-5.1	7.4
14000.0	609.1	1.3	9.8
15000.0	590.3	-12.2	16.9
16000.0	566.9	-10.1	13.9
17000.0	543.8	-8.2	7.1
18000.0	524.5	-8.9	22.4
19000.0	508.0	-7.2	11.9
20000.0	484.3	-16.4	10.3
21000.0	462.9	-18.2	6.8
22000.0	446.3	-14.4	6.5
23000.0	430.7	-14.4	0.9
24000.0	410.8	-29.5	45.6
25000.0	396.0	-14.7	64.2
26000.0	375.6	-33.5	42.3
27000.0	361.0	-32.8	61.9
28000.0	348.3	-29.7	60.9

RESULTS OF THE REPLICATION # 8

HEIGHT	PRESSURE	TEMPERATURE	REL HUMD
0.0	1015.0	29.6	97.4
1000.0	979.7	23.3	93.8
2000.0	950.2	16.6	47.5
3000.0	915.1	19.6	44.2
4000.0	880.1	17.3	48.4
5000.0	851.3	13.3	29.0
6000.0	823.4	11.3	20.1
7000.0	795.7	10.8	33.9
8000.0	765.1	8.0	28.3
9000.0	739.9	12.4	18.6
10000.0	711.5	4.5	17.2
11000.0	683.6	5.6	12.2
12000.0	660.4	-1.7	2.0
13000.0	636.6	0.5	32.4
14000.0	609.8	4.1	2.0
15000.0	590.0	-2.2	12.7

HEIGHT	PRESSURE	TEMPERATURE	REL HUMD
0.0	1015.3	21.7	93.3
1000.0	982.7	24.6	83.7
2000.0	949.7	25.5	29.3
3000.0	917.7	17.1	37.0
4000.0	879.1	16.6	46.7
5000.0	850.9	23.2	37.6
6000.0	821.5	13.1	24.1
7000.0	796.9	13.2	25.3
8000.0	767.5	5.7	39.7
9000.0	740.1	18.3	31.1
10000.0	708.9	8.0	12.2
11000.0	683.0	7.8	9.4
12000.0	658.8	7.3	17.7
13000.0	637.7	-0.8	9.7
14000.0	609.5	1.8	5.8
15000.0	590.8	1.3	2.0
16000.0	565.9	-6.9	18.2
17000.0	542.6	-7.6	10.3
18000.0	529.0	-6.7	12.0
19000.0	505.3	-10.4	4.1
20000.0	484.6	-11.1	16.3
21000.0	463.2	-20.8	16.8
22000.0	449.4	-8.1	22.5
23000.0	425.9	-14.3	17.2
24000.0	410.9	-20.9	37.4
25000.0	396.9	-25.4	69.8
26000.0	378.1	-31.3	39.0
27000.0	362.8	-31.3	46.5
28000.0	347.2	-32.9	64.1

RESULTS OF THE REPLICATION # 10

HEIGHT	PRESSURE	TEMPERATURE	REL HUMD
0.0	1015.3	30.7	87.7
1000.0	983.4	14.1	98.5
2000.0	952.0	24.7	29.7
3000.0	916.1	20.2	28.4
4000.0	879.1	16.4	49.8
5000.0	853.3	11.3	34.5
6000.0	824.5	22.4	43.6
7000.0	795.7	16.6	24.7
8000.0	766.9	11.4	29.2
9000.0	740.3	8.7	21.0
10000.0	709.0	11.7	15.0
11000.0	684.7	9.0	18.0
12000.0	661.0	-2.2	2.0
13000.0	635.7	2.5	4.8
14000.0	607.8	2.7	3.2
15000.0	589.8	2.0	5.0
16000.0	567.0	-1.1	2.0
17000.0	544.4	-9.6	2.8
18000.0	525.4	-11.0	12.7
19000.0	504.6	-13.2	1.3
20000.0	485.1	-17.1	6.3
21000.0	468.4	-23.0	2.0
22000.0	445.2	-20.5	1.1
23000.0	426.4	-21.8	2.0
24000.0	411.2	-21.7	43.2
25000.0	394.8	-26.8	54.1
26000.0	379.4	-29.5	49.3
27000.0	361.1	-33.4	35.4
28000.0	345.4	-33.7	57.0

FILE: CAL2A

RESULTS OF THE REPLICATION # 1

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.8	15.7	98.0
1000.0	986.2	17.1	80.9
2000.0	949.7	20.4	18.8
3000.0	914.4	19.6	23.6
4000.0	880.4	18.3	33.8
5000.0	852.4	18.4	31.6
6000.0	819.8	13.5	36.4
7000.0	789.1	14.6	31.6
8000.0	765.3	12.0	33.2
9000.0	738.9	7.9	40.1
10000.0	710.6	7.2	38.7
11000.0	683.3	4.8	40.8
12000.0	663.5	1.0	20.6
13000.0	639.4	1.3	14.1
14000.0	616.0	1.4	2.0
15000.0	589.5	-1.8	19.5
16000.0	568.6	-3.6	3.0
17000.0	542.3	-6.0	10.6
18000.0	523.5	-10.5	2.0
19000.0	503.3	-12.6	9.0
20000.0	486.3	-14.8	34.2
21000.0	461.7	-16.8	8.2
22000.0	442.2	-18.3	18.8
23000.0	426.9	-21.0	2.0
24000.0	407.9	-23.4	12.9
25000.0	397.7	-24.8	44.5
26000.0	379.7	-25.8	34.1
27000.0	362.7	-28.0	44.5
28000.0	344.7	-30.8	40.4

RESULTS OF THE REPLICATION # 2

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.8	16.7	98.0
1000.0	983.0	19.8	59.3
2000.0	942.7	19.8	53.8
3000.0	917.3	20.5	23.4
4000.0	887.2	20.3	37.5
5000.0	852.2	19.2	31.8
6000.0	817.3	16.5	23.1
7000.0	796.9	12.2	34.9
8000.0	766.1	11.2	41.2
9000.0	737.2	8.7	42.2
10000.0	709.4	7.6	27.3
11000.0	685.2	5.6	37.2
12000.0	656.3	4.0	18.3
13000.0	638.8	0.1	2.0
14000.0	610.9	-0.2	3.7
15000.0	589.1	-3.9	16.2
16000.0	563.6	-4.5	14.1
17000.0	543.5	-5.6	2.7
18000.0	524.0	-10.4	15.7
19000.0	505.1	-11.3	6.5
20000.0	488.6	-16.1	16.0
21000.0	464.0	-17.4	3.9
22000.0	443.8	-19.4	33.0
23000.0	429.2	-19.7	12.3
24000.0	412.1	-23.2	27.0
25000.0	394.1	-24.6	30.5
26000.0	379.1	-26.9	30.7
27000.0	367.3	-29.2	32.2
28000.0	345.9	-30.5	52.3

RESULTS OF THE REPLICATION # 3

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1014.9	16.5	95.9
1000.0	987.4	19.4	60.5
2000.0	949.1	19.9	24.3
3000.0	913.3	20.6	42.8
4000.0	881.6	19.3	36.2
5000.0	853.5	17.3	40.4
6000.0	822.9	14.1	14.8
7000.0	791.7	14.2	36.5
8000.0	766.0	9.5	35.0
9000.0	738.0	10.5	46.1
10000.0	706.9	6.5	29.0
11000.0	683.2	5.0	38.5
12000.0	660.2	1.2	49.9
13000.0	633.8	3.6	4.2
14000.0	614.3	-1.5	0.9
15000.0	589.4	-3.6	10.1

16000.0	567.6	-5.3	20.5
17000.0	541.0	-6.3	2.0
18000.0	528.7	-11.4	17.0
19000.0	502.7	-12.0	18.0
20000.0	482.0	-14.5	20.5
21000.0	467.8	-17.0	26.5
22000.0	444.9	-18.8	13.9
23000.0	429.7	-18.2	17.7
24000.0	405.3	-21.0	36.2
25000.0	395.8	-21.7	51.7
26000.0	378.7	-27.7	26.3
27000.0	361.9	-30.0	15.2
28000.0	348.7	-32.0	53.1

RESULTS OF THE REPLICATION # 4

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.8	17.2	88.5
1000.0	920.3	18.7	66.3
2000.0	945.5	21.2	46.8
3000.0	913.4	21.3	20.2
4000.0	883.1	19.2	32.4
5000.0	855.8	17.5	24.7
6000.0	824.6	14.9	33.6
7000.0	790.7	11.9	46.4
8000.0	765.6	11.0	37.8
9000.0	736.1	8.0	40.7
10000.0	709.4	7.7	47.1
11000.0	685.2	6.0	24.4
12000.0	655.6	2.5	17.2
13000.0	639.7	2.0	13.3
14000.0	611.0	0.0	8.8
15000.0	583.7	-2.9	2.0
16000.0	563.3	-3.7	2.0
17000.0	544.3	-5.5	8.2
18000.0	520.6	-10.1	20.8
19000.0	501.3	-14.1	15.8
20000.0	482.5	-14.1	18.4
21000.0	465.4	-16.6	14.1
22000.0	450.7	-19.3	12.4
23000.0	428.8	-20.0	4.2
24000.0	409.8	-23.5	24.4
25000.0	395.7	-26.6	56.8
26000.0	378.8	-26.6	41.7
27000.0	360.7	-30.3	37.0
28000.0	346.1	-30.8	66.4

RESULTS OF THE REPLICATION # 5

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.8	15.4	98.0
1000.0	983.8	20.3	50.4
2000.0	946.8	20.0	25.8
3000.0	908.7	19.5	33.2
4000.0	887.0	18.4	40.8
5000.0	856.3	16.9	38.0
6000.0	820.2	15.2	49.4
7000.0	791.5	13.2	33.5
8000.0	765.7	10.8	26.1
9000.0	740.8	7.2	35.4
10000.0	712.0	8.0	48.2
11000.0	681.9	5.2	32.4
12000.0	659.1	2.5	35.3
13000.0	635.0	1.0	8.5
14000.0	611.9	0.4	18.7
15000.0	588.2	-2.4	23.8
16000.0	563.3	-5.1	12.4
17000.0	542.7	-6.5	6.9
18000.0	521.5	-6.6	2.3
19000.0	503.4	-10.9	13.1
20000.0	482.1	-14.0	14.2
21000.0	461.9	-16.2	28.6
22000.0	443.9	-19.4	27.2
23000.0	429.1	-19.2	12.5
24000.0	409.6	-22.1	25.3
25000.0	391.6	-25.6	54.2
26000.0	377.8	-25.9	35.8
27000.0	357.6	-26.6	33.2
28000.0	342.4	-30.6	62.2

RESULTS OF THE REPLICATION # 6

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.3	16.3	98.0
1000.0	985.0	17.3	76.3
2000.0	945.3	19.4	14.7

3000.0	912.6	21.8	25.8	16000.0	563.4	-4.5	9.9
4000.0	883.7	20.5	48.7	17000.0	546.4	-6.8	2.4
5000.0	852.8	17.5	43.4	18000.0	522.1	-10.4	6.0
6000.0	819.3	15.5	18.5	19000.0	501.9	-12.1	15.7
7000.0	795.2	14.1	37.4	20000.0	481.3	-16.0	10.5
8000.0	765.3	10.8	33.1	21000.0	461.4	-17.1	14.2
9000.0	742.7	7.1	31.1	22000.0	446.3	-18.2	15.5
10000.0	710.1	8.0	19.4	23000.0	430.9	-21.7	5.0
11000.0	681.7	2.7	37.5	24000.0	408.8	-21.8	33.3
12000.0	660.3	3.6	32.4	25000.0	388.1	-25.5	45.9
13000.0	638.6	3.5	2.0	26000.0	381.9	-26.1	42.4
14000.0	615.2	0.2	16.0	27000.0	357.9	-27.2	31.9
15000.0	588.0	-2.7	0.8	28000.0	347.4	-33.2	57.7
16000.0	567.1	-4.4	2.0				
17000.0	544.1	-6.3	1.8				
18000.0	526.9	-9.6	16.5				
19000.0	500.7	-13.4	3.5				
20000.0	487.4	-13.3	16.0				
21000.0	465.7	-16.3	20.7				
22000.0	453.6	-17.7	16.0				
23000.0	430.5	-19.6	20.3				
24000.0	408.9	-22.6	26.8				
25000.0	390.6	-24.3	51.1				
26000.0	377.4	-26.9	23.2				
27000.0	363.4	-28.4	35.6				
28000.0	345.0	-30.8	62.7				

RESULTS OF THE REPLICATION # 7

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.8	17.6	99.9
1000.0	986.2	16.4	66.9
2000.0	945.5	19.9	42.3
3000.0	919.8	19.8	28.9
4000.0	884.0	18.2	37.7
5000.0	849.3	16.3	38.7
6000.0	820.7	15.3	38.0
7000.0	796.0	10.8	29.7
8000.0	764.6	9.3	35.3
9000.0	741.5	9.6	49.5
10000.0	704.6	5.4	44.6
11000.0	680.2	4.8	44.2
12000.0	661.7	2.5	36.1
13000.0	638.2	0.3	8.4
14000.0	609.4	0.1	11.8
15000.0	587.6	-5.4	17.9
16000.0	568.8	-6.0	7.9
17000.0	543.6	-7.3	7.1
18000.0	521.5	-9.7	28.4
19000.0	507.2	-10.9	17.9
20000.0	480.5	-15.0	17.3
21000.0	461.8	-17.6	15.8
22000.0	445.2	-17.5	18.5
23000.0	431.4	-19.1	0.9
24000.0	409.0	-25.0	27.6
25000.0	394.7	-22.9	61.2
26000.0	373.0	-28.2	26.3
27000.0	359.4	-29.9	48.9
28000.0	347.4	-31.0	59.9

RESULTS OF THE REPLICATION # 8

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1014.7	18.1	98.0
1000.0	980.6	19.2	66.8
2000.0	946.5	19.4	46.5
3000.0	912.2	20.4	36.2
4000.0	882.8	18.1	48.4
5000.0	852.3	16.1	30.0
6000.0	820.8	14.0	20.1
7000.0	794.3	12.5	34.9
8000.0	761.7	10.1	35.3
9000.0	738.8	9.6	33.6
10000.0	712.2	5.6	37.2
11000.0	682.7	4.6	33.2
12000.0	662.0	1.1	20.0
13000.0	636.2	1.7	33.4
14000.0	610.6	0.8	1.4
15000.0	587.2	-2.9	13.7

RESULTS OF THE REPLICATION # 9

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.8	16.1	98.0
1000.0	985.6	19.5	56.7
2000.0	945.7	21.6	28.3
3000.0	916.5	19.8	29.0
4000.0	881.2	18.0	46.7
5000.0	851.6	18.6	38.6
6000.0	817.6	14.4	24.1
7000.0	796.4	13.1	26.3
8000.0	765.7	9.5	46.7
9000.0	739.3	11.1	46.1
10000.0	707.9	6.5	32.2
11000.0	681.7	5.1	30.4
12000.0	659.3	3.3	41.7
13000.0	638.1	1.4	10.7
14000.0	610.0	0.3	7.8
15000.0	588.5	-2.0	2.0
16000.0	567.3	-5.2	12.2
17000.0	541.5	-7.1	10.3
18000.0	529.0	-9.1	18.0
19000.0	502.7	-11.7	10.1
20000.0	481.0	-13.7	23.3
21000.0	462.2	-18.3	25.8
22000.0	450.5	-15.9	34.5
23000.0	423.5	-19.1	17.2
24000.0	409.2	-22.9	19.4
25000.0	396.3	-25.6	66.8
26000.0	377.3	-27.7	23.0
27000.0	362.3	-29.5	33.5
28000.0	345.7	-31.8	63.1

RESULTS OF THE REPLICATION # 10

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1015.8	18.3	96.7
1000.0	986.7	16.8	71.5
2000.0	949.5	21.4	28.7
3000.0	913.9	20.6	20.4
4000.0	881.1	17.9	49.8
5000.0	855.7	15.6	35.5
6000.0	822.6	16.8	43.6
7000.0	794.4	14.0	25.7
8000.0	764.6	10.9	36.2
9000.0	739.6	8.7	36.0
10000.0	708.0	7.5	35.0
11000.0	684.5	5.4	39.0
12000.0	663.0	1.0	17.8
13000.0	634.8	2.2	5.8
14000.0	607.1	0.5	5.2
15000.0	586.8	-1.9	6.0
16000.0	569.0	-3.8	2.0
17000.0	544.7	-7.7	2.8
18000.0	523.0	-10.2	18.7
19000.0	501.5	-12.4	7.3
20000.0	481.9	-15.2	13.3
21000.0	470.8	-18.8	6.6
22000.0	443.5	-19.0	13.1
23000.0	424.3	-21.0	2.0
24000.0	409.7	-23.1	25.2
25000.0	392.8	-25.9	51.1
26000.0	379.3	-27.2	33.3
27000.0	359.6	-30.0	22.4
28000.0	342.7	-32.0	56.0

FILE: CAL8F

RESULTS OF THE REPLICATION # 1

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1017.6	12.5	97.8
1000.0	985.5	6.7	98.0
2000.0	951.2	18.5	9.8
3000.0	915.4	14.4	24.6
4000.0	881.3	15.2	42.8
5000.0	852.2	20.2	29.6
6000.0	820.4	6.4	41.4
7000.0	790.6	15.9	42.6
8000.0	766.0	12.7	37.2
9000.0	735.0	2.4	45.1
10000.0	710.0	6.3	51.7
11000.0	683.3	2.6	53.8
12000.0	659.9	-7.8	45.6
13000.0	635.7	-6.5	40.1
14000.0	612.3	2.9	52.0
15000.0	587.3	0.4	86.5
16000.0	565.6	-2.3	83.0
17000.0	540.0	-4.6	87.6
18000.0	521.4	-14.6	58.2
19000.0	500.8	-15.4	51.0
20000.0	482.3	-16.7	40.2
21000.0	461.1	-15.6	29.2
22000.0	442.2	-18.8	42.8
23000.0	424.8	-23.8	34.2
24000.0	407.5	-23.9	14.9
25000.0	394.7	-23.4	14.5
26000.0	377.3	-24.6	25.1
27000.0	360.1	-26.0	54.5
28000.0	344.7	-29.3	10.4

RESULTS OF THE REPLICATION # 2

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1017.6	16.8	98.0
1000.0	983.6	17.3	82.3
2000.0	947.0	16.3	44.8
3000.0	917.1	18.0	24.4
4000.0	885.4	23.3	46.5
5000.0	852.1	23.5	29.8
6000.0	818.9	18.4	28.1
7000.0	795.3	6.2	45.9
8000.0	766.5	9.3	45.2
9000.0	734.0	5.4	47.2
10000.0	709.3	8.0	40.3
11000.0	684.5	5.8	50.2
12000.0	655.6	4.3	43.3
13000.0	635.3	-11.2	25.4
14000.0	609.2	-3.3	57.7
15000.0	587.1	-7.8	83.2
16000.0	562.6	-5.8	94.1
17000.0	540.8	-3.0	79.7
18000.0	521.7	-14.4	76.7
19000.0	501.9	-10.3	48.5
20000.0	483.7	-21.9	22.0
21000.0	462.5	-17.8	24.9
22000.0	443.1	-23.3	57.0
23000.0	426.1	-18.6	48.3
24000.0	410.1	-23.1	29.0
25000.0	392.5	-22.5	0.5
26000.0	377.0	-29.1	21.7
27000.0	362.9	-30.7	42.2
28000.0	345.4	-27.9	22.3

RESULTS OF THE REPLICATION # 3

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1017.6	16.1	92.9
1000.0	986.2	15.8	83.5
2000.0	950.9	16.3	15.3
3000.0	914.7	18.2	43.8
4000.0	882.0	19.2	45.2
5000.0	852.9	16.1	38.4
6000.0	822.2	8.8	19.8
7000.0	792.2	14.4	47.5
8000.0	766.4	2.3	39.0
9000.0	734.5	12.8	51.1
10000.0	707.8	3.5	42.0
11000.0	683.3	3.3	51.5
12000.0	657.9	-6.9	74.9
13000.0	632.4	3.0	30.2
14000.0	611.3	-8.5	54.9
15000.0	587.3	-6.8	77.1

16000.0	565.1	-9.0	98.0
17000.0	539.2	-5.7	62.4
18000.0	524.6	-18.0	78.0
19000.0	500.5	-13.2	60.0
20000.0	479.7	-15.4	26.5
21000.0	464.7	-16.2	47.5
22000.0	443.8	-20.8	37.9
23000.0	426.4	-12.4	53.7
24000.0	406.0	-26.4	38.2
25000.0	393.5	-22.8	21.7
26000.0	376.7	-32.1	17.3
27000.0	359.6	-33.9	25.2
28000.0	347.1	-33.9	23.1

RESULTS OF THE REPLICATION # 4

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1017.6	18.8	85.5
1000.0	981.9	13.1	89.3
2000.0	948.7	21.6	37.8
3000.0	914.7	20.9	21.2
4000.0	882.9	18.7	41.4
5000.0	854.3	16.8	22.7
6000.0	823.3	12.0	38.6
7000.0	791.6	5.3	57.4
8000.0	766.2	8.5	41.8
9000.0	733.3	2.5	45.7
10000.0	709.3	8.3	60.1
11000.0	684.5	7.6	37.4
12000.0	655.2	-1.8	42.2
13000.0	635.9	-3.5	39.3
14000.0	609.3	-2.5	62.8
15000.0	583.8	-4.1	61.0
16000.0	562.5	-2.7	75.8
17000.0	541.2	-2.5	85.2
18000.0	519.7	-12.8	81.8
19000.0	499.7	-21.5	57.8
20000.0	480.0	-13.9	24.4
21000.0	463.3	-14.8	35.1
22000.0	447.3	-22.7	36.4
23000.0	425.9	-19.6	40.2
24000.0	408.7	-24.4	26.4
25000.0	393.5	-30.5	26.8
26000.0	376.8	-27.8	32.7
27000.0	358.9	-35.1	47.0
28000.0	345.6	-29.1	36.4

RESULTS OF THE REPLICATION # 5

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1017.6	11.7	97.8
1000.0	984.0	19.5	73.4
2000.0	949.5	17.1	16.8
3000.0	911.9	13.7	34.2
4000.0	885.2	15.3	49.8
5000.0	854.6	14.4	36.0
6000.0	820.6	13.2	54.4
7000.0	792.1	10.2	44.5
8000.0	766.2	7.7	30.1
9000.0	736.1	-0.5	40.4
10000.0	710.9	9.6	61.2
11000.0	682.5	4.3	45.4
12000.0	657.3	-1.6	60.3
13000.0	633.1	-7.7	34.5
14000.0	609.8	-0.8	72.7
15000.0	586.6	-1.9	90.8
16000.0	562.4	-8.3	92.4
17000.0	540.3	-6.7	83.9
18000.0	520.2	0.9	63.3
19000.0	500.9	-8.9	55.1
20000.0	479.8	-13.5	20.2
21000.0	461.2	-13.3	49.6
22000.0	443.2	-23.1	51.2
23000.0	426.1	-16.4	48.5
24000.0	408.5	-18.8	27.3
25000.0	391.0	-26.4	24.2
26000.0	376.2	-25.2	26.8
27000.0	357.1	-20.2	43.2
28000.0	343.4	-28.3	32.2

RESULTS OF THE REPLICATION # 6

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1017.6	15.0	99.3
1000.0	985.3	7.6	99.3
2000.0	948.6	14.6	5.7

3000.0	914.3	22.8	26.8
4000.0	883.3	23.8	57.7
5000.0	852.5	16.6	41.4
6000.0	820.1	14.3	23.5
7000.0	794.3	14.0	48.4
8000.0	766.0	7.8	37.1
9000.0	737.3	-0.9	36.1
10000.0	709.7	9.5	32.4
11000.0	682.4	-5.7	50.5
12000.0	658.0	2.7	57.4
13000.0	635.2	2.7	25.7
14000.0	611.8	-1.7	70.0
15000.0	586.4	-3.1	67.8
16000.0	564.8	-5.2	79.4
17000.0	541.1	-5.7	78.8
18000.0	523.5	-10.8	77.5
19000.0	499.3	-18.6	45.5
20000.0	482.9	-10.4	22.0
21000.0	463.5	-13.4	41.7
22000.0	449.0	-16.4	40.0
23000.0	426.9	-18.2	56.3
24000.0	408.1	-20.7	28.8
25000.0	390.4	-21.4	21.1
26000.0	376.0	-29.1	14.2
27000.0	360.5	-27.7	45.6
28000.0	344.9	-29.1	32.7

RESULTS OF THE REPLICATION # 7

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1017.6	20.3	96.9
1000.0	985.5	4.1	89.9
2000.0	948.7	16.4	33.3
3000.0	918.6	15.1	29.9
4000.0	883.4	14.7	46.7
5000.0	850.4	11.8	36.7
6000.0	820.9	13.5	43.0
7000.0	794.8	0.5	40.7
8000.0	765.6	1.6	39.3
9000.0	736.6	9.1	54.5
10000.0	706.4	-0.7	57.6
11000.0	681.4	2.8	57.2
12000.0	658.8	-1.8	61.1
13000.0	635.0	-10.2	34.4
14000.0	608.3	-2.1	65.8
15000.0	586.2	-14.1	84.9
16000.0	565.8	-11.9	87.9
17000.0	540.8	-9.8	84.1
18000.0	520.2	-11.3	89.4
19000.0	503.2	-8.7	59.9
20000.0	478.8	-17.4	23.3
21000.0	461.1	-18.8	36.8
22000.0	444.0	-15.6	42.5
23000.0	427.5	-16.3	36.9
24000.0	408.2	-30.4	29.6
25000.0	392.9	-15.6	31.2
26000.0	373.3	-34.2	17.3
27000.0	358.1	-33.4	58.9
28000.0	346.4	-30.1	29.9

RESULTS OF THE REPLICATION # 8

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1017.6	22.1	98.0
1000.0	982.1	14.9	89.8
2000.0	949.3	14.5	37.5
3000.0	914.0	17.5	37.2
4000.0	882.7	14.5	57.4
5000.0	852.2	11.1	28.0
6000.0	820.9	8.2	25.1
7000.0	793.8	7.5	45.9
8000.0	763.8	4.8	39.3
9000.0	735.0	9.1	38.6
10000.0	711.0	0.3	50.2
11000.0	682.9	1.7	46.2
12000.0	659.0	-7.3	45.0
13000.0	633.8	-4.6	59.4
14000.0	609.0	0.7	55.4
15000.0	585.9	-4.1	80.7

16000.0	562.5	-5.7	89.9
17000.0	542.5	-7.8	79.4
18000.0	520.6	-14.4	66.9
19000.0	500.0	-13.7	57.7
20000.0	479.3	-21.5	16.5
21000.0	460.9	-16.6	35.2
22000.0	444.6	-18.3	39.5
23000.0	427.1	-26.5	41.0
24000.0	408.1	-17.5	35.3
25000.0	388.9	-25.9	15.9
26000.0	378.7	-25.7	33.4
27000.0	357.2	-22.9	41.9
28000.0	346.4	-38.9	27.7

RESULTS OF THE REPLICATION # 9

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1017.6	14.2	99.3
1000.0	985.1	16.2	79.7
2000.0	948.8	23.4	19.3
3000.0	916.6	15.0	30.0
4000.0	881.7	13.8	55.7
5000.0	851.8	21.0	36.6
6000.0	819.0	10.0	29.1
7000.0	795.0	9.9	37.3
8000.0	766.2	2.5	50.7
9000.0	735.2	15.0	51.1
10000.0	708.4	3.8	45.2
11000.0	682.3	3.9	43.4
12000.0	657.4	1.7	66.7
13000.0	634.9	-5.9	36.7
14000.0	608.7	-1.6	61.8
15000.0	586.7	-0.6	62.4
16000.0	564.8	-8.7	92.2
17000.0	539.6	-9.2	87.3
18000.0	524.7	-9.1	79.0
19000.0	500.5	-11.9	52.1
20000.0	479.1	-12.1	29.3
21000.0	461.4	-21.4	46.8
22000.0	447.1	-9.3	58.5
23000.0	422.7	-16.2	53.2
24000.0	408.3	-21.8	21.4
25000.0	393.8	-26.3	36.8
26000.0	375.8	-32.0	14.0
27000.0	359.9	-31.9	43.5
28000.0	345.3	-33.3	33.1

RESULTS OF THE REPLICATION # 10

HEIGHT	PRESSURE	TEMPERATURE	REL HUMID
0.0	1017.6	23.2	93.7
1000.0	985.8	5.7	94.5
2000.0	951.1	22.6	19.7
3000.0	915.0	18.1	21.4
4000.0	881.7	13.6	58.8
5000.0	854.2	9.1	33.5
6000.0	822.0	19.3	48.6
7000.0	793.8	13.3	36.7
8000.0	765.6	8.2	40.2
9000.0	735.4	5.4	41.0
10000.0	708.5	7.5	48.0
11000.0	684.0	5.1	52.0
12000.0	659.6	-7.8	42.8
13000.0	632.9	-2.6	31.8
14000.0	607.0	-0.7	59.2
15000.0	585.7	0.1	73.0
16000.0	565.9	-2.9	66.5
17000.0	541.4	-11.2	79.8
18000.0	521.1	-13.4	79.7
19000.0	499.8	-14.7	49.3
20000.0	479.6	-18.1	19.3
21000.0	466.6	-23.6	27.6
22000.0	442.9	-21.7	37.1
23000.0	423.2	-23.7	23.7
24000.0	408.6	-22.6	27.2
25000.0	391.7	-27.7	21.1
26000.0	377.1	-30.2	24.3
27000.0	358.2	-34.0	32.4
28000.0	343.5	-34.1	26.0

APPENDIX 5

UFLR PREDICTED PERFORMANCES FOR UNDITHERED ATMOSPHERIC PROFILES

UFLR output for CAL1

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	5.9	2.7	1.2	6.8	4.0	1.9	7.9	5.6	2.6	8.1	5.8	2.6
1000	5.9	2.7	1.2	6.8	4.0	1.9	7.9	5.6	2.6	8.1	5.8	2.6
1500	6.4	2.8	1.0	7.5	4.2	1.9	8.8	6.2	2.9	9.0	6.5	3.0
2000	7.3	2.9	1.0	8.6	4.5	2.0	10.3	7.1	3.3	10.5	7.4	3.5
2500	8.1	3.0	1.1	9.6	4.8	1.8	11.6	7.8	3.6	12.0	8.3	3.9
3000	8.8	3.0	1.2	10.5	4.9	1.7	12.8	8.3	3.9	13.2	8.9	4.2
3500	9.4	3.0	1.3	11.3	5.0	1.7	13.8	8.8	4.2	14.3	9.4	4.4
4000	9.9	2.9	1.4	12.0	5.1	1.8	14.8	9.2	4.3	15.3	9.9	4.7
5000	10.8	2.9	1.4	13.2	5.2	2.0	16.5	9.8	4.1	17.1	10.7	4.9
7500	12.8	3.1	1.4	15.9	5.1	2.4	20.4	10.8	3.9	21.2	11.9	4.5
10000	14.6	3.5	0.0	18.3	5.2	2.5	23.9	11.7	4.3	25.0	12.9	4.7
15000	17.4	3.6	0.0	22.7	5.8	2.6	30.2	11.8	5.4	31.7	13.7	5.8
20000	20.3	3.6	0.0	26.0	6.2	0.0	35.3	11.9	5.7	37.1	13.7	6.7
25000	22.6	0.0	0.0	28.5	6.3	0.0	39.8	12.3	6.0	41.8	13.9	6.7
30000	24.5	0.0	0.0	31.3	6.4	0.0	43.4	12.8	6.0	45.8	14.4	7.0

UFLR output for CAL2

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	8.1	3.1	1.4	9.6	4.8	2.2	11.6	7.7	3.7	11.9	8.2	3.9
1000	8.8	3.1	1.3	10.5	4.9	2.3	12.8	8.3	4.0	13.2	8.9	4.3
1500	9.5	3.2	1.2	11.5	5.1	2.2	14.1	8.9	4.3	14.6	9.5	4.6
2000	10.3	3.2	1.1	12.5	5.3	2.4	15.5	9.4	4.6	16.0	10.2	4.9
2500	11.0	3.3	1.1	13.4	5.4	2.0	16.8	9.9	4.7	17.4	10.8	5.2
3000	11.6	3.3	1.2	14.3	5.5	1.9	18.0	10.3	4.8	18.6	11.3	5.4
3500	12.1	3.2	1.3	14.9	5.5	1.9	18.9	10.6	4.8	19.7	11.6	5.4
4000	12.5	3.1	1.4	15.5	5.6	1.9	19.7	10.8	5.0	20.5	11.9	5.4
5000	13.2	3.0	1.4	16.4	5.7	2.1	21.0	11.1	4.8	21.8	12.3	5.9
7500	14.7	3.2	1.5	18.5	5.3	2.5	24.1	11.7	4.1	25.1	13.2	4.9
10000	16.0	3.5	0.0	20.2	5.3	2.5	26.6	12.2	4.4	27.8	13.6	4.9
15000	18.1	3.6	0.0	23.5	5.8	2.6	31.3	12.0	5.5	32.8	14.0	5.8
20000	20.4	3.7	0.0	26.0	6.2	0.0	35.1	12.0	5.7	36.9	13.8	6.8
25000	22.3	0.0	0.0	28.0	6.3	0.0	38.4	12.3	6.0	40.3	13.9	6.7
30000	23.7	0.0	0.0	30.1	6.4	0.0	40.8	12.8	6.0	42.9	14.3	7.0

UFLR output for CAL3

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	8.0	3.0	1.4	9.5	4.7	2.2	11.5	7.7	3.7	11.9	8.1	3.9
1000	8.2	3.1	1.3	9.7	4.8	2.2	11.8	7.8	3.8	12.2	8.3	4.0
1500	9.1	3.2	1.1	10.9	5.0	2.2	13.3	8.6	4.1	13.7	9.1	4.4
2000	10.2	3.2	1.1	12.4	5.3	2.4	15.3	9.4	4.6	15.9	10.2	4.9
2500	11.2	3.3	1.1	13.7	5.5	2.1	17.1	10.0	4.8	17.7	11.0	5.3
3000	11.9	3.4	1.2	14.6	5.6	1.9	18.4	10.5	4.8	19.1	11.5	5.5
3500	12.4	3.2	1.3	15.3	5.6	1.9	19.5	10.8	4.9	20.2	11.8	5.5
4000	12.9	3.1	1.4	16.1	5.6	1.9	20.5	11.0	5.0	21.3	12.2	5.6
5000	14.0	3.0	1.4	17.5	5.9	2.1	22.5	11.6	5.0	23.4	12.8	6.0
7500	15.9	3.2	1.5	20.2	5.4	2.6	26.3	12.2	4.3	27.5	13.8	5.0
10000	17.0	3.5	0.0	21.7	5.3	2.5	28.8	12.6	4.5	30.1	14.1	5.0
15000	19.4	3.6	0.0	25.2	5.8	2.6	33.8	12.4	5.5	35.5	14.5	5.9
20000	21.3	3.7	0.0	27.6	6.3	0.0	37.5	12.2	5.8	39.4	14.1	6.9
25000	23.2	0.0	0.0	29.3	6.4	0.0	40.6	12.4	6.0	42.6	14.1	6.8
30000	24.7	0.0	0.0	31.4	6.4	0.0	43.1	12.9	6.1	45.3	14.4	7.1

UFLR output for CAL4

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	6.0	2.8	1.2	6.9	4.0	1.9	8.1	5.7	2.6	8.2	5.9	2.7
1000	6.3	2.8	1.2	7.3	4.2	2.0	8.6	6.0	2.8	8.8	6.3	2.9
1500	6.9	2.9	1.1	8.0	4.4	2.0	9.5	6.6	3.1	9.8	6.9	3.2
2000	7.7	3.0	1.0	9.1	4.7	2.1	10.9	7.4	3.5	11.3	7.8	3.7
2500	8.5	3.1	1.1	10.2	4.9	1.8	12.4	8.1	3.8	12.8	8.7	4.1
3000	9.3	3.1	1.2	11.2	5.0	1.8	13.7	8.7	4.1	14.1	9.4	4.4
3500	9.9	3.0	1.3	12.0	5.1	1.8	14.9	9.2	4.3	15.4	9.9	4.7
4000	10.5	3.0	1.4	12.8	5.2	1.8	15.9	9.6	4.6	16.5	10.4	4.9
5000	11.5	2.9	1.4	14.1	5.4	2.0	17.8	10.2	4.3	18.4	11.2	5.2
7500	13.5	3.1	1.4	16.8	5.1	2.5	21.7	11.1	4.0	22.6	12.4	4.6
10000	15.0	3.5	0.0	18.8	5.2	2.5	24.6	11.9	4.3	25.7	13.1	4.8
15000	17.3	3.6	0.0	22.4	5.8	2.6	29.8	11.7	5.4	31.2	13.6	5.8
20000	19.9	3.6	0.0	25.3	6.2	0.0	34.3	11.8	5.7	35.9	13.6	6.7
25000	22.1	0.0	0.0	27.7	6.3	0.0	38.1	12.2	6.0	40.0	13.8	6.7
30000	23.8	0.0	0.0	30.3	6.4	0.0	41.2	12.7	6.0	43.4	14.2	7.0

UFLR output for CAL5

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	8.5	3.1	1.4	10.1	4.9	2.2	12.2	8.1	4.0	12.6	8.6	4.2
1000	9.7	3.3	1.3	11.7	5.2	2.3	14.4	9.1	4.5	14.8	9.8	4.8
1500	10.7	3.3	1.2	13.0	5.4	2.3	16.1	9.7	4.7	16.7	10.5	5.2
2000	11.3	3.3	1.1	13.9	5.5	2.4	17.3	10.1	4.9	17.9	11.1	5.4
2500	11.8	3.3	1.1	14.5	5.6	2.1	18.2	10.4	5.0	18.9	11.4	5.6
3000	12.2	3.4	1.2	15.1	5.7	1.9	19.0	10.7	5.0	19.7	11.7	5.7
3500	12.6	3.2	1.3	15.6	5.6	1.9	19.7	10.9	4.9	20.5	12.0	5.6
4000	13.0	3.1	1.4	16.1	5.7	1.9	20.5	11.1	5.1	21.3	12.3	5.6
5000	13.7	3.0	1.4	17.0	5.8	2.1	21.7	11.4	5.0	22.6	12.6	6.0
7500	14.7	3.2	1.5	18.5	5.3	2.6	23.9	11.8	4.2	24.9	13.2	4.9
10000	15.7	3.5	0.0	19.7	5.3	2.5	25.6	12.2	4.4	26.7	13.5	4.9
15000	17.3	3.6	0.0	22.3	5.8	2.6	29.1	11.8	5.5	30.4	13.7	5.8
20000	19.2	3.6	0.0	23.7	6.2	0.0	31.6	11.7	5.7	33.0	13.4	6.7
25000	20.5	0.0	0.0	25.5	6.2	0.0	33.5	12.0	5.9	35.1	13.5	6.6
30000	21.4	0.0	0.0	27.0	6.3	0.0	34.8	12.5	5.9	36.6	13.8	6.9

UFLR output for CAL6

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	8.4	3.1	1.4	9.9	4.8	2.2	12.1	8.0	3.9	12.4	8.5	4.1
1000	9.4	3.2	1.3	11.3	5.1	2.3	13.8	8.8	4.3	14.3	9.5	4.6
1500	10.2	3.3	1.2	12.3	5.3	2.3	15.3	9.4	4.6	15.8	10.1	5.0
2000	10.8	3.3	1.1	13.1	5.4	2.4	16.4	9.8	4.7	16.9	10.6	5.1
2500	11.4	3.3	1.1	13.9	5.5	2.1	17.5	10.2	4.9	18.1	11.1	5.4
3000	12.0	3.4	1.2	14.8	5.6	1.9	18.7	10.6	4.9	19.4	11.6	5.6
3500	12.6	3.2	1.3	15.6	5.6	1.9	19.8	10.9	4.9	20.6	12.0	5.6
4000	13.1	3.1	1.4	16.3	5.7	1.9	20.7	11.1	5.1	21.6	12.3	5.6
5000	13.8	3.0	1.4	17.2	5.8	2.1	22.0	11.5	5.0	23.0	12.7	6.0
7500	15.0	3.2	1.5	18.9	5.3	2.6	24.6	11.9	4.2	25.6	13.4	4.9
10000	16.1	3.5	0.0	20.3	5.3	2.5	26.6	12.3	4.4	27.8	13.7	4.9
15000	18.1	3.6	0.0	23.4	5.8	2.6	30.8	12.0	5.5	32.3	14.0	5.8
20000	20.1	3.7	0.0	25.4	6.2	0.0	34.0	11.9	5.7	35.5	13.7	6.8
25000	21.5	0.0	0.0	26.9	6.3	0.0	36.2	12.1	6.0	37.9	13.7	6.7
30000	22.6	0.0	0.0	28.6	6.4	0.0	37.7	12.6	6.0	39.7	14.1	7.0

UFLR output for CAL7

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	7.7	3.0	1.3	9.1	4.6	2.2	10.9	7.4	3.5	11.2	7.8	3.7
1000	8.2	3.1	1.3	9.8	4.8	2.2	11.9	7.9	3.8	12.2	8.4	4.1
1500	9.0	3.2	1.1	10.8	5.0	2.2	13.2	8.5	4.1	13.6	9.1	4.5
2000	9.8	3.2	1.1	11.9	5.2	2.3	14.7	9.2	4.5	15.1	9.8	4.8
2500	10.5	3.3	1.1	12.8	5.3	2.0	15.8	9.6	4.7	16.4	10.4	5.1
3000	11.0	3.3	1.2	13.4	5.4	1.9	16.7	9.9	4.6	17.3	10.8	5.2
3500	11.4	3.2	1.3	13.9	5.4	1.8	17.5	10.2	4.7	18.1	11.1	5.2
4000	11.8	3.1	1.4	14.5	5.5	1.9	18.2	10.4	4.9	18.9	11.4	5.3
5000	12.5	3.0	1.4	15.4	5.6	2.1	19.5	10.8	4.7	20.3	11.9	5.7
7500	13.7	3.1	1.5	17.0	5.2	2.5	21.9	11.3	4.1	22.8	12.6	4.7
10000	14.7	3.5	0.0	18.3	5.2	2.5	23.7	11.8	4.4	24.7	13.0	4.8
15000	16.5	3.6	0.0	20.9	5.7	2.6	27.3	11.5	5.4	28.5	13.2	5.7
20000	18.3	3.6	0.0	22.5	6.1	0.0	29.8	11.5	5.6	31.2	13.0	6.5
25000	19.7	0.0	0.0	24.4	6.2	0.0	31.7	11.8	5.9	33.3	13.2	6.5
30000	20.7	0.0	0.0	26.0	6.3	0.0	33.5	12.4	5.9	35.0	13.7	6.8

UFLR output for CAL8

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	8.9	3.1	1.4	10.6	5.0	2.2	13.0	8.4	4.0	13.4	9.0	4.3
1000	9.3	3.2	1.3	11.2	5.0	2.3	13.8	8.7	4.2	14.2	9.4	4.5
1500	10.3	3.3	1.2	12.4	5.3	2.3	15.5	9.4	4.5	16.0	10.2	4.9
2000	11.4	3.3	1.1	14.0	5.5	2.4	17.5	10.1	4.8	18.1	11.1	5.3
2500	12.3	3.4	1.1	15.2	5.6	2.1	19.3	10.7	5.0	20.0	11.7	5.6
3000	13.0	3.4	1.2	16.2	5.7	1.9	20.7	11.1	5.1	21.5	12.2	5.8
3500	13.9	3.3	1.3	16.9	5.7	1.9	21.7	11.3	5.0	22.6	12.6	5.8
4000	13.8	3.1	1.4	17.3	5.7	1.9	22.3	11.4	5.1	23.2	12.7	5.7
5000	14.5	3.1	1.4	18.3	5.9	2.1	23.8	11.7	5.1	24.8	13.0	6.0
7500	16.0	3.2	1.5	20.4	5.4	2.6	26.9	12.2	4.2	28.1	13.8	5.0
10000	17.2	3.5	0.0	22.1	5.3	2.5	29.5	12.6	4.5	30.9	14.1	5.0
15000	19.3	3.6	0.0	25.1	5.8	2.6	34.0	12.3	5.5	35.7	14.5	5.9
20000	21.0	3.7	0.0	27.2	6.3	0.0	37.1	12.1	5.8	39.1	14.0	6.9
25000	23.1	0.0	0.0	29.2	6.3	0.0	40.8	12.4	6.0	42.8	14.1	6.7
30000	24.8	0.0	0.0	31.6	6.4	0.0	43.8	12.9	6.1	46.2	14.4	7.1

APPENDIX 6

UFLR PREDICTED PERFORMANCES FOR DITHERED ATMOSPHERIC PROFILES

file1A: (ten outputs)

TARGET	1			2			3			4		
ALTITUDE	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
FEET		(NMI)			(NMI)			(NMI)			(NMI)	
500	5.5	2.7	1.2	6.4	3.8	1.8	7.4	5.3	2.4	7.6	5.5	2.5
1000	5.7	2.7	1.2	6.5	3.9	1.9	7.6	5.4	2.5	7.8	5.6	2.5
1500	6.6	2.9	1.0	7.8	4.3	2.0	9.2	6.4	3.0	9.4	6.7	3.1
2000	7.8	3.0	1.0	9.2	4.7	2.1	11.1	7.5	3.6	11.4	7.9	3.8
2500	8.8	3.1	1.1	10.5	4.9	1.9	12.8	8.3	4.0	13.2	8.9	4.3
3000	9.6	3.1	1.2	11.5	5.1	1.8	14.1	9.0	4.2	14.6	9.6	4.5
3500	10.2	3.0	1.3	12.4	5.2	1.8	15.3	9.4	4.4	15.8	10.2	4.8
4000	10.7	3.0	1.4	13.1	5.3	1.8	16.3	9.7	4.7	16.9	10.6	5.0
5000	11.6	2.9	1.4	14.3	5.4	2.0	18.0	10.3	4.4	18.7	11.3	5.2
7500	13.4	3.1	1.4	16.8	5.1	2.5	21.6	11.1	4.0	22.4	12.4	4.6
10000	15.2	3.5	0.0	19.0	5.2	2.5	24.9	11.9	4.4	26.0	13.2	4.8
15000	17.7	3.6	0.0	23.1	5.8	2.6	30.7	11.9	5.5	32.1	13.8	5.8
20000	20.3	3.7	0.0	25.9	6.2	0.0	35.1	11.9	5.7	36.9	13.7	6.8
25000	22.4	0.0	0.0	28.2	6.3	0.0	38.9	12.3	6.0	40.9	13.9	6.7
30000	24.1	0.0	0.0	30.7	6.4	0.0	42.0	12.8	6.0	44.2	14.3	7.0

1A2

TARGET	1			2			3			4		
ALTITUDE	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
FEET		(NMI)			(NMI)			(NMI)			(NMI)	
500	4.6	2.5	1.2	5.3	3.4	1.6	6.0	4.4	2.0	6.1	4.5	2.0
1000	4.9	2.5	1.2	5.6	3.5	1.7	6.4	4.6	2.1	6.5	4.7	2.1
1500	5.3	2.6	1.0	6.1	3.7	1.8	7.0	5.0	2.3	7.1	5.2	2.3
2000	5.8	2.7	1.0	6.7	4.0	1.7	7.8	5.6	2.6	8.0	5.8	2.6
2500	6.4	2.8	1.0	7.5	4.2	1.6	8.8	6.2	2.9	9.0	6.4	3.0
3000	7.0	2.8	1.2	8.2	4.4	1.6	9.8	6.8	3.2	10.0	7.1	3.3
3500	7.5	2.8	1.3	8.9	4.6	1.7	10.7	7.3	3.4	11.0	7.7	3.6
4000	8.0	2.8	1.4	9.4	4.7	1.7	11.4	7.6	3.5	11.7	8.1	3.8
5000	8.7	2.8	1.3	10.4	4.7	2.0	12.7	8.2	3.5	13.1	8.8	4.0
7500	10.4	3.0	1.4	12.6	4.7	2.3	15.6	9.4	3.6	16.2	10.2	4.0
10000	11.6	3.4	0.0	14.4	4.9	2.4	18.0	10.1	4.1	18.7	11.3	4.4
15000	14.3	3.5	0.0	17.2	5.6	2.5	22.1	10.4	5.3	23.0	11.8	5.5
20000	16.2	3.6	0.0	19.8	5.9	0.0	25.1	10.8	5.4	26.2	12.2	6.1
25000	17.6	0.0	0.0	21.8	6.1	0.0	27.5	11.3	5.7	28.6	12.6	6.3
30000	18.6	0.0	0.0	23.3	6.1	0.0	29.8	12.0	5.7	31.0	13.2	6.5

1A3

TARGET	1			2			3			4		
ALTITUDE	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
FEET		(NMI)			(NMI)			(NMI)			(NMI)	
500	5.8	2.7	1.2	6.6	3.9	1.9	7.7	5.5	2.5	7.9	5.7	2.6
1000	5.9	2.7	1.2	6.8	4.0	1.9	7.9	5.6	2.6	8.1	5.8	2.6
1500	6.8	2.9	1.1	8.0	4.4	2.0	9.4	6.6	3.1	9.7	6.9	3.2
2000	8.0	3.0	1.0	9.4	4.7	2.1	11.4	7.6	3.7	11.7	8.1	3.8
2500	8.8	3.1	1.1	10.6	5.0	1.9	12.9	8.4	4.0	13.3	9.0	4.3
3000	9.4	3.1	1.2	11.3	5.0	1.8	13.9	8.8	4.1	14.3	9.5	4.4
3500	9.8	3.0	1.3	11.9	5.1	1.8	14.6	9.1	4.3	15.1	9.8	4.6
4000	10.3	2.9	1.4	12.5	5.2	1.8	15.5	9.4	4.5	16.0	10.2	4.8
5000	11.1	2.9	1.4	13.6	5.3	2.0	17.1	10.0	4.2	17.7	10.9	5.0
7500	13.3	3.1	1.4	16.6	5.1	2.5	21.3	11.0	4.0	22.2	12.3	4.6
10000	15.1	3.5	0.0	19.0	5.2	2.5	24.8	11.9	4.3	25.9	13.1	4.8
15000	17.8	3.6	0.0	23.3	5.8	2.6	31.1	11.9	5.5	32.6	13.9	5.8
20000	20.6	3.7	0.0	26.6	6.2	0.0	36.2	12.0	5.7	38.1	13.8	6.8
25000	22.9	0.0	0.0	29.0	6.3	0.0	40.6	12.3	6.0	42.6	14.0	6.7
30000	24.8	0.0	0.0	31.7	6.4	0.0	44.2	12.9	6.0	46.6	14.4	7.0

1A4

TARGET	1			2			3			4		
ALTITUDE	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
FEET		(NMI)			(NMI)			(NMI)			(NMI)	
500	6.1	2.8	1.2	7.0	4.1	1.9	8.3	5.8	2.7	8.4	6.1	2.7
1000	5.9	2.7	1.2	6.9	4.0	1.9	8.0	5.7	2.6	8.2	5.9	2.7
1500	6.2	2.8	1.0	7.1	4.1	1.9	8.4	5.9	2.7	8.6	6.2	2.8
2000	6.8	2.9	1.0	8.0	4.4	1.9	9.5	6.6	3.1	9.7	6.9	3.2
2500	7.6	3.0	1.1	8.9	4.6	1.7	10.7	7.3	3.4	11.0	7.7	3.6
3000	8.3	3.0	1.2	9.9	4.8	1.7	12.0	7.9	3.7	12.3	8.4	3.9
3500	9.0	2.9	1.3	10.8	4.9	1.7	13.1	8.5	4.1	13.6	9.1	4.3
4000	9.6	2.9	1.4	11.5	5.1	1.8	14.2	8.9	4.2	14.7	9.6	4.6
5000	10.6	2.9	1.4	13.0	5.2	2.0	16.2	9.7	4.1	16.7	10.5	4.8
7500	12.6	3.1	1.4	15.6	5.0	2.4	20.0	10.7	3.9	20.7	11.8	4.4
10000	14.4	3.5	0.0	18.0	5.1	2.5	23.5	11.7	4.3	24.5	12.8	4.7
15000	17.3	3.6	0.0	22.6	5.8	2.6	30.0	11.7	5.4	31.4	13.6	5.8
20000	20.2	3.6	0.0	25.9	6.2	0.0	35.3	11.9	5.7	37.2	13.7	6.7
25000	22.7	0.0	0.0	28.6	6.3	0.0	40.0	12.3	6.0	42.1	13.9	6.7
30000	24.7	0.0	0.0	31.5	6.4	0.0	43.9	12.8	6.0	46.4	14.4	7.0

1A5

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	5.8	2.7	1.2	6.7	4.0	1.9	7.8	5.6	2.6	8.0	5.3	2.6
1000	6.0	2.8	1.2	6.9	4.0	1.9	8.1	5.8	2.7	8.3	6.0	2.7
1500	6.8	2.9	1.1	7.9	4.3	2.0	9.4	6.5	3.1	9.6	6.3	3.2
2000	7.8	3.0	1.0	9.3	4.7	2.1	11.1	7.5	3.6	11.4	7.9	3.8
2500	8.7	3.1	1.1	10.4	4.9	1.9	12.7	8.3	3.9	13.0	8.3	4.2
3000	9.4	3.1	1.2	11.3	5.0	1.8	13.8	8.8	4.1	14.3	9.5	4.5
3500	9.9	3.0	1.3	12.0	5.1	1.8	14.8	9.2	4.3	15.3	9.9	4.6
4000	10.3	2.9	1.4	12.5	5.2	1.8	15.6	9.5	4.5	16.1	10.2	4.9
5000	11.1	2.9	1.4	13.7	5.3	2.0	17.1	10.0	4.2	17.7	10.9	5.0
7500	12.7	3.1	1.4	15.7	5.0	2.4	20.1	10.7	3.9	20.9	11.9	4.5
10000	14.4	3.5	0.0	18.0	5.2	2.5	23.4	11.7	4.3	24.4	12.8	4.7
15000	17.0	3.6	0.0	21.9	5.7	2.6	29.0	11.6	5.4	30.4	13.5	5.8
20000	19.6	3.6	0.0	24.7	6.2	0.0	33.5	11.7	5.7	35.0	13.5	6.7
25000	21.7	0.0	0.0	27.2	6.3	0.0	37.1	12.1	5.9	39.0	13.7	6.6
30000	23.3	0.0	0.0	29.7	6.4	0.0	40.0	12.7	6.0	42.2	14.2	7.0

1A6

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	5.2	2.6	1.2	6.0	3.7	1.8	6.9	5.0	2.3	7.1	5.1	2.3
1000	5.4	2.6	1.2	6.2	3.8	1.8	7.2	5.2	2.4	7.3	5.3	2.4
1500	6.4	2.8	1.0	7.4	4.2	1.9	8.7	6.2	2.9	8.9	6.4	3.0
2000	7.5	3.0	1.0	8.9	4.6	2.1	10.6	7.3	3.5	10.9	7.6	3.6
2500	8.5	3.1	1.1	10.1	4.9	1.8	12.3	8.1	3.8	12.6	8.6	4.1
3000	9.2	3.1	1.2	11.1	5.0	1.8	13.5	8.7	4.1	14.0	9.3	4.4
3500	9.7	3.0	1.3	11.7	5.1	1.8	14.5	9.0	4.3	14.9	9.8	4.6
4000	10.1	2.9	1.4	12.2	5.2	1.8	15.1	9.3	4.4	15.6	10.0	4.8
5000	10.6	2.9	1.4	12.9	5.2	2.0	16.1	9.7	4.1	16.7	10.5	4.8
7500	12.5	3.1	1.4	15.4	5.0	2.4	19.6	10.6	3.9	20.4	11.7	4.4
10000	14.2	3.5	0.0	17.7	5.1	2.5	22.9	11.6	4.3	23.9	12.7	4.7
15000	16.8	3.6	0.0	21.6	5.7	2.6	28.4	11.6	5.4	29.7	13.4	5.7
20000	19.4	3.6	0.0	24.2	6.2	0.0	32.7	11.7	5.6	34.2	13.4	6.6
25000	21.3	0.0	0.0	26.7	6.3	0.0	36.1	12.1	5.9	37.9	13.6	6.6
30000	22.8	0.0	0.0	29.0	6.4	0.0	38.7	12.6	6.0	40.8	14.1	7.0

1A7

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	5.3	2.6	1.2	6.1	3.7	1.8	7.1	5.1	2.3	7.2	5.2	2.3
1000	5.7	2.7	1.2	6.6	3.9	1.9	7.6	5.5	2.5	7.8	5.7	2.5
1500	6.4	2.8	1.0	7.4	4.2	1.9	8.7	6.1	2.9	8.9	6.4	2.9
2000	7.2	2.9	1.0	8.4	4.5	2.0	10.0	6.9	3.3	10.3	7.3	3.4
2500	7.9	3.0	1.1	9.4	4.7	1.8	11.3	7.6	3.6	11.6	8.0	3.8
3000	8.6	3.0	1.2	10.3	4.8	1.7	12.5	8.2	3.8	12.8	8.7	4.1
3500	9.2	2.9	1.3	11.0	5.0	1.7	13.5	8.6	4.1	13.9	9.2	4.4
4000	9.7	2.9	1.4	11.7	5.1	1.8	14.4	9.0	4.2	14.9	9.7	4.7
5000	10.5	2.9	1.4	12.9	5.2	2.0	16.0	9.6	4.1	16.6	10.4	4.8
7500	12.4	3.1	1.4	15.4	5.0	2.4	19.6	10.6	3.9	20.3	11.7	4.4
10000	14.1	3.5	0.0	17.6	5.1	2.5	22.7	11.5	4.3	23.7	12.7	4.7
15000	16.7	3.6	0.0	21.5	5.7	2.6	28.3	11.5	5.4	29.6	13.3	5.7
20000	19.4	3.6	0.0	24.3	6.2	0.0	32.9	11.7	5.6	34.4	13.4	6.6
25000	21.5	0.0	0.0	27.0	6.3	0.0	36.7	12.1	5.9	38.5	13.7	6.6
30000	23.1	0.0	0.0	29.4	6.4	0.0	39.6	12.7	6.0	41.8	14.1	7.0

1A8

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	4.4	2.4	1.1	4.9	3.2	1.5	5.6	4.1	1.8	5.7	4.2	1.8
1000	4.6	2.5	1.1	5.2	3.4	1.6	5.9	4.3	1.9	6.0	4.4	1.9
1500	5.0	2.6	1.0	5.7	3.6	1.7	6.6	4.7	2.1	6.7	4.9	2.2
2000	5.7	2.7	1.0	6.6	3.9	1.7	7.6	5.5	2.5	7.8	5.6	2.6
2500	6.3	2.8	1.0	7.3	4.2	1.6	8.6	6.1	2.9	8.8	6.3	2.9
3000	6.8	2.8	1.2	8.0	4.3	1.6	9.5	6.6	3.1	9.8	6.9	3.2
3500	7.3	2.7	1.3	8.6	4.5	1.6	10.3	7.0	3.3	10.5	7.4	3.5
4000	7.7	2.7	1.3	9.1	4.7	1.7	10.9	7.4	3.4	11.2	7.8	3.7
5000	8.5	2.8	1.3	10.1	4.7	1.9	12.2	8.0	3.4	12.6	8.6	3.9
7500	10.3	3.0	1.4	12.5	4.7	2.3	15.4	9.4	3.6	16.0	10.1	4.0
10000	11.6	3.4	0.0	14.4	4.9	2.4	18.0	10.1	4.1	18.7	11.3	4.4
15000	14.4	3.5	0.0	17.3	5.6	2.5	22.4	10.5	5.3	23.4	11.9	5.5
20000	16.4	3.6	0.0	20.1	5.9	0.0	25.7	10.9	5.4	26.8	12.3	6.1
25000	18.0	0.0	0.0	22.3	6.1	0.0	28.3	11.4	5.7	29.5	12.7	6.3
30000	19.1	0.0	0.0	24.0	6.2	0.0	30.8	12.1	5.8	32.0	13.3	6.6

1A9															
TARGET				1			2			3			4		
ALTITUDE	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID			
FEET		(NMI)			(NMI)			(NMI)			(NMI)				
500	5.4	2.7	1.2	6.2	3.8	1.8	7.2	5.2	2.4	7.3	5.3	2.4			
1000	5.6	2.7	1.2	6.5	3.9	1.9	7.5	5.4	2.5	7.7	5.6	2.5			
1500	6.4	2.8	1.0	7.4	4.2	1.9	8.7	6.2	2.9	8.9	6.4	2.9			
2000	7.3	2.9	1.0	8.6	4.5	2.0	10.3	7.1	3.4	10.6	7.4	3.5			
2500	8.1	3.1	1.1	9.7	4.8	1.8	11.7	7.8	3.7	12.0	8.3	3.9			
3000	8.8	3.1	1.2	10.5	4.9	1.7	12.9	8.4	3.9	13.2	8.9	4.2			
3500	9.4	3.0	1.3	11.2	5.0	1.8	13.8	8.8	4.2	14.2	9.4	4.5			
4000	9.8	2.9	1.4	11.8	5.1	1.8	14.6	9.1	4.3	15.0	9.8	4.7			
5000	10.4	2.9	1.4	12.7	5.2	2.0	15.8	9.6	4.0	16.4	10.4	4.7			
7500	12.4	3.1	1.4	15.3	5.0	2.4	19.4	10.6	3.9	20.2	11.7	4.4			
10000	13.9	3.5	0.0	17.3	5.1	2.5	22.3	11.4	4.3	23.3	12.6	4.6			
15000	16.5	3.6	0.0	21.1	5.7	2.6	27.6	11.4	5.4	28.9	13.2	5.7			
20000	19.0	3.6	0.0	23.6	6.1	0.0	31.9	11.6	5.6	33.4	13.3	6.6			
25000	21.0	0.0	0.0	26.3	6.2	0.0	35.3	12.0	5.9	37.0	13.5	6.6			
30000	22.5	0.0	0.0	28.5	6.3	0.0	37.9	12.6	5.9	39.9	14.0	6.9			

1A10														
TARGET			1			2			3			4		
ALTITUDE	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID		
FEET		(NMI)			(NMI)			(NMI)			(NMI)			
500	5.3	2.6	1.2	6.0	3.7	1.8	7.0	5.0	2.3	7.1	5.2	2.3		
1000	5.5	2.7	1.2	6.4	3.8	1.8	7.4	5.3	2.4	7.5	5.5	2.4		
1500	6.4	2.8	1.0	7.4	4.2	1.9	8.7	6.2	2.9	9.0	6.4	2.9		
2000	7.4	2.9	1.0	8.7	4.6	2.0	10.4	7.2	3.4	10.7	7.5	3.5		
2500	8.3	3.1	1.1	9.9	4.8	1.8	12.0	8.0	3.7	12.3	8.5	4.0		
3000	9.1	3.1	1.2	10.9	5.0	1.8	13.4	8.6	4.0	13.8	9.2	4.3		
3500	9.8	3.0	1.3	11.8	5.1	1.8	14.5	9.1	4.3	15.0	9.8	4.6		
4000	10.2	2.9	1.4	12.4	5.2	1.8	15.4	9.4	4.5	15.9	10.2	4.8		
5000	11.0	2.9	1.4	13.5	5.3	2.0	16.9	9.9	4.2	17.5	10.8	5.0		
7500	12.8	3.1	1.4	16.0	5.1	2.4	20.4	10.8	3.9	21.2	12.0	4.5		
10000	14.7	3.5	0.0	18.4	5.2	2.5	24.0	11.8	4.3	25.0	13.0	4.7		
15000	17.4	3.6	0.0	22.7	5.8	2.6	30.2	11.8	5.4	31.6	13.7	5.8		
20000	20.2	3.6	0.0	25.9	6.2	0.0	35.2	11.9	5.7	36.9	13.7	6.7		
25000	22.5	0.0	0.0	28.4	6.3	0.0	39.4	12.3	6.0	41.5	13.9	6.7		
30000	24.4	0.0	0.0	31.1	6.4	0.0	43.0	12.8	6.0	45.3	14.3	7.0		

file2A: (ten outputs)

TARGET															
1				2			3			4					
ALTITUDE	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID			
FEET		(NMI)			(NMI)			(NMI)			(NMI)				
500	7.3	3.0	1.3	8.6	4.5	2.1	10.2	7.0	3.3	10.5	7.4	3.5			
1000	7.7	3.0	1.3	9.1	4.7	2.2	10.9	7.4	3.6	11.3	7.8	3.7			
1500	8.7	3.2	1.1	10.5	5.0	2.2	12.7	8.3	4.0	13.1	8.9	4.3			
2000	9.9	3.2	1.1	11.9	5.2	2.4	14.7	9.2	4.5	15.2	9.9	4.8			
2500	10.8	3.3	1.1	13.2	5.4	2.0	16.4	9.8	4.7	16.9	10.7	5.2			
3000	11.5	3.4	1.2	14.1	5.5	1.9	17.7	10.3	4.8	18.3	11.2	5.5			
3500	12.1	3.2	1.3	14.9	5.5	1.9	18.8	10.6	4.8	19.5	11.6	5.4			
4000	12.5	3.1	1.4	15.5	5.6	1.9	19.6	10.8	5.0	20.3	11.9	5.5			
5000	13.2	3.0	1.4	16.3	5.8	2.1	20.8	11.2	4.8	21.6	12.3	5.9			
7500	14.4	3.2	1.5	18.1	5.3	2.5	23.3	11.6	4.1	24.3	13.0	4.8			
10000	15.5	3.5	0.0	19.5	5.3	2.5	25.4	12.1	4.4	26.5	13.4	4.8			
15000	17.3	3.6	0.0	22.3	5.8	2.6	29.3	11.8	5.5	30.7	13.7	5.8			
20000	19.5	3.6	0.0	24.4	6.2	0.0	32.6	11.8	5.7	34.1	13.5	6.7			
25000	21.1	0.0	0.0	26.3	6.3	0.0	35.1	12.1	5.9	36.8	13.6	6.6			
30000	22.2	0.0	0.0	28.1	6.3	0.0	36.8	12.6	6.0	38.7	14.0	6.9			

2A2															
TARGET				1			2			3			4		
ALTITUDE	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID			
FEET		(NMI)			(NMI)			(NMI)			(NMI)				
500	7.4	3.0	1.3	8.7	4.6	2.1	10.4	7.1	3.4	10.7	7.5	3.6			
1000	8.2	3.1	1.3	9.7	4.8	2.2	11.7	7.8	3.8	12.1	8.3	4.0			
1500	8.7	3.1	1.1	10.4	4.9	2.2	12.7	8.3	4.0	13.1	8.8	4.3			
2000	9.1	3.1	1.0	10.9	5.0	2.3	13.4	8.6	4.2	13.8	9.2	4.5			
2500	9.5	3.2	1.1	11.5	5.1	1.9	14.2	8.9	4.3	14.7	9.6	4.7			
3000	10.2	3.2	1.2	12.4	5.3	1.8	15.4	9.4	4.4	15.9	10.2	4.9			
3500	10.7	3.1	1.3	13.1	5.3	1.8	16.4	9.8	4.5	16.9	10.6	5.0			
4000	11.1	3.0	1.4	13.6	5.4	1.9	17.0	10.0	4.8	17.6	10.9	5.1			
5000	11.7	3.0	1.4	14.4	5.5	2.0	18.2	10.4	4.5	18.9	11.4	5.4			
7500	13.3	3.1	1.5	16.5	5.1	2.5	21.2	11.1	4.0	22.1	12.3	4.6			
10000	14.5	3.5	0.0	18.0	5.2	2.5	23.3	11.7	4.3	24.3	12.9	4.7			
15000	16.6	3.6	0.0	21.0	5.7	2.6	27.4	11.5	5.4	28.7	13.3	5.7			
20000	18.7	3.6	0.0	23.0	6.1	0.0	30.8	11.5	5.6	32.2	13.2	6.6			
25000	20.3	0.0	0.0	25.2	6.2	0.0	33.2	11.9	5.9	34.8	13.4	6.6			
30000	21.4	0.0	0.0	27.0	6.3	0.0	35.0	12.5	5.9	36.8	13.8	6.9			

2A3

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	7.8	3.0	1.3	9.3	4.7	2.2	11.2	7.5	3.6	11.5	8.0	3.8
1000	8.7	3.1	1.3	10.4	4.9	2.3	12.7	8.3	4.0	13.1	8.8	4.3
1500	9.8	3.2	1.2	11.9	5.2	2.3	14.6	9.1	4.4	15.1	9.8	4.8
2000	10.9	3.3	1.1	13.3	5.4	2.4	16.6	9.9	4.7	17.2	10.7	5.2
2500	11.7	3.3	1.1	14.4	5.5	2.1	18.1	10.4	4.9	18.7	11.4	5.5
3000	12.1	3.4	1.2	14.9	5.6	1.9	18.8	10.6	4.9	19.5	11.6	5.6
3500	12.3	3.2	1.3	15.2	5.6	1.9	19.3	10.7	4.8	20.0	11.8	5.5
4000	12.6	3.1	1.4	15.6	5.6	1.9	19.9	10.8	5.0	20.7	12.0	5.5
5000	13.1	3.0	1.4	16.3	5.7	2.1	20.9	11.1	4.8	21.7	12.2	5.9
7500	14.8	3.2	1.5	18.7	5.3	2.5	24.3	11.8	4.2	25.3	13.2	4.9
10000	16.0	3.5	0.0	20.2	5.3	2.5	26.5	12.2	4.4	27.7	13.6	4.9
15000	18.0	3.6	0.0	23.3	5.8	2.6	30.9	12.0	5.5	32.4	14.0	5.8
20000	20.2	3.7	0.0	25.7	6.2	0.0	34.6	11.9	5.7	36.2	13.7	6.8
25000	22.0	0.0	0.0	27.6	6.3	0.0	37.6	12.2	6.0	39.4	13.8	6.7
30000	23.4	0.0	0.0	29.7	6.4	0.0	39.8	12.7	6.0	41.9	14.2	7.0

2A4

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	8.5	3.1	1.4	10.1	4.8	2.2	12.3	8.0	3.8	12.6	8.6	4.1
1000	9.0	3.2	1.3	10.7	5.0	2.3	13.2	8.5	4.1	13.6	9.1	4.4
1500	9.5	3.2	1.2	11.5	5.1	2.2	14.1	8.9	4.2	14.6	9.5	4.6
2000	10.0	3.2	1.1	12.1	5.2	2.3	15.0	9.2	4.4	15.6	10.0	4.8
2500	10.7	3.3	1.1	13.0	5.3	2.0	16.3	9.7	4.6	16.9	10.6	5.0
3000	11.5	3.3	1.2	14.1	5.5	1.9	17.8	10.2	4.7	18.5	11.2	5.3
3500	12.2	3.2	1.3	15.1	5.5	1.9	19.2	10.7	4.8	20.0	11.7	5.4
4000	12.8	3.1	1.4	15.9	5.6	1.9	20.3	10.9	5.0	21.1	12.1	5.5
5000	13.8	3.0	1.4	17.3	5.8	2.1	22.4	11.5	4.9	23.3	12.7	5.9
7500	15.5	3.2	1.5	19.8	5.3	2.6	25.9	12.0	4.2	27.1	13.6	4.9
10000	16.9	3.5	0.0	21.6	5.3	2.5	28.8	12.5	4.5	30.1	14.0	4.9
15000	19.6	3.6	0.0	25.6	5.8	2.6	34.9	12.4	5.5	36.7	14.6	5.9
20000	21.9	3.7	0.0	29.0	6.3	0.0	40.0	12.3	5.8	42.2	14.3	7.0
25000	24.3	0.0	0.0	31.5	6.4	0.0	44.1	12.5	6.1	46.7	14.3	6.8
30000	26.2	0.0	0.0	33.5	6.5	0.0	47.8	13.0	6.1	50.4	14.7	7.1

2A5

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	8.1	3.1	1.4	9.6	4.8	2.2	11.6	7.8	3.8	12.0	8.2	4.0
1000	9.1	3.2	1.3	10.9	5.0	2.3	13.3	8.6	4.2	13.7	9.2	4.5
1500	10.1	3.3	1.2	12.2	5.3	2.3	15.1	9.3	4.5	15.6	10.0	4.9
2000	11.0	3.3	1.1	13.5	5.4	2.4	16.8	9.9	4.8	17.4	10.8	5.2
2500	11.8	3.3	1.1	14.5	5.6	2.1	18.2	10.4	5.0	18.9	11.4	5.5
3000	12.3	3.4	1.2	15.2	5.7	1.9	19.2	10.8	5.0	20.0	11.8	5.7
3500	12.7	3.2	1.3	15.7	5.6	1.9	19.9	10.9	4.9	20.7	12.0	5.6
4000	12.9	3.1	1.4	16.0	5.6	1.9	20.4	11.0	5.0	21.2	12.2	5.6
5000	13.3	3.0	1.4	16.5	5.8	2.1	21.2	11.2	4.9	22.0	12.4	5.9
7500	14.1	3.2	1.5	17.7	5.2	2.5	22.9	11.5	4.1	23.9	12.8	4.8
10000	15.4	3.5	0.0	19.2	5.2	2.5	25.1	12.0	4.4	26.2	13.3	4.8
15000	17.1	3.6	0.0	22.0	5.8	2.6	28.9	11.7	5.5	30.2	13.6	5.8
20000	19.3	3.6	0.0	24.0	6.2	0.0	32.2	11.7	5.7	33.6	13.4	6.7
25000	20.9	0.0	0.0	26.0	6.3	0.0	34.6	12.0	5.9	36.3	13.6	6.6
30000	22.0	0.0	0.0	27.8	6.3	0.0	36.3	12.5	5.9	38.2	13.9	6.9

2A6

TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	7.3	3.0	1.3	8.5	4.5	2.1	10.2	7.0	3.3	10.5	7.4	3.5
1000	7.9	3.1	1.3	9.3	4.7	2.2	11.2	7.5	3.7	11.6	8.0	3.8
1500	9.0	3.2	1.1	10.8	5.0	2.2	13.2	8.5	4.1	13.6	9.1	4.5
2000	10.2	3.2	1.1	12.3	5.3	2.4	15.2	9.4	4.6	15.7	10.1	4.9
2500	11.2	3.3	1.1	13.6	5.5	2.1	17.0	10.0	4.8	17.6	11.0	5.3
3000	11.9	3.4	1.2	14.6	5.6	1.9	18.3	10.5	4.9	19.0	11.5	5.6
3500	12.2	3.2	1.3	15.1	5.6	1.9	19.1	10.7	4.9	19.8	11.7	5.5
4000	12.3	3.1	1.4	15.2	5.5	1.9	19.2	10.7	5.0	20.0	11.8	5.4
5000	12.5	3.0	1.4	15.4	5.6	2.1	19.6	10.8	4.7	20.4	11.9	5.7
7500	13.9	3.2	1.5	17.4	5.2	2.5	22.4	11.4	4.1	23.3	12.7	4.7
10000	15.3	3.5	0.0	19.1	5.2	2.5	24.9	12.0	4.4	26.0	13.3	4.8
15000	17.2	3.6	0.0	22.1	5.8	2.6	29.0	11.7	5.5	30.3	13.6	5.8
20000	19.4	3.6	0.0	24.1	6.2	0.0	32.3	11.7	5.7	33.8	13.4	6.7
25000	20.9	0.0	0.0	26.1	6.3	0.0	34.8	12.0	5.9	36.4	13.6	6.6
30000	22.1	0.0	0.0	27.9	6.3	0.0	36.5	12.6	5.9	38.4	14.0	6.9

2A7												
TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	7.0	2.9	1.3	8.2	4.4	2.1	9.7	6.7	3.2	10.0	7.1	3.3
1000	7.9	3.1	1.3	9.4	4.7	2.2	11.3	7.6	3.7	11.6	8.0	3.9
1500	8.6	3.1	1.1	10.3	4.9	2.2	12.5	8.2	4.0	12.9	8.7	4.3
2000	9.2	3.2	1.1	11.0	5.1	2.3	13.5	8.7	4.2	14.0	9.3	4.6
2500	9.8	3.2	1.1	11.8	5.2	2.0	14.5	9.1	4.4	15.0	9.8	4.8
3000	10.4	3.2	1.2	12.6	5.3	1.8	15.6	9.5	4.5	16.1	10.3	5.0
3500	10.8	3.1	1.3	13.2	5.3	1.8	16.4	9.8	4.6	17.0	10.7	5.0
4000	11.2	3.0	1.4	13.6	5.4	1.9	17.1	10.0	4.8	17.7	10.9	5.2
5000	11.7	3.0	1.4	14.4	5.5	2.0	18.1	10.4	4.5	18.8	11.4	5.4
7500	13.1	3.1	1.5	16.1	5.1	2.5	20.6	10.9	4.0	21.4	12.1	4.6
10000	14.0	3.5	0.0	17.4	5.1	2.5	22.3	11.5	4.3	23.2	12.7	4.7
15000	15.9	3.6	0.0	19.9	5.7	2.6	25.8	11.2	5.4	26.8	12.9	5.7
20000	17.8	3.6	0.0	21.9	6.1	0.0	28.6	11.3	5.5	29.9	12.9	6.4
25000	19.2	0.0	0.0	23.8	6.2	0.0	30.6	11.7	5.8	32.1	13.1	6.5
30000	20.1	0.0	0.0	25.3	6.2	0.0	32.4	12.3	5.8	33.7	13.6	6.7

2A8												
TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	6.7	2.9	1.3	7.8	4.3	2.1	9.3	6.5	3.1	9.5	6.8	3.2
1000	7.4	3.0	1.3	8.7	4.6	2.1	10.4	7.1	3.4	10.6	7.5	3.5
1500	8.0	3.1	1.1	9.5	4.8	2.1	11.5	7.7	3.7	11.8	8.1	3.9
2000	8.6	3.1	1.0	10.3	4.9	2.3	12.6	8.2	4.0	12.9	8.8	4.2
2500	9.2	3.2	1.1	11.1	5.1	1.9	13.6	8.7	4.2	14.0	9.3	4.5
3000	9.7	3.2	1.2	11.7	5.1	1.8	14.5	9.1	4.2	15.0	9.8	4.7
3500	10.1	3.0	1.3	12.3	5.2	1.8	15.2	9.3	4.4	15.8	10.1	4.8
4000	10.4	3.0	1.4	12.7	5.3	1.8	15.8	9.5	4.6	16.3	10.3	4.9
5000	11.1	2.9	1.4	13.6	5.3	2.0	17.1	10.0	4.3	17.7	10.9	5.1
7500	12.9	3.1	1.4	16.0	5.1	2.5	20.4	10.9	4.0	21.2	12.0	4.6
10000	14.2	3.5	0.0	17.6	5.1	2.5	22.7	11.6	4.3	23.7	12.7	4.7
15000	16.3	3.6	0.0	20.6	5.7	2.6	26.8	11.4	5.4	28.0	13.1	5.7
20000	18.4	3.6	0.0	22.7	6.1	0.0	30.2	11.5	5.6	31.5	13.1	6.5
25000	20.0	0.0	0.0	24.9	6.2	0.0	32.6	11.9	5.9	34.2	13.3	6.5
30000	21.1	0.0	0.0	26.6	6.3	0.0	34.3	12.4	5.9	36.1	13.8	6.8

2A9												
TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	7.8	3.0	1.4	9.2	4.7	2.2	11.1	7.5	3.6	11.4	7.9	3.8
1000	8.7	3.2	1.3	10.4	4.9	2.3	12.7	8.3	4.0	13.1	8.8	4.3
1500	9.6	3.2	1.2	11.6	5.2	2.2	14.2	9.0	4.4	14.7	9.6	4.7
2000	10.5	3.3	1.1	12.7	5.3	2.4	15.8	9.6	4.6	16.3	10.4	5.0
2500	11.2	3.3	1.1	13.7	5.5	2.1	17.1	10.0	4.8	17.7	11.0	5.3
3000	11.8	3.4	1.2	14.5	5.6	1.9	18.2	10.4	4.8	18.9	11.4	5.5
3500	12.2	3.2	1.3	15.0	5.5	1.9	19.0	10.7	4.8	19.7	11.7	5.4
4000	12.4	3.1	1.4	15.3	5.6	1.9	19.4	10.7	5.0	20.2	11.8	5.4
5000	12.7	3.0	1.4	15.7	5.7	2.1	20.1	10.9	4.7	20.8	12.0	5.8
7500	14.2	3.2	1.5	17.8	5.2	2.5	22.9	11.5	4.1	23.9	12.9	4.8
10000	15.2	3.5	0.0	18.9	5.2	2.5	24.7	12.0	4.4	25.8	13.2	4.8
15000	17.0	3.6	0.0	21.8	5.8	2.6	28.6	11.7	5.5	30.0	13.5	5.8
20000	19.2	3.6	0.0	23.8	6.2	0.0	31.9	11.7	5.7	33.4	13.4	6.6
25000	20.8	0.0	0.0	25.9	6.3	0.0	34.3	12.0	5.9	36.0	13.5	6.6
30000	21.9	0.0	0.0	27.6	6.3	0.0	36.0	12.5	5.9	37.9	13.9	6.9

2A10												
TARGET	1			2			3			4		
ALTITUDE FEET	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID	DET	CLASS (NMI)	ID
500	7.2	3.0	1.3	8.4	4.5	2.1	10.0	6.9	3.3	10.3	7.3	3.4
1000	8.1	3.1	1.3	9.5	4.8	2.2	11.5	7.7	3.7	11.8	8.2	3.9
1500	9.0	3.2	1.1	10.8	5.0	2.2	13.2	8.5	4.1	13.6	9.1	4.4
2000	10.0	3.2	1.1	12.0	5.2	2.4	14.9	9.2	4.5	15.4	10.0	4.8
2500	10.8	3.3	1.1	13.2	5.4	2.0	16.4	9.8	4.7	17.0	10.7	5.2
3000	11.6	3.3	1.2	14.2	5.5	1.9	17.8	10.3	4.8	18.5	11.3	5.5
3500	12.2	3.2	1.3	15.0	5.5	1.9	18.9	10.7	4.8	19.6	11.7	5.4
4000	12.4	3.1	1.4	15.4	5.6	1.9	19.5	10.7	5.0	20.2	11.9	5.4
5000	12.9	3.0	1.4	16.0	5.7	2.1	20.5	11.0	4.8	21.3	12.1	5.8
7500	14.1	3.2	1.5	17.8	5.2	2.5	23.0	11.5	4.1	23.9	12.8	4.8
10000	15.4	3.5	0.0	19.4	5.2	2.5	25.3	12.1	4.4	26.5	13.4	4.8
15000	17.4	3.6	0.0	22.5	5.8	2.6	29.7	11.8	5.5	31.1	13.7	5.8
20000	19.7	3.6	0.0	24.8	6.2	0.0	33.3	11.8	5.7	34.8	13.6	6.7
25000	21.4	0.0	0.0	26.8	6.3	0.0	36.1	12.1	6.0	37.9	13.7	6.6
30000	22.7	0.0	0.0	28.8	6.4	0.0	38.1	12.6	6.0	40.1	14.1	7.0

APPENDIX 7

COMPUTER PROGRAM UFLRPLT

C	PROGRAM UFLRPLT	UFL00010
	IMPLICIT INTEGER*2 (I-N)	UFL00020
	DIMENSION X(150),R1(150),R2(150),R3(150),RA(12,150)	UFL00030
	CHARACTER*80 TITLE\$,BLANK\$,BUF\$,FILN\$*20	UFL00040
	BLANK\$=' '	UFL00050
1	WRITE(*,*)'INPUT FILE NAME AND TYPE'	UFL00060
	WRITE(*,*)'A NULL INPUT EXITS THE PROGRAM'	UFL00070
	READ(*, '(A20)')FILN\$	UFL00080
	OPEN(2,FILE=FILN\$,STATUS='OLD',ERR=3)	UFL00090
	DO 2 I=1,100	UFL00100
	IF(I.EQ. 100)WRITE(*,*)' OPEN WAS SUCCESSFUL '	UFL00110
2	CONTINUE	UFL00120
	I = 1	UFL00130
	READ(2, '(A80)')TITLE\$	UFL00140
7	READ(2, '(A80)',END=6)BUF\$	UFL00150
	IF (BUF\$(6:7) .EQ. '00' .AND. I .LE. 150)THEN	UFL00160
	READ(BUF\$, '(F7.0,4(F7.1,2F5.1))')X(I),(RA(J,I),J=1,12)	UFL00170
	I=I+1	UFL00180
	ENDIF	UFL00190
	IF(I.EQ. 150)GO TO 6	UFL00200
	GO TO 7	UFL00210
6	DO 20 I=1,12,3	UFL00220
	DO 15 J=1,150	UFL00230
	R1(J)=RA(I,J)	UFL00240
	R2(J)=RA(I+1,J)	UFL00250
	R3(J)=RA(I+2,J)	UFL00260
15	CONTINUE	UFL00270
	I1 = (I-1)/3 +1	UFL00280
	CALL PLOTIT(R1,R2,R3,X,I1)	UFL00290
20	CONTINUE	UFL00300
	GO TO 4	UFL00310
3	CONTINUE	UFL00320
	WRITE(*, '(' CAN NOT FIND ',A20)')FILN\$	UFL00330
	GO TO 1	UFL00340
4	CALL DONEPL	UFL00350
	STOP	UFL00360
	END	UFL00370
C		UFL00380
	SUBROUTINE PLOTIT(X1,X2,X3,Y,I1)	UFL00390
	IMPLICIT INTEGER*2 (I-N)	UFL00400
	DIMENSION X1(150),X2(150),X3(150),Y(15),X11(15),X22(15),X33(15),	UFL00410
	*RA(12,150)	UFL00420
	CHARACTER CH\$*17	UFL00430
	CALL COMPRS	UFL00440
	CALL PAGE(11.,8.5)	UFL00450
	CALL AREA2D(7.,5.5)	UFL00460
	WRITE(CH\$, '(' TARGET NUMBER ', I2, '\$')')I1	UFL00470
	CALL HEADIN(CH\$,100,1.5,1)	UFL00480
	CALL YNAME('ELEVATION (FEET)\$',100)	UFL00490
	CALL XNAME('RANGE (NMI)\$',100)	UFL00500
	CALL YAXANG(0)	UFL00510
	CALL XTICKS(2)	UFL00520
	CALL YTICKS(6)	UFL00530
	CALL GRAF(0.,4.,48.,0.,6000.,30000.)	UFL00540
	CALL DOT	UFL00550
	CALL GRID(1,1)	UFL00560
	CALL RESET('DOT')	UFL00570
	DO 32 I=1,150,15	UFL00580
	DO 31 J=1,15	UFL00590
	X11(J) = X1(I+J-1)	UFL00600
	X22(J) = X2(I+J-1)	UFL00610
	X33(J) = X3(I+J-1)	UFL00620
31	CONTINUE	UFL00630
	CALL DOT	UFL00640
	CALL CURVE(X11,Y,15,0)	UFL00650
	CALL DASH	UFL00660
	CALL CURVE(X22,Y,15,0)	UFL00670
	CALL CURVE(X33,Y,15,0)	UFL00680
32	CONTINUE	UFL00690
	CALL ENDPL(0)	UFL00700
	RETURN	UFL00710
	END	UFL00720

APPENDIX 8

SELECTED PERFORMANCE DATA FOR HEIGHT LEVELS TESTED

COMBINATION: A

SIGMAT = 1.0 SIGMARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4			
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	
(NMI)	(NMI)		(NMI)	(NMI)		(NMI)	(NMI)		(NMI)	(NMI)		
6.6	2.9	1.0	7.8	4.3	2.0	9.2	6.4	3.0	9.4	6.7	3.1	
5.3	2.6	1.0	6.1	3.7	1.8	7.0	5.0	2.3	7.1	5.2	2.3	
6.8	2.9	1.0	8.0	4.4	2.0	9.4	6.6	3.1	9.7	6.9	3.2	
6.2	2.8	1.0	7.1	4.1	1.9	8.4	5.9	2.7	8.6	6.2	2.8	
6.8	2.9	1.1	7.9	4.3	2.0	9.4	6.5	3.1	9.6	6.8	3.2	
6.4	2.8	1.0	7.4	4.2	1.9	8.7	6.2	2.9	8.9	6.4	3.0	
6.4	2.8	1.0	7.4	4.2	1.9	8.7	6.1	2.9	8.9	6.4	3.0	
5.0	2.8	1.0	5.7	3.6	1.7	6.6	4.7	2.1	6.7	4.9	2.2	
6.4	2.8	1.0	7.4	4.2	1.9	8.7	6.2	2.9	8.9	6.4	3.0	
6.4	2.8	1.0	7.4	4.2	1.9	8.7	6.2	2.9	9.0	6.4	2.9	
10.1	8.7	3.2	1.1	10.5	5.0	2.2	12.7	8.3	4.0	13.1	8.9	4.3
	8.7	3.1	1.1	10.4	4.9	2.2	12.7	8.3	4.0	13.1	8.8	4.3
	9.8	3.1	1.2	11.9	5.2	2.3	14.6	9.1	4.4	15.1	9.8	4.8
	9.5	3.2	1.2	11.5	5.1	2.3	14.1	8.9	4.2	14.6	9.5	4.6
	10.1	3.3	1.2	12.2	5.3	2.3	15.1	9.3	4.5	15.6	10.0	4.9
	9.6	3.2	1.1	10.8	5.0	2.2	13.2	8.5	4.1	13.6	9.1	4.5
	8.0	3.1	1.1	10.3	4.9	2.2	12.5	8.2	4.0	12.9	8.7	4.3
	8.0	3.1	1.1	9.5	4.5	2.1	11.1	7.7	3.7	11.8	8.1	3.9
	9.6	3.2	1.2	11.6	5.2	2.2	14.2	9.0	4.4	14.7	9.6	4.7
	9.0	3.2	1.1	10.8	5.0	2.2	13.2	8.5	4.1	13.6	9.1	4.4
6.5	2.9	1.0	7.6	4.3	1.9	9.0	6.3	3.0	9.2	6.6	3.0	
7.1	2.9	1.1	8.4	4.5	2.0	10.0	6.9	3.3	10.2	7.2	3.4	
6.7	2.9	1.0	7.9	4.3	2.0	9.3	6.5	3.0	9.5	6.8	3.1	
6.9	2.9	1.1	8.1	4.4	2.0	9.6	6.7	3.2	9.9	7.0	3.3	
6.6	2.8	1.0	7.2	4.1	1.9	8.4	6.0	2.8	8.6	6.2	2.9	
6.9	2.9	1.0	7.6	4.3	1.9	9.0	6.6	3.0	9.2	6.6	3.1	
5.5	2.7	1.0	6.3	3.8	1.8	7.3	5.2	2.4	7.4	5.4	2.4	
6.5	2.9	1.0	7.6	4.3	1.9	9.0	6.3	3.0	9.2	6.6	3.1	
6.7	2.9	1.0	7.8	4.3	2.0	9.2	6.5	3.0	9.5	6.8	3.1	
9.5	3.2	1.2	11.4	5.1	2.2	13.9	8.9	4.3	14.3	9.5	4.7	
8.1	3.1	1.1	9.6	4.8	2.1	11.7	7.8	3.7	12.0	8.2	4.0	
9.6	3.2	1.2	11.6	5.2	2.2	14.3	9.0	4.4	14.7	9.6	4.7	
9.0	3.2	1.1	10.9	5.0	2.3	13.3	8.5	4.1	13.7	9.1	4.4	
9.5	3.2	1.2	11.4	5.1	2.2	13.9	8.9	4.3	14.4	9.5	4.7	
9.1	3.2	1.2	10.9	5.0	2.2	13.3	8.6	4.2	13.7	9.2	4.5	
8.3	3.1	1.1	9.9	4.9	2.2	12.0	8.0	3.9	12.4	8.5	4.1	
7.6	3.0	1.1	9.0	4.5	2.1	10.8	7.3	3.5	11.1	7.7	3.7	
9.1	3.2	1.2	11.0	5.1	2.2							

FLIGHT ALTITUDE: 1,500 FT. COMBINATION: B

SIGNAP = 2.5 SIGMAT = 2.0 SIGMARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(#II)	(#II)		(#II)	(#II)		(#II)	(#II)		(#II)	(#II)	
7.2	3.0	1.1	8.4	4.5	2.0	10.1	6.9	3.3	10.3	7.3	3.4
5.1	2.6	1.0	5.8	3.6	1.7	6.7	4.8	2.2	6.8	5.0	2.2
6.7	2.9	1.0	7.8	4.3	2.0	9.2	6.5	3.0	9.4	6.7	3.1
6.0	2.8	1.0	7.0	4.1	1.9	8.2	5.8	2.7	8.4	6.0	2.7
6.6	2.9	1.0	7.6	4.3	1.9	9.0	6.3	3.0	9.2	6.6	3.0
6.7	2.9	1.1	7.9	4.3	2.0	9.3	6.5	3.1	9.5	6.8	3.2
6.7	2.9	1.0	7.9	4.3	2.0	9.3	6.5	3.1	9.5	6.8	3.1
4.7	2.5	0.9	5.4	3.5	1.7	6.2	4.5	2.0	6.3	4.6	2.0
6.3	2.8	1.0	7.3	4.1	1.9	8.5	6.0	2.8	8.7	6.3	2.9
6.5	2.9	1.0	7.6	4.2	1.9	8.9	6.3	2.9	9.1	6.6	3.0
9.3	3.2	1.2	11.2	5.1	2.2	13.7	8.8	4.2	14.1	9.3	4.6
8.4	3.1	1.1	10.1	4.9	2.1	12.2	8.1	3.9	12.6	8.6	4.1
9.7	3.2	1.2	11.7	5.2	2.2	14.3	9.0	4.4	14.8	9.7	4.7
9.3	3.2	1.1	11.2	5.1	2.2	13.8	8.8	4.2	14.2	9.4	4.5
9.9	3.3	1.2	11.9	5.2	2.3	14.7	9.2	4.5	15.2	9.9	4.8
9.4	3.2	1.2	11.3	5.1	2.2	13.9	8.8	4.3	14.3	9.4	4.6
8.9	3.2	1.1	10.7	5.0	2.2	13.0	8.5	4.1	13.4	9.0	4.4
7.7	3.0	1.1	9.1	4.7	2.1	10.9	7.4	3.6	11.2	7.8	3.7
9.5	3.2	1.2	11.4	5.1	2.2	14.0	8.9	4.3	14.4	9.5	4.7
9.1	3.2	1.1	10.9	5.0	2.2	13.3	8.6	4.2	13.7	9.2	4.5
7.0	2.9	1.1	8.2	4.4	2.0	9.7	6.8	3.2	10.0	7.1	3.3
5.8	2.7	1.0	6.7	3.9	1.8	7.8	5.6	2.6	7.9	5.7	2.6
7.0	2.9	1.1	8.2	4.4	2.0	9.7	6.7	3.2	10.0	7.1	3.3
6.6	2.9	1.0	7.7	4.3	1.9	9.0	6.3	3.0	9.3	6.6	3.0
6.8	2.9	1.1	7.9	4.4	2.0	9.4	6.6	3.1	9.6	6.9	3.2
6.5	2.9	1.0	7.5	4.2	1.9	8.9	6.2	3.0	9.1	6.5	3.0
6.8	2.9	1.1	7.9	4.4	2.0	9.4	6.5	3.1	9.6	6.8	3.2
5.2	2.6	1.0	5.9	3.7	1.8	6.8	4.9	2.2	6.9	5.0	2.3
6.4	2.9	1.0	7.5	4.2	1.9	8.8	6.2	2.9	9.0	6.5	3.0
6.7	2.9	1.1	7.9	4.3	2.0	9.3	6.5	3.1	9.6	6.8	3.2
10.0	3.3	1.2	12.1	5.3	2.3	14.9	9.3	4.5	15.4	10.0	4.9
7.9	3.0	1.1	9.3	4.7	2.1	11.2	7.5	3.6	11.5	8.0	3.8
9.5	3.2	1.2	11.4	5.1	2.2	13.9	8.9	4.3	14.4	9.5	4.6
8.9	3.1	1.1	10.7	5.0	2.2	13.0	8.4	4.0	13.4	9.0	4.3
9.2	3.2	1.2	11.1	5.1	2.2	13.5	8.7	4.2	14.0	9.3	4.5
9.5	3.2	1.2	11.4	5.1	2.2	13.9	8.9	4.3	14.4	9.5	4.6
8.7	3.1	1.1	10.4	5.0	2.2	12.6	8.3	4.0	13.0	8.8	4.4
7.3	3.0	1.1	8.6	4.5	2.0	10.2	7.0	3.4	10.5	7.4	3.5
9.0	3.2	1.1	10.8	5.0	2.2	13.2	8.5	4.1	13.6	9.1	4.4
9.0	3.2	1.1	10.8	5.0	2.2	13.2	8.5	4.1	13.6	9.1	4.5
11.1	3.4	1.2	13.5	5.5	2.3	16.8	9.9	4.8	17.4	10.8	5.3
11.0	3.3	1.2	13.3	5.4	2.3	16.6	9.8	4.8	17.2	10.7	5.3
11.7	3.4	1.2	14.2	5.6	2.4	17.8	10.3	5.0	18.4	11.3	5.5
11.1	3.3	1.2	13.6	5.4	2.3	17.0	9.9	4.8	17.6	10.8	5.3
10.6	3.3	1.2	12.8	5.4	2.3	15.8	9.6	4.7	16.4	10.4	5.1
12.9	3.5	1.2	15.9	5.7	2.4	20.0	11.0	5.2	20.8	12.2	5.8
11.1	3.4	1.2	13.5	5.5	2.3	16.8	9.9	4.8	17.4	10.8	5.3
11.3	3.4	1.2	13.7	5.5	2.4	17.1	10.0	4.9	17.7	11.0	5.4
9.5	3.2	1.2	11.4	5.1	2.2	13.9	8.9	4.3	14.4	9.5	4.7
12.1	3.4	1.2	14.8	5.6	2.4	18.5	10.5	5.0	19.2	11.6	5.6
10.3	3.3	1.2	12.4	5.3	2.3	15.3	9.4	4.6	15.9	10.1	5.0
9.8	3.3	1.2	11.8	5.2	2.3	14.5	9.1	4.4	15.0	9.8	4.8
10.3	3.3	1.2	12.4	5.3	2.3	15.3	9.4	4.6	15.8	10.2	5.0
10.4	3.3	1.2	12.6	5.3	2.3	15.7	9.5	4.6	16.3	10.3	5.0
11.4	3.4	1.2	13.9	5.5	2.4	17.4	10.1	4.9	18.0	11.1	5.4
10.3	3.3	1.2	12.4	5.3	2.3	15.3	9.4	4.6	15.8	10.1	5.0
10.4	3.3	1.2	12.5	5.3	2.3	15.5	9.5	4.6	16.1	10.3	5.0
8.7	3.1	1.1	10.4	4.9	2.2	12.6	8.2	4.0	13.0	8.8	4.3
10.8	3.3	1.2	13.0	5.4	2.3	16.2	9.7	4.7	16.8	10.5	5.2
9.3	3.2	1.2	11.2	5.1	2.2	13.7	8.8	4.3	14.1	9.4	4.6
9.6	3.2	1.2	11.5	5.2	2.2	14.1	9.0	4.4	14.6	9.6	4.7
8.5	3.1	1.1	10.2	4.9	2.2	12.4	8.1	3.9	12.8	8.7	4.2
9.1	3.2	1.2	10.9	5.1	2.2	13.3	8.6	4.2	13.7	9.2	4.5
9.2	3.2	1.1	11.0	5.0	2.2	13.5	8.6	4.1	13.9	9.2	4.5
9.8	3.3	1.2	11.9	5.3	2.3	14.6	9.1	4.5	15.1	9.8	4.8
9.6	3.3	1.2	11.5	5.2	2.3	14.1	8.9	4.4	14.6	9.6	4.7
9.7	3.2	1.2	11.6	5.2	2.2	14.3	9.0	4.4	14.7	9.7	4.7
7.9	3.1	1.1	9.4	4.7	2.1	11.3	7.6	3.7	11.6	8.0	3.8
9.6	3.2	1.2	11.5	5.2	2.2	14.1	8.9	4.3	14.6	9.6	4.7
9.2	3.2	1.2	11.0	5.1	2.2	13.4	8.7	4.2	13.9	9.2	4.6
10.2	3.3	1.2	12.2	5.3	2.3	15.1	9.3	4.6	15.6	10.1	5.0
8.5	3.1	1.1	10.2	4.9	2.2	12.4	8.1	3.9	12.7	8.7	4.2
10.6	3.3	1.2	12.9	5.4	2.3	16.0	9.6	4.6	16.5	10.4	5.1
9.9	3.3	1.2	12.0	5.2	2.2	14.9	9.2	4.4	15.4	9.9	4.8
9.9	3.3	1.2	12.0	5.2	2.2	14.8	9.2	4.4	15.2	9.9	4.8
9.4	3.3	1.2	11.2	5.1	2.2	13.7	8.8	4.3	14.2	9.4	4.7
10.0	3.3	1.2	12.0	5.2	2.2	14.8	9.2	4.4	15.3	9.9	4.9
8.0	3.1	1.1	9.4	4.7	2.1	11.4	7.6	3.7	11.7	8.1	3.9
9.4	3.2	1.2	11.3	5.1	2.2	13.8	8.8	4.3	14.2	9.4	4.6
10.2	3.3	1.2	12.3	5.3	2.3	15.2	9.4	4.6	15.7	10.1	4.9

FLIGHT ALTITUDE: 1,500 FT. COMBINATION: C
 SIGMAP = 2.5 SIGMAT = 4.0 SIGMARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
8.3	3.1	1.1	9.9	4.8	2.1	12.0	7.9	3.8	12.3	8.4	4.0
4.7	2.2	0.9	5.3	3.4	1.6	6.1	4.4	2.0	6.2	4.5	2.0
6.4	2.2	1.0	7.4	4.2	1.9	8.7	6.1	2.9	8.9	6.4	2.9
5.8	2.2	1.0	6.7	3.9	1.8	7.8	5.6	2.5	8.0	5.8	2.6
6.1	2.2	1.0	7.1	4.1	1.9	8.3	5.9	2.7	8.5	6.1	2.8
7.5	3.0	1.1	8.8	4.6	2.0	10.5	7.2	3.5	10.8	7.6	3.6
7.4	3.0	1.1	8.7	4.6	2.0	10.3	7.1	3.4	10.6	7.5	3.5
4.2	3.3	0.9	4.8	3.2	1.5	5.4	3.9	1.7	5.5	4.0	1.7
6.0	2.2	1.0	6.9	4.0	1.9	8.1	5.7	2.7	8.3	5.9	2.7
6.6	2.9	1.0	7.7	4.3	1.9	9.1	6.4	3.0	9.3	6.7	3.1
10.4	3.3	1.2	12.6	5.3	2.3	15.6	9.5	4.6	16.1	10.3	5.1
7.9	3.1	1.1	9.4	4.4	2.1	11.3	7.6	3.3	11.7	8.0	3.8
9.3	3.1	1.2	11.2	5.1	2.2	13.7	8.8	4.2	14.2	9.4	4.6
9.0	3.1	1.1	10.8	5.0	2.2	13.1	8.5	4.0	13.6	9.1	4.4
9.5	3.1	1.2	11.4	5.1	2.2	14.4	8.9	4.3	14.5	9.5	4.7
10.5	3.1	1.2	12.3	5.3	2.3	15.2	9.4	4.6	15.8	10.1	5.0
9.2	3.1	1.1	11.4	5.2	2.2	13.9	8.9	4.4	14.4	9.5	4.7
7.0	3.1	1.1	8.2	4.4	2.0	9.7	6.7	3.2	9.9	7.0	3.3
9.1	3.1	1.1	11.0	5.0	2.2	13.4	8.6	4.2	13.9	9.2	4.5
9.2	3.2	1.2	11.0	5.1	2.2	13.4	8.7	4.2	13.8	9.2	4.5
8.0	3.1	1.1	9.4	4.7	2.1	11.4	7.6	3.7	11.7	8.1	3.9
5.3	3.1	1.0	6.1	3.7	1.8	7.1	5.1	2.3	7.2	5.2	2.4
6.7	3.1	1.0	7.8	4.3	2.0	8.9	6.4	3.0	9.4	6.7	3.1
6.5	3.1	1.0	7.3	4.1	1.9	8.5	6.0	2.8	8.7	6.3	2.9
6.5	3.1	1.0	7.6	4.2	2.0	8.9	6.3	3.0	9.1	6.5	3.0
7.0	3.1	1.1	8.3	4.4	2.0	9.8	6.8	3.3	10.1	7.1	3.4
7.1	3.1	1.1	8.3	4.4	2.0	9.9	6.9	3.3	10.1	7.2	3.4
4.5	3.0	0.9	5.1	3.3	1.6	5.8	4.2	1.9	5.9	4.3	1.9
6.2	2.2	1.0	7.2	4.1	1.9	8.5	6.0	2.8	8.7	6.2	2.9
6.8	2.9	1.1	7.9	4.3	2.0	9.3	6.5	3.1	9.5	6.8	3.2
11.2	3.4	1.2	13.5	5.5	2.4	16.8	10.0	4.8	17.4	10.9	5.4
7.3	3.1	1.1	8.6	4.5	2.0	10.3	7.0	3.4	10.6	7.4	3.5
9.1	3.1	1.1	10.9	5.5	2.3	13.3	8.6	4.1	13.7	9.1	4.4
8.6	3.1	1.1	10.0	5.4	2.2	12.3	8.1	3.9	12.7	8.6	4.0
8.7	3.1	1.1	10.0	5.4	2.2	12.3	8.1	3.9	12.7	8.6	4.0
10.8	3.1	1.2	12.3	5.3	2.3	15.2	9.4	4.6	15.8	10.1	5.0
9.3	3.1	1.2	11.1	5.1	2.2	13.6	8.8	4.3	14.0	9.3	4.6
6.6	3.1	1.0	7.7	4.4	2.0	9.1	6.4	3.3	9.3	6.6	3.3
8.7	3.1	1.1	10.4	5.4	2.3	12.6	8.3	4.0	13.0	8.8	4.3
9.1	3.2	1.2	10.9	5.1	2.2	13.3	8.6	4.2	13.7	9.2	4.5
12.2	3.4	1.2	14.9	5.6	2.4	18.8	10.6	5.1	19.5	11.6	5.6
10.4	3.1	1.1	12.3	5.3	2.3	15.6	9.5	4.6	16.1	10.3	5.1
11.6	3.1	1.2	13.8	5.5	2.4	17.2	10.1	4.9	17.8	11.0	5.4
10.7	3.1	1.1	12.3	5.3	2.3	15.6	9.5	4.6	16.1	10.3	5.1
12.8	3.4	1.2	15.7	5.7	2.4	19.9	10.9	5.2	20.6	12.1	5.7
11.8	3.1	1.1	14.4	5.6	2.4	18.5	10.4	5.0	19.0	11.4	5.5
11.6	3.1	1.2	14.1	5.5	2.4	18.2	10.2	4.9	18.1	11.2	5.4
8.5	3.1	1.1	10.0	5.4	2.2	12.3	8.1	3.9	12.7	8.6	4.0
11.9	3.1	1.2	14.2	5.5	2.4	18.3	10.4	5.0	18.9	11.4	5.5
10.3	3.3	1.2	12.4	5.3	2.3	15.3	9.4	4.6	15.8	10.2	5.0
11.3	3.4	1.2	13.8	5.5	2.4	17.2	10.1	4.9	17.9	11.0	5.4
9.2	3.1	1.1	11.1	5.1	2.2	13.6	8.7	4.2	14.0	9.3	4.6
10.0	3.1	1.2	12.0	5.0	2.2	14.8	9.2	4.5	15.3	9.9	4.9
10.0	3.1	1.1	11.1	5.1	2.2	13.6	8.7	4.2	14.0	9.3	4.6
11.2	3.1	1.2	13.7	5.5	2.4	17.1	10.0	4.8	17.7	10.9	5.4
10.7	3.1	1.1	12.3	5.3	2.3	15.6	9.5	4.6	16.1	10.3	5.1
7.8	3.0	0.9	4.9	3.2	1.5	5.7	3.9	1.7	5.8	4.0	1.7
10.5	3.1	1.2	12.7	5.4	2.3	15.1	9.7	4.7	16.6	10.5	5.2
9.1	3.2	1.2	10.9	5.1	2.2	13.3	8.6	4.2	13.6	9.2	4.5
10.7	3.3	1.2	12.9	5.4	2.3	16.0	9.7	4.7	16.6	10.5	5.2
8.0	3.1	1.1	9.5	4.7	2.1	11.4	7.7	3.7	11.8	8.1	3.9
8.8	3.1	1.1	10.5	5.0	2.2	12.7	8.3	4.1	13.1	8.9	4.4
8.8	3.1	1.1	10.5	5.0	2.2	12.7	8.3	4.1	13.1	8.9	4.4
9.3	3.1	1.2	11.1	5.1	2.2	13.3	8.8	4.3	14.2	9.4	4.6
10.4	3.1	1.1	12.3	5.3	2.3	15.6	9.5	4.6	16.0	10.2	5.0
7.2	3.0	0.9	4.8	3.2	1.5	5.4	3.9	1.7	5.5	4.0	1.7
9.3	3.1	1.2	11.1	5.1	2.2	13.3	8.7	4.2	14.0	9.3	4.6
11.3	3.4	1.2	13.7	5.5	2.4	17.0	10.0	4.9	17.6	11.0	5.4
8.0	3.1	1.1	9.5	4.7	2.1	11.4	7.6	3.7	11.7	8.1	3.9
10.2	3.1	1.2	12.3	5.3	2.3	15.2	9.4	4.6	15.7	10.1	5.0
9.6	3.1	1.1	11.1	5.1	2.2	13.3	8.9	4.3	14.4	9.6	4.7
9.4	3.1	1.1	11.1	5.1	2.2	13.3	8.8	4.3	14.3	9.4	4.6
10.1	3.1	1.2	12.3	5.3	2.3	15.2	9.4	4.6	15.7	10.1	5.0
7.3	3.0	0.9	4.8	3.2	1.5	5.4	3.9	1.7	5.5	4.0	1.7
9.0	3.1	1.1	11.1	5.0	2.2	13.3	8.5	4.2	13.6	9.1	4.4
10.5	3.1	1.2	12.6	5.3	2.3	15.6	9.5	4.6	16.1	10.3	5.1

FLIGHT ALTITUDE: 1,500 FT. COMBINATION: D

SIGMAP = 1.5 SIGMAT = 1.0 SIGMARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(NMI)	(NMI)		(NMI)	(NMI)		(NMI)	(NMI)		(NMI)	(NMI)	
6.5	2.9	1.0	7.6	4.3	1.9	9.0	6.3	3.0	9.2	6.6	3.0
5.3	2.6	1.0	6.1	3.7	1.8	7.0	5.1	2.3	7.2	5.2	2.3
6.7	2.9	1.0	7.8	4.3	2.0	9.2	6.5	3.0	9.5	6.8	3.1
6.2	2.8	1.0	7.2	4.1	1.9	8.4	6.0	2.8	8.6	6.2	2.8
6.8	2.9	1.1	7.9	4.3	2.0	9.4	6.5	3.1	9.6	6.8	3.2
6.3	2.8	1.0	7.4	4.2	1.9	8.7	6.1	2.9	8.9	6.4	2.9
5.1	2.6	1.0	7.3	4.2	1.9	8.6	6.1	2.8	8.8	6.3	2.9
6.3	2.8	1.0	7.4	4.2	1.9	8.7	6.1	2.9	8.9	6.4	2.9
6.3	2.8	1.0	7.3	4.2	1.9	8.6	6.1	2.8	8.8	6.3	2.9
8.7	3.2	1.1	10.5	5.0	2.2	12.7	8.3	4.0	13.1	8.9	4.3
8.7	3.1	1.1	10.4	4.9	2.2	12.7	8.3	4.0	13.1	8.8	4.3
9.8	3.3	1.2	11.9	5.2	2.3	14.6	9.1	4.4	15.1	9.8	4.8
9.6	3.2	1.2	11.5	5.1	2.2	14.2	8.9	4.3	14.7	9.6	4.6
10.1	3.3	1.2	12.2	5.3	2.3	15.1	9.3	4.5	15.6	10.0	4.9
9.0	3.2	1.1	10.8	5.0	2.2	13.2	8.5	4.1	13.6	9.1	4.4
9.0	3.2	1.1	10.8	5.0	2.2	13.1	8.5	4.1	13.5	9.1	4.4
8.7	3.1	1.1	10.4	4.9	2.2	12.6	8.3	4.0	13.0	8.8	4.3
8.1	3.1	1.1	9.6	4.8	2.1	11.6	7.8	3.7	12.0	8.2	3.9
9.6	3.2	1.2	11.5	5.2	2.2	14.1	8.9	4.3	14.6	9.6	4.7
6.4	2.9	1.0	7.5	4.2	1.9	8.8	6.2	2.9	9.0	6.5	3.0
6.0	2.8	1.0	7.0	4.0	1.9	8.1	5.8	2.7	8.3	6.0	2.7
7.0	2.9	1.1	8.2	4.4	2.0	9.8	6.8	3.2	10.0	7.1	3.3
6.8	2.9	1.0	7.9	4.3	2.0	9.4	6.6	3.1	9.6	6.9	3.2
7.0	2.9	1.1	8.2	4.4	2.0	9.8	6.8	3.2	10.0	7.1	3.3
6.1	2.8	1.0	7.1	4.1	1.9	8.3	5.9	2.8	8.5	6.1	2.8
6.6	2.9	1.0	7.7	4.3	2.0	9.1	6.4	3.0	9.3	6.7	3.1
5.5	2.7	1.0	6.4	3.8	1.8	7.4	5.3	2.4	7.5	5.5	2.5
6.5	2.9	1.0	7.6	4.3	1.9	9.0	6.3	3.0	9.2	6.6	3.1
6.6	2.9	1.0	7.7	4.3	1.9	9.1	6.4	3.0	9.3	6.6	3.1
9.3	3.2	1.2	11.2	5.1	2.2	13.7	8.8	4.3	14.1	9.4	4.6
8.1	3.1	1.1	9.7	4.8	2.1	11.7	7.8	3.8	12.0	8.3	4.0
9.5	3.2	1.2	11.4	5.1	2.2	14.0	8.9	4.3	14.4	9.5	4.6
9.1	3.2	1.2	11.0	5.0	2.2	13.4	8.6	4.1	13.9	9.2	4.4
9.5	3.2	1.2	11.4	5.1	2.2	13.9	8.9	4.3	14.4	9.5	4.6
9.0	3.2	1.1	10.8	5.0	2.2	13.1	8.5	4.1	13.5	9.1	4.5
8.3	3.1	1.1	9.9	4.8	2.1	11.9	7.9	3.9	12.3	8.4	4.1
7.7	3.0	1.1	9.1	4.7	2.1	10.9	7.4	3.6	11.2	7.8	3.7
9.1	3.2	1.2	10.9	5.0	2.2	13.3	8.6	4.2	13.7	9.2	4.5
8.8	3.2	1.1	10.5	5.0	2.2	12.8	8.3	4.0	13.2	8.9	4.3
10.5	3.3	1.2	12.6	5.3	2.3	15.7	9.5	4.6	16.2	10.3	5.1
11.2	3.4	1.2	13.6	5.5	2.3	17.0	10.0	4.8	17.6	10.9	5.4
11.8	3.4	1.2	14.4	5.6	2.3	17.9	10.3	5.0	18.6	11.3	5.5
11.4	3.4	1.2	14.0	5.5	2.3	17.5	10.1	4.8	18.1	11.1	5.4
13.0	3.5	1.2	15.9	5.7	2.4	20.1	11.0	5.2	20.8	12.2	5.8
10.6	3.3	1.2	12.8	5.4	2.3	15.8	9.6	4.7	16.3	10.4	5.1
10.8	3.3	1.2	13.0	5.4	2.3	16.2	9.7	4.7	16.7	10.5	5.2
11.0	3.3	1.2	13.4	5.4	2.3	16.6	9.9	4.8	17.2	10.7	5.3
10.1	3.3	1.2	12.1	5.3	2.3	15.0	9.3	4.5	15.5	10.0	4.9
12.1	3.4	1.2	14.8	5.6	2.4	18.6	10.5	5.1	19.2	11.6	5.6
9.6	3.2	1.2	11.6	5.2	2.2	14.2	9.0	4.4	14.7	9.6	4.7
10.1	3.3	1.2	12.1	5.3	2.3	15.0	9.3	4.5	15.5	10.0	4.9
10.4	3.3	1.2	12.5	5.3	2.3	15.4	9.5	4.6	16.0	10.2	5.0
9.7	3.3	1.2	11.2	5.1	2.2	13.6	8.8	4.3	14.1	9.3	4.6
10.7	3.3	1.2	13.0	5.4	2.3	16.2	9.6	4.6	16.8	10.5	5.1
11.5	3.4	1.2	14.0	5.5	2.4	17.5	10.2	4.9	18.2	11.1	5.5
9.9	3.3	1.2	11.9	5.2	2.3	14.6	9.1	4.5	15.1	9.8	4.8
10.1	3.3	1.2	12.2	5.3	2.3	15.1	9.3	4.5	15.6	10.0	4.9
9.2	3.2	1.2	11.0	5.1	2.2	13.5	8.7	4.2	13.9	9.2	4.5
10.8	3.3	1.2	13.1	5.4	2.3	16.3	9.7	4.7	16.8	10.6	5.2
9.1	3.2	1.2	10.9	5.1	2.2	13.3	8.6	4.2	13.7	9.2	4.5
8.8	3.2	1.1	10.6	5.0	2.2	12.9	8.4	4.0	13.3	8.9	4.3
9.1	3.2	1.2	10.9	5.1	2.2	13.3	8.6	4.2	13.7	9.2	4.5
9.4	3.2	1.2	11.3	5.1	2.2	13.9	8.8	4.2	14.3	9.4	4.6
10.1	3.3	1.2	12.1	5.3	2.3	15.0	9.3	4.5	15.5	10.0	4.9
9.3	3.2	1.2	11.2	5.1	2.2	13.6	8.8	4.3	14.1	9.3	4.6
9.3	3.2	1.2	11.2	5.1	2.2	13.7	8.8	4.3	14.2	9.4	4.6
8.3	3.1	1.1	9.9	4.8	2.1	12.0	7.9	3.8	12.4	8.5	4.1
9.7	3.2	1.2	11.7	5.2	2.2	14.3	9.0	4.4	14.8	9.7	4.7
9.1	3.2	1.1	10.9	5.0	2.2	13.3	8.6	4.2	13.7	9.2	4.5
9.7	3.2	1.2	11.6	5.2	2.3	14.3	9.0	4.4	14.7	9.7	4.8
8.8	3.2	1.1	10.6	5.0	2.2	12.9	8.4	4.0	13.3	8.9	4.3
10.6	3.3	1.2	12.9	5.4	2.3	16.0	9.6	4.6	16.5	10.4	5.1
10.2	3.3	1.2	12.3	5.2	2.3	15.3	9.3	4.5	15.8	10.0	4.8
10.2	3.3	1.2	12.3	5.2	2.3	15.2	9.3	4.5	15.7	10.1	4.9
9.2	3.2	1.2	11.0	5.1	2.2	13.4	8.7	4.2	13.8	9.2	4.6
9.6	3.2	1.2	11.6	5.2	2.2	14.2	9.0	4.4	14.7	9.6	4.7
8.3	3.1	1.1	9.9	4.8	2.1	12.0	7.9	3.8	12.4	8.5	4.1
9.5	3.2	1.2	11.4	5.1	2.2	13.9	8.9	4.3	14.4	9.5	4.7
10.0	3.3	1.2	12.1	5.2	2.3	14.9	9.2	4.5	15.4	9.9	4.8

FLIGHT ALTITUDE: 1,500 FT. COMBINATION: E

SIGMAP = 1.5 SIGMAT = 2.0 SIGMARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(NMI)	(NMI)		(NMI)	(NMI)		(NMI)	(NMI)		(NMI)	(NMI)	
7.1	2.9	1.1	8.3	4.5	2.0	9.9	6.8	3.2	10.1	7.2	3.4
5.1	2.6	1.0	5.8	3.6	1.7	6.7	4.9	2.2	6.9	5.0	2.2
6.5	2.9	1.0	7.6	4.3	1.9	9.0	6.3	3.0	9.2	6.6	3.0
6.1	2.8	1.0	7.0	4.1	1.9	8.2	5.9	2.7	8.4	6.1	2.8
6.5	2.9	1.0	7.6	4.3	1.9	9.0	6.3	3.0	9.2	6.6	3.0
6.7	2.9	1.0	7.8	4.3	2.0	9.2	6.5	3.0	9.5	6.7	3.1
6.7	2.9	1.0	7.8	4.3	2.0	9.2	6.4	3.0	9.4	6.7	3.1
4.8	2.5	0.9	5.5	3.5	1.7	6.3	4.5	2.0	6.4	4.7	2.1
6.2	2.8	1.0	7.2	4.1	1.9	8.5	6.0	2.8	8.7	6.2	2.8
6.4	2.8	1.0	7.4	4.2	1.9	8.8	6.2	2.9	9.0	6.4	3.0
9.3	3.2	1.2	11.2	5.1	2.2	13.7	8.8	4.2	14.1	9.4	4.6
8.5	3.1	1.1	10.5	4.9	2.1	12.3	8.1	3.9	12.6	8.6	4.1
9.7	3.2	1.2	11.7	5.2	2.2	14.3	9.0	4.4	14.8	9.7	4.7
9.4	3.2	1.2	11.3	5.1	2.2	13.9	8.8	4.4	14.3	9.4	4.5
9.9	3.3	1.2	11.9	5.2	2.2	14.7	9.2	4.5	15.2	9.9	4.8
9.4	3.2	1.2	11.3	5.1	2.2	13.8	8.8	4.4	14.2	9.4	4.6
9.0	3.1	1.1	10.8	5.0	2.2	13.1	8.5	4.2	13.6	9.1	4.5
7.8	3.0	1.1	9.2	4.7	2.1	11.1	7.5	3.6	11.4	7.9	3.8
9.4	3.2	1.2	11.3	5.1	2.2	13.9	8.8	4.4	14.4	9.5	4.6
9.1	3.2	1.1	10.9	5.0	2.2	13.3	8.6	4.1	13.7	9.2	4.5
6.9	2.9	1.1	8.1	4.4	2.0	9.6	6.7	3.2	9.8	7.0	3.3
5.8	2.7	1.0	6.7	4.0	1.8	7.8	5.6	2.6	8.0	5.8	2.6
6.9	2.9	1.1	8.0	4.4	2.0	9.5	6.6	3.1	9.8	6.9	3.3
6.6	2.9	1.0	7.8	4.3	1.9	9.2	6.4	3.0	9.4	6.7	3.1
6.8	2.9	1.1	8.0	4.4	2.0	9.5	6.6	3.1	9.7	6.9	3.3
6.4	2.9	1.0	7.5	4.2	1.9	8.8	6.2	2.9	9.0	6.5	3.0
6.9	2.9	1.1	8.1	4.4	2.0	9.5	6.7	3.2	9.8	7.0	3.3
5.2	2.6	1.0	6.0	3.7	1.8	6.9	5.0	2.3	7.0	5.1	2.3
6.4	2.9	1.0	7.5	4.2	1.9	8.8	6.2	2.9	9.0	6.5	3.0
6.6	2.9	1.0	7.7	4.3	2.0	9.1	6.4	3.0	9.3	6.7	3.1
9.9	3.3	1.2	11.9	5.2	2.2	14.6	9.2	4.5	15.1	9.8	4.9
7.9	3.1	1.1	9.3	4.7	2.1	11.3	7.6	3.6	11.6	8.0	3.8
9.3	3.2	1.2	11.2	5.1	2.2	13.7	8.7	4.2	14.1	9.3	4.4
8.9	3.2	1.2	10.8	5.0	2.2	13.5	8.5	4.2	13.6	9.1	4.4
9.4	3.2	1.2	11.3	5.1	2.2	13.9	8.8	4.4	14.4	9.4	4.5
9.4	3.2	1.2	11.3	5.1	2.2	13.9	8.8	4.4	14.4	9.4	4.5
8.6	3.1	1.1	10.3	4.9	2.1	12.5	8.2	4.0	12.9	8.8	4.3
7.4	3.0	1.1	8.7	4.6	2.0	10.4	7.1	3.4	10.7	7.5	3.6
8.9	3.2	1.1	10.7	5.0	2.2	13.1	8.5	4.1	13.5	9.0	4.4
8.9	3.2	1.1	10.6	5.0	2.2	12.9	8.4	4.1	13.3	9.0	4.4
11.1	3.4	1.2	13.5	5.5	2.3	16.8	9.9	4.8	17.4	10.8	5.3
11.0	3.3	1.2	13.3	5.4	2.3	16.6	9.8	4.8	17.2	10.7	5.3
11.7	3.4	1.2	14.2	5.6	2.4	17.8	10.3	5.0	18.4	11.3	5.5
11.1	3.3	1.2	13.6	5.4	2.3	17.0	9.9	4.8	17.6	10.8	5.3
12.9	3.7	1.2	15.9	5.7	2.4	20.0	11.0	5.2	20.8	12.2	5.8
11.1	3.4	1.2	13.5	5.5	2.3	16.8	9.9	4.8	17.4	10.8	5.3
11.3	3.4	1.2	13.7	5.5	2.3	17.1	10.0	4.9	17.7	11.0	5.4
9.5	3.2	1.2	11.4	5.1	2.2	13.9	8.9	4.4	14.4	9.5	4.4
12.1	3.4	1.2	14.8	5.6	2.4	18.5	10.5	5.0	19.2	11.6	5.6
10.6	3.3	1.2	12.8	5.4	2.3	15.8	9.6	4.7	16.4	10.4	5.1
10.2	3.3	1.2	12.3	5.3	2.3	15.2	9.3	4.6	15.7	10.1	4.9
9.8	3.3	1.2	11.8	5.2	2.2	14.6	9.1	4.4	15.0	9.8	4.8
10.2	3.3	1.2	12.3	5.3	2.3	15.2	9.4	4.6	15.7	10.1	4.9
10.5	3.3	1.2	12.7	5.3	2.3	15.8	9.5	4.6	16.4	10.3	5.0
11.4	3.4	1.2	13.9	5.4	2.4	17.4	10.1	4.9	18.0	11.1	5.4
10.3	3.3	1.2	12.4	5.3	2.3	15.3	9.4	4.6	15.8	10.1	4.9
8.8	3.2	1.1	10.5	5.0	2.2	12.8	8.3	4.0	13.2	8.9	4.3
10.7	3.3	1.2	13.0	5.4	2.3	16.1	9.7	4.7	16.7	10.5	5.2
9.2	3.2	1.2	11.1	5.1	2.2	13.5	8.7	4.2	13.9	9.3	4.6
9.7	3.2	1.2	11.6	5.2	2.3	14.3	9.0	4.4	14.8	9.7	4.8
8.5	3.1	1.1	10.2	4.9	2.2	12.4	8.1	3.9	12.8	8.7	4.2
8.9	3.2	1.1	10.7	5.0	2.2	13.0	8.5	4.1	13.4	9.0	4.4
9.2	3.2	1.1	11.1	5.1	2.2	13.6	8.7	4.2	14.0	9.3	4.5
9.8	3.3	1.2	11.8	5.2	2.2	14.6	9.1	4.4	15.1	9.8	4.8
9.7	3.3	1.2	11.7	5.2	2.2	14.3	9.0	4.4	14.8	9.7	4.8
9.7	3.3	1.2	11.7	5.2	2.2	14.3	9.0	4.4	14.8	9.7	4.8
8.0	3.1	1.1	9.5	4.8	2.1	11.5	7.7	3.7	11.8	8.1	3.9
9.5	3.2	1.2	11.5	5.1	2.2	14.1	8.9	4.3	14.5	9.5	4.7
9.2	3.2	1.2	11.0	5.1	2.2	13.5	8.7	4.2	13.9	9.3	4.6
10.3	3.3	1.2	12.4	5.3	2.3	15.3	9.4	4.6	15.8	10.1	5.0
8.5	3.1	1.1	10.2	4.9	2.2	12.4	8.1	3.9	12.8	8.7	4.2
10.4	3.3	1.2	12.6	5.3	2.3	15.6	9.5	4.6	16.2	10.3	5.0
10.0	3.3	1.2	12.1	5.2	2.3	15.0	9.2	4.4	15.5	9.9	4.8
9.9	3.3	1.2	11.9	5.2	2.2	14.7	9.2	4.5	15.2	9.9	4.8
9.6	3.3	1.2	11.5	5.1	2.2	14.0	8.9	4.3	14.5	9.6	4.7
10.1	3.3	1.2	12.1	5.2	2.3	15.0	9.3	4.4	15.5	10.0	4.9
8.0	3.1	1.1	9.5	4.8	2.1	11.5	7.7	3.7	11.8	8.2	3.9
9.3	3.2	1.2	11.1	5.1	2.2	13.7	8.8	4.3	14.1	9.4	4.6
10.2	3.3	1.2	12.3	5.3	2.3	15.2	9.3	4.5	15.7	10.1	4.9

FLIGHT ALTITUDE = 1,500 FT. COMBINATION: F
 SIGNAP = 1.5 SIGMAT = 4.0 SIGMARH 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(#11)	(#11)		(#11)	(#11)		(#11)	(#11)		(#11)	(#11)	
8.2	3.1	1.1	9.7	4.8	2.1	11.8	7.8	3.8	12.1	8.3	4.0
4.7	2.5	0.9	5.4	3.4	1.6	6.1	4.4	2.0	6.2	4.5	2.0
6.2	2.8	1.0	7.2	4.1	1.9	8.5	6.0	2.8	8.7	6.2	2.8
5.8	2.7	1.0	6.7	4.0	1.8	7.9	5.6	2.6	8.0	5.8	2.6
6.1	2.8	1.0	7.1	4.1	1.9	8.3	5.9	2.7	8.5	6.1	2.8
7.4	3.0	1.1	8.7	4.6	2.0	10.5	7.2	3.4	10.7	7.5	3.6
7.3	3.0	1.1	8.6	4.5	2.0	10.2	7.0	3.4	10.5	7.4	3.5
4.3	2.4	0.9	4.9	3.2	1.5	5.5	4.0	1.8	5.6	4.1	1.8
5.9	2.8	1.0	6.9	4.0	1.9	8.0	5.7	2.6	8.2	5.9	2.7
6.5	2.9	1.0	7.6	4.3	1.9	8.9	6.3	2.9	9.1	6.6	3.0
10.5	3.3	1.2	12.6	5.3	2.3	15.7	9.5	4.6	16.2	10.3	5.1
7.9	3.1	1.1	9.4	4.7	2.1	11.4	7.6	3.7	11.7	8.1	3.9
9.3	3.2	1.2	11.2	5.1	2.2	13.7	8.8	4.2	14.1	9.4	4.6
9.0	3.2	1.1	10.9	5.0	2.2	13.3	8.5	4.1	13.7	9.1	4.4
9.1	3.2	1.1	11.0	5.1	2.2	13.3	8.6	4.2	13.8	9.2	4.5
9.5	3.2	1.2	11.4	5.1	2.2	14.0	8.9	4.3	14.5	9.5	4.6
10.2	3.3	1.2	12.3	5.3	2.3	15.2	9.4	4.6	15.7	10.1	5.0
9.6	3.2	1.2	11.5	5.2	2.2	14.1	9.0	4.4	14.5	9.6	4.7
7.1	3.0	1.1	8.4	4.5	2.0	9.9	6.9	3.3	10.2	7.2	3.4
9.1	3.2	1.1	10.9	5.0	2.2	13.3	8.6	4.2	13.8	9.2	4.5
7.9	3.1	1.1	9.3	4.7	2.1	11.2	7.5	3.6	11.5	8.0	3.8
5.3	2.6	1.0	6.1	3.8	1.8	7.1	5.1	2.3	7.2	5.3	2.4
6.5	2.9	1.0	7.6	4.3	1.9	9.0	6.3	3.0	9.2	6.6	3.0
6.4	2.8	1.0	7.4	4.2	1.9	8.7	6.1	2.8	8.9	6.4	2.9
6.5	2.9	1.0	7.5	4.2	1.9	8.9	6.2	2.9	9.1	6.5	3.0
7.0	2.9	1.1	8.2	4.5	2.0	9.8	6.8	3.2	10.0	7.1	3.4
7.4	3.0	1.1	8.7	4.6	2.0	10.3	7.1	3.4	10.6	7.5	3.5
6.6	2.9	1.0	7.7	4.3	1.9	9.0	6.4	3.0	9.2	6.6	3.1
4.6	2.5	0.9	5.2	3.4	1.6	6.0	4.3	1.9	6.1	4.4	2.0
6.2	2.8	1.0	7.2	4.1	1.9	8.5	6.0	2.8	8.7	6.2	2.9
11.0	3.4	1.2	13.4	5.5	2.3	16.6	9.9	4.7	17.2	10.8	5.3
7.3	3.0	1.1	8.6	4.6	2.0	10.3	7.1	3.4	10.6	7.4	3.5
8.9	3.2	1.1	10.7	5.0	2.2	13.0	8.4	4.1	13.4	9.0	4.4
8.6	3.1	1.1	10.3	4.9	2.1	12.6	8.2	3.9	13.0	8.8	4.2
8.7	3.1	1.1	10.5	4.9	2.2	12.7	8.3	4.0	13.1	8.8	4.3
10.2	3.3	1.2	12.2	5.3	2.3	15.1	9.3	4.6	15.6	10.1	5.0
9.2	3.2	1.2	11.0	5.1	2.2	13.4	8.7	4.3	13.8	9.3	4.6
6.7	2.9	1.1	7.8	4.3	2.0	9.3	6.5	3.1	9.5	6.8	3.2
8.6	3.1	1.1	10.3	4.9	2.2	12.5	8.2	4.0	12.9	8.8	4.2
9.0	3.2	1.1	10.7	5.0	2.2	13.0	8.5	4.1	13.4	9.1	4.4
12.1	3.4	1.2	14.8	5.6	2.4	18.6	10.5	5.0	19.2	11.6	5.6
10.4	3.3	1.2	12.9	5.3	2.3	15.9	9.5	4.6	16.1	10.2	5.0
11.3	3.4	1.2	13.7	5.5	2.4	17.1	10.0	4.9	17.7	11.0	5.4
10.7	3.3	1.2	13.0	5.4	2.3	16.2	9.7	4.7	16.8	10.5	5.1
12.8	3.5	1.2	15.7	5.7	2.4	19.9	10.9	5.2	20.6	12.1	5.8
11.8	3.4	1.2	14.4	5.6	2.4	18.0	10.3	5.0	18.6	11.3	5.5
11.5	3.4	1.2	13.9	5.5	2.4	17.3	10.1	4.9	17.9	11.1	5.5
8.7	3.2	1.1	10.4	5.0	2.2	12.6	8.3	4.0	13.0	8.9	4.3
11.8	3.4	1.2	14.4	5.6	2.4	18.1	10.4	5.0	18.7	11.4	5.5
10.2	3.3	1.2	12.2	5.3	2.3	15.0	9.3	4.6	15.5	10.1	5.0
11.2	3.4	1.2	13.7	5.5	2.3	17.1	10.0	4.8	17.7	10.9	5.4
9.3	3.2	1.2	11.1	5.1	2.2	13.6	8.7	4.2	14.1	9.3	4.6
9.9	3.3	1.2	11.9	5.2	2.3	14.7	9.2	4.5	15.1	9.8	4.8
10.0	3.3	1.2	12.1	5.2	2.3	15.0	9.2	4.5	15.5	9.9	4.8
11.2	3.4	1.2	13.7	5.5	2.3	17.1	10.0	4.8	17.7	10.9	5.4
10.9	3.3	1.2	13.3	5.4	2.3	16.5	9.8	4.8	17.1	10.7	5.3
10.6	3.3	1.2	12.8	5.4	2.3	15.9	9.6	4.7	16.4	10.4	5.1
8.0	3.1	1.1	9.4	4.7	2.1	11.3	7.6	3.7	11.6	8.1	3.9
10.5	3.3	1.2	12.6	5.3	2.3	15.7	9.5	4.6	16.3	10.3	5.1
9.0	3.2	1.1	10.7	5.0	2.2	13.0	8.5	4.1	13.4	9.1	4.5
10.6	3.3	1.2	12.7	5.4	2.3	15.8	9.6	4.7	16.3	10.4	5.1
8.0	3.1	1.1	9.5	4.8	2.1	11.5	7.7	3.7	11.8	8.1	3.9
8.6	3.1	1.1	10.3	4.9	2.2	12.5	8.2	4.0	12.9	8.8	4.2
9.3	3.2	1.2	11.2	5.1	2.2	13.7	8.8	4.3	14.1	9.4	4.6
8.9	3.2	1.1	10.7	5.0	2.2	13.0	8.4	4.0	13.4	9.0	4.4
9.3	3.2	1.2	11.2	5.1	2.2	13.8	8.8	4.2	14.2	9.4	4.6
10.5	3.3	1.2	12.7	5.4	2.3	15.7	9.6	4.7	16.3	10.4	5.1
10.5	3.3	1.2	12.6	5.4	2.3	15.6	9.5	4.7	16.1	10.3	5.1
7.4	3.0	1.1	8.7	4.6	2.0	10.3	7.1	3.4	10.6	7.5	3.5
9.2	3.2	1.1	11.0	5.1	2.2	13.5	8.6	4.2	13.9	9.2	4.5
11.1	3.4	1.2	13.5	5.5	2.4	16.8	10.0	4.8	17.4	10.8	5.4
8.0	3.1	1.1	9.5	4.8	2.1	11.5	7.7	3.7	11.8	8.1	3.9
10.0	3.3	1.2	12.1	5.2	2.3	14.9	9.2	4.5	15.4	9.9	4.8
9.7	3.2	1.2	11.7	5.1	2.2	14.4	9.0	4.3	14.8	9.6	4.7
9.4	3.2	1.2	11.3	5.1	2.2	13.8	8.8	4.3	14.3	9.4	4.6
10.3	3.3	1.2	12.4	5.3	2.3	15.3	9.5	4.6	15.9	10.2	5.1
10.9	3.3	1.2	13.2	5.4	2.3	16.3	9.8	4.8	16.9	10.6	5.2
7.4	3.0	1.1	8.7	4.6	2.0	10.4	7.1	3.4	10.7	7.5	3.5
9.0	3.2	1.1	10.8	5.0	2.2	13.1	8.5	4.1	13.5	9.1	4.4
10.4	3.3	1.2	12.6	5.3	2.3	15.6	9.5	4.6	16.1	10.3	5.0

FLIGHT ALTITUDE = 5,000 FT. COMBINATION: A

SIGMAP = 2.5 SIGMAT = 1.0 SIGMARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #3		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(MII)	(MII)		(MII)	(MII)		(MII)	(MII)		(MII)	(MII)	
11.6	2.9	1.4	14.3	5.4	2.0	18.0	10.3	4.4	18.7	11.3	5.2
8.7	2.8	1.3	10.4	4.7	2.0	12.7	8.2	3.5	13.1	8.8	4.0
13.3	3.1	1.4	16.6	5.1	2.5	21.3	11.0	4.0	22.2	12.3	4.6
10.6	2.9	1.4	13.0	5.2	2.0	16.2	9.7	4.1	16.7	10.5	4.8
11.1	2.9	1.4	13.7	5.3	2.0	17.1	10.0	4.2	17.7	10.9	5.0
10.6	2.9	1.4	12.9	5.2	2.0	16.1	9.7	4.1	16.7	10.5	4.8
10.5	2.9	1.4	12.9	5.2	2.0	16.0	9.6	4.1	16.6	10.4	4.8
8.5	2.8	1.3	10.1	4.7	1.9	12.2	8.0	3.4	12.6	8.6	3.9
10.4	2.9	1.4	12.7	5.2	2.0	15.8	9.6	4.0	16.4	10.4	4.7
11.0	2.9	1.4	13.5	5.3	2.0	16.9	9.9	4.2	17.5	10.8	5.0
13.2	3.0	1.4	16.3	5.8	2.1	20.8	11.2	4.8	21.6	12.3	5.9
11.7	3.0	1.4	14.4	5.5	2.0	18.2	10.4	4.5	18.9	11.4	5.4
13.1	3.0	1.4	16.3	5.7	2.1	20.9	11.1	4.8	21.7	12.2	5.9
13.8	3.0	1.4	17.3	5.8	2.1	22.4	11.5	4.9	23.3	12.7	5.9
13.3	3.0	1.4	16.5	5.8	2.1	21.2	11.2	4.9	22.0	12.4	5.9
12.5	3.0	1.4	15.4	5.6	2.1	19.6	10.8	4.7	20.4	11.9	5.7
11.7	3.0	1.4	14.4	5.5	2.0	18.1	10.4	4.5	18.8	11.4	5.4
11.1	2.9	1.4	13.6	5.3	2.0	17.1	10.0	4.3	17.7	10.9	5.1
12.7	3.0	1.4	15.7	5.7	2.1	20.1	10.9	4.7	20.8	12.0	5.8
12.9	3.0	1.4	16.0	5.7	2.1	20.5	11.0	4.8	21.3	12.1	5.8
11.4	2.9	1.4	14.0	5.4	2.0	17.6	10.2	4.4	18.2	11.2	5.2
9.7	2.8	1.4	11.7	5.0	2.0	14.5	9.1	3.8	14.9	9.7	4.4
11.7	2.9	1.4	14.4	5.4	2.0	18.2	10.3	4.4	18.9	11.4	5.3
11.5	2.9	1.4	14.1	5.4	2.0	17.8	10.2	4.3	18.5	11.2	5.1
11.3	2.9	1.4	13.9	5.4	2.0	17.4	10.1	4.3	18.0	11.1	5.1
10.4	2.9	1.4	12.6	5.2	2.0	15.7	9.5	4.1	16.2	10.3	4.8
10.7	2.9	1.4	13.1	5.3	2.0	16.4	9.8	4.2	17.0	10.6	4.9
9.1	2.8	1.3	10.9	4.9	2.0	13.4	8.6	3.7	13.8	9.2	4.2
10.5	2.9	1.4	12.8	5.2	2.0	15.9	9.6	4.1	16.5	10.4	4.8
11.5	2.9	1.4	14.2	5.4	2.0	17.8	10.2	4.4	18.5	11.2	5.2
14.8	3.1	1.4	18.5	5.9	2.1	23.8	11.9	5.3	24.8	13.2	6.1
12.3	3.0	1.4	15.1	5.6	2.1	19.2	10.7	4.6	19.9	11.7	5.6
14.2	3.1	1.4	17.8	5.9	2.1	22.9	11.6	5.1	23.9	12.9	6.0
14.6	3.1	1.4	18.1	5.9	2.1	24.0	11.8	5.1	25.0	13.1	6.0
14.1	3.1	1.4	17.5	5.8	2.1	22.5	11.6	5.1	23.5	12.8	6.0
13.3	3.0	1.4	16.7	5.8	2.1	21.4	11.3	4.9	22.3	12.5	5.9
12.5	3.0	1.4	15.3	5.6	2.1	19.4	10.8	4.7	20.3	12.3	5.7
11.5	3.0	1.4	14.4	5.5	2.0	17.9	10.3	4.4	18.6	11.3	5.3
13.5	3.0	1.4	16.8	5.8	2.1	21.5	11.3	4.9	22.3	12.5	5.9
13.9	3.0	1.4	17.3	5.8	2.1	22.2	11.5	5.0	23.1	12.7	6.0
15.2	3.1	1.4	19.1	6.0	2.1	24.8	12.1	5.4	25.8	13.4	6.2
13.9	3.0	1.4	17.4	5.9	2.1	22.4	11.5	5.0	23.3	12.7	6.0
14.6	3.1	1.4	18.3	5.9	2.1	23.7	11.8	5.2	24.7	13.1	6.1
15.4	3.1	1.4	19.5	6.0	2.1	25.4	12.1	5.3	26.5	13.5	6.2
15.7	3.1	1.4	19.8	6.0	2.1	25.9	12.2	5.5	27.0	13.7	6.2
14.3	3.1	1.4	17.9	5.9	2.1	23.2	11.7	5.1	24.2	13.0	6.0
14.2	3.1	1.4	17.8	5.9	2.1	22.9	11.7	5.1	23.9	12.9	6.0
12.8	3.0	1.4	15.8	5.7	2.1	20.1	11.0	4.7	20.9	12.0	5.8
14.9	3.1	1.4	18.7	5.9	2.1	24.3	11.9	5.3	25.4	13.3	6.1
14.4	3.1	1.4	18.1	5.9	2.1	23.5	11.8	5.2	24.5	13.0	6.1
14.5	3.1	1.4	18.1	5.9	2.1	23.4	11.8	5.2	24.3	13.1	6.1
13.2	3.0	1.4	16.4	5.8	2.1	21.0	11.2	4.9	21.8	12.3	5.9
13.6	3.0	1.4	16.9	5.8	2.1	21.6	11.4	5.0	22.5	12.5	5.9
15.1	3.1	1.4	19.2	5.9	2.1	25.1	12.0	5.3	26.1	13.4	6.1
14.7	3.1	1.4	18.5	5.9	2.1	24.0	11.9	5.2	25.0	13.2	6.1
13.7	3.0	1.4	17.1	5.8	2.1	21.9	11.4	5.0	22.8	12.6	6.0
13.7	3.0	1.4	17.0	5.8	2.1	21.8	11.4	5.0	22.8	12.6	6.0
12.3	3.0	1.4	15.2	5.6	2.1	19.3	10.7	4.6	20.0	11.8	5.7
14.1	3.1	1.4	17.6	5.9	2.1	22.7	11.6	5.1	23.7	12.8	6.0
13.3	3.0	1.4	16.4	5.8	2.1	20.9	11.2	4.9	21.8	12.4	5.9
13.6	3.0	1.4	16.8	5.8	2.1	21.5	11.4	5.0	22.4	12.5	5.9
12.1	3.0	1.4	14.9	5.6	2.1	18.9	10.6	4.6	19.6	11.6	5.5
12.4	3.0	1.4	15.2	5.6	2.1	19.3	10.7	4.7	20.0	11.8	5.7
13.7	3.0	1.4	17.1	5.8	2.1	22.0	11.4	4.9	22.9	12.6	5.9
13.6	3.0	1.4	16.8	5.8	2.1	21.6	11.4	4.9	22.5	12.5	5.9
12.8	3.0	1.4	15.9	5.7	2.1	20.2	11.0	4.8	21.0	12.1	5.8
11.5	2.9	1.4	14.1	5.4	2.0	17.8	10.2	4.4	18.4	11.2	5.2
13.0	3.0	1.4	16.1	5.7	2.1	20.6	11.1	4.8	21.4	12.2	5.9
13.0	3.0	1.4	16.0	5.7	2.1	20.5	11.1	4.8	21.3	12.2	5.8
12.8	3.0	1.4	15.8	5.7	2.1	20.1	10.9	4.7	20.9	12.0	5.8
14.1	3.1	1.4	17.6	5.9	2.1	22.6	11.6	5.1	23.5	12.8	6.0
12.2	3.0	1.4	15.1	5.6	2.1	19.1	10.7	4.6	19.8	11.7	5.6
14.5	3.1	1.4	18.3	5.9	2.1	23.9	11.8	5.1	24.9	13.1	6.0
15.0	3.1	1.4	19.1	5.9	2.1	24.9	11.9	5.2	26.0	13.3	6.1
13.9	3.0	1.4	17.3	5.8	2.1	22.2	11.5	5.0	23.1	12.7	6.0
14.1	3.1	1.4	18.2	5.9	2.1	23.7	11.8	5.1	24.7	13.0	6.0
12.1	3.0	1.4	14.9	5.6	2.1	18.9	10.6	4.6	19.6	11.6	5.5
13.7	3.0	1.4	17.1	5.8	2.1	22.0	11.4	4.9	22.9	12.6	5.9
13.6	3.0	1.4	16.8	5.8	2.1	21.6	11.4	4.9	22.5	12.5	5.9
12.8	3.0	1.4	15.9	5.7	2.1	20.2	11.0	4.8	21.0	12.1	5.8
11.5	2.9	1.4	14.1	5.4	2.0	17.8	10.2	4.4	18.4	11.2	5.2
13.0	3.0	1.4	16.1	5.7	2.1	20.6	11.1	4.8	21.4	12.2	5.9
13.0	3.0	1.4	16.0	5.7	2.1	20.5	11.1	4.8	21.3	12.2	5.8
12.8	3.0	1.4	15.8	5.7	2.1	20.1	10.9	4.7	20.9	12.0	5.8
14.1	3.1	1.4	17.6	5.9	2.1	22.6	11.6	5.1	23.5	12.8	6.0
12.2	3.0	1.4	15.1	5.6	2.1	19.1	10.7	4.6	19.8	11.7	5.6
14.5	3.1	1.4	18.3	5.9	2.1	23.9	11.8	5.1	24.9	13.1	6.0
15.0	3.1	1.4	19.1	5.9	2.1	24.9	11.9	5.2	26.0	13.3	6.1
13.9	3.0	1.4	17.3	5.8	2.1	22.2	11.5	5.0	23.1	12.7	6.0
14.1	3.1	1.4	18.2	5.9	2.1	23.7	11.8	5.1	24.7	13.0	6.0
12.1	3.0	1.4	14.9	5.6	2.1	18.9	10.6	4.6	19.6	11.6	5.5
13.7	3.0	1.4	17.1	5.8	2.1	22.0	11.4	4.9	22.9	12.6	5.9
13.6	3.0	1.4	16.8	5.8	2.1	21.6	11.4	4.9	22.5	12.5	5.9
12.8	3.0	1.4	15.9	5.7	2.1	20.2	11.0	4.8	21.0	12.1	5.8
11.5	2.9	1.4	14.1	5.4	2.0	17.8	10.2	4.4	18.4	11.2	5.2
13.0	3.0	1.4	16.1	5.7	2.1	20.6	11.1	4.8	21.4	12.2	5.9
13.0	3.0	1.4	16.0	5.7	2.1	20.5	11.1	4.8	21.3	12.2	5.8
12.8	3.0	1.4	15.8	5.7	2.1	20.1	10.9	4.7	20.9	12.0	5.8
14.1	3.1	1.4	17.6	5.9	2.1	22.6	11.6	5.1	23.5	12.8	6.0
12.2	3.0	1.4	15.1	5.6	2.1	19.1	10.7	4.6	19.8	11.7	5.6
14.5	3.1	1.4	18.3	5.9	2.1	23.9	11.8	5.1	24.9	13.1	6.0
15.0	3.1	1.4	19.1	5.9	2.1	24.9	11.9	5.2	26.0	13.3	6.1
13.9	3.0	1.4	17.3	5.8	2.1	22.2	11.5	5.0	23.1	12.7	6.0
14.1	3.1	1.4	18.2	5.9	2.1	23.7	11.8	5.1	24.7	13.0	6.0
12.1	3.0	1.4	14.9	5.6	2.1	18.9	10.6	4.6	19.6	11.6	5.5
13.7	3.0	1.4	17.1	5.8	2.1	22.0	11.4	4.9	22.9	12.6	5.9
13.6	3.0	1.4	16.8	5.8	2.1	21.6	11.4	4.9	22.5	12.5	5.9
12.8	3.0	1.4	15.9	5.7	2.1	20.2	11.0	4.8	21.0	12.1	5.8
11.5	2.9	1.4	14.1	5.4	2.0	17.8	10.2	4.4	18.4	11.2	5.2
13.0	3.0	1.4	16.1	5.7	2.1	20.6	11.1	4.8	21.4	12.2	5.9
13.0	3.0	1.4	16.0	5.7	2.1	20.5	11.1	4.8	21.3	12.2	5.8
12.8	3.0	1.4	15.8	5.7	2.1	20.1	10.9	4.7	20.9	12.0	5.8
14.1	3.1	1.4	17.6								

FLIGHT ALTITUDE = 5,000 FT. COMBINATION: B

SIGMAP = 2.5 SIGMAT = 2.0 SIGMARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(NM)	(NM)		(NM)	(NM)		(NM)	(NM)		(NM)	(NM)	
12.2	3.0	1.4	15.1	5.5	2.0	19.2	10.6	4.5	19.9	11.7	5.5
8.5	2.8	1.3	10.1	4.7	1.9	12.3	8.0	3.4	12.7	8.6	3.9
10.9	2.9	1.4	13.4	5.3	2.0	16.8	9.9	4.2	17.4	10.8	4.9
10.4	2.9	1.4	12.7	5.1	2.0	15.8	9.5	4.0	16.3	10.3	4.7
11.0	2.9	1.4	13.5	5.3	2.0	16.9	9.9	4.2	17.5	10.8	5.0
10.7	2.9	1.4	13.1	5.2	2.0	16.4	9.7	4.1	17.0	10.6	4.9
11.0	2.9	1.4	13.5	5.3	2.0	16.9	9.9	4.2	17.5	10.8	5.0
8.3	2.7	1.3	9.9	4.6	1.9	11.9	7.9	3.4	12.3	8.4	3.8
10.3	2.9	1.4	12.6	5.1	2.0	15.6	9.5	4.0	16.2	10.3	4.7
11.2	2.9	1.4	13.7	5.3	2.0	17.2	10.0	4.2	17.8	11.0	5.0
13.6	3.0	1.4	16.9	5.8	2.1	21.6	11.4	5.0	22.5	12.5	5.9
11.5	2.9	1.4	14.1	5.4	2.0	17.7	10.2	4.4	18.4	11.2	5.2
13.0	3.0	1.4	16.1	5.7	2.1	20.6	11.1	4.8	21.5	12.2	5.8
13.6	3.0	1.4	17.0	5.8	2.1	21.9	11.3	4.9	22.8	12.5	5.9
13.3	3.0	1.4	16.5	5.8	2.1	21.1	11.2	4.9	22.0	12.4	5.9
12.5	3.0	1.4	15.4	5.6	2.1	19.7	10.8	4.7	20.5	11.9	5.7
12.1	3.0	1.4	14.8	5.6	2.1	18.8	10.6	4.6	19.5	11.6	5.5
11.0	3.0	1.4	13.5	5.3	2.0	16.9	9.9	4.3	17.5	10.8	5.0
12.6	3.0	1.4	15.6	5.6	2.1	19.9	10.9	4.7	20.6	11.9	5.7
13.1	3.0	1.4	16.2	5.7	2.1	20.7	11.1	4.8	21.6	12.2	5.9
12.0	3.0	1.4	14.7	5.5	2.0	18.6	10.5	4.5	19.3	11.5	5.4
9.5	2.8	1.4	11.4	4.9	2.0	14.0	8.9	3.8	14.5	9.5	4.3
11.5	2.9	1.4	14.2	5.4	2.0	17.9	10.3	4.4	18.6	11.2	5.2
11.3	2.9	1.4	13.8	5.3	2.0	17.4	10.1	4.3	18.0	11.0	5.1
11.2	2.9	1.4	13.7	5.4	2.0	17.2	10.1	4.3	17.8	11.0	5.1
10.6	2.9	1.4	12.9	5.2	2.0	16.0	9.7	4.1	16.6	10.5	4.8
11.1	2.9	1.4	13.6	5.3	2.0	17.0	10.0	4.3	17.6	10.9	5.0
8.9	2.8	1.3	10.6	4.8	2.0	13.0	8.4	3.6	13.4	9.0	4.1
10.4	2.9	1.4	12.7	5.2	2.0	15.8	9.6	4.1	16.3	10.4	4.8
11.6	2.9	1.4	14.3	5.4	2.0	18.0	10.3	4.4	18.7	11.3	5.2
15.3	3.1	1.4	19.2	6.0	2.1	24.8	12.1	5.4	25.8	13.5	6.2
12.0	3.0	1.4	14.8	5.5	2.0	18.7	10.5	4.5	19.4	11.6	5.5
14.0	3.0	1.4	17.5	5.9	2.1	22.6	11.6	5.0	23.5	12.8	6.0
14.4	3.1	1.4	18.2	5.9	2.1	23.5	11.7	5.1	24.5	13.0	6.0
14.0	3.1	1.4	17.4	5.9	2.1	22.3	11.6	5.0	23.2	12.7	6.0
13.6	3.0	1.4	16.9	5.8	2.1	21.6	11.4	5.0	22.5	12.5	5.9
12.8	3.0	1.4	15.8	5.7	2.1	20.1	11.0	4.8	20.8	12.1	5.8
11.4	2.9	1.4	14.0	5.4	2.0	17.6	10.2	4.4	18.2	11.1	5.2
13.4	3.0	1.4	16.7	5.8	2.1	21.3	11.3	4.9	22.2	12.4	5.9
14.0	3.1	1.4	17.5	5.9	2.1	22.4	11.6	5.1	23.4	12.8	6.0
15.6	3.1	1.4	19.7	6.0	2.1	25.6	12.2	5.4	26.7	13.7	6.2
13.7	3.1	1.4	17.1	5.8	2.1	22.0	11.5	5.0	22.9	12.6	6.0
14.5	3.1	1.4	18.2	5.9	2.1	23.5	11.8	5.2	24.5	13.1	6.1
15.1	3.1	1.4	19.1	5.9	2.1	24.9	12.0	5.3	26.0	13.4	6.1
14.4	3.1	1.4	18.1	5.9	2.1	23.3	11.8	5.2	24.3	13.0	6.1
15.8	3.1	1.4	20.0	6.0	2.1	26.0	12.3	5.5	27.2	13.7	6.2
14.3	3.1	1.4	18.0	5.9	2.1	23.2	11.7	5.1	24.2	13.0	6.0
14.5	3.1	1.4	18.2	5.9	2.1	23.5	11.8	5.2	24.5	13.1	6.1
12.7	3.0	1.4	15.6	5.7	2.1	19.9	10.9	4.7	20.7	12.0	5.8
14.8	3.1	1.4	18.7	5.9	2.1	24.2	11.9	5.3	25.3	13.2	6.1
14.9	3.1	1.4	18.8	6.0	2.1	24.2	12.0	5.3	25.3	13.3	6.1
13.0	3.0	1.4	16.1	5.7	2.1	20.6	11.1	4.8	21.4	12.2	5.8
13.5	3.0	1.4	16.8	5.8	2.1	21.5	11.3	4.9	22.4	12.5	5.9
14.9	3.1	1.4	18.8	5.9	2.1	24.5	11.9	5.2	25.6	13.3	6.1
14.8	3.1	1.4	18.6	5.9	2.1	24.1	11.9	5.2	25.1	13.2	6.1
13.8	3.0	1.4	17.2	5.8	2.1	22.1	11.5	5.0	23.0	12.7	6.0
14.0	3.0	1.4	17.4	5.9	2.1	22.4	11.6	5.1	23.4	12.8	6.0
12.2	3.0	1.4	15.0	5.6	2.1	19.0	10.6	4.6	19.8	11.7	5.5
14.0	3.0	1.4	17.5	5.9	2.1	22.5	11.6	5.1	23.5	12.8	6.0
13.3	3.0	1.4	16.4	5.8	2.1	21.0	11.2	4.9	21.8	12.4	5.9
14.0	3.1	1.4	17.5	5.9	2.1	22.4	11.6	5.1	23.3	12.8	6.0
11.8	3.0	1.4	14.6	5.5	2.0	18.4	10.4	4.5	19.1	11.5	5.4
12.2	3.0	1.4	15.0	5.6	2.1	19.1	10.7	4.6	19.8	11.7	5.6
13.4	3.0	1.4	16.8	5.8	2.1	21.5	11.3	4.9	22.4	12.4	5.9
13.5	3.0	1.4	16.8	5.8	2.1	21.5	11.3	4.9	22.4	12.5	5.9
12.9	3.0	1.4	15.9	5.7	2.1	20.3	11.0	4.8	21.1	12.1	5.8
13.2	3.0	1.4	16.3	5.8	2.1	20.8	11.2	4.8	21.7	12.3	5.9
11.4	2.9	1.4	14.0	5.4	2.0	17.6	10.2	4.4	18.2	11.1	5.2
12.9	3.0	1.4	16.0	5.7	2.1	20.5	11.0	4.8	21.3	12.1	5.8
13.1	3.0	1.4	16.2	5.7	2.1	20.7	11.1	4.8	21.5	12.3	5.9
14.5	3.1	1.4	18.2	5.9	2.1	23.5	11.8	5.2	24.4	13.1	6.1
11.9	3.0	1.4	14.6	5.5	2.0	18.5	10.5	4.5	19.2	11.5	5.4
14.4	3.1	1.4	18.1	5.9	2.1	23.5	11.7	5.1	24.5	13.0	6.0
14.8	3.1	1.4	18.7	5.9	2.1	24.4	11.8	5.1	25.4	13.2	6.1
13.8	3.0	1.4	17.2	5.8	2.1	22.0	11.5	5.0	23.0	12.6	6.0
12.5	3.0	1.4	15.4	5.6	2.1	19.6	10.8	4.7	20.3	11.9	5.7
13.7	3.0	1.4	17.0	5.8	2.1	21.9	11.4	5.0	22.8	12.6	5.9
11.6	3.0	1.4	14.2	5.5	2.0	17.9	10.3	4.4	18.6	11.3	5.3
12.7	3.0	1.4	15.7	5.7	2.1	20.0	10.9	4.7	20.8	12.0	5.8
14.7	3.1	1.4	18.6	5.9	2.1	24.1	11.9	5.2	25.2	13.2	6.1

FLIGHT ALTITUDE = 5,000 FT. COMBINATION: C

SIGMAP = 2.5 SIGMAT = 4.0 SIGMARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(NMI)	(NMI)		(NMI)	(NMI)		(NMI)	(NMI)		(NMI)	(NMI)	
13.4	3.0	1.4	16.7	5.8	2.1	21.4	11.3	4.8	22.3	12.4	5.9
8.0	2.7	1.3	9.5	4.5	1.9	11.4	7.6	3.3	11.8	8.1	3.6
10.6	2.9	1.4	13.0	5.2	2.0	16.2	9.7	4.1	16.7	10.5	4.8
10.0	2.8	1.4	12.1	5.0	2.0	15.0	9.3	3.9	15.5	10.0	4.5
10.7	2.9	1.4	13.1	5.2	2.0	16.4	9.8	4.1	17.0	10.6	4.8
10.8	2.9	1.4	13.3	5.3	2.0	16.6	9.8	4.2	17.2	10.7	4.9
11.9	3.0	1.4	14.6	5.5	2.0	18.5	10.4	4.4	19.2	11.5	5.3
7.9	2.7	1.3	9.3	4.5	1.9	11.1	7.5	3.2	11.5	7.9	3.6
10.1	2.9	1.4	12.2	5.1	2.0	15.1	9.3	3.9	15.6	10.0	4.6
11.3	2.9	1.4	14.0	5.4	2.0	17.5	10.1	4.3	18.2	11.1	5.1
14.4	3.1	1.4	18.0	5.9	2.1	23.3	11.7	5.2	24.2	13.0	6.1
10.0	2.9	1.4	13.3	5.3	2.0	16.6	9.8	4.2	17.2	10.7	5.0
12.7	3.0	1.4	15.8	5.7	2.1	20.1	10.9	4.7	20.9	12.0	5.7
13.1	3.0	1.4	16.3	5.7	2.1	20.9	11.1	4.7	21.8	12.2	5.8
13.2	3.0	1.4	16.4	5.8	2.0	20.9	11.2	4.8	21.8	12.3	5.9
12.4	3.0	1.4	15.3	5.6	2.1	19.5	10.7	4.6	20.3	11.8	5.6
12.8	3.0	1.4	15.7	5.7	2.1	20.0	11.0	4.8	20.7	12.0	5.8
10.7	2.9	1.4	13.1	5.3	2.0	16.3	9.8	4.2	16.9	10.6	4.9
12.3	3.0	1.4	15.2	5.6	2.1	19.3	10.7	4.6	20.1	11.8	5.6
13.3	3.0	1.4	16.5	5.8	2.1	21.0	11.2	4.9	21.9	12.3	5.9
13.0	3.0	1.4	16.1	5.7	2.1	20.5	11.1	4.8	21.3	12.2	5.8
9.0	2.8	1.3	10.7	4.8	2.0	13.1	8.4	3.6	13.5	9.1	4.1
11.2	2.9	1.4	13.8	5.3	2.0	17.3	10.1	4.3	17.9	11.0	5.1
10.8	2.9	1.4	13.2	5.2	2.0	16.5	9.8	4.1	17.1	10.7	4.9
11.0	2.9	1.4	13.5	5.3	2.0	16.8	9.9	4.2	17.4	10.8	5.0
10.8	2.9	1.4	13.1	5.3	2.0	16.4	9.8	4.2	17.0	10.6	4.9
11.6	3.0	1.4	14.3	5.4	2.0	18.0	10.3	4.4	18.7	11.3	5.3
8.4	2.7	1.3	9.9	4.6	1.9	12.0	7.9	3.4	12.4	8.4	3.8
10.2	2.9	1.4	12.4	5.1	2.0	15.3	9.4	4.0	15.9	10.2	4.7
11.7	2.9	1.4	14.4	5.4	2.0	18.1	10.3	4.4	18.8	11.3	5.3
16.3	3.1	1.4	20.6	6.1	2.1	26.7	12.5	5.6	27.9	14.0	6.3
11.4	2.9	1.4	14.0	5.4	2.0	17.6	10.2	4.4	18.3	11.2	5.2
13.3	3.0	1.4	17.0	5.8	2.1	21.9	11.4	4.9	22.8	12.6	5.9
14.0	3.0	1.4	17.5	5.8	2.1	22.6	11.5	5.0	23.5	12.7	6.0
13.7	3.0	1.4	17.0	5.8	2.1	21.7	11.4	4.9	22.6	12.6	5.9
13.6	3.0	1.4	16.9	5.8	2.1	21.7	11.4	4.9	22.6	12.5	5.9
13.5	3.0	1.4	16.7	5.8	2.1	21.3	11.4	4.9	22.1	12.5	5.9
10.9	2.9	1.4	13.3	5.3	2.0	16.7	9.9	4.2	17.3	10.8	5.0
13.2	3.0	1.4	16.4	5.8	2.1	20.9	11.2	4.9	21.7	12.3	5.9
14.2	3.1	1.4	17.7	5.9	2.1	22.8	11.6	5.1	23.7	12.9	6.0
16.4	3.1	1.4	20.8	6.1	2.1	27.2	12.5	5.6	28.4	14.0	6.3
13.3	3.0	1.4	16.5	5.8	2.1	21.1	11.2	4.9	21.9	12.3	5.9
14.3	3.1	1.4	17.9	5.9	2.1	23.1	11.7	5.1	24.1	12.9	6.0
14.6	3.1	1.4	18.4	5.9	2.1	23.8	11.8	5.2	24.8	13.1	6.1
15.9	3.1	1.4	20.2	6.0	2.1	26.3	12.3	5.5	27.5	13.8	6.2
14.2	3.1	1.4	17.7	5.9	2.1	23.0	11.6	5.1	23.9	12.9	6.0
15.0	3.1	1.4	18.9	6.0	2.1	24.5	12.0	5.3	25.5	13.3	6.1
12.3	3.0	1.4	15.1	5.6	2.1	19.2	10.7	4.6	20.0	11.8	5.6
14.7	3.1	1.4	18.4	5.9	2.1	23.9	11.8	5.2	24.9	13.1	6.1
14.4	3.1	1.4	17.9	5.9	2.1	23.1	11.7	5.1	24.1	13.0	6.0
15.7	3.1	1.4	19.9	6.0	2.1	25.8	12.3	5.5	26.9	13.7	6.2
12.5	3.0	1.4	15.4	5.6	2.1	19.6	10.8	4.7	20.4	11.9	5.7
13.3	3.0	1.4	16.5	5.8	2.1	21.1	11.2	4.9	22.0	12.4	5.9
14.4	3.1	1.4	18.1	5.9	2.1	23.5	11.7	5.1	24.4	13.0	6.0
14.8	3.1	1.4	18.6	5.9	2.1	24.1	11.9	5.2	25.2	13.2	6.1
13.8	3.0	1.4	17.2	5.8	2.1	22.1	11.5	5.0	23.1	12.6	6.0
14.5	3.1	1.4	18.2	5.9	2.1	23.5	11.8	5.2	24.5	13.1	6.1
11.8	3.0	1.4	14.5	5.5	2.0	18.3	10.4	4.5	18.9	11.4	5.4
13.7	3.0	1.4	17.1	5.8	2.1	22.0	11.5	5.0	22.9	12.6	6.0
13.2	3.0	1.4	16.3	5.8	2.1	20.7	11.2	4.9	21.6	12.3	5.9
14.8	3.1	1.4	18.6	5.9	2.1	24.1	11.9	5.3	25.1	13.3	6.1
11.2	2.9	1.4	13.8	5.4	2.0	17.3	10.1	4.3	17.9	11.0	5.1
12.0	3.0	1.4	14.7	5.5	2.1	18.6	10.5	4.6	19.3	11.6	5.5
13.0	3.0	1.4	16.1	5.7	2.1	20.6	11.0	4.7	21.5	12.2	5.8
13.4	3.0	1.4	16.6	5.8	2.1	21.2	11.3	4.9	22.1	12.4	5.9
12.8	3.0	1.4	15.8	5.7	2.1	20.2	10.9	4.7	21.0	12.0	5.8
13.9	3.1	1.4	17.4	5.9	2.1	22.3	11.5	5.1	23.2	12.7	6.0
11.1	2.9	1.4	13.6	5.3	2.0	17.0	10.0	4.3	17.6	10.9	5.1
12.7	3.0	1.4	15.7	5.7	2.1	20.0	10.9	4.7	20.7	12.0	5.8
13.3	3.0	1.4	16.5	5.8	2.1	21.1	11.2	4.9	21.9	12.4	5.9
15.3	3.1	1.4	19.3	6.0	2.1	25.0	12.1	5.4	26.1	13.5	6.2
11.2	2.9	1.4	13.7	5.4	2.0	17.2	10.1	4.3	17.9	11.0	5.1
14.0	3.0	1.4	17.5	5.8	2.1	22.7	11.5	5.0	23.7	12.7	6.0
14.3	3.0	1.4	18.0	5.9	2.1	23.3	11.6	5.0	24.3	12.9	6.0
13.6	3.0	1.4	16.9	5.8	2.1	21.6	11.4	4.9	22.5	12.5	5.9
12.3	3.0	1.4	15.1	5.6	2.1	19.2	10.7	4.6	20.0	11.8	5.6
14.5	3.1	1.4	18.2	5.9	2.1	23.5	11.8	5.2	24.5	13.1	6.1
11.3	2.9	1.4	13.8	5.4	2.0	17.3	10.1	4.3	18.0	11.0	5.2
12.5	3.0	1.4	15.4	5.6	2.1	19.6	10.8	4.7	20.3	11.9	5.7
15.1	3.1	1.4	19.1	5.9	2.1	24.8	12.0	5.3	25.9	13.4	6.1

FLIGHT ALTITUDE = 5,000 FT. COMBINATION: D

SIGNAP = 1.5 SIGMAT = 1.0 SIGNARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(NMI)			(NMI)			(NMI)			(NMI)		
11.5	2.9	1.4	14.2	5.4	2.0	17.8	10.2	4.3	18.5	11.2	5.2
11.8	2.9	1.3	14.5	5.4	2.0	18.0	10.2	4.3	19.2	11.2	5.2
11.0	2.9	1.4	14.8	5.4	2.0	18.3	10.2	4.3	19.5	11.2	5.2
10.7	2.9	1.4	15.1	5.4	2.0	18.6	10.2	4.3	19.8	11.2	5.2
11.1	2.9	1.4	15.4	5.4	2.0	18.9	10.2	4.3	20.1	11.2	5.2
10.5	2.9	1.4	15.7	5.4	2.0	19.2	10.2	4.3	20.4	11.2	5.2
10.5	2.9	1.4	16.0	5.4	2.0	19.5	10.2	4.3	20.7	11.2	5.2
10.5	2.9	1.4	16.3	5.4	2.0	19.8	10.2	4.3	21.0	11.2	5.2
10.4	2.9	1.4	16.6	5.4	2.0	20.1	10.2	4.3	21.3	11.2	5.2
10.4	2.9	1.4	16.9	5.4	2.0	20.4	10.2	4.3	21.6	11.2	5.2
10.9	2.9	1.4	17.2	5.4	2.0	20.7	10.2	4.3	21.9	11.2	5.2
13.1	2.0	1.4	17.5	5.4	2.1	21.0	11.1	4.8	22.2	12.3	5.9
11.1	2.0	1.4	17.8	5.4	2.1	21.3	11.1	4.8	22.5	12.3	5.9
13.1	2.0	1.4	18.1	5.4	2.1	21.6	11.1	4.8	22.8	12.3	5.9
13.9	2.0	1.4	18.4	5.4	2.1	21.9	11.1	4.8	23.1	12.3	5.9
13.3	2.0	1.4	18.7	5.4	2.1	22.2	11.1	4.8	23.4	12.3	5.9
13.3	2.0	1.4	19.0	5.4	2.1	22.5	11.1	4.8	23.7	12.3	5.9
12.6	2.0	1.4	19.3	5.4	2.1	22.8	11.1	4.8	24.0	12.3	5.9
12.6	2.0	1.4	19.6	5.4	2.1	23.1	11.1	4.8	24.3	12.3	5.9
11.1	2.0	1.4	19.9	5.4	2.1	23.4	11.1	4.8	24.6	12.3	5.9
11.1	2.0	1.4	20.2	5.4	2.1	23.7	11.1	4.8	24.9	12.3	5.9
12.7	2.0	1.4	20.5	5.4	2.1	24.0	11.1	4.8	25.2	12.3	5.9
11.3	2.9	1.4	20.8	5.4	2.1	24.3	11.1	4.8	25.5	12.3	5.9
11.3	2.9	1.4	21.1	5.4	2.1	24.6	11.1	4.8	25.8	12.3	5.9
11.6	2.9	1.4	21.4	5.4	2.1	24.9	11.1	4.8	26.1	12.3	5.9
11.6	2.9	1.4	21.7	5.4	2.1	25.2	11.1	4.8	26.4	12.3	5.9
11.3	2.9	1.4	22.0	5.4	2.1	25.5	11.1	4.8	26.7	12.3	5.9
10.3	2.9	1.4	22.3	5.4	2.1	25.8	11.1	4.8	27.0	12.3	5.9
10.3	2.9	1.4	22.6	5.4	2.1	26.1	11.1	4.8	27.3	12.3	5.9
10.3	2.9	1.4	22.9	5.4	2.1	26.4	11.1	4.8	27.6	12.3	5.9
10.9	2.9	1.4	23.2	5.4	2.1	26.7	11.1	4.8	27.9	12.3	5.9
10.9	2.9	1.4	23.5	5.4	2.1	27.0	11.1	4.8	28.2	12.3	5.9
10.6	2.9	1.4	23.8	5.4	2.1	27.3	11.1	4.8	28.5	12.3	5.9
11.3	2.9	1.4	24.1	5.4	2.1	27.6	11.1	4.8	28.8	12.3	5.9
14.6	3.1	1.4	24.4	5.4	2.1	27.9	11.1	4.8	29.1	12.3	5.9
14.3	3.1	1.4	24.7	5.4	2.1	28.2	11.1	4.8	29.4	12.3	5.9
14.1	3.1	1.4	25.0	5.4	2.1	28.5	11.1	4.8	29.7	12.3	5.9
14.7	3.1	1.4	25.3	5.4	2.1	28.8	11.1	4.8	30.0	12.3	5.9
14.0	3.1	1.4	25.6	5.4	2.1	29.1	11.1	4.8	30.3	12.3	5.9
13.3	3.1	1.4	25.9	5.4	2.1	29.4	11.1	4.8	30.6	12.3	5.9
12.6	3.1	1.4	26.2	5.4	2.1	29.7	11.1	4.8	30.9	12.3	5.9
12.6	3.1	1.4	26.5	5.4	2.1	30.0	11.1	4.8	31.2	12.3	5.9
13.7	3.1	1.4	26.8	5.4	2.1	30.3	11.1	4.8	31.5	12.3	5.9
13.7	3.1	1.4	27.1	5.4	2.1	30.6	11.1	4.8	31.8	12.3	5.9
15.1	3.1	1.4	27.4	5.4	2.1	30.9	11.1	4.8	32.1	12.3	5.9
13.3	3.1	1.4	27.7	5.4	2.1	31.2	11.1	4.8	32.4	12.3	5.9
13.3	3.1	1.4	28.0	5.4	2.1	31.5	11.1	4.8	32.7	12.3	5.9
14.6	3.1	1.4	28.3	5.4	2.1	31.8	11.1	4.8	33.0	12.3	5.9
14.6	3.1	1.4	28.6	5.4	2.1	32.1	11.1	4.8	33.3	12.3	5.9
14.3	3.1	1.4	28.9	5.4	2.1	32.4	11.1	4.8	33.6	12.3	5.9
14.3	3.1	1.4	29.2	5.4	2.1	32.7	11.1	4.8	33.9	12.3	5.9
14.3	3.1	1.4	29.5	5.4	2.1	33.0	11.1	4.8	34.2	12.3	5.9
14.3	3.1	1.4	29.8	5.4	2.1	33.3	11.1	4.8	34.5	12.3	5.9
14.3	3.1	1.4	30.1	5.4	2.1	33.6	11.1	4.8	34.8	12.3	5.9
14.3	3.1	1.4	30.4	5.4	2.1	33.9	11.1	4.8	35.1	12.3	5.9
14.3	3.1	1.4	30.7	5.4	2.1	34.2	11.1	4.8	35.4	12.3	5.9
14.3	3.1	1.4	31.0	5.4	2.1	34.5	11.1	4.8	35.7	12.3	5.9
14.3	3.1	1.4	31.3	5.4	2.1	34.8	11.1	4.8	36.0	12.3	5.9
14.3	3.1	1.4	31.6	5.4	2.1	35.1	11.1	4.8	36.3	12.3	5.9
14.3	3.1	1.4	31.9	5.4	2.1	35.4	11.1	4.8	36.6	12.3	5.9
14.3	3.1	1.4	32.2	5.4	2.1	35.7	11.1	4.8	36.9	12.3	5.9
14.3	3.1	1.4	32.5	5.4	2.1	36.0	11.1	4.8	37.2	12.3	5.9
14.3	3.1	1.4	32.8	5.4	2.1	36.3	11.1	4.8	37.5	12.3	5.9
14.3	3.1	1.4	33.1	5.4	2.1	36.6	11.1	4.8	37.8	12.3	5.9
14.3	3.1	1.4	33.4	5.4	2.1	36.9	11.1	4.8	38.1	12.3	5.9
14.3	3.1	1.4	33.7	5.4	2.1	37.2	11.1	4.8	38.4	12.3	5.9
14.3	3.1	1.4	34.0	5.4	2.1	37.5	11.1	4.8	38.7	12.3	5.9
14.3	3.1	1.4	34.3	5.4	2.1	37.8	11.1	4.8	39.0	12.3	5.9
14.3	3.1	1.4	34.6	5.4	2.1	38.1	11.1	4.8	39.3	12.3	5.9
14.3	3.1	1.4	34.9	5.4	2.1	38.4	11.1	4.8	39.6	12.3	5.9
14.3	3.1	1.4	35.2	5.4	2.1	38.7	11.1	4.8	39.9	12.3	5.9
14.3	3.1	1.4	35.5	5.4	2.1	39.0	11.1	4.8	40.2	12.3	5.9
14.3	3.1	1.4	35.8	5.4	2.1	39.3	11.1	4.8	40.5	12.3	5.9
14.3	3.1	1.4	36.1	5.4	2.1	39.6	11.1	4.8	40.8	12.3	5.9
14.3	3.1	1.4	36.4	5.4	2.1	39.9	11.1	4.8	41.1	12.3	5.9
14.3	3.1	1.4	36.7	5.4	2.1	40.2	11.1	4.8	41.4	12.3	5.9
14.3	3.1	1.4	37.0	5.4	2.1	40.5	11.1	4.8	41.7	12.3	5.9
14.3	3.1	1.4	37.3	5.4	2.1	40.8	11.1	4.8	42.0	12.3	5.9
14.3	3.1	1.4	37.6	5.4	2.1	41.1	11.1	4.8	42.3	12.3	5.9
14.3	3.1	1.4	37.9	5.4	2.1	41.4	11.1	4.8	42.6	12.3	5.9
14.3	3.1	1.4	38.2	5.4	2.1	41.7	11.1	4.8	42.9	12.3	5.9
14.3	3.1	1.4	38.5	5.4	2.1	42.0	11.1	4.8	43.2	12.3	5.9
14.3	3.1	1.4	38.8	5.4	2.1	42.3	11.1	4.8	43.5	12.3	5.9
14.3	3.1	1.4	39.1	5.4	2.1	42.6	11.1	4.8	43.8	12.3	5.9
14.3	3.1	1.4	39.4	5.4	2.1	42.9	11.1	4.8	44.1	12.3	5.9
14.3	3.1	1.4	39.7	5.4	2.1	43.2	11.1	4.8	44.4	12.3	5.9
14.3	3.1	1.4	40.0	5.4	2.1	43.5	11.1	4.8	44.7	12.3	5.9
14.3	3.1	1.4	40.3	5.4	2.1	43.8	11.1	4.8	45.0	12.3	5.9
14.3	3.1	1.4	40.6	5.4	2.1	44.1	11.1	4.8	45.3	12.3	5.9
14.3	3.1	1.4	40.9	5.4	2.1	44.4	11.1	4.8	45.6	12.3	5.9
14.3	3.1	1.4	41.2	5.4	2.1	44.7	11.1	4.8	45.9	12.3	5.9
14.3	3.1	1.4	41.5	5.4	2.1	45.0	11.1	4.8	46.2	12.3	5.9
14.3	3.1	1.4	41.8	5.4	2.1	45.3	11.1	4.8	46.5	12.3	5.9
14.3	3.1	1.4	42.1	5.4	2.1	45.6	11.1	4.8	46.8	12.3	5.9
14.3	3.1	1.4	42.4	5.4	2.1	45.9	11.1	4.8	47.1	12.3	5.9
14.3	3.1	1.4	42.7	5.4	2.1	46.2	11.1	4.8	47.4	12.3	5.9
14.3	3.1	1.4	43.0	5.4	2.1	46.5	11.1	4.8	47.7	12.3	5.9
14.3	3.1	1.4	43.3	5.4	2.1	46.8	11.1	4.8	48.0	12.3	5.9
14.3	3.1	1.4	43.6	5.4	2.1	47.1	11.1	4.8	48.3	12.3	5.9
14.3	3.1	1.4	43.9	5.4	2.1	47.4	11.1	4.8	48.6	12.3	5.9
14.3	3.1	1.4	44.2	5.4	2.1	47.7	11.1	4.8	48.9	12.3	5.9
14.3	3.1	1.4	44.5	5.4	2.1	48.0	11.1	4.8	49.2	12.3	5.9
14.3	3.1	1.4	44.8	5.4	2.1	48.3	11.1	4.8	49.5	12.3	5.9
14.3	3.1	1.4	45.1	5.4	2.1	48.6	11.1	4.8	49.8	12.3	5.9
14.3	3.1	1.4	45.4	5.4	2.1	48.9	11.1	4.8	50.1	12.3	5.9
14.3	3.1	1.4	45.7	5.4	2.1	49.2	11.1	4.8	50.4	12.3	5.9
14.3	3.1	1.4	46.0	5.4	2.1	49.5	11.1	4.8	50.7	12.3	5.9
14.3	3.1	1.4	46.3	5.4	2.1	49.8	11.1	4.8	51.0	12.3	5.9
14.3	3.1	1.4	46.6	5.4	2.1	50.1	11.1	4.8	51.3	12.3	5.9
14.3	3.1	1.4	46.9	5.4	2.1	50.4	11.1	4.8	51.6	12.3	5.9
14.3	3.1	1.4	47.2	5.4	2.1	50.7	11.1	4.8	51.9	12.3	5.9
14.3	3.1	1.4	47.5	5.4	2.1	51.0	11.1	4.8	52.2</		

FLIGHT ALTITUDE = 5,000 FT. COMBINATION: E

SIGMAP = 1.5 SIGMAT = 2.0 SIGMARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(NMI)	(NMI)	(NMI)	(NMI)	(NMI)	(NMI)	(NMI)	(NMI)	(NMI)	(NMI)	(NMI)	(NMI)
12.1	3.0	1.4	14.9	5.5	2.0	18.9	10.6	4.5	19.7	11.6	5.4
8.5	2.8	1.3	10.2	4.7	1.9	12.4	8.1	3.5	12.7	8.6	3.9
10.8	2.9	1.4	13.3	5.2	2.0	16.6	9.8	4.1	17.2	10.7	4.9
10.5	2.9	1.4	12.8	5.2	2.0	15.9	9.6	4.0	16.5	10.4	4.7
11.0	2.9	1.4	13.5	5.3	2.0	16.9	9.9	4.2	17.5	10.8	5.0
10.7	2.9	1.4	13.0	5.2	2.0	16.3	9.7	4.1	16.9	10.6	4.8
10.9	2.9	1.4	13.4	5.3	2.0	16.8	9.9	4.2	17.4	10.8	4.9
8.4	2.7	1.3	9.9	4.6	1.9	12.1	7.9	3.4	12.4	8.5	3.8
10.3	2.9	1.4	12.5	5.1	2.0	15.6	9.5	4.0	16.1	10.2	4.7
11.0	2.9	1.4	13.5	5.3	2.0	16.9	9.9	4.2	17.6	10.8	5.0
13.6	3.0	1.4	16.9	5.8	2.1	21.6	11.4	5.0	22.5	12.5	5.9
11.5	2.9	1.4	14.2	5.4	2.0	17.8	10.2	4.4	18.5	11.2	5.3
13.0	3.0	1.4	16.1	5.7	2.1	20.6	11.0	4.8	21.5	12.2	5.8
13.6	3.0	1.4	17.1	5.8	2.1	22.0	11.4	4.9	22.9	12.5	5.9
13.3	3.0	1.4	16.5	5.8	2.1	21.1	11.2	4.9	21.9	12.3	5.9
12.5	3.0	1.4	15.4	5.6	2.1	19.6	10.8	4.6	20.4	11.9	5.7
12.1	3.0	1.4	14.9	5.6	2.1	18.9	10.6	4.6	19.6	11.7	5.6
11.1	2.9	1.4	13.6	5.3	2.0	17.1	10.0	4.3	17.7	10.9	5.1
12.6	3.0	1.4	15.5	5.6	2.1	19.8	10.8	4.7	20.6	11.9	5.7
13.0	3.0	1.4	16.2	5.7	2.1	20.7	11.1	4.8	21.5	12.2	5.8
11.8	3.0	1.4	14.6	5.5	2.0	18.4	10.4	4.5	19.0	11.5	5.4
9.5	2.8	1.4	11.5	5.0	2.0	14.1	8.9	3.8	14.6	9.6	4.4
11.4	2.9	1.4	14.1	5.4	2.0	17.7	10.2	4.3	18.4	11.2	5.2
11.4	2.9	1.4	14.0	5.4	2.0	17.6	10.1	4.3	18.2	11.1	5.1
11.2	2.9	1.4	13.8	5.4	2.0	17.3	10.1	4.3	17.9	11.0	5.1
10.5	2.9	1.4	12.8	5.2	2.0	15.9	9.6	4.1	16.5	10.4	4.8
11.2	2.9	1.4	13.7	5.3	2.0	17.1	10.0	4.3	17.8	11.0	5.1
9.0	2.8	1.3	10.7	4.8	2.0	13.1	8.5	3.6	13.6	9.1	4.1
10.5	2.9	1.4	12.7	5.2	2.0	15.8	9.6	4.1	16.4	10.4	4.8
11.4	2.9	1.4	14.1	5.4	2.0	17.7	10.2	4.3	18.3	11.2	5.2
15.2	3.1	1.4	19.0	6.0	2.1	24.6	12.1	5.4	25.6	13.4	6.2
12.1	3.0	1.4	14.8	5.5	2.1	18.8	10.6	4.6	19.5	11.6	5.5
13.9	3.0	1.4	17.4	5.8	2.1	22.3	11.5	5.0	23.3	12.7	6.0
14.5	3.1	1.4	18.3	5.9	2.1	23.7	11.7	5.1	24.7	13.0	6.0
13.9	3.0	1.4	17.3	5.9	2.1	22.2	11.5	5.0	23.1	12.7	6.0
13.5	3.0	1.4	16.8	5.8	2.1	21.5	11.3	4.9	22.3	12.5	5.9
12.8	3.0	1.4	15.7	5.7	2.1	20.0	11.0	4.8	20.7	12.1	5.8
11.5	2.9	1.4	14.1	5.4	2.0	17.7	10.2	4.4	18.4	11.2	5.3
13.4	3.0	1.4	16.6	5.8	2.1	21.2	11.3	4.9	22.1	12.4	5.9
13.9	3.0	1.4	17.3	5.8	2.1	22.2	11.5	5.0	23.1	12.7	6.0
15.6	3.1	1.4	19.7	6.0	2.1	25.6	12.2	5.4	26.7	13.7	6.2
13.7	3.0	1.4	17.1	5.8	2.1	22.0	11.5	5.0	22.9	12.6	6.0
14.5	3.1	1.4	18.2	5.9	2.1	23.5	11.8	5.2	24.5	13.1	6.1
15.1	3.1	1.4	19.1	5.9	2.1	24.9	12.0	5.3	26.0	13.4	6.1
15.8	3.1	1.4	20.0	6.0	2.1	26.0	12.3	5.5	27.2	13.7	6.2
14.3	3.1	1.4	18.0	5.9	2.1	23.2	11.7	5.1	24.2	13.0	6.0
14.5	3.1	1.4	18.2	5.9	2.1	23.5	11.8	5.2	24.5	13.1	6.1
12.7	3.0	1.4	15.6	5.7	2.1	19.9	10.9	4.7	20.7	12.0	5.8
14.8	3.1	1.4	18.7	5.9	2.1	24.2	11.9	5.3	25.3	13.2	6.1
14.4	3.1	1.4	18.1	5.9	2.1	23.3	11.8	5.2	24.3	13.0	6.1
14.8	3.1	1.4	18.6	5.9	2.1	24.0	11.9	5.3	25.0	13.2	6.1
13.1	3.0	1.4	16.2	5.7	2.1	20.7	11.1	4.8	21.5	12.2	5.9
13.5	3.0	1.4	16.7	5.8	2.1	21.4	11.3	4.9	22.3	12.5	5.9
14.9	3.1	1.4	18.9	5.9	2.1	24.6	11.9	5.3	25.7	13.3	6.1
14.8	3.1	1.4	18.6	5.9	2.1	24.1	11.9	5.3	25.1	13.2	6.1
13.8	3.0	1.4	17.2	5.8	2.1	22.1	11.5	5.0	23.0	12.7	6.0
13.9	3.0	1.4	17.4	5.9	2.1	22.3	11.5	5.0	23.2	12.7	6.0
12.3	3.0	1.4	15.1	5.6	2.1	19.2	10.7	4.6	19.9	11.7	5.6
14.0	3.0	1.4	17.4	5.9	2.1	22.5	11.6	5.0	23.4	12.8	6.0
13.2	3.0	1.4	16.3	5.8	2.1	20.8	11.2	4.9	21.6	12.3	5.9
14.1	3.1	1.4	17.5	5.9	2.1	22.5	11.6	5.1	23.5	12.8	6.0
11.9	3.0	1.4	14.6	5.5	2.0	18.5	10.5	4.5	19.2	11.5	5.4
12.2	3.0	1.4	14.9	5.5	2.1	18.9	10.6	4.6	19.6	11.7	5.6
13.5	3.0	1.4	16.8	5.8	2.1	21.6	11.3	4.9	22.5	12.5	5.9
13.5	3.0	1.4	16.8	5.8	2.1	21.5	11.3	4.9	22.3	12.5	5.9
12.9	3.0	1.4	16.0	5.7	2.1	20.5	11.0	4.8	21.3	12.1	5.8
13.2	3.0	1.4	16.4	5.8	2.1	20.9	11.2	4.9	21.8	12.3	5.9
11.5	2.9	1.4	14.1	5.4	2.0	17.7	10.2	4.4	18.4	11.2	5.3
12.9	3.0	1.4	16.0	5.7	2.1	20.4	11.0	4.8	21.2	12.1	5.8
13.1	3.0	1.4	16.2	5.7	2.1	20.7	11.1	4.8	21.6	12.3	5.9
14.6	3.1	1.4	18.3	5.9	2.1	23.6	11.8	5.2	24.6	13.1	6.1
12.0	3.0	1.4	14.7	5.5	2.0	18.6	10.5	4.5	19.3	11.5	5.4
14.2	3.0	1.4	17.9	5.9	2.1	23.2	11.6	5.1	24.2	12.9	6.0
14.8	3.1	1.4	18.8	5.9	2.1	24.5	11.9	5.2	25.5	13.2	6.1
13.7	3.0	1.4	17.1	5.8	2.1	22.0	11.4	5.0	22.9	12.6	6.0
12.6	3.0	1.4	15.5	5.7	2.1	19.8	10.9	4.7	20.5	11.9	5.8
13.8	3.0	1.4	17.1	5.8	2.1	22.0	11.5	5.0	23.0	12.6	6.0
11.6	3.0	1.4	14.3	5.5	2.0	18.0	10.3	4.4	18.7	11.3	5.3
12.7	3.0	1.4	15.7	5.7	2.1	19.9	10.9	4.7	20.7	12.0	5.8
14.7	3.1	1.4	18.5	5.9	2.1	24.0	11.8	5.2	25.1	13.1	6.1

FLIGHT ALTITUDE = 5,000 FT. COMBINATION: F

SIGMAP = 1.5 SIGMAT = 4.0 SIGMARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(NII)	(NII)		(NII)	(NII)		(NII)	(NII)		(NII)	(NII)	
13.3	3.0	1.4	16.5	5.7	2.1	21.2	11.2	4.8	22.1	12.3	5.9
8.1	2.7	1.3	9.5	4.5	1.9	11.5	7.7	3.3	11.8	8.1	3.7
10.5	2.9	1.4	12.8	5.2	2.0	15.9	9.6	4.0	16.5	10.4	4.7
10.1	2.9	1.4	12.2	5.1	2.0	15.1	9.3	3.9	15.7	10.1	4.5
10.7	2.9	1.4	13.1	5.2	2.0	16.3	9.7	4.1	16.9	10.6	4.8
10.8	2.9	1.4	13.2	5.2	2.0	16.5	9.8	4.1	17.1	10.6	4.9
11.8	3.0	1.4	14.5	5.5	2.0	18.4	10.4	4.4	19.1	11.4	5.3
8.0	2.7	1.3	9.4	4.5	1.9	11.3	7.6	3.2	11.7	8.0	3.6
10.0	2.9	1.4	12.1	5.1	2.0	15.0	9.3	3.9	15.6	10.0	4.5
11.2	2.9	1.4	13.8	5.3	2.0	17.3	10.1	4.2	17.9	11.0	5.0
14.4	3.1	1.4	18.0	5.9	2.1	23.3	11.7	5.2	24.3	13.0	6.1
10.9	2.9	1.4	13.4	5.3	2.0	16.7	9.9	4.2	17.3	10.8	5.0
12.7	3.0	1.4	15.7	5.6	2.1	20.1	10.9	4.7	20.9	12.0	5.7
13.2	3.0	1.4	16.4	5.7	2.1	21.0	11.1	4.8	21.9	12.3	5.8
13.2	3.0	1.4	16.4	5.7	2.1	21.0	11.2	4.8	21.8	12.3	5.9
13.2	3.0	1.4	16.3	5.7	2.1	20.9	11.2	4.8	21.7	12.3	5.9
12.9	3.0	1.4	15.8	5.6	2.1	19.4	10.7	4.6	20.2	11.8	5.6
12.8	3.0	1.4	15.8	5.7	2.1	20.1	11.0	4.8	20.8	12.1	5.8
10.8	2.9	1.4	13.2	5.3	2.0	16.5	9.8	4.2	17.1	10.7	5.0
12.3	3.0	1.4	15.2	5.6	2.1	19.3	10.7	4.6	20.0	11.8	5.6
12.9	3.0	1.4	15.9	5.7	2.1	20.3	11.0	4.8	21.1	12.1	5.8
9.0	2.8	1.3	10.8	4.8	2.0	13.2	8.5	3.6	13.7	9.1	4.1
11.1	2.9	1.4	13.6	5.3	2.0	17.1	10.1	4.2	17.7	10.9	5.0
10.9	2.9	1.4	13.4	5.3	2.0	16.7	9.9	4.2	17.3	10.8	4.9
11.0	2.9	1.4	13.4	5.3	2.0	16.8	9.9	4.2	17.4	10.8	5.0
10.7	2.9	1.4	13.1	5.3	2.0	16.3	9.8	4.2	16.9	10.6	4.9
11.9	3.0	1.4	14.6	5.5	2.0	18.4	10.4	4.5	19.1	11.5	5.4
11.4	2.9	1.4	14.1	5.4	2.0	17.7	10.2	4.3	18.3	11.2	5.2
8.5	2.8	1.3	10.1	4.7	1.9	12.2	8.0	3.4	12.6	8.6	3.9
10.2	2.9	1.4	12.4	5.1	2.0	15.3	9.4	4.0	15.9	10.2	4.7
16.2	3.1	1.4	20.4	6.1	2.1	26.5	12.4	5.6	27.6	13.9	6.3
11.5	2.9	1.4	14.4	5.4	2.0	17.7	10.2	4.4	18.4	11.2	5.2
13.5	3.0	1.4	16.8	5.8	2.1	21.6	11.3	4.9	22.5	12.5	5.9
14.1	3.0	1.4	17.6	5.8	2.1	22.7	11.6	5.0	23.7	12.8	6.0
13.6	3.0	1.4	16.9	5.8	2.1	21.6	11.4	5.0	22.5	12.6	5.9
13.5	3.0	1.4	16.8	5.8	2.1	21.5	11.4	4.9	22.4	12.5	5.9
13.4	3.0	1.4	16.6	5.8	2.1	21.1	11.3	5.0	22.0	12.5	5.9
11.0	2.9	1.4	13.5	5.3	2.0	16.9	10.0	4.3	17.5	10.9	5.1
13.2	3.0	1.4	16.3	5.8	2.1	20.8	11.2	4.8	21.6	12.3	5.9
14.0	3.1	1.4	17.5	5.9	2.1	22.5	11.6	5.1	23.4	12.8	6.0
16.3	3.1	1.4	20.7	6.1	2.1	27.0	12.5	5.6	28.2	14.0	6.3
13.3	3.0	1.4	16.5	5.8	2.1	21.1	11.2	4.9	21.9	12.3	5.9
14.3	3.1	1.4	17.8	5.9	2.1	23.1	11.7	5.1	24.0	12.9	6.0
14.6	3.1	1.4	18.5	5.9	2.1	24.0	11.8	5.2	25.0	13.1	6.1
15.9	3.1	1.4	20.2	6.0	2.1	26.3	12.3	5.5	27.5	13.8	6.2
14.1	3.1	1.4	17.7	5.9	2.1	22.9	11.6	5.1	23.9	12.8	6.0
14.9	3.1	1.4	18.8	6.0	2.1	24.3	12.0	5.3	25.3	13.3	6.1
12.4	3.0	1.4	15.3	5.6	2.1	19.5	10.8	4.7	20.2	11.8	5.7
14.6	3.1	1.4	18.4	5.9	2.1	23.8	11.8	5.2	24.8	13.1	6.1
14.2	3.1	1.4	17.8	5.9	2.1	22.9	11.7	5.1	23.9	12.9	6.0
15.6	3.1	1.4	19.7	6.0	2.1	25.6	12.2	5.4	26.7	13.7	6.2
12.6	3.0	1.4	15.5	5.6	2.1	19.7	10.8	4.7	20.5	11.9	5.7
13.3	3.0	1.4	16.5	5.8	2.1	21.1	11.2	4.9	21.9	12.4	5.9
14.4	3.1	1.4	18.2	5.9	2.1	23.6	11.7	5.1	24.6	13.0	6.0
14.8	3.1	1.4	18.6	5.9	2.1	24.2	11.9	5.3	25.2	13.1	6.1
13.8	3.0	1.4	17.2	5.8	2.1	22.1	11.5	5.0	23.1	12.6	6.0
14.4	3.1	1.4	18.1	5.9	2.1	23.3	11.8	5.2	24.3	13.0	6.1
11.9	3.0	1.4	14.6	5.5	2.0	18.5	10.5	4.5	19.2	11.5	5.4
13.7	3.0	1.4	17.1	5.8	2.1	21.9	11.4	5.0	22.8	12.6	6.0
13.1	3.0	1.4	16.2	5.8	2.1	20.6	11.1	4.9	21.4	12.2	5.9
14.7	3.1	1.4	18.5	5.9	2.1	23.9	11.9	5.3	24.9	13.2	6.1
11.3	2.9	1.4	13.8	5.4	2.0	17.4	10.1	4.3	18.0	11.0	5.2
11.9	3.0	1.4	14.6	5.5	2.0	18.4	10.5	4.5	19.1	11.5	5.5
13.3	3.0	1.4	16.5	5.8	2.1	21.1	11.2	4.9	21.9	12.4	5.9
13.1	3.0	1.4	16.2	5.7	2.1	20.8	11.1	4.8	21.6	12.2	5.8
13.3	3.0	1.4	16.6	5.8	2.1	21.2	11.3	4.9	22.0	12.4	5.9
12.8	3.0	1.4	15.9	5.7	2.1	20.3	11.0	4.7	21.1	12.1	5.8
14.0	3.1	1.4	17.4	5.9	2.1	22.4	11.6	5.1	23.3	12.8	6.0
11.2	2.9	1.4	13.7	5.4	2.0	17.2	10.0	4.3	17.8	11.0	5.1
12.6	3.0	1.4	15.6	5.7	2.1	19.9	10.9	4.7	20.7	12.0	5.7
15.2	3.1	1.4	19.1	6.0	2.1	24.8	12.1	5.4	25.9	13.4	6.2
11.5	2.9	1.4	13.8	5.4	2.0	17.4	10.1	4.3	18.0	11.0	5.2
13.8	3.0	1.4	17.3	5.8	2.1	22.4	11.5	5.0	23.4	12.7	5.9
14.3	3.0	1.4	18.1	5.9	2.1	23.5	11.7	5.0	24.5	12.9	6.0
13.5	3.0	1.4	16.8	5.8	2.1	21.5	11.3	4.9	22.4	12.5	5.9
12.4	3.0	1.4	15.2	5.6	2.1	19.4	10.7	4.7	20.2	11.8	5.7
14.6	3.1	1.4	18.3	5.9	2.1	23.7	11.8	5.2	24.7	13.1	6.1
11.3	2.9	1.4	13.9	5.4	2.0	17.5	10.2	4.4	18.1	11.1	5.2
12.5	3.0	1.4	15.3	5.6	2.1	19.5	10.8	4.7	20.3	11.9	5.7
15.0	3.1	1.4	19.0	5.9	2.1	24.7	12.0	5.3	25.8	13.3	6.1

FLIGHT ALTITUDE = 10,000 FT. COMBINATION: A

SIGMAP = 2.5 SIGMAT = 1.0 SIGMARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(NHI)	(NHI)		(NHI)	(NHI)		(NHI)	(NHI)		(NHI)	(NHI)	
15.2	3.5	0.0	19.0	5.2	2.5	24.9	11.9	4.4	26.0	13.2	4.8
11.6	3.4	0.0	14.4	4.9	2.4	18.0	10.1	4.1	18.7	11.3	4.4
15.1	3.5	0.0	19.0	5.2	2.5	24.8	11.9	4.3	25.9	13.1	4.8
14.4	3.5	0.0	18.0	5.1	2.5	23.5	11.7	4.3	24.5	12.8	4.7
14.4	3.5	0.0	18.0	5.2	2.5	23.4	11.7	4.3	24.4	12.8	4.7
14.2	3.5	0.0	17.7	5.1	2.5	22.9	11.6	4.3	23.9	12.7	4.7
14.1	3.5	0.0	17.6	5.1	2.5	22.7	11.5	4.3	23.7	12.7	4.7
11.6	3.4	0.0	14.4	4.9	2.4	18.0	10.1	4.1	18.7	11.3	4.4
13.9	3.5	0.0	17.3	5.1	2.5	22.5	11.4	4.3	23.3	12.6	4.6
14.7	3.5	0.0	18.4	5.2	2.5	24.0	11.8	4.3	25.0	13.0	4.7
15.5	3.5	0.0	19.5	5.3	2.5	25.4	12.1	4.4	26.5	13.4	4.8
14.5	3.5	0.0	18.0	5.2	2.5	23.3	11.7	4.3	24.3	12.9	4.7
16.0	3.5	0.0	20.2	5.3	2.5	26.5	12.2	4.4	27.7	13.6	4.9
16.9	3.5	0.0	21.6	5.3	2.5	28.8	12.5	4.5	30.1	14.0	4.9
15.4	3.5	0.0	19.2	5.2	2.5	25.1	12.0	4.4	26.2	13.3	4.8
15.3	3.5	0.0	19.1	5.2	2.5	24.9	12.0	4.4	26.0	13.3	4.8
14.0	3.5	0.0	17.4	5.1	2.5	22.3	11.5	4.3	23.2	12.7	4.7
14.2	3.5	0.0	17.6	5.1	2.5	22.7	11.6	4.3	23.7	12.7	4.7
15.2	3.5	0.0	18.9	5.2	2.5	24.7	12.0	4.4	25.8	13.2	4.8
15.4	3.5	0.0	19.4	5.2	2.5	25.3	12.1	4.4	26.5	13.4	4.8
14.4	3.5	0.0	18.0	5.2	2.5	23.2	11.7	4.3	24.2	12.9	4.7
12.7	3.4	0.0	15.7	5.0	2.5	19.9	10.7	4.2	20.7	12.0	4.5
15.3	3.5	0.0	19.2	5.2	2.5	25.2	12.0	4.4	26.3	13.3	4.8
15.2	3.5	0.0	19.1	5.2	2.5	25.0	11.9	4.3	26.1	13.2	4.8
14.1	3.5	0.0	17.6	5.1	2.5	22.6	11.6	4.3	23.6	12.7	4.7
13.5	3.5	0.0	16.7	5.1	2.5	21.3	11.2	4.3	22.2	12.4	4.6
13.8	3.5	0.0	17.2	5.1	2.5	22.1	11.4	4.3	23.0	12.5	4.6
12.2	3.4	0.0	15.2	5.0	2.4	19.1	10.5	4.1	19.8	11.7	4.5
13.4	3.5	0.0	16.6	5.1	2.5	21.2	11.1	4.2	22.0	12.3	4.6
14.8	3.5	0.0	18.5	5.2	2.5	24.2	11.8	4.3	25.2	13.0	4.7
17.1	3.6	0.0	21.8	5.4	2.5	28.7	12.6	4.5	30.0	14.1	5.0
15.3	3.5	0.0	19.1	5.2	2.5	24.8	12.0	4.4	25.9	13.3	4.8
17.2	3.6	0.0	22.0	5.4	2.5	29.1	12.7	4.5	30.5	14.1	5.0
17.9	3.6	0.0	23.3	5.4	2.5	31.3	12.8	4.5	32.8	14.4	5.0
16.4	3.5	0.0	20.7	5.3	2.5	27.2	12.4	4.5	28.4	13.8	4.9
16.5	3.5	0.0	20.8	5.3	2.5	27.3	12.4	4.5	28.5	13.8	4.9
15.0	3.5	0.0	18.6	5.2	2.5	24.1	11.9	4.4	25.1	13.1	4.8
14.9	3.5	0.0	18.5	5.2	2.5	24.0	11.9	4.4	25.0	13.1	4.8
16.2	3.5	0.0	20.4	5.3	2.5	26.7	12.3	4.4	27.9	13.7	4.9
16.6	3.5	0.0	21.1	5.3	2.5	27.7	12.5	4.5	28.9	13.9	4.9
17.2	3.6	0.0	21.8	5.4	2.5	28.8	12.6	4.5	30.1	14.1	5.0
16.4	3.5	0.0	20.7	5.3	2.5	27.1	12.4	4.5	28.3	13.8	4.9
17.0	3.6	0.0	21.5	5.4	2.5	28.4	12.6	4.5	29.7	14.0	5.0
17.8	3.6	0.0	22.9	5.4	2.5	30.6	12.8	4.5	32.1	14.4	5.0
17.1	3.5	0.0	21.7	5.4	2.5	28.7	12.6	4.5	30.1	14.1	5.0
16.9	3.5	0.0	21.4	5.4	2.5	28.2	12.6	4.5	29.5	14.0	5.0
16.4	3.5	0.0	20.7	5.3	2.5	27.1	12.4	4.5	28.3	13.8	4.9
15.7	3.5	0.0	19.7	5.3	2.5	25.8	12.2	4.4	26.9	13.5	4.9
16.9	3.5	0.0	21.5	5.3	2.5	28.4	12.6	4.5	29.7	14.0	5.0
16.3	3.5	0.0	20.8	5.3	2.5	27.4	12.4	4.5	28.6	13.8	4.9
16.6	3.5	0.0	21.0	5.3	2.5	27.6	12.5	4.5	28.8	13.9	4.9
15.7	3.5	0.0	19.7	5.3	2.5	25.8	12.2	4.4	27.0	13.5	4.9
16.0	3.5	0.0	20.1	5.3	2.5	26.3	12.3	4.4	27.4	13.6	4.9
17.7	3.6	0.0	22.9	5.4	2.5	30.7	12.8	4.5	32.2	14.3	5.0
16.4	3.5	0.0	20.7	5.3	2.5	27.3	12.4	4.5	28.5	13.8	4.9
16.3	3.5	0.0	20.6	5.3	2.5	27.1	12.4	4.5	28.3	13.8	4.9
15.9	3.5	0.0	20.0	5.3	2.5	26.1	12.2	4.4	27.3	13.6	4.9
15.3	3.5	0.0	19.1	5.2	2.5	24.9	12.0	4.4	26.0	13.3	4.8
16.3	3.5	0.0	20.6	5.3	2.5	27.0	12.4	4.5	28.2	13.7	4.9
15.3	3.5	0.0	19.0	5.2	2.5	24.7	12.0	4.4	25.8	13.3	4.8
15.7	3.5	0.0	19.6	5.3	2.5	25.6	12.2	4.4	26.7	13.5	4.9
14.6	3.5	0.0	18.2	5.2	2.5	23.6	11.8	4.3	24.6	13.0	4.7
14.6	3.5	0.0	18.1	5.2	2.5	23.4	11.8	4.3	24.4	13.0	4.7
16.2	3.5	0.0	20.6	5.3	2.5	27.3	12.3	4.4	28.5	13.7	4.9
15.4	3.5	0.0	19.3	5.2	2.5	25.1	12.1	4.4	26.2	13.3	4.8
15.4	3.5	0.0	19.3	5.2	2.5	25.2	12.1	4.4	26.3	13.4	4.8
14.4	3.5	0.0	17.8	5.2	2.5	23.0	11.7	4.3	24.0	12.8	4.7
15.2	3.5	0.0	19.1	5.2	2.5	24.8	12.0	4.4	25.9	13.3	4.8
15.1	3.5	0.0	18.9	5.2	2.5	24.6	12.0	4.4	25.6	13.2	4.8
15.0	3.5	0.0	18.7	5.2	2.5	24.3	11.9	4.4	25.3	13.1	4.8
16.2	3.5	0.0	20.4	5.3	2.5	26.7	12.3	4.4	27.9	13.7	4.9
14.8	3.5	0.0	18.4	5.2	2.5	24.0	11.8	4.3	25.0	13.1	4.8
17.3	3.6	0.0	22.3	5.4	2.5	29.7	12.7	4.5	31.1	14.2	5.0
17.8	3.6	0.0	23.1	5.4	2.5	31.2	12.8	4.5	32.7	14.4	5.0
15.7	3.5	0.0	19.8	5.3	2.5	25.9	12.2	4.4	27.0	13.5	4.9
16.9	3.5	0.0	21.6	5.3	2.5	28.6	12.5	4.5	30.0	14.0	4.9
15.0	3.5	0.0	18.7	5.2	2.5	24.3	11.9	4.4	25.3	13.2	4.8
15.6	3.5	0.0	19.6	5.3	2.5	25.7	12.1	4.4	26.8	13.4	4.8
14.6	3.5	0.0	18.2	5.2	2.5	23.5	11.8	4.3	24.5	13.0	4.7
14.9	3.5	0.0	18.5	5.2	2.5	24.0	11.9	4.4	25.1	13.1	4.8

FLIGHT ALTITUDE = 10,000 FT. COMBINATION:B

SIGMAP = 2.5 SIGMAT = 2.0 SIGMARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(NMII)	(NMII)		(NMII)	(NMII)		(NMII)	(NMII)		(NMII)	(NMII)	
15.7	3.5	0.0	19.8	5.2	2.5	26.1	12.1	4.4	27.2	13.5	4.8
11.4	3.5	0.0	14.0	4.9	2.4	17.5	9.9	4.1	18.2	11.0	4.3
14.9	3.5	0.0	18.7	5.2	2.5	24.5	11.8	4.3	25.5	13.1	4.7
14.2	3.5	0.0	17.8	5.1	2.5	23.1	11.6	4.3	24.1	12.7	4.7
14.3	3.5	0.0	17.9	5.1	2.5	23.2	11.6	4.3	24.2	12.8	4.7
14.3	3.5	0.0	17.9	5.1	2.5	23.2	11.7	4.3	24.2	12.8	4.7
14.6	3.5	0.0	18.2	5.2	2.5	23.7	11.7	4.3	24.8	12.9	4.7
11.5	3.5	0.0	14.2	4.9	2.4	17.8	10.0	4.1	18.4	11.1	4.4
13.8	3.5	0.0	17.2	5.1	2.5	22.1	11.3	4.3	23.0	12.5	4.6
14.8	3.5	0.0	18.5	5.2	2.5	24.2	11.8	4.3	25.2	13.0	4.7
15.9	3.5	0.0	19.9	5.3	2.5	26.1	12.2	4.4	27.2	13.5	4.9
14.2	3.5	0.0	17.7	5.2	2.5	22.8	11.6	4.3	23.8	12.8	4.7
15.9	3.5	0.0	20.0	5.3	2.5	26.3	12.2	4.4	27.4	13.5	4.9
16.7	3.5	0.0	21.4	5.3	2.5	28.5	12.5	4.5	29.8	13.9	4.9
15.4	3.5	0.0	19.2	5.2	2.5	25.1	12.0	4.4	26.2	13.3	4.8
15.3	3.5	0.0	19.1	5.2	2.5	25.0	12.0	4.4	26.1	13.3	4.8
14.4	3.5	0.0	17.8	5.2	2.5	22.9	11.7	4.3	23.9	12.8	4.7
14.1	3.5	0.0	17.6	5.1	2.5	22.6	11.6	4.3	23.6	12.7	4.7
15.1	3.5	0.0	18.8	5.2	2.5	24.5	11.9	4.4	25.6	13.2	4.8
15.5	3.5	0.0	19.4	5.2	2.5	25.4	12.1	4.4	26.2	13.4	4.8
14.9	3.5	0.0	18.6	5.2	2.5	24.1	11.9	4.4	25.2	13.1	4.8
12.4	3.5	0.0	15.4	5.0	2.4	19.4	10.6	4.2	20.2	11.8	4.5
15.1	3.5	0.0	19.0	5.2	2.5	24.8	11.9	4.4	25.9	13.2	4.8
15.0	3.5	0.0	18.9	5.2	2.5	24.7	11.9	4.4	25.8	13.1	4.7
14.0	3.5	0.0	17.5	5.1	2.5	22.5	11.5	4.3	23.4	12.7	4.7
13.6	3.5	0.0	16.9	5.1	2.5	21.6	11.3	4.3	22.5	12.5	4.6
14.2	3.5	0.0	17.6	5.1	2.5	22.7	11.6	4.3	23.7	12.7	4.7
12.0	3.5	0.0	14.9	5.0	2.4	18.7	10.3	4.1	19.4	11.6	4.4
13.2	3.5	0.0	16.4	5.1	2.5	20.9	11.1	4.2	21.8	12.3	4.6
14.9	3.5	0.0	18.6	5.2	2.5	24.3	11.8	4.3	25.3	13.1	4.7
17.5	3.5	0.0	22.3	5.4	2.5	29.4	12.8	4.5	30.8	14.3	5.0
17.0	3.5	0.0	21.7	5.3	2.5	28.7	12.6	4.5	29.4	13.2	4.8
17.8	3.5	0.0	23.1	5.4	2.5	31.0	12.8	4.5	32.5	14.4	5.0
16.3	3.5	0.0	20.6	5.3	2.5	27.0	12.4	4.5	28.2	13.8	4.9
16.6	3.5	0.0	20.9	5.3	2.5	27.5	12.5	4.5	28.7	13.9	4.9
15.3	3.5	0.0	19.1	5.2	2.5	24.7	12.0	4.4	25.8	13.3	4.8
14.7	3.5	0.0	18.3	5.2	2.5	23.7	11.8	4.4	24.7	13.0	4.8
16.1	3.5	0.0	20.3	5.3	2.5	26.5	12.3	4.4	27.7	13.7	4.9
16.7	3.5	0.0	21.2	5.3	2.5	27.9	12.5	4.5	29.1	13.9	4.9
17.4	3.5	0.0	22.2	5.4	2.5	29.4	12.7	4.5	30.8	14.3	5.0
16.2	3.5	0.0	20.4	5.3	2.5	26.7	12.3	4.4	27.9	13.7	4.9
16.9	3.5	0.0	21.4	5.3	2.5	28.2	12.6	4.5	29.5	14.0	5.0
17.7	3.5	0.0	22.7	5.4	2.5	30.4	12.8	4.5	31.9	14.3	5.0
16.4	3.5	0.0	20.7	5.3	2.5	27.2	12.4	4.5	28.4	13.8	4.9
17.2	3.5	0.0	21.9	5.4	2.5	28.9	12.7	4.5	30.2	14.1	5.0
16.9	3.5	0.0	21.4	5.3	2.5	28.2	12.6	4.5	29.5	14.0	5.0
16.6	3.5	0.0	21.9	5.3	2.5	27.7	12.5	4.5	28.9	13.9	4.9
15.7	3.5	0.0	19.7	5.3	2.5	25.7	12.2	4.4	26.8	13.5	4.9
16.9	3.5	0.0	21.4	5.3	2.5	28.3	12.6	4.5	29.5	14.0	5.0
16.9	3.5	0.0	21.4	5.3	2.5	28.3	12.6	4.5	29.5	14.0	5.0
16.9	3.5	0.0	21.4	5.3	2.5	28.3	12.6	4.5	29.5	14.0	5.0
15.5	3.5	0.0	19.4	5.2	2.5	25.4	12.1	4.4	26.5	13.4	4.8
15.9	3.5	0.0	20.0	5.3	2.5	26.1	12.2	4.4	27.2	13.5	4.9
17.6	3.5	0.0	22.7	5.4	2.5	30.5	12.8	4.5	31.9	14.3	5.0
16.4	3.5	0.0	20.8	5.3	2.5	27.3	12.4	4.5	28.5	13.8	4.9
16.4	3.5	0.0	20.7	5.3	2.5	27.2	12.4	4.5	28.4	13.8	4.9
16.2	3.5	0.0	20.4	5.3	2.5	26.7	12.3	4.4	27.9	13.7	4.9
15.2	3.5	0.0	19.0	5.2	2.5	24.8	12.0	4.4	25.9	13.3	4.8
16.2	3.5	0.0	20.4	5.3	2.5	26.8	12.3	4.4	27.9	13.7	4.9
15.2	3.5	0.0	19.0	5.2	2.5	24.6	12.0	4.4	25.7	13.3	4.8
16.0	3.5	0.0	20.1	5.3	2.5	26.3	12.3	4.4	27.4	13.6	4.9
14.4	3.5	0.0	17.9	5.2	2.5	23.1	11.7	4.3	24.1	12.8	4.7
14.5	3.5	0.0	18.0	5.2	2.5	23.2	11.8	4.3	24.2	12.9	4.7
16.2	3.5	0.0	20.5	5.3	2.5	27.1	12.3	4.4	28.3	13.7	4.9
15.4	3.5	0.0	19.2	5.2	2.5	25.1	12.0	4.4	26.2	13.3	4.8
15.4	3.5	0.0	19.2	5.2	2.5	25.1	12.0	4.4	26.2	13.3	4.8
15.4	3.5	0.0	19.2	5.2	2.5	25.1	12.0	4.4	26.2	13.3	4.8
14.3	3.5	0.0	17.8	5.2	2.5	22.9	11.7	4.3	23.9	12.8	4.7
15.1	3.5	0.0	18.9	5.2	2.5	24.7	12.0	4.4	25.7	13.2	4.8
15.2	3.5	0.0	18.9	5.2	2.5	24.6	12.0	4.4	25.7	13.2	4.8
16.5	3.5	0.0	20.8	5.3	2.5	27.3	12.4	4.5	28.5	13.8	4.9
14.5	3.5	0.0	18.0	5.2	2.5	23.4	11.7	4.3	24.4	12.9	4.7
17.3	3.5	0.0	22.5	5.4	2.5	29.3	12.6	4.5	30.7	14.1	5.0
17.7	3.5	0.0	23.7	5.4	2.5	31.0	12.8	4.5	32.5	14.4	5.0
15.7	3.5	0.0	19.7	5.3	2.5	25.7	12.2	4.4	26.8	13.5	4.9
15.0	3.5	0.0	18.7	5.2	2.5	24.2	11.9	4.4	25.3	13.2	4.8
16.0	3.5	0.0	20.2	5.3	2.5	26.5	12.3	4.4	27.7	13.7	4.9
14.9	3.5	0.0	18.5	5.2	2.5	24.0	11.9	4.4	25.1	13.1	4.8
17.0	3.5	0.0	21.7	5.3	2.5	28.8	12.6	4.5	30.2	14.0	4.9

FLIGHT ALTITUDE = 10,000 FT. COMBINATION: C

SIGMAP = 2.5 SIGMAT = 4.0 SIGMARH = 8.0

TARGET #1				TARGET #2				TARGET #3				TARGET #4			
DET	CLASS	#1	ID	DET	CLASS	#2	ID	DET	CLASS	#3	ID	DET	CLASS	#4	ID
(NMI)				(NMI)				(NMI)				(NMI)			
16.7	W	0.0	0.0	21.3	W	0.0	0.0	28.2	W	0.0	0.0	29.5	W	0.0	0.0
10.9	W	0.0	0.0	15.2	W	0.0	0.0	16.5	W	0.0	0.0	17.1	W	0.0	0.0
14.5	W	0.0	0.0	18.2	W	0.0	0.0	23.7	W	0.0	0.0	24.7	W	0.0	0.0
13.9	W	0.0	0.0	17.4	W	0.0	0.0	22.4	W	0.0	0.0	23.4	W	0.0	0.0
14.1	W	0.0	0.0	17.6	W	0.0	0.0	22.8	W	0.0	0.0	23.7	W	0.0	0.0
14.4	W	0.0	0.0	18.0	W	0.0	0.0	23.4	W	0.0	0.0	24.4	W	0.0	0.0
15.5	W	0.0	0.0	19.6	W	0.0	0.0	25.7	W	0.0	0.0	26.9	W	0.0	0.0
11.1	W	0.0	0.0	13.6	W	0.0	0.0	16.9	W	0.0	0.0	17.5	W	0.0	0.0
13.4	W	0.0	0.0	16.7	W	0.0	0.0	21.5	W	0.0	0.0	22.3	W	0.0	0.0
14.8	W	0.0	0.0	18.6	W	0.0	0.0	24.3	W	0.0	0.0	25.3	W	0.0	0.0
16.4	W	0.0	0.0	20.7	W	0.0	0.0	27.2	W	0.0	0.0	28.4	W	0.0	0.0
15.6	W	0.0	0.0	18.9	W	0.0	0.0	21.6	W	0.0	0.0	22.7	W	0.0	0.0
15.5	W	0.0	0.0	19.6	W	0.0	0.0	23.7	W	0.0	0.0	24.7	W	0.0	0.0
15.3	W	0.0	0.0	21.0	W	0.0	0.0	24.9	W	0.0	0.0	25.9	W	0.0	0.0
15.2	W	0.0	0.0	19.2	W	0.0	0.0	25.0	W	0.0	0.0	26.1	W	0.0	0.0
15.2	W	0.0	0.0	19.0	W	0.0	0.0	24.7	W	0.0	0.0	25.8	W	0.0	0.0
15.0	W	0.0	0.0	18.6	W	0.0	0.0	24.1	W	0.0	0.0	25.2	W	0.0	0.0
13.9	W	0.0	0.0	17.3	W	0.0	0.0	22.2	W	0.0	0.0	23.1	W	0.0	0.0
14.7	W	0.0	0.0	18.3	W	0.0	0.0	23.8	W	0.0	0.0	24.9	W	0.0	0.0
15.5	W	0.0	0.0	19.4	W	0.0	0.0	25.4	W	0.0	0.0	26.5	W	0.0	0.0
15.7	W	0.0	0.0	19.7	W	0.0	0.0	25.8	W	0.0	0.0	26.9	W	0.0	0.0
11.8	W	0.0	0.0	14.6	W	0.0	0.0	18.4	W	0.0	0.0	19.1	W	0.0	0.0
14.7	W	0.0	0.0	18.4	W	0.0	0.0	24.1	W	0.0	0.0	25.5	W	0.0	0.0
13.6	W	0.0	0.0	17.7	W	0.0	0.0	23.3	W	0.0	0.0	24.4	W	0.0	0.0
13.9	W	0.0	0.0	17.1	W	0.0	0.0	23.2	W	0.0	0.0	24.4	W	0.0	0.0
14.8	W	0.0	0.0	18.4	W	0.0	0.0	24.0	W	0.0	0.0	25.0	W	0.0	0.0
13.9	W	0.0	0.0	17.1	W	0.0	0.0	23.2	W	0.0	0.0	24.4	W	0.0	0.0
11.1	W	0.0	0.0	14.2	W	0.0	0.0	17.7	W	0.0	0.0	18.4	W	0.0	0.0
12.9	W	0.0	0.0	16.0	W	0.0	0.0	20.4	W	0.0	0.0	21.2	W	0.0	0.0
14.8	W	0.0	0.0	18.5	W	0.0	0.0	24.2	W	0.0	0.0	25.2	W	0.0	0.0
18.1	W	0.0	0.0	23.2	W	0.0	0.0	30.8	W	0.0	0.0	32.2	W	0.0	0.0
14.5	W	0.0	0.0	18.0	W	0.0	0.0	23.3	W	0.0	0.0	24.3	W	0.0	0.0
16.7	W	0.0	0.0	21.2	W	0.0	0.0	28.0	W	0.0	0.0	29.4	W	0.0	0.0
17.6	W	0.0	0.0	22.6	W	0.0	0.0	30.3	W	0.0	0.0	31.1	W	0.0	0.0
16.1	W	0.0	0.0	20.0	W	0.0	0.0	26.6	W	0.0	0.0	28.8	W	0.0	0.0
15.9	W	0.0	0.0	19.4	W	0.0	0.0	25.9	W	0.0	0.0	27.1	W	0.0	0.0
14.3	W	0.0	0.0	17.8	W	0.0	0.0	22.9	W	0.0	0.0	24.9	W	0.0	0.0
15.8	W	0.0	0.0	19.9	W	0.0	0.0	26.0	W	0.0	0.0	27.1	W	0.0	0.0
16.7	W	0.0	0.0	21.2	W	0.0	0.0	27.9	W	0.0	0.0	29.1	W	0.0	0.0
17.9	W	0.0	0.0	22.9	W	0.0	0.0	30.5	W	0.0	0.0	31.9	W	0.0	0.0
15.7	W	0.0	0.0	19.7	W	0.0	0.0	25.8	W	0.0	0.0	27.0	W	0.0	0.0
16.7	W	0.0	0.0	21.1	W	0.0	0.0	27.8	W	0.0	0.0	29.0	W	0.0	0.0
17.4	W	0.0	0.0	22.4	W	0.0	0.0	29.8	W	0.0	0.0	31.3	W	0.0	0.0
17.3	W	0.0	0.0	22.1	W	0.0	0.0	29.2	W	0.0	0.0	30.6	W	0.0	0.0
16.7	W	0.0	0.0	21.2	W	0.0	0.0	27.9	W	0.0	0.0	29.1	W	0.0	0.0
17.7	W	0.0	0.0	21.8	W	0.0	0.0	28.8	W	0.0	0.0	30.0	W	0.0	0.0
15.5	W	0.0	0.0	19.4	W	0.0	0.0	26.2	W	0.0	0.0	28.4	W	0.0	0.0
16.7	W	0.0	0.0	21.1	W	0.0	0.0	28.2	W	0.0	0.0	29.1	W	0.0	0.0
16.2	W	0.0	0.0	20.4	W	0.0	0.0	26.8	W	0.0	0.0	27.9	W	0.0	0.0
17.3	W	0.0	0.0	22.1	W	0.0	0.0	29.2	W	0.0	0.0	30.6	W	0.0	0.0
15.0	W	0.0	0.0	18.7	W	0.0	0.0	24.3	W	0.0	0.0	25.4	W	0.0	0.0
15.7	W	0.0	0.0	19.7	W	0.0	0.0	25.7	W	0.0	0.0	26.8	W	0.0	0.0
17.4	W	0.0	0.0	22.3	W	0.0	0.0	29.8	W	0.0	0.0	31.3	W	0.0	0.0
16.5	W	0.0	0.0	20.9	W	0.0	0.0	27.5	W	0.0	0.0	28.7	W	0.0	0.0
16.3	W	0.0	0.0	20.6	W	0.0	0.0	27.1	W	0.0	0.0	28.3	W	0.0	0.0
16.7	W	0.0	0.0	21.1	W	0.0	0.0	28.8	W	0.0	0.0	30.0	W	0.0	0.0
15.9	W	0.0	0.0	19.4	W	0.0	0.0	26.2	W	0.0	0.0	28.4	W	0.0	0.0
15.9	W	0.0	0.0	19.4	W	0.0	0.0	26.2	W	0.0	0.0	28.4	W	0.0	0.0
15.0	W	0.0	0.0	18.7	W	0.0	0.0	24.2	W	0.0	0.0	25.3	W	0.0	0.0
16.5	W	0.0	0.0	20.8	W	0.0	0.0	27.3	W	0.0	0.0	28.5	W	0.0	0.0
13.8	W	0.0	0.0	17.1	W	0.0	0.0	22.0	W	0.0	0.0	23.9	W	0.0	0.0
14.3	W	0.0	0.0	17.7	W	0.0	0.0	22.7	W	0.0	0.0	23.7	W	0.0	0.0
16.0	W	0.0	0.0	20.2	W	0.0	0.0	26.6	W	0.0	0.0	27.8	W	0.0	0.0
15.3	W	0.0	0.0	19.1	W	0.0	0.0	24.9	W	0.0	0.0	26.0	W	0.0	0.0
15.3	W	0.0	0.0	19.2	W	0.0	0.0	25.0	W	0.0	0.0	26.1	W	0.0	0.0
15.1	W	0.0	0.0	20.0	W	0.0	0.0	26.6	W	0.0	0.0	27.7	W	0.0	0.0
14.1	W	0.0	0.0	17.7	W	0.0	0.0	22.2	W	0.0	0.0	23.3	W	0.0	0.0
14.9	W	0.0	0.0	18.9	W	0.0	0.0	24.1	W	0.0	0.0	25.6	W	0.0	0.0
15.1	W	0.0	0.0	18.9	W	0.0	0.0	24.6	W	0.0	0.0	25.6	W	0.0	0.0
16.9	W	0.0	0.0	21.4	W	0.0	0.0	28.3	W	0.0	0.0	29.5	W	0.0	0.0
13.9	W	0.0	0.0	17.5	W	0.0	0.0	22.1	W	0.0	0.0	23.0	W	0.0	0.0
16.8	W	0.0	0.0	20.4	W	0.0	0.0	26.5	W	0.0	0.0	27.6	W	0.0	0.0
15.6	W	0.0	0.0	19.5	W	0.0	0.0	25.5	W	0.0	0.0	26.6	W	0.0	0.0
14.8	W	0.0	0.0	18.1	W	0.0	0.0	24.0	W	0.0	0.0	25.1	W	0.0	0.0
14.4	W	0.0	0.0	17.9	W	0.0	0.0	23.8	W	0.0	0.0	24.5	W	0.0	0.0
16.4	W	0.0	0.0	20.6	W	0.0	0.0	27.1	W	0.0	0.0	28.2	W	0.0	0.0
16.6	W	0.0	0.0	20.8	W	0.0	0.0	27.3	W	0.0	0.0	28.4	W	0.0	0.0
17.0	W	0.0	0.0	21.7	W	0.0	0.0	28.9	W	0.0	0.0	30.3	W	0.0	0.0

FLIGHT ALTITUDE = 10,000 FT. COMBINATION: D

SIGMAP = 1.5 SIGMAT = 1.0 SIGMARH 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(NMI)	(NMI)		(NMI)	(NMI)		(NMI)	(NMI)		(NMI)	(NMI)	
15.1	3.5	0.0	18.9	2.2	2.5	24.7	11.9	4.4	25.8	13.1	4.8
11.6	3.5	0.0	14.4	4.9	2.2	18.1	10.1	4.1	18.8	11.3	4.4
15.0	3.5	0.0	18.8	2.2	2.5	24.6	11.9	4.3	25.6	13.1	4.7
14.5	3.5	0.0	18.1	1.1	2.2	23.6	11.7	4.3	24.6	12.9	4.7
14.4	3.5	0.0	18.0	2.2	2.5	23.4	11.7	4.3	24.5	12.8	4.7
14.1	3.5	0.0	17.6	1.1	2.2	22.8	11.6	4.3	23.8	12.7	4.7
14.0	3.5	0.0	17.5	1.1	2.2	22.6	11.5	4.3	23.6	12.6	4.6
11.7	3.5	0.0	14.5	4.9	2.2	18.2	10.1	4.1	18.9	11.3	4.4
13.9	3.5	0.0	17.3	1.1	2.2	22.3	11.4	4.3	23.2	12.6	4.6
14.5	3.5	0.0	18.2	2.2	2.5	23.7	11.7	4.3	24.7	12.9	4.7
15.5	3.5	0.0	19.4	2.3	2.5	25.4	12.1	4.4	26.5	13.4	4.8
14.5	3.5	0.0	18.0	2.2	2.5	23.4	11.7	4.3	24.4	12.9	4.7
14.6	3.5	0.0	20.2	2.2	2.5	26.5	12.2	4.4	27.7	13.6	4.9
14.9	3.5	0.0	21.6	2.3	2.5	28.9	12.5	4.5	30.2	14.0	4.9
15.6	3.5	0.0	19.2	2.2	2.5	25.1	12.0	4.4	26.2	13.3	4.8
15.5	3.5	0.0	19.3	2.2	2.5	25.3	12.1	4.4	26.4	13.3	4.8
15.6	3.5	0.0	19.1	2.2	2.5	24.8	12.0	4.4	25.9	13.3	4.8
14.4	3.5	0.0	17.4	1.1	2.2	22.4	11.6	4.3	23.3	12.7	4.7
14.7	3.5	0.0	17.7	2.2	2.5	22.8	11.6	4.3	23.8	12.8	4.7
15.2	3.5	0.0	18.9	2.2	2.5	24.7	12.0	4.4	25.8	13.2	4.8
14.3	3.5	0.0	17.8	2.2	2.5	23.0	11.7	4.3	24.0	12.8	4.7
12.7	3.5	0.0	15.8	0.0	2.2	20.0	10.8	4.2	20.8	12.0	4.5
15.2	3.5	0.0	19.1	2.2	2.5	24.9	11.9	4.4	26.0	13.2	4.8
14.2	3.5	0.0	17.2	1.1	2.2	22.0	11.6	4.3	23.7	12.7	4.7
13.3	3.5	0.0	16.7	1.1	2.2	21.2	11.2	4.3	22.1	12.4	4.6
13.8	3.5	0.0	17.2	1.1	2.2	22.1	11.4	4.3	23.1	12.6	4.6
12.3	3.5	0.0	15.3	0.0	2.2	19.2	10.5	4.2	20.0	11.7	4.5
13.4	3.5	0.0	16.6	1.1	2.2	21.2	11.1	4.2	22.1	12.3	4.6
14.7	3.5	0.0	18.3	2.2	2.5	23.9	11.8	4.3	24.9	13.0	4.7
17.1	3.5	0.0	21.6	2.4	2.5	28.5	12.6	4.5	29.8	14.1	5.0
15.3	3.5	0.0	19.1	2.2	2.5	24.5	12.0	4.4	26.0	13.3	4.8
17.1	3.5	0.0	21.8	2.4	2.5	28.9	12.6	4.5	30.2	14.1	5.0
18.0	3.5	0.0	23.4	2.4	2.5	31.4	12.9	4.6	32.9	14.4	5.0
16.4	3.5	0.0	20.7	2.3	2.5	27.1	12.4	4.5	28.3	13.8	4.9
16.4	3.5	0.0	20.7	2.3	2.5	27.2	12.4	4.5	28.3	13.8	4.9
14.9	3.5	0.0	18.5	2.2	2.5	24.0	11.9	4.4	25.0	13.1	4.8
16.1	3.5	0.0	18.6	2.2	2.5	24.1	11.9	4.4	25.2	13.1	4.8
16.5	3.5	0.0	20.9	2.3	2.5	26.7	12.3	4.5	27.8	13.7	4.9
17.1	3.5	0.0	21.7	2.4	2.5	28.7	12.6	4.5	30.0	14.1	5.0
16.3	3.5	0.0	20.6	2.3	2.5	27.1	12.4	4.5	28.3	13.8	4.9
16.9	3.5	0.0	21.5	2.3	2.5	28.3	12.6	4.5	29.6	14.0	5.0
17.8	3.5	0.0	23.0	2.4	2.5	30.7	12.8	4.6	32.2	14.4	5.0
17.1	3.5	0.0	21.8	2.4	2.5	28.8	12.6	4.5	30.1	14.1	5.0
16.4	3.5	0.0	20.7	2.3	2.5	27.2	12.4	4.5	28.3	13.8	4.9
16.9	3.5	0.0	21.4	2.3	2.5	28.2	12.6	4.5	29.4	14.0	5.0
16.3	3.5	0.0	20.6	2.3	2.5	27.0	12.4	4.5	28.2	13.8	4.9
15.8	3.5	0.0	19.8	2.3	2.5	25.9	12.2	4.4	27.1	13.5	4.9
16.9	3.5	0.0	21.5	2.3	2.5	28.4	12.6	4.5	29.6	14.0	5.0
16.5	3.5	0.0	20.9	2.3	2.5	27.5	12.4	4.5	28.7	13.8	4.9
15.8	3.5	0.0	19.8	2.3	2.5	25.9	12.2	4.4	27.0	13.5	4.9
15.0	3.5	0.0	20.0	2.3	2.5	26.2	12.3	4.4	27.3	13.6	4.9
17.8	3.5	0.0	23.0	2.4	2.5	30.8	12.8	4.6	32.5	14.4	5.0
16.4	3.5	0.0	20.8	2.3	2.5	27.3	12.4	4.5	28.5	13.8	4.9
16.3	3.5	0.0	20.6	2.3	2.5	27.1	12.4	4.5	28.3	13.8	4.9
15.8	3.5	0.0	19.9	2.3	2.5	26.1	12.2	4.4	27.2	13.5	4.9
15.3	3.5	0.0	19.2	2.3	2.5	25.0	12.0	4.4	26.1	13.3	4.8
16.3	3.5	0.0	20.5	2.3	2.5	27.0	12.4	4.5	28.2	13.7	4.9
15.7	3.5	0.0	19.7	2.3	2.5	25.7	12.2	4.4	26.8	13.5	4.9
14.6	3.5	0.0	18.2	2.2	2.5	24.6	11.8	4.3	24.7	13.0	4.7
16.3	3.5	0.0	20.7	2.3	2.5	27.4	12.4	4.5	28.4	13.7	4.9
15.5	3.5	0.0	19.2	2.2	2.5	25.1	12.1	4.4	26.2	13.3	4.8
15.0	3.5	0.0	19.4	2.2	2.5	25.3	12.1	4.4	26.4	13.4	4.8
14.4	3.5	0.0	17.9	2.2	2.5	24.4	11.9	4.4	25.4	13.1	4.8
14.2	3.5	0.0	17.9	2.2	2.5	23.2	11.7	4.3	24.2	12.9	4.7
15.2	3.5	0.0	19.0	2.2	2.5	24.8	12.0	4.4	25.9	13.3	4.8
15.1	3.5	0.0	18.9	2.2	2.5	24.6	12.0	4.4	25.6	13.2	4.8
16.2	3.5	0.0	20.4	2.3	2.5	26.8	12.3	4.4	28.0	13.7	4.9
17.8	3.5	0.0	22.1	2.4	2.5	29.5	12.6	4.5	30.9	14.1	5.0
17.9	3.5	0.0	19.7	2.3	2.5	25.8	12.2	4.4	27.0	13.5	4.9
15.1	3.5	0.0	18.8	2.2	2.5	24.4	12.0	4.4	25.4	13.2	4.8
15.7	3.5	0.0	19.7	2.3	2.5	25.8	12.1	4.4	26.9	13.5	4.8
14.7	3.5	0.0	18.2	2.2	2.5	23.6	11.8	4.3	24.6	13.0	4.7
15.0	3.5	0.0	18.6	2.2	2.5	24.2	11.9	4.4	25.2	13.1	4.8
16.9	3.5	0.0	21.5	2.3	2.5	28.6	12.5	4.5	29.9	14.0	4.9

FLIGHT ALTITUDE = 10,000 FT. COMBINATION: E

SIGMAP = 1.5 SIGMAT = 2.0 SIGHARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(NMI)	(NMI)		(NMI)	(NMI)		(NMI)	(NMI)		(NMI)	(NMI)	
15.6	3.5	0.0	19.7	5.2	2.5	25.8	12.1	4.4	27.0	13.4	4.8
11.4	3.4	0.0	14.1	4.9	2.4	17.6	10.0	4.1	18.3	11.1	4.4
14.8	3.5	0.0	18.5	5.2	2.5	24.2	11.8	4.3	25.3	13.0	4.7
14.3	3.5	0.0	17.9	5.1	2.5	23.3	11.6	4.3	24.3	12.8	4.7
14.3	3.5	0.0	17.9	5.1	2.5	23.3	11.6	4.3	24.3	12.8	4.7
14.3	3.5	0.0	17.8	5.1	2.5	23.1	11.6	4.3	24.1	12.8	4.7
14.5	3.5	0.0	18.2	5.2	2.5	23.6	11.7	4.3	24.7	12.9	4.7
11.5	3.4	0.0	14.3	4.9	2.4	17.9	10.0	4.1	18.6	11.2	4.4
13.7	3.5	0.0	17.1	5.1	2.5	22.0	11.3	4.3	23.0	12.5	4.6
14.6	3.5	0.0	18.3	5.2	2.5	23.9	11.8	4.3	25.0	12.9	4.7
15.8	3.5	0.0	19.9	5.3	2.5	26.0	12.2	4.4	27.2	13.5	4.9
14.3	3.5	0.0	17.7	5.2	2.5	22.9	11.6	4.3	23.8	12.8	4.7
15.9	3.5	0.0	20.0	5.3	2.5	26.3	12.2	4.4	27.4	13.5	4.9
16.8	3.5	0.0	21.5	5.3	2.5	28.6	12.5	4.5	29.9	13.9	4.9
15.4	3.5	0.0	19.2	5.2	2.5	25.1	12.0	4.4	26.2	13.3	4.8
15.3	3.5	0.0	19.1	5.2	2.5	24.9	12.0	4.4	26.0	13.3	4.8
14.4	3.5	0.0	17.9	5.2	2.5	23.0	11.7	4.3	24.0	12.9	4.7
14.2	3.5	0.0	17.7	5.2	2.5	22.8	11.6	4.3	23.8	12.8	4.7
15.0	3.5	0.0	18.8	5.2	2.5	24.5	11.9	4.4	25.5	13.2	4.8
15.5	3.5	0.0	19.4	5.2	2.5	25.4	12.1	4.4	26.5	13.4	4.8
14.8	3.5	0.0	18.4	5.2	2.5	23.9	11.8	4.4	25.0	13.0	4.8
12.5	3.4	0.0	15.5	5.0	2.4	19.6	10.6	4.2	20.3	11.8	4.5
15.0	3.5	0.0	18.8	5.2	2.5	24.6	11.9	4.4	25.7	13.1	4.8
15.1	3.5	0.0	19.0	5.2	2.5	24.9	11.9	4.4	26.0	13.2	4.8
14.1	3.5	0.0	17.5	5.1	2.5	22.6	11.5	4.3	23.6	12.7	4.7
13.6	3.5	0.0	16.9	5.1	2.5	21.5	11.3	4.3	22.4	12.4	4.6
14.3	3.5	0.0	17.7	5.1	2.5	22.9	11.6	4.3	23.9	12.8	4.7
12.1	3.4	0.0	15.0	5.0	2.4	18.9	10.4	4.1	19.6	11.6	4.4
13.3	3.5	0.0	16.5	5.1	2.5	21.0	11.1	4.2	21.8	12.3	4.6
14.7	3.5	0.0	18.4	5.2	2.5	24.0	11.8	4.3	25.0	13.0	4.7
17.4	3.6	0.0	22.2	5.4	2.5	29.2	12.7	4.5	30.6	14.2	5.0
15.1	3.5	0.0	18.8	5.2	2.5	24.5	11.9	4.4	25.5	13.2	4.8
17.0	3.5	0.0	21.6	5.3	2.5	28.5	12.6	4.5	29.8	14.0	5.0
17.9	3.5	0.0	23.2	5.4	2.5	31.2	12.8	4.5	32.7	14.4	5.0
16.3	3.5	0.0	20.6	5.3	2.5	27.0	12.4	4.4	28.2	13.8	4.9
16.5	3.5	0.0	20.8	5.3	2.5	27.3	12.4	4.4	28.5	13.8	4.9
15.3	3.5	0.0	19.0	5.2	2.5	24.7	12.0	4.4	25.7	13.3	4.8
14.8	3.5	0.0	18.4	5.2	2.5	23.9	11.8	4.4	24.9	13.1	4.8
16.1	3.5	0.0	20.2	5.3	2.5	26.5	12.3	4.4	27.7	13.6	4.9
16.6	3.5	0.0	21.0	5.3	2.5	27.6	12.5	4.5	28.9	13.9	4.9
17.4	3.6	0.0	22.2	5.4	2.5	29.4	12.7	4.5	30.8	14.3	5.0
16.2	3.5	0.0	20.4	5.3	2.5	26.7	12.3	4.4	27.9	13.7	4.9
16.9	3.5	0.0	21.4	5.3	2.5	28.2	12.6	4.5	29.5	14.0	5.0
17.7	3.6	0.0	22.7	5.4	2.5	30.4	12.8	4.5	31.9	14.3	5.0
17.2	3.5	0.0	21.9	5.4	2.5	28.9	12.7	4.5	30.2	14.1	5.0
16.9	3.5	0.0	21.4	5.4	2.5	28.2	12.6	4.5	29.5	14.0	5.0
16.6	3.5	0.0	21.1	5.3	2.5	27.7	12.5	4.5	28.9	13.9	4.9
15.7	3.5	0.0	19.7	5.3	2.5	25.7	12.2	4.4	26.8	13.5	4.9
16.9	3.5	0.0	21.4	5.3	2.5	28.3	12.6	4.5	29.5	14.0	5.0
16.4	3.5	0.0	20.7	5.3	2.5	27.2	12.4	4.5	28.4	13.8	4.9
16.8	3.5	0.0	21.3	5.3	2.5	28.0	12.5	4.5	29.3	14.0	5.0
15.6	3.5	0.0	19.5	5.3	2.5	25.5	12.1	4.4	26.6	13.4	4.8
15.9	3.5	0.0	19.9	5.3	2.5	26.0	12.2	4.4	27.1	13.6	4.9
17.7	3.5	0.0	22.8	5.4	2.5	30.6	12.8	4.5	32.0	14.3	5.0
16.5	3.5	0.0	20.8	5.3	2.5	27.4	12.4	4.5	28.6	13.8	4.9
16.4	3.5	0.0	20.7	5.3	2.5	27.2	12.4	4.5	28.4	13.8	4.9
16.1	3.5	0.0	20.3	5.3	2.5	26.7	12.3	4.4	27.8	13.7	4.9
15.3	3.5	0.0	19.1	5.3	2.5	24.9	12.0	4.4	26.0	13.3	4.8
16.2	3.5	0.0	20.4	5.3	2.5	26.7	12.3	4.4	27.9	13.7	4.9
15.2	3.5	0.0	18.9	5.2	2.5	24.5	12.0	4.4	25.6	13.2	4.8
16.0	3.5	0.0	20.1	5.3	2.5	26.3	12.3	4.4	27.5	13.6	4.9
14.4	3.5	0.0	17.9	5.2	2.5	23.2	11.7	4.3	24.2	12.9	4.7
14.4	3.5	0.0	17.9	5.2	2.5	23.1	11.7	4.3	24.1	12.9	4.7
16.2	3.5	0.0	20.6	5.3	2.5	27.2	12.3	4.4	28.4	13.7	4.9
15.4	3.5	0.0	19.2	5.3	2.5	25.1	12.0	4.4	26.2	13.3	4.8
15.5	3.5	0.0	19.4	5.3	2.5	25.3	12.1	4.4	26.4	13.4	4.8
15.4	3.5	0.0	19.3	5.3	2.5	25.2	12.1	4.4	26.3	13.3	4.8
14.4	3.5	0.0	17.9	5.2	2.5	23.1	11.7	4.3	24.1	12.9	4.7
15.1	3.5	0.0	18.9	5.2	2.5	24.7	12.0	4.4	25.7	13.2	4.8
15.1	3.5	0.0	18.9	5.2	2.5	24.6	12.0	4.4	25.7	13.2	4.8
16.5	3.5	0.0	20.8	5.3	2.5	27.4	12.4	4.5	28.6	13.8	4.9
14.6	3.5	0.0	18.1	5.2	2.5	23.5	11.8	4.3	24.5	12.9	4.7
17.1	3.5	0.0	21.9	5.3	2.5	29.1	12.6	4.5	30.5	14.1	5.0
17.8	3.5	0.0	23.1	5.4	2.5	31.1	12.8	4.5	32.6	14.4	5.0
15.7	3.5	0.0	19.7	5.3	2.5	25.8	12.2	4.4	26.9	13.5	4.8
15.1	3.5	0.0	18.8	5.3	2.5	24.4	12.0	4.4	25.4	13.2	4.8
16.1	3.5	0.0	20.3	5.3	2.5	26.7	12.3	4.4	27.8	13.6	4.9
14.6	3.5	0.0	18.2	5.2	2.5	23.6	11.8	4.3	24.6	13.0	4.7
14.9	3.5	0.0	18.5	5.2	2.5	24.0	11.9	4.4	25.0	13.1	4.8
16.9	3.5	0.0	21.6	5.3	2.5	28.7	12.5	4.5	30.1	14.0	4.9

FLIGHT ALTITUDE = 10,000 COMBINATION: F
 SIGMAP = 1.5 SIGMAT = 4.0 SIGMARH = 8.0

TARGET #1			TARGET #2			TARGET #3			TARGET #4		
DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID	DET	CLASS	ID
(HII)	(HII)		(HII)	(HII)		(HII)	(HII)		(HII)	(HII)	
16.6	W	0.0	21.1	5	3	28.0	12	4	29.2	13	8
11.0	W	0.0	13.3	4	8	16.6	9	6	17.2	10	6
14.4	W	0.0	18.0	2	5	23.4	11	7	24.4	12	8
14.0	W	0.0	17.5	1	1	22.6	11	4	23.5	12	6
14.1	W	0.0	17.6	1	1	22.8	11	5	23.7	12	7
14.3	W	0.0	17.9	1	1	23.2	11	7	24.2	12	8
15.5	W	0.0	19.5	2	2	25.6	12	0	26.7	13	3
11.1	W	0.0	13.7	9	9	17.1	9	8	17.8	10	8
13.4	W	0.0	16.7	5	2	21.4	11	1	22.3	12	3
14.7	W	0.0	18.4	5	2	24.0	11	8	25.1	13	0
16.4	W	0.0	20.7	5	3	27.2	12	4	28.4	13	8
13.6	W	0.0	16.9	3	2	21.7	11	3	22.7	12	5
15.6	W	0.0	19.6	3	2	23.7	12	1	24.8	13	8
15.4	W	0.0	19.4	3	2	23.0	12	4	24.3	13	8
15.3	W	0.0	19.2	3	2	23.3	12	1	24.6	13	3
15.1	W	0.0	18.9	2	2	23.0	12	0	24.1	13	3
15.0	W	0.0	18.7	2	2	22.4	11	9	23.5	13	2
14.0	W	0.0	17.4	1	1	22.4	11	5	23.4	12	7
14.7	W	0.0	18.3	2	2	23.8	11	8	24.9	13	0
15.6	W	0.0	19.6	5	3	25.6	12	1	26.7	13	4
11.9	W	0.0	14.7	5	2	18.5	10	3	19.2	11	5
14.6	W	0.0	18.3	2	2	23.8	11	8	24.9	13	9
13.9	W	0.0	17.3	1	1	22.2	11	4	23.5	12	0
13.8	W	0.0	17.1	1	1	22.2	11	4	23.5	12	6
15.0	W	0.0	18.7	2	2	24.1	11	9	25.5	13	5
14.6	W	0.0	18.3	2	2	23.8	11	8	24.8	13	1
11.6	W	0.0	14.3	2	2	17.9	10	1	18.6	11	2
12.9	W	0.0	16.0	5	0	20.4	10	9	21.2	12	1
18.0	W	0.0	23.1	5	4	30.6	12	9	32.0	14	5
14.6	W	0.0	18.1	2	2	23.4	11	8	24.4	12	9
16.6	W	0.0	21.1	3	3	27.8	12	5	29.0	13	9
17.6	W	0.0	22.8	3	3	30.5	12	7	32.2	14	3
16.1	W	0.0	20.8	3	3	26.6	12	3	27.7	13	7
16.5	W	0.0	19.9	3	3	27.7	12	4	28.8	13	8
14.4	W	0.0	19.9	3	3	27.7	12	2	28.5	13	5
15.4	W	0.0	19.9	3	3	27.7	12	2	28.5	13	5
15.8	W	0.0	19.9	3	3	27.7	12	2	28.5	13	5
16.6	W	0.0	21.0	3	3	27.7	12	2	28.5	13	5
17.8	W	0.0	22.8	5	4	30.3	12	9	31.8	14	4
15.7	W	0.0	19.8	3	2	25.9	12	2	27.0	13	5
16.6	W	0.0	21.1	3	3	27.7	12	5	29.0	13	9
17.5	W	0.0	22.4	3	3	30.0	12	7	31.4	14	3
17.3	W	0.0	22.1	3	3	29.3	12	7	30.6	14	2
16.7	W	0.0	21.1	3	3	27.8	12	5	29.0	13	9
17.1	W	0.0	21.7	3	3	28.6	12	6	29.9	14	1
15.6	W	0.0	19.5	3	3	27.5	12	1	28.6	13	4
16.7	W	0.0	21.5	3	3	27.5	12	1	29.1	13	9
16.1	W	0.0	20.3	3	3	26.6	12	3	27.8	13	7
17.3	W	0.0	22.0	5	4	29.1	12	7	30.4	14	2
15.1	W	0.0	18.8	3	2	24.5	11	9	25.5	13	2
15.7	W	0.0	19.7	3	2	25.7	12	2	26.8	14	5
17.4	W	0.0	22.4	3	3	30.0	12	7	31.4	14	2
16.5	W	0.0	20.9	3	3	27.5	12	4	28.8	13	9
16.3	W	0.0	20.6	3	3	27.1	12	4	28.3	13	8
16.6	W	0.0	21.1	3	3	27.7	12	5	29.0	13	9
15.1	W	0.0	18.8	3	2	24.5	11	9	25.5	13	2
15.9	W	0.0	19.9	3	3	26.6	12	3	27.7	13	7
15.0	W	0.0	18.0	3	2	24.1	11	9	25.1	13	1
16.4	W	0.0	20.7	3	3	27.2	12	4	28.3	13	8
13.2	W	0.0	17.2	1	1	22.1	11	4	23.0	12	6
14.2	W	0.0	17.6	1	1	22.6	11	6	23.6	12	8
15.1	W	0.0	18.9	2	2	24.6	12	0	25.7	13	2
16.0	W	0.0	20.3	3	3	26.7	12	2	27.9	13	6
15.3	W	0.0	19.1	3	2	25.0	12	0	26.0	13	3
15.3	W	0.0	19.2	3	2	25.0	12	0	26.1	13	3
16.1	W	0.0	20.3	3	3	26.6	12	3	27.8	13	7
14.2	W	0.0	17.7	1	1	22.8	11	6	23.7	12	8
14.9	W	0.0	18.5	2	2	24.1	11	9	25.1	13	1
16.8	W	0.0	21.3	5	4	28.1	12	5	29.4	14	4
13.9	W	0.0	17.3	1	1	22.2	11	4	23.1	12	6
16.7	W	0.0	21.3	5	4	28.3	12	5	29.6	14	9
17.6	W	0.0	22.7	3	3	30.5	12	7	32.0	14	3
15.6	W	0.0	19.5	3	2	25.5	12	1	26.6	13	4
14.9	W	0.0	18.5	2	2	23.9	11	9	25.0	13	1
16.8	W	0.0	21.4	5	4	28.3	12	5	29.9	14	0
14.5	W	0.0	18.0	1	1	22.3	11	7	24.2	12	9
14.6	W	0.0	18.1	2	2	23.3	11	8	24.5	13	0
17.0	W	0.0	21.7	5	4	28.8	12	6	30.2	14	9

APPENDIX 9

CORRELATION RESULTS FOR NORMALITY TEST

Correlation(r) Results

a) Height = 1,500 Ft.

Combination	c1	c4	c7	c10
A	0.982	0.983	0.983	0.984
B	0.983	0.982	0.984	0.984
C	0.991	0.991	0.992	0.992
D	0.980	0.979	0.981	0.981
E	0.982	0.987	0.977	0.981
F	0.990	0.991	0.992	0.991

b) Height = 5,000 Ft.

Combination	c1	c4	c7	c10
A	0.987	0.989	0.991	0.991
B	0.987	0.988	0.989	0.989
C	0.989	0.991	0.992	0.992
D	0.989	0.991	0.992	0.992
E	0.989	0.991	0.991	0.991
F	0.989	0.991	0.991	0.991

c) Height = 10,000 Ft.

Combination	c1	c4	c7	c10
A	0.985	0.991	0.992	0.991
B	0.981	0.987	0.989	0.988
C	0.987	0.984	0.985	0.985
D	0.978	0.984	0.985	0.985
E	0.982	0.989	0.989	0.989
F	0.987	0.989	0.989	0.988

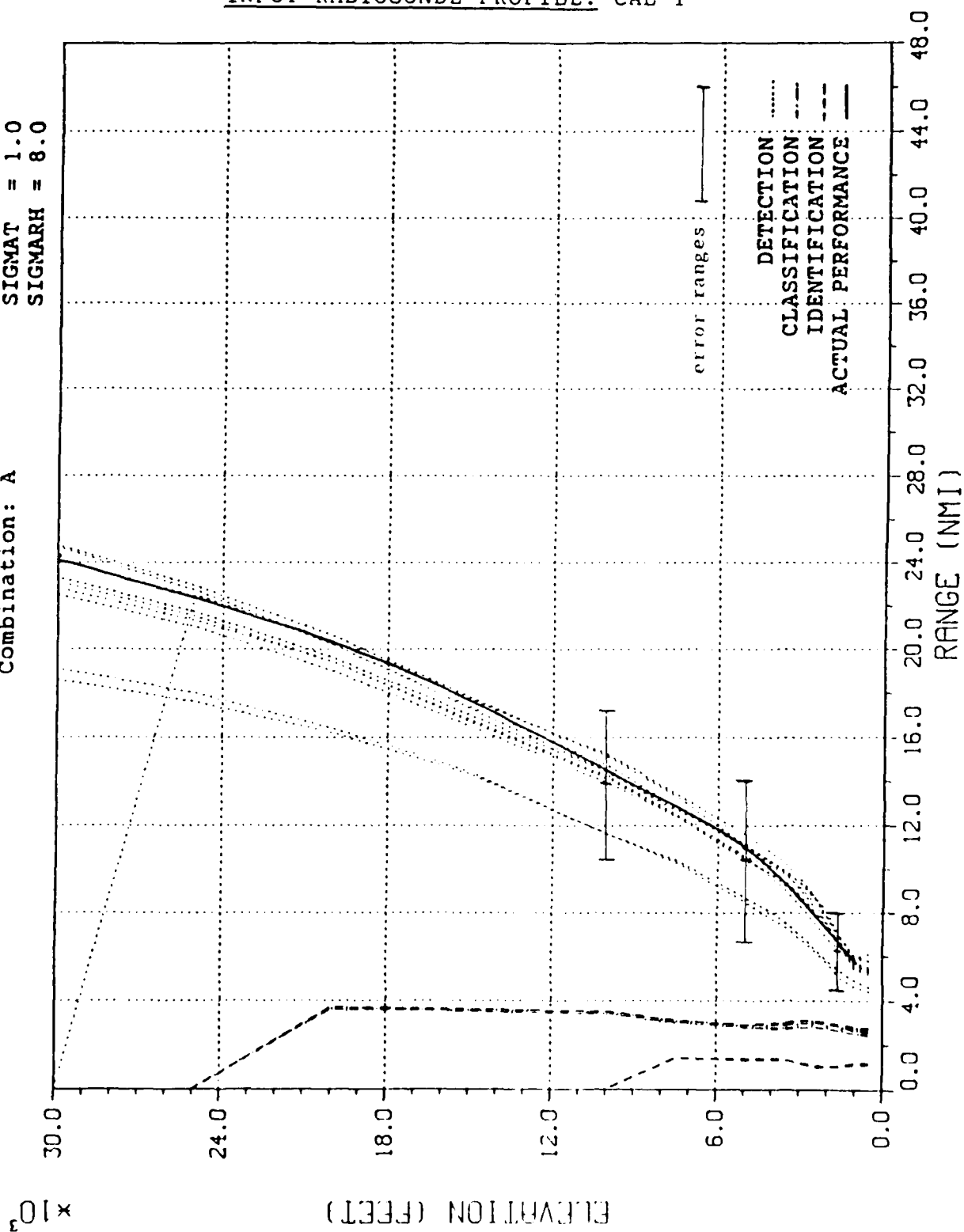
APPENDIX 10

VISUAL DISPLAY OF DITHERED AND UNDITHERED PROFILES PERFORMANCES BY THE PROGRAM UFLR

TARGET NUMBER 1

SIGMAP = 2.5
SIGMAT = 1.0
SIGMARH = 8.0

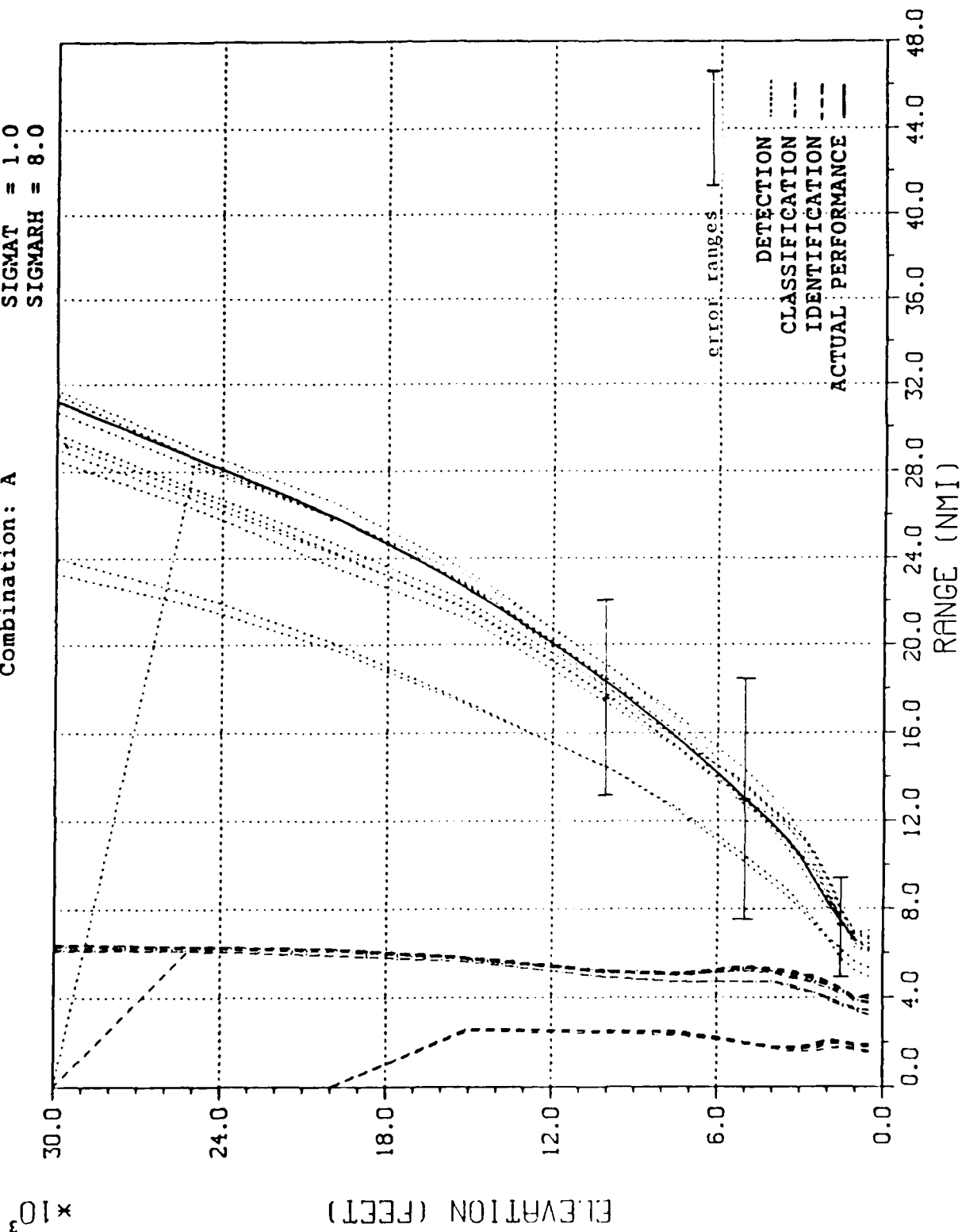
Combination: A



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

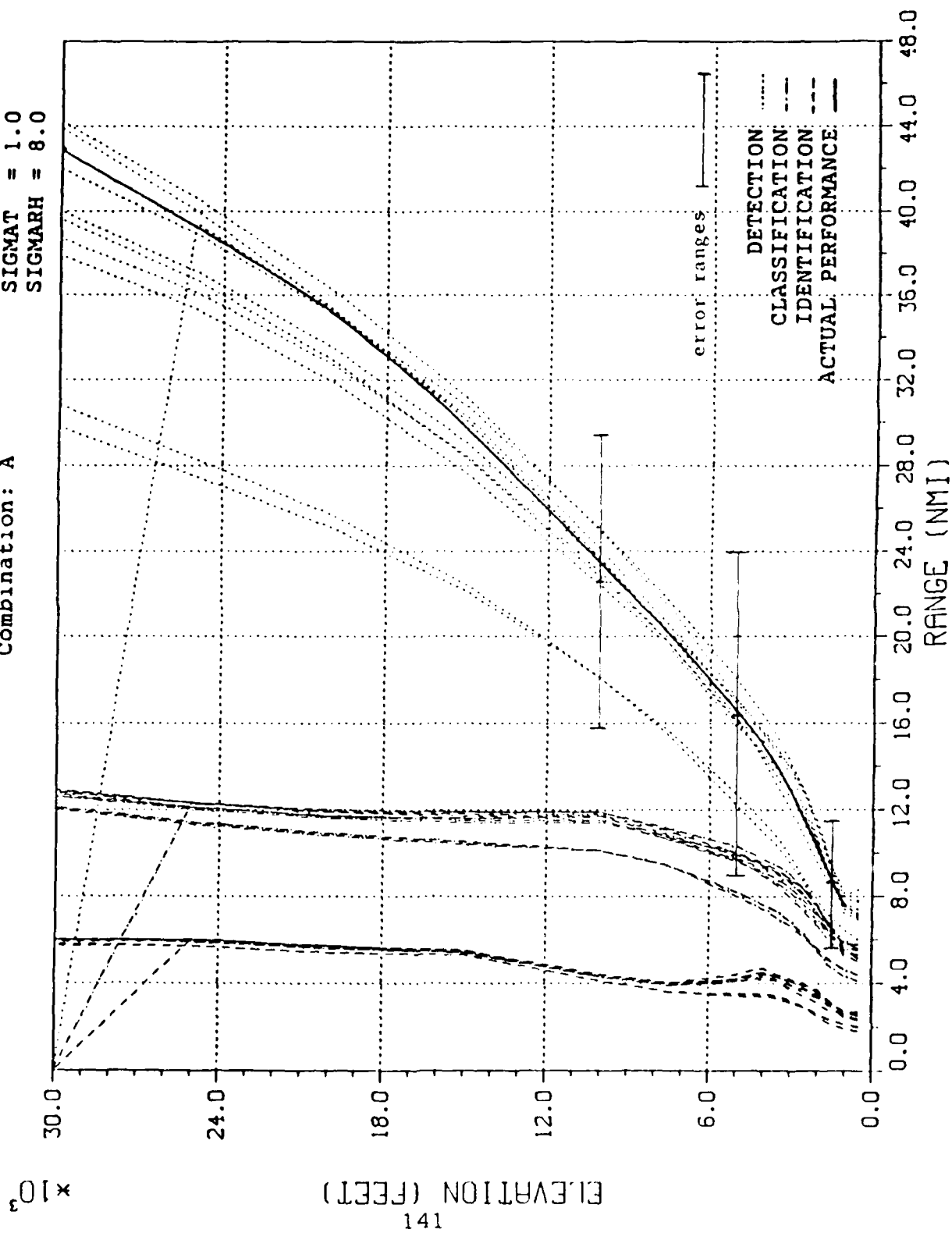
Combination: A



TARGET NUMBER 3

Combination: A

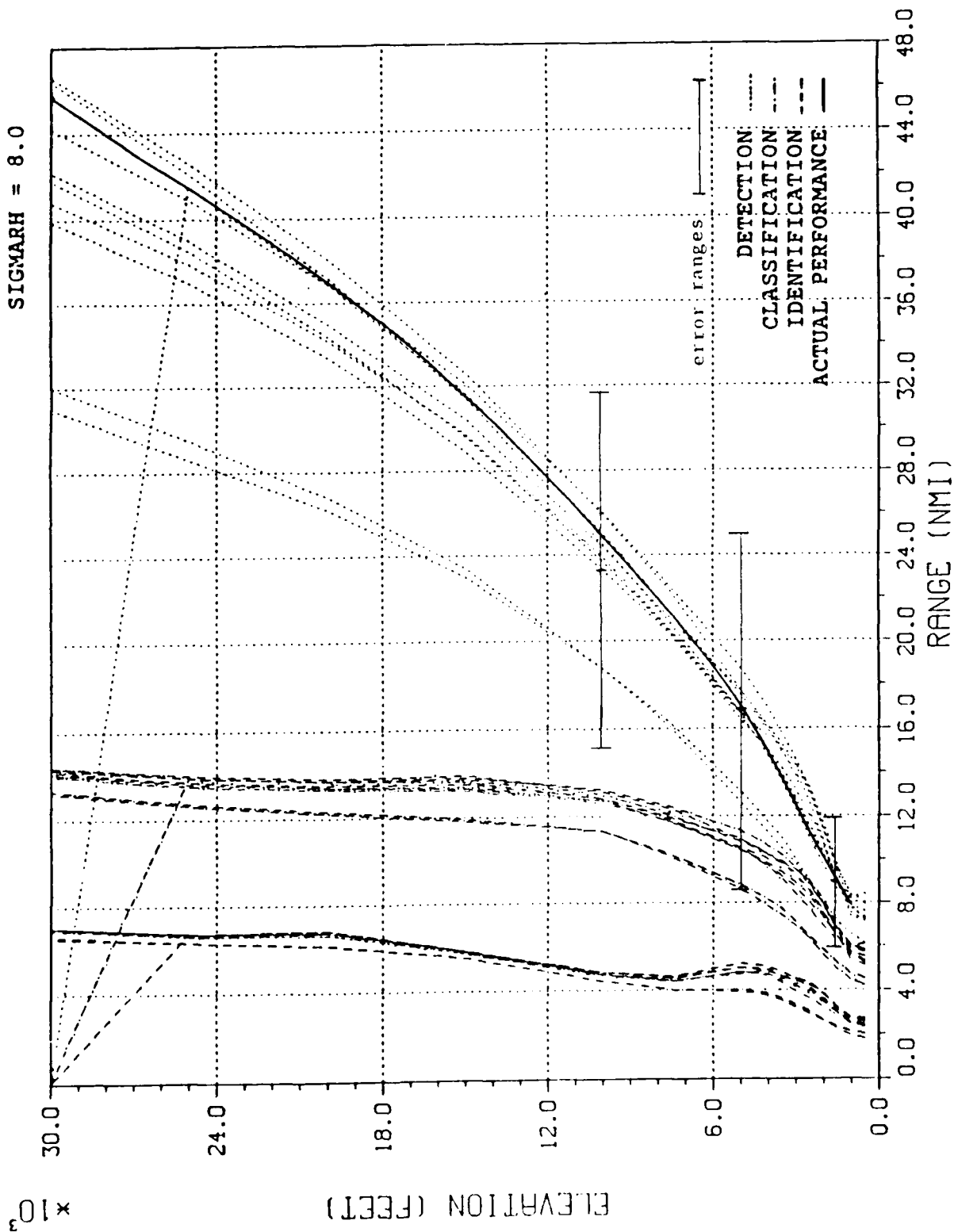
SIGMAP = 2.5
SIGMAT = 1.0
SIGMARH = 8.0



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: A

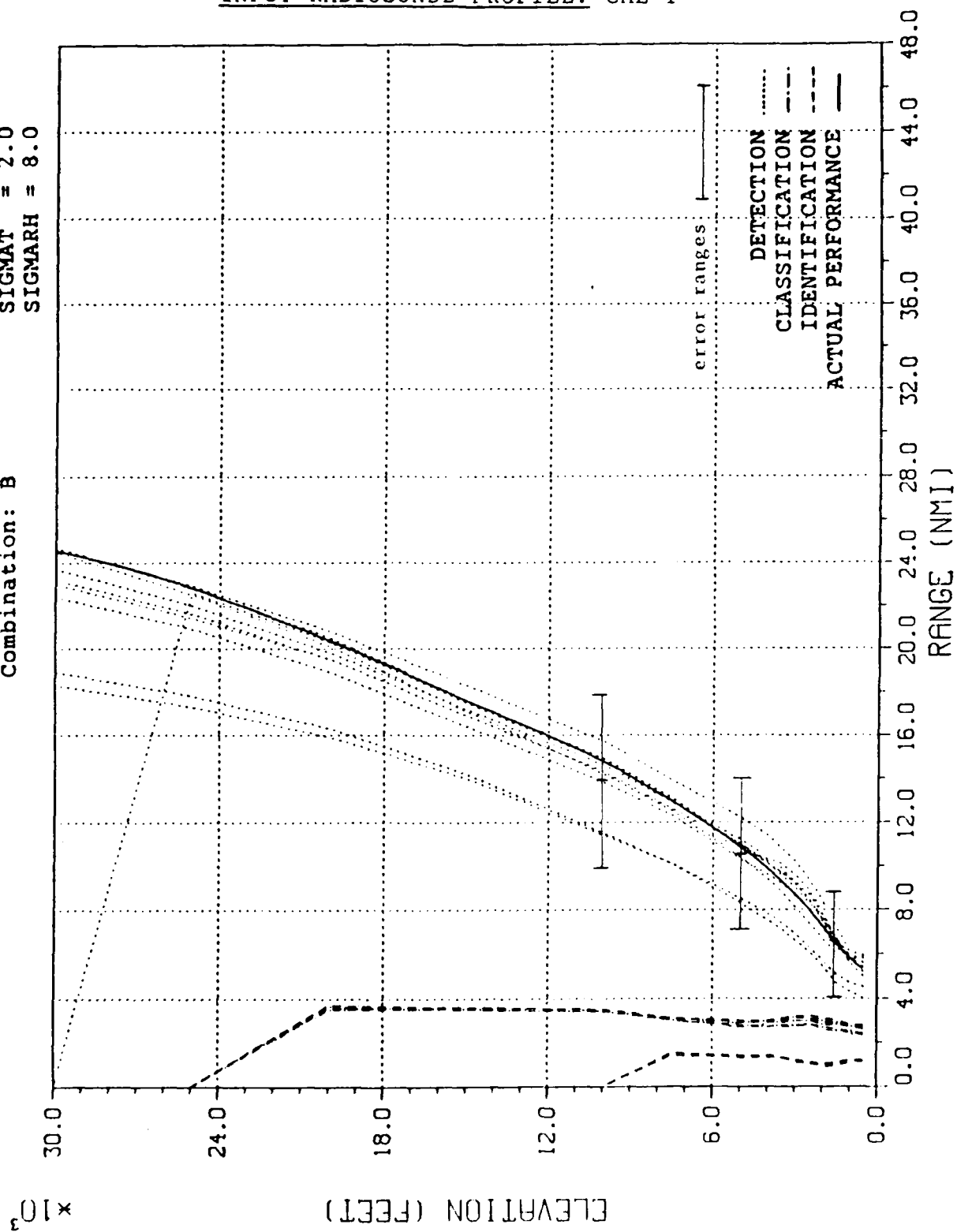


TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: B

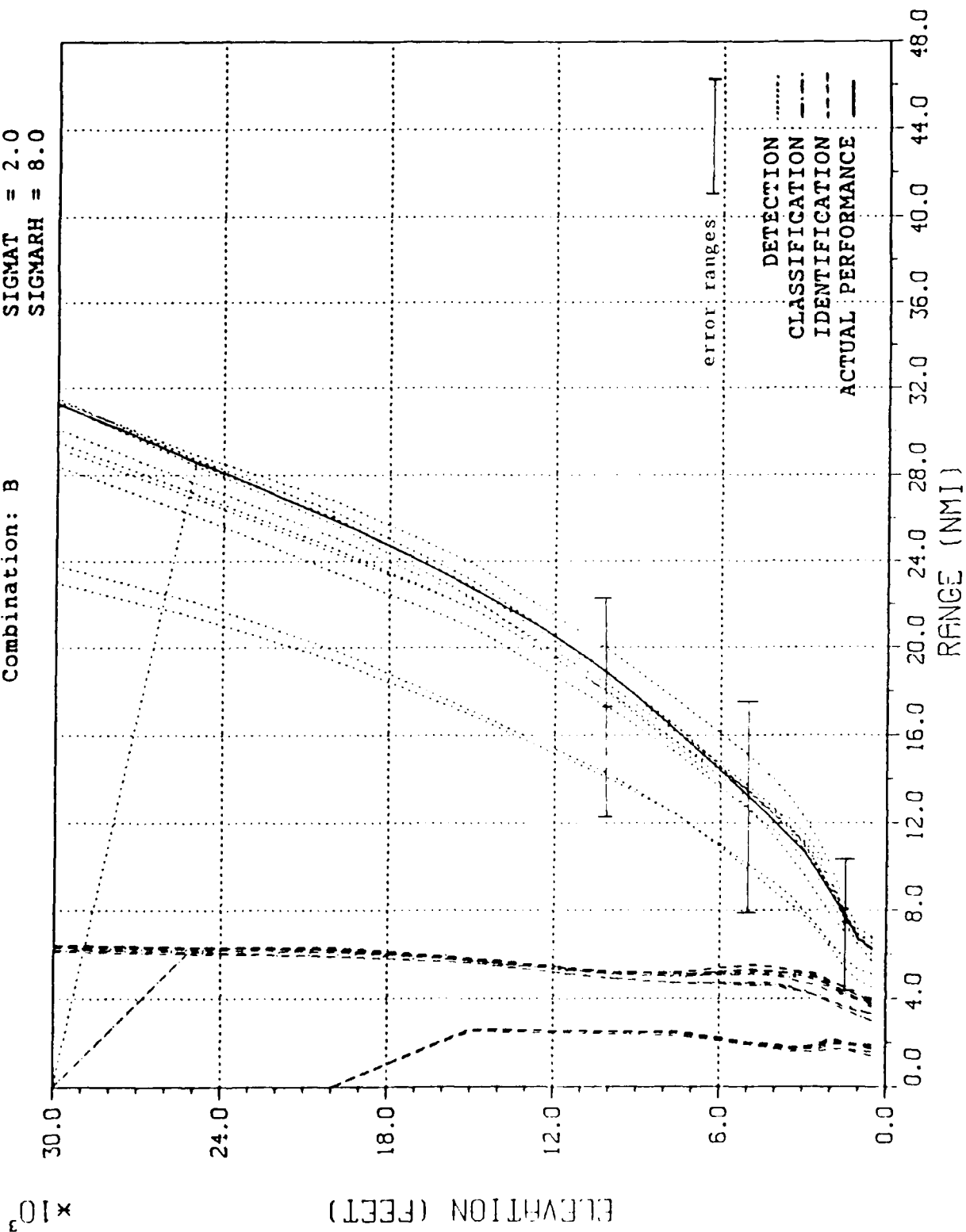
INPUT RADIOSONDE PROFILE: CAL 1



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

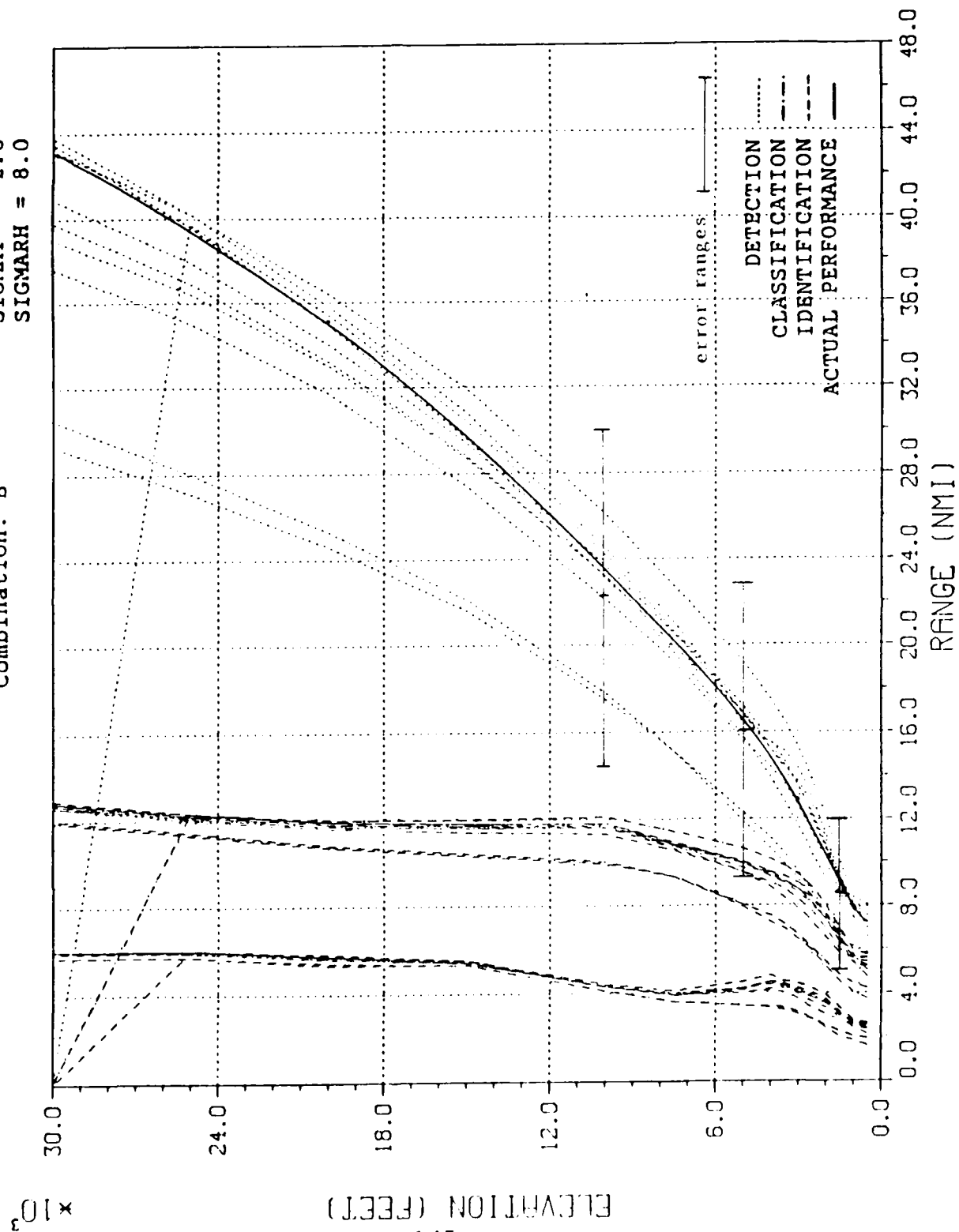
Combination: B



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

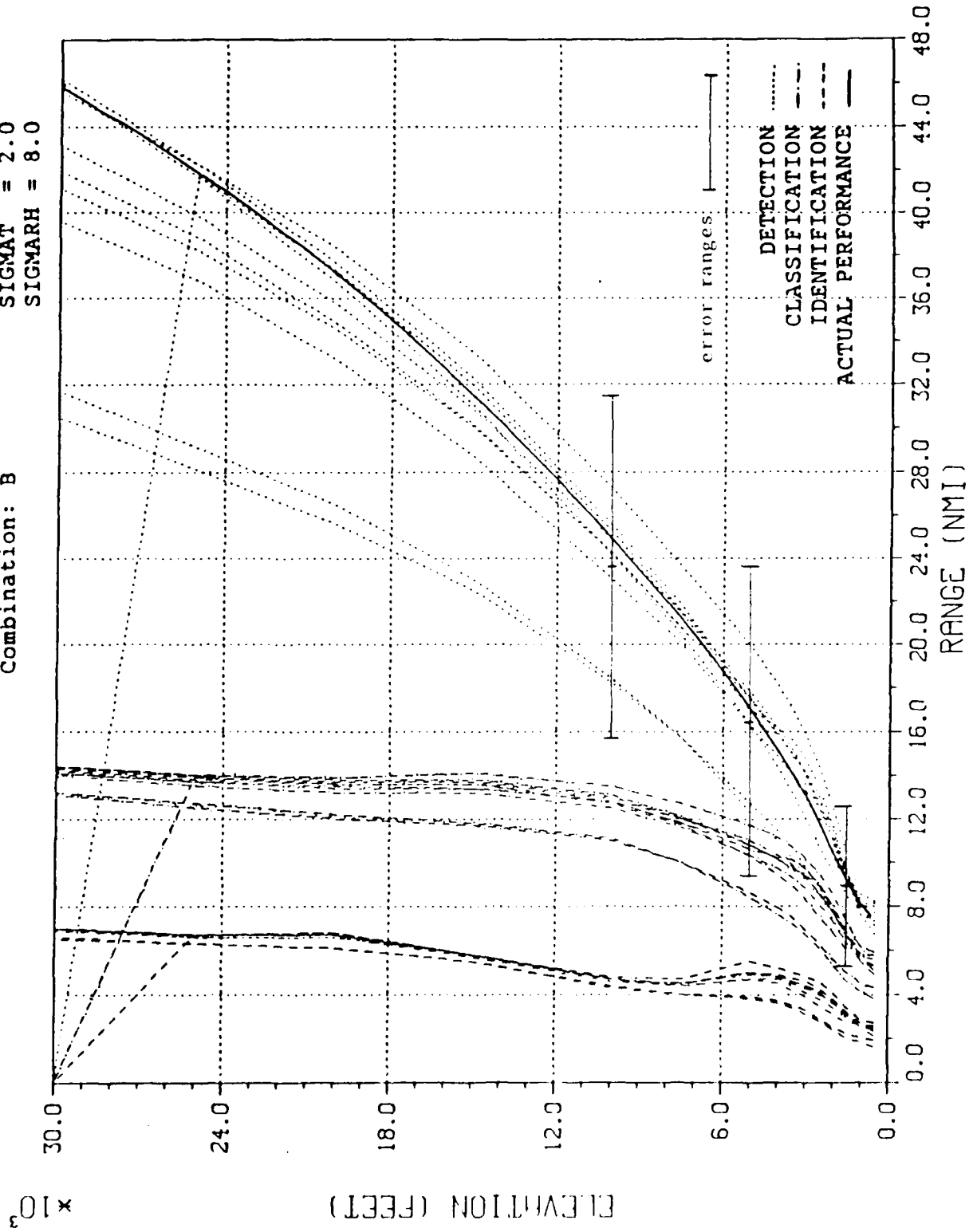
Combination: B



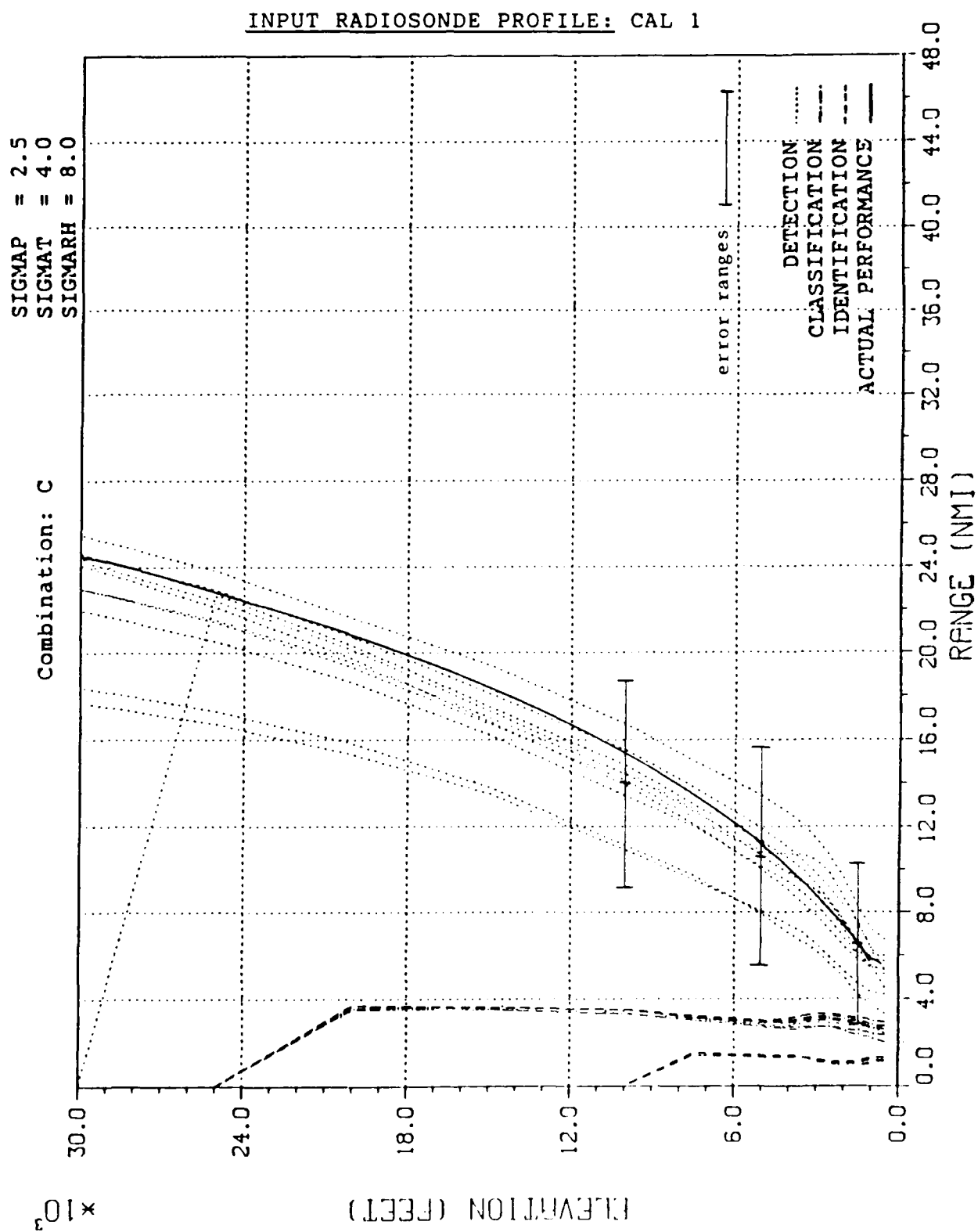
TARGET NUMBER 4

Combination: B

SIGMAP = 2.5
SIGMAT = 2.0
SIGMARH = 8.0



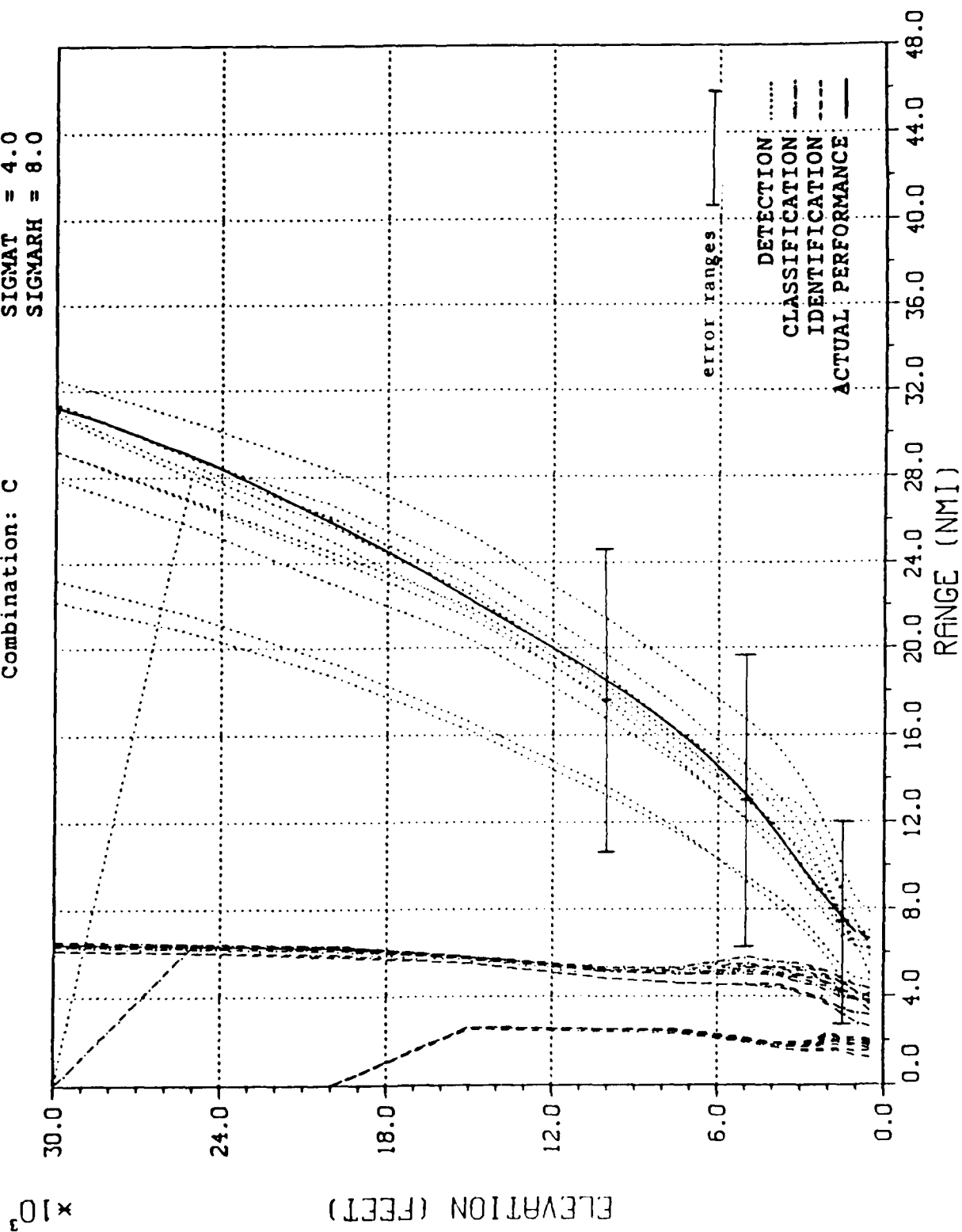
TARGET NUMBER 1



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

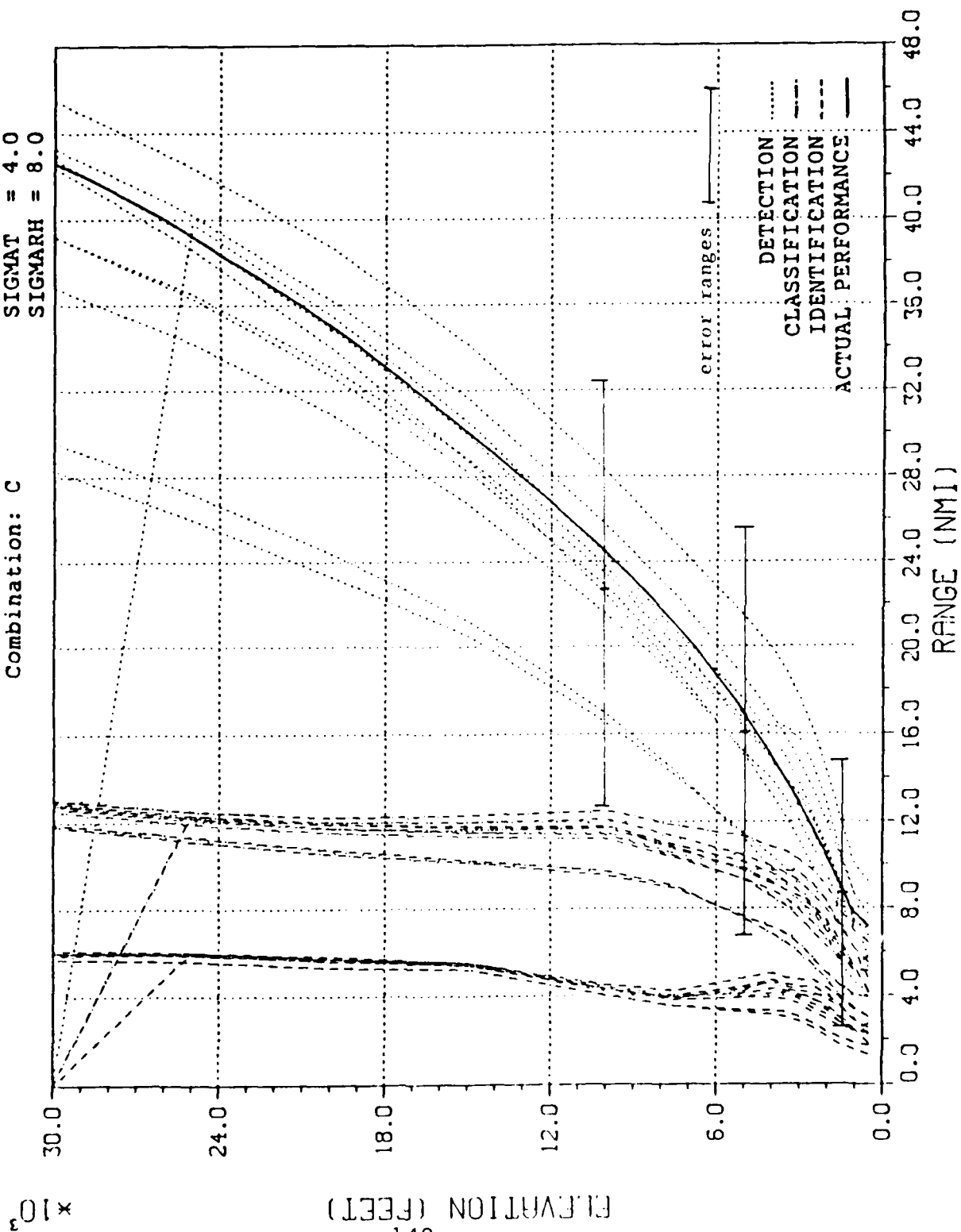
Combination: C



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

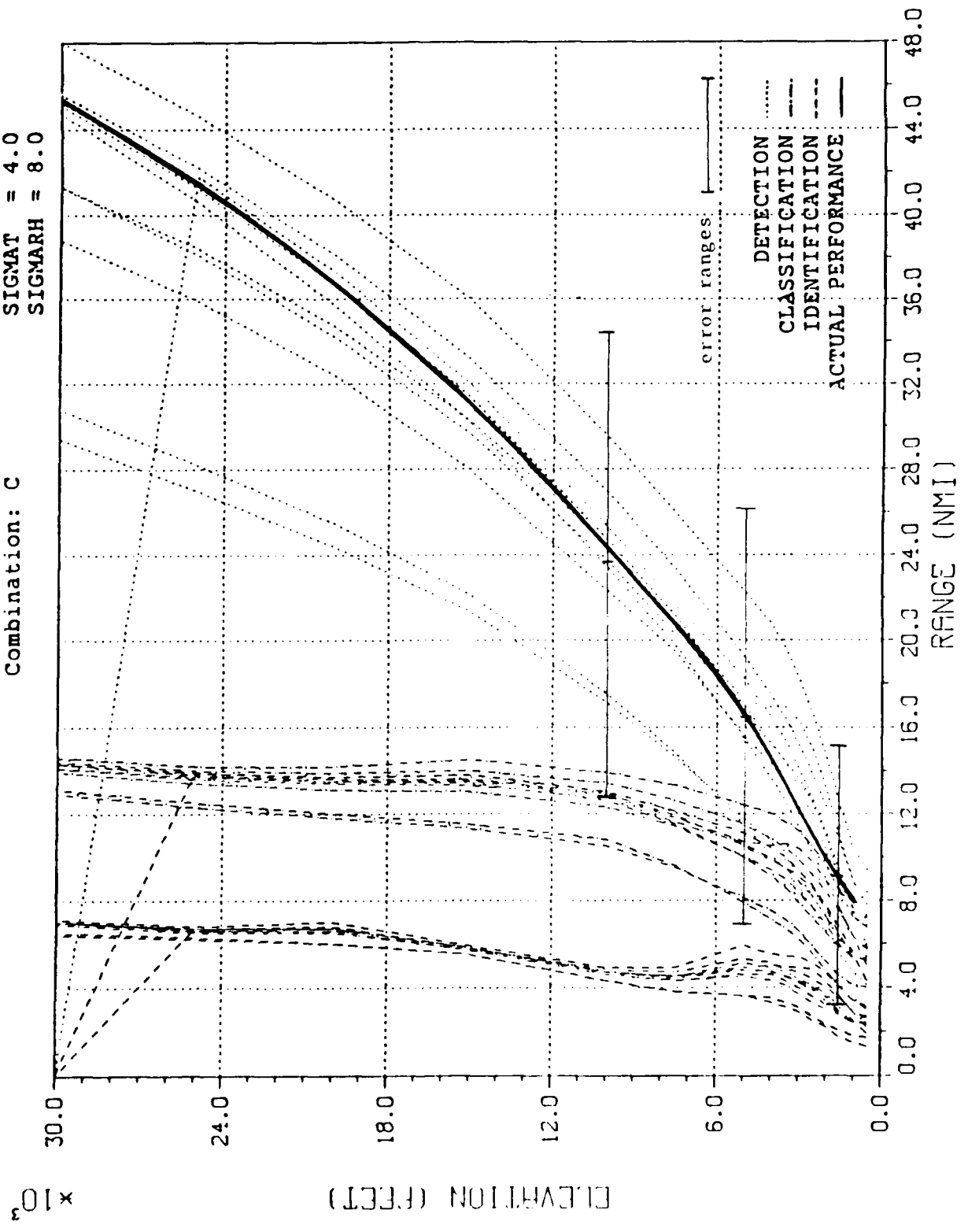
Combination: C



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

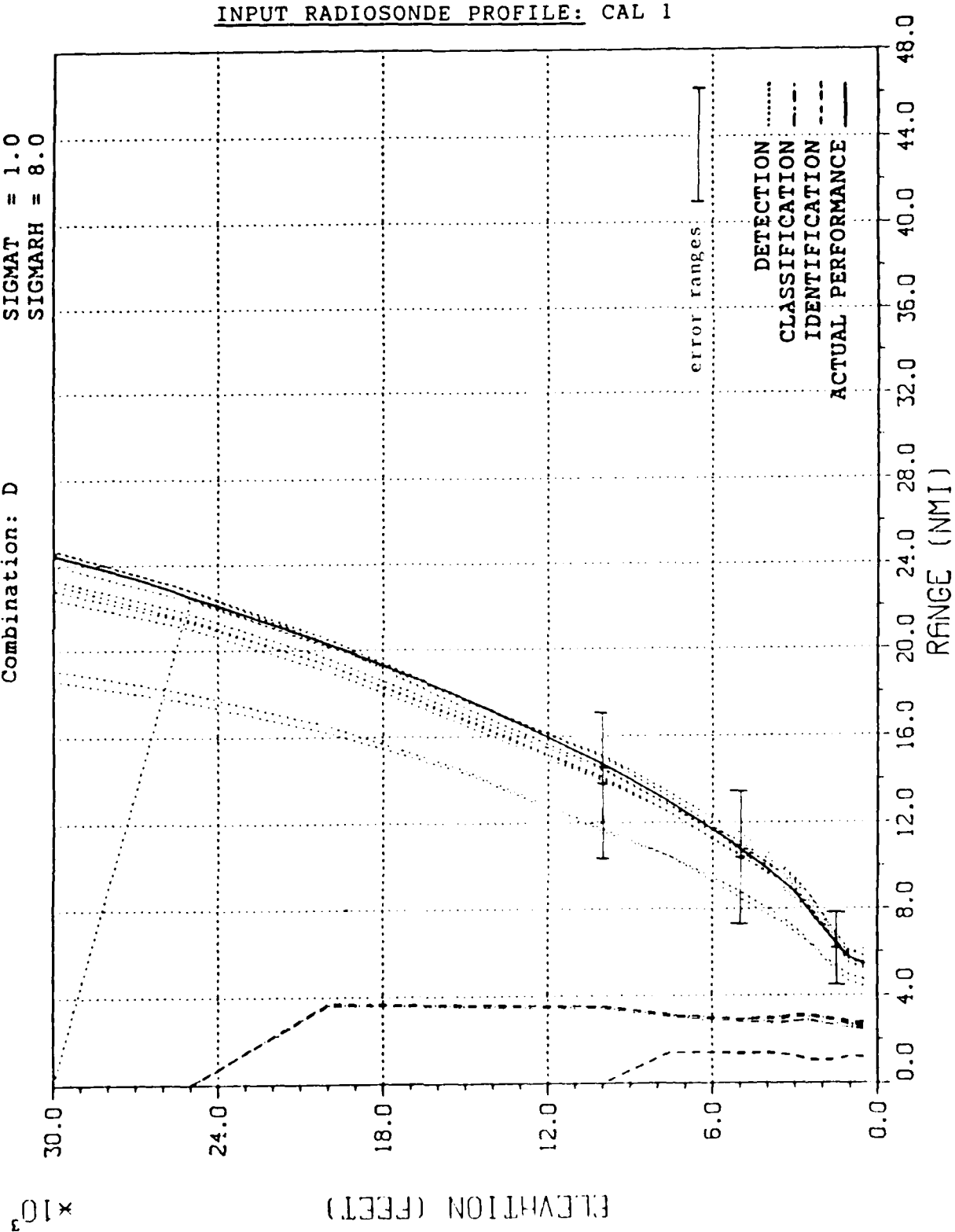
Combination: C



TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

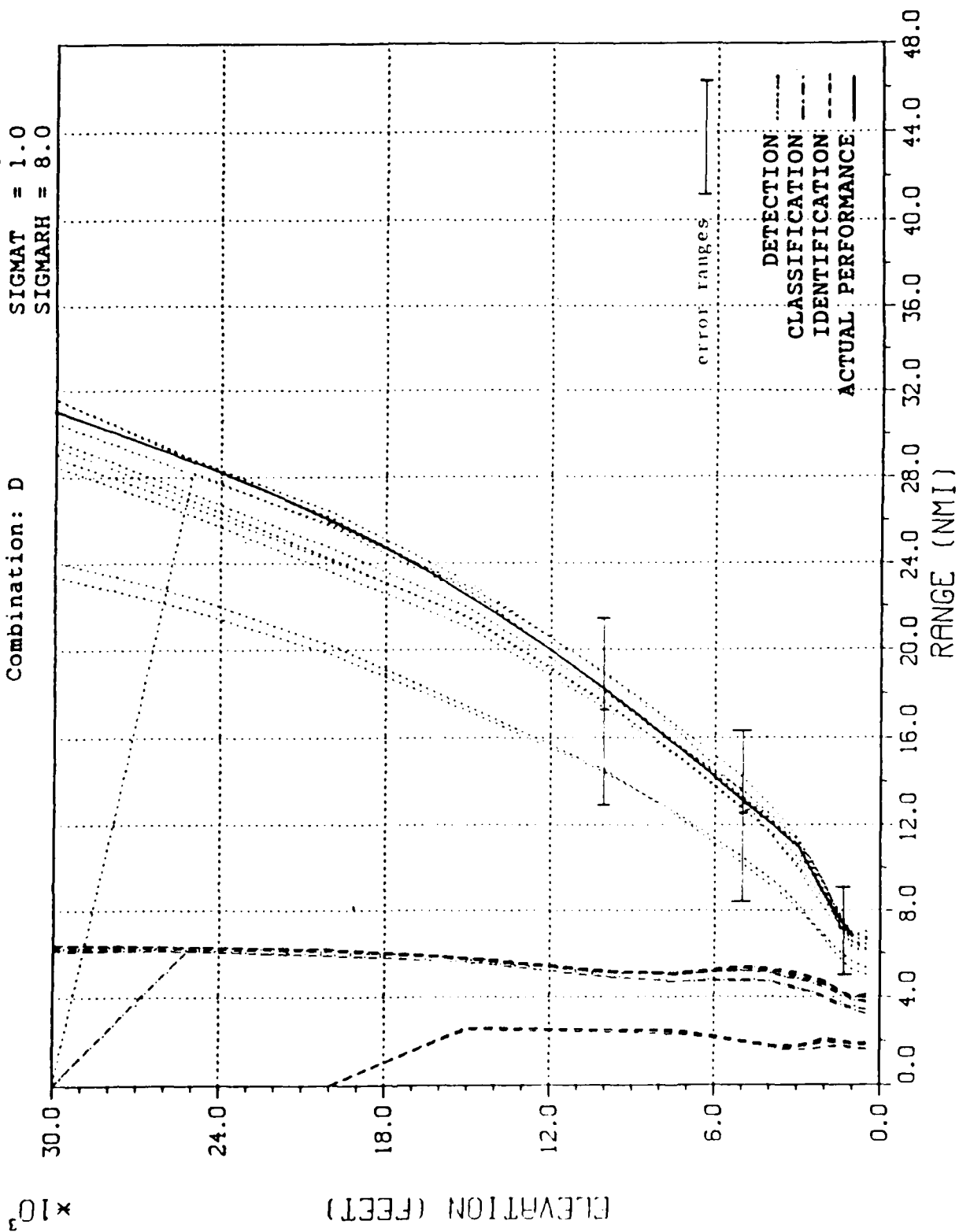
Combination: D



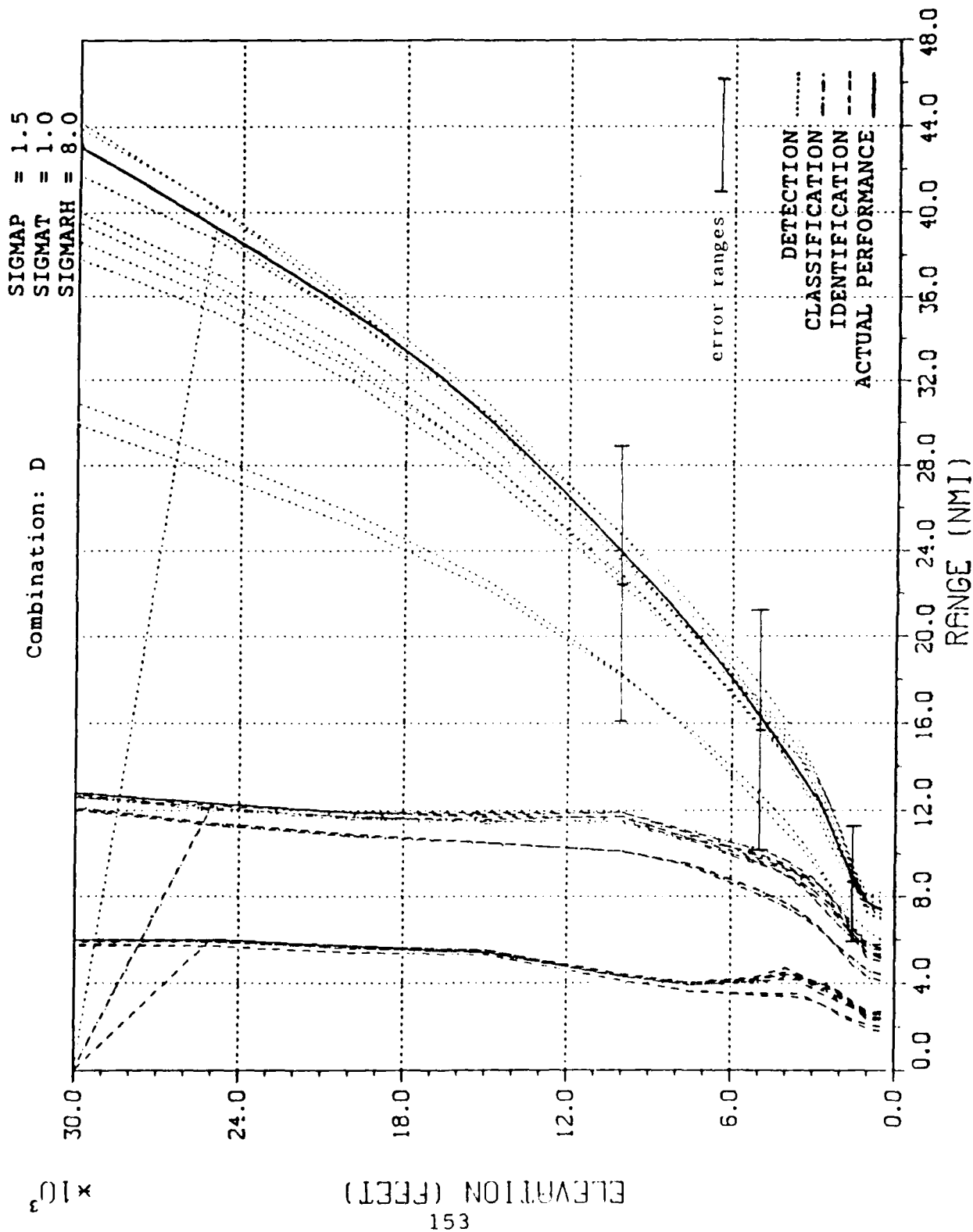
TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

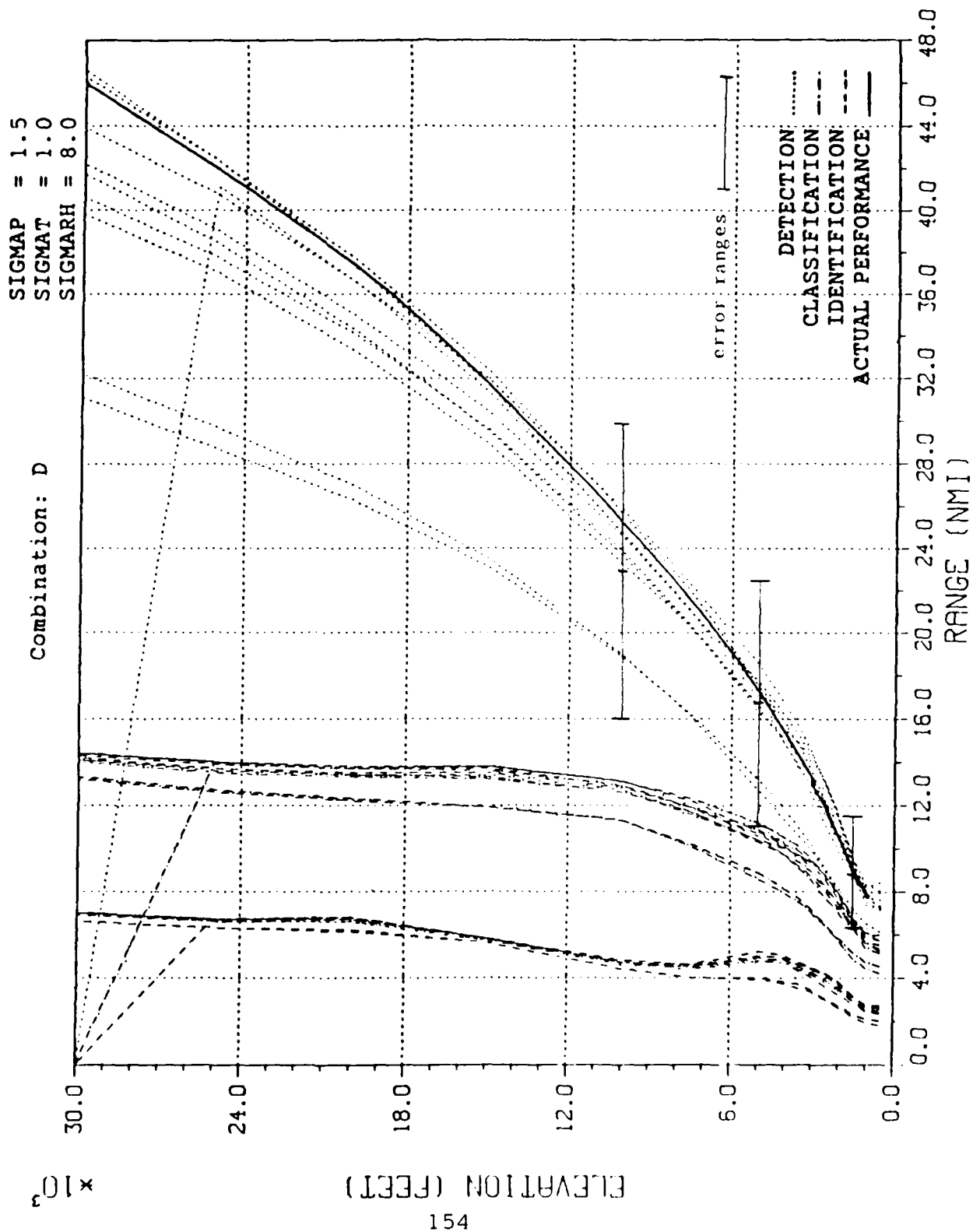
Combination: D



TARGET NUMBER 3



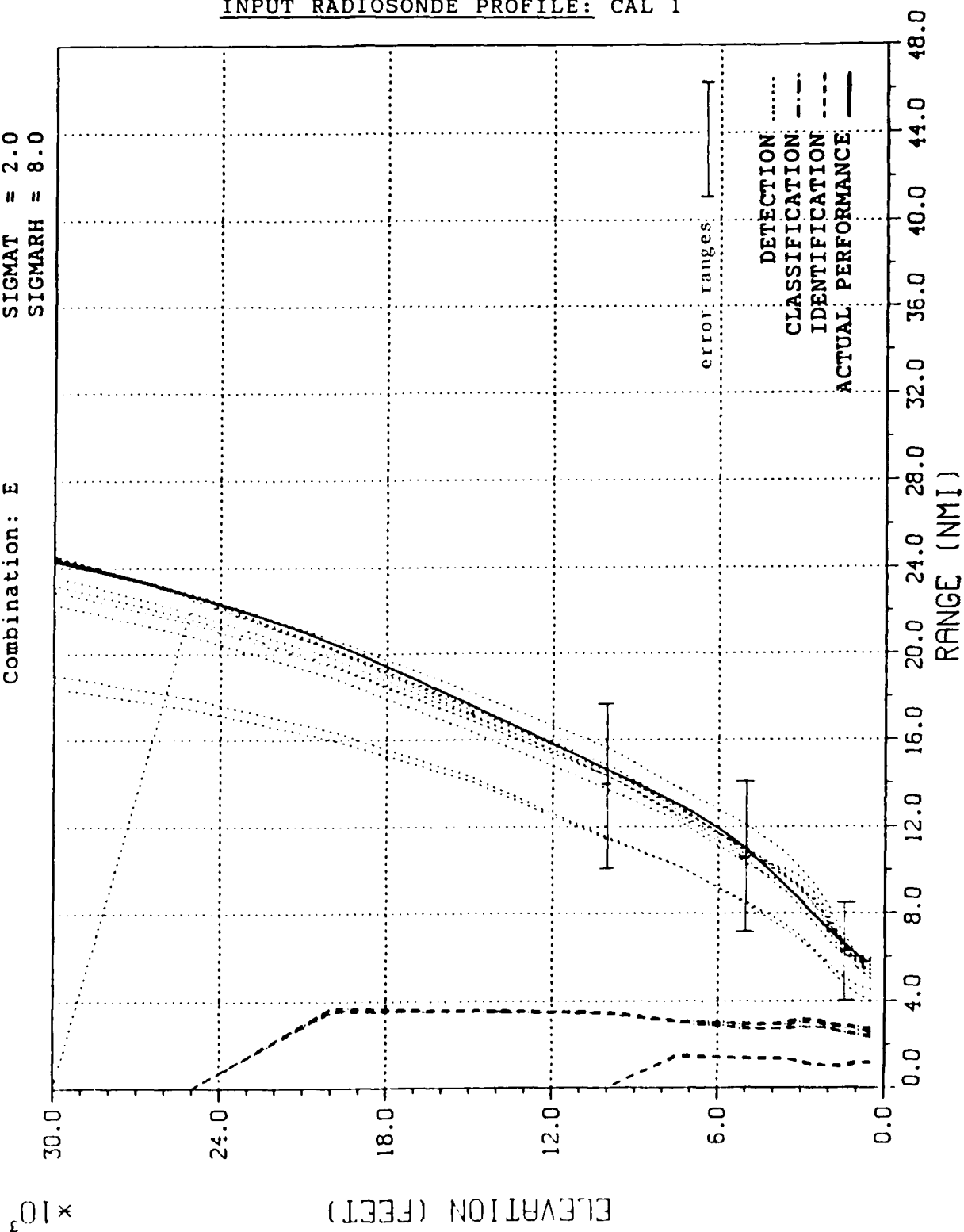
TARGET NUMBER 4



TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

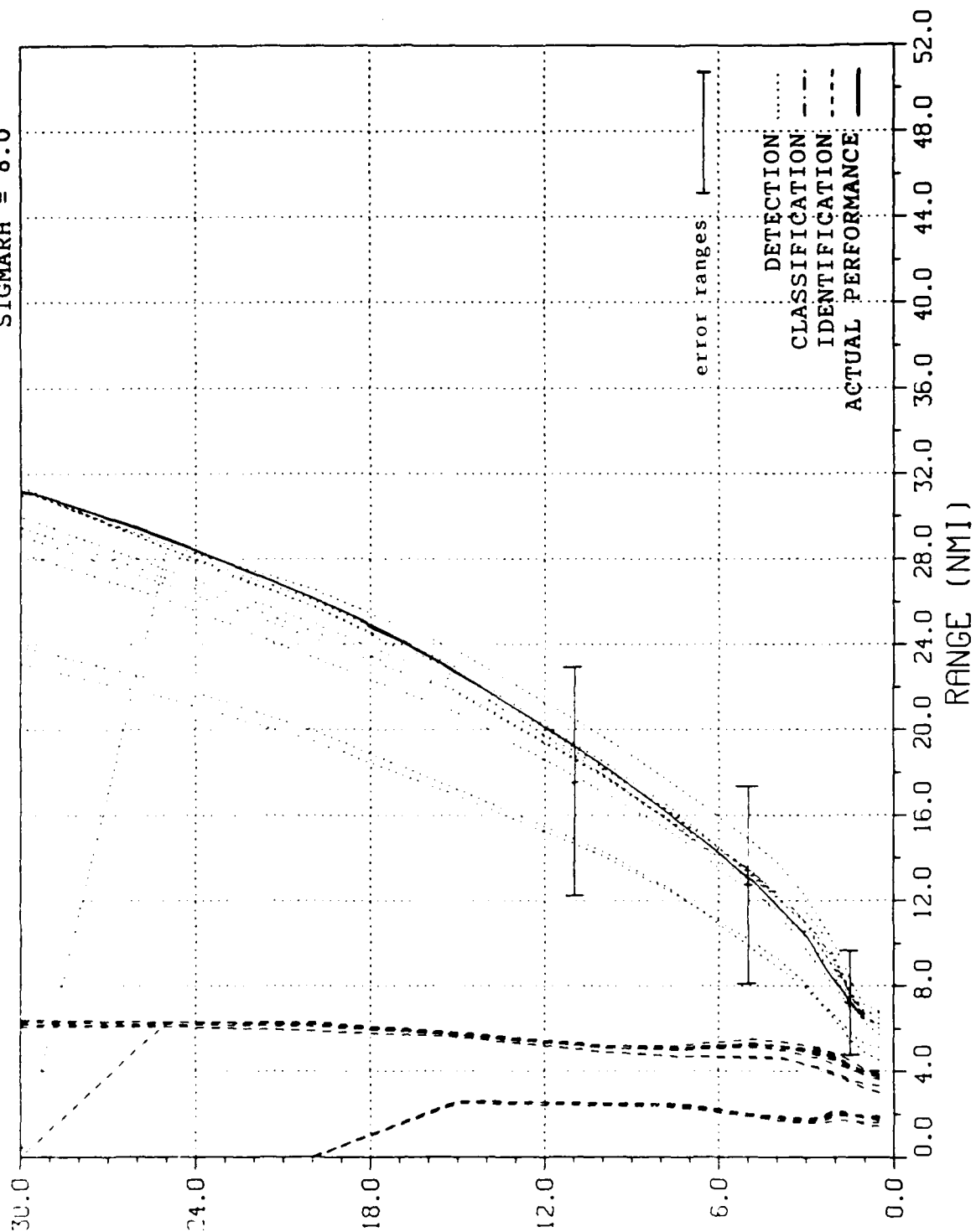
Combination: E



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: E



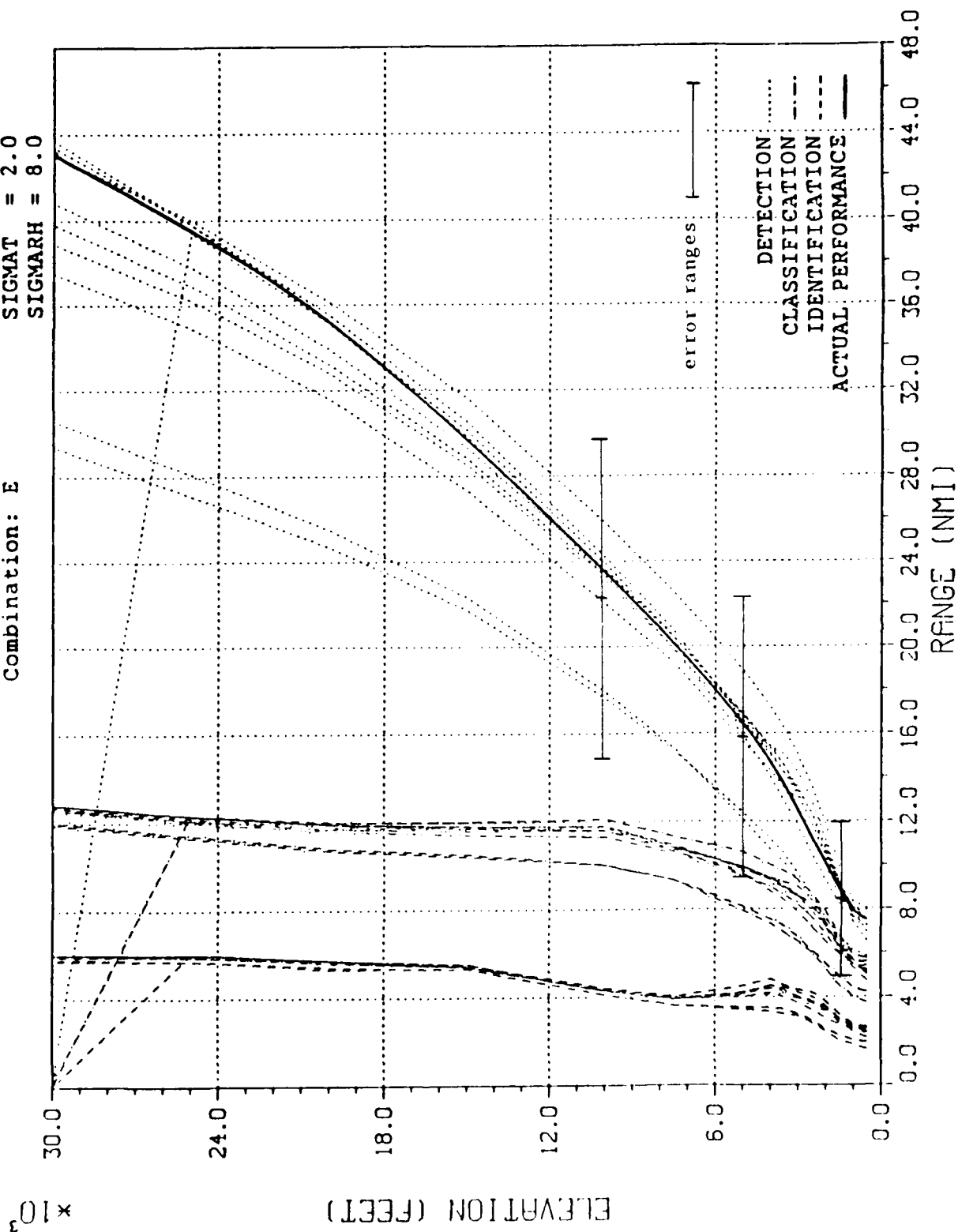
ELEVATION (FEET)

RANGE (NMI)

TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

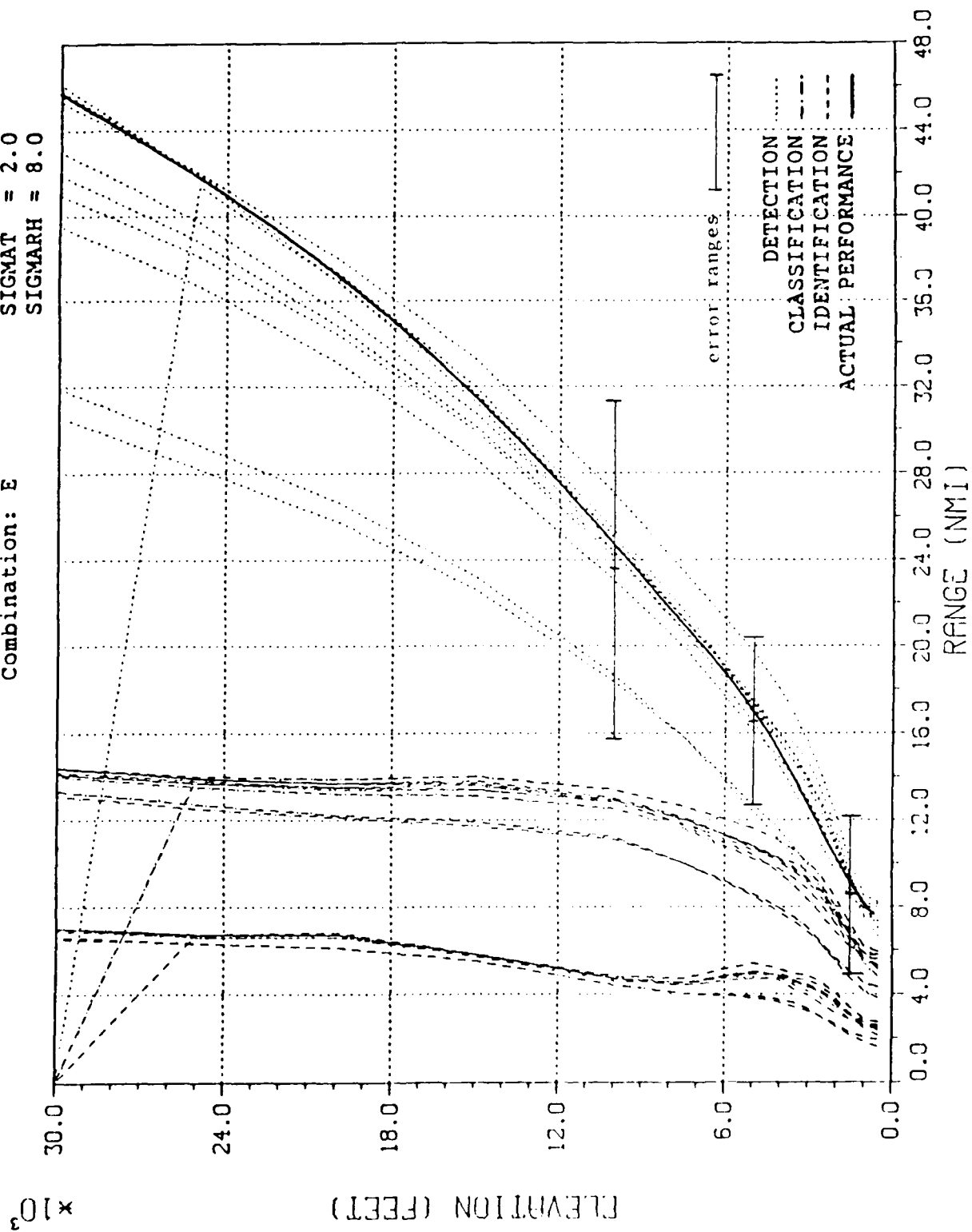
Combination: E



TARGET NUMBER 4

SIGMAP = 1.5
SIGMAT = 2.0
SIGMARH = 8.0

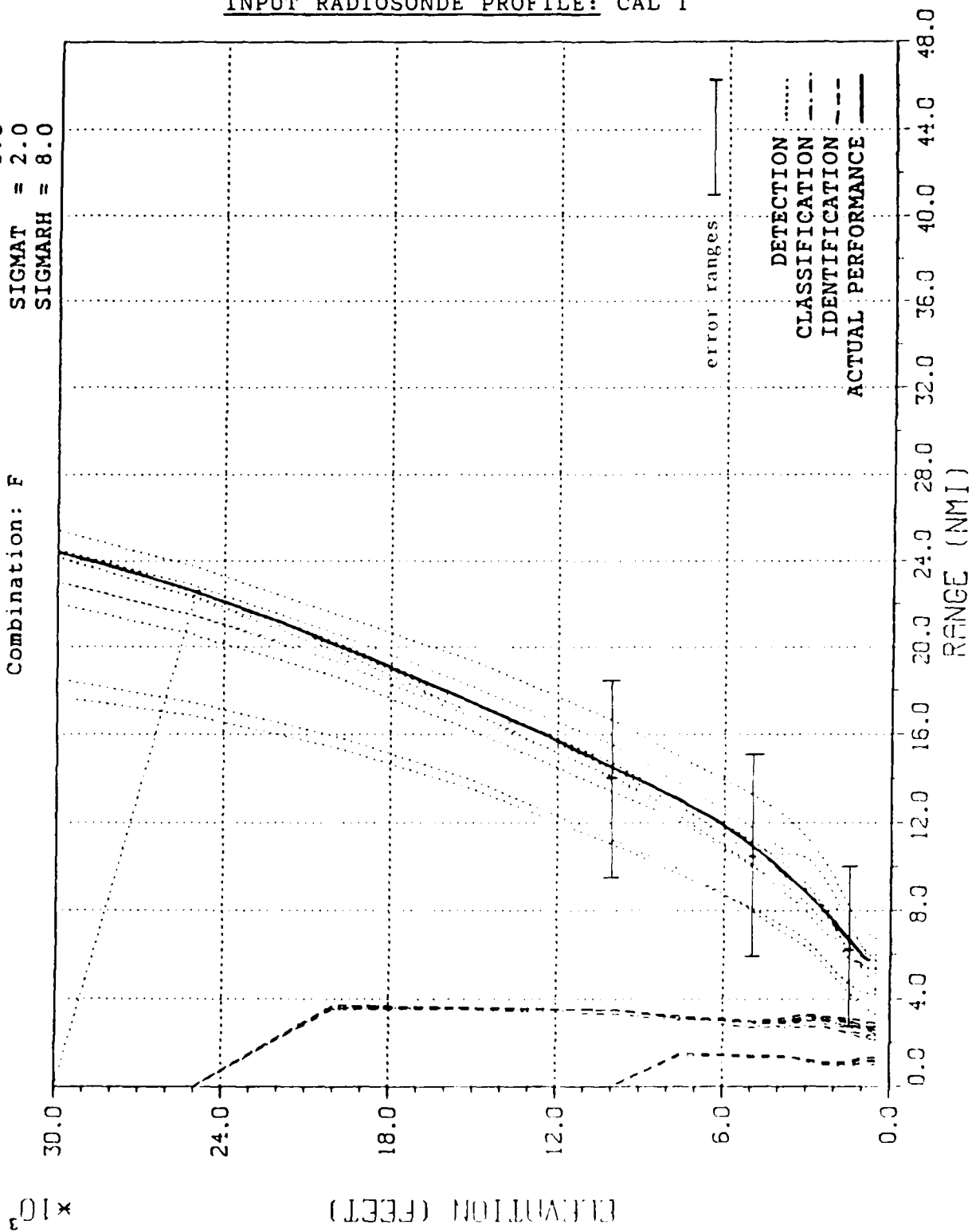
Combination: E



TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

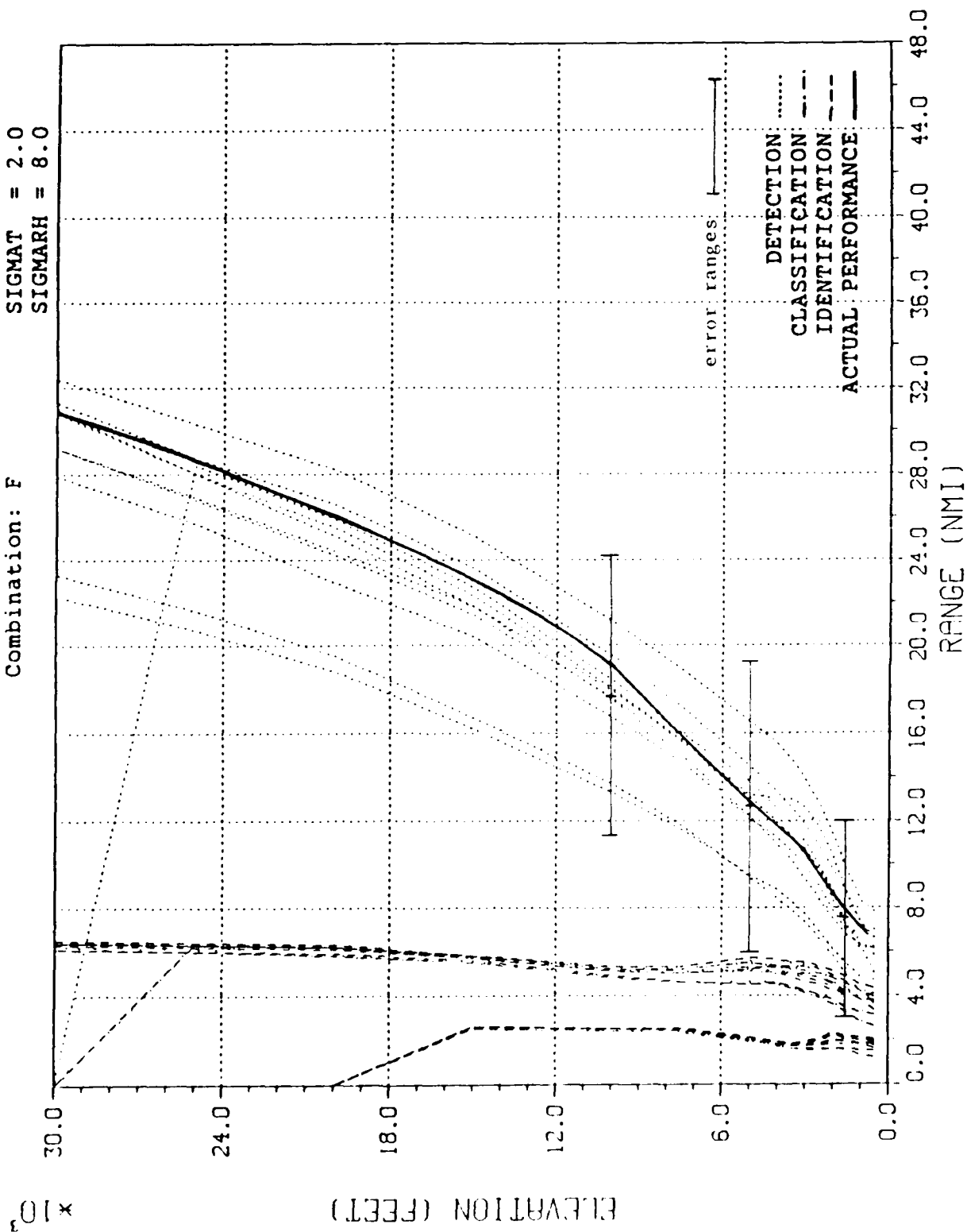
Combination: F



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

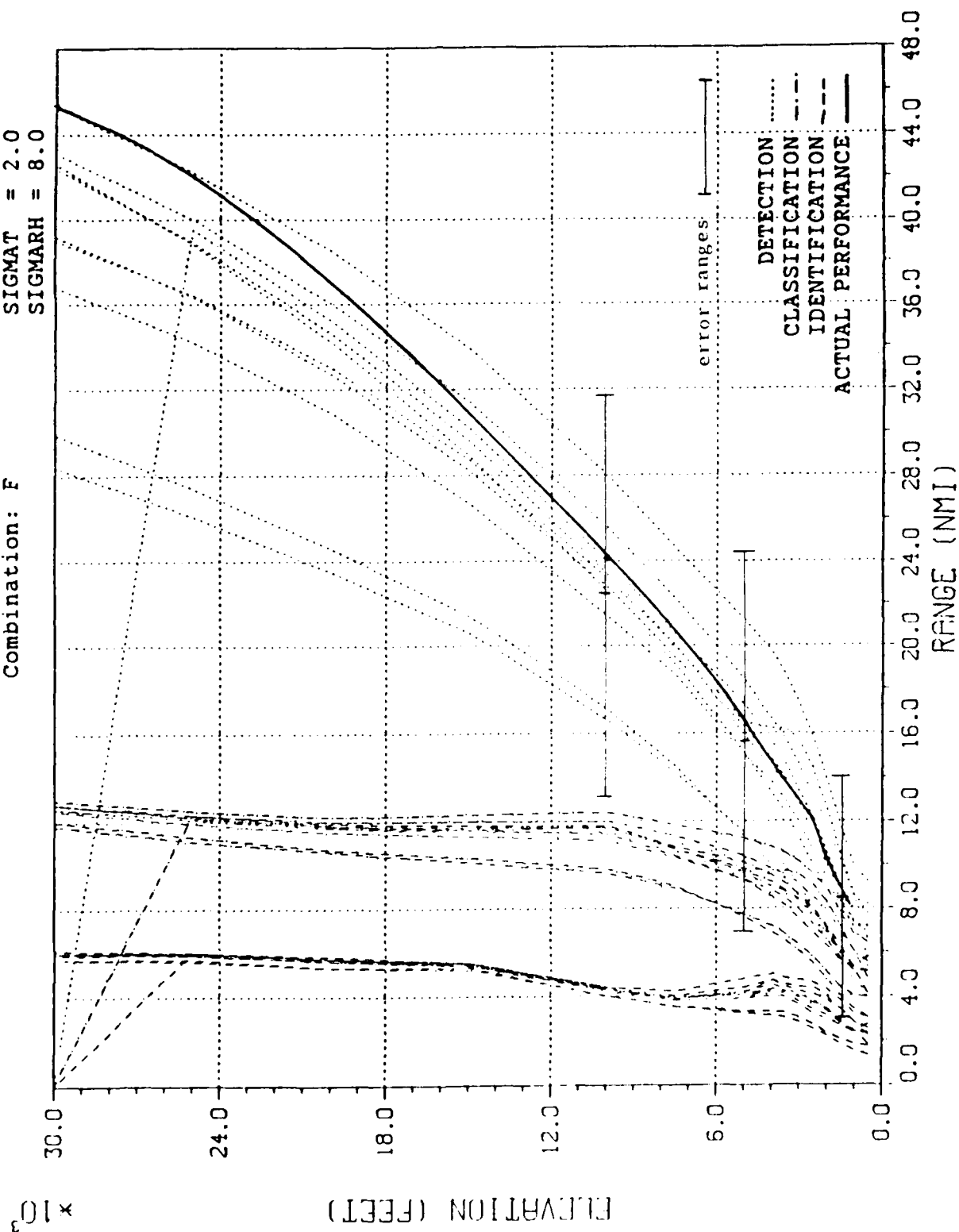
Combination: F



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

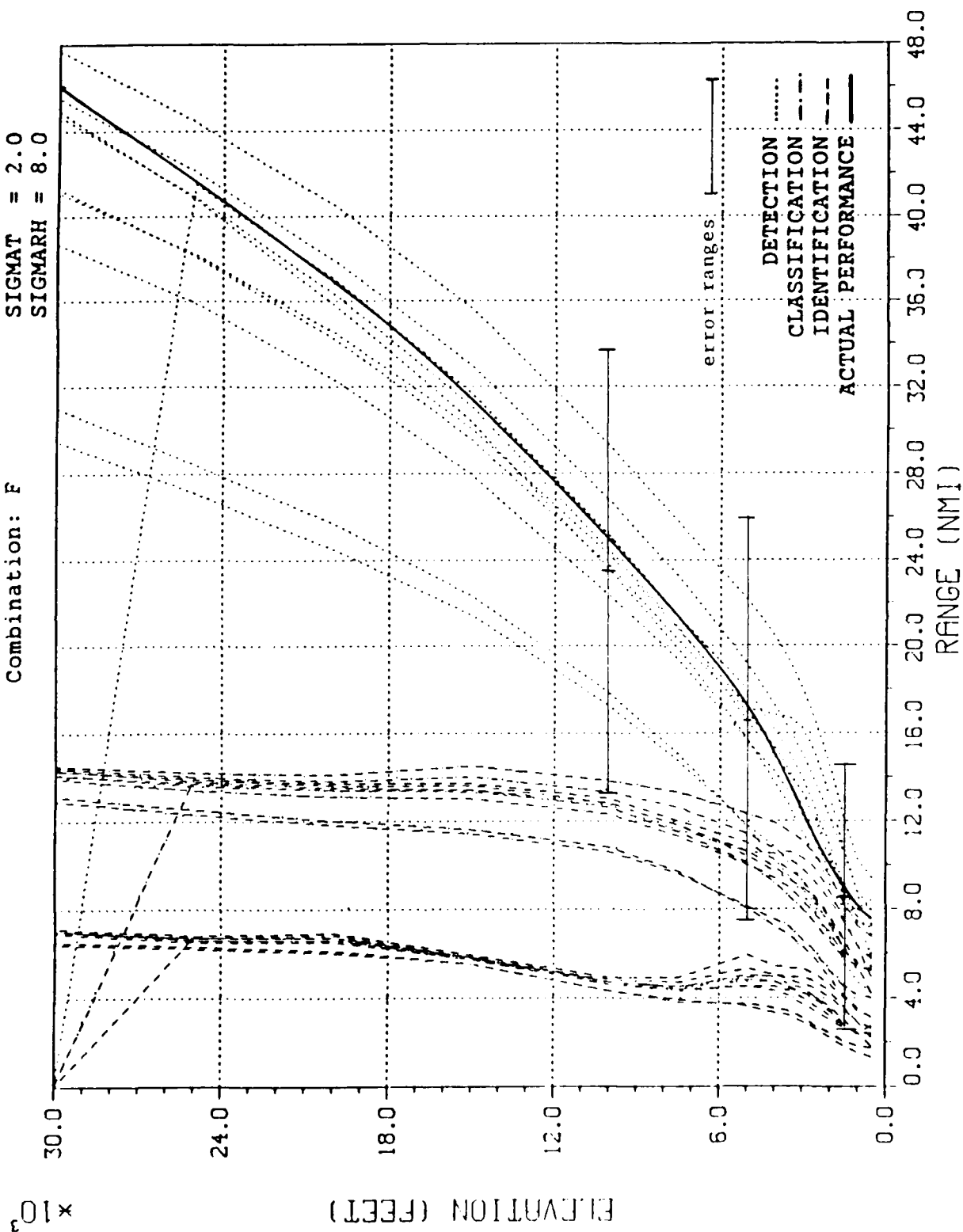
Combination: F



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

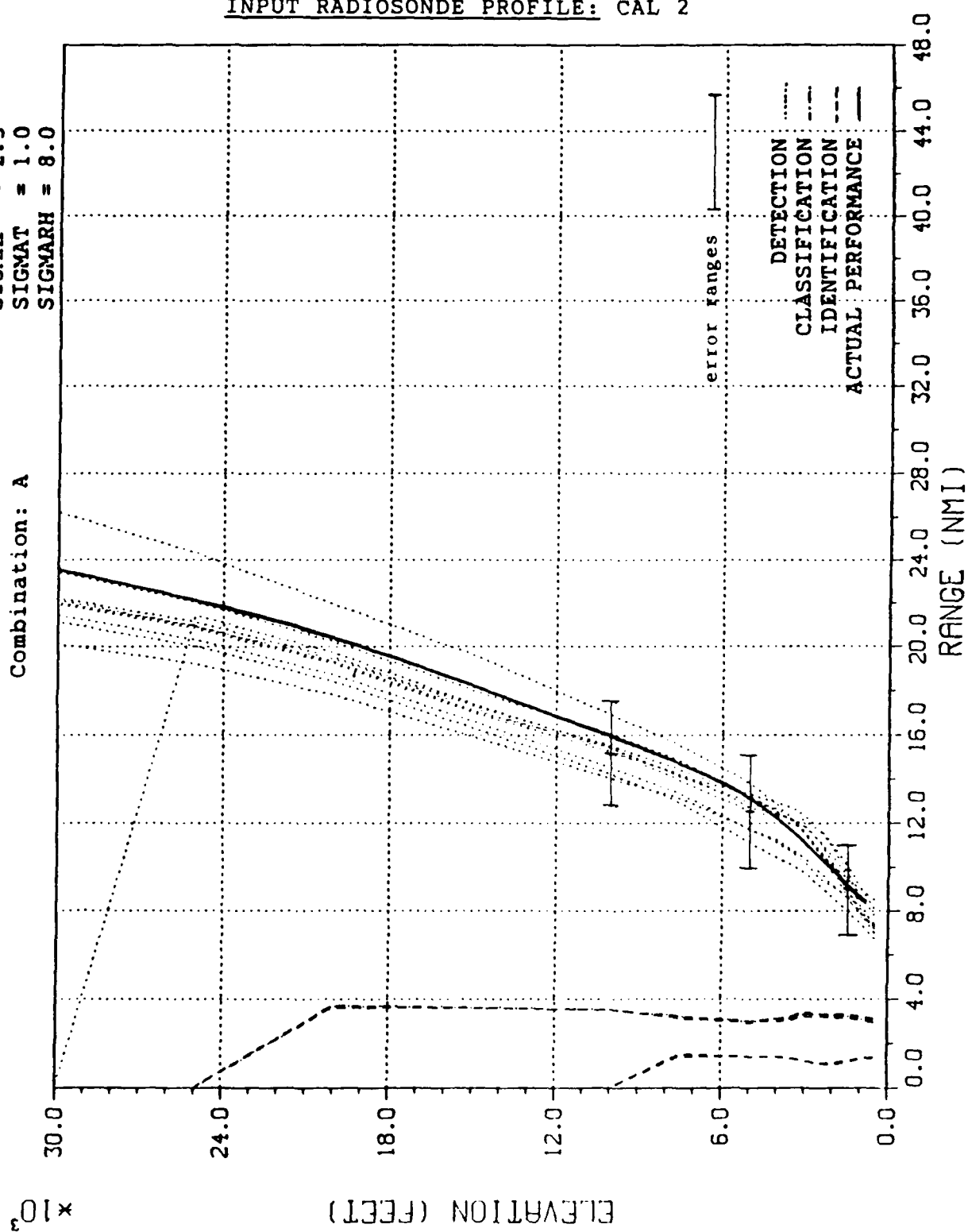
Combination: F



TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

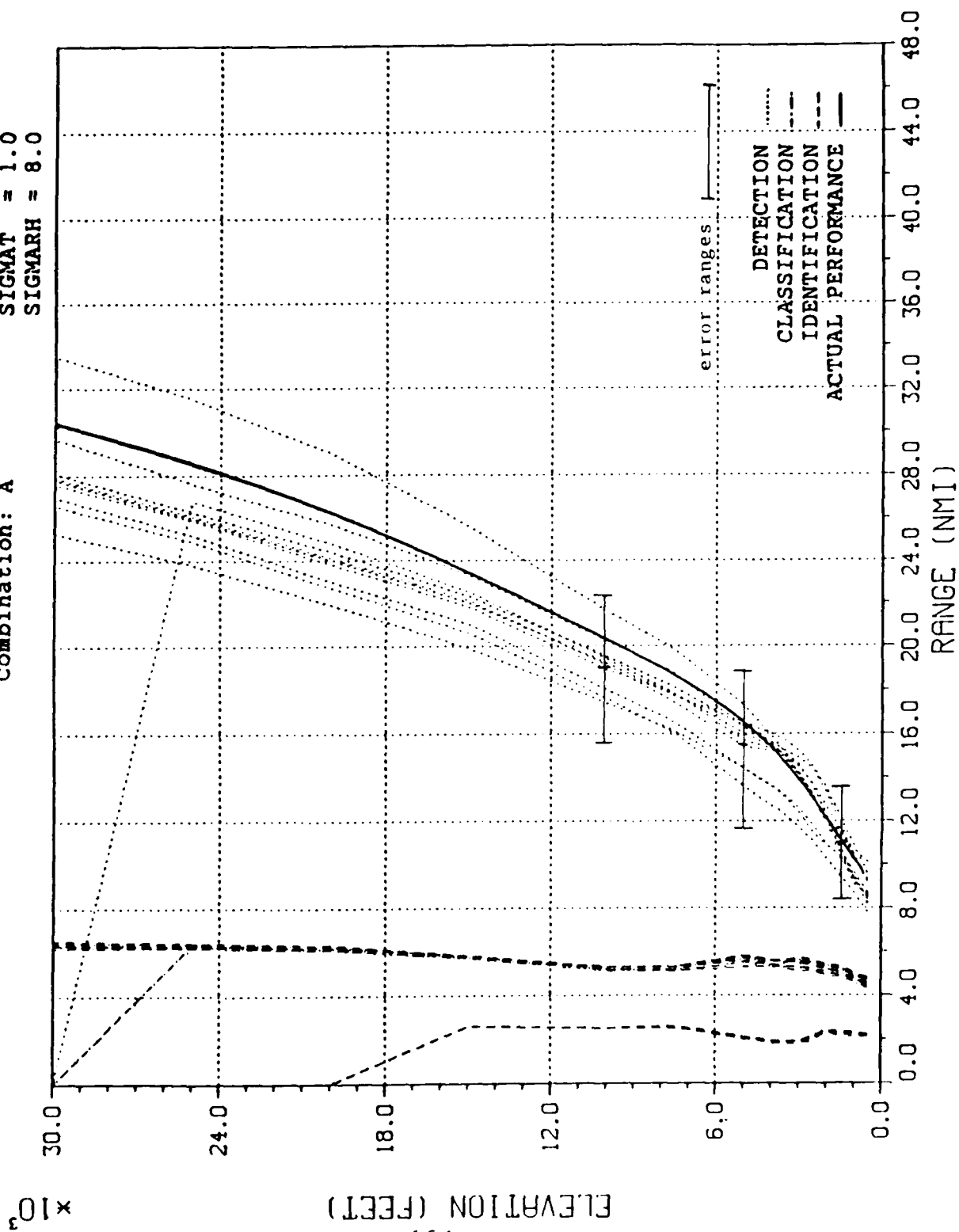
Combination: A



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

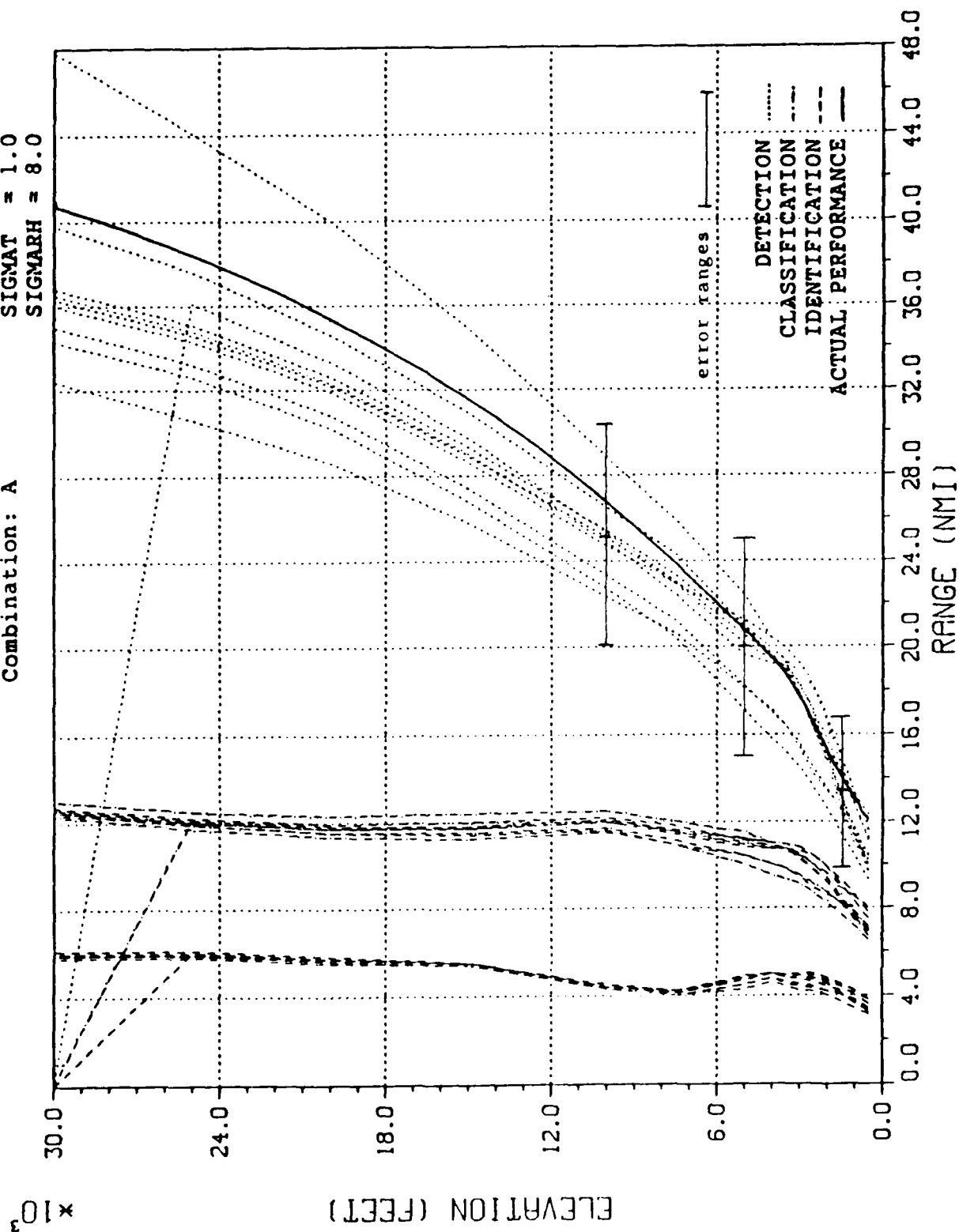
Combination: A



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

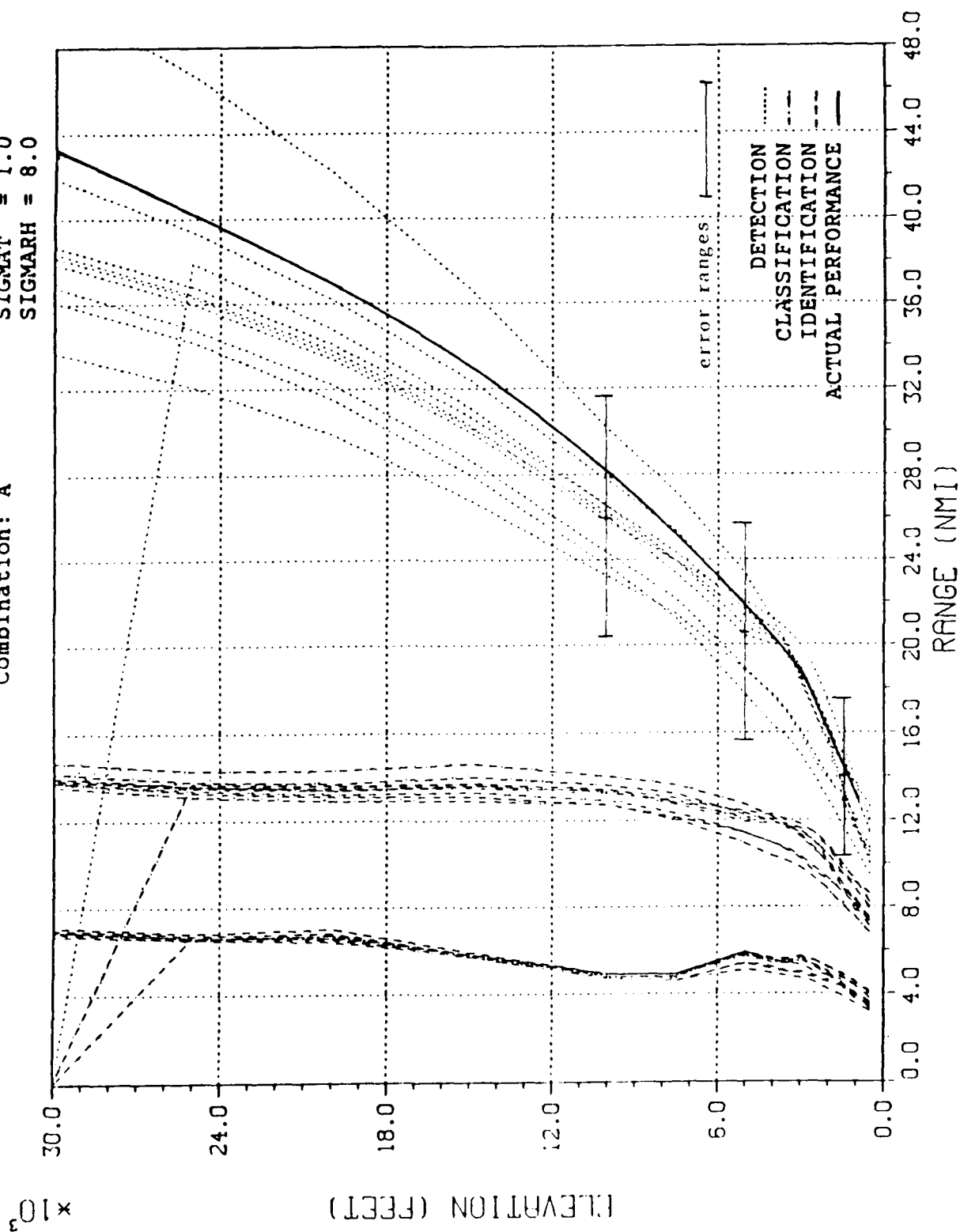
Combination: A



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

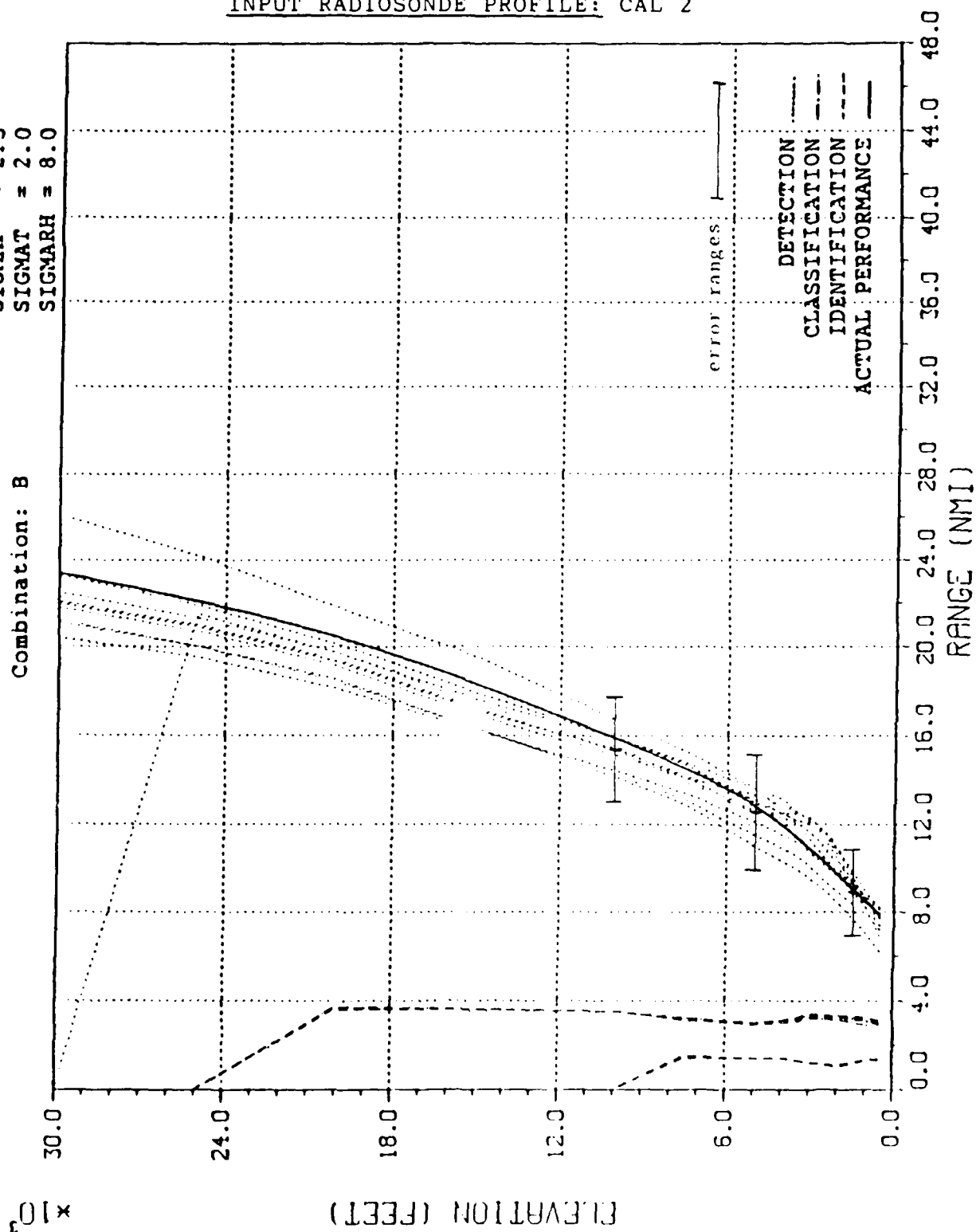
Combination: A



TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

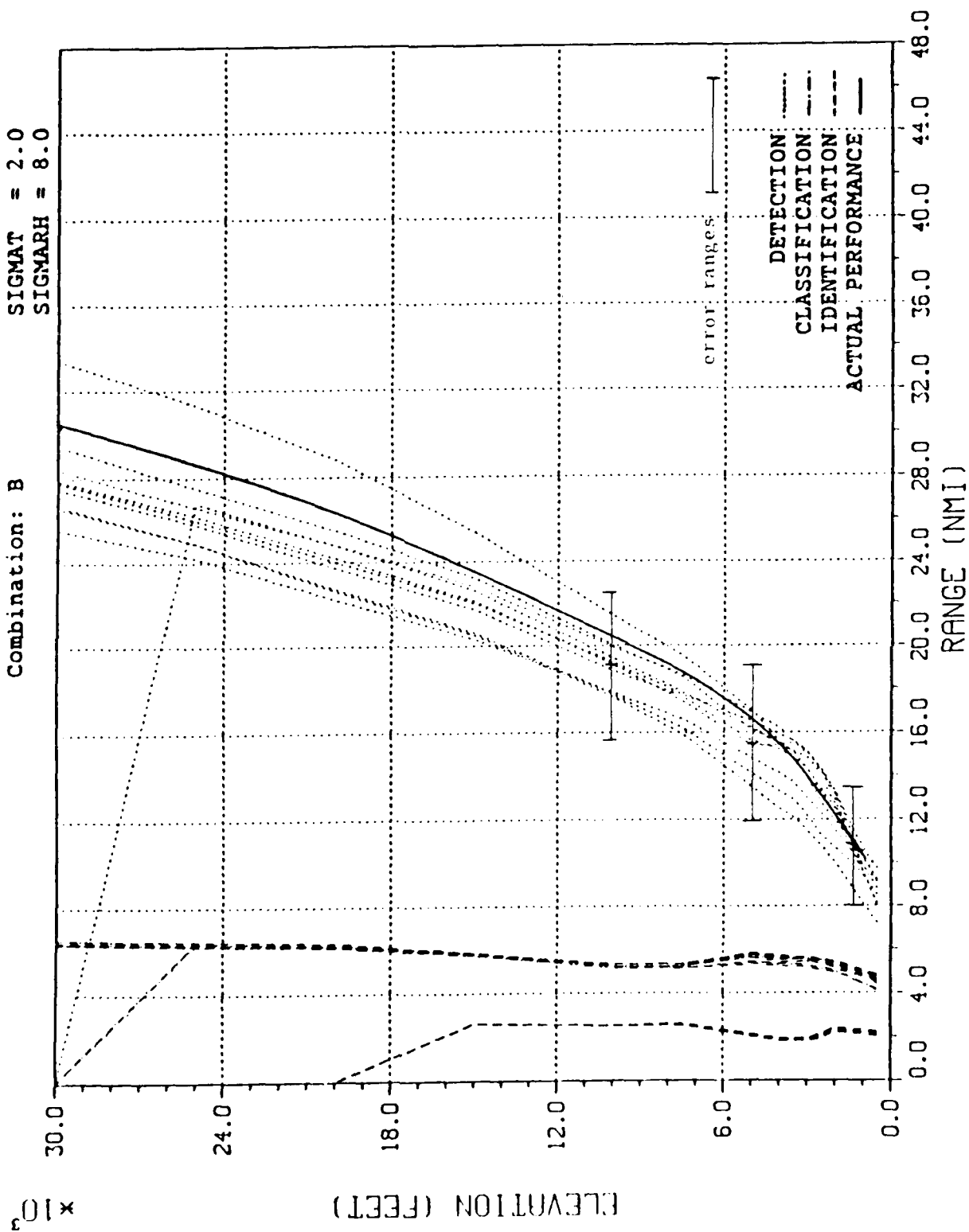
Combination: B



TARGET NUMBER 2

SIGMAP = 2.5
SIGMAT = 2.0
SIGMARH = 8.0

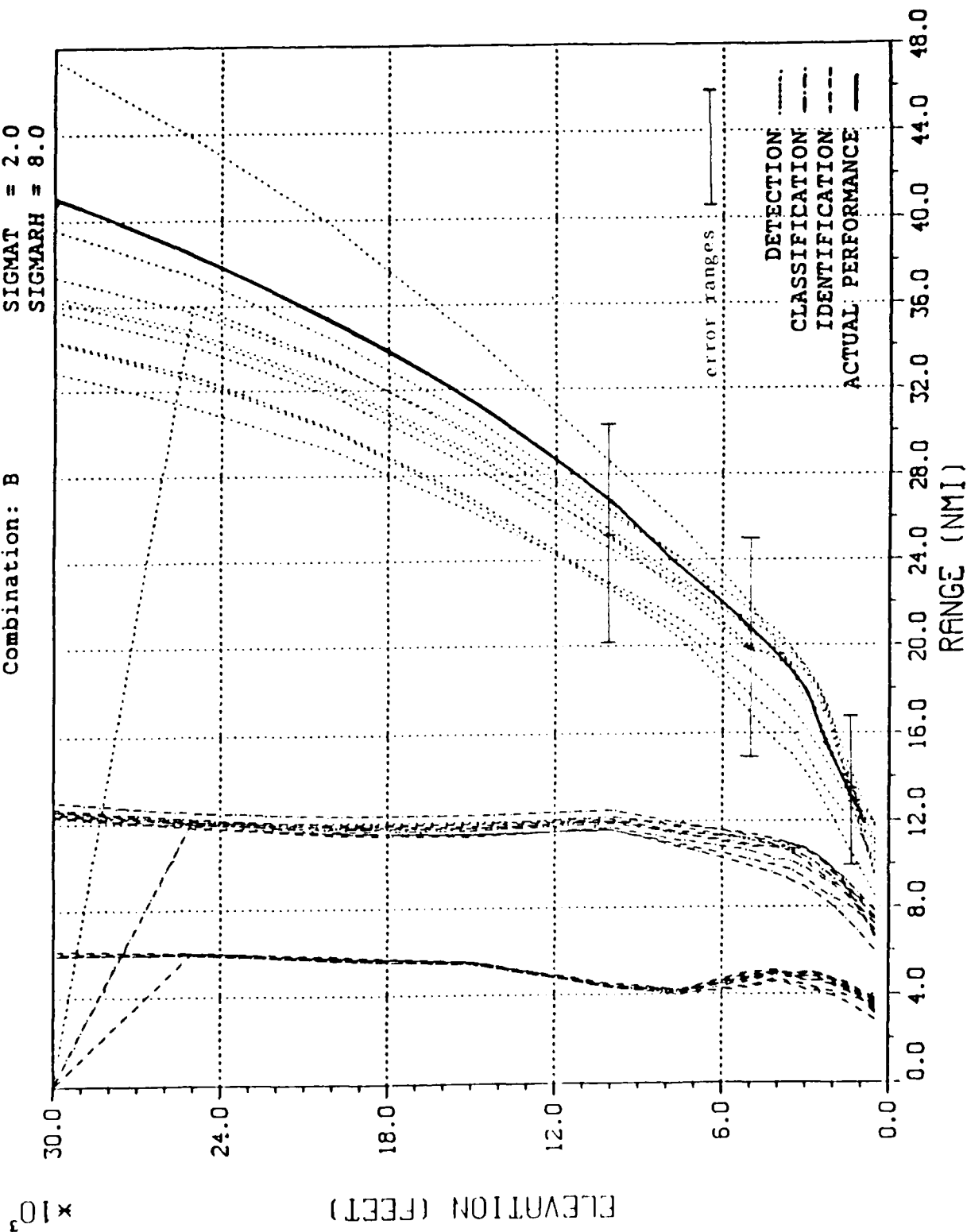
Combination: B



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

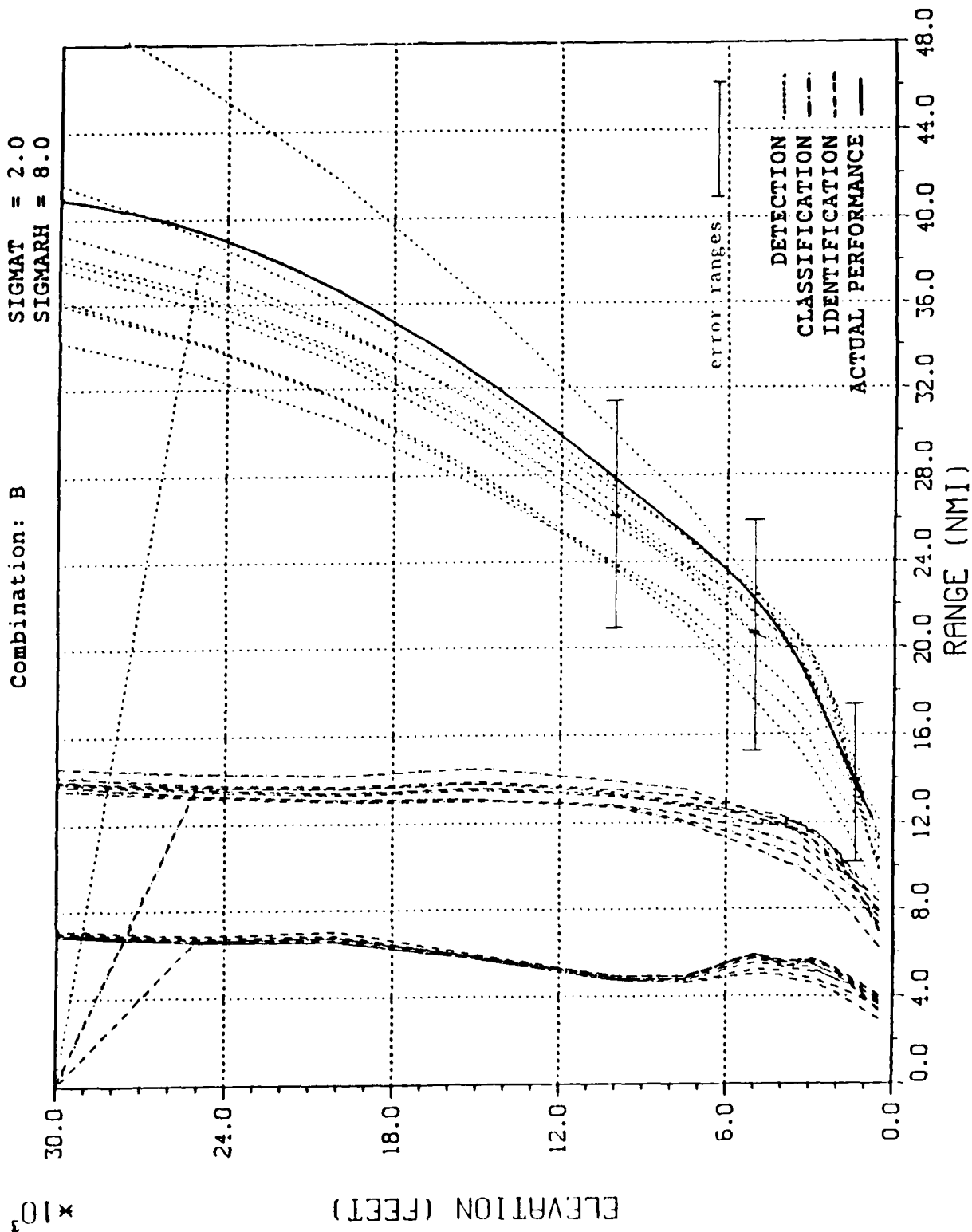
Combination: B



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: B

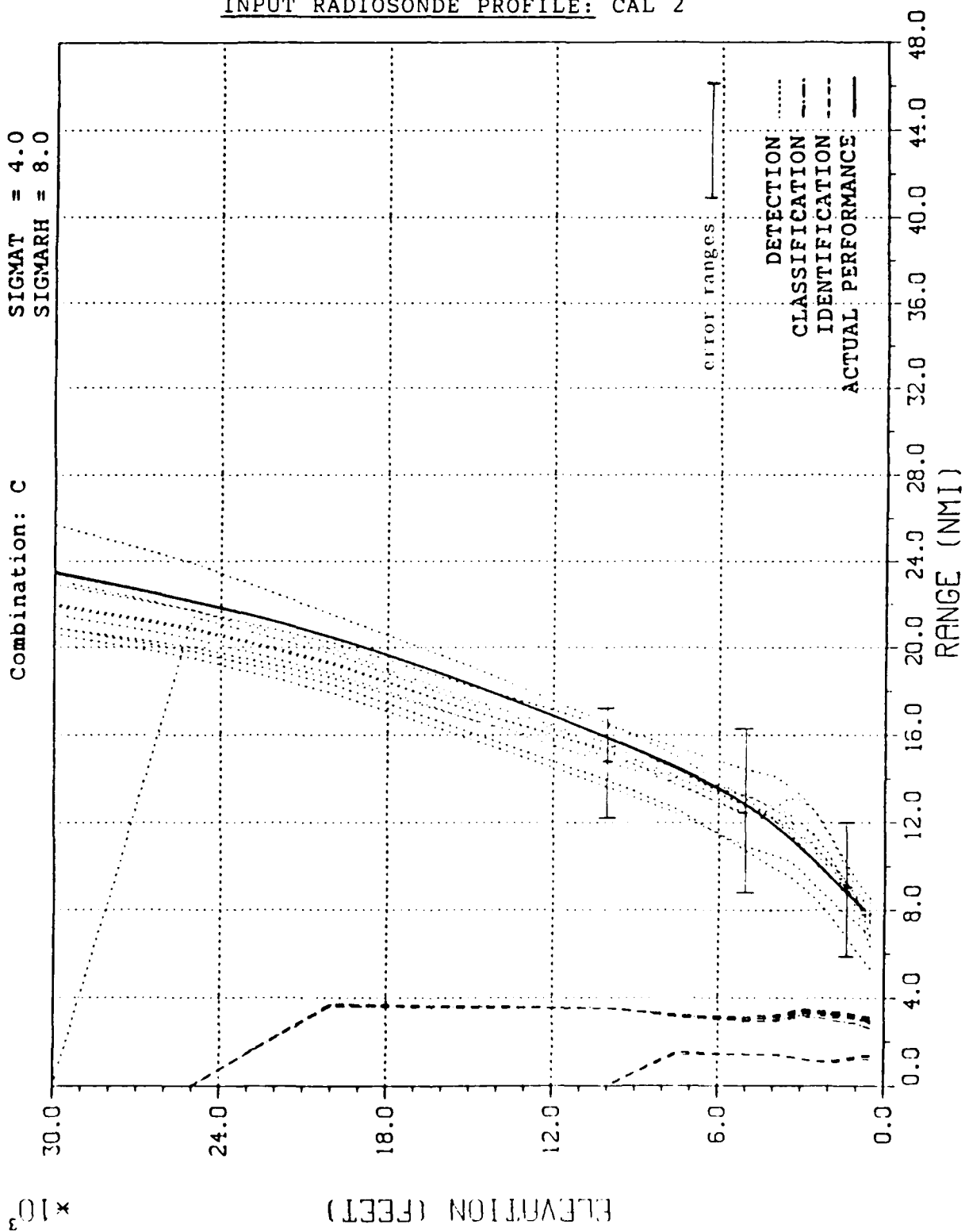


INPUT RADIOSONDE PROFILE: CAL 2

TARGET NUMBER 1

SIGMAP = 2.5
SIGMAT = 4.0
SIGMARH = 8.0

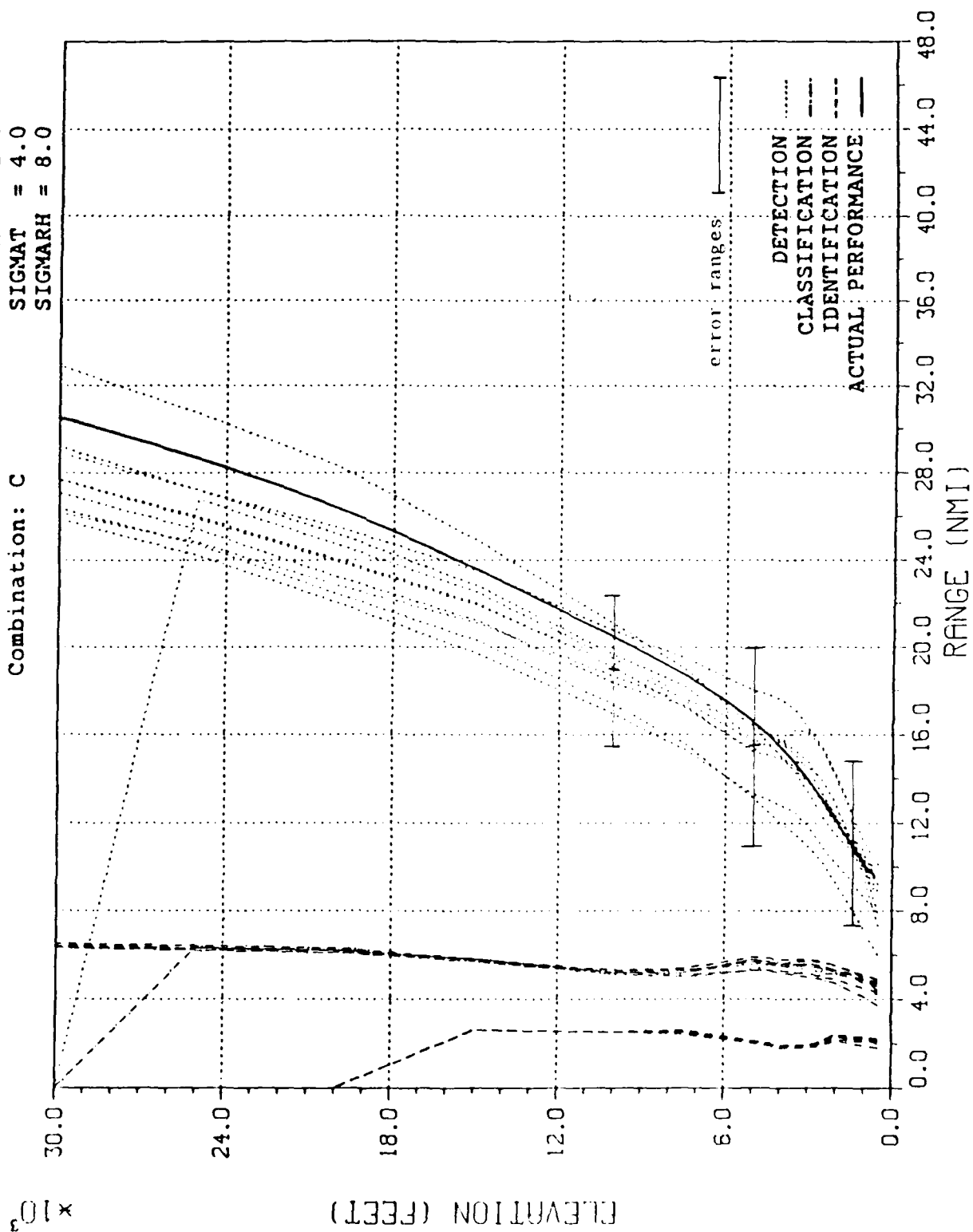
Combination: C



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

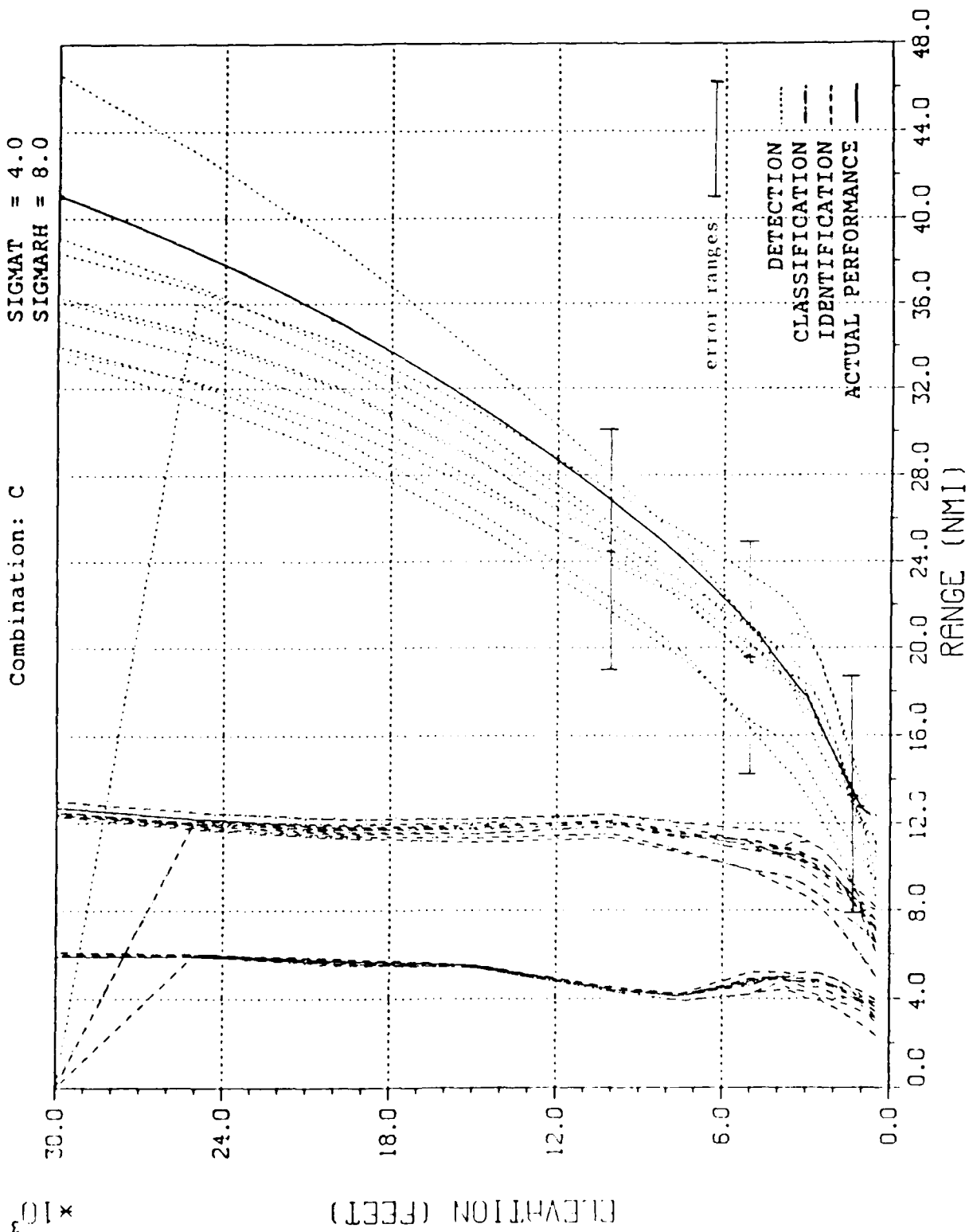
Combination: C



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

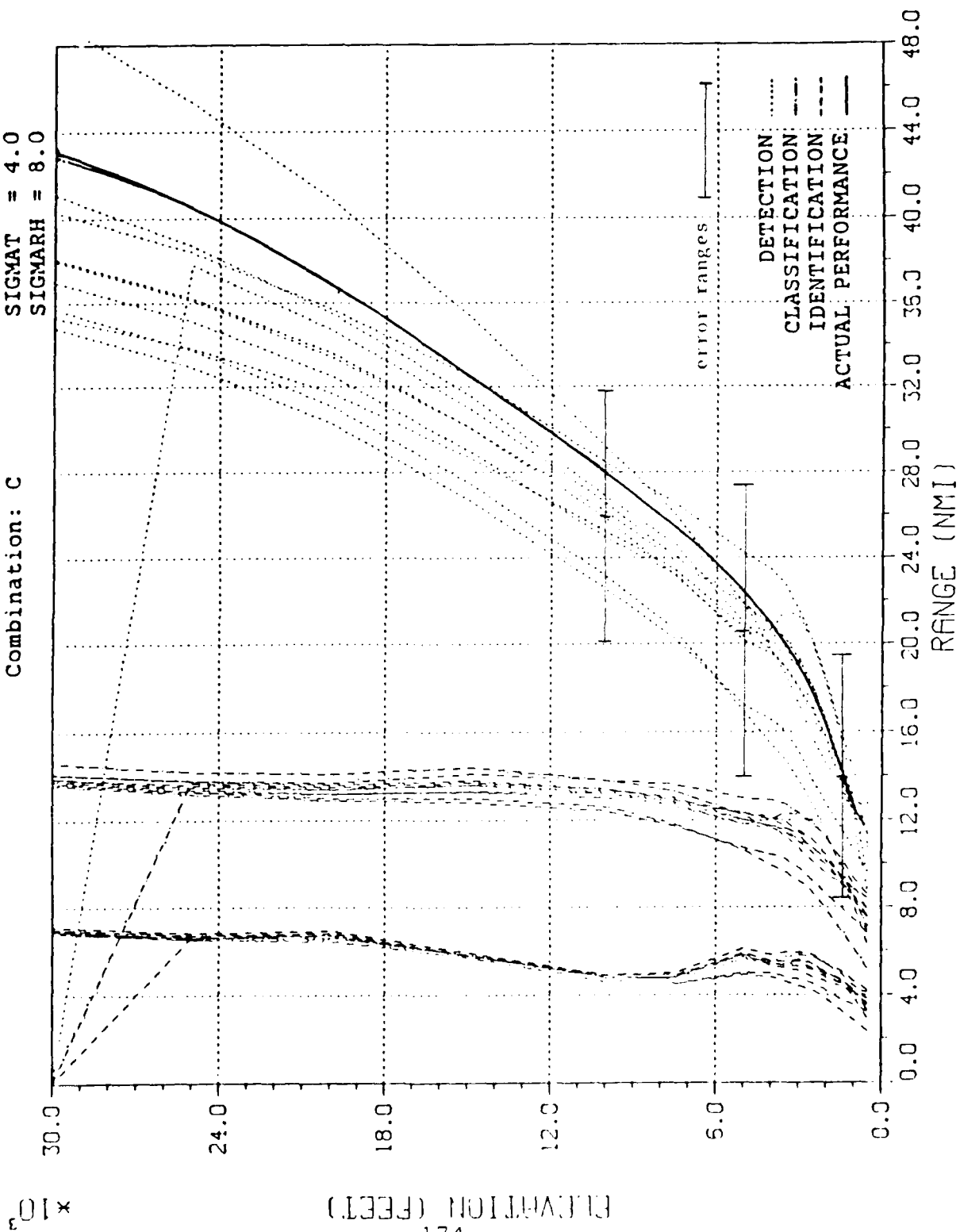
Combination: C



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

Combination: C

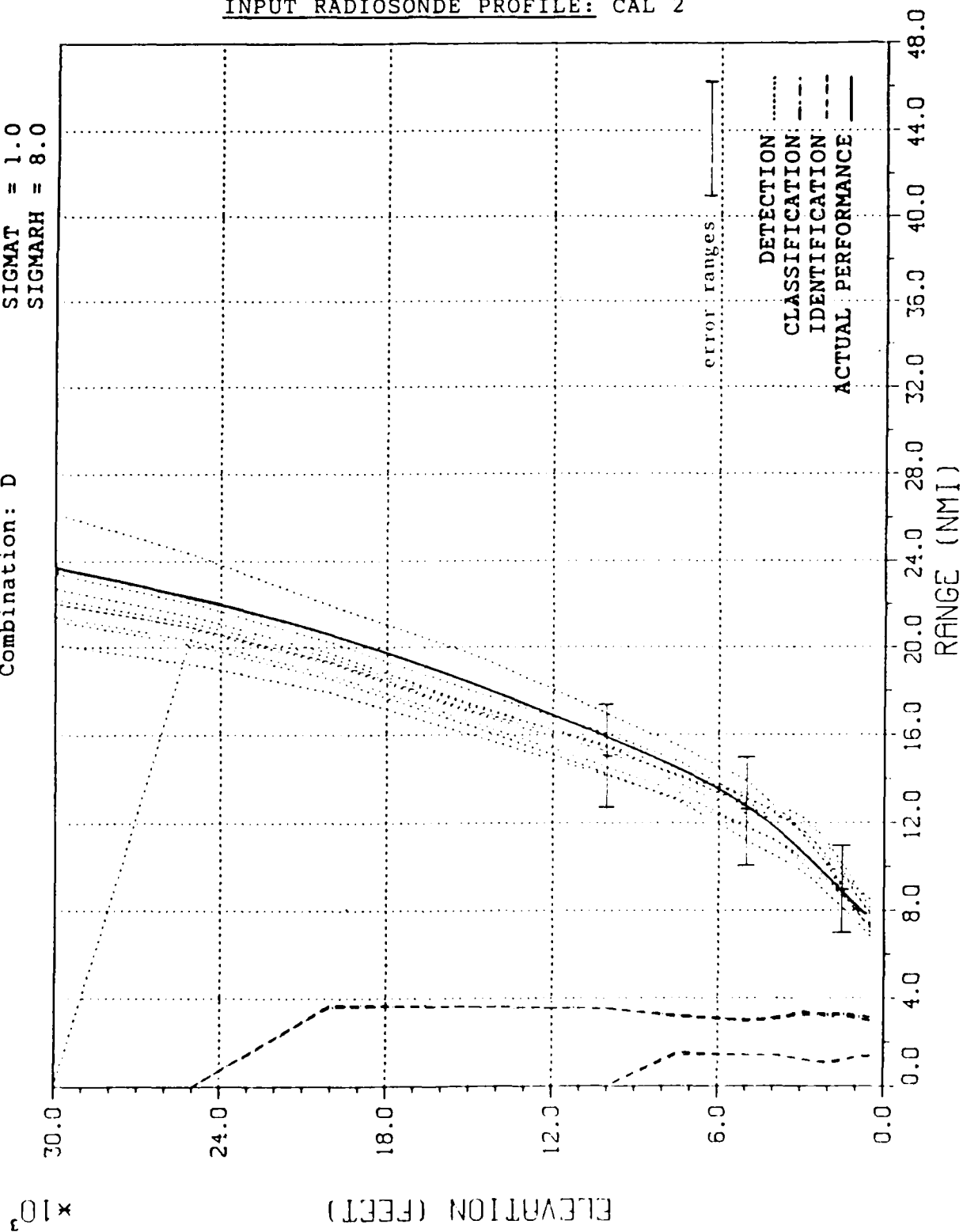


TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: D

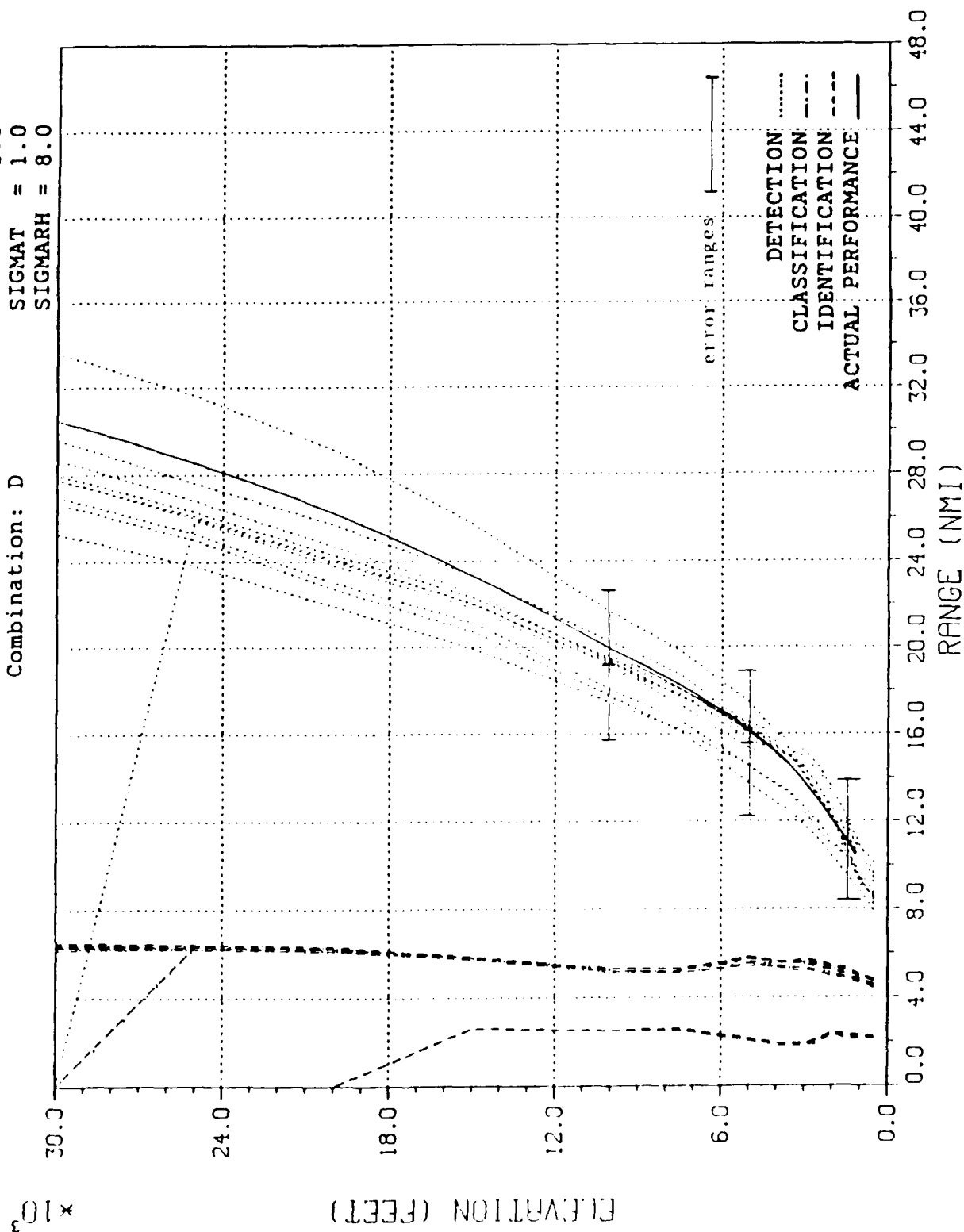
INPUT RADIOSONDE PROFILE: CAL 2



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

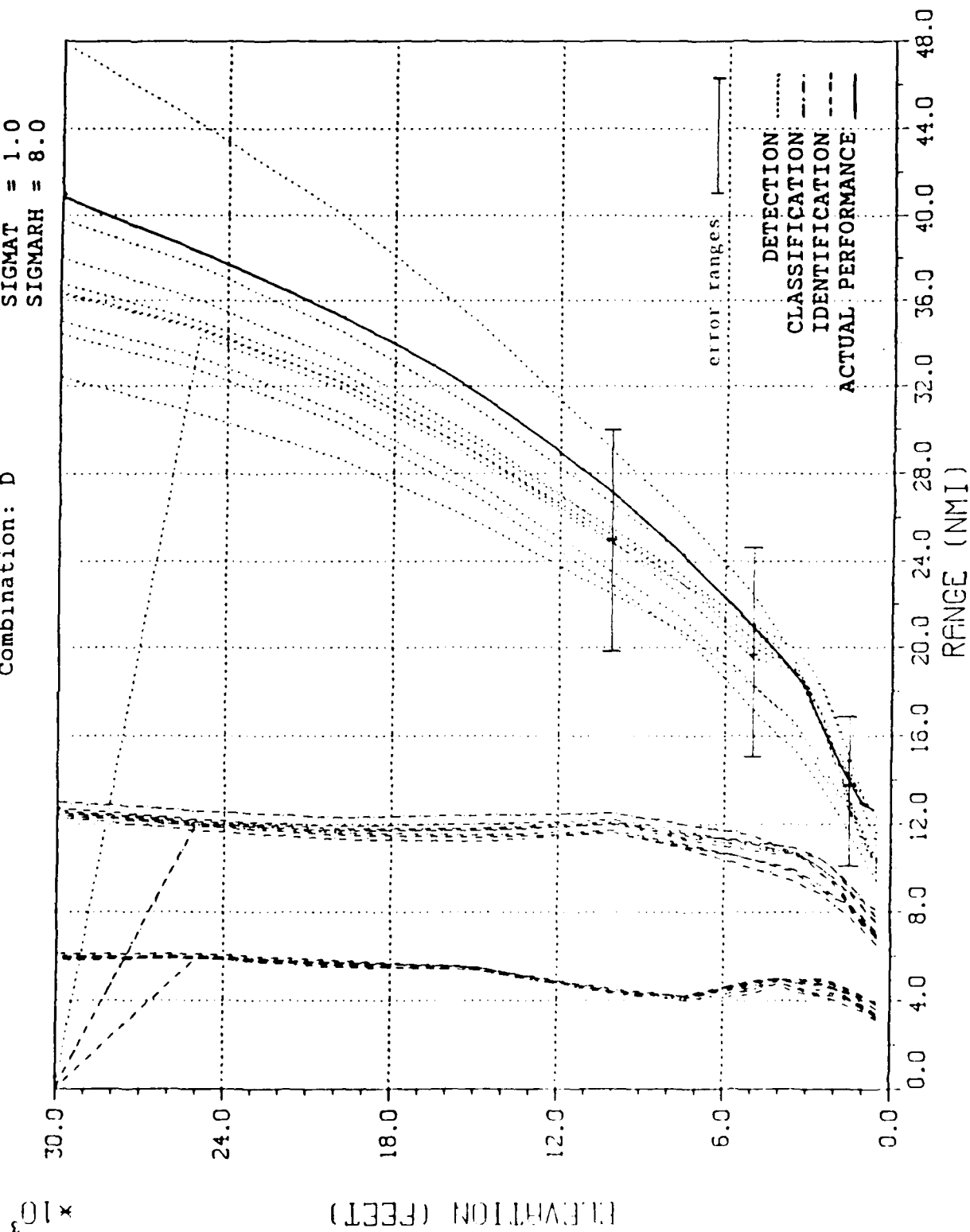
Combination: D



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

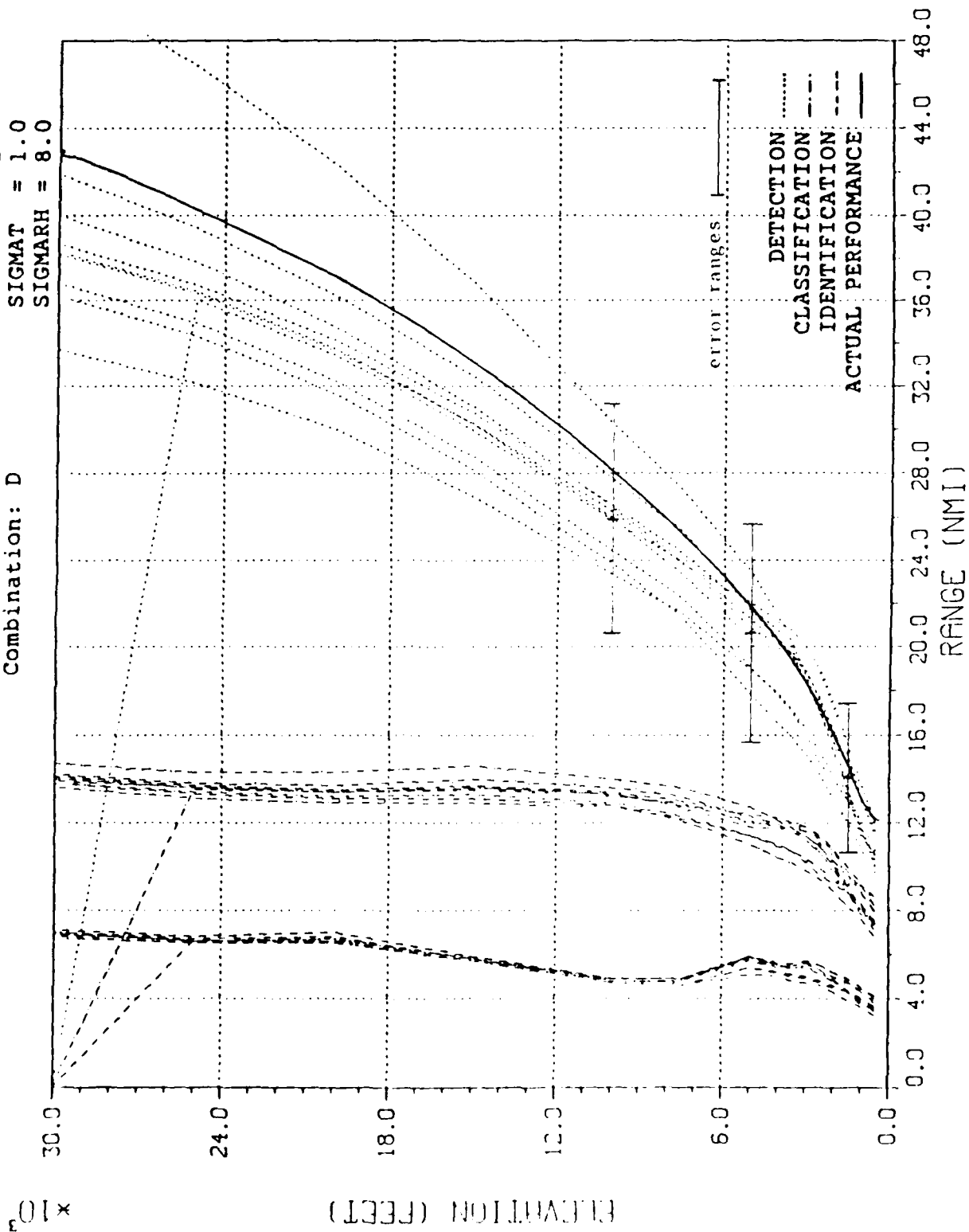
Combination: D



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

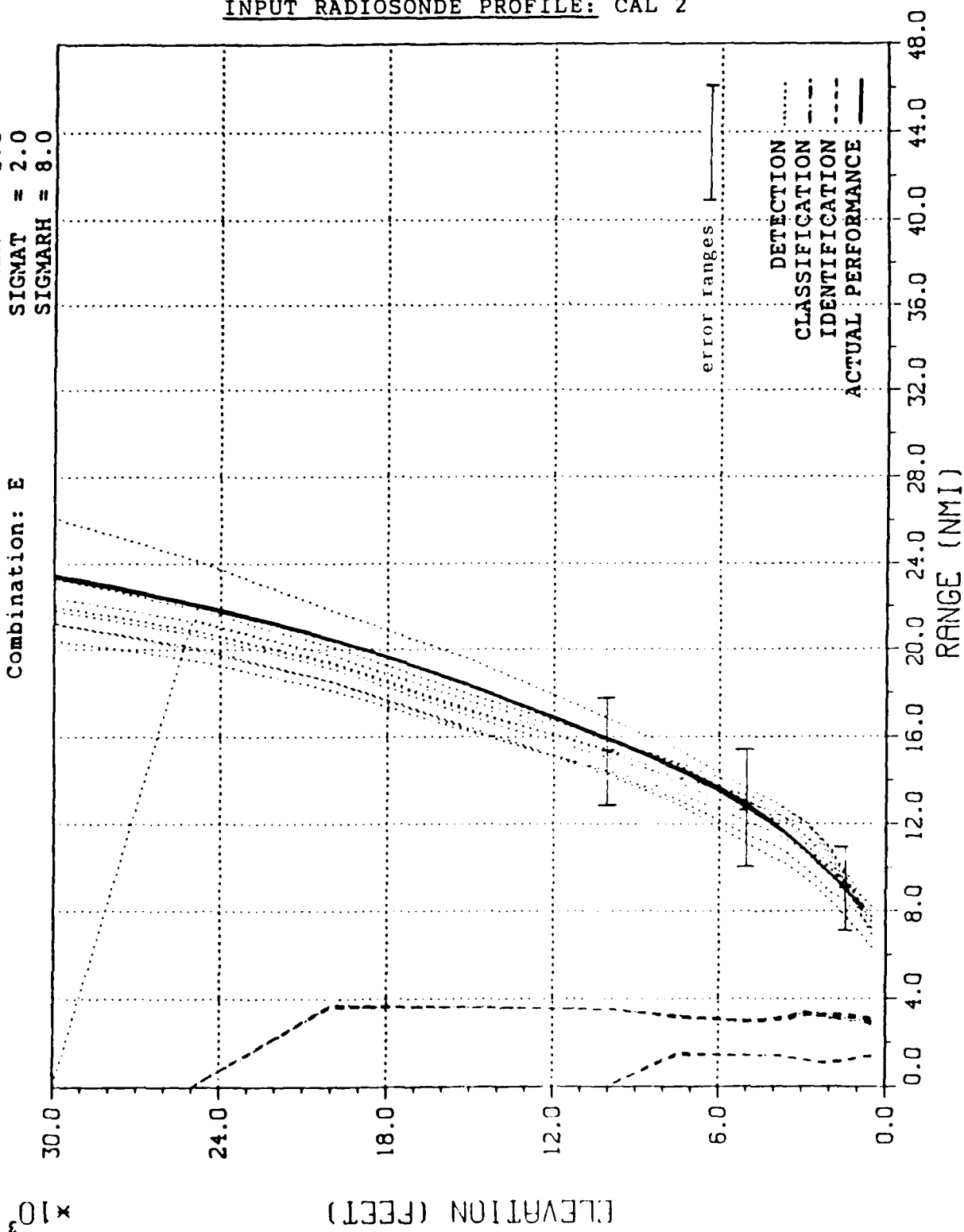
Combination: D



TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

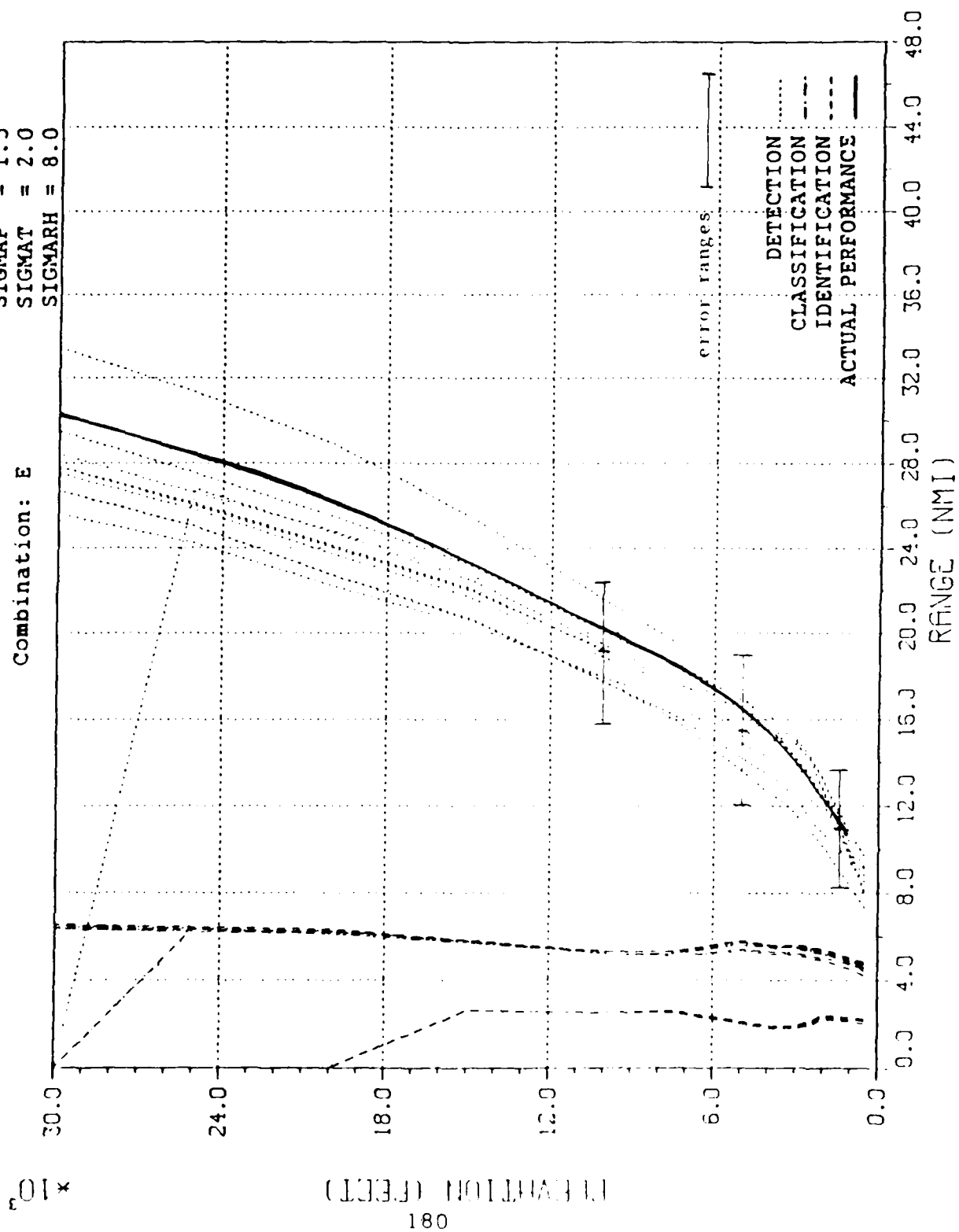
Combination: E



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

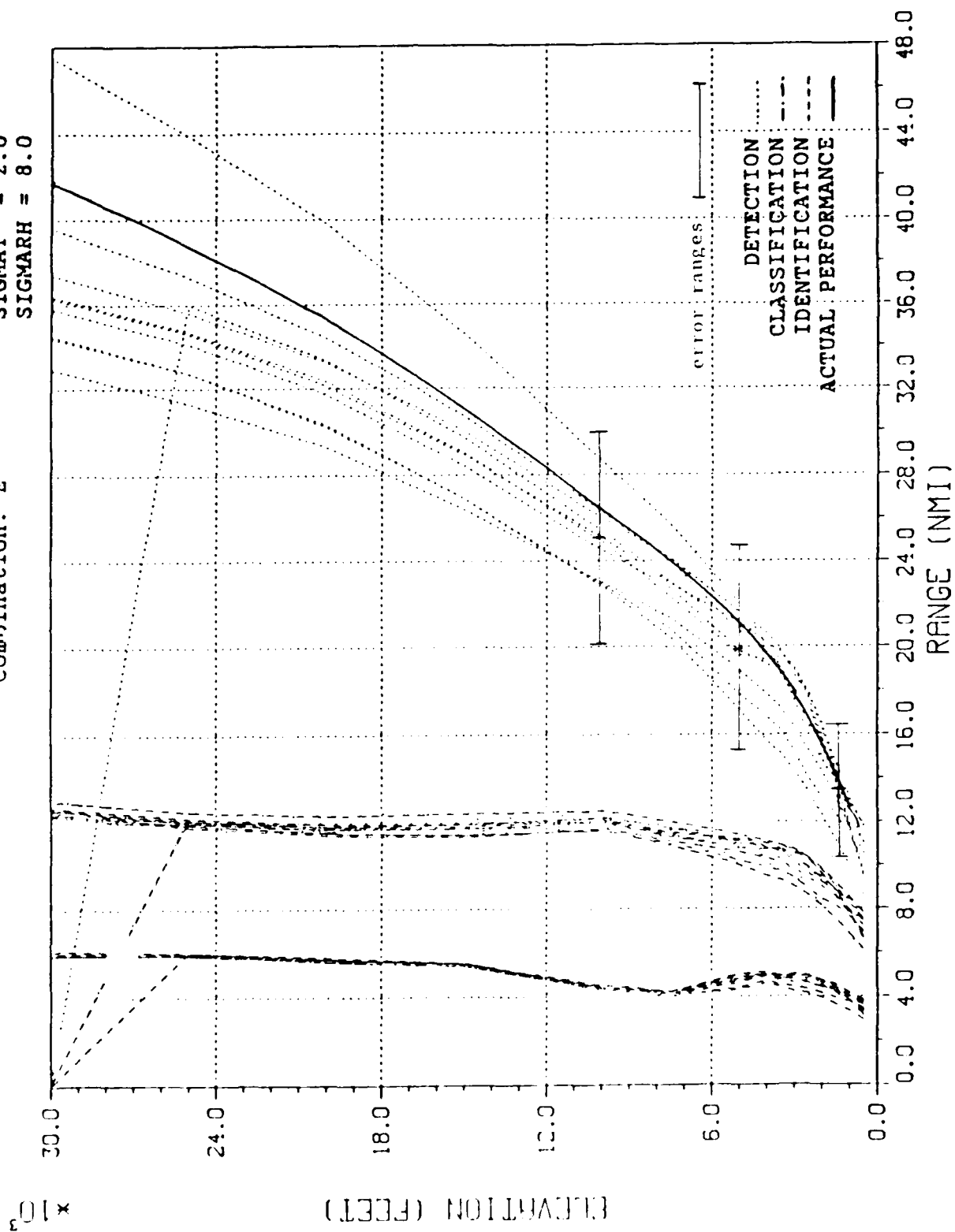
Combination: E



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

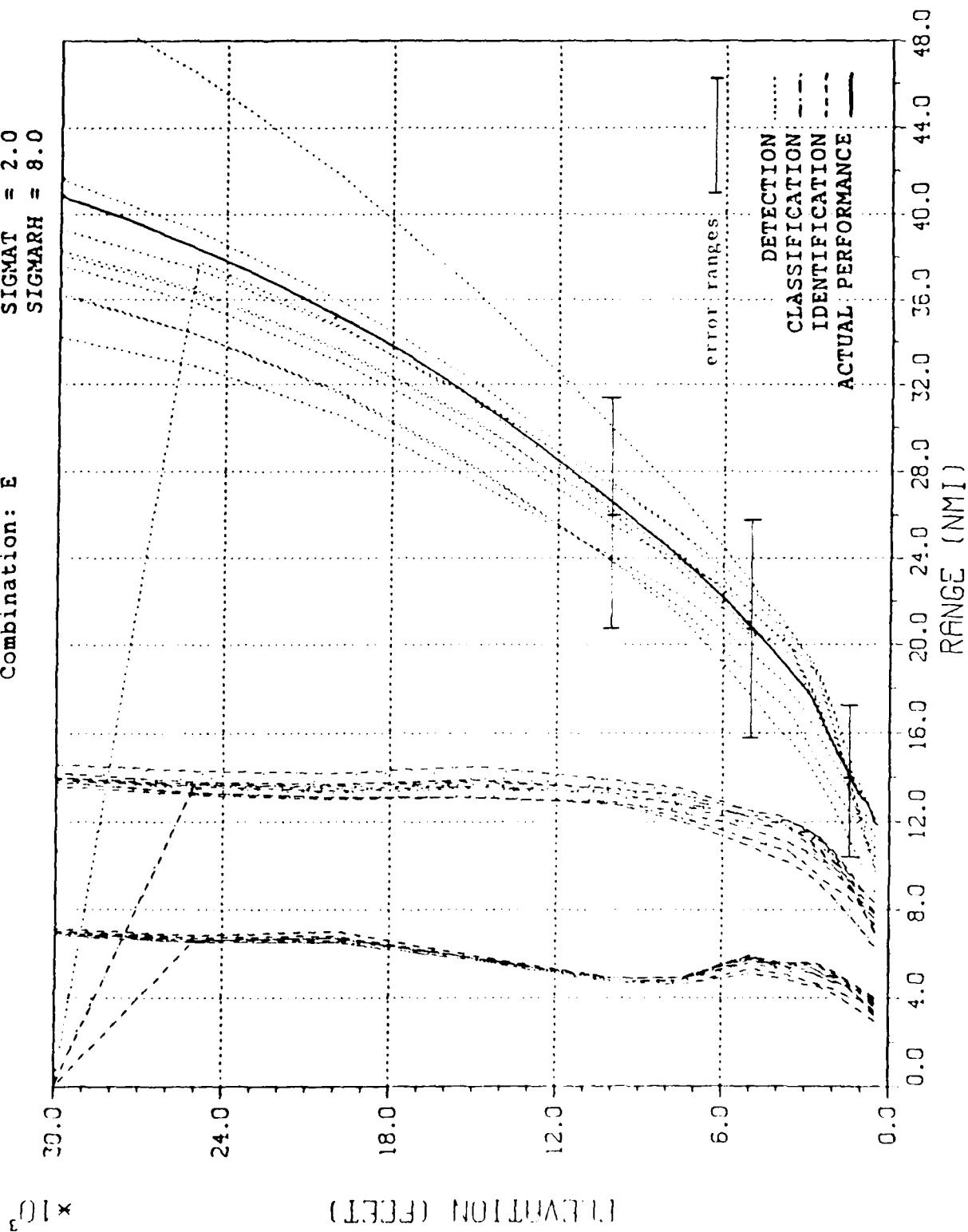
Combination: E



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

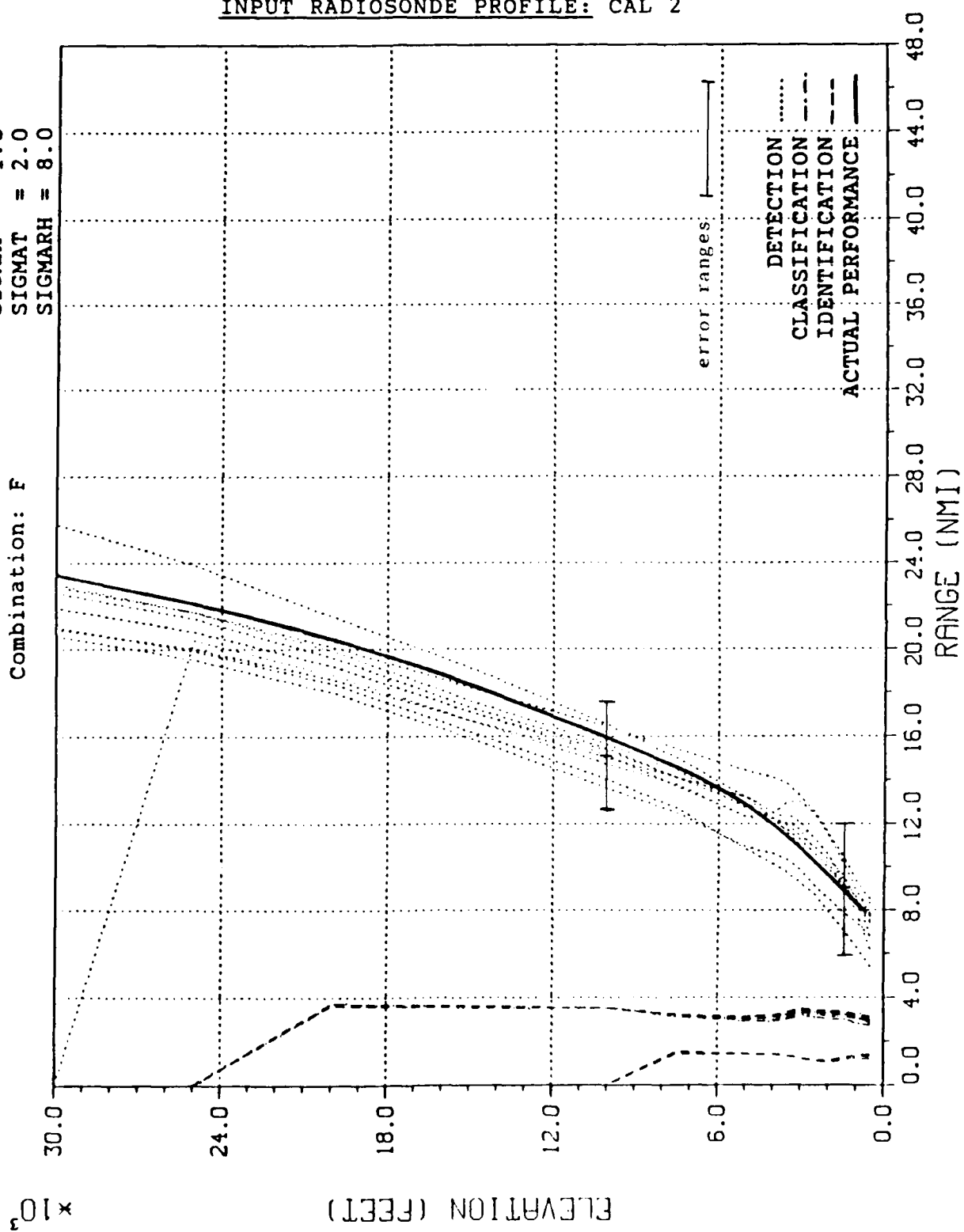
Combination: E



TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

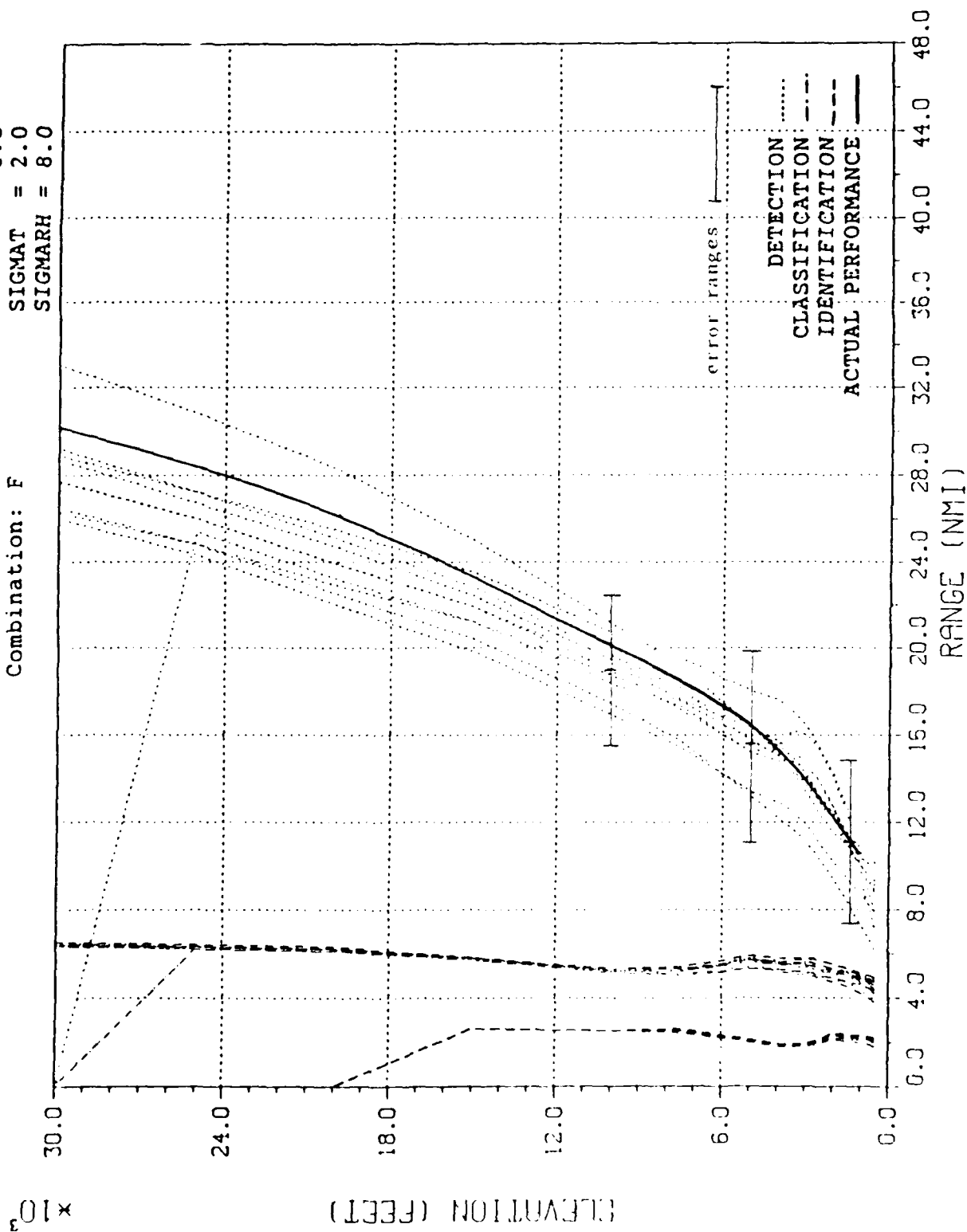
Combination: F



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

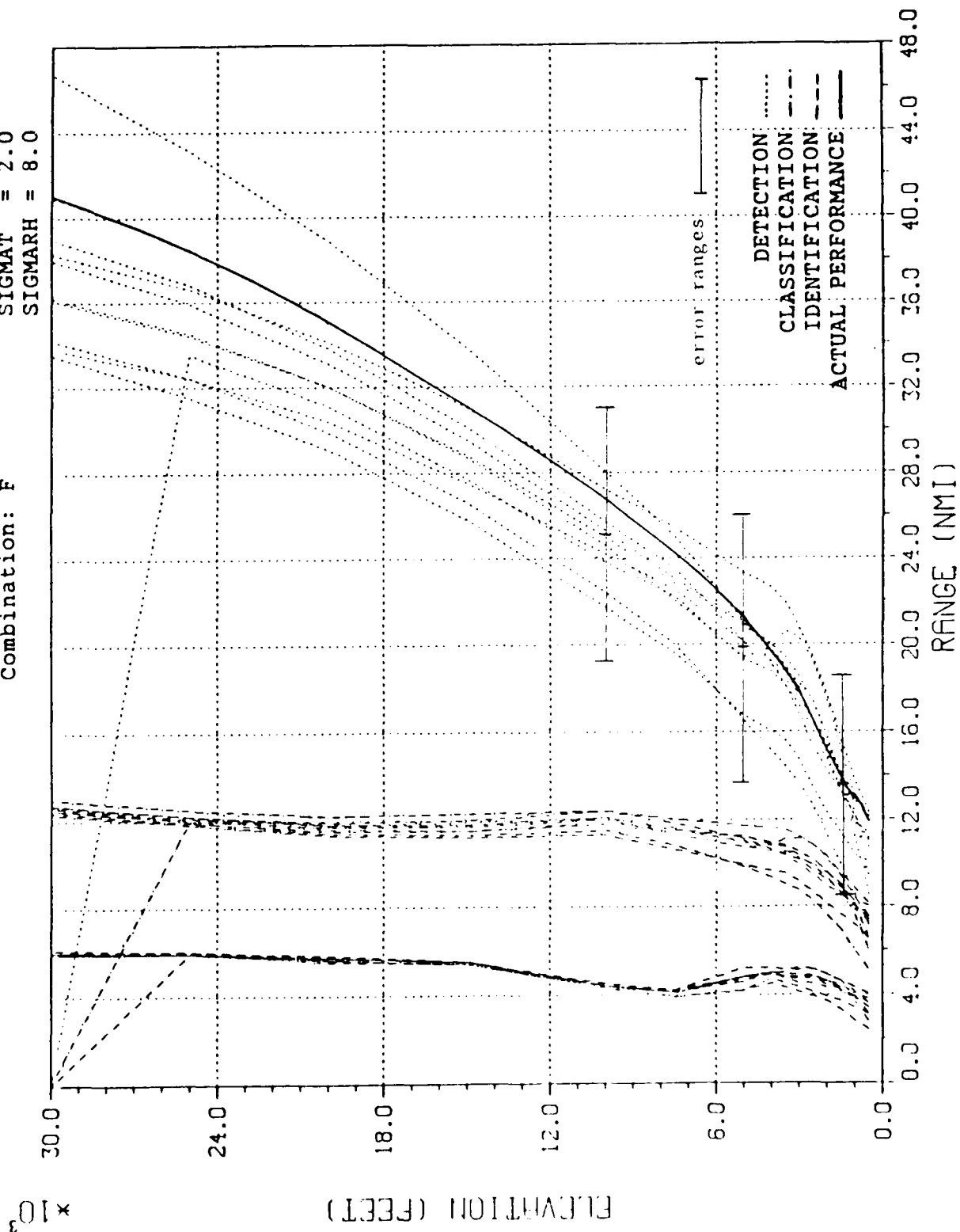
Combination: F



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

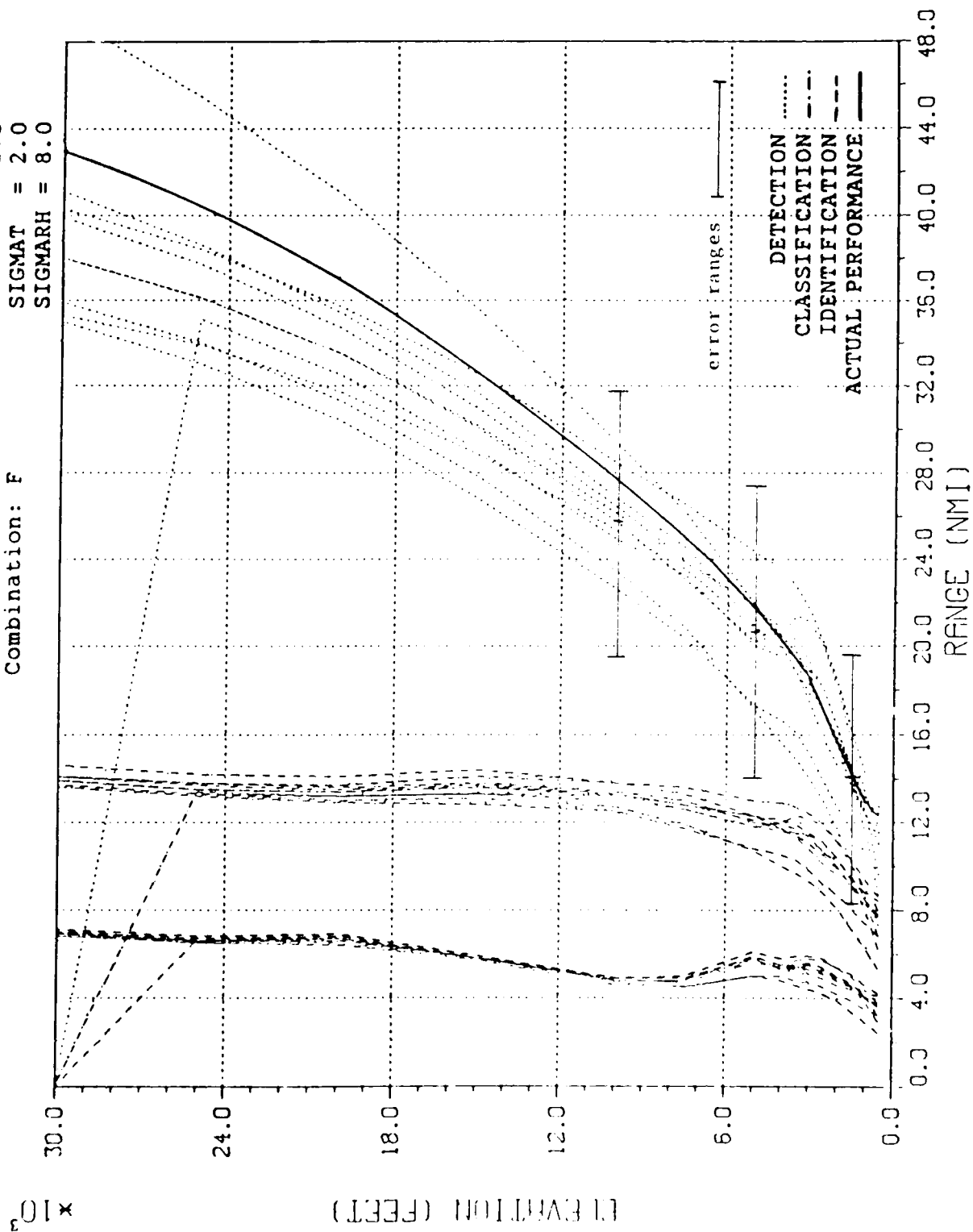
Combination: F



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

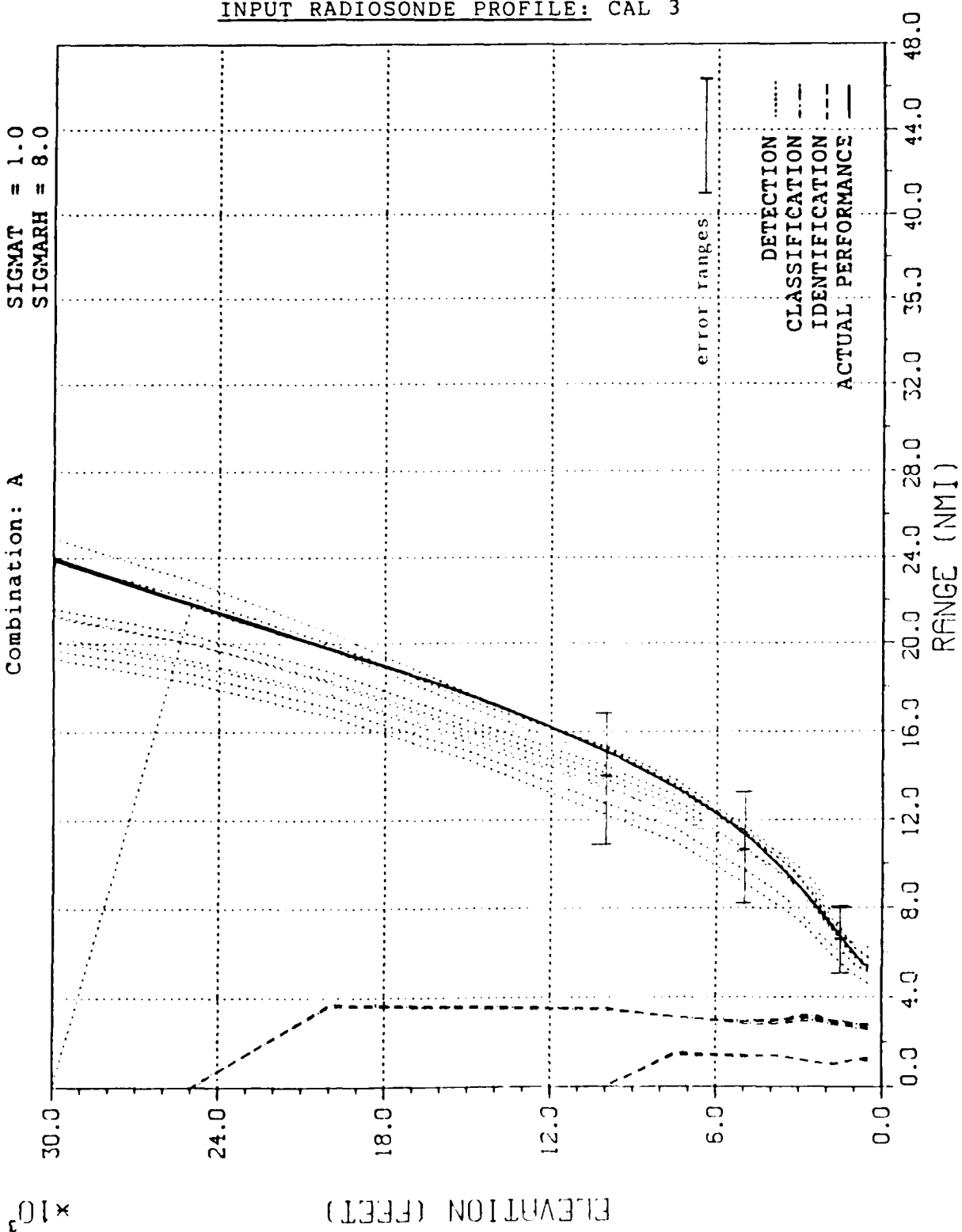
Combination: F



TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

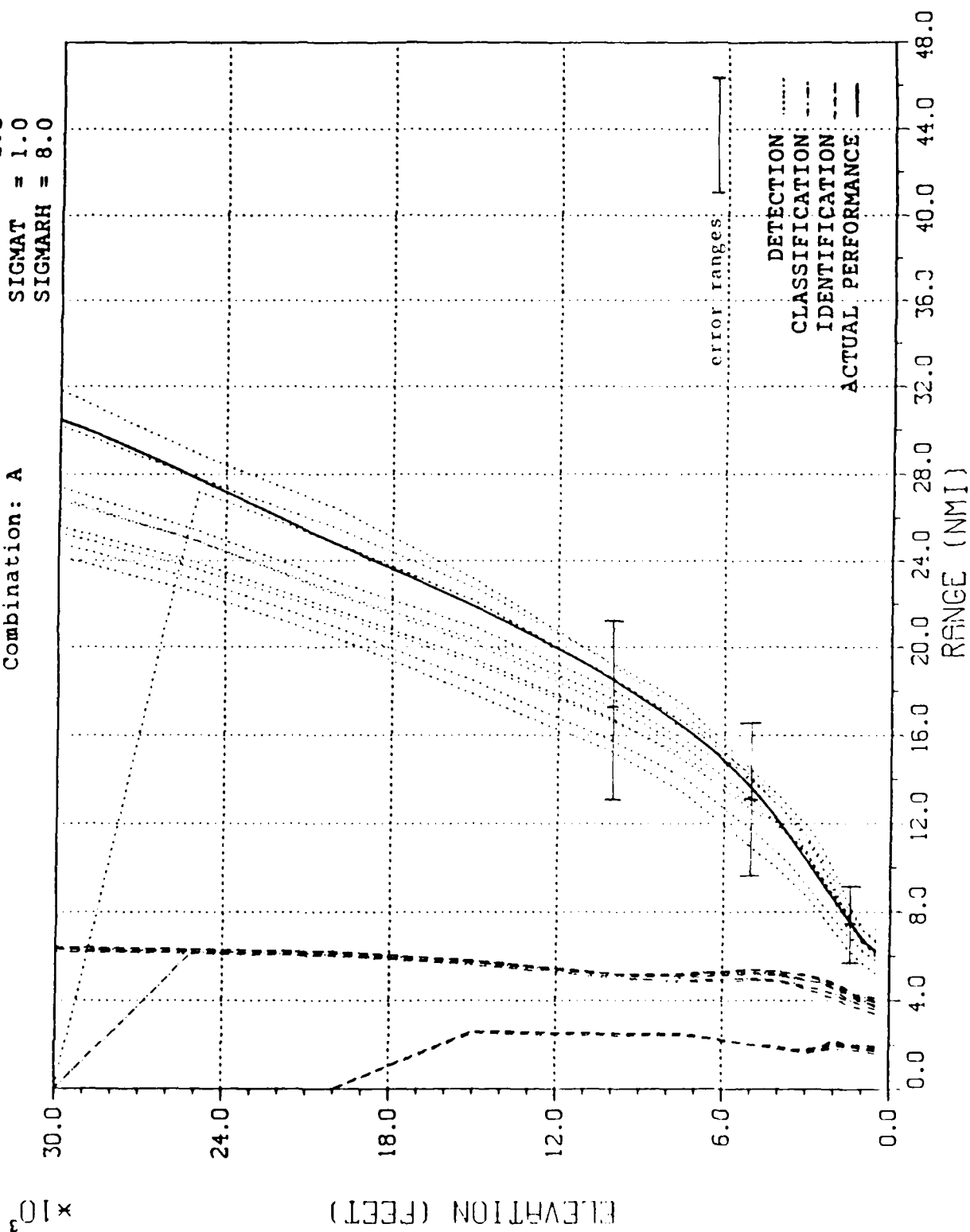
Combination: A



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

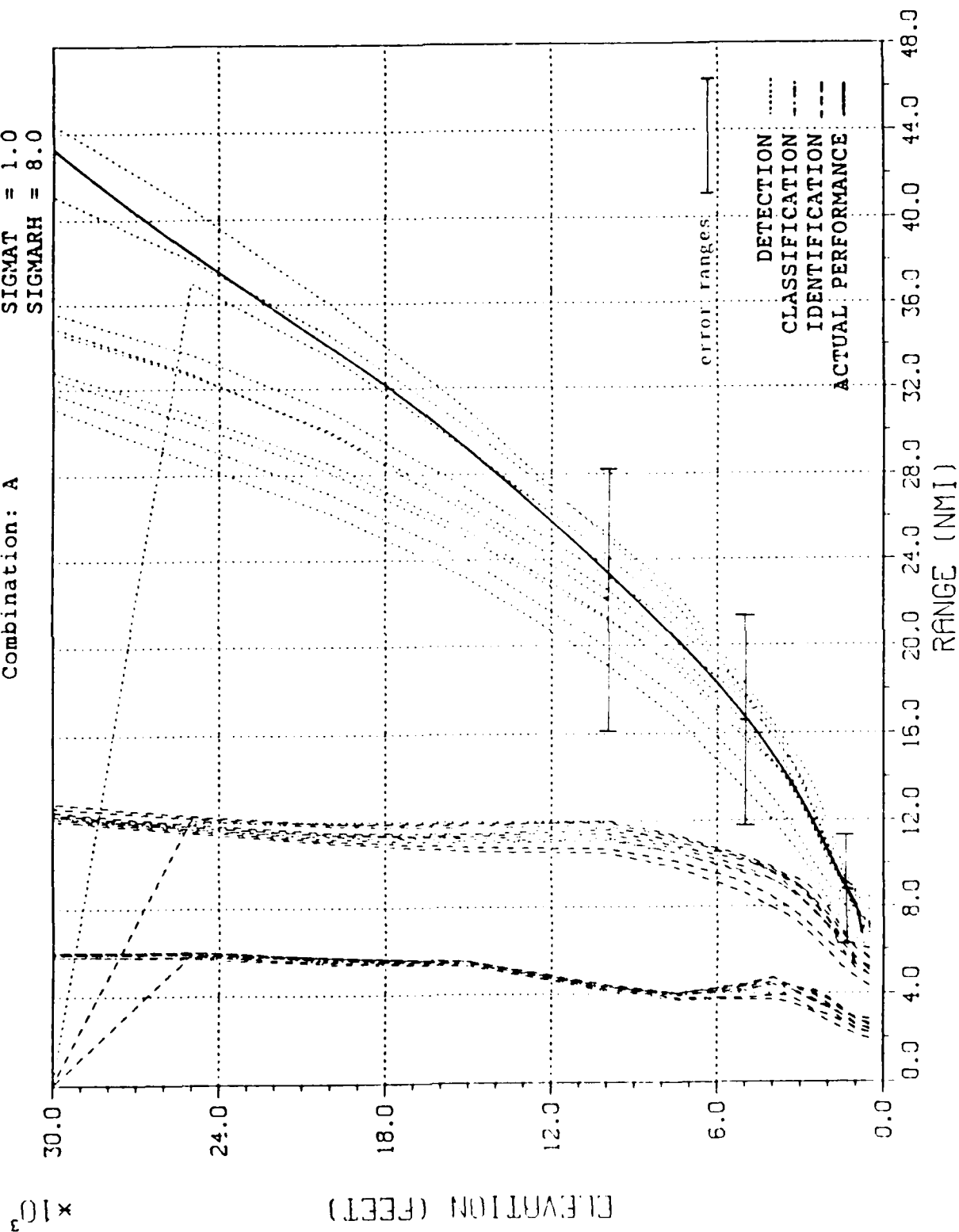
Combination: A



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

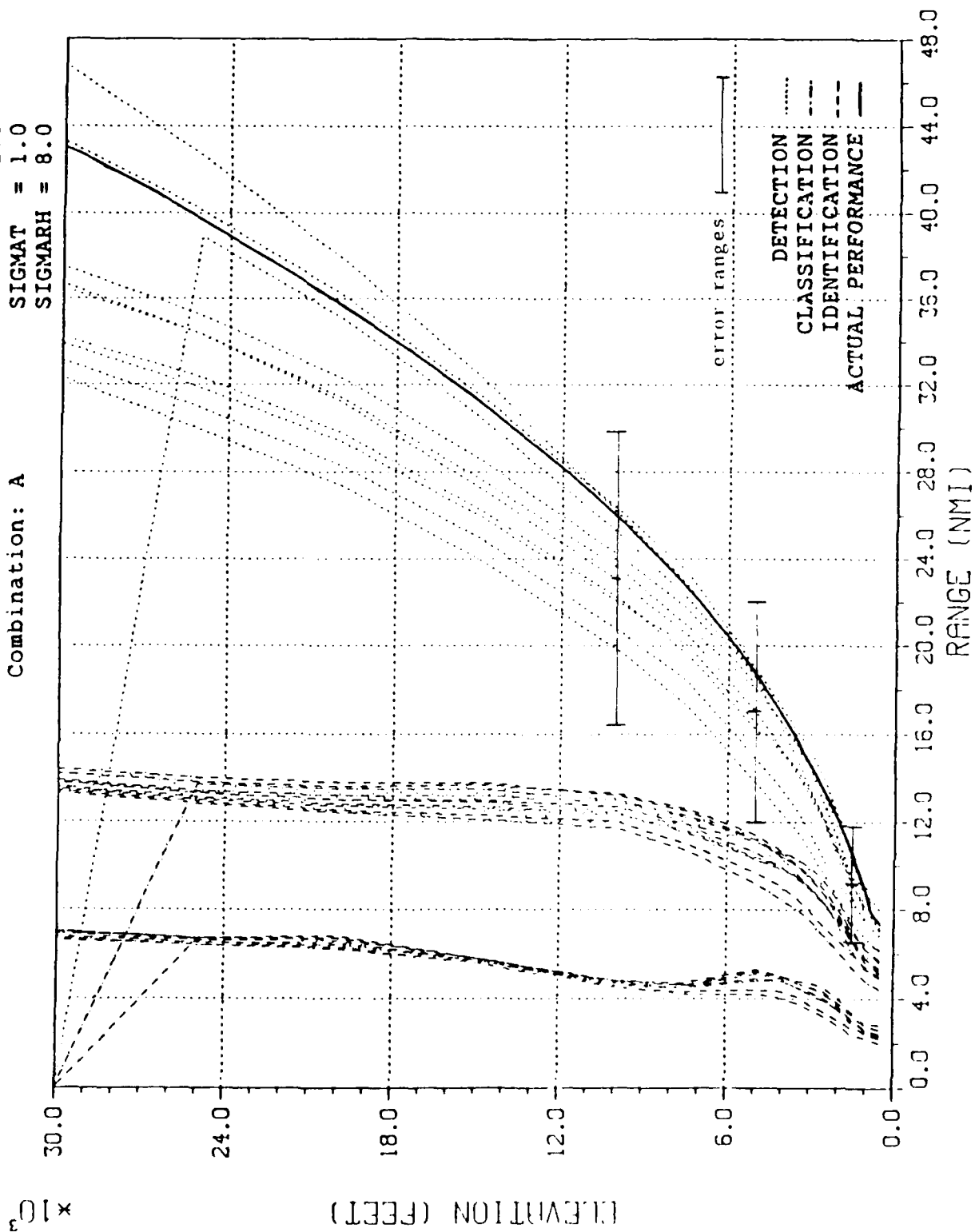
Combination: A



TARGET NUMBER 4

SIGMAP = 2.5
SIGMAT = 1.0
SIGMARH = 8.0

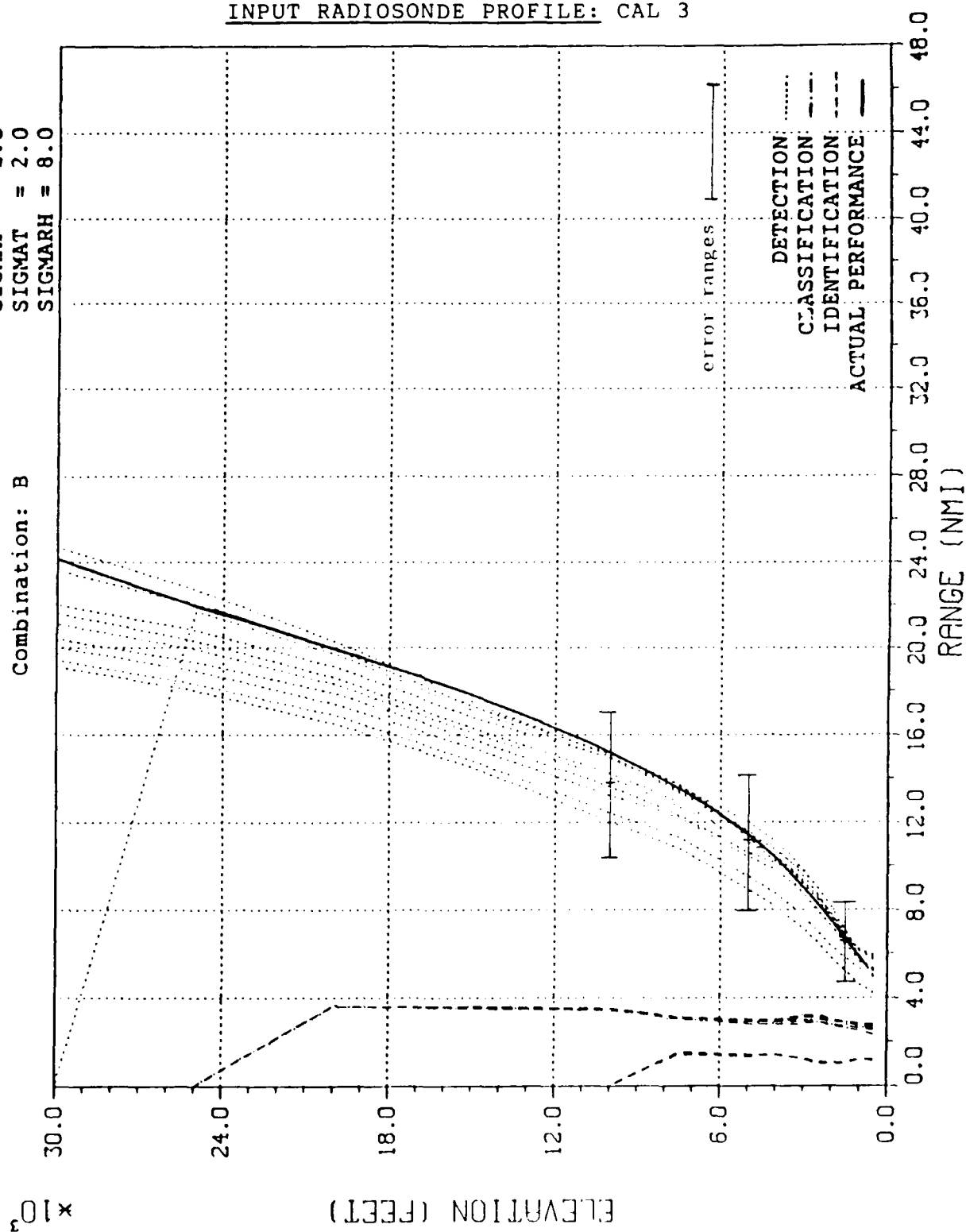
Combination: A



TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

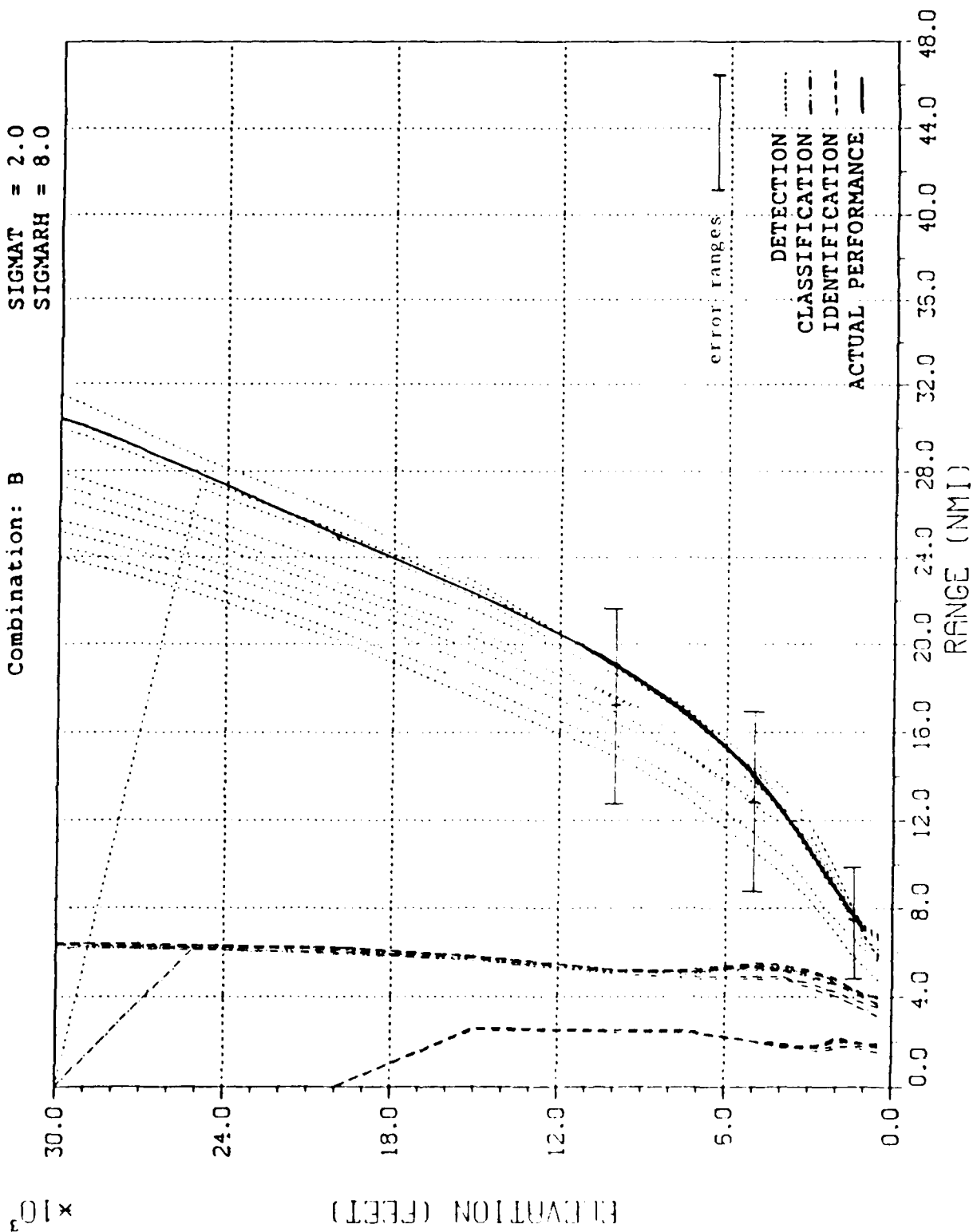
Combination: B



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

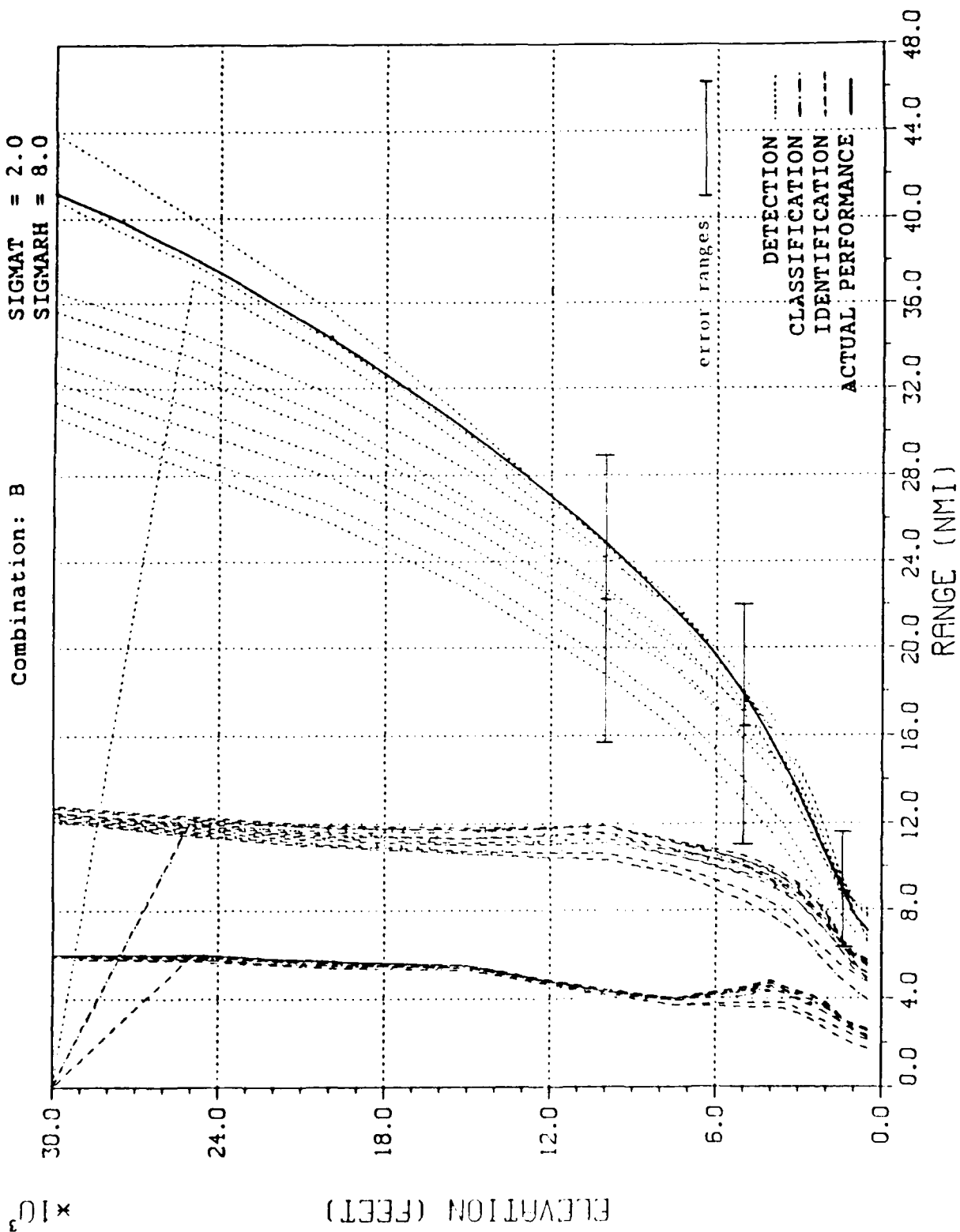
Combination: B



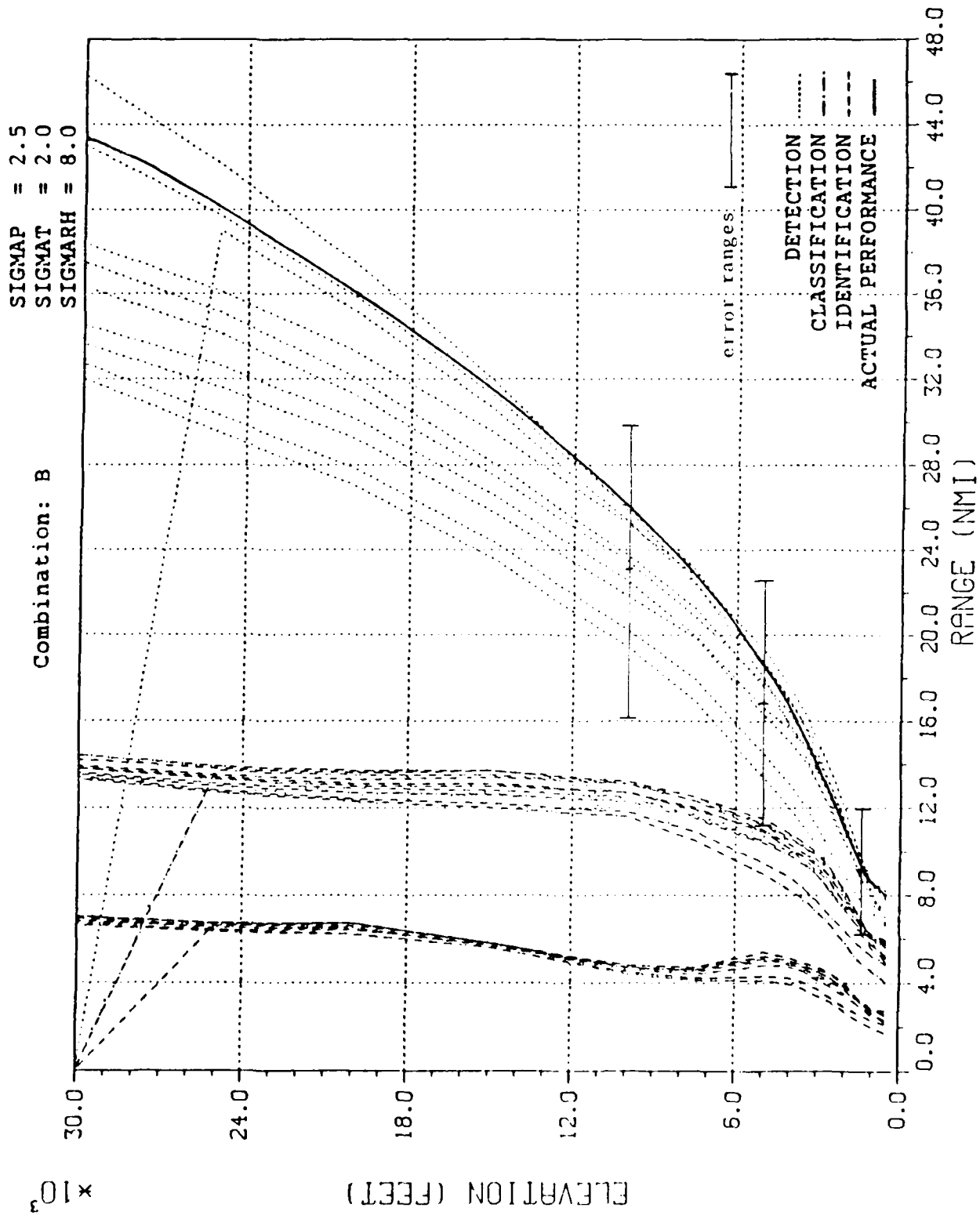
TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: B



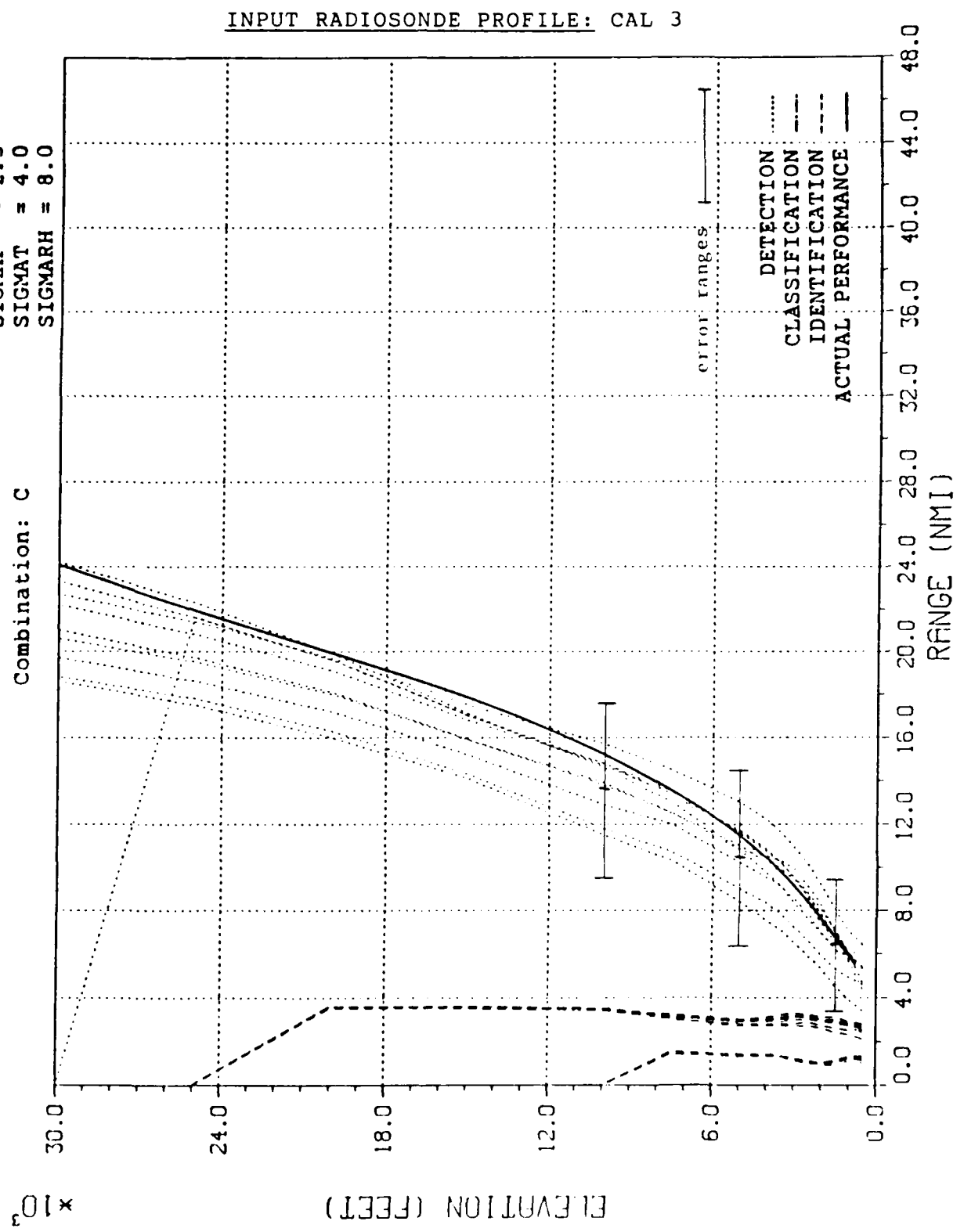
TARGET NUMBER 4



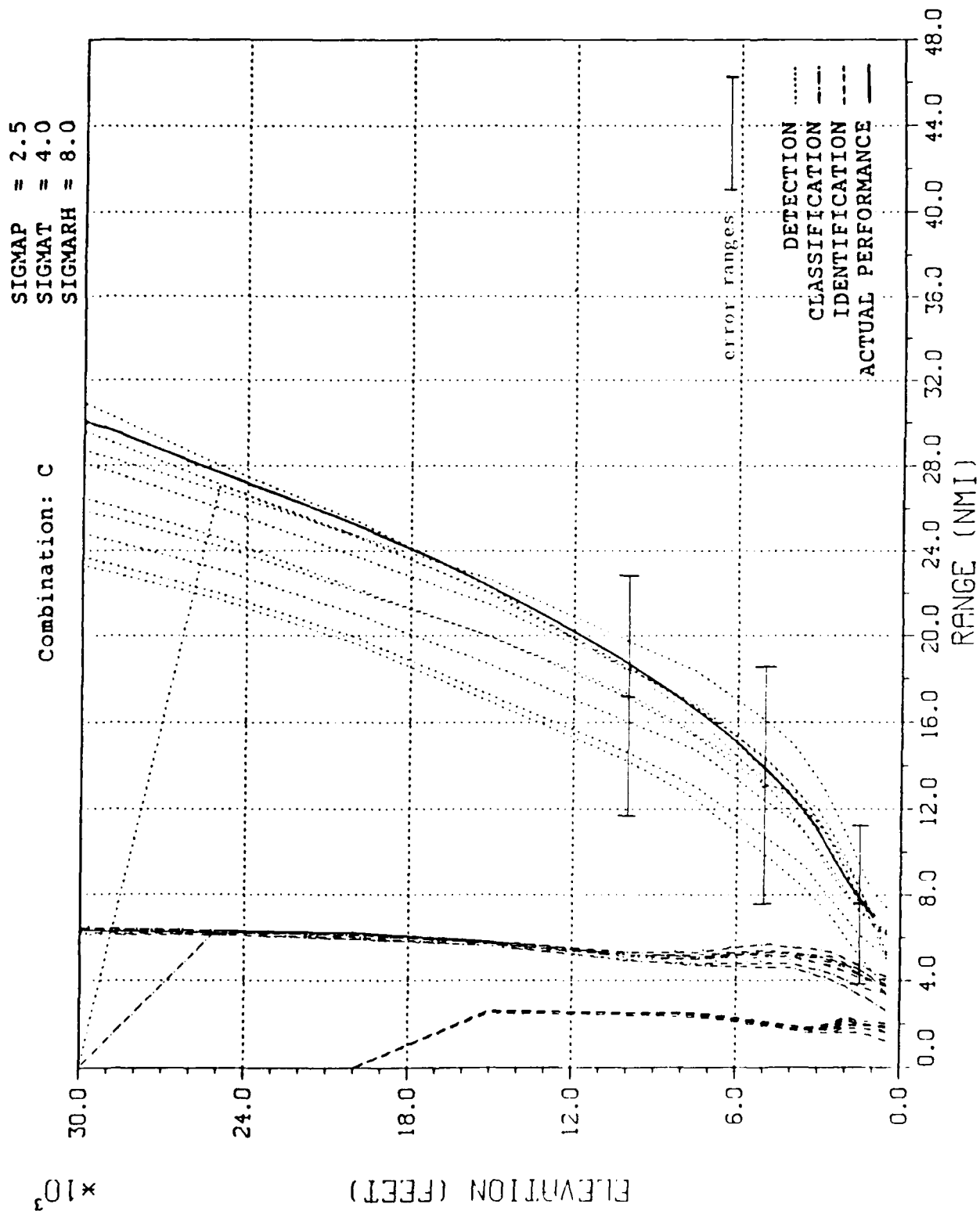
TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

Combination: C



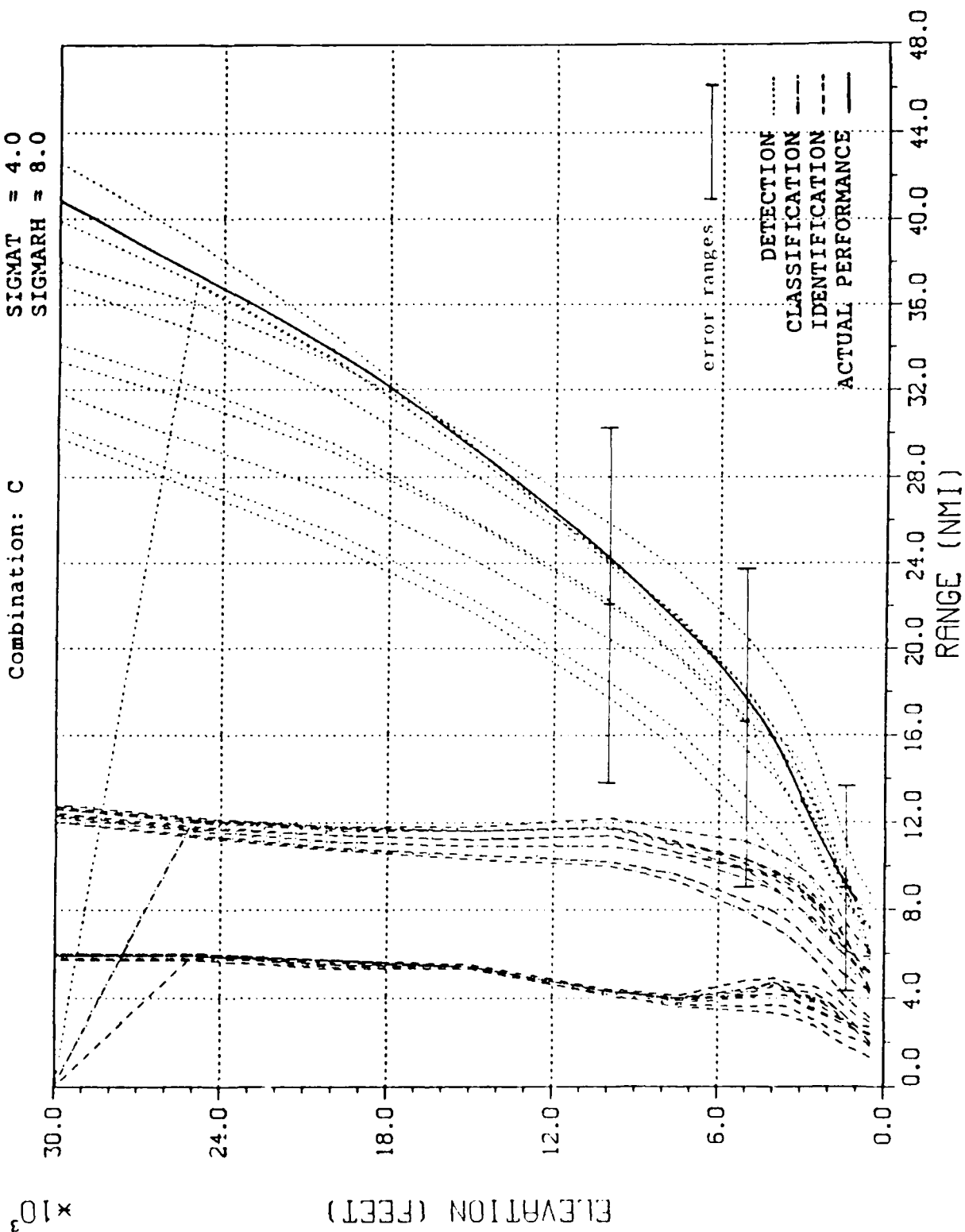
TARGET NUMBER 2



TARGET NUMBER 3

SIGMAP = 2.5
SIGMAT = 4.0
SIGMARH = 8.0

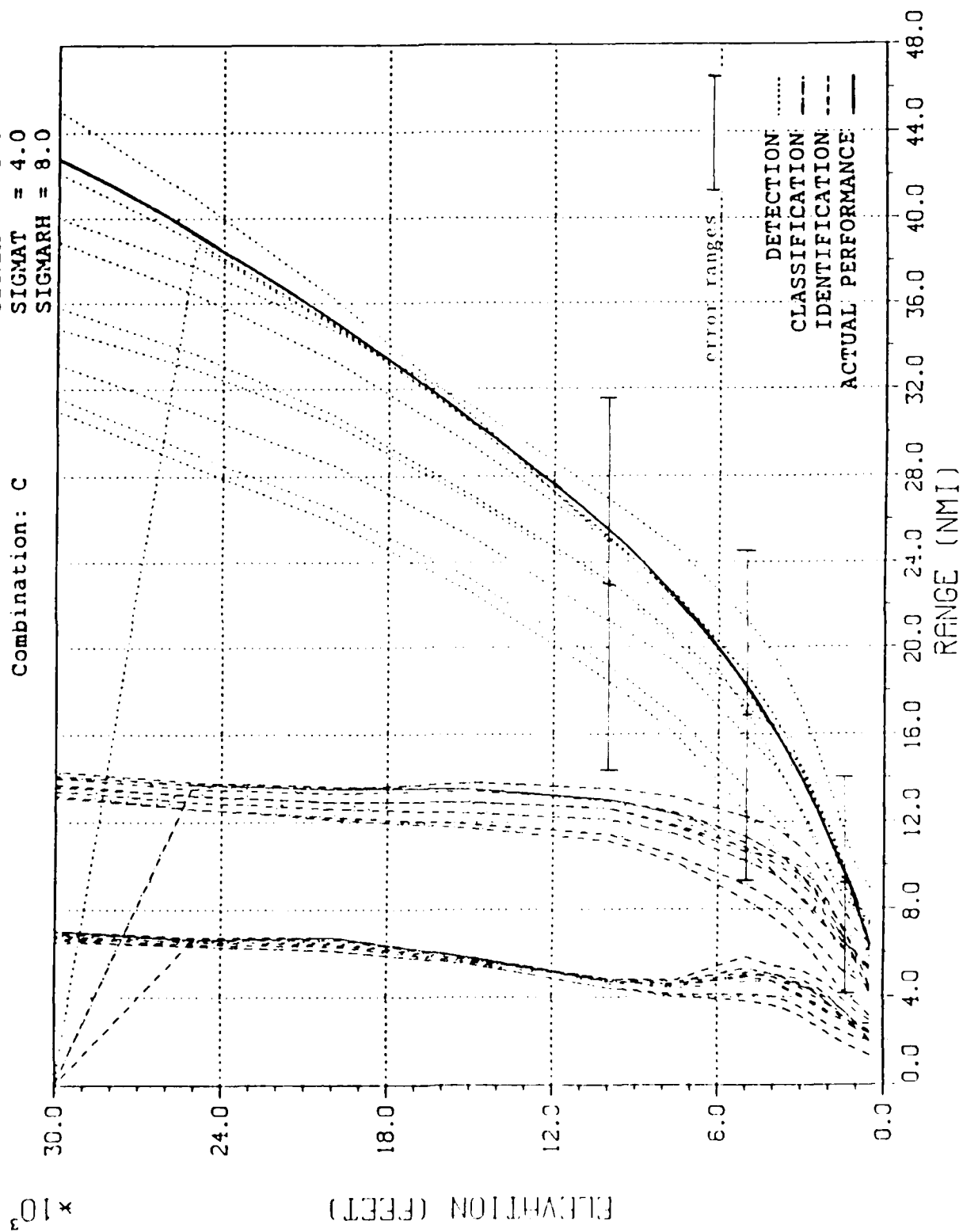
Combination: C



TARGET NUMBER 4

SIGMAP = 2.5
SIGMAT = 4.0
SIGMARH = 8.0

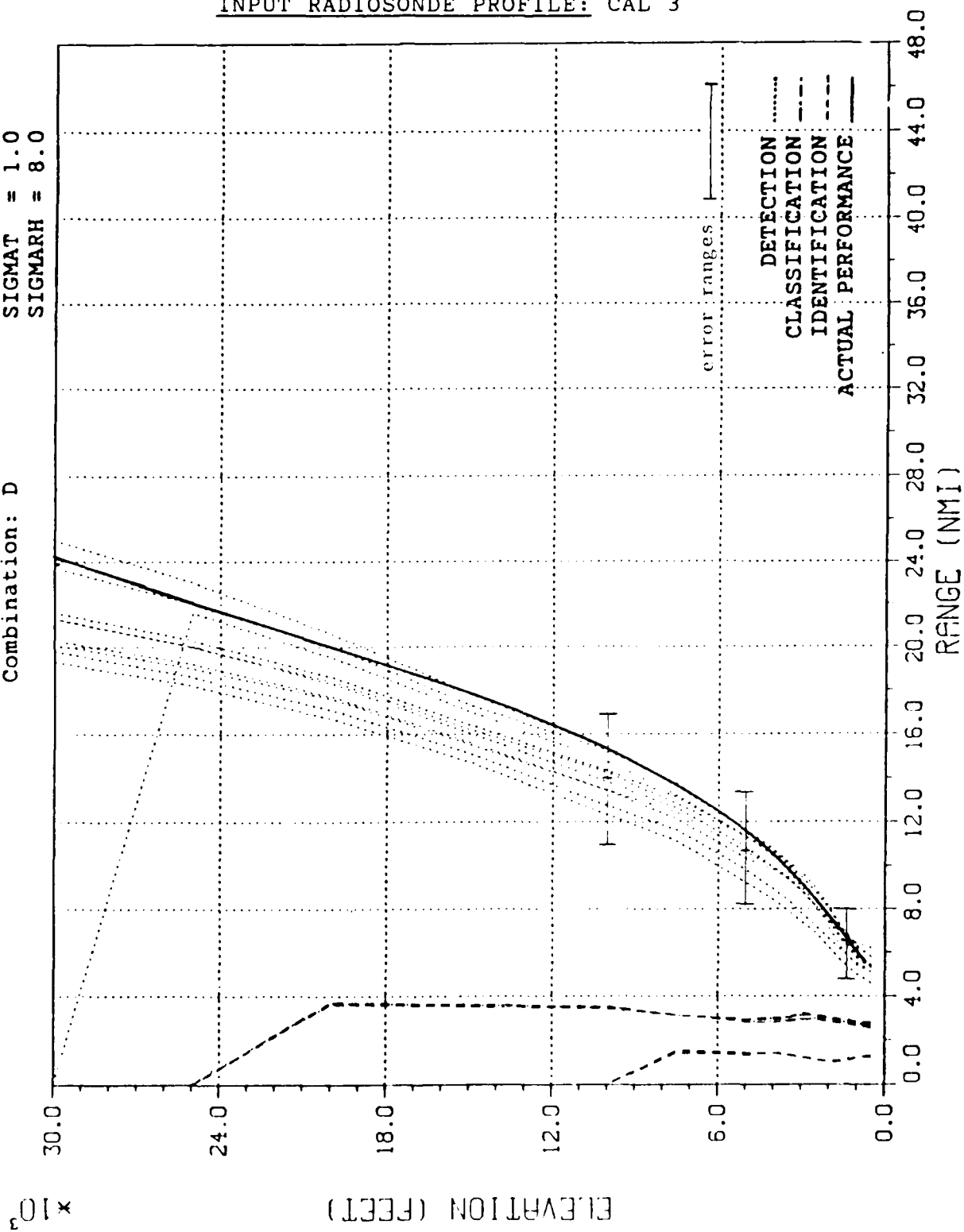
Combination: C



TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

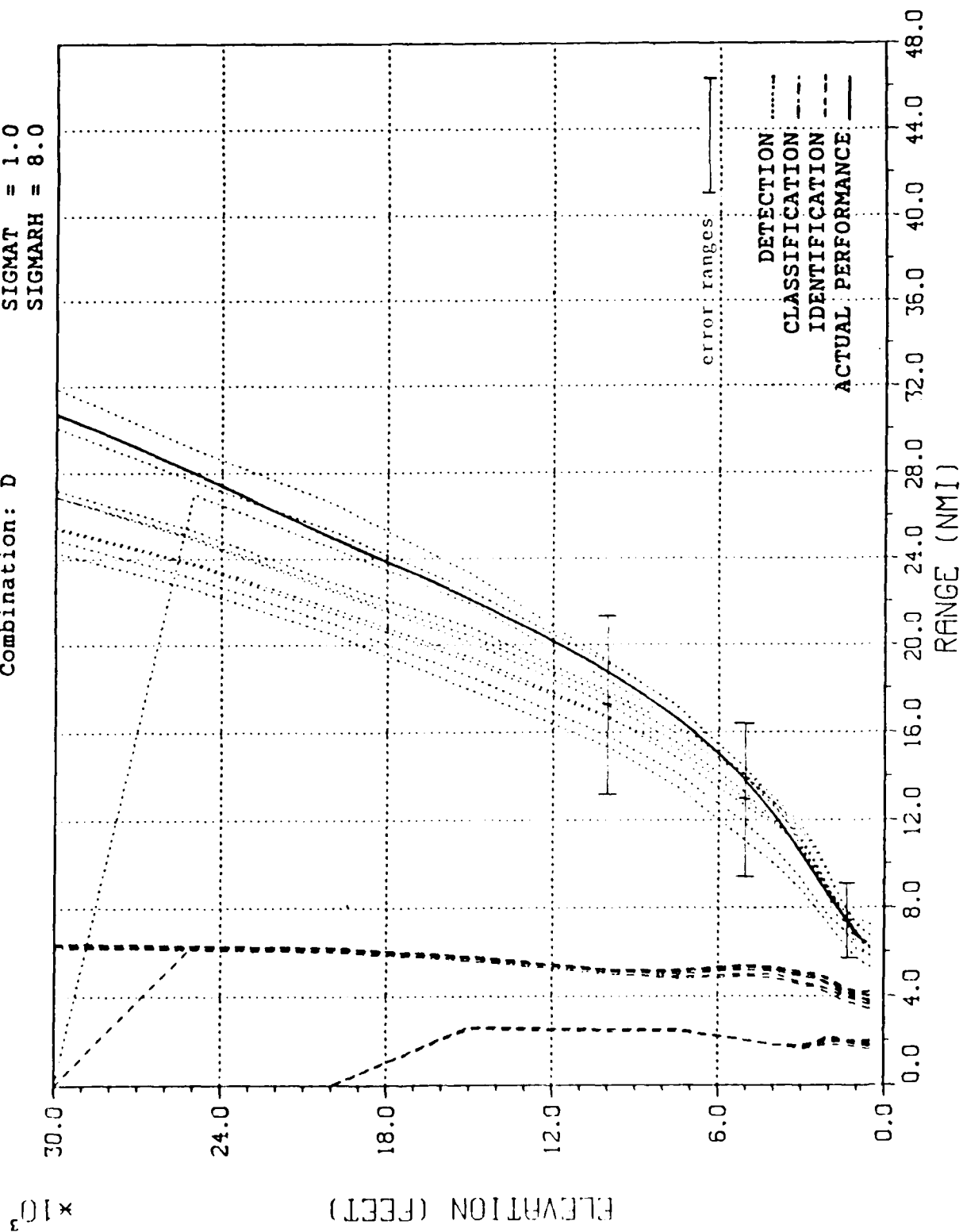
Combination: D



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

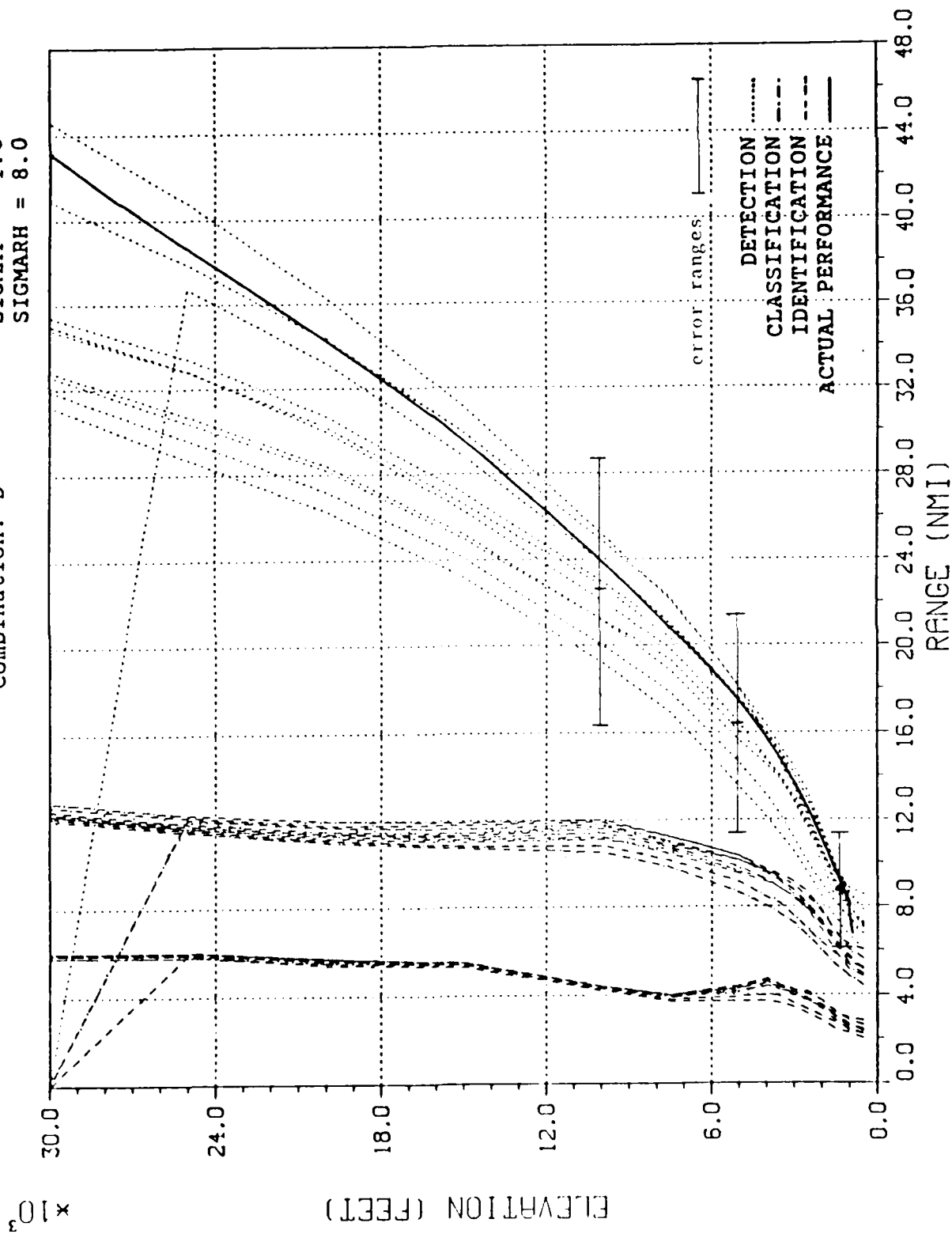
Combination: D



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

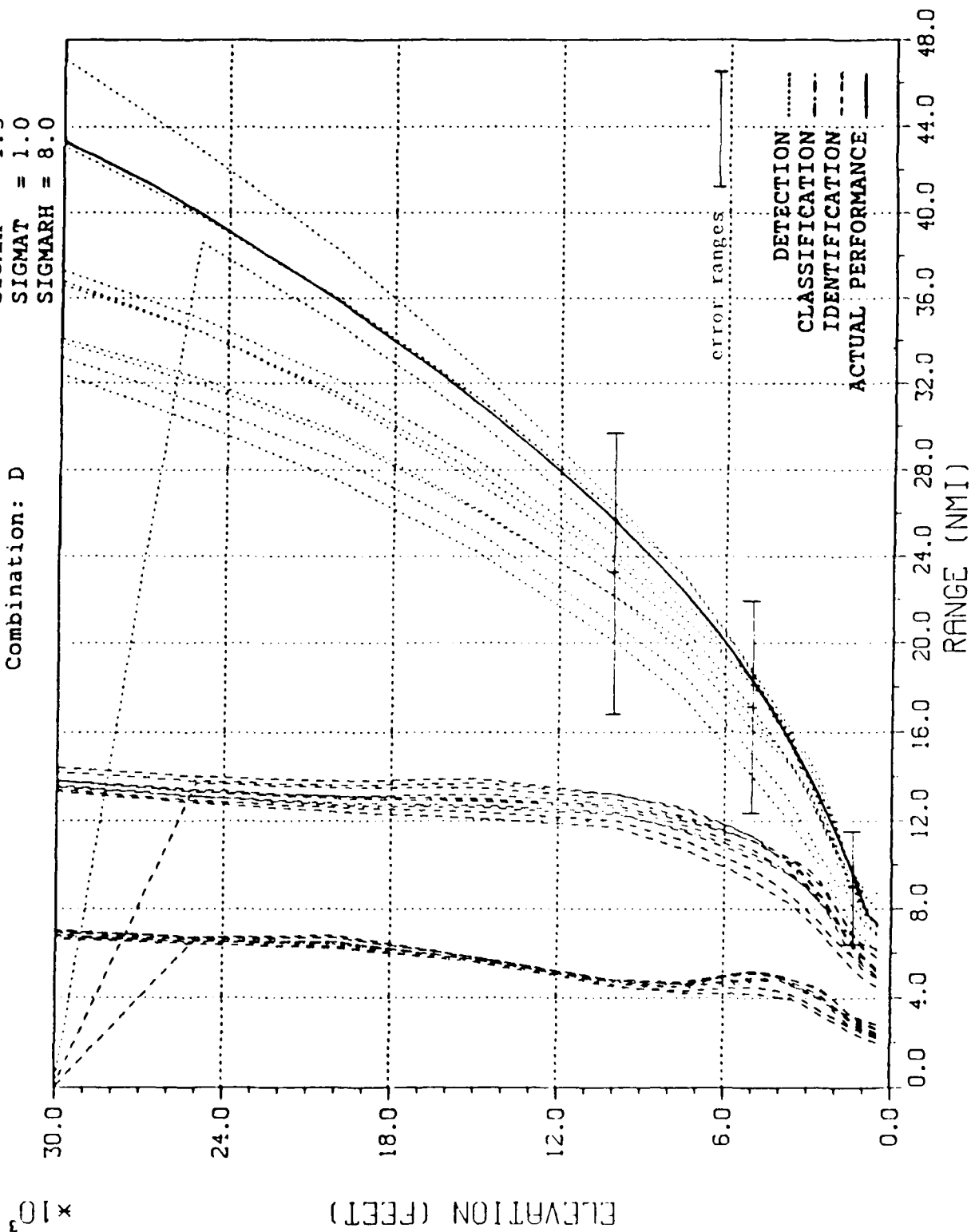
Combination: D



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

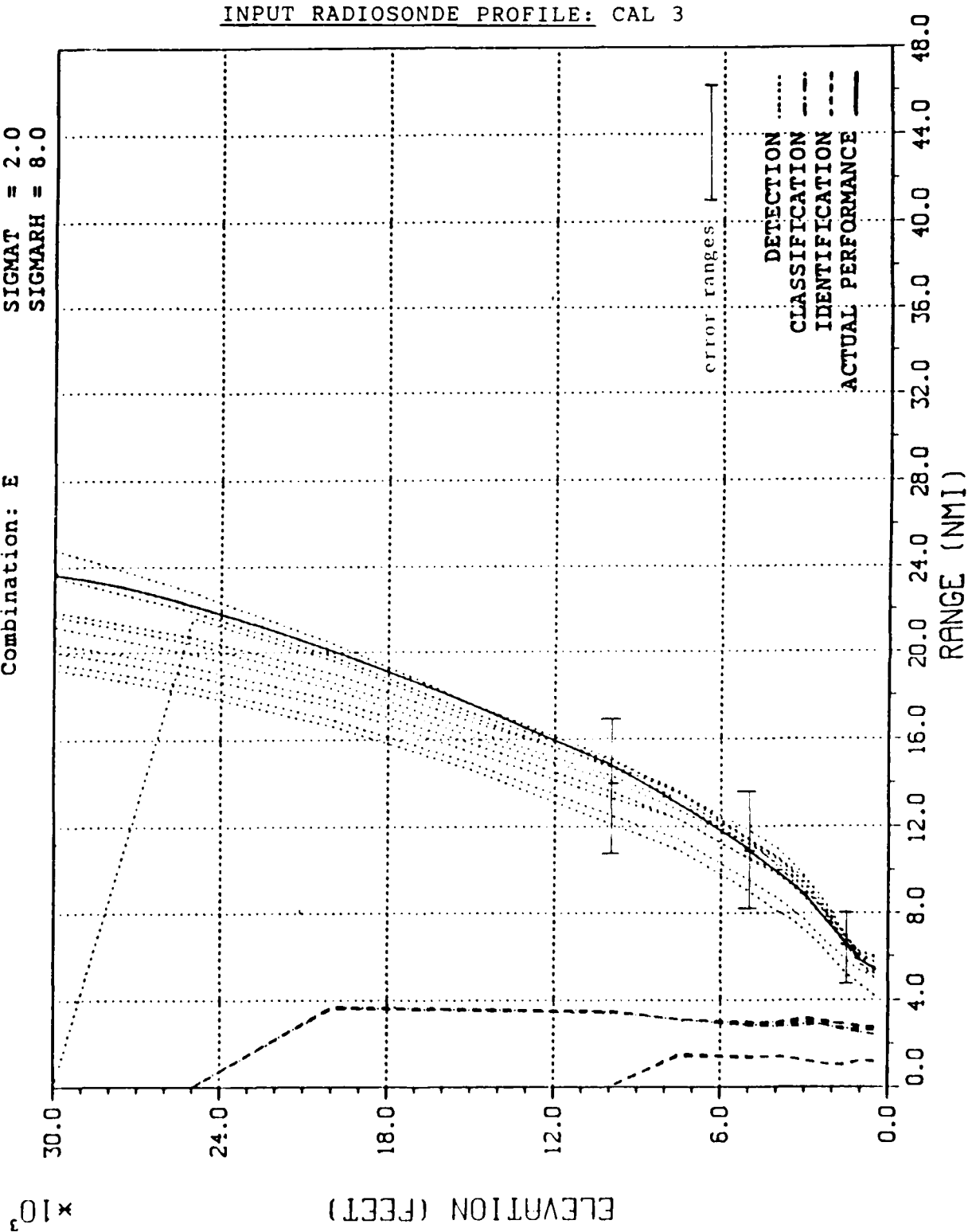
Combination: D



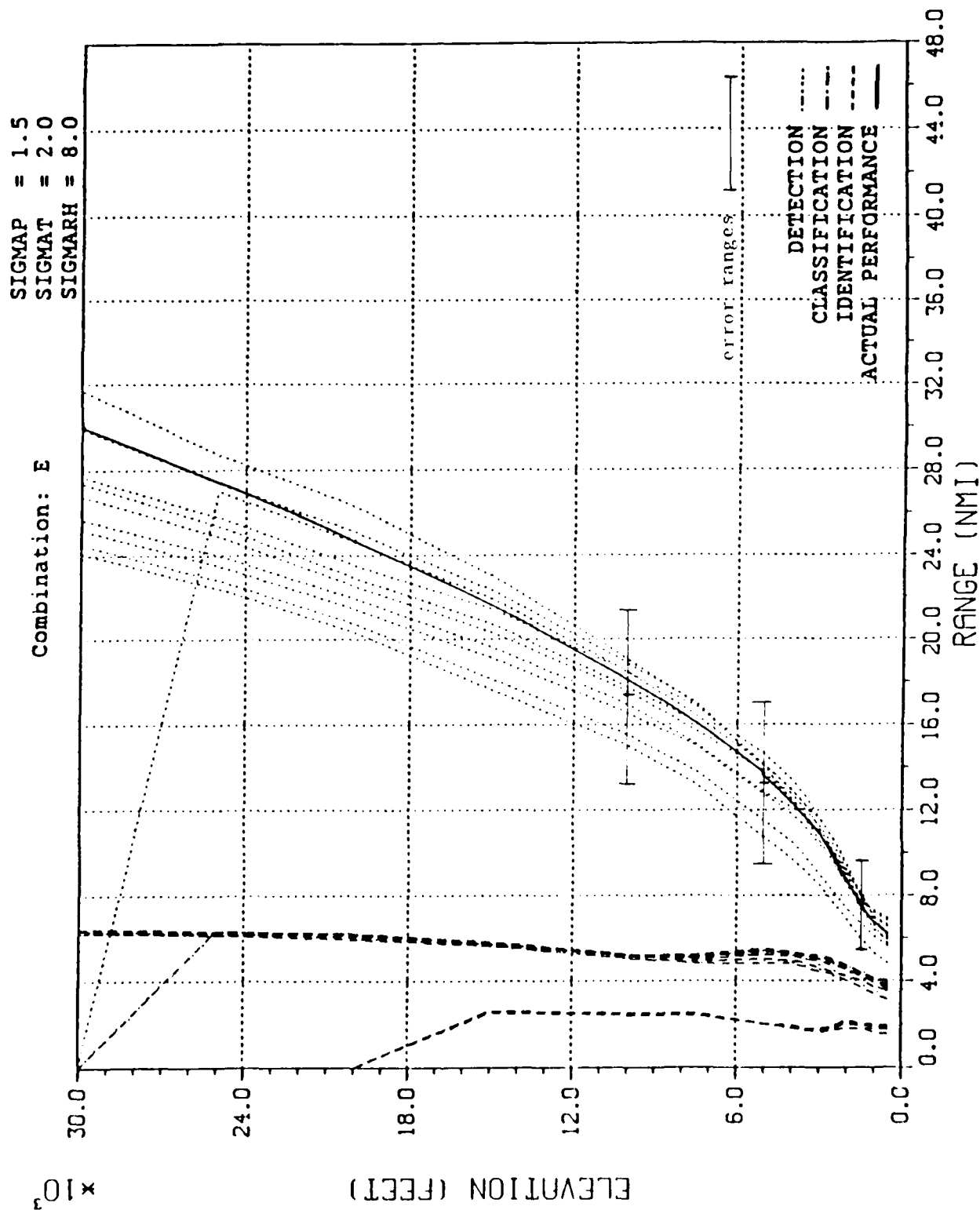
TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: E



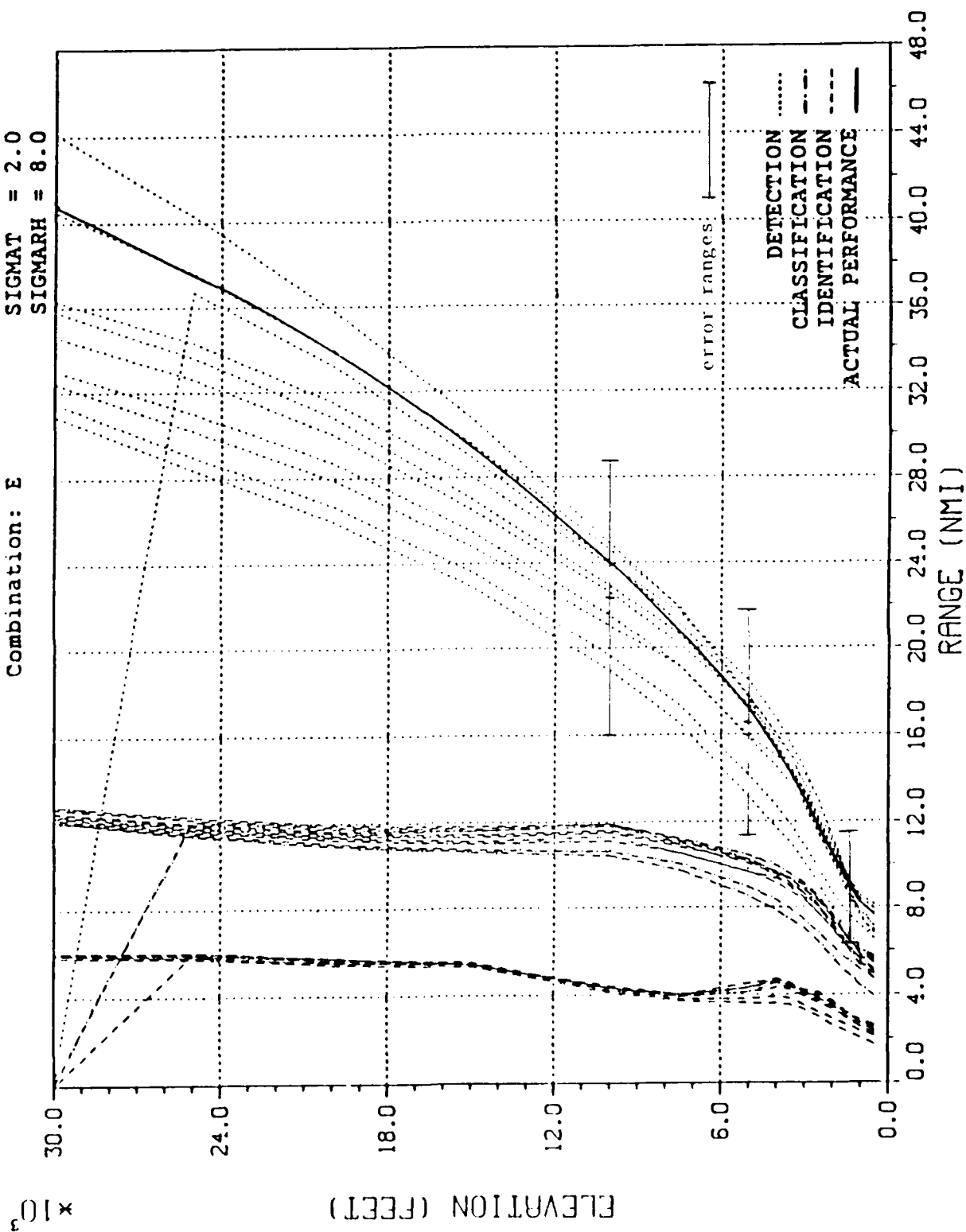
TARGET NUMBER 2



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

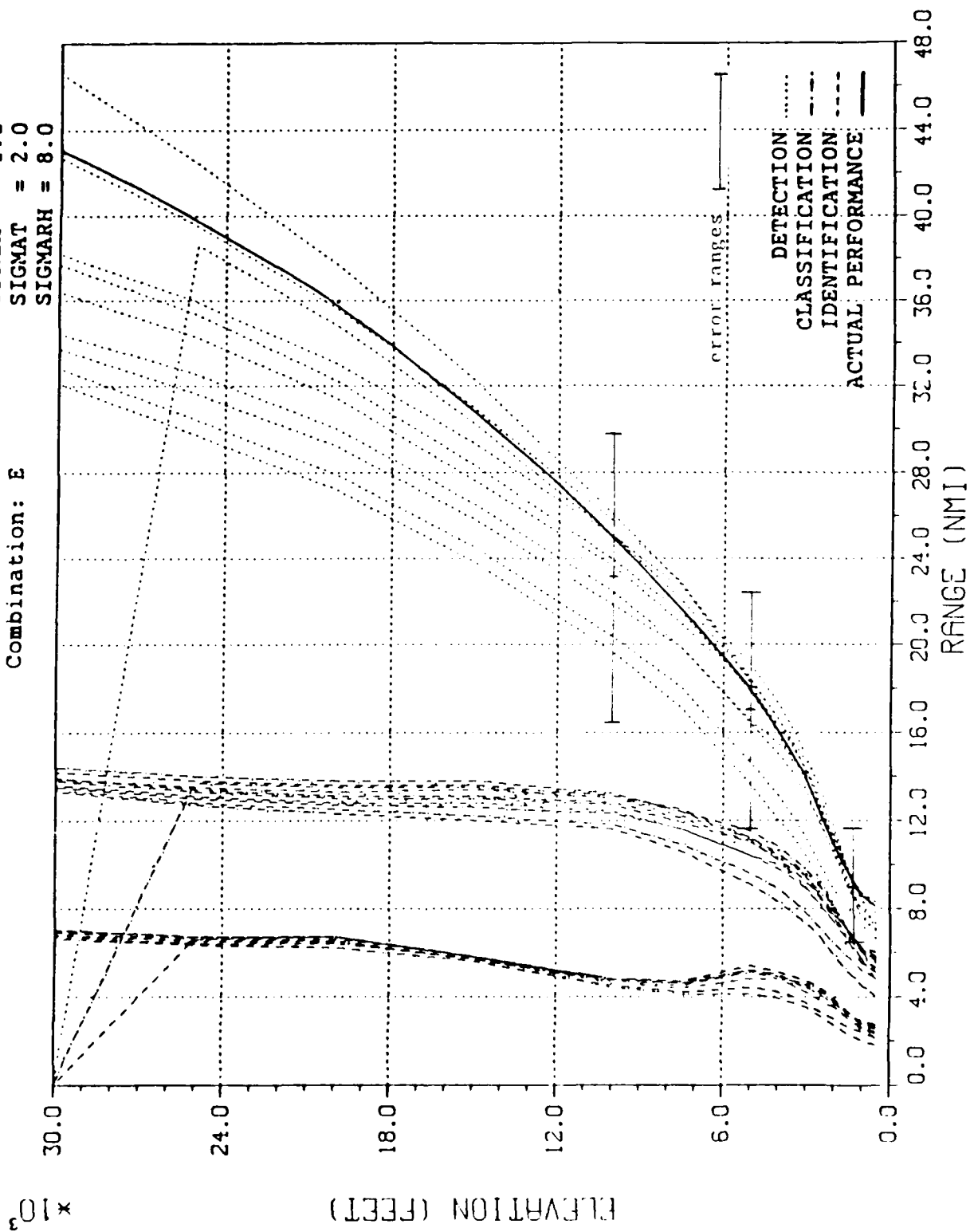
Combination: E



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: E

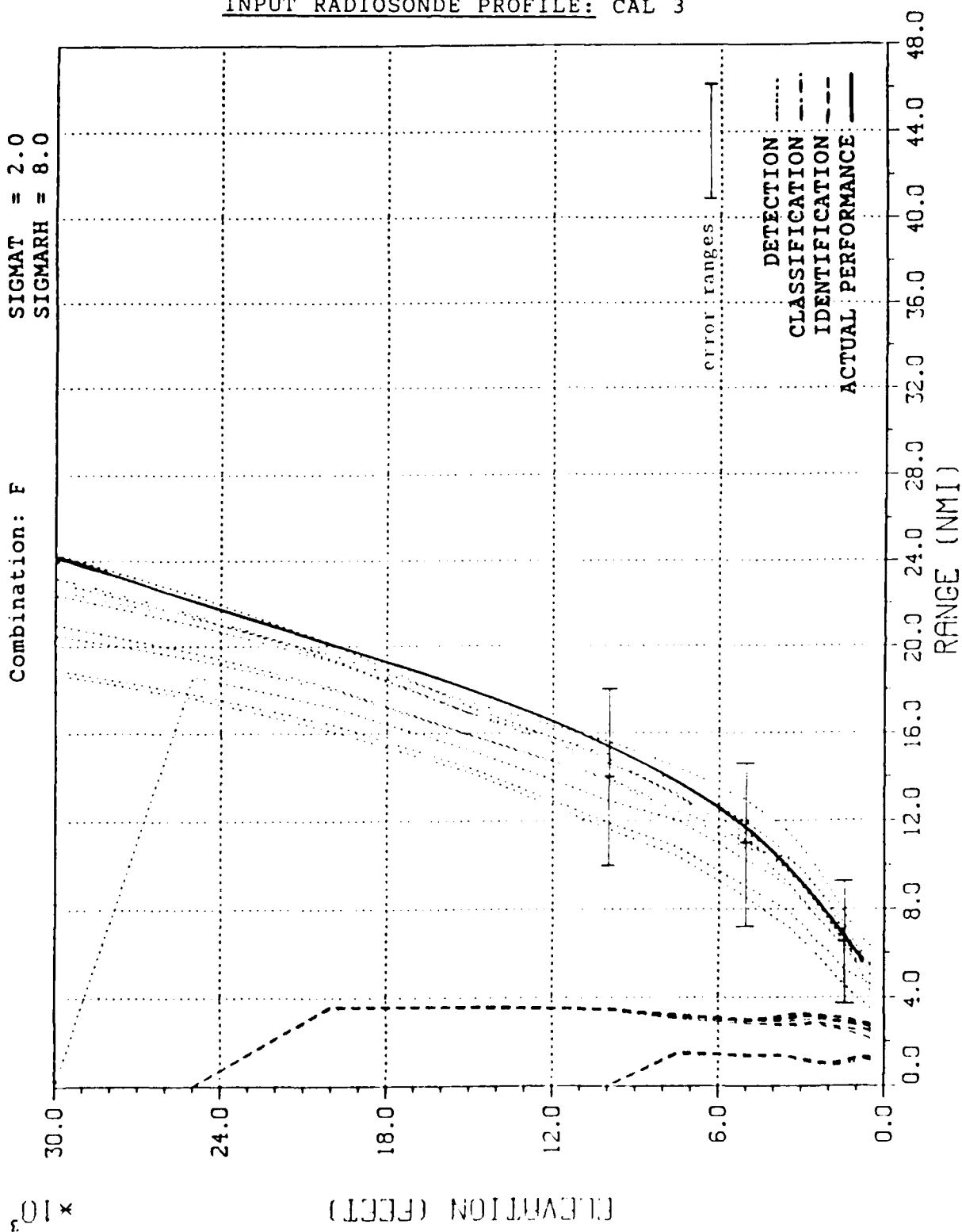


INPUT RADIOSONDE PROFILE: CAL 3

TARGET NUMBER 1

SIGMAP = 1.5
SIGMAT = 2.0
SIGMARH = 8.0

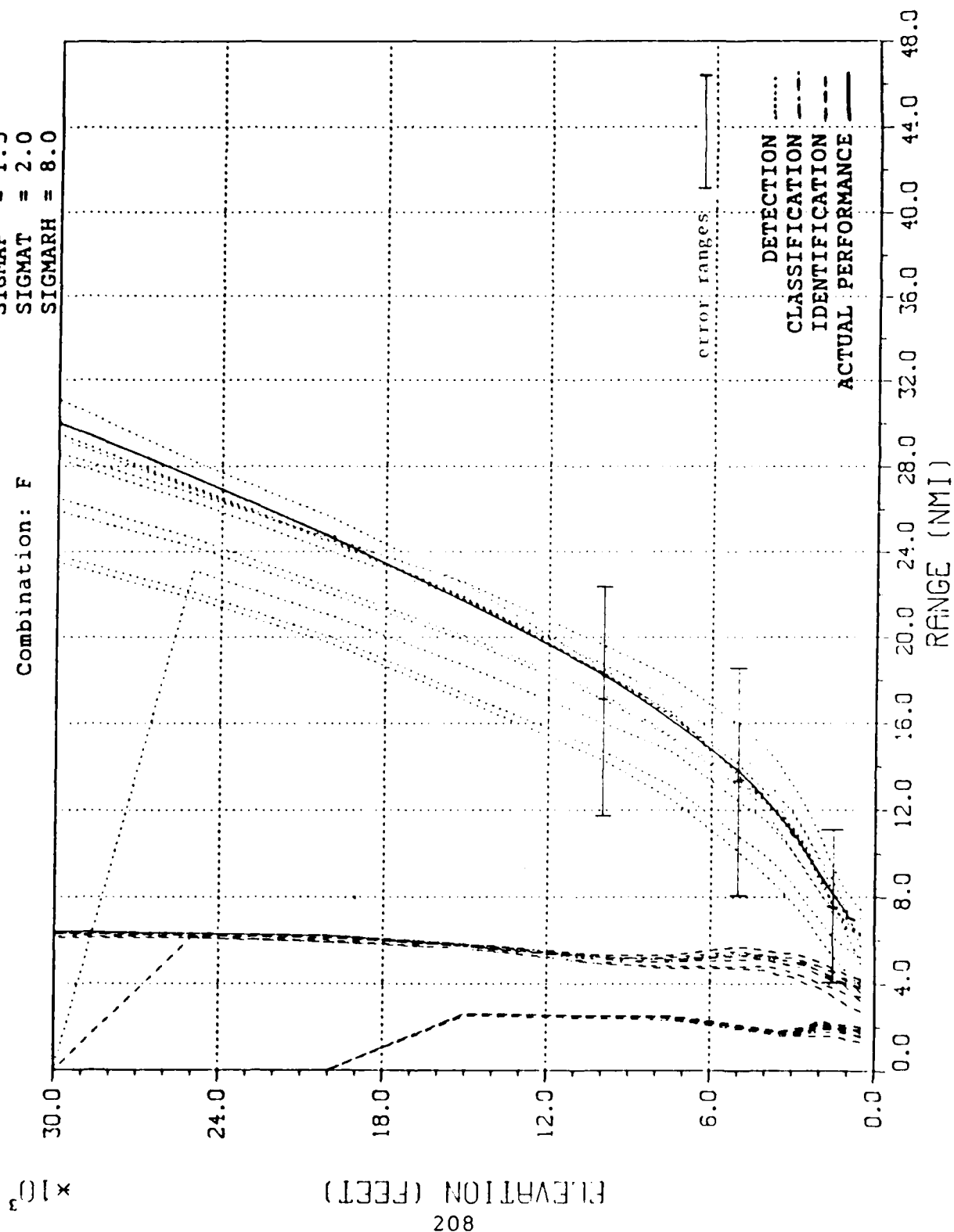
Combination: F



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

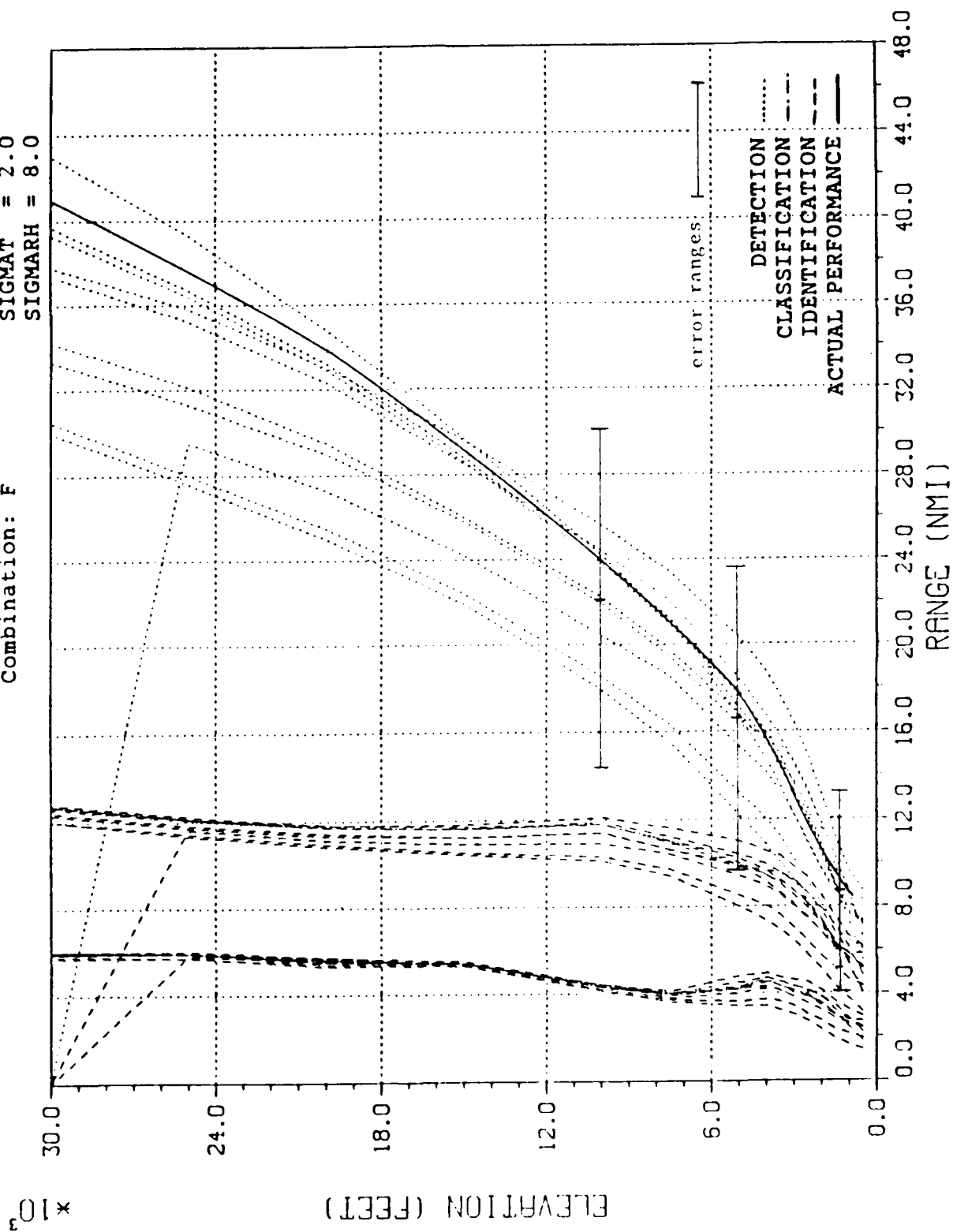
Combination: F



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

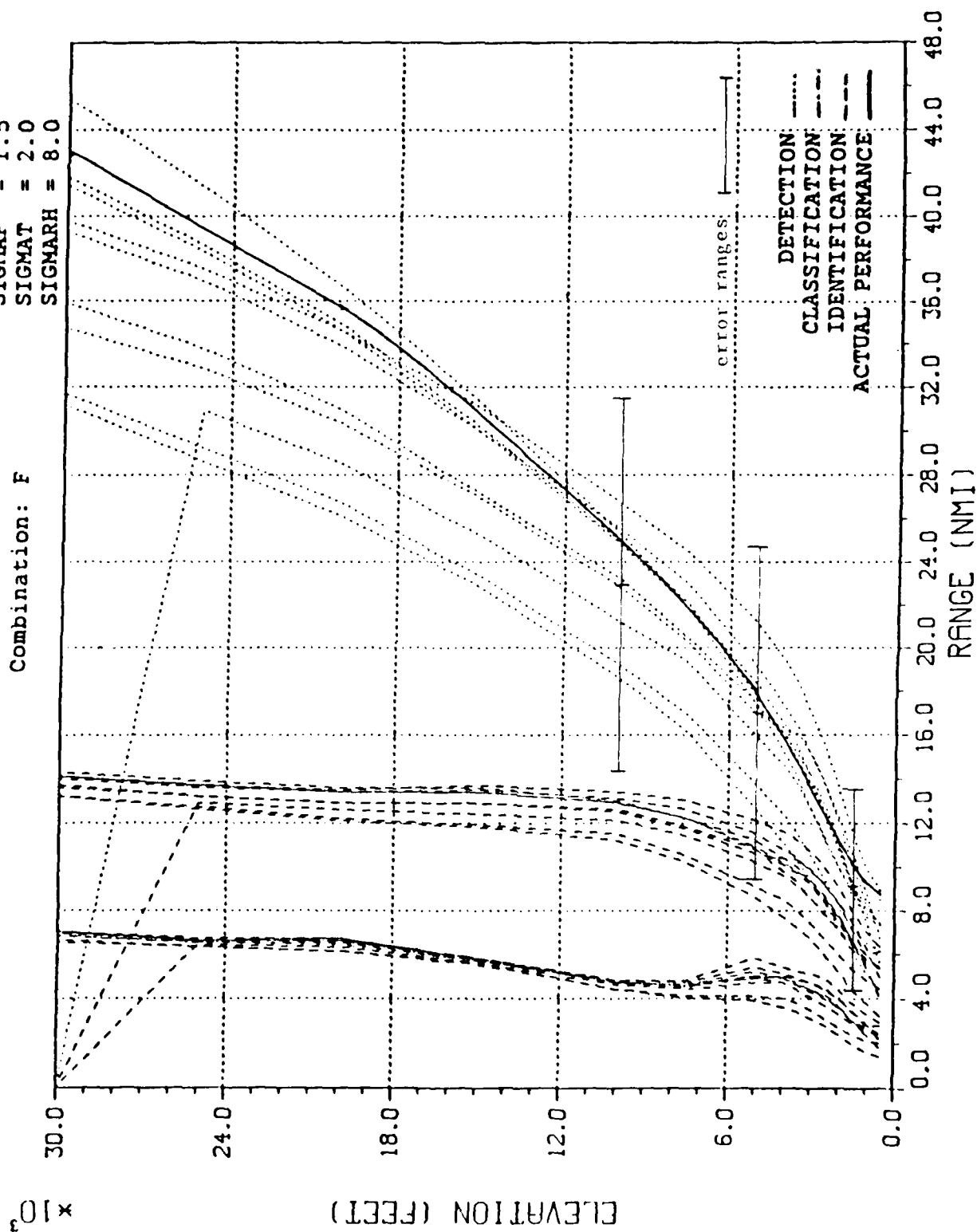
Combination: F



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: F

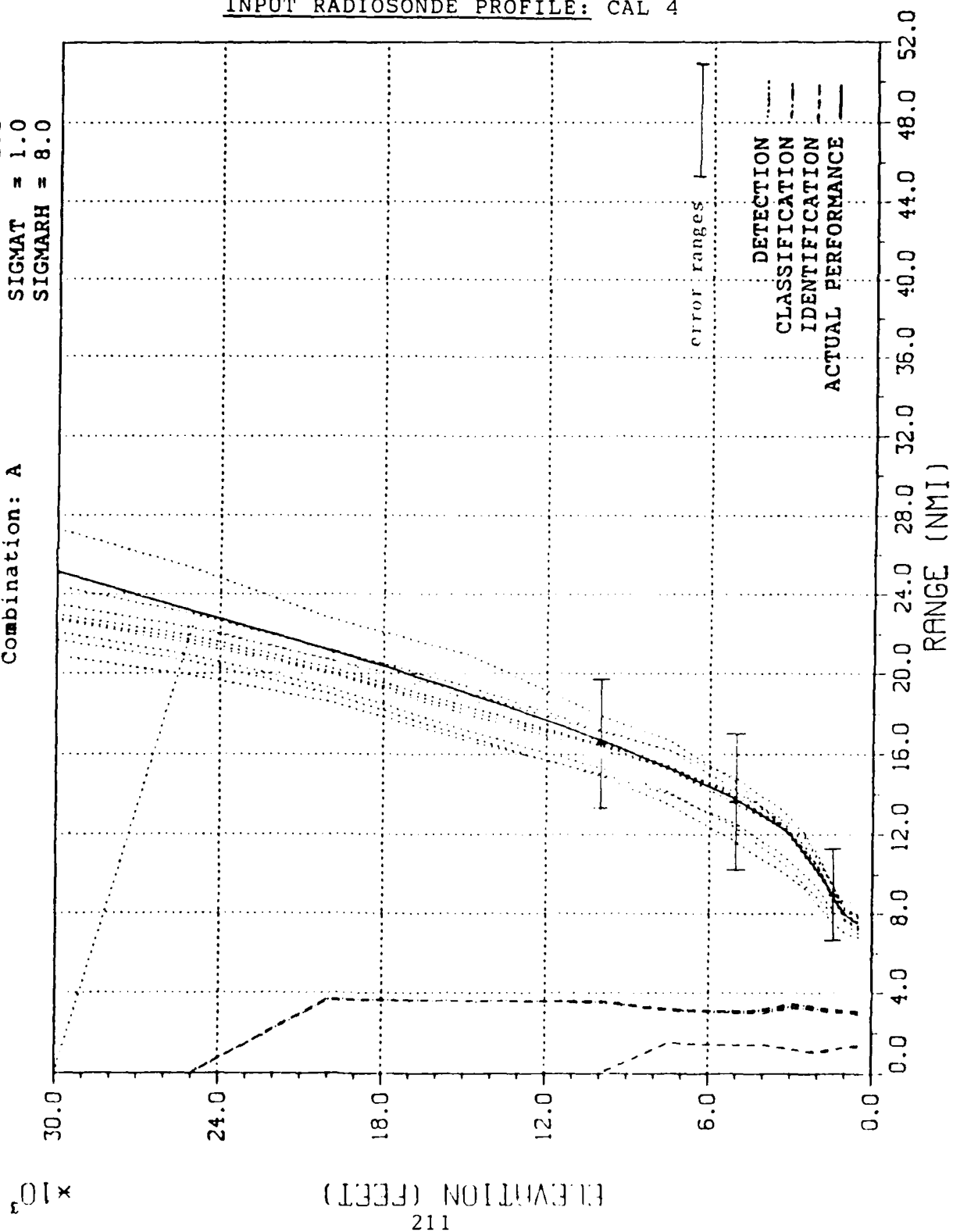


TARGET NUMBER 1

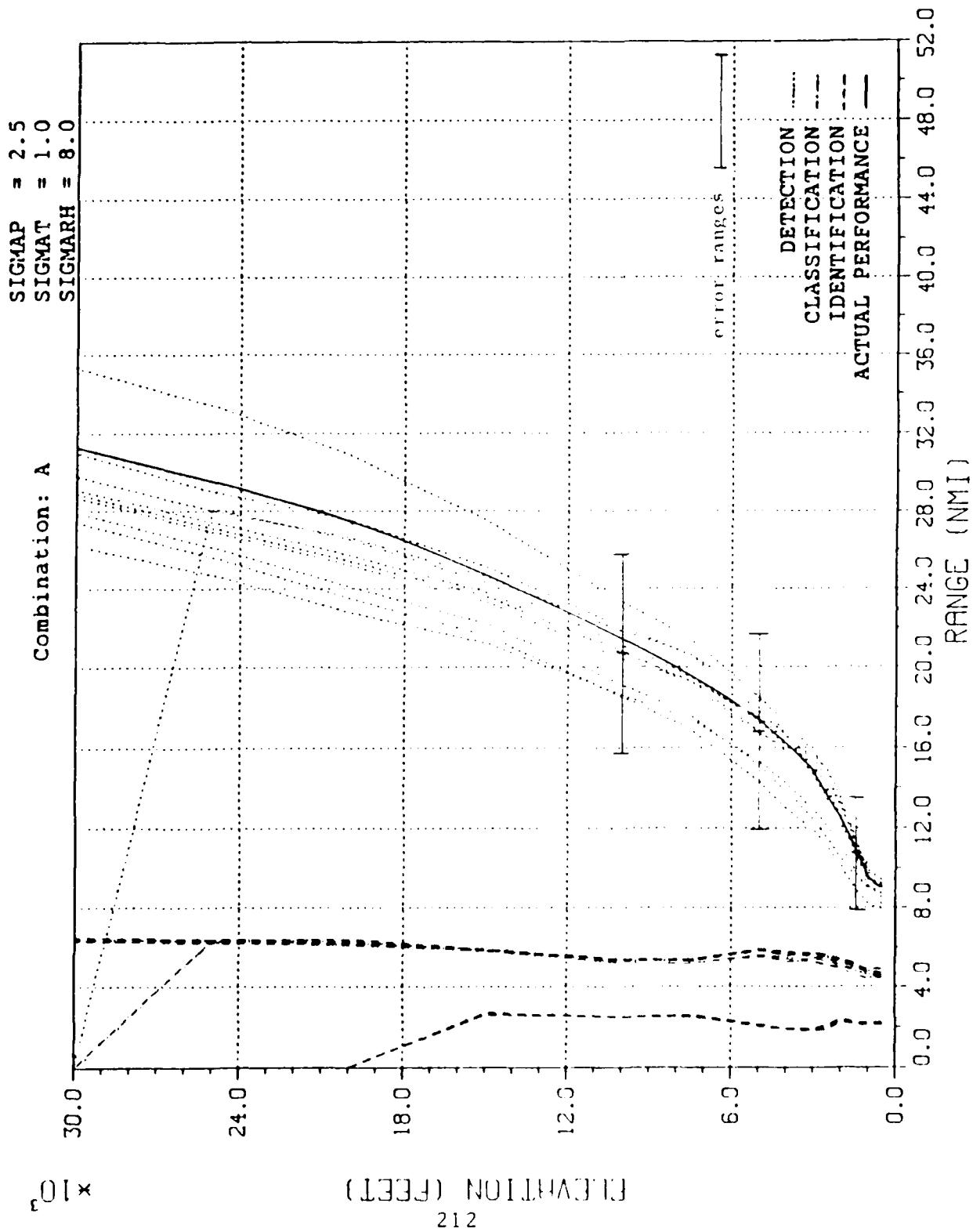
SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: A

INPUT RADIOSONDE PROFILE: CAL 4



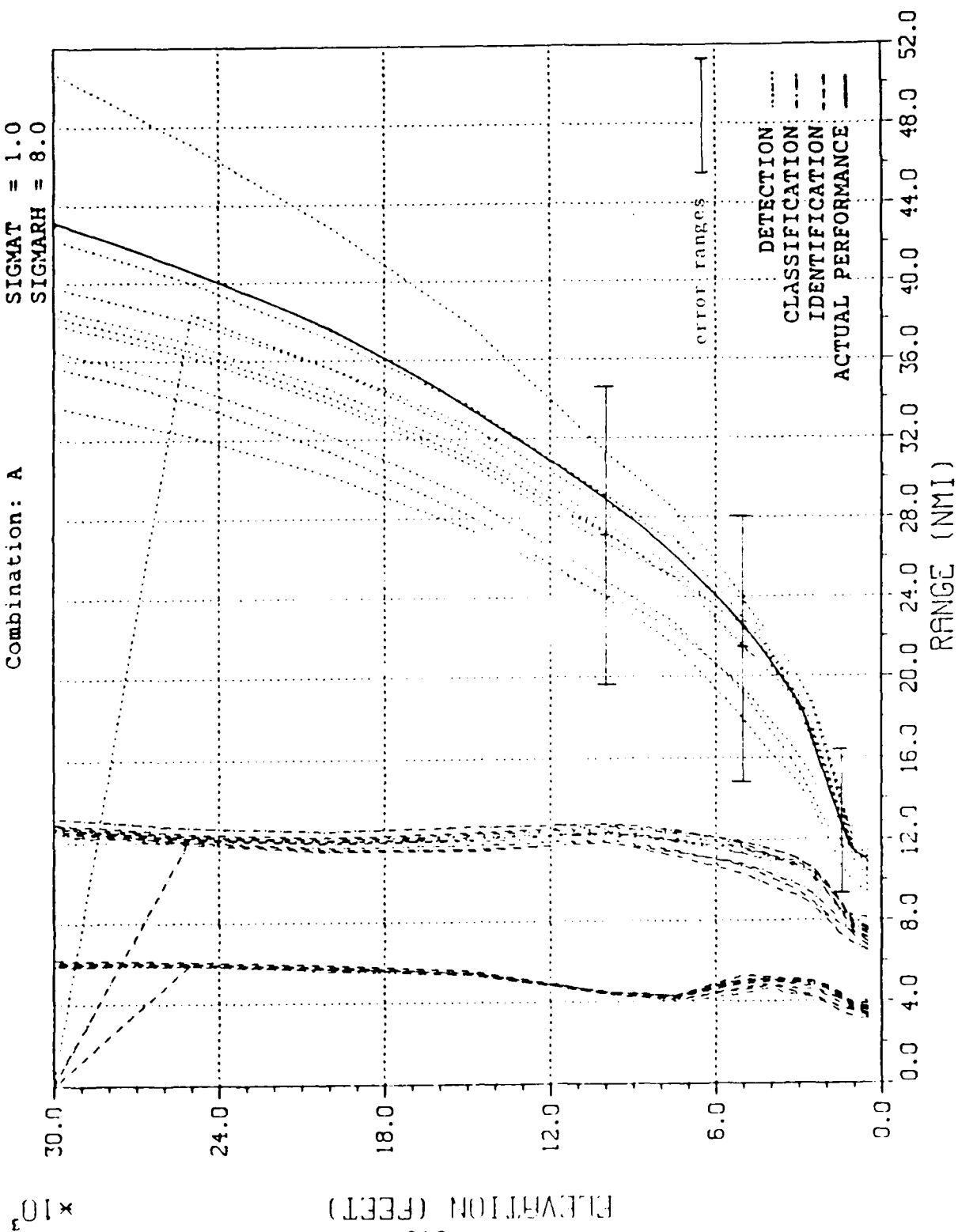
TARGET NUMBER 2



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

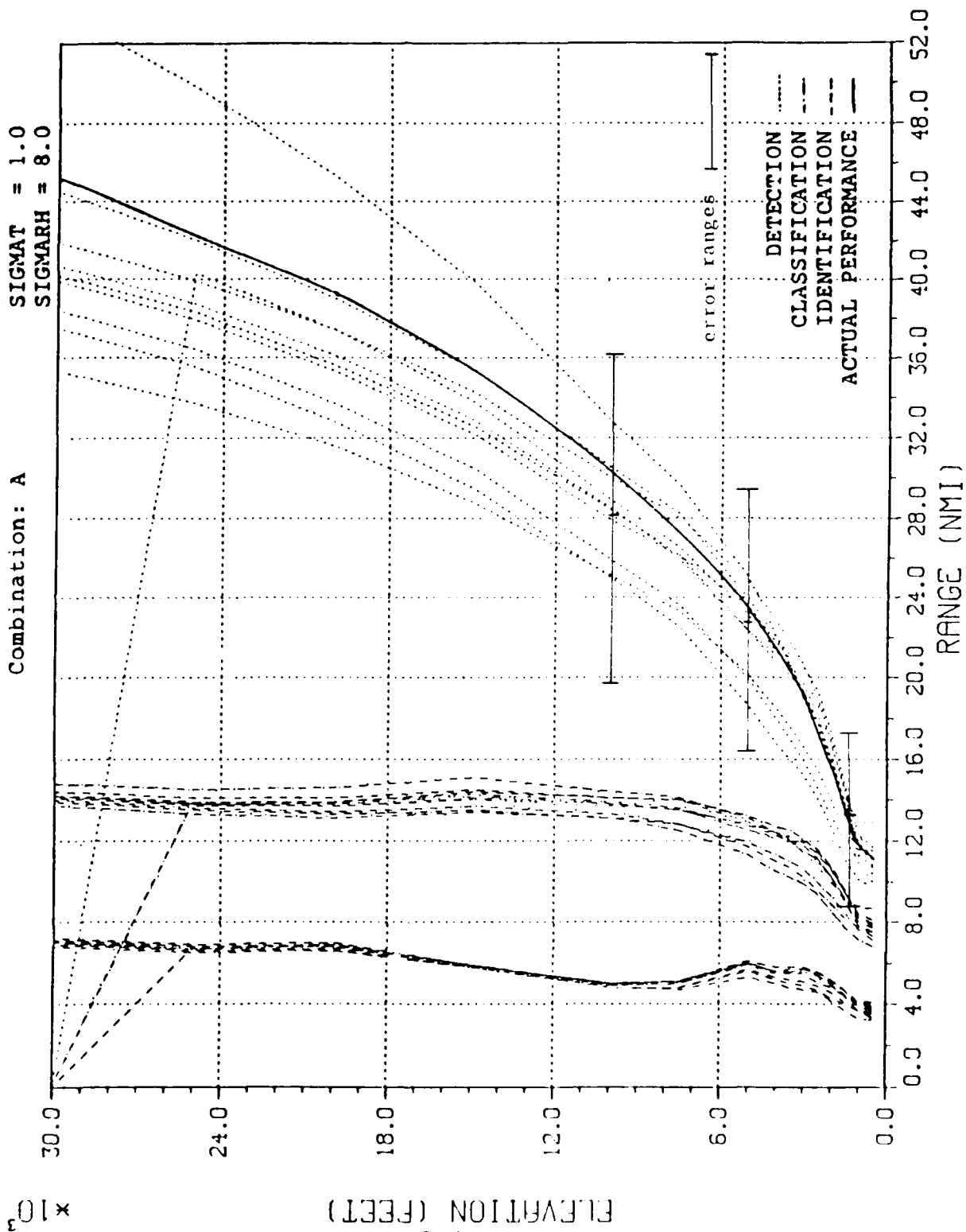
Combination: A



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

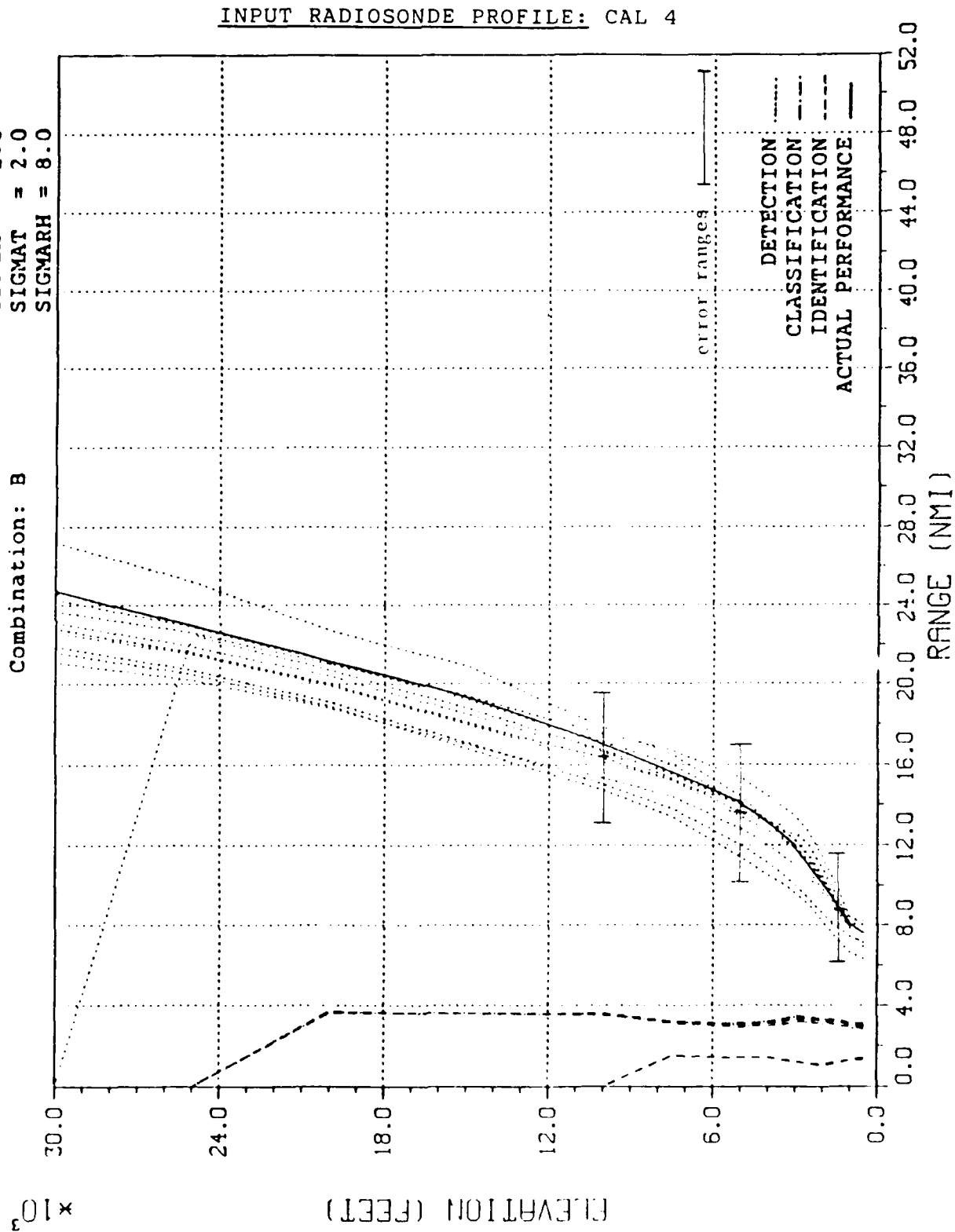
Combination: A



TARGET NUMBER 1

SIGMAP = 2.5
SIGMAT = 2.0
SIGMARH = 8.0

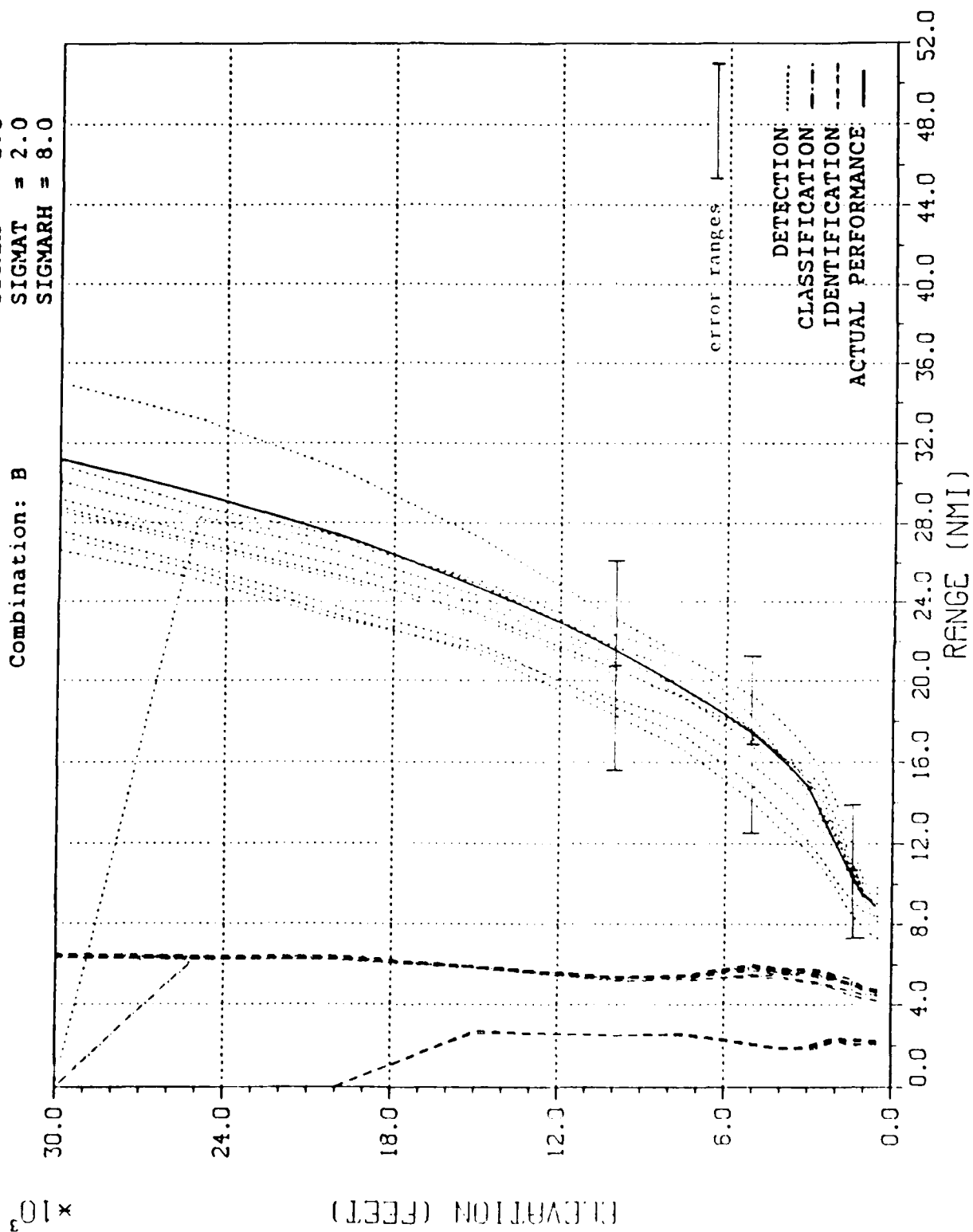
Combination: B



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

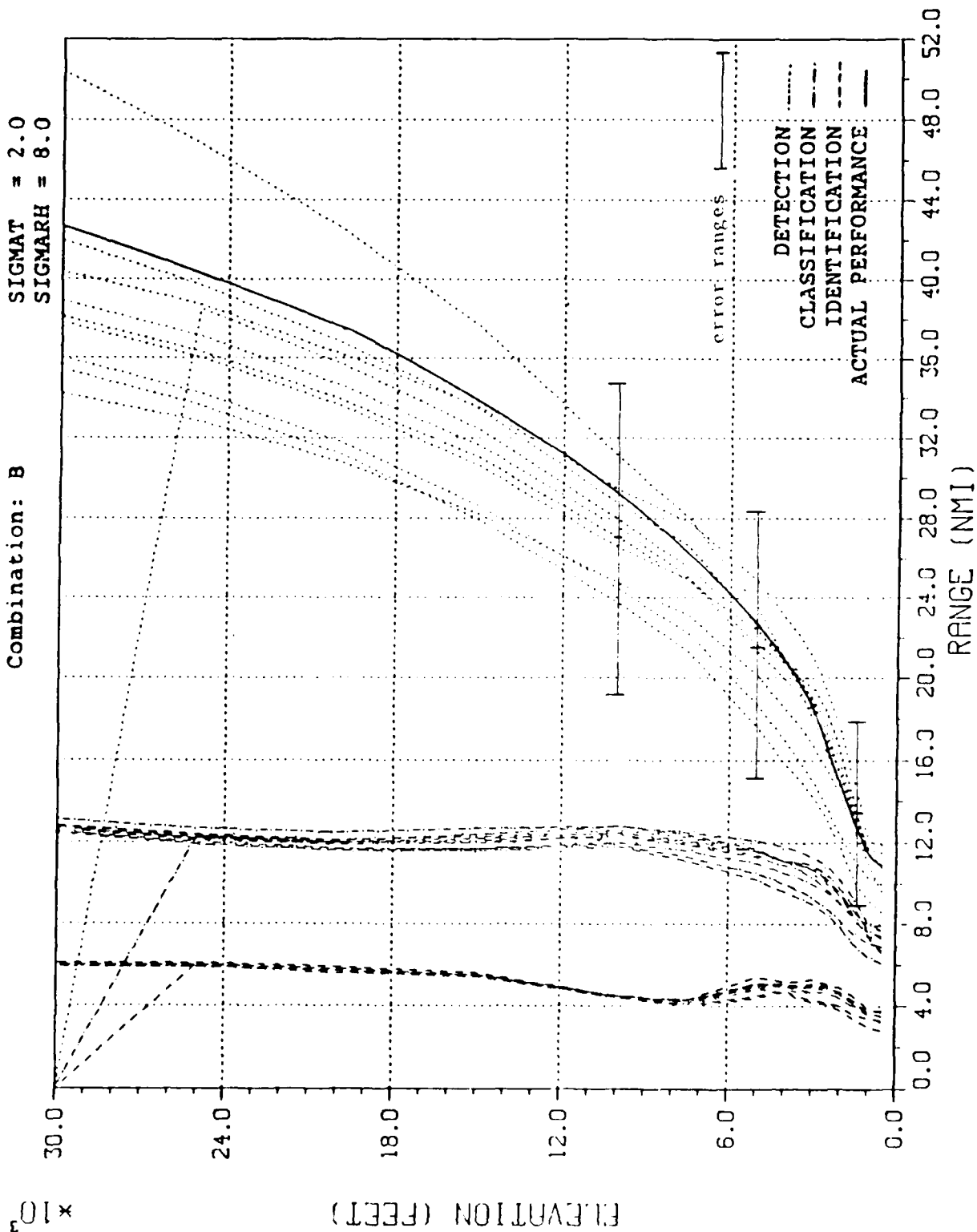
Combination: B



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

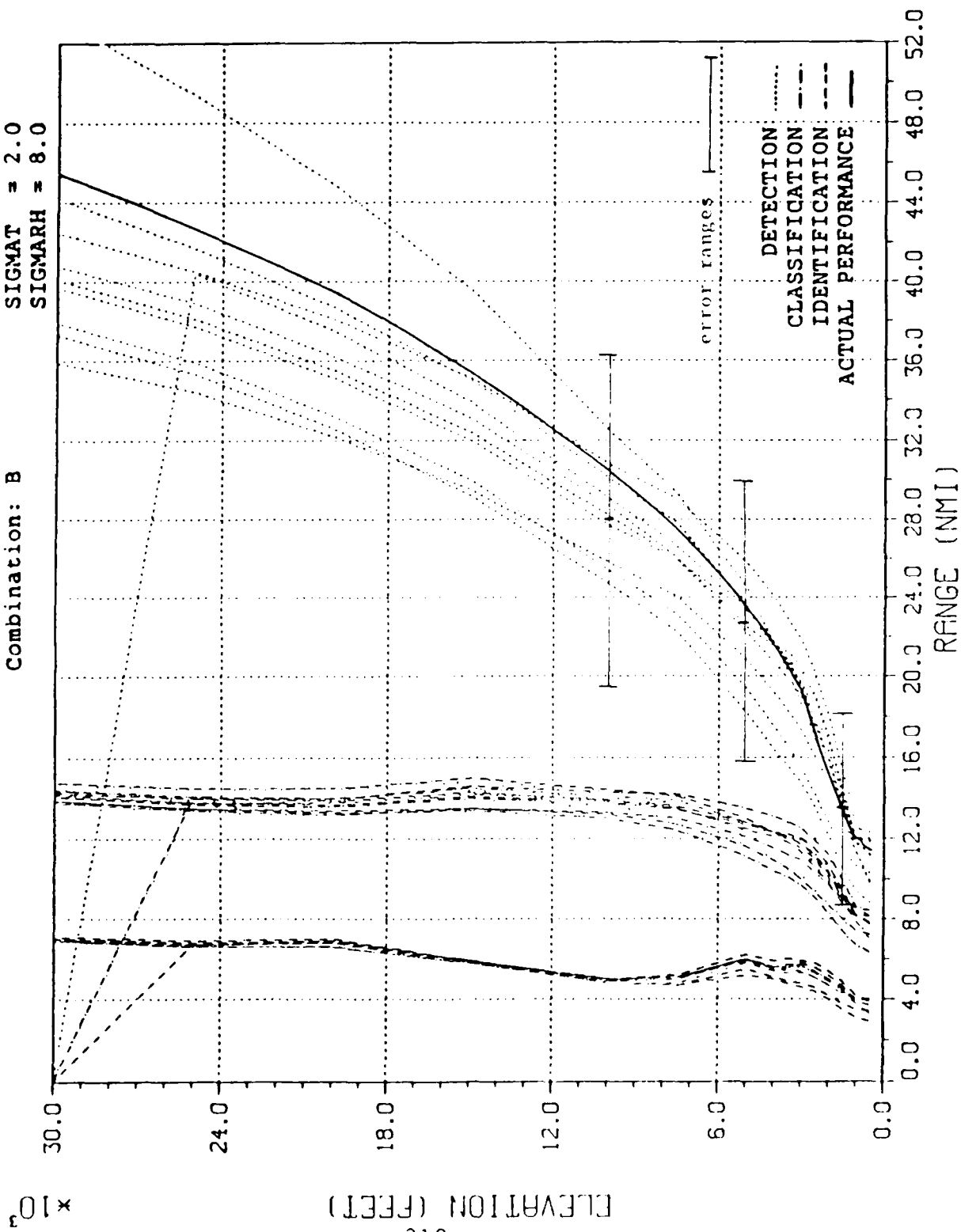
Combination: B



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

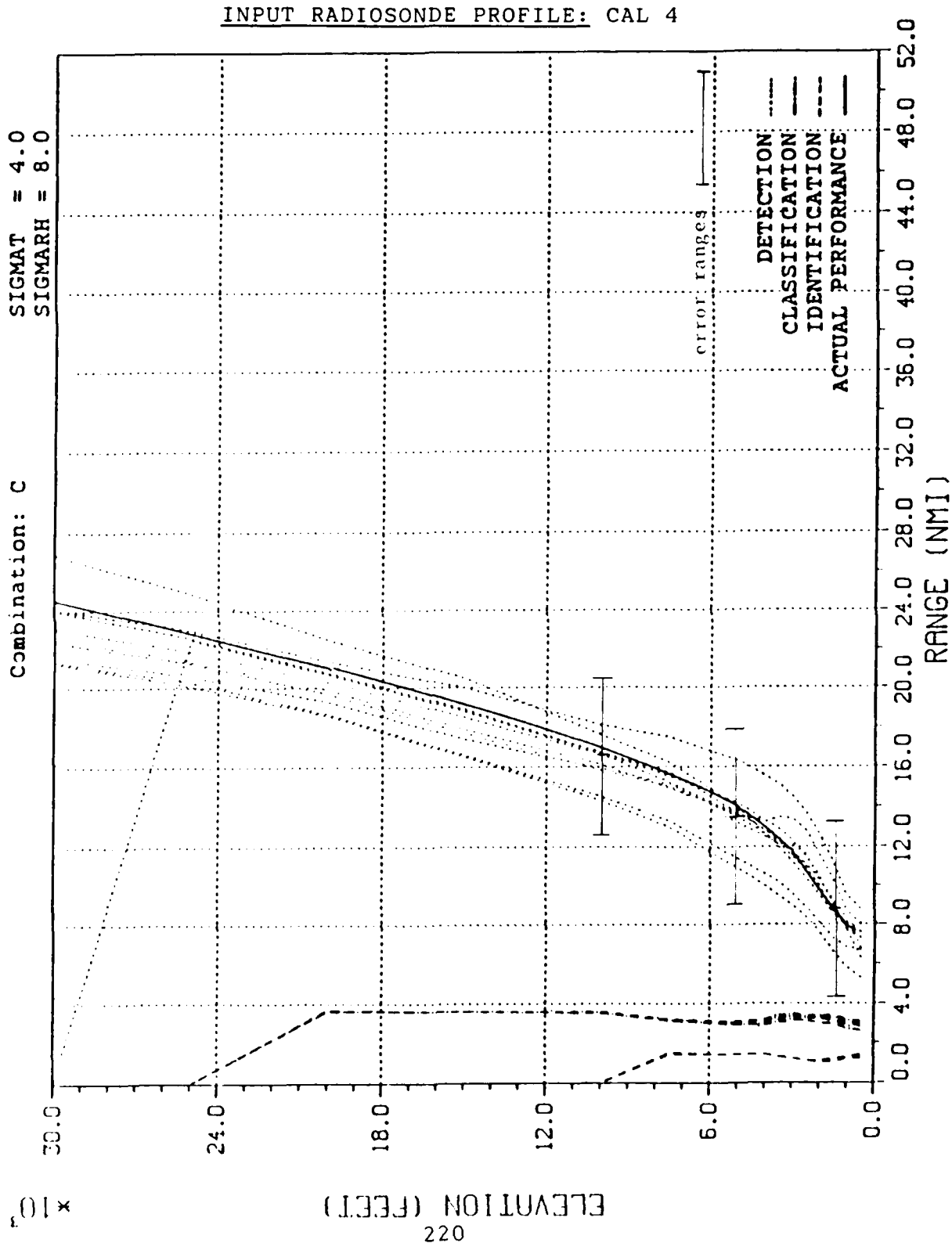
Combination: B



TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

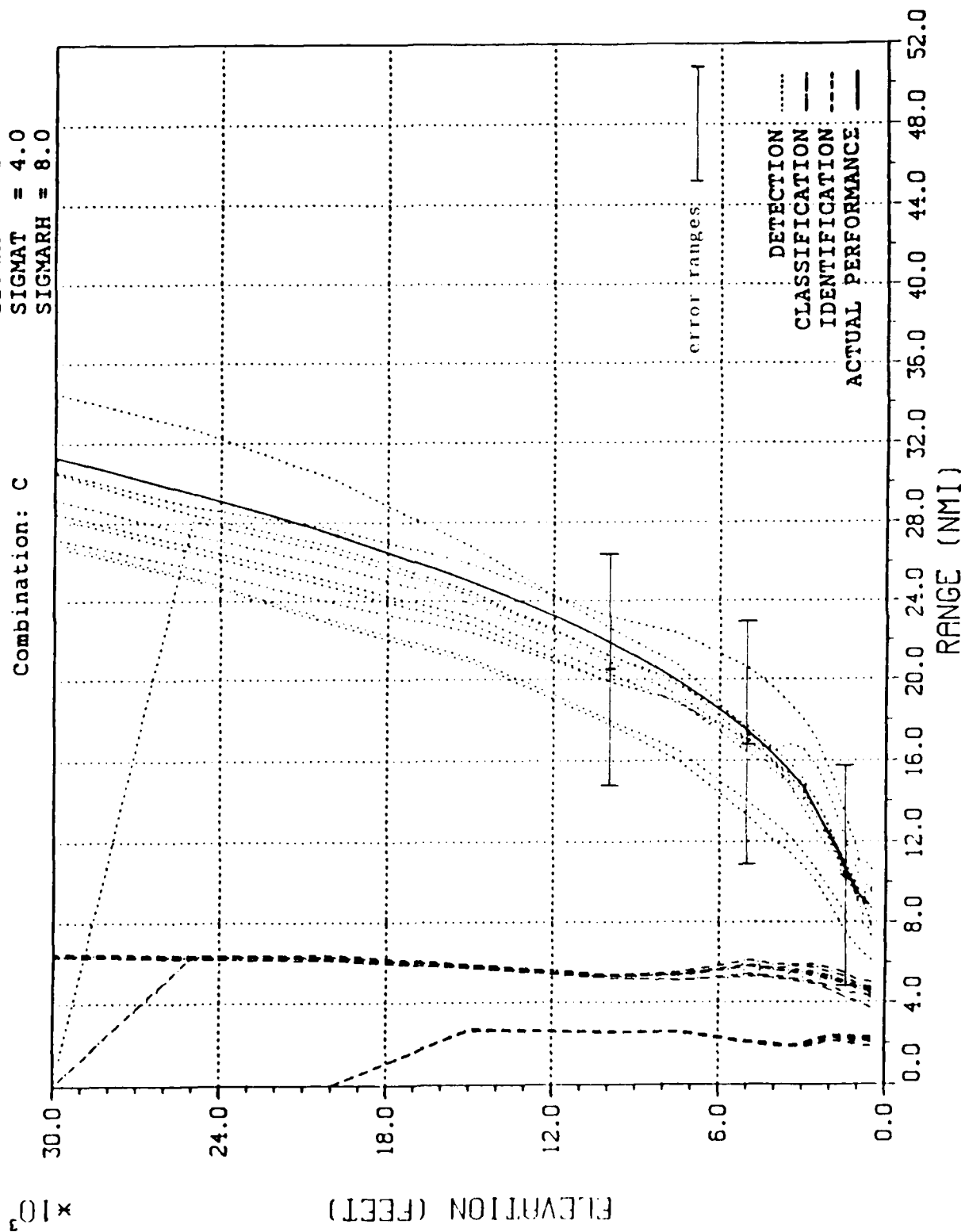
Combination: C



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

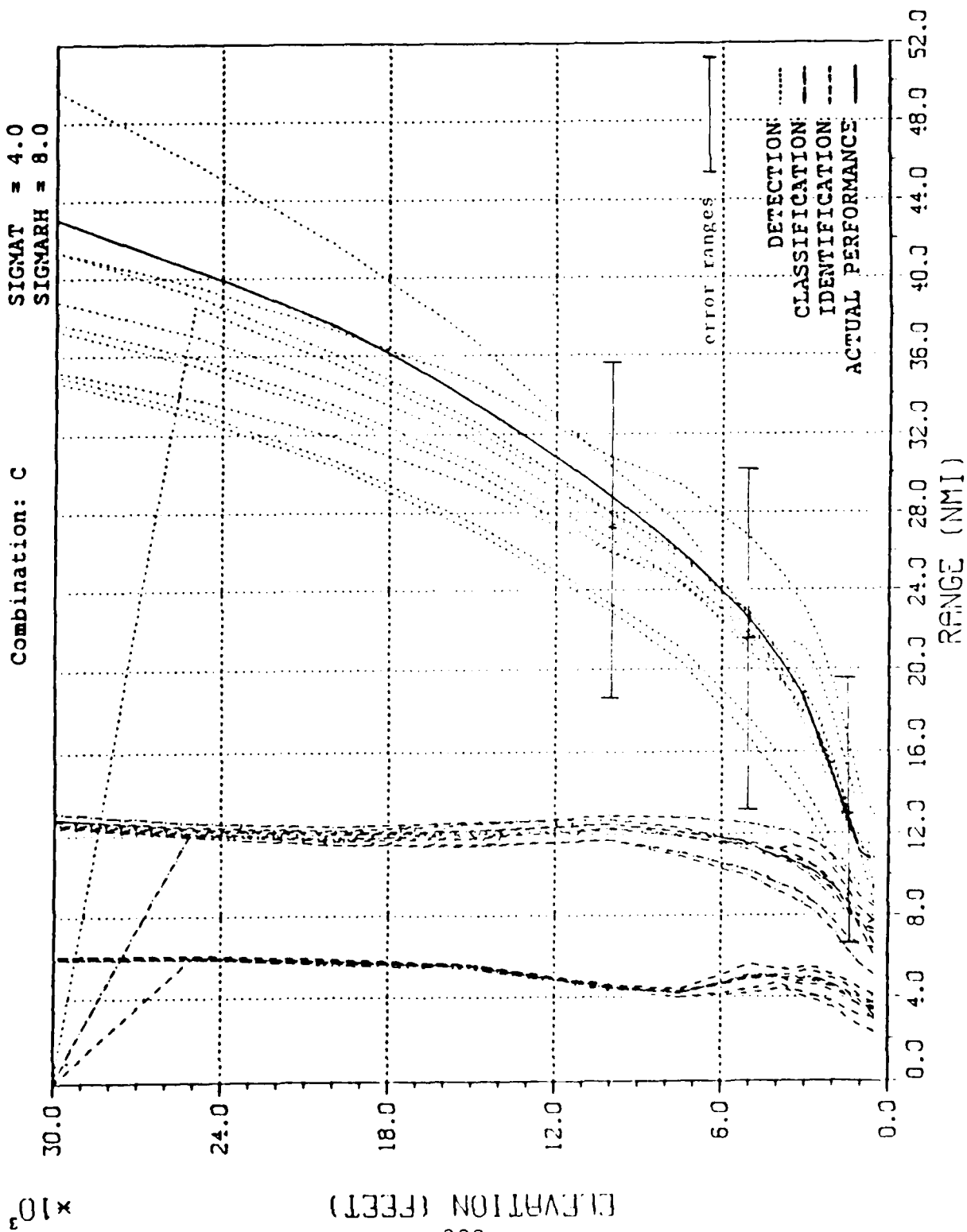
Combination: C



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

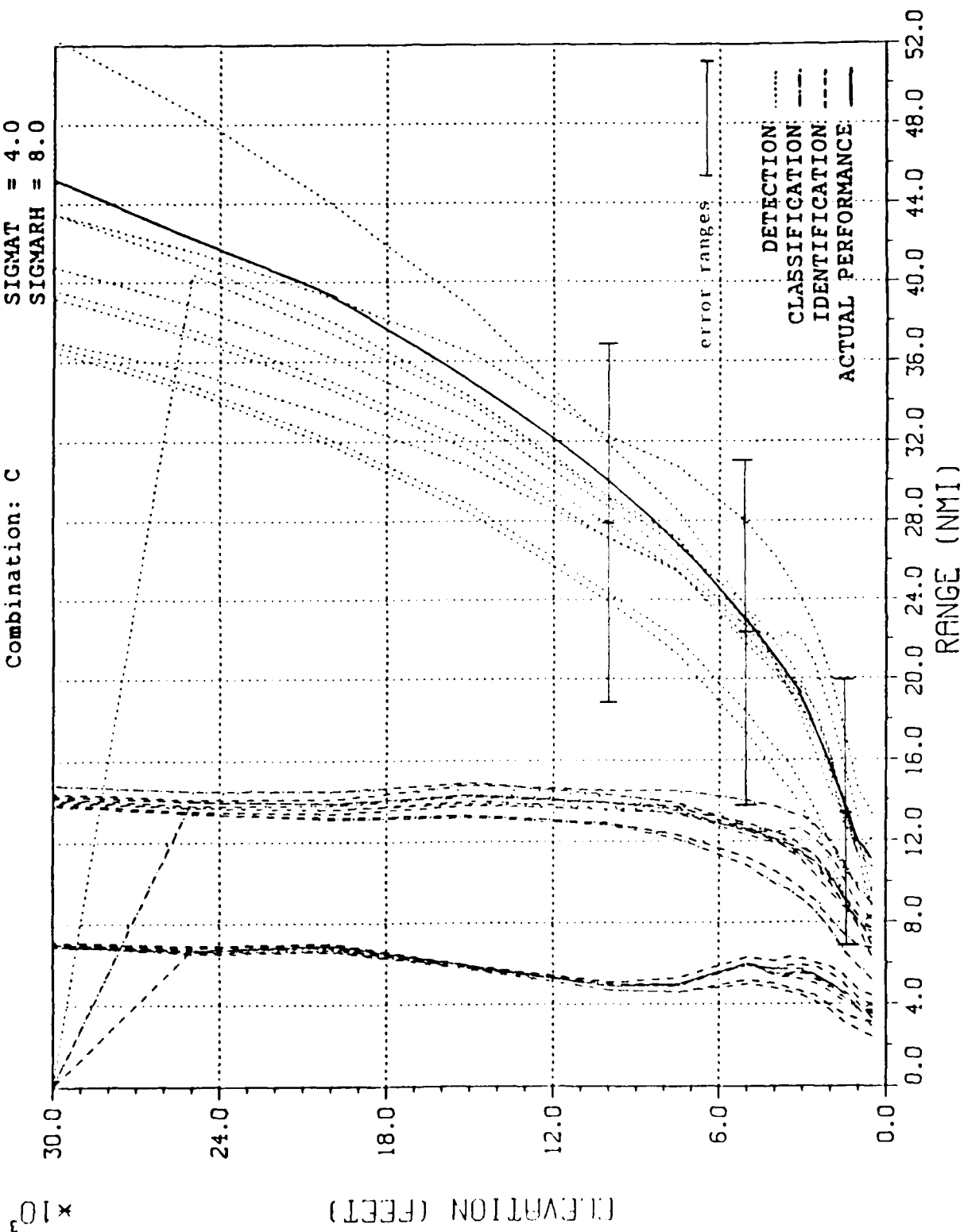
Combination: C



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

Combination: C

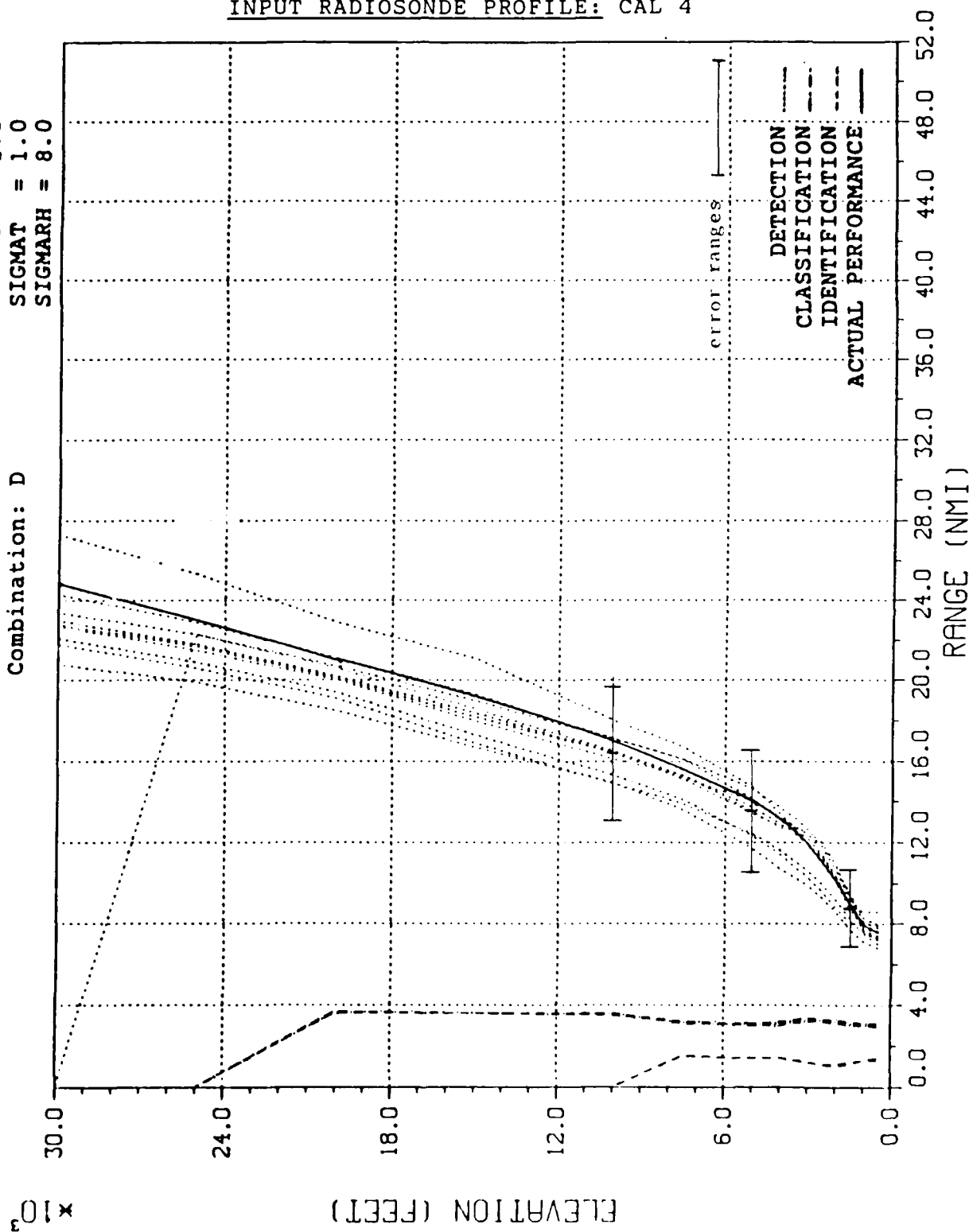


TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: D

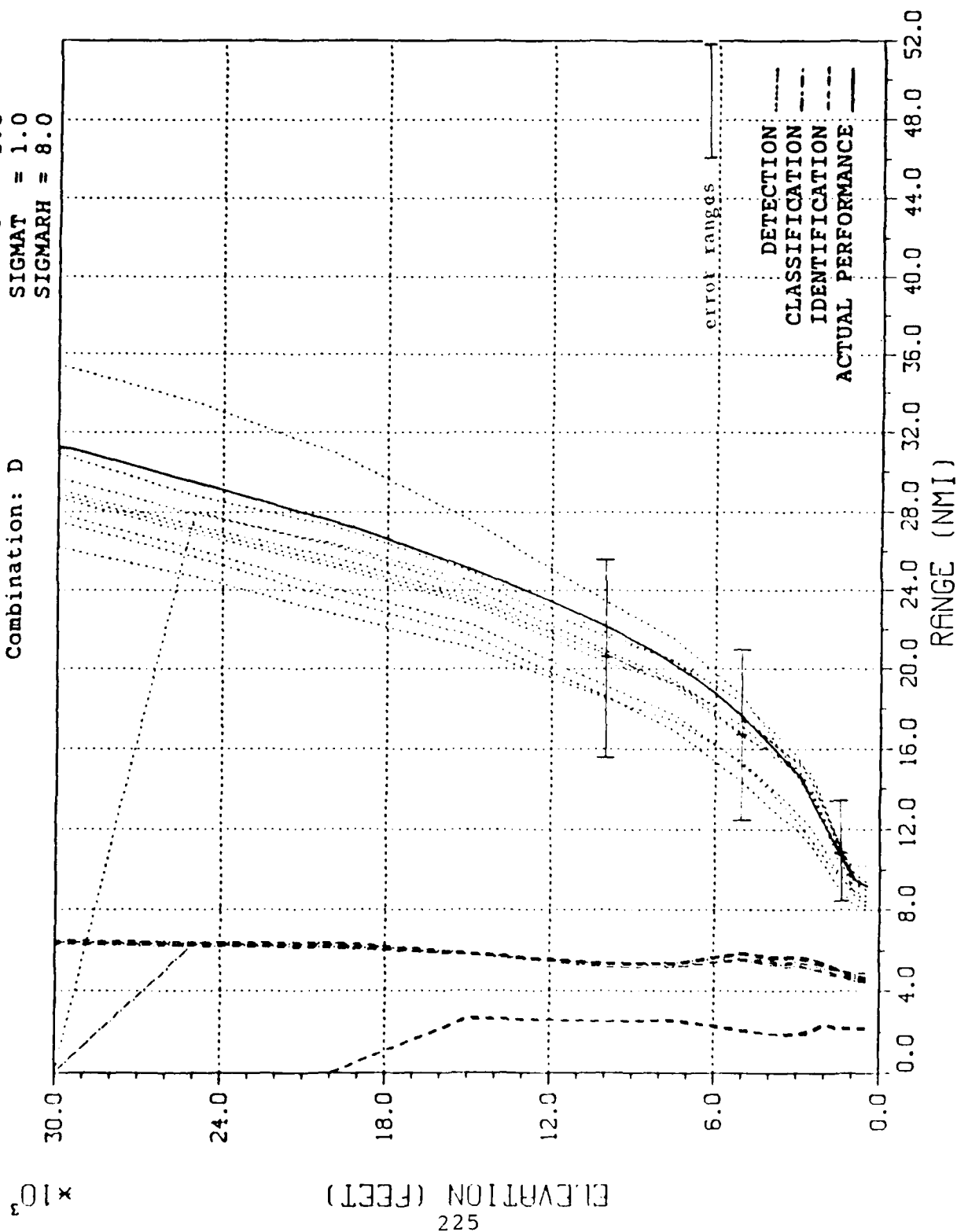
INPUT RADIOSONDE PROFILE: CAL 4



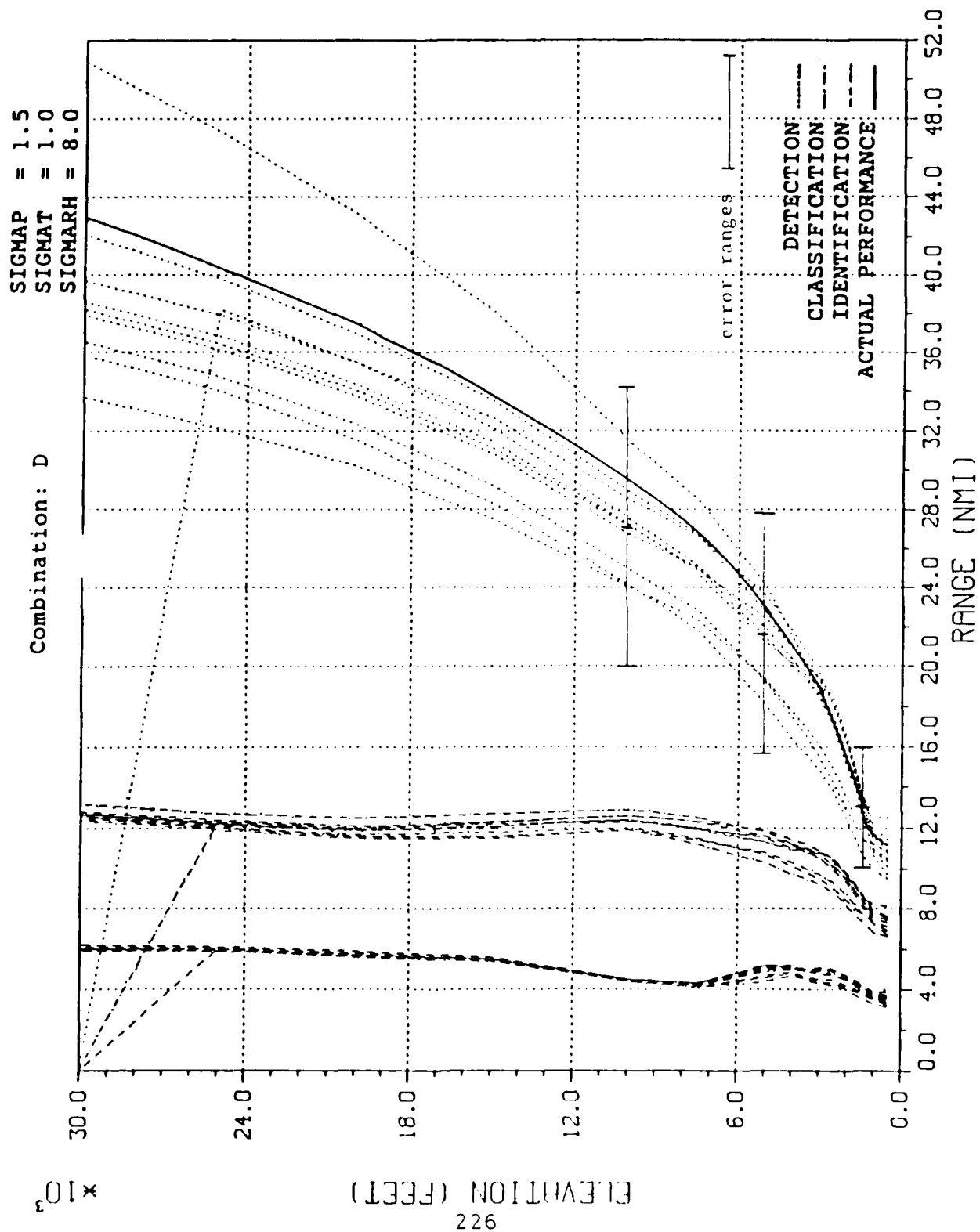
TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: D



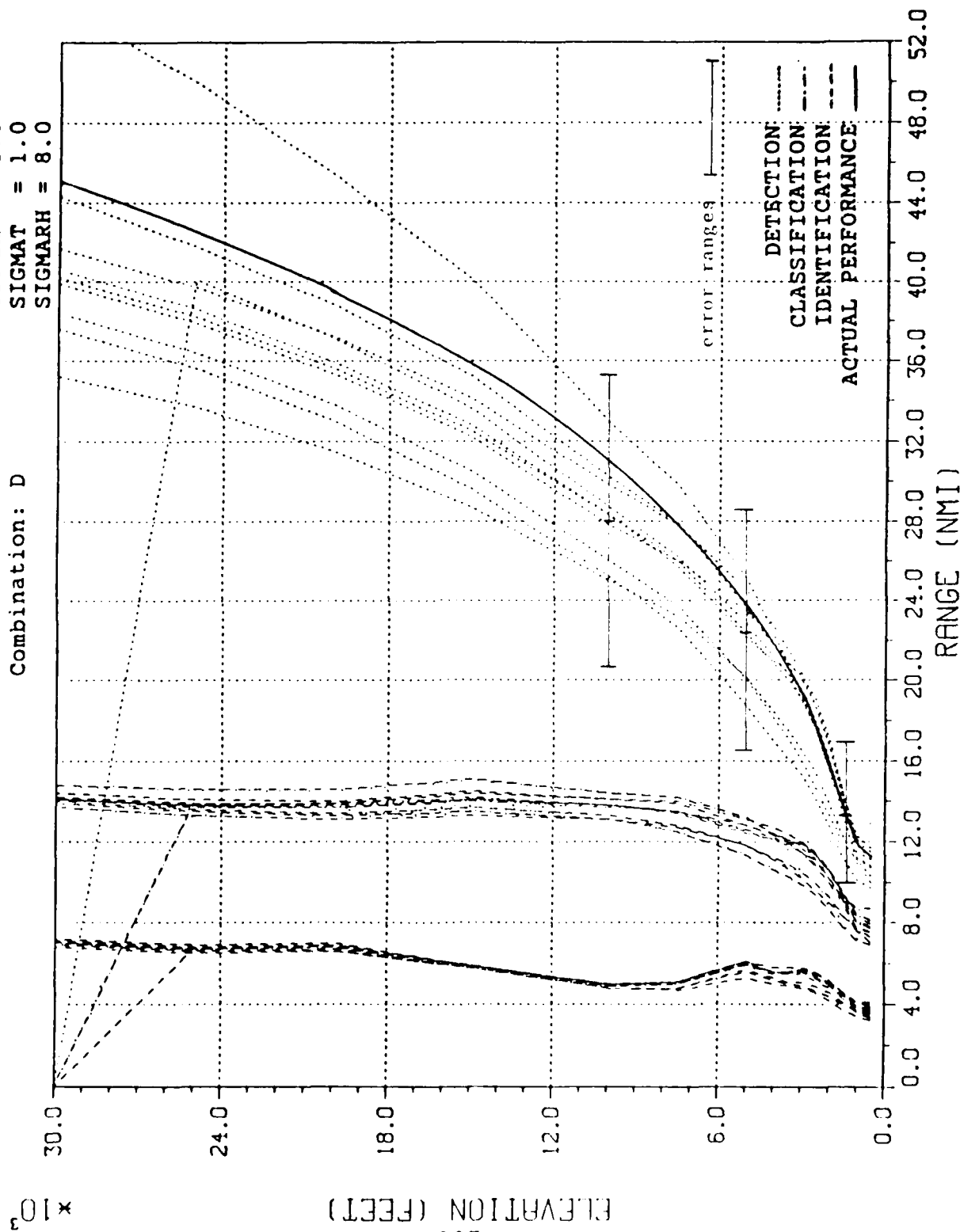
TARGET NUMBER 3



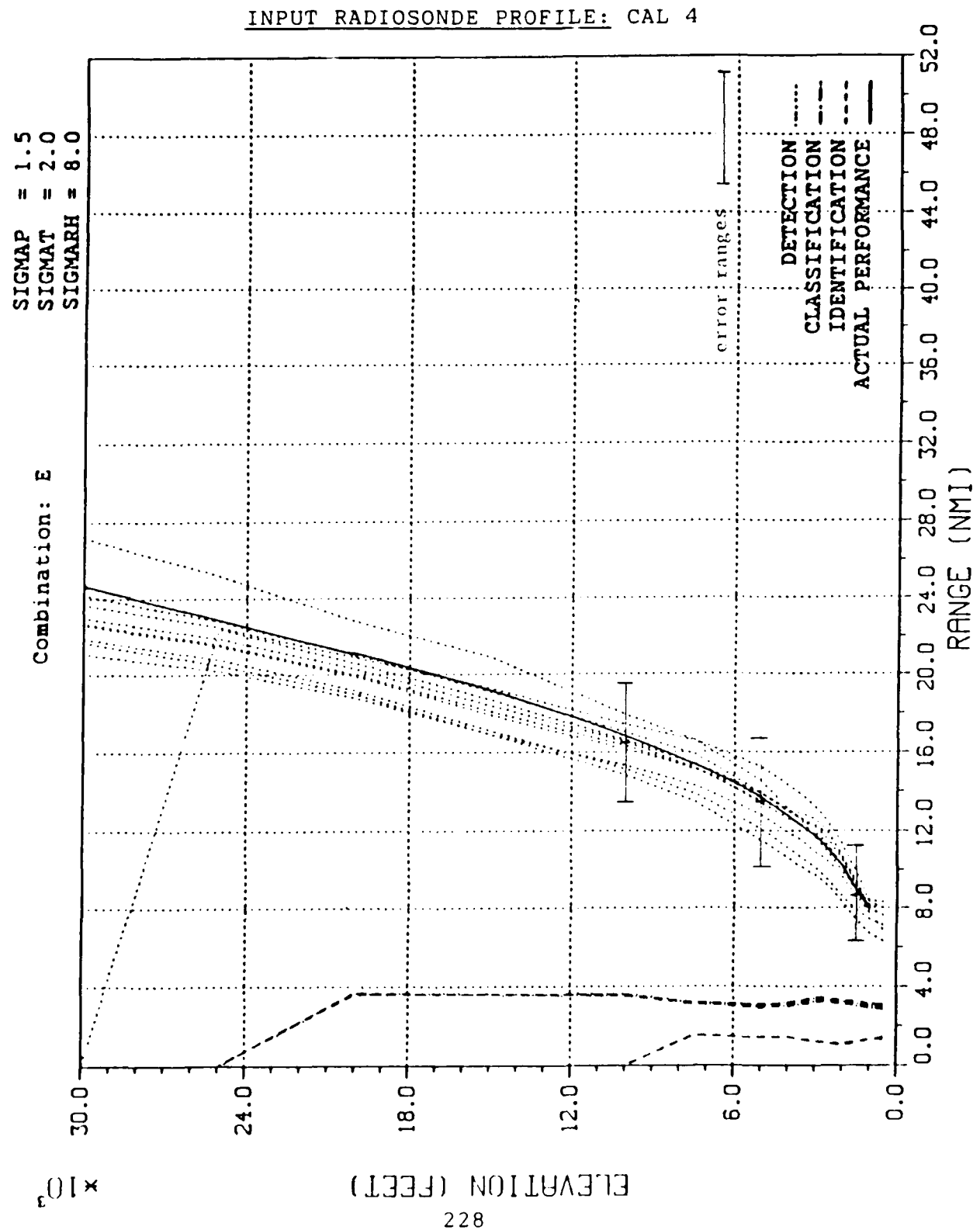
TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: D



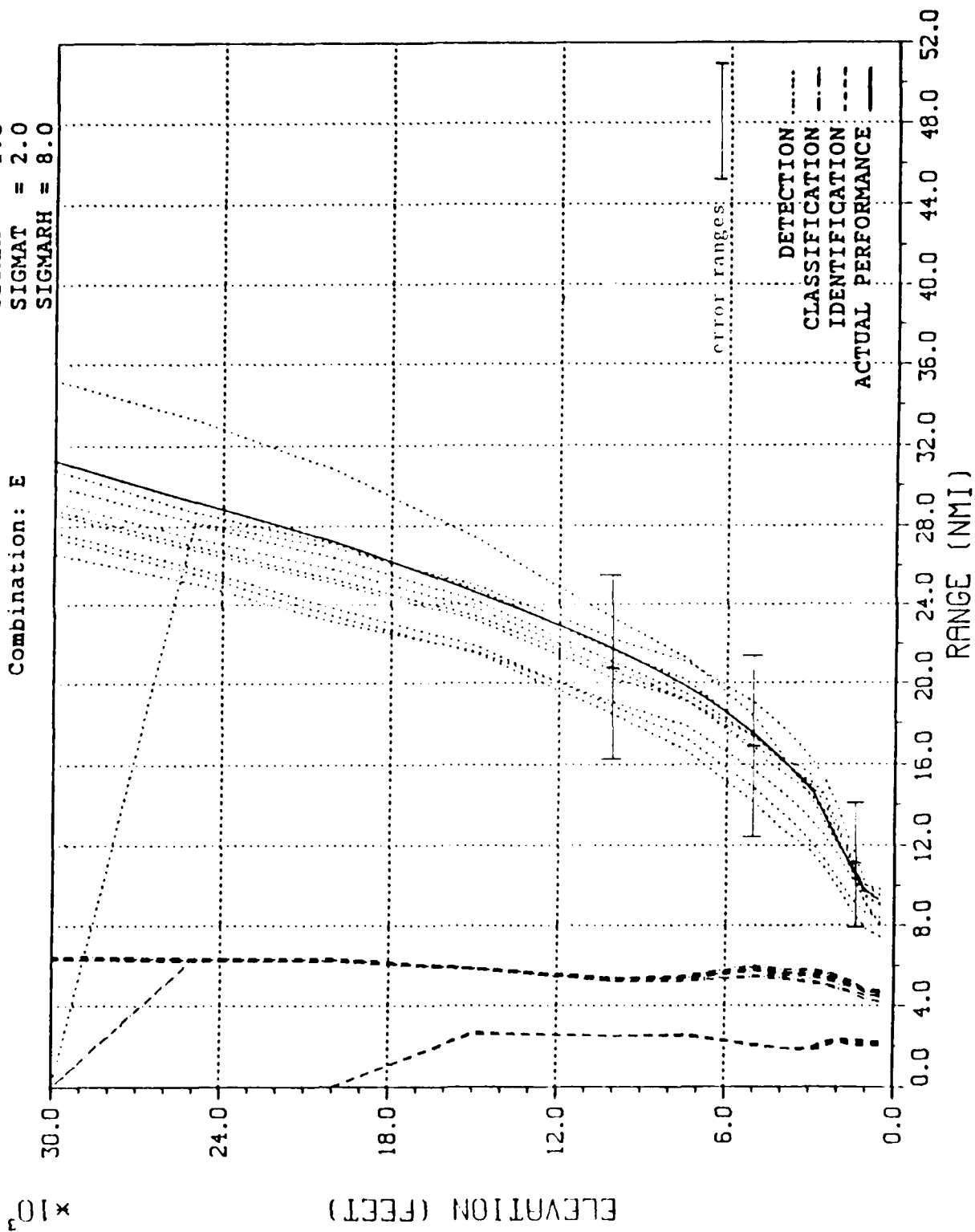
TARGET NUMBER 1



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

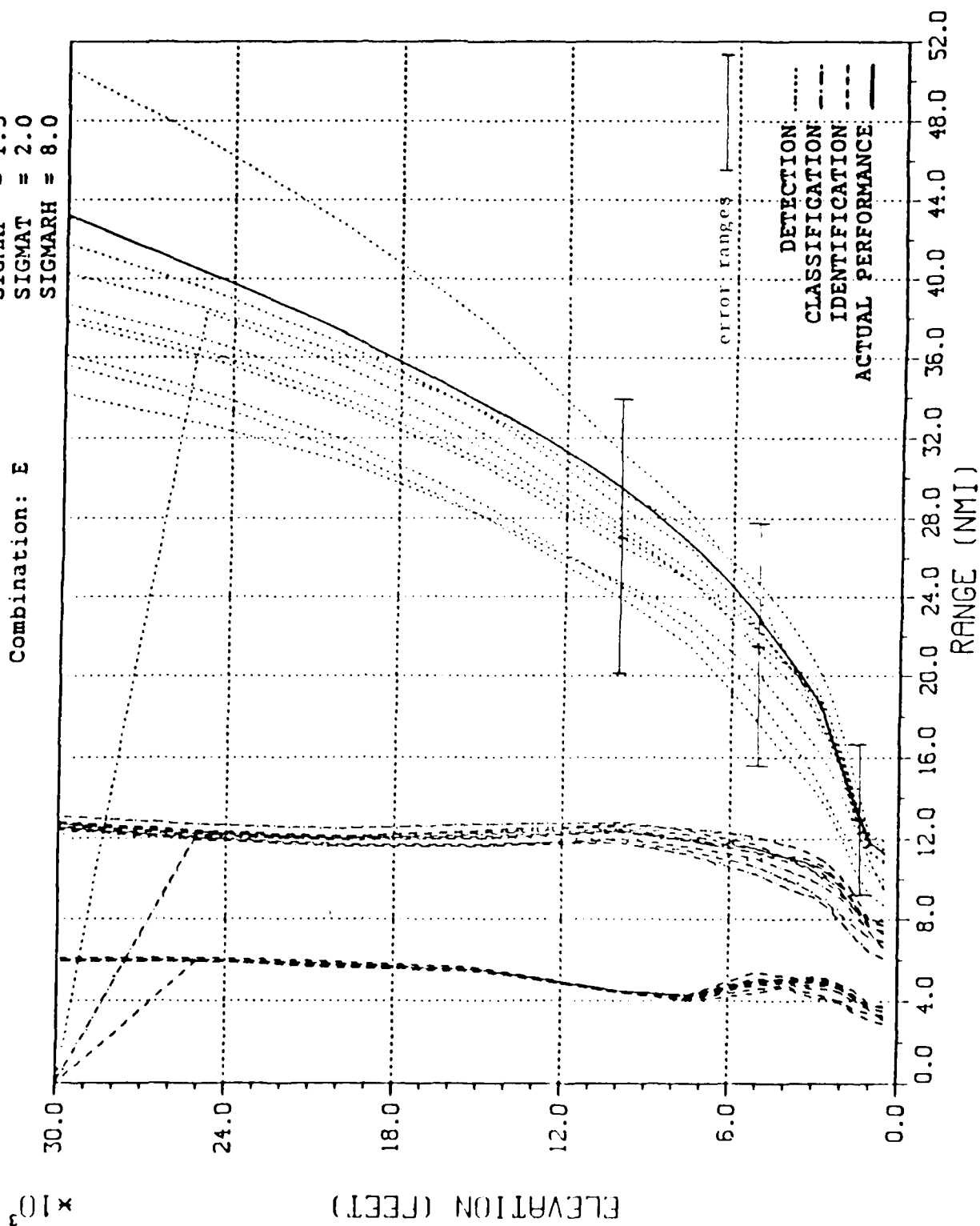
Combination: E



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

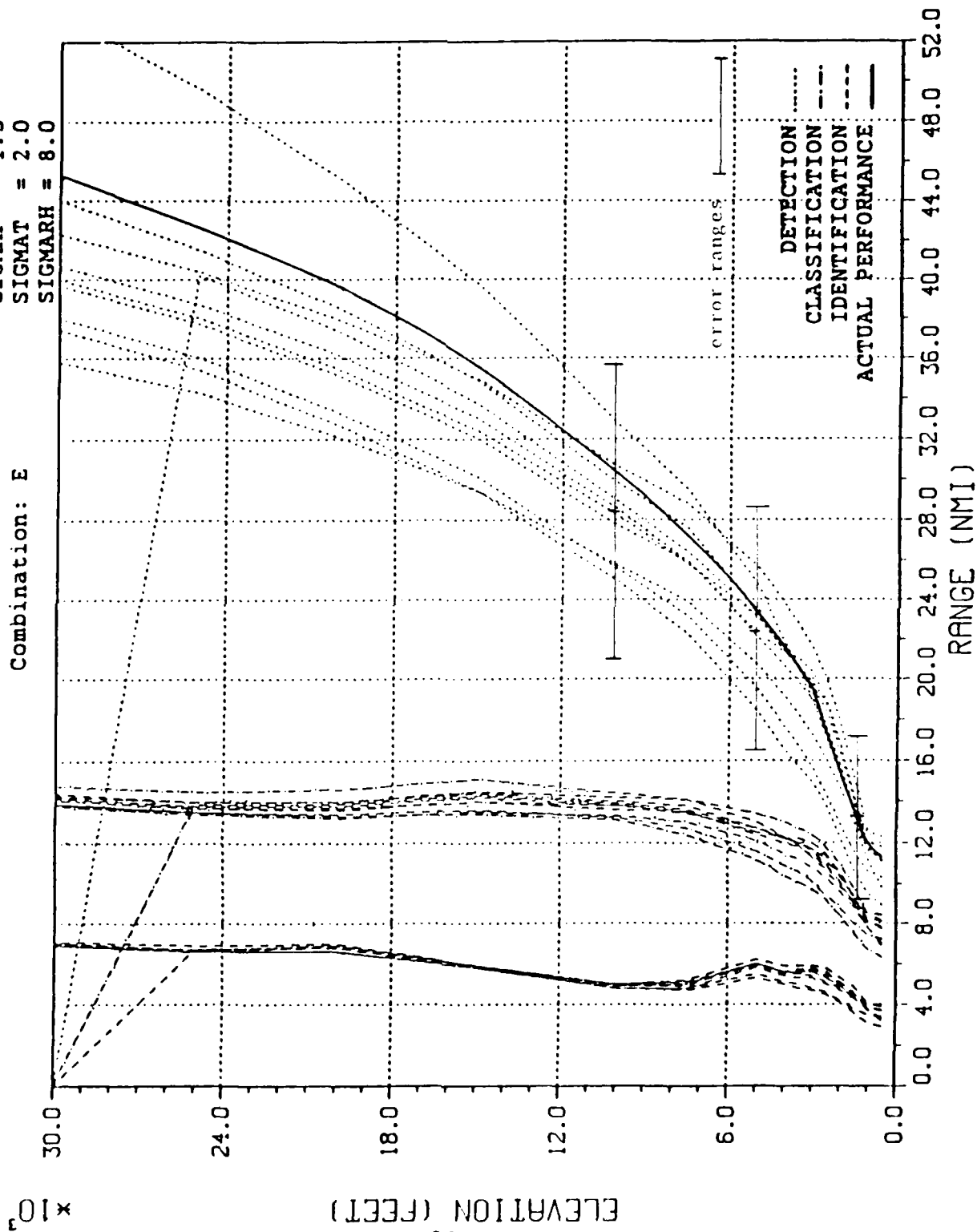
Combination: E



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: E

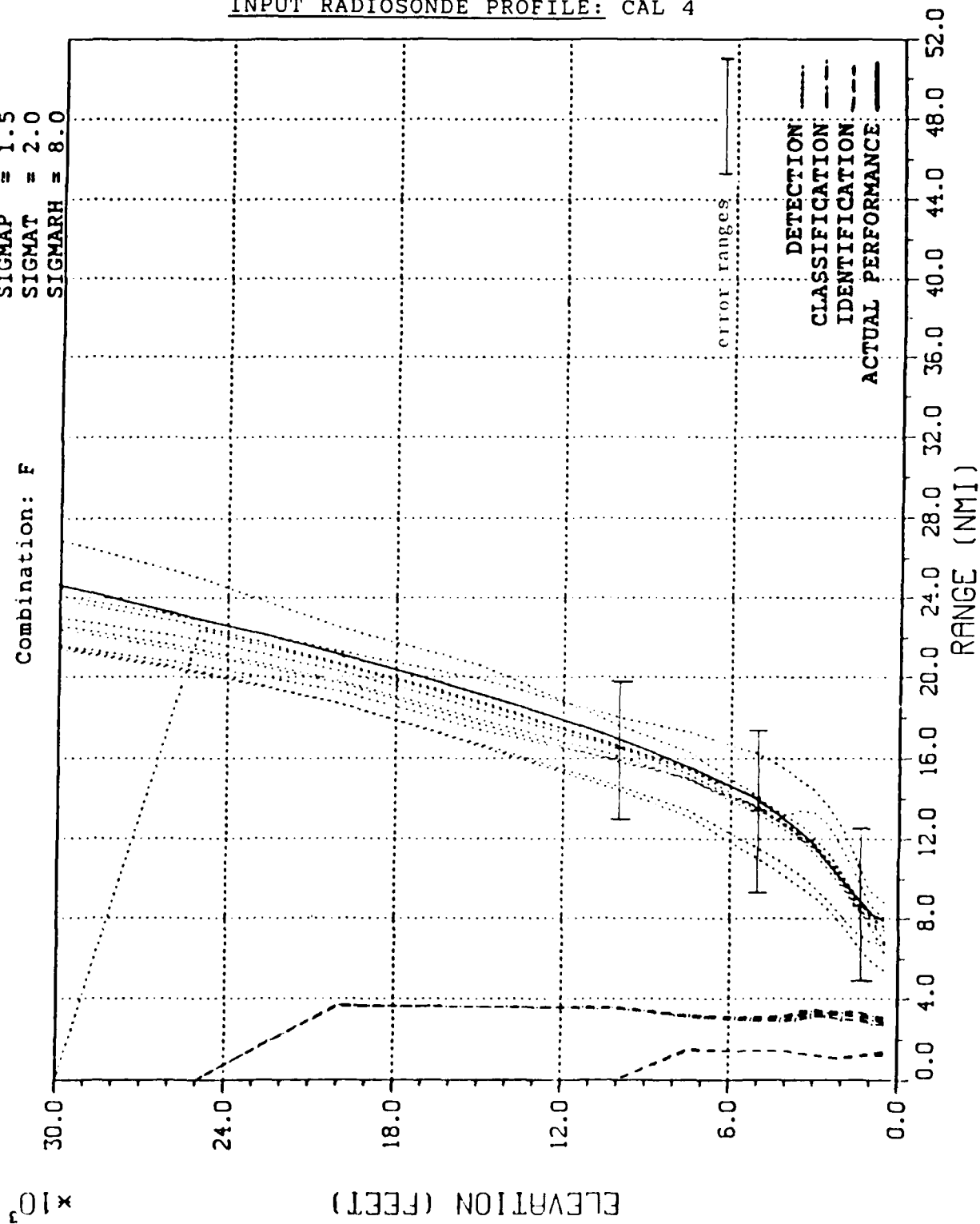


TARGET NUMBER 1

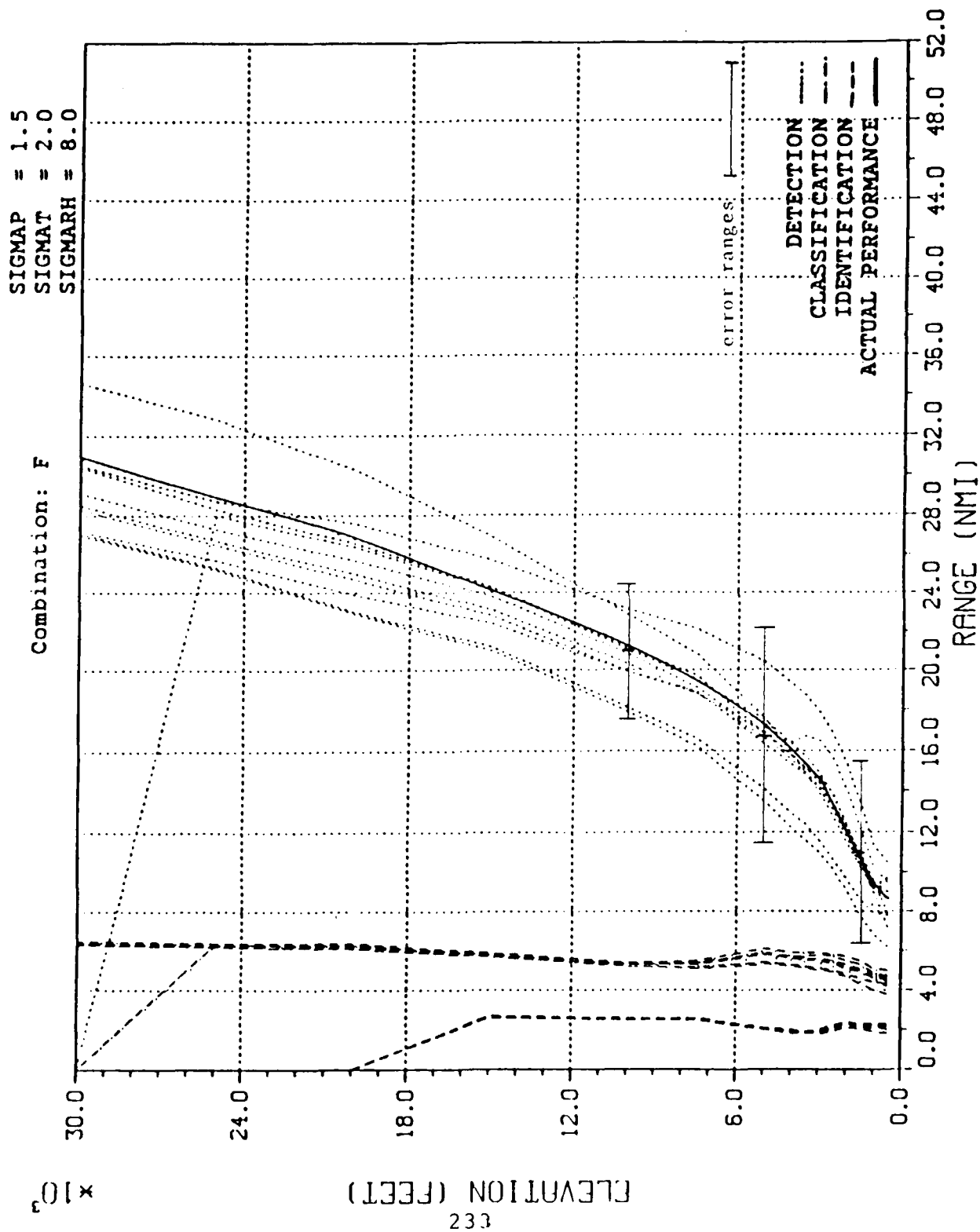
SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: F

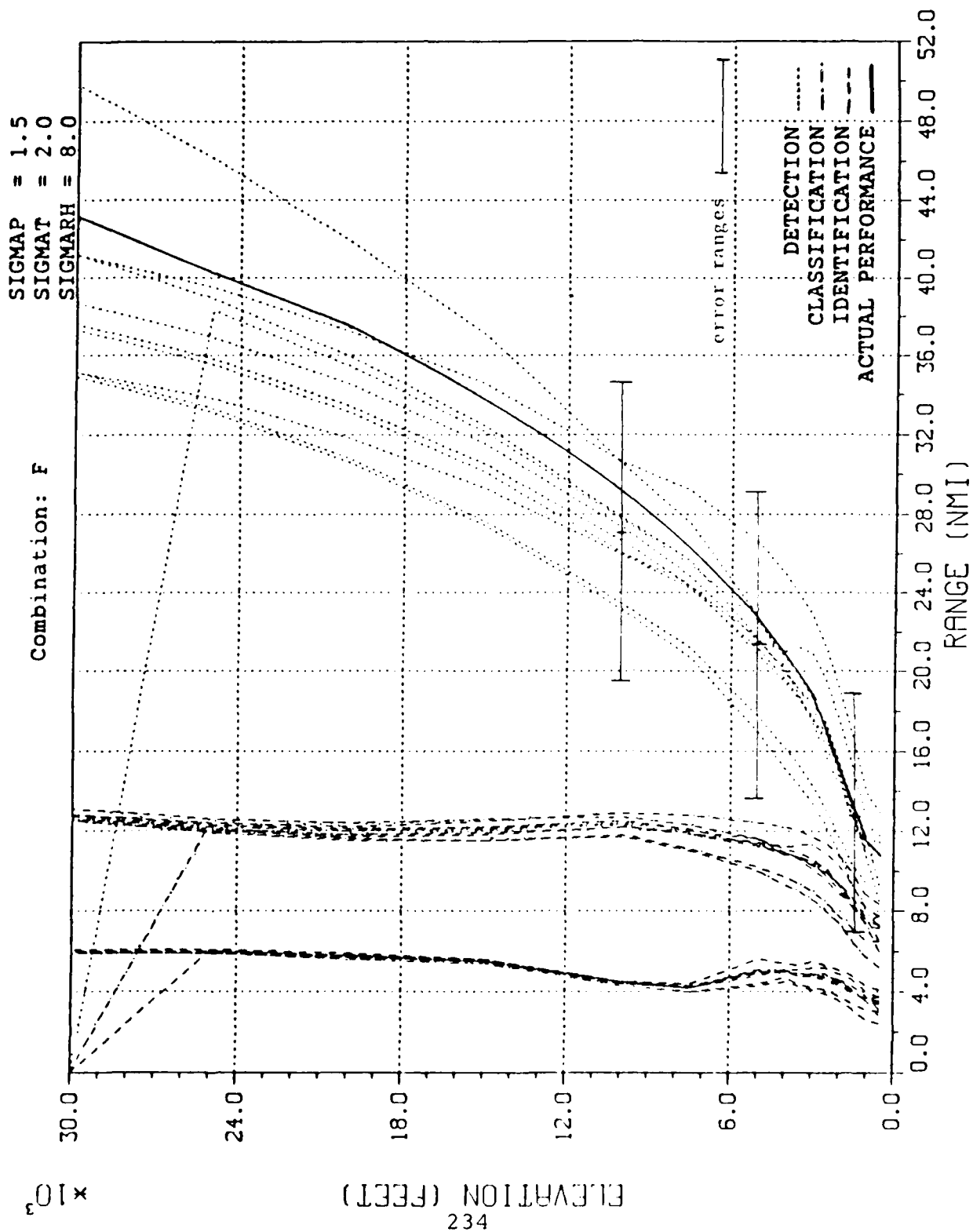
INPUT RADIOSONDE PROFILE: CAL 4



TARGET NUMBER 2



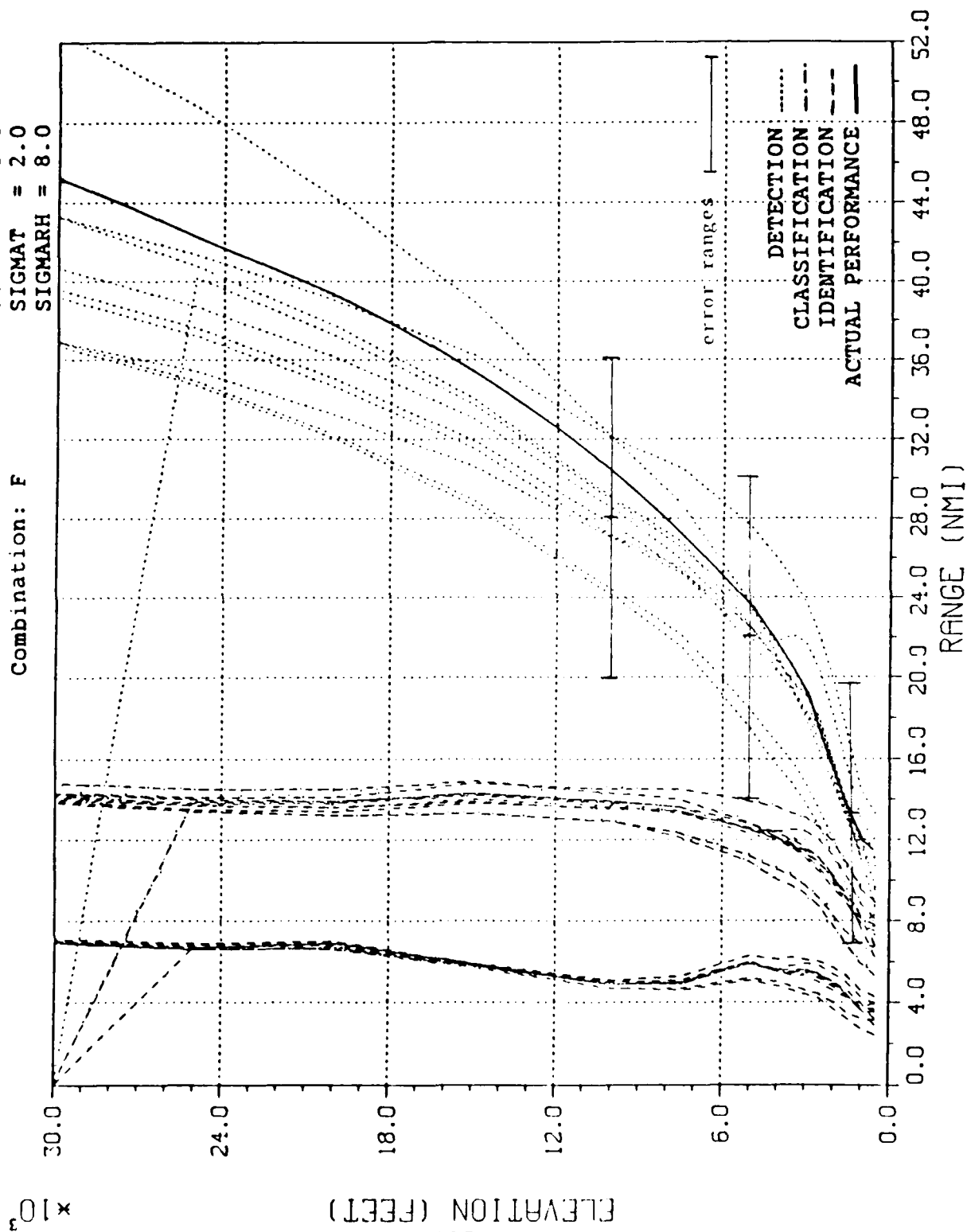
TARGET NUMBER 3



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

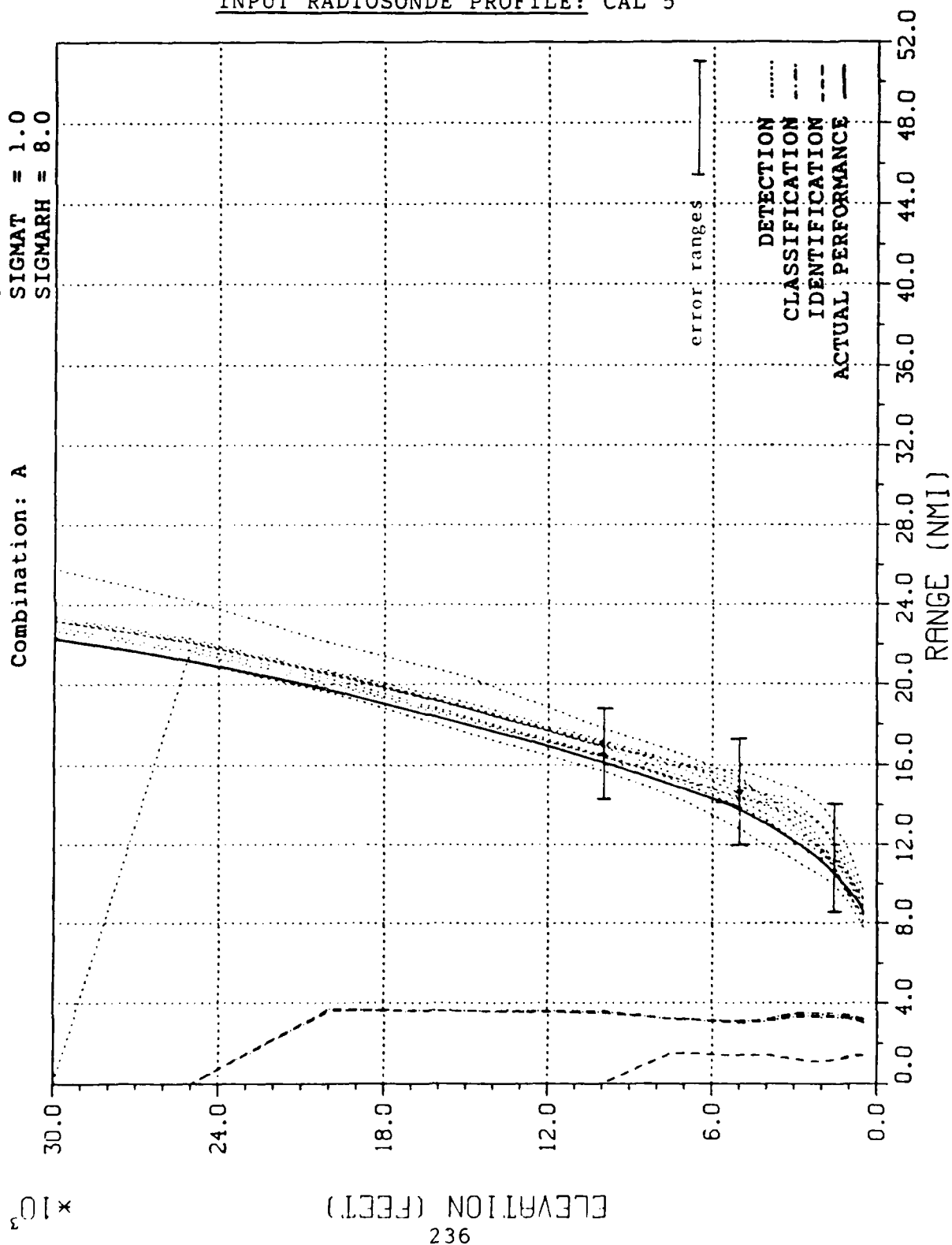
Combination: F



TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

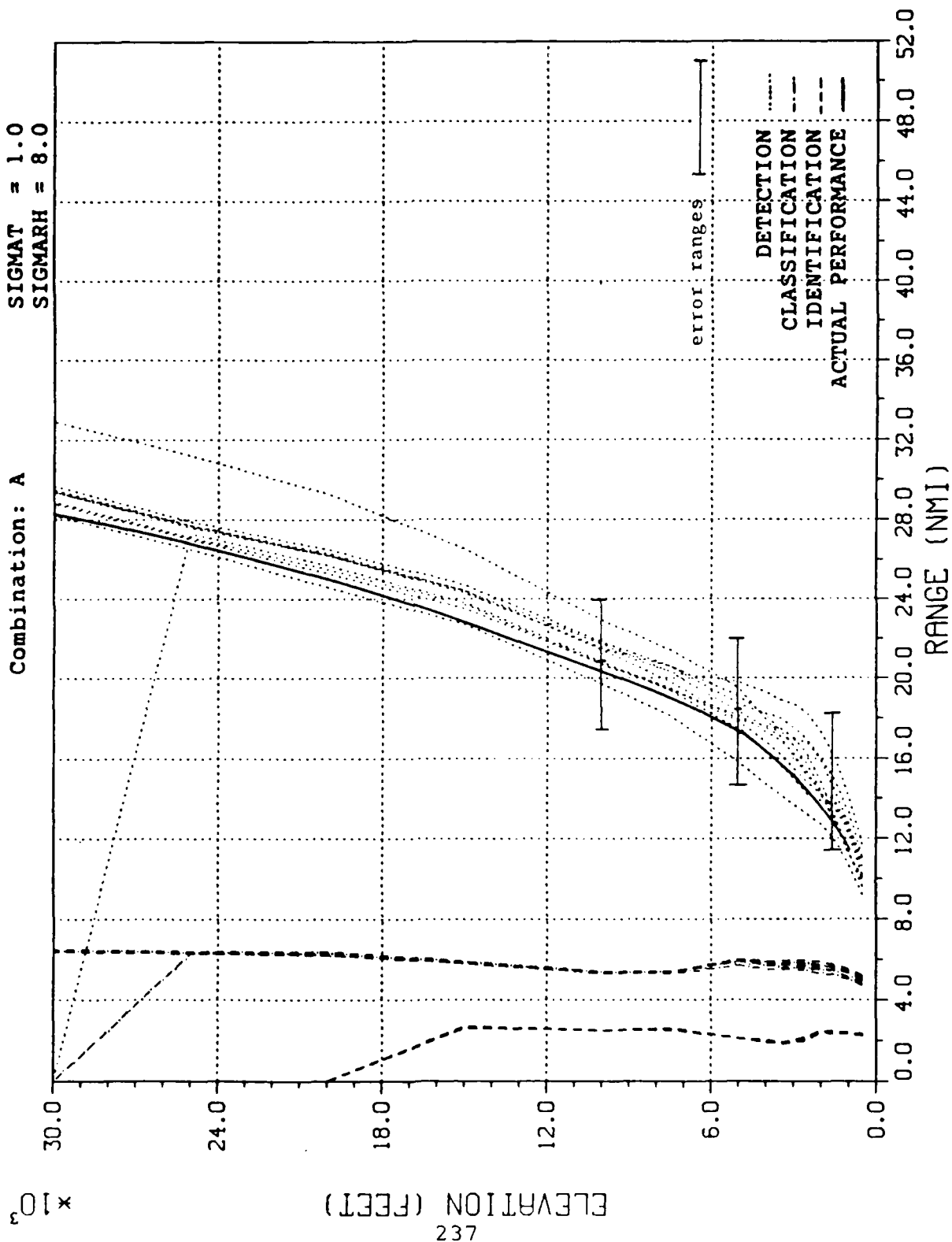
Combination: A



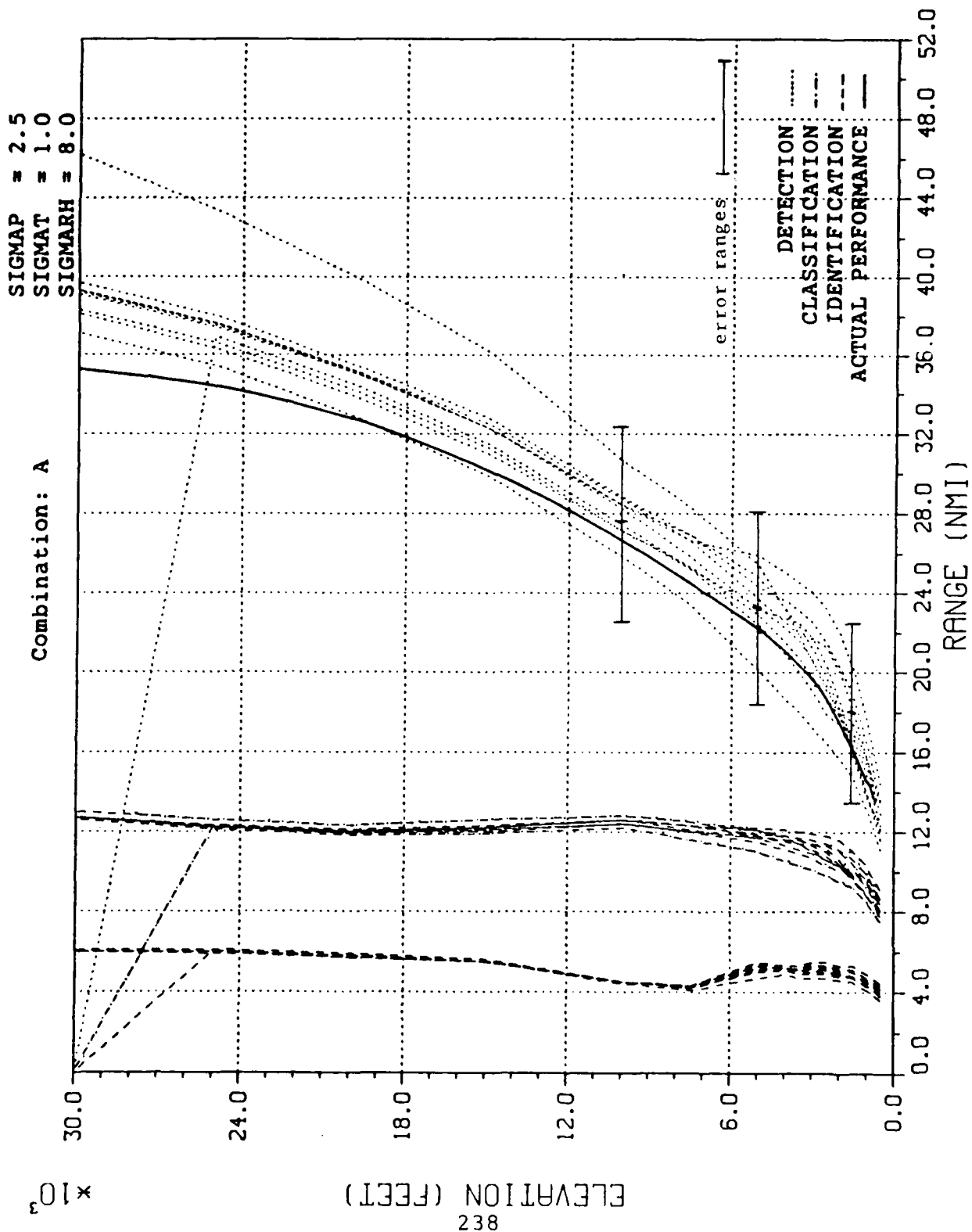
TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: A



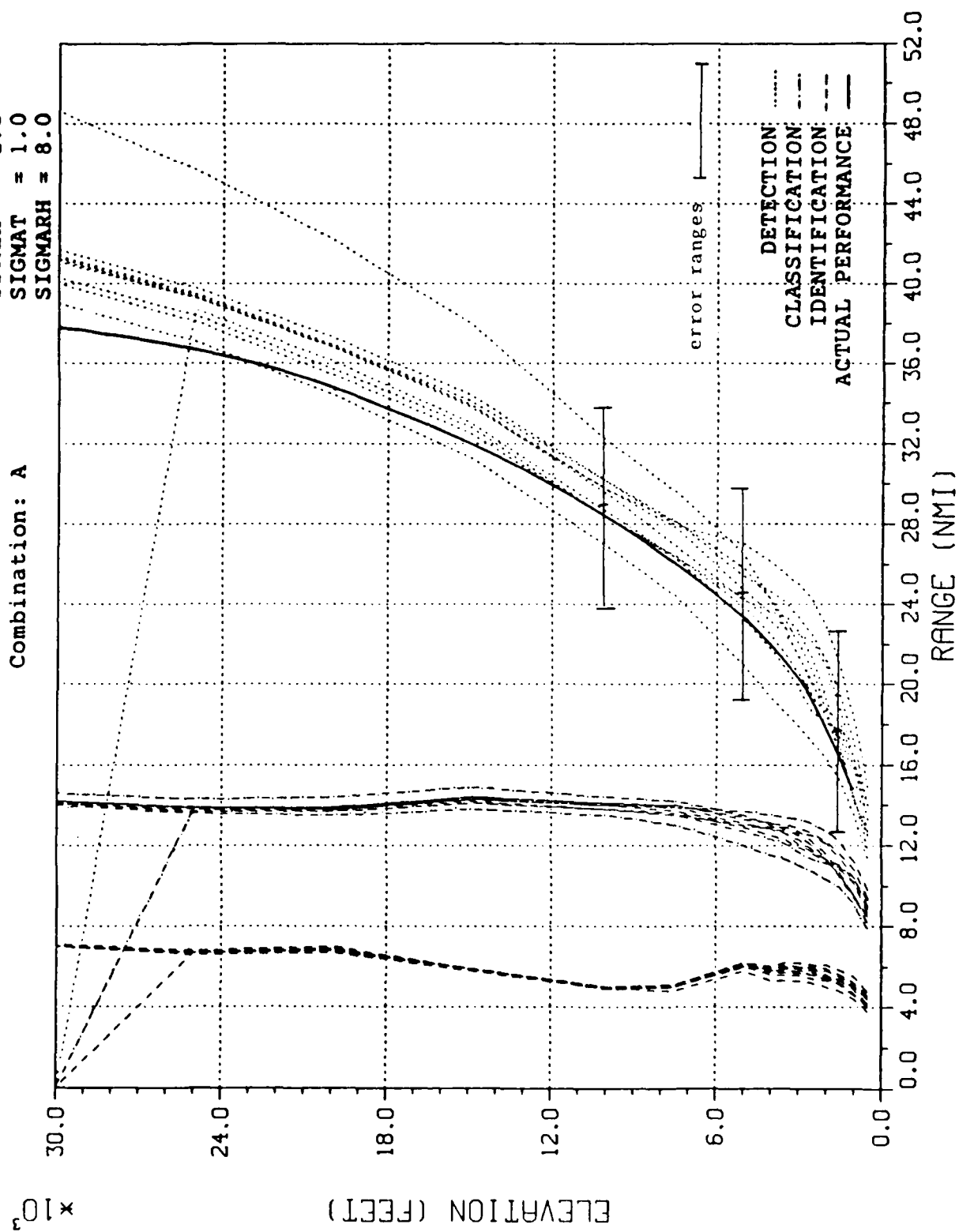
TARGET NUMBER 3



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: A

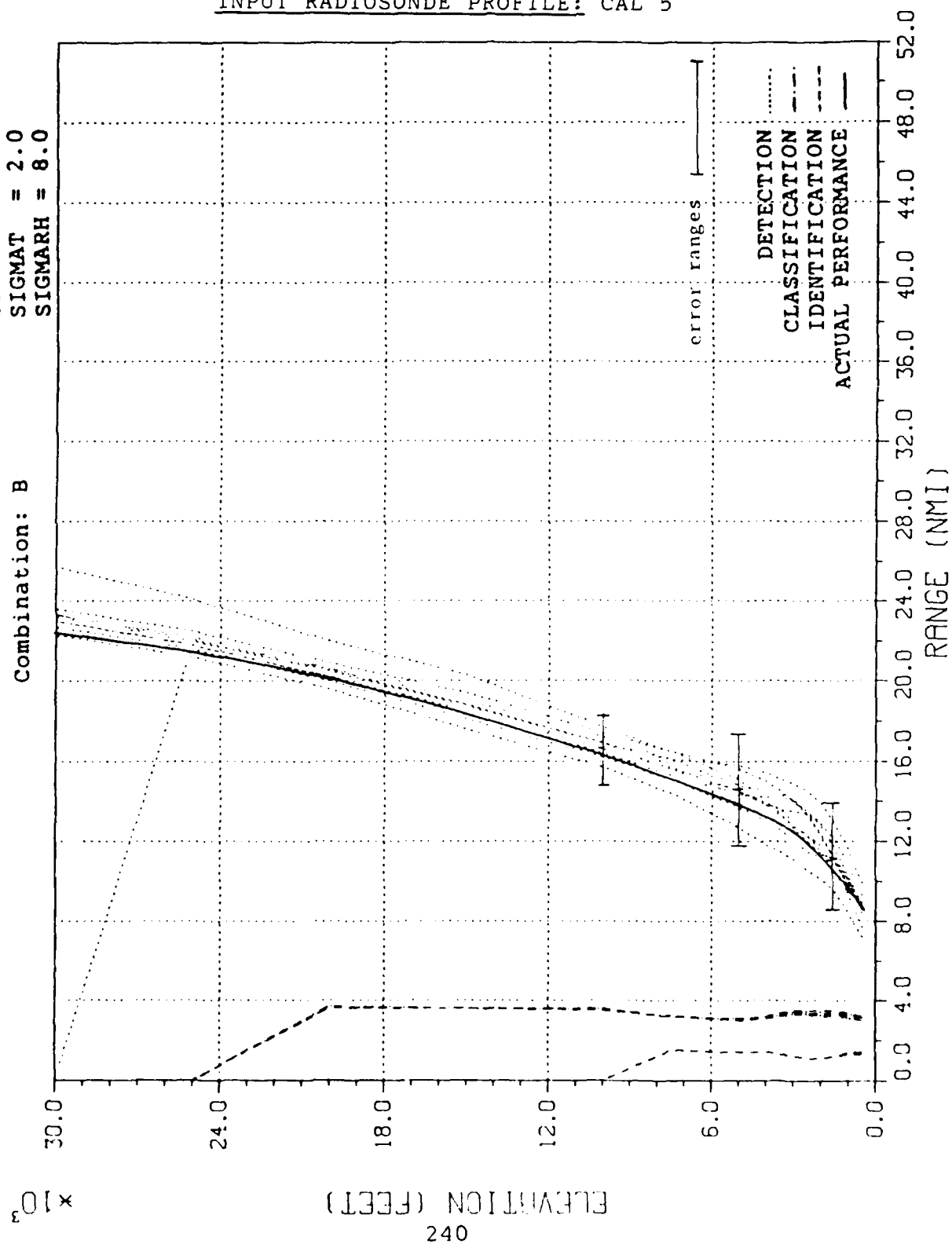


TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: B

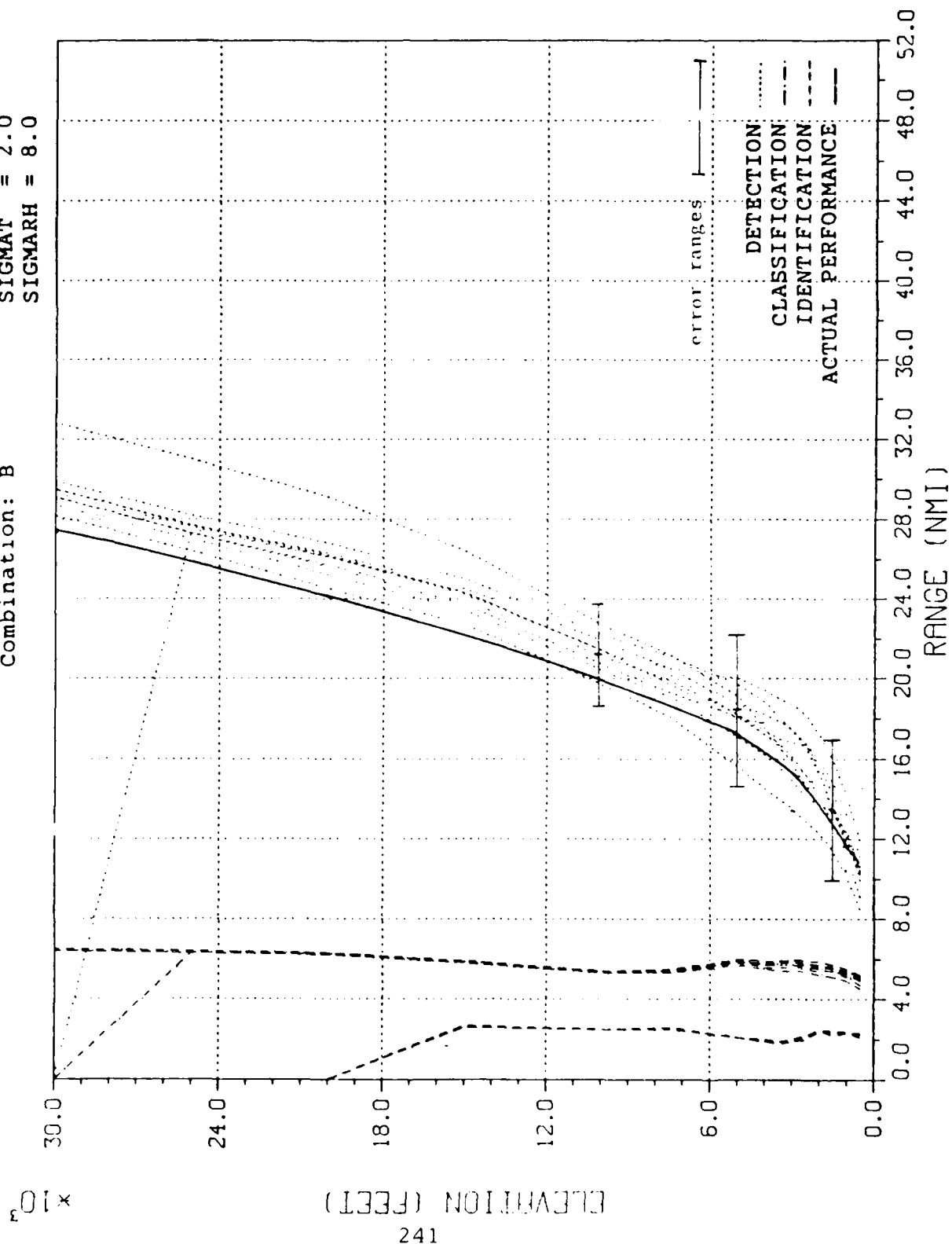
INPUT RADIOSONDE PROFILE: CAL 5



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

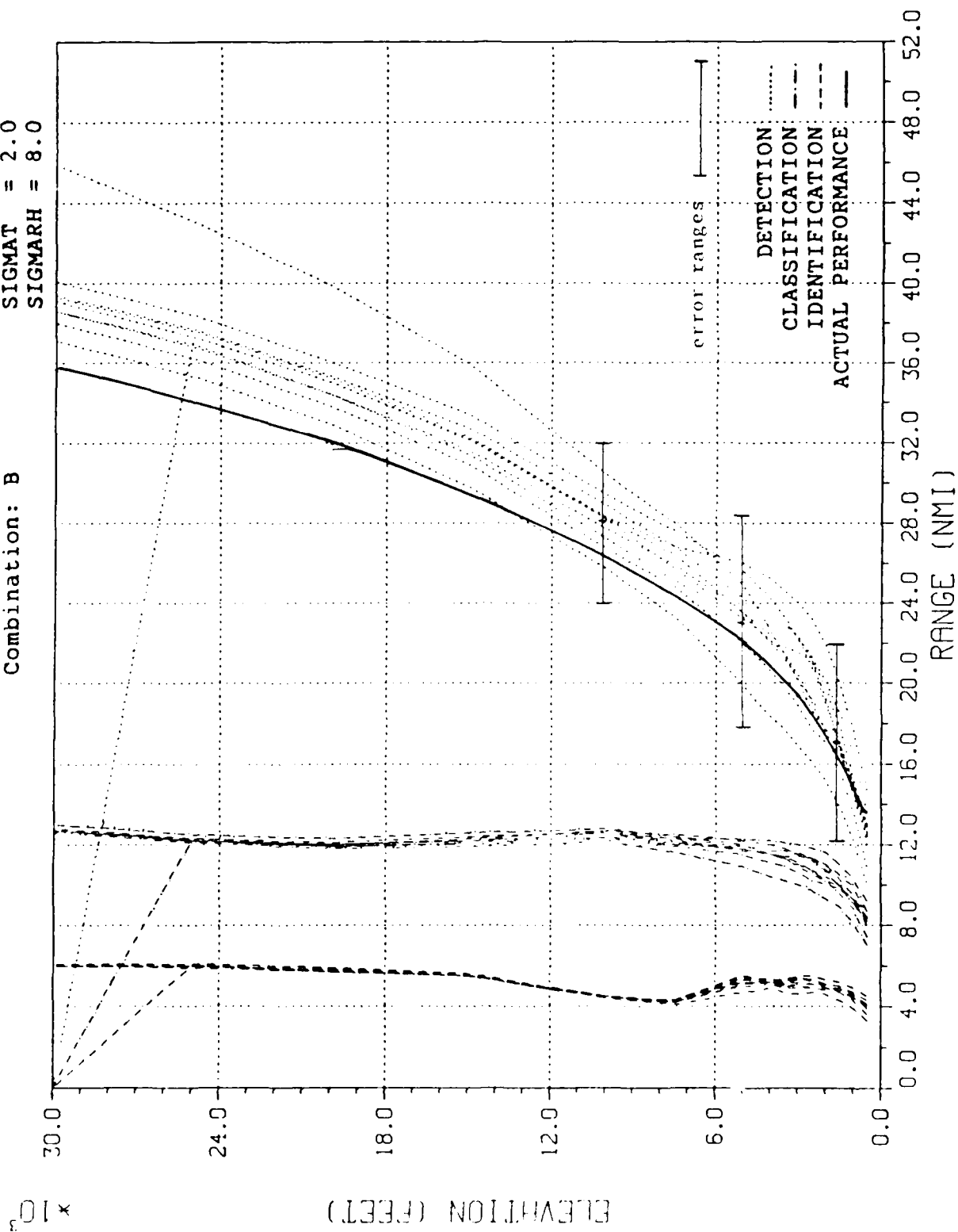
Combination: B



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

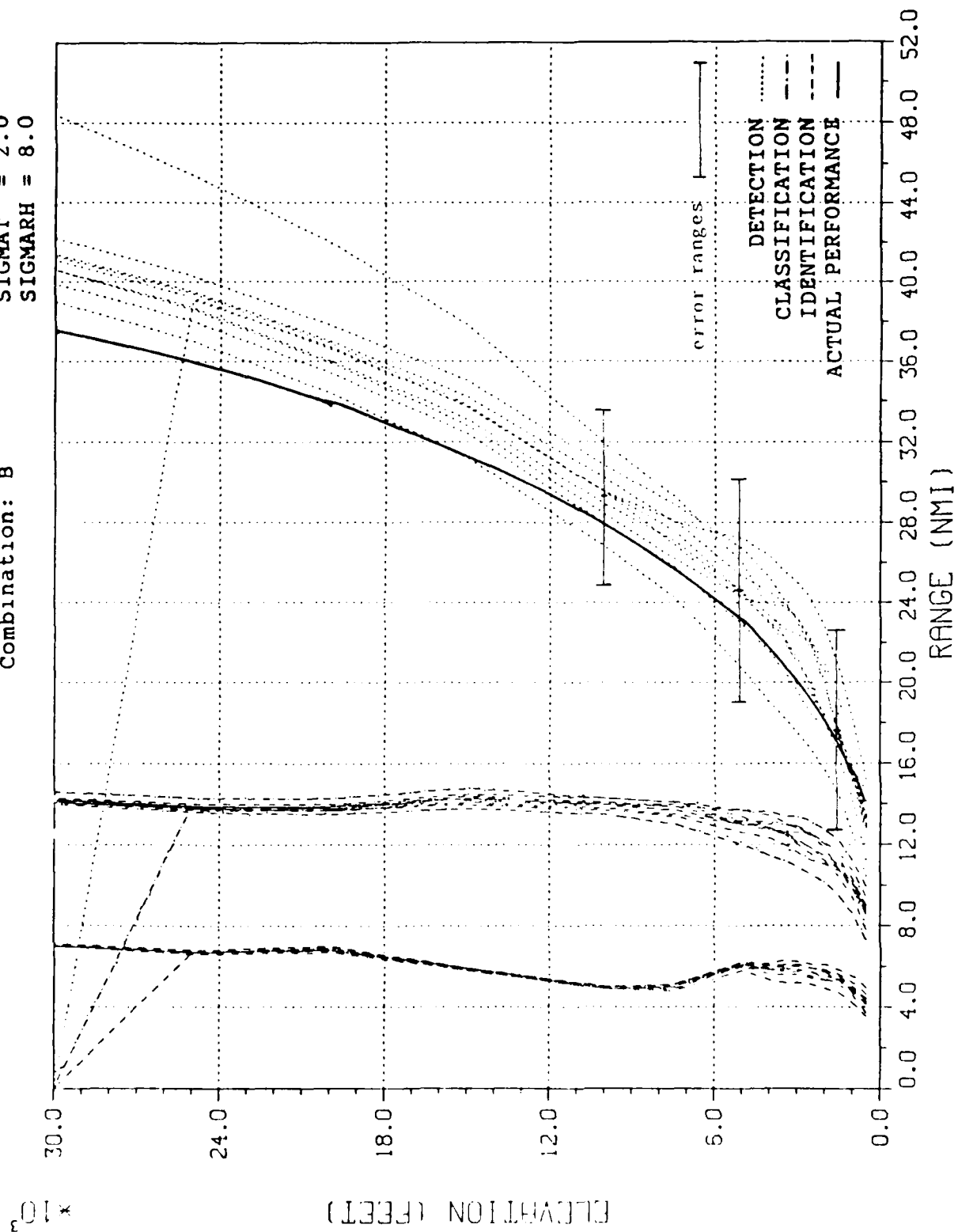
Combination: B



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: B

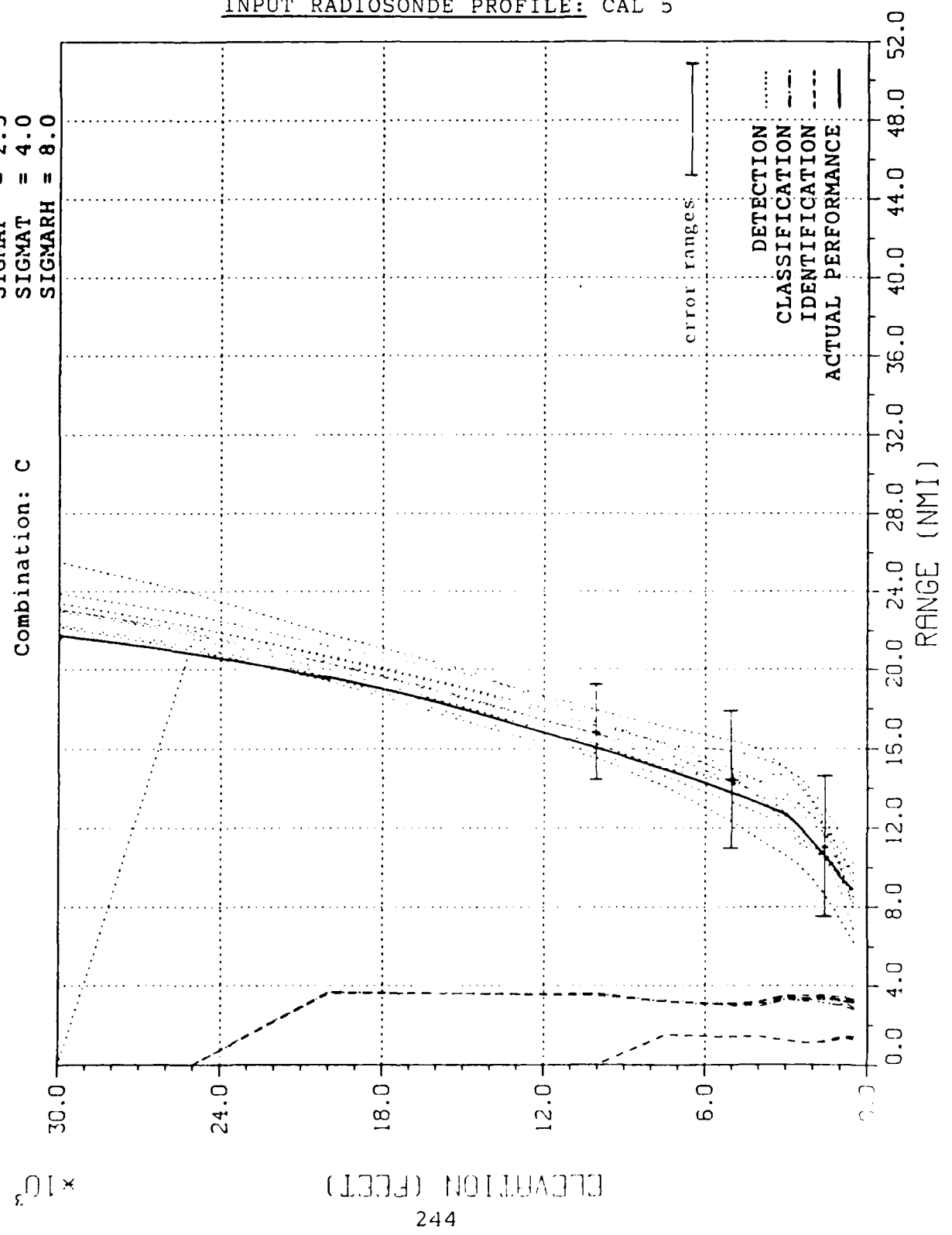


TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

Combination: C

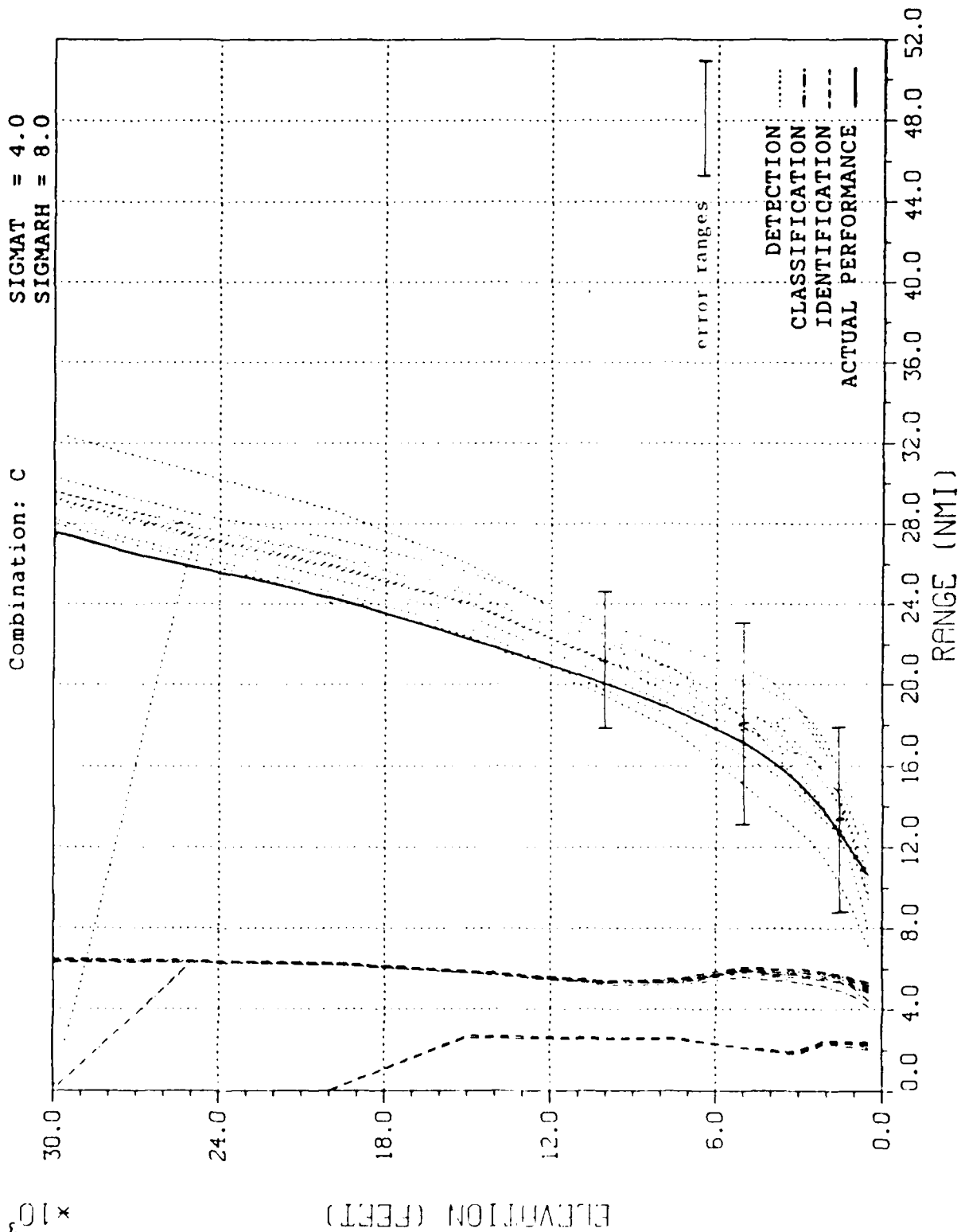
INPUT RADIOSONDE PROFILE: CAL 5



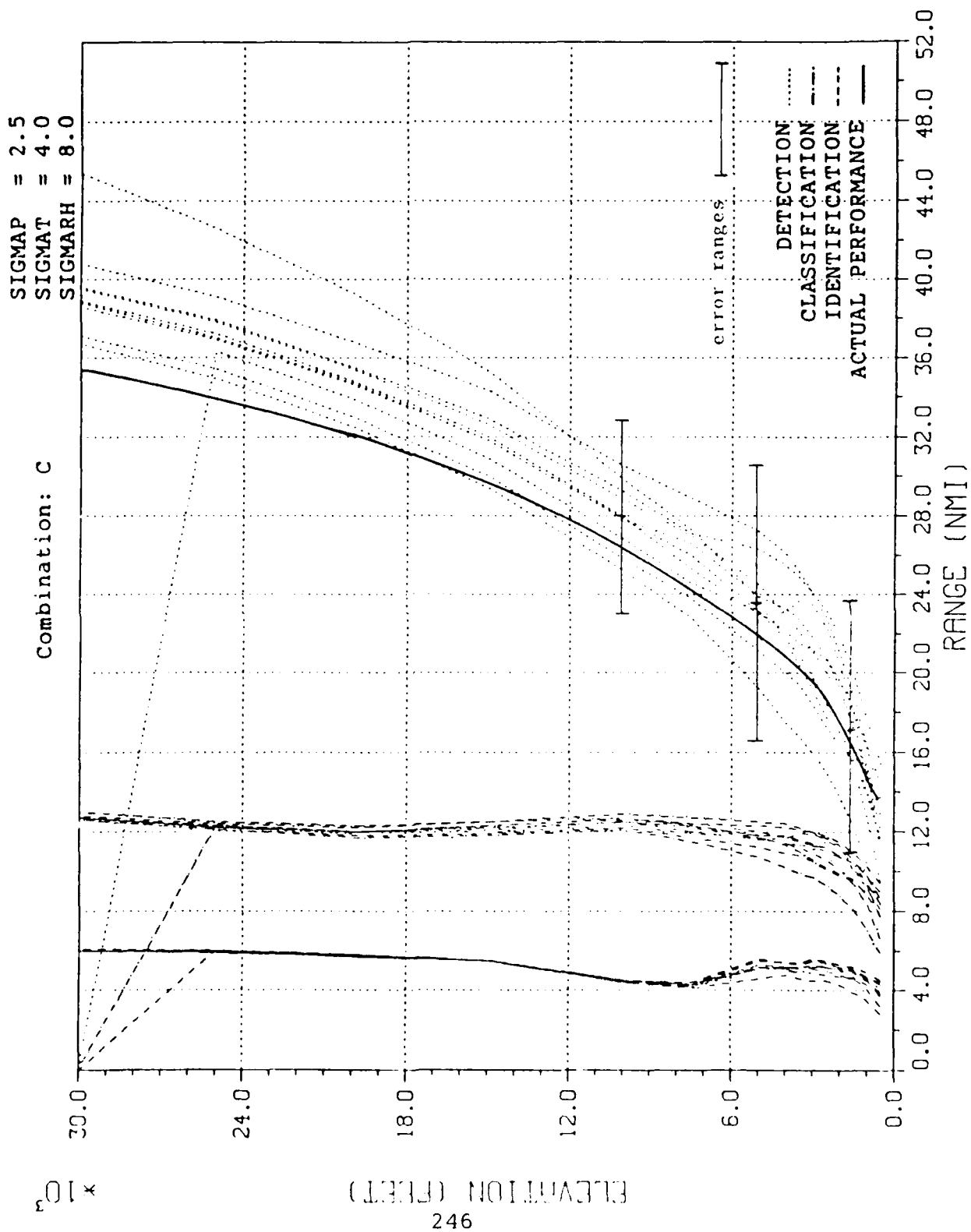
TARGET NUMBER 2

SIGMAP = 2.5
SIGMAT = 4.0
SIGMARH = 8.0

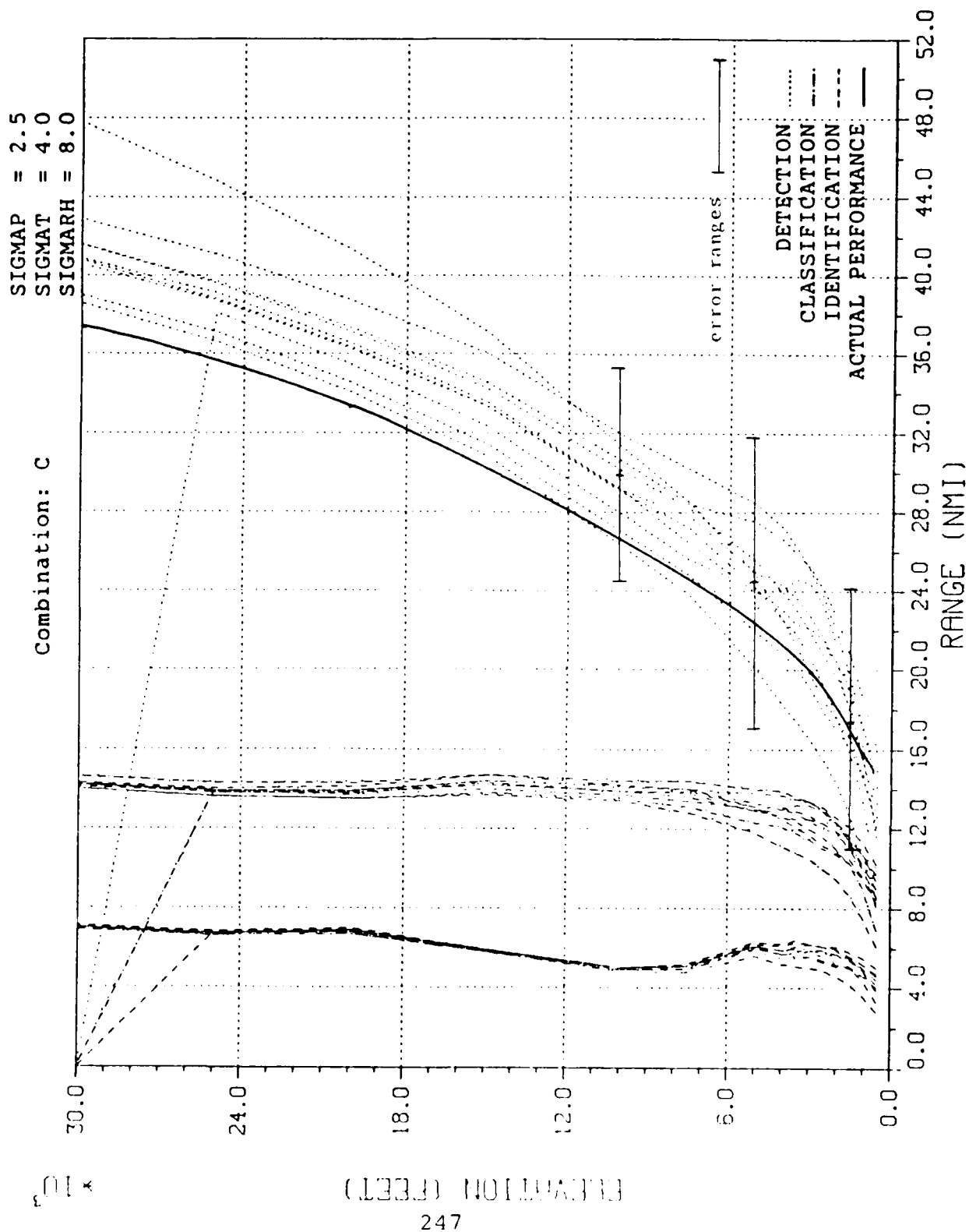
Combination: C



TARGET NUMBER 3



TARGET NUMBER 4

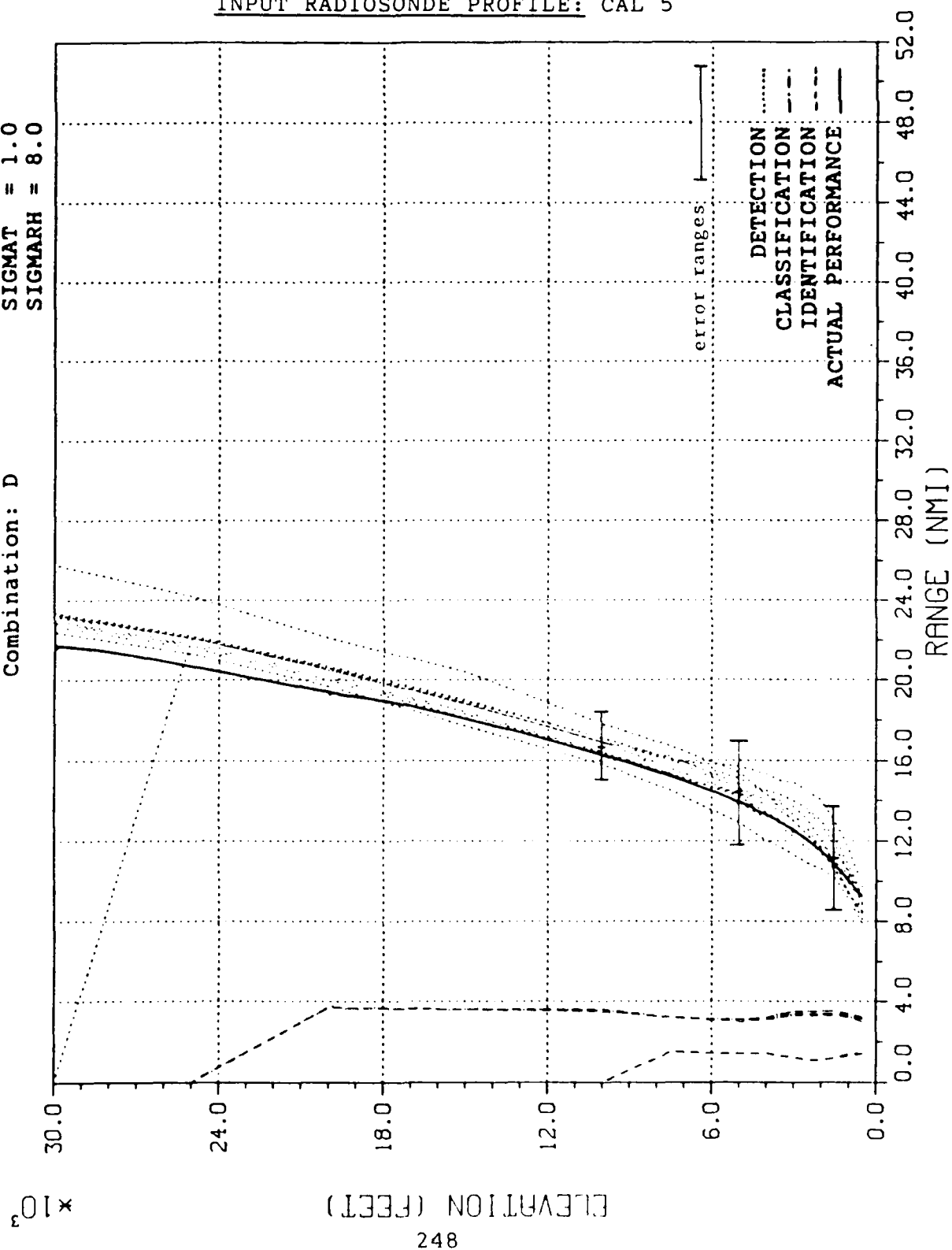


TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: D

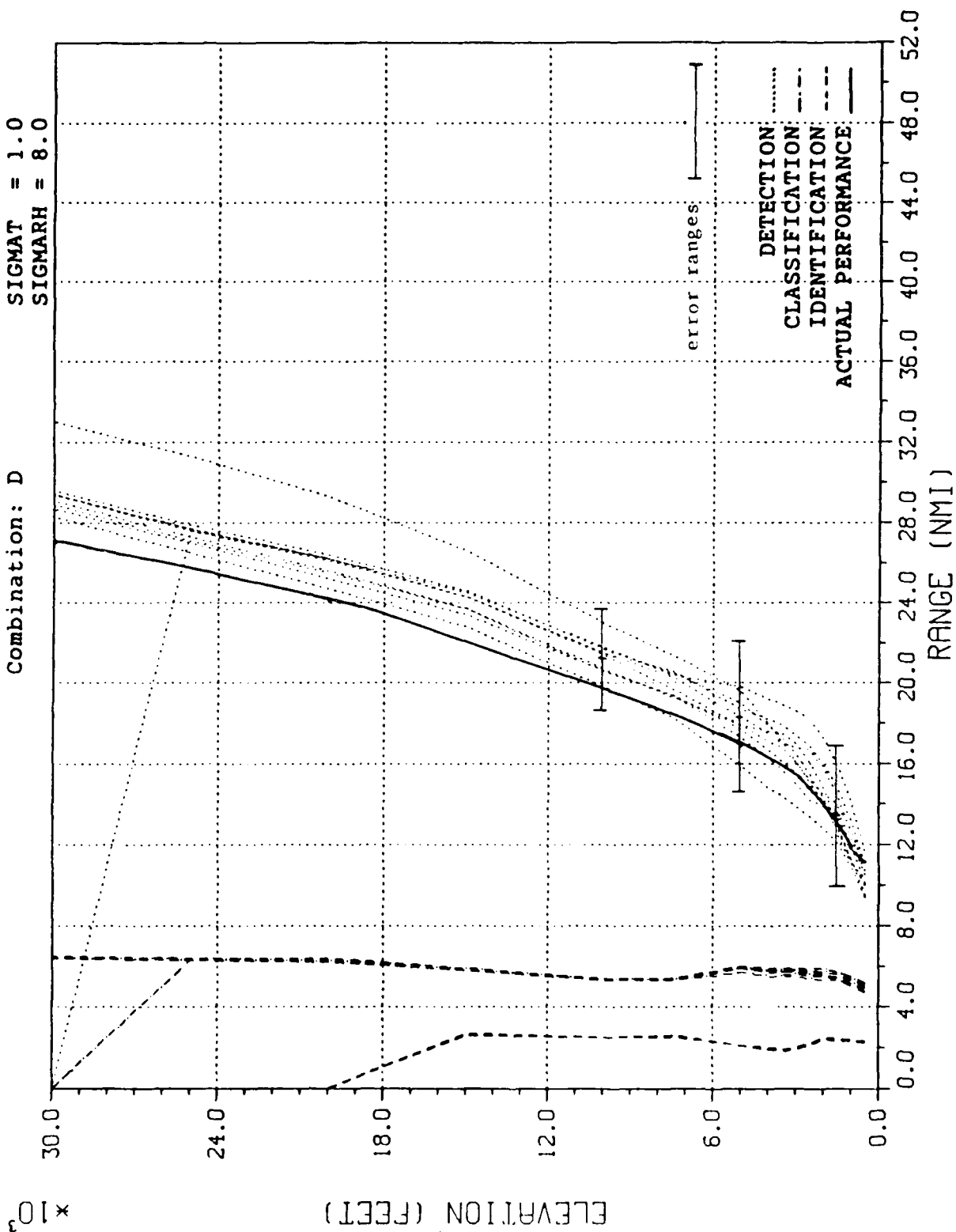
INPUT RADIOSONDE PROFILE: CAL 5



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

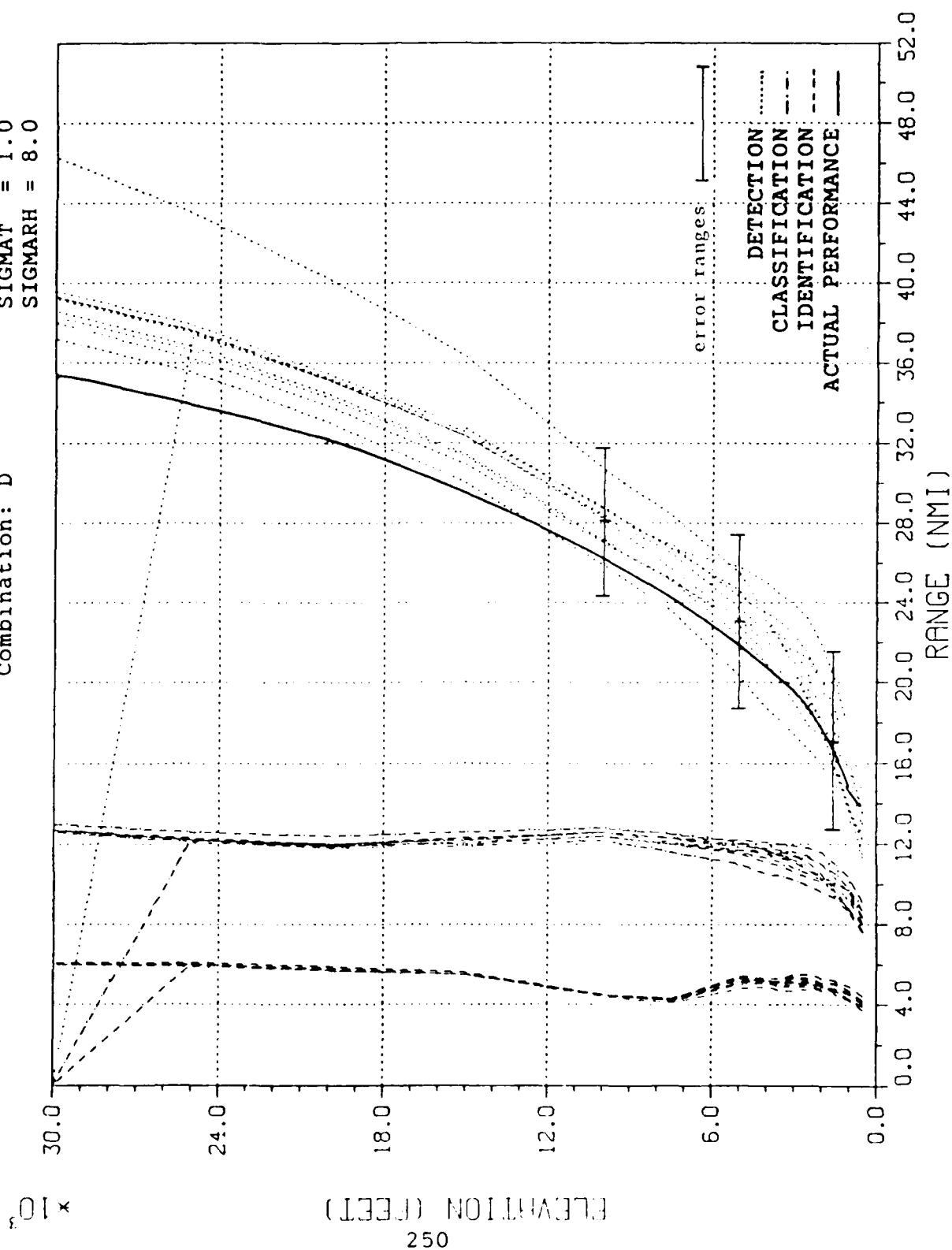
Combination: D



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

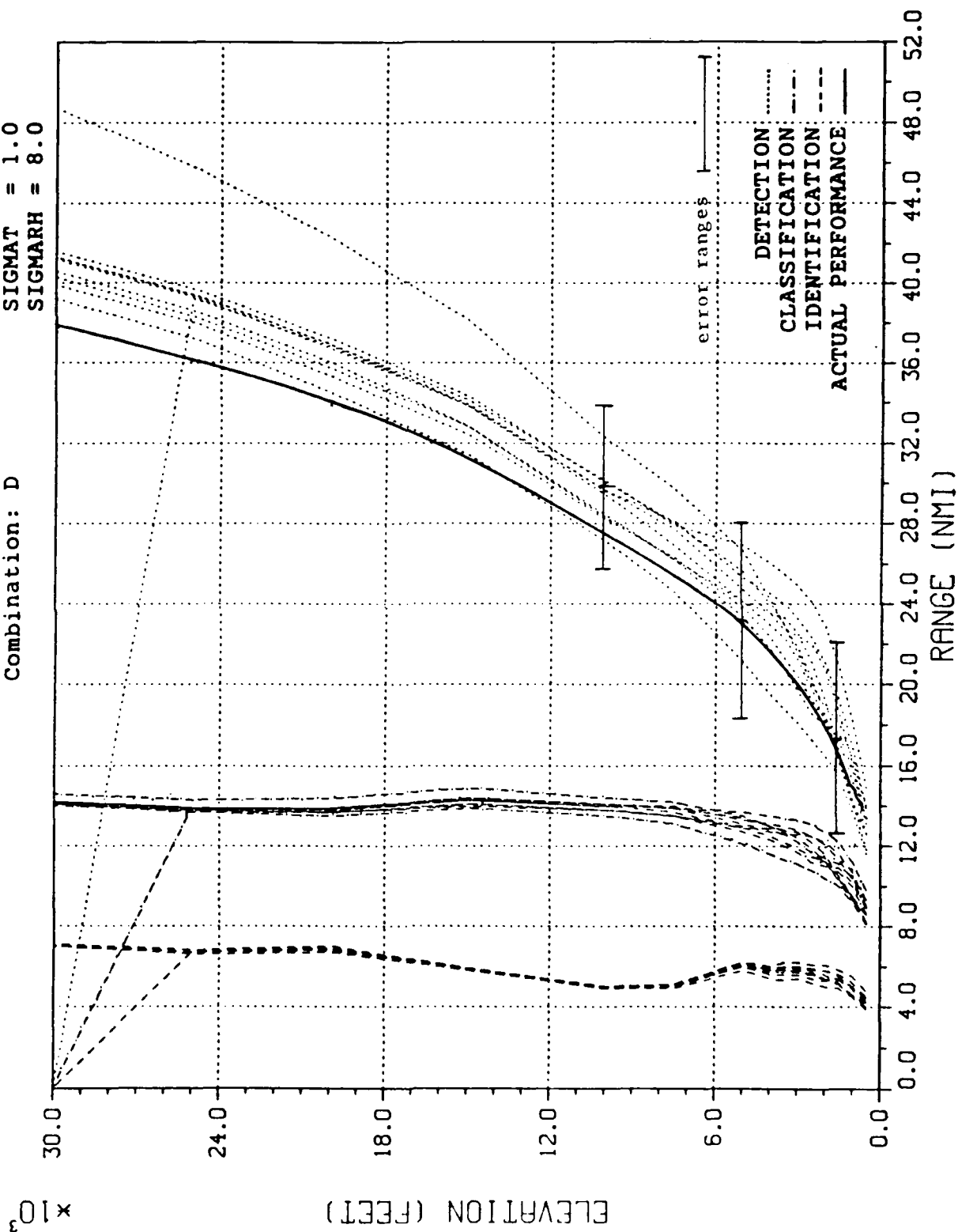
Combination: D



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

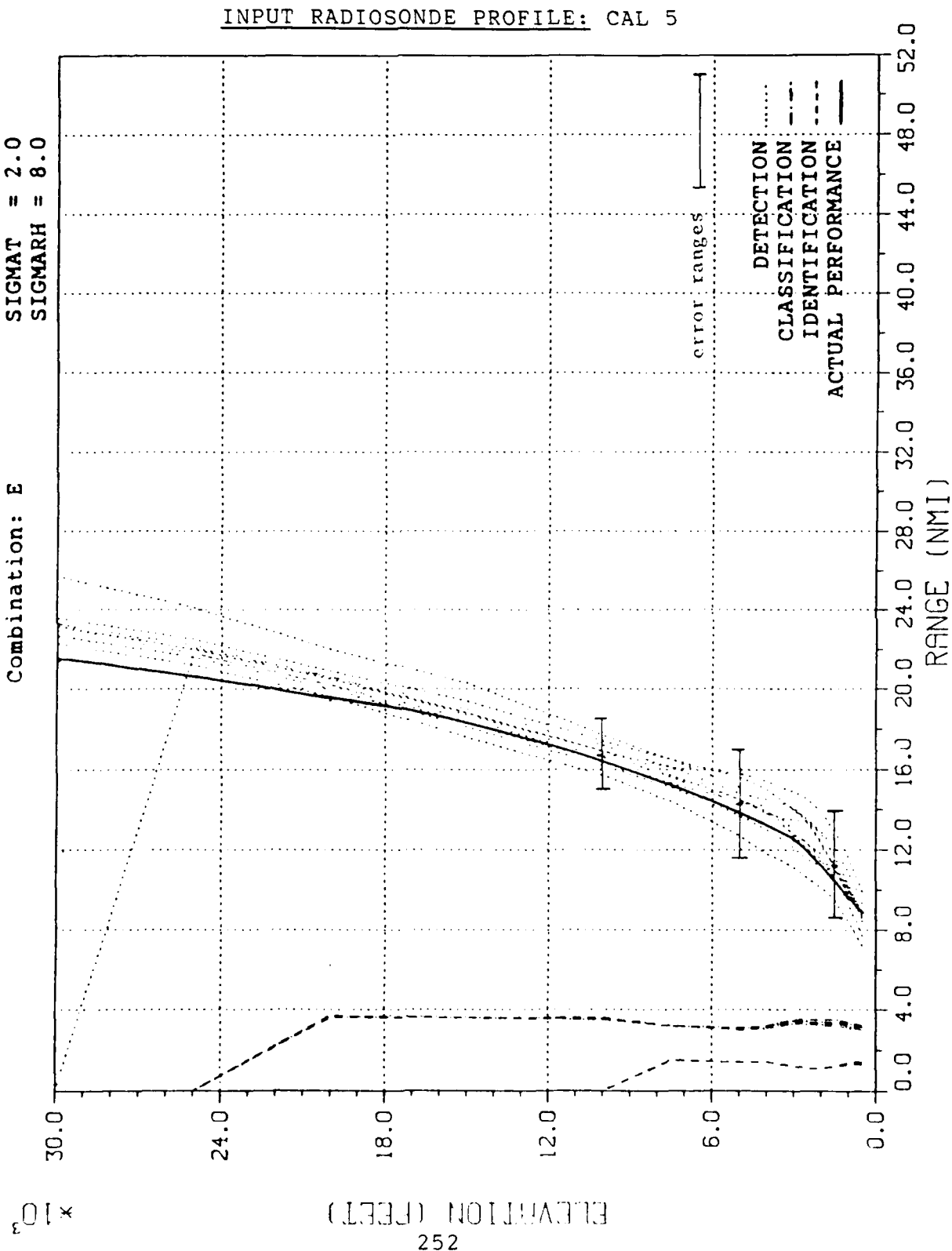
Combination: D



TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

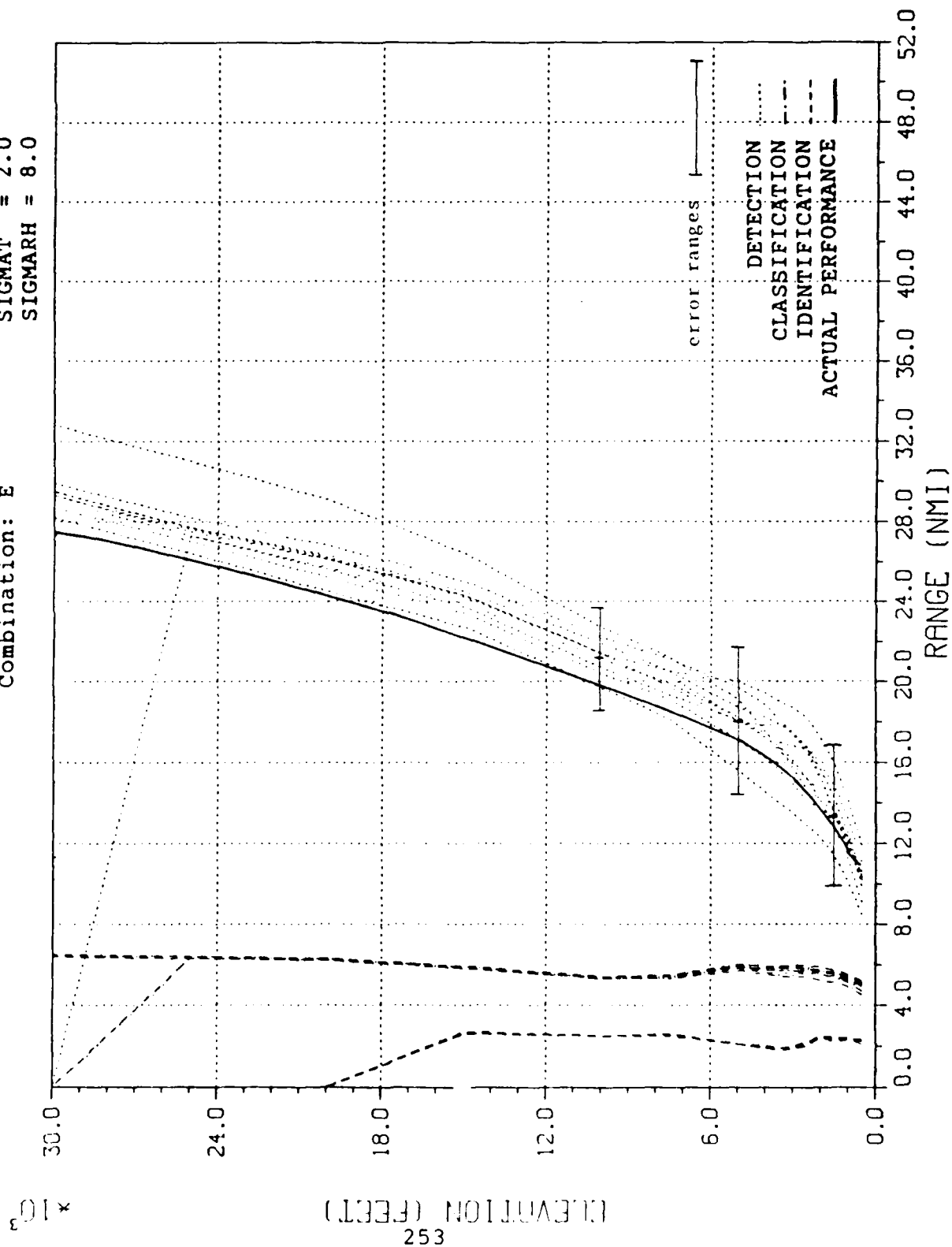
Combination: E



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

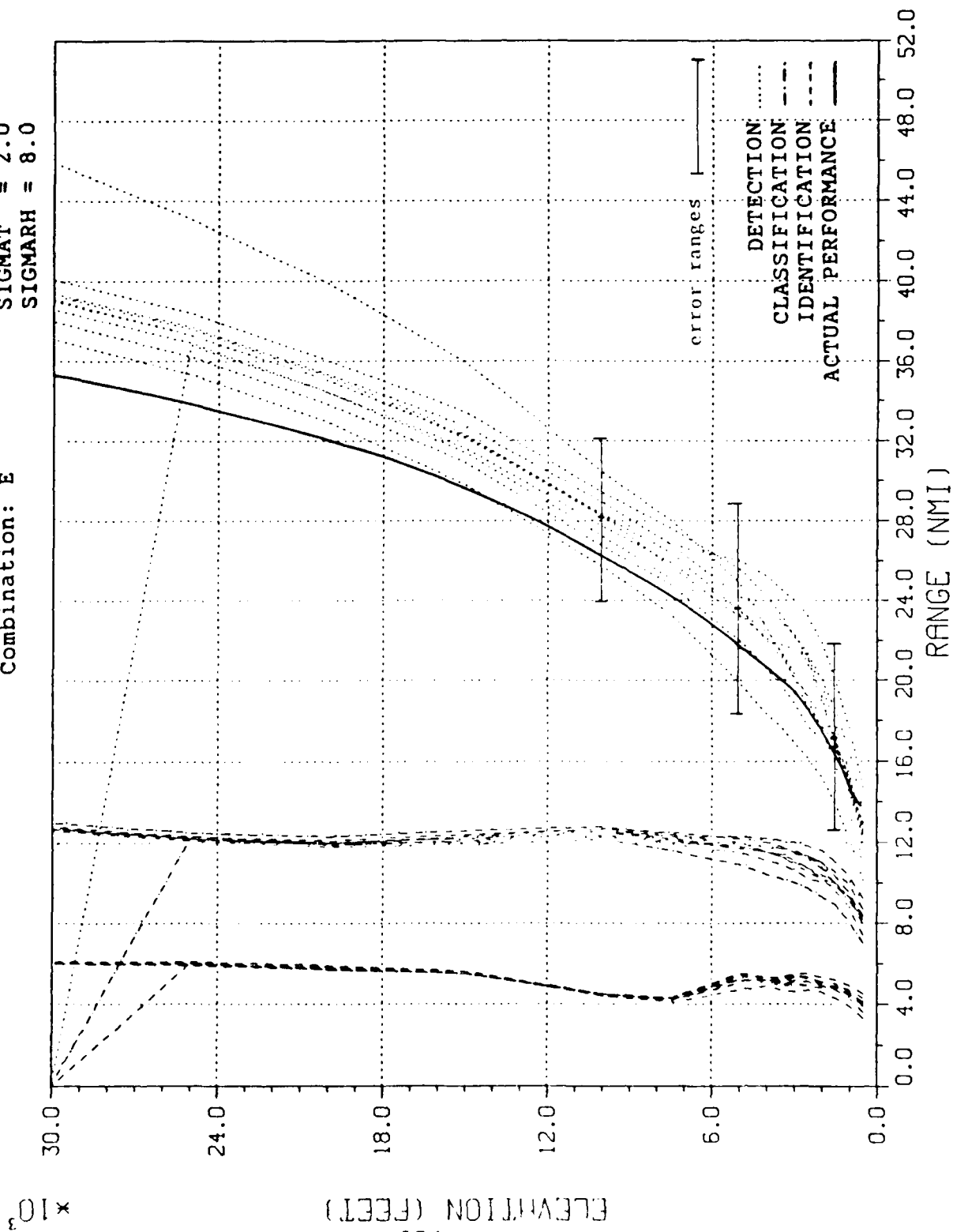
Combination: E



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

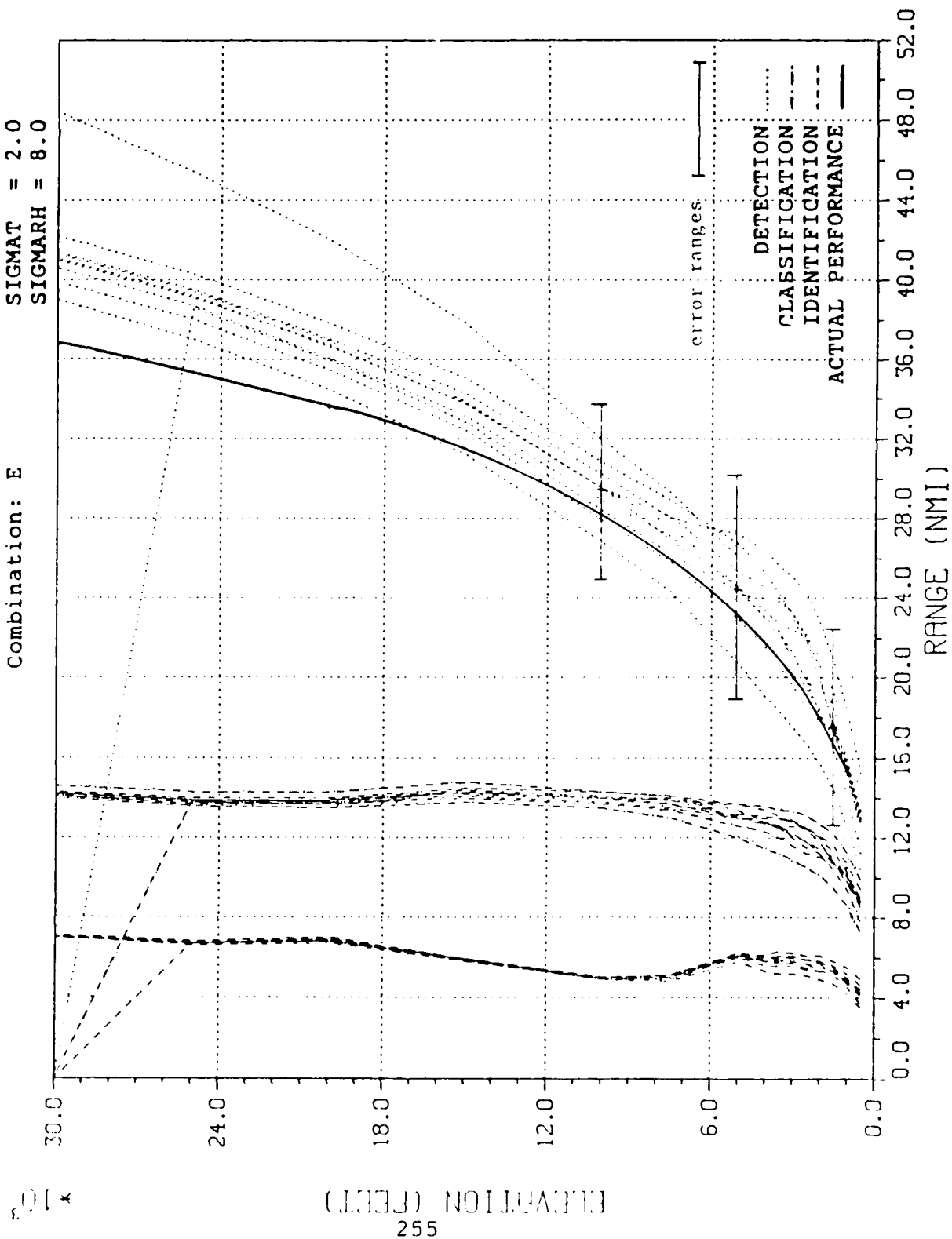
Combination: E



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

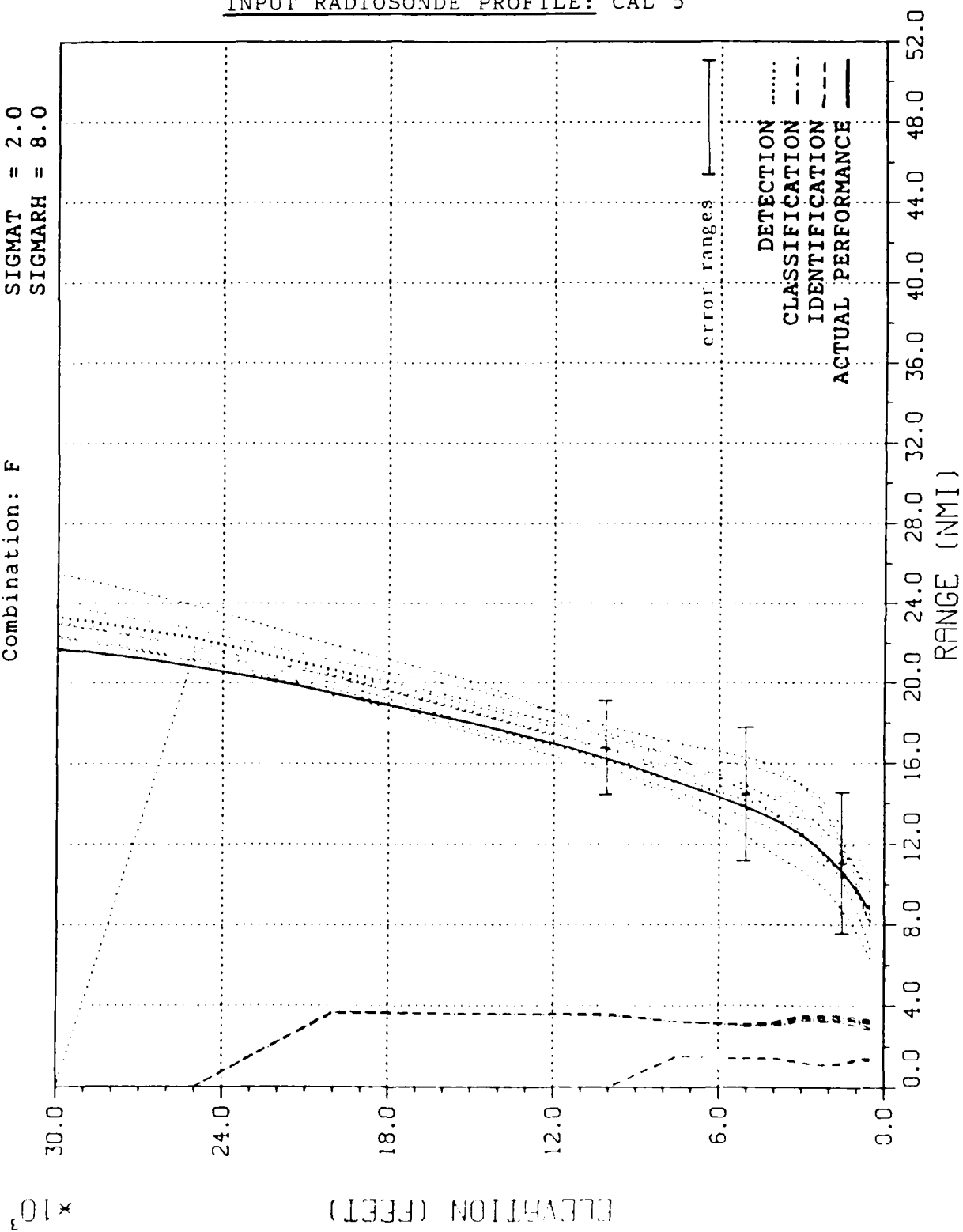
Combination: E



TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

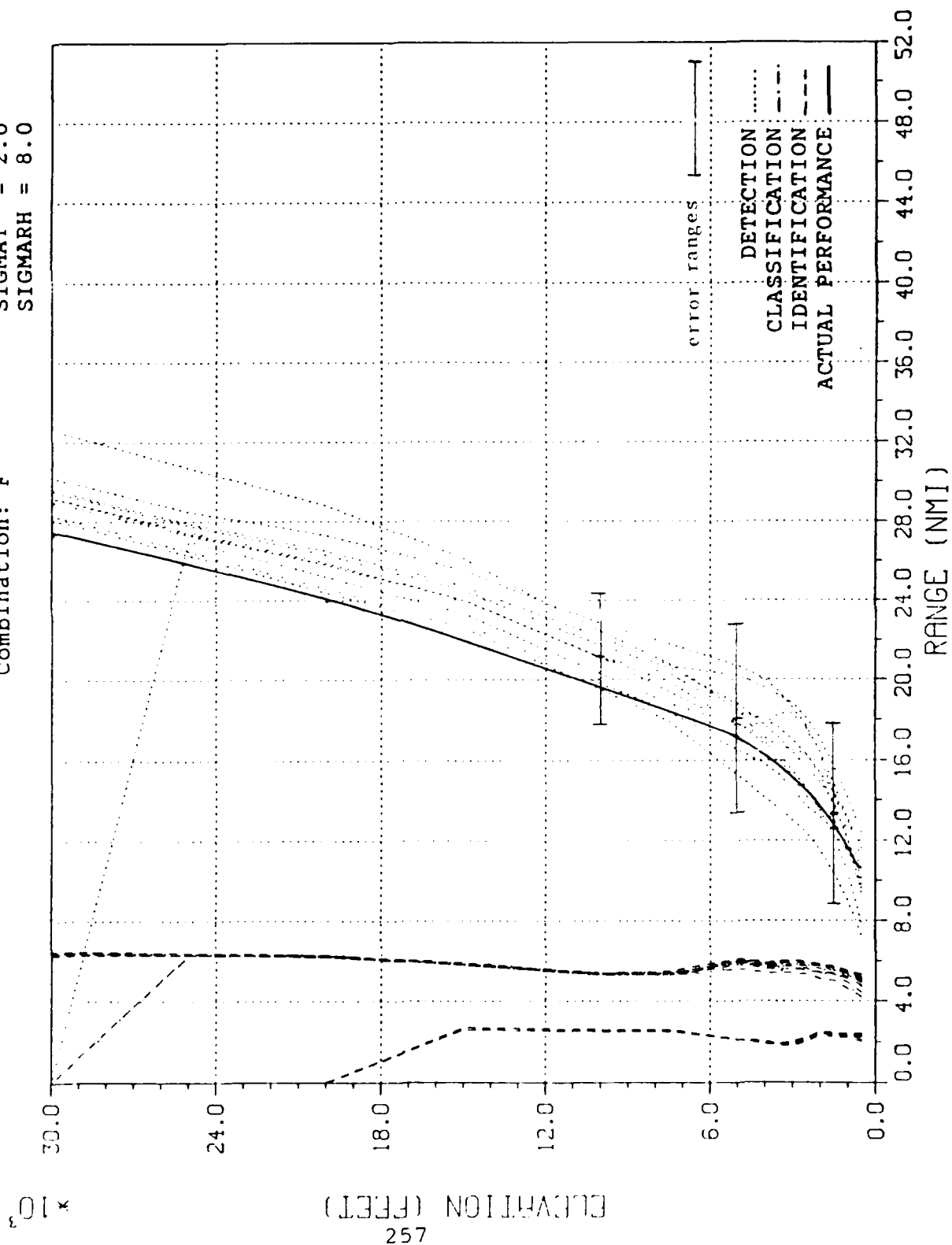
Combination: F



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

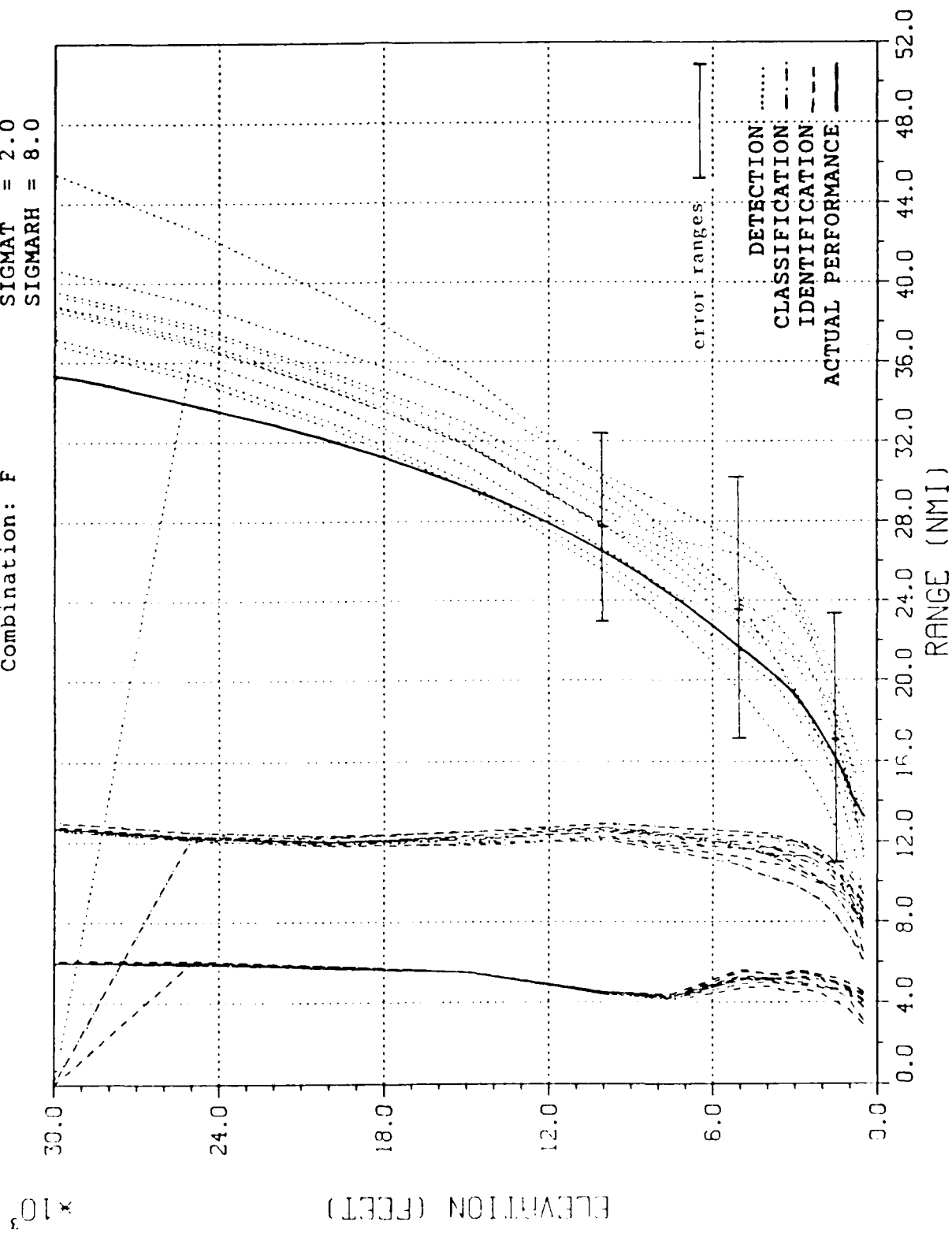
Combination: F



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

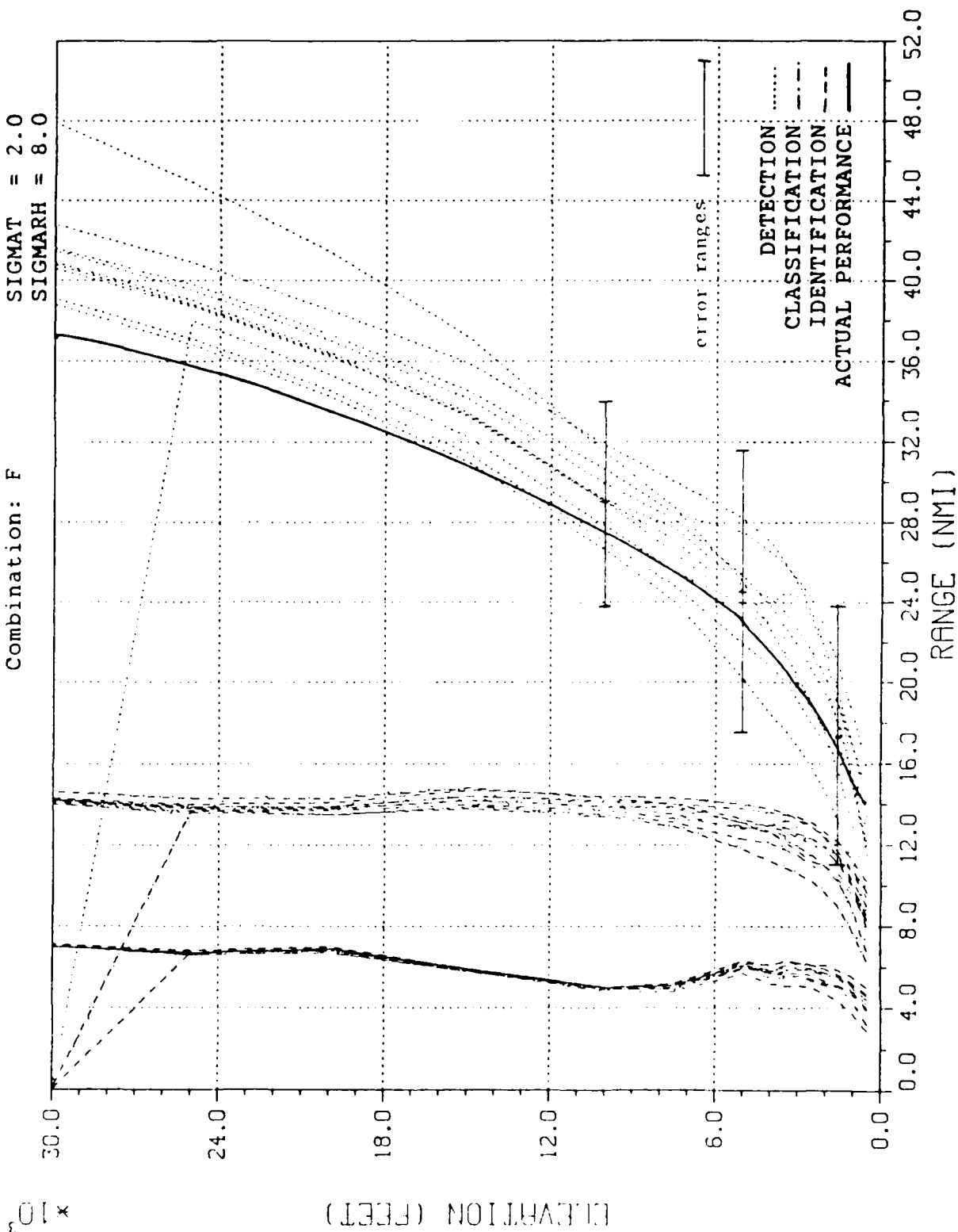
Combination: F



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: F

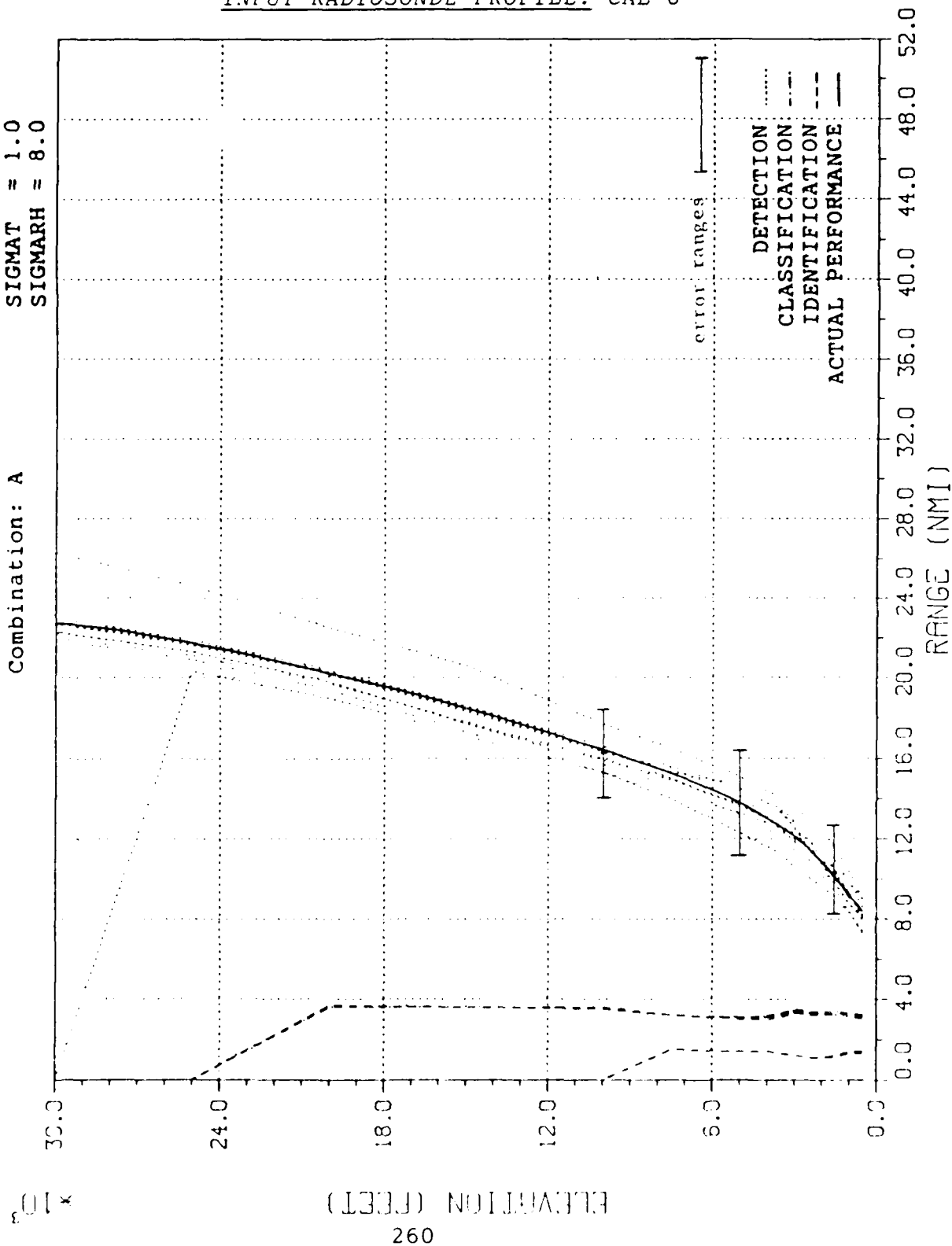


INPUT RADIOSONDE PROFILE: CAL 6

TARGET NUMBER 1

SIGMAP = 2.5
SIGMAT = 1.0
SIGMARH = 8.0

Combination: A



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: A

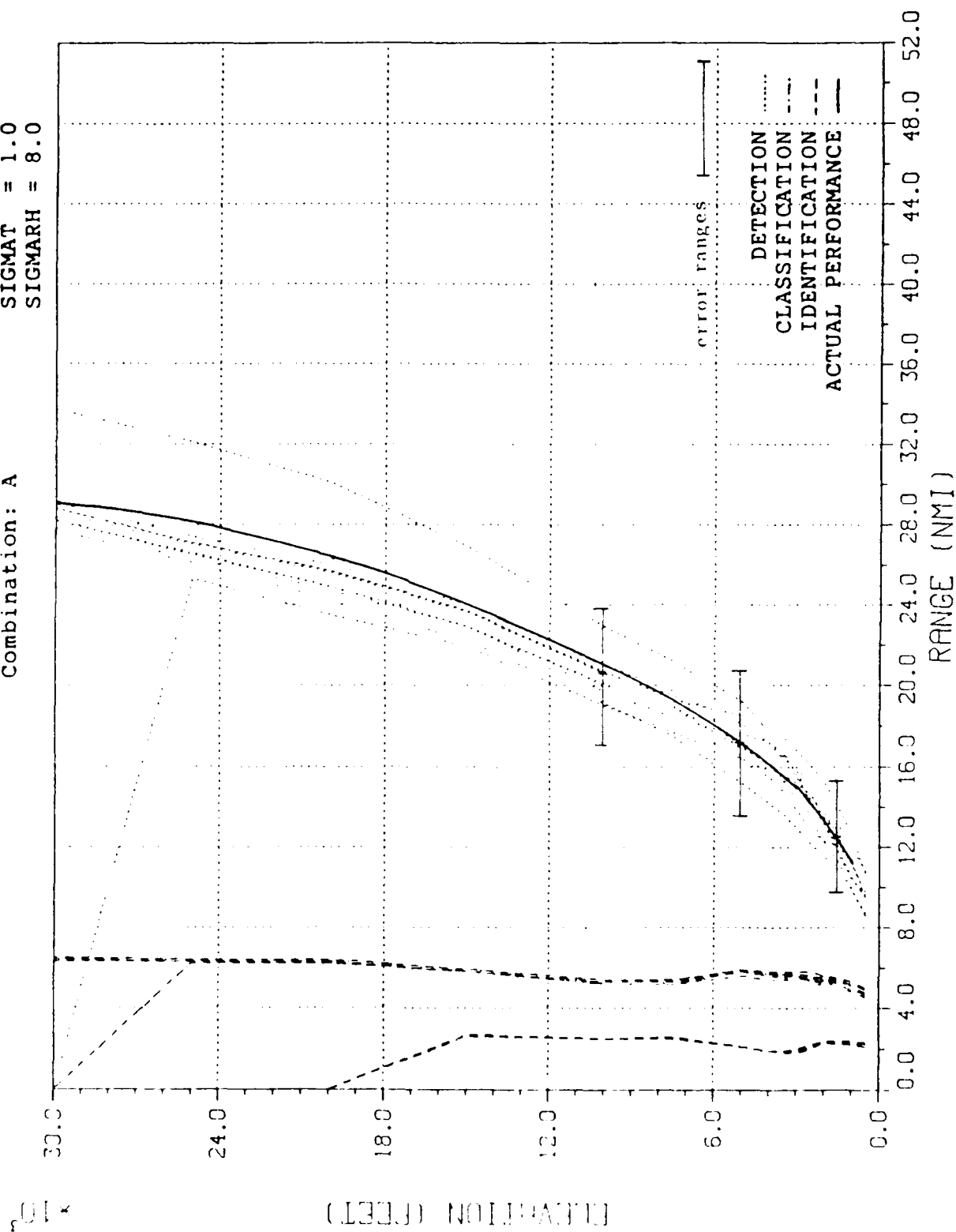
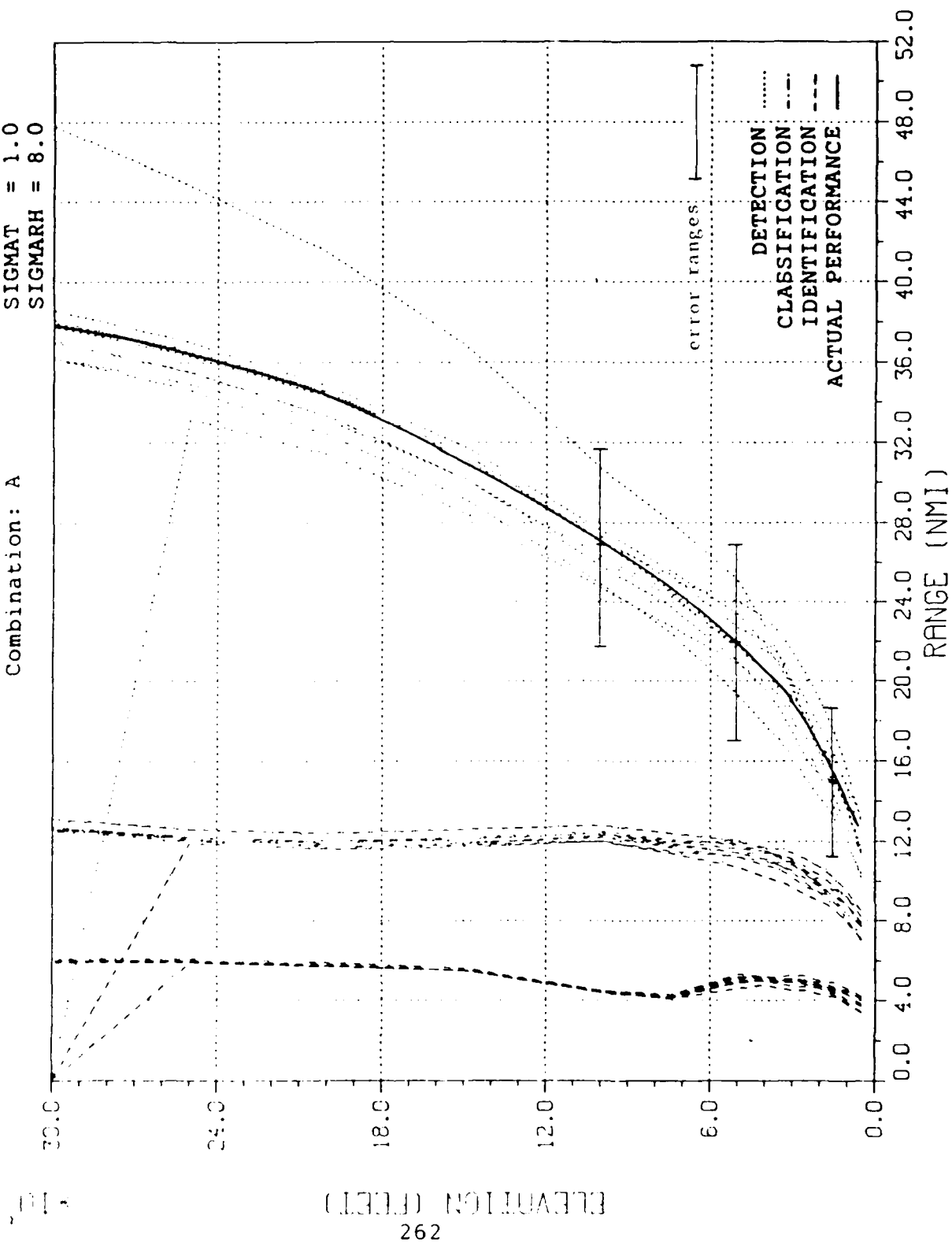


FIGURE NUMBER 3

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

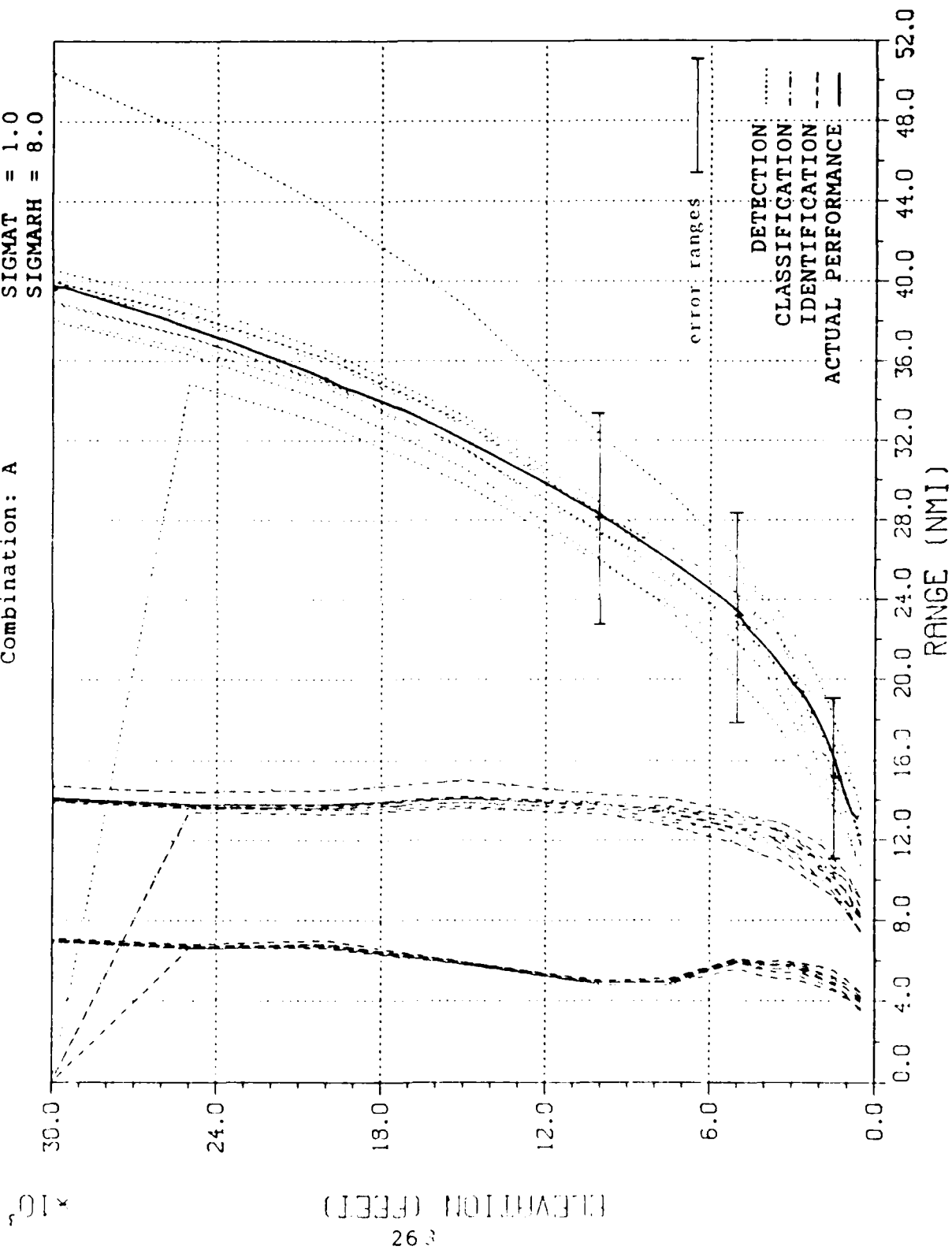
Combination: A



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

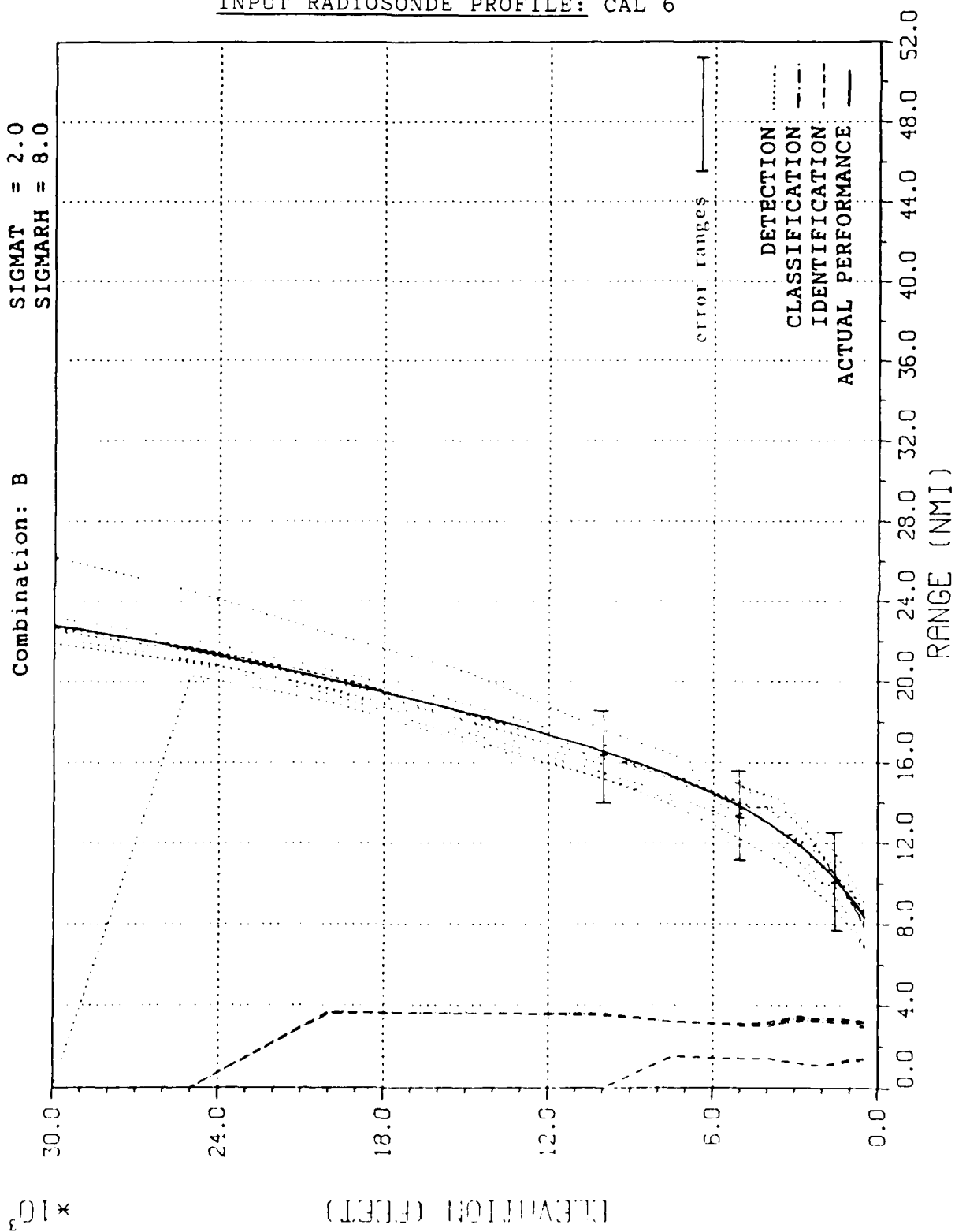
Combination: A



TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

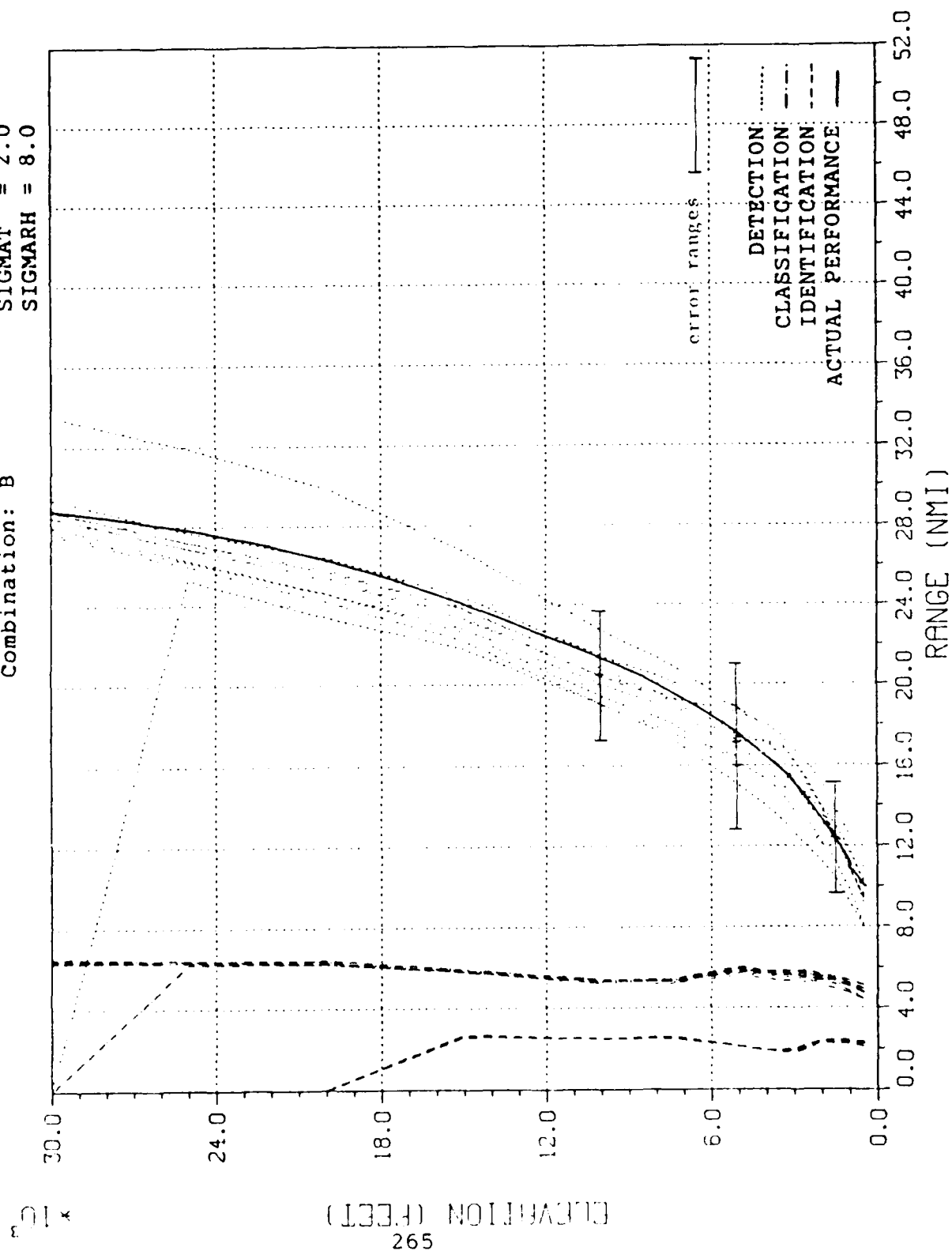
Combination: B



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

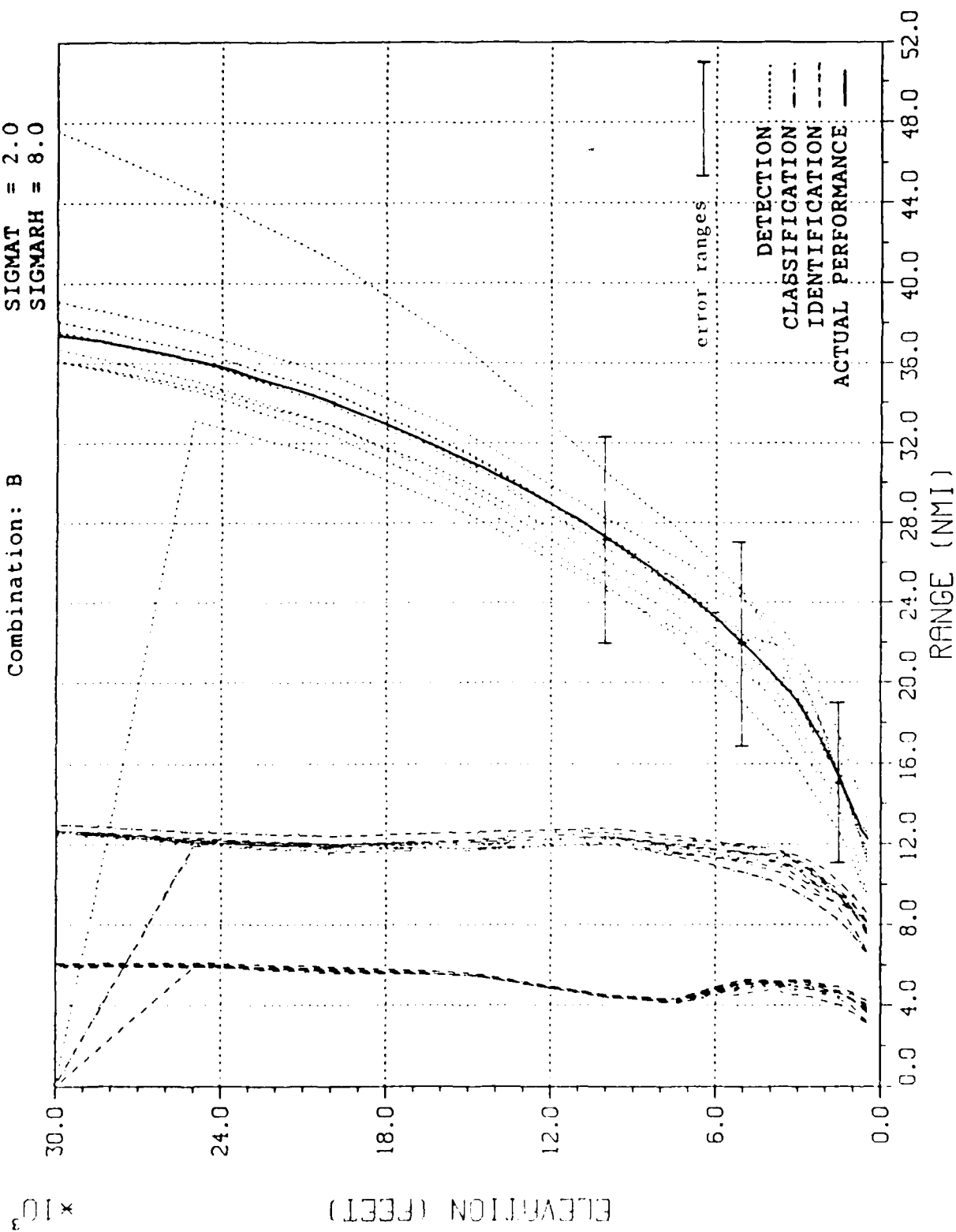
Combination: B



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

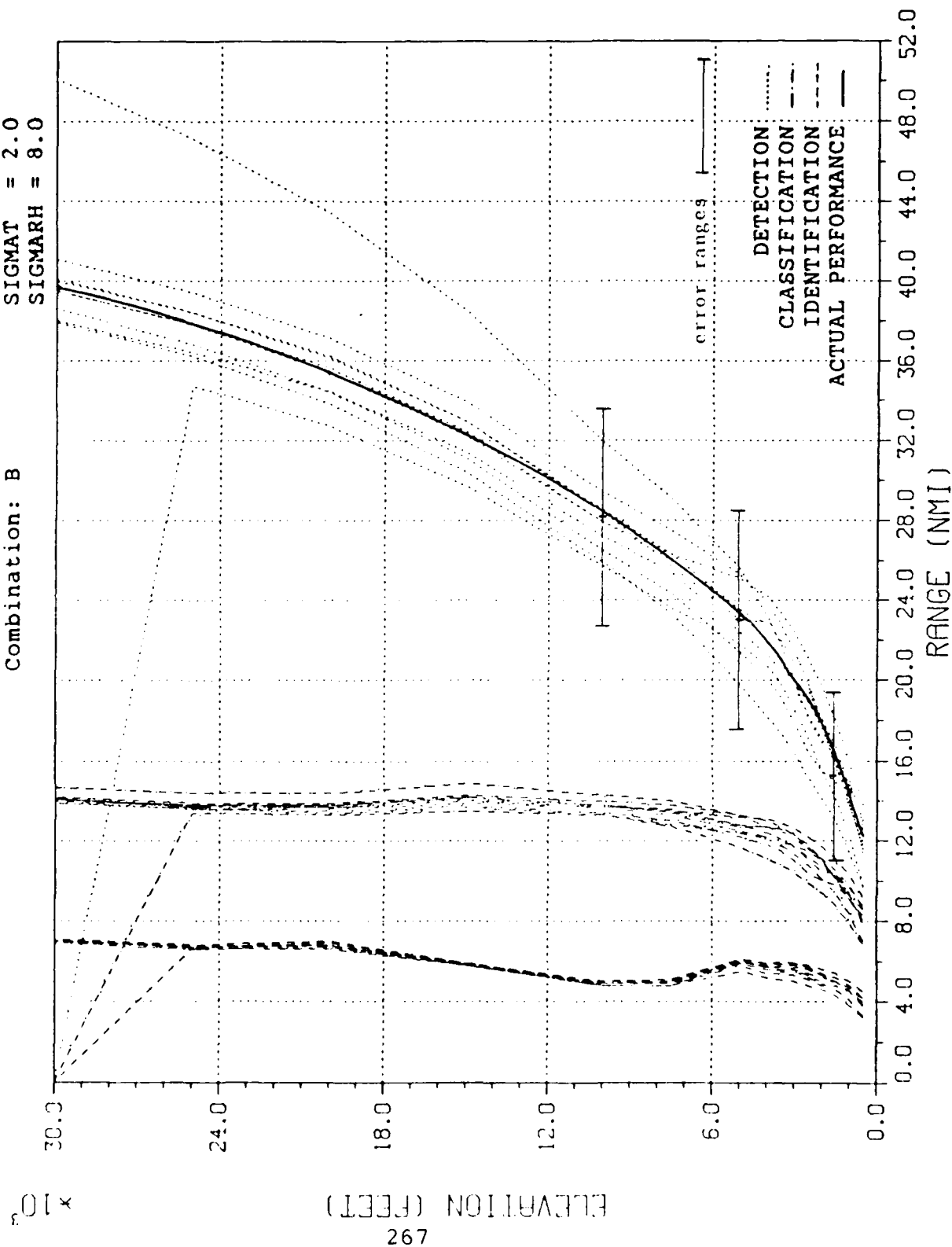
Combination: B



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: B

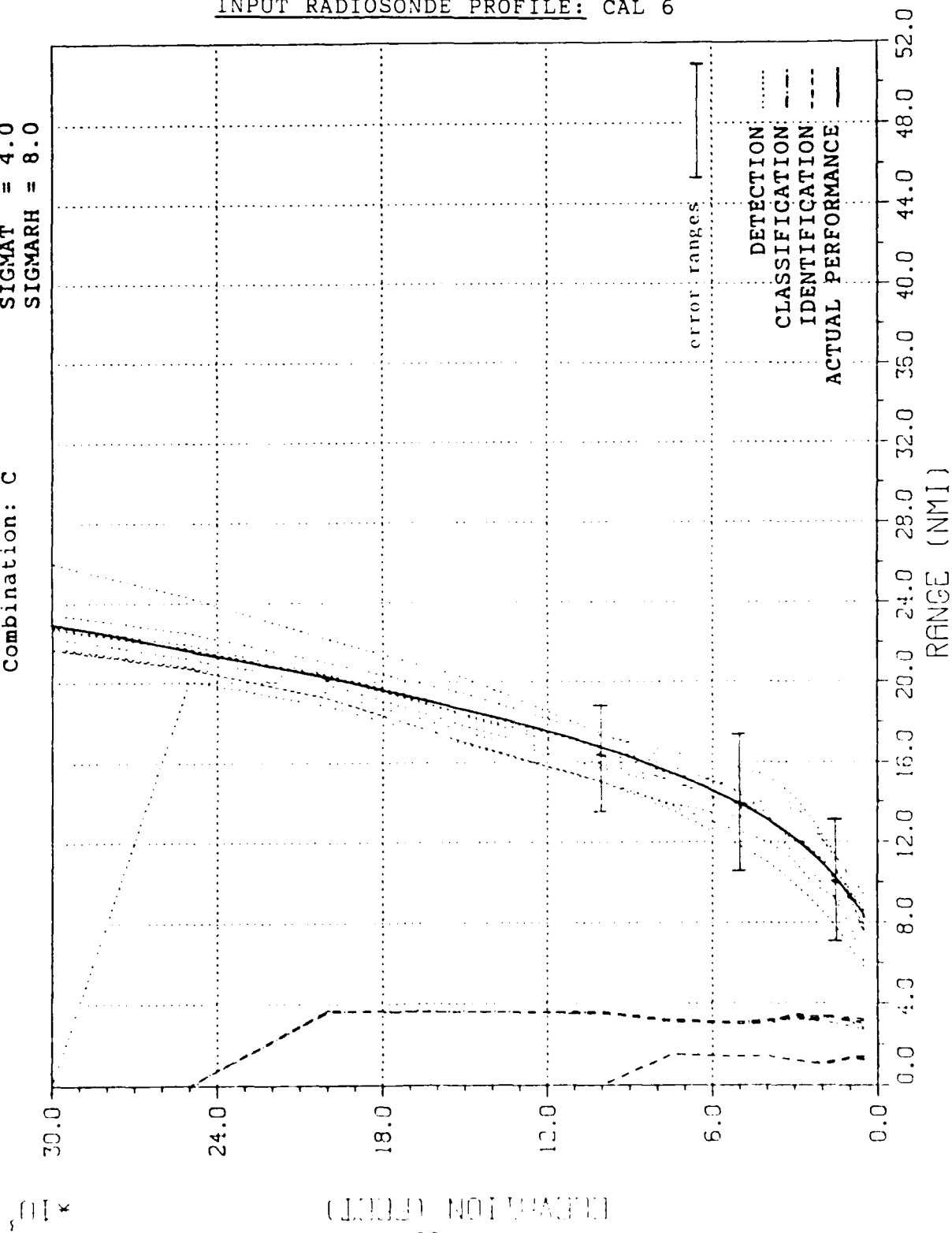


TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

Combination: C

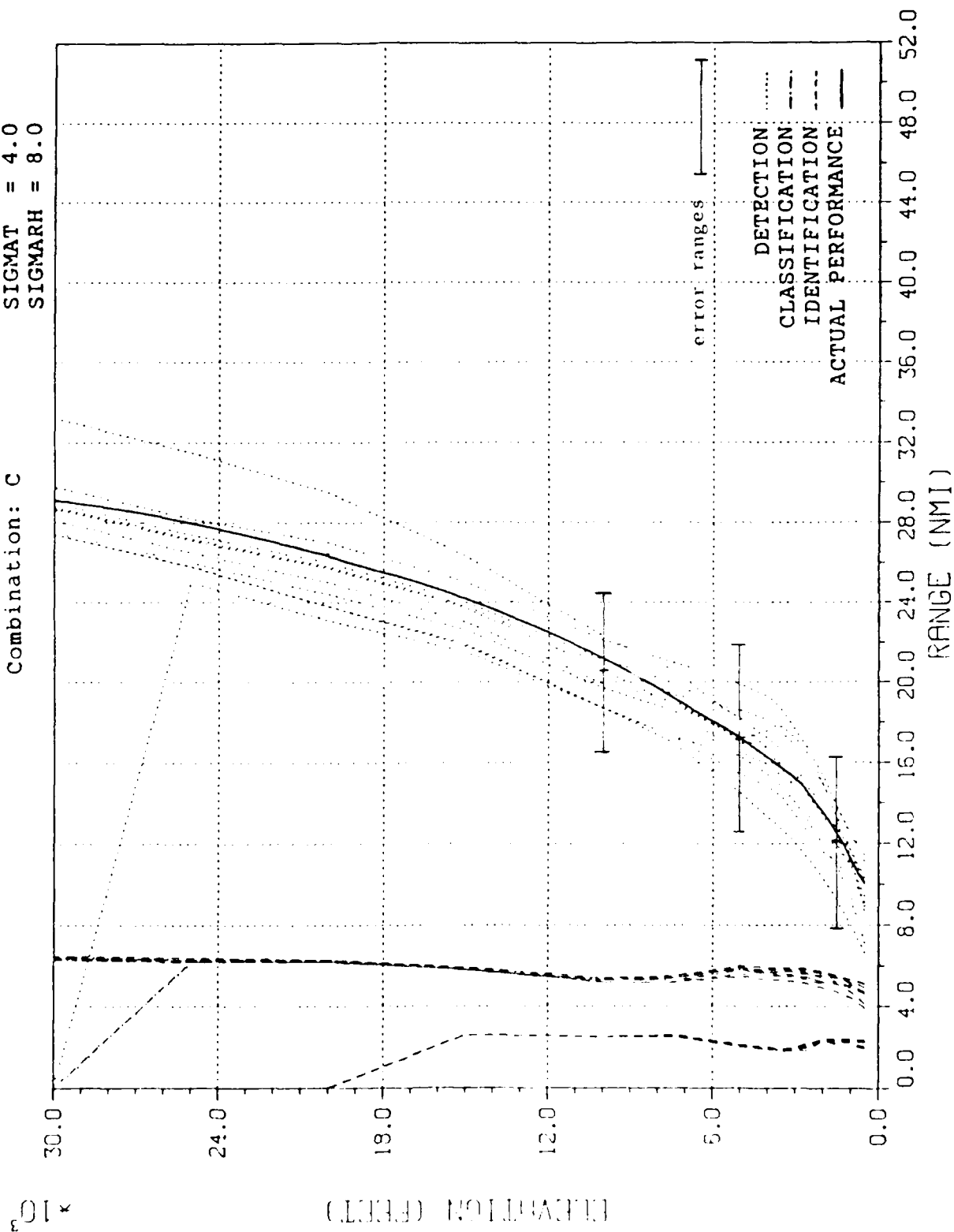
INPUT RADIOSONDE PROFILE: CAL 6



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

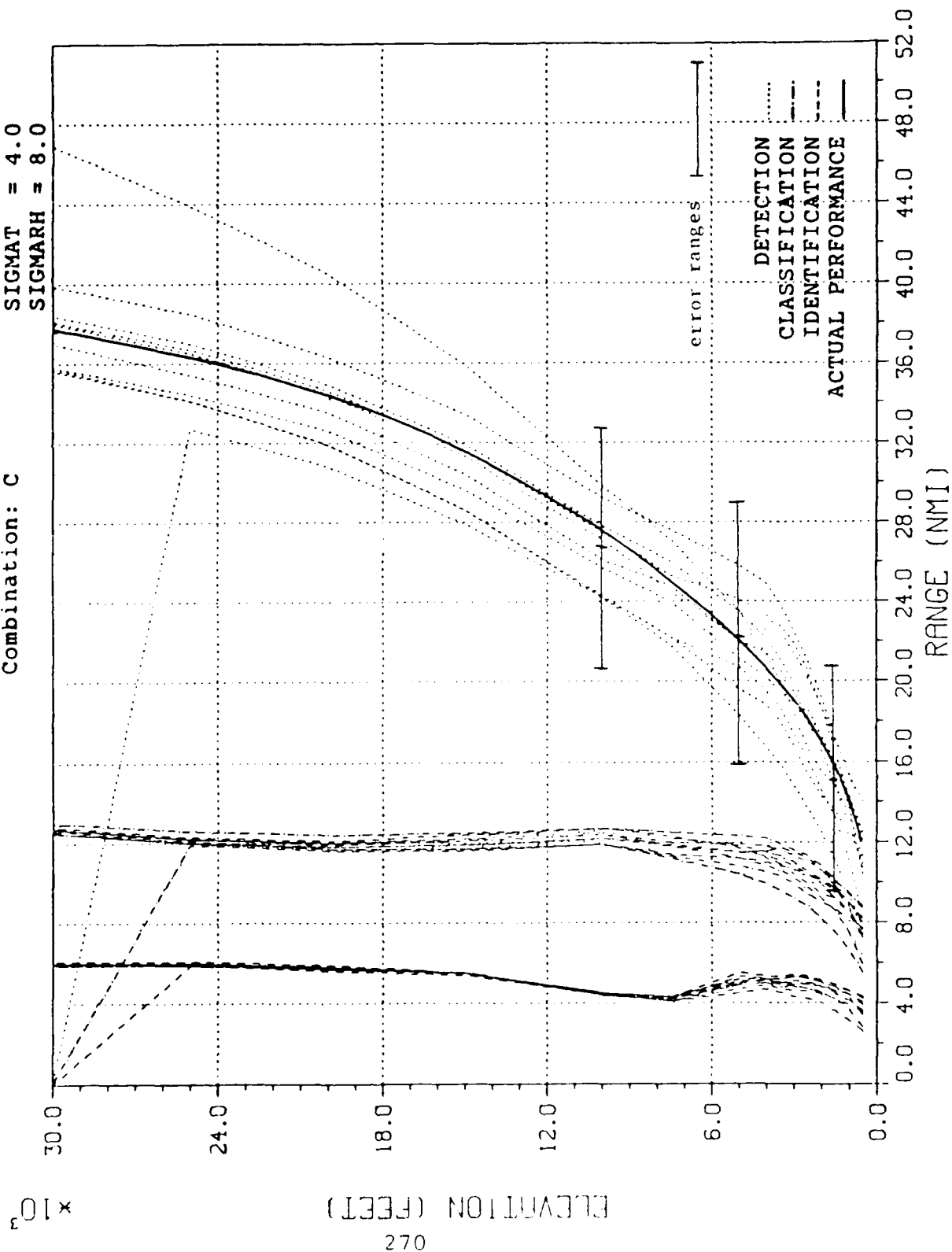
Combination: C



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

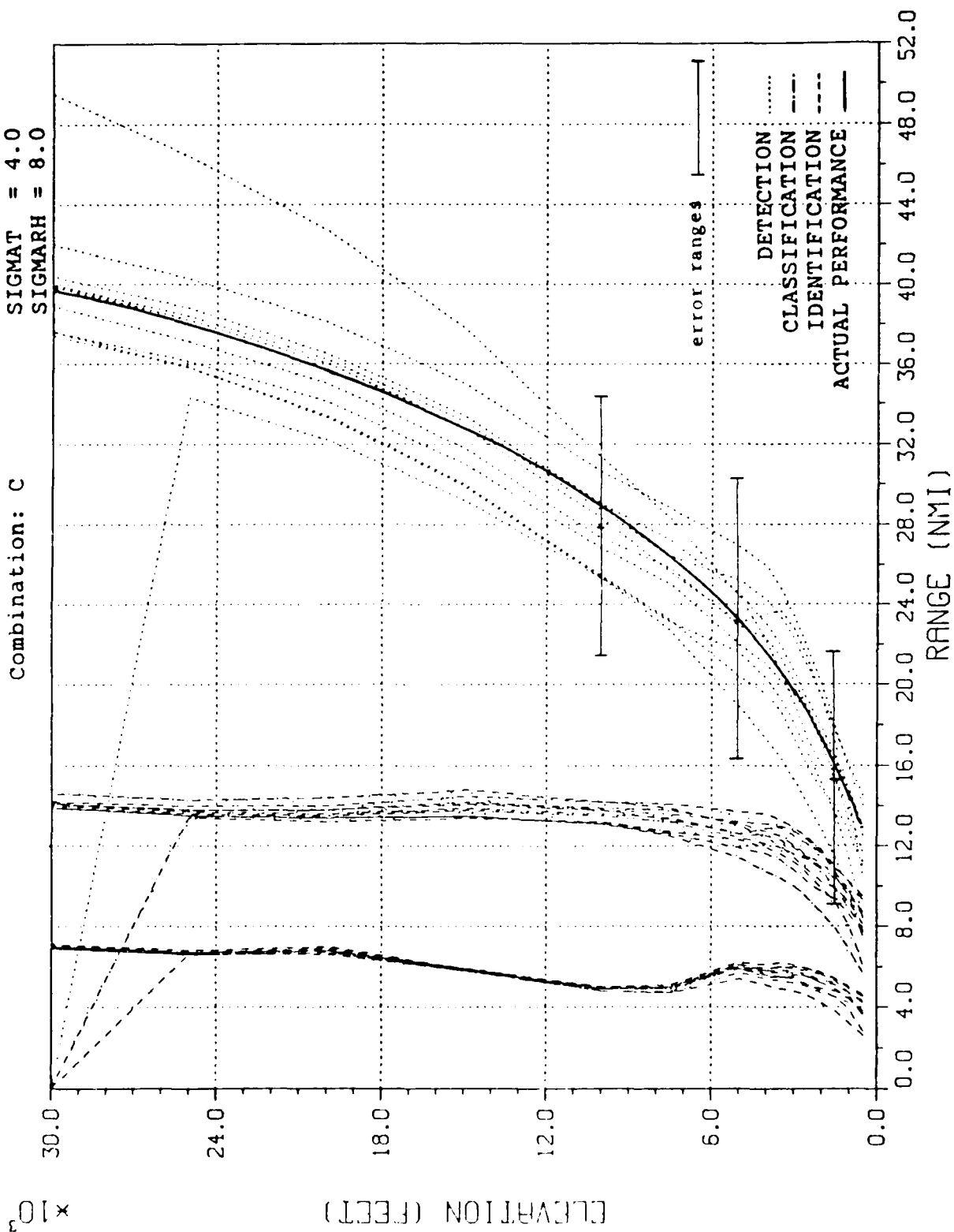
Combination: C



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

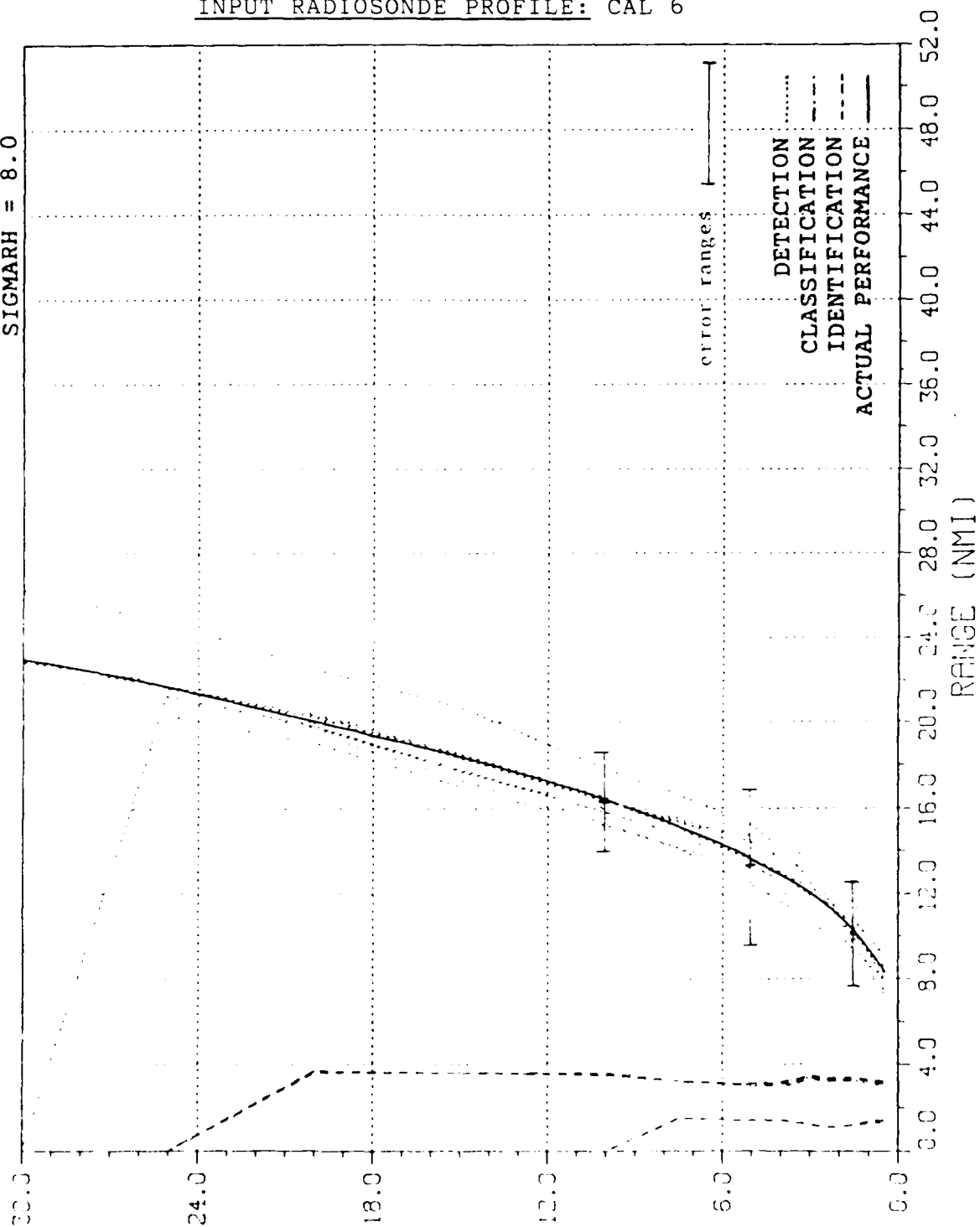
Combination: C



TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

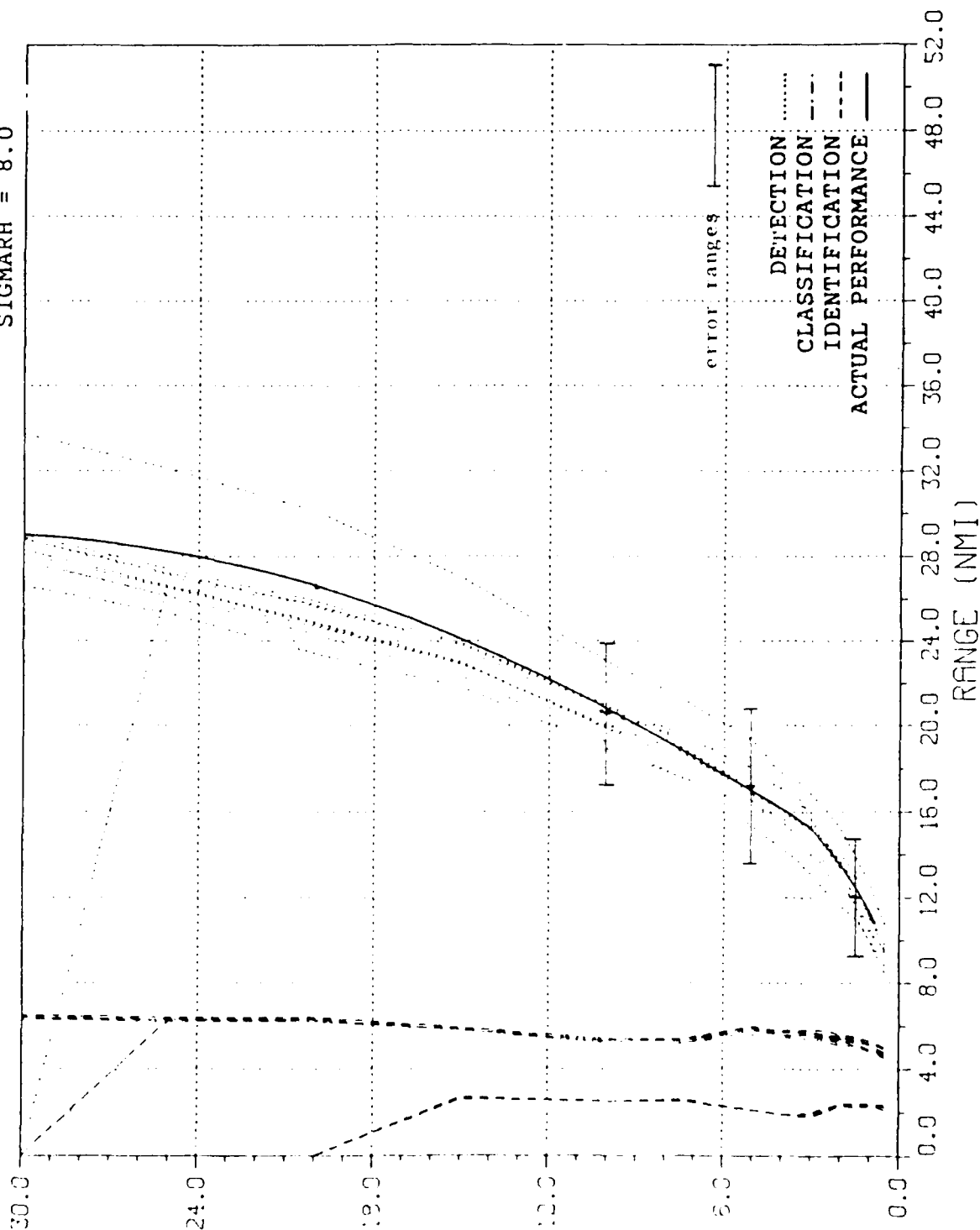
Combination: D



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

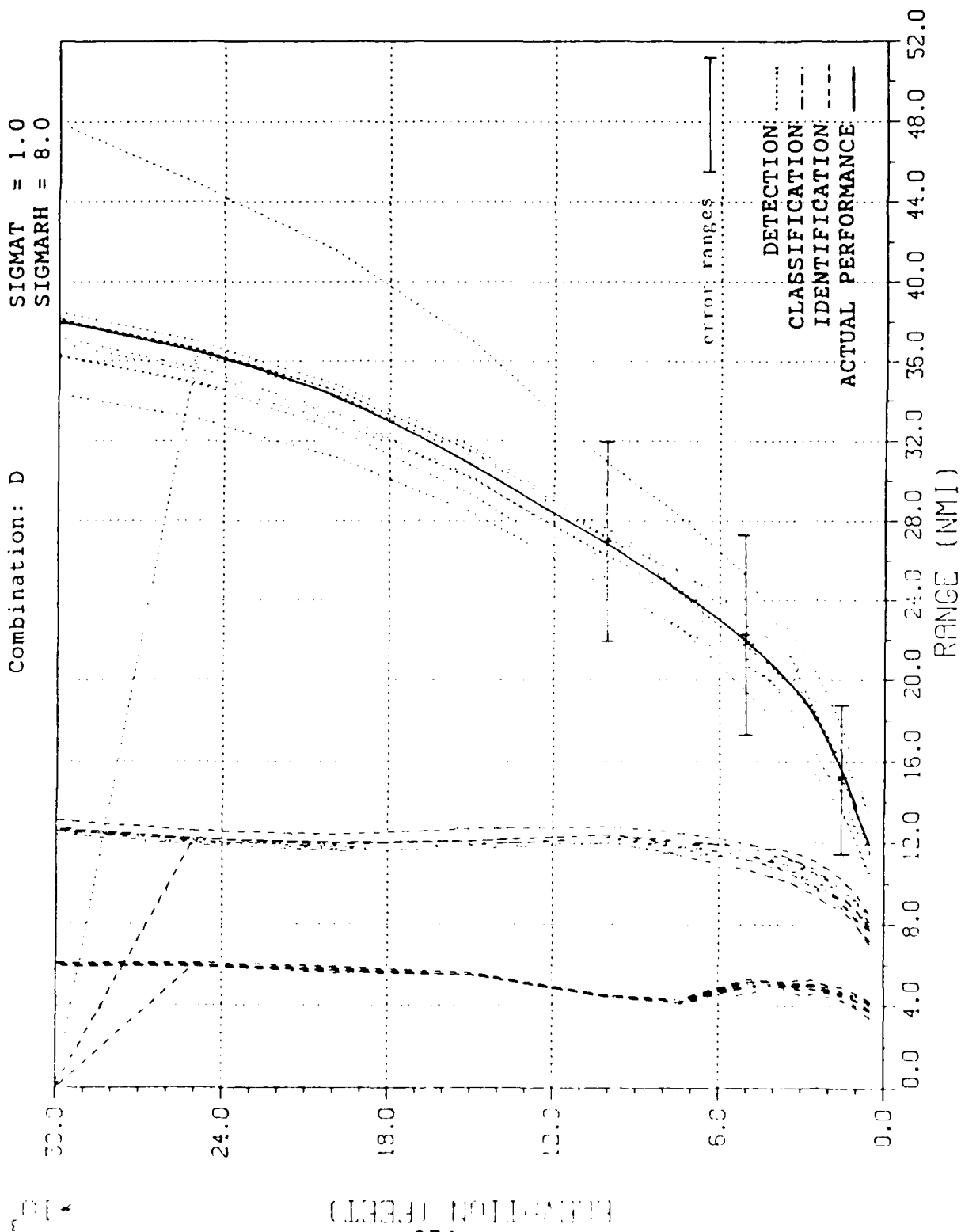
Combination: D



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

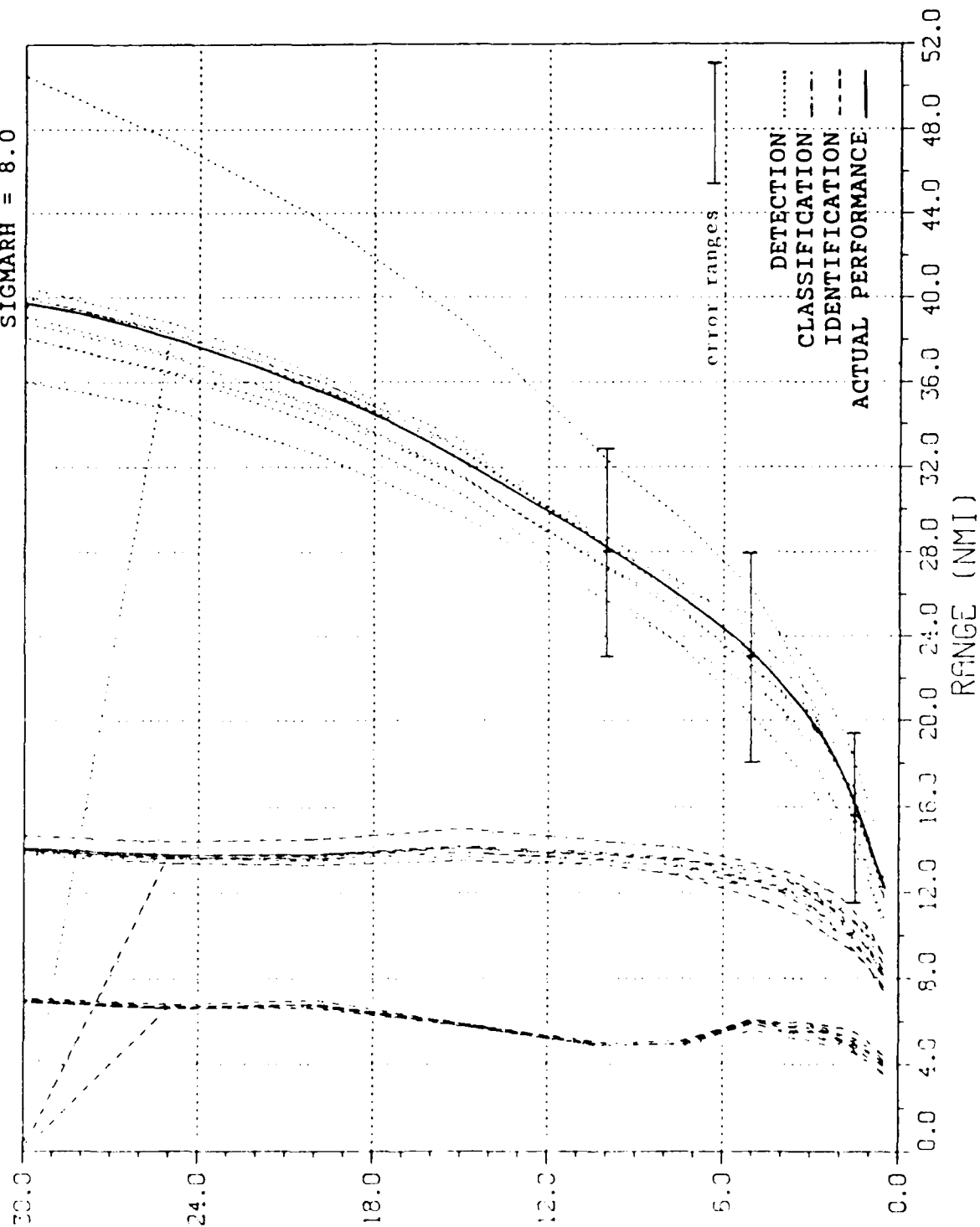
Combination: D



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: D

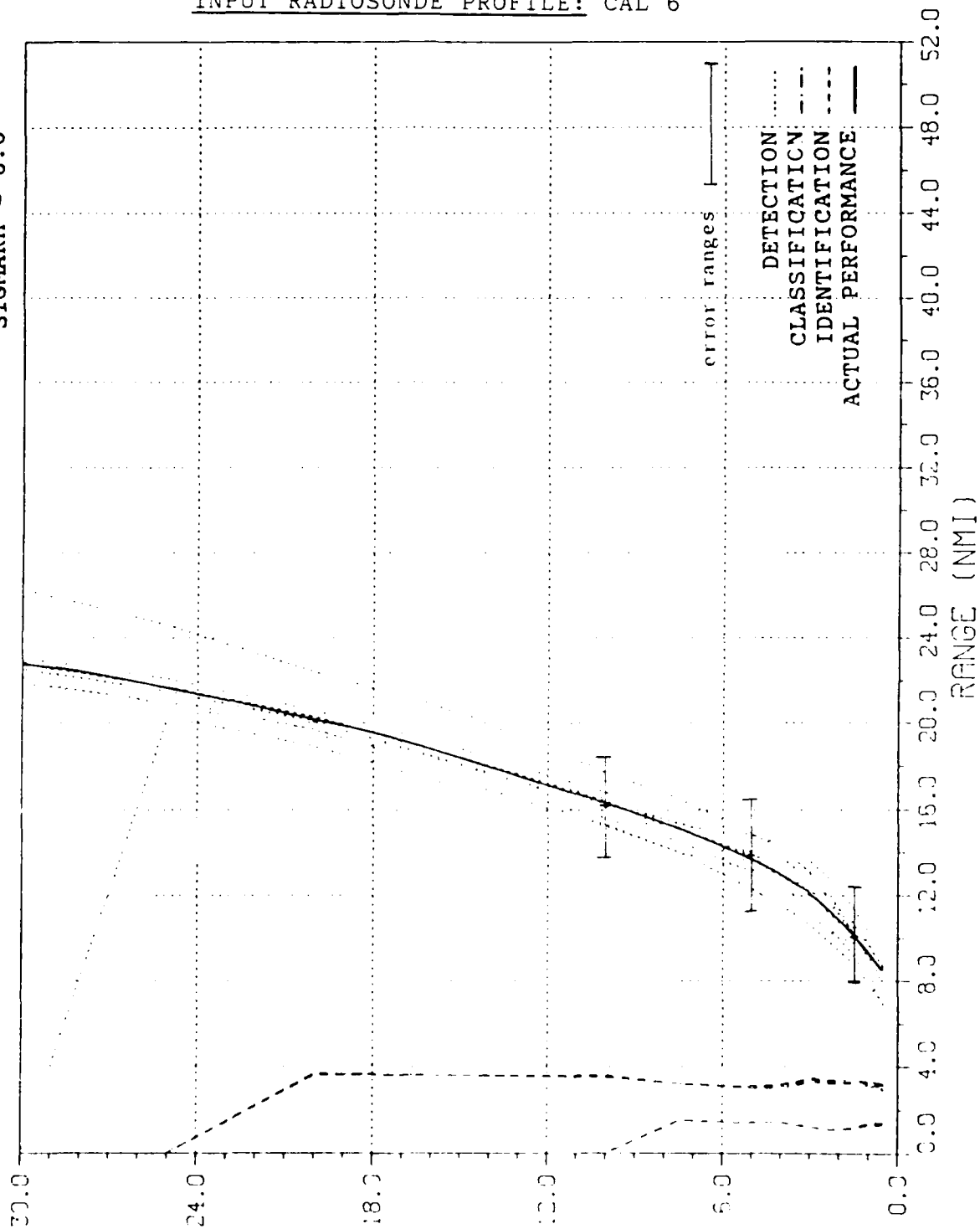


TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: E

INPUT RADIOSONDE PROFILE: CAL 6

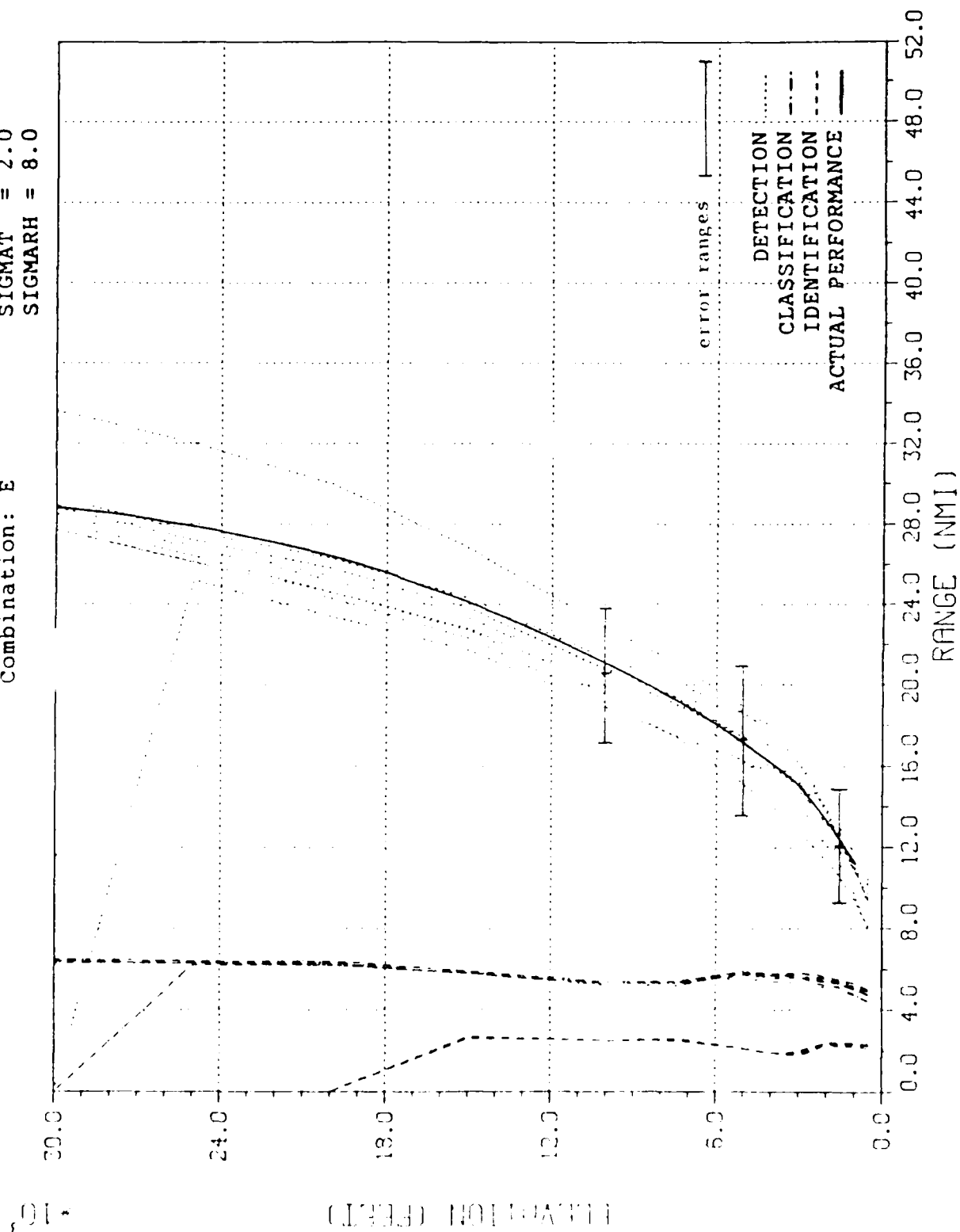


276

TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

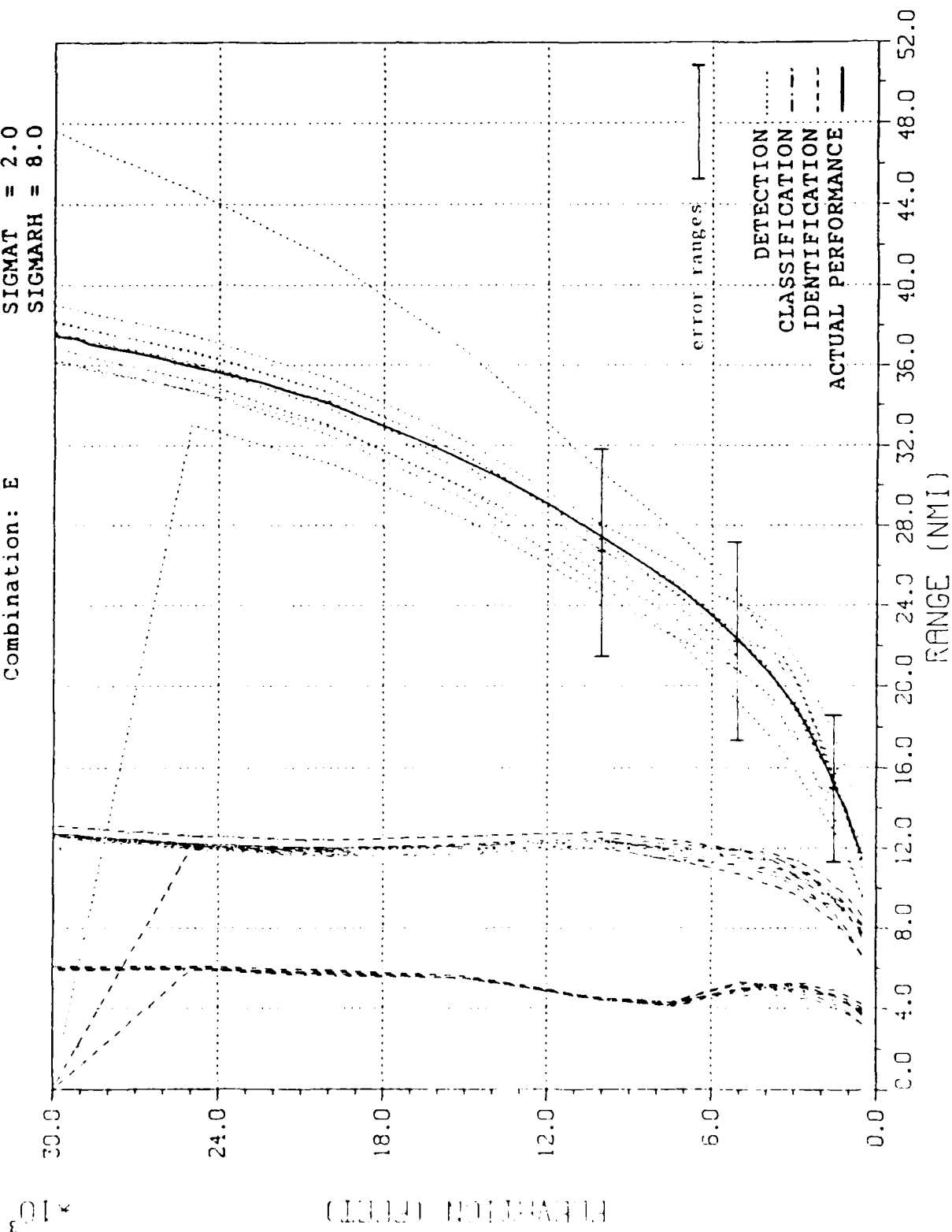
Combination: E



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

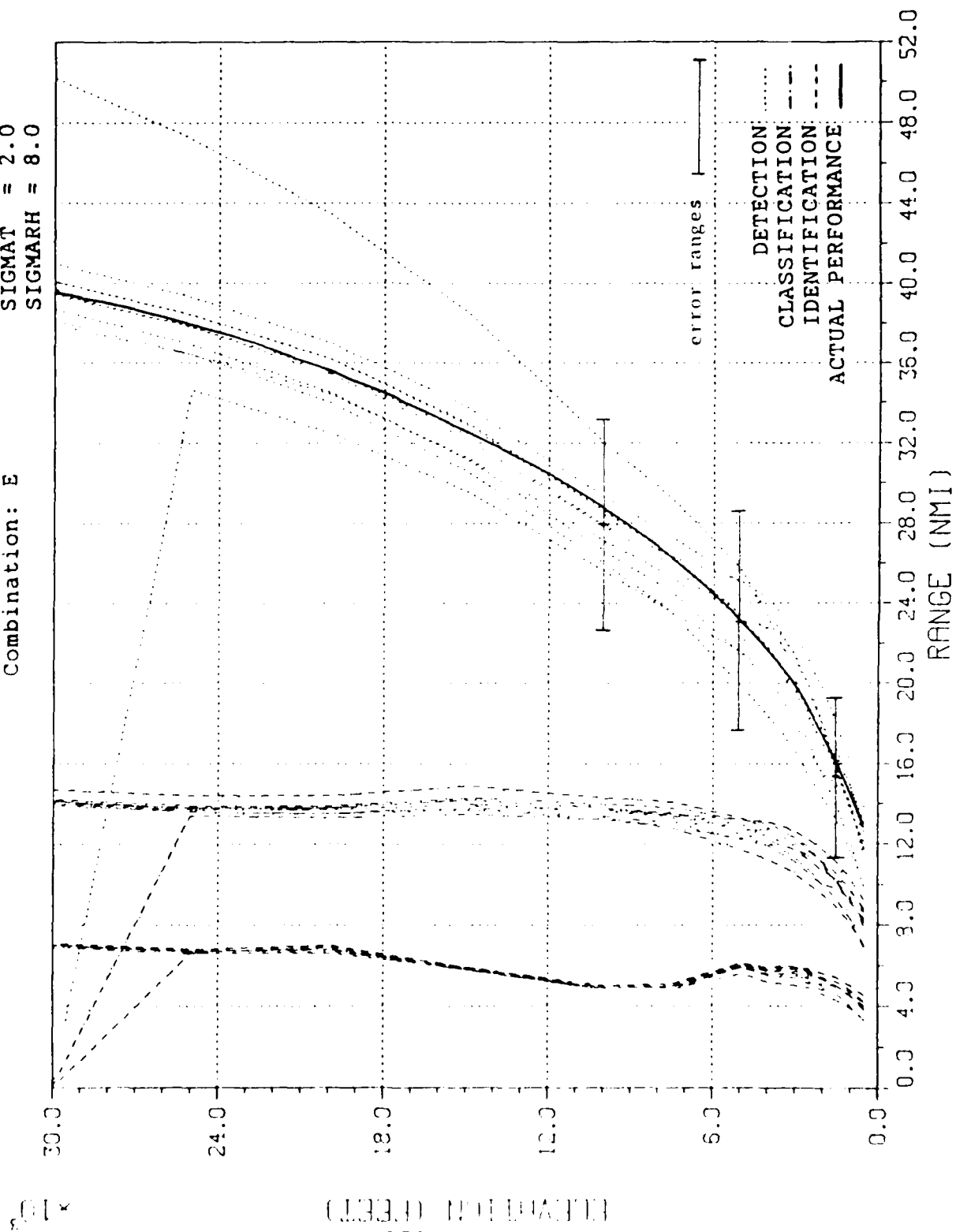
Combination: E



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: E

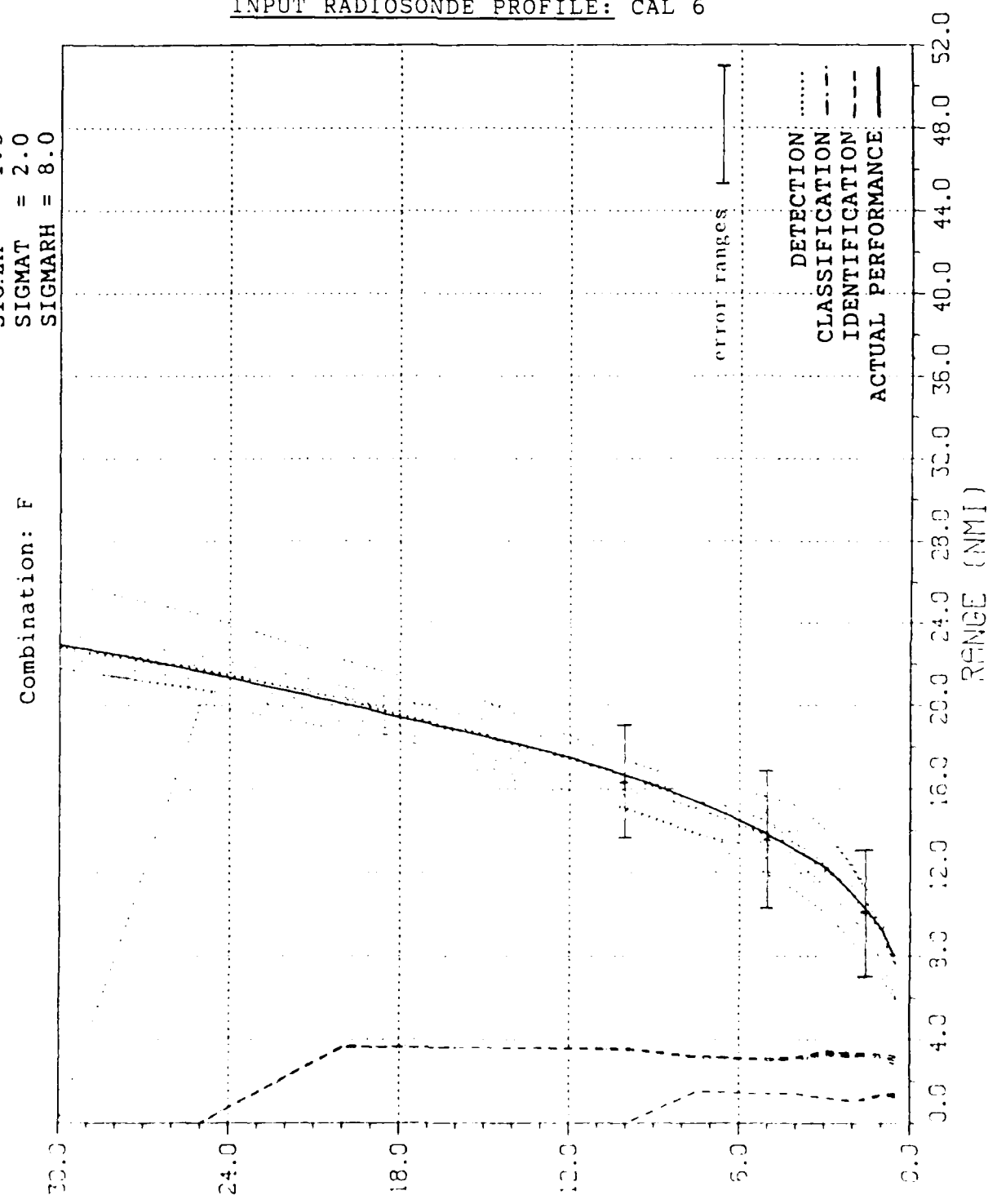


TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: F

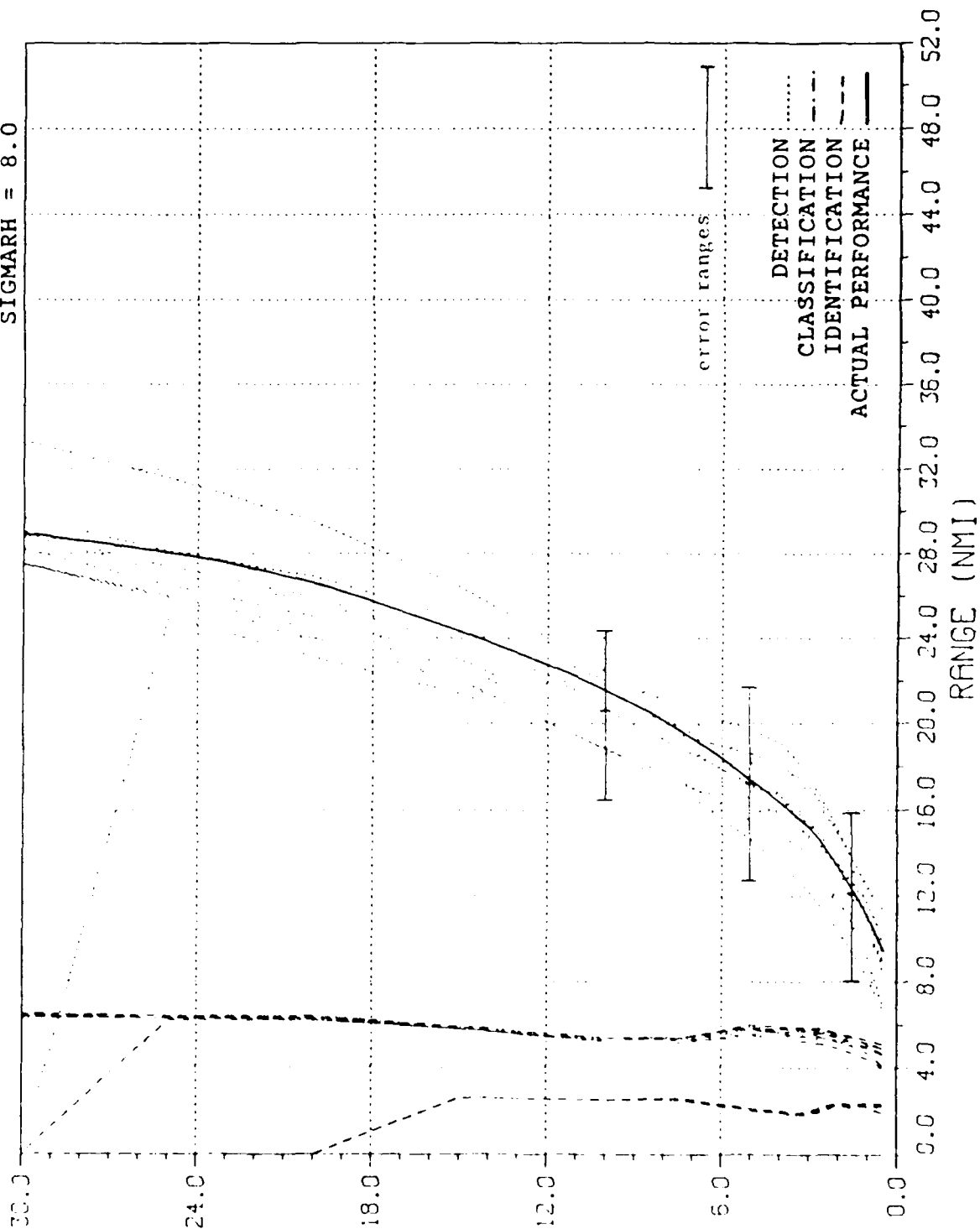
INPUT RADIOSONDE PROFILE: CAL 6



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: F

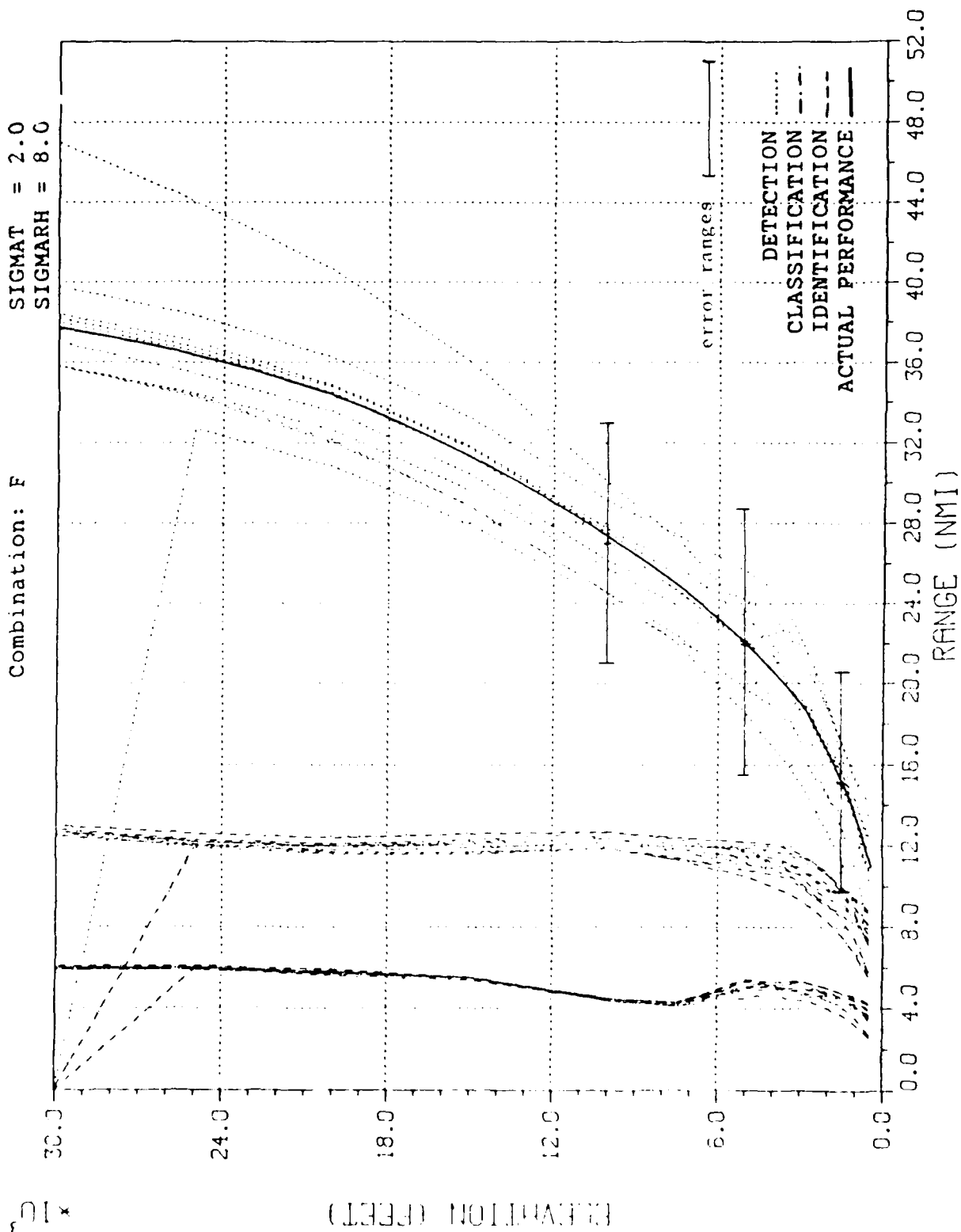


ELEVATION (FEET)

TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

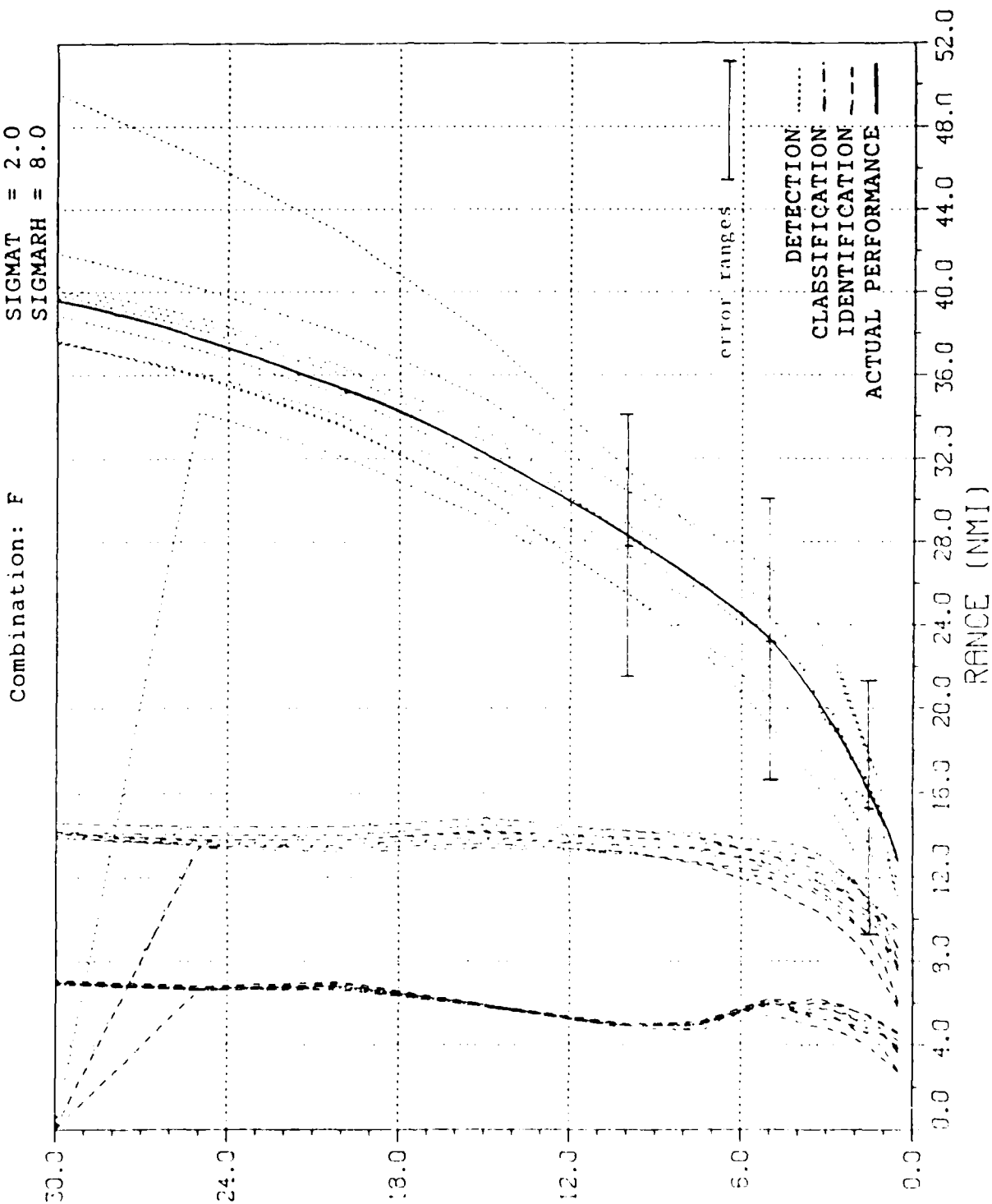
Combination: F



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: F

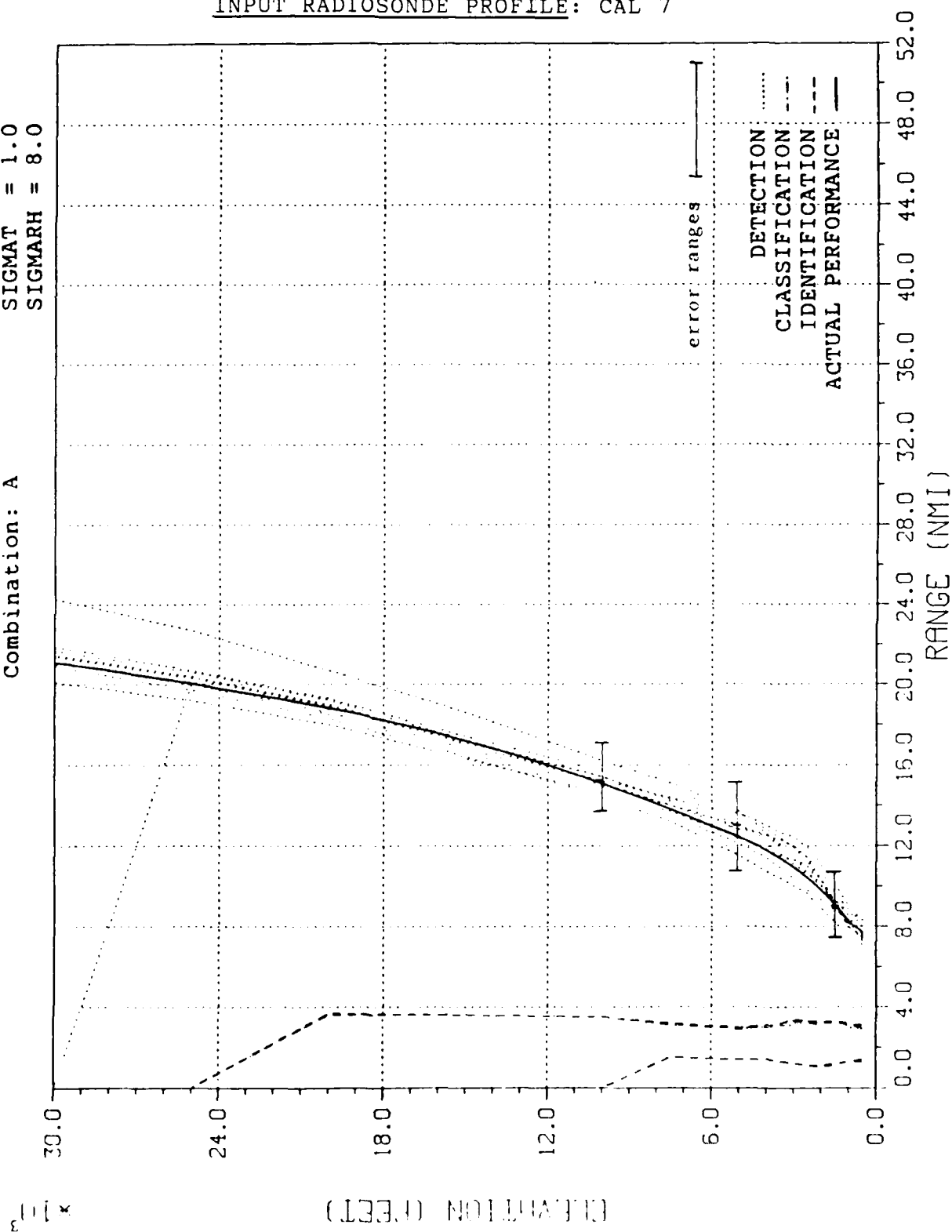


283

TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: A



INPUT RADIOSONDE PROFILE: CAL 7

TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: A

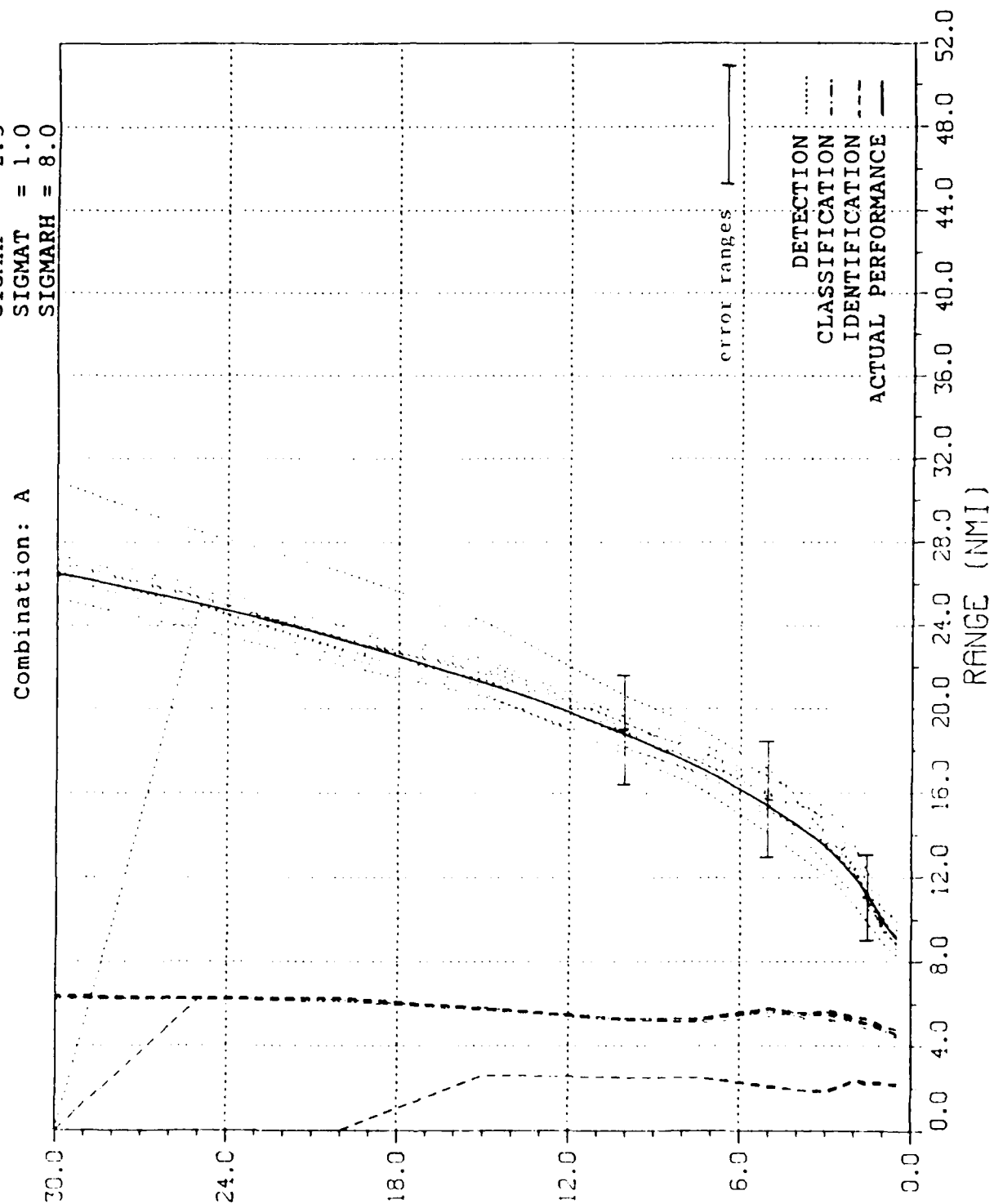
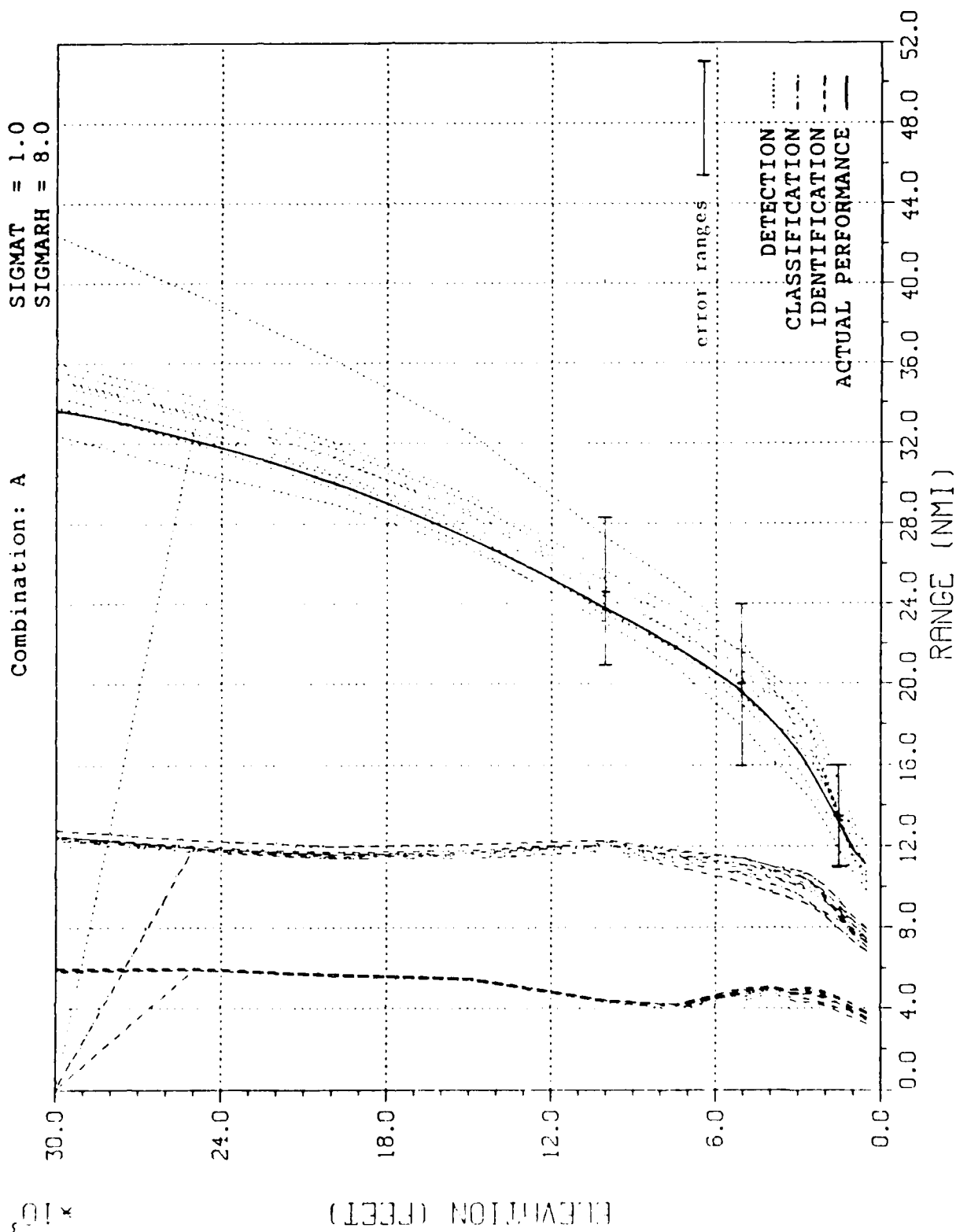


ILLUSTRATION (C.E.D.)

TARGET NUMBER 3

SIGMAP = 2.5
SIGMAT = 1.0
SIGMARH = 8.0

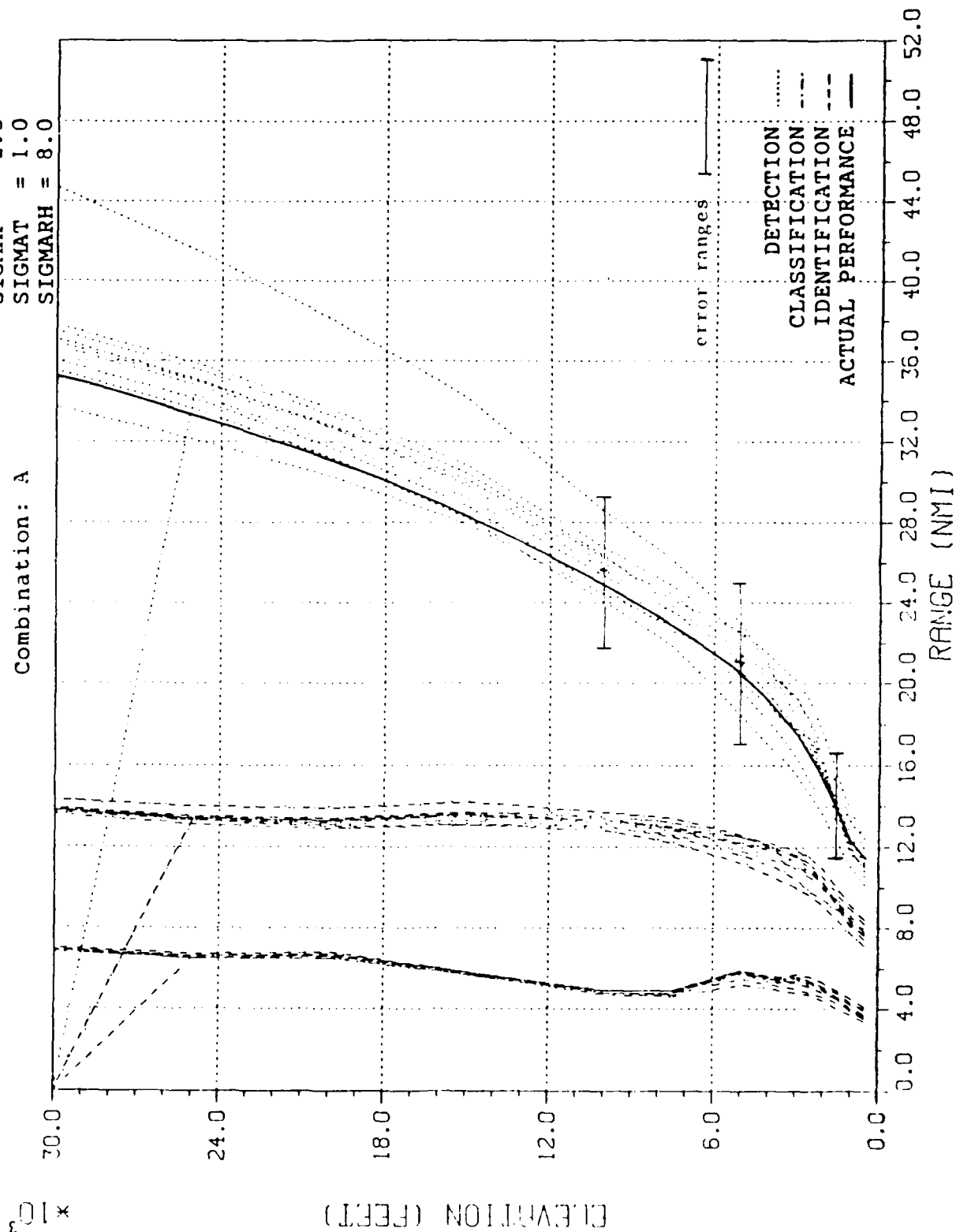
Combination: A



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

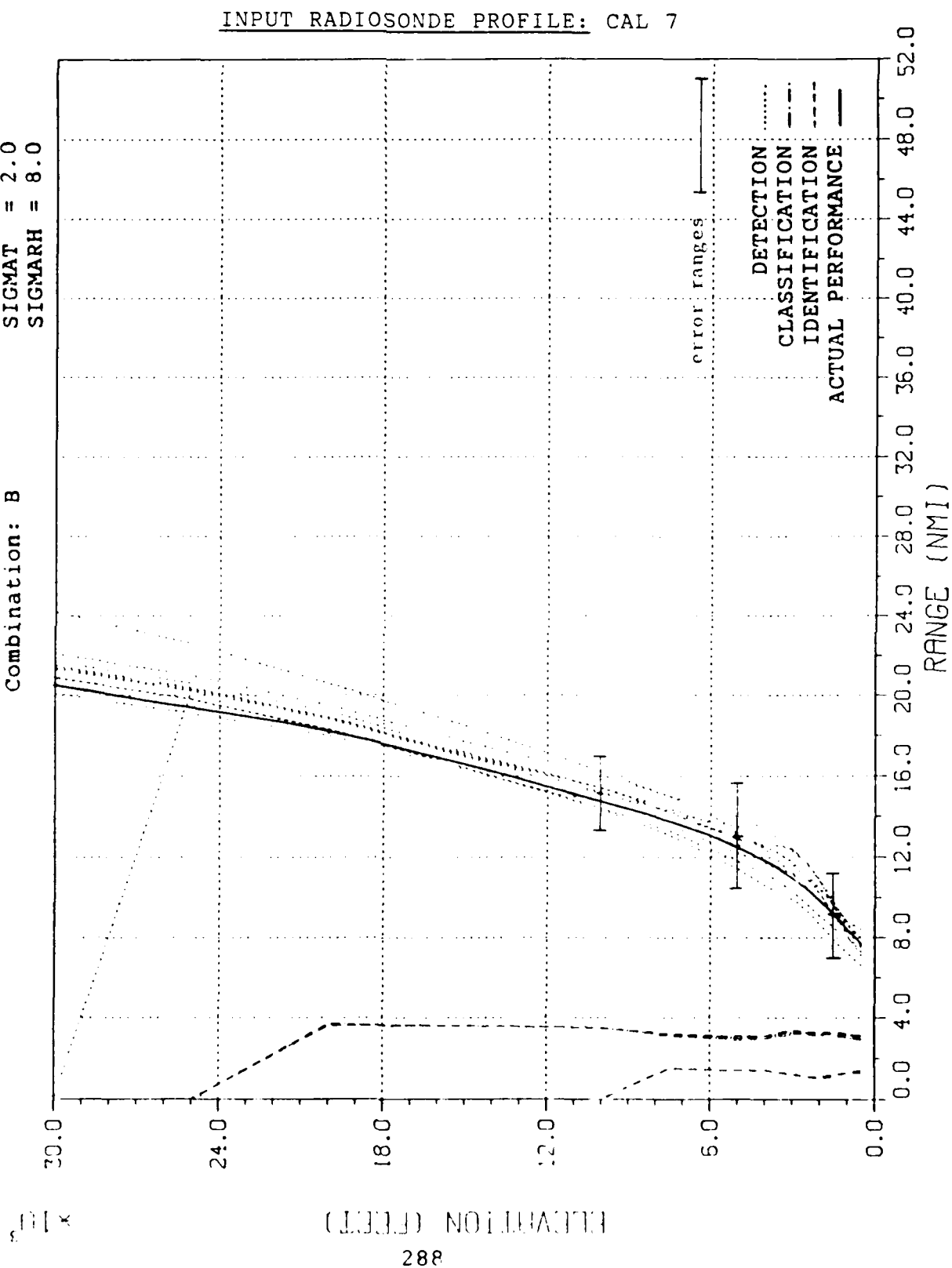
Combination: A



TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

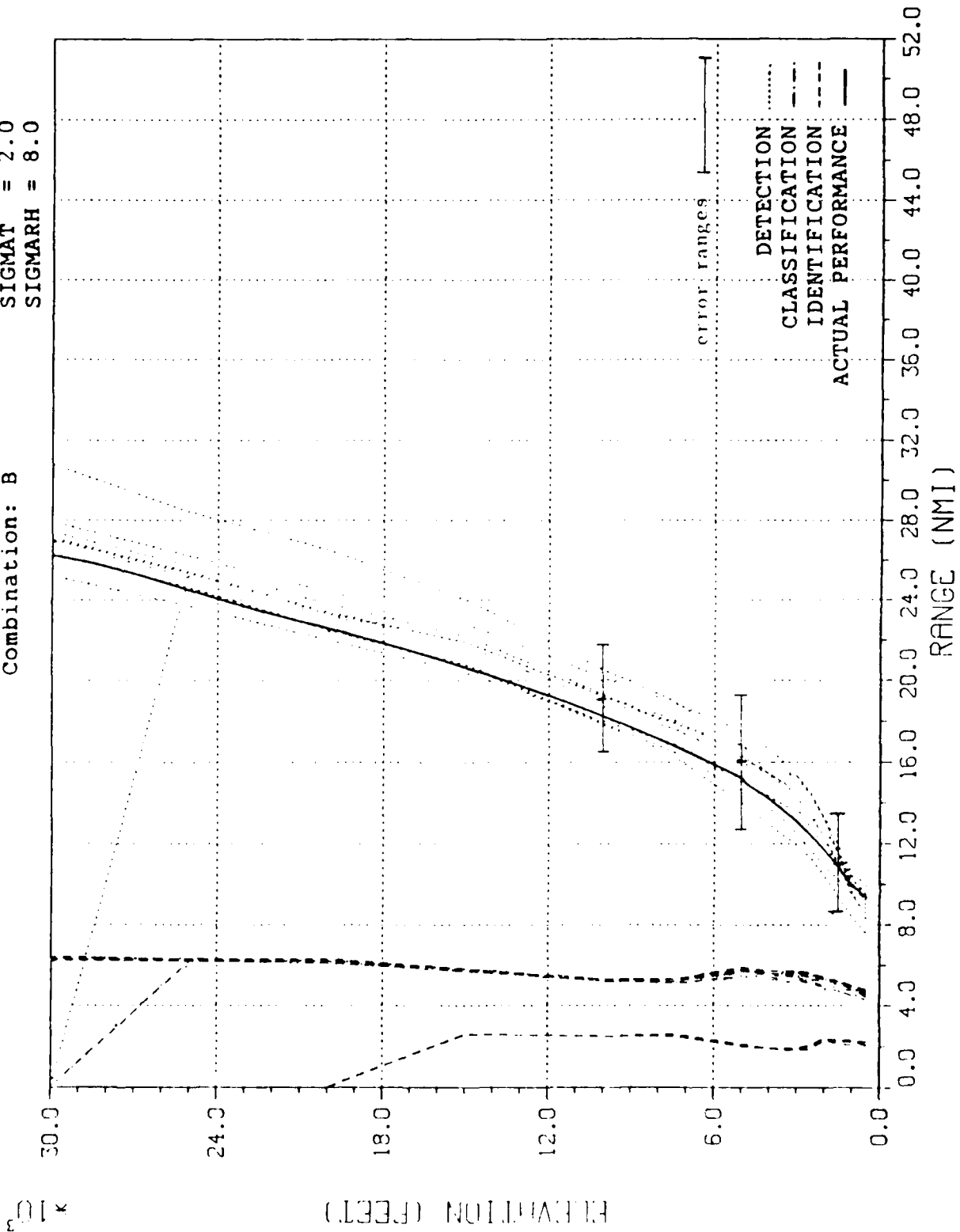
Combination: B



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

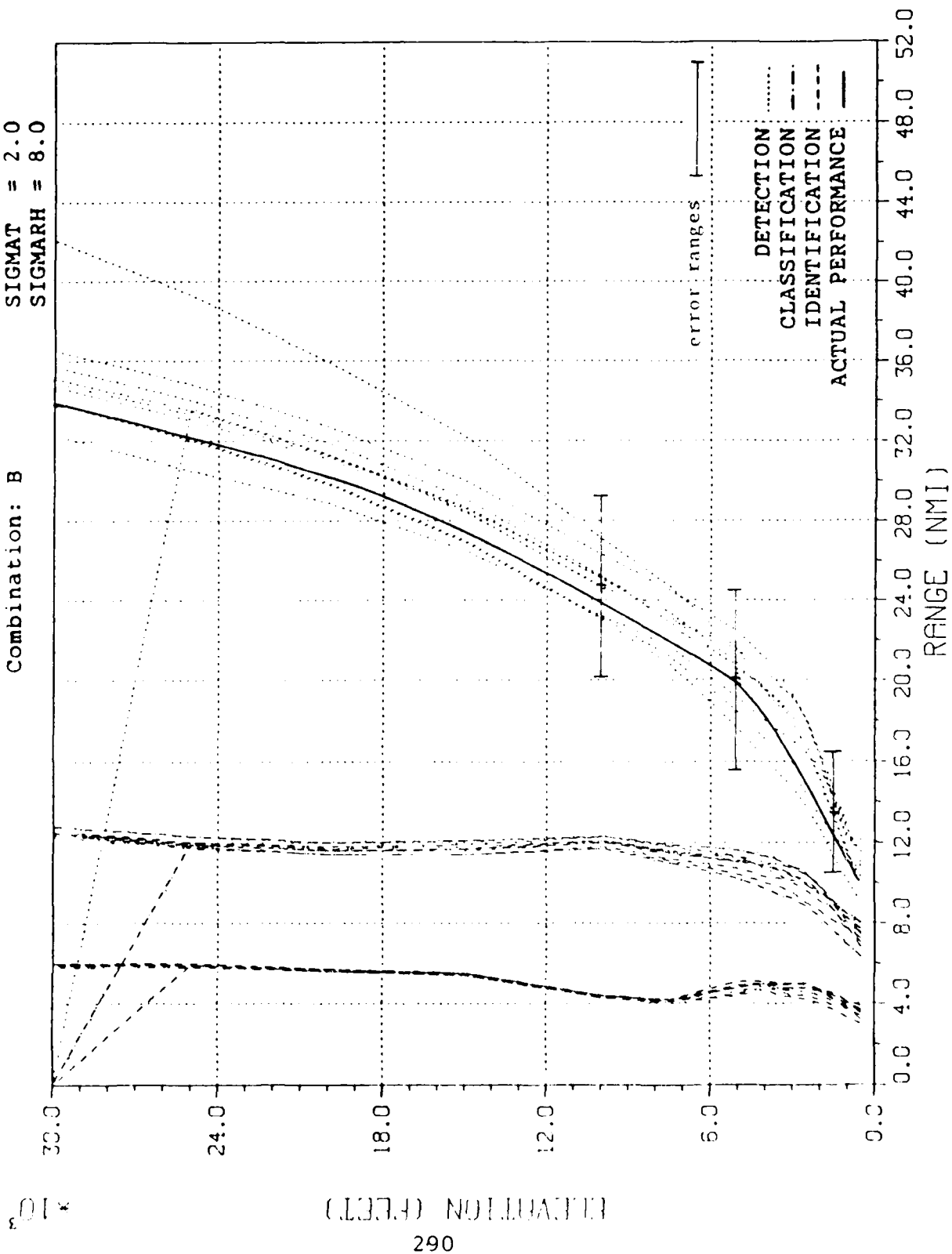
Combination: B



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

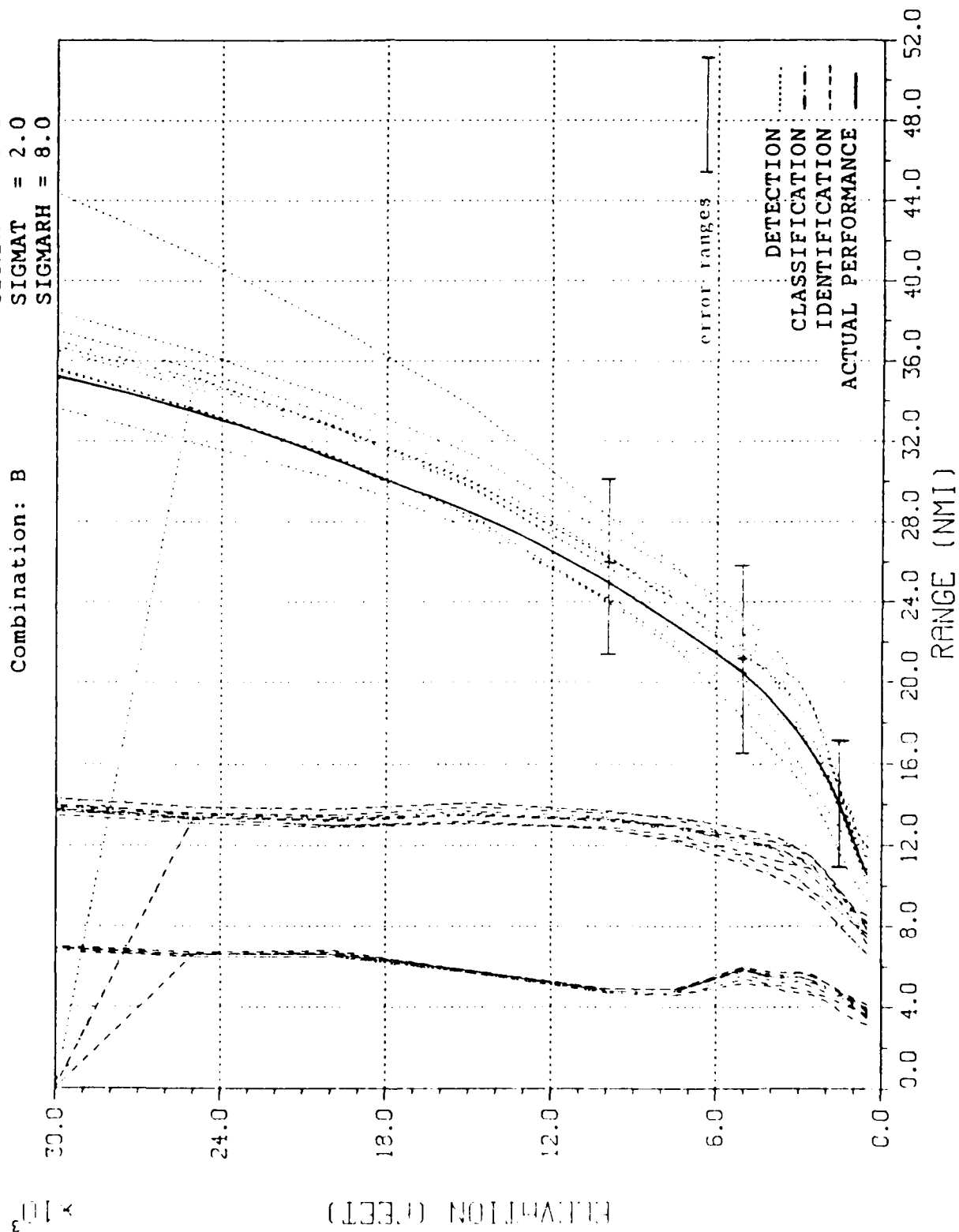
Combination: B



TARGET NUMBER 4

SIGMAP = 2.5
SIGMAT = 2.0
SIGMARH = 8.0

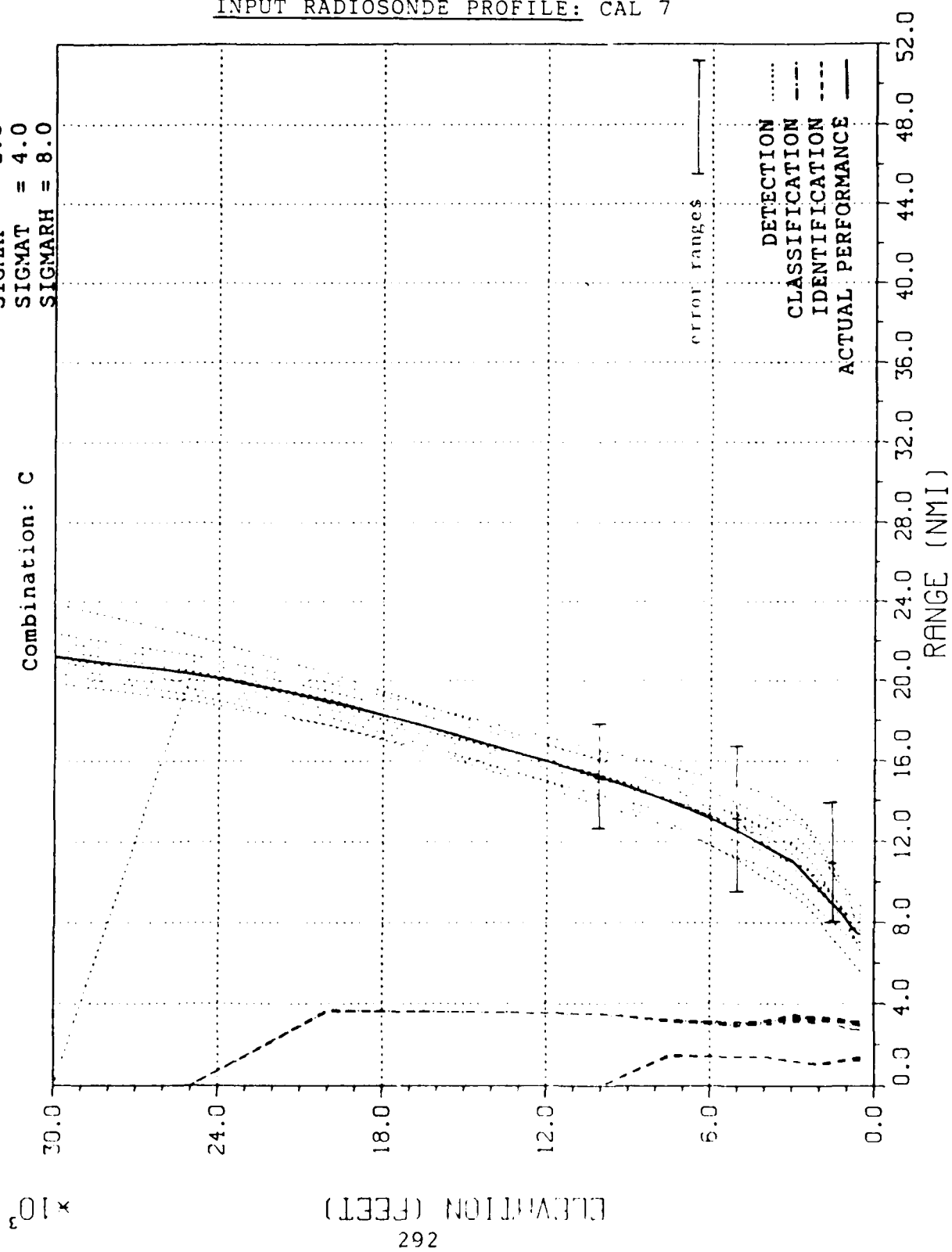
Combination: B



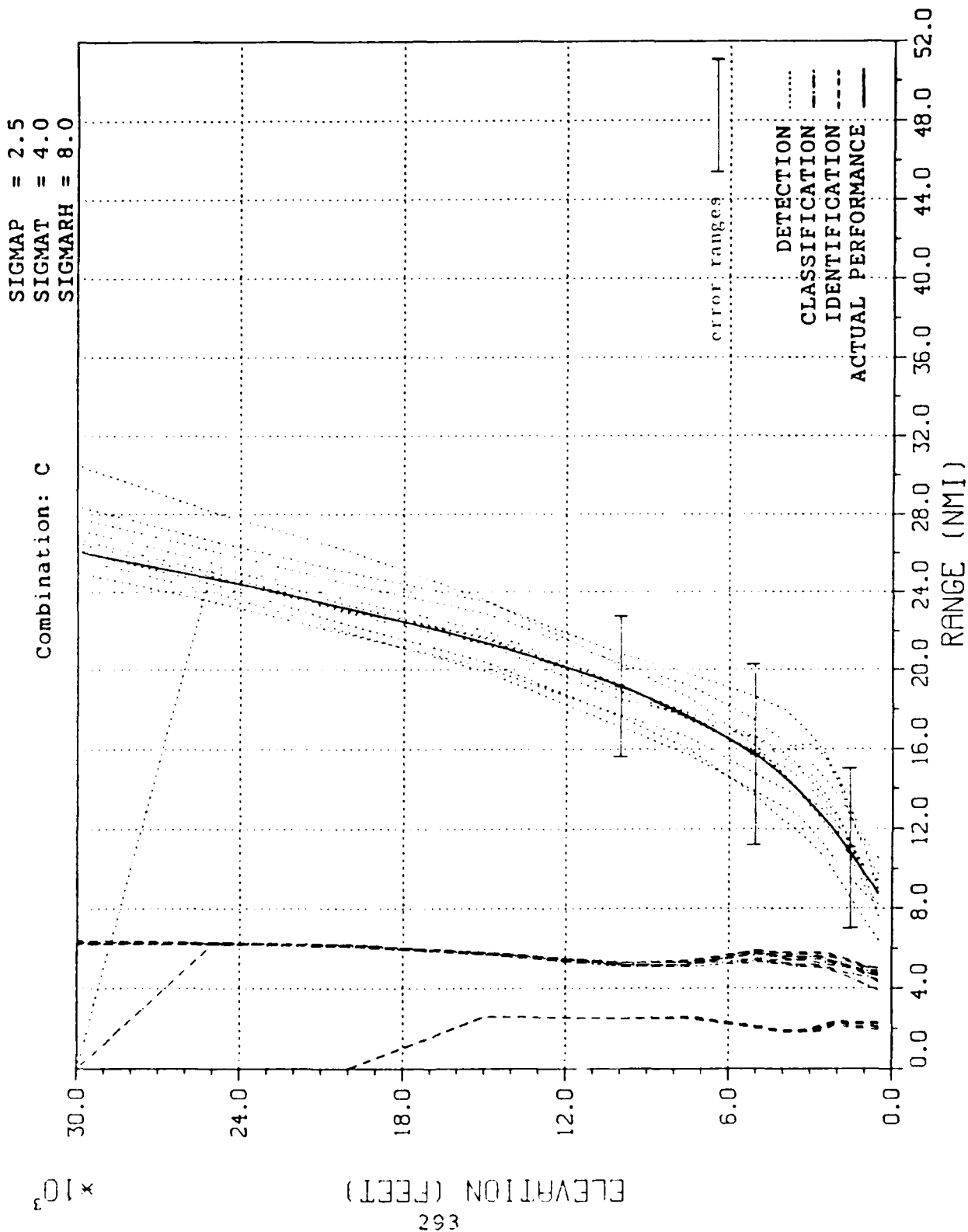
TARGET NUMBER 1

SIGMAP = 2.5
SIGMAT = 4.0
SIGMARH = 8.0

Combination: C



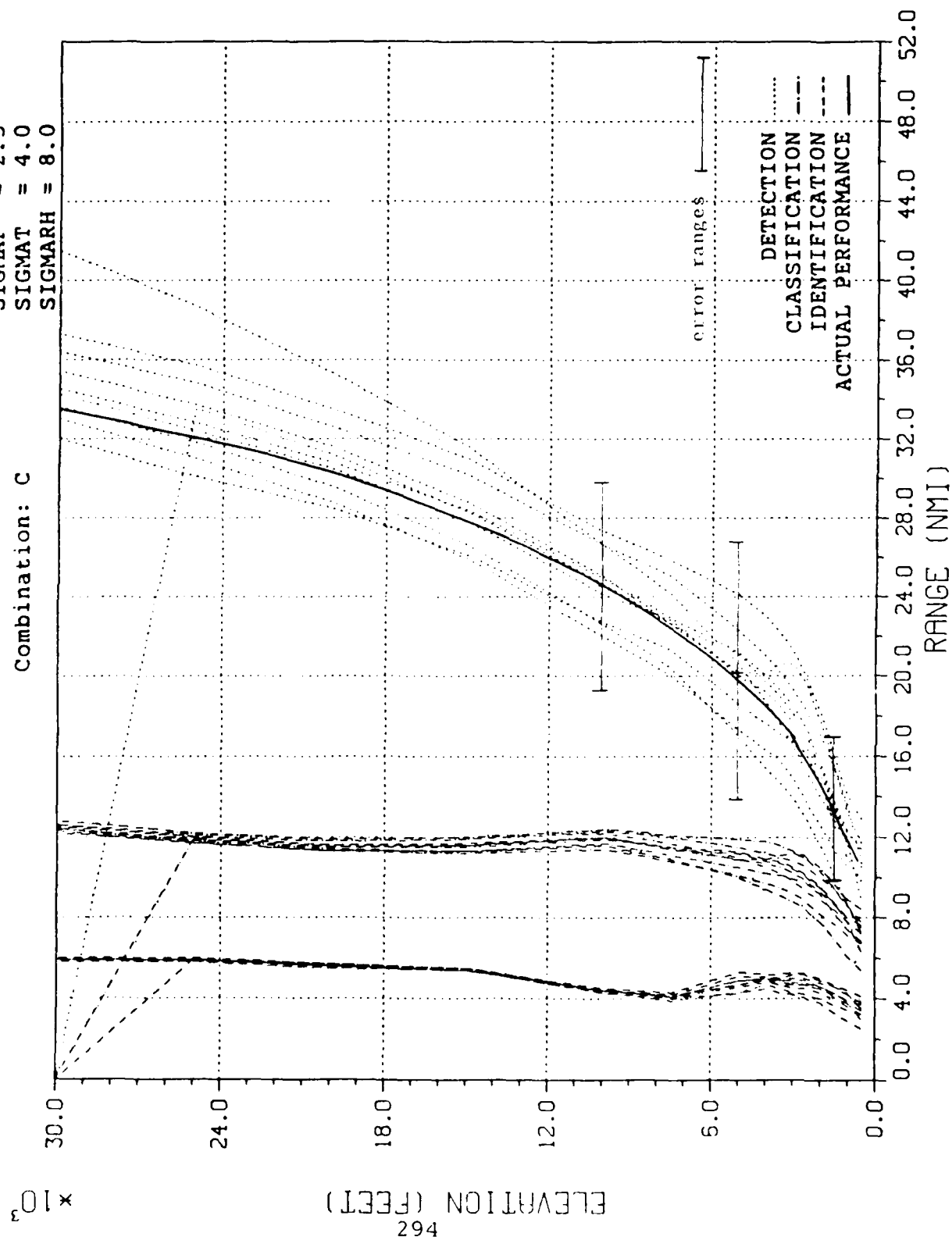
TARGET NUMBER 2



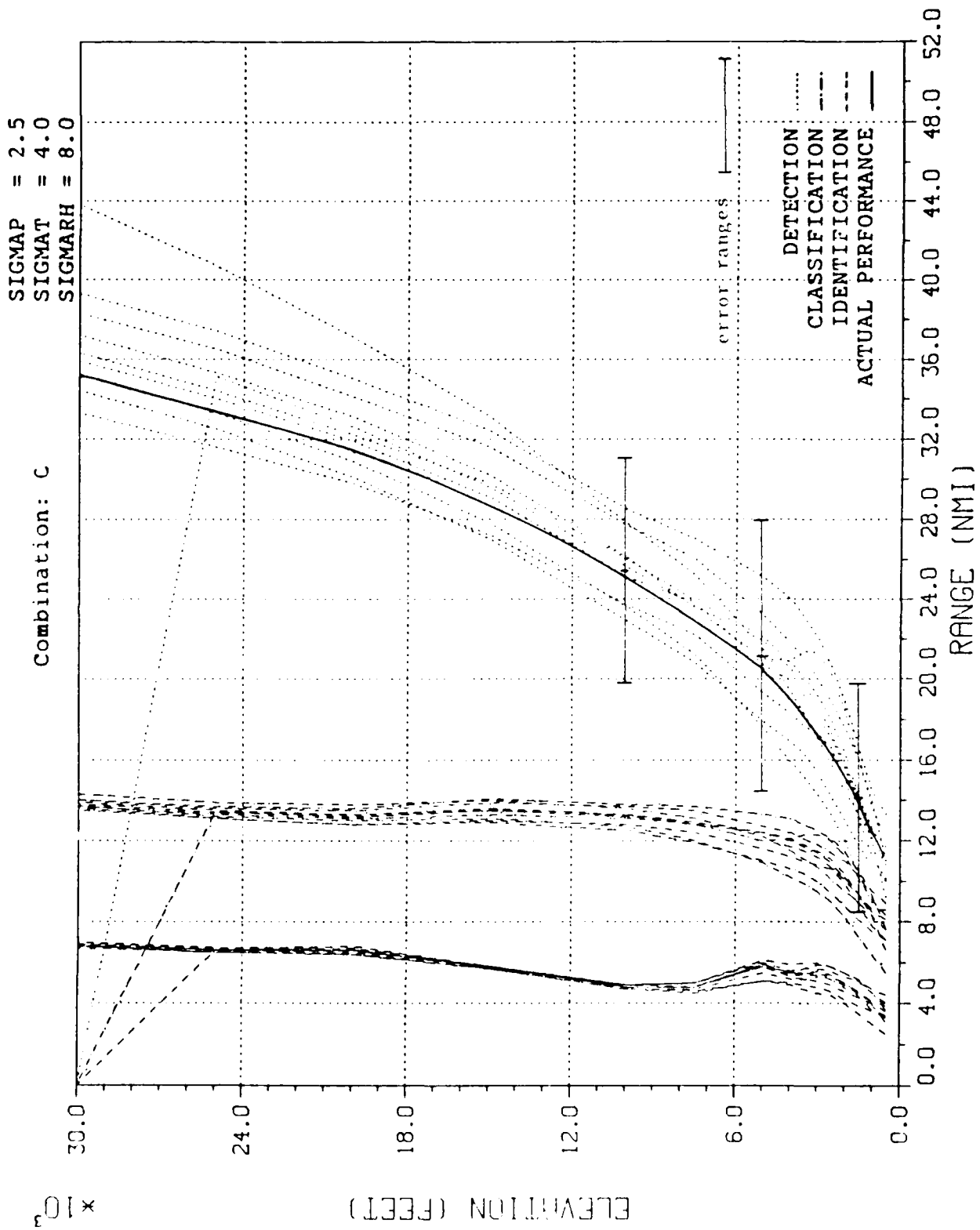
TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

Combination: C



TARGET NUMBER 4

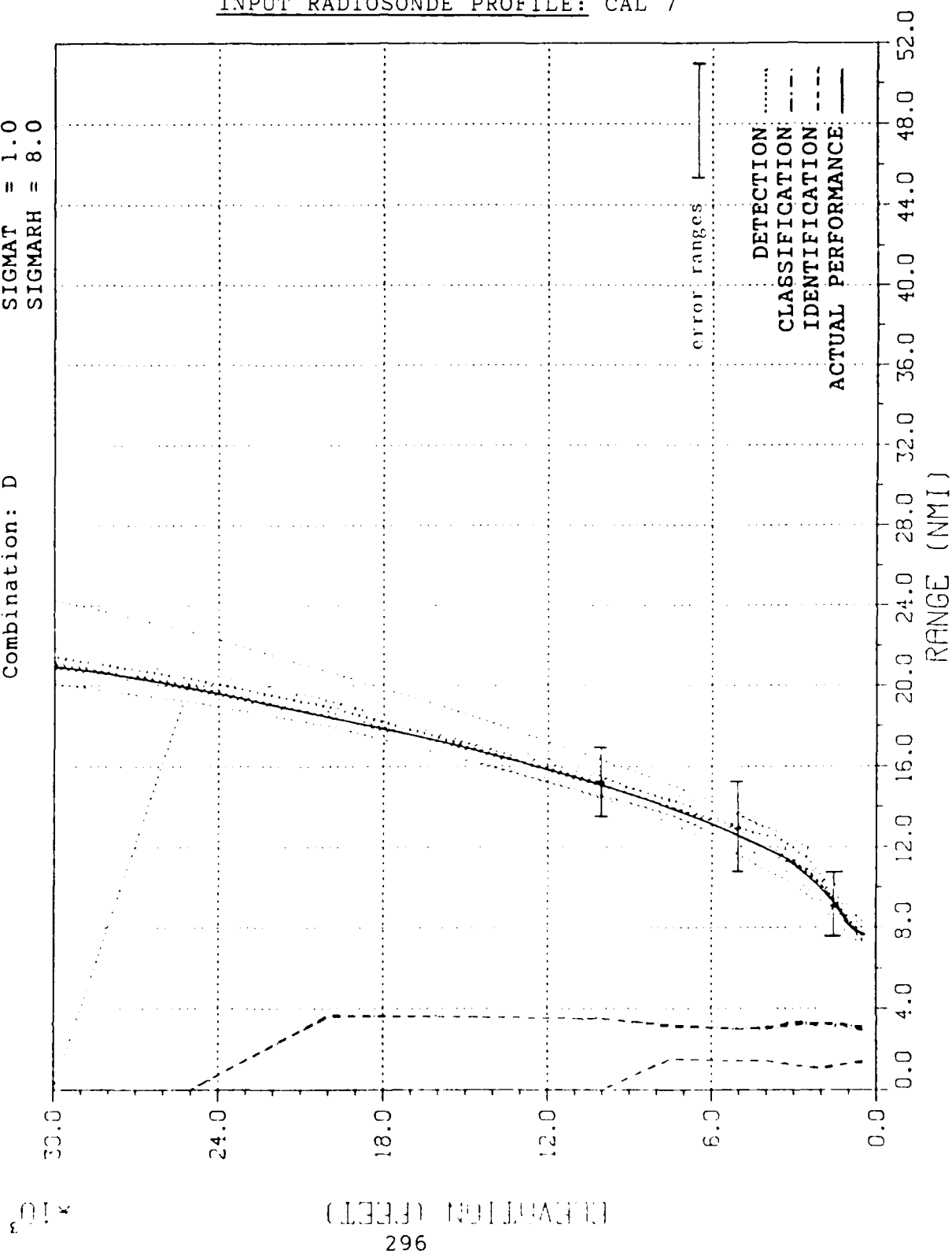


TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: D

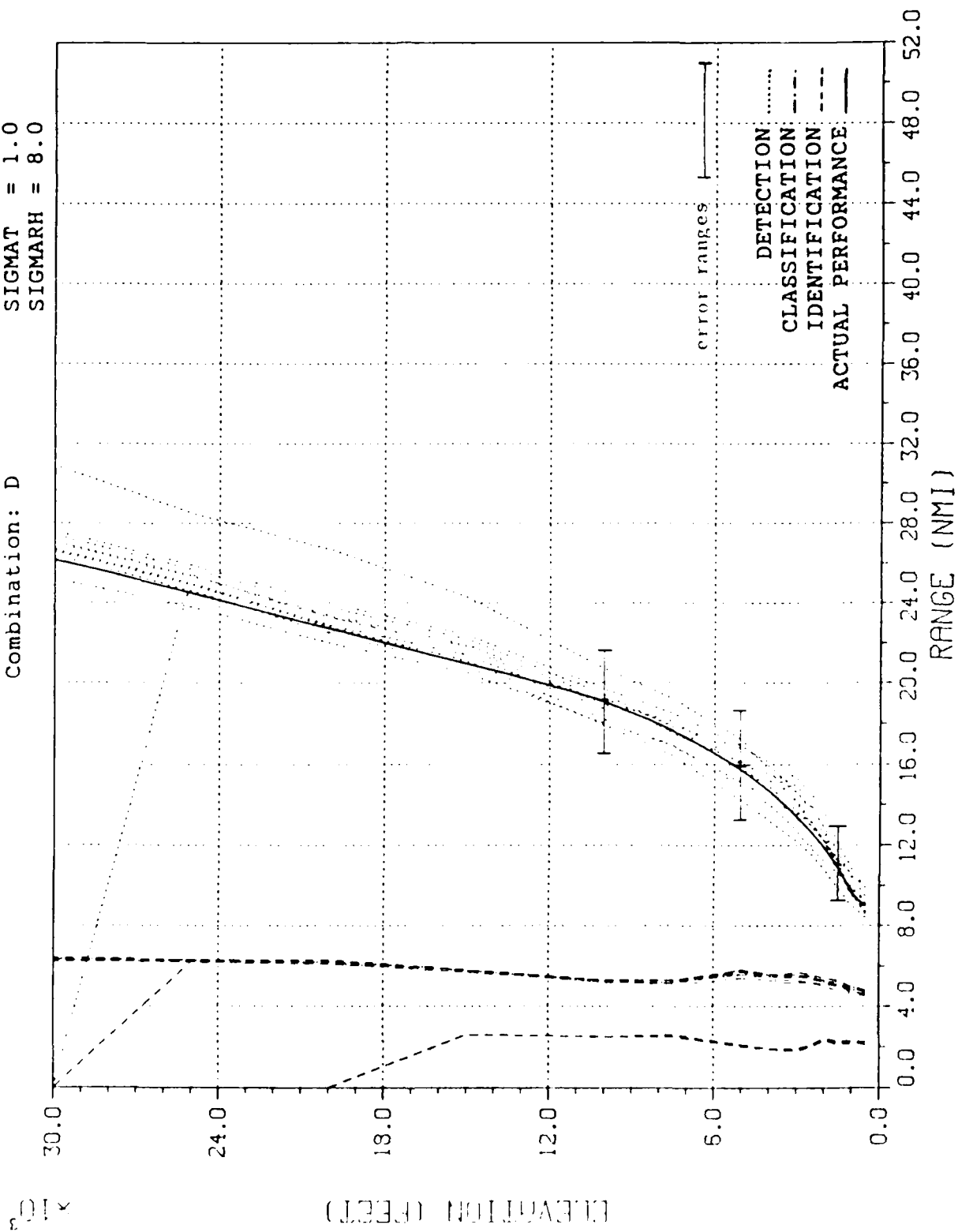
INPUT RADIOSONDE PROFILE: CAL 7



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

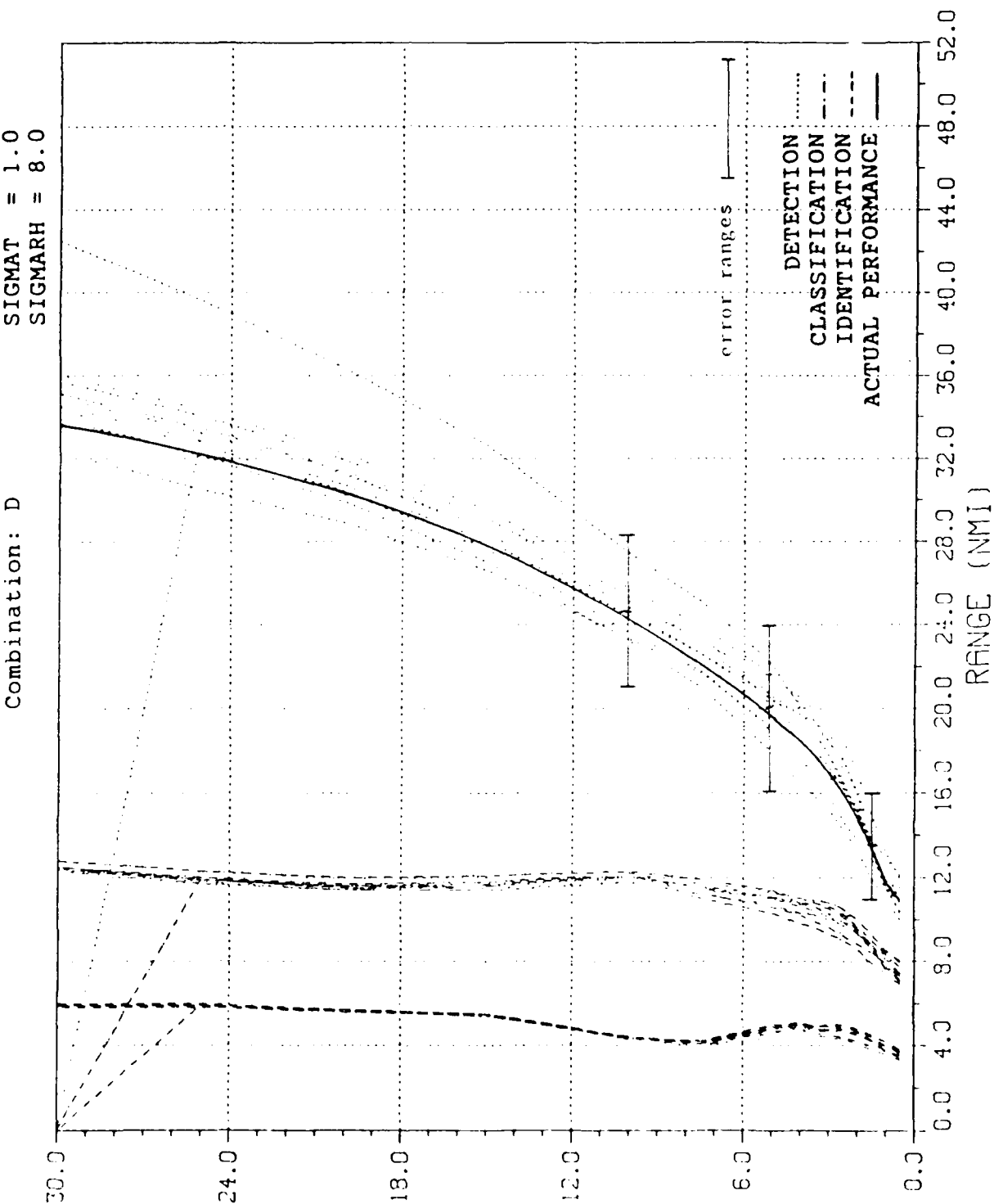
Combination: D



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: D

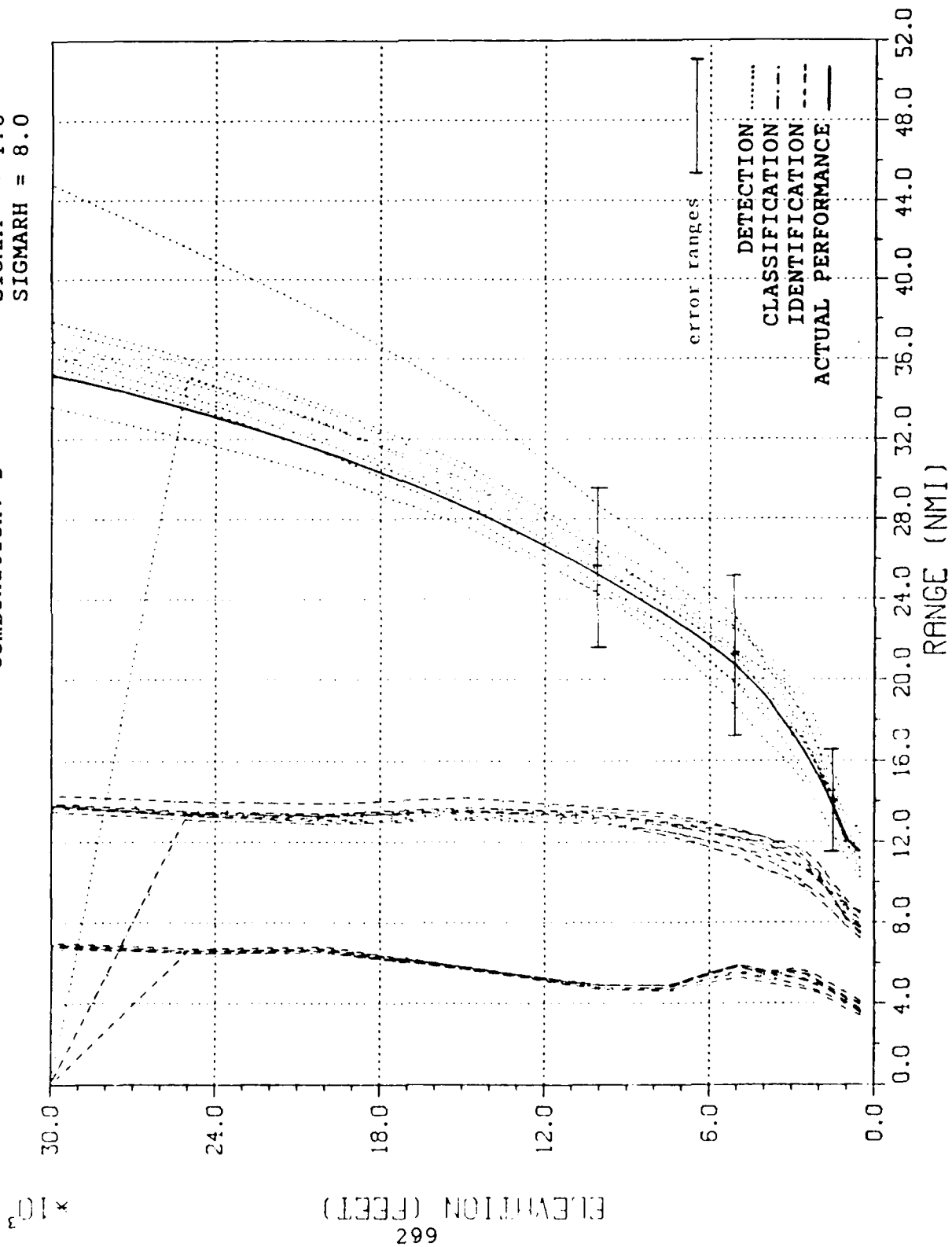


CLASSIFICATION

TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

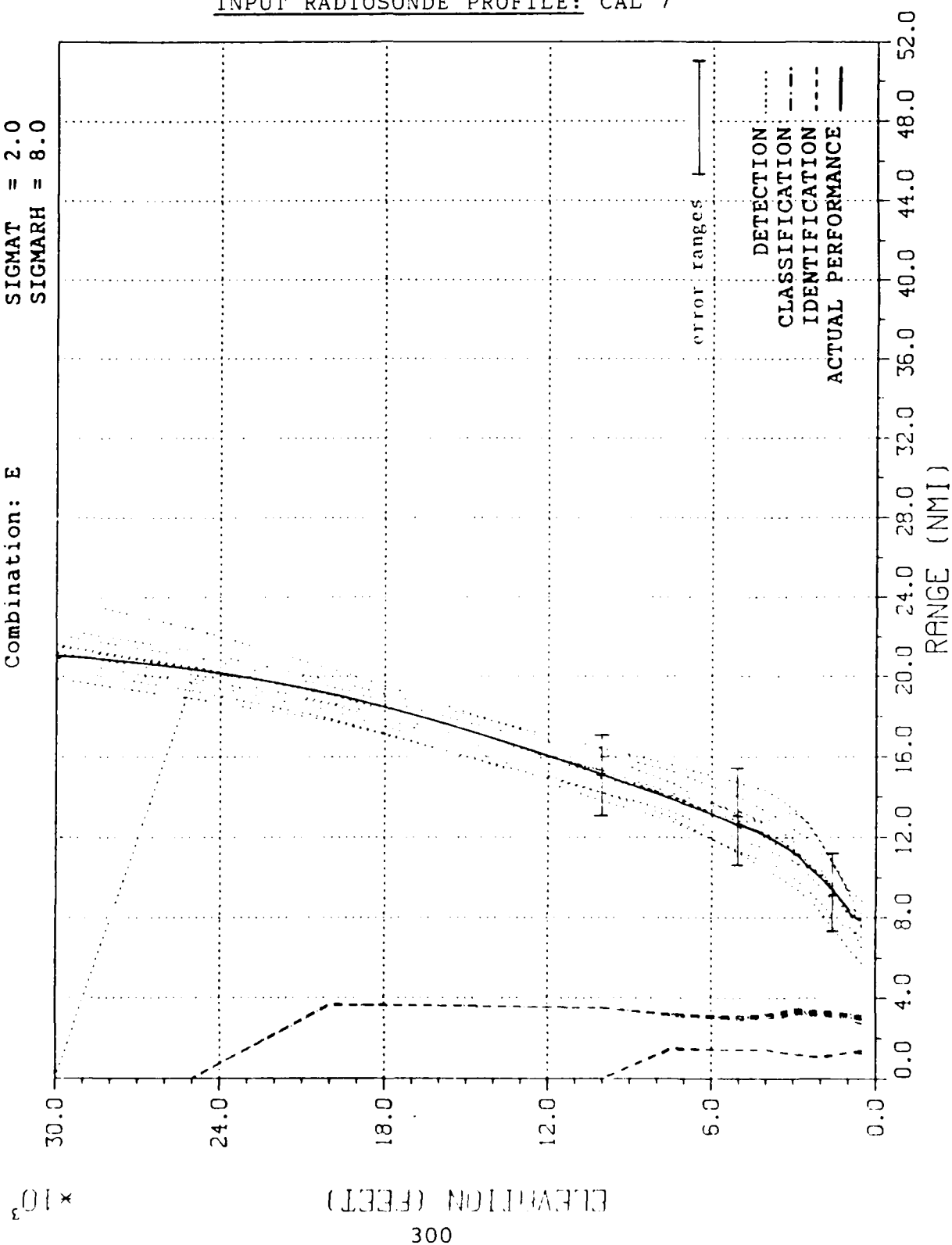
Combination: D



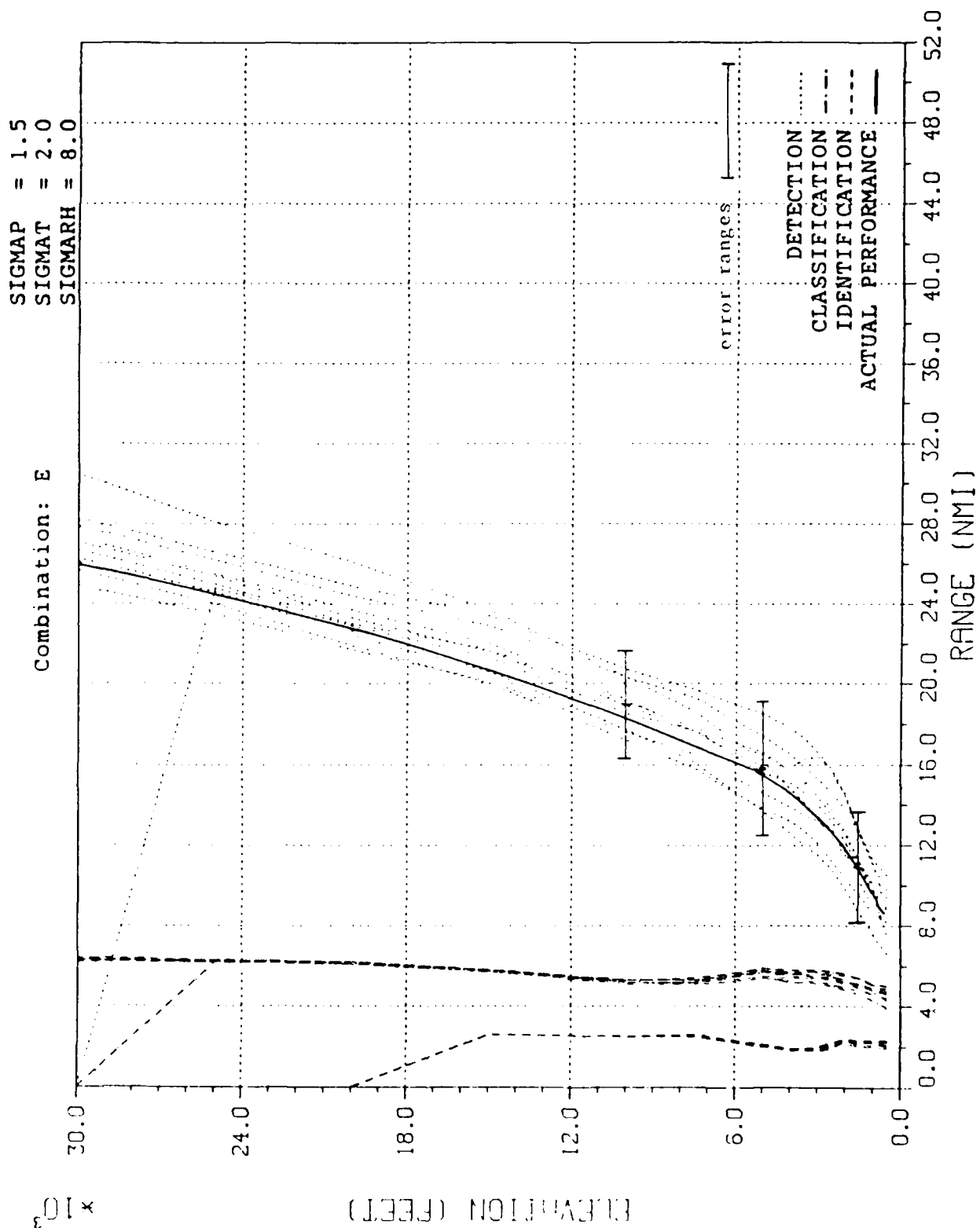
TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: E



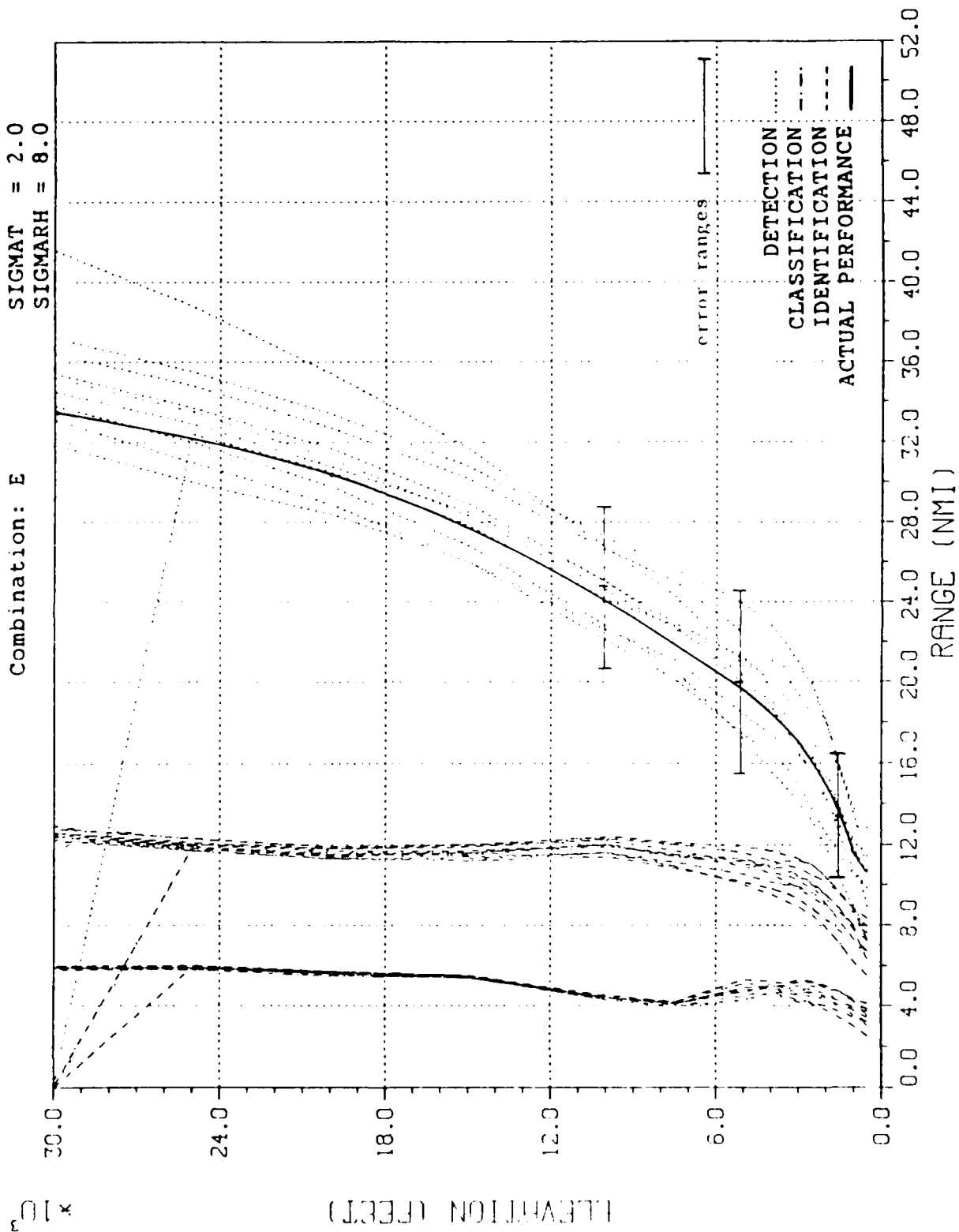
TARGET NUMBER 2



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

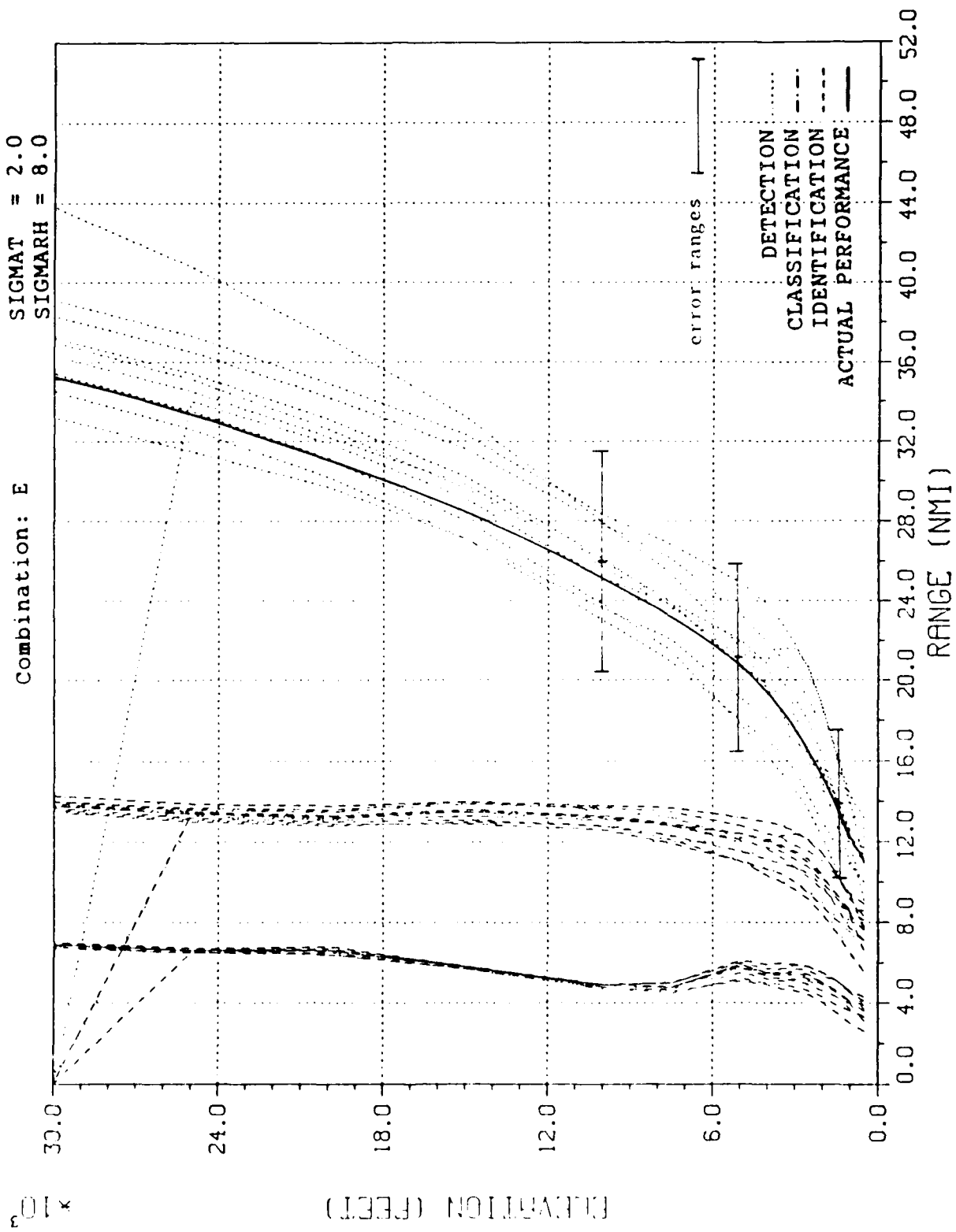
Combination: E



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

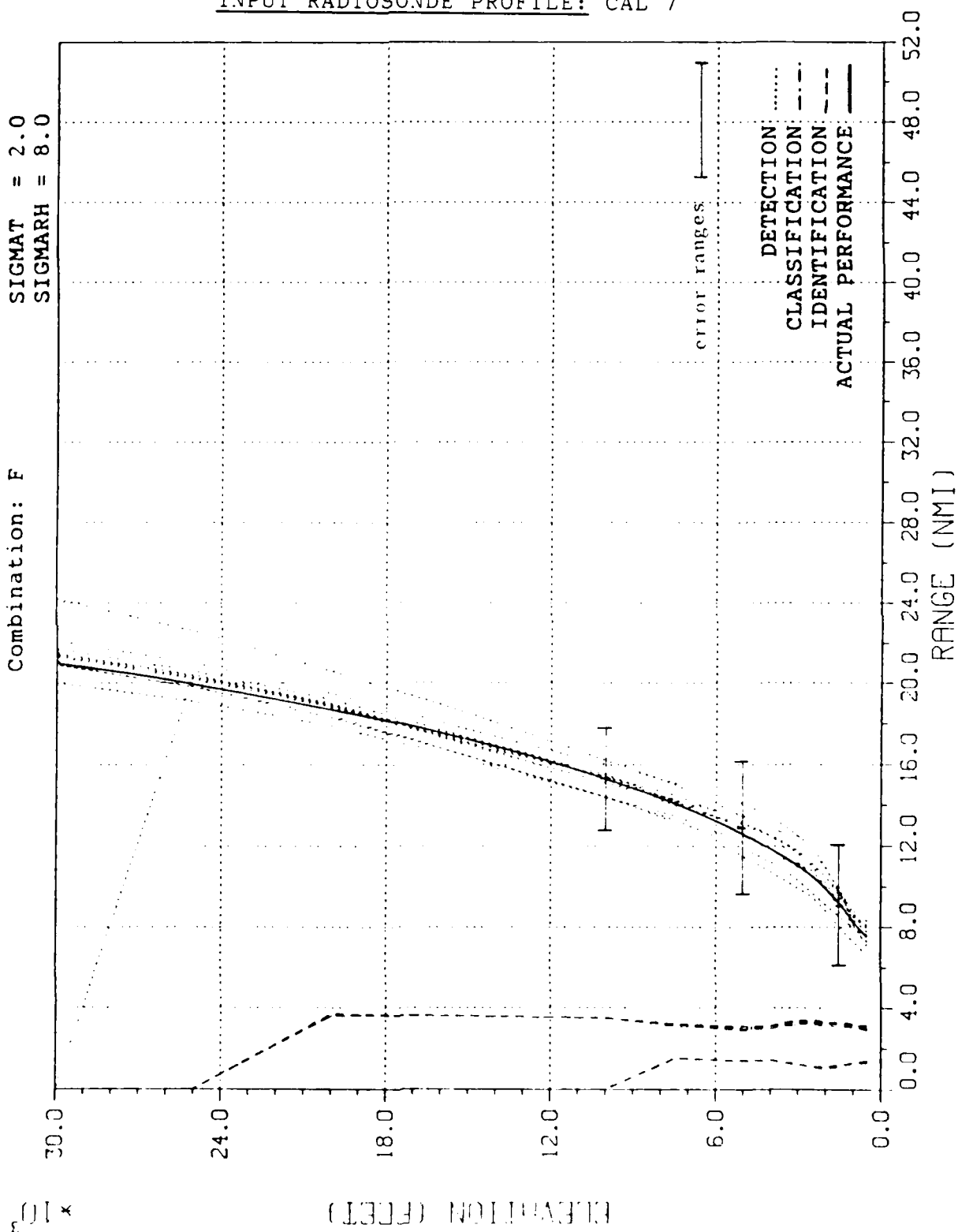
Combination: E



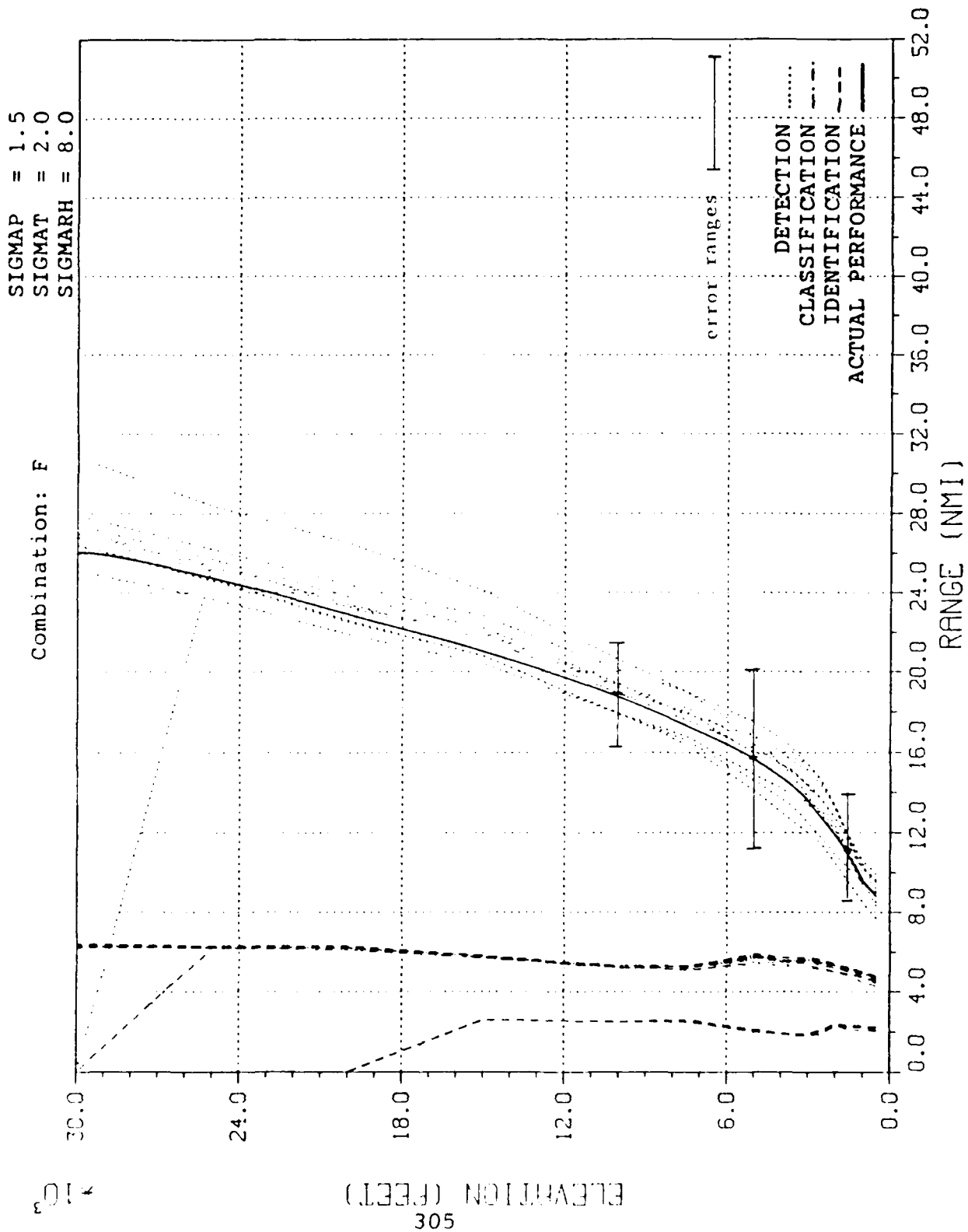
TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: F



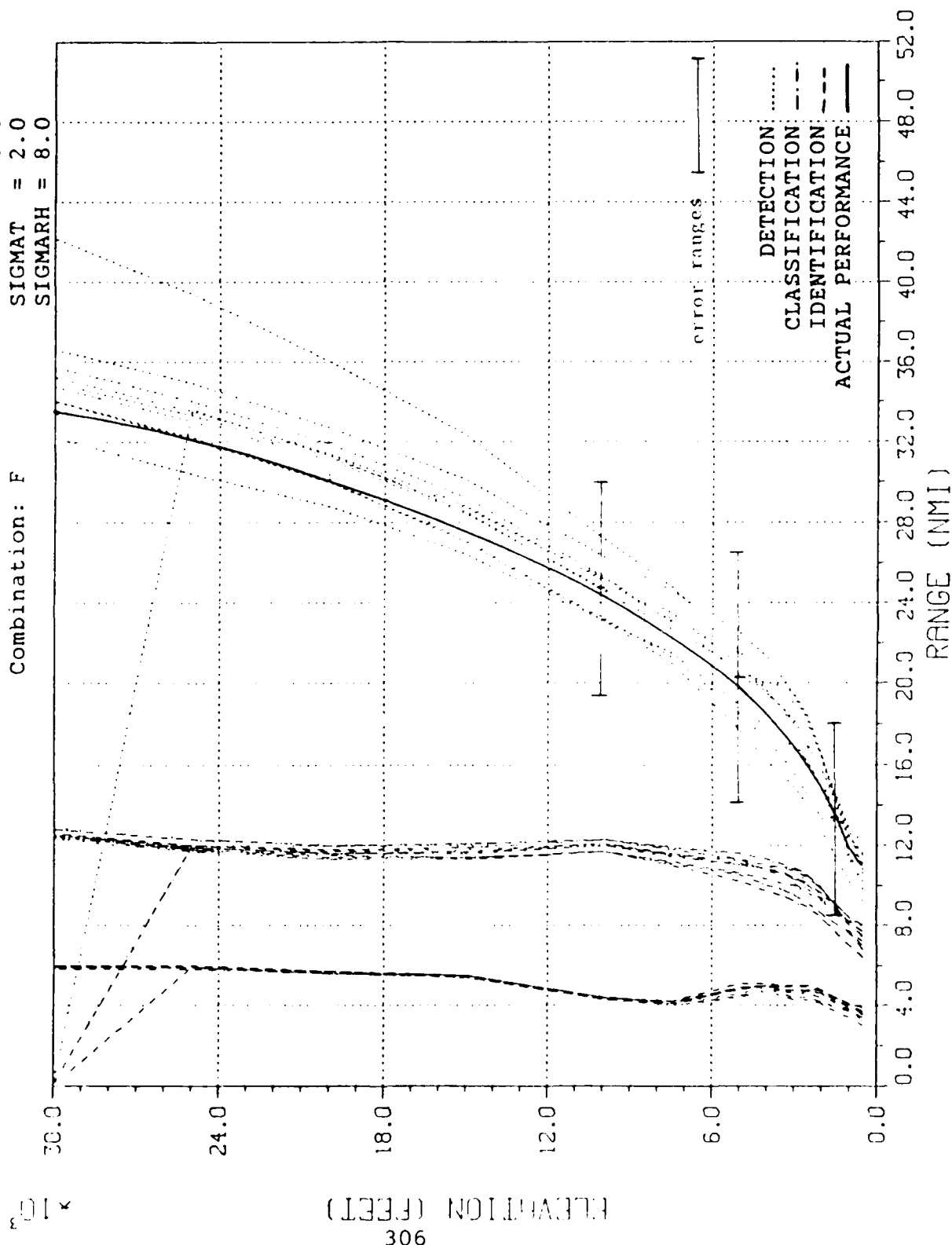
TARGET NUMBER 2



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

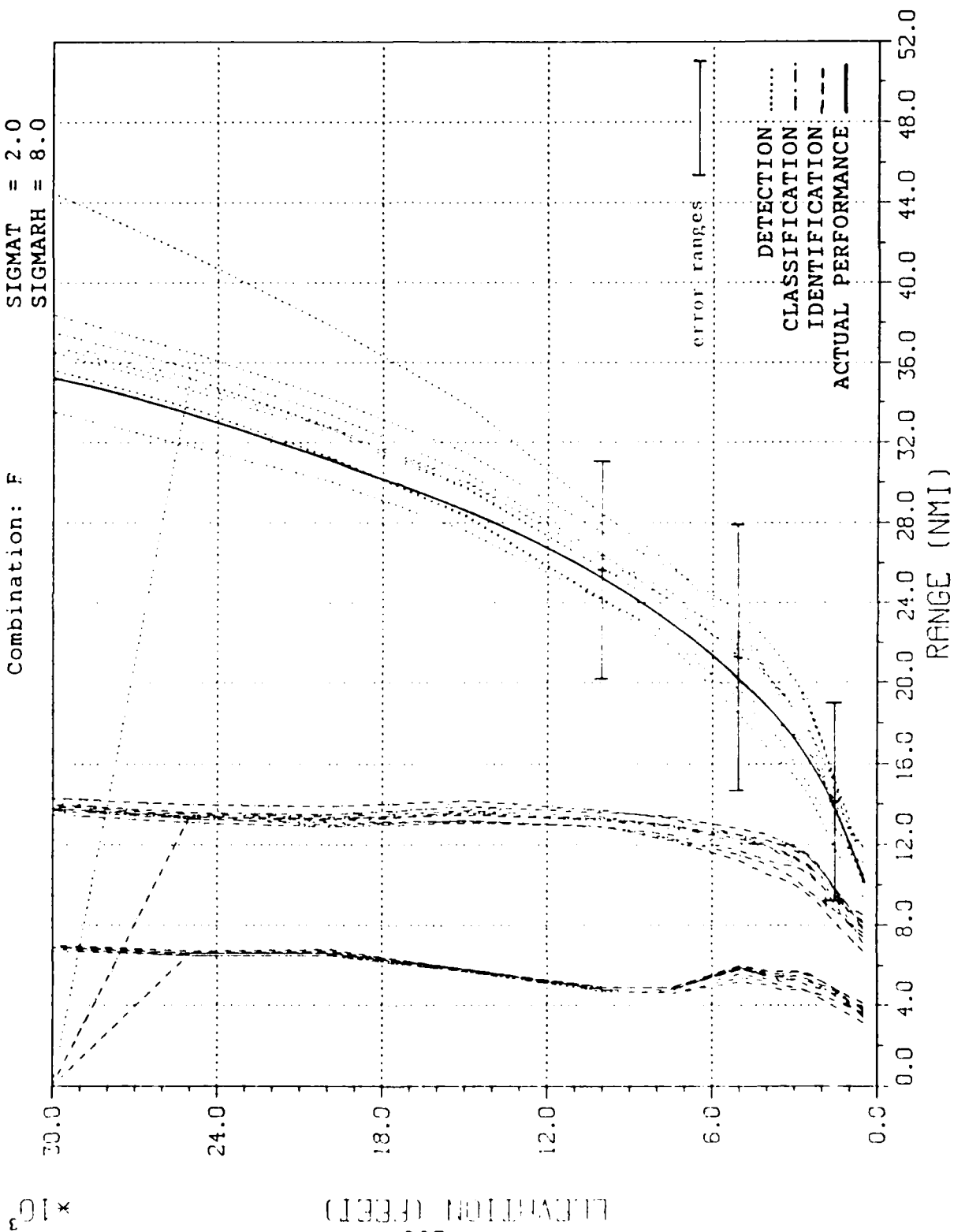
Combination: F



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

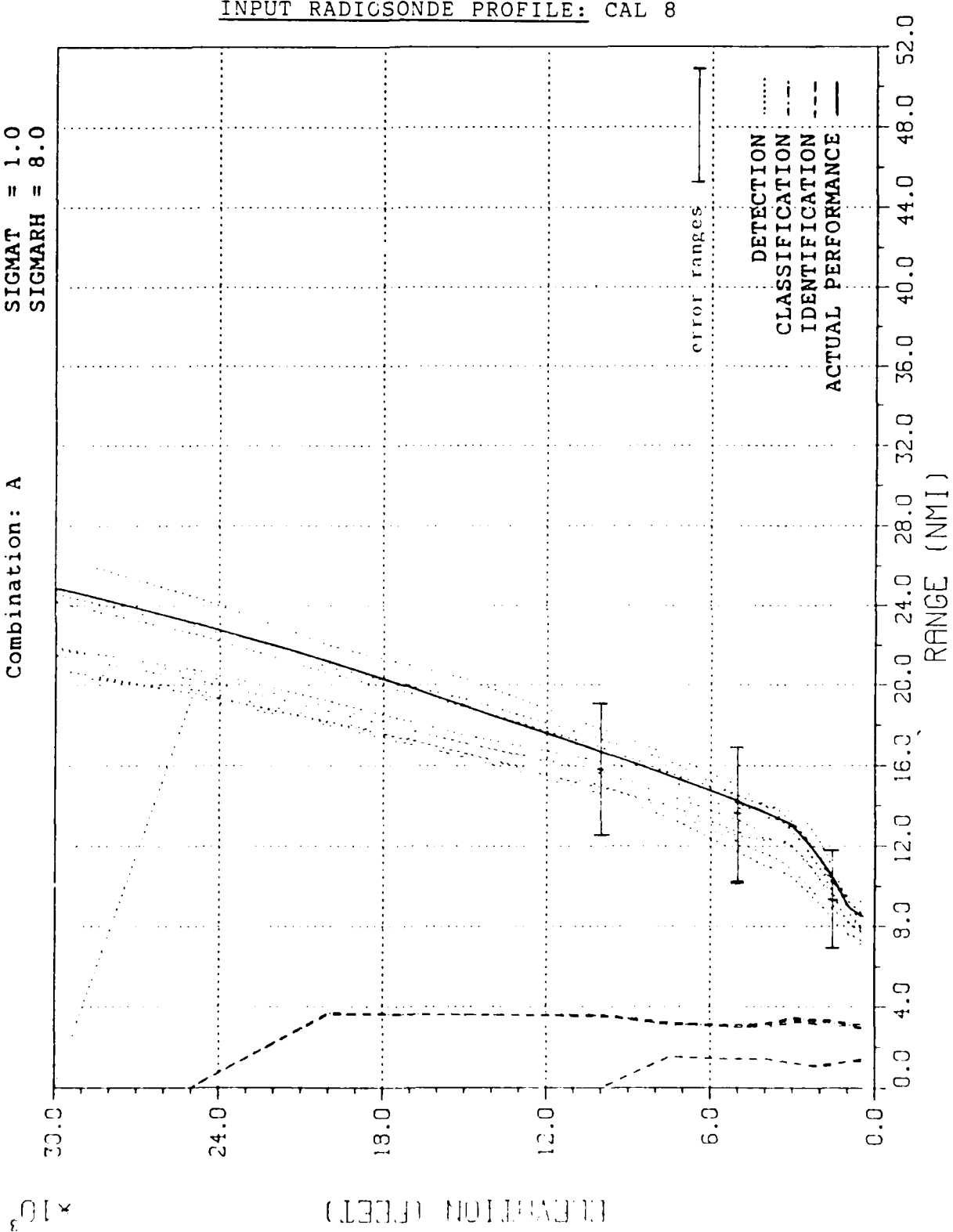
Combination: F



TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

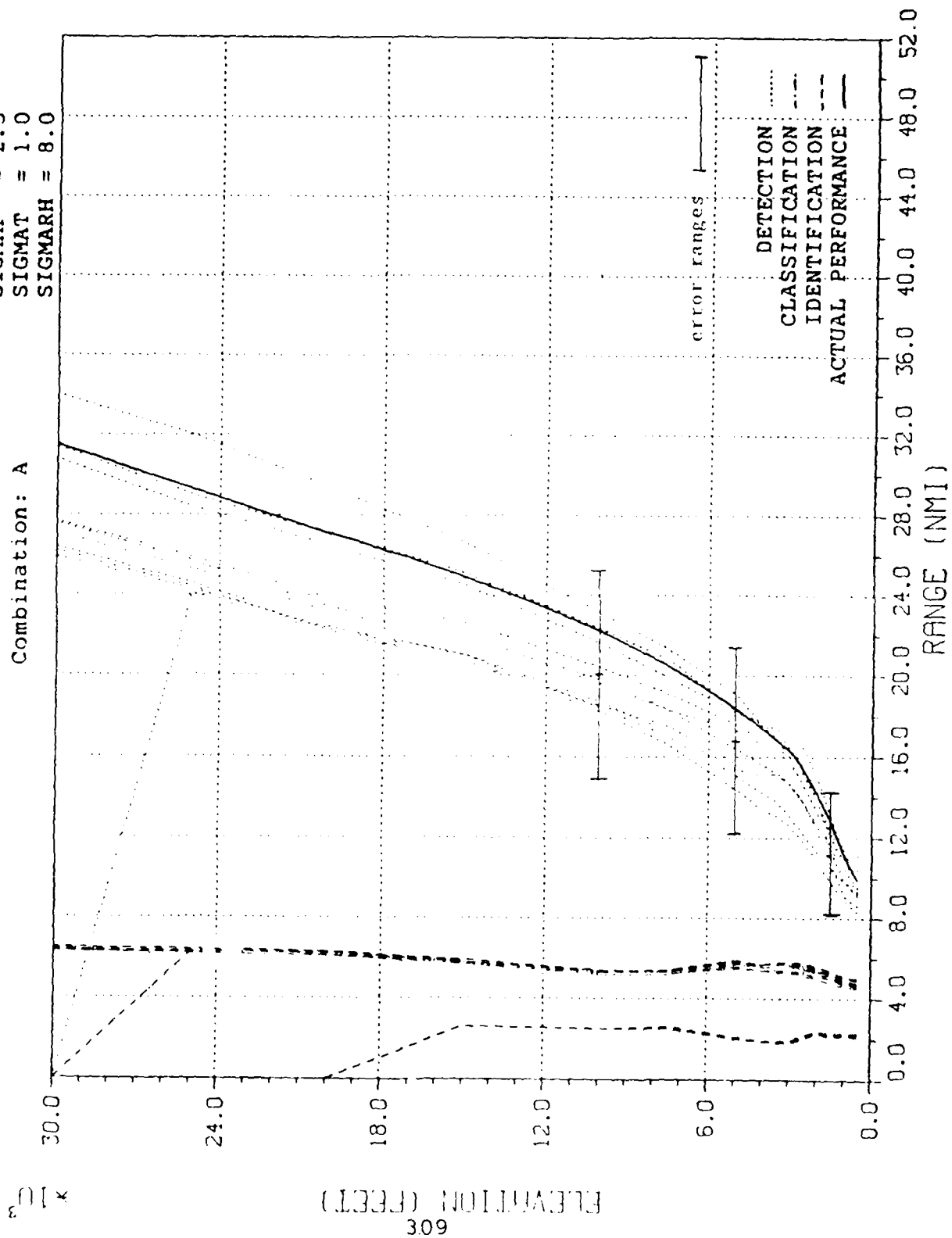
Combination: A



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

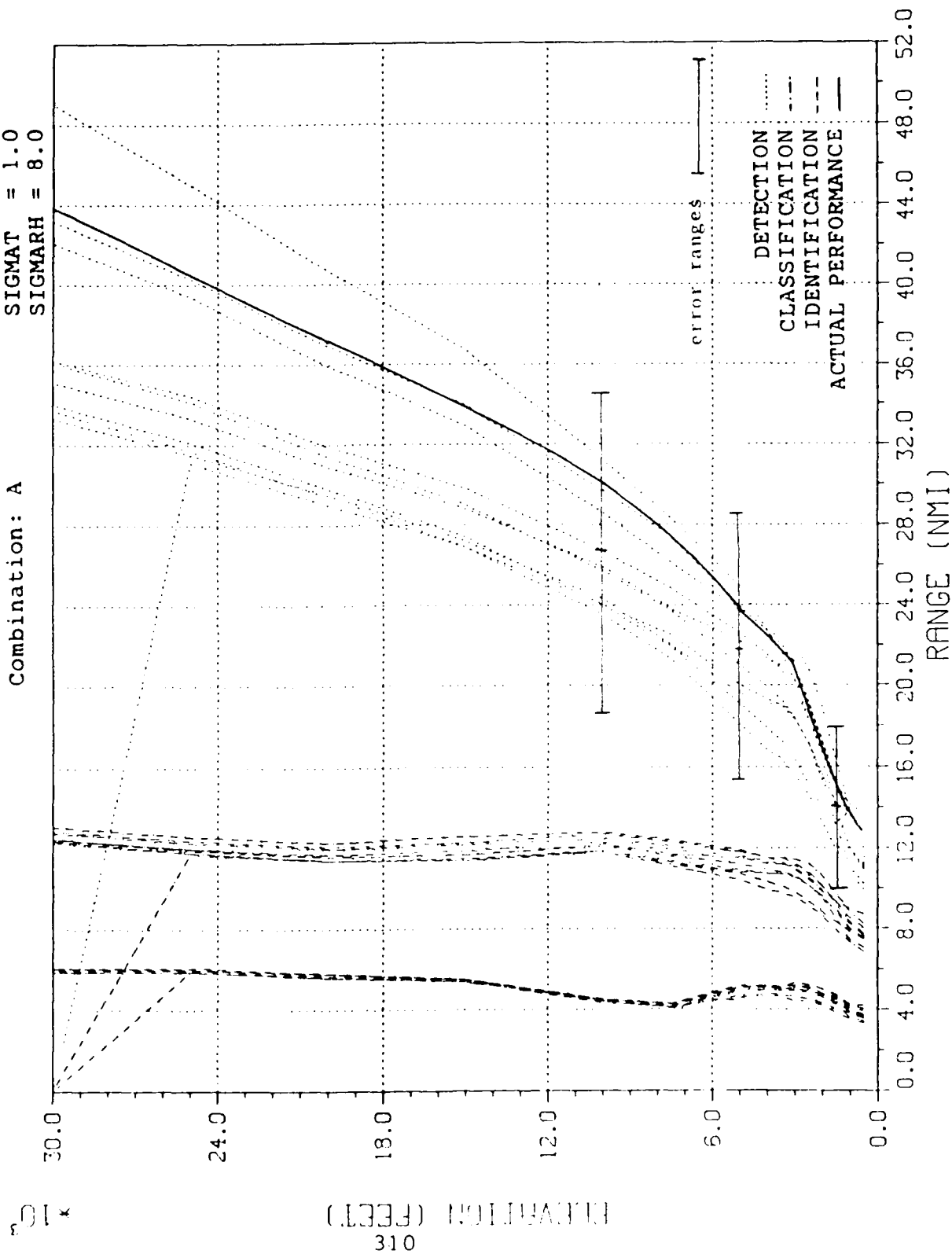
Combination: A



TARGET NUMBER 3

SIGMAP = 2.5
SIGMAT = 1.0
SIGMARH = 8.0

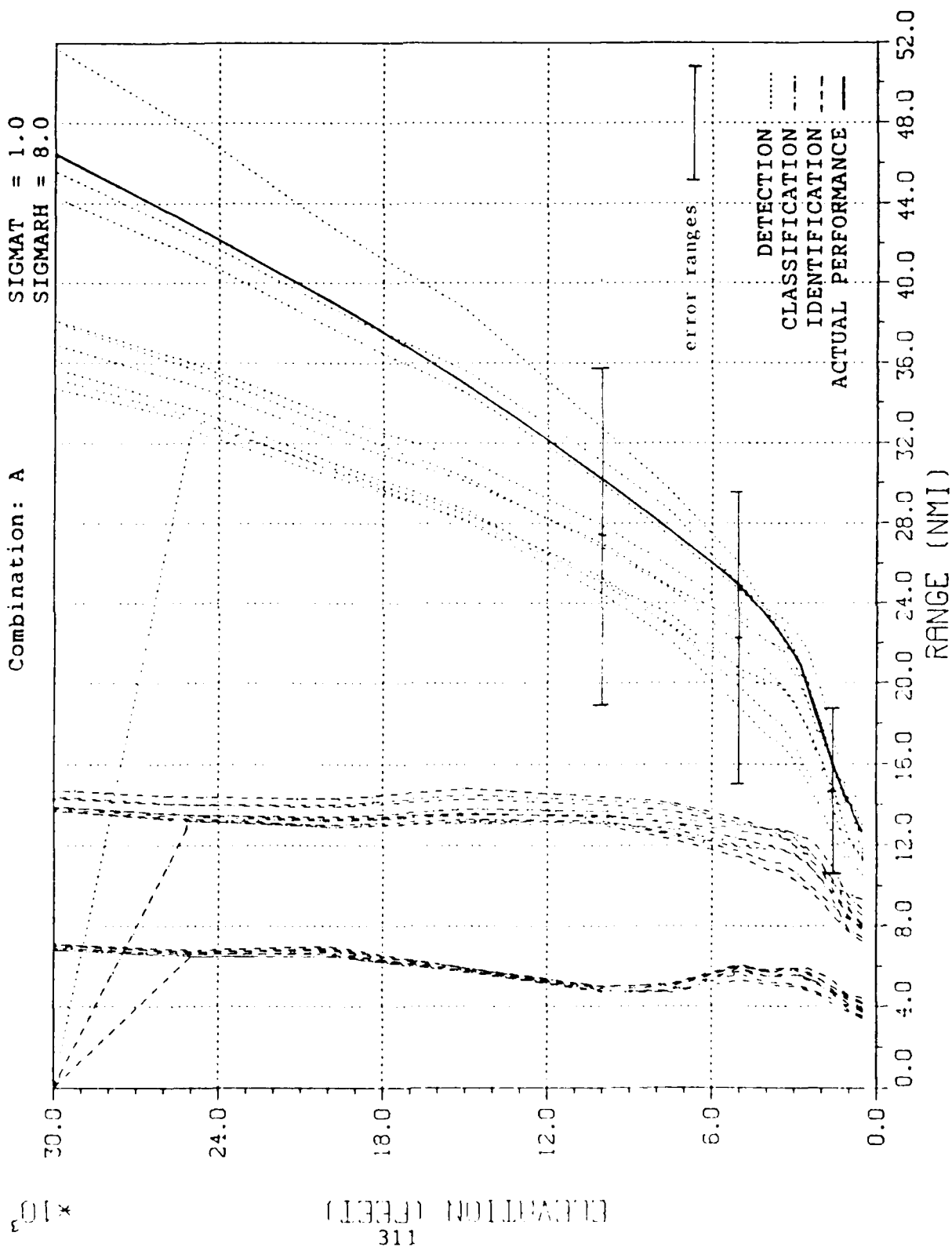
Combination: A



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: A

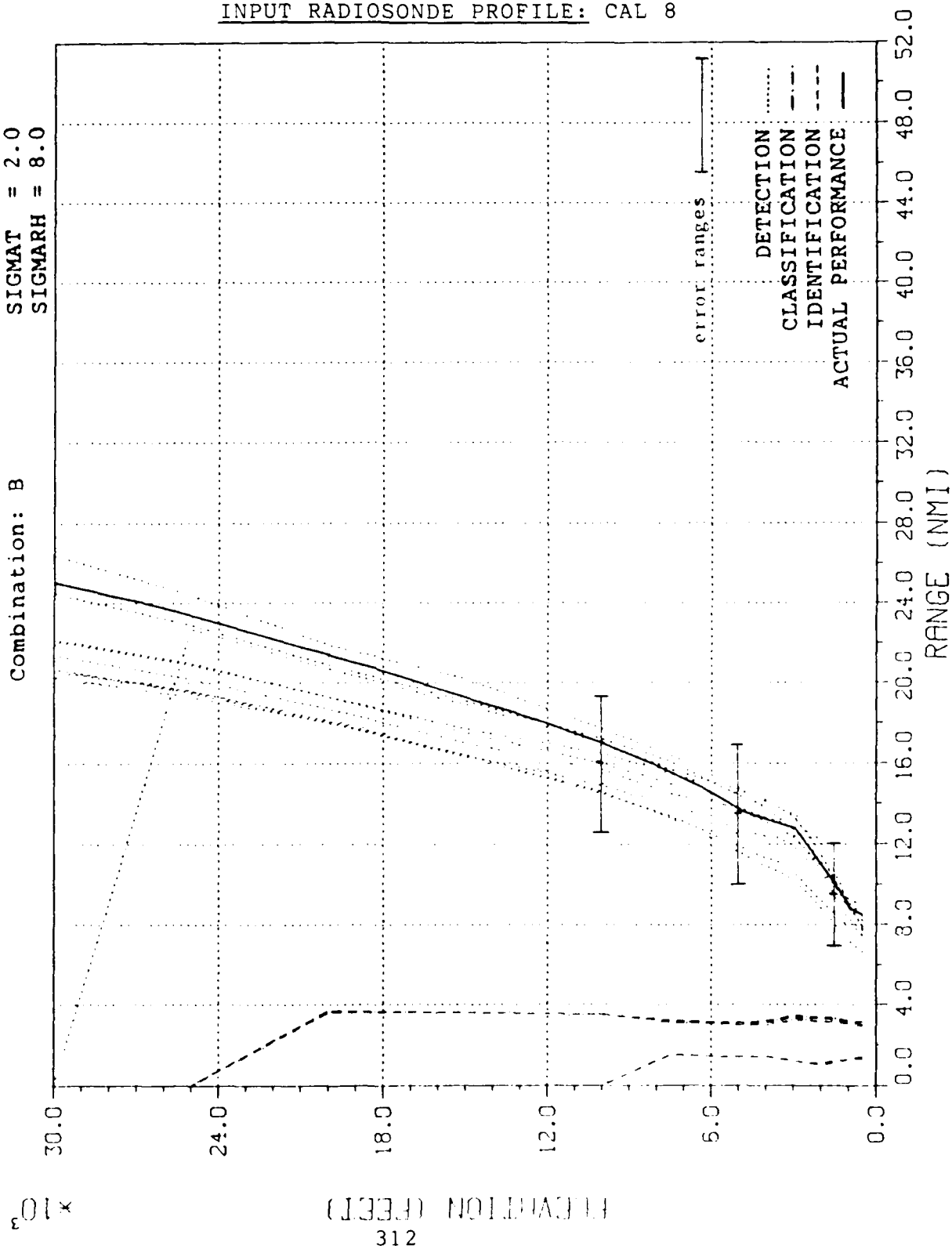


TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: B

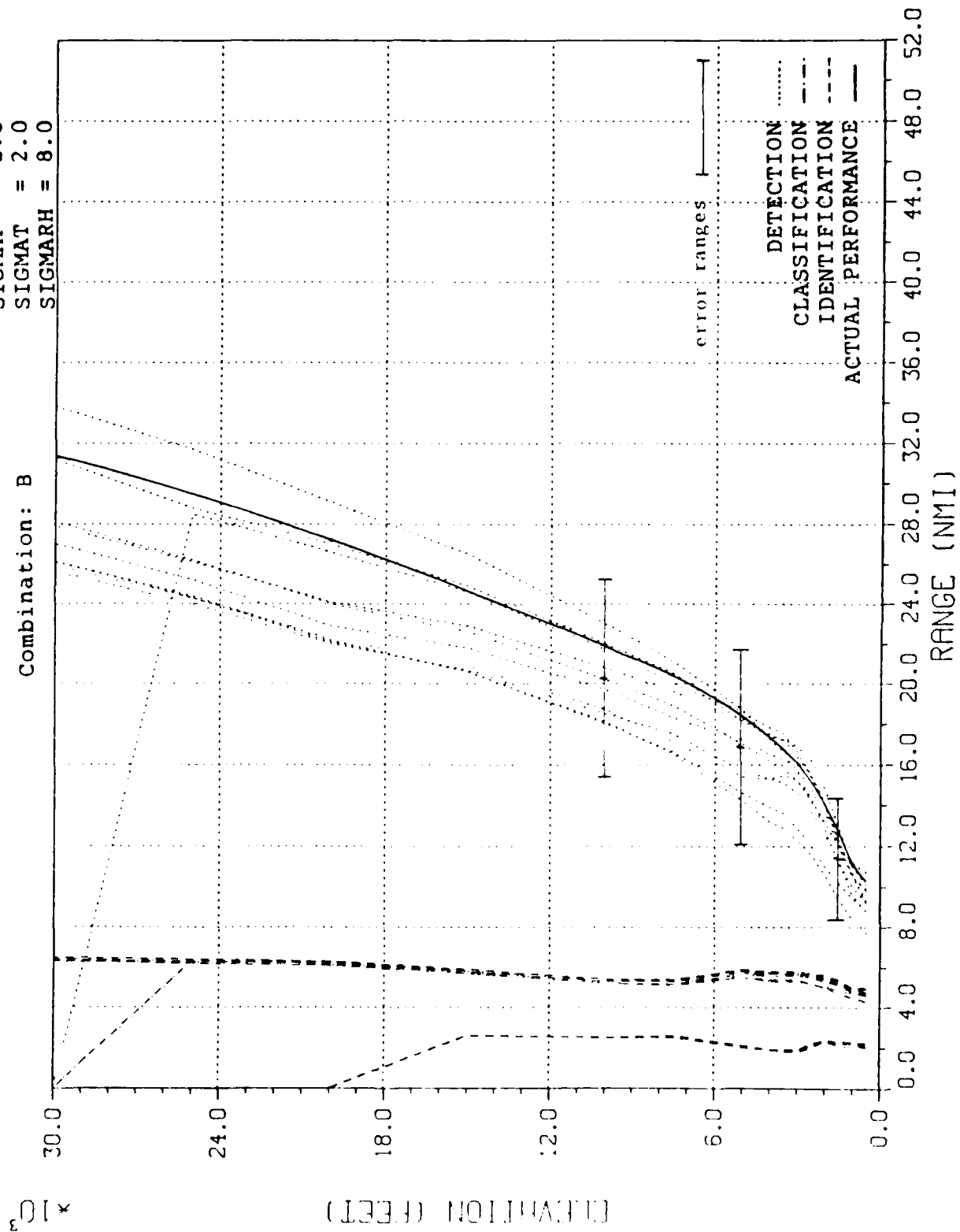
INPUT RADIOSONDE PROFILE: CAL 8



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

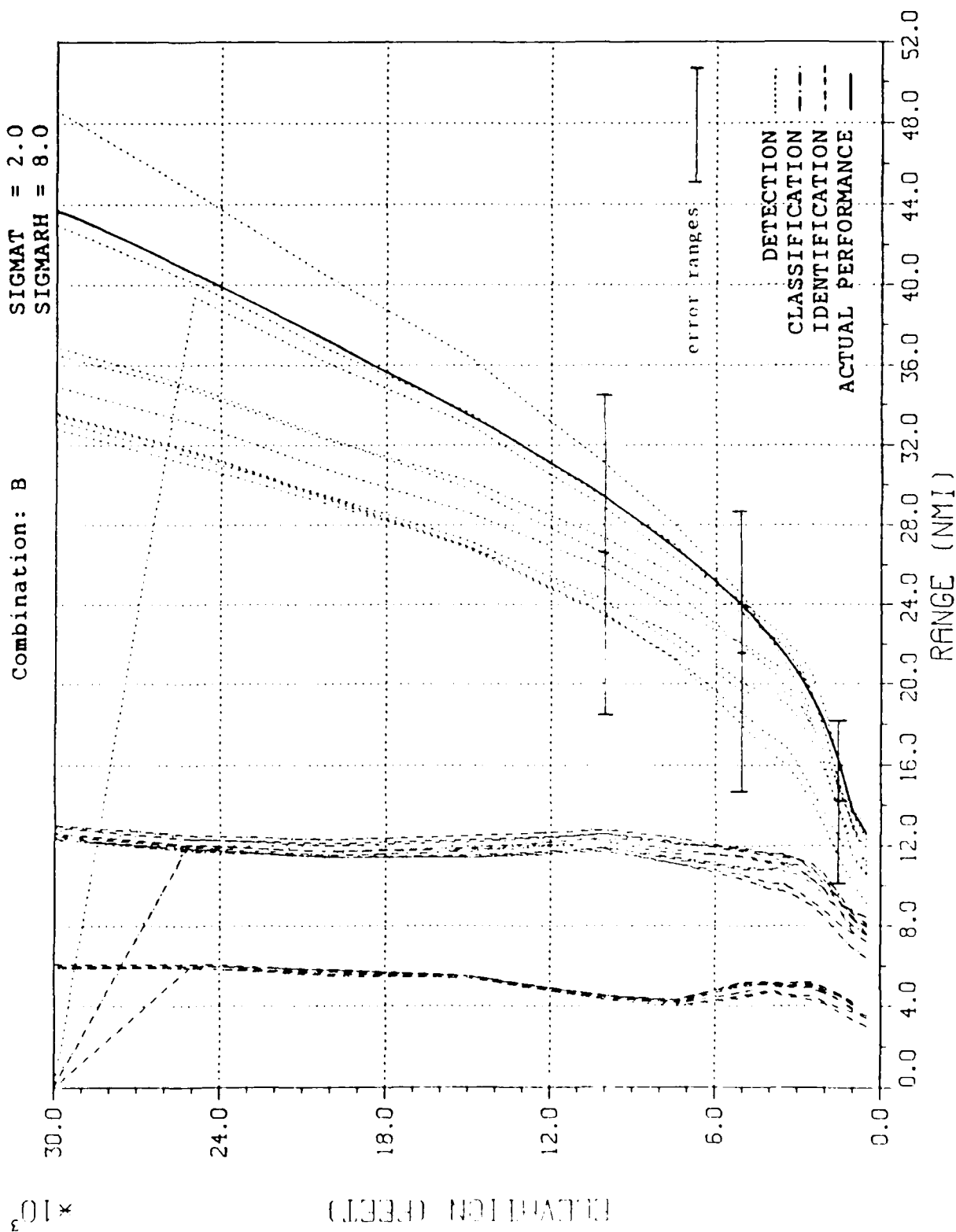
Combination: B



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

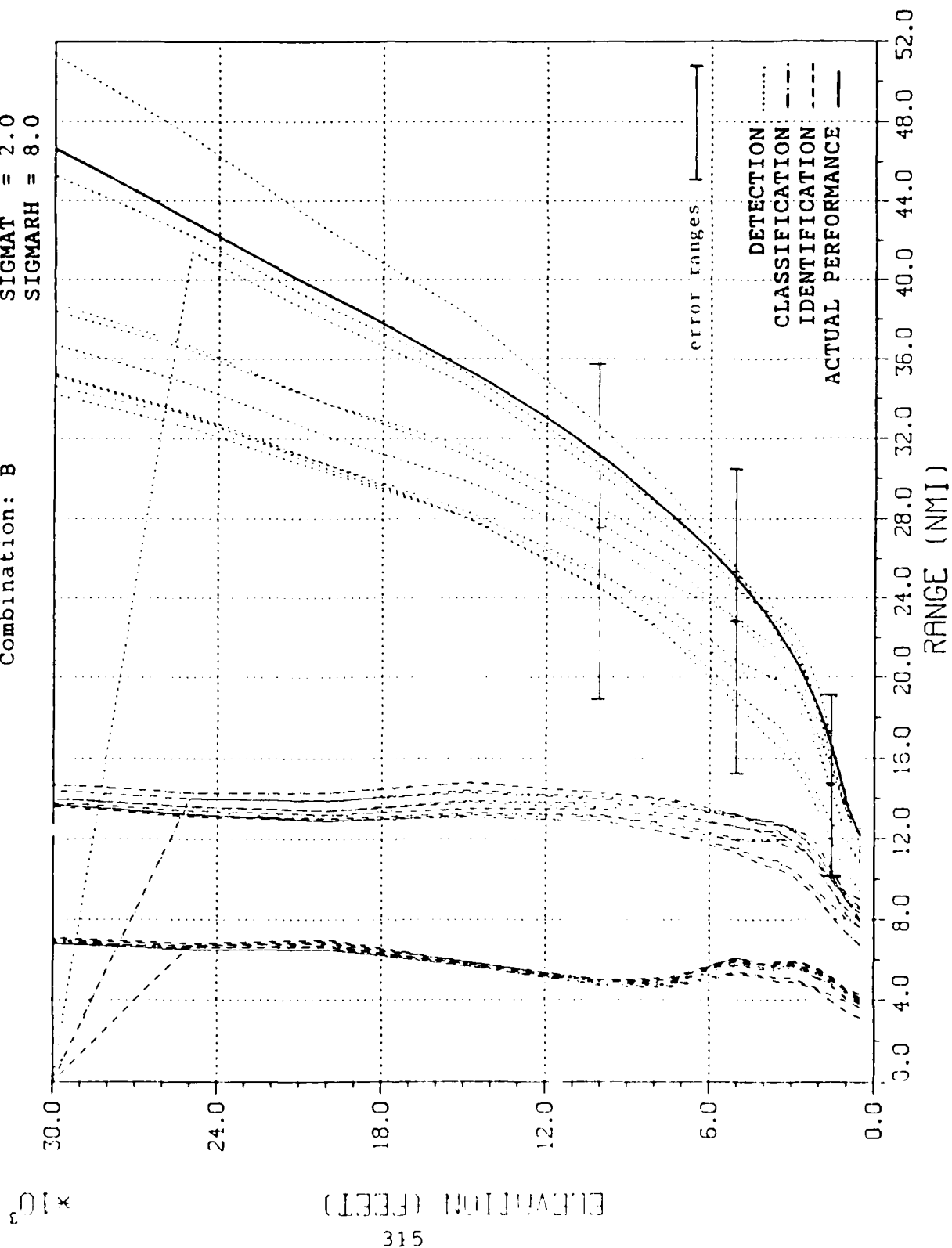
Combination: B



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: B

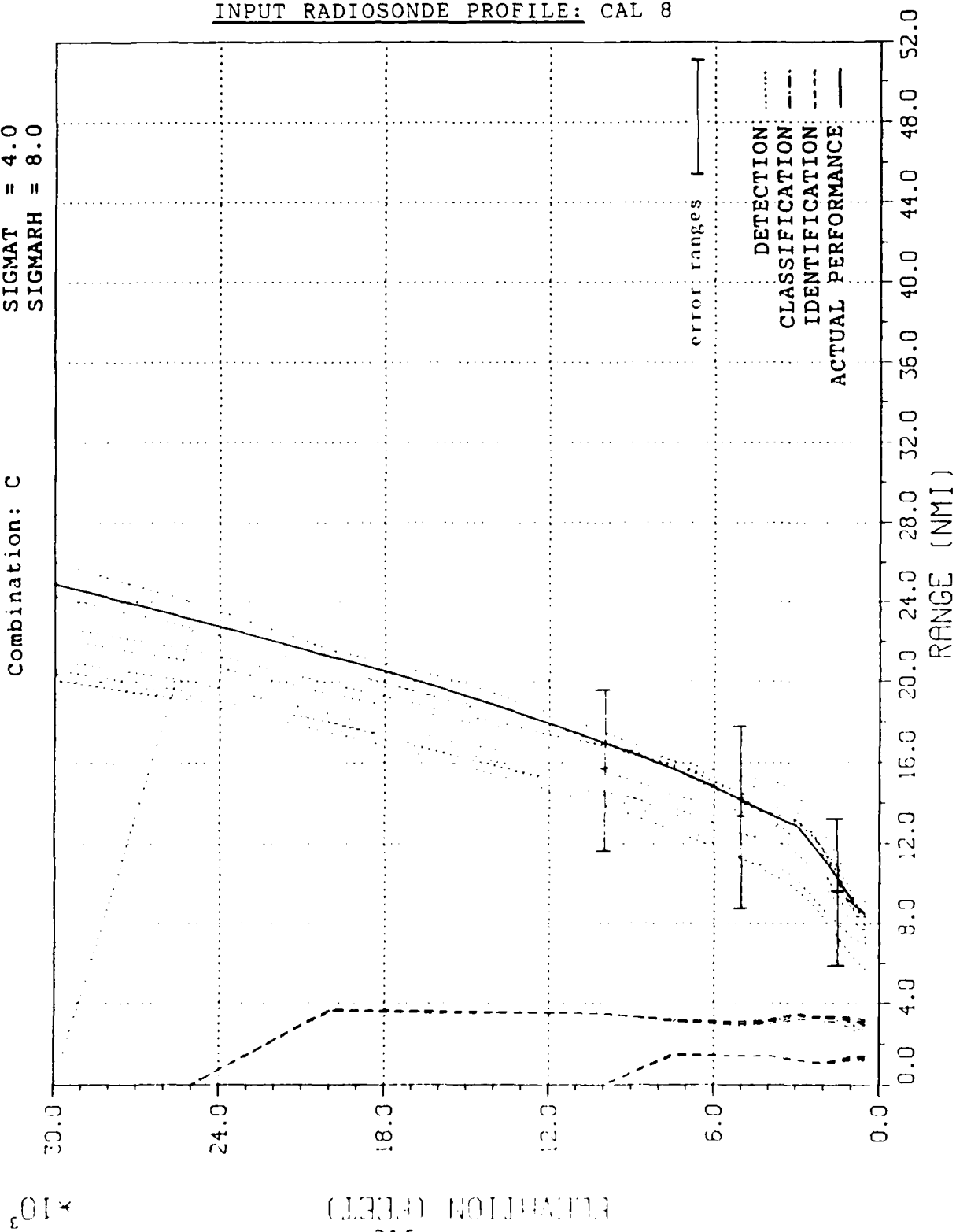


TARGET NUMBER 1

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

Combination: C

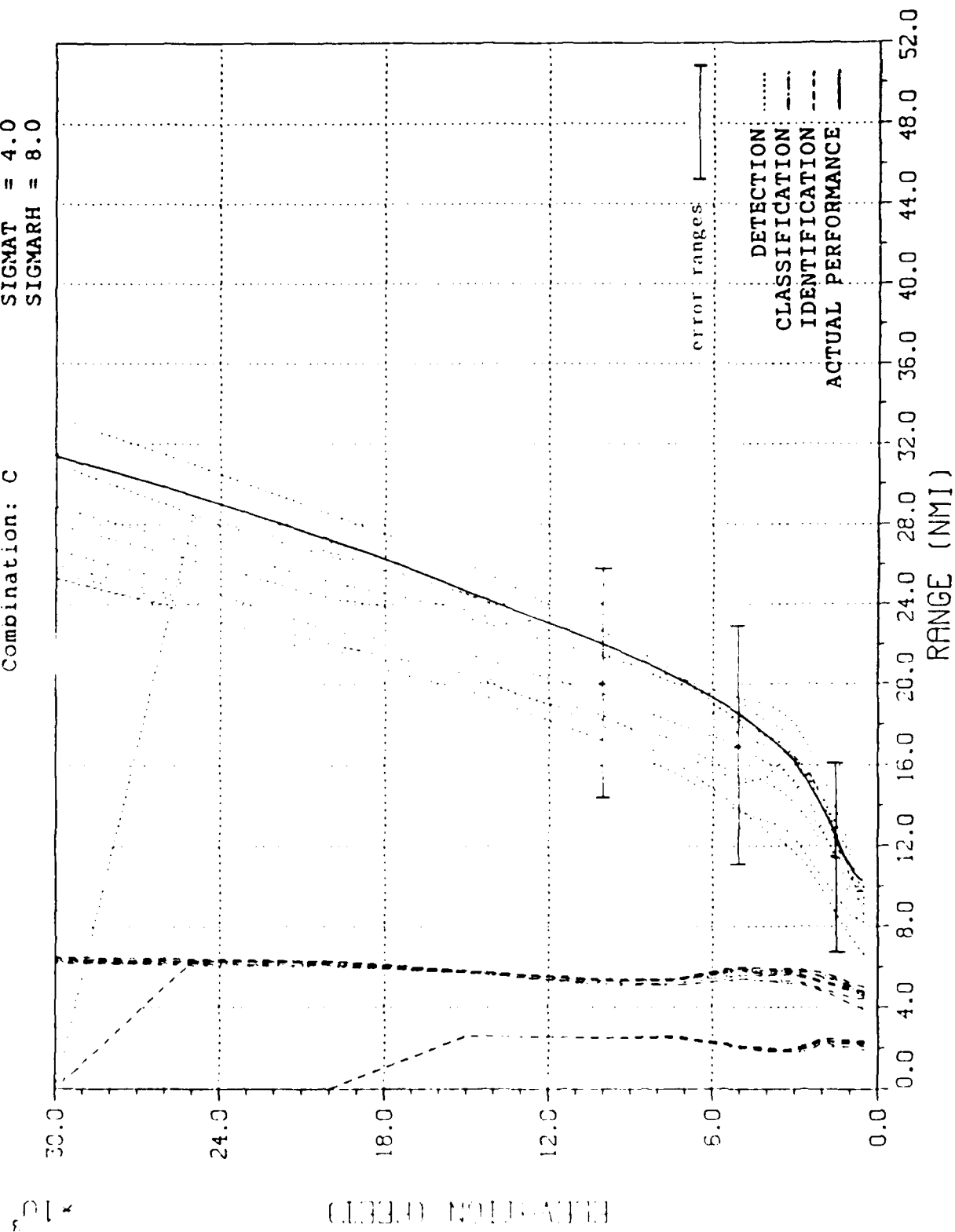
INPUT RADIOSONDE PROFILE: CAL 8



TARGET NUMBER 2

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

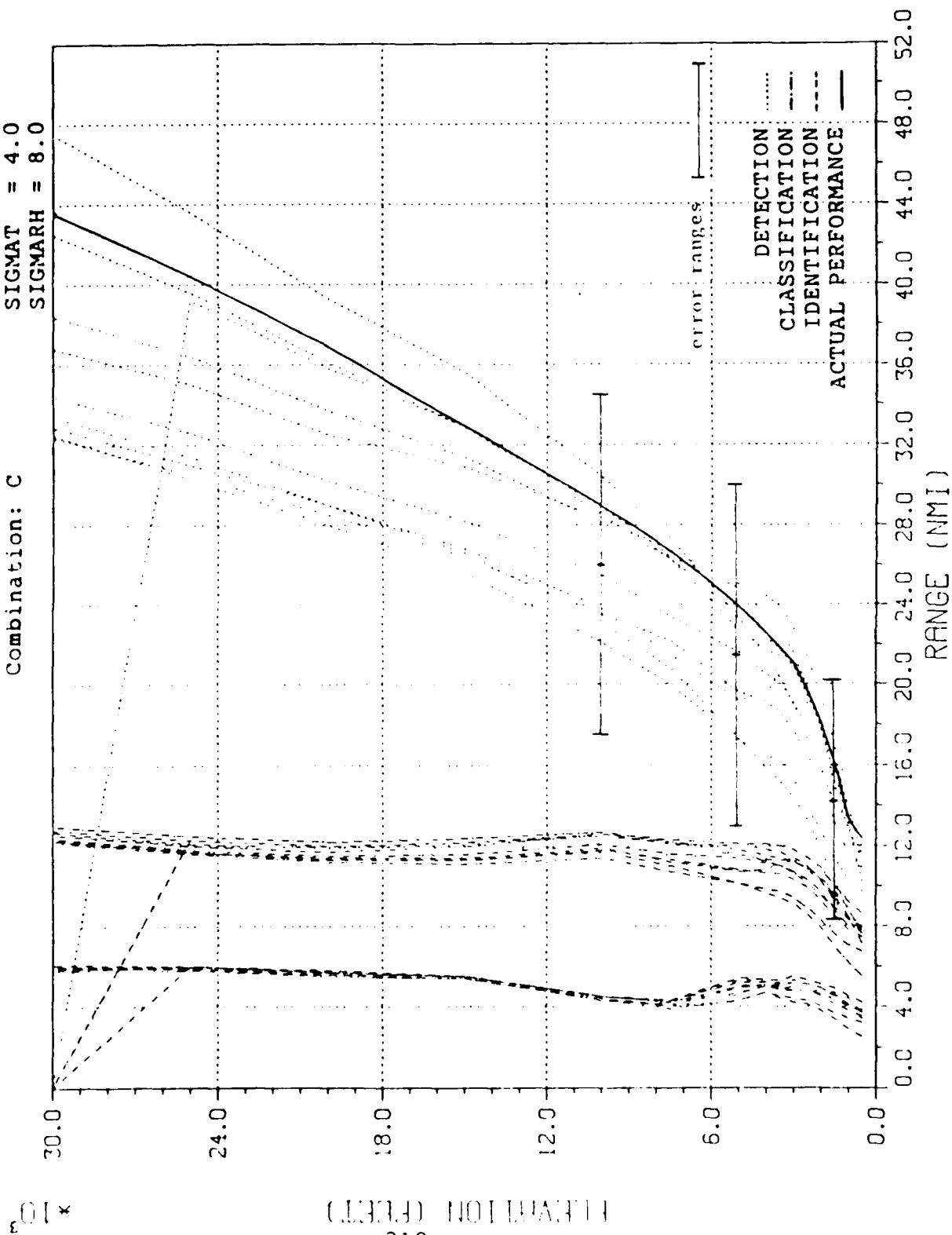
Combination: C



TARGET NUMBER 3

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

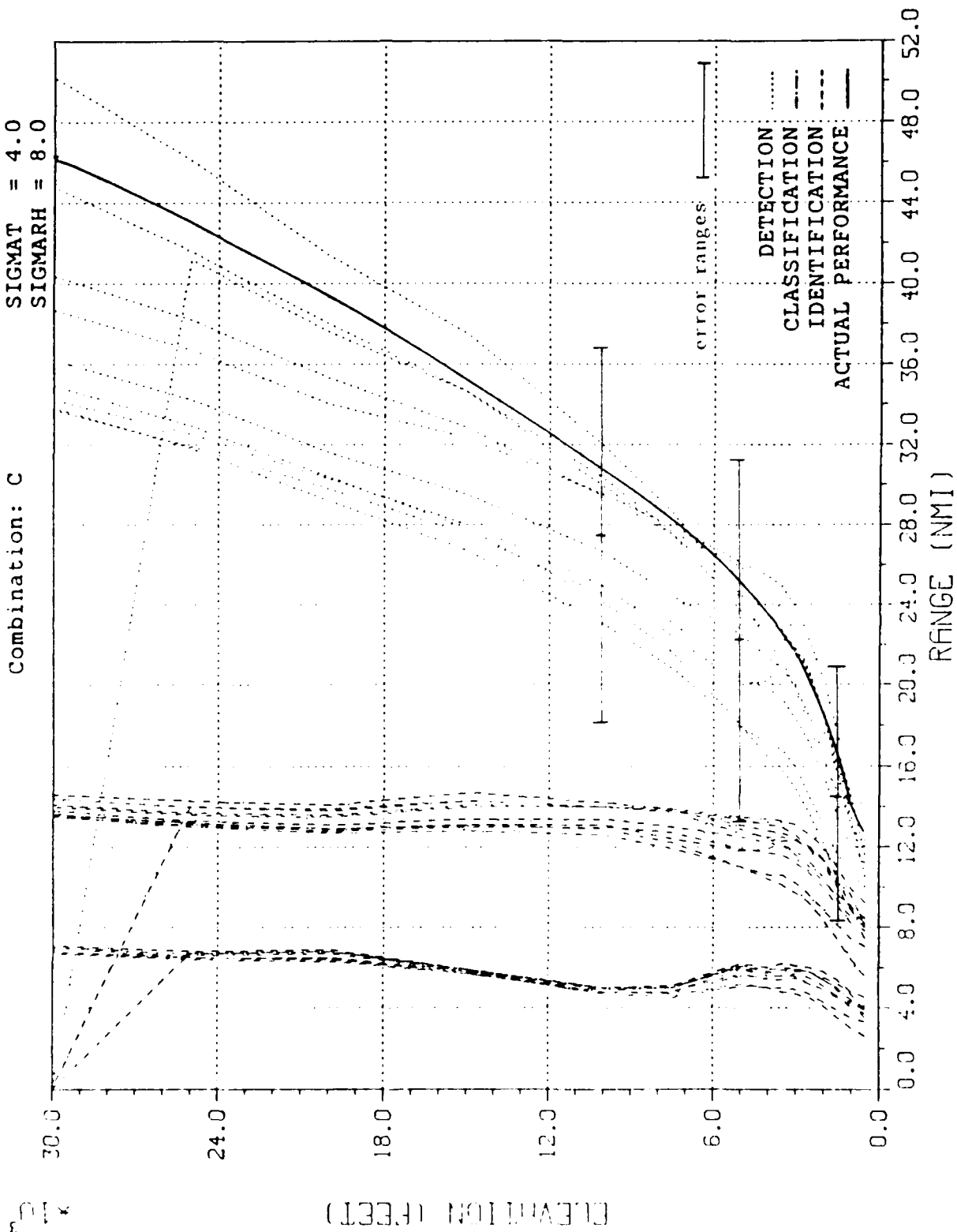
Combination: C



TARGET NUMBER 4

SIGMAP = 2.5
 SIGMAT = 4.0
 SIGMARH = 8.0

Combination: C

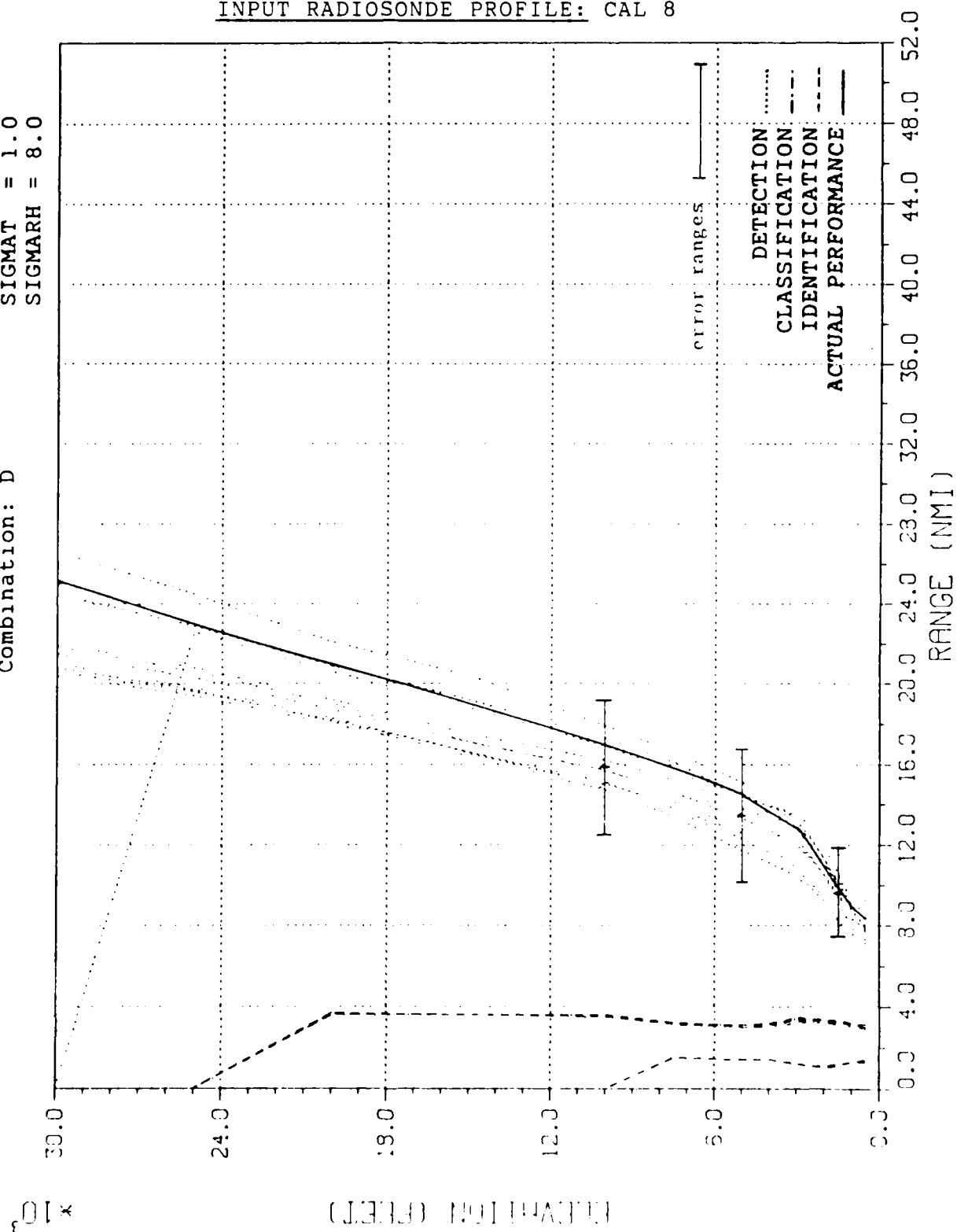


TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: D

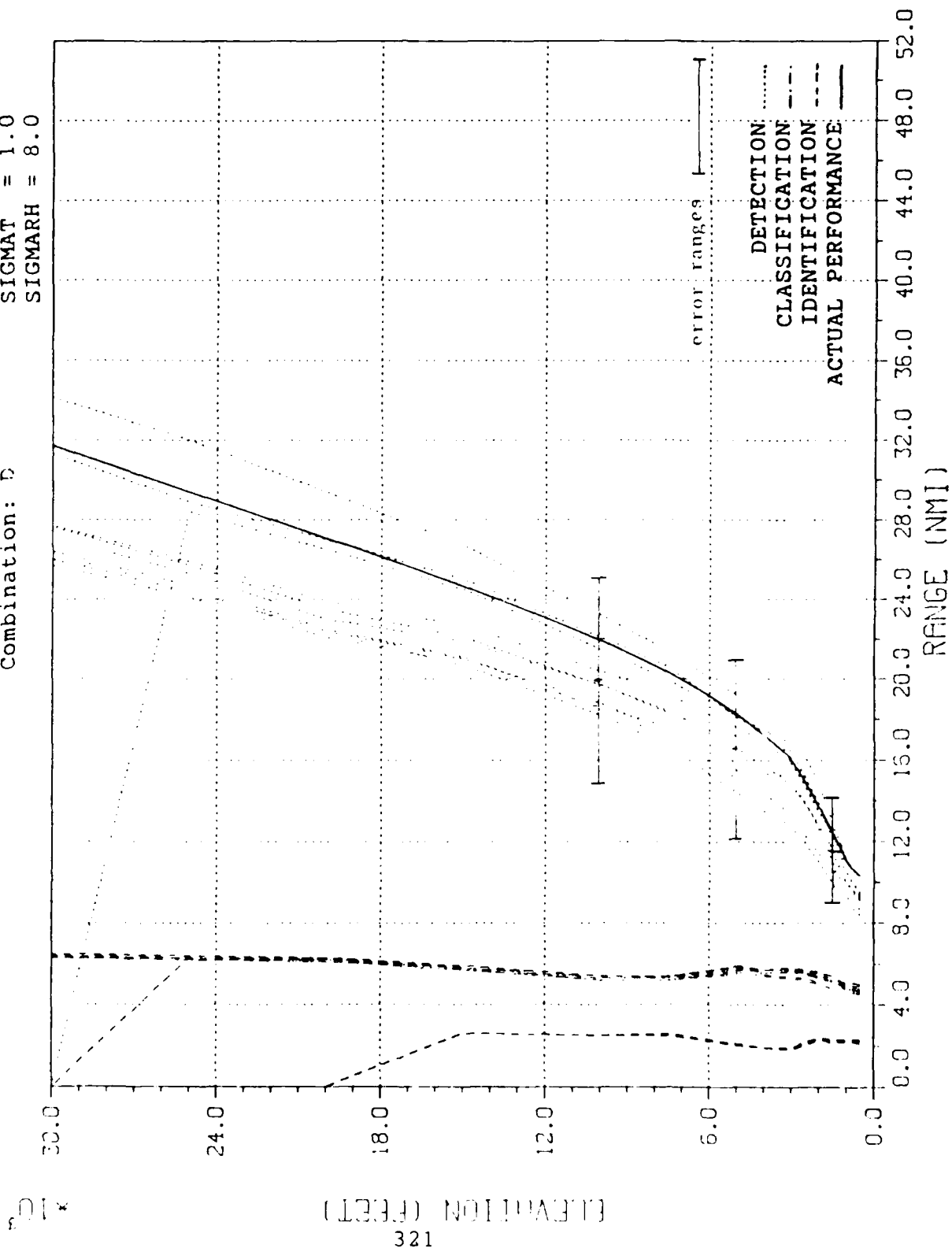
INPUT RADIOSONDE PROFILE: CAL 8



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

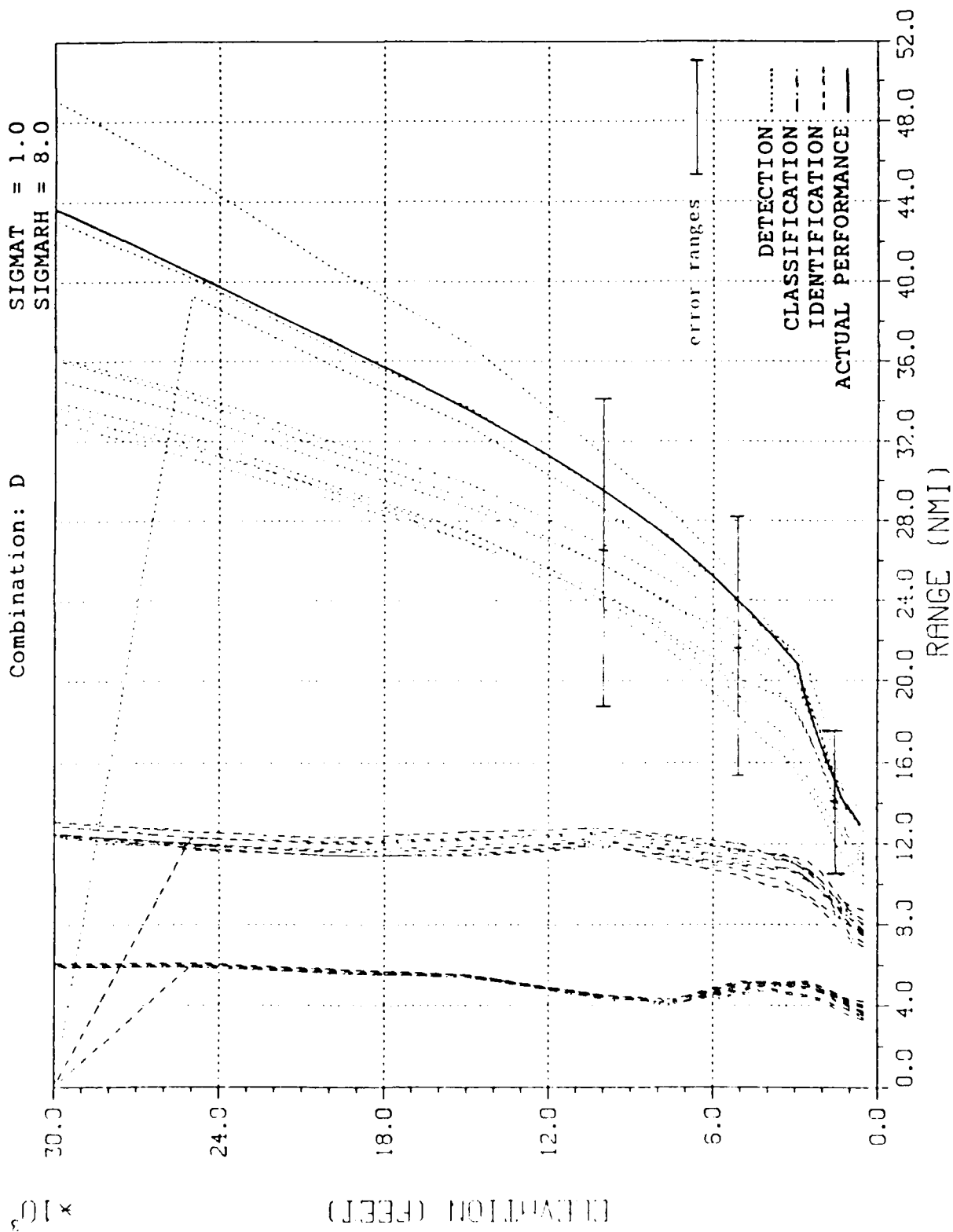
Combination: D



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

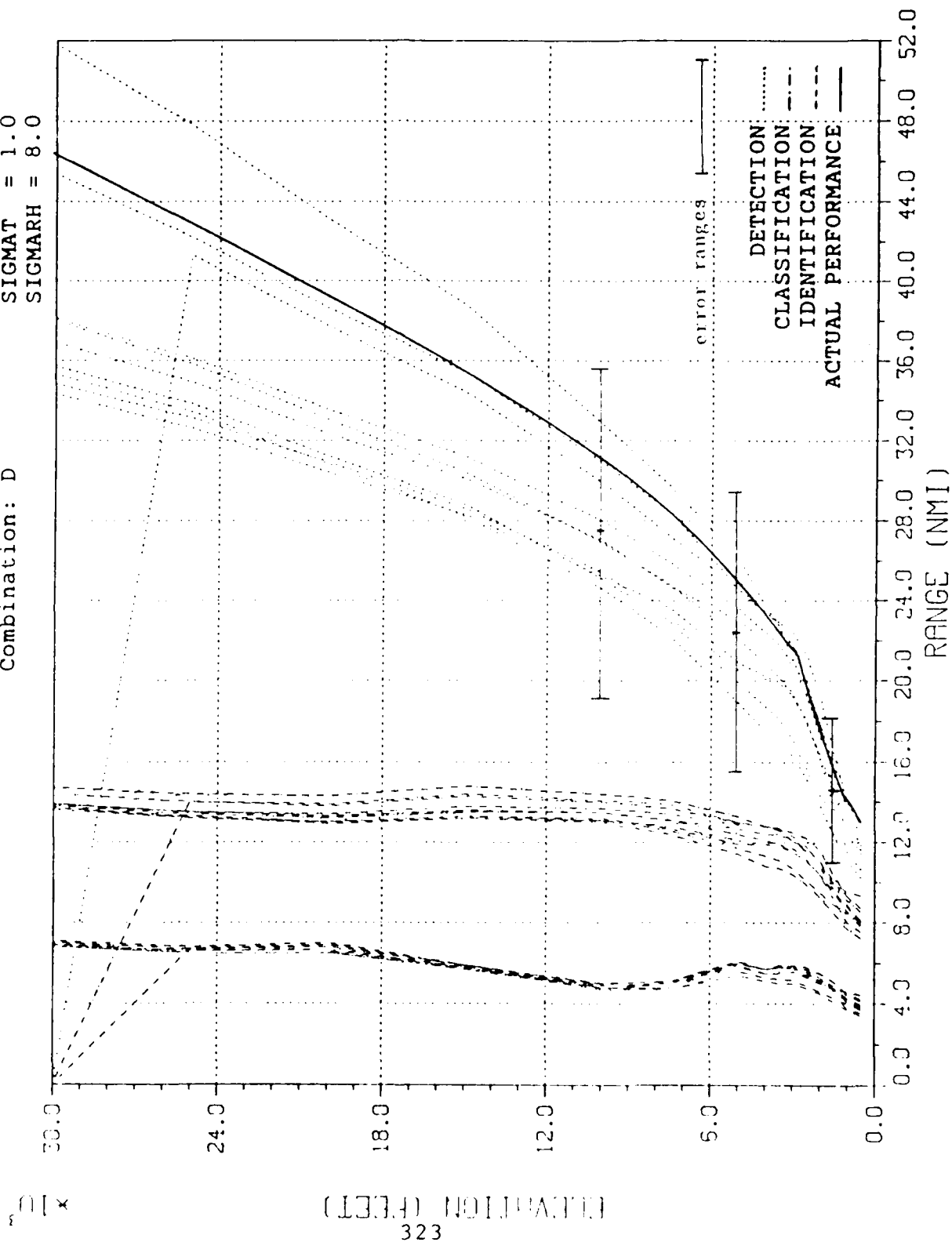
Combination: D



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 1.0
 SIGMARH = 8.0

Combination: D

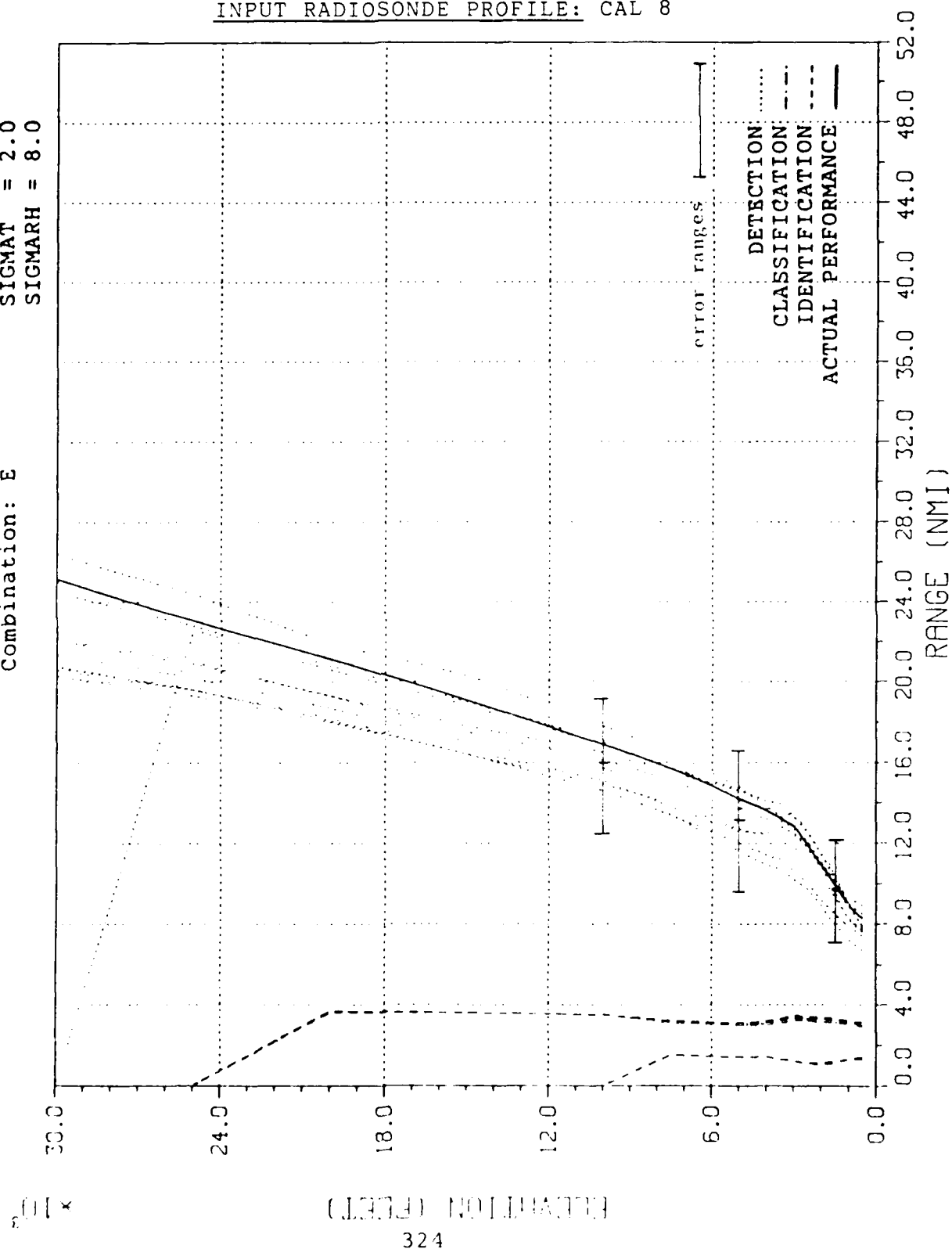


TARGET NUMBER 1

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: E

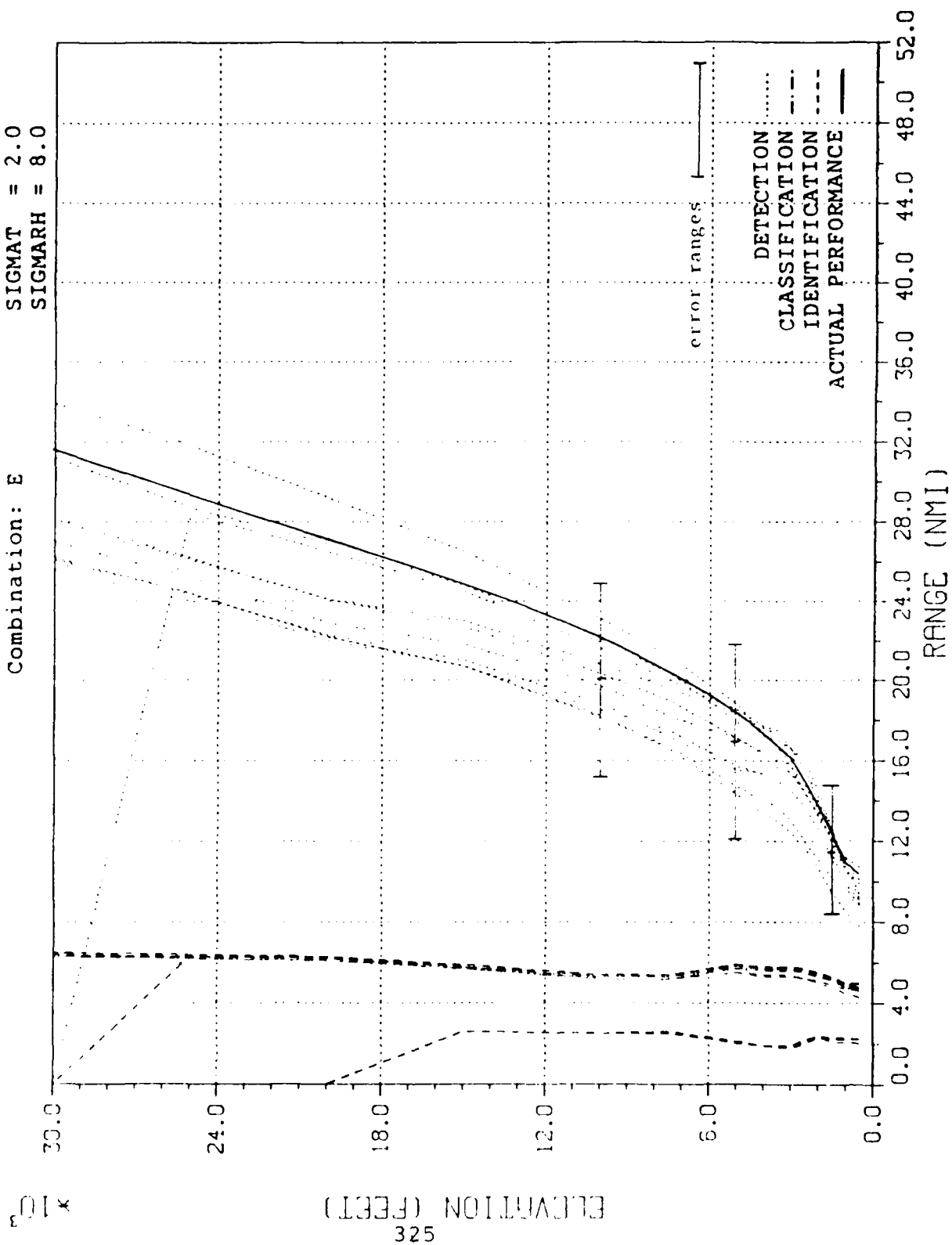
INPUT RADIOSONDE PROFILE: CAL 8



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

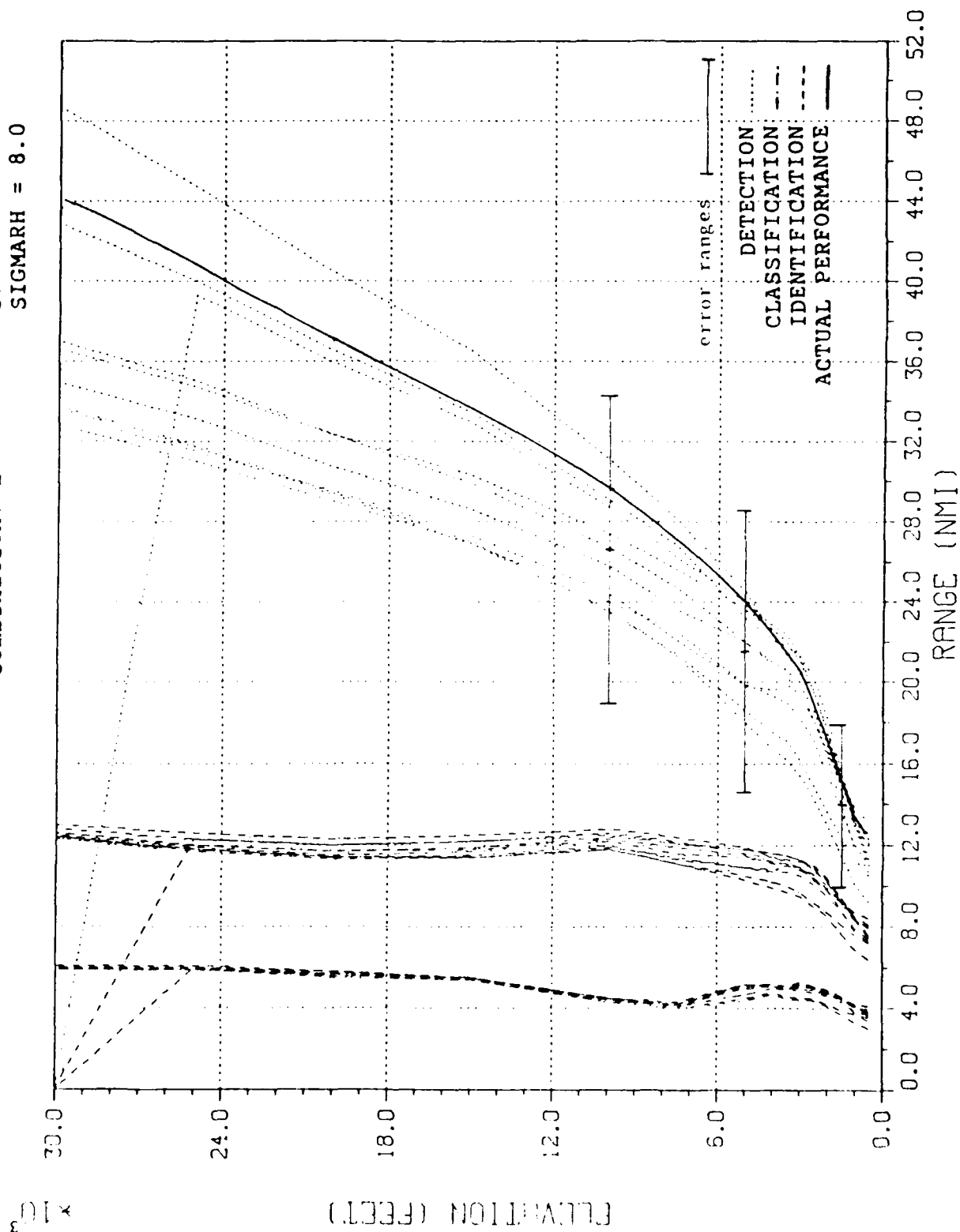
Combination: E



TARGET NUMBER 3

SIGMAF = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

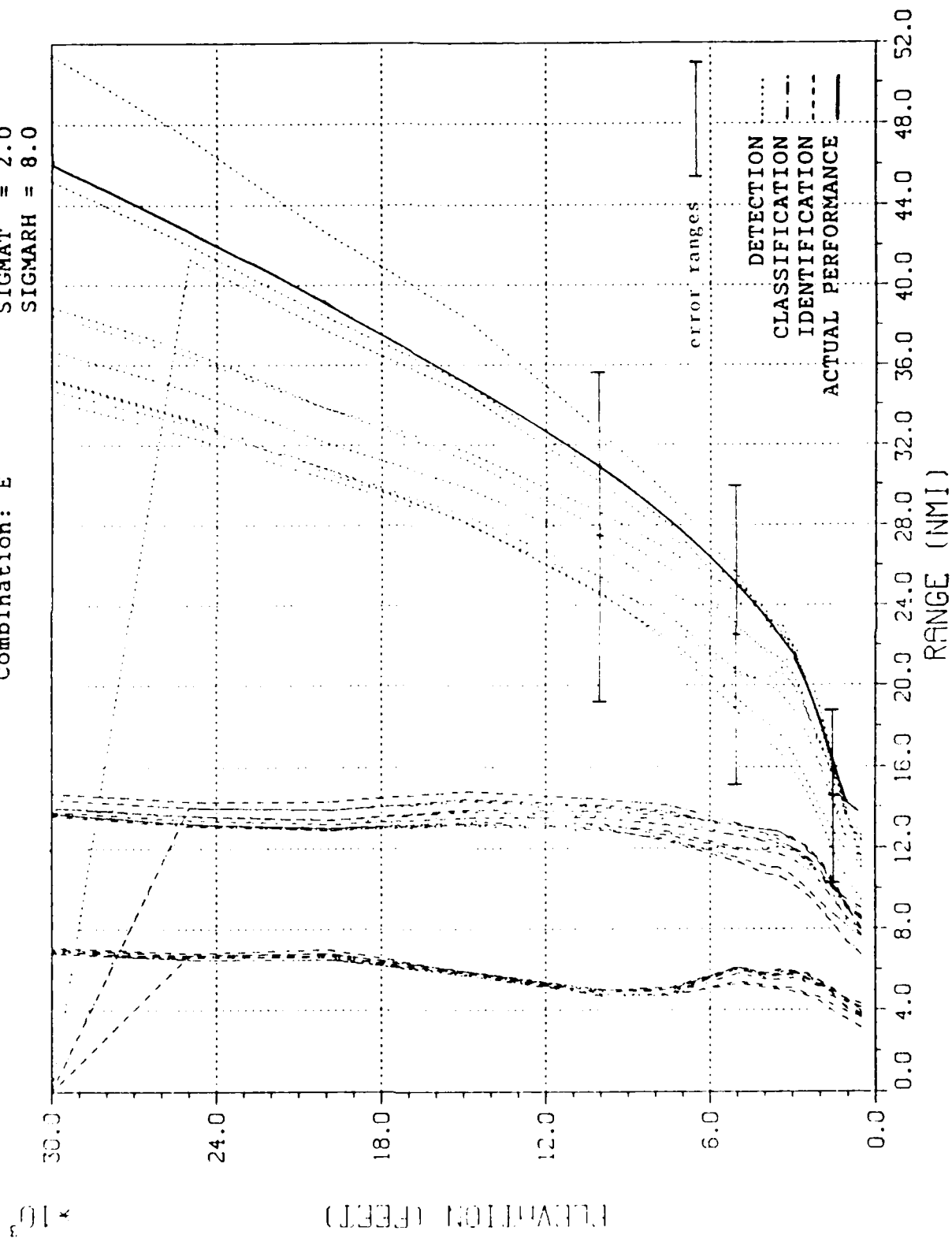
Combination: E



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: E

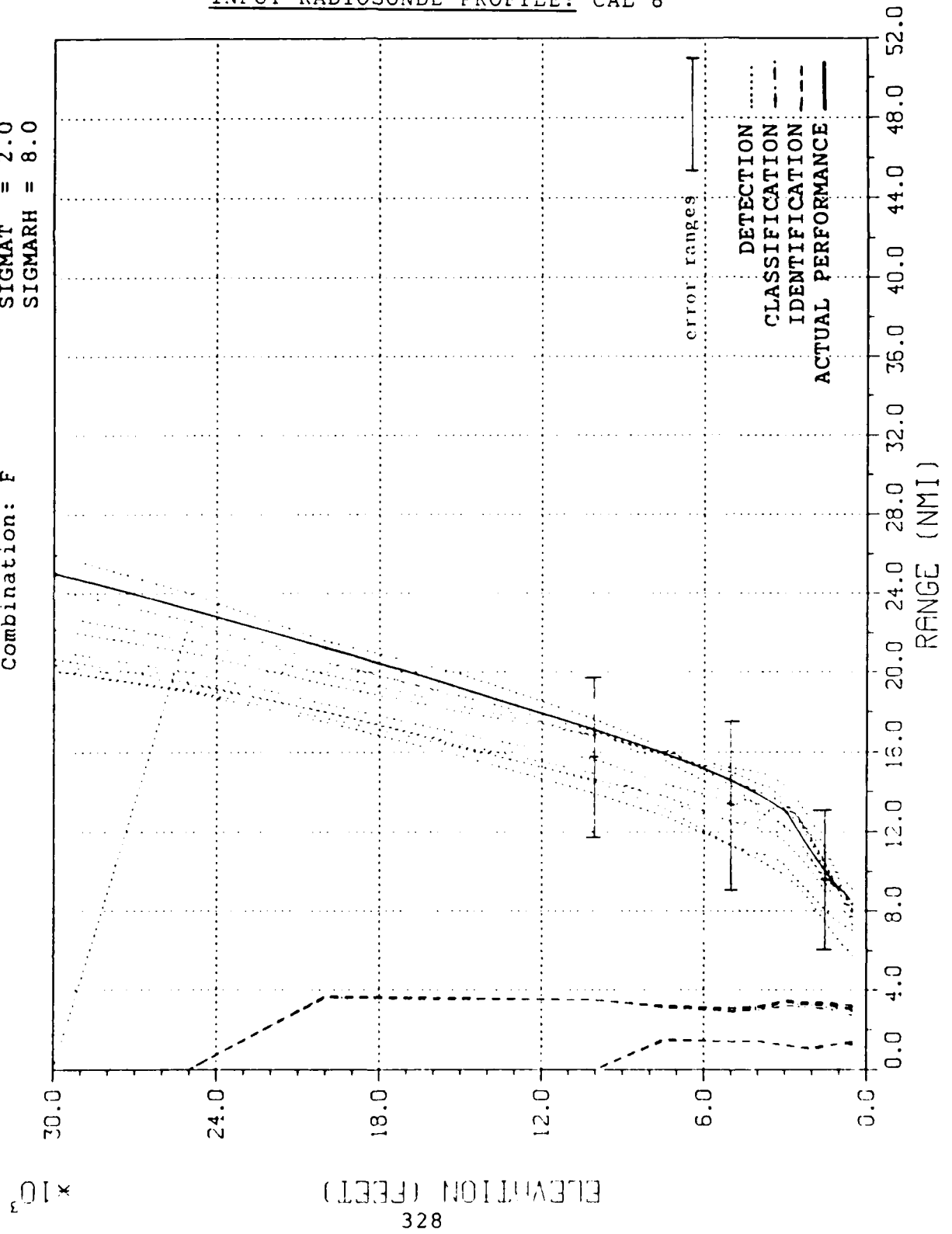


INPUT RADIOSONDE PROFILE: CAL 8

TARGET NUMBER 1

SIGMAP = 1.5
SIGMAT = 2.0
SIGMARH = 8.0

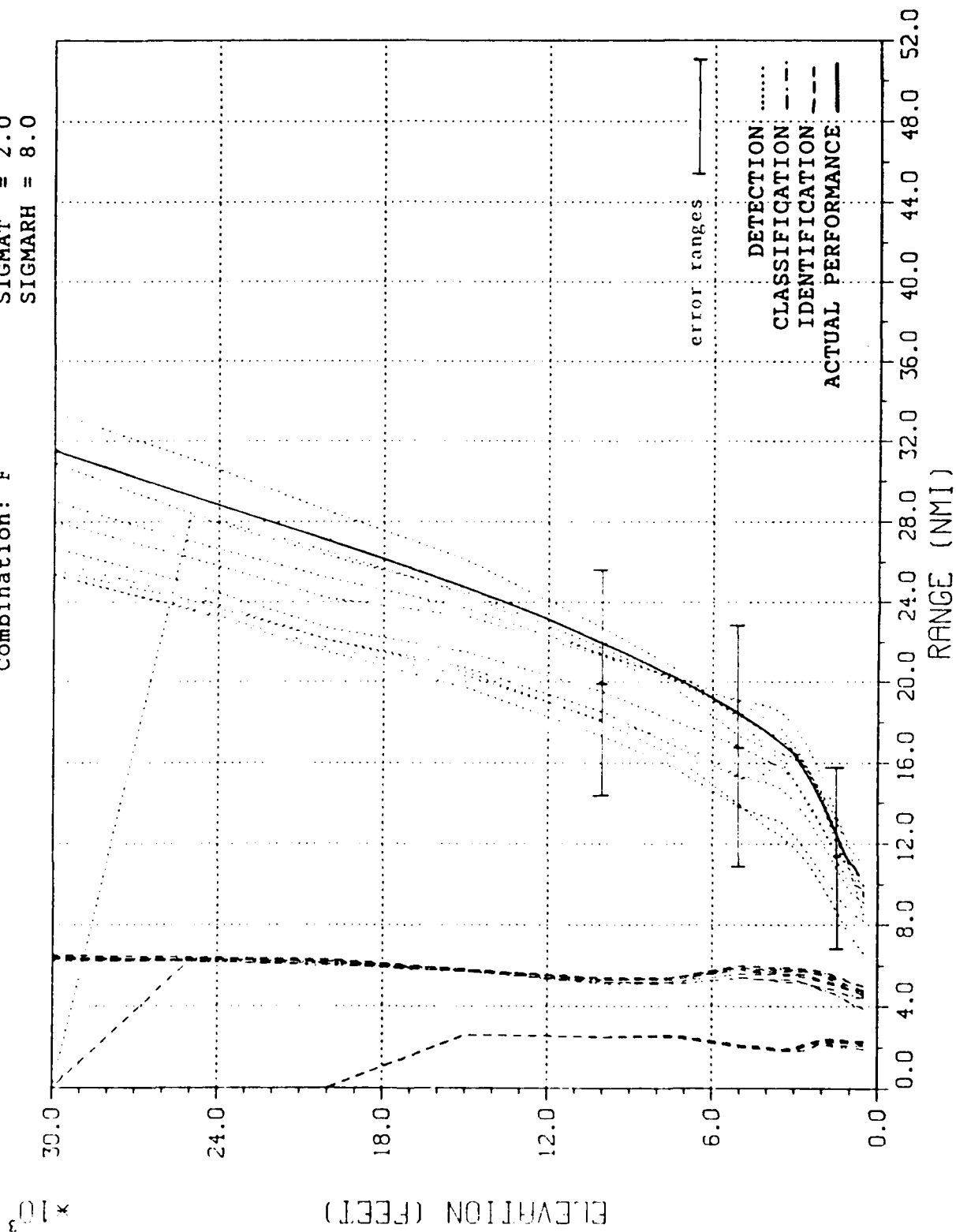
Combination: F



TARGET NUMBER 2

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

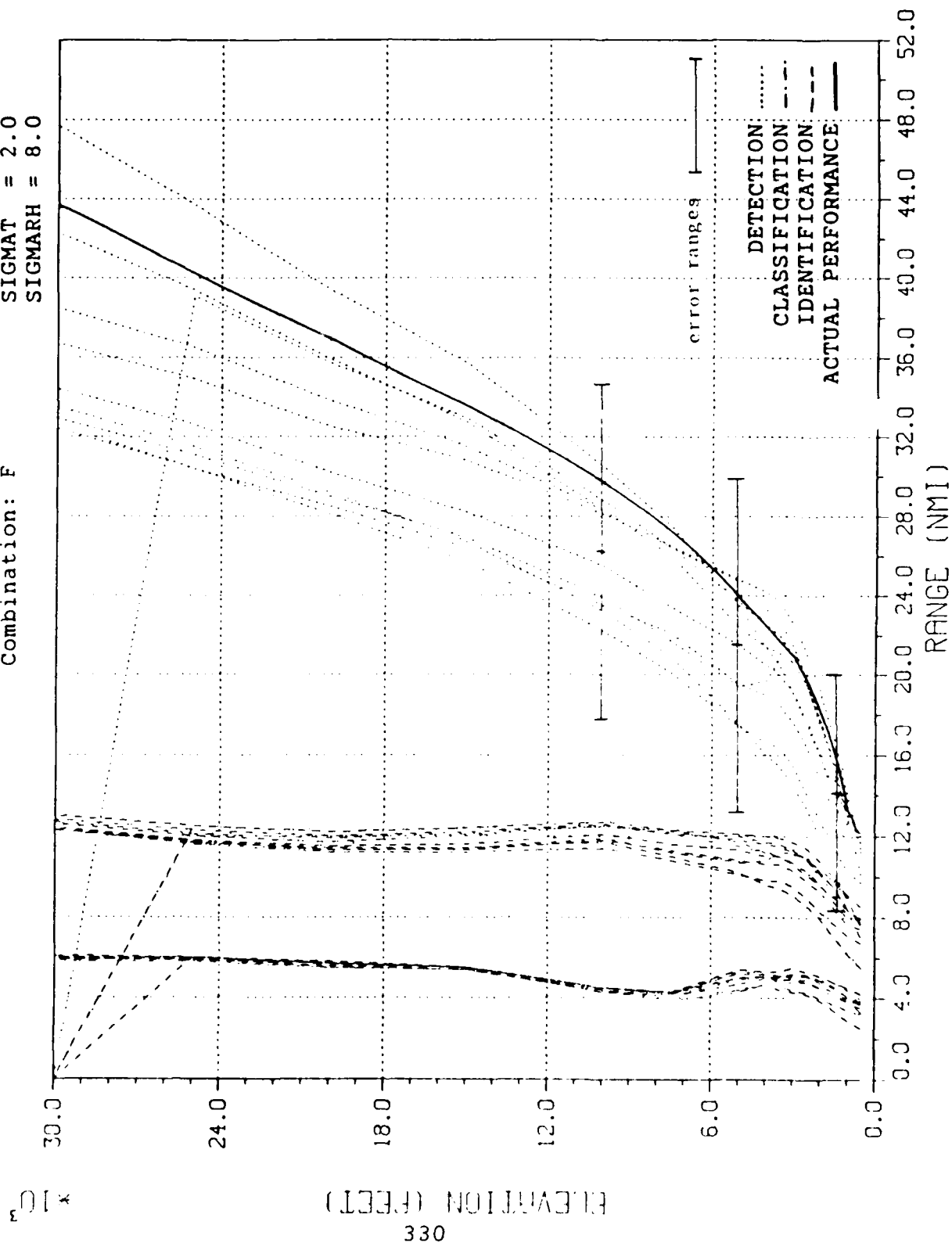
Combination: F



TARGET NUMBER 3

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

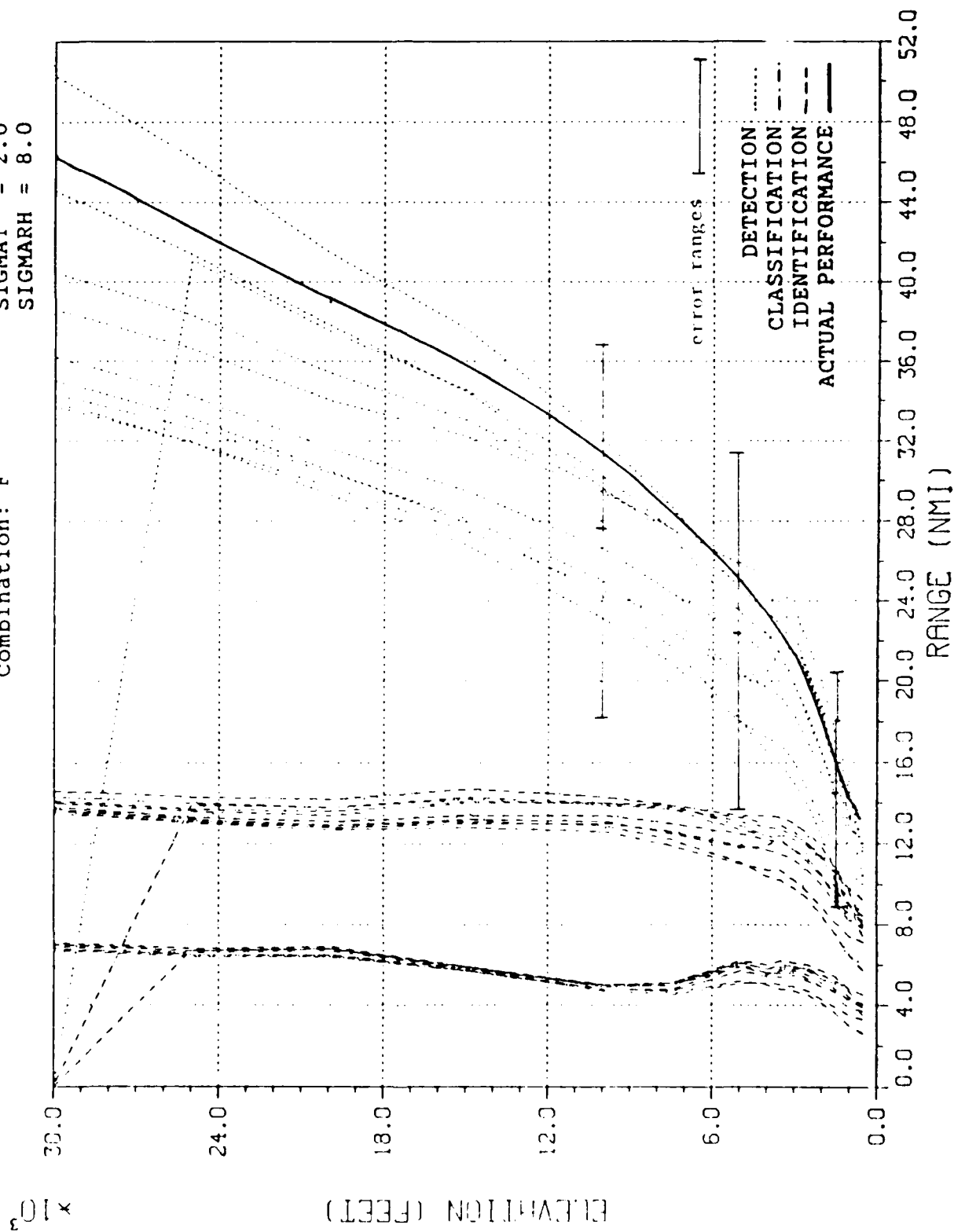
Combination: F



TARGET NUMBER 4

SIGMAP = 1.5
 SIGMAT = 2.0
 SIGMARH = 8.0

Combination: F



LIST OF REFERENCES

1. Lloyd, J. M., Thermal Imaging Systems, Third printing, 1982.
2. H. Hitney Computer Sciences Corporation, Forward Looking Infrared Performance Specification (PPS) for the Tactical Environmental Support System (TESS)(U), Reported under Contract N6601-83-D-0043, 1986.
3. Devore, Jay L., Probability and Statistics for Engineering and the Sciences, Second edition, 1987.

BIBLIOGRAPHY

1. "Infrared Imaging Systems Technology," Proceedings of the Society of Photo-Optical Instrumentation Engineers, Vol 226, April 1980.
2. "Infrared Technology IX," Proceedings of the Society of Photo-Optical Instrumentation Engineers, Vol 430, August 1983.
3. Bolla, H. J., Radiation in the Atmosphere, 1977.
4. Crittenden, E. C., Jr., and others, Optical Resolution in the Turbulent Atmosphere of the Marine Boundary Layer, February 1978.
5. Elsasser, Walter M., Heat Transfer by Infrared Radiation in the Atmosphere, 1944.
6. Hitney, H., Forward Looking Infra-Red Program Performance Specification (PPS) for the Tactical Environmental Support System (TESS), Computer Sciences Corporation, San Diego, CA, March 1986.
7. Kemp, Barron, Infrared Technology, 1962.
8. Keyes, R. J., Optical and Infrared Detectors, 1980.
9. Newman, Donald G., Probability and Statistics.
10. Naval Ocean System Center Technical Report, Effective Use of the Electromagnetic Products of TESS and IREPS, by W. L. Patterson, October 1988.
11. Schaefer, Robert L., Student Edition of Minitab, 1989.
12. Zuev, V. E., Atmospheric Transparency in the Visible and the Infrared, 1970.

INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center 2
Cameron Station
Alexandria, Virginia 22304-6145
2. Library, Code 0142 2
Naval Postgraduate School
Monterey, California 93943-5002
3. Prof. E. A. Milne, Code 61MN 2
Naval Postgraduate School
Monterey, California 93943-5000
4. Prof. Alfred W. Cooper, Code 61 Cr 2
Naval Postgraduate School
Monterey, California 93943-5000
5. Mr. John Cook 2
Navy Environmental Predictions Research Facility
(NEPRF)
Monterey, California 93940
6. Chairman, Electronic Warfare Academic Group 1
Naval Postgraduate School (Code 73)
Monterey, California 93943
7. Director, Research Administration 1
Naval Postgraduate School (Code 012)
Monterey, California 93943
8. LCDR Rodolfo Reategui 2
Av. Alfredo Benavides No. 4628
Vista Alegre - Surco
Lima 33 - PERU
9. CDR Harry Thornberry 1
Naval Postgraduate School
SMC Box 1434
Monterey, California 93943
10. LTJG. Chia, Hua Kai (ROCN) 1
9, Lane 6, Shy Jain Li
Chy Jin District, Kaohsiung, 80504
Taiwan, Republic of China