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**Life regiment hussars K3
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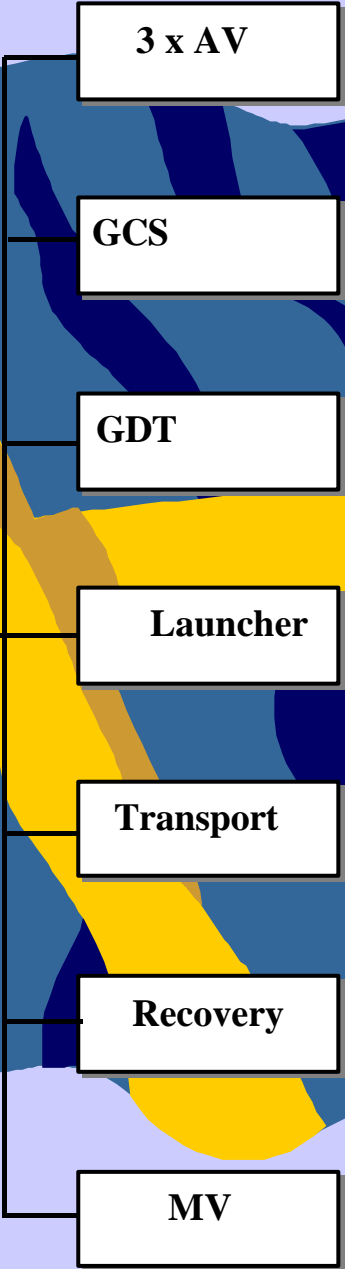
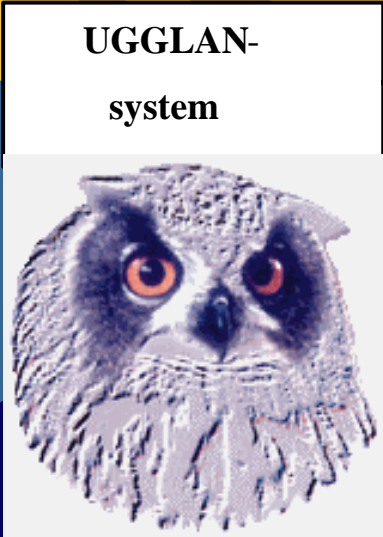
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Report Documentation Page

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Ugglan update

68 flights

110 hours

Flight conditions:

-30 to + 20 C

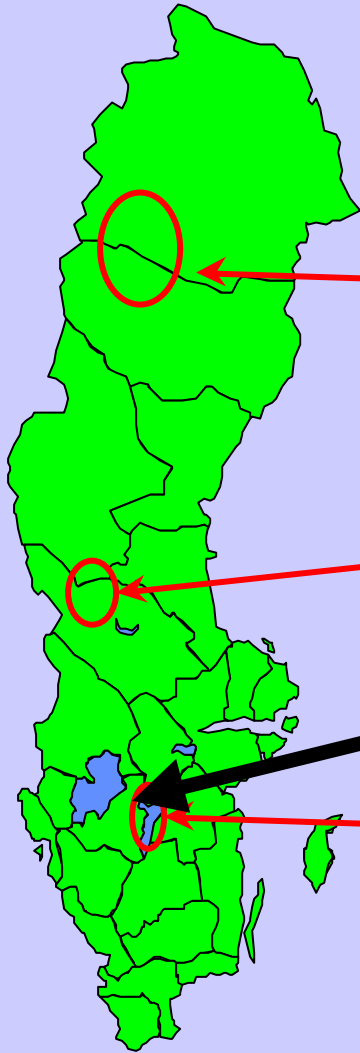
No crashes or de

One hard landing after engine failure

One AV dragged in the parachute, due to a malfunction in the parachute releaser.



UAV Flight Areas today



**Vidsel (FMV Test Range,
40 x 100 km) 44 flights**

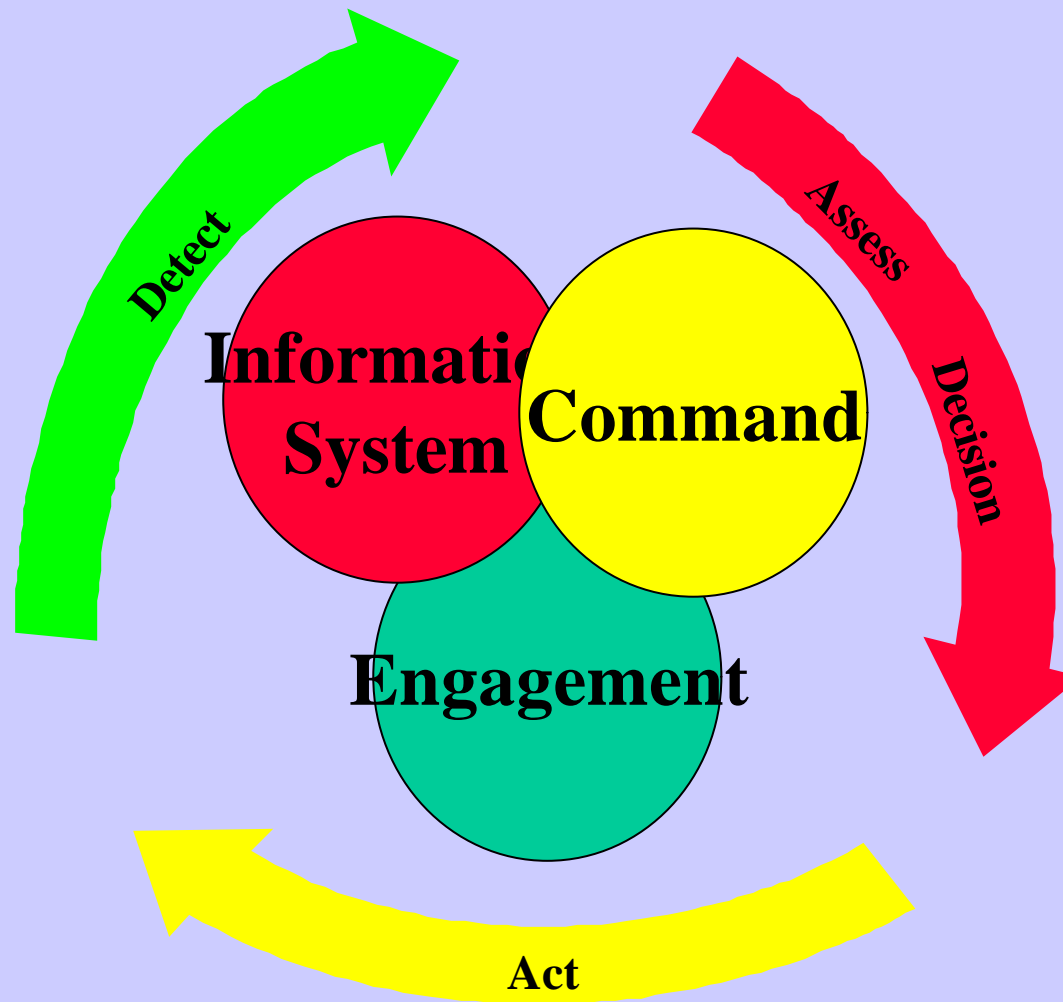


UGGLAN

Sensor to Shooter

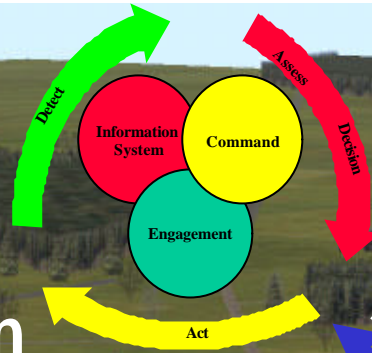


Command and order process.



Priority list

1. HQ
2. Artillery
3. Armoured bn
4.



Intel Rep
BDA rep

Adjustment
Order Fire Mission



- 20 to -28 deg C



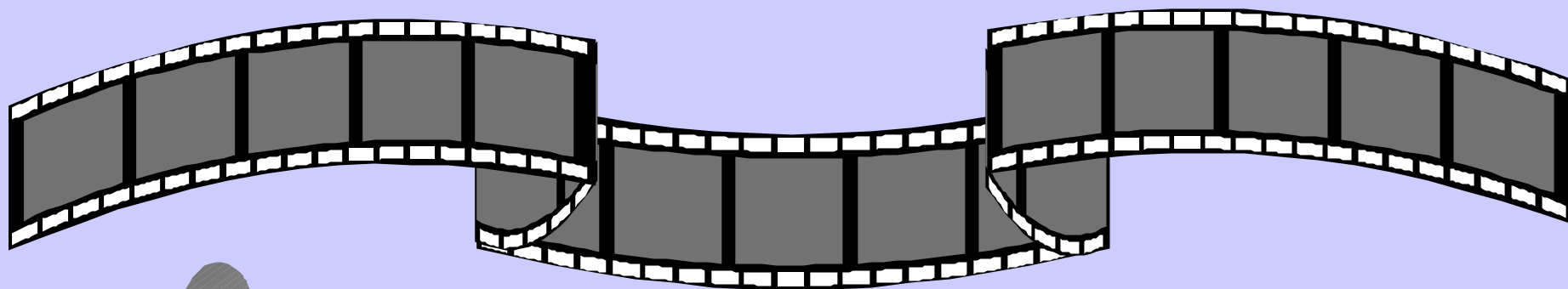
Windy



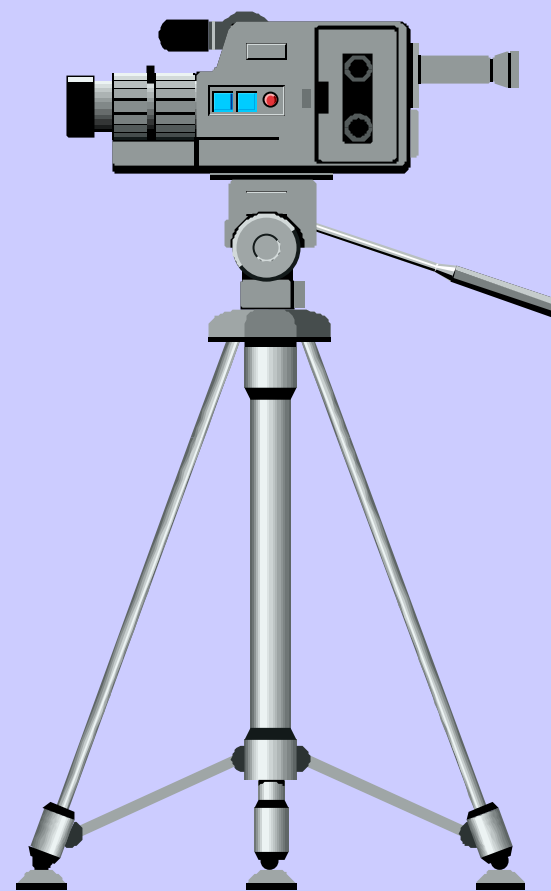
1.2 m snow



**Arctic
Conditions**



SANSON TO SHOOT



Operational experience / Lessons learned

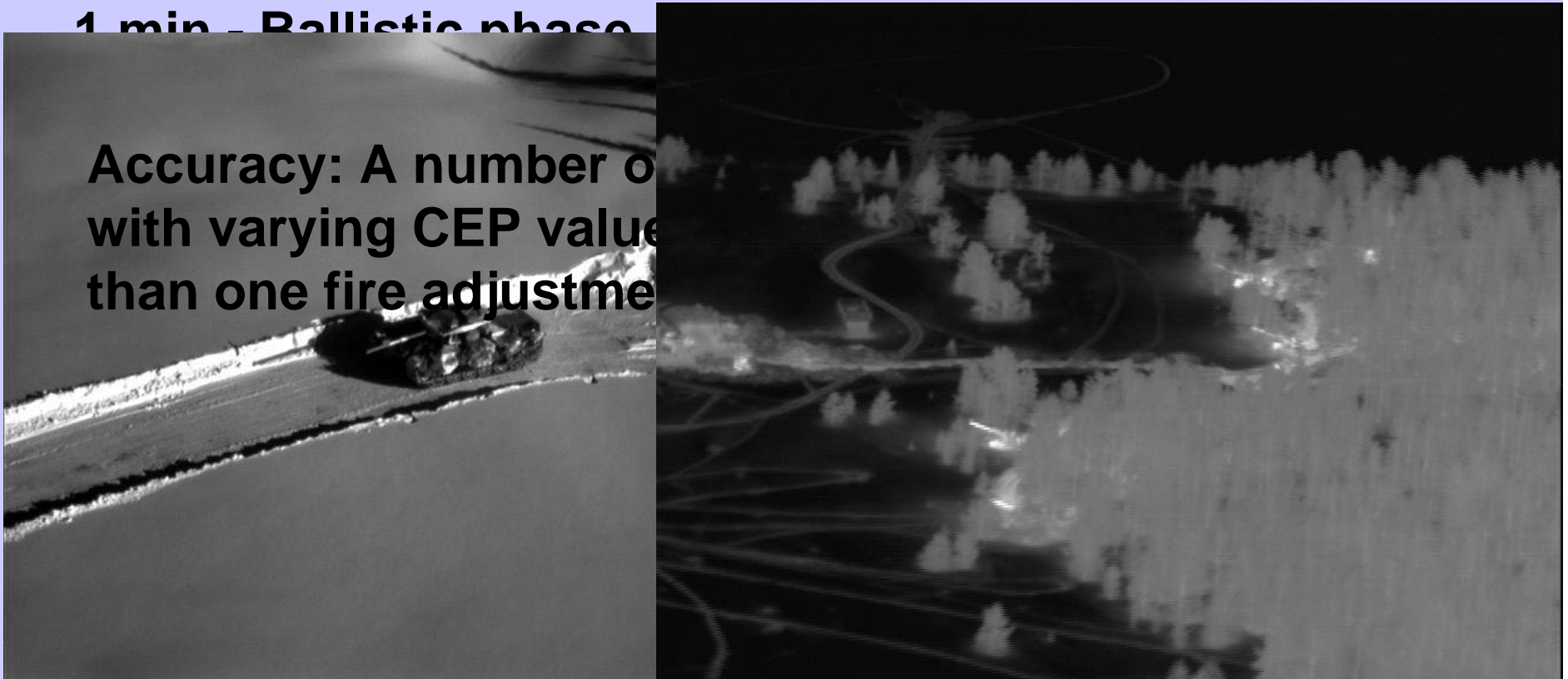
From target detection to impact 3 min

1 min- Target detection and filling in artillery formats

1 min- Transmission, loading and aiming

1 min - Ballistic phase

Accuracy: A number of
with varying CEP values
than one fire adjustment



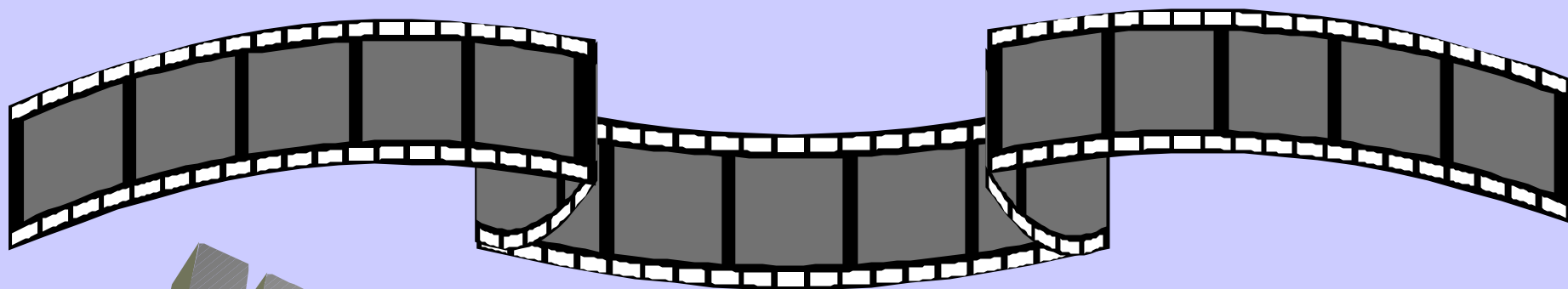
Method:

Acquire the coordinates of the target (with as good CEP as possible).

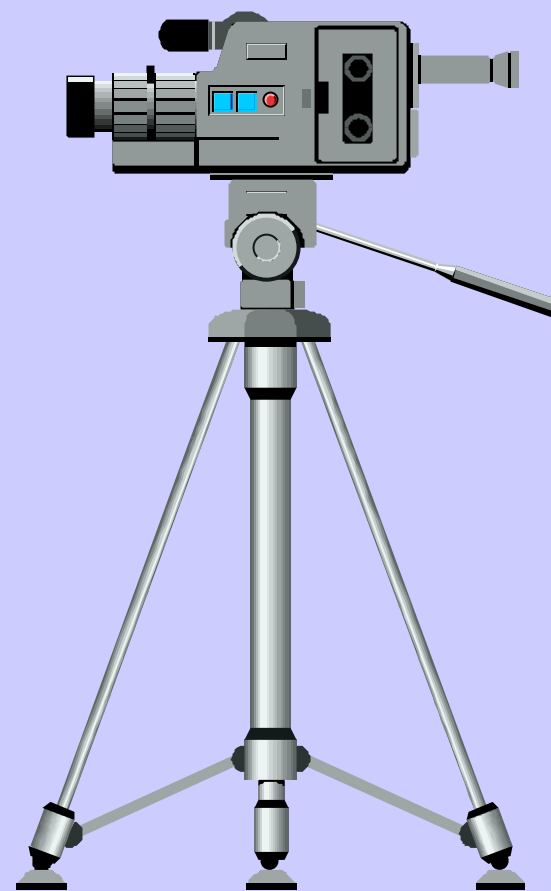
Move the AV away while the coordinates are transmitted, in order to be in a favourable position, upon impact.

Set FOV to WIDE in order to be able to have the target in view, as well as the impact bursts.

Make necessary adjustment, or if the first result was good, perform BDA.



Video Production

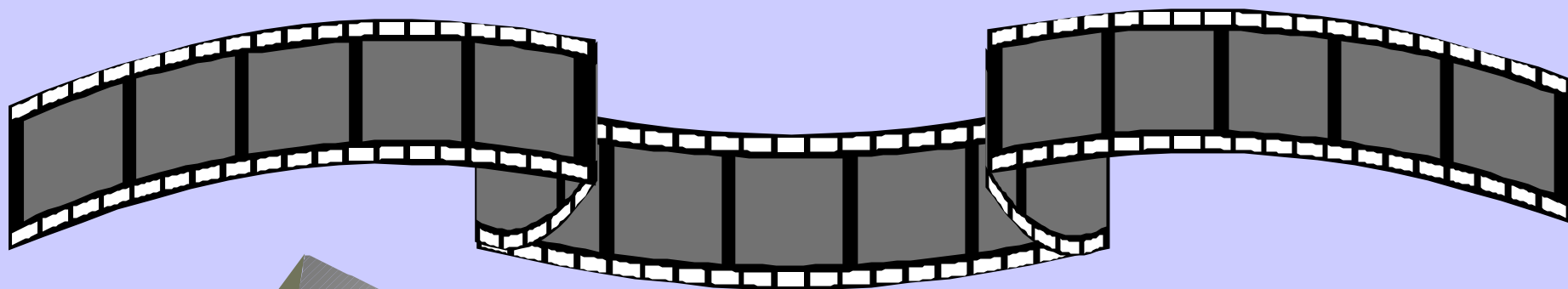


Mine detection

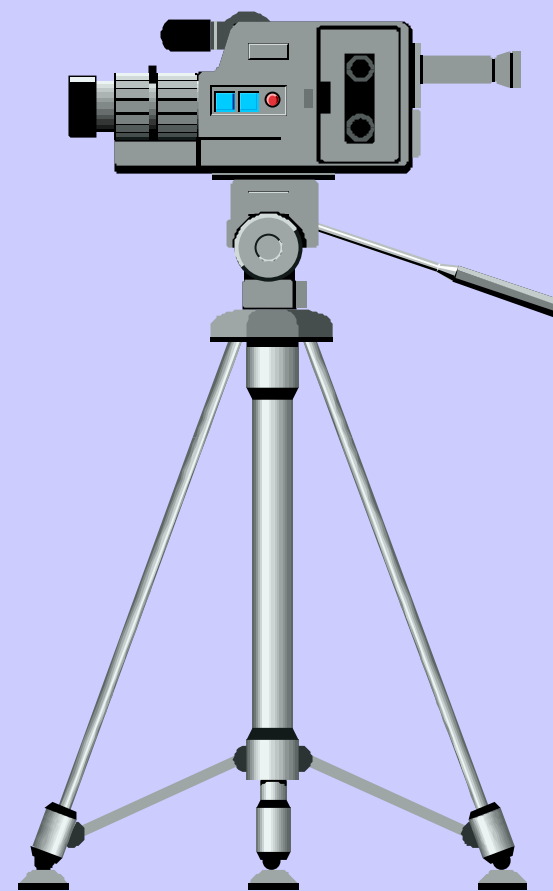
Tests in snow and on bare ground, with mines that have been on the site for several days, have been made.

Results: Mines on roads or in open terrain is no problem to detect, whether it is snow or not.

Detecting mines in the snow or in terrain with lot of stones and/or small bushes, or terrain with foliage cover is very difficult or even impossible.



LEGIONS



Decoys

These decoys were detected due to lack of :

- additional and personnel equipment.**
- heat signature on wheels.**
- antennas.**
- etc.**

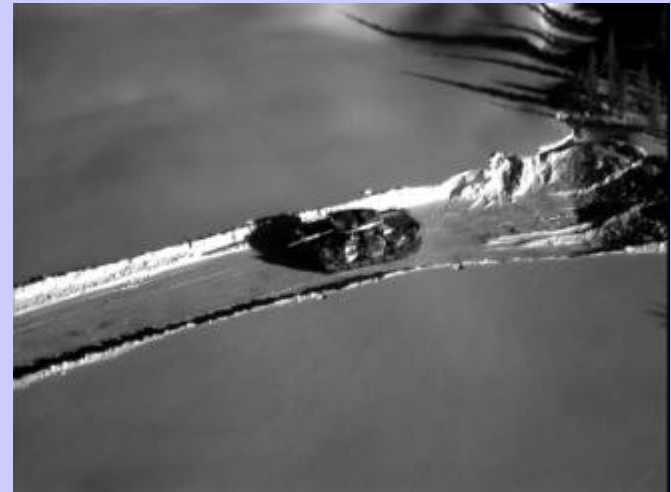
Other means of detecting decoys is:

- Track picture (or lack of...)**

Effect of decoys:

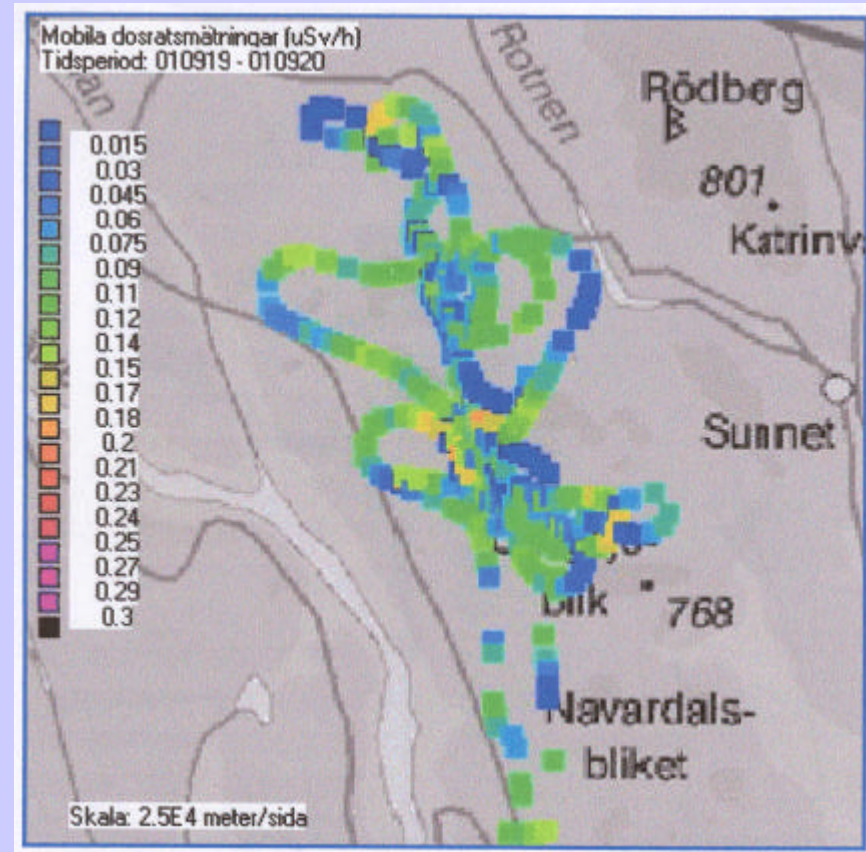
- Time delay**

In order to be effective, decoys needs to be as detailed as possible, in all spectra.



Radiac sensor

During the PfP exercise “Barents Rescue” (Sep 2001), one AV was equipped with a radiac sensor and measurements were sent to the SSI (the Swedish Radiation Institute) using an ordinary GSM telephone and then presented on the Internet, as shown in the picture.



Lessons learned - General

A UAV is not a sensor system, it is a flying system with a multirole capability.

It costs money and time in terms of:

- maintenance**
- airworthiness**
- documentation**
- spare parts**
- operator training (pilots, mission commanders,
sensor operators and technicians)**

General acceptance of unmanned systems?

Unmanned = Uncontrollable = Unreliable

Airworthy?

QUESTIONS?

