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**CHARACTERIZATION OF THE ENERGY DEPOSITION
PRODUCED BY THE PRIMARY ELECTRON BEAM ON
THE EXCEDE III PROGRAM
APPENDIX B & C**

**R.J. Rieder
R.L. McNutt, Jr.
S.A. Rappaport**

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**Visidyne, Inc.
10 Corporate Place
South Bedford Street
Burlington, MA 01803**

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**PHILLIPS LABORATORY
Directorate of Geophysics
AIR FORCE MATERIEL COMMAND
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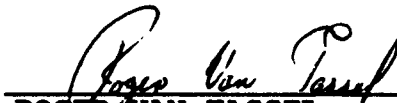
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FRANCIS X. ROBERT
Contract Manager



STEPHAN D. PRICE
Branch Chief



ROGER VAN TASSEL
Division Director

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6. AUTHOR(S)

R.J. Rieder
R.L. McNutt *
S.A. Rappaport

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Visidyne, Inc.
10 Corporate Place
South Bedford Street
Burlington MA 01803

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* Applied Physics Lab, Johns Hopkins University, Laurel, MD

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13. ABSTRACT (Maximum 200 words)

The primary goal of the EXCEDE III (Excitation by Electron Deposition) atmospheric energy deposition experiment was to monitor the spatial distribution of the energy deposition profile produced by the ~18 Ampere -2.5 keV electron beam. During the rocket flight on April 27, 1990, prompt emission at 3914 Å from the N₂⁺ (1N) 0-0 transition were measured by a UV scanning photometer. We have inverted the intensity profiles to obtain profiles of energy deposition by the beam.

14. SUBJECT TERMS

EXCEDE III, N₂⁺ (1N), 3914 Å, Electron Beam, Atmospheric Deposition, Artificial Aurora, Scanning Photometer

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Appendix B: Table of 3914 Å Scanning Photometer Fit Parameters

Accession For	
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DTIC TAB	☐
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Justification	
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Availability Codes	
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SCAN #	TIME (s)	ALT. (km)	SINO	λ_e (nm-n)	λ_e (nm-n)	y_e (m)	δy_e (m)	θ (m)	$\delta\theta$ (m)	p	δp	γ_e (deg)	$\delta\gamma_e$ (deg)	ϕ (deg)
1	134.9	97.90	.69	80.20149	1.93047	5.24492	.00362	1.37000	.01010	22.00000	1.08000	3.20900	.00221	.8400
2	136.0	98.53	.69	130.85510	3.05186	5.56746	.01080	2.36000	.02040	1.83000	.03190	3.25900	.01100	1.3800
3	136.8	98.99	.69	198.86220	4.56113	5.72051	.01480	2.11000	.01560	1.40000	.02010	3.21900	.00831	1.1900
4	138.0	99.61	.69	146.33250	3.40889	5.89335	.01720	2.08000	.01960	1.21000	.01990	3.18900	.00930	1.1200
5	138.8	100.04	.69	170.25230	3.94417	4.73625	.01070	2.41000	.01970	1.52000	.02470	2.46900	.00974	1.2600
6	139.8	100.61	.69	-	-	-	-	-	-	-	-	-	-	-
7	140.8	101.10	.69	-	-	-	-	-	-	-	-	-	-	-
8	141.9	101.66	.69	137.89030	3.24476	2.67537	.02530	2.82000	.02710	1.40000	.02620	1.25900	.01190	1.3200
9	142.6	102.03	.69	115.84660	2.76569	2.36831	.02760	2.74000	.02070	1.46000	.02910	1.07900	.01250	1.2500
10	143.9	102.63	.69	101.77620	2.46148	2.34029	.02970	2.74000	.03250	1.39000	.03150	1.02900	.01310	1.2100
11	144.6	102.97	.69	94.03741	2.30046	1.97305	.03140	2.73000	.03400	1.50000	.03770	.84100	.01340	1.1700
12	145.8	103.56	.69	91.69234	2.25001	1.02614	.03170	2.69000	.03390	1.41000	.03390	.42500	.01310	1.1100
13	146.7	103.94	.70	-	-	-	-	-	-	-	-	-	-	-
14	147.6	104.39	.70	-	-	-	-	-	-	-	-	-	-	-
15	148.6	104.82	.70	-	-	-	-	-	-	-	-	-	-	-
16	149.7	105.31	.70	71.99374	1.84079	-.81435	.03470	2.47000	.03790	1.38000	.03990	-.30200	.01290	.9170
17	150.4	105.59	.70	67.06908	1.73228	-.86355	.03610	2.45000	.03890	1.30000	.04040	-.31200	.01300	.8840
18	151.7	106.12	.70	52.06062	1.40498	-.46597	.03680	2.20000	.04070	1.29000	.04420	-.16400	.01300	.7740
19	152.4	106.40	.70	50.65357	1.37848	-.40448	.04000	2.28000	.04320	1.28000	.04730	-.13920	.01380	.7860
20	153.5	106.85	.70	-	-	-	-	-	-	-	-	-	-	-
21	154.5	107.22	.70	-	-	-	-	-	-	-	-	-	-	-
22	155.5	107.60	.70	-	-	-	-	-	-	-	-	-	-	-
23	156.3	107.91	.70	54.40569	1.53675	.56104	.04220	2.28000	.04770	1.28000	.05010	.17600	.01320	.7150
24	157.5	108.36	.70	46.90145	1.32286	1.09950	.04590	2.36000	.04800	1.33000	.05220	.33600	.01410	.7230
25	158.2	108.60	.70	46.66695	1.34270	.93421	.04690	2.30000	.05100	1.28000	.05450	.28100	.01410	.6900
26	159.5	109.03	.70	39.86624	1.16811	1.10703	.04660	2.20000	.05040	1.24000	.05660	.32600	.01370	.6470
27	160.2	109.26	.70	41.27328	1.21460	.81935	.04900	2.31000	.05050	1.34000	.06090	.23600	.01410	.6640
28	161.3	109.63	.70	-	-	-	-	-	-	-	-	-	-	-
29	162.3	109.93	.70	-	-	-	-	-	-	-	-	-	-	-
30	163.4	110.27	.70	42.91483	1.27437	.89020	.04730	2.24000	.05790	1.18000	.05690	.24400	.01280	.6080
31	164.1	110.48	.70	37.99018	1.15510	.56685	.05400	2.27000	.05730	1.27000	.06310	.15100	.01440	.6050
32	165.3	110.84	.70	34.94158	1.62602	.41835	.08610	2.02000	.07180	1.46000	.08880	.10900	.02250	.5280
33	166.0	111.03	.70	36.58313	1.14786	.57773	.05270	2.14000	.05660	1.20000	.06580	.14800	.01350	.5490
34	167.3	111.37	.70	29.31341	2.47738	.34170	.08640	2.11000	.07830	2.33000	.25100	.08600	.02180	.5320
35	168.1	111.58	.70	-	-	-	-	-	-	-	-	-	-	-
36	169.1	111.83	.70	-	-	-	-	-	-	-	-	-	-	-
37	170.1	112.06	.70	-	-	-	-	-	-	-	-	-	-	-
38	171.2	112.32	.70	25.32679	1.94132	1.11982	.07800	1.97000	.09130	1.80000	.19000	.26300	.01830	.4630
39	171.9	112.47	.70	24.15425	1.60541	1.04292	.07880	1.90000	.08200	1.95000	.22100	.24100	.01820	.4390
40	173.1	112.74	.70	28.84439	1.32294	2.28599	.09080	2.10000	.07460	1.45000	.10200	.52000	.02070	.4770
41	173.8	112.88	.70	26.96834	1.31828	2.51892	.08290	2.02000	.08050	1.34000	.09400	.56400	.01860	.4540
42	175.0	113.10	.70	-	-	-	-	-	-	-	-	-	-	-
43	175.9	113.28	.71	-	-	-	-	-	-	-	-	-	-	-
44	176.9	113.45	.71	-	-	-	-	-	-	-	-	-	-	-
45	177.7	113.59	.70	28.14087	1.09860	3.10109	.07210	2.02000	.07750	1.46000	.12100	.65400	.01520	.4260
46	179.0	113.79	.70	25.79580	2.19006	3.10330	.10700	2.15000	.12500	1.56000	.14100	.64400	.02210	.4460
47	179.7	113.89	.70	29.31341	1.11334	2.76636	.06520	2.02000	.07810	1.20000	.09120	.56600	.01330	.4130
48	180.9	114.06	.70	27.67186	1.07729	2.70968	.08480	2.38000	.09030	1.42000	.10700	.54700	.01710	.4810
49	181.6	114.16	.70	24.15425	1.05978	2.09207	.09750	2.12000	.08680	1.69000	.14900	.41600	.01940	.4220
50	182.8	114.29	.70	-	-	-	-	-	-	-	-	-	-	-
51	183.7	114.40	.70	-	-	-	-	-	-	-	-	-	-	-
52	184.8	114.51	.70	24.15425	1.17525	1.46108	.08130	2.19000	.08000	1.85000	.18700	.27900	.01550	.4170
53	185.5	114.58	.70	24.15425	1.03553	1.46277	.08690	2.13000	.08600	1.74000	.16800	.27500	.01640	.4000
54	186.8	114.68	.70	21.55122	1.09311	1.46719	.11200	2.12000	.09850	1.62000	.16000	.27300	.02080	.3940
55	187.5	114.73	.70	25.32679	1.03118	.21255	.09270	2.30000	.09500	1.45000	.12700	.03900	.01700	.4210
56	188.8	114.82	.70	12.59304	.90413	-.95468	.08710	1.68000	.08830	2.44000	.41500	-.17290	.01580	.3040
57	189.6	114.86	.71	-	-	-	-	-	-	-	-	-	-	-
58	190.6	114.91	.71	-	-	-	-	-	-	-	-	-	-	-
59	191.5	114.94	.71	-	-	-	-	-	-	-	-	-	-	-
60	192.7	114.97	.70	23.68524	.95249	-2.25566	.08970	2.42000	.09000	1.64000	.14800	-.38900	.01540	.4170
61	193.3	114.99	.70	21.36361	1.39481	-2.61308	.12200	2.22000	.11000	1.58000	.15500	-.44500	.02080	.3780
62	194.6	115.00	.70	22.37199	.98534	-1.58752	.09320	2.28000	.10400	1.35000	.14300	-.26700	.01570	.3830
63	195.3	115.00	.70	21.97333	1.27045	-2.11761	.15100	2.26000	.13300	1.49000	.14700	-.35200	.02510	.3750
64	196.4	114.99	.70	-	-	-	-	-	-	-	-	-	-	-
65	197.4	114.97	.70	-	-	-	-	-	-	-	-	-	-	-
66	198.5	114.94	.70	6.80071	.45670	-5.49979	.03440	1.52000	.07670	12.80000	3.43000	-.88200	.00551	.2440
67	199.2	114.92	.70	22.48925	1.04809	-1.15525	.12200	2.48000	.10300	2.05000	.22800	-.18310	.01940	.3940
68	200.5	114.86	.71	22.13749	.98685	-.75280	.12100	2.82000	.11500	2.18000	.26200	-.11810	.01890	.4430
69	201.1	114.82	.71	20.09727	2.20460	-1.56752	.12800	2.32000	.17400	1.52000	.26200	-.24300	.01990	.3600
70	202.4	114.74	.71	21.01185	.94404	-1.03785	.10400	2.36000	.11100	1.46000	.15700	-.15910	.01590	.3620
71	203.1	114.69	.71	21.10565	1.49059	-1.90617	.15200	2.34000	.16800	1.43000	.18200	-.28900	.02300	.3550
72	204.2	114.60	.71	-	-	-	-	-	-	-	-	-	-	-
73	205.2	114.51	.71	-	-	-	-	-	-	-	-	-	-	-
74	206.3	114.39	.71	15.05537	.83316	-2.33580	.14800	2.41000	.13300	1.57000	.22100	-.34400	.02180	.3550
75	207.0	114.32	.71	15.66509	.93143	-2.57299	.16000	2.65000	.15700	1.47000	.18900	-.37500	.02340	.3860

θ (deg)	$\delta\theta$ (deg)	I_0 (MR)	δI_0 (MR)	r_{min} (m)	$A_0(2^{\text{nd}})$ (MR-m)	δA_0 (MR-m)	$y_0(2^{\text{nd}})$ (m)	δy_0 (m)	$\sigma(2^{\text{nd}})$ (m)	$\delta\sigma(2^{\text{nd}})$ (m)	<Dose> (eV/cm ²)
.84000	.00616	.00532	.00286	-	-	-	-	-	-	-	-
1.38000	.01190	.01320	.00337	3.45169	-	-	-	-	-	-	3.920E+12
1.19000	.00881	.02767	.00345	3.47339	-	-	-	-	-	-	6.799E+12
1.12000	.01060	.02426	.00350	3.69856	-	-	-	-	-	-	5.879E+12
1.26000	.01030	.03353	.00350	3.81447	-	-	-	-	-	-	7.989E+12
-	-	.00366	.00088	-	-	-	-	-	-	-	-
-	-	.00288	.00086	-	-	-	-	-	-	-	-
1.32000	.01270	.01623	.00349	4.64216	-	-	-	-	-	-	1.027E+13
1.25000	.01310	.03377	.00355	4.41942	-	-	-	-	-	-	8.076E+12
1.21000	.01430	.03049	.00347	4.52656	-	-	-	-	-	-	4.964E+12
1.17000	.01450	.03072	.00342	4.34754	-	-	-	-	-	-	3.938E+12
1.11000	.01480	.03236	.00345	4.41264	-	-	-	-	-	-	2.849E+12
-	-	.02369	.00052	-	-	-	-	-	-	-	-
-	-	.00446	.00010	-	-	-	-	-	-	-	-
-	-	.00908	.00020	-	-	-	-	-	-	-	-
.91700	.01410	.02509	.00328	4.09526	-	-	-	-	-	-	1.309E+12
.88400	.01400	.01616	.00323	4.18899	-	-	-	-	-	-	1.103E+12
.77400	.01440	.01782	.00317	3.77699	-	-	-	-	-	-	8.317E+11
.78600	.01490	.01688	.00316	3.93065	-	-	-	-	-	-	7.290E+11
-	-	.01081	.00024	-	-	-	-	-	-	-	-
-	-	.00401	.00009	-	-	-	-	-	-	-	-
-	-	.00424	.00009	-	-	-	-	-	-	-	-
.71500	.01490	.01745	.00312	3.93065	-	-	-	-	-	-	5.748E+11
.72300	.01470	.01665	.00312	3.98719	-	-	-	-	-	-	4.502E+11
.69000	.01530	.01501	.00314	3.96513	-	-	-	-	-	-	4.314E+11
.64700	.01480	.01278	.00308	3.85883	-	-	-	-	-	-	3.522E+11
.66400	.01450	.01290	.00309	3.88765	-	-	-	-	-	-	3.484E+11
-	-	.00371	.00008	-	-	-	-	-	-	-	-
-	-	.00305	.00007	-	-	-	-	-	-	-	-
.60800	.01570	.01114	.00311	4.04057	-	-	-	-	-	-	2.972E+11
.60500	.01520	.01365	.00309	3.92997	-	-	-	-	-	-	2.622E+11
.52800	.01870	.01248	.00306	3.25811	4.83085	1.27780	6.86000	.88600	2.80000	.47700	2.755E+11
.54900	.01450	.01210	.00308	3.82310	0.70587	0.15229	10.80000	.25700	1.11000	.29000	2.388E+11
.53200	.01970	.01027	.00308	2.83164	10.48247	2.32838	3.26000	.56000	3.87000	.24500	2.457E+11
-	-	.00847	.00019	-	-	-	-	-	-	-	-
-	-	.00340	.00007	-	-	-	-	-	-	-	-
-	-	.00565	.00012	-	-	-	-	-	-	-	-
.46300	.02150	.00936	.00310	2.90010	8.18430	1.76566	3.86000	.60200	4.75000	.35900	1.801E+11
.43900	.01900	.01029	.00313	2.71220	8.02015	1.40410	4.62000	.55400	4.50000	.29100	1.794E+11
.47700	.01700	.00929	.00306	3.39830	3.14240	.90550	9.42000	1.33000	3.55000	.81200	1.643E+11
.45400	.01910	.00783	.00303	3.39959	1.52195	.95034	13.50000	2.84000	4.77000	1.78000	1.501E+11
-	-	.00417	.00009	-	-	-	-	-	-	-	-
-	-	.00673	.00015	-	-	-	-	-	-	-	-
-	-	.00385	.00008	-	-	-	-	-	-	-	-
.42600	.01630	.00879	.00308	3.25811	2.53268	.48163	12.30000	.63200	2.64000	.50900	1.458E+11
.44600	.02590	.00807	.00310	3.36294	2.50923	1.94250	9.68000	4.81000	5.01000	2.45000	1.252E+11
.41300	.01600	.00849	.00305	3.60880	2.04256	.35229	11.60000	.40200	2.14000	.34200	1.300E+11
.48100	.01828	.00978	.00306	3.89061	.66600	.33098	14.10000	.84800	1.61000	.86200	1.102E+11
.42200	.01730	.00795	.00310	3.20256	3.11895	.59027	10.70000	.72600	2.99000	.54200	1.148E+11
-	-	.00347	.00008	-	-	-	-	-	-	-	-
-	-	.00244	.00005	-	-	-	-	-	-	-	-
.41700	.01530	.00610	.00322	3.18947	4.12733	.89574	7.52000	1.56000	6.84000	.81600	1.067E+11
.40000	.01620	.00837	.00308	3.17897	2.34587	.41362	10.90000	.66700	2.83000	.54100	1.053E+11
.39400	.01930	.00823	.00308	3.26105	2.55613	.72213	9.03000	1.47000	4.09000	.99600	8.903E+10
.42100	.01740	.01037	.00310	3.72195	1.65562	.42602	8.32000	.50300	1.96000	.42900	9.030E+10
.30400	.01600	.00689	.00310	2.22186	5.81578	.78207	2.05000	.57500	5.44000	.49300	7.323E+10
-	-	.00371	.00008	-	-	-	-	-	-	-	-
-	-	.00879	.00019	-	-	-	-	-	-	-	-
-	-	.01022	.00022	-	-	-	-	-	-	-	-
.41700	.01550	.00959	.00310	3.70278	1.25461	.24777	8.52000	.44800	2.11000	.47400	7.632E+10
.37800	.01870	.00532	.00307	3.45268	3.00169	1.18610	5.24000	2.36000	4.89000	1.40000	7.286E+10
.38300	.01740	.00830	.00310	3.82255	1.77287	.38423	9.66000	.76500	3.11000	.68400	6.724E+10
.37500	.02210	.00715	.00317	3.61033	2.69683	1.02885	5.21000	1.87000	4.03000	1.25000	6.904E+10
-	-	.00675	.00015	-	-	-	-	-	-	-	-
-	-	.00341	.00008	-	-	-	-	-	-	-	-
.24400	.01230	.00427	.00307	-	-	-	-	-	-	-	-
.39400	.01640	.00652	.00319	3.47611	2.00269	.43140	9.73000	.93400	3.76000	.87600	6.842E+10
.44300	.01810	.00901	.00313	3.86882	1.34138	.28295	9.47000	.34000	1.64000	.31800	5.924E+10
.36000	.02700	.00607	.00331	3.67202	1.96986	2.10398	8.67000	4.93000	4.99000	2.09000	5.600E+10
.36200	.01700	.00586	.00322	3.80451	1.00838	.24022	11.10000	.59700	2.34000	.63300	5.533E+10
.35500	.02250	.00396	.00324	3.81216	3.23620	1.20045	4.20000	3.27000	5.81000	2.03000	5.498E+10
-	-	.00464	.00010	-	-	-	-	-	-	-	-
-	-	.00504	.00011	-	-	-	-	-	-	-	-
.35500	.01960	.00591	.00319	3.75882	1.32497	.38570	10.10000	1.26000	3.46000	1.09000	3.777E+10
.38600	.02290	.00455	.00319	4.26040	.52530	.16012	10.90000	.62500	1.69000	.63800	3.432E+10

2

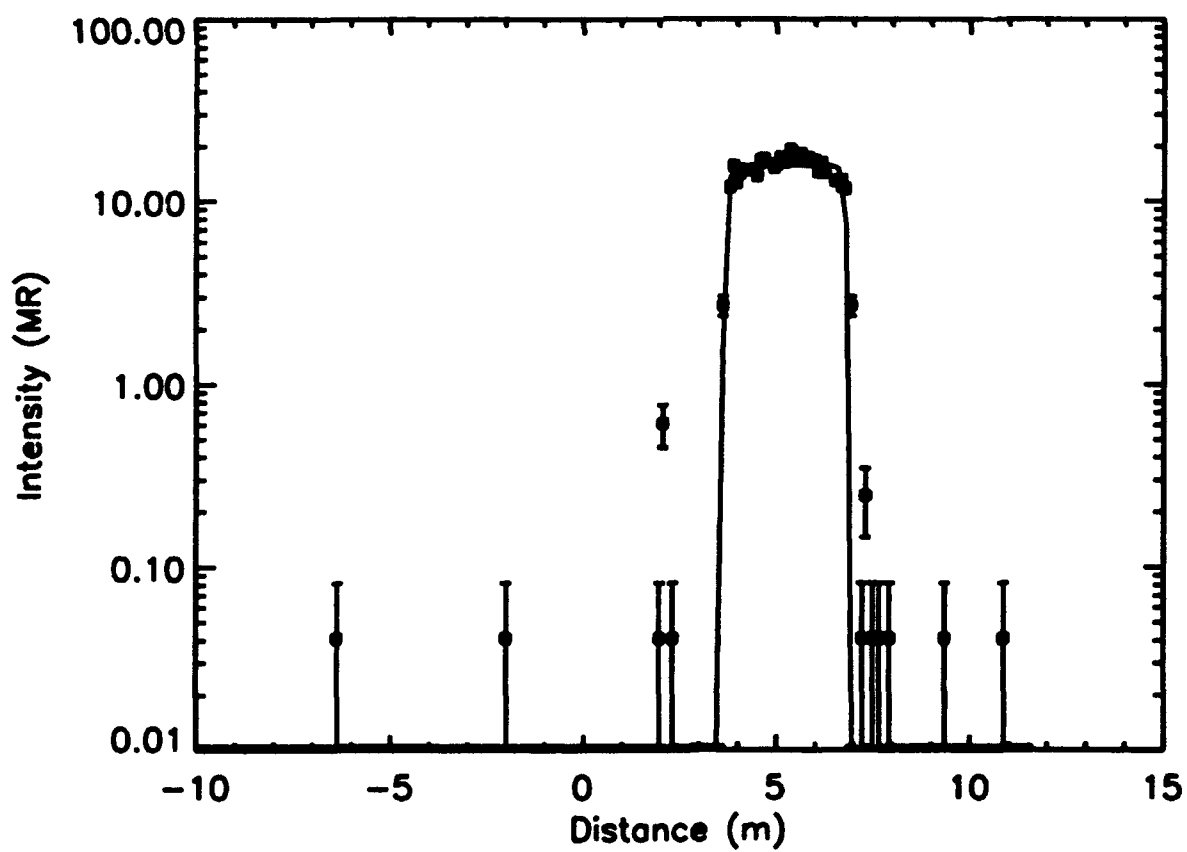
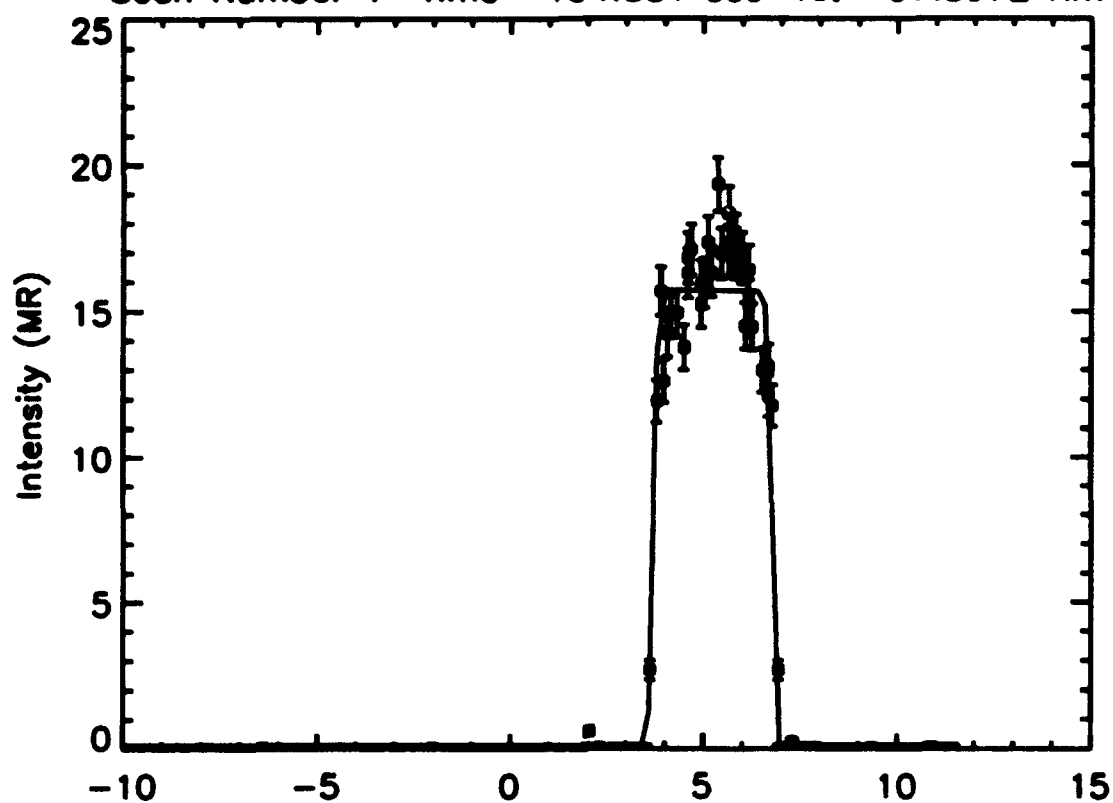
SCAN #	TIME (s)	ALT. (km)	SINO	A _x (mm-m)	A _z (mm-m)	y _o (m)	y _z (m)	u (m)	u _z (m)	p	p _z	γ _o (deg)	γ _z (deg)
76	208.3	114.17	.71	15.61818	.97260	-2.65089	.14400	2.40000	.15200	1.47000	.21000	-.38200	.02080
77	208.9	114.08	.71	15.68854	.89688	-3.21616	.14600	2.52000	.14900	1.79000	.25200	-.46000	.02080
78	210.2	113.90	.71	15.43058	.82577	-3.03439	.15100	2.64000	.14600	1.50000	.18500	-.42900	.02130
79	211.0	113.78	.70	-	-	-	-	-	-	-	-	-	-
80	212.0	113.63	.70	-	-	-	-	-	-	-	-	-	-
81	212.8	113.49	.70	11.53776	.72370	-4.73588	.17000	2.92000	.16900	2.41000	.43100	-.65000	.02340
82	214.1	113.27	.70	14.51600	.79402	-3.33315	.14500	2.65000	.14300	1.46000	.19400	-.45300	.01970
83	214.8	113.14	.70	12.63994	.82894	-4.70132	.18600	2.82000	.19000	2.11000	.33900	-.63200	.02500
84	216.1	112.90	.70	17.86945	.99980	-4.32750	.15400	2.66000	.15100	1.49000	.17500	-.57700	.02050
85	216.8	112.76	.70	17.07213	.91544	-4.87589	.14100	2.75000	.16000	1.55000	.20200	-.64300	.01860
86	217.9	112.52	.70	-	-	-	-	-	-	-	-	-	-
87	218.9	112.31	.70	-	-	-	-	-	-	-	-	-	-
88	220.0	112.04	.70	25.56129	1.10174	-4.11582	.10300	2.75000	.11000	1.84000	.18200	-.52900	.01320
89	220.7	111.89	.70	23.91974	1.46933	-5.19357	.14600	2.67000	.14000	1.60000	.18100	-.66100	.01860
90	221.9	111.57	.70	22.23129	2.46444	-5.27048	.14100	2.52000	.17600	1.61000	.23300	-.66500	.01780
91	222.6	111.39	.70	22.55960	1.30572	-5.96800	.15700	2.76000	.15000	2.05000	.25300	-.74600	.01970
92	223.9	111.05	.70	24.62326	1.08931	-5.72564	.12700	3.00000	.12000	1.80000	.19400	-.70900	.01580
93	224.6	110.87	.70	11.13910	.82070	-8.86190	.12700	1.57000	.14300	3.01000	.65500	-1.08900	.01560
94	225.7	110.54	.70	-	-	-	-	-	-	-	-	-	-
95	226.7	110.26	.70	-	-	-	-	-	-	-	-	-	-
96	227.8	109.91	.70	27.20284	1.24389	-6.56462	.12400	2.87000	.13800	1.55000	.16600	-.78500	.01490
97	228.5	109.70	.70	24.15425	1.17315	-7.13024	.13300	2.86000	.14100	1.95000	.24000	-.84700	.01580
98	229.8	109.29	.70	27.90636	1.24324	-6.97850	.14600	3.22000	.13900	1.89000	.20700	-.82100	.01720
99	230.4	109.07	.70	29.54792	2.70573	-5.74470	.16000	3.06000	.18700	1.66000	.19900	-.67100	.01870
100	231.6	108.68	.70	-	-	-	-	-	-	-	-	-	-
101	232.5	108.34	.70	-	-	-	-	-	-	-	-	-	-
102	233.5	107.98	.70	-	-	-	-	-	-	-	-	-	-
103	234.3	107.68	.70	40.56976	1.78463	4.77660	.12300	3.22000	.12000	1.84000	.18400	.54000	.01390
104	235.6	107.21	.70	39.86624	1.66399	5.35934	.11200	2.91000	.13000	1.33000	.11600	.60100	.01250
105	236.3	106.93	.70	36.34863	1.64703	4.20136	.12800	3.17000	.12400	1.68000	.15600	.46700	.01420
106	237.5	106.44	.70	37.75567	1.60775	4.70448	.13000	3.47000	.11500	2.19000	.21300	.51900	.01430
107	238.2	106.15	.70	39.16272	1.66189	3.58604	.12600	3.13000	.13100	1.68000	.15300	.39200	.01380
108	239.4	105.69	.70	-	-	-	-	-	-	-	-	-	-
109	240.3	105.28	.70	-	-	-	-	-	-	-	-	-	-
110	241.5	104.79	.70	53.23315	1.94838	-3.13526	.10200	3.18000	.09860	1.67000	.13000	-.33500	.01090
111	242.1	104.49	.70	56.04724	2.05306	-3.85097	.11300	3.48000	.10900	1.90000	.14400	-.40900	.01200
112	243.4	103.91	.70	61.90992	2.75257	-3.37851	.14800	3.57000	.15300	1.80000	.18100	-.35600	.01560
113	244.1	103.60	.70	65.42753	2.66420	-4.18792	.15400	3.79000	.14100	1.87000	.15800	-.43700	.01610
114	245.4	103.00	.70	79.02895	2.97609	-1.98152	.11000	3.72000	.11900	1.61000	.10900	-.28600	.01150
115	246.2	102.61	.70	-	-	-	-	-	-	-	-	-	-
116	247.2	102.12	.70	-	-	-	-	-	-	-	-	-	-
117	248.1	101.64	.70	-	-	-	-	-	-	-	-	-	-
118	249.3	101.07	.70	81.13951	3.67535	.10902	.15300	4.01000	.17000	1.75000	.16400	.01100	.01540
119	249.9	100.71	.70	87.47121	3.33214	-.77170	.14300	4.23000	.13300	2.27000	.21600	-.07750	.01430
120	251.2	100.05	.71	87.47121	3.33214	-1.30799	.12400	4.18000	.15200	1.64000	.12600	-.12990	.01240
121	251.9	99.69	.72	96.61700	3.67807	-4.11325	.14700	4.46000	.16700	2.10000	.20200	-.40600	.01450
122	253.0	99.07	.74	-	-	-	-	-	-	-	-	-	-
123	254.0	98.53	.76	-	-	-	-	-	-	-	-	-	-
124	255.0	97.98	.78	-	-	-	-	-	-	-	-	-	-
125	255.8	97.50	.79	140.23540	5.17178	3.31912	.15700	4.32000	.12900	1.58000	.09240	.31900	.01510
126	257.0	96.78	.81	138.12480	4.40518	9.03740	.12100	4.83000	.13300	1.59000	.09590	.85900	.01150
127	257.8	96.35	.82	195.57910	10.08616	10.23337	.13200	3.91000	.25000	1.28000	.12800	.96900	.01250
128	259.0	95.62	.84	162.04450	6.04165	14.12643	.20300	5.37000	.16300	2.32000	.16900	1.32900	.01910
129	259.8	95.16	.85	216.21570	6.69661	14.11887	.11900	4.67000	.10300	1.65000	.09270	1.31900	.01110
130	260.9	94.46	.86	-	-	-	-	-	-	-	-	-	-
131	261.8	93.89	.87	-	-	-	-	-	-	-	-	-	-
132	262.9	93.19	.89	300.16930	8.29422	18.80169	.08510	4.62000	.08170	1.80000	.07760	1.72900	.00780
133	263.6	92.70	.89	354.10600	9.73580	17.89075	.08480	4.56000	.08710	1.70000	.06730	1.62900	.00773
134	264.8	91.92	.91	457.28920	12.09105	15.48227	.06900	4.32000	.07370	1.48000	.05230	1.39900	.00625
135	265.6	91.42	.91	236.85230	7.41569	11.28179	.13700	4.41000	.09990	1.76000	.10200	1.01900	.01240
136	266.8	90.60	.92	684.76120	17.70936	8.46111	.05630	3.79000	.05740	1.68000	.05740	.75700	.00503
137	267.7	90.02	.93	-	-	-	-	-	-	-	-	-	-
138	268.6	89.34	.94	-	-	-	-	-	-	-	-	-	-
139	269.6	88.66	.95	-	-	-	-	-	-	-	-	-	-
140	270.7	87.87	.96	4.73705	1.26828	3.45177	.90200	7.84000	.49000	.73400	.38800	.30100	.07860
141	271.6	87.27	.96	-	-	-	-	-	-	-	-	-	-
142	272.5	86.54	.96	-	-	-	-	-	-	-	-	-	-
143	273.5	85.84	.95	-	-	-	-	-	-	-	-	-	-
144	274.5	85.09	.95	-	-	-	-	-	-	-	-	-	-
145	275.5	84.37	.95	-	-	-	-	-	-	-	-	-	-
146	276.5	83.60	.95	-	-	-	-	-	-	-	-	-	-
147	277.3	82.92	.95	675.38090	19.59889	34.38936	.06490	4.68000	.10600	1.51000	.06980	2.86900	.00542
148	278.5	81.98	.95	103.41770	4.01370	.21630	.26500	7.59000	.25900	1.77000	.16400	.01800	.02200
149	279.2	81.47	.94	210.82200	6.62959	-30.12643	.13500	5.59000	.14400	1.56000	.08230	-2.48100	.01120
150	280.4	80.52	-	-	-	-	-	-	-	-	-	-	-

θ (deg)	θ_y (deg)	I (NR)	I_z (NR)	r_{mm} (m)	$A_z(2^{nd})$ (NR-m)	ΔA_z (NR-m)	$y_z(2^{nd})$ (m)	θ_y (m)	$\theta(2^{nd})$ (m)	$\theta_z(2^{nd})$ (m)	$\langle D_{000} \rangle$ (eV/cm ²)
.34600	.02190	.00497	.00324	3.85848	1.23820	.61736	8.58000	3.78000	6.20000	3.19000	3.705E+10
.36000	.02120	.00612	.00319	3.71813	1.32497	.37167	10.80000	1.50000	4.18000	1.49000	3.822E+10
.37200	.02070	.00497	.00324	4.20421	.83250	.34755	10.70000	2.38000	4.40000	2.48000	3.261E+10
-	-	.00462	.00010	-	-	-	-	-	-	-	-
-	-	.00628	.00014	-	-	-	-	-	-	-	-
.40000	.02320	.00455	.00324	3.87678	.69649	.27246	7.67000	1.29000	2.97000	1.36000	2.545E+10
.36000	.01940	.00382	.00317	4.27425	.85361	.19508	10.50000	.34700	1.31000	.32300	2.852E+10
.37900	.02560	.00511	.00321	3.91259	.96851	.27988	8.37000	1.15000	3.57000	1.14000	2.688E+10
.35500	.02010	.00392	.00326	4.24932	1.15143	.58916	11.00000	3.45000	5.40000	2.93000	3.437E+10
.36300	.02110	.00368	.00326	4.31394	.92161	.24940	10.10000	.78900	2.41000	.71900	3.206E+10
-	-	.00363	.00008	-	-	-	-	-	-	-	-
-	-	.00809	.00018	-	-	-	-	-	-	-	-
.35300	.01410	.00556	.00329	4.01351	.98962	.23341	11.50000	.64100	2.13000	.63400	4.944E+10
.33900	.01780	.00628	.00354	4.12949	1.93703	1.09129	8.31000	5.80000	4.32000	5.63000	4.459E+10
.31800	.02220	.00633	.00336	3.88684	3.33000	2.26418	3.06000	7.20000	7.52000	4.06000	4.332E+10
.34500	.01880	.00600	.00338	3.86858	2.72028	.74579	6.32000	1.75000	5.36000	1.65000	4.382E+10
.37200	.01480	.00699	.00329	4.41652	1.27103	.33417	10.60000	1.20000	3.74000	1.22000	4.124E+10
.19300	.01760	.00415	.00317	1.95474	-	-	-	-	-	-	4.183E+10
-	-	.00448	.00010	-	-	-	-	-	-	-	-
-	-	.00521	.00011	-	-	-	-	-	-	-	-
.34400	.01650	.00675	.00333	4.50218	1.24289	.29908	11.30000	1.23000	4.52000	1.18000	4.272E+10
.33900	.01680	.00786	.00343	4.08258	1.42346	.34147	7.58000	.86000	3.18000	.82800	4.153E+10
.37900	.01640	.00638	.00336	4.65100	1.50319	.38835	8.09000	1.51000	5.16000	1.55000	4.153E+10
.35700	.02180	.00631	.00345	4.65775	3.21275	2.53366	6.13000	7.03000	7.48000	4.04000	4.357E+10
-	-	.01173	.00026	-	-	-	-	-	-	-	-
-	-	.00363	.00008	-	-	-	-	-	-	-	-
-	-	.00119	.00003	-	-	-	-	-	-	-	-
.36400	.01410	.00685	.00343	4.69946	1.56416	.39080	21.80000	1.05000	3.71000	1.07000	5.682E+10
.32600	.01450	.00865	.00350	4.91641	1.19364	.27329	22.60000	.54100	2.43000	.51500	5.272E+10
.35200	.01380	.00680	.00352	4.80072	1.81743	.35178	22.30000	.74800	3.42000	.76700	4.889E+10
.38300	.01270	.00727	.00347	4.75318	1.82916	.32379	22.60000	.73600	3.86000	.74300	5.068E+10
.34300	.01430	.00884	.00369	4.74014	2.39197	.36031	21.90000	.57600	3.47000	.49500	5.236E+10
-	-	.00525	.00012	-	-	-	-	-	-	-	-
-	-	.00231	.00005	-	-	-	-	-	-	-	-
.34100	.01060	.00711	.00385	4.82805	2.10353	.38504	14.80000	.62000	3.46000	.64300	6.793E+10
.36900	.01160	.00692	.00373	5.01644	3.91627	.84861	12.50000	.92600	4.10000	.88800	6.843E+10
.37600	.01610	.00943	.00402	5.25565	2.26300	.69359	15.00000	1.72000	4.77000	1.44000	7.134E+10
.39700	.01480	.00917	.00387	5.49672	2.39197	.45332	15.70000	.75600	3.75000	.70400	7.165E+10
.38600	.01240	.00793	.00401	5.73772	1.48209	.36261	16.80000	.47500	2.02000	.50300	8.203E+10
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-	-	.00469	.00010	-	-	-	-	-	-	-	-
-	-	.00460	.00010	-	-	-	-	-	-	-	-
.40500	.01710	.01128	.00399	5.97082	3.84592	.74586	20.70000	1.33000	5.47000	1.14000	7.833E+10
.42400	.01340	.00729	.00387	5.72518	6.40205	.86283	18.20000	.65000	4.16000	.52100	8.761E+10
.41500	.01510	.00790	.00390	6.39571	4.52599	.75235	19.60000	.52800	3.34000	.51000	7.856E+10
.44000	.01650	.00861	.00404	6.19829	5.34677	.83148	14.60000	.82500	4.23000	.73200	9.050E+10
-	-	.00961	.00021	-	-	-	-	-	-	-	-
-	-	.00242	.00005	-	-	-	-	-	-	-	-
-	-	.00317	.00007	-	-	-	-	-	-	-	-
.41500	.01240	.00926	.00404	6.71874	7.19937	1.07174	23.70000	.95600	5.28000	.81000	1.289E+11
.46100	.01270	.00877	.00399	7.49091	5.81578	.87938	30.80000	.68700	3.55000	.53900	1.155E+11
.37100	.02370	.01046	.00399	6.74072	7.17592	.79441	33.30000	.34300	2.86000	.32100	1.835E+11
.50600	.01530	.01076	.00395	7.21662	15.75889	3.16146	32.50000	1.79000	6.70000	1.01000	1.435E+11
.43700	.00959	.01100	.00397	7.12679	10.97494	1.41605	34.10000	.74500	4.72000	.59700	1.949E+11
-	-	.00645	.00014	-	-	-	-	-	-	-	-
-	-	.00500	.00011	-	-	-	-	-	-	-	-
.42400	.00749	.01018	.00390	6.80143	20.96495	1.79787	40.40000	.57300	5.48000	.44200	2.894E+11
.41600	.00794	.01278	.00407	6.87151	23.40382	2.22718	39.20000	.56100	5.16000	.38700	3.393E+11
.39100	.00667	.01660	.00400	6.92303	23.91974	1.99140	36.50000	.47800	4.97000	.49000	4.367E+11
.39700	.00898	.01168	.00399	6.55120	32.83102	2.13558	31.70000	.39800	5.26000	.32200	2.396E+11
.33800	.00513	.01259	.00402	5.73966	38.69370	2.12657	30.30000	.25200	4.39000	.25100	7.942E+11
-	-	.00492	.00011	-	-	-	-	-	-	-	-
-	-	.00258	.00006	-	-	-	-	-	-	-	-
-	-	.00521	.00011	-	-	-	-	-	-	-	-
.68400	.30400	.00560	.00448	19.96457	-	-	-	-	-	-	1.588E+09
-	-	.01037	.00023	-	-	-	-	-	-	-	-
-	-	.01187	.00026	-	-	-	-	-	-	-	-
-	-	.01728	.00038	-	-	-	-	-	-	-	-
-	-	.01086	.00024	-	-	-	-	-	-	-	-
-	-	.00148	.00003	-	-	-	-	-	-	-	-
-	-	.00976	.00021	-	-	-	-	-	-	-	-
.39200	.00885	.01461	.00407	7.42996	22.93481	2.05163	58.50000	.61200	5.28000	.41800	5.781E+11
.63000	.02150	.01062	.00397	11.24936	6.58965	1.23967	29.20000	1.37000	6.16000	1.22000	5.775E+10
.46100	.01190	.01592	.00393	8.74364	10.20107	1.78237	-4.85000	1.05000	5.13000	.69400	1.487E+11
-	-	.01998	.00044	-	-	-	-	-	-	-	-

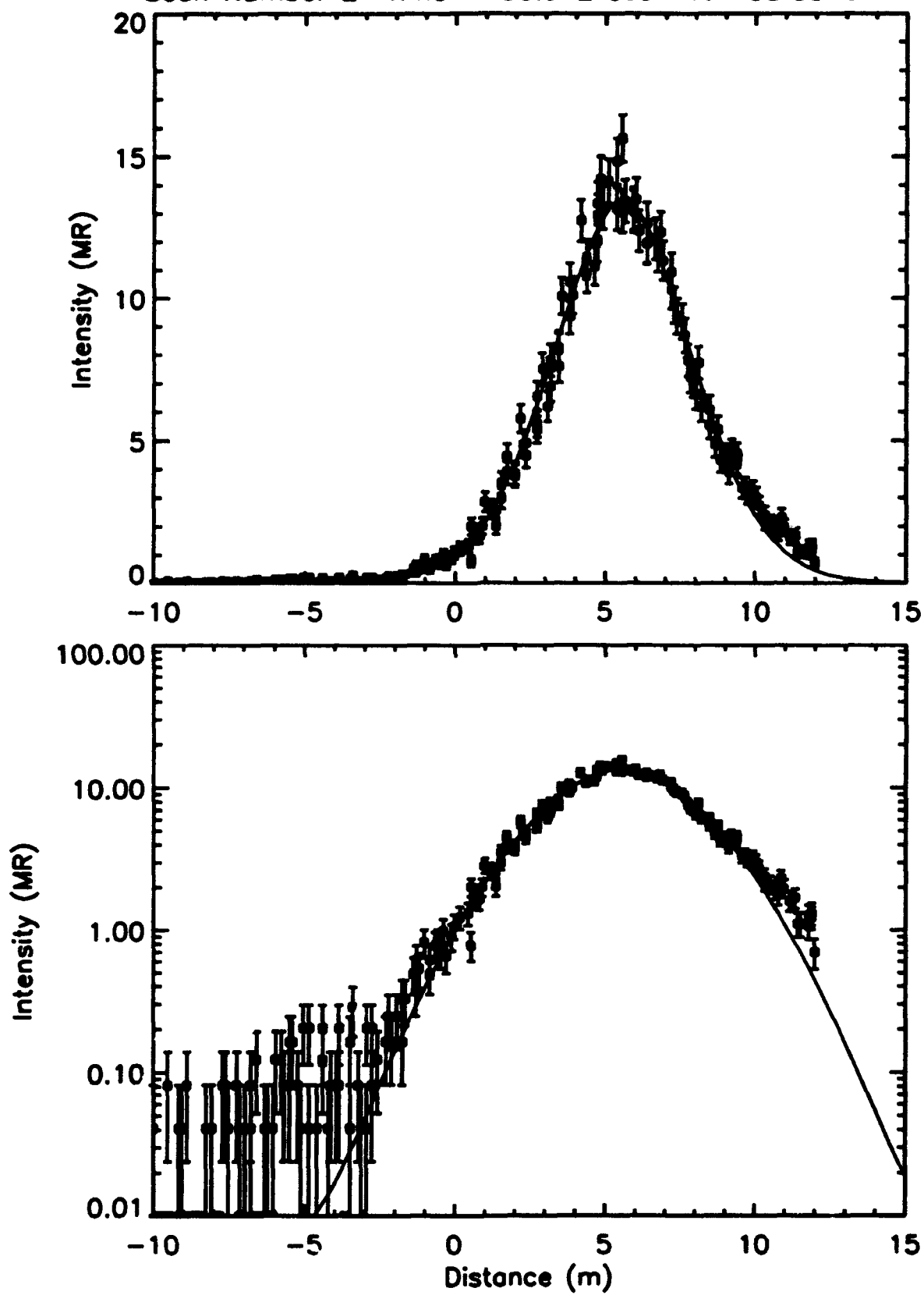
2

**Appendix C: Catalog of 3914 Å Scanning Photometer Data
and Corresponding Fits**

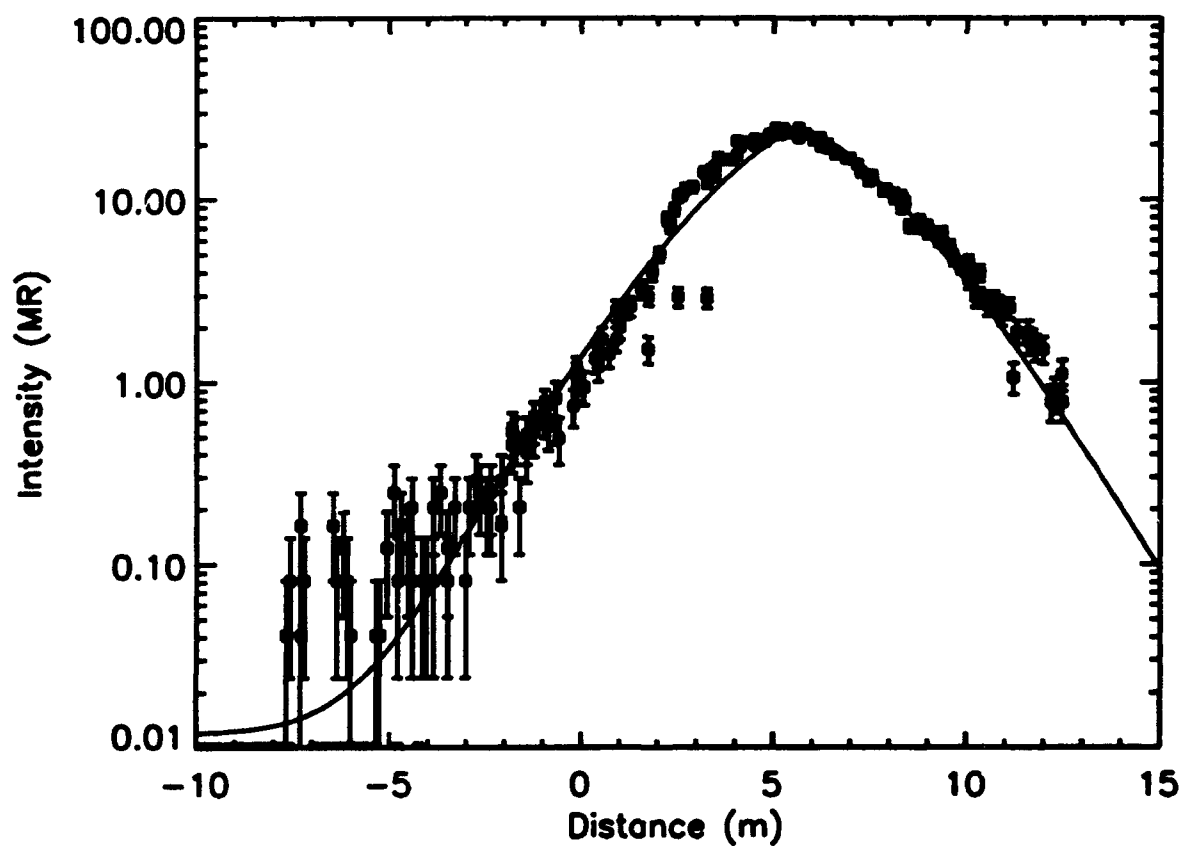
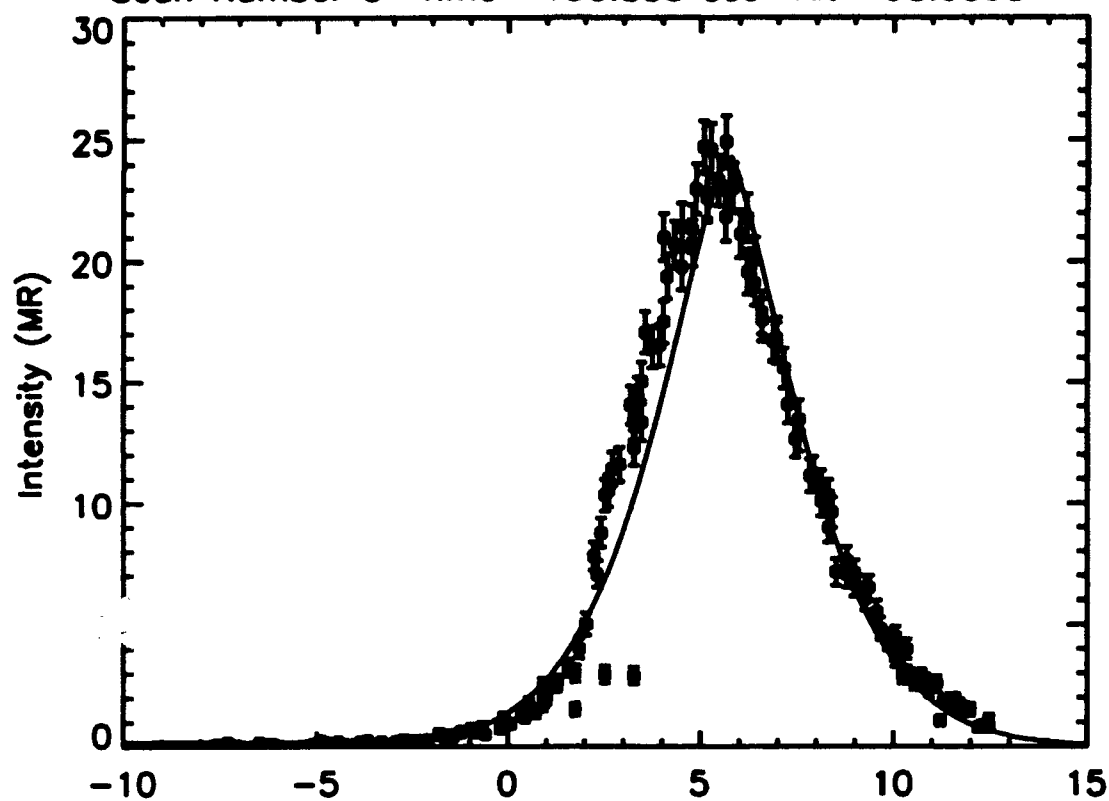
EXCEDE III 3914 A Scanning Photometer
Scan Number 1 Time= 134.881 sec Alt= 97.8972 Km



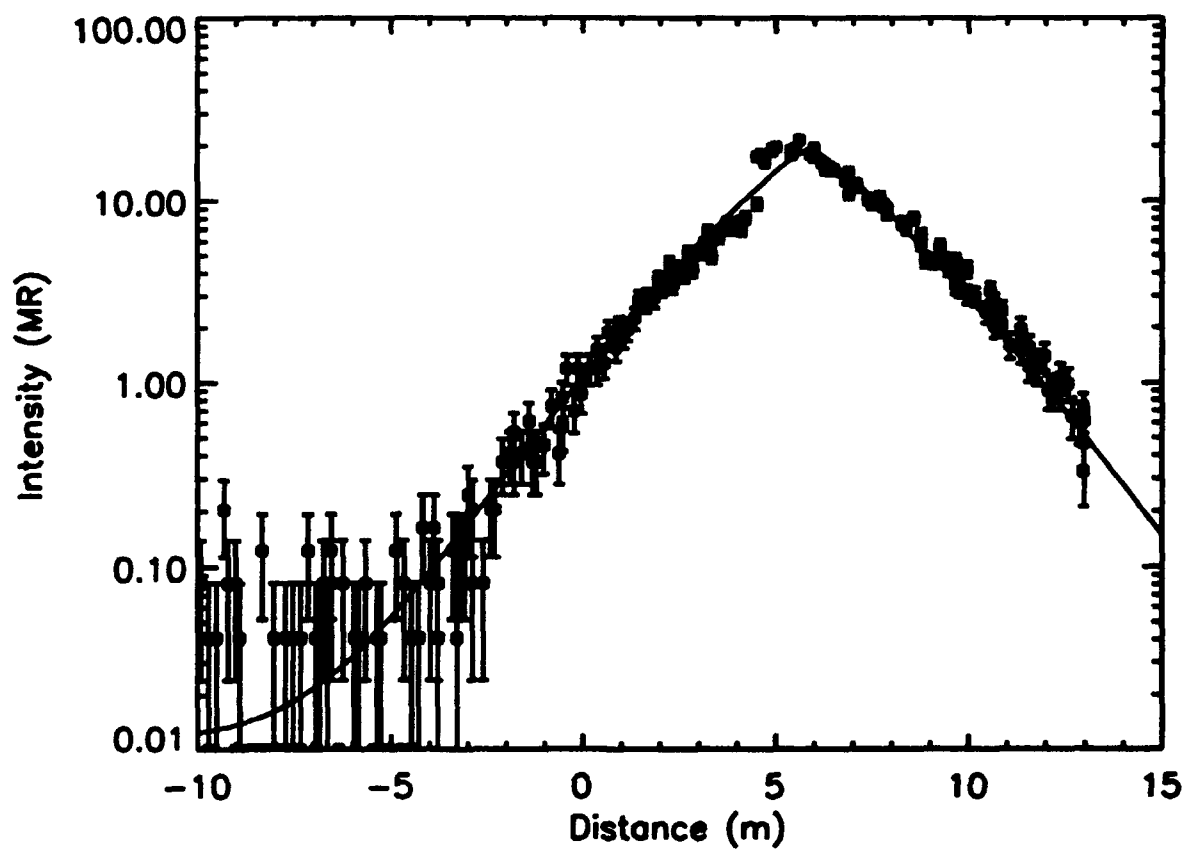
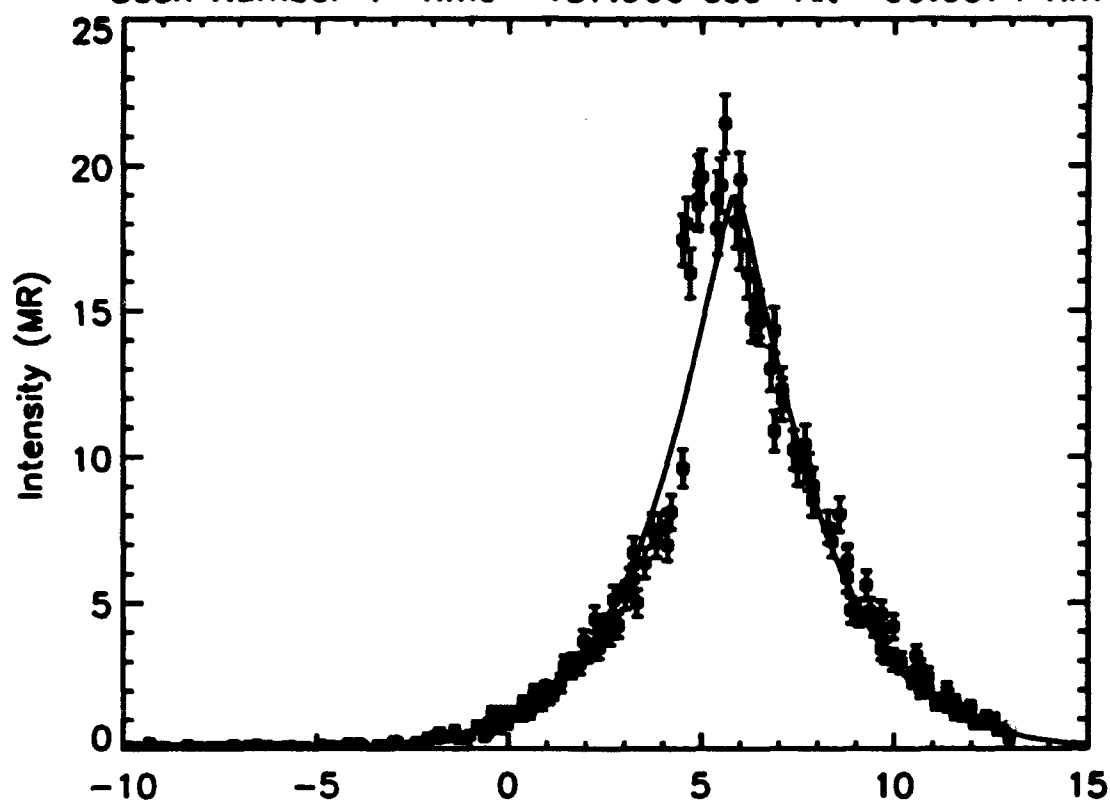
EXCEDE III 3914 A Scanning Photometer
Scan Number 2 Time= 136.012 sec Alt= 98.5346 Km



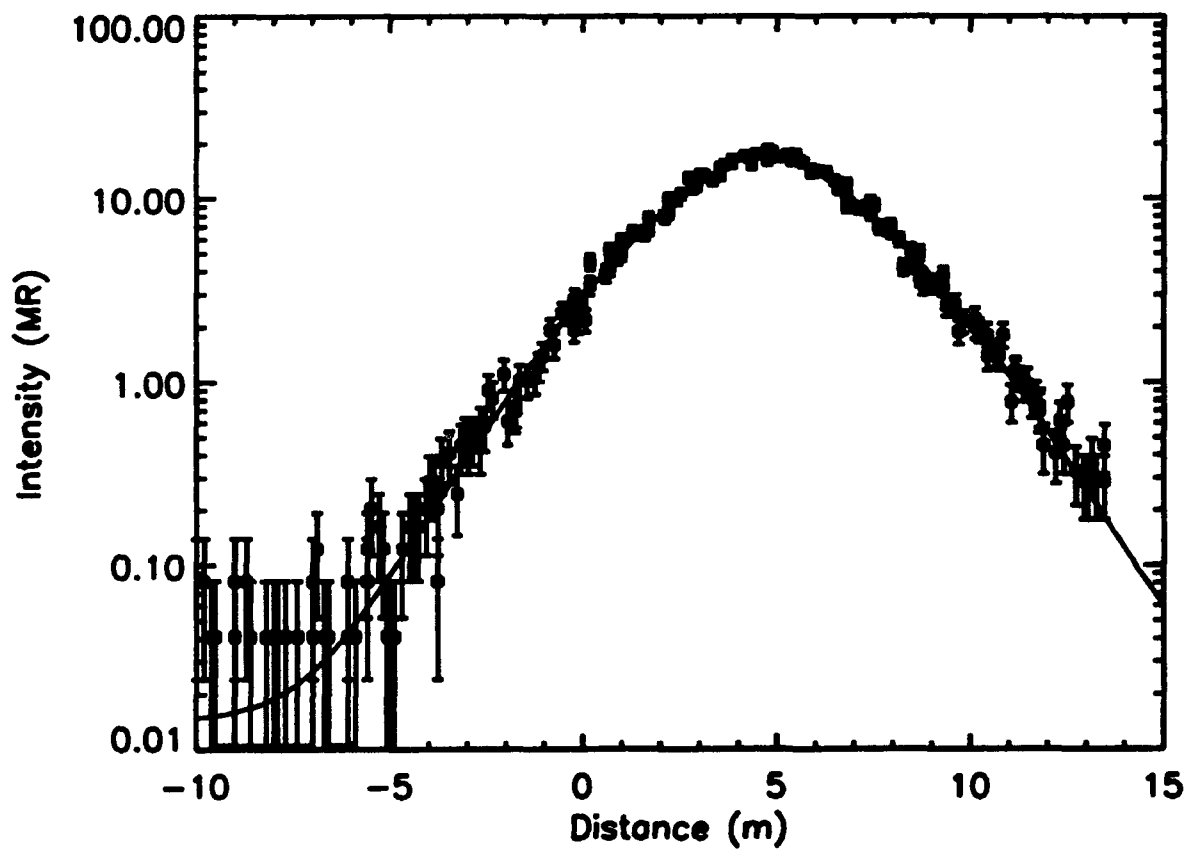
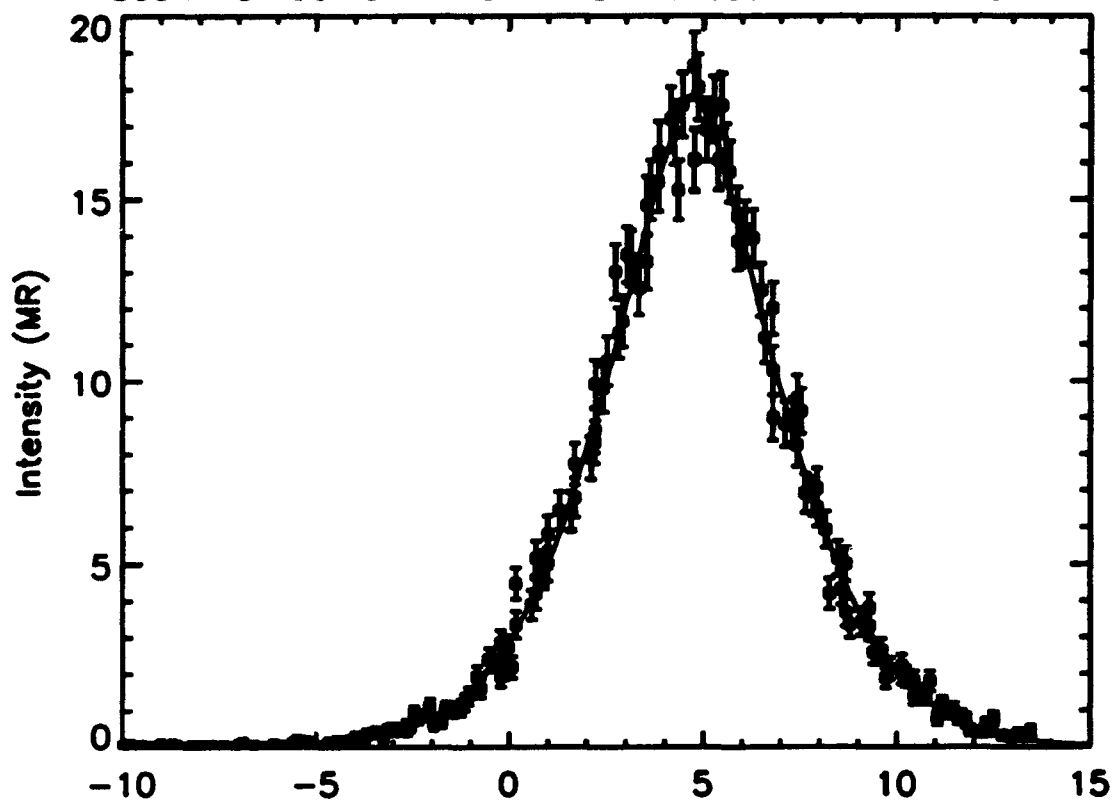
EXCEDE III 3914 A Scanning Photometer
Scan Number 3 Time= 136.833 sec Alt= 98.9898 Km



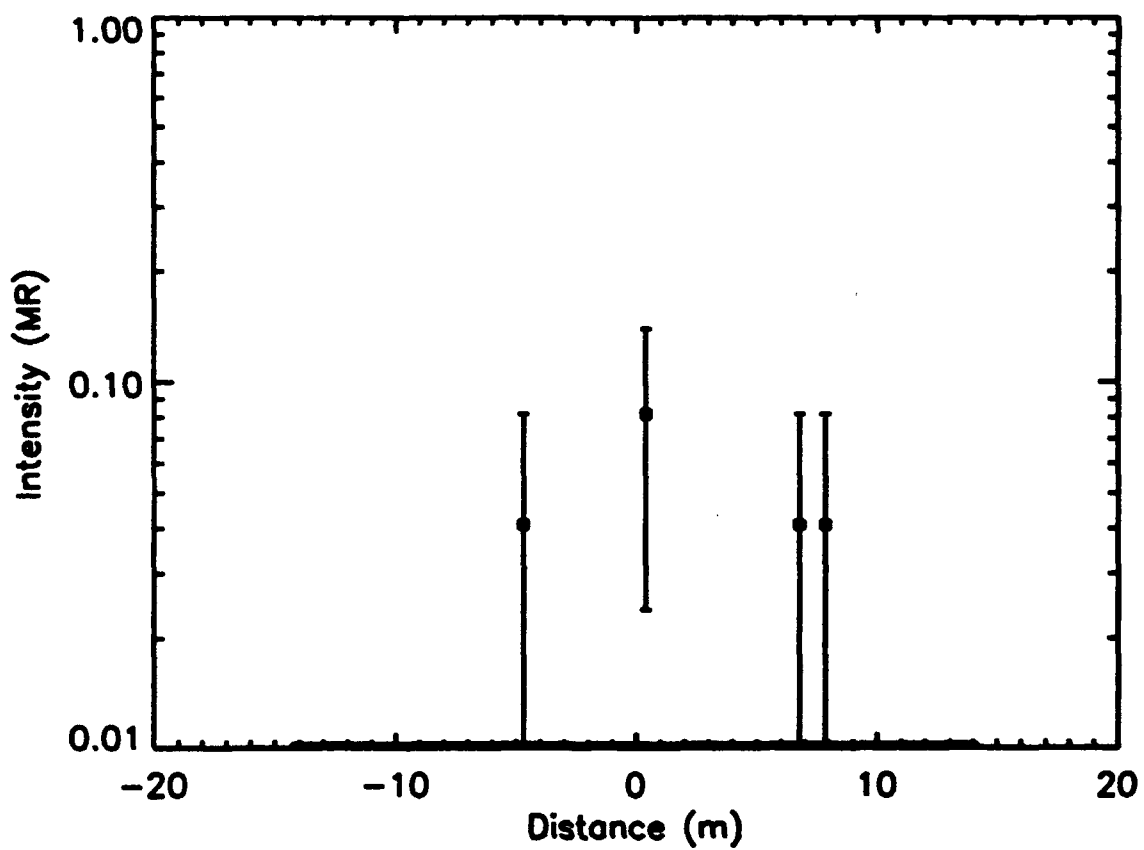
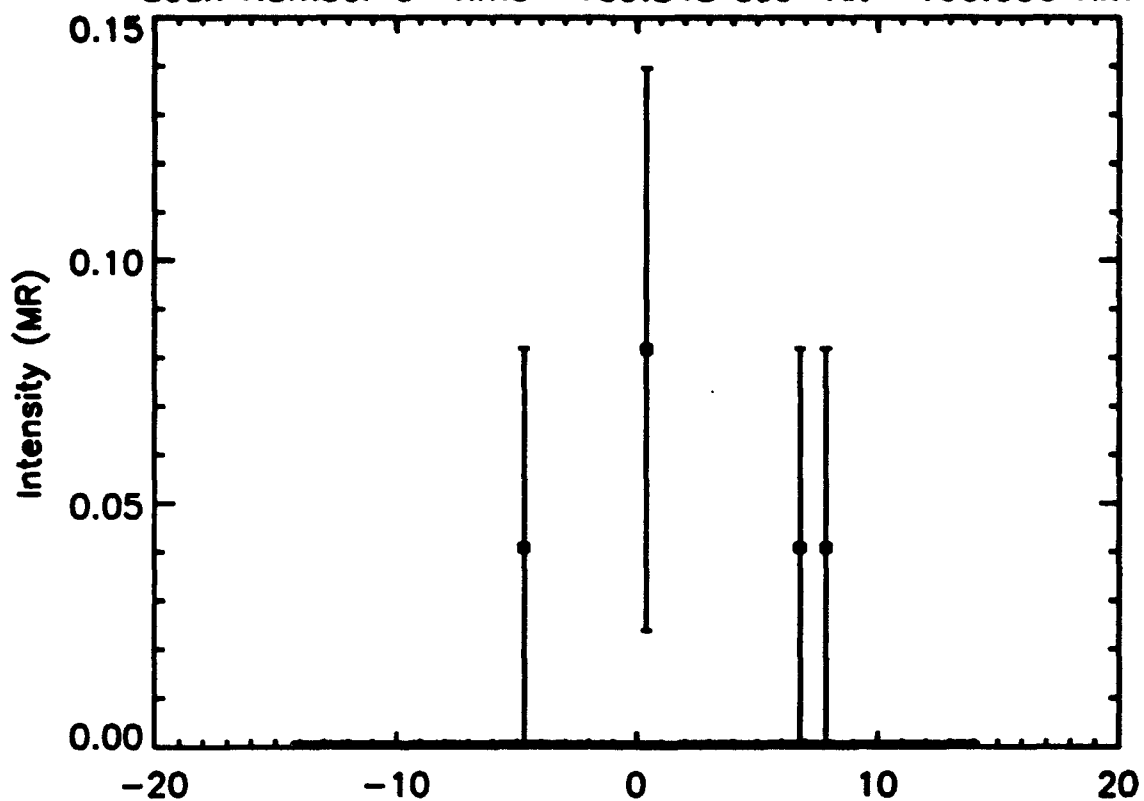
EXCEDE III 3914 A Scanning Photometer
Scan Number 4 Time= 137.966 sec Alt= 99.6074 Km



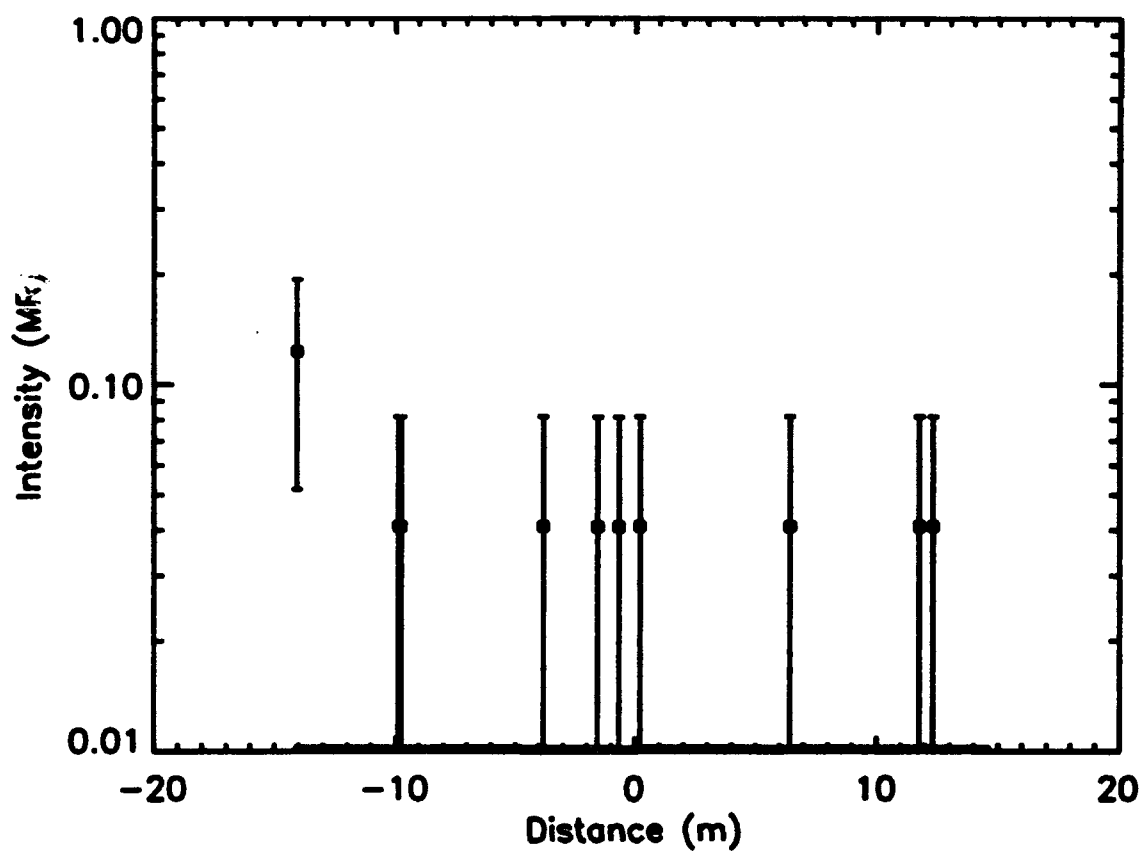
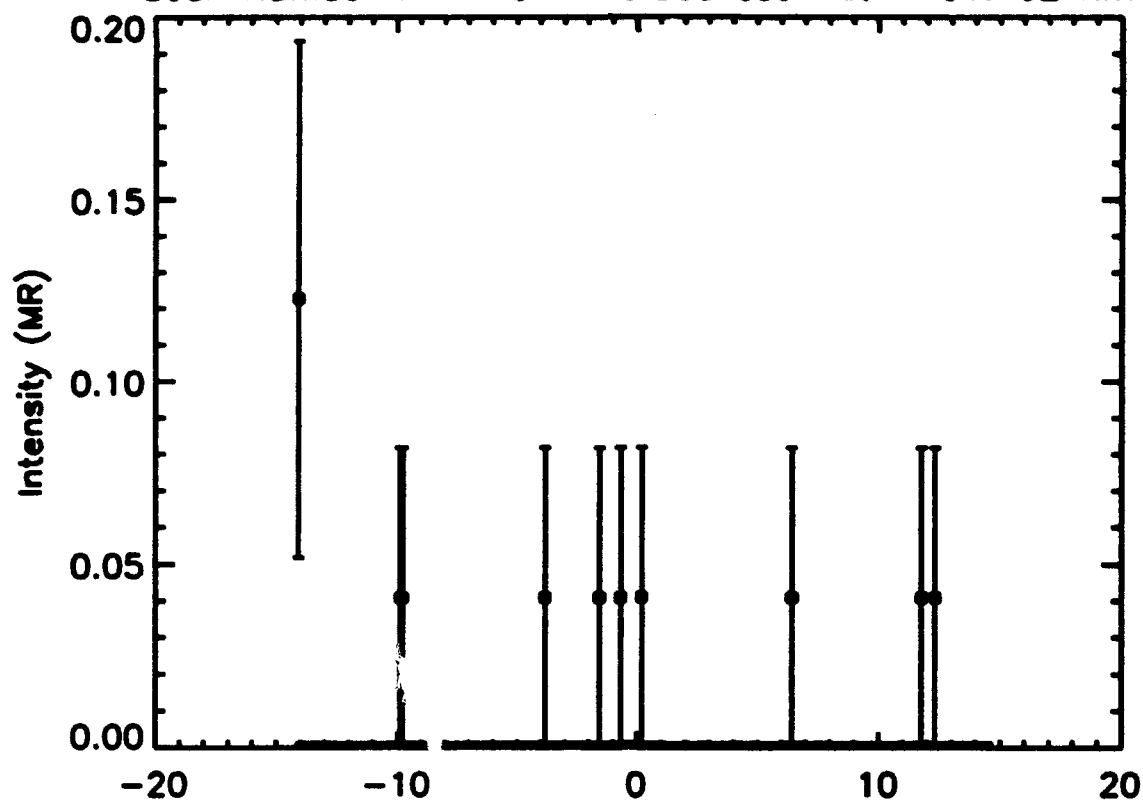
EXCEDE III 3914 A Scanning Photometer
Scan Number 5 Time= 138.768 sec Alt= 100.037 Km



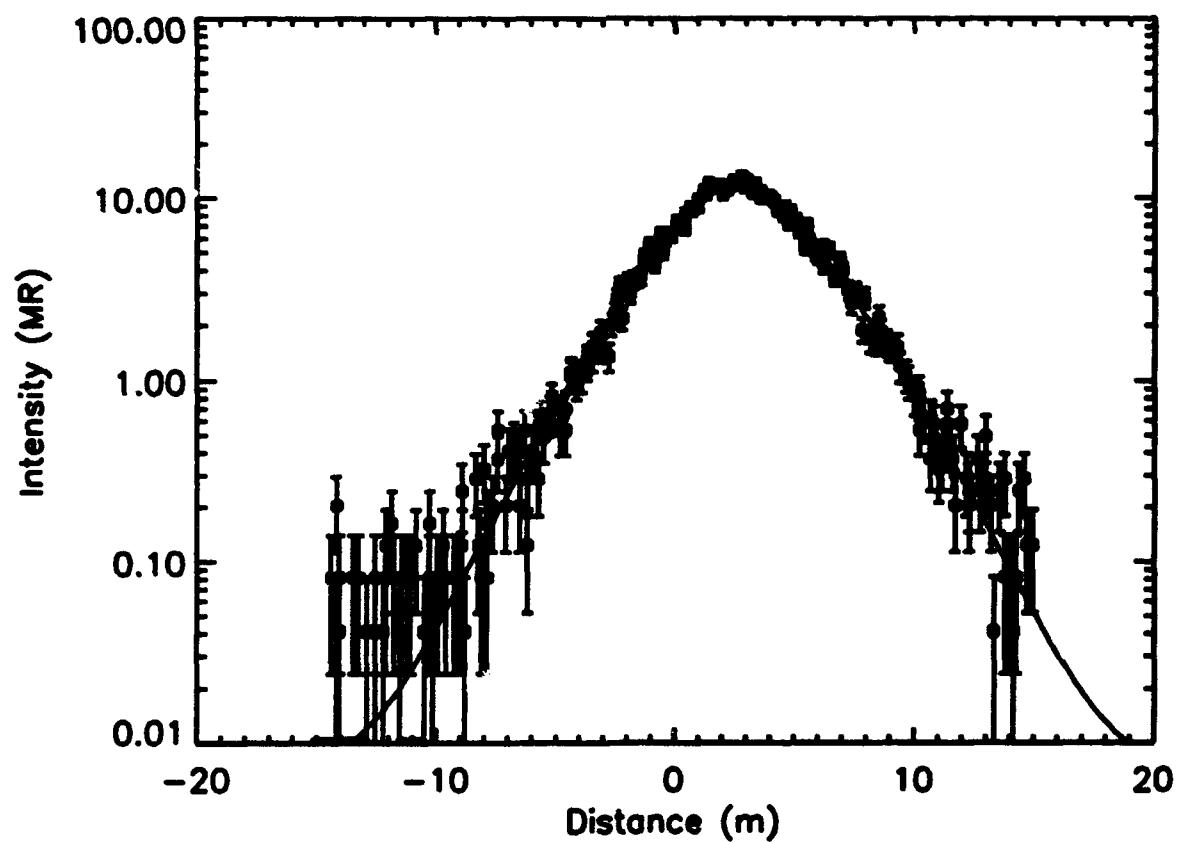
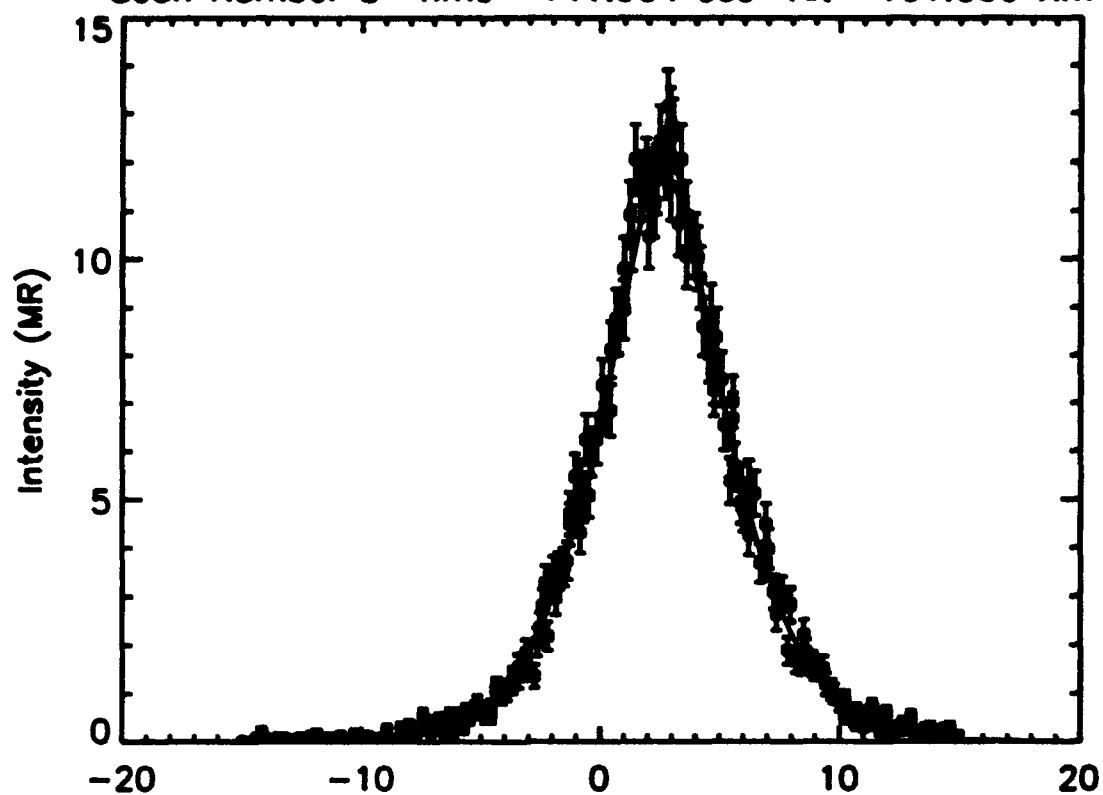
EXCEDE III 3914 A Scanning Photometer
Scan Number 6 Time= 139.848 sec Alt= 100.606 Km



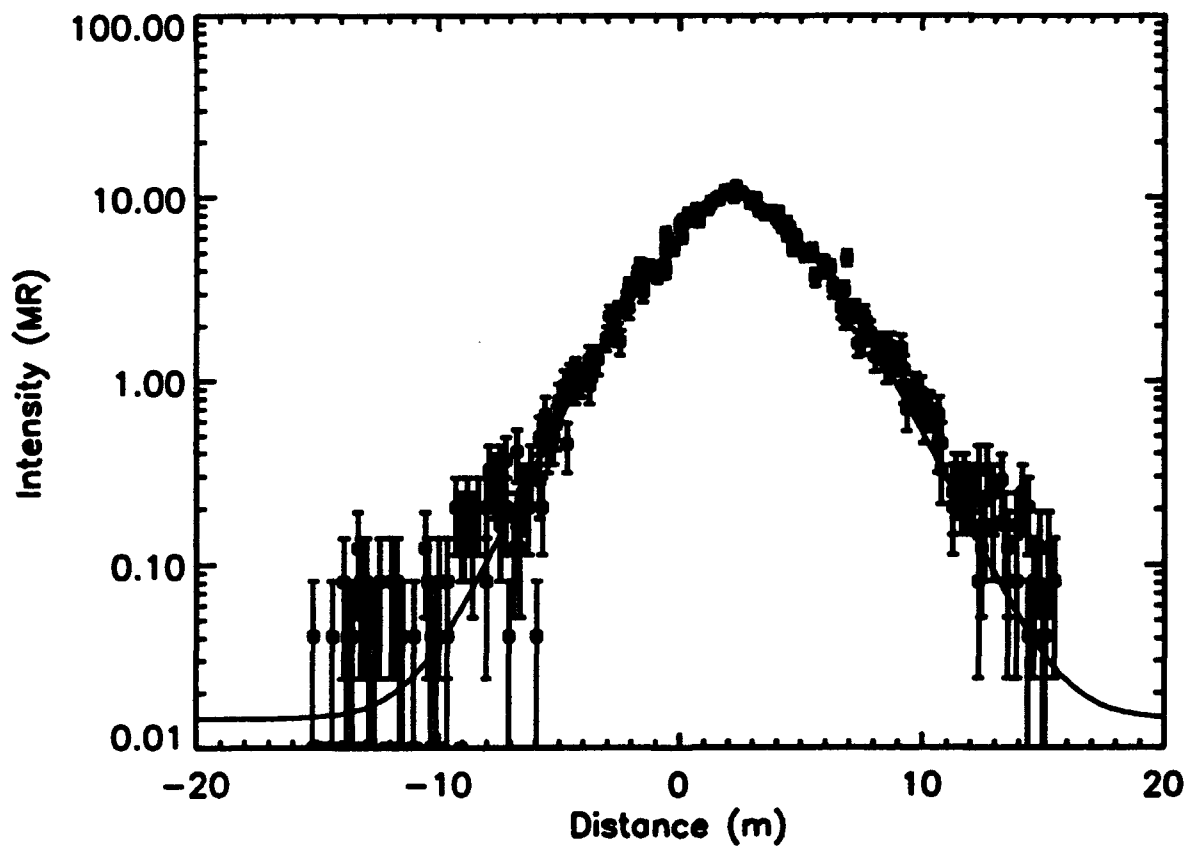
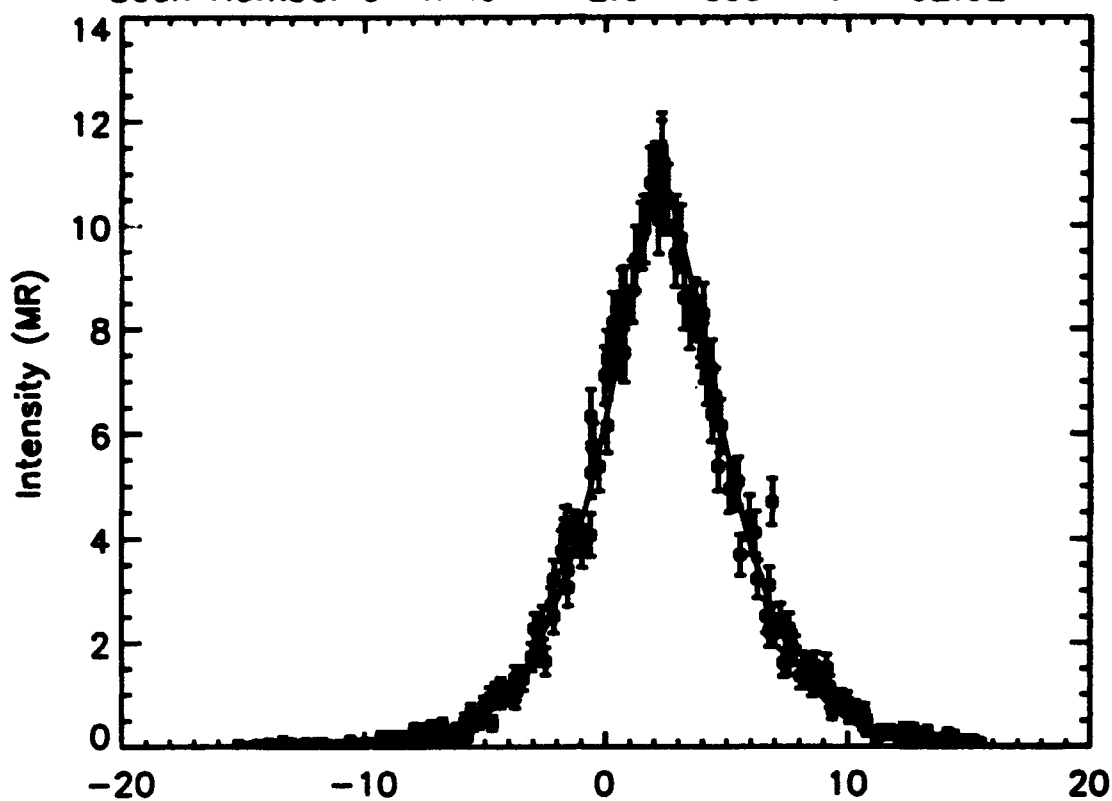
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Scan Number 7 Time= 140.805 sec Alt= 101.102 Km



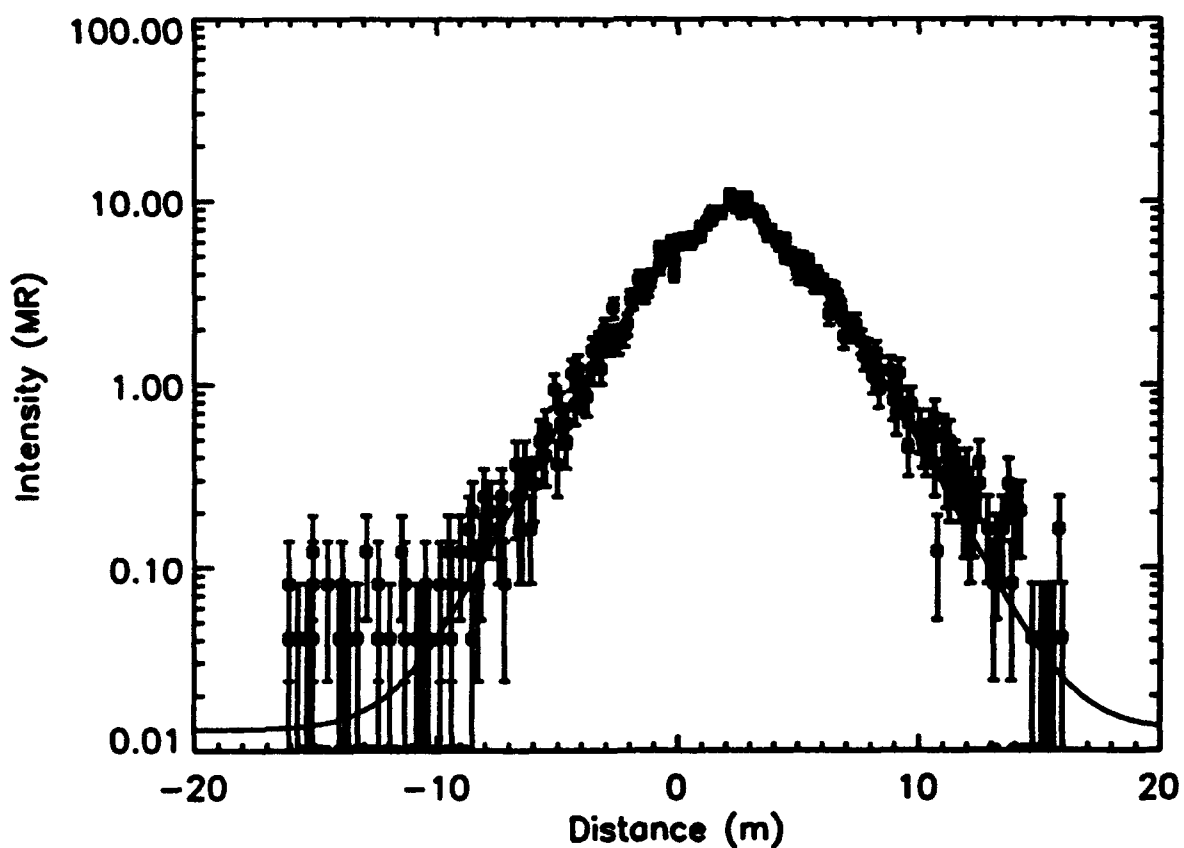
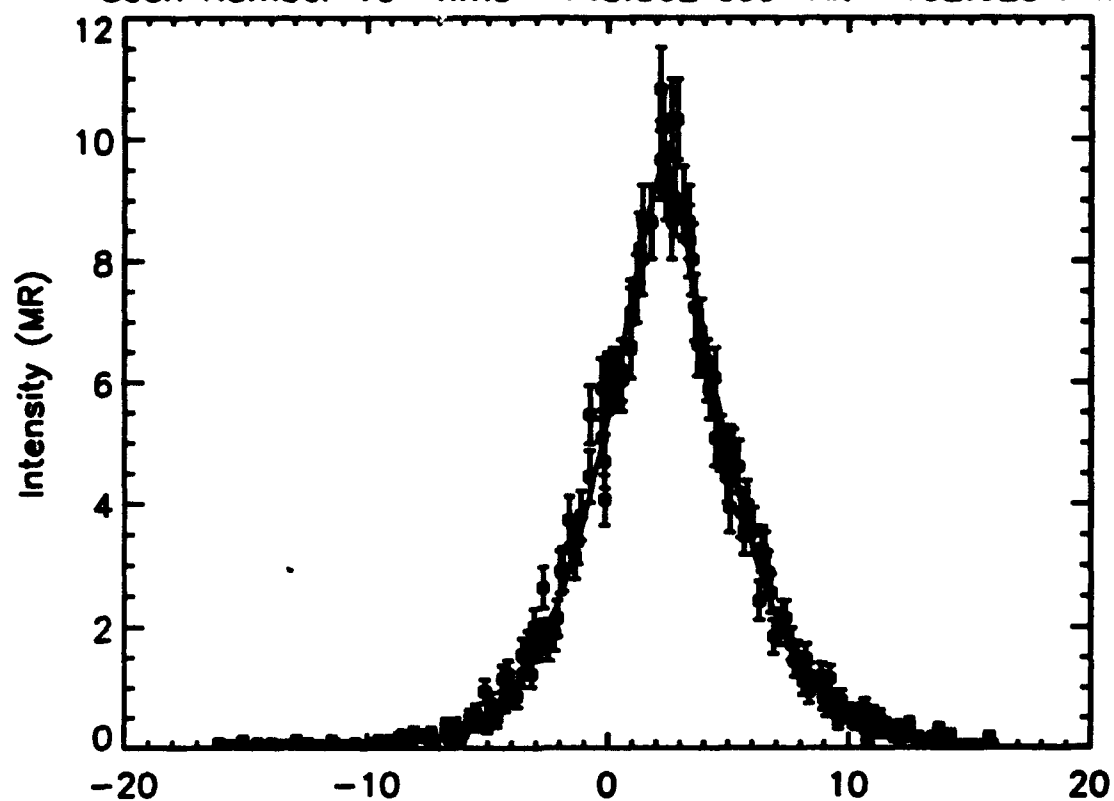
EXCEDE III 3914 A Scanning Photometer
Scan Number 8 Time= 141.904 sec Alt= 101.660 Km



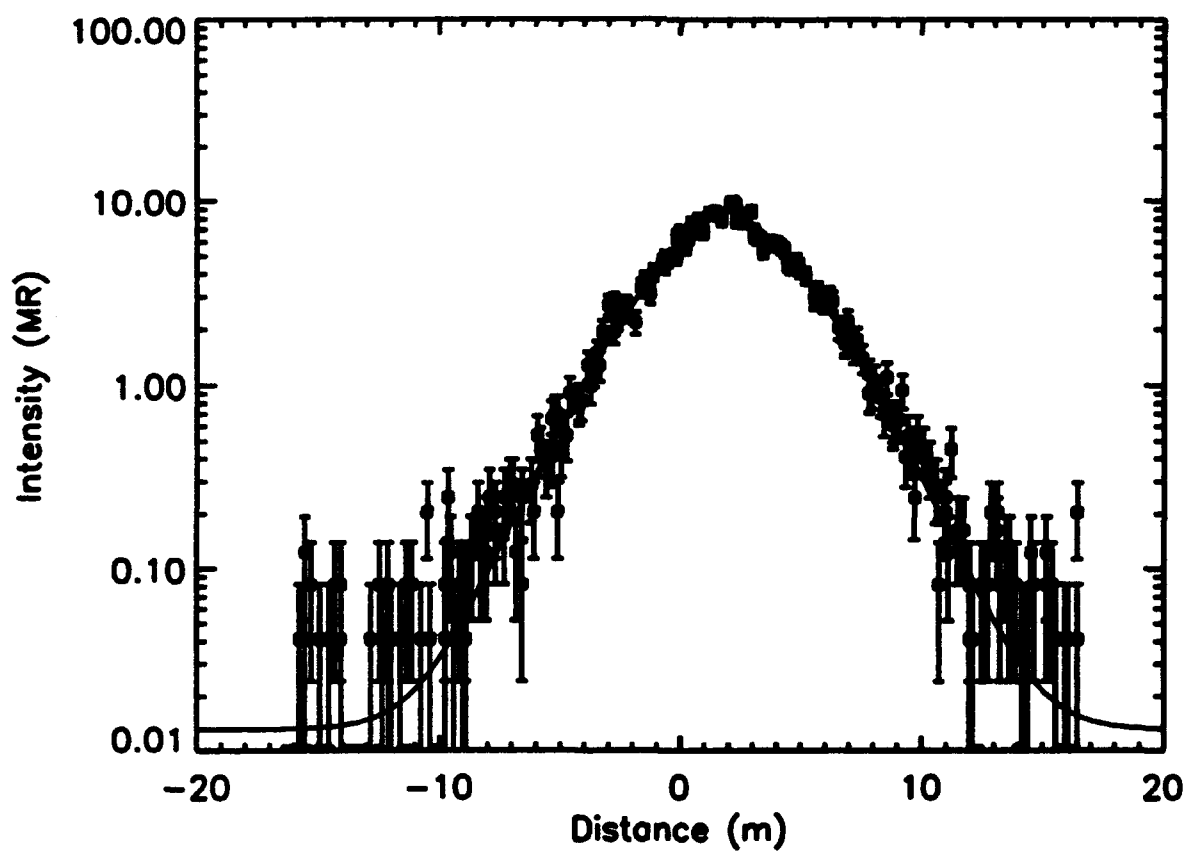
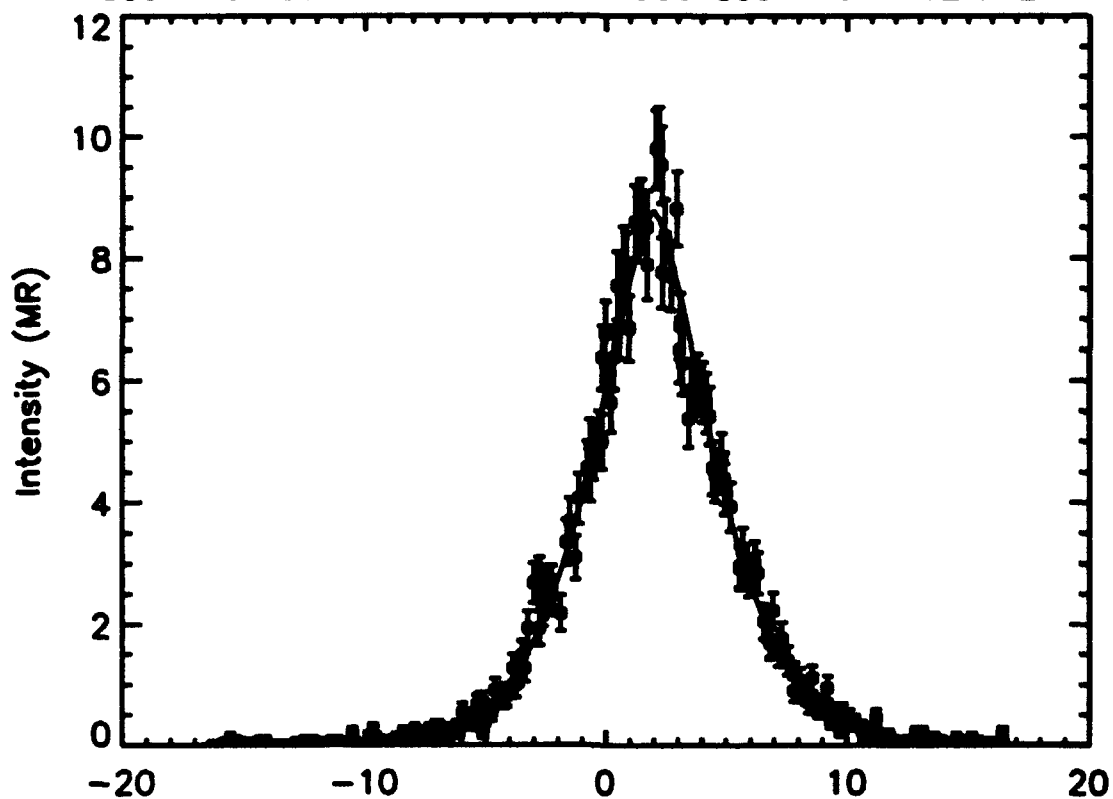
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Scan Number 9 Time= 142.641 sec Alt= 102.027 Km



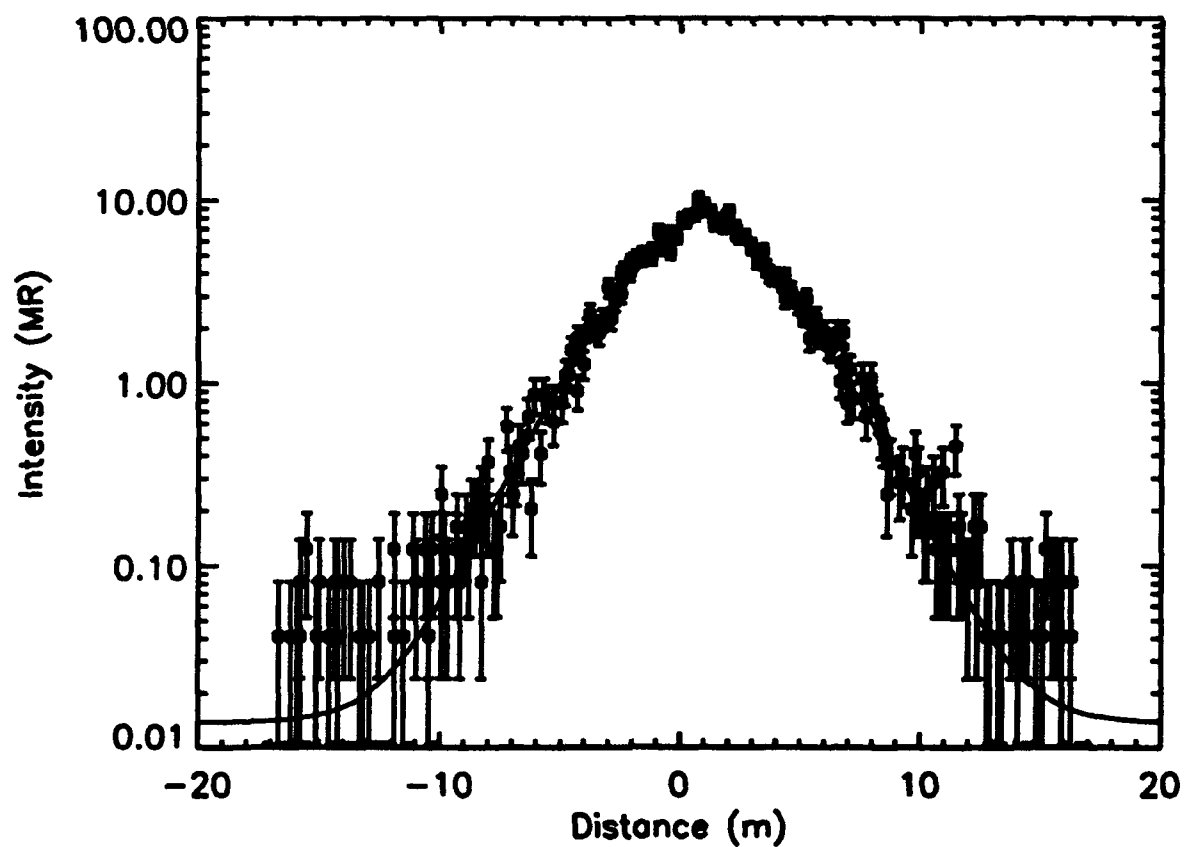
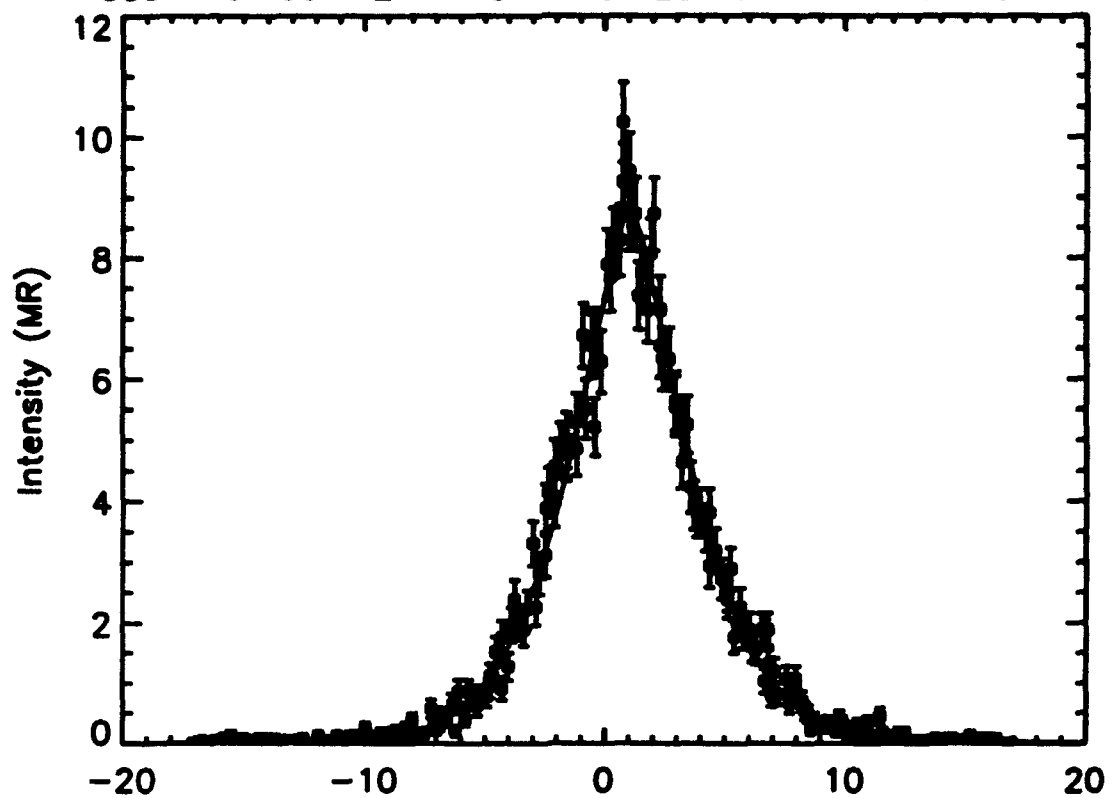
EXCEDE III 3914 A Scanning Photometer
Scan Number 10 Time= 143.862 sec Alt= 102.625 Km



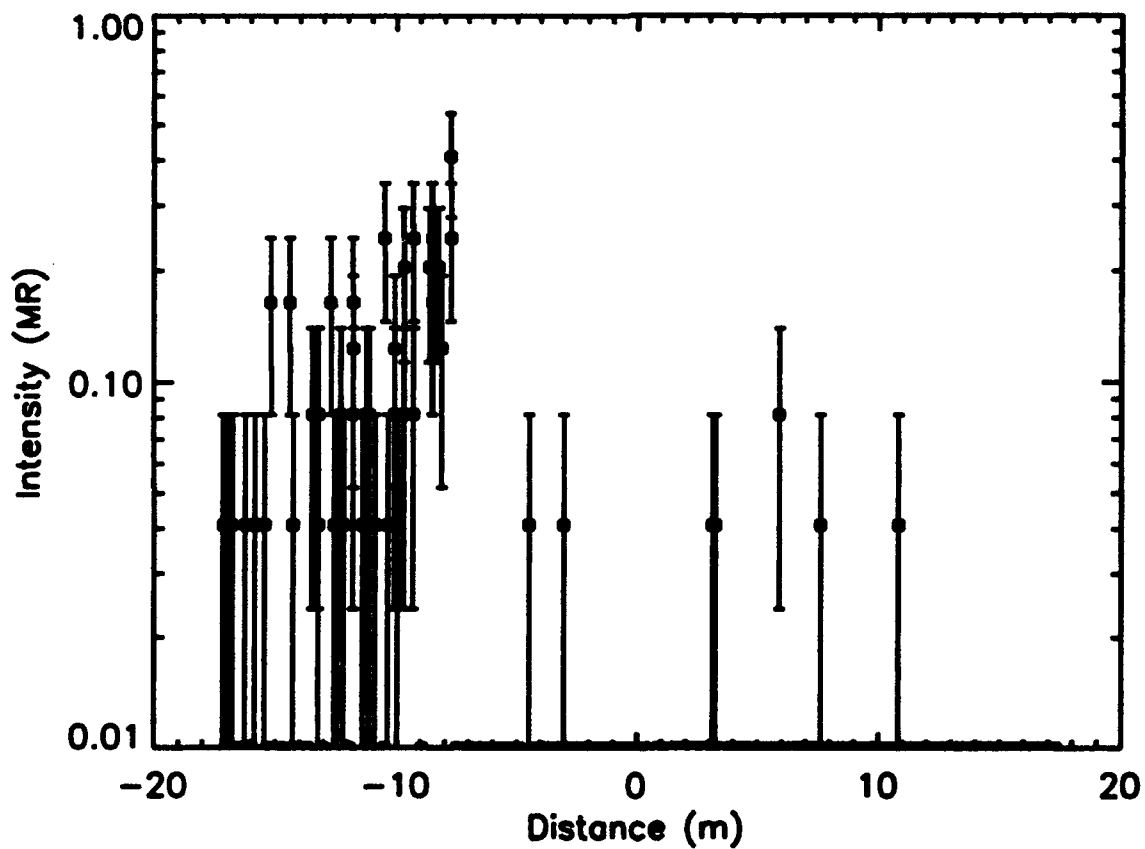
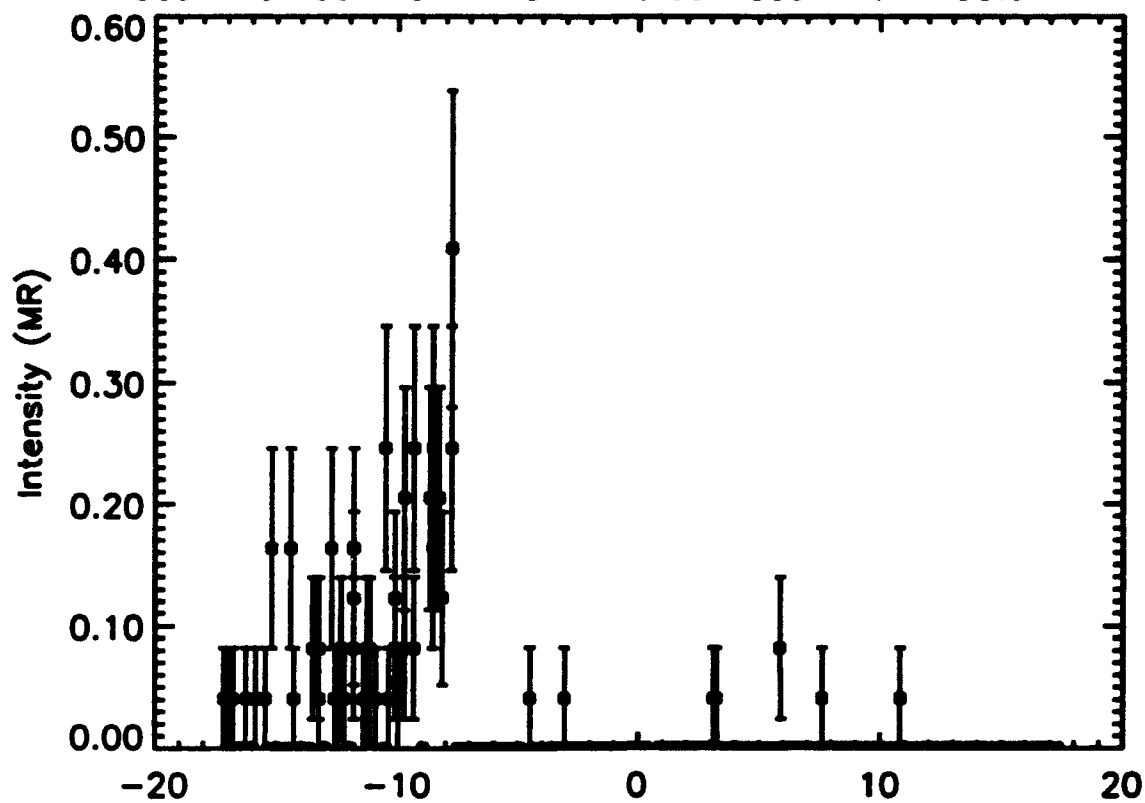
EXCEDE III 3914 A Scanning Photometer
Scan Number 11 Time= 144.583 sec Alt= 102.972 Km



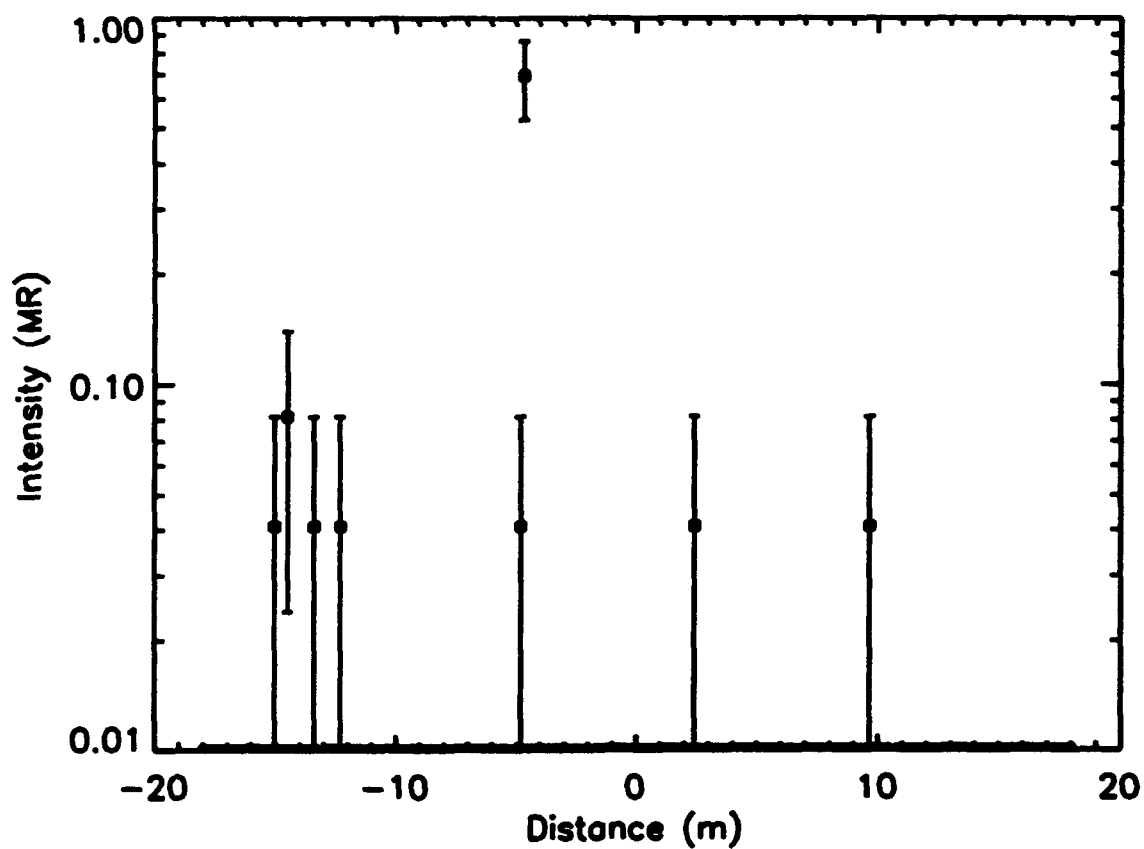
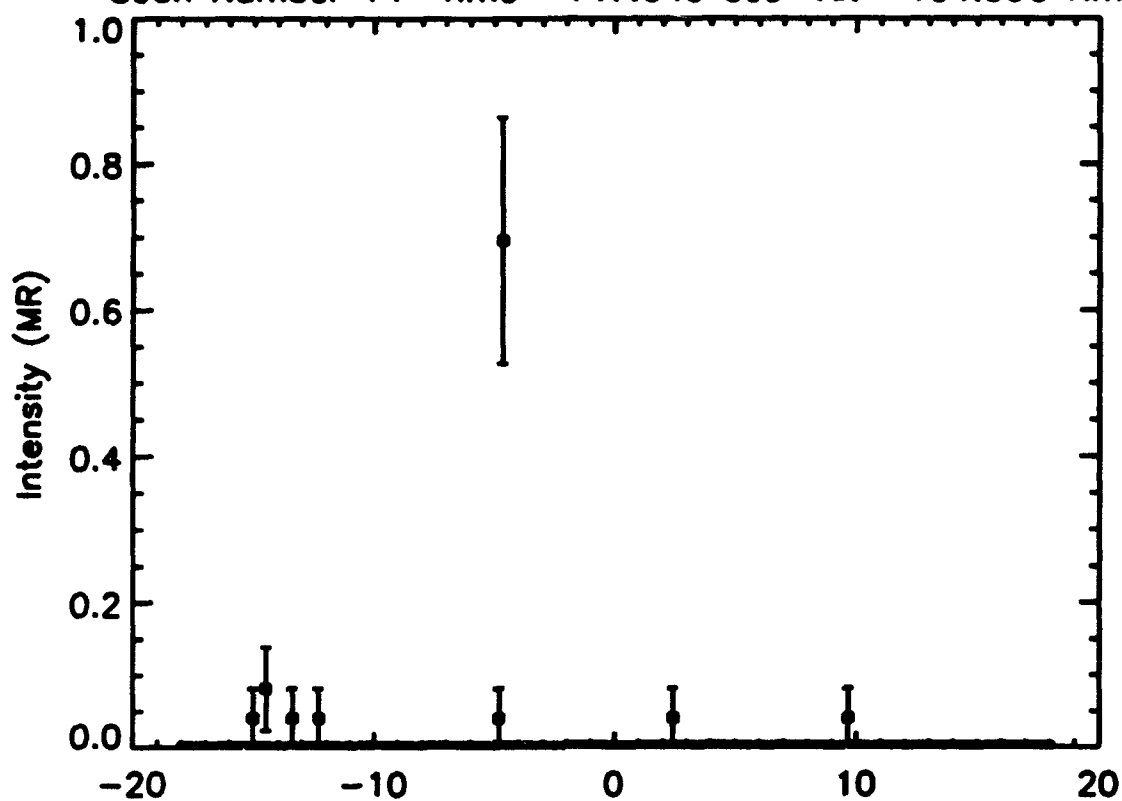
EXCEDE III 3914 A Scanning Photometer
Scan Number 12 Time= 145.822 sec Alt= 103.556 Km



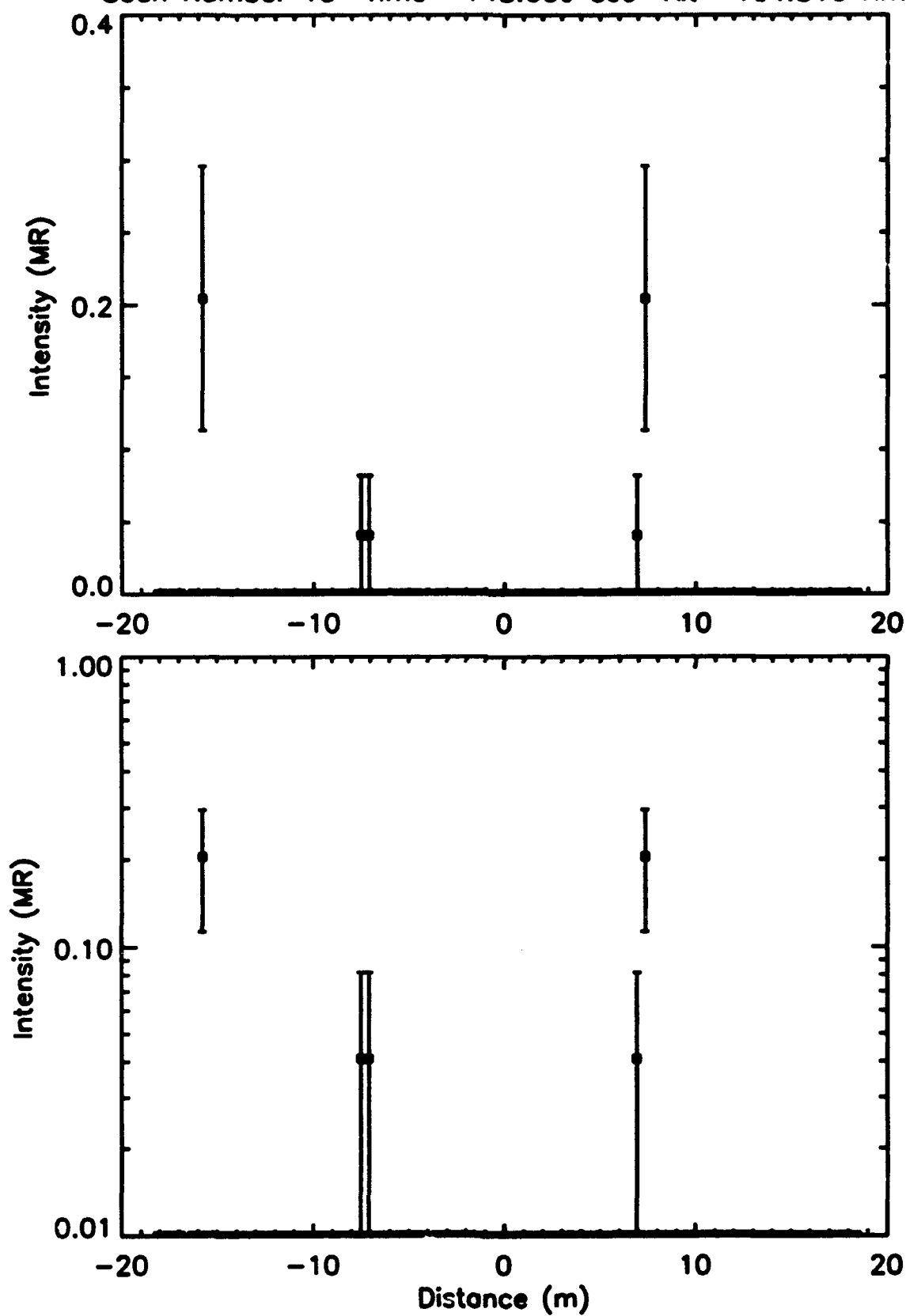
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Scan Number 13 Time= 146.657 sec Alt= 103.941 Km



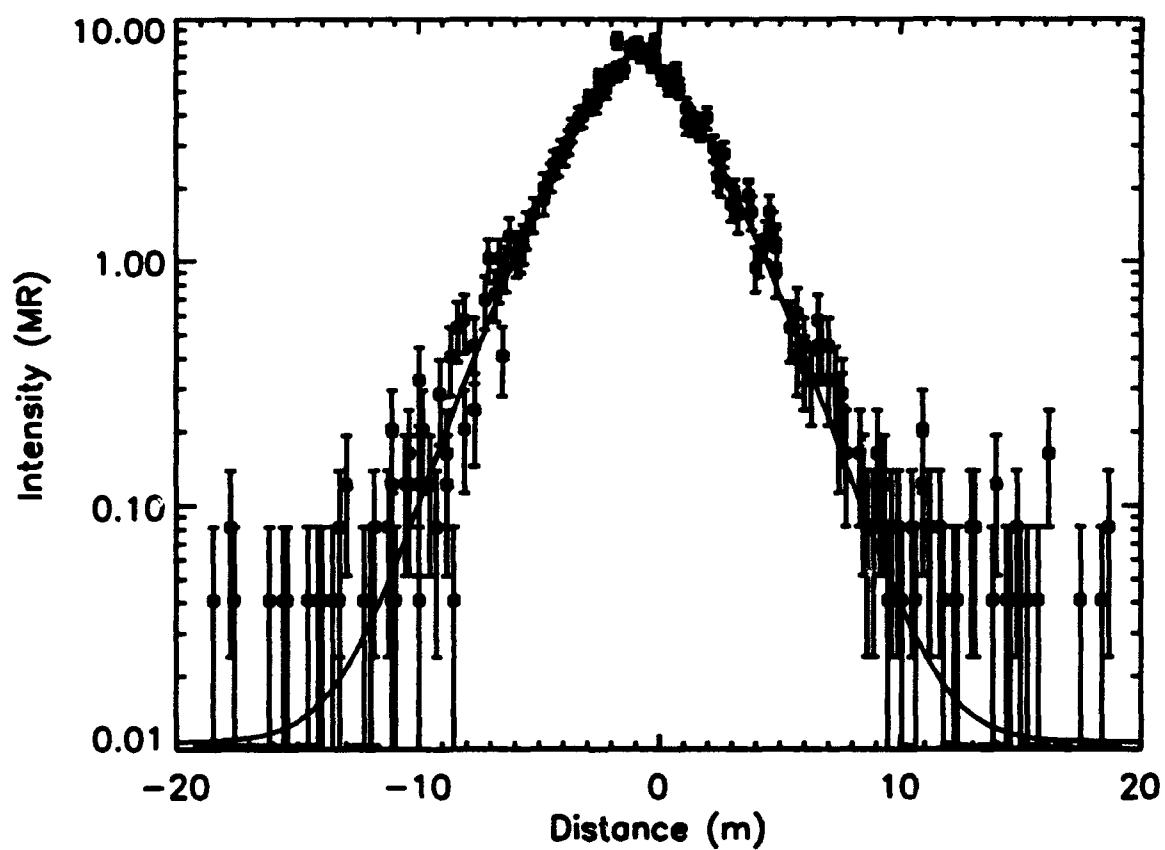
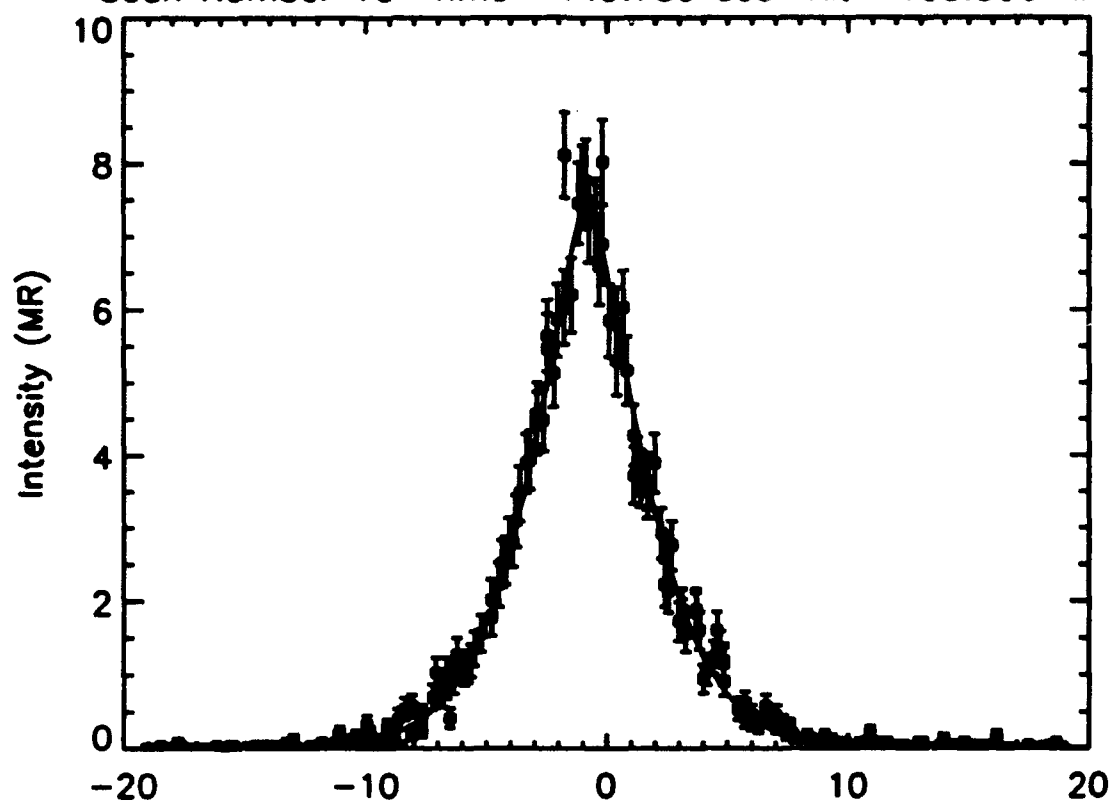
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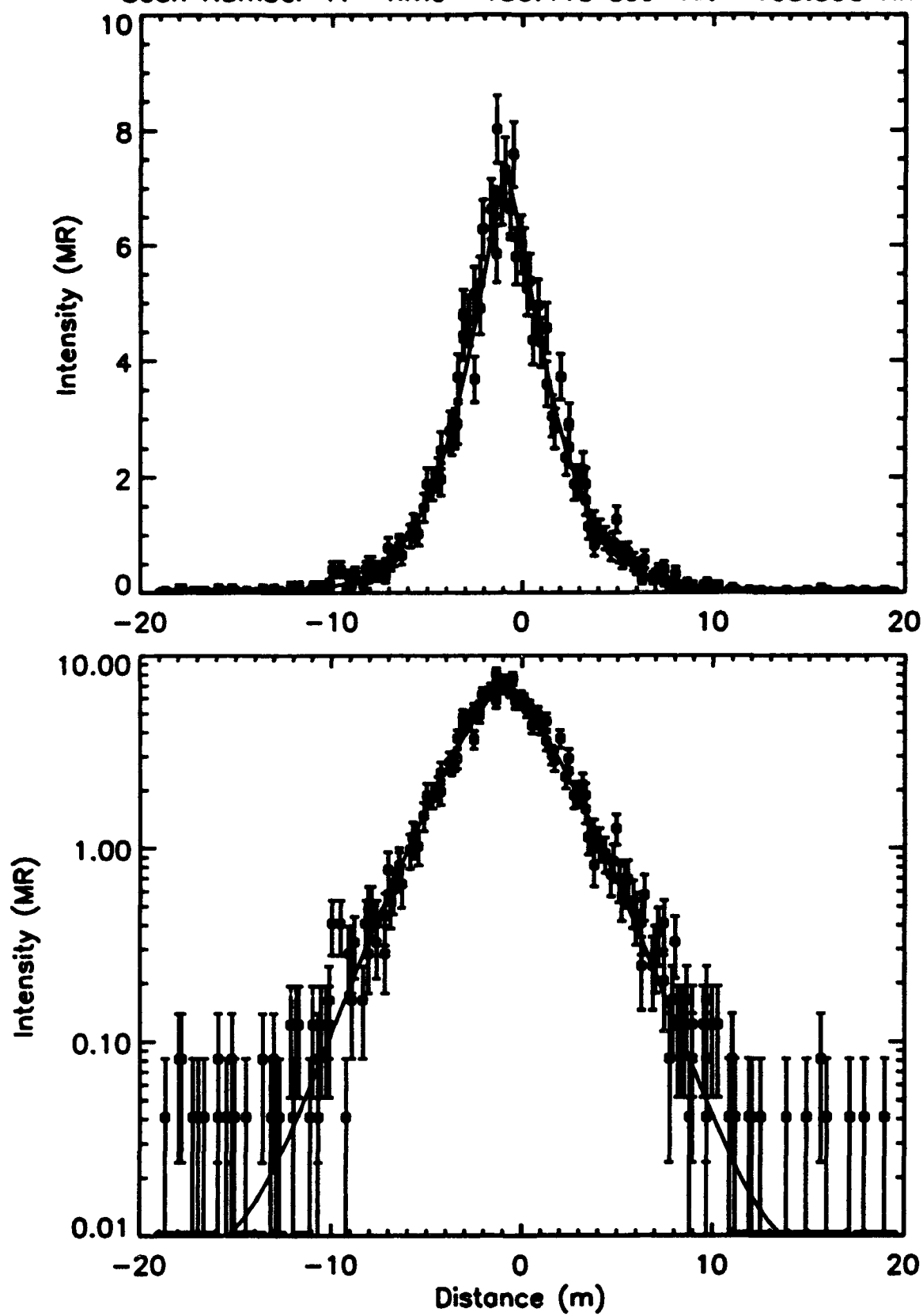
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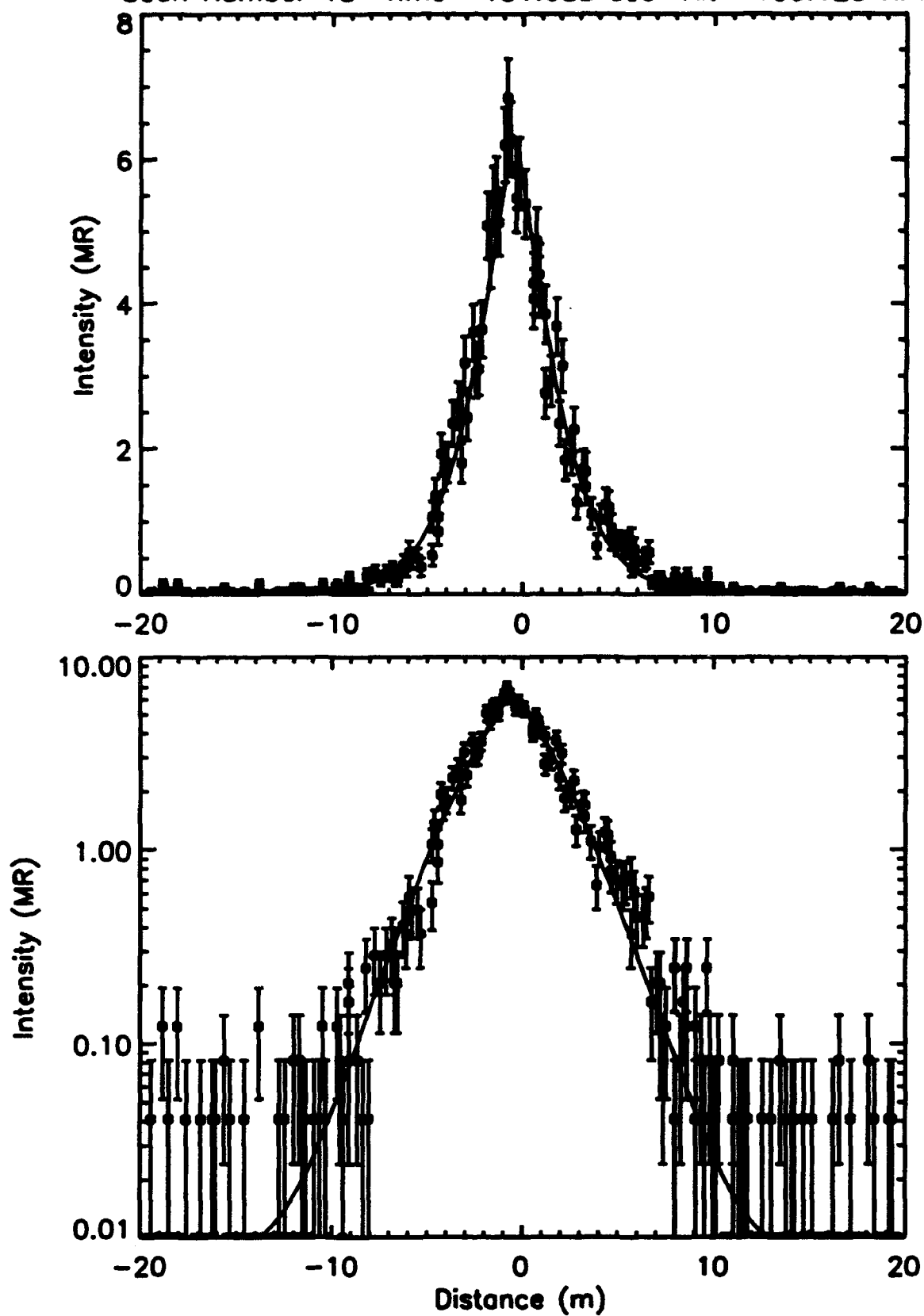
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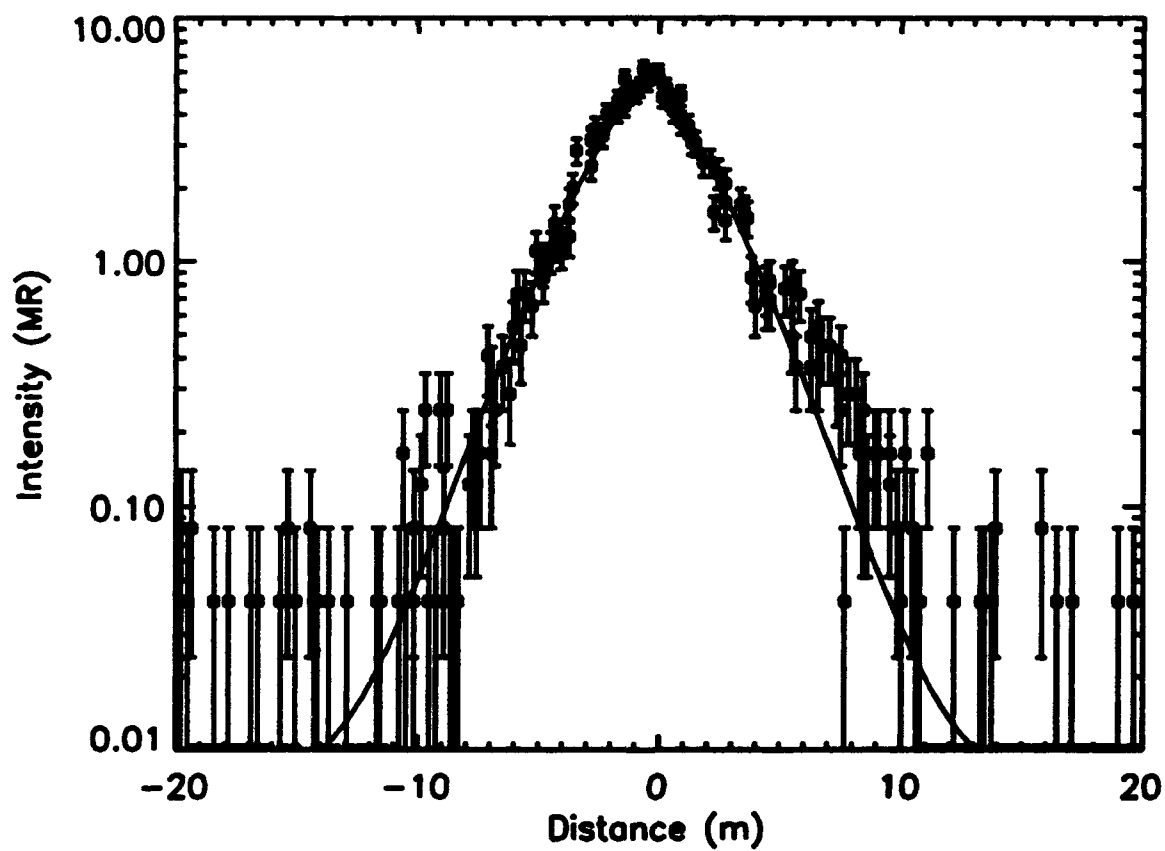
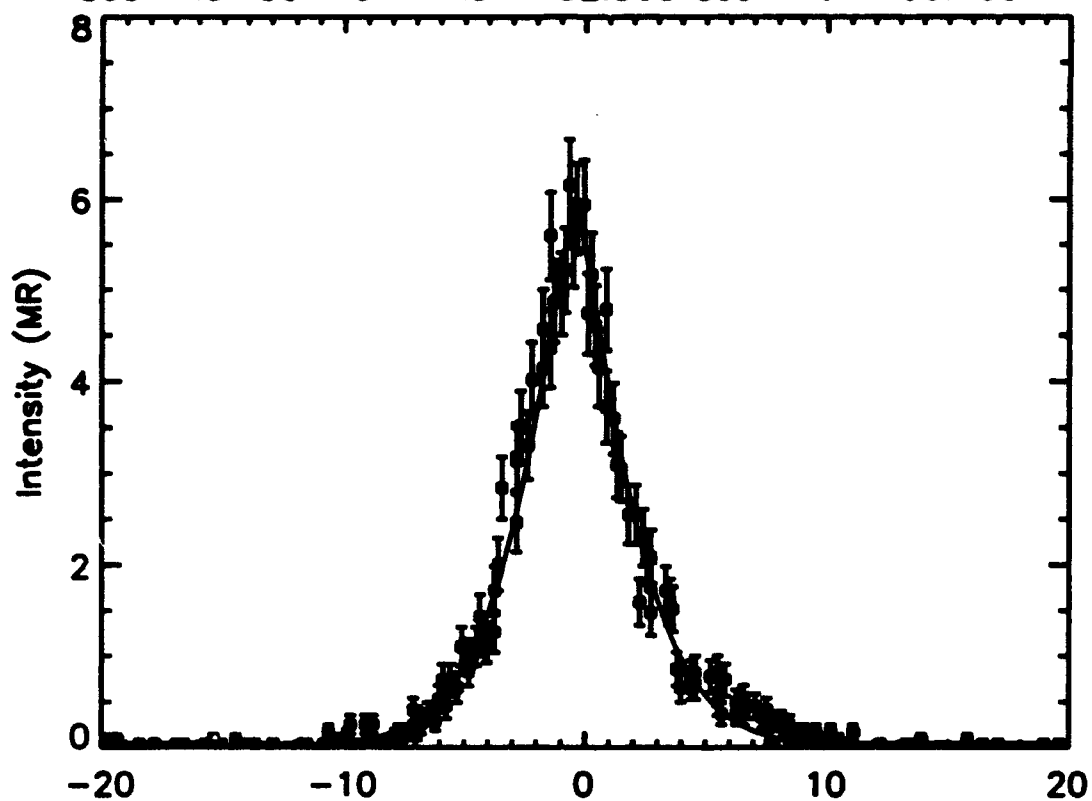
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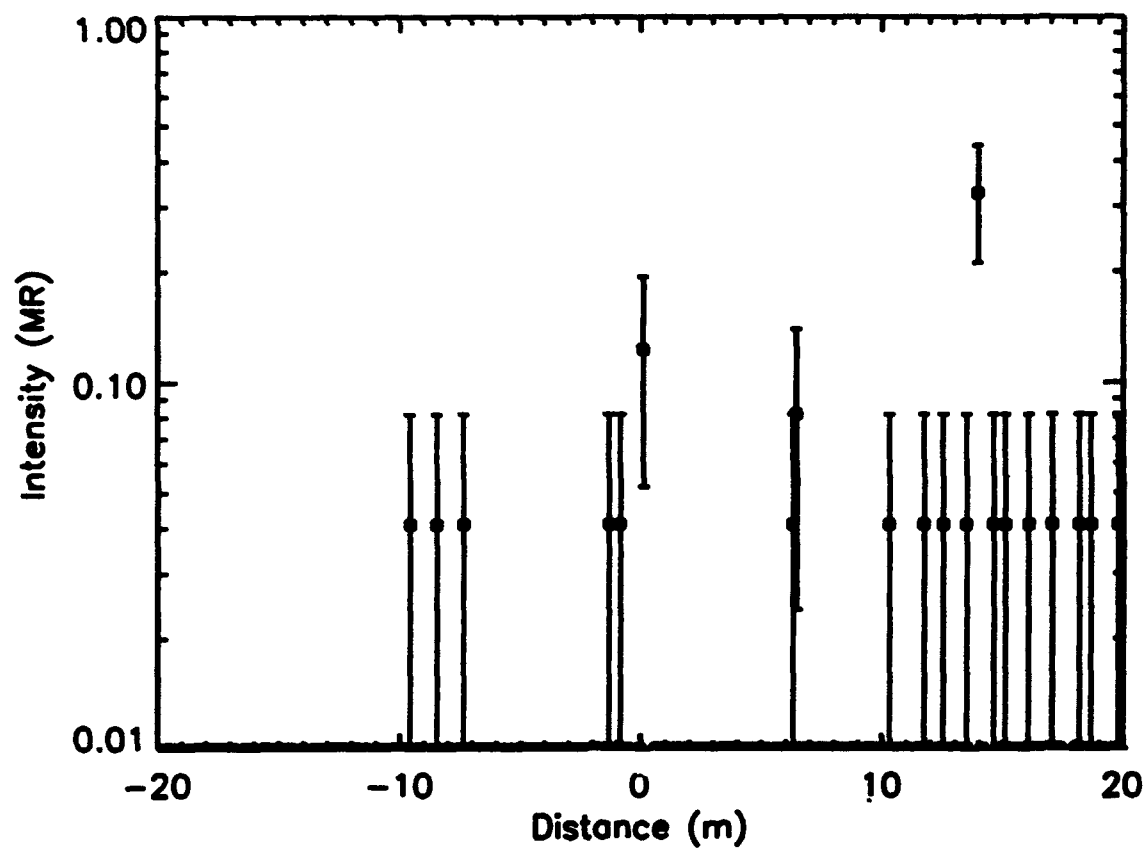
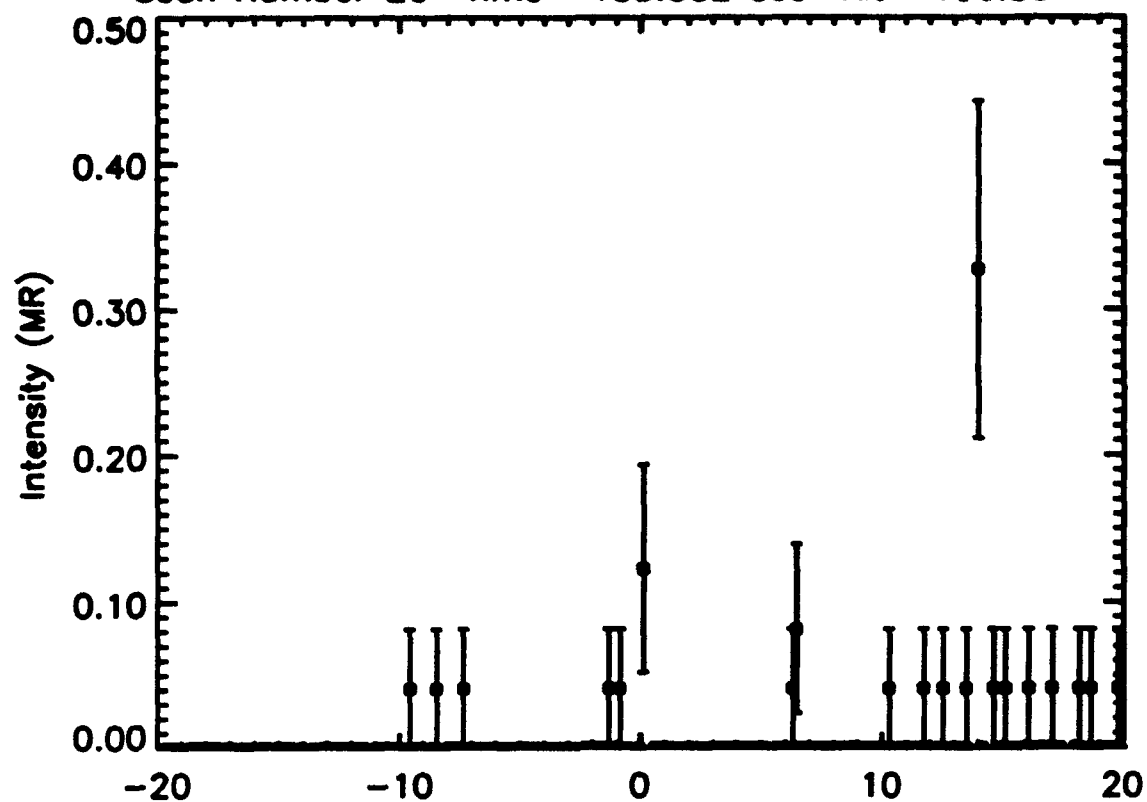
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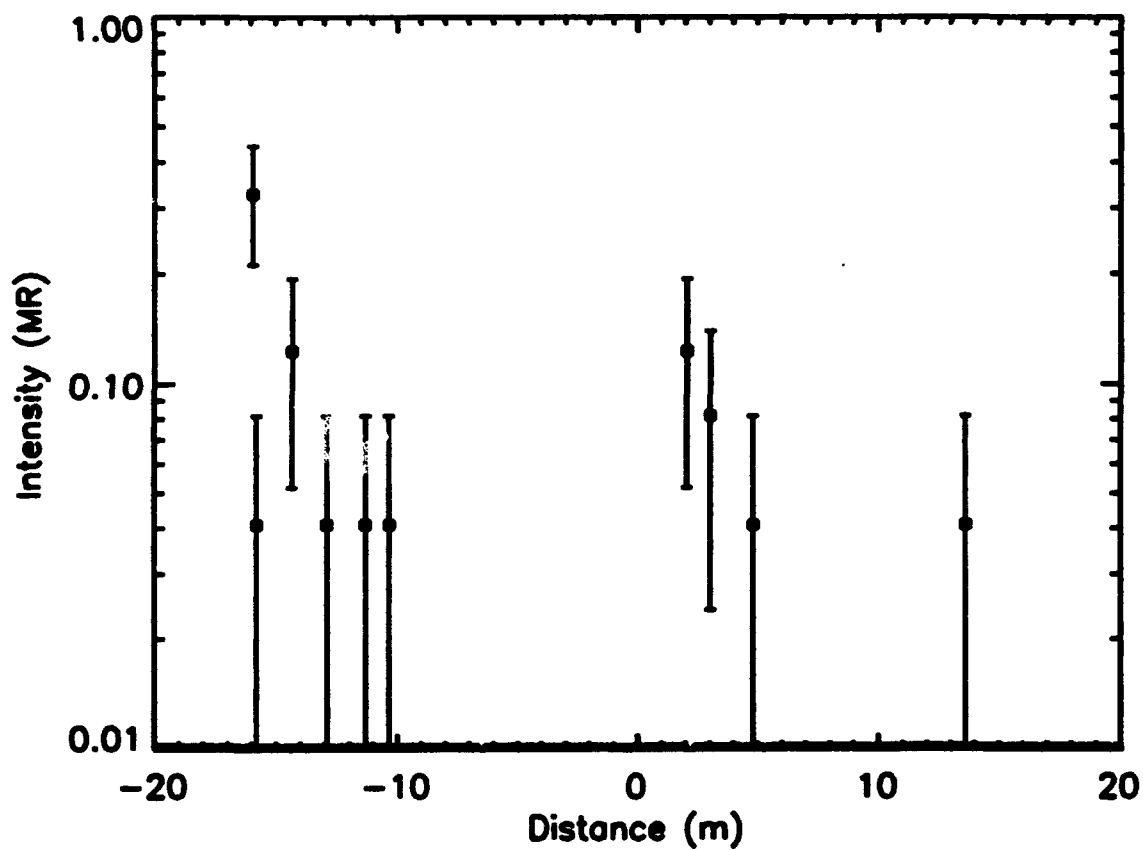
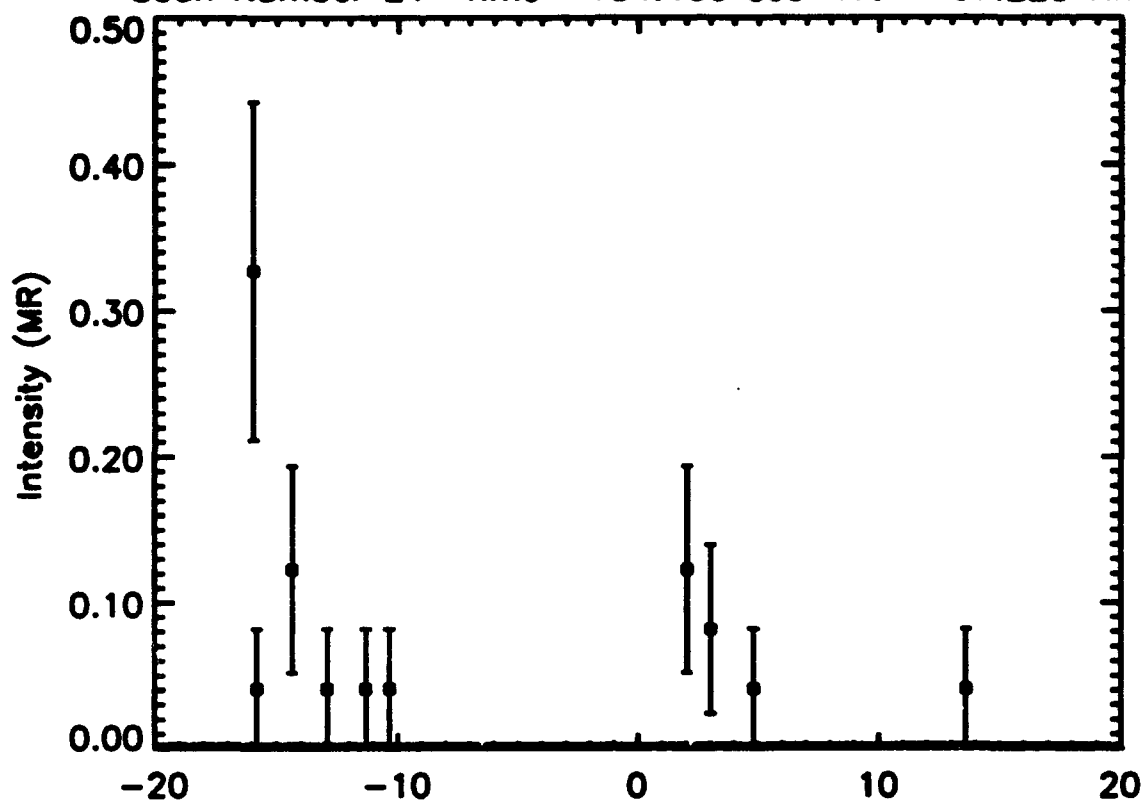
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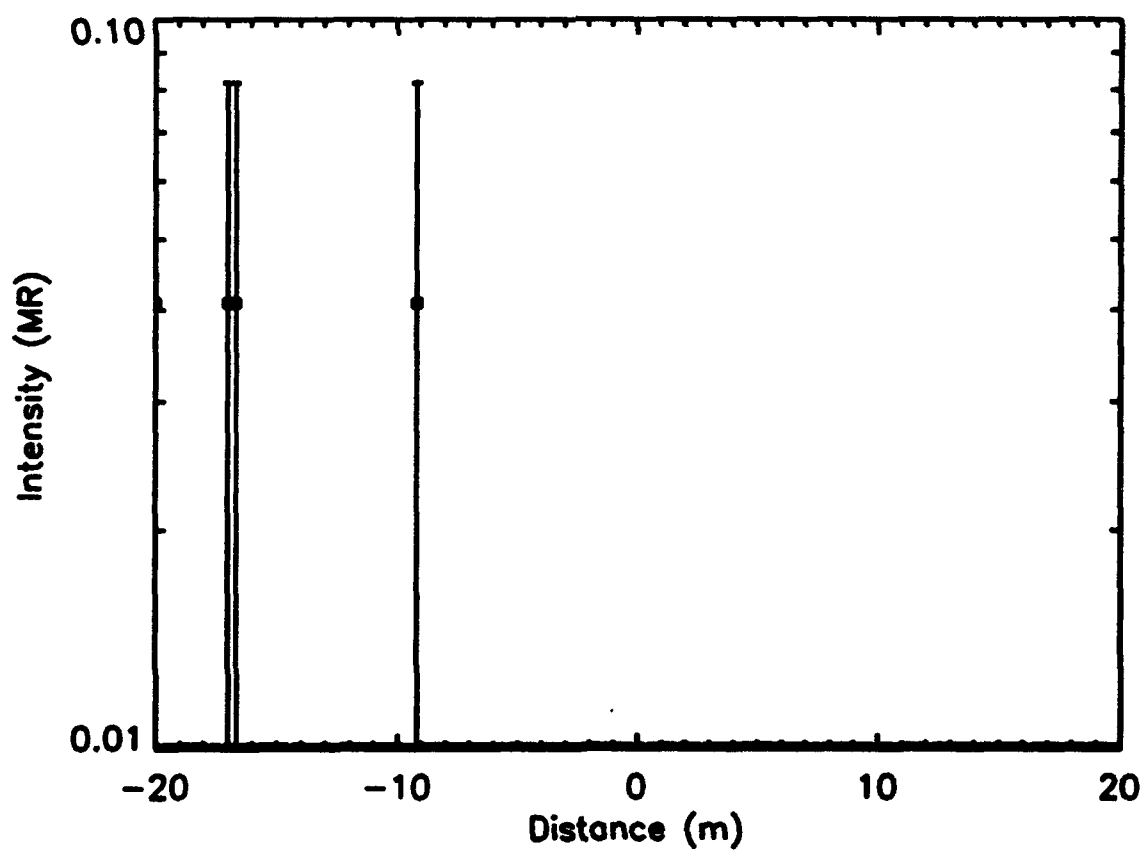
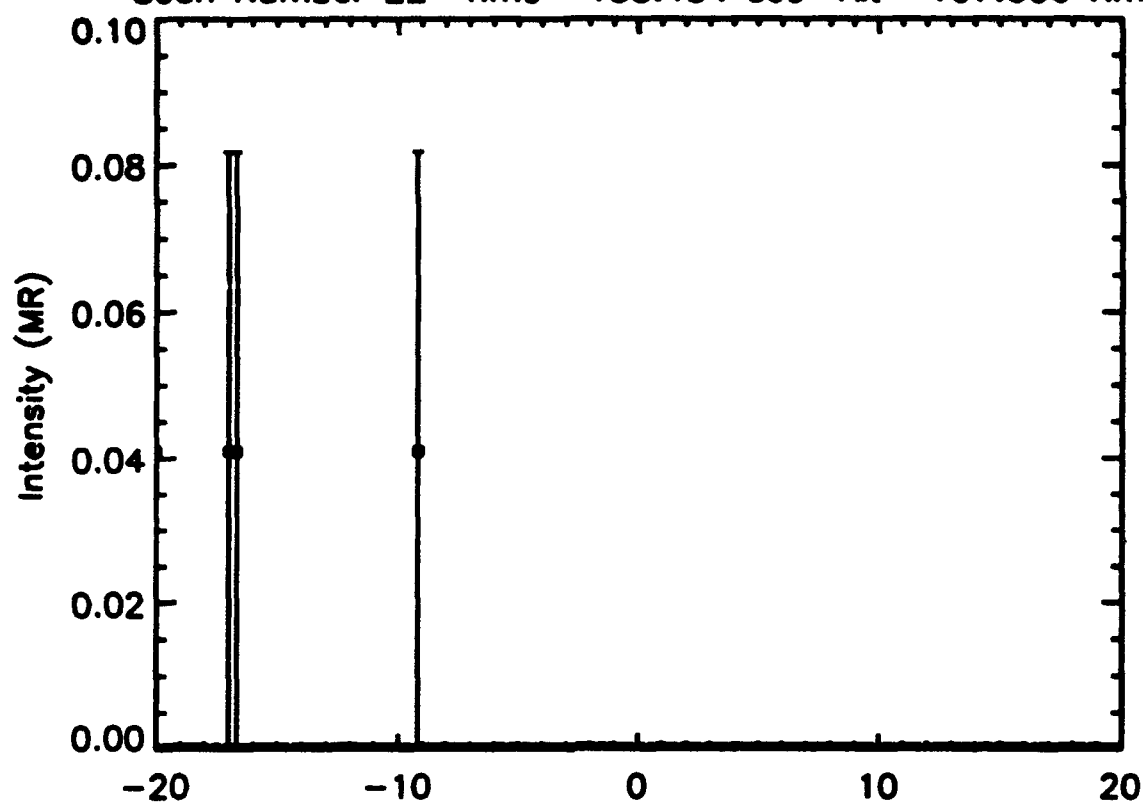
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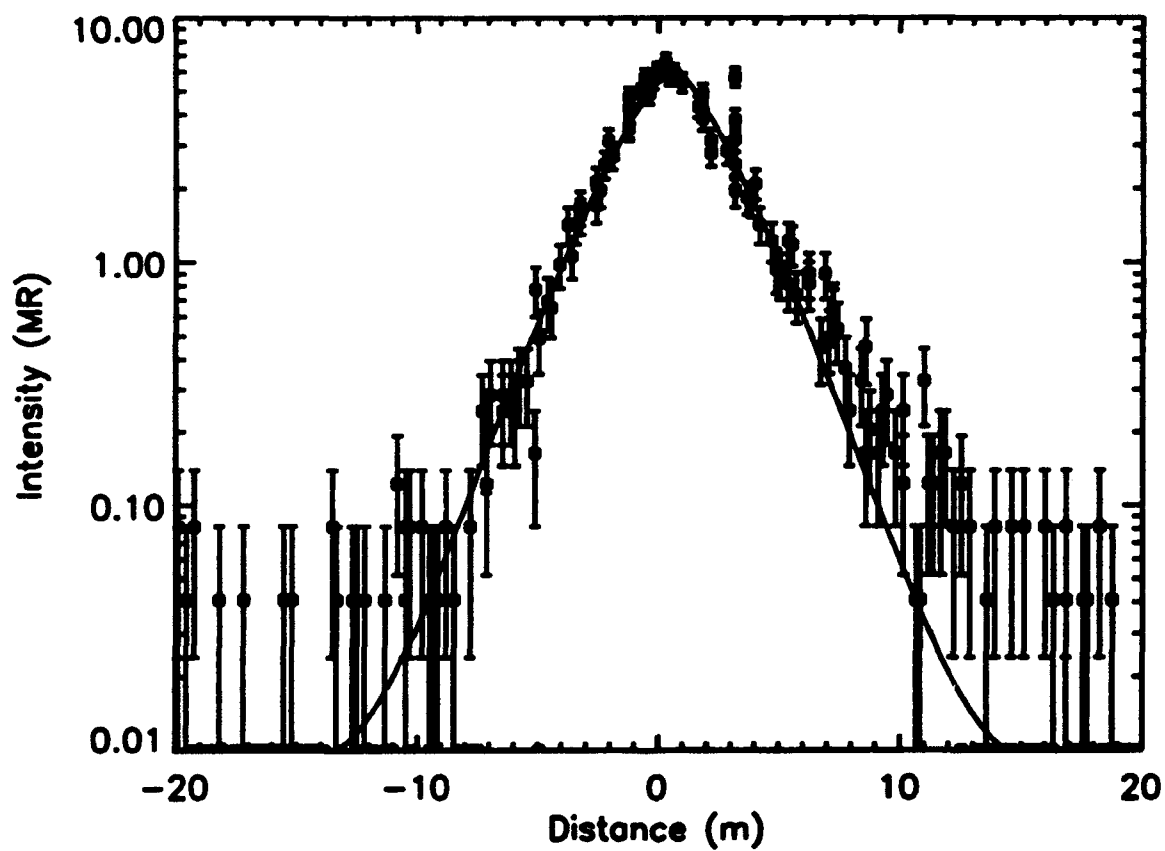
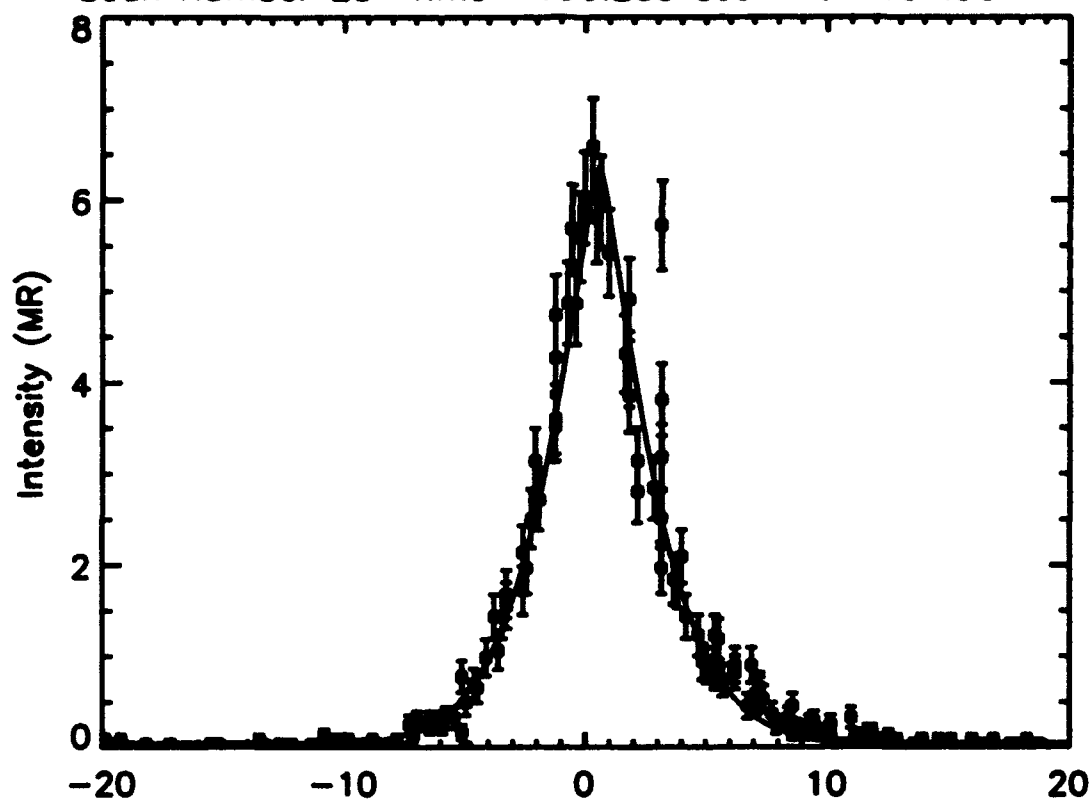
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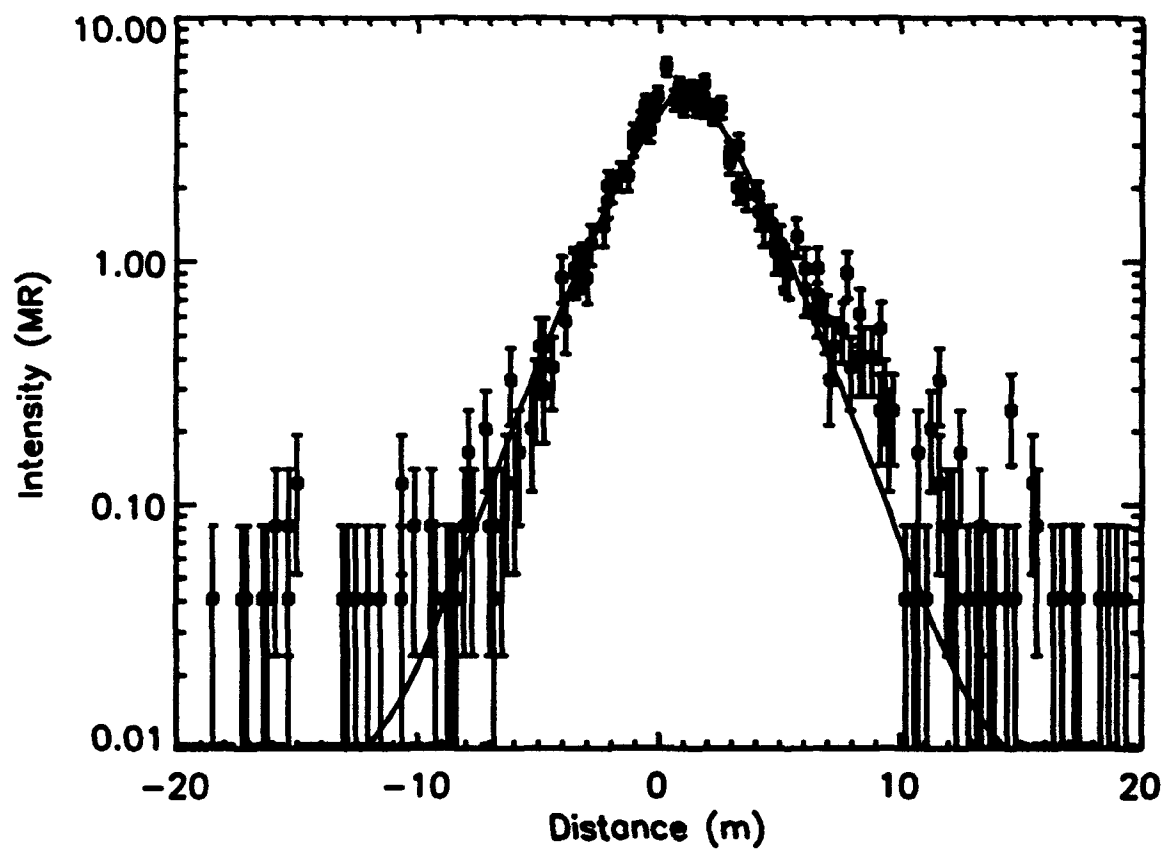
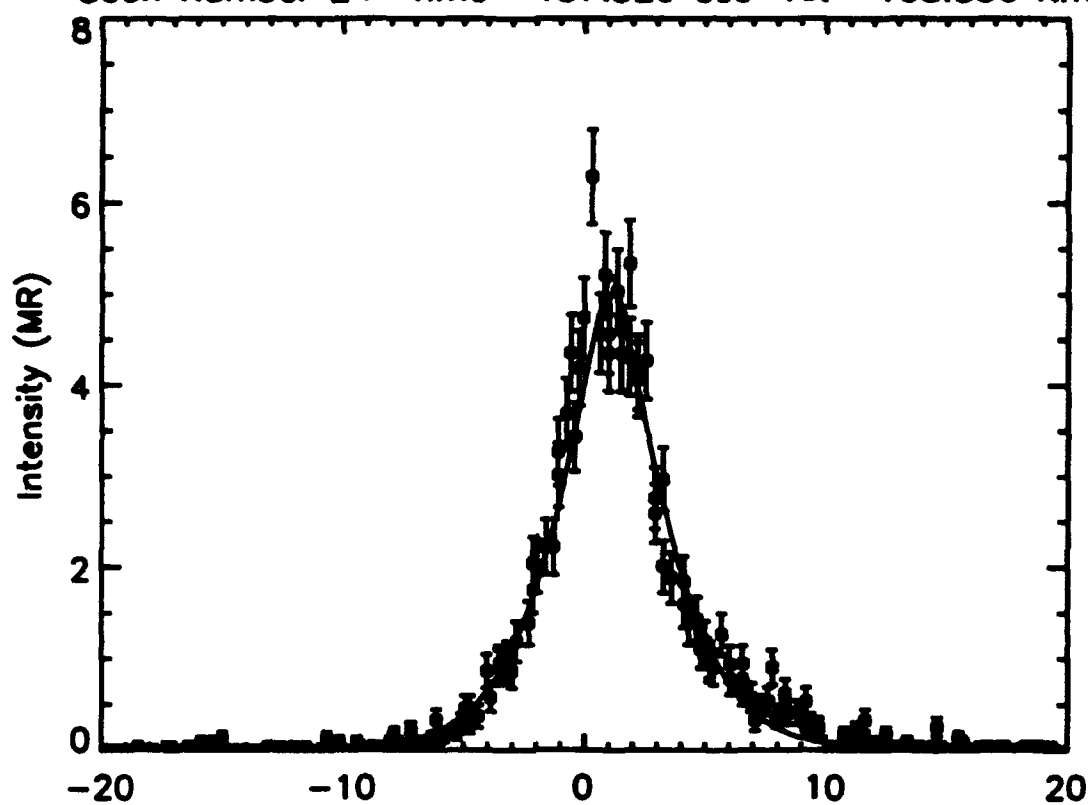
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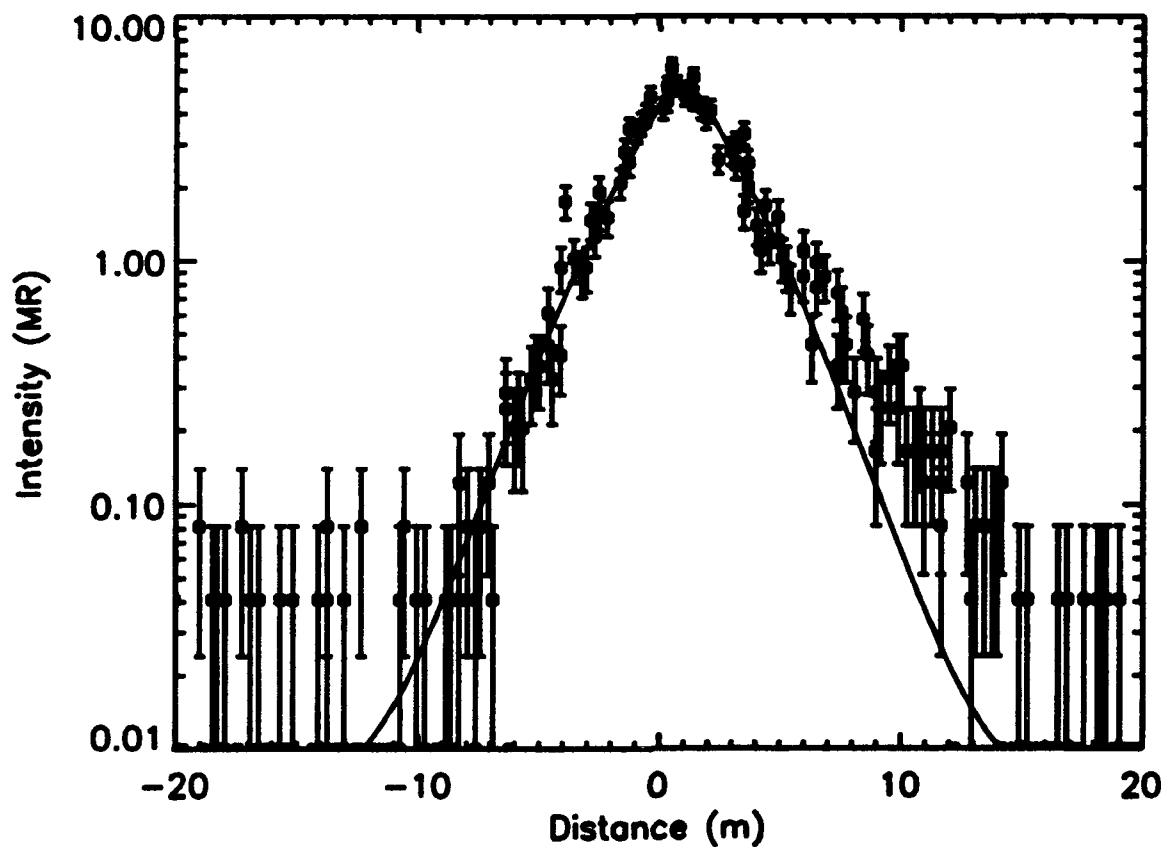
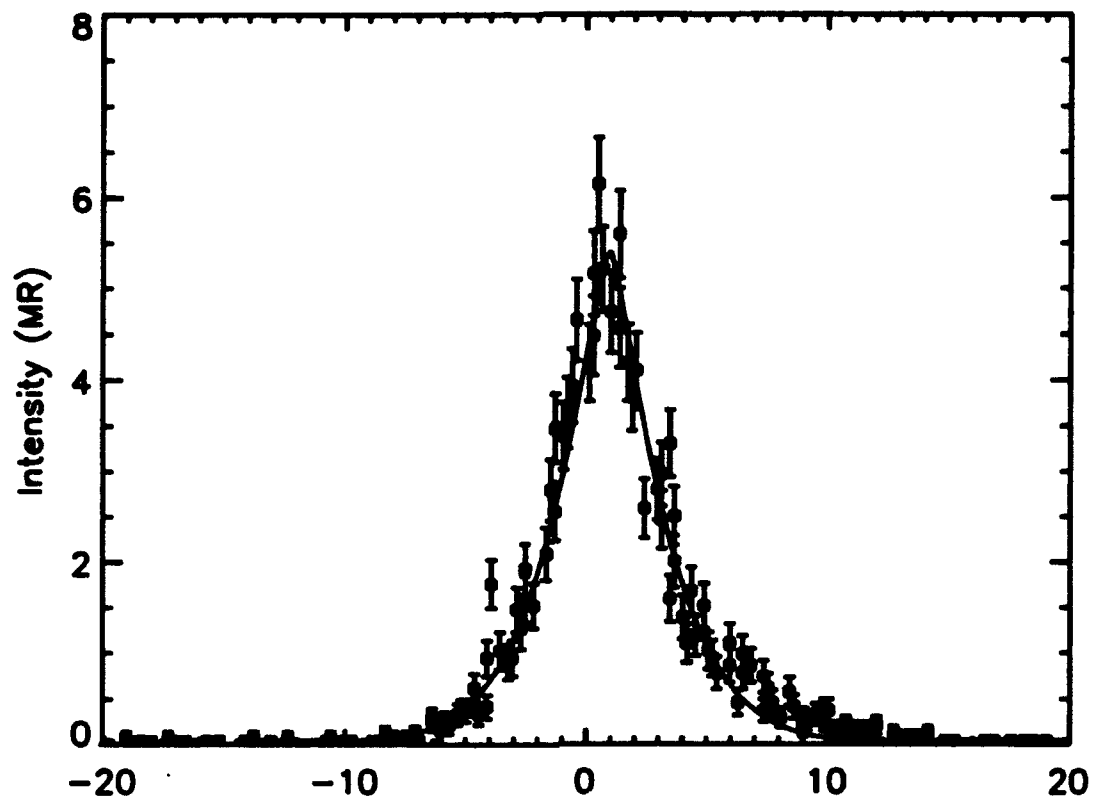
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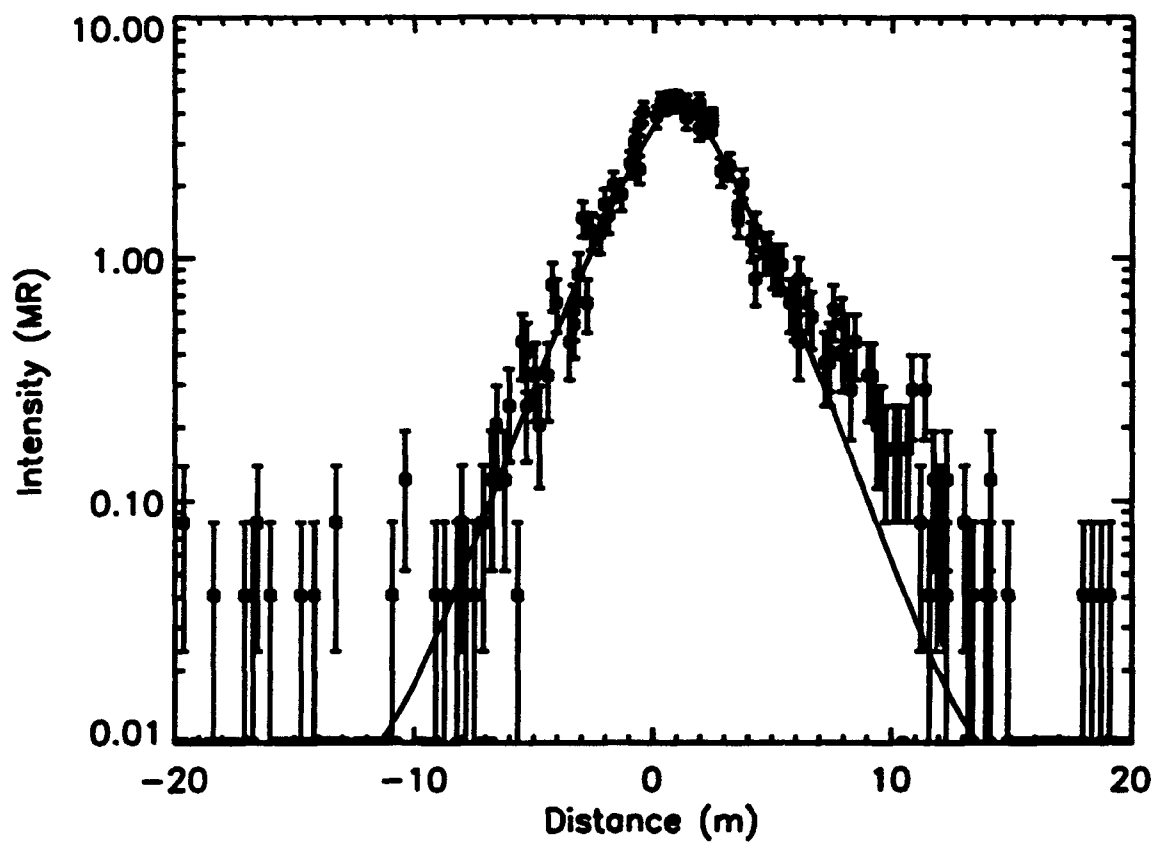
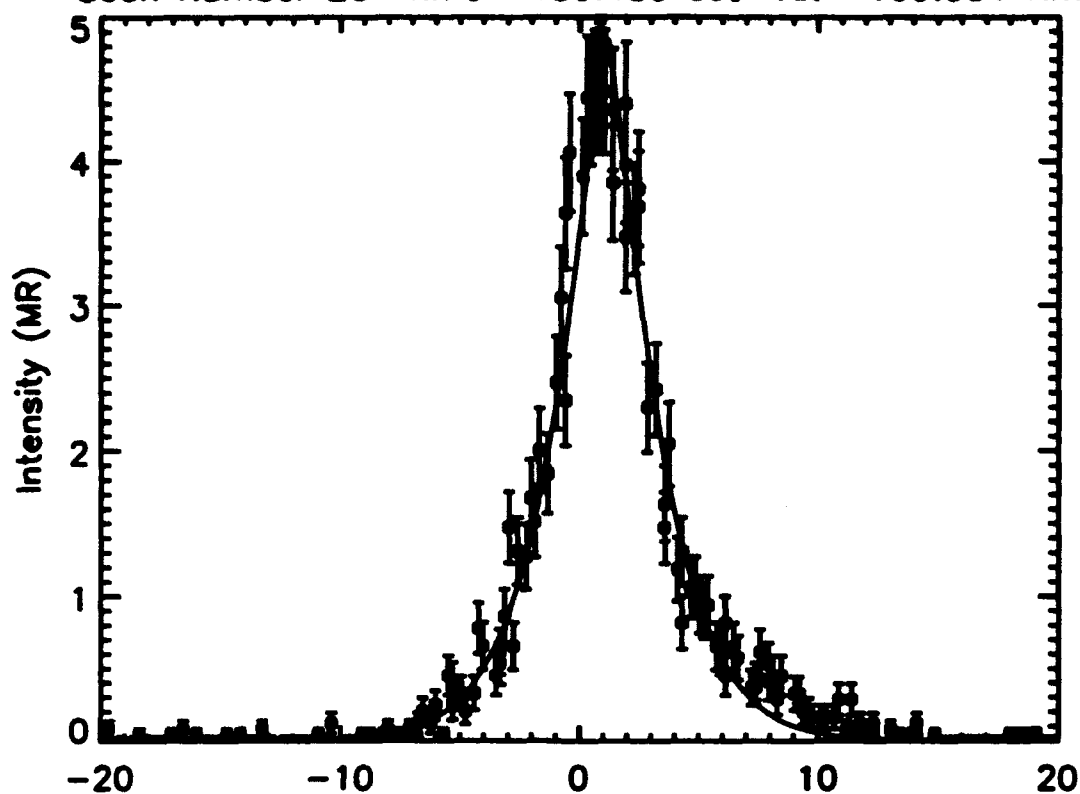
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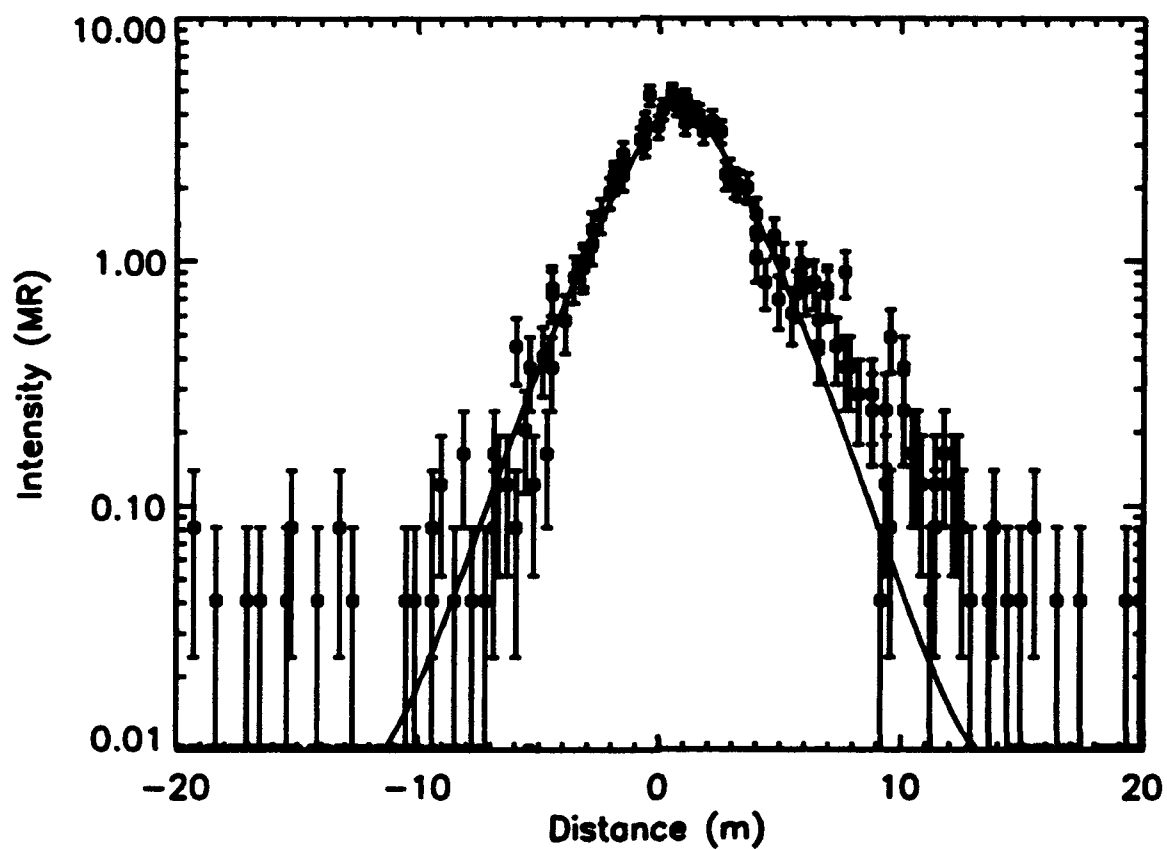
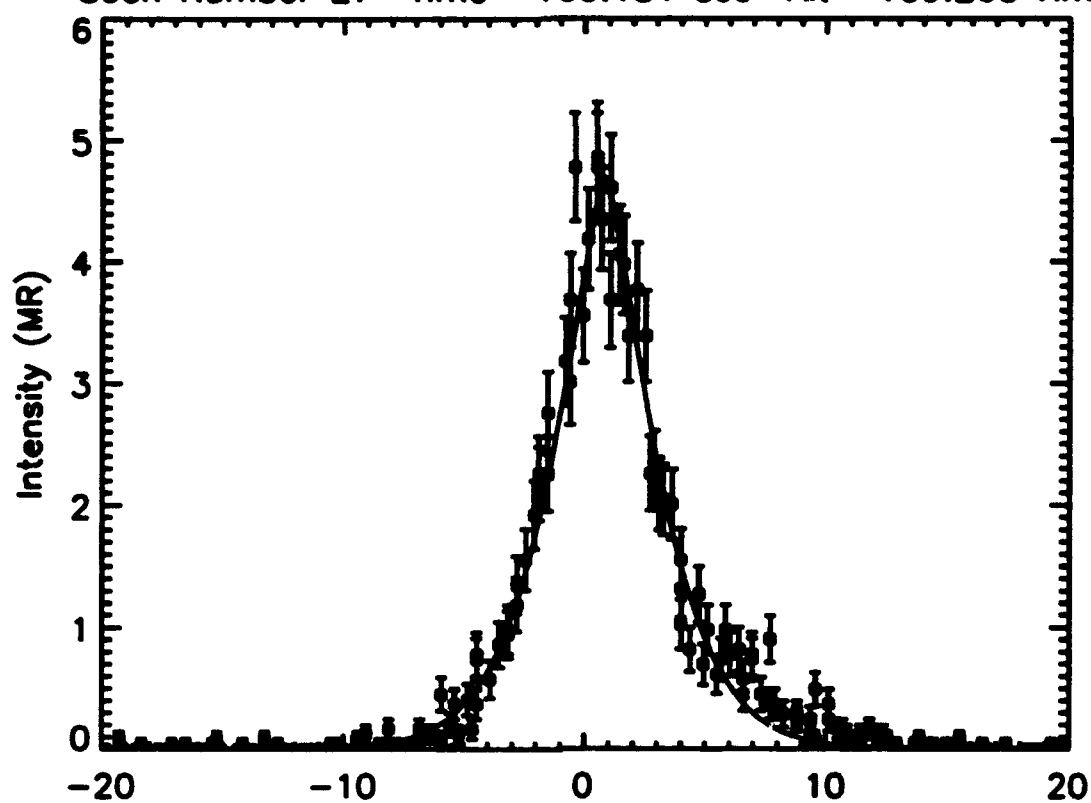
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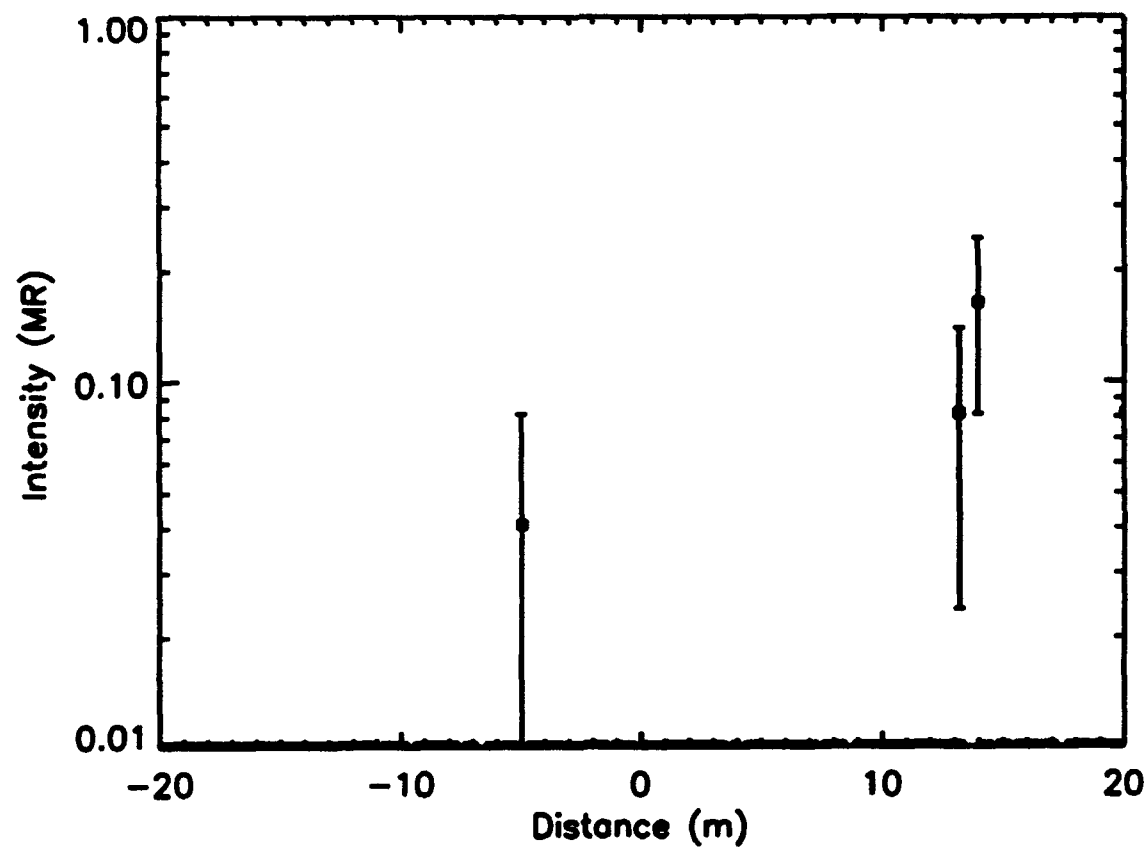
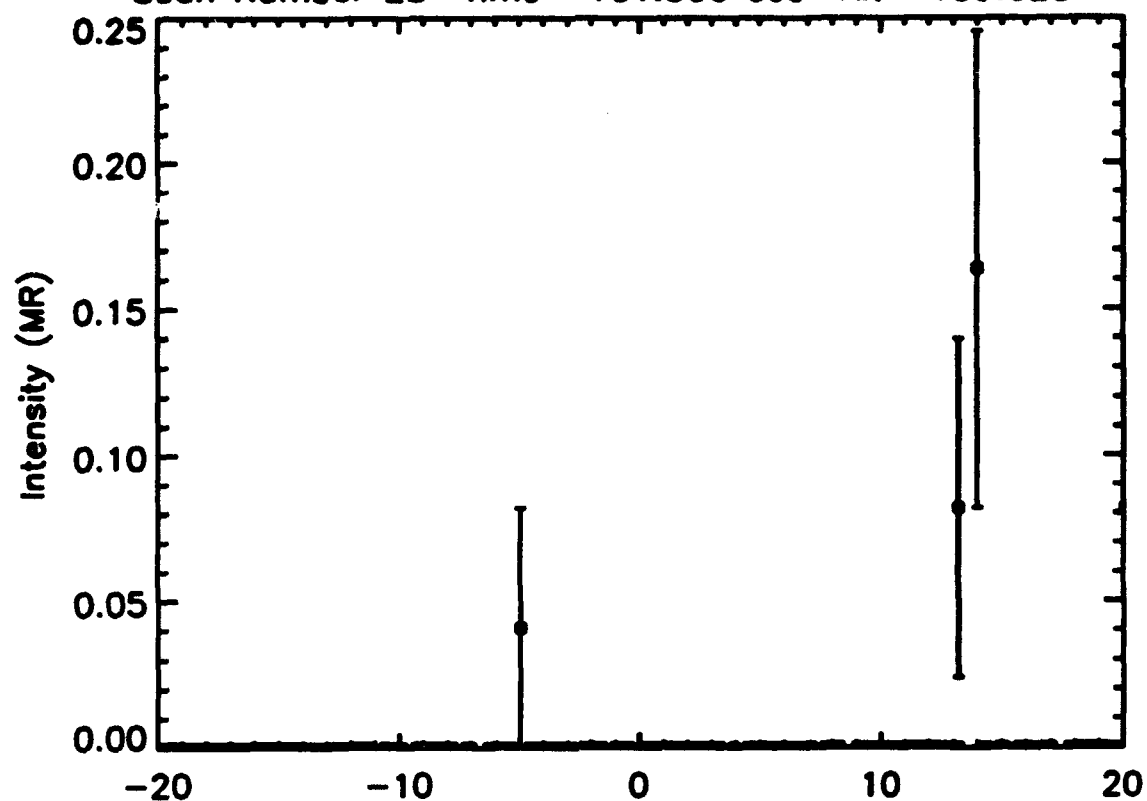
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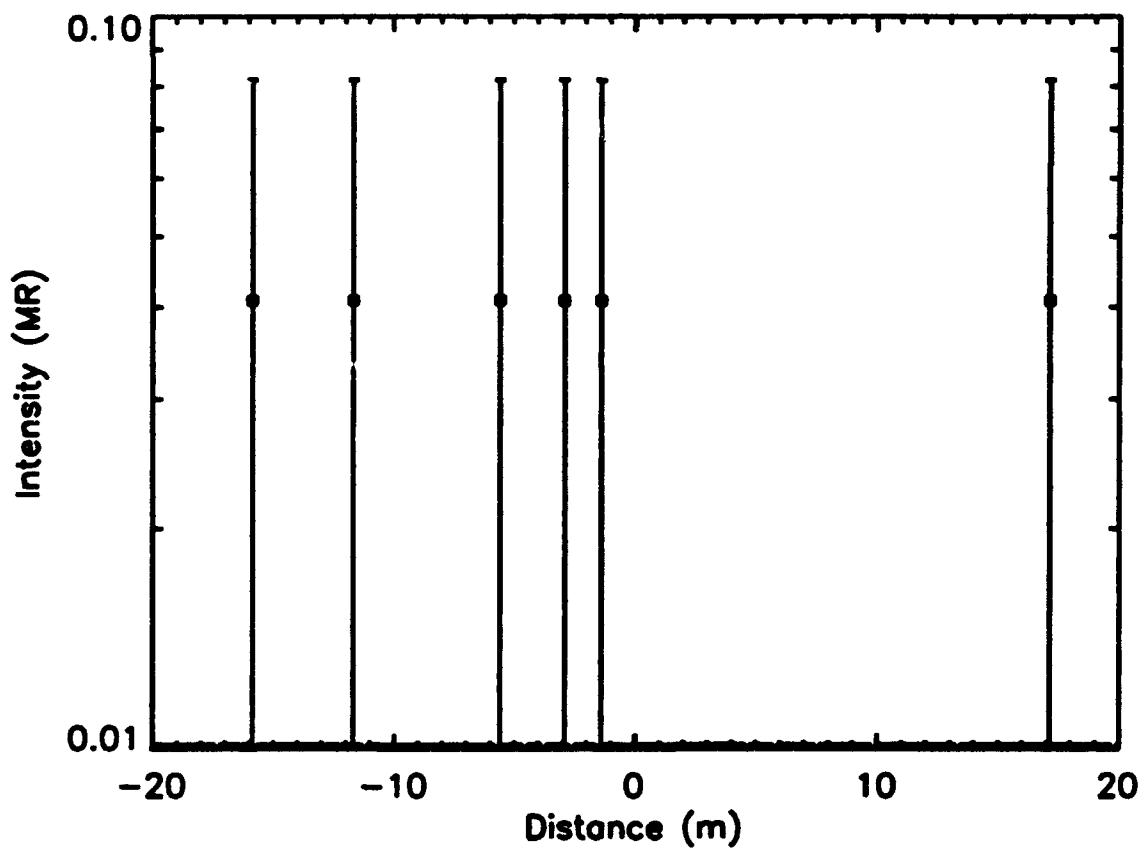
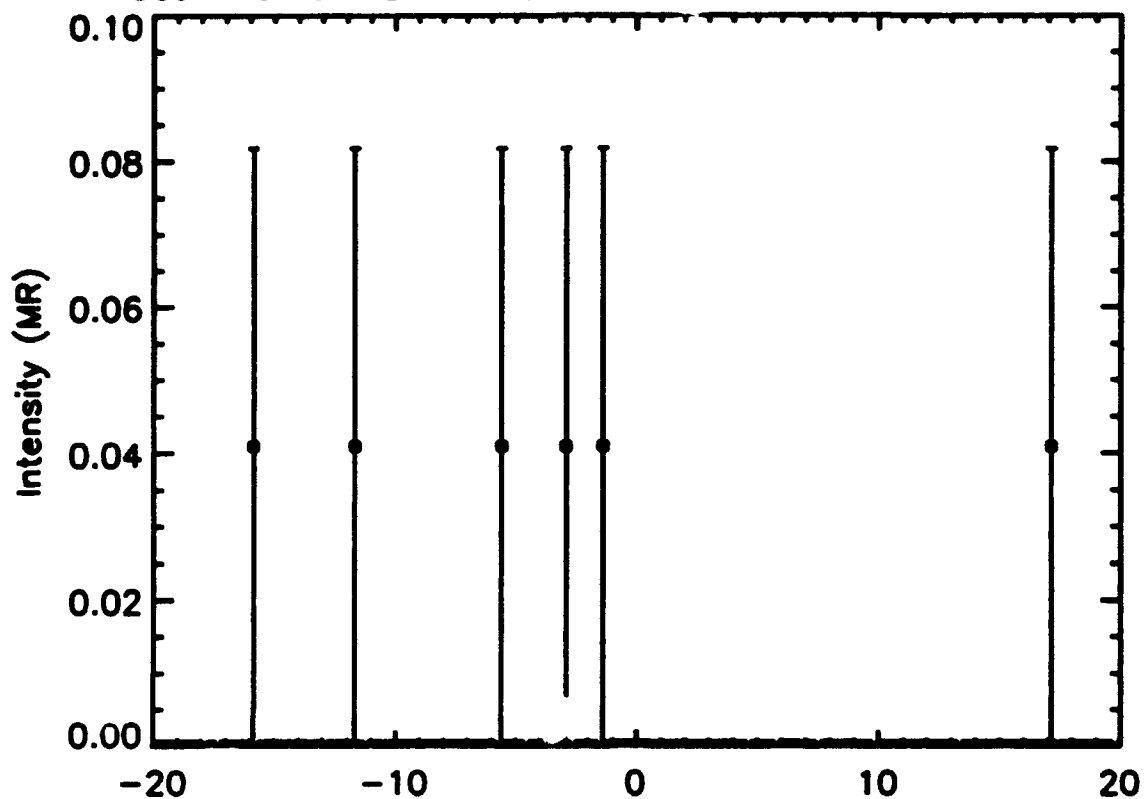
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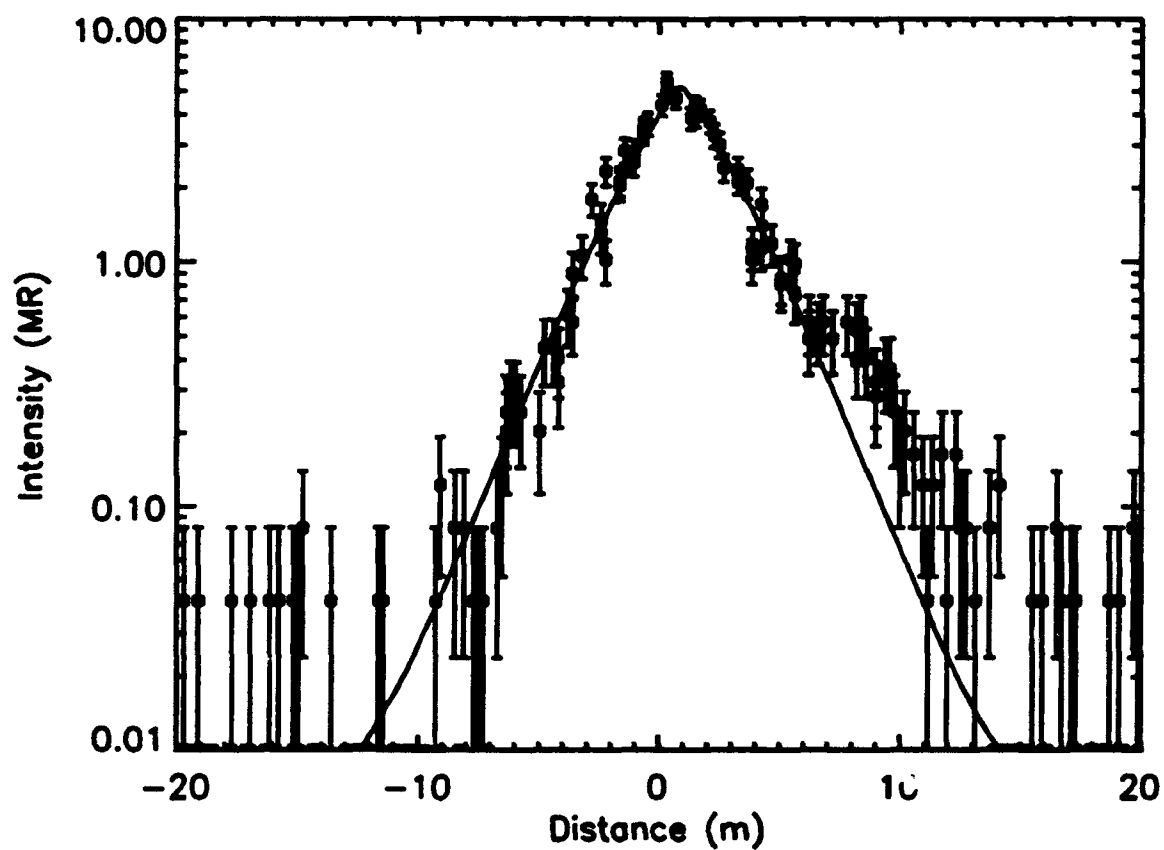
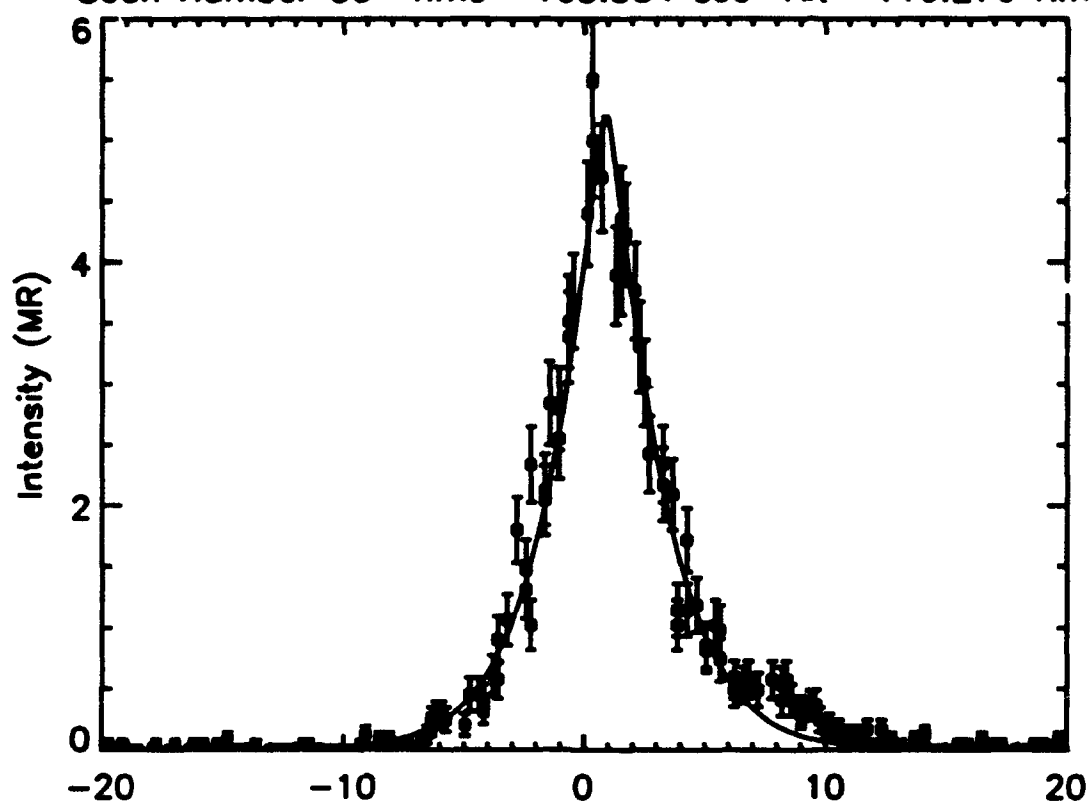
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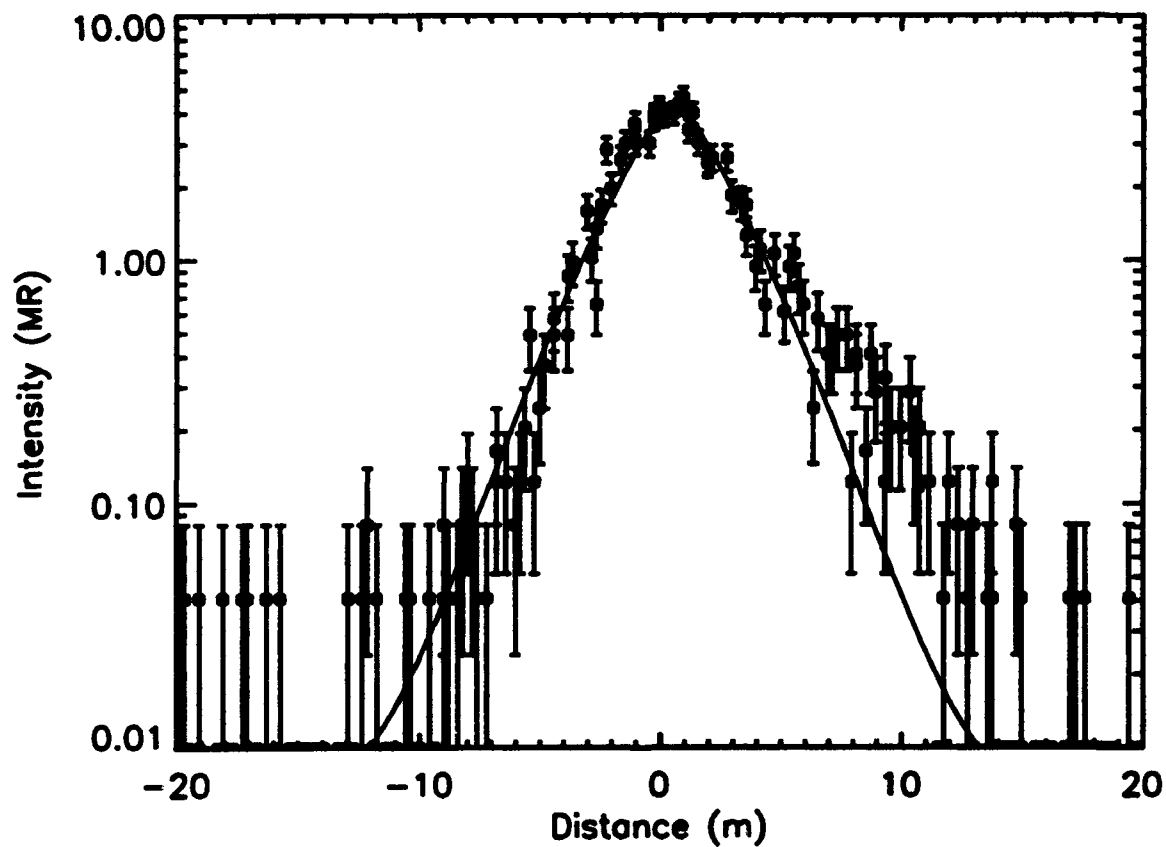
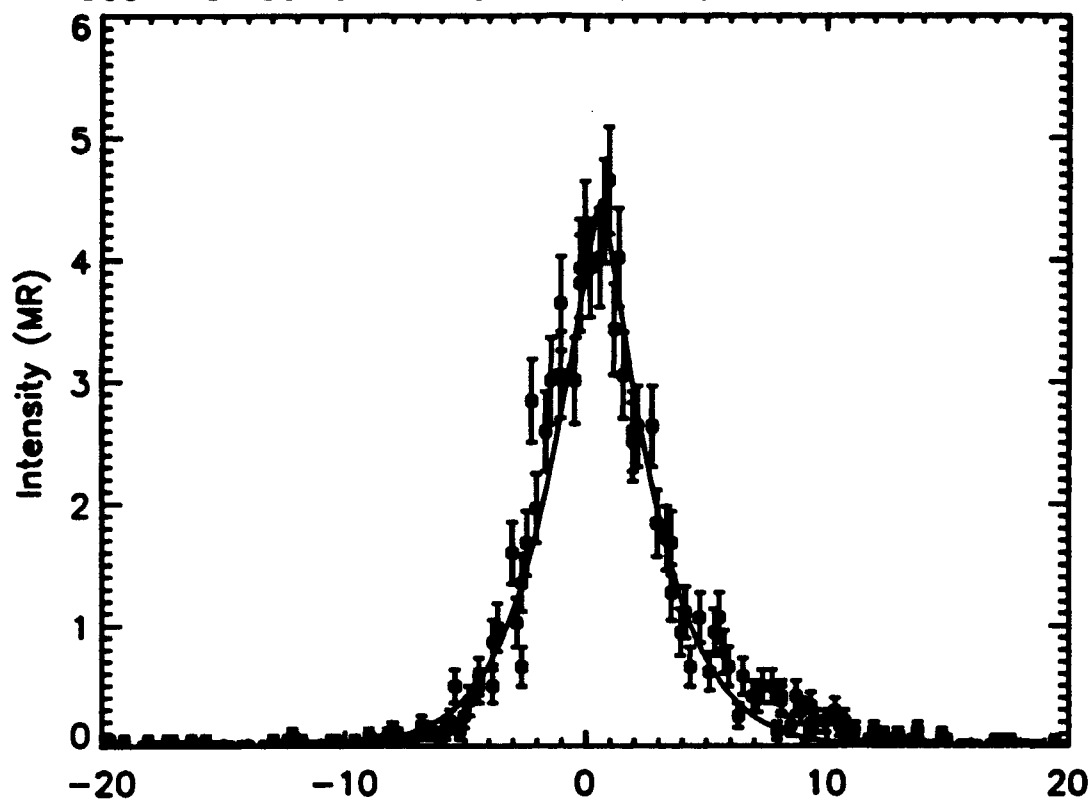
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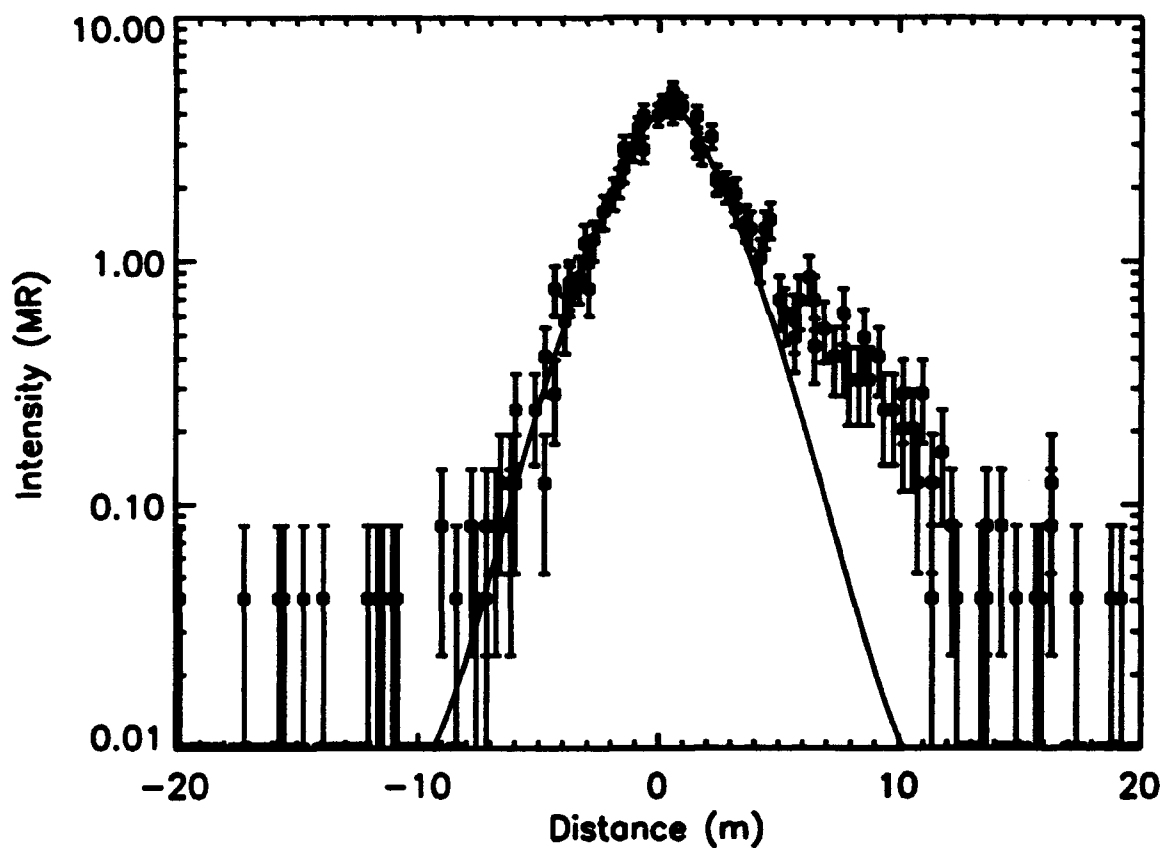
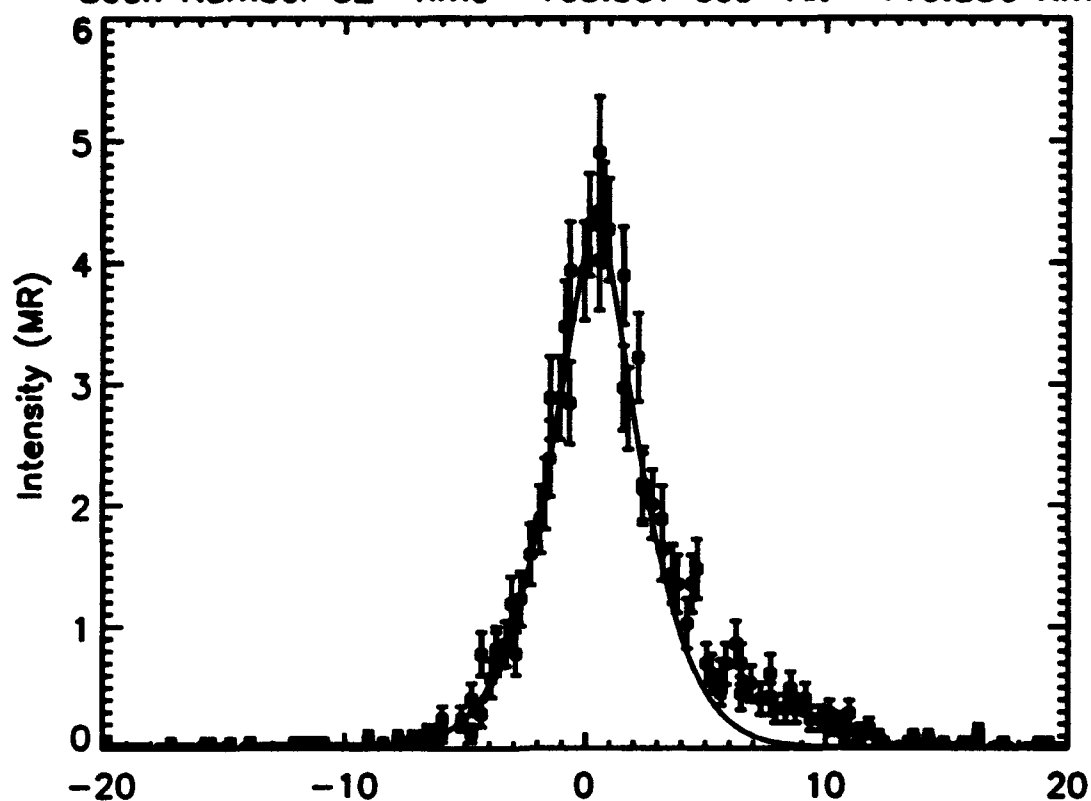
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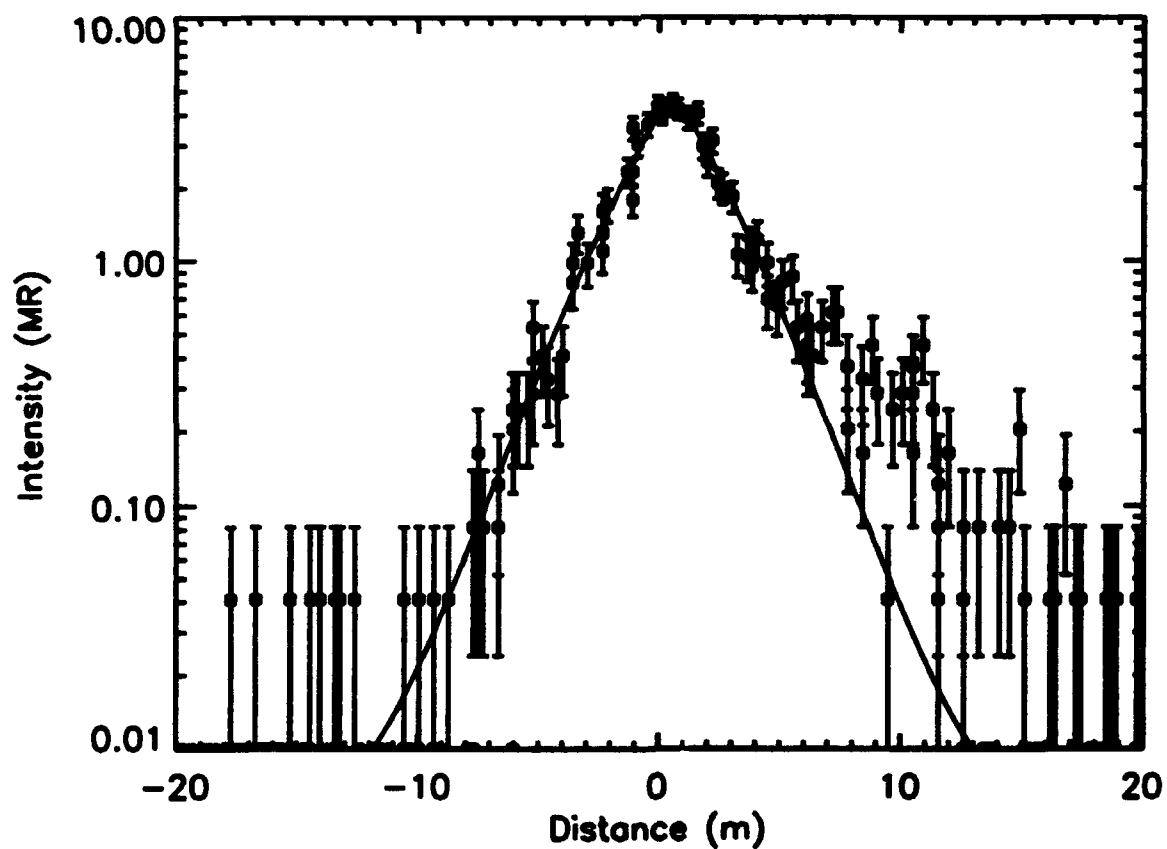
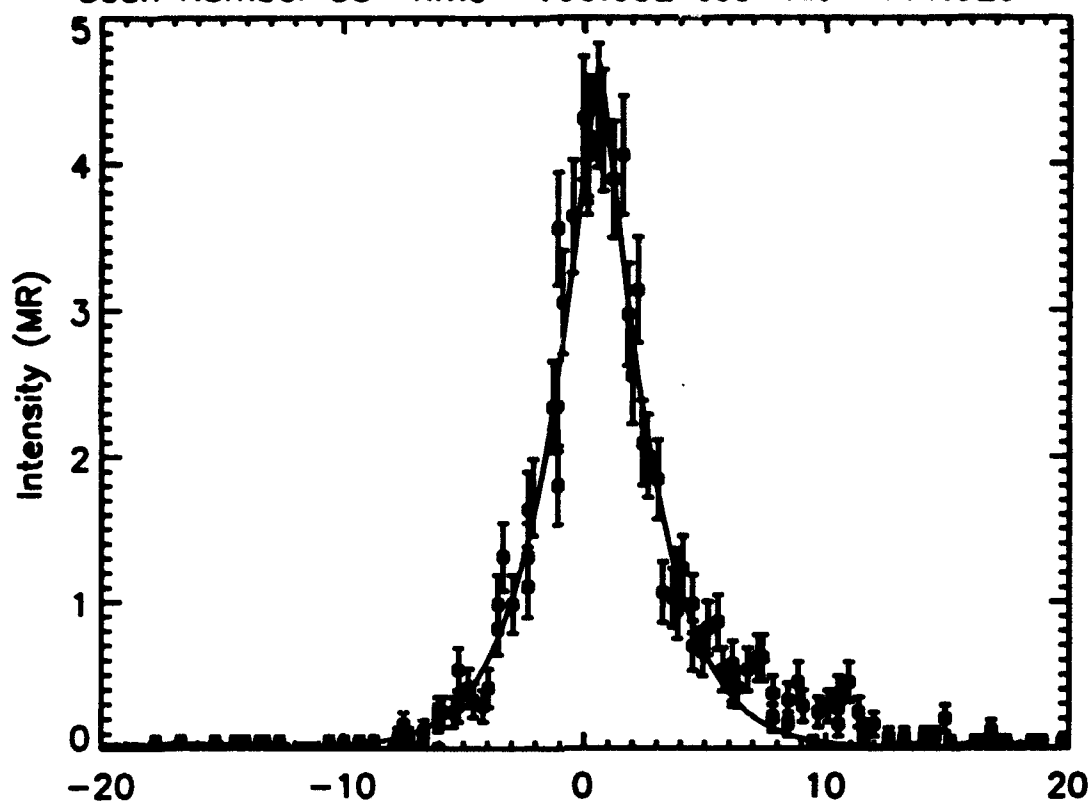
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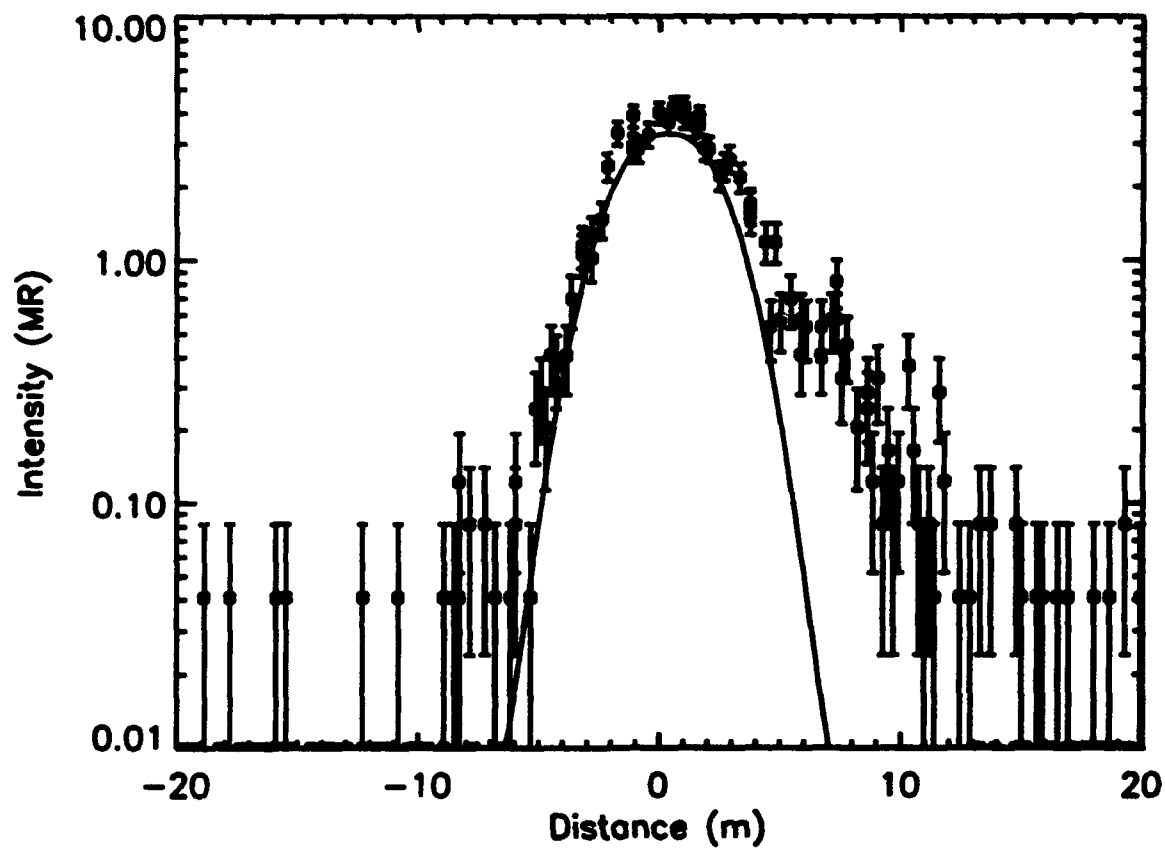
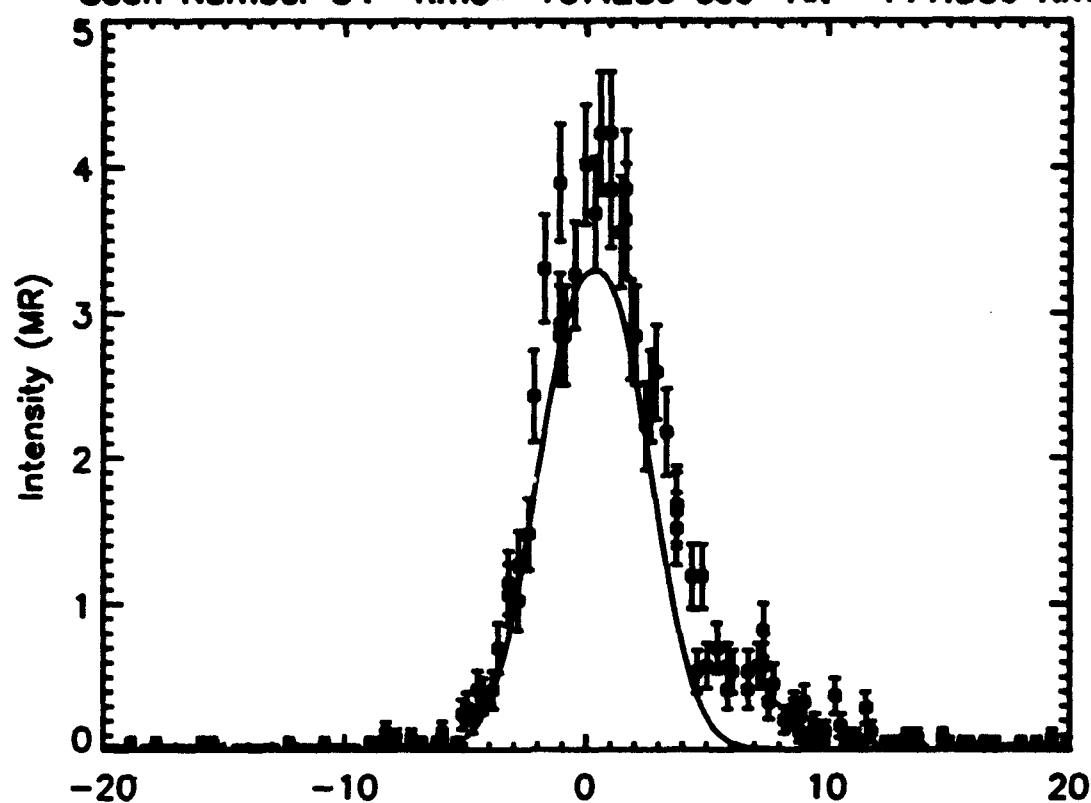
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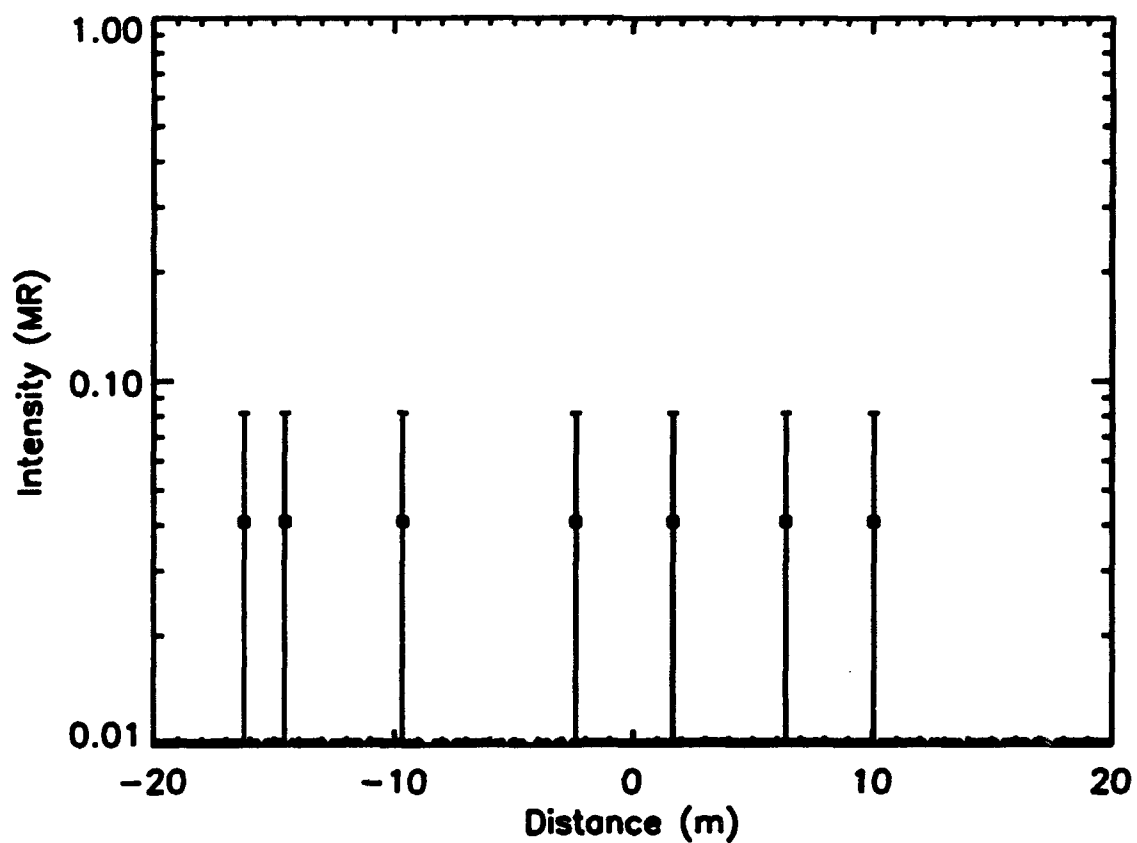
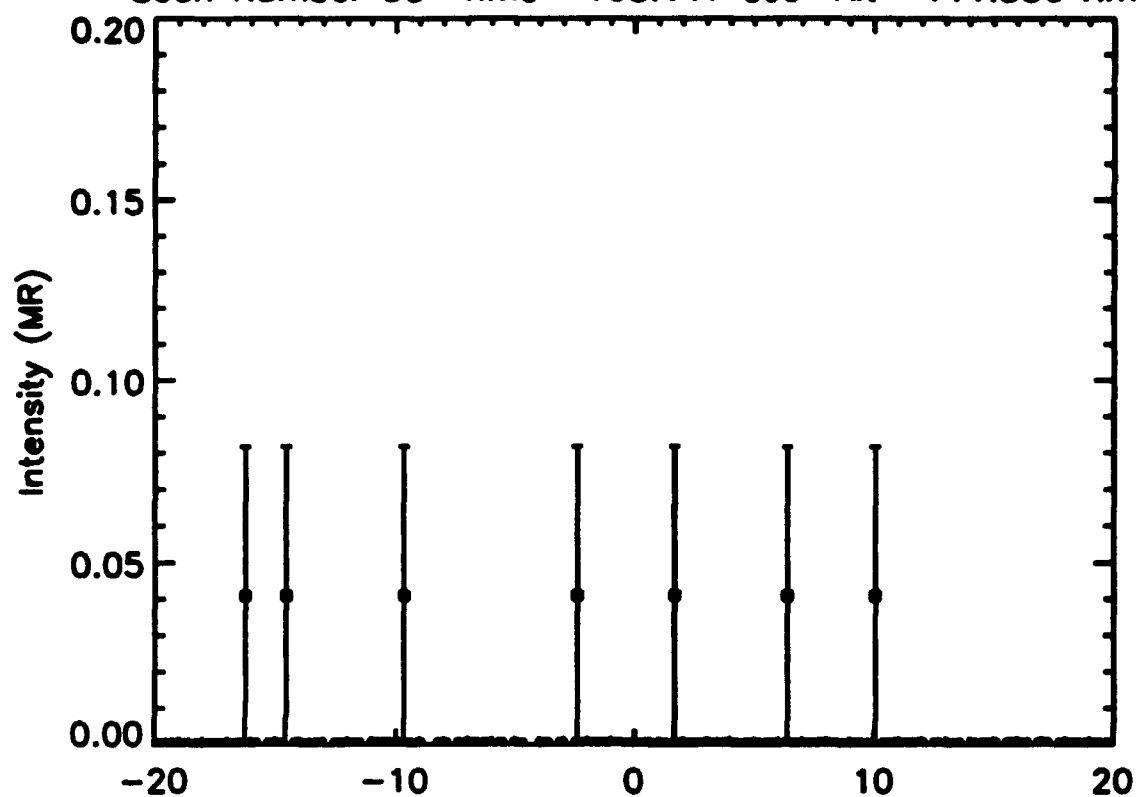
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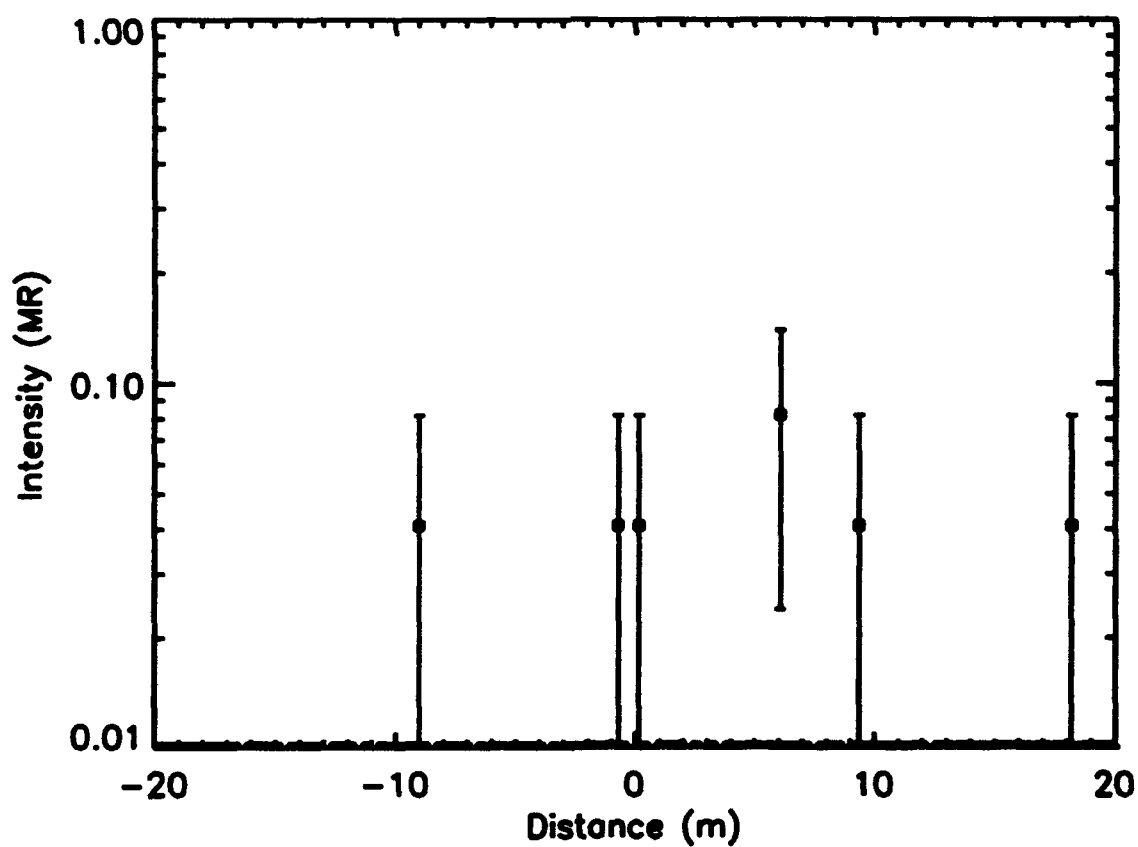
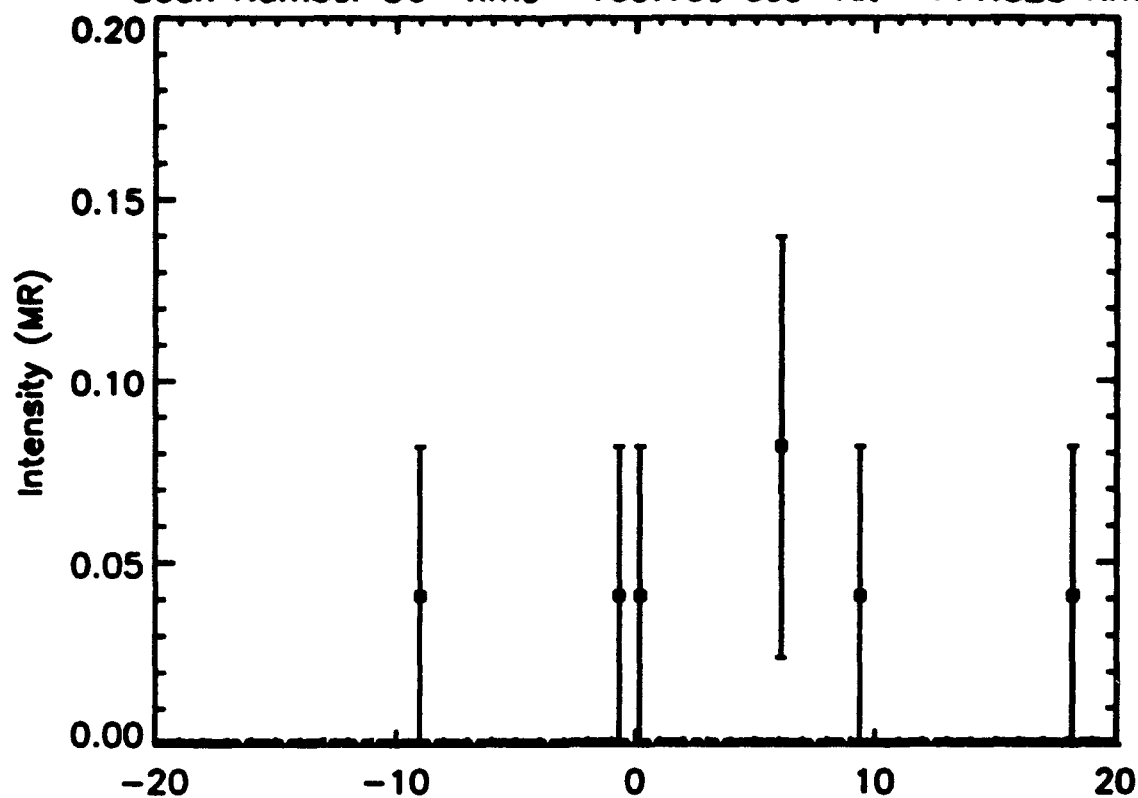
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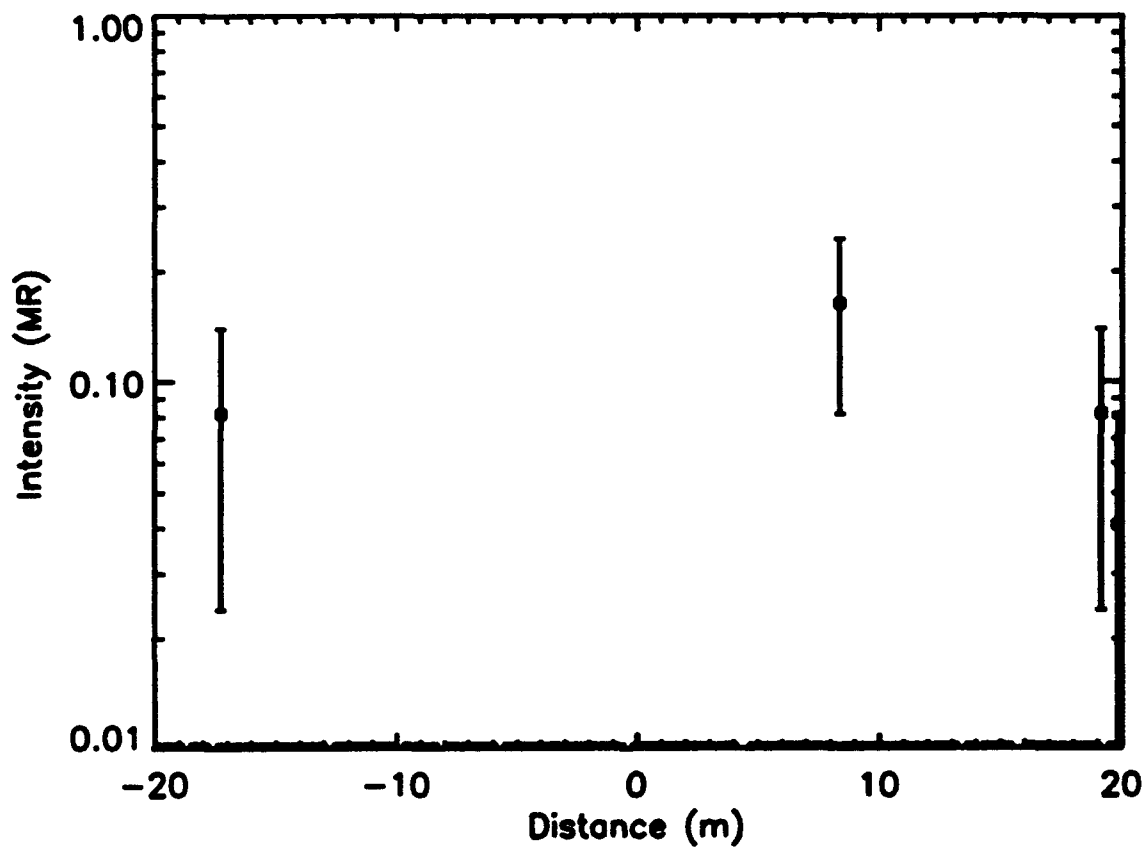
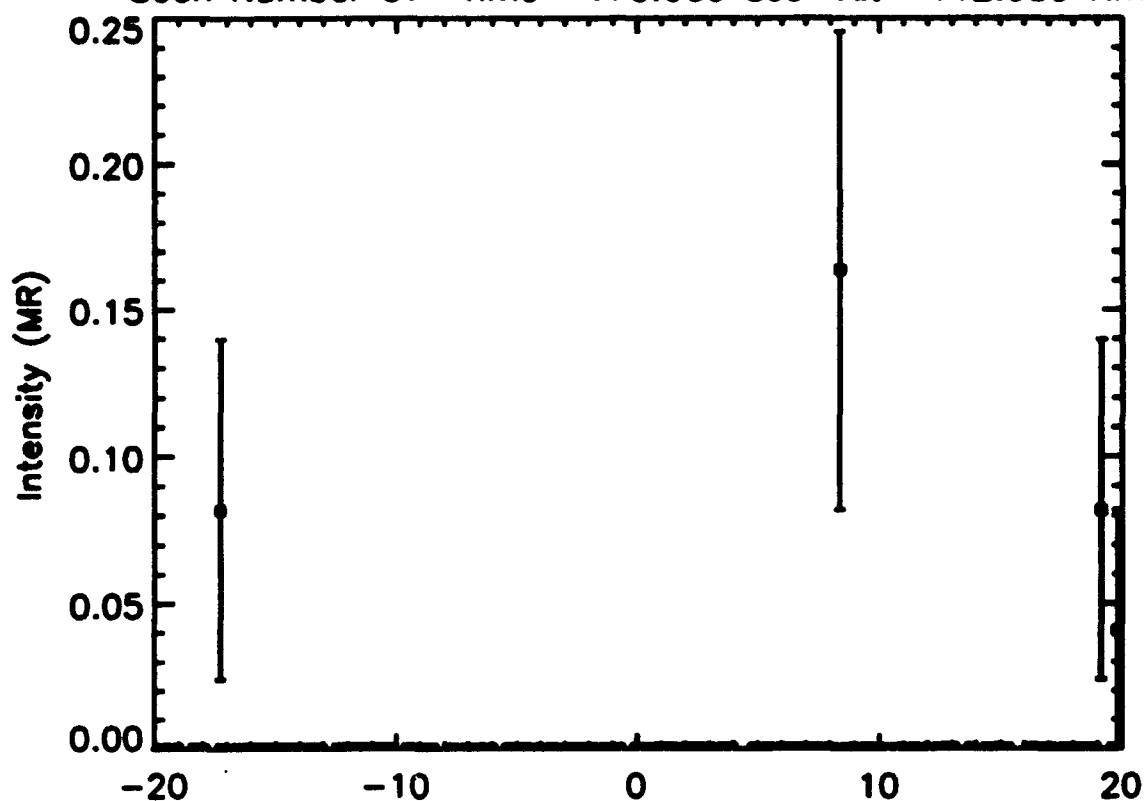
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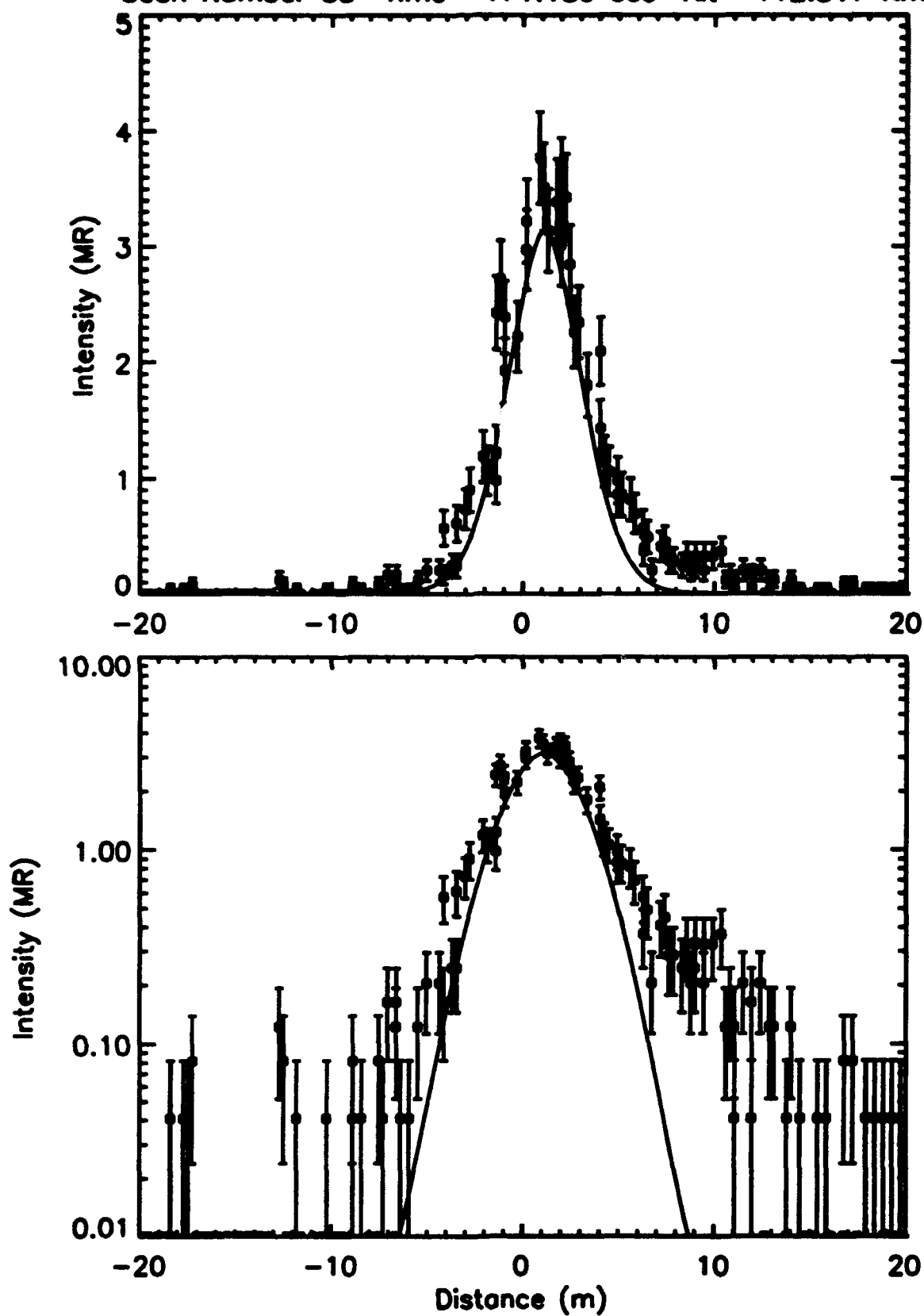
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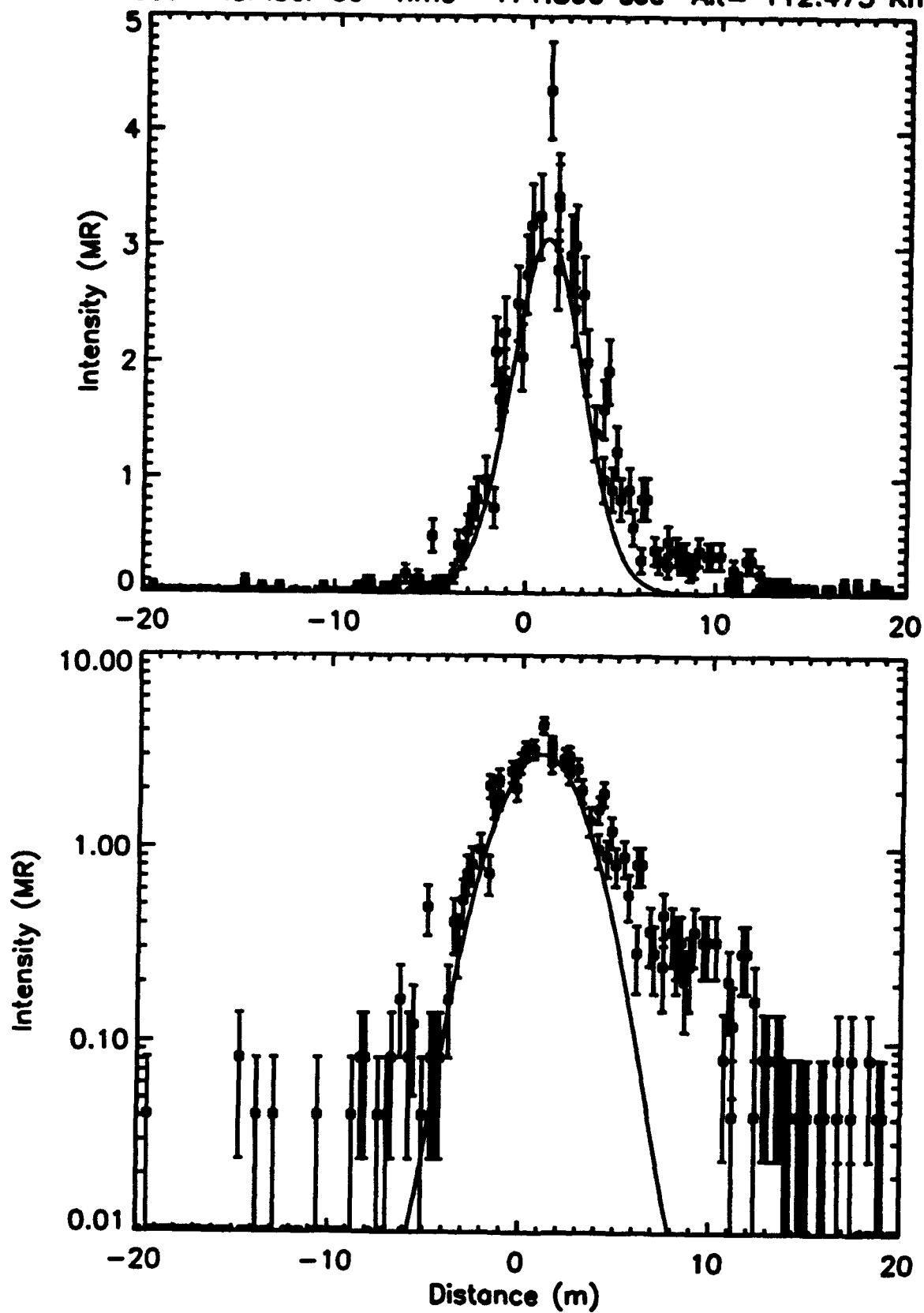
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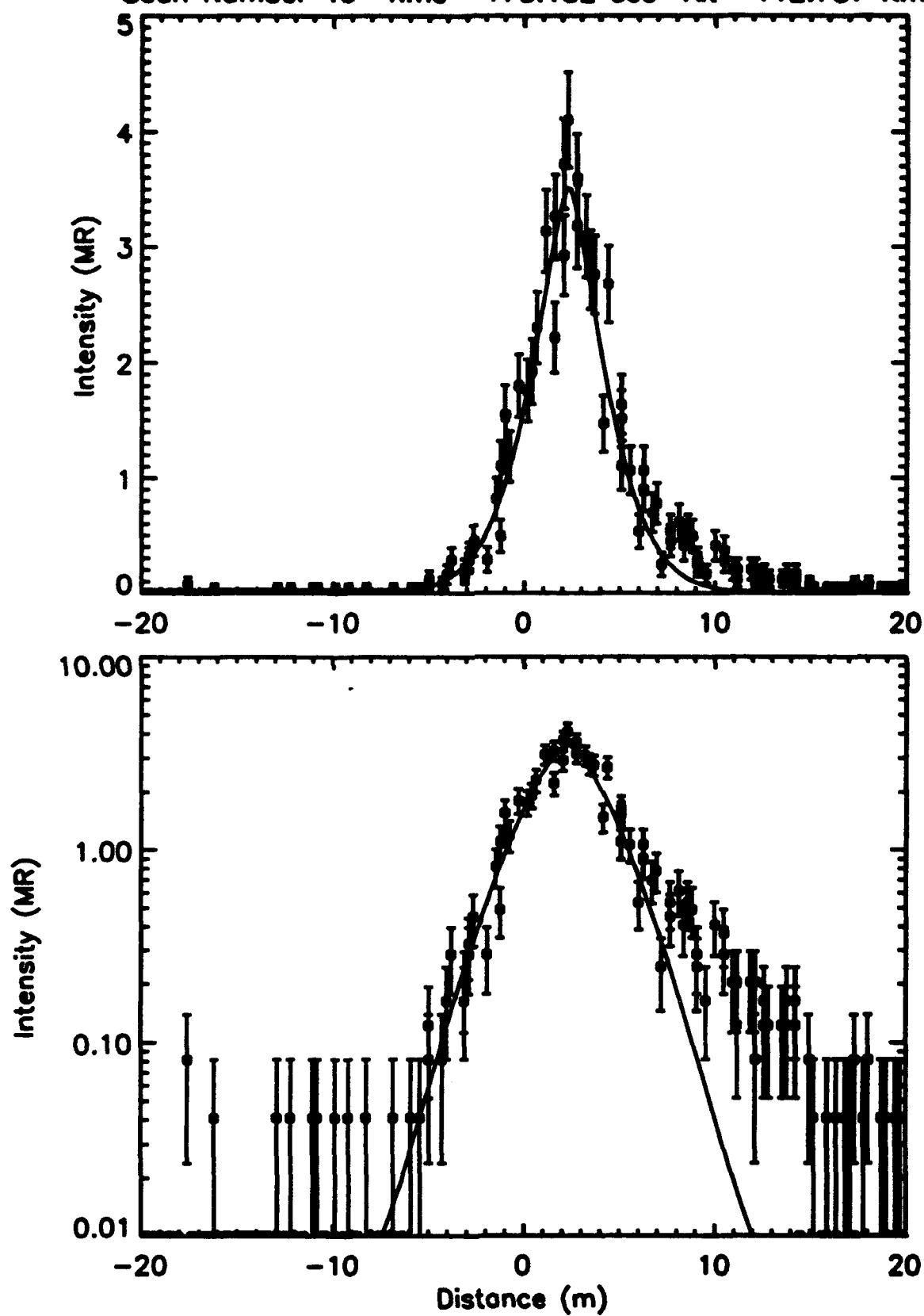
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Scan Number 38 Time= 171.189 sec Alt= 112.317 Km



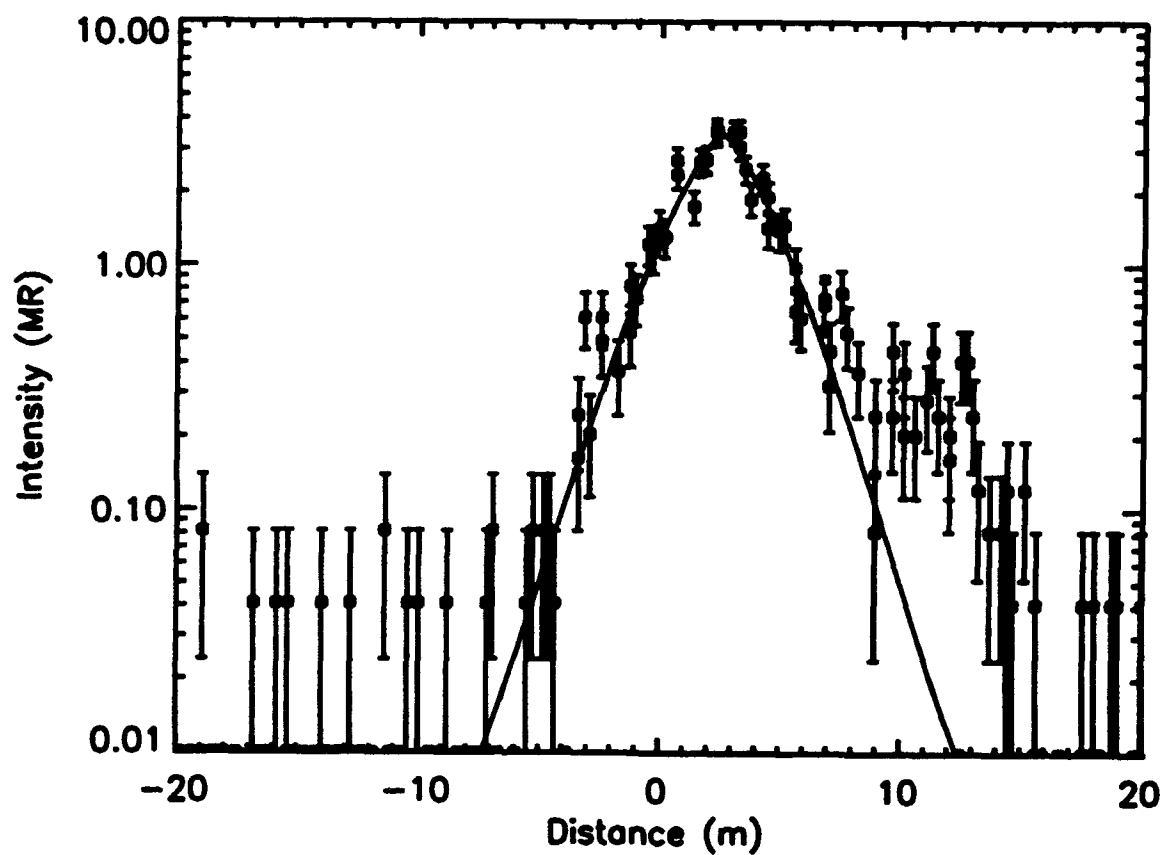
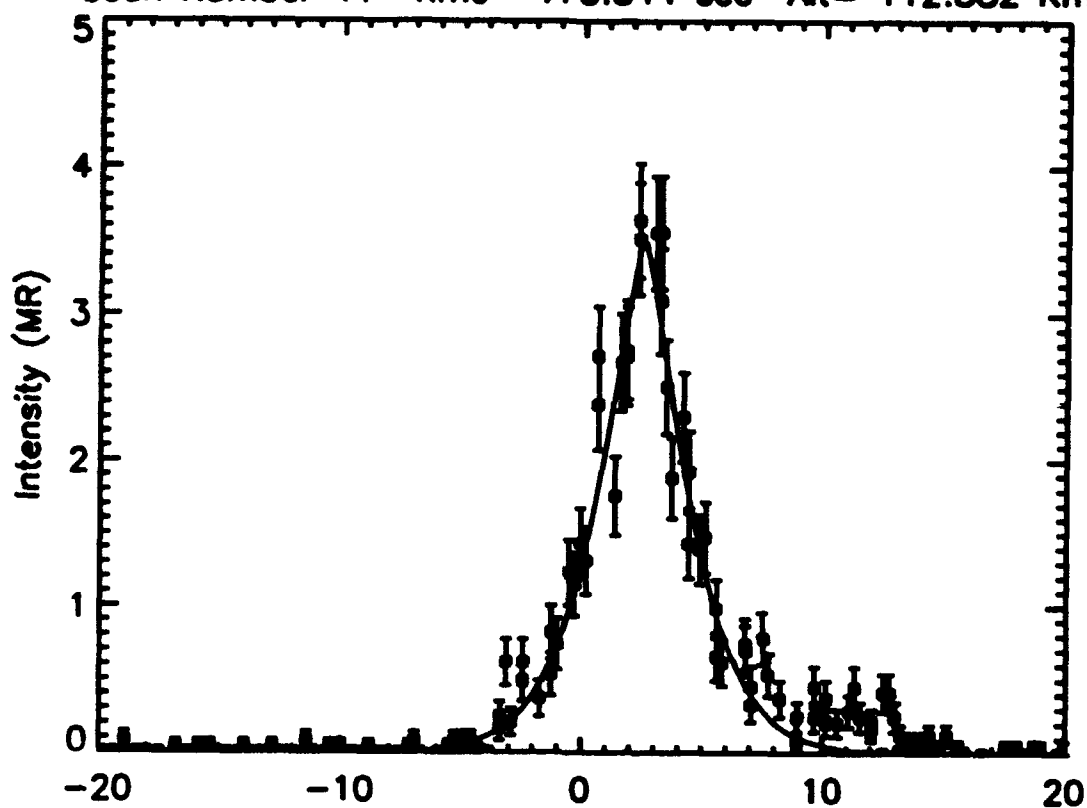
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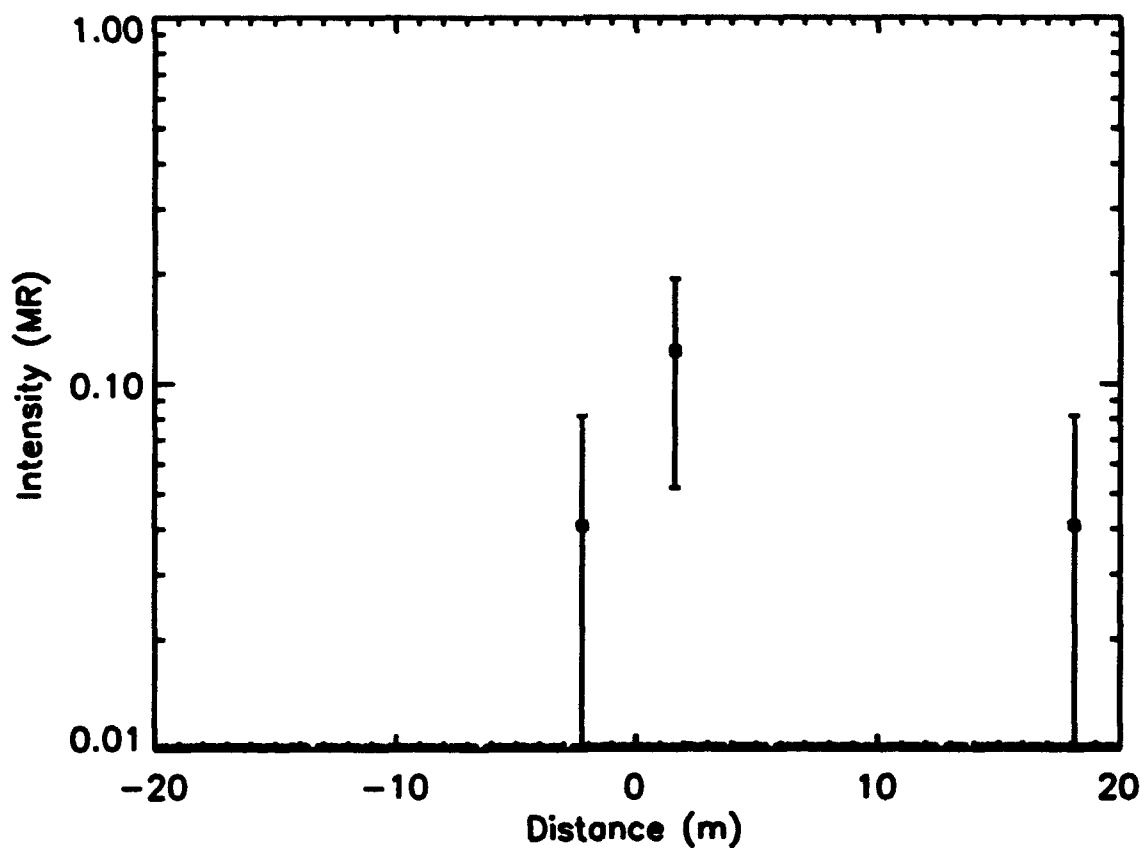
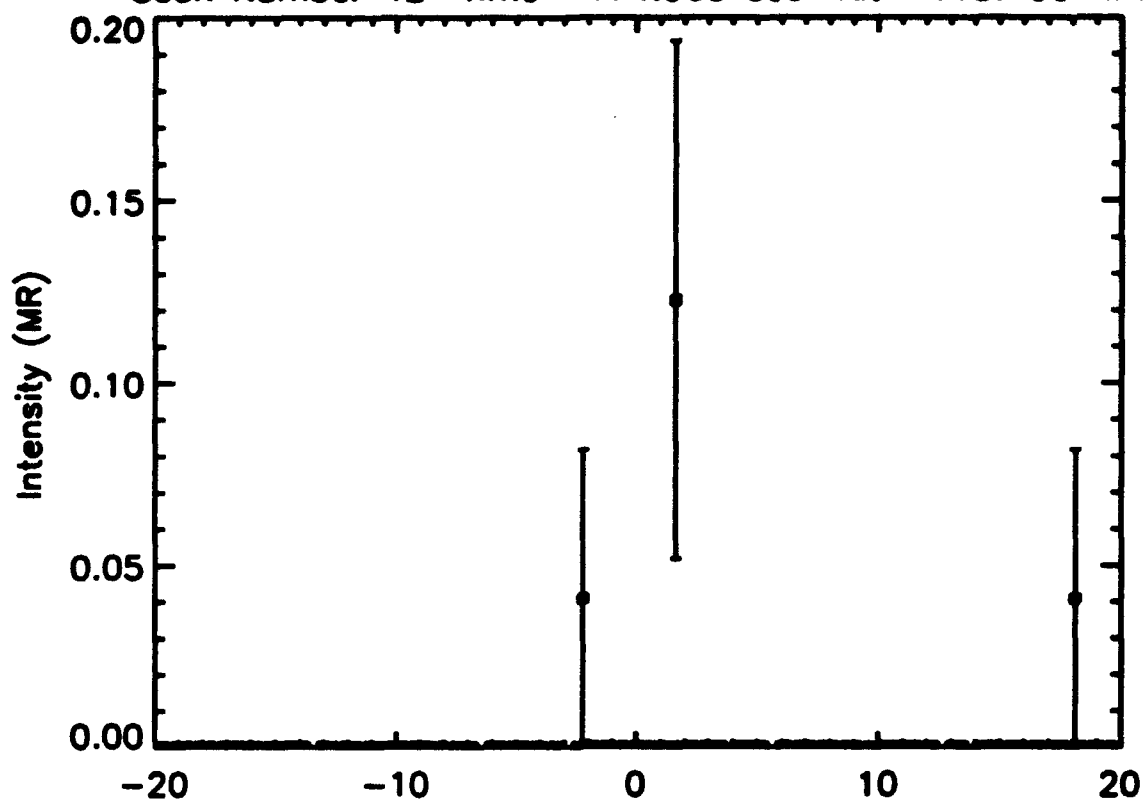
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Scan Number 40 Time= 173.132 sec Alt= 112.737 Km



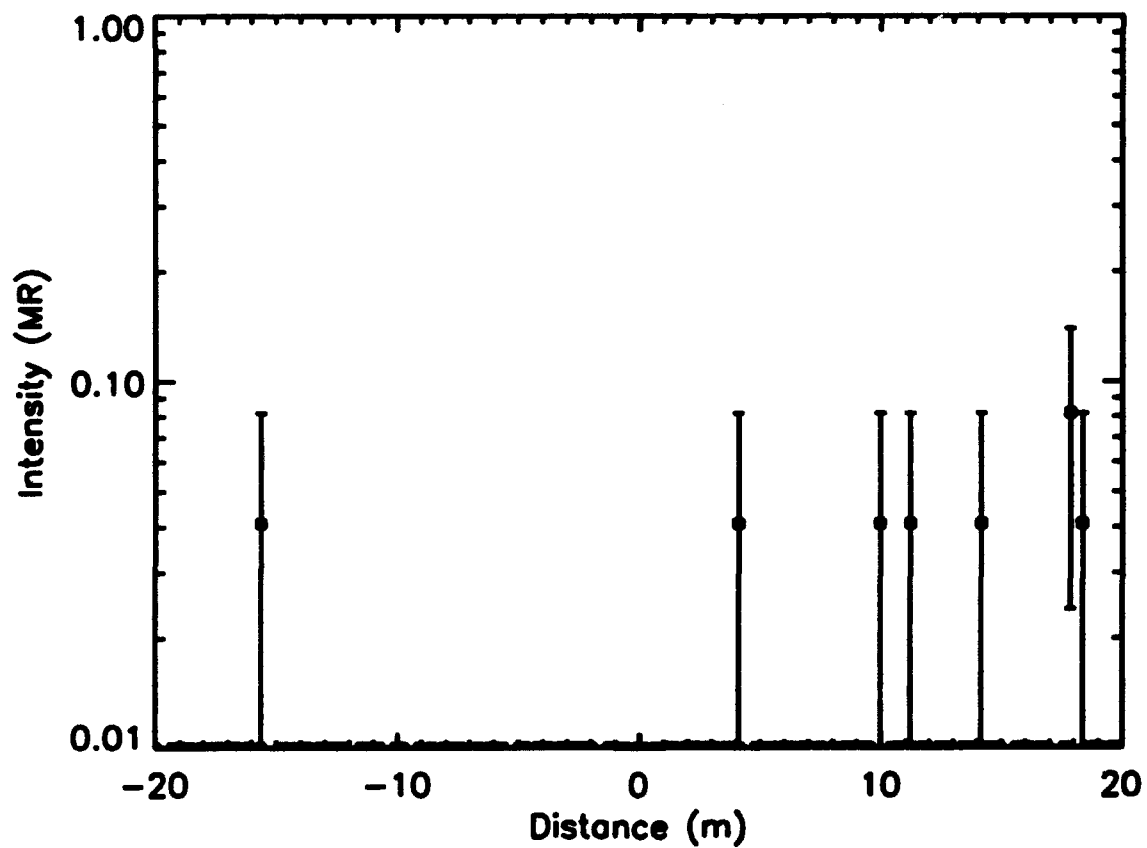
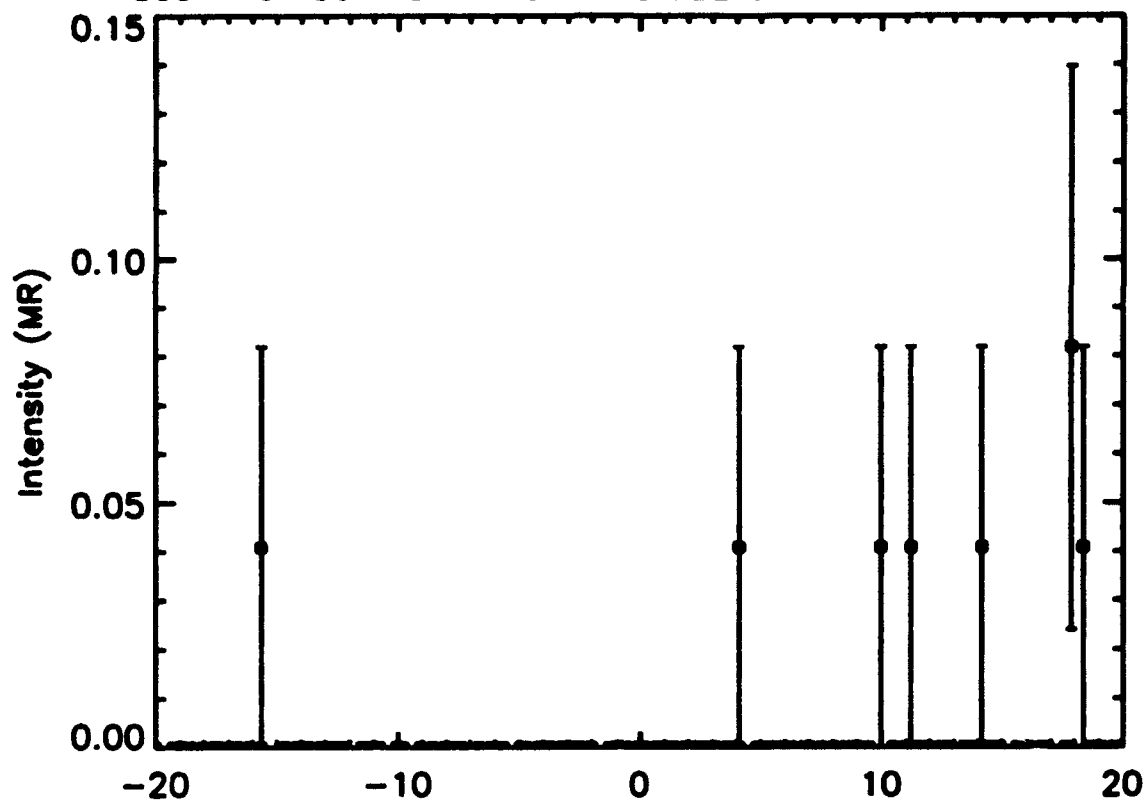
EXCEDE III 3914 A Scanning Photometer
Scan Number 41 Time= 173.844 sec Alt= 112.882 Km



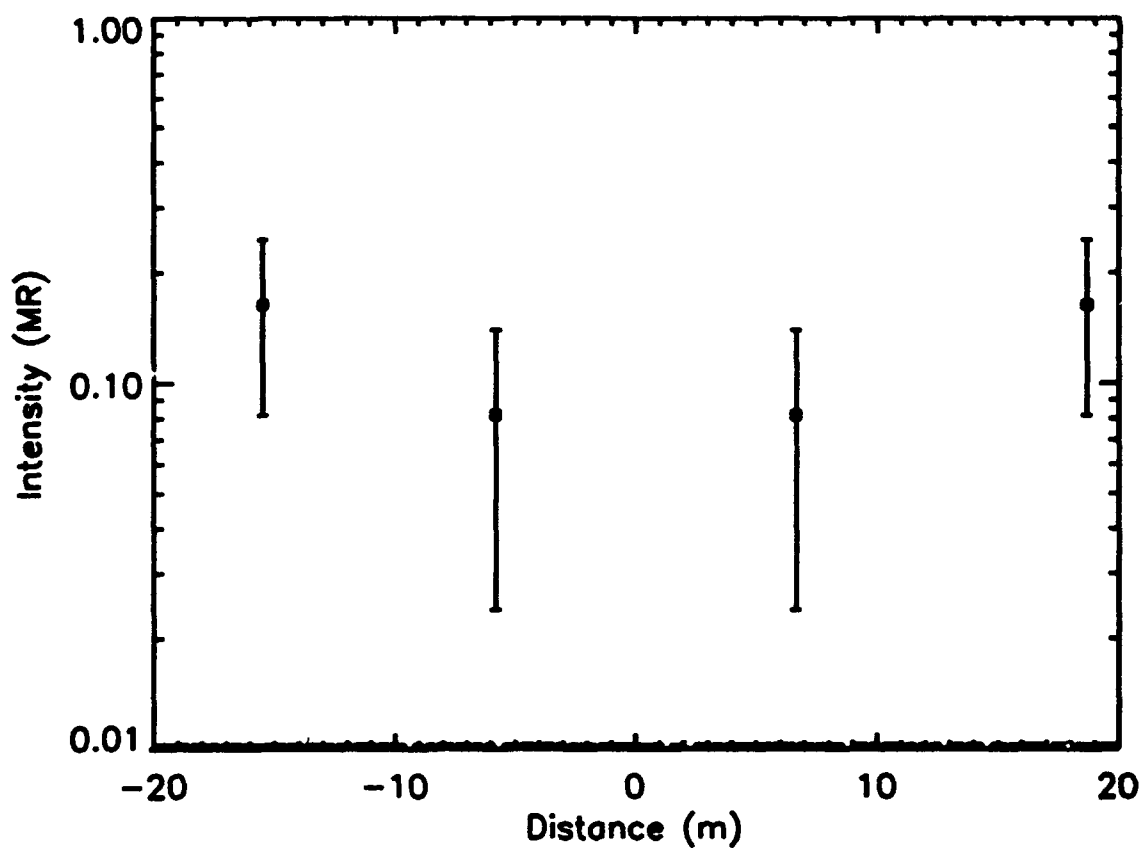
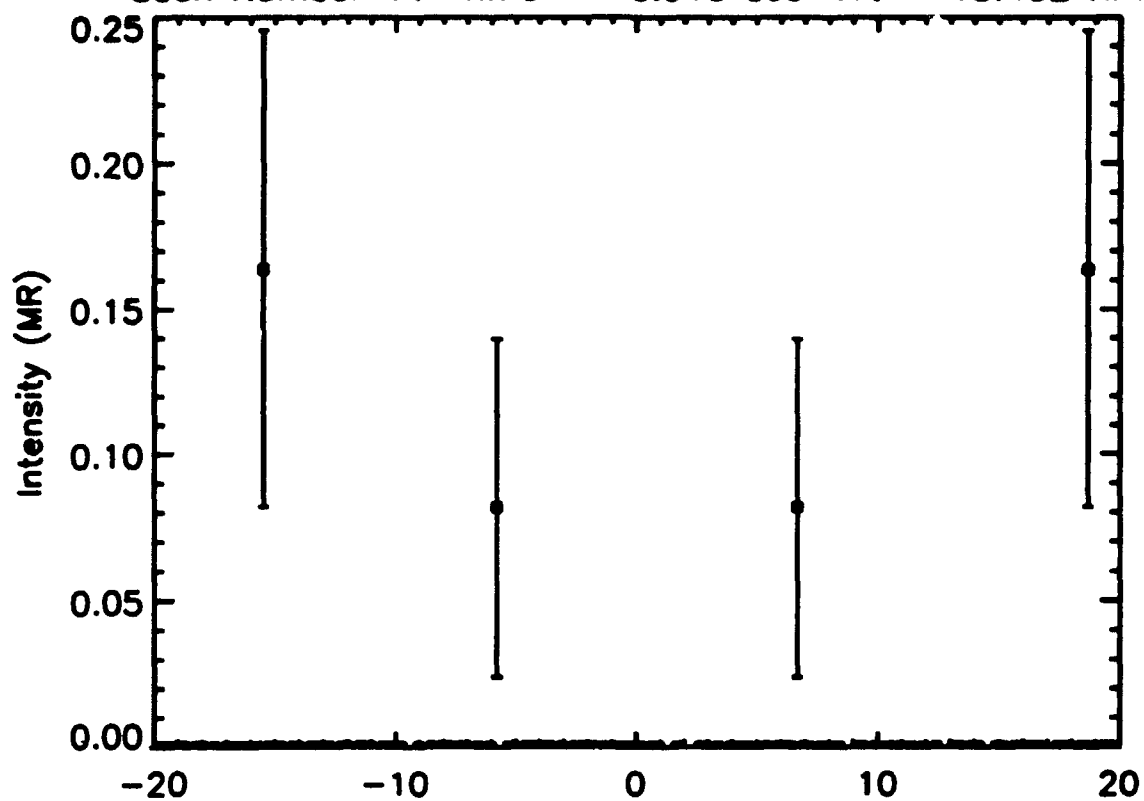
EXCEDE III 3914 A Scanning Photometer
Scan Number 42 Time= 174.963 sec Alt= 113.100 Km



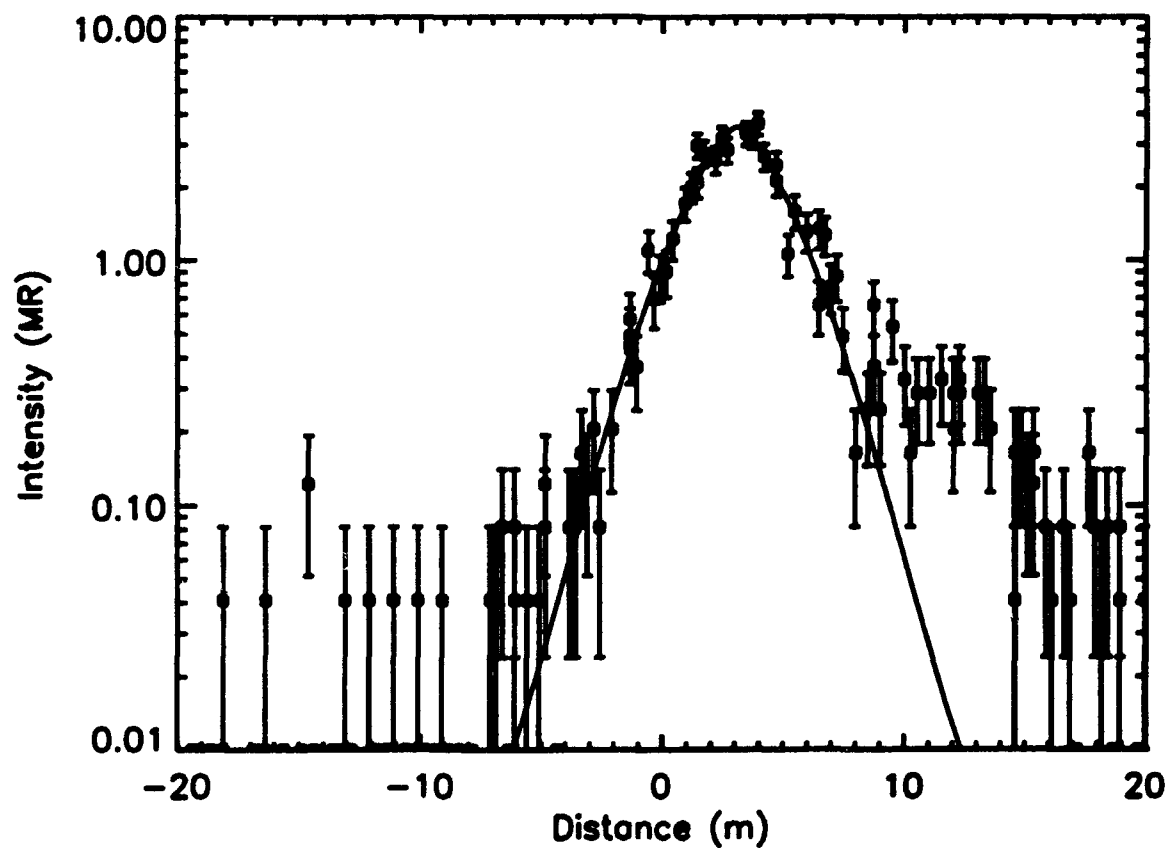
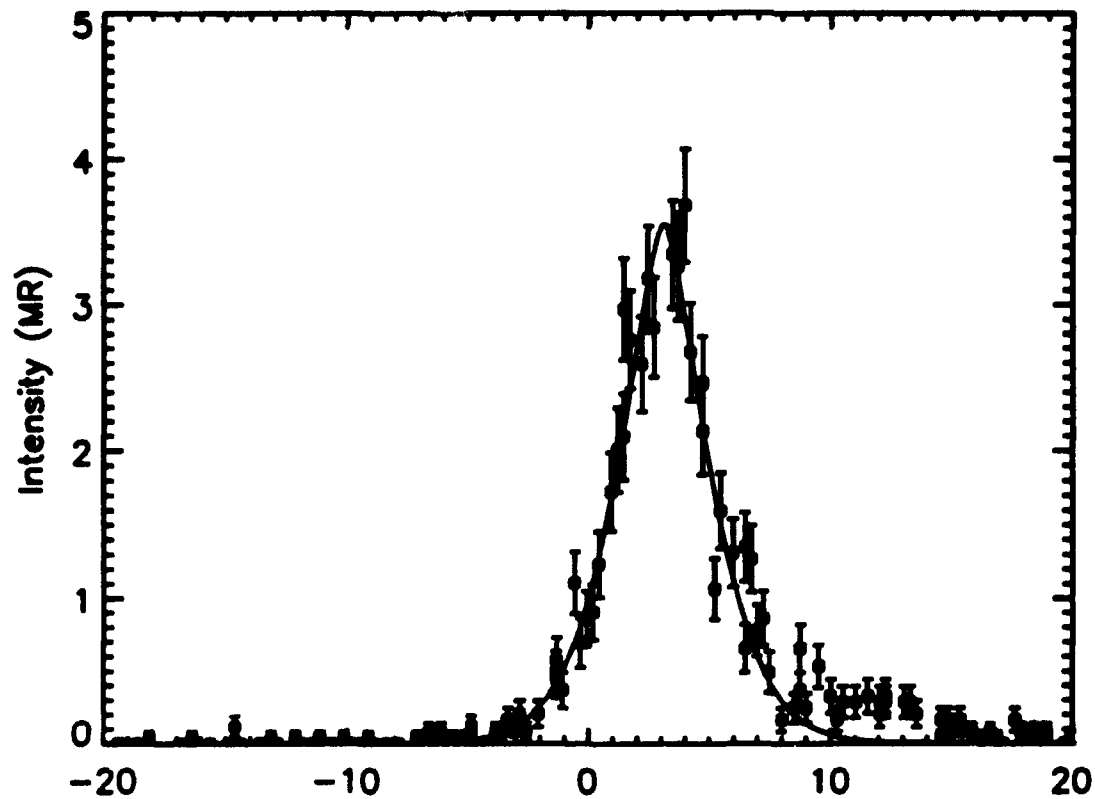
EXCEDE III 3914 A Scanning Photometer
Scan Number 43 Time= 175.922 sec Alt= 113.278 Km



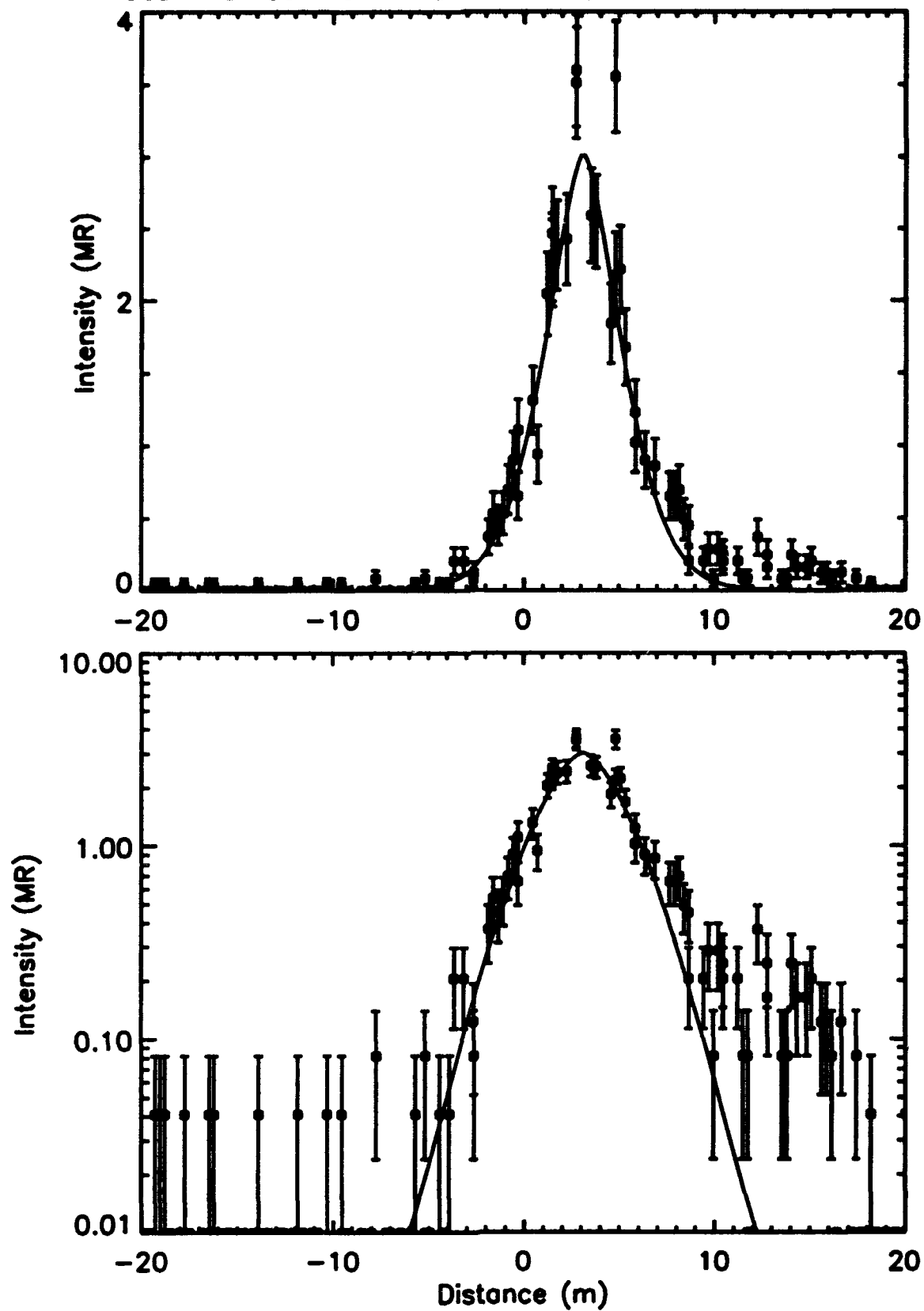
EXCEDE III 3914 A Scanning Photometer
Scan Number 44 Time= 176.915 sec Alt= 113.452 Km



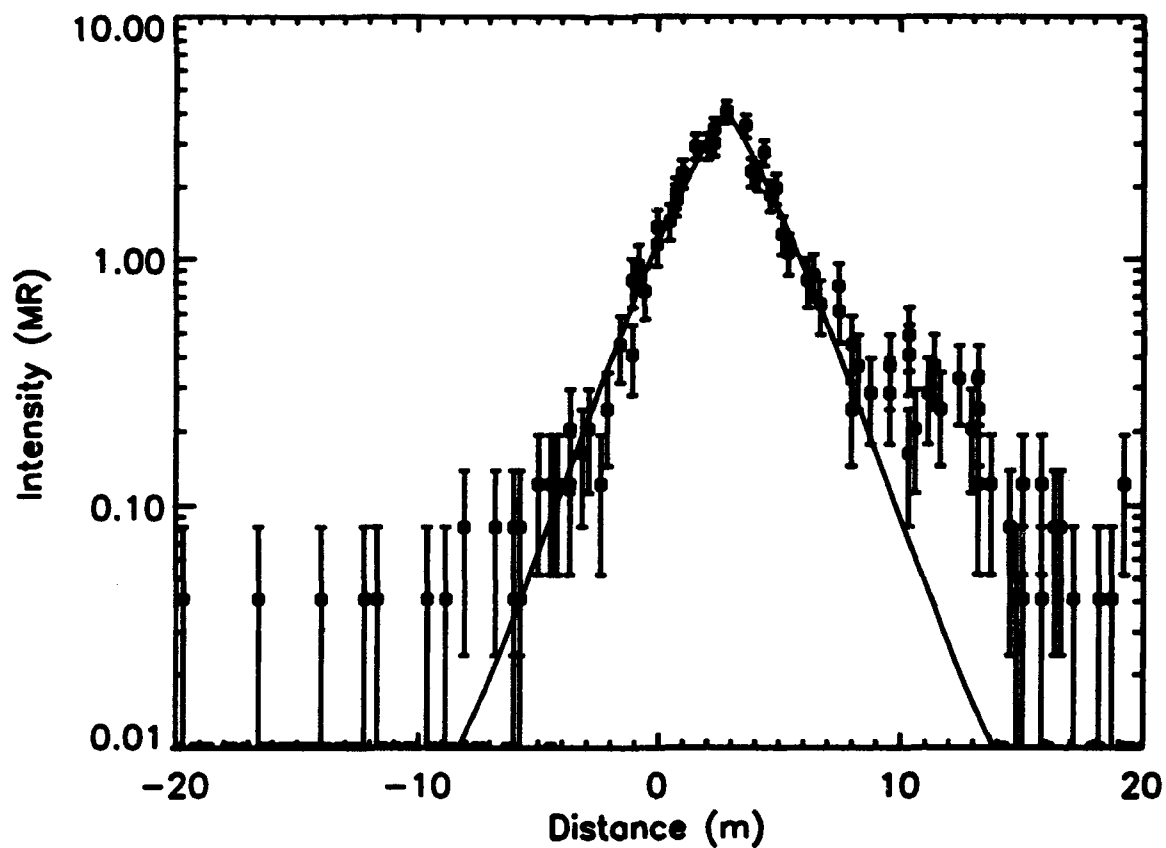
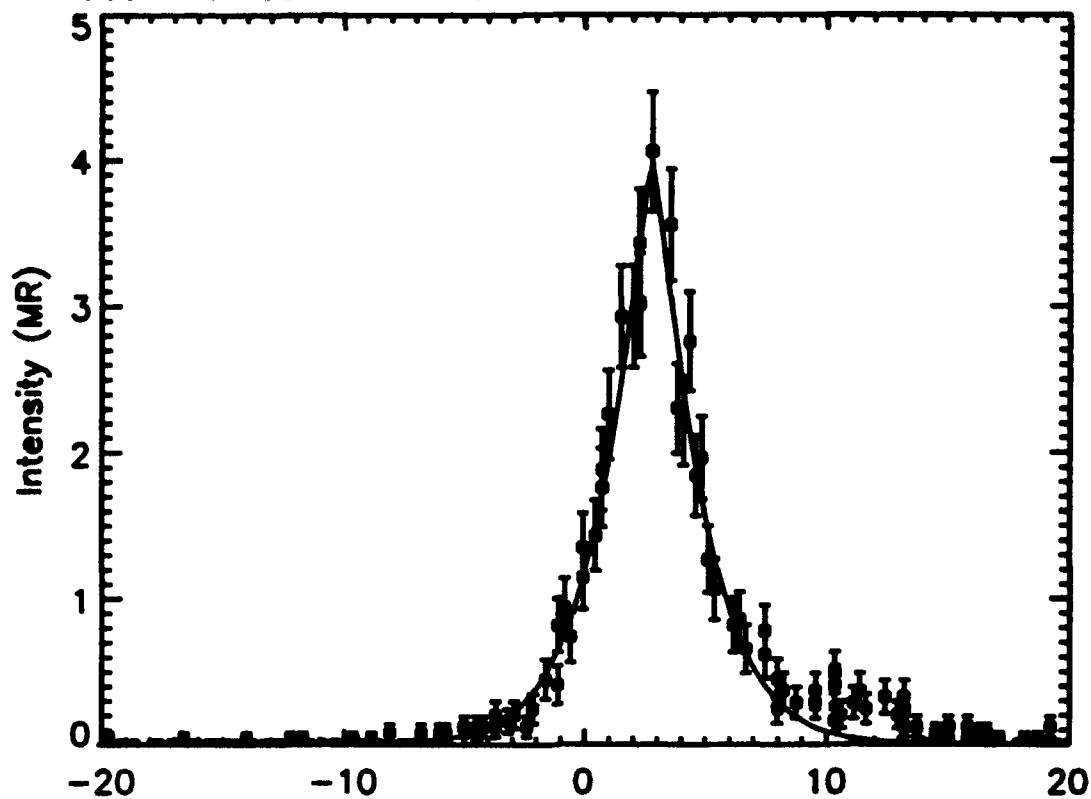
EXCEDE III 3914 A Scanning Photometer
Scan Number 45 Time= 177.747 sec Alt= 113.591 Km



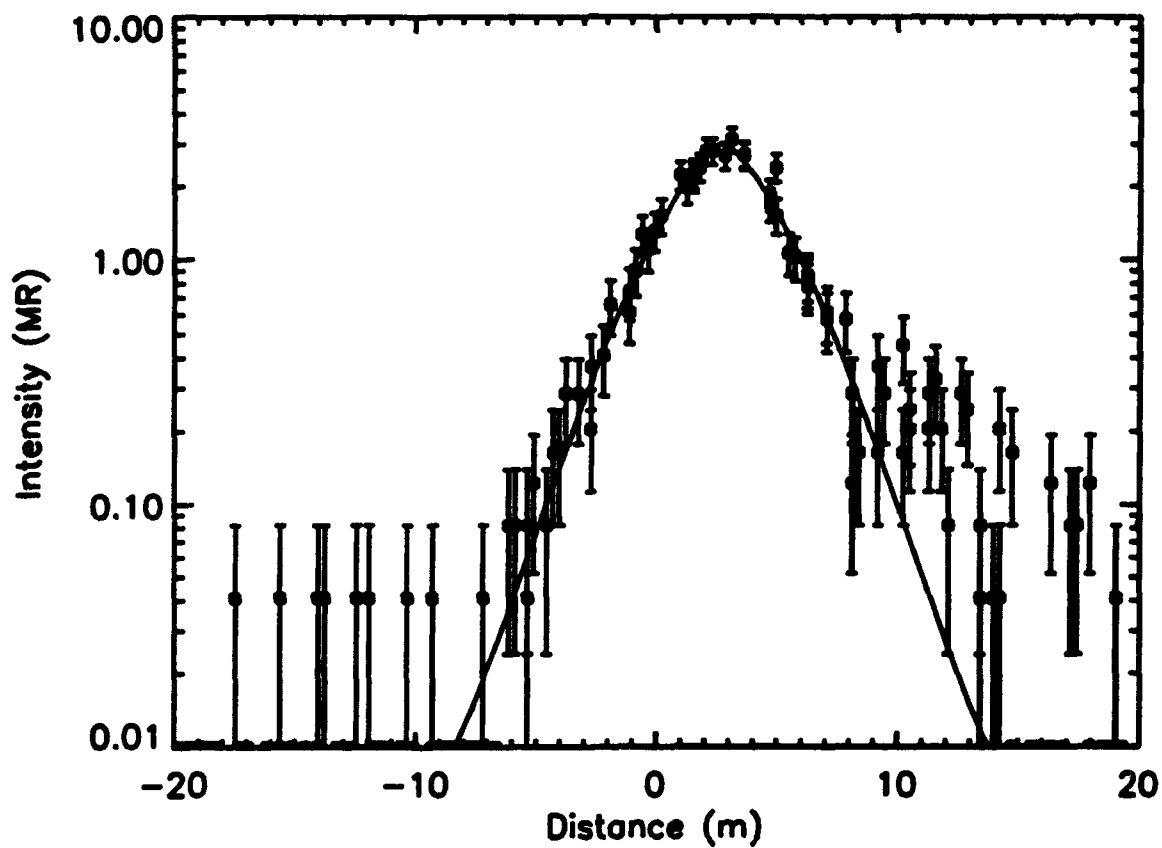
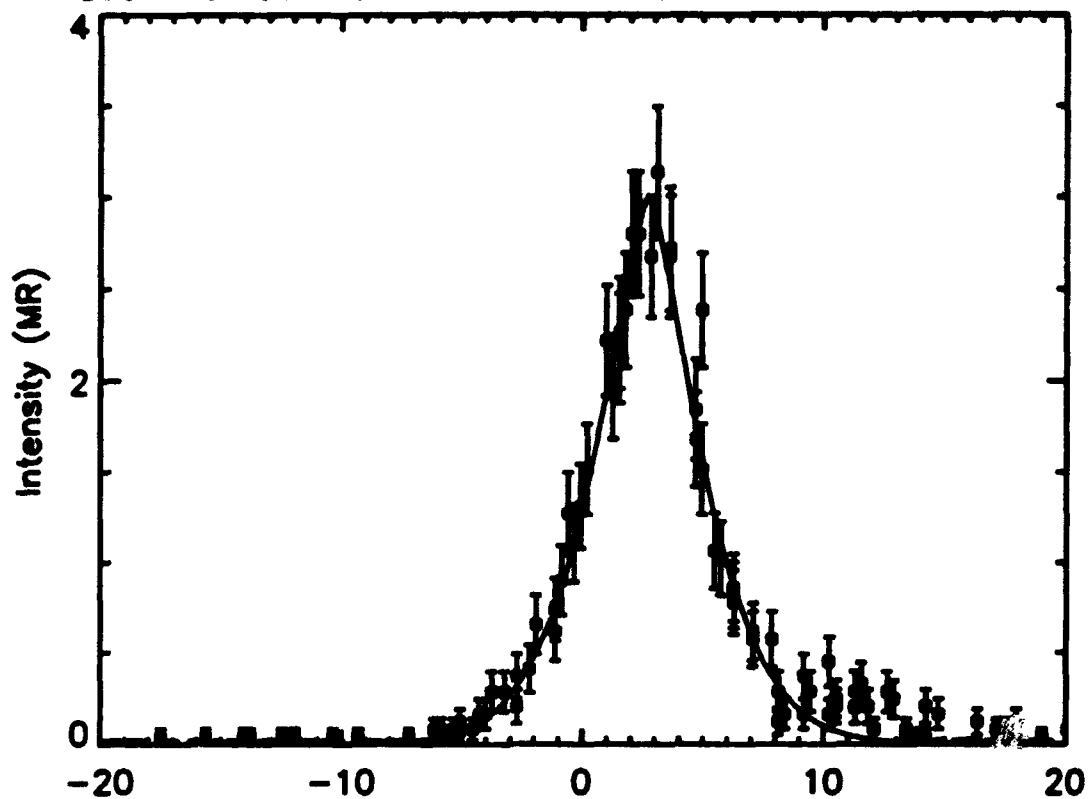
EXCEDE III 3914 A Scanning Photometer
Scan Number 46 Time = 178.985 sec Alt = 113.786 Km



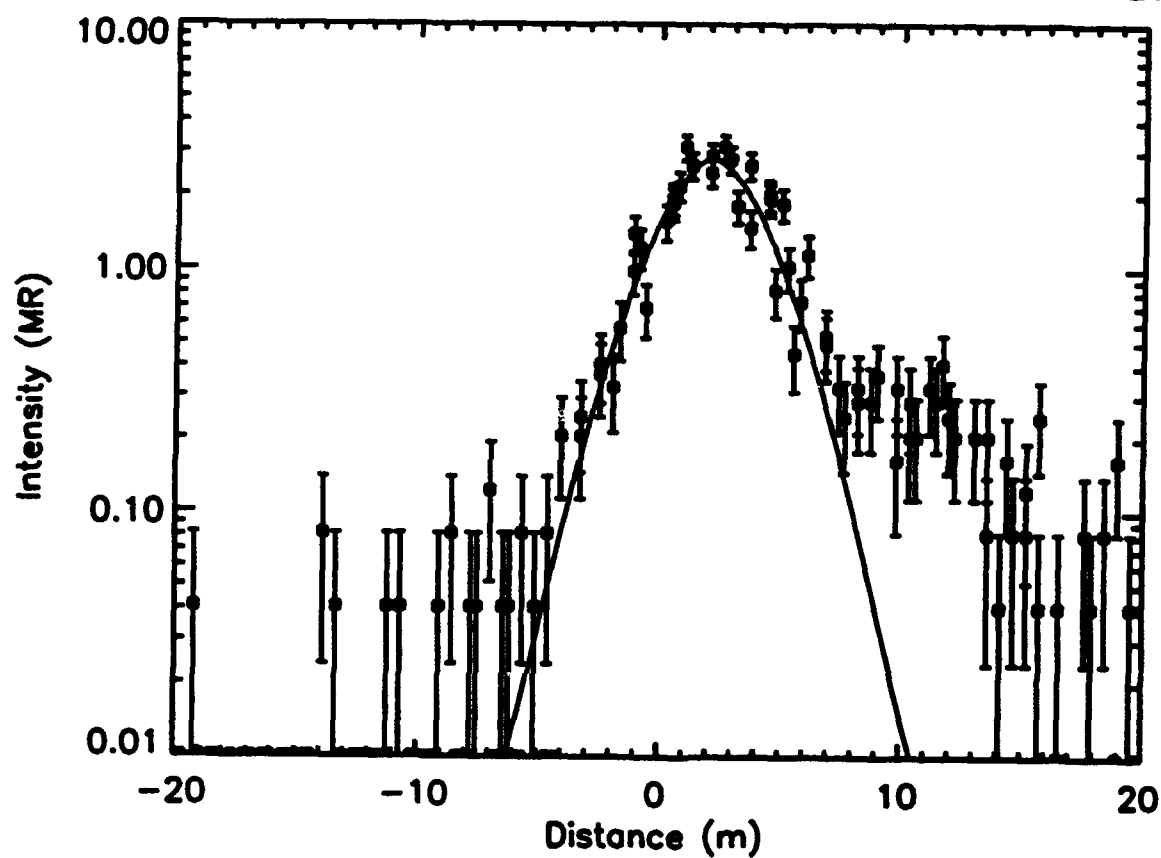
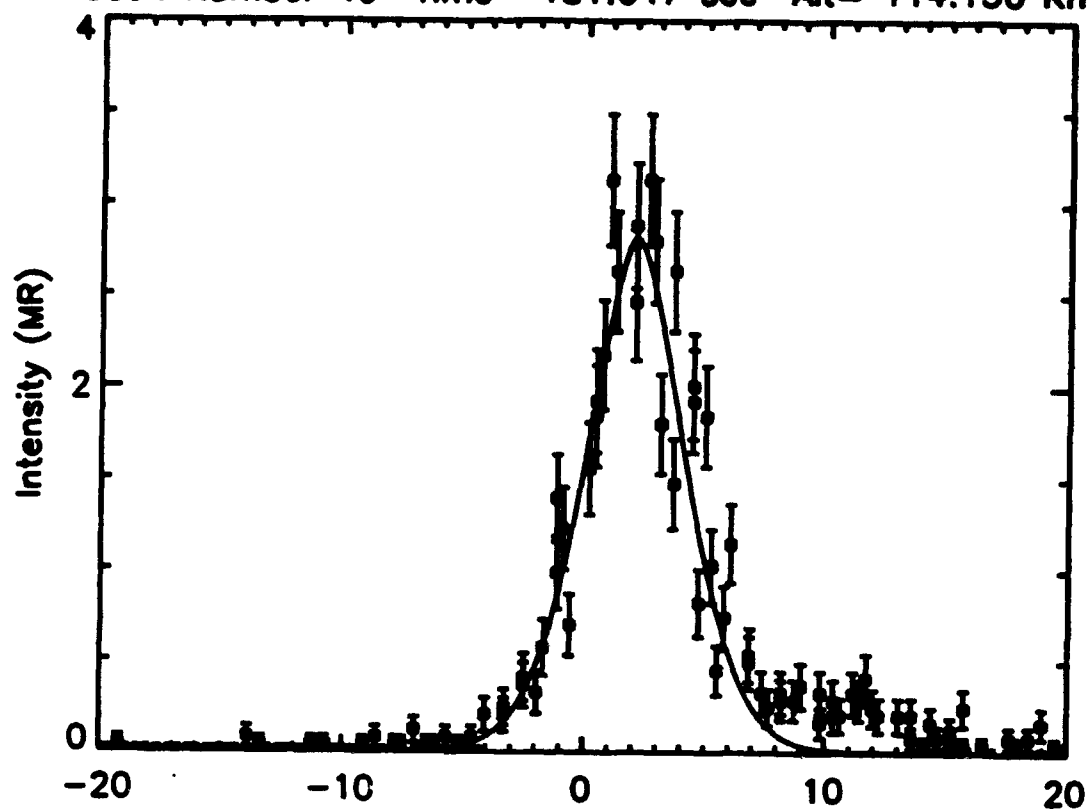
EXCEDE III 3914 A Scanning Photometer
Scan Number 47 Time= 179.698 sec Alt= 113.892 Km



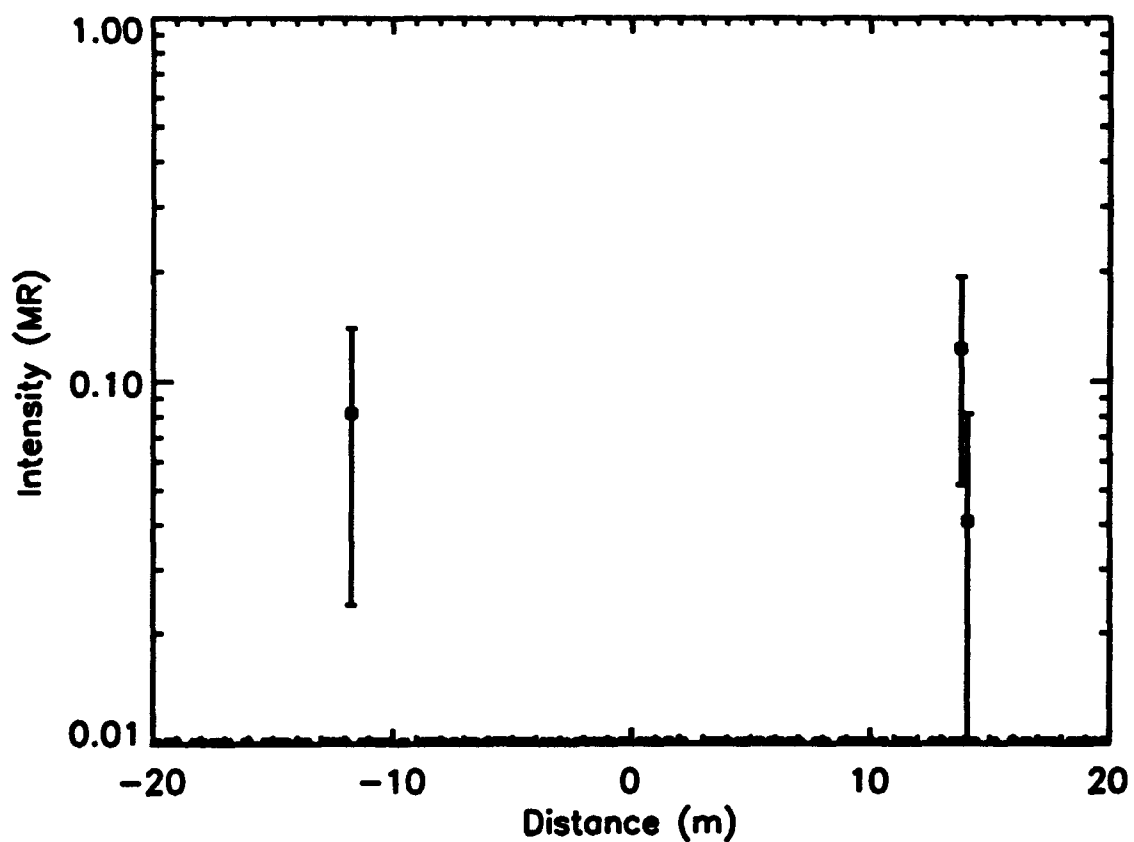
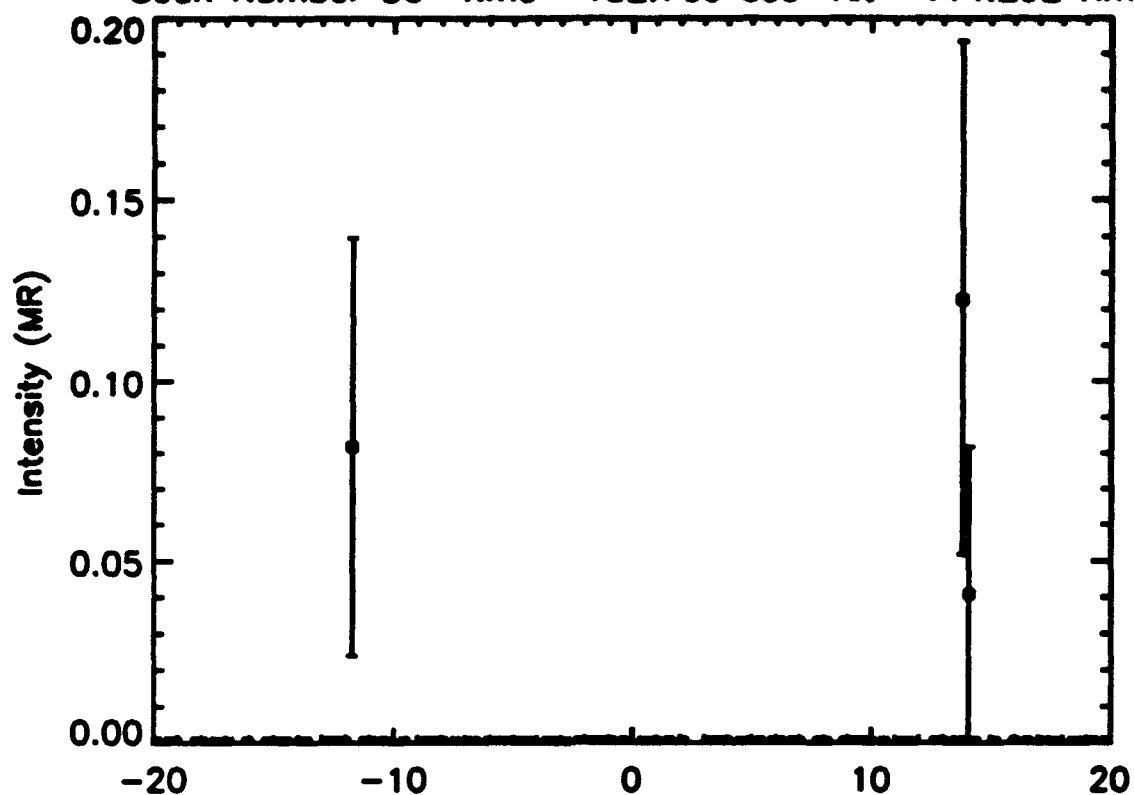
EXCEDE III 3914 A Scanning Photometer
Scan Number 48 Time = 180.939 sec Alt = 114.064 Km



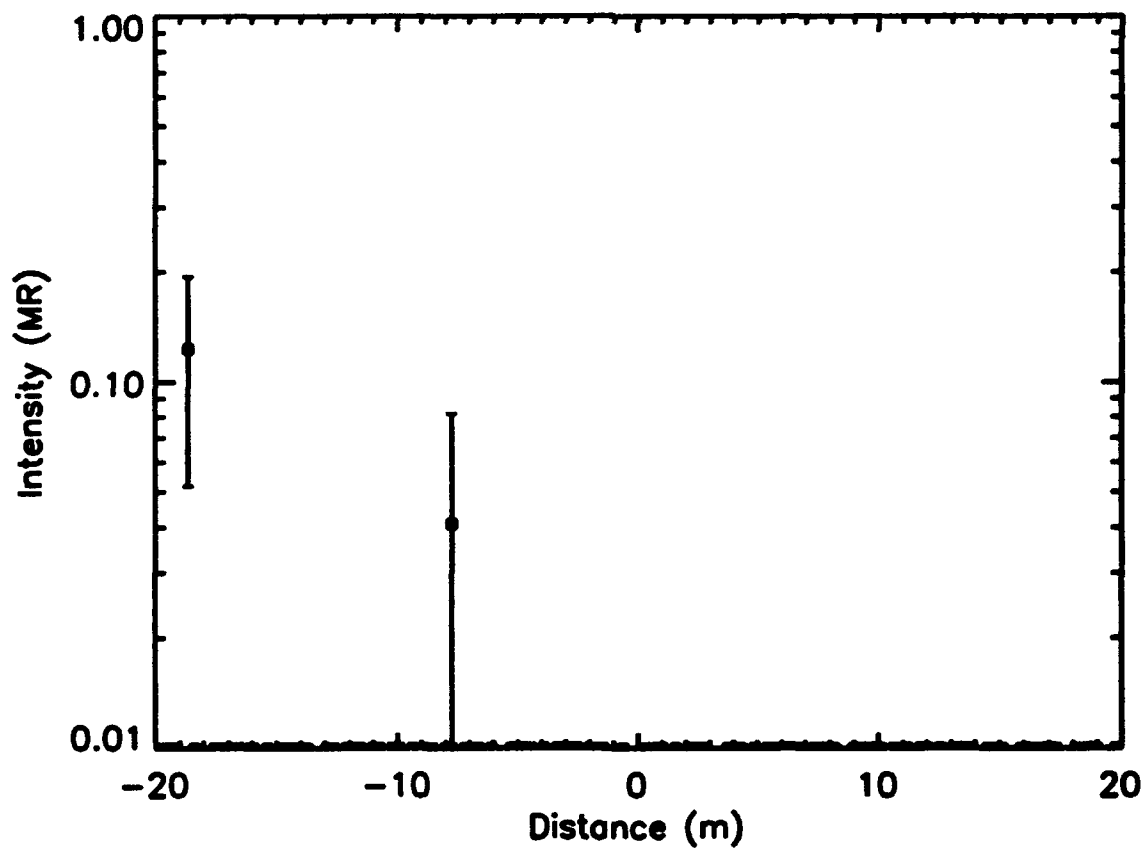
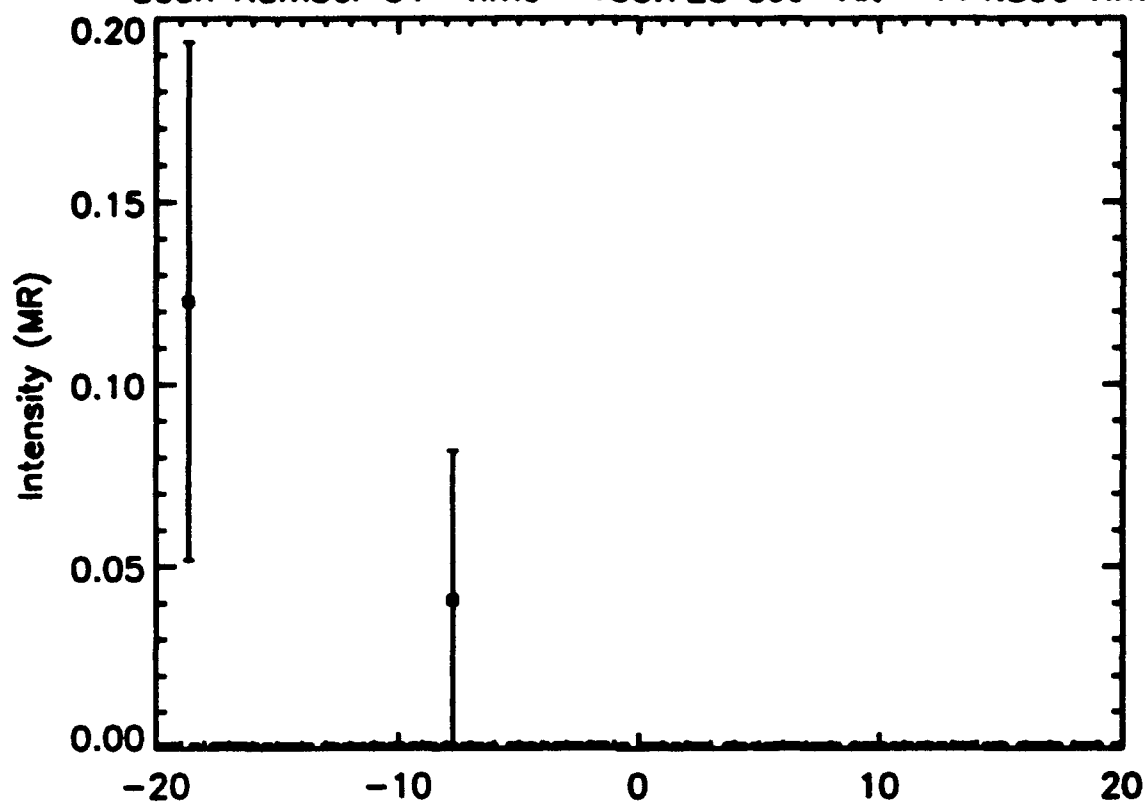
EXCEDE III 3914 A Scanning Photometer
Scan Number 49 Time= 181.647 sec Alt= 114.156 Km



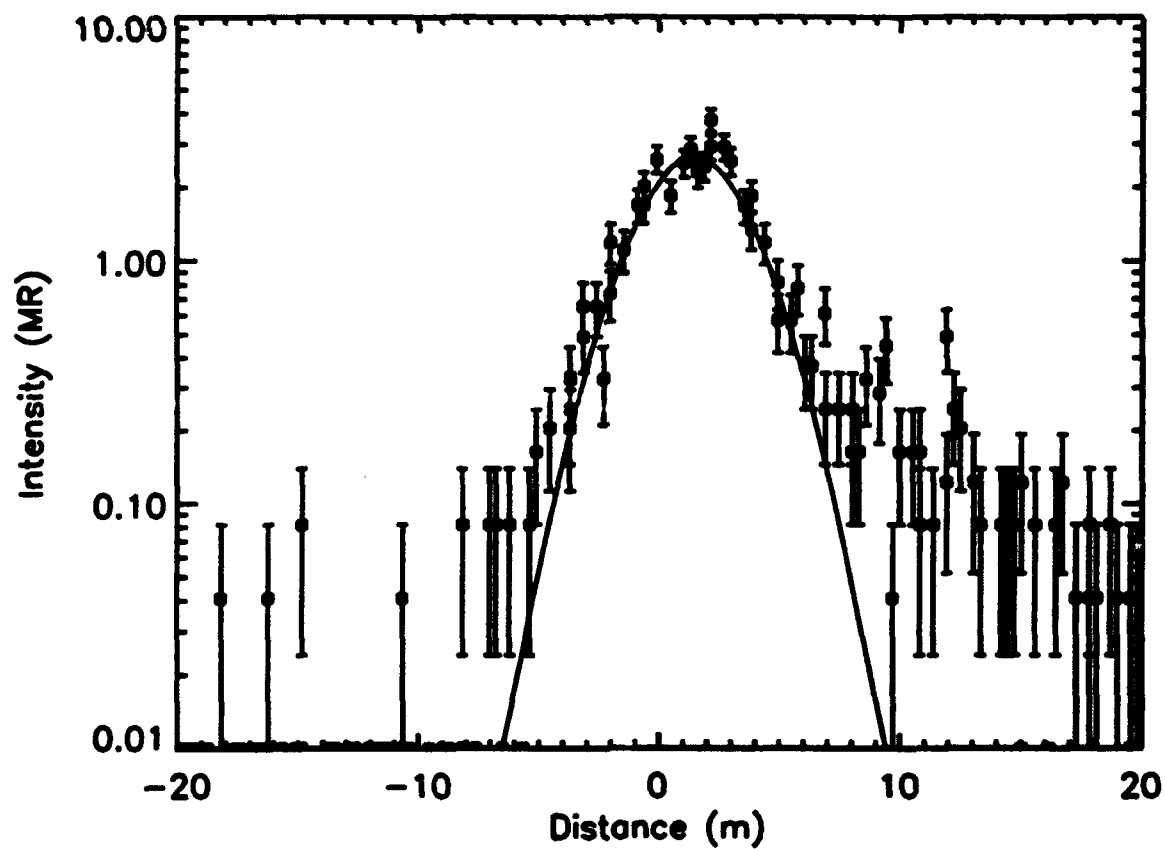
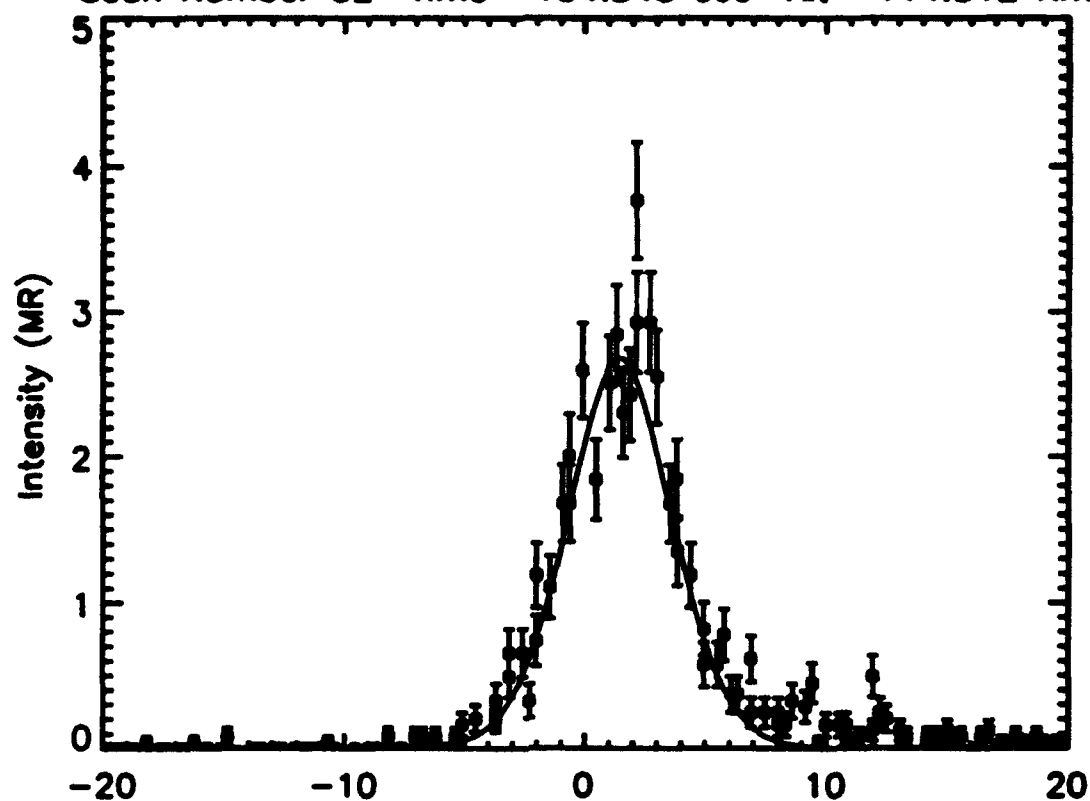
EXCEDE III 3914 A Scanning Photometer
Scan Number 50 Time = 182.769 sec Alt = 114.292 Km



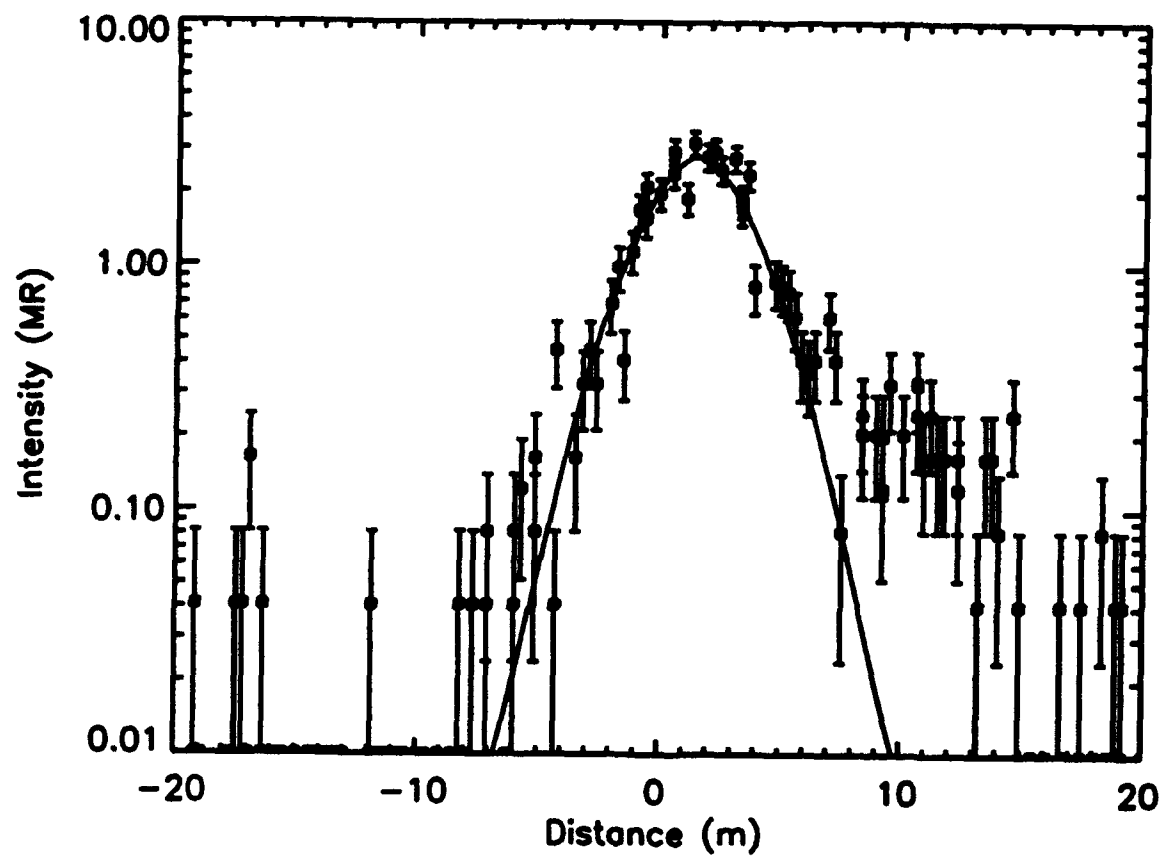
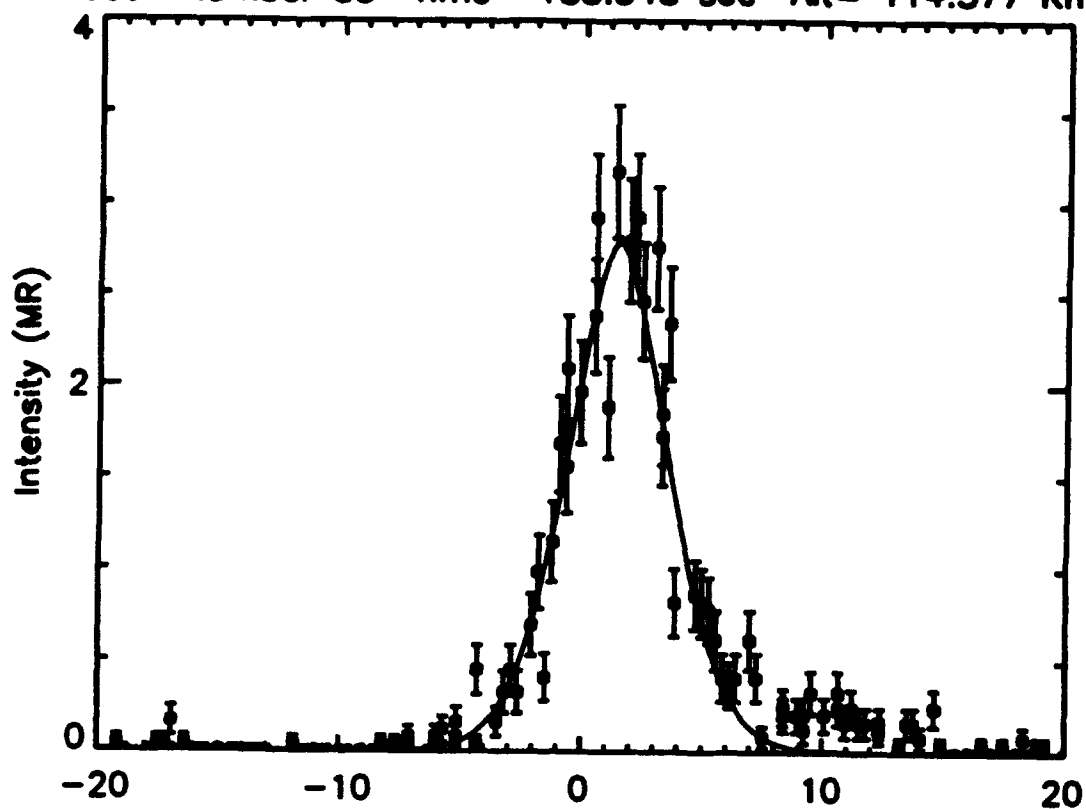
EXCEDE III 3914 A Scanning Photometer
Scan Number 51 Time= 183.728 sec Alt= 114.399 Km



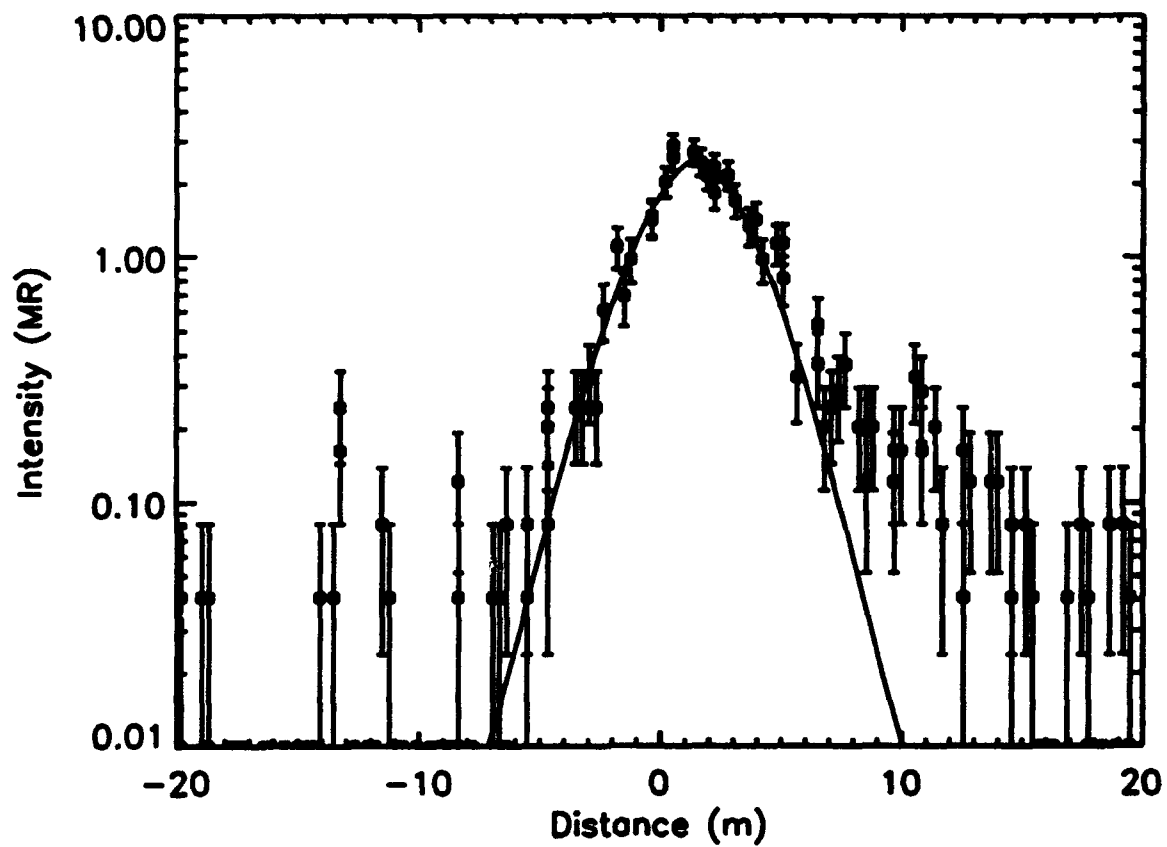
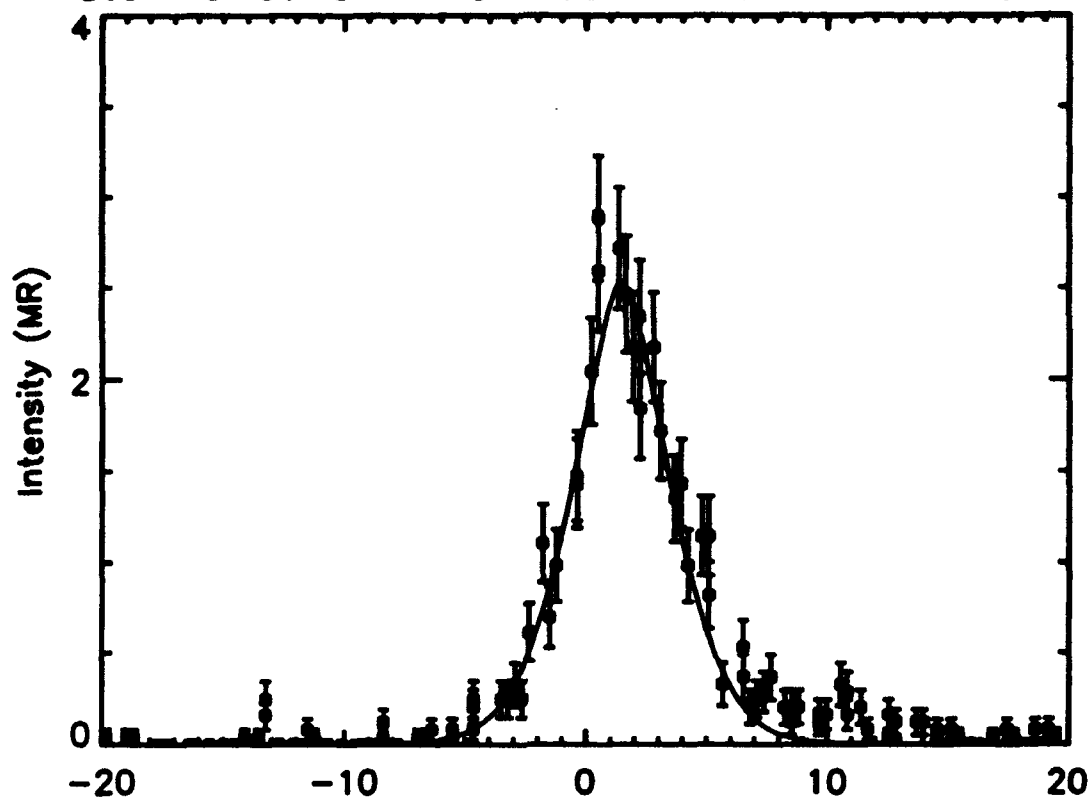
EXCEDE III 3914 A Scanning Photometer
Scan Number 52 Time= 184.848 sec Alt= 114.512 Km



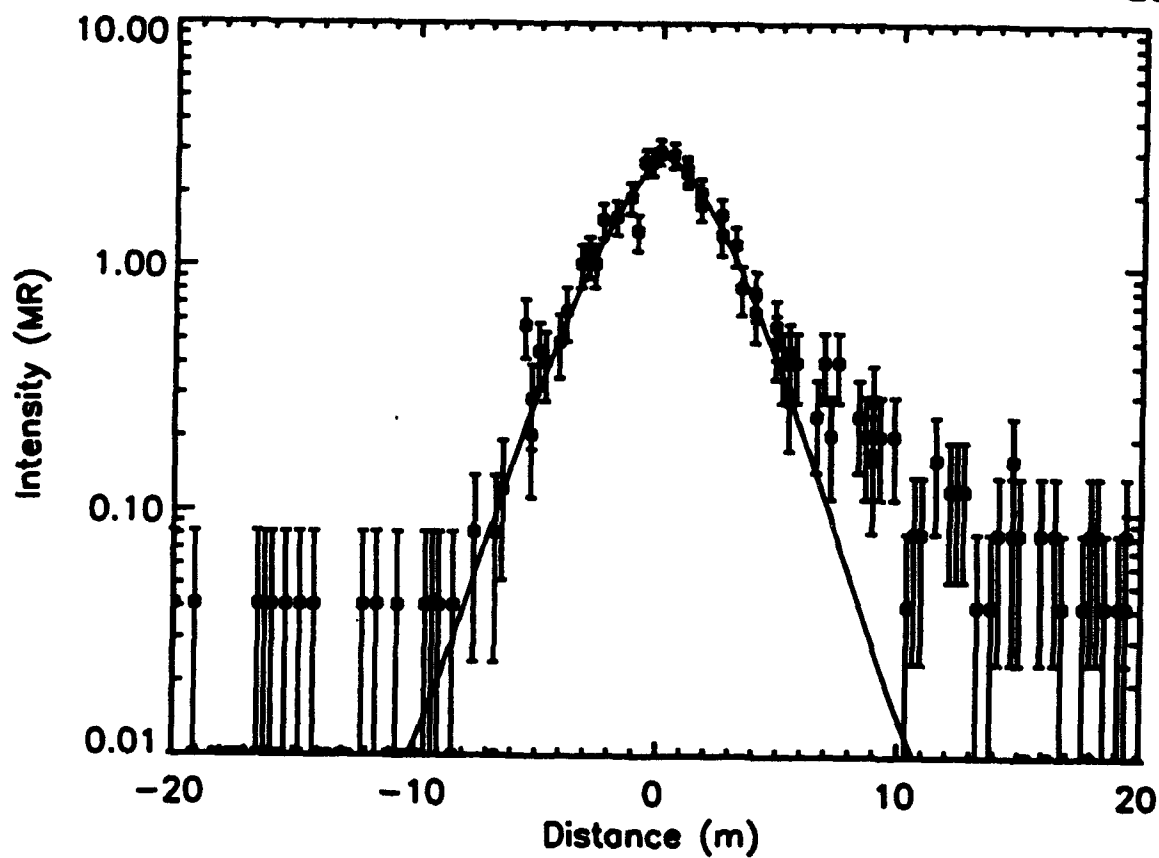
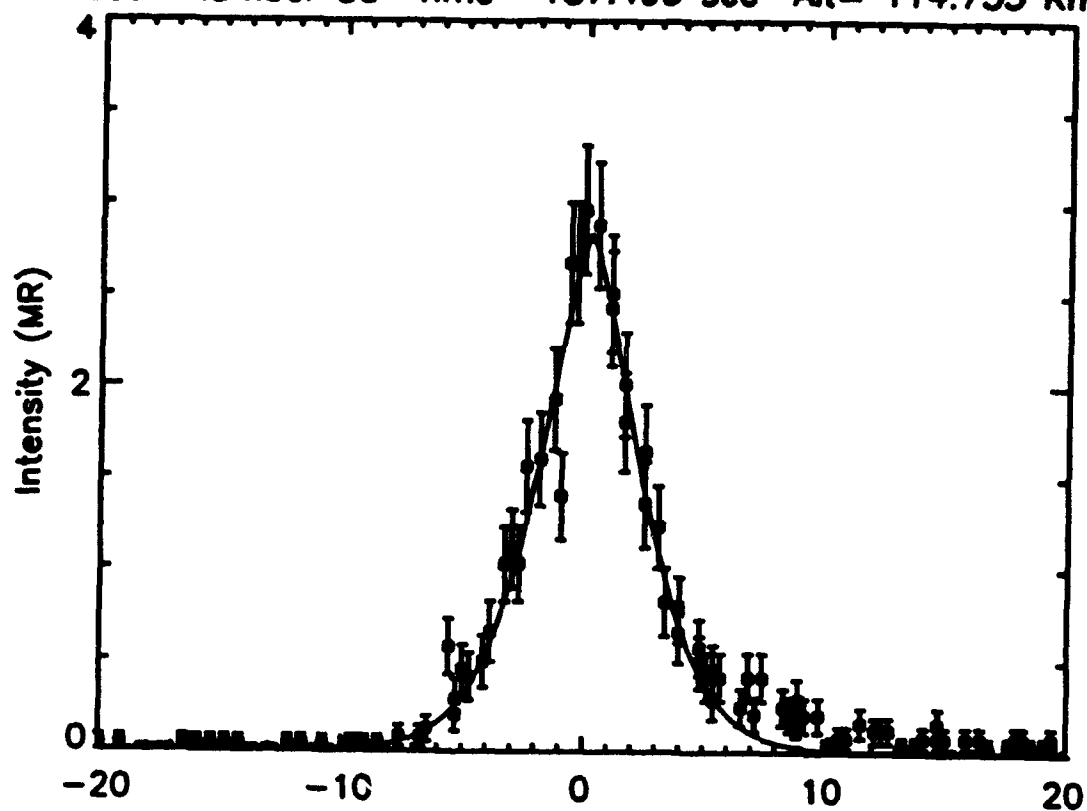
EXCEDE III 3914 A Scanning Photometer
Scan Number 53 Time= 185.548 sec Alt= 114.577 Km



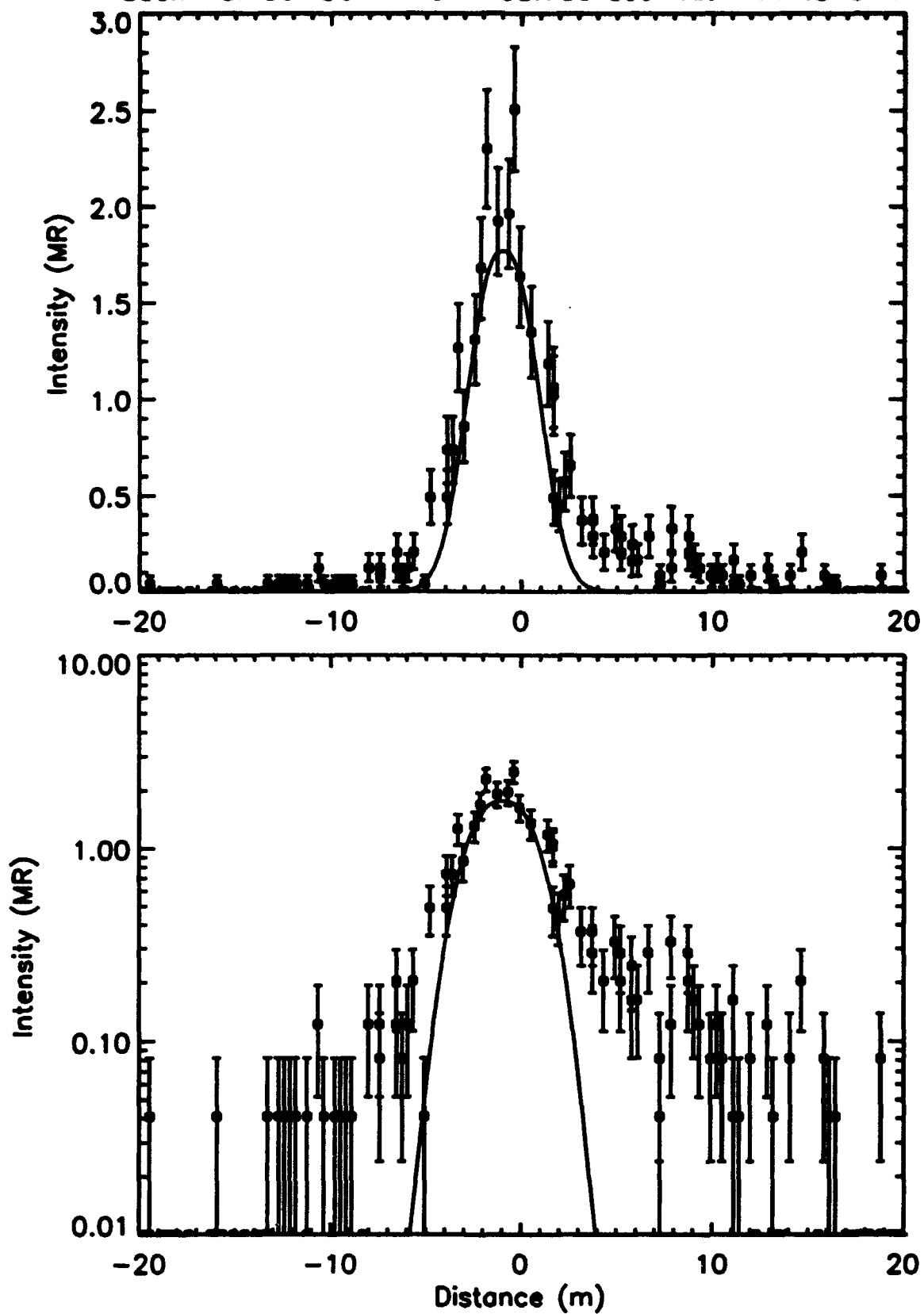
EXCEDE III 3914 A Scanning Photometer
Scan Number 54 Time= 186.798 sec Alt= 114.682 Km



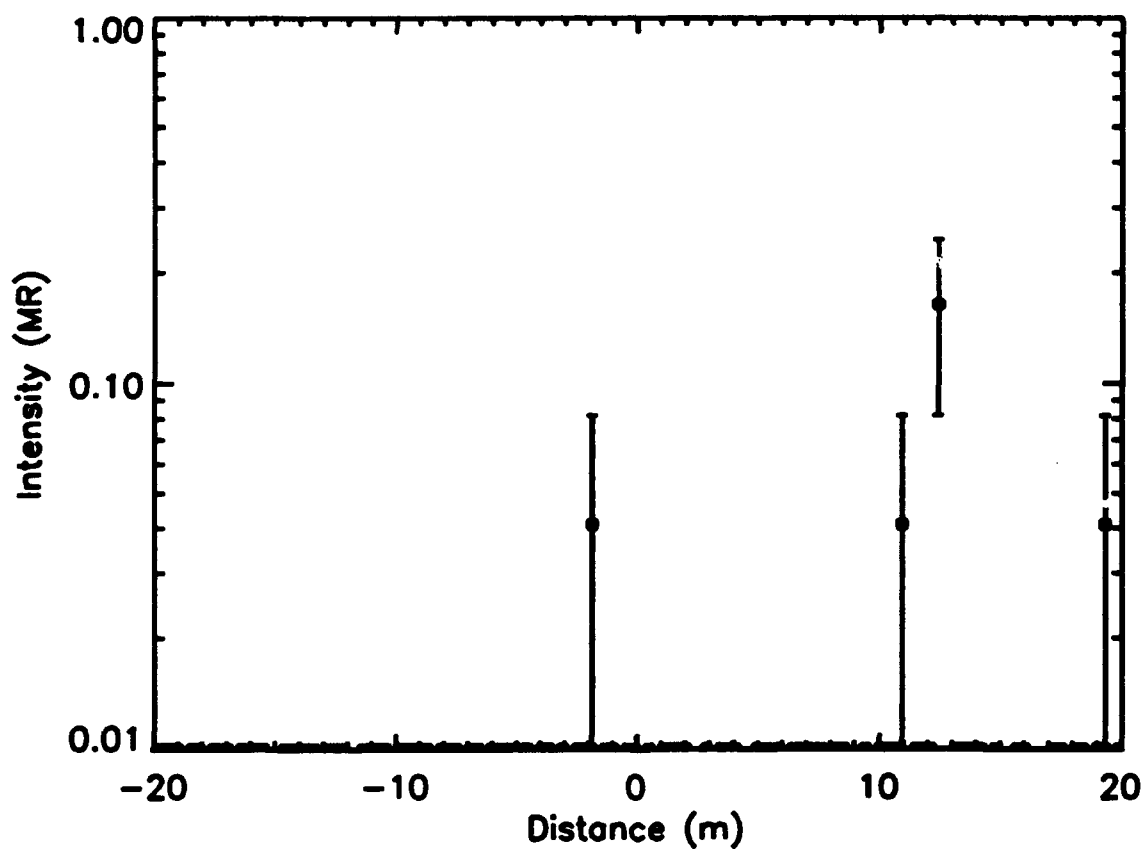
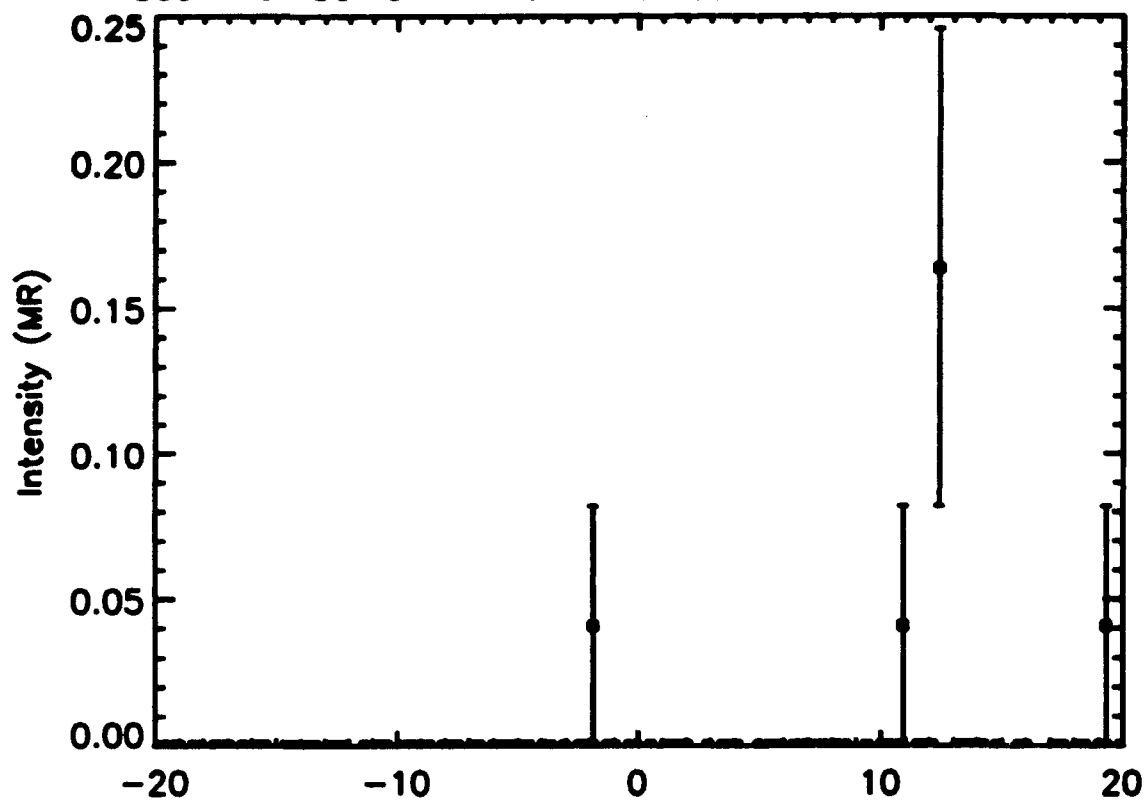
EXCEDE III 3914 A Scanning Photometer
Scan Number 55 Time= 187.493 sec Alt= 114.733 Km



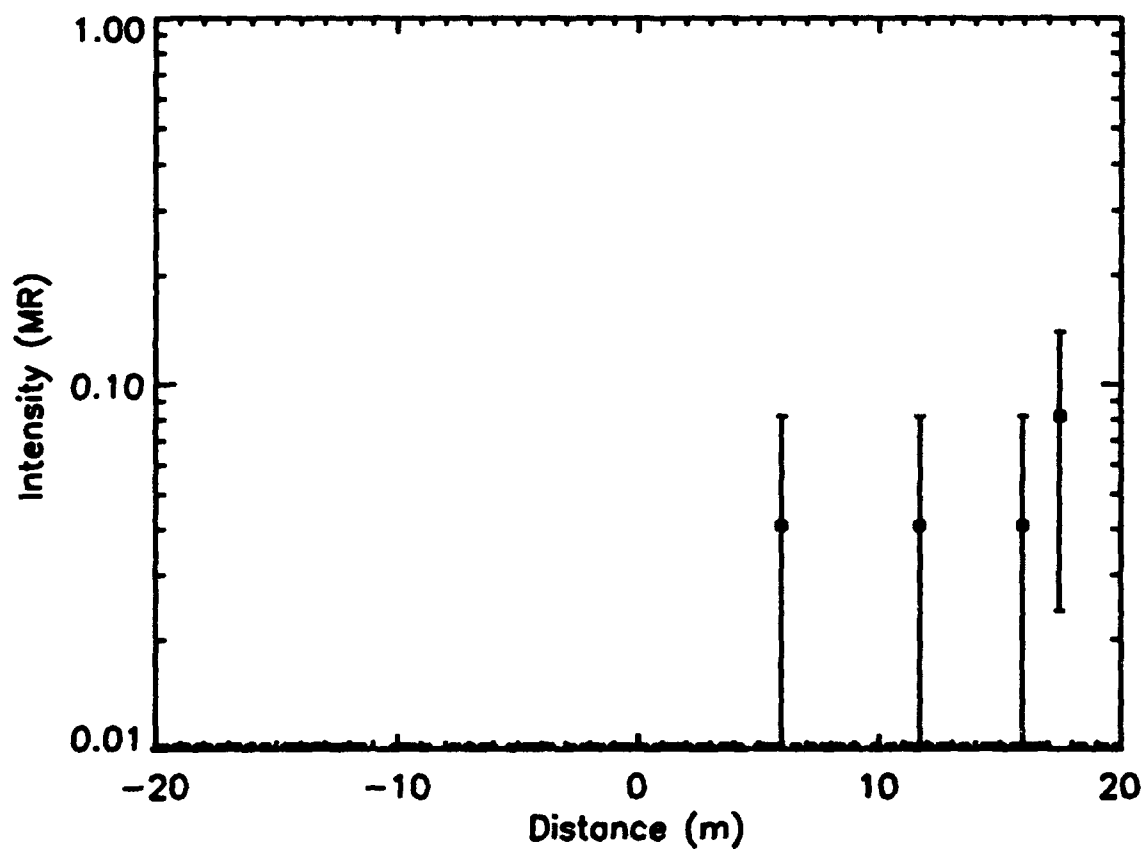
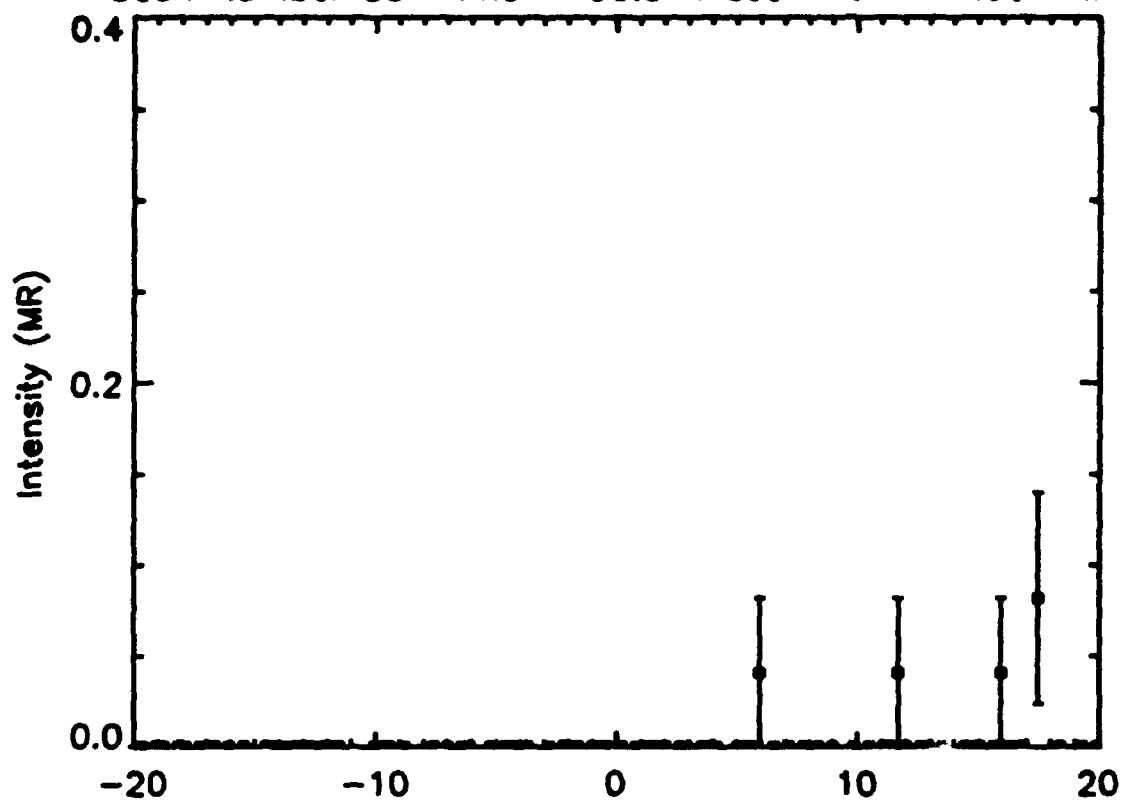
EXCEDE III 3914 A Scanning Photometer
Scan Number 56 Time= 188.759 sec Alt= 114.816 Km



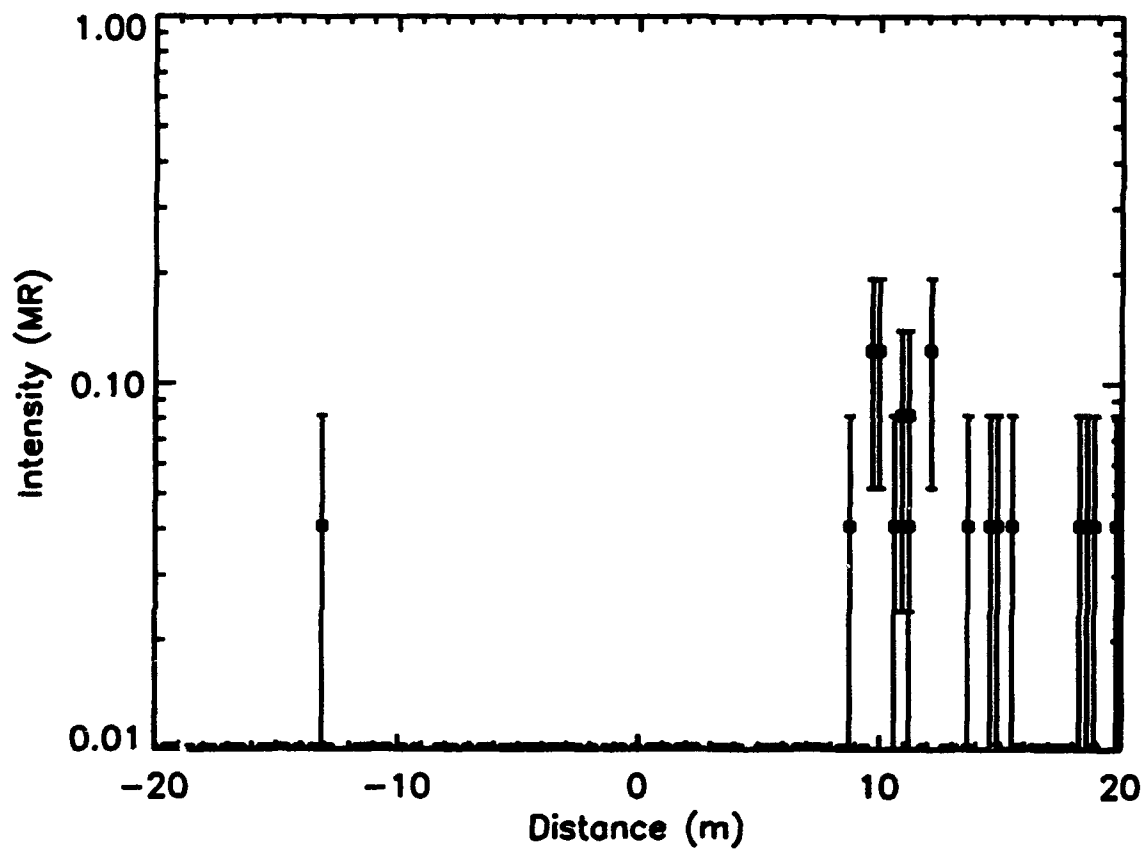
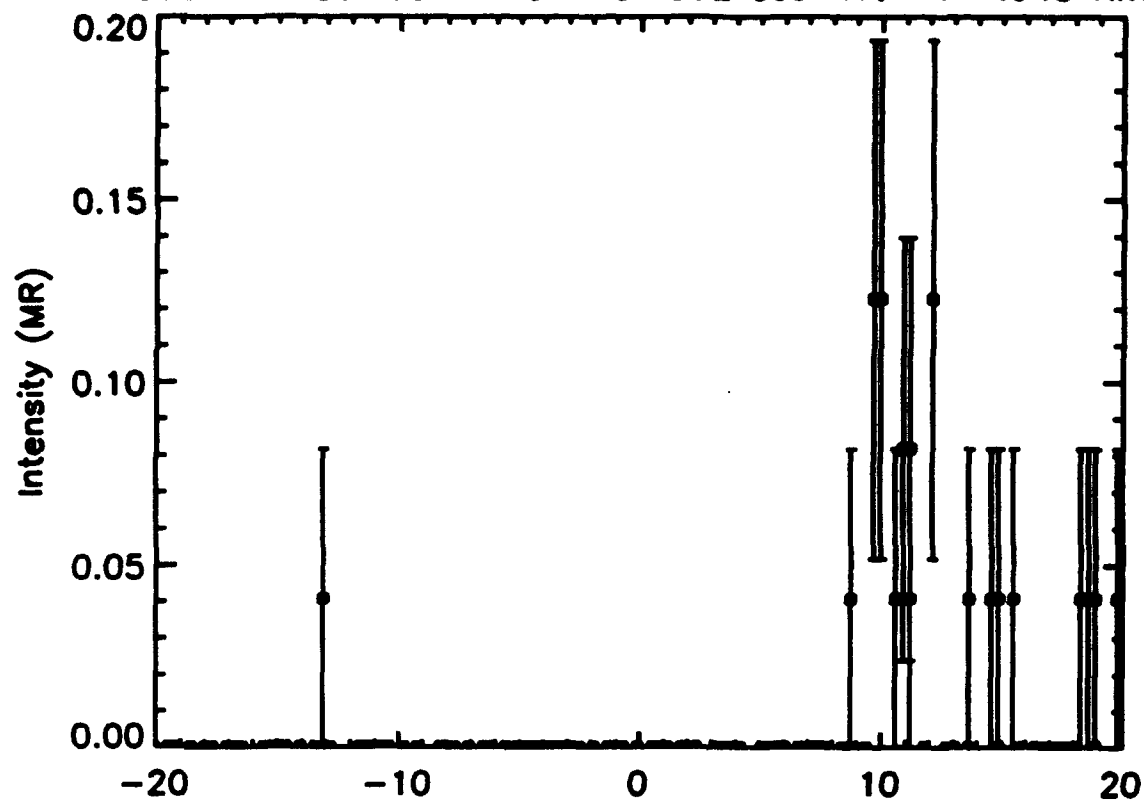
EXCEDE III 3914 A Scanning Photometer
Scan Number 57 Time= 189.583 sec Alt= 114.861 Km



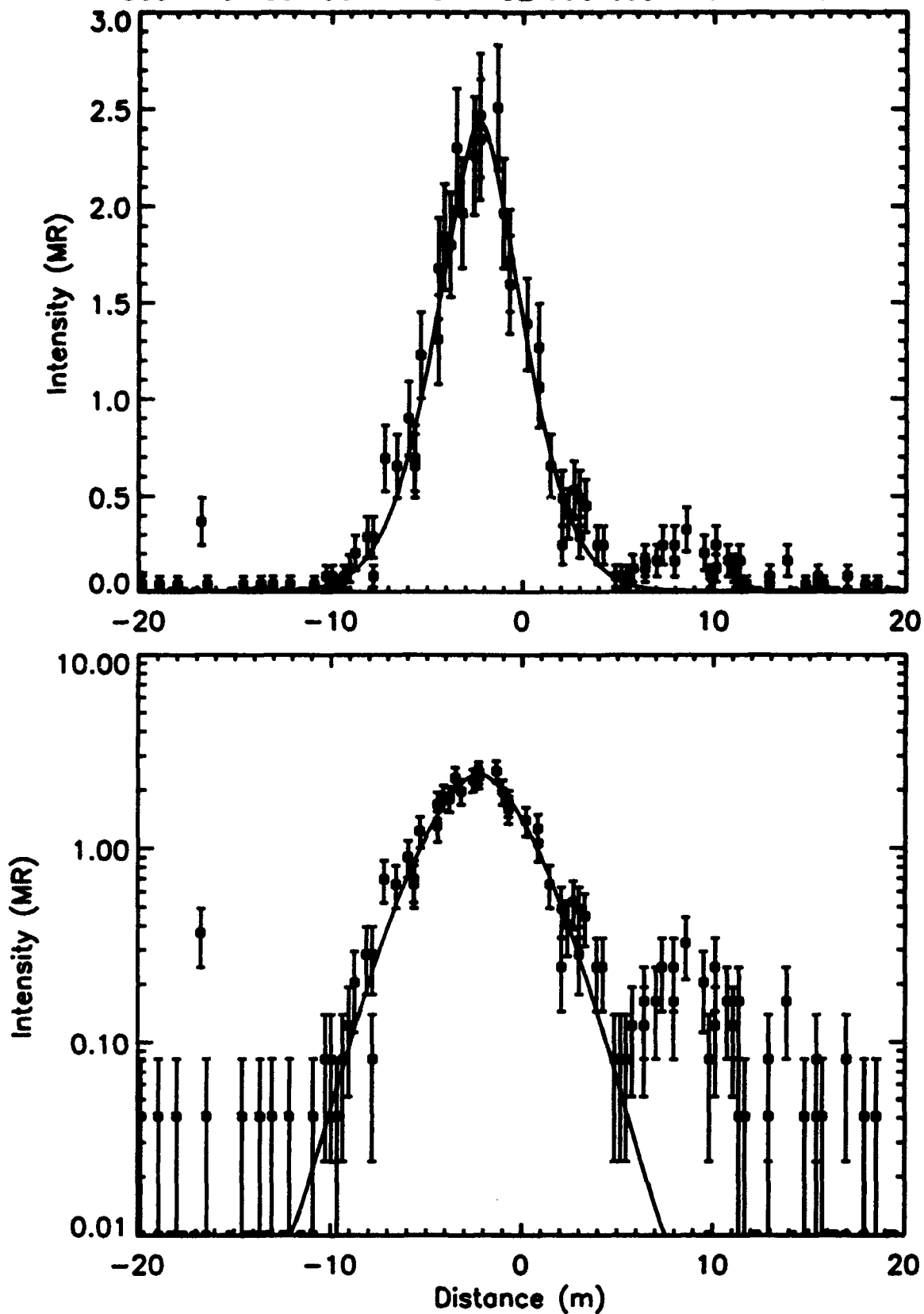
EXCEDE III 3914 A Scanning Photometer
Scan Number 58 Time= 190.574 sec Alt= 114.907 Km



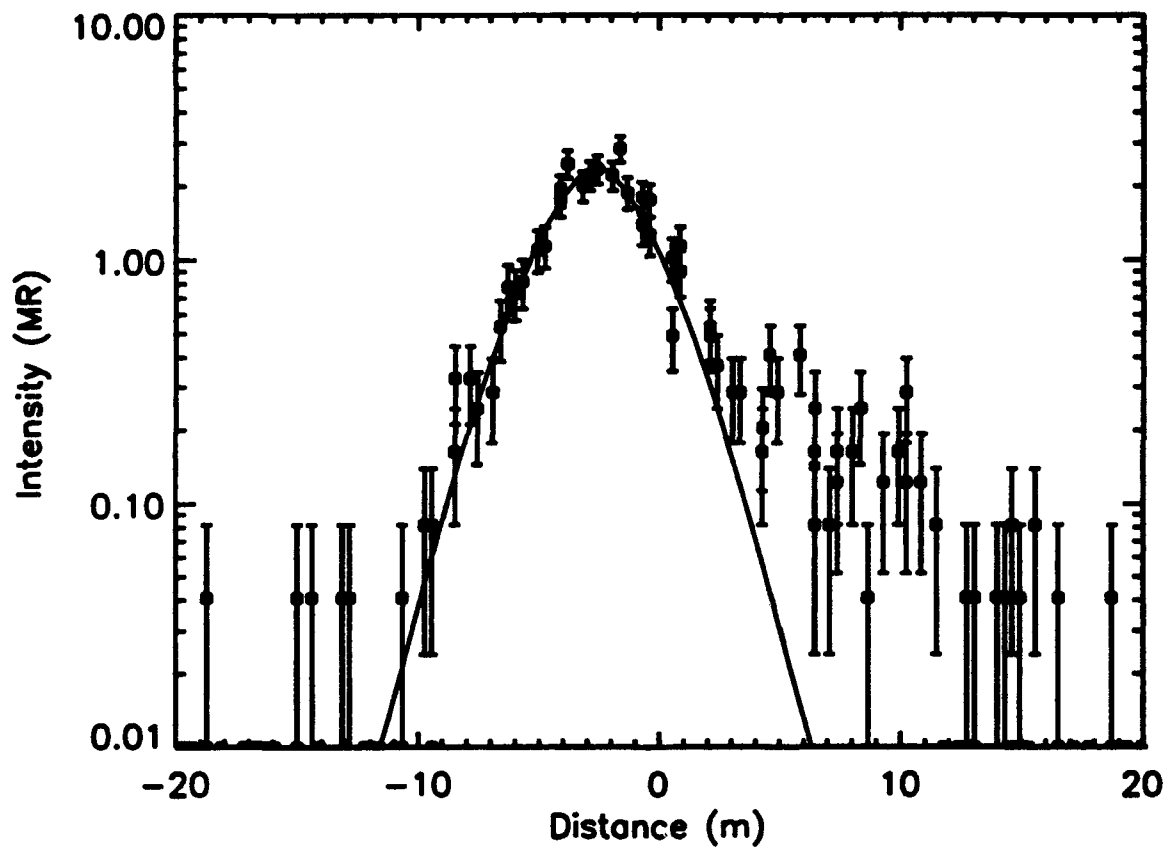
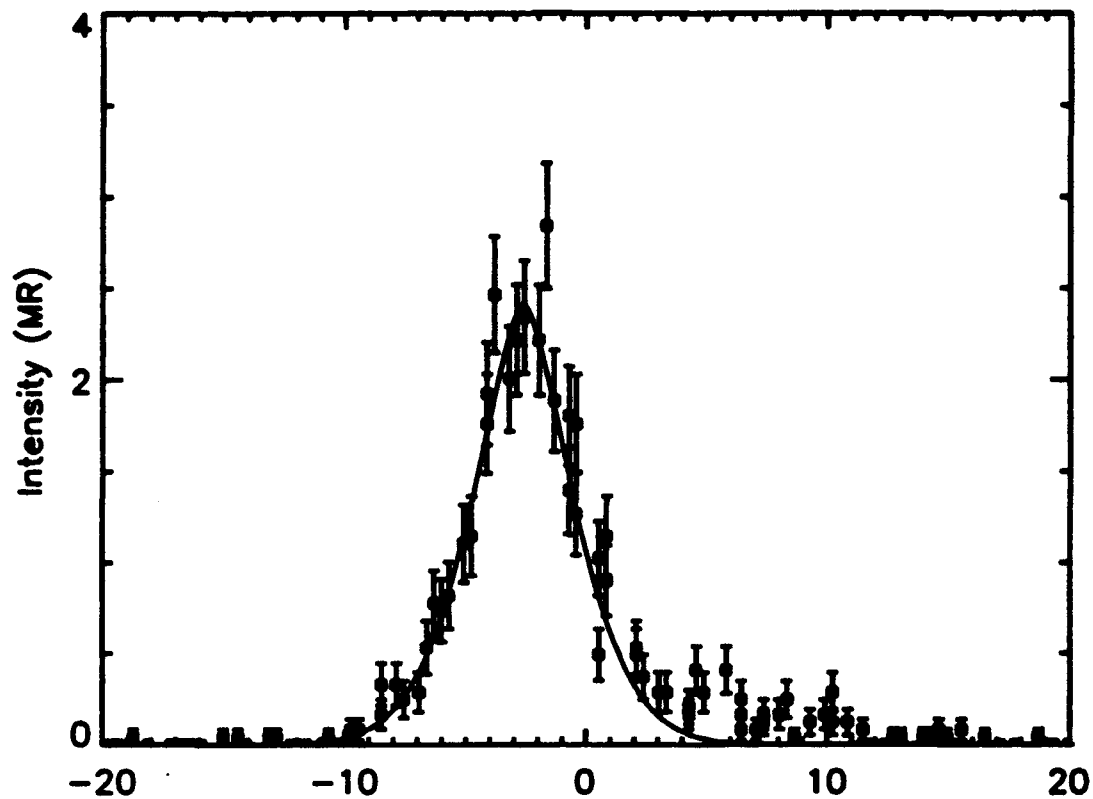
EXCEDE III 3914 A Scanning Photometer
Scan Number 59 Time= 191.532 sec Alt= 114.943 Km



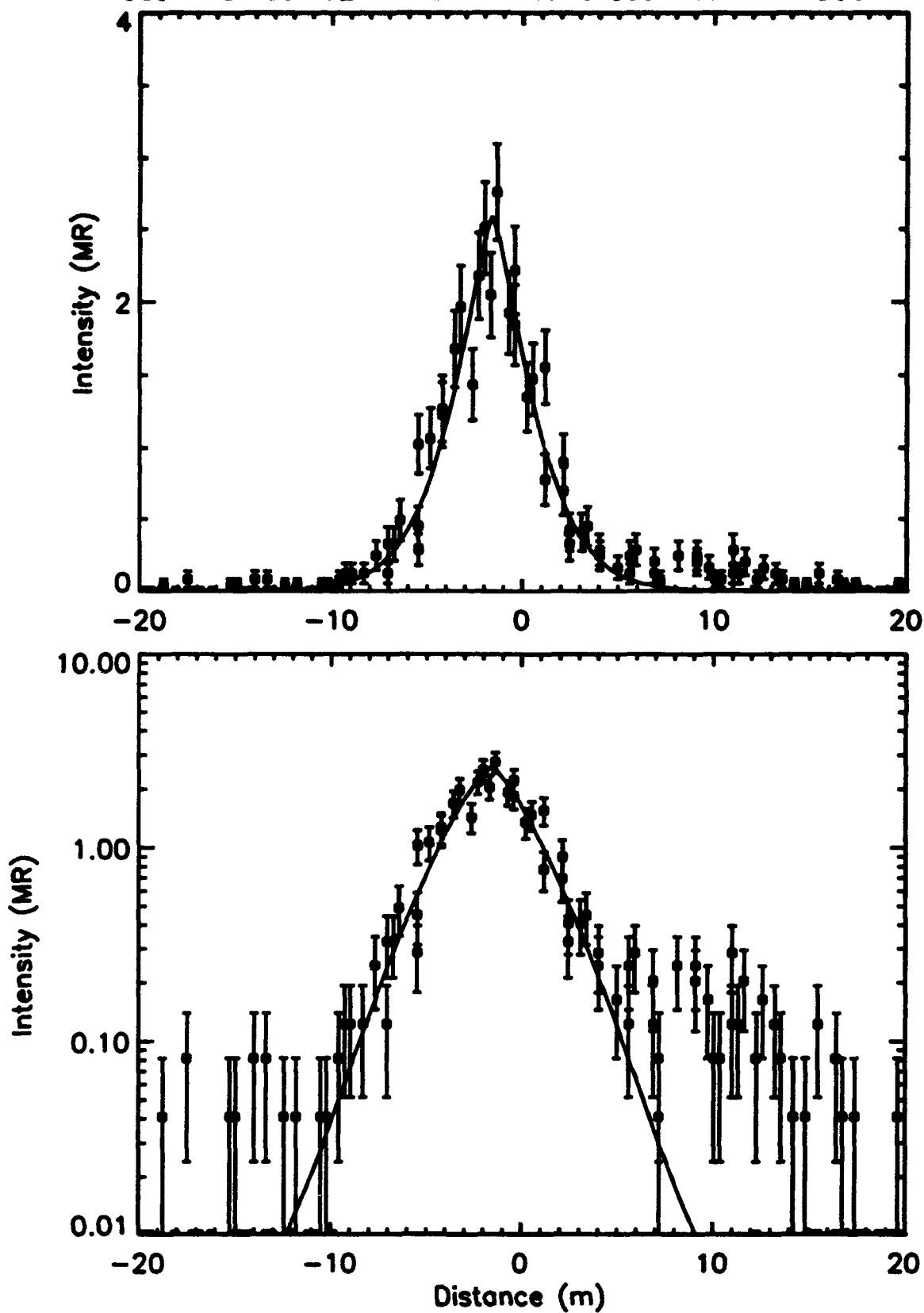
EXCEDE III 3914 A Scanning Photometer
Scan Number 60 Time = 192.666 sec Alt = 114.974 Km



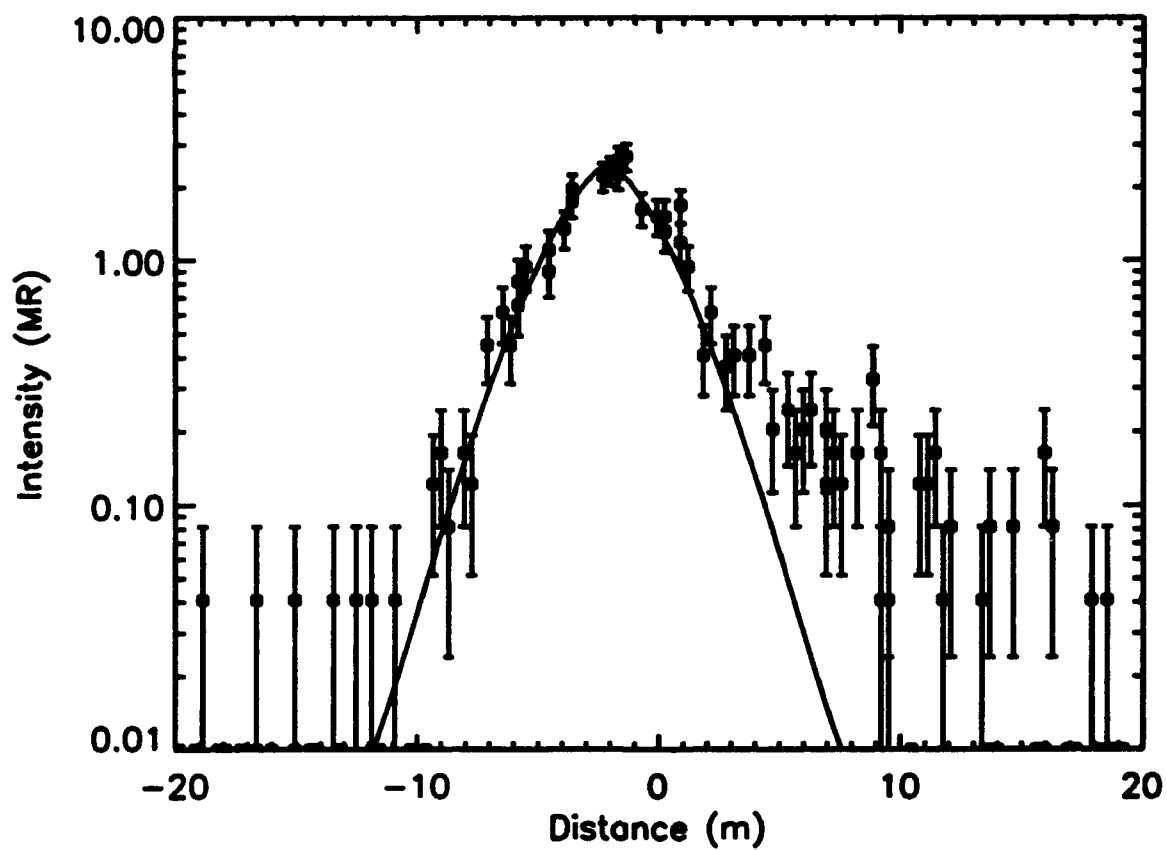
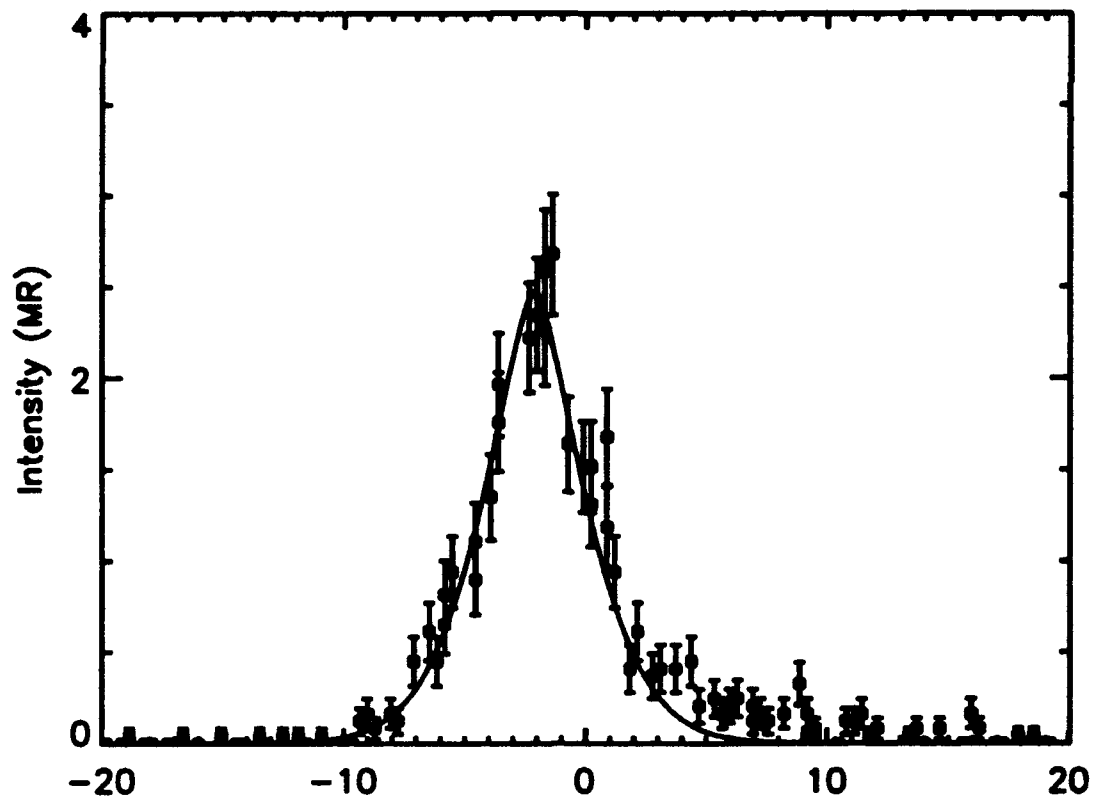
EXCEDE III 3914 A Scanning Photometer
Scan Number 61 Time= 193.338 sec Alt= 114.987 Km



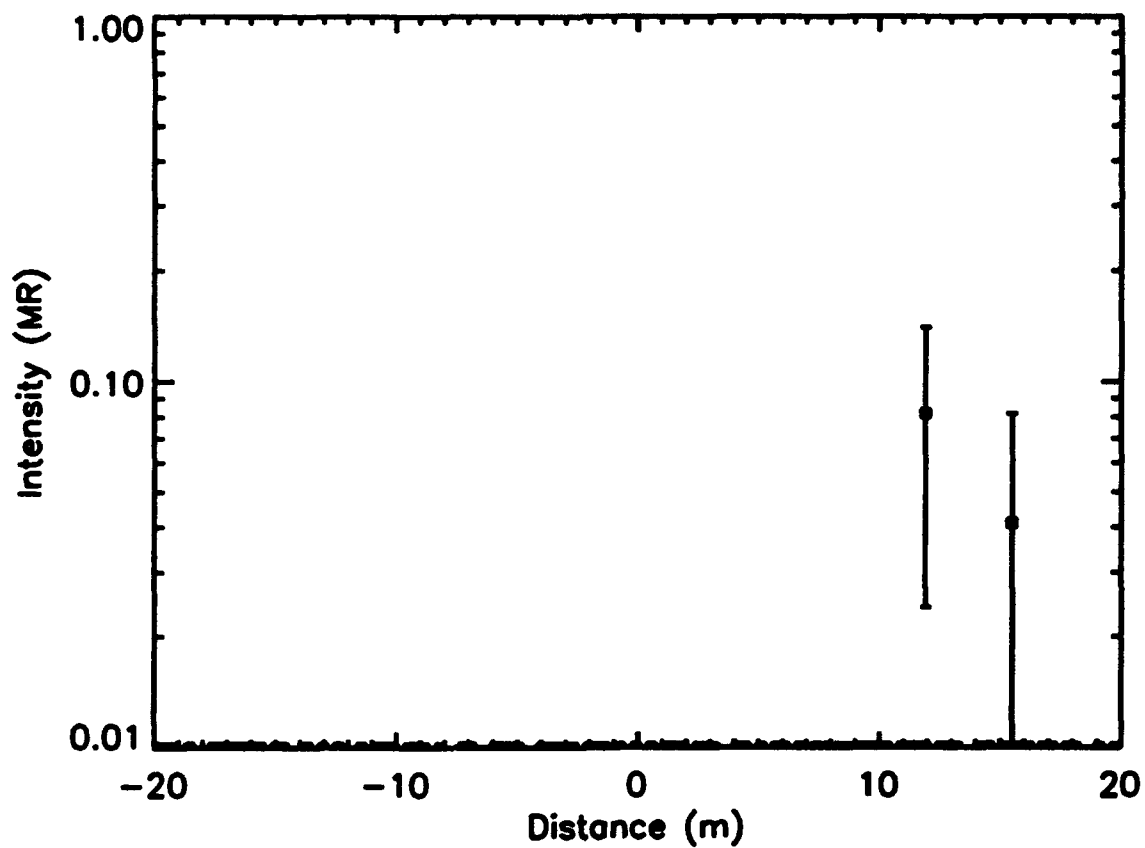
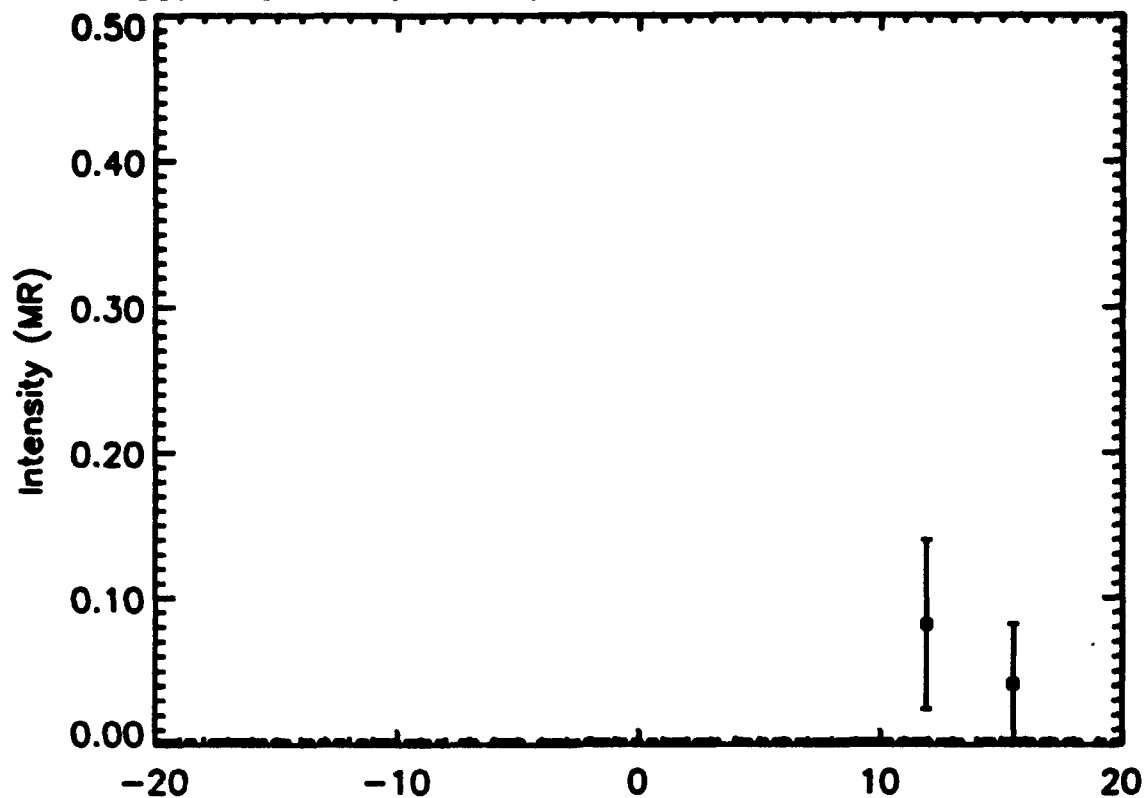
EXCEDE III 3914 A Scanning Photometer
Scan Number 62 Time= 194.616 sec Alt= 114.999 Km



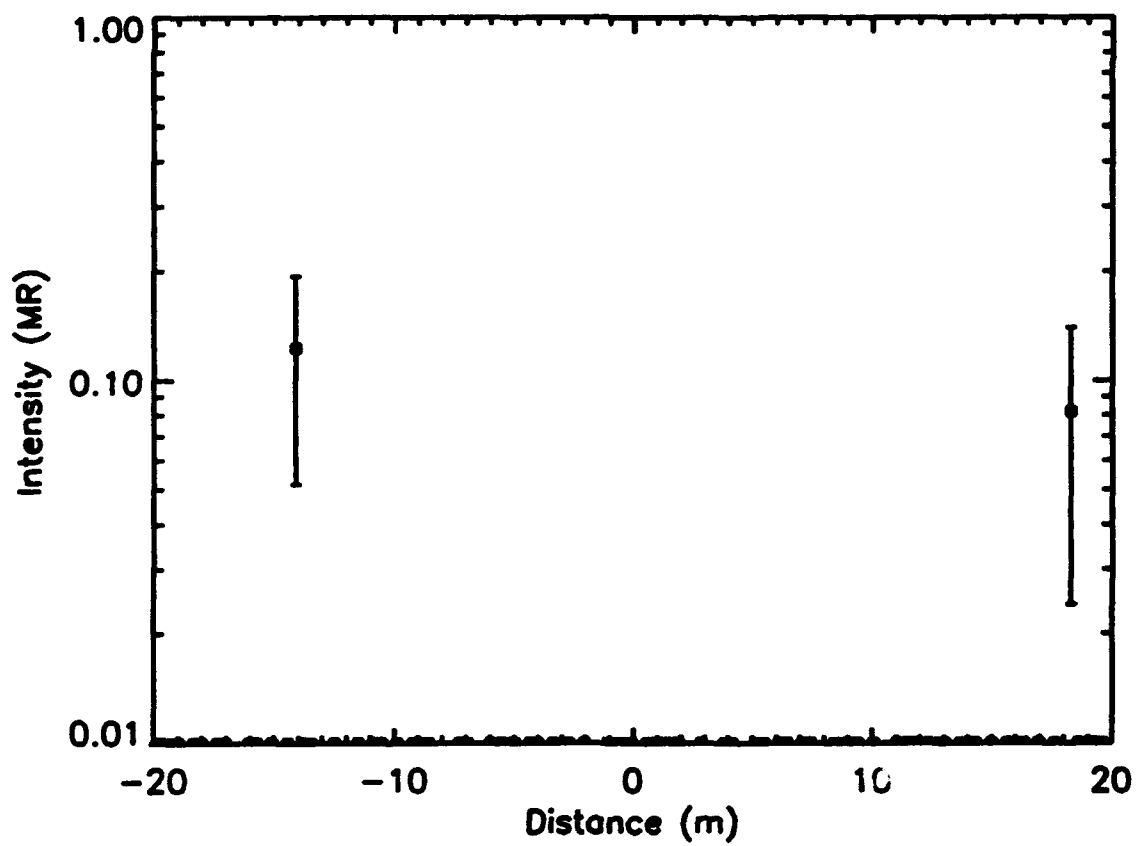
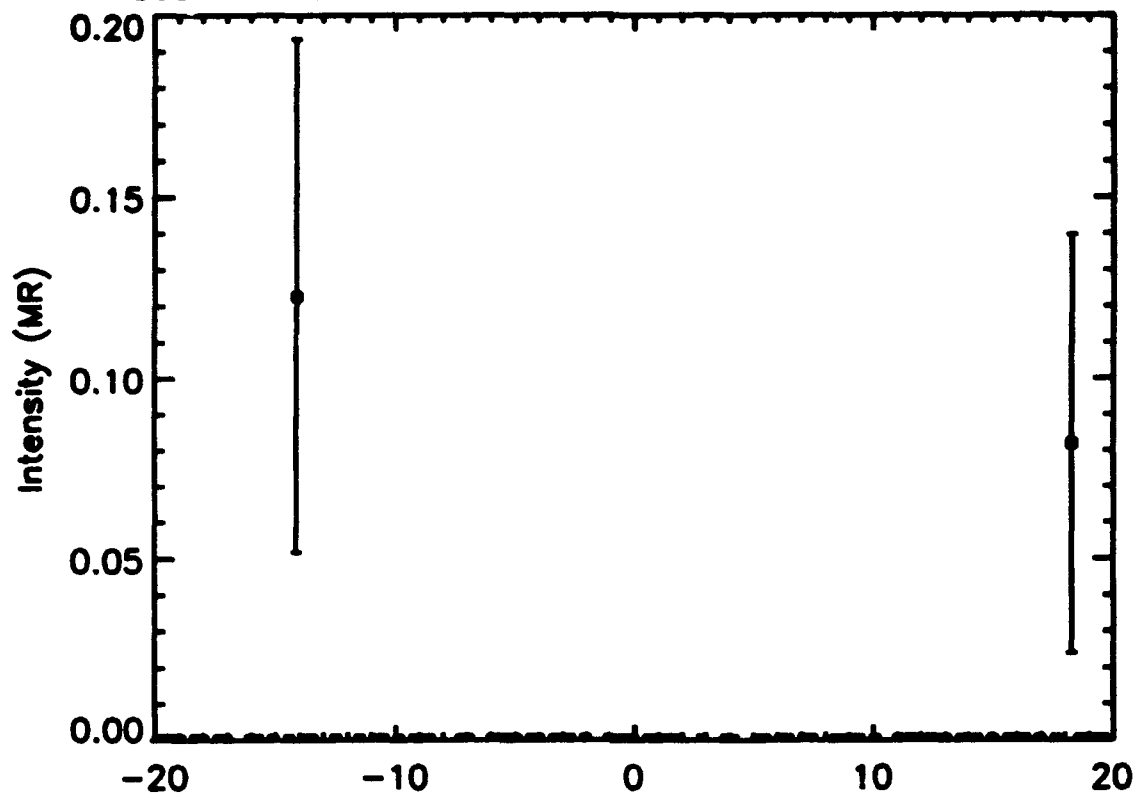
EXCEDE III 3914 A Scanning Photometer
Scan Number 63 Time= 195.292 sec Alt= 115.000 Km



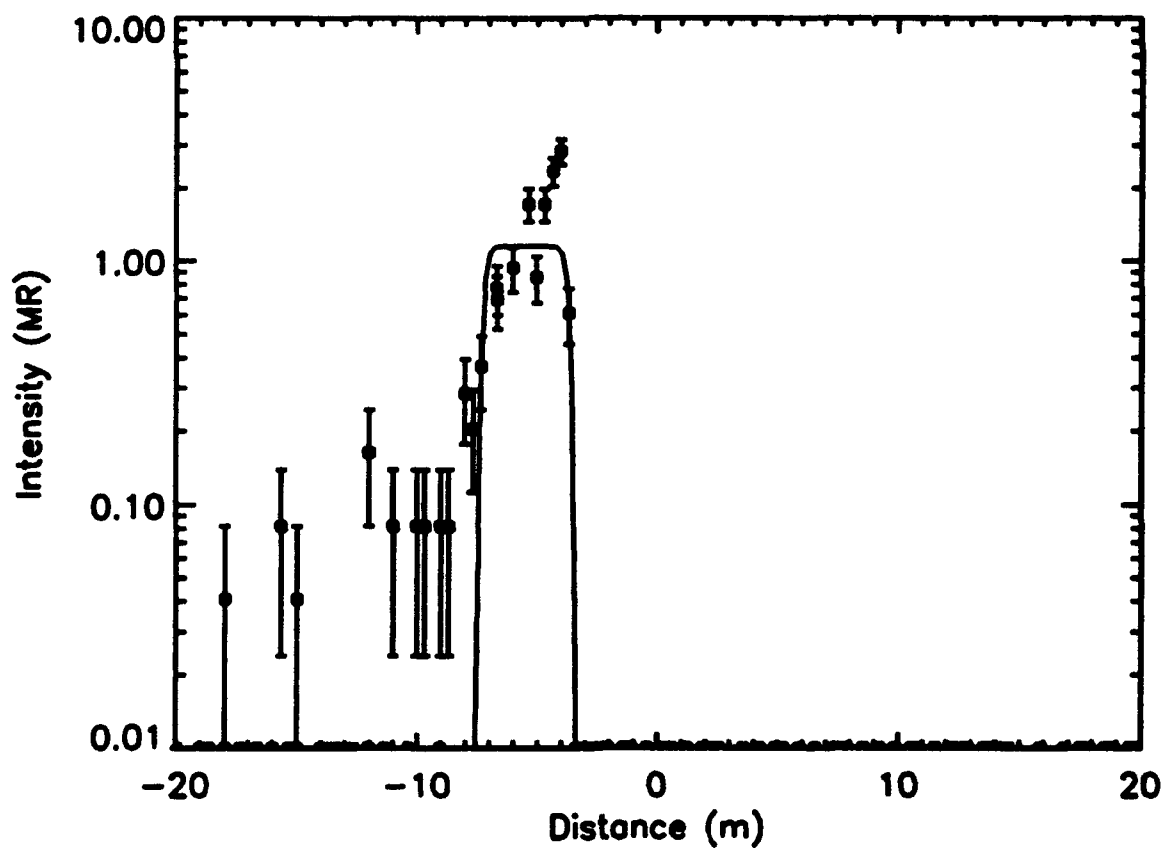
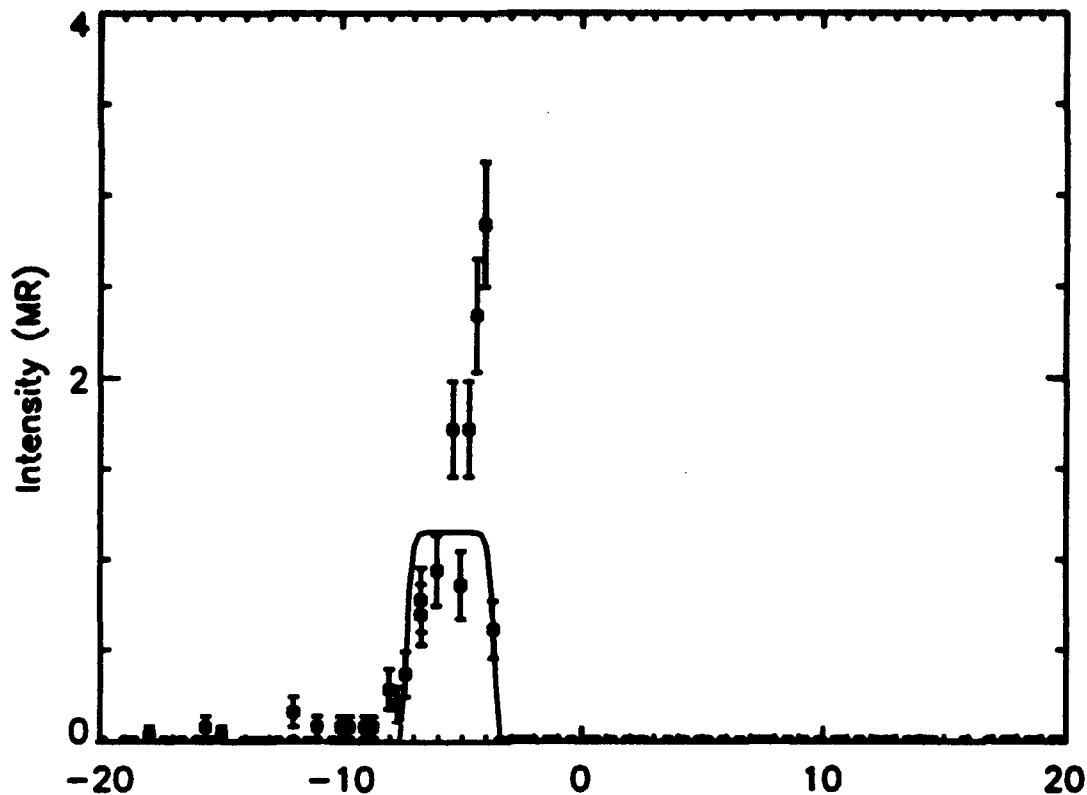
EXCEDE III 3914 A Scanning Photometer
Scan Number 64 Time= 196.428 sec Alt= 114.990 Km



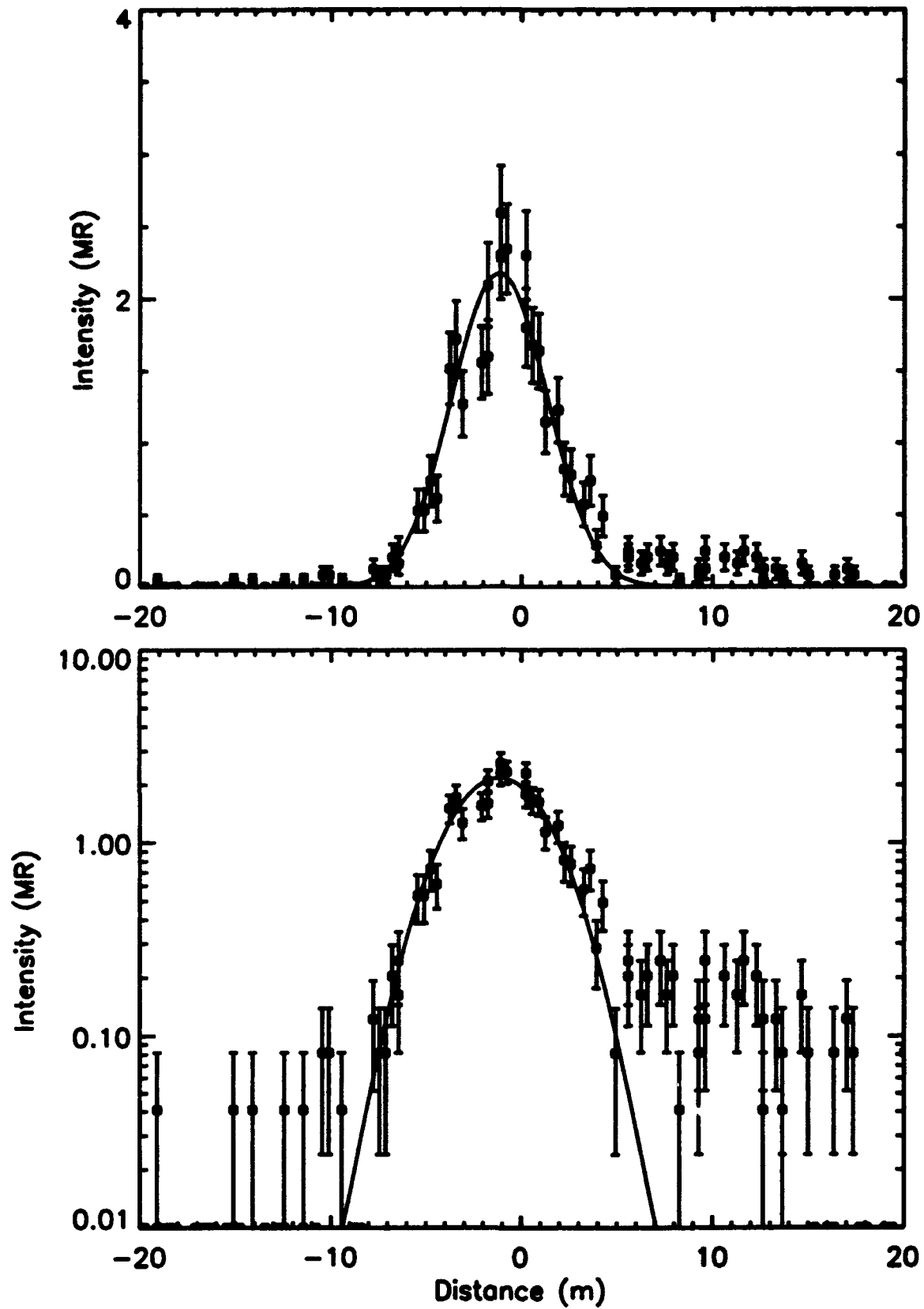
EXCEDE III 3914 A Scanning Photometer
Scan Number 65 Time= 197.387 sec Alt= 114.973 Km



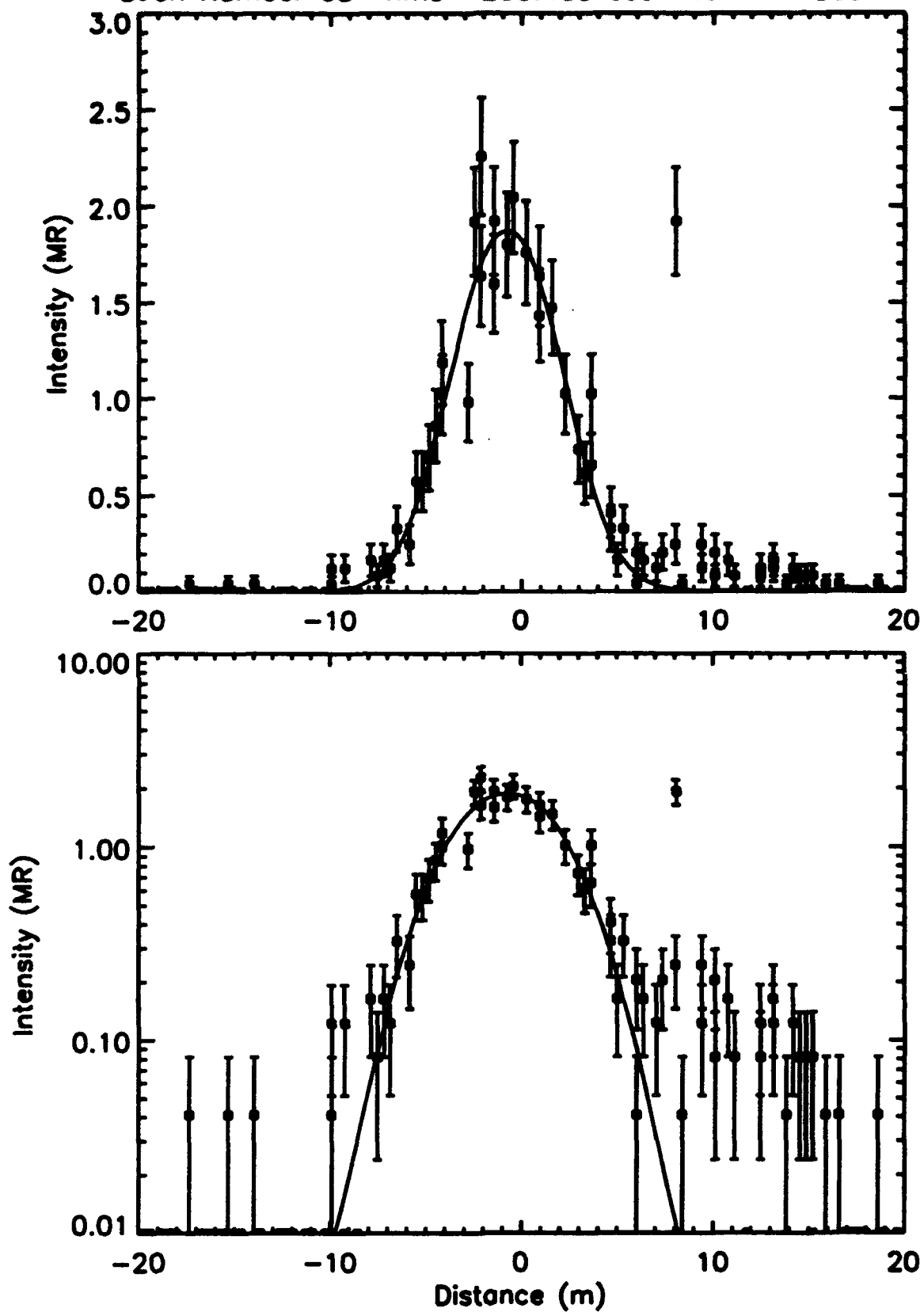
EXCEDE III 3914 A Scanning Photometer
Scan Number 66 Time= 198.531 sec Alt= 114.941 Km



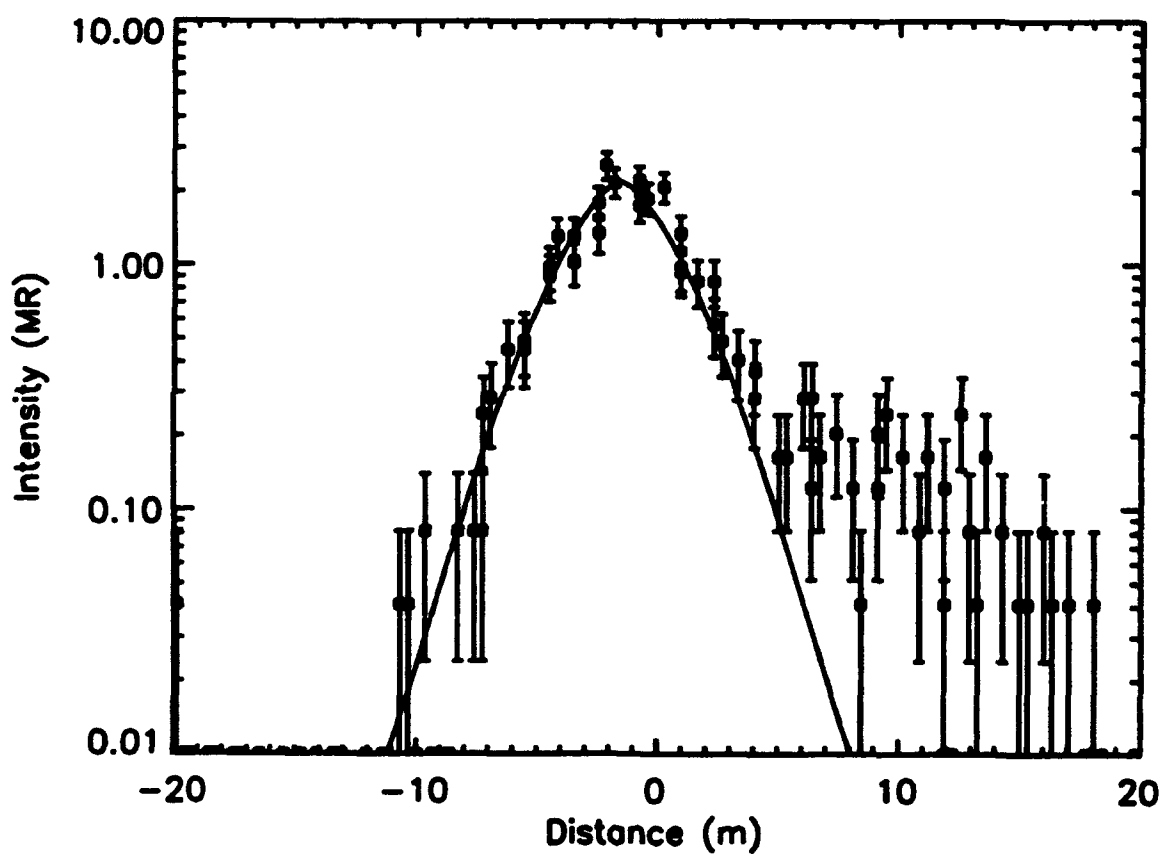
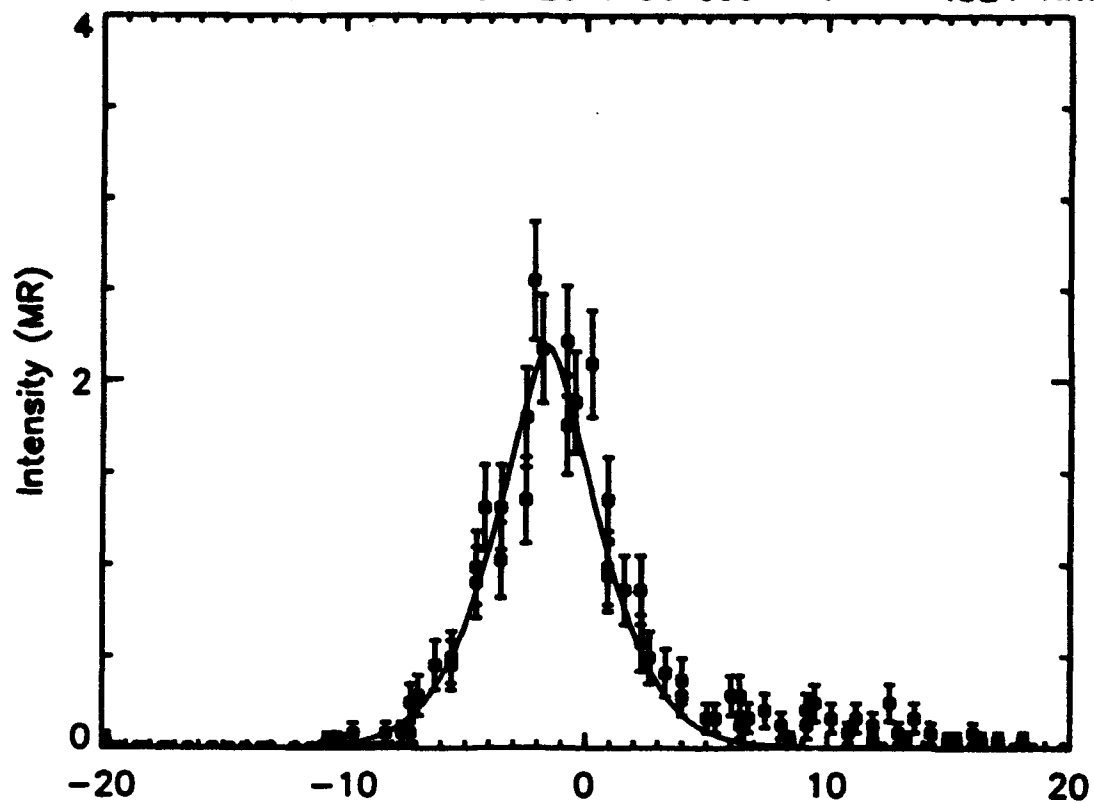
EXCEDE III 3914 A Scanning Photometer
Scan Number 67 Time= 199.197 sec Alt= 114.917 Km



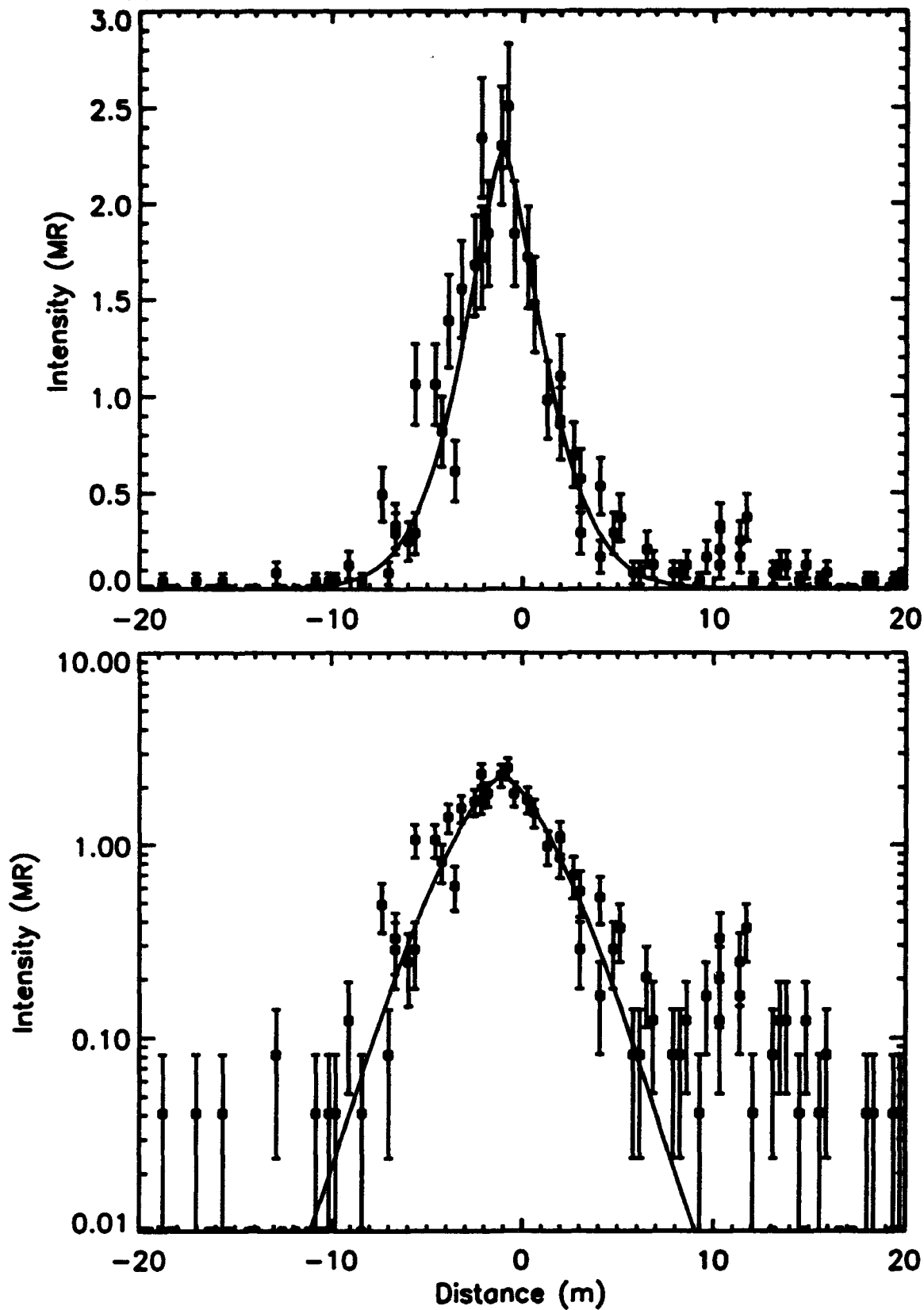
EXCEDE III 3914 A Scanning Photometer
Scan Number 68 Time= 200.465 sec Alt= 114.859 Km



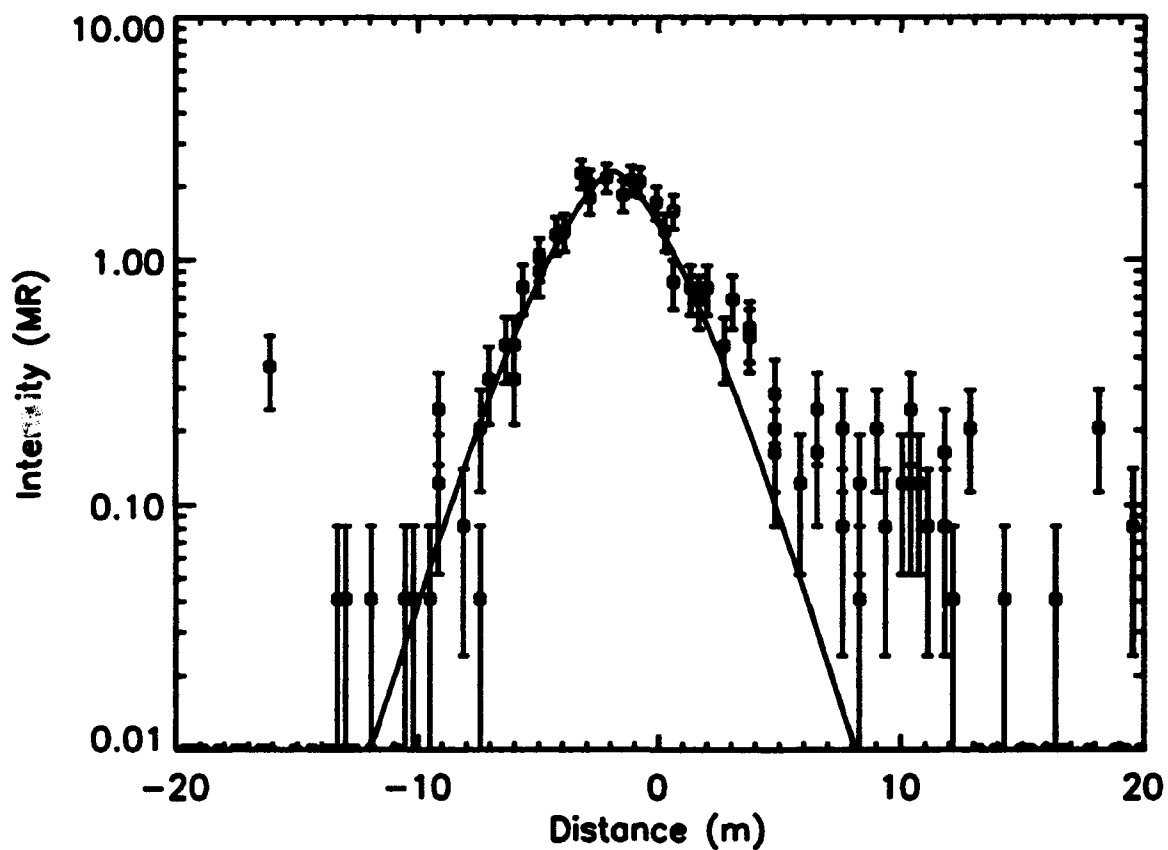
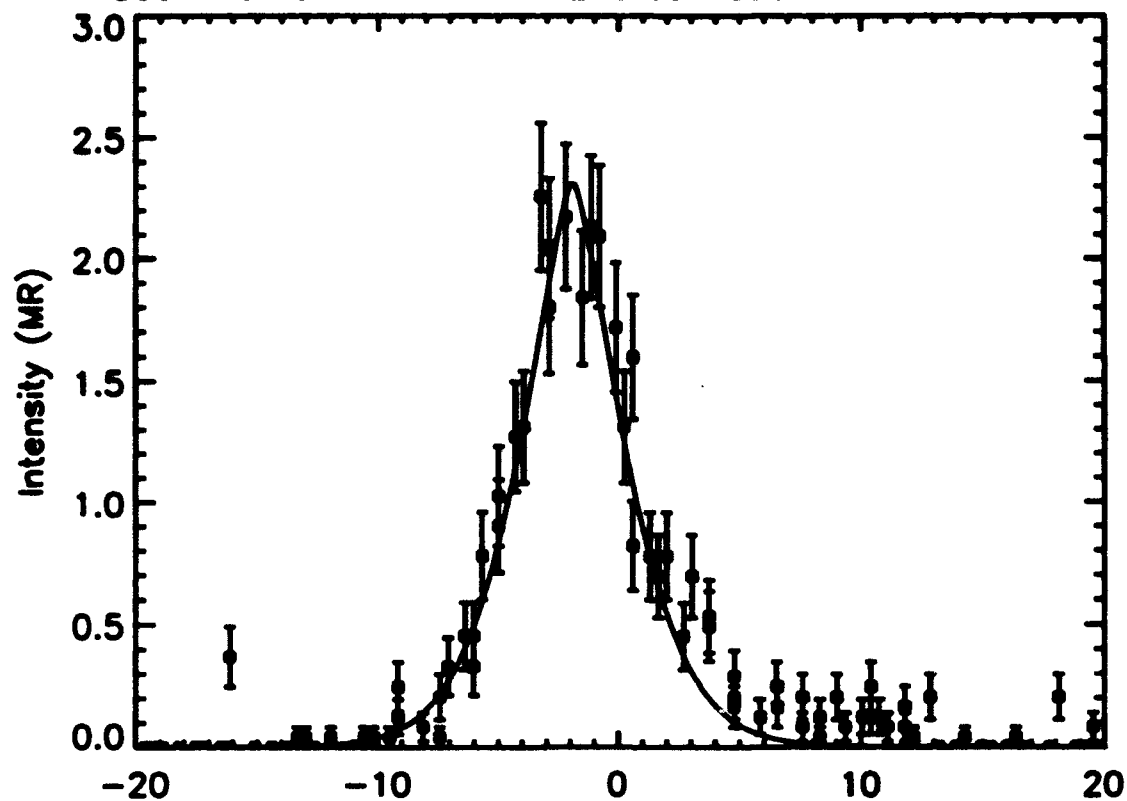
EXCEDE III 3914 A Scanning Photometer
Scan Number 69 Time= 201.150 sec Alt= 114.821 Km



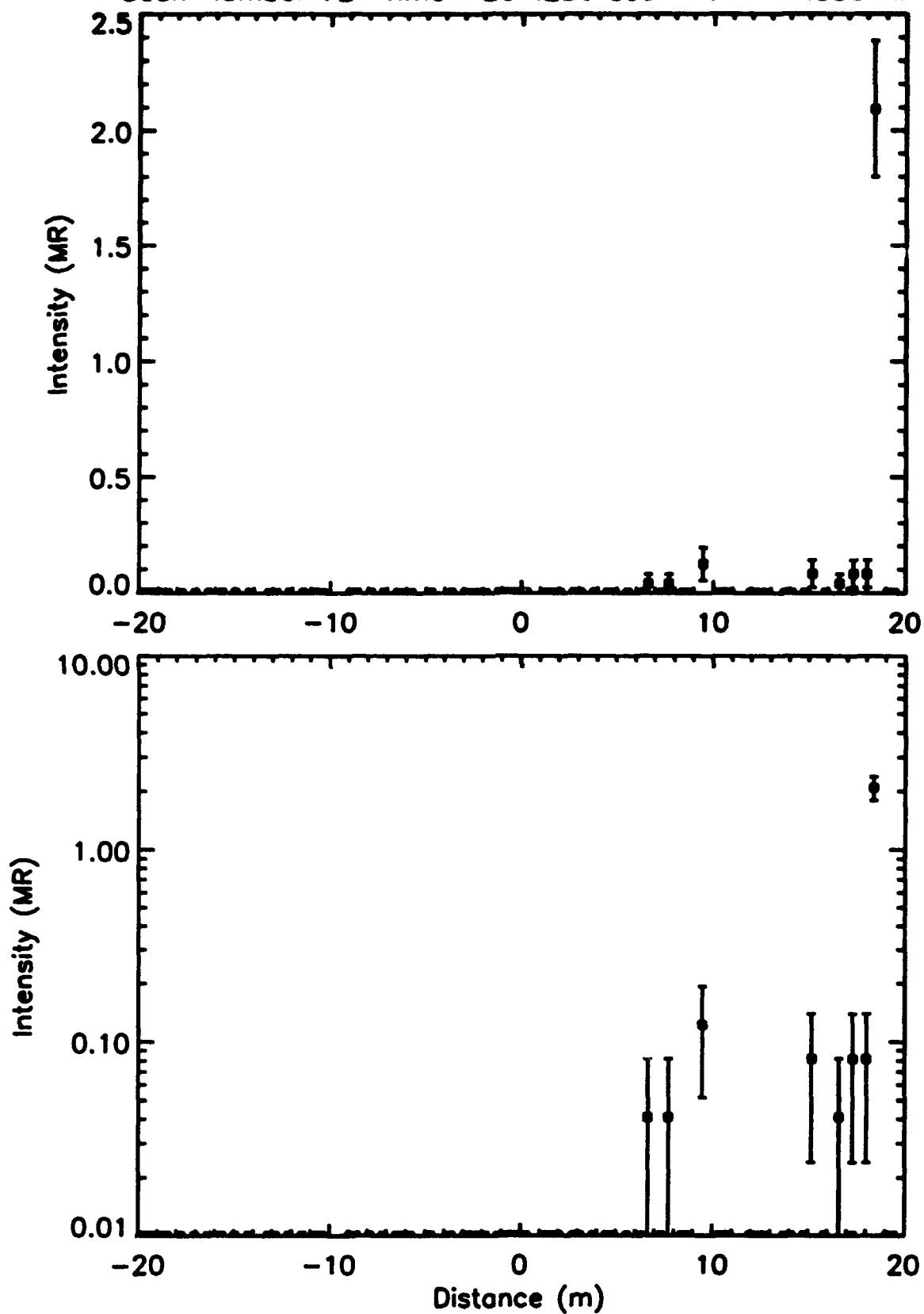
EXCEDE III 3914 A Scanning Photometer
Scan Number 70 Time= 202.417 sec Alt= 114.740 Km



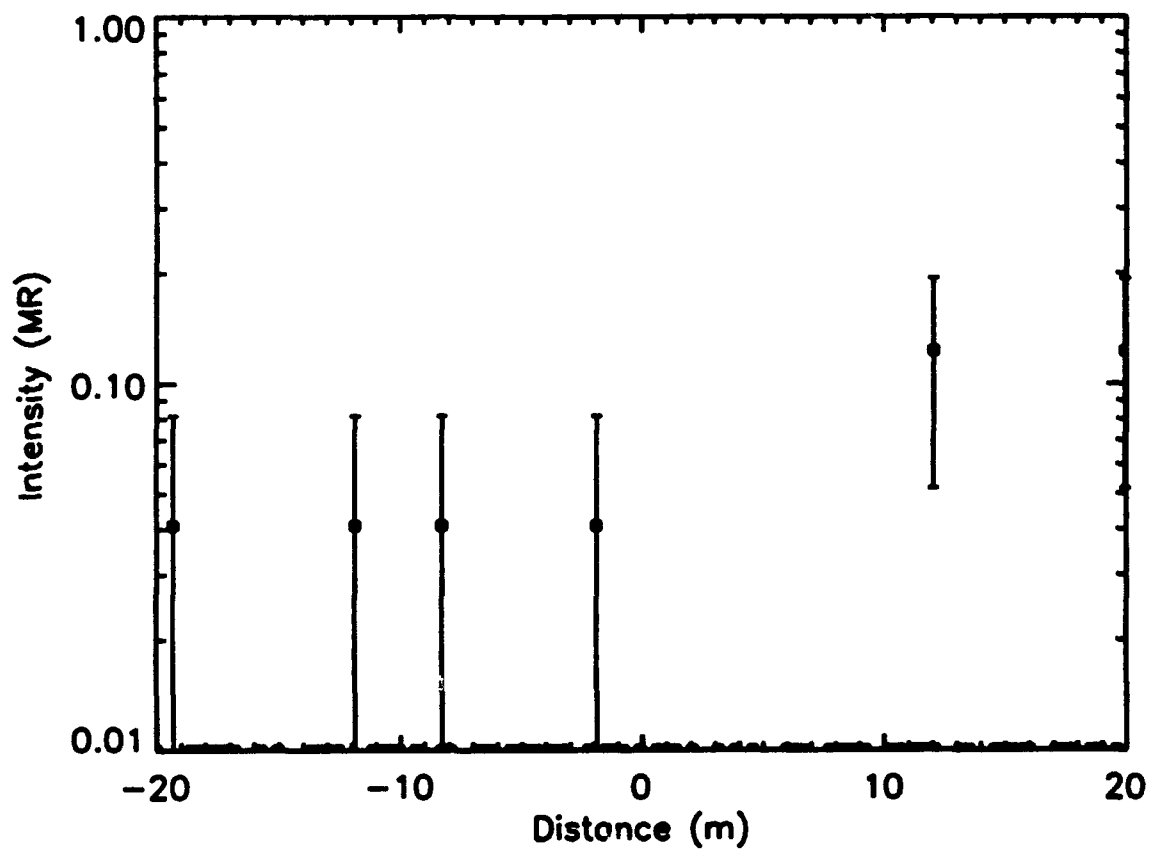
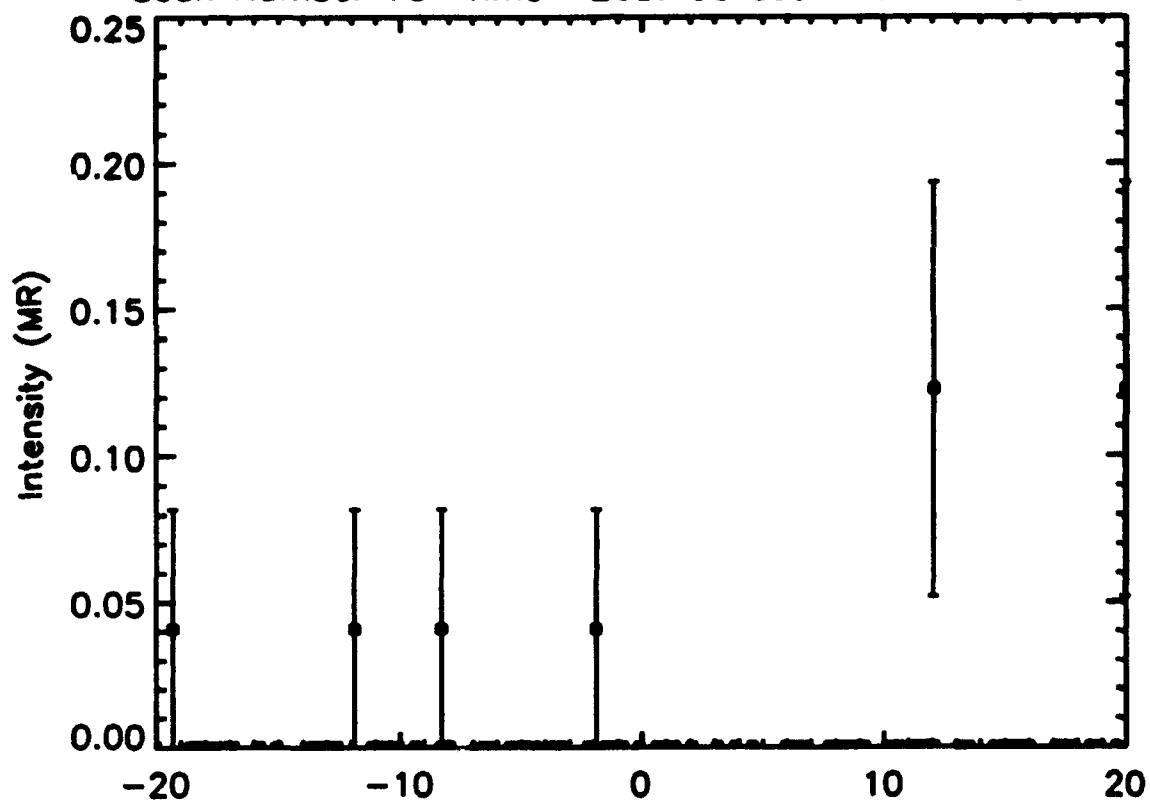
EXCEDE III 3914 A Scanning Photometer
Scan Number 71 Time= 203.097 sec Alt= 114.690 Km



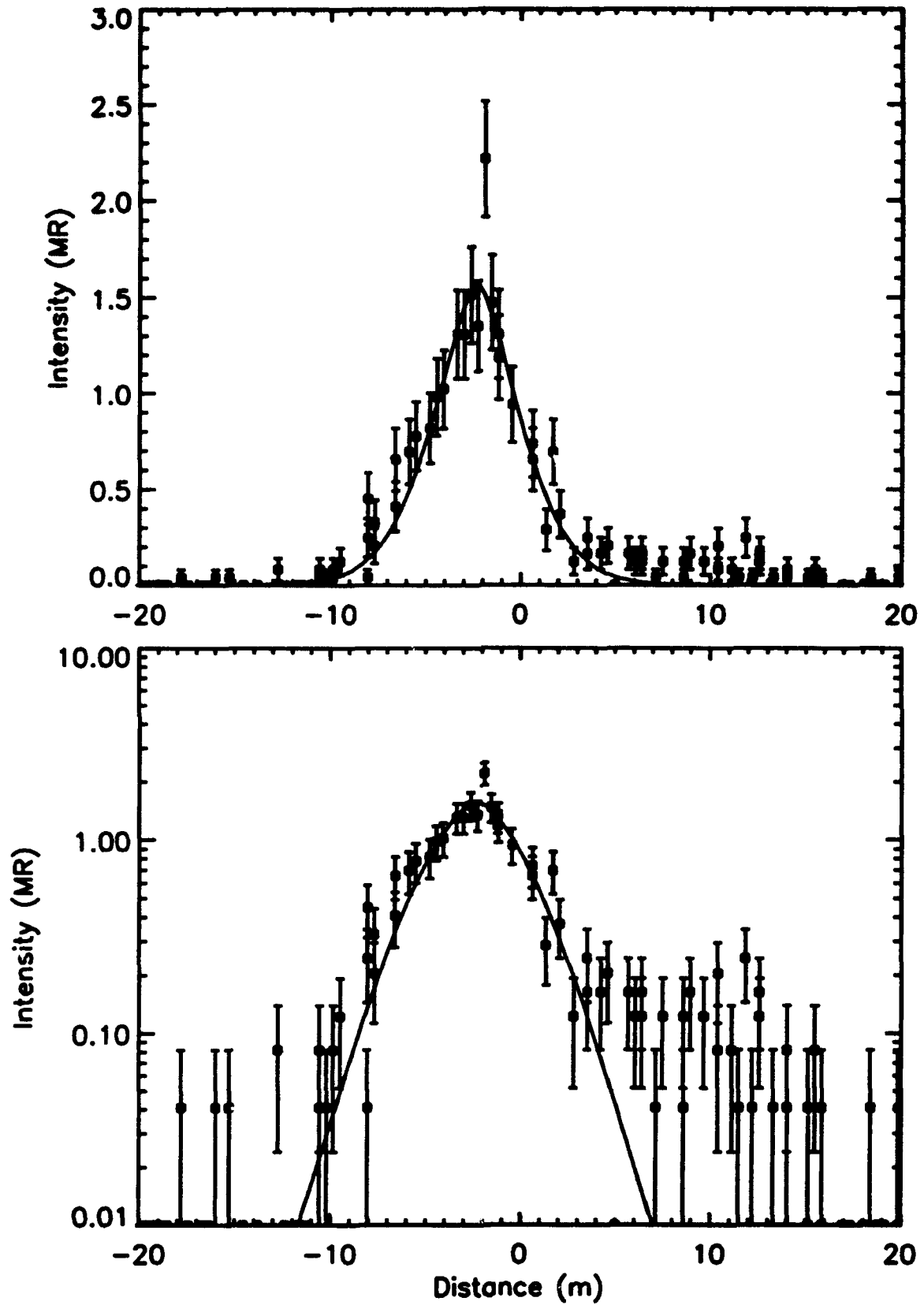
EXCEDE III 3914 A Scanning Photometer
Scan Number 72 Time= 204.236 sec Alt= 114.596 Km



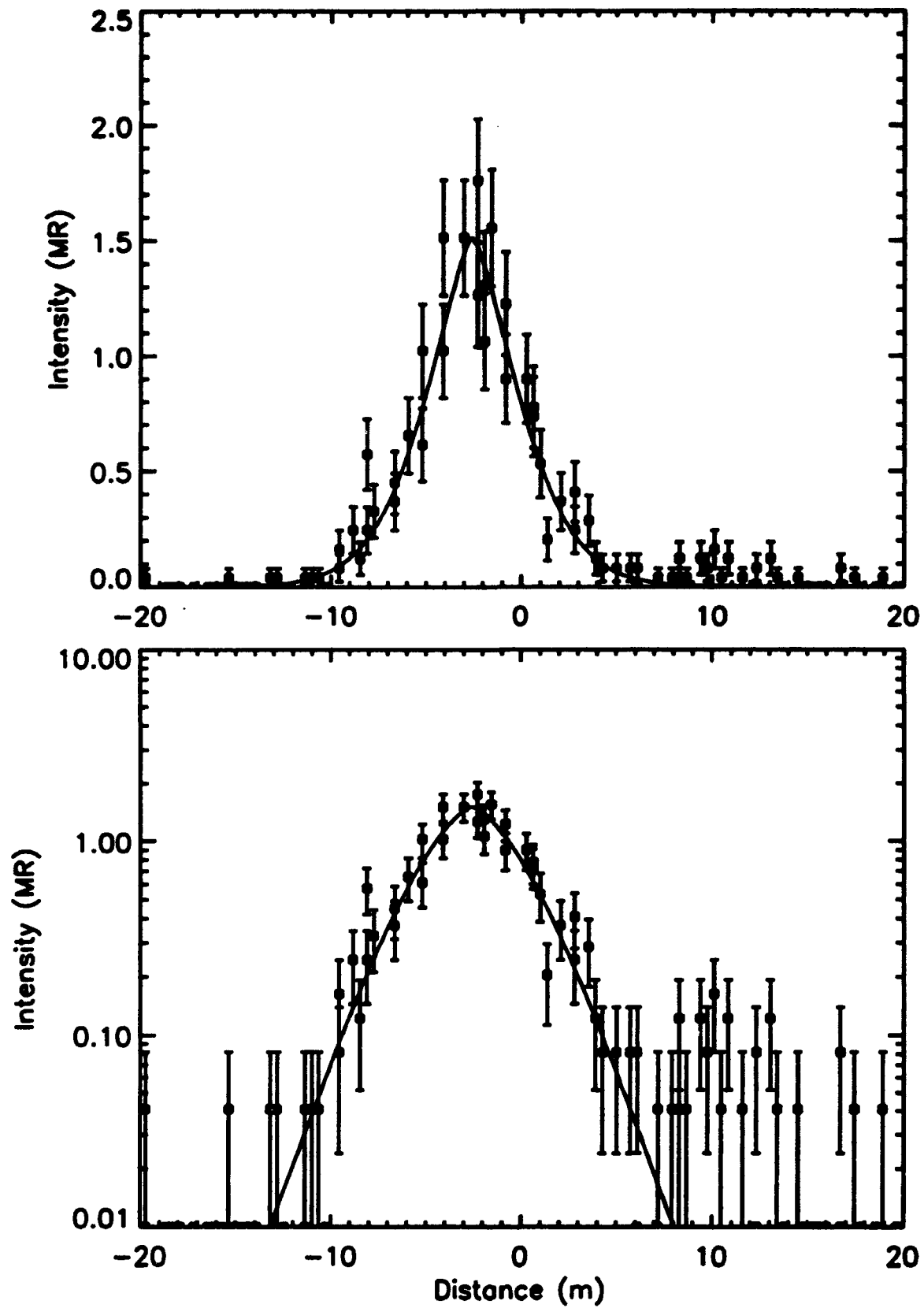
EXCEDE III 3914 A Scanning Photometer
Scan Number 73 Time= 205.193 sec Alt= 114.508 Km



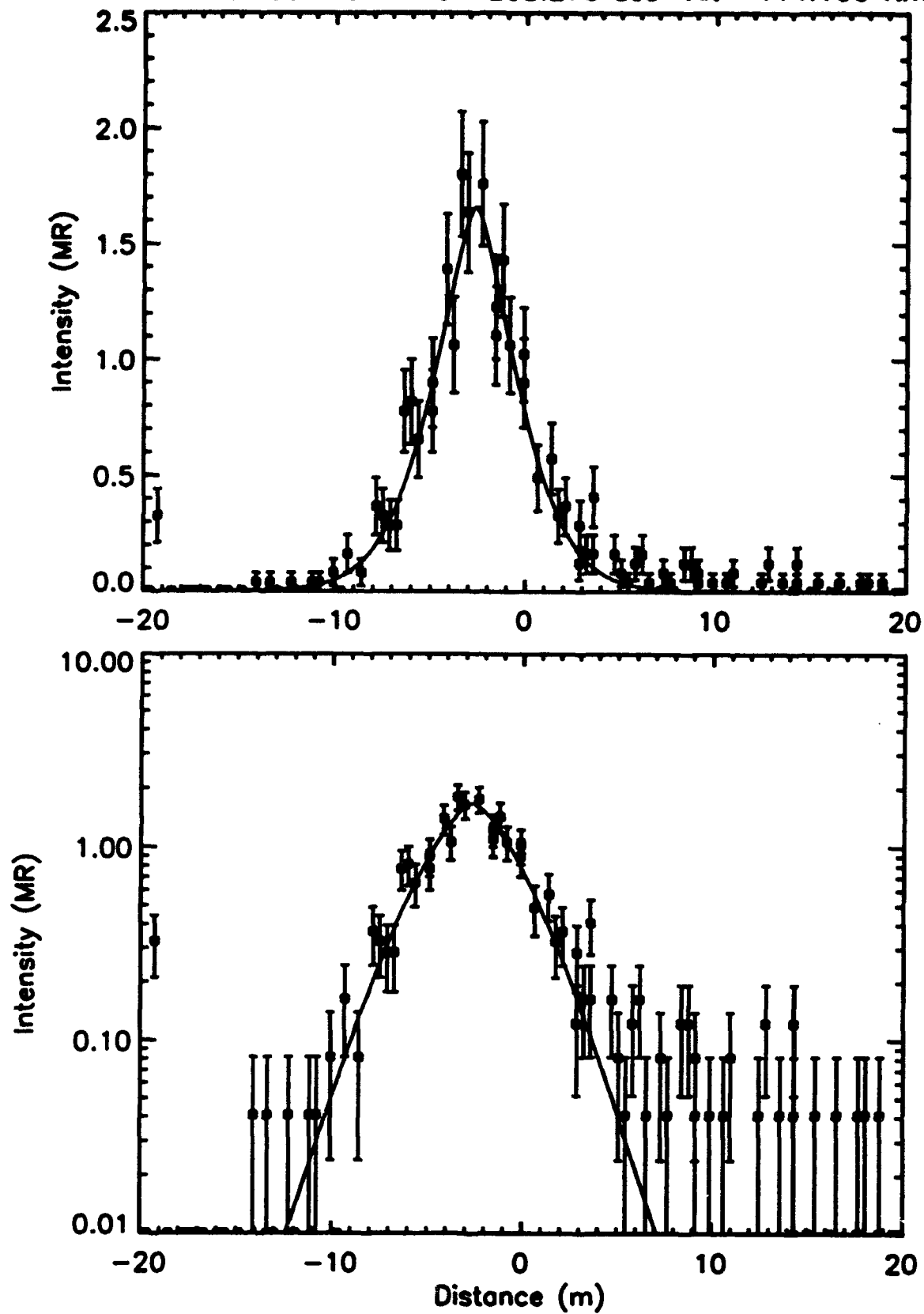
EXCEDE III 3914 A Scanning Photometer
Scan Number 74 Time= 206.323 sec Alt= 114.393 Km



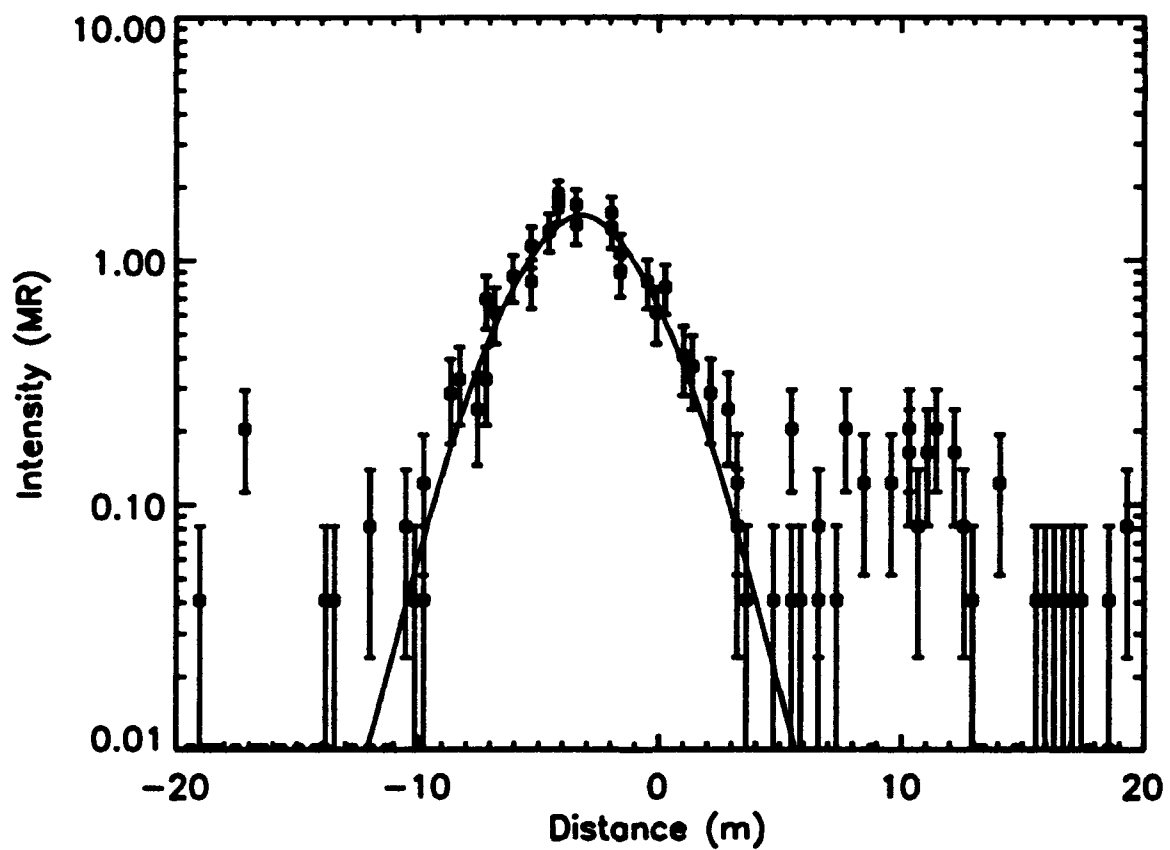
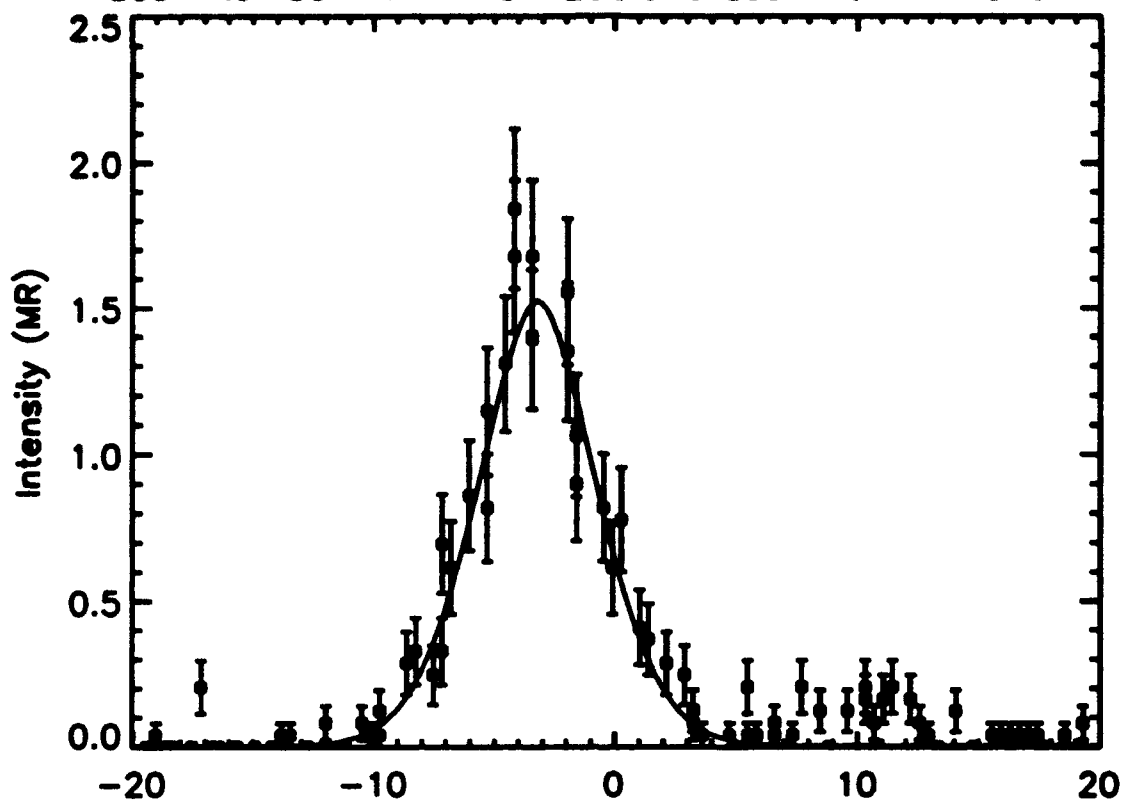
EXCEDE III 3914 A Scanning Photometer
Scan Number 75 Time = 207.998 sec Alt = 114.319 Km



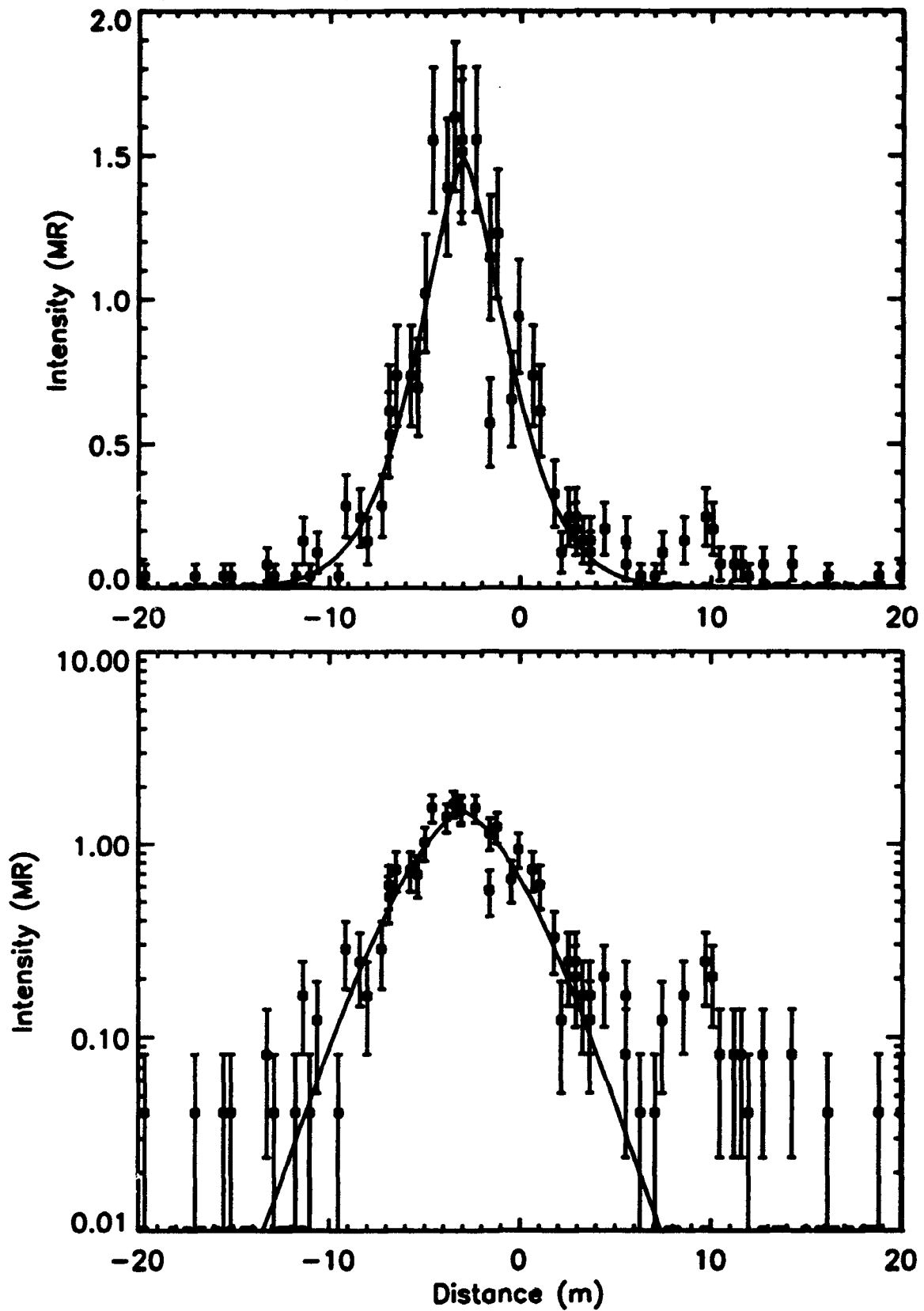
EXCEDE III 3914 A Scanning Photometer
Scan Number 76 Time= 208.276 sec Alt= 114.166 Km



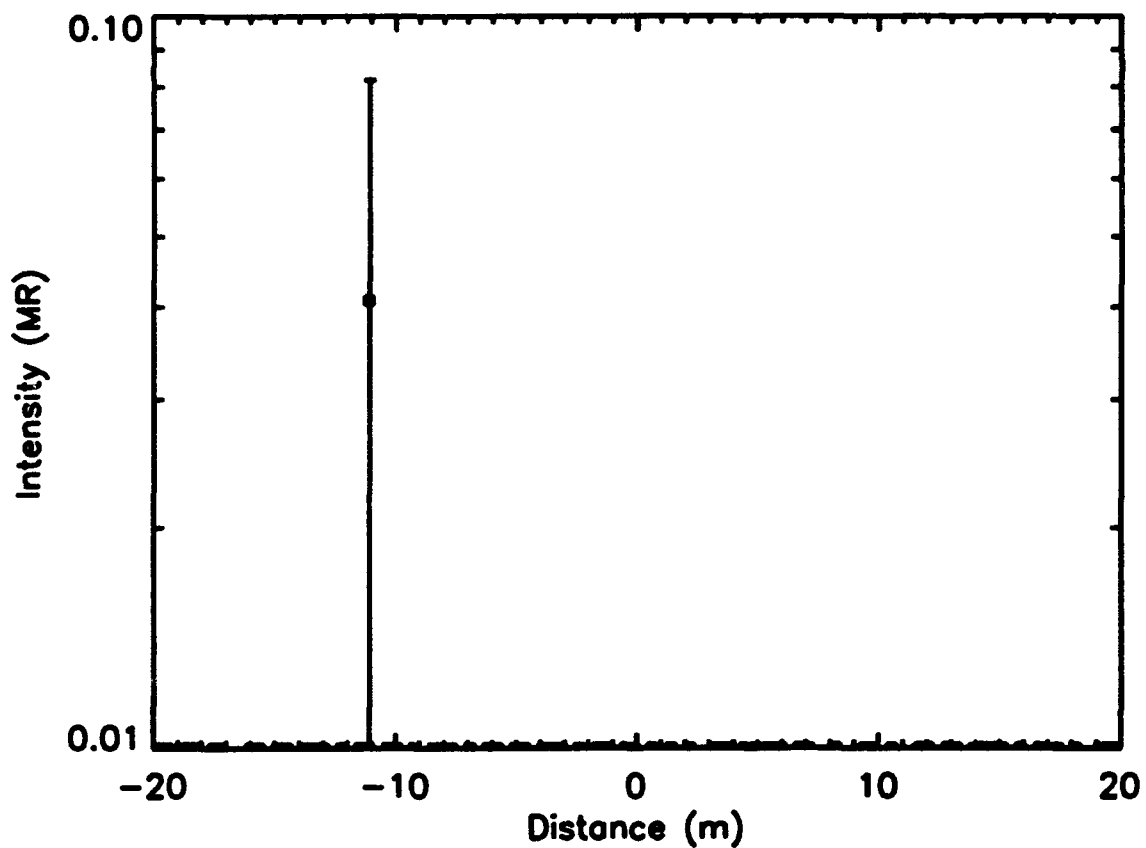
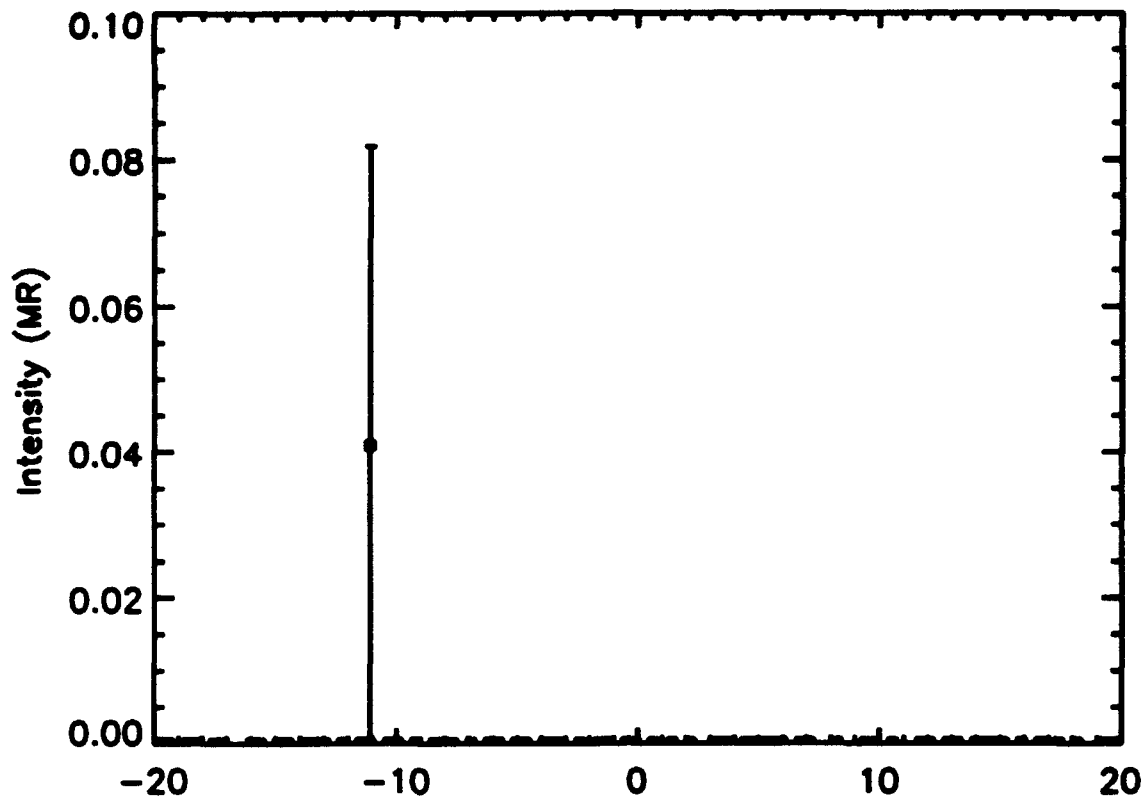
EXCEDE III 3914 A Scanning Photometer
Scan Number 77 Time= 208.948 sec Alt= 114.079 Km



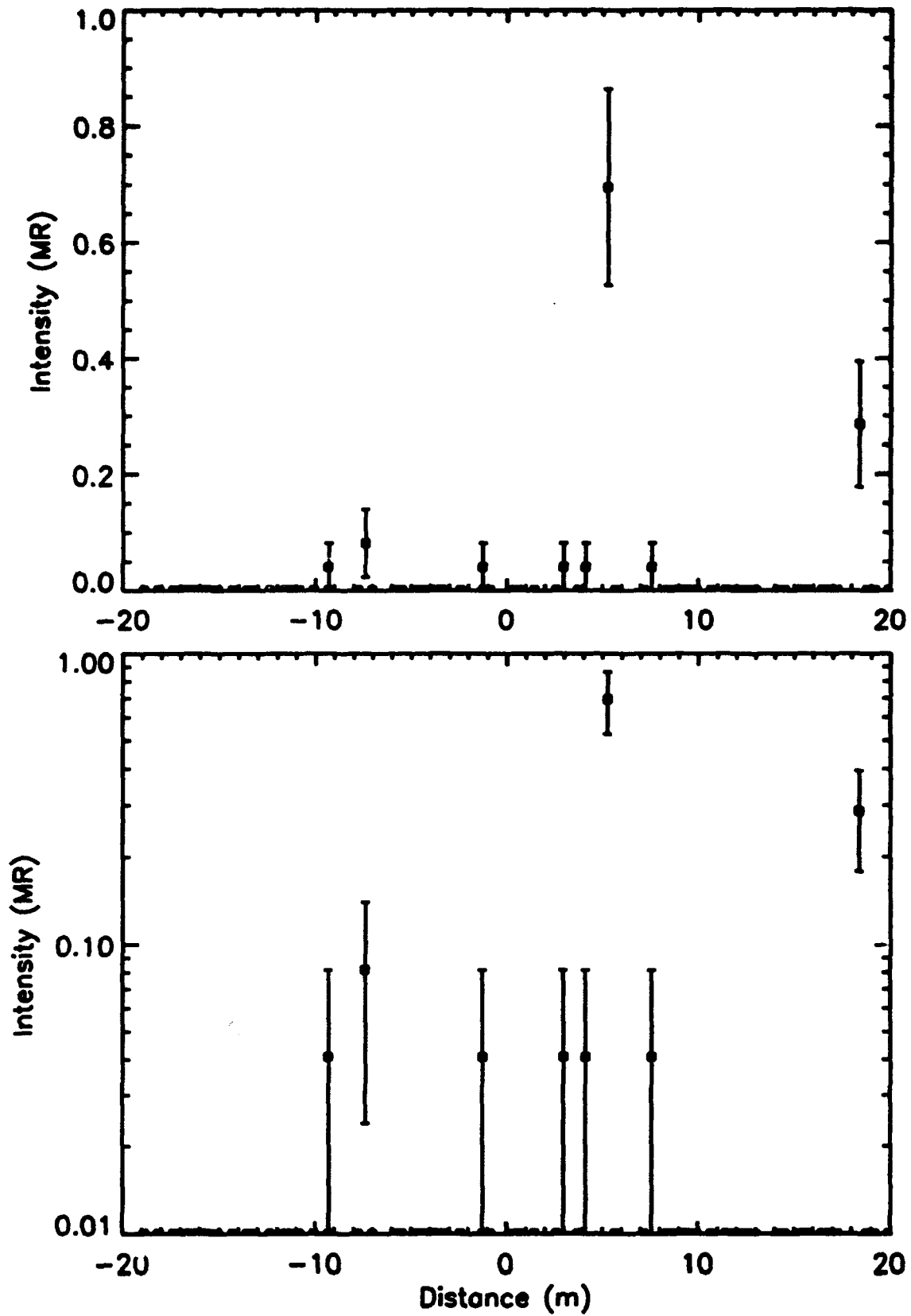
EXCEDE III 3914 A Scanning Photometer
Scan Number 78 Time= 210.229 sec Alt= 113.902 Km



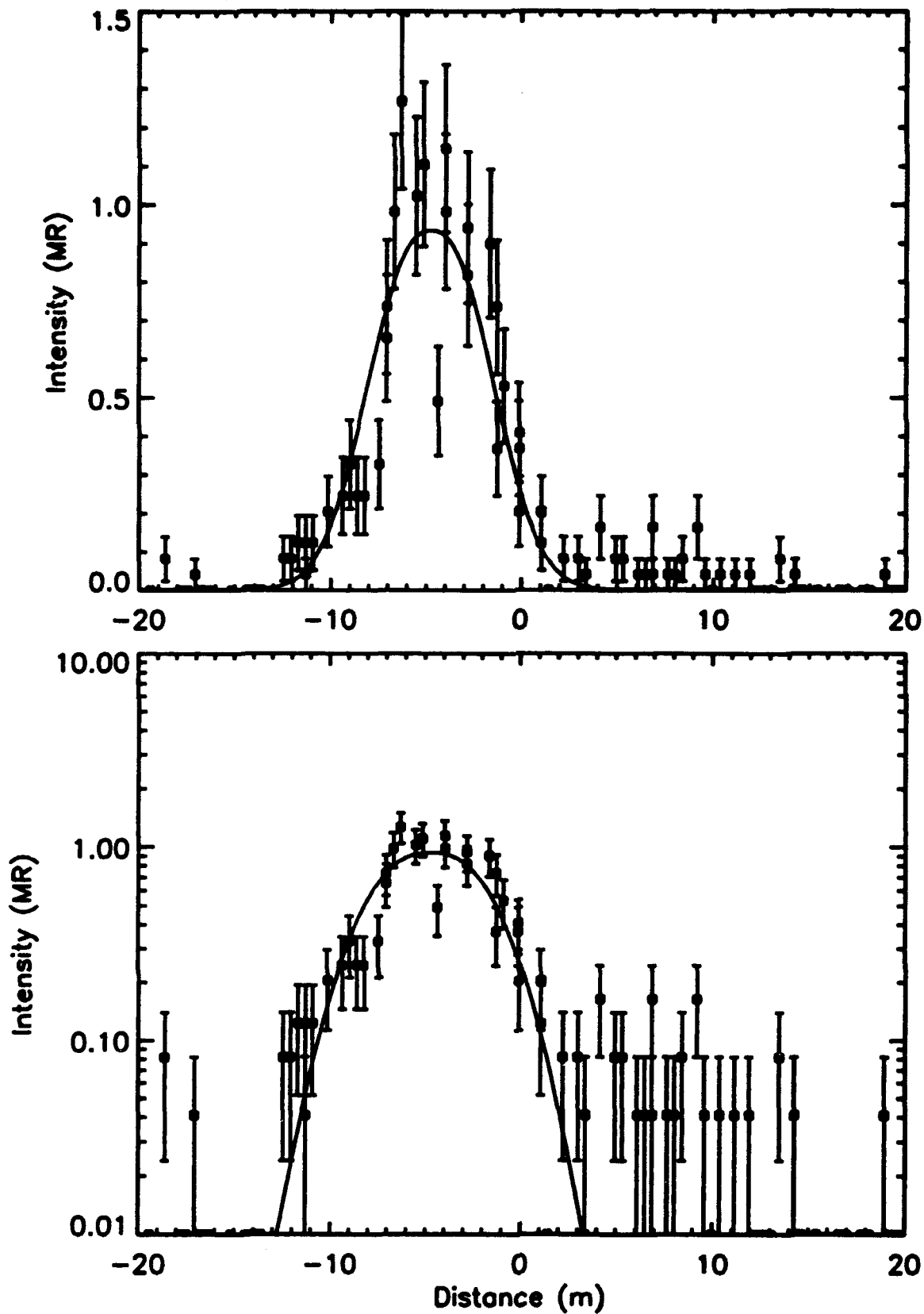
EXCEDE III 3914 A Scanning Photometer
Scan Number 79 Time= 211.048 sec Alt= 113.781 Km



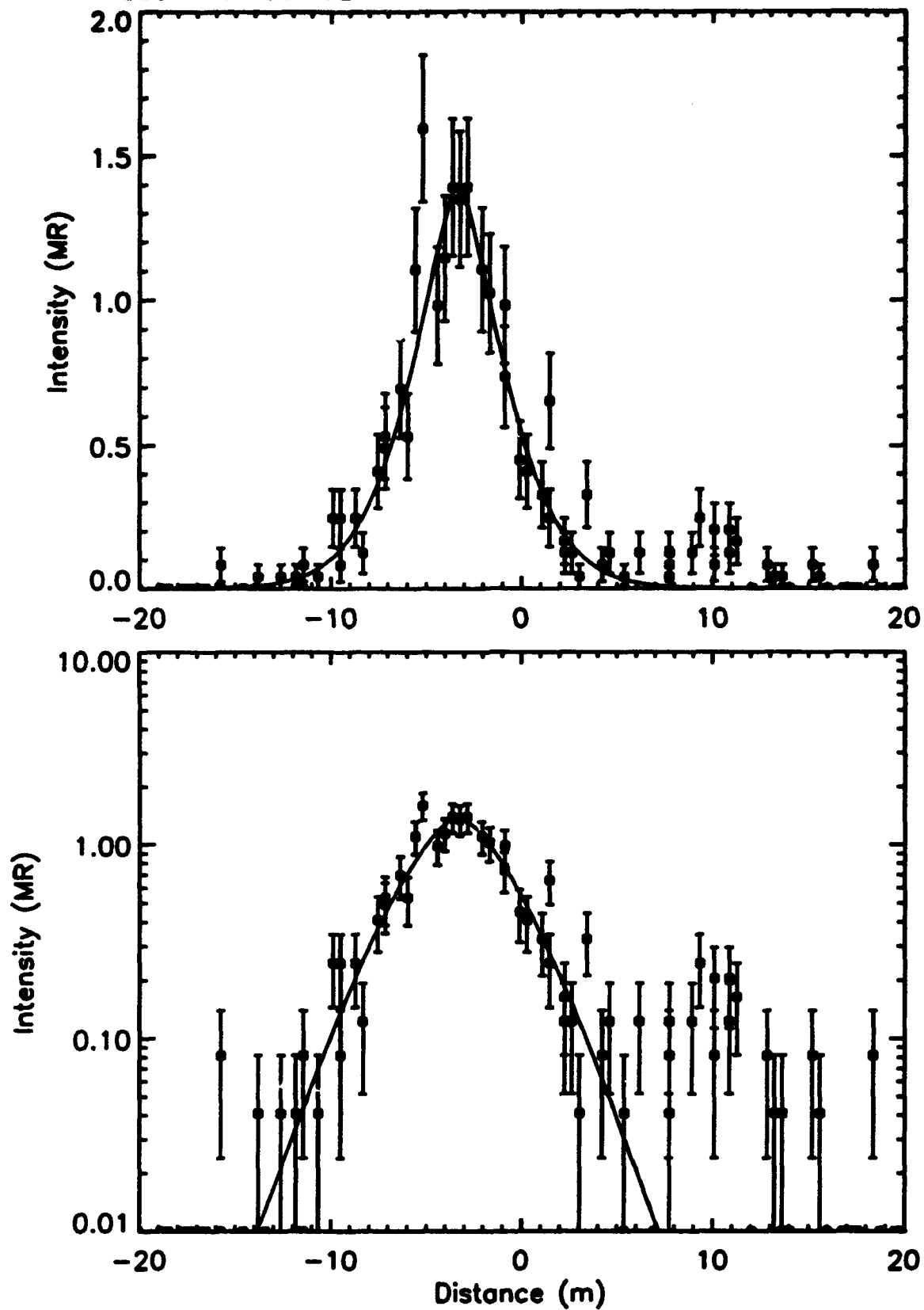
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Scan Number 80 Time= 212.040 sec Alt= 113.626 Km



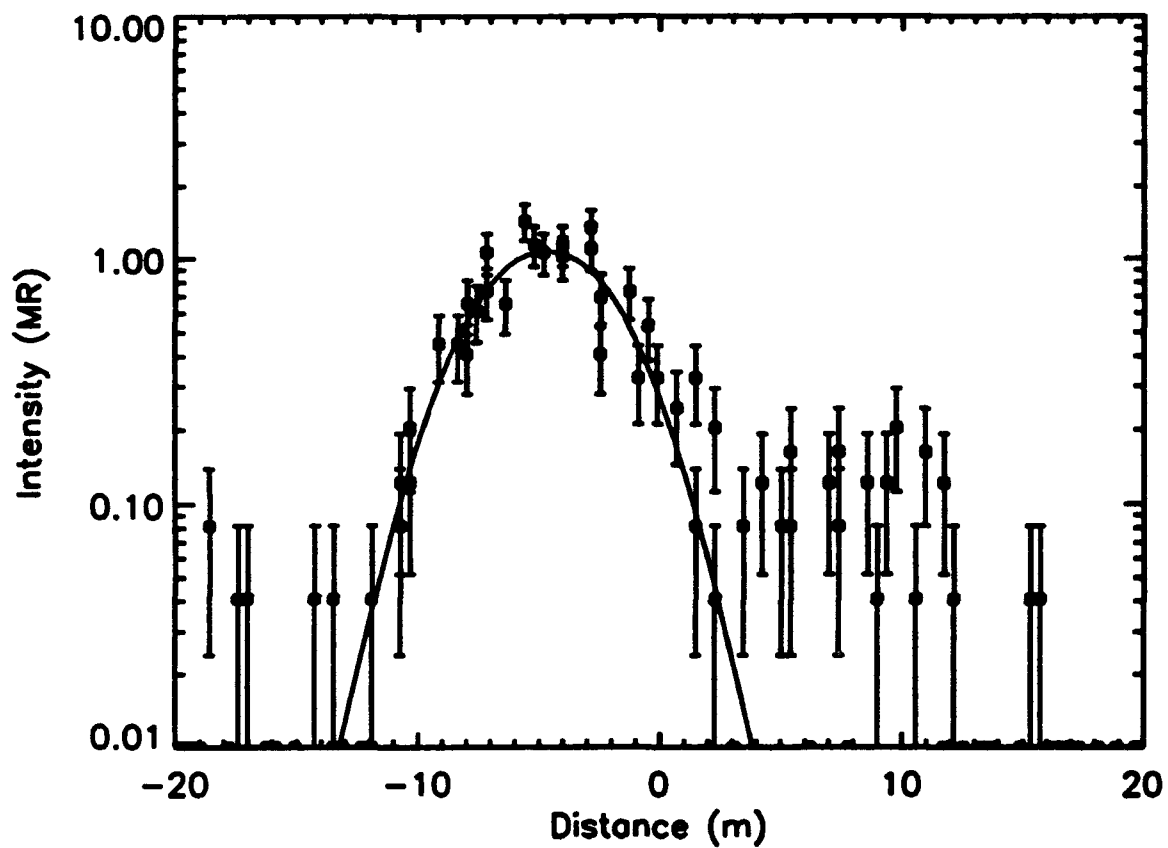
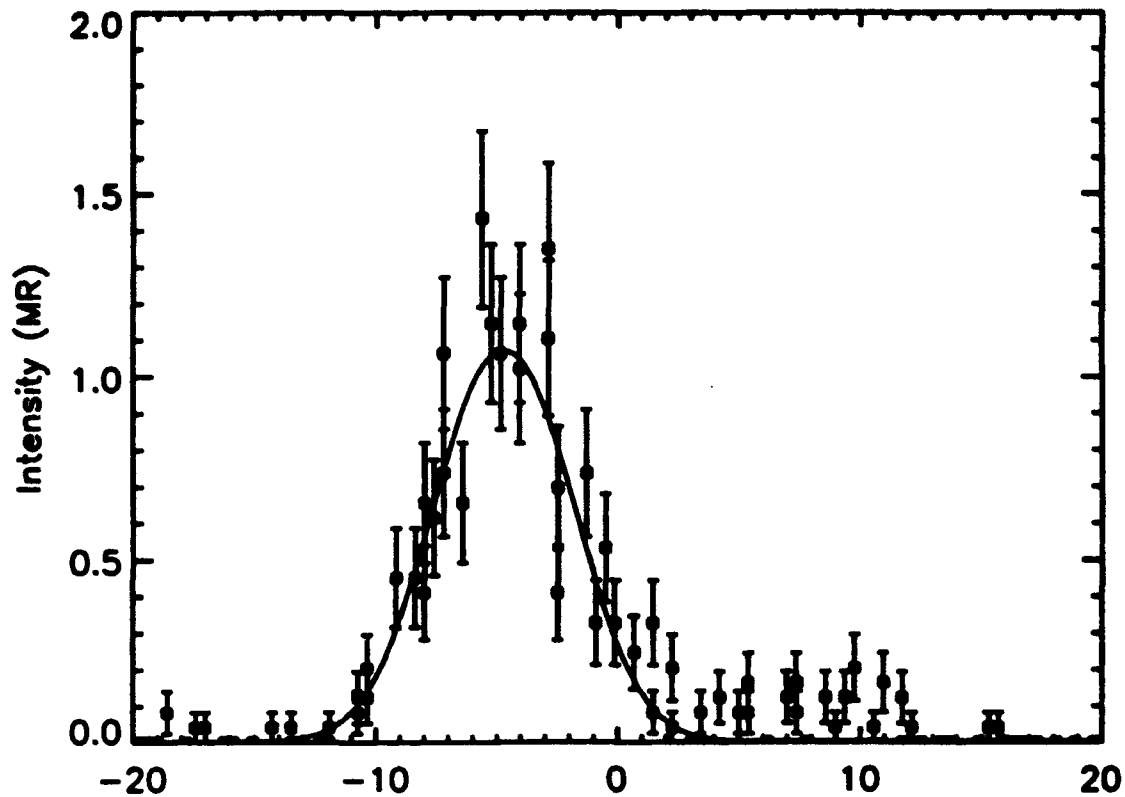
EXCEDE III 3914 A Scanning Photometer
Scan Number 81 Time= 212.848 sec Alt= 113.493 Km



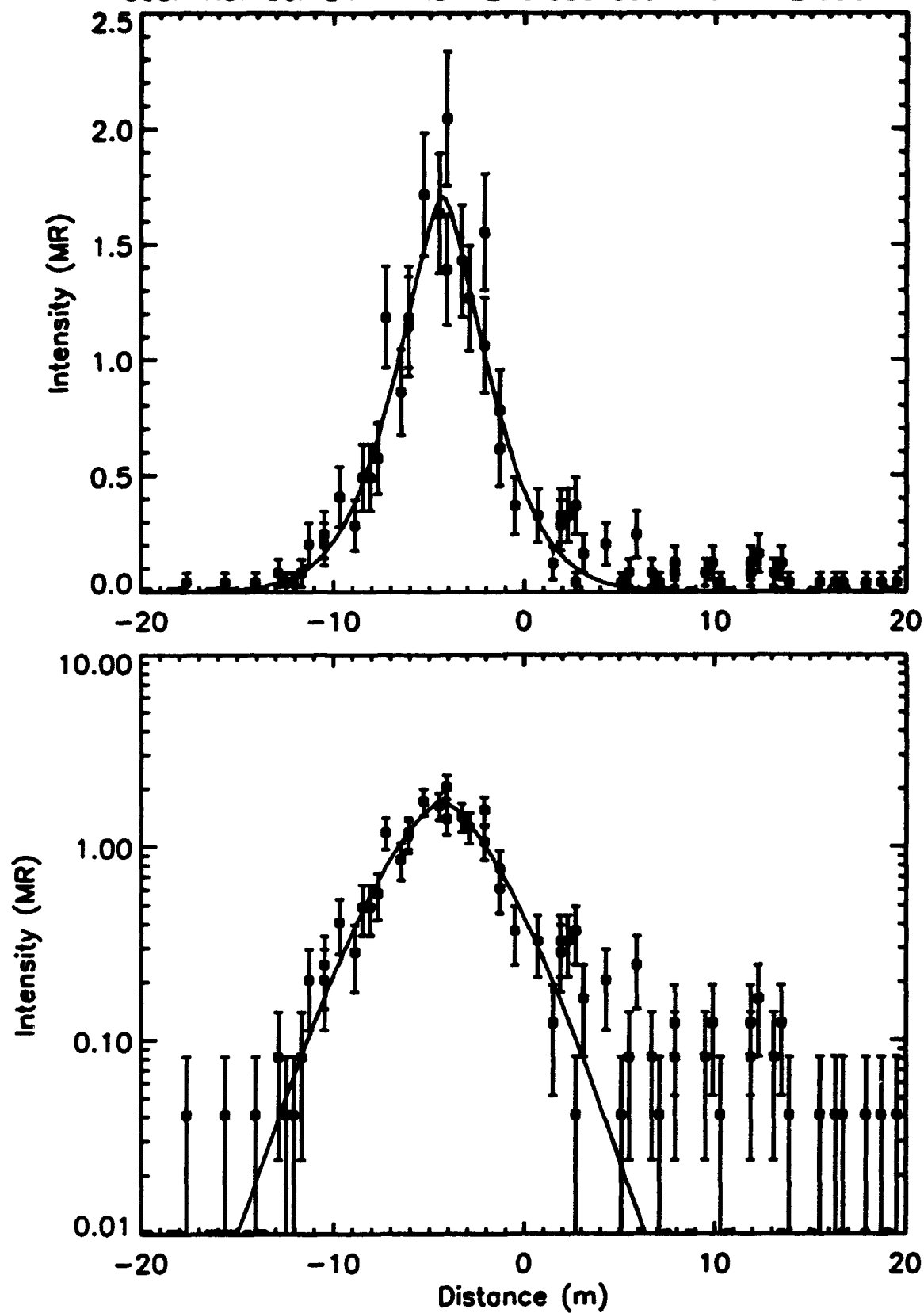
EXCEDE III 3914 A Scanning Photometer
Scan Number 82 Time= 214.134 sec Alt= 113.268 Km



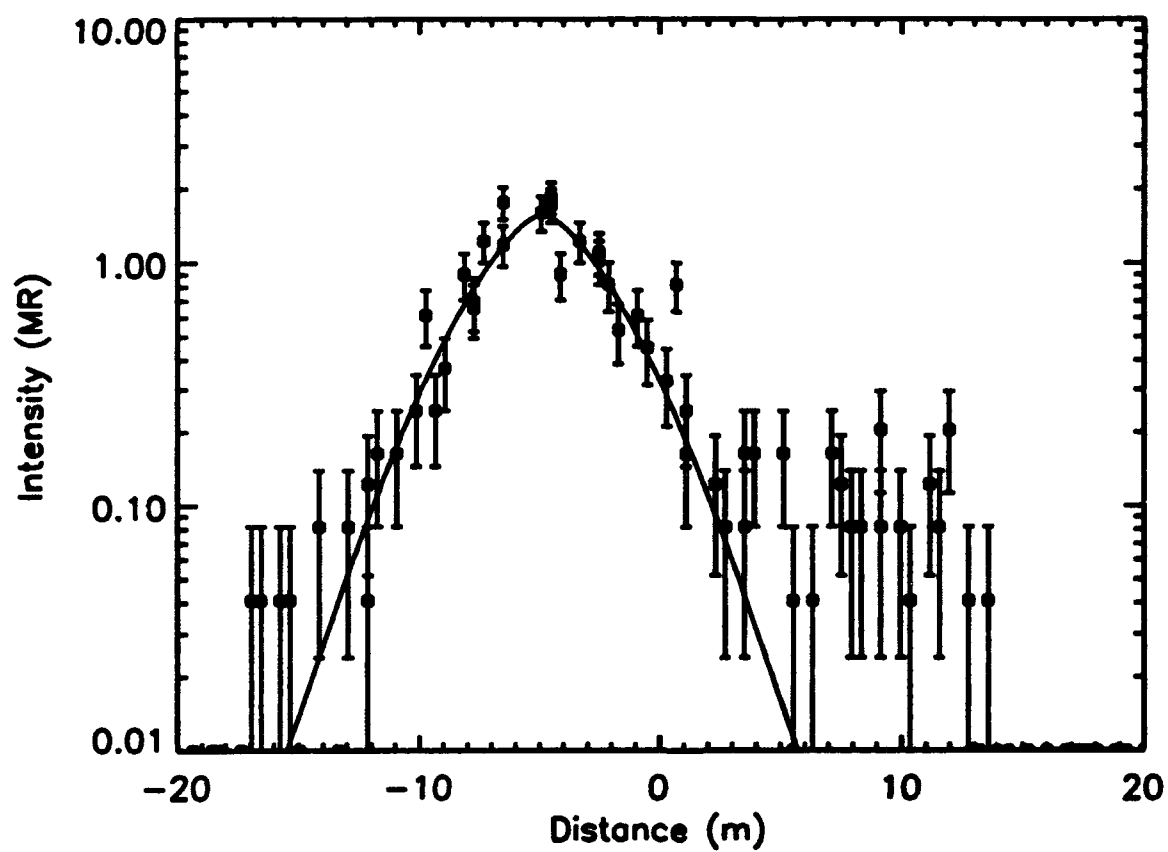
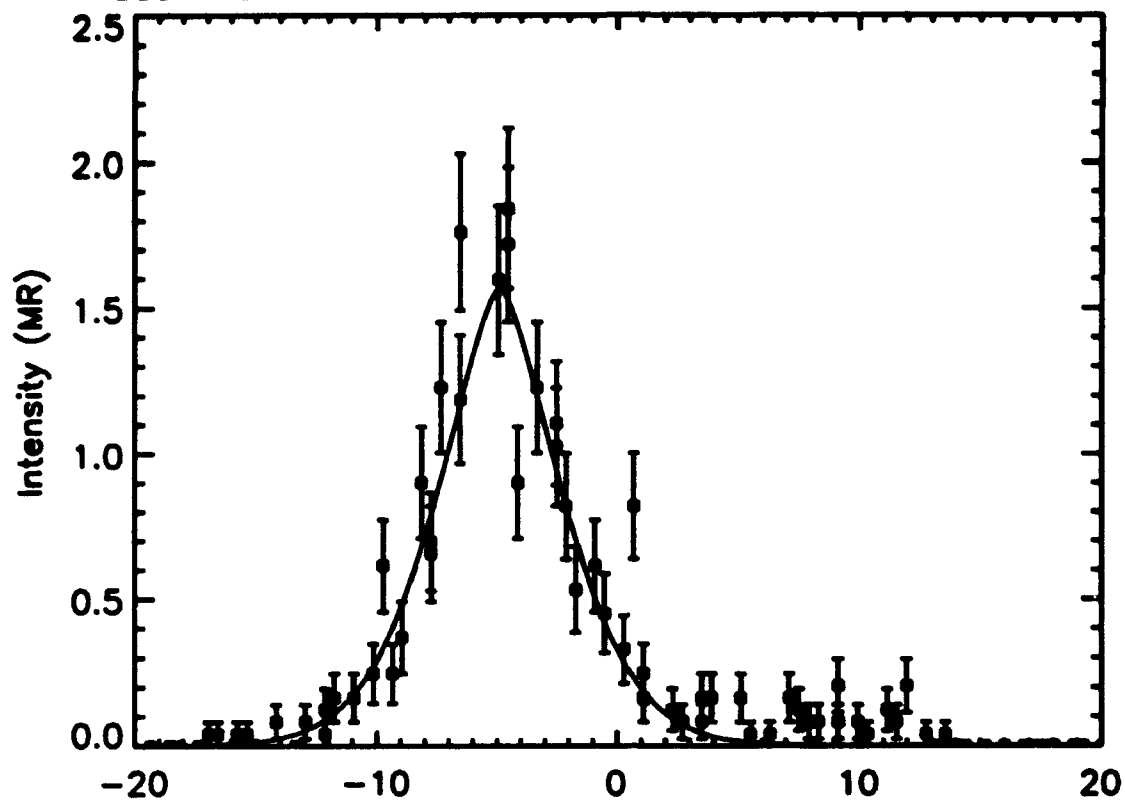
EXCEDE III 3914 A Scanning Photometer
Scan Number 83 Time= 214.801 sec Alt= 113.145 Km



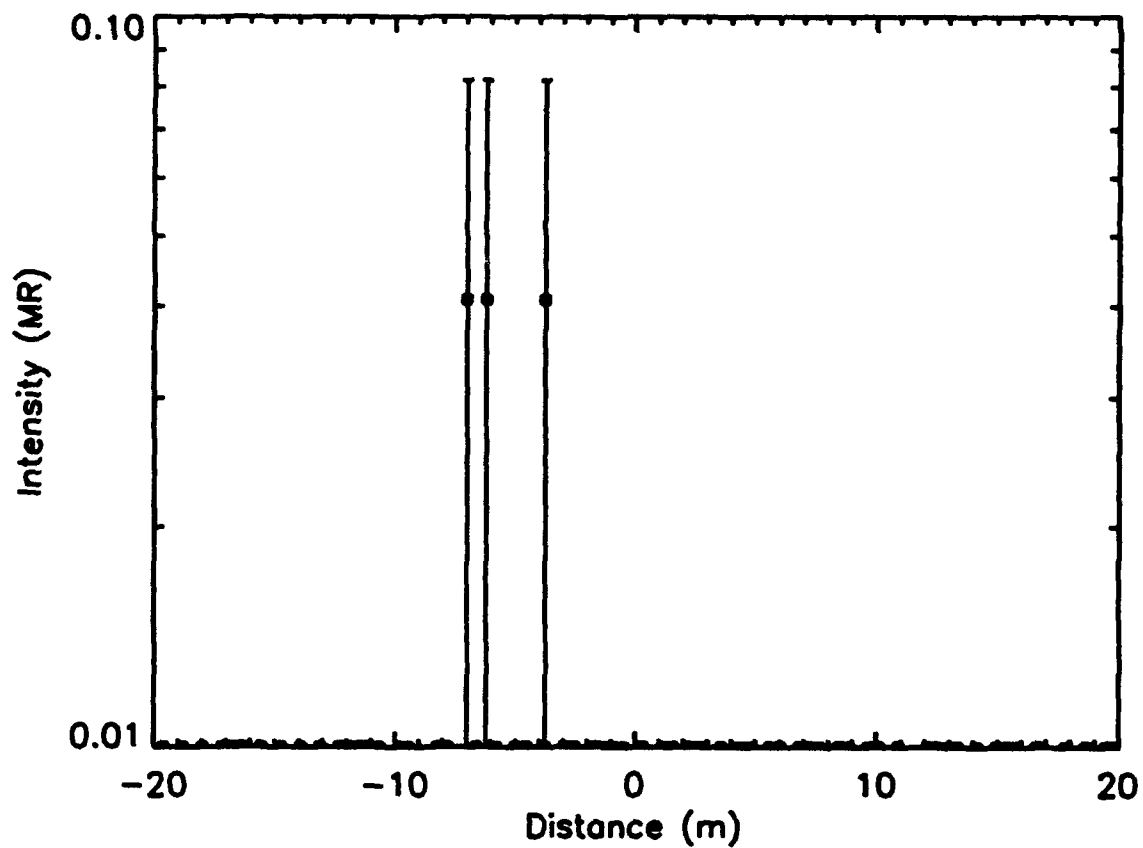
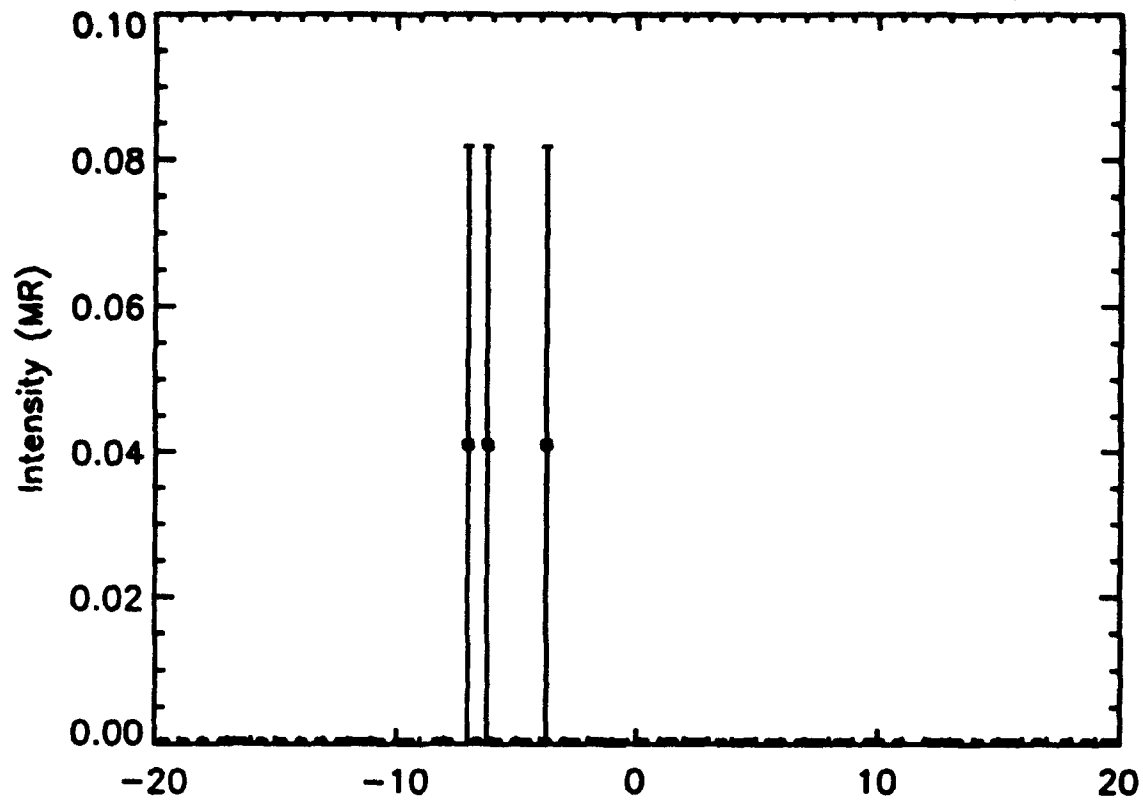
EXCEDE III 3914 A Scanning Photometer
Scan Number 84 Time = 216.088 sec Alt = 112.896 Km



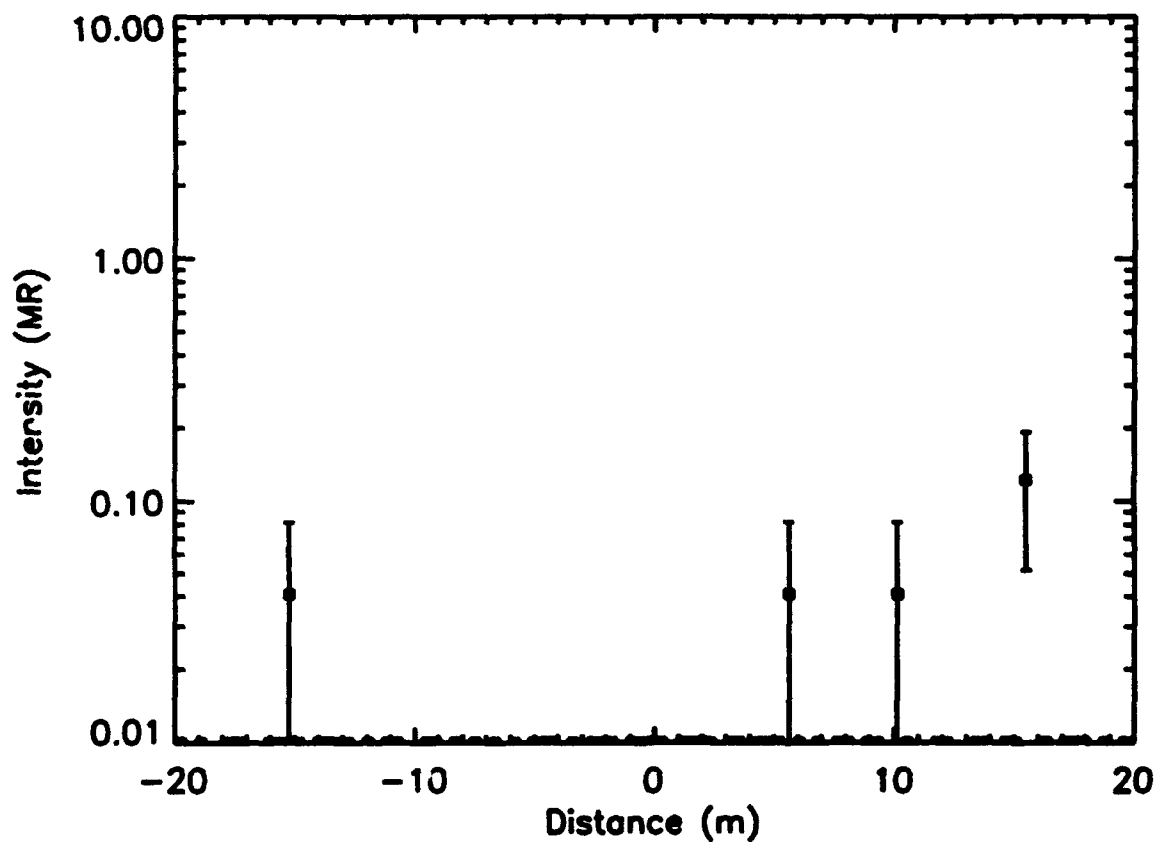
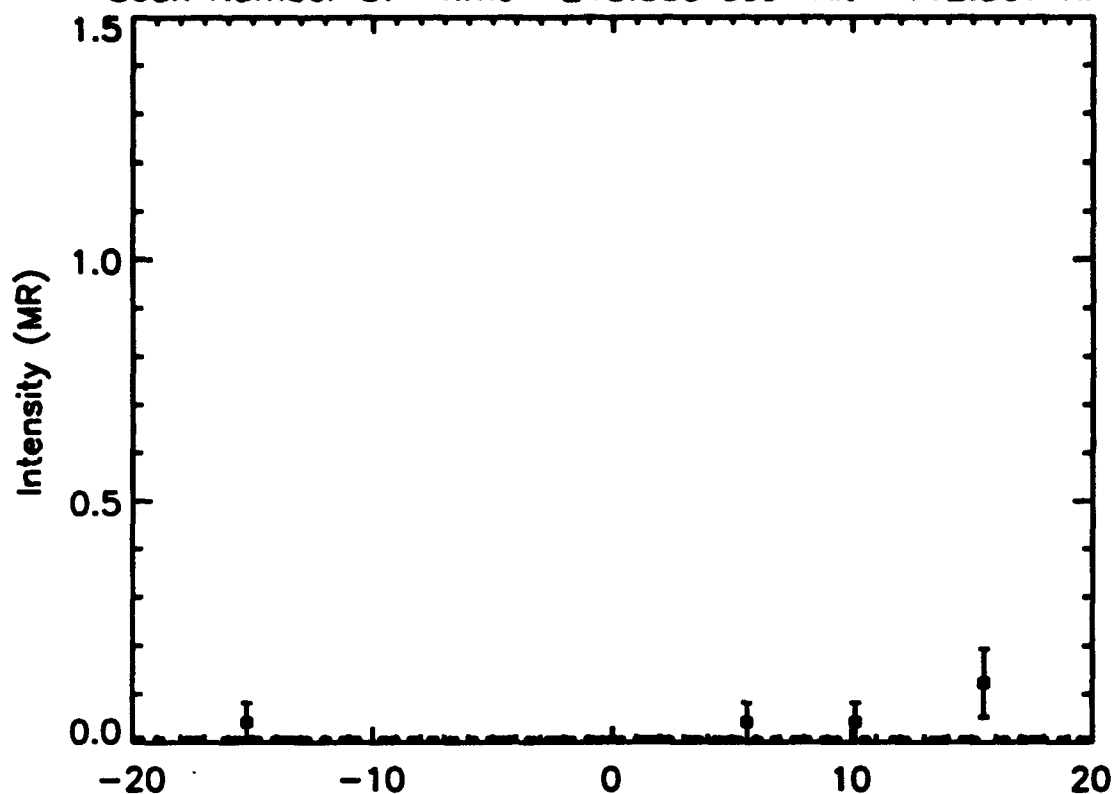
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Scan Number 85 Time= 216.751 sec Alt= 112.761 Km



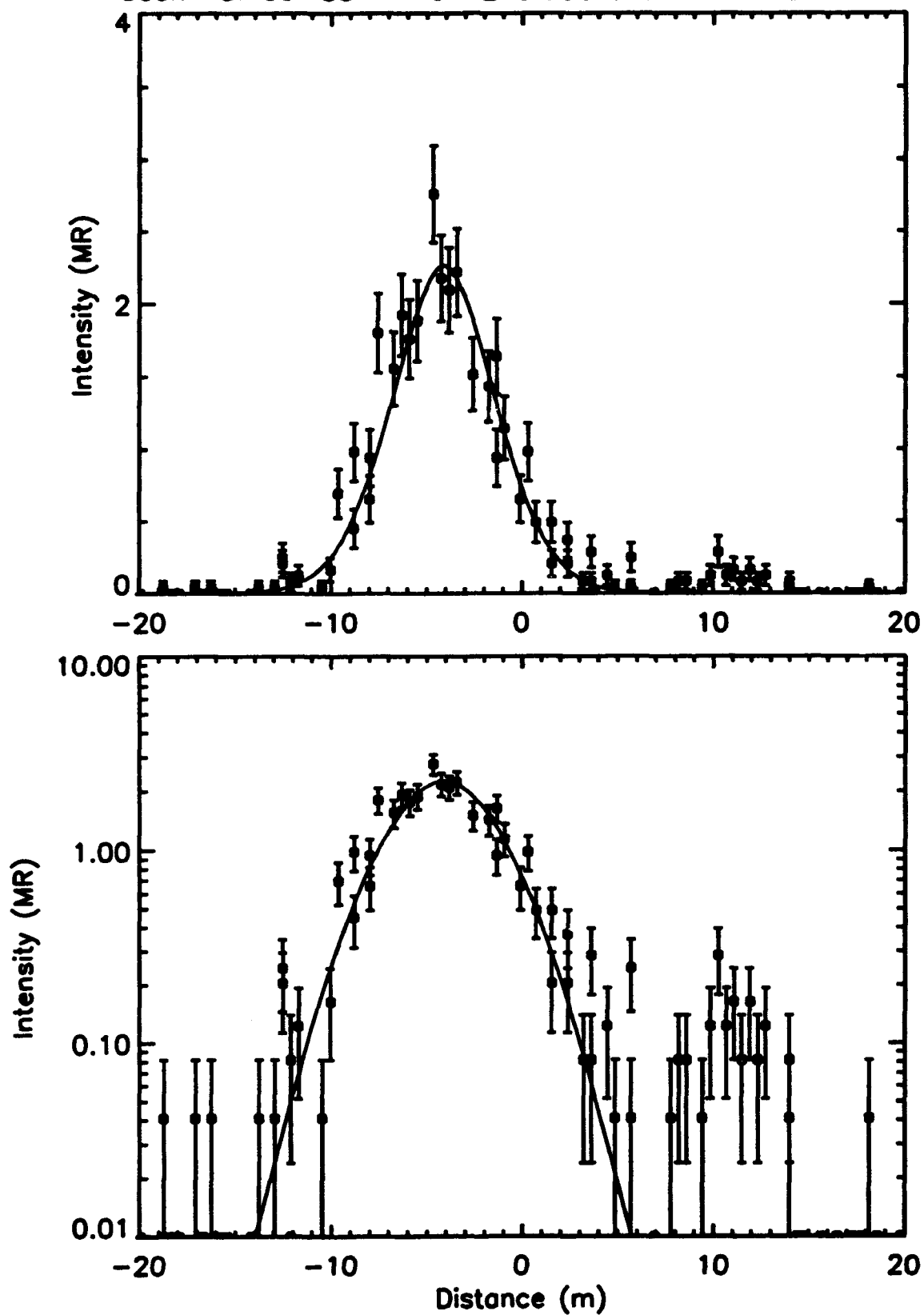
EXCEDE III 3914 A Scanning Photometer
Scan Number 86 Time= 217.895 sec Alt= 112.520 Km



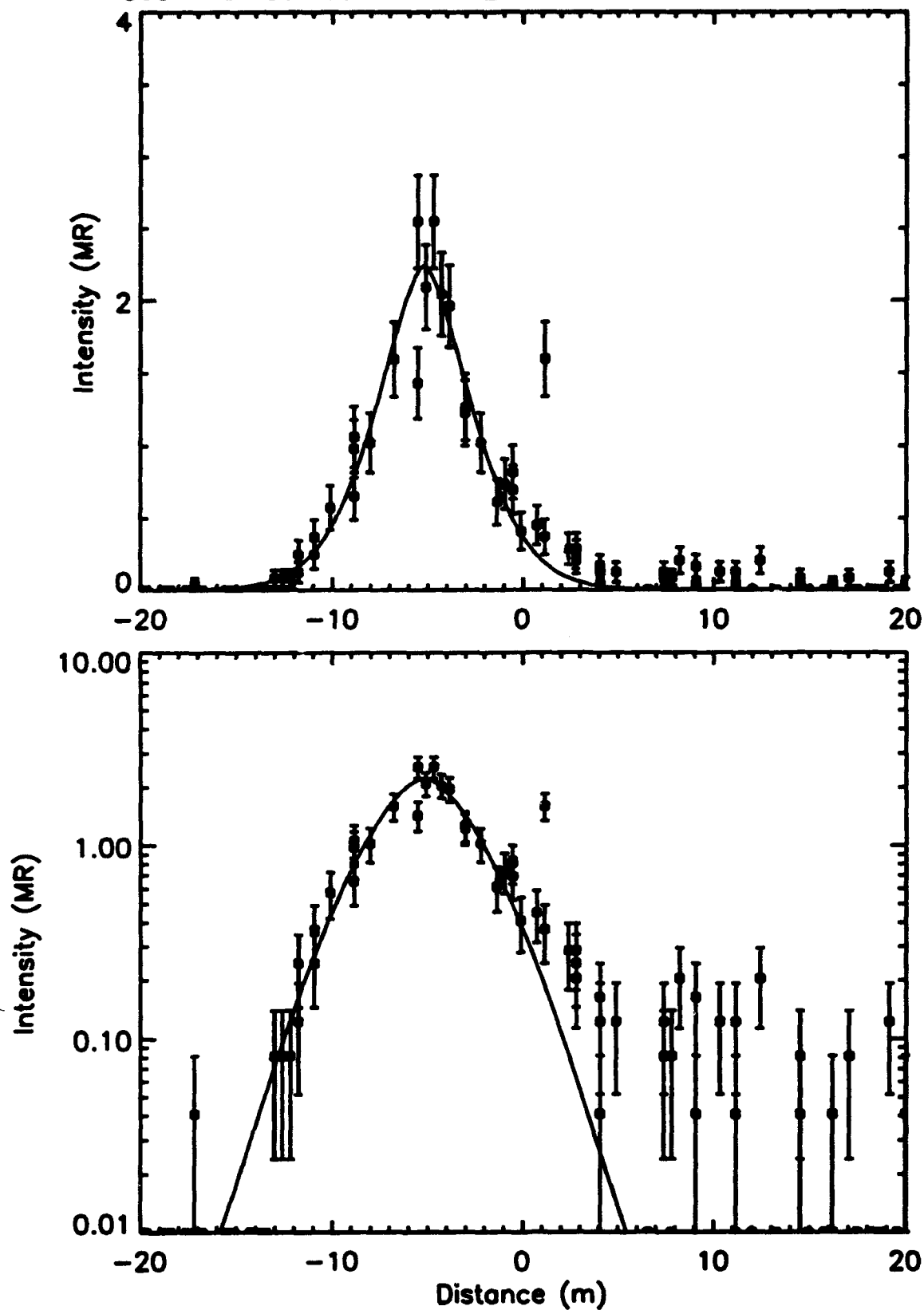
EXCEDE III 3914 A Scanning Photometer
Scan Number 87 Time= 218.855 sec Alt= 112.307 Km



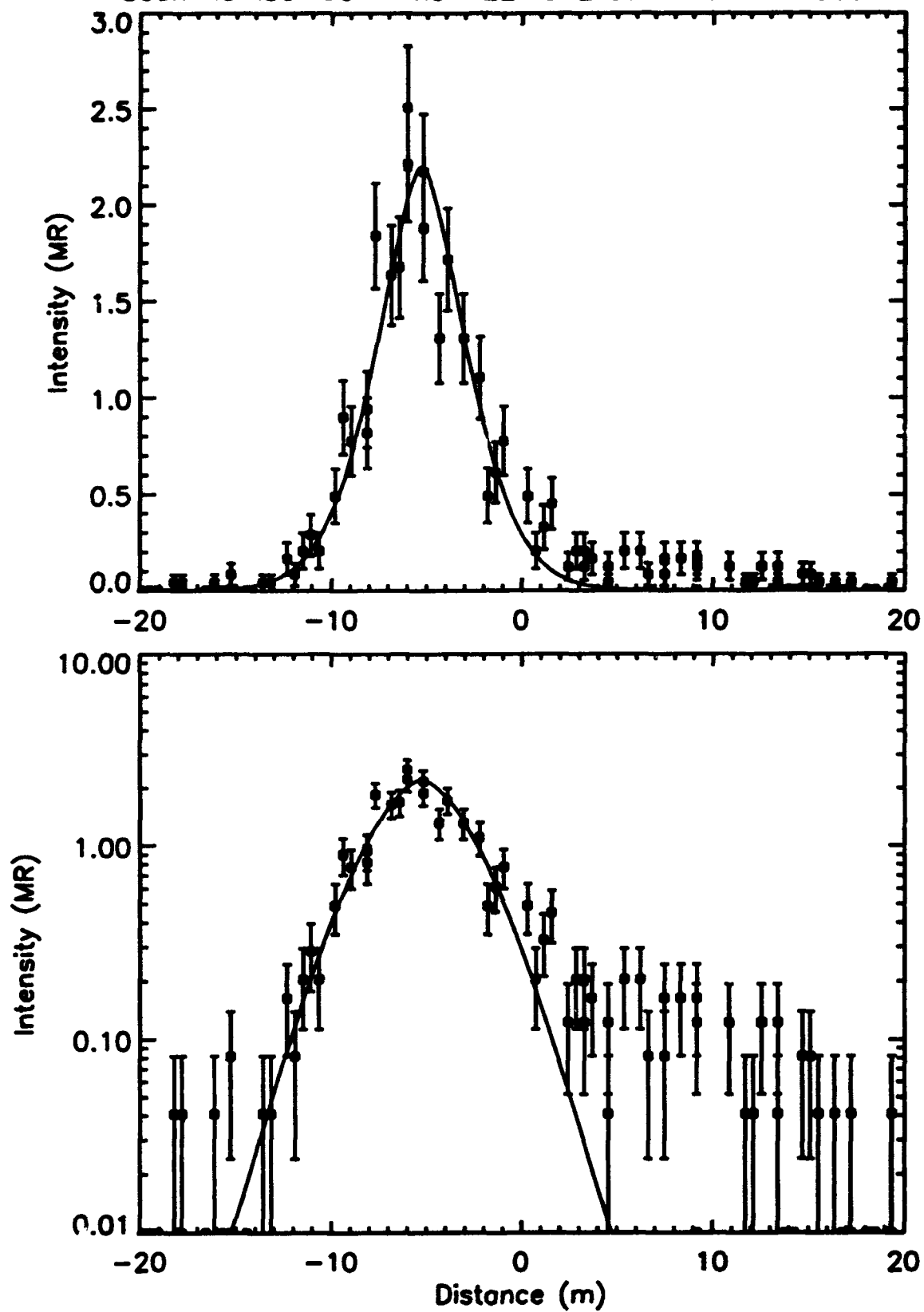
EXCEDE III 3914 A Scanning Photometer
Scan Number 88 Time= 219.990 sec Alt= 112.045 Km



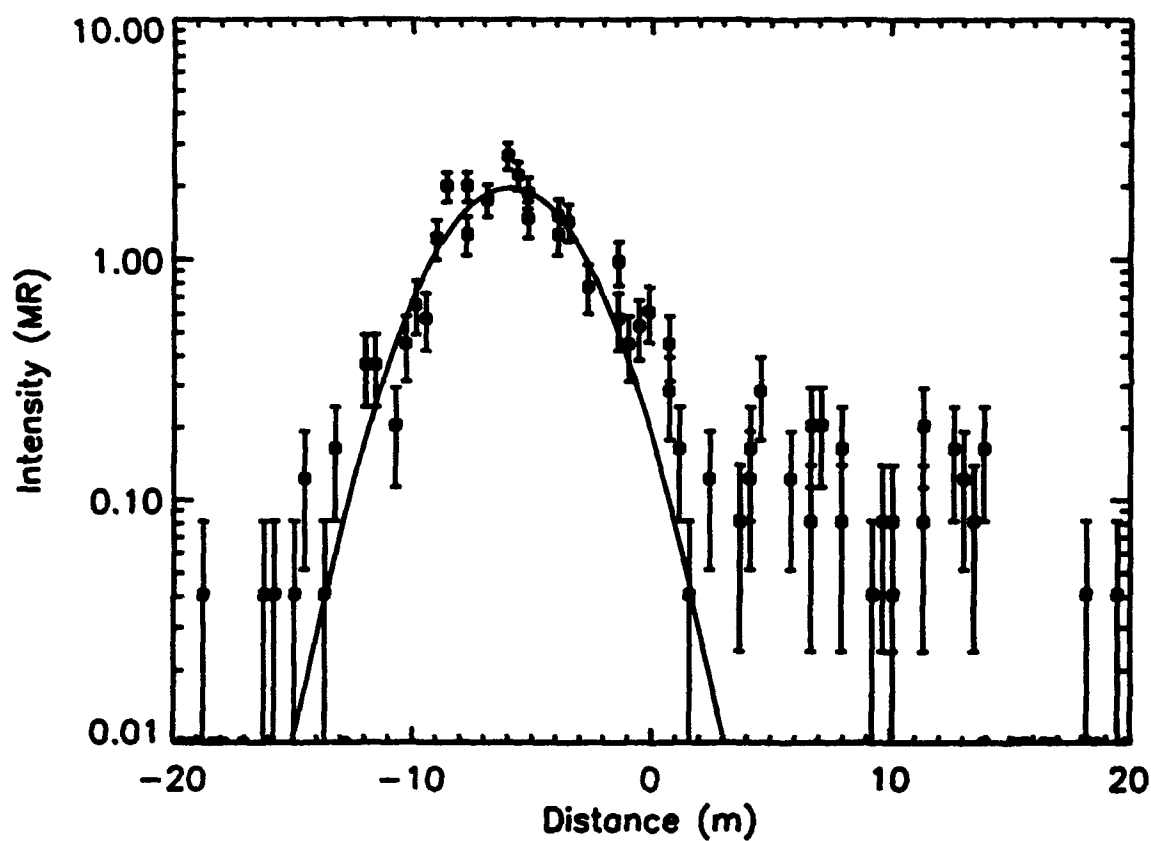
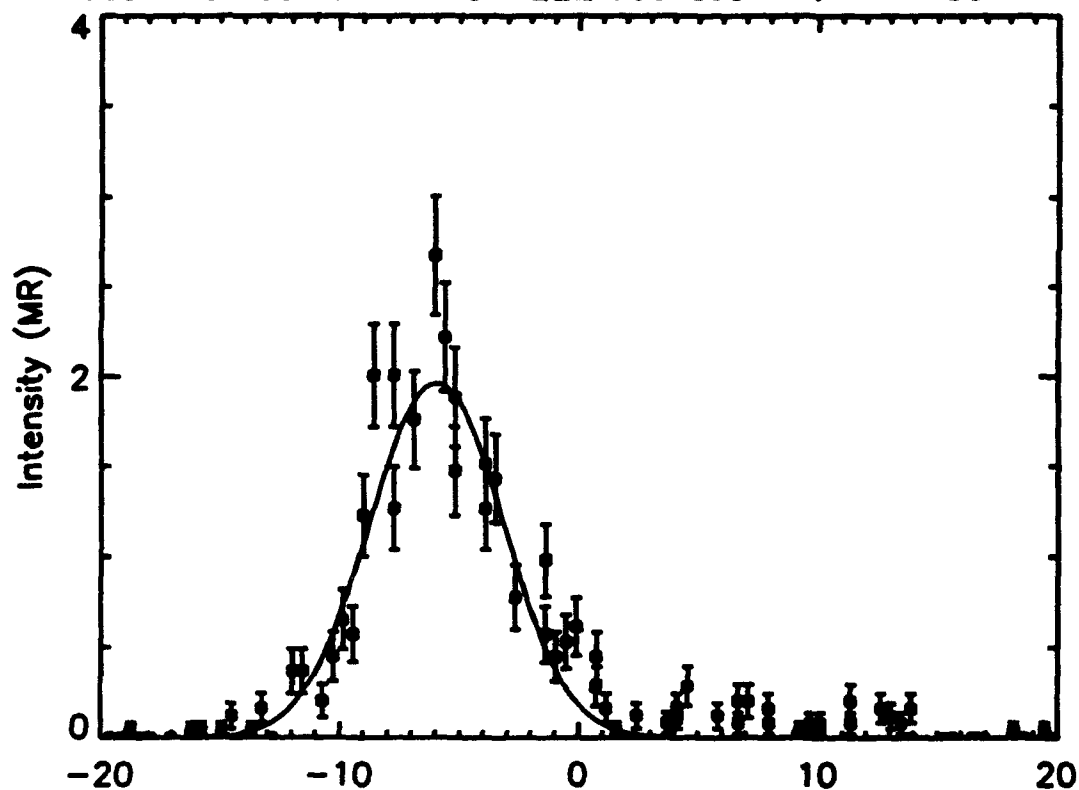
EXCEDE III 3914 A Scanning Photometer
Scan Number 89 Time= 220.653 sec Alt= 111.886 Km



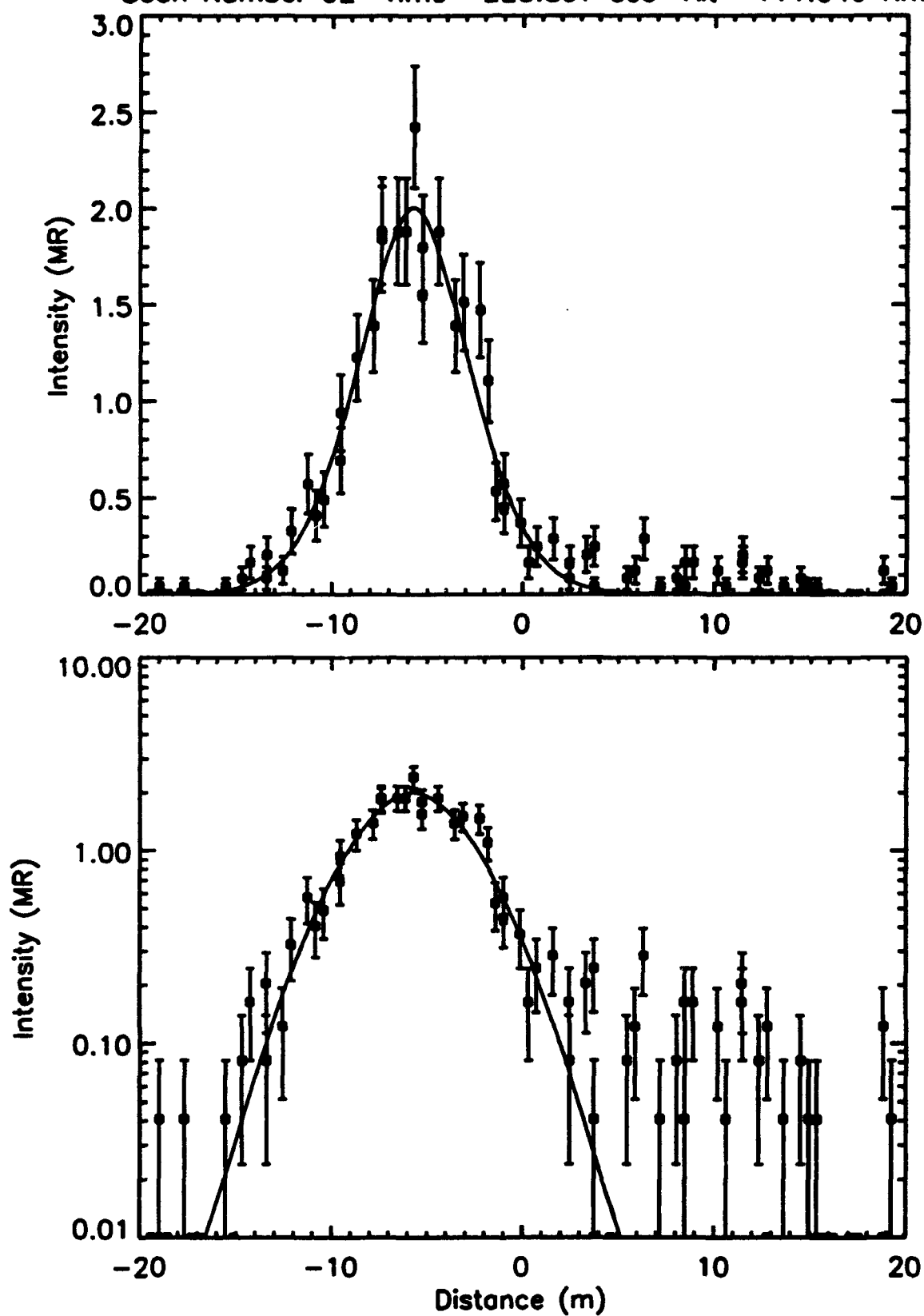
EXCEDE III 3914 A Scanning Photometer
Scan Number 90 Time= 221.942 sec Alt= 111.565 Km



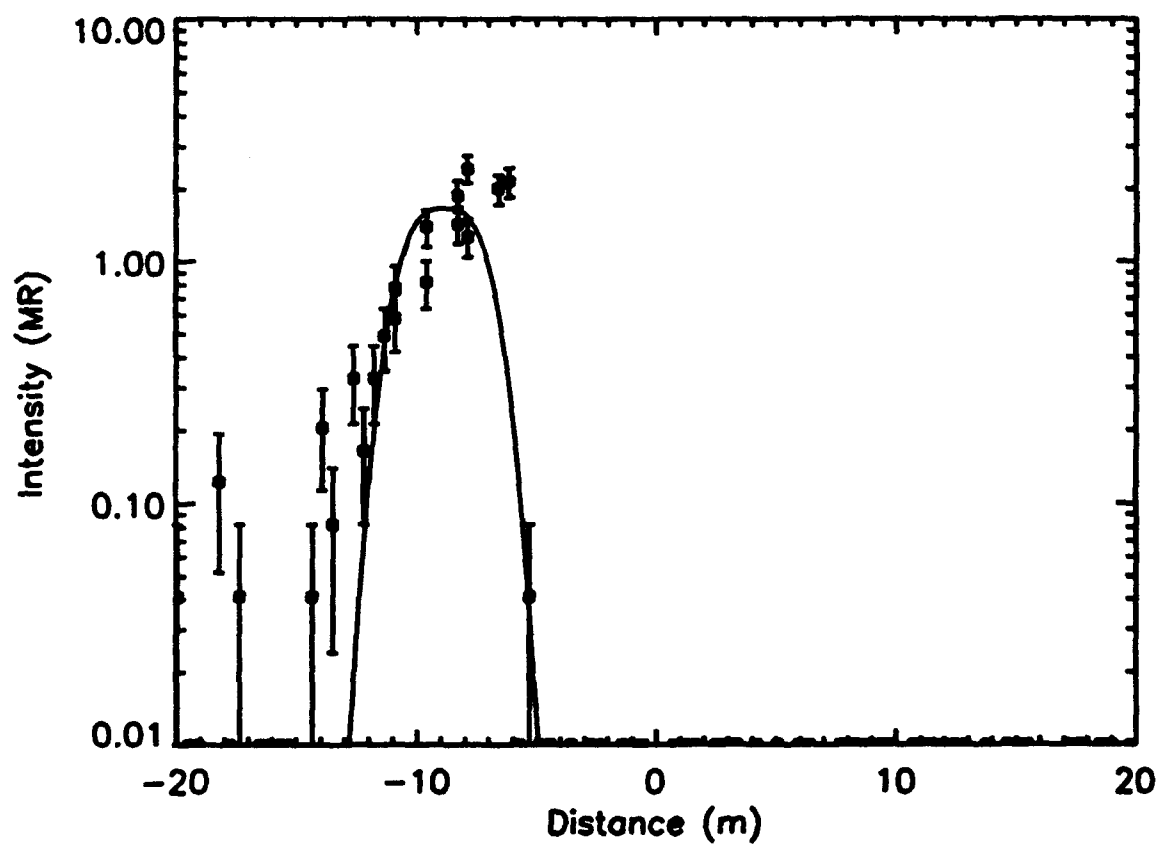
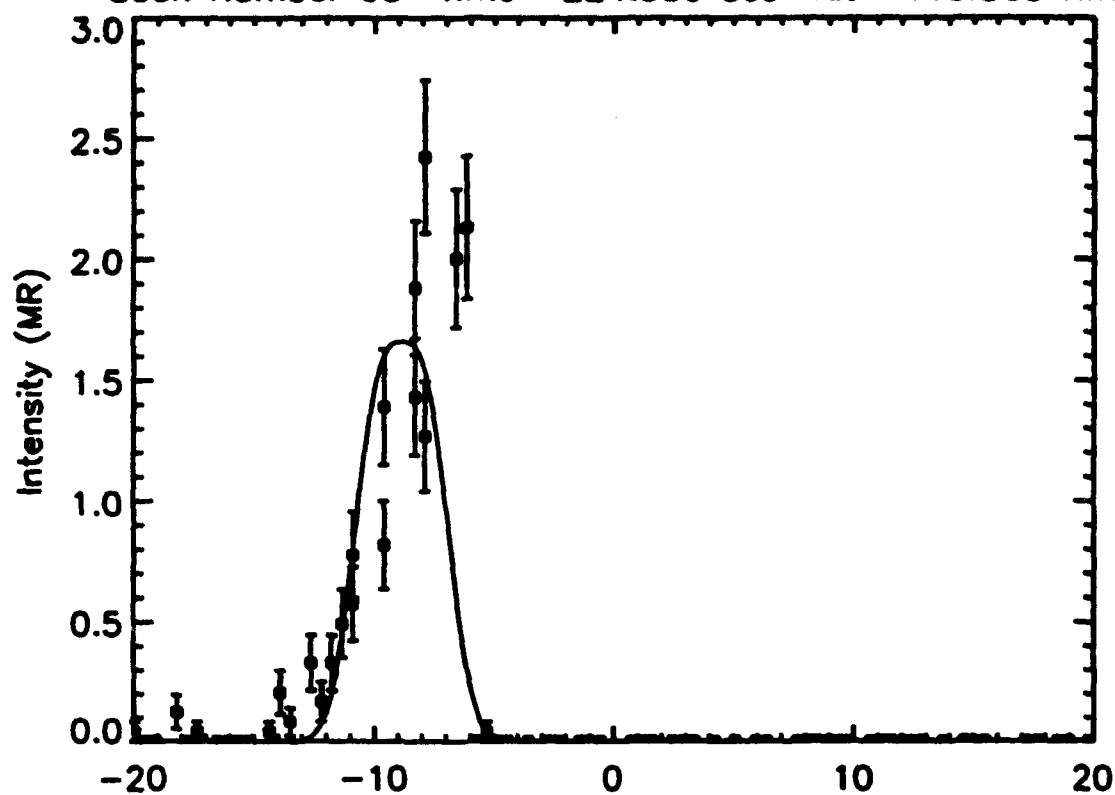
EXCEDE III 3914 A Scanning Photometer
Scan Number 91 Time= 222.605 sec Alt= 111.394 Km



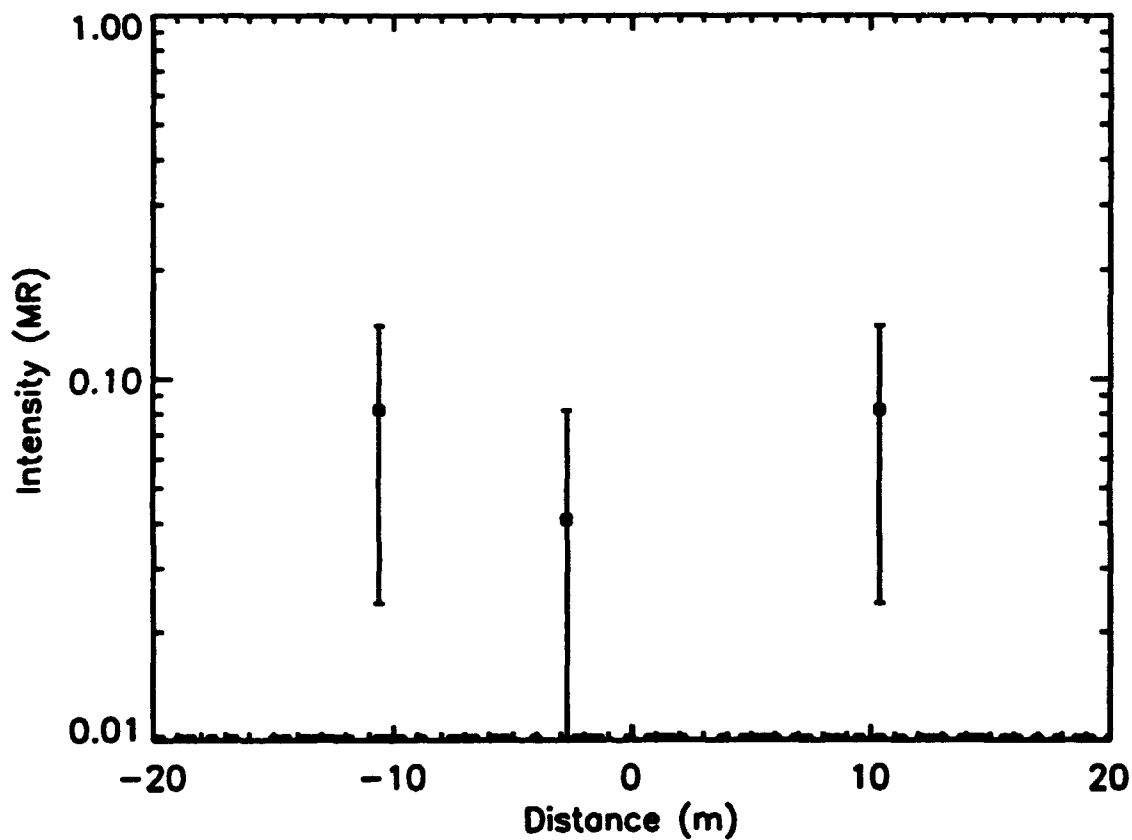
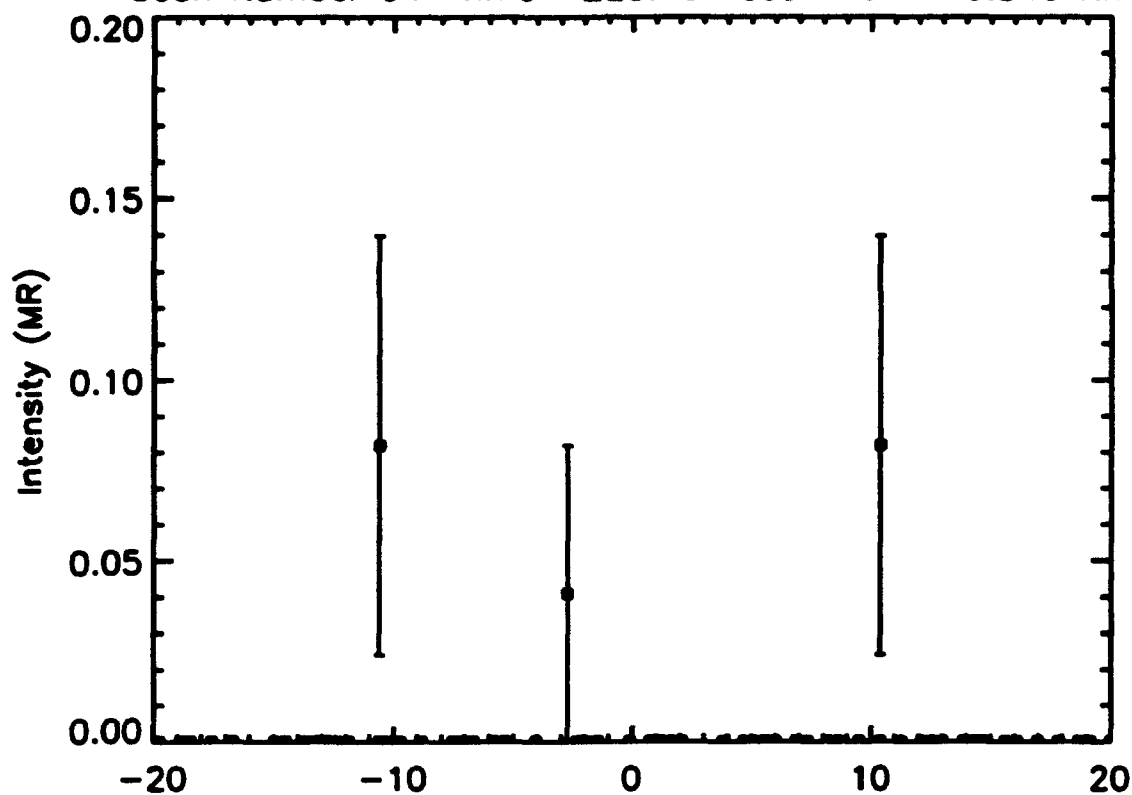
EXCEDE III 3914 A Scanning Photometer
Scan Number 92 Time= 223.897 sec Alt= 111.049 Km



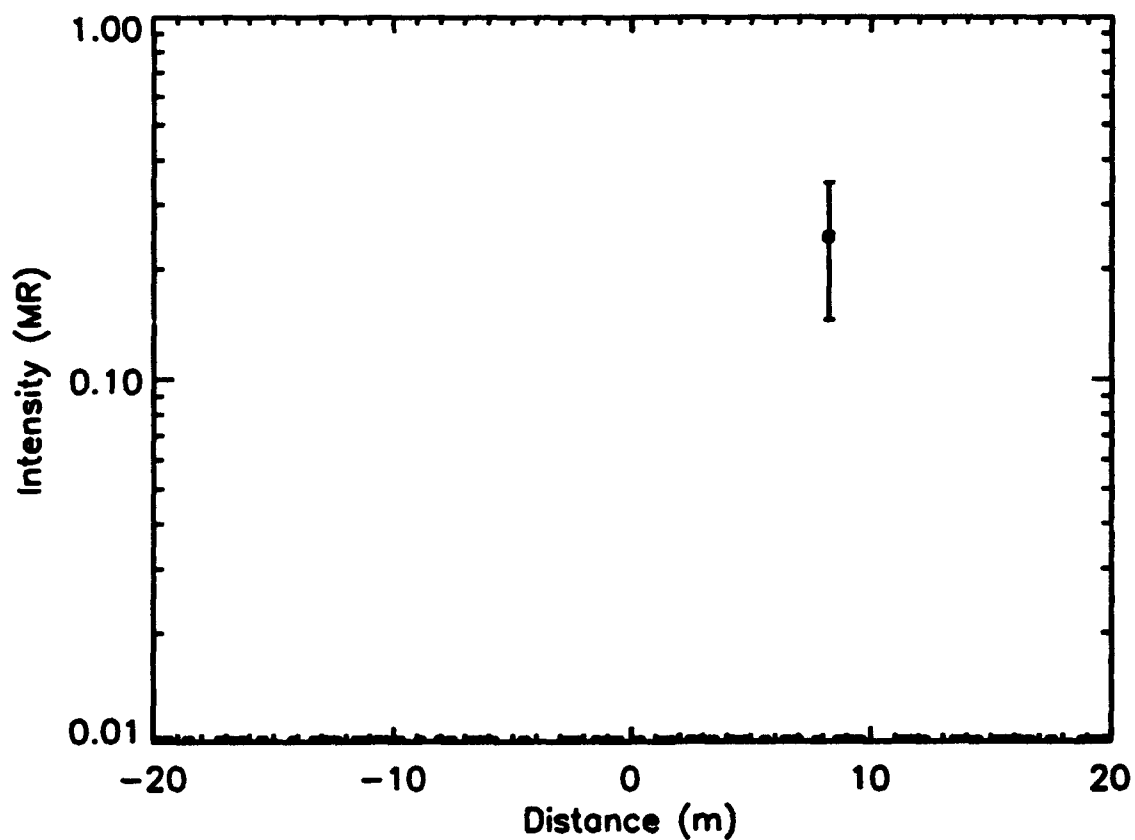
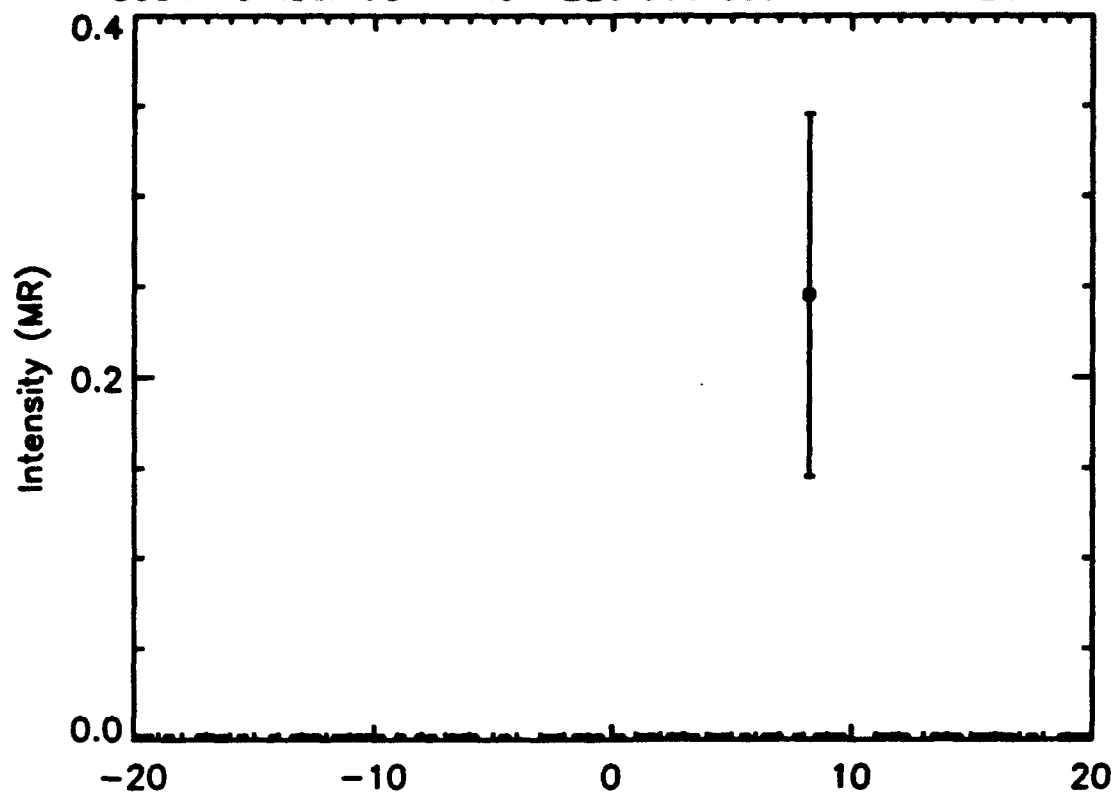
EXCEDE III 3914 A Scanning Photometer
Scan Number 93 Time= 224.550 sec Alt= 110.868 Km



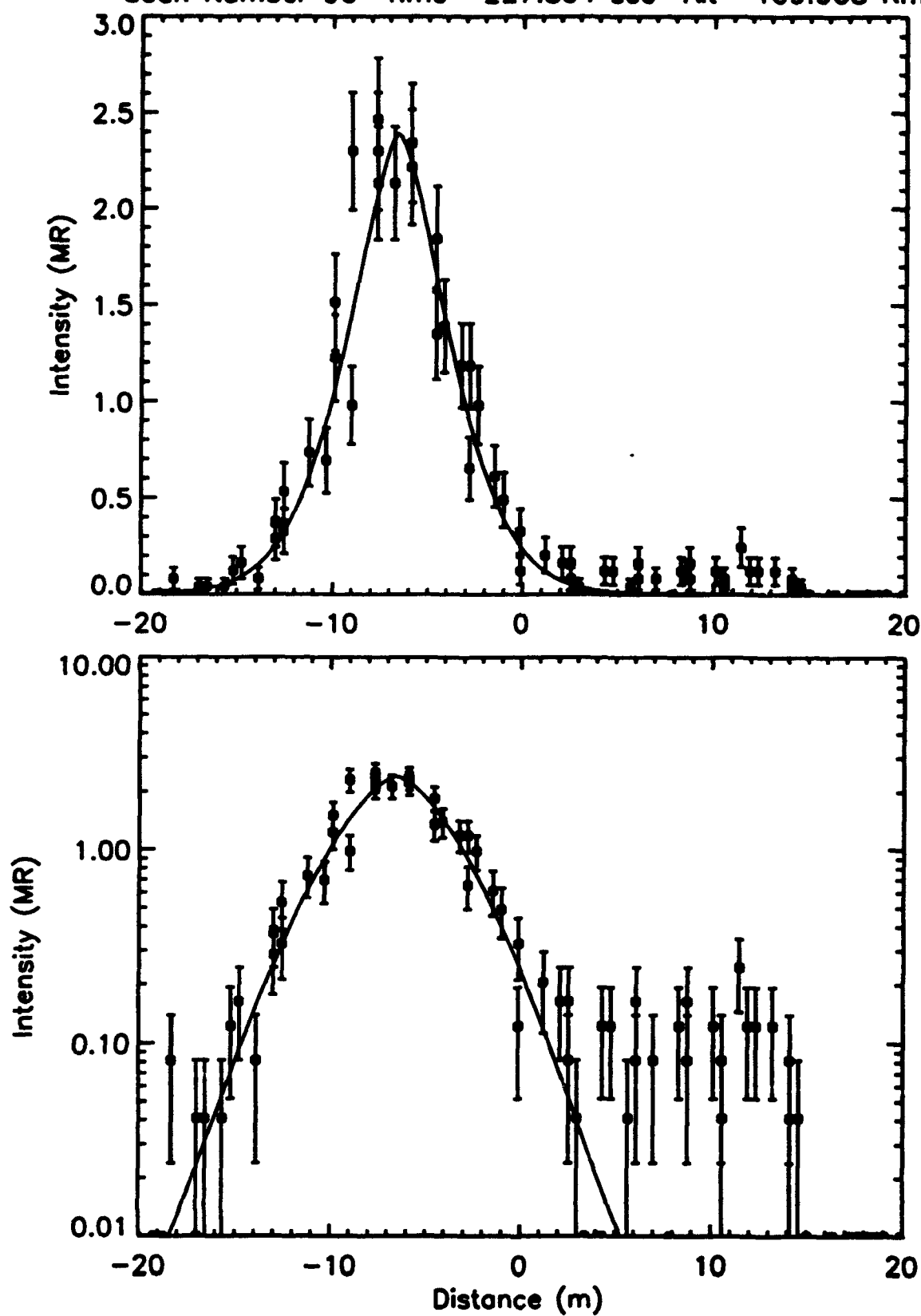
EXCEDE III 3914 A Scanning Photometer
Scan Number 94 Time= 225.701 sec Alt= 110.540 Km



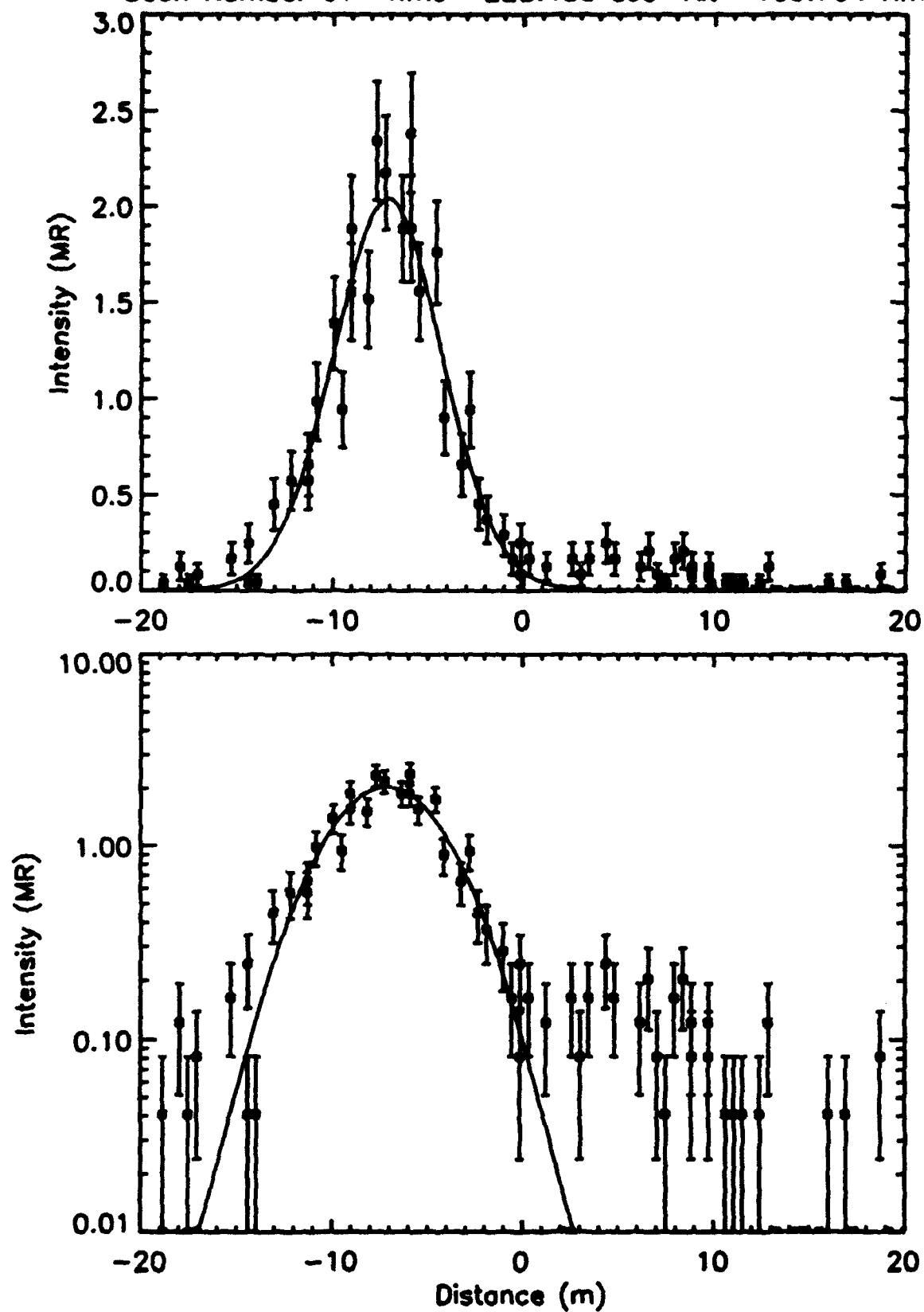
EXCEDE III 3914 A Scanning Photometer
Scan Number 95 Time= 226.660 sec Alt= 110.257 Km



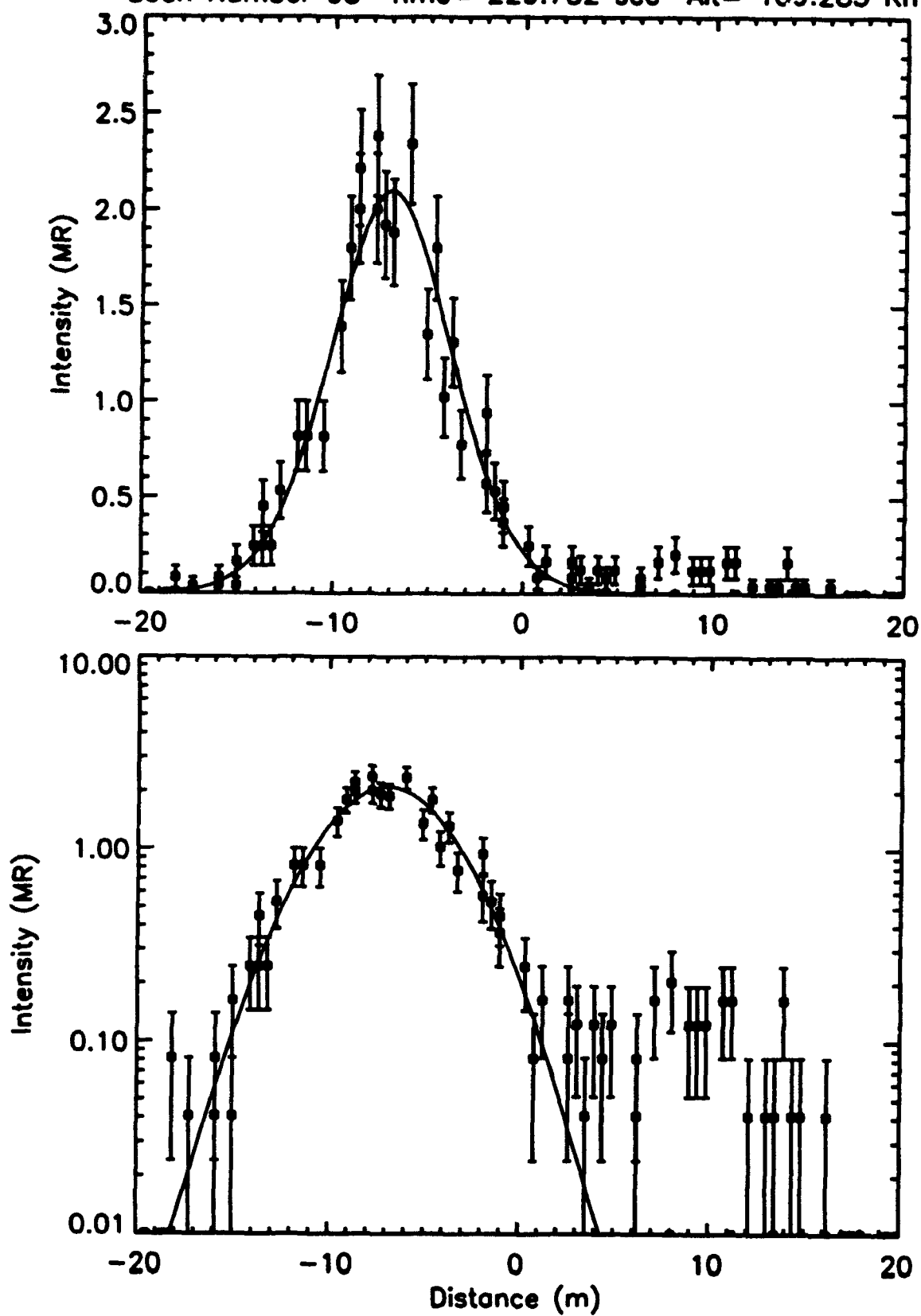
EXCEDE III 3914 A Scanning Photometer
Scan Number 96 Time= 227.804 sec Alt= 109.908 Km



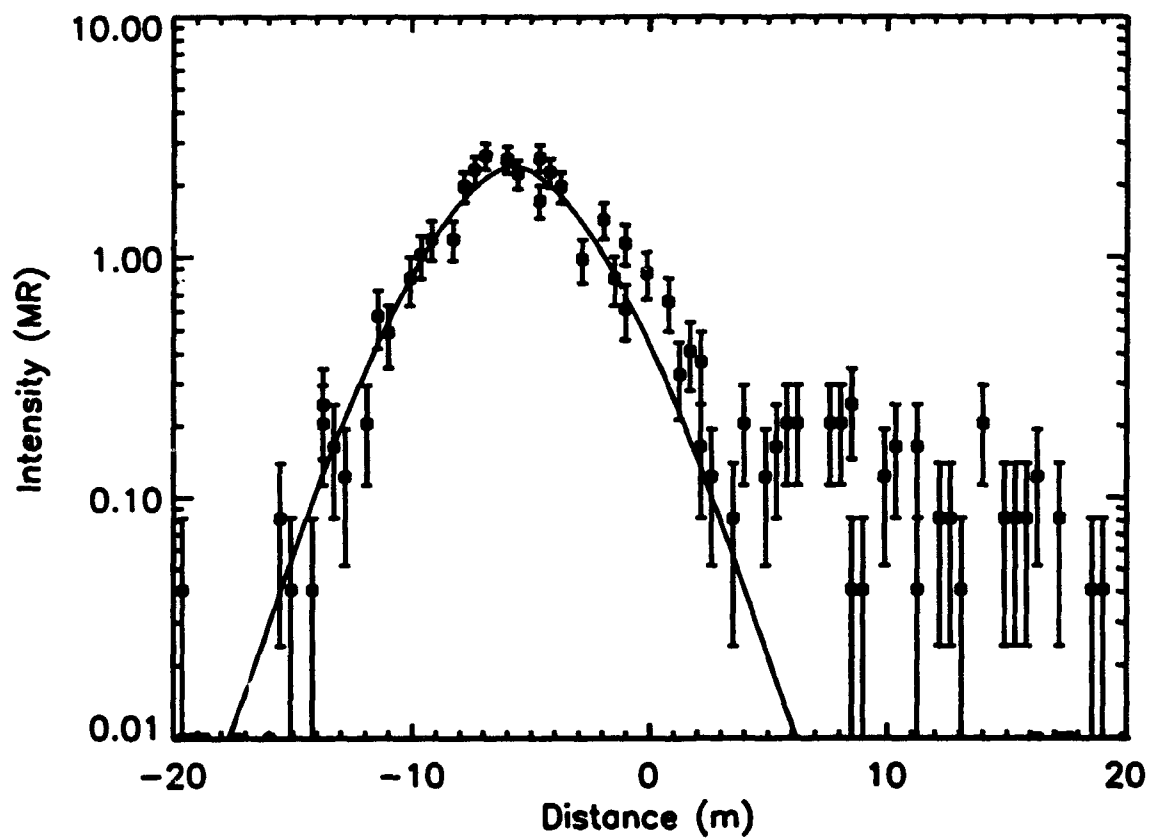
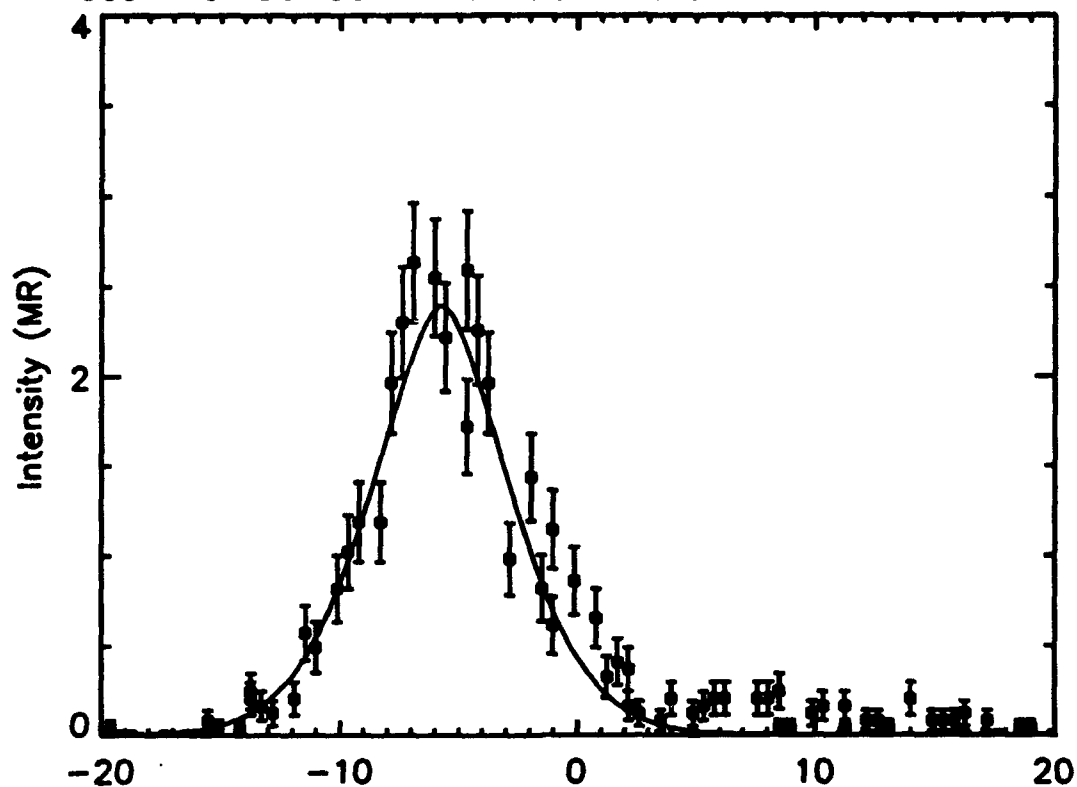
EXCEDE III 3914 A Scanning Photometer
Scan Number 97 Time= 228.455 sec Alt= 109.704 Km



EXCEDE III 3914 A Scanning Photometer
Scan Number 98 Time= 229.752 sec Alt= 109.285 Km

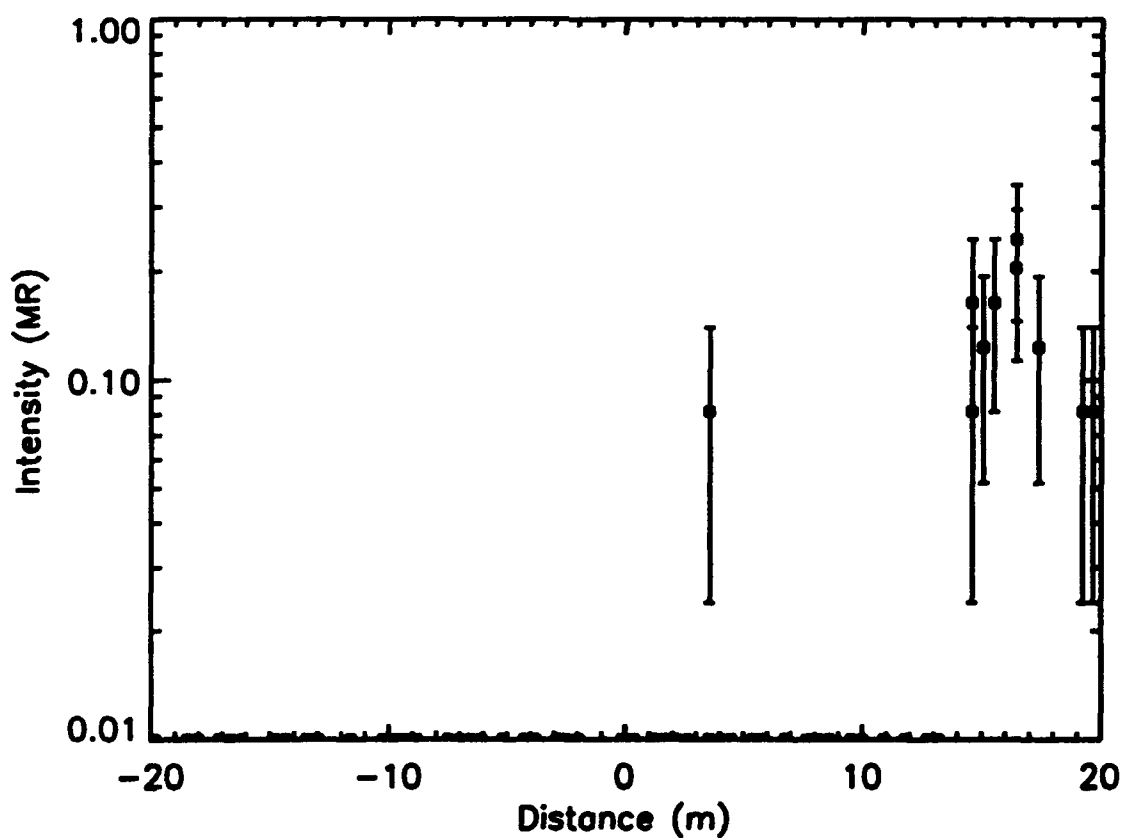
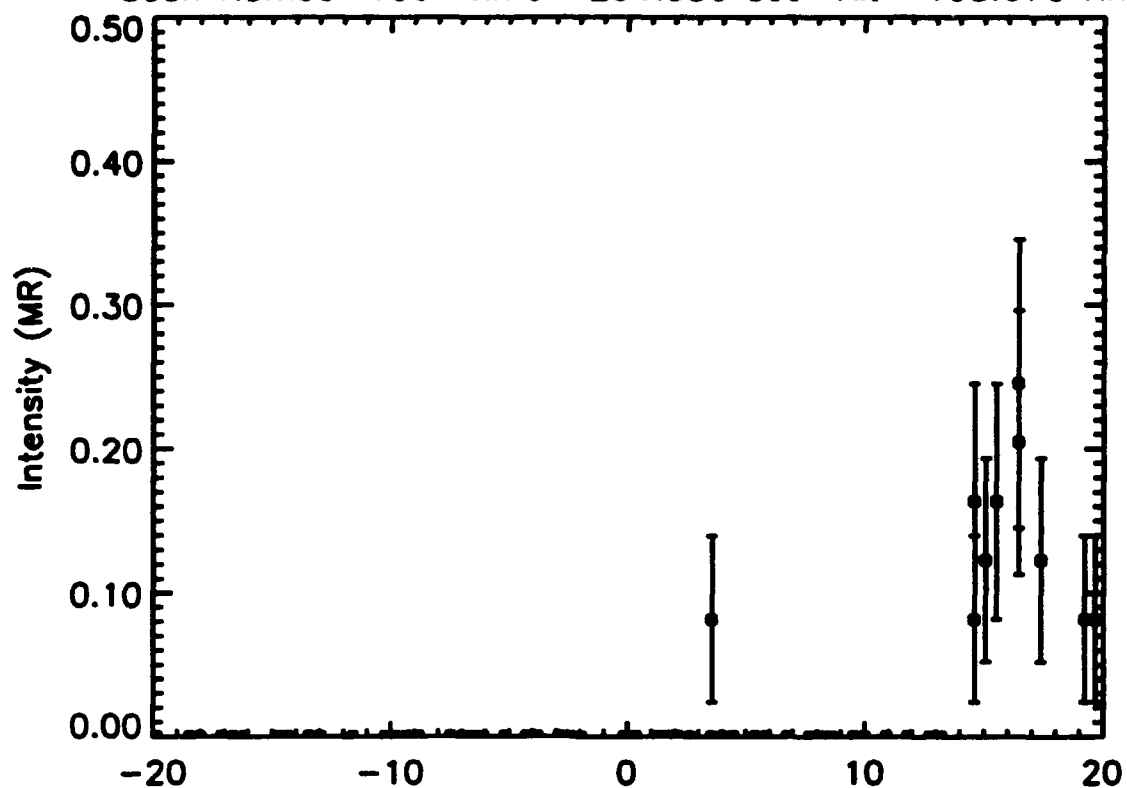


EXCEDE III 3914 A Scanning Photometer
Scan Number 99 Time= 230.413 sec Alt= 109.066 Km

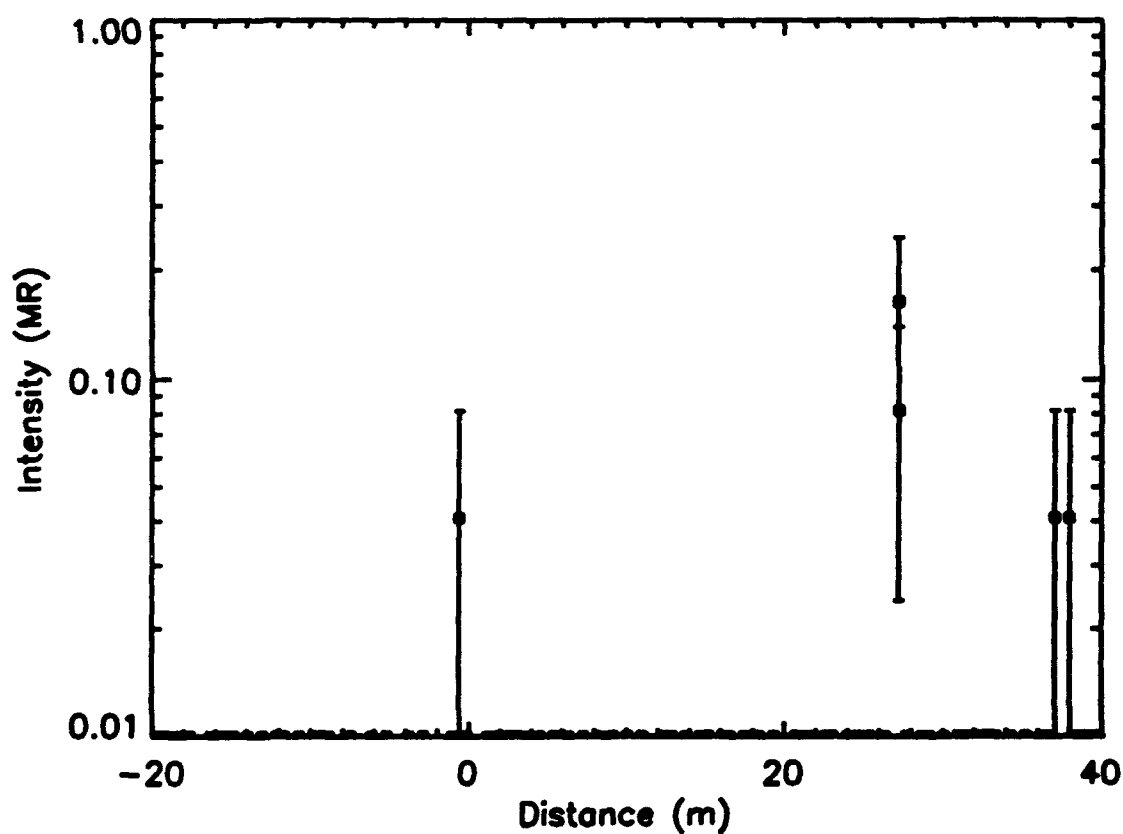
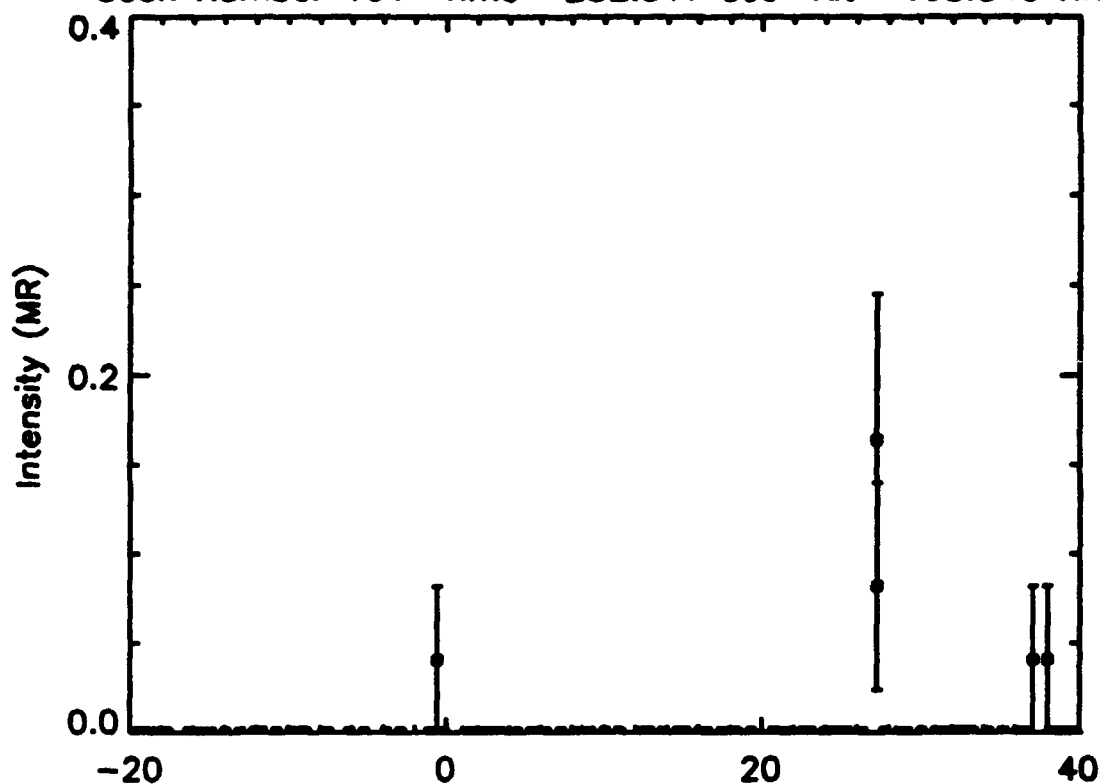


EXCEDE III 3914 A Scanning Photometer

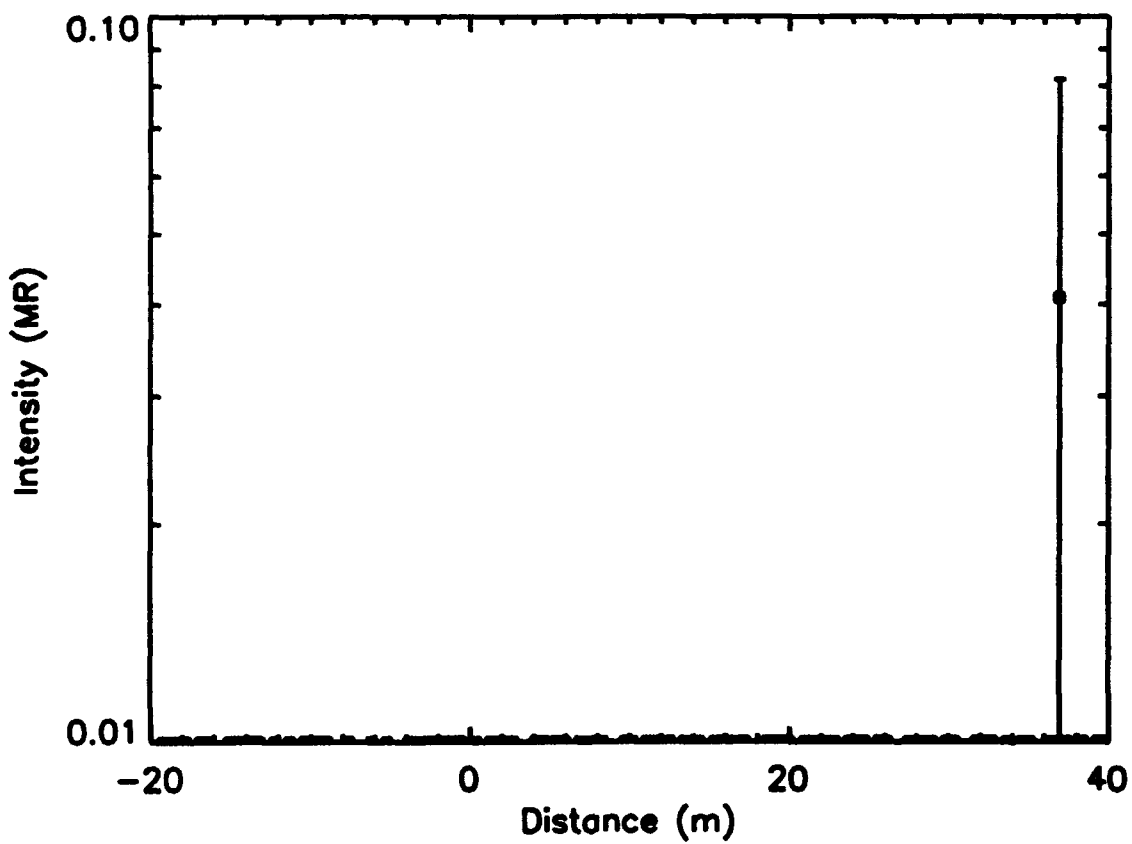
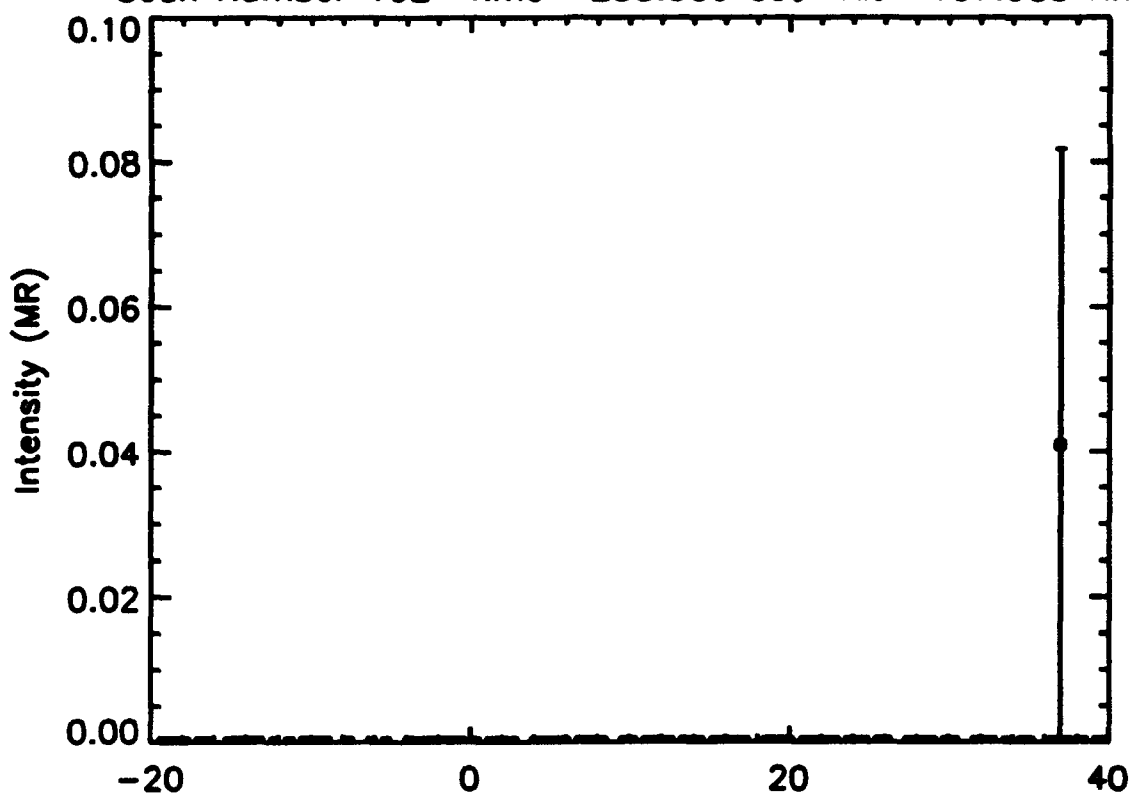
Scan Number 100 Time= 231.556 sec Alt= 108.676 Km



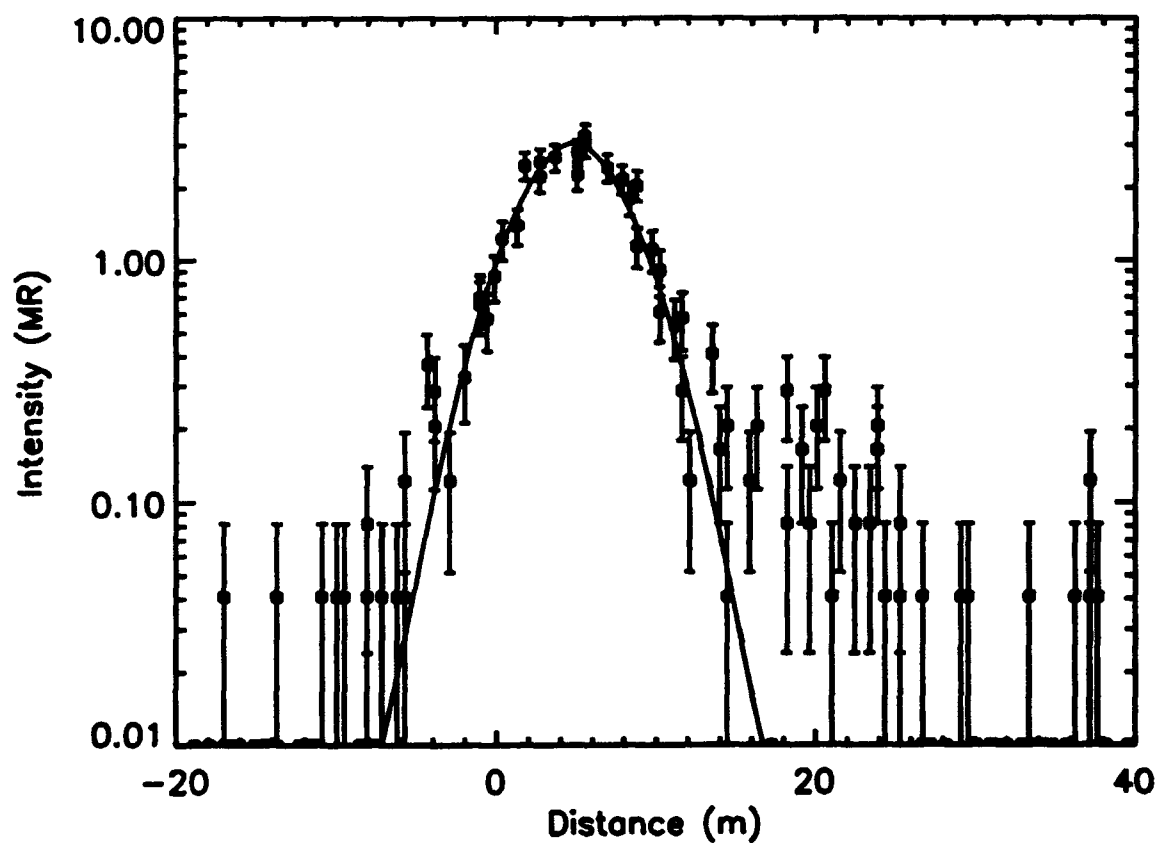
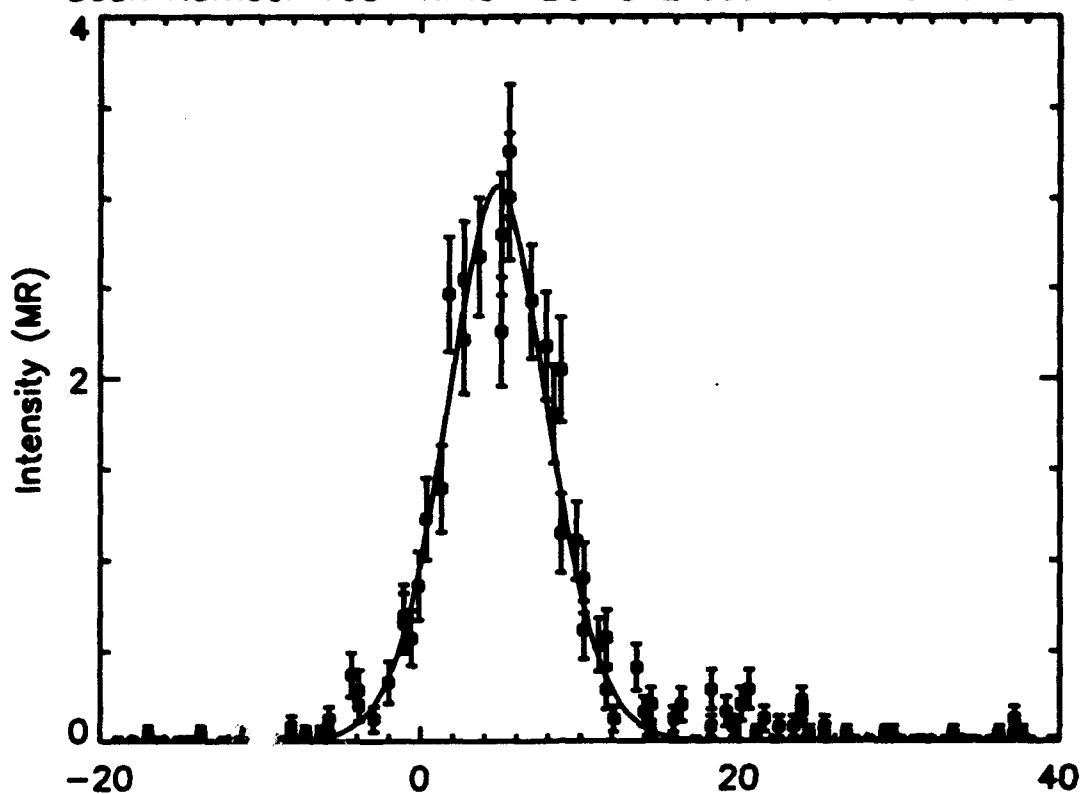
EXCEDE III 3914 A Scanning Photometer
Scan Number 101 Time= 232.517 sec Alt= 108.340 Km



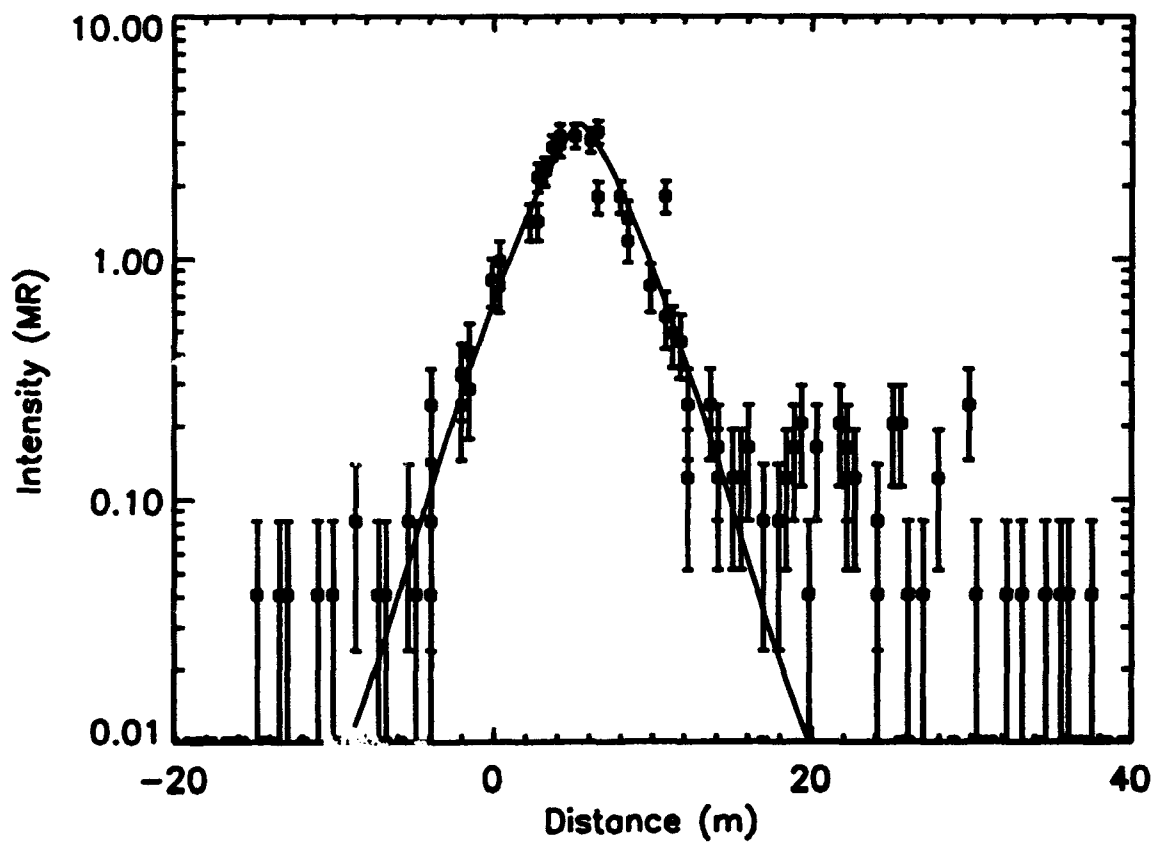
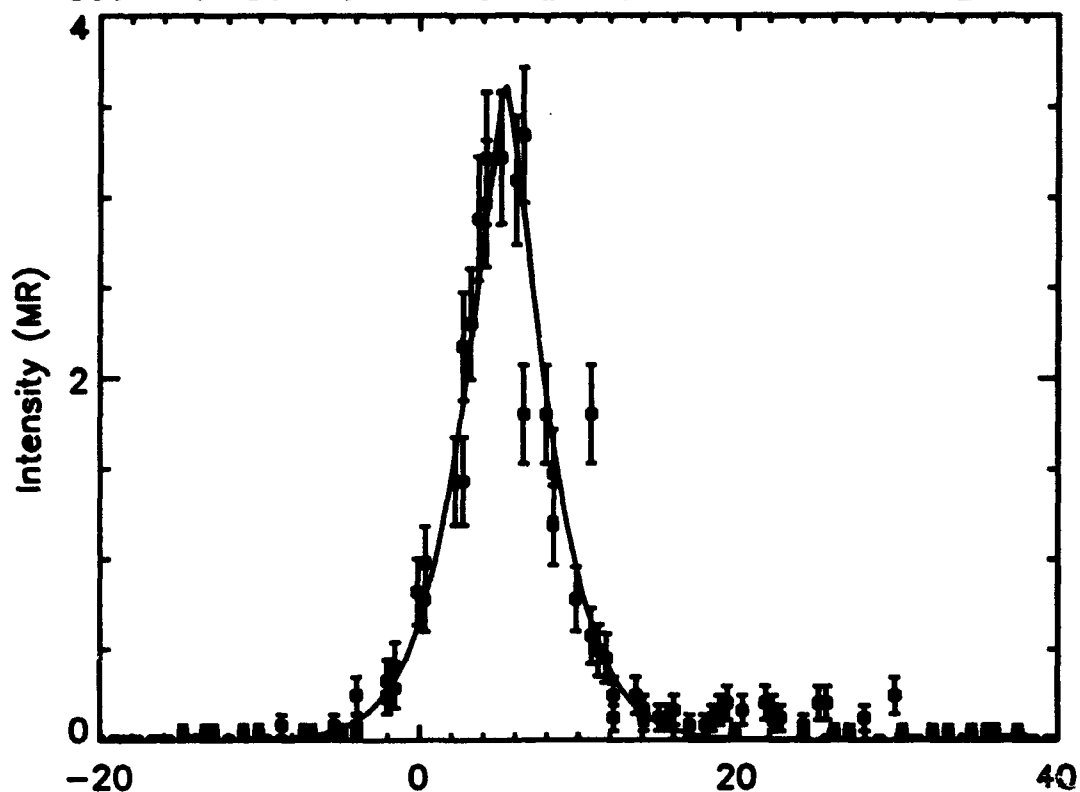
EXCEDE III 3914 A Scanning Photometer
Scan Number 102 Time= 233.509 sec Alt= 107.983 Km



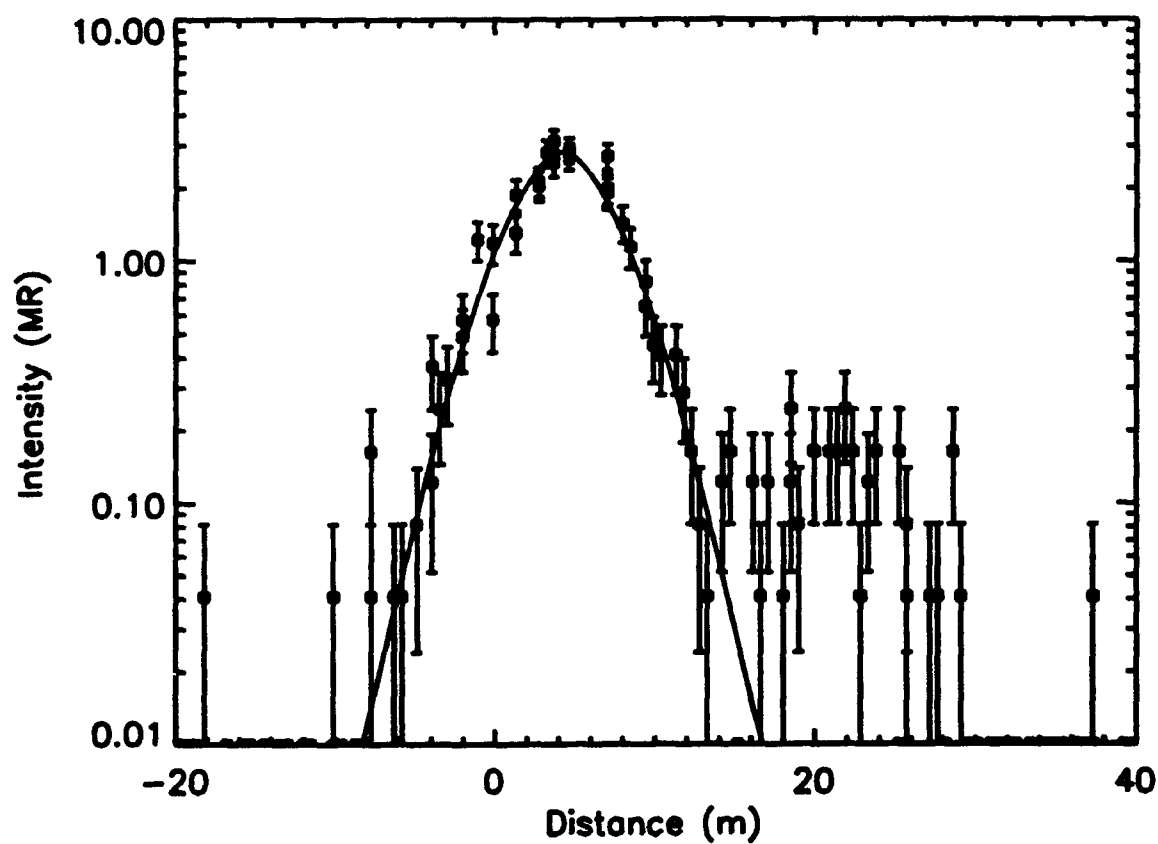
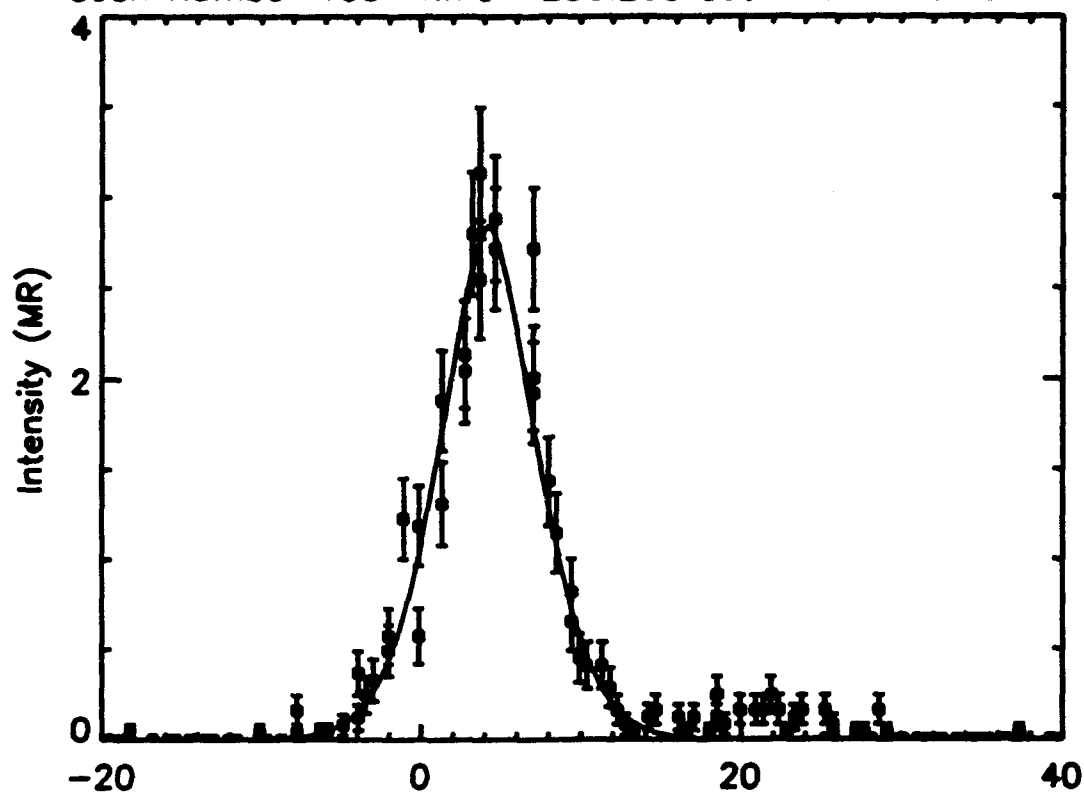
EXCEDE III 3914 A Scanning Photometer
Scan Number 103 Time= 234.342 sec Alt= 107.676 Km



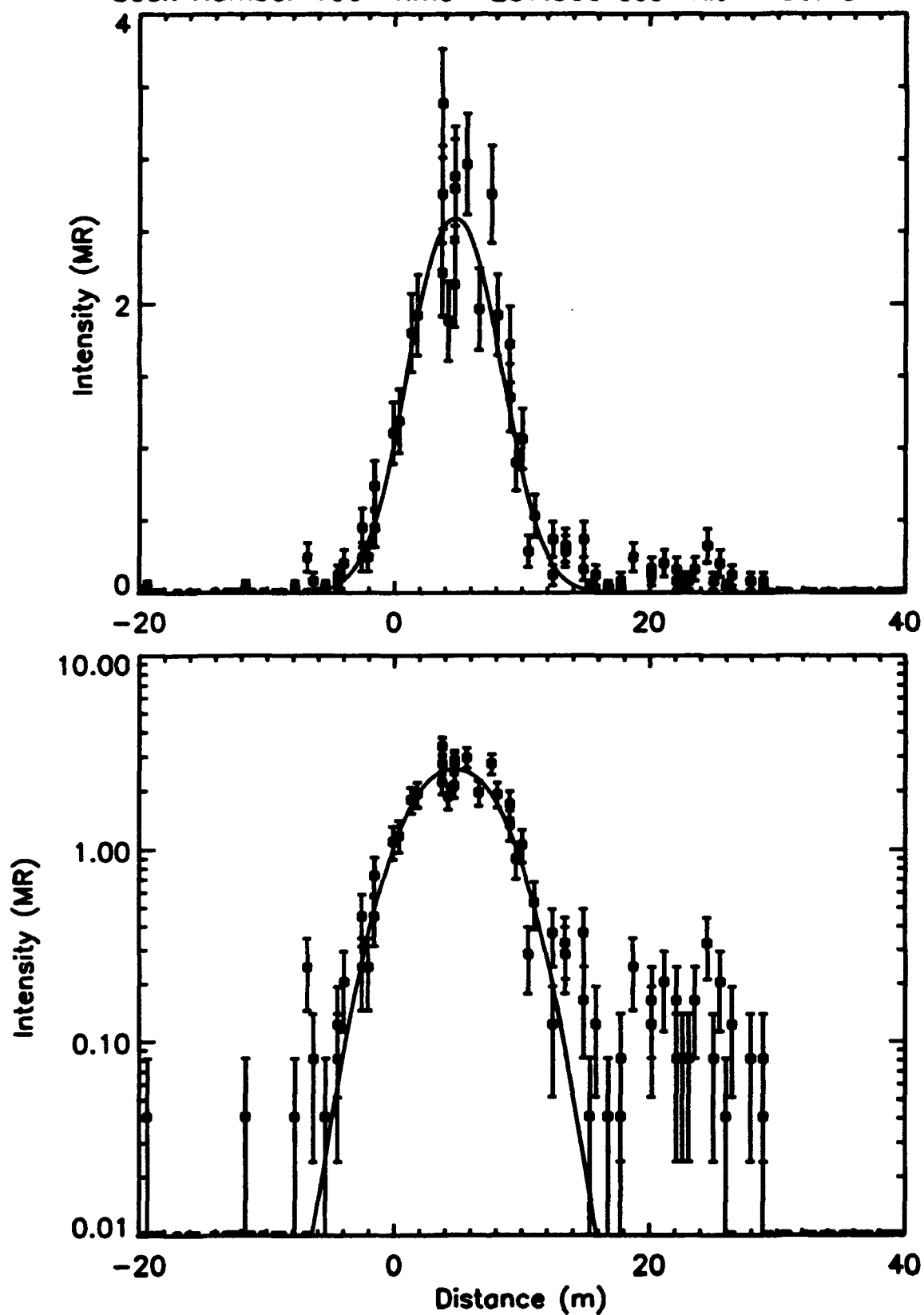
EXCEDE III 3914 A Scanning Photometer
Scan Number 104 Time= 235.578 sec Alt= 107.208 Km



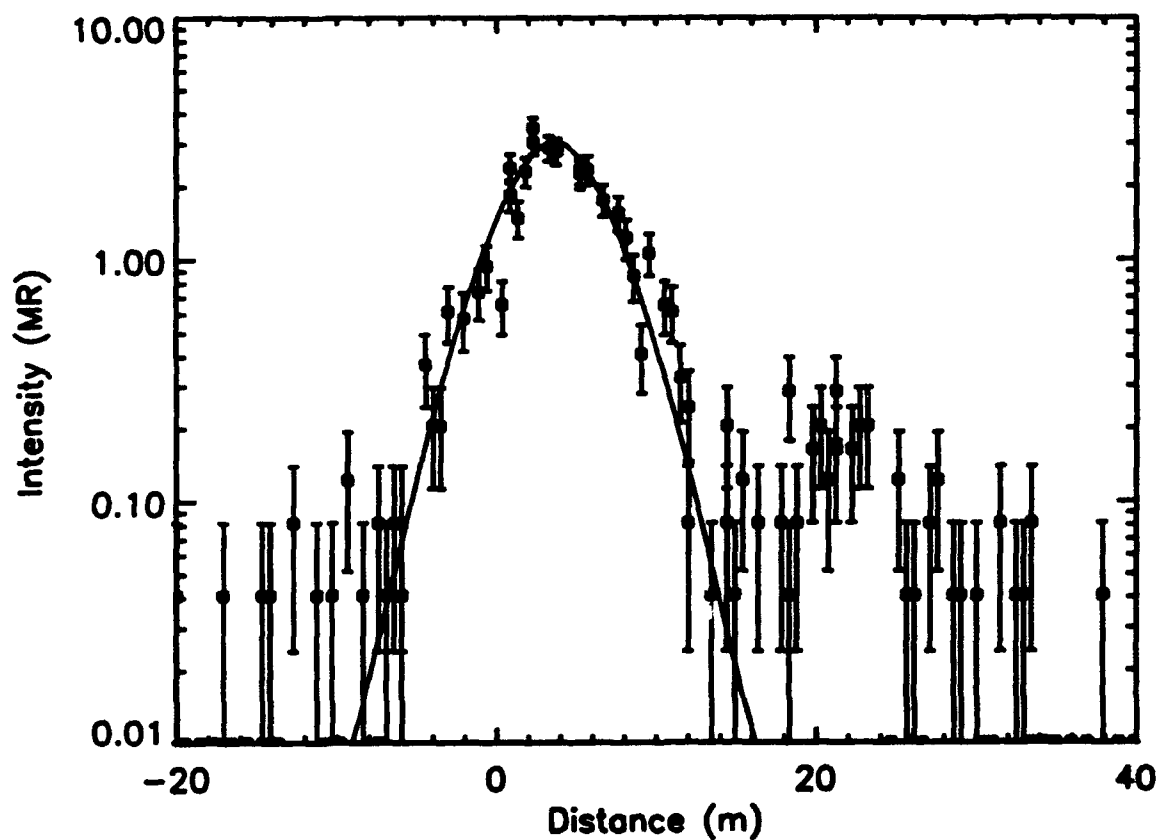
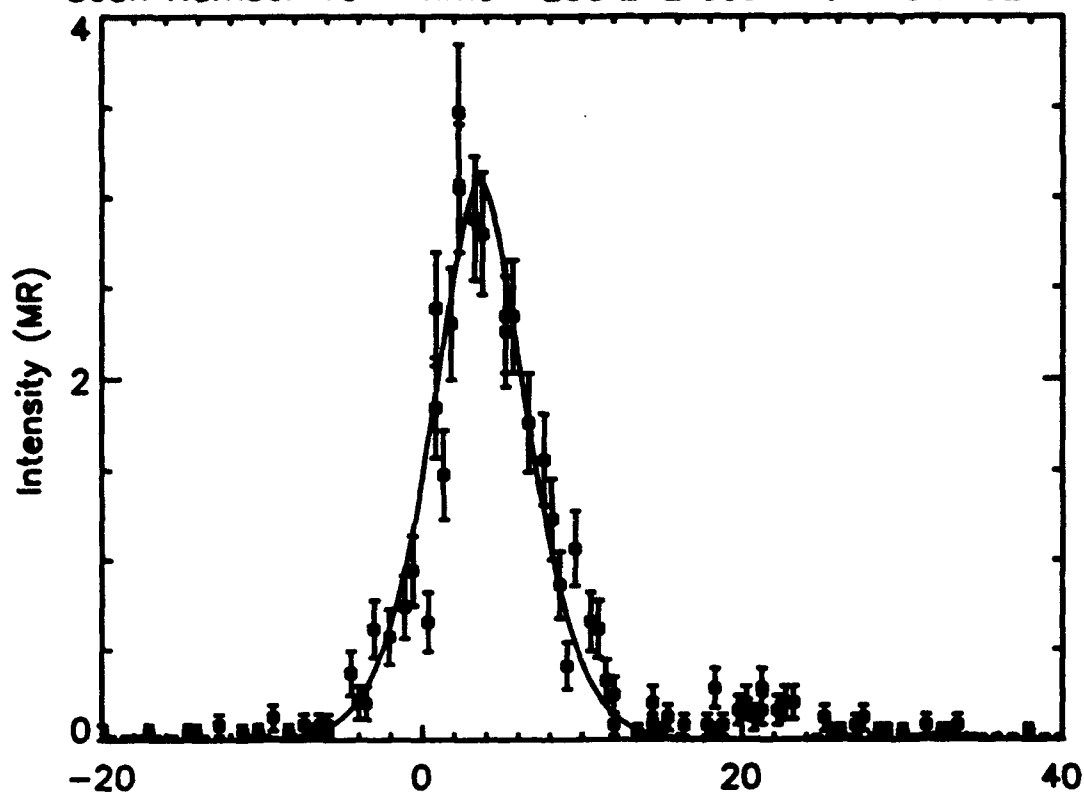
EXCEDE III 3914 A Scanning Photometer
Scan Number 105 Time= 236.293 sec Alt= 106.931 Km



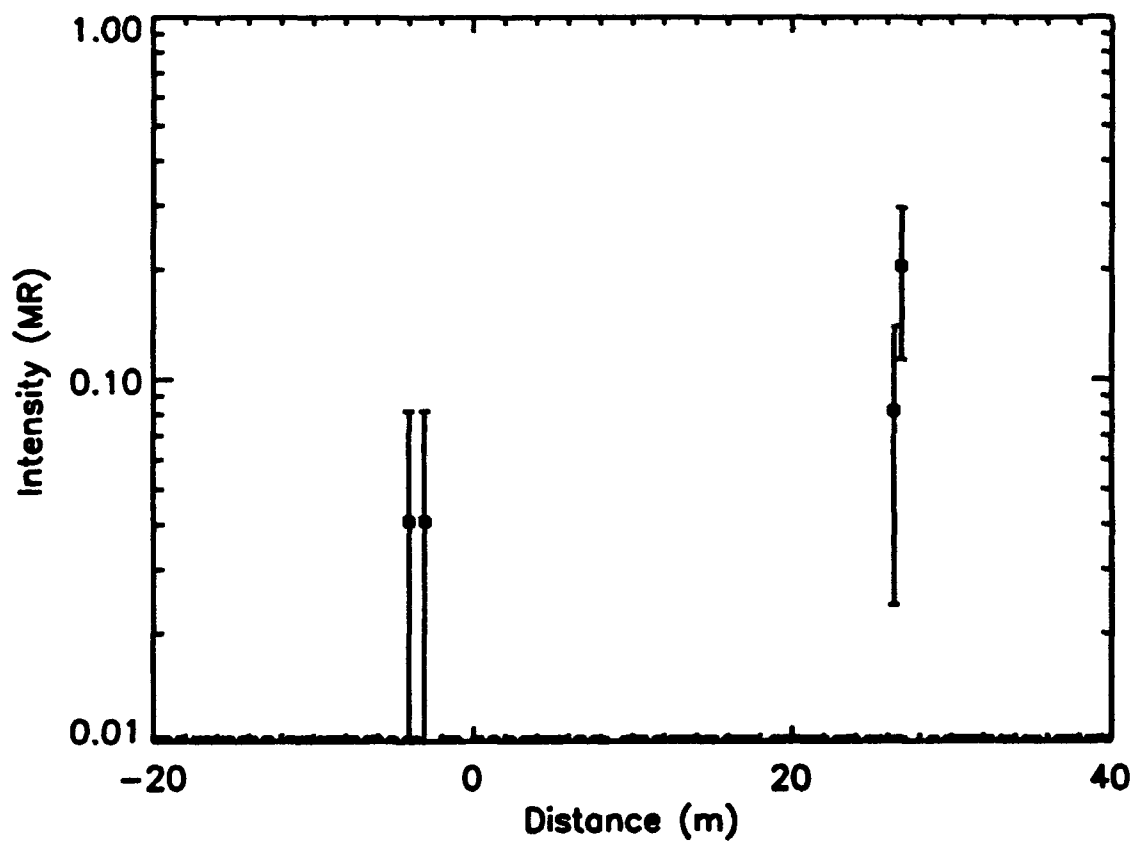
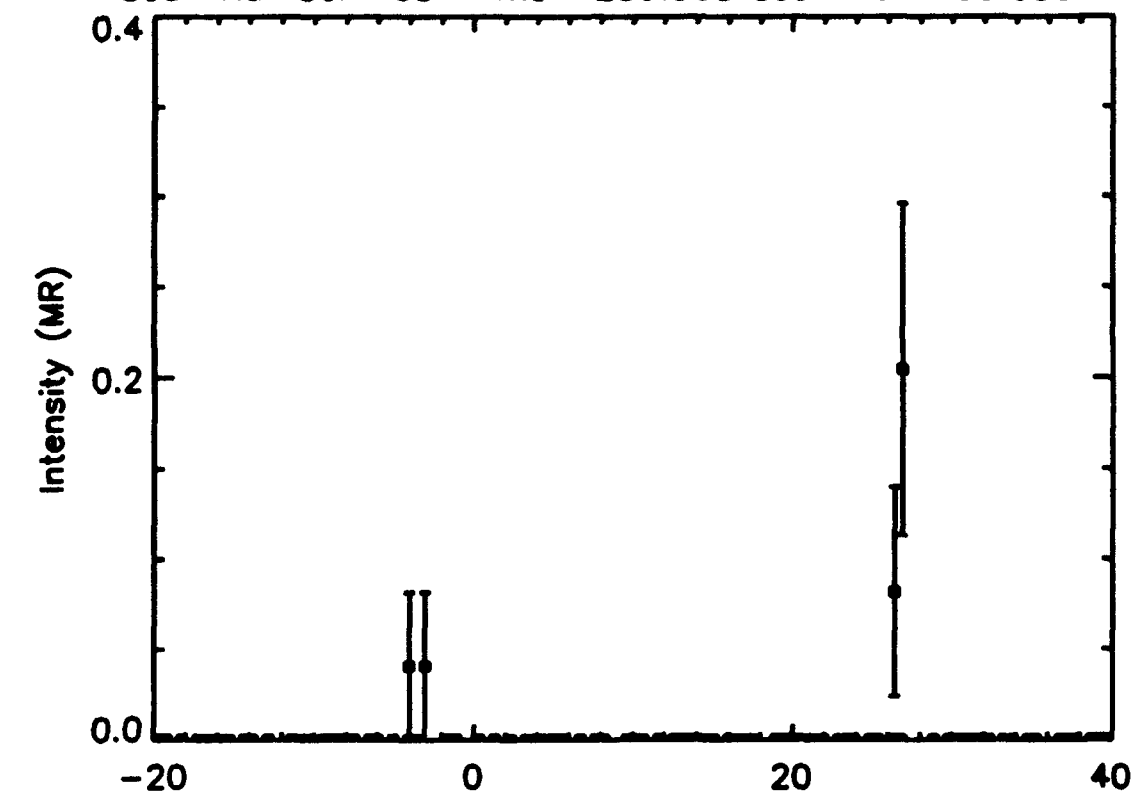
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Scan Number 106 Time= 237.539 sec Alt= 106.437 Km



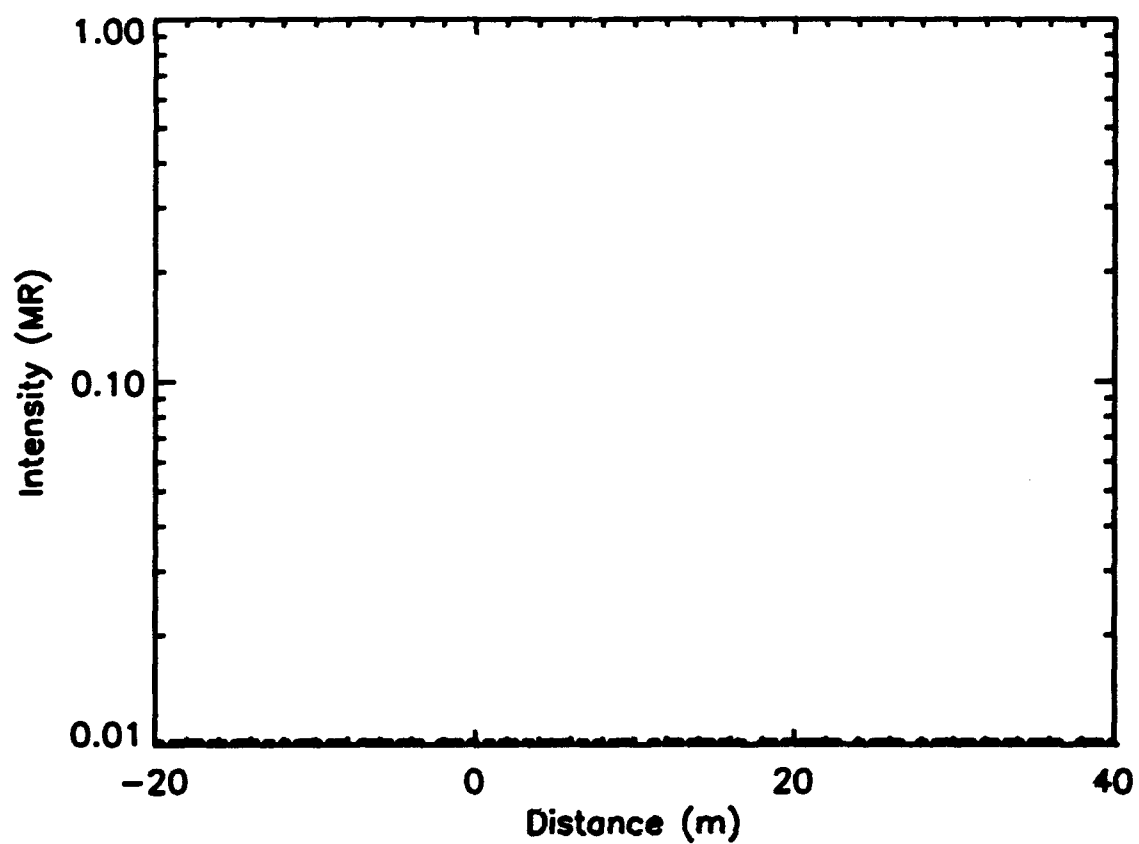
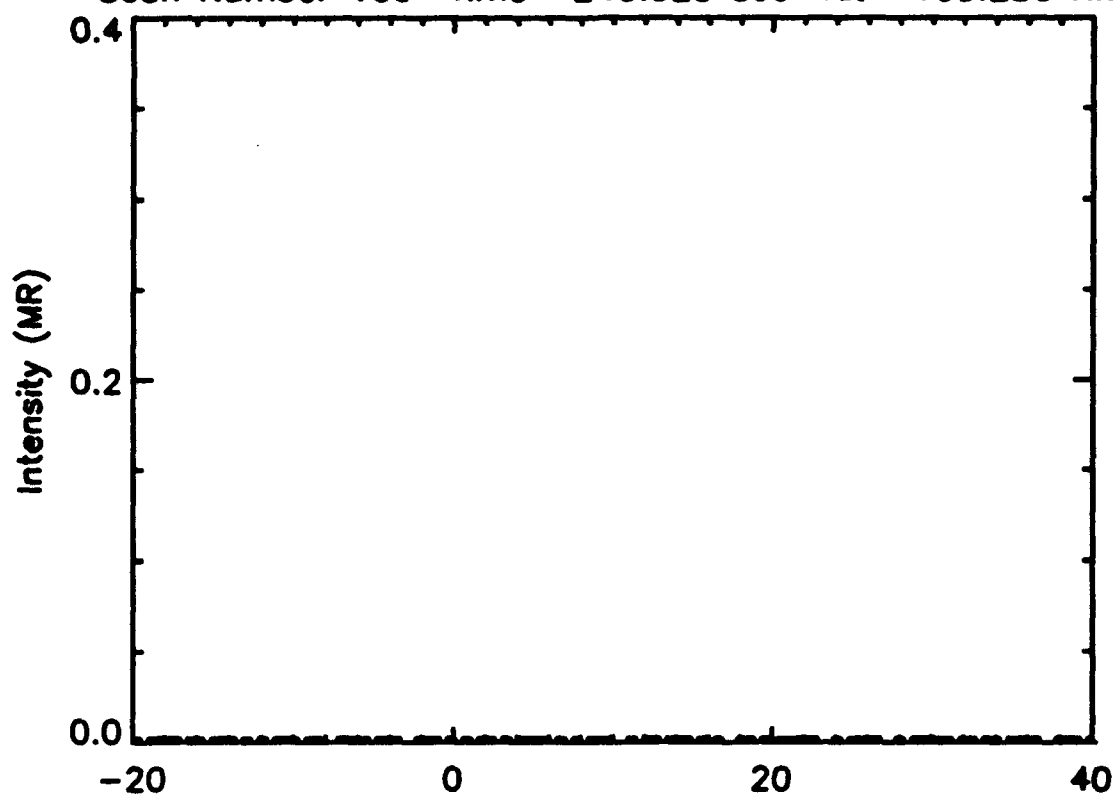
EXCEDE III 3914 A Scanning Photometer
Scan Number 107 Time= 238.242 sec Alt= 106.152 Km



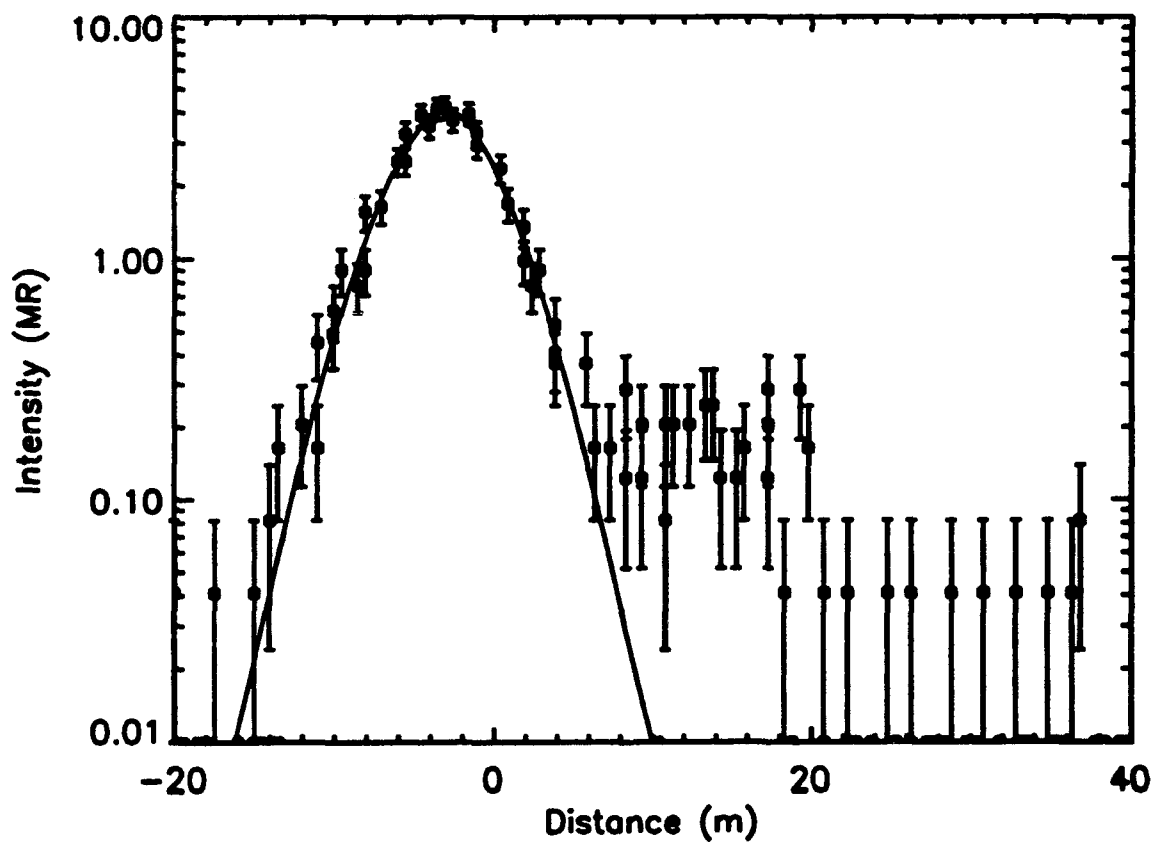
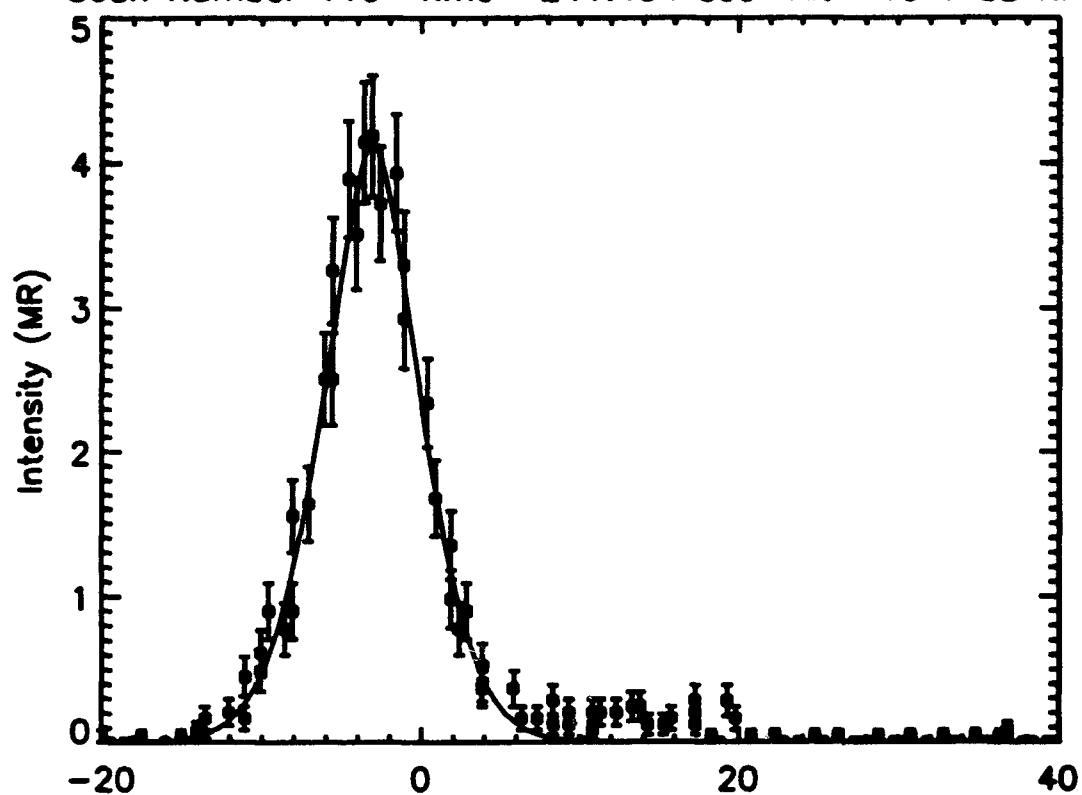
EXCEDE III 3914 A Scanning Photometer
Scan Number 108 Time= 239.365 sec Alt= 105.686 Km



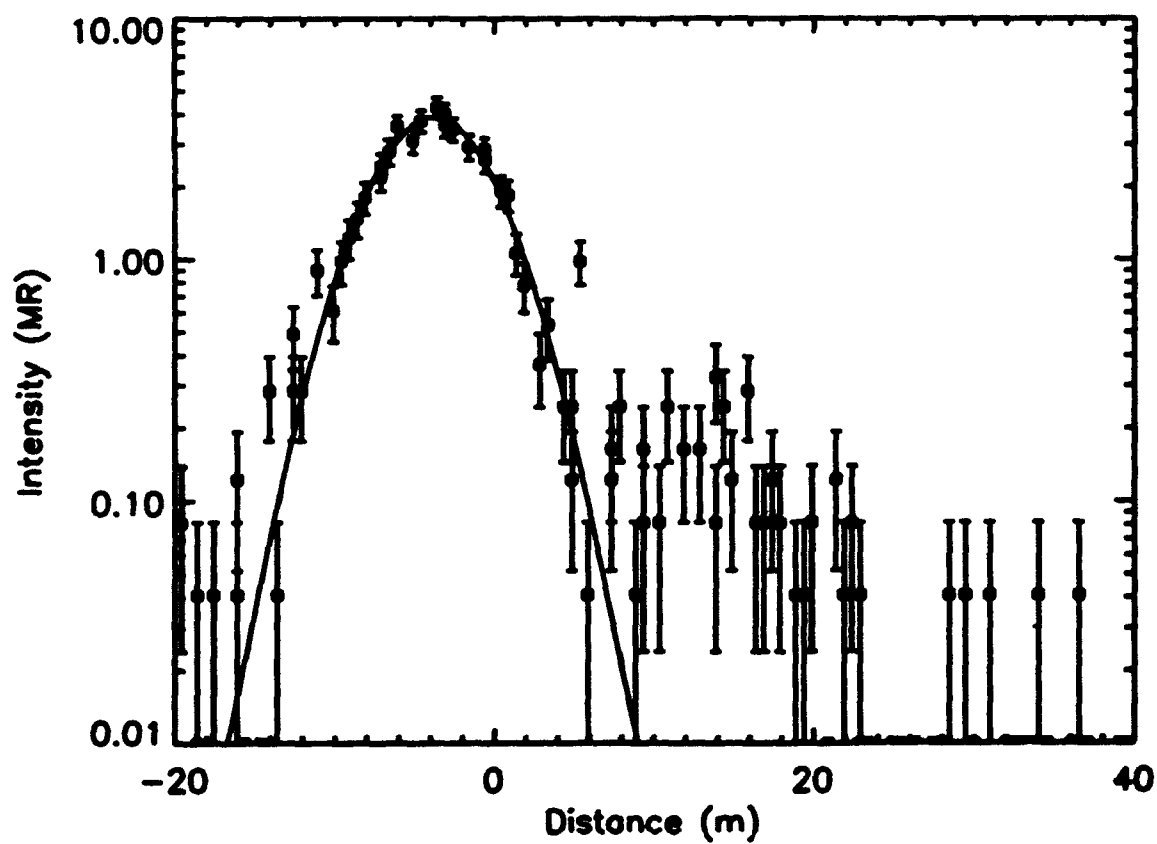
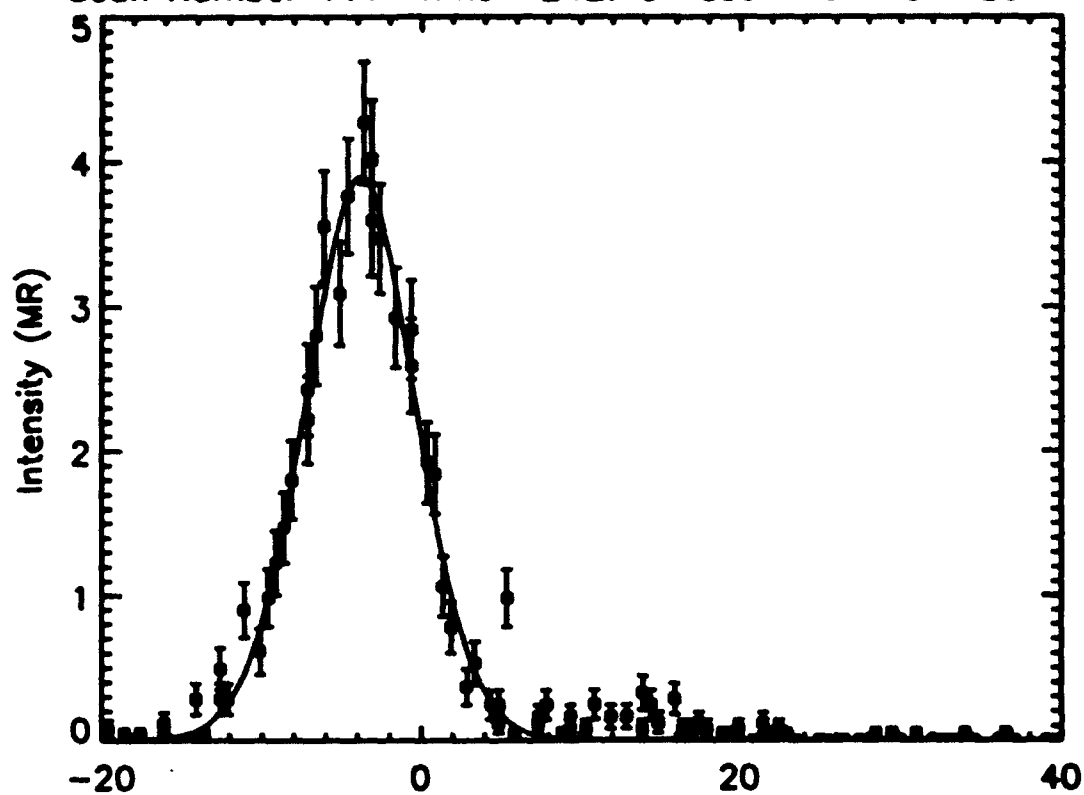
EXCEDE III 3914 A Scanning Photometer
Scan Number 109 Time= 240.323 sec Alt= 105.280 Km



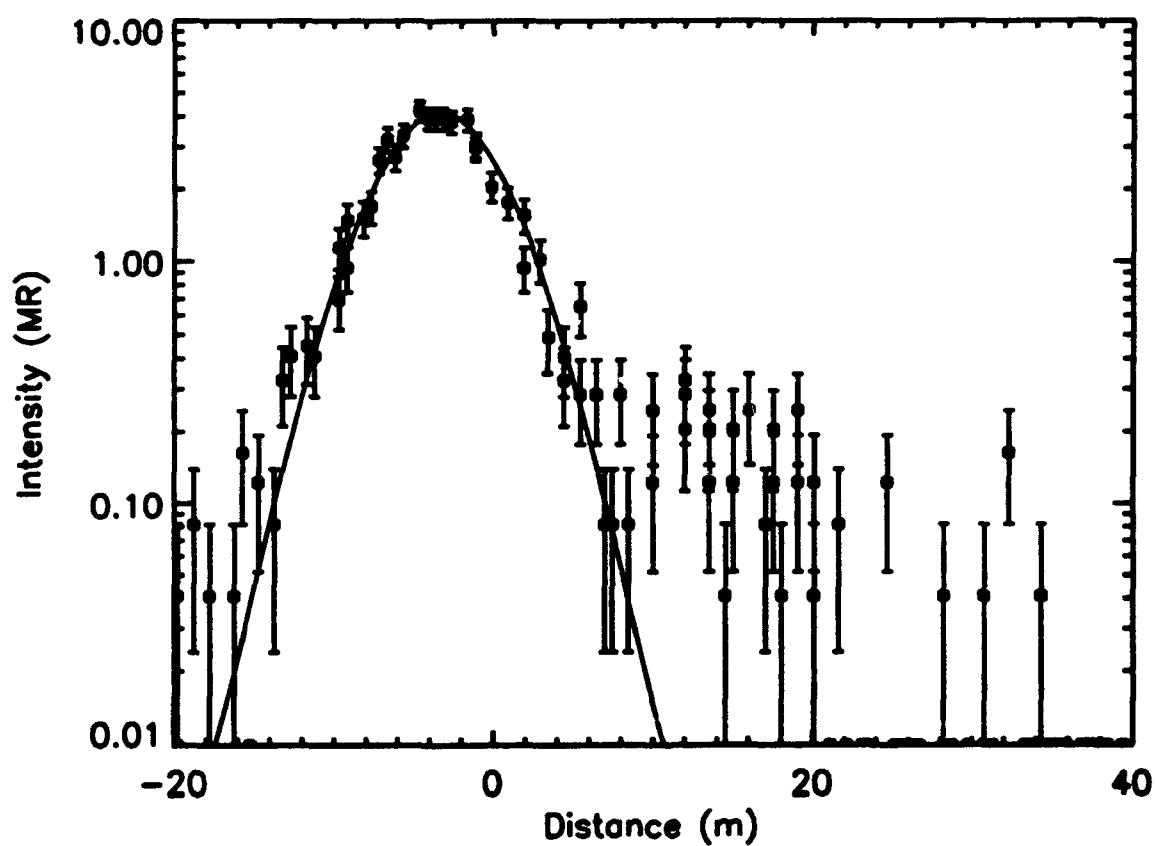
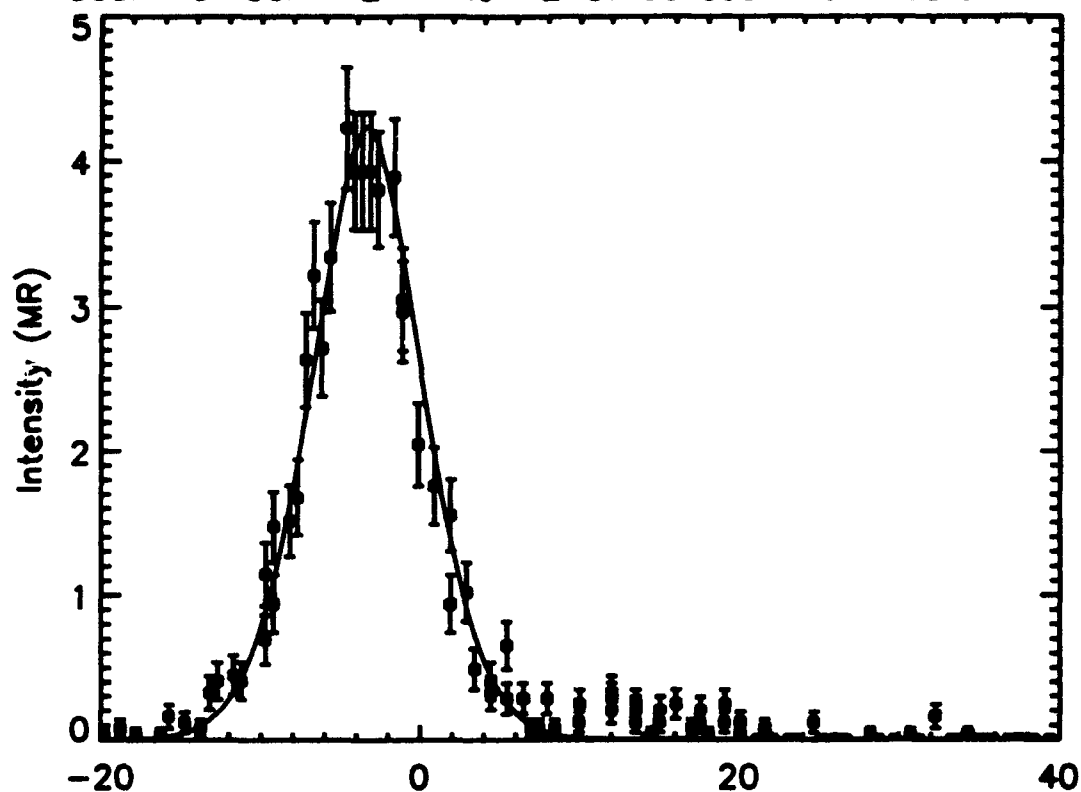
EXCEDE III 3914 A Scanning Photometer
Scan Number 110 Time= 241.454 sec Alt= 104.788 Km



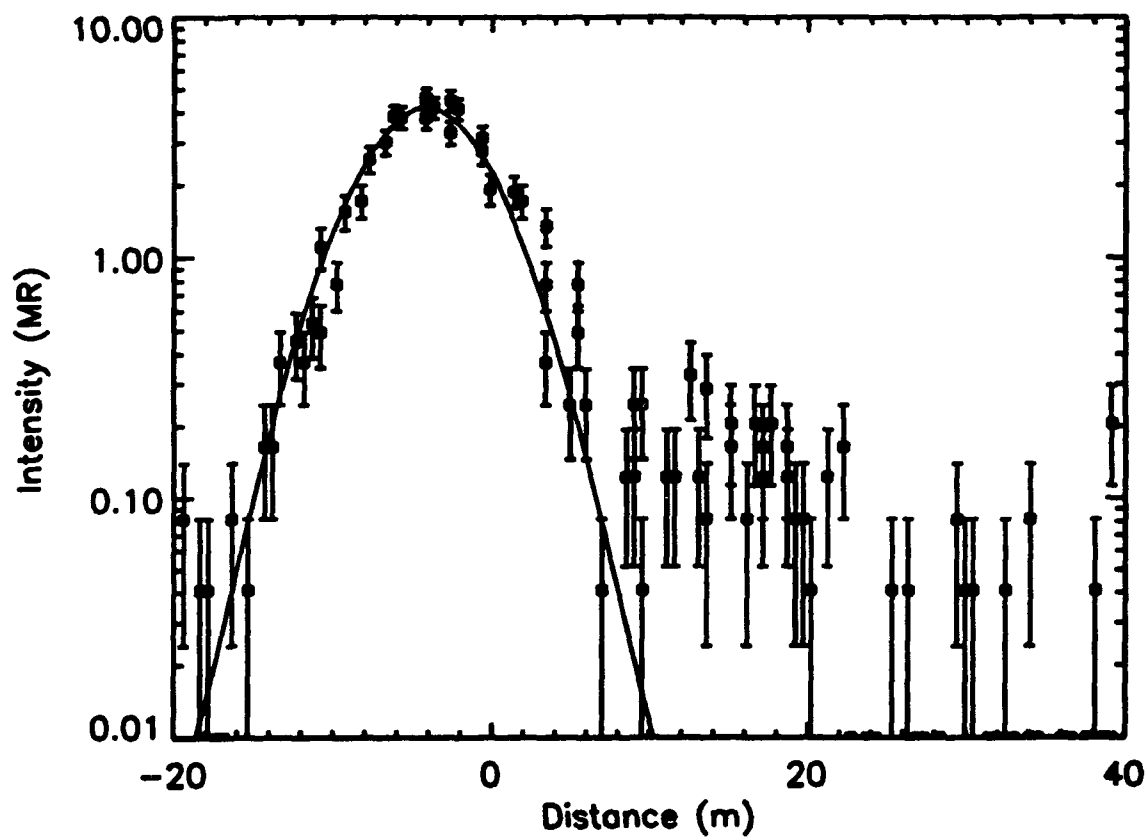
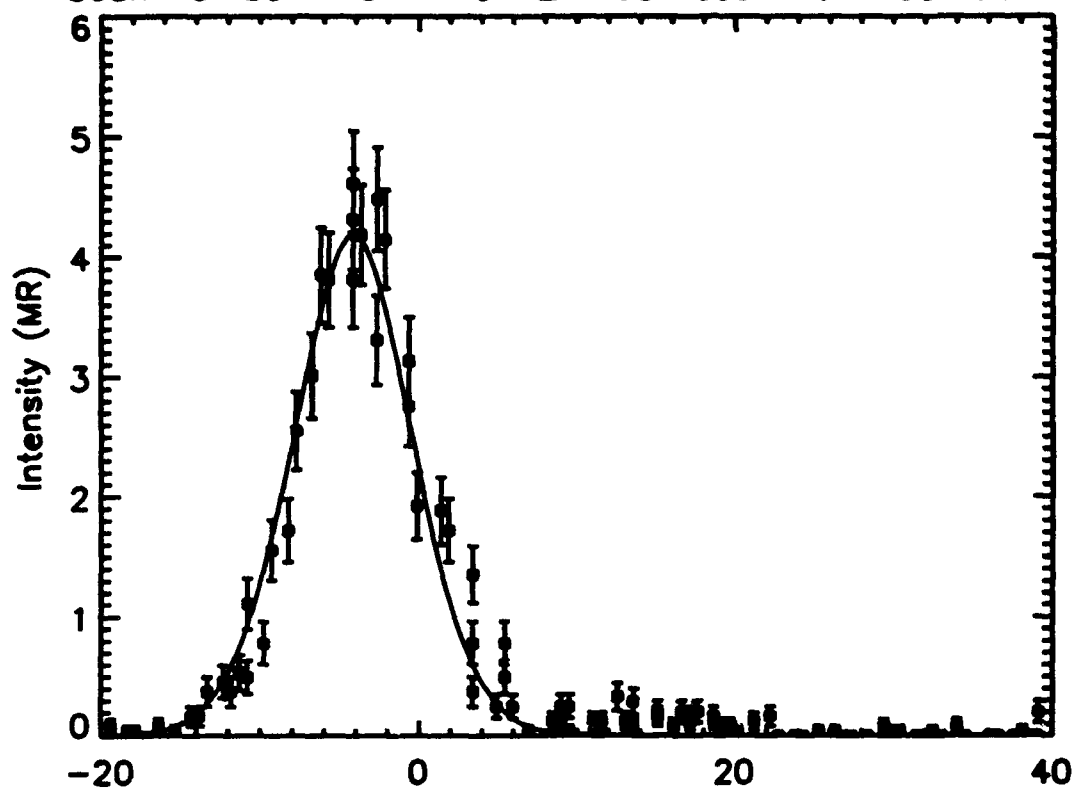
EXCEDE III 3914 A Scanning Photometer
Scan Number 111 Time= 242.131 sec Alt= 104.489 Km



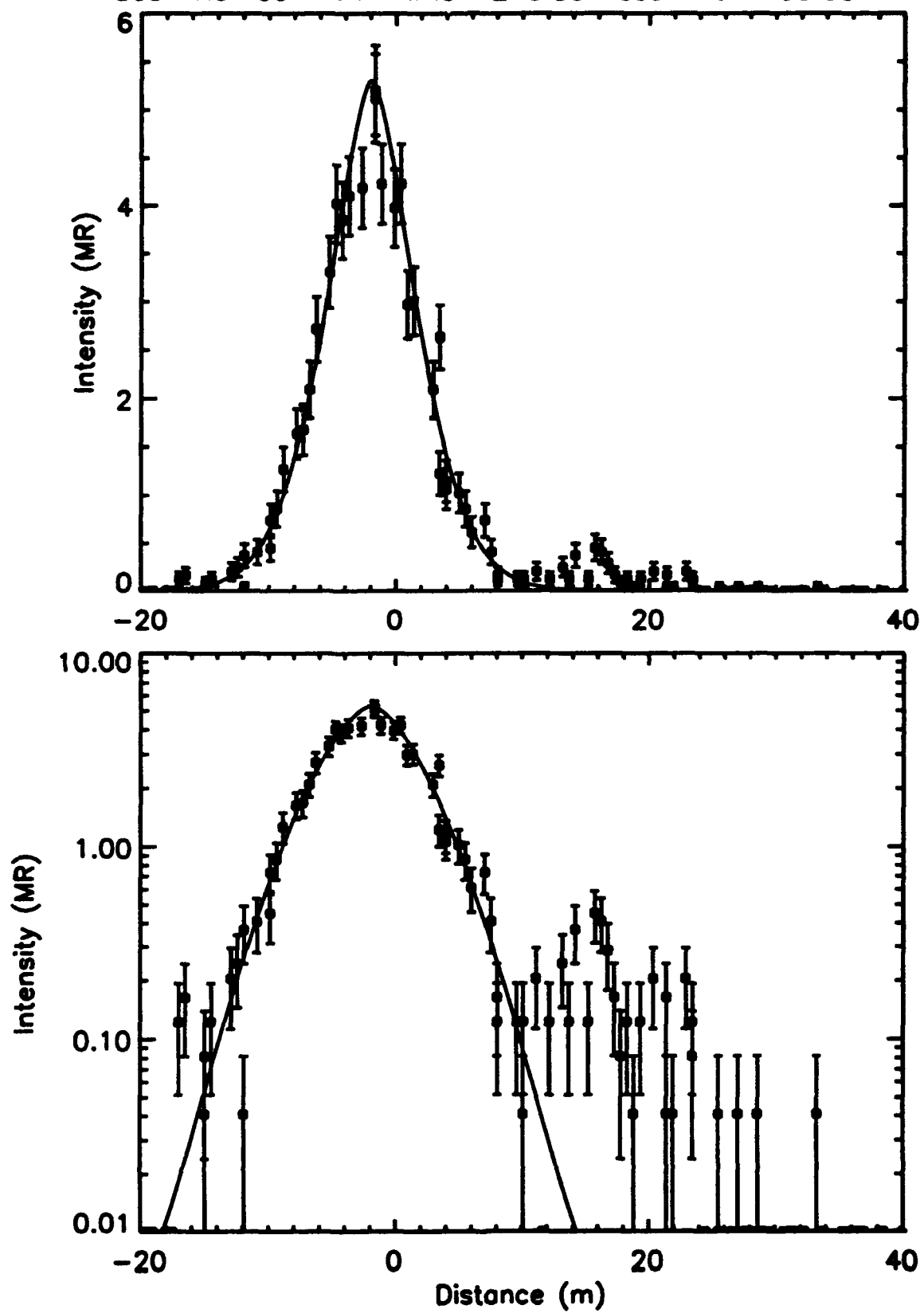
EXCEDE III 3914 A Scanning Photometer
Scan Number 112 Time= 243.408 sec Alt= 103.911 Km



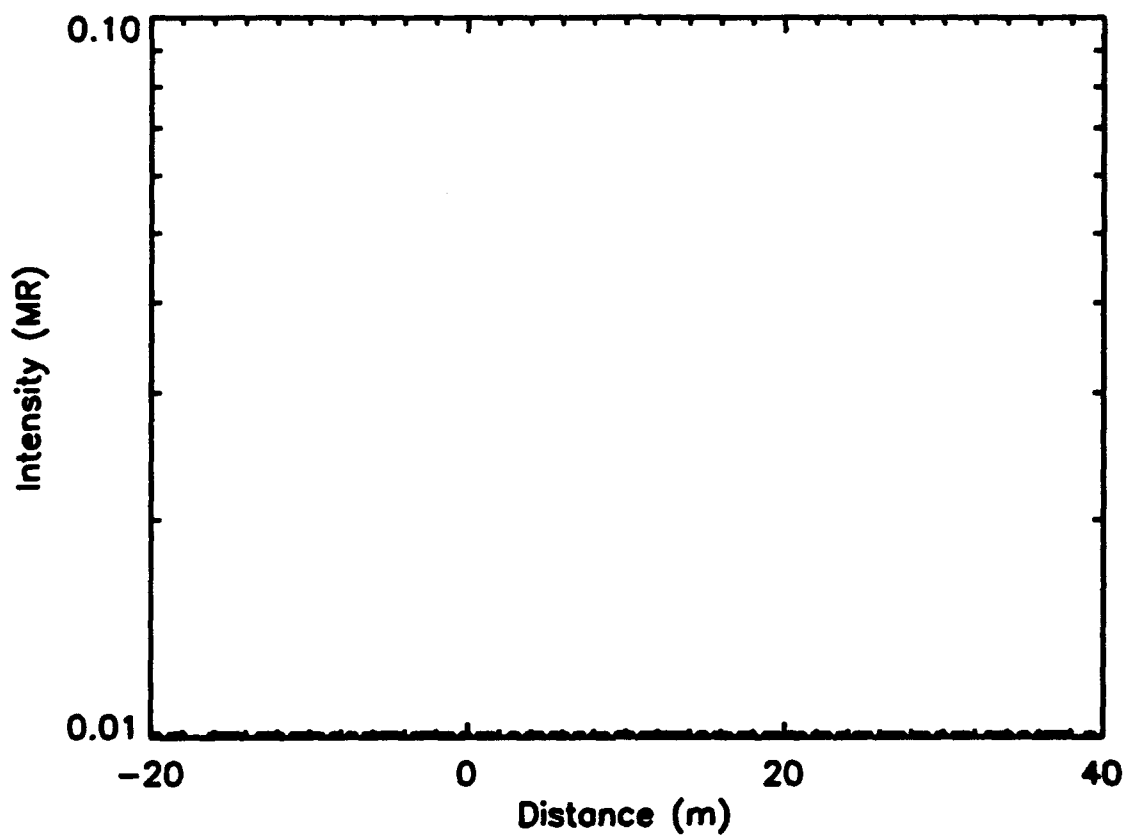
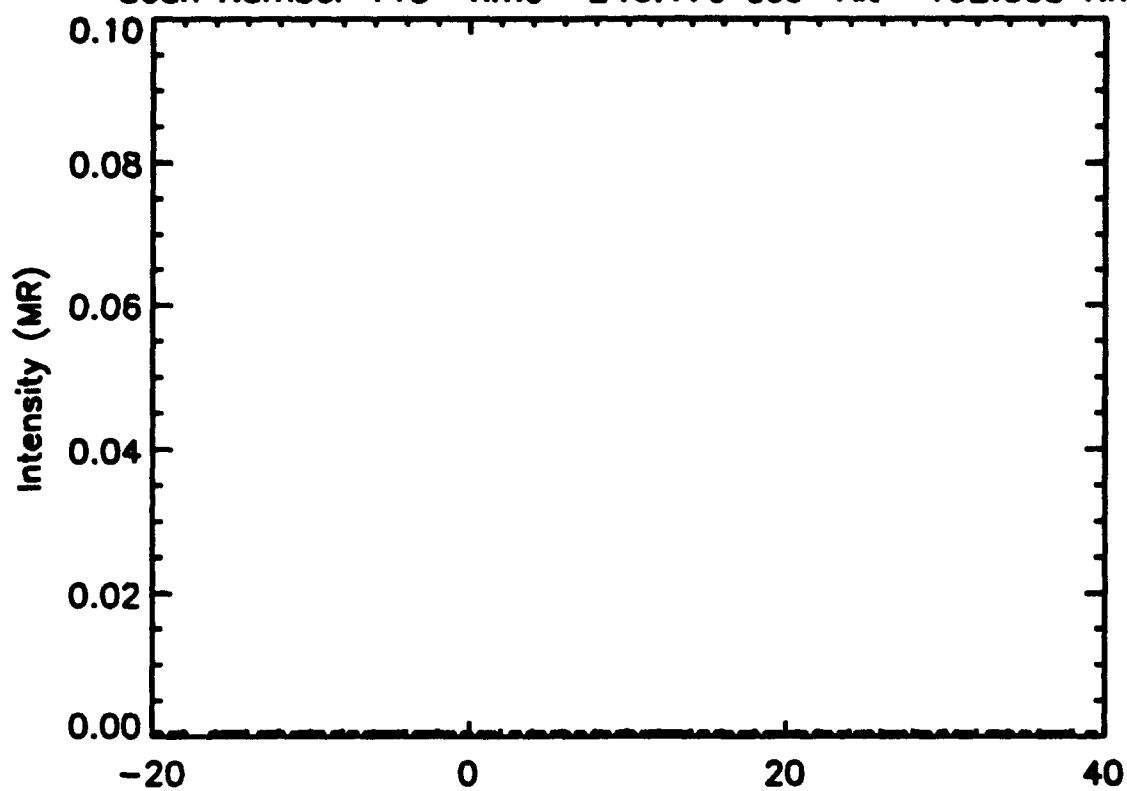
EXCEDE III 3914 A Scanning Photometer
Scan Number 113 Time= 244.084 sec Alt= 103.600 Km



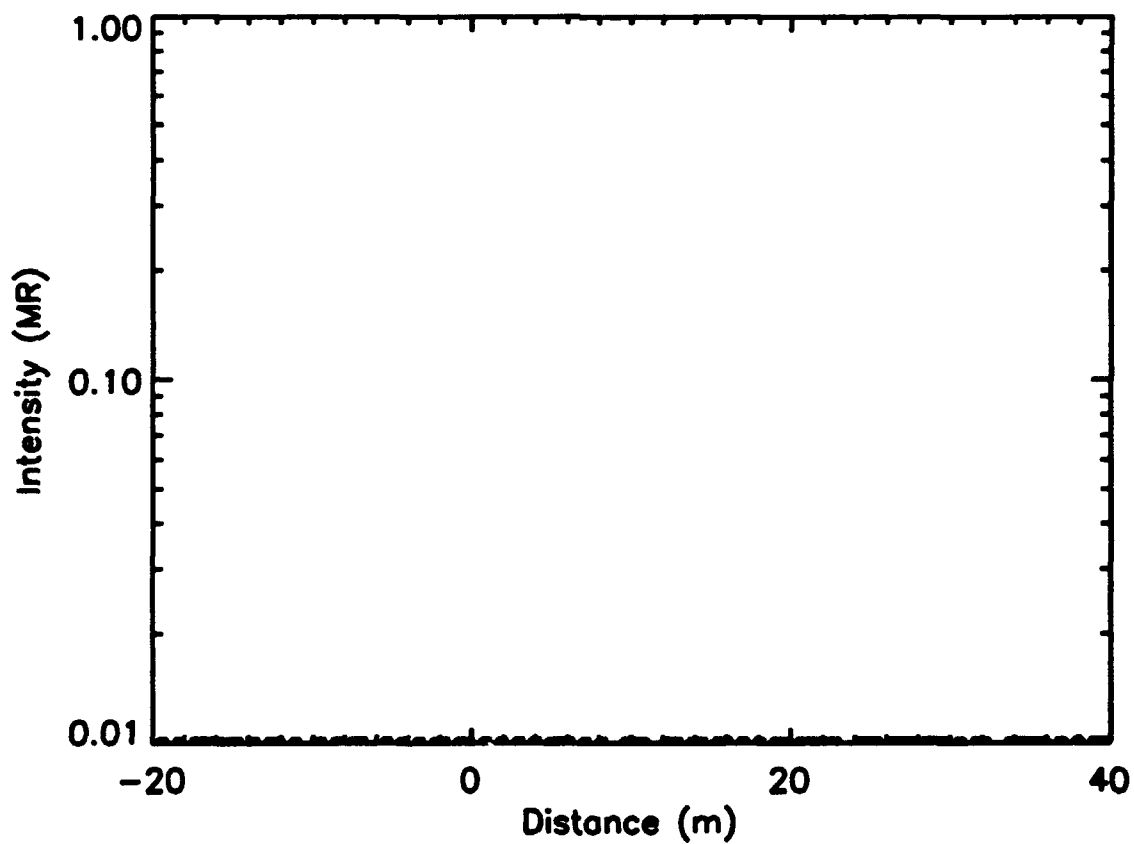
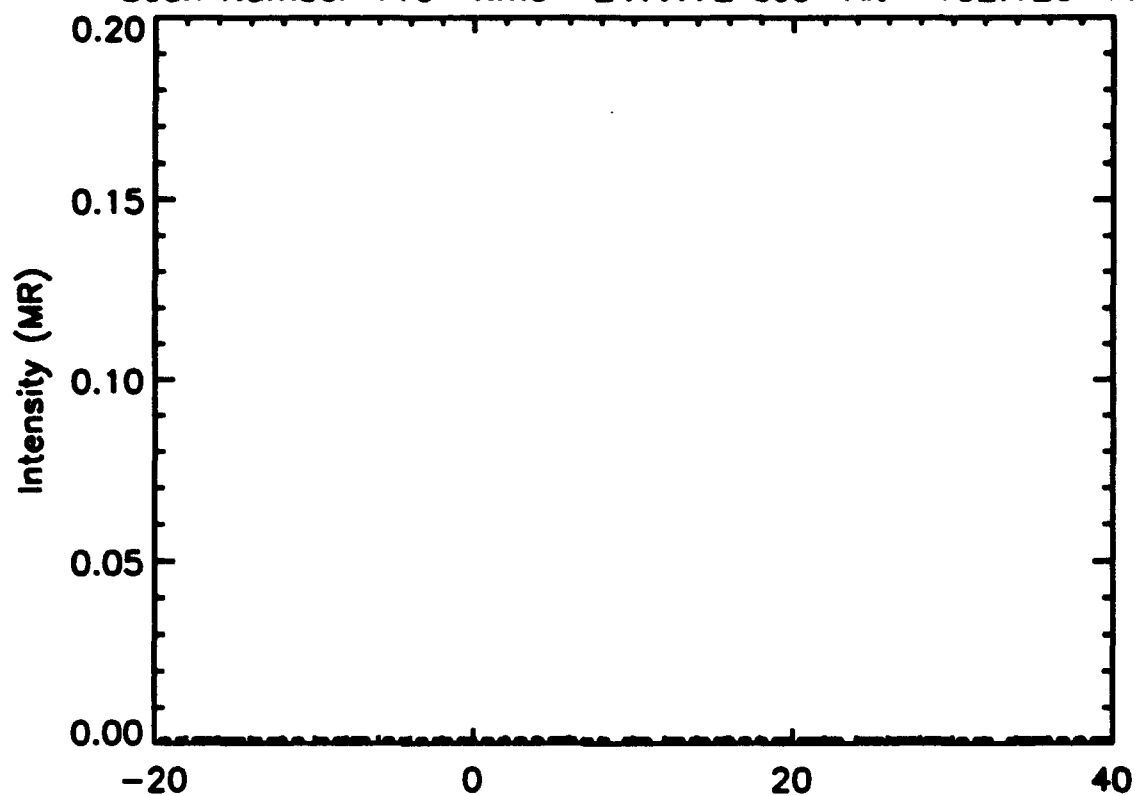
EXCEDE III 3914 A Scanning Photometer
Scan Number 114 Time= 245.357 sec Alt= 103.001 Km



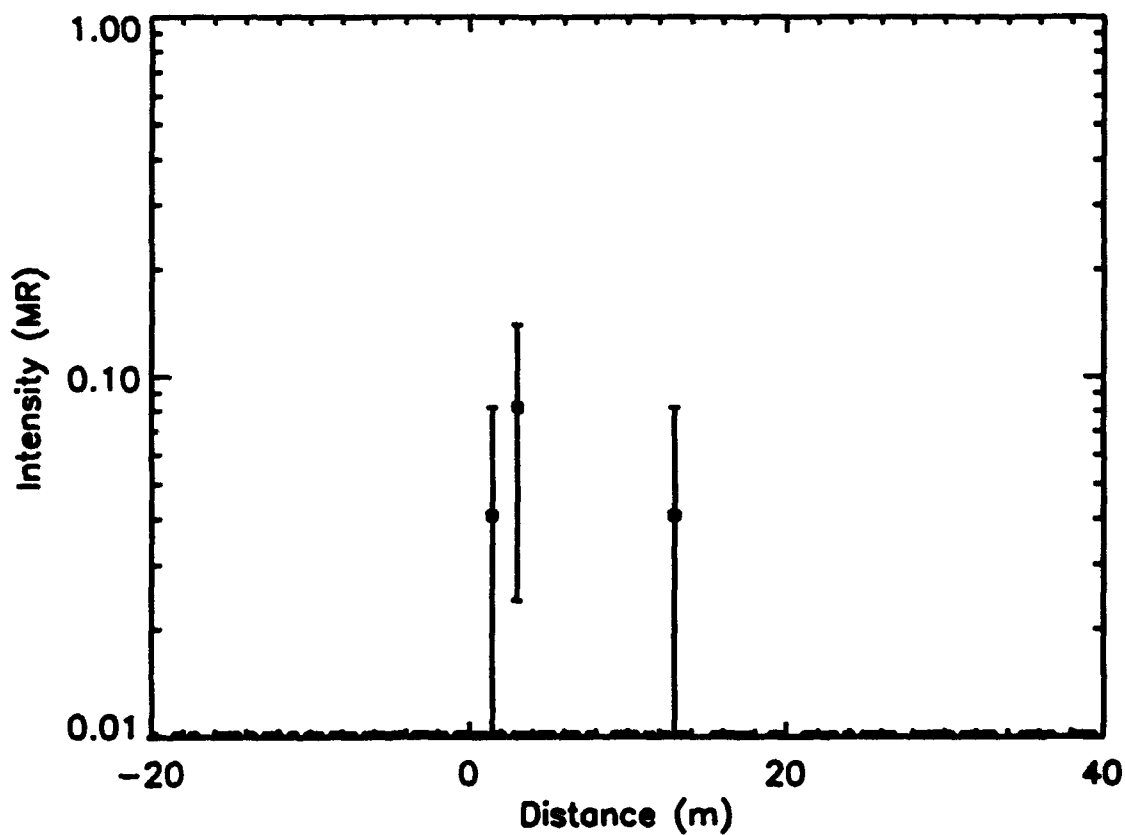
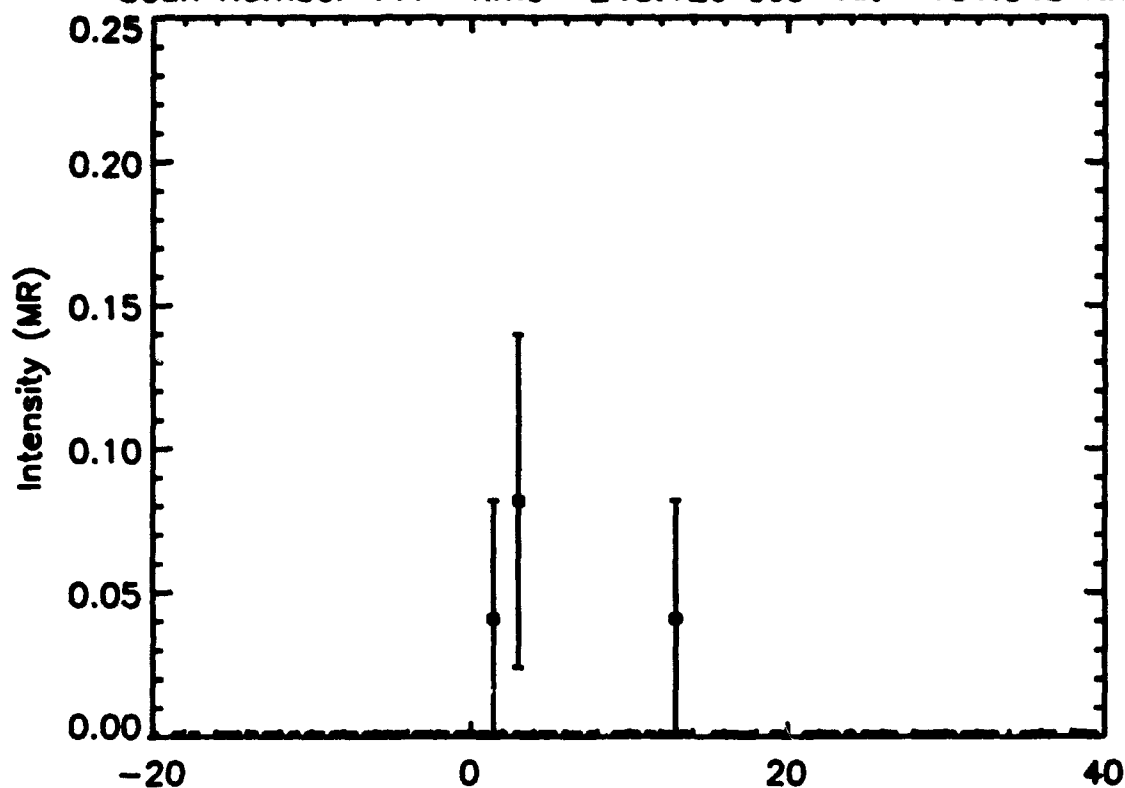
EXCEDE III 3914 A Scanning Photometer
Scan Number 115 Time= 246.179 sec Alt= 102.605 Km



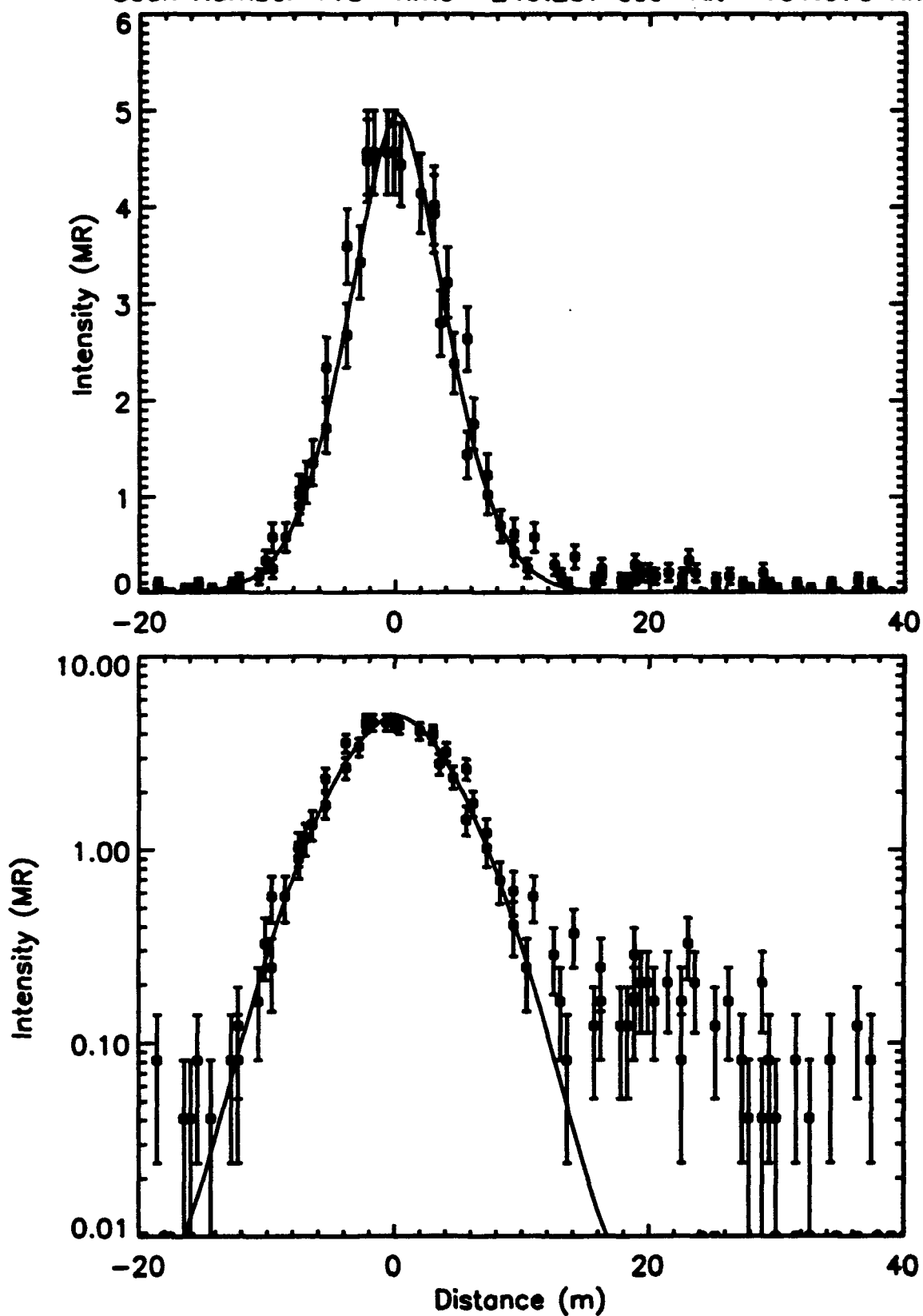
EXCEDE III 3914 A Scanning Photometer
Scan Number 116 Time= 247.172 sec Alt= 102.120 Km



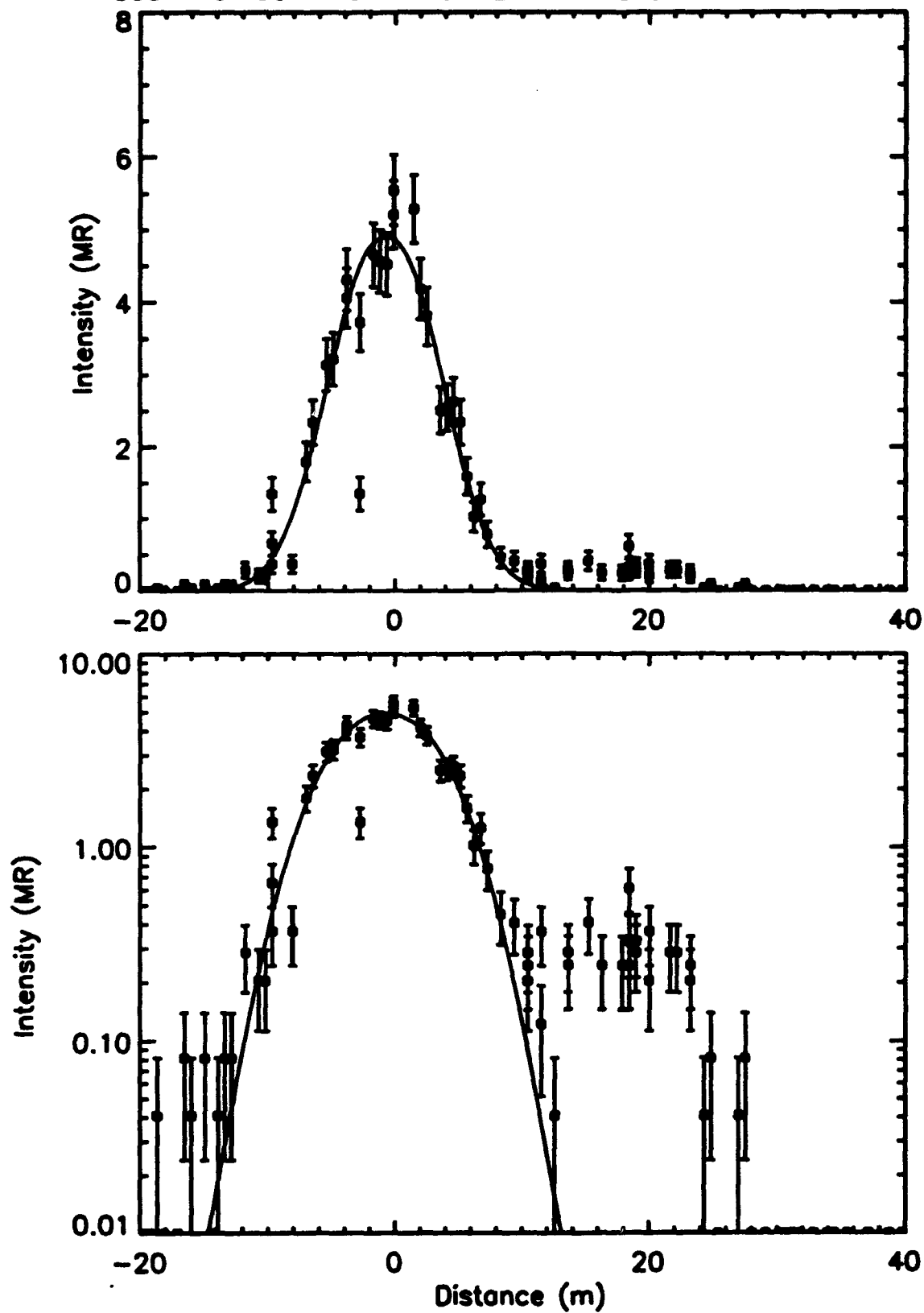
EXCEDE III 3914 A Scanning Photometer
Scan Number 117 Time= 248.129 sec Alt= 101.643 Km



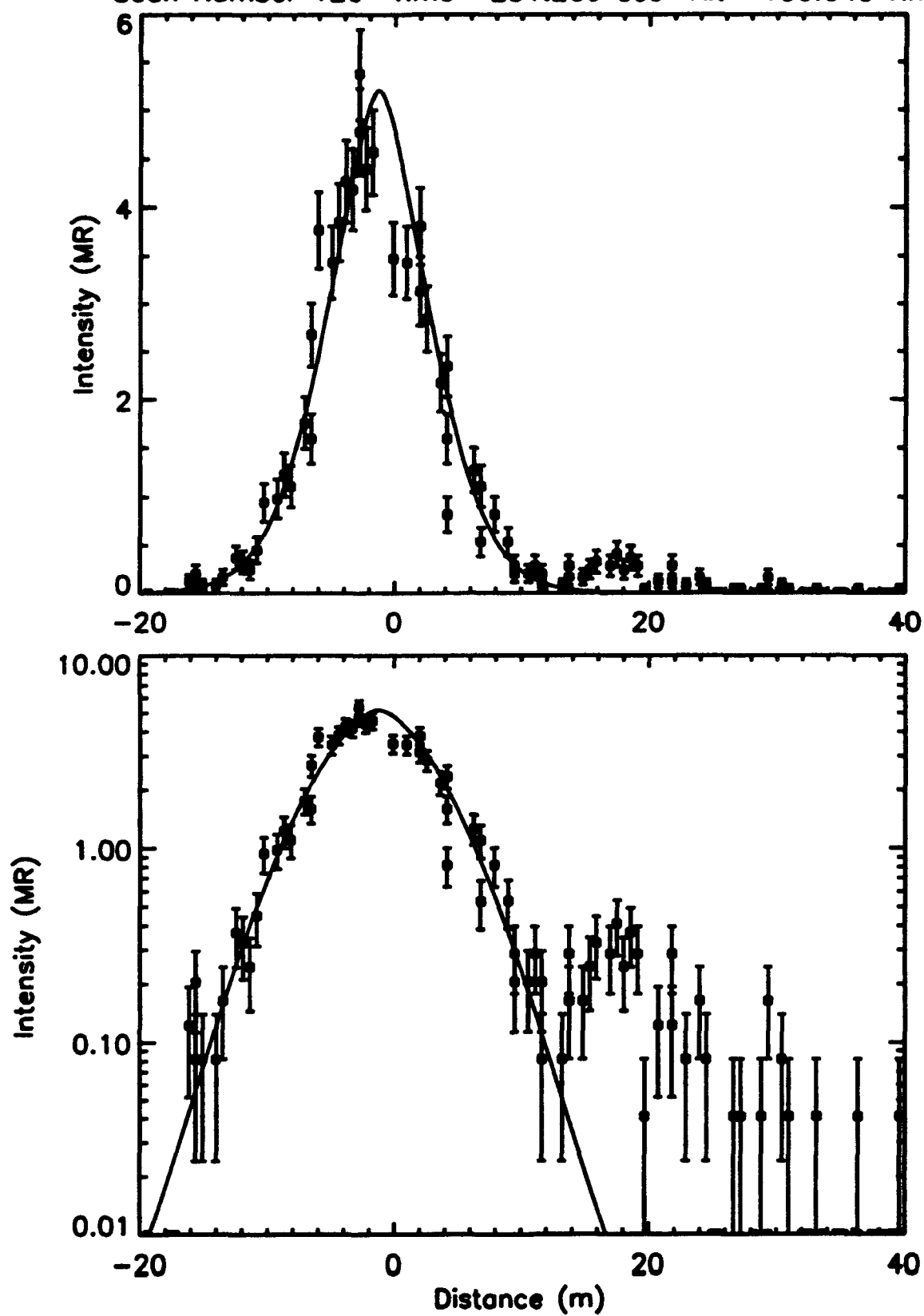
EXCEDE III 3914 A Scanning Photometer
Scan Number 118 Time= 249.257 sec Alt= 101.070 Km



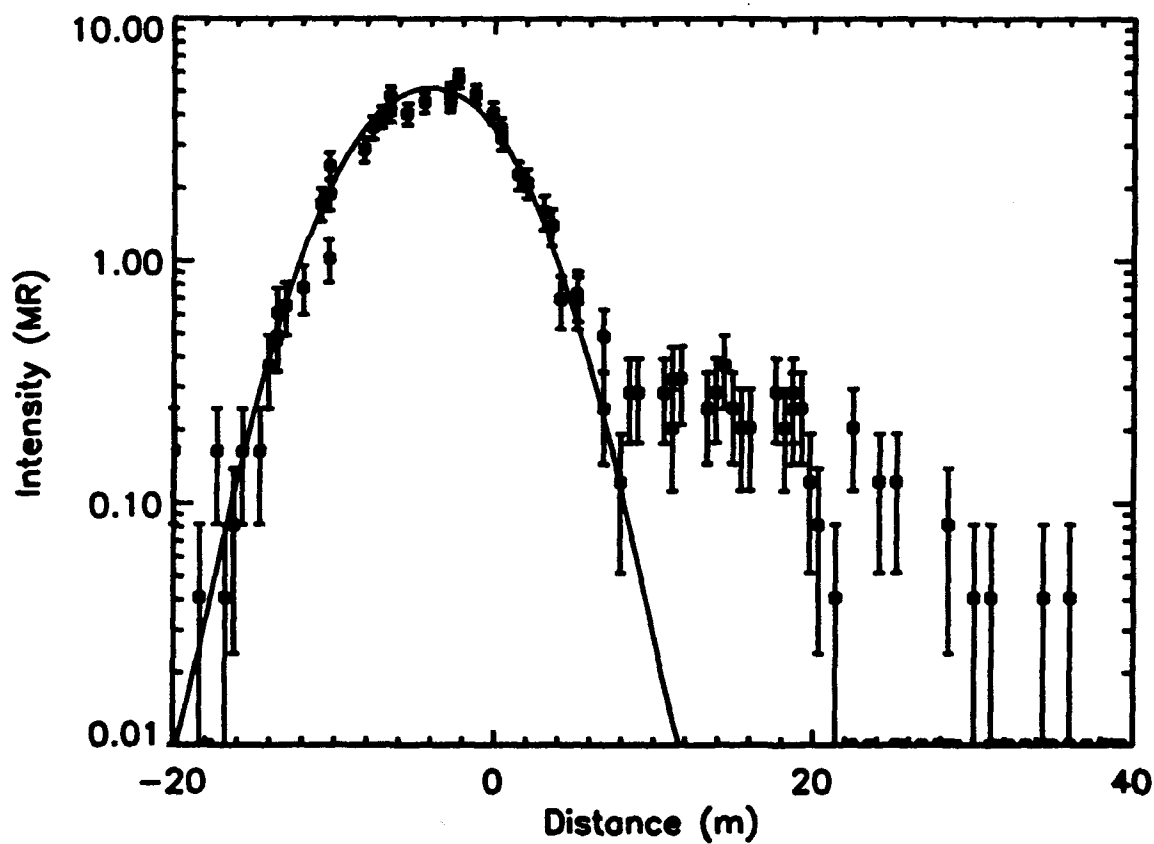
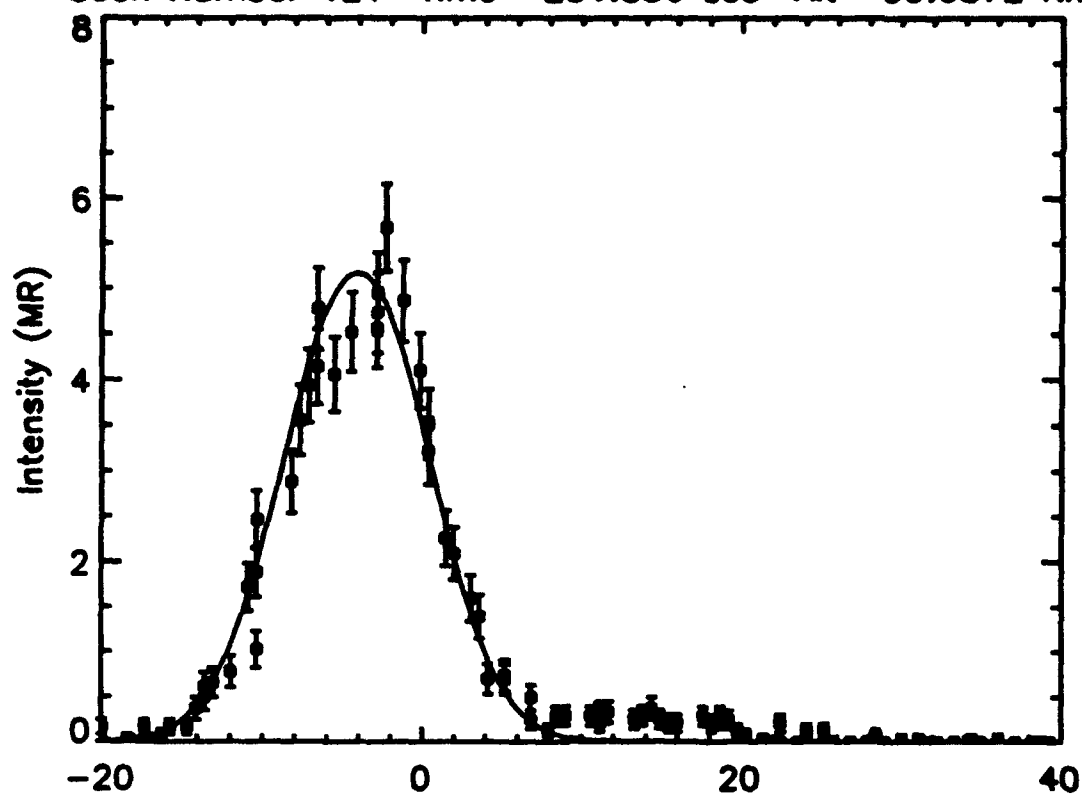
EXCEDE III 3914 A Scanning Photometer
Scan Number 119 Time= 249.944 sec Alt= 100.715 Km



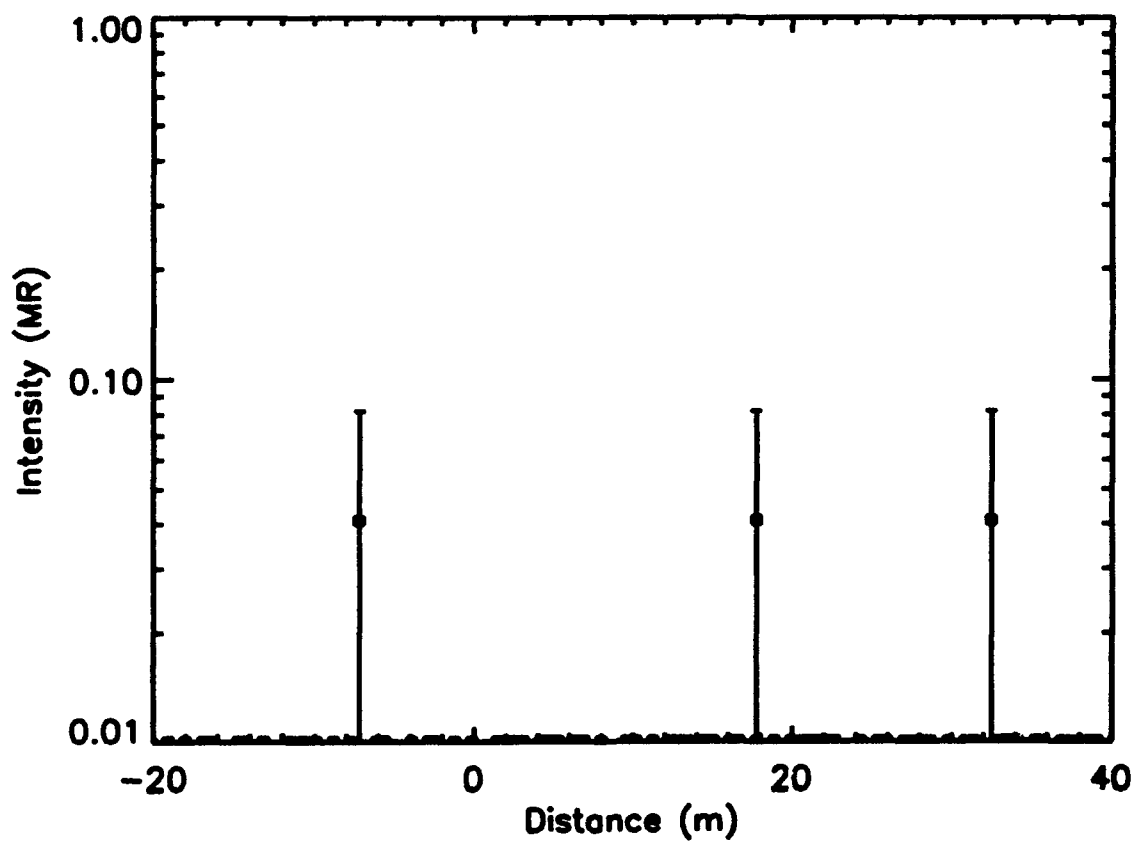
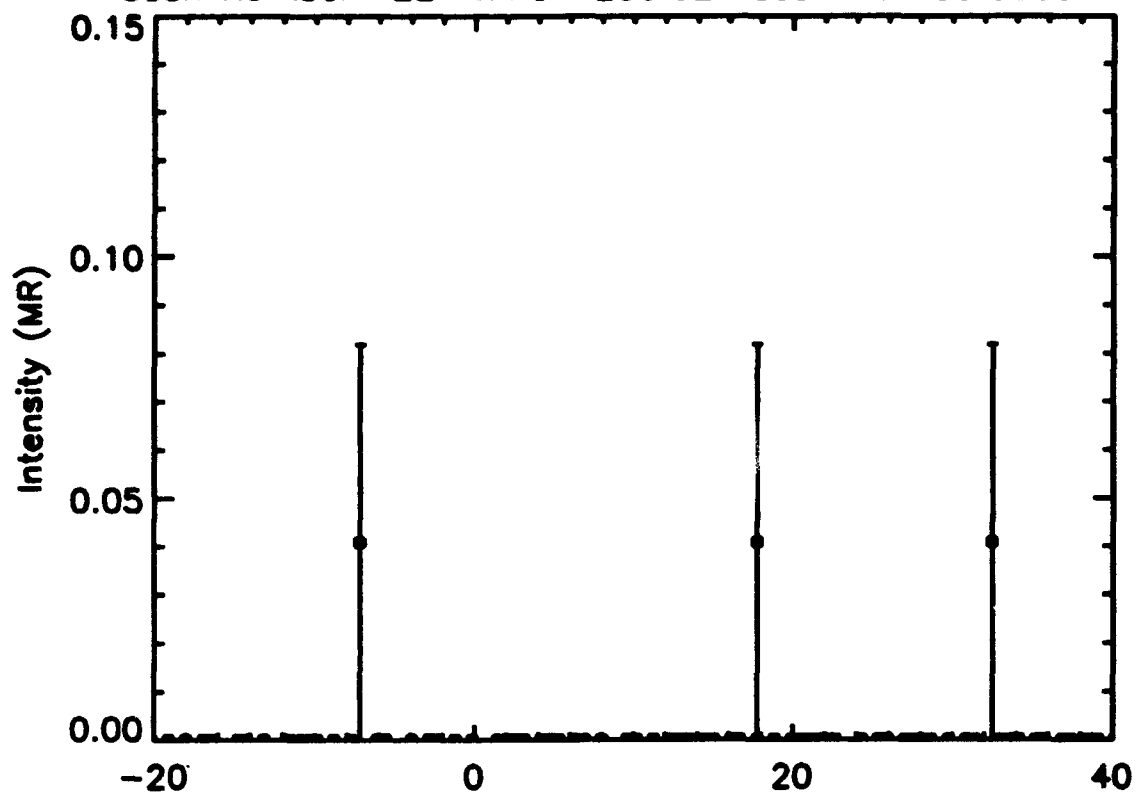
EXCEDE III 3914 A Scanning Photometer
Scan Number 120 Time= 251.209 sec Alt= 100.049 Km



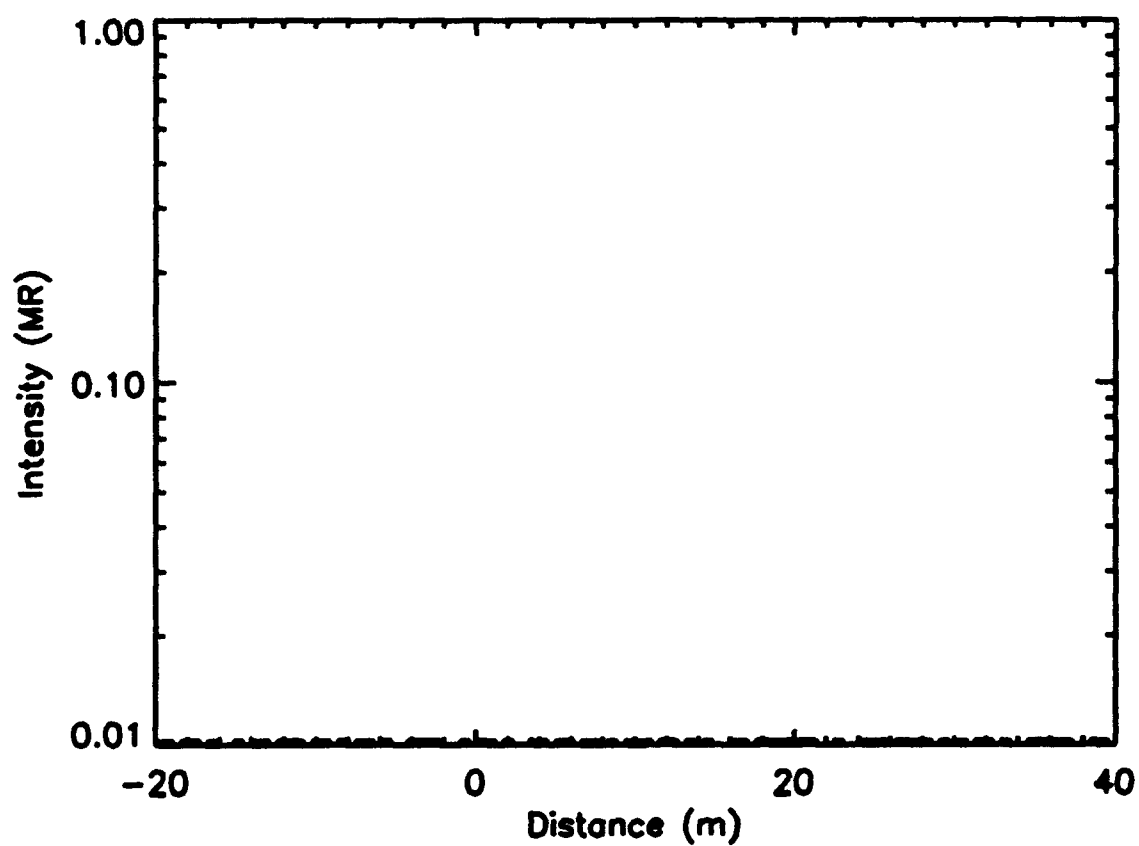
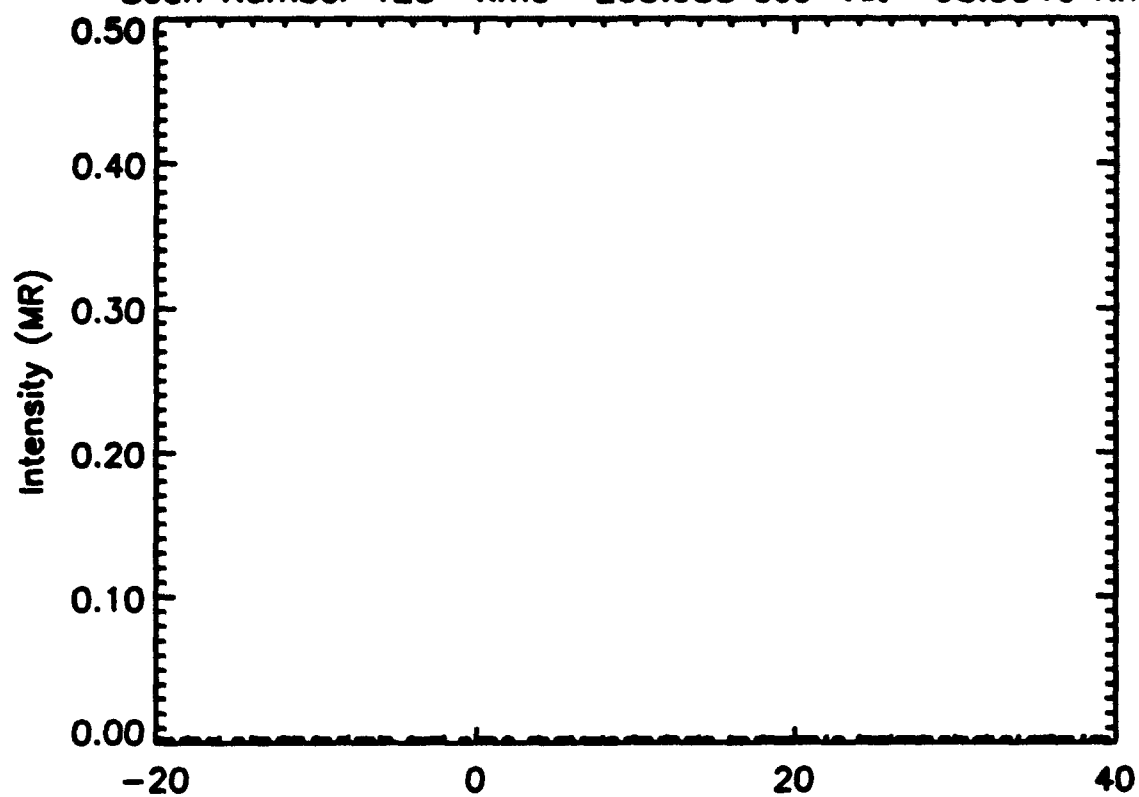
EXCEDE III 3914 A Scanning Photometer
Scan Number 121 Time= 251.886 sec Alt= 99.6872 Km



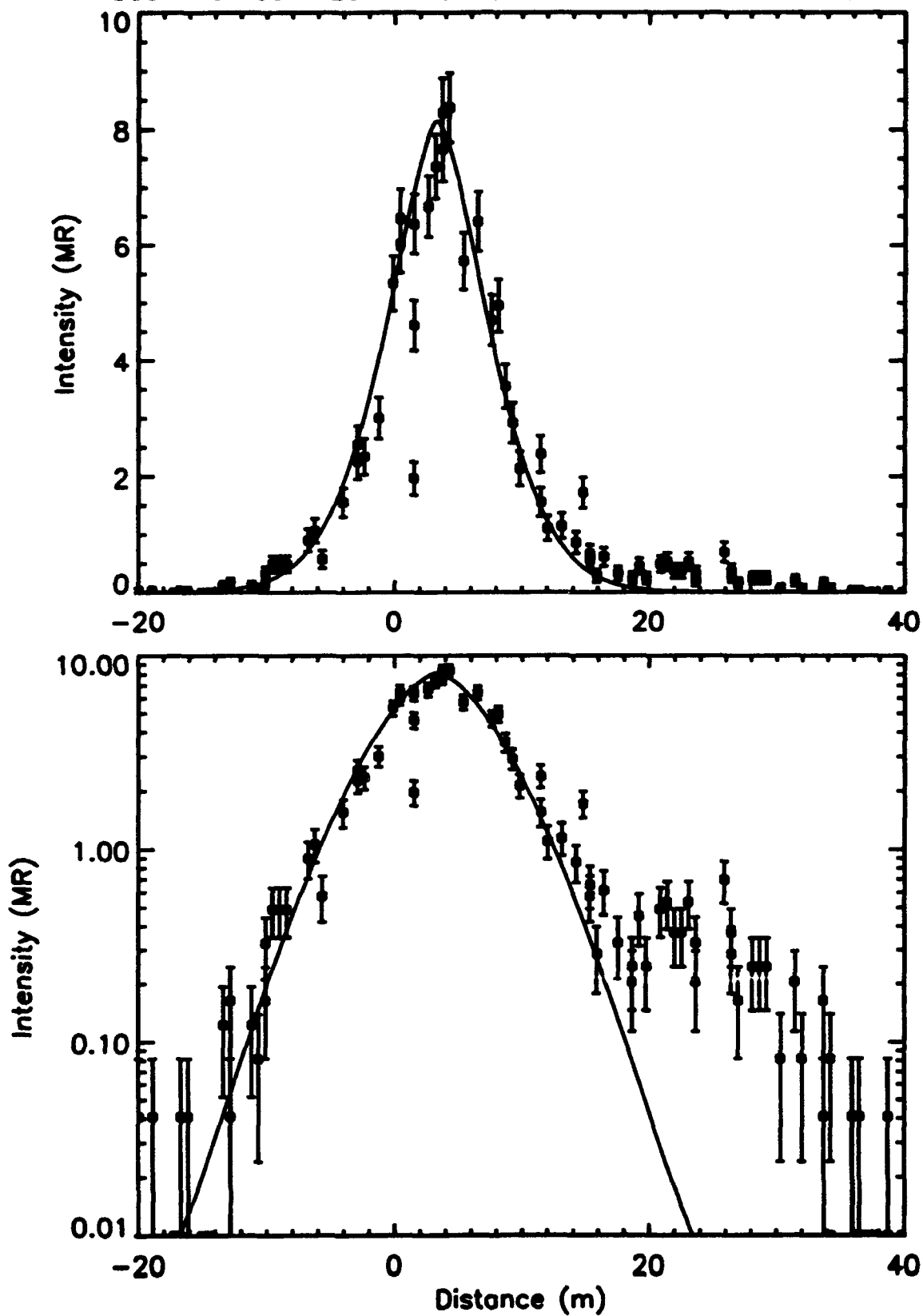
EXCEDE III 3914 A Scanning Photometer
Scan Number 122 Time= 253.027 sec Alt= 99.0666 Km



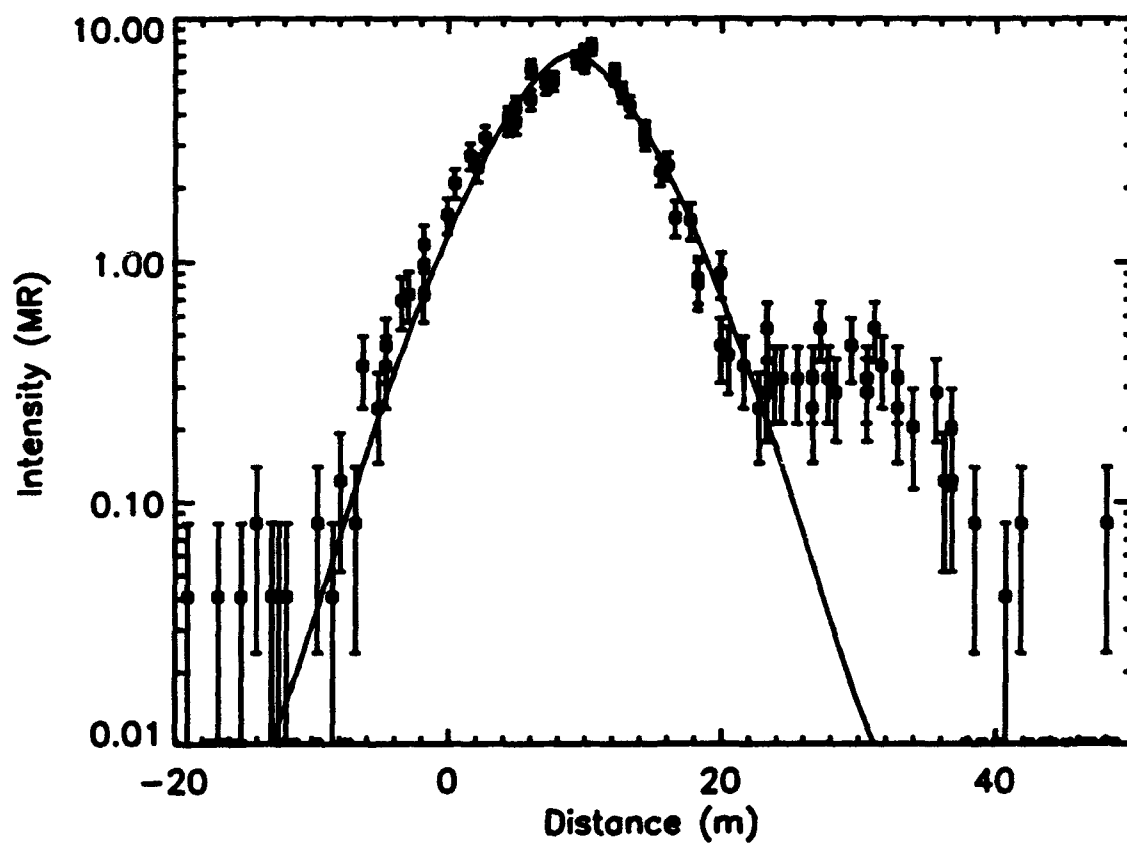
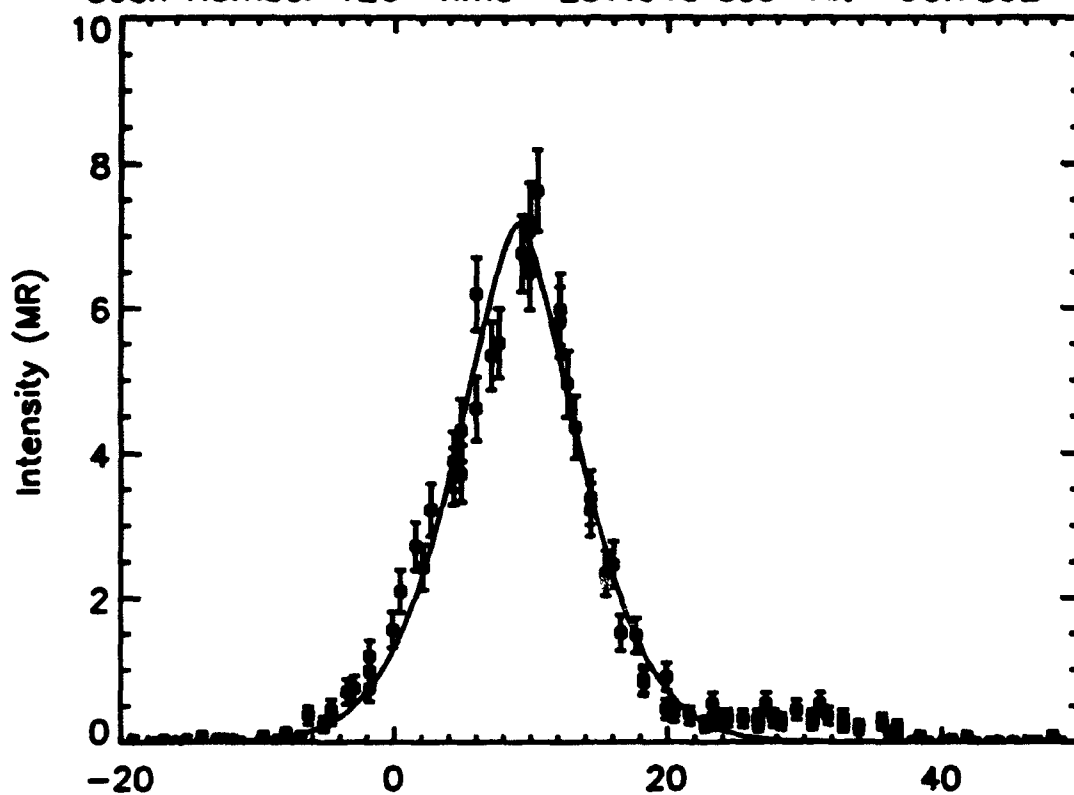
EXCEDE III 3914 A Scanning Photometer
Scan Number 123 Time= 253.988 sec Alt= 98.5346 Km



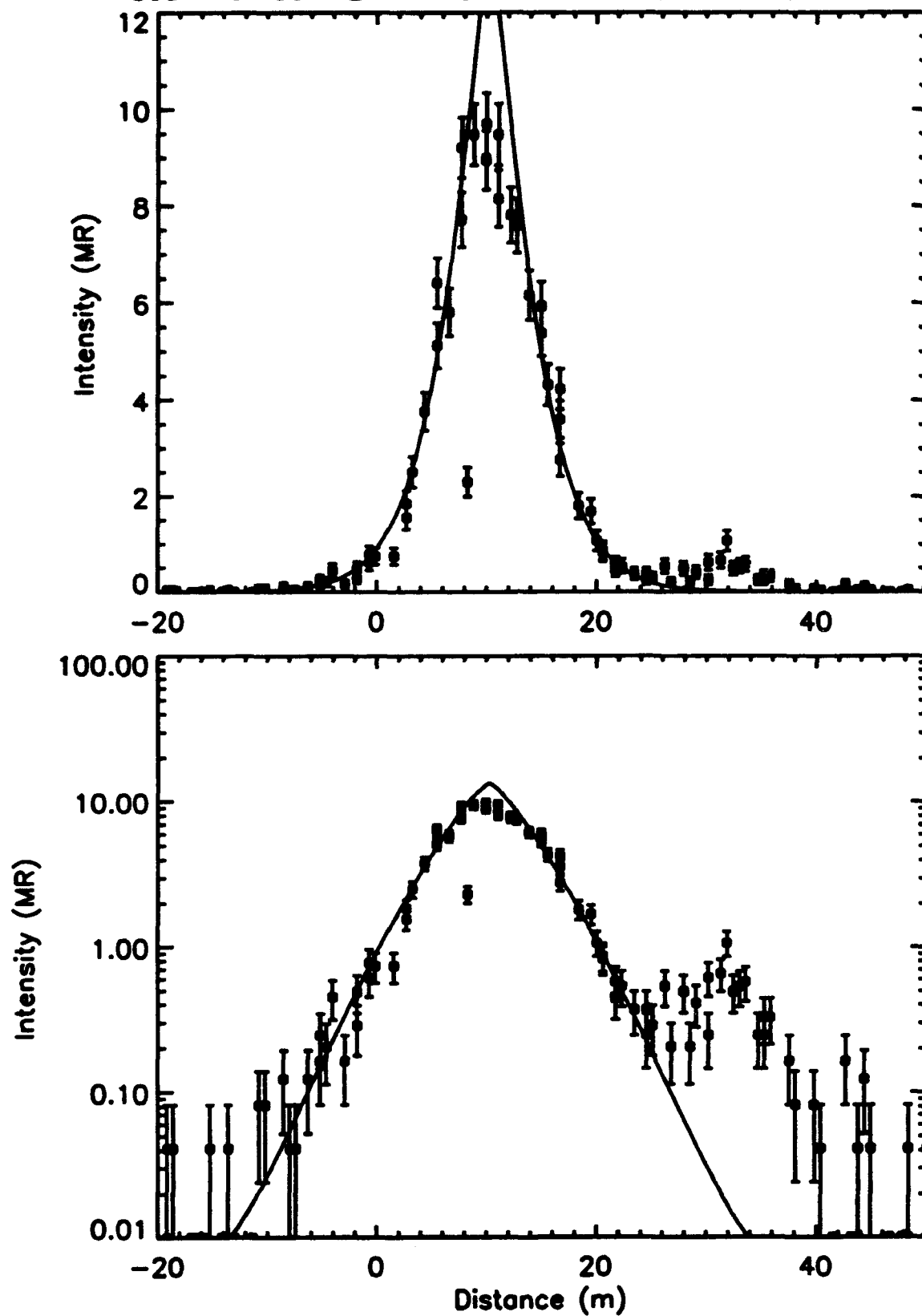
EXCEDE III 3914 A Scanning Photometer
Scan Number 125 Time= 255.809 sec Alt= 97.5023 Km



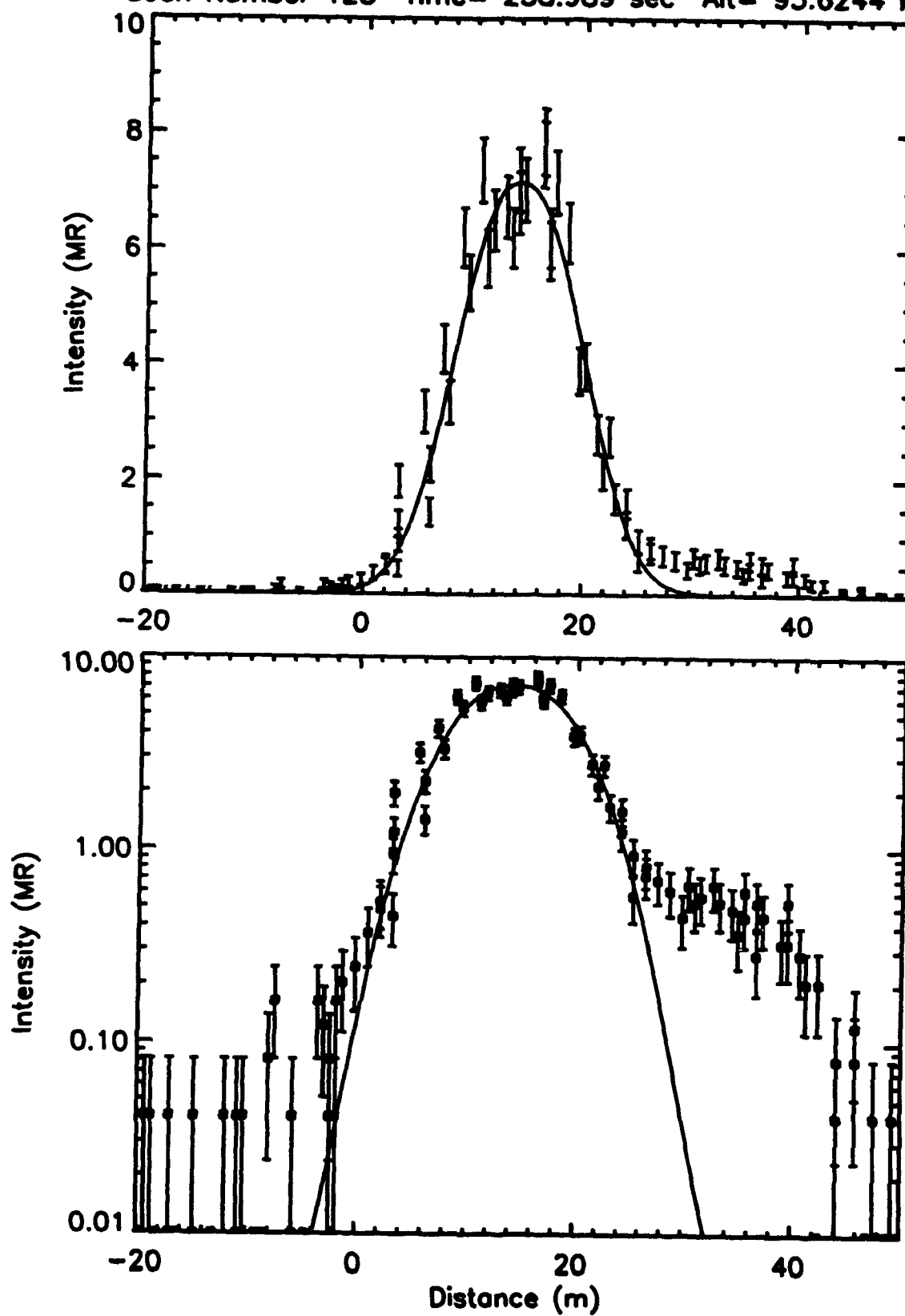
EXCEDE III 3914 A Scanning Photometer
Scan Number 126 Time= 257.046 sec Alt= 96.7832 Km



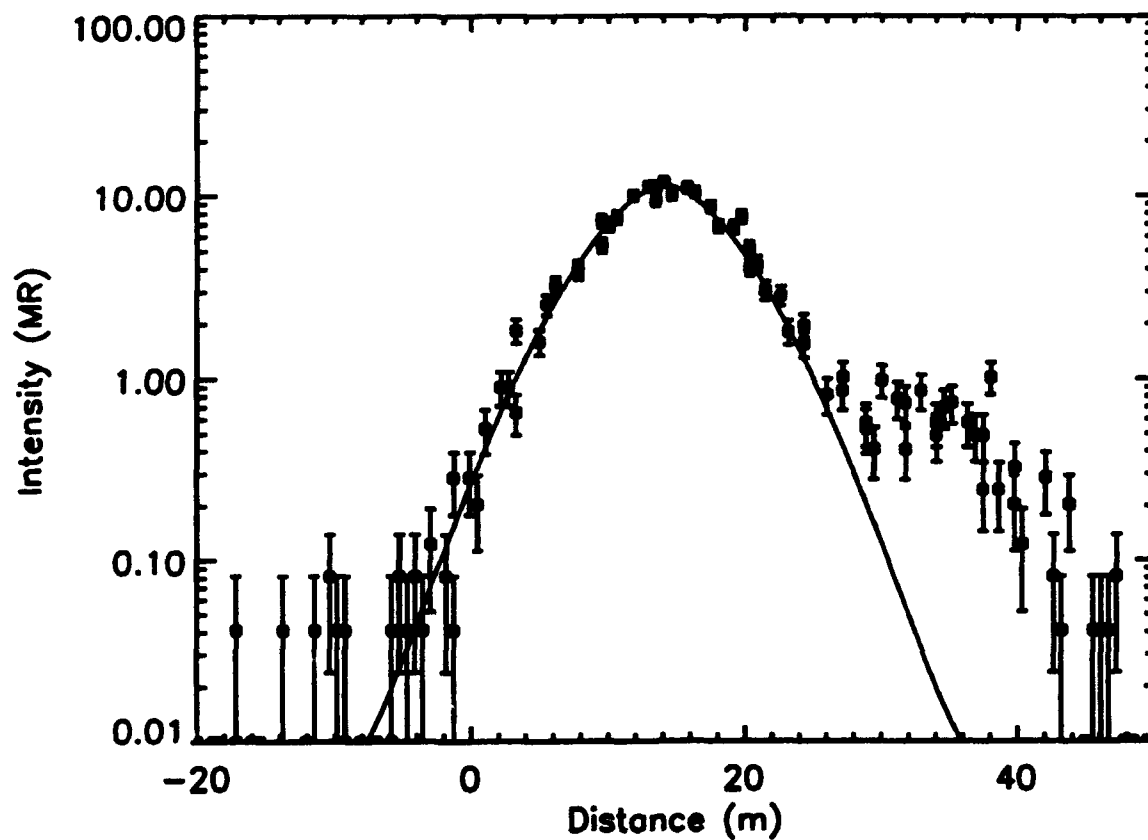
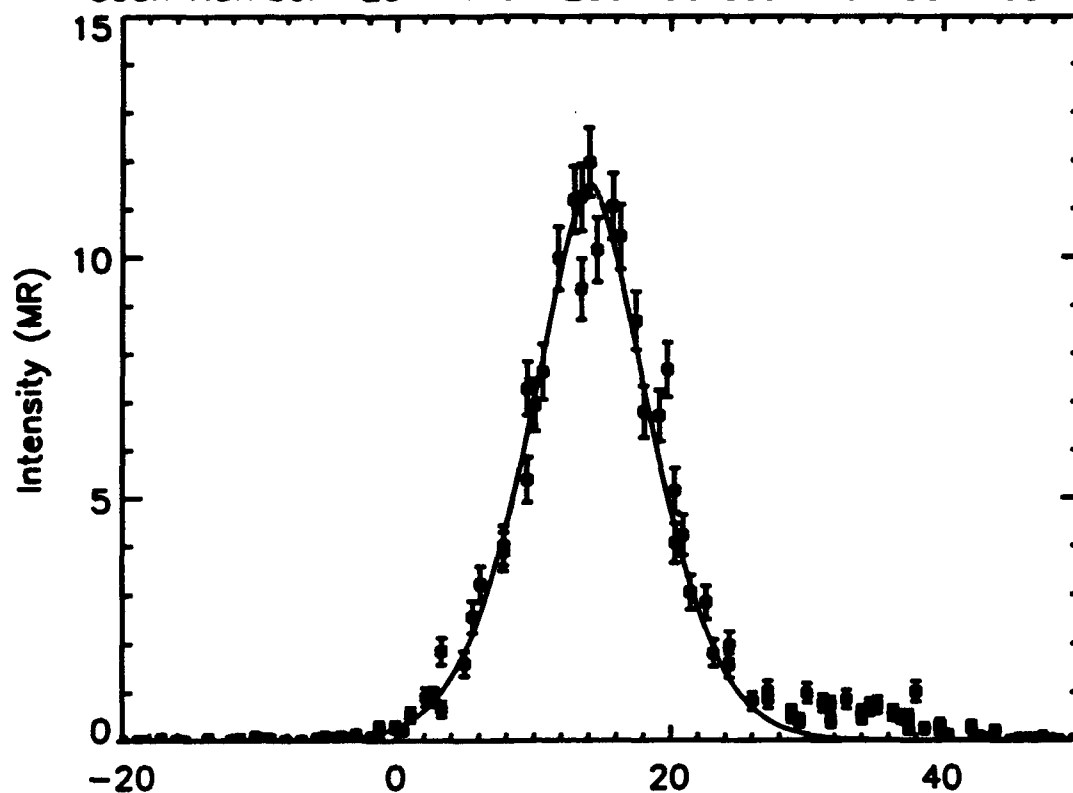
EXCEDE III 3914 A Scanning Photometer
Scan Number 127 Time= 257.773 sec Alt= 96.3538 Km



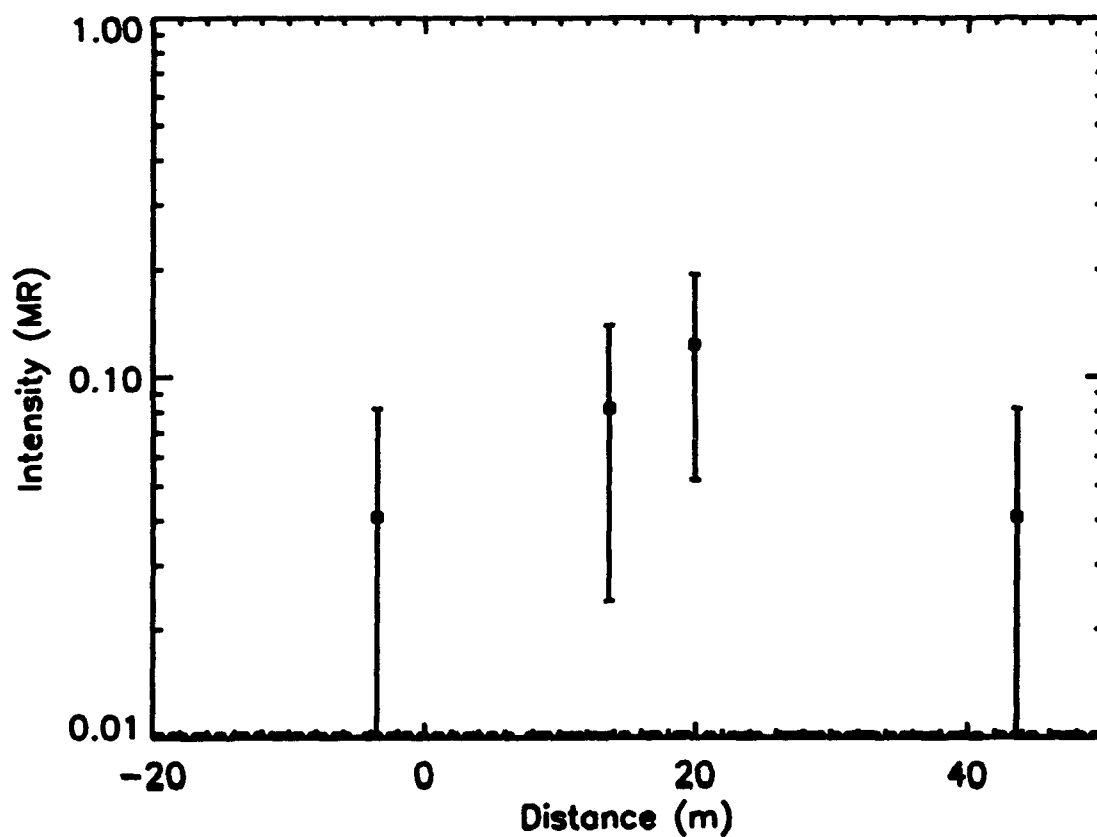
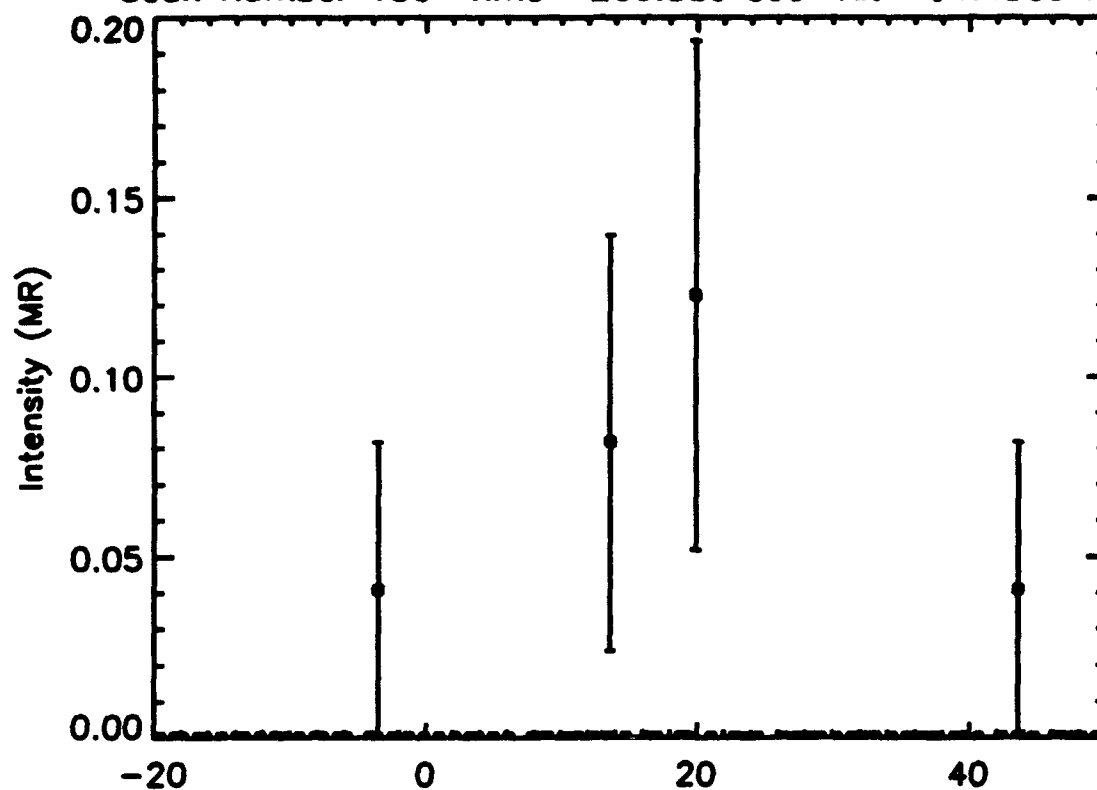
EXCEDE III 3914 A Scanning Photometer
Scan Number 128 Time= 258.989 sec Alt= 95.6244 Km



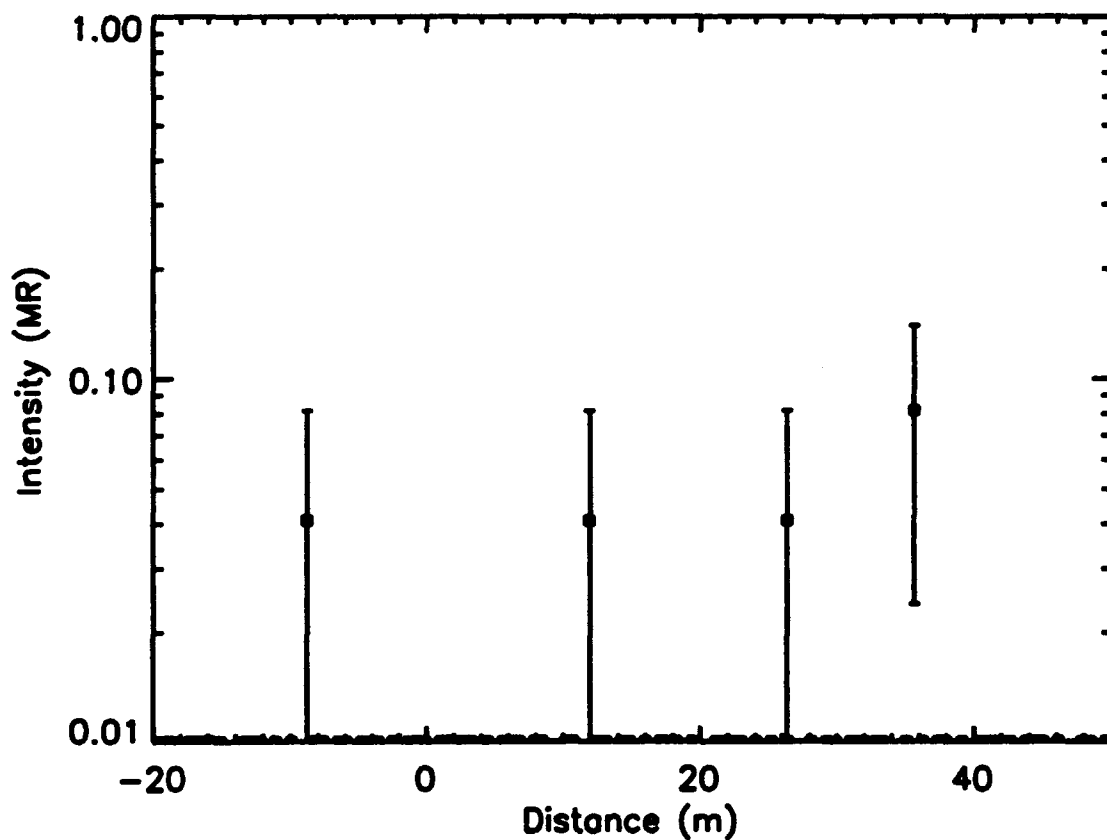
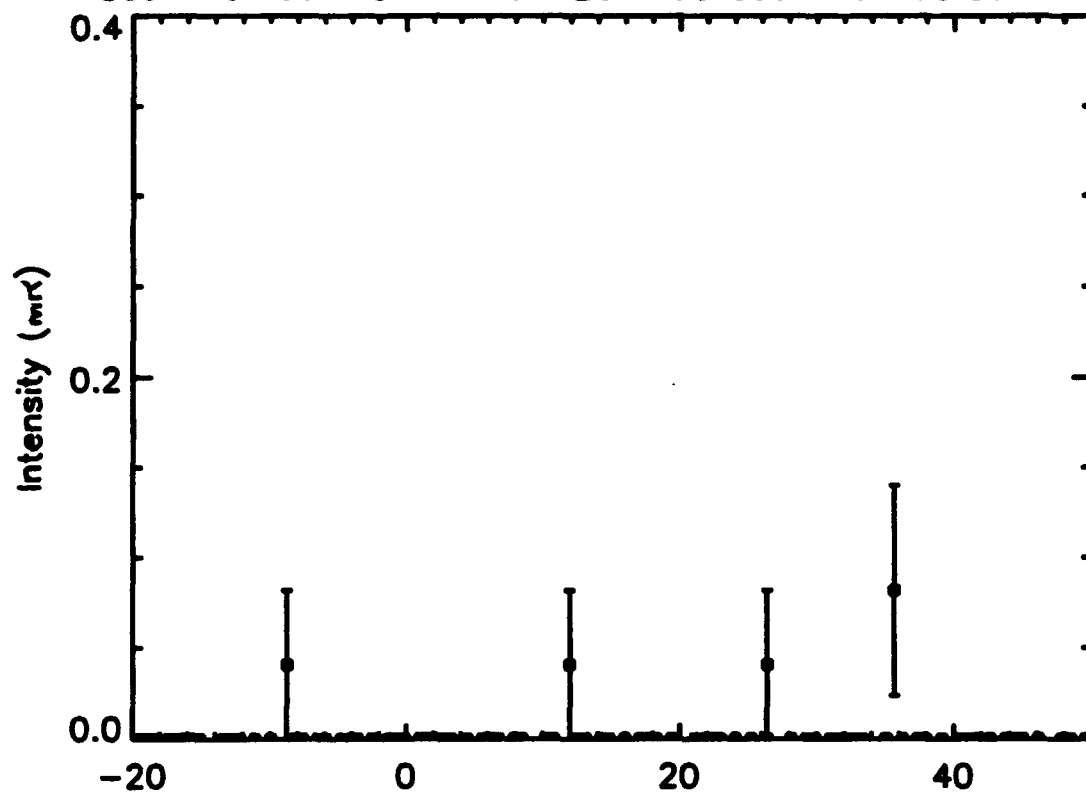
EXCEDE III 3914 A Scanning Photometer
Scan Number 129 Time= 259.750 sec Alt= 95.1608 Km



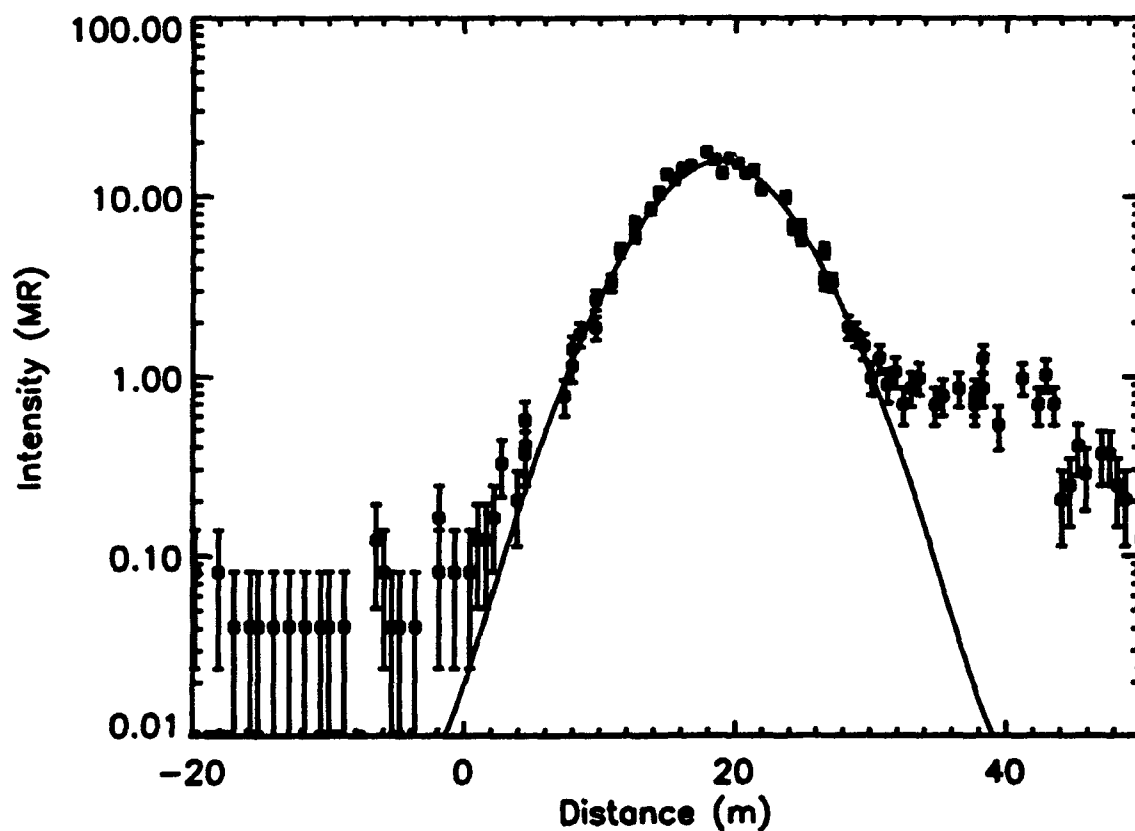
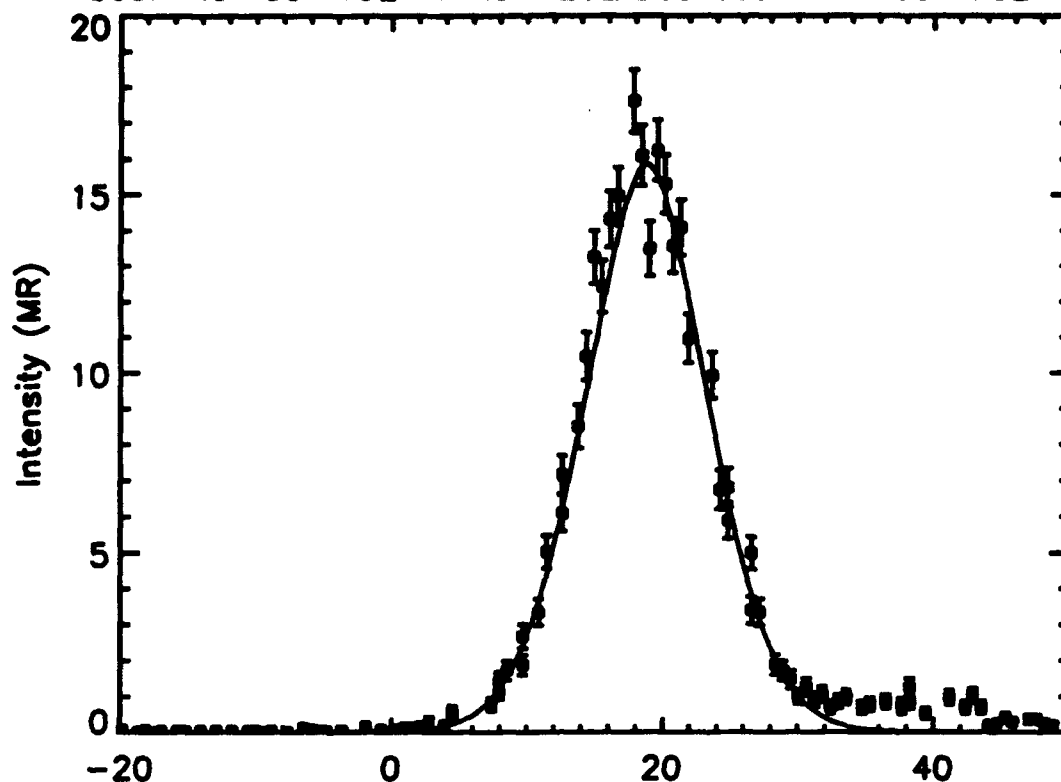
EXCEDE III 3914 A Scanning Photometer
Scan Number 130 Time= 260.889 sec Alt= 94.4569 Km



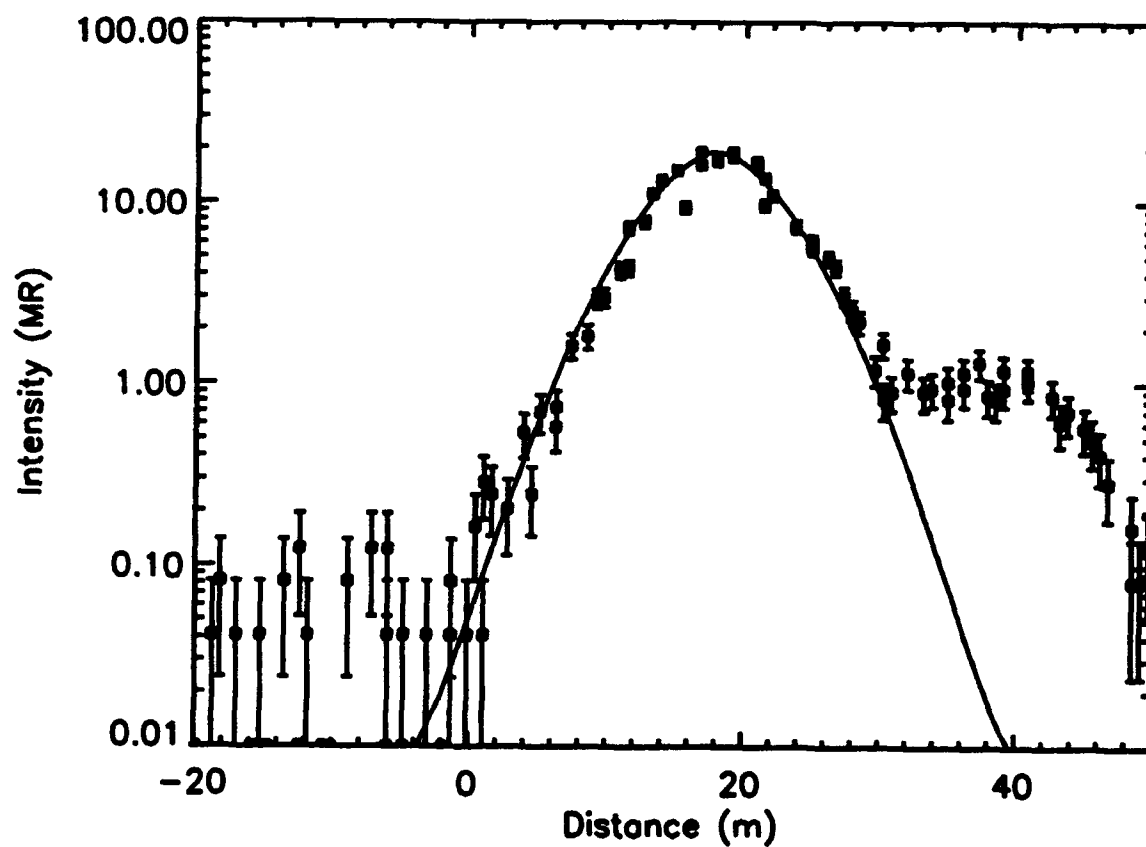
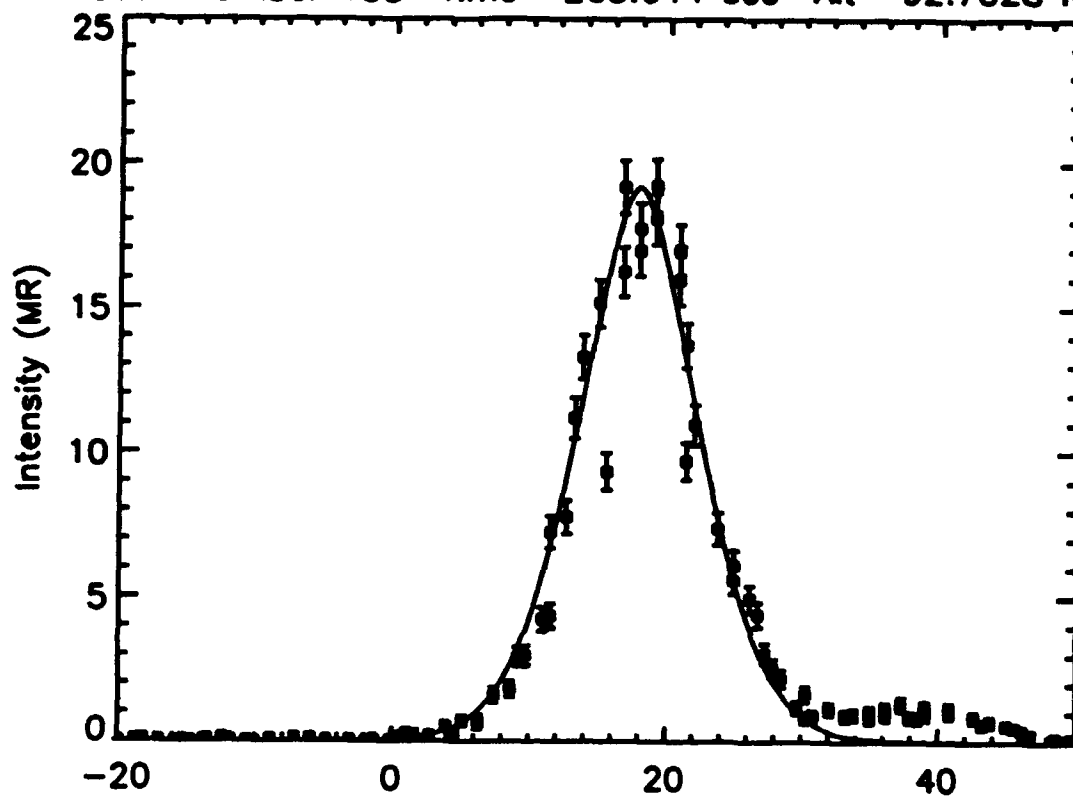
EXCEDE III 3914 A Scanning Photometer
Scan Number 131 Time= 261.795 sec Alt= 93.8877 Km



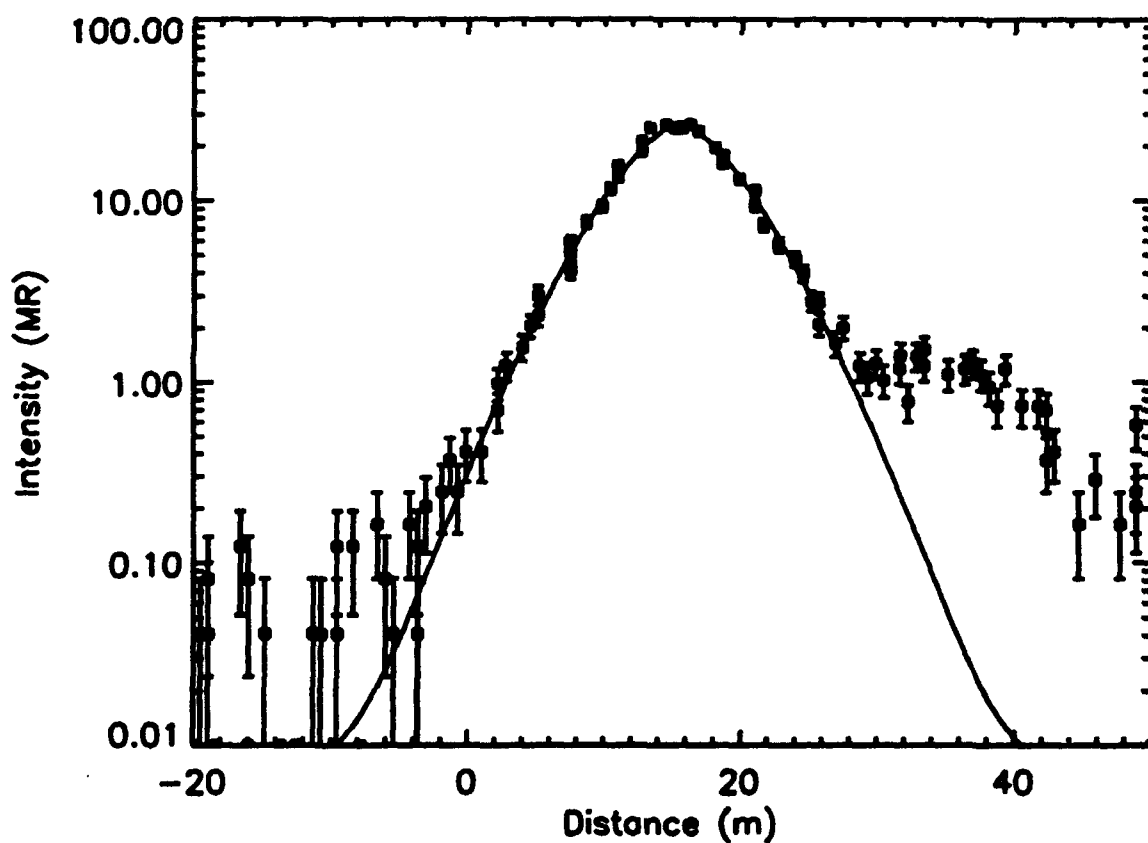
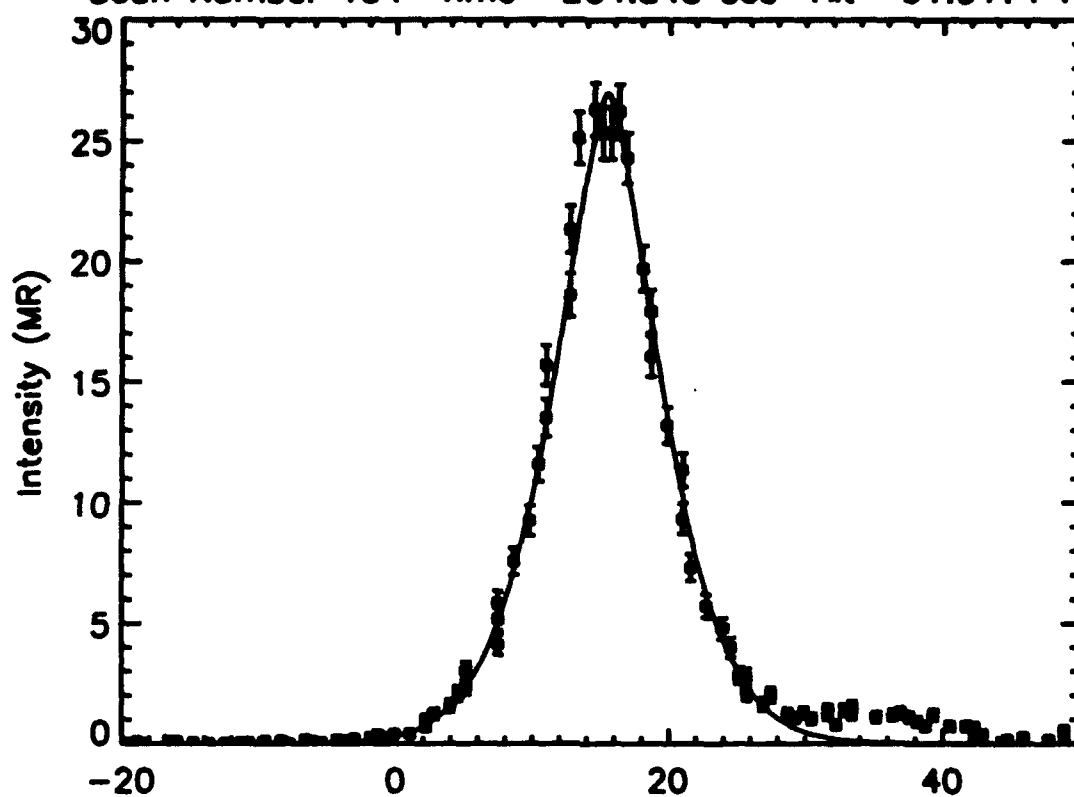
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Scan Number 132 Time= 262.885 sec Alt= 93.1932 Km



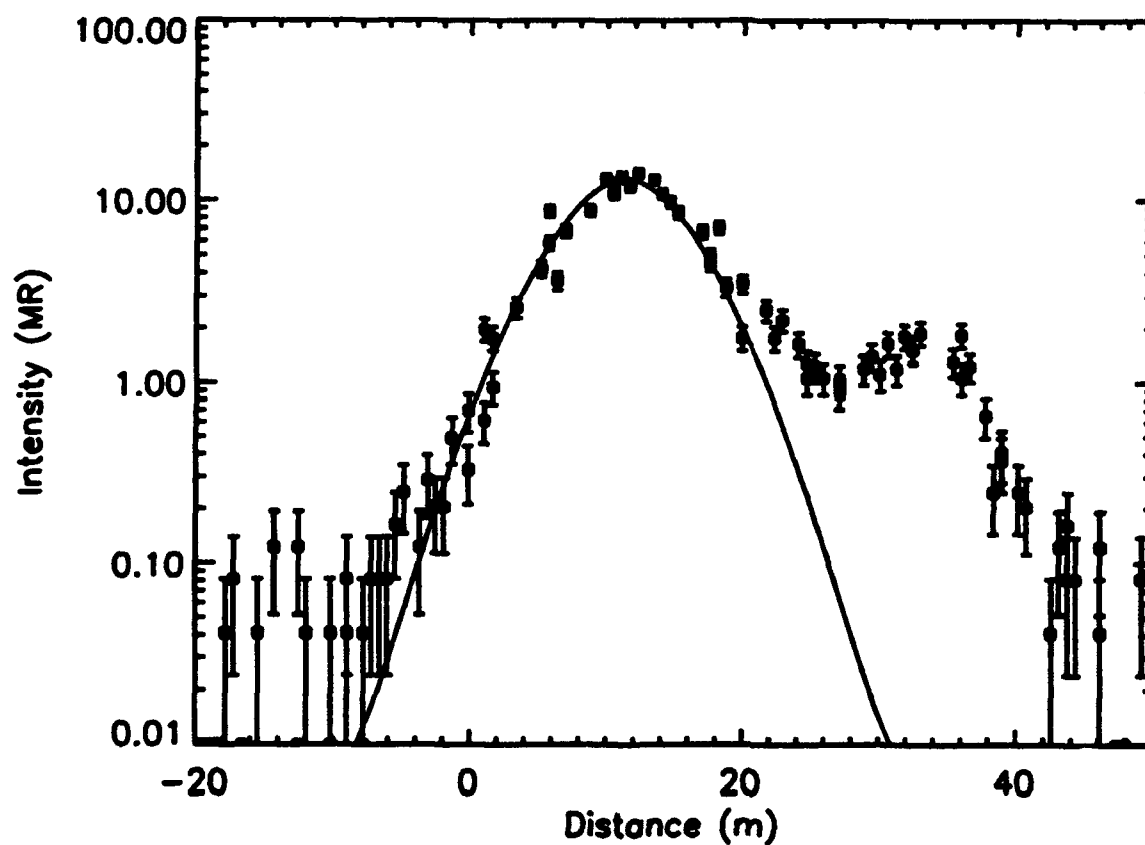
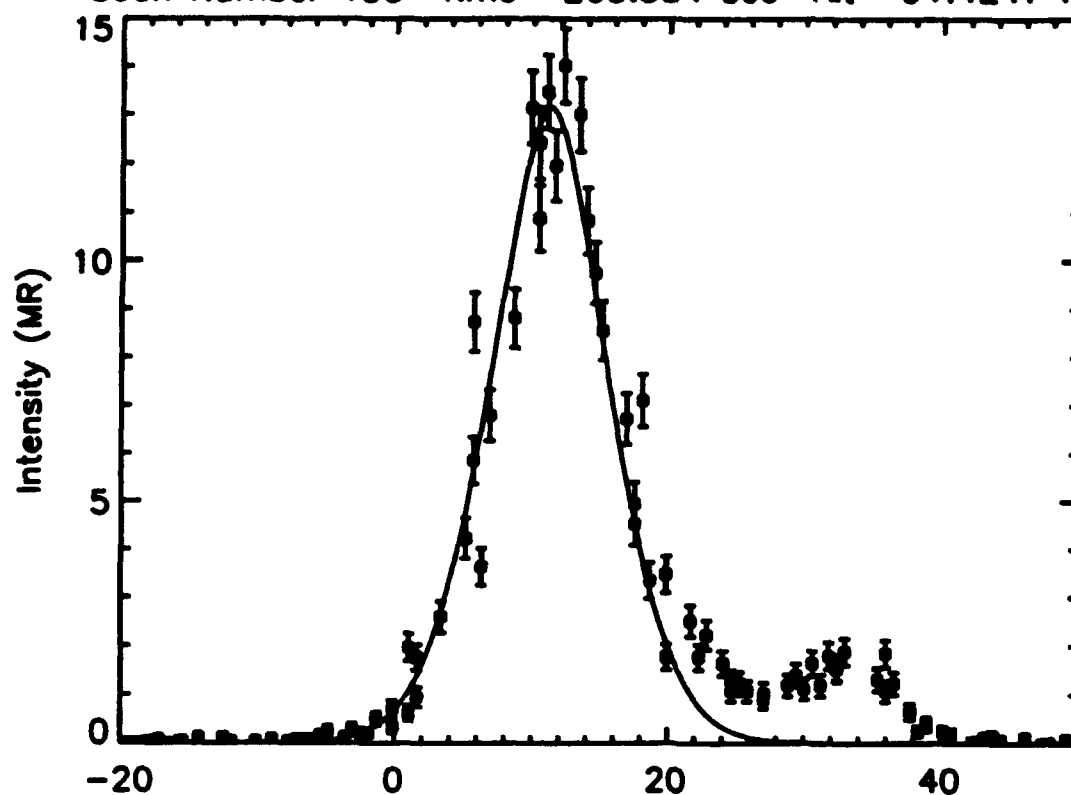
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Scan Number 133 Time= 263.644 sec Alt= 92.7028 Km



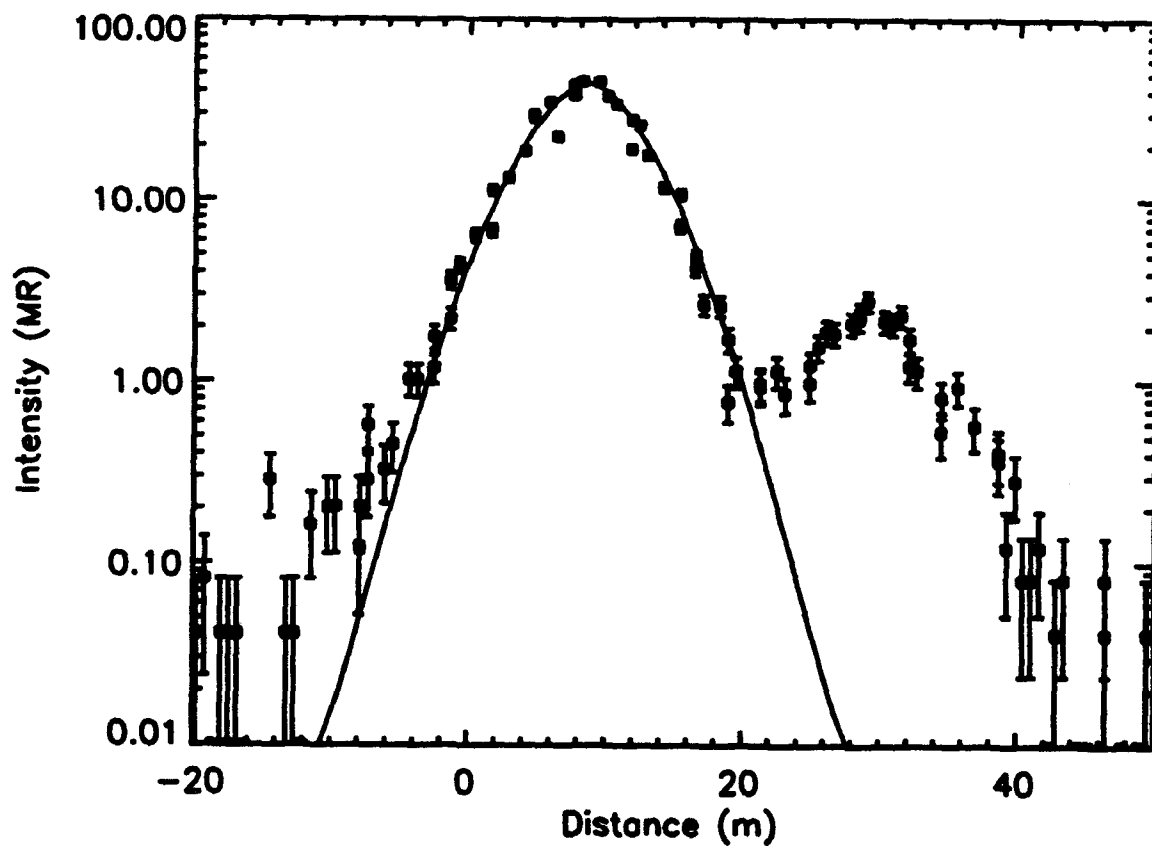
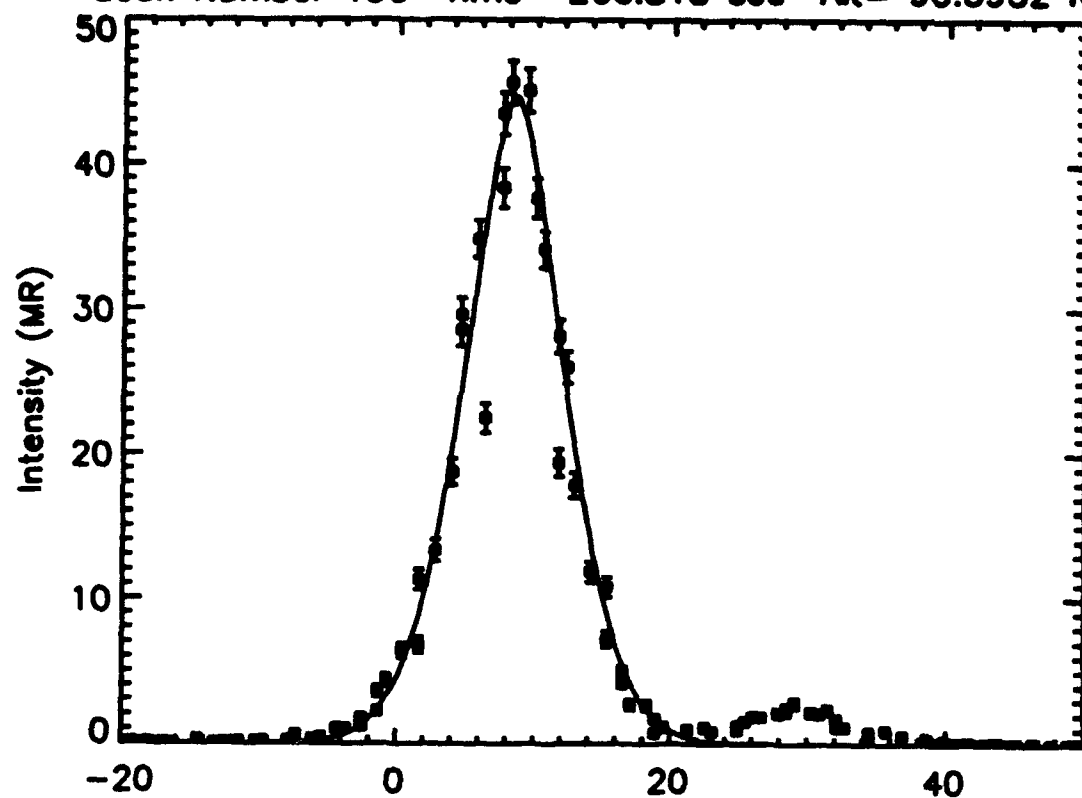
EXCEDE III 3914 A Scanning Photometer
Scan Number 134 Time = 264.843 sec Alt = 91.9171 Km



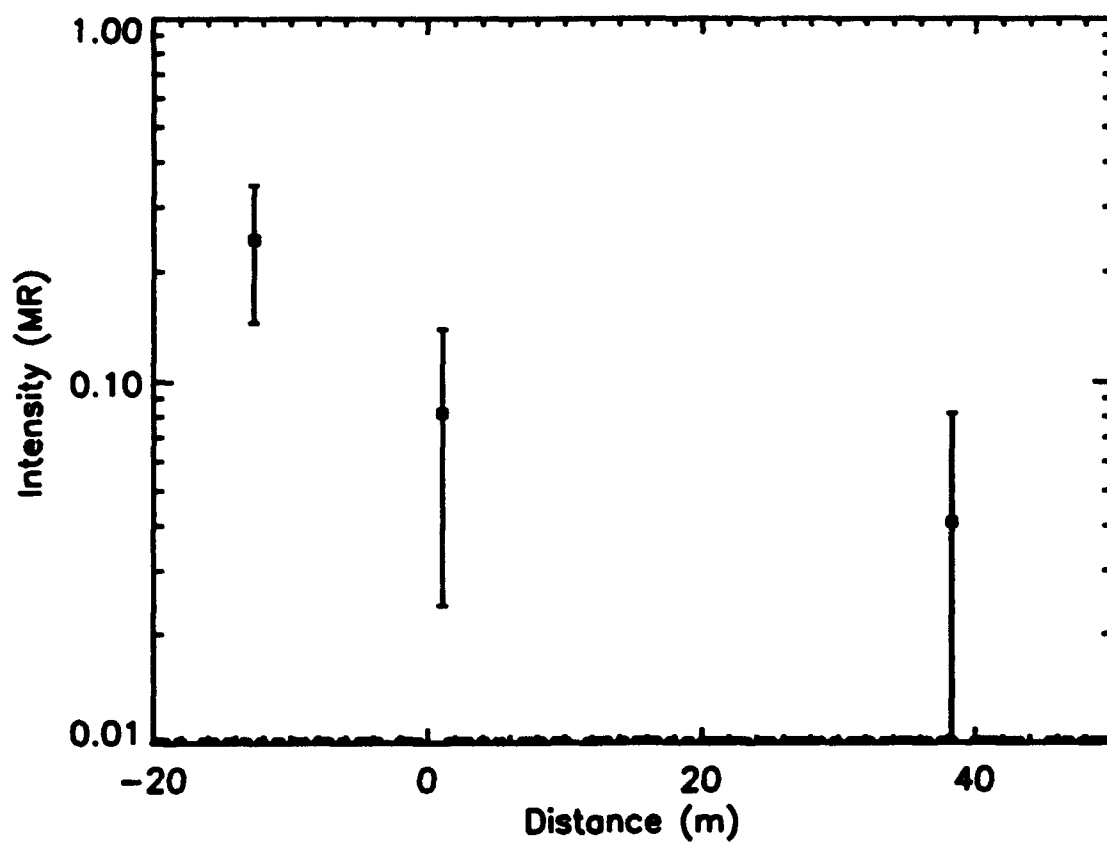
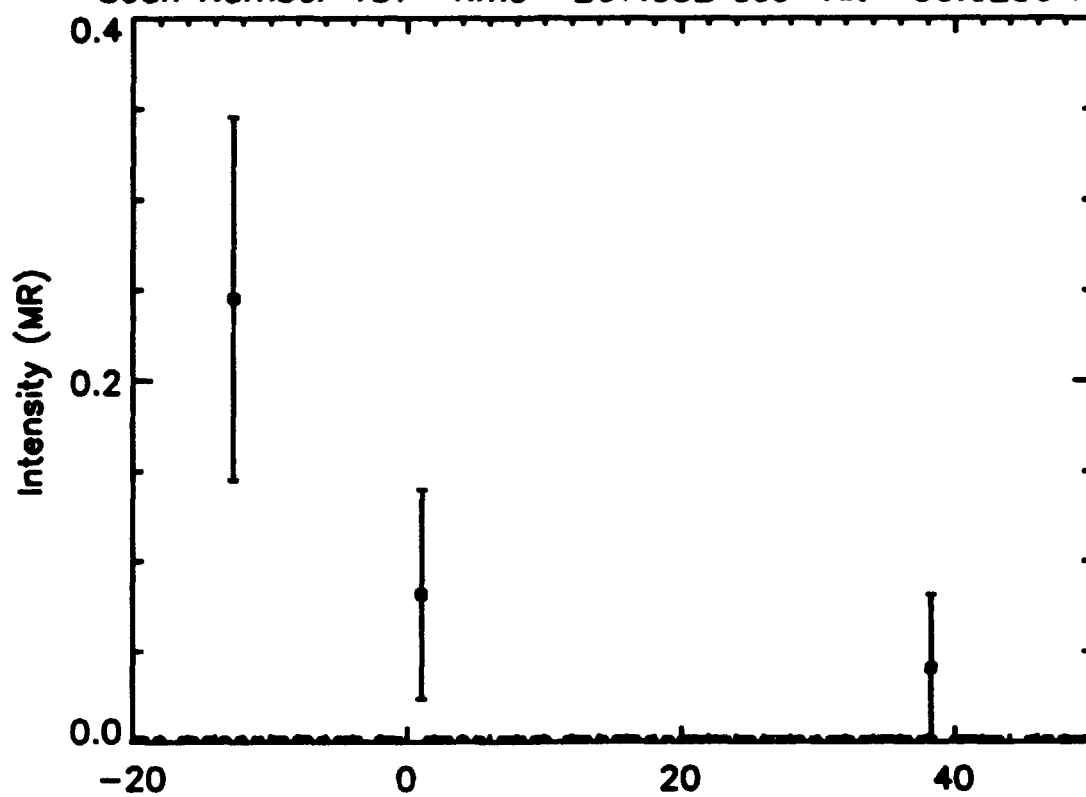
EXCEDE III 3914 A Scanning Photometer
Scan Number 135 Time= 265.584 sec Alt= 91.4247 Km



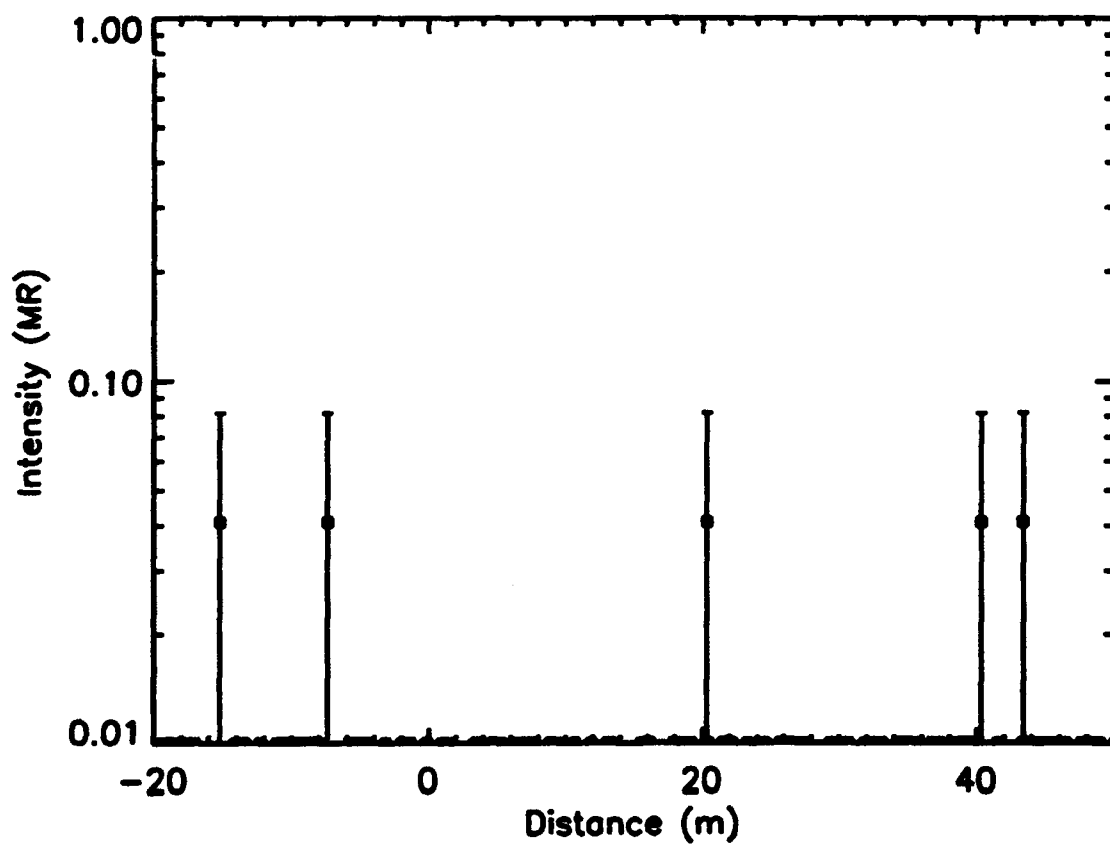
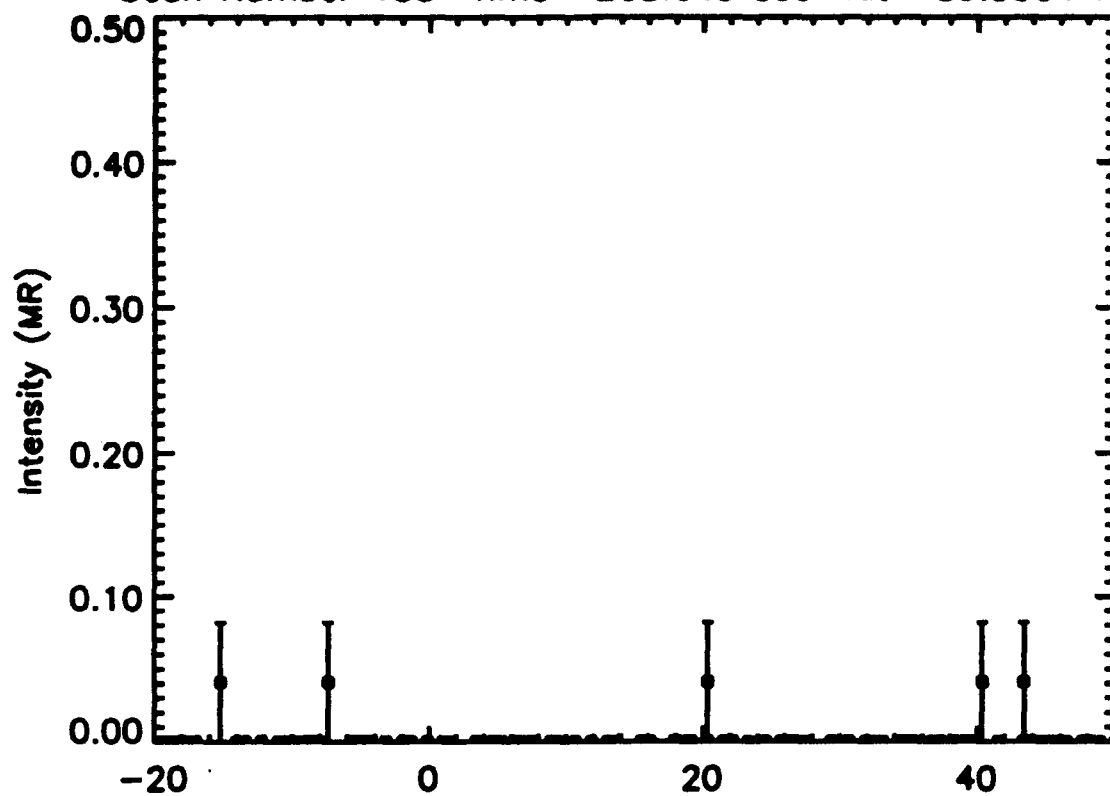
EXCEDE III 3914 A Scanning Photometer
Scan Number 136 Time = 266.815 sec Alt = 90.5952 Km



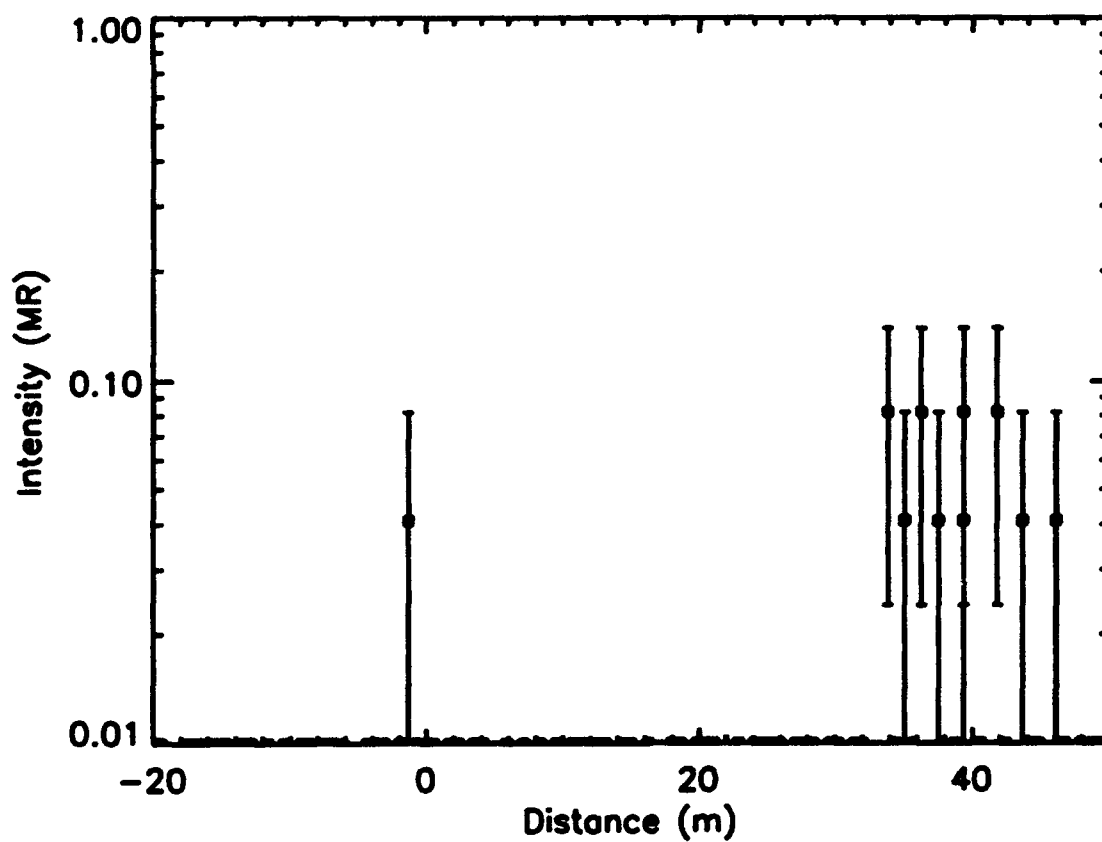
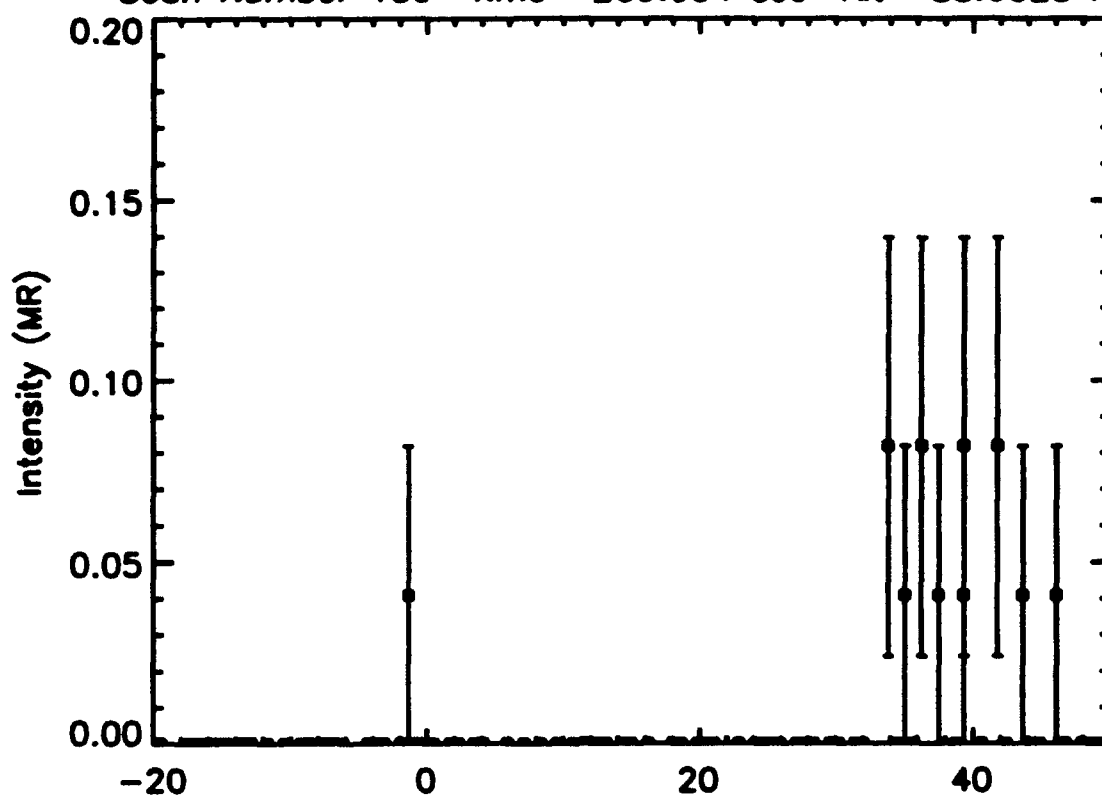
EXCEDE III 3914 A Scanning Photometer
Scan Number 137 Time= 267.652 sec Alt= 90.0230 Km



EXCEDE III 3914 A Scanning Photometer
Scan Number 138 Time= 268.645 sec Alt= 89.3354 Km



EXCEDE III 3914 A Scanning Photometer
Scan Number 139 Time= 269.604 sec Alt= 88.6628 Km



EXCEDE III 3914 A Scanning Photometer
Scan Number 140 Time = 270.725 sec Alt = 87.8654 Km

