



EISCAT

ESR DATA FORMAT

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Raw data dumps

1. ESR data format

Data is recorded in the [matlab4](#) data format and consists of several blocks:

- the experiment info, d_ExpInfo (ASCII string)
- the antenna parameters (see below), d_parbl (32 bit reals)
- the data, d_data (2×32 bit complex reals)
- the raw samples (not always present), d_raw (216 bit complex integers)

1.1. d_parbl

Entry	Value	Introduced
1	Dump end year	
2	Dump end month	
3	Dump end days	
4	Dump end hours	
5	Dump end minutes	
6	Dump end seconds	
7	Integration time, sec	
8	Combined output power, W	
9	Elevation, degrees	

10	Azimuth, degrees	
11	Dump end time, secs since 1970	
12	Dump sequence number	
13	% power tx1 klystron a (of 62.5 kW)	
14	% power tx1 klystron b	
15	% power tx2 klystron a	
16	% power tx2 klystron b	
17	% power tx3 klystron a	
18	% power tx3 klystron b	
19	% power tx4 klystron a	
20	% power tx4 klystron b	
21	Noise injection calibration, K	
22	Pre-integration factor	
23	% power tx5 klystron a	
24	% power tx5 klystron b	
25	% power tx6 klystron a	
26	% power tx6 klystron b	
27	% power tx7 klystron a	
28	% power tx7 klystron b	
29	% power tx8 klystron a	

30	% power tx8 klystron b	
31	rx frequency, channel 1 (MHz)	1999-08-19
32	rx frequency, channel 2 (MHz)	1999-08-19
33	rx frequency, channel 3 (MHz)	1999-08-19
34	rx frequency, channel 4 (MHz)	1999-08-19
35	rx frequency, channel 5 (MHz)	1999-08-19
36	rx frequency, channel 6 (MHz)	1999-08-19
37	rx frequency, channel 7 (MHz)	1999-08-19
38	rx frequency, channel 8 (MHz)	1999-08-19
39	rx frequency, channel 9 (MHz)	1999-08-19
40	d_parbl version number	1999-11-12
41	antenna ID (1-6)	1999-11-12
42	Remote antenna intersection range, m	2003-02-28
43-62	User parameters	2003-07-23
63	High voltage reading (V)	2003-09-01
64	Loop counter	2004-02-01
65	Peak power read from wave guide UHF system (W)	2004-02-20
66	RF duty cycle read from wave guide UHF system	2004-03-20