

Date: December 2, 1988  
To : EISCAT data representatives  
From : Peter Collis  
Subject : CP result tapes

Results from the following experiments are now available and will be mailed to you when the tapes have been copied. This may take a little time as there is a substantial amount of copying underway here just now. System performance plots for these experiments are included.

CP-2-D	13/15 June	1988 (12 UT on 14th onwards)
CP-3-F	12/14 July	1988
CP-1-H	26/27 July	1988
CP-2-D	9/10 August	1988
CP-2-D	16/18 August	1988
CP-1-H	30 Aug/1 Sept	1988

#### Notes

1. Refer to the report "Some effects of recent system behaviour on common program results" for discussions of the data quality for these experiments. The results from 26/27 July are particularly unreliable.
2. The results from CP-2-D, 16/18 August, extend to more than one 2400' tape.
3. Variances for the Tromso long pulse results of CP-1-H 30/8 - 1/9 are about a factor of two larger than usual. The discrepancy was noticed and investigated during the experiment itself but there was no obvious cause. The data appeared normal, as did the fitted ACF's.

#### DISTRIBUTION OF LONG PULSE VARIANCES

The following analysis was performed to investigate the abnormally large variances from the long pulse results of the two CP-1-H experiments during September. All CP-1 and CP-2 experiments from 1988 were included, though for long experiments not all CP-2 results were analysed (typically 24 hours of results were included from each CP-2 experiment). The variances were binned in increments of 0.5, and values up to the maximum interval of 8.5 to 9.0 are plotted versus percentage occurrence. All gates with a good fit are included. The shapes of the distributions are very similar for most of the experiments, with a peak in the distribution between 2.5 and 3.0 and typically 70% or 80% of the values between 2.0 and 4.0. The three abnormal cases are for CP-1 on 26/27 July, 30 August/1 September and 6/7 September. The July experiment is known to have produced unreliable data, though the distribution of variances still maximises close to normal, but with a much greater than usual occurrence rate of large variance values. The other two cases have broader than usual distributions and are shifted to larger values. No explanation of these effects has yet been found. The peaks of the distributions are listed below.

Date	CP	Peak of variance distribution
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16/20 March	1	2.5 - 3.0
5/7 April	1	2.5 - 3.0
12/13 April	2	2.5 - 3.0
3/4 May	1	2.5 - 3.5
14/15 June	2	2.5 - 3.0
26/27 July	1	3.0 - 4.0
9/10 Aug	2	2.5 - 3.0
16/17 Aug	2	2.5 - 3.0
30 Aug/1 Sept	1	6.0 - 6.5
6/7 Sept	1	4.5 - 5.0
16/17 Nov	2	2.5 - 3.0
10/11 Jan (1989)	1	3.0 - 3.5