

Date: September 6, 1991
To: EISCAT data representatives
From: Peter Collis
Subject: Common programme result tapes

Data from the following experiments have now been analysed and tapes containing results in the standard format will be mailed to you when copies have been made. Plots of system temperature and transmitter peak power during these experiments are enclosed.

(1991)

CP-1-I 02/03 May (1000 - 1400 UT)
CP-3-F 11/12 Jun (1800 - 1600 UT)
CP-1-I 10/11 Jul (1000 - 1600 UT)
CP-2-D 12/12 Aug (0808 - 1422 UT)
CP-2-D 13/13 Aug (0157 - 0230 UT)
CP-1-I 13/13 Aug (0236 - 1125 UT)
CP-1-I 13/14 Aug (1845 - 0845 UT)
CP-2-D 17/19 Aug (2113 - 0600 UT)

Notes

1. CP-1-I, 2/3 May, 1991.

Remote site results begin before 10 UT because the scheduled start was for 8 UT but the transmitter could not be reliably until 10 UT.

From 1100 to 1730 UT (2nd May) the multipulse densities show a problem, most likely related to a wrongly set LO2. A similar effect occurred from 0730 to 0953 UT (3rd) following a crowbar. Some of the irregularities in system temperature correlate with known problems in the simultaneously-operated VHF experiment.

2. CP-3-F, 11/12 June.

This experiment was originally scheduled to begin at 10 UT but transmitter difficulties caused a delay until 18UT. Kiruna results start at 10 UT but stop after a few minutes. Sodankylä result files start at 16 UT.

A change to the TXMONI (transmitter monitoring) program before the start of this operation caused wrong (too low) values of peak power to be estimated. However, the high voltage values were correctly recorded and the transmitted power for data analysis purposes was calculated using the usual polynomial expression.

Between 0100 and 0640 UT (12th) there was a radar controller problem (1 second error), causing loss of remote site signals at the extremes of scan. This followed a crowbar at 0047 UT. A crowbar at 2335 UT was followed by DMA problems which were corrected by 0002 UT.

3. CP-1-I, 10/11 July.

A data gap from 1215-1330 UT on 10 July was caused by a transmitter problem. No data were recorded after 0825 UT 11 July in Kiruna due to a power failure.

Note that this experiment started at 10 UT but in Tromsø the LO1 was offset by about 13 kHz until 1430 UT, giving enormous (wrong) velocities. No results from this interval are included on the tape. Also, the Tromsø azimuth and elevation values written to the parameter block were zero until about 1730 UT; correct values were included manually into the analysis.

4. CP-2-D/CP-1-I.12/14 August.

These operations were severely disrupted by problems in Tromsø . The first CP-2 part contains several gaps due to crowbars and antenna faults, leading to the experiment being suspended at 14 UT to allow checks on the transmitter and antenna. Repairs to the transmitter allowed the resumption of CP-2 at 0157 UT (13th) but the antenna fault persisted, preventing scanning, so CP-2 was stopped at 0230 UT and CP-1 started at 0235 UT. Kiruna and Sodankylä continued data-taking throughout most of this period and the remote site CP-2 results are written as a continuous sequence on the tapes, though there was no signal for much of the time.

The first part of the CP-1 operation continued to 1125 UT (13th), at which time it was stopped for further antenna checks. Scanning was still not possible after these investigations so CP-1 was resumed at 1845 UT and continued to 0845 UT (14th). A few cases of bad fits and high variances occurred in the CP-1 long pulse analysis (and a small number in the multipulse) from what seemed to be intermittent interference during both parts of this operation. The spikes in system temperature indicate when this problem occurred.

5. CP-2-D, 17/19 August.

Several short gaps and a small number of longer ones occurred during the first part of this operation due to difficulties with the transmitter. The most significant losses were 2210-2320 (17th), 0003-0054(18th), 0350-0425(18th), 0442-0505(18th), 0513-0551(18th), 0609-0909(18th), 1300-1356(18th) and 1318-1348(18th), all times UT.

Low power was transmitted after 1348 UT and nominal levels were again possible after 1617 UT. Remote site operations were trouble-free.