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NORSAR

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S. NORSAR DATA PROCESSING CENTER (NDPC) OPERATION

Data Center

For facilities, refer to previous semiannual report (Scientific Report No. 4-73/74). No substantial changes in the facilities or equipment occurred in the report period. An initiative was taken to have the previously hired sections of the semi-permanent office building transferred to the project.

As usual some personnel changes occurred in the operator group. Two operators left in the period, and new personnel were hired. Two others have given notice of leaving during the summer.

Maintenance of equipment continued as before, except that project personnel accomplished repair work on some of the special equipment (display units). Equipment in general performed satisfactorily, although various malfunctions occurred, in particular in peripheral equipment. Because of equipment redundancy, there has usually been no problem in keeping the system going. However, a tendency towards more frequent malfunctions is observed, the probable cause of which is equipment aging.

One serious stop occurred 3-6 April, due to a malfunction in the Special Processing System (SPS). As there is no back-up for this machine, the whole system stopped. Because of the complexity of this machine, it took about 3 days to get it running again. (Two faults were eventually located.)

Another phenomenon causing some concern is the difficulty encountered when starting the system after a power failure.

For a review of computer usage, refer to Chapters O and P.

Communications

In spring and summer communication outages invariably increase compared to the winter months. Average subarray communication outage, typically as low as 1-2% during winter, may increase to 10% or even more during summer. A summary of communication outages in this period is given in Table S.1. As before subarrays are treated separately, although outage may concern groups of several subarrays, e.g. 03C, 04C and 05C down continuously for several days in June, caused by a lightning stroke in a cable. Outage figures are based on the automatic on-line print-outs.

P. Tveitane

TABLE S.1

Communications, degraded/outages.

Sub-arrays	JAN		FEB		MAR		APR		MAY		JUN		Total Hours degr./down		Per Cent degr./down	
	>20	>200	>20	>200	>20	>200	>20	>200	>20	>200	>20	>200	>20	>200	>20	>200
01A	10.0	11.5	2.0	7.0	1.5	-	1.0	-	2.5	-	2.5	1.0	19.5	19.5	0.5	0.5
01B	10.0	11.5	2.0	7.0	2.0	-	1.0	-	2.5	-	2.0	2.0	19.5	20.5	0.5	0.5
02B	8.5	10.0	1.0	26.5	1.5	-	1.0	-	2.5	-	2.5	2.0	17.0	38.5	0.4	0.9
03B	8.5	9.5	1.0	7.0	1.0	-	1.0	-	2.5	-	2.5	1.5	16.5	18.0	0.4	0.4
04B	7.5	10.0	0.5	7.0	2.0	-	1.0	5.0	3.0	2.0	3.0	68.5	17.0	92.4	0.4	2.2
05B	4.0	2.0	4.0	7.0	3.5	6.5	5.0	3.5	4.0	0.5	41.5	30.0	62.0	49.5	1.5	1.2
06B	74.0	2.5	6.5	4.5	5.0	95.5	11.5	5.5	4.5	14.0	2.0	46.5	103.5	168.5	2.5	4.0
07B	3.0	1.0	1.0	5.5	3.5	12.0	2.5	4.5	4.0	2.0	5.0	101.5	19.0	126.5	0.5	3.0
01C	2.0	3.0	2.0	9.5	2.0	12.0	4.5	8.5	3.5	1.0	1.5	261.0	35.0	295.0	0.8	7.0
02C	8.0	10.5	2.0	7.5	3.5	2.5	2.0	-	3.0	-	2.5	27.0	21.0	47.5	0.5	1.1
03C	6.0	12.5	1.5	7.5	1.0	6.0	2.0	3.5	2.0	-	-	274.0	13.5	302.5	0.3	7.2
04C	7.0	10.5	1.0	7.0	4.0	2.5	1.0	-	2.5	-	1.5	274.0	17.0	294.0	0.4	7.0
05C	7.0	38.5	2.0	56.0	2.0	1.5	1.0	-	3.5	1.0	1.5	274.0	17.0	371.0	0.4	8.8
06C	8.5	49.0	2.5	61.5	1.0	-	1.0	0.5	2.5	13.0	2.5	6.5	18.0	130.5	0.4	3.1
07C	-	-	-	11.5	1.0	15.0	-	-	1.5	5.0	43.0	10.5	45.5	42.0	1.1	1.0
08C	-	-	1.0	10.5	0.5	2.0	1.0	-	2.0	8.0	1.0	1.5	5.5	22.0	0.1	0.5
09C	2.5	2.0	0.5	99.0	444.5	188.5	4.5	3.0	317.0	3.0	5.0	46.0	774.0	341.5	18.4	8.1
10C	4.0	3.0	1.0	37.5	3.0	12.0	2.5	3.0	4.5	-	6.0	48.0	21.0	103.5	0.5	2.5
11C	3.5	1.5	1.5	8.5	1.0	12.5	2.5	3.5	2.5	3.5	3.5	29.0	14.5	58.5	0.3	1.4
12C	2.5	2.0	-	8.5	1.5	11.5	2.5	4.0	3.5	0.5	5.0	29.0	15.0	55.5	0.4	1.3
13C	3.5	3.5	1.0	10.5	2.0	16.0	2.5	4.0	3.5	1.0	5.5	29.0	18.0	64.0	0.4	1.5
14C	1.5	2.5	1.0	9.5	2.0	13.0	2.0	4.5	3.5	1.5	65.0	262.5	75.0	293.0	1.8	7.0