#264

ISIS-2

ENERGETIC PARTICLE DETECTOR

71-024A-04A

ISIS 2

ELECTRON + PROTON DATA TAPE

71-024A-04A

THIS DATA SET HAS BEEN RESTORED. THERE WERE ORIGINALLY 187 9-TRACK, 800 BPI TAPES WRITTEN IN BINARY. THERE ARE 28 RESTORED TAPES. THE DR AND DS TAPES ARE 9-TRACK, 6250 BPI. THE ORIGINAL TAPES WERE CREATED ON AN IBM 360 COMPUTER. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR02660	DS02660	D14517	1-64	04/19/71 - 06/12/71
		D14274	65-125	05/12/71 - 08/08/72
		D14013	126-201	05/13/71 - 08/24/71
		D17096	202-277	05/13/71 - 07/24/72
		D14269	278-338	05/15/71 - 05/23/71
		D14268	339-396	05/16/71 - 05/24/71
		D14271	397-455	05/25/71 - 10/27/71
DR02661	DS02661	D14272	1-61	05/30/71 - 08/27/71
		D14291	62-129	09/08/71 - 04/30/72
		D15129	130-194	06/13/71 - 06/23/71
		D15134	195-264	06/14/71 - 09/01/71
		D15130	265-327	06/19/71 - 06/23/71
		D15131	328-398	06/23/71 - 07/10/71
		D15132	399-467	06/25/71 - 07/11/71
DR02662	DS02662	D14273	1-73	06/03/71 - 08/04/72
		D14463	74-140	07/12/71 - 07/18/71
		D14464	141-215	07/19/71 - 07/25/71
		D14257	216-289	07/26/71 - 08/01/71
		D14258	290-364	08/01/71 - 08/14/71
		D14430	365-438	08/02/71 - 08/08/71
		D14261	439-511	08/06/71 - 11/16/71
DR02665	DS02665	D18464	1-73	08/21/71 - 01/05/74
		D14466	74-146	08/18/71 - 01/16/72
		D23708	147-219	08/19/71 - 10/14/73
		D17089	220-286	08/23/71 - 03/27/72
		D14288	287-355	09/02/71 - 09/07/71
		D14467	356-421	08/21/71 - 11/10/71
		D14267	422-491	11/01/71 - 11/06/71

DR#	DS#	D#	FILES	TIME SPAN
DR02666	DS02666	D14264	1-69	11/07/71 - 12/16/71
		D14262	70-136	11/08/71 - 11/29/71
		D14465	137-201	11/11/71 - 01/21/72
		D14462	202-270	11/71/71 - 11/22/71
		D14468	271-334	11/30/71 - 12/08/71
		D14266	335-402	12/03/71 - 12/26/71
		D14263	403-472	12/11/71 - 12/29/71
DR02667	DS02667	D14429	1-49	12/17/71 - 08/05/72
		D14265	50-114	12/18/71 - 01/15/72
		D14433	115-185	12/29/71 - 05/21/72
		D14270	186-254	01/04/72 - 05/16/72
		D15143	255-326	01/07/72 - 07/14/72
		D28809	327-399	01/11/72 - 11/27/75
		D15133	400-469	01/23/72 - 01/27/72
DR02668	DS02668	D15135	1-74	01/28/72 - 07/17/72
		D15139	75-141	01/31/72 - 02/07/72
		D14289	142-214	02/07/72 - 02/13/72
		D30421	215-296	02/11/72 - 01/18/74
		D14293	297-366	02/13/72 - 02/20/72
		D14431	367-433	02/17/72 - 08/01/72
		D14432	434-506	02/19/72 - 05/02/72
DR02669	DS02669	D14471	1-7	02/20/72 - 02/20/72
		D23710	8-92	02/20/72 - 07/31/75
		D14275	93-163	02/21/72 - 02/28/72
		D14520	164-228	02/24/72 - 04/05/72
		D14294	229-298	02/29/72 - 03/07/72
		D14424	299-365	03/08/72 - 03/21/72
		D14296	366-436	03/12/72 - 03/19/72
DR02672	DS02672	D29897	1-77	03/15/72 - 11/06/75
		D14427	78-147	03/24/72 - 04/28/72
		D15137	148-222	04/06/72 - 04/13/72
		D14469	223-297	04/09/72 - 04/21/72
		D17092	298-370	04/14/72 - 12/28/72
		D14470	371-439	04/21/72 - 04/27/72
		D14259	440-515	05/08/72 - 07/18/72
DR02673	DS02673	D15146	1-69	05/12/72 - 11/14/72
		D15128	70-132	05/15/72 - 05/20/72
		D14292	133-201	05/22/72 - 05/26/72
		D14276	202-269	05/27/72 - 07/28/72
		D33414	270-344	05/31/72 - 01/20/77
		D14519	345-409	06/01/72 - 06/06/72
		D14277	410-476	06/06/72 - 07/15/72
DR02674	DS02674	D14511	1-67	06/08/72 - 06/13/72
		D14513	68-142	06/13/72 - 06/21/72
		D14514	143-210	06/20/72 - 06/25/72
		D14518	211-278	08/24/71 - 08/28/71
		D15136	379-348	06/26/72 - 07/01/72
		D15147	349-423	07/10/72 - 07/07/72

DR#	DS#	D#	FILES	TIME SPAN
DR02675	DS02675	D15138	1-68	07/18/72 - 07/22/72
		D14287	69-140	07/23/72 - 07/29/72
		D14290	141-212	07/29/72 - 08/21/72
		D14260	213-280	08/09/72 - 08/15/72
		D14295	281-350	08/25/72 - 08/31/72
		D14425	351-422	09/01/72 - 09/07/72
		D14428	423-481	09/09/72 - 09/20/72
DR02676	DS02676	D14426	1-73	09/12/72 - 09/18/72
		D14512	74-152	09/21/72 - 09/27/72
		D14515	153-221	09/28/72 - 10/03/72
		D30898	222-304	09/13/72 - 07/18/75
		D14516	305-372	10/04/72 - 10/10/72
		D15142	373-435	10/10/72 - 10/19/72
		D17093	436-507	10/17/72 - 11/12/72
DR02677	DS02677	D18468	1-78	10/21/72 - 10/03/73
		D23706	79-153	10/25/72 - 09/28/74
		D23707	154-214	10/30/72 - 11/05/72
		D28092	215-298	11/01/72 - 06/12/75
		D17094	299-366	11/12/72 - 11/21/72
		D17095	367-438	11/21/72 - 11/27/72
		D17097	439-504	11/27/72 - 12/03/72
DR02679	DS02679	D30419	1-82	12/01/72 - 07/20/73
		D33415	83-159	12/01/72 - 04/27/76
		D17098	160-225	12/03/72 - 12/07/72
		D18459	226-296	12/08/72 - 12/13/72
		D29895	297-380	12/10/72 - 06/26/74
		D18460	381-450	12/14/72 - 12/18/72
		D18769	451-536	12/14/72 - 12/13/75
DR02680	DS02680	D30417	1-74	12/17/72 - 10/07/75
		D18462	75-142	12/19/72 - 12/23/72
		D29896	143-230	12/22/72 - 01/13/76
		D18461	231-295	12/25/72 - 01/02/73
		D17091	296-368	01/01/73 - 12/24/73
		D33423	369-458	01/03/73 - 12/17/75
DR02681	DS02681	D15145	1-67	01/04/73 - 01/09/73
		D16593	68-135	01/10/73 - 01/14/73
		D16591	136-207	01/15/73 - 01/19/73
		D16589	208-275	01/20/73 - 01/25/73
		D33421	276-325	01/24/73 - 12/09/76
		D16588	326-396	01/25/73 - 01/30/73
		D16585	397-464	02/06/73 - 02/11/73
DR02682	DS02682	D16586	1-68	01/31/73 - 02/05/73
		D17090	69-139	02/12/73 - 02/17/73
		D15140	140-209	02/20/73 - 02/27/73
		D16587	210-281	02/21/73 - 03/31/73
		D16592	282-353	02/27/73 - 03/12/73
		D15144	354-424	02/82/73 - 03/06/73
		D16590	425-500	03/13/73 - 03/18/73

DR#	DS#	D#	FILES	TIME SPAN
DR02683	DS02683	D29902	1-86	03/18/73 - 12/17/75
		D16594	87-154	03/19/73 - 03/27/73
		D30905	155-245	03/31/73 - 04/24/77
		D23702	246-323	04/02/73 - 04/30/74
		D28840	324-405	04/05/73 - 06/25/73
		D28844	406-479	04/06/73 - 05/23/74
		D28093	480-563	04/30/73 - 02/27/75
DR02687	DS02687	D28095	1-75	05/02/73 - 10/17/75
		D30900	76-159	05/11/73 - 01/24/77
		D30899	160-248	06/06/73 - 09/06/76
		D23705	249-326	06/18/73 - 12/14/74
		D28807	327-409	06/19/73 - 05/23/75
		D23701	410-506	06/25/73 - 02/22/74
		D28842	507-581	06/26/73 - 07/07/73
DR02688	DS02688	D29904	1-82	07/11/73 - 07/18/73
		D29903	83-162	07/18/73 - 07/28/73
		D28837	163-252	08/01/73 - 09/15/73
		D29899	253-326	08/01/73 - 09/29/73
		D28810	327-412	08/04/73 - 11/01/75
		D23704	413-497	08/18/73 - 12/14/74
DR02689	DS02689	D18465	1-76	10/14/73 - 01/29/74
		D23709	77-153	10/15/73 - 01/30/74
		D28097	154-226	11/13/73 - 10/08/75
		D18466	227-296	11/16/73 - 02/24/74
		D28101	297-375	11/17/73 - 04/22/74
		D28100	376-461	11/17/72 - 04/08/74
		D28096	462-546	12/31/73 - 11/13/75
DR02690	DS02690	D30425	1-90	01/01/74 - 11/13/74
		D23703	91-185	01/19/74 - 12/05/74
		D30423	186-237	02/07/74 - 05/13/74
		D30896	238-318	02/13/74 - 03/04/75
		D18467	319-392	02/25/74 - 03/24/74
		D29900	393-478	03/05/74 - 11/26/75
		D28845	479-552	04/01/74 - 10/25/74
DR02691	DS02691	D28806	1-80	04/22/74 - 05/24/75
		D28841	81-157	05/01/74 - 05/11/74
		D33416	158-244	05/07/74 - 07/11/77
		D28843	245-324	05/10/74 - 05/20/74
		D28098	325-405	07/05/75 - 08/05/75
		D30424	406-492	07/09/74 - 02/15/75
		D28099	493-579	08/12/74 - 03/28/75
DR02693	DS02693	D30903	1-80	10/17/74 - 01/23/77
		D30418	81-162	12/09/74 - 01/08/76
		D30426	163-249	02/20/75 - 07/31/76
		D30422	250-329	03/12/75 - 09/20/76
		D29901	330-404	03/29/73 - 08/01/73
		D28094	405-486	05/08/75 - 09/30/75
		D28808	487-571	07/02/75 - 11/12/75

DR#	DS#	D#	FILES	TIME SPAN
DR02694	DS02694	D29898	1-82	08/01/73 - 06/17/76
		D28836	83-168	10/21/75 - 12/11/75
		D30897	169-250	01/04/76 - 10/01/76
		D33418	251-336	01/04/76 - 01/14/76
		D30420	337-419	01/08/76 - 06/23/76
		D33419	420-507	01/14/76 - 10/29/76
		D30901	508-586	11/25/76 - 12/13/76
DR02695	DS02695	D30902	1-86	12/10/76 - 12/26/76
		D30904	87-175	01/19/77 - 06/24/77
		D33420	176-263	01/24/77 - 03/30/78
		D33422	264-354	01/31/77 - 05/06/77
		D33417	355-447	02/06/77 - 12/03/77
DR02696	DS02696	D15141	1-70	07/06/72 - 07/10/72
		D28838	71-154	09/15/73 - 05/02/74

REQ. A	T
JCH	VJP
WTJ	CMP
VJP	
CMP	

RAND		
RB5505	RC3418	RC8201
RC0344	RC5986	RC8774
RC2487	RC7402	
RC6862	RC7978	

ISIS 2

ACQ. AGENT
EGS

ENERGETIC PARTICLE DETECTOR

71-024A-04A

This data set catalog consists of 372 ISIS-2 Energetic Particle Detector data. The tapes are multi-filed, nine track, 800 BPI, in IBM/360 binary format. The logical and physical records are the same, consisting of 13,000 eight-bit bytes.

D#	C#	FILES	TIME SPAN
D-14013	C-11262	75	5/13/71 - 8/24/71
D-14257	C-11466	74	7/26/71 - 8/01/71
D-14258	C-11467	75	8/01/71 - 8/14/71
D-14259	C-11468	76	5/08/72 - 7/18/72
D-14260	C-11469	68	8/09/72 - 8/15/72
D-14261	C-11470	73	8/07/72 - 8/08/71
D-14262	C-11471	67	11/08/71 - 11/29/71
D-14263	C-11472	70	12/11/71 - 12/29/71
D-14264	C-11473	69	11/07/71 - 12/16/71
D-14265	C-11474	65	12/18/71 - 1/15/72
D-14266	C-11475	68	12/03/71 - 12/26/71
D-14267	C-11476	70	11/01/71 - 11/06/71
D-14268	C-11477	58	5/16/71 - 5/24/71
D-14269	C-11478	61	5/15/71 - 5/23/71
D-14270	C-11479	69	1/04/72 - 5/17/72
D-14271	C-11480	59	5/26/71 - 10/27/71
D-14272	C-11481	61	5/30/71 - 8/27/71
D-14273	C-11482	73	7/03/71 - 8/05/71
D-14274	C-11483	61	5/12/71 - 8/08/72

D#	C#	FILES	TIME SPAN
-14275	C-11484	71	2/21/72 - 2/28/72
D-14276	C-11485	68	5/27/72 - 7/26/72
D-14277	C-11486	67	6/06/72 - 7/15/72
D-14287	C-11487	72	7/23/72 - 7/29/72
D-14288	C-11488	69	9/02/71 - 9/07/71
D-14289	C-11489	73	2/07/72 - 2/13/72
D-14290	C-11490	72	7/29/72 - 8/21/72
D-14291	C-11491	68	5/31/71 - 4/30/72
D-14292	C-11492	69	5/22/72 - 5/26/72
D-14293	C-11493	70	2/13/72 - 2/20/72
D-14294	C-11494	70	2/29/72 - 3/07/72
D-14295	C-11495	70	8/25/72 - 8/31/72
D-14296	C-11496	71	3/12/72 - 3/19/72
D-14424	C-11622	67	3/08/72 - 3/21/72
D-14425	C-11623	72	9/01/72 - 9/17/72
D-14426	C-11624	73	9/12/72 - 9/18/72
D-14427	C-11625	70	3/24/72 - 4/28/72
D-14428	C-11626	59	9/09/72 - 9/20/72
D-14429	C-11627	49	12/16/71 - 3/05/72
D-14430	C-11628	74	8/02/71 - 8/08/71
D-14431	C-11629	67	2/17/72 - 8/01/72
D-14432	C-11630	73	2/19/72 - 5/02/72
D-14433	C-11631	71	12/29/71 - 5/21/72
D-14462	C-11696	69	11/17/71 - 11/22/71
D-14463	C-11697	67	7/12/71 - 7/18/71
D-14464	C-11698	75	7/19/71 - 7/25/71
D-14465	C-11699	65	11/11/71 - 1/21/72
D-14466	C-11700	73	8/18/71 - 1/16/72
D-14467	C-11701	66	10/23/71 - 11/10/71

D#	C#	FILES	TIME SPAN
D-14468	C-11702	64	11/30/71 - 12/08/71
D-14469	C-11703	75	4/09/72 - 4/21/72
D-14470	C-11704	69	4/21/72 - 4/27/72
D-14471	C-11705	63	2/20/72 - 8/23/72
D-14511	C-11717	67	6/08/72 - 6/13/72
D-14512	C-11718	79	9/21/72 - 9/27/72
D-14513	C-11719	75	6/13/72 - 6/21/72
D-14514	C-11720	68	6/20/72 - 6/25/72
D-14515	C-11721	69	9/28/72 - 10/03/72
D-14516	C-11722	68	10/04/72 - 10/10/72
D-14517	C-11723	64	4/19/71 - 6/12/71
D-14518	C-11724	68	6/20/72 - 6/25/72
D-14519	C-11725	65	6/01/72 - 6/08/72
D-14520	C-11726	65	2/24/72 - 4/05/72
D-15128	C-11727	63	5/15/72 - 5/20/72
D-15129	C-11728	65	6/13/71 - 6/23/71
D-15130	C-11729	63	6/19/71 - 6/24/71
D-15131	C-11730	71	6/23/71 - 7/10/71
D-15132	C-11731	69	6/25/71 - 7/11/71
D-15133	C-11732	70	1/21/72 - 1/27/72
D-15134	C-11733	70	6/14/71 - 9/01/71
D-15135	C-11734	74	1/28/72 - 7/12/72
D-15136	C-11735	70	6/26/72 - 7/01/72
D-15137	C-11736	75	4/06/72 - 4/13/72
D-15138	C-11810	68	7/18/72 - 7/22/72
-15139	C-11811	67	1/31/72 - 2/07/72
D-15140	C-11812	70	2/20/73 - 2/27/73

D#	C#	FILES	TIME SPAN
D-15141	C-11813	70	7/06/72 - 7/10/72
D-15142	C-11814	63	10/10/72 - 10/19/72
D-15143	C-11815	72	1/07/72 - 7/14/72
D-15144	C-11816	71	2/28/73 - 3/06/73
D-15145	C-11817	67	1/04/73 - 1/09/73
D-15146	C-11818	69	5/12/72 - 11/14/72
D-15147	C-11819	75	7/01/72 - 7/07/72
D-16585	C-12611	68	1/31/73 - 2/05/73
D-16586	C-12612	70	2/06/73 - 2/11/73
D-16587	C-12613	72	2/21/73 - 3/31/73
D-16588	C-12614	71	1/25/73 - 1/30/73
D-16589	C-12615	68	1/20/73 - 1/25/73
D-16590	C-12616	76	3/13/73 - 3/18/73
D-16591	C-12617	72	1/15/73 - 1/19/73
D-16592	C-12618	72	2/27/73 - 3/12/73
D-16593	C-12619	68	1/10/73 - 1/14/73
D-16594	C-12620	68	3/19/73 - 3/27/73
D-17089	C-13536	67	8/23/71 - 3/27/72
D-17090	C-13537	71	2/12/73 - 2/17/73
D-17091	C-13538	73	1/01/73 - 12/24/73
D-17092	C-13539	73	4/14/72 - 12/28/72
D-17093	C-13540	72	10/17/72 - 11/12/72
D-17094	C-13541	68	11/12/72 - 11/21/72
D-17095	C-13542	72	11/22/72 - 11/28/72
D-17096	C-13543	76	5/13/71 - 7/24/72
D-17097	C-13544	66	11/28/72 - 12/03/72
D-17098	C-13545	66	12/03/72 - 12/07/72

D#	C#	FILES	TIME SPAN
D-18459	C-14920	71	12/08/72 - 12/13/72
D-18460	C-14921	70	12/14/72 - 12/18/72
D-18461	C-14922	65	12/25/72 - 1/02/73
D-18462	C-14923	68	12/19/71 - 12/23/72
D-18463	C-14924	67	4/17/72 - 1/21/74
D-18464	C-14925	73	8/21/71 - 1/05/74
D-18465	C-14926	76	10/14/73 - 1/29/74
D-18466	C-14927	70	11/16/73 - 2/24/74
D-18467	C-14928	74	2/25/74 - 3/24/74
D-18468	C-14929	78	10/21/72 - 10/03/73
D-23701	C-17823	97	6/25/73 - 2/22/74
D-23702	C-17824	78	4/02/73 - 4/30/74
D-23703	C-17825	95	1/19/74 - 12/05/74
D-23704	C-17826	85	8/18/73 - 12/14/74
D-23705	C-17827	78	6/18/73 - 12/14/74
D-23706	C-17828	75	10/25/72 - 9/28/74
D-23707	C-17829	61	10/30/72 - 11/05/74
D-23708	C-17830	73	8/19/71 - 10/14/73
D-23709	C-17831	77	10/15/73 - 1/30/74
D-23710	C-17832	85	2/20/72 - 7/31/75
D-28092	C-18557	84	11/01/72 - 6/12/75
D-28093	C-18558	84	4/30/73 - 2/27/75
D-20894	C-18559	82	5/08/75 - 9/30/75
D-28095	C-18560	75	5/02/73 - 10/17/75
D-20896	C-18561	85	12/31/73 - 11/13/75
D-28097	C-18562	73	11/13/73 - 10/08/75
D-28098	C-18563	81	7/05/74 - 8/05/74
D-28099	C-18564	86	8/12/74 - 3/28/75

D#	C#	FILES	TIME SPAN
28100	18565	86	11/17/73 - 4/09/74
28101	18566	79	11/17/73 - 4/22/74
28806	18679	80	4/22/74 - 5/24/75
28807	18680	83	6/19/73 - 5/24/75
28808	18681	85	7/2/75 - 11/12/75
28809	18682	73	1/11/72 - 11/27/75
28810	18683	86	8/04/73 - 11/01/75
28836	18766	86	10/21/75 - 12/11/75
28837	18767	90	8/1/73 - 9/15/73
28838	18768	84	9/15/73 - 5/2/74
28839	18769	86	12/14/72 - 12/13/75
28840	18770	82	4/5/73 - 6/25/73
28841	18771	77	5/1/74 - 5/11/74
28842	18772	75	6/26/73 - 7/7/73
28843	18773	80	5/10/74 - 5/20/74
28844	18774	74	4/6/73 - 5/23/74
28845	18775	74	4/1/74 - 10/25/74
29895	19289	84	12/11/72 - 06/26/74
29896	19290	88	12/22/72 - 01/13/76
29897	19291	77	03/16/72 - 11/07/75
29898	19292	82	08/01/75 - 06/18/76
29899	19293	74	08/01/73 - 09/29/73
29900	19294	87	03/05/74 - 11/26/75
29901	19295	75	03/29/75 - 08/01/75
29902	19296	86	03/18/73 - 12/17/75
29903	19297	80	07/18/73 - 07/28/73
29904	19298	82	07/11/73 - 07/18/73

D#	C#	FILES	TIME SPAN
D-30417	C-19397	74	12/17/72 - 10/07/75
D-30418	C-19398	82	12/09/74 - 1/08/76
D-30419	C-19399	82	12/01/72 - 7/20/73
D-30420	C-19400	83	1/08/76 - 6/23/76
D-30421	C-19401	82	2/11/72 - 1/18/74
D-30422	C-19472	80	3/12/75 - 9/27/76
D-30423	C-19473	52	2/07/74 - 5/13/74
D-30424	C-19474	87	7/09/74 - 2/15/75
D-30425	C-19475	90	1/01/74 - 11/13/74
D-30426	C-19476	87	2/20/75 - 7/31/76
D-30896	C-19718	81	2/13/74 - 3/04/75
D-30897	C-19693	82	1/04/76 - 10/01/76
D-30898	C-19694	83	10/01/72 - 7/18/75
D-30899	C-19695	89	6/06/73 - 9/06/76
D-30900	C-19696	84	5/11/73 - 1/24/77
D-30901	C-19697	79	11/25/76 - 12/13/76
D-30902	C-19698	86	12/10/76 - 12/26/76
D-30903	C-19699	80	10/17/74 - 1/23/77
D-30904	C-19700	89	1/19/77 - 6/24/77
D-30905	C-19719	91	3/31/73 - 4/24/77
D-33414	C-20606	75	5/31/72 - 1/20/77
D-33415	C-20607	77	12/01/72 - 4/27/76
D-33416	C-20608	87	5/07/74 - 7/11/76
D-33417	C-20609	93	2/06/77 - 12/03/77
D-33418	C-20610	80	1/04/76 - 1/14/76
D-33419	C-20611	88	1/14/76 - 10/29/76
D-33420	C-20612	88	1/24/77 - 3/30/78
D-33421	C-20613	50	1/24/73 - 12/09/76

D#	C#	FILES	TIME SPAN
D-33422	C-20614	91	1/31/77 - 5/06/77
D-33423	C-20615	90	1/03/73 - 12/17/75

800 BPI
9 TRACK
75 ft

FORMAT OF ISIS-2 OUTPUT TAPE (COPY)

R * 4 4 byte real word

I * 4 4 byte integer

I * 2 2 byte integer

Total record length 13000 bytes (1 minute's data)

BL	I*4	Block length in bytes (4 more than RL)
RL	I*4	Record length in bytes
PASS	I*4	Pass number
YEAR	I*4	Year (i.e. 72)
DAY	I*4	Day of year (Jan. 1 = 1)
HOUR	I*4	Hour of day (U.T.))
MIN	I*4	Minute of hour) Start time of minute's data
SEC	I*4	Second of minute)
NFR	I*4	Element no. of first data readout in the minute
SPIN	R*4	Spin period as determined from magnetometers
TEMP	3I*4	3 temperatures (°C) from sensors H,I,L
TOLDE	R*4	Solar magnetic declination (deg)
ORBIT(KR,5)	R*4	Apparent local solar time at start of minute
PPARS(1-5)	5R*4	Invariant latitude (1), U.T. (2), mag. loc. time (3), mag. field (4), spin axis-mag. field angle (5), on the integral minute
ORBIT(1-10,6)	10R*4	Geodetic latitude)
ORBIT(" 7)	"	" longitude)
ORBIT(" 8)	"	" height)
ORBIT(" 9)	"	Geomagnetic latitude) 10 values of each,
ORBIT(" 10)	"	" longitude) taken at 6 sec.
ORBIT(" 12)	"	Invariant latitude) intervals
ORBIT(" 14)	"	McIlwain L)
ORBIT(" 15)	"	B mag. field strength)
COUNTG(1-225,1)	225I*4	G1 (axial 40 keV geiger)
COUNTG(" 2)	"	G2 (axial 20 keV geiger - not working)
COUNTG(" 3)	"	G3 (radial 20 keV geiger)
THETA (1-225)	225R*4	Magnetic aspect angle of G3 at midpoint of sampling interval
COUNTD(1-225)	225I*4	DE1L
COUNTI(1-225,1)	225I*2	DE2L
COUNTI(" 2)	"	DE2H
COUNTI(" 3)	"	D1P
COUNTI(" 4)	"	D1A
COUNTI(" 5)	"	D2
COUNTI(" 6)	"	D3E
COUNTI(" 7)	"	D3P

.... 2

COUNTX(1-225,1)	225I*2	DE1H			
COUNTX(" 2)	"	CP1			
COUNTX(" 3)	"	CP2			
COUNTX(" 4)	"	CE1			
COUNTX(" 5)	"	CE2			
LEV (1-225,1)	225I*2	Level corresponding to	DE1L	readout	(0 or 1)
LEV (" 2)	"	" "	DE1H	"	"
LEV (" 3)	"	" "	CP1	"	(1,3,5,7)
LEV (" 4)	"	" "	CP2	"	(2,4,6,8)
LEV (" 5)	"	" "	CE1	"	(1,3,5,7)
LEV (" 6)	"	" "	CE2	"	(2,4,6,8)

11-C-9A-C-9A

ISIS-2 EPD Detector Characteristics

Data from the detectors are accumulated digitally, by directly counting particles within the specified energy ranges of the various detectors, as tabulated below. G1 views along the S/C axis. All other detectors view perpendicular to the S/C axis.

Data from detectors A are accumulated for 0.250 second intervals, with a sample being obtained every 0.267 seconds.

Data from detectors B, the stepped electrostatic analyzer, are accumulated for 0.1167 seconds on each of the eight steps giving a complete spectrum in 1.067 seconds.

Detectors A

Name	Type	Energy Discrimination	Geom. Factor cm^2 sr	Collimator Half-Angle
G1 ✓	Geiger	$e^- > 40$ keV $p^+ > 0.6$ meV	1.03×10^{-3}	5.6°
G3 ✓	Geiger	$e^- > 22$ keV $p^+ > 0.24$ meV	8.83×10^{-4}	5.5°
DE1L ✓	Solid State (switched)	$e^- > 40, 60$ keV $p^+ \gtrsim 0.15$ meV	7.84×10^{-3}	6.8°
DE1H ✓	(switched)	$e^- > 94, 124$ keV $p^+ \gtrsim 0.20$ meV		
DE2L ✓	Solid State	$e^- > 150$ keV $p^+ \gtrsim 0.75$ meV	8.15×10^{-3}	7.0°
DE2H ✓		$e^- > 210$ keV		
D1P ✓ D1A ✓	Solid State	$0.75 < p^+ < 4.0$ meV $2.6 < \alpha^{++} < 16.0$ meV	4.9×10^{-2}	11.3°
D2 ✓	Solid State	$3.2 < p^+ < 12.7$ meV	1.15×10^{-1}	17.4°
D3P ✓ D3E ✓	Solid State	$12.9 < p^+ < 28$ meV $1.0 < e^- \lesssim 2.0$ meV	3.45×10^{-1}	45.0°

Detectors B

The electron and proton differential spectrometer uses cylindrical electrostatic analyzers and channeltron detectors, which have 10 mm diameter aperture funnels. The $\Delta E/E$ of the spectrometer is 30% and 15% for the electrons and protons respectively.

The centre energy for each step and the computed reciprocal of the physical geometric factor (PGF) for each electron step is tabulated. The PGF assumes a detector efficiency of 100%.

...2

Step No	Proton Energy (keV)	Electron Energy (keV)	$(PGF)^{-1}$ cm^2 sr keV Electrons
1	26.2	9.65	9.0×10^2
2	21.6	7.8	1.11×10^3
3	17.0	6.0	1.44
4	12.3	4.1	2.07
5	9.4	3.0	2.81
6	7.6	2.25	3.68
7	5.2	1.25	6.10
8	2.25	0.15	2.97×10^4

The DE1, DE2, D1 and D3 detectors each have two discrimination levels corresponding to different particle energies. The DE1 detector is switched between two discrimination levels in alternate frames of the experiment's commutation format. LEVD is an integer field indicating which DE1L discriminator level is being sampled. LEVD=0 is for the 40 keV discriminator and LEVD=1 is for the 60 keV discriminator. LEVX is an integer field indicating both the DE1H discriminator level and the energy step of the channeltron elements CP1, CP2, CE1, CE2. The first 225 integers are 0 or 1 indicating the DE1H 94 and 124 keV discrimination levels respectively. The second 225 integers are 1, 3, 5 and 7 indicating the step number of the CP1 element. The third 225 integers are 2, 4, 6 and 8 indicating the CP2 step numbers. The fourth and fifth groups of 225 integers perform the corresponding function for the CE1 and CE2 elements.

The NFR index indicates the element in the experiment frame which occurs first in the one minute record. The order in which the elements are sampled in the experiment frame is shown in the "ISIS-2 E.P.D. Data Format".

ISIS-2 E.P.D. DATA FORMAT

	SATELLITE'S PCM WORD 13 (MSB)								SATELLITE'S PCM WORD 14 (LSB)							
BIT NO.	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
WORD NO.	2^8								2^7							
0	0	0	0	1	0	1	0	0	0	1	1	0	1	1	1	1
1	0		G3 Geiger e^- > 20 keV 2^{14}													P
2	0	0	CP1 p^+ ≐ 26.2, 17.0, 9.4, 5.2 keV 2^{13}													P
3	0	0	G1 Geiger e^- > 40 keV 2^{13}													P
4			DE1 SiJ e^- > 40 & 60 keV 2^{15}													P
5			DE1 e^- ≳ 90 & 120 keV 2^{15}													P
6			CE1 e^- ≐ 9.6, 6.0, 3.0, 1.3 keV 2^{15}													P
7	0		G2 Geiger e^- > 20 keV 2^{14}													P
8			DE2 SiJ e^- > 200 keV 2^{15}													P
9			D3 e^- = 1-2 meV						A	B	C	0	0	D	E	P
10			DE2 e^- > 150 keV 2^{15}													P
1			D1 SiJ p^+ = 0.8-4.0 meV 2^{15}													P
12			D2 SiJ p^+ = 3.2-12.7 meV 2^{15}													P
13			CE2 e^- ≐ 7.8, 4.1, 2.2, 0.15 keV 2^{15}													P
14			D1 α^{++} = 2.5-16 meV D3 p^+ = 12.9-28 meV													P
15			CP2 p^+ ≐ 21.6, 12.4, 7.6, 2.2 keV													P

have been superseded

Notes:

Words 2,6,13,15 always contain 1 count resulting from the gate switching transients. Data accumulation time = 7/60 sec./frame. has been subtracted

Other words. Data accumulation time = 0.250 sec./frame.

Word 0 is the frame synchronization pattern.

P is the parity bit generated in the experiment encoder to give the 16 bit word an odd parity.

CE & CP are channeltrons with electrostatic analyzers stepped through 8 energies in 64/60 of a second. CE $\Delta E/E \sim 30\%$ CP $\Delta E/E \sim 15\%$

DE1 in words 4 & 5 has the amplifier output switched between 2 different discrimination levels on alternate frames. PCM logical 1 is higher level.

Flag bits A to E in word 9 are assigned as follows: A,B,D are the 2^2, 2^1,2^0 bits of the 8 position electrostatic analyzer programmed power supply.
C is an overflow indicator bit for the 8 bit scaler word no. 9.
E is the bias position switch for words 4 & 5.

D & DE are all fully depleted silicon junction diode particle detectors.

Word 14 is divided into 2 independent scalers of 2^8 & 2^7. D3 in word 14 (2^7) is prescaled by 2^3.

ISIS-2 Detector Characteristics

Detector No.	Detector Type	Word No.	Energy Discrimination	Geom. Factor cm^2 sr	½ Angle
G1	Geiger	3	$e^- > 40$ keV $p^+ > 0.6$ meV	1.03×10^{-3}	5.6^0
G2	Geiger	7	$e^- > 20$ keV $p^+ > 0.2$ meV	8.8×10^{-4}	5.1^0
G3	Geiger	1	$e^- > 22$ keV $p^+ > 0.24$ meV	8.83×10^{-4}	5.5^0
DE1	Solid State	4	$e^- > 40,60$ keV $p^+ \lesssim 0.15$ meV	7.84×10^{-3}	6.8^0
		5	$e^- > 94,124$ keV $p^+ \lesssim 0.20$ meV		
DE2	Solid State	10	$e^- > 150$ keV $p^+ \lesssim 0.75$ meV	8.15×10^{-2}	7.0^0
		8	$e^- > 210$ keV		
D1	Solid State	11 14	$0.75 < p^+ < 4.0$ meV $2.6 < \alpha^{++} < 16.0$ meV	4.9×10^{-2}	11.3^0
D2	Solid State	12	$3.2 < p^+ < 12.7$ meV	1.15×10^{-1}	17.4^0
D3	Solid State	14 9	$12.9 < p^+ < 28$ meV $1.0 < e^- \lesssim 2.0$ meV	3.45×10^{-1}	45.0^0
CE	Channeltron &	6,13	$0.1 < e^- < 9.65$ keV in 8 steps		$1.5^0 \perp$ & $1.7^0 \parallel$
CP	ESA	2,15	$2.25 < p^+ < 26.2$ keV		$2.1^0 \perp$ & $1.1^0 \parallel$

ISIS-2 CHANNELTRON DIFFERENTIAL SPECTROMETER

Word 9 Flags A	B	D	Ee^- (keV) Word 13	Word 6	1/P.G.F. F.W.H.M.	Ep^+ (keV) Word 15	Word 3
0	1	0		9.65	9.0×10^2		26.2
0	1	0	7.82		1.11×10^3	21.6	
1	0	0		5.99	1.44		17.0
1	0	0	4.10		2.07	12.3	
1	1	0		2.97	2.81		9.41
1	1	0	2.24		3.68	7.58	
0	0	0		1.27	6.10		5.18
0	0	0	0.1-0.2		2.97×10^4	2.25	

$\Delta E/E$ CE = 30% CP = 15%

Flux (electrons cm^{-2} sr^{-1} sec^{-1} keV^{-1}) = 8.5 x (countΔE) x $\frac{1}{P.G.F.}$

The physical geometric factor includes the ΔE appropriate to the energy at the centre of each energy step.

D-14013

********** CONTENTS OF TAPE EXP4001 **********

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
1	531	71	133	0	47	5	1	2	53	80.7	47.2	81.3
2	531	71	133	1	57	8	2	11	56	55.6	27.0	55.6
3	532	71	133	2	28	21	2	41	57	51.4	79.9	[illegible]
4	534	71	133	7	2	6	8	1	54	35.[illegible]	[illegible]	[illegible]
5	535	71	133	8	42	25	8	54	43	26.4	37.5	72.9
6	536	71	133	13	51	6	14	3	0	56.4	83.4	83.7
7	537	71	133	15	43	5	16	29	41	47.5	32.6	83.[illegible]
8	537	71	133	17	3	5	17	17	53	71.7	[illegible]	71.[illegible]
9	539	71	133	19	49	5	20	5	47	83.5	[illegible]	3.[illegible]
10	540	71	133	21	45	42	21	57	54	75.5	42.[illegible]	75.5
11	708	71	147	5	12	6	5	28	54	32.6	42.[illegible]	42.6
12	709	71	147	6	50	22	7	35	52	62.8	81.2	81.2
13	710	71	147	8	6	2	8	17	56	21.4	40.7	40.7
14	710	71	147	9	3	10	9	38	52	26.0	74.4	64.[illegible]
15	711	71	147	10	53	8	11	9	39	31.5	39.4	39.[illegible]
16	714	71	147	12	46	11	13	1	17	35.6	31.3	35.6
17	716	71	147	15	34	50	15	50	50	40.4	32.9	40.4

********** CONTENTS OF TAPE EXP4001 **********

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	[illegible] START	[illegible]	[illegible]
1[illegible]	717	71	147	17	48	10	18	16	52	38.[illegible]	[illegible]	[illegible]
2[illegible]	718	71	147	19	10	3	19	26	51	[illegible]	[illegible]	[illegible]
3[illegible]	719	71	147	21	5	5	21	16	53	77.[illegible]	[illegible]	[illegible]
4[illegible]	723	71	148	5	34	25	5	51	49	[illegible]	[illegible]	[illegible]
5[illegible]	724	71	148	6	7	6	6	18	54	46.[illegible]	[illegible]	[illegible]
6[illegible]	724	71	148	7	28	7	7	46	1	43.1	[illegible]	[illegible]
7[illegible]	725	71	148	7	58	8	8	12	56	41.2	[illegible]	[illegible]
8[illegible]	725	71	148	9	8	9	9	24	39	76.[illegible]	[illegible]	[illegible]
9[illegible]	727	71	148	12	36	7	12	51	49	[illegible]	[illegible]	[illegible]
10[illegible]	728	71	148	14	49	7	15	5	37	[illegible]	[illegible]	[illegible]
11[illegible]	729	71	148	16	35	29	17	2	39	41.3	[illegible]	[illegible]
12[illegible]	730	71	148	17	44	16	18	7	46	72.2	[illegible]	[illegible]
13[illegible]	730	71	148	18	25	34	18	47	58	[illegible]	[illegible]	[illegible]
14[illegible]	731	71	148	19	48	4	20	4	46	[illegible]	[illegible]	[illegible]
15[illegible]	732	71	148	21	45	35	22	0	35	68.2	30.4	[illegible]

********** CONTENTS OF TAPE EXP4001 **********

FILE	ORBIT	YEAR	DAY	START TIME HR MN SC	STOP TIME HR MN SC	**INV. STARTING LAT	[illegible]	[illegible]
33	1721	71	227	0 26 5	1 15 53	49.8	72.7	77.3
34	1722	71	227	2 31 5	3 8 53	24.4	76.1	64.0
35	1724	71	227	4 48 4	5 2 52	61.2	76.5	[illegible]
36	1724	71	227	5 52 13	6 4 50	[illegible]	[illegible]	[illegible]
37	1725	71	227	6 38 5	6 53 53	46.3	[illegible]	[illegible]
38	1725	71	227	7 42 28	7 58 46	63.7	[illegible]	[illegible]
39	1726	71	227	8 41 7	9 6 55	67.8	[illegible]	[illegible]
40	1726	71	227	9 35 27	9 51 51	56.0	76.2	[illegible]
41	1727	71	227	11 19 18	11 49 12	38.2	[illegible]	[illegible]
42	1728	71	227	12 40 7	13 21 1	53.4	[illegible]	[illegible]
43	1729	71	227	14 26 5	15 1 47	75.7	26.5	[illegible]
44	1732	71	227	19 55 8	20 10 50	47.2	79.5	[illegible]
45	1733	71	227	21 44 8	21 58 56	38.5	78.1	[illegible]
46	1733	71	227	22 35 5	22 49 53	30.2	[illegible]	[illegible]
47	1734	71	228	1 4 6	1 43 54	48.1	[illegible]	[illegible]
48	1736	71	228	3 26 30	3 46 54	49.9	[illegible]	[illegible]
49	1737	71	228	5 23 5	5 50.53	51.8	[illegible]	[illegible]
50	1738	71	228	7 16 5	7 44 59	45.3	49.4	[illegible]
51	1739	71	228	10 31 5	10 46 53	74.1	30.0	74.1
52	1740	71	228	11 56 10	12 10 46	32.5	65.7	[illegible]
53	1741	71	228	13 18 8	13 47 56	83.3	25.7	[illegible]
54	1742	71	228	15 3 5	15 30 53	73.9	36.9	[illegible]
[illegible]	[illegible]	71	228	18 40 11	18 54 47	48.6	80.2	[illegible]
[illegible]	[illegible]	71	228	20 29 7	20 42 49	37.9	75.5**	[illegible]
[illegible]	[illegible]	71	234	1 3 5	1 42 47	48.8	79.7	[illegible]
58	1812	71	234	3 31 4	3 45 52	62.4	[illegible]	[illegible]
59	1812	71	234	4 32 54	4 47 48	72.3	62.3	79.7
60	1813	71	234	5 22 6	5 50 54	50.0	46.5	84.1
61	1813	71	234	6 6 12	6 22 18	27.3	59.0	[illegible]
62	1814	71	234	7 30 55	8 4 49	83.6	35.5	[illegible]
63	1814	71	234	8 19 6	8 35 42	60.4	72.5	[illegible]
64	1815	71	234	10 4 8	10 15 56	39.8	64.0	64.0
65	1815	71	234	10 31 42	10 45 54	70.9	30.5	70.9

********** CONTENTS OF TAPE EXP4001 **********

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
66	1816	71	234	11	55	8	12	42	44	31.7	23.8	84.4
67	1817	71	234	13	9	7	13	46	55	75.1	28.4	84.4
68	1818	71	234	15	3	4	15	17	52	76.0	61.3	84.0
69	1819	71	234	16	59	6	17	13	54	80.2	49.5	81.4
70	1819	71	234	18	8	6	18	23	54	56.7	27.0	56.7
71	1820	71	234	18	39	6	18	53	54	48.2	80.0	80.6
72	1835	71	236	0	25	8	1	4	38	48.2	79.6	79.6

********** CONTENTS OF TAPE EXP4001 **********

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
73	1845	71	236	18	1	4	18	29	58	48.1	44.6	80.6
74	1846	71	236	19	48	29	20	19	59	33.7	50.7	80.9
75	1847	71	236	21	45	5	22	25	53	46.1	22.1	82.5

ONLY 50 Files

********** CONTENTS OF TAPE EXP4185 **********

NAT. RES. COUNCIL CANADA TAPE UP941(INPUT)
WRITTEN NOV. 29 1978 TO DEC. 14 1978
DATE TAPE COPIED DEC. 20 1978

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
1	11459	73	264	16	21	14	16	27	56	84.3	75.0	84.3
2	11464	73	265	1	50	7	1	58	55	73.4	82.7	84.4
3	11465	73	265	3	44	8	3	52	50	74.2	81.9	84.3
4	15029	74	181	12	31	6	12	45	54	38.7	76.1	76.1
5	15035	74	182	0	20	5	0	35	53	74.7	33.5	74.7
6	15430	74	213	5	2	5	5	16	53	23.5	45.7	45.7
7	15437	74	213	17	6	7	17	21	55	45.9	25.5	45.9
8	15444	74	214	5	40	25	5	53	31	23.2	43.0	43.0
9	15449	74	214	15	52	5	16	3	53	39.9	21.9	39.9
10	15597	74	226	8	38	6	8	52	54	40.4	76.1	76.1
11	15635	74	229	8	37	19	8	52	7	40.0	76.4	76.4
12	15636	74	229	10	32	15	10	46	45	47.3	82.1	82.3
13	15939	74	253	8	31	27	8	45	57	37.7	78.5	78.5
14	16406	74	290	5	16	17	5	30	53	37.8	77.7	77.7
15	16412	74	290	17	6	23	17	22	47	77.7	33.5	77.7
16	16444	74	293	5	15	35	5	29	53	37.6	77.3	77.3
17	16450	74	293	17	6	6	17	22	12	78.0	34.0	78.0
18	16778	74	319	14	30	22	14	45	52	76.6	35.1	76.6
19	17176	74	351	0	3	12	0	18	5	35.7	69.5	69.5
20	17207	74	353	11	15	20	11	29	13	75.3	41.9	75.3
21	18325	75	76	16	52	7	17	0	19	34.5	56.6	56.6
22	18584	75	97	4	3	5	4	14	23	75.5	44.0	75.5
23	18590	75	97	14	59	19	15	5	49	44.5	62.2	62.2
24	18609	75	99	3	25	33	3	36	27	72.3	42.4	72.3
25	18615	75	99	14	20	9	14	35	3	40.9	76.1	76.1
26	18649	75	102	6	25	0	6	34	24	49.2	31.4	49.2
27	18685	75	105	3	24	5	3	35	29	75.2	43.3	75.2
28	18691	75	105	14	18	17	14	26	53	39.4	62.5	62.5
29	18729	75	108	14	17	42	14	25	54	39.6	61.7	61.7
30	18735	75	109	2	8	25	2	19	37	70.2	40.0	70.2
31	18931	75	124	12	59	4	13	14	52	38.2	77.1	77.1
32	18944	75	125	13	37	16	13	48	28	40.8	71.4	71.4
33	18969	75	127	12	59	17	13	10	29	40.4	70.3	70.3
34	19392	75	160	22	2	0	22	11	24	42.0	26.3	42.0
35	19393	75	160	23	53	8	0	2	20	53.7	32.3	53.7
36	19405	75	161	22	37	49	22	49	31	48.8	26.9	48.8
37	19417	75	162	21	20	1	21	29	25	51.8	28.7	51.8
38	19418	75	162	23	15	0	23	24	24	52.2	30.4	52.2
39	19431	75	163	23	51	8	0	0	20	58.6	35.8	58.6
40	20215	75	225	21	20	7	21	28	25	39.2	28.2	39.2
41	26236	76	336	4	59	5	5	11	11	74.7	42.1	74.7
42	26242	76	336	15	55	5	16	7	5	39.5	69.8	69.8
43	26243	76	336	17	51	3	17	59	57	49.9	74.2	74.2
44	26274	76	339	5	2	4	5	14	10	66.5	33.8	66.5
45	26305	76	341	15	17	5	15	28	29	40.6	69.1	69.1
46	26306	76	341	17	13	6	17	22	24	51.3	75.8	75.8
47	26312	76	342	4	58	4	5	10	10	76.3	43.1	76.3
48	26337	76	344	4	19	3	4	31	9	76.4	44.2	76.4
49	26343	76	344	15	16	5	15	27	29	39.7	68.7	68.7
50	26344	76	344	17	8	5	17	20	11	39.5	72.5	72.5

OUTPUT TAPE EXP4185 (CON'T)

FILE	ORBIT	YEAR	DAY	START TIME HR MN SC	STOP TIME HR MN SC	**INV. LATITUDE** START	STOP	MAX.
51	26344	76	344	17 8 5	17 20 11	0.0	0.0	0.0

GARBAGE

********** CONTENTS OF TAPE EXP4184 **********

NAT. RES. COUNCIL CANADA TAPE UP236(INPUT)
WRITTEN DEC. 1 1978 TO DEC. 7 1978
DATE TAPE COPIED DEC. 14 1978

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
1	26924	77	24	11	23	23	11	34	53	78.7	49.0	78.7
2	26926	77	24	15	1	54	15	11	54	74.8	73.2	82.8
3	26927	77	24	16	53	35	17	4	53	74.3	74.8	84.3
4	26928	77	24	18	48	20	18	58	56	78.2	74.3	84.4
5	26929	77	24	20	39	12	20	50	48	67.1	80.0	84.4
6	26938	77	25	13	45	6	13	56	54	69.8	71.2	81.5
7	26939	77	25	15	35	37	15	47	49	66.1	77.6	83.8
8	26940	77	25	17	33	5	17	43	5	79.9	73.7	84.4
9	26941	77	25	19	25	52	19	36	46	76.9	74.3	84.4
10	26951	77	26	14	22	6	14	33	54	69.4	72.8	82.2
11	26952	77	26	16	15	36	16	26	54	73.8	74.2	84.3
12	26953	77	26	18	10	21	18	20	57	79.0	73.5	84.3
13	26954	77	26	20	1	38	20	12	50	70.1	79.1	84.3
14	30286	77	289	20	37	10	20	48	40	80.4	67.5	84.4
15	30287	77	289	22	24	37	22	36	49	65.5	82.5	84.4
16	30289	77	290	2	9	7	2	28	19	48.7	74.6	83.9
17	30294	77	290	11	50	7	12	1	55	76.0	69.1	83.3
18	30302	77	291	2	46	6	3	5	48	45.1	76.1	83.7
19	30309	77	291	16	15	9	16	26	58	79.1	58.4	80.8
20	30310	77	291	18	5	35	18	13	53	75.5	75.5	82.1
21	30315	77	292	3	25	5	3	46	59	46.7	67.8	83.7
22	30317	77	292	7	23	7	7	34	55	72.3	74.9	84.4
23	30318	77	292	9	16	8	9	27	8	70.2	80.8	84.4
24	30325	77	292	22	29	37	22	41	49	79.0	68.2	84.3
25	30326	77	293	0	18	6	0	29	54	61.9	83.4	84.4
26	30329	77	293	6	11	7	6	22	55	83.3	61.2	84.4
27	30333	77	293	13	41	24	13	52	54	72.6	69.1	81.0
28	30340	77	294	2	58	6	3	9	54	78.6	63.9	83.7
29	30341	77	294	4	48	20	4	59	50	65.8	77.7	84.3
30	30348	77	294	18	6	5	18	17	53	78.3	63.2	82.4
31	30354	77	295	5	22	6	5	32	48	53.6	83.6	83.6
32	30356	77	295	9	16	35	9	27	53	72.7	77.6	84.4
33	30364	77	296	0	24	7	0	35	37	78.9	67.8	84.3
34	30372	77	296	15	32	43	15	51	55	70.2	48.8	80.7
35	30379	77	297	4	54	8	5	5	50	82.6	60.4	84.3
36	30392	77	298	5	23	46	5	32	52	59.6	84.2	84.2
37	30550	77	310	16	44	6	16	55	54	69.1	73.2	82.3
38	30558	77	311	7	58	5	8	8	47	72.4	79.5	84.4
39	30589	77	313	18	37	37	18	48	49	75.2	73.6	84.3
40	30594	77	314	4	3	4	4	14	52	53.2	84.2	84.2
41	30604	77	314	23	5	6	23	16	48	78.2	67.8	84.4
42	30605	77	315	0	51	27	0	58	51	53.3	73.6	73.6
43	30620	77	316	5	24	30	5	35	48	69.5	78.7	84.3
44	30643	77	318	0	58	24	1	9	54	73.2	70.5	83.7
45	30645	77	318	4	50	6	5	1	55	80.2	66.0	84.4
46	30775	77	328	11	14	5	11	25	59	73.1	41.8	73.1
47	30876	77	336	10	31	4	10	42	52	80.6	51.7	80.6
48	30908	77	338	22	51	6	23	2	54	46.5	78.1	78.1
49	30946	77	341	23	1	6	23	12	54	74.2	68.5	83.7
50	30947	77	342	0	54	54	1	5	54	71.2	73.8	84.1

OUTPUT TAPE EXP4184 (CON'T)

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
51	30959	77	342	23	40	14	23	51	56	76.6	65.9	83.7
52	30963	77	343	7	19	6	7	30	48	82.1	62.8	84.3
53	30972	77	344	0	19	0	0	27	54	78.3	72.1	83.8
54	30984	77	344	23	0	35	23	12	53	73.7	67.4	83.6
55	30985	77	345	0	54	6	1	5	54	70.0	72.8	84.2
56	30997	77	345	23	40	1	23	50	55	77.0	67.7	83.7
57	30998	77	346	1	32	7	1	43	55	70.0	73.7	84.4
58	31002	77	346	9	9	8	9	20	56	76.0	65.2	81.4
59	31003	77	346	11	1	5	11	11	47	73.6	68.5	80.6
60	31004	77	346	12	53	27	13	3	51	73.3	70.6	81.3
61	31009	77	346	22	12	7	22	23	55	47.1	78.8	78.8
62	31419	78	14	7	14	33	7	26	3	80.2	51.2	80.2
63	31451	78	16	19	37	7	19	48	55	53.3	83.6	83.6
64	31666	78	33	18	54	11	19	5	59	46.4	79.0	79.0
65	31716	78	37	17	37	4	17	48	52	47.2	79.4	79.4
66	31717	78	37	19	32	3	19	43	51	46.2	79.4	79.4
67	31754	78	40	17	36	38	17	48	8	46.9	78.4	78.4
68	31894	78	51	18	52	4	19	3	52	46.5	79.8	79.8
69	31907	78	52	19	33	9	19	42	57	54.7	82.4	82.4
70	31945	78	55	19	33	14	19	42	56	56.3	83.3	83.3
71	31987	78	59	3	19	6	3	30	54	81.0	52.8	81.0
72	32000	78	60	3	57	3	4	8	57	79.9	50.1	79.9
73	32001	78	60	5	50	1	6	1	55	79.1	47.8	79.1
74	32012	78	61	2	39	6	2	51	12	81.1	58.1	81.8
75	32050	78	64	2	40	4	2	51	22	81.5	55.7	81.5
76	32052	78	64	6	27	31	6	36	55	78.1	52.6	78.1
77	32089	78	67	4	33	4	4	45	52	79.6	47.0	79.6
78	32101	78	68	3	21	0	3	30	24	73.4	48.5	73.4
79	32139	78	71	3	19	1	3	31	13	76.5	44.7	76.5
80	32151	78	72	2	4	0	2	15	54	76.9	46.0	76.9
81	32189	78	75	2	4	0	2	15	48	75.2	44.4	75.2
82	32247	78	79	15	38	24	15	46	48	50.7	74.1	74.1
83	32254	78	80	5	9	51	5	18	21	76.3	53.0	76.3
84	32273	78	81	16	56	16	17	5	58	54.6	81.6	81.6
85	32278	78	82	2	40	40	2	50	58	72.8	45.6	72.8
86	32298	78	83	16	15	36	16	25	54	48.8	77.7	77.7
87	32348	78	87	14	57	4	15	8	52	45.5	77.7	77.7
88	32374	78	89	16	14	3	16	25	51	46.6	79.6	79.6

********** CONTENTS OF TAPE EXP4183 **********

NAT. RES. COUNCIL CANADA TAPE UPB25(INPUT)
WRITTEN NOV. 17 1978 TO NOV. 28 1978
DATE TAPE COPIED DEC. 11 1978

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
1	22167	76	14	22	56	6	23	7	54	74.2	74.7	84.4
2	22168	76	15	0	52	52	1	1	22	79.9	76.1	84.4
3	22169	76	15	2	47	0	2	55	30	76.1	76.5	84.2
4	22170	76	15	4	41	55	4	51	55	75.4	71.6	83.6
5	22171	76	15	6	39	6	6	47	54	82.1	69.1	84.3
6	22172	76	15	8	30	35	8	40	23	75.1	77.1	84.4
7	22173	76	15	10	25	17	10	35	29	77.3	75.5	84.4
8	22174	76	15	12	19	13	12	29	49	77.9	70.8	84.2
9	22175	76	15	14	17	1	14	21	55	80.6	69.7	80.6
10	22176	76	15	16	5	51	16	15	51	78.2	64.4	80.6
11	22177	76	15	18	0	7	18	6	49	80.8	69.5	81.1
12	22178	76	15	19	47	5	19	58	53	70.2	72.9	83.0
13	22179	76	15	21	39	51	21	51	21	72.3	76.0	84.4
14	22180	76	15	23	35	14	23	45	26	77.6	75.5	84.4
15	22181	76	16	1	26	24	1	36	48	66.8	82.4	84.3
16	22182	76	16	3	25	51	3	34	57	77.4	72.7	83.8
17	22184	76	16	7	14	6	7	25	24	74.3	71.6	84.3
18	22185	76	16	9	9	15	9	15	27	77.3	84.3	84.4
19	22186	76	16	11	2	5	11	13	59	74.8	72.9	84.4
20	22187	76	16	12	59	7	13	5	48	82.0	73.5	82.9
21	22188	76	16	14	49	52	14	59	52	77.2	67.2	81.0
22	22189	76	16	16	43	54	16	51	54	79.4	68.0	80.7
23	22190	76	16	18	38	6	18	43	24	81.7	72.2	81.7
24	22191	76	16	20	23	5	20	34	35	67.4	78.0	84.1
25	22192	76	16	22	18	6	22	29	54	74.6	74.0	84.4
26	22193	76	17	0	14	6	0	22	24	79.5	77.8	84.4
27	22194	76	17	2	8	6	2	17	18	75.6	76.0	84.4
28	22195	76	17	4	1	51	4	12	45	71.1	73.5	83.6
29	22196	76	17	5	58	6	6	8	48	75.3	70.4	84.2
30	22197	76	17	7	52	10	8	2	28	74.8	75.2	84.4
31	22198	76	17	9	46	10	9	57	28	74.9	74.9	84.4
32	22199	76	17	11	40	6	11	50	30	75.6	74.9	84.3
33	22200	76	17	13	36	10	13	43	52	80.9	70.6	82.0
34	22201	0	17	15	28	18	15	35	48	79.0	70.5	80.7
35	22202	76	17	17	21	53	17	28	53	80.4	69.2	80.9
36	22205	76	17	22	56	45	23	6	27	77.3	77.3	84.3
37	22206	76	18	0	48	6	0	59	24	67.8	80.0	84.3
38	22207	76	18	2	45	51	2	55	21	73.8	75.9	84.1
39	22208	76	18	4	40	51	4	50	51	73.3	73.6	83.7
40	22214	76	18	16	3	29	16	14	53	74.3	65.4	80.6
41	22215	76	18	17	58	50	18	5	14	80.2	72.4	81.3
42	22216	76	18	19	46	6	19	57	30	69.4	75.2	83.3
43	22217	76	18	21	40	9	21	50	27	74.7	77.1	84.4
44	22218	76	18	23	34	30	23	44	30	76.7	76.8	84.3
45	22662	76	54	0	54	55	1	4	55	79.3	51.6	79.3
46	22663	76	54	2	48	2	2	57	50	83.0	57.0	83.0
47	22665	76	54	6	31	2	6	52	20	75.9	48.3	84.3
48	22666	76	54	8	24	15	8	46	21	74.5	45.5	84.3
49	22669	76	54	13	49	5	14	9	29	34.1	79.2	80.7
50	22671	76	54	17	49	9	17	58	21	78.0	74.3	84.3

OUTPUT TAPE EXP4183 (CON'T)

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
51	22675	76	55	1	40	6	1	49	54	59.8	33.3	59.8
52	22682	76	55	14	38	43	14	47	19	68.7	78.6	81.0
53	22683	76	55	16	23	6	16	33	48	47.3	76.5	76.5
54	22684	76	55	18	12	51	18	24	57	43.7	74.6	74.6
55	22685	76	55	20	7	7	20	29	54	45.0	74.4	84.4
56	25373	76	268	2	17	6	2	28	54	28.4	42.4	42.4
57	25466	76	275	10	12	15	10	24	21	75.3	42.2	75.3
58	25473	76	275	23	2	14	23	14	20	46.0	79.6	79.6
59	25478	76	276	8	56	16	9	8	22	71.5	39.8	71.5
60	25485	76	276	21	43	14	21	55	20	35.5	68.6	68.6
61	25491	76	277	9	34	15	9	46	21	73.2	40.7	73.2
62	25498	76	277	22	23	14	22	35	20	42.9	76.3	76.3
63	25510	76	278	21	10	3	21	17	15	48.6	67.4	67.4
64	25658	76	290	13	15	16	13	26	52	40.4	27.6	40.4
65	25671	76	291	13	53	19	14	4	55	38.7	27.4	38.7
66	25709	76	294	13	52	16	14	3	52	39.6	26.9	39.6
67	25721	76	295	12	36	15	12	47	51	41.1	27.8	41.1
68	25759	76	298	12	37	0	12	48	6	38.4	28.0	38.4
69	25772	76	299	13	14	14	13	25	56	38.5	27.6	38.5
70	25784	76	300	11	58	15	12	10	3	39.6	28.5	39.6
71	25810	76	302	13	13	15	13	24	51	39.2	27.1	39.2
72	25822	76	303	11	58	16	12	9	52	38.5	28.5	38.5
73	25768	76	299	6	20	13	6	32	25	70.9	40.1	70.9
74	25769	76	299	8	13	13	8	25	25	78.5	46.1	78.5
75	25776	76	299	21	6	15	21	18	21	50.5	81.1	81.1
76	25781	76	300	6	58	13	7	9	25	71.4	43.5	71.4
77	25782	76	300	8	54	47	9	3	23	71.2	46.8	71.2
78	25794	76	301	7	35	21	7	47	27	76.2	44.4	76.2
79	25795	76	301	9	29	22	9	41	28	81.7	46.9	81.7
80	25800	76	301	18	33	14	18	45	20	41.9	72.1	72.1
81	25801	76	301	20	27	16	20	31	10	47.3	58.6	58.6
82	25801	76	301	20	31	28	20	39	22	59.2	78.7	78.7
83	25806	76	302	6	20	38	6	31	20	69.6	42.1	69.6
84	25807	76	302	8	12	18	8	24	24	80.0	48.1	80.0
85	25814	76	302	21	5	15	21	17	21	49.5	81.4	81.4
86	25819	76	303	6	56	14	7	8	20	76.3	45.7	76.3
87	25820	76	303	8	50	16	9	2	22	82.1	48.7	82.1
88	25826	76	303	19	48	17	20	0	23	44.1	75.8	75.8

********** CONTENTS OF TAPE EXP4187 **********

NAT. RES. COUNCIL CANADA TAPE UP975(INPUT)
WRITTEN DEC. 19 1978 TO JAN. 8 1979
DATE TAPE COPIED JAN. 11 1979

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
1	8154	73	3	19	54	21	20	9	3	76.4	58.8	84.3
2	14925	74	173	6	51	18	7	0	54	78.5	75.3	84.4
3	14931	74	173	18	8	9	18	16	57	80.5	76.0	84.3
4	14932	74	173	20	2	6	20	10	54	79.9	76.0	84.4
5	14943	74	174	16	53	6	17	1	36	80.7	74.3	84.4
6	14944	74	174	18	46	6	18	54	54	81.3	75.6	84.3
7	14946	74	174	22	29	8	22	43	50	61.0	74.1	84.1
8	14955	74	175	15	34	8	15	45	56	70.0	73.6	83.3
9	14956	74	175	17	30	12	17	38	48	80.5	75.7	84.4
10	14974	74	177	3	39	14	3	50	50	74.0	73.0	84.3
11	14975	74	177	5	33	8	5	44	50	73.9	74.9	84.4
12	15222	74	196	17	47	57	18	1	57	41.7	24.4	41.7
13	15235	74	197	18	25	18	18	39	48	43.2	25.0	43.2
14	15237	74	197	23	1	38	23	15	50	75.0	37.5	75.0
15	15266	74	200	6	20	4	6	34	52	23.6	46.1	46.1
16	15285	74	201	17	8	5	17	22	53	45.0	23.6	45.0
17	15298	74	202	17	46	0	17	59	54	44.9	23.2	44.9
18	15311	74	203	18	24	25	18	38	55	43.5	25.4	43.5
19	15336	74	205	17	45	8	17	59	50	46.1	23.8	46.1
20	15348	74	206	16	30	11	16	45	59	42.7	26.7	42.7
21	15361	74	207	17	7	13	17	21	55	45.1	23.8	45.1
22	15374	74	208	17	46	35	18	1	17	41.1	26.9	41.1
23	15386	74	209	16	30	18	16	45	54	41.2	27.5	41.2
24	15393	74	210	5	3	39	5	16	39	21.9	43.5	43.5
25	15505	74	219	2	3	31	2	17	25	43.0	28.9	43.0
26	15506	74	219	5	1	4	5	15	52	23.9	45.8	45.8
27	15511	74	219	14	22	11	14	50	53	29.1	79.4	79.4
28	15524	74	220	15	0	4	15	26	28	28.7	73.7	73.7
29	15530	74	221	0	40	15	0	53	21	21.9	52.9	52.9
30	15531	74	221	4	20	4	4	36	28	29.1	42.1	42.1
31	15538	74	221	15	55	1	16	5	25	47.6	76.0	76.0
32	15538	74	221	16	27	21	16	41	57	45.0	24.1	45.0
33	15593	74	226	0	24	53	0	45	24	81.5	44.9	84.4
34	15595	74	226	3	48	0	3	58	18	21.1	43.4	43.4
35	15595	74	226	4	12	4	4	31	58	80.0	43.2	83.8
36	15599	74	226	11	57	23	12	11	23	54.9	22.4	54.9
37	15600	74	226	13	35	5	13	43	53	81.4	74.6	84.4
38	15601	74	226	15	13	51	15	27	51	41.8	79.3	79.3
39	15607	74	227	2	54	22	3	30	53	75.8	27.3	84.4
40	15612	74	227	13	43	5	13	57	53	29.1	43.5	43.5
41	15613	74	227	14	13	9	14	21	57	83.0	73.9	84.3
42	15614	74	227	15	54	6	16	5	54	46.8	78.9	78.9
43	16409	74	290	10	36	9	10	43	51	43.3	23.7	43.3
44	16416	74	290	23	16	9	23	25	51	26.1	51.1	51.1
45	16765	74	318	13	53	20	14	7	50	72.6	34.6	72.6
46	16772	74	319	2	39	15	2	54	21	35.1	75.3	75.3
47	16803	74	321	13	52	11	14	6	41	75.0	36.6	75.0
48	16828	74	323	13	17	21	13	25	21	65.0	43.5	65.0
49	16835	74	324	2	4	34	2	12	22	44.9	66.3	66.3
50	16842	74	324	15	49	6	15	56	24	71.2	49.4	71.2

OUTPUT TAPE EXP4187 (CON'T)

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
51	16860	74	326	1	23	38	1	37	32	36.7	72.9	72.9
52	16866	74	326	13	17	16	13	25	28	64.7	42.5	64.7
53	17255	74	357	5	22	10	5	37	56	44.0	25.9	44.0
54	17256	74	357	7	18	39	7	26	26	37.8	23.6	37.8
55	17975	75	49	1	26	49	1	40	55	42.8	23.9	42.8
56	17982	75	49	14	3	9	14	11	27	22.4	38.6	38.6
57	18133	75	61	12	4	56	12	12	38	22.2	29.1	29.1
58	18145	75	62	12	41	7	12	49	7	24.6	27.0	27.0
59	18152	75	63	0	47	39	0	54	9	40.4	24.6	40.4
60	18159	75	63	13	20	8	13	27	38	23.6	29.4	29.4
61	18170	75	64	12	3	56	12	11	8	22.9	26.9	26.9
62	20432	75	242	23	40	46	23	47	28	23.3	37.2	37.2
63	20488	75	247	10	27	21	10	35	27	34.3	21.5	34.3
64	20495	75	247	23	0	24	23	8	24	21.9	35.9	35.9
65	20520	75	249	22	22	33	22	28	33	21.4	31.2	31.2
66	20558	75	252	22	22	6	22	31	24	21.6	40.3	40.3
67	20650	75	260	6	27	33	6	37	21	28.5	42.6	42.6
68	21369	75	316	23	56	6	0	14	12	54.2	69.0	82.1
69	21369	75	316	23	56	6	0	14	12	54.2	69.0	82.1
70	21764	75	348	3	24	6	3	35	54	65.3	81.7	84.3
71	21765	75	348	5	22	9	5	32	21	71.9	76.2	84.1
72	21770	75	348	14	56	7	15	7	55	78.6	66.6	83.9
73	21771	75	348	16	48	6	16	57	54	75.5	71.1	81.4
74	21775	75	349	0	18	8	0	25	44	77.2	81.9	84.3
75	21776	75	349	2	11	6	2	21	24	75.6	77.4	84.3
76	21777	75	349	4	3	5	4	14	53	66.8	79.0	84.3
77	21781	75	349	11	44	5	11	55	23	72.5	77.2	84.3
78	21783	75	349	15	33	6	15	44	36	77.0	67.5	82.7
79	21787	75	349	23	2	17	23	12	59	74.9	73.6	84.4
80	21788	75	350	0	54	6	1	5	54	73.3	75.8	84.3
81	21789	75	350	2	48	6	2	59	24	72.4	77.1	84.4
82	21793	75	350	10	28	5	10	36	5	72.7	83.8	84.3
83	21794	75	350	12	22	4	12	33	52	73.0	75.8	84.3
84	21799	75	350	21	46	6	21	57	54	71.2	71.5	82.6
85	21800	75	350	23	39	6	23	50	24	74.1	74.4	84.3
86	21803	75	351	5	23	8	5	32	20	75.2	75.3	84.0
87	21805	75	351	9	12	4	9	23	22	73.4	72.3	84.4
88	21808	75	351	14	56	7	15	8	13	79.6	63.9	83.5
89	21810	75	351	18	43	24	18	50	54	80.4	67.1	80.6
90	21811	75	351	20	36	6	20	42	36	81.1	70.4	81.4

********** CONTENTS OF TAPE EXP4186 **********

NAT. RES. COUNCIL CANADA TAPE UP307(INPUT)
WRITTEN DEC. 12 1978 TO DEC. 19 1978
DATE TAPE COPIED DEC. 21 1978

FILE	ORBIT	YEAR	DAY	START TIME			STOP TIME			**INV. LATITUDE**		
				HR	MN	SC	HR	MN	SC	START	STOP	MAX.
1	27007	77	31	0	30	6	0	41	54	69.4	73.4	84.0
2	27008	77	31	2	26	6	2	37	54	74.0	71.6	84.3
3	27009	77	31	4	20	8	4	30	50	74.2	77.5	84.4
4	27010	77	31	6	18	7	6	25	49	84.1	73.6	84.3
5	27011	77	31	8	12	5	8	23	53	82.5	57.0	82.6
6	27012	77	31	10	4	5	10	15	53	80.6	56.3	80.9
7	27015	77	31	15	36	36	15	48	48	72.3	72.7	84.3
8	27016	77	31	17	32	7	17	41	55	80.2	74.4	84.4
9	27017	77	31	19	22	1	19	32	55	68.2	82.1	84.3
10	27033	77	33	1	47	12	1	58	54	72.5	72.5	84.4
11	27034	77	33	3	41	5	3	52	53	72.0	76.1	84.4
12	27035	77	33	5	36	6	5	45	54	75.3	78.6	84.4
13	27040	77	33	14	58	15	15	9	51	70.7	74.7	83.8
14	27041	77	33	16	53	1	17	3	49	77.5	74.0	84.4
15	27042	77	33	18	46	9	18	57	57	75.4	73.5	84.3
16	27043	77	33	20	34	6	20	45	54	55.2	84.2	84.2
17	27044	77	33	22	28	4	22	39	52	50.9	82.1	82.1
18	27213	77	47	6	52	9	7	3	58	80.9	61.4	82.7
19	27217	77	47	14	9	16	14	29	52	48.7	74.2	84.4
20	27218	77	47	16	13	6	16	23	48	78.3	73.8	84.3
21	27219	77	47	18	6	6	18	16	54	74.1	76.1	84.4
22	27220	77	47	19	57	25	20	8	55	63.4	81.5	84.4
23	27223	77	48	1	45	35	1	56	53	73.8	74.1	84.3
24	27224	77	48	3	39	45	4	0	27	74.6	50.8	84.3
25	27225	77	48	5	37	11	5	48	47	83.2	62.5	84.3
26	27226	77	48	7	29	8	7	40	56	79.6	61.5	81.8
27	27230	77	48	14	46	5	14	57	53	48.4	78.4	78.4
28	27490	77	69	3	46	36	3	55	6	76.7	53.4	76.7
29	27497	77	69	16	39	17	16	46	35	53.5	73.5	73.5
30	27522	77	71	15	59	10	16	8	52	49.5	75.9	75.9
31	27527	77	72	1	56	18	2	3	24	67.7	49.0	67.7
32	27528	77	72	3	46	45	3	55	21	74.5	50.7	74.5
33	27534	77	72	14	42	8	14	51	32	48.8	73.7	73.7
34	27573	77	75	16	44	16	16	53	52	68.7	83.0	84.4
35	27596	77	77	12	19	36	12	30	54	72.4	75.0	84.3
36	27612	77	78	18	38	5	18	49	53	64.6	78.0	83.8
37	27627	77	79	23	9	11	23	20	47	75.2	71.3	84.3
38	27635	77	80	14	13	43	14	23	31	77.5	76.8	84.3
39	27666	77	83	1	2	23	1	12	53	74.5	77.5	84.4
40	27689	77	84	20	34	7	20	45	55	69.5	72.8	84.1
41	27691	77	85	0	24	8	0	33	50	74.5	79.4	84.4
42	27697	77	85	11	39	36	11	51	48	70.3	74.6	84.4
43	27698	77	85	13	34	36	13	44	24	76.5	77.7	84.3
44	27728	77	87	22	28	12	22	39	48	70.3	75.9	84.3
45	27736	77	88	13	32	36	13	44	48	72.5	75.3	84.3
46	27739	77	88	19	17	12	19	28	48	69.8	72.6	83.6
47	27767	77	91	0	32	5	0	43	35	81.5	51.0	81.5
48	27768	77	91	2	29	9	2	36	51	70.4	49.0	70.4
49	27800	77	93	14	40	6	14	48	6	49.6	71.7	71.7
50	27804	77	93	22	38	37	22	50	49	77.3	45.6	77.3

OUTPUT TAPE EXP4186 (CON'T)

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
51	27805	77	94	0	31	36	0	43	24	81.7	50.0	81.7
52	27806	77	94	2	28	6	2	34	48	71.3	52.7	71.3
53	27824	77	95	12	7	9	12	18	45	50.1	80.3	80.3
54	27825	77	95	14	1	22	14	11	46	49.3	77.9	77.9
55	27830	77	95	23	53	37	0	5	25	80.7	49.6	80.7
56	27831	77	96	1	48	53	2	0	11	75.0	44.0	75.0
57	27862	77	98	12	6	8	12	14	26	48.8	70.6	70.6
58	27863	77	98	14	1	16	14	7	28	49.9	67.1	67.1
59	27864	77	98	16	2	7	16	13	56	64.7	79.3	84.3
60	27867	77	98	21	50	7	22	1	55	75.0	71.1	84.4
61	27891	77	100	19	20	6	19	27	48	81.8	71.4	84.0
62	27900	77	101	12	16	36	12	26	30	77.9	76.0	84.4
63	27906	77	101	23	43	30	23	54	48	75.0	75.0	84.4
64	27922	77	103	6	1	45	6	11	57	77.0	65.5	80.6
65	27929	77	103	19	19	16	19	30	52	80.9	61.7	84.1
66	27931	77	103	23	18	11	23	29	23	70.5	42.0	70.5
67	27932	77	104	1	8	33	1	19	51	77.8	47.1	77.8
68	27953	77	105	16	41	5	16	52	53	67.9	74.6	83.8
69	27956	77	105	22	26	12	22	37	0	72.8	77.8	84.3
70	27963	77	106	11	27	6	11	38	54	49.3	80.4	80.4
71	27964	77	106	13	21	41	13	28	5	49.1	66.9	66.9
72	27970	77	107	1	12	4	1	18	28	66.6	49.0	66.6
73	27975	77	107	10	10	5	10	21	53	45.4	75.9	75.9
74	28032	77	111	22	34	42	22	46	18	82.0	51.3	82.0
75	28033	77	112	0	29	38	0	38	8	77.1	54.0	77.1
76	28065	77	114	12	42	44	12	48	38	50.1	66.5	66.5
77	28070	77	114	22	35	7	22	46	25	79.4	49.8	79.4
78	28071	77	115	0	33	7	0	39	31	66.0	48.4	66.0
79	28076	77	115	9	31	8	9	42	56	46.0	76.6	76.6
80	28102	77	117	10	47	42	10	58	18	50.3	78.4	78.4
81	28103	77	117	12	42	6	12	48	30	49.2	67.1	67.1
82	28133	77	119	21	55	37	22	7	25	81.4	50.5	81.4
83	28134	77	119	23	50	8	0	1	50	77.8	46.3	77.8
84	28165	77	122	10	8	23	10	19	53	48.9	79.2	79.2
85	28166	77	122	12	3	13	12	12	55	49.5	76.3	76.3
86	28171	77	122	21	54	37	22	6	37	83.1	51.3	83.1
87	28172	77	122	23	49	36	0	0	48	77.5	47.2	77.5
88	28204	77	125	12	2	35	12	11	23	48.7	73.1	73.1
89	28209	77	125	21	54	38	22	6	26	81.7	50.5	81.7
90	28210	77	125	23	49	48	23	58	30	75.2	51.7	75.2
91	28215	77	126	8	51	8	9	2	50	45.9	76.1	76.1

********** CONTENTS OF TAPE EXP4181 **********

NAT. RES. COUNCIL CANADA TAPE UPB16(INPUT)
WRITTEN OCT. 13 1978 TO OCT. 26 1978
DATE TAPE COPIED NOV. 10 1978

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
1	27091	77	37	15	35	37	15	47	49	73.2	72.8	84.3
2	27092	77	37	17	16	38	17	38	50	42.5	80.0	84.4
3	27093	77	37	19	20	13	19	30	49	64.8	84.4	84.4
4	27094	77	37	21	15	18	21	26	48	63.3	80.9	84.0
5	27097	77	38	3	2	21	3	24	27	71.9	49.1	84.4
6	27098	77	38	4	57	6	5	17	24	74.5	51.7	84.4
7	27099	77	38	6	55	5	7	6	53	83.3	59.3	83.8
8	27100	77	38	8	44	14	8	55	56	75.2	66.5	81.3
9	27104	77	38	16	4	4	16	19	17	50.8	84.2	84.3
10	27105	77	38	18	0	14	18	18	50	56.4	74.4	84.4
11	27106	77	38	19	57	6	20	8	54	60.5	84.0	84.3
12	27107	77	38	21	57	48	22	7	54	74.5	73.2	83.7
13	27110	77	39	3	40	8	4	1	26	71.9	52.0	84.4
14	27111	77	39	5	44	37	5	56	25	78.8	47.1	78.8
15	27112	77	39	7	31	7	7	42	55	80.6	62.0	82.6
16	27116	77	39	14	48	13	15	8	54	48.3	74.6	84.4
17	27117	77	39	16	40	52	17	2	51	48.8	74.1	84.3
18	27118	77	39	18	35	38	18	45	56	48.7	76.5	76.5
19	27119	77	39	20	37	37	20	47	55	66.1	81.9	84.3
20	27122	77	40	2	25	5	2	46	23	74.7	47.4	84.4
21	27123	77	40	4	18	15	4	28	51	72.8	79.4	84.4
22	27123	77	40	4	27	46	4	39	28	82.4	51.4	82.4
23	27124	77	40	6	16	7	6	27	55	82.7	62.6	84.3
24	27125	77	40	8	8	7	8	19	55	79.3	61.9	81.8
25	27129	77	40	15	25	15	15	46	57	48.5	73.8	84.3
26	27130	77	40	17	19	7	17	39	20	49.5	77.6	84.3
27	27131	77	40	19	19	9	19	30	57	62.6	83.5	84.3
28	27135	77	41	3	2	45	3	23	57	74.3	49.5	84.3
29	27136	77	41	4	56	6	5	17	48	73.1	49.0	84.3
30	27137	77	41	6	53	8	7	4	56	81.1	62.7	83.4
31	27138	77	41	8	45	11	8	56	47	78.4	62.3	81.2
32	27142	77	41	16	3	32	16	14	50	50.8	79.8	79.8
33	27142	77	41	16	13	36	16	24	55	76.7	73.3	84.3
34	27143	77	41	17	57	1	18	17	55	48.7	75.7	84.3
35	27144	77	41	19	59	30	20	8	54	67.7	83.3	84.4
36	27145	77	41	21	53	43	22	4	49	64.0	80.2	83.7
37	27148	77	42	3	40	4	4	1	29	72.9	50.8	84.3
38	27149	77	42	5	35	0	5	57	7	76.2	43.4	84.3
39	27150	77	42	7	30	8	7	41	56	79.7	62.7	82.3
40	27154	77	42	14	46	21	15	8	51	45.7	73.5	84.4
41	27155	77	42	16	41	7	17	1	30	50.5	76.4	84.3
42	27156	77	42	18	40	15	18	51	57	62.0	84.3	84.4
43	27157	77	42	20	36	7	20	47	55	62.7	81.1	84.2
44	27160	77	43	2	24	5	2	46	24	73.2	46.8	84.3
45	27161	77	43	4	18	5	4	39	23	73.6	50.1	84.3
46	27162	77	43	6	15	6	6	26	54	81.5	63.5	84.3
47	27163	77	43	8	7	6	8	18	54	78.4	62.7	81.6
48	27167	77	43	15	25	38	15	45	25	50.9	76.5	84.4
49	27168	77	43	17	20	26	17	39	26	53.8	76.2	84.4
50	27173	77	44	3	2	16	3	23	52	74.2	48.8	84.4

OUTPUT TAPE EXP4181 (CON'T)

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
51	27174	77	44	4	56	28	5	17	34	75.3	47.9	84.3
52	27180	77	44	16	3	5	16	14	53	51.0	81.4	81.4
53	27181	77	44	17	57	17	18	17	59	50.2	74.4	84.4
54	27182	77	44	19	57	16	20	8	58	62.3	82.3	84.3
55	27186	77	45	3	40	13	4	0	49	74.6	51.2	84.4
56	27187	77	45	5	34	56	5	54	51	77.2	47.6	84.3
57	27188	77	45	7	30	7	7	41	55	80.5	60.8	82.1
58	27192	77	45	14	57	7	15	7	49	74.8	74.9	84.3
59	27193	77	45	16	40	19	17	1	55	49.5	74.1	84.4
60	27194	77	45	18	41	17	18	51	53	65.5	84.1	84.3
61	27198	77	46	2	23	10	2	34	52	71.9	75.8	84.4
62	27199	77	46	4	18	6	4	27	54	74.9	79.2	84.4
63	29530	77	230	4	11	11	4	19	47	50.0	73.7	73.7
64	29534	77	230	12	11	16	12	21	52	72.8	45.4	72.8
65	29535	77	230	14	2	36	14	14	48	81.8	49.0	81.8
66	29536	77	230	15	59	13	16	5	43	71.1	53.1	71.1
67	29560	77	232	13	0	18	13	36	54	32.6	48.4	80.8
68	29561	77	232	15	20	19	15	27	55	74.0	53.0	74.0
69	30162	45	280	1	42	9	1	52	27	77.5	10.6	84.3
70	30163	77	280	3	31	7	3	42	55	59.4	82.0	83.7
71	30170	77	280	16	53	39	17	4	51	76.5	63.7	80.7
72	30171	77	280	18	42	10	18	53	46	66.7	75.1	81.9
73	30177	77	281	6	1	9	6	23	56	50.6	61.3	84.3
74	30178	77	281	8	4	1	8	14	55	75.6	73.7	84.3
75	30179	77	281	9	56	30	10	7	48	71.8	78.4	84.3
76	30185	77	281	21	15	36	21	27	54	78.7	67.4	84.4
77	30186	77	281	23	8	37	23	18	25	78.2	76.3	84.4
78	30187	77	282	0	58	57	1	8	57	65.4	84.3	84.4
79	30188	77	282	2	51	56	2	57	50	58.1	74.5	74.5
80	30480	77	305	4	12	7	4	23	55	75.6	67.9	84.4
81	30493	77	306	4	43	57	5	3	21	57.9	65.0	84.3
82	30504	77	307	1	28	6	1	47	48	46.6	75.0	83.7
83	30511	77	307	14	54	36	15	6	48	74.4	63.7	80.8
84	30519	77	308	6	4	6	6	15	54	70.6	76.5	84.3
85	30527	77	308	21	9	38	21	21	50	76.0	72.5	84.4
86	30530	77	309	2	54	7	3	5	56	72.6	70.1	83.8
87	30806	77	330	21	42	18	21	53	54	66.6	79.6	84.3
88	30821	77	332	2	11	13	2	22	49	67.4	76.4	84.4
89	30837	77	333	8	32	15	8	39	9	72.4	83.0	83.3
90	30847	77	334	3	27	16	3	38	46	67.9	78.4	84.3
91	30852	77	334	12	56	11	13	7	53	73.7	65.9	80.8
92	30883	77	336	23	40	14	23	51	50	74.8	68.3	83.7
93	30891	77	337	14	46	6	14	57	54	69.5	73.0	82.4

********** CONTENTS OF TAPE EXP4182 **********

NAT. RES. COUNCIL CANADA TAPE UPB22(INPUT)
WRITTEN OCT. 27 1978 TO NOV. 16 1978
DATE TAPE COPIED NOV. 23 1978

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.		
1	22040	76	4	22	21	59	22	31	41	78.5	74.2	84.3		
2	22041	76	5	0	15	6	0	24	54	77.9	75.9	84.3		
3	22043	76	5	4	3	51	4	13	21	73.4	75.9	83.9		
4	22044	76	5	5	59	30	6	9	54	75.1	70.9	83.8		
5	22045	76	5	7	52	7	8	3	55	69.8	74.3	84.3		
6	22046	76	5	9	47	27	9	58	21	73.4	76.7	84.3		
7	22047	76	5	11	42	18	11	53	30	76.3	73.6	84.3		
8	22050	76	5	17	20	54	17	31	54	73.6	67.3	80.6		
9	22051	76	5	19	11	52	19	23	46	69.8	70.4	81.5		
10	22052	76	5	21	3	5	21	14	23	67.9	77.7	83.8		
11	22053	76	5	22	56	51	23	5	9	72.1	84.2	84.3		
12	22054	76	6	0	52	8	1	2	50	76.3	75.7	84.3		
13	22055	76	6	2	42	6	2	53	54	60.7	83.2	84.4		
14	22059	76	6	10	25	6	10	36	18	73.1	77.0	84.3		
15	22060	76	6	12	19	6	12	27	6	73.9	82.8	84.3		
16	22062	76	6	16	6	10	16	15	52	75.3	69.8	80.8		
17	22063	76	6	17	57	52	18	8	28	72.7	69.6	80.8		
18	22064	76	6	19	46	54	20	0	29	64.1	72.7	82.2		
19	22065	76	6	21	43	7	21	53	25	75.7	74.4	84.4		
20	22068	76	7	3	25	12	3	35	48	73.5	73.6	84.2		
21	22069	76	7	5	20	8	5	30	50	72.6	72.5	83.6		
22	22071	76	7	9	9	4	9	20	22	73.1	75.1	84.3		
23	22072	76	7	11	3	6	11	14	24	73.8	76.2	84.4		
24	22075	76	7	16	43	3	16	54	51	73.9	64.9	80.6		
25	22076	76	7	18	34	51	18	45	33	72.0	70.7	81.2		
26	22077	76	7	20	26	20	20	37	26	70.5	74.6	83.0		
27	22078	76	7	22	19	5	22	30	29	72.6	76.1	84.4		
28	22081	76	8	4	3	7	4	13	49	72.1	73.6	84.3		
29	22082	76	8	5	56	5	6	7	53	66.2	75.7	83.9		
30	22084	76	8	9	47	5	9	58	53	73.7	74.3	84.4		
31	22085	76	8	11	41	4	11	52	22	74.3	75.0	84.3		
32	22091	76	8	22	57	29	23	8	47	75.3	74.7	84.4		
33	22092	76	9	0	52	34	1	2	22	77.6	75.8	84.4		
34	22093	76	9	2	47	10	2	55	10	75.2	79.4	84.3		
35	22094	76	9	4	43	8	4	51	26	76.8	75.0	83.7		
36	22099	76	9	14	15	5	14	23	5	80.5	70.4	82.0		
37	22101	76	9	17	56	51	18	7	51	71.7	69.7	80.9		
38	22102	76	9	19	47	51	19	58	27	68.5	76.7	82.4		
39	22103	76	9	21	41	6	21	52	54	72.2	74.4	84.3		
40	22104	76	9	23	35	14	23	47	8	75.4	73.3	84.4		
41	22105	76	10	1	31	36	1	40	24	79.3	75.4	84.3		
42	22106	76	10	3	27	18	3	35	24	79.6	73.6	84.0		
43	22108	76	10	7	14	6	7	25	54	71.9	71.7	84.4		
44	22109	76	10	9	8	5	9	19	53	71.6	75.5	84.4		
45	22110	76	10	11	3	6	11	14	30	75.0	74.5	84.4		
46	22111	76	10	13	0	5	13	7	23	82.3	**********		73.0	82.3
47	22116	76	10	22	20	44	22	30	26	78.5	75.0	84.3		
48	22118	76	11	2	5	20	2	16	50	66.7	79.3	84.3		
49	22119	76	11	4	5	26	4	12	14	79.1	76.9	83.7		
50	22127	76	11	19	16	10	19	21	34	81.7	73.5	81.9		

OUTPUT TAPE EXP4182 (CON'T)

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.	
51	22128	76	11	21	5	7	21	14	19	76.8	75.4	84.4	
52	22129	76	11	22	56	25	23	4	37	73.8	83.9	84.3	
53	22130	76	12	0	47	21	0	58	51	64.3	83.5	84.4	
54	22131	76	12	2	46	51	2	57	27	75.1	72.3	84.3	
55	22132	76	12	4	40	51	4	51	57	71.4	72.6	83.6	
56	22135	76	12	10	25	6	10	36	24	74.3	74.4	84.3	
57	22136	76	12	12	20	6	12	31	48	78.9	67.2	84.4	
58	22137	76	12	14	15	9	14	22	51	81.1	69.1	81.7	
59	22138	76	12	16	9	5	16	13	23	80.6	72.9	80.6	
60	22139	76	12	18	2	35	18	7	59	80.4	67.7	80.4	
61	22140	76	12	19	48	8	19	59	14	71.1	73.4	82.7	Rec. 1&2 may have errors
62	22141	76	12	21	42	57	21	52	27	78.7	74.4	84.3	
63	22142	76	12	23	34	5	23	45	53	73.5	75.4	84.3	
64	22143	76	13	1	26	13	1	38	13	65.5	79.9	84.3	
65	22144	76	13	3	25	52	3	34	22	76.6	75.4	83.9	
66	22145	76	13	5	20	51	5	29	51	76.6	73.3	83.8	
67	22146	76	13	7	17	51	7	27	21	83.1	66.9	84.3	
68	22147	76	13	9	8	6	9	19	54	72.9	74.6	84.4	
69	22148	76	13	11	2	4	11	13	22	73.6	76.1	84.4	
70	22149	76	13	12	58	51	13	6	51	81.0	72.6	83.3	
71	22150	76	13	14	51	6	14	59	54	78.6	69.0	81.1	
72	22151	76	13	16	46	7	16	52	49	80.6	67.1	80.6	
73	22152	76	13	18	38	16	18	44	28	81.3	70.7	81.5	
74	22153	76	13	20	24	54	20	35	30	70.4	77.0	83.7	
75	22154	76	13	22	19	40	22	29	22	77.3	76.6	84.4	
76	22156	76	14	2	10	51	2	17	27	81.8	76.7	84.4	
77	22157	76	14	4	3	48	4	12	48	75.7	74.4	83.7	
78	22158	76	14	5	59	9	6	8	51	74.8	71.2	84.1	
79	22159	76	14	7	51	5	8	2	53	70.4	74.8	84.4	
80	22160	76	14	9	46	9	9	57	27	73.6	76.1	84.4	
81	22161	76	14	11	40	6	11	51	54	74.4	72.9	84.3	
82	22162	76	14	13	37	9	13	47	39	81.6	62.3	82.3	
83	22163	76	14	15	28	50	15	37	56	79.0	66.5	80.8	
84	22164	76	14	17	23	37	17	29	49	80.8	68.2	80.8	
85	22165	76	14	19	10	50	19	21	26	72.4	72.4	82.1	
86	22166	76	14	21	4	6	21	13	30	76.0	76.3	84.3	

********** CONTENTS OF TAPE EXP4178 **********

NAT. RES. COUNCIL CANADA TAPE UP172(INPUT)
WRITTEN NOV. 25 1977 TO DEC. 2 1977
DATE TAPE COPIED DEC. 08 1977

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
1	5397	72	152	3	33	52	3	42	46	76.4	80.1	84.4
2	5398	72	152	5	26	50	5	38	26	73.0	75.7	84.4
3	5400	72	152	9	14	7	9	27	49	62.8	74.1	83.6
4	5409	72	153	2	18	5	2	26	53	74.9	79.7	84.3
5	8654	73	43	7	0	55	7	12	49	75.0	70.2	84.4
6	13151	74	33	6	12	10	6	28	52	44.3	27.7	44.3
7	13714	74	77	16	8	43	16	22	13	22.4	46.9	46.9
8	13719	74	78	2	19	4	2	32	52	41.3	23.9	41.3
9	13725	74	78	14	51	11	15	5	53	23.3	45.0	45.0
10	13732	74	79	2	56	25	3	9	55	42.7	23.3	42.7
11	13738	74	79	15	29	14	15	44	26	23.3	47.7	47.7
12	13745	74	80	3	35	1	3	47	49	40.9	24.0	40.9
13	13764	74	81	14	51	1	15	5	55	23.0	46.6	46.6
14	13770	74	82	2	57	37	3	11	19	38.4	26.3	38.4
15	13777	74	82	15	34	23	15	42	53	24.2	44.8	44.8
16	14355	74	128	8	13	6	8	27	54	53.1	21.1	53.1
17	14357	74	128	10	53	51	11	6	15	78.4	44.8	78.4
18	14357	74	128	12	12	1	12	26	49	24.5	45.8	45.8
19	14364	74	129	0	18	20	0	30	56	40.7	24.0	40.7
20	14376	74	129	23	2	15	23	14	57	40.2	23.0	40.2
21	14383	74	130	12	2	6	12	17	0	80.4	54.2	****** 82.8
22	14389	74	130	23	39	56	23	52	50	40.8	23.7	40.8
23	14395	74	131	10	19	46	10	31	52	21.4	42.5	42.5
24	14401	74	131	22	24	59	22	36	53	37.2	22.9	37.2
25	14408	74	132	10	56	40	11	10	58	22.5	46.7	46.7
26	14414	74	132	23	1	53	23	14	47	40.0	23.6	40.0
27	14421	74	133	11	34	4	11	48	58	23.5	47.8	47.8
28	14427	74	133	23	39	48	23	52	48	40.1	24.6	40.1
29	14433	74	134	10	18	1	10	32	55	22.8	46.8	46.8
30	14439	74	134	22	23	39	22	35	51	39.8	22.3	39.8
31	14445	74	135	10	54	55	11	9	55	24.4	45.1	45.1
32	14906	74	171	19	8	53	19	20	53	37.8	22.8	37.8
33	14912	74	172	7	40	3	7	48	15	23.7	27.2	27.2
34	14932	74	173	20	25	7	20	36	55	36.6	24.6	36.6
35	14937	74	174	7	2	57	7	19	15	21.9	52.1	52.1
36	14944	74	174	19	8	18	19	19	54	38.2	22.2	38.2
37	14951	74	175	7	40	2	7	49	56	23.1	32.6	32.6
38	14970	74	176	20	28	35	20	35	53	27.4	24.0	27.4
39	14976	74	177	7	2	4	7	17	58	22.5	49.9	49.9
40	15013	74	180	7	1	4	7	15	52	23.4	45.3	45.3
41	15020	74	180	19	6	42	19	19	48	40.3	23.7	40.3
42	16061	74	262	23	11	51	23	25	27	77.4	42.1	77.4
43	18427	75	84	18	12	1	18	21	19	52.6	79.5	79.5
44	18453	75	86	19	29	1	19	37	19	58.8	83.6	83.6
45	18976	75	128	1	53	0	2	4	30	48.6	27.7	48.6
46	19026	75	132	0	33	0	0	42	24	56.3	31.9	56.3
47	21356	75	315	23	19	15	23	37	3	55.2	68.0	80.0
48	21369	75	316	23	56	6	0	14	18	54.2	68.8	82.1
49	21558	75	331	22	0	1	22	16	19	52.4	73.5	79.8
50	21571	75	332	22	36	1	22	53	13	48.9	75.5	81.8

OUTPUT TAPE EXP4178 (CON'T)

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
51	21583	75	333	21	21	1	21	37	13	49.0	75.2	78.5
52	21728	75	345	7	16	6	7	24	24	67.5	82.9	83.7
53	21773	75	348	21	18	37	21	35	13	51.6	74.7	81.5
54	21785	75	349	20	4	25	20	19	13	53.7	74.6	78.3
55	21798	75	350	20	40	2	20	55	14	49.5	78.0	80.1
56	21824	75	352	21	55	6	22	13	12	50.9	73.1	84.3
57	21861	75	355	20	5	1	20	18	7	59.4	75.0	79.4
58	22089	76	8	20	8	6	20	16	12	79.3	73.3	83.3
59	22140	76	12	20	39	7	20	50	55	63.2	80.5	84.3
60	22562	76	46	3	42	21	3	52	57	42.0	27.2	42.0
61	22587	76	48	3	7	36	3	17	54	32.6	29.9	32.6
62	22593	76	48	15	32	12	15	43	54	29.3	37.2	37.2
63	22612	76	50	2	28	27	2	35	57	33.9	26.5	33.9
64	22625	76	51	3	4	25	3	16	49	39.5	29.1	39.5
65	22637	76	52	1	48	15	2	0	57	38.1	29.5	38.1
66	22663	76	54	3	3	16	3	14	52	41.9	27.7	41.9
67	22701	76	57	3	3	12	3	12	54	41.4	27.2	41.4
68	22726	76	59	2	24	9	2	35	57	42.5	27.5	42.5
69	22751	76	61	1	47	21	1	59	51	37.9	29.7	37.9
70	26856	77	19	2	26	29	2	37	47	70.5	74.8	84.4
71	26857	77	19	4	21	9	4	32	57	72.1	75.4	84.4
72	26865	77	19	19	26	37	19	37	55	77.0	73.6	84.3
73	26866	77	19	21	18	10	21	29	46	67.2	79.4	84.3
74	26871	77	20	6	53	12	7	3	54	73.5	77.8	84.4
75	26872	77	20	8	50	6	9	1	54	81.0	61.9	82.8

********** CONTENTS OF TAPE EXP4179 **********

NAT. RES. COUNCIL CANADA TAPE UP173(INPUT)
WRITTEN JAN. 17 1978 TO JAN. 25 1978
DATE TAPE COPIED FEB. 08 1978

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
1	7737	72	336	21	53	48	22	7	18	79.0	59.0	84.3
2	8085	72	364	8	56	13	9	11	31	58.0	75.0	84.3
3	8123	73	1	8	53	14	9	8	20	50.6	82.4	84.4
4	8128	73	1	18	38	12	18	54	30	75.5	53.3	81.9
5	8135	73	2	7	40	7	7	56	37	57.1	71.0	82.1
6	8148	73	3	8	16	36	8	33	24	54.6	73.5	84.3
7	8161	73	4	8	55	20	9	11	32	58.5	72.6	84.4
8	8163	73	4	11	52	52	12	0	52	77.7	81.5	84.3
9	11760	73	288	11	21	25	11	39	37	55.4	70.1	84.3
10	11955	73	303	21	3	16	21	21	46	76.3	47.3	84.4
11	13063	74	26	7	30	48	7	43	54	39.9	24.6	39.9
12	13221	74	38	18	8	30	18	21	54	21.7	45.7	45.7
13	13227	74	39	6	11	46	6	27	58	43.1	28.0	43.1
14	13524	74	62	16	12	49	16	25	55	20.7	50.0	50.0
15	13644	74	72	4	12	55	4	26	55	44.1	24.2	44.1
16	13656	74	73	2	59	0	3	11	54	37.8	24.7	37.8
17	13662	74	73	15	29	58	15	44	52	23.2	46.0	46.0
18	13669	74	74	3	35	23	3	49	35	42.0	25.0	42.0
19	13757	74	81	2	20	43	2	32	55	35.6	24.8	35.6
20	13783	74	83	3	34	59	3	48	35	40.0	25.9	40.0
21	13789	74	83	14	13	3	14	26	57	22.3	44.1	44.1
22	13795	74	84	2	21	12	2	33	54	33.3	27.7	33.3
23	14165	74	113	8	16	8	8	30	50	50.0	22.1	50.0
24	14178	74	114	8	54	16	9	8	52	49.4	21.7	49.4
25	14430	74	134	6	19	6	6	32	54	50.1	22.2	50.1
26	14515	74	140	22	27	16	22	36	52	28.0	25.8	28.0
27	15179	74	193	7	38	10	7	52	52	23.0	49.7	49.7
28	15184	74	193	17	48	23	18	1	47	41.6	23.3	41.6
29	15197	74	194	18	26	0	18	39	54	42.4	24.3	42.4
30	15210	74	195	19	5	7	19	16	55	39.1	24.0	39.1
31	18074	75	56	21	25	6	21	35	6	51.3	82.1	82.1
32	19039	75	133	1	11	4	1	23	28	57.0	28.6	57.0
33	19052	75	134	1	49	54	1	58	30	55.9	34.6	55.9
34	19354	75	157	22	0	37	22	9	19	46.7	27.5	46.7
35	19355	75	157	23	54	16	23	59	46	51.2	37.3	51.2
36	21254	75	307	22	44	8	22	56	2	31.5	33.2	33.2
37	21268	75	308	23	29	16	23	36	22	27.3	41.3	41.3
38	21292	75	310	22	45	22	22	56	52	29.0	36.8	36.8
39	21306	75	311	23	27	3	23	35	21	26.8	40.4	40.4
40	21324	75	313	10	18	10	10	29	58	36.7	29.3	36.7
41	21331	75	313	22	50	32	22	57	20	27.0	39.7	39.7
42	21342	75	314	21	29	11	21	40	23	28.7	35.2	35.2
43	21355	75	315	22	7	12	22	18	24	28.4	36.9	36.9
44	21469	75	324	22	4	47	22	15	23	29.5	34.3	34.3
45	21532	75	329	21	25	10	21	35	52	31.0	31.9	31.9
46	21544	75	330	20	10	16	20	21	28	29.8	33.5	33.5
47	21744	75	346	13	51	5	14	1	41	73.2	44.5	73.2
48	22258	76	22	3	46	17	3	58	47	38.5	28.6	38.5
49	22360	76	30	5	1	13	5	13	7	40.6	28.2	40.6
50	22398	76	33	5	0	0	5	12	48	43.2	28.3	43.2

OUTPUT TAPE EXP4179 (CON'T)

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
51	22486	76	40	3	42	9	3	54	51	44.1	27.6	44.1
52	22491	76	40	14	19	10	14	29	52	27.6	35.3	35.3
53	22492	76	40	16	12	5	16	23	53	28.5	39.4	39.4
54	22498	76	41	2	30	30	2	41	54	31.5	31.6	31.6
55	22499	76	41	4	22	7	4	31	55	39.8	27.4	39.8
56	22549	76	45	3	3	1	3	15	49	44.9	27.3	44.9
57	22751	76	61	1	47	21	1	59	51	37.9	29.7	37.9
58	22763	76	62	0	33	24	0	43	54	31.8	29.7	31.8
59	22764	76	62	2	24	21	2	35	57	41.3	27.9	41.3
60	22776	76	63	1	9	0	1	22	0	37.6	30.3	37.6
61	22801	76	65	0	31	9	0	42	57	36.2	29.0	36.2
62	22827	76	67	1	45	15	1	56	51	41.9	27.5	41.9
63	22840	76	68	2	24	12	2	33	54	40.6	27.4	40.6
64	22877	76	71	0	32	21	0	41	51	31.9	28.8	31.9
65	22878	76	71	2	24	6	2	35	0	40.4	28.0	40.4
66	22978	76	78	23	51	11	0	2	59	36.6	29.1	36.6
67	22979	76	79	1	45	9	1	55	51	39.9	27.9	39.9
68	22991	76	80	0	27	3	0	38	51	42.6	27.2	42.6
69	23074	76	86	13	37	12	13	47	54	49.8	25.2	49.8
70	23087	76	87	14	14	19	14	25	49	51.3	24.2	51.3
71	23206	76	96	23	47	6	23	57	48	42.6	27.0	42.6
72	23244	76	99	23	47	9	23	56	51	41.8	27.0	41.8
73	23332	76	106	22	32	6	22	44	48	35.4	31.3	35.4
74	23407	76	112	20	37	5	20	47	53	34.4	28.1	34.4
75	23408	76	112	22	29	12	22	38	54	41.3	26.6	41.3
76	23433	76	114	21	50	16	22	1	52	42.3	26.9	42.3
77	23483	76	118	20	35	26	20	46	56	36.5	28.3	36.5

********** CONTENTS OF TAPE EXP4180 **********

NAT. RES. COUNCIL CANADA TAPE UPB10(INPUT)
WRITTEN AUG. 18 1978 TO OCT. 12 1978
DATE TAPE COPIED OCT. 17 1978

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
1	14345	74	127	11	35	1	11	50	19	23.0	48.8	48.8
2	14351	74	127	23	40	1	23	52	55	41.8	23.1	41.8
3	27747	77	89	10	25	4	10	36	53	72.9	70.5	83.2
4	27751	77	89	18	2	34	18	11	4	75.8	75.7	83.7
5	27754	77	89	23	45	5	23	55	47	73.8	77.2	84.4
6	27766	77	90	22	31	5	22	42	54	79.7	66.6	84.4
7	27767	77	91	0	23	11	0	30	53	74.7	84.3	84.4
8	27774	77	91	13	33	38	13	40	38	76.6	84.2	84.4
9	27775	77	91	15	23	23	15	34	53	62.3	83.9	84.4
10	27790	77	92	19	55	6	20	6	54	70.3	71.9	84.1
11	27791	77	92	21	50	5	22	1	53	72.2	72.9	84.3
12	27817	77	94	23	6	22	23	17	52	73.9	74.6	84.4
13	27826	77	95	16	4	6	16	15	54	69.4	75.3	84.3
14	27828	77	95	19	58	7	20	9	55	79.9	62.4	84.2
15	27836	77	96	11	0	40	11	11	52	72.8	75.0	84.3
16	27837	77	96	12	53	4	13	4	52	71.8	77.0	84.4
17	27851	77	97	15	24	30	15	35	54	67.0	79.4	84.3
18	27852	77	97	17	24	31	17	31	49	79.2	75.6	83.8
19	27882	77	100	2	17	24	2	28	54	79.9	65.1	83.5
20	27889	77	100	15	24	24	15	35	54	67.5	78.3	84.3
21	27894	77	101	0	59	39	1	9	57	75.4	76.0	84.3
22	27895	77	101	2	54	10	3	5	46	77.9	65.4	82.4
23	27901	77	101	14	8	17	14	19	53	70.3	77.6	84.4
24	27905	77	101	21	49	8	22	0	56	73.6	72.9	84.3
25	27907	77	102	1	39	23	1	49	47	80.3	68.8	84.3
26	27920	77	103	2	16	19	2	27	55	78.6	65.8	83.2
27	27927	77	103	15	22	23	15	33	47	62.7	82.3	84.4
28	27933	77	104	2	52	18	3	3	54	74.8	68.5	82.2
29	27937	77	104	10	21	36	10	32	54	73.3	74.1	84.3
30	28116	77	118	13	30	45	13	39	51	77.6	76.0	84.3
31	28120	77	118	21	8	58	21	18	52	75.1	77.7	84.4
32	28121	77	118	23	2	8	23	12	50	73.4	77.9	84.4
33	28131	77	119	17	56	36	18	8	54	69.6	71.4	84.1
34	28132	77	119	19	54	5	20	5	53	78.7	67.0	84.3
35	28155	77	121	15	19	51	15	31	57	60.5	80.7	83.8
36	28158	77	121	21	8	7	21	18	55	74.1	76.7	84.4
37	28159	77	121	23	2	6	23	12	48	74.7	76.4	84.4
38	28165	77	122	10	18	36	10	29	54	75.8	74.2	84.4
39	28166	77	122	12	11	37	12	23	49	72.8	74.3	84.4
40	28168	77	122	15	58	13	16	9	49	60.6	81.2	83.7
41	28170	77	122	19	50	5	20	1	53	68.7	77.1	84.4
42	28171	77	122	21	46	7	21	55	49	74.7	79.6	84.4
43	28178	77	123	10	52	36	11	4	48	66.0	81.9	84.3
44	28183	77	123	20	29	17	20	40	53	72.6	75.3	84.3
45	28184	77	123	22	24	4	22	33	58	74.6	78.4	84.3
46	28185	77	124	0	21	5	0	32	53	82.6	60.9	83.8
47	28193	77	124	15	25	7	15	36	43	76.2	67.0	83.7
48	28196	77	124	21	7	22	21	17	46	73.4	78.7	84.3
49	28208	77	125	19	55	9	20	6	57	83.7	62.7	84.3
50	28209	77	125	21	45	6	21	55	48	73.3	78.4	84.3

OUTPUT TAPE EXP4180 (CON'T)

FILE	ORBIT	YEAR	DAY	START TIME HR	MN	SC	STOP TIME HR	MN	SC	**INV. LATITUDE** START	STOP	MAX.
51	28210	77	125	23	39	28	23	50	46	75.2	72.7	84.4
52	28211	77	126	1	33	5	1	44	53	75.8	66.3	81.8
53	28222	77	126	22	23	6	22	33	48	74.0	77.4	84.4
54	28228	77	127	9	41	0	9	50	24	78.5	76.1	84.4
55	28232	77	127	17	10	3	17	29	51	48.7	70.9	84.1
56	28246	77	128	19	50	10	20	1	46	71.6	75.7	84.4
57	28247	77	128	21	45	7	21	54	49	74.7	79.7	84.4
58	28248	77	128	23	39	17	23	50	53	76.1	70.6	84.3
59	28270	77	130	17	21	6	17	32	54	81.1	61.4	84.2
60	28272	77	130	21	6	11	21	14	5	72.8	84.2	84.3
61	28278	77	131	8	22	36	8	34	48	71.7	73.8	84.4
62	28279	77	131	10	12	36	10	21	30	64.0	84.3	84.3
63	28281	77	131	14	4	4	14	15	52	66.8	76.7	84.1
64	28284	77	131	19	50	5	20	1	53	72.7	74.6	84.4
65	28294	77	132	14	38	4	14	54	28	54.6	75.3	83.8
66	28297	77	132	20	28	7	20	38	49	73.4	78.0	84.3
67	28311	77	133	23	0	10	23	11	46	75.1	72.3	84.3
68	28316	77	134	8	22	23	8	33	53	72.9	75.0	84.3
69	28317	77	134	10	16	47	10	27	47	76.5	74.8	84.4
70	28545	77	152	10	4	32	10	13	20	49.2	73.3	73.3
71	28549	77	152	18	3	55	18	15	55	76.3	45.7	76.3
72	28551	77	152	21	52	42	22	0	18	72.6	52.0	72.6
73	28557	77	153	8	48	9	8	59	51	50.4	81.6	81.6
74	28576	77	154	21	13	12	21	20	54	77.0	56.4	77.0
75	28582	77	155	8	9	17	8	20	23	49.3	78.5	78.5
76	28583	77	155	10	6	13	10	12	55	54.6	72.9	72.9
77	28608	77	157	9	24	23	9	35	23	46.0	75.9	75.9
78	28613	77	157	19	19	42	19	20	36	76.7	74.4	76.7
79	28614	77	157	21	13	8	21	23	50	75.5	46.7	75.5
80	28924	77	182	8	7	7	8	14	55	51.6	72.8	72.8
81	28928	77	182	16	6	37	16	17	49	73.8	45.3	73.8
82	29018	77	189	18	34	36	18	46	48	80.2	47.5	80.2
83	29023	77	190	3	37	19	3	48	49	45.2	74.3	74.3
84	29050	77	192	6	48	48	6	59	0	50.4	77.9	77.9
85	29054	77	192	14	48	8	14	59	56	75.4	44.7	75.4
86	29055	77	192	16	44	8	16	55	26	72.3	43.0	72.3
87	29056	77	192	18	34	52	18	46	52	78.0	45.4	78.0

LIST OF ISIS-2 PASSES PROCESSED AS OF JAN. 18 1979. YEAR 1976

DAY	START HR	START MN	START SC	STOP HR	STOP MN	STOP SC	INV. LAT. START	INV. LAT. STOP	INV. LAT. MAX.	ORBIT	NRC FILE TAPE		WDC EXP4
4	20	19	5	20	29	47	48.8	77.5	77.5	22039	UP332	70	169
4	22	21	59	22	31	41	78.3	74.1	84.2	22040	UPB22	1	182
5	0	15	6	0	24	54	77.8	75.8	84.2	22041	UPB22	2	182
5	4	3	51	4	13	21	73.3	75.8	83.8	22043	UPB22	3	182
5	5	59	30	6	9	54	75.0	70.8	83.6	22044	UPB22	4	182
5	7	52	7	8	3	55	69.6	74.2	84.2	22045	UPB22	5	182
5	9	47	27	9	58	21	73.3	76.5	84.2	22046	UPB22	6	182
5	10	0	13	10	11	43	71.5	42.5	71.5	22046	UP332	71	169
5	11	42	18	11	53	30	76.1	73.5	84.2	22047	UPB22	7	182
5	11	55	18	12	4	24	68.5	43.8	68.5	22047	UP332	72	169
5	17	9	19	17	20	55	41.5	73.5	73.5	22050	UP332	73	169
5	17	20	54	17	31	54	73.5	67.2	80.5	22050	UPB22	8	182
5	19	0	7	19	11	55	37.2	69.8	69.8	22051	UP332	74	169
5	19	11	52	19	23	46	69.7	70.2	81.5	22051	UPB22	9	182
5	21	3	5	21	14	23	67.8	77.6	83.6	22052	UPB22	10	182
5	22	45	50	22	56	50	44.0	72.0	72.0	22053	UP332	75	169
5	22	56	51	23	5	9	72.0	84.0	84.2	22053	UPB22	11	182
6	0	41	20	0	50	26	46.2	71.0	71.0	22054	UP332	76	169
6	0	52	8	1	2	50	76.2	75.5	84.2	22054	UPB22	12	182
6	2	42	6	2	53	54	60.5	83.0	84.2	22055	UPB22	13	182
6	10	25	6	10	36	18	73.0	77.0	84.2	22059	UPB22	14	182
6	10	38	8	10	49	26	72.0	42.8	72.0	22059	UP332	77	169
6	12	19	6	12	27	6	73.8	82.6	84.2	22060	UPB22	15	182
6	16	6	10	16	15	52	75.1	69.7	80.6	22062	UPB22	16	182
6	17	46	5	17	57	53	39.7	72.6	72.6	22063	UP332	78	169
6	17	57	52	18	8	28	72.6	69.5	80.7	22063	UPB22	17	182
6	19	39	6	19	48	54	42.5	69.5	69.5	22064	UP332	79	169
6	19	46	54	20	0	29	64.0	72.6	82.0	22064	UPB22	18	182
6	21	43	7	21	53	25	75.6	74.2	84.2	22065	UPB22	19	182
7	3	25	12	3	35	48	73.3	73.5	84.0	22068	UPB22	20	182
7	5	20	8	5	30	50	72.5	72.3	83.5	22069	UPB22	21	182
7	5	30	41	5	42	53	72.7	38.0	72.7	22069	UP128	73	159
7	9	9	4	9	20	21	73.0	75.0	84.1	22071	UPB22	22	182
7	9	22	24	9	31	30	69.5	46.0	69.5	22071	UP128	74	159
7	11	3	6	11	14	24	73.7	76.1	84.2	22072	UPB22	23	182
7	11	16	15	11	27	27	71.1	41.5	71.1	22072	UP128	75	159
7	16	30	7	16	41	55	38.5	71.0	71.0	22075	UP128	76	159
7	16	43	3	16	54	51	73.8	64.7	80.5	22075	UPB22	24	182
7	18	23	4	18	34	52	39.0	72.0	72.0	22076	UP128	77	159
7	18	34	51	18	45	33	71.8	70.6	81.0	22076	UPB22	25	182
7	20	26	20	20	37	26	70.5	74.5	83.0	22077	UPB22	26	
7	20	26	20	20	37	26	70.5	74.5	83.0	22077	UPB22	28	182
7	22	7	7	22	18	55	42.5	72.0	72.0	22078	UP128	78	159
7	22	19	5	22	30	29	72.5	76.0	84.2	22078	UPB22	27	
7	22	19	5	22	30	29	72.5	76.0	84.2	22078	UPB22	29	182
8	0	1	25	0	11	25	42.8	69.5	69.5	22079	UP128	79	159
8	4	3	7	4	13	49	72.0	73.5	84.1	22081	UPB22	30	182
8	4	13	37	4	25	49	74.0	39.6	74.0	22081	UP128	80	159
8	5	56	5	6	7	53	66.1	75.5	83.7	22082	UPB22	31	182
8	6	7	36	6	19	48	76.3	41.5	76.3	22082	UP128	81	159
8	9	47	5	9	58	53	73.5	74.1	84.2	22084	UPB22	32	
8	9	47	5	9	58	53	73.5	74.1	84.2	22084	UPB22	34	182
8	9	58	56	10	10	56	74.0	43.3	74.0	22084	UP128	82	159
8	11	41	4	11	52	22	74.2	74.8	84.2	22085	UPB22	33	
8	11	41	4	11	52	22	74.2	74.8	84.2	22085	UPB22	35	182
8	11	54	9	12	3	33	70.0	44.3	70.0	22085	UP298	1	161
8	17	8	57	17	19	51	42.0	72.3	72.3	22088	UP298	2	161
8	19	0	12	19	11	48	39.1	71.2	71.2	22089	UP298	3	161
8	20	8	6	20	16	12	79.2	73.2	83.2	22089	UP172	59	178
8	22	44	23	22	55	29	41.8	69.8	69.8	22091	UP298	4	161
8	22	57	29	23	8	47	75.1	74.6	84.2	22091	UPB22	36	182
9	0	41	19	0	50	19	47.0	71.5	71.5	22092	UP298	5	161
9	0	52	34	1	2	22	77.5	75.6	84.2	22092	UPB22	38	182
9	2	47	10	2	55	10	75.1	79.3	84.1	22093	UPB22	39	182
9	4	43	8	4	51	26	76.7	74.8	83.5	22094	UPB22	40	182
9	4	52	8	5	3	56	73.0	39.3	73.0	22094	UP298	6	161
9	10	38	14	10	49	26	70.6	41.6	70.6	22097	UP298	7	161
9	14	15	5	14	23	5	80.3	70.2	81.8	22099	UPB22	41	182
9	15	53	12	16	2	24	41.5	66.8	66.8	22100	UP298	8	161
9	17	45	13	17	56	49	39.0	71.5	71.5	22101	UP298	9	161
9	17	56	51	18	7	51	71.5	69.6	80.8	22101	UPB22	42	182
9	19	39	11	19	48	53	44.6	71.1	71.1	22102	UP298	10	161
9	19	47	51	19	58	27	68.5	76.5	82.3	22102	UPB22	43	182
9	21	30	40	21	39	28	45.5	67.7	67.7	22103	UP298	11	161
9	21	41	6	21	52	54	72.1	74.3	84.1	22103	UPB22	44	182
9	23	24	0	23	33	24	45.5	70.3	70.3	22104	UP298	12	161
9	23	35	14	23	47	8	75.3	73.2	84.2	22104	UPB22	45	182
10	1	31	36	1	40	24	79.2	75.3	84.2	22105	UPB22	46	182
10	3	27	18	3	35	24	79.5	73.5	84.0	22106	UPB22	47	182
10	3	35	47	3	47	53	72.5	38.5	72.5	22106	UPA76	69	156
10	5	28	47	5	41	0	77.0	42.2	77.0	22107	UPA76	70	156
10	7	14	6	7	25	54	71.7	71.6	84.2	22108	UPB22	48	182
10	9	8	5	9	19	53	71.5	75.5	84.2	22109	UPB22	49	182
10	9	21	5	9	31	17	72.2	46.0	72.2	22109	UPA76	71	156
10	11	3	6	11	14	30	74.8	74.5	84.2	22110	UPB22	50	182
10	11	17	21	11	26	27	66.7	42.5	66.7	22110	UPA76	72	156
10	13	0	5	13	7	23	82.2	73.0	82.2	22111	UPB22	51	182
10	13	7	23	13	7	23	73.0	73.0	73.0	22111	UPB22	52	
10	18	21	9	18	30	57	35.7	63.0	63.0	22114	UPA76	73	156
10	22	7	20	22	18	20	44.2	72.1	72.1	22116	UPA76	74	156
10	22	20	44	22	30	26	78.3	75.0	84.1	22116	UPB22	53	182
11	0	2	24	0	10	48	46.0	68.7	68.7	22117	UPA76	75	156
11	2	5	20	2	16	50	66.6	79.2	84.2	22118	UPB22	54	182
11	4	5	26	4	12	14	79.0	76.7	83.6	22119	UPB22	55	182
11	19	16	10	19	21	34	81.5	73.3	81.8	22127	UPB22	56	182
11	20	55	5	21	3	23	50.5	72.2	72.2	22128	UPA76	76	156
11	21	5	7	21	14	19	76.7	75.3	84.2	22128	UPB22	57	182
11	22	47	5	22	54	23	49.1	68.2	68.2	22129	UPA76	77	156
11	22	56	25	23	4	37	73.6	83.7	84.2	22129	UPB22	58	182
12	0	47	21	0	58	51	64.1	83.5	84.2	22130	UPB22	59	182
12	2	46	51	2	57	27	75.0	72.2	84.2	22131	UPB22	60	
12	2	46	51	2	57	27	75.0	72.2	84.2	22131	UPB22	62	182
12	4	40	51	4	51	57	71.3	72.5	83.5	22132	UPB22	61	
12	4	40	51	4	51	57	71.3	72.5	83.5	22132	UPB22	63	182
12	6	46	54	6	57	30	72.6	42.8	72.6	22133	UPA76	78	156
12	8	42	8	8	51	20	73.1	48.8	73.1	22134	UPA76	79	156
12	10	25	6	10	36	24	74.2	74.2	84.2	22135	UPB22	64	182
12	10	38	20	10	48	26	69.0	42.6	69.0	22135	UPA76	80	156
12	12	20	6	12	31	48	78.7	67.1	84.2	22136	UPB22	65	182
12	14	15	9	14	22	51	81.0	69.0	81.6	22137	UPB22	66	182

R. L. CRAIN LIMITED

```
$JOB  10:37:57
$OP ******** DUMP OF ~~OUT-2~~ **********
$ASS IN MS3
$EXE DPHEX BS
INPUT TAPE ON MS3
DATA INPUT    1 1 1
 FILE  1      RECORD  1      LENGTH   13000BYTES
```

D-30897

To REDUCE SIZE of DSC MOST of THE DUMPS WERE TOSSED. RWF 3/26/79

(0)	32C80000	32C40000	00005617	0000004C	00000004	00000014	00000013	00000005	00000007	42130791
(40)	0000000E	FFFFFFF3	00000000	C1FCAA25	452C36D3	00000000	00000000	00000000	00000000	00000000
(80)	42275B6E	4227AC72	4227FD76	42264E79	42289F7C	4228F07F	42294182	42299281	4229E383	422A3484
(120)	C21ECF68	C21ED17D	C21ED387	C21ED587	C21ED77C	C21ED966	C21EDB45	C21EDD19	C21EDEE1	C21EE09E
(160)	4357E4FB	4357E313	4357E12C	4357DF45	4357DD5E	4357DB78	4357D992	4357D7AC	4357D5C7	4357D3E2
(200)	422FB99A	4230097F	42300595D	42300A935	42300F907	42314BD2	42319897	4231E852	42323809	42328789
(240)	422EB539	422EC96A	422EDDEB	422EF2BE	422F07E5	422F1D62	422F3337	422F4965	422F5FEF	422F76D9
(280)	4230F414	423137FC	42317CCD	4231C02D	42320468	423248BB	42328D27	4232D1B0	42331646	42335AF4
(320)	41251AAB	41258CB2	4125E90A	4126539E	4126C08F	41272FEA	4127A1C2	41281633	41288D35	412906EB
(360)	4040D776	40411188	40414BC1	404185BD	4041BF52	4041F8A8	404231AF	40426A63	4042A2C8	4042DAD9
(400)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(440)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(480)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(520)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(600)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(720)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(760)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(800)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(880)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(920)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1040)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1080)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1160)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1200)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1280)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1320)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1360)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1400)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1440)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1480)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1520)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1600)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1720)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1760)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1800)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1880)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1920)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2040)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2080)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2160)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2200)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000