#293

OAO-A2

REDUCED PHOTOMETER

68-110A-02A

OAO 2

REDUCED PHOTOMETER DATA MAGTAPE

68-110A-02A

THIS DATA SET HAS BEEN RESTORED. IT ORIGINALLY CONTAINED 414 7-TRACK, 556 BPI TAPES WRITTEN IN BCD. THERE ARE SEVEN RESTORED TAPES WRITTEN IN ASCII. TWO OF THE ORIGINAL TAPES WERE BAD: D010003 AND D010552. THE TAPES WERE COMPRESSED AND BLOCKED 100 TO 1. FOR THE MOST PART THE TAPES ARE IN TIME SEQUENTIAL ORDER, BUT THERE ARE A FEW TAPES OUT OF ORDER. THE DR TAPES ARE 3480 CARTRIDGES AND THE DS TAPES ARE 9-TRACK, 6250 BPI. THE ORIGINAL TAPES WERE CREATED ON AN IBM 7094 COMPUTER AND WERE RESTORED ON THE MRS SYSTEM. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN	
DR005948	DS005948	D009827	1-14	12/11/68 - 12/13/68	
		D009828	15-36	12/18/68 - 12/20/68	
		D009829	37-68	12/20/68 - 12/22/68	(a)
		D009830	69-97	12/22/68 - 12/24/68	
		D010022	98-152	12/27/68 - 12/29/68	
		D009831	153-196	12/30/68 - 01/01/69	
		D010023	197-229	01/01/69 - 01/03/69	
		D009832	230-273	01/10/69 - 01/12/69	
		D009833	274-313	01/12/69 - 01/15/69	
		D009834	314-337	01/15/69 - 01/17/69	
		D010024	338-402	01/31/69 - 02/02/69	
		D010061	403-473	02/02/69 - 02/03/69	(b)
		D010348	474-532	02/30/69 - 02/06/69	
		D013369	533-593	02/06/69 - 02/08/69	(c)
		D010026	594-643	02/08/69 - 02/11/69	
		D010027	644-690	02/11/69 - 02/17/69	(d)
		D011002	691-719	03/01/69 - 03/03/69	
		D010028	720-744	03/03/69 - 03/05/69	(e)
		D010127	745-775	03/05/69 - 03/07/69	(f)
		D010029	776-824	03/28/69 - 03/30/69	(g)
		D010030	825-862	03/30/69 - 04/01/69	(h)
		D010004	863-905	04/05/69 - 04/08/69	(i)
		D010062	906-946	04/08/69 - 04/11/69	(j)
		D010005	947-972	04/11/69 - 04/12/69	(k)
		D010006	973-1012	04/16/69 - 04/18/69	
		D010007	1013-1059	04/19/69 - 04/21/69	

DR#	DS#	D#	FILES	TIME SPAN	
DR005948 CON'T	DS005948	D010008	1060-1103	04/22/69 - 04/24/69	
		D010009	1104-1168	05/08/69 - 05/11/69	(l)
		D010010	1169-1203	05/11/69 - 05/13/69	(m)
		D011001	1204-1273	05/13/69 - 05/16/69	(n)
		D010644	1274-1315	05/16/69 - 05/19/69	(o)
		D010011	1316-1361	05/30/69 - 06/05/69	(p)
		D010643	1362-1390	06/05/69 - 06/09/69	(q)
		D010012	1391-1445	06/09/69 - 06/13/69	(r)
		D010013	1446-1494	06/13/69 - 06/16/69	(s)
		D010405	1495-1550	06/16/69 - 06/19/69	(t)
		D010002	1551-1603	07/10/69 - 07/12/69	(u)
		D013370	1604-1636	07/12/69 - 07/15/69	(v)
		D010349	1637-1669	07/15/69 - 07/18/69	(w)
		D009999	1670-1721	07/21/69 - 07/25/69	(x)
		D009998	1722-1769	08/01/69 - 08/03/69	
		D009997	1770-1839	08/04/69 - 08/04/69	
		D009996	1840-1886	08/09/69 - 08/12/69	(y)
		D009995	1887-1928	08/12/69 - 08/14/69	
		D009994	1929-1953	08/14/69 - 08/15/69	(z)
		D009993	1954-1985	09/05/69 - 09/07/69	(aa)
		D010021	1986-2010	09/07/69 - 09/09/69	(bb)
		D010020	2011-2040	09/10/69 - 09/12/69	
		D010019	2041-2066	09/12/69 - 09/14/69	(cc)
		D010018	2067-2093	09/14/69 - 09/16/69	(dd)
		D013371	2094-2124	09/16/69 - 09/19/69	
		D010016	2125-2169	09/26/69 - 09/28/69	(ee)
		D010015	2170-2206	09/28/69 - 09/30/69	
		D011000	2207-2245	09/30/69 - 10/02/69	(ff)
DR005949	DS005949	D010014	1-32	10/02/69 - 10/04/69	(gg)
		D010063	33-73	10/05/69 - 10/07/69	
		D010128	74-104	10/07/69 - 10/09/69	(hh)
		D010064	105-120	10/31/69 - 10/31/69	
		D010129	121-156	11/07/69 - 11/07/69	(ii)
		D010065	157-181	11/11/69 - 11/14/69	(jj)
		D010130	182-218	11/14/69 - 11/16/69	
		D011012	219-246	11/17/69 - 11/18/69	
		D010131	247-279	11/18/69 - 11/20/69	
		D010132	280-314	11/21/69 - 11/23/69	
		D010133	315-350	11/23/69 - 11/25/69	(kk)
		D010066	351-391	11/25/69 - 11/28/69	
		D010134	392-418	12/26/69 - 12/28/69	
		D010135	419-454	12/28/69 - 12/31/69	
		D010350	455-480	01/05/70 - 01/07/70	
		D010136	481-515	01/08/70 - 01/10/70	(ll)
		D010137	516-555	01/10/70 - 01/13/70	
		D008756	556-592	01/17/70 - 01/20/70	(mm)
		D010138	593-626	01/20/70 - 01/22/70	(nn)
		D010139	627-674	01/22/70 - 01/25/70	
		D010140	675-703	01/25/70 - 01/27/70	
		D010351	704-741	01/27/70 - 01/30/70	(oo)
		D010141	742-771	02/17/70 - 02/19/70	
		D010142	772-797	02/19/70 - 02/22/70	

DR#	DS#	D#	FILES	TIME SPAN	
DR005949 CON'T.	DS005949	D010068	798-829	02/22/70 - 02/25/70	
		D010069	830-860	02/25/70 - 02/27/70	
		D010143	861-894	02/27/70 - 03/02/70	
		D010144	895-919	03/02/70 - 03/06/70	
		D010070	920-936	03/06/70 - 03/09/70	
		D010145	937-955	03/10/70 - 03/11/70	
		D008743	956-977	03/12/70 - 03/13/70	
		D010146	978-1006	03/14/70 - 03/16/70	
		D008746	1007-1044	03/16/70 - 03/19/70	
		D008745	1045-1051	03/20/70 - 03/22/70	
		D008744	1052-1081	03/22/70 - 03/25/70	
		D010352	1082-1092	03/25/70 - 03/27/70	
		D008751	1093-1102	03/28/70 - 03/29/70	
		D008710	1103-1120	04/04/70 - 04/06/70	
		D008741	1121-1174	04/10/70 - 04/15/70	
		D008752	1175-1229	04/15/70 - 04/19/70	(pp)
		D008755	1230-1261	04/19/70 - 04/22/70	(qq)
		D008742	1262-1292	04/22/70 - 04/25/70	
		D008753	1293-1331	04/25/70 - 04/28/70	(rr)
		D010406	1332-1370	04/28/70 - 05/01/70	(ss)
		D008754	1371-1406	05/01/70 - 05/04/70	
		D010642	1407-1430	05/06/70 - 05/09/70	
		D010353	1431-1468	05/09/70 - 05/11/70	
		D010354	1469-1510	05/11/70 - 05/14/70	
		D008747	1511-1522	05/14/70 - 05/15/70	
		D008709	1523-1544	05/17/70 - 05/19/70	
		D010355	1545-1564	05/19/70 - 05/22/70	
		D008708	1565-1593	05/23/70 - 05/25/70	
		D008749	1594-1609	05/25/70 - 05/29/70	
		D008750	1610-1638	06/03/70 - 06/06/70	
		D010356	1639-1666	06/06/70 - 06/09/70	
		D013302	1667-1684	06/09/70 - 06/12/70	(tt)
		D010357	1685-1726	06/13/70 - 06/16/70	
		D010559	1727-1737	06/21/70 - 06/22/70	(uu)
		D010380	1738-1769	06/23/70 - 06/25/70	(vv)
		D010381	1770-1794	06/25/70 - 06/28/70	
		D010382	1795-1824	06/28/70 - 07/01/70	
		D010407	1825-1841	07/02/70 - 07/04/70	
		D010383	1842-1861	07/05/70 - 07/09/70	
		D010385	1862-1886	07/09/70 - 07/11/70	
DR005950	DS005950	D010385	1-28	07/11/70 - 07/14/70	
		D010386	29-52	07/14/70 - 07/17/70	(ww)
		D010387	53-73	07/18/70 - 07/20/70	(xx)
		D010388	74-100	07/20/70 - 07/23/70	(yy)
		D010389	101-127	07/23/70 - 07/26/70	
		D010408	128-153	07/26/70 - 07/29/70	
		D013303	154-183	07/29/70 - 08/01/70	(zz)
		D010390	184-223	08/01/70 - 08/05/70	
		D013304	224-252	08/06/70 - 08/09/70	
		D010410	253-280	08/12/70 - 08/15/70	
		D010411	281-316	08/15/70 - 08/18/70	

DR#	DS#	D#	FILES	TIME SPAN	
DR005950 CON'T.	DS005950	D010392	317-342	08/18/70 - 08/21/70	
		D010393	343-360	08/18/70 - 08/23/70	
		D010394	361-368	08/23/70 - 08/24/70	????
		D010412	369-388	08/24/70 - 08/26/70	
		D010395	389-401	08/27/70 - 08/29/70	(aaa)
		D010396	402-423	08/30/70 - 09/03/70	
		D013305	424-456	09/30/70 - 09/05/70	(bbb)
		D010413	457-488	09/05/70 - 09/08/70	
		D010414	489-507	09/08/70 - 09/10/70	
		D010415	508-523	09/10/70 - 09/12/70	
		D010416	524-543	09/13/70 - 09/17/70	
		D010417	544-576	09/17/70 - 09/20/70	
		D010641	577-607	09/20/70 - 09/22/70	
		D010418	608-628	09/22/70 - 09/25/70	
		D013306	629-654	09/26/70 - 09/29/70	(ccc)
		D010420	655-668	09/29/70 - 10/02/70	
		D010640	669-674	10/03/70 - 10/04/70	(ddd)
		D010421	675-678	10/05/70 - 10/09/70	
		D010422	679-683	10/09/70 - 10/11/70	
		D010423	684-688	10/11/70 - 10/12/70	
		D010424	689-718	10/14/70 - 10/17/70	
		D011013	719-724	10/17/70 - 10/20/70	
		D010425	725-727	10/21/70 - 10/21/70	
		D010426	728-743	10/23/70 - 10/25/70	(eee)
		D010427	744-751	10/25/70 - 10/28/70	
		D013364	752-756	10/29/70 - 10/29/70	(fff)
		D010428	757-800	11/01/70 - 11/04/70	(ggg)
		D010999	801-847	11/04/70 - 11/07/70	(hhh)
		D010998	848-851	11/07/70 - 11/07/70	(iii)
		D010639	852-873	11/08/70 - 11/10/70	
		D010429	874-875	11/11/70 - 11/11/70	(jjj)
		D010430	876-881	11/13/70 - 11/14/70	
		D010431	882-886	11/20/70 - 11/22/70	
		D013365	887-891	11/26/70 - 11/29/70	(kkk)
		D010471	892-924	12/03/70 - 12/05/70	
		D010472	925-928	12/05/70 - 12/05/70	
		D010432	929-967	12/08/70 - 12/10/70	
		D010473	968-983	12/11/70 - 12/13/70	
		D010474	984-1000	12/13/70 - 12/14/70	
		D010475	1001-1014	12/14/70 - 12/17/70	
		D010638	1015-1037	12/18/70 - 12/20/70	(lll)
		D010476	1038-1055	12/21/70 - 12/22/70	
		D010477	1056-1059	12/24/70 - 12/26/70	
		D010478	1060-1078	12/26/70 - 12/28/70	
		D010481	1079-1098	12/31/70 - 01/03/71	
		D013366	1099-1100	01/03/71 - 01/06/71	(mmm)
		D010461	1101-1104	01/06/71 - 01/07/71	
		D010546	1105-1124	01/06/71 - 01/23/71	(nnn)
		D013367	1125-1136	01/10/71 - 01/20/71	(ooo)
		D010462	1137-1162	01/23/71 - 01/27/71	(ppp)
		D013372	1163-1190	01/27/71 - 01/30/71	(qqq)
		D010464	1191-1199	01/03/71 - 02/02/71	
		D010482	1200-1206	02/02/71 - 02/03/71	(rrr)

DR#	DS#	D#	FILES	TIME SPAN	
DR005951	DS005951	D013373	1-10	02/04/71 - 02/06/71	(sss)
		D013374	11-23	02/06/71 - 02/09/71	(ttt)
		D010466	24-46	02/09/71 - 02/12/71	
		D010483	47-77	02/13/71 - 02/15/71	
		D010545	78-104	02/16/71 - 02/18/71	
		D013375	105-114	02/19/71 - 02/21/71	(uuu)
		D010467	115-125	02/21/71 - 02/23/71	
		D010484	126-136	02/24/71 - 02/28/71	(vvv)
		D013376	137-151	03/01/71 - 03/05/71	(www)
		D010520	152-170	03/07/71 - 03/11/71	(xxx)
		D010469	171-190	03/11/71 - 03/16/71	
		D010485	191-210	03/16/71 - 03/21/71	
		D010470	211-229	03/22/71 - 03/25/71	
		D010537	230-235	03/25/71 - 03/26/71	
		D010486	236-255	03/27/71 - 03/29/71	
		D010539	256-287	03/29/71 - 04/01/71	(yyy)
		D010487	288-300	04/01/71 - 04/04/71	
		D010488	301-313	04/05/71 - 04/07/71	
		D010538	314-330	04/07/71 - 04/10/71	
		D010489	331-351	04/11/71 - 04/14/71	
		D010490	352-368	04/14/71 - 04/15/71	
		D010544	369-382	04/16/71 - 04/17/71	
		D010541	383-390	04/17/71 - 04/19/71	
		D010540	391-397	04/19/71 - 04/22/71	
		D010535	398-406	04/22/71 - 04/25/71	(zzz)
		D010637	407-422	04/26/71 - 04/28/71	(aaaa)
		D010525	423-441	04/29/71 - 05/02/71	
		D010524	442-460	05/02/71 - 05/05/71	
		D010523	461-483	05/06/71 - 05/09/71	
		D010522	484-508	05/10/71 - 05/11/71	
		D010528	509-512	05/12/71 - 05/12/71	
		D013368	513-519	05/15/71 - 05/16/71	(bbbb)
		D010533	520-538	05/17/71 - 05/19/71	
		D010532	539-553	05/19/71 - 05/21/71	
		D010531	554-566	05/22/71 - 05/25/71	(cccc)
		D010521	567-586	05/26/71 - 05/28/71	(dddd)
		D010529	587-611	06/03/71 - 06/04/71	(eeee)
		D010526	612-623	06/05/71 - 06/06/71	(ffff)
		D010534	624-631	06/07/71 - 06/09/71	(gggg)
		D010543	632-648	06/09/71 - 06/10/71	(hhhh)
		D010530	649-652	06/01/71 - 06/02/71	(iiii)
		D010542	653-668	06/11/71 - 06/13/71	(jjjj)
		D010557	669-689	06/14/71 - 06/16/71	(kkkk)
		D010558	690-691	06/17/71 - 06/17/71	(llll)
		D016651	692-724	06/17/71 - 06/23/71	(mmmm)
		D010560	725-750	06/23/71 - 06/29/71	(nnnn)
		D013307	751-762	06/30/71 - 07/03/71	(oooo)
		D010562	763-770	07/04/71 - 07/06/71	(pppp)
		D010563	771-781	07/09/71 - 07/11/71	(qqqq)
		D010564	782-805	07/12/71 - 07/14/71	(rrrr)
		D010547	806-841	07/14/71 - 07/18/71	(ssss)
		D010548	842-860	07/18/71 - 07/20/71	(tttt)
		D010556	861-889	07/21/71 - 07/23/71	(uuuu)
		D013308	890-904	07/24/71 - 07/27/71	(vvvv)

DR#	DS#	D#	FILES	TIME SPAN	
DR005951 CON'T.	DS005951	D010554	905-915	07/28/71 - 07/30/71	(wwww)
		D010636	916-934	07/30/71 - 08/03/71	(xxxx)
		D010553	935-959	08/04/71 - 08/07/71	(yyyy)
		D010552	960-975	08/12/71 - 08/14/71	
		D010551	976-983	08/14/71 - 08/17/71	(zzzz)
		D010634	984-992	08/18/71 - 08/20/71	(aaaaa)
		D010550	993-1005	08/20/71 - 08/20/71	(bbbbb)
		D010549	1006-1017	08/26/71 - 08/26/71	
		D010633	1018-1044	08/30/71 - 08/31/71	(ccccc)
		D010632	1045-1062	09/03/71 - 09/03/71	(ddddd)
		D010631	1063-1095	09/07/71 - 09/10/71	(eeeee)
		D011016	1096-1104	09/10/71 - 09/12/71	(fffff)
		D013309	1105-1124	09/12/71 - 09/14/71	(ggggg)
		D013310	1125-1146	09/14/71 - 09/17/71	(hhhhh)
		D010630	1147-1182	09/17/71 - 09/20/71	(iiiii)
		D010629	1183-1190	09/20/71 - 09/21/71	(jjjjj)
		D010628	1191-1197	09/21/71 - 09/22/71	(kkkkk)
		D010627	1198-1211	09/22/71 - 09/24/71	(lllll)
		D010626	1212-1237	09/24/71 - 09/27/71	(mmmmm)
		D010625	1238-1276	09/27/71 - 09/30/71	(nnnnn)
		D010635	1277-1303	09/30/71 - 10/03/71	(ooooo)
DR005952	DS005952	D010615	1-29	11/21/71 - 11/23/71	(ppppp)
		D011014	30-45	10/06/71 - 10/09/71	(qqqqq)
		D010616	46-65	10/09/71 - 10/12/71	(rrrrr)
		D010617	66-95	10/02/71 - 10/16/71	(sssss)
		D010619	96-127	10/17/71 - 10/20/71	(ttttt)
		D010620	128-156	10/21/71 - 10/26/71	(uuuuu)
		D010621	157-186	10/26/71 - 10/29/71	(vvvvv)
		D010622	187-205	10/29/71 - 11/02/71	(wwwww)
		D010623	206-213	11/03/71 - 11/04/71	(xxxxx)
		D016650	214-230	11/05/71 - 11/06/71	(yyyyy)
		D010624	231-254	11/06/71 - 11/10/71	(zzzzz)
		D010618	255-272	11/12/71 - 11/13/71	(aaaaaa)
		D013311	273-303	11/14/71 - 11/17/71	(bbbbbb)
		D011008	304-309	11/17/71 - 11/18/71	(cccccc)
		D011005	310-338	11/21/71 - 11/23/71	
		D011004	339-380	11/23/71 - 11/26/71	(dddddd)
		D013312	381-400	11/27/71 - 11/29/71	(eeeeee)
		D011009	401-417	11/29/71 - 12/01/71	
		D013313	418-433	12/02/71 - 12/04/71	
		D014382	434-452	12/04/71 - 12/07/71	(ffffff)
		D016649	453-478	12/07/71 - 12/12/71	
		D014383	479-510	12/12/71 - 12/17/71	
		D013314	511-544	12/17/71 - 12/22/71	
		D011015	545-573	12/22/71 - 12/25/71	
		D011007	574-605	12/25/71 - 12/28/71	
		D011010	606-638	12/29/71 - 12/31/71	(gggggg)
		D011006	639-669	12/31/71 - 01/03/72	(hhhhhh)
		D011011	670-703	01/03/72 - 01/06/72	(iiiiii)
		D011003	704-725	01/06/72 - 01/08/72	
		D013315	726-753	01/09/72 - 01/10/72	

DR#	DS#	D#	FILES	TIME SPAN	
DR005952	DS005952	D013316	754-783	01/11/72 - 01/13/72	
CON'T.		D014384	784-817	01/14/72 - 01/17/72	(jjjjjj)
		D013362	818-828	01/13/72 - 01/15/72	(kkkkkk)
		D014040	829-857	01/16/72 - 01/18/72	
		D013353	858-888	01/18/72 - 01/21/72	
		D016648	889-920	01/21/72 - 01/24/72	
		D013354	921-951	01/24/72 - 01/26/72	
		D013355	952-970	01/27/72 - 01/29/72	
		D013356	971-983	01/30/72 - 02/02/72	
		D016647	984-1014	02/02/72 - 02/07/72	
		D014385	1015-1047	02/12/72 - 02/15/72	
		D016638	1048-1074	02/15/72 - 02/18/72	
		D013357	1075-1098	02/20/72 - 02/22/72	
		D013358	1099-1120	02/23/72 - 02/24/72	
		D013359	1121-1153	02/24/72 - 02/27/72	
		D013360	1154-1172	02/27/72 - 03/01/72	
		D014039	1173-1200	03/01/72 - 03/03/72	(llllll)
		D014042	1201-1235	03/03/72 - 03/06/72	
		D013361	1236-1260	03/06/72 - 03/08/72	
		D013342	1261-1291	02/07/72 - 02/12/72	
		D016646	1292-1314	03/08/72 - 03/10/72	
		D013343	1315-1331	03/10/72 - 03/12/72	
		D013344	1332-1346	03/12/72 - 03/14/72	(mmmmmm)
		D016645	1347-1372	03/14/72 - 03/17/72	(nnnnnn)
		D013345	1373-1407	03/17/72 - 03/20/72	(oooooo)
		D013346	1408-1418	03/21/72 - 03/23/72	(pppppp)
		D013347	1419-1455	03/23/72 - 03/27/72	(qqqqqq)
		D016644	1456-1492	03/27/72 - 03/31/72	
		D013348	1493-1519	04/01/72 - 04/05/72	(rrrrrr)
		D013349	1520-1549	04/05/72 - 04/08/72	(ssssss)
		D013350	1550-1575	04/08/72 - 04/11/72	(tttttt)
		D014048	1576-1598	04/11/72 - 04/14/72	(uuuuuu)
		D014047	1599-1625	04/15/72 - 04/18/72	
		D013351	1626-1674	04/18/72 - 04/21/72	
		D013317	1675-1703	04/21/72 - 04/24/72	
		D013318	1704-1746	04/24/72 - 04/27/72	(vvvvvv)
		D014045	1747-1777	04/27/72 - 04/30/72	(wwwwww)
		D013319	1778-1793	04/30/72 - 05/01/72	(xxxxxx)
		D013320	1794-1820	05/02/72 - 05/04/72	(yyyyyy)
		D013321	1821-1847	05/04/72 - 05/06/72	(zzzzzz)
		D013332	1848-1878	05/04/72 - 05/06/72	(aaaaaaa)
		D013363	1879-1907	05/07/72 - 05/09/72	(bbbbbbb)
		D013333	1908-1928	05/09/72 - 05/11/72	
DR005953	DS005953	D013334	1-17	05/12/72 - 05/13/72	(ccccccc)
		D013335	18-32	05/14/72 - 05/16/72	(ddddddd)
		D014046	33-56	05/17/72 - 05/19/72	(eeeeeee)
		D013336	57-78	05/20/72 - 05/23/72	(fffffff)
		D013323	79-96	05/23/72 - 05/27/72	(ggggggg)
		D013324	97-122	05/27/72 - 05/31/72	
		D013325	123-154	06/01/72 - 06/05/72	

DR#	DS#	D#	FILES	TIME SPAN	
DR005953	DS005953	D014386	155-167	06/08/72 - 06/09/72	
CON'T.		D013326	168-205	06/16/72 - 06/18/72	
		D013328	206-220	06/19/72 - 06/24/72	
		D013329	221-240	06/28/72 - 06/30/72	
		D013330	241-259	06/30/72 - 07/03/72	
		D013331	260-279	07/03/72 - 07/06/72	(hhhhhhh)
		D014387	280-303	07/06/72 - 07/10/72	
		D014388	304-326	07/11/72 - 07/15/72	
		D014389	327-353	07/21/72 - 07/26/72	
		D013338	354-375	07/27/72 - 07/29/72	
		D013339	376-406	07/29/72 - 08/01/72	
		D013340	407-445	08/02/72 - 08/04/72	(iiiiiii)
		D013341	446-500	08/04/72 - 08/06/72	(jjjjjjj)
		D014043	501-522	08/07/72 - 08/09/72	
		D014044	523-544	08/10/72 - 08/12/72	
		D014041	545-575	08/12/72 - 08/15/72	
		D014059	576-599	08/15/72 - 08/17/72	(kkkkkkk)
		D014062	600-604	08/17/72 - 08/19/72	(lllllll)
		D014061	605-609	08/20/72 - 08/22/72	
		D014063	610-613	08/22/72 - 08/23/72	
		D014060	614-623	08/24/72 - 08/26/72	(mmmmmmm)
		D014065	624-658	08/29/72 - 09/01/72	
		D014064	659-664	09/01/72 - 09/04/72	
		D016643	665-693	09/04/72 - 09/06/72	
		D014068	694-722	09/07/72 - 09/10/72	
		D014067	723-740	09/11/72 - 09/12/72	(nnnnnnn)
		D014066	741-757	09/13/72 - 09/16/72	
		D014025	758-774	09/16/72 - 09/19/72	(ooooooo)
		D013352	775-794	09/20/72 - 09/25/72	
		D013322	795-809	09/25/72 - 09/27/72	
		D014390	810-822	09/27/72 - 09/30/72	
		D014024	823-844	10/01/72 - 10/03/72	
		D016642	845-867	10/04/72 - 10/06/72	(ppppppp)
		D014391	868-879	10/06/72 - 10/08/72	(qqqqqqq)
		D014027	880-882	10/09/72 - 10/11/72	(rrrrrrr)
		D014026	883-933	10/12/72 - 10/14/72	(sssssss)
		D014029	934-959	10/14/72 - 10/15/72	(ttttttt)
		D014028	960-984	10/16/72 - 10/17/72	
		D014031	985-1001	10/18/72 - 10/19/72	(uuuuuuu)
		D014030	1002-1029	10/19/72 - 10/21/72	
		D014033	1030-1060	10/22/72 - 10/24/72	(vvvvvvv)
		D014032	1061-1072	10/24/72 - 10/26/72	(wwwwww)
		D014381	1073-1094	10/26/72 - 10/28/72	(xxxxxxx)
		D014050	1095-1121	10/28/72 - 10/31/72	
		D014380	1122-1140	11/01/72 - 11/02/72	
		D014049	1141-1165	11/03/72 - 11/07/72	
		D014052	1166-1185	11/08/72 - 11/12/72	
		D014051	1186-1205	11/12/72 - 11/15/72	
		D014054	1206-1230	11/16/72 - 11/19/72	
		D014053	1231-1273	11/20/72 - 11/22/72	
		D014056	1274-1330	11/22/72 - 11/24/72	(yyyyyyy)
		D014379	1331-1367	11/24/72 - 11/27/72	
		D016641	1368-1390	11/27/72 - 11/28/72	

DR#	DS#	D#	FILES	TIME SPAN	
DR005953	DS005953	D014055	1391-1407	11/29/72 - 11/30/72	
CON'T.		D014058	1408-1435	12/01/72 - 12/03/72	
		D014057	1436-1455	12/03/72 - 12/05/72	
		D016640	1456-1488	12/06/72 - 12/08/72	
		D014036	1489-1497	12/08/72 - 12/10/72	
		D014035	1498-1506	12/10/72 - 12/12/72	
		D014034	1507-1522	12/12/72 - 12/14/72	
		D014038	1523-1526	12/14/72 - 12/14/72	
		D014037	1527-1540	12/15/72 - 12/16/72	
		D014378	1541-1570	12/17/72 - 12/19/72	
		D014377	1571-1600	12/19/72 - 12/21/72	
		D016639	1601-1618	12/21/72 - 01/06/73	
		D014376	1619-1647	01/18/73 - 01/22/73	(zzzzzzz)
		D014375	1648-1663	01/22/73 - 01/24/73	
		D014374	1664-1687	01/24/73 - 01/26/73	
		D014373	1688-1710	01/26/73 - 01/30/73	
		D014372	1711-1717	01/30/73 - 02/01/73	
		D014371	1718-1723	02/02/73 - 02/04/73	
DR005961	DS005961	D010000	1-43	07/19/69 - 07/21/69	
		D013327	44-72	06/13/72 - 06/16/72	
		D013337	73-103	07/16/72 - 07/20/72	
		D014370	104-109	02/02/73 - 02/04/73	
		D014369	110-115	02/05/73 - 02/07/73	

(a) D009829 - 26 ERRORS, REC. 382, 440, F5; REC. 17, 18, 47, 75, 104, 162, F6; REC. 335, F22; REC. 99, 492, 914, F24; REC. 233, 283, F30; REC. 165, 274, 480, 539, 718, 927, 1001, 1282, 1357, F31; REC. 74, 180, 286, F32
(b) D010061 - 2 ERRORS, REC. 42, F57; REC. 205, F70
(c) D013369 - 2 ERRORS, REC. 221, 249, F8
(d) D010027 - 8 ERRORS, REC. 176, 178, F1; REC. 474, 475, 485, 590, 591, 746, F2
(e) D010028 - 76 ERRORS, REC. 22, 325, 337, 343, 370, F1; REC. 23, 110, 128, 152, 164, 188, 194, 236, 419, 631, 637, 643, 649, 655, 673, 860, 869, 884, 896, 914, 920, 926, 938, 944, F2; REC. 50, 53, 56, 62, 145, 157, 163, 178, 356, 442, 457, 475, 543, F3; REC. 5, 133, 276, 344, 350, 356, F4; REC. 7, 25, 78, 84, 167 217, 386, 454, 466, 472, 475, 481, 550, 551, F5; REC. 76, 88, 168, 195, 464, 479, F6; REC. 367, 414, F7; REC. 23, F8; REC. 438, F9; REC. 333, F13; REC. 20, F15; REC. 456, 505, F25
(f) D010127 - 19 ERRORS, REC. 141, 234, F1; REC. 91, 153, 556, 711, 847, 927, 958, F2; REC. 316, 453, 687, 699, F3; REC. 398, 674, 792, F5; REC. 13, 119, F10 REC. 167, F14
(g) D010029 - 35 ERRORS, REC. 317, 472, F1; REC. 23, 32, 110, 124, 153, 346, 355, 375, 410, 514, 560, 604, 650, 679, 685, 705, 740, 772, 801, 827, F2; REC. 65, 109, 110, 580, F3; REC. 41, 138, F4; REC. 164, F6; REC. 547, F9; REC. 31, F11; REC. 227, 283, F12; REC. 51, F16; REC. 114, F21
(h) D010030 - 9 ERRORS, REC. 91, 122, 413, 574, F2; REC. 70, F6; REC. 247, F8; REC. 33, F14; REC. 245, F15; REC. 205, F31
(i) D010004 - 2 ERRORS, REC. 199, 391, F1
(j) D010062 - 552 ERRORS, REC. 251, 433, 545, F2; REC. 129, 299, 305, 461, F3; REC. 70, 188, 249, 396, 402, F4; REC. 121, 212, 221, 291, 297, 453, 526, F5; REC. 119, 228, 257, 340, 390, 410, 434, 437, F6; REC. 40, 46, 61, 208, 214,

252, 255, 267, 290, 302, 349, 414, 428, 434, 440, 549, 658, 711, F7; REC. 46, 52, 129, 167, 258, 264, 270, 276, 314, 344, 347, 438, 444, 494, F8; REC. 9, 21, 41, 47, 53, 68, 74, 150, 218, 274, 277, 312, 330, 336, 342, 409, F9; REC. 2, 40 52, 58, 67, 81, 87, 99, 119, 131, 137, 164, 178, 222, 228, 234, 275, 281, 299, 337, 346, 349, 366, 399, 402, F10; REC. 2, 49, 111, 117, 123, 129, 188, 194, 232, 260, 313, 319, 325, 354, 369, 372, 375, 395, 413, 419, 449, 461, 483, 489, 492, 507, 543, F11; REC. 2, 5, 8, 46, 93, 108, 111, 143, 149, 199, 202, 234, 237, 240, 246, 252, 258, 276, 282, 285, 341, 365, 371, 383, 418, 421, 424, 439, 457, 463, 469, 478, 490, 496, 502, F12; REC. 4, 36, 42, 48, 54, 74, 80, 89, 127 130, 133, 142, 168, 186, 291, 294, 297, 309, 321, 344, 356, 362, 382, 397, 400, 423, 426, 479, F13; REC. 5, 20, 52, 58, 84, 93, 102, 108, 114, 117, 123, 137, 149, 158, 161, 181, 187, 202, 248, 260, 266, 269, 272, 275, 301, 304, 307, 319, 322, 369, 378, 419, 422, F14; REC. 2, 37, 46, 72, 101, 119, 125, 139, 142, 153, 156, 188, 267, 270, 290, 340, 367, 369, 372, 386, 392, 398, 401, 415, 418, 421, 427, 433, 453, 459, 488, 500, 561, 587, 604, 624, 662, F15; REC. 4, 24, 38, 71, 154, 203, 234, 309, 323, 329, F16; REC. 16, 25, 60, 66, 104, 121, 147, 150, 170 F17; REC. 8, 28, 51, 77, 89, 112, 126, 175, F18; REC. 8, 22, 31, 54, 60, 63, 103, 140, 157, 295, 297, 320, 323, 346, 352, 358, 381, 393, 407, 413, F19; REC. 1, 13, 22, 39, 51, 74, 77, 91, 120, 141, F20; REC. 74, 85, F21; REC. 1, 18, 35, 44, 52, 66, 205, F22; REC. 41, 58, 67, 81, 87, 93, 101, 110, 113, 130, 144, 155 161, 175, 206, 339, 348, 351, 356, 362, 365, 406, 425, 436, 592, 755, 970, 1025 F23; REC. 14, 192, 271, 360, F24; REC. 26, 74, 97, F25; REC. 6, 20, 42, 137, 300, 302, 313, 316, 322, 364, 375, 419, F26; REC. 5, 302, 307, 318, F27; REC. 169, 171, 174, 177, 191, 210, 511, 895, 897, 906, 1072, 1083, F28; REC. 74, 88, 118, 270, 273, 276, 314, 518, 523, F29; REC. 298, 323, 526, 553, F30; REC. 7, F31; REC. 7, 65, 78, 298, 300, F32; REC. 100, 390, 408, F33; REC. 150, 325, 530, 538, 632, F35; REC. 14, 132, 213, 592, 936, 1084, 1320, 1322, F36; REC. 245, 250, 276, 292, 301, 321, F37; REC. 16, 333, 340, 486, F38; REC. 80, 268, F40; REC. 164, 581, 605, 620, 740, F41; REC. 126, 352, 362, 625, 966, 1119, 43; REC. 90, 96, 98, 113, 570, 584, 791, F44

(k) D010005 - 120 ERRORS, REC. 170, 260, 336, F1; REC. 100, 142, 206, 265, 273, 349, 394, 439, 453, 461, 484, 498, 529, 608, 622, 628, 639, 659, 662, 690, 699, 707, 826, 894, 925, 948, 962, 991, 1005, 1013, 1016, 1022, 1033, 1036, F2; REC. 4, 84, 121, 181, 204, 218, 298, 304, 318, 355, 429, 466, 503, 526, 546, F3; REC. 10, 33, 70, 110, 113, 122, 142, 153, 156, 193, 290, 333, 427, F4; REC. 39, 82, 119, 219, 265, 345, 365, 523, 580, F5; REC. 65, 79, 188, 208, 257, 343, 544 593, F6; REC. 16, F7; REC. 100, 120, 192, 235, 249, F8, REC. 27, 101, 199, 256, 293, 336, 445, 557, 574, 776, 790, F9, REC. 253, 523, 891, 1122, F10; REC. 137, 180, 278, 356, F11; REC. 33, F13; REC. 113, F14; REC. 70, F15; REC. 44, 93, F17 REC. 130, F18; REC. 86, 141, 184, 276, F19; REC. 125, F21; REC. 586, F22; REC. 298, F25

(l) D010009 - 116 ERRORS, REC. 361, 464, 486, 491, F1; REC. 56, 81, 92, 109, 198, 248, 270, 273, 387, 406, 612, 626, 637, 684, 1116, 1172, 1323, F2; REC. 117, 126, 137, 148, 308, 322, 384, 432, F3; REC. 66, 242, 307, F4; REC. 71, F5; REC. 22, F6; REC. 16, F10; REC. 21, F11; REC. 23, F12; REC. 62, 85, 105, 122, 165, F14; REC. 7, F16; REC. 24, F17; REC. 21, F19; REC. 12, 46, 55, 98, 112, 152, 232, 258, 281, 312, F20; REC. 40, 69, 126, 229, 252, F21; REC. 62, 122, 185, 308, 342, 351, 511, F22; REC. 53, 73, 185, 354, 368, F23; REC. 111, 180, 214, 257, 486, 552, 572, F24; REC. 76, 90, 96, 127, 139, 159, 239, F25; REC. 63, F26; REC. 10, 139, 153, F27; REC. 2, 22, 71, 163, 180, 249, 278, F29; REC. 122, 280, 329, 415, 550, F30; REC. 143, 309, F31; REC. 64, 359, F32; REC. 2, F33; REC. 23, F36; REC. 124, 233, F40; REC. 40, F47; REC. 64, F50; REC. 174, F53; REC. 116, F55; REC. 141, F56; REC. 45, F57

(m) D010010 - 1 ERROR, REC. 371, F 4

(n) D011001 - 8 ERRORS, REC. 79, F9; REC. 294, F47; REC. 97, F49; REC. 138, F52 EC. 134, F54; REC. 455, F56; REC. 164, F57; REC. 206, F65

(o) D010644 - 1 ERROR, REC. 119, F41

(p) D010011 - 6 ERRORS, REC. 247, 428, F2; REC. 137, F6; REC. 94, 100, F13; REC. 144, F20

(q) D010643 - 429 ERRORS, REC. 34, F1; REC. 110, 116, 122, 232, 297, 303, 309, 315, 410, 508, 609, 695, 707, 719, 802, 891, 894, 900, 906, 912, 989, 1081, 1087, F2; REC. 5, 11, 85, 88, 174, 186, 192, F3; REC. 203, 360, 363, 366, 508, 517, F4; REC. 62, 133, 201, 213, 328, 367, 387, F5; REC. 38, 41, 44, 50, 71, 21, 192, 201, 207, 260, 263, 328, 334, 340, 402, 470, 473, 479, 485, 544, 609, 618, 674, 677, 742, 745, 751, 757, 813, F6; REC. 24, 83, 148, 151, F7; REC. 10, 13, 16, 81, 84, 87, 90, 102, 155, 223, 226, 229, 235, 297, 300, 359, 362, 368, 374, 430, 433, 439, 498, 501, 507, 513, 569, 572, 575, 640, 646, 652, 696, 699, 705, 770, 773, 779, 785, F8; REC. 53, 121, 127, 133, 192, 198, 251, 254, 257, 260, 293, 316, 319, 325, 387, 393, F9; REC. 5, 11, 17, 23, 76, 79, 82, 85, 100, 147, 150, 156, 162, 218, 221, 280, 283, 289, 295, 345, 348, 413, 416, 422, 449, F10; REC. 22, 25, 28, F11; REC. 7, 13, 19, 72, 78, 143, 146, 152, 158, F12; REC 2, 8, F13; REC. 37, 43, 49, 111, 114, 179, 182, 188, F15; REC. 39, 42, 48, 193, 199, F16; REC. 12, F17; REC. 6, 12, 18, 80, 83, 86, 148, 151, 157, 163, 225, 296, 302, 308, 370, 441, 447, 474, 509, 512, 518, 577, 586, 592, F18; REC. 2, 5 8, 14, 20, 88, 91, 147, 159, 165, 180, 224, 236, 242, 304, 310, F19; REC. 52, 58, 123, 191, 197, 256, 259, 330 ,336, 395, 407, 463, 469, 528, 531, 593, 596, 602, 658, 661, 664, 673, 729, 735, 791, 794, 806, 818, 853, 856, 862, 868, 924, 927, 945, 1001, 1057, 1060, 1063, 1078, 1119, 1128, 1134, 1140, 1193, 1196, 1205, F20; REC. 36, 42, F21; REC. 5, 11, 13, 17, 20, 67, 70, 76, 82, 141, 203, 268, 271, 274, 277, 280, 407, 419, 425, 475, 481, 487, 496, 531, 546, 552, F22; REC. 20, 91, 97, 103, 153, 159, 230, 280, 286, 292, 298, 357, 363, 413, 419, 475, 478, 490, 540, 546, 623, 667, 673, 735, 750, 800, F23; REC. 27, 33, 104, 116, 160, 222, 243, 287, 293, 349, 358, 414, 467, 479, 491, 535, 541, 562, 618, 668, 674, 733, 789, F24; REC. 6, 56, 59, 71, 115, 174, 180, 227, 230, 236, 242, 289, 292, 295, 301, 313, 351, 357, 413, 422, 428, 463, 466, 472, 528, 537, 587, 593, F25; REC. 15, 21, 27, 77, 83, 145, 148, 154, 210, 216, 222, 272, 275, 281, 287, 293, 349, F26; REC. 31, 37, 43, 93, 99, 164, 170, 226, 229, 282, 297, 303, 353, 359, F27; REC. 1, 7, 16, 22, 84, 90, 140, 149, 155, 205, 211, 223, 264, 270, 276, 288, 332, 338, 353, F28; REC. 12, 41, F29

(r) D010012 - 516 ERRORS, REC. 88, 519, 658, 714, 785, F2; REC. 135, F3; REC. 5 11, 32, 38, 79, 100, 144, 150, 227, 280, 283, 289, 301, 304, 351, 360, 366, F4; REC. 33, 39, 42, 48, 110, 181, 193, 196, 240, 243, 249, 255, 276, 305, 314, 364 370, 376, 447, 503, 509, 571, 580, F5; REC. 22, 69, 78, 81, 134, 137, 140, 149, 199, 205, 255, 261, 264, 317, 326, 332, 344, F6; REC. 45, 113, 169, 172, 237, 296, 299, 305, 432, 485, 491, 503, 547, 553, 665, 668, 745, 795, 801, 851, 922, 972, 978, F7; REC. 62, 68, 74, 136, 384, F8; REC. 2, 14, F9; REC. 72, 78, 128, 149, 193, 249, 255, 311, 314, 320, 391, F10; REC. 52, 117, 191, F11; REC. 32, 41, 88, 106, 162, 168, 218, 227, 277, 280, 283, 395, 398, 404, F12; REC. 5, 8, 64, F13; REC. 37, F14; REC. 6, 15, 62, F15; REC. 27, 33, 86, 92, 151, 219, 284, 328, 355, 384, F16; REC. 14, 26, 70, 91, 97, 123, 129, 135, 194, 250, 383, F17; REC. 49, 52, 99, 105, 167, 173, 220, 226, 229, 267, 270, 282, 332, 388, 391, 403, F18; REC. 22, 28, 40, 78, 84, 149, 152, 258, 314, 317, 320, 367, F19; REC. 15, 24, 83, 139, F20; REC. 2, 17, 55, 176, 182, 188, F21; REC. 63, 69, 175, 234 237, 296, 299, 355, F22; REC. 11, 55, 64, 70, 179, 185, 232, F23; REC. 14, 58, 64, 188, 220, 282, 379, 414, 417, 499, 505, 604, 610, 639, 665, F24; REC. 50, 103, 156, 238, F25; REC. 65, 71, 109, 112, 115, 156, 191, 238, 241, 279, 282, 411, 466, F26; REC. 2, 81, 125, 160, 210, 213, 251, 295, 368, 397, 403, 444, 546, 563, 586, 592, 626, 658, 696, 725, 771, 822, 883, F28; REC. 14, 17, 73, 76, 120, 197, F29; REC. 1, 10, 17, 50, 56, 59, 73, F30; REC. 1, 13, 19, 48, 51, 57, 60, 63, 101, 107, 110, 113, 116, 122, 166, 169, 175, F31; REC. 43, 52, 96, 99, 105, 108, 111, 114, 167, 176, 226, F32; REC. 37, 55, 99, 102, 105, 111, 173 229, 238, 244, 247, 297, F33; REC. 7, 15, 23, 31, 62, 65, 71, 73, 79, 87, 99, 108, 116, 119, 170, 178, 206, 212, 216, 220, 239, 241, 244, 300, 353, 365, 371, 377, 403, 409, 412, 415, 440, 446, 449, 452, 460, 463, 466, 477, 492, 495, 500, 03, 511, 544, 552, 555, 560, 566, 569, 578, 580, 586, 589, F34; REC. 26, 29, 31, 34, 39, 46, 126, F36; REC. 59, 71, 98, 127, 130, 138, 277, 280, 297, 362, 368, 377, F38; REC. 28, 37, 42, 49, 194, 253, 273, 279, 293, 408, F39; REC. 30, 36, 45, 48, 79, 83, 87, 176, F40; REC. 27, 38, 85, 94, 97, 106, 115, 153, 159,

165, 171, 177, 180, 181, 188, 197, 206, 220, 225, 232-235, 244-260, F41; REC. 85, 381, 443, F42; REC. 89, F46; REC. 2, 58, 88, 141, 322, 485, 523, 535, 541, 556, 618, 624, 630, 636, 680, 688, 691, 694, 697, 750, 762, 768, 774, 780, 789, 47; REC. 16, 28, 34, 40, 52, 58, 67, 87, 99, 111, 134, 136, 192, 216, 462, 18; REC.47, 435, 613, 693, F49; REC. 74, 249, 264, 338, F50; REC. 12, 33, 45, 101, 122, 193, 220, 389, F51; REC. 270, 451, 469, 481, 662, 905, 920, 1068, F52; REC. 150, F53; REC. 464, 562, 687, F54; REC. 80, 86, F55

(s) D010013 - 413 ERRORS, REC. 20, 99, 134, 300, 315, 341, 361, 367, 373, 400, 416, 422, 459, F1; REC. 22, 25, 51, 65, 71, 97, 103, 126, 181, 190, 230, 285, 288, 314, 331, 334, 366, 369, 383, 389, 409, 432, 447, 453, 454, 461, 464, 467, 475, 478, 481, 487, 513, 536, 559, 585, 591, 628, 643, 669, 674, 677, 706, 712, 732, 741, 758, 764, 775, 781, 810, F2; REC. 7, 13, 36, 39, 56, 68, 85, 105, 120 134, 154, 169, 203, 226, 238, 252, 278, 281, 301, 304, 310, 327, 350, 356, 379, 399, 405, 425, 431, 448, 457, 463, 512, 552, 558, 601, 610, 650, 665, 676, F3; REC. 15, 35, 55, 64, 84, 139, 168, 194, 249, 255, 310, 325, 336, 351, 386, F4; REC. 7, 13, 27, 33, 59, 65, 68, 85, 88, 91, 94, 123, 155, 176, 196, 225, 231, 234, 240, 249, 261, 275, 278, 284, 299, 311, 331, 337, 343, 349, 370, 376, 390, 402, F5; REC. 43, 81, 93, 108, 114, 120, 149, 152, 161, 208, 214, 220, 285, 288 347, 359, 365, 383, F6; REC. 6, 12, 65, 80, 86, 145, 151, 157, 169, 190, 234, 246, 252, 282, 326, 332, 397, 403, 433, 439, 480, 489, 495, 507, 513, 531, 552, 566, 602, 608, 614, 676, 715, F7; REC. 90, 173, 179, 191, 197, 244, 256, 259, 298, F8; REC. 55, 67, 147, 150, 159, 162, 236, 248, 254, 328, 331, 346, 361, 441, 447, 453, 459, 536, 539, 548, 554, 560, 563, 628, 634, 646, 658, 673, F9; REC. 2, 53, 82, 91, 100, 115, 133, 195, 201, F10; REC. 23, 29, 35, 41, 133, F11 REC. 18, 59, 74, 80, 86, 104, 110, 178, 217, 229, 235, 279, 291, 297, 303, 309, 315, 321, F12; REC. 39, 48, 51, 60, 63, 69, 93, 155, 167, 179, 185, 206, 268, 277, 280, 286, 292, 304, 310, 384, 396, 509, 512, 601, 607, 613, 631, 729, F13; REC. 25, 49, 129, 135, 141, 147, 218, 224, 248, 260, 278, 346, 358, 364, 370, 379, F14; REC. 19, 212, 224, 230, 236, 337, F15; REC. 19, 43, 123, 141, 251, 54, 370, 468, 474, 483, 489, 501, 569, 587, 593, 697, 703, 730, F16; REC. 71, 74, 83, 89, 202, 238, 416, 437, 529, 639, 734, 740, F17; REC. 36, 60, 66, 167, 179, 271, 283, 408, 494, 637, F18; REC. 94, F19; REC. 52, 171, 239, 257, 263, 269, F21; REC. 266, 331, 346, 373, 453, F22; REC. 3, 83, 95, 184, F23; REC. 124 225, 311, 448, F24; REC. 21, 220, F25; REC. 236, F26; REC. 60, 84, 292, 578, F27; REC. 64, 347, 496, 588, F28; REC. 345, F29; REC. 32, F30; REC. 24, 36, F33 REC. 49, 308, F36; REC. 46, 219, F37; REC. 28, 46, F38; REC. 324, F39; REC. 20, F40; REC. 293, F42; REC. 28, 144, 287, F43; REC. 120, F44; REC. 378, 476, F48

(t) D010405 - 226 ERRORS, REC. 323, 360, F1; REC. 25, 158, 297, 309, 421, 430, 581, 676, 708, 720, F2; REC. 11, 23, 73, 129, 138, 150, 159, 227, 265, 283, 289 301, 360, F3; REC. 40, 173, F4; REC. 61, 315, 448, F5; REC. 57, 128, 311, 388, 444, F6; REC. 164, 368, 418, 424, F7; REC. 98, 163, 181, 237, 290, 308, 314, 364, 370, 376, 388, 435, 453, 488, 494, F8; REC. 4, 54, 131, 181, F9; REC. 321, 377, 643, 702, 764, 770, 776, F10; REC. 23, 61, 73, 129, 135, 206, 256, 324, F11; REC. 13, 119, 125, 264, 311, 329, 335, 385, F13; REC. 86, 136, 142, 207, 225, 269, 325, 399, F14; REC. 26, 147, F15; REC. 65, 127, 567, 750, F17; REC. 86, 325, 334, 461, 467, F18; REC. 24, 36, F20; REC. 26, 82, F21; REC. 40, 43, F23; REC. 2, 70, F24; REC. 45, F25; REC. 13, F26; REC. 161, 179, F27; REC. 67, 188, 256, 448, F28; REC. 14, 268, F29; REC. 332, 397, F30; REC. 122, 172, 311, 317, 379, F31; REC. 351, F32; REC. 20, 91, F33; REC. 43, 49, 126, 182, 188, F35 REC. 11, F36; REC. 45, 95, 101, F38; REC. 98, 169, 423, F39; REC. 98, 287, 358, 420, 553, F40; REC. 390, F41; REC. 168, 446, 505, F42; REC. 368, 501, F43; REC. 134, 211, 217, 356, 362, 368, 406, 439, 477, 557, F44; REC. 15, 21, 98, 154, 624, 686, F45; REC. 234, 299, 565, F46; REC. 345, 354, 360, 361, 422, F47; REC. 154, 160, 210, 225, 231, 232, 370, F48; REC. 57, F49; REC. 46, 61, 114, F50; REC. 76, 88, 153, F51; REC. 77, 107, 145, 151, 154, 172, F52; REC. 70, 76, 82, 17, 138, 141, 144, 271, 277, 348, F53; REC. 65, 68, 76, 82, 84, 173, F54; REC. 16, 78, 155, 161, F55; REC. 5, 73, 82, 91, 97, 115, 130, 165, 171, 177, 221, F56

(u) D010002 - 11 ERRORS, REC. 301, F6; REC. 275, F12; REC. 92, F19; REC. 87,

F30; REC. 18, F37; REC. 115, F39; REC. 13, 19, F41; REC. 31, F46; REC. 236, F48; REC. 388, F51
(v) D013370 - 20 ERRORS, REC. 187, F2; REC. 63, F5; REC. 146, F8; REC. 73, F9; REC. 2, 331, F12; REC. 219, F17; REC. 424, F20; REC. 139, F21; REC. 93, 128, 22; REC. 259, F25; REC. 400, F26; REC. 141, F27; REC. 3, 338, 636, 715, F28; REC. 168, F31; REC. 59, F32
(w) D010349 - 1 ERROR, REC. 110, F10
(x) D009999 - 1 ERROR, REC. 5, F1
(y) D009996 - 43 ERRORS, REC. 200, 362, F1; REC. 246, 252, F5; REC. 133, 186, 230, 333, F6; REC. 362, F9; REC. 953, F13; REC. 371, F14; REC. 32, 144, 176, 279, 332, F15; REC. 28, 87, 125, 234, 281, 319, F16; REC. 28, 34, 99, 152, F17; REC. 484, F18; REC. 139, F19; REC. 223, F21; REC. 129, F22; REC. 22, F27; REC. 170, 261, F30; REC. 365, F31; REC. 404, 442, F33; REC. 186, F34; REC. 311, F35; REC. 75, F38; REC. 34, 169, F39; REC. 374, F46; REC. 157, F47
(z) D009994 - 41 ERRORS, REC. 28, 131, 343, F1; REC. 433, F2; REC. 414, F3; REC. 49, 413, F4; REC. 373, F5; REC. 19, F6; REC. 168, 174, 337, 500, F7; REC. 29, F9; REC. 54, 229, 309, 312, F10; REC. 62, 213, F11; REC. 66, F12; REC. 203, F13; REC. 75, F14; REC. 85, F15; REC. 15, 196, 359, F16; REC. 494, F17; REC. 209, 227, 396, F18; REC. 27, 107, F20; REC. 16, F21; REC. 307, F23; REC. 269, 676, F24; REC. 18, 374, 644, 656, F25
(aa) D009993 - 2 ERRORS, REC. 230, F15; REC. 397, F20
(bb) D010021 - 2 ERRORS, REC. 536, F2; REC. 64, F3
(cc) D010019 - 49 ERRORS, REC. 148, 402, 473, 517, F2; REC. 288, F3; REC. 92, 231, 358, F4; REC. 157, 284, 399, F5; REC. 100, 150, 239, 289, 298, F6; REC. 120, 182, F7; REC. 162, 245, 257, 369, 378, F8; REC. 2, 123, 167, 179, 262, 324 386, 398, 401, F9; REC. 213, 302, F10; REC. 167, 300, F11; REC. 100, 257, F12; REC. 117, 327, F14; REC. 275, F15; REC. 57, 341, F16; REC. 208, 347, F17; REC. 45, F18; REC. 360, F19; REC. 241, 380, F20
(dd) D010018 - 45 ERRORS, REC. 104, F2; REC. 396, F3; REC. 22, F4; REC. 47, F5; EC. 573, F6; REC. 81, 131, 330, 392, F7; REC. 41, 127, 385, F8; REC. 29, F9; EC. 392, F10; REC. 348, F11; REC. 164, 256, 434, F12; REC. 312, F13; REC. 417, F14; REC. 259, F15; REC. 192, F16; REC. 223, 395, F17; REC. 21, 134, 196, 380, F18; REC. 136, 477, 557, F19; REC. 164, 401, F20; REC. 103, F21; REC. 68, 92, 148, F22; REC. 228, F23; REC. 182, F24; REC. 259, F25; REC. 148, 492, F26; REC. 40, 277, 446, F27
(ee) D010016 - 5 ERRORS, REC. 21, F3; REC. 132, F5; REC. REC. 248, F32; REC. 58 F34; REC. 54, F42
(ff) D011000 - 8 ERRORS, REC. 123, 129, F8; REC. 120, 265, F9; REC. 191, F15; REC. 483, F24; REC. 314, F36; REC. 116, F39
(gg) D010014 - 6 ERRORS, REC. 112, F2; REC. 95, F6; REC. 124, F8; REC. 141, F9; REC. 824, F10; REC. 175, F17
(hh) D010128 - 57 ERRORS, REC. 168, 374, F1; REC. 68, 171, F2; REC. 131, 228, 234, F3; REC. 150, 247, 253, F4; REC. 186, 295, 301, F5; REC. 31, 175, 272, F6; REC. 164, 255, 364, F7; REC. 55, 255, 358, F8; REC. 50, F9; REC. 138, 447, F10; REC. 346, F11; REC. 152, 255, 358, F12; REC. 515, F13; REC. 209, 280, F14; REC. 140, F15; REC. 67, 170, F16; REC. 204, F17; REC. 89, 207, F18; REC. 303, F19; REC. 179, 185, 191, F20; REC. 2, F21; REC. 71, 377, F23; REC. 261, 364, F24; REC. 78, 181, F26; REC. 219, 316, 413, F28; REC. 402, F29; REC. 288, 391, F30; REC. 311, 393, F31
(ii) D010129 - 4 ERRORS, REC. 8, 9, 11, F1; REC. REC. 400, F10
(jj) D010065 - 4 ERRORS, REC. 1, 29, 56, 83
(kk) D010133 - 4 ERRORS, REC. 43, 229, 253, 264, F2
(ll) D010136 - 1 ERROR, REC. 495, F4
(mm) D010138 - 1 ERROR, REC. 196, F3
(nn) D008756 - 1 ERROR, REC. 123, F7
oo) D010351 - 1 ERROR, REC. 2, F26
(pp) D008752 - 2 ERRORS, REC. 58, F1; REC. 15, F11
(qq) D008755 - 1 ERROR, REC. 456, F10
(rr) D008753 - 3 ERRORS, REC. 173, F1; REC. 51, F2; REC. 90, F12

(ss) D010406 - 1 ERROR, REC. 258, F11
(tt) D013302 - 47 ERRORS, REC. 106, 198, 204, 216, 222, 273, F1; REC. 26, 187, 395, F2; REC. 3, 48, 140, 170, 301, 423, 509, F3; REC. 22, 84, 102, 224, 343, 355, 367, 471, 590, 596, F4; REC. 14, 38, 181, 255, 273, 279, 285, F5; REC. 163 175, 181, 318, 544, 934, 940, F7; REC. 8 F10; REC, 571, F11; REC. 108, 114, F12 REC. 50, 797, 3219, F14
(uu) D010559 - 77 ERRORS, REC. 199, F2; REC. 485, 584, F3; REC. 52, 66, 114, 137, 148, 165, 185, 233, 256, 338, 341, 358, 361, 375, 437, 494, 534, 605, 608, 676, 690, 764, 778, 804, 978, 989, 992, 1043, 1149, 1160, 1177, 1223, 1294, 1360,1374, 1394, 1460, 1591, 1657, 1694, 1703, 1783, 1805, 1877, 1905, 1908, 1965, 1971, 1994, 2014, 2060, 2094, 2171, 2174, 2194, 2274, 2363, 2377, 2414, F4; REC. 2, 31, 45, 102, 125, 131, 171, 248, 277, 285, 328, 457, 474, F5; REC. 151, 372, F8
(vv) D010380 - 3 ERRORS, REC. 12, 70, 225, F1
(ww) D010386 - 2 ERRORS, REC. 126, 185, F1
(xx) D010387 - 1 ERROR, REC. 980, F4
(yy) D010388 - 1 ERROR, REC. 2356, F4
(zz) D013303 - 99 ERRORS, REC. 152, 158, 249, 390, 428, 475, 481, F1; REC. 8, 34, 40, 61, 84, 152, 184, 190, 193, 219, 237, 301, 313, 316, 366, 372, 398, 404 419, 442, 448, 451, 483, 489, 533, F2; REC. 5, 37, 43, 81, 90, 125, 128, 143, 149, 166, 172, 219, 225, 263, 304, 310, 325, 360, 395, 401, 486, 492, 507, 539, 583, 621, 674, 689, 712, 733, 753, 768, 818, 847, 850, 865, 894, 903, 932, 935, 950, 1020, 1026, 1070, 1091, 1123, 1126, 1132, 1208, 1214, 1279, 1305, 1311, 1467, 1564, 1602, 1699, 1937, 1984, 2178, 2275, 2319, 2748, 2942, 3706, F3; REC 172, F5; REC. 253, F9
(aaa) D010395 - 2 ERRORS, REC. 334, 391, F4
(bbb) D013305 - 18 ERRORS, REC. 425, F1; REC. 78, F2; REC. 16, 84, 90, 242, F3; REC. 208, F4; REC. 93, 343, 355, F5; REC. 10, 28, 43, 49, 480, F6; REC. 44, 169 F7; REC. 288, F8
(ccc) D013306 - 5 ERRORS, REC. 628, F14; REC. 90, F16; REC. 93, F20; REC. 103, 123; REC. 43, F25
(ddd) D010640 - 1 ERROR, REC. 58, F1
(eee) D010426 - 1 ERROR, REC. 192, F6
(fff) D013364 - 27 ERRORS, REC. 32, 273, 285, 297, F1; REC. 337, 462, 468, 474, 498, F2; REC. 118, 124, 198, 204, 326, F3; REC. 117, 129, 150, 169, 358, 1001, 1093, 1105, 1117, 1123, 1168, F4; REC. 6738, 10780, F5
(ggg) D010428 - 1 ERROR, REC. 45, F29
(hhh) D010999 - 1 ERROR, REC. 23, F1
(iii) D010998 - 2 ERRORS, REC. 56, F1; REC. 47, F2
(jjj) D010429 - 8 ERRORS, REC. 414, 872, 2024, 3081, 3691, 4191, 4444, 4938, F2
(kkk) D013365 - 31 ERRORS, REC. 35, 94, 100, 112, 130, 133, 142, 148, 157, 160, 243, 249, 261, 273, 285, 297, 300, 306, 315, 330, f1; REC. 24, 30, 36, 51, 66, F2; REC. 45, 46, 48, 49, 52, 53, F3
(lll) D010638 - 1 ERROR, REC. 40, F1
(mmm) D013366 - 1 ERROR, REC. 2438, F2
(nnn) D010546 - 1 ERROR, REC. 1416, F3
(ooo) D013367 - 35 ERRORS, REC. 283, 295, 313, F1; REC. 382, 653, 975, 1058, F4 REC. 305, 385, 391, 397, 668, 933, 939, 945, 1222, 1368, 1627, 1678, 1752, 2017 2062, 2306, 2595, 2854, F5; REC. 16, 147, 430, 451, 627, 628, 634, 635, 642, 653, F6
(ppp) D010462 - 3 ERRROS, REC. 78, 135, 162, F17
(qqq) D013372 - 23 ERRORS, REC. 210, 451, 463, 469, F1; REC. 26, 53, 83, 291, 330, 446, 470, 471, 487-489, 520, 827, F2; REC. 438, F3; REC. 168, F5; REC; 147 280, F23; REC. 257, F24; REC. 43, F25
(rrr) D010482 - 2 ERRORS, REC. 1521, 1580, F4
(sss) D013373 - 22 ERRORS, REC. 99, 161, 173, 185, 197, 248, 337, 340, F1; REC. 3, 89, 95, 366, 378, 411, 429, 622, F2; REC. 112, F3; REC. 329, 335, 341, F5; REC. 199, 808, F10
(ttt) D013374 - 61 ERRORS, REC. 238, 250, 360, F1; REC. 109, 142, 243, 278, 300

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F2; REC. 881, 902, F3; REC. 145,, 326, 332, 519, 525, 718, 887, 905, F4; REC.
28, 176, 182, 556, 737, 743, 951, 1123, 1203, 1298, 1390, 2162, 2349,
F5; REC. 338, F7; REC. 1945, F12
(uuu) D013375 - 28 ERRORS, REC. 56, 247, 339, F1; REC. 277, 283, 566, 572, F2;
REC. 27, 45, 322, 599, F3; REC. 53, 65, 71, 77, 211, 354, 366, 387, 637, 661,
712, 882, 968, 974, 986, 998, F4; REC. 593, F8
(vvv) D010484 - 3 ERRORS, REC. 3742, 3754, 3770, F3
(www) D013376 - 33 ERRORS, REC. 48, 66, 146, 155, 161, 173, 179, 191, 224, 280,
283, 289, 295, 301, 319, F1; REC. 62, 166, 195, 297, 313-316, 723, 728, 729,
732, 739-741, F2; REC. 1977, 2185, F4; REC. 93, F5
(xxx) D010520 - 16 ERRORS, REC. 128, 370, F1; REC. 1, F3; REC. 255, F4; REC. 66
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414, 417, 420, 423, 426, 429, 432, 435, 438, 441, 444, 447, 450, 453, 456, 459,
462, F1; REC. 5, 11, 14, 17, 35, 41, 44, 50, 56, 59, 62, 65, 71, 74, 77, 80, 83
6,87, 89, 92, 93, 95, 98, 101, 105, 107, 110, 113, 116, 128, 129, 131, 134,
135, 140, 141, 143, 146, 149, 161, 173, 176, 179, 182, 185, 188, 191, 197, 218,
221, 224, 227, 230, 233, 236, 239, 242, 245, 248, 254, 257, 260, 263, 266, 269,
272, 275, 278, 281, 284, F2; REC. 2, 5, 8, 11, 14, 20, 23, 29, 35, 38, 41, F3
(lllllll) D014062 - 2 ERRORS, REC. 134, F5; REC. 567, F8
(mmmmmmm) D014060 - 1 ERROR, REC. 1032, F2
(nnnnnnn) D014067 - 2 ERRORS,REC. 172, 173, F1
(ooooooo) D014025 - 7 ERRORS, REC. 866, 917, F2; REC. 314, 369, F5; REC. 744,
748, 479, F9
(ppppppp) D016642 - 3 ERRORS, REC. 293, F6; REC. 693, 697, F7
(qqqqqqq) D014391 - 1 ERROR, REC. 1, F1
(rrrrrrr) D014027 - 8 ERRORS, REC. 60, F2; REC. 470, 477, 478, 526, 871, 1502,
2989, F10
(sssssss) D014026 - 7 ERRORS, REC. 4971, 4998, 5024, 5051, 5104, 5157, 12096, F
(ttttttt) D014029 - 2 ERRORS, REC. 41, 43, F31
(uuuuuuu) D014031 - 4 ERRORS, REC. 12-14, F1; REC. 233, F5
(vvvvvvv) D014033 - 6 ERRORS, REC. 679, F7; REC. 64, 96-98, 125, F14
(wwwwwww) D014032 - 4 ERRORS, REC. 73, F6; REC. 294, 344, 345, F24
(xxxxxxx) D014381 - 5 ERRORS, REC. 1, F1; REC. 324, 352, F9; REC. 27, 108, F10
(yyyyyyy) D014056 - 2 ERRORS, REC. 198, 202, F3
(zzzzzzz) D014376 - 6 ERRORS, REC. 36, 43-46, 48, F4

REQ. AGENT	RAND NO.	ACQ. AGENT
WTJ	RB0416	CDW

OAO-A2

REDUCED PHOTOMETER

68-110A-02A

This data set consists of 414 556 BPI, 7 track, BCD tapes that were produced on an IBM 7094. The first file of each tape contains stripper summaries which is followed by a series of star files. At the end of the data there is a double end of file, after which comes one file containing stripper summaries, another double end of file followed by one file containing all the Droop Summaries. Each tape ends with a triple end of file. The number of files listed for each tape do not include the last two end of files.

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-08708	DC0442	40	5/23/70 - 5/25/70
D-08709	DC0432	22	5/16/70 - 5/19/70
D-08710	DC0381	18	4/04/70 - 4/06/70
D-08741	DC0382	54	4/10/70 - 4/15/70
D-08742	DC0401	31	4/22/70 - 4/25/70
D-08743	DC0352	22	3/12/70 - 3/13/70
D-08744	DC0363	30	3/22/70 - 3/25/70
D-08745	DC0362	7	3/20/70 - 3/22/70
D-08746	DC0361	38	3/16/70 - 3/19/70
D-08747	DC0431	60	5/14/70 - 5/16/70
D-08749	DC0451	16	5/25/70 - 5/30/70
D-08750	DC0452	29	6/03/70 - 6/06/70
D-08751	DC0372	10	3/28/70 - 3/29/70
D-08752	DC0391	55	4/15/70 - 4/19/70

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-08753	DC0402	39	4/25/70 - 4/28/70
D-08754	DC0412	36	5/01/70 - 5/04/70
D-08755	DC0392	32	4/19/70 - 4/22/70
D-08756	DC0301	37	1/17/70 - 1/20/70
D-09827	DC0001	18	12/11/68 - 12/13/68
D-09828	DC0011	26	12/18/68 - 12/20/68
D-09829	DC0012	36	12/20/68 - 12/22/68
D-09830	DC0013	33	12/22/68 - 12/24/68
D-09831	DC0022	48	12/30/68 - 1/01/69
D-09832	DC0031	48	1/10/69 - 1/12/69
D-09833	DC0032	44	1/12/69 - 1/15/69
D-09834	DC0033	28	1/15/69 - 1/17/69
D-09993	DC0191	36	9/05/69 - 9/07/69
D-09994	DC0183	29	8/14/69 - 8/13/69
D-09995	DC0182	46	8/12/69 - 8/14/69
D-09996	DC0181	51	8/09/69 - 8/12/69
D-09997	DC0172	73	8/04/69 - 8/08/69
D-09998	DC0171	52	8/01/69 - 8/03/69
D-09999	DC0162	56	7/21/69 - 7/25/69
D-10000	DC0161	47	7/18/69 - 7/21/69
D-10002	DC0151	57	7/10/69 - 7/12/69
D-10003	DC0073	42	4/02/69 - 4/05/69
D-10004	DC0081	47	4/05/69 - 4/08/69
D-10005	DC0091	30	4/11/69 - 4/12/69
D-10006	DC0092	44	4/16/69 - 4/18/69
D-10007	DC0101	51	4/16/69 - 4/21/69
D-10008	DC0102	48	4/22/69 - 4/24/69
D-10009	DC0111	69	5/08/69 - 5/11/69
D-10010	DC0112	39	5/11/69 - 5/13/69

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-10011	DC0121	50	5/30/69 - 6/05/69
D-10012	DC0132	59	6/09/69 - 6/13/69
D-10013	DC0141	53	6/13/69 - 6/16/69
D-10014	DC0221	36	10/02/69 - 10/04/69
D-10015	DC0212	41	9/28/69 - 9/30/69
D-10016	DC0211	49	9/26/69 - 9/28/69
D-10018	DC0202	31	9/14/69 - 9/16/69
D-10019	DC0201	30	9/12/69 - 9/14/69
D-10020	DC0193	34	9/10/69 - 9/12/69
D-10021	DC0192	29	9/07/69 - 9/09/69
D-10022	DC0021	59	12/27/68 - 12/29/68
D-10023	DC0023	38	1/01/69 - 1/03/69
D-10024	DC0041	69	1/31/69 - 2/02/69
D-10026	DC0052	54	2/08/69 - 2/11/69
D-10027	DC0053	51	2/11/69 - 2/17/69
D-10028	DC0062	29	3/03/69 - 3/05/69
D-10029	DC0071	53	3/28/69 - 3/30/69
D-10030	DC0072	42	3/30/69 - 4/01/69
D-10061	DC0042	75	2/02/69 - 2/03/69
D-10062	DC0082	45	4/08/69 - 4/11/69
D-10063	DC0222	45	10/04/69 - 10/07/69
D-10064	DC0231	18	10/31/69 - 11/07/69
D-10065	DC0242	25	11/11/69 - 11/14/69
D-10066	DC0263	41	11/25/69 - 11/28/69
D-10068	DC0323	32	2/22/70 - 2/25/70
D-10069	DC0331	31	2/25/70 - 2/27/70
D-10070	DC0342	17	3/06/70 - 3/09/70
D-10127	DC0063	34	3/05/69 - 3/07/69
D-10128	DC0223	35	10/07/69 - 10/10/69

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-10129	DC0241	38	11/07/69 - 11/11/69
D-10130	DC0251	41	11/14/69 - 11/16/69
D-10131	DC0253	37	11/18/69 - 11/20/69
D-10132	DC0261	39	11/21/69 - 11/23/69
D-10133	DC0262	40	11/23/69 - 11/25/69
D-10134	DC0271	31	12/26/69 - 12/28/69
D-10135	DC0272	40	12/28/69 - 12/31/69
D-10136	DC0282	39	1/08/70 - 1/10/70
D-10137	DC0291	44	1/10/70 - 1/13/70
D-10138	DC0302	38	1/20/70 - 1/22/70
D-10139	DC0311	52	1/22/70 - 1/25/70
D-10140	DC0312	33	1/25/70 - 1/27/70
D-10141	DC0321	34	2/17/70 - 2/19/70
D-10142	DC0322	30	2/19/70 - 2/22/70
D-10143	DC0332	38	2/27/70 - 3/02/70
D-10144	DC0341	29	3/02/70 - 3/06/70
D-10145	DC0351	23	3/10/70 - 3/11/70
D-10146	DC0353	23	3/14/70 - 3/16/70
D-10348	DC0043	63	2/03/69 - 2/06/69
D-10349	DC0153	37	7/15/69 - 7/18/69
D-10350	DC0281	30	1/05/70 - 1/07/70
D-10351	DC0313	40	1/27/70 - 1/30/70
D-10352	DC0371	15	3/25/70 - 3/27/70
D-10353	DC0422	40	5/09/70 - 5/11/70
D-10354	DC0423	44	5/11/70 - 5/14/70
D-10355	DC0441	24	5/19/70 - 5/23/70
D-10356	DC0461	30	6/06/70 - 6/09/70
D-10357	DC0471	44	6/13/70 - 6/16/70
D-10380	DC0482	36	6/23/70 - 6/25/70

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-10381	DC0491	29	6/25/70 - 6/28/70
D-10382	DC0492	34	6/28/70 - 7/01/70
D-10383	DC0502	24	7/05/70 - 5/09/70
D-10384	DC0511	29	7/09/70 - 7/11/70
D-10385	DC0512	30	7/11/70 - 7/14/70
D-10386	DC0513	28	7/14/70 - 7/17/70
D-10387	DC0521	25	7/17/70 - 7/20/70
D-10388	DC0522	29	7/20/70 - 7/23/70
D-10389	DC0531	31	7/23/70 - 7/26/70
D-10390	DC0542	44	8/01/70 - 8/05/70
D-10392	DC0562	30	8/15/70 - 8/18/70
D-10393	DC0563	22	8/18/70 - 8/21/70
D-10394	DC0571	40	8/22/70 - 8/24/70
D-10395	DC0581	17	8/26/70 - 8/30/70
D-10396	DC0582	26	8/30/70 - 9/03/70
D-10405	DC0142	60	6/16/70 - 6/19/70
D-10406	DC0411	39	4/28/70 - 5/01/70
D-10407	DC0501	17	7/01/70 - 7/04/70
D-10408	DC0532	26	7/26/70 - 7/29/70
D-10410	DC0552	28	8/09/70 - 8/12/70
D-10411	DC0561	36	8/12/70 - 8/15/70
D-10412	DC0572	12	8/24/70 - 8/26/70
D-10413	DC0592	32	9/05/70 - 9/08/70
D-10414	DC0593	19	9/08/70 - 9/10/70
D-10415	DC0601	9	9/10/70 - 9/12/70
D-10416	DC0609	26	9/13/70 - 9/17/70
D-10417	DC0611	21	9/17/70 - 9/19/70
D-10418	DC0621	21	9/22/70 - 9/25/70

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-10420	DC0631	14	9/29/70 - 10/03/70
D-10421	DC0641	4	10/05/70 - 10/09/70
D-10422	DC0642	5	10/09/70 - 10/11/70
D-10423	DC0643	5	10/11/70 - 10/14/70
D-10424	DC0651	30	10/14/70 - 10/17/70
D-10425	DC0661	3	10/21/70 - 10/23/70
D-10426	DC0662	16	10/23/70 - 10/25/70
D-10427	DC0663	8	10/25/70 - 10/28/70
D-10428	DC0672	49	11/01/70 - 11/04/70
D-10429	DC0691	4	11/11/70 - 11/13/70
D-10430	DC0692	6	11/13/70 - 11/14/70
D-10431	DC0701	5	11/20/70 - 11/22/70
D-10432	DC0731	43	12/08/70 - 12/10/70
D-10461	DC0771	6	1/06/71 - 1/10/71
D-10462	DC0792	26	1/25/71 - 1/27/71
D-10464	DC0802	13	1/30/71 - 2/02/71
D-10466	DC0821	23	2/09/71 - 2/13/71
D-10467	DC0833	11	2/21/71 - 2/23/71
D-10469	DC0861	20	3/11/71 - 3/16/71
D-10470	DC0872	19	3/22/71 - 3/25/71
D-10471	DC0712	37	12/03/70 - 12/05/70
D-10472	DC0721	4	12/05/70 - 12/08/70
D-10473	DC0732	20	12/10/70 - 12/13/70
D-10474	DC0733	17	12/13/70 - 12/14/70
D-10475	DC0741	14	12/14/70 - 12/17/70
D-10476	DC0743	18	12/20/70 - 12/23/70
D-10477	DC0751	4	12/23/70 - 12/26/70
D-10478	DC0742	23	12/26/70 - 12/28/70
D-10481	DC0761	24	12/31/70 - 1/03/70

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-10482	DC0811	7	2/02/71 - 2/03/71
D-10483	DC0822	35	2/13/71 - 2/15/71
D-10484	DC0841	15	2/24/71 - 2/28/71
D-10485	DC0871	20	3/16/71 - 3/21/71
D-10486	DC0882	24	3/27/71 - 3/29/71
D-10487	DC0891	15	4/01/71 - 4/04/71
D-10488	DC0892	20	4/05/71 - 4/07/71
D-10489	DC0902	25	4/11/71 - 4/14/71
D-10490	DC0911	19	4/14/71 - 4/15/71
D-10520	DC0852	23	3/07/71 - 3/11/71
D-10521	DC0971	24	5/26/71 - 5/28/71
D-10522	DC0942	29	5/10/71 - 5/12/71
D-10523	DC0941	25	5/06/71 - 5/10/71
D-10524	DC0932	23	5/02/71 - 5/06/71
D-10525	DC0931	23	4/29/71 - 5/02/71
D-10526	DC0982	14	6/05/71 - 6/07/71
D-10528	DC0951	8	5/12/71 - 5/13/71
D-10529	DC0981	29	6/02/71 - 6/04/71
D-10530	DC0972	8	6/01/71 - 6/02/71
D-10531	DC0962	15	5/22/71 - 5/26/71
D-10532	DC0961	19	5/19/71 - 5/22/71
D-10533	DC0953	23	5/17/71 - 5/19/71
D-10534	DC0983	12	6/07/71 - 6/09/71
D-10535	DC0921	13	4/22/71 - 4/25/71
D-10537	DC0881	10	3/25/71 - 3/27/71
D-10538	DC0901	21	4/07/71 - 4/10/71
D-10539	DC0883	36	3/29/71 - 4/01/71
D-10540	DC0914	9	4/19/71 - 4/22/71
D-10541	DC0913	12	4/17/71 - 4/19/71

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-10542	DC0992	20	6/11/71 - 6/13/71
D-10543	DC0991	19	6/09/71 - 6/10/71
D-10544	DC0912	18	4/15/71 - 4/17/71
D-10545	DC0831	29	2/15/71 - 2/18/71
D-10546	DC0791	24	1/20/71 - 1/23/71
D-10547	DC1041	40	7/14/71 - 7/18/71
D-10548	DC1042	23	7/18/71 - 7/20/71
D-10549	DC1092	15	8/20/71 - 8/23/71
D-10550	DC1091	13	8/18/71 - 8/20/71
D-10551	DC1081	20	8/12/71 - 8/14/71
D-10552	DC1072	30	8/07/71 - 8/11/71
D-10553	DC1071	29	8/03/71 - 8/07/71
D-10554	DC1061	15	7/28/71 - 7/30/71
D-10556	DC1051	33	7/21/71 - 7/24/71
D-10557	DC0993	25	6/14/71 - 6/16/71
D-10558	DC1001	4	6/17/71 - 6/20/71
D-10559	DC1002	15	6/21/71 - 6/22/71
D-10560	DC1011	30	6/23/71 - 6/29/71
D-10562	DC1022	10	7/04/71 - 7/08/71
D-10563	DC1031	15	7/09/71 - 7/11/71
D-10564	DC1032	28	7/11/71 - 7/14/71
D-10615	DC1152	29	9/30/71 - 10/03/71
D-10616	DC1162	34	10/06/71 - 10/09/71
D-10617	DC1171	24	10/09/71 - 10/12/71
D-10618	DC1211	28	11/06/71 - 11/10/71
D-10619	DC1172	20	10/12/71 - 10/16/71
D-10620	DC1181	36	10/17/71 - 10/20/71
D-10621	DC1182	33	10/21/71 - 10/26/71

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-10622	DC1191	34	10/26/71 - 10/29/71
D-10623	DC1201	23	10/31/71 - 11/03/71
D-10624	DC1203	19	11/05/71 - 11/06/71
D-10625	DC1144	30	9/24/71 - 9/27/71
D-10626	DC1143	18	9/22/71 - 9/24/71
D-10627	DC1142	9	9/21/71 - 9/22/71
D-10628	DC1141	10	9/20/71 - 9/21/71
D-16629	DC1133	40	9/17/71 - 9/20/71
D-10630	DC1132	26	9/14/71 - 9/17/71
D-10631	DC1112	20	9/03/71 - 09/06/71
D-10632	DC1111	29	8/30/71 - 9/03/71
D-10633	DC1101	14	8/26/71 - 8/30/71
D-10634	DC1082	12	8/14/71 - 8/17/71
D-10635	DC1151	43	9/27/71 - 9/30/71
D-10636	DC1062	23	7/30/71 - 7/31/71
D-10637	DC0922	20	4/26/71 - 4/28/71
D-10638	DC0742	27	12/17/70 - 12/20/70
D-10639	DC0683	26	11/08/70 - 11/11/70
D-10640	DC0632	10	10/03/70 - 10/05/70
D-10641	DC0612	35	9/20/70 - 9/22/70
D-10642	DC0421	28	5/06/70 - 5/09/70
D-10643	DC0131	33	6/05/69 - 6/09/69
D-10644	DC0114	46	5/16/69 - 5/19/69
D-10998	DC0682	8	11/07/70 - 11/08/70
D-10999	DC0681	51	11/04/70 - 11/07/70
D-11000	DC0213	43	9/30/69 - 10/02/69
D-11001	DC0113	74	5/13/69 - 5/16/69
D-11002	DC0061	33	3/01/69 - 3/03/69

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-11003	DC1292	38	1/03/72 - 1/06/72
D-11004	DC1231	33	11/20/71 - 11/23/71
D-11005	DC1222	10	11/17/71 - 11/20/71
D-11006	DC1282	37	12/29/71 - 12/31/71
D-11007	DC1272	33	12/22/71 - 12/25/71
D-11008	DC1221	35	11/14/71 - 11/17/71
D-11009	DC1241	24	11/26/71 - 11/29/71
D-11010	DC1281	36	12/25/71 - 12/29/71
D-11011	DC1291	35	12/31/71 - 1/03/72
D-11012	DC0252	32	11/16/69 - 11/18/69
D-11013	DC0652	10	10/17/70 - 10/20/70
D-11014	DC1161	29	10/03/71 - 10/05/71
D-11015	DC1271	38	12/17/71 - 12/22/71
D-11016	DC1121	37	9/07/71 - 9/10/71
D-13302	DC0462	22	6/09/70 - 6/13/70
D-13303	DC0541	32	7/29/70 - 8/01/70
D-13304	DC0551	33	8/06/70 - 8/09/70
D-13305	DC0591	37	9/03/70 - 9/05/70
D-13306	DC0622	30	9/25/70 - 9/29/70
D-13307	DC1021	16	6/30/71 - 7/03/71
D-13308	DC1052	19	7/24/71 - 7/27/71
D-13309	DC1122	13	9/10/71 - 9/12/71
D-13310	DC1131	24	9/12/71 - 9/14/71
D-13311	DC1212	22	11/12/71 - 11/14/71
D-13312	DC1232	44	11/23/71 - 11/26/71
D-13313	DC1242	19	11/29/71 - 12/02/71
D-13314	DC1261	36	12/12/71 - 12/17/71
D-13315	DC1293	24	1/06/72 - 1/08/72

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-13316	DC1301	32	1/08/72 - 1/10/72
D-13317	DC1442	53	4/18/72 - 4/21/72
D-13318	DC1451	33	4/21/72 - 4/24/72
D-13319	DC1453	35	4/27/72 - 4/30/72
D-13320	DC1461	20	4/30/72 - 5/02/72
D-13321	DC1462	29	5/02/72 - 5/04/72
D-13322	DC1671	24	9/20/72 - 9/25/72
D-13323	DC1491	24	5/20/72 - 5/23/72
D-13324	DC1492	22	5/23/72 - 5/27/72
D-13325	DC1501	30	5/27/72 - 5/31/72
D-13326	DC1512	17	6/08/72 - 6/09/72
D-13327	DC1521	33	6/12/72 - 6/16/72
D-13328	DC1531	42	6/16/72 - 6/18/72
D-13329	DC1532	19	6/18/72 - 6/25/72
D-13330	DC1541	24	6/28/72 - 6/30/72
D-13331	DC1551	23	6/30/72 - 7/03/72
D-13332	DC1471	31	5/04/72 - 5/06/72
D-13333	DC1472	33	5/06/72 - 5/09/72
D-13334	DC1473	25	5/09/72 - 5/11/72
D-13335	DC1481	19	5/11/72 - 5/13/72
D-13336	DC1483	28	5/17/72 - 5/19/72
D-13337	DC1571	35	7/16/72 - 7/20/72
D-13338	DC1581	31	7/21/72 - 7/26/72
D-13339	DC1591	26	7/27/72 - 7/29/72
D-13340	DC1592	35	7/29/72 - 8/01/72
D-13341	DC1593	43	8/01/72 - 8/04/72
D-13342	DC1382	29	3/06/72 - 3/08/72
D-13343	DC1383	27	3/08/72 - 3/10/72

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-13344	DC1391	21	3/10/72 - 3/12/72
D-13345	DC1393	30	3/14/72 - 3/17/72
D-13346	DC1401	39	3/17/72 - 3/20/72
D-13347	DC1402	15	3/21/72 - 3/23/72
D-13348	DC1411	39	3/27/72 - 3/31/72
D-13349	DC1421	32	4/01/72 - 4/05/72
D-13350	DC1422	34	4/05/72 - 4/08/72
D-13351	DC1441	29	4/15/72 - 4/18/72
D-13352	DC1662	19	9/16/72 - 9/19/72
D-13353	DC1311	33	1/15/72 - 1/18/72
D-13354	DC1321	34	1/21/72 - 1/24/72
D-13355	DC1322	35	1/24/72 - 1/27/72
D-13356	DC1323	23	1/27/72 - 1/29/72
D-13357	DC1352	29	2/15/72 - 2/18/72
D-13358	DC1361	28	2/20/72 - 2/22/72
D-13359	DC1362	26	2/20/72 - 2/24/72
D-13360	DC1371	37	2/24/72 - 2/27/72
D-13361	DC1381	39	3/03/72 - 3/06/72
D-13362	DC0292	38	1/13/70 - 1/17/70
D-13363	DC0413	35	5/04/70 - 5/06/70
D-13364	DC0671	9	10/28/70 - 11/01/70
D-13365	DC0711	9	11/26/70 - 12/02/70
D-13366	DC0762	4	1/03/71 - 1/06/71
D-13367	DC0781	14	1/10/71 - 1/20/71
D-13368	DC0952	11	5/15/71 - 5/16/71
D-13369	DC0051	65	2/08/69 - 2/08/69
D-13370	DC0152	37	7/12/69 - 7/15/69
D-13371	DC0203	35	9/16/69 - 9/19/69

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-13372	DC0801	32	1/27/71 - 1/30/71
D-13373	DC0812	14	2/04/71 - 2/06/71
D-13374	DC0813	17	2/06/71 - 2/09/71
D-13375	DC0832	14	2/18/71 - 2/21/71
D-13376	DC0851	19/01	3/01/71 - 3/05/71
D-14024	DC1681	17	9/28/72 - 9/30/72
D-14025	DC1661	19	9/13/72 - 9/16/72
D-14026	DC1693	5	10/09/72 - 10/11/72
D-14027	DC1692	14	10/06/72 - 10/08/72
D-14028	DC1702	30	10/14/72 - 10/15/72
D-14029	DC1701	55	10/11/72 - 10/14/72
D-14030	DC1704	19	10/18/72 - 10/19/72
D-14031	DC1703	29	10/16/72 - 10/17/72
D-14032	DC1712	35	10/22/72 - 10/24/72
D-14033	DC1711	32	10/19/72 - 10/21/72
D-14034	DC1782	13	12/10/72 - 12/12/72
D-14035	DC1781	13	12/08/72 - 12/10/72
D-14036	DC1773	37	12/05/72 - 12/08/72
D-14037	DC1784	8	12/14/72 - 12/15/72
D-14038	DC1783	20	12/12/72 - 12/14/72
D-14039	DC1372	23	2/27/72 - 3/01/72
D-14040	DC1303	15	1/13/72 - 1/15/72
D-14041	DC1611	26	8/09/72 - 8/12/72
D-14042	DC1373	32	3/01/72 - 3/03/72
D-14043	DC1601	59	8/04/72 - 8/06/72
D-14044	DC1602	24	8/07/72 - 8/09/72
D-14045	DC1452	47	4/24/72 - 4/27/72
D-14046	DC1482	19	5/13/72 - 5/16/72

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-14047	DC1432	27	4/11/72 - 4/14/72
D-14048	DC1431	30	4/08/72 - 4/11/72
D-14049	DC1723	23	11/01/72 - 11/03/72
D-14050	DC1721	24	10/26/72 - 10/28/72
D-14051	DC1732	24	11/08/72 - 11/11/72
D-14052	DC1731	29	11/03/72 - 11/07/72
D-14053	DC1742	29	11/16/72 - 11/19/72
D-14054	DC1741	24	11/12/72 - 11/15/72
D-14055	DC1762	27	11/27/72 - 11/28/72
D-14056	DC1751	47	11/20/72 - 11/22/72
D-14057	DC1771	32	12/01/72 - 12/03/72
D-14058	DC1763	19	11/29/72 - 12/01/72
D-14059	DC1612	35	8/12/72 - 8/15/72
D-14060	DC1623	8	8/22/72 - 8/23/72
D-14061	DC1621	9	8/17/72 - 8/19/72
D-14062	DC1613	28	8/15/72 - 8/17/72
D-14063	DC1622	9	8/19/72 - 8/22/72
D-14064	DC1632	39	8/29/72 - 9/01/72
D-14065	DC1631	14	8/24/72 - 8/26/72
D-14066	DC1652	22	9/10/72 - 9/12/72
D-14067	DC1651	33	9/07/72 - 9/10/72
D-14068	DC1642	33	9/04/72 - 9/06/72
D-14369	DC1831	10	2/05/73 - 2/08/73
D-14370	DC1821	10	2/02/73 - 2/04/73
D-14371	DC1813	11	1/30/73 - 2/01/73
D-14372	DC1812	27	1/26/73 - 1/30/73
D-14373	DC1811	28	1/24/73 - 1/26/73
D-14374	DC1802	20	1/23/73 - 1/24/73

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-14375	DC1801	33	1/18/73 - 1/22/73
D-14376	DC1794	22	12/21/72 - 1/07/73
D-14377	DC1792	34	12/17/72 - 12/19/72
D-14378	DC1791	18	12/15/72 - 12/16/72
D-14379	DC1752	61	11/22/72 - 11/24/72
D-14380	DC1722	31	10/28/72 - 10/31/72
D-14381	DC1713	16	10/24/72 - 10/26/72
D-14382	DC1243	20	12/02/71 - 12/04/71
D-14383	DC1252	30	12/07/71 - 12/12/71
D-14384	DC1302	34	1/11/72 - 1/13/72
D-14385	DC1332	35	2/02/72 - 2/07/72
D-14386	DC1511	36	6/01/72 - 6/05/72
D-14387	DC1552	24	7/03/72 - 7/06/72
D-14388	DC1561	28	7/06/72 - 7/10/72
D-14389	DC1562	27	7/11/72 - 7/15/72
D-14390	DC1672	19	9/25/72 - 9/27/72
D-14391	DC1691	27	10/04/72 - 10/06/72
D-16638	DC1351	37	2/12/72 - 2/15/72
D-16639	DC1793	34	12/19/72 - 12/21/72
D-16640	DC1772	24	12/03/72 - 12/05/72
D-16641	DC1761	41	11/24/72 - 11/27/72
D-16642	DC1682	26	9/30/72 - 10/03/72
D-16643	DC1641	10	9/02/72 - 9/04/72
D-16644	DC1403	41	3/23/72 - 3/27/72
D-16645	DC1392	19	3/12/72 - 3/14/72
D-16646	DC1341	35	2/07/72 - 2/12/72
D-16647	DC1331	17	1/30/72 - 2/02/72
D-16648	DC1312	35	1/18/72 - 1/21/72
D-16649	DC1251	23	12/04/71 - 12/07/71

D#	WEEK & PART NUMBER	FILES	TIME SPAN
D-16650	DC1202	12	11/03/71 - 11/05/71
D-16651	DC0481	37	6/17/70 - 6/23/70

A DESCRIPTION OF DROOP (DATA REDUCTION OF OAO PHOTOMETRY)
NOTES ON THE AUTOMATIC REDUCTION OF OAO PHOTOMETRY

MANY FACTORS INFLUENCE THE QUALITY OF OAO PHOTOMETRIC DATA AND ITS AMENABILITY TO COMPUTERIZED REDUCTION. AMONG THESE ARE THE OBSERVING SEQUENCE ITSELF (I.E. THE PRESENCE AND TIMING OF FILTER, CALIBRATION AND DARK OBSERVATIONS), ITS EXECUTION RELATIVE TO THE INTERVAL OF SPACECRAFT NIGHT, EFFECTS OF THE SOUTH ATLANTIC ANOMALY AND THE SPECTRAL TYPE, BRIGHTNESS AND EVEN THE INTERSTELLAR REDDENING OF THE OBJECT UNDER STUDY.

THE SPACE ASTRONOMY LABORATORY COMPUTER PROGRAM DROOP (DATA REDUCTION OF OAO PHOTOMETRY) IS A COMPROMISE BETWEEN COMPLEXITY AND THE NUMBER OF OBSERVATIONS IT CAN BE EXPECTED TO PROCESS IN A SATISFACTORY FASHION. DROOP, TOGETHER WITH OTHER INITIALIZING PROGRAMS, IS DESIGNED TO ACCOMPLISH THE BASIC DATA PROCESSING NECESSARY FOR THE FURTHER ANALYSES OF PROGRAM OBJECTS. IN THIS CATEGORY ARE INCLUDED THE DETERMINATION OF THE CALIBRATION FACTOR FOR EACH PHOTOMETER, THE NUMBER OF OVERFLOWS, IF ANY, OF THE DIGITAL COUNTERS AND THE DARK CONTRIBUTION TO THE SIGNAL.

ALL OBSERVING SEQUENCES USED EXTENSIVELY IN THE OAO OBSERVING PROGRAM INCLUDE COMBINATIONS OF FILTERS AND GAINS SUCH THAT EACH FILTER IS USED MORE THAN ONCE AND AT VARIOUS GAINS. ANY ONE FILTER-GAIN COMBINATION IS EXECUTED SIX TIMES IN SUCCESSION AND COMPRISES ONE FRAME IN AN OBSERVING SEQUENCE. IF THE SIX LINES OF DATA PASS A NUMBER OF TESTS FOR CONSISTENCY, THEY ARE AVERAGED AND DARK IS SUBTRACTED. THIS QUANTITY, NORMALIZED TO THE PHOTOMETER'S RESPONSE TO THE CALIBRATION SLIDE, IS THE BASIC OBSERVATIONAL DATUM COMPUTED BY DROOP AND ON [illegible] OUTPU[illegible] WRITING THIS AS FOLLOWS, DIG = (OBJECT-DARK)/(CAL-DARK), IT SHOULD BE NOTED THAT THE QUANTITY (CAL-DARK) IS AN AVERAGE TAKEN OVER THE ENTIRE DATA TAPE BEING PROCESSED, GENERALLY ONE-THIRD TO ONE-HALF OF A WEEK OF OAO OBSERVATIONS. THE OVERALL STABILITY OF THE PHOTOMETERS IS SUCH THAT THIS MEAN YIELDS HIGHER ACCURACY THAN INDIVIDUAL CALIBRATION MEASUREMENTS. THE QUANTITIES IN THE NUMERATOR ARE DERIVED ONLY FROM DATA COLLECTED DURING A SINGLE EPISODE OF SPACECRAFT NIGHT, THAT IS, ONE FILTER-CAL-DARK OBSERVING SEQUENCE.

THE PRINTOUT OF A DROOP-PROCESSED FRAME IS HEADED BY SEVERAL LINES OF INFORMATION WITH REGARD TO OBJECT IDENTIFICATION AND SPACECRAFT STATUS FOLLOWED BY THE RESULTS OF THE PROGRAM CALCULATIONS. THESE, INCLUDE THE QUANTITY 'DIG' FOR EACH OF THE FILTERS PLUS THE ESTIMATED ERROR, DARK COUNT, DATA QUALITY FLAGS, AND THE METHOD OF AVERAGING. A NUMBER OF OTHER HANDY PIECES OF KNOWLEDGE ARE ALSO LISTED INCLUDING ALL THE ORIGINAL RAW ANALOG AND DIGITAL DATA.

ALL OBSERVATIONS IN A SEQUENCE THROUGH A GIVEN FILTER ARE AVERAGED BY WEIGHTING THE INDIVIDUAL DATA POINTS BY THE INVERSE OF THEIR CALCULATED ERROR. THESE AVERAGES, TOGETHER WITH THE CALIBRATION DATA, ARE PRESENTED IN THE SUMMARY THAT APPEARS AT THE HEAD OF EACH SEQUENCE.

ALONG WITH THE DIGITAL RESULT FOR EACH FILTER, AN AUXILIARY QUANTITY IS COMPUTED WHICH PUTS THE CAL-NORMALIZED DATA ON A MAGNITUDE SCALE WITH COMPENSATION FOR THE RELATIVE SYSTEM SENSITIVITY. THIS QUANTITY IS 'OAO-MAG' AND IS DEFINED AS

-2.5 LOG(DIGITAL) - 2.5 LOG(DELTA),

WHERE 'DIGITAL' IS THE RESULT APPEARING ON THE PREVIOUS LINE IN THE SUMMARY PAGE AND 'LOG DELTA' IS THE SYSTEM RESPONSE RELATIVE TO S1,F1, TABULATED BELOW.

LOG DELTA, SYSTEM RESPONSE RELATIVE TO S1F1

S1	F3	(4250A)	-0.680	S3	F2	(2460A)	+0.815
	F1	(3320A)	0.000		F1	(1910A)	1.699
	F4	(2990A)	+0.123		F5	(1680A)	2.466
S2	F2	(2950A)	0.043	S4	F1	(1550A)	2.119
	F5	(2390A)	0.461		F3	(1430A)	2.216
	F1	(2040A)	0.720		F4	(1330A)	2.696

BARRING MODIFICATIONS TO THE ABOVE TABLE, ONLY ONE FURTHER QUANTITY IS REQUIRED TO PUT THE ENTIRE PHOTOMETRIC SYSTEM ON AN ABSOLUTE SCALE, NAMELY, THE ABSOLUTE RESPONSE AT 3320A.

FOLLOWING THE SUMMARY PAGE IS A LISTING OF THE COEFF/C/ENTS OF T[illegible]E [illegible]ARK [illegible]URV5 [illegible]PLOT IN TERMS OF ST1, E2.

AS A STANDARD DATA REDUCTION ROUTINE, DROOP PERFORMS WELL IN PROCESSING COMPLETE OBSERVING SEQUENCES OF THE BRIGHTER STARS. WHEN REQUIRED TO REDUCE INCOMPLETE SEQUENCES (FOR EXAMPLE, WHEN FRAMES OF DARK DATA ARE LOST) OR DATA COLLECTED FROM MORE DIFFICULT OBJECTS (NEBULAE, GALAXIES OR FAINT STARS) THE RESULTS ARE LESS SATISFACTORY. NO ATTEMPT WAS MADE TO INCORPORATE INTO DROOP THE MULTITUDE OF COMPLEX DECISIONS AND APPROXIMATIONS THAT MIGHT BE MADE IN THE HAND REDUCTION OF DIFFICULT DATA.

OBSERVERS WHO WISH TO USE DROOP-PROCESSED DATA ALONE OR AS A PARTIAL FOUNDATION FOR FURTHER HAND REDUCTION SHOULD KEEP THE FOLLOWING COMMENTS IN MIND.

1. SKY BACKGROUND -- FOR MANY OBJECTS, THE SKY BACKGROUND IS IMPORTANT AND HAS BEEN OBSERVED FREQUENTLY.

Figure 3.1-2a. Description of DROOP Output, Page 1

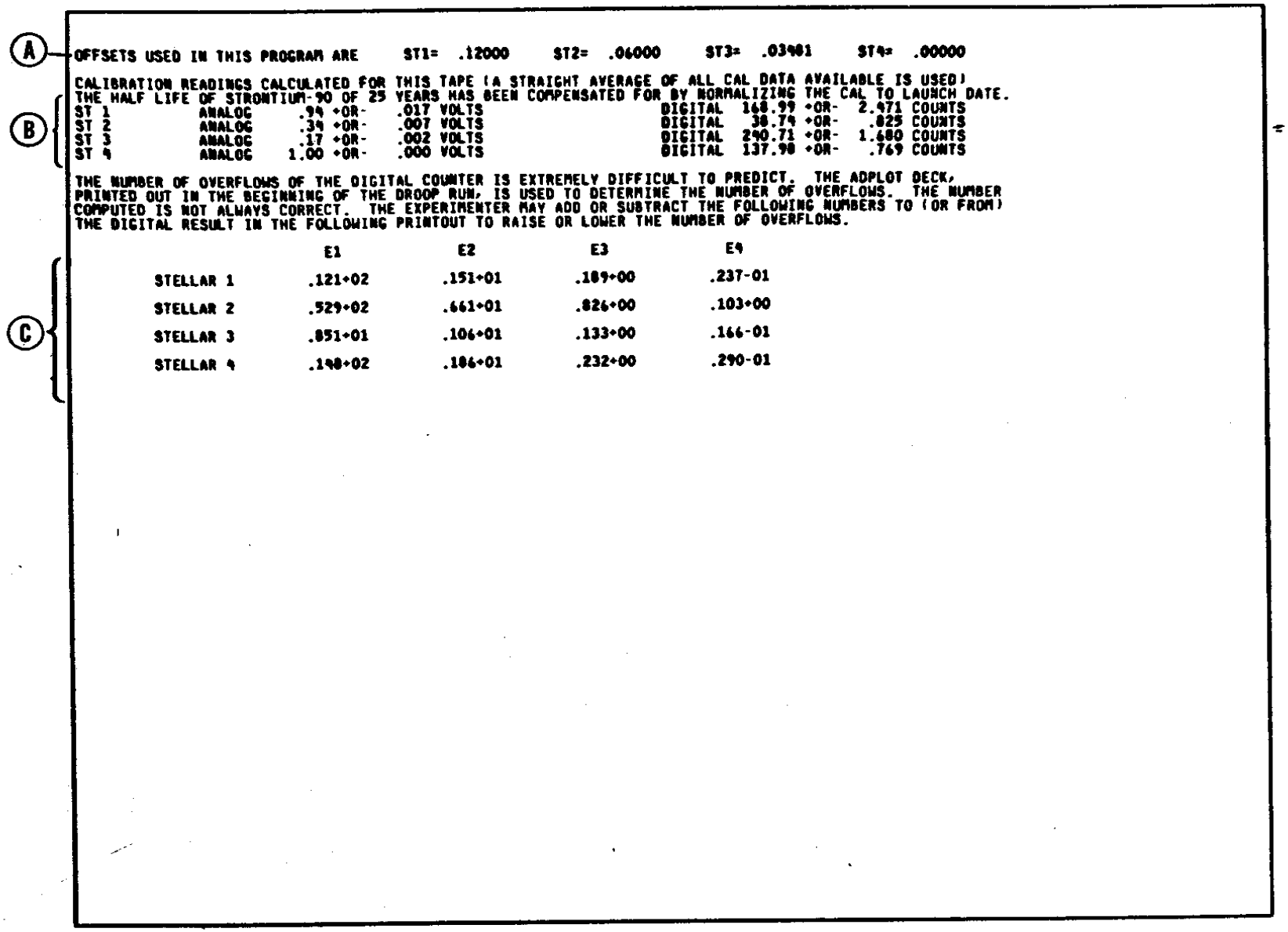


Figure 3.1-3. DROOP Output (Overview): Calibration Data

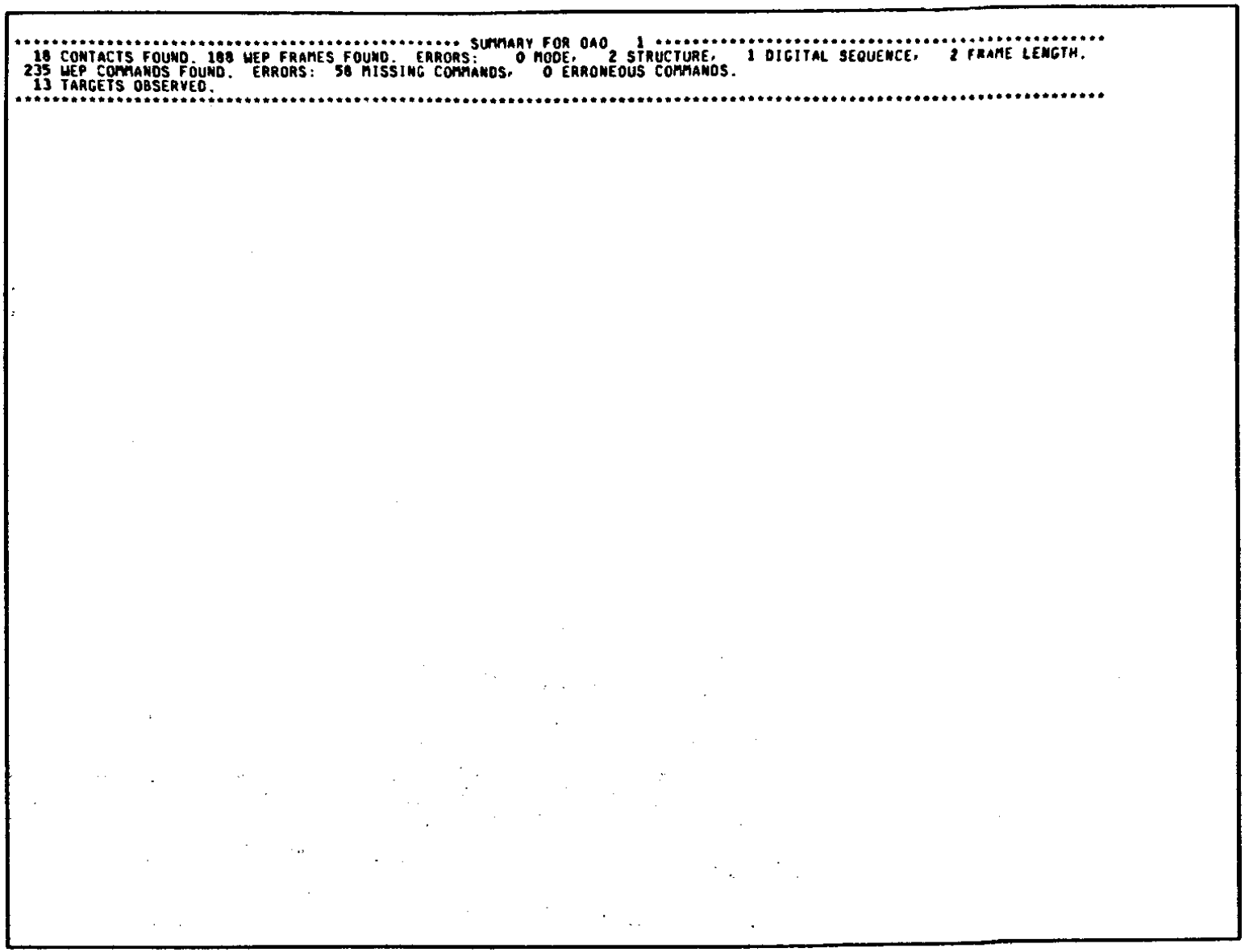


Figure 3.1-4. DROOP Output (Overview): Tape Summary

STAR OBSERVATION SUMMARY FOR OAO 1

(A) NAME	(B) RA	(C) DEC	(D) MAG	(E) SP	(F) LC	(G) PEC	(H) MV	(I) B-V	(J) U-B	(K) COMMENTS	(L) CONTACT	(M) TIME OF FIRST OBS	(N) A	(O) B	(P) C	(Q) AN	(R) LT
BET CAR	9 12.69	-69 30.4	1.6	A1	IV	S	1.68	0.00	0.02	P= 0 Y= 0	57 R	12/11/68 06:19:34	6	1	11	17	18
IOT CAR	9 15.76	-59 3.5	2.2	F0	I		2.25	0.18	0.11	P= 0 Y= 0	63 S	12/11/68 17:46:24	10	2	3	3	11
91465	10 30.24	-61 25.4	3.3	B5	V	E	3.31	-0.10	-0.71	P= 0 Y= 0	66 S	12/11/68 22:34:31	10	2	3	5	10
I CAR	9 43.89	-62 16.8	3.4	G2			3.40	1.20		P= 0 Y= 0	70 R	12/12/68 03:40:11	10	2	0	0	6
BET CAR	9 12.69	-69 30.4	1.7	A1	IV	S	1.68	0.00	0.02	P= 0 Y= 0	70 R	12/12/68 05:00:56	11	2	0	0	9
GAM VEL	8 8.00	-47 12.1	1.8	C7			1.82	-0.26	-0.93	P= 0 Y= 0	71 R	12/12/68 06:17:45	1	0	8	3	7
BET CAR	9 12.69	-69 30.4	1.7	A1	IV	S	1.68	0.00	0.02	P= 0 Y= 0	76 S	12/12/68 12:59:38	6	1	1	2	6
IOT CAR	9 15.76	-59 3.5	2.2	F0	I		2.25	0.18	0.11	P= 0 Y= 0	76 S	12/12/68 13:52:35	6	1	0	0	3
83183	9 33.00	-59 0.3	4.1	B5	II		4.08	0.01	-0.56	P= 0 Y= 0	76 S	12/12/68 14:36:22	10	2	3	6	8
88206	10 7.04	-51 33.7	4.9	B2	V		4.85	-0.13	-0.71	P= 0 Y= 0	78 S	12/12/68 18:38:36	8	2	0	1	5
91465	10 30.24	-61 25.4	3.3	B5	V	E	3.31	-0.10	-0.71	P= 0 Y= 0	80 S	12/12/68 20:20:34	17	3	3	3	15
OMG CAR	10 12.57	-69 46.9	3.3	B7	IV		3.31	-0.08	-0.32	P= 0 Y= 0	84 R	12/13/68 01:45:38	12	3	0	0	14
BET CAR	9 12.69	-69 30.4	1.7	A1	IV	S	1.68	0.00	0.02	P= 0 Y= 0	84 R	12/13/68 03:01:24	12	2	14	0	19

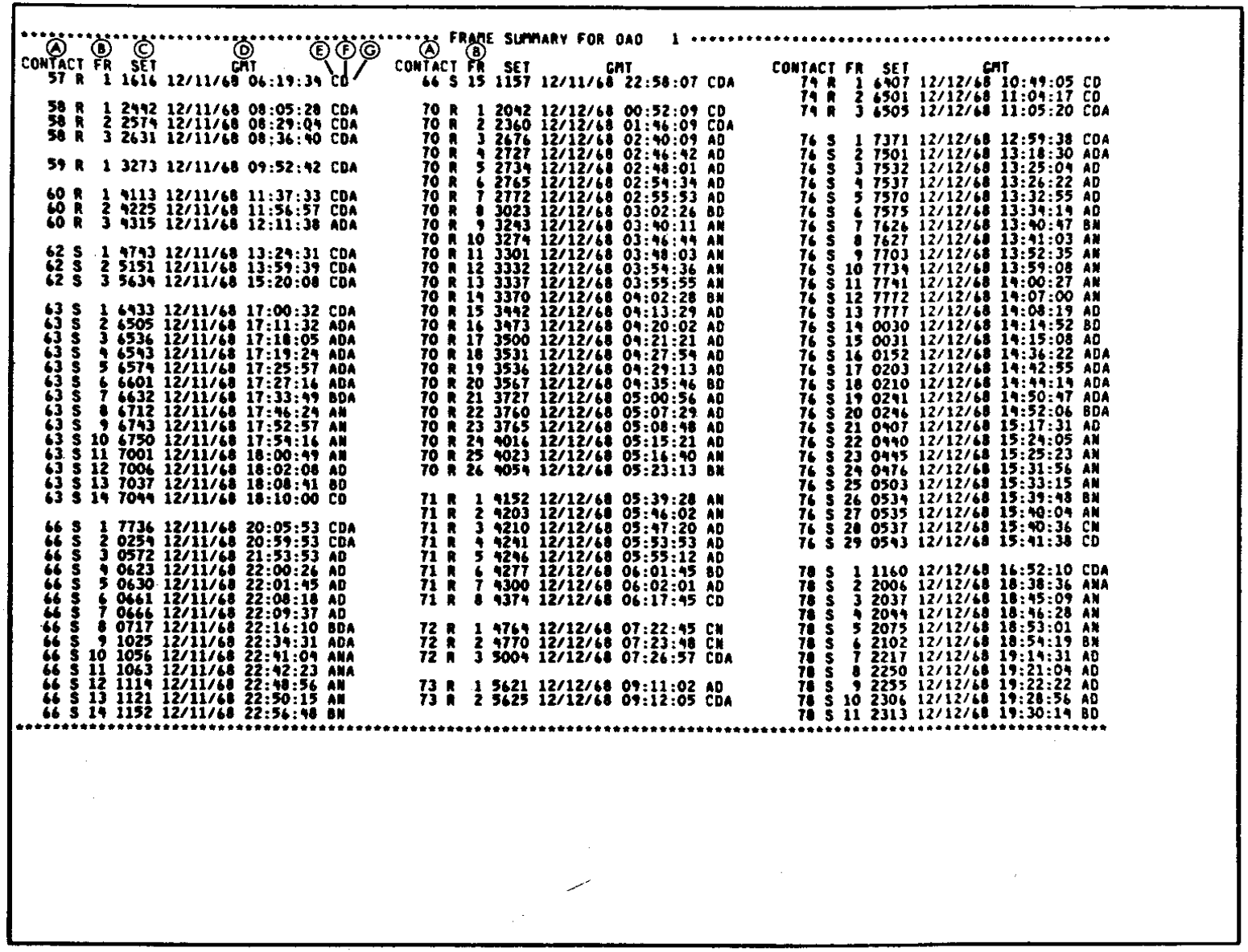
Figure 3.1-5. DROOP Output (Overview): Summary of Objects Observed

(pitch and yaw) are in arc-minutes if initials P and Y are used; they are in units of 15 arc-seconds if the initials PT and YT are used. The latter units may be used up to 15 arc-minutes off the reference object.

Also listed are (l) number and initial of the ground station to which the data were transmitted from the satellite, (m) date and time of the first observation, (n,o,p) number of frames in each mode, (q) number of frames observed in the South Atlantic Geomagnetic Anomaly (heading: AN), and (r) number of frames observed in spacecraft daylight (heading: LT).

This is followed by a frame summary (see Figure 3.1-6). This frame summary lists, for each frame on the tape, (a) contact number and initial of the ground station, (b) frame number, (c) spacecraft clock setting (heading: SET), (d) date and time the observing sequence of the data in the frame was started, and, in three columns (e, f, and g), the mode (designated A, B, or C), day/night status of the spacecraft (designated D or N), and whether the spacecraft was in the South Atlantic Geomagnetic Anomaly (designated A or blank). The star summary and the frame summary are both repeated at the end of the main body of output, along with all 'object' data summaries.

The next page (see Figure 3.1-7) lists spacecraft ephemeris elements for this tape: a time correlation between GMT and the spacecraft clock, the semi-major axis, inclination, mean anomaly, position of perigee, right ascension of the ascending node, rate of change of the right ascension of the ascending node, day and minute of the epoch, calculated period, and Julian date of epoch.



```
                                    FRAME SUMMARY FOR OAO   1
  (A)     (B)  (C)                (D)          (E)(F)(G)      (A)  (B)
CONTACT   FR   SET                GMT                        CONTACT FR   SET          GMT
   57 R    1 1616 12/11/68 06:19:34 CD          66 S  15 1157 12/11/68 22:58:07 CDA
                                                                                      74 R   1 6907 12/12/68 10:49:05 CD
   58 R    1 2492 12/11/68 08:05:28 CDA         70 R   1 2042 12/12/68 00:52:09 CD    74 R   2 6501 12/12/68 11:04:17 CD
   58 R    2 2579 12/11/68 08:29:04 CDA         70 R   2 2360 12/12/68 01:46:09 CDA   74 R   3 6505 12/12/68 11:05:20 CDA
   58 R    3 2631 12/11/68 08:36:40 CDA         70 R   3 2676 12/12/68 02:40:09 AD
                                                70 R   4 2727 12/12/68 02:46:42 AD    76 S   1 7371 12/12/68 12:59:38 CDA
   59 R    1 3273 12/11/68 09:52:42 CDA         70 R   5 2734 12/12/68 02:48:01 AD    76 S   2 7501 12/12/68 13:18:30 ADA
                                                70 R   6 2765 12/12/68 02:54:34 AD    76 S   3 7532 12/12/68 13:25:04 AD
   60 R    1 4113 12/11/68 11:37:33 CDA         70 R   7 2772 12/12/68 02:55:53 AD    76 S   4 7537 12/12/68 13:26:22 AD
   60 R    2 4225 12/11/68 11:56:57 CDA         70 R   8 3023 12/12/68 03:02:26 BD    76 S   5 7570 12/12/68 13:32:55 AD
   60 R    3 4315 12/11/68 12:11:38 ADA         70 R   9 3243 12/12/68 03:40:11 AN    76 S   6 7575 12/12/68 13:34:14 AD
                                                70 R  10 3274 12/12/68 03:46:44 AN    76 S   7 7626 12/12/68 13:40:47 BN
   62 S    1 4743 12/11/68 13:24:31 CDA         70 R  11 3301 12/12/68 03:48:03 AN    76 S   8 7627 12/12/68 13:41:03 AN
   62 S    2 5151 12/11/68 13:59:39 CDA         70 R  12 3332 12/12/68 03:54:36 AN    76 S   9 7703 12/12/68 13:52:35 AN
   62 S    3 5634 12/11/68 15:20:08 CDA         70 R  13 3337 12/12/68 03:55:55 AN    76 S  10 7734 12/12/68 13:59:08 AN
                                                70 R  14 3370 12/12/68 04:02:28 BN    76 S  11 7741 12/12/68 14:00:27 AN
   63 S    1 6433 12/11/68 17:00:32 CDA         70 R  15 3442 12/12/68 04:13:29 AD    76 S  12 7772 12/12/68 14:07:00 AN
   63 S    2 6505 12/11/68 17:11:32 ADA         70 R  16 3473 12/12/68 04:20:02 AD    76 S  13 7777 12/12/68 14:08:19 AD
   63 S    3 6536 12/11/68 17:18:05 ADA         70 R  17 3500 12/12/68 04:21:21 AD    76 S  14 0030 12/12/68 14:14:52 BD
   63 S    4 6543 12/11/68 17:19:24 ADA         70 R  18 3531 12/12/68 04:27:54 AD    76 S  15 0031 12/12/68 14:15:08 AD
   63 S    5 6574 12/11/68 17:25:57 ADA         70 R  19 3536 12/12/68 04:29:13 AD    76 S  16 0152 12/12/68 14:36:22 ADA
   63 S    6 6601 12/11/68 17:27:16 ADA         70 R  20 3567 12/12/68 04:35:46 BD    76 S  17 0203 12/12/68 14:42:55 ADA
   63 S    7 6632 12/11/68 17:33:49 BDA         70 R  21 3727 12/12/68 05:00:56 AD    76 S  18 0210 12/12/68 14:44:14 ADA
   63 S    8 6712 12/11/68 17:46:24 AN          70 R  22 3760 12/12/68 05:07:29 AD    76 S  19 0241 12/12/68 14:50:47 ADA
   63 S    9 6743 12/11/68 17:52:57 AN          70 R  23 3765 12/12/68 05:08:48 AD    76 S  20 0246 12/12/68 14:52:06 BDA
   63 S   10 6750 12/11/68 17:54:16 AN          70 R  24 4016 12/12/68 05:15:21 AD    76 S  21 0407 12/12/68 15:17:31 AD
   63 S   11 7001 12/11/68 18:00:49 AN          70 R  25 4023 12/12/68 05:16:40 AN    76 S  22 0440 12/12/68 15:24:05 AN
   63 S   12 7006 12/11/68 18:02:08 AD          70 R  26 4054 12/12/68 05:23:13 BN    76 S  23 0445 12/12/68 15:25:23 AN
   63 S   13 7037 12/11/68 18:08:41 BD                                               76 S  24 0476 12/12/68 15:31:56 AN
   63 S   14 7044 12/11/68 18:10:00 CD          71 R   1 4152 12/12/68 05:39:28 AN    76 S  25 0503 12/12/68 15:33:15 AN
                                                71 R   2 4203 12/12/68 05:46:02 AN    76 S  26 0534 12/12/68 15:39:48 BN
   66 S    1 7736 12/11/68 20:05:53 CDA         71 R   3 4210 12/12/68 05:47:20 AD    76 S  27 0535 12/12/68 15:40:04 AN
   66 S    2 0254 12/11/68 20:59:53 CDA         71 R   4 4241 12/12/68 05:53:53 AD    76 S  28 0537 12/12/68 15:40:36 CN
   66 S    3 0572 12/11/68 21:53:53 AD          71 R   5 4246 12/12/68 05:55:12 AD    76 S  29 0543 12/12/68 15:41:38 CD
   66 S    4 0623 12/11/68 22:00:26 AD          71 R   6 4277 12/12/68 06:01:45 BD
   66 S    5 0630 12/11/68 22:01:45 AD          71 R   7 4300 12/12/68 06:02:01 AD    78 S   1 1160 12/12/68 16:52:10 CDA
   66 S    6 0661 12/11/68 22:08:18 AD          71 R   8 4374 12/12/68 06:17:45 CD    78 S   2 2006 12/12/68 18:38:36 ANA
   66 S    7 0666 12/11/68 22:09:37 AD                                               78 S   3 2037 12/12/68 18:45:09 AN
   66 S    8 0717 12/11/68 22:16:10 BDA         72 R   1 4764 12/12/68 07:22:45 CN    78 S   4 2044 12/12/68 18:46:28 AN
   66 S    9 1025 12/11/68 22:34:31 ADA         72 R   2 4770 12/12/68 07:23:48 CN    78 S   5 2075 12/12/68 18:53:01 AN
   66 S   10 1056 12/11/68 22:41:04 ANA         72 R   3 5004 12/12/68 07:26:57 CDA   78 S   6 2102 12/12/68 18:54:19 BN
   66 S   11 1063 12/11/68 22:42:23 ANA                                               78 S   7 2217 12/12/68 19:14:31 AD
   66 S   12 1114 12/11/68 22:48:56 AN          73 R   1 5621 12/12/68 09:11:02 AD    78 S   8 2250 12/12/68 19:21:04 AD
   66 S   13 1121 12/11/68 22:50:15 AN          73 R   2 5625 12/12/68 09:12:05 CDA   78 S   9 2255 12/12/68 19:22:22 AD
   66 S   14 1152 12/11/68 22:56:48 BN                                               78 S  10 2306 12/12/68 19:28:56 AD
                                                                                     78 S  11 2313 12/12/68 19:30:14 BD
```

Figure 3.1-6. DROOP Output (Overview): Frame Summary

```
INPUT       001
OUTPUT      001
SELECT
TC                15.7292778  2201.59798     WEEK   0.  PART 1
AXIS                7154.58
INCLINATION         34.997
MEAN ANOMALY        153.093
PERIGEE             282.85
RA NODE             74.57
D(RA NODE)          -5.4767
DAY OF EPOCH        342      12/07/68
MIN OF EPOCH        532.0
START
PERIOD            100.15850
EPOCH       2440197.8694444444

STRIPR RUN ID =T00008   04/27/72   13:39:04

*** END OF FILE ***
```

Figure 3.1-7. DROOP Output-(Overview): Spacecraft Ephemeris

3.2 DESCRIPTION OF THE OBJECT DATA

This section describes those portions of the DROOP results that summarize observations of a particular object. These data are contained on two pages preceding each set of individual observations (frames).

The first page (Figure 3.2-1) summarizes all observations of the object in question for a particular set of frames. The first line (a) of this page gives the name of the object, the date and time span of the observations summarized, the orbit number, ground station initial, and week number. After skipping a line, the next line (b) begins with the letter 'S.' This is a remnant from earlier software and can be ignored. Following the letter 'S,' the object name is repeated, followed by the right ascension/declination of the object, its magnitude, spectral type, luminosity class, peculiarities, visual magnitude, B-V, U-B, and spacecraft pitch and yaw (or other comments). Note that if the B-V or U-B values are not known, those columns will contain zeros.

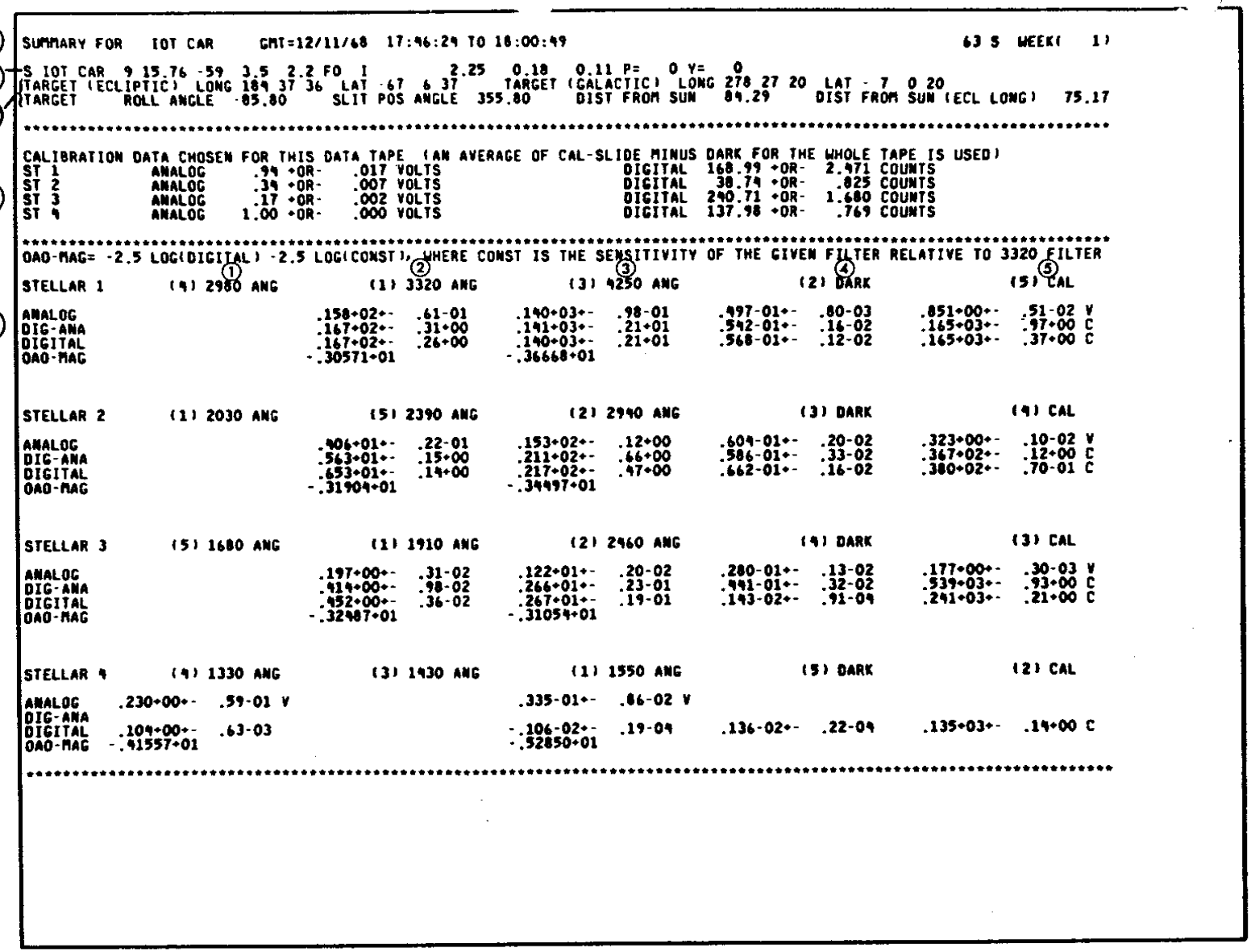
On the next line (C), the target (object) longitude and latitude are given in both ecliptic coordinates and galactic coordinates. On the following line, after the word 'target,' the spacecraft roll angle, the slit position angle, the distance of the telescopes from the Sun, and the distance from the Sun in ecliptic longitude are given. The roll angle (C) is defined as the angle between the spacecraft y-(pitch) axis and the celestial equator, measured in the y-z (pitch-yaw) plane.

Between two lines of asterisks, the calibration data (table D) presented earlier in the overview data section are repeated. Note that the analog value for ST4 is meaningless since that channel failed.

Following the second line of asterisks is a line defining the 'OAO magnitude.' Note that the 'LOG (CONST)' is the same as the 'LOG (DELTA)' mentioned in the DROOP description (see Figure 3.1-2).

Following this definition, the data from the entire set of observations (all relevant frames) were averaged individually for each stellar photometer and each filter position (including dark current data and calibration data).

For each photometer and each filter position (arrayed as columns), four quantities were averaged. The analog values determined for (DATA - DK)/(CAL - DK) are listed first, followed by the digital analog value of (DATA - DK)/(CAL - DK). (Note: These values were derived by using the volts/overflow and offsets in conjunction with the analog data). These are followed by the digital values of (DATA - DK)/(CAL - DK), and in the case of filter positions only (i.e., not in the case of dark current measurements or calibration data), the



```
(A) SUMMARY FOR   IOT CAR     GMT=12/11/68  17:46:24 TO 18:00:49                                                  63 S  WEEK(   1)
(B) S IOT CAR  9 15.76 -59  3.5  2.2 FO  I          2.25   0.18   0.11 P=   0 Y=   0
(C) TARGET (ECLIPTIC)  LONG 184 37 36  LAT -67  6 37     TARGET (GALACTIC)  LONG 278 27 20  LAT - 7  0 20
    TARGET     ROLL ANGLE  -85.80     SLIT POS ANGLE  355.80     DIST FROM SUN   84.29     DIST FROM SUN (ECL LONG)   75.17
*****************************************************************************************************************************
CALIBRATION DATA CHOSEN FOR THIS DATA TAPE  (AN AVERAGE OF CAL-SLIDE MINUS DARK FOR THE WHOLE TAPE IS USED)
(D) ST 1          ANALOG      .94 +OR-    .017 VOLTS                    DIGITAL  168.99 +OR-  2.471 COUNTS
    ST 2          ANALOG      .34 +OR-    .007 VOLTS                    DIGITAL   38.74 +OR-   .825 COUNTS
    ST 3          ANALOG      .17 +OR-    .002 VOLTS                    DIGITAL  240.71 +OR-  1.680 COUNTS
    ST 4          ANALOG     1.00 +OR-    .000 VOLTS                    DIGITAL  137.98 +OR-   .769 COUNTS
*****************************************************************************************************************************
OAO-MAG= -2.5 LOG(DIGITAL) -2.5 LOG(CONST), WHERE CONST IS THE SENSITIVITY OF THE GIVEN FILTER RELATIVE TO 3320 FILTER
                        (1)                  (2)                  (3)                  (4)                  (5)
STELLAR 1       (4) 2980 ANG          (1) 3320 ANG          (3) 4250 ANG          (2) DARK              (5) CAL

(E) ANALOG                          .158+02+-  .61-01     .140+03+-  .98-01     .497-01+-  .80-03     .851+00+-  .51-02 V
    DIG-ANA                         .167+02+-  .31+00     .141+03+-  .21+01     .542-01+-  .16-02     .165+03+-  .97+00 C
    DIGITAL                         .167+02+-  .26+00     .140+03+-  .21+01     .568-01+-  .12-02     .165+03+-  .37+00 C
    OAO-MAG                        -.30571+01            -.36668+01

STELLAR 2       (1) 2030 ANG          (5) 2390 ANG          (2) 2940 ANG          (3) DARK              (4) CAL

    ANALOG                          .406+01+-  .22-01     .153+02+-  .12+00     .604-01+-  .20-02     .323+00+-  .10-02 V
    DIG-ANA                         .563+01+-  .15+00     .211+02+-  .66+00     .586-01+-  .33-02     .367+02+-  .12+00 C
    DIGITAL                         .653+01+-  .14+00     .217+02+-  .47+00     .662-01+-  .16-02     .380+02+-  .70-01 C
    OAO-MAG                        -.31904+01            -.34497+01

STELLAR 3       (5) 1680 ANG          (1) 1910 ANG          (2) 2460 ANG          (4) DARK              (3) CAL

    ANALOG                          .197+00+-  .31-02     .122+01+-  .20-02     .280-01+-  .13-02     .177+00+-  .30-03 V
    DIG-ANA                         .414+00+-  .98-02     .266+01+-  .23-01     .441-01+-  .32-02     .539+03+-  .93+00 C
    DIGITAL                         .452+00+-  .36-02     .267+01+-  .19-01     .143-02+-  .91-04     .241+03+-  .21+00 C
    OAO-MAG                        -.32487+01            -.31054+01

STELLAR 4       (4) 1330 ANG          (3) 1430 ANG          (1) 1550 ANG          (5) DARK              (2) CAL

    ANALOG    .230+00+-  .59-01 V                         .335-01+-  .86-02 V
    DIG-ANA
    DIGITAL   .104+00+-  .63-03                          -.106-02+-  .19-04     .136-02+-  .22-04     .135+03+-  .14+00 C
    OAO-MAG  -.41557+01                                  -.52850+01
*****************************************************************************************************************************
```

Figure 3.2-1. DROOP Output (Object): Summary of a Set of Observations of One Object During One Contact

values for the derived OAO magnitude. Note that the dark current values are defined as the ratios of DK to CAL - DK, in volts or counts, and that the calibration data are actually values of CAL - DK in volts or counts (see Figure 3.2-1). These may be compared with the values listed on the table of calibration data after the half-life of the strontium^{90} source is taken into account by the following formula:

$$(CAL - DK)_{t=0} = (CAL - DK)_t \times e^{(orbit \times 5.27 \times 10^{-6})} \qquad (3.2\text{-}1)$$

Note that the data from Stellar Photometer 4 do not include digitized analog data and that the analog data were estimated from models of stellar spectra.

The second page (Figure 3.2-2) iterates the identification line A, beginning with the vestigial 'S,' but with the date and time period covered added to the end. In line B are the analog voltages (computed at Exposure/gain 2) for the four instruments and each filter predicted from the model stellar spectra previously alluded to.

The curve fits for the dark data are given next. Wherever possible, a second-order parabolic fit was determined using the least-squares method, which fits the dark current as a function of time in minutes from the start of the first measurement (t=0). The date and time for t=0 are given on the upper right-hand corner of the plot (item(E)). If the second-order fit was not possible, a linear fit was determined for the dark current as a function of time, and if that failed, the average was simply used. Whenever possible, data from the four stellar photometers were used independently (the type of process is then labeled 'individual fitting'). If necessary, the data from the different photometers were merged by converting all data to their equivalent ST1 values, using the interrelations listed earlier (see Figure 3.1-1). In the latter case, the process is called 'collective fitting.' These coefficients and the root-mean-square error in the residuals (the residual is the difference between the measured value and that calculated using the curve fit) are given in tabular form for each detector, and the resulting dark current is in counts at Exposure/gain 2.

Following this table, dark current (listed as both raw observed data, where 1=ST1, 2=ST2, etc., and derived data, where A=ST1, B=ST2, etc.) is shown against time on a plot generated by a line printer, with a vertical line within the graph indicating the time of the last observation in the sequence of frames.

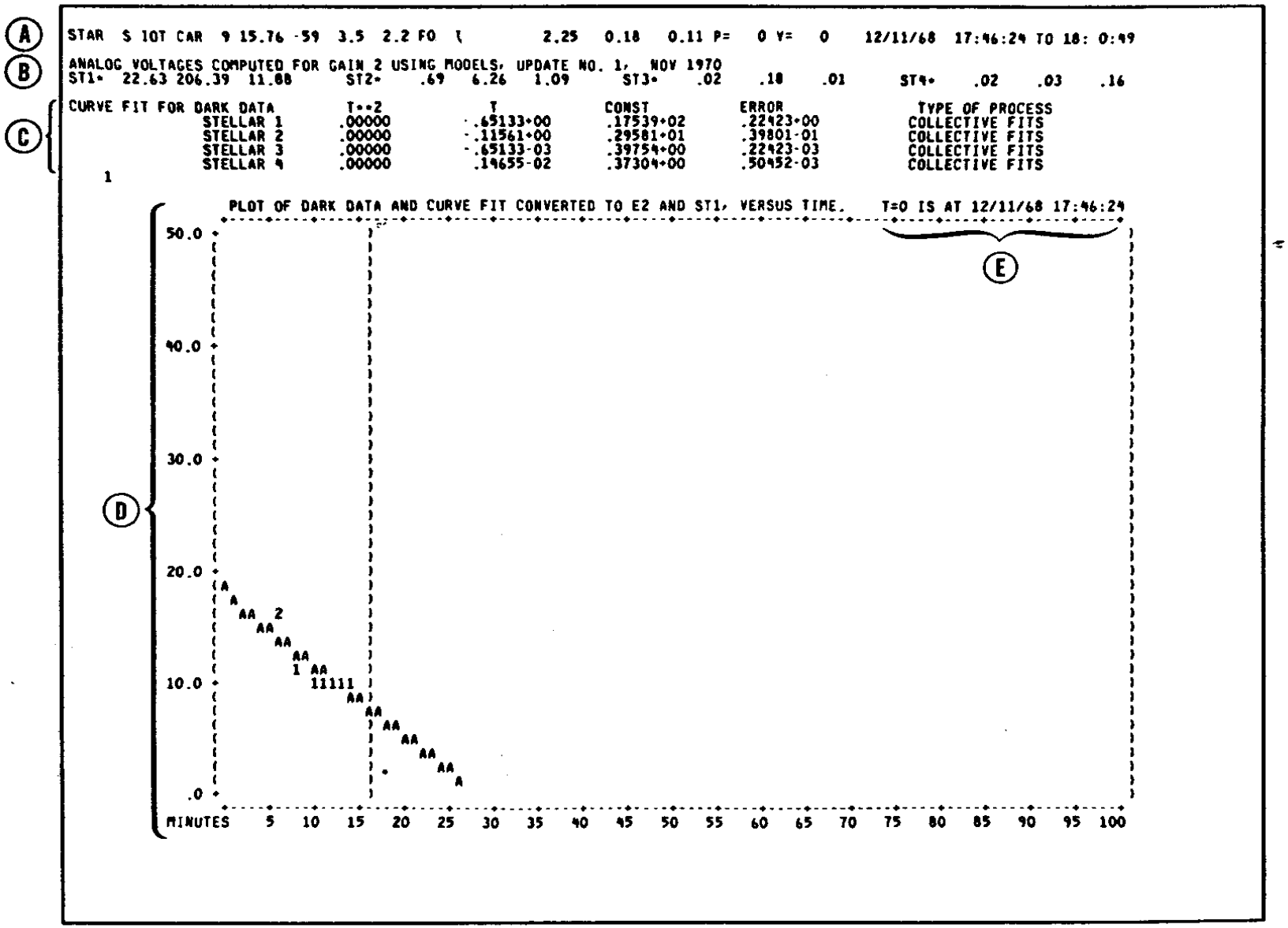


Figure 3.2-2. DROOP Output (Object): Curve Fit for Dark Data

3.3 DESCRIPTION OF THE FRAME DATA

This portion of the DROOP results describes the data from each individual observing run. These data were not reduced if the observations were: (a) not made in the stellar photometer mode, (b) made during predicted spacecraft day, or (c) made when the spacecraft was within the predicted South Atlantic Geomagnetic Anomaly. Otherwise, the individual frame data include both raw and reduced stellar photometer data.

Data rejected because they were taken during predicted spacecraft day are illustrated in Figure 3.3-1.

Line A gives the contact orbit number, the ground station abbreviation, and the frame number. Line B gives the reason this frame was rejected (in this case, because the spacecraft was in daylight). The group of lines labelled C gives the raw stellar photometer data, nebular photometer data, and some spectrometer data. The second column, headed M, gives the mode of operation (in this case, Mode A). The columns headed E give the exposure/gain used for that subframe. The column headed F gives the filter position number. The column headed A gives the aperture used (L= large, S=small). The columns headed ANA give the analog voltages. The columns headed DIG give the raw digital counts. The columns headed C are indicators of collimation trouble (N signifies 'normal').

The spectrometer data in the rightmost six columns should be disregarded. They will be described in another document. The group of lines labelled D contains spectrometer data, power supply and thermal data, orbital information, and a flag indicating the spacecraft was in daylight or the South Atlantic Geomagnetic Anomaly, if applicable. These lines can usually be disregarded.

Data rejected because they were taken when the spacecraft was within the predicted South Atlantic Geomagnetic Anomaly are illustrated in Figure 3.3-2. Items A, C, and D are identical to those described above in Figure 3.3-1. Item B differs only in that the reason for rejection was that the spacecraft was in the Anomaly rather than daylight.

Data rejected because they were not taken in Mode A are illustrated in Figures 3.3-3a and 3.3-3b. Again, Items A, C, and D are essentially the same as in Figure 3.3-1, except that the tables of Items C and D are much longer because the spacecraft was in the spectrometer mode. Item B is different only in that the reason for rejection was that the spacecraft was not in Mode A.

A sample of reduced stellar photometer data is shown in Figure 3.3-4. Frames such as this one are the essence of each data set.

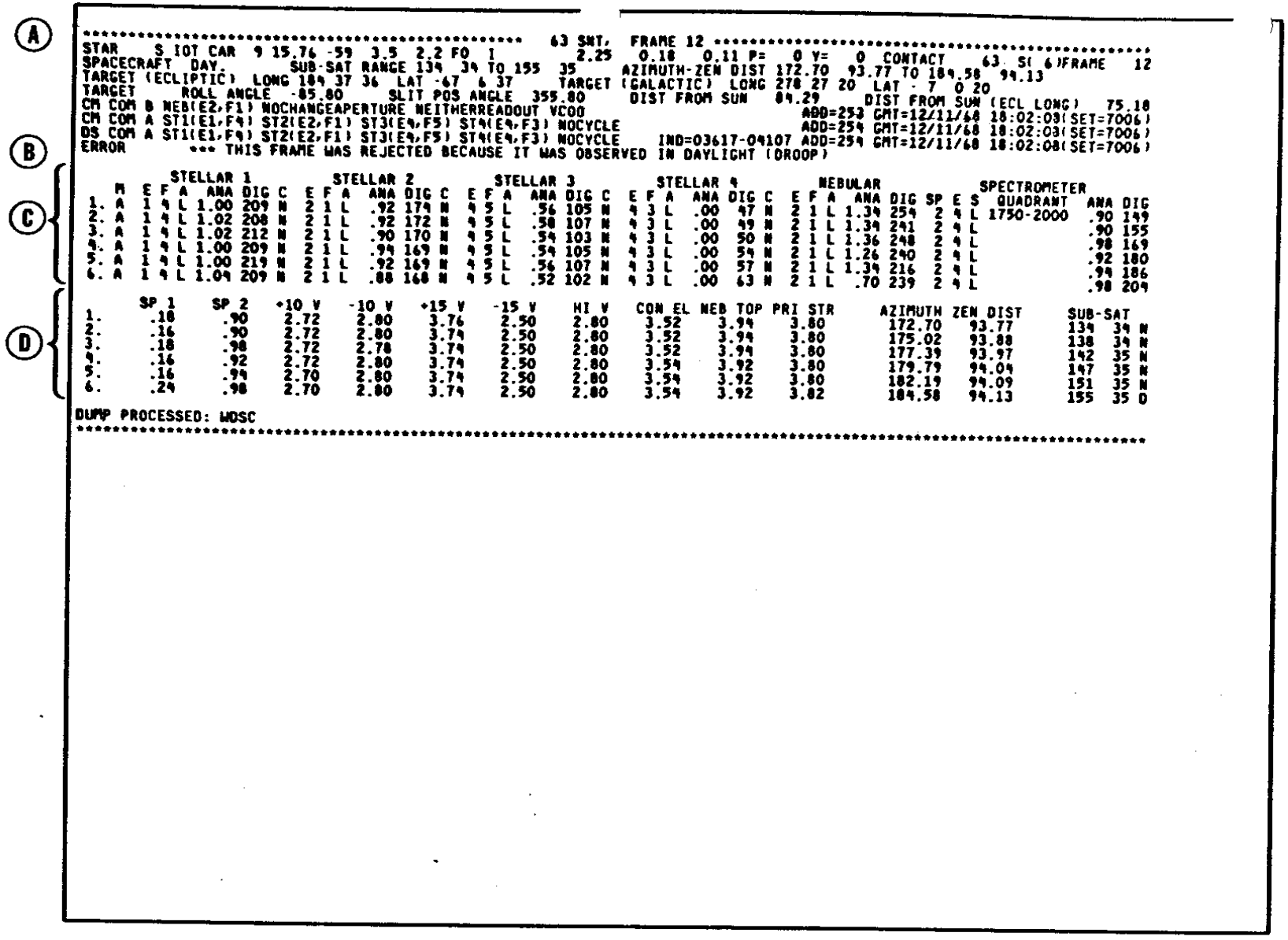
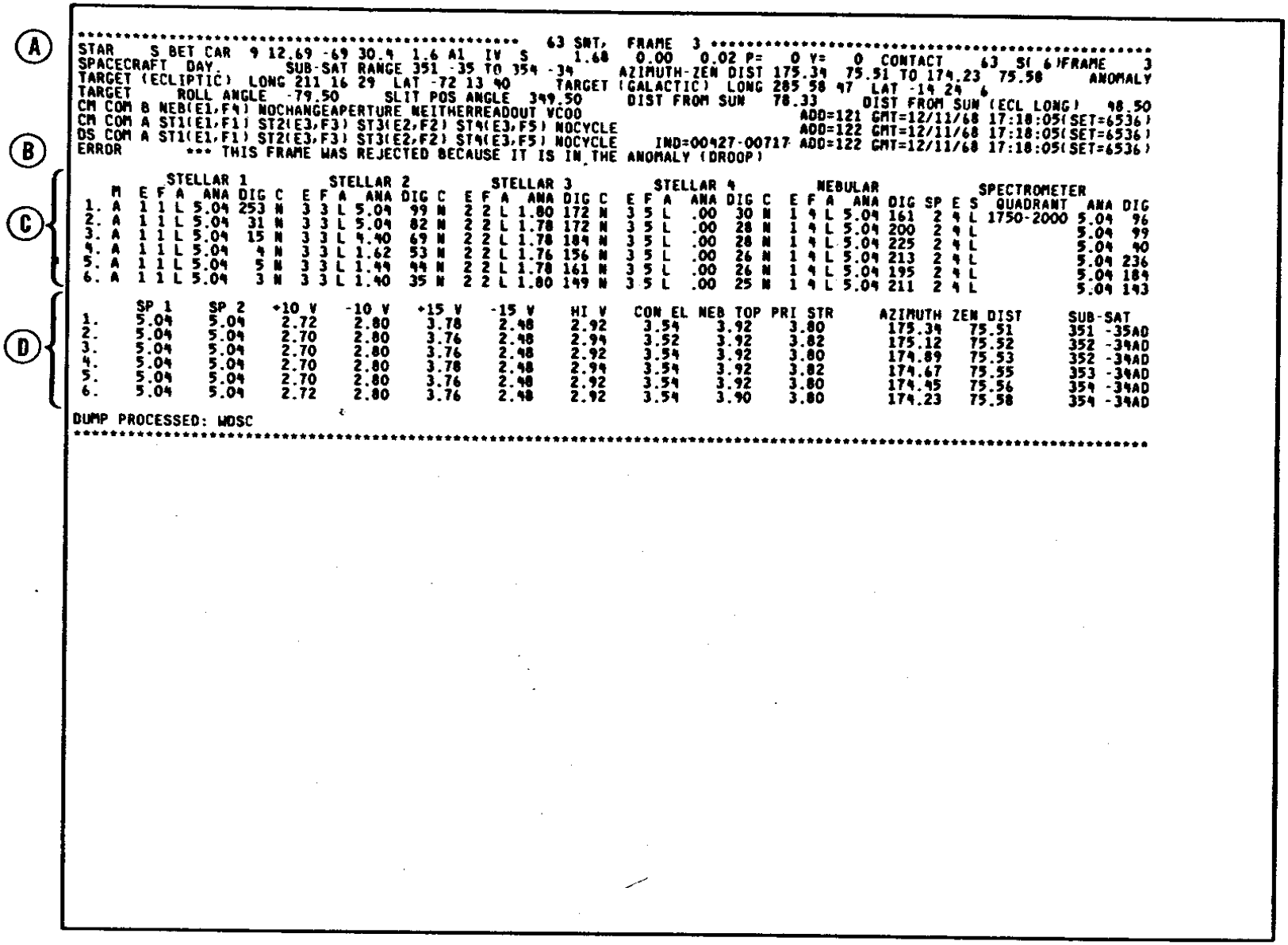


Figure 3.3-1. DROOP Output (Frame): Frame Rejected Because It Was Observed in Daylight



```
A  ************************************************  63 SNT,  FRAME  3 ************************************************
   STAR    S BET CAR  9 12.69 -69 30.4  1.6 A1  IV  S     1.68   0.00   0.02 P=   0 Y=   0  CONTACT    63  S( 6)FRAME    3
   SPACECRAFT  DAY.        SUB-SAT RANGE 351 -35 TO 354 -34     AZIMUTH-ZEN DIST 175.34  75.51 TO 174.23  75.58     ANOMALY
   TARGET (ECLIPTIC)  LONG 211 16 29  LAT -72 13 40     TARGET (GALACTIC)  LONG 285 58 47  LAT -14 24  6
   TARGET      ROLL ANGLE  -79.50      SLIT POS ANGLE  349.50     DIST FROM SUN   78.33     DIST FROM SUN (ECL LONG)   48.50
   CM COM B NEB(E1,F4) NOCHANGEAPERTURE NEITHERREADOUT VCOO                                ADD=121 GMT=12/11/68 17:18:05(SET=6536)
   CM COM A ST1(E1,F1) ST2(E3,F3) ST3(E2,F2) ST4(E3,F5) NOCYCLE                            ADD=122 GMT=12/11/68 17:18:05(SET=6536)
   DS COM A ST1(E1,F1) ST2(E3,F3) ST3(E2,F2) ST4(E3,F5) NOCYCLE     IND=00427-00717 ADD=122 GMT=12/11/68 17:18:05(SET=6536)
B  ERROR        *** THIS FRAME WAS REJECTED BECAUSE IT IS IN THE ANOMALY (DROOP)
```

C

		STELLAR 1					STELLAR 2					STELLAR 3					STELLAR 4					NEBULAR					SPECTROMETER				
	M	E	F	A	ANA	DIG	C	E	F	A	ANA	DIG	C	E	F	A	ANA	DIG	C	E	F	A	ANA	DIG	SP	E	S	QUADRANT	ANA	DIG
1.	A	1	1	L	5.04	253	N	3	3	L	5.04	99	N	2	2	L	1.80	172	N	3	5	L	.00	30	N	1	4	L	5.04	161	2	4	L	1750-2000	5.04	96
2.	A	1	1	L	5.04	31	N	3	3	L	5.04	82	N	2	2	L	1.78	172	N	3	5	L	.00	28	N	1	4	L	5.04	200	2	4	L		5.04	99
3.	A	1	1	L	5.04	15	N	3	3	L	4.40	69	N	2	2	L	1.78	184	N	3	5	L	.00	28	N	1	4	L	5.04	225	2	4	L		5.04	40
4.	A	1	1	L	5.04	4	N	3	3	L	1.62	53	N	2	2	L	1.76	156	N	3	5	L	.00	26	N	1	4	L	5.04	213	2	4	L		5.04	236
5.	A	1	1	L	5.04	5	N	3	3	L	1.44	44	N	2	2	L	1.78	161	N	3	5	L	.00	26	N	1	4	L	5.04	195	2	4	L		5.04	184
6.	A	1	1	L	5.04	3	N	3	3	L	1.40	35	N	2	2	L	1.80	149	N	3	5	L	.00	25	N	1	4	L	5.04	211	2	4	L		5.04	143

D

	SP 1	SP 2	+10 V	-10 V	+15 V	-15 V	HI V	CON EL	NEB TOP	PRI STR	AZIMUTH	ZEN DIST	SUB-SAT
1.	5.04	5.04	2.72	2.80	3.78	2.48	2.92	3.54	3.92	3.80	175.34	75.51	351 -35AD
2.	5.04	5.04	2.70	2.80	3.76	2.48	2.94	3.52	3.92	3.82	175.12	75.52	352 -34AD
3.	5.04	5.04	2.70	2.80	3.76	2.48	2.92	3.54	3.92	3.80	174.89	75.53	352 -34AD
4.	5.04	5.04	2.70	2.80	3.78	2.48	2.94	3.54	3.92	3.82	174.67	75.55	353 -34AD
5.	5.04	5.04	2.70	2.80	3.76	2.48	2.92	3.54	3.92	3.80	174.45	75.56	354 -34AD
6.	5.04	5.04	2.72	2.80	3.76	2.48	2.92	3.54	3.90	3.80	174.23	75.58	354 -34AD

```
DUMP PROCESSED: WDSC
*****************************************************************************************************************
```

Figure 3.3-2. DROOP Output (Frame): Frame Rejected Because It Was Observed in Predicted South Atlantic Geomagnetic Anomaly

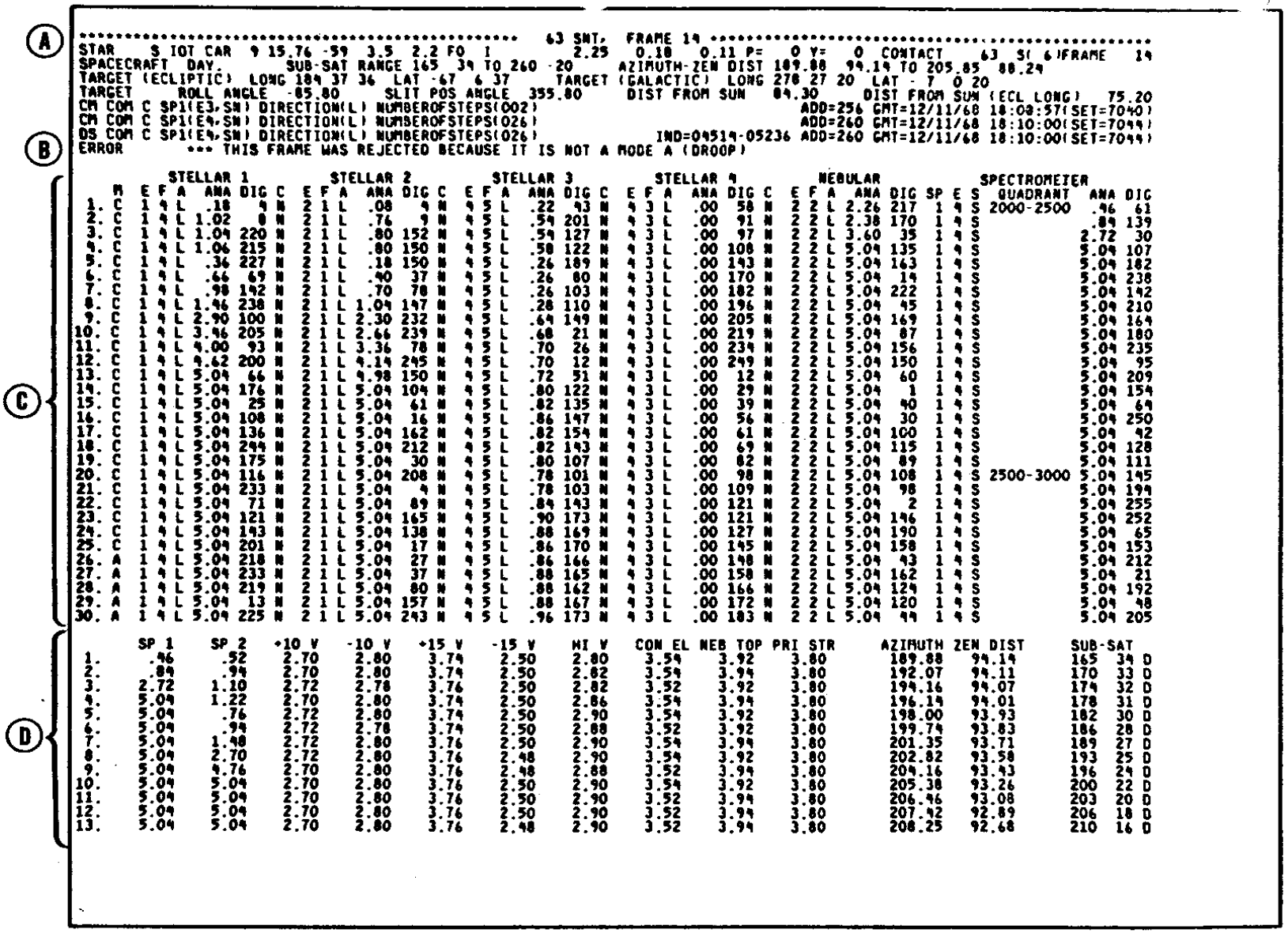
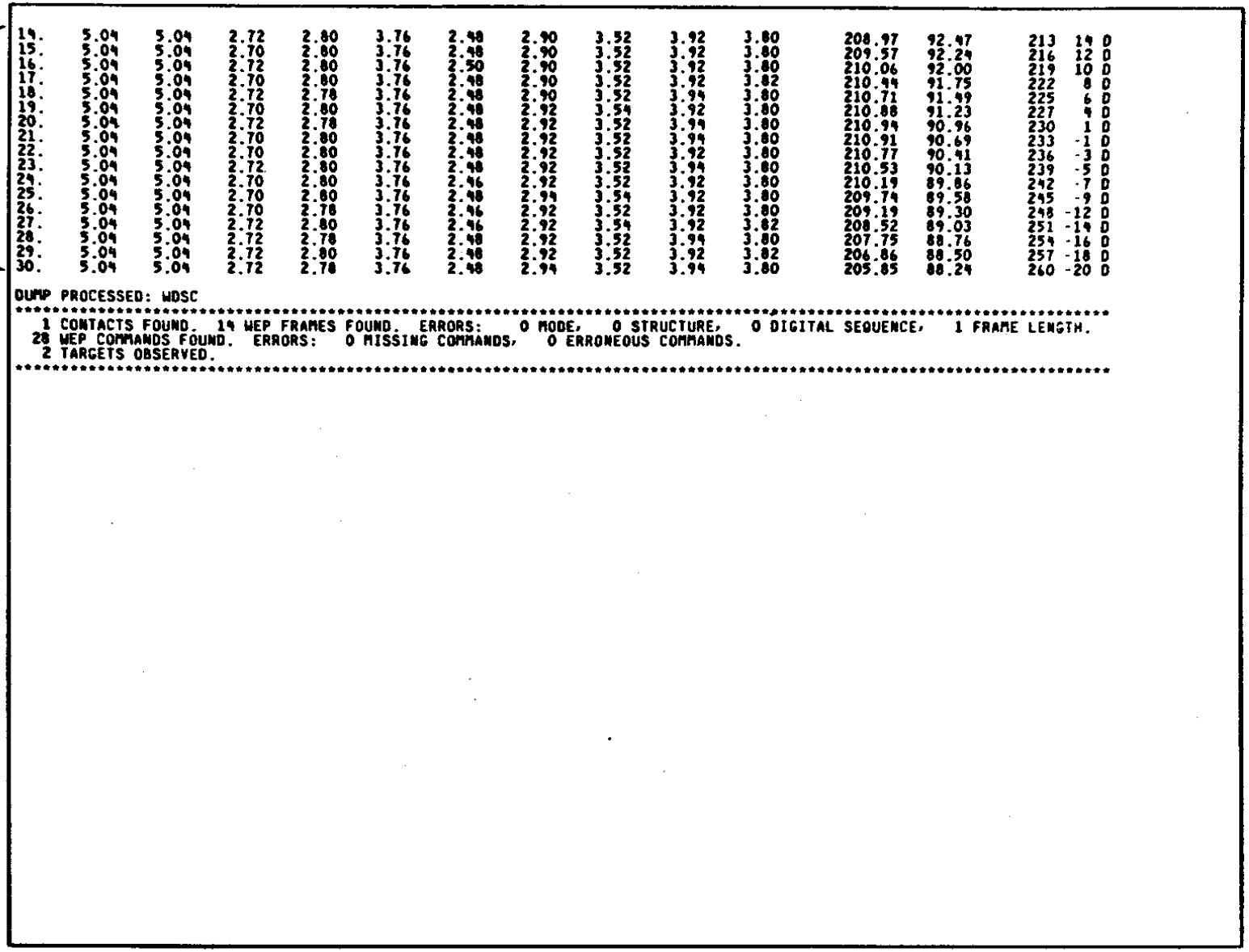


Figure 3.3-3a. DROOP Output (Frame): Frame Rejected Because It Was Not in Mode A



14.	5.04	5.04	2.72	2.80	3.76	2.48	2.90	3.52	3.92	3.80	208.97	92.47	213	14 D
15.	5.04	5.04	2.70	2.80	3.76	2.48	2.90	3.52	3.92	3.80	209.57	92.24	216	12 D
16.	5.04	5.04	2.72	2.80	3.76	2.50	2.90	3.52	3.92	3.80	210.06	92.00	219	10 D
17.	5.04	5.04	2.70	2.80	3.76	2.48	2.90	3.52	3.92	3.82	210.44	91.75	222	8 D
18.	5.04	5.04	2.72	2.78	3.76	2.48	2.90	3.52	3.94	3.80	210.71	91.49	225	6 D
19.	5.04	5.04	2.70	2.80	3.76	2.48	2.92	3.54	3.92	3.80	210.88	91.23	227	4 D
20.	5.04	5.04	2.72	2.78	3.76	2.48	2.92	3.52	3.94	3.80	210.94	90.96	230	1 D
21.	5.04	5.04	2.70	2.80	3.76	2.48	2.92	3.52	3.94	3.80	210.91	90.69	233	-1 D
22.	5.04	5.04	2.70	2.80	3.76	2.48	2.92	3.52	3.92	3.80	210.77	90.41	236	-3 D
23.	5.04	5.04	2.72	2.80	3.76	2.48	2.92	3.52	3.94	3.80	210.53	90.13	239	-5 D
24.	5.04	5.04	2.70	2.80	3.76	2.46	2.92	3.52	3.92	3.80	210.19	89.86	242	-7 D
25.	5.04	5.04	2.70	2.80	3.76	2.48	2.94	3.54	3.92	3.80	209.74	89.58	245	-9 D
26.	5.04	5.04	2.70	2.78	3.76	2.46	2.92	3.52	3.92	3.80	209.19	89.30	248	-12 D
27.	5.04	5.04	2.72	2.80	3.76	2.46	2.92	3.54	3.92	3.82	208.52	89.03	251	-14 D
28.	5.04	5.04	2.72	2.78	3.76	2.48	2.92	3.52	3.94	3.80	207.75	88.76	254	-16 D
29.	5.04	5.04	2.72	2.80	3.76	2.48	2.92	3.52	3.92	3.82	206.86	88.50	257	-18 D
30.	5.04	5.04	2.72	2.78	3.76	2.48	2.94	3.52	3.94	3.80	205.85	88.24	260	-20 D

DUMP PROCESSED: WDSC

****

1 CONTACTS FOUND. 14 WEP FRAMES FOUND. ERRORS: 0 MODE, 0 STRUCTURE, 0 DIGITAL SEQUENCE, 1 FRAME LENGTH.
28 WEP COMMANDS FOUND. ERRORS: 0 MISSING COMMANDS, 0 ERRONEOUS COMMANDS.
2 TARGETS OBSERVED.

****

Figure 3.3-3b. DROOP Output (Frame): Frame Rejected Because It Was Not in Mode A

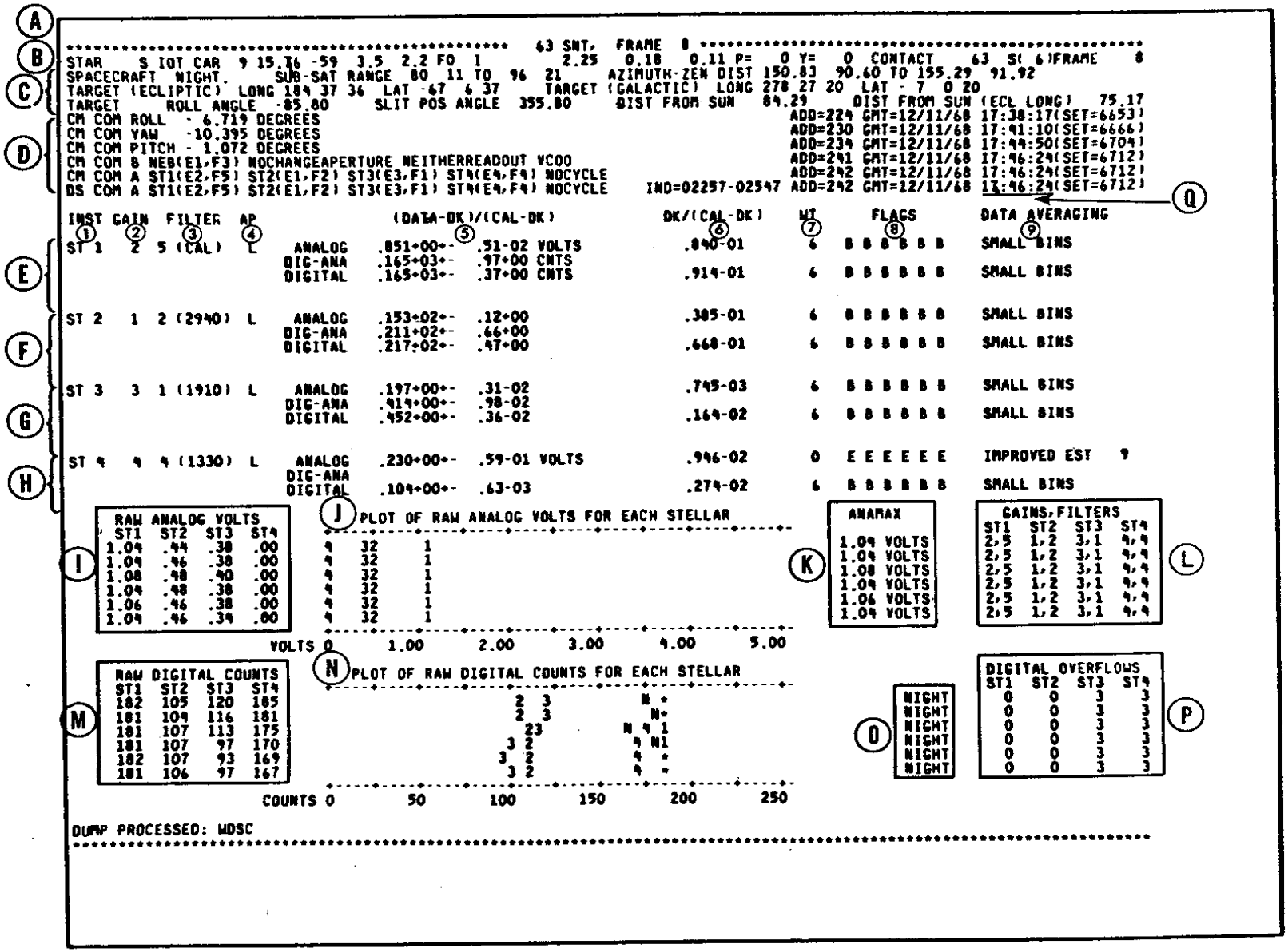


Figure 3.3-4. DROOP Output (Frame): Frame of Reduced Stellar Photometer Data

Line A of Figure 3.3-4 gives the contact orbit number (normally an orbit or two after the observations were taken), the abbreviations of the ground station used, and the frame number. The frame number is the same as the sequence number arbitrarily assigned to that frame, with the first frame dumped during a ground station contact designated as '1.'

Line B lists information about the target object. Following the word 'star' is the vestigial 'S' followed by the star name (abbreviated), the right ascension (hours, minutes), the declination (degrees, minutes), the magnitude, the spectral type, the luminosity class, peculiarities (if any), the visual magnitude, B-V, U-B, spacecraft pitch and yaw (see the explanation of Figure 3.1-4 in Section 3.1 for further detail), the contact orbit number, the ground station initial, and the frame number (repeated from line A).

The lines labeled C list spacecraft and target position information. The first line indicates spacecraft day or night (in words), followed by the subsatellite range (latitude and longitude of subsatellite points during data collection), and the azimuth-zenith distance (in degrees) at the beginning and the end of the frame. These directions refer to the object relative to the subsatellite point. This is followed by the target object's longitude and latitude in both ecliptic and galactic coordinates (the second line), and on the last line, the spacecraft roll angle (degrees), the spectrometer slit position angle (degrees), the angular distance from the Sun (degrees), and the distance from the Sun in ecliptic longitude.

The lines labeled D contain miscellaneous command information, and, except for one item, they are not always needed for data reduction. The useful item is the time given in the lower right-hand corner (the end of the line beginning 'DS COM' Item Q). This date and time is the starting time of this frame of observations. This time is needed to compute the dark current using the fitted curve given on Figure 3.2-2 (using the start-time given above the right-hand corner of the plot on Figure 3.2-2, Item E).

The remaining tables and plots on the page list information as described below.

Column 1 of Tables E through H, under the heading INST, lists the instrument in use for this table (e.g., ST1 is Stellar Photometer 1, etc.). Column 2, under the heading GAIN, lists the exposure/gain setting for this table (e.g., 1=E1, 0.125-sec accumulation time, 10^{-6} ampere full-scale for the electrometer; 2=E2, 1.0-sec accumulation time, 10^{-7} ampere full-scale on the electrometer, etc.). Column 3, under the heading FILTER, gives the filter wheel position number and, in parentheses, the filter's effective wavelength or the word DARK or CAL. Column 4, under the heading AP, gives the aperture setting. A setting of L stands for large (10 arc-minutes in diameter),

and a setting of S stands for small (2 arc-minutes in diameter). Column 5, under the heading (DATA - DK)/(CAL - DK), gives for each instrument the mean values and errors for the quantity (DATA - DK)/(CAL - DK) for analog, digitized analog, and digital data. Note that for dark data, the quantity is DK/(CAL - DK), and for calibration data the quantity is CAL - DK. Each quantity was derived from averaged values of the raw data and estimated error values given.

Column 6, under the heading DK/(CAL - DK), gives values of the ratio DK/(CAL - DK) computed using the dark current correction curve derived in Figure 3.2-2. Column 7, under the heading WT, gives a weighting factor, or quality factor, to be associated with these averages (6 denotes the best data, 0 the worst). This weighting factor is discussed in the description of the DROOP processing (see Figure 3.1-2d). Column 8, under the heading FLAGS, is actually a set of six columns (one for each observation made during this frame), containing flags showing the data quality and method of averaging for each individual data point. The flags are discussed in the description of DROOP processing (see Figure 3.1-2d). Column 9, under the heading DATA AVERAGING, indicates, in words, the type of data averaging used to derive the averages shown in Column 5.

Table I lists the raw analog voltages observed for each observation (in rows) by each instrument (in columns).

Plot J is a line-printer plot showing the values of the analog voltages observed by each of the four instruments as a function of time. The purpose of this plot is to summarize visually the variations in the observations.

Table K lists the maximum observed analog voltage for each set of observations (in rows).

Table L lists the exposure/gain-filter combinations for each observation within a frame. All rows within a column should be the same. If all rows within a column are not the same, that frame should be rejected.

Table M lists the raw digital counts observed for each observation (in rows) by each instrument (in columns).

Plot N is a line-printer plot showing the values of the raw digital counts observed for each instrument as a function of time. The purpose of this plot is to summarize visually the variations in the observations.

List O indicates whether the spacecraft was operating in spacecraft night during all of the observations. It should be a set of six rows, each row reading NIGHT.

Table P is a list of the estimated overflows of the digital accumulator for each observation (in rows) by each instrument (in columns).

```
************************************************** SUMMARY FOR OAO 432 ************************************************** 0000
  2[illegible] CONTACTS FOUND. 311 WEP FRAMES FOUND.  ERRORS      MODE,   2 STRUCTURE,   2 DIGITAL SEQUENCE,   1 FRAME LENGTH.   0000
 337 WEP COMMANDS FOUND.  ERRORS   27 MISSING COMMANDS,   [illegible] ERRONEOUS COMMANDS.                                  0000
  21 TARGETS OBSERVED.                                                                                                      0000
************************************************************************************************************************** 0000
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D-8709

**********STAR OBSERVATION SUMMARY FOR DAO 432********** 0000

NAME		RA		DEC		MAG	SP	LC	PEC	MV	B-V	U-B	COMMENTS	CONTACT	TIME OF FIRST OBS	A	B	C	AN	LT	
KAP CAS		29.52	62	59.5	4.2	B1	IA			4.16	0.13	-0.80	P= 0 Y= -20	7559 R	5/16/70 20 59 29	0	0	2	0	1	0000
EPS CAS	1	51.76	63	25.9	3.4	B3	IV	P		3.37	-0.16	-0.58	P= 0 Y= 0	7559 R	5/16/70 22 39 38 13	1	2	1	5		0000
GAM CAS		53.36	60	47.5	2.6	B0	IV	E		2.57	-0.19	-1.06	P= 0 Y= -20	7560 M	5/17/70 03 40 17	0	0	2	2	1	0000
SIG CAS	23	56.45	55	28.7	4.9	B1	V			4.88	-0.08	-0.81	P= 0 Y= 0	7562 M	5/17/70 05 20 26	0	0	1	0	1	0000
10 LAC	22	37.01	38	47.6	4.9	09	V			4.87	-0.20	-1.04	P= 0 Y= 0	7562 M	5/17/70 07 00 50	0	0	1	0	1	0000
28 VUL	20	36.34	23	56.4	5.0	B5	V			5.05	-0.15		P= 0 Y= 0	7564 S	5/17/70 08 40 58	0	0	2	1	1	0000
DEL DEL	20	41.12	14	53.7	4.4	A		M		4.42	0.30	0.10	P= 0 Y= 0	7564 S	5/17/70 10 16 55	109	2	2	17	14	0000
GAM CYG	20	20.43	40	5.5	2.2	F8	IB			2.21	0.67	0.53	P= 0 Y= 0	7578 S	5/18/70 06 23 47	0	0	1	0	1	0000
GAM CYG	20	20.34	40	2.1	2.2	F8	IB			2.21	0.67	0.53	P= 4 Y= 0	7578 S	5/18/70 08 04 11	0	0	1	0	0	0000
GAM CYG	20	20.43	40	5.5	2.2	F8	IB			2.21	0.67	0.53	P= 0 Y= 0	7578 S	5/18/70 09 40 55	77	0	0	0	7	0000
SKY	20	21.01	39	50.0	8.0	A5							NEAR GAM CYG	7587 R	5/18/70 21 06 40	11	1	0	0	3	0000
GAM CYG	20	20.43	40	5.5	2.2	F8	IB			2.21	0.67	0.53	P= 0 Y= 0	7587 R	5/18/70 23 02 00	11	0	0	8	1	0000
DEL CYG	19	43.35	44	56.7	2.9	B9.5	III			2.87	-0.03	-0.09	P= 4 Y= 0	7589 M	5/19/70 00 46 20	0	0	2	2	1	0000
DEL CYG	19	43.41	45	0.2	2.9	B9.5	III			2.87	-0.03	-0.09	P= 0 Y= 0	7589 M	5/19/70 02 26 28	0	0	2	2	1	0000
DEL CYG	19	41.52	45	3.9	2.9	B9.5	III			2.87	-0.03	-0.09	P= 0 Y= -20	7592 S	5/19/70 05 47 00	0	0	2	0	2	0000
R LYR	18	53.80	43	52.7	4.0	M5	III	SRB		4.00	1.59	1.41	P= 0 Y= 0	7592 S	5/19/70 08 58 53	11	0	0	1	1	0000
SKY	18	53.80	43	40.0	8.0	A5							NEAR R LYR	7594 S	5/19/70 10 39 01	11	0	0	0	1	0000
BET DRA	17	29.30	52	20.7	2.8	G2	II			2.79	0.96	1.66	P= 0 Y= 0	7594 S	5/19/70 12 22 02	11	0	0	0	1	0000
SKY	17	37.00	52	10.0	8.0	A5							BET + GAM DRA	7595 S	5/19/70 14 01 55	11	0	0	0	1	0000
ETA DRA	16	23.32	61	37.1	2.7	G8	III			2.74	0.91	0.70	P= 0 Y= 0	7597 D	5/19/70 15 41 47	11	0	0	0	1	0000
SKY	16	23.32	61	60.0	8.0	A5							NEAR ETA DRA	7597 D	5/19/70 17 22 58	11	0	0	0	1	0000

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******** FRAME SUMMARY FOR OAO 432 ******** 0000

CONTACT	FR	SET	GMT
7559 R	1	2677	5/16/70 20 59 29 CD
7559 R	2	2766	5/16/70 21 13 54 CN
7559 R	3	3475	5/16/70 22 39 38 AD
7559 R	4	3476	5/16/70 22 39 53 AN
7559 R	5	3477	5/16/70 22 40 09 CN
7559 R	6	3650	5/16/70 23 07 41 AN
7559 R	7	4273	5/17/70 00 19 46 CDA
7560 M	1	5041	5/17/70 01 53 36 BD
7560 M	2	5071	5/17/70 01 59 53 AD
7560 M	3	5075	5/17/70 02 00 56 AN
7560 M	4	5077	5/17/70 02 01 28 AN
7560 M	5	5103	5/17/70 02 02 31 AN
7560 M	6	5105	5/17/70 02 03 02 AN
7560 M	7	5111	5/17/70 02 04 05 AN
7560 M	8	5113	5/17/70 02 04 36 AN
7560 M	9	5117	5/17/70 02 05 39 AN
7560 M	10	5121	5/17/70 02 06 11 AN
7560 M	11	5322	5/17/70 02 40 00 AD
7560 M	12	5670	5/17/70 03 40 17 CDA
7560 M	13	5757	5/17/70 03 54 42 CNA
7562 M	1	6466	5/17/70 05 20 26 CD
7562 M	2	7265	5/17/70 07 00 50 CD
7564 S	1	0263	5/17/70 08 40 58 CD
7564 S	2	0145	5/17/70 08 54 04 CNA
7564 S	3	0641	5/17/70 10 16 55 AD
7564 S	4	0672	5/17/70 10 23 29 AN
7564 S	5	0674	5/17/70 10 23 59 AN
7564 S	6	0700	5/17/70 10 25 02 AN
7564 S	7	0731	5/17/70 10 31 35 AN
7564 S	8	0735	5/17/70 10 32 38 AN
7564 S	9	0766	5/17/70 10 39 11 AN
7564 S	10	0772	5/17/70 10 40 14 AN
7564 S	11	0776	5/17/70 10 41 17 AN
7564 S	12	1000	5/17/70 10 41 49 AN
7564 S	13	1004	5/17/70 10 42 52 AN
7566 S	1	1442	5/17/70 11 57 50 AD
7566 S	2	1473	5/17/70 12 04 23 AN
7566 S	3	1475	5/17/70 12 04 54 AN
7566 S	4	1501	5/17/70 12 05 57 AN
7566 S	5	1532	5/17/70 12 12 30 AN
7566 S	6	1536	5/17/70 12 13 33 AN

CONTACT	FR	SET	GMT
7566 S	7	1567	5/17/70 12 20 07 AN
7566 S	8	1573	5/17/70 12 21 09 AN
7566 S	9	1577	5/17/70 12 22 12 AN
7566 S	10	1601	5/17/70 12 22 44 AN
7566 S	11	1605	5/17/70 12 23 47 AN
7566 S	12	2243	5/17/70 13 38 45 AD
7566 S	13	2274	5/17/70 13 45 18 AN
7566 S	14	2276	5/17/70 13 45 50 AN
7566 S	15	2302	5/17/70 13 46 53 AN
7566 S	16	2333	5/17/70 13 53 26 AN
7566 S	17	2337	5/17/70 13 54 29 AN
7566 S	18	2370	5/17/70 14 01 02 AN
7566 S	19	2374	5/17/70 14 02 05 AN
7566 S	20	2400	5/17/70 14 03 08 AN
7566 S	21	2402	5/17/70 14 03 39 AN
7566 S	22	2406	5/17/70 14 04 42 AN
7568 O	1	3035	5/17/70 15 17 50 AD
7568 O	2	3066	5/17/70 15 24 23 AN
7568 O	3	3070	5/17/70 15 24 55 AN
7568 O	4	3074	5/17/70 15 25 57 AN
7568 O	5	3125	5/17/70 15 32 31 AN
7568 O	6	3131	5/17/70 15 33 34 AN
7568 O	7	3162	5/17/70 15 40 07 AN
7568 O	8	3166	5/17/70 15 41 10 AN
7568 O	9	3172	5/17/70 15 42 13 AN
7568 O	10	3174	5/17/70 15 42 44 AN
7568 O	11	3200	5/17/70 15 43 47 AN
7568 O	12	3636	5/17/70 16 58 45 AD
7568 O	13	3667	5/17/70 17 05 18 AN
7568 O	14	3671	5/17/70 17 05 50 AN
7568 O	15	3675	5/17/70 17 06 53 AN
7568 O	16	3726	5/17/70 17 13 26 AN
7568 O	17	3732	5/17/70 17 14 29 AN
7568 O	18	3763	5/17/70 17 21 02 AN
7568 O	19	3767	5/17/70 17 22 05 AN
7568 O	20	3773	5/17/70 17 23 08 AN
7568 O	21	3775	5/17/70 17 23 39 AN
7568 O	22	4001	5/17/70 17 24 42 AN
7571 R	1	4434	5/17/70 18 38 54 AD
7571 R	2	4465	5/17/70 18 45 27 AN
7571 R	3	4467	5/17/70 18 45 58 AN
7571 R	4	4473	5/17/70 18 47 01 AN
7571 R	5	4524	5/17/70 18 53 34 AN

CONTACT	FR	SET	GMT
7571 R	6	4530	5/17/70 18 54 37 AN
7571 R	7	4561	5/17/70 19 01 11 AN
7571 R	8	4565	5/17/70 19 02 14 AN
7571 R	9	4571	5/17/70 19 03 16 AN
7571 R	10	4573	5/17/70 19 03 48 AN
7571 R	11	5231	5/17/70 20 18 46 AD
7571 R	12	5262	5/17/70 20 25 19 AN
7571 R	13	5264	5/17/70 20 25 51 AN
7571 R	14	5270	5/17/70 20 26 54 AN
7571 R	15	5321	5/17/70 20 33 27 AN
7571 R	16	5325	5/17/70 20 34 30 AN
7571 R	17	5356	5/17/70 20 41 03 AN
7571 R	18	5362	5/17/70 20 42 06 AN
7571 R	19	5366	5/17/70 20 43 09 AN
7571 R	20	5370	5/17/70 20 43 40 AN
7571 R	21	5374	5/17/70 20 44 43 AN
7573 R	1	5743	5/17/70 21 45 17 BD
7573 R	2	6027	5/17/70 21 58 54 AD
7573 R	3	6060	5/17/70 22 05 28 AN
7573 R	4	6062	5/17/70 22 05 59 AN
7573 R	5	6066	5/17/70 22 07 02 AN
7573 R	6	6117	5/17/70 22 13 35 AN
7573 R	7	6123	5/17/70 22 14 38 AN
7573 R	8	6154	5/17/70 22 21 11 AN
7573 R	9	6160	5/17/70 22 22 14 AN
7573 R	10	6164	5/17/70 22 23 17 AN
7573 R	11	6166	5/17/70 22 23 49 AN
7573 R	12	6172	5/17/70 22 24 52 AN
7573 R	13	6624	5/17/70 23 38 47 AD
7573 R	14	6655	5/17/70 23 45 20 AN
7573 R	15	6657	5/17/70 23 45 52 AN
7573 R	16	6663	5/17/70 23 46 55 ANA
7573 R	17	6714	5/17/70 23 53 28 ANA
7573 R	18	6720	5/17/70 23 54 31 ANA
7573 R	19	6751	5/18/70 00 01 04 ANA
7573 R	20	6755	5/18/70 00 02 07 ANA
7573 R	21	6761	5/18/70 00 03 10 ANA
7573 R	22	6763	5/18/70 00 03 41 ANA
7573 R	23	6767	5/18/70 00 04 44 ANA
7575 M	1	7400	5/18/70 01 14 12 BD
7575 M	2	7426	5/18/70 01 19 58 AD
7575 M	3	7457	5/18/70 01 26 31 AN
7575 M	4	7461	5/18/70 01 27 02 AN

******** 0000

********** FRAME SUMMARY FOR DAO 432 ********** 0000

CONTACT	FR	SET	GMT	
7575 M	5	7465	5/18/70 01 28 05 ANA	0000
7575 M	6	7516	5/18/70 01 34 39 ANA	0000
7575 M	7	7522	5/18/70 01 35 42 ANA	0000
7575 M	8	7553	5/18/70 01 42 15 ANA	0000
7575 M	9	7557	5/18/70 01 43 18 ANA	0000
7575 M	10	7563	5/18/70 01 44 21 ANA	0000
7575 M	11	7565	5/18/70 01 44 52 ANA	0000
7575 M	12	7571	5/18/70 01 45 55 ANA	0000
7575 M	13	1240	5/18/70 03 33 15 CDA	0000
7575 M	14	1337	5/18/70 04 43 39 CD	0000
				0000
7578 S	1	1635	5/18/70 06 23 47 CD	0000
7578 S	2	2434	5/18/70 08 04 11 CN	0000
7578 S	3	3215	5/18/70 09 40 55 AD	0000
7578 S	4	3246	5/18/70 09 47 28 AN	0000
7578 S	5	3250	5/18/70 09 47 59 AN	0000
7578 S	6	3254	5/18/70 09 49 02 AN	0000
7578 S	7	3305	5/18/70 09 55 35 AN	0000
7578 S	8	3311	5/18/70 09 56 38 AN	0000
7578 S	9	3342	5/18/70 10 03 11 AN	0000
7578 S	10	3346	5/18/70 10 04 14 AN	0000
7578 S	11	3352	5/18/70 10 05 17 AN	0000
7578 S	12	3354	5/18/70 10 05 49 AN	0000
7578 S	13	3360	5/18/70 10 06 52 AN	0000
				0000
7580 S	1	4007	5/18/70 11 20 00 AD	0000
7580 S	2	4040	5/18/70 11 26 33 AN	0000
7580 S	3	4042	5/18/70 11 27 04 AN	0000
7580 S	4	4046	5/18/70 11 28 07 AN	0000
7580 S	5	4077	5/18/70 11 34 40 AN	0000
7580 S	6	4103	5/18/70 11 35 43 AN	0000
7580 S	7	4134	5/18/70 11 42 16 AN	0000
7580 S	8	4140	5/18/70 11 43 19 AN	0000
7580 S	9	4144	5/18/70 11 44 22 AN	0000
7580 S	10	4146	5/18/70 11 44 54 AN	0000
7580 S	11	4152	5/18/70 11 45 57 AN	0000
7580 S	12	4610	5/18/70 13 00 55 AD	0000
7580 S	13	4641	5/18/70 13 07 28 AN	0000
7580 S	14	4643	5/18/70 13 08 01 AN	0000
7580 S	15	4647	5/18/70 13 09 02 AN	0000
7580 S	16	4700	5/18/70 13 15 36 AN	0000
7580 S	17	4704	5/18/70 13 16 39 AN	0000
7580 S	18	4735	5/18/70 13 23 12 AN	0000
7580 S	19	4741	5/18/70 13 24 15 AN	0000
7580 S	20	4745	5/18/70 13 25 18 AN	0000

CONTACT	FR	SET	GMT	
7580 S	21	4747	5/18/70 13 25 49 AN	0000
7580 S	22	4753	5/18/70 13 26 52 AN	0000
				0000
7581 S	1	5425	5/18/70 14 40 48 AD	0000
7581 S	2	5436	5/18/70 14 47 21 AN	0000
7581 S	3	5440	5/18/70 14 47 52 AN	0000
7581 S	4	5444	5/18/70 14 48 55 AN	0000
7581 S	5	5475	5/18/70 14 55 29 AN	0000
7581 S	6	5501	5/18/70 14 56 31 AN	0000
7581 S	7	5532	5/18/70 15 03 05 AN	0000
7581 S	8	5536	5/18/70 15 04 08 AN	0000
7581 S	9	5542	5/18/70 15 05 11 AN	0000
7581 S	10	5544	5/18/70 15 05 42 AN	0000
7581 S	11	5550	5/18/70 15 06 45 AN	0000
				0000
7583 O	1	6207	5/18/70 16 21 59 AD	0000
7583 O	2	6240	5/18/70 16 28 32 AN	0000
7583 O	3	6242	5/18/70 16 29 04 AN	0000
7583 O	4	6246	5/18/70 16 30 06 AN	0000
7583 O	5	6277	5/18/70 16 36 40 AN	0000
7583 O	6	6303	5/18/70 16 37 43 AN	0000
7583 O	7	6334	5/18/70 16 44 16 AN	0000
7583 O	8	6340	5/18/70 16 45 19 AN	0000
7583 O	9	6344	5/18/70 16 46 22 AN	0000
7583 O	10	6346	5/18/70 16 46 53 AN	0000
7583 O	11	6352	5/18/70 16 47 56 AN	0000
7583 O	12	7000	5/18/70 18 00 48 AD	0000
7583 O	13	7031	5/18/70 18 07 22 AN	0000
7583 O	14	7033	5/18/70 18 07 53 AN	0000
7583 O	15	7037	5/18/70 18 08 56 AN	0000
7583 O	16	7070	5/18/70 18 15 29 AN	0000
7583 O	17	7074	5/18/70 18 16 32 AN	0000
7583 O	18	7125	5/18/70 18 23 05 AN	0000
7583 O	19	7131	5/18/70 18 24 08 AN	0000
7583 O	20	7135	5/18/70 18 25 11 AN	0000
7583 O	21	7137	5/18/70 18 25 43 AN	0000
7583 O	22	7143	5/18/70 18 26 46 AN	0000
				0000
7585 R	1	7602	5/18/70 19 41 59 AD	0000
7585 R	2	7633	5/18/70 19 48 32 AN	0000
7585 R	3	7635	5/18/70 19 49 04 AN	0000
7585 R	4	7641	5/18/70 19 50 07 AN	0000
7585 R	5	7672	5/18/70 19 56 40 AN	0000
7585 R	6	7675	5/18/70 19 57 43 AN	0000
7585 R	7	7727	5/18/70 20 04 16 AN	0000

CONTACT	FR	SET	GMT	
7585 R	8	7733	5/18/70 20 05 19 AN	0000
7585 R	9	7737	5/18/70 20 06 22 AN	0000
7585 R	10	7741	5/18/70 20 06 53 AN	0000
7585 R	11	7745	5/18/70 20 07 56 AN	0000
				0000
7587 R	1	0305	5/18/70 21 06 40 BD	0000
7587 R	2	0354	5/18/70 21 16 53 AD	0000
7587 R	3	0416	5/18/70 21 25 48 AD	0000
7587 R	4	0420	5/18/70 21 26 19 AN	0000
7587 R	5	0424	5/18/70 21 27 22 AN	0000
7587 R	6	0455	5/18/70 21 33 55 AN	0000
7587 R	7	0461	5/18/70 21 34 58 AN	0000
7587 R	8	0512	5/18/70 21 41 31 AN	0000
7587 R	9	0516	5/18/70 21 42 34 AN	0000
7587 R	10	0547	5/18/70 21 49 08 AN	0000
7587 R	11	0551	5/18/70 21 49 39 AN	0000
7587 R	12	0555	5/18/70 21 50 42 AN	0000
7587 R	13	1175	5/18/70 23 02 00 AD	0000
7587 R	14	1226	5/18/70 23 08 33 AN	0000
7587 R	15	1230	5/18/70 23 09 05 AN	0000
7587 R	16	1234	5/18/70 23 10 08 ANA	0000
7587 R	17	1265	5/18/70 23 16 41 ANA	0000
7587 R	18	1271	5/18/70 23 17 44 ANA	0000
7587 R	19	1322	5/18/70 23 24 17 ANA	0000
7587 R	20	1326	5/18/70 23 25 20 ANA	0000
7587 R	21	1332	5/18/70 23 26 23 ANA	0000
7587 R	22	1334	5/18/70 23 26 54 ANA	0000
7587 R	23	1340	5/18/70 23 27 57 ANA	0000
				0000
7589 M	1	2013	5/19/70 00 46 20 CDA	0000
7589 M	2	2102	5/19/70 01 00 45 CNA	0000
7589 M	3	2611	5/19/70 02 26 28 CDA	0000
7589 M	4	3415	5/19/70 04 08 11 CNA	0000
				0000
7592 S	1	4206	5/19/70 05 47 00 CD	0000
7592 S	2	5004	5/19/70 07 27 08 CD	0000
7592 S	3	5542	5/19/70 08 58 53 AD	0000
7592 S	4	5603	5/19/70 09 07 32 AN	0000
7592 S	5	5605	5/19/70 09 08 03 AN	0000
7592 S	6	5611	5/19/70 09 09 06 AN	0000
7592 S	7	5642	5/19/70 09 15 39 AN	0000
7592 S	8	5646	5/19/70 09 16 42 AN	0000
7592 S	9	5677	5/19/70 09 23 16 AN	0000
7592 S	10	5703	5/19/70 09 24 18 AN	0000
7592 S	11	5734	5/19/70 09 30 52 AN	0000

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********** FRAME SUMMARY FOR DAD 432 ********** 0000

CONTACT	FR	SET	GMT	CONTACT	FR	SET	GMT	CONTACT	FR	SET	GMT	
7592 S	12	5736	5/19/70 09 31 23 AN	7594 S	18	7276	5/19/70 12 44 19 AN	7597 O	3	0576	5/19/70 15 48 52 AN	0000
7592 S	13	5742	5/19/70 09 32 26 ANA	7594 S	19	7302	5/19/70 12 45 22 AN	7597 O	4	0602	5/19/70 15 49 55 AN	0000
				7594 S	20	7333	5/19/70 12 51 55 AN	7597 O	5	0633	5/19/70 15 56 28 AN	0000
7594 S	1	6340	5/19/70 10 39 01 AD	7594 S	21	7335	5/19/70 12 52 26 AN	7597 O	6	0637	5/19/70 15 57 31 AN	0000
7594 S	2	6401	5/19/70 10 47 40 AN	7594 S	22	7341	5/19/70 12 53 29 AN	7597 O	7	0670	5/19/70 16 04 04 AN	0000
7594 S	3	6403	5/19/70 10 48 11 AN					7597 O	8	0674	5/19/70 16 05 07 AN	0000
7594 S	4	6407	5/19/70 10 49 14 AN	7595 S	1	7746	5/19/70 14 01 55 AD	7597 O	9	0725	5/19/70 16 11 40 AN	0000
7594 S	5	6440	5/19/70 10 55 47 AN	7595 S	2	7777	5/19/70 14 08 28 AN	7597 O	10	0727	5/19/70 16 12 12 AN	0000
7594 S	6	6444	5/19/70 10 56 53 AN	7595 S	3	0001	5/19/70 14 08 59 AN	7597 O	11	0733	5/19/70 16 13 15 AN	0000
7594 S	7	6475	5/19/70 11 03 23 AN	7595 S	4	0005	5/19/70 14 10 02 AN	7597 O	12	1345	5/19/70 17 22 58 AD	0000
7594 S	8	6501	5/19/70 11 04 26 AN	7595 S	5	0036	5/19/70 14 16 35 AN	7597 O	13	1376	5/19/70 17 29 32 AN	0000
7594 S	9	6532	5/19/70 11 11 00 AN	7595 S	6	0042	5/19/70 14 17 38 AN	7597 O	14	1400	5/19/70 17 30 03 AN	0000
7594 S	10	6534	5/19/70 11 11 31 AN	7595 S	7	0073	5/19/70 14 24 11 AN	7597 O	15	1404	5/19/70 17 31 06 AN	0000
7594 S	11	6540	5/19/70 11 12 34 AN	7595 S	8	0077	5/19/70 14 25 14 AN	7597 O	16	1435	5/19/70 17 37 39 AN	0000
7594 S	12	7151	5/19/70 12 22 02 AD	7595 S	9	0130	5/19/70 14 31 48 AN	7597 O	17	1441	5/19/70 17 38 42 AN	0000
7594 S	13	7202	5/19/70 12 28 35 AN	7595 S	10	0132	5/19/70 14 32 19 AN	7597 O	18	1472	5/19/70 17 45 15 AN	0000
7594 S	14	7204	5/19/70 12 29 07 AN	7595 S	11	0136	5/19/70 14 33 22 AN	7597 O	19	1476	5/19/70 17 46 18 AN	0000
7594 S	15	7210	5/19/70 12 30 09 AN					7597 O	20	1527	5/19/70 17 52 51 AN	0000
7594 S	16	7241	5/19/70 12 36 43 AN	7597 O	1	0543	5/19/70 15 41 47 AD	7597 O	21	1531	5/19/70 17 53 23 AN	0000
7594 S	17	7245	5/19/70 12 37 46 AN	7597 O	2	0574	5/19/70 15 48 20 AN	7597 O	22	1535	5/19/70 17 54 26 AN	0000

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