

#120

APOLLO PASSIVE SEISMIC EVENT

69-099C-03A (Apollo 12)  
71-008C-04B (Apollo 14)  
71-063C-01B (Apollo 15)  
72-031C-01B (Apollo 16)

## APOLLO 12 LM/ALSEP

## SEISMIC EVENT TAPE

69-099C-03A

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY THERE WERE 340 7-TRACK, 800 BPI TAPES WRITTEN IN BINARY. THERE ARE 30 RESTORED TAPES. THE DR TAPES ARE 3480 CARTRIDGES AND THE DS TAPES ARE 9-TRACK, 6250 BPI. FOR THE MOST PART THE TAPES ARE STACKED IN TIME SEQUENTIAL ORDER, BUT THERE ARE A FEW THAT ARE NOT. THE ORIGINAL TAPES WERE CREATED ON A PDP-15 COMPUTER AND WERE RESTORED ON THE MRS COMPUTER. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR005540	DS005540	D008120	1	11/20/69 - 12/14/69
		D008121	2	12/14/69 - 01/07/70 (a)
		D008122	3	01/07/70 - 01/29/70 (b)
		D008123	4	01/29/70 - 02/07/70
		D008124	5	02/10/70 - 02/21/70
		D008125	6	02/21/70 - 03/06/70
		D013616	7	02/24/70 - 03/08/70
		D008126	8	03/06/70 - 03/26/70
DR005541	DS005541	D008127	1	03/29/70 - 04/05/70
		D008128	2	04/06/70 - 04/15/70
		D008129	3	04/16/70 - 04/27/70 (c)
		D008172	4	04/27/70 - 05/20/70
		D008173	5	05/21/70 - 06/12/70
		D008174	6	06/13/70 - 07/02/70
		D008175	7	07/03/70 - 07/18/70 (d)
		D008176	8	07/18/70 - 08/05/70
DR005542	DS005542	D008177	1	08/05/70 - 08/17/70 (e)
		D008178	2	08/17/70 - 08/31/70 (f)
		D008179	3	08/31/70 - 09/17/70 (g)
		D008180	4	09/17/70 - 10/06/70
		D008181	5	10/06/70 - 10/24/70 (h)
		D013610	6	10/24/70 - 11/12/70
		D013611	7	11/15/70 - 12/11/70
		D013612	8	12/13/70 - 12/31/70
DR005543	DS005543	D013613	1	01/03/71 - 01/21/71
		D013614	2	01/21/71 - 02/04/71
		D013615	3	02/06/71 - 02/19/71
		D013617	4	02/19/71 - 02/24/71
		D013624	5	03/08/71 - 03/13/71
		D013625	6	03/14/71 - 03/21/71
		D013626	7	03/21/71 - 03/25/71
		D013627	8	03/25/71 - 04/02/71

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DR#	DS#	D#	FILES	TIME SPAN	
DR005544	DS005544	D013623	1	04/02/71 - 04/05/71	(i)
		D013622	2	04/05/71 - 04/14/71	
		D013621	3	04/14/71 - 04/17/71	(j)
		D013620	4	04/17/71 - 04/28/71	
		D013619	5	04/28/71 - 05/02/71	
		D013618	6	05/02/71 - 05/12/71	
		D013602	7	05/12/71 - 05/16/71	
		D013605	8	05/27/71 - 05/31/71	(k)
DR005545	DS005545	D013604	1	05/25/71 - 05/27/71	
		D013603	2	05/16/71 - 05/25/71	(l)
		D013606	3	06/01/71 - 06/07/71	
		D013630	4	06/07/71 - 06/09/71	
		D013631	5	06/10/71 - 06/12/71	
		D013632	6	06/12/71 - 06/24/71	
		D013629	7	06/24/71 - 06/27/71	
		D013628	8	06/27/71 - 07/03/71	
DR005546	DS005546	D013685	1	07/05/71 - 07/09/71	(m)
		D013686	2	07/10/71 - 07/21/71	
		D013687	3	07/21/71 - 07/31/71	
		D013688	4	08/02/71 - 08/17/71	
		D013689	5	08/17/71 - 08/22/71	(n)
		D013690	6	08/25/71 - 08/31/71	(o)
		D013691	7	08/31/71 - 09/13/71	
		D013692	8	09/13/71 - 09/20/71	
DR005547	DS005547	D013609	1	09/20/71 - 09/26/71	
		D013608	2	09/26/71 - 09/30/71	
		D013607	3	09/30/71 - 10/05/71	(p)
		D013739	4	10/06/71 - 10/15/71	
		D013740	5	10/15/71 - 10/16/71	
		D013741	6	10/16/71 - 10/19/71	(q)
		D013742	7	10/19/71 - 10/22/71	
		D013818	8	10/24/71 - 10/25/71	(r)
		D013819	9	10/25/71 - 10/28/71	(s)
		D013820	10	10/28/71 - 10/31/71	
		D013869	11	10/31/71 - 11/05/71	
		D013821	12	11/05/71 - 11/09/71	
DR005548	DS005548	D013822	1	11/09/71 - 11/16/71	
		D013823	2	11/16/71 - 11/17/71	
		D013814	3	11/17/71 - 11/20/71	
		D013813	4	11/20/71 - 11/22/71	
		D013812	5	11/22/71 - 11/26/71	
		D013827	6	11/26/71 - 12/03/71	
		D013826	7	12/03/71 - 12/07/71	
		D013825	8	12/08/71 - 12/15/71	
		D013824	9	12/15/71 - 12/17/71	
		D013815	10	12/17/71 - 12/20/71	
		D013816	11	12/20/71 - 12/26/71	
		D013817	12	12/27/71 - 12/31/71	
		D013872	13	01/01/72 - 01/06/72	
		D013873	14	01/07/72 - 01/13/72	
		D013874	15	01/13/72 - 01/20/72	

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DR#	DS#	D#	FILES	TIME SPAN
DR005549	DS005549	D013864	1	01/20/72 - 01/31/72
		D013865	2	01/31/72 - 02/10/72
		D013866	3	02/10/72 - 02/21/72
		D013867	4	02/06/72 - 03/06/72 (t)
		D014093	5	03/07/72 - 03/15/72
		D014094	6	03/15/72 - 03/23/72
		D014095	7	03/23/72 - 04/04/72
		D013863	8	04/04/72 - 04/12/72
		D013862	9	04/12/72 - 04/18/72
		D014096	10	04/18/72 - 04/27/72
		D013868	11	04/27/72 - 04/30/72
		D013696	12	04/30/72 - 05/05/72
		D013695	13	05/05/72 - 05/09/72
		D013694	14	05/09/72 - 05/12/72
DR005550	DS005550	D013693	1	05/12/72 - 05/14/72 (u)
		D013871	2	05/14/72 - 05/16/72
		D013870	3	05/16/72 - 05/19/72
		D013591	4	05/19/72 - 05/25/72
		D013590	5	05/26/72 - 05/29/72
		D013589	6	05/29/72 - 06/03/72
		D013601	7	06/03/72 - 06/06/72 (v)
		D013598	8	06/06/72 - 06/09/72
		D013584	9	06/09/72 - 06/12/72
		D013585	10	06/12/72 - 06/16/72
		D013586	11	06/16/72 - 06/23/72
		D013587	12	06/23/72 - 06/25/72
		D013588	13	06/26/72 - 06/28/72
		D013596	14	06/28/72 - 07/04/72
DR005551	DS005551	D013600	1	07/04/72 - 07/08/72
		D013595	2	07/08/72 - 07/11/72
		D013599	3	07/11/72 - 07/18/72 (w)
		D013597	4	07/18/72 - 07/21/72
		D013594	5	07/21/72 - 07/25/72
		D013593	6	07/25/72 - 08/04/72
		D013592	7	08/04/72 - 08/11/72
		D014091	8	08/11/72 - 08/15/72
		D014092	9	08/16/72 - 08/18/72
		D014088	10	08/18/72 - 08/22/72
		D014089	11	08/22/72 - 08/26/72
		D014090	12	08/27/72 - 09/04/72
		D014097	13	09/06/72 - 09/16/72
		D014098	14	09/16/72 - 09/16/72



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DR#	DS#	D#	FILES	TIME SPAN	
DR005552	DS005552	D014238	1	09/23/72 - 09/30/72	(x)
		D014239	2	09/30/72 - 10/14/72	(y)
		D015890	3	10/15/72 - 10/21/72	
		D014240	4	10/21/72 - 10/26/72	
		D015891	5	10/26/72 - 11/05/72	
		D015895	6	11/05/72 - 11/09/72	
		D015896	7	11/09/72 - 11/13/72	
		D015897	8	11/13/72 - 11/17/72	
		D015769	9	11/17/72 - 11/25/72	
		D015768	10	11/25/72 - 12/05/72	
		D015767	11	12/05/72 - 12/09/72	
		D015894	12	12/09/72 - 12/14/72	
		D015893	13	12/14/72 - 12/21/72	(z)
DR005553	DS005553	D015892	1	12/21/72 - 12/31/72	
		D016118	2	01/01/73 - 01/05/73	
		D016117	3	01/05/73 - 01/12/73	
		D016181	4	01/12/73 - 01/21/73	
		D016182	5	01/22/73 - 02/01/73	
		D016183	6	02/01/73 - 02/10/73	
		D016184	7	02/10/73 - 02/17/73	(aa)
		D017568	8	02/17/73 - 03/08/73	
		D016186	9	03/09/73 - 03/20/73	(bb)
		D016624	10	03/20/73 - 03/27/73	
		D016623	11	03/27/73 - 04/03/73	
		D016770	12	04/03/73 - 04/13/73	(cc)
DR005554	DS005554	D016771	1	04/13/73 - 04/28/73	(dd)
		D016772	2	04/28/73 - 05/03/73	
		D016769	3	05/03/73 - 05/19/73	
		D016783	4	05/19/73 - 05/28/73	
		D016788	5	05/28/73 - 05/29/73	
		D016775	6	06/02/73 - 06/14/73	(ee)
		D016776	7	06/14/73 - 06/25/73	(ff)
		D016793	8	06/25/73 - 06/28/73	
		D016794	9	06/28/73 - 07/03/73	
		D016792	10	07/03/73 - 07/10/73	
		D016782	11	07/10/73 - 07/18/73	(gg)
		D016781	12	07/19/73 - 07/24/73	(hh)
		D016785	13	07/24/73 - 07/30/73	
		D016784	14	07/30/73 - 08/02/73	(ii)
DR005555	DS005555	D016795	1	08/02/73 - 08/09/73	
		D016789	2	08/09/73 - 08/16/73	
		D016790	3	08/16/73 - 08/29/73	
		D016780	4	08/29/73 - 09/02/73	(jj)
		D016779	5	09/02/73 - 09/10/73	(kk)
		D016791	6	09/10/73 - 09/19/73	(ll)
		D016774	7	09/19/73 - 10/03/73	
		D016773	8	10/03/73 - 10/09/73	
		D017565	9	10/10/73 - 10/16/73	
		D023619	10	10/05/73 - 10/20/73	(mm)
		D017566	11	10/16/73 - 10/30/73	
		D016787	12	10/30/73 - 11/09/73	

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DR#	DS#	D#	FILES	TIME SPAN
DR005556	DS005556	D016786	1	11/09/73 - 11/22/73
		D016777	2	11/22/73 - 12/01/73
		D016778	3	12/01/73 - 12/08/73
		D017567	4	12/09/73 - 12/20/73
		D017552	5	12/20/73 - 12/24/73
		D016881	6	12/24/73 - 12/31/73
		D017551	7	01/01/74 - 01/07/74
		D017550	8	01/07/74 - 01/19/74 (nn)
		D017559	9	01/19/74 - 01/29/74
		D017560	10	01/29/74 - 02/06/74
		D017561	11	02/15/74 - 02/15/74
		D017547	12	02/15/74 - 02/22/74
		D017546	13	02/24/74 - 03/01/74
		D017558	14	03/02/74 - 03/11/74
DR005557	DS005557	D017557	1	03/11/74 - 03/20/74
		D017556	2	03/21/74 - 03/30/74 (oo)
		D017555	3	03/30/74 - 04/16/74 (pp)
		D017554	4	04/16/74 - 04/25/74
		D017553	5	04/25/74 - 05/10/74
		D017544	6	05/11/74 - 05/20/74
		D017545	7	05/21/74 - 06/02/74
		D017569	8	06/03/74 - 06/16/74 (qq)
		D017570	9	06/16/74 - 06/28/74
		D017564	10	06/28/74 - 07/03/74
		D017563	11	07/03/74 - 07/14/74 (rr)
		D017562	12	07/14/74 - 07/20/74
		D017548	13	07/21/74 - 08/06/74
DR005558	DS005558	D017549	1	08/06/74 - 08/11/74
		D019067	2	08/11/74 - 08/22/74
		D019066	3	08/22/74 - 08/29/74
		D019073	4	08/29/74 - 09/08/74
		D019072	5	09/09/74 - 09/17/74
		D019071	6	09/17/74 - 09/24/74
		D019163	7	09/25/74 - 10/06/74
		D019079	8	11/04/74 - 11/12/74 (ss)
		D019162	9	10/07/74 - 10/16/74
		D019080	10	11/12/74 - 11/19/74
		D019161	11	10/17/74 - 10/26/74
		D019075	12	11/19/74 - 11/27/74
		D019074	13	11/27/74 - 12/09/74

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DR#	DS#	D#	FILES	TIME SPAN
DR005559	DS005559	D019078	1	10/27/74 - 11/04/74
		D019068	2	12/09/74 - 12/14/74 (tt)
		D019070	3	12/14/74 - 12/25/74
		D019069	4	12/25/74 - 12/31/74
		D019077	5	01/02/75 - 01/12/75
		D019076	6	01/12/75 - 01/24/75
		D019365	7	01/24/75 - 01/30/75
		D019364	8	01/31/75 - 02/12/75 (uu)
		D019363	9	02/12/75 - 02/22/75
		D022093	10	02/23/75 - 03/08/75 (vv)
		D022094	11	03/08/75 - 03/24/75
		D022184	12	03/25/75 - 04/05/75 (ww)
		D022185	13	04/06/75 - 04/14/75
		D022186	14	04/14/75 - 04/23/75
DR005560	DS005560	D022190	1	04/23/75 - 05/07/75
		D022183	2	05/07/75 - 05/16/75 (xx)
		D022189	3	05/17/75 - 06/02/75
		D022188	4	06/03/75 - 06/16/75
		D022187	5	06/16/75 - 06/22/75
		D022454	6	06/22/75 - 06/26/75
		D022647	7	06/27/75 - 07/07/75 (yy)
		D022648	8	07/07/75 - 07/30/75 (zz)
		D022649	9	07/30/75 - 08/09/75
		D022650	10	08/09/75 - 08/20/75
		D022651	11	08/20/75 - 09/02/75
		D023016	12	09/02/75 - 09/12/75 (aaa)
		D023017	13	09/12/75 - 09/27/75
DR005561	DS005561	D023618	1	09/27/75 - 10/05/75
		D023620	2	10/21/75 - 10/31/75 (bbb)
		D023621	3	10/31/75 - 11/11/75 (ccc)
		D023622	4	11/13/75 - 11/26/75
		D023623	5	11/26/75 - 12/02/75
		D023713	6	12/02/75 - 12/11/75
		D023715	7	12/11/75 - 12/23/75
		D023714	8	12/24/75 - 12/31/75
		D028102	9	01/01/76 - 01/13/76
		D028103	10	01/13/76 - 02/03/76 (ddd)
		D028104	11	02/04/76 - 02/16/76
		D028105	12	02/16/76 - 02/29/76
DR005562	DS005562	D031825	1	03/01/76 - 03/05/76
		D031931	2	03/05/76 - 03/11/76 (eee)
		D031932	3	03/11/76 - 03/16/76
		D031933	4	03/16/76 - 03/31/76
		D031957	5	03/31/76 - 04/11/76 (fff)
		D031958	6	04/11/76 - 04/23/76 (ggg)
		D031959	7	04/23/76 - 05/01/76
		D031960	8	05/01/76 - 05/11/76
		D031961	9	05/11/76 - 05/23/76 (hhh)
		D031962	10	05/23/76 - 05/27/76 (iii)
		D031977	11	05/28/76 - 06/04/76 (jjj)
		D031978	12	06/04/76 - 06/10/76
		D031979	13	06/10/76 - 06/21/76
		D032038	14	06/21/76 - 06/25/76

## 69-099C-03A

DR#	DS#	D#	FILES	TIME SPAN
DR005563	DS005563	D032039	1	06/25/76 - 07/02/76
		D032040	2	07/02/76 - 07/10/76
		D032041	3	07/10/76 - 07/21/76
		D032042	4	07/21/76 - 07/28/76
		D032043	5	07/29/76 - 07/31/76 (kkk)
		D032277	6	07/31/76 - 08/10/76
		D032278	7	08/11/76 - 08/19/76
		D032279	8	08/19/76 - 08/26/76
		D032280	9	08/26/76 - 08/31/76 (lll)
		D032281	10	08/31/76 - 09/11/76
		D032282	11	09/11/76 - 09/20/76
		D032283	12	09/20/76 - 09/23/76
		D032284	13	09/24/76 - 10/05/76
		D032285	14	10/05/76 - 10/18/76
DR005564	DS005564	D032286	1	10/19/76 - 10/22/76
		D032287	2	10/23/76 - 11/04/76
		D032288	3	11/04/76 - 11/15/76
		D032289	4	11/15/76 - 11/19/76
		D032336	5	11/19/76 - 11/28/76
		D032337	6	11/28/76 - 12/06/76 (mmm)
		D032338	7	12/06/76 - 12/15/76 (nnn)
		D032926	8	12/15/76 - 12/26/76 (ooo)
		D032927	9	12/26/76 - 12/31/76 (ppp)
		D032883	10	01/01/77 - 01/07/77
		D032884	11	01/08/77 - 01/13/77 (qqq)
		D032885	12	01/13/77 - 01/22/77
		D032886	13	01/22/77 - 01/28/77 (rrr)
		D032887	14	01/28/77 - 02/07/77
DR005565	DS005565	D032888	1	02/07/77 - 02/20/77 (sss)
		D032889	2	02/20/77 - 03/02/77
		D032890	3	03/02/77 - 03/06/77
		D033667	4	03/07/77 - 03/20/77 (ttt)
		D032891	5	03/20/77 - 03/31/77
		D032938	6	03/31/77 - 04/01/77
		D032939	7	04/01/77 - 04/05/77 (uuu)
		D032940	8	04/05/77 - 04/14/77
		D032941	9	04/14/77 - 04/18/77
		D032942	10	04/18/77 - 04/26/77
		D032943	11	04/26/77 - 04/28/77
		D032944	12	04/28/77 - 05/01/77
		D032945	13	05/02/77 - 05/05/77
		D033677	14	07/03/77 - 07/11/77

DR#	DS#	D#	FILES	TIME SPAN
DR005566	DS005566	D033794	1	08/27/77 - 09/06/77 (vvv)
		D033687	2	02/13/77 - 05/17/77
		D033686	3	05/29/77 - 09/13/77
		D033685	4	05/23/77 - 05/17/78
		D033675	5	06/15/77 - 06/23/77
		D033674	6	06/12/77 - 06/15/77
		D033673	7	06/06/77 - 06/12/77
		D033672	8	05/27/77 - 06/05/77
		D033671	9	05/23/77 - 05/27/77
		D033670	10	05/17/77 - 05/22/77
		D033669	11	05/12/77 - 05/16/77 (www)
		D033668	12	05/05/77 - 05/12/77
		D033684	13	08/17/77 - 08/27/77 (xxx)
		D033683	14	08/13/77 - 08/17/77 (yyy)
DR005567	DS005567	D033682	1	06/10/77 - 08/13/77
		D033681	2	07/24/77 - 08/02/77
		D033680	3	07/20/77 - 07/24/77
		D033679	4	01/06/77 - 07/20/77
		D033678	5	07/11/77 - 07/16/77 (zzz)
		D033676	6	06/23/77 - 07/06/77
DR005568	DS005568	D057810	1	02/16/70 - 10/02/75
		D057811	2	02/22/71 - 05/21/72
		D057812	3	02/13/75 - 05/16/75
DR005618	DS005618	D057813	1	05/23/75 - 05/16/76
		D057815	2	05/28/76 - 11/15/76
		D057814	3	08/18/76 - 05/15/77
		D033795	4	09/08/77 - 09/11/77
		D033796	5	09/11/77 - 09/16/77
		D033797	6	09/16/77 - 09/30/77

- (a) D008121 - 8 ERRORS, REC. 42, 151-155, 244, 1164, FILE 1
- (b) D008122 - 1 ERROR, REC. 962, FILE 1
- (c) D008129 - 3 ERRORS, REC. 51, 164, 173, FILE 1
- (d) D008175 - 17 ERRORS, REC. 119, 126, 132, 1195, 1197, 1201-1212, FILE 1
- (e) D008177 - 2 ERRORS, REC. 320, 418, FILE 1
- (f) D008178 - 2 ERRORS, REC. 633, 1489, FILE 1
- (g) D008179 - 1 ERROR, REC. 27, FILE 1
- (h) D008181 - 1 ERROR, REC. 4, FILE 1
- (i) D013623 - 4 ERRORS, REC. 51, 57, 77, 86, FILE 1
- (j) D013621 - 4 ERRORS, REC. 48, 49, 56, 58, FILE 1
- (k) D013605 - 1 ERROR, REC. 104, FILE 1
- (l) D013603 - 1 ERROR, REC. 8, FILE 1
- (m) D013685 - 9 ERRORS, REC. 4-11, 14, FILE 1
- (n) D013689 - 1 ERROR, REC. 79, FILE 1
- (o) D013690 - 1 ERROR, REC. 141, FILE 1
- (p) D013607 - 1 ERROR, REC. 71, FILE 1
- (q) D013741 - 1 ERROR, REC. 831, FILE 1
- (r) D013818 - 1 ERROR, REC. 402, FILE 1

(s) D013819 - 6 ERRORS, REC. 7, 202, 262, 1075, 1505, 1526, FILE 1  
(t) D013867 - 2 ERRORS, REC. 948, 949, FILE 1  
(u) D013693 - 7 ERRORS, REC. 611, 615, 616, 619, 620, 623, 624, FILE 1  
(v) D013601 - 4 ERRORS, REC. 270, 418, 419, 830, FILE 1  
(w) D013599 - 1 ERROR, REC. 216, FILE 1  
(x) D014238 - 4 ERRORS, REC. 37, 39, 41, 42, FILE 1  
(y) D014239 - 2 ERRORS, REC. 212, 213, FILE 1  
(z) D015893 - 1 ERROR, REC. 1562, FILE 1  
(aa) D016184 - 1 ERROR, REC. 64, FILE 1  
(bb) D016186 - 2 ERRORS, REC. 5, 6, FILE 1  
(cc) D016770 - 2 ERRORS, REC. 1305, 1306, FILE 1  
(dd) D016771 - 3 ERRORS, REC. 1543, 1547, 1586, FILE 1  
(ee) D016775 - 12 ERRORS, REC. 686, 691, 718, 738, 742, 746, 750, 754, 766, 782, 786, 790, FILE 1  
(ff) D016776 - 1 ERROR, REC. 168, FILE 1  
(gg) D016782 - 19 ERRORS, REC. 909, 1925-1942, FILE 1  
(hh) D016781 - 4 ERRORS, REC. 3, 9, 10, 33, FILE 1  
(ii) D016784 - 1 ERROR, REC. 349, FILE 1  
(jj) D016780 - 4 ERRORS, REC. 145-147, 149, FILE 1  
(kk) D016779 - 1 ERROR, REC. 195, FILE 1  
(ll) D016791 - 1 ERROR, REC. 19, FILE 1  
(mm) D023619 - 1 ERROR, REC. 727, FILE 1  
(nn) D017550 - 2 ERRORS, REC. 459, 461, FILE 1  
(oo) D017556 - 2 ERRORS, REC. 41, 61, FILE 1  
(pp) D017555 - 1 ERROR, REC. 106, FILE 1  
(qq) D017569 - 1 ERROR, REC. 1529, FILE 1  
(rr) D017563 - 2 ERRORS, REC. 506, 507, FILE 1  
(ss) D019079 - 1 ERROR, REC. 856, FILE 1  
(tt) D019068 - 1 ERROR, REC. 145, FILE 1  
(uu) D019364 - 1 ERROR, REC. 822, FILE 1  
(vv) D022093 - 13 ERRORS, REC. 62, 79, 80, 94, 111, 121, 171, 183, 285, 324, 629, 1032, 1194, FILE 1  
(ww) D022184 - 1 ERROR, REC. 101, FILE 1  
(xx) D022183 - 1 ERROR, REC. 4, FILE 1  
(yy) D022647 - 1 ERROR, REC. 41, FILE 1  
(zz) D022648 - 4 ERRORS, REC. 49, 67, 156, 198, FILE 1  
(aaa) D023016 - 19 ERRORS, REC. 1554, 1565-75, 1582-88, FILE 1  
(bbb) D023620 - 1 ERROR, REC. 221, FILE 1  
(ccc) D023621 - 1 ERROR, REC. 982, FILE 1  
(ddd) D028103 - 2 ERRORS, REC. 53, 54, FILE 1  
(eee) D031931 - 11 ERRORS, REC. 43, 79, 167, 562, 743, 1202, 1295, 1297, 1344, 1400, 1483, FILE 1  
(fff) D031957 - 11 ERRORS, REC. 6, 11, 47, 59, 69, 84, 91, 104, 113, 117, 126, FILE 1  
(ggg) D031958 - 2 ERRORS, REC. 1537, 1603, FILE 1  
(hhh) D031961 - 8 ERRORS, REC. 811-818, FILE 1  
(iii) D031962 - 7 ERRORS, REC. 7-10, 19, 27, 39, FILE 1  
(jjjj) D031977 - 39 ERRORS, REC. 466, 896, 1078, 1093, 1103, 1105, 1160, 1163, 1165, 1168, 1172, 1173, 1175, 1185, 1187, 1190, 1195, 1197, 1205, 1212, 1215, 1220, 1260, 1265, 1270, 1275, 1305, 1372, 1407, 1417, 1472, 1497, 1504, 1517, 1522, 1569, 1591, 1592, 1594, FILE 1  
(kkk) D032043 - 2 ERRORS, REC. 57, 82, FILE 1  
(lll) D032280 - 3 ERRORS, REC. 99, 110, 112, FILE 1  
(mmm) D032337 - 2 ERRORS, REC. 238, 240, FILE 1  
(nnn) D032338 - 1 ERROR, REC. 245, FILE 1  
(ooo) D032926 - 1 ERROR, REC. 309, FILE 1  
(ppp) D032927 - 6 ERRORS, REC. 191, 208, 216, 224, 237, 245, FILE 1  
(qqq) D032884 - 6 ERRORS, REC. 207, 212, 228, 232, 237, 241, FILE 1  
(rrr) D032886 - 4 ERRORS, REC. 52, 244, 248, 252, FILE 1

(sss) D032888 - 1 ERROR, REC. 242, FILE 1  
(ttt) D033667 - 1 ERROR, REC. 28, FILE 1  
(uuu) D032939 - 1 ERROR, REC. 176, FILE 1  
(vvv) D033794 - 5 ERRORS, REC. 99, 103, 107, 163, 220, FILE 1  
(www) D033669 - 1 ERROR, REC. 106, FILE 1  
(xxx) D033684 - 27 ERRORS, REC. 16, 29, 33, 37, 42, 46, 50, 54, 63, 71, 75,  
88, 92, 96, 100, 105, 113, 117, 121, 134, 138, 159, 163, 167, 188, 213,  
242, FILE 1  
(yyy) D033683 - 108 ERRORS, REC. 500-607, FILE 1  
(zzz) D033678 - 1 ERROR, REC. 117, FILE 1

APOLLO 12, 14, 15, 16

PASSIVE SEISMIC EVENT

69-099C-03A, 71-008C-04B, 71-063C-01B, 72-031C-01B

This data set consists of [REDACTED], 800 BPI, Binary, 7-track tapes created on an PDP-15 computer. Each tape contains one file of Seismic data. The first two records of each tape are header records. The data records that follow contain 18 word logical records with 90 logical records per physical record.

The time spans for the tapes are as follows:

APOLLO 12 69-099C-03A

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-08120	C-06188	1	11/20/69 - 12/14/69
D-08121	C-06189	2	12/14/69 - 1/07/70
D-08122	C-06190	3	1/07/70 - 1/29/70
D-08123	C-06191	4	1/29/70 - 2/07/70
D-08124	C-06192	5	2/10/70 - 2/21/70
D-08125	C-06242	6	2/21/70 - 3/04/70
D-08126	C-06243	7	3/05/70 - 3/26/70
D-08127	C-06244	8	3/29/70 - 4/05/70
D-08128	C-06245	9	4/06/70 - 4/15/70
D-08129	C-06246	10	4/16/70 - 4/27/70
D-08172	C-08103	11	4/27/70 - 5/20/70
D-08173	C-08104	12	5/21/70 - 6/13/70
D-08174	C-08105	13	6/13/70 - 7/02/70
D-08175	C-08106	14	7/03/70 - 7/18/70
D-08176	C-08107	15	7/18/70 - 8/05/70
D-08177	C-08108	16	8/05/70 - 8/17/70
D-08178	C-08109	17	8/17/70 - 8/31/70



<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-08179	C-08110	18	8/31/70 - 9/17/70
D-08180	C-08111	19	9/17/70 - 10/06/70
D-08181	C-08112	20	10/06/70 - 10/24/70
D-13610	C-10833	21	10/24/70 - 11/12/70
D-13611	C-10834	22	11/15/70 - 12/11/70
D-13612	C-10835	23	12/13/70 - 12/31/70
D-13613	C-10836	24	1/03/71 - 1/21/71
D-13614	C-10837	25	1/21/71 - 2/04/71
D-13615	C-10838	26	2/06/71 - 2/19/71
D-13617	C-10839	27	2/19/71 - 2/24/71
D-13616	C-11382	28	2/24/71 - 3/08/71
D-13624	C-11023	29	3/08/71 - 3/13/71
D-13625	C-10846	30	3/14/71 - 3/21/71
D-13626	C-10847	31	3/21/71 - 3/25/71
D-13627	C-10848	32	3/25/71 - 4/02/71
D-13623	C-10849	33	4/02/71 - 4/05/71
D-13622	C-10844	34	4/05/71 - 4/14/71
D-13621	C-10843	35	4/14/71 - 4/17/71
D-13620	C-10842	36	4/17/71 - 4/28/71
D-13619	C-10841	37	4/28/71 - 5/02/71
D-13618	C-10840	38	5/02/71 - 5/12/71
D-13602	C-10826	39	5/12/71 - 5/16/71
D-13605	C-10829	40	5/16/71 - 5/25/71
D-13604	C-10828	41	5/25/71 - 5/27/71
D-13603	C-10827	42	5/27/71 - 6/01/71
D-13606	C-10830	43	6/01/71 - 6/07/71
D-13630	C-10851	44	6/07/71 - 6/09/71
D-13631	C-10852	45	6/10/71 - 6/12/71
D-13632	C-10853	46	6/12/71 - 6/24/71
D-13629	C-10850	47	6/24/71 - 6/27/71

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-13628	C-10849	48	6/27/71 - 7/03/71
D-13685	C-10869	49	7/05/71 - 7/09/71
D-13686	C-10870	50	7/10/71 - 7/21/71
D-13687	C-10871	51	7/21/71 - 7/31/71
D-13688	C-10872	52	8/02/71 - 8/17/71
D-13689	C-10873	53	8/17/71 - 8/22/71
D-13690	C-10874	54	8/25/71 - 8/31/71
D-13691	C-10875	55	8/31/71 - 9/13/71
D-13692	C-10876	56	9/13/71 - 9/20/71
D-13609	C-11383	57	9/20/71 - 9/26/71
D-13608	C-10877	58	9/26/71 - 9/30/71
D-13607	C-10831	59	9/30/71 - 10/05/71
D-13739	C-10893	60	10/06/71 - 10/15/71
D-13740	C-10894	61	10/15/71 - 10/16/71
D-13741	C-10895	61	10/16/71 - 10/19/71
D-13742	C-10896	62	10/19/71 - 10/22/71
D-13818	C-10903	63	10/24/71 - 10/25/71
D-13819	C-10904	64	10/25/71 - 10/28/71
D-13820	C-10905	65	10/28/71 - 10/31/71
D-13869	C-10920	66	10/31/71 - 11/05/71
D-13821	C-10906	67	11/05/71 - 11/09/71
D-13822	C-10907	68	11/09/71 - 11/16/71
D-13823	C-10908	69	11/16/71 - 11/17/71
D-13814	C-10899	70	11/17/71 - 11/20/71
D-13813	C-10898	71	11/20/71 - 11/22/71
D-13812	C-10897	72	11/22/71 - 11/26/71
D-13827	C-10912	73	11/26/71 - 12/03/71
D-13826	C-10911	74	12/03/71 - 12/07/71
D-13825	C-10910	75	12/08/71 - 12/15/71
D-13824	C-10909	76	12/15/71 - 12/17/71

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-13815	C-10900	77	12/17/71 - 12/20/71
D-13816	C-10901	78	12/20/71 - 12/26/71
D-13817	C-10902	79	12/27/71 - 12/31/71
D-13872	C-10923	80	1/01/72 - 1/06/72
D-13873	C-10924	81	1/07/72 - 1/13/72
D-13874	C-10925	82	1/13/72 - 1/20/72
D-13864	C-10915	83	1/20/72 - 1/31/72
D-13865	C-10916	84	1/31/72 - 2/10/72
D-13866	C-10917	85	2/10/72 - 2/21/72
D-13867	C-10918	86	2/21/72 - 3/06/72
D-14093	C-11132	87	3/07/72 - 3/15/72
D-14094	C-11132	88	3/15/72 - 3/23/72
D-14095	C-11134	89	3/23/72 - 4/04/72
D-13863	C-10914	90	4/04/72 - 4/12/72
D-13862	C-10913	91	4/12/72 - 4/18/72
D-14096	C-11135	92	4/18/72 - 4/27/72
D-13868	C-10919	93	4/27/72 - 4/30/72
D-13696	C-10892	94	4/30/72 - 5/05/72
D-13695	C-10891	95	5/05/72 - 5/09/72
D-13694	C-10878	96	5/09/72 - 5/12/72
D-13693	C-10877	97	5/12/72 - 5/14/72
D-13871	C-10923	98	5/14/72 - 5/16/72
D-13870	C-10921	99	5/16/72 - 5/19/72
D-13591	C-10306	100	5/19/72 - 5/25/72
D-13590	C-10305	101	5/26/72 - 5/29/72
D-13589	C-10304	102	5/29/72 - 6/03/72
D-13601	C-10825	103	6/03/72 - 6/06/72
D-13598	C-10822	104	6/06/72 - 6/09/72

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-13584	C-10299	105	6/09/72 - 6/12/72
D-13585	C-10300	106	6/12/72 - 6/16/72
D-13586	C-10301	107	6/16/72 - 6/23/72
D-13587	C-10302	108	6/23/72 - 6/25/72
D-13588	C-10303	109	6/26/72 - 6/28/72
D-13596	C-10820	110	6/28/72 - 7/04/72
D-13600	C-10824	111	7/04/72 - 7/08/72
D-13595	C-10819	112	7/08/72 - 7/11/72
D-13599	C-10823	113	7/11/72 - 7/18/72
D-13597	C-10821	114	7/18/72 - 7/21/72
D-13594	C-10818	115	7/21/72 - 7/25/72
D-13593	C-10817	116	7/25/72 - 8/04/72
D-13592	C-10816	117	8/04/72 - 8/11/72
D-14091	C-11136	118	8/11/72 - 8/15/72
D-14092	C-11137	119	8/16/72 - 8/18/72
D-14088	C-11138	120	8/18/72 - 8/22/72
D-14089	C-11139	121	8/22/72 - 8/26/72
D-14090	C-11140	122	8/27/72 - 9/06/72
D-14097	C-11141	123	9/06/72 - 9/16/72
D-14098	C-11142	124	9/16/72 - 9/23/72
D-14238	C-11384	125	9/23/72 - 9/30/72
D-14239	C-11385	126	10/01/72 - 10/15/72
D-15890	C-12066	127	10/15/72 - 10/21/72
D-14240	C-11386	128	10/21/72 - 10/26/72
D-15891	C-12067	129	10/26/72 - 11/05/72
D-15895	C-12068	130	11/05/72 - 11/09/72
D-15896	C-12069	131	11/09/72 - 11/13/72
D-15897	C-12070	132	11/13/72 - 11/17/72
D-15769	C-12071	133	11/17/72 - 11/25/72
D-15768	C-12072	134	11/25/72 - 12/05/72

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-15767	C-12073	135	12/05/72 - 12/09/72
D-15894	C-12074	136	12/09/72 - 12/14/72
D-15895	C-12075	137	12/14/72 - 12/21/72
D-15892	C-12076	138	12/21/72 - 12/31/72
D-16118	C-12198	139	1/01/73 - 1/05/73
D-16117	C-12199	140	1/05/73 - 1/12/73
D-16181	C-12713	141	1/12/73 - 1/21/73
D-16182	C-12714	142	1/22/73 - 2/01/73
D-16183	C-12715	143	2/01/73 - 2/10/73
D-16184	C-12716	144	2/10/73 - 2/17/73
D-17568	C-13995	145	2/17/73 - 3/08/73
D-16186	C-12717	146	3/09/73 - 3/20/73
D-16624	C-12719	147	3/20/73 - 3/27/73
D-16623	C-12720	148	3/22/73 - 4/03/73
D-16770	C-13065	149	4/03/73 - 4/13/73
D-16771	C-13066	150	4/13/73 - 4/28/73
D-16772	C-13067	151	4/28/73 - 5/03/73
D-16769	C-13068	152	5/03/73 - 5/19/73
D-16783	C-13069	153	5/19/73 - 5/28/73
D-16788	C-13070	154	5/28/73 - 6/02/73
D-16775	C-13071	155	6/02/73 - 6/14/73
D-16776	C-13072	156	6/14/73 - 6/25/73
D-16793	C-13073	157	6/25/73 - 6/28/73
D-16794	C-13074	158	6/28/73 - 7/03/73
D-16792	C-13075	159	7/03/73 - 7/10/73
D-16782	C-13076	160	7/10/73 - 7/19/73
D-16781	C-13077	161	7/19/73 - 7/24/73
D-16785	C-13078	162	7/24/73 - 7/30/73
D-16784	C-13079	163	7/30/73 - 8/02/73
D-16795	C-13080	164	8/02/73 - 8/09/73

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-16789	C-13081	165	8/09/73 - 8/16/73
D-16790	C-13082	166	8/16/73 - 8/29/73
D-16780	C-13083	167	8/29/73 - 9/02/73
D-16779	C-13084	168	9/02/73 - 9/10/73
D-16791	C-13085	169	9/10/73 - 9/19/73
D-16774	C-13086	170	9/19/73 - 10/03/73
D-16775	C-13087	171	10/03/73 - 10/08/73
D-17565	C-13996	172	10/10/73 - 10/16/73
D-17566	C-13997	173	10/16/73 - 10/30/73
D-16787	C-13088	174	10/30/73 - 11/09/73
D-16786	C-13089	175	11/09/73 - 11/22/73
D-16777	C-13090	176	11/22/73 - 12/01/73
D-16778	C-13091	177	12/01/73 - 12/08/73
D-17567	C-13998	178	12/09/73 - 12/20/73
D-17552	C-13999	179	12/20/73 - 12/24/73
D-16881	C-13092	180	12/24/73 - 12/31/73
D-17551	C-14000	181	1/01/74 - 1/07/74
D-17550	C-14001	182	1/07/74 - 1/19/74
D-17559	C-14002	183	1/19/74 - 1/29/74
D-17560	C-14003	184	1/29/74 - 2/06/74
D-17561	C-14004	185	2/14/74 - 2/15/74
D-17547	C-14005	186	2/15/74 - 2/22/74
D-17546	C-14006	187	2/24/74 - 3/01/74
D-17558	C-14007	188	3/02/74 - 3/11/74
D-17557	C-14008	189	3/11/74 - 3/20/74
D-17556	C-14009	190	3/21/74 - 3/30/74
D-17555	C-14010	191	3/30/74 - 4/16/74
D-17554	C-14011	192	4/16/74 - 4/25/74
D-17553	C-14012	193	4/25/74 - 5/10/74
D-17544	C-14013	194	5/11/74 - 5/20/74
D-17545	C-14014	195	5/21/74 - 6/02/74

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-17569	C-14015	196	6/03/74 - 6/16/74
D-17570	C-14016	197	6/16/74 - 6/28/74
D-17564	C-15335	198	6/28/74 - 7/03/74
D-17563	C-14017	199	7/03/74 - 7/14/74
D-17562	C-14018	200	7/14/74 - 7/20/74
D-17548	C-14019	201	7/21/74 - 8/06/74
D-17549	C-14020	202	8/06/74 - 8/11/74
D-19067	C-15336	203	8/11/74 - 8/22/74
D-19066	C-15337	204	8/22/74 - 8/29/74
D-19073	C-15338	205	8/29/74 - 9/08/74
D-19072	C-15339	206	9/09/74 - 9/17/74
D-19071	C-15340	207	9/17/74 - 9/24/74
D-19163	C-15341	208	9/25/74 - 10/06/74
D-19162	C-15342	209	10/07/74 - 10/16/74
D-19161	C-15343	210	10/17/74 - 10/26/74
D-19078	C-15344	211	10/27/74 - 11/04/74
D-19079	C-15345	212	11/04/74 - 11/12/74
D-19080	C-15346	213	11/12/74 - 11/19/74
D-19075	C-15347	214	11/19/74 - 11/26/74
D-19074	C-15348	215	11/26/74 - 12/09/74
D-19068	C-15349	216	12/09/74 - 12/14/74
D-19070	C-15350	217	12/14/74 - 12/25/74
D-19069	C-15351	218	12/25/74 - 12/31/74
D-19077	C-15352	219	1/02/75 - 1/12/75
D-19076	C-15353	220	1/12/75 - 1/24/75
19365	C-15548	221	1/24/75 - 1/30/75
D-19364	C-15549	222	1/31/75 - 2/12/75
D-19363	C-15550	223	2/12/75 - 2/22/75

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-22093	C-17340	224	2/23/75 - 3/08/75
D-22094	C-17040	225	3/08/75 - 3/24/75
D-22184	C-17095	226	3/25/75 - 4/05/75
D-22185	C-17096	227	4/06/75 - 4/14/75
D-22186	C-17097	228	4/14/75 - 4/23/75
D-22190	C-17098	229	4/23/75 - 5/07/75
D-22183	C-17099	230	5/07/75 - 5/16/75
D-22189	C-17100	231	5/17/75 - 6/02/75
D-22188	C-17101	232	6/03/75 - 6/16/75
D-22187	C-17102	233	6/16/75 - 6/22/75
D-22454	C-17523	234	6/22/75 - 6/26/75
D-22647	C-17524	235	6/27/75 - 7/07/75
D-22648	C-17525	236	7/07/75 - 7/30/75
D-22649	C-17526	237	7/30/75 - 8/09/75
D-22650	C-17527	238	8/09/75 - 8/20/75
D-22651	C-17528	239	8/20/75 - 9/02/75
D-23016	C-17805	240	9/02/75 - 9/12/75
D-23017	C-17806	241	9/12/75 - 9/27/75
D-23618	C-17961	242	9/27/75 - 10/05/75
D-23619	C-18590	243	10/05/75 - 10/20/75
D-23620	C-17962	244	10/21/75 - 10/31/75
D-23621	C-17963	245	10/31/75 - 11/11/75
D-23622	C-17964	246	11/13/75 - 11/26/75
D-23623	C-17965	247	11/26/75 - 12/02/75
D-23713	C-17966	248	12/02/75 - 12/11/75
D-23715	C-17967	249	12/11/75 - 12/23/75
D-23714	C-17968	250	12/24/75 - 12/31/75
D-28102	C-18586	251	1/01/76 - 1/13/76
D-28103	C-18587	252	1/13/76 - 2/03/76



<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-28104	C-18588	253	2/04/76 - 2/16/76
D-28105	C-18589	254	2/16/76 - 2/28/76
D-31825	C-20112	255	3/02/76 - 3/06/76
D-31931	C-20113	256	3/06/76 - 3/12/76
D-31932	C-20114	257	3/12/76 - 3/17/76
D-31933	C-20115	258	3/17/76 - 4/01/76
D-31957	C-20256	259	4/01/76 - 4/12/76
D-31958	C-20116	260	4/12/76 - 4/24/76
D-31959	C-20117	261	4/24/76 - 5/02/76
D-31960	C-20118	262	5/02/76 - 5/12/76
D-31961	C-20119	263	5/12/76 - 5/24/76
D-31962	C-20120	264	5/24/76 - 5/28/76
D-31977	C-20121	265	5/29/76 - 6/05/76
D-31978	C-20122	266	6/05/76 - 6/10/76
D-31979	C-20123	267	6/10/76 - 6/21/76
D-32038	C-20453	268	6/21/76 - 6/25/76
D-32099	C-20454	269	6/25/76 - 7/02/76
D-32040	C-20455	270	7/02/76 - 7/10/76
D-32041	C-20456	271	7/10/76 - 7/21/76
D-32042	C-20457	272	7/21/76 - 7/28/76
D-32043	C-20458	273	7/28/76 - 7/31/76
D-32277	C-20459	274	7/31/76 - 8/10/76
D-32278	C-20460	275	8/11/76 - 8/19/76
D-32279	C-20461	276	8/19/76 - 8/26/76
D-32280	C-20462	277	8/26/76 - 8/31/76
D-32281	C-20463	278	8/31/76 - 9/11/76
D-32282	C-20464	279	9/11/76 - 9/20/76
D-32283	C-20465	280	9/20/76 - 9/23/76

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-32284	C-20466	281	9/24/76 - 10/05/76
D-32285	C-20467	282	10/05/76 - 10/18/76
D-32286	C-20368	283	10/19/76 - 10/22/76
D-32287	C-20469	284	10/23/76 - 11/03/76
D-32288	C-20470	285	11/04/76 - 11/15/76
D-32289	C-20471	286	11/15/76 - 11/19/76
D-32336	C-20472	287	11/19/76 - 11/28/76
D-32337	C-20473	288	11/28/76 - 12/06/76
D-32338	C-20474	289	12/06/76 - 12/15/76
D-32926	C-20475	290	12/15/76 - 12/26/76
D-32927	C-20476	291	12/26/76 - 12/31/76
D-32883	C-20477	292	1/01/77 - 1/07/77
D-32884	C-20478	293	1/08/77 - 1/13/77
D-32885	C-20479	294	1/13/77 - 1/22/77
D-32886	C-20480	295	1/22/77 - 1/28/77
D-32887	C-20481	296	1/28/77 - 2/07/77
D-32888	C-20482	297	2/07/77 - 2/20/77
D-32889	C-20483	298	2/20/77 - 3/02/77
D-32890	C-20484	299	3/02/77 - 3/06/77
D-33667	C-20559	300	3/07/77 - 3/20/77
D-32891	C-20485	301	3/20/77 - 3/31/77
D-32938	C-20486	302	3/31/77 - 4/01/77
D-32939	C-20487	303	4/01/77 - 4/05/77
D-32940	C-20488	304	4/05/77 - 4/14/77
D-32941	C-20489	305	4/14/77 - 4/18/77
D-32942	C-20490	306	4/18/77 - 4/26/77
D-32943	C-20491	307	4/26/77 - 4/28/77
D-32944	C-20492	308	4/28/77 - 5/01/77
D-32945	C-20493	309	5/02/77 - 5/05/77

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-33668		310	5/05/77 - 5/12/77
D-33669		311	5/12/77 - 5/16/77
D-33670		312	5/17/77 - 5/22/77
D-33671		313	5/23/77 - 5/27/77
D-33672		314	5/27/77 - 6/05/77
D-33673		315	6/06/77 - 6/12/77
D-33674		316	6/12/77 - 6/15/77
D-33675		317	6/15/77 - 6/23/77
D-33676		318	6/23/77 - 6/30/77
D-33677	C-20560	319	7/03/77 - 7/11/77
D-33678		320	7/11/77 - 7/16/77
D-33679		321	7/16/77 - 7/20/77
D-33680		322	7/20/77 - 7/24/77
D-33681		323	7/24/77 - 8/02/77
D-33682		324	8/02/77 - 8/13/77
D-33683		325	8/13/77 - 8/17/77
D-33684		326	8/17/77 - 8/27/77
*D-33685		20006	5/23/75 - 5/16/76
*D-33686		20007	5/28/77 - 9/12/77
*D-33687		30002	2/13/75 - 5/16/76
D-33794	C-20496	327	8/27/77 - 9/06/77
D-33795		328	9/08/77 - 9/11/77
D-33796		329	9/11/77 - 9/16/77
D-33797		330	9/16/77 - 9/30/77

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\*Special event tapes

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-57810	C-	334	02/16/70 - 10/02/75
D-57811	C-	335	02/22/71 - 05/21/72
D-57812	C-	30002*	02/13/75 - 05/16/76
D-57813	C-	20006*	05/23/75 - 05/16/76
D-57814	C-	333	08/18/76 - 05/15/77
D-57815	C-	20007*	01/18/76 - 09/13/77

\*May be duplicates

(P/O in back of catalog)

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<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-13653	C-10880	26	2/06/71 - 2/19/71
D-13652	C-10879	27	2/19/71 - 2/24/71
D-13641	C-10861	28	2/24/71 - 3/08/71
D-13640	C-10860	29	3/08/71 - 3/13/71
D-13639	C-10859	30	3/14/71 - 3/21/71
D-13638	C-11027	31	3/21/71 - 3/25/71
D-13642	C-10862	32	3/25/71 - 4/01/71
D-13658	C-10885	33	4/02/71 - 4/05/71
D-13657	C-10884	34	4/05/71 - 4/14/71
D-13656	C-10883	35	4/14/71 - 4/17/71
D-13655	C-10882	36	4/17/71 - 4/28/71
D-13654	C-10881	37	4/28/71 - 5/02/71
D-13643	C-10863	38	5/02/71 - 5/12/71
D-13644	C-10864	39	5/12/71 - 5/16/71
D-13647	C-11028	40	5/16/71 - 5/25/71
D-13645	C-10865	41	5/25/71 - 5/27/71
D-13646	C-10866	42	5/27/71 - 5/31/71
D-13635	C-10856	43	6/01/71 - 6/07/71
D-13634	C-10855	44	6/07/71 - 6/09/71
D-13633	C-10854	45	6/10/71 - 6/12/71
D-13637	C-10858	46	6/12/71 - 6/24/71
D-13636	C-10857	47	6/24/71 - 6/27/71
D-13697	C-10926	48	6/27/71 - 7/05/71
D-13698	C-10927	49	7/05/71 - 7/09/71
D-13699	C-10928	50	7/10/71 - 7/21/71
D-13700	C-10929	51	7/21/71 - 7/31/71
D-13701	C-11029	52	8/02/71 - 8/17/71
D-13702	C-10930	53	8/17/71 - 8/24/71

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-13703	C-10931	54	8/25/71 - 8/31/71
D-13704	C-10932	55	8/31/71 - 9/13/71
D-13650	C-11025	56	9/13/71 - 9/20/71
D-13649	C-11024	57	9/20/71 - 9/26/71
D-13648	C-10867	58	9/26/71 - 9/30/71
D-13651	C-10868	59	9/30/71 - 10/05/71
D-13743	C-10936	60	10/06/71 - 10/15/71
D-13744	C-10937	61	10/15/71 - 10/19/71
D-13745	C-10938	62	10/19/71 - 10/23/71
D-13835	C-10946	63	10/23/71 - 10/24/71
D-13836	C-10947	64	10/25/71 - 10/28/71
D-13837	C-10948	65	10/28/71 - 10/31/71
D-13838	C-10949	66	10/31/71 - 11/05/71
D-13839	C-10950	67	11/05/71 - 11/09/71
D-13840	C-10951	68	11/09/71 - 11/16/71
D-13841	C-10952	69	11/16/71 - 11/17/71
D-13830	C-10941	70	11/17/71 - 11/20/71
D-13829	C-10940	71	11/20/71 - 11/22/71
D-13828	C-10939	72	11/22/71 - 11/26/71
D-13844	C-10955	73	11/26/71 - 12/03/71
D-13843	C-10954	74	12/03/71 - 12/07/71
D-13842	C-10953	75	12/08/71 - 12/15/71
D-13831	C-10942	76	12/15/71 - 12/17/71
D-13832	C-10943	77	12/17/71 - 12/20/71
D-13833	C-10944	78	12/20/71 - 12/27/71
D-13834	C-10945	79	12/27/71 - 12/31/71
D-13886	C-10967	80	1/01/72 - 1/06/72
D-13887	C-10968	81	1/07/72 - 1/13/72
D-13888	C-10969	82	1/13/72 - 1/20/72

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-13878	C-10959	83	1/20/72 - 1/31/72
D-13879	C-10960	84	1/31/72 - 2/10/72
D-13880	C-10961	85	2/10/72 - 2/17/72
D-13883	C-10964	86	2/21/72 - 3/06/72
D-14104	C-11143	87	3/07/72 - 3/15/72
D-14105	C-11144	88	3/15/72 - 3/23/72
D-14106	C-11145	89	3/23/72 - 4/04/72
D-13877	C-10958	90	4/04/72 - 4/12/72
D-13876	C-10957	91	4/12/72 - 4/18/72
D-13875	C-10956	92	4/18/72 - 4/27/72
D-13882	C-10963	93	4/27/72 - 4/30/72
D-13707	C-10935	94	4/30/72 - 5/05/72
D-13706	C-10934	95	5/05/72 - 5/09/72
D-13705	C-10933	96	5/09/72 - 5/12/72
D-13881	C-10962	97	5/12/72 - 5/14/72
D-13885	C-10966	98	5/14/72 - 5/16/72
D-13884	C-10965	99	5/16/72 - 5/19/72
D-13556	C-10314	100	5/19/72 - 5/25/72
D-13555	C-10313	101	5/26/72 - 5/29/72
D-13554	C-10312	102	5/29/72 - 6/03/72
D-13561	C-10318	103	6/03/72 - 6/06/72
D-13560	C-11387	104	6/06/72 - 6/08/72
D-13549	C-10307	105	6/09/72 - 6/12/72
D-13550	C-10308	106	6/12/72 - 6/16/72
D-13551	C-10309	107	6/10/72 - 6/23/72
D-13552	C-10310	108	6/23/72 - 6/25/72
D-13553	C-10311	109	6/26/72 - 6/28/72
D-13564	C-10321	110	6/28/72 - 7/04/72
D-13563	C-10320	111	7/04/72 - 7/08/72
D-13562	C-10319	112	7/08/72 - 7/11/72
D-13566	C-10323	113	7/11/72 - 7/18/72

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-13565	C-10322	114	7/18/72 - 7/21/72
D-13559	C-10317	115	7/21/72 - 7/25/72
D-13558	C-10316	116	7/25/72 - 8/04/72
D-13557	C-10315	117	8/04/72 - 8/11/72
D-14102	C-11146	118	8/11/72 - 8/15/72
D-14103	C-11147	119	8/16/72 - 8/18/72
D-14099	C-11148	120	8/18/72 - 8/22/72
D-14100	C-11149	121	8/22/72 - 8/26/72
D-14101	C-11150	122	8/27/72 - 9/06/72
D-14107	C-11151	123	9/06/72 - 9/16/72
D-14108	C-11152	124	9/10/72 - 9/23/72
D-14241	C-11388	125	9/23/72 - 9/30/72
D-14242	C-11389	126	10/01/72 - 10/15/72
D-15898	C-12078	127	10/15/72 - 10/21/72
D-14243	C-11390	128	10/21/72 - 10/26/72
D-15899	C-12078	129	10/26/72 - 11/05/72
D-15902	C-12079	130	11/05/72 - 11/09/72
D-15903	C-12080	131	11/09/72 - 11/13/72
D-15904	C-12081	132	11/13/72 - 11/17/72
D-15772	C-12082	133	11/17/72 - 11/25/72
D-15771	C-12083	134	11/25/72 - 12/05/72
D-15770	C-12084	135	12/05/72 - 12/09/72
D-15901	C-12085	136	12/09/72 - 12/14/72
D-15900	C-12086	137	12/14/72 - 12/21/72
D-16121	C-12200	138	12/21/72 - 12/31/72
D-16120	C-12201	139	1/01/73 - 1/05/73
D-16119	C-12202	140	1/05/73 - 1/12/73



<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-16187	C-12721	141	1/12/73 - 1/21/73
D-16188	C-12722	142	1/22/73 - 2/01/73
D-16189	C-12723	143	2/01/73 - 2/10/73
D-16190	C-12724	144	2/10/73 - 2/17/73
D-16191	C-12725	145	2/17/73 - 3/08/73
D-16628	C-12726	146	3/09/73 - 3/20/73
D-16627	C-12727	147	3/20/73 - 3/27/73
D-16626	C-12728	148	3/27/73 - 4/03/73
D-16811	C-13174	149	4/13/73 - 4/28/73
D-16796	C-13175	150	4/13/73 - 4/28/73
D-16812	C-13176	151	4/28/73 - 5/03/73
D-16810	C-13177	152	5/03/73 - 5/19/73
D-16802	C-13178	153	5/19/73 - 5/28/73
D-16815	C-13179	154	5/28/73 - 6/02/73
D-16816	C-13180	155	6/02/73 - 6/14/73
D-16817	C-13181	156	6/14/73 - 6/25/73
D-16809	C-13182	157	6/25/73 - 6/27/73
D-16808	C-13183	158	6/28/73 - 7/03/73
D-16807	C-13184	159	7/03/73 - 7/10/73
D-16823	C-13185	160	7/10/73 - 7/18/73
D-16822	C-13186	161	7/19/73 - 7/24/73
D-16799	C-13187	162	7/24/73 - 7/30/73
D-16798	C-13188	163	7/30/73 - 8/02/73
D-16797	C-13189	164	8/02/73 - 8/09/73
D-16803	C-13190	165	8/09/73 - 8/16/73
D-16804	C-13191	166	8/10/73 - 8/29/73
D-16821	C-13192	167	8/29/73 - 9/02/73
D-16806	C-13193	168	9/02/73 - 9/10/73

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-16805	C-13194	169	9/10/73 - 9/19/73
D-16814	C-13195	170	9/19/73 - 10/03/73
D-16814	C-13196	171	10/03/73 - 10/09/73
D-17591	C-14125	172	10/10/73 - 10/16/73
D-16801	C-13197	173	10/16/73 - 10/30/73
D-16800	C-13198	174	10/30/73 - 11/09/73
D-16818	C-13199	175	11/09/73 - 11/22/73
D-16819	C-13200	176	11/22/73 - 12/01/73
D-16820	C-13201	177	12/01/73 - 12/08/73
D-17592	C-14126	178	12/09/73 - 12/20/73
D-16882	C-13202	179	12/20/73 - 12/24/73
D-16883	C-13203	180	12/24/73 - 12/31/73
D-17576	C-14127	181	1/01/74 - 1/07/74
D-17575	C-14128	182	1/07/74 - 1/19/74
D-17585	C-14129	183	1/19/74 - 1/29/74
D-17586	C-14130	184	1/29/74 - 2/06/74
D-17587	C-14131	185	2/06/74 - 2/15/74
D-17572	C-14132	186	2/15/74 - 2/22/74
D-17571	C-14133	187	2/24/74 - 3/01/74
D-17584	C-14134	188	3/02/74 - 3/11/74
D-17583	C-14135	189	3/11/74 - 3/20/74
D-17582	C-14136	190	3/21/74 - 3/30/74
D-17581	C-14137	191	3/30/74 - 4/16/74
D-17580	C-14138	192	4/16/74 - 4/25/74
D-17579	C-14139	193	4/25/74 - 5/10/74
D-17578	C-14140	194	5/11/74 - 5/20/74
D-17577	C-14141	195	5/21/74 - 6/02/74
D-17593	C-14142	196	6/03/74 - 6/16/74
D-17594	C-14143	197	6/16/74 - 6/28/74
D-17590	C-14144	198	6/28/74 - 7/03/74

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-17589	C-14145	199	7/03/74 - 7/14/74
D-17588	C-14146	200	7/14/74 - 7/20/74
D-17573	C-14147	201	7/21/74 - 8/06/74
D-17574	C-14148	202	8/06/74 - 8/11/74
D-19083	C-15354	203	8/11/74 - 8/22/74
D-19082	C-15355	204	8/22/74 - 8/29/74
D-19081	C-15356	205	8/29/74 - 9/08/74
D-19088	C-15357	206	9/09/74 - 9/17/74
D-19087	C-15358	207	9/17/74 - 9/24/74
D-19166	C-15359	208	9/25/74 - 10/06/74
D-19165	C-15360	209	10/07/74 - 10/16/74
D-19164	C-15361	210	10/17/74 - 10/26/74
D-19094	C-15362	211	10/27/74 - 11/04/74
D-19095	C-15363	212	11/04/74 - 11/12/74
D-19084	C-15364	213	11/12/74 - 11/19/74
D-19090	C-15365	214	11/19/74 - 11/26/74
D-19089	C-15366	215	11/27/74 - 12/09/74
D-19086	C-15367	216	12/09/74 - 12/14/74
D-19085	C-15368	217	12/14/74 - 12/25/74
D-19093	C-15369	218	12/25/74 - 12/31/74
D-19092	C-15370	219	1/02/75 - 1/12/75
D-19091	C-15371	220	1/12/75 - 1/24/75
D-19368	C-15551	221	1/24/75 - 1/30/75
D-19367	C-15552	222	1/31/75 - 2/12/75
D-19366	C-15553	223	2/12/75 - 2/22/75
D-22095	C 17341	224	2/23/75 3/08/75

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-22096	C-17041	225	3/08/75 - 3/24/75
D-22195	C-17103	226	3/25/75 - 4/05/75
D-22196	C-17104	227	4/06/75 - 4/14/75
D-22192	C-17105	228	4/14/75 - 4/23/75
D-22193	C-17106	229	4/23/75 - 5/07/75
D-22194	C-17107	230	5/07/75 - 5/16/75
D-22191	C-17122	231	5/17/75 - 6/02/75
D-22197	C-17108	232	6/03/75 - 6/16/75
D-22455	C 17342	233	6/16/75 6/22/75
D 22456	C-17343	234	6/22/75 6/26/75
D-22652	C-17529	235	6/27/75 - 7/07/75
D-22653	C-17530	236	7/07/75 - 7/30/75
D-22654	C-17531	237	7/30/75 - 8/09/75
D-22655	C-17532	238	8/09/75 - 8/20/75
D-23018	C-17807	239	8/20/75 - 9/02/75
D-23019	C-17808	240	9/02/75 - 9/12/75
D-23020	C-17809	241	9/12/75 - 9/27/75
D-23624	C-17969	242	9/27/75 - 10/05/75
D-23625	C-17970	243	10/05/75 - 10/20/75
D-23626	C-17971	244	10/21/75 - 10/31/75
D-23627	C-17972	245	10/31/75 - 11/11/75
D-23628	C-17973	246	11/13/75 - 11/26/75
D-23629	C-17974	247	11/26/75 - 12/02/75
D-23718	C-17975	248	12/02/75 - 12/11/75
D-23717	C-17976	249	12/11/75 - 12/23/75
D-23716	C-17977	250	12/24/75 - 12/31/75

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-28106	C-18591	251	1/01/76 - 1/13/76
D-28107	C-18592	252	1/13/76 - 1/17/76
		253	
D-28108	C-18593	254	2/19/76 - 2/29/76
D-31826	C-20234	255	3/02/76 - 3/06/76
D-31934	C-20235	256	3/06/76 - 3/12/76
D-31935	C-20236	257	3/12/76 - 3/17/76
D-31936	C-20237	258	3/17/76 - 3/18/76
NO EVENT TAPES FOR EVENT #259			
		#260	
		#261	
		#262	
		#263	
D-31963	C-20238	264	5/24/76 - 5/28/76
D-31980	C-20239	265	5/29/76 - 6/05/76
D-31981	C-20240	266	6/05/76 - 6/09/76
D-32044	C-20362	267	6/10/76 - 6/21/76
D-32045	C-20363	268	6/21/76 - 6/25/76
D-32046	C-20364	269	6/25/76 - 7/02/76
D-32047	C-20365	270	7/02/76 - 7/10/76
D-32048	C-20366	271	7/10/76 - 7/21/76
D-32049	C-20367	272	7/21/76 - 7/28/76
D-32050	C-20368	273	7/29/76 - 7/31/76
D-32290	C-20369	274	7/31/76 - 8/10/76
D-32291	C-20370	275	8/11/76 - 8/19/76
D-32292	C-20371	276	8/19/76 - 8/26/76
D-32293	C-20372	277	8/26/76 - 8/31/76
D-32294	C-20373	278	8/31/76 - 9/11/76

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-32295	C-20374	279	9/11/76 - 9/20/76
D-32296	C-20563	280	9/20/76 - 9/23/76
D-32297	C-20564	281	9/24/76 - 10/05/76
D-32298	C-20375	282	10/05/76 - 10/08/76
NO EVENT TAPES FOR EVENT #283			
#284			
D-32299	C-20376	285	11/12/76 - 11/15/76
D-32300	C-20377	286	11/15/76 - 11/19/76
D-32301	C-20378	287	11/18/76 - 11/28/76
D-32302	C-20379	288	11/28/76 - 12/06/76
D-32303	C-20380	289	12/06/76 - 12/15/76
D-32928	C-20381	290	12/15/76 - 23/26/76
D-32929	C-20382	291	12/26/76 - 12/31/76
D-32892	C-20383	292	1/01/77 - 1/07/77
D-32893	C-20384	293	1/08/77 - 1/13/77
D-32894	C-20385	294	1/13/77 - 1/22/77
D-32895	C-20386	295	1/22/77 - 1/28/77
D-32896	C-20387	296	1/28/77 - 2/07/77
D-32897	C-20388	297	2/07/77 - 2/20/77
D-32898	C-20389	298	2/20/77 - 3/02/77
D-32899	C-20390	299	3/02/77 - 3/06/77
D-32900	C-20391	300	3/07/77 - 3/20/77
D-33688	C-20561	301	3/20/77 - 3/31/77
D-32946	C-20392	302	3/31/77 - 4/01/77
D-32947	C-20393	303	4/01/77 - 4/05/77
D-32948	C-20394	304	4/05/77 - 4/14/77
D-32949	C-20395	305	4/14/77 - 4/18/77
D-32950	C-20396	306	4/18/77 - 4/26/77

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-32951	C-20397	307	4/26/77 - 4/28/77
D-32952	C-20398	308	4/28/77 - 5/02/77
D-32953	C-20399	309	5/02/77 - 5/05/77
D-33689		310	5/05/77 - 5/12/77
D-33690		311	5/12/77 - 5/16/77
D-33691		312	5/17/77 - 5/22/77
D-33692		313	5/23/77 - 5/27/77
D-33693		314	5/27/77 - 6/05/77
D-33694		315	6/06/77 - 6/12/77
D-33695		316	6/12/77 - 6/15/77
D-33696		317	6/15/77 - 6/23/77
D-33697	C-20561	318	6/23/77 - 6/30/77
D-33698		319	7/03/77 - 7/11/77
D-33699		320	7/11/77 - 7/16/77
D-33700		321	7/16/77 - 7/20/77
D-33701		322	7/20/77 - 7/24/77
D-33702		323	7/24/77 - 7/29/77
D-33703		324	8/03/77 - 8/12/77
D-33704		325	8/13/77 - 8/17/77
D-33705		326	8/17/77 - 8/27/77
*D-33706		20006	5/23/75 - 1/13/76
*D-33707		20007	5/28/77 - 9/12/77
*D-33708		30002	2/13/75 - 3/08/76
D-33798	C-20597	327	8/27/77 - 9/06/77
D-33799		328	9/08/77 - 9/11/77
D-33800		329	9/11/77 - 9/16/77
D-33801		330	9/16/77 - 9/30/77

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\*Special Event tapes

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-57816	C-	334	02/07/71 - 04/20/72
D-57817	C-	335	04/02/72 - 06/23/73
D-57818	C-	20006*	05/22/75 - 01/13/75
D-57819	C-	30002*	02/13/75 - 03/08/76
D-57820	C-	333	08/08/76 - 05/15/77
D-57821	C-	20007*	05/28/76 - 09/13/77

\*May be duplicates

P/O in Back of Catalog



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<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-13709	C-10971	52	8/02/71 - 8/17/71
D-13708	C-10970	53	8/17/71 - 8/24/71
D-13710	C-10972	54	8/25/71 - 8/31/71
D-13711	C-10973	55	8/31/71 - 9/13/71
D-13661	C-10888	56	9/13/71 - 9/20/71
D-13660	C-10887	57	9/20/71 - 9/26/71
D-13659	C-10886	58	9/26/71 - 9/30/71
D-13746	C-10977	59	9/30/71 - 10/05/71
D-13747	C-10978	60	10/06/71 - 10/15/71
D-13748	C-10979	61	10/15/71 - 10/19/71
D-13852	C-10987	62	10/19/71 - 10/23/71
D-13853	C-10988	63	10/23/71 - 10/25/71
D-13854	C-10989	64	10/25/71 - 10/28/71
D-13855	C-11391	65	10/28/71 - 10/31/71
D-13856	C-10990	66	10/31/71 - 11/05/71
D-13857	C-10991	67	11/05/71 - 11/09/71
D-13858	C-10992	68	11/09/71 - 11/16/71
D-13848	C-10983	69	11/16/71 - 11/17/71
D-13847	C-10982	70	11/17/71 - 11/20/71
D-13846	C-10981	71	11/20/71 - 11/22/71
D-13845	C-10980	72	11/22/71 - 11/26/71
D-13861	C-10995	73	11/26/71 - 12/03/71
D-13860	C-10994	74	12/03/71 - 12/07/71
D-13859	C-10993	75	12/08/71 - 12/15/71
D-13849	C-10984	76	12/15/71 - 12/17/71
D-13850	C-10985	77	12/17/71 - 12/20/71
D-13851	C-10986	78	12/20/71 - 12/27/71
D-13901	C-11008	79	12/27/71 - 12/31/71

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<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-13902	C-11009	80	1/01/72 - 1/06/72
D-13903	C-11010	81	1/07/72 - 1/13/72
D-13904	C-11011	82	1/13/72 - 1/20/72
D-13893	C-11000	83	1/20/72 - 1/31/72
D-13894	C-11001	84	1/31/72 - 2/10/72
D-13895	C-11002	85	2/10/72 - 2/21/72
D-13898	C-11005	86	2/21/72 - 3/06/72
D-14114	C-11166	87	3/07/72 - 3/15/72
D-14115	C-11167	88	3/15/72 - 3/23/72
D-13892	C-10999	89	3/23/72 - 4/04/72
D-13891	C-10998	90	4/04/72 - 4/12/72
D-13890	C-10997	91	4/12/72 - 4/18/72
D-13889	C-10996	92	4/18/72 - 4/27/72
D-13897	C-11004	93	4/27/72 - 4/30/72
D-13714	C-10976	94	4/30/72 - 5/05/72
D-13713	C-10975	95	5/05/72 - 5/09/72
D-13712	C-10974	96	5/09/72 - 5/13/72
D-13896	C-11003	97	5/13/72 - 5/14/72
D-13900	C-11007	98	5/14/72 - 5/16/72
D-13899	C-11006	99	5/16/72 - 5/19/72
D-13573	C-10330	100	5/19/72 - 5/25/72
D-13572	C-10329	101	5/25/72 - 5/29/72
D-13578	C-11392	102	5/29/72 - 6/03/72
D-13577	C-10334	103	6/03/72 - 6/06/72
D-13576	C-10333	104	6/06/72 - 6/09/72
D-13567	C-10324	105	6/09/72 - 6/12/72
D-13568	C-10325	106	6/12/72 - 6/16/72
D-13569	C-10326	107	6/16/72 - 6/23/72
D-13570	C-10327	108	6/23/72 - 6/25/72
D-13571	C-10328	109	6/20/72 - 6/28/72

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-13580	C-11030	110	6/28/72 - 7/04/72
D-13579	C-10335	111	7/04/72 - 7/08/72
D-13583	C-10338	112	7/08/72 - 7/11/72
D-13582	C-10339	113	7/11/72 - 7/18/72
D-13581	C-10336	114	7/18/72 - 7/21/72
D-13575	C-10332	115	7/21/72 - 7/25/72
D-13574	C-10331	116	7/25/72 - 8/04/72
D-14111	C-11168	117	8/04/72 - 8/11/72
D-14112	C-11169	118	8/11/72 - 8/15/72
D-14113	C-11170	119	8/16/72 - 8/18/72
D-14109	C-11171	120	8/18/72 - 8/22/72
D-14110	C-11172	121	8/22/72 - 8/26/72
D-14116	C-11173	122	8/27/72 - 9/06/72
D-14117	C-11174	123	9/06/72 - 9/16/72
D-14118	C-11175	124	9/16/72 - 9/23/72
D-14244	C-11393	125	9/23/72 - 9/30/72
D-15905	C-12087	126	9/30/72 - 10/14/72
D-15906	C-12088	127	10/15/72 - 10/21/72
D-14245	C-11394	128	10/21/72 - 10/26/72
D-15907	C-12089	129	10/26/72 - 11/05/72
D-15910	C-12090	130	11/05/72 - 11/09/72
D-15911	C-12091	131	11/09/72 - 11/13/72
D-15775	C-12092	132	11/13/72 - 11/17/72
D-15776	C-12093	133	11/17/72 - 11/25/72
D-15774	C-12094	134	11/25/72 - 12/05/72
D-15773	C-12095	135	12/05/72 - 12/09/72
D-15909	C-12096	136	12/09/72 - 12/14/72

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-15908	C-12097	137	12/14/72 - 12/21/72
D-16124	C-12203	138	12/21/72 - 12/31/72
D-16125	C-12204	139	1/01/73 - 1/05/73
D-16122	C-12205	140	1/05/73 - 1/12/73
D-16192	C-12729	141	1/12/73 - 1/21/73
D-16193	C-12730	142	1/22/73 - 2/01/73
D-16194	C-12731	143	2/01/73 - 2/10/73
D-16195	C-12732	144	2/10/73 - 2/17/73
D-16196	C-12733	145	2/17/73 - 3/08/73
D-16630	C-12734	146	3/09/73 - 3/20/73
D-16629	C-12735	147	3/20/73 - 3/27/73
D-17616	C-14204	148	3/27/73 - 4/03/73
D-16829	C-13265	149	4/03/73 - 4/13/73
D-17615	C-14205	150	4/13/73 - 4/28/73
D-16837	C-13266	151	4/28/73 - 5/03/73
D-16828	C-13267	152	5/03/73 - 5/19/73
D-16827	C-13268	153	5/19/73 - 5/28/73
D-16741	C-13269	154	5/28/73 - 6/02/73
D-16842	C-13270	155	6/02/73 - 6/14/73
D-16843	C-13271	156	6/14/73 - 6/25/73
D-16834	C-13272	157	6/25/73 - 6/28/73
D-17617	C-14206	158	6/28/73 - 7/03/73
D-16850	C-13273	159	7/03/73 - 7/10/73
D-16849	C-13274	160	7/10/73 - 7/18/73
D-16848	C-13275	161	7/19/73 - 7/24/73
D-16836	C-13276	162	7/24/73 - 7/30/73
D-16835	C-13277	163	7/30/72 - 8/02/73
D-16830	C-13278	164	8/02/73 - 8/09/73
D-16831	C-13279	165	8/09/73 - 8/16/73
D-16832	C-13280	166	8/16/73 - 8/29/73
D-16847	C-13281	167	8/29/73 - 9/02/73

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-16833	C-13282	168	9/02/73 - 9/10/73
D-16840	C-13283	169	9/10/73 - 9/19/73
D-16839	C-13284	170	9/19/73 - 10/03/73
D-16838	C-13285	171	10/03/73 - 10/09/73
D-16826	C-13286	172	10/01/73 - 10/16/73
D-16825	C-13287	173	10/16/73 - 10/30/73
D-16824	C-13288	174	10/30/73 - 11/09/73
D-16844	C-13289	175	11/09/73 - 11/22/73
D-16845	C-13290	176	11/22/73 - 12/01/73
D-16846	C-13291	177	12/01/73 - 12/08/73
D-16884	C-13292	178	12/09/73 - 12/20/73
D-17603	C-14207	179	12/20/73 - 12/24/73
D-16885	C-13293	180	12/24/73 - 12/31/73
D-17602	C-14208	181	1/01/74 - 1/07/74
D-17601	C-14209	182	1/07/74 - 1/19/74
D-17611	C-14210	183	1/19/70 - 1/29/74
D-17612	C-14211	184	1/29/74 - 2/06/74
D-17597	C-14212	185	2/06/74 - 2/15/74
D-17596	C-14213	186	2/15/74 - 2/22/74
D-17595	C-14214	187	2/24/74 - 3/01/74
D-17610	C-14215	188	3/02/74 - 3/11/74
D-17609	C-14216	189	3/11/74 - 3/20/74
D-17608	C-14217	190	3/21/74 - 3/30/74
D-17607	C-14218	191	3/30/74 - 4/16/74
D-17606	C-14219	192	4/16/74 - 4/25/74
D-17605	C-14220	193	4/26/74 - 5/11/74
D-17604	C-14221	194	5/11/74 - 5/20/74
D-17618	C-14222	195	5/21/74 - 6/02/74
D-17619	C-14223	196	6/03/74 - 6/16/74

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
J-17620	C-14224	197	6/16/74 - 6/28/74
D-17614	C-14225	198	6/28/74 - 7/03/74
D-17613	C-14226	199	7/03/74 - 7/14/74
D-17598	C-14227	200	7/14/74 - 7/20/74
D-17599	C-14228	201	7/21/74 - 8/06/74
D-17600	C-14229	202	8/06/74 - 8/11/74
D-19098	C-15372	203	8/11/74 - 8/22/74
D-19097	C-15373	204	8/22/74 - 8/29/74
D-19103	C-15374	205	8/29/74 - 9/08/74
D-19102	C-15375	206	9/09/74 - 9/17/74
D-19101	C-15376	207	9/17/74 - 9/24/74
D-19167	C-15377	208	9/25/74 - 10/06/74
D-19168	C-15378	209	10/07/74 - 10/16/74
D-19109	C-15379	210	10/17/74 - 10/26/74
D-19110	C-15380	211	10/27/74 - 10/04/74
D-19111	C-15381	212	11/04/74 - 11/12/74
D-19096	C-15382	213	11/12/74 - 11/19/74
D-19105	C-15383	214	11/19/74 - 11/26/74
D-19104	C-15384	215	11/27/74 - 12/09/74
D-19100	C-15385	216	12/09/74 - 12/14/74
D-19099	C-15386	217	12/14/74 - 12/25/74
D-19108	C-15387	218	12/25/74 - 12/31/74
D-19107	C-15388	219	1/02/75 - 1/12/75
D-19106	C-15389	220	1/12/75 - 1/24/75
D-19370	C-15554	221	1/24/75 - 1/30/75
D-19369	C-15555	222	1/31/75 - 2/12/75

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-22097	C-17042	223	2/12/75 - 2/22/75
D-22098	C-17043	224	2/23/75 - 3/08/75
D-22099	C-17044	225	3/08/75 - 3/24/75
D-22201	C-17109	226	3/25/75 - 4/05/75
D-22202	C-17110	227	4/06/75 - 4/14/75
D-22198	C-17533	228	4/14/75 - 4/23/75
D-22199	C-17111	229	4/23/75 - 5/07/75
D-22200	C-17112	230	5/07/75 - 5/16/75
D-22203	C-17113	231	5/17/75 - 6/02/75
D-22204	C-17114	232	6/03/75 - 6/16/75
D-22457	C 17344	233	6/16/75 - 6/22/75
D-22458	C 17345	234	6/22/75 - 6/26/75
D-22656	C-17978	235	6/27/75 - 7/07/75
D-22657	C-18599	236	7/07/75 - 7/30/75
D-22658	C-17535	237	7/30/75 - 8/09/75
D-22659	C-17536	238	8/09/75 - 8/20/75
D-23021	C-17810	239	8/20/75 - 9/02/75
D-23022	C-17811	240	9/02/75 - 9/12/75
D-23023	C-17812	241	9/12/75 - 9/27/75
D-23630	C-18598	242	9/27/75 - 10/04/75
D-23631	C-17979	243	10/05/75 - 10/20/75
D-23632	C-17980	244	10/21/75 - 10/31/75
D-23633	C-17981	245	10/31/75 - 11/11/75
D-23634	C-17982	246	11/13/75 - 11/26/75
D-23635	C-17983	247	11/26/75 - 12/02/75
D-23721	C-17984	248	12/02/75 - 12/11/75
D-23720	C-17985	249	12/11/75 - 12/23/75
D-23719	C-17986	250	12/24/75 - 12/31/75

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-28109	C-18594	251	1/01/76 - 1/13/76
D-28110	C-18595	252	1/13/76 - 2/04/76
D-28112	C-18597	253	2/04/76 - 2/16/76
D-28111	C-18596	254	2/16/76 - 2/29/76
D-31827	C-20241	255	3/02/76 - 3/06/76
D-31937	C-20242	256	3/06/76 - 3/12/76
D-31938	C-20243	257	3/12/76 - 3/17/76
D-31964	C-20244	258	3/17/76 - 4/01/76
D-31965	C-20245	259	4/01/76 - 4/12/76
D-31966	C-20246	260	4/12/76 - 4/24/76
D-31967	C-20247	261	4/24/76 - 5/02/76
D-31968	C-20248	262	5/02/76 - 5/12/76
D-31969	C-20249	263	5/12/76 - 5/24/76
D-31970	C-20250	264	5/24/76 - 5/28/76
D-31982	C-20251	265	5/29/76 - 6/05/76
D-31983	C-20252	266	6/05/76 - 6/10/76
D-32051	C-20408	267	6/10/76 - 6/21/76
D-32052	C-20409	268	6/21/76 - 6/25/76
D-32053	C-20410	269	6/25/76 - 7/02/76
D-32054	C-20411	270	7/02/76 - 7/10/76
D-32055	C-20412	271	7/10/76 - 7/21/76
D-32056	C-20413	272	7/21/76 - 7/28/76
D-32057	C-20414	273	7/28/76 - 7/31/76
D-32304	C-20415	274	7/31/76 - 8/10/76
D-32305	C-20416	275	8/11/76 - 8/19/76
D-32306	C-20417	276	8/19/76 - 8/26/76
D-32307	C-20418	277	8/26/76 - 8/31/76
D-32308	C-20419	278	8/31/76 - 9/11/76



<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-32309	C-20420	279	9/11/76 - 9/20/76
D-32310	C-20421	280	9/20/76 - 9/23/76
D-32311	C-20422	281	9/24/76 - 10/05/76
D-32312	C-20423	282	10/05/76 - 10/18/76
D-32313	C-20424	283	10/19/76 - 10/22/76
D-32314	C-20425	284	10/23/76 - 11/03/76
D-32315	C-20426	285	11/04/76 - 11/15/76
D-32316	C-20427	286	11/15/76 - 11/19/76
D-32317	C-20428	287	11/19/76 - 11/28/76
D-32318	C-20429	288	11/28/76 - 12/06/76
D-32930	C-20430	289	12/06/76 - 12/15/76
D-32931	C-20431	290	12/15/76 - 12/26/76
D-32932	C-20432	291	12/26/76 - 12/31/76
D-32901	C-20433	292	1/01/77 - 1/07/77
D-32902	C-20434	293	1/08/77 - 1/13/77
D-32903	C-20435	294	1/13/77 - 1/22/77
D-32904	C-20436	295	1/22/77 - 1/28/77
D-32905	C-20437	296	1/28/77 - 2/07/77
D-32906	C-20438	297	2/07/77 - 2/20/77
D-32907	C-20439	298	2/20/77 - 3/02/77
D-32908	C-20440	299	3/02/77 - 3/06/77
D-32909	C-20441	300	3/07/77 - 3/20/77
D-32910	C-20442	301	3/20/77 - 3/31/77
D-32954	C-20443	302	3/31/77 - 4/01/77
D-32955	C-20444	303	4/01/77 - 4/05/77
D-32956	C-20445	304	4/05/77 - 4/14/77
D-32957	C-20446	305	4/14/77 - 4/18/77
D-32958	C-20447	306	4/18/77 - 4/26/77

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-32959	C-20448	307	4/26/77 - 4/28/77
D-32960	C-20449	308	4/28/77 - 5/02/77
D-33709	C-20565	309	5/02/77 - 5/05/77
D-33710		310	5/05/77 - 5/12/77
D-33711		311	5/12/77 - 5/16/77
D-33712		312	5/17/77 - 5/22/77
D-33713		313	5/23/77 - 5/27/77
D-33714		314	5/27/77 - 6/05/77
D-33715		315	6/06/77 - 6/12/77
D-33716		316	6/12/77 - 6/12/77
D-33717		317	6/15/77 - 6/23/77
D-33718		318	6/23/77 - 6/30/77
D-33719		319	7/03/77 - 7/11/77
D-33720		320	7/11/77 - 7/16/77
D-33721		321	7/16/77 - 7/20/77
D-33722		322	7/20/77 - 7/24/77
D-33723		323	7/24/77 - 8/02/77
D-33724		324	8/02/77 - 8/13/77
D-33725		325	8/13/77 - 8/17/77
D-33726		326	8/17/77 - 8/27/77
*D-33727		20006	5/23/75 - 5/16/76
*D-33728		20007	5/28/77 - 9/12/77
*D-33729		30002	2/13/75 - 5/16/76
D-33802	C-20598	327	8/27/77 - 9/06/77
D-33803		328	9/08/77 - 9/11/77
D-33804		329	9/11/77 - 9/16/77
D-33805		330	9/16/77 - 9/30/77

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\*Special event tapes

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-57822	C-	334	08/03/71 - 11/11/76
D-57823	C-	335	11/11/72 - 06/23/73
D-57824	C-	30002*	02/13/75 - 05/16/76
D-57825	C-	20006*	05/23/75 - 05/16/76
D-57826	C-	333	08/08/76 - 05/15/77
D-57827	C-	20007*	05/28/76 - 09/13/77

\*May be duplicates

P/O in back of Catalog

APOLLO 16 72-031C-01B

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-13905	C-11012	92	4/21/72 - 4/27/72
D-13909	C-11016	93	4/27/72 - 4/30/72
D-13908	C-11015	94	4/30/72 - 5/05/72
D-13907	C-11014	95	5/05/72 - 5/09/72
D-13906	C-11013	96	5/09/72 - 5/12/72
D-14124	C-11176	97	5/12/72 - 5/14/72
D-13911	C-11018	98	5/14/72 - 5/16/72
D-13910	C-11017	99	5/16/72 - 5/19/72
D-13538	C-11395	100	5/19/72 - 5/25/72
D-13537	C-10343	101	5/26/72 - 5/29/72
D-13543	C-10348	102	5/29/72 - 6/03/72
D-13542	C-10347	103	6/03/72 - 6/06/72
D-13541	C-10346	104	6/06/72 - 6/09/72
D-13532	C-11026	105	6/09/72 - 6/12/72
D-13533	C-10339	106	6/12/72 - 6/16/72
D-13534	C-10340	107	6/16/72 - 6/23/72
D-13535	C-10341	108	6/23/72 - 6/25/72
D-13536	C-10342	109	6/26/72 - 6/28/72
D-13544	C-10349	110	6/28/72 - 7/04/72
D-13548	C-10353	111	7/04/72 - 7/08/72
D-13547	C-10352	112	7/08/72 - 7/11/72
D-13546	C-10351	113	7/11/72 - 7/18/72
D-13545	C-10350	114	7/18/72 - 7/20/72
D-13540	C-10345	115	7/21/72 - 7/25/72
D-13539	C-10344	116	7/25/72 - 8/04/72
D-14121	C-11177	117	8/04/72 - 8/11/72
D-14122	C-11178	118	8/11/72 - 8/15/72
D-13123	C-11179	119	8/16/72 - 8/18/72

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-14119	C-11180	120	8/18/72 - 8/22/72
D-14120	C-11181	121	8/22/72 - 8/26/72
D-14125	C-11182	122	8/27/72 - 9/06/72
D-14126	C-11183	123	9/06/72 - 9/16/72
D-14127	C-11184	124	9/16/72 - 9/23/72
D-14246	C-11396	125	9/23/72 - 9/30/72
D-15912	C-12098	126	9/30/72 - 10/14/72
D-15913	C-12099	127	10/15/72 - 10/21/72
D-14247	C-11397	128	10/21/72 - 10/26/72
D-15914	C-12100	129	10/26/72 - 11/05/72
D-15918	C-12101	130	11/05/72 - 11/09/72
D-15919	C-12102	131	11/09/72 - 11/13/72
D-15778	C-12103	132	11/13/72 - 11/17/72
D-15779	C-12104	133	11/17/72 - 11/25/72
D-15777	C-12105	134	11/25/72 - 12/05/72
D-15917	C-12106	135	12/05/72 - 12/09/72
D-15916	C-12107	136	12/09/72 - 12/14/72
D-15915	C-12108	137	12/14/72 - 12/21/72
D-16126	C-12206	138	12/21/72 - 12/31/72
D-16125	C-12207	139	1/01/73 - 1/05/73
D-16127	C-12208	140	1/05/73 - 1/12/73
D-16197	C-12736	141	1/12/73 - 1/21/73
D-16198	C-12737	142	1/22/73 - 2/01/73
D-16199	C-12738	143	2/01/73 - 2/10/73
D-16200	C-12739	144	2/10/73 - 2/17/73
D-16201	C-12740	145	2/17/73 - 3/08/73
D-16632	C-12741	146	3/09/73 - 3/20/73
D-16631	C-12742	147	3/20/73 - 3/27/73
D-17640	C-14250	148	3/27/73 - 4/03/73

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-16866	C-13403	149	4/03/73 - 4/13/73
D-16867	C-13404	150	4/13/73 - 4/28/73
D-16865	C-13405	151	4/28/73 - 5/03/73
D-16852	C-13406	152	5/03/73 - 5/19/73
D-16851	C-13407	153	5/19/73 - 5/28/73
D-16871	C-13408	154	5/28/73 - 6/02/73
D-16872	C-13409	155	6/02/73 - 6/14/73
D-16863	C-13410	156	6/14/73 - 6/25/73
D-16862	C-13411	157	6/25/73 - 6/28/73
D-16861	C-13412	158	6/28/73 - 7/03/73
D-16877	C-13413	159	7/03/73 - 7/10/73
D-16876	C-13414	160	7/10/73 - 7/18/73
D-16878	C-13415	161	7/19/73 - 7/24/73
D-16853	C-13416	162	7/24/73 - 7/30/73
D-16864	C-13417	163	7/30/73 - 8/02/73
D-16857	C-13418	164	8/02/73 - 8/09/73
D-16858	C-13419	165	8/09/73 - 8/16/73
D-16859	C-13420	166	8/16/73 - 8/29/73
D-16875	C-13421	167	8/29/73 - 9/02/73
D-16860	C-13422	168	9/02/73 - 9/10/73
D-16870	C-13423	169	9/10/73 - 9/19/73
D-16869	C-13424	170	9/19/73 - 10/03/73
D-16868	C-13425	171	10/03/73 - 10/09/73
D-16856	C-13426	172	10/10/73 - 10/16/73
D-16855	C-13427	173	10/16/73 - 10/30/73
D-16854	C-13428	174	10/30/73 - 11/09/73
D-16873	C-13429	175	11/09/73 - 11/22/73
D-16874	C-13430	176	11/22/73 - 12/01/73

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-16886	C-13431	177	12/01/73 - 12/08/73
D-16887	C-13432	178	12/09/73 - 12/20/73
D-16888	C-13433	179	12/20/73 - 12/24/73
D-16889	C-13434	180	12/24/73 - 12/31/73
D-17628	C-14231	181	1/01/74 - 1/07/74
D-17627	C-14232	182	1/07/74 - 1/19/74
D-17636	C-14233	183	1/19/74 - 1/29/74
D-17637	C-14234	184	1/29/74 - 2/06/74
D-17623	C-14235	185	2/06/74 - 2/15/74
D-17622	C-14236	186	2/15/74 - 2/22/74
D-17621	C-14237	187	2/24/74 - 3/01/74
D-17635	C-14238	188	3/02/74 - 3/11/74
D-17634	C-14239	189	3/11/74 - 3/20/74
D-17633	C-14240	190	3/21/74 - 3/30/74
D-17632	C-14241	191	3/30/74 - 4/16/74
D-17631	C-14242	192	4/16/74 - 4/25/74
D-17630	C-14243	193	4/25/74 - 5/10/74
D-17629	C-14244	194	5/11/74 - 5/20/74
D-17641	C-14245	195	5/21/74 - 6/02/74
D-17642	C-14246	196	6/03/74 - 6/16/74
D-17643	C-14247	197	6/16/74 - 6/28/74
D-17639	C-14248	198	6/28/74 - 7/03/74
D-17638	C-14249	199	7/03/74 - 7/14/74
D-17624	C-14250	200	7/14/74 - 7/20/74
D-17625	C-14251	201	7/21/74 - 8/06/74
D-17626	C-14252	202	8/06/74 - 8/11/74

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-19112	C-15390	203	8/11/74 - 8/22/74
D-19122	C-15391	204	8/22/74 - 8/29/74
D-19120	C-15392	205	8/29/74 - 9/08/74
D-19119	C-15393	206	9/09/74 - 9/17/74
D-19118	C-15394	207	9/17/74 - 9/24/74
D-19170	C-15395	208	9/25/74 - 10/06/74
D-19169	C-15396	209	10/07/74 - 10/16/74
D-19125	C-15397	210	10/17/74 - 10/26/74
D-19126	C-15398	211	10/27/74 - 11/04/74
D-19127	C-15399	212	11/04/74 - 11/12/74
D-19121	C-15400	213	11/12/74 - 11/19/74
D-19114	C-15401	214	11/19/74 - 11/26/74
D-19117	C-15402	215	11/27/74 - 12/09/74
D-19116	C-15403	216	12/09/74 - 12/14/74
D-19115	C-15404	217	12/14/74 - 12/25/74
D-19124	C-15405	218	12/25/74 - 12/31/74
D-19123	C-15406	219	1/02/75 - 1/12/75
D-19113	C-15407	220	1/12/75 - 1/24/75
D-19372	C-15556	221	1/24/75 - 1/30/75
D-19371	C-15557	222	1/31/75 - 2/12/75
D-22100	C 17346	223	2/12/75 - 2/22/75
D-22101	C-17045	224	2/23/75 - 3/08/75
D-22102	C-17046	225	3/08/75 - 3/24/75
D-22206	C-17115	226	3/25/75 - 4/05/75
D-22208	C-17116	227	4/06/75 - 4/14/75
D-22205	C-17117	228	4/14/75 - 4/23/75
D-22211	C-17118	229	4/23/75 - 5/07/75
D-22207	C-17119	230	5/07/75 - 5/16/75
D-22210	C-17120	231	5/17/75 - 6/02/75



<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-22459	C-17347	233	6/16/75 - 6/22/75
D-22460	C-17348	234	6/22/75 - 6/26/75
D-22660	C-17538	235	6/27/75 - 7/07/75
D-22661	C-17539	236	7/07/75 - 7/30/75
D-22662	C-17540	237	7/30/75 - 8/09/75
D-22663	C-17541	238	8/09/75 - 8/20/75
D-23024	C-17813	239	8/20/75 - 9/02/75
D-23025	C-17814	240	9/02/75 - 9/12/75
D-23026	C-17815	241	9/12/75 - 9/27/75
D-23636	C-17987	242	9/27/75 - 10/05/75
D-23637	C-17988	243	10/05/75 - 10/20/75
D-23638	C-17989	244	10/21/75 - 10/31/75
D-23639	C-17990	245	10/31/75 - 11/11/75
D-23640	C-17991	246	11/13/75 - 11/26/75
D-23641	C-17992	247	11/26/75 - 12/02/75
D-23724	C-17993	248	12/02/75 - 12/11/75
D-23723	C-17994	249	12/11/75 - 12/23/75
D-23722	C-17995	250	12/24/75 - 12/31/75
		251	
D-28114	C-18601	252	1/13/76 - 2/04/76
D-28115	C-18602	253	2/04/76 - 2/16/76
D-28116	C-18600	254	2/16/76 - 2/29/76
D-31828	C-20137	255	3/01/76 - 3/05/76
D-31939	C-20138	256	3/05/76 - 3/11/76
D-31940	C-20139	257	3/11/76 - 3/16/76
D-31971	C-20140	258	3/16/76 - 3/31/76
D-31972	C-20141	259	3/31/76 - 4/11/76
D-31973	C-20142	260	4/11/76 - 4/23/76

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-31974	C-20143	261	4/23/76 - 5/01/76
D-31975	C-20144	262	5/01/76 - 5/11/76
D-31976	C-20145	263	5/11/76 - 5/23/76
D-31984	C-20146	264	4/23/76 - 5/27/76
D-31985	C-20147	265	5/28/76 - 6/04/76
D-31986	C-20569	266	6/04/76 - 6/10/76
D-32058	C-20315	267	6/12/76 - 6/23/76
D-32059	C-20316	268	6/23/76 - 6/27/76
D-32060	C-20570	269	6/25/76 - 7/02/76
D-32061	C-20317	270	7/01/76 - 7/12/76
D-32062	C-20318	271	7/12/76 - 7/23/76
D-32063	C-20319	272	7/23/76 - 7/30/76
D-32064	C-20320	273	7/31/76 - 8/02/76
D-32319	C-20321	274	8/02/76 - 8/12/76
D-32320	C-20322	275	8/13/76 - 8/21/76
D-32321	C-20323	276	8/21/76 - 8/28/76
D-32322	C-20324	277	8/28/76 - 9/02/76
D-32323	C-20325	278	9/02/76 - 9/13/76
D-32324	C-20326	279	9/13/76 - 9/22/76
D-32325	C-20327	280	9/22/76 - 9/25/76
D-32326	C-20328	281	9/26/76 - 10/07/76
D-32327	C-20329	282	10/07/76 - 10/20/76
D-32328	C-20330	283	10/21/76 - 10/24/76
D-32329	C-20331	284	10/25/76 - 11/06/76
D-32330	C-20332	285	11/06/76 - 11/17/76
D-32331	C-20333	286	11/17/76 - 11/21/76
D-32332	C-20334	287	11/21/76 - 11/30/76
D-32333	C-20335	288	11/30/76 - 12/08/76
D-32933	C-20336	289	12/08/76 - 12/17/76

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-32934	C-20337	290	12/17/76 - 12/28/76
D-32935	C-20338	291	12/28/76 - 12/31/76
D-32911	C-20339	292	1/01/77 - 1/07/77
D-32912	C-20340	293	1/08/77 - 1/13/77
D-32913	C-20341	294	1/13/77 - 1/22/77
D-32914	C-20342	295	1/22/77 - 1/28/77
D-32915	C-20343	296	1/28/77 - 2/07/77
D-32916	C-20344	297	2/07/77 - 2/20/77
D-32917	C-20345	298	2/20/77 - 3/02/77
D-32918	C-20346	299	3/02/77 - 3/06/77
D-32919	C-20347	300	3/07/77 - 3/20/77
D-32920	C-20348	301	3/20/77 - 3/31/77
D-32961	C-20353	302	3/31/77 - 4/01/77
D-32962	C-20354	303	4/01/77 - 4/05/77
D-32963	C-20355	304	4/05/77 - 4/14/77
D-32964	C-20356	305	4/14/77 - 4/18/77
D-32965	C-20357	306	4/18/77 - 4/26/77
D-32966	C-20358	307	4/26/77 - 4/28/77
D-32967	C-20359	308	4/28/77 - 5/02/77
D-33730	C-20567	309	5/02/77 - 5/05/77
D-33731		310	5/05/77 - 5/12/77
D-33732		311	5/12/77 - 5/16/77
D-33733		312	5/17/77 - 5/22/77
D-33734		313	5/23/77 - 5/27/77
D-33735		314	5/27/77 - 6/05/77
D-33736		315	6/06/77 - 6/12/77
D-33737		316	6/12/77 - 6/15/77
D-33738		317	6/15/77 - 6/23/77
D-33739		318	6/23/77 - 6/30/77

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-33740	C-20568	319	7/03/77 - 7/11/77
D-33741		320	7/11/77 - 7/16/77
D-33742		321	7/16/77 - 7/20/77
D-33743		322	7/20/77 - 7/24/77
D-33744		323	7/24/77 - 8/02/77
D-33745		324	8/02/77 - 8/13/77
D-33746		325	8/13/77 - 8/17/77
D-33747		326	8/17/77 - 8/27/77
*D-33748		20006	5/23/75 - 5/16/76
*D-33749		20007	5/28/77 - 9/12/77
*D-33750		30002	2/13/75 - 5/16/76
D-33806	C-20599	327	8/27/77 - 9/06/77
D-33807		328	9/08/77 - 9/11/77
D-33808		329	9/11/77 - 9/16/77
D-33809		330	9/16/77 - 9/30/77
D-39825	C-	331	5/02/72 - 6/24/73
D-39826	C-	332	7/10/73 - 6/23/75

---

\*Special event tapes

<u>D#</u>	<u>C#</u>	<u>EVENT#</u>	<u>TIME SPAN</u>
D-57828	C-	30002*	02/13/75 - 05/16/76
D-57829	C-	20006*	05/21/75 - 05/16/76
D-57830	C-	333	08/08/76 - 05/15/77
D-57831	C-	20007*	05/28/76 - 09/13/77

\*May be duplicates

P/O in back of Catalog

APOLLO 12

PASSIVE SEISMIC EVENT

69-099G-03A

HEADER RECORD FORMAT

<u>WORD</u>	<u>DESCRIPTION</u>	<u>TYPE</u>
1	Experiment Identification (PS EXP)	BCD
2	ALSEP Number (ALSEPX)	BCD
3	Mission Identification (A/Sxxx)	BCD
4	Spare	BCD

APOLLO 12  
69-099C-03A  
PASSIVE SEISMIC EVENT  
DATA RECORD FORMAT

WORD 1			WORD 2			WORD 3					
1-4	5-10	11-12	13-22	23-24	25-36	1-10	11-12	13-22	23-24	25-34	35-36
ELAPSED TIME, MSEC			MAGNETO-METER DATA	SPARE	CONTROL WORD	CONTROL WORD	CONTROL WORD	CONTROL WORD	CONTROL WORD	CONTROL WORD	CONTROL WORD
WORD 4											
1-10	11-12	13-22	23-24	25-34	35-36	1-10	11-12	13-22	23-24	25-34	35-36
SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (X)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (Y)	0
WORD 5											
1-10	11-12	13-22	23-24	25-34	35-36	1-10	11-12	13-22	23-24	25-34	35-36
SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (Y)	0
WORD 6											
1-10	11-12	13-22	23-24	25-34	35-36	1-10	11-12	13-22	23-24	25-34	35-36
SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (Y)	0	SHORT PERIOD SEISMIC (Z)	0
WORD 7											
1-10	11-12	13-22	23-24	25-34	35-36	1-10	11-12	13-22	23-24	25-34	35-36
SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (Y)	0
WORD 8											
1-10	11-12	13-22	23-24	25-34	35-36	1-10	11-12	13-22	23-24	25-34	35-36
LONG PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (Y)	0
WORD 9											
1-10	11-12	13-22	23-24	25-34	35-36	1-10	11-12	13-22	23-24	25-34	35-36
LONG PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	HOUSE-KEEPING DATA	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD TOTAL	0
WORD 10											
1-10	11-12	13-22	23-24	25-34	35-36	1-10	11-12	13-22	23-24	25-34	35-36
SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (Y)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (Z)	0
WORD 11											
1-10	11-12	13-22	23-24	25-34	35-36	1-10	11-12	13-22	23-24	25-34	35-36
SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (X)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (Y)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0
WORD 12											
1-10	11-12	13-22	23-24	25-34	35-36	1-10	11-12	13-22	23-24	25-34	35-36
SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	COMMAND VERIFICATION	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0
WORD 13											
1-10	11-12	13-22	23-24	25-34	35-36	1-10	11-12	13-22	23-24	25-34	35-36
SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (X)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (Y)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0
WORD 14											
1-10	11-12	13-22	23-24	25-34	35-36	1-10	11-12	13-22	23-24	25-34	35-36
SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (X)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (Y)	0	SHORT PERIOD SEISMIC (Z)	0
WORD 15											
1-10	11-12	13-22	23-24	25-34	35-36	1-10	11-12	13-22	23-24	25-34	35-36
SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (X)	0	LONG PERIOD SEISMIC (Y)	0	SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0
WORD 16											
1-10	11-12	13-22	23-24	25-34	35-36	1-10	11-12	13-22	23-24	25-34	35-36
SHORT PERIOD SEISMIC (Z)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (X)	0	SHORT PERIOD SEISMIC (Z)	0	LONG PERIOD SEISMIC (Y)	0	SHORT PERIOD SEISMIC (Z)	0

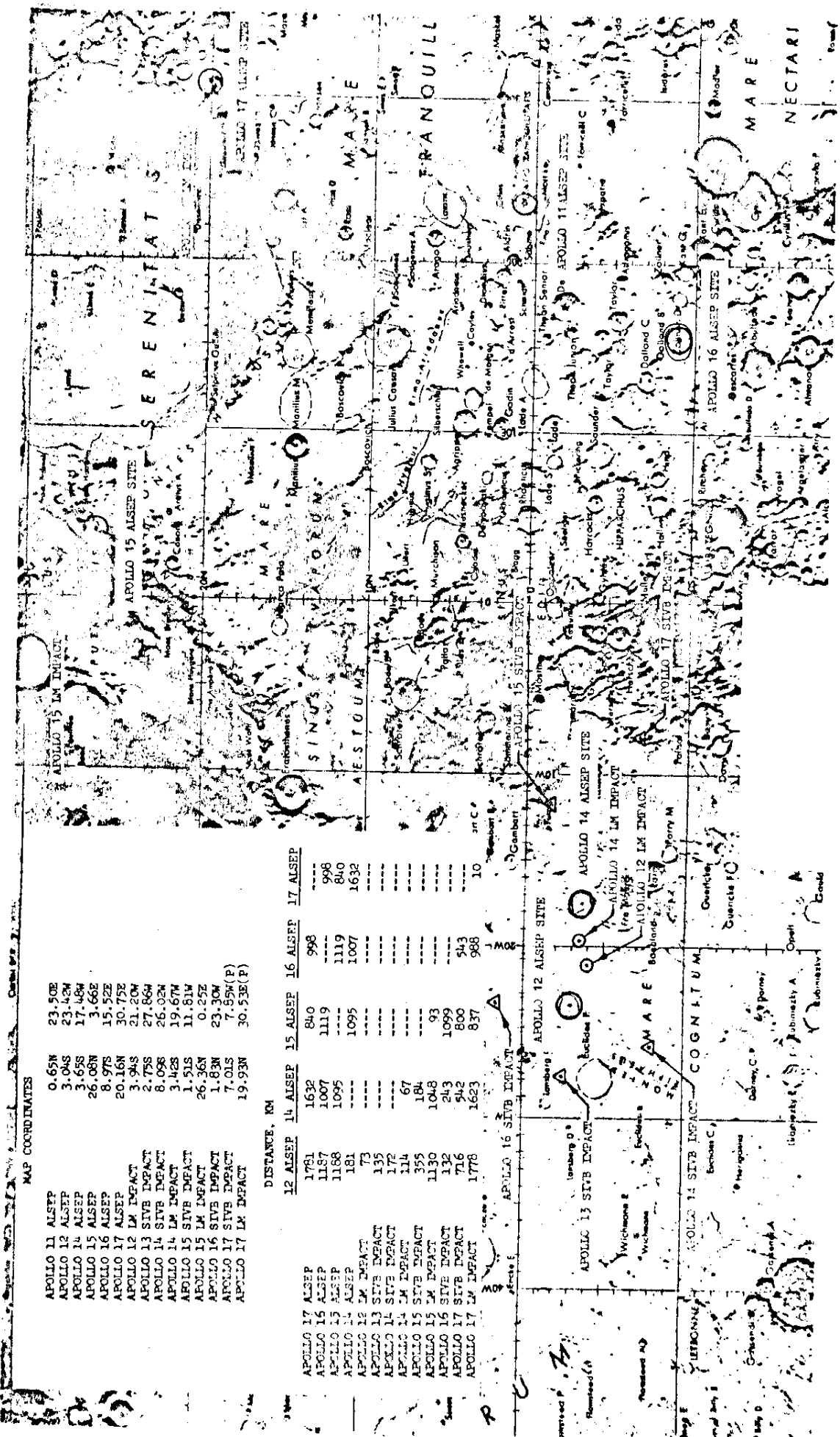
PASSIVE SEISMIC EXPERIMENT

NASA EXPERIMENT NO. S-031

NSSDC IDENTIFICATION NO. APOLLO 12 69-099C-03  
APOLLO 14 71-008C-04  
APOLLO 16 72-031C-01

→ Apollo 15 71-063C-01





MAP COORDINATES

APOLLO 11 ALSEP	0.65N	23.50E
APOLLO 12 ALSEP	3.04S	23.42W
APOLLO 13 ALSEP	3.65S	17.48W
APOLLO 14 ALSEP	26.08N	3.66E
APOLLO 15 ALSEP	8.97S	15.52E
APOLLO 16 ALSEP	20.16N	30.75E
APOLLO 17 ALSEP	3.94S	21.20W
APOLLO 12 LM IMPACT	2.75S	27.86W
APOLLO 13 SIVB IMPACT	8.09S	26.02W
APOLLO 14 LM IMPACT	3.42S	19.67W
APOLLO 15 SIVB IMPACT	1.51S	11.81W
APOLLO 16 LM IMPACT	26.36N	0.25E
APOLLO 17 SIVB IMPACT	1.83N	23.30W
APOLLO 17 LM IMPACT	7.01S	7.59W(P)
APOLLO 17 LM IMPACT	19.93N	30.53E(P)

DISTANCE, KM

	12 ALSEP	14 ALSEP	15 ALSEP	16 ALSEP	17 ALSEP
APOLLO 17 ALSEP	1781	1632	840	998	---
APOLLO 15 ALSEP	1187	1007	1119	---	998
APOLLO 14 ALSEP	1186	1095	---	1119	840
APOLLO 13 ALSEP	181	---	1095	1007	1632
APOLLO 12 LM IMPACT	73	---	---	---	---
APOLLO 13 SIVB IMPACT	135	---	---	---	---
APOLLO 14 SIVB IMPACT	172	---	---	---	---
APOLLO 14 LM IMPACT	114	---	---	---	---
APOLLO 15 SIVB IMPACT	355	---	---	---	---
APOLLO 15 LM IMPACT	1130	---	---	---	---
APOLLO 16 SIVB IMPACT	132	---	---	---	---
APOLLO 17 SIVB IMPACT	716	---	---	---	---
APOLLO 17 LM IMPACT	1778	---	---	---	---
APOLLO 16 SIVB IMPACT	---	---	---	---	10

*Ph. Barnea*

AUG 15 1973

**Apollo Passive Seismic Experiment**

**Data File**

**Preface:**

This report contains information necessary to use the lunar seismic data file available at Goddard Space Flight Center. No attempt is made to describe the data itself, but only the instruments, historical background, and the formats in which data are stored.

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### Section 5

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## Section 1 - Operational History

Seismic stations were installed on the lunar surface by the astronauts of Apollo missions 11, 12, 14, 15, and 16. The locations and installation dates of the seismic stations are listed in Table 1. Station 11 operated only 16 days before loss of the command uplink terminated operation. The four remaining stations constitute the Apollo Seismic Network. This network spans the near side of the Moon in an approximate equilateral triangle with 1100 km spacing between stations (stations 12 and 14 are 181 km apart at one corner of the triangle as shown in Figure 1).

Four seismometers are included at each station: Three long-period components forming a triaxial set (one sensitive to vertical motion and two sensitive to horizontal motion), with sensitivity to ground motion sharply peaked at 0.45 Hz (peaked-response mode); and a fourth seismometer sensitive to vertical motion with peak sensitivity at 8 Hz (short period component). These instruments can detect vibrations of the lunar surface as small as one-half angstrom at maximum sensitivity. Of the sixteen separate seismometers, all but two are presently operating properly. The short period component at station 12 has failed to operate since initial activation, and one of the long period seismometers at station 14 (vertical component) became unstable after one year.

Unless otherwise indicated in the Operation History listing, Table 2, the instruments have been operated at maximum sensitivity with the long-period seismometers in the peaked-response mode. This configuration is designated as the "standard mode" in Table 2. The various operating modes are described in Section 2. Although not noted in Table 2, all seismometers at a given station were operated at reduced gain while the astronauts remained on the surface.

In addition to signals from natural sources (moonquakes and meteoroid impacts), signals were recorded from nine man-made impacts. These were provided by two types of space vehicles: the LM (Lunar Module) ascent stage and the third, or S-IVB, stage of the Saturn booster. The LM's were guided to impact following the return of the surface crew to the CSM (Command Service Module) in lunar orbit. The S-IVB stages were directed by remote control from Earth to planned impact points following separation from the Apollo spacecraft. Seismic signals from these impacts were recorded at ranges of from 67 to 1750 km. Data pertinent to the impacts are given in Section 3.

Table I:

## LUNAR PASSIVE SEISMIC STATION STATISTICS

STATION	Date of Deployment Yr. Day	Location <sup>a</sup>		Distance from LM (m)	Azimuth of Components		Distance and Azimuths from other stations			
		Lat.	Long.		+X	+Y	12	14	15	16
11	'69 208	1.75°N	23.45°W	16.8	0°	90°	---	---	---	---
12	'69 323	3.04°S	23.42°E	130	180°	270°	---	181 km 276°	1188 km 226°	1187 km 276°
14	'71 036	3.65°S	17.48°W	178	0°	90°	181 km 96°	---	1095 km 218°	1007 km 277°
15	'71 212	26.08°N	3.66°E	110	0°	90°	1188 km 40°	1095° 33°	---	1119 km 342°
16	'72 109	8.97°S	15.51°E	95	334.5°	64.5°	1187 km 100°	1007 km 101°	1119 km 160°	---

a. Listed coordinates are derived from the Manned Space Flight Network Apollo tracking data. Locations based on these data are referenced to a mean spherical surface and may differ by several kilometers from coordinates referenced to surface features.

b. Upward ground motion produces positive-going output signal for the vertical components. The listed azimuths for the horizontal-component seismometers are the directions of ground motion that give positive-going output signal (0° = North, 90° = East, 180° = South, 270° = West).

Table 2 Operational History

DATE			EVENT
Yr.	Day	Station	
69	208	11	Deployment: Flat response mode
69	215	11	Station turned off for lunar night
69	230	11	Station turned on for 2nd lunar day
69	237	11	Long period components drift off scale, station overheating and not accepting commands
69	239	11	Loss of all data
69	323	12	Deployment: Flat response mode Short period component not operating LPZ operating with abnormal long period response
	326	12	Changed long period response to standard mode to bring LPZ back into operation.
70	105	12	Reduce LP gain to -10 db during S4B13 impact (01 hrs 24 min)
70	105	12	Increase LP gain to 0 db (02 hrs 30 min)
71	036	14	Deployment: standard mode
71	210	14	Reduce LP gain to -10 db during S4B 15 impact (21 hrs 00 min)
71	210	14	Increase LP gain to 0 db (21 hrs 47 min)
71	212	15	Deployment: standard mode
71	330 to		
72	030	14	LPZ axis anomalously noisy affecting LPX and LPY. After mid-January LPZ is usually dead but occasionally has periods of normal operation.
72	109	16	Deployment: standard mode
72	343	16	LPY anomalous noise and reduced gain
72	345	14	Reduce LP gain to -10 db during S4B17 impact (20 hrs 35 min)
	345	14	Increase LP gain to 0 db (20 hrs 55 min)
72	348	16	LPY back to normal

## Section 2 INSTRUMENT CHARACTERISTICS

A seismometer consists of a mass free to move in one direction that is suspended by means of springs and/or hinges from a framework. The suspended mass is supplied with damping to suppress vibrations at the natural period of the system. The framework rests on and moves with the surface. The suspended mass tends to remain fixed in space and the resulting relative motion between the mass and the framework can be recorded and used to calculate the original ground motion.

The Apollo seismic stations consist of two main subsystems: the sensor unit and the electronics module. The sensor unit, shown schematically in figures 2 and 3 contain three matched long period (LP) seismometers aligned orthogonally to measure vertical and horizontal ground motions. The unit also contains a vertical short period (SP) seismometer. The instrument is constructed principally of beryllium and weighs 11.5 kg, including the electronics module and thermal insulation. Without insulation, the sensor unit is 23 cm in diameter and 29 cm high. The total power drain varies between 4.3 and 7.4 W.

Instrument temperature control is provided by a 6-W heater, a proportional controller and except for station 11, an aluminized Mylar insulation. The insulating shroud is spread over the local surface to reduce temperature variations in the surface material.

The seismic response curves are shown in (fold out) figure 4. The LP seismometers have a useful frequency range from 0.004 to 2 Hz. The SP seismometers cover a band from 0.05 to 20 Hz. Two modes of operation, flat and peaked response, are possible for the LP seismometers. In the flat response mode, the LP seismometers have natural periods of 15 sec. In the peaked response mode, the seismometers act like underdamped pendulums with natural periods of 2.2 sec. Maximum



sensitivity is increased by a factor of 5.6 in the peaked response mode, but sensitivity to low frequency signals is reduced. Calibration of each sensor is accomplished by applying a step of current to each coil by command from Earth. At tidal frequencies, gravitational acceleration is measured by monitoring the feedback current used to center the seismometer mass. The tidal sensitivity of the instruments is  $8 \times 10^{-3}$  milligals per digital unit.

The LP horizontal seismometers (LPX and LPY) are very sensitive to tilts and must be leveled to high accuracy. This is accomplished by means of a two-axis, motor-driven gimbal. A third motor adjusts the LPZ seismometer in the vertical direction. Motor operation is controlled by command.

A caging system is provided to secure all critical elements of the instrument against damage during transport and deployment phases. A pneumatic system is used in which pressurized bellows expand and clamp fragile parts in place. Uncaging is accomplished by piercing the connecting lines.

The seismometer systems are controlled from earth by a set of 15 commands that govern functions such as leveling, instrument gain (adjustable in 10 db steps), and calibration.

Seismic disturbances are observed on the long-period seismometers of each station throughout the daytime period of each lunar day. These disturbances are most intense near times of sunrise and sunset, and are believed to be due to thermal contraction and expansion of the Mylar shroud that covers the seismometers, or the cable connecting the seismometers to the central station, or both.

Time codes recorded on PSE tapes are normally those generated from time codes on range tapes, and are believed to be accurate within a few tens of milliseconds of GMT when signal is received at a range station.

However, when it is difficult to extract time information from range tapes, time codes generated from an "internal clock", a clock internal to a computer at Johnson Spacecraft Center, is substituted. Since this internal clock is not synchronized with tape speed during range tape playback, the time codes thus generated are only as accurate as the accuracy of the speed of the tape transport. The time codes thus generated may drift as much as several tens of seconds from true GMT if allowed to continue for several hours. Users of the PSE tapes should be aware of possible time code errors in situations where relative time between stations is important. The reader is directed to the section on PSE tape irregularities for further discussion of errors occurring on PSE tapes.

The reader is directed to the bibliography for more detailed discussions of instrumentation, especially Latham, et al., 1969, Breseke and Lewko, 1971, and Sutton and Latham, 1964.

### Section 3: Data Set Descriptions

#### 1. Compressed Scale Playouts

The compressed scale playouts yield a complete time history of the lunar seismic data. Data from each station are read from tape (Passive Seismic Experiment (PSE) tapes supplied by NASA, Johnson Spacecraft Center) and plotted synchronously in compressed form. To enhance the signal-to-noise ratio for higher frequency events, a difference method is employed in reduction of the data. The absolute value of the difference between consecutive data points is summed over 40 points for long-period data (320 points for short period data) and this value is plotted yielding one value for each six seconds of data. Consecutive points are plotted with opposite polarity to yield a line with the appearance of a seismogram. A horizontal scale of 20 minutes per inch and vertical scales of 400 digital units per inch (long period) and 3200 digital units per inch (short period) are used. Components at each station are arranged LPX, LPY, LPZ, SPZ with long period X at the top and short period Z at the bottom. Time tics are displayed every ten minutes and each hour (GMT) is labeled. The year and day are displayed every six hours.

#### 2. Event Tapes

Seismic events (see data set #6) detected on the long period components by routine manual search of the compressed scale playouts (data set #1) are copied from the original PSE tapes to event tapes containing only time periods when seismic events are observed. Each event tape contains data from one station only; the same time periods are copied in chronological order onto separate tapes for each station. Thus, intervals which may contain no detectable signal at one station are on event tapes because an event was detected at another station.

FIGURE 2

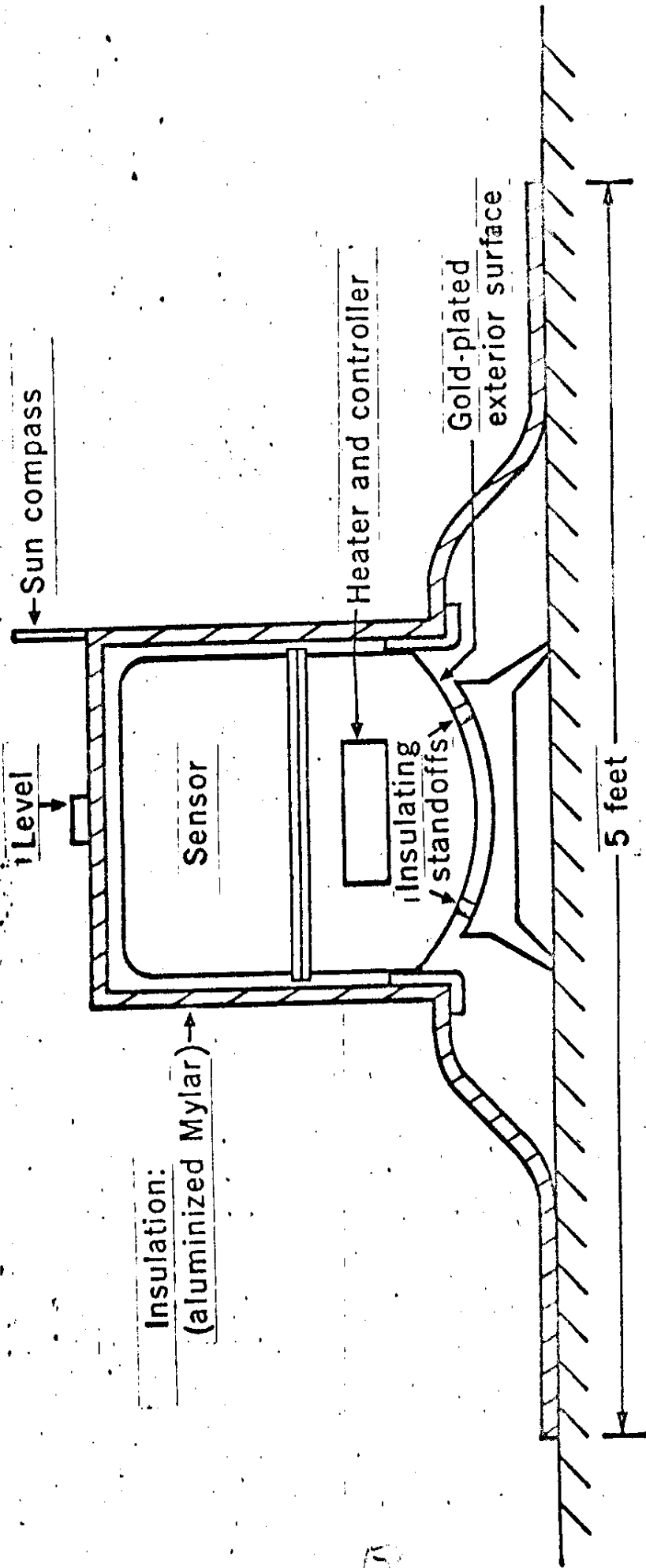
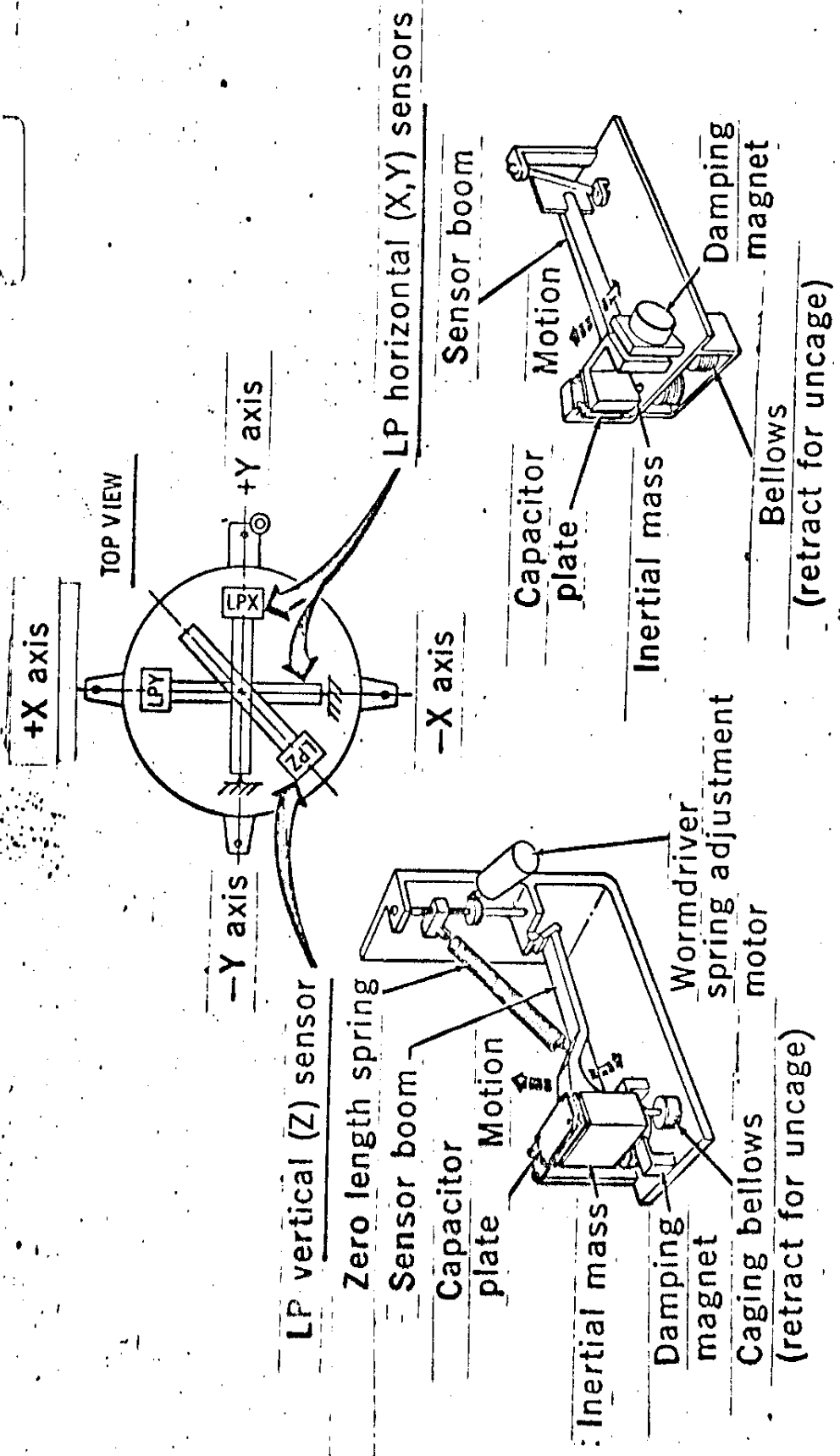


FIGURE 3



Event tapes are numbered serially and are in chronological order. All tapes are labeled with the event tape number, station number, tape number, and total time interval covered by the tape. Listings of the time intervals covered on each tape are supplied with the tapes and can also be found using the next data set (#3). The format with which event tapes are read is described in the section on tape formats.

3. Event Compressed Scale Playouts

Each event tape (data sets #2 and #4) has been plotted in compressed scale to provide a visual display of the contents of each event tape. These playouts have the same format as data set #1 with the exceptions that time is not continuous and an amplitude scale twice that of data set #1 is used.

4. Artificial Impact Event Tapes

Each impact of man-made origin (artificial impacts) has been recorded on a special set of event tapes. These tapes are identical in format to the event tapes (data set #2). Table 3 shows data pertinent to each of the impacts. The reader is directed to the brief station history for information concerning the status of each station at times of impacts. Compressed scale playouts of these events are supplied as part of data set #3.

5. Expanded Playouts

A. Method of Selection: Expanded time scale playouts (usually ten minutes in length) have been generated for the following long-period seismic events.

1. All events observed at station 12 (data set #6) during the period November 20, 1969 to February 5, 1971 with peak-to-peak signal amplitudes of two or more digital units.

Table 3: ARTIFICIAL IMPACT DATA

EVENT	Year, day	hr min sec	Lat.	Long.	Distances (km) and Azimuth from stations			Impact Angle from Horizontal	Impact Heading	Impact Energy, ergs
					12	14	15			
Apollo 12 LM	1969, 324	22 17 17.7	3.94°S	21.21°W	73° 112°	-	-	3.7°	306°	3.36 X 10 <sup>16</sup>
Apollo 13 SIVB	1970, 105	01 09 41.0	2.75°S	27.86°W	135° 274°	-	-	76°	78°	4.63 X 10 <sup>17</sup>
Apollo 14 SIVB	1971, 035	07 40 55.4	8.09°S	26.02°W	172° 207°	-	-	69°	103°	5.54 X 10 <sup>17</sup>
Apollo 14 LM	1971, 038	00 45 25.7	3.42°S	19.67°W	114° 96°	67° 276°	-	3.6°	282°	3.25 X 10 <sup>16</sup>
Apollo 15 SIVB	1971, 210	20 58 42.9	1.51°S	11.81°W	355° 83°	184° 69°	-	62°	97°	4.61 X 10 <sup>17</sup>
Apollo 15 LM	1971, 215	03 03 37.0	26.36°N	0.25°N	1130° 36°	1048° 29°	-	3.2°	284°	3.43 X 10 <sup>16</sup>
Apollo 16 SIVB	1972, 110	21 02 04±4*	2.24±.33°N 24.49±.33°W*				-	79° (?)	78°	4.59 X 10 <sup>17</sup>
Apollo 17 SIVB	1972, 345	20 32 42.3	4.21°S	12.31°W	338° 96°	157° 96°	1032° 209°	55°	97°	4.71 X 10 <sup>17</sup>
Apollo 17 LM	1972, 350	06 50 20.8	19.96°N	30.50°E	1750° 64°	1598° 61°	770° 98°	4.9°	283°	3.14 X 10 <sup>16</sup>

\* tracking signal lost before impact. The origin time was obtained by interpretation of seismic data, and the location was extrapolated from the early trajectory.

2. Most of the events observed at two or three stations during the period February 5, 1971 to April 21, 1972.

B. Annotation Formats

1. Events occurring during the years of 1969 and 1970 were detected by station 12 only. The long-period components (X,Y,Z) have been played out for each event. The annotation is as follows:

YEAR

SKIP X MAG (C)

DAY HR MN SECOND

YEAR = year in which the playout begins

SKIP = tape identification numbers which can be ignored

MAG = multiplicative factor which adjusts the signal amplitude of an event for plotting; this number can be ignored.

C = long-period component, e.g. X = long period X component (LPX)

Y = long period Y component (LPY)

Z = long period Z component (LPZ)

DAY = Julian day of the year on which the playout begins

HR, MN, SECOND = universal time at which the playout begins

Time marks are placed at one minute intervals. The first tick mark indicates the time DAY:HR:MIN+1.

2. Playouts of events occurring during the years of 1971 and 1972 are annotated as follows:

YEAR DAY HR MIN

YEAR = year in which the playout begins

DAY = Julian day of the year on which playout begins

HR MIN = time at which the first minute mark is placed; minute marks are indicated by the vertical tick marks superposed upon the seismic traces.



ST = seismic station at which the signal was detected, e.g.,  
12, 14, 15, 16.

N = 1, 2, 3, or 4, where,

- 1 = long-period X component (LPX)
- 2 = long-period Y component (LPY)
- 3 = long-period Z component (LPZ)
- 4 = short-period Z component (SPZ)

**General Remarks:**

1. In almost all cases the data represented by the expanded time scale playouts are taken directly from the PSE tapes and are not processed in any way (e.g., no filtering, smoothing, signal averaging, etc.).
2. Notations on the seismograms such as phase picks (e.g., P, S,) event classification (e.g., A, B, C, M), etc. are not primary data but interpretations of the data and should be recognized and used as such.
3. Time marks are not corrected for possible clock errors.

**6. Event Catalog**

The event catalog has been compiled from the log of long period events observed on the compressed scale playouts (data set #1). Only events of apparent or probable seismic origin are included. Noise events, such as tilts and thermal noise are not included, nor are events observed exclusively on the short period components. The card deck (or tape in card-image format) contains the same set of events as included on the event tapes (data sets #2 and #4). The cards are arranged in chronological order.

**Card format:**

columns	format	data
3, 4	I2	year
6,7,8	I3	Julian day
10-13	2I2	start hour-minute

columns	format	data
15-18	2I2	stop hour-minute (9999 for overlaps)
37-40	4I1	playout log, = 1, if expanded scale playout is available at station 12 (col. 37) station 14 (col. 38) station 15 (col. 39) station 16 (col. 40)
42-45	4I1	Quality factor <sup>1</sup>  = blank: normal quality  = 1 no data = 2 type 6 time error (see section on tape irregu- larities) = 3 noisy = 4 masked  for station: 12 (col. 42) 14 (col. 43) 15 (col. 44) 16 (col. 45)
77	A1	event type*  A: classified moonquake  M: suspected moonquake  C: suspected impact  Z: mostly short period  X: special type  L: LM impact  S: SIVB impact
79, 80	I2	Moonquake class <sup>2</sup>  (only used in conjunction with type 'A' events)

1 Priority given to smallest number

2 Note that these data are interpretive rather than primary data.

7. PSE TAPES

PSE tapes covering continuous operation of the lunar passive seismic system for a period of one month (April, 1973) are supplies. These tapes are labeled in sequential order from the day of deployment of the instrument as well as with the Julian day and universal start and stop times. The station number and date of tape generation also appear on the tapes. Format for reading of PSE tapes is found in the section on tape formats.

## Section 4: Tape Formats and Irregularities

### FORMATS

Data sets #2 (event tapes), #4 (artificial impact tapes) and #7 (PSE-tapes, one <sup>hour</sup> year of data) formats are described below. All tapes are 7 track, 1/2 inch binary, 800 bpi, odd parity, with standard IBM EOF on 2400 foot reels.

Data is transmitted from the Moon in 64 word frames, one frame every 0.60375 seconds. The ALSEP words are assigned to meet the needs of the scientific instruments in the Apollo Lunar Surface Experiment Package. Those assigned to the Passive Seismic Experiment are given in Table 4. Each ALSEP word is ten bits, or a range from 0 to 1023 digital units. Sensor equilibrium data values are near 500 digital units. Missing ALSEP words in the short period data (2,46, etc.) should be replaced to obtain equal spacing of data points.

Each frame of data is recorded on tape in a logical record consisting of eighteen 36 bit words for format A and nine 36 bit words for format B. The first three of these words contain timing, synchronization, and error information as described below. The remaining words containing the data are described in Table 5 A and B.

Word 1 contains time at the start of the frame in milliseconds from the beginning of the year starting in bit 1 and ending in bit 35 right justified in binary. The time on January 01 at 00 hours 00 minutes 00 seconds is reset to  $8.64 \times 10^7$  msec so that the year starts on day 1 rather than day 0.

Word 2 contains a range station I. D. code in bits 0-3, a bit error rate in bits 4-9, and, starting on day 183, 1973, a time source indicator in bit 35 (last bit); if this bit is set, then computer clock time rather than G. M. T. was used for updating the time code. Several tens of seconds of error in time codes have been noted when the computer clock is used.

Word 3 contains synchronization codes and a frame counter. This word should contain the following in bits 0-9, 12-21 and 24-25.

bit:	0	1	2	3	4	5	6	7	8	9	12	13	14	15	16	17	18	19	20	21	24	25
value:	1	1	1	0	0	0	1	0	0	1	0	0	0	0	1	1	1	0	1	1	0	1

If this is not the case, then sync has been lost with the data and errors may be present. Bits 26-32 contain a frame counter which steps once per frame resetting to zero after 89 frames. A break in the sequence may indicate timing errors.

ALSEP words arranged as shown in Table 5 are packed in the 36 bit words as shown below:

bit 0                      9                      12                      21                      24                      33

ALSEP word A	0	0	ALSEP word B	0	0	ALSEP word C	0	0
--------------	---	---	--------------	---	---	--------------	---	---

Note that in FORMAT B (Table 5-B) the data is compressed by a factor of 2 as all SP ALSEP words are missing. This was done as a cost-saving procedure since the station 12 short period component is not operating.

Each tape begins with two identical label records written in BCD. These records contain four words each as described below:

Word	Parameter
1	experiment I.D. (PS EXP or PSEXPB)
2	ALSEP I. D.
	Sta. 12 = A
	Sta. 14 = B
	Sta. 15 = C
	Sta. 16 = D

Word	Parameter
3	Mission I.D.:
	Sta. 12 = A/S507
	Sta. 14 = A/S509
	Sta. 15 = A/S510
	Sta. 16 = A/S511
4	None or Year (bcd blanks or year)

Event tapes, data sets #2 and #4, differ from normal PSE tapes in that time is not continuous since gaps occur between events. All events are recorded in chronological order. Further information regarding tape encoding and formats is available in NASA documents MSC-00119 and MSC-004434.

TABLE 4

## P.S.E. ALSEP Words

ALSEP Word(s)	Description
even words (except 2, 24*, 46, 56)	short period (SP) vertical data
9, 25, 41, 57	long period X component (LPX)
11, 27, 43, 59	long period Y component (LPY)
13, 29, 45, 61	long period Z component (LPZ)
35 (even frames)	X axis tidal
35 (odd frames)	Z axis tidal
37 (even frames)	Y axis tidal
37 (odd frames)	instrument temperature

\*Apollo 15 only

TABLE 5-A

## ALSEP WORD LOCATIONS

FORMAT A<sup>1</sup>

36 bit word	ALSEP word	USE
4	4, 6, 8	SP, SP, SP
5	9, 10, 11	LPX, SP, LPY
6	12, 13, 14	SP, LPZ, SP
7	16, 18, 20	SP, SP, SP
8	22, 24, 25	SP, SP*, LPX
9	26, 27, 28	SP, LPY, SP
10	29, 30, 32	LPZ, SP, SP
11	33, 34, 35	-, SP, TDLX/Z
12	36, 37, 38	SP, TEMP/TDLY, SP
13	40, 41, 42	SP, LPX, SP
14	43, 44, 45	LPY, SP, LPZ
15	46, 48, 50	-, SP, SP
16	52, 54, 57	SP, SP, LPX
17	58, 59, 60	SP, LPY, SP
18	61, 62, 64	LPZ, SP, SP

\* not for Apollo 15

<sup>1</sup>  
used for all tapes (except station 12 tapes after day 288, 1971)



TABLE 5-B

ALSEP WORD LOCATIONS

FORMAT B\*

36 bit word	ALSEP WORD	USE
4	9, 11, 13	LPX, LPY, LPZ
5	25, 27, 29	LPX, LPY, LPZ
6	33, 35, 37	-, TDLX/Z, TEMP/TDLY
7	41, 43, 45	LPX, LPY, LPZ
8	46, 57, 59	-, LPX, LPY
9	61, -, -	LPZ

\*used only for station 12 starting on day 289, 1971

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## PSE Tape Irregularities

The following is a list of types of irregularities, other than tape reading errors and data glitches, found in PSE tapes. The user of PSE tapes is urged to be aware of their existence.

### 1. Data gap

A normal data gap is represented by a time increment from one logical record to the next by an amount that is an exact multiple of the normal frame rate ( $603.75 \pm 0.05$  ms) and an increment of the frame count corresponding to the time increment. Small data gaps, a few seconds in duration, are quite common, occurring at a rate of several to a few tens of times per day.

### 2. Data overlap

A normal data overlap is represented by a time decrement from one logical record to the next by an amount that is an exact multiple of the normal frame rate and a decrement of the frame count corresponding to the time decrement. Data overlaps are rare, but they do occur in earlier tapes.

### 3. Clock offset due to range station switch

When the range station receiving data from the Moon is switched from one to another, a slight offset in time is observed, which is normally less than 20 milliseconds.

### 4. Sync error

When data from the Moon are not correctly translated onto PSE tapes because of errors in synchronization, it is reflected on the Barker code which is included in each logical record. A data gap of a few frames normally follows a sync error.

5. Zero record

Some logical records are filled with all zeroes. A data gap may or may not occur at the same time.

6. Clock rate error

This occurs when time information based on a computer internal clock is substituted. It can be identified by an abnormal time increment from one frame to the next. The normal time increment per frame is 603 or 604 milliseconds, with 90-frame average in the range of 603.70 to 603.80 milliseconds. The abnormal clock rate is usually less than 0.5% off normal, but larger anomalies are found. The duration of this error is from a few minutes to as much as 6 to 8 hours. An anomalous period usually starts with a small offset in frame count and ends with a large offset in frame count, representing a large clock adjustment. Multiple clock adjustments are found in some cases. The amount of clock adjustment ranges from a fraction of a second to several tens of seconds. The time information on tapes are nearly continuous, thus generating a data gap or a data overlap without clear indication of their existence when the clock is adjusted.

7. Time/frame count error

Simultaneous discontinuities in time and frame count which do not agree with each other occur rather frequently without abnormal clock rate. They occur in pairs or multiples so that the net offset in time and/or frame count is always zero. The offset in time at a discontinuity is often either an exact multiple of the normal frame rate or even seconds. When it is an exact multiple of the normal frame rate, whether the error is in time or in frame count cannot be determined. When it

is not an exact multiple of the normal frame rate, including offsets  
of even seconds, a time error is indicated.

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To Users of Passive Seismic Experiment Event Tapes

The tapes written at NASA Manned Spacecraft Center, Houston, containing data of the Apollo Passive Seismic Experiment (PSE) are being processed by the PSE group at LDGO to extract the time segments containing identified seismic events. These event data are written on a series of event tapes described herein.

The original file of PSE tapes contains one 2400 foot reel of tape per day per lunar station. Lunar seismic events are identified on compressed time-scale playouts (3 inches per hour) of the entire data stream which are made at LDGO. Start and end times of each event are picked. Copying of the event begins 10 minutes before the start time and terminates five minutes after the end time. Overlapping time intervals appear as continuous data on the tapes.

Each event tape contains data from one lunar station only, as with the PSE tapes. The same time intervals are copied in chronological order for all stations. Thus an interval which may contain no detectable signal at one station was placed on the tape because an event was identified during that interval at another station. The number of records on tapes which cover the same time interval at different stations may vary slightly due to differences in the original PSE tapes.

Tapes are numbered serially. Tapes 1 through 25 cover Apollo 12 events from its deployment up to the time of Apollo 14 deployment. Station 14 tapes begin with tape 26. Each tape has a label on its hub giving station number, event tape number, the total time interval covered by that tape and the total number of data records on the tape. A list of tapes and time intervals covered is attached.

The records on the Event tapes are binary records, 800 BPI, odd parity, standard EOF.

Also attached is a portion of the writeup of the program (EVENTP) used at LDGO for writing event tapes. It further describes the formats and conventions used in writing event tapes.



Documentation on each event tape consisted of 1) a listing of the start and end times of each event copied (not including the 10-minute leader and 5-minute following intervals); 2) a serial listing of the data records on each tape giving the final time code in each record. This serial listing contains five pertinent data words referring to each record written on the Event tape. Column one is the record number (the first two records are the header label records); column two is the number of data frames in the record referred to. This number is a good indicator of data gaps - any number less than 90 implies missing data and time gaps found on the MSC input tape within that record; columns 3, 4, and 5 are time code (days, minutes, milliseconds) from the last frame of the specific record referred to by the number in column one.

The main consideration in placing events on the event tapes is that every probable event, no matter how weak, is picked. Visibility of an event depends upon the signal to noise ratio as well as the payout characteristics of the traces used.

Regarding signal to noise ratio, when sunlight falls on the instrument the traces are noisier by perhaps a factor of two than during the night. This is probably mechanical noise induced by temperature changes in nearby ALSEP equipment and the natural surroundings. Also, large impulsive tilts apparently caused by thermal popping of the seismometer shroud are quite frequent. Shortly after sunset, temperatures stabilize at their night time values and these noise sources are absent until the following sunrise. Therefore, weaker events are probably detectable during the night than during the day.

The compressed time scale payout used for picking events consists of a processed velocity-sensitive trace for each seismometer component. Since the weakest events appear as an increase in the background frequency rather than in displacement amplitude, the compressed payouts seem favorable for detection of weak events. All natural events identified by the current criteria as well as events of doubtful and unusual type are included, providing they appear to be of probable natural origin rather than due to instrumental causes.

All picks are made on the long-period components only. Therefore, signals which appear to be natural events on the short-period components are not included unless they are also detectable on the long-period components. However, the short-period data accompanying the long-period picks are included on the event tapes, since all records are standard PSE records containing the same data as found on the PSE tapes. Apollo 12 short-period data reflects the failure of that component.

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Lamont-Doherty Geological Observatory Technical Note

SUBJECT: Long-Period Data Storage Tapes from APOLLO XII

DATE: 10 February 1971

PREPARED BY: Bruce Charles Auld

This report is a description of the data processing plan for Apollo XII long-period seismic data storage tapes, and the accompanying listing compiled at Lamont-Doherty Geological Observatory for distribution to the National Space Science Data Center. The first section is a description of the data format for the LP storage tapes. Following this is a discussion of the mechanics of writing these tapes. The last section is a brief description of the Apollo XII long-period seismometers, their response curve, and the method by which these data are transmitted from the moon to the earth. Any modifications and/or additions to this data processing plan will be published as addenda when required.

## Contents

Introduction

1. Data Format on Storage Tapes
2. Mechanics of Writing Storage Tapes
3. Instrumental Response and Data Transmission from the Apollo XII  
Passive Seismic Experiment

Appendix A - Elapsed Time and the Three-Word Time Code

Appendix B - Two Problems Regarding Apollo XII Long-Period  
Data

## Introduction

The data contained on the long-period event storage tapes are compiled from the ALSEP 1 PSE\* data tapes which are distributed by the Manned Spacecraft Center, MSC, in Houston to the Principal Investigators for the Passive Seismic Experiment. All long-period data of seismologic interest contained on the MSC tapes are condensed and transferred to the long-period event storage tapes. These storage tapes are then made available to other interested investigators.

\*ALSEP 1 PSE = Apollo Lunar Surface Experiments Package #1, Passive Seismic Experiment. This package was deployed during the Apollo XII flight.

## 1. Data Format of Storage Tapes

Each storage tape contains all long-period event data for a time interval specified on the label attached to the face of the tape reel. The data on a storage tape is divided into a series of events which are written in chronological order. Each event is numbered, starting with event number 1, and subdivided into data records which are also numbered, starting with data record number 0, for each event. Each data record is made up of data frames with 16 data words per frame. The data for each event begin approximately 5 minutes before the start of the event and continue 10 minutes after the event has disappeared into the background.

To simplify numbering of the events and data records, each data record is preceded by a 9-word list record. This list record contains all information pertinent to the following data record. The 9 words of the list record contain the following information:

LIST(1) = Event number

LIST(2) = Tape number

LIST(3) = Data record number for the event

LIST(4) - LIST(7) = Start time in days, hours, mins, and secs for the event (not the record).

LIST(8) = relative maximum amplitude of the event (15 is a very small event, 100 is a large, natural event). This is useful only as a guide, and has no quantitative significance. Some list records for events in 1970 do not contain a meaningful number in LIST(8).

LIST(9) = number of words in the data record which follows

The data record which follows is of variable length, but the last list record word gives the number of words to be read in the data record.

Data records are a maximum of 2048 words and a minimum of 16 words in length. They are divided into frames with 16 words per frame. The frame contains the three-word time code, the bit error rate, and four words each of long-period X, Y, and Z data in the following order:

DATA(1) - DATA(3) = three-word time code corresponding to total elapsed time from the first of the year to the beginning of the first data words in the frame (see Appendix A for an explanation of the three-word time code).

DATA(4) = bit error rate. (This is usually zero, but for a frame with erroneous data it may be non-zero).

DATA(5) - DATA(8) = long-period X data

DATA(9) - DATA(12) = long-period Y data

DATA(13) - DATA(16) = long-period Z data

DATA(17) - DATA(32) = second frame

.  
. .  
.

DATA(16 \* N-15) - DATA(16 \* N) = Nth frame where N = 1, 2, ... NN; and NN is LIST(9)/16.

Each frame is supposed to be 0.603773 secs in duration so that a full data record of 128 frames contains 77.283 seconds of long-period data. However, there are occasional data records for which erroneous time has been read from the MSC original tapes and the total elapsed time may be either too long or too short, e. g., tape 1, event 8, batches 4 and 5. See Appendix B for a brief discussion of problems arising from erroneous data contained on the long-period event storage tapes. It is important to point out that erroneous data are usually caused by transmission difficulties between the moon and receiving facilities on earth. These

erroneous data have not been corrected on either the MSC original tapes or the storage tapes and consequently must be eliminated by the individual user.

The dynamic range of the long-period data is 0 to + 1023 with an average D.C. value for each channel of approximately 512 digital units. The expected values of the three-word time code are 0 to 27 for the first word and 0 to 32,767 for words 2 and 3. Erroneous data may cause the first word of the time code to exceed 27, but these data may be ignored.

Accompanying each data storage tape sent to the Space Science Data Center at Goddard is a computer generated listing which gives start, end, and elapsed times for each data record on that tape. The start and end times are calculated from the three-word time codes at the beginning and end frames of each data record and correspond to the start time of these frames. The elapsed time is the difference between the start and end times. Note that the actual elapsed time for the data record is the calculated elapsed time plus 0.604 seconds for the duration of the last frame. A normal calculated elapsed time is 76.678 secs for a full record or actual elapsed time of 77.282 secs, i.e., 128 frames x 0.603773 secs per frame. Variations of  $\pm 2$  or 3 milliseconds are acceptable, but frames which contain larger deviations from the elapsed time than this will usually be found to contain a data drop-out or some other form of erroneous data.

## 2. Mechanics of Writing Storage Tapes

Data records are written on magnetic tape via an unformatted sub-routine\* with data convert on and data translate off, (see IBM form A22-6866-4, Component Description of Magnetic Tape Units, 2400-Series, for a discussion of conversion and translation features). A seven-track head with odd parity and 800 b.p.i. density are employed. The storage tapes are generated on an IBM 2415 Model 1 tape drive connected to an IBM 1130 computer. All words in a data record are 16-bit one word integers written in standard BCDIC.

A data record is written as follows:

- 1.) the data array is entered, starting at the high order bit of the last word in the array, into a data channel,
- 2.) data convert takes the first three 8-bit bytes and converts them into four 6-bit tape characters,
- 3.) these four tape characters are then written on the magnetic tape,
- 4.) the next 24 bits are converted as in step 2 and written as in step 3, etc.

Note that since the 1130 has a 16-bit word, the first data word is written on the first  $2 \frac{2}{3}$  tape characters, the second data word is written on the next  $2 \frac{2}{3}$  tape characters, and the third data word is written on the next  $2 \frac{2}{3}$  tape characters, i.e., three data words for every eight tape characters or six bytes.

The flow of data is illustrated in Figure 1. Figure 1A shows the nine list record words constituting the first record on ALSEP 1 long-period event storage #1 as they appear in core in the 1130. Figure 1B shows how the bits for the last three data words of this array are written on tape as eight tape characters or six bytes. The next three data words are written in the next eight tape characters. After all nine list record words have been written on tape, there is an inter-record gap before the next data record. Note that since  $LIST(9) = 2048$ , the next data record will contain 2048 words. The data record is written in the same manner



the same manner as the list record.

\*This subroutine (MAGTA) writes a data record in reverse order, i.e.,  
the last data word is written first and the first data word is written last.

Core Location*	Binary Contents (16 bits/wd)	Hex	Decimal	Word No. (LIST coefficients)
01FE	0000 1000 0000 0000	0800	2048	9
01FF	0000 0000 0000 0000	0000	0	8
0200	0000 0000 0001 1110	001E	30	7
0201	0000 0000 0000 1100	000C	12	6
0202	0000 0000 0001 0110	0016	22	5
0203	0000 0001 0100 0100	0144	324	4
0204	0000 0000 0000 0000	0000	0	3
0205	0000 0000 0000 0001	0001	1	2
0206	0000 0000 0000 0001	0001	1	1

Figure 1A. 1130 Data Array as It Appears In Core for the First List Record on Tape #ALSEPILP01.

[0000 1000 0000 0000]	[0000 0000 0000 0000]	[0000 0000 0001 1110]	3X16 = 48 bits					
1130 wd. 1	1130 wd. 2	1130 wd. 3						
[0000 1000]	[0000 0000]	[0000 0000]	[0000 0000]	[0000 0000]	[0001 1110]	6X8 = 48 bits		
byte 1	byte 2	byte 3	byte 4	byte 5	byte 6			
[000010]	[000000]	[000000]	[000000]	[000000]	[000000]	[000000]	[011110]	8X6 = 48 bits
t.c.1	t.c.2	t.c.3	t.c.4	t.c.5	t.c.6	t.c.7	t.c.8	

Figure 1B. Conversion of First Three 1130 Words from Core, (i.e., LIST(9)-LIST(7)), into 6 Bytes and 8 Tape Characters

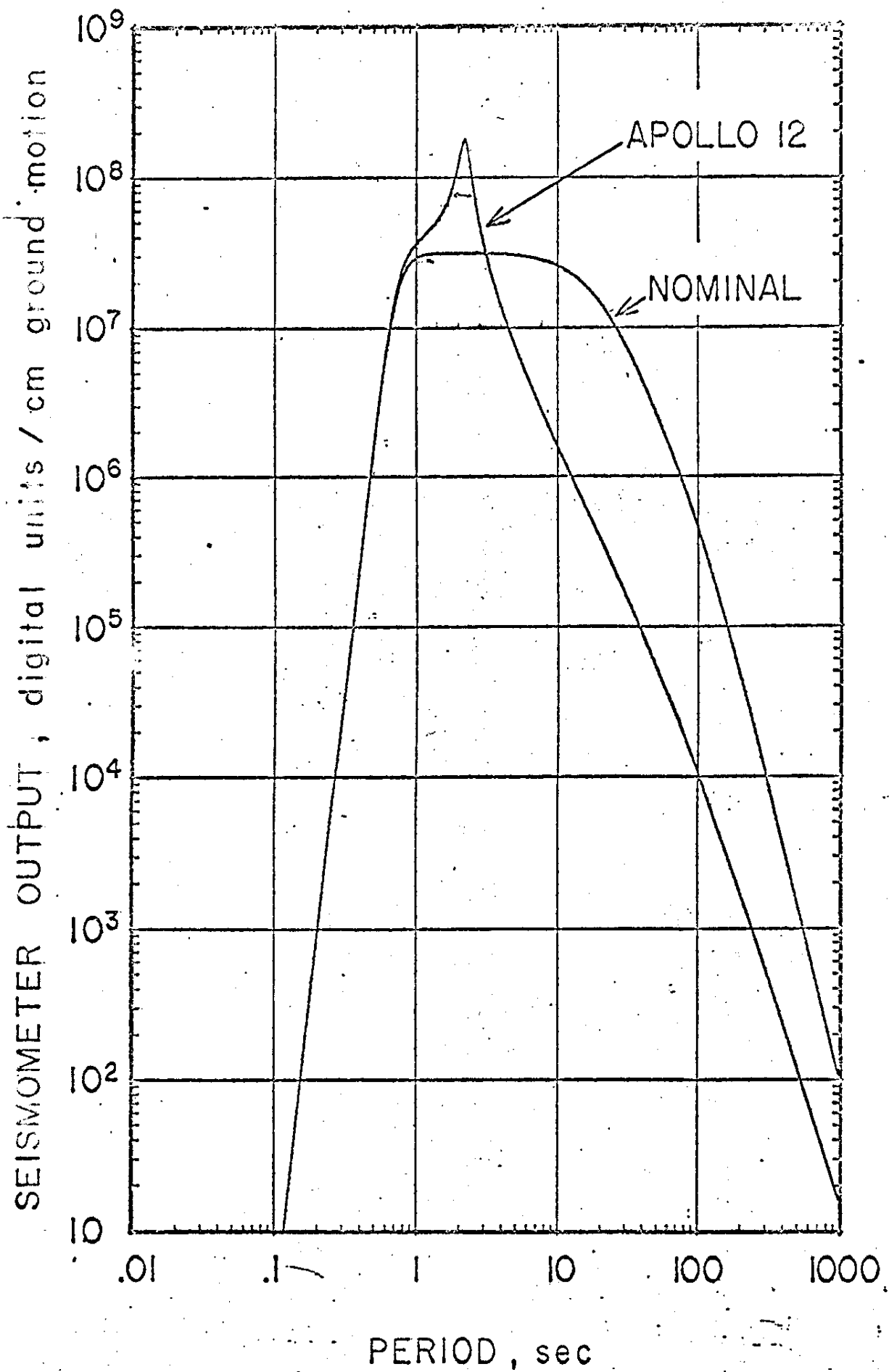
\*Core start is arbitrarily chosen

### 3. Data Transmission from the ALSEP 1 PSE

This brief description of the ALSEP 1 seismometers and the method of data transmission from the APOLLO 12 site to MSC in Houston is given so that users of these data may understand the relationship between actual ground motion on the moon and the digital numbers which appear on the data tapes.

A response curve which is applicable to all three long-period seismometers is given in Figure 2. This curve gives ground displacement in digital units for periods from 0.1 seconds to 1000 seconds on a log-log scale. The peaked curve labelled APOLLO 12 is the mode in which these long-period data are recorded. The ALSEP 1 is unstable in the nominal mode and consequently this mode has not been used since the early days of the experiment. The ALSEP 1 amplifiers may be commanded to reduce the gains by -10, -20, and -30 db from the magnification shown. However, normal operation is at 0 db and any reductions in gain will be noted in the tape event listings supplied with ALSEP 1 event storage tapes.

The ALSEP data transmitter generates an S-Band carrier frequency which is received at any of several NASA recording stations on earth. The r.f. bit stream and time-of-day (GMT) are recorded on range tapes. The time is generated at the range station and represents the time which the signal was received on earth. The range tapes are converted to computer compatible tapes at the Manned Spacecraft Center in Houston. This computer compatible tape is used to produce the PSE tapes which are distributed to Lamont-Doherty Geological Observatory. The tapes supplied to L-DGO have been corrected for some data drop outs; however, there still remain some erroneous data on these tapes.



-figure 2

The event storage tapes supplied to the National Space Science Data Center contain selected intervals of data copied at Lamont from the PSE tapes. Accompanying the event storage tapes sent to the data center at Goddard is a computer generated listing which gives the start, end, and elapsed times of each data record and event on the tapes.

## APPENDIX A

## Elapsed Time and the Three-Word Time Code

NOTE: This explanation of the three-word time code was written for internal use at Lamont-Doherty Geological Observatory, and the example used is inaccessible to users of the storage tapes. However, the technique for deriving total elapsed time is still applicable to data obtained from the ALSEP1 long-period storage tapes. Total elapsed time is begun at 0000 hours GMT, 01 Jan and is restarted each year.

Elapsed Time and the Three-Word Time Code:

Total elapsed time in milliseconds is stored in Houston as a single 36-bit 7090 word. The three-word (1130) time code is derived from the 36-bit (7090) word. The procedure is as follows:

1) Take the 7090 word, e.g.,

0011 1100 0000 1111 0011 0111' 0000 1111 0011...(1-7090  
word)\*

and store as three 16-bit words on tape by placing two zeros before each 6 bits, left to right, e.g.,

0	F	0	0		
<u>0000</u>	1111	<u>0000</u>	0000	=	3840
3	C	3	7		
<u>0011</u>	1100	<u>0011</u>	0111	=	15415
3	3	3	3		three 16-bit (1130) words
<u>0000</u>	0011	<u>0011</u>	0011	=	0819

(Underlined zeros are artificially introduced and are not part of the original 36-bit 7090 word.) These three 16-bit words are written on ALSEP storage tapes and can be read with the 1130 by either EDIT1 or MAGTA\*\*

2.) The first word of the three-word time code is obtained from the first six non-underlined bits of the first (top) 1130 word. The second word of the three-word time code is obtained from the next 15 non-underlined bits, counting left to right, top to bottom. The third word is obtained from the last 15 non-underlined bits. Thus, the three-word time code in the 1130 would be

0	0	0	F	
<u>0000</u>	<u>0000</u>	<u>0000</u>	1111	= 15

0	1	E	6	
<u>0000</u>	0001	1110	0110	= 486
7	0	F	3	
<u>0111</u>	0000	1111	0011	= 28915

(Underlined bits are artificially introduced and should all be zeros.)

3.) The three-word time code is converted back to total elapsed time in milliseconds by multiplying the first word by  $(2^{15})^2$ , the second word by  $(2^{15})$ , and adding these to the third word, e.g.,

15 * 32768 <sup>2</sup>	=	16106127360	
486 * 32768	=	15925248	
28915 * 1	=	<u>28915</u>	
		16122081523	= elapsed time in milliseconds

4.) The time in days, hours, minutes, and seconds is found by finding the largest day which will fit into the elapsed time, then the largest hour, and finally the largest minute. The remainder is in milliseconds, e.g.,

	16122081523	
186 * 24 * 60 * 60 * 1000 =	<u>16070400000</u>	= day 186
	51681523	
14 * 60 * 60 * 1000 =	<u>50400000</u>	= hour 14
	1281523	
21 * 60 * 1000 =	<u>1260000</u>	= min. 21
	21523	= sec. 21.523

i.e., 186<sup>D</sup> 14<sup>H</sup> 21<sup>M</sup> 21.523<sup>S</sup>

A Fortran routine called EDIT3 has been written to convert the three 16-bit 1130 words (read backwards from ALSEP tape with MAGTA, data convert off) into the three-word time code.



\*The example is taken from the start of the third physical record on ALSEP tape 51571 (first physical record after the two header records).

\*\*The output from EDIT1 is the three-word time code. The output from MAGTA is the three 16-bit 1130 words described in step 1.) Note that the data array from a MAGTA read is backward when compared to an EDIT1 read. Also note that data convert is set off for a MAGTA read.

## APPENDIX B

## Two Problems Regarding ALSEP Long-Period Data

NOTE: This explanation of erroneous data and incorrect times was written for internal use at Lamont-Doherty Geological Observatory and the examples used are inaccessible to users of the storage tapes supplied to the Space Science Data Center. However, the principles involved remain the same and do apply to the long-period event storage tapes.

## Two Problems Regarding the Digital Plotting of

## ALSEP Long-Period Data

SUMMARY. This report outlines the minimum techniques necessary to eliminate erroneous data points and incorrect times from ALSEP long-period digital data for the purpose of digital plotting. It is recommended that data be checked point by point and that each frame time be used to calculate time difference between frames.

Erroneous Data Points. Erroneous LP data have been found in four places: 1) in the frame before a frame with a non-zero B.E.R. (see example 1), 2) in a frame full of zeros, including zero time and zero B.E.R. (see example 2), 3) in a frame full of zeros, including zero B.E.R., but with a correct time (see example 3), and 4) as an isolated erroneous value (see example 4).

The simplest and most effective way to eliminate these erroneous data is to compare each data value with its predecessor. It has been found that if these two values differ by less than 13, the result will be, with two exceptions, an acceptable data stream. The two exceptions to this are 1) during gain changes, and 2) during extremely large events (see example 7). In the latter case, a difference of 30 generally will produce acceptable data. The first exception occurs so rarely that it need not be incorporated into a general comparison routine.

Incorrect Times. Incorrect times have been found in three places: 1) as zeros in a frame full of zeros, including zero B.E.R. (see example

2), 2) as a repeated time (see example 5), and 3) where data and time have been deleted without any zeros showing in the data (see example 6). In this last case, the time is actually correct, but as a consequence, the data cannot be assumed always continuous in time.

The persistence of incorrect times on the tape make it necessary to calculate time before every frame is plotted, i.e., every 12 long-period words. Needless to say, this will consume a great deal of computer time.

// XEQ AULIS

3 working time code

B.E.R.

LTX

LTY

LTPZ

Code	LTX	LTY	LTPZ
212465011774	522	521	494
212465011775	522	521	494
212465011776	522	521	494
212465011777	522	521	494
212465011778	522	521	494
212465011779	522	521	494
212465011780	522	521	494
212465011781	522	521	494
212465011782	522	521	494
212465011783	522	521	494
212465011784	522	521	494
212465011785	522	521	494
212465011786	522	521	494
212465011787	522	521	494
212465011788	522	521	494
212465011789	522	521	494
212465011790	522	521	494
212465011791	522	521	494
212465011792	522	521	494
212465011793	522	521	494
212465011794	522	521	494
212465011795	522	521	494
212465011796	522	521	494
212465011797	522	521	494
212465011798	522	521	494
212465011799	522	521	494
212465011800	522	521	494
212465011801	522	521	494
212465011802	522	521	494
212465011803	522	521	494
212465011804	522	521	494
212465011805	522	521	494
212465011806	522	521	494
212465011807	522	521	494
212465011808	522	521	494
212465011809	522	521	494
212465011810	522	521	494
212465011811	522	521	494
212465011812	522	521	494
212465011813	522	521	494
212465011814	522	521	494
212465011815	522	521	494
212465011816	522	521	494
212465011817	522	521	494
212465011818	522	521	494
212465011819	522	521	494
212465011820	522	521	494
212465011821	522	521	494
212465011822	522	521	494
212465011823	522	521	494
212465011824	522	521	494
212465011825	522	521	494
212465011826	522	521	494
212465011827	522	521	494
212465011828	522	521	494
212465011829	522	521	494
212465011830	522	521	494
212465011831	522	521	494
212465011832	522	521	494
212465011833	522	521	494
212465011834	522	521	494
212465011835	522	521	494
212465011836	522	521	494
212465011837	522	521	494
212465011838	522	521	494
212465011839	522	521	494
212465011840	522	521	494
212465011841	522	521	494
212465011842	522	521	494
212465011843	522	521	494
212465011844	522	521	494
212465011845	522	521	494
212465011846	522	521	494
212465011847	522	521	494
212465011848	522	521	494
212465011849	522	521	494
212465011850	522	521	494
212465011851	522	521	494
212465011852	522	521	494
212465011853	522	521	494
212465011854	522	521	494
212465011855	522	521	494
212465011856	522	521	494
212465011857	522	521	494
212465011858	522	521	494
212465011859	522	521	494
212465011860	522	521	494
212465011861	522	521	494
212465011862	522	521	494
212465011863	522	521	494
212465011864	522	521	494
212465011865	522	521	494
212465011866	522	521	494
212465011867	522	521	494
212465011868	522	521	494
212465011869	522	521	494
212465011870	522	521	494
212465011871	522	521	494
212465011872	522	521	494
212465011873	522	521	494
212465011874	522	521	494
212465011875	522	521	494
212465011876	522	521	494
212465011877	522	521	494
212465011878	522	521	494
212465011879	522	521	494
212465011880	522	521	494
212465011881	522	521	494
212465011882	522	521	494
212465011883	522	521	494
212465011884	522	521	494
212465011885	522	521	494
212465011886	522	521	494
212465011887	522	521	494
212465011888	522	521	494
212465011889	522	521	494
212465011890	522	521	494
212465011891	522	521	494
212465011892	522	521	494
212465011893	522	521	494
212465011894	522	521	494
212465011895	522	521	494
212465011896	522	521	494
212465011897	522	521	494
212465011898	522	521	494
212465011899	522	521	494
212465011900	522	521	494

← 1 ALSEP FRAME (TIME, B.E.R.)  
← L.P. data only.

example # 01



272405411634 0 522 522 522 493 494 494 494 497 497 497 497 497  
 272405412237 0 522 522 522 494 494 494 494 497 497 497 497 497  
 272405412841 0 522 522 522 493 493 493 493 497 497 497 497 497  
 272405413445 0 522 522 522 493 493 493 493 497 497 497 497 497  
 272405414049 0 521 521 521 494 494 494 494 497 497 497 497 497  
 272405414652 0 522 522 522 494 494 494 494 497 497 497 497 497  
 272405415256 0 522 522 522 494 494 494 494 497 497 497 497 497  
 272405415860 0 522 522 522 493 493 493 493 497 497 497 497 497  
 272405416464 0 521 521 521 494 494 494 494 497 497 497 497 497  
 272405417067 0 521 521 521 494 494 494 494 497 497 497 497 497  
 272405417671 0 522 522 522 493 493 493 493 497 497 497 497 497  
 272405418275 0 522 522 522 493 493 493 493 497 497 497 497 497  
 272405418879 0 522 521 521 494 494 494 494 497 497 497 497 497  
 272405419482 0 521 521 521 494 494 494 494 497 497 497 497 497  
 272405420086 0 522 522 522 494 494 494 494 497 497 497 497 497  
 272405420690 0 522 522 522 493 493 493 493 497 497 497 497 497  
 272405421294 0 521 521 521 494 494 494 494 497 497 497 497 497  
 272405421897 0 521 521 521 494 494 494 494 497 497 497 497 497  
 272405422501 0 522 522 522 493 493 493 493 497 497 497 497 497  
 272405423105 0 522 521 521 494 494 494 494 497 497 497 497 497  
 272405423709 0 521 521 521 494 494 494 494 497 497 497 497 497  
 272405424312 0 521 521 521 494 493 493 493 497 497 497 497 497

10 3 2 344  
 272405424916 0 521 522 522 2048 494 494 494 494 497 497 497 497 497  
 272405425520 0 522 522 522 494 494 494 494 497 497 497 497 497  
 272405426124 0 522 522 522 494 494 494 494 497 497 497 497 497  
 272405426727 0 522 522 522 493 493 493 493 497 497 497 497 497  
 272405427331 0 522 522 522 494 494 494 494 497 497 497 497 497  
 272405427935 0 521 522 522 494 494 494 494 497 497 497 497 497  
 272405428539 0 521 521 522 493 493 493 493 497 497 497 497 497  
 272405429142 0 522 522 522 493 493 493 493 496 496 496 496 496  
 272405430746 0 0 0 0 0 0 0 0 0 0 0 0 0  
 272405431349 0 0 0 0 0 0 0 0 0 0 0 0 0  
 272405431952 0 0 0 0 0 0 0 0 0 0 0 0 0  
 272405432556 0 521 521 521 494 494 494 494 497 497 497 497 497  
 272405433161 0 521 522 522 494 494 494 494 497 497 497 497 497  
 272405433765 0 521 522 522 494 494 494 494 497 497 497 497 497  
 2724055 601 0 522 522 521 494 494 494 494 497 497 497 497 497  
 2724055 1204 0 521 521 522 494 494 494 494 497 497 497 497 497  
 2724055 1808 0 521 522 522 494 494 494 494 497 497 497 497 497  
 2724055 2412 0 522 522 521 493 493 493 493 497 497 497 497 497  
 2724055 3015 0 521 521 521 494 494 494 494 497 497 497 497 497  
 2724055 3619 0 521 521 522 494 494 494 494 497 497 497 497 497  
 2724055 4223 0 522 522 522 494 494 494 494 497 497 497 497 497  
 2724055 4827 0 521 521 521 494 494 494 494 497 497 497 497 497  
 2724055 5431 0 521 522 522 494 494 494 494 497 497 497 497 497  
 2724055 6034 0 522 522 522 494 494 494 494 497 497 497 497 497  
 2724055 6638 0 522 522 522 494 494 494 494 497 497 497 497 497  
 2724055 7242 0 521 521 521 494 494 494 494 497 497 497 497 497  
 2724055 7845 0 521 522 522 493 493 493 493 496 496 496 496 496  
 2724055 8449 0 522 522 522 494 494 494 494 497 497 497 497 497  
 2724055 9053 0 521 521 521 494 494 494 494 497 497 497 497 497  
 2724055 9657 0 521 521 521 494 494 494 494 497 497 497 497 497  
 272405510260 0 522 522 522 494 494 494 494 497 497 497 497 497  
 272405510863 0 522 522 522 494 494 494 494 497 497 497 497 497  
 272405511467 0 522 522 522 494 494 494 494 497 497 497 497 497  
 272405512071 0 521 521 521 494 494 494 494 497 497 497 497 497  
 272405512674 0 521 521 521 493 493 493 493 496 496 496 496 496  
 272405513278 0 521 522 522 494 494 494 494 497 497 497 497 497

sample # 03











Apollo 12

D-57811

RECORD LENGTH = 1 OF FILE 1  
24 BYTES

1C 1D 256525456360 000517000014 003663000001 0425222525516

*G V R N T*  
*335*



417 ( 2497)  
425 ( 2545)  
433 ( 2593)  
441 ( 2641)  
449 ( 2689)  
457 ( 2737)  
465 ( 2785)  
473 ( 2833)  
481 ( 2881)  
489 ( 2929)  
497 ( 2977)  
505 ( 3025)  
513 ( 3073)  
521 ( 3121)  
529 ( 3169)  
537 ( 3217)  
545 ( 3265)  
553 ( 3313)  
561 ( 3361)  
569 ( 3409)  
577 ( 3457)  
585 ( 3505)  
593 ( 3553)  
601 ( 3601)  
609 ( 3649)  
617 ( 3697)  
625 ( 3745)  
633 ( 3793)  
641 ( 3841)  
649 ( 3889)  
657 ( 3937)  
665 ( 3985)  
673 ( 4033)  
681 ( 4081)  
689 ( 4129)  
697 ( 4177)  
705 ( 4225)  
713 ( 4273)  
721 ( 4321)  
729 ( 4369)  
737 ( 4417)  
745 ( 4465)  
753 ( 4513)  
761 ( 4561)  
769 ( 4609)  
777 ( 4657)  
785 ( 4705)  
793 ( 4753)  
801 ( 4801)  
809 ( 4849)



Apollo 12 D-57813

RECORD LENGTH = 1 OF FILE 1  
24 BYTES

IC 1) 256525456360 047046000014 003667000001 134033435220



Apollo 12 D-57814

RECORD LENGTH = 1 OF FILE 1  
24 BYTES

383 12 1176  
ELEMENT 256525456360 000515000014 003670000000 216214216214

1( 1)



917( 2497)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
925( 2545)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
933( 2593)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
941( 2641)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
949( 2689)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
957( 2737)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
965( 2785)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
973( 2833)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
981( 2881)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
989( 2929)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
997( 2977)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
505( 3025)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
513( 3073)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
521( 3121)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
529( 3169)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
537( 3217)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
545( 3265)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
553( 3313)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
561( 3361)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
569( 3409)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
577( 3457)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
585( 3505)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
593( 3553)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
601( 3601)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
609( 3649)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
617( 3697)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
625( 3745)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
633( 3793)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
641( 3841)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
649( 3889)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
657( 3937)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
665( 3985)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
673( 4033)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
681( 4081)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
689( 4129)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
697( 4177)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
705( 4225)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
713( 4273)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
721( 4321)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
729( 4369)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
737( 4417)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
745( 4465)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
753( 4513)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
761( 4561)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
769( 4609)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
777( 4657)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
785( 4705)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
793( 4753)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
801( 4801)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII
809( 4849)	IIIIIIIIIIIIIIIIIIII	IIIIIIIIIIIIIIIIIIII

Apr 11/13 D-57815

RECORD LENGTH = 1 OF FILE 1  
24 BYTES  
256525456360 047047000014 003670000001 140045532773  
*Event* *2007* *12* *13-1* *day* *149*





SJOB 16:21:09  
 BASS IN MSS SI TY  
 SEXEC DPHEX7 RS  
 INPUT TAPE ON MSS

X USE APOLLO TIMES PROGRAM  
 TO GET TIME

APOLLO 12  
 PASSIVE SEISMIC EVENT

0-28102

69-0996-03A  
 01/01/76-01/13/76

DATA INPUT	1	2	3	LENGTH	18	BYTES
FILE 1	0003E00	0001E00	00100677	23E6		
FILE 2	0003E00	0001E00	00100677	23E6		
FILE 3					3645	BYTES

( 0 )	0067723E	8A02FFC0	00E240E0	50032C7A	C7A88347	AC7A8060	2EC82482	C7AC7A80	0082C7AC	7A800000
( 40 )	00067726	42A32FFC	00E240E0	C50882C7	7AC7A804	7AC7A804	080C0008	2C7AC7AC	00082C7A	87A80000
( 80 )	00066772	89FA02FF	000E240E	EC51082C	C7A47A80	C7A47A80	642EC824	82C7A47A	80008347	A07A8000
( 120 )	00000677	2AE9A02F	FC000E24	00510823	47A07A88	2C78C7A8	35480082	082C78C7	A800082C	78C7A800
( 160 )	00000677	7205A02F	FFC000E2	40EC5208	2C78C7A8	82C78C7A	818C2EC8	2482C78C	7A800082	C78C7A80
( 200 )	00000005	72FE31AD	2FFC000E	240EE528	82C78C7A	82C78C7A	4A18080C	00082C78	C7A40008	2C78C7A4
( 240 )	00000000	67732CDA	02FFC000	E240EC53	82C78C7A	82C78C7A	74A0002E	C82882C7	887A4000	82C7847A
( 280 )	40000000	05773469	A02FFC00	0E240EC5	3882C784	7A482C78	47A400C8	0C00082C	7847A400	082C7847
( 320 )	A0000000	0057736C	4A02FFC0	00E240E0	54082C78	47A082C7	847A0000	2EC82482	C7847A00	0082C784
( 360 )	7A000000	00577339	20A02FFC	000E240E	C54882C7	807A082C	7807A000	080C0008	2C7807A0	00082C78
( 400 )	C7A00000	00567773	B7CA02FF	FC000E24	EC550638	87807A00	682F4824	8387807A	00008387	A0000838
( 440 )	807A0000	00006677	5DD7A02F	FC000E24	0EC55883	876C7A08	2C76C7A0	04080C00	083826C7	A000082C
( 480 )	76C7AC00	00000667	74033A02	FFC000E2	40EC5608	2C76C7A0	83C77C7A	00002EC8	2482C76C	7A000082
( 520 )	C76C7AC0	00000006	77428FA0	2FFC000E	240EC568	82C76C7A	083C77C7	A0000810	00083C77	C7A00008
( 560 )	3C77C7AC	00000000	67744EBA	02FFC000	E240EC57	083877C7	A083C77C	7A003C2E	C82482C7	6C7A0000
( 600 )	82C76C7A	00000000	06774747	A02FFC00	7882C780	7A083878	7A083878	07A00448	10000838	7807A000
( 640 )	082C7847	A0000000	0067749A	2A02FFC0	00E240E0	58082C78	47A082C7	847A003C	2EC82482	C7847A00
( 680 )	0882C788	7A800000	0067749B	FEA02FFC	00E240E0	00E240E0	00E240E0	787A082C	080C0008	2C7887A0
( 720 )	00082C78	C7A00000	00006774	E5AA02FF	C000E240	EC59082C	78C7A082	C78C78C3	342EC824	82C78C7A
( 760 )	00082C78	5C7A0000	00000677	5036A02F	FFC000E2	0EC59882	08C7A080	00090C00	082C78C7	082C78C7
( 800 )	A000082C	78C7A000	00000677	75311A02	FC000E24	40EC5A08	307987A0	83079C7A	03782F48	2483078C
( 840 )	7A000082	C78C7A00	00000006	725560A0	2FFC000E	240EC5A8	82C7A07A	082C7A07	A00E080C	00082C7A
( 880 )	47A00008	2C7A47A0	00000000	06775C9A	A02FFC00	E240EC5B	08287A87	A08287A8	7A02A02E	C8248287
( 920 )	AC7A0000	8287AC7A	00000000	66775A24	A02FFC00	0E240EC5	888287AC	7A48247A	C7A40008	0C000820
( 960 )	7AC7A000	08207AC7	A4000000	006775C8	00E240E0	00E240E0	5C081C7A	C7A485C7	2EC82480	0C000820
( 1000 )	C7AC7A40	0080C7AC	7A400000	0006775E	00E240E0	00E240E0	C5C880C7	AC7A4810	7847A400	08100008
( 1040 )	0C7B47A8	00080C7A	00080C7A	00006776	138A02FF	C000E240	EC5D0808	47AC7A80	3C2EC824	0C2EC824
( 1080 )	804AC7A8	80008047	AC7A8000	00006776	6394A02F	FC000E24	00C5D880	07AC7A88	07AC7A88	11480C00
( 1120 )	08007AC7	A80007FC	7887A800	00000667	765EFA02	FFC000E2	40EC5E07	FC787A88	7FC787A8	82382EC8
( 1160 )	247EC7AC	7A80007E	AC7AC7A8	00000006	77684BA0	2FFC000E	240EC5E8	7FC7887A	87EC7AC7	A804080C
( 1200 )	0007EC7A	C7A80007	EC7AC7A8	00000000	6776AA7A	02FFC000	E240EC5F	08007B47	A88007AC	7A804C2F
( 1240 )	8R285007	847A8000	8007B07A	00000000	06776D0A	A02FFC00	0E240EC5	F88007AC	C7AC007A	C7AC08C8
( 1280 )	00008084	7AC7AC00	08047AC7	AC000000	006776F5	EA02FFC0	00E240E0	6008047A	87AC8087	A87AC064
( 1320 )	2EC82480	87A47AC0	0080C7A4	7AC00000	00067771	8AA02FFC	000E240E	C60880C7	A47AC80C	7A07AC35
( 1360 )	880C0008	0C7A07AC	00080C78	C7AC0000	00067777	416A02FF	C000E240	EC61080C	78C7AC80	C78C7AC0
( 1400 )	C82EC824	8C78C7A0	C00080C7	8C7AC000	00000677	767A02FF	FC000E24	0EC61880	C78C7AC8	0C78C7AC
( 1440 )	00080600	080C78C7	AC00080C	78C7AC00	00000667	778C0A02	FFC000E2	40EC6208	0C7887AC	80C7887A
( 1480 )	C1B82EC8	2480C784	7AC00080	C7807AC0	00000006	777B29A0	2FFC000E	240EC628	80C76C7A	C80C76C7
( 1520 )	AC1B880C	00082076	C7AC0008	2076C7AC	00000000	677D885A	02FFC000	E240EC63	082076C7	AC82476C
( 1560 )	7AC0542E	C8248287	6C7AC000	82876C7A	C0000000	06777FE0	AC2FFC00	0E240EC6	3882C768	7AC82C76
( 1600 )	47AC0448	1000082C	7647AC00	082C7607	AC000000	00677823	CA02FFC0	00E240E0	64082C76	07AC82C7
( 1640 )	4C7AC16C	2EC82482	C74C7AC0	0082C7AC	7AC00000	00067784	98A02FFC	000E240E	C64882C7	4C7AC82C
( 1680 )	74C7AC00	080C0008	2C74C7AC	00082C74	C7AC0000	00066778	6F4A02FF	C000E240	EC65082C	74C7AC84
( 1720 )	074C7AC0	002EC824	84074C7A	C0008407	4C7AC000	00000677	894FA02F	FC000E24	0EC65884	474C7AC8
( 1760 )	447467AC	00080C00	084474C7	AC000844	74C7AC00	00000667	788ABA02	FFC000E2	40EC6608	4474C7AC
( 1800 )	84474C7A	C0542EC8	24848760	7AC00084	47607AC0	00000006	778E08A0	2FFC000E	240EC668	8487647A
( 1840 )	C8487647	AC08060C	00684876	87AC0008	4476C7AC	00000000	6779063A	02FFC000	E240EC67	084476C7
( 1880 )	AC84476C	7AC0542E	C8248447	08248447	C7AC0000	84476C7A	C0000000	067792BF	AA02FFC0	7884476C
( 1920 )	7AC34076	C7AC1E05	0C000840	76C7AC00	08407807	AC000000	00677951	AA02FFC0	00E240E0	68084078
( 1960 )	47AC8407	87AC00FC	2EC82484	07887AC0	0084078C	7AC00000	00067797	76A02FFC	000E240E	C68882C7
( 2000 )	8C7AC82C	78C7AC00	080C0008	2C78C7AC	C0082C78	C7AC0000	00006779	9D2A02FF	C000E240	EC69082C
( 2040 )	7C7AC832	C78C7A82	282EC824	82C78C7A	800082C7	8C7A8000	00000677	9C2D02FF	FC000E24	0EC69882
( 2080 )	C7C7A888	2C7A07A8	3FC80C00	082C7A07	A800082C	7A47A800	00000667	79E89A02	FFC000E2	40EC6A08
( 2120 )	2C7A47A8	82C7A47A	40002EC8	2482C7A4	7A400082	C7A87A40	00000006	77A0E5A0	2FFC000E	240EC6A8

( 2160)	82C7A87A	482C7A87	A400080C	00062C7A	87A40008	2C7A87A4	00000000	677A341A	02FFC000	F240EC6B
( 2200)	082C7A87	A42C7A87	7A40002E	C82482C7	A87A4000	8287A87A	40000000	0677A59C	A02FFC00	0E240EC6
( 2240)	888287A8	7A43287A	87A41188	00000828	7A87A400	08347A87	A4000000	00677A7F	8A02FFC0	00E240EC
( 2280)	5C08247A	87A48247	A87A4124	2EC52482	407A87A4	008207A8	7A400000	000677AA	54A02FFC	000E240E
( 2320)	6C83207	A87A4820	7A87A000	08000008	207A87A4	008181C7A	87A00000	000677A4	C80A02FF	C000E240
( 2360)	EC40080C	7A87A080	C7A82A00	002E0824	80C7A87A	000080C7	A87A0000	00000677	A0B0A02F	FC000E24
( 2400)	0EC40C80	C7A87A03	0C7A407A	2F430C00	080C7A47	A0000820	7A47A000	00000067	78167A02	FFC000E2
( 2440)	40EC4108	207A47A0	8207A47A	00342EC8	248207A4	7A000080	C7A47A00	00000006	72B33C3A	2EFC000E
( 2480)	240EC418	8207A47A	08207A87	0030C80C	9008207A	87A00008	207A87A0	00000000	677B61FA	02FFC000
( 2520)	E240EC42	48207A87	A08207A8	7A004C2E	C8248207	A87A0000	8207A87A	00000000	0677B87A	A02FFC00
( 2560)	0E240EC4	28207A87	7A08207A	87A02B88	00000820	487A0000	008247A8	00000000	00677B8D	3A02FFC0
( 2600)	0E240EC4	4308247A	87A08247	A87A0348	2EC82482	7A87A000	008287A8	7A000000	000677BD	6A02FFC0
( 2640)	000E240E	4388287	A87A0828	7A87A03F	C80C0008	287A87A0	0006287A	87A00000	0006677B	F8EA02FF
( 2680)	C000E240	EC44082C	7A87A082	C7A87A02	902EC824	82C7A87A	000082C7	A87A4000	00000677	C1EAA02F
( 2720)	C000E240	0EC44882	C7A87A48	2C7AC7A4	38880C20	082C7AC7	A400082C	7AC7A400	00000067	7C445A02
( 2760)	FFC000E2	40EC4508	2C7AC7A4	82C7AC7A	40002EC8	2482C7AC	7A400082	C7AC7A40	00000006	77C6A1A0
( 2800)	2FFC000E	240EC458	82C7AC7A	482C7AC7	A400080C	00082C7A	C7A40008	387AC7A4	00000000	677C8FDA
( 2840)	02FFC000	E240EC46	082C7AC7	A482C7AC	7A40002E	C82482C7	AC7A4000	40000000	40000000	0677C858
( 2880)	02FFC000	0E240EC4	6882C7AC	7A482C7A	C7A40008	000082C7	7AC7A400	082C7AC7	40000000	00677CDB
( 2920)	4A02FFC0	00E240EC	47982C7A	87A482C7	A87A4000	2F882482	C7A87A40	0082C7A8	7A400000	000677DD
( 2960)	10A02FFC	00E240EC	C47882C7	A87A482C	7A87A412	480C0008	407AC7A4	0008407A	C7A40000	0000677D
( 3000)	25CA02FF	C00E240E	EC480840	7AC7A484	07AC7A40	002EC824	4A07AC7A	40008447	AC7A4000	00000677
( 3040)	D4C7A02F	FC000E24	0EC48884	47AC7A48	447AC7A4	07080C40	08447AC7	A4000848	7AC7A400	00000067
( 3080)	7D223FA0	FFC000E2	40EC4908	487AC7A4	8487AC7A	00002EC8	288687AC	7A000084	87AC7A00	00000006
( 3120)	7D979FA0	2FFC000E	240EC498	8487AC7A	48487AC7	A400080C	00984C7A	C7A40008	4C7AC7A4	00000000
( 3160)	5770DB8A	02FFC000	E240EC4A	084C7AC7	A484C7A8	7A43402E	C82884C7	A87A4000	84C7A87A	40000000
( 3200)	0577DE36	A02FFC00	0E240EC4	A884C7A4	7A484C7A	47A41288	0000084C	7A47A400	084C7A47	40000000
( 3240)	00677E99	A02FFC00	00E240EC	4B084C7A	47A484C7	A07A0150	2EC82484	C7A07A00	0084C78C	7A000000
( 3280)	00677E2E	EA02FFC0	00E240EC	C4B884C7	8C7A484C	78C7A400	880C0008	4C78C7A4	00084C78	C7A00000
( 3320)	0006777E	54AA02FF	C00E240E	EC4E0840	78C7A084	C78C7A08	062E0824	84C78C7A	000084C7	8C7A4000
( 3360)	00000677	E7A5A02F	FC000E24	0EC46884	C78C7A08	4878C7A0	00080C00	084878C7	A0000848	7947A000
( 3400)	00000657	7EA01A02	FFC000E2	40EC4608	487907A0	8447907A	00021F88	24844790	7A000084	47907A00
( 3440)	00000606	77EC5D40	2FFC000E	240EC408	8447907A	484478C7	4000480C	00084478	C7A40008	4078C7A4
( 3480)	00000000	677EEB9A	02FFC000	E240EC4E	084078C7	A484078C	7A403C2E	C8248407	8C7A4000	82C78C7A
( 3520)	40000000	0677F114	A02FFC00	0E240EC4	E882C78C	7A4A0008	000082C7	7887A400	08387887	
( 3560)	A4000000	00677F37	0A02FFC0	00E240EC	4F083878	87A482C7	887A43FC	2EC82882	C7887A40	0082C788
( 3600)	7A400000	000677F5	CDA02FFC	000E240E	C4F8882C7	847A482C	7847A408	480C0008	2C7807A4	00082C78
( 3640)	07A40000	00								
FILE 1	RECORD	1583	LENGTH	3645	BYTES					
( 0)	0430035B	2102FFC0	00E240EC	5B88047D	C8088047	DC808000	7B086C80	47DC8080	008047DC	80800000
( 40)	00430038	0F102FFC	000E240E	C5C08007	DC808800	7E080815	CA647588	007E0808	0008007E	08080000
( 80)	000430D3	A59102FF	C00E240E	EC5C87FC	7E08087F	7E080800	7FC7E080	80007FC7	E4808000	
( 120)	00004300	3CC5102F	FC000E24	0EC5D07F	C7E48087	FC7E4808	158A6475	87FC7E48	080007FC	7E880C00
( 160)	00000430	D3F21102	FFC000E2	40EC5D87	FC7E880C	7F87E80C	C3407B08	6C7F87E8	8080007F	87EC8080
( 200)	00000043	0D417C10	2FFC000E	240EC5E0	7F87F080	C7F87F08	0C2ACA64	7587F87F	080C0007	F87F480C
( 240)	00000004	30D43D81	02FFC000	E240EC5E	87F87F48	0C7F87F4	80C16878	086C7E87	F480C000	7F87F480
( 280)	C0000000	430D4634	102FFC00	0E240EC5	F07F87F8	80C7F87F	880C184A	647587FC	7F480C00	07FC7F48
( 320)	0C000000	0430D489	0102FFC0	00E240EC	5F87FC7F	480C7FC7	F480C214	7B086C7F	C7F480C0	007FC7F4
( 360)	80C00000	00430D4A	E8102FFC	000E240E	C6007FC7	F480C7FC	7F480C1E	0A647587	FC7F480C	0008007F
( 400)	080C0000	000430D4	D47102FF	C00E240E	EC608800	7F808C80	47F080C3	647B086C	8007F080	C0008047
( 440)	F080C000	000430D0	4FA3102F	FC000E24	0EC61080	47F080C8	047F080C	050A6475	88047F08	0C000804
( 480)	7F080C00	00000430	D51FF102	FFC000E2	40EC6188	047F080C	8047F080	C1047B08	6C8047FD	80C00080
( 520)	87F080C0	00000043	0D545B10	2FFC000E	E240EC62	8087F080	88087EC8	081BA464	7588087E	C8080008
( 560)	087EC808	00000004	30D56B61	02FFC000	E240EC62	8087F080	88087EC8	081BA464	7588087E	C8080008
( 600)	80C7E808	80000000	430D5912	102FFC00	0E240EC6	3080C7EC	80880C7E	8808146A	6475880C	7E880800
( 640)	080C7E48	08000000	0430D5B6	E102FFC0	00E240EC	63880C7E	480880C7	E4808180	78086C80	C7E08080
( 680)	080C7E08	80000000	00430D5D	CA102FFC	000E240E	C6480C07	E080880C	7E080831	4A647588	0C7E0808
( 720)	00080C7E	08080000	000430D6	025102FF	FC000E24	EC64880C	0E64880C	0E64880C	007B086C	80C7E080
( 760)	C00080C7	E080C000	0000430D	6281102F	FC000E24	0EC65080	87E080C8	087E080C	000A6475	88087E08
( 800)	C0008080	F080C000	00000430	D64D0102	FFC000E2	40EC6588	087E080C	8087E080	C0007B08	6C8087E4
( 840)	30C00808	87E880C0	00000043	0D673910	2FFC000E	240EC660	8087E880	C087E880	CC1B4A64	7588047E
( 880)	C80C0008	047EC80C	00000004	30D69941	02FFC000	E240EC66	88047F08	0C8047F0	80C2E07B	086C8047
( 920)	F080C000	8047F480	C0000000	430D6B60	102FFC00	E240EC66	708047F4	80C8047F	480C1CCA	64758804
( 960)	7F880C00	08047F88	08000000	0430D6E4	C102FFC0	00E240EC	6788047F	C80C8047	FC80C1DC	7B086C80
( 1000)	47FC80C0	008047FC	80C00000	00430D70	A8102FFC	000E240E	C6808007	FC80C00F	8A647588	
( 1040)	007FC80C	0008007F	C80C0000	000430D7	303102FF	C00E240E	E6688800	7FC80C80	07FC80C0	007B086C







































APOLLO 14 LM/ALSEP

SEISMIC EVENT TAPES

71-008C-04B

THIS DATA SET HAS BEEN RESTORED. IT ORIGINALLY CONTAINED 307 7-TRACK 800 BPI TAPES, WRITTEN IN BINARY. THERE ARE 37 RESTORED TAPES. TWO OF THE ORIGINAL TAPES WERE NOT RESTORABLE, THEY ARE D013744 AND D013745. THE DR TAPES ARE 3480 CARTRIDGES AND THE DS TAPES ARE 9-TRACK 6250 BPI. FOR THE MOST PART THE TAPES WERE STACKED IN TIME SEQUENTIAL ORDER, BUT THE LAST FEW DR/DS TAPES ARE A LITTLE OUT OF ORDER. THE ORIGINAL TAPES WERE CREATED ON A PDP15 COMPUTER AND WERE RESTORED ON THE MRS. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR005742	DS005742	D013653	1	02/06/71 - 02/19/71
		D057816	2	02/07/71 - 04/20/72
		D013652	3	02/19/71 - 02/24/71 (a)
		D013641	4	02/24/71 - 03/08/71
DR005743	DS005743	D013640	1	03/08/71 - 03/13/71
		D013639	2	03/14/71 - 03/21/71
		D013638	3	03/21/71 - 03/25/71 (b)
		D013642	4	03/25/71 - 04/02/71
		D013658	5	04/02/71 - 04/05/71
		D013657	6	04/05/71 - 04/14/71
		D013656	7	04/14/71 - 04/17/71 (c)
		D013655	8	04/17/71 - 04/28/71
DR005744	DS005744	D013654	1	04/28/71 - 05/02/71 (d)
		D013643	2	05/02/71 - 05/12/71
		D013644	3	05/12/71 - 05/16/71 (e)
		D013647	4	05/16/71 - 05/25/71
		D013645	5	05/25/71 - 05/27/71
		D013646	6	05/27/71 - 05/31/71 (f)
		D013635	7	06/01/71 - 06/07/71
		D013634	8	06/07/71 - 06/09/71
DR005745	DS005745	D013633	1	06/10/71 - 06/12/71 (g)
		D013637	2	06/12/71 - 06/24/71 (h)
		D013636	3	06/24/71 - 06/27/71
		D013697	4	06/27/71 - 07/05/71
		D013698	5	07/05/71 - 07/09/71
		D013699	6	07/10/71 - 07/21/71 (i)
		D013700	7	07/21/71 - 07/31/71
		D013701	8	08/02/71 - 08/17/71

\* Ref. to 69-099C-03 A for further documentation



## 71-008C-04B

DR#	DS#	D#	FILES	TIME SPAN
DR005746	DS005746	D013702	1	08/17/71 - 08/24/71
		D013703	2	08/25/71 - 08/31/71
		D013704	3	08/31/71 - 09/13/71
		D013650	4	09/13/71 - 09/20/71
		D013649	5	09/20/71 - 09/26/71 (j)
		D013648	6	09/26/71 - 09/30/71
		D013651	7	09/30/71 - 10/05/71 (k)
		D013743	8	10/06/71 - 10/15/71
DR005747	DS005747	D013835	1	10/23/71 - 10/25/71
		D013836	2	10/25/71 - 10/28/71
		D013837	3	10/28/71 - 10/31/71 (l)
		D013838	4	10/31/71 - 11/05/71 (m)
		D013839	5	11/05/71 - 11/09/71
		D013840	6	11/09/71 - 11/16/71
		D013841	7	11/16/71 - 11/17/71
		D013830	8	11/17/71 - 11/20/71
DR005748	DS005748	D013829	1	11/20/71 - 11/22/71
		D013828	2	11/22/71 - 11/26/71
		D018344	3	11/26/71 - 12/03/71
		D013843	4	12/03/71 - 12/07/71
		D013842	5	12/08/71 - 12/15/71
		D013831	6	12/15/71 - 12/17/71
		D013832	7	12/17/71 - 12/20/71
		D013833	8	12/20/71 - 12/27/71
DR005749	DS005749	D013834	1	12/27/71 - 12/31/71
		D013886	2	01/01/72 - 01/06/72 (n)
		D013887	3	01/07/72 - 01/13/72
		D013888	4	01/13/72 - 01/20/72 (o)
		D013878	5	01/20/72 - 01/31/72
		D013879	6	01/31/72 - 02/10/72
		D013880	7	02/10/72 - 02/21/72
		D013883	8	02/21/72 - 03/06/72 (p)
DR005750	DS005750	D014104	1	03/07/72 - 03/15/72 (q)
		D014105	2	03/15/72 - 03/23/72 (r)
		D014106	3	03/23/72 - 04/04/72
		D057817	4	04/20/72 - 06/23/73
		D013877	5	04/04/72 - 04/12/72
		D013876	6	04/12/72 - 04/18/72
		D013875	7	04/18/72 - 04/27/72
		D013882	8	04/27/72 - 04/30/72
DR005751	DS005751	D013707	1	04/30/72 - 05/05/72
		D013706	2	05/05/72 - 05/09/72
		D013705	3	05/09/72 - 05/12/72
		D013881	4	05/12/72 - 05/14/72
		D013885	5	05/14/72 - 05/16/72
		D013884	6	05/16/72 - 05/19/72
		D013556	7	05/19/72 - 05/25/72
		D013555	8	05/26/72 - 05/29/72

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DR#	DS#	D#	FILES	TIME SPAN	
DR005752	DS005752	D013554	1	05/29/72 - 06/03/72	
		D013561	2	06/03/72 - 06/06/72	(s)
		D013560	3	06/06/72 - 06/09/72	
		D013549	4	06/09/72 - 06/12/72	
		D013550	5	06/12/72 - 06/16/72	
		D013551	6	06/16/72 - 06/23/72	
		D013552	7	06/23/72 - 06/25/72	
		D013553	8	06/26/72 - 06/28/72	
DR005753	DS005753	D013564	1	06/28/72 - 07/04/72	
		D013563	2	07/04/72 - 07/08/72	
		D013562	3	07/08/72 - 07/11/72	
		D013566	4	07/11/72 - 07/18/72	
		D013565	5	07/18/72 - 07/21/72	
		D013559	6	07/21/72 - 07/25/72	
		D013558	7	07/25/72 - 08/04/72	(t)
		D013557	8	08/04/72 - 08/11/72	
DR005754	DS005754	D014102	1	08/11/72 - 08/15/72	(u)
		D014103	2	08/16/72 - 08/18/72	
		D014099	3	08/18/72 - 08/22/72	
		D014100	4	08/22/72 - 08/26/72	
		D014101	5	08/27/72 - 09/06/72	(v)
		D014107	6	09/06/72 - 09/16/72	
		D014108	7	09/16/72 - 09/23/72	
		D014241	8	09/23/72 - 09/30/72	(w)
		D014242	9	09/30/72 - 10/14/72	(x)
DR005755	DS005755	D015898	1	10/15/72 - 10/21/72	
		D014243	2	10/21/72 - 10/26/72	
		D015899	3	10/26/72 - 11/05/72	(y)
		D015902	4	11/05/72 - 11/09/72	(z)
		D015903	5	11/09/72 - 11/13/72	
		D015904	6	11/13/72 - 11/17/72	
		D015772	7	11/17/72 - 11/25/72	
		D015771	8	11/25/72 - 12/05/72	
DR005756	DS005756	D015770	1	12/05/72 - 12/09/72	
		D015901	2	12/09/72 - 12/14/72	
		D015900	3	12/14/72 - 12/21/72	(aa)
		D016121	4	12/21/72 - 12/31/72	
		D016120	5	01/01/73 - 01/05/73	
		D016119	6	01/05/73 - 01/12/73	
		D016187	7	01/12/73 - 01/21/73	
		D016188	8	01/22/73 - 02/01/73	
DR005757	DS005757	D016189	1	02/01/73 - 02/10/73	
		D016190	2	02/10/73 - 02/17/73	
		D016191	3	02/17/73 - 03/08/73	
		D016628	4	03/09/73 - 03/20/73	(bb)
		D016627	5	03/20/73 - 03/27/73	(cc)
		D016626	6	03/27/73 - 04/03/73	(dd)
		D016811	7	04/03/73 - 04/13/73	
		D016796	8	04/13/73 - 04/28/73	(ee)

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DR#	DS#	D#	FILES	TIME SPAN	
.005758	DS005758	D016812	1	04/28/73 - 05/03/73	(ff)
		D016810	2	05/03/73 - 05/19/73	
		D016802	3	05/19/73 - 05/28/73	
		D016815	4	05/28/73 - 06/02/73	
		D016816	5	06/02/73 - 06/14/73	(gg)
		D016817	6	06/14/73 - 06/25/73	(hh)
		D016809	7	06/25/73 - 06/27/73	
		D016808	8	06/28/73 - 07/03/73	
DR005759	DS005759	D016807	1	07/03/73 - 07/10/73	(ii)
		D016823	2	07/10/73 - 07/18/73	(jj)
		D016822	3	07/19/73 - 07/24/73	(kk)
		D016799	4	07/24/73 - 07/30/73	(ll)
		D016798	5	07/30/73 - 08/02/73	
		D016797	6	08/02/73 - 08/09/73	
		D016803	7	08/09/73 - 08/16/73	(mm)
		D016804	8	08/16/73 - 08/29/73	(nn)
DR005760	DS005760	D016821	1	08/29/73 - 09/02/73	(oo)
		D016806	2	09/02/73 - 09/10/73	(pp)
		D016805	3	09/10/73 - 09/19/73	(qq)
		D016814	4	09/19/73 - 10/03/73	
		D016813	5	10/03/73 - 10/09/73	(rr)
		D017591	6	10/10/73 - 10/16/73	
		D016801	7	10/16/73 - 10/30/73	
		D016800	8	10/30/73 - 11/09/73	(ss)
DR005761	DS005761	D016818	1	11/09/73 - 11/22/73	
		D016819	2	11/23/73 - 12/01/73	(tt)
		D016820	3	12/01/73 - 12/08/73	
		D017592	4	12/09/73 - 12/20/73	
		D016882	5	12/20/73 - 12/24/73	
		D016883	6	12/24/73 - 12/31/73	
		D017576	7	01/01/74 - 01/07/74	
		D017575	8	01/07/74 - 01/19/74	
		D017585	9	01/19/74 - 01/29/74	
DR005815	DS005815	D017586	1	01/29/74 - 02/06/74	
		D017587	2	02/06/74 - 02/15/74	
		D017572	3	02/15/74 - 02/22/74	
		D017571	4	02/24/74 - 03/01/74	
		D017584	5	03/02/74 - 03/11/74	(uu)
		D017583	6	03/11/74 - 03/20/74	(vv)
		D017582	7	03/21/74 - 03/30/74	(ww)
		D017581	8	03/30/74 - 04/16/74	
		D017580	9	04/16/74 - 04/25/74	
DR005816	DS005816	D017579	1	04/25/74 - 05/10/74	(xx)
		D017578	2	05/11/74 - 05/20/74	(yy)
		D017577	3	05/21/74 - 06/02/74	
		D017593	4	06/03/74 - 06/16/74	
		D017594	5	06/16/74 - 06/28/74	
		D017590	6	06/28/74 - 07/03/74	
		D017589	7	07/03/74 - 07/14/74	
		D017588	8	07/14/74 - 07/20/74	

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DR#	DS#	D#	FILES	TIME SPAN
DR005817	DS005817	D017573	1	07/21/74 - 08/06/74
		D017574	2	08/06/74 - 08/11/74
		D019083	3	08/11/74 - 08/22/74
		D019082	4	08/22/74 - 08/29/74
		D019081	5	08/29/74 - 09/08/74
		D019088	6	09/09/74 - 09/17/74
		D019087	7	09/17/74 - 09/24/74
		D019166	8	09/25/74 - 10/06/74
		D019165	9	10/07/74 - 10/16/74 (zz)
DR005818	DS005818	D019164	1	10/17/74 - 10/26/74
		D019094	2	10/27/74 - 11/04/74
		D019095	3	11/04/74 - 11/12/74
		D019084	4	11/12/74 - 11/19/74
		D019090	5	11/19/74 - 11/26/74
		D019089	6	11/27/74 - 12/09/74
		D019086	7	12/09/74 - 12/14/74
		D019085	8	12/14/74 - 12/25/74 (aaa)
		D019093	9	12/25/74 - 12/31/74
DR005819	DS005819	D019092	1	01/02/75 - 01/12/75
		D019091	2	01/12/75 - 01/24/75
		D019368	3	01/24/75 - 01/30/75
		D019367	4	01/31/75 - 02/12/75
		D019366	5	02/12/75 - 02/22/75
		D057819	6	02/13/75 - 03/08/76
		D022095	7	02/23/75 - 03/08/75
		D022096	8	03/08/75 - 03/24/75 (bbb)
		D022195	9	03/25/75 - 04/05/75
DR005820	DS005820	D022196	1	04/06/75 - 04/14/75
		D022192	2	04/14/75 - 04/23/75
		D022193	3	04/23/75 - 05/07/75
		D022194	4	05/07/75 - 05/16/75
		D022191	5	05/17/75 - 06/02/75
		D057818	6	05/22/75 - 01/13/76
		D022197	7	06/03/75 - 06/16/75
		D022455	8	06/16/75 - 06/22/75
		D022456	9	06/22/75 - 06/26/75
DR005821	DS005821	D022652	1	06/27/75 - 07/07/75 (ccc)
		D022653	2	07/07/75 - 07/30/75
		D022654	3	07/30/75 - 08/09/75
		D022655	4	08/09/75 - 08/20/75 (ddd)
		D023018	5	08/20/75 - 09/02/75 (eee)
		D023019	6	09/02/75 - 09/12/75
		D023020	7	09/12/75 - 09/27/75 (fff)
		D023624	8	09/27/75 - 10/05/75 (ggg)
		D023625	9	10/05/75 - 10/20/75

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DR#	DS#	D#	FILES	TIME SPAN
DR005822	DS005822	D023626	1	10/21/75 - 10/31/75
		D023627	2	10/31/75 - 11/11/75
		D023628	3	11/13/75 - 11/26/75
		D023629	4	11/26/75 - 12/02/75 (hhh)
		D023718	5	12/02/75 - 12/11/75 (iii)
		D023717	6	12/11/75 - 12/23/75
		D023716	7	12/24/75 - 12/31/75
		D028106	8	01/01/76 - 01/13/76
		D028107	9	01/13/76 - 01/17/76 (jjj)
DR005823	DS005823	D028108	1	02/19/76 - 02/29/76
		D031826	2	03/01/76 - 03/05/76
		D031934	3	03/05/76 - 03/11/76
		D031935	4	03/11/76 - 03/16/76
		D031936	5	03/16/76 - 03/17/76
		D031963	6	05/23/76 - 05/27/76
		D057821	7	05/28/76 - 09/13/77
		D031980	8	05/28/76 - 06/04/76
		D031981	9	06/04/76 - 06/08/76
DR005824	DS005824	D032044	1	06/10/76 - 06/21/76 (kkk)
		D032045	2	06/21/76 - 06/25/76
		D032046	3	06/25/76 - 07/02/76 (lll)
		D032047	4	07/02/76 - 07/10/76
		D032048	5	07/10/76 - 07/21/76
		D032049	6	07/21/76 - 07/28/76
		D032050	7	07/29/76 - 07/31/76 (mmm)
		D032290	8	07/31/76 - 08/10/76 (nnn)
		D057820	9	08/08/76 - 05/15/77
DR005825	DS005825	D032291	1	08/11/76 - 08/19/76
		D032292	2	08/19/76 - 08/26/76 (ooo)
		D032293	3	08/26/76 - 08/31/76
		D032294	4	08/31/76 - 09/11/76
		D032295	5	09/11/76 - 09/20/76 (ppp)
		D032296	6	09/20/76 - 09/23/76
		D032297	7	09/24/76 - 10/05/76
		D032298	8	10/05/76 - 10/08/76 (qqq)
		D032299	9	11/12/76 - 11/15/76
DR005826	DS005826	D032300	1	11/15/76 - 11/19/76
		D032301	2	11/19/76 - 11/28/76
		D032302	3	11/28/76 - 12/06/76
		D032303	4	12/06/76 - 12/15/76
		D032928	5	12/15/76 - 12/26/76
		D032929	6	12/26/76 - 12/31/76 (rrr)
		D032892	7	01/01/77 - 01/07/77
		D032893	8	01/08/77 - 01/13/77
		D032894	9	01/13/77 - 01/22/77

DR#	DS#	D#	FILES	TIME SPAN
005827	DS005827	D032895	1	01/22/77 - 01/28/77
		D032896	2	01/28/77 - 02/07/77
		D032897	3	02/07/77 - 02/20/77
		D032898	4	02/20/77 - 03/02/77
		D032899	5	03/02/77 - 03/06/77
		D032900	6	03/07/77 - 03/20/77
		D033688	7	03/20/77 - 03/31/77 (sss)
		D032946	8	03/31/77 - 04/01/77 (ttt)
		D032947	9	04/01/77 - 04/05/77
DR005828	DS005828	D032948	1	04/05/77 - 04/14/77
		D032949	2	04/14/77 - 04/18/77 (uuu)
		D032950	3	04/18/77 - 04/26/77
		D032951	4	04/26/77 - 04/28/77
		D032952	5	04/28/77 - 05/02/77 (vvv)
		D032953	6	05/02/77 - 05/05/77
		D033798	7	08/27/77 - 09/06/77 (www)
		D033799	8	09/08/77 - 09/11/77
		D033800	9	09/11/77 - 09/16/77
DR005829	DS005829	D033801	1	09/16/77 - 09/30/77
		D032924	2	03/20/77 - 03/31/77
		D033696	3	06/05/77 - 06/23/77
		D033695	4	06/12/77 - 06/15/77
		D033708	5	02/13/77 - 03/09/77
		D033707	6	05/29/77 - 09/13/77
		D033706	7	05/22/77 - 01/13/78
		D033705	8	08/17/77 - 08/27/77
		D033704	9	08/13/77 - 08/17/77
DR005830	DS005830	D033703	1	08/04/77 - 08/13/77
		D033702	2	07/24/77 - 07/30/77 (xxx)
		D033701	3	07/20/77 - 07/24/77
		D033700	4	07/17/77 - 07/20/77
		D033699	5	07/11/77 - 07/16/77
		D033698	6	07/03/77 - 07/11/77
		D033697	7	06/23/77 - 06/30/77
		D033690	8	05/12/77 - 05/16/77 (yyy)
		D033692	9	05/23/77 - 05/27/77 (zzz)
DR005831	DS005831	D033693	1	05/27/77 - 06/05/77
		D033694	2	06/06/77 - 06/12/77
		D033691	3	05/17/77 - 05/22/77
		D033689	4	05/05/77 - 05/12/77

- (a) D013652 - 2 ERRORS, REC. 12, 15, FILE 1
- (b) D013638 - 1 ERROR, REC. 343, FILE 1
- (c) D013656 - 2 ERRORS, REC. 62, 64, FILE 1
- (d) D013654 - 1 ERROR, REC. 1562, FILE 1
- (e) D013644 - 9 ERRORS, REC. 129, 445, 447, 573-575, 886-888, FILE 1
- (f) D013646 - 1 ERROR, REC. 14, FILE 1
- (g) D013633 - 2 ERRORS, REC. 127, 128, FILE 1
- (h) D013637 - 1 ERROR, REC. 89, FILE 1

- (i) D013699 - 1 ERROR, REC. 369, FILE 1
- (j) D013649 - 2 ERRORS, REC. 862, 863, FILE 1
- (k) D013743 - 15 ERRORS, REC. 4, 29, 30, 60, 66, 73, 193, 239, 319, 589, 776, 1028, 1401, 1412, 1428, FILE 1
- (l) D013837 - 1 ERROR, REC. 71, FILE 1
- (m) D013838 - 18 ERRORS, REC. 8-12, 14-16, 18-26, 144, FILE 1
- (n) D013886 - 2 ERRORS, REC. 70, 79, FILE 1
- (o) D013888 - 1 ERROR, REC. 216, FILE 1
- (p) D013883 - 1 ERROR, REC. 59, FILE 1
- (q) D014104 - 1 ERROR, REC. 352, FILE 1
- (r) D014105 - 3 ERRORS, REC. 11, 30, 32, FILE 1
- (s) D013561 - 1 ERROR, REC. 168, FILE 1
- (t) D013558 - 4 ERRORS, REC. 1-4, FILE 1
- (u) D014102 - 1 ERROR, REC. 8, FILE 1
- (v) D014101 - 1 ERROR, REC. 163, FILE 1
- (w) D014241 - 1 ERROR, REC. 50, FILE 1
- (x) D014242 - 1 ERROR, REC. 180, FILE 1
- (y) D015899 - 6 ERRORS, REC. 252, 558, 560, 561, 565, 1452, FILE 1
- (z) D015902 - 14 ERRORS, REC. 239, 254, 257, 259, 275, 432, 442, 450, 473, 502, 550, 560, 581, 588, FILE 1
- (aa) D015900 - 23 ERRORS, REC. 303, 305, 309, 318, 319, 322, 325-327, 331, 333, 344, 352, 360, 361, 369, 378, 379, 382-384, 732, 851, FILE 1
- (bb) D016628 - 3 ERRORS, REC. 139, 140, 182, FILE 1
- (cc) D016627 - 5 ERRORS, REC. 13, 15, 16, 235, 1054, FILE 1
- (dd) D016626 - 6 ERRORS, REC. 154-157, 281, 282, FILE 1
- (ee) D016796 - 3 ERRORS, REC. 1-3, FILE 1
- (ff) D016812 - 1 ERROR, REC. 3, FILE 1
- (gg) D016816 - 1 ERROR, REC. 1181, FILE 1
- (hh) D016817 - 2 ERRORS, REC. 6, 1430, FILE 1
- (i) D016807 - 3 ERRORS, REC. 659, 660, 1264, FILE 1
- (jj) D016823 - 1 ERROR, REC. 1511, FILE 1
- (kk) D016822 - 9 ERRORS, REC. 1409-1412, 1467-1469, 1471, 1536, FILE 1
- (ll) D016799 - 15 ERRORS, REC. 7, 236-240, 539, 667, 826, 938, 1103, 1120, 1164, 1248, 1553, FILE 1
- (mm) D016803 - 1 ERROR, REC. 119, FILE 1
- (nn) D016804 - 6 ERRORS, REC. 3, 6, 16, 1011, 1103, 1131, FILE 1
- (oo) D016821 - 7 ERRORS, REC. 98, 105, 107, 116, 121, 123, 132, FILE 1
- (pp) D016806 - 4 ERRORS, REC. 6, 373, 411, 1295, FILE 1
- (qq) D016805 - 1 ERROR, REC. 410, FILE 1
- (rr) D016813 - 8 ERRORS, REC. 182, 187, 191, 221, 250, 1219, 1351, 1352, FILE 1
- (ss) D016800 - 16 ERRORS, REC. 502, 826-829, 832-842, FILE 1
- (tt) D016819 - 1 ERROR, REC. 1234, FILE 1
- (uu) D017584 - 1 ERROR, REC. 229, FILE 1
- (vv) D017583 - 1 ERROR, REC. 264, FILE 1
- (ww) D017582 - 11 ERRORS, REC. 394-404, FILE 1
- (xx) D017579 - 3 ERRORS, REC. 196-198, FILE 1
- (yy) D017578 - 1 ERROR, REC. 391, FILE 1
- (zz) D019165 - 1 ERROR, REC. 736, FILE 1
- (aaa) D019085 - 1 ERROR, REC. 271, FILE 1
- (bbb) D022096 - 1 ERROR, REC. 155, FILE 1
- (ccc) D022652 - 7 ERRORS, REC. 23, 213, 670, 784, 928, 1055, 1531, FILE 1
- (ddd) D022655 - 1 ERROR, REC. 135, FILE 1
- (eee) D023018 - 1 ERROR, REC. 116, FILE 1
- (fff) D023020 - 1 ERROR, REC. 91, FILE 1
- (ggg) D023624 - 1 ERROR, REC. 45, FILE 1
- (hhh) D023629 - 8 ERRORS, REC. 5, 41, 69, 71, 73, 75, 76, 85, FILE 1
- (iii) D023718 - 2 ERRORS, REC. 58, 103, FILE 1
- (jjj) D028107 - 1 ERROR, REC. 19, FILE 1
- (kkk) D032044 - 12 ERRORS, REC. 111, 112, 181, 201, 234, 1447, 1518, 1533,

1537, 1549, 1553, 1566, FILE 1  
(lll) D032046 - 14 ERRORS, REC. 125, 186, 289, 416, 469, 480, 507, 508,  
535, 537, 919, 923, 941, 946, FILE 1  
(mmm) D032050 - 5 ERRORS, REC. 499-501, 503, 505, FILE 1  
(nnn) D032290 - 2 ERRORS, REC. 511, 1449, FILE 1  
(ooo) D032292 - 1 ERROR, REC. 52, FILE 1  
(ppp) D032295 - 3 ERRORS, REC. 164, 436, 438, FILE 1  
(qqq) D032298 - 1 ERROR, REC. 40, FILE 1  
(rrr) D032929 - 16 ERRORS, REC. 620, 798, 867-872, 920, 1206-1212, FILE 1  
(sss) D033688 - 5 ERRORS, REC. 29-32, 443, FILE 1  
(ttt) D032946 - 1 ERROR, REC. 122, FILE 1  
(uuu) D032949 - 1 ERROR, REC. 16, FILE 1  
(vvv) D032952 - 1 ERROR, REC. 70, FILE 1  
(www) D033798 - 4 ERRORS, REC. 7, 54, 55, 60, FILE 1  
(xxx) D033702 - 1 ERROR, REC. 924, FILE 1  
(yyy) D033690 - 1 ERROR, REC. 22, FILE 1  
(zzz) D033692 - 1 ERROR, REC. 221, FILE 1



Apollo 17 D-57816

RECORD LENGTH = 1 24 FILE BYTES 1  
334 1971  
1( 1) 256525456360 000516000016 003663000000 031064756041

RECORD = 1682 OF FILE 1  
LENGTH = 9720 BYTES

105( 1) 107562435514 2402000000000 704403543210 407040704070 377040703704 407437644074 407640743760 407040704074  
17( 97) 40737044070 37640704070 113440744010 407451304074 407437644074 407437644074  
25( 145) 407040704070 407040703764 407037044070 240200000000 704403543220 407437644074  
33( 193) 407040704070 407040703764 406437044064 376440704070 002440706310 004403543220  
41( 241) 377040643704 407037644064 40643704064 376440644070 407562440003 407037644070  
49( 289) 407037704070 370440703764 407040704064 407040703770 407037044003 407037044070  
57( 337) 704403543240 407040704070 377040703704 407037644070 407037044070 407037044070  
65( 385) 000440706310 407014504070 407037644070 407037644070 407040704070 407040704070  
73( 433) 107562442272 240200000000 704403543250 370440703764 407040704070 407037044070  
81( 481) 407037044070 376440704070 00040704010 407041304070 407037644070 407037644070  
89( 529) 407037044070 376440704070 107562443426 240200000000 704403543260 407037644070  
97( 577) 407040704070 407040703770 40703704070 240200000000 704403543260 407037644070  
105( 625) 407040704070 407040703764 40703704070 376440704070 000040706304 407040703704  
113( 673) 377040703704 407037644070 40703704070 376440704070 107562444562 40703704070  
121( 721) 407037644070 370440703764 407040704070 407040703764 407037044070 407037044070  
129( 769) 704403543300 407040704070 407040704070 407040703764 407037044070 407037044070  
137( 817) 074440706304 407014504070 376440703704 376440704070 407040704070 407040704070  
145( 865) 107562447051 240200000000 704403543310 370440703764 407040704070 407040704070  
153( 913) 407037044070 376440704070 00003704010 407041304070 377040703704 407040703704  
161( 961) 407037044070 376440744070 107562450205 407041304070 407037644070 407037644070  
169( 1009) 407040704070 407040703764 40703704070 240200000000 704403542000 407040703764  
177( 1057) 407040704070 407040703770 407037044070 376440704070 000040706310 407040703764  
185( 1105) 377040703704 407037644070 407037044070 376440704070 107562451341 407037644070  
193( 1153) 407037644070 370440703764 407040704070 407040703770 407037044070 407037044070  
201( 1201) 006440706304 407014504070 407040704070 376440703764 407037044070 407037044070  
209( 1249) 107562453630 407040703770 407037044070 407040703764 407040704070 407040704070  
217( 1297) 407037044070 407040703770 171040704010 407041304070 407437704074 370440703764  
225( 1345) 407037044070 376440704070 407040704070 407040703764 407040704070 407040703764  
233( 1393) 407037044070 376440704070 407040704070 407040703764 407040704070 407040703764  
241( 1441) 407040704070 407040703770 107562454764 240200000000 704403542044 407040703764  
249( 1489) 407040704070 407040703770 407037044070 376440704070 407040703764 407040703764  
257( 1537) 377040703704 407037644070 407040704070 407040704070 407040704070 407040704070  
265( 1585) 407037644070 370440703764 370440704070 407040703764 407040704070 407040703764  
273( 1633) 704403542060 407040704070 407040704070 406440703764 406440703764 406440703764  
281( 1681) 000040746304 407040704070 407040704070 407040703764 407040704070 407040704070  
289( 1729) 1075624660407 240200000000 704403542070 370440704070 407040704070 407040704070  
297( 1777) 407037044070 376440704070 020040704010 407041304070 377040703704 407040703704  
305( 1825) 407037044070 376440704070 107562461543 240200000000 704403542100 40703704070  
313( 1873) 407040704070 407040703770 407037044070 376440704070 407037044070 407037044070  
321( 1921) 407040704070 407040703764 407037044070 376440704070 103440706304 407040706304  
329( 1969) 376440703704 407037644070 407040704070 407040703764 107562462677 407037644070  
337( 2017) 704403542120 370440703764 407440704070 407040703764 407037044070 407037044070  
345( 2065) 000040706304 407014504070 407040704070 407040703764 407037044070 407037044070  
353( 2113) 107562465166 240200000000 704403542130 370440703704 407040703770 407040703770  
361( 2161) 407037044070 376440704070 00040704010 407041304070 377040703704 407040703704  
369( 2209) 407037044070 376440704070 107562466322 240200000000 704403542140 407037644070  
377( 2257) 407037044070 376440704070 107562466322 240200000000 704403542140 407037644070  
385( 2305) 407040704070 407040703764 407037044070 376440704070 101040706310 407040706310  
393( 2353) 407040704070 407037644070 407037044070 376440704070 101040706310 407040706310  
401( 2401) 376440703704 407040704070 407040704070 376440703764 407037044070 407037044070  
409( 2449) 407037644070 371040703760 407040704070 407040703770 407037044070 407037044070



897C	5377)	407440744074	407040703764	376440704070	1075625530466	2420000000000	7044003542510	407040704070
905C	5425)	376440703710	407037644070	407040703764	407037044070	376440704070	000040794010	407041304070
913C	5473)	407037704070	37044073764	407040703770	407037044070	376440704070	00040704070	407041304070
921C	5521)	704403542520	407040704070	407037644070	407040704070	376440704070	1075625531622	2420000000000
929C	5569)	107562532756	407014504070	370440743764	377040703704	407040703764	407037044070	376440704070
945C	5665)	407037044070	376440704070	407041304070	407037644070	407037644070	407040704070	407040703764
953C	5713)	407037044070	407040704070	2420000000000	7044003542540	370040703764	407040703770	407040703770
961C	5761)	407040704070	376440703770	376440704070	107562553245	407040704070	7044003542550	407040704070
969C	5809)	407040704070	407037644070	376440704070	407037044070	407040704070	407037644070	407040704070
977C	5857)	376440703704	407037644070	407040704070	7044003542540	407040704070	000040704070	407040704070
985C	5905)	407037704070	370440703764	407040703764	407040703704	407040703770	407037644070	407040704070
993C	5953)	704403542560	407040704070	407040704070	407040703764	407037644070	407037044070	407040704070
1001C	6001)	024000706310	407014504070	407040703704	377040703704	407037644070	000040704070	407040704070
1009C	6049)	1075625537535	407040704070	377040704070	407037044070	407040704070	000040704070	407040704070
1017C	6097)	407040704070	407037044070	407037644070	407040704070	407040703770	407037044070	407040704070
1025C	6145)	407037044070	376440704070	407040704070	377040703704	407037644070	407037044070	407040704070
1033C	6193)	407040704070	407040704070	407041304070	407037704070	407040703760	407040703704	407040703770
1041C	6241)	407040704070	407040703770	376440704070	7044003542660	407040704070	407040703704	407040703770
1049C	6289)	376440703704	407040703770	407037644070	024000706304	407040704070	407040703704	407040703770
1057C	6337)	407037704070	407037644070	407040703764	1075625542024	407040703770	407037044070	407040703770
1065C	6385)	704403542620	407040703764	407040704070	407037044070	407037644070	407037044070	407040703770
1073C	6433)	145040706304	407040704070	407041304070	407037044070	407037644070	7044003542610	407040704070
1081C	6481)	1075625544314	407040704070	407037644070	407037044070	407040704070	023440704010	407040704070
1089C	6529)	407037044070	407040704070	407040704070	407040704070	407040703764	407037004070	407040704070
1097C	6577)	407037044070	376440704070	407040704070	377040703704	407037644070	407040704070	407040703770
1105C	6625)	407040704070	407040704070	407040704070	407037044070	407040704070	407040704070	407040703770
1113C	6673)	407040704070	407040703764	407040703764	407037044070	407040704070	407040704070	407040703770
1121C	6721)	377040703704	407037644070	407040703764	407040704070	407040703770	407037004070	407040703764
1129C	6769)	407037644070	407037644070	407040703760	407040703704	407037644070	407037044070	407040703764
1137C	6817)	704403542660	407040704070	407040703704	704403542640	407040704070	407040703704	407040703764
1145C	6865)	123040706310	407040704070	407037644070	123440706304	407040704070	407040704070	407040703764
1153C	6913)	107562551073	407037044070	407037704070	1075625546603	407040704070	407037044070	407040703764
1161C	6961)	407037044070	407040704070	407040704070	407037044070	407040703770	407037044070	407040703764
1169C	7009)	407037044070	407040704070	407040704070	377040703704	407037644070	407040704070	407040703764
1177C	7057)	407040704070	407040704070	407040704070	407037644070	407040703704	407040704070	407040703764
1185C	7105)	407040704070	407040704070	407040704070	407040703704	407040703764	407040704070	407040703764
1193C	7153)	377040703704	407037644070	407040703764	407040704070	407040703770	407037044070	407040703764
1201C	7201)	407437644074	407437644074	407040703764	407037044070	407040704070	407037044070	407040703764
1209C	7249)	704403542720	407040704070	407040703764	407037044070	407040704070	000040704070	407040703764
1217C	7297)	023040706304	407040706304	407040703704	407037004070	376440704070	107562554516	2402000000000
1225C	7345)	107562555652	407037044070	407037644070	407040703764	407040704070	407037044070	407040703764
1233C	7393)	407037044070	407037044070	051040704010	377040743704	407040703770	407037044070	407040703764
1241C	7441)	407037044070	407037044070	107562557006	407437644074	407040704070	407040703770	407040703764
1249C	7489)	407040704070	407040704070	407037044070	704403542740	406440644064	407440704070	407040703764
1257C	7537)	407040704070	407040703770	407037044070	116040706310	407014504060	376440643704	407037644070
1265C	7585)	376440703704	407040703770	407037044070	107562560141	407014504060	407037044070	407037644070
1273C	7633)	407037644070	407037644070	407040704070	407037004070	407040704070	407037044070	407040703764
1281C	7681)	704403542760	407040704070	407040704070	407037044070	407040704070	407040704070	407040703764
1289C	7729)	031040706310	407040703770	407037644070	407040704070	407040703770	407040704070	407040703770
1297C	7777)	107562562431	407037044070	407037044070	407040704070	407040704070	407040704070	407040703764
1305C	7825)	407037044070	407037044070	052040706010	377040703700	407040704070	407037044070	407040703764
1313C	7873)	407037044070	407037044070	107562563564	407037644070	407037644070	407040704070	407040703764
1321C	7921)	407040704070	407040704070	407437044074	2420000000000	407040704070	407040704070	407040703764
1329C	7969)	407040704070	407040703764	407037044070	376440746310	407040704070	407037644070	407040703764
1337C	8017)	376440703704	407040703704	407037044070	107562564720	407040704070	407037644070	407040703764
1345C	8065)	407437644070	407040703764	407040703764	407037044070	407040704070	155040704010	407040703764
1353C	8113)	704403543020	406440644064	407040704064	406440644064	406440644064	15040704010	407040703764
1361C	8161)	000040706304	407040703764	377040703764	407040704070	407040703770	407037044070	407040703764
1369C	8209)	107562567210	407040703764	407040704070	377040703770	407037644070	407040704070	407040703770





Apollo 14

D-57818

IC ID      Event      2006 14  
256525456360      047046000016      003667000000      134031035346

RECORD      1      OF FILE      1  
LENGTH =      24      BYTES











April 14 D-57819

RECORD LENGTH = 1 OF FILE 1  
24 BYTES  
1( 1) 256525456360 072462000016 003667000000 034722571607

Event





897C 5377)  
905C 5425)  
913C 5473)  
921C 5521)  
929C 5569)  
937C 5617)  
945C 5665)  
953C 5713)  
961C 5761)  
969C 5809)  
977C 5857)  
985C 5905)  
993C 5953)  
1001C 6001)  
1009C 6049)  
1017C 6097)  
1025C 6145)  
1033C 6193)  
1041C 6241)  
1049C 6289)  
1057C 6337)  
1065C 6385)  
1073C 6433)  
1081C 6481)  
1089C 6529)  
1097C 6577)  
1105C 6625)  
1113C 6673)  
1121C 6721)  
1129C 6769)  
1137C 6817)  
1145C 6865)  
1153C 6913)  
1161C 6961)  
1169C 7009)  
1177C 7057)  
1185C 7105)  
1193C 7153)  
1201C 7201)  
1209C 7249)  
1217C 7297)  
1225C 7345)  
1233C 7393)  
1241C 7441)  
1249C 7489)  
1257C 7537)  
1265C 7585)  
1273C 7633)  
1281C 7681)  
1289C 7729)  
1297C 7777)  
1305C 7825)  
1313C 7873)  
1321C 7921)  
1329C 7969)  
1337C 8017)  
1345C 8065)  
1353C 8113)  
1361C 8161)  
1369C 8209)







APOLLO 15 LM/ALSEP

SEISMIC EVENT TAPES

71-063C-01B

This data set has been restored. There were originally 288 7-track, 800 BPI tapes written in Binary. There are 33 restored tapes. The DR tapes are 3480 cartridges and the DS tapes are 9-track, 6250 BPI. The original tapes were created on a PDP11 computer and the restored tapes were created on an IBM 9021 computer. The DR and DS numbers along with the corresponding D numbers are as follows:

<u>DR#</u>	<u>DS#</u>	<u>D#</u>	<u>FILES</u>	<u>TIME SPAN</u>
DR004476	DS004476	D013709	1	08/02/71 - 08/17/71
		D013708	2	08/17/71 - 08/24/71
		D013710	3	08/25/71 - 08/31/71
		D013711	4	08/31/71 - 09/13/71
		D013661	5	09/13/71 - 09/20/71
		D013660	6	09/20/71 - 09/26/71
		D013659	7	09/26/71 - 09/30/71
		D013746	8	09/30/71 - 10/05/71
		D013747	9	10/06/71 - 10/15/71
DR004477	DS004477	D013748	1	10/15/71 - 10/19/71 (a)
		D013852	2	10/19/71 - 10/23/71
		D013853	3	10/23/71 - 10/25/71
		D013854	4	10/25/71 - 10/28/71
		D013856	5	10/31/71 - 11/05/71
		D013857	6	11/05/71 - 11/09/71
		D013858	7	11/09/71 - 11/16/71
DR004478	DS004478	D013848	1	11/16/71 - 11/17/71
		D013847	2	11/17/71 - 11/20/71
		D013846	3	11/20/71 - 11/22/71
		D013845	4	11/22/71 - 11/26/71
		D013861	5	11/26/71 - 12/03/71
		D013860	6	12/03/71 - 12/07/71
		D013859	7	12/08/71 - 12/15/71
		D013849	8	12/15/71 - 12/17/71
		D013850	9	12/17/71 - 12/20/71
DR004479	DS004479	D013851	1	12/20/71 - 12/27/71
		D013901	2	12/27/71 - 12/31/71
		D013902	3	01/01/72 - 01/06/72
		D013903	4	01/07/72 - 01/13/72
		D013904	5	01/13/72 - 01/20/72
		D013893	6	01/20/72 - 01/31/72
		D013894	7	01/31/72 - 02/10/72
		D013895	8	02/10/72 - 02/21/72
		D013898	9	02/21/72 - 03/06/72

\* Ref. 40 69-099C-03A for further documentation

## 71-063C-01B

<u>DR#</u>	<u>DS#</u>	<u>D#</u>	<u>FILES</u>	<u>TIME SPAN</u>
DR004480	DS004480	D014114	1	03/07/72 - 03/15/72
		D014115	2	03/15/72 - 03/23/72
		D013892	3	03/23/72 - 04/04/72
		D013891	4	04/04/72 - 04/12/72
		D013890	5	04/12/72 - 04/18/72
		D013889	6	04/18/72 - 04/27/72
		D013897	7	04/27/72 - 04/30/72
		D013714	8	04/30/72 - 05/05/72
		D013713	9	05/05/72 - 05/09/72
DR004481	DS004481	D013712	1	05/09/72 - 05/12/72
		D013896	2	05/12/72 - 05/14/72
		D013900	3	05/14/72 - 05/16/72
		D013899	4	05/16/72 - 05/19/72
		D013573	5	05/19/72 - 05/25/72
		D013572	6	05/26/72 - 05/29/72
		D013578	7	05/29/72 - 06/03/72
		D013577	8	06/03/72 - 06/06/72 (b)
DR004482	DS004482	D013576	1	06/06/72 - 06/09/72
		D013567	2	06/09/72 - 06/12/72
		D013568	3	06/12/72 - 06/16/72
		D013569	4	06/16/72 - 06/23/72
		D013570	5	06/23/72 - 06/25/72
		D013571	6	06/26/72 - 06/28/72
		D013580	7	06/28/72 - 07/04/72
		D013579	8	07/04/72 - 07/08/72
		D013583	9	07/08/72 - 07/11/72
DR004483	DS004483	D013582	1	07/11/72 - 07/18/72
		D013581	2	07/18/72 - 07/21/72
		D013575	3	07/21/72 - 07/25/72
		D013574	4	07/25/72 - 08/04/72
		D014111	5	08/04/72 - 08/11/72
		D014112	6	08/11/72 - 08/15/72
		D014113	7	08/16/72 - 08/18/72
		D014109	8	08/18/72 - 08/22/72 (c)
DR004594	DS004594	D014110	1	08/22/72 - 08/26/72
		D014116	2	08/27/72 - 09/06/72
		D014117	3	09/06/72 - 09/16/72
		D014118	4	09/16/72 - 09/23/72 (d)
		D014244	5	09/23/72 - 09/30/72
		D015905	6	09/30/72 - 10/14/72
		D015906	7	10/15/72 - 10/21/72
		D014245	8	10/21/72 - 10/26/72 (e)
		D013855	9	10/27/72 - 10/30/72

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<u>DR#</u>	<u>DS#</u>	<u>D#</u>	<u>FILES</u>	<u>TIME SPAN</u>
DR004484	DS004484	D015907	1	10/26/72 - 11/05/72
		D015910	2	11/05/72 - 11/09/72
		D015911	3	11/09/72 - 11/13/72
		D015775	4	11/13/72 - 11/17/72
		D015776	5	11/17/72 - 11/25/72
		D015774	6	11/25/72 - 12/05/72
		D015773	7	12/05/72 - 12/09/72
		D015909	8	12/09/72 - 12/14/72
		D015908	9	12/14/72 - 12/21/72
DR004485	DS004485	D016124	1	12/21/72 - 12/31/72
		D016123	2	01/01/73 - 01/05/73
		D016122	3	01/05/73 - 01/12/73
		D016192	4	01/12/73 - 01/21/73
		D016193	5	01/22/73 - 02/01/73
		D016194	6	02/01/73 - 02/10/73
		D016195	7	02/10/73 - 02/17/73
		D016196	8	02/17/73 - 03/08/73
DR004595	DS004595	D016630	1	03/09/72 - 03/20/72
		D016629	2	03/20/73 - 03/27/73 (f)
		D017616	3	03/27/73 - 04/03/73
		D016829	4	04/03/73 - 04/13/73
		D017615	5	04/13/73 - 04/28/73
		D016837	6	04/28/73 - 05/03/73
		D016828	7	05/03/73 - 05/19/73
		D016827	8	05/19/73 - 05/28/73 (g)
		D016841	9	05/28/73 - 06/02/73
DR004596	DS004596	D016842	1	06/02/73 - 06/14/73 (h)
		D016843	2	06/14/73 - 06/25/73
		D016834	3	06/25/73 - 06/28/73
		D017617	4	06/28/73 - 07/03/73
		D016850	5	07/03/73 - 07/10/73
		D016849	6	07/10/73 - 07/18/73
		D016848	7	07/19/73 - 07/24/73
		D016836	8	07/24/73 - 07/30/73
		D016835	9	07/30/73 - 08/02/73
DR004597	DS004597	D016830	1	08/02/73 - 08/09/73
		D016831	2	08/09/73 - 08/16/73
		D016832	3	08/16/73 - 08/29/73
		D016847	4	08/29/73 - 09/02/73
		D016833	5	09/02/73 - 09/10/73
		D016840	6	09/10/73 - 09/19/73
		D016839	7	09/19/73 - 10/03/73
		D016838	8	10/03/73 - 10/09/73
		D016826	9	10/10/73 - 10/16/73

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<u>DR#</u>	<u>DS#</u>	<u>D#</u>	<u>FILES</u>	<u>TIME SPAN</u>
DR004598	DS004598	D016825	1	10/16/73 - 10/30/73
		D016824	2	10/30/73 - 11/09/73
		D016844	3	11/09/73 - 11/22/73
		D016845	4	11/22/73 - 12/01/73
		D016846	5	12/01/73 - 12/08/73
		D016884	6	12/09/73 - 12/20/73 (i)
		D017603	7	12/20/73 - 12/24/73
		D016885	8	12/24/73 - 12/31/73
		D017602	9	01/01/74 - 01/07/74
DR004488	DS004488	D017601	1	01/07/74 - 01/19/74
		D017611	2	01/19/74 - 01/29/74
		D017612	3	01/29/74 - 02/06/74
		D017597	4	02/06/74 - 02/15/74
		D017596	5	02/15/74 - 02/22/74
		D017595	6	02/24/74 - 03/01/74
		D017610	7	03/02/74 - 03/11/74
		D017609	8	03/11/74 - 03/20/74
		D017608	9	03/21/74 - 03/30/74
DR004489	DS004489	D017607	1	03/30/74 - 04/16/74
		D017606	2	04/16/74 - 04/25/74
		D017605	3	04/25/74 - 05/10/74
		D017504	4	05/11/74 - 05/20/74
		D017618	5	05/21/74 - 06/02/74
		D017619	6	06/03/74 - 06/16/74
		D017620	7	06/16/74 - 06/28/74
		D017614	8	06/28/74 - 07/03/74
		D017613	9	07/03/74 - 07/14/74
DR004490	DS004490	D017598	1	07/14/74 - 07/20/74
		D017599	2	07/21/74 - 08/06/74
		D017600	3	08/06/74 - 08/11/74
		D019098	4	08/11/74 - 08/22/74
		D019097	5	08/22/74 - 08/29/74
		D019103	6	08/29/74 - 09/08/74
		D019102	7	09/09/74 - 09/17/74
		D019101	8	09/17/74 - 09/24/74
		D019167	9	09/25/74 - 10/06/74
DR004491	DS004491	D019168	1	10/07/74 - 10/16/74
		D019109	2	10/17/74 - 10/26/74
		D019110	3	10/27/74 - 11/04/74
		D019111	4	11/04/74 - 11/12/74
		D019096	5	11/15/74 - 11/19/74
		D019105	6	11/19/74 - 11/26/74
		D019104	7	11/27/74 - 12/09/74
		D019100	8	12/09/74 - 12/14/74
		D019099	9	12/14/74 - 12/25/74

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<u>DR#</u>	<u>DS#</u>	<u>D#</u>	<u>FILES</u>	<u>TIME SPAN</u>
DR004492	DS004492	D019108	1	12/25/74 - 12/31/74
		D019107	2	01/02/75 - 01/12/75
		D019106	3	01/12/75 - 01/24/75
		D019370	4	01/24/75 - 01/30/75
		D019369	5	01/31/75 - 02/12/75
		D022097	6	02/12/75 - 02/22/75
		D022098	7	02/23/75 - 03/08/75
		D022099	8	03/08/75 - 03/24/75
		D022201	9	03/25/75 - 04/05/75
DR004493	DS004493	D022202	1	04/06/75 - 04/14/75
		D022198	2	04/14/75 - 04/23/75
		D022199	3	04/23/75 - 05/07/75
		D022200	4	05/07/75 - 05/16/75
		D022203	5	05/17/75 - 06/02/75
		D022204	6	06/03/75 - 06/16/75 (j)
		D022457	7	06/16/75 - 06/22/75
		D022458	8	06/22/75 - 06/26/75
		D022656	9	06/27/75 - 07/07/75 (k)
DR004494	DS004494	D022657	1	07/07/75 - 07/30/75 (l)
		D022658	2	07/30/75 - 08/09/75
		D022659	3	08/09/75 - 08/20/75
		D023021	4	08/20/75 - 09/02/75 (m)
		D023022	5	09/02/75 - 09/12/75
		D023023	6	09/12/75 - 09/27/75
		D023630	7	09/27/75 - 10/05/75
		D023631	8	10/05/75 - 10/20/75
		D023632	9	10/21/75 - 10/31/75
DR004495	DS004495	D023633	1	10/31/75 - 11/11/75
		D023634	2	11/13/75 - 11/26/75
		D023635	3	11/26/75 - 12/02/75
		D023721	4	12/02/75 - 12/11/75 (n)
		D023720	5	12/11/75 - 12/23/75 (o)
		D023719	6	12/24/75 - 12/31/75
		D028109	7	01/01/76 - 01/13/76
		D028110	8	01/13/76 - 02/04/76
		D028112	9	02/04/76 - 02/16/76
DR004496	DS004496	D028111	1	02/16/76 - 02/29/76 (p)
		D031827	2	03/01/76 - 03/05/76
		D031937	3	03/05/76 - 03/11/76
		D031938	4	03/11/76 - 03/16/76
		D031964	5	03/16/76 - 03/31/76
		D031965	6	03/31/76 - 04/11/76 (q)
		D031966	7	04/11/76 - 04/23/76
		D031967	8	04/23/76 - 05/01/76
		D031968	9	05/01/76 - 05/11/76

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<u>DR#</u>	<u>DS#</u>	<u>D#</u>	<u>FILES</u>	<u>TIME SPAN</u>
DR004497	DS004497	D031969	1	05/11/76 - 05/23/76
		D031970	2	05/23/76 - 05/27/76
		D031982	3	05/28/76 - 06/04/76
		D031983	4	06/04/76 - 06/10/76
		D032051	5	06/10/76 - 06/21/76
		D032052	6	06/21/76 - 06/25/76
		D032053	7	06/25/76 - 07/02/76
		D032054	8	07/02/76 - 07/10/76
		D032055	9	07/10/76 - 07/21/76
DR004599	DS004599	D032056	1	07/21/76 - 07/28/76
		D032057	2	07/29/76 - 07/31/76
		D032304	3	07/31/76 - 08/10/76
		D032305	4	08/11/76 - 08/19/76
		D032306	5	08/19/76 - 08/26/76
		D032307	6	08/26/76 - 08/31/76
		D032308	7	08/31/76 - 09/11/76
		D032309	8	09/11/76 - 09/20/76
		D032310	9	09/20/76 - 09/23/76
DR004600	DS004600	D032311	1	09/24/76 - 10/05/76
		D032312	2	10/05/76 - 10/18/76
		D032313	3	10/19/76 - 10/22/76
		D032314	4	10/22/76 - 11/03/76
		D032315	5	11/04/76 - 11/15/76
		D032316	6	11/15/76 - 11/19/76
		D032317	7	11/19/76 - 11/28/76
		D032318	8	11/28/76 - 12/06/76
		D032930	9	12/06/76 - 12/15/76
DR004601	DS004601	D032931	1	12/15/76 - 12/26/76
		D032932	2	12/26/76 - 12/31/76
		D032901	3	01/01/77 - 01/07/77
		D032902	4	01/08/77 - 01/13/77
		D032903	5	01/13/77 - 01/22/77
		D032904	6	01/22/77 - 01/28/77
		D032905	7	01/28/77 - 02/07/77
		D032906	8	02/07/77 - 02/20/77
		D032907	9	02/20/77 - 03/02/77

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<u>DR#</u>	<u>DS#</u>	<u>D#</u>	<u>FILES</u>	<u>TIME SPAN</u>
DR004602	DS004602	D032908	1	03/02/77 - 03/06/77
		D032909	2	03/07/77 - 03/20/77
		D032910	3	03/20/77 - 03/31/77
		D032954	4	03/31/77 - 04/01/77
		D032955	5	04/01/77 - 04/05/77
		D032956	6	04/05/77 - 04/14/77
		D032957	7	04/14/77 - 04/18/77
		D032958	8	04/18/77 - 04/26/77
		D032959	9	04/26/77 - 04/29/77
DR004603	DS004603	D032960	1	04/28/77 - 05/02/77
		D033709	2	05/02/77 - 05/05/77
		D033710	3	05/05/77 - 05/12/77
		D033711	4	05/12/77 - 05/16/77
		D033712	5	05/17/77 - 05/22/77
		D033713	6	05/23/77 - 05/27/77
		D033714	7	05/27/77 - 06/05/77
		D033715	8	06/06/77 - 06/12/77
		D033716	9	06/12/77 - 06/15/77
DR004604	DS004604	D033717	1	06/15/77 - 06/23/77
		D033718	2	06/23/77 - 06/30/77
		D033719	3	07/03/77 - 07/11/77
		D033720	4	07/11/77 - 07/16/77
		D033721	5	07/16/77 - 07/20/77 (r)
		D033722	6	07/20/77 - 07/24/77
		D033723	7	07/24/77 - 08/02/77
		D033724	8	08/02/77 - 08/13/77
		D033725	9	08/13/77 - 08/17/77
DR004605	DS004605	D033726	1	08/17/77 - 08/27/77
		D033802	2	08/27/77 - 09/06/77
		D033803	3	09/08/77 - 09/11/77
		D033804	4	09/11/77 - 09/16/77
		D033805	5	09/16/77 - 09/30/77
DR004606	DS004606	D057822	1	08/03/71 - 11/11/76
		D057823	2	11/11/72 - 06/23/73
		D057824	3	02/13/75 - 05/16/76
		D033729	4	02/13/75 - 05/16/76
		D033727	5	05/23/75 - 05/16/76
		D057825	6	05/23/75 - 05/16/77
		D057826	7	08/08/76 - 05/15/77 (s)
		D033728	8	05/28/77 - 09/13/77
		D057827	9	05/28/77 - 09/13/77

(a) D013748: Read errors occurred in records 155, 195, 200, & 310 of file 1.

(b) D013577: Read error occurred in record 8 of file 1.



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- (c) D014109: Read errors occurred in records 277, 283, 953, 955, & 958 of file 1.
- (d) D014118: Read errors occurred in records 689, 1203, 1206, 1385, & 1580 of file 1.
- (e) D014245: Read errors occurred in records 5 & 6 of file 1.
- (f) D016629: Read errors occurred in records 296, 1123, & 1126 of file 1.
- (g) D016827: Read errors occurred in records 10, 248, 250, & 252 of file 1.
- (h) D016842: Read errors occurred in records 717, 1389, & 1624 of file 1.
- (i) D016884: Read errors occurred in records 971 & 974 of file 1.
- (j) D022204: Read error occurred in record 645 of file 1.
- (k) D022656: Read error occurred in record 3 of file 1.
- (l) D022657: Read errors occurred in records 3, 6, 12, 15, 29, 36, 38, 59, 66, & 352 of file 1.
- (m) D023021: Read error occurred in record 1577 of file 1.
- (n) D023721: Read errors occurred in records 116, 118, 121, 123, & 125 of file 1.
- (o) D023720: Read error occurred in record 58 of file 1.
- (p) D028111: Read errors occurred in records 122, 139, 140, 142, 147, 149, & 342 of file 1.
- (q) D031965: Read error occurred in record 1586 of file 1.
- (r) D033721: Read errors occurred in records 602 & 603 of file 1.
- (s) D057826: Read errors occurred in records 278, 280, & 289 of file 1.

Apollo 15 D 57822

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Apollo 15 D-57823

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Apollo 15 D-57824

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1361( 8161)  
1369( 8209)





Apr 16 15 D-57825

1( 1) 256525456360 047046000017 003667000000 134033262351  
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RECORD LENGTH = 1615 OF FILE 1  
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17C	49)
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49C	241)
57C	289)
65C	337)
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81C	433)
89C	481)
97C	529)
105C	577)
113C	625)
121C	673)
129C	721)
137C	769)
145C	817)
153C	865)
161C	913)
169C	961)
177C	1009)
185C	1057)
193C	1105)
201C	1153)
209C	1201)
217C	1249)
225C	1297)
233C	1345)
241C	1393)
249C	1441)
257C	1489)
265C	1537)
273C	1585)
281C	1633)
289C	1681)
297C	1729)
305C	1777)
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321C	1873)
329C	1921)
337C	1969)
345C	2017)
353C	2065)
361C	2113)
369C	2161)
377C	2209)
385C	2257)
393C	2305)
401C	2353)
409C	2401)
	2449)

417C 2497)  
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 865C 5185)  
 873C 5233)  
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 889C 5329)

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1281 ( 7681 )  
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1329 ( 7969 )  
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1353 ( 8113 )  
1361 ( 8161 )  
1369 ( 8209 )





III

Apollo 15 D-57827

1( 1) 256525456360 047047000017 003670000000 140045533167  
 EVANT 2007 15 176 day 149  
 RECORD = 1 OF FILE 1  
 LENGTH = 24 BYTES













Apollo 16 D-57829

RECORD LENGTH = 1 OF FILE 1  
24 BYTES  
Event 20006 16 75  
1C 1) 256525456360 047046000020 003667000000 134031035031

APOLLO 16 LM/ASLEP

SEISMIC EVENT TAPES

72-031C-01B

THIS DATA SET HAS BEEN RESTORED. IT ORIGINALLY CONTAINED 248 7-TRACK, 800 BPI TAPES WRITTEN IN BINARY. THERE ARE 29 RESTORED TAPES. THE DR TAPES ARE 3480 CARTRIDGES AND THE DS TAPES ARE 9-TRACK, 6250 BPI. SOME OF THE TAPES ARE NOT IN TIME SPAN ORDER. THE ORIGINAL TAPES WERE CREATED ON AN IBM 360 COMPUTER AND WERE RESTORED ON THE MRS. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR005702	DS005702	D013905	1	04/21/72 - 04/27/72
		D013909	2	04/27/72 - 04/30/72
		D013908	3	04/30/72 - 05/05/72
		D039825	4	05/02/72 - 06/23/72
		D013907	5	05/05/72 - 05/09/72
		D013906	6	05/09/72 - 05/12/72 (a)
		D014124	7	05/12/72 - 05/14/72
		D013911	8	05/14/72 - 05/16/72 (b)
		D013910	9	05/16/72 - 05/19/72
DR005703	DS005703	D013538	1	05/19/72 - 05/25/72
		D013537	2	05/26/72 - 05/29/72
		D013543	3	05/29/72 - 06/03/72
		D013542	4	06/03/72 - 06/06/72 (c)
		D013541	5	06/06/72 - 06/09/72
		D013532	6	06/09/72 - 06/12/72
		D013533	7	06/12/72 - 06/16/72
		D013534	8	06/16/72 - 06/23/72
DR005704	DS005704	D013535	1	06/23/72 - 06/25/72
		D013536	2	06/26/72 - 06/28/72
		D013544	3	06/28/72 - 07/04/72
		D013548	4	07/04/72 - 07/08/72
		D013547	5	07/08/72 - 07/11/72
		D013546	6	07/11/72 - 07/18/72
		D013545	7	07/18/72 - 07/20/72
		D013540	8	07/21/72 - 07/25/72
		D013539	9	07/25/72 - 08/04/72

\* Ref. to 69-099C-03A for further Documentation

## 72-031C-01B

DR#	DS#	D#	FILES	TIME SPAN
DR005705	DS005705	D014121	1	08/04/72 - 08/11/72
		D014122	2	08/11/72 - 08/15/72 (d)
		D014123	3	08/16/72 - 08/18/72
		D014119	4	08/18/72 - 08/22/72 (e)
		D014120	5	08/22/72 - 08/26/72
		D014125	6	08/27/72 - 09/06/72 (f)
		D014126	7	09/06/72 - 09/16/72
		D014127	8	09/16/72 - 09/23/72 (g)
		D014246	9	09/23/72 - 09/30/72 (h)
DR005706	DS005706	D015912	1	09/30/72 - 10/14/72
		D015913	2	10/15/72 - 10/21/72
		D014247	3	10/21/72 - 10/26/72
		D015914	4	10/26/72 - 11/05/72
		D015918	5	11/05/72 - 11/09/72
		D015919	6	11/09/72 - 11/13/72 (i)
		D015778	7	11/13/72 - 11/17/72 (j)
		D015779	8	11/17/72 - 11/25/72
		D015777	9	11/25/72 - 12/05/72
DR005707	DS005707	D015917	1	12/05/72 - 12/09/72
		D015916	2	12/09/72 - 12/14/72 (k)
		D015915	3	12/14/72 - 12/21/72
		D016126	4	12/21/72 - 12/31/72
		D016125	5	01/01/73 - 01/05/73
		D016127	6	01/05/73 - 01/12/73
		D016197	7	01/12/73 - 01/21/73
		D016198	8	01/22/73 - 02/01/73 (l)
DR005708	DS005708	D016199	1	02/01/73 - 02/10/73
		D016200	2	02/10/73 - 02/17/73
		D016201	3	02/17/73 - 03/08/73
		D016632	4	03/09/73 - 03/20/73 (m)
		D016631	5	03/20/73 - 03/27/73
		D017640	6	03/27/73 - 04/03/73
		D016866	7	04/03/73 - 04/13/73
		D016867	8	04/13/73 - 04/28/73 (n)
DR005709	DS005709	D016865	1	04/28/73 - 05/03/73 (o)
		D016852	2	05/03/73 - 05/19/73
		D016851	3	05/19/73 - 05/28/73 (p)
		D016871	4	05/28/73 - 06/02/73
		D016872	5	06/02/73 - 06/14/73
		D016863	6	06/14/73 - 06/25/73 (q)
		D016862	7	06/25/73 - 06/28/73
		D016861	8	06/28/73 - 07/03/73

## 72-031C-01B

DR#	DS#	D#	FILES	TIME SPAN
DR005710	DS005710	D016877	1	07/03/73 - 07/10/73
		D016876	2	07/10/73 - 07/18/73 (r)
		D039826	3	07/10/73 - 06/23/75
		D016878	4	07/19/73 - 07/24/73
		D016853	5	07/24/73 - 07/30/73 (s)
		D016864	6	07/30/73 - 08/02/73 (t)
		D016857	7	08/02/73 - 08/09/73 (u)
		D016858	8	08/09/73 - 08/16/73 (v)
		D016859	9	08/16/73 - 08/29/73
DR005711	DS005711	D016875	1	08/29/73 - 09/02/73 (w)
		D016860	2	09/02/73 - 09/10/73 (x)
		D016870	3	09/10/73 - 09/19/73
		D016869	4	09/19/73 - 10/03/73 (y)
		D016868	5	10/03/73 - 10/09/73 (z)
		D016856	6	10/10/73 - 10/16/73 (aa)
		D016855	7	10/16/73 - 10/30/73 (bb)
		D016854	8	10/30/73 - 11/09/73
		D016873	9	11/09/73 - 11/22/73 (cc)
DR005712	DS005712	D016874	1	11/22/73 - 12/01/73 (dd)
		D016886	2	12/01/73 - 12/08/73
		D016887	3	12/09/73 - 12/20/73 (ee)
		D016888	4	12/20/73 - 12/24/73 (ff)
		D016889	5	12/24/73 - 12/31/73
		D017628	6	01/01/74 - 01/07/74
		D017627	7	01/07/74 - 01/19/74
		D017636	8	01/19/74 - 01/29/74 (gg)
		D017637	9	01/29/74 - 02/06/74
DR005713	DS005713	D017623	1	02/06/74 - 02/15/74
		D017622	2	02/15/74 - 02/22/74 (hh)
		D017621	3	02/24/74 - 03/01/74
		D017635	4	03/02/74 - 03/11/74
		D017634	5	03/11/74 - 03/20/74
		D017633	6	03/21/74 - 03/30/74
		D017632	7	03/30/74 - 04/16/74 (ii)
		D017631	8	04/16/74 - 04/25/74
		D017630	9	04/25/74 - 05/10/74
DR005714	DS005714	D017629	1	05/11/74 - 05/20/74 (jj)
		D017641	2	05/21/74 - 06/02/74
		D017642	3	06/03/74 - 06/16/74
		D017643	4	06/16/74 - 06/28/74
		D017639	5	06/28/74 - 07/03/74
		D017638	6	07/03/74 - 07/14/74
		D017624	7	07/14/74 - 07/20/74
		D017625	8	07/21/74 - 08/06/74
		D017626	9	08/06/74 - 08/11/74



## 72-031C-01B

DR#	DS#	D#	FILES	TIME SPAN
DR005715	DS005715	D019112	1	08/11/74 - 08/22/74
		D019122	2	08/22/74 - 08/29/74
		D019120	3	08/29/74 - 09/08/74
		D019119	4	09/09/74 - 09/17/74
		D019118	5	09/17/74 - 09/24/74
		D019170	6	09/25/74 - 10/06/74
		D019169	7	10/07/74 - 10/16/74 (kk)
		D019125	8	10/17/74 - 10/26/74
		D019126	9	10/27/74 - 11/04/74
DR005716	DS005716	D019127	1	11/04/74 - 11/12/74
		D019121	2	11/12/74 - 11/19/74
		D019114	3	11/19/74 - 11/26/74
		D019117	4	11/27/74 - 12/08/74
		D019116	5	12/09/74 - 12/14/74
		D019115	6	12/14/74 - 12/25/74
		D019124	7	12/25/74 - 12/31/74
		D019123	8	01/02/75 - 01/12/75
		D019113	9	01/12/75 - 01/24/75
DR005717	DS005717	D019372	1	01/24/75 - 01/30/75
		D019371	2	01/31/75 - 02/12/75
		D022100	3	02/12/75 - 02/22/75 (ll)
		D057828	4	02/13/75 - 05/16/76 (mm)
		D022101	5	02/23/75 - 03/08/75
		D022102	6	03/08/75 - 03/24/75
		D022206	7	03/25/75 - 04/05/75
		D022208	8	04/06/75 - 04/14/75 (nn)
		D022205	9	04/14/75 - 04/23/75
DR005718	DS005718	D022211	1	04/23/75 - 05/07/75
		D022207	2	05/07/75 - 05/16/75
		D022210	3	05/17/75 - 06/02/75
		D057829	4	05/21/75 - 05/16/76 (oo)
		D022209	5	06/03/75 - 06/16/75
		D022459	6	06/16/75 - 06/22/75
		D022460	7	06/22/75 - 06/26/75
		D022660	8	06/27/75 - 07/07/75
DR005719	DS005719	D022661	1	07/07/75 - 07/30/75
		D022662	2	07/30/75 - 08/09/75
		D022663	3	08/09/75 - 08/20/75
		D023024	4	08/20/75 - 09/02/75
		D023025	5	09/02/75 - 09/12/75
		D023026	6	09/12/75 - 09/27/75 (pp)
		D023636	7	09/27/75 - 10/05/75
		D023637	8	10/05/75 - 10/20/75
		D023638	9	10/21/75 - 10/31/75

## 72-031C-01B

DR#	DS#	D#	FILES	TIME SPAN
DR005720	DS005720	D023639	1	10/31/75 - 11/11/75
		D023640	2	11/13/75 - 11/26/75
		D023641	3	11/26/75 - 12/02/75
		D023724	4	12/02/75 - 12/11/75 (qq)
		D023723	5	12/11/75 - 12/23/75 (rr)
		D023722	6	12/24/75 - 12/31/75
		D028113	7	01/01/76 - 01/13/76
		D028115	8	01/13/76 - 02/04/76
		D028116	9	02/04/76 - 02/16/76
DR005721	DS005721	D028114	1	02/16/76 - 02/29/76
		D031828	2	03/01/76 - 03/05/76
		D031939	3	03/05/76 - 03/11/76 (ss)
		D031940	4	03/11/76 - 03/16/76
		D031971	5	03/16/76 - 03/31/76
		D031972	6	03/31/76 - 04/11/76 (tt)
		D031973	7	04/11/76 - 04/23/76
		D031974	8	04/23/76 - 05/01/76
		D031975	9	05/01/76 - 05/11/76
DR005722	DS005722	D031976	1	05/11/76 - 05/23/76
		D031984	2	05/23/76 - 05/27/76
		D031985	3	05/28/76 - 06/04/76
		D057831	4	05/28/76 - 09/13/77
		D031986	5	06/04/76 - 06/10/76 (uu)
		D032058	6	06/12/76 - 06/21/76
		D032059	7	06/23/76 - 06/27/76
		D032060	8	06/25/76 - 07/02/76
		D032061	9	07/02/76 - 07/10/76 (vv)
DR005723	DS005723	D032062	1	07/10/76 - 07/21/76 (ww)
		D032063	2	07/21/76 - 07/28/76
		D032064	3	07/29/76 - 07/31/76
		D032319	4	07/31/76 - 08/10/76 (xx)
		D057830	5	08/08/76 - 05/15/77 (yy)
		D032320	6	08/11/76 - 08/19/76 (zz)
		D032321	7	08/19/76 - 08/26/76
		D032322	8	08/26/76 - 08/31/76
		D032323	9	08/31/76 - 09/11/76
DR005724	DS005724	D032324	1	09/11/76 - 09/20/76
		D032325	2	09/20/76 - 09/23/76
		D032326	3	09/24/76 - 10/05/76
		D032327	4	10/05/76 - 10/18/76 (aaa)
		D032328	5	10/19/76 - 10/22/76
		D032329	6	10/23/76 - 11/04/76
		D032330	7	11/04/76 - 11/15/76 (bbb)
		D032331	8	11/15/76 - 11/19/76
		D032332	9	11/19/76 - 11/28/76

DR#	DS#	D#	FILES	TIME SPAN
DR005725	DS005725	D032333	1	11/28/76 - 12/06/76
		D032933	2	12/06/76 - 12/15/76
		D032934	3	12/15/76 - 12/26/76
		D032935	4	12/26/76 - 12/31/76
		D032911	5	01/01/77 - 01/07/77
		D032912	6	01/08/77 - 01/13/77
		D032913	7	01/13/77 - 01/22/77 (ccc)
		D032914	8	01/22/77 - 01/28/77 (ddd)
		D032915	9	01/28/77 - 02/07/77
DR005726	DS005726	D032916	1	02/07/77 - 02/20/77
		D032917	2	02/20/77 - 03/02/77
		D032918	3	03/02/77 - 03/06/77
		D032919	4	03/07/77 - 03/20/77
		D032920	5	03/20/77 - 03/31/77
		D032961	6	03/31/77 - 04/01/77
		D032962	7	04/01/77 - 04/05/77
		D032963	8	04/05/77 - 04/14/77
		D032964	9	04/14/77 - 04/18/77
DR005727	DS005727	D032965	1	04/18/77 - 04/26/77
		D032966	2	04/26/77 - 04/28/77
		D032967	3	04/28/77 - 05/02/77
		D033730	4	05/02/77 - 05/05/77 (eee)
		D033740	5	07/03/77 - 07/11/77
		D033806	6	08/27/77 - 09/06/77
		D033807	7	09/08/77 - 09/11/77
		D033808	8	09/11/77 - 09/16/77 (fff)
		D033809	9	09/16/77 - 09/30/77
DR005728	DS005728	D033734	1	05/23/77 - 05/27/77
		D033736	2	06/06/77 - 06/12/77 (ggg)
		D033738	3	06/15/77 - 06/23/77 (hhh)
		D033737	4	06/12/77 - 06/15/77
		D033750	5	02/13/77 - 05/17/77
		D033749	6	05/29/77 - 09/13/77
		D033748	7	05/22/77 - 05/17/78
		D033747	8	08/17/77 - 08/27/77
		D033746	9	08/13/77 - 08/17/77
DR005729	DS005729	D033745	1	08/02/77 - 08/13/77 (iii)
		D033744	2	07/24/77 - 08/02/77
		D033743	3	07/20/77 - 07/24/77
		D033742	4	05/18/77 - 07/20/77
		D033741	5	07/11/77 - 07/16/77
		D033739	6	06/23/77 - 06/30/77
		D033735	7	05/27/77 - 06/05/77
		D033733	8	05/17/77 - 05/22/77
		D033731	9	05/05/77 - 05/12/77
DR005730	DS005730	D033732	1	05/12/77 - 05/16/77

(a) D013906 - 1 ERROR, REC. 23, FILE 1  
(b) D013911 - 1 ERROR, REC. 57, FILE 1  
(c) D013542 - 1 ERROR, REC. 482, FILE 1  
(d) D014122 - 3 ERRORS, REC. 120, 143, 634, FILE 1  
(e) D014119 - 12 ERRORS, REC. 31-36, 38, 45, 54, 55, 61, 73, FILE 1  
(f) D014125 - 1 ERROR, REC. 31, FILE 1  
(g) D014127 - 1 ERROR, REC. 251, FILE 1  
(h) D014246 - 1 ERROR, REC. 1, FILE 1  
(i) D015919 - 3 ERRORS, REC. 35, 48, 49, FILE 1  
(j) D015778 - 1 ERROR, REC. 49, FILE 1  
(k) D015916 - 9 ERRORS, REC. 24, 35, 38, 339, 1489, 1525, 1561, 1563, 1583, FILE 1  
(l) D016198 - 2 ERRORS, REC. 1577, 1578, FILE 1  
(m) D016632 - 3 ERRORS, REC. 59, 140, 174, FILE 1  
(n) D016867 - 3 ERRORS, REC. 9, 50, 52, FILE 1  
(o) D016865 - 2 ERRORS, REC. 1526, 1527, FILE 1  
(p) D016851 - 2 ERRORS, REC. 1607, 1608, FILE 1  
(q) D016863 - 4 ERRORS, REC. 18, 50, 51, 500, FILE 1  
(r) D016876 - 4 ERRORS, REC. 1528 - 1531, FILE 1  
(s) D016853 - 1 ERROR, REC. 125, FILE 1  
(t) D016864 - 1 ERROR, REC. 30, FILE 1  
(u) D016857 - 4 ERRORS, REC. 8, 1533 - 1535, FILE 1  
(v) D016858 - 4 ERRORS, REC. 6, 7, 1429, 1430, FILE 1  
(w) D016875 - 1 ERROR, REC. 1532, FILE 1  
(x) D016860 - 1 ERROR, REC. 999, FILE 1  
(y) D016869 - 5 ERRORS, REC. 1569-1571, 1575, 1576, FILE 1  
(z) D016868 - 4 ERRORS, REC. 254, 1526-28, FILE 1  
(aa) D016856 - 2 ERRORS, REC. 1325, 1448, FILE 1  
(bb) D016855 - 2 ERRORS, REC. 30, 31, FILE 1  
(cc) D016873 - 3 ERRORS, REC. 12, 1297, 1298, FILE 1  
(dd) D016874 - 1 ERROR, REC. 1500, FILE 1  
(ee) D016887 - 3 ERRORS, REC. 5, 17, 159, FILE 1  
(ff) D016888 - 1 ERROR, REC. 93, FILE 1  
(gg) D017636 - 1 ERROR, REC. 405, FILE 1  
(hh) D017622 - 1 ERROR, REC. 426, FILE 1  
(ii) D017632 - 4 ERRORS, REC. 445, 447, 449, 450, FILE 1  
(jj) D017629 - 1 ERROR, REC. 220, FILE 1  
(kk) D019169 - 1 ERROR, REC. 213, FILE 1  
(ll) D022100 - 1 ERROR, REC. 1446, FILE 1  
(mm) D057828 - 1 ERROR, REC. 169, FILE 1  
(nn) D022208 - 1 ERROR, REC. 192, FILE 1  
(oo) D057829 - 4 ERRORS, REC. 226, 453, 455, 1024, FILE 1  
(pp) D023026 - 1 ERROR, REC. 135, FILE 1  
(qq) D023724 - 1 ERROR, REC. 104, FILE 1  
(rr) D023723 - 6 ERRORS, REC. 11-16, FILE 1  
(ss) D031939 - 2 ERRORS, REC. 3, 113, FILE 1  
(tt) D031972 - 2 ERRORS, REC. 1341, 1400, FILE 1  
(uu) D031986 - 1 ERROR, REC. 1, FILE 1  
(vv) D032061 - 3 ERRORS, REC. 1-3, FILE 1  
(ww) D032062 - 1 ERROR, REC. 96, FILE 1  
(xx) D032319 - 5 ERRORS, REC. 4, 570-573, FILE 1  
(yy) D057830 - 2 ERRORS, REC. 90, 96, FILE 1  
(zz) D032320 - 1 ERROR, REC. 26, FILE 1  
(aaa) D032327 - 16 ERRORS, REC. 4, 36, 40, 43, 47, 49, 51, 54, 58, 60, 65, 90, 104, 106, 131, 978, FILE 1  
(bbb) D032330 - 1 ERROR, REC. 137, FILE 1  
(ccc) D032913 - 1 ERROR, REC. 8, FILE 1

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- (ddd) D032914 - 1 ERROR, REC. 1537, FILE 1
- (eee) D033730 - 1 ERROR, REC. 28, FILE 1
- (fff) D033808 - 3 ERRORS, REC. 54-56, FILE 1
- (ggg) D033736 - 1 ERROR, REC. 57, FILE 1
- (hhh) D033738 - 14 ERRORS, REC. 160-173, FILE 1
- (iii) D033745 - 1 ERROR, REC. 88, FILE 1

Apollo 16 D-57830

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Apollo 16 D-57831

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Table with 10 columns and 1000 rows. Each row contains 10 vertical bars of varying lengths, likely representing a barcode or data visualization.

