

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
101			JOB		FORTRAN COMPILER -- ARITH PHASE TWO -- PHASE 34								
102			CTL		6611								
103			*										
104			*		ALL ARITHMETIC AND IF STATEMENTS ARE UNNESTED USING A								
105			*		FORCING TABLE TECHNIQUE. ERROR CHECKING CONTINUES.								
106			*										
107			*		ON ENTRY X1 IS THE TOP OF THE TOPMOST NON-ASSIGNMENT NON-IF								
108			*		STATEMENT, X2 IS THE TOP OF THE TOPMOST ASSIGNMENT OR IF								
109			*		STATEMENT IN HIGH CORE, AND X3 IS ONE BELOW THE BOTTOMMOST								
110			*		ASSIGNMENT OR IF STATEMENT IN HIGH CORE.								
111			*										
112			X1	EQU	89			0089					
113			X2	EQU	94			0094					
114			X3	EQU	99			0099					
115			*										
116			*		STUFF IN THE RESIDENT AREA								
117			*										
118			GLOBER	EQU	184 GLOBAL ERROR FLAG -- WM MEANS ERROR			0184					
119			*										
120				EXT00	SNAPSH, LOADNX, CDOVLY					MACRO			
121			SNAPSH	EQU	333			0333		GEN			
122			PHASLD	EQU	381			0381		GEN			
123			SNAPEX	EQU	564			0564		GEN			
124			LOADNX	EQU	700 CARD OVERLAY UNLESS NOP			0700		GEN			
125			CDOVLY	EQU	700 1 IF LOADING FROM CARDS, N IF FROM TAPE			0700		GEN			
126			TPREAD	EQU	704 LOAD OVERLAY FROM TAPE			0704		GEN			
127			TPERR	EQU	728			0728		GEN			
128			*										
129				EXT03	START, TOP OF PHASE 3					MACRO			
130			BEGIN3	EQU	838			0838		GEN			
131			TOP3	EQU	2600			2600		GEN			
132			*										
133			110	DCW	@ARITH TWO@	9	0110				1		
134			*										
135			*		LOAD THIS BLOCK AND THE NEXT ONE								
136			*										
137			PHAS34	LDPH	ARITH TWO,LOADAD,LOADNX,,,34.1					MACRO			
			*	PHAZ	LDPH [PHASID],LOADAD,ENTAD[,SKIPFG,SKIP],[NUMBER][,HALT]					GEN			
			*	XFR	PHASZ PROHIBITED IN A MACRO					GEN			
			*							GEN			
			*	LOAD	A BLOCK					GEN			
			*							GEN			
138			)6J003	EQU	110 PHASE ID			0110		GEN			
139			)6K003	EQU	700 LOAD NEXT PHASE			0700		GEN			
140			)6L003	EQU	704 TAPE READ INSTRUCTION			0704		GEN			
141			)6M003	EQU	728 TAPE ERROR HANDLER			0728		GEN			
			*							GEN			
142				ORG	201				0201				
143			PHAS34	EQU	*&1			0201		GEN			
144				LCA	)9J003,)6J003	7	0201	L 252 110		GEN	2	252	110

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
145				BCE	)6K003,)6K003,1			8	0208	B 700 700 1	GEN	2	700 700
146				BCE	)6K003,)6L003&4,0			8	0216	B 700 708 0	GEN	2	700 708
147				RTW	1,LOADAD			8	0224	L %U1 838 R	GEN	2	%U1 838
148				BER	)6M003			5	0232	B 728 L	GEN	2	728
149				CS	LOADNX,)9R003			7	0237	/ 700 258	GEN	3	700 258
150			)9J003	DCW	@ARITH TWO@			9	0252		GEN	3	
151				DC	#1			1	0253		GEN	3	
152				DC	@34.1@	PHASE NUMBER		4	0257		GEN	3	
153			)9R003	DCW	@}@			1	0258		GEN	3	
154				XFR	PHAS34					B 201		4	201
155			*										
156				ORG	BEGIN3					0838			
157			*										
158			LOADAD	EQU	*&1	LOAD ADDRESS			0838				
159	838		BEGN34	BCE	DONE,X2,.			8	0838	B N47 094 .		5	2547 094
160	846			SW	GM			4	0846	, N59		5	2559
161	850			MCW	X2,SX2			7	0850	M 094 P31		5	094 2731
162	857			SBR	X3,2&X3			7	0857	H 099 0?2		5	099 002+3
163	864			SBR	X1,2&X1			7	0864	H 089 0 2		5	089 002+1
164	871			MCW	X1,X2			7	0871	M 089 094		6	089 094
165	878		GET00	MN	X2,CHKX2	GET X2		7	0878	D 094 P33		6	094 2733
166	885			MN		UP TO		1	0885	D		6	
167	886			C	CHKX2,K00	X2 & X00		7	0886	C P33 P35		6	2733 2735
168	893			BE	GOT00			5	0893	B 913 S		6	913
169	898			CW	0&X2			4	0898	) 0!0		6	000+2
170	902			SBR	X2,1&X2			7	0902	H 094 0!1		6	094 001+2
171	909			B	GET00			4	0909	B 878		7	878
172	913		GOT00	MN	0&X2			4	0913	D 0!0		7	000+2
173	917			SAR	X2P99	X2 & X00 - 1		4	0917	Q P38		7	2738
174	921			MN	0&X3			4	0921	D 0?0		7	000+3
175	925			SAR	X2			4	0925	Q 094		7	094
176	929		CLRL	C	X2,X2P99	CLEAR DOWN		7	0929	C 094 P38		7	094 2738
177	936			BE	CLRXL	TO TOP		5	0936	B 953 S		7	953
178	941			CS	0&X2	OF CODE		4	0941	/ 0!0		8	000+2
179	945			SBR	X2	IN LOW		4	0945	H 094		8	094
180	949			B	CLRL	CORE & X00		4	0949	B 929		8	929
181	953		CLRXL	MN	0&X1			4	0953	D 0 0		8	000+1
182	957			SAR	X1			4	0957	Q 089		8	089
183	961		MORE	MCM	0&X3	MOVE CODE		4	0961	P 0?0		8	000+3
184	965			SAR	SX3&6	DOWN FROM		4	0965	Q 987		8	987
185	969			MCM	0&X3,1&X1	TOP CORE		7	0969	P 0?0 0 1		9	000+3 001+1
186	976			MN		TO BOTTOM		1	0976	D		9	
187	977			SBR	X1	OF BOTTOMMOST		4	0977	H 089		9	089
188	981		SX3	SBR	X3,0	ASSIGNMENT		7	0981	H 099 000		9	099 000
189	988			BCE	MORE,0&X1,	OR IF		8	0988	B 961 0 0		9	961 000+1
190	996			MN	0&X3	STATEMENT		4	0996	D 0?0		9	000+3
191	1 000			CW				1	1000	)		9	
192	1 001			SW	0&X1			4	1001	, 0 0		10	000+1
193	1 005			C	X3,SX2			7	1005	C 099 P31		10	099 2731
194	1 012			BU	MORE			5	1012	B 961 /		10	961







SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
345					* INDEX FROM TABLE IS ZERO.								
346					* PREV * CURR % . BLANK								
347					* PREV % CURR *%&@. BLANK ,								
348					* PREV # CURR *%&@. BLANK ,								
349					* PREV GM CURR #								
350					* PREV & CURR *%@. BLANK ,								
351					* PREV @ CURR % . BLANK								
352					* PREV . CURR % BLANK								
353					* PREV BLANK CURR *%&@. BLANK ,								
354					* PREV , CURR % . BLANK								
355					*								
356	1	603	ZERO	MCW	X3,X1 CURRENT TO PREVIOUS	7		1603	M 099 089		28	099	089
357	1	610		B	HUNT GET NEXT OPERATOR	4		1610	B S91		28	1291	
358	1	614		B	WHEW	4		1614	B T81		28	1381	
359					*								
360					* INDEX FROM TABLE IS ONE.								
361					* PREV % CURR )								
362					*								
363	1	618	ONE	SW	2&X3	4		1618	, 0?2		29	002+3	
364	1	622		LCA	0&X1,1&X1	7		1622	L 0 0 0 1		29	000+1	001+1
365	1	629		CW	3&X3	4		1629	) 0?3		29	003+3	
366	1	633		CW		1		1633	)		29		
367	1	634		LCA	0&X3,2&X3	7		1634	L 0?0 0?2		29	000+3	002+3
368	1	641		SBR	X1,1&X1	7		1641	H 089 0 1		29	089	001+1
369	1	648		SBR	X3,1&X3	7		1648	H 099 0?1		29	099	001+3
370	1	655		B	WHEW	4		1655	B T81		30	1381	
371					*								
372					* INDEX FROM TABLE IS TWO								
373					* PREV * CURR *)G&@								
374					* PREV & CURR )G&								
375					* PREV @ CURR *)G&@								
376					* PREV . CURR *)G&@								
377					*								
378	1	659	TWO	MCW	IXTOP,X2	7		1659	M P41 094		30	2741	094
379	1	666		MZ	4&X3,SAVTAG	7		1666	Y 0?4 Q15		30	004+3	2815
380	1	673		BCE	*&8,2&X3,\$	8		1673	B W88 0?2 \$		30	1688	002+3
381	1	681		MZ	3&X3,SAVTAG	7		1681	Y 0?3 Q15		30	003+3	2815
382	1	688		SW	2&X3	4		1688	, 0?2		30	002+3	
383	1	692		LCA	0&X1,0&X2	7		1692	L 0 0 0!0		31	000+1	000+2
384	1	699		SBR	X2	4		1699	H 094		31	094	
385	1	703		CW	1&X2	4		1703	) 0!1		31	001+2	
386	1	707		SW	2&X1	4		1707	, 0 2		31	002+1	
387	1	711		SW		1		1711	,		31		
388	1	712		LCA	1&X1,0&X2	7		1712	L 0 1 0!0		31	001+1	000+2
389	1	719		SBR	X2	4		1719	H 094		31	094	
390	1	723		SBR	IXTOP	4		1723	H P41		32	2741	
391	1	727		CW	1&X2	4		1727	) 0!1		32	001+2	
392	1	731		BCE	SUBTWO,2&X1,\$	8		1731	B Y90 0 2 \$		32	1890	002+1
393	1	739		LCA	4&X1,0&X2	7		1739	L 0 4 0!0		32	004+1	000+2
394	1	746		SBR	IXTOP	4		1746	H P41		32	2741	

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
395	1	750		MZ	3&X1, TAG1	7		1750	Y 0 3 N57		32	003+1	2557
396	1	757		SAR	X1	4		1757	Q 089		32	089	
397	1	761	SUBBAK	B	COUNT	4		1761	B V73		33	1573	
398	1	765		LCA	CH, 2&X1	7		1765	L N58 0 2		33	2558	002+1
399	1	772		LCA	1&X3	4		1772	L 0?1		33	001+3	
400	1	776		CW	0&X1	4		1776	) 0 0		33	000+1	
401	1	780		MN		1		1780	D		33		
402	1	781		SAR	X3	4		1781	Q 099		33	099	
403	1	785		SBR	X1, 2&X1	7		1785	H 089 0 2		33	089	002+1
404	1	792		BWZ	TWOA, TAG1, S	8		1792	V Y36 N57 S		34	1836	2557
405	1	800		BM	TWOA, TAG1	8		1800	V Y36 N57 K		34	1836	2557
406	1	808		BWZ	LOCBRK, SAVTAG, 2	8		1808	V /79 Q15 2		34	1179	2815
407	1	816		BWZ	LOCBRK, SAVTAG, B	8		1816	V /79 Q15 B		34	1179	2815
408	1	824		BCE	LOCBRK, PREV, .	8		1824	B /79 Q02 .		35	1179	2802
409	1	832		B	MIXED	4		1832	B Y52		35	1852	
410	1	836	TWOA	BWZ	LOCBRK, SAVTAG, S	8		1836	V /79 Q15 S		35	1179	2815
411	1	844		BM	LOCBRK, SAVTAG	8		1844	V /79 Q15 K		35	1179	2815
412				*									
413				*	MIXED MODE ARITHMETIC								
414				*									
415	1	852	MIXED	CS	332	4		1852	/ 332		35	332	
416	1	856		CS		1		1856	/		35		
417	1	857		SW	GLOBER	4		1857	, 184		35	184	
418	1	861		MN	SEQNO, 241	7		1861	D P47 241		36	2747	241
419	1	868		MN		1		1868	D		36		
420	1	869		MN		1		1869	D		36		
421	1	870		MCW	ERR46	4		1870	M Q53		36	2853	
422	1	874		W		1		1874	2		36		
423	1	875		BCV	*&5	5		1875	B Y84 @		36	1884	
424	1	880		B	*&3	4		1880	B Y86		36	1886	
425	1	884		CC	1	2		1884	F 1		37		
426	1	886		B	ERRFIN	4		1886	B M47		37	2447	
427				*									
428	1	890	SUBTWO	SBR	X2, 10&X1	7		1890	H 094 0/0		37	094	010+1
429	1	897		BCE	*&8, 2&X2, \$	8		1897	B Z12 0!2 \$		37	1912	002+2
430	1	905		SBR	X2, 6&X2	7		1905	H 094 0!6		37	094	006+2
431	1	912		MCW	IXTOP, *&7	7		1912	M P41 Z25		37	2741	1925
432	1	919		LCA	2&X2, 0	7		1919	L 0!2 000		38	002+2	000
433	1	926		SBR	IXTOP	4		1926	H P41		38	2741	
434	1	930		MZ	4&X1, TAG1	7		1930	Y 0 4 N57		38	004+1	2557
435	1	937		MCW	X2, X1	7		1937	M 094 089		38	094	089
436	1	944		B	SUBBAK	4		1944	B X61		38	1761	
437				*									
438				*	INDEX FROM TABLE IS FOUR								
439				*	PREV , CURR *)G&@								
440				*									
441	1	948	FOUR	MCW	KN, 1&X1	7		1948	M Q54 0 1		38	2854	001+1
442	1	955		MZ	4&X3, TAG1	7		1955	Y 0?4 N57		39	004+3	2557
443	1	962		BCE	FIVEB, 2&X3, \$	8		1962	B J17 0?2 \$		39	2117	002+3
444	1	970		MZ	3&X3, TAG1	7		1970	Y 0?3 N57		39	003+3	2557

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
445	1	977		B	FIVEB		4	1977	B J17		39	2117	
446			*										
447			* INDEX FROM		TABLE IS FIVE								
448			* PREV BLANK		CURR )								
449			*										
450	1	981	FIVE	MCW	3&X1,W2		7	1981	M 0 3 Q56		39	003+1	2856
451	1	988		BCE	FIVEC,3&X1,X		8	1988	B J75 0 3 X		40	2175	003+1
452	1	996		MZ	*-4,TAG1		7	1996	Y Z98 N57		40	1998	2557
453	2	003	FIVEF	SW	2&X1		4	2003	, 0 2		40	002+1	
454	2	007		MCW	2&X1,*&8		7	2007	M 0 2 !21		40	002+1	2021
455	2	014		BCE	USRFNC,USRCOD,0		8	2014	B !99 Q68 0		40	2099	2868
456	2	022		CHAIN	11					MACRO			
457				BCE			1	2022	B	GEN	40		
458				BCE			1	2023	B	GEN	40		
459				BCE			1	2024	B	GEN	41		
460				BCE			1	2025	B	GEN	41		
461				BCE			1	2026	B	GEN	41		
462				BCE			1	2027	B	GEN	41		
463				BCE			1	2028	B	GEN	41		
464				BCE			1	2029	B	GEN	41		
465				BCE			1	2030	B	GEN	41		
466				BCE			1	2031	B	GEN	42		
467				BCE			1	2032	B	GEN	42		
468	2	033		MZ	4&X3,SAVTAG		7	2033	Y 0?4 Q15		42	004+3	2815
469	2	040		BCE	FIVEA,2&X3,\$		8	2040	B !55 0?2 \$		42	2055	002+3
470	2	048		MZ	3&X3,SAVTAG		7	2048	Y 0?3 Q15		42	003+3	2815
471	2	055	FIVEA	BCE	FIVED,2&X1,F		8	2055	B K07 0 2 F		42	2207	002+1
472	2	063		BCE	FIVED,2&X1,I		8	2063	B K07 0 2 I		43	2207	002+1
473	2	071		C	W2,KAX		7	2071	C Q56 Q70		43	2856	2870
474	2	078		BE	FIVED		5	2078	B K07 S		43	2207	
475	2	083		BWZ	MSG28,SAVTAG,S		8	2083	V K23 Q15 S		43	2223	2815
476	2	091		BM	MSG28,SAVTAG		8	2091	V K23 Q15 K		43	2223	2815
477	2	099	USRFNC	MCW	2&X1,1&X1		7	2099	M 0 2 0 1		44	002+1	001+1
478	2	106		MCW	KLPAR,2&X1		7	2106	M Q71 0 2		44	2871	002+1
479	2	113		CW	2&X1		4	2113	) 0 2		44	002+1	
480	2	117	FIVEB	MCW	IXTOP,X2		7	2117	M P41 094		44	2741	094
481	2	124		SW	2&X3		4	2124	, 0?2		44	002+3	
482	2	128		LCA	1&X1,0&X2		7	2128	L 0 1 0!0		44	001+1	000+2
483	2	135		SBR	IXTOP		4	2135	H P41		45	2741	
484	2	139		B	COUNT		4	2139	B V73		45	1573	
485	2	143		LCA	CH,1&X1		7	2143	L N58 0 1		45	2558	001+1
486	2	150		LCA	1&X3		4	2150	L 0?1		45	001+3	
487	2	154		MN	0&X1		4	2154	D 0 0		45	000+1	
488	2	158		CW			1	2158	)		45		
489	2	159		MN			1	2159	D		45		
490	2	160		SAR	X3		4	2160	Q 099		46	099	
491	2	164		SBR	X1,1&X1		7	2164	H 089 0 1		46	089	001+1
492	2	171		B	LOCBRK		4	2171	B /79		46	1179	
493	2	175	FIVEC	MZ	FIVEC,TAG1		7	2175	Y J75 N57		46	2175	2557
494	2	182		LCA	2&X1,3&X1		7	2182	L 0 2 0 3		46	002+1	003+1





SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
539	2	261	MSG24	CS	332	4		2261	/ 332		53	332	
540	2	265		CS		1		2265	/		53		
541	2	266		SW	GLOBER	4		2266	, 184		54	184	
542	2	270		MN	SEQNO,238	7		2270	D P47 238		54	2747	238
543	2	277		MN		1		2277	D		54		
544	2	278		MN		1		2278	D		54		
545	2	279		MCW	ERR24	4		2279	M R06		54	2906	
546	2	283		W		1		2283	2		54		
547	2	284		BCV	*&5	5		2284	B K93 @		54	2293	
548	2	289		B	*&3	4		2289	B K95		55	2295	
549	2	293		CC	1	2		2293	F 1		55		
550	2	295		B	ERRFIN	4		2295	B M47		55	2447	
551				*									
552				*	EXCESS OF # SIGNS								
553				*	INDEX FROM TABLE IS NINE								
554				*	PREV * CURR #								
555				*	PREV # CURR #								
556				*	PREV & CURR #								
557				*	PREV @ CURR #								
558				*	PREV . CURR #								
559				*	PREV BLANK CURR #								
560				*	PREV , CURR #								
561				*									
562	2	299	MSG26	CS	332	4		2299	/ 332		55	332	
563	2	303		CS		1		2303	/		55		
564	2	304		SW	GLOBER	4		2304	, 184		55	184	
565	2	308		MN	SEQNO,243	7		2308	D P47 243		55	2747	243
566	2	315		MN		1		2315	D		56		
567	2	316		MN		1		2316	D		56		
568	2	317		MCW	ERR26	4		2317	M R46		56	2946	
569	2	321		W		1		2321	2		56		
570	2	322		BCV	*&5	5		2322	B L31 @		56	2331	
571	2	327		B	*&3	4		2327	B L33		56	2333	
572	2	331		CC	1	2		2331	F 1		56		
573	2	333		B	ERRFIN	4		2333	B M47		57	2447	
574				*									
575				*	MULTIPLE EXPONENT								
576				*	INDEX FROM TABLE IS EIGHT								
577				*	PREV . CURR .								
578				*									
579	2	337	MSG32	CS	332	4		2337	/ 332		57	332	
580	2	341		CS		1		2341	/		57		
581	2	342		SW	GLOBER	4		2342	, 184		57	184	
582	2	346		MN	SEQNO,243	7		2346	D P47 243		57	2747	243
583	2	353		MN		1		2353	D		57		
584	2	354		MN		1		2354	D		57		
585	2	355		MCW	ERR32	4		2355	M R86		58	2986	
586	2	359		W		1		2359	2		58		
587	2	360		BCV	*&5	5		2360	B L69 @		58	2369	
588	2	365		B	*&3	4		2365	B L71		58	2371	

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
589	2	369		CC	1		2	2369	F 1		58		
590	2	371		B	ERRFIN		4	2371	B M47		58	2447	
591			*										
592			*		PARENTHESIS ERROR								
593			*		INDEX FROM TABLE IS SEVEN								
594			*		PREV % CURR GM								
595			*		PREV # CURR )								
596			*		PREV BLANK CURR GM								
597			*										
598	2	375	MSG16	CS	332		4	2375	/ 332		58	332	
599	2	379		CS			1	2379	/		59		
600	2	380		SW	GLOBER		4	2380	, 184		59	184	
601	2	384		MN	SEQNO,243		7	2384	D P47 243		59	2747	243
602	2	391		MN			1	2391	D		59		
603	2	392		MN			1	2392	D		59		
604	2	393		MCW	ERR16		4	2393	M ?26		59	3026	
605	2	397		W			1	2397	2		59		
606	2	398		BCV	*%5		5	2398	B M07 @		60	2407	
607	2	403		B	*%3		4	2403	B M09		60	2409	
608	2	407		CC	1		2	2407	F 1		60		
609	2	409		B	ERRFIN		4	2409	B M47		60	2447	
610			*										
611			*		LEFT SIDE IS WRONG								
612			*		INDEX FROM TABLE IS SIX								
613			*		PREV GM CURR *)%&@. BLANK ,								
614			*										
615	2	413	MSG25	CS	332		4	2413	/ 332		60	332	
616	2	417		CS			1	2417	/		60		
617	2	418		SW	GLOBER		4	2418	, 184		60	184	
618	2	422		MN	SEQNO,243		7	2422	D P47 243		61	2747	243
619	2	429		MN			1	2429	D		61		
620	2	430		MN			1	2430	D		61		
621	2	431		MCW	ERR25		4	2431	M ?66		61	3066	
622	2	435		W			1	2435	2		61		
623	2	436		BCV	*%5		5	2436	B M45 @		61	2445	
624	2	441		B	*%3		4	2441	B M47		61	2447	
625	2	445		CC	1		2	2445	F 1		62		
626	2	447	ERRFIN	MCW	IXTSAV,IXTOP		7	2447	M P44 P41		62	2744	2741
627	2	454		B	RESTRT		4	2454	B N08		62	2508	
628			*										
629			*		INDEX FROM TABLE IS THREE								
630			*		PREV # CURR G								
631			*										
632	2	458	THREE	MCW	IXTOP,X2		7	2458	M P41 094		62	2741	094
633	2	465		SW	2&X3		4	2465	, 0?2		62	002+3	
634	2	469		LCA	0&X1,0&X2		7	2469	L 0 0 0!0		62	000+1	000+2
635	2	476		LCA	KEQ		4	2476	L ?67		62	3067	
636	2	480		SBR	X2		4	2480	H 094		63	094	
637	2	484		CW	2&X2		4	2484	) 0!2		63	002+2	
638	2	488		CW			1	2488	)		63		

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
639	2	489		SW	2&X1		4	2489	, 0 2		63	002+1	
640	2	493	LINK	LCA	0,0&X2		7	2493	L 000 0!0		63	000	000+2
641	2	500		LCA	GM		4	2500	L N59		63	2559	
642	2	504		SBR	IXTOP		4	2504	H P41		63	2741	
643	2	508	RESTR	MCW	SX3B,X1		7	2508	M P52 089		64	2752	089
644	2	515		B	LOOP		4	2515	B  60		64	1060	
645			*										
646	2	519	ALMOST	SBR	X1,5&X1	GET BACK ABOVE PREFIX IN LOW CORE	7	2519	H 089 0 5		64	089	005+1
647	2	526		MCW	IXTOP,X3		7	2526	M P41 099		64	2741	099
648	2	533		SBR	X2,5&X3		7	2533	H 094 0?5		64	094	005+3
649	2	540		MCW	SX2,X3		7	2540	M P31 099		64	2731	099
650			*										
651	2	547	DONE	BSS	SNAPSH,C		5	2547	B 333 C		65	333	
652	2	566		B	LOADNX		4	2552	B 700		65	700	
653			*										
654			* DATA										
655			*										
656	2	570		DCW	@<@		1	2556			65		
657	2	571	TAG1	DC	@ @		1	2557			65		
658	2	572	CH	DC	@ @		1	2558			65		
659	2	573	GM	DC	@}@		1	2559		GMARK	65		
660	2	623		DCW	@ERROR 28 - INCORRECT MODE OF FUNCTION ARGUMENT, ST@		50	2609			67		
661	2	631	ERR28	DC	@ATEMENT @		8	2617			67		
662	2	632		DCW	@-@		1	2618			67		
663			*										
664			* ROWS AND COLUMNS OF TABLE ARE INDEXED BY POSITIONS IN										
665			* CHARS, TAKEN IN REVERSE ORDER.										
666			*										
667	2	642	CHARS	DCW	@, .@&}#%)*@ INTERESTING CHARACTERS?		10	2628			67		
668	2	643	TABLE	EQU	*&1			2629					
669			*		CURR *)%#G&@. ,								
670	2	652		DC	@220922200S@ * PREV		10	2638			68		
671	2	662		DC	@SSSSSSSS@ )		10	2648			68		
672	2	672		DC	@0109700000@ %		10	2658			68		
673	2	682		DC	@0709300000@ #		10	2668			69		
674	2	692		DC	@6660S66666@ GM		10	2678			69		
675	2	702		DC	@020922000S@ &		10	2688			69		
676	2	712		DC	@220922200S@ AT WAS /		10	2698			70		
677	2	722		DC	@220922280S@ . WAS **		10	2708			70		
678	2	732		DC	@0509700000@ BLANK		10	2718			70		
679	2	742		DC	@440944400S@ , WAS NEGATE		10	2728			71		
680	2	745	SX2	DCW	#3		3	2731			71		
681	2	747	CHKX2	DCW	#2		2	2733			71		
682	2	749	K00	DCW	00		2	2735			71		
683	2	752	X2P99	DCW	#3 X2 & X00 - 1		3	2738			71		
684	2	755	IXTOP	DCW	#3 INDEX OF STATEMENT IN TOP CORE		3	2741			72		
685	2	758	IXTSAV	DCW	#3		3	2744			72		
686	2	761	SEQNO	DCW	#3		3	2747			72		
687	2	762	KBRACK	DCW	@]@		1	2748			72		
688	2	763	KR	DCW	@R@		1	2749			72		

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
689	2	766	SX3B	DCW	#3	3		2752			72		
690	2	802	ERR2	DCW	@MESSAGE 2 - OBJECT PROGRAM TOO LARGE@	36		2788			73		
691	2	814	KB12	DCW	#12	12		2800			74		
692	2	815	CURR	DCW	#1	1		2801			74		
693	2	816	PREV	DCW	#1	1		2802			74		
694	2	819	W3	DCW	#3	3		2805			74		
695	2	820	CHNUM	DCW	#1	1		2806			74		
696	2	823	ACHARS	DSA	CHARS	3		2809	O28		74	2628	
697	2	824	K1	DCW	1	1		2810			74		
698	2	825	KPLUS	DCW	@&@	1		2811			75		
699	2	828	W3B	DCW	#3	3		2814			75		
700	2	829	SAVTAG	DCW	#1 TYPE TAG ZONE	1		2815			75		
701	2	867	ERR46	DCW	@ERROR 46 - MIXING IN ARITH, STATEMENT @	38		2853			76		
702	2	868	KN	DCW	@N@	1		2854			76		
703	2	870	W2	DCW	#2	2		2856			77		
704	2	882	USRCOD	DCW	@RUPWYZKJLMDH@ CODES FOR USER FUNCTIONS	12		2868			77		
705	2	884	KAX	DCW	@AX@	2		2870			77		
706	2	885	KLPAR	DCW	@%@	1		2871			77		
707	2	920	ERR24	DCW	@ERROR 24 - SYSTEM ERROR, STATEMENT @	35		2906			78		
708	2	960	ERR26	DCW	@ERROR 26 - EXCESS OF # SIGNS, STATEMENT @	40		2946			80		
709	3	000	ERR32	DCW	@ERROR 32 - MULTIPLE EXPONENT, STATEMENT @	40		2986			82		
710	3	040	ERR16	DCW	@ERROR 16 - PARENTHESIS ERROR, STATEMENT @	40		3026			84		
711	3	080	ERR25	DCW	@ERROR 25 - LEFT SIDE INVALID, STATEMENT @	40		3066			86		
712	3	081	KEQ	DCW	@#@	1		3067			86		
713	3	091	GMWM	DCW	@}@	1		3068		GMARK	86		
714			XFR		BEGN34				B 838		87	838	
715			CLRME	CLRA	BEGN34,GMWM					MACRO			
			*	CLRA	CLRBOT,CLRTOP[,ORG,GMWMAD]					GEN			
			*							GEN			
			*	CLEAR CORE	AFTER A PHASE USING THE CLRTOP ADDRESS					GEN			
			*							GEN			
716			ORG		201				0201				
			*							GEN			
			*	CLEAR DOWN	TO CLRBOT & X00 THE EASY WAY					GEN			
			*							GEN			
717			CLRME	EQU	*&1			0201		GEN			
718			)0J005	CS	GMWM CLEAR FROM CLRTOP	4		0201	/ ?68	GEN	88	3068	
719				SBR	)0J005&3	4		0205	H 204	GEN	88	204	
720				SBR	)0L005&6	4		0209	H 250	GEN	88	250	
721				C	)0J005&3,)0M005 DOWN TO CLRBOT & X00?	7		0213	C 204 261	GEN	88	204	261
722				BU	)0J005	5		0220	B 201 /	GEN	88	201	
			*							GEN			
			*	NOW CLEAR	DOWN TO CLRBOT THE HARD WAY					GEN			
			*							GEN			
723			)0K005	C	)0L005&6,)0N005	7		0225	C 250 264	GEN	88	250	264
724				BU	)0L005	5		0232	B 244 /	GEN	88	244	
725				CS	LOADNX,)0Q005 LOAD THE NEXT BLOCK AT 1	7		0237	/ 700 271	GEN	89	700	271
726			)0L005	LCA	)0P005,0-0 CLEAR WITH BLANK AND WORD MARK	7		0244	L 265 000	GEN	89	265	000
727				SBR	)0L005&6	4		0251	H 250	GEN	89	250	
728				B	)0K005	4		0255	B 225	GEN	89	225	

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
729			)0M005	DSA	)0R005 CLRBOT & X00 - 1	3		0261	899	GEN	89	899	
730			)0N005	DSA	BEGN34 CLRBOT	3		0264	838	GEN	89	838	
731			)0P005	DCW	#1	1		0265		GEN	89		
732				DC	@CLRA @ IDENTIFY IN A DECK, TAPE, OR DUMP	5		0270		GEN	89		
733			)0Q005	DCW	@}@	1		0271		GEN	90		
734				ORG	BEGN34&X00				0900				
735			)0R005	EQU	* CLRBOT & X00 - 1			0899		GEN			
736				XFR	CLRME				B 201		91	201	

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
)0J005	0201: 0	)0K005	0225: 0	)0L005	0244: 0	)0M005	0261: 0	)0N005	0264: 0	)0P005	0265: 0
)0Q005	0271: 0	)0R005	0899: 0	)6J003	0110: 0	)6K003	0700: 0	)6L003	0700: 0	)6L003	0704: 0
)6L004	0704: 0	)6M003	0728: 0	)6M004	0728: 0	)9J003	0252: 0	)9R003	0258: 0	)9R004	0242: 0
ACHARS	2809: 0	ALMOST	2519: 0	BEGIN3	0838: 0	BEGN34	0838: 0	CDOVLY	0700: 0	CH	2558: 0
CHARS	2628: 0	CHKX2	2733: 0	CHNUM	2806: 0	CLRL	0929: 0	CLRME	0201: 0	CLRXL	0953: 0
COUNT	1573: 0	COUNTX	1599: 0	CURR	2801: 0	DONE	2547: 0	END1	2223: 0	ERR16	3026: 0
ERR2	2788: 0	ERR24	2906: 0	ERR25	3066: 0	ERR26	2946: 0	ERR28	2617: 0	ERR32	2986: 0
ERR46	2853: 0	ERRFIN	2447: 0	FIVE	1981: 0	FIVEA	2055: 0	FIVEB	2117: 0	FIVEC	2175: 0
FIVED	2207: 0	FIVEF	2003: 0	FOUR	1948: 0	GET00	0878: 0	GETB	1228: 0	GLOBER	0184: 0
GM	2559: 0	GMWM	3068: 0	GOT00	0913: 0	GOTB	1244: 0	HALT	1217: 0	HUNT	1291: 0
HUNTL	1303: 0	HUNTX	1343: 0	IFSTMT	1221: 0	IXTOP	2741: 0	IXTSAV	2744: 0	K00	2735: 0
K1	2810: 0	KAX	2870: 0	KB12	2800: 0	KBRACK	2748: 0	KEQ	3067: 0	KLPAR	2871: 0
KN	2854: 0	KPLUS	2811: 0	KR	2749: 0	LINK	2493: 0	LOADAD	0838: 0	LOADNX	0700: 0
LOCBRK	1179: 0	LOOK	1516: 0	LOOK2	1528: 0	LOOK3	1562: 0	LOOKCH	1539: 0	LOOP	1060: 0
MIXED	1852: 0	MORE	0961: 0	MOVEUP	1257: 0	MOVEUX	1287: 0	MSG16	2375: 0	MSG24	2261: 0
MSG25	2413: 0	MSG26	2299: 0	MSG28	2223: 0	MSG32	2337: 0	ONE	1618: 0	PART2	0201: 0
PHAS34	0201: 0	PHASLD	0381: 0	PREV	2802: 0	READY	1153: 0	RESTRT	2508: 0	SAVTAG	2815: 0
SEQNO	2747: 0	SKPSUB	1347: 0	SNAPEX	0564: 0	SNAPSH	0333: 0	SUBBAK	1761: 0	SUBTWO	1890: 0
SX2	2731: 0	SX3	0981: 0	SX3B	2752: 0	TABLE	2629: 0	TAG1	2557: 0	THREE	2458: 0
TOP3	2600: 0	TPERR	0728: 0	TPREAD	0704: 0	TWO	1659: 0	TWOA	1836: 0	USRCOD	2868: 0
USRFNC	2099: 0	W2	2856: 0	W3	2805: 0	W3B	2814: 0	WHEW	1381: 0	X1	0089: 0
X2	0094: 0	X2P99	2738: 0	X3	0099: 0	ZERO	1603: 0				

## UNREFERENCED SYMBOLS

PHASLD SNAPEX TOP3 TPERR TPREAD