

COMUNICACION

QUINTO CATALOGO FUNDAMENTAL DEL CIRCULO MERIDIANO DE SAN JUAN

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Observatorio Astronómico "Félix Aguilar"

Este Catálogo fue observado con el Círculo Meridiano Reversible-Repsold de 190 mm de abertura y 2.25 m de distancia focal, que se opera en el Observatorio Astronómico "Félix Aguilar" de la Universidad Nacional de San Juan, y contiene las estrellas FK4 que fueron observadas como estrellas de referencia para la confección del Segundo Catálogo Círculo Meridiano San Juan, FKSZ, catálogo al que deberá remitirse para mejor información.

Las estrellas del Quinto Catálogo, fueron observadas y compensadas en cuatro zonas, a saber: de $+30^\circ$ a 0° , de 0° a $-31:5$, de $-31:5$ a -60° y de -60° a -90° de declinación.

Contiene 689 estrellas FK4 con un total de 3690 observaciones en ascensión recta y 2076 en declinación. El error medio cuadrático promedio reducido al Ecuador de una observación en ascensión recta, es de $0:020$ y de $0:31$ en declinación.

Las observaciones comprenden el período Agosto de 1975 hasta Noviembre de 1977.

Los valores (O-C), instrumento menos FK4, tanto en ascensión recta como en declinación que figuran en el Quinto Catálogo, son promedios de los valores individuales de ambos frenos reducidos a un freno promedio, los que a su vez, fueron reducidos al sistema del Primer Catálogo Fundamental Círculo Meridiano San Juan mediante una constante para cada zona.

Los gráficos 1 y 2 muestran las curvas $\Delta \alpha \delta \cos \delta$ y $\Delta \delta$, instrumento menos FK4, de cada uno de los frenos del Quinto Catálogo Fundamental CMSJ.

Los gráficos 3 y 4 muestran las curvas $\Delta \alpha \delta \cos \delta$ y $\Delta \delta$ del Primer Catálogo Fundamental CMSJ y las de este Catálogo reducidas al anterior.

EQUIPO DE OBSERVACION

Las personas que en algún momento compusieron el equipo de observación, son las siguientes: R.A. Carestia, G.G. Gutiérrez, D.H. Garay, W.L. Castro, R.E. Orrego, M. Gallego, R. Jakowczyk, M.A. Montoya, A. Rocher, R. Herrera y E.R. Galarza.

COMPUTACION

La programación FORTRAN de la reducción preliminar de los resultados, fue realizada por el Ing. Aldo Zaragoza, quien trabajó en los

programas de Computación, utilizando la computadora IBM 1130 y la IBM 370/30 del Centro de Cómputos de la Universidad Nacional de San Juan, hasta su fallecimiento acaecido el 30 de octubre de 1979. Posteriormente los trabajos de computación se continuaron con la colaboración prestada por la Ing. Carla Bruschi de Cardinali del Centro de Cómputos de la Universidad Nacional de San Juan.

Quinto Catálogo Fundamental C.M. de San Juan

EXPLICACION

Columna	Denominación	Significado
1	FK4 NUMBER	Número de estrella Catálogo FK4 + 30.000
2	R.A. 1950.0	Ascensión recta media 1950.0 del catálogo FK4 en horas, minutos y segundos.
3	DEC. 1950.0	Declinación media 1950.0 del catálogo FK4 en grados, minutos y segundos.
4	P.M. IR.A.) 1950.0	Movimiento propio secular 1950.0 del catálogo FK4 en ascensión recta en segundos de tiempo.
5	P.M. (D) 1950.0	Movimiento propio secular 1950.0 del catálogo FK4 en segundos de arco.
6	(O - C) R.A.	Corrección a la ascensión recta del catálogo FK4 en segundos de tiempo para la época media de observación, reducido al Primer Catálogo.
7	ME .001	Error medio cuadrático reducido al Ecuador.
8	N	Número de observaciones en ascensión recta.
9	EPOCH 1900 +	Epoca media de las observaciones en ascensión recta.
10	(O - C) D	Corrección a la declinación del catálogo FK4 en segundos de arco para la época media de observación, reducido al Primer Catálogo.
11	ME .01	Error medio cuadrático.
12	N	Número de observaciones en declinación.
13	EPOCH 1900 +	Epoca media de las observaciones en declinación.

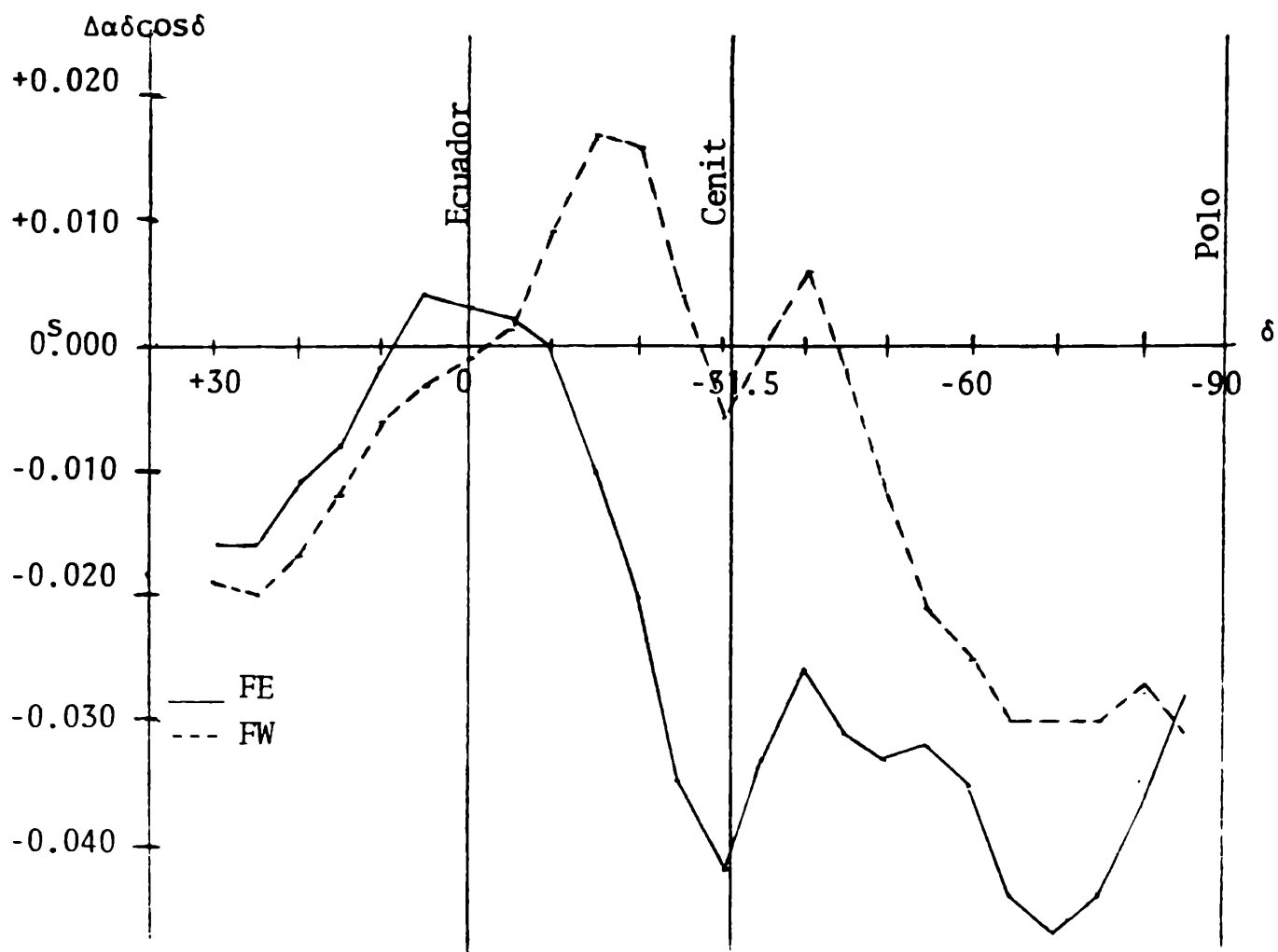


Figura 1

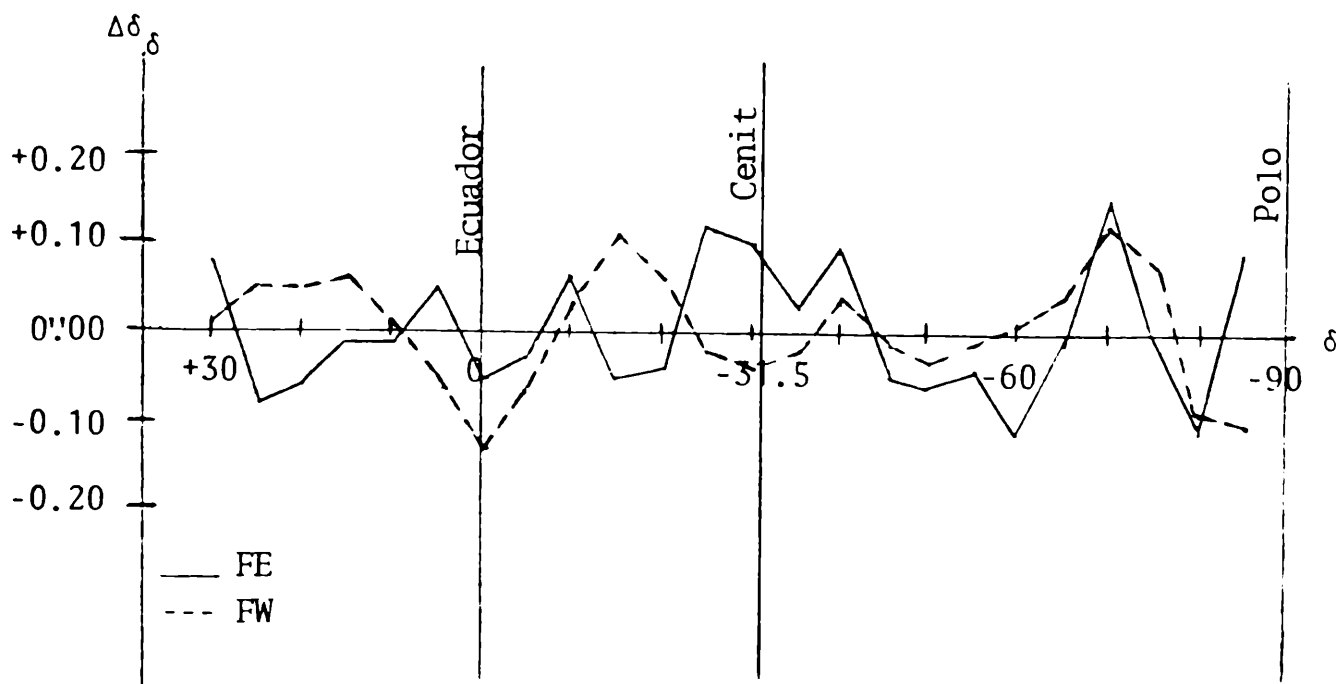


Figura 2

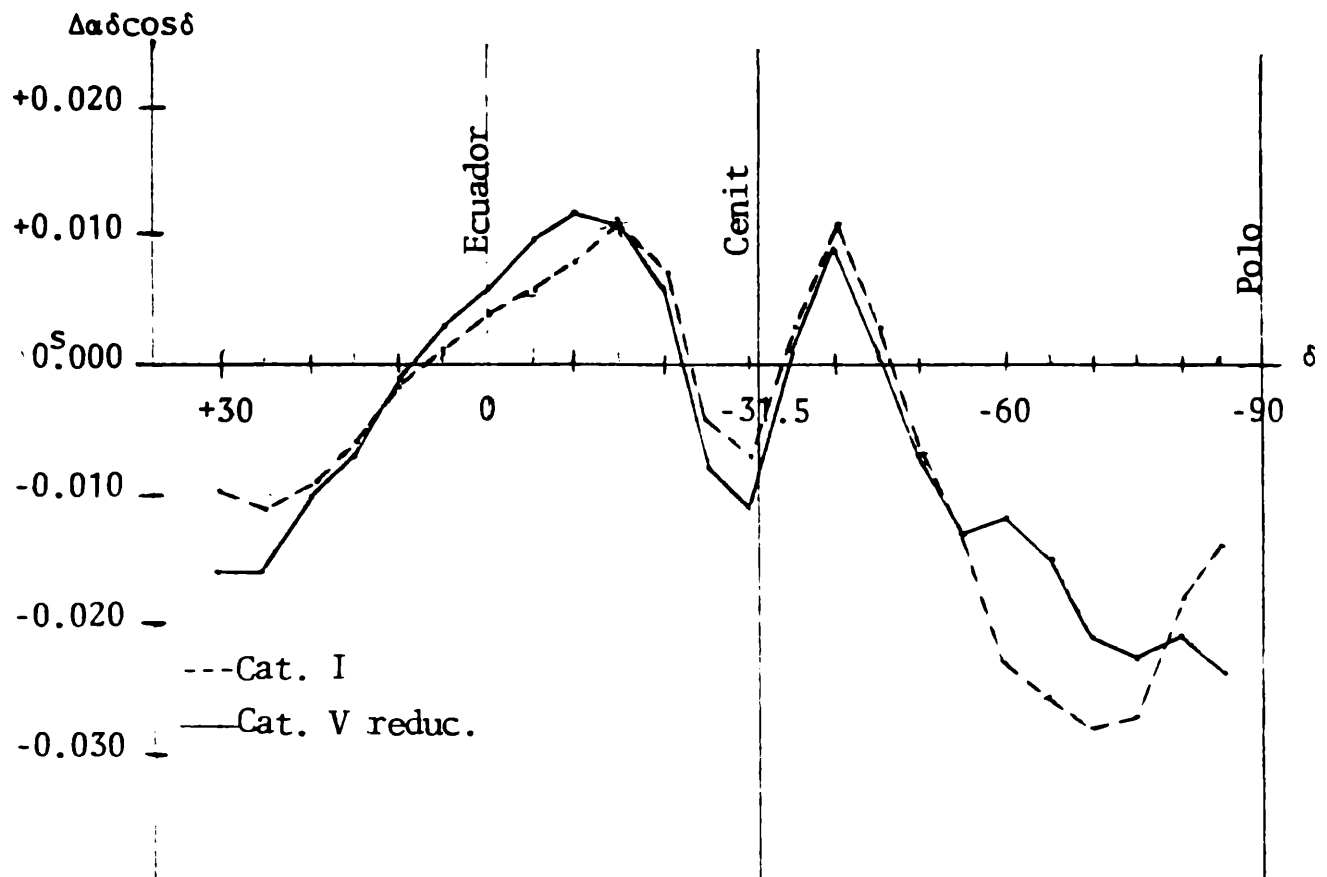


Figura 3

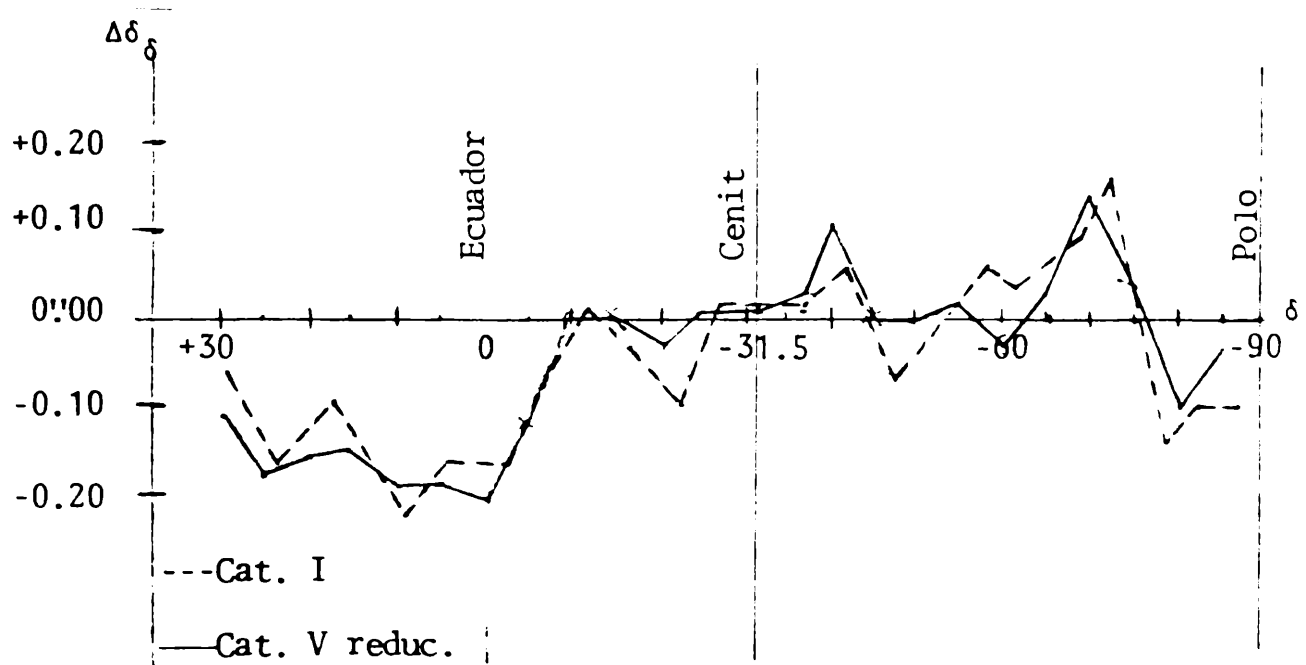


Figura 4

FIFTH STAR JUAN MELILLI SINGLE FUNDAMENTAL CATALOGUE (SUPPL. COLUMBIANO)

FK# NUMER	RA.1955.	DEC.1955.	PM(MA) 1955.0	PRO(D) 1955.	(U-L)RA .001	MC .001	N	EP(LM) 1903*	(U-L)U .01	ME .01	N	EP(M) 1900
30104	2 59 50.952	- 9 5 45.65	0.534	-21.71	0.000	17	2	76.91	0.000	00	0	00.95
30107	2 59 51.744	- 9 5 41.15	-0.032	-7.45	-0.032	6	0	76.92	0.000	00	0	00.90
30113	3 0 0.200	-72 5 51.70	0.650	1.30	-0.102	7	2	75.99	-0.20	92	4	70.95
30114	3 0 45.305	19 32 20.22	1.072	-0.67	0.011	0	4	76.97	-0.12	29	4	76.97
30116	3 10 13.150	- 1 22 54.84	1.295	-6.27	-0.007	13	7	75.07	0.000	00	0	00.90
30116	3 11 16.747	-57 50 29.47	0.157	1.20	-0.002	10	3	75.96	-0.37	2	3	72.96
30121	3 22 7.121	0 51 15.25	-0.960	-7.49	0.002	5	7	76.94	0.03	17	7	76.97
30123	3 24 27.329	9 32 35.17	0.371	-3.90	0.012	3	7	76.34	0.23	6	3	76.97
30125	3 29 6.502	12 46 0.30	0.134	0.22	-0.017	5	9	76.49	0.000	00	0	00.90
30126	3 31 5.144	-50 32 51.41	0.050	0.16	0.059	0	2	76.98	0.27	32	2	76.95
30133	3 40 15.499	-32 5 49.36	0.042	1.74	0.039	0	1	75.80	-0.55	0	1	72.00
30136	3 41 54.055	23 57 27.82	0.133	-7.10	0.003	9	7	76.50	-0.01	10	5	76.91
30137	3 41 57.943	- 1 19 10.07	-0.019	-0.31	0.022	4	4	75.95	0.000	00	0	00.90
30139	3 44 30.424	23 57 7.57	0.145	-4.35	-0.007	21	5	75.31	-0.55	13	4	76.15
30140	3 44 41.716	-23 23 46.29	-1.154	-5.70	0.018	0	4	75.95	0.17	3	3	75.95
30141	3 43 33.903	-04 57 50.21	4.990	7.32	-0.020	3	3	75.96	-0.05	11	3	75.96
30145	3 47 34.895	-36 21 2.40	-0.420	-4.94	0.010	10	3	76.20	0.25	21	3	76.20
30146	3 47 59.669	-74 23 55.23	1.227	11.09	-0.170	0	1	75.90	0.34	0	1	75.90
30150	3 57 54.370	12 21 2.13	-0.399	-1.92	-0.024	12	3	76.20	0.000	00	0	00.90
30151	4 0 29.564	5 51 7.47	0.007	-0.01	-0.009	7	5	76.50	0.000	00	0	00.90
30154	4 9 22.339	- 6 57 59.74	0.327	0.29	0.010	0	3	75.96	0.000	00	0	00.90
30156	4 12 00.543	-02 35 55.04	0.074	9.97	-0.022	12	3	75.96	-0.20	13	3	75.96
30162	4 20 2.894	17 25 36.01	0.752	-4.03	-0.024	23	3	76.97	-0.13	22	3	76.97
30164	4 29 41.505	19 4 10.36	0.703	-3.02	-0.049	0	1	77.01	0.000	00	0	00.90
30166	4 21 12.207	-00 19 50.75	0.651	9.99	-0.037	10	3	75.96	0.44	23	3	75.96
30170	4 33 30.315	-30 39 43.53	-0.370	-1.25	-0.037	20	2	75.94	0.22	7	4	75.94
30171	4 32 56.793	-55 8 51.78	0.613	0.00	-0.079	0	3	75.96	0.05	2	3	75.96
30172	4 35 53.315	-14 24 1.00	-0.298	-16.09	0.009	10	7	75.92	0.39	0	1	75.92
30174	4 37 14.613	22 51 46.00	-0.010	-1.56	-0.020	31	3	75.03	0.25	0	1	75.03
30175	4 42 51.773	- 3 20 41.33	0.371	-1.09	0.022	15	4	76.97	0.000	00	0	00.90
30177	4 43 33.295	-71 1 22.62	0.293	3.39	-0.137	6	3	75.96	0.32	15	3	75.96
30179	4 43 32.421	5 31 16.94	-0.326	0.14	0.008	11	4	75.07	0.02	23	4	75.07
30180	4 31 33.001	2 21 37.24	-0.030	0.03	-0.018	16	2	75.07	-0.43	16	2	75.07
30181	4 53 43.932	33 5 19.94	0.020	-0.04	0.008	24	2	75.07	0.33	14	3	75.07
30188	5 3 23.305	- 5 0 33.94	-0.072	-0.04	0.023	24	2	75.94	0.000	00	0	00.90
30195	5 12 17.001	- 0 53 47.05	-0.139	-0.00	-0.001	8	2	75.94	0.000	00	0	00.90
30207	5 30 31.344	-17 51 24.18	-0.037	0.14	0.024	6	2	75.94	-0.39	15	2	75.94
30214	5 23 51.219	-76 22 40.31	3.101	23.54	-0.217	17	2	76.60	-0.17	0	1	75.90
30215	5 37 50.211	-34 5 50.73	0.015	-2.75	0.045	0	1	77.01	-0.22	0	1	77.01
30217	5 42 22.653	-22 27 46.31	-2.120	-37.27	-0.019	17	2	75.94	0.05	1	2	75.94

FIFTH SAH JUAN MERIDIAN CIRCLE FUNDAMENTAL CATALOGUE (UPPER CULMINATIONS)

FK5 NUMBER	RA. 1950.	DEC. 1950.	PK(1950)	PK(1950)	PK(1950)	(U-C)RA	ME	N	(U-C)M	ME	(U-C)M	ME	Y	1950
30218	5 44 31.158	17 42 43.75	-0.027	-0.027	-0.73	-0.032	14	4	77.17	-0.01	25	4	77.17	
30219	5 44 41.256	-14 50 21.19	-0.164	-0.164	-0.34	0.009	8	2	75.94	0.01	11	2	75.94	
30220	5 45 23.313	-9 41 5.45	-0.325	-0.325	-0.47	0.008	0	1	75.90	0.00	0	0	75.90	
30222	5 49 19.193	-20 52 55.23	1.001	1.001	-65.01	0.010	9	2	75.94	-0.36	25	2	75.94	
30224	5 52 27.309	7 23 57.92	0.173	0.173	0.37	-0.009	18	2	75.94	0.00	0	0	75.94	
30230	6 2 19.755	4 9 47.18	-0.330	-0.330	-0.62	0.009	0	2	75.94	0.00	0	0	75.94	
30244	6 21 7.050	4 37 11.68	-0.134	-0.134	1.03	0.003	7	4	77.17	0.00	0	0	77.17	
30246	6 25 29.351	-4 43 47.03	-0.066	-0.066	-0.05	0.012	10	6	76.78	-0.08	16	2	75.94	
30251	6 34 49.346	16 26 37.40	0.330	0.330	-4.37	-0.045	11	4	77.17	0.02	7	4	77.17	
30258	6 42 15.171	2 28 6.45	-0.142	-0.142	-1.32	0.016	11	4	77.17	-0.01	35	4	77.17	
30262	6 47 43.725	-01 53 14.36	-1.036	-1.036	26.56	-0.003	8	4	77.19	-0.49	12	4	77.19	
30264	6 44 14.538	-80 45 40.15	-0.741	-0.741	5.66	0.000	7	9	76.80	0.00	0	0	76.80	
30266	6 51 21.921	-11 58 29.64	-0.979	-0.979	-1.05	0.029	7	11	76.79	0.24	18	2	77.25	
30267	6 52 1.688	-70 54 5.41	0.031	0.031	1.04	0.014	14	4	77.19	-0.36	16	4	77.19	
30269	7 1 0.527	20 38 43.45	-0.055	-0.055	-0.32	-0.028	5	6	76.85	-0.24	14	6	76.85	
30272	7 3 22.412	-56 40 23.73	0.022	0.022	-0.21	-0.015	9	4	77.19	-0.20	19	4	77.19	
30273	7 6 21.436	-26 18 45.56	-0.056	-0.056	0.29	-0.003	10	4	76.98	0.26	19	4	76.98	
30275	7 11 9.037	-46 40 29.57	-1.364	-1.364	9.70	0.004	4	2	76.20	0.37	50	2	76.20	
30277	7 15 13.198	16 37 20.12	-0.336	-0.336	-3.95	-0.025	7	3	77.17	-0.53	11	3	77.17	
30283	7 24 20.357	0 23 29.89	-0.365	-0.365	-4.04	-0.007	10	4	77.19	0.00	0	0	77.19	
30286	7 25 53.649	31 23 6.32	1.177	1.177	17.07	0.000	0	0	0.00	0.23	3	2	76.21	
30287	7 31 24.654	21 59 59.07	-1.343	-1.343	-10.25	0.000	0	0	0.00	0.44	0	1	76.21	
30288	7 31 28.636	-22 11 12.51	-0.334	-0.334	3.95	0.008	10	5	76.82	0.23	10	3	76.82	
30289	7 34 47.476	-3 59 52.74	-0.493	-0.493	1.35	0.025	8	4	77.25	-0.20	13	4	77.25	
30290	7 35 31.010	-34 31 17.92	-0.226	-0.226	1.33	-0.038	51	2	76.20	-0.20	6	2	76.20	
30291	7 36 41.117	5 21 16.81	-4.732	-4.732	-102.37	0.040	3	6	76.87	0.00	0	0	76.87	
30293	7 38 21.406	-9 25 54.53	-0.523	-0.523	-2.43	-0.002	9	7	76.78	0.51	20	2	76.25	
30294	7 41 25.857	24 31 10.48	-0.222	-0.222	-3.49	-0.021	15	6	76.85	-0.21	14	6	76.85	
30296	7 44 17.114	33 32 24.61	-0.122	-0.122	-3.12	-0.022	5	3	77.17	0.17	20	3	77.17	
30304	7 57 14.251	-3 32 31.18	-0.394	-0.394	-3.77	0.036	21	7	76.76	-0.15	25	2	76.22	
30306	8 1 49.522	-39 51 40.83	-0.265	-0.265	1.09	-0.009	13	5	76.42	0.01	15	5	76.42	
30308	8 5 4.321	-24 9 52.50	-0.636	-0.636	4.00	0.008	9	6	76.73	-0.03	7	7	76.73	
30311	8 11 2.019	-19 30 10.95	-0.136	-0.136	-0.70	0.020	6	13	76.71	-0.00	13	6	76.71	
30312	8 13 43.202	9 20 27.73	-0.304	-0.304	-5.17	-0.004	7	6	76.72	-0.10	23	3	77.17	
30313	8 16 40.940	-36 30 12.25	-0.331	-0.331	4.29	0.045	2	2	76.20	0.36	10	2	76.20	
30315	8 21 29.353	-59 20 52.98	-0.326	-0.326	1.31	-0.003	6	2	76.20	-0.30	0	1	76.20	
30316	8 23 9.718	-3 44 31.46	-0.467	-0.467	-2.67	-0.006	13	3	76.23	-0.37	3	3	76.23	
30318	8 22 10.641	-77 19 20.06	-3.415	-3.415	3.62	-0.106	3	22	76.81	0.04	16	7	76.81	
30321	8 29 49.156	20 36 44.72	-0.321	-0.321	-4.81	-0.027	22	4	77.17	-0.47	23	4	77.17	
30325	8 37 39.279	-12 17 51.03	-0.606	-0.606	-0.59	0.035	5	2	76.21	0.00	0	0	76.21	

FIFTH SAN JUAN MERIDIAN CIRCLE FUNDAMENTAL CATALOGUE (UPPER CULMINATIONS)

FK NUMBER	RA. 1950.	DEC. 1950.	PK (K) 1950.0	PK (J) 1950.	(U-C) KA .001	ME .001	N	EP (CM) 1900*	(U-C) D .01	MZ .01	N	L. (M) 1950*
30327	8 41 54.051	-55 0 13.04	-0.143	0.07	0.016	20	2	76.32	0.43	3	1	76.32
30328	8 43 40.514	-48 56 39.19	-0.179	-4.79	-0.028	4	4	77.17	-0.33	30	4	77.17
30331	8 43 46.055	-78 46 57.76	-0.779	2.11	-0.164	5	11	76.36	0.06	9	5	76.32
30336	8 53 54.921	-00 27 11.05	-0.317	3.68	-0.005	7	10	76.63	-0.25	7	10	76.63
30337	8 55 45.247	12 3 9.07	0.258	-2.37	-0.013	6	8	76.54	0.000	0	0	0.000
30342	9 2 25.731	-46 53 52.51	-0.497	-1.61	-0.050	12	2	76.40	-0.29	33	2	76.42
30345	9 6 4.310	-43 13 47.60	-0.193	1.22	-0.006	9	6	76.43	-0.11	6	6	76.43
30347	9 11 45.918	-2 31 34.63	0.860	-31.29	-0.015	5	23	76.61	-0.36	9	11	76.48
30348	9 12 39.662	-69 30 39.63	-2.862	10.23	-0.158	11	4	77.19	0.26	10	4	77.19
30350	9 16 11.558	17 55 6.30	-0.351	-13.37	0.0	14	4	76.31	-0.39	11	3	76.31
30351	9 15 42.109	-59 3 53.70	-0.240	0.75	-0.060	7	4	76.74	-0.02	19	4	76.74
30353	9 20 33.453	-54 47 47.30	-0.094	0.62	-0.015	8	6	76.52	-0.31	5	4	76.52
30354	9 25 7.791	-8 26 27.47	-0.119	2.76	0.0	5	12	76.66	0.34	6	5	76.39
30356	9 27 10.760	-35 43 54.93	-0.205	-0.71	-0.011	19	2	76.32	0.05	3	2	76.32
30361	9 29 42.071	-56 48 47.60	-0.419	-0.07	0.0	14	4	76.78	0.19	18	4	76.78
30362	9 31 14.673	-72 51 32.55	-0.434	-0.73	-0.114	8	7	76.80	0.36	10	8	76.73
30363	9 33 29.306	10 7 14.64	-0.760	-9.05	-0.004	10	4	76.76	-0.26	5	2	76.21
30366	9 41 58.247	-27 32 23.32	-0.373	2.78	-0.025	10	5	76.75	0.22	17	5	76.75
30367	9 43 0.776	24 0 17.62	-0.330	-1.51	-0.002	4	6	76.64	-0.65	11	6	76.64
30370	9 48 42.326	- 4 0 29.32	0.337	-3.16	0.010	4	19	76.72	0.04	11	7	76.85
30373	9 52 33.632	-10 46 16.11	-0.358	-4.22	0.003	7	11	76.62	-0.13	13	11	76.62
30375	9 55 6.249	-34 19 44.86	-0.135	0.46	0.041	4	2	77.40	-0.11	16	2	77.40
30376	9 57 7.779	3 37 26.41	-0.463	1.69	0.013	6	12	76.72	0.000	0	0	0.000
30377	9 56 43.347	-35 39 3.66	-0.335	-2.41	0.038	7	6	76.63	-0.13	10	6	76.63
30378	9 57 34.334	8 17 34.76	-0.215	-2.64	-0.007	7	6	76.64	0.000	0	0	0.000
30379	10 4 36.553	17 0 26.17	-0.712	-0.58	-0.010	15	2	76.36	-0.32	34	2	76.36
30380	10 5 42.647	12 12 44.54	-1.096	0.26	0.001	4	8	77.08	-0.38	23	2	77.30
30381	10 6 3.942	-12 6 22.55	-1.407	-9.46	0.012	4	11	76.59	0.000	0	0	0.000
30382	10 12 37.796	-41 52 25.25	-1.345	3.64	-0.029	14	2	76.32	0.33	40	2	76.32
30384	10 13 54.758	23 40 1.94	0.134	-1.21	-0.014	6	9	76.55	-0.24	11	9	76.55
30385	10 12 33.047	-05 47 21.35	-0.625	0.25	-0.093	7	6	76.63	-0.01	12	6	76.63
30388	10 20 54.335	- 3 45 14.54	-0.325	-0.05	0.016	7	10	76.53	-0.32	3	1	76.33
30389	10 23 40.213	-13 34 44.56	-0.417	-3.34	0.035	8	3	76.39	0.000	0	0	0.000
30390	10 24 52.333	36 57 50.88	-0.936	-10.55	0.032	16	2	76.36	0.39	24	2	76.36
30391	10 23 24.184	-73 46 36.88	-0.438	-3.14	-0.102	17	2	77.36	0.01	20	2	77.36
30396	10 30 17.762	9 33 52.22	-0.329	-0.61	0.006	9	7	76.34	0.000	0	0	0.000
30401	10 34 53.647	-78 20 53.72	-1.293	1.60	-0.068	5	15	76.56	0.000	0	0	0.000
30402	10 37 18.653	-55 20 32.70	-0.267	-0.36	0.002	7	7	76.44	0.39	13	7	76.44
30404	10 38 51.533	- 1 28 41.50	-0.932	-12.50	-0.010	7	6	76.37	0.17	35	3	76.37
30406	10 41 10.052	-64 7 55.36	-0.323	0.76	-0.013	9	6	76.63	-0.28	11	6	76.63

FIFTH SAM JUAN MERIDIAN CIRCLE FUNDAMENTAL CATALOGUE (UPPER CULMINATION)

FK4 NUMBER	H.A. 1950.	DEC. 1950.	P ₁ (-A) 1950.0	P ₁ (U) 1950.	(U-C)FA .001	ME .001	N	CPJCH 1950*	(C-L)U .01	ME .01	N	(P)JCH 1950*
30409	10 46 37.797	10 48 37.01	-0.335	-2.04	0.001	7	6	76.51	-0.93	9	7	76.51
30410	10 47 9.331	-15 55 53.45	-0.625	19.02	0.003	11	2	77.58	-0.21	21	2	77.58
30411	10 45 20.164	-8 16 34.91	-2.136	3.40	0.107	4	11	76.61	0.13	15	5	76.61
30412	10 50 31.231	34 29 5.02	0.634	-20.32	0.009	6	3	76.50	-0.74	10	3	76.50
30414	10 54 22.976	-36 52 6.70	0.633	-13.28	-0.006	3	8	76.50	-0.36	17	3	76.50
30415	10 57 51.272	-41 27 26.45	0.130	-0.22	0.029	6	2	77.29	0.36	14	2	77.29
30418	11 2 20.300	7 36 24.10	-2.332	-5.32	-0.002	8	7	76.58	0.03	12	5	76.58
30421	11 9 11.730	-22 33 8.99	0.002	-10.22	0.001	12	5	76.75	-0.38	22	5	76.75
30422	11 11 27.035	20 47 52.67	1.016	-13.53	-0.008	13	12	76.77	-0.16	10	11	76.77
30423	11 11 37.006	19 42 11.38	-0.421	-3.35	-0.018	13	5	76.32	0.19	10	2	76.32
30425	11 15 46.947	33 22 2.56	-0.219	2.26	0.0	17	5	76.30	-0.01	17	5	76.30
30427	11 13 33.430	6 18 13.06	-0.637	-1.50	0.013	10	6	77.23	-0.22	40	3	77.23
30428	11 18 33.151	-54 13 0.27	-0.345	-0.64	-0.007	8	4	76.83	-0.19	23	4	76.83
30431	11 22 22.550	-17 24 32.96	-0.717	-0.14	0.010	7	8	76.61	0.33	18	7	76.61
30434	11 30 32.204	-31 34 50.66	-1.624	-4.21	0.009	32	2	77.40	-0.50	2	2	77.40
30435	11 33 24.001	-47 21 21.21	0.332	-5.36	0.040	18	2	77.40	0.36	14	2	77.40
30437	11 34 23.255	- 0 32 51.17	0.334	3.83	-0.015	7	7	76.62	-0.36	18	5	76.62
30438	11 35 10.915	-75 37 10.20	-3.542	-0.10	-0.111	8	8	76.31	****	**	0	****
30439	11 37 43.438	-34 28 2.58	-0.304	-0.25	0.024	5	7	76.64	-0.07	14	7	76.64
30442	11 44 4.966	-60 54 1.05	-0.376	-2.06	0.033	10	4	76.31	0.30	23	4	76.31
30449	11 40 30.005	14 51 5.80	-3.428	-11.09	0.001	18	2	76.21	-0.23	28	2	76.21
30449	11 48 5.386	2 2 47.61	4.936	-27.46	-0.003	4	8	76.59	-0.23	15	5	76.59
30446	11 49 38.232	-44 53 42.92	-0.769	-1.81	0.051	9	6	76.59	0.36	16	7	76.59
30449	12 1 3.711	-42 9 14.82	2.333	-12.13	0.027	11	9	76.56	0.53	10	9	76.56
30450	12 2 39.734	9 0 36.34	-1.452	4.30	-0.008	9	7	76.35	-0.23	14	2	76.35
30452	12 3 43.446	-50 26 38.33	-0.343	-1.24	-0.015	9	9	76.56	0.31	12	9	76.56
30453	12 7 22.919	-22 20 30.12	-0.524	1.01	0.033	4	3	76.47	0.02	20	3	76.47
30455	12 12 28.030	-58 28 14.80	-0.494	-1.01	-0.015	8	13	76.61	-0.37	11	13	76.61
30457	12 13 13.313	-17 15 51.04	-1.143	1.77	0.030	17	3	76.47	-0.31	16	3	76.47
30459	12 15 22.132	-79 2 4.83	-1.523	1.46	-0.057	4	16	76.80	0.02	13	6	76.80
30465	12 27 16.380	-16 14 14.14	-1.485	-14.34	0.021	5	11	76.37	-0.20	9	11	76.37
30466	12 28 22.727	-56 50 0.23	0.346	-20.70	-0.043	9	7	76.32	0.34	14	7	76.32
30469	12 29 27.193	-71 51 25.17	-1.024	-0.92	-0.128	4	8	76.71	-0.01	12	8	76.71
30474	12 34 10.033	-68 51 36.83	-0.743	-1.59	-0.054	9	8	76.71	-0.12	14	7	76.71
30475	12 36 37.747	- 7 43 14.48	-0.526	-3.11	0.009	6	11	76.59	****	**	0	****
30479	12 41 20.246	-28 2 59.26	-0.231	-4.03	-0.015	6	5	76.34	0.02	17	5	76.34
30481	12 44 47.337	-55 24 56.53	-0.504	-1.69	-0.047	4	7	76.77	-0.27	12	7	76.77
30482	12 50 39.510	-39 54 26.31	0.553	-2.65	-0.019	7	3	76.43	0.20	12	3	76.43
30487	12 58 47.373	-71 16 47.18	5.601	-3.16	-0.077	3	3	76.66	0.34	49	2	76.66
30488	12 59 41.210	11 13 38.90	-1.868	1.73	0.014	10	7	77.12	-0.13	25	3	77.12

FIFTH STAR JAW MEXICANA CIRCLE FUNDAMENTAL CATALOGUE (UPPER COLUMBIANS)

PK# NUMBER	RA. 1950.	DEC. 1950.	PMK(1) 1950.0	PM(10) 1950.	(0-C)11A .301	ME .301	U	FRICH 19000	(-C)12 .31	Y	U 1950
30489	13 5 56.753	-49 30 19.89	-0.276	-1.23	0.009	9	9	76.39	-0.14	9	76.39
30490	13 7 21.476	- 5 16 21.11	-0.232	-3.86	0.013	6	13	76.74	0.24	3	76.34
30491	13 7 42.260	38 45 51.03	-0.627	3.81	-0.020	13	2	76.21	0.13	2	76.31
30492	13 9 32.444	23 7 52.03	-6.049	37.00	0.022	0	1	76.32	-0.16	1	76.32
30493	13 11 49.936	-67 37 48.79	-0.281	-1.07	-0.057	7	8	76.71	0.22	3	76.71
30496	13 17 46.683	-36 26 50.37	-2.317	-3.58	0.010	5	6	76.39	0.09	6	76.39
30498	13 22 33.391	-10 54 3.36	-0.271	-3.34	0.002	6	15	76.39	-0.08	17	76.39
30501	13 32 8.336	- 0 20 27.51	-1.912	3.54	0.009	10	3	76.47	0.29	3	76.47
30503	13 34 51.964	-75 25 47.32	-0.439	-1.45	-0.101	8	4	76.50	0.000	0	0.000
30504	13 36 42.322	-55 12 46.33	-0.236	-1.74	-0.004	33	2	76.52	-0.37	2	76.52
30506	13 42 50.314	-32 47 29.80	-3.624	-14.98	0.003	12	2	76.52	0.13	2	76.52
30507	13 44 53.139	17 42 18.89	-3.372	3.37	0.001	7	4	76.50	0.23	4	76.50
30508	13 46 35.658	-42 13 31.64	-0.199	-2.64	0.008	17	2	76.32	0.35	2	76.32
30510	13 47 8.706	-17 53 9.12	-0.714	-4.15	0.003	4	6	76.39	-0.05	9	76.39
30512	13 52 24.510	-67 2 34.87	-0.264	-4.24	0.000	0	0	0.000	0.05	19	76.32
30514	13 54 0.273	-63 26 33.16	-0.236	-3.24	-0.077	0	1	76.41	0.01	0	76.41
30515	13 55 42.433	-24 43 54.18	-0.360	-3.09	-0.012	14	6	76.57	-0.04	26	76.57
30518	14 0 16.510	-60 7 50.09	-0.274	-2.34	-0.074	8	6	76.49	0.01	14	76.49
30522	14 8 7.066	25 19 39.84	-0.172	-6.42	0.006	15	6	76.81	-0.37	25	76.81
30523	14 10 13.451	-19 2 30.80	0.036	13.25	0.012	12	9	76.88	-0.83	1	76.23
30525	14 13 23.345	- 5 45 46.18	-0.229	-43.20	0.017	9	3	76.47	0.000	0	0.000
30526	14 13 22.730	19 26 33.96	-7.769	-199.91	-0.010	8	7	76.76	0.22	14	76.76
30529	14 16 48.224	-50 9 26.52	-0.100	-1.00	0.012	16	3	76.80	0.32	21	76.80
30534	14 29 43.446	30 35 24.14	-0.791	11.66	-0.024	11	2	77.32	-0.52	57	77.32
30539	14 38 26.301	-64 43 52.38	-2.914	-23.77	-0.002	13	5	76.51	0.21	6	76.51
30541	14 38 22.533	-47 10 29.32	-0.175	-1.98	-0.014	6	5	76.62	-0.23	27	76.62
30542	14 41 32.773	-78 30 5.63	-0.038	-1.82	-0.130	5	8	76.53	-0.63	25	76.53
30545	14 40 23.283	- 5 26 30.52	0.704	-32.12	0.014	3	6	76.40	0.000	0	0.000
30546	14 43 33.576	-32 10 23.89	-0.130	-6.80	0.041	0	1	77.24	0.18	0	77.24
30547	14 43 43.033	- 2 6 4.37	-0.763	-3.39	0.006	11	6	76.39	-0.08	13	76.39
30549	14 48 6.447	-15 50 6.59	-0.746	-7.11	0.020	7	5	76.41	0.35	19	76.41
30551	14 53 31.476	14 36 50.36	-0.130	-0.36	-0.016	4	4	76.35	0.11	24	76.35
30557	15 2 13.374	27 3 27.75	-1.313	-3.06	-0.013	8	3	76.73	-0.04	21	76.73
30559	15 4 43.738	-31 34 37.80	-1.161	-6.70	-0.015	18	3	76.86	-0.20	0	76.86
30562	15 12 42.226	- 5 7 25.80	-0.125	0.10	-0.015	5	8	76.36	-0.23	0	76.36
30564	15 14 13.733	- 7 11 30.53	-1.062	-2.34	-0.301	3	1	76.37	-0.62	0	76.37
30568	15 18 37.512	-36 9 33.19	-0.748	-8.72	0.032	20	3	76.86	0.29	28	76.86
30569	15 26 1.765	-73 13 7.26	0.078	-1.89	0.004	0	1	77.49	0.27	0	77.49
30570	15 23 28.116	15 36 9.65	-0.079	-1.10	0.004	4	2	77.37	0.34	0	77.37
30572	15 25 42.944	29 16 37.26	-1.375	8.33	-0.045	7	5	76.45	-0.20	23	76.45

FIFTH STAR JUAN HEPLING CIRCLE FUNDAMENTAL CATALOGUE (UPPER CULMINATIONS)

FK4 NUMBER	RA. 1950.	DEC. 1950.	PM(RA) 1950.	PM(Δ) 1950.	PM(Ω) 1950.	(U-C)KA .001	ME .001	N	EPHON 1950*	(J-C)U .01	AE .01	N	EPHON 1950*
30576	15 30 54.670	31 31 30.97	-0.174	-1.49	-1.49	-0.003	11	2	77.01	-0.23	6	2	77.01
30582	15 41 43.121	6 34 53.52	0.970	4.45	4.45	-0.051	0	1	77.59	0.000	0	0	77.59
30585	15 43 22.670	15 34 37.42	0.970	-4.37	-4.37	-0.016	0	1	76.44	0.25	0	1	76.44
30586	15 47 0.616	-3 16 42.55	-0.576	-2.76	-2.76	-0.001	21	3	76.60	0.14	52	2	76.60
30592	15 47 40.668	-33 28 35.56	-0.072	-3.22	-3.22	-0.016	0	1	77.24	-0.25	0	1	77.24
30597	15 55 49.501	-25 58 13.14	-0.374	-2.67	-2.67	0.006	0	1	77.53	-0.29	0	1	77.53
30603	16 2 31.537	-19 40 12.45	-0.341	-2.13	-2.13	0.002	7	3	76.68	-0.20	11	3	76.68
30610	16 11 45.325	-3 34 1.41	-0.316	-14.50	-14.50	0.008	10	3	76.66	-0.23	14	2	77.04
30611	16 23 3.680	-59 58 28.74	4.045	10.06	10.06	0.018	13	4	76.61	0.27	13	4	76.61
30622	16 25 22.783	-73 47 23.30	-4.343	-6.67	-6.67	-0.176	7	5	76.61	-0.42	17	4	76.61
30625	16 34 24.137	-10 28 2.81	0.076	2.26	2.26	0.015	8	3	76.89	0.000	0	0	77.00
30628	16 43 21.059	-68 56 19.69	0.522	-3.35	-3.35	-0.103	17	5	76.61	-0.10	20	5	76.61
30633	16 46 55.237	-34 12 15.26	-4.918	-25.95	-25.95	0.006	17	2	77.63	0.0	35	2	77.63
30634	16 55 17.959	5 27 4.61	-1.937	-0.95	-0.95	0.0	3	3	76.95	0.000	0	0	77.00
30635	16 56 22.471	30 59 55.52	-0.375	2.78	2.78	-0.006	4	2	76.64	-0.50	27	2	76.64
30638	17 3 2.442	12 48 29.08	0.341	-1.06	-1.06	-0.029	0	1	76.55	0.000	0	0	77.00
30642	17 8 34.015	-43 10 31.10	0.210	-28.46	-28.46	0.001	8	3	75.67	0.01	23	3	75.67
30644	17 16 30.473	-70 4 26.01	0.000	-1.48	-1.48	-0.033	11	5	76.61	0.07	20	4	76.61
30645	17 18 56.157	-24 57 5.20	-0.020	-2.12	-2.12	-0.022	11	6	76.96	-0.14	11	6	76.96
30648	17 21 3.264	-55 24 6.11	-0.312	-2.43	-2.43	-0.028	8	7	76.90	-0.37	9	7	76.90
30652	17 26 34.753	-60 36 43.50	-0.671	-9.36	-9.36	-0.054	4	6	75.66	-0.01	10	6	75.66
30656	17 31 36.676	12 35 41.92	0.034	-2.80	-2.80	-0.015	6	2	77.63	-0.11	6	2	77.63
30661	17 34 43.274	-15 22 7.01	-0.310	-6.09	-6.09	-0.026	0	1	76.65	0.000	0	0	77.00
30662	17 40 49.242	-64 42 9.87	-0.052	-5.20	-5.20	0.017	7	12	76.22	0.11	18	5	77.01
30665	17 40 10.270	-51 48 35.06	-0.138	-19.53	-19.53	-0.065	4	2	77.07	0.02	0	2	77.07
30666	17 41 0.041	4 35 11.84	-0.276	15.86	15.86	-0.006	6	10	76.06	0.24	3	10	76.06
30673	17 44 5.100	-40 6 34.95	0.007	-0.64	-0.64	0.006	8	8	76.50	-0.11	0	1	76.44
30677	17 50 16.352	-9 46 9.10	-0.022	-11.36	-11.36	-0.004	5	16	76.16	0.02	12	8	76.16
30678	17 50 8.348	2 55 56.61	-0.311	-0.93	-0.93	0.004	8	11	76.53	-0.22	16	4	77.19
30680	18 4 16.036	-75 53 40.32	0.348	-29.05	-29.05	0.006	9	7	76.91	0.22	11	5	77.07
30681	18 4 53.626	9 33 16.74	-0.421	8.11	8.11	-0.001	9	5	77.09	-0.08	10	7	76.91
30686	18 5 55.418	26 45 15.79	-0.374	0.95	0.95	-0.035	6	2	76.64	-0.13	12	5	77.04
30691	18 16 37.191	-61 31 9.62	0.043	0.39	0.39	-0.059	0	10	76.85	0.60	6	2	76.64
30692	18 21 53.942	21 44 44.36	1.332	-24.37	-24.37	0.010	0	6	76.92	0.19	15	5	76.92
30697	18 23 15.974	-45 59 53.12	-0.137	-4.63	-4.63	0.008	7	2	77.65	-0.12	13	7	76.90
30698	18 29 22.950	-42 21 2.24	0.277	-2.06	-2.06	-0.007	6	10	76.06	0.02	9	10	76.06
30704	18 37 12.297	-71 28 26.15	0.158	-15.76	-15.76	-0.043	9	4	76.61	0.34	14	4	76.61
30706	18 47 55.414	-62 14 51.43	0.094	-1.76	-1.76	0.026	5	13	76.60	-0.27	10	13	76.60
30708	18 52 9.927	-26 21 36.29	0.104	-5.39	-5.39	0.024	16	2	77.71	0.04	15	2	77.71

FIFTH STAR JUNE, MEXICANA, CIRCLE FUNDAMENTAL CATALOGUE (UPPER COLUMNATION)

FK4 NUMBER	RA.1950.	DEC.1950.	PM(AR) 1950.0	PM(UT) 1950.	(U-C)PA .001	ML .001	N	SP(UB) 1930*	(U-C)U .01	B	V	W
30710	18 54 44.833	-21 10 26.87	0.250	-1.18	0.009	6	6	77.34	-0.12	10	3	77.59
30712	18 57 21.119	14 59 56.41	-0.360	-7.53	-0.006	6	12	76.03	-0.12	20	3	77.67
30716	19 3 6.080	13 47 13.86	-0.373	-5.52	0.001	6	7	76.57	-0.24	20	3	77.52
30717	19 3 22.000	-4 57 52.74	-0.145	-3.82	0.005	4	3	77.06	0.000	04	3	77.53
30720	19 6 47.450	-21 6 17.49	-0.304	-3.51	-0.007	8	4	77.42	-0.18	23	4	77.52
30722	19 14 42.594	-19 2 37.10	-0.003	-1.49	-0.017	6	4	75.71	0.000	04	0	77.55
30725	19 15 28.137	11 50 13.53	0.331	1.62	0.006	9	4	77.16	0.000	04	0	77.58
30727	19 18 51.034	-16 3 1.82	0.092	-0.61	0.011	5	8	76.81	0.00	7	3	77.68
30728	19 20 25.422	-40 42 43.10	0.201	-12.07	0.008	14	7	75.66	-0.13	13	7	77.66
30730	19 22 56.598	7 0 40.90	1.694	6.54	0.013	3	6	77.32	-0.15	10	4	78.03
30731	19 23 46.937	-29 50 37.05	0.147	-4.50	-0.011	11	3	76.50	0.11	24	4	78.03
30732	19 28 42.222	27 51 12.44	0.337	-0.21	0.012	0	1	76.73	0.000	04	0	78.03
30737	19 34 12.072	-7 8 24.73	0.334	-0.42	0.009	4	8	77.38	0.000	04	0	78.03
30741	19 43 52.377	10 29 24.36	0.193	0.15	-0.003	3	7	75.66	0.000	04	0	78.03
30743	19 43 39.429	18 24 34.69	0.317	1.03	-0.007	8	6	77.02	-0.14	7	6	77.32
30745	19 48 20.590	8 44 5.72	3.624	3.86	0.015	3	2	77.07	0.000	04	0	78.03
30748	19 49 59.225	0 52 33.23	0.331	-0.61	0.012	0	1	76.75	0.000	04	0	78.03
30748	19 54 50.750	-13 2 43.83	1.604	-13.14	-0.034	4	11	76.71	-0.02	10	10	78.03
30751	19 56 29.133	-35 24 47.51	0.061	-2.44	0.005	0	1	76.75	0.03	0	1	78.03
30752	19 56 31.933	19 21 18.47	0.469	2.55	-0.026	19	4	77.40	0.13	13	4	77.00
30754	20 3 50.490	-66 16 43.41	19.601	-114.09	0.048	8	7	76.28	-0.44	13	0	78.03
30754	20 3 33.869	-53 1 33.20	-0.313	1.03	-0.040	5	6	75.67	0.22	17	0	78.07
30756	20 3 43.474	-0 28 16.06	0.236	0.72	-0.006	11	6	76.37	-1.32	0	1	78.73
30760	20 14 06.627	24 30 57.96	0.119	-1.49	-0.002	7	3	76.91	-0.16	29	3	78.03
30764	20 21 42.259	-26 53 50.02	0.106	-6.50	-0.023	0	1	76.79	-0.53	3	1	78.03
30768	20 30 49.130	11 7 59.63	0.373	-1.04	-0.007	6	10	76.74	0.000	04	0	78.03
30772	20 36 42.006	3 54 31.97	2.133	2.14	0.003	1	2	77.23	0.17	13	2	77.62
30775	20 40 23.602	-66 23 5.92	-0.012	1.62	-0.057	11	7	76.58	-0.46	19	3	78.03
30783	20 50 39.333	-52 38 40.20	0.314	-2.21	-0.055	12	3	77.10	-0.23	14	3	77.13
30787	20 53 44.031	-77 13 1.18	0.275	-36.56	-0.039	9	6	79.30	-0.37	17	3	78.72
30790	20 59 46.018	-36 49 41.15	-0.243	-11.03	0.061	9	3	75.79	0.07	10	2	78.79
30794	21 6 57.333	-11 34 31.13	0.623	-1.36	0.012	7	8	76.76	0.000	04	0	78.03
30796	21 12 12.233	-33 28 17.15	0.313	-1.34	0.073	6	9	76.66	0.21	7	0	78.03
30800	21 13 19.440	3 2 24.35	0.374	-6.37	0.023	10	11	76.95	0.000	04	0	78.03
30801	21 14 34.049	-32 22 57.73	0.446	-2.38	-0.030	13	2	77.90	0.00	7	2	77.50
30802	21 17 34.134	-41 1 19.55	0.671	-0.67	-0.018	23	2	77.20	0.37	20	2	77.00
30804	21 17 40.347	19 35 22.77	0.764	6.65	0.00	4	9	76.09	0.02	19	4	76.62
30805	21 22 20.104	-65 35 38.77	1.341	15.69	-0.036	6	3	76.14	0.42	14	4	76.23
30806	21 23 48.930	-22 37 44.34	0.915	2.67	-0.019	8	8	76.74	-0.12	12	3	76.76
30808	21 28 35.650	-5 47 31.66	0.128	-0.34	0.011	6	6	77.13	-0.25	35	2	77.76

FIFTH SAN JUAN MERIDIAN CIRCLE FUNDAMENTAL CATALOGUE (SUPPLY COLUMINATION)

FK4 NUMBER	RA.1950.	DEC.1950.	PM(RA) 1950.	PM(DEC) 1950.	(U-C)RA .001	ME .001	N	EPJUM 1950.	(O-C)U .01	AE .01	N	Limit 1950.
30810	21 35 59.066	-77 36 20.24	1.761	-23.93	-0.181	3	9	76.64	0.04	13	6	76.64
30814	21 41 50.427	-33 15 17.00	0.200	-9.01	-0.018	8	5	75.71	0.00	3	4	75.71
30815	21 41 43.756	9 36 41.05	0.156	0.46	-0.002	7	10	76.24	-0.31	0	1	76.24
30816	21 43 20.608	-11 35 50.66	0.105	-0.67	0.012	6	6	76.25	*****	***	0	76.25
30820	21 46 35.522	-69 51 40.68	-0.415	-0.37	-0.062	7	6	76.23	0.39	14	5	76.23
30822	21 50 51.450	-37 36 3.59	0.471	-1.05	-0.307	15	5	76.52	0.17	9	5	76.52
30824	21 54 31.763	-55 13 53.02	0.639	-0.53	-0.042	20	4	76.20	0.39	9	4	76.20
30825	21 59 33.053	-56 59 33.65	46.218	-255.54	0.014	4	14	76.24	0.20	12	11	76.24
30826	21 58 39.093	12 52 46.68	0.392	-5.15	-0.003	11	6	76.27	-0.67	0	1	76.27
30827	22 3 12.946	- 0 33 48.59	0.111	-0.44	0.009	12	3	77.39	-0.43	0	1	77.39
30832	22 5 28.201	-33 14 0.28	0.614	-3.29	0.020	12	6	76.45	0.25	19	5	76.45
30834	22 7 40.600	5 57 4.13	1.837	3.22	0.003	3	16	76.13	0.04	13	6	76.13
30838	22 11 28.904	-20 0 26.11	0.206	0.15	-0.041	16	4	75.74	0.10	8	4	75.74
30839	22 14 32.203	-60 41 24.35	1.986	-3.93	-0.023	5	21	76.50	-0.16	14	7	76.50
30840	22 14 11.707	- 6 1 58.75	0.790	-1.91	0.024	18	2	77.78	-0.15	16	2	77.78
30842	22 19 4.421	- 1 36 23.77	0.859	1.23	0.014	11	7	75.89	*****	***	0	75.89
30843	22 19 3.314	11 57 9.63	0.301	1.16	-0.010	5	3	76.44	-0.27	0	1	77.75
30845	22 25 43.747	-39 23 7.56	0.312	-16.39	0.024	0	1	76.79	0.80	0	1	76.79
30850	22 32 47.203	- 0 22 22.77	0.593	-5.11	*****	**	0	*****	*****	***	0	*****
30854	22 37 23.033	-27 16 17.76	0.224	0.47	-0.027	12	5	76.15	-0.23	4	5	76.15
30855	22 38 57.997	10 34 11.39	0.540	-0.77	-0.014	5	3	77.10	*****	***	0	*****
30859	22 39 41.444	-47 8 43.20	1.322	-0.60	-0.001	9	6	77.12	0.18	16	6	77.12
30867	22 40 31.264	29 57 33.42	0.103	-2.06	-0.023	0	1	77.78	*****	***	0	*****
30868	22 40 36.751	-13 51 25.17	-0.057	-3.30	0.015	23	2	76.78	*****	***	0	*****
30862	22 47 22.171	24 20 13.72	1.078	-3.05	-0.016	7	10	76.13	-0.25	7	9	76.13
30864	22 50 0.375	- 7 50 46.15	0.048	3.95	0.019	5	6	76.34	*****	***	0	*****
30865	22 51 12.032	-70 20 29.10	-0.768	7.31	-0.020	20	4	76.74	0.46	19	4	76.74
30866	22 51 59.932	-16 5 13.92	-0.294	-2.18	0.011	5	9	76.17	-0.19	23	6	76.17
30867	22 54 33.232	-29 53 15.79	2.584	-16.09	-0.035	12	3	76.51	0.33	17	3	76.51
30868	22 57 56.343	-23 1 21.53	-0.692	-0.76	-0.040	17	4	77.30	-0.29	23	4	77.30
30873	23 6 40.760	-21 26 58.94	0.382	3.60	-0.006	5	9	76.24	-0.17	12	6	76.24
30876	23 13 51.250	-62 16 20.88	2.229	-2.64	-0.033	4	4	76.81	0.02	16	4	76.81
30877	23 14 31.463	-50 30 36.45	-0.222	6.94	-0.101	9	5	75.71	-0.50	8	5	75.71
30878	23 14 34.332	3 0 31.05	5.072	2.20	-0.004	5	10	76.65	-0.23	7	6	76.65
30879	23 16 7.705	-32 48 10.04	0.173	-6.37	0.001	6	2	76.80	-0.27	0	1	76.80
30880	23 18 9.506	23 27 59.22	0.239	-0.17	-0.015	9	8	75.82	-0.46	12	7	75.82
30881	23 22 52.799	23 7 42.20	1.403	4.31	-0.013	0	2	75.84	-0.22	35	2	75.84
30883	23 23 41.239	-52 59 55.03	0.367	13.14	0.048	0	1	75.79	0.73	0	1	75.79
30884	23 24 22.087	0 58 53.91	0.572	-9.22	0.020	3	4	75.74	*****	***	0	*****
30885	23 26 37.409	12 25 4.42	0.437	3.44	0.001	0	1	75.79	*****	***	0	*****

FIFTH SAN JUAN MERIDIAN CIRCLE FUNDAMENTAL CATALOGUE (JPLP's CUMULATION)

FK# NUMBER	מס. כוכבים	DEC. 1950	PM(1950)	PM(1950)	(U-C)RA 1950	ME 1950	N 1950	CPUCH 1950	(U-C)D 1950	ME 1950	N 1950	CPUCH 1950	(U-C)D 1950	ME 1950	N 1950	CPUCH 1950	(U-C)D 1950	ME 1950	N 1950
30866	23 30 17.630	-36 5 42.35	0.720	2.02	-0.003	11	7	76.60	0.17	11	7	76.60	0.17	11	7	76.60	0.17	11	7
30868	23 32 57.258	- 7 44 28.73	-0.021	2.22	0.018	4	8	75.85	0.000	4	8	75.85	0.000	4	8	75.85	0.000	4	8
30872	23 37 22.633	5 21 18.60	2.511	-42.23	0.007	4	7	76.18	0.000	4	7	76.18	0.000	4	7	76.18	0.000	4	7
30894	23 40 7.338	-14 49 17.44	0.661	-6.29	0.019	7	4	75.38	0.000	7	4	75.38	0.000	7	4	75.38	0.000	7	4
30896	23 46 19.463	-26 24 24.70	0.002	-10.13	0.015	10	3	75.74	0.000	10	3	75.74	0.000	10	3	75.74	0.000	10	3
30897	23 47 33.915	-10 15 12.10	0.911	7.89	0.009	11	5	76.42	0.000	11	5	76.42	0.000	11	5	76.42	0.000	11	5
30900	23 56 6.762	- 3 50 3.24	-0.333	-6.79	-0.024	12	3	76.90	0.000	12	3	76.90	0.000	12	3	76.90	0.000	12	3
30902	23 56 44.494	6 35 11.41	1.019	-10.94	-0.022	7	8	76.22	-0.50	7	8	76.22	-0.50	7	8	76.22	-0.50	7	8
30903	23 57 19.974	-05 51 19.05	0.712	-1.99	-0.088	22	3	76.53	-0.21	22	3	76.53	-0.21	22	3	76.53	-0.21	22	3
30904	23 59 3.313	-77 20 30.15	-1.573	-16.99	-0.133	6	8	76.47	0.32	6	8	76.47	0.32	6	8	76.47	0.32	6	8
30916	1 40 5.652	-05 1 22.73	2.752	2.36	-0.049	3	4	76.04	0.40	3	4	76.04	0.40	3	4	76.04	0.40	3	4
30917	5 4 29.049	-82 32 26.44	-0.750	0.77	-0.040	7	7	75.93	-0.15	7	7	75.93	-0.15	7	7	75.93	-0.15	7	7
30918	9 4 20.782	-03 27 38.13	-9.217	3.32	-0.333	4	11	76.76	-0.21	4	11	76.76	-0.21	4	11	76.76	-0.21	4	11
30919	12 49 30.427	-04 51 8.65	5.383	2.50	-0.399	4	19	76.51	-0.32	4	19	76.51	-0.32	4	19	76.51	-0.32	4	19
30921	16 41 50.393	-06 16 55.61	1.029	0.00	-0.209	13	2	77.10	0.000	13	2	77.10	0.000	13	2	77.10	0.000	13	2
30924	22 41 4.413	-01 38 41.05	-2.840	0.63	-0.100	7	12	76.10	-0.29	7	12	76.10	-0.29	7	12	76.10	-0.29	7	12
30925	23 21 22.177	-07 45 27.44	3.246	1.10	-0.333	4	8	76.38	0.000	4	8	76.38	0.000	4	8	76.38	0.000	4	8
31001	0 2 10.290	-71 42 34.66	0.791	-1.25	0.015	21	6	77.03	0.28	21	6	77.03	0.28	21	6	77.03	0.28	21	6
31002	0 2 46.530	- 5 59 13.96	-0.077	9.36	0.003	3	4	75.88	0.000	3	4	75.88	0.000	3	4	75.88	0.000	3	4
31004	0 12 0.662	19 55 43.61	0.668	0.49	-0.017	7	3	76.66	-0.31	7	3	76.66	-0.31	7	3	76.66	-0.31	7	3
31006	0 16 1.201	31 14 23.10	0.457	-0.08	-0.046	11	2	75.84	-0.34	11	2	75.84	-0.34	11	2	75.84	-0.34	11	2
31008	0 18 1.317	7 54 45.79	-0.024	1.35	-0.010	13	4	76.39	-0.44	13	4	76.39	-0.44	13	4	76.39	-0.44	13	4
31010	0 22 30.274	1 59 46.70	-0.100	-1.17	-0.016	0	1	75.77	0.000	0	1	75.77	0.000	0	1	75.77	0.000	0	1
31011	0 31 12.777	-29 50 1.09	-0.190	-2.95	-0.052	11	4	75.38	0.49	11	4	75.38	0.49	11	4	75.38	0.49	11	4
31013	0 38 58.031	-46 21 33.10	-0.165	0.33	0.001	15	4	76.42	-0.14	15	4	76.42	-0.14	15	4	76.42	-0.14	15	4
31020	0 46 20.752	16 40 15.74	-0.014	-20.03	-0.040	12	3	76.86	0.13	12	3	76.86	0.13	12	3	76.86	0.13	12	3
31022	0 50 27.048	- 1 24 55.35	0.340	-1.29	-0.016	8	4	75.38	-0.15	8	4	75.38	-0.15	8	4	75.38	-0.15	8	4
31024	0 56 13.724	- 6 9 3.03	0.336	-7.67	-0.002	12	3	76.32	0.000	12	3	76.32	0.000	12	3	76.32	0.000	12	3
31025	0 59 9.759	-16 31 39.35	0.514	-8.20	-0.016	14	6	75.90	-0.20	14	6	75.90	-0.20	14	6	75.90	-0.20	14	6
31028	1 2 26.726	14 40 34.69	0.333	5.88	0.001	8	5	76.49	-0.13	8	5	76.49	-0.13	8	5	76.49	-0.13	8	5
31031	1 5 30.962	-41 45 14.23	0.330	0.90	-0.011	9	3	76.07	0.18	9	3	76.07	0.18	9	3	76.07	0.18	9	3
31032	1 8 45.036	20 46 9.66	0.258	-0.61	-0.010	3	4	76.31	-0.33	3	4	76.31	-0.33	3	4	76.31	-0.33	3	4
31033	1 11 6.753	7 18 41.34	0.371	-5.75	0.023	8	12	76.40	0.000	8	12	76.40	0.000	8	12	76.40	0.000	8	12
31034	1 15 13.314	3 21 6.23	-0.345	-1.35	0.021	8	16	76.20	-0.33	8	16	76.20	-0.33	8	16	76.20	-0.33	8	16
31036	1 21 11.433	-31 12 20.44	-0.074	-1.13	-0.024	5	5	75.79	0.17	5	5	75.79	0.17	5	5	75.79	0.17	5	5
31038	1 23 21.711	-04 37 44.89	0.303	-1.52	-0.005	16	3	76.30	0.31	16	3	76.30	0.31	16	3	76.30	0.31	16	3
31041	1 24 23.475	-13 18 57.29	0.333	0.99	-0.010	6	3	75.94	0.61	6	3	75.94	0.61	6	3	75.94	0.61	6	3
31043	1 27 12.209	-21 53 14.62	0.350	1.03	0.003	8	7	75.91	-0.39	8	7	75.91	-0.39	8	7	75.91	-0.39	8	7
31044	1 29 10.327	-49 19 55.20	1.399	15.90	0.017	9	3	76.28	-0.30	9	3	76.28	-0.30	9	3	76.28	-0.30	9	3
31051	1 47 7.649	-10 55 38.88	-1.335	-9.13	0.010	7	6	76.39	0.000	7	6	76.39	0.000	7	6	76.39	0.000	7	6

FIFTH SEMI-JUARY MERIDIAN CIRCLE FUNDAMENTAL CATALOGUE (UPPER CULMINATION)

FK4 NUMBER	RA. 1950.	DEC. 1950.	PM(1950.0)	PM(1950.0)	(U-C)FA	ME .001	U	LPJCH 1903+	(U-C)J	ME .01	U	U(1950)
31057	2 10 19.570	17 2 47.26	0.006	-1.97	0.014	7	2	75.99	*****	**	0	76.00
31058	2 10 20.747	8 36 47.56	-0.17	-0.33	0.016	20	2	76.93	*****	**	0	76.94
31064	2 19 43.554	-17 53 14.07	0.304	-5.74	-0.011	4	4	75.95	*****	**	0	75.96
31065	2 20 51.272	-66 53 11.04	-0.702	0.00	-0.075	0	4	76.90	-0.33	17	4	76.91
31075	2 36 41.625	-40 4 6.79	1.167	-2.44	-0.056	3	2	75.79	-0.05	3	2	75.80
31076	2 39 6.229	-34 45 48.15	0.460	0.60	-0.050	2	3	76.59	-0.10	10	3	76.60
31083	2 54 6.380	-3 54 45.05	-0.244	-3.57	0.020	13	5	76.15	-0.37	7	4	76.16
31083	2 57 1.871	8 42 33.54	0.321	-0.44	-0.002	6	10	76.44	-0.09	21	3	76.45
31086	3 1 13.270	-47 10 12.72	0.203	0.83	0.003	17	3	76.56	-0.17	4	3	76.57
31087	3 4 56.824	-13 56 50.58	-0.059	-25.92	-0.015	4	3	76.53	*****	**	0	76.54
31090	3 6 35.839	28 53 15.10	0.133	-0.97	-0.041	20	3	75.08	0.17	27	3	75.09
31090	3 12 42.041	-35 44 34.04	0.244	1.15	0.015	10	3	76.17	0.27	35	3	76.18
31091	3 13 24.143	-9 0 15.51	-0.355	4.87	0.022	2	6	76.42	*****	**	0	76.43
31092	3 16 44.129	3 11 17.27	1.700	9.76	0.020	20	4	75.95	-0.54	14	4	75.96
31095	3 17 9.367	-77 54 17.51	3.515	6.00	-0.124	19	3	75.96	-0.04	43	3	75.97
31097	3 26 8.051	-5 14 45.17	0.335	0.97	0.014	34	2	75.75	*****	**	0	75.76
31099	3 31 34.657	-21 47 47.95	0.234	-2.42	0.027	13	4	75.95	0.14	16	4	75.96
31106	3 30 18.221	17 10 46.55	1.335	-2.64	-0.027	9	7	76.34	-0.42	17	7	76.35
31108	3 52 0.266	-47 2 23.52	0.267	-3.26	0.027	0	1	75.78	-0.19	16	2	75.79
31112	4 1 44.055	21 56 44.01	0.637	-3.58	-0.009	13	4	75.87	-0.09	6	4	75.88
31115	4 6 14.929	19 28 43.16	0.756	-2.39	-0.034	7	3	76.42	-0.11	14	7	76.43
31119	4 17 53.145	-16 33 21.15	0.101	-1.30	0.027	0	1	77.01	*****	**	0	77.02
31120	4 21 11.310	-3 51 34.77	-0.365	-5.41	0.006	3	3	75.87	*****	**	0	75.88
31123	4 25 56.382	1 16 17.25	0.373	-1.05	0.000	12	4	76.97	*****	**	0	76.98
31125	4 31 0.470	14 44 27.45	0.655	-2.45	0.006	6	6	76.42	-0.10	7	6	76.43
31129	4 38 50.921	-11 57 29.54	-1.355	-7.81	0.068	0	1	77.01	-0.17	0	1	77.02
31132	4 44 25.693	-23 10 56.31	0.334	1.43	-0.066	21	2	75.94	-0.05	3	2	75.95
31138	4 50 36.535	-75 0 52.73	0.721	5.73	-0.057	3	2	75.99	0.31	16	2	75.99
31140	5 1 42.545	15 20 10.18	0.110	-3.46	0.022	0	1	75.90	*****	**	0	75.91
31144	5 10 41.013	-16 15 47.97	0.230	-2.66	0.020	0	1	77.01	*****	**	0	77.02
31146	5 17 10.190	-13 13 37.19	-0.368	-0.31	0.003	1	2	75.94	-0.26	21	2	75.95
31147	5 19 12.471	-3 25 49.03	-0.327	-0.13	0.011	16	2	75.94	0.11	18	2	75.95
31148	5 24 1.054	17 55 15.48	0.034	-2.44	0.015	0	1	77.01	*****	**	0	77.02
31166	6 9 3.343	-68 49 56.56	-0.355	1.00	-0.056	0	1	75.90	-0.12	0	1	75.91
31168	6 12 11.401	29 31 6.24	-0.544	-26.48	-0.014	5	4	77.17	0.06	13	4	77.18
31169	6 13 38.053	12 17 16.13	0.352	18.55	0.001	7	2	75.94	*****	**	0	75.95
31170	6 17 16.235	-7 48 1.79	-0.367	-0.22	0.002	7	4	77.19	*****	**	0	77.20
31171	6 21 37.336	-11 30 6.50	-0.415	-4.02	0.016	12	3	77.20	*****	**	0	77.21
31173	6 25 39.027	20 14 44.06	-0.042	-1.71	-0.004	4	3	77.17	-0.04	21	2	77.18
31174	6 30 11.958	7 22 16.36	-0.717	-0.77	-0.005	10	4	77.19	*****	**	0	77.20

FIFTH SAN JUAN MERIDIAN CIRCLE FUNDAMENTAL CATALOGUE (UPPER COLUMBIAN)

STAR NUMBER	RA. 1950.	DEC. 1950.	PARALL. 1950.0	PARALL. 1950.	(U-L)K	ME .001	N	EPJUN 1950*	(U-L)D .01	AC .01	EPJUN 1950*
31175	6 31 5.227	- 1 10 50.07	-0.036	-2.25	0.0	3	2	75.94	-0.71	0	75.94
31180	6 47 50.322	-32 26 56.66	-0.036	0.17	-0.029	0	1	76.19	0.07	0	76.19
31181	6 57 24.533	- 8 20 8.84	-0.124	-0.43	0.023	15	4	77.23	0.000	0.0	77.23
31184	7 2 27.676	-42 15 44.93	-0.164	6.75	0.016	21	2	76.20	0.23	31	76.20
31185	7 5 7.274	7 35 4.62	0.019	0.00	0.010	8	10	77.00	-0.32	3	77.00
31189	7 7 10.004	-70 25 4.75	0.524	10.15	-0.074	14	3	77.20	0.21	0	77.20
31193	7 27 0.821	12 6 41.66	0.004	-2.06	-0.002	4	10	77.00	0.000	0.0	77.00
31197	7 34 29.444	-19 35 22.07	-0.082	0.30	-0.012	21	2	76.22	-0.52	11	76.22
31203	7 46 0.300	-46 24 0.76	-0.082	0.27	-0.026	24	2	76.20	-0.21	24	76.20
31205	7 49 6.395	1 53 45.19	-0.132	-0.49	0.015	6	4	77.17	0.07	21	77.17
31206	7 54 0.180	15 55 31.23	-0.190	-4.25	0.005	15	7	76.75	-0.32	14	76.75
31210	7 55 43.446	-30 11 50.24	-0.033	0.06	0.001	9	5	77.03	-0.42	13	77.03
31214	7 57 37.538	-18 15 39.17	-0.052	-4.58	0.008	6	2	77.23	0.14	21	77.23
31215	7 59 50.542	- 6 11 47.63	0.015	-1.51	0.020	11	8	76.73	0.07	12	76.73
31216	8 14 40.537	4 22 29.15	-0.027	0.64	0.034	47	2	76.21	-0.42	16	76.21
31218	8 16 51.207	-10 0 30.52	-0.329	3.27	0.010	8	7	76.60	-0.02	11	76.60
31222	8 25 50.013	14 22 39.84	-0.101	-1.55	0.005	6	17	76.72	-0.03	15	76.72
31223	8 25 3.374	5 52 45.00	-0.453	-1.17	-0.010	1	4	76.21	0.24	24	76.21
31226	8 38 57.063	-40 28 12.11	-0.035	0.16	0.012	8	4	76.30	0.15	22	76.30
31227	8 38 51.636	-52 44 37.11	-0.221	1.90	-0.087	9	4	76.74	0.10	12	76.74
31228	8 40 25.722	21 36 50.62	-0.743	-4.20	-0.017	18	4	77.17	-0.23	29	77.17
31229	8 42 40.433	-20 24 7.24	-0.131	0.08	-0.015	16	3	76.23	-0.43	14	76.23
31230	8 46 50.952	- 3 15 22.83	-0.102	-2.70	0.004	4	19	76.76	-0.14	15	76.76
31231	8 52 54.496	-16 2 58.72	0.055	-0.25	0.021	12	3	76.23	-0.02	1	76.23
31234	8 54 13.313	-41 3 29.74	-0.378	3.76	-0.064	27	2	76.20	0.60	0	76.20
31235	8 59 24.744	- 0 17 10.25	-0.349	0.74	0.005	10	4	76.21	0.14	15	76.21
31236	9 5 2.414	10 52 14.13	-0.143	-1.14	-0.008	6	10	76.33	-0.31	14	76.33
31240	9 6 47.000	-14 9 14.94	0.098	-0.25	0.016	3	4	76.26	0.000	0.0	76.26
31241	9 7 49.166	-30 9 37.21	-0.019	-4.30	-0.014	11	7	76.60	0.000	0.0	76.60
31242	9 7 41.241	-14 32 32.51	-0.439	4.00	-0.005	23	3	76.33	-0.02	28	76.33
31243	9 14 10.077	-25 45 50.29	-0.072	-1.07	-0.022	8	3	76.33	-0.21	14	76.33
31244	9 21 49.177	26 23 55.32	-0.235	-2.01	-0.039	19	2	77.17	-0.07	3	77.17
31245	9 22 54.006	- 4 54 3.25	-0.113	-1.47	0.027	6	5	76.33	0.07	14	76.33
31246	9 29 15.107	11 31 21.05	-0.033	-3.64	-0.012	7	14	76.43	-0.01	13	76.43
31247	9 30 54.210	-20 53 30.00	-0.149	0.74	0.018	10	8	76.73	0.17	11	76.73
31249	9 33 0.000	-31 57 11.33	0.263	-2.25	-0.004	23	2	76.28	-0.12	6	76.28
31249	9 33 30.653	4 52 35.60	-1.008	-2.67	-0.012	10	4	76.61	-0.01	31	76.61
31251	9 40 37.007	30 12 14.14	-0.142	-1.00	-0.023	13	3	76.67	-0.40	11	76.67
31252	9 41 0.637	14 15 3.06	0.020	-0.72	-0.003	10	8	76.27	-0.62	16	76.27
31253	9 43 5.444	16 54 53.42	0.100	-1.76	-0.005	4	3	76.36	0.12	28	76.36

LISTA DE JUAN MENJIVAR: CIRCULO FUNDACIONAL CATALOGUE (UPPER CUMULATIVE)

KEY NUMBER	K4.1920.	DEL.1950.	P4(K)	P1(0)	(U-C)FA	MC	N	EPION	(S-C)J	"	1950
			1950.0	1950.	(U-C)FA	.001		1950	.01	"	1950
31254	9 43 52.339	-62 10 56.42	-0.254	0.53	0.024	7	12	76.76	-0.01	12	76.76
31256	9 49 23.441	-45 57 33.54	-0.300	0.53	-0.004	19	2	77.40	0.14	18	77.50
31257	9 53 38.379	-7 26 29.50	-0.166	-0.11	0.018	4	10	76.72	****	0	****
31258	9 50 0.015	32 10 13.66	-4.149	-43.52	-0.025	10	3	76.36	-0.44	12	76.36
31260	10 2 2.261	-24 2 34.25	-0.845	1.33	-0.023	9	3	77.05	-0.13	37	77.05
31261	10 2 41.295	-12 49 17.50	-0.237	0.75	0.068	5	13	76.63	0.30	10	76.30
31264	10 15 24.581	-61 4 55.68	-0.373	0.25	0.064	13	4	76.26	-0.37	20	76.26
31265	10 15 44.978	-28 44 29.04	-0.116	0.35	-0.014	22	2	77.34	0.31	43	77.34
31266	10 18 27.370	2 32 33.78	-0.382	0.68	0.003	6	7	76.51	****	0	****
31268	10 20 10.666	-41 23 52.28	-0.256	3.13	0.019	8	6	76.59	-0.25	12	76.59
31270	10 26 56.370	-2 28 57.21	-0.344	-1.30	0.039	11	3	76.39	0.15	28	76.39
31271	10 27 3.779	28 59 15.73	0.327	-0.37	-0.028	6	3	76.31	0.19	2	76.31
31277	10 40 23.705	-32 27 12.42	-0.254	-0.24	-0.022	1	2	77.29	0.19	11	77.29
31281	10 47 47.457	-6 37 56.58	-0.386	-1.32	0.010	8	6	76.28	****	0	****
31283	10 57 23.133	-18 1 22.62	-3.254	12.45	0.011	8	2	77.38	0.12	14	77.38
31284	10 57 29.773	3 33 10.88	0.301	-1.94	-0.007	7	4	76.31	0.07	16	76.31
31285	11 0 4.107	-3 14 35.28	-0.175	-2.34	0.019	5	3	76.60	-0.33	0	76.36
31286	11 3 3.336	-10 49 3.64	0.076	-6.69	0.012	6	7	76.08	****	0	****
31287	11 4 21.105	2 13 38.29	-2.584	-3.94	-0.002	4	5	76.94	-0.42	35	76.21
31289	11 6 26.766	-58 42 13.62	-0.088	-0.24	-0.031	7	8	76.59	-0.01	8	76.59
31290	11 9 47.625	-32 9 42.71	0.180	0.33	-0.014	10	4	76.60	0.25	16	76.60
31291	11 10 19.751	-48 49 45.03	-0.970	3.45	-0.017	0	1	77.27	-0.46	0	77.27
31292	11 14 7.195	-3 22 30.76	-0.747	-4.15	0.003	5	17	76.89	-0.37	13	77.35
31295	11 23 6.335	27 1 29.03	-0.252	0.36	-0.004	2	3	77.42	-0.68	0	77.42
31297	11 27 21.923	3 7 34.52	0.112	-1.68	-0.004	5	13	76.88	-0.03	12	76.88
31298	11 27 8.712	-27 45 17.44	-0.198	-0.62	-0.039	8	3	76.39	0.21	23	76.39
31299	11 34 8.577	-9 31 32.04	-0.452	0.22	0.019	8	3	77.42	****	0	****
31300	11 38 22.232	34 29 2.89	-0.193	-3.79	-0.010	6	5	76.30	-0.44	12	76.30
31301	11 42 13.576	-16 4 21.55	0.272	-3.57	-0.008	9	3	76.39	0.24	27	76.39
31302	11 43 17.340	6 48 34.72	-0.137	-13.75	0.006	10	4	77.34	-0.49	0	77.34
31303	11 45 24.461	29 48 7.73	-1.370	-0.61	-0.010	7	5	76.76	0.18	11	76.76
31305	11 46 13.237	-26 28 17.96	-0.255	-1.47	-0.009	10	2	77.38	0.20	21	77.38
31306	11 48 23.750	-5 3 18.52	0.010	-0.26	0.010	12	2	77.38	0.06	25	77.38
31308	11 53 6.234	15 55 23.03	0.362	-0.39	0.023	3	4	76.24	0.13	15	76.24
31309	11 53 27.131	-16 52 23.63	-0.334	-1.39	0.033	9	7	76.70	0.01	11	76.70
31310	11 55 33.265	32 33 11.10	-0.885	-6.29	0.011	15	2	76.21	-0.28	21	76.21
31311	11 58 13.015	6 53 35.14	-0.014	-3.40	0.011	5	13	76.56	-0.34	28	77.05
31312	12 3 21.083	-35 24 55.88	-0.258	-0.19	0.023	8	3	76.43	-0.33	36	76.43
31313	12 7 38.743	17 5 14.50	-0.135	-0.61	0.008	8	7	76.62	-0.36	18	76.62
31315	12 16 45.613	-6 38 12.56	0.019	-2.75	0.019	20	2	76.31	0.17	25	76.31

FIFTH SAN JUAN MERIDIAN CIRCLE FUNDAMENTAL CATALOGUE (UPPER CULMINATIONS)

FK5 NUMBER	RA. 1950.	DEC. 1950.	PAR(Δ)	PM(Δ)	(U-C)IA	ME	M	CPUCH	(U-C)U	ME	CPUCH	CPUCH	CPUCH	CPUCH
	1950.0	1950.0	1950.	1950.	1950.	.001		1950+	1950	.001	1950+	1950+	1950+	1950+
31317	12 17 46.541	3 35 21.07	-1.920	-6.75	-0.016	1	2	76.36	0.000	0	76.36	76.36	76.36	76.36
31318	12 22 49.997	-27 26 19.79	0.326	-0.33	0.012	3	3	76.47	0.37	10	76.47	76.47	76.47	76.47
31321	12 30 54.434	-12 33 13.94	-0.155	4.93	0.021	5	9	76.51	-0.43	27	76.51	76.51	76.51	76.51
31324	12 34 12.650	-5 33 23.59	-0.224	-2.17	0.025	4	9	76.30	-0.23	17	76.30	76.30	76.30	76.30
31326	12 39 21.109	19 30 39.16	0.306	-9.45	-0.013	3	24	76.80	-0.10	14	76.80	76.80	76.80	76.80
31326	12 43 3.423	7 56 47.16	-0.730	0.03	0.012	3	6	76.85	-0.21	0	76.85	76.85	76.85	76.85
31329	12 45 13.631	-24 34 46.08	-0.310	3.69	0.003	7	8	76.36	-0.40	11	76.36	76.36	76.36	76.36
31330	12 45 18.332	3 50 43.36	-0.336	-0.74	0.023	6	3	76.40	0.17	0	76.40	76.40	76.40	76.40
31331	12 47 37.957	-33 43 37.22	-0.223	-2.34	-0.012	14	3	76.43	-0.20	3	76.43	76.43	76.43	76.43
31336	12 57 4.003	-3 32 33.43	-0.263	0.34	0.001	4	3	76.39	-0.30	33	76.39	76.39	76.39	76.39
31339	13 3 32.003	21 25 16.01	-0.524	-4.76	0.020	23	2	77.22	-0.60	3	77.22	77.22	77.22	77.22
31340	13 4 39.192	-53 11 33.20	-0.436	-3.21	-0.061	0	1	76.51	0.59	0	76.51	76.51	76.51	76.51
31342	13 14 6.374	-31 14 31.61	0.279	-3.24	-0.009	13	2	76.26	0.07	40	76.26	76.26	76.26	76.26
31343	13 14 19.307	-43 42 57.34	-0.046	-0.69	0.035	11	6	76.42	-0.42	17	76.42	76.42	76.42	76.42
31344	13 15 4.635	5 43 37.99	-0.045	1.13	0.002	0	20	76.79	-0.22	14	76.79	76.79	76.79	76.79
31347	13 19 22.932	-69 43 36.07	-0.426	-1.71	-0.068	0	1	76.41	0.03	0	76.41	76.41	76.41	76.41
31349	13 24 8.412	-12 26 53.17	-0.917	-2.30	0.020	5	6	76.49	0.00	0	76.49	76.49	76.49	76.49
31349	13 25 39.001	14 2 42.76	-1.639	-3.14	0.002	10	9	76.63	-0.33	11	76.63	76.63	76.63	76.63
31350	13 26 0.001	31 24 27.61	0.021	-0.41	-0.020	10	8	76.66	-0.43	24	76.66	76.66	76.66	76.66
31351	13 31 39.762	3 34 34.36	0.231	-2.67	-0.004	5	10	76.61	-0.44	43	76.61	76.61	76.61	76.61
31354	13 36 44.946	-23 11 51.04	-0.062	9.21	0.002	0	1	77.33	0.27	0	77.33	77.33	77.33	77.33
31355	13 33 38.047	-8 27 5.13	-0.672	3.47	0.015	3	3	76.31	0.00	0	76.31	76.31	76.31	76.31
31356	13 39 33.337	-20 30 30.42	-0.200	-0.60	0.074	12	3	76.43	-0.02	26	76.43	76.43	76.43	76.43
31357	13 41 47.549	-15 53 42.06	0.303	-1.09	0.019	0	1	77.53	0.00	0	77.53	77.53	77.53	77.53
31359	13 44 23.997	23 37 6.21	-0.101	-6.33	-0.065	0	1	76.21	-0.31	0	76.21	76.21	76.21	76.21
31359	13 47 15.033	8 39 22.40	-0.142	0.51	-0.014	5	9	76.66	-0.31	19	76.66	76.66	76.66	76.66
31362	13 57 13.010	-3 16 25.29	-0.139	-0.37	0.013	7	9	76.71	0.04	16	76.71	76.71	76.71	76.71
31363	14 0 23.200	-76 33 24.73	-2.493	-3.51	-0.043	6	10	76.52	0.00	0	76.52	76.52	76.52	76.52
31363	14 1 44.203	-14 43 36.11	-0.277	-2.34	0.036	0	1	77.33	0.41	0	77.33	77.33	77.33	77.33
31369	14 15 32.016	-10 29 7.67	-0.448	-4.66	0.018	14	4	76.73	0.11	9	76.73	76.73	76.73	76.73
31372	14 16 30.709	13 14 2.67	0.723	-3.49	-0.010	1	3	76.31	0.00	0	76.31	76.31	76.31	76.31
31373	14 17 30.333	-37 39 23.06	-0.374	-1.39	0.035	2	2	76.90	0.00	33	76.90	76.90	76.90	76.90
31374	14 20 43.414	-11 29 12.00	-0.067	-0.34	0.009	0	1	77.33	0.00	0	77.33	77.33	77.33	77.33
31381	14 34 17.310	-12 5 37.96	-3.945	36.03	-0.008	10	3	76.30	-0.35	6	76.30	76.30	76.30	76.30
31382	14 39 19.269	11 52 30.14	-1.072	-11.74	-0.004	5	6	76.64	0.00	0	76.64	76.64	76.64	76.64
31383	14 41 13.463	26 44 22.02	0.105	-2.04	-0.027	37	2	77.32	0.22	26	77.32	77.32	77.32	77.32
31385	14 44 49.206	-23 52 44.62	0.312	-0.73	0.017	0	1	76.55	-0.29	0	76.55	76.55	76.55	76.55
31387	14 47 34.339	-15 47 25.90	-0.701	-7.22	0.020	2	3	77.13	0.54	0	77.13	77.13	77.13	77.13
31388	14 51 11.188	8 26 42.00	-0.170	0.16	0.011	6	8	76.72	-0.29	4	76.72	76.72	76.72	76.72
31389	14 52 40.096	-33 39 14.44	0.165	-0.44	-0.004	13	3	76.86	-0.30	31	76.86	76.86	76.86	76.86

FIFTH SAN JUAN MERIDIAN CIRCLE FUNDAMENTAL CATALOGUE (UPPER CULMINATION)

FK4 NUMBER	RA. 1950.	DEC. 1950.	PAR(1950.0)	PM(U) 1950.	(U-C)K1A	ME .001	N	EPUCH 1900+	(O-C)D	ME .01	N	EPULM 1900+
31392	14 54 40.338	21 45 21.92	-0.146	-2.84	-0.040	9	3	76.50	-0.39	36	3	76.50
31393	14 54 59.224	0 1 50.08	0.411	-2.73	-0.014	12	3	76.88	-0.27	16	2	77.04
31396	15 5 6.199	25 3 46.28	1.356	-17.12	-0.057	0	1	77.59	0.09	0	1	77.59
31399	15 11 33.112	-31 20 1.92	-0.035	-0.34	-0.007	0	1	77.54	-0.34	0	1	77.54
31401	15 16 17.876	10 36 32.20	-0.601	0.0	-0.011	5	3	76.78	-0.13	13	3	76.78
31404	15 19 57.472	-26 30 40.65	0.211	-0.04	-0.042	0	1	76.55	0.25	0	1	76.55
31406	15 21 8.045	-0 50 43.12	0.495	-3.28	-0.024	6	3	77.23	-0.49	15	3	77.23
31408	15 28 29.625	8 44 56.02	0.221	-0.43	-0.006	8	8	76.61	-0.26	22	5	76.76
31409	15 31 26.466	-9 53 40.37	2.053	-24.14	0.019	9	3	76.68	0.01	12	3	76.68
31415	15 50 25.602	-20 1 8.70	-0.082	-2.70	0.003	8	3	76.88	-0.29	18	3	76.88
31417	15 55 23.102	-14 8 11.73	-0.103	-1.93	0.009	10	4	76.54	0.33	0	1	76.55
31418	15 56 5.450	-41 26 9.45	-0.333	-1.52	-0.004	10	2	77.59	0.05	6	2	77.59
31419	15 57 30.953	-16 23 15.24	-4.418	-39.60	0.041	0	1	76.57	0.45	0	1	76.57
31420	15 58 5.433	-8 16 17.12	-0.120	-1.83	0.048	4	2	76.52	0.000	0	0	0.000
31421	16 5 48.989	17 10 43.81	-0.225	-1.07	-0.011	14	2	77.01	-0.19	57	2	77.01
31422	16 6 43.291	6 31 11.65	1.561	-73.37	0.004	7	7	76.58	0.000	0	0	0.000
31424	16 12 48.049	-78 34 25.65	-0.160	-3.69	-0.102	6	7	77.16	0.000	0	0	0.000
31427	16 19 32.244	1 8 42.37	-1.045	4.90	0.0	18	2	77.05	0.000	0	0	0.000
31429	16 21 44.526	7 3 44.55	0.0	1.59	0.006	13	2	77.63	0.000	0	0	0.000
31431	16 28 6.516	-34 35 50.07	-0.077	-1.75	-0.001	0	1	77.54	0.75	0	1	77.54
31433	16 33 43.677	-2 13 10.02	3.026	-31.96	-0.002	17	4	76.60	-0.39	23	2	76.56
31435	16 45 27.905	-58 57 16.37	0.531	-3.10	0.024	0	1	77.54	0.44	0	1	77.54
31436	16 44 38.330	2 9 11.52	-0.112	-1.36	0.021	13	6	77.10	-0.57	9	3	76.57
31442	16 51 36.391	10 14 46.44	-0.356	-3.78	-0.007	7	11	76.87	-0.09	25	3	76.57
31443	16 53 59.779	-76 8 29.21	-0.897	-15.67	-0.054	8	7	76.91	-0.31	19	5	76.61
31445	16 58 25.223	-4 8 57.19	-0.312	-7.61	0.030	6	3	77.61	0.000	0	0	0.000
31450	17 7 1.923	-10 27 34.86	0.365	-10.85	0.011	5	16	76.31	0.000	0	0	0.000
31451	17 9 20.432	7 57 14.99	0.217	1.34	0.006	7	9	76.73	-0.18	36	3	76.55
31452	17 13 48.269	-32 36 29.73	-0.762	-5.47	0.011	22	2	77.63	-0.30	16	2	77.63
31453	17 13 59.357	1 15 53.07	-0.024	-1.23	-0.003	3	7	75.66	0.000	0	0	0.000
31455	17 24 2.712	-60 49 5.71	-0.345	-4.10	-0.006	5	14	77.04	0.05	9	5	76.61
31459	17 24 1.695	4 10 56.12	0.010	0.55	0.005	0	1	77.59	-0.37	0	1	77.59
31460	17 26 42.747	26 8 49.49	0.130	1.51	-0.061	0	1	77.59	-0.06	0	1	77.59
31461	17 31 59.363	-11 12 35.18	-0.017	0.45	0.023	6	4	77.15	0.000	0	0	0.000
31462	17 40 25.872	-21 39 36.57	-0.380	-4.61	-0.006	12	5	77.04	0.34	5	5	77.04
31464	17 44 24.664	-27 48 49.14	0.005	-0.93	-0.014	13	2	77.65	-0.07	33	2	77.65
31467	17 52 15.012	-7 43 31.53	-0.329	-5.40	-0.001	12	8	76.87	0.000	0	0	0.000
31468	17 53 24.044	26 3 24.14	0.016	0.68	-0.016	21	4	77.39	-0.40	24	4	77.39
31470	17 58 26.705	-17 9 24.26	0.002	-0.71	0.011	9	4	77.15	-0.14	4	4	77.15
31471	18 2 44.229	-50 5 49.54	-0.115	-1.71	-0.023	8	8	76.16	0.47	12	8	76.16

FIFTH STAR JURY MERITARY CIRCLE FUNDAMENTAL CATALOGUE (UPPER COLUMN(S))

PK# NUMBER	PA.1950.	DEC.1950.	PAC(1) 1950.0	PAR(0) 1950.	(U-C)PA -0.01	DE -0.01	SP. JON 1950+	(U-C)J -0.01	DE -0.01	PK# NUMBER
31472	18 6 52.908	-13 56 40.19	0.064	-0.54	0.056	12	77.01	-0.01	19	77.02
31473	19 7 31.023	-42 57 54.78	-0.143	-0.13	-0.053	8	76.10	-0.03	0	76.08
31475	16 14 34.076	- 5 46 36.59	0.027	-0.07	0.016	11	77.15	0.27	1	76.08
31476	18 16 22.197	3 21 11.45	-0.007	1.00	-0.013	4	77.10	-0.73	0	77.07
31478	18 23 14.383	8 0 8.76	-0.027	-0.59	0.026	16	76.66	0.004	0	77.02
31479	18 24 2.768	25 47 56.13	0.102	-2.17	-0.004	7	76.92	-0.15	13	76.02
31480	18 27 4.776	- 2 1 5.27	0.198	-3.34	0.012	3	76.85	0.004	0	76.02
31484	18 34 4.632	9 4 53.64	-0.002	-12.88	0.024	7	76.37	-0.08	0	77.02
31486	18 39 32.139	- 9 6 7.26	0.044	0.06	-0.019	30	76.66	0.26	24	76.06
31489	18 44 31.239	- 4 48 10.73	-0.051	-1.66	0.016	0	77.65	-0.27	11	77.02
31490	18 45 14.049	-43 44 11.56	0.225	-1.70	-0.004	7	76.16	-0.05	11	76.16
31491	18 49 40.700	18 7 26.04	0.513	11.49	-0.020	1	76.64	-0.58	11	76.64
31495	18 52 30.131	-16 26 21.12	-0.196	-16.61	0.020	5	77.15	0.05	12	77.15
31499	19 9 56.723	-75 53 13.52	0.112	-1.54	-0.054	4	76.22	-0.19	13	76.65
31510	19 9 57.326	- 3 1 28.53	0.086	-0.68	0.004	7	77.67	0.004	0	77.02
31502	19 22 25.096	11 50 9.47	4.920	63.92	0.004	3	77.05	-0.37	5	76.02
31504	19 23 47.575	-54 25 37.63	0.004	1.58	-0.043	9	75.67	-0.26	10	75.07
31508	19 26 37.410	24 33 44.50	-0.927	-10.23	0.008	5	76.96	-0.27	11	76.96
31509	19 28 2.936	- 2 53 40.34	0.122	-0.63	0.016	6	76.10	-0.01	24	77.65
31511	19 31 36.752	7 16 16.89	1.442	-15.67	-0.002	4	76.77	0.10	0	76.73
31512	19 37 51.562	-16 24 25.95	0.474	-4.54	-0.013	0	76.67	-0.39	0	76.07
31513	19 38 46.129	17 21 31.95	0.301	-3.26	0.0	7	76.96	-0.38	11	76.96
31514	19 39 39.567	-16 14 33.95	0.437	-1.01	0.022	4	76.51	0.46	11	77.71
31517	19 43 26.804	-19 52 58.53	-0.927	-8.71	-0.010	16	76.55	-0.01	11	76.55
31520	19 51 43.597	-42 0 5.48	0.129	5.63	0.075	0	76.75	-0.45	0	76.75
31522	19 55 6.736	-15 37 22.32	0.092	-9.00	0.010	10	76.70	0.004	0	77.02
31523	19 59 2.403	27 36 51.44	0.439	0.98	-0.035	8	77.13	-0.22	10	77.13
31524	20 1 41.745	7 8 7.07	0.089	1.54	0.0	8	77.06	-0.33	12	76.02
31526	20 11 57.746	15 2 30.56	0.402	5.09	-0.014	9	76.27	-0.10	16	76.70
31527	20 14 52.697	-12 39 51.04	0.131	0.18	0.017	7	76.94	0.004	0	77.02
31529	20 15 21.232	-47 52 3.18	0.071	0.21	0.045	13	76.77	-0.26	42	76.77
31532	20 22 23.345	-23 49 36.92	0.113	1.10	-0.006	23	75.74	0.004	10	75.74
31533	20 27 2.213	- 3 3 11.13	0.600	-1.71	0.007	6	76.71	0.004	0	76.02
31534	20 27 21.092	30 12 2.35	0.032	0.15	0.021	27	76.24	0.25	0	76.73
31536	20 29 39.610	-10 1 31.22	2.052	10.32	0.012	7	76.72	0.004	0	76.02
31541	20 44 20.236	15 56 34.82	-0.240	-19.46	-0.010	17	75.51	-0.25	13	76.66
31542	20 45 6.792	-44 10 20.19	1.725	-10.35	0.039	8	77.19	-0.20	16	77.19
31543	20 45 5.974	- 5 12 43.27	-0.008	-3.75	0.023	4	76.74	-0.43	0	77.02
31547	20 49 57.475	- 9 10 19.76	0.276	-2.93	0.008	4	77.11	-0.11	0	77.16
31548	20 54 52.797	-16 13 30.69	0.351	0.17	0.0	15	75.74	0.004	0	76.02

LISTA DE ESTRELLAS DE CÍRCULO FUNDAMENTAL CATALUÑA (SUPER CATALOGO)

FK5 NUMERO	RA. (1950)	DEC. (1950)	MAG. (1950)	PARAL. (1950)	(U)RA 0.001	(U)DEC 0.001	(U)PRO 0.01	(U)CLO 0.01	(U)EQU 1950	N	(U)EQU 1950	(U)CLO 0.01	(U)PRO 0.01	(U)EQU 1950
31549	20 56	2.120	22 7	53.72	-0.020	0.12	-0.006	0.000	2	2	75.76	0.00	0.00	75.76
31554	21 0	41.373	-70 19	55.94	0.500	-2.73	0.021	0.000	0	0	76.00	0.00	0.00	76.00
31555	21 7	34.577	5 55	44.82	0.393	-15.21	-0.007	0.000	0	7	76.02	-0.15	0.00	76.02
31556	21 10	17.073	-27 49	43.50	0.740	-11.62	-0.005	0.000	0	1	77.71	0.10	0.00	77.71
31559	21 15	51.355	34 41	9.87	0.008	-0.05	-0.011	0.000	17	2	75.31	0.71	0.00	75.31
31561	21 19	27.000	-17 2	55.00	0.225	0.00	0.003	0.000	9	5	76.06	-0.14	0.00	76.06
31562	21 21	27.600	-13 5	37.46	0.603	0.54	-0.001	0.000	4	2	77.71	0.00	0.00	77.71
31563	21 22	42.265	-34 32	37.96	0.135	4.33	-0.008	0.000	8	12	76.42	-0.26	0.00	76.42
31564	21 25	56.934	7 58	37.59	0.308	-2.00	0.008	0.000	5	14	76.47	-0.14	0.00	76.47
31566	21 29	13.447	-34 9	57.06	0.034	-0.24	-0.058	0.000	11	3	77.45	0.40	0.00	77.45
31569	21 35	3.429	- 8 4	49.43	0.762	-2.26	0.009	0.000	4	12	76.34	0.00	0.00	76.34
31573	21 45	1.193	-47 31	53.86	1.623	-29.46	-0.010	0.000	17	6	75.72	0.10	0.00	75.72
31574	21 44	41.021	2 27	14.60	0.067	0.30	-0.007	0.000	6	5	75.97	0.00	0.00	75.97
31576	21 48	34.074	-23 30	15.40	2.222	-0.06	-0.018	0.000	13	4	75.74	0.17	0.00	75.74
31577	21 50	34.375	-13 47	16.98	2.124	1.35	0.028	0.000	7	3	77.46	-0.00	0.00	77.46
31579	21 54	3.203	21 0	5.44	0.010	2.04	0.003	0.000	15	5	76.18	-0.39	0.00	76.18
31580	21 56	13.527	- 4 36	33.36	-0.027	-2.25	0.0	0.000	10	5	77.75	-0.13	0.00	77.75
31581	22 3	6.497	-39 47	7.30	-0.168	-11.66	-0.024	0.000	10	11	76.30	0.01	0.00	76.30
31582	22 11	55.888	-16 3	44.63	-0.303	-35.62	0.026	0.000	7	6	76.30	0.62	0.00	76.30
31585	22 22	43.232	1 7	22.67	0.116	0.55	0.001	0.000	5	10	76.12	-0.40	0.00	76.12
31587	22 24	59.429	-67 44	37.60	2.780	-0.89	-0.069	0.000	19	3	76.40	-0.23	0.00	76.40
31588	22 26	56.135	8 52	23.15	0.378	-1.78	0.0	0.000	13	3	76.06	0.01	0.00	76.06
31589	22 26	77.453	26 30	25.25	0.186	-0.01	-0.005	0.000	8	4	75.02	0.03	0.00	75.02
31592	22 28	40.070	-32 36	11.08	0.533	-1.15	-0.032	0.000	18	4	75.94	0.0	0.00	75.94
31595	22 35	10.024	- 4 29	11.25	-0.468	-11.44	0.021	0.000	7	2	77.76	0.00	0.00	77.76
31601	23 0	49.035	-35 1	12.70	0.590	0.24	0.034	0.000	7	2	75.79	-0.25	0.00	75.79
31602	23 1	17.867	3 33	1.75	0.071	-0.43	0.017	0.000	0	1	75.84	0.00	0.00	75.84
31603	23 4	27.025	9 8	23.50	0.064	-0.96	-0.006	0.000	4	19	76.51	-0.12	0.00	76.51
31605	23 7	32.132	-45 31	4.35	1.301	-2.10	-0.042	0.000	7	8	76.51	-0.49	0.00	76.51
31606	23 9	12.613	6 26	53.78	-0.001	0.01	-0.001	0.000	7	13	76.23	-0.47	0.00	76.23
31607	23 11	43.776	- 6 19	7.92	0.253	-19.22	0.303	0.000	4	16	76.21	0.00	0.00	76.21
31608	23 13	16.345	- 4 21	37.71	2.495	-1.25	0.010	0.000	5	3	76.89	0.00	0.00	76.89
31614	23 25	25.035	6 6	14.76	-0.021	-0.19	-0.001	0.000	0	1	75.77	0.02	0.00	75.77
31615	23 26	31.118	19 44	12.84	0.308	0.14	-0.003	0.000	9	6	75.63	-0.15	0.00	75.63
31620	23 39	27.636	1 30	17.32	-0.368	-14.69	0.004	0.000	0	6	76.72	0.00	0.00	76.72
31623	23 45	22.229	- 3 2	22.61	0.617	1.02	0.006	0.000	7	7	76.31	0.00	0.00	76.31
31625	23 50	3.329	10 40	9.09	-0.165	0.37	-0.020	0.000	5	3	75.87	0.00	0.00	75.87
31626	23 52	1.301	-40 34	43.87	3.201	3.31	0.025	0.000	14	5	76.12	0.12	0.00	76.12
31628	23 54	3.377	22 22	11.55	-0.146	0.00	-0.031	0.000	5	9	76.17	-0.17	0.00	76.17
31630	23 59	13.719	- 6 17	30.91	0.329	-3.60	0.008	0.000	7	5	75.87	-0.03	0.00	75.87

FIFTH STAR JUNE MENJESIA CIRCULAR FUNDAMENTAL CATALOGUE (JUNE - JULY 1970)

FK# NUMBER	PA. 1950.	DEC. 1950.	PA (R.A.) 1950. J	PH (U) 1950.	(U-C) RA .001	ME .001	N	CP (U) 1970	(U-C) U .01	ME .01	M	DATE (YJ)
31656	2 28 8.550	-85 56 32.73	0.282	-2.34	-0.161	6	4	76.50	0.000	0.0	0	66.07
31661	7 4 59.177	-86 57 27.44	7.735	0.34	-0.560	3	4	76.22	0.000	0.0	0	67.00
31663	10 34 4.236	-85 49 55.73	-3.153	0.37	-0.542	7	6	76.06	0.000	0.0	0	66.11
31664	10 59 42.579	-84 14 27.69	-6.632	-0.65	-0.295	4	12	76.04	0.000	0.0	0	66.11
31665	13 32 25.672	-85 31 53.97	-7.963	-2.03	-0.417	5	3	76.26	-0.12	0	4	76.07
31666	15 31 26.275	-84 18 14.99	4.532	4.06	-0.302	2	6	77.02	0.0	0	1	77.17
31667	19 46 56.138	-81 28 47.97	0.696	0.39	-0.028	3	33	76.42	-0.34	12	4	76.72
31668	20 31 0.723	-84 34 57.99	4.284	-2.38	-0.324	4	23	76.81	0.07	8	10	76.72
31670	22 22 39.605	-86 13 26.74	-3.643	6.22	-0.269	5	12	76.77	0.000	0.0	0	66.08