

## LUNAR 1000 CHALLENGE

	A	B	C	D	E	F	G	H	I
1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
2	Abbot	5.6	54.8		37				
3	Abel	-34.6	85.8		69, IV				Libration object
4	Abenezra	-21.0	11.9	55	56				
5	Abetti	19.9	27.7		24				
6	Abulfeda	-13.8	13.9	54	45				
7	Acosta	-5.6	60.1		49				
8	Adams	-31.9	68.2		69				
9	Aepinus	88.0	-109.7						Libration object
10	Agatharchides	-19.8	-30.9	113	52				
11	Agrippa	4.1	10.5	61	34				
12	Airy	-18.1	5.7	63	55, 56				
13	Al-Bakri	14.3	20.2		35				
14	Albategnius	-11.2	4.1	66	44, 45				
15	Al-Biruni	17.9	92.5		III				Libration object
16	Aldrin	1.4	22.1	44	35				
17	Alexander	40.3	13.5		13				
18	Alfraganus	-5.4	19.0		46				
19	Alhazen	15.9	71.8		27				
20	Aliacensis	-30.6	5.2	67	55, 65				
21	Almanon	-16.8	15.2	55	56				
22	Al-Marrakushi	-10.4	55.8		48				
23	Alpetragius	-16.0	-4.5	74	55				
24	Alphonsus	-13.4	-2.8	75	44, 55				
25	Ameghino	3.3	57.0		38				
26	Ammonius	-8.5	-0.8	75	44				
27	Amontons	-5.3	46.8		48				
28	Amundsen	-84.5	82.8		73, 74, V				Libration object
29	Anaxagoras	73.4	-10.1	76	4				
30	Anaximander	66.9	-51.3		2				
31	Anaximenes	72.5	-44.5		3				
32	Andel	-10.4	12.4		45				
33	Andersson	-49.7	-95.3		VI				Libration object
34	Angstrom	29.9	-41.6		19				
35	Ansgarius	-12.7	79.7		49, IV				Libration object
36	Anuchin	-49.0	101.3		V				Libration object
37	Anville	1.9	49.5		37				
38	Apianus	-26.9	7.9	55	56				
39	Apollonius	4.5	61.1	2	38				
40	Arago	6.2	21.4	44	35				
41	Aratus	23.6	4.5		22				
42	Archimedes	29.7	-4.0	78	22, 12				
43	Archytas	58.7	5.0	76	4				
44	Argelander	-16.5	5.8	63	56				
45	Ariadaeus	4.6	17.3		35				
46	Aristarchus	23.7	-47.4	122	18				
47	Aristillus	33.9	1.2	69	12				
48	Aristoteles	50.2	17.4	48	5				
49	Armstrong	1.4	25.0	44	35				
50	Arnold	66.8	35.9	48	5				
51	Arrhenius	-55.6	-91.3		VI				Libration object
52	Artemis	25.0	-25.4		20				300mm
53	Artsimovich	27.6	-36.6		19				
54	Aryabhata	6.2	35.1		36				

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55	Arzachel	-18.2	-1.9	74	55				
56	Asada	7.3	49.9		37				
57	Asclepi	-55.1	25.4	58	74				
58	Ashbrook	-81.4	-112.5		VI				Libration object
59	Aston	32.9	-87.7	L9	8				Libration object
60	Atlas	46.7	44.4	24	15				
61	Atwood	-5.8	57.7	5	49				
62	Autolycus	30.7	1.5	69	12				
63	Auwers	15.1	17.2		24				
64	Auzout	10.3	64.1		38				
65	Avery	-1.4	81.4		49, IV				Libration object
66	Avicenna	39.7	-97.2		VIII				Libration object
67	Azophi	-22.1	12.7	55	56				
68	Baade	-44.8	-81.8		61, VI, VII				Libration object
69	Babbage	59.5	-56.8	133	2				
70	Babcock	4.2	93.9		III				Libration object
71	Back	1.1	80.7		38, III				Libration object
72	Baco	-51.0	19.1	58	74				
73	Baillaud	74.6	37.5		5				
74	Bailly	-66.8	-69.4	L8	71, VIII				Libration object
75	Baily	49.7	30.4		6				
76	Balboa	19.1	-83.2		17, VIII				Libration object
77	Ball	-35.9	-8.4	88	64				
78	Balmer	-20.1	70.6		60				
79	Banachiewicz	5.2	80.1		38, III				Libration object
80	Bancroft	28.0	-6.4		21, 22				
81	Banting	26.6	16.4		23				
82	Barkla	-10.7	67.2		49				
83	Barnard	-29.6	86.4		60, 69, IV				Libration object
84	Barocius	-44.9	16.8	50	66				
85	Barrow	71.3	7.7		4				
86	Bartels	24.5	-89.9		17, VIII				Libration object
87	Bayer	-51.6	-35.0	118	71				
88	Beals	37.3	86.5		16, III				Libration object
89	Beaumont	-18.0	28.8	25	57, 58				
90	Beer	27.1	-9.1	89	21				
91	Behaim	-16.5	79.4		60, IV				Libration object
92	Beketov	16.3	29.2		25				
93	Bela	24.7	2.3		22				
94	Belkovich	61.5	90.0		7, II				Libration object
95	Bell	21.8	-96.4		VIII				Libration object
96	Bellot	-12.4	48.2		48				
97	Bernouilli	35.0	60.7		16				
98	Berosus	33.5	69.9	8	16				
99	Berzelius	36.6	50.9		15				
100	Bessarion	14.9	-37.3		19				
101	Bessel	21.8	17.9		24				
102	Bettinus	-63.4	-44.8	125	71				
103	Bianchini	48.7	-34.3	106	2, 10				
104	Biela	-54.9	51.3	30	75, 76				
105	Bilharz	-5.8	56.3	5	49				
106	Billy	-13.8	-50.1	124	40				
107	Biot	-22.6	51.1		59				

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
108	Birmingham	65.1	-10.5		4, 3				
109	Birt	-22.4	-8.5	83	54				
110	Black	-9.2	80.4		49, IV				Libration object
111	Blagg	1.3	1.5	64	33				
112	Blancanus	-63.6	-21.5	98	72				
113	Blanchard	-58.5	-94.4		VI				Libration object
114	Blanchinus	-25.4	2.5		55				
115	Bliss	53.0	-13.5		3				Formerly called Plato A
116	Bobillier	19.6	15.5		23				
117	Bode	6.7	-2.4		33				
118	Boethius	5.6	72.3		38				
119	Boguslawsky	-72.9	43.2		74				
120	Bohnenberger	-16.2	40.0	25	58				
121	Bohr	12.8	-86.4		28, VIII				Libration object
122	Boltzmann	-74.9	-90.7		VI				Libration object
123	Bombelli	5.3	56.2		38				
124	Bonpland	-8.3	-17.4	93	42				
125	Boole	63.7	-87.4		2, I				Libration object
126	Borda	-25.1	46.6	10	59				
127	Borel	22.3	26.4		24				
128	Born	-6.0	66.8		49				
129	Bosch	86.8	133.5						Libration object
130	Boscovich	9.8	11.1		34				
131	Boss	45.8	89.2		16, III				Libration object
132	Bouguer	52.3	-35.8	133	2				
133	Boussingault	-70.4	54.7		74, 75				Libration object
134	Bowen	17.6	9.1		23				
135	Brackett	17.9	23.6		24				
136	Bragg	42.5	-102.9		VIII				Libration object
137	Braude	-81.8	158.9						Libration object
138	Brayley	20.9	-36.9		19				
139	Breislak	-48.2	18.3	50	66				
140	Brenner	-39.0	39.3	20	68				
141	Brewster	23.3	34.7		25				
142	Brianchon	74.8	-86.5		2, 3, I				Libration object
143	Briggs	26.5	-69.1	L7	17				Libration object
144	Brisbane	-49.1	68.5		76, V				Libration object
145	Brown	-46.4	-17.9		64				
146	Bruce	1.1	0.4	64	33				
147	Brunner	-9.9	90.9		IV				Libration object
148	Buch	-38.8	17.7	50	66				
149	Bullialdus	-20.7	-22.2	100	53				
150	Bunsen	41.4	-85.3		8, VIII				Libration object
151	Burckhardt	31.1	56.5		16				
152	Burg	45.0	28.2	36	14				
153	Burnham	-13.9	7.3		45				
154	Busching	-38.0	20.0	50	66				
155	Byrd	85.3	9.8		4, II				Libration object
156	Byrgius	-24.7	-65.3		50, 51				Libration object
157	C Herschel	34.5	-31.2	106	10				
158	C Mayer	63.2	17.3	48	5				
159	Cabeus	-84.9	-35.5		73, VI				Libration object
160	Cajal	12.6	31.1		36				

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
161	Calippus	38.9	10.7	60	13				
162	Cameron	6.2	45.9		37				
163	Campanus	-28.0	-27.8	101	53				
164	Cannizzaro	55.6	-100.7		I				Libration object
165	Cannon	19.9	81.4		27, III				Libration object
166	Capella	-7.6	34.9	28	47				
167	Capuanus	-34.1	-26.7	108	63				
168	Cardanus	13.2	-72.4	L7	28				Libration object
169	Carlini	33.7	-24.1		10				
170	Carlos	24.9	2.3						
171	Carmichael	19.6	40.4	27	25				
172	Carpenter	69.4	-50.9		2, 3				
173	Carrel	10.7	26.7		35				
174	Carrillo	-2.2	80.9		49, IV				Libration object
175	Carrington	44.0	62.1		15				
176	Cartan	4.2	59.3		38				
177	Casatus	-72.6	-30.5	107	72				
178	Cassini	40.2	4.6	68	12				
179	Catalan	-45.7	-87.3		61, VI				Libration object
180	Catena Abulfeda	-17.0	17.0	54	56, 57				
181	Catena Davy	-11.0	-7.0	82	43				
182	Catena Dziejwulski	21.0	99.0		III				Libration object
183	Catena Humboldt	-22.0	85.0		60, IV				Libration object
184	Catena Krafft	15.0	-72.0		17, 28				200mm
185	Catena Littrow	22.0	29.0	34	24				
186	Catena Sylvester	80.0	-80.0		I				Libration object
187	Catena Taruntius	3.0	48.7						
188	Catena Timocharis	29.0	-13.0		21				500mm
189	Catharina	-18.0	23.6	39	57				
190	Cauchy	9.6	38.6	26	36				
191	Cavalerius	5.1	-66.8	131	28				
192	Cavendish	-24.5	-53.7	128	51				
193	Caventou	29.8	-29.4		20				
194	Cayley	4.0	15.1		34				
195	Celsius	-34.1	20.1	46	67				
196	Censorinus	-0.4	32.7	28	47				
197	Cepheus	40.8	45.8	16	15				
198	Chacornac	29.8	31.7	33	14, 25				
199	Chadwick	-52.7	-101.3		VI				Libration object
200	Challis	79.5	9.2		4				
201	Chamberlin	-58.9	95.7		V				Libration object
202	Chapman	50.4	-100.7		I				Libration object
203	Chappe	-61.2	-91.5		VI				Libration object
204	Chevallier	44.9	51.2		15				
205	Ching-te	20.0	30.0		25				
206	Chladni	4.0	1.1		33				
207	Cichus	-33.3	-21.1	108	63				
208	Clairaut	-47.7	13.9	50	66				
209	Clausius	-36.9	-43.8	127	62				
210	Clavius	-58.4	-14.4	92	72, 73				
211	Cleomedes	27.7	55.5	11	26				
212	Cleostratus	60.4	-77.0	L6	1, I				Libration object
213	Clerke	21.7	29.8		25				

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
214	Collins	1.3	23.7	44	35				
215	Colombo	-15.1	45.8	13c	59				
216	Compton	56.0	105.0		II				Libration object
217	Condon	1.9	60.4		38				
218	Condorcet	12.1	69.6	2	38				
219	Conon	21.6	2.0		22				
220	Cook	-17.5	48.9		59				
221	Copernicus	9.7	-20.0	95	31				
222	Couder	-4.8	-92.4		VII				Libration object
223	Cremona	67.5	-90.6		2, I				Libration object
224	Crile	14.2	46.0		37				
225	Crozier	-13.5	50.8		48				
226	Cruger	-16.7	-66.8	132	50				
227	Curie	-23.0	91.8		IV				Libration object
228	Curtis	14.6	56.6		26				
229	Curtius	-67.2	4.4	80	73				
230	Cusanus	72.0	70.8	L5	6, II				Libration object
231	Cuvier	-50.3	9.9	58	74				
232	Cyrrillus	-13.2	24.0	38	46				
233	Cysatus	-66.2	-6.1	80	73				
234	da Vinci	9.1	45.0		37				
235	Daguerre	-11.9	33.6	25	47				
236	Dale	-9.6	82.9		49, IV				Libration object
237	Dalton	17.1	-84.3		17, VIII				Libration object
238	Daly	5.7	59.6		38				
239	Damoiseau	4.8	-61.1		39				
240	Daniell	35.3	31.1		14				
241	Darney	-14.5	-23.6	102	42, 53				
242	D'Arrest	2.3	14.7		34				
243	Darwin	-19.8	-69.1		50				
244	Daubree	15.7	14.7		23				
245	Davy	-11.8	-8.1	82	43				
246	Dawes	17.2	26.4	43	24				
247	de Gasparis	-25.9	-50.7		51				
248	de Gerlache	-88.5	-87.1		VI				Libration object
249	De La Rue	59.1	53.0		6				
250	De Morgan	3.3	14.9		34				
251	De Roy	-55.3	-99.1		VI				Libration object
252	De Sitter	80.1	39.6		5, II				Libration object
253	De Vico	-19.7	-60.2		50, 51				
254	Debes	29.5	51.7	11	26				
255	Debus	-10.5	99.6		IV				Libration object
256	Dechen	46.1	-68.2		8				
257	Delambre	-1.9	17.5	47	46				
258	Delaunay	-22.2	2.5		55				
259	Delisle	29.9	-34.6	114	9, 19				
260	Delmotte	27.1	60.2	11	26				
261	Deluc	-55.0	-2.8	81	73				
262	Dembowski	2.9	7.2		34				
263	Democritus	62.3	35.0	L5	5				
264	Demonax	-78.2	59.0		74, V				Libration object
265	Desargues	70.2	-73.3		2, I				
266	Descartes	-11.7	15.7		45				

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267	Deseilligny	21.1	20.6		24				
268	Deslandres	-32.5	-5.2	79	64, 65				
269	Dionysius	2.8	17.3		35				
270	Diophantus	27.6	-34.3	114	19				
271	Doerful	-69.1	-107.9		VI				Libration object
272	Dollond	-10.4	14.4		45				
273	Donati	-20.7	5.2		55				
274	Donner	-31.4	98.0		IV				Libration object
275	Doppelmayer	-28.5	-41.4	121	52				
276	Dorsa Aldrovandi	24.0	29.0	34	24				
277	Dorsa Andrusov	-1.0	57.0		49				
278	Dorsa Argand	28.0	-40.0		19				
279	Dorsa Barlow	15.0	31.0	35	25, 36				
280	Dorsa Burnet	27.0	-57.0		18				
281	Dorsa Cato	1.0	47.0	13b	37				
282	Dorsa Ewing	-11.0	-38.0		41				
283	Dorsa Geikie	-3.0	53.0	13a	48				
284	Dorsa Harker	14.0	64.0	1a	27, 38				
285	Dorsa Lister	19.0	22.0	41	24				
286	Dorsa Mawson	-7.0	53.0	13a	48				
287	Dorsa Rubey	-10.0	-42.0	120	40				
288	Dorsa Smirnov	25.0	25.0	41	24				
289	Dorsa Sorby	18.7	13.7						
290	Dorsa Stille	27.0	-19.0		20				
291	Dorsa Tetyaev	19.0	65.0	1a	27				
292	Dorsa Whiston	30.0	-57.0		8				
293	Dorsum Arduino	26.0	-36.0		19				
294	Dorsum Azara	26.0	20.0	41	24				
295	Dorsum Bucher	31.0	-39.0		9				
296	Dorsum Buckland	21.0	12.0	56	23				
297	Dorsum Cayeux	1.0	51.0	13a	37				
298	Dorsum Cushman	1.0	49.0		37				
299	Dorsum Gast	24.0	9.0	56	23				
300	Dorsum Grabau	30.0	-14.0	89	11				
301	Dorsum Guettard	-10.0	-18.0	93	42				
302	Dorsum Heim	31.0	-29.0	104	10				
303	Dorsum Higazy	28.0	-17.0	89	21				
304	Dorsum Nicol	18.0	23.0	41	24				
305	Dorsum Niggli	29.0	-52.0		18				
306	Dorsum Oppel	19.0	52.0	15	26				
307	Dorsum Owen	25.0	11.0	56	23				
308	Dorsum Scilla	32.0	-60.0		8				
309	Dorsum Termier	11.0	58.0		37, 38				
310	Dorsum Von Cotta	24.0	12.0	56	23				
311	Dorsum Zirkel	29.0	-24.0	104	10, 20				
312	Dove	-46.7	31.5		67				
313	Draper	17.6	-21.7		20				
314	Drebbel	-40.9	-49.0	127	62				
315	Dreyer	10.0	96.9		III				Libration object
316	Drude	-38.5	-91.8		VII				Libration object
317	Drygalski	-79.7	-86.8		72, VI				Libration object
318	Dubiago	4.4	70.0		38				
319	Dugan	64.2	103.3		II				Libration object

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320	Dunthorne	-30.1	-31.6	108	62, 63				
321	Dziewulski	21.2	98.9		III				Libration object
322	Eckert	17.3	58.3		26				
323	Eddington	21.5	-71.8	L7	17				Libration object
324	Edison	25.0	99.1		III				Libration object
325	Egede	48.7	10.6	48	13, 5				
326	Eimmart	24.0	64.8	3	27				
327	Einstein	16.6	-88.5		17, VIII				Libration object
328	Eischstadt	-22.6	-78.3		50, VII				Libration object
329	Elger	-35.3	-29.8		63				
330	Ellison	55.1	-107.5		I				Libration object
331	Elmer	-10.1	84.1		49, IV				Libration object
332	Encke	4.6	-36.6	115	30				
333	Endymion	53.6	56.5	9	7				
334	Epigenes	67.5	-4.6		4				
335	Epimenides	-40.9	-30.2	109	63				
336	Eratosthenes	14.5	-11.3	87	21, 32				
337	Erlanger	87.0	28.6						Libration object
338	Erro	5.7	98.5		III				Libration object
339	Esclangon	21.5	42.1		25				
340	Euclides	-7.4	-29.5	110	41				
341	Euctemon	76.4	31.3		5				
342	Eudoxus	44.3	16.3	48	13				
343	Euler	23.3	-29.2		20				
344	Fabbroni	18.7	29.2		25				
345	Fabricius	-42.9	42.0	20	68				
346	Fabry	43.0	101.0		II, III				Libration object
347	Fahrenheit	13.1	61.7		38				Farenheit in VMA
348	Faraday	-42.4	8.7	62	66				
349	Faustini	-87.3	77.0		V				Libration object
350	Fauth	6.3	-20.1		31				
351	Faye	-21.4	3.9		55				
352	Fedorov	28.2	-37.0		19				
353	Fenyi	-44.9	-105.1		VI, VII				Libration object
354	Fermat	-22.6	19.8		57				
355	Fernelius	-38.1	4.9	62	65				
356	Feuillee	27.4	-9.4	89	21				
357	Fibiger	86.1	37.1						Libration object
358	Finsch	23.6	21.3		24				
359	Firmicus	7.3	63.4	2	38				
360	Flammarion	-3.4	-3.7	75	44				
361	Flamsteed	-4.5	-44.3	120	40				
362	Fiorey	87.0	-19.8						Libration object
363	Focas	-33.7	-93.8		VII				Libration object
364	Fontana	-16.1	-56.6		51				
365	Fontenelle	63.4	-18.9	85	3				
366	Foucault	50.4	-39.7	133	2				
367	Fourier	-30.3	-53.0	128	51, 61				
368	Fox	0.5	98.2		III				Libration object
369	Fra Mauro	-6.0	-17.0	93	42, 43				
370	Fracastorius	-21.2	33.0	29	58				
371	Franck	22.6	35.5		25				
372	Franklin	38.8	47.7	16	15				

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
373	Franz	16.6	40.2		25				
374	Fraunhofer	-39.5	59.1	7	69				
375	Fredholm	18.4	46.5		26				
376	Freud	25.8	-52.3		18				
377	Froelich	80.3	-109.7		I				Libration object
378	Fryxell	-21.3	-101.4		VII				Libration object
379	Furnerius	-36.3	60.4	7	69				
380	G Bond	32.4	36.2		15				
381	Galen	21.9	5.0		22				
382	Galilaei	10.5	-62.7	131	28				
383	Galle	55.9	22.3	48	5				
384	Galvani	49.6	-84.6		1, 8, I				Libration object
385	Gambart	1.0	-15.2		32				
386	Ganswindt	-79.6	110.3		V				Libration object
387	Gardner	17.7	33.8		25				
388	Gartner	59.1	34.6	L5	6				
389	Gassendi	-17.5	-39.9	116	52				
390	Gaudibert	-10.9	37.8		47				
391	Gauricus	-33.8	-12.6	88	64				
392	Gauss	35.9	79.1		16				Libration object
393	Gay-Lussac	13.9	-20.8		31				
394	Geber	-19.4	13.9	55	56				
395	Geissler	-2.6	76.5		49				
396	Geminus	34.5	56.7	8	16				
397	Gemma Frisius	-34.2	13.3	51	66				
398	Gerard	44.5	-80.0		8, VIII				Libration object
399	Gernsback	-36.5	99.7		IV				Libration object
400	Gibbs	-18.4	84.3		60, IV				Libration object
401	Gilbert	-3.2	76.0		49				
402	Gill	-63.9	75.9		75, V				Libration object
403	Ginzel	14.3	97.4		III				Libration object
404	Gioja	83.3	2.0		4				
405	Giordano Bruno	37.0	103.0		III				Libration object
406	Glaisher	13.2	49.5		37				
407	Glushko	8.4	-77.6		28				
408	Goclenius	-10.0	45.0	13c	48				
409	Goddard	14.8	89.0		27, III				Libration object
410	Godin	1.8	10.2	61	34				
411	Goldschmidt	73.0	-2.9	76	4				
412	Golgi	27.8	-60.0		18				
413	Goodacre	-32.7	14.1	51	66				
414	Gore	86.2	-62.3						Libration object
415	Gould	-19.2	-17.2		53				
416	Graff	-42.4	-88.6		61, VII				Libration object
417	Greaves	13.2	52.7	1b	37				
418	Grignard	84.5	-75.8						Libration object
419	Grimaldi	-5.2	-68.6	134	39				Libration object
420	Grove	40.3	32.9		14				
421	Gruemberger	-66.9	-10.0	80	73				
422	Gruithuisen	32.9	-39.7	117	9				
423	Guericke	-11.5	-14.1		43				
424	Gum	-40.4	88.6		69, IV				Libration object
425	Gutenberg	-8.6	41.2	13c	48				



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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
426	Guthnick	-47.7	-93.9		VI				Libration object
427	Gylden	-5.3	0.3		44				
428	Haber	83.4	-94.6						Libration object
429	Hagecius	-59.8	46.6	30	75				
430	Hahn	31.3	73.6	8	16				
431	Haidinger	-39.2	-25.0	109	63				
432	Hainzel	-41.3	-33.5	109	63				
433	Haldane	-1.7	84.1		49, IV				Libration object
434	Hale	-74.2	90.8		74, 75, V				Libration object
435	Hall	33.7	37.0		15				
436	Halley	-8.0	5.7	65	45				
437	Hamilton	-42.8	84.7		69, IV				Libration object
438	Hanno	-56.3	71.2		76, V				Libration object
439	Hansen	14.0	72.5		38				
440	Hanskiy	-9.7	97.0		IV				Libration object, Ganskiy in VMA
441	Hansteen	-11.5	-52.0	124	40				
442	Harding	43.5	-71.7		8				
443	Hargreaves	-2.2	64.0		49				
444	Harkhebi	39.9	99.8		III				Libration object
445	Harlan	-38.5	79.5		69, IV				Libration object
446	Harpalus	52.6	-43.4	133	2				
447	Hartwig	-6.1	-80.5		39, VII				Libration object
448	Hase	-29.4	62.5	6	59				
449	Haskin	81.5	133.2						Libration object
450	Hausen	-65.5	-88.4		71, VI				Libration object
451	Haworth	-87.5	-5.2						Libration object
452	Hayn	64.7	85.2		6, II				Libration object
453	Hecataeus	-21.8	79.6		60, IV				Libration object
454	Hedervari	-81.8	84.0		V				Libration object
455	Hedin	2.9	-76.5		28				
456	Heinrich	24.8	-15.3	89	21				
457	Heinsius	-39.5	-17.7	97	64				
458	Heis	32.4	-31.9		10				
459	Helicon	40.4	-23.1	106	10				
460	Hell	-32.4	-7.8	79	64				
461	Helmert	-7.6	87.6		49, IV				Libration object
462	Helmholtz	-68.1	64.1		75, V				Libration object
463	Henry	-24.0	-56.8	128	51				
464	Henry Freres	-23.5	-58.9	128	51				
465	Heraclitus	-49.2	6.2	62, 81	73				Also required for Objective 62, 81
466	Hercules	46.7	39.1	24	14				
467	Herigonius	-13.3	-33.9		41				
468	Hermann	-0.9	-57.3		39				
469	Hermite	86.4	-87.3		4, II				Libration object
470	Herodotus	23.2	-49.7	122	18				
471	Herschel	-5.7	-2.1	75	44				
472	Hesiodus	-29.4	-16.3	108	54				
473	Hevelius	2.2	-67.3	131	28				
474	Hevesy	83.1	149.2						Libration object
475	Heyrovsky	-39.6	-95.3		VII				Libration object
476	Hill	20.9	40.8	27	25				
477	Hind	-7.9	7.4	65	45				
478	Hinshelwood	89.4	-51.9						Libration object

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
479	Hippalus	-24.8	-30.2	113	52, 53				
480	Hipparchus	-5.5	4.8	65	44, 45				
481	Hirayama	-6.0	93.7		IV				Libration object
482	Hohmann	-17.9	-94.1		VII				Libration object
483	Holden	-19.1	62.5	4	60				
484	Hommel	-54.6	33.0	30	75				
485	Hooke	41.2	54.9		15				
486	Hornsby	23.8	12.5		23				
487	Horrebow	58.7	-40.8		2				
488	Horrocks	-4.0	5.9	65	45				
489	Hortensius	6.5	-28.0	111	30				
490	Houssay	83.1	98.5						Libration object
491	Houtermans	-9.4	87.2		49, IV				Libration object
492	Hubble	22.1	86.9	L4	27, III				Libration object
493	Huggins	-41.1	-1.4	72	65				
494	Humason	30.7	-56.6		8				
495	Humboldt	-27.2	80.9		60				Libration object
496	Hume	-4.7	90.4		IV				Libration object
497	Huxley	20.2	-4.5		22				
498	Hyginus	7.8	6.3	61	34				
499	Hypatia	-4.3	22.6	40	46				
500	ibn Bajja	-86.3	-75.0						Libration object
501	ibn Battuta	-6.9	50.4		48				
502	ibn Rushd	-11.7	21.7	38	46				
503	ibn Yunus	14.1	91.1		III				Libration object
504	Ideler	-49.2	22.3		74				
505	Idel'son	-81.5	110.9		V				Libration object
506	Il'in	-17.8	-97.5		VII				Libration object
507	Inghirami	-47.5	-68.8	127	61, 62				
508	Isidorus	-8.0	33.5	28	47				
509	Ivan	26.9	-43.3		19				
510	J Herschel	62.1	-41.2	133	2				
511	Jacobi	-56.7	11.4	58	74				
512	Jansen	13.5	28.7	35	36				
513	Jansky	8.5	89.5		38, III				Libration object
514	Janssen	-44.9	41.5	22	67, 68				
515	Jeans	-55.8	91.4		V				Libration object
516	Jehan	20.7	-31.9		19				Wrong loc'n in VMA, use Euler K
517	Jenkins	0.3	78.1		38				
518	Jenner	-42.1	95.9		IV				Libration object
519	Joliot	25.6	92.7		III				Libration object
520	Jomo	24.4	2.4						
521	Joy	25.0	6.6		23				
522	Julius Caesar	9.0	15.4	53	34				
523	Kaiser	-36.5	6.5	62	65, 66				
524	Kane	63.1	26.1		5				
525	Kant	-10.6	20.1	38	46				
526	Kao	-6.7	87.6		49, IV				Libration object
527	Kapteyn	-10.8	70.6		49				
528	Kastner	-7.0	79.1		49				Libration object
529	Keldysh	51.2	43.6		6				
530	Kepler	8.1	-38.0	115	30				
531	Kies	-26.3	-22.5	101	53				

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
532	Kiess	-6.4	84.0		49, IV				Libration object
533	Kinau	-60.8	15.1	58	74				
534	Kirch	39.2	5.6	77	12				
535	Kircher	-67.1	-45.3	125	71, 72				
536	Kirchhoff	30.3	38.8		15				
537	Klaproth	-69.7	-26.0	107	72				
538	Klein	-12.0	2.6	66	44				
539	Knox-Shaw	5.3	80.2		38, III				Libration object
540	Kocher	-84.5	-134.0						Libration object
541	Konig	-24.1	-24.6	100	53				
542	Kopff	-17.4	-89.6		50, VII				Libration object
543	Kovalskiy	-21.1	98.1		IV				Libration object
544	Krafft	16.6	-72.6	L7	17				Libration object
545	Kramarov	-2.3	-98.8		VII				Libration object
546	Krasnov	-29.9	-79.6		50, VII				Libration object
547	Kreiken	-9.0	84.6		49, IV				Libration object
548	Krieger	29.0	-45.6		19				
549	Krogh	9.4	65.7		38				
550	Krusenstern	-26.2	5.9		55, 56				
551	Kugler	-53.8	103.7		V				Libration object
552	Kuhn	-84.5	-152.5						Libration object
553	Kuiper	-9.8	-22.7	102	42				
554	Kundt	-11.5	-11.5		43				
555	Kunowsky	3.2	-32.5		30				
556	La Caille	-23.8	1.1		55				
557	La Condamine	53.4	-28.2		2				
558	La Perouse	-10.7	76.3		49				
559	Lacroix	-37.9	-59.0	135	61				
560	Lacus Aestatis	-15.0	-69.0		39, 50				
561	Lacus Autumni	-14.0	-82.0		39, 50, VII				Libration object
562	Lacus Bonitatis	23.0	44.0		25, 26				
563	Lacus Doloris	17.0	9.0	52	23				
564	Lacus Excellentiae	-36.0	-43.0	127	62				
565	Lacus Felicitatis	19.0	5.0	52	22				
566	Lacus Gaudii	17.0	13.0	52	23				
567	Lacus Hiemalis	15.0	14.0	52	23				
568	Lacus Lenitatis	14.0	12.0	52	23, 34				
569	Lacus Mortis	45.0	27.0	36	14				
570	Lacus Odii	19.0	7.0	52	23				
571	Lacus Perseverantiae	8.0	62.0		38				
572	Lacus Somniorum	39.0	28.0	36	14				
573	Lacus Spei	43.0	65.0	8	16				
574	Lacus Temporis	46.0	57.0		15				
575	Lacus Timoris	-39.0	-28.0	109	63				
576	Lacus Veris	-13.0	-87.0		39, 50, VII				Libration object
577	Lade	-1.3	10.1		45				
578	Lagalla	-44.6	-22.5		63				
579	Lagrange	-33.2	-72.0		61				
580	Lalande	-4.4	-8.6	82	43				
581	Lallemand	-14.3	-84.1		39, VII				Libration object
582	Lamarck	-22.9	-69.8		50				
583	Lamb	-42.8	100.8		IV				Libration object
584	Lambert	25.8	-21.0	104	20				

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
585	Lame	-14.7	64.5	4	49, 60				
586	Lamech	42.7	13.1		13				
587	Lamont	5.0	23.2	44	35				
588	Landsteiner	31.3	-14.8	89	11				
589	Langley	51.1	-86.3		1, I				Libration object
590	Langrenus	-8.9	60.9	5	49				
591	Lansberg	-0.3	-26.6	103	42				
592	Lassell	-15.5	-7.9		54				
593	Laue	28.0	-96.7		VIII				Libration object
594	Lauritsen	-27.6	96.1		IV				Libration object
595	Laveran	-81.8	-159.8						Libration object
596	Lavoisier	38.2	-81.2		8, VIII				Libration object
597	Lawrence	7.4	43.2		37				
598	Le Gentil	-74.4	-76.5		72, VI				Libration object
599	Le Monnier	26.6	30.6	34	24, 25				
600	Le Verrier	40.3	-20.6	106	11				
601	Leakey	-3.2	37.4		47				
602	Lebesgue	-5.1	89.0		49, IV				Libration object
603	Lee	-30.7	-40.7	127	62				
604	Legendre	-28.9	70.2		59, 60				
605	Lehmann	-40.0	-56.0	127	61, 62				
606	Lenard	85.2	-109.7						Libration object
607	Lepaute	-33.3	-33.6	108	62				
608	Letronne	-10.6	-42.4	120	40				
609	Lexell	-35.8	-4.2	79	65				
610	Liapunov	26.3	89.3		27, III				Libration object
611	Licetus	-47.1	6.7	62	65				
612	Lichtenberg	31.8	-67.7		8				
613	Lick	12.4	52.7	1b	37				
614	Liebig	-24.3	-48.2		51				
615	Lilius	-54.5	6.2	81	73				
616	Lindbergh	-5.4	52.9		48				
617	Lindblad	70.4	-98.8		I				Libration object
618	Lindenau	-32.3	24.9	46	67				
619	Lindsay	-7.0	13.0		45				
620	Linne	27.7	11.8	57	23				
621	Liouville	2.6	73.5		38				
622	Lippershey	-25.9	-10.3		54				
623	Littrow	21.5	31.4		25				
624	Lockyer	-46.2	36.7	22	67				
625	Loewy	-22.7	-32.8		52				
626	Lohrmann	-0.5	-67.2		39				
627	Lohse	-13.7	60.2	4	49				
628	Lomonosov	27.3	98.0		III				Libration object
629	Longfellow	-7.5	91.3		IV				Libration object (Hirayama Q)
630	Longomontanus	-49.5	-22.0	99	64, 72				
631	Lorentz	34.3	-96.9		VIII				Libration object
632	Louise	28.5	-34.2		19				
633	Louville	44.0	-46.0		9				
634	Lovelace	82.3	-106.4		I				Libration object
635	Lubbock	-3.9	41.8	13c	48				
636	Lubiniezky	-17.8	-23.8		53				
637	Lucian	14.3	36.7		25, 36				

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
638	Ludwig	-7.7	97.4		IV				Libration object
639	Luther	33.2	24.1		14				
640	Lyell	13.6	40.6		36				
641	Lyot	-50.2	84.1		69,76,V				Libration object
642	Maclaurin	-1.9	68.0		49				
643	Maclear	10.5	20.1		35				
644	Macmillan	24.2	-7.8		21				
645	Macrobius	21.3	46.0	11	26				
646	Madler	-11.0	29.8	37	47				
647	Maestlin	4.9	-40.6		29				
648	Magelhaens	-11.9	44.1		48				
649	Maginus	-50.0	-6.2	81	65, 73				
650	Main	80.8	10.1		4				
651	Mairan	41.6	-43.4	106	9				
652	Malapert	-84.9	12.9		73, V				Libration object
653	Malinkin	-87.2	75.9						Libration object
654	Mallet	-45.4	54.2	14	68				
655	Manilius	14.5	9.1	59	23, 34				
656	Manners	4.6	20.0		35				
657	Manzinus	-67.7	26.8	58	74				
658	Maraldi	19.4	34.9	27	25				
659	Marco Polo	15.4	-2.0		22				
660	Mare Anguis	22.0	67.0	3	27				
661	Mare Australe	-46.0	91.0	L1	76, IV, V				Libration object
662	Mare Cognitum	-10.0	-23.0	102	42				
663	Mare Crisium	17.0	59.0	1b	26,27,37,38				
664	Mare Fecunditatis	-2.0	52.0	Part 1-B	37,48,49,59				
665	Mare Frigoris	58.0	-20.0	Part 1-B	1 to 6				
666	Mare Humboldtianum	57.0	80.0	9	7, II				Libration object
667	Mare Humorum	-24.0	-39.0	Part 1-B	51, 52				
668	Mare Imbrium	30.0	-20.0	96	9-12,19-21				
669	Mare Insularum	7.0	-22.0	111	30-32,41,42				
670	Mare Marginis	12.0	88.0	L2	27, 38, III				Libration object
671	Mare Nectaris	-15.0	35.0	25	47, 58				
672	Mare Nubium	-20.0	-15.0	Part 1-B	53, 54				
673	Mare Orientale	-20.0	-95.0	L10	50, VII				Libration object
674	Mare Serenitatis	28.0	18.0	Part 1-B	13,14,23,24				
675	Mare Smythii	-2.0	87.0	L3	38,49,III,IV				Libration object
676	Mare Spumans	1.0	65.0	2	38				
677	Mare Tranquillitatis	8.0	28.0	Part 1-B	35,36,47				
678	Mare Undarum	7.0	69.0	2	38				
679	Mare Vaporum	13.0	3.0	Part 1-B	22, 33, 34				
680	Marinus	-39.4	76.5		69				
681	Marius	11.9	-50.8	126	29				
682	Markov	53.4	-62.7	L6	1				Libration object
683	Marth	-31.1	-29.3		63				
684	Maskelyne	2.2	30.1	35	36				
685	Mason	42.6	30.5	36	14				
686	Maunder	-14.6	-93.8		VII				Libration object
687	Maupertuis	49.6	-27.3	106	2				
688	Maurolycus	-41.8	14.0	50	66				
689	Maury	37.1	39.6		15				
690	Maxwell	30.0	98.6		III				Libration object

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
691	McAdie	2.1	92.1		III				Libration object
692	McClure	-15.3	50.3		59				
693	McDonald	30.4	-20.9		10				
694	McLaughlin	47.1	-92.9		I				Libration object
695	Mee	-43.7	-35.0		63				
696	Mees	13.6	-96.1		VIII				Libration object
697	Mendel	-48.8	-109.9		VI				Libration object
698	Menelaus	16.3	16.0	56	23				
699	Menzel	3.4	36.9		36				
700	Mercator	-29.3	-26.1	101	53				
701	Mercurius	46.6	66.2		15, 16				
702	Merrill	75.2	-116.3		I				Libration object
703	Mersenius	-21.5	-49.2	123	51				
704	Messala	39.2	59.9	8	16				
705	Messier	-1.9	47.6	13b	48				
706	Metius	-40.4	43.3	20	68				
707	Meton	73.8	19.2		4, 5				
708	Milichius	10.0	-30.2	112	30				
709	Miller	-39.3	0.8	72	65				
710	Mitchell	49.7	20.2	48	5				
711	Moigno	66.4	28.9		5				
712	Moltke	-0.6	24.2	45	46				
713	Monge	-19.2	47.6		59				
714	Mons Ampere	19.0	-4.0	70	22				
715	Mons Argaeus	19.0	29.0	34	24, 25				
716	Mons Bradley	22.0	1.0	70	22				
717	Mons Delisle	29.0	-36.0	114	19				
718	Mons Esam	14.6	35.7		36				
719	Mons Gruithuisen Delta	36.0	-39.5	117	9				
720	Mons Gruithuisen Gamma	36.6	-40.5	117	9				
721	Mons Hadley	27.0	5.0	70	22				
722	Mons Hadley Delta	26.0	4.0	70	22				
723	Mons Hansteen	-12.0	-50.0	124	40				
724	Mons Herodotus	27.0	-53.0	122	18				Not in VMA
725	Mons Huygens	20.0	-3.0	70	22				
726	Mons La Hire	28.0	-25.0	104	20				
727	Mons Maraldi	20.0	35.0	27	25				
728	Mons Moro	-12.0	-20.0	102	42				
729	Mons Penck	-10.0	22.0	38	46				
730	Mons Pico	46.0	-9.0	84	11				
731	Mons Piton	41.0	-1.0	77	12				
732	Mons Rumker	41.0	-58.0	130	8				
733	Mons Usov	12.0	63.0	1a	38				
734	Mons Vinogradov	22.4	-43.4	114	19				
735	Mons Vitruvius	19.0	31.0	34	25				
736	Mons Wolff	17.0	-7.0	70	21				
737	Mont Blanc	45.0	1.0	68	12				
738	Montanari	-45.8	-20.6	97	64				
739	Montes Agricola	29.0	-54.0	122	18				
740	Montes Alpes	46.0	2.0	68	12				
741	Montes Apenninus	20.0	-3.0	70	22				
742	Montes Archimedes	26.0	-5.0	78	22				

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
743	Montes Carpatus	15.0	-25.0	105	20, 31				
744	Montes Caucasus	39.0	9.0	60	13				
745	Montes Cordillera	-20.0	-80.0	L10	39,50,VII				Libration object
746	Montes Haemus	17.0	13.0	52	23				
747	Montes Harbinger	27.0	-41.0	119	19				
748	Montes Jura	47.0	-37.0	106	10				
749	Montes Pyrenaeus	-14.0	41.0	23	48, 58				
750	Montes Recti	48.0	-20.0	94	11				
751	Montes Rhipaeus	-7.0	-28.0	110	41, 42				
752	Montes Rook	-20.0	-83.0		50, VII				Libration object
753	Montes Secchi	3.0	43.0	13b	37				
754	Montes Spitzbergen	35.0	-5.0	77	12				
755	Montes Taurus	26.0	36.0	27	25				
756	Montes Teneriffe	48.0	-13.0	84	3, 11				
757	Moretus	-70.6	-5.5	80	73				
758	Morley	-2.8	64.6		49				
759	Moseley	20.9	-90.1		VIII				Libration object
760	Mosting	-0.7	-5.9	82	43				
761	Mouchez	78.3	-26.6		3, 4				
762	Moulton	-61.1	97.2		V				Libration object
763	Mount Marilyn	1.1	40.0						
764	Muller	-7.6	2.1		44				
765	Murchison	5.1	-0.1	64	33				
766	Mutus	-63.6	30.1	58	74				
767	Nansen	81.3	95.3		5, II				Libration object
768	Naonobu	-4.6	57.8	5	49				
769	Nasireddin	-41.0	0.2	72	65				
770	Nasmyth	-50.5	-56.2	129	70				
771	Natasha	20.0	-31.3		19				
772	Naumann	35.4	-62.0		8				
773	Neander	-31.3	39.9	14	68				
774	Nearch	-58.5	39.1	30	75				
775	Nefed'ev	-81.1	135.8						Libration object
776	Neison	68.3	25.1		5				
777	Neper	8.8	84.5		38, III				Libration object
778	Nernst	35.4	-94.5		VIII				Libration object
779	Neumayer	-71.1	70.7		75, V				Libration object
780	Newcomb	29.9	43.8	19	15, 25				
781	Newton	-76.7	-16.9	80	73				
782	Nicholson	-26.2	-85.1		50, VII				Libration object
783	Nicolai	-42.4	25.9	32	67				
784	Nicollet	-21.9	-12.5		54				
785	Nielsen	31.8	-51.8		8				
786	Niepce	72.7	-119.1		I				Libration object
787	Nobile	-85.2	53.5		V				Libration object
788	Nobili	0.2	75.9		38				
789	Noggerath	-48.8	-45.7	129	62, 70				
790	Nonius	-34.8	3.8	71	65				
791	Norman	-11.8	-30.4		41				
792	Nother	66.6	-113.5		I				Libration object
793	Nunn	4.6	91.1		III				Libration object
794	Oceanus Procellarum	0.0	-50.0	Part 1-B	28				Also RUKL 8,9,17-19,29,39-41,VII
795	Oenopides	57.0	-64.1	L6	1				Libration object

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
796	Oersted	43.1	47.2		15				
797	Oken	-43.7	75.9	L1	69, IV				Libration object
798	Oibers	7.4	-75.9		28				
799	Omar Khayyam	58.0	-102.1		I				Libration object
800	Opelt	-16.3	-17.5		53				
801	Oppolzer	-1.5	-0.5		44				
802	Orontius	-40.3	-4.0	72	65				
803	Palisa	-9.4	-7.2		43				
804	Palitzsch	-28.0	64.5		59				
805	Pallas	5.5	-1.6	64	33				
806	Palmieri	-28.6	-47.7		51				
807	Palus Epidemiarum	-32.0	-27.0	108	53, 63				
808	Palus Putredinis	27.0	0.0		22				
809	Palus Somni	15.0	44.0	18	26, 37				
810	Paneth	63.0	-94.8		I				Libration object
811	Parkhurst	-33.4	103.6		IV				Libration object
812	Parrot	-14.5	3.3		44, 55				
813	Parry	-7.9	-15.8	93	42, 43				
814	Pascal	74.3	-70.1		3, I				Libration object
815	Peary	88.6	33.0		4, II				Libration object
816	Peek	2.6	86.9		38, III				Libration object
817	Peirce	18.3	53.5	1b	26				
818	Peirescius	-46.5	67.6		68, 69				
819	Pentland	-64.6	11.5	80	73, 74				
820	Petavius	-25.3	60.4	6	59				
821	Petermann	74.2	66.3	L5	5, II				Libration object
822	Peters	68.1	29.5		5				
823	Petit	2.3	63.5		38				
824	Petrov	-61.4	88.0		76, V				Libration object
825	Pettit	-27.5	-86.6		50, VII				Libration object
826	Petzval	-62.7	-110.4		VI				Libration object
827	Phillips	-26.6	76.0		60				
828	Philolaus	72.1	-32.4	85	3				
829	Phocyclides	-52.9	-57.3	118	70				
830	Piazzi	-36.2	-67.9		61				
831	Piazzi Smyth	41.9	-3.2	77	12				
832	Picard	14.6	54.7	1b	26, 37				
833	Piccolomini	-29.7	32.2	31	58, 68				
834	Pickering	-2.9	7.0		45				
835	Pictet	-43.6	-7.4	86	64, 65				
836	Pierazzo	3.3	-100.2						Libration object
837	Pilate	-60.3	-86.4		70, VI				Libration object
838	Pingre	-58.7	-73.7		70, VI				Libration object
839	Pitatus	-29.8	-13.5	90	54, 64				
840	Pitiscus	-50.4	30.9	30	75				
841	Piana	42.2	28.2	36	14				
842	Planitia Descensus	7.0	-64.0	131	28				Planitia Descensus in VMA
843	Plaskett	82.3	176.0		II				Libration object
844	Plato	51.6	-9.3	85	3, 4				
845	Playfair	-23.5	8.4	49	56				
846	Plinius	15.4	23.7	43	24				
847	Plutarch	24.1	79.0		27, III				Libration object
848	Poczobutt	57.5	-99.3		I				Libration object



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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
849	Poisson	-30.4	10.6	51	56, 66				
850	Polybius	-22.4	25.6		57				
851	Pomortsev	0.7	66.9		38				
852	Poncelet	75.8	-54.1		3, I				Libration object
853	Pons	-25.3	21.5		57				
854	Pontanus	-28.4	14.4		56				
855	Pontecoulant	-58.7	66.0		76				
856	Popov	17.2	99.7		III				Libration object
857	Porter	-56.1	-10.1	92	72				
858	Posidonius	31.8	29.9	33	14				
859	Priestly	-57.3	108.4		V				Libration object
860	Prinz	25.5	-44.1	119	19				
861	Proclus	16.1	46.8	18	26				
862	Proctor	-46.4	-5.1	72	65				
863	Promontorium Agarum	14.0	66.0	1a	38				
864	Promontorium Agassiz	42.0	2.0	68	12				
865	Promontorium Archerusia	17.0	22.0	43	24				
866	Promontorium Deville	43.0	1.0	68	12				
867	Promontorium Fresnel	29.0	5.0		22				
868	Promontorium Heraclides	41.0	-34.0	106	10				
869	Promontorium Kelvin	-27.0	-33.0	113	52				
870	Promontorium La Place	46.0	-26.0	106	10				
871	Promontorium Lavinium	15.0	49.0	15	26				
872	Promontorium Olivium	15.0	49.0	15	26				
873	Promontorium Taenarium	-19.0	-8.0	83	54				
874	Protagoras	56.0	7.3		4				
875	Ptolemaeus	-9.2	-1.8	75	44				
876	Puiseux	-27.8	-39.0		52				
877	Pupin	23.8	-11.0		21				300mm
878	Purbach	-25.5	-1.9	73	55				
879	Purkyne	-1.6	94.9		IV				Libration object
880	Pythagoras	63.5	-62.8	133	2, I				
881	Pytheas	20.5	-20.6	104	20				
882	Rabbi Levi	-34.7	23.6	46	67				
883	Raman	27.0	-55.1		18				
884	Ramsden	-32.9	-31.8	108	63				
885	Rankine	-3.9	71.5		49				
886	Rayleigh	29.0	89.2		27, III				Libration object
887	Reaumur	-2.4	0.7	65	44				
888	Regiomontanus	-28.4	-1.0	73	55				
889	Regnault	54.1	-88.0		1, I				Libration object
890	Reichenbach	-30.3	48.0	12	59, 69				
891	Reimarus	-47.7	60.3		68				
892	Reiner	7.0	-54.9	126	29				
893	Reiner Gamma	8.0	-59.0	131	28				
894	Reinhold	3.3	-22.8	103	31				
895	Repsold	51.4	-78.5		1				
896	Respighi	2.8	71.9		38				
897	Rhaeticus	0.0	4.9	64	33, 44				
898	Rheita	-37.1	47.2	14	68				

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
899	Riccioli	-3.0	-74.3		39				
900	Riccus	-36.9	26.5		67				
901	Richardson	31.1	100.3		III				Libration object
902	Riemann	39.5	87.2		16, III				Libration object
903	Rima Agatharchides	-20.0	-28.0		53				300mm
904	Rima Archytas	53.0	5.0		4				
905	Rima Ariadaeus	7.0	13.0	53	34				
906	Rima Artsimovich	27.0	-39.0		19				<a href="http://www.lpod.org/coppermine/displayimage.php?album=22&amp;pos=20">http://www.lpod.org/coppermine/displayimage.php?album=22&amp;pos=20</a> (Half way between Montes Harbinger and Artsimovich) N/S configuration
907	Rima Billy	-15.0	-48.0		51				300mm
908	Rima Birt	-21.0	-9.0	83	54				
909	Rima Bradley	23.0	-2.0		22				
910	Rima Brayley	23.0	-36.0		19				500mm +
911	Rima Calippus	37.0	13.0		13				
912	Rima Cardanus	11.0	-73.0		28				
913	Rima Cauchy	10.0	39.0	26	36				
914	Rima Cleomedes	28.0	56.0	11	26				
915	Rima Conon	18.0	2.0		22				
916	Rima Delisle	31.0	-33.0		9				500mm +
917	Rima Diophantus	29.0	-33.0		19				500mm +
918	Rima Flammarion	-2.0	-5.0	75	44				
919	Rima Furnerius	-36.3	60.4		69				Located in crater Furnerius
920	Rima G Bond	33.0	35.0		15				
921	Rima Galliae	13.0	-59.0	126	28				
922	Rima Gartner	59.1	34.6		6				300mm Location wrong in VMA
923	Rima Gay-Lussac	13.0	-22.0	105	31				
924	Rima Hadley	25.0	3.0	70	22				
925	Rima Hansteen	-12.0	-53.0		40				
926	Rima Hase	-33.0	66.0		69				200mm
927	Rima Herigonius	-13.0	-37.0		41				500mm
928	Rima Hesiodus	-30.0	-21.0	108	53, 54, 63				
929	Rima Hyginus	7.8	6.3	61	33, 34				
930	Rima Jansen	15.0	29.0		25, 36				
931	Rima Mairan	38.0	-47.0		9				300mm
932	Rima Marius	17.0	-49.0		18				
933	Rima Messier	-1.0	45.0		37, 48				500mm
934	Rima Milichius	8.0	-33.0		30				500mm +
935	Rima Oppolzer	-1.0	2.0		44				300mm
936	Rima Reaumur	-3.0	3.0		44				300mm
937	Rima Schroter	1.0	-6.0		32				300mm
938	Rima Sharp	44.0	-51.0		9				500mm +
939	Rima Sheepshanks	58.0	24.0		5				500mm +
940	Rima Sirsalis	-14.0	-60.0	132	39, 50				
941	Rima Suess	6.0	-47.0		29				500mm +
942	Rima Sung-Mei	24.6	11.3						part of Aratus CA
943	Rima Yangel'	16.6	4.8						
944	Rimae Alphonsus	-13.4	-2.8		44				500mm
945	Rimae Archimedes	27.0	-4.0		22				100mm
946	Rimae Aristarchus	28.0	-47.0	122	18, 19				300mm
947	Rimae Arzachel	-18.2	-1.2	74	55				200mm
948	Rimae Atlas	46.7	44.4		15				200mm
949	Rimae Bode	10.0	-4.0		33				300mm
950	Rimae Boscovich	9.8	11.1		34				500mm

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951	Rimae Burg	45.0	26.0	36	14				
952	Rimae Chacornac	29.0	32.0		14			300mm	
953	Rimae Daniell	37.0	26.0		14				
954	Rimae Darwin	-20.0	-67.0	132	50			300mm	
955	Rimae de Gasparis	-25.0	-50.0		51			200mm	
956	Rimae Doppelmayr	-26.0	-45.0	121	52				
957	Rimae Fresnel	28.0	4.0		22			200mm	
958	Rimae Gassendi	-17.5	-39.9		52			200mm	
959	Rimae Goclenius	-8.0	43.0		48			200mm	
960	Rimae Grimaldi	-9.0	-64.0	134	39				
961	Rimae Gutenberg	-5.0	38.0		47			300mm	
962	Rimae Hevelius	2.0	-66.0		28			300mm	
963	Rimae Hippalus	-25.0	-29.0	113	52, 53			200mm	
964	Rimae Hypatia	-1.0	23.0	45	46				
965	Rimae Janssen	-46.0	39.0		67			200mm	
966	Rimae Littrow	23.0	31.0	34	25			See VMA Littrow LAC LM	
967	Rimae Maclear	13.0	20.0		35			300mm	
968	Rimae Maestlin	2.0	-40.0		29			300mm	
969	Rimae Maupertuis	51.0	-22.0		3			500mm +	
970	Rimae Menelaus	17.0	17.0	56	24				
971	Rimae Mersenius	-20.0	-45.0	123	51				
972	Rimae Opelt	-13.0	-18.0		42			300mm	
973	Rimae Palmieri	-28.0	-47.0		51			300mm	
974	Rimae Parry	-8.0	-17.0	93	42, 43			300mm	
975	Rimae Petavius	-25.2	60.0	6	59				
976	Rimae Pitatus	-29.2	-12.3	90	54				
977	Rimae Plato	51.0	-2.0		4			300mm	
978	Rimae Plinius	17.0	24.0	43	24				
979	Rimae Posidonius	31.8	29.9		14			300mm	
980	Rimae Prinz	27.0	-43.0		19			300mm	
981	Rimae Ramsden	-33.0	-31.0	108	63				
982	Rimae Repsold	51.0	-80.0		1, 1			Libration object	
983	Rimae Riccioli	-2.0	-74.0		39			300mm	
984	Rimae Ritter	3.0	18.0		35			200mm	
985	Rimae Romer	27.0	35.0		25			200mm	
986	Rimae Secchi	1.0	44.0		37				
987	Rimae Sosigenes	7.0	19.0		35			300mm	
988	Rimae Sulpicius Gallus	21.0	10.0	56	23				
989	Rimae Taruntius	5.8	46.8						
990	Rimae Theaetetus	33.0	6.0		12			300mm	Rima in VMA
991	Rimae Triesnecker	4.0	4.0	64	33, 34				
992	Rimae Zupus	-15.0	-53.0		51			300mm	
993	Ritchey	-11.1	8.5		45				
994	Rittenhouse	-74.5	106.5		V			Libration object	
995	Ritter	2.0	19.2	44	35				
996	Ritz	-15.1	92.2		IV			Libration object	
997	Robinson	59.0	-45.9		2				
998	Rocca	-12.7	-72.8		39				
999	Rocco	28.9	-45.0		19				
1000	Romer	25.4	36.4	27	25				
1001	Rontgen	33.0	-91.4		VIII			Libration object	
1002	Rosenberger	-55.4	43.1	30	75				
1003	Ross	11.7	21.7	44	35				

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
1004	Rosse	-17.9	35.0	25	58				
1005	Rost	-56.4	-33.7	118	71				
1006	Röthmann	-30.8	27.7	46	67				
1007	Rozhdestvenskiy	85.8	-159.1		I				Libration object
1008	Runge	-2.5	86.7		49, IV				Libration object
1009	Rupes Altai	-24.0	23.0	40	57				
1010	Rupes Cauchy	9.0	37.0	26	36				
1011	Rupes Kelvin	-28.0	-33.0	113	52				
1012	Rupes Liebig	-25.0	-46.0	121	51				
1013	Rupes Mercator	-30.0	-23.0	101	53				
1014	Rupes Recta	-22.0	-7.0	83	54				
1015	Rupes Toscanelli	27.0	-47.0	122	18				
1016	Russell	26.5	-75.4	L7	17				Libration object
1017	Ruth	28.7	-45.1		19				
1018	Rutherford	-60.9	-12.1	92	72				
1019	Rydberg	-46.5	-96.3		VI				Libration object
1020	Rynin	47.0	-103.5		I				Libration object
1021	Sabatier	13.2	79.0		38				Libration object
1022	Sabine	1.4	20.1	44	35				
1023	Sacrobosco	-23.7	16.7	49	56, 57				
1024	Samir	28.5	-34.3						
1025	Sampson	29.7	-16.5		21				
1026	Santbech	-20.9	44.0	10	59				
1027	Santos-Dumont	27.7	4.8		22				
1028	Sarabhai	24.7	21.0	41	24				
1029	Sasserides	-39.1	-9.3	86	64				
1030	Saunder	-4.2	8.8		45				
1031	Saussure	-43.4	-3.8	72	65				
1032	Scheele	-9.4	-37.8		41				
1033	Scheiner	-60.5	-27.8	98	72				
1034	Schiaparelli	23.4	-58.8		18				
1035	Schickard	-44.4	-54.6	127	62				
1036	Schiller	-51.8	-40.0	118	71				
1037	Schluter	-5.9	-83.3		39, VII, VIII				Libration object
1038	Schmidt	1.0	18.8		35				
1039	Schomberger	-76.7	24.9		73, 74				
1040	Schonfeld	44.8	-98.1		VIII				Libration object
1041	Schorr	-19.5	89.7		60, IV				Libration object
1042	Schrodinger	-75.6	133.7		V				Libration object
1043	Schroter	2.6	-7.0		32				
1044	Schubert	2.8	81.0		38, III				Libration object
1045	Schumacher	42.4	60.7		16				
1046	Schwabe	65.1	45.6		6				
1047	Schwarzschild	70.6	119.6		II				Libration object
1048	Scoresby	77.7	14.1		4				
1049	Scott	-81.9	45.3		73, 74, V				Libration object
1050	Secchi	2.4	43.5	13b	37				
1051	Seeliger	-2.2	3.0	65	44				
1052	Segner	-58.9	-48.3	125	71				
1053	Seleucus	21.0	-66.6	L7	17				Libration object
1054	Seneca	26.6	80.2		27, III				Libration object
1055	Shackleton	-89.9	0.0		V, VI				Libration object
1056	Shaler	-32.9	-85.2		61, VII				Libration object

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
1057	Shapley	9.4	56.9		38				
1058	Sharp	45.7	-40.2	106	9, 10				
1059	Sheepshanks	59.2	16.9	48	5				
1060	Shi Shen	76.0	104.1		II				Libration object
1061	Shoemaker	-88.1	44.9		V				Libration object
1062	Short	-74.6	-7.3	80	73				
1063	Shuckburgh	42.6	52.8		15				
1064	Shuleykin	-27.1	-92.5		VII				Libration object
1065	Sikorsky	-66.1	103.2		V				Libration object
1066	Silberschlag	6.2	12.5		34				
1067	Simpelius	-73.0	15.2	80	73				
1068	Sinas	8.8	31.6	35	36				
1069	Sinus Aestuum	12.0	-8.0	87	32, 33				
1070	Sinus Amoris	19.0	38.0	27	25				
1071	Sinus Asperitatis	-6.0	25.0	42	46, 47				
1072	Sinus Concordiae	11.0	43.0	21	37				
1073	Sinus Fidei	18.0	2.0		22				
1074	Sinus Honoris	12.0	18.0	44	35				
1075	Sinus Iridum	45.0	-32.0	106	10				Also required for Objective Part 1-B
1076	Sinus Lunicus	32.0	-1.0	69	12				
1077	Sinus Medii	0.0	0.0	64	33, 44				
1078	Sinus Roris	45.0	-60.0	Part 1-B	1, 8, 9, I, VIII				
1079	Sinus Successus	1.0	58.0	2	38				
1080	Sirsalis	-12.5	-60.4	132	39				
1081	Skłodowska	-18.0	96.0		IV				Libration object
1082	Slater	-88.1	111.3						Libration object
1083	Slocum	-3.0	89.0		49, IV				Libration object
1084	Smithson	2.4	53.6		37				
1085	Smoluchowski	60.3	-96.8		I				Libration object
1086	Snellius	-29.3	55.7	10	59, 69				
1087	Somerville	-8.3	64.9		49				
1088	Sommering	0.1	-7.5		32, 43				
1089	Sosigenes	8.7	17.6		35				
1090	South	57.7	-50.8		2				
1091	Spallanzani	-46.3	24.7	32	67				
1092	Sporer	-4.3	-1.8		44				
1093	Spurr	27.9	-1.2		22				
1094	Stadius	10.5	-13.7	91	32				
1095	Steinheil	-48.6	46.5	17	68, 76				
1096	Stella	19.9	29.8						
1097	Stevinus	-32.5	54.2	12	69				
1098	Stewart	2.2	67.0		38				
1099	Stiborius	-34.4	32.0	32	67				
1100	Stoffer	-41.1	6.0	62	65, 66				
1101	Stokes	52.5	-88.1		1, I				Libration object
1102	Strabo	61.9	54.3		6				
1103	Street	-46.5	-10.5	86	64				
1104	Struve	23.0	-76.6	L7	17, VIII				Libration object
1105	Suess	4.4	-47.6		29				
1106	Sulpicius Gallus	19.6	11.6	56	23				
1107	Sundman	10.8	-91.6		VIII				Sumner in VMA?
1108	Svedberg	-81.7	65.2						Libration object
1109	Sverdrup	-88.3	-153.4						Libration object

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
1110	Swasey	-5.5	89.7		49, IV				Libration object
1111	Swift	19.3	53.4	1b	26				
1112	Sylvester	82.7	-79.6		3, I				Libration object
1113	Tacchini	4.9	85.5		38, III				Libration object
1114	Tacitus	-16.2	19.0	40	57				
1115	Tacquet	16.6	19.2		24				
1116	Taizo	24.7	2.2						
1117	Talbot	-2.5	85.3		49, IV				Libration object
1118	Tannerus	-56.4	22.0	58	74				
1119	Taruntius	5.6	46.5	13b	37				
1120	Taylor	-5.3	16.7		46				
1121	Tebbutt	9.6	53.6		37				Tebutt in VMA
1122	Tempel	3.9	11.9		34				
1123	Thales	61.8	50.3		6				
1124	Theaetetus	37.0	6.0	68	12				
1125	Thebit	-22.0	-4.0	74	55				
1126	Theiler	13.4	83.3		38, III				Libration object
1127	Theon Jr	-2.3	15.8	47	45, 46				
1128	Theon Sr	-0.8	15.4	47	45, 46				
1129	Theophilus	-11.4	26.4	37	46, 47				
1130	Theophrastus	17.5	39.0		25				
1131	Timaeus	62.8	-0.5		4				
1132	Timocharis	26.7	-13.1	89	21				
1133	Tisserand	21.4	48.2		26				
1134	Titius	-26.8	100.7		IV				Libration object
1135	Tobias Mayer	15.6	-29.1	112	19				
1136	Tolansky	-9.5	-16.0		42, 43				
1137	Torricelli	-4.6	28.5	42	47				
1138	Toscanelli	27.9	-47.5	122	18				
1139	Townley	3.4	63.3		38				
1140	Trailles	28.4	52.8	11	26				
1141	Triesnecker	4.2	3.6	64	33				
1142	Trouvelot	49.3	5.8		4				
1143	Tucker	-5.6	88.2		49, IV				Libration object
1144	Turner	-1.4	-13.2		43				
1145	Tycho	-43.3	-11.2	86	64				
1146	Ukert	7.8	1.4		33				
1147	Ulugh Beigh	32.7	-81.9	L9	8, VII				Libration object
1148	Urey	27.9	87.4		27, III				Libration object
1149	Vaisala	25.9	-47.8		18				
1150	Vallis Alpes	49.0	3.0	68	4, 12				
1151	Vallis Baade	-46.0	-76.0	135	61, VI				
1152	Vallis Bohr	9.9	-88.6		VIII				Libration object, not in VMA
1153	Vallis Bouvard	-39.0	-83.0		61, VII				Libration object
1154	Vallis Capella	-7.0	35.0	28	47				
1155	Vallis Christel	24.5	11.1						part of Aratus CA
1156	Vallis Inghirami	-44.0	-73.0	135	61				
1157	Vallis Krishna	24.5	11.3						part of Aratus CA
1158	Vallis Palitzsch	-25.0	65.0		59				
1159	Vallis Rheita	-42.0	51.0	14	68				
1160	Vallis Schrodinger	-67.0	105.0		V				Libration object
1161	Vallis Schroteri	26.0	-51.0	122	18				
1162	Vallis Snellius	-31.0	59.0	10	59, 69				

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
1163	van Albada	9.4	64.3		38				
1164	Van Biesbroeck	28.7	-45.6		19				Van Biesbroeck in VMA
1165	Van Vleck	-1.9	78.3		49				
1166	Van Vleck	13.9	-83.8		28, VIII				Libration object
1167	Vashakidze	43.6	93.3		III				Libration object
1168	Vega	-45.4	63.4		68				
1169	Vendelinus	-16.3	61.8	4	60				
1170	Vera	26.3	-43.7		19				
1171	Verne	24.9	-25.3		20				300mm
1172	Very	25.6	25.3	41	24				
1173	Vestine	33.9	93.9		III				Libration object
1174	Vieta	-29.2	-56.3	128	51, 61				
1175	Virchow	9.8	83.7		38, III				Libration object
1176	Vitello	-30.4	-37.5	127	62				
1177	Vitruvius	17.6	31.3		25				
1178	Vlacq	-53.3	38.8	30	75				
1179	Vogel	-15.1	5.9	63	56				
1180	Volta	54.0	-84.9	L6	1, I				Libration object
1181	von Baeyer	-81.8	61.9						Libration object
1182	von Behring	-7.8	71.8		49				
1183	von Braun	41.1	-78.0		8, VIII				Libration object, formerly called Lavoisier D
1184	Voskresenskiy	28.0	-88.1		17, VIII				Libration object
1185	W Bond	65.3	3.7	76	4				
1186	Wallace	20.3	-8.7		21				
1187	Wallach	4.9	32.3		36				
1188	Walter	28.0	-33.8						
1189	Walther	-33.0	0.7	71	65				
1190	Wapowski	-83.1	53.8						
1191	Wargentini	-49.6	-60.2	129	70				
1192	Warner	-4.0	87.3		49, IV				Libration object
1193	Watt	-49.5	48.6	17	76				
1194	Watts	8.9	46.3		37				
1195	Webb	-0.9	60.0	5	49				
1196	Weierstrass	-1.3	77.2		49				
1197	Weigel	-58.2	-38.8	118	71				
1198	Weinek	-27.5	37.0		58				
1199	Weiss	-31.8	-19.5	108	63, 64				
1200	Werner	-28.0	3.3	67	55				
1201	Wexler	-69.1	90.2		75, V				Libration object
1202	Whewell	4.2	13.7		34				
1203	Whipple	89.1	120.0						Libration object
1204	Wichmann	-7.5	-38.1		41				
1205	Widmanstätten	-6.1	85.5		49, IV				Libration object
1206	Wiechert	-84.5	165.0		V				Libration object
1207	Wildt	9.0	75.8		38				
1208	Wilhelm	-43.1	-20.8	97	63, 64				
1209	Wilkins	-29.4	19.6		57, 67				
1210	Williams	42.0	37.2		14, 15				
1211	Wilson	-69.2	-42.4	98	72				
1212	Winthrop	-10.7	-44.4		40				
1213	Wohler	-38.2	31.4	32	67				
1214	Wolf	-22.7	-16.6		54				
1215	Wollaston	30.6	-46.9		9				

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
1216	Wright	-31.6	-86.6		61, VII				Libration object
1217	Wrottesley	-23.9	56.8	6	59				
1218	Wurzelbauer	-33.9	-15.9	88	64				
1219	Wyld	-1.4	98.1		IV				Libration object
1220	Xenophanes	57.6	-81.4	L6	1, I				Libration object
1221	Yakovkin	-54.5	-78.8		70, VI				Libration object
1222	Yangel'	17.0	4.7		22				
1223	Yerkes	14.6	51.7	1b	26, 37				
1224	Young	-41.5	50.9	14	68				
1225	Zach	-60.9	5.3	80	73				
1226	Zagut	-32.0	22.1	46	67				
1227	Zahringer	5.6	40.2		37				
1228	Zasyadko	3.9	94.2		III				Libration object
1229	Zeeman	-75.2	-134.8		VI				Libration object
1230	Zeno	45.2	72.9		16, III				Libration object
1231	Zinner	26.6	-58.8		18				
1232	Zollner	-8.0	18.9		46				
1233	Zsigmondi	59.7	-104.7		I				Libration object
1234	Zucchius	-61.4	-50.3	125	71				
1235	Zupus	-17.2	-52.3		51				