

## 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	Armeghino	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	Biancanus	-63.6	-21.5	98	72				
113	Bianchard	-58.5	-94.4		VI				Libration object
114	Bianchinus	-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 Dziewulski	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 Timocharis	29.0	-13.0		21				500mm
188	Catharina	-18.0	23.6	39	57				
189	Cauchy	9.6	38.6	26	36				
190	Cavalerius	5.1	-66.8	131	28				
191	Cavendish	-24.5	-53.7	128	51				
192	Caventou	29.8	-29.4		20				
193	Cayley	4.0	15.1		34				
194	Celsius	-34.1	20.1	46	67				
195	Censorinus	-0.4	32.7	28	47				
196	Cepheus	40.8	45.8	16	15				
197	Chacornac	29.8	31.7	33	14, 25				
198	Chadwick	-52.7	-101.3		VI				Libration object
199	Challis	79.5	9.2		4				
200	Chamberlin	-58.9	95.7		V				Libration object
201	Chapman	50.4	-100.7		I				Libration object
202	Chappe	-61.2	-91.5		VI				Libration object
203	Chevallier	44.9	51.2		15				
204	Ching-te	20.0	30.0		25				
205	Chladni	4.0	1.1		33				
206	Cichus	-33.3	-21.1	108	63				
207	Clairaut	-47.7	13.9	50	66				
208	Clausius	-36.9	-43.8	127	62				
209	Clavius	-58.4	-14.4	92	72, 73				
210	Cleomedes	27.7	55.5	11	26				
211	Cleostratus	60.4	-77.0	L6	1, I				Libration object
212	Clerke	21.7	29.8		25				
213	Collins	1.3	23.7	44	35				

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1	LUNAR OBJECT	LAT	LONG	LUNAR PROGRAM BOOKLET OBJECTIVE	RUKL	DATE VIEWED	LOG BOOK	PAGE	NOTES
214	Colombo	-15.1	45.8	13c	59				
215	Compton	56.0	105.0		II				Libration object
216	Condon	1.9	60.4		38				
217	Condorcet	12.1	69.6	2	38				
218	Conon	21.6	2.0		22				
219	Cook	-17.5	48.9		59				
220	Copernicus	9.7	-20.0	95	31				
221	Couder	-4.8	-92.4		VII				Libration object
222	Cremona	67.5	-90.6		2, I				Libration object
223	Crile	14.2	46.0		37				
224	Crozier	-13.5	50.8		48				
225	Cruger	-16.7	-66.8	132	50				
226	Curie	-23.0	91.8		IV				Libration object
227	Curtis	14.6	56.6		26				
228	Curtius	-67.2	4.4	80	73				
229	Cusanus	72.0	70.8	L5	6, II				Libration object
230	Cuvier	-50.3	9.9	58	74				
231	Cyrillus	-13.2	24.0	38	46				
232	Cysatus	-66.2	-6.1	80	73				
233	da Vinci	9.1	45.0		37				
234	Daguerre	-11.9	33.6	25	47				
235	Dale	-9.6	82.9		49, IV				Libration object
236	Dalton	17.1	-84.3		17, VIII				Libration object
237	Daly	5.7	59.6		38				
238	Damoiseau	4.8	-61.1		39				
239	Daniell	35.3	31.1		14				
240	Darney	-14.5	-23.6	102	42, 53				
241	D'Arrest	2.3	14.7		34				
242	Darwin	-19.8	-69.1		50				
243	Daubree	15.7	14.7		23				
244	Davy	-11.8	-8.1	82	43				
245	Dawes	17.2	26.4	43	24				
246	de Gasparis	-25.9	-50.7		51				
247	de Gerlache	-88.5	-87.1		VI				Libration object
248	De La Rue	59.1	53.0		6				
249	De Morgan	3.3	14.9		34				
250	De Roy	-55.3	-99.1		VI				Libration object
251	De Sitter	80.1	39.6		5, II				Libration object
252	De Vico	-19.7	-60.2		50, 51				
253	Debes	29.5	51.7	11	26				
254	Debus	-10.5	99.6		IV				Libration object
255	Dechen	46.1	-68.2		8				
256	Delambre	-1.9	17.5	47	46				
257	Delaunay	-22.2	2.5		55				
258	Delisle	29.9	-34.6	114	9, 19				
259	Delmotte	27.1	60.2	11	26				
260	Deluc	-55.0	-2.8	81	73				
261	Dembowski	2.9	7.2		34				
262	Democritus	62.3	35.0	L5	5				
263	Demonax	-78.2	59.0		74, V				Libration object
264	Desargues	70.2	-73.3		2, I				
265	Descartes	-11.7	15.7		45				
266	Desilligny	21.1	20.6		24				

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267	Deslandres	-32.5	-5.2	79	64, 65				
268	Dionysius	2.8	17.3		35				
269	Diophantus	27.6	-34.3	114	19				
270	Doerful	-69.1	-107.9		VI				Libration object
271	Dollond	-10.4	14.4		45				
272	Donati	-20.7	5.2		55				
273	Donner	-31.4	98.0		IV				Libration object
274	Doppelmayr	-28.5	-41.4	121	52				
275	Dorsa Aldrovandi	24.0	29.0	34	24				
276	Dorsa Andrusov	-1.0	57.0		49				
277	Dorsa Argand	28.0	-40.0		19				
278	Dorsa Barlow	15.0	31.0	35	25, 36				
279	Dorsa Burnet	27.0	-57.0		18				
280	Dorsa Cato	1.0	47.0	13b	37				
281	Dorsa Ewing	-11.0	-38.0		41				
282	Dorsa Geikie	-3.0	53.0	13a	48				
283	Dorsa Harker	14.0	64.0	1a	27, 38				
284	Dorsa Lister	19.0	22.0	41	24				
285	Dorsa Mawson	-7.0	53.0	13a	48				
286	Dorsa Rubey	-10.0	-42.0	120	40				
287	Dorsa Smirnov	25.0	25.0	41	24				
288	Dorsa Sorby	18.7	13.7						
289	Dorsa Stille	27.0	-19.0		20				
290	Dorsa Tetyaev	19.0	65.0	1a	27				
291	Dorsa Whiston	30.0	-57.0		8				
292	Dorsum Arduino	26.0	-36.0		19				
293	Dorsum Azara	26.0	20.0	41	24				
294	Dorsum Bucher	31.0	-39.0		9				
295	Dorsum Buckland	21.0	12.0	56	23				
296	Dorsum Cayeux	1.0	51.0	13a	37				
297	Dorsum Cushman	1.0	49.0		37				
298	Dorsum Gast	24.0	9.0	56	23				
299	Dorsum Grabau	30.0	-14.0	89	11				
300	Dorsum Guettard	-10.0	-18.0	93	42				
301	Dorsum Heim	31.0	-29.0	104	10				
302	Dorsum Higazy	28.0	-17.0	89	21				
303	Dorsum Nicol	18.0	23.0	41	24				
304	Dorsum Niggli	29.0	-52.0		18				
305	Dorsum Opper	19.0	52.0	15	26				
306	Dorsum Owen	25.0	11.0	56	23				
307	Dorsum Scilla	32.0	-60.0		8				
308	Dorsum Termier	11.0	58.0		37, 38				
309	Dorsum Von Cotta	24.0	12.0	56	23				
310	Dorsum Zirkel	29.0	-24.0	104	10, 20				
311	Dove	-46.7	31.5		67				
312	Draper	17.6	-21.7		20				
313	Drebbel	-40.9	-49.0	127	62				
314	Dreyer	10.0	96.9		III				Libration object
315	Drude	-38.5	-91.8		VII				Libration object
316	Drygalski	-79.7	-86.8		72, VI				Libration object
317	Dubiago	4.4	70.0		38				
318	Dugan	64.2	103.3		II				Libration object
319	Dunthorne	-30.1	-31.6	108	62, 63				

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320	Dziewulski	21.2	98.9		III				Libration object
321	Eckert	17.3	58.3		26				
322	Eddington	21.5	-71.8	L7	17				Libration object
323	Edison	25.0	99.1		III				Libration object
324	Egede	48.7	10.6	48	13, 5				
325	Eimmart	24.0	64.8	3	27				
326	Einstein	16.6	-88.5		17, VIII				Libration object
327	Eischstadt	-22.6	-78.3		50, VII				Libration object
328	Elger	-35.3	-29.8		63				
329	Ellison	55.1	-107.5		I				Libration object
330	Elmer	-10.1	84.1		49, IV				Libration object
331	Encke	4.6	-36.6	115	30				
332	Endymion	53.6	56.5	9	7				
333	Epigenes	67.5	-4.6		4				
334	Epimenides	-40.9	-30.2	109	63				
335	Eratosthenes	14.5	-11.3	87	21, 32				
336	Erlanger	87.0	28.6						Libration object
337	Erro	5.7	98.5		III				Libration object
338	Esclangon	21.5	42.1		25				
339	Euclides	-7.4	-29.5	110	41				
340	Euctemon	76.4	31.3		5				
341	Eudoxus	44.3	16.3	48	13				
342	Euler	23.3	-29.2		20				
343	Fabbroni	18.7	29.2		25				
344	Fabricius	-42.9	42.0	20	68				
345	Fabry	43.0	101.0		II, III				Libration object
346	Fahrenheit	13.1	61.7		38				Fahrenheit in VMA
347	Faraday	-42.4	8.7	62	66				
348	Faustini	-87.3	77.0		V				Libration object
349	Fauth	6.3	-20.1		31				
350	Faye	-21.4	3.9		55				
351	Fedorov	28.2	-37.0		19				
352	Fenyi	-44.9	-105.1		VI, VII				Libration object
353	Fermat	-22.6	19.8		57				
354	Fernelius	-38.1	4.9	62	65				
355	Feuillee	27.4	-9.4	89	21				
356	Fibiger	86.1	37.1						Libration object
357	Finsch	23.6	21.3		24				
358	Firmicus	7.3	63.4	2	38				
359	Fiammarion	-3.4	-3.7	75	44				
360	Fiamsteed	-4.5	-44.3	120	40				
361	Florey	87.0	-19.8						Libration object
362	Focas	-33.7	-93.8		VII				Libration object
363	Fontana	-16.1	-56.6		51				
364	Fontenelle	63.4	-18.9	85	3				
365	Foucault	50.4	-39.7	133	2				
366	Fourier	-30.3	-53.0	128	51, 61				
367	Fox	0.5	98.2		III				Libration object
368	Fra Mauro	-6.0	-17.0	93	42, 43				
369	Fracastorius	-21.2	33.0	29	58				
370	Franck	22.6	35.5		25				
371	Franklin	38.8	47.7	16	15				
372	Franz	16.6	40.2		25				

## 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
373	Fraunhofer	-39.5	59.1	7	69				
374	Fredholm	18.4	46.5		26				
375	Freud	25.8	-52.3		18				
376	Froelich	80.3	-109.7		I				Libration object
377	Fryxell	-21.3	-101.4		VII				Libration object
378	Furnerius	-36.3	60.4	7	69				
379	G Bond	32.4	36.2		15				
380	Galen	21.9	5.0		22				
381	Galilaei	10.5	-62.7	131	28				
382	Galle	55.9	22.3	48	5				
383	Galvani	49.6	-84.6		1, 8, I				Libration object
384	Gambart	1.0	-15.2		32				
385	Ganswindt	-79.6	110.3		V				Libration object
386	Gardner	17.7	33.8		25				
387	Gartner	59.1	34.6	L5	6				
388	Gassendi	-17.5	-39.9	116	52				
389	Gaudibert	-10.9	37.8		47				
390	Gauricus	-33.8	-12.6	88	64				
391	Gauss	35.9	79.1		16				Libration object
392	Gay-Lussac	13.9	-20.8		31				
393	Geber	-19.4	13.9	55	56				
394	Geissler	-2.6	76.5		49				
395	Geminus	34.5	56.7	8	16				
396	Gemma Frisius	-34.2	13.3	51	66				
397	Gerard	44.5	-80.0		8, VIII				Libration object
398	Gernsback	-36.5	99.7		IV				Libration object
399	Gibbs	-18.4	84.3		60, IV				Libration object
400	Gilbert	-3.2	76.0		49				
401	Gill	-63.9	75.9		75, V				Libration object
402	Ginzel	14.3	97.4		III				Libration object
403	Gioja	83.3	2.0		4				
404	Giordano Bruno	37.0	103.0		III				Libration object
405	Glaisher	13.2	49.5		37				
406	Glushko	8.4	-77.6		28				
407	Goclenius	-10.0	45.0	13c	48				
408	Goddard	14.8	89.0		27, III				Libration object
409	Godin	1.8	10.2	61	34				
410	Goldschmidt	73.0	-2.9	76	4				
411	Golgi	27.8	-60.0		18				
412	Goodacre	-32.7	14.1	51	66				
413	Gore	86.2	-62.3						Libration object
414	Gould	-19.2	-17.2		53				
415	Graff	-42.4	-88.6		61, VII				Libration object
416	Greaves	13.2	52.7	1b	37				
417	Grignard	84.5	-75.8						Libration object
418	Grimaldi	-5.2	-68.6	134	39				Libration object
419	Grove	40.3	32.9		14				
420	Grumberger	-66.9	-10.0	80	73				
421	Gruithuisen	32.9	-39.7	117	9				
422	Guericke	-11.5	-14.1		43				
423	Gum	-40.4	88.6		69, IV				Libration object
424	Gutenberg	-8.6	41.2	13c	48				
425	Guthnick	-47.7	-93.9		VI				Libration object

## 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
426	Gylden	-5.3	0.3		44				
427	Haber	83.4	-94.6						Libration object
428	Hagecius	-59.8	46.6	30	75				
429	Hahn	31.3	73.6	8	16				
430	Haidinger	-39.2	-25.0	109	63				
431	Hainzel	-41.3	-33.5	109	63				
432	Haldane	-1.7	84.1		49, IV				Libration object
433	Hale	-74.2	90.8		74, 75, V				Libration object
434	Hall	33.7	37.0		15				
435	Halley	-8.0	5.7	65	45				
436	Hamilton	-42.8	84.7		69, IV				Libration object
437	Hanno	-56.3	71.2		76, V				Libration object
438	Hansen	14.0	72.5		38				
439	Hanskiy	-9.7	97.0		IV				Libration object, Ganskiy in VMA
440	Hansteen	-11.5	-52.0	124	40				
441	Harding	43.5	-71.7		8				
442	Hargreaves	-2.2	64.0		49				
443	Harkhebi	39.9	99.8		III				Libration object
444	Harlan	-38.5	79.5		69, IV				Libration object
445	Harpalus	52.6	-43.4	133	2				
446	Hartwig	-6.1	-80.5		39, VII				Libration object
447	Hase	-29.4	62.5	6	59				
448	Haskin	81.5	133.2						Libration object
449	Hausen	-65.5	-88.4		71, VI				Libration object
450	Haworth	-87.5	-5.2						Libration object
451	Hayn	64.7	85.2		6, II				Libration object
452	Hecataeus	-21.8	79.6		60, IV				Libration object
453	Hedervari	-81.8	84.0		V				Libration object
454	Hedin	2.9	-76.5		28				
455	Heinrich	24.8	-15.3	89	21				
456	Heinsius	-39.5	-17.7	97	64				
457	Heis	32.4	-31.9		10				
458	Helicon	40.4	-23.1	106	10				
459	Hell	-32.4	-7.8	79	64				
460	Helmert	-7.6	87.6		49, IV				Libration object
461	Helmholtz	-68.1	64.1		75, V				Libration object
462	Henry	-24.0	-56.8	128	51				
463	Henry Freres	-23.5	-58.9	128	51				
464	Heraclitus	-49.2	6.2	62, 81	73				Also required for Objective 62, 81
465	Hercules	46.7	39.1	24	14				
466	Herigonius	-13.3	-33.9		41				
467	Hermann	-0.9	-57.3		39				
468	Hermite	86.4	-87.3		4, II				Libration object
469	Herodotus	23.2	-49.7	122	18				
470	Herschel	-5.7	-2.1	75	44				
471	Hesiodus	-29.4	-16.3	108	54				
472	Hevelius	2.2	-67.3	131	28				
473	Hevesy	83.1	149.2						Libration object
474	Heyrovsky	-39.6	-95.3		VII				Libration object
475	Hill	20.9	40.8	27	25				
476	Hind	-7.9	7.4	65	45				
477	Hinshelwood	89.4	-51.9						Libration object
478	Hippalus	-24.8	-30.2	113	52, 53				

## 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
479	Hipparchus	-5.5	4.8	65	44, 45				
480	Hirayama	-6.0	93.7		IV				Libration object
481	Hohmann	-17.9	-94.1		VII				Libration object
482	Holden	-19.1	62.5	4	60				
483	Hommel	-54.6	33.0	30	75				
484	Hooke	41.2	54.9		15				
485	Hornsby	23.8	12.5		23				
486	Horrebow	58.7	-40.8		2				
487	Horrocks	-4.0	5.9	65	45				
488	Hortensius	6.5	-28.0	111	30				
489	Houssay	83.1	98.5						Libration object
490	Houtermans	-9.4	87.2		49, IV				Libration object
491	Hubble	22.1	86.9	L4	27, III				Libration object
492	Huggins	-41.1	-1.4	72	65				
493	Humason	30.7	-56.6		8				
494	Humboldt	-27.2	80.9		60				Libration object
495	Hume	-4.7	90.4		IV				Libration object
496	Huxley	20.2	-4.5		22				
497	Hyginus	7.8	6.3	61	34				
498	Hypatia	-4.3	22.6	40	46				
499	Ibn Bajja	-86.3	-75.0						Libration object
500	Ibn Battuta	-6.9	50.4		48				
501	Ibn Rushd	-11.7	21.7	38	46				
502	Ibn Yunus	14.1	91.1		III				Libration object
503	Ideler	-49.2	22.3		74				
504	Idel'son	-81.5	110.9		V				Libration object
505	Il'in	-17.8	-97.5		VII				Libration object
506	Inghirami	-47.5	-68.8	127	61, 62				
507	Isidorus	-8.0	33.5	28	47				
508	Ivan	26.9	-43.3		19				
509	J Herschel	62.1	-41.2	133	2				
510	Jacobi	-56.7	11.4	58	74				
511	Jansen	13.5	28.7	35	36				
512	Jansky	8.5	89.5		38, III				Libration object
513	Janssen	-44.9	41.5	22	67, 68				
514	Jeans	-55.8	91.4		V				Libration object
515	Jehan	20.7	-31.9		19				Wrong loc'n in VMA, use Euler K
516	Jenkins	0.3	78.1		38				
517	Jenner	-42.1	95.9		IV				Libration object
518	Joliot	25.6	92.7		III				Libration object
519	Jomo	24.4	2.4						
520	Joy	25.0	6.6		23				
521	Julius Caesar	9.0	15.4	53	34				
522	Kaiser	-36.5	6.5	62	65, 66				
523	Kane	63.1	26.1		5				
524	Kant	-10.6	20.1	38	46				
525	Kao	-6.7	87.6		49, IV				Libration object
526	Kapteyn	-10.8	70.6		49				
527	Kastner	-7.0	79.1		49				Libration object
528	Keldysh	51.2	43.6		6				
529	Kepler	8.1	-38.0	115	30				
530	Kies	-26.3	-22.5	101	53				
531	Kiess	-6.4	84.0		49, IV				Libration object

## 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
532	Kinau	-60.8	15.1	58	74				
533	Kirch	39.2	5.6	77	12				
534	Kircher	-67.1	-45.3	125	71, 72				
535	Kirchhoff	30.3	38.8		15				
536	Klaproth	-69.7	-26.0	107	72				
537	Klein	-12.0	2.6	66	44				
538	Knox-Shaw	5.3	80.2		38, III				Libration object
539	Kocher	-84.5	-134.0						Libration object
540	Konig	-24.1	-24.6	100	53				
541	Kopff	-17.4	-89.6		50, VII				Libration object
542	Kovalskiy	-21.1	98.1		IV				Libration object
543	Krafft	16.6	-72.6	L7	17				Libration object
544	Kramarov	-2.3	-98.8		VII				Libration object
545	Krasnov	-29.9	-79.6		50, VII				Libration object
546	Kreiken	-9.0	84.6		49, IV				Libration object
547	Krieger	29.0	-45.6		19				
548	Krogh	9.4	65.7		38				
549	Krusenstern	-26.2	5.9		55, 56				
550	Kugler	-53.8	103.7		V				Libration object
551	Kuhn	-84.5	-152.5						Libration object
552	Kuiper	-9.8	-22.7	102	42				
553	Kundt	-11.5	-11.5		43				
554	Kunowsky	3.2	-32.5		30				
555	La Caille	-23.8	1.1		55				
556	La Condamine	53.4	-28.2		2				
557	La Perouse	-10.7	76.3		49				
558	Lacroix	-37.9	-59.0	135	61				
559	Lacus Aestatis	-15.0	-69.0		39, 50				
560	Lacus Autumni	-14.0	-82.0		39, 50, VII				Libration object
561	Lacus Bonitatis	23.0	44.0		25, 26				
562	Lacus Doloris	17.0	9.0	52	23				
563	Lacus Excellentiae	-36.0	-43.0	127	62				
564	Lacus Felicitatis	19.0	5.0	52	22				
565	Lacus Gaudii	17.0	13.0	52	23				
566	Lacus Hiemalis	15.0	14.0	52	23				
567	Lacus Lenitatis	14.0	12.0	52	23, 34				
568	Lacus Mortis	45.0	27.0	36	14				
569	Lacus Odii	19.0	7.0	52	23				
570	Lacus Perseverantiae	8.0	62.0		38				
571	Lacus Somniorum	39.0	28.0	36	14				
572	Lacus Spei	43.0	65.0	8	16				
573	Lacus Temporis	46.0	57.0		15				
574	Lacus Timoris	-39.0	-28.0	109	63				
575	Lacus Veris	-13.0	-87.0		39, 50, VII				Libration object
576	Lade	-1.3	10.1		45				
577	Lagalla	-44.6	-22.5		63				
578	Lagrange	-33.2	-72.0		61				
579	Lalande	-4.4	-8.6	82	43				
580	Lallemand	-14.3	-84.1		39, VII				Libration object
581	Lamarck	-22.9	-69.8		50				
582	Lamb	-42.8	100.8		IV				Libration object
583	Lambert	25.8	-21.0	104	20				
584	Lame	-14.7	64.5	4	49, 60				

### 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
585	Lamech	42.7	13.1		13				
586	Lamont	5.0	23.2	44	35				
587	Landsteiner	31.3	-14.8	89	11				
588	Langley	51.1	-86.3		1, 1				Libration object
589	Langrenus	-8.9	60.9	5	49				
590	Lansberg	-0.3	-26.6	103	42				
591	Lassell	-15.5	-7.9		54				
592	Laue	28.0	-96.7		VIII				Libration object
593	Lauritsen	-27.6	96.1		IV				Libration object
594	Laveran	-81.8	-159.8						Libration object
595	Lavoisier	38.2	-81.2		8, VIII				Libration object
596	Lawrence	7.4	43.2		37				
597	Le Gentil	-74.4	-76.5		72, VI				Libration object
598	Le Monnier	26.6	30.6	34	24, 25				
599	Le Verrier	40.3	-20.6	106	11				
600	Leakey	-3.2	37.4		47				
601	Lebesgue	-5.1	89.0		49, IV				Libration object
602	Lee	-30.7	-40.7	127	62				
603	Legendre	-28.9	70.2		59, 60				
604	Lehmann	-40.0	-56.0	127	61, 62				
605	Lenard	85.2	-109.7						Libration object
606	Lepaute	-33.3	-33.6	108	62				
607	Letronne	-10.6	-42.4	120	40				
608	Lexell	-35.8	-4.2	79	65				
609	Liapunov	26.3	89.3		27, III				Libration object
610	Licetus	-47.1	6.7	62	65				
611	Lichtenberg	31.8	-67.7		8				
612	Lick	12.4	52.7	1b	37				
613	Liebig	-24.3	-48.2		51				
614	Lilius	-54.5	6.2	81	73				
615	Lindbergh	-5.4	52.9		48				
616	Lindblad	70.4	-98.8		I				Libration object
617	Lindenau	-32.3	24.9	46	67				
618	Lindsay	-7.0	13.0		45				
619	Linne	27.7	11.8	57	23				
620	Liouville	2.6	73.5		38				
621	Lippershey	-25.9	-10.3		54				
622	Littrow	21.5	31.4		25				
623	Lockyer	-46.2	36.7	22	67				
624	Loewy	-22.7	-32.8		52				
625	Lohrmann	-0.5	-67.2		39				
626	Lohse	-13.7	60.2	4	49				
627	Lomonosov	27.3	98.0		III				Libration object
628	Longfellow	-7.5	91.3		IV				Libration object (Hirayama Q)
629	Longomontanus	-49.5	-22.0	99	64, 72				
630	Lorentz	34.3	-96.9		VIII				Libration object
631	Louise	28.5	-34.2		19				
632	Louville	44.0	-46.0		9				
633	Lovelace	82.3	-106.4		I				Libration object
634	Lubbock	-3.9	41.8	13c	48				
635	Lubiniezky	-17.8	-23.8		53				
636	Lucian	14.3	36.7		25, 36				
637	Ludwig	-7.7	97.4		IV				Libration object

## 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
638	Luther	33.2	24.1		14				
639	Lyeil	13.6	40.6		36				
640	Lyot	-50.2	84.1		69,76,V				Libration object
641	Maclaurin	-1.9	68.0		49				
642	Maclear	10.5	20.1		35				
643	Macmillan	24.2	-7.8		21				
644	Macrobios	21.3	46.0	11	26				
645	Madler	-11.0	29.8	37	47				
646	Maestlin	4.9	-40.6		29				
647	Magelhaens	-11.9	44.1		48				
648	Maginus	-50.0	-6.2	81	65, 73				
649	Main	80.8	10.1		4				
650	Mairan	41.6	-43.4	106	9				
651	Malapert	-84.9	12.9		73, V				Libration object
652	Malinkin	-87.2	75.9						Libration object
653	Mallet	-45.4	54.2	14	68				
654	Manilius	14.5	9.1	59	23, 34				
655	Manners	4.6	20.0		35				
656	Manzinus	-67.7	26.8	58	74				
657	Maraldi	19.4	34.9	27	25				
658	Marco Polo	15.4	-2.0		22				
659	Mare Anguis	22.0	67.0	3	27				
660	Mare Australe	-46.0	91.0	L1	76, IV, V				Libration object
661	Mare Cognitum	-10.0	-23.0	102	42				
662	Mare Crisium	17.0	59.0	1b	26,27,37,38				
663	Mare Fecunditatis	-2.0	52.0	Part 1-B	37,48,49,59				
664	Mare Frigoris	58.0	-20.0	Part 1-B	1 to 6				
665	Mare Humboldtianum	57.0	80.0	9	7, II				Libration object
666	Mare Humorum	-24.0	-39.0	Part 1-B	51, 52				
667	Mare Imbrium	30.0	-20.0	96	9-12,19-21				
668	Mare Insularum	7.0	-22.0	111	30-32,41,42				
669	Mare Marginis	12.0	88.0	L2	27, 38, III				Libration object
670	Mare Nectaris	-15.0	35.0	25	47, 58				
671	Mare Nubium	-20.0	-15.0	Part 1-B	53, 54				
672	Mare Orientale	-20.0	-95.0	L10	50, VII				Libration object
673	Mare Serenitatis	28.0	18.0	Part 1-B	13,14,23,24				
674	Mare Smythii	-2.0	87.0	L3	38,49,III,IV				Libration object
675	Mare Spumans	1.0	65.0	2	38				
676	Mare Tranquillitatis	8.0	28.0	Part 1-B	35,36,47				
677	Mare Undarum	7.0	69.0	2	38				
678	Mare Vaporum	13.0	3.0	Part 1-B	22, 33, 34				
679	Marinus	-39.4	76.5		69				
680	Marius	11.9	-50.8	126	29				
681	Markov	53.4	-62.7	L6	1				Libration object
682	Marth	-31.1	-29.3		63				
683	Maskelyne	2.2	30.1	35	36				
684	Mason	42.6	30.5	36	14				
685	Maunder	-14.6	-93.8		VII				Libration object
686	Maupertuis	49.6	-27.3	106	2				
687	Maurolycus	-41.8	14.0	50	66				
688	Maury	37.1	39.6		15				
689	Maxwell	30.0	98.6		III				Libration object
690	McAdie	2.1	92.1		III				Libration object

## 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
691	McClure	-15.3	50.3		59				
692	McDonald	30.4	-20.9		10				
693	McLaughlin	47.1	-92.9		I				Libration object
694	Mee	-43.7	-35.0		63				
695	Mees	13.6	-96.1		VIII				Libration object
696	Mendel	-48.8	-109.9		VI				Libration object
697	Menelaus	16.3	16.0	56	23				
698	Menzel	3.4	36.9		36				
699	Mercator	-29.3	-26.1	101	53				
700	Mercurius	46.6	66.2		15, 16				
701	Merrill	75.2	-116.3		I				Libration object
702	Mersenius	-21.5	-49.2	123	51				
703	Messala	39.2	59.9	8	16				
704	Messier	-1.9	47.6	13b	48				
705	Metius	-40.4	43.3	20	68				
706	Meton	73.8	19.2		4, 5				
707	Milichius	10.0	-30.2	112	30				
708	Miller	-39.3	0.8	72	65				
709	Mitchell	49.7	20.2	48	5				
710	Moigno	66.4	28.9		5				
711	Moltke	-0.6	24.2	45	46				
712	Monge	-19.2	47.6		59				
713	Mons Ampere	19.0	-4.0	70	22				
714	Mons Argaeus	19.0	29.0	34	24, 25				
715	Mons Bradley	22.0	1.0	70	22				
716	Mons Delisle	29.0	-36.0	114	19				
717	Mons Esam	14.6	35.7		36				
718	Mons Gruithuisen Delta	36.0	-39.5	117	9				
719	Mons Gruithuisen Gamma	36.6	-40.5	117	9				
720	Mons Hadley	27.0	5.0	70	22				
721	Mons Hadley Delta	26.0	4.0	70	22				
722	Mons Hansteen	-12.0	-50.0	124	40				
723	Mons Herodotus	27.0	-53.0	122	18				Not in VMA
724	Mons Huygens	20.0	-3.0	70	22				
725	Mons La Hire	28.0	-25.0	104	20				
726	Mons Maraldi	20.0	35.0	27	25				
727	Mons Moro	-12.0	-20.0	102	42				
728	Mons Penck	-10.0	22.0	38	46				
729	Mons Pico	46.0	-9.0	84	11				
730	Mons Piton	41.0	-1.0	77	12				
731	Mons Rumker	41.0	-58.0	130	8				
732	Mons Usov	12.0	63.0	1a	38				
733	Mons Vinogradov	22.4	-43.4	114	19				
734	Mons Vitruvius	19.0	31.0	34	25				
735	Mons Wolff	17.0	-7.0	70	21				
736	Mont Blanc	45.0	1.0	68	12				
737	Montanari	-45.8	-20.6	97	64				
738	Montes Agricola	29.0	-54.0	122	18				
739	Montes Alpes	46.0	2.0	68	12				
740	Montes Apenninus	20.0	-3.0	70	22				
741	Montes Archimedes	26.0	-5.0	78	22				
742	Montes Carpatus	15.0	-25.0	105	20, 31				

## 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
743	Montes Caucasus	39.0	9.0	60	13				
744	Montes Cordillera	-20.0	-80.0	L10	39,50, VII				Libration object
745	Montes Haemus	17.0	13.0	52	23				
746	Montes Harbinger	27.0	-41.0	119	19				
747	Montes Jura	47.0	-37.0	106	10				
748	Montes Pyrenaeus	-14.0	41.0	23	48, 58				
749	Montes Recti	48.0	-20.0	94	11				
750	Montes Rhipaeus	-7.0	-28.0	110	41, 42				
751	Montes Rook	-20.0	-83.0		50, VII				Libration object
752	Montes Secchi	3.0	43.0	13b	37				
753	Montes Spitzbergen	35.0	-5.0	77	12				
754	Montes Taurus	26.0	36.0	27	25				
755	Montes Teneriffe	48.0	-13.0	84	3, 11				
756	Moretus	-70.6	-5.5	80	73				
757	Morley	-2.8	64.6		49				
758	Moseley	20.9	-90.1		VIII				Libration object
759	Mosting	-0.7	-5.9	82	43				
760	Mouchez	78.3	-26.6		3, 4				
761	Moulton	-61.1	97.2		V				Libration object
762	Muller	-7.6	2.1		44				
763	Murchison	5.1	-0.1	64	33				
764	Mutus	-63.6	30.1	58	74				
765	Nansen	81.3	95.3		5, II				Libration object
766	Naonobu	-4.6	57.8	5	49				
767	Nasireddin	-41.0	0.2	72	65				
768	Nasmyth	-50.5	-56.2	129	70				
769	Natasha	20.0	-31.3		19				
770	Naumann	35.4	-62.0		8				
771	Neander	-31.3	39.9	14	68				
772	Nearch	-58.5	39.1	30	75				
773	Nefed'ev	-81.1	135.8						Libration object
774	Neison	68.3	25.1		5				
775	Neper	8.8	84.5		38, III				Libration object
776	Nernst	35.4	-94.5		VIII				Libration object
777	Neumayer	-71.1	70.7		75, V				Libration object
778	Newcomb	29.9	43.8	19	15, 25				
779	Newton	-76.7	-16.9	80	73				
780	Nicholson	-26.2	-85.1		50, VII				Libration object
781	Nicolai	-42.4	25.9	32	67				
782	Nicollet	-21.9	-12.5		54				
783	Nielsen	31.8	-51.8		8				
784	Niepce	72.7	-119.1		I				Libration object
785	Nobile	-85.2	53.5		V				Libration object
786	Nobili	0.2	75.9		38				
787	Noggerath	-48.8	-45.7	129	62, 70				
788	Nonius	-34.8	3.8	71	65				
789	Norman	-11.8	-30.4		41				
790	Nother	66.6	-113.5		I				Libration object
791	Nunn	4.6	91.1		III				Libration object
792	Oceanus Procellarum	0.0	-50.0	Part 1-B	28				Also RUKL 8,9, 17-19,29,39-41, VII
793	Oenopides	57.0	-64.1	L6	1				Libration object
794	Oersted	43.1	47.2		15				
795	Oken	-43.7	75.9	L1	69, IV				Libration object

## 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
796	Olbers	7.4	-75.9		28				
797	Omar Khayyam	58.0	-102.1		I				Libration object
798	Opelt	-16.3	-17.5		53				
799	Oppolzer	-1.5	-0.5		44				
800	Orontius	-40.3	-4.0	72	65				
801	Palisa	-9.4	-7.2		43				
802	Palitzsch	-28.0	64.5		59				
803	Pallas	5.5	-1.6	64	33				
804	Palmieri	-28.6	-47.7		51				
805	Palus Epidemiarum	-32.0	-27.0	108	53, 63				
806	Palus Putredinis	27.0	0.0		22				
807	Palus Somni	15.0	44.0	18	26, 37				
808	Paneth	63.0	-94.8		I				Libration object
809	Parkhurst	-33.4	103.6		IV				Libration object
810	Parrot	-14.5	3.3		44, 55				
811	Parry	-7.9	-15.8	93	42, 43				
812	Pascal	74.3	-70.1		3, I				Libration object
813	Peary	88.6	33.0		4, II				Libration object
814	Peek	2.6	86.9		38, III				Libration object
815	Peirce	18.3	53.5	1b	26				
816	Peirescius	-46.5	67.6		68, 69				
817	Pentland	-64.6	11.5	80	73, 74				
818	Petavius	-25.3	60.4	6	59				
819	Petermann	74.2	66.3	L5	5, II				Libration object
820	Peters	68.1	29.5		5				
821	Petit	2.3	63.5		38				
822	Petrov	-61.4	88.0		76, V				Libration object
823	Pettit	-27.5	-86.6		50, VII				Libration object
824	Petzval	-62.7	-110.4		VI				Libration object
825	Phillips	-26.6	76.0		60				
826	Philolaus	72.1	-32.4	85	3				
827	Phocyclides	-52.9	-57.3	118	70				
828	Piazzi	-36.2	-67.9		61				
829	Piazzi Smyth	41.9	-3.2	77	12				
830	Picard	14.6	54.7	1b	26, 37				
831	Piccolomini	-29.7	32.2	31	58, 68				
832	Pickering	-2.9	7.0		45				
833	Pictet	-43.6	-7.4	86	64, 65				
834	Pierazzo	3.3	-100.2						Libration object
835	Pilate	-60.3	-86.4		70, VI				Libration object
836	Pingre	-58.7	-73.7		70, VI				Libration object
837	Pitatus	-29.8	-13.5	90	54, 64				
838	Pitiscus	-50.4	30.9	30	75				
839	Plana	42.2	28.2	36	14				
840	Planitia Descensus	7.0	-64.0	131	28				Planitia Descensus in VMA
841	Plaskett	82.3	176.0		II				Libration object
842	Plato	51.6	-9.3	85	3, 4				
843	Playfair	-23.5	8.4	49	56				
844	Plinius	15.4	23.7	43	24				
845	Plutarch	24.1	79.0		27, III				Libration object
846	Poczobutt	57.5	-99.3		I				Libration object
847	Poisson	-30.4	10.6	51	56, 66				
848	Polybius	-22.4	25.6		57				

## 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
849	Pomortsev	75.8	66.9		38				
850	Poncelet	75.8	-54.1		3, I				Libration object
851	Pons	-25.3	21.5		57				
852	Pontanus	-28.4	14.4		56				
853	Pontecoulant	-58.7	66.0		76				
854	Popov	17.2	99.7		III				Libration object
855	Porter	-56.1	-10.1	92	72				
856	Posidonius	31.8	29.9	33	14				
857	Priestly	-57.3	108.4		V				Libration object
858	Prinz	25.5	-44.1	119	19				
859	Proclus	16.1	46.8	18	26				
860	Proctor	-46.4	-5.1	72	65				
861	Promontorium Agarum	14.0	66.0	1a	38				
862	Promontorium Agassiz	42.0	2.0	68	12				
863	Promontorium Archerusia	17.0	22.0	43	24				
864	Promontorium Deville	43.0	1.0	68	12				
865	Promontorium Fresnel	29.0	5.0		22				
866	Promontorium Heraclides	41.0	-34.0	106	10				
867	Promontorium Kelvin	-27.0	-33.0	113	52				
868	Promontorium La Place	46.0	-26.0	106	10				
869	Promontorium Lavinium	15.0	49.0	15	26				
870	Promontorium Olivium	15.0	49.0	15	26				
871	Promontorium Taenarium	-19.0	-8.0	83	54				
872	Protagoras	56.0	7.3		4				
873	Ptolemaeus	-9.2	-1.8	75	44				
874	Puiseux	-27.8	-39.0		52				
875	Pupin	23.8	-11.0		21				300mm
876	Purbach	-25.5	-1.9	73	55				
877	Purkyne	-1.6	94.9		IV				Libration object
878	Pythagoras	63.5	-62.8	133	2, I				
879	Pytheas	20.5	-20.6	104	20				
880	Rabbi Levi	-34.7	23.6	46	67				
881	Raman	27.0	-55.1		18				
882	Ramsden	-32.9	-31.8	108	63				
883	Rankine	-3.9	71.5		49				
884	Rayleigh	29.0	89.2		27, III				Libration object
885	Reaumur	-2.4	0.7	65	44				
886	Regiomontanus	-28.4	-1.0	73	55				
887	Regnault	54.1	-88.0		1, I				Libration object
888	Reichenbach	-30.3	48.0	12	59, 69				
889	Reimarus	-47.7	60.3		68				
890	Reiner	7.0	-54.9	126	29				
891	Reiner Gamma	8.0	-59.0	131	28				
892	Reinhold	3.3	-22.8	103	31				
893	Repsold	51.4	-78.5		1				
894	Respighi	2.8	71.9		38				
895	Rhaeticus	0.0	4.9	64	33, 44				
896	Rheita	-37.1	47.2	14	68				
897	Riccioli	-3.0	-74.3		39				
898	Riccus	-36.9	26.5		67				

## 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
899	Richardson	31.1	100.3		III				Libration object
900	Riemann	39.5	87.2		16, III				Libration object
901	Rima Agatharchides	-20.0	-28.0		53				300mm
902	Rima Archytas	53.0	5.0		4				
903	Rima Ariadaeus	7.0	13.0	53	34				
904	Rima Artsimovich	27.0	-39.0		19				<a href="http://www.ipod.org/coppermine/displayimage.php?album=22&amp;pos=20">http://www.ipod.org/coppermine/displayimage.php?album=22&amp;pos=20</a> (Half way between Montes Harbinger and Artsimovich) N/S configuration
905	Rima Billy	-15.0	-48.0		51				300mm
906	Rima Birt	-21.0	-9.0	83	54				
907	Rima Bradley	23.0	-2.0		22				
908	Rima Brayley	23.0	-36.0		19				500mm +
909	Rima Calippus	37.0	13.0		13				
910	Rima Cardanus	11.0	-73.0		28				
911	Rima Cauchy	10.0	39.0	26	36				
912	Rima Cleomedes	28.0	56.0	11	26				
913	Rima Conon	18.0	2.0		22				
914	Rima Delisle	31.0	-33.0		9				500mm +
915	Rima Diophantus	29.0	-33.0		19				500mm +
916	Rima Flammarion	-2.0	-5.0	75	44				
917	Rima Furnerius	-36.3	60.4		69				Located in crater Furnerius
918	Rima G Bond	33.0	35.0		15				
919	Rima Galliae	13.0	-59.0	126	28				
920	Rima Gartner	59.1	34.6		6				300mm Location wrong in VMA
921	Rima Gay-Lussac	13.0	-22.0	105	31				
922	Rima Hadley	25.0	3.0	70	22				
923	Rima Hansteen	-12.0	-53.0		40				
924	Rima Hase	-33.0	66.0		69				200mm
925	Rima Herigonius	-13.0	-37.0		41				500mm
926	Rima Hesiodus	-30.0	-21.0	108	53, 54, 63				
927	Rima Hyginus	7.8	6.3	61	33, 34				
928	Rima Jansen	15.0	29.0		25, 36				
929	Rima Mairan	38.0	-47.0		9				300mm
930	Rima Marius	17.0	-49.0		18				
931	Rima Messier	-1.0	45.0		37, 48				500mm
932	Rima Milichius	8.0	-33.0		30				500mm +
933	Rima Oppolzer	-1.0	2.0		44				300mm
934	Rima Reaumur	-3.0	3.0		44				300mm
935	Rima Schroter	1.0	-6.0		32				300mm
936	Rima Sharp	44.0	-51.0		9				500mm +
937	Rima Sheepshanks	58.0	24.0		5				500mm +
938	Rima Sirsalis	-14.0	-60.0	132	39, 50				
939	Rima Suess	6.0	-47.0		29				500mm +
940	Rima Sung-Mei	24.6	11.3						part of Aratus CA
941	Rimae Alphonsus	-13.4	-2.8		44				500mm
942	Rimae Archimedes	27.0	-4.0		22				100mm
943	Rimae Aristarchus	28.0	-47.0	122	18, 19				300mm
944	Rimae Arzachel	-18.2	-1.2	74	55				200mm
945	Rimae Atlas	46.7	44.4		15				200mm
946	Rimae Bode	10.0	-4.0		33				300mm
947	Rimae Boscovich	9.8	11.1		34				500mm
948	Rimae Burg	45.0	26.0	36	14				
949	Rimae Chacornac	29.0	32.0		14				300mm

## 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
950	Rimae Daniell	37.0	26.0		14				
951	Rimae Darwin	-20.0	-67.0	132	50			300mm	
952	Rimae de Gasparis	-25.0	-50.0		51			200mm	
953	Rimae Doppelmayer	-26.0	-45.0	121	52				
954	Rimae Fresnel	28.0	4.0		22			200mm	
955	Rimae Gassendi	-17.5	-39.9		52			200mm	
956	Rimae Goclenius	-8.0	43.0		48			200mm	
957	Rimae Grimaldi	-9.0	-64.0	134	39				
958	Rimae Gutenberg	-5.0	38.0		47			300mm	
959	Rimae Hevelius	2.0	-66.0		28			300mm	
960	Rimae Hippalus	-25.0	-29.0	113	52, 53			200mm	
961	Rimae Hypatia	-1.0	23.0	45	46				
962	Rimae Janssen	-46.0	39.0		67			200mm	
963	Rimae Littrow	23.0	31.0	34	25			See VMA Littrow LAC LM	
964	Rimae Maclear	13.0	20.0		35			300mm	
965	Rimae Maestlin	2.0	-40.0		29			300mm	
966	Rimae Maupertuis	51.0	-22.0		3			500mm +	
967	Rimae Menelaus	17.0	17.0	56	24				
968	Rimae Mersenius	-20.0	-45.0	123	51				
969	Rimae Opelt	-13.0	-18.0		42			300mm	
970	Rimae Palmieri	-28.0	-47.0		51			300mm	
971	Rimae Parry	-8.0	-17.0	93	42, 43			300mm	
972	Rimae Petavius	-25.2	60.0	6	59				
973	Rimae Pitatus	-29.2	-12.3	90	54				
974	Rimae Plato	51.0	-2.0		4			300mm	
975	Rimae Plinius	17.0	24.0	43	24				
976	Rimae Posidonius	31.8	29.9		14			300mm	
977	Rimae Prinz	27.0	-43.0		19			300mm	
978	Rimae Ramsden	-33.0	-31.0	108	63				
979	Rimae Repsold	51.0	-80.0		1, 1			Libration object	
980	Rimae Riccioli	-2.0	-74.0		39			300mm	
981	Rimae Ritter	3.0	18.0		35			200mm	
982	Rimae Romer	27.0	35.0		25			200mm	
983	Rimae Secchi	1.0	44.0		37				
984	Rimae Sosigenes	7.0	19.0		35			300mm	
985	Rimae Sulpicius Gallus	21.0	10.0	56	23				
986	Rimae Theaetetus	33.0	6.0		12			300mm	Rima in VMA
987	Rimae Triesnecker	4.0	4.0	64	33, 34				
988	Rimae Zupus	-15.0	-53.0		51			300mm	
989	Ritchey	-11.1	8.5		45				
990	Rittenhouse	-74.5	106.5		V			Libration object	
991	Ritter	2.0	19.2	44	35				
992	Ritz	-15.1	92.2		IV			Libration object	
993	Robinson	59.0	-45.9		2				
994	Rocca	-12.7	-72.8		39				
995	Rocco	28.9	-45.0		19				
996	Romer	25.4	36.4	27	25				
997	Rontgen	33.0	-91.4		VIII			Libration object	
998	Rosenberger	-55.4	43.1	30	75				
999	Ross	11.7	21.7	44	35				
1000	Rosse	-17.9	35.0	25	58				
1001	Rost	-56.4	-33.7	118	71				
1002	Rothmann	-30.8	27.7	46	67				

## 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
1003	Rozhdestvenskiy	85.8	-159.1		I				Libration object
1004	Runge	-2.5	86.7		49, IV				Libration object
1005	Rupes Altai	-24.0	23.0	40	57				
1006	Rupes Cauchy	9.0	37.0	26	36				
1007	Rupes Kelvin	-28.0	-33.0	113	52				
1008	Rupes Liebig	-25.0	-46.0	121	51				
1009	Rupes Mercator	-30.0	-23.0	101	53				
1010	Rupes Recta	-22.0	-7.0	83	54				
1011	Rupes Toscanelli	27.0	-47.0	122	18				
1012	Russell	26.5	-75.4	L7	17				Libration object
1013	Ruth	28.7	-45.1		19				
1014	Rutherford	-60.9	-12.1	92	72				
1015	Rydberg	-46.5	-96.3		VI				Libration object
1016	Rynin	47.0	-103.5		I				Libration object
1017	Sabatier	13.2	79.0		38				Libration object
1018	Sabine	1.4	20.1	44	35				
1019	Sacrobosco	-23.7	16.7	49	56, 57				
1020	Sampson	29.7	-16.5		21				
1021	Santbech	-20.9	44.0	10	59				
1022	Santos-Dumont	27.7	4.8		22				
1023	Sarabhai	24.7	21.0	41	24				
1024	Sasserides	-39.1	-9.3	86	64				
1025	Saunders	-4.2	8.8		45				
1026	Saussure	-43.4	-3.8	72	65				
1027	Scheele	-9.4	-37.8		41				
1028	Scheiner	-60.5	-27.8	98	72				
1029	Schiaparelli	23.4	-58.8		18				
1030	Schickard	-44.4	-54.6	127	62				
1031	Schiller	-51.8	-40.0	118	71				
1032	Schluter	-5.9	-83.3		39, VII, VIII				Libration object
1033	Schmidt	1.0	18.8		35				
1034	Schomberger	-76.7	24.9		73, 74				
1035	Schonfeld	44.8	-98.1		VIII				Libration object
1036	Schorr	-19.5	89.7		60, IV				Libration object
1037	Schrodinger	-75.6	133.7		V				Libration object
1038	Schroter	2.6	-7.0		32				
1039	Schubert	2.8	81.0		38, III				Libration object
1040	Schumacher	42.4	60.7		16				
1041	Schwabe	65.1	45.6		6				
1042	Schwarzschild	70.6	119.6		II				Libration object
1043	Scoresby	77.7	14.1		4				
1044	Scott	-81.9	45.3		73, 74, V				Libration object
1045	Secchi	2.4	43.5	13b	37				
1046	Seeliger	-2.2	3.0	65	44				
1047	Segner	-58.9	-48.3	125	71				
1048	Seleucus	21.0	-66.6	L7	17				Libration object
1049	Seneca	26.6	80.2		27, III				Libration object
1050	Shackleton	-89.9	0.0		V, VI				Libration object
1051	Shaler	-32.9	-85.2		61, VII				Libration object
1052	Shapley	9.4	56.9		38				
1053	Sharp	45.7	-40.2	106	9, 10				
1054	Sheepshanks	59.2	16.9	48	5				
1055	Shi Shen	76.0	104.1		II				Libration object

### 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
1056	Shoemaker	-88.1	44.9		V				Libration object
1057	Short	-74.6	-7.3	80	73				
1058	Shuckburgh	42.6	52.8		15				
1059	Shuleykin	-27.1	-92.5		VII				Libration object
1060	Sikorsky	-66.1	103.2		V				Libration object
1061	Silberschlag	6.2	12.5		34				
1062	Simpelius	-73.0	15.2	80	73				
1063	Sinas	8.8	31.6	35	36				
1064	Sinus Aestuum	12.0	-8.0	87	32, 33				
1065	Sinus Amoris	19.0	38.0	27	25				
1066	Sinus Asperitatis	-6.0	25.0	42	46, 47				
1067	Sinus Concordiae	11.0	43.0	21	37				
1068	Sinus Fidei	18.0	2.0		22				
1069	Sinus Honoris	12.0	18.0	44	35				
1070	Sinus Iridum	45.0	-32.0	106	10				Also required for Objective Part 1-B
1071	Sinus Lunicus	32.0	-1.0	69	12				
1072	Sinus Medii	0.0	0.0	64	33, 44				
1073	Sinus Roris	45.0	-60.0	Part 1-B	1,8,9,I,VIII				
1074	Sinus Successus	1.0	58.0	2	38				
1075	Sirsalis	-12.5	-60.4	132	39				
1076	Sklodowska	-18.0	96.0		IV				Libration object
1077	Slater	-88.1	111.3						Libration object
1078	Slocum	-3.0	89.0		49, IV				Libration object
1079	Smithson	2.4	53.6		37				
1080	Smoluchowski	60.3	-96.8		I				Libration object
1081	Snellius	-29.3	55.7	10	59, 69				
1082	Somerville	-8.3	64.9		49				
1083	Sommering	0.1	-7.5		32, 43				
1084	Sosigenes	8.7	17.6		35				
1085	South	57.7	-50.8		2				
1086	Spallanzani	-46.3	24.7	32	67				
1087	Sporer	-4.3	-1.8		44				
1088	Spurr	27.9	-1.2		22				
1089	Stadius	10.5	-13.7	91	32				
1090	Steinheil	-48.6	46.5	17	68, 76				
1091	Stella	19.9	29.8						
1092	Stevinus	-32.5	54.2	12	69				
1093	Stewart	2.2	67.0		38				
1094	Stiborius	-34.4	32.0	32	67				
1095	Stofler	-41.1	6.0	62	65, 66				
1096	Stokes	52.5	-88.1		1, I				Libration object
1097	Strabo	61.9	54.3		6				
1098	Street	-46.5	-10.5	86	64				
1099	Struve	23.0	-76.6	L7	17, VIII				Libration object
1100	Suess	4.4	-47.6		29				
1101	Sulpicius Gallus	19.6	11.6	56	23				
1102	Sundman	10.8	-91.6		VIII				Sumner in VMA?
1103	Svedberg	-81.7	65.2						Libration object
1104	Sverdrup	-88.3	-153.4						Libration object
1105	Swasey	-5.5	89.7		49, IV				Libration object
1106	Swift	19.3	53.4	1b	26				
1107	Sylvester	82.7	-79.6		3, I				Libration object
1108	Tacchini	4.9	85.5		38, III				Libration object

## 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
1109	Tacitus	-16.2	19.0	40	57				
1110	Tacquet	16.6	19.2		24				
1111	Taizo	24.7	2.2						
1112	Talbot	-2.5	85.3		49, IV				Libration object
1113	Tannerus	-56.4	22.0	58	74				
1114	Taruntius	5.6	46.5	13b	37				
1115	Taylor	-5.3	16.7		46				
1116	Tebbutt	9.6	53.6		37				Tebbutt in VMA
1117	Tempel	3.9	11.9		34				
1118	Thales	61.8	50.3		6				
1119	Theaetetus	37.0	6.0	68	12				
1120	Thebit	-22.0	-4.0	74	55				
1121	Theiler	13.4	83.3		38, III				Libration object
1122	Theon Jr	-2.3	15.8	47	45, 46				
1123	Theon Sr	-0.8	15.4	47	45, 46				
1124	Theophilus	-11.4	26.4	37	46, 47				
1125	Theophrastus	17.5	39.0		25				
1126	Timaeus	62.8	-0.5		4				
1127	Timocharis	26.7	-13.1	89	21				
1128	Tisserand	21.4	48.2		26				
1129	Titius	-26.8	100.7		IV				Libration object
1130	Tobias Mayer	15.6	-29.1	112	19				
1131	Tolansky	-9.5	-16.0		42, 43				
1132	Torricelli	-4.6	28.5	42	47				
1133	Toscaneli	27.9	-47.5	122	18				
1134	Townley	3.4	63.3		38				
1135	Tralles	28.4	52.8	11	26				
1136	Triesnecker	4.2	3.6	64	33				
1137	Trouvelot	49.3	5.8		4				
1138	Tucker	-5.6	88.2		49, IV				Libration object
1139	Turner	-1.4	-13.2		43				
1140	Tycho	-43.3	-11.2	86	64				
1141	Ukert	7.8	1.4		33				
1142	Ulugh Beigh	32.7	-81.9	L9	8, VII				Libration object
1143	Urey	27.9	87.4		27, III				Libration object
1144	Vaisala	25.9	-47.8		18				
1145	Vallis Alpes	49.0	3.0	68	4, 12				
1146	Vallis Baade	-46.0	-76.0	135	61, VI				
1147	Vallis Bohr	9.9	-88.6		VIII				Libration object, not in VMA
1148	Vallis Bouvard	-39.0	-83.0		61, VII				Libration object
1149	Vallis Capella	-7.0	35.0	28	47				
1150	Vallis Christel	24.5	11.1						part of Aratus CA
1151	Vallis Inghirami	-44.0	-73.0	135	61				
1152	Vallis Krishna	24.5	11.3						part of Aratus CA
1153	Vallis Palitzsch	-25.0	65.0		59				
1154	Vallis Rheita	-42.0	51.0	14	68				
1155	Vallis Schrodinger	-67.0	105.0		V				Libration object
1156	Vallis Schroteri	26.0	-51.0	122	18				
1157	Vallis Snellius	-31.0	59.0	10	59, 69				
1158	van Albada	9.4	64.3		38				
1159	van Biesbroeck	28.7	-45.6		19				Van Biesbroeck in VMA
1160	van Vleck	-1.9	78.3		49				
1161	van Vleck	13.9	-83.8		28, VIII				Libration object

## 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
1162	Vashakidze	43.6	93.3		III				Libration object
1163	Vega	-45.4	63.4		68				
1164	Vendelinus	-16.3	61.8	4	60				
1165	Vera	26.3	-43.7		19				
1166	Verne	24.9	-25.3		20				300mm
1167	Very	25.6	25.3	41	24				
1168	Vestine	33.9	93.9		III				Libration object
1169	Vieta	-29.2	-56.3	128	51, 61				
1170	Virchow	9.8	83.7		38, III				Libration object
1171	Vitello	-30.4	-37.5	127	62				
1172	Vitruvius	17.6	31.3		25				
1173	Vlacc	-53.3	38.8	30	75				
1174	Vogel	-15.1	5.9	63	56				
1175	Volta	54.0	-84.9	L6	1, I				Libration object
1176	von Baeyer	-81.8	61.9						Libration object
1177	von Behring	-7.8	71.8		49				
1178	von Braun	41.1	-78.0		8, VIII				Libration object, formerly called Lavoisier D
1179	Voskresenskiy	28.0	-88.1		17, VIII				Libration object
1180	W Bond	65.3	3.7	76	4				
1181	Wallace	20.3	-8.7		21				
1182	Wallach	4.9	32.3		36				
1183	Walter	28.0	-33.8						
1184	Walther	-33.0	0.7	71	65				
1185	Wapowski	-83.1	53.8						
1186	Wargentin	-49.6	-60.2	129	70				
1187	Warner	-4.0	87.3		49, IV				Libration object
1188	Watt	-49.5	48.6	17	76				
1189	Watts	8.9	46.3		37				
1190	Webb	-0.9	60.0	5	49				
1191	Weierstrass	-1.3	77.2		49				
1192	Weigel	-58.2	-38.8	118	71				
1193	Weinek	-27.5	37.0		58				
1194	Weiss	-31.8	-19.5	108	63, 64				
1195	Werner	-28.0	3.3	67	55				
1196	Wexler	-69.1	90.2		75, V				Libration object
1197	Whewell	4.2	13.7		34				
1198	Whipple	89.1	120.0						Libration object
1199	Wichmann	-7.5	-38.1		41				
1200	Widmanstätten	-6.1	85.5		49, IV				Libration object
1201	Wiechert	-84.5	165.0		V				Libration object
1202	Wildt	9.0	75.8		38				
1203	Wilhelm	-43.1	-20.8	97	63, 64				
1204	Wilkins	-29.4	19.6		57, 67				
1205	Williams	42.0	37.2		14, 15				
1206	Wilson	-69.2	-42.4	98	72				
1207	Winthrop	-10.7	-44.4		40				
1208	Wöhler	-38.2	31.4	32	67				
1209	Wolf	-22.7	-16.6		54				
1210	Wollaston	30.6	-46.9		9				
1211	Wright	-31.6	-86.6		61, VII				Libration object
1212	Wrottesley	-23.9	56.8	6	59				
1213	Wurzelbauer	-33.9	-15.9	88	64				
1214	Wyid	-1.4	98.1		IV				Libration object

## 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
1215	Xenophanes	57.6	-81.4	L6	1, I				Libration object
1216	Yakovkin	-54.5	-78.8		70, VI				Libration object
1217	Yangel'	17.0	4.7		22				
1218	Yerkes	14.6	51.7	1b	26, 37				
1219	Young	-41.5	50.9	14	68				
1220	Zach	-60.9	5.3	80	73				
1221	Zagut	-32.0	22.1	46	67				
1222	Zahringer	5.6	40.2		37				
1223	Zasyadko	3.9	94.2		III				Libration object
1224	Zeeman	-75.2	-134.8		VI				Libration object
1225	Zeno	45.2	72.9		16, III				Libration object
1226	Zinner	26.6	-58.8		18				
1227	Zöllner	-8.0	18.9		46				
1228	Zsigmondi	59.7	-104.7		I				Libration object
1229	Zucchius	-61.4	-50.3	125	71				
1230	Zupus	-17.2	-52.3		51				