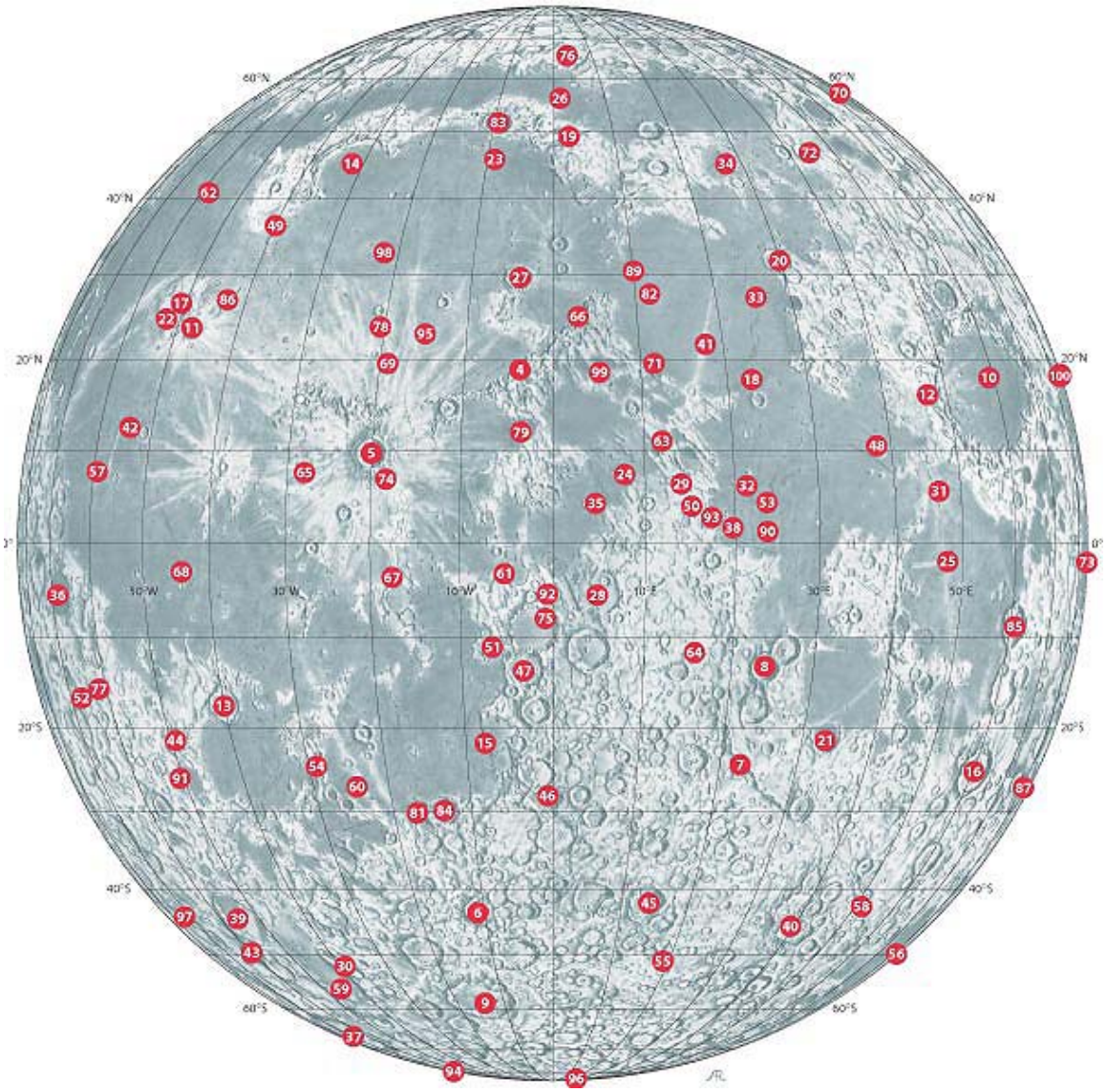
The Lunar 100



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The Lunar 100

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L	**Feature Name**	**Significance**	**Lat. (°)**	**Long. (°)**	**Diam. (km)**	**Rükl Chart**
1	Moon	Large satellite	—	—	3,476	—
2	Earthshine	Twice reflected sunlight	—	—	—	—
3	Mare/highland dichotomy	Two materials with distinct compositions	—	—	—	—
4	Apennines	Imbrium basin rim	18.9N	3.7W	70	22
5	Copernicus	Archetypal large complex crater	9.7N	20.1W	93	31
6	Tycho	Large rayed crater with impact melts	43.4S	11.1W	85	64
7	Altai Scarp	Nectaris basin rim	24.3S	22.6E	425	57
8	Theophilus, Cyrillus, Catharina	Crater sequence illustrating stages of degradation	13.2S	24.0E	—	46, 57
9	Clavius	Lacks basin features in spite of its size	58.8S	14.1W	225	72
10	Mare Crisium	Mare contained in large circular basin	18.0N	59.0E	540	26, 27, 37, 38
11	Aristarchus	Very bright crater with dark bands on its walls	23.7N	47.4W	40	18
12	Proclus	Oblique-impact rays	16.1N	46.8E	28	26
13	Gassendi	Floor-fractured crater	17.6S	40.1W	101	52
14	Sinus Iridum	Very large crater with missing rim	45.0N	32.0W	260	10
15	Straight Wall	Best example of a lunar fault	21.8S	7.8W	110	54
16	Petavius	Crater with domed & fractured floor	25.1S	60.4E	177	59
17	Schröter's Valley	Giant sinuous rille	26.2N	50.8W	168	18
18	Mare Serenitatis dark edges	Distinct mare areas with different compositions	17.8N	23.0E	N/A	24
19	Alpine Valley	Lunar graben	49.0N	3.0E	165	4
20	Posidonius	Floor-fractured crater	31.8N	29.9E	95	14
Chart numbers refer to Antonín Rükl's *Atlas of the Moon*.						

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The Lunar 100 (continued)						
L	**Feature Name**	**Significance**	**Lat. (°)**	**Long. (°)**	**Diam. (km)**	**Rükl Chart**
21	Fracastorius	Crater with subsided & fractured floor	21.5S	33.2E	124	58
22	Aristarchus Plateau	Mysterious uplifted region mantled with pyroclastics	26.0N	51.0W	150	18
23	Pico	Isolated Imbrium basin-ring fragment	45.7N	8.9W	25	11
24	Hyginus Rille	Rille containing rimless collapse pits	7.4N	7.8E	220	34
25	Messier & Messier A	Oblique ricochet-impact pair	1.9S	47.6E	11	48
26	Mare Frigoris	Arcuate mare of uncertain origin	56.0N	1.4E	1600	2-6
27	Archimedes	Large crater lacking central peak	29.7N	4.0W	83	12, 22
28	Hipparchus	First drawing of a single crater	5.5S	4.8E	150	44, 45
29	Aridaeus Rille	Long, linear graben	6.4N	14.0E	250	34
30	Schiller	Possible oblique impact	51.9S	39.0W	180	71
31	Taruntius	Young floor-fractured crater	5.6N	46.5E	56	37
32	Arago Alpha & Beta	Volcanic domes	6.2N	21.4E	26	35
33	Serpentine Ridge	Basin inner-ring segment	27.3N	25.3E	155	24
34	Lacus Mortis	Strange crater with rille & ridge	45.0N	27.2E	152	14
35	Triesnecker Rilles	Rille family	4.3N	4.6E	215	33
36	Grimaldi basin	A small two-ring basin	5.5S	68.3W	440	39
37	Bailly	Barely discernible basin	66.5S	69.1W	303	71
38	Sabine & Ritter	Possible twin impacts	1.7N	19.7E	30	35
39	Schickard	Crater floor with Orientale basin ejecta stripe	44.3S	55.3W	227	62
40	Janssen Rille	Rare example of a highland rille	45.4S	39.3E	190	67, 68
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The Lunar 100

The Lunar 100 (continued)						
L	**Feature Name**	**Significance**	**Lat. (°)**	**Long. (°)**	**Diam. (km)**	**Rükl Chart**
41	Bessel ray	Ray of uncertain origin near Bessel	21.8N	17.9E	N/A	24
42	Marius Hills	Complex of volcanic domes & hills	12.5N	54.0W	125	28, 29
43	Wargentin	A crater filled to the rim with lava or ejecta	49.6S	60.2W	84	70
44	Mersenius	Domed floor cut by secondary craters	21.5S	49.2W	84	51
45	Maurolycus	Region of saturation cratering	42.0S	14.0E	114	66
46	Regiomontanus central peak	Possible volcanic peak	28.0S	0.6W	124	55
47	Alphonsus dark spots	Dark-halo eruptions on crater floor	13.7S	3.2W	119	44
48	Cauchy region	Fault, rilles, & domes	10.5N	38.0E	130	36
49	Gruithuisen Delta & Gamma	Volcanic domes formed with viscous lavas	36.3N	40.0W	20	9
50	Cayley Plains	Light, smooth plains of uncertain origin	4.0N	15.1E	14	34
51	Davy crater chain	Result of comet-fragment impacts	11.1S	6.6W	50	43
52	Crüger	Possible volcanic caldera	16.7S	66.8W	45	50
53	Lamont	Possible buried basin	4.4N	23.7E	106	35
54	Hippalus Rilles	Rilles concentric to Humorum basin	24.5S	29.0W	240	52, 53
55	Baco	Unusually smooth crater floor & surrounding plains	51.0S	19.1E	69	74
56	Australe basin	A partially flooded ancient basin	49.8S	84.5E	880	76
57	Reiner Gamma	Conspicuous swirl & magnetic anomaly	7.7N	59.2W	70	28
58	Rheita Valley	Basin secondary-crater chain	42.5S	51.5E	445	68
59	Schiller-Zucchius basin	Badly degraded overlooked basin	56.0S	45.0W	335	70, 71
60	Kies Pi	Volcanic dome	26.9S	24.2W	45	53
Chart numbers refer to Antonín Rükl's *Atlas of the Moon*.						

The Lunar 100

The Lunar 100 (continued)						
L	Feature Name	Significance	Lat. (°)	Long. (°)	Diam. (km)	Rükl Chart
61	Mösting A	Simple crater close to center of lunar near side	3.2S	5.2W	13	43
62	Rümker	Large volcanic dome	40.8N	58.1W	70	8
63	Imbrium sculpture	Basin ejecta near & overlying Boscovich & Julius Caesar	11.0N	12.0E	—	34
64	Descartes	Apollo 16 landing site; putative region of highland volcanism	11.7S	15.7E	48	45
65	Hortensius domes	Dome field north of Hortensius	7.6N	27.9W	10	30
66	Hadley Rille	Lava channel near Apollo 15 landing site	25.0N	3.0E	—	22
67	Fra Mauro formation	Apollo 14 landing site on Imbrium ejecta	3.6S	17.5W	—	42
68	Flamsteed P	Proposed young volcanic crater & Surveyor 1 landing site	3.0S	44.0W	112	40
69	Copernicus secondary craters	Rays & craterlets near Pytheas	19.6N	19.1W	4	20
70	Humboldtianum basin	Multi-ring impact basin	57.0N	80.0E	650	7
71	Sulpicius Gallus dark mantle	Ash eruptions northwest of crater	19.6N	11.6E	12	23
72	Atlas dark-halo craters	Explosive volcanic pits on the floor of Atlas	46.7N	44.4E	87	15
73	Smythii basin	Difficult-to-observe basin scarp & mare	2.0S	87.0E	740	38, 49
74	Copernicus H	Dark-halo impact crater	6.9N	18.3W	5	31
75	Ptolemaeus B	Saucerlike depression on the floor of Ptolemaeus	8.0S	0.8W	16	44
76	W. Bond	Large crater degraded by Imbrium ejecta	65.3N	3.7E	158	4
77	Sirsalis Rille	Procellarum basin radial rilles	15.7S	61.7W	425	39, 50
78	Lambert R	A buried "ghost" crater	23.8N	20.6W	54	20
79	Sinus Aestuum	Eastern dark-mantle volcanic deposit	12.0N	3.5W	90	33
80	Orientale basin	Youngest large impact basin	19.0S	95.0W	930	50
Chart numbers refer to Antonín Rükl's *Atlas of the Moon*.						

The Lunar 100

The Lunar 100 (continued)						
L	Feature Name	Significance	Lat. (°)	Long. (°)	Diam. (km)	Rükl Chart
81	Hesiodus A	Concentric crater	30.1S	17.0W	15	54
82	Linné	Small crater once thought to have disappeared	27.7N	11.8E	2.4	23
83	Plato craterlets	Crater pits at limits of detection	51.6N	9.4W	101	3, 4
84	Pitatus	Crater with concentric rilles	29.8S	13.5W	97	54
85	Langrenus rays	Aged ray system	8.9S	60.9E	132	49
86	Prinz Rilles	Rille system near the crater Prinz	27.0N	43.0W	46	19
87	Humboldt	Crater with central peaks & dark spots	27.0S	80.9E	207	60
88	Peary	Difficult-to-observe polar crater	88.6N	33.0E	74	4, II
89	Valentine Dome	Volcanic dome	30.5N	10.1E	30	13
90	Armstrong, Aldrin & Collins	Small craters near the Apollo 11 landing site	1.3N	23.7E	3	35
91	De Gasparis Rilles	Area with many rilles	25.9S	50.7W	30	51
92	Gylden Valley	Part of the Imbrium radial sculpture	5.1S	0.7E	47	44
93	Dionysius rays	Unusual & rare dark rays	2.8N	17.3E	18	35
94	Drygalski	Large south-pole region crater	79.3S	84.9W	162	72, VI
95	Procellarum basin	The Moon's biggest basin?	23.0N	15.0W	3200	—
96	Leibnitz Mountains	Rim of South Pole-Aitken basin	85.0S	30.0E	—	73, V
97	Inghirami Valley	Orientale basin ejecta	44.0S	73.0W	140	61
98	Imbrium lava flows	Mare lava-flow boundaries	32.8N	22.0W	—	10
99	Ina	D-shaped young volcanic caldera	18.6N	5.3E	3	22
100	Mare Marginis swirls	Possible magnetic field deposits	18.5N	88.0E	—	27, III
Chart numbers refer to Antonín Rükl's *Atlas of the Moon*.						