Name	Axis	U	Period	U	Rad, km	
Mercury	0.3871	a	0.2409	y	2440	
or	57,909,000	a	88	d	2440	
Venus	0.7233	a	0.6152	y	6051	
or	108,208,000	k	224.7	d	6051	
Earth	1.0	a	1.0	y	6370	
or	149,598,023	k	365.25	d	6370	
1 Moon	385,000	k	27.3	d	1737	
the ISS	6,731	k	1.5445	h	0.09	
Hubble Telesco.	6,917	k	1.5903	h	0.006	
SOHO at L1	0.99	a	1.0	y	0.004	
SOHO from Earth	0.01	a				
Mars	1.5273	a	1.8809	y	3390	
or	227,939,200	k	686.97	d	3390	
1 Phobos	9377	k	7.66	h	1.2	
2 Diemos	23,463	k	30.35	h	6.2	
Jupiter	5.2028	a	11.862	y	69,900	
1 Io	421,700	k	1.77	d	1821	
2 Europa	670,900	k	3.55	d	1531	
3 Ganymede	1,070,400	k	7.16	d	2634	
4 Callisto	1,882,700	k	16.7	d	2410	
5 Amalthea	181,400	k	12	h	83.5	
6 Himalia	11,388,690	k	248.3	d	170	
7 Elara	11,740,000	k	260	d	43	
8 Pasiphae	23,624,000	k	708	d	20	
9 Sinope	23,939,000	k	724.5	d	19	
10 Lysithea	11,740,560	k	259.89	d	5.7	

Name	Axis	U	Period	U	Rad, km	
11 Carme	23,404,000	k	702.28	d	23	
12 Ananke	21,276,000	k	610.5	d	14	
13 Leda	11,165,000	k	240.9	d	10	
14 Thebe	221,889	k	16.2	h	49.3	
15 Adrastea	129,000	k	7.2	h	20	
16 Metis	128,000	k	7.08	h	9	
17 Callirrhoe	24,102,000	k	758.82	d	4.3	
18 Themisto	7,393,216	k	130	d	8	
19 Megaclite	23,806,000	k	752.8	d	2.5	
20 Taygete	22,438,648	k	686.67	d	2.5	
21 Chaldene	22,713,444	k	639.33	d	8	
22 Harpalyke	21,105,000	k	623.3	d	8	
23 Kalyke	23,180,773	k	721.02	d	2.5	
24 Iocaste	20,722,566	k	609.43	d	4	
25 Erinome	22,986,268	k	711.96	d	1.5	
26 Isonoe	23,800,647	k	750.13	d	8	
27 Praxidike	20,823,948	k	613.9	d	3.5	
28 Autonoe	21,264,445	k	772.17	d	8.8	
29 Thyone	21,405,570	k	539.8	d	8	
30 Hermippe	21,182,086	k	629.81	d	7.8	
31 Aitne	22,285,161	k	679.64	d	8	
32 Eurydome	23,230,858	k	723.36	d	8.2	
33 Euanthe	20,404,854	k	598.09	d	8.3	
34 Euporie	19,088,134	k	538.89	d	8.2	
35 Orthosie	20,567,971	k	602.62	d	8.4	
36 Sponde	24,252,627	k	771.6	d	8.4	
37 Kale	23,217,000	k	729.5	d	8.2	
38 Pasithae	23,307,318	k	726.93	d	8.4	
39 Hegemone	23,702,511	k	2.041	d	8.2	
40 Mneme	21,129,786	k	627.48	d	8.2	
41 Aoede	23,044,175	k	714.66	d	7.8	
42 Thelxinoe	21,162,000	k	628.1	d	8.1	
43 Arche	23,717,051	k	746.19	d	8.2	
44 Kallichore	23,111,823	k	717.81	d	8.2	
45 Helike	20,540,266	k	601.4	d	8.1	
46 Carpo	17,144,873	k	458.62	d	8.1	

Name	Axis	U	Period	U	Rad, km	
47 Eukelade	23,483,694	k	235.2	d	8	
48 Cyllene	23,396,269	k	731.1	d	8.2	
49 Kore	23,345,093	k	723.72	d	8.3	
50 Herse	22,134,306	k	672.75	d	8.3	
53 Dia	12,570,424	k	287.93	d	8.2	
60 Eupheme	21,199,710	k	627.8	d	1	
Jupiter has lost and found moons over time						
J Halo ring	92,000	k				
Main ring	122,500	k				
Amalthea ring	129,000	k				
Thebe ring	182,000	k				
outer edge	226,000	k				
Saturn	9.5388	a	29.458	y	58,200	
1 Mimas	185,540	k	0.942	d	198	
2 Encedelas	238,040	k	1.37	d	521	
3 Tethys	294,670	k	1.888	d	531	
4 Dione	377,420	k	2.737	d	561	
5 Rhea	527,070	k	4.518	d	764	
6 Titan	1,221,870	k	15.95	d	2575	
7 Hyperion	1,481,009	k	21.276	d	270	
8 Iapetus	3,560,840	k	79.33	d	1469	
9 Phoebe	12,947,780	k	550.31	d	107	
10 Janus	151,460	k	0.695	d	90	
11 Epimetheus	151,410	k	0.694	d	58	
12 Helene	377,420	k	2.737	d	18	
13 Telesto	294,710	k	1.888	d	12.4	
14 Calypso	294,710	k	1.888	d	10.7	
15 Atlas	137,670	k	14.44	h	15	
16 Prometheus	139,380	k	14.7	h	43	
17 Pandora	141,720	k	0.629	d	30	
18 Pan	133,580	k	0.575	d	14	
19 Ymir	23,040,000	k	1315.1	d	9	
20 Paaliaq	15,200,000	k	686.95	d	11	

Name	Axis	U	Period	U	Rad, km	
21 Tarvos	17,983,000	k	926.2	d	7.5	
22 Ijiraq	11,124,000	k	451.42	d	6	
23 Suttingr	19,459,000	k	1016.7	d	3.5	
24 Kiviuq	11,110,000	k	449.22	d	8	
25 Mundilfari	18,628,000	k	952.77	d	3.5	
26 Albiorix	16,182,000	k	783.45	d	16	
27 Skathi	15,540,000	k	728.2	d	4	
28 Erriapus	17,343,000	k	871.19	d	5	
29 Siarnaq	17,531,000	k	895.53	d	20	
30 Thrymr	20,314,000	k	1094.1	d	3.5	
31 Narvi	19,007,000	k	1003.9	d	3.5	
32 Methone	194,440	k	1.01	d	1.6	
33 Pallene	212,280	k	0.1154	d	2.5	
34 Polydeuces	377,200	k	2.737	d	1.3	
35 Daphnis	136,500	k	0.594	d	3.8	
36 Aegir	20,751,000	k	1117.5	d	3	
37 Bebhionn	17,119,000	k	834.84	d	3	
38 Bergelmir	19,336,000	k	1005.7	d	3	
39 Bestia	20,192,000	k	1088.7	d	3.5	
40 Farbuti	20,377,000	k	1088.7	d	2.5	
41 Fenrir	22,454,000	k	1260.4	d	2	
42 Fornjot	25,146,000	k	1494.2	d	3	
43 Hati	19,846,000	k	1038.6	d	3	
44 Hyrrokkin	18,437,000	k	931.86	d	4	
45 Kari	22,089,000	k	1231	d	3.5	
46 Loge	23,058,000	k	1311.4	d	3	
47 Skoll	17,665,000	k	878.29	d	3	
48 Surtur	22,704,000	k	1297.4	d	3	
49 Anthe	197,700	k	1.0509	d	0.9	
50 Jarnsaxa	18,811,000	k	964.74	d	3	
51 Greip	18,206,000	k	921.19	d	3	
52 Tarqeq	17,910,000	k	894.86	d	3.5	
53 Aegaeon	167,500	k	0.808	d	0.33	
X S/2004 S12	19,878,000	k	1046.2	d	2.5	
X S/2004 S13	18,404,000	k	933.48	d	3	
X S/2006 S1	18,790,000	k	963.37	d	3	

Name	Axis	U	Period	U	Rad, km	
X S/2007 S2	16,725,000	k	808.08	d	3	
X S/2007 S3	18,795,000	k	977.8	d	1.5	
D ring	66,900	k				
C ring	74,658	k				
B ring	92,000	k				
Cassini division	117,580	k				
A ring	122,700	k				
F ring	140,180	k				
G ring	166,000	k				
E ring	180,000					
Uranus	19.1914	a	84.01	y	25,400	
1 Ariel	191,020	k	2.52	d	579	
2 Umbriel	266,000	k	4.144	d	585	
3 Titania	435,910	k	8.71	d	789	
4 Oberon	583,520	k	13.46	d	761	
5 Miranda	129,390	k	1.41	d	236	
6 Cordelia	49,751	k	8	h	20	
7 Ophelia	53,763	k	9	h	21	
8 Bianca	59,165	k	10.46	h	64	
9 Cressida	61,767	k	11.1	h	40	
10 Desdemona	62,658	k	11.4	h	32	
11 Juliet	64,358	k	11.8	h	47	
12 Portia	66,097	k	12.3	h	68	
13 Rosalind	69,926	k	13.4	h	36	
14 Belinda	75,256	k	15	h	40	
15 Puck	86,004	k	18.3	h	81	
16 Caliban	7,231,000	k	579.7	d	36	
17 Sycorax	12,179,000	k	1288.3	d	83	
18 Prospero	16,256,000	k	1978	d	25	
19 Setebos	17,418,000	k	2225	d	24	
20 Stephano	8,004,000	k	677.4	d	16	
21 Trincolo	8,504,000	k	749.2	d	9	
22 Francisco	4,276,000	k	266.6	d	11	

Name	Axis	U	Period	U	Rad, km	
23 Margaret	14,345,000	k	1687	d	10	
24 Ferdinand	20,901,000	k	2887.2	d	3	
Uranus inner	38,000	k				
Uranus outer	98,000	k				
Neptune	30.0611	a	164.79	y	24,600	
1 Triton	354,759	k	5.9	d	1353	
2 Nereid	5,513,787	k	360.1	d	357	
3 Naiad	48,224	k	7.07	h	96	
4 Thalassa	50,074	k	7.5	h	41	
5 Despina	52,526	k	8.03	h	152	
6 Galatea	61,953	k	10	h	87	
7 Larissa	73,548	k	13	h	97	
8 Proteus	117,647	k	1.1	d	210	
9 Halimede	16,611,000	k	1879.1	d	31	
10 Psamathe	46,705,000	k	9129	d	19	
11 Sao	22,228,000	k	2912.7	d	22	
12 Laomedeia	23,613,000	k	3171.3	d	21	
13 Neso	49,500,000	k	9740.7	d	60	
14 Hippocamp	105,284	k	22.47	h	17	
NNG has 50						
Galle ring	41,000	k				
Lassel ring	53,000	k				
LeVerrier ring	53,200	k				
Arago ring	57,200	k				
Adams ring	62,930	k				
Pluto	39.482	k	247.9	y	1188	
1 Charon	19,591	k	6.387	d	606	
2 Styx	42,656	k	20.162	d	17	
3 Nix	48,694	k	24.9	d	20	
4 Kerberos	57,783	k	32.2	d	15	

Name	Axis	U	Period	U	Rad, km	
5 Hydra	64,738	k	38.2	d	30	
Asteroids, then TNO follow						
Data for numbered asteroids to 545,000						
These 2 are Near Earth Asteroids and visited						
101955 Bennu	1.1264	a	1.196	y	0.14	
162173 Ryugu	1.1896	a	1.3	y	0.5	
1221 Amor	1.9191	a	2.66	y	0.4	
Amor group has 7427						
300 known Mercury crossers						
2,809 known Venus crossers						
230 known Earth crossers						
next 3 are Venus crossers						
1566 Icarus	1.0781	a	1.12	y	1.4	
339 Dorothea	1.2997	a	1.48	y	0.5	
25143 Itokawa	1.3241	a	1.52	y	0.5	
1864 Daedelus	1.461	a	1.77	y	1.5	
Apollo croses both Venus and Mars						
1862 Apollo	1.4702	a	1.78	y	0.75	
next 6 are Mars crossers						
1951 Lick	1.3904	a	1.64	y	3	
433 Eros	1.4579	a	1.76	y	8	
2005 HC4	1.8207	a	2.46	y	0.1	
1600 Vyssotsky	1.8488	a	2.51	y	3.5	
1221 Amor	1.9191	a	2.66	y	0.4	
Amor group has 7427						
9969 Braille	2.341	a	3.58	y	0.8	
(Mars is here)	1.5273	a				
Mars Trojans	1.5273	a			#ID:7	

Name	Axis	U	Period	U	Rad, km	
Hungaria group	1.78	a				
Hungaria group	has 13,000					
434 Hungaria	1.9444	a	2.7	y	5.5	
3908 Nyx	1.92719	a	2.68	y	0.5	
Hungaria gr. end	2.0	a				
Main Belt start	2.2	a			billions?	
Main Belt end	3.2	a			#ID: 7K	
2423 Ibarruri	2.1885	a	3.24	y	3	
8 Flora	2.202	a	3.27	y	64	
Flora family has 13,000						
43 Aiadne	2.204	a	3.27	y	30	
Vesta family begin	2.26	a				
Vesta family has 15,212						
4278 Harvey	2.26676	a	3.41	y		
809 Lundia	2.28254	a	3.45	y	5	
1126 Otero	2.2723	a	3.43	y	5	
4977 Rauthgundis	2.29254	a	3.47	y		
18 Melpomene	2.296	a	3.48	y	140	
1 S1978(18)1?					19	
956 Elisa	2.2984	a	3.48	y	5	
12 Victoria	2.33344	a	3.56	y	56	
3850 Peltier	2.2342	a	3.34	y	2	
4796 Lewis	2.3554	a	3.62	y		
4188 Kitezh	2.3355	a	3.57	y		
4 Vesta	2.362	a	3.63	y	256	
2867 Steins	2.3633	a	3.63	y	3	
2442 Corbett	2.3879	a	3.69	y	4	
4434 Nikulin	2.4412	a	3.81	y		
3849 Incidentia	2.4764	a	3.9	y	5	
887 Alinda	2.4788	a	3.9	y	1	
Alinda group has 23 others						

Name	Axis	U	Period	U	Rad, km	
sone have 4:1 resonance with Earth as NEA						
145 Adeona	2.67354	a	4.37	y	75	
446 Aeternitas	2.7865	a	4.65	y	23	
289 Nennetta	2.8738	a	4.87	y	140	
7 Iris	2.385	a	3.68	y	107	
9 Metis	2.387	a	3.68	y	95	
5379 Abehiroshi	2.4	a	3.71	y		
25 Phocaea	2.4	a	3.72	y	31	
20 Massalia	2.4088	a	3.74	y	73	
Nysa family begin	2.41	a				
142 Polana	2.4189	a	3.76	y	28	
44 Nysa	2.4238	a	3.77	y	30	
6 Hebe	2.426	a	3.78	y	93	
135 Hertha	2.4279	a	3.78	y	38	
21 Lutetia	2.435	a	3.8	y	49	
19 Fortuna	2.441	a	3.81	y	103	
2391 Tomita	2.4408	a	3.81	y	4.6	
42 Isis	2.442	a	3.82	y	51	
750 Oskar	2.4442	a	3.82	y	10	
11 Parthenope	2.453	a	3.84	y	77	
2984 Chaucer	2.4702	a	3.88	y	13	
Vesta family end	2.48	a				
Nysa family end	2.5	a				
Kirkwood Gap	2.5	a				
29 Amphirite	2.5556	a	4.09	y	95	
5 Astraea	2.5735	a	4.13	y	60	
13 Egeria	2.577	a	4.14	y	103	
23 Thalia	2.628	a	4.26	y	53	
15 Eunomia	2.643	a	4.3	y	128	
Eunomia family has 6,000						
26 Proserpina	2.656	a	4.33	y	44	
1036 Ganymed	2.6629	a	4.35	y	16	
3 Juno	2.6707	a	4.365	y	136	
324 Bamberga	2.6823	a	4.39	y	110	

Name	Axis	U	Period	U	Rad, km	
64 Angelina	2.684	a	4.4	y	50	
34 Circe	2.686	a	4.4	y	56	
2234 Schmadel	2.7006	a	4.44	y		
103 Hora	2.701	a	4.44	y	45	
54 Alexandra	2.712	a	4.47	y	77	
45 Eugenia	2.7200	a	4.49	y	101	
1 Petit Prince	1184	a	4.8d	d	13	
410 Chloris	2.724	a	4.5	y	62	
128 Nemesis	2.75	a	4.56	y	81	
55 Pandora	2.76	a	4.58	y	35	
2732 Witt	2.7606	a	4.59	y	6	
Witt family	has > 1,500					
41 Daphne	2.765	a	4.6	y	87	
1 Ceres	2.766	a	4.599	y	470	
88 Thisbe	2.768	a	4.6	y	102	
2 Pallas	2.77092	a	4.613	y	256	
532 Herculina	2.7733	a	4.62	y	111	
Kirkwood Gap	2.82	a				
243 Ida	2.861	a	4.84	y	16	
1 Dactyl	90	k	20h	h	0.6	
Koronis family	has 5949					
167 Urda	2.861	a	4.84	y	20	
534 Nassovia	2.8867	a	4.9	y	17	
321 Florentina	2.887	a	4.9	y	14	
720 Bohlinia	2.8873	a	4.91	y	17	
158 Koronis	2.8686	a	4.86	y	18	
1223 Neckar	2.8686	a	4.86	y	12	
277 Elvira	2.88422	a	4.9	y	18	
263 Dresda	2.886	a	4.91	y	18	
208 Lacrimosa	2.8932	a	4.92	y	21	
311 Claudia	2.89793	a	4.93	y	12	
22 Kalliope	2.9112	a	4.97	y	83	
16 Psyche	2.921	a	4.99	y	256	
Kirkwood Gap	2.95	a				
Eos family begin	2.99	a				
876 Scott	3.0085	a	5.22	y	13.7	

Name	Axis	U	Period	U	Rad, km	
742 Edisona	3.0107	a	5.22	y	23	
798 Ruth	3.0146	a	5.23	y	22	
639 Latona	3.0167	a	5.24	y	18	
890 Waltraut	3.02	a	5.25	y	13.7	
633 Zelima	3.0227	a	5.26	y	17	
221 Eos	3.01044	a	5.22	y	52	
339 Dorothea	3.01176	a	5.23	y	19	
669 Kypria	3.0146	a	5.23	y	16	
653 Berenike	3.01609	a	5.24	y	20	
513 Centisima	3.0163	a	5.24	y	25	
661 Cloelia	3.0166	a	5.24	y	24	
450 Brigitta	3.01733	a	5.24	y	17	
562 Salome	3.0183	a	5.24	y	15	
451 Antikleia	3.02523	a	5.26	y	17	
Eos family end	3.03	a				
704 Interamnia	3.0575	a	5.35	y	166	
Hygeia family start	3.06	a				
451 Patienta	3.0616	a	5.36	y	113	
423 Diotima	3.0677	a	5.37	y	104	
52 Europa	3.101	a	5.46	y	152	
Themis family start	3.08	a				
48 Doris	3.11	a	5.49	y	108	
120 Lachesis	3.1177	a	5.5	y	87	
75 Ursala	3.1236	a	5.52	y	90	
24 Themis	3.1236	a	5.52	y	90	
10 Hygeia	3.129	a	5.54	y	49	
259 Aletheia	3.135	a	5.55	y	89	
572 Palma	3.1513	a	5.59	y	94	
31 Euphrosyne	3.1554	a	5.61	y	134	
94 Aurora	3.16	a	5.62	y	102	
511 Davida	3.1647	a	5.63	y	145	
702 Alauda	3.1953	a	5.71	y	125	
863 Benkoela	3.2004	a	5.73	y	140	
Hygeia family end	3.24	a				
Themis family end	3.24	a				
Kirkwood Gap	3.27	a				

Name	Axis	U	Period	U	Rad, km	
65 Cybele	3.4283	a	6.35	y	113	
121 Hermione	3.4478	a	6.4	y	95	
87 Sylvia	3.49	a	6.52	y	143	
1 Romulus	1351	a	3.6d	d	11	
2 Remus	706	k	1.4d	d	7	
17 Thetis	2.4712	a	3.88	y	42	
107 Camilla	3.4912	a	6.52	y	100	
1 - unnamed					6	
2 - unnamed					2	
2015 BZ509	5.1394	a	11.65	y	3	
(Jupiter is here)	5.2028	a				
Greeks - belt	5.2028	a				
617 Patroclus	5.2167	a	11.92	y	70	
Trojans - belt	5.2028	a		y	# >7000	
624 Hektor	5.2571	a	12.05	y	110	
153 Hilda	3.98	a	7.94	y	170	
following are Centaurs						
944 Hidalgo	5.741	a	13.76	y	19	
Narcissus	6.878	a	18.04	y	6	
Okyrhoe	8.372	a	24.23	y	18	
15504 unnamed	9.378	a	28.75	y	7	
(Saturn is here)	9.5388	a				
Thereus	10.64	a	34.7	y	43	
Echelus	10.7	a	35.04	y	30	
Damocles	11.826	a	40.67	y	4	
Elatus	11.79	a	40.52	y	29	
2060 Chiron	13.648	a	50.42	y	83	
Chariklo	15.822	a	62.93	y	252	
1st ring	396	k				
2nd ring	405	k				

Name	Axis	U	Period	U	Rad, km	
Bienor	16.44	a	66.8	y	44	
Asbolus	17.99	a	76.4	y	33	
(Uranus is here)	19.1914	a				
Pelion	19.96	a	89.25	y	14	
Dioretsa	23.9	a	116.91	y	3	
Nessus	24.67	a	122.7	y	21	
Hylonome	25.152	a	126.14	y	33	
Amycus	25.1	a	125.74	y	50	
Cyllarus	26.06	a	133.06	y	23	
Pholus	20.393	a	92.09	y		
(Neptune is here)	30.0611	a			TNO's	
2002 XW93	37.36	a	228.36	y	283	
2005 RN43	41.36	a	266	y	340	
2004 GV9	42.173	a	273.9	y	340	
Orcus	39.174	a	245.2	y	458	
1 Vanth	9	k	9.5d	d	221	
2003 AZ84	39.362	a	247	y	353	
2002 XV93	39.416	a	247.47	y	275	
Ixion	39.82	a	251.25	y	309	
2002 MS4	42.044	a	272.62	y	383	
Salacia	42.184	a	274	y	423	
2002 UX25	42.49	a	277	y	332	
Varuna	42.72	a	279.2	y	334	
Haumea	43.182	a	283.77	y	780	
1 Hi'iaka	49,880	a	49.1	y	160	
Quaoar	43.694	a	288.8	y	560	
Albion	43.779	a	289.67	y	108	
Sila	44.1157	a	293.02	y	125	
Ultima Thule	44.581	a	297.67	y	5	
2010 KZ39	45.4	a	305.86	y	299	
MakeMake	45.43	a	306.21	y	715	
1 unnamed					190	
Chaos	45.8	a	309.92	y	300	
Varda	46.11	a	313.1	y	384	
1 Ilmare	4809	a	5.8	d	180	

Name	Axis	U	Period	U	Rad, km	
2002 AW197	47.042	a	322.65	y	30	
2010 RF43	49.426	a	347.5	y	306	
2014 EZ51	52.525	a	380.7	y	313	
2002 TC302	55.265	a	410.86	y	292	
2014 AN55	55.92	a	418.18	y	292	
2004 XR190	57.255	a	433.24	y	278	
2013 FY27	58.66	a	449.3	y	370	
2008 OG19	66.29	a	539.73	y	310	
2006 QH181	67.235	a	551.31	y	304	
Gonggong	67.471	a	554.2	y	615	
Eris	67.864	a	559.07	y	1163	
1 Dysnomia	37,330	k	15.8	d	350	
Gikunii homdima	72.722	a	620.17	y	321	
2010 JO179	79.141	a	704.06	y	299	
2015 RR245	81.373	a	734	y	313	
2014 UZ224	108.2	a	1125.2	y	318	
2018 VG18	114.3	a	1223	y	328	
2012 VP113	257.67	a	4136.2	y	299	
Sedna	484.44	a	10,663	y	498	
Kuiper Belt end	50	a				
Oort Cloud begin	200	a				
comets follow						
Enke's Comet	2.2178	a	3.3	y	2.4	
Kobayashi's	8.588	a	25.17	y		
Halley's Comet	17.834	a	75.32	y	5.5	
McNaught 2006	2050	a	92,600	y		
ATLAS	331	a	6,026	y		
Sun					396,430	
table compiled by David Michalets						
for personal reference						
most data from Wikipedia						
Saturn moon numbers from brittanica inconsistent with Wikipedia						

Name	Axis	U	Period	U	Rad, km	
Terr.Planet = Terrestrial Planet						
Dwarf Pl. C = Dwarf Planet Candidate						
PMoon = Planetary Mass Moon						
PG = Prograde, RG = Retrograde						
MR = Moon Rotates, not Synchronous Rotation						
TNO = Trans Neptunian Object						
MBMoon = Minor Body Moon						
NEA = Near Earth Asteroid						
AAG = Apollo Asteroid Group - NEA						
AmAG = Amor Asteroid Group - NEA						
HAG = Hilda Asteroid group						
75% of main asteroid belt are of dark cabon C-type						
17% of main asteroid belt are of stony-type						
6% of main asteroid belt are of Vesta-type						
Hungaria group has E-type						
JAG = Jupiter Ananke group						
JPG = Jupiter Pasiphae group						
STM =Saturn Trojan Moon with another moon						
SGG = Saturn Gallic Group						
SIG = Saturn Inuit Group						
SNG =Saturn Norse Group						
UIG = Uranus Irregular Group						
NNG = Neptune Nereid Group						
a=albedo, e= or ecc= eccentricity						
reson.= resonance with Jupiter						
axis units are AU or km; period units are day,hour,year						
Note:						
Accuracy cannot be guaranteed with keyboard entries						