Table III-4b. Orbital and physical parameters of satellites.

	a (10^3km)	p (days)	r (km)	m (10^{24}g)	ρ (ρ^0) (g/cm^3)	Albedo	Surface composition[b]
Earth (1)							
Moon	384	27.3	1738	73.5	3.34	0.12	basalts
Mars (2)							
Phobos	9.38	0.319	~11[a]	1.3×10^{-3}	2.0±0.5	0.06	cc
Deimos	23.5	1.26	~6[a]	1.8×10^{-4}	1.9±0.5	0.06	cc
Jupiter (≥17)							
Io	422	1.77	1815	89.2	3.55(3.4)	0.6	sulfur, SO_2
Europa	671	3.55	1570	48.7	3	0.6	ice
Ganymede	1070	7.16	2640	149	1.9(~1.4)	0.4	dirty ice
Callisto	1880	16.7	2410	106	1.8(~1.4)	0.2	dirty ice
Saturn (≥24)							
Mimas	186	0.942	195	0.038	1.4±0.2	0.77	ice
Enceladus	238	1.37	250	0.074	1.2±0.5	1	~pure ice
Tethys	295	1.89	525	0.63	1.2±0.1	0.8	ice
Dione	377	2.74	560	1.05	1.4±0.1	0.55	ice
Rhea	527	4.52	765	2.3	1.2±0.1	0.65	ice
Titan	1222	15.95	2560	136	1.9(~1.4)	0.2	dirty ice; N_2(g)
Iapetus	3561	79.3	720	1.93	1.2±0.1	0.5/0.06	ice/cc
Uranus (≥15)							
Miranda	130	1.41	242	0.071	1.3±0.4	0.22	dirty ice
Ariel	192	2.52	580	1.44	1.7±0.3	0.4	dirty ice
Umbriel	267	4.14	595	1.18	1.4±0.2	0.16	dirty ice
Titania	438	8.71	800	3.43	1.6±0.1	0.23	dirty ice
Oberon	586	13.46	775	2.87	1.5±0.1	0.2	dirty ice
Neptune (≥8)							
Triton	354	5.88	1360	~140	2.02	0.4	CH_4 + hydro-carbon + N_2 ice
Nereid	5520	360	~200			0.1	
Pluto (≥1)							
Charon	19.1	6.39	~595		~2		CH_4 + hydro-carbon + N_2 ice

a: Phobos and Deimos are ellipsoidal with principal axes of 13.5×10.5×9 and 7.5×6×5 respectively. b: surface compositions are deduced from the spectral reflectance curves of satellites. cc = carbonaceous chondrite; ice = water ice unless specified, and always mixed with various amount of carbonaceous chondrite materials. The distinction between ice and dirty ice is arbitrarily set at the surface albedo of 0.5. Number in parenthesis behind each planet indicates the number of satellites so far discovered. Density values in parenthesis are at one atmosphere pressure. Data are mostly from Farinolia (1987) and Burns (1986).