Table 9. Photon energies (E_P's) and orbital radii (r/R_s) used for the construction of Figs. 13,16,17 and 18. The individual pairings of E_p's and r/R_s's are determined by first pairing Ep(7,∞) with the inner radius of the A ring and the inner and outer radius of the C ring. Then the other pairings automatically fall into place.

Satellite or Ring Edge Name	[i][a]	r/R_s[b]	n_f, n_i[c]	$E_p(n_f, n_i)$[c] (cm^{-1})
Saturn's Equatorial radius		1.000		
Inner Edge D ring	[29]	1.110	6,∞	3048.3
D68 ringlet	[28]	1.122[d]	5,9	3034.7
D72 ringlet	[27]	1.187[d]	5,8	2674.8
D73 ringlet	[26]	1.216[d]	4,5	2469.1
Outer Edge D ring		1.236		
Inner Edge C ring	[25]	1.239	7,∞	2239.5
Titan ringlet in Colombo Gap	[24]		5,7	2149.9
Titan ringlet in Colombo Gap	[24]		6,11	2141.3
Average Titan ringlet $E_p's$	[24]	1.292		2145.7
Maxwell ringlet in Maxwell Gap	[23]		6,11	2141.3
Maxwell ringlet in Maxwell Gap	[23]		5,7	2149.9
Average Maxwell ringlet $E_p's$	[23]	1.452		2145.7
Outer Edge C ring	[22]	1.526	7,∞	2239.5
Inner Edge B ring		1.526		
Outer Edge B ring		1.950		
Huygens ringlet in Huygens Gap	[21]	1.955[e]	6,13	2398.9
Laplace ringlet in Laplace Gap	[20]	1.992[e]	6,12	2286.2
Inner Edge A ring	[1]	2.030	7,∞f	2239.5
Pan in Encke Gap	[2]		5,7	2149.9
Pan in Encke Gap	[2]		6,11	2141.4
Average Pan E_p's	[2]	2.217		2145.7
Daphnis and Keeler Gap	[3]	2.265	7,20	1965.2
Outer Edge A ring		2.270		

[a] Indices in Tables 7, 8 and 9 & Figs. 12, 13 and 15.

[b] Orbital radii of satellites and rings in units of the equatorial radius of Saturn and from NASA (2021) except as otherwise noted. These orbital radii are transformed with Eq. (8) to give (r/R_s)' values used in Fig. (18).

[c] The quantum numbers that define transitions in the hydrogen atom and photon energies associated with these transitions.

[d] Hedman et al. (2007)b

[e] French et al. (2020) their Fig. 2