Table 1: Photoreaction rates and excess energies of selected exospheric species for quiet and active Sun conditions at 1 AU heliocentric distance, based on [**?**]. Values in brakets indicate the use of experimental data for particle cross-sections.

	Reaction	Quiet Sun		Active Sun	
		Ionization Rate $[10^{-7}\mathrm{s}^{-1}]$	Excess Energy [eV]	Ionization Rate $[10^{-7}\mathrm{s}^{-1}]$	Excess Energy [eV]
1	$H + \nu \longrightarrow H^+ + e^-$	0.726	3.54	1.720	3.97
2	$H_2 + \nu \longrightarrow H(1\,s) + H(1\,s)$	0.480	8.23	1.090	8.22
	$H_2 + \nu \longrightarrow H(1\,s) + H(2\,s, {}_2p)$	0.344	0.44	0.821	0.42
	$H_2 + \nu \longrightarrow {H_2}^+ + e^-$	0.541	6.56	1.150	7.17
	$H_2 + \nu \longrightarrow H + H^+ + e^-$	0.095	24.80	0.279	27.00
	Σ	1.460		3.340	
4	$He + \nu \longrightarrow He^+ + e^-$	0.525	15.50	1.510	17.80
17	$OH + \nu \longrightarrow O(3\,p) + H$	(120.00) 65.400	(2.00) 1.27	(138.00) 71.700	(2.14) 1.43
	$OH + \nu \longrightarrow O(1\,d) + H$	(70.10) 6.350	(7.73) 7.90	(176.00) 15.100	(7.74) 7.88
	$OH + \nu \longrightarrow O(1\,s) + H$	(8.33) 0.671	(10.00) 9.80	(21.10) 1.640	(10.00) 9.94
	$OH + \nu \longrightarrow OH^+ + e^-$	(2.43) 2.470	(19.40) 19.10	(6.43) 6.520	(23.60) 23.50
	Σ	(200.86) 74.891		(341.53) 94.960	
18	$H_2O + \nu \longrightarrow OH + H$	103.000	3.42	176.000	4.04
	$H_2O + \nu \longrightarrow H_2 + O(1\,d)$	5.970	3.84	14.800	3.94
	$H_2O + \nu \longrightarrow H + H + O$	7.550	0.70	19.100	0.70
	$H_2O + \nu \longrightarrow {H_2O}^+ + e^-$	3.310	12.40	8.280	15.20
	$H_2O + \nu \longrightarrow H + {OH}^+ + e^-$	0.554	18.60	1.510	23.20
	$H_2O + \nu \longrightarrow H_2 + O^+ + e^-$	0.059	36.50	0.221	39.80
	$H_2O + \nu \longrightarrow OH + H^+ + e^-$	0.131	25.00	0.407	30.50
	Σ	120.574		220.318	
39	$Ar + \nu \longrightarrow Ar^+ + e^-$	3.050	10.10	6.900	12.80