Reaction : ^{28}Si(p,γ)^{29}P

Parameters for the resonances at $357 \leq E_r \leq 2778$ keV are obtained from NE60, OK60b, VA61, EJ64, EN66, BE70, ZU71, BA73b, BY74, AL75b, RI79, TE79 and GR90. Tail contributions are also taken into account. The non-resonant contribution is calculated by using the S-factor reported by GR90. Above $T_9 = 3$, HF estimates are used following the procedure explained in Sect. 2.5. The difference between the adopted rates and the CA88 ones are probably due to the different resonance parameters used here. At low temperatures, where the direct capture contribution is significant, the differences are larger.

E_r (keV)	J^π	$\omega\gamma$ (meV)					
		BY74	RI79	GR90	others	adopt	
357 ± 4	$5/2^+$	1.3 ± 0.3	2.7 ± 0.2	1.7 ± 0.4	2.3 ± 0.3 [OK60b] 2.3 ± 0.4 [VA61] 1.6 ± 0.2 [EN66]	2.0 ± 0.2	I
698.9 ± 0.7	$7/2^-$	0.21 ± 0.08		0.15 ± 0.03	≤ 2 [VA61] 0.34 ± 0.06 [ZU71] ≤ 0.23 [BA73] 0.12 ± 0.04 [AL75b]	0.17 ± 0.04	M
1332.6 ± 0.5	$7/2^+$	30 ± 6	43 ± 4	29 ± 5	$7.7 \pm 4^*$ [EJ64] $13.5 \pm 3^*$ [ZU71]	36.3 ± 2.8	M
1595 ± 0.7	$3/2^-$	2500 ± 400	4200 ± 340	2500 ± 400	3400 ± 700 [NE60] 3600 ± 800 [VA61] 4000 ± 1000 [EJ64] 3100 ± 500 [TE79] 3600 ± 800 [KI85]	3300 ± 270	M
1894 ± 1					0.45 ± 0.13 [NE60]	0.45 ± 0.13	M
2012.4 ± 1.3	$1/2^+$	410 ± 60	440 ± 70	440 ± 70	430 ± 200 [NE60] 420 ± 80 [VA61] 320 ± 100 [EJ64] 530 ± 100 [TE79] 540 ± 200 [KI85]	430 ± 30	M
2206.9 ± 1.5	$5/2^+$	220 ± 50			130 ± 50 [KA75]	180 ± 50	M
2545 ± 2	$7/2^+$	50 ± 10			320 ± 100 [KA75]	50 ± 10	M
2779 ± 10	$1/2^-$			2500 ± 400	≤ 2000 [EJ64] 2700 ± 1700 [TE79] 3100 ± 400 [KI85]	2800 ± 300	M
2994 ± 2	$7/2^-$				460 ± 70 [EJ64]	460 ± 70	M

*disregarded

T_9	low	adopt	high	exp	ratio	T_9	low	adopt	high	exp	ratio	T_9	low	adopt	high	exp	ratio
0.03	3.02	5.97	11.9	-25	8.1	0.18	3.60	4.18	4.82	-7	0.9	1.5	1.14	1.29	1.48	1	0.9
0.04	3.34	6.61	13.1	-22	9.0	0.2	3.10	3.59	4.11	-6	0.9	1.75	1.61	1.87	2.21	1	0.8
0.05	4.86	9.63	19.1	-20	10	0.25	1.43	1.64	1.86	-4	0.9	2	2.47	2.93	3.58	1	0.7
0.06	2.16	4.29	8.52	-18	11	0.3	1.74	1.98	2.24	-3	0.9	2.5	6.43	7.86	10.1	1	0.6
0.07	4.48	8.87	17.6	-17	12	0.35	1.00	1.14	1.28	-2	0.9	3	1.48	1.85	2.46	2	0.6
0.08	0.55	1.08	2.14	-15	13	0.4	3.64	4.11	4.60	-2	1.0	3.5	1.98	2.75	4.01	2	0.5
0.09	4.59	9.01	17.8	-15	12	0.45	0.97	1.09	1.22	-1	0.9	4	2.51	3.82	5.98	2	0.4
0.1	3.56	6.44	12.0	-14	4.6	0.5	2.09	2.35	2.62	-1	1.0	5	3.64	6.51	11.2	2	0.4
0.11	4.40	6.33	9.66	-13	1.6	0.6	6.36	7.14	7.94	-1	1.0	6	4.82	9.92	18.3	2	0.4
0.12	6.82	8.55	11.0	-12	1.1	0.7	1.36	1.52	1.69	0	1.0	7	0.60	1.41	2.73	3	0.5
0.13	8.21	9.88	11.9	-11	1.0	0.8	2.34	2.62	2.91	0	1.0	8	0.73	1.90	3.83	3	0.6
0.14	7.13	8.45	9.96	-10	1.0	0.9	3.51	3.92	4.35	0	1.0	9	0.86	2.48	5.14	3	0.7
0.15	4.64	5.46	6.38	-9	0.9	1	4.77	5.33	5.92	0	1.0	10	1.01	3.16	6.70	3	0.8
0.16	2.39	2.79	3.24	-8	0.9	1.25	7.99	8.97	10.0	0	1.0						