^{54}Cr(p,p),(p,n),(p,γ) res 1971Mo28,1973Pe07

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Huo Junde	NDS 109, 787 (2008)	30-Apr-2007

1971Mo28: E=1.8-2.9 MeV; enriched targets (98%, 3 μg/cm^2), carbon backings (10 μg/cm^2); surface-barrier detector for protons (total resolution of 350 eV); BF_3 counters for neutrons; measured σ(E(p); E) in (p,p) and (p,n) reactions; multichannel and multilevel R-matrix analyses;

1973Pe07: E=1.98-2.02 MeV; the same authors as 1971Mo28; studied ^{54}Cr(p,p), (p,p′γ), and (p,γ) in the vicinity of fragmented analog of the ground state of ^{55}Cr; measured excitation functions;

See also 1971Mo16.

^{55}Mn Levels

E(level)[†]	J$^{\pi}$[&]	Comments
S(p)+1983.3[‡]	3/2$^-$	Γ_p=10 eV *5*, Γ_γ=1.62 eV.
S(p)+1986.7[‡]	3/2$^-$	Γ_p=115 eV *10*, Γ_γ=1.03 eV.
S(p)+1992.0[‡]	3/2$^-$	Γ_p=20 eV *5*, Γ_γ=0.25 eV.
S(p)+2001.2[‡]	3/2$^-$	Γ_p=40 eV *5*, Γ_γ=0.41 eV.
S(p)+2005.2[‡]	3/2$^-$	Γ_p=20 eV *5*, Γ_γ=0.43 eV.
S(p)+2006.9[‡]	3/2$^-$	Γ_p=25 eV *5*, Γ_γ=0.30 eV.
S(p)+2008.4[‡]	3/2$^-$	Γ_p=55 eV *5*, Γ_γ=1.07 eV.
S(p)+2010.8[‡]	3/2$^-$	Γ_p=65 eV *5*, Γ_γ=0.48 eV.
S(p)+2041.5	1/2$^+$	Γ_p=30 eV *5*.
S(p)+2060.5	1/2$^+$	Γ_p=10 eV *5*.
S(p)+2068.4	1/2$^+$	Γ_p=30 eV *5*.
S(p)+2084.6	1/2$^+$	Γ_p=25 eV *5*.
S(p)+2145.4	1/2$^+$	Γ_p=100 eV *15*.
S(p)+2166.6	1/2$^+$	Γ_p=30 eV *5*.
S(p)+2179.8	1/2$^+$	Γ_p=30 eV *5*.
S(p)+2189.0	1/2$^+$	Γ_p=10 eV *5*.
S(p)+2203.6	1/2$^+$	Γ_p=60 eV *10*.
S(p)+2224.0	1/2$^+$	Γ_p=35 eV *5*.
S(p)+2228.5	1/2$^+$	Γ_p=15 eV *5*.
S(p)+2232.6	1/2$^+$	Γ_p=30 eV *5*.
S(p)+2241.0	1/2$^+$	Γ_p=80 eV *10*.
S(p)+2256.4	1/2$^+$	Γ_p=25 eV *5*.
S(p)+2259.9[#]	1/2$^-$	Γ_p=70 eV *10*.
S(p)+2264.2[#]	1/2$^-$	Γ_p=195 eV *20*.
S(p)+2266.4	1/2$^+$	Γ_p=10 eV *5*.
S(p)+2267.9[#]	1/2$^-$	Γ_p=75 eV *10*.
S(p)+2270.3[#]	1/2$^-$	Γ_p=5 eV *5*.
S(p)+2274.6[#]	1/2$^-$	Γ_p=45 eV *5*.
S(p)+2279.9	1/2$^+$	Γ_p=125 eV *15*.
S(p)+2286.1	1/2$^+$	Γ_p=50 eV *5*.
S(p)+2295.4	1/2$^+$	Γ_p=70 eV *10*.
S(p)+2301.0	1/2$^+$	Γ_p=50 eV *5*.
S(p)+2310.0	1/2$^+$	Γ_p=35 eV *5*, Γ_n=5 eV *5*.
S(p)+2313.2	1/2$^+$	Γ_p=45 eV *5*, Γ_n=1 eV *1*.
S(p)+2323.1	1/2$^+$	Γ_p=70 eV *10*, Γ_n=5 eV *5*.
S(p)+2330.1	1/2$^+$	Γ_p=40 eV *5*, Γ_n=5 eV *5*.
S(p)+2355.8	1/2$^+$	Γ_p=10 eV *5*, Γ_n=1 eV *1*.
S(p)+2363.7	1/2$^+$	Γ_p=15 eV *5*, Γ_n=5 eV *5*.
S(p)+2378.9	1/2$^+$	Γ_p=40 eV *10*, Γ_n=5 eV *5*.

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^{54}Cr(p,p),(p,n),(p,γ) res 1971Mo28,1973Pe07 (continued)

^{55}Mn Levels (continued)

E(level)[†]	J^π[&]	Comments
S(p)+2384.0	1/2+	Γ_p=45 eV *10*, Γ_n=45 eV *15*.
S(p)+2393.8	1/2+	Γ_p=15 eV *5*, Γ_n=10 eV *5*.
S(p)+2397.0	1/2+	Γ_p=50 eV *5*, Γ_n=5 eV *5*.
S(p)+2402.3	1/2+	Γ_p=60 eV *10*, Γ_n=40 eV *10*.
S(p)+2404.5	1/2+	Γ_p=75 eV *15*, Γ_n=50 eV *15*.
S(p)+2418.1	1/2+	Γ_p=75 eV *15*, Γ_n=75 eV *15*.
S(p)+2422.8	1/2+	Γ_p=20 eV *10*, Γ_n=180 eV *50*.
S(p)+2432.5	(3/2−)	Γ_p=100 eV *15*, Γ_n=30 eV *10*.
S(p)+2470.8	1/2+	Γ_p=80 eV *10*, Γ_n=80 eV *15*.
S(p)+2492.1	1/2+	Γ_p=50 eV *15*, Γ_n=200 eV *50*.
S(p)+2530.9	1/2+	Γ_p=125 eV *15*, Γ_n=40 eV *15*.
S(p)+2532.0	1/2+	Γ_p=40 eV *15*, Γ_n=40 eV *20*.
S(p)+2542.6	1/2+	Γ_p=40 eV *10*, Γ_n=15 eV *5*.
S(p)+2544.3	1/2+	Γ_p=100 eV *20*, Γ_n=100 eV *20*.
S(p)+2545.6	1/2+	Γ_p=90 eV *20*, Γ_n=10 eV *5*.
S(p)+2548.1	1/2+	Γ_p=120 eV *25*, Γ_n=15 eV *5*.
S(p)+2556.3	1/2+	Γ_p=10 eV *5*, Γ_n=2 eV *2*.
S(p)+2556.9	1/2+	Γ_p=10 eV *5*, Γ_n=30 eV *10*.
S(p)+2563.0	1/2+	Γ_p=50 eV *25*, Γ_n=100 eV *50*.
S(p)+2564.6	1/2+	Γ_p=75 eV *25*, Γ_n=200 eV *100*.
S(p)+2567.6	1/2+	Γ_p=75 eV *25*, Γ_n=250 eV *100*.
S(p)+2574.6	1/2+	Γ_p=340 eV *50*, Γ_n=80 eV *30*.
S(p)+2583.1	1/2+	Γ_p=25 eV *10*, Γ_n=70 eV *35*.
S(p)+2589.9	1/2+	Γ_p=45 eV *10*, Γ_n=100 eV *30*.
S(p)+2592.1[@]	3/2−	Γ_p=30 eV *10*, Γ_n=70 eV *20*.
S(p)+2597.0[@]	(3/2−)	Γ_p=10 eV *5*, Γ_n=80 eV *25*.
S(p)+2598.1[@]	3/2−	Γ_p=40 eV *15*, Γ_n=150 eV *50*.
S(p)+2599.9[@]	3/2−	Γ_p=30 eV *10*, Γ_n=5 eV *5*.
S(p)+2602.8	1/2+	Γ_p=30 eV *15*, Γ_n=10 eV *5*.
S(p)+2603.8[@]	3/2−	Γ_p=30 eV *10*, Γ_n=140 eV *50*.
S(p)+2607.8	1/2+	Γ_p=175 eV *30*, Γ_n=30 eV *15*.
S(p)+2608.1[@]	(3/2−)	Γ_p=80 eV *20*, Γ_n=80 eV *25*.
S(p)+2608.6[@]	3/2−	Γ_p=225 eV *50*, Γ_n=50 eV *15*.
S(p)+2611.5[@]	3/2−	Γ_p=125 eV *30*, Γ_n=325 eV *100*.
S(p)+2618.4[@]	(3/2−)	Γ_p=10 eV *5*, Γ_n=20 eV *10*.
S(p)+2620.3	1/2+	Γ_p=25 eV *10*, Γ_n=5 eV *5*.
S(p)+2638.3	1/2−	Γ_p=20 eV *10*, Γ_n=40 eV *15*.
S(p)+2642.2	1/2+	Γ_p=100 eV *20*, Γ_n=200 eV *50*.
S(p)+2642.5	3/2−	Γ_p=20 eV *10*, Γ_n=50 eV *25*.
S(p)+2647.0	1/2−	Γ_p=10 eV *5*, Γ_n=50 eV *20*.
S(p)+2649.6	1/2−	Γ_p=30 eV *10*, Γ_n=50 eV *25*.
S(p)+2652.0	1/2+	Γ_p=35 eV *10*, Γ_n=60 eV *20*.
S(p)+2654.3	1/2+	Γ_p=30 eV *10*, Γ_n=90 eV *30*.
S(p)+2662.2	1/2+	Γ_p=10 eV *5*, Γ_n=75 eV *25*.
S(p)+2666.1	1/2+	Γ_p=65 eV *15*, Γ_n=75 eV *20*.
S(p)+2670.0	1/2+	Γ_p=50 eV *20*, Γ_n=100 eV *25*.
S(p)+2681.3	1/2−	Γ_p=40 eV *10*, Γ_n=120 eV *30*.
S(p)+2682.9	1/2+	Γ_p=125 eV *25*, Γ_n=300 eV *75*.
S(p)+2685.5	1/2+	Γ_p=40 eV *10*, Γ_n=100 eV *25*.

[†] E(level)=S(p)+E(p), S(p)=8067.0 keV *4* (2003Au03), E(p) from 1971Mo28, ΔE(p)≈3 keV.

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^{54}Cr(p,p),(p,n),(p,γ) res 1971Mo28,1973Pe07 (continued)

^{55}Mn Levels (continued)

‡ Identified by 1971Mo28 as fine structure component of isobaric analog of ^{55}Cr g.s..

Identified by 1971Mo28 as fine structure component of isobaric analog of ^{55}Cr first excited state.

@ Identified by 1971Mo28 as fine structure component of isobaric analog of ^{55}Cr third excited state.

& Evaluator noted that cross sections on resonance do not clearly distinguish between J=L+1/2 and J=L−1/2; therefore, authors′ $3/2^-$ and $1/2^-$ assignment may be uncertain.