^{47}Ti(p,γ):resonance 1961Du03

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 179, 1 (2022)	30-Nov-2021

$J^{\pi}(^{47}\text{Ti})=5/2^{-}$. Measured γ's.

1961Du03: E=0.8-1.4 MeV proton beams (changed in steps of ≈0.4 keV) were produced from the Van de Graaff generator at Chalmers University of Technology, Gothenburg. Target was 6 μg/cm^2 ^{47}Ti. γ rays were detected with a NaI detector. Measured γ yields, excitation function. Deduced resonance energies. Reported 98 (p,γ) resonances (of which 5 were doublets).

All data are from 1961Du03.

^{48}V Levels

E_p values given under comments are in lab system.

E(level)†	Resonance Yield	Comments
7702.3 *14*	50	E_p=891.7 *10*.
7705.9 *14*	70	E_p=895.4 *10*.
7708.8 *14*	70	E_p=898.4 *10*.
7712.0 *14*	120	E_p=901.6 *10*.
7717.3 *14*	25	E_p=907.1 *10*.
7723.5 *14*	25	E_p=913.4 *10*.
7730.2 *14*	170	E_p=920.2 *10*.
7746.2 *14*	35	E_p=936.6 *10*.
7750.8 *14*	100	E_p=941.3 *10*.
7755.2 *14*	200	E_p=945.8 *10*.
7767.6 *14*	700	E_p=958.4 *10*.
7772.7 *14*	40	E_p=963.6 *10*.
7777.8 *14*	145	E_p=968.9 *10*.
7781.3 *14*	45	E_p=972.4 *10*.
7788.5 *14*	190	E_p=979.8 *10*.
7791.1 *14*	80	E_p=982.4 *10*.
7794.1 *14*	210	E_p=985.5 *10*.
7796.9 *14*	70	E_p=988.4 *10*.
7804.0 *14*	55	E_p=995.6 *10*.
7805.7 *14*	25	E_p=997.4 *10*.
7809.4 *14*	15	E_p=1001.1 *10*.
7815.5 *14*	230	E_p=1007.4 *10*.
7821.5 *14*	136	E_p=1013.5 *10*.
7825.4 *14*	190	E_p=1017.5 *10*.
7830.9 *14*	25	E_p=1023.1 *10*.
7834.6 *14*	230	E_p=1026.9 *10*.
7837.8 *14*	70	E_p=1030.1 *10*.
7840.5 *14*	160	E_p=1032.9 *10*.
7842.8 *14*	130	E_p=1035.3 *10*.
7846.1 *14*	100	E_p=1038.6 *10*.
7850.1 *14*	90	E_p=1042.7 *10*.
7851.9 *14*	40	E_p=1044.6 *10*.
7856.3 *14*	130	E_p=1049.0 *10*.
7857.9 *14*	280	E_p=1050.7 *10*.
7862.6 *14*	170	E_p=1055.5 *10*.
7863.5 *14*	170	E_p=1056.4 *10*.
7869.7 *14*	220	E_p=1062.7 *10*.
7873.0 *14*	170	E_p=1066.1 *10*.
7875.0 *14*	85	E_p=1068.1 *10*.
7879.3 *14*	150	E_p=1072.5 *10*.
7883.6 *14*	25	E_p=1076.9 *10*.

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^{47}Ti(p,γ):resonance 1961Du03 (continued)

^{48}V Levels (continued)

E(level)†	Resonance Yield	Comments
7886.4 *14*	490	E_p=1079.8 *10*.
7893.8 *14*	85	E_p=1087.3 *10*.
7895.3 *14*	60	E_p=1088.9 *10*.
7899.0 *14*	85	E_p=1092.7 *10*.
7904.3 *14*	350	E_p=1098.1 *10*.
7908.9 *14*	150	E_p=1102.8 *10*.
7912.0 *14*	250	E_p=1105.9 *10*.
7916.6 *14*	90	E_p=1110.6 *10*.
7920.1 *14*	180	E_p=1114.2 *10*.
7924.1 *14*	75	E_p=1118.3 *10*.
7926.5 *14*	330	E_p=1120.7 *10*.
7928.1 *14*	210	E_p=1122.4 *10*.
7931.3 *14*	120	E_p=1125.7 *10*.
7933.6 *14*	I00	E_p=1128.0 *10*.
7938.2 *14*	880	E_p=1132.7 *10*.
7941.4 *14*	270	E_p=1136.0 *10*.
7943.5 *14*	260	E_p=1138.1 *10*.
7948.6 *14*	140	E_p=1143.3 *10*.
7952.1 *14*	270	E_p=1146.9 *10*.
7953.8 *14*	400	E_p=1148.6 *10*.
7957.2 *14*	270	E_p=1152.1 *10*.
7960.0 *14*	320	E_p=1155.0 *10*.
7964.2 *14*	200	E_p=1159.3 *10*.
7967.2 *14*	250	E_p=1162.3 *10*.
7968.9 *14*	160	E_p=1164.1 *10*.
7971.9 *14*	370	E_p=1167.1 *10*.
7973.6 *14*	290	E_p=1168.9 *10*.
7976.9 *14*	180	E_p=1172.2 *10*.
7980.6 *14*	160	E_p=1176.0 *10*.
7985.1 *14*	130	E_p=1180.6 *10*.
7987.5 *14*	490	E_p=1183.1 *10*.
7998.1 *14*	200	E_p=1193.9 *10*.
8002.6 *14*	280	E_p=1198.5 *10*.
8006.3 *14*	280	E_p=1202.3 *10*.
8011.8 *14*	220	E_p=1207.9 *10*.
8014.2 *14*	330	E_p=1210.3 *10*.
8018.3 *14*	290	E_p=1214.5 *10*.
8022.4 *14*	330	E_p=1218.7 *10*.
8028.9 *14*	310	E_p=1225.3 *10*.
8032.3 *14*	250	E_p=1228.8 *10*.
8037.2 *14*	250	E_p=1233.8 *10*.
8039.5 *14*	150	E_p=1236.2 *10*.
8041.9 *14*	170	E_p=1238.6 *10*.
8043.6 *14*	320	E_p=1240.4 *10*.
8048.2 *14*	250	E_p=1245.1 *10*.
8053.6 *14*	200	E_p=1250.6 *10*.
8057.7 *14*	500	E_p=1254.8 *10*.
8059.5 *14*	250	E_p=1256.6 *10*.
8061.8 *14*	250	E_p=1259.0 *10*.
8070.5 *14*	290	E_p=1267.8 *10*.
8074.7 *14*	160	E_p=1272.1 *10*.
8077.9 *14*	75	E_p=1275.4 *10*.
8081.5 *14*	470	E_p=1279.1 *10*.
8084.4 *14*	470	E_p=1282.0 *10*.
8088.9 *14*	300	E_p=1286.6 *10*.
8090.8 *14*	300	E_p=1288.6 *10*.
8093.4 *14*	260	E_p=1291.2 *10*.

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^{47}Ti(p,γ):resonance 1961Du03 (continued)

^{48}V Levels (continued)

E(level)†	Resonance Yield	Comments
8095.8 *14*	370	E_p=1293.7 *10*.
8098.3 *14*	470	E_p=1296.2 *10*.
8100.7 *14*	330	E_p=1298.7 *10*.
8102.6 *14*	150	E_p=1300.6 *10*.
8106.7 *14*	320	E_p=1304.8 *10*.
8112.0 *14*	260	E_p=1310.2 *10*.
8115.1 *14*	170	E_p=1313.4 *10*.
8117.5 *14*	300	E_p=1315.9 *10*.

† From E_p(c.m.)+S(p)(^{48}V), with S(p)(^{48}V)=6829.4 *10* (2021Wa16).