C(^{23}O,^{22}O),Pb(^{23}O,^{22}O)

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia[#], A. Chakraborty[##]	NDS 171, 1 (2021)	1-Jun-2020

Other references: 2004Co25, 2000Sa47.

2005No01: Pb(^{23}O,^{22}O) – ^{23}O beam, E=422 MeV/nucleon, produced by ^{40}Ar(C,X), E=500 MeV/nucleon. Recoil fragment separator, CsI γ-ray coincidence.

2004Co11, 2005Co24: C(^{23}O,^{22}O)- ^{23}O beam produced by ^{40}Ar(C,X) E=938 MeV/nucleon. Recoil fragment separator, NaI γ-ray coincidence.

2002Ka20: C(^{23}O,^{22}O) – ^{23}O beam, E=72 MeV/nucleon, produced by ^{40}Ar(C,X), E=92 MeV/nucleon. Recoil fragment separator, particle identification by time-of-flight information, pulse height information from NaI(Tl) E and ΔE (Si) detectors. Measured momentum spectrum of one-neutron removal fragment ^{22}O. FWHM (Γ)=94 MeV/c 12 (Lorentzian fitting). Deduced spin-parity for ^{23}O g.s. from fitting of the measured momentum data. SPEG spectrometer,

2000Sa47: C(^{23}O,^{22}O) – ^{23}O beam produced by ^{40}Ar(C,X), E=70 MeV/ nucleon at GANIL. The reaction products were collected and selected according to magnetic rigidity using SISSI device coupled with the beam analysis spectrometer. Ion identification by energy loss from a gas ionization chamber and time-of-flight information. Measured momentum distribution and one-neutron removal cross section, deduced spin and parity for ^{23}O g.s.

^{23}O Levels

E(level)	J^{π}	L	S	Comments
0.0	$1/2^+$	0	0.77 10	J^{π},L: From analysis of single neutron removal cross sections determined from ^{22}O γ-ray emission yields and compared to theoretical models based on the Eikonal approximation (2004Co11, 2005Co24). 2002Ka20 propose $1/2^+$ or $5/2^+$. 2000Sa47 propose $1/2^+$ from their work. S: C^{2}S from 2005No01.