^{92}Mo(p,pn):radius,Mom 2009Ch09

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 114, 1293 (2013)	1-Sep-2013

Dataset includes ^{93}Nb(p,3n) reaction.

Rms, isotope shift and magnetic moment measurements.

Measurement was performed at JYFL and data were obtained with IGISOL using ^{93}Nb(p,3n) and ^{92}Mo(p,pn) reactions. Typical ion flux was 3000 s^{-1} for ^{91}Mo. Recoiling ions in the ion guide were efficiently thermalized and extracted using a helium buffer gas and sextupole ion guide. Mass-analyzed ensembles were then cooled and bunched in an rf quadrupole trap and accelerated to a laser-ion interaction region, then Doppler tuned onto resonance. Measured resolved hyperfine resonances as a function of accelerating voltage. The accurately known μ values for ^{95}Mo and ^{97}Mo, (μ=−0.9142 *1* and −0.9335 *1*, respectively), were used to provide an average calibration of the atomic magnetic field produced by the atomic electrons. Laser spectroscopy technique.

^{91}Mo Levels

E(level)	J^π	$T_{1/2}$	Comments
0	$9/2^+$	15.49 min *1*	$\%\varepsilon+\%\beta^+=100$ μ=−0.932 *3* (2009Ch09) μ: from hyperfine structure in laser spectroscopy. $\Delta\langle r^2\rangle(^{91}Mo,^{92}Mo)$=+0.021 fm^2 *1* (2009Ch09); uncertainty is statistical only. Isotope shift(^{91}Mo,^{92}Mo)=−171 MHz *5* (2009Ch09). Total uncertainty is given here; statistical uncertainty is 2. J^π,$T_{1/2}$: from Adopted Levels, Gammas.