

${}^{93}\text{Nb}(\text{p},\text{p}2\text{n})$:moment 2009Ch25

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

Optical pumping in an ion beam cooler buncher, laser spectroscopy JYFL IGISOL facility; 33 MeV ${}^{93}\text{Nb}$ beam; natural Nb foil provided stable ions as a spectroscopic reference. The reaction products were mass analyzed in bunches while the central axis of the ion beam cooler was illuminated by laser light. Measured μ , spectroscopic electric quadrupole moment and charge radius from the hfs coefficients, using the known moments of ${}^{93}\text{Nb}$ as a calibration.

 ${}^{91}\text{Nb}$ Levels

| E(level) | $J^{\pi\dagger}$ | Comments |
|----------|------------------|---|
| 0 | $9/2^+$ | $\mu=+6.521$ 2 (2009Ch25) $Q=-0.25$ 3 (2009Ch25) |
| 104.6 | $1/2^-$ | $\mu=-0.101$ 2 (2009Ch25) $\Delta\langle r^2 \rangle({}^{91\text{g}}\text{Nb}, {}^{91\text{m}}\text{Nb})=+0.040$ fm ² 3 (2009Ch25). |

\dagger From Adopted Levels.