## $^{185}$Re($^{3}$He,d) 2010Ph01,2009PhZY

History

| Type | Author | Citation | Literature Cutoff Date |
|---|---|---|---|
| Full Evaluation | J. C. Batchelder and A. M. Hurst, M. S. Basunia | NDS 183, 1 (2022) | 1-Mar-2022 |

Others: 2009PhZZ, 2008PhZY, 2008GaZW – same research group of 2010Ph01 and presumably superseded earlier publications.
Adapted/edited the XUNDL dataset Compiled by B. Singh (McMaster), September 23, 2010.
$J^{\pi}$($^{185}$Re g.s.)=5/2$^{+}$.
2010Ph01,2009PhZY: E=30 MeV provided by the tandem accelerator at Maier Leibnitz lab in Garching. The deuteron spectra analyzed by Q3D magnetic spectrograph. Measured deuteron spectra, angular distributions from 5° to 50°. DWBA analysis of $\sigma(\theta)$ data. FWHM=6.3 to 13.0 keV. Quasiparticle phonon model calculations.

### $^{186}$Os Levels

| E(level)[†] | $J^{\pi}$ | L[‡] | S[‡] | Comments |
|---|---|---|---|---|
| 0.0[#] | 0$^{+}$ | 2 | 0.33 *10* | Admixtures of the two-quasiparticle components of configuration $\pi$5/2[402]-$\pi$5/2[402] is 1.5 *4* (expt) compared with the predicted value of 0.16 *1* for single j and l. |
| 137.1[#] | 2$^{+}$ | | | |
| 434.1[#] | 4$^{+}$ | 2 | 0.054 | S,L: From 2009PhZY. |
| 767.5[@] | 2$^{+}$ | 0 | 0.16 *5* | Admixtures of the two-quasiparticle components of configuration $\pi$5/2[402]-$\pi$1/2[400] is 0.33 *10* (expt) compared with the predicted value of 0.16 from Quasiparticle phonon model calculations. |
| 910.5[@] | 3$^{+}$ | 0 | 0.045 | S,L: From 2009PhZY. |
| 1061.0[&] | 0$^{+}$ | | | |
| 1070.5[@] | 4$^{+}$ | | | |
| 1208.4[&] | 2$^{+}$ | | | |
| 1351.9[a] | 4$^{+}$ | 2 | 0.34 *10* | Admixtures of the two-quasiparticle components of configuration $\pi$5/2[402]+$\pi$3/2[402] is 0.34 *10* (expt) compared with the predicted value of 0.41 from Quasiparticle phonon model calculations. |
| 1480.1 | 3$^{-}$ | 5 | 0.193 | S,L: From 2009PhZY. |
| 1559.8[a] | 5$^{+}$ | | | |

[†] Rounded values from Adopted Levels corresponding to labeled peaks in Fig. 1 of 2010Ph01 and Fig.1 in 2009PhZY.
[‡] From 2010Ph01, except otherwise noted. Values for other levels reported in 2009PhZY, but not in 2010Ph01.
[#] Band(A): K$^{\pi}$=0$^{+}$, g.s. band.
[@] Band(B): K$^{\pi}$=2$^{+}$, $\gamma$-vibrational band.
[&] Band(C): K$^{\pi}$=0$^{+}$ band.
[a] Band(D): K$^{\pi}$=4$^{+}$ band.

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**Band(D): $K^{\pi}=4^{+}$ band**

**$5^{+}$ 1559.8**

**$4^{+}$ 1351.9**

**Band(C): $K^{\pi}=0^{+}$ band**

**$2^{+}$ 1208.4**

**Band(B): $K^{\pi}=2^{+}$, $\gamma$-vibrational band**

**$4^{+}$ 1070.5**

**$0^{+}$ 1061.0**

**$3^{+}$ 910.5**

**$2^{+}$ 767.5**

**Band(A): $K^{\pi}=0^{+}$, g.s. band**

**$4^{+}$ 434.1**

**$2^{+}$ 137.1**

**$0^{+}$ 0.0**

$^{186}_{76}Os_{110}$