

Muonic atom **1984Zu02**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	B. Singh, J. K. Tuli, E. Browne		NDS 170, 499 (2020)	8-Oct-2020

From time distribution of fission events, the muonic atom mean-life was obtained as 61.7 ns <sup>38</sup>, and the ratio of radiationless fission to capture was observed to be 0.046 <sup>30</sup> by [1970Bu29](#).

Muonic x-ray energies were measured; intrinsic quadrupole moment,  $Q(0)=10.3$  <sup>3</sup> and deformation parameter,  $\beta=0.24$  <sup>2</sup> were deduced by [1967De21](#).

From muonic K, L, M, and N x-rays, measured intrinsic quadrupole moment, intrinsic hexadecapole moment,  $B(E2)$  values for excitation of the g.s. band, and deformation parameters were deduced by [1984Zu02](#):

 $^{233}\text{U}$  Levels

E(level) <sup>†</sup>	J <sup>π</sup> <sup>†</sup>	Comments
0	5/2 <sup>+</sup>	$Q_0=10.294$ <sup>59</sup> ; Intrinsic hexadecapole moment $H_0=2.55$ <sup>30</sup> . $\beta_2=0.243$ <sup>4</sup> , $\beta_4=0.091$ <sup>15</sup> , $\langle r^2 \rangle^{1/2}=5.816$ fm <sup>7</sup> .
40.35	7/2 <sup>+</sup>	$B(E2)=5.041$ <sup>16</sup> .
92.15	9/2 <sup>+</sup>	$B(E2)$ (from g.s.)= $1.76$ <sup>3</sup> . $B(E2)$ (from 40.3,7/2 <sup>+</sup> )= $3.97$ <sup>4</sup> .
155.25	11/2 <sup>+</sup>	$B(E2)$ (from 40.3,7/2 <sup>+</sup> )= $2.73$ <sup>4</sup> . $B(E2)$ (from 92.1,9/2 <sup>+</sup> )= $2.97$ <sup>6</sup> .

<sup>†</sup> From the Adopted Levels. Energies are rounded values.