

$^9\text{Be}(^{197}\text{Au},\text{X})$ 2012Re19

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong and Kang Mengxiao		NDS 121, 395 (2014)	1-Mar-2014

2012Re19: Mass spectrometry technique used to measure masses directly and identify high-spin isomers. $E=478\text{-}492$ MeV/nucleon from UNILAC-SIS facility at GSI. Target= ^9Be 1035 mg/cm² with a 221 mg/cm² niobium backing. Mostly bare atoms of the highly-charged reaction products were separated with FRS and injected into storage ring ESR. The ions were stochastically and electron cooled. Deduced masses from spectra; identified high-spin isomer.

^{195}Os in 76^+ charge state, i.e. bare ion.

 ^{195}Os Levels

E(level)	J^π	$T_{1/2}$	Comments
0	(3/2 ⁻)	6.5 min <i>ll</i>	$\% \beta^- = ?$ $T_{1/2}$: from Adopted Levels. J^π : from systematics in neighbour nuclide. Number of ions detected=63.
454 <i>l</i> 0		>9 min	$\% \text{IT} > 0$; $\% \beta^- = ?$ $E(\text{level})$: from measured mass difference between the isomer and g.s. (2012Re19). $T_{1/2}$: measured in 2012Re19 for bare ^{195}Os ions, one ion was lost from the ring. Assuming the ion loss was due to atomic electron capture, the measured $T_{1/2}=32$ min +154-16; and β decay, the measured $T_{1/2}=16$ min +29-7. Number of ions detected=73. Isomeric transition was observed, implying γ -ray emission.