

$^{209}\text{Bi}(\pi^-, \gamma)$ **1974Ba44**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. Chen # and F. G. Kondev		NDS 126, 373 (2015)	30-Sep-2013

1974Ba44: E=190 MeV/c pion beam was produced from the Lawrence Berkeley Laboratory 184-inch cyclotron. Target was a metallic Bi plate. γ -rays were detected in a 180° pair-spectrometer. Measured photon spectrum. Deduced levels, γ -width. Total radiative branching=0.98% 10. Radiative branching to levels in region 0-4 MeV=0.0036% 18 (**1974Ba44**).

 ^{209}Pb Levels

E(level)	Comments
0.0	
7.9×10^3 4	E(level): if π^- capture is in 4f orbital. E=8.5 MeV 4 if π^- capture is in 5g orbital. 1974Ba44 suggests this level is analog of possible giant quadrupole resonance expected at ≈ 26.5 MeV in ^{209}Bi . Radiative branching to 7900 level=0.047% 7.
13×10^3 2	Radiative branching to 13000 level=0.096% 16.