

$^9\text{Be}(^{208}\text{Pb}, \text{X}\gamma)$ 2009A130

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Balraj Singh	ENSDF	31-Mar-2022

2009A130 (also 2012A105): ^{187}Hf produced in projectile fragmentation of ^{208}Pb beam at 1 GeV/nucleon with ^9Be target at GSI facility. Fragment Recoil separator (FRS) was used to identify ^{187}Hf nuclide. The secondary ions were implanted into the RISING active stopper consisting of double-sided silicon strip detectors. Measured $E\gamma$, $I\gamma$, $\gamma\gamma$, $\gamma\gamma(t)$, correlations, and isomer half-life using RISING array of 15 seven-element Ge cluster detectors for γ rays, two multi-wire proportional counters for position measurements, two scintillation detectors providing time-of-flight and position information, and two scintillators and an ionization chamber (MUSIC) for energy loss measurements.

 ^{187}Hf Levels

<u>E(level)</u>	<u>$T_{1/2}$</u>	<u>Comments</u>
0+x	$0.27\ \mu\text{s}$ 8	$T_{1/2}$: measured by 2009A130 (also 2012A105) from $\gamma(t)$.

 $\gamma(^{187}\text{Hf})$

<u>E_γ</u>	<u>$E_i(\text{level})$</u>
$^{x232}_{\text{Hf}}^\dagger$	
$^{x264}_{\text{Hf}}^\dagger$	

† γ associated with the decay of 0.27- μs isomer.

x γ ray not placed in level scheme.