

Pb( $^{76}\text{Ge}, ^{76}\text{Ge}'\gamma$ ):inelastic 2008Iw03

| Type            | Author                                       | History | Citation         | Literature Cutoff Date |
|-----------------|--|---------|------------------|------------------------|
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Heavy-ion inelastic scattering.

**2008Iw03** (also **2005Iw03**): E=37 MeV/nucleon  $^{76}\text{Ge}$  beam provided by RIBF facility at RIKEN. Secondary beam produced in the reaction  $^9\text{Be}(^{86}\text{Kr},\text{X})$  with E=63 MeV/nucleon beam. Beams identified with a parallel-plate avalanche counter for  $B\rho$ , a plastic scintillator for time-of-flight and a Si detector for  $\Delta E$ . Detected charged particles using an Si telescope and an NaI(Tl) calorimeter. Measured  $E\gamma$ ,  $I\gamma$  using DALI2 array of 158 NaI(Tl) detectors. Deduced B(E2) values from cross sections. Comparison with large-scale shell model calculations. **2005Iw03** is from the same group.

 $^{76}\text{Ge}$  Levels

| E(level) | $J^\pi$ | $T_{1/2}^\dagger$ | Comments   |
|----------|---------|-------------------|--|
| 0        | $0^+$   |                   |  |
| 569 7    | $2^+$   | 18 ps 2           | $\sigma(\text{exp})=1.23$ b 11.<br>$T_{1/2}$ : from measured B(E2) $\downarrow=0.053$ 5.   |
| 1109 12  | $2^+$   | 8.2 ps 26         | $\sigma(\text{exp})=43$ mb 12.<br>$T_{1/2}$ : from measured B(E2) $\downarrow(1109\gamma)=0.0017$ 5 and adopted branching of 0.41 4 for 1109 $\gamma$ from Adopted Levels, Gammas. |
| 1424 14  | $4^+$   | 1.4 ps 3          | $\sigma(\text{exp})=26$ mb 8.<br>$T_{1/2}$ : from measured B(E2) $\downarrow=0.089$ +18-19.  |
| 3182 21  | $2^+$   |                   |  |

$^\dagger$  Deduced by evaluators from measured B(E2) values and Adopted  $\gamma$ -branching ratios.

 $\gamma(^{76}\text{Ge})$ 

| $E_\gamma$ | $E_i(\text{level})$ | $J_i^\pi$ | $E_f$ | $J_f^\pi$ | Comments  |
|------------|---------------------|-----------|-------|-----------|---|
| 540        | 1109                | $2^+$     | 569   | $2^+$     | $E_\gamma$ : this peak was not resolved from the strong 569 peak. |
| 569 7      | 569                 | $2^+$     | 0     | $0^+$     | B(E2) $\downarrow=0.053$ 5  |
| 855 9      | 1424                | $4^+$     | 569   | $2^+$     | B(E2) $\downarrow=0.089$ +18-19                                   |
| 1109 12    | 1109                | $2^+$     | 0     | $0^+$     | B(E2) $\downarrow=0.0017$ 5                                       |
| 2059 17    | 3182                | $2^+$     | 1109  | $2^+$     |   |

**Pb( $^{76}\text{Ge}, ^{76}\text{Ge}'\gamma$ ):inelastic 2008Iw03**Level Scheme