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Prompt Gamma-ray Data Evaluation of Thermal Neutron Capture for $A=20\sim35$

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The prompt gamma-ray data and their decay schemes of thermal-neutron capture for stable nuclei with mass number $A=20\sim35$ (^{20}Ne , ^{21}Ne , ^{22}Ne , ^{23}Na , ^{24}Mg , ^{25}Mg , ^{26}Mg , ^{27}Al , ^{28}Si , ^{29}Si , ^{30}Si , ^{31}P , ^{32}S , ^{33}S , ^{34}S , ^{35}Cl) have been evaluated with the method and programs as before^[1]. The evaluated data have been changed into ENSDF format and checked in Physics and ENSDF format.

Reference

- [1] Zhou Chunmei, CNDP, 22, 76 (1999)



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Nuclear Data Sheets for $A = 62$ and 63

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The 1989 evaluation of $A=62$ (90Ki08)^[1] and 1991 evaluation of $A=63$ (91Ki10)^[2] have been revised using available experimental decay and reaction data since the last evaluations.

In this $A=62$ updated evaluation there are some new data and reactions, such as $T_{1/2}$ for ^{62}Cr , $^{208}\text{Pb}(^{64}\text{Ni}, X\gamma)$ for ^{62}Fe , $^{60}\text{Ni}(\alpha, ^2\text{He})$ and $^{60}\text{Ni}(^{12}\text{C}, ^{10}\text{C})$ for ^{62}Ni , $^{50}\text{Cr}(^{16}\text{O},$

3p γ) for ^{62}Cu , ^{60}Ni (^{12}C , ^{10}Be) and ^{40}Ca (^{28}Si , $\alpha 2p\gamma$) for ^{62}Zn , and ^{40}Ca (HI, X γ) for ^{62}Ga , specifically.

In this $A=63$ reevaluation there are some new data and reactions, such as $T_{1/2}$ for ^{63}Cr and ^{63}Mn , ^{18}O (^{48}Ca , p2n γ) and ^{64}Ni (d, $^3\text{He}\gamma$) for ^{63}Co , ^{40}Ca (^{28}Si , 5p γ) and ^{64}Zn (d, $^3\text{He}\gamma$) for ^{63}Cu , ^{40}Ca (^{28}Si , 4p γ) and ^{50}Cr (^{16}O , 2p γ) for ^{63}Zn , and ^{40}Ca (^{28}Si , $\alpha p\gamma$), ^{40}Ca (^{32}S , 2 $\alpha p\gamma$) for ^{63}Ga , specifically.

The detailed level schemes and decay schemes, and experimental reaction and decay data for $A=62$ and 63 are summarized and presented.

Updated evaluations of nuclear data sheets for $A=62$ and 63 have been sent to National Nuclear Data Center, USA, and will be published in «Nuclear Data Sheets».

Reference

- [1] M. M. King, Nuclear Data Sheets, 60, 337 (1990)
- [2] M. M. King, Nuclear Data Sheets, 64, 815 (1991)