

NRDC Memo CP-C/472: Present status of Karlsruhe cross sections

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NRDC Memo CP-C/472

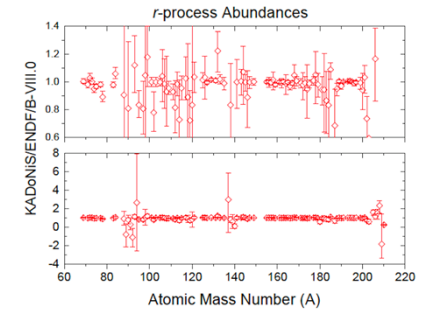
- For years KADoNiS compilation was considered the greatest resource by astrophysicists. F. Kaeppler claimed 1-3% precision in KADoNiS cross sections.
- A binary star merger (GW170817) gave us a first r-process site.
- International Evaluation of Neutron Cross Section Standards (A. Carlson et al.) found 5-7% error in $^{197}\text{Au}(n,\gamma)$ cross section, Karlsruhe beam monitor.
- R. Reifarth et al., Eur.Phys.J.Plus 133, 424 (2018): $^{103}\text{Rh} - ^{197}\text{Au}$ corrections.
- At NNDC we calculated r-process abundances using ENDF/B-VIII.0 library and KADo NiS.
- In October 2019, I submitted an NRDC memo CP-C/472 (Present Status of Karlsruhe Cross Sections): Gold monitor was used for $Z=6-92$.
- INDC(GER)—053, Activation Data from Karlsruhe Revisited by F. Kaeppler and R. Reifarth in February 2021. No credit to memo or A. Carlson.

IAEA
International Atomic Energy Agency
INDC(GER)-053
Dist. G+J
INDC International Nuclear Data Committee

Activation Data from Karlsruhe Revisited

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Goethe Universität Frankfurt, Giersch Science Center, Frankfurt/Main, Germany
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- develops nuclear safety standards and, based on these standards, promotes the achievement and maintenance of high levels of safety in applications of nuclear energy, as well as the protection of human health and the environment against ionizing radiation;
- verifies through its inspection system that States comply with their commitments, under the Non-Proliferation Treaty and other non-proliferation agreements, to use nuclear material and facilities only for peaceful purposes.