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Search for scissor resonance in ^{182}Ta

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Abstract content (Max 300 words) **Formatting & Special chars**

Relatively small changes to the overall shape of the photon strength function such as the scissors or pygmy resonances can have significant impact on reaction rates which are important for modelling processes that take place in astrophysical environments and reactors. Recent results from the University of Oslo indicate the existence of a significant amount of scissor resonance strength in the photon strength function for nuclei in the actinide region [1]. In order to investigate the extent and persistence of the scissor resonance strength towards lighter nuclei, an experiment was performed utilizing the NaI gamma-ray detector array (CACTUS) and silicon particle telescopes (SiRi) at the cyclotron laboratory at the University of Oslo to measure the nuclear level density and photon strength function of ^{182}Ta . In this talk I will present and discuss preliminary data from the $^{181}\text{Ta}(d,p)^{182}\text{Ta}$ reaction.

[1] M. Guttormsen et al. Phys. Rev. Lett. 109, 162503 (2012)

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Main supervisor (name and email) and his / her institution

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