

FAIR/NUSTAR - More than ever

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NUSTAR is the largest collaboration for nuclear structure, astrophysics and reactions studies in the world. Founded 10 years ago to develop a science programme and build instrumentation for the planned FAIR facility at GSI Darmstadt, Germany it copes very well with the delays of this mega-science project. A versatile suite of state-of-the-art detection system has been developed and is being employed at GSI and other facilities in the world.

NUSTAR relies primarily on the availability of exotic rare isotope beams produced by fragmentation reactions and fission of relativistic heavy ions. The fragment separator FRS and a versatile set of instruments, including gamma arrays, particle spectrometers and a storage ring enable unique experiments at GSI. The Super-FRS at the FAIR facility will provide several orders of magnitude stronger beams, enabling access to the extremes of nuclear stability. Continuous R&D efforts result in improved detectors and enable the NUSTAR collaboration to steadily enhance the sensitivity and selectivity limit of their experiments. Current NUSTAR physics highlights as well as development projects and activities will be discussed.