



Universität
Basel

Research Project

IReNA (International Research Network for Nuclear Astrophysics)

Project funded by own resources

Project title IReNA (International Research Network for Nuclear Astrophysics)

Principal Investigator(s) [Thielemann, Friedrich-Karl](#) ;

Organisation / Research unit

Departement Physik / Theoretische Physik Astrophysik (Thielemann)

Project Website <https://www.irenaweb.org/>

Project start 01.10.2019

Probable end 30.09.2024

Status Active

How did the Universe create the chemical elements we are made of? What do stars tell us about the building blocks of matter? To accelerate progress towards answering these questions, IReNA connects international research networks in nuclear physics, astronomy, and computational science. The emergence of multi-messenger astronomy, where extreme astrophysical environments are observed using gravitational waves, X-rays, visible light, gamma-rays, radio waves, and neutrinos, opens up the opportunity to understand the formation of the elements and the nature of dense matter. IReNA connects this broad range of observations with the extraordinarily broad range of experimental and theoretical nuclear physics studies and advanced computational models needed to truly create new windows into the physics of the universe.

Keywords astronomical observations, nuclear physics, computational models for nuclear astrophysics

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Other funds

Follow-up Project of... [4613223 ChETEC \(Chemical Elements as Tracers of the Evolution of the Cosmos\)](#), [European Cost Action 16117](#)

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