

## **NICER: studying dense matter on the International Space Station**

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NICER, the Neutron Star Interior Composition Explorer, is an X-ray telescope that was installed on the International Space Station in 2017. Its 3+ year mission? To study the nature of the densest matter in the Universe, found in the cores of neutron stars. NICER does this by exploiting the effects of General and Special Relativity on X-rays emitted from the hot magnetic polar caps of X-ray pulsars. I will explain some of the challenges we have encountered along the way and present preliminary results from the mission. NICER is paving the way for the Next Generation of larger area X-ray telescopes to be launched over the next decade, which will enable even bigger strides in our understanding of dense matter.