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Magnetars: the Universe strongest magnets

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Magnetars are a small subset of the neutron star population, being the strongest magnets we know of. They show themselves via powerful X/gamma-ray steady and flaring emission. The energetics of such flares in our Galaxy second only the supernova explosions. In this talk I will first review the observational characteristics of these highly magnetic pulsars, and some recent discoveries in the field. Subsequently, I will present what we currently know about their life-cycle, through detailed simulations of neutron star magneto-thermal evolution and pulsar population synthesis. I will then finish with some considerations on how the study of the Galactic population of magnetars might constrain their possible connection with Gamma Ray Bursts.

Author: REA, Nanda (University of Amsterdam/CSIC-IEEC)

Presenter: REA, Nanda (University of Amsterdam/CSIC-IEEC)

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