

From Cryogenics to Cosmos: Exploring Dark Matter with CRESST.

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Auditorium & Webcast 16:00 h

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The enigmatic nature of the Universe's missing matter presents one of the most compelling puzzles in contemporary particle physics. Directly probing the elusive dark matter particles via their faint interactions within terrestrial detectors represents the most direct path to decipher the composition of the dark matter halo enveloping our galaxy. Located deep within the Gran Sasso underground laboratory, CRESST is a cryogenic experiment utilising (scintillating) crystals to detect the subtle signals of elastic dark matter-nucleus scattering. This sophisticated technique allows for the detection of incredibly low-energy nuclear recoils, below 10 eV, providing unparalleled sensitivity in the quest for sub-GeV/ c^2 dark matter. This seminar will explore the intricacies of cryogenic detectors, present the most recent groundbreaking results from CRESST, and illuminate the exciting perspectives for the experiment's future.

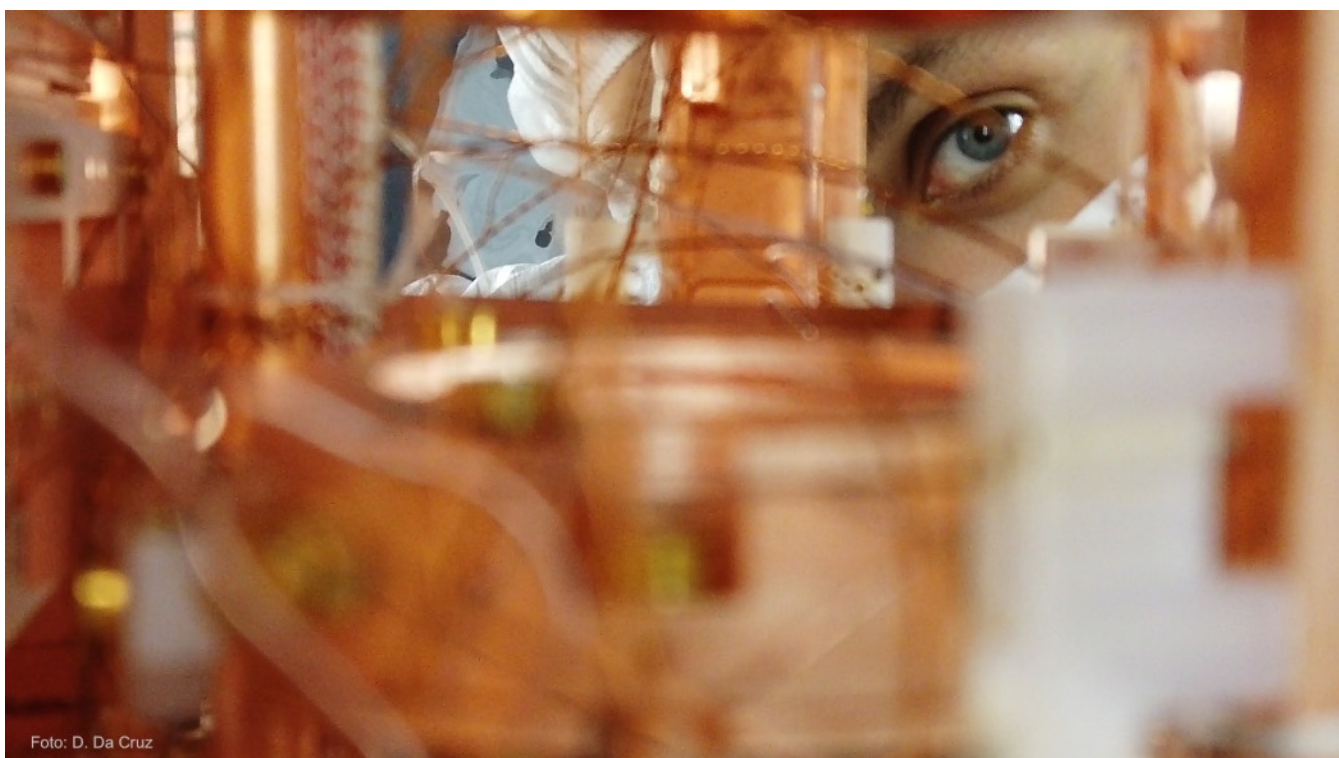


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