

Neutron stars as multi-messenger laboratories for dense matter

June 14-27, 2021 on ZOOM Platform

Abstract | Main Topics

The equation of state (EOS) for strongly-interacting matter is of great interest for the nuclear physics and astrophysics, and there are strong theoretical, experimental, and observational efforts to elucidate its properties at supra-nuclear densities. Many new observational data from gravitational wave facilities, X-ray satellites, and nuclear experiments become available and contribute to the global understanding of neutron-star physics. Together with nuclear experimental inputs and theoretical advances, this wealth of new results is expected to improve the understanding of the neutron-star core and the supra-nuclear EOS.

This workshop brings together experts in nuclear physics and observations in 2021 to critically examine the new data made available by NICER and by the LIGO-Virgo-KAGRA collaboration in order to form a better understanding and to obtain more robust constraints on the EOS of dense matter.

Keynote speakers

Sebastiano Bernuzzi (Friedrich-Schiller-Universität Jena), Jay Kalinani (University of Padova), Soumi De (Los Alamos National Laboratory), Jocelyn Read (California State University, Fullerton), Ben Magalit (University of California, Berkeley), Mansi Kasliwal, California Institute of Technology, Slavko Bogdanov (Columbia University), Cole Miller (University of Maryland at College Park), Geert Raaijmakers (University of Amsterdam), Natalie Webb (IRAP, Institut de Recherche en Astrophysique, Toulouse), Thankful Cromartie (Cornell University), Chuck Horowitz (Indiana University), Andrew Steiner (University of Tennessee, Knoxville), Tyler Gorda (TU Darmstadt), Anthea Fantina (GANIL, Caen), Almudena Arcones (TU Darmstadt), Tetyana Galatyuk (TU Darmstadt), Francesco Pederiva (University of Trento), Anna Watts (University of Amsterdam), Nanda Rea (Institute of Space Sciences – ICE-CSIC, Barcelona), Tim Dietrich (University of Postdam), David Radice (Pennsylvania State University).

Organizers

Ingo **TEWS** (Los Alamos National Laboratory), Bruno **GIACOMAZZO** (University of Milano-Bicocca),
Sebastien **GUILLOT** (IRAP, Toulouse), Jerome **MARGUERON** (IP2I, Lyon), Samaya **NISSANKE** (University of Amsterdam)

Director of the ECT*: Professor Gert **Aarts** | The ECT* is part of the Fondazione Bruno Kessler.
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For virtual organization please contact: ECT* Secretariat - Villa Tambosi - Strada delle Tabarelle 286 | 38123 Villazzano (Trento) – Italy |
Tel.: +39-0461 314763, E-mail: staff@ectstar.eu or visit <http://www.ectstar.eu>