

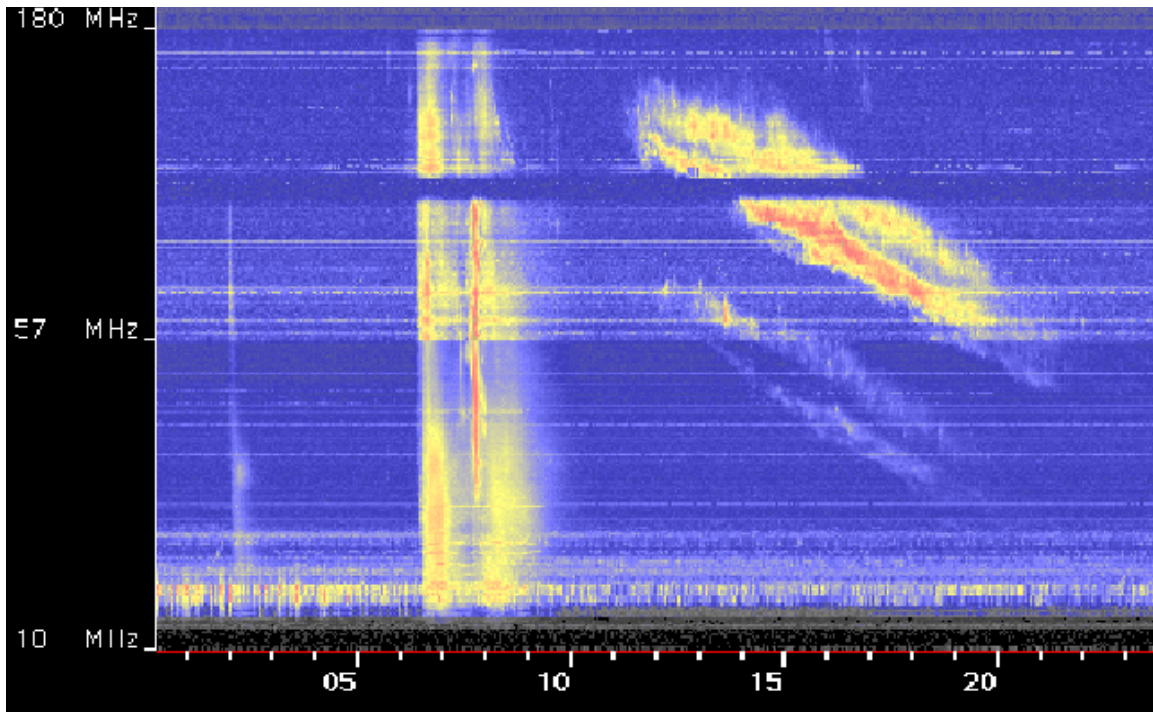
Bachelor and master topics

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Solar flares and their emissions

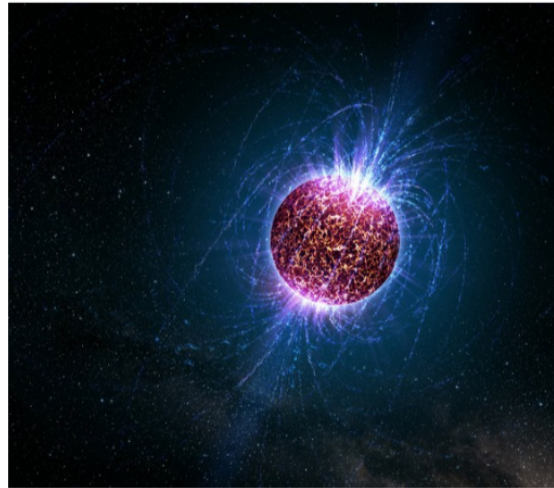


Neutron stars provide insights into a broad range of various astrophysical phenomena

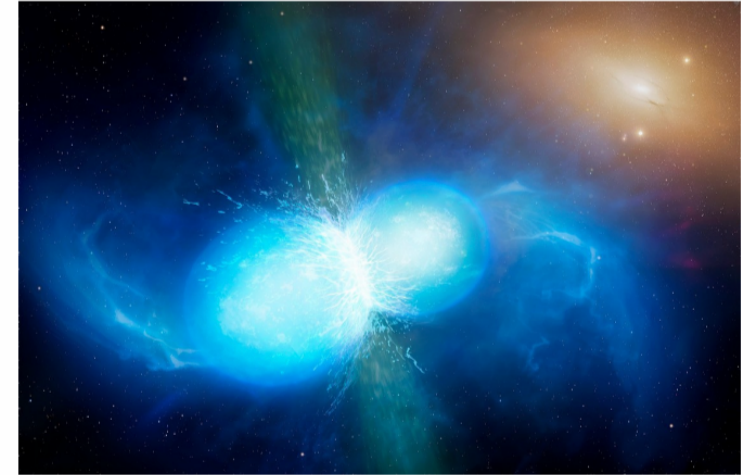
Pulsars



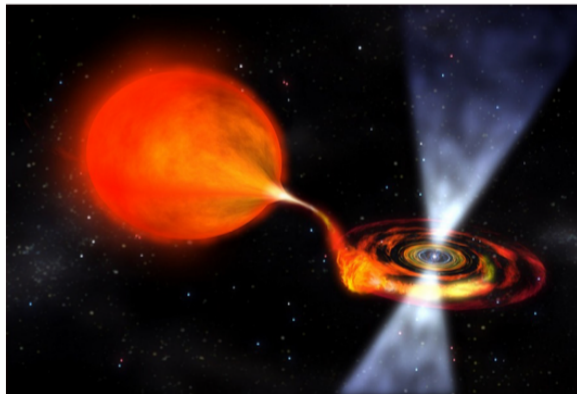
Magnetars



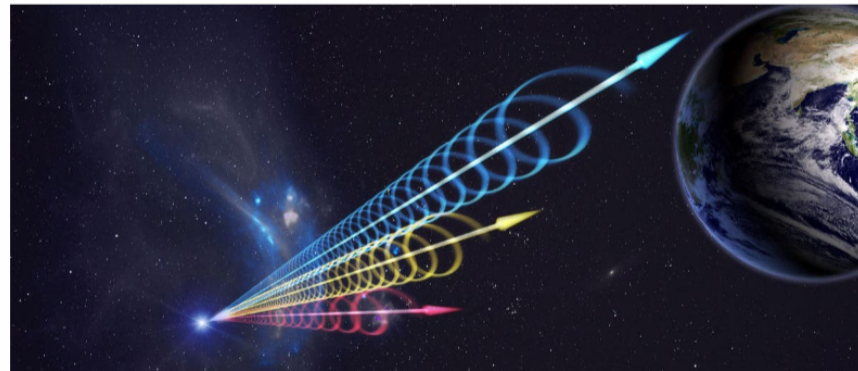
Gravitational waves



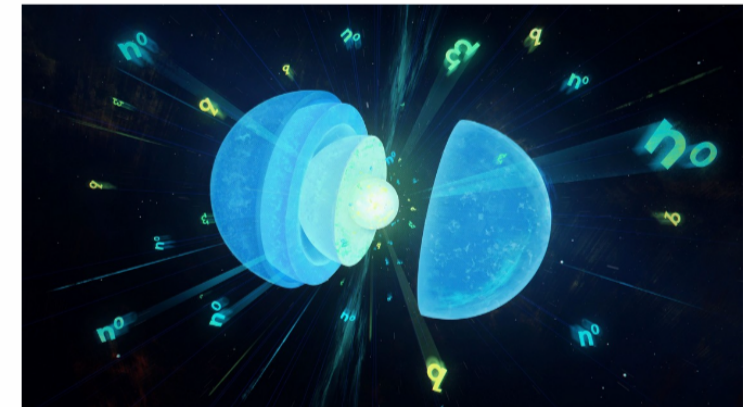
Millisecond pulsars



Fast radio bursts



Extreme physical environments



Simulations on supercomputers



Examples of topics

- Study of radio, UV, and X-ray emission during solar flare
- Systematic analyzes of solar radio burst archive in Ondřejov
- Interpretation of pulsar radio and X-ray emission
- Study of particle acceleration in (relativistic) magnetic reconnection or in (relativistic) shock region
- Development of code for radio or X-ray emission or transfer
- Implementation of electron-positron creation into our code Tristan