

# Extreme physics of neutron stars

EWASS, Turku, July 10-12, 2013

Program (23.06.2013)

## **Session 1, Wednesday, July 10, 14:15 – 15:45 / EOS, masses and radii**

14:15-14:25 Yakovlev, Dima: Introduction

14:25-15:10 Haensel, Pawel: Equation of state, masses, and radii of neutron stars

15:10-15:45 Poutanen, Juri: X-ray bursts and the equation of state

*coffee break 15:45 –16:15*

## **Session 2, Wednesday, July 10, 16:15 – 17:45 / X-ray bursts**

16:15-17:00 Jean in 't Zand: Observations of X-ray bursts

17:00 -17:15 Linares, Manuel: Thermonuclear bursts from slowly and rapidly accreting neutron stars

17:15-17:30 Cavecchi, Yuri: The mechanism of flame propagation in Type I bursts

17:30-17:45 Nättilä, Joonas: Influence of accretion flow on the cooling of neutron star atmospheres after X-ray bursts: implications for mass and radius determination

## **Session 3, Thursday, July 11, 11:00 – 12:30 / X-ray and gamma-ray pulsars**

11:00-11:25 Tsygankov, Sergey: Power spectra of transient X-ray pulsars: estimation of the neutron stars magnetic field

11:25-11:45 Mushtukov, Alexander: A reflection model for the cyclotron lines in the spectra of X-ray pulsars

11:45-12:05 Roberts, Mallory: Multiwavelength studies of the black widow and redback population

12:05-12:30 Kuiper, Lucien: The soft gamma-ray pulsar population and its link to the Fermi LAT pulsar population: a full high-energy picture

**Session 4, Thursday, July 11, 13:30 – 15:30 / Cooling of isolated and accreting neutron stars**

13:30-14:15 Shternin, Peter: Neutron star cooling theory

14:15-14:40 Kaminker, Alexander: Modeling thermal structure of magnetars: heating versus cooling

14:40-15:05 Suleimanov, Valery: Carbon atmosphere models for neutron stars

15:05-15:30 Kylafis, Nick: Accreting magnetars

*coffee break 15:30 – 16:00*

**Session 5, Thursday, July 11, 16:00–18:30 / Magnetars**

16:00-16:45 Watts, Anna: Magnetar bursts

16:45-17:30 Parfrey, Kyle: Magnetospheric models of magnetar flares

17:30-18:15 Levin, Yuri: Magnetar seismology and the physics of neutron-star interiors

**Session 6, Friday, July 12, 11:45 – 13:15 / Superfluidity, glitches and timing noise**

11:45-12:25 Gusakov, Michael: Baryon superfluidity and neutron-star dynamics

12:25-12:45 Kantor, Elena: New instability windows and evolution scenario for rotating neutron stars in LMXBs

12:45-13:00 Petri, Jerome: The force-free neutron star magnetosphere linked to its wind

13:00-13:15 Yakovlev, Dmitry: Self-similarity relations for cooling superfluid neutron stars

**Posters**

Cerri, Danjela: Noise Strength Estimates of magnetars AXP 4U 0142+61, Swift J1822.3-1606, SGR J1833-0832 and Swift J1834.9-0846

Kantor, Elena: Thermal g-modes in superfluid neutron stars