

Day 1: Crust constraints from heated neutron stars

Registration 8:30-9:30

Morning session 1, 9:30 - 11.00

Welcome address -- Nathalie Degenaar (10 min)

Crust cooling of accretion-heated NSs in LMXBs -- Aastha Parikh (invited, 30 min)

Crust cooling of accretion-heated NSs in HMXBs -- Alicia Rouco Escorial (invited, 30 min)

Thermal emission from the full neutron star surface in a quiescent HMXB -- Craig Heinke (contributed, 20 min)

Coffee break 11:00 - 11:30

Morning session 2, 11:30 - 13:00

Simulations of accretion-heated neutron stars -- Laura Ootes (invited, 30 min)

Theoretical implications of thermal emission from quiescent NSs -- Sophia Han (invited, 30 min)

Contamination of low-level accretion in quiescence -- Montserrat Armas Padilla (invited, 30 min)

Lunch break 13:00 - 14:00

Afternoon session 1, 14:00 - 14:50

Diffuse nuclear burning in cooling neutron stars -- Marcella Wijngaarden (invited, 30 min)

The physics of shallow heating --- Andrew Cumming (contributed, 20 min)

Coffee break 14:50 - 15:30

Afternoon session 2, 15:30 - 17:00

Moderated discussion (TBD; shallow heating) -- Dany Page, Dima Yakovlev, Craig Heinke

Welcome reception, 17:00 - 19:00 (Cafe/restaurant Polder)

Day 2: Nuclear reactions

Morning session 1, 9:30 - 11:10

Theory of nuclear surface burning -- Yuri Cavechhi (invited, 30 min)

Observations of X-ray bursts -- Duncan Galloway (invited, 30 min)

Observations of long bursts -- Khaled Alizai (contributed, 20 min)

New models for Type I X-Ray Bursts and their ashes -- Alexander Heger (contributed, 20 min)

Coffee break 11:10 - 11:40

Morning session 2, 11:40 - 13:10

Crustal modes and X-ray bursts -- Frank Chambers (invited, 30 min)

Crust reactions and EOS -- Anthea Fantina (invited, 30 min)

Light and heavy clusters in warm stellar matter -- Helena Pais (contributed, 20 min)

Accreted versus catalyzed crust: neutron star parameters -- Leszek Zdunik (contributed, 20 min)

Lunch break 13:10 - 14:10

Afternoon session 1, 14:10 - 15:00

Crust reactions in connection with lab experiments -- Zach Meisel (invited, 30 min)

Neutron transfer reactions and detailed balance for fusion reactions in the thermo-pycnonuclear regime -- Andrey Chugunov (contributed, 20 min)

Coffee break 15:00 - 15:30

Afternoon session 2, 15:30 - 17:00

Moderated discussion (topic TBD) -- Andrew Cumming & Edward Brown & Alexander Heger

Conference dinner, 18:30 - 23:00 (Poesiat & Kater)

Day 3: Crust physics and magnetic fields

Morning 1, 9:30 - 10:50

Crust physics -- Nicolas Chamel (invited, 30 min)

Neutron star crusts as viewed from nuclear experiments -- Hendrik Schatz (invited, 30 min)

Pairing, entrainment, and phonons in the inner crust -- Michael Urban (contributed, 20 min)

Coffee break 10:50 - 11:20

Morning 2, 11:20 - 13:00

Nuclear pasta, simulations -- Matt Caplan (invited, 30 min)

The abundance and disorder of nuclear pasta in neutron star crusts -- William Newton (contributed, 20 min)

Crust superfluidity -- Vanessa Graber (invited, 30 min)

Pulsar glitches and NICER monitoring of PSR J0537-6910 -- Wynn Ho (contributed, 20 min)

Lunch break 13:00 - 14:00

Afternoon 1, 14:00 - 15:20

Magneto-thermal evolution of neutron stars -- Daniele Viganò (invited, 30 min)

Crust cooling of magnetars -- Francesco Coti Zelati (invited, 30 min)

Maximal cooling of neutron star crusts — Andrew Cumming (contributed, 20 min)

Coffee break 15:20 - 15:50

Afternoon 2, 15:50 - 17:00

Moderated discussion on open questions in NS crust research -- Helena Pais, Wynn Ho

Meeting adjourn, 17:00