

MODE 2016 workshop

Scientific program

Meudon, 18-20 May 2016

Wednesday 14:15 → 16:25 : plenary session salle de conférence, château (bât.9)

J.Novak – *welcome* (15')

N.Stergioulas – *Equation of state constraints through binary neutron star merger asteroseismology* (30 + 10')

A.Marcowith – *On particle acceleration at astrophysical shocks* (20 + 5')

D.Smith – *Gamma-ray pulsars with Fermi* (20 + 5')

L.-M.Lin – *Probing the universality of I-Love-Q relations* (20 + 5')

* 16:25 – 16:55 Coffee break

Wednesday 16:55 → 18:35 : parallel sessions

Parallel Session I - « Pulsars and NS magnetosphere » 16:55 -18:35 : salle du CIAS, château (bât.9)

J.-M.Griessmeier – *Low frequency radio observations with the LOFAR station FR606* (20 + 5')

F.Mottez – *Where do Fast Radio Bursts come from ?* (20 + 5')

J.R.Garcia – *Pulsars with MAGIC* (20 + 5')

G.Voisin – *Curvature radiation in pulsar magnetospheres from a quantum-electrodynamics point of view* (20 + 5')

Parallel Session II - « SNR and PWNe » 16:55 -18:35 : salle de conférence, château (bât.9)

M.-H.Gronidin – *New Extended GeV Sources in the Galactic Plane Found in a Search of the Pass 8 data from Fermi-LAT* (20 + 5')

P.Martin – *Particle accelerators in another galaxy: the Large Magellanic Cloud observed with Fermi and H.E.S.S.* (20 + 5')

A.Marcowith – *Gamma-ray emission from young massive star clusters* (20 + 5')

A.Gusdorf – *Old supernova remnants: an interstellar perspective* (20 + 5')

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Thursday 9:30 → 12:35 : plenary session salle de conférence, château (bât.9)

N.Andersson – *When the crust yields: From glitches to flares* (30 + 10')

J.Margueron – *Impact of the nuclear EOS in dense and uniform matter on the bounce properties of core-collapse supernova* (20 + 5')

O.Porth – *3D modelling of PWN* (30 + 10')

* 11:15 – 11:45 Coffee Break

Y.Gallant – *The population of Pulsar Wind Nebulae as observed in TeV gamma-rays* (20 + 5')

L.Guillemot – *The gamma-ray millisecond pulsar deathline, revisited* (20 + 5')

* Lunch buffet 12:35 – 14:00

Thursday 14:00 → 18:00 : parallel sessions

Parallel Session I - « NS interiors » 14:00 -15:40 :
salle de conférence, château (bât.9)

A.Raduta – *Nuclear physics beyond drip-line and its impact on electron capture rates during core-collapse* (20 + 5')

A.Sourie – *Relativistic models for pulsar glitches with realistic equations of state* (20 + 5')

N.Martin – *Hydrodynamics of the neutron star inner crust* (20 + 5')

A.Harutyunyan – *Electrical conductivity of warm neutron star crusts in magnetic fields* (20 + 5')

Parallel Session II - « PWNe » 14:00 -15:40 :
salle du CIAS, château (bât.9)

R.Terrier – *Pulsar wind nebulae at the Galactic Centre* (20 + 5')

C.Gouiffes – *Change in hard X-rays and optical polarization of the Crab nebula and pulsar* (20 + 5')

J.Devin – *Disentangling the hadronic from the leptonic emission in the composite SNR G326.3-1.8* (20 + 5')

C.Maitra – *The elusive nature of AX J0043-737: An 87 ms pulsar in the SMC* (20 + 5')

* Coffee Break 15:40 – 16:10

Parallel Session I - « NS interiors » 16:10 -17:50 :
salle de conférence, château (bât.9)

M.Marques – *Relativistic differentially rotating stars with hot matter* (20 + 5')

M.Sieniawska – *Similar global parameters, different interiors - how to distinguish between neutron stars?* (20 + 5')

D.Chatterjee – *An Empirical Equation of State and its applications in nuclear physics and astrophysics* (20 + 5')

R.Stiele – *Compact stars in a SU(3) Quark-Meson Model* (20 + 5')

Parallel Session III - « SNRs » 16:10 -17:50 :
salle du CIAS, château (bât.9)

P.Maggi – *Fe K and ejecta emission in SNR G15.9+0.2 with XMM-Newton*(20 + 5')

B.Condon – *High-energy observations of the shell-type remnants RX J1713 and RCW 86 with Fermi-LAT* (20 + 5')

F.Acero – *Thermal X-rays and shock speed measurement in RX J1713.7–3946* (20 + 5')

L.Jouvin – *Origin of the VHE cosmic rays excess in the galactic center* (20 + 5')

19h-21h conference dinner (bus leaving from the Meudon observatory at 18h)

* Restaurant Perraudin, 157 rue Saint Jacques, 75005 Paris

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Friday morning 9:30 → 12:35 : plenary session
salle de conférence, château (bât.9)

J.Pétri – *Pulsar winds and magnetospheres* (30 + 10')

N.Renault-Tinacci – *Phase-resolved spectral analysis of Fermi-LAT millisecond pulsars* (20 + 5')

A.Chugunov – *Differential rotation and nonlinear r-modes in magnetized neutron stars* (20 + 5')

* 11:00-11:30 Coffee break

S.Tydel – *Equation of State for Astrophysical Applications* (30 + 10')

M.Fortin – *Neutron star radii and crusts: uncertainties and unified equations of state* (20 + 5')

12:35 : end of the workshop.

* Lunch buffet 12:35 – 14:00

Friday afternoon 14:00 → 18:00 :

**NewCompStar COST Working Group 2 meeting “Nuclear Physics”
salle de conférence, château (bât.9)**

Working group leader : Jérôme Margueron

- Discussion on the *microscopic needs for compact stars physics*, chaired by N. Andersson, N. Stergioulas and S. Tydel (40')
- **Nicolas Chamel** (topic leader) – *Probing Nuclear Superfluidity With Pulsar Timing Observations* (30 + 10')
- **Isaac Vidaña** (topic leader) – *Nuclear symmetry energy and the r-mode instability of neutron stars* (30 + 10')
- **Pierre Becker** – *Extended Skyrme equation of state in asymmetric nuclear matter* (20+5')
- **Kristian Petrik** – *A Novel Mapping of the Non-local Fock Terms onto the Relativistic Hartree Theory* (20+5')