

Poster Rapporteur

The Present and Future of Pulsar
Astronomy - IAU JD02

All the posters - at a glance

- Effects of core magnetic fields in evolution of binary neutron stars Taghi Mirtorabi, Atefeh Javadi Khasraghi, Shohre Abdolrahimi
- External Electromagnetic Fields of Slowly Rotating Relativistic Magnetized NUT Stars B.J. Ahmedov, A.V. Khugaev
- PSR J0538+2817 As The Remnant Of The First Supernova Explosion In A Massive Binary V.V. Gvaramadze
- Ensemble Pulsar Time Scale A.E. Rodin
- Comparison of Giant Radio Pulses in Young Pulsars and Millisecond Pulsars A. Slowikowska1, A. Jessner2, G. Kanbach1, B. Klein2
- Integral IBIS and JEM-X Observations of PSR B0540-69 A. Slowikowska1, G. Kanbach1, J. Borkowski2, W. Becker1
- Plasma Modes Along Open Field Lines of Neutron Star Endowed with Gravitomagnetic NUT Charge B.J. Ahmedov1, V.G. Kagmanova2
- The Drift Model of Magnetars I.F. Malov1, G.Z. Machabeli2
- Substellar companions around neutron stars B. Posselt2, R. Neuhäuser2, F. Haber11
- Detection Of The Individual Pulses Of The Pulsars _0809+74; _0834+06; _0950+08; _0943+10; _1133+16 At Decameter Wave Range O.M. Ulyanov1, V.V. Zakharenko1, A.A. Konvalenko1, A. Lecacheux2, C. Rosolen2, H.O. Rucker3
- An Analytical Description of Low-Energy Secondary Plasma Particle Distribution in Pulsar Magnetospheres V. M. Kontorovich, A. B. Flanchik
- Timing Irregularities and the Neutron Star Stability J.O. Urama
- Force-free pulsar magnetosphere A.N. Timokhin
- Crab pulsar optical photometry and spectroscopy with microsecond temporal resolution G. Beskin1, S. Karpov1, V. Plokhotnichenko1, V. Debur1, A. Biryukov2, D. Badjin2, M. Redfern3, A. Shearer3
- Discovery of a large time scale cyclic evolution of radio pulsars rotational frequency. G. Beskin1, A. Biryukov2, S. Karpov1
- Abnormal Phases in Nuclear Matter in Supernova core collapse model D.J. Bora, H.L. Duorah, K. Duorah
- Instant Radio Spectra of Giant Pulses from the Crab Pulsar Over Decimeter to Decameter Wave Band M.V. Popov1, A.D. Kuzmin2, O.M. Ulyanov3, A.A. Deshpande4, A.A. Ershov2, V.I. Kondratiev1, S.V. Kostyuk1, B.Ya. Losovsky2, V.A. Soglasnov1, V.V. Zakharenko3
- Pulsar Nulling Quantitative Analysis J.H. Seiradakis, K. Lazaridis
- Eclipse Study Of The Double Pulsar R. P. Breton1, V. M. Kaspi1, M. A. McLaughlin2, S. M. Ransom3, M. Lyutikov5, M. Kramer6, F. Camilo4, I. H. Stairs5, R. Ferdman5
- Observations of southern pulsars at high radio frequencies A. Karastergioul1, S. Johnston2
- Pulsar Braking Indices Altan Baykal, Ali Alpar
- Electrodynamics Of Pulsar's Electrospheres J.A. Petri
- About one hypothesis on the origin of Anomalous X-ray Pulsars and Soft Gamma-ray Repeaters F. Kasumov, A. Allakhverdiev, A. Asvarov
- Combined models of evolution and real ages of pulsars A. Allakhverdiev, F. Kasumov, S. Tagieva
- X-ray Emission From Hot Polar Cap In Pulsars With Drifting Subpulses J. Gil, G. Melikidze
- Pulsed Radio Emission From Two XDINS V.M. Malofeev, O.I. Malov, D.A. Teplykh
- Magnetospheric Eclipses in the Double Pulsar System J0737-3039 R. R. Rafikov1, P. Goldreich2
- Electromagnetic Fields of Magnetized Neutron Stars in Braneworld B.J. Ahmedov, F.J. Fattoyev
- On Dependence of Some Parameters of Radio Pulsars Radiation on Their Age V.H. Malumian, A.N. Harutyunyan
- The Nan-çay Pulsar Instrumentation : The BON Coherent Dedispersor I. Cognard, G. Theureau
- Relation of Pulsars to the Remnants of Supernova Bursts V.H. Malumian, A.N. Harutyunyan
- The Multi-photon Electron-Positron Pair Production in the Magnetosphere of Pulsars Ara K. Avetissian
- RELATIVISTIC, ELECTROMAGNETIC WAVES IN PULSAR WINDS O. Skjaeraasen
- Coupled Spin, Mass, Magnetic field, and Orbital Evolution of Accreting Neutron stars M. Mirtorabi, A. Javadi Khasraghi, S. Abdolrahimi
- Investigating The Magnetic Field of The Solar Corona With Pulsars S.Ord
- RRATs and PSR B1931+21 X.-D. Li
- Is PSR B0656+14 a very nearby RRAT source? P Weltevrede1, B Stappers2, J Rankin3, G Wright4
- Glitch Observations In Slow Pulsars G.H. Janssen1, B.W. Stappers2
- Mode Coupling in Pulsar Magnetospheres Due to Plasma Gradients Perpendicular to the Magnetic Field A. C. Judge
- Software Aspects of PuMa-II R Karuppusamy1, B Stappers1, B Stappers2
- High Time Resolution Low-Frequency Pulsar Studies B. W. Stappers
- The 8gr8 Cygnus Survey for New Pulsars and RRATs E. Rubio-Herrera1, R. Braun2, G. Janssen1, J. van Leeuwen3, B.W. Stappers1
- Pulsar Coherent De-dispersion Observation at Urumqi Observatory Aili Yiishamuding
- X-ray Monitoring of the Pulsar PSR B1259_63 H. H. Huang, W. Becker
- XMM-Newton Observation of PSR B1957+20 H. H. Huang, W. Becker
- Optical observations of binary millisecond X-ray pulsars in quiescence. P Callanan1, M Reynolds1, A Filippenko2, P Garnavich1, R Foley2
- X-Ray Studies of the Central Compact Objects in Puppis-A& RX J0852.0-4622 C. Y. Hui, W. Becker
- Probing the Proper Motion of the Central Compact Object in Puppis-A C. Y. Hui, W. Becker
- Exposing Drifting Subpulses From The Slowest To The Fastest Pulsars Joeri van Leeuwen
- Pulsar Research With LOFAR, The First Next-Generation Radio Telescope Joeri van Leeuwen1, Ben Stappers2
- Non-Dipolar Surface Magnetic Field of Neutron Stars: General Approach and Observational Consequences G.I. Melikidze, A. Szary, J. Gil
- Glitches In the Vela Pulsar SJ Buchner1, C Flanagan2

A note on poster styles

Three main approaches

- Printout of a paper (high word density)
- Reporting plans (no results yet)
- Storyboard approach (low word density)

Remember that people can always see the paper for the details...

A classification scheme

- Searches and Surveys
- Timing
- Radio observations
- RRATs
- Evolution: observations and theory
- Emission theory
- Optical observations
- High-energy observations

Searches and surveys

- 8gr8 Cygnus survey (556)
 - 328 MHz in grating mode with WSRT
 - 300 sq deg; 1.9 hr dwell times
 - Few 10s of new pulsars/RRATs expected
- Radio emission from XDINs (536)
 - 42-112 MHz with LPA
 - 1RXS J1308+21 (10.3 s)
 - 1RXS J2143+06 (9.4 s)
 - Excellent targets for LOFAR (563, 557)

Timing

- Glitch observations (560; *566)
 - WSRT 30 small glitches, incl. 3 in 1814-1744
- Are the small glitches “aftershocks”?
- Is there a correlation between the size of a glitch and the time until the next glitch?
- Is there an evolution of glitch behaviour with pulsar age?
- Can anomalous braking indices be understood by missed glitches? (541)

Timing

- Coherent dedispersion
 - WSRT (558)
 - Nancay (544)
 - Urumqi (555)
- Ensemble pulsar timescale (*518)
- Irregularities and EOS (*526)

Radio Observations

- Single pulses (520)
- Giant pulses (531)
- Drifting sub-pulses (564; 537-xray)
- Pulsar nulling (532)
- High-frequency polarimetry (542)
- Solar corona studies (549)
- Double pulsar eclipses (533, 535)

Rotating Radio Transients

- RRATs and 1931+21 (550)
 - Debris disk / propellor model
- Non-dipolar fields (565)
- RRATs and 0656+14 (551)
 - Exceptionally powerful bursts (AO data)
 - A nearby pulsar $D=0.3$ kpc
 - When placed at 5-6 kpc ... RRATlike?

Evolution: observations

- High pm of cco in Puppis A (561,562)
- Alternative origin for J0538 (517)
- Parameter-age correlations (*538)
- PSR-SNR associations (*545)
- Evolution-age models (*538)
- Nu-Nudot correlations (529)

Evolution: theory

- P, M, B + orbit evolution (515)
- B-field evolution in binary systems (546)
- Non-dipolar B-fields (565)
- X-ray PSRs/ SGRs (*539)

Emission theory

- Plasma in mag'spheres 523, *525, 559
- EM fields/braneworlds 516, 534
- Relativistic EM waves in PSRwinds 547
- Pulsar electrospheres 540
- Force-free aligned rotator 527

Optical observations

- Searches for planets (521)
 - Direct imaging of 14 nearby NSs
- Crab photometry (529)
 - 1994-2003 stable profile; 2005-6 changes?
- Crab polarimetry (519)
 - 10s of us resolution with OPTIMA/NOT
- IGR 00291+5934 during quiesc. (552)
 - No heating of secondary cf 1808.4-3658

High-energy observations

- XMM/ASCA monitor of B1259-63 (553)
 - Time variation of X-ray flux
 - Orbital variation of photon index
 - Interaction between pulsar and stellar wind
- XMM observation of B1957+20 (554)
 - Power-law spectrum of nebula emission
 - Significant X-ray modulation near eclipse
- INTEGRAL detection of B0540-69 (524)
 - Pulsations visible at 100 keV
 - Cheng/Wei model with Synchrotron and IC

Summary

- Excellent sampling of pulsar astronomy across the EM spectrum with good links to theory.
- Thanks to everyone for sending me their posters in advance!
- Come to the poster session 17:40 today in the South Hall on Floor 3!