

# CURRICULUM VITAE

- Name:** Joanna Marie Rankin
- Address:** Department of Physics, Cook Building A405,  
University of Vermont, Burlington, Vermont 05405  
Telephone: 802-656-0051/656-2644
- Education:** University of Iowa, Ph.D. (Astrophysics), June 1970  
Tulane University, M.S. (Physics), August 1966  
Southern Methodist University, B.S., June 1965
- Citizenship:** Ireland, United States
- Positions:** Professor of Physics, University of Vermont (1988-)  
Visiting Committee, Arecibo Observatory (2004-6)  
Visiting Scientist, Sterrenkundig Instituut ‘Anton Pannekoek’  
University of Amsterdam, Netherlands (2001, 2002, 2005, 2009)  
Visiting Scientist, Raman Research Institute, Bangalore,  
India (1988, 1991, 1993-97, 1999, 2001, 2004)  
Associate Professor of Physics, Univ. of Vermont (1980-88)  
Senior Research Associate, History Dept. and Center for  
Radiophysics and Space Research, Cornell Univ. (1978-80)  
Acting Head, Computer Dept., Arecibo Observatory (1975)  
Assistant Professor of Astronomy, Cornell Univ (1974-78)  
Scientific Staff, Arecibo Observatory, Arecibo (1970-78)  
Visiting Scientist, Radiophysics Div., C.S.I.R.O., Sydney, Australia (1972)
- Pre- and Post-  
doctoral  
Students &  
Colleagues:** Jeffrey Herfindal (Auburn); Patrick Weltevrede (Amsterdam);  
Stephen Redman (Penn); Joeri van Leeuwen (Utrecht);  
R. Ramachandran (Raman Research Institute, Berkeley);  
Dipanjan Mitra (Raman Research Institute, MPI Radioastronomy);  
Jeffrey Kern (New Mexico Tech); Mark McKinnon (New Mexico Tech),  
Kyriakh Xilouris (Thessaloniki); N. Rathnasree (UVM);  
Gordon Gullahorn, Daniel Stinebring & Richard Isaacman (Cornell);  
John Benson, Steven Spangler, & Joel Weisberg (Iowa)
- Courses  
Taught:** Astronomy 5—Introductory Astronomy (complete)  
(Fall 2001-03)  
Astronomy 57—History and Practice of Ancient Astronomy  
(Spring 2002-04,06; Fall 2007-9)  
Physics 214—Electrodynamics  
(Spring 1982, 85, Fall 2000,04,-06,09)  
Physics 257—Astrophysics  
(Spring 1983, 96.00; Fall 1984, 86, 88, 91, 93, 95-6, 97-8, 04,06-8)  
Physics 323—Physics and Philosophy

(Spring 1981)  
Physics 323—Pulsar Radio Astronomy  
(Spring 1996, 2003, 06)  
Women's Studies 174—Women, Science and Nature  
(Fall 1990, Spring 1993, 95, 96, 98, 00,02,04,07)

**Research Support:** 2007-2011 National Science Foundation (AST 07-07669)  
2002-5 Visitor Grant, Netherlands National Science Foundation  
2001-2006 National Science Foundation (AST 00-98685)  
2000-2005 National Science Foundation (AST 99-86754)  
1997-2001 National Science Foundation (INT 97-00668)  
1993-1999 National Science Foundation (INT 93-21974)  
1990-1994 National Science Foundation (AST 89-17722)  
1986-1990 Vermont EPSCoR Research Grant  
1983 Research Corporation: Cottrell Grant  
1982 UVM Graduate College Research Grant  
1981 National Science Foundation (SES 81-03180)  
1978 National Science Foundation (SOC 78-17501)

**Honors:** Fulbright Fellowship, India (1994)  
Indo-U.S. Fellowship, C. I. E. S. (1991)  
Kellogg Foundation National Fellowship Finalist (1982)  
Van Allen-Link Fellowship (1968-70)

**Listed in:** *American Men and Women of Science*  
*Who's Who in Frontier Science and Technology*  
*Who's Who in Society*  
*Who's Who in Technology*

**Professional Societies:** International Astronomical Union  
International Scientific Radio Union (URSI)  
American Astronomical Society  
Sigma Xi  
American Women in Science  
National Women's Studies Association  
Federation of American Scientists  
Union of Concerned Scientists

**Conference Organ'tion:** International Astronomical Union Colloquium #128,  
*The Magnetospheric Structure and Emission Mechanism of Radio Pulsars*,agòw, Poland, June 1990 (with T. H. Hankins)

**Books Published:** *The Magnetospheric Structure and Emission Mechanism of Radio Pulsars*, International Astronomical Union Colloquium #128, Lagòw, Poland (with T. H. Hankins and J. A. Gil), 1992

**Language Skills:** Russian (reading and some conversation)  
German (reading and some conversation)  
Spanish (reading and some conversation)  
Sanskrit (some reading)  
French (some reading)  
Latin (some reading)

## LECTURES & COLLOQUIA (2001—):

Inter-University Centre for Astronomy & Astrophysics, Pune, India “Pulsar Subbeam Circulation Mapping: Touching the Physics of Pulsar Emission” January 2001).

Sterrenkundig Instituut Utrecht, Utrecht University, Utrecht, Netherlands “Pulsar Subbeam Circulation Mapping: Touching the Physics of Pulsar Emission” February 2001).

Kapteyn Institute, Groningen University, Groningen, Netherlands “Pulsar Subbeam Circulation Mapping: Touching the Physics of Pulsar Emission” March 2001).

Max Planck Institut für Radioastronomie, Bonn, “Pulsar Subbeam Circulation Mapping: Touching the Physics of Pulsar Emission” March 2001).

Netherlands Foundation for Radio Astronomy, Dwingeloo, Netherlands “Pulsar Subbeam Circulation Mapping: Touching the Physics of Pulsar Emission” March 2001).

Astrophysics Program, Nijmegen University, Nijmegen, Netherlands “Pulsar Subbeam Circulation Mapping: Touching the Physics of Pulsar Emission” April 2001).

Netherlands Pulsar Research Group, “Observational Methods for Understanding Pulsar Radio Emission” (three talks, June 2001).

MFO Coordination Meeting, Sterrenkundig Instituut, University of Amsterdam “Rotating Subbeam Systems & the Physics of Pulsar Emission” (May 2002).

University of Amsterdam, Sterrenkundig Instituut ‘Anton Pannekoek “Rotating Subbeam Systems, the Eur-Asian Polarimetric Observations Project & the Problem of Pulsar Emission” June 2002).

Netherlands Foundation for Radio Astronomy, Dwingeloo, Netherlands “Rotating Subbeam Systems, the Eur-Asian Polarimetric Observations Project & the Problem of Pulsar Emission” June 2002).

Pushchino Radio Astronomy Observatory, Pushchino, Russia “Rotating Subbeam Systems, the Eur-Asian Polarimetric Observations Project & the Problem of Pulsar Emission” (July 2002)

Astro-Space Center of the Lebedev Physical Institute of the Russian Academy of Sciences, Moscow “Rotating Subbeam Systems, the Eur-Asian Polarimetric Observations Project & the Problem of Pulsar Emission” (July 2002)

Physics Department, McGill University “Rotating Subbeam Systems & the Problem of Pulsar Emission” (October 2002).

Arecibo Observatory, Puerto Rico, “Rotating Subbeam Systems & the Problem of Pulsar Emission” (October 2002).

Astronomy Department, UC Berkeley “Rotating

Subbeam Systems & the Physics of Pulsar Emission” (September 2003).

Physics & Astronomy Department, Univ. of Iowa “Rotating Subbeam Systems & the Physics of Pulsar Emission” (November 2003).

Raman Research Institute, Bangalore, India “Rotating Subbeam Systems & the Physics of Pulsar Emission” (January 2004).

National Centre for Radio Astrophysics, Pune, India, “Pulsar Emission Dynamics: Not As Our Mothers Taught Us” (January 2007).

Raman Research Institute, Bangalore, India “Connecting Pulsar Phenomena with the Emission Physics” (January 2007).

Physics Department, University of Vermont, “Connecting Radio Pulsar Phenomena with the Emission Physics” (March 2007).

University of Amsterdam, Sterrenkundig Instituut ‘Anton Pannekoek “Connecting Radio Pulsar Phenomena with the Emission Physics” (March 2007).

Physics Department, University of Vermont, “Connecting Radio Pulsar Phenomena with the Emission Physics” (April 2007).

Physics Department, McGill University, Montreal, Canada “Connecting Radio Pulsar Phenomena with the Emission Physics” (May 2007).

Workshop on Pulsar Populations, NRAO Green Bank Observatory, “Nulling, Drifting. Moding and Carousel-Beam Emission” (May 2007).

40 Years of Pulsars, Magnetars & More Symposium, McGill University, “Many Recent Insights Into the Problem of Pulsar Emission” (August 2007).

Frontiers of Astronomy with the World’s Largest Radio Telescope, Washington, D.C., “Single Pulse Studies Pulsar Emission Mechanisms” (Sept. 2007).

Middle America Regional Astronomy Conference, Kansas City, MO “Connecting Pulsar Phenomena with the Emission Physics” (March 2008).

Low Frequency Pulsar Science, Lorentz Center, Leiden University, “Connecting Single Pulse Behaviour with Pulsar Emission Physics” (June. 2008).

Armagh Observatory, Armagh, Northern Ireland, “Connecting Radio Pulsar Phenomena with the Emission Physics” (July 2008).

INAF -Arcetri Workshop “Pulsars in their Diversity”, Elba, Italy “Conal/Core Phenomena and the Physics of Pulsar Emission” (June 2009).

National Centre for Radio Astrophysics, Pune, India, “A New Era of Pulsar Emission Investigation” (January 2010).

Raman Research Institute, Bangalore, India “A New Era of Pulsar Emission Investigation” (January 2010).

## REFEREED ASTRONOMICAL PUBLICATIONS:

Quasi-sinusoidal oscillation in arrival times of pulses from NP 0532 (with D. W. Richards, G. H. Pettengill, and C. C. Counselman III), *Astrophysical Journal* **160**, L1-L6 (1970).

Pulsar NP 0532: Average polarization and daily variability at 430-MHz (with D. B. Campbell and C. Heiles), *Nature* **225**, 527-528 (1970).

*The 1969 solar occultation of the Crab Nebula pulsar NP 0532*, Ph.D. thesis, University of Iowa 70-26 (1970).

Pulsar NP 0532: Properties and systematic polarization of individual strong pulses at 430 MHz (with C. Heiles and D. B. Campbell, *Nature* **226**, 529-531 (1970).

Pulsar NP 0532: Polarization of strong pulses at 430 MHz as seen with 300 kHz bandwidth (with C. Heiles), *Nature* **227**, 1330-1331 (1970).

Pulsar NP 0532: Absence of average polarization at 111.5 MHz (with C. Heiles and D. B. Campbell) *Nature* **228**, 1074 (1970).

Radio pulse shapes, flux densities and dispersion of pulsar NP 0532 (with J. M. Comella, H. D. Craft, Jr., D. W. Richards, D. B. Campbell, and C. C. Counselman III), *Astrophysical Journal* **162**, 707-726 (1970).

Multipath delay distortion of radio pulses from NP 0532 (with C. C. Counselman III), *Astrophysical Journal* **166**, 513-523 (1971).

Pulsar NP 0532: Frequency structure in individual strong pulses (with C. Heiles), *Nature Physical Science* **231**, 97-99 (1971).

Pulsar NP 0532: Disappearance of the precursor pulse component at 606 MHz (with C. Heiles and J. M. Comella), *Astrophysical Journal* **163**, L95-L96 (1971).

Crab Nebula pulsar radio pulse arrival times at Arecibo Observatory (with C. C. Counselman III, and D. W. Richards), *Astronomical Journal* **76**, 686-690 (1971).

Density of the solar corona from occultations of NP 0532 (with C. C. Counselman III), *Astrophysical Journal* **175**, 843-856 (1972).

Decimeter wavelength observations of radio recombination lines in W51 (with a Parrish, V. Pankonin, C. E. Heiles, and Y. Terzian), *Astrophysical Journal* **178**, 673-680 (1972).

Pulsar NP 0532: Variability of dispersion and scattering (with C. C. Counselman III), *Astrophysical Journal* **181**, 875-899 (1973).

Improved parameters of 15 southern pulsars (with P. M. McCulloch, J. G. Ables, M. M. Komes-

aroff, and P. A. Hamilton), *Astrophysical Letters* **14**, 169-170 (1973).

Changes in the distribution of density and radio scattering in the solar corona in 1971 (with C. C. Counselman III), *Astrophysical Journal* **185**, 357-362 (1973).

Individual pulse polarization properties of three pulsars (with D. B. Campbell and D. C. Backer), *Astrophysical Journal* **188**, 609-613 (1974).

Short duration radio flares of UV Ceti stars (with S. R. Spangler and S. D. Shawhan), *Astrophysical Journal* **190**, L129-131 (1974).

Timing results for thirteen pulsars (with D. Richards & G. A. Zeissig), *Nature* **251**, 37 (1974).

The Crab Nebula Pulsar: Radiofrequency spectral variability (with R. R. Payne, D. B. Campbell), *Astrophysical Journal* **193**, L71-74 (1974).

Change of pulse characteristics of the Vela pulsar with frequency (with M. M. Komesaroff and P. M. McCulloch), *Nature* **252**, 210-212 (1974).

Four Stokes parameter radio frequency polarimetry of a flare from AD Leonis (with S. R. Spangler and S. D. Shawhan), *Astrophysical Journal* **194**, L43-L46 (1974).

Pulsar fluctuation spectra and the generalized drifting-subpulse phenomenon II (with D. C. Backer and D. B. Campbell), *Astrophysical Journal* **197**, 481-487 (1974).

430-MHz radioastronomical polarimetry at Arecibo Observatory (with D. B. Campbell and S. R. Spangler), *N.A.I.C. Report #46*, Cornell University, Ithaca, New York (1975).

Further changes in the distribution and density of the solar corona in 1973 (with J. M. Weisberg, R. R. Payne, and C. C. Counselman III, *Astrophysical Journal* **209**, 252-259 (1976).

430-MHz polarimetry of flares from UV Ceti-type stars (with S. R. Spangler and S. D. Shawhan), *University of Iowa Physics Department Report* **74-32** (1974).

Pulsar polarization: Orthogonal mode emission in geometric models (with D. C. Backer and D. B. Campbell), *Nature* **263**, 202 (1976).

Timing results for seven pulsars (with G. E. Gullahorn, R. R. Payne, and D. W. Richards), *Astrophysical Journal* **205**, L151-L153 (1976).

Further observations of binary pulsar 1913+16 (with J. H. Taylor, R. A. Hulse, L. A. Fowler & G. E. Gullahorn), *Astrophysical Journal* **206**, L53 (1976).

The Crab Nebula pulsar: Variability of dispersion and scattering (with R. Isaacman), *Astrophysical Journal* **214**, 214-232 (1977).

On the spinup/spindown of pulsar JP 1953+29

(with V. N. Mansfield), *Vistas in Astronomy* **21**, 393-405 (1977).

The Crab Nebula pulsar: Six years of radio frequency arrival times (with G. E. Gullahorn, R. Isaacman and R. R. Payne), *Astronomical Journal* **82**, 309-312 (1977).

Orthogonal modes of polarization from pulsar PSR 2020+28 (with J. M. Cordes and D. C. Backer), *Astrophysical Journal* **223**, 961 (1978).

Calibration of the Arecibo Observatory six-channel, 30-MHz adding polarimeter for use at 21-cm wavelength (with J. M. Weisberg and K. Sellgren, *N.A.I.C. Report* **113**, Cornell Univ., Ithaca, NY (1979).

Pulsar timing results from Arecibo Observatory (with G. E. Gullahorn), *Astronomical Journal* **83**, 1219-1224 (1978).

Pulsar proper motions from timing observations (with G. E. Gullahorn), *Astrophysical Journal* **225**, 963-969 (1978).

Neutral hydrogen absorption in the spectra of four low-latitude pulsars (with J. M. Weisberg and V. Boriakoff), *Astronomy & Astrophysics* **77**, 204-209 (1979).

Statistical summaries of polarized pulsar radiation (with D. C. Backer), *Astrophysical Journal Supplement Series* **42**, 143-173 (1980).

HI absorption measurements of seven low-latitude pulsars (with J. M. Weisberg and V. Boriakoff), *Astronomy & Astrophysics* **88**, 84-93 (1980).

Irregular pulsar timing behavior (with G. E. Gullahorn), *Astrophysical Journal* **260**, 520 (1982).

Statistics of neutral hydrogen absorption toward pulsars (with J. M. Dickey, J. M. Weisberg, and V. Boriakoff), *Astronomy and Astrophysics* **101**, 332-341 (1981).

Pulsar polarization: Weak features and sources at 430 MHz (with J. M. Benson), *Astronomical Journal* **82**, 618-632 (1981).

Toward an empirical theory of pulsar emission: I. morphological taxonomy *Astrophysical Journal* **274**, 333-358 (1983).

Toward an empirical theory of pulsar emission: II. on the spectral behavior of component width *Astrophysical Journal* **274**, 359-368 (1983).

Pulsar polarization fluctuations I. 1404-MHz statistical summaries (with D. R. Stinebring, J. M. Cordes, J. M. Weisberg, and V. Boriakoff) *Astrophysical Journal Supplement Series* **55**, 247-277 (1984).

Pulsar polarization fluctuations II. 800-MHz statistical summaries (with D. R. Stinebring, J. M.

Cordes, J. M. Weisberg, and V. Boriakoff) *Astrophysical Journal Suppl. Ser.* **55**, 279-288 (1984).

Null transition times, quantized drift modes, and no memory across nulls for PSR 1944+17 (with W. T. S. Deich, J. M. Cordes, and T. H. Hankins) *Astrophysical Journal* **300**, 540-550 (1986).

Toward an empirical theory of pulsar emission: III. mode changing, drifting subpulses, and nulling *Astrophysical Journal* **301**, 901 (1986).

On the spindown of pulsar 0656+14 (with D. Domingue, J. M. Weisberg, and P. R. Backus) *Astronomy & Astrophysics* **161**, 303 (1986).

Mode changing and quasi-periodic modulation in pulsar 1737+13, a bright, five-component pulsar (with A. Wolszczan, and D. R. Stinebring) *Astrophysical Journal* **324**, 1048-55 (1988).

On the polarization-modal construction of triplicity in pulsar 1604-00 *Astrophysical Journal* **325**, 314-319 (1988).

Neutral hydrogen absorption measurements for ten pulsars and the electron density in the galactic plane (with J. M. Weisberg and V. Boriakoff) *Astronomy & Astrophysics* **186**, 307 (1988).

The Crab Nebula: Secular variations in the Faraday rotation of the pulsar and the great 1974-75 scattering event (with D. B. Campbell, R. Isaacman, & R. Payne) *Astronomy & Astrophysics* **202**, 166 (1988).

Arecibo 21-cm polarimetry of 55 Pulsars: a guide to classification (with D. R. Stinebring, & J. M. Weisberg) *Astrophysical Journal* **346**, 869 (1989).

Phenomenology and the problem of pulsar emission (with J. Gil) *Comments in Astrophysics* **14 (1)**, 1 (1989).

Toward an empirical theory of pulsar emission: IV. geometry of the core emission region *Astrophysical Journal* **352**, 247 (1990).

Toward an empirical theory of pulsar emission: V. On the circular polarization in pulsar radiation (with V. Radhakrishnan) *Astrophysical Journal* **352**, 258 (1990).

Pulsar classification: Bonn polarization observations at 1720 MHz (with Xilouri, K., Seiradakis, J. M., and Sieber, W.) *Astronomy & Astrophysics* **241**, 87 (1991).

Microstructure-determined pulsar dispersion measures and the problem of profile alignment (with T. H. Hankins, V. A. Izvekova, A. D. Kuz'min, V. M. Malofeev, and D. R. Stinebring), *Astrophysical Journal (Letters)* **373**, L17 (1991).

Toward an empirical theory of pulsar emission: VI. geometry of the conal emission region *Astrophysical Journal* **405**, 285-97 (1993).

Toward an empirical theory of pulsar emission: VI. geometry of the conal emission region. Appendix and tables *Astrophysical Journal Supplement Series* **85**, 145-61 (1993).

Long-term intensity variations of 20 pulsars (with D. LaBrecque and J. M. Cordes) *Astronomical Journal* **108(5)**, 1854-9 (1994).

On the approach to stability of pulsar average profiles (with N. Rathnasree), *Astrophysical Journal* **452**, 814-8 (1995).

Polarization-mode separation and the emission geometry of pulsar 0823+26: a new type of pulsar emission? (with N. Rathnasree), *Journal of Astrophysics & Astronomy* **16**, 327 (1995).

On 'orthogonal' polarisation modes in pulsars: a study of PSR 2110+27 (with N. Rathnasree), *Astrophysical Letters & Comm.* **35**, 281-8 (1996).

On the polarization and emission geometry of pulsar 1929+10: does its emission come from a single pole or two poles? (with N. Rathnasree), *Journal of Astrophysics & Astronomy* **18**, 91 (1997).

Individual and integrated pulse properties of PSR B0943+10 involved in the mode-changing phenomenon (with S. A. Suleymanova, V. A. Izvekova and N. Rathnasree) *Journal of Astronomy & Astrophysics* **18**, 1 (1998).

Gaussian component decomposition and the five-component profile of pulsar B1451-68 (with X. J. Wu, X. Y. Gao, and V. M. Malofeev) *Astronomical Journal* **116**, 1984 (1998).

Pulsar magnetospheric emission mapping: Images and implications of polar-cap "weather" (with A. A. Deshpande) *Astrophysical Journal* **524**, 1008 (1999).

Topology and polarisation of subbeams associated with pulsar B0943+10's 'drifting'-subpulse emission: I. Analysis of Arecibo 430- and 111.5-MHz observations (with A. A. Deshpande) *Monthly Notices of the Royal Astronomical Society* **322**, 438-460 (2001).

Pulsar subpulse polarization: No evidence for systematic polarization-angle rotations (with R. Ramachandran, B. W. Stappers, M.L.A. Kouwenhoven & A.G.J. van Leeuwen) *Astronomy & Astrophysics* **381**, 993-999 (2002).

Toward an empirical theory of pulsar emission: VII. On the Spectral Behavior of Conal Beam Radii and Emission Heights (with Dipanjan Mitra) *Astrophysical Journal* **577**, 322 (2002).

Null-induced changes in PSR B0809+74 (with A.G.L. van Leeuwen, M.L.A. Kouwenhoven, R. Ramachandran, & B. Stappers) *Astronomy & Astrophysics* **387**, 169 (2002).

Probing drifting and nulling mechanisms through

their interaction in PSR B0809+74 (with A.G.J. van Leeuwen, B. W. Stappers & R. Ramachandran) *Astronomy & Astrophysics* **399**, 223 (2003).

Topology and polarisation of subbeams associated with pulsar B0943+10's 'drifting'-subpulse emission: III. Analysis of Pushchino 103- and 40-MHz observations (with S. A. Suleymanova, and A. A. Deshpande) *Monthly Notices of the Royal Astronomical Society* **340**, 1076 (2003).

Toward an empirical theory of pulsar emission: VIII. Subbeam Circulation and the Polarization-Modal Structure of Conal Beams *Astrophysical Journal* (with R. Ramachandran) **590**, 411 (2003).

Rotating subbeams and the physics of pulsar emission (with G. A. E. Wright) *Astronomy & Astrophysics Review* **12** 43-69 (December 2003).

Notch pairs in pulsar average profiles: a new phenomenon? (with Maura McLaughlin) *Monthly Notices of the Royal Astronomical Society* **351**, 808 (2004).

Intrinsic rotation measure variation in pulsars — mixing of non-orthogonal modes? (with R. Ramachandran, D. C. Backer, J. W. Weisberg & K. Devine) *Astrophysical Journal* **606**, 1167 (2004).

PSR B0809+74: Understanding Its Perplexing Subpulse-separation ( $P_2$ ) Variations (with R. Ramachandran, & S. A. Suleymanova) *Astronomy & Astrophysics* **429**, 999 (2005).

PSR B2303+30: A single system of drifting subpulses, moding, and nulling (with S. R. Redman & G. A. E. Wright) *Notices of the Royal Astronomical Society* **357**, 859 (2005).

Core and conal component analysis of pulsar B1237+25 (with Z. Srostlik) *Monthly Notices of the Royal Astronomical Society* . **362**, 1121 (2005).

Phenomenology of pulsar 0809+74's rotating subbeam system: I. geometry and profile 'absorption' (with R. Ramachandran & S. A. Suleymanova) *Astronomy & Astrophysics* **447**, 235 (2006).

Phenomenology of pulsar 0809+74's rotating subbeam system: II. "Carousel" configuration and polarization (with R. Ramachandran, A.G.L. van Leeuwen, & S. A. Suleymanova) *Astronomy & Astrophysics* **455**, 215 (2006).

Topology and polarisation of subbeams associated with pulsar B0943+10's 'drifting'-subpulse emission: IV. Q- to B-Mode Transition Recovery Dynamics' (with S. A. Suleymanova) *Astronomy & Astrophysics* **453**, 679 (2006).

Episodic Bistable Profile Illumination in Pulsars B0919+06 & B1859+07: A Consequence of 'Absorption'? (with C. Rodriguez & G. A. E. Wright) *Monthly Notices of the Royal Astronomical*

*Society* **370**, 673 (2006).

Is pulsar B0656+14 a very nearby RRAT source? (with P. Weltevrede, B. W. Stappers & G. A. E. Wright) *Astrophysical Journal* **645**, L149 (2006).

The bright spiky emission of pulsar B0656+14 (with P. Weltevrede, B. W. Stappers & G. A. E. Wright) *Astronomy & Astrophysics* **459**, 597 (2006).

A model for double notches and bifurcated components in radio profiles of pulsars and magnetars; evidence for the parallel acceleration maser in the pulsar magnetosphere (with J. Dyks & B. Rudak) *Astronomy & Astrophysics* **465**, 981 (2007).

Further evidence for alignment of the rotation and velocity vectors in pulsars *Astrophysical Journal* **664**, 443 (2007).

Absolute broadband polarization behaviour of PSR B0329+54: A glimpse of the core emission process (with D. Mitra & Y. Gupta) *Monthly Notices of the Royal Astronomical Society* **379**, 932 (2007).

Interaction between nulls and emission in pulsar B0834+06 (with G.A.E. Wright) *Monthly Notices of the Royal Astronomical Society* **379**, 507 (2007).

Periodic Nulls in Pulsar B1133+16 (with J. L. Herfindal) *Monthly Notices of the Royal Astronomical Society* **380**, 430 (2007).

On the Subpulse Modulation, Polarization and Subbeam Carousel Configuration of Pulsar B1857—26 (with D. Mitra) *Monthly Notices of the Royal Astronomical Society* **385**, 606 (2008).

On the 'periodic nulls' of pulsar J1819+1305: a subbeam carousel in which most of the beamlets are missing (with G.A.E. Wright) *Monthly Notices of the Royal Astronomical Society* **385**, 1923 (2008).

Deep analyses of nulling in Arecibo pulsars reveal further periodic behavior (with Jeffrey Herfindal) *Monthly Notices of the Royal Astronomical Society* **393**, 1391 (2009).

Random and non-random pulsar nulling (with S. R. Redman) *Monthly Notices of the Royal Astronomical Society* **395**, 1529 (2009).

Topology and polarisation of subbeams associated with pulsar B0943+10's 'drifting'-subpulse emission: V. A new look at the low frequency 'B'urst-mode emission (with S. A. Suleymanova) *Monthly Notices of the Royal Astronomical Society* **396**, 870 (2009).

Arecibo multi-frequency time-aligned pulsar average-profiles and polarization database *Astronomical Journal* (with T. H. Hankins) **139**, 168 (2010).

The beam topology and dynamic emission prop-

erties of pulsar B0943+10 — VI. Discovery of a 'Q'-mode precursor and comparison with pulsar B1822-09 (with Isaac Backus and Dipanjan Mitra) *Monthly Notices of the Royal Astronomical Society* (in press, accepted, 3/10).

Subpulse modulation, moding and nulling of the five-component pulsar B1737+13 (with Megan Force) *Monthly Notices of the Royal Astronomical Society* (submitted, in revision, 3/10).

On the nulls, modes and interpulse emission of radio pulsar B1944+17 (with Isabel M. Kloumann) *Monthly Notices of the Royal Astronomical Society* (submitted, in revision, 3/10).

Toward an empirical theory of pulsar emission. IX. On the peculiar properties and geometric regularity of Lyne & Manchester's 'partial cone' pulsars (with D. Mitra) *Astrophysical Journal* (in final preparation, 3/10).

On the multiple drift modes and nulls of pulsar B1918+19 (with G.A.E. Wright & Andrew M Brown) *Monthly Notices of the Royal Astronomical Society* (in preparation, 3/10).

Radio polarimetry of pulsar B0656+14 (with P. Weltevrede, B. W. Stappers & G. A. E. Wright) *Astronomy & Astrophysics* (in preparation).

B1717–29: Another pulsar with accurate drift and "absorbed" trailing emission (with D. Mitra & S. Sarala) *Monthly Notices of the Royal Astronomical Society* (in preparation).

Outer edge depolarization in pulsar conal profiles: a consequence of O-mode refraction? (with D. Mitra) *Monthly Notices of the Royal Astronomical Society* (in preparation).

## CONFERENCE REPORTS:

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