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**Research Interests:**

- Pulsar timing, pulsar emission, scintillation
- Pulsar-like objects: RRATs, FRBs
- Pulsar navigation, pulsar clock
- Astronomical technique and method

**Selected Publications:**

- Bai, Juntao; Wang, Na\*; Dai, Shi; Wang, Shuangqiang; Yuan, Jianping; Yan, Wenming; Shang, Lunhua; Xu, Xin; Dang, Shijun; Zhang, Zhen, "Deep Searches

for Radio Pulsations and Bursts from Four Magnetar and a Magnetar-like Pulsar with FAST", 2025, ApJ, 979, 122

- Zhao, D.; Yuan, J. P.\*; Wang, N.\*; Li, D.\*; Wang, P.; Xue, M. Y.; Zhu, W. W.; Miao, C. C.; Yan, W. M.; Wang, J. B.; Yao, J. M.; Wu, Q. D.; Wang, S. Q.; Sun, S. N.; Kou, F. F.; Chen, Y. T.; Dang, S. J.; Feng, Y.; Liu, Z. J.; Miao, X. L.; Meng, L. Q.; Yuan, M.; Niu, C. H.; Niu, J. R.; Qian, L.; Wang, S.; Xie, X. Y.; Xiao, Y. F.; Yue, Y. L.; You, S. P.; Yu, X. H.; Zhao, R. S.; Yuen, R.; Zhou, X.; Zhang, L.; Xie, M.; Li, Y. X.; Wang, Y. B.; Luo, Z. K.; Gan, Z. Y.; Sun, Z. Y.; Chi, M. M.; Wang, C. J., "Follow-up Timing of 12 Pulsars Discovered in Commensal Radio Astronomy FAST Survey", 2024, ApJ, 975, 88
- Yang, Lei; Wang, Na\*; Liu, Zhiyong; Li, Ning, "Tracking and Disturbance Suppression of the Radio Telescope Servo System Based on the Equivalent-Input-Disturbance Approach", 2024, Advances in Astronomy, 2024(5786292
- Yuan, Ye; Liu, Zhi-Yong; Wang, Na\*, "Measuring Track-Related Pointing Errors on the Nanshan Radio Telescope with an Optical Pointing Telescope", 2024, Advances in Astronomy, 2024(1538293 9
- Zhao, D.; Wang, N.\*; Yuan, J. P.\*; Li, D.\*; Wang, P.; Xue, M. Y.; Zhu, W. W.; Miao, C. C.; Yan, W. M.; Wang, J. B.; Yao, J. M.; Wu, Q. D.; Wang, S. Q.; Sun, S. N.; Kou, F. F.; Chen, Y. T.; Dang, S. J.; Feng, Y.; Liu, Z. J.; Miao, X. L.; Meng, L. Q.; Yuan, M.; Niu, C. H.; Niu, J. R.; Qian, L.; Wang, S.; Xie, X. Y.; Xiao, Y. F.; Yue, Y. L.; You, S. P.; Yu, X. H.; Zhao, R. S.; Yuen, R.; Zhou, X.; Zhang, L.; Wang, Y. B.; Wu, J. F.; Gan, Z. Y.; Sun, Z. Y.; Wang, C. J., "A Relativistic Double Neutron Star Binary PSR J1846-0513", 2024, Astrophysical Journal Letters, 964(1), L7
- Wu, Q. D.; Yuan, J. P.\*; Wang, N.\*; Li, D.\*; Wang, P.; Xue, M. Y.; Zhu, W. W.; Miao, C. C.; Yan, W. M.; Wang, J. B.; Yao, J. M.; Wang, S. Q.; Sun, S. N.; Kou, F. F.; Tu, Z. Y.; Xie, J. T.; Pan, Z. C.; Zhao, D.; Chen, Y. T.; Dang, S. J.; Feng, Y.; Liu, Z. J.; Miao, X. L.; Meng, L. Q.; Yuan, M.; Niu, C. H.; Niu, J. R.; Qian, L.; Wang, S.; Xie, X. Y.; Xiao, Y. F.; Yue, Y. L.; You, S. P.; Yu, X. H.; Zhao, R. S.; Zhang, L.; Yuen, R.; Wen, Z. G.; Tedila, H. M., "Follow-up timing of 24 pulsars discovered in commensal radio astronomy FAST survey", 2023, Monthly Notices of the Royal Astronomical Society, 522(4), 5152-5164
- Wang, Na\*; Xu, Qian; Ma, Jun; Liu, Zhiyong; Liu, Qi; Zhang, Hailong; Pei, Xin; Chen, Maozheng; Manchester, Richard N.; Lee, Kejia; Zheng, Xingwu; Kaercher, Hans J.; Zhao, Wulin; Li, Hongwei; Li, Dongwei; Suess, Martin; Reichert, Matthias; Zhu, Zhongyi; Wang, Congsi; Li, Mingshuai; Li, Rui; Li, Ning; Kazezkhan, Guljaina; Yan, Wenming; Wu, Gang; Cui, Lang; Zhang, Ming; Li, Haitao, "The Qitai radio telescope", 2023, Science China-Physics Mechanics & Astronomy, 66(8), 289512
- Li, Ning\*; Wang, Na\*; Liu, Zhiyong; Yang, Lei, "Active Disturbance Rejection-based Double-loop Control Design for Large Antenna's Servo

System", 2023, Publications of the Astronomical Society of the Pacific, 135(1053), 115001

- Yang, Lei; Wang, Na\*; Liu, Zhiyong\*; Li, Ning, "Improving Disturbance Rejection Performance of EID-Based Control by Employing PLTD", 2023, Ieee Access, 11, 108024-108032
- Wu, Qinglong\*; Yao, Zhan; Wu, Tanhui; Hou, Yangqing; Zhang, Huazhen; Xu, Qian; Wang, Na, "Back Frame Section Size Optimization of Large Aperture Telescope", 2023, Journal of Harbin Institute of Technology (New Series), 30(4), 76-84
- Sun, S. N.; Wang, N.\*; Yan, W. M.; Wang, S. Q.; Xie, J. T., "Wide-bandwidth Observations of PSR J0941-39 and PSR J1107-5907", 2023, The Astrophysical Journal, 959, 56
- Zhao, D.; Yan, W. M.\*; Wang, N.\*; Yuan, J. P., "Investigation of Emission States of PSR J1722-3207", 2023, Astrophysical Journal, 959(1), 26
- Wu, Q. D.; Wang, N.\*; Yuan, J. P.\*; Li, D.\*; Wang, P.; Xue, M. Y.; Zhu, W. W.; Miao, C. C.; Yan, W. M.; Wang, J. B.; Yao, J. M.; Wang, S. Q.; Sun, S. N.; Kou, F. F.; Zhao, D.; Chen, Y. T.; Dang, S. J.; Feng, Y.; Liu, Z. J.; Miao, X. L.; Meng, L. Q.; Yuan, M.; Niu, C. H.; Niu, J. R.; Qian, L.; Wang, S.; Xie, X. Y.; Xiao, Y. F.; Yue, Y. L.; You, S. P.; Yu, X. H.; Zhao, R. S.; Yuen, R.; Zhou, X.; Zhang, L., "PSR J2150+3427: A Possible Double Neutron Star System", 2023, Astrophysical Journal Letters, 958(1), L17
- Zhou, Zu-Rong; Wang, Jing-Bo\*; Wang, Na\*; Yuan, Jian-Ping; Kou, Fei-Fei; Dang, Shi-Jun, "Detection of 16 Small Glitches in Nine Pulsars", 2022, Research in Astronomy and Astrophysics, 22(9), 095008
- Xie, Jintao; Wang, Jingbo\*; Wang, Na\*; Kou, Feifei; Wang, Shuangqiang; Sun, Shengnan, "The Emission Properties of RRAT J0139+3336 at 1.25 GHz", 2022, ASTROPHYSICAL JOURNAL LETTERS, 940(1), L21
- Wang, S. Q.; Wang, J. B.\*; Wang, N.\*; Yao, J. M.; Hobbs, G.; Dai, S.; Kou, F. F.; Miao, C. C.; Li, D.; Feng, Y.; Dang, S. J.; Wang, D. H.; Wang, P.; Yuan, J. P.; Zhang, C. M.; Zhang, L.; Zhang, S. B.; Zhu, W. W., "Unusual Emission Variations Near the Eclipse of Black Widow Pulsar PSR J1720-0533", 2021, ApJL, 922, L13
- Li, J.; Wang, N.; Liu, Z.\*; Song, Y.; Li, N.; Xu, L.; Wang, J., "Trends in Architecture and Middleware of Radio Telescope Control System", 2021, Adv. Astron., 2021, 2655250
- Wang, S. Q.; Wang, J. B.\*; Wang, N.; Feng, Y.; Zhang, S. B.; Lee, K. J.; Li, D.; Lu, J. G.; Xie, J. T.; Zhou, D. J.; Zhang, L., "A Single Pulse Study of a Millisecond Pulsar PSR J0621+1002", 2021, ApJ, 913, 67
- Dang, S.-J.; Wang, N.\*; Wang, H.-H.; Yuan, J.-P.\*; Shang, L.-H.; Yuen, R.; Ge, M.-Y.; Zhou, X.; Wang, S.-Q.; Kou, F.-F.; Yan, W.-M.; Wang, J.-B.; Wen, Z.-G.;

Bai, J.-T.; Liu, Z.-Y.; Zhou, Z.-R., "Spin-down and emission variations for PSR J0742-2822", 2021, RAA, 21, 042

- Sun, S. N.; Yan, W. M.\*; Wang, N.\*, "Detection of giant pulses in PSR J1047-6709", 2021, MNRAS, 501, 3900-3904
- Zhai Nannan; Liu Zhiyong; Wang Na \*; Zhu Chunhua \*, "Optimization of Multi-Target Observation Strategies for Radio Telescopes ", 2021, Acta Astronomica Sinica, 62, 54-64
- Jiang, L.; Wang, N.; Chen, W. C.; Li, X. D.; Liu, W. M.; Gao, Z. F., Astrangestarsscenario for the formation of isolated millisecond pulsars, A&A, 2020
- Yan, W. M.; Manchester, R. N.; Wang, N.; Wen, Z. G.; Yuan, J. P.; Lee, K. J.; Chen, J. L., Periodic mode changing in PSR J1048-5832, MNRAS, 2020
- Han, W.; Wang, J. B.; Wang, N.; Sun, G. W.; He, D. L., A method of groundtarget positioning by observing radio pulsars, Exp Astron, 2020
- Han, W.; Wang, N.; Wang, J. B.; Yuan, J. P.; He, D. L., Using single millisecondpulsarfor terrestrial position determination, Ap&SS, 2019
- Wang, Y. B.; Zhou, X.; Wang, N.; Liu, X. W., The r-mode instability windows of strangestars, RAA, 2019
- Yan, W. M.; Manchester, R. N.; Wang, N.; Yuan, J. P.; Wen, Z. G.; Lee, K. J., PeriodicQ-mode modulation in PSR J1825-0935 (PSR B1822-09), MNRAS, 2019
- Kou, F. F.; Yuan, J. P.; Wang, N.; Yan, W. M.; Dang, S. J., The spin-down state changeand mode change associated with glitch activity of PSR B2035+36, MNRAS, 2018
- Pan, Y. Y.; Zhang, C. M.; Song, L. M.; Wang, N.; Li, D.; Yang, Y. Y., The minimummagnetic field of millisecond pulsars calculated according to accretion: applicationtotheX-ray neutron star SAX J1808.4-3658 in a low-mass X-ray binary, MNRAS, 2018
- Yan, W. M.; Wang, N.; Manchester, R. N.; Wen, Z. G.; Yuan, J. P., Single-pulseobservations of the Galactic centre magnetar PSR J1745-2900 at 3.1 GHz, MNRAS, 2018
- Wang, C. S.; Li, H. H.; Ying, K.; Xu, Q.; Wang, N.; Duan, B. Y.; Gao, W.; Xiao, L.; Duan, Y. H., Active Surface Compensation for Large Radio Telescope Antennas, Int J AntennPropag, 2018
- Zhao Cong, Xu Qian, Wang Na, Xiang Binbin. Research on the Main Focus Feed Source Switching Scheme of the 110-meter Radio Telescope in Qitai, Xinjiang. Astronomical Research and Technology, 2017
- Yao, J. M.; Manchester, R. N.; Wang, N., Determination of the Sun's offset fromtheGalactic plane using pulsars, MNRAS, 2017

- Yao, J. M.; Manchester, R. N.; Wang, N., A New Electron-density Model for Estimation of Pulsar and FRB Distances, *ApJ*, 2017
- Yuan, J. P.; Manchester, R. N.; Wang, N. et al., Pulse profiles and timing of PSRJ1757-2421, *MNRAS*, 2017
- Gao, Z. F.; Wang, N.; Shan, H.; Li, X.-D.; Wang, W., The Dipole Magnetic Field and Spin-down Evolutions of the High Braking Index Pulsar PSR J1640–4631, *ApJ*, 2017
- Gao, Z. F.; Li, X.-D.; Wang, N. et al., Constraining the braking indices of magnetars, *MNRAS*, 2016
- Zhu, C.; Gao, Z. F.; Li, X. D.; Wang, N.; Yuan, J. P. et al., Modified Fermi energy of electrons in a superhigh magnetic field, *Morden Phys. Lett. A.*, 2016
- Xiao Ming, Wang Na, Liu Zhiyong. The Influence of Atmospheric Refraction on the High-precision Pointing of Radio telescopes. *Astronomical Research and Technology*, 2016
- Xu Qian, Wang Na, Challenges and Advances in QTT Antenna Structures, *Advances in Astronomy*, 2016
- Wang, Z.; Wang, N.; Ping, J. S., Research on the lunar ionosphere using dual-frequency radio occultation with a small VLBI antenna, *Ap&SS*, 2015
- Wang, Z.; Wang, N.; Ping, J. S., Electron content near the lunar surface using dual-frequency VLBI tracking data in a single lunar orbiter mission, *RAA*, 2015
- Gao, Z. F.; Wang, N.; Xu, Y.; Shan, H.; Li, X.-D., The effects of superhigh magnetic fields on the equations of state of neutron stars, *Astronomische Nachrichten*, 2015
- Wang Na, 110-meter Radio telescope, Qitai, Xinjiang, *Science in China (G)*, 2014
- Gao, Z. F.; Peng, Q. H.; Wang, N., Pressure of Degenerate and Relativistic Electrons in a Superhigh Magnetic Field, *Morden Phys. Lett. A.*, 2013
- Pan, Y. Y.; Wang, N.; Zhang, C. M., Binary pulsars in magnetic field versus spin period diagram, *Ap&SS*, 2013
- Wang, X.; Wang, N.; Yan, Y.H., The Relationship Between the Particle Injection Rate and the Dispersion of the Scattering Angular Distribution, *ApJS*, 2013
- Wang, N.; Yuan, J. P.; Liu, Z. Y.; et al., Recent glitches detected in the Crab pulsar, *Ap&SS*, 2012
- Chen, D., Zhu, X. Z., Wang, N., Research on Ensemble Pulsar Time Based on Observed Data, *Chinese Astronomy & Astrophysics*, 2012
- Gao, Z. F.; Wang, N.; Song, D. L.; Yuan, J. P.; Chou, C.-K., The effects of intense magnetic fields on Landau levels in a neutron star, *Ap&SS*, 2011
- Na, X. S.; Wang, N.; Yuan, J. P. et al., Hurst parameter analysis of radio pulsar timing residuals, *MNRAS*, 2011

- Gao, Z. F.; Wang, N.; Yuan, J. P.; Jiang, L.; Song, D. L., Numerical simulation of the electron capture process in a magnetar interior, *Ap&SS*, 2011
- Gao, Z. F.; Wang, N.; Yuan, J. P. et al., Evolution of superhigh magnetic fields of magnetars, *Ap&SS*, 2011
- Peng, Q.-H.; Gao, Z. F.; Wang, N. et al., Physics on huge X-ray luminosity of magnetars, *Proceedings of Science*, 2011
- Chen, J. L.; Wang, H. G.; Wang, N. et al., Long term monitoring of mode switching for PSR B0329+54, *ApJ*, 2011
- Liu, Z.-Y.; Wang, N.; Zhao, C.-S., An Observational Study of the Strong Single Pulses of PSR J0034-0721, 102. Nizamdin, B.; Esamdin, A.; *Chinese Astronomy and Astrophysics*, 2011
- Wang, N., Pulsar glitches detected at Urumqi, *Highlights of Astronomy*, 2010
- Yuan, J. P.; Wang, N.; Manchester, R. N. et al., A Very Large Glitch in PSR B2334+61, *ApJL*, 2010
- Yuan, J. P.; Wang, N.; Manchester, R. N.; Liu, Z. Y., 29 glitches detected at Urumqi Observatory, *MNRAS*, 2010
- Wang, N.; Yan, Z.; Manchester, R. N. et al., Daily observations of interstellar scintillation in PSR B0329+54, *MNRAS*, 2008
- Zou, W. Z.; Wang, N.; Manchester, R. N. et al., Observations of six glitches in PSR B1737-30, *MNRAS*, 2008
- Wang, N.; Manchester, R. N.; Johnston, S., Pulsar nulling and mode changing, *MNRAS*, 2007
- Wang, N.; Manchester, R. N.; Johnston, S. et al., Long-term Scintillation Observation of five Pulsars at 1540 MHz, *MNRAS*, 2005
- Wang, N.; Johnston, S.; Manchester, R. N., 13 years of timing of PSR B1259-63, *MNRAS*, 2004
- Wang, N., Manchester, R. N., Zhang, J., Wu, X. J., et al., Pulsar timing at Urumqi Astronomical Observatory: system and results, *MNRAS*, 2001
- Wang, N., Manchester, R. N., Pace, R. et al., Glitches in Southern Pulsars, *MNRAS*, 2000