

Jia-Cheng LIU

Personal information

Gender: Male
Citizenship: P.R. China
Date of birth: 31 Oct, 1984
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Education

SYRTE, l'Observatoire de Paris, Ph.D., Astrometry and Celestial Mechanics, Sep 2011 – Sep 2012
– Supervisor: Prof. Nicole Capitaine
Nanjing University, P.R. China, Ph.D., Astrometry and Celestial Mechanics, Sep 2009 – Sep 2012
– Supervisor: Prof. Zi Zhu
Nanjing University, P.R. China, Master, Astrometry and Celestial Mechanics, Sep 2007 – Jul 2009
– Supervisor: Prof. Zi Zhu
Nanjing University, P.R. China, B.Sc., Astronomy, Sep 2003 – Jul 2007

Working Experience

- Assistant Research Fellow, Nanjing University, Oct 2012 – Sep 2017
- Visiting Scholar, Mullard Space Science Laboratory, University College London (MSSL/UCL), UK, May 2017 – August 2017
- Associate Professor, Nanjing University, Sep 2017 – present
- Teaching course: Analytical Mechanics (undergraduate students of 2nd year)

Honors & Awards

- Excellent PhD Thesis of Nanjing University (2012): *The establishment, realization, and transformation of new astronomical reference systems*

Academic participation

- Since 2017 Member of the IAU/IAG joint working group "Precession-nutation".

Research Interests

- Theories in celestial reference systems and frames: Linking the VLBI and Gaia reference frames
- Precession-nutation of the Earth: Study Earth's rotation in the Gaia reference frame
- Precession, angular momentum of solar system planets

Selected Publications

1. Liu J.-C. & Zhu Z., 2010, *Rotation curve of the Galactic outer disk derived from radial velocities and UCAC3 proper motions of carbon stars*, **RAA**, 10, 541-552
2. Liu J.-C., Zhu Z. & Zhang H., 2010, *Reconsidering the Galactic coordinate system*, **A&A**, 526, A16
3. Huang T.-Y. & Liu J.-C., 2011, Translation of *IAU 2006 "Nomenclature for Fundamental Astronomy" Glossary*, (in Chinese)

4. **Liu J.-C.**, Zhu Z. & Hu B., 2011, *Position and proper-motion systematic difference between the PPMX and UCAC3 catalogs*, **RAA**, 11, 1074
5. **Liu J.-C.**, Zhu Z. & Hu B., 2011, *Constructing a Galactic coordinate system based on near-infrared and radio catalogs*, **A&A**, 536, A102
6. **Liu J.-C.**, Capitaine N., Lambert S. B., Malkin Z. & Zhu Z., 2012 *Systematic effect of the Galactic aberration on the ICRS realization and the Earth orientation parameters*, **A&A**, 548, A50
7. **Liu J.-C.** & Zhu Z., 2012, *Explanation and Implementation of the IAU 2000/2006 Resolutions on Fundamental Astronomy*, **Progress in Astronomy**, 30, 411 (Review paper in Chinese)
8. **Liu J.-C.**, Xie Y. & Zhu Z., 2013, *Aberration in proper motions for stars in our Galaxy*, **MNRAS**, 433, 3597
9. Capitaine N. & **Liu J.-C.**, 2014, *The Evaluation of the Earth's Dynamical Flattening Based on the IAU Precession-nutation and VLBI Observations*, **Proceedings of the IVS 2014 General Meeting**, 373–375
10. Huyan Z.-B., Zhu Z. & **Liu J.-C.**, 2015, *Kinematics of solar neighborhood stars and dependence on age and metallicity*, **RAA**, 15, 393
11. **Liu J.-C.** & Capitaine N., 2017, *Evaluation of a possible upgrade of the IAU 2006 precession*, **A&A**, 597, A83
12. Liu N., **Liu J.-C.** & Zhu Z., 2017, *Test of source selection for constructing a more stable and uniform celestial reference frame*, **MNRAS**, 466, 1567
13. Liu N., Zhu Z. **Liu J.-C.** & Ding C.-Y., 2017, *Overall properties of the Gaia DR1 reference frame*, **A&A**, 599, A140
14. **Liu J.-C.**, Malkin Z., & Zhu Z., 2018, *Impact of quasar proper motions on the alignment between the International Celestial Reference Frame and the Gaia reference frame*, **MNRAS**, 474, 4477
15. **Liu J.-C.**, Zhu Z., & Liu N., 2018, *Link between the VLBI and Gaia Reference Frames*, **AJ**, 156, 13
16. Shi Y.-Y., Zhu Z.; Liu N., **Liu J.-C.**, Ding C.-Y., & Cheng Y.-T., 2019, *Comparison of the PPMXL and UCAC5 Catalogs with the Gaia DR2*, **AJ**, 157, 222
17. Ding P.-J., Zhu Z., & **Liu J.-C.**, 2019, *Solar Neighborhood Kinematics from Gaia and LAMOST Dwarf Stars*, **AJ**, 158, 247