

Monday, June 3<sup>rd</sup>, 2023

08:30-09:30. Registration & Excursion Booking

09:30–10:00. Welcome Speech & Introduction to the Workshop - Blanc Michel, Dong Xiaolong

Session 1 – Assembling the Puzzle of the Jupiter System

BlanMichel c, Bolton Scott, Li Lei lead conveners

Chair: Bolton Scott

10:00-10:15 Introduction to the WS: The Jupiter System, a Comparative Perspective - Michel Blanc

10:15-10:45 **Keynote Talk:** Formation & Evolution of the Jupiter System - David Stevenson, on line

10:45-11:00 Questions & Discussion

11:00-11:15. Coffee Break

Chair: Li Lei

11:15-11:45 The Juno View of the Jupiter System - Bolton Scott

11:45-12:00 The Polar Magnetosphere & its Coupling Processes - Blanc Michel

12:00-12:20 The Jovian Atmosphere - Hartogh Paul

12:20-12:35 General Discussion

12:40: Group Photo at First Floor of Building A

12:45-14:00. Lunch

Chair: Blanc Michel

14:00-14:20 Rings & Small Inner Moons - Charnoz Sebastien

14:20-14:40 Irregular Moons - Hestroffer Daniel

14:40-15:00 Discussion & Open Questions

15:00 -15:30. Coffee Break

Session 2 - Internal Structure & Dynamics of the Galilean Satellites

Nimmo Francis, Sotin Christophe (*on line*)

Chair: Nimmo Francis

15:30-16:00 Overview/Internal Structures: McKinnon William

16:00-16:15 Solid Body Dynamics & Measurements - Ermakov Anton

16:15-16:30 Rotational Dynamics & Measurements - Trinh Antony, Van Hoolst Tim (*online*)

16:30-16:45 Break

Chair: McKinnon William

16:45-17:00 Tidal Response & Measurements - Nimmo Francis

17:00-17:15 Ocean Dynamics & Measurements - Rovira Navarro Marc

17h15-17:30 Ocean Dynamics - Kang Wanyin

17h30-17:45 Future Measurement Prospects - Tobie Gabriel (*online*)

17h45-18:15 General Discussion

Tuesday, June 4<sup>th</sup>, 2023

Session 3 - Geology & Surface Properties of the Galilean Satellites

Olga Prieto-Ballesteros, Min Ding, Federico Tosi lead conveners

Chair: Ding Min, Prieto Ballesteros Olga

9:00-9:20 Topography of Jovian Icy Moons - Schenk Paul

9:20-9:40 Cratering on the Jovian Satellite Surfaces - Baby Namitha (*online*)

9:40-10:00 Tectonic Activity of Icy Moons - Rhoden Alyssa (*online*)

10:00-10:20 Surface Composition of Jupiter's Icy Galilean Moons - Tosi Federico

10:30-11:00. Coffee Break

Chair: Tosi Federico

11:00-11:20 Ice Petrology: Physical-chemical Properties of Surface Materials - Prieto Ballesteros Olga

11:20-11:40 Hydrothermal Alteration Systems & Cryo-volcanism in the Jupiter Moons - Vance Steve (*online*)

11:40-12:00 Potential for Life in Europa's Ocean - Finkel Pablo (*online*)

12:00-12:30 General Discussion

12:30-14:00. Lunch

Session 4 - Tidal/Gravitational Interactions & Orbital Evolution

Lainey Valery, Van Hoolst Tim (*on line*)

14:00-14:30 Overview: Tides & Observations Lainey Valéry

14:30-14:45 Tidal Dissipation in Giant Planets Terquem Caroline

14:45-15:00 Solid-body Dissipation in Satellites - Trinh Antony

15:00-15:15 Ocean Tide Dissipation, Torques, & Future Measurements - Hay Hamish

15:15-15:30 Long Term Evolution of the Saturnian Satellites - Tian Zhenliang

15:30-15:45 Long-term Orbital Evolution of the Galilean Satellites - Lari Giacomo

15:45-16:15 Coffee Break

16:15-16:30 Reconstruction of the Past Orbits Over Long-time Spans - Barriot Jean Pierre

16:30-16:45 Ground Based Astrometry of Jovian Moons - Peng Qingyu

16:45-17:00 Future Measurement with Juice & Clipper - Dirkx Dominic (*online*)

17:00-17:30 General Discussion

18:30 – Workshop Dinner hosted by ISSI-Beijing

Location: Third Floor of Park Plaza Hotel

Wednesday, June 5<sup>th</sup>, 2023, morning

Session 5 - Jupiter-Moon-magnetosphere Electrodynamic Interactions

Kimura Tomoki, Li Lei lead conveners

Moderator – Shengyi Ye

08:30-08:40 Introduction - Kimura Tomoki, Li Lei

08:40-09:00 Moon's Atmosphere & Eruption: Io - Koga Ryoichi

09:00-09:20 Moon's Gas Torus - Tsuchiya Fuminori

09:20-09:40 Correlations Between Electrostatic Wave Activity in the Magnetodisk Monitored by Galileo & Juno, & Io Volcanic Activity – Ni Binbin

09:40-10:00 Jupiter's Magnetosphere - Yao Zhonghua

10:00-10:30. Coffee Break

10:30-10:50 Electromagnetic Interaction Between Moons & Jupiter's Magnetosphere - Ye Shengyi

10:50-11:10 Planetary Soft X-ray Emissions – Sun Tianran

11:10-11:30 Moon-magnetosphere Interactions & Moon-induced Aurorae as Revealed by Juno - Hue Vincent, (*online*)

11:30-12:00 General Discussion

12:00-13:30. Lunch

13:30- Free Time

Thursday, June 6<sup>th</sup>, 2023

Session 6 - Origin and early evolution of the Jovian satellites

Nimmo Francis, Ji Jianghui, Hao Jihua

Chair: Hao Jihua

09:00-09:30 Overview of Origin & Early Evolution – Nimmo Francis

09:30-09:45 Disk & Satellite Chemistry - Mousis Olivier

09:45-10:00 Satellite Accretion in the Context of Pebbles - Ormel Chris

10:00-10:15 Satellite Accretion - Ogihara Masahiro

10:15-10:45 Coffee Break

Chair: Nimmo Francis

10:45-11:15 Satellite Formation & Long-term Evolution - McKinnon William

11:15-11:30 Dynamics of Rings, Moon & Dust - Charnoz Sebastien

11:30-11:45 Satellite Accretion (Jupiter vs Saturn) – Fujii Yuri

11:45-12:00 Io's Long-term Evolution from Isotopes - de Kleer Katherine

12:00-12:30 General Discussion

12:30-14:00. Lunch

14:00-14:20 Currently Planned Missions: JUICE - Witasse Olivier (*online*)

Special Session – Early Career Scientists Contributions

Hao Jihua, Li Lei

Chair: Hao Jihua

14:20-14:35 Trapped & Leaking Energetic Particles in Injection Flux Tubes of Giant Planet's Magnetospheres - Yin Zefan

14:35-14:50 Juno Observations of Jupiter's Magnetodisk Plasma – Liu Zhiyang

14:50-15:05 Simulation of the Plasma Convection in Jovian Inner Magnetosphere Using the Rice Convection Model - Wang Yuxian

15:05-15:20 Unexpected Long-term Variations of Saturn's Ring Current Revealed by Energetic Neutral Atom Imaging - Li Yimeng

15:20-15:35 Statistical Distributions of Plasma Density & Pressure in the Jovian Plasma Sheet - Fu Haobo

15:35 -16:00. Coffee Break

Chair: [Li Lei](#)

16:00-16:15 Jovian Decametric Radio Emissions from Multi-view Observations - Zheng Ruobing

16:15 - 16:30 Thermal Structure of the Ice Shell of Enceladus - Huang Qian

16:30 - 16:45 Organics in Icy Moons: Sources, Stability, & their Evolution - Liu Can

16:45 - 17:00 Simulation of Io Plasma Torus Around Jupiter: Predictions for Lenghu Observatory -  
Tan Xiaoyi

17:00 - 17:15 Combination of Altimetry Crossovers & Doppler Observables for Callisto Geodesy -  
Desprats William

17:15-18:00 General Discussion – Lessons Learnt, Key Open Science Questions, how the Book can  
Best Address Them

Friday, June 7<sup>th</sup>, 2023

Session 7 - From Planned Missions to Open Questions & New Initiatives

[Li Lei](#), [Bolton Scott](#), [Blanc Michel](#)

Chair: [Blanc Michel](#)

09:00-09:20 Review of Open Science Questions (Titov Dimitri, Bolton Scott)

**Currently planned missions:**

09:20-09:40 Europa Clipper - Pappalardo Robert (*online*)

09:40-10:00 From Hisaki to Lapyuta – Go Murakami (*online*)

10:00-10:20 Earth-based Monitoring of the Jupiter System for the Next Decade - He Fei

10:20-10:50. Coffee Break

Chair: [Titov Dimitri](#)

**Missions under study:**

10:50-11:10 Europa Lander – Bolton Scott, Hand Kevin (*online*)

11:10-11:30 Io Mission(s) : Nimmo Francis, Bolton Scott, McKinnon William

11:30-12:30 TianWen-4 mission: Miao Yuanming, Yao Zhonghua, Jing Quan

12:30-13:30 Lunch

13:30-14:00 Summary & Discussion: Science Questions and Mission Drivers for Future Missions to  
the Jupiter System

Session 8 – Wrap-up & Work Plan: from Workshop Lessons to Book Drafting

15:30- End of Workshop