

ISSI-BJ Forum on Exploring greenhouse gases, water and climate changes by LEO-LEO occultation

24-25 July 2019 + 26 July 2019

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WEDNESDAY 24 July 2019

Introduction		Chair: L. En
8:30-9:00	Registration	
9:00-9:10	Welcome and introduction to ISSI-BJ	A. Yang
9:10-9:30	Brief introduction to NSSC and China Space Science Missions	Q. Fan
Session 1 Overview to LEO-LEO occultation technique and review previous studies		Chair: G. Kirchengast & W. Bai
9:30-10:00	The LEO-LEO occultation technique and overall research objectives	G. Kirchengast
10:00-10:30	Overview of LEO-LEO occultation preparatory studies in Europe/ESA	A. Löscher
<i>10:30-11:00 Coffee Break</i>		
11:00-11:30	Overview of LEO-LEO occultation research and studies in China	Y. Sun, Q. Du & C. Liu
11:30-12:00	Discussion	
<i>12:00-14:00 Lunch Break</i>		
Session 2 Mission overviews and scientific challenges		Chair: K. Cahoy & A. Löscher
14:00-14:30	Climate and Atmospheric Components Exploring Satellites (CACES) mission concept	D. Lv
14:30-15:00	Current performance and future perspective of FY-3 satellites atmospheric sounding	Z. Yang
<i>15:00-15:30 Coffee Break and Group Photo</i>		
15:30-16:00	Challenges in monitoring of atmospheric profiles by using the LEO-LEO microwave technique	S. Syndergaard
16:00-16:20	Scientific challenges in greenhouse gases, water and climate change studies	G. Kirchengast
16:20-17:00	Discussion	
<i>18:30 Dinner hosted by ISSI-BJ</i>		

THURSDAY 25 July 2019

Session 3 CACES mission design and payloads		Chair: A. Löscher & J. Wickert
9:00-9:30	Introduction to Climate and Atmospheric Components Exploring Satellites (CACES) mission design	W. Xin
9:30-10:00	Introduction to the X/K band microwave occultation sounder design	W. Bai
10:00-10:30	Introduction to the Infrared-laser occultation sounder design	D. Lei & L. Cheng
<i>10:30-11:00 Coffee Break</i>		

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11:00-12:00 Discussion

12:00-14:00 *Lunch Break*

Session 4 Synergies, complementary missions and international collaborations

Chair: S.Syndergaard & C. Liu

14:00-14:30 ESA technology and system studies in the context of MW and optical Leo-Leo occultation

A. Löscher

14:30-15:00 CubeSat-compatible LEO-LEO laser occultation atmospheric sounder for temperature-pressure and greenhouse gas profiling

K. Cahoy

15:00-15:30 GNSS sounding science and its LEO-LEO synergies

J. Wickert

15:30-16:00 *Coffee Break*

Session 5 Discussion and future plans

Chair: G. Kirchengast & D. Lv

16:00-17:00 Discussion:
- Key science goals of CACES
- Design, payloads, observing strategy, science data exploitation
- International collaborations and their potential
- Outline, structure, publication of the forum report
- Action items
- Summary of the Forum

18:00 *Dinner hosted by CACES team*

FRIDAY 26 July 2019

Discussion by key scientists and engineers about the detailed techniques, forum results, and related paper work (internal mission science meeting)

Meeting room: A0827