



## Center for Space Science Workshop\*

### The Sun and planetary systems

\*Some minor changes may occur

NYUAD, Conference Center, Room 009

## The Sun and planetary systems

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Note: All meetings will be held in NYU Abu Dhabi Campus. Travel between the hotel and the campus will be organized. More details will be forthcoming.

### Day 1: October 10, 2022

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#### Opening session

- 09:00 Welcome – K.R. Sreenivasan (PI, CSS)
- 09:05 Welcome – Arlie Petters (NYUAD Provost)
- 09:15 UAE space program – HE Ibrahim Al Qasim (Deputy DG, UAE Space Agency)
- 09:30 CSS accomplishments and the future – K.R. Sreenivasan
- Additional remarks by co-PIs
- Comments by the Chair and Members of the Board

10:30 Coffee break + Group picture (30 min)

#### Session 1: Mars

Session Chair:

- 11:00 Results from HOPE – Hessa Al Matroushi (MBRSC)
- 11:30 Mars research at NYUAD – Dimitra Atri (NYUAD)
- 12:00 Planetary science research at Khalifa University – Mohamed Ramy El-Maarry (Khalifa U.)

12:30 Lunch (1.5 hour)

## **Session 2: The Sun**

Session Chair:

- 14:00 Probing the Sun with inertial modes – Laurent Gizon (MPS, NYUAD)
- 14:30 Modeling solar inertial modes – Yuto Bekki (MPS)
- 15:00 Two short talks by CSS researchers: Chris Hanson (superganules) and Jishnu Bhattacharya (helioseismology)

15:30 Coffee break (30 min)

## **Session 3: Stars**

Session Chair:

- 16:00 Machine Learning for the study of stellar oscillations – Shravan Hanasoge (TIFR, NYUAD)
- 16:30 Stellar shapes and activity – Othman Benomar (Tokyo)

17:00 Bus to hotel for hotel guests

19:00 Conference dinner at hotel

## **Day 2: October 11, 2022**

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### **Session 4: Mars (continued)**

Session Chair:

- 09:00 The Mars Sample Return program – Gerhard Kminek (ESA)
- 09:30 Seismology of Mars – Simon Stähler (ETHZ)
- 10:00 NASA Mars 2020 mission – Amy Williams (U. Florida, Gainesville)

10:30 Coffee break (30 min)

### **Session 5: Heliophysics**

Session Chair:

- 11:00 Solar Orbiter: first results – Daniel Mueller (ESA)
- 11:30 Computational MHD – James Stone (IAS, Princeton)
- 12:00 Convection at low Prandtl numbers – Joerg Schumacher (U. Ilmenau)

12:30 Lunch (1.5 hour)

## **Session 6: Simulations of solar physics, and the new Mars data**

Session Chair:

- 14:00 Multi-scale simulations of the Sun – Andrius Popovas (Univ. Oslo)
- 14:30 - 15:30 Four short talks by Dattaraj Dhuri (auroras), Ambrish Pandey (small aspect ratio convection), Maria Al Handawi (Mars organics) and Nour Abdelmoneim (Mars climate)

15:30 Coffee break (30 min)

End of day 2 for meeting participants

16:00 Board meeting

(Note: This meeting will feature remarks by Vice Chancellor Mariet Westerman (NYUAD) and Stacie Bloom, Vice Provost for Research (New York University). It will begin with a few brief comments by the PI, and will include working dinner.)

## **Day 3: October 12, 2022**

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### **Session 7: Exoplanets**

Session Chair:

- 9:00 Giant exoplanets – Ian Dobbs-Dixon (NYUAD)
- 9:30 Formation of habitable worlds – Tim Lichtenberg (Oxford, Groningen)
- 10:00 Exoplanet biosignatures – Nikku Madhusudhan (Cambridge)

10:30 Coffee break (30 min)

### **Session 8: Looking ahead**

Session Chair: Marta Losada

- 11:00 European Space Agency roadmap – Fabio Favata (ESA)
- 11:30 Proposal for a 4 $\pi$  solar mission – Thomas Berger (SWX TREC Boulder)
- 12:00 Missions to near-Earth asteroids – Patrick Michel (OCA)

12:30 Closing words – John Leibacher (Board Chair; NSO, IAS)

Lunch (approx 1.5 hour)

## **After 14:00: Tours**

Organize your own tours (suggestions will be provided) to get a taste of Abu Dhabi, e.g., Louvre AD, Grand Mosque, desert excursion, Saadiyat beach, etc.

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