

Mass Loss from Io's Unique Atmosphere: Do Volcanoes Really Control Jupiter's Magnetosphere?

Meeting #1 – Bern – September 5-9, 2022

Location: ISSI, Hallerstrasse 6, 3012 Bern, Switzerland

<https://g.page/ISSIBern?share>

ISSI's Covid rules: www.issibern.ch/local-guide/covid19-rules-current-situation/

Zoom Link:

<https://us02web.zoom.us/j/82070433630?pwd=bzdMQWxsRFh4clg0dlEyT1BuZDRoUT09>

Meeting ID: 820 7043 3630

Passcode: Mars

Participants - in person:

Lorenz Roth (Lead)

Katherine de Kleer

David Goldstein

Alessandro Mura

Aljona Blöcker

Joachim Saur

Fuminori Tsuchiya

Vincent Dols

Ryoichi Koga

Anne-Cathrine Dott

Stephan Schlegel

from Bern:

Nick Thomas (Univ. Bern)

Lea Klaiber (Univ. Bern)

Audrey Vorburger (Univ. Bern)

Hans Huybrighs (ISSI visitor)

Remote participants:

Carl Schmidt

Emmanuel Lellouch

John Spencer

Wendy Tseng

Sarah Badman

Diego Moral Pombo

Shahab Fatemi

Darrell Strobel

(Fran Bagenal)

==> Schedule on the following pages

All times in CEST (local time, Bern)

Monday, Sep 5

13:00 M. Sargent (ISSI) Welcome at ISSI
L. Roth Organizational
Round the table
L. Roth Objectives and goals of the effort / meeting

~15:00 Coffee break

L. Roth Takeaways from September 2021 telecons
Discussing topics for group discussions

17:00 Welcome reception by ISSI

Tuesday, Sep 6

Morning: Presentations and discussions on surface processes / volcanic activity

10:00

K. de Kleer Ground-based IR volcano monitoring / Na-volcano correlation /paper on dunes
A. MuraJuno JIRAM views of Io's surface and volcanoes
A. Dott Modeling of a sublimated atmosphere

12:30 Lunch

Afternoon: Presentations and discussions on atmosphere & plumes

13:30

R. Koga Observations of Io's atmosphere (ALMA) and neutral cloud (Hisaki)
C. Schmidt Update on optical and UV observations of Io
L. Klaiber Dusty-Gas Simulations of Io's plumes
D. Goldstein "Perhaps some more wild ideas on escape"

18:00 Aare swimming? (<https://goo.gl/maps/5tZpgwqEDATurihX8> -
<https://goo.gl/maps/wwVKWGZmBq7XJQCo9>)

19:00 Dinner: Restaurant Rosengarten - <https://www.rosengarten.be>

Wednesday, Sep 7

Morning: Presentations and discussions on magnetospheric traces/impacts of mass loss events

9:30

F. Tsuchiya The Io plasma torus event in 2015 from Hisaki
H. Huybrighs Atmospheric signatures in energetic proton data
V. Dols Io's neutral loss by physical chemistry processes

12:30 Lunch

Afternoon: Strategies towards observational evidence for mass loss events

14:00

E. Lellouch Review: Io's atmosphere and its variability
W.-L. Tseng SMA observations of Io's atmosphere from 2022
A. MuraJuno extended mission with Io flybys
Discussion on strategies and possible observing facilities

Thursday, Sep 8

10:00

Torus, footprint, Jupiter aurora and Io

S. Schlegel Io's interaction through its auroral footprint
A. Muralo footprint from JIRAM
S. Badman HST Jupiter aurora observations

12:30 Lunch

13:30

Working on Review paper layout
Looking through discussion list
Group discussions

Friday, Sep 9

10:00

L. Roth Summary of the meeting
Planning ahead and tasks for the group(s)

12:30 Adjourn