
* ISWI Newsletter - Vol. 16 No. 001

16 January 2024 *

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* Archive of back issues: ISWI Website <https://iswi-secretariat.org/>

* Archive of all ISWI webinars:

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* <https://www.youtube.com/playlist?list=PLaOqa4cng0GF3cKuj6Yz5kqG1BQ-Akkhr>

Dear ISWI Newsletter Subscriber:

This issue is the first one for Year 2024.

It is the first issue to go out on a new email distribution system.

The mailing lists for the ISWI Newsletter and other ISWI announcements will be managed by Boston College in Boston, Massachusetts, United States. Subscribers will receive a welcome email from "iswi-community@listserv.bc.edu" with the subject "Welcome to list iswi-community" stating they have been added to the new list. No action is needed on the part of the subscriber.

If you wish to send a message to me (ISWI Newsletter Editor), send email to georgemaeda3[at]gmail.com

Please do not reply to "iswi-community@listserv.bc.edu" which is just the broadcaster of the newsletter.

Cordially,
George Maeda
Editor of the ISWI Newsletter

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All PDFs are appended at the end and are numbered with a 3-digit serial number.

[01]-----

Message from the Executive Director of ISWI:

Please view this attached PDF:
agenda_steering_committee_2024.pdf

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[02]-----

Aditya-L1, ISRO'S first solar spacecraft enters Sun's final orbit
The Economic Times News; Jan 06, 2024

Synopsis

Indian Space Research Organisation (ISRO) has achieved a major milestone as they successfully completed the last manoeuvre to position the Aditya-L1 spacecraft into its designated orbit. Aditya-L1 is India's first space-based observatory dedicated to studying the Sun. The spacecraft has now reached its final destination, a distance of approximately 1.5 million kilometres from the Earth.

<https://economictimes.indiatimes.com/news/science/aditya-l1-isros-first-solar-spacecraft-enters-suns-final-orbit/articleshow/106596085.cms?from=mdr>

[03]-----

THE FOLLOWING INFO IS FROM ISRO'S WEBSITE:

Aditya L1 shall be the first space based Indian mission to study the Sun. The spacecraft shall be placed in a halo orbit around the Lagrange point 1 (L1) of the Sun-Earth system, which is about 1.5 million km from the Earth. A satellite placed in the halo orbit around the L1 point has the major advantage of continuously viewing the Sun without any occultation/eclipses. This will provide a greater advantage of observing the solar activities and its effect on space weather in real time. The spacecraft carries seven payloads to observe the photosphere, chromosphere and the outermost layers of the Sun (the corona) using electromagnetic and particle and magnetic field detectors. Using the special vantage point L1, four payloads directly view the Sun and the remaining three payloads carry out in-situ studies of particles and fields at the Lagrange point L1, thus providing important scientific studies of the propagatory effect of solar dynamics in the interplanetary medium

The suits of Aditya L1 payloads are expected to provide most crucial informations to understand the problem of coronal heating, coronal mass ejection, pre-flare and flare activities and their characteristics, dynamics of space weather, propagation of particle and fields etc.

Science Objectives:

The major science objectives of Aditya-L1 mission are:

- * Study of Solar upper atmospheric (chromosphere and corona) dynamics.
- * Study of chromospheric and coronal heating, physics of the partially ionized plasma, initiation of the coronal mass ejections, and flares
- * Observe the in-situ particle and plasma environment providing data for the study of particle dynamics from the Sun.
- * Physics of solar corona and its heating mechanism.
- * Diagnostics of the coronal and coronal loops plasma: Temperature, velocity and density.
- * Development, dynamics and origin of CMEs.
- * Identify the sequence of processes that occur at multiple layers (chromosphere, base and extended corona) which eventually leads to solar eruptive events.
- * Magnetic field topology and magnetic field measurements in the solar corona .
- * Drivers for space weather (origin, composition and dynamics of solar wind .

WEBSITE:

https://www.isro.gov.in/Aditya_L1.html

Download this Aditya-L1 booklet -- it is quite good:

https://www.isro.gov.in/media_isro/pdf/Aditya_L1_Booklet.pdf

[04]-----

Time-lapse of Solar Cycle 25 displays increasing activity on the Sun

<https://www.youtube.com/watch?v=71we0DQSPjA&t=80s>

NOAASatellites 35,735 views Jun 1, 2023

NOAA's GOES satellite time-lapse of Solar Cycle 25 from December 2019 through April 2023 alongside the progression of the number of sunspots.

The Solar Ultraviolet Imagers (SUVI) create images of the solar corona at six different extreme ultraviolet wavelengths. NOAA's space weather forecasters use SUVI imagery to issue alerts and watches for space weather storms.

[05]-----

Dear George, 15-Jan-2024

Konnichiwa!

I hope it is not too late to publish this reminder in the next ISWI Newsletter?

Arigato gozaimasu! Yenca

Yenca Migoya-Orue'
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Dear ISWI Community,

The 4th URSI Atlantic Radio Science Meeting (URSI AT-RASC 2024) will be held in Gran Canaria, Spain during 19 - 24 May, 2024.

We would like you to consider sending an abstract to our session:
"G06: Modeling and forecasting the ionosphere: new ways to cooperate Complex Systems theory and Machine Learning".

The session description is given below. **The deadline for papers submission is this Friday, 20 January 2024.**

G06: Modeling and forecasting the ionosphere:

new ways to cooperate Complex Systems theory and Machine Learning

Session Description:

Ionosphere modelling and forecasting are paramount objectives of research in the field. In this framework, several considerable milestones were reached both through Physics-based models and empirical-climatological studies. Our session will bring together novel concepts for modelling and forecasting the ionosphere, both data-driven and physics-based, with underlying machine learning (ML) and/or complex dynamical systems methodologies to trigger their fruitful cross-fertilization. The ML approach is recognized to be at the present cutting edge of numerical and big data analysis tools, gleaning a deep understanding of otherwise hidden system behavior from historical records. On the other hand, recognizing the ionosphere as a complex dynamical system structured on many time- and space-scales, intrinsically nonlinear and statistically-treated, paves the way to paradigm changes in its dynamical theory. Both approaches can offer superior forecasting capabilities to explore in cooperation. This session is intended to be open to papers that consider approaches stemming from the foregoing considerations.

Find more details at <https://www.atrasc.com/papersubmission.php>.

Conveners: Ivan Galkin, Claudio Cesaroni, Yenca Migoya-Orue, Massimo Materassi

*****[End of this issue of the ISWI Newsletter]*****

ISWI Steering Committee Annual Meeting**2024 February 5: 2:00 PM– 6:00 PM and February 6: 9 AM – 1:00 PM****In-Person and Online Meeting****Agenda**

1. Introduction & Report (Chair)
2. Secretariat Update (Nat Gopalswamy, Kathleen Kramer, George Maeda)
3. Steering Committee Update (Nat Gopalswamy)
4. SCOSTEP/PRESTO Report (Kazuo Shiokawa)
5. Reports from ISWI Regional & National Coordinators (lead: Christine Amory)
6. ISWI Instruments Update (Shing Fung and Instrument PIs)
7. ISWI/Iberia School 2023 report (Anna Morozova)
8. ISWI/Zambia School report (Chigo Ngwira)
9. ISWI/Nepal School plans (Nishu Karna)
- 10 UN/ISWI workshop and UN-ISWI activities (Sharafat Gadimova, Daniela Banys)
11. ISWI/NOAA Report (Elsayeed Talat)
12. ISWI/NASA report (???)
13. COSPAR Space Weather Roadmap and ISWAT activities (Masha Kuznetsova)
14. Steering committee member presentations
15. Any other business

Concurrent ISWI Activity**ISWI Poster/Instrument Exhibits: February 5-9, 2024****Location:** Rotunda, Vienna International Center

February 5: 9 AM – 11 AM Exhibit setup

February 5: 11:30 AM Inauguration (TBD)

February 5 – 9 Poster/Instrument Exhibits open

February 9: 1:00 PM Take down all Exhibits.