



ISRO Agency Report

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Recent Developments

- ISRO is committed for developing and launching satellite instruments for Met/Ocean applications and providing support to Indian User Agencies.
- ISRO maintains web portals (MOSDAC, VEDAS and BHUVAN) for dissemination of satellite data to international community.
- ISRO developed the Multi-Mission Data Reception and Processing System (MMDRPS) under an MoU with IMD (MoES), which is operational at IMD New Delhi since Jan 2021 for INSAT-3D/3DR. 15 new parameters have been added from old IMDPS system.
- 1-D Var based physical retrieval algorithm implemented for SST from INSAT-3D/3DR Imager observation to mitigate the diurnal/seasonal dependency on SST biases.
- INSAT-3D/3DR radiances are monitored using GSICS procedure. Inter-calibration of IR channels are in demo phase with IASI-A/B and under implementation for IASI-C and CrIS. Inter-calibration procedure Vis/SWIR channels with MODIS is under testing.
- Under ISRO Processing Platform for International Charter : Space and Major Disasters
 - ✓ Developed prototype for online image processing and analysis tools that will be soon operational (<https://vedas.sac.gov.in>)

Issues with Instruments/Dataset

- INSAT-3DR Sounder is being used operationally after INSAT-3D Sounder stopped functioning in Sept 2020.
- Re-processing of Scatsat-1 data in v1.1.4 since Jun 20, 2019 completed. Data delivery suspended since Feb28, 2021 due to an anomaly in the redundant chain. This will be replaced by Oceansat-3 Scatterometer in Oct 2021.
- ISRO-CNES joint mission – SARAL/AltiKa is in drifting phase. Crossover analysis using Jason suggests that the bias remains more or less same. Data still useful for Oceanographic applications. Very useful for Geodesy research.

Upcoming satellites

- GISAT-1 is scheduled for launch in May 2021, at 85.5E. Mx-VNIR and HyS-VNIR/SWIR will have daytime rapid scan of 500 x 500 km every 5 min for monitoring of natural disasters.
- Oceansat-3 will be launched in Oct 2021, with 13 narrow band OCM-3, 2 band SSTM, Ku band scatterometer and Argos-4 (CNES).
- INSAT-3DS (Ground spare) launch in mid-2022 to provide continuity to INSAT-3D/3DR.
- Aditya-L1, first Indian observatory class mission for solar & heliospheric studies is scheduled for launch in 2022.

Missions under Study Phase

- LEO: (a) MW Temperature & Humidity Sounder in low-inclination orbit, (b) 6-89 GHz MW Radiometer in low-inclination orbit, (c) Dual Frequency Scatterometer, C/Ku with 5 km (Regional)/25 km (global) resolution.
- GEO: INSAT-4th Generation Satellite with Advanced Imager, HypSpec Sounder, Lightning mapper

Thanks

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