GSICS Agency Report - ISRO
2022

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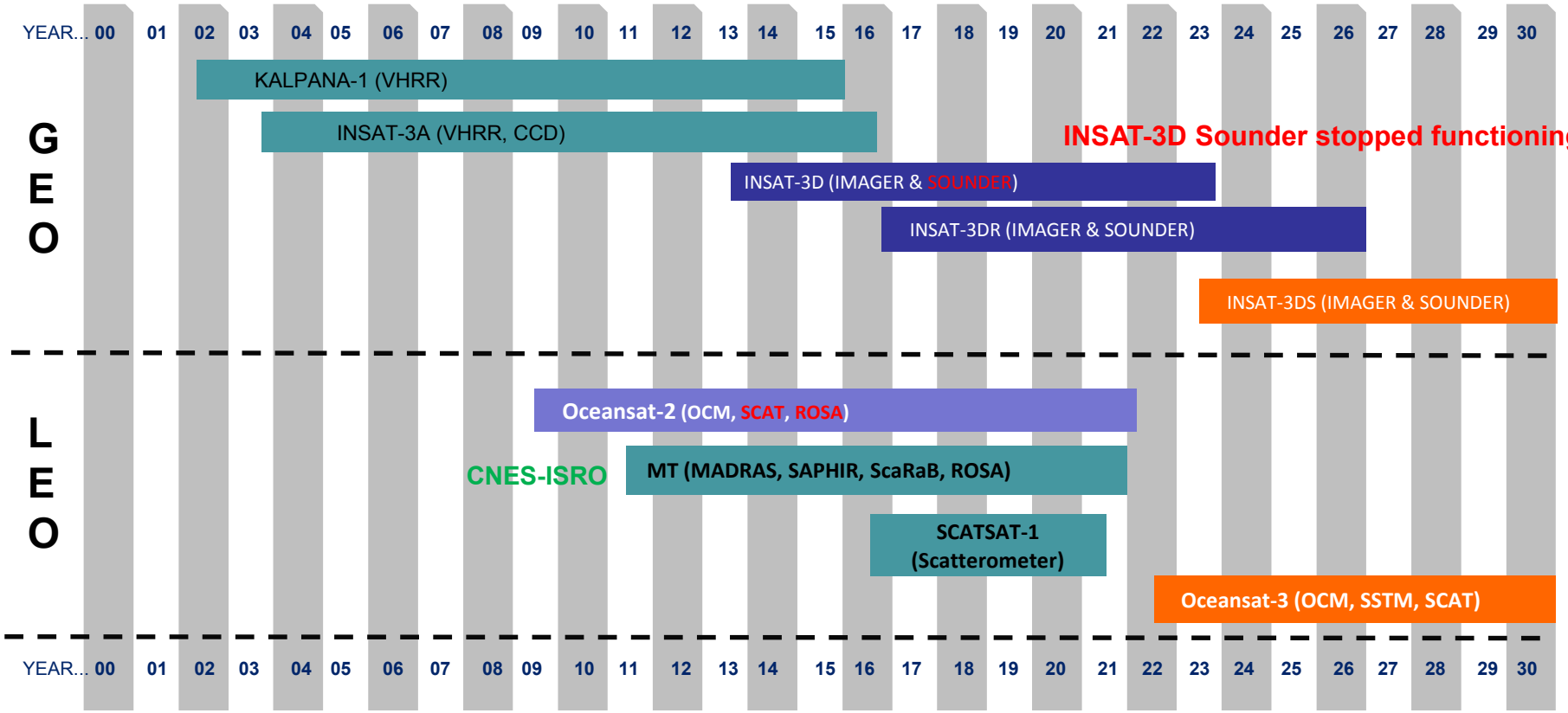
Indian Space Research Organisation (ISRO)

Presentation Overview

- ISRO's Instruments Updates & Planned launches Relevant to GSICS
- ISRO GSICS Thredds Server
- ISRO's support to GRWG Activities
- ISRO's support to GDWG Activities
- Bias Monitoring
- Agency's Personnel supporting GSICS

ISRO's Instruments Updates & Planned launches Relevant to GSICS

Atmosphere & Ocean



ISRO GSICS Thredds Server

https://mosdac.gov.in

MOSDAC

Meteorological & Oceanographic Satellite Data Archival Centre

Space Applications Centre, ISRO

हिन्दी English

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GSICS

- GSICS (GLOBAL SPACE-BASED INTER-CALIBRATION SYSTEM) is an international collaborative effort initiated in 2005 by World Meteorological Organization (WMO) and the Coordination Group for Meteorological Satellites (CGMS).
- The objective of GSICS is to provide calibration corrections needed for accurately integrating data from multiple observing systems and ensuring consistent observations for climate monitoring weather forecasting, and environmental applications.
- ISRO as a member organization of GSICS is carrying out the inter-calibration activity for Indian meteorological satellites in order to provide the calibration correction coefficients to the international users.

Monitored satellite/instrument	Reference satellite/instrument	Status	GSICS Product	Documentation
INSAT 3D/Imager	METOP / IASI	Demo	Near real-time correction Re-analysis correction Bias monitoring	ATBD Readme Publications
INSAT 3D/Sounder	METOP / IASI	Demo	Near real-time correction Re-analysis correction Bias monitoring	ATBD Readme Publications
INSAT 3R/Imager	METOP / IASI	Demo	Near real-time correction Re-analysis correction Bias monitoring	ATBD Readme Publication

Support to GRWG Activities

- Algorithm to generate RAC products is ready and tested
- RAC products generation will be taken up after filling the data gaps.
- Procedure to use MetOp-C is prepared/tested, and product generation is ready for demo-phase
- Algorithm for ray-matching technique ready for VIS and SWIR channels and data of INSAT-3D (2015-2021) and INSAT-3DR (2017-2021) has been processed.

Support to GDWG Activities

- IASI data received through Eumetcast for operational use (SAC and IMD)
- IASI data through Eumetsat THREDDS Server Standing order : Fall-back option
- Started using MetOp-C data since Nov 2020 (product not yet operational)
- Plotting tool for ISRO products
- Plotting tool interface for RAC product under development/testing.

Bias Monitoring: INSAT-3D Imager vs MetOp-A IASI

Demonstration Monitor

Data Centre
ISRO

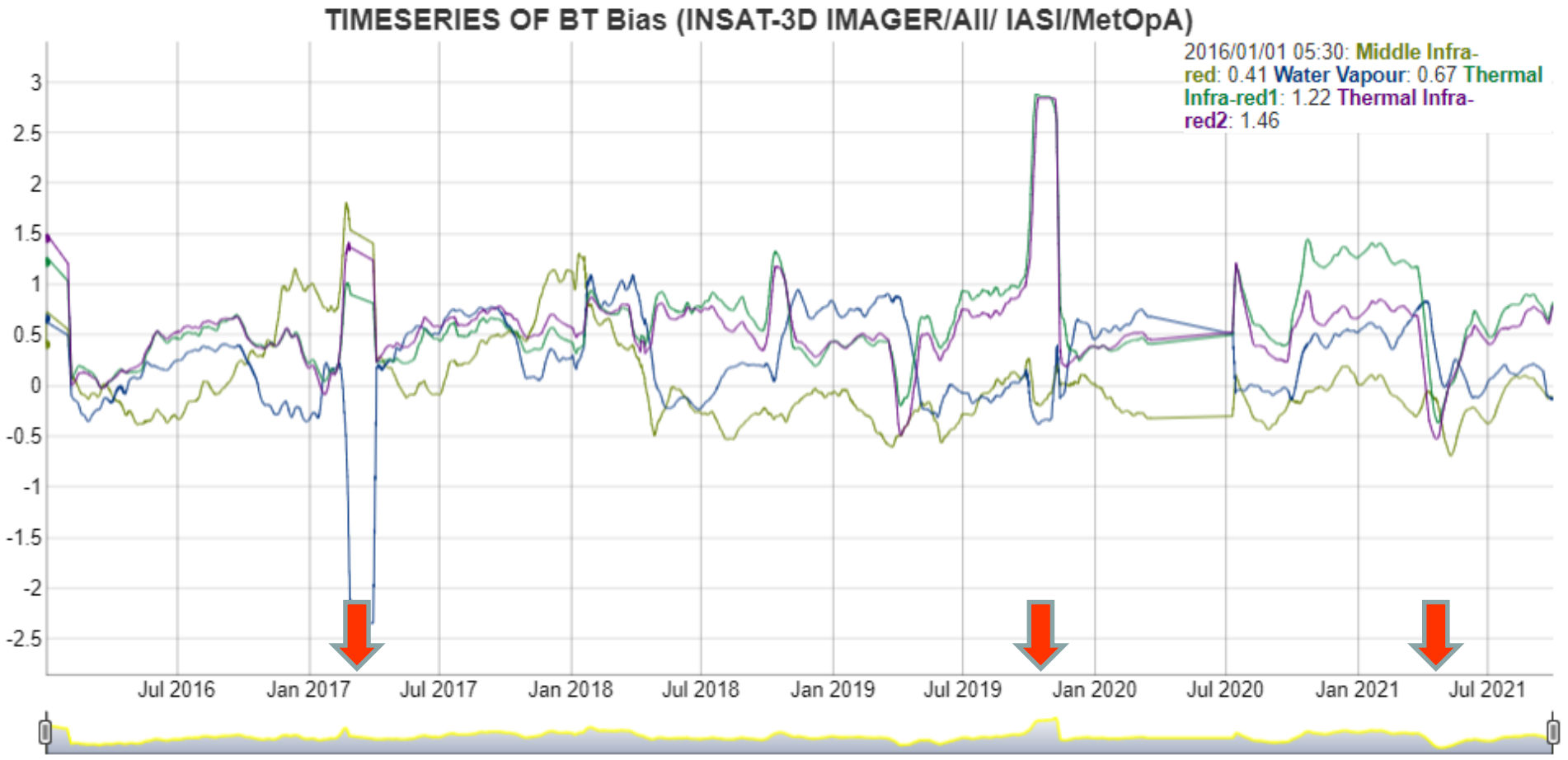
Monitored Sensor
INSAT-3D IMAGER

Product Type
Near Real Time Correc...

Reference Sensor
IASI/MetOpA

Band
All

RELOAD



Bias Monitoring: INSAT-3D Imager vs MetOp-B IASI

Demonstration

Monitor

Data Centre

ISRO

Monitored Sensor

INSAT-3D IMAGER

Product Type

Near Real Time Correc...

Reference Sensor

IASI/MetOpB

Band

All

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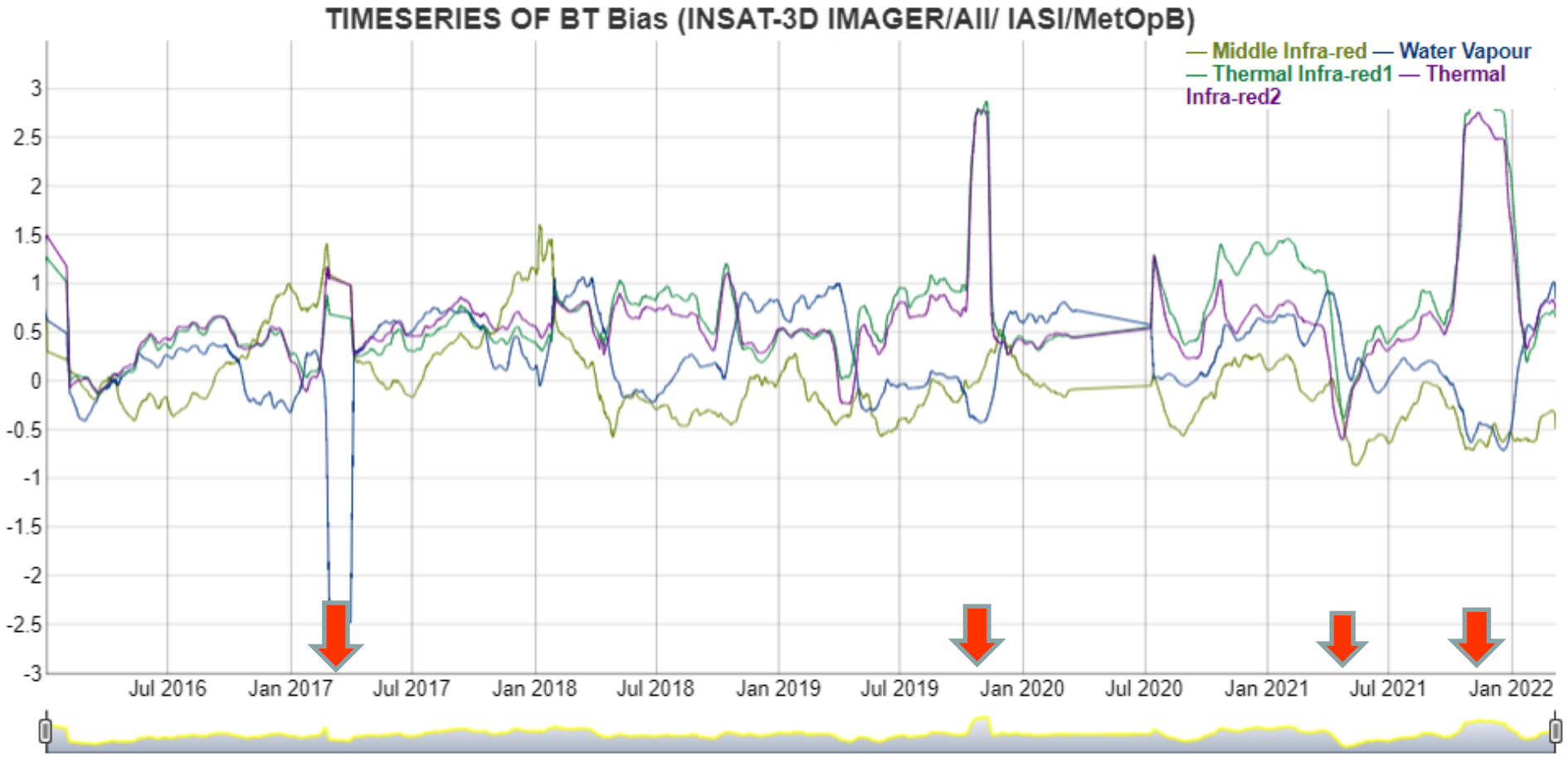

Bias Monitoring: INSAT-3DR Imager vs MetOp-A IASI

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Data Centre

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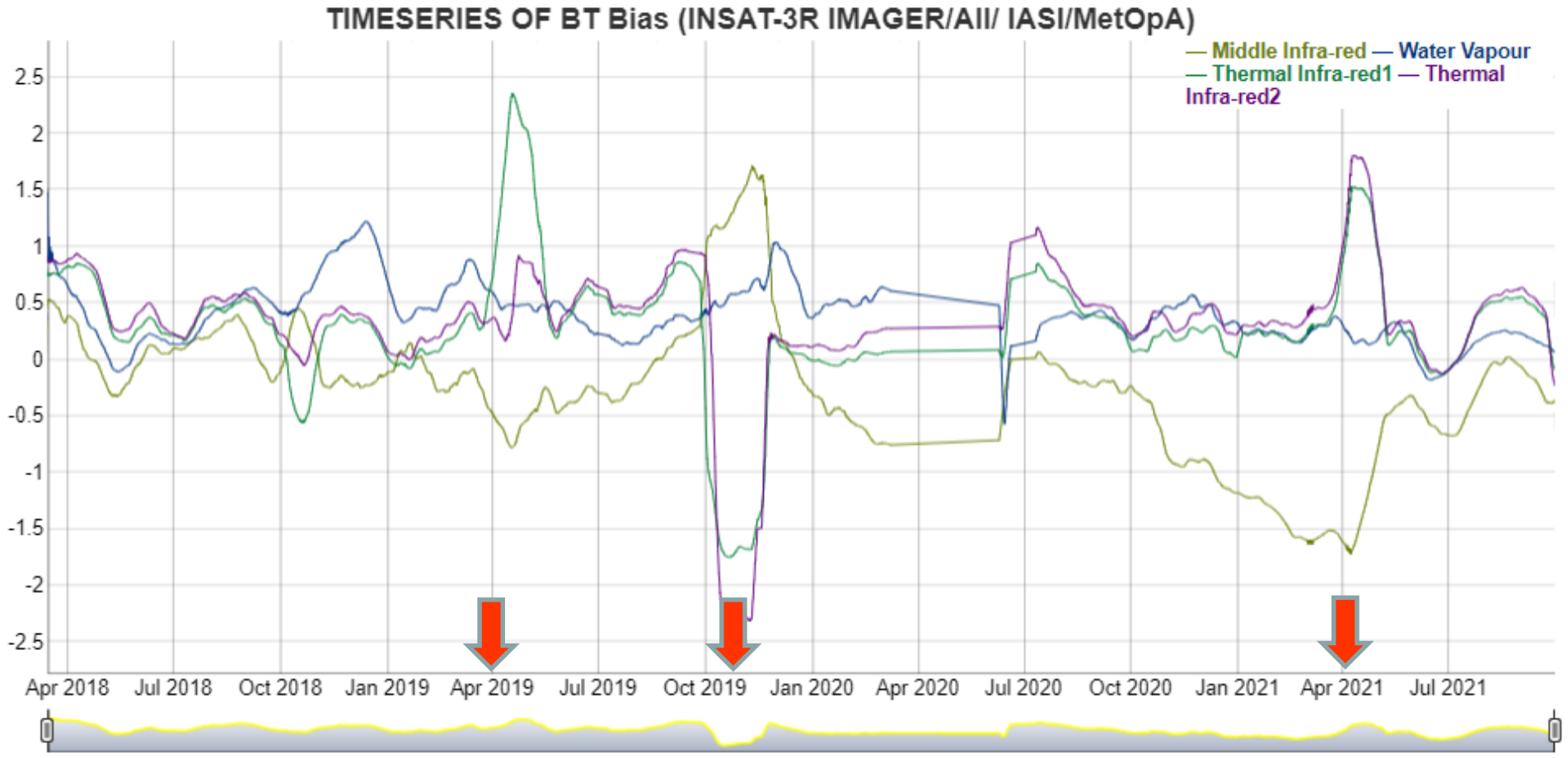

Bias Monitoring: INSAT-3DR Imager vs MetOp-B IASI

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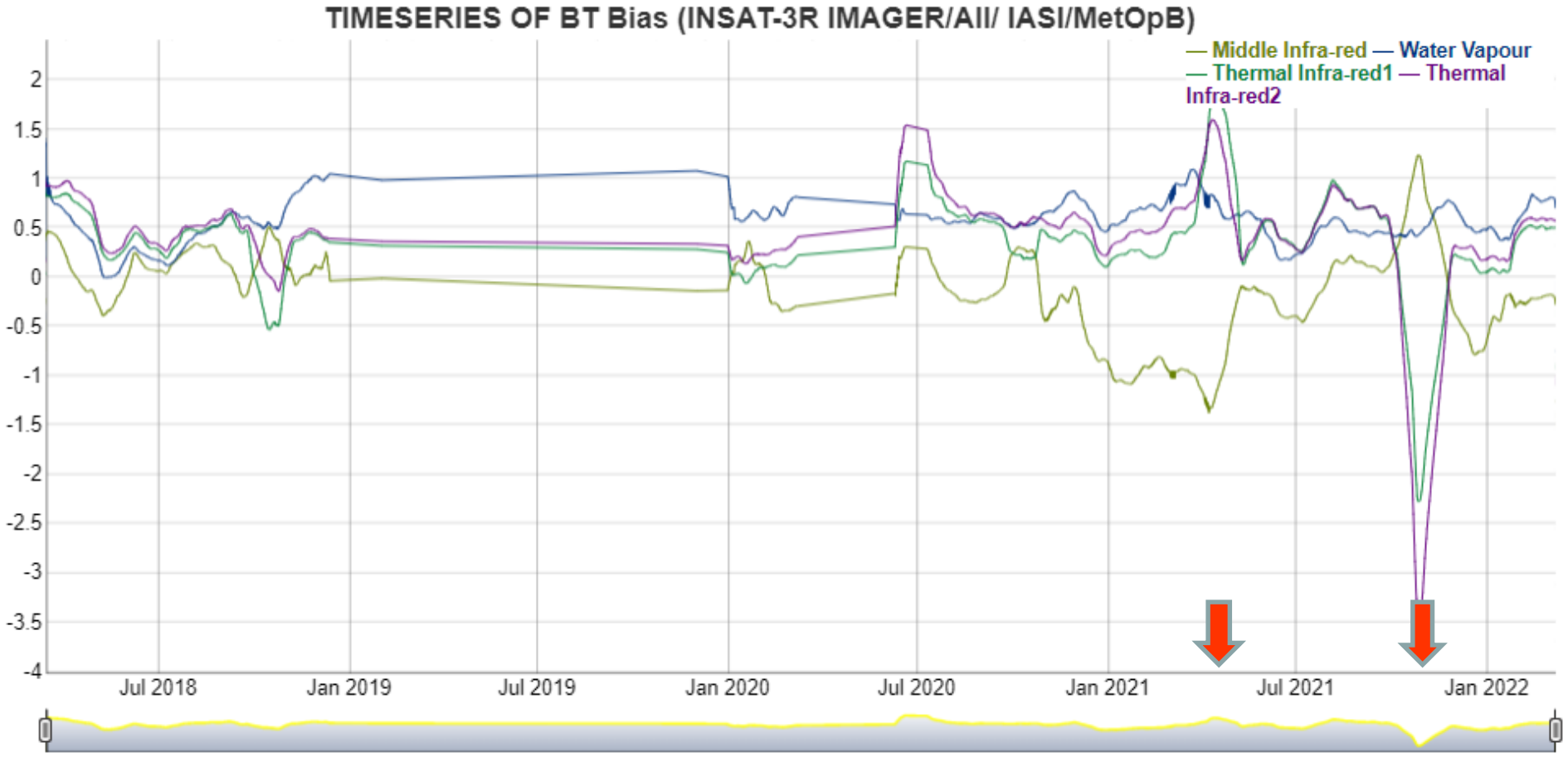

Agency's Personnel supporting GSICS

❖ *Points of contacts/meeting participants:*

– *EP: Dr Raj Kumar (Dr Pradeep Thapliyal, till new member is nominated)*

– *GRWG: Dr Pradeep Kumar Thapliyal (pkthapliyal@sac.isro.gov.in)*

Dr Munn Vinayak Shukla (munnvinayak@sac.isro.gov.in)

– *GDWG: Dr Nitant Dube, (nitant@sac.isro.gov.in)*

– *GSICS Point of Contact for Operational Matters: Mr D K Patel*

(Ms Shivani Shah, shivanishah@sac.isro.gov.in, till new member is nominated)

❖ Restructuring of ISRO GSICS activity to include new members

Thanks