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Revisiting climatological Diurnal cycle of precipitation over Indian subcontinent using IMERG data

Utkarsh Verma¹, Samir Pokhrel¹, Subodh Kumar Saha¹, Anupam Hazra¹ and H S Chaudhari¹

¹Indian Institute of Tropical Meteorology, Pune, Maharashtra-411008, India.

Presented by: Utkarsh Verma

Contact: *utkarsh.verma@tropmet.res.in*

Objective of the paper :

- Utilizing very high spatial and temporal resolution data from IMERG GPM constellation of satellites for diurnal studies.
- Studying long term climatological diurnal oscillation characteristics of precipitation over Indian subcontinent and identifying the improvements and validate the previous studies using TRMM data (e.g. Sahany et., al. 2010, Deshpande and Goswami 2013, Chen 2019 etc.).

Data, Methodology, Results & Summary

Data & Methods:

- IMERG v06 data ($0.1^\circ \times 0.1^\circ$ & 30 min resolution)
- Extracted the Phase of rainfall peaking hours and Amplitude mean of diurnal scale using Harmonic Analysis

Results & Summary:

- Fig (a) shows climatology of rainfall over Indian region during JJAS where most of rainfall are observed over WG, HF, North BOB, NE and CI region.
- Fig (b) shows diurnal climatology and it shows it's role in mean climatology of rainfall as seen in Fig (c)
- Phase hours of peak rainfall shown in Fig (d) and in line graph explains the importance of this study where all the regions are dynamically and thermodynamically differ to each other during monsoon months

