

---

# NASA/ADS

## Equatorial Plasma Bubbles Related to MSTID: Signature of Troposphere to Ionosphere Coupling

Show affiliations

**Takahashi, Hisao; Shiokawa, Kazuo; Wrasse, Cristiano M.;  
Alexandre Figueiredo, Cosme; Abdu, Mangalathayil; Barros Silva, Diego;  
Otsuka, Yuichi**

Equatorial ionosphere over the South American continent has been observed by ground-based GNSS receiver network (TEC maps and de-trended TEC), ionosondes (foF2 and hF) and optical imagers (OI6300 and OH). Mesospheric gravity waves (MGW), medium scale ionospheric disturbances (MSTID), and equatorial plasma bubbles (EPB) were successfully monitored. Occurrence of MSTID and MGW in the afternoon to evening followed by EPB was observed in several cases in September 2015. We found that both MGW and MSTID were related to strong tropospheric convection activities. Also found was that the inter-bubble distances are approximately same to the horizontal wavelength of MSTID, suggesting that MSTIDs could be one of the possible forcing mechanism to generate EPBs.

### **Publication:**

42nd COSPAR Scientific Assembly. Held 14-22 July 2018, in Pasadena, California, USA, Abstract id. C1.1-1-18.

### **Pub Date:**

July 2018

### **Bibcode:**

2018cosp...42E3326T

 Feedback/Corrections? ([http://adsabs.harvard.edu/adsfeedback/submit\\_abstract.php?bibcode=2018cosp...42E3326T](http://adsabs.harvard.edu/adsfeedback/submit_abstract.php?bibcode=2018cosp...42E3326T))