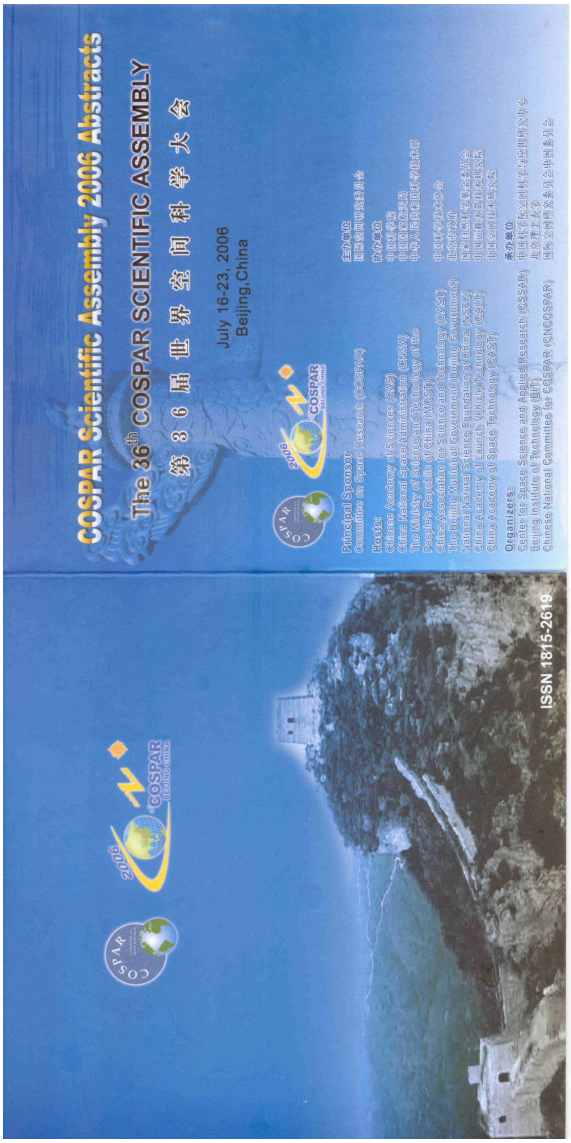
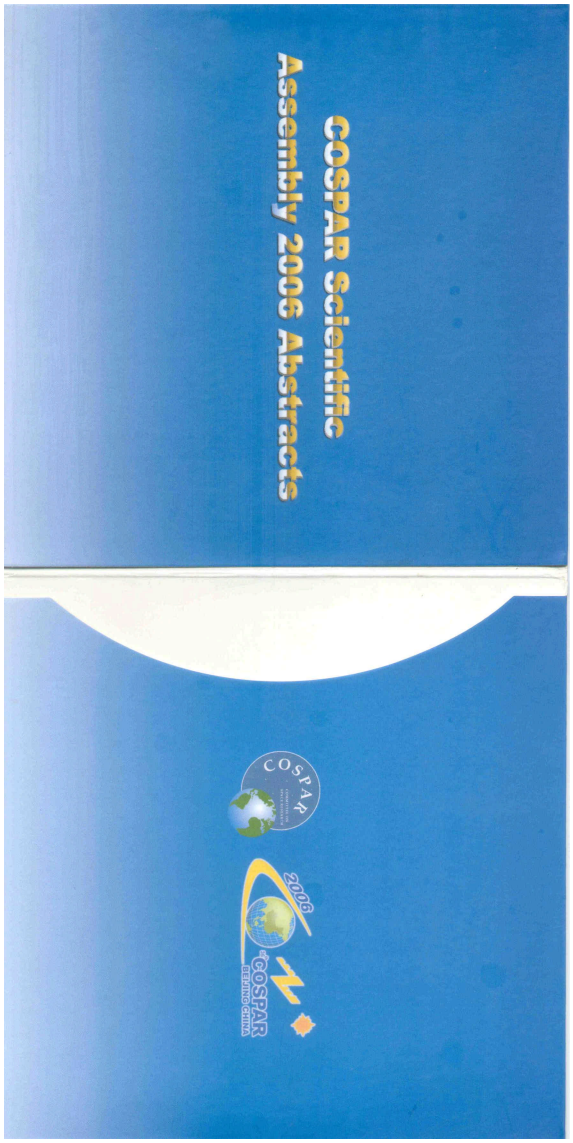
Gravity wave signatures in the stratosphere over Equator

C. M. Wrasse(1) , H. Takahashi(1), J. Fechine(1), A. F. Medeiros(2), J. Wickert(3), C. M. Denardini(1)

(1) Instituto Nacional de Pesquisas Espaciais, INPE, Brazil. (2) Universidade Federal de Campina Grande, UFCG, Brazil. (3) The German Research Center for Earth Sciences, GFZ, Germany

Gravity wave activities in the stratosphere are deduced from GPS radio occultation temperature profiles obtained by CHAMP satellite. From the temperature data potential energy profiles are deduced and used to study the gravity wave activity in the stratosphere. The results obtained over South America showed a seasonal variation of the gravity waves, with a major activity during the spring and autumn. An annual variation in the gravity wave activity was also observed, with the maximum occurence in 2002 and 2004 and minimum during 2003 and 2005. These results will be compared with the gravity wave activity around the Equator for the last 4 years.





ISSN 1815-2619

Oral Programme - C2.2 Tides, Waves and Coupling Processes from Troposphere to Ionosphere

Select contributions you wish to be included in your Personal Programme and press "Add" to Personal Programme. Finally, click on "Personal Programme" to modify, view, print, save or export your Personal Programme.

Please, click Abstract Number to find the corresponding abstract as PDF file; if necessary, download Adobe Acrobat Reader 4.0 first to open the file. Any abstract may be freely reproduced for non-commercial, scientific purposes; however, the moral right of the author(s) to be identified as the author(s) of such abstracts is asserted.

MSO: Taylor, M.

DO: Fukao, S.

Co-Sponsorship:

Thursday, 20 July 2006

Lecture Room: Room 1001-1002

Chairperson: TAYLOR, M

9:30 - 9:50 COSPAR2006-A-01502; C2.2-0001-06
Forbes, J.M.; Palo, S.E.; Zhang, X.; Russell, J.; Mertens, C.J.; Mlynczak, M.
Mesosphere-thermosphere penetration of stratosphere planetary waves from TIMED/SABER temperature measurements (solicited)

9:50 - 10:05 COSPAR2006-A-02381; C2.2-0002-06
Xiong, J.; Wan, W.; Ning, B.; Liu, L.; Vincent, R.A.; Reid, I.
Tides and Quasi-two-day waves observed in Wuhan and their comparisons with those in Adelaide during 2002 and 2003

10:05 - 10:20 COSPAR2006-A-01531; C2.2-0003-06
Wu, D. L.; **Pi, X.**; Ao, C. O.; Mannucci, A. J.
Quasi-biannual oscillations (QBO) seen in GPS/CHAMP tropospheric and ionospheric data

10:20 - 10:40 COSPAR2006-A-01838; C2.2-0004-06
Zhao, Y.; Taylor, M. ; Gardner, C.; Liu, A.
Title: Investigating planetary wave and seasonal variability in mesospheric temperature at mid- and low-latitudes (solicited)

10:40 - 10:55 COSPAR2006-A-03686; C2.2-0005-06
Li, T.; She, C.Y.; Palo, S.; Wu, Q.; Liu , H.; Salby, M.L.
Coordinated Lidar and TIMED observations of the quasi-two-day wave during August 2002-2004 and possible quasi-biennial oscillation influence

10:55 - 11:10 COSPAR2006-A-00650; C2.2-0006-06
Gurubaran, S; Rajaram, R
Long-term variabilities of the 6.5-day planetary wave in the low latitude mesopause region

11:10 COFFEE BREAK

Chairperson: FORB, J

11:30 - 11:45 COSPAR2006-A-01644; C2.2-0007-06
Takahashi, H.; Wrasse, C. M.; Pancheva, D.; Abdu, M. A.; Batista, I. S.; Lima, L. M.; Batista, P. P.; Clemesha, B. R.; Shiokawa, K.
Planetary waves in the equatorial mesosphere and ionosphere

11:45 - 12:05 COSPAR2006-A-02045; C2.2-0008-06
Pancheva, D.
Planetary wave coupling of the low latitude atmosphere-ionosphere system (solicited)

12:05 - 12:20 COSPAR2006-A-01156; C2.2-0009-06
Jiang, G.; Xiong, J.; Wan, W.; Ning, B.; Liu, L.
Meteor radar observation of 6.5-day wave in the MLT region over Wuhan (30.5ºN, 114.3ºE)

12:20 - 12:35 COSPAR2006-A-02737; C2.2-0010-06
Sridharan, S.; Nakamura, T.; Tsuda, T.; Vincent, R. A.; Russell, J. M.
Radar, Radiosonde and Satellite-based Observations of 5-8-day wave in the Equatorial Atmosphere: Vertical Propagation and Zonal Characteristics of the wave from Troposphere to MLT Region

12:35 - 12:50 COSPAR2006-A-01419; C2.2-0011-06
Zhang, Z.; Shepherd, S.

10:05 - 10:20 COSPAR2006-A-00274; C2.2-0026-06
Janches, D.; Fritts, D. C.; Riggin, D. M.; Stockwell, R. G.; Sulzer, M. P ; Gonzalez, S.
Gravity waves and momentum fluxes in the MLT using the 430 MHz Dual-Beam Measurements at Arecibo

10:20 - 10:35 COSPAR2006-A-01847; C2.2-0027-06
Ejiri, M. K.; **Taylor, M. J.**; Pautet, P. D.; Zhao, Y.; Liu, A. Z.
Investigating short-period mesospheric gravity wave propagation and momentum flux at low-latitudes using simultaneous Na lidar and temperature mapper measurements

10:35 - 10:50 COSPAR2006-A-00185; C2.2-0028-06
Clemesha, B; Yang, G; Tokumoto, A; Batista, P; Simonich, D
Gravity wave statistics at 23 S from lidar and meteor radar measurements

10:50 - 11:05 COSPAR2006-A-03115; C2.2-0029-06
Chen, Z.; Lu, D.; Preusse, P.; Ern, M.
Spectra of The Stratospheric GWs Induced by A Tropical Cyclone

11:05 COFFEE BREAK

Chairperson: YAMAMOTO, M

11:30 - 11:50 COSPAR2006-A-01307; C2.2-0030-06
Gerding, M.; Rauthe, M.; Hoeffner, J.; Berger, U.; Luebken, F.-J.
Lidar temperature soundings of gravity and tidal waves from 1 to 105 km altitude at mid-latitudes (solicited)

11:50 - 12:05 COSPAR2006-A-01549; C2.2-0031-06
Venkat Ratnam, M.; Tsuda, T. ; Shibagaki, Y.; Kozu, T.; Mori, S.
Gravity wave characteristics over the equator observed during CPEA campaign using simultaneous multiple stations data

12:05 - 12:20 COSPAR2006-A-01293; C2.2-0032-06
Preusse, P.; **Ern, M.**; Krebsbach, M.; Eckermann, S.D.; Warner, C.D.; Picard, R.H.
A four-year climatology of SABER gravity wave activity

12:20 - 12:35 COSPAR2006-A-02711; C2.2-0033-06
Evan, S.; **Chane-Ming, F.**; Keckhut, P.
Activity of convective tropical gravity-waves above the south west indian ocean

12:35 - 12:50 COSPAR2006-A-01538; C2.2-0034-06
Jiang, J. H.; Wu, D. L.
New Results of Gravity Wave Observations from Aura MLS

12:50 - 13:05 COSPAR2006-A-01262; C2.2-0035-06
DEBASHIS NATH, D; RAMKUMAR, T. K.; NARAYANA RAO, D.; BHAVANI KUMAR, Y.; VISHNU PRASANTH, P.
VHF radar and lidar observations of high frequency gravity waves from lower troposphere to mesosphere in the tropical region

13:05 LUNCH BREAK

Chairperson: FRITTS,D AND CLEMESH, B

15:30 - 15:50 COSPAR2006-A-01890; C2.2-0036-06
Snively, J; Pasko, V; Taylor, M; Hocking, W
Mesopause airglow modulation by Doppler-ducted gravity waves (solicited)

15:50 - 16:05 COSPAR2006-A-01545; C2.2-0037-06
Shiokawa, K. ; Suzuki, S. ; Otsuka, Y. ; Ogawa, T. ; Nakamura, T. ; Mlynczak, M. G.; Russell III, J. M.
A multi-instrument measurement of a mesospheric front-like structure at the equator

16:05 - 16:20 COSPAR2006-A-00678; C2.2-0038-06
Nikoukar, R.; Kamalabadi, F. ; **Swenson, G.**; Liu, A.
Variability of mesospheric OH layer volume emission profiles derived from SABER limb measurements

16:20 - 16:35 COSPAR2006-A-01410; C2.2-0039-06
Wrasse, C. M.; Takahashi, H.; Fechine, J.; Medeiros, A. F; Wickert, J.; Denardini, C. M.
Gravity wave signatures in the stratosphere over Equator

16:35 - 16:50 COSPAR2006-A-02552; C2.2-0040-06
Yu, Y.; Hickey, M.
The Numerical Simulation of Gravity Waves Propagating Upward Through The Middle Atmosphere Forced by Latent and Convective Heating