

TIMED Science Working Group Meeting Agenda
APL, Building MP3-E-183

Tuesday 02-11-03

8:45-8:50	Programatics	Dave Grant
8:50-8:55	NASA HQ Comments	Mary Mellott
8:55-9:15	Instrument Updates GUVI SABER SEE TIDI	Andy Christensen Jim Russell Tom Woods Tim Killeen
9:15-10:45	Session A: Algorithm and Validation I	Sam Yee
10:45-11:00	Break	
11:00-12:15	Session A: Algorithm and Validation II	Sam Yee
12:15-13:45	Lunch	
13:45-15:45	Session A: Algorithm and Validation III	Elsayed Talaat
15:45-16:00	Break	
16:00-18:30	Session B: Basic Structures and Variability I	Elsayed Talaat
18:30	Adjourn	

TIMED Science Working Group Meeting
APL, Building MP3-E-183

Wednesday 02-12-03

9:00-10:30	Session B: Basic Structures and Variability II	Sam Yee
10:30-10:45	Break	
10:45-12:30	Session B: Basic Structure and Variability III	Sam Yee
12:30-14:00	Lunch	
14:00-15:45	Session B: Basic Structure and Variability IV	Elsayed Talaat
15:45-16:00	Break	
16:00-18:00	Session C: Energy Inputs and Outputs	Elsayed Talaat
18:00	SWG Adjourned	

TIMED Science Working Group Meeting
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Thursday 02-13-03

0900:10:00 Storm Workshop Planning

10:00- Extended Mission Discussion

TIMED SWG

**TIMED Science Working Group Meeting
Science Presentation**

Tuesday 02-11-03

Session A: Algorithm and Validation I

- A - 01 **09:15-09:30** Validation of the solar XUV irradiance.
Tom Woods, Scott Bailey, Phil Chamberlin, Frank Eparvier, and Don Woodraska
- A - 02 **09:30-09:45** Validation of the SEE solar EUV and FUV irradiance measurements.
Frank Eparvier, Tom Woods, Don Woodraska, Phil Chamberlin, Ryan Keenan, and Karen Turk
- A - 03 **09:45-10:00** Solar irradiance variability in the TIMED epoch: Comparison of SEE observations and NRL models.
J. Lean, H. Warren, J. Mariska, T. Woods, F. Eparvier
- A - 04 **10:00-10:15** Scientific objectives and early results from the Global Ultraviolet Imager (GUVI) on the TIMED spacecraft.
A. B. Christensen, S. Avery, J. Craven, G. Crowley, R. Meier, C.-I. Meng, D. Morrison, L. Paxton, C. Swenson, R. Walterscheid
- A - 05 **10:15-10:30** Validation of GUVI Observations.
L. J. Paxton, Morrison, D., Wolven, B., Kil, H., Zhang, Y., Talaat, E., DeMajistre, R., Christensen, A., and the GUVI Science Team

10:30:10:45 Break

Session A: Algorithm and Validation II

- A - 06 **10:45:11:00** Analysis of TIMED/GUVI daytime limb scans.
Robert R. Meier, D. J. Strickland, A. B. Christensen, L. Paxton, D. Morrison, J. Craven, G. Crowley, R. Walterscheid, S. Avery, C.-I. Meng, James Bishop, J. Michael Picone, Douglas Drob
- A - 07 **11:00:11:15** Remote sensing of electron characteristic energy and energy flux in the auroral regions using TIMED/GUVI data.
Y. Zhang, L.J. Paxton, D. Morrison, H. Kil, B. Wolven, C.-I. Meng, A.B. Christensen
- A - 08 **11:15:11:30** SABER vertical temperature profile validation studies.
James M. Russell III, Ellis E. Remsberg, Martin G. Mlynczak, Christopher J. Mertens Manuel Lopez-Puertas and Gretchen Lingenfelter
- A - 09 **11:30:11:45** Retrieval of kinetic temperature and carbon dioxide from SABER measurements of non-local thermodynamic equilibrium limb emission.
Christopher J. Mertens, Martin G. Mlynczak, Manuel Lopez-Puertas, Peter P. Wintersteiner, Richard H. Picard, Jeremy R. Winick, Larry L. Gordley, and James M. Russell III

A - 10 **11:45:12:00** Comparison between CSU sodium lidar observations and SABER temperature and TIDI wind measurements onboard TIMED.
C. Y. She, B. P. Williams, D. A. Krueger, C. J. Mertens, and J. M. Russell III, Q. Wu, and T. Killeen

A - 11 **12:00:12:15** Falling sphere data and TIMED measurements.
W. D. Pesnell, R. A. Goldberg, F. A. Schmidlin, and C. Mertens

12:15:13:45 Lunch Break

Session A: Algorithm and Validation III

A - 12 **13:45:14:00** Coordinated measurements of mesospheric gravity wave climatology and temperatures with TIMED.
M. J. Taylor, Y. Zhao, A. Taori and D. Hatch

A - 13 **14:00:14:15** Fast Fourier synoptic mapping of SABER data.
R. S. Lieberman and R. R. Garcia

A - 15 **14:15:14:30** Climatological comparisons of atmospheric ozone measurements between SABER and MSX UVISI.
J.-H. Yee, R. J. Vervack, E. R. Talaat and J. M. Russell III

A - 15 **14:30:14:45** Retrieval of volume emission rates from SABER infrared limb radiance measurements.
Marty Mlynczak, F. J. Martin-Torres, C. J. Mertens, J. Winick, R. Picard, P. Wintersteiner, L. Gordley, M. Lopez-Puertas, J. M. Russell III

A - 16 **14:45:15:00** NO 5.3 micron radiation interpretation.
J.-H. Yee, E. R. Talaat, M. F. Morgan, P. K. Swaminathan, R. Sharma, J. Duff and H. Dothe

A - 17 **15:00:15:15** South pole meteor radar status.
J. Avery, S. Avery, S. Palo

A - 18 **15:15:15:30** The utility of NO airglows for remote sensing of thermospheric atomic oxygen or temperature.
J.-H. Yee, E. R. Talaat, M. F. Morgan, S. Bailey and J. M. Russell III

A - 19 **15:30:15:45** New capabilities for Arecibo measurements of temperature, density and winds.
Sixto Gonzalez

15:45:16:00 Break

Session B: Basic Structures and Variability I

B - 01 **16:00:16:15** Neutral wind results from TIMED Doppler interferometer.
Q. Wu, T. L. Killeen, S. C. Solomon, W. R. Skinner, D. A. Ortland, R. J. Niciejewski, D. A. Gell, R. M. Johnson, J. F. Kafkalidis, R. D. Gablehouse

- B - 02 **16:15:16:30** Ozone and temperature variability from preliminary SABER data.
A. K. Smith and D. R. Marsh
- B - 03 **16:30:16:45** Correlation coefficients between temperature and ozone in the upper stratosphere and the mesosphere derived from SABER measurements.
Xun Zhu, J.-H. Yee, E. R. Talaat and J. M. Russell III
- B - 04 **16:45:17:00** Initial Na lidar mesopause region D(Na), T, U, V observations and MLT dynamics studies with synergistic SABER and TIDI products.
C. Y. She, B. P. Williams, D. A. Krueger
- B - 05 **17:00:17:15** Mesospheric ozone and temperature response to solar rotational forcing.
E. R. Talaat, J.-H. Yee, X. Zhu and J. M. Russell III
- B - 06 **17:15:17:30** Observations of the O₂ atmospheric band nightglow.
Stan Solomon, Jason Craig, Dave Gell, Julie Kafkalidis, Tim Killeen,
Rick Niciejewski, Dave Ortland, Wib Skinner, and Qian Wu
- B - 07 **17:30:17:45** O/N₂ Observations: Storm and Quiet Times.
Paxton, L. J., Crowley, G., Zhang, Y., Morrison, D., Wolven, B., Christensen, A., and the
GUVI Science Team
- B - 08 **17:45:18:00** Seasonal variation of thermospheric composition as measured by
TIMED/GUVI.
G. Crowley, L. J. Paxton, A. Christensen, D. Morrison, Y. Zhang, Y. Kil, B. Wolven, D.
Strickland, J. Craven, R. Meier, P. Straus, R. Walterscheid, C-I. Meng, C. Swenson, S. Avery
- B - 09 **18:00:18:15** GUVI nighttime observations of the equatorial and mid-latitude
ionosphere.
P. R. Straus, L. J. Paxton, G. Crowley, S. Henderson, Hyosub Kil, D. Morrison, C. Swenson,
A. B. Christensen
- B - 10 **18:15:18:30** Comparison of TIMED/GUVI inferred nighttime electron density with
ionospheric observations and models.
E. R. Talaat, R. DeMajistre, L. Paxton, J.-H. Yee, L. P. Goncharenko, G. Crowley, S. M. I.
Azeem, H. Kil, B. Shpynev, Q. Zhou, D. Morrison, B. Wolven, Y. Zhang and A. Christensen

18:30 Adjourned

**TIMED Science Working Group Meeting
Science Presentation**

Wednesday 02-12-03

Session B: Basic Structures and Variability II

B - 11 **09:00-09:15** Preliminary comparisons of migrating tides between SABER measurements and the JHU/APL tidal model. I: Derivation of zonal mean and tidal fields from the measurements.

Xun Zhu, J.-H. Yee, E. R. Talaat and J. M. Russell III

B - 12 **09:15-09:30** Preliminary comparisons of migrating tides between SABER measurements and the JHU/APL tidal model. II: Effect of zonal mean fields on tidal amplitudes in the mesosphere.

Xun Zhu, J.-H. Yee, E. R. Talaat and J. M. Russell III

B - 13 **09:30-09:45** Interannual and subseasonal variability of the diurnal tide.

Ruth Lieberman and Dennis Riggan

B - 14 **09:45-10:00** A preliminary investigation of the diurnal tide during April 2002.

M. E. Hagan, J. Oberheide, G. Lu, R. G. Roble, J. M. Russell III, M. G. Mlynczak, and C. J. Mertens

B - 15 **10:00-10:15** Nonmigrating tides as measured by the SABER instrument on TIMED during April-May, 2002.

Forbes, J.M., Russell, J., Zhang, X., Miyahara, S., Palo, S., Miyoshi, Y., Mlynczak, M., Mertens, C.J., and R. Garcia

B - 16 **10:15-10:30** Non-migrating tides, with zonally symmetric component, generated in the mesosphere.

H. G. Mayr, J. G. Mengel, E. R. Talaat, H. S. Porter, C. O. Hines

10:30-11:45 Break

Session B: Basic Structures and Variability III

B - 17 **10:45-11:00** Studies of planetary waves in the middle and upper atmosphere.

E. R. Talaat, J.-H. Yee and J. M. Russell III

B - 18 **11:00-11:15** Characteristics of a 6-8 day planetary wave during April 2002.

S. E. Palo, J. Russell, N. J. Mitchell, J. M. Forbes, X. Zhang, M. Mlynczak, C. J. Merten, and R. Garcia

B - 19 **11:15-11:30** Modeling study of planetary waves in the mesosphere lower thermosphere (MLT).

J. G. Mengel, H. G. Mayr, D. Drob, H. S. Porte, C. O. Hines

B - 20 **11:30-11:45** The relative impacts of high-energy solar and magnetospheric particles during the 15-24 April 2002 storm interval.

Xiaohua Fang

B - 21 **11:45-12:00** Space weather effects of the April 15-23 2002 geomagnetic storm.
Geoff Crowley, L. J. Paxton, P. Straus, A. Christensen, D. Morrison, B. Wolven, H. Kil, Y. Zhang, L. Goncharenko, J. Makela, Y. Sahai, O. de la Beaujardiere, C. Meng, J. Craven, D. Strickland, C. Swenson, R. Walterscheid, R. Meier, S. Avery

B - 22 **12:00-12:15** Observations of April 2002 events by incoherent scatter radars.
Larisa P. Goncharenko

B - 23 **12:15-12:30** Global model/data comparisons for April 2002 storm.
Larisa P. Goncharenko

12:30-14:00 Lunch

Session B: Basic Structures and Variability IV

B - 24 **14:00-14:15** Composition change in the lower thermosphere over Alaska from TIMED ground based and GUVI observations.
J. H. Hecht, D. J. Strickland, M. G. Conde, G. R. Swenson, D. Morrison

B - 25 **14:15-14:30** Ground-based auroral measurements at Sondrestromfjord during GUVI observations of the O/N2 ratio over this region.
G. Sivjee

B - 26 **14:30-14:45** Causes of increases in mid latitude NO density during magnetic storms.
P. G. Richards

B - 27 **14:45-15:00** Wind measurements during the April 2002 period.
Larisa P. Goncharenko

B - 28 **15:00-15:15** Mesospheric airglows and HF AGW studies.
Gary Swenson, Alan Liu, Feng Li, and Jing Tang

B - 29 **15:15-15:30** The Morphology of Equatorial Plasma Density Depletions Observed by GUVI.
Kil, H., Paxton, L. J., Su, S., Wolven, B., Zhang, Y., Morrison, D., Christensen, A., and the GUVI Science Team

B - 30 **15:30-15:45** Signatures of rocket and shuttle exhaust in SABER radiance data.
Siskind, D. E., Stevens, M. H., Kochenash, A. J., Russell, J. M. III, and Mylnczak, M. G.

15:45-16:00 Break

Session C: Energy Inputs/Outputs

- C - 01 **16:00-16:15** Model calculations of solar EUV effects on the atmosphere.
Stan Solomon, Ray Roble, Liyang Qian, Jason Craig, Tom Woods, Frank Eparvier, and Scott Bailey
- C - 02 **16:15-16:30** Comparison of TIMED-GUVI derived images of auroral characteristic energy with ground-based Doppler temperature sky maps derived from the 557.7-nm optical emission.
Mark G. Conde, Matt Krynicki, and Dirk Lummerzheim
- C - 03 **16:30-16:45** Response of electron energy flux and characteristic energy in the auroral oval during the April 17-24, 2002 storm.
Y. Zhang, L. J. Paxton, D. Morrison, H. Kil, B. Wolven, C.-I. Meng, A.B. Christensen
- C - 04 **16:45-17:00** Update on the global morphology of storm-enhanced density events.
Janet U. Kozyra
- C - 05 **17:00-17:15** Update on broad-band electron precipitation during 17-20 April 2002.
Janet U. Kozyra
- C - 06 **17:15-17:30** Update on high energy, high-intensity polar rain during 17-20 April 2002.
Janet U. Kozyra
- C - 07 **17:30-17:45** Eigenmode analysis of SuperDARN ionospheric convection data during the TIMED Era.
J. B. Baker and R. A. Greenwald
- C - 08 **17:45-18:00** Energy balance in the Sun-Earth system during the solar storm events of April 2002.
Marty Mlynczak, F. J. Martin-Torres, M. Hagan, R. Roble, G. Lu, J. Winick, R. Picard, C. J. Mertens, M. Lopez-Puertas, K. Beaumont, S. Jacobson, T. Marshall, L. Gordley, L. Paxton, J. Kozyra, T. Woods, J. M. Russell III
- 18:00** Meeting Adjourned

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Confirmed TIMED SWG Attendees

1. Baker, J. B.
2. Christensen, A. B.
3. Conde, M. G.
4. Crowley, G.
5. Eparvier, F.
6. Fang, X.
7. Forbes, J. M.
8. Goncharenko, L. P.
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