

Session Program

Monday 28 August, Room A
AM 09:30-10:45 Opening Session

AM 11:00-12:45

Session 1: Tidal instrumentation

Conveners: M. Van Ruymbeke and T. Tsubokawa

- S1100, WESTERHAUS, M. and Zuern, W.,
On the use of earth tides in geodynamic research
- S1O01, EL Wahabi, A., DUCARME, B. and Van Ruymbeke, M.,
Humidity and temperature effects on LaCoste & Romberg gravimeters
- S1O02, FRANCIS, O. and Hendrickx, M.,
Calibration of the LaCoste-Romberg 906 by comparison with the superconducting gravimeter C021 in Membach (Belgium)
- S1O03, Falk, R., Harnisch, M., HARNISCH, G., Nowak, I., Richter, B. and Wolf, P.,
Calibration of the superconducting gravimeters SG103, C023, CD029 and CD030
- S1O04, RUOTSALAINEN, H.,
Modernizing the Finnish long water - tube tiltmeter.
- S1O05, TSUBOKAWA, T., Tazawa, S. and Tsuruta, S.,
New type of a half - filled water - tube tilt meter

PM 14:15-15:45

- S1O06 JAHR, T., Jentzsch, G. and Kroner, C.,
The geodynamic observatory Moxa / Germany : instrumentation and purposes
- S1O07, DATE', S., Kumagai, N., Ohshima, T., Sasaki, S. and Takao, M.,
Earth tides in a large circular electron accelerator
- S1O08, VAN RUYMBEKE, M., Beauducel, Fr. and Somerhausen, A.,
New developments of the EDAS concept dedicated to tidal monitoring

PM 16:00-17:45

Session 3: Tidal observations using space techniques

Conveners: H. Schuh and A. Sengoku

- S3100, HAAS, R.,
Tidal effects and space geodetic techniques
- S3O01, IORIO, L.,
Effects of Earth tides on the orbital elements of LAGEOS and LAGEOS II SLR satellites
- S3O02, WU, B., Peng, B., Zhu, Y. and Hsu, H.,
Love numbers determined by Satellite Laser Ranging
- S3O03, SCHMITZ-HUBSCH, H., Schuh, H. and Weber, R.,
Investigation of high-frequency tidal and non-tidal variations Of the Earth rotation parameters.
- S3O04, AOKI, S., Ozawa, T., Shibuya, K. and Masuyama, A.,
Ocean tide observed with differential GPS technique in Lützw-Holm Bay, Antarctica
- S3O05, PETROV, L.,
Determination of Love numbers h and l for long-period tides using VLBI

Tuesday 29 August, Room A

AM 09:15-10:45

Session 3: Tidal observations using space techniques (continue)

- S3O06, FURUYA, M. and Okubo, S.,
Imaging oceanic tidal loading deformation by SAR interferometry - analysis of ERS data over South Korea
- S3O07, HATANAKA, Y., Sengoku, A., Sato, T., Johnson, J., Rocken, C. and Meertens, C.,
Detection of the tidal loading signals from GPS permanent array of GSI Japan
- S3O08, Varga, P., Zavoti, J., GROTEN, E. and Arfa-Kaboodvand, K.,
Tidal observations derived from GPS based length of day and polar motion data

- S3O09, SHIRAI, T. and Fukushima, T.,
The detection of free core nutation
- S3O10, Molodensky, S.M. and GROTEN, E.,
On the upper bound of the liquid core viscosity
- AM 11:00-12:45 (105 min)**
- Session 7: Superconducting gravimetry**
Conveners: D. Crossley and Y. Imanishi
- S7I00, MEURERS, B.,
Superconducting gravimetry in geophysical research today
- S7O01, DUCARME, B., Sun, H.P., Casula, G., Crossley, D., Francis, O., Harnisch, M. & G.,
Hinderer, J., Imanishi, Y., Merriam, J., Meurers, B., Neumeier, J., Richter, B., Sato, T.,
Takemoto, S., Van Dam, T. and Virtanen, H.,
Tidal gravity results from GGP network in connection with tidal loading
and Earth response
- S7O02, NEUMEYER, J., Brinton, E., Fourie, P., Ritschel, B., Dittfeld, H.-J. and Pflug, H.,
Installation and first results of the dual sphere SG at the South African Geodynamic
Observatory Sutherland
- S7O03, ZUERN, W., Laske, G., Widmer-Schmidrig, R., Gilbert, F. and Kleinert, S.,
Observation of low order toroidal free oscillations of the Earth with gravimeters
- S7O04, HARNISCH, M. and Harnisch, G.,
Study of long - term gravity variations based on data of the GGP cooperation
- PM 14:00-15:45**
- S7O05, IMANISHI, Y., Higashi, T. and Fukuda, Y.,
Calibration of superconducting gravimeter T011 by one month parallel observation
with absolute gravimeter FG5 #210
- S7O06, VIRTANEN, H.,
Hydrological studies at the gravity station Metsähovi in Finland
- S7O07, AMALVICT, M., Hinderer, J., Boy, J.-P. and Gegout, P.,
A 3 year comparison between a superconducting gravimeter (GWRC026)
and an absolute gravimeter (FG5 - 206) in Strasbourg (France)
- S7O08, SATO, T., Asari, K., Tamura, Y., Plag, H.-P., Digre, H., Fukuda, Y.,
Kaminuma, K. and Hamano, Y.,
Continuous gravity observation at Ny-Alesund, Svalbard, Norway with
a superconducting gravimeter CT#039
- S7O09, SUN, H.-P., Hsu, H.-T., Wang, Y., Chen, X.-D., Xu, J.-Q., Hao, X.-H. and Zhang, W.-M.,
Determination of the new tidal parameters obtained with superconducting
gravimeter at Wuhan/China
- S7O10, RICHTER, B., Zerbini, S., Negusini, M., Simon, D., Romagnoli, C. and Domenichini, F.,
Height and gravity variations by continuous GPS, gravity and
environmental parameter observations in the Southern Po Plain (Medicina, Italy)
- PM 16:00-17:30**
- S7O11, TAMURA, Y., Sato, T., Aoyama, Y., Matsumoto, K. and Asari, K.,
Free core resonance parameters obtained from gravity tide observations
at Esashi Earth Tides Station
- S7O12, KRONER, C.,
Hydrological effects in the gravity data of the geodynamic observatory Moxa
- S7O13, MANSINHA, L. and Hayes, T.,
A search for the gravitational wave from earthquakes
- S7O14, SMYLIE, D.E., Francis, O. and Merriam, J. B.,
Beyond tides - determination of core properties from
superconducting gravimeter observations
- S7O15, CROSSLEY, D., Hinderer, J. and Amalvict, M.,
A spectral comparison of absolute and superconducting gravimeter data

PM 17:30-19:00, Room B

Poster Core Time (Sessions 1, 3, 4, 6, 7)

Session 1:

- S1P01, DOREYE, N., Klein, G., Celli, G. and Harpes, P.,
WALLACE: from the integrated data acquisition system to the database, the full remote control and management of the Walferdange Underground Laboratory
- S1P02, IMANISHI, Y.,
Development of a high-rate and high-resolution data acquisition system based on a real-time operating system
- S1P03, OHYA, F., Teraishi, M., Furuzawa, T. and Sonoda, Y.,
Measurement of tidal tilt with half-filled type water-tube tiltmeter
- S1P04, VAN RUYMBEKE, M., Ducarme, B. and Somerhausen, A.,
Determination of the scale factor of the tidal parameters at the Brussels station

Session 3:

- S3P01, RICHTER, B., Schwahn, W., Simon, D. and Falk, R.,
Proposal for a gravity network in Europe to verify observations from satellite missions
- S3P02, HATANAKA, Y., Sengoku, A. and Sato, T.,
GPS permanent array as a tool for measuring tidal signals

Session 4:

- S4P01, MATHEWS, P.M.,
Love numbers and gravimetric factor for diurnal tides

Session 6:

- S6P01, DUCARME, B. and Venedikov, A.P.,
Special analysis of long tidal series of cryogenic gravimeters
- S6P02, MORII, W.,
A new method of spectral analysis based on the technique of the AM receiver

Session 7:

- S7P01, VAN RUYMBEKE, M., Somerhausen, A. and Mansinha, L.,
Meteorological effects observed in Europe during the eclipse of August 11, 1999
- S7P02, MANSINHA, L., Ducarme, B., Hinderer, J., Meurers, B. and Van Ruymbeke, M.,
Gravitational shielding observations in Europe during the eclipse of 1999 August 11
- S7P03, RICHTER, B., Brinton, E.W., Reineman, R. and Warburton, R.J.,
Superconducting gravimeters for remote deployment and array measurements
- S7P04, WARBURTON, R.J., Lee, T.-C., Damiata, B., Jentzsch, G., Van Dam, T., Francis, O. and d'Oreye, N. and Richter, B.,
Applications for arrays of superconducting gravimeters
- S7P05, MEURERS, B.,
Tidal and non-tidal gravity variations in Vienna - a five years' SG record
- S7P06, NAWA, K., Suda, N., Fukao, Y. and Sato, T.,
Observation of the Earth's background free oscillations: comparison of superconducting gravimeter, LaCoste Romberg Gravimeters and STS-1V seismometers
- S7P07, KRONER, C., Jahr, Th. and Jentzsch, G.,
Comparison of data sets recorded with the dual sphere superconducting gravimeter CD 034 at the Geodynamic Observatory Moxa
- S7P08, OGASAWARA, S., Higashi, T., Fukuda Y. and Takemoto, S.,
Calibration of a superconducting gravimeter with an absolute gravimeter FG-5 in Kyoto
- S7P09, RITSCHHEL, B., Neuneyer, J., Hönow, B., Dittfeld, H.-J. and Pflug, H.,
Sutherland SG data acquisition and multi media monitoring and information system
- S7P10, AOYAMA, Y., Sato, T., Fukuda, Y. and Ooe, M.,
Earth's gravity response to the Chandler Wobble
- S7P11, MCQUEEN, H., Sato, T., Tamura, Y., Asari, K. and Lambeck, K.,
Instrumental drift and site stability at Canberra Gravity Station
- S7P12, AMALVICT, M., McQueen, H. and Govind, R.,
Absolute gravity measurements and calibration of SG CT #31 at Canberra, 1999-2000
- S7P13, MERRIAM, J.B., Pagiatakis, S. and Liard, J.,
Reference level stability of the Canadian superconducting gravimeter installation
- S7P14, FUKUZAKI, Y., Aoki, S., Yamada A., Tamura, Y., Sato, T. and Shibuya, K.,
Coherent variation between SG and GPS in Syowa station, Antarctica

Wednesday 30 August, Room A

AM 09:15-10:45

Session 6: Data processing

Conveners: A. Venedikov and Y. Tamura

- S6I00, ISHIGURO, M.,
Tidal data analysis and information criteria
- S6O01, VENEDIKOV, A.P., Arnosó, J. and Vieira, R.,
Program VAV/2000 for tidal analysis of unevenly spaced data with irregular drift and colored noise
- S7O02 DITTFELD, H.-J.,
About the validity of environmental parameters in gravimetric tidal analyses
- S6O03, HSU, H.T., Liu, L.T. and Sun, H.P.,
Wavelet-characterized approach to harmonic analysis of tide gravity observations

AM 11:00-12:45

Session 4: Modeling of solid earth tides and related problems

Conveners: P.M. Mathews and S. Okubo

- S4I00, SCHERNECK, H.-G.,
Solid Earth model with liquid core and ocean loading in application to ground water tides in deep wells
- S4O01, FUKUSHIMA, T.,
Longitude origins on a moving equator
- S4O02, KOPAEV, A. and Ducarme, B.,
Large-scale tide gravity anomalies: modelling and analysis of observations
- S4O03, MATHEWS, P.M.,
Consistent modeling of effects of the tidal potential
- S4O04, Tsuji, D. and OKUBO, S.,
Complex green's function for diurnal/semidiurnal loadings

Thursday 31 August, Room A

AM 09:15-10:45

Session 2: Results of ground based observations

Conveners: G. Jentzsch and S. Nakao

- S2I00, AGNEW, D.C.,
Nominal and actual precision and accuracy in earth-tide observations
- S2O01, ARNOSO, J., Vieira, R., Velez, E.J., Van Ruymbeke, M. and Venedikov, A.P.,
Analysis of tidal and long term variations of three gravity meters installed at station Cueva de Los Verdes (Lanzarote, Spain)
- S2O02, ISHII, H., Yamauchi, T., Matsumoto, S., Hirata, Y., Nakao, S., Sano, O. and Hirano, T.,
Three-dimensional strain and stress continuous observation in Kamaishi mine in the northeast Japan
- S2O03, BAKER, T.F. and Bos, M.,
Tidal gravity observations and ocean tide models
- S2O04, NAKAO, S., Hirata, Y., Jentzsch, G., Ramatshi, M. and Araya, A.,
Comparative observation of pendulum type tiltmeters in Nokogiriyama observatory, Japan

AM 11:00-12:30

- S2O05, JENTZSCH, G., Zadro, M., Braitenberg, C., Latynina, L.A., Verbitskiy, T.Z., and Tichomirov, A.V.,
Relations between different geodynamic parameters and seismicity in areas of high and low seismic hazards
- S2O06, DAL MORE, G., Ebblin, C. and Zadro, M.,
The FEM in the interpretation of tilt-strainmeter observations in a cave; air pressure loading effects
- S2O07, BRAITENBERG, C. and Zadro, M.,
Modeling the hydrologic induced signal in geodetic measurements
- S2O08 RYDELEK, P.A., Eguchi, T., Watabe, I., Iwasaki, S., Fujinawa, Y. and Fujita, E.,
Tidal analysis of data from pressure sensors located at the Sagami Trough, Central Japan

AM 12:30-13:00

Session 8: Tidal studies in tectonic active regions

Conveners: R. Vieira and K. Fujimori

S8I00, KASAHARA, J. and Sato, T.,

An implication on the relation among tides, hydrothermal activity and volcanic earthquakes observed by ocean bottom seismometers

PM 14:00-16:00

S8O01, FUJIOKA, K., Kobayashi, K., Kato, K., Aoki, M., Mitsuzawa, K., Kinoshita, M. and Nishizawa, A.,

Tide-related variability of hydrothermal activity at the TAG hydrothermal mound, Mid - Atlantic Ridge

S8O02, AOKI, Y. and Kato, T.,

Tidal triggering of seismic swarms off the Izu Peninsula, Japan

S8O03, OMURA, M., Otsuka, S., Fujimori, K. and Yamamoto, T.,

Tidal strains observed in the Rokko-Otsuki fault, Kobe, Japan, before occurrence of the 1995 Hyogoken-Nanbu Earthquake

S8O04, WESTERHAUS, M.,

No clear evidence for temporal tidal tilt modification prior to large earthquakes and volcanic eruptions

S8O05, SUGIHARA, M., Ishido, T., Nishi, Y. and Tosha, T.,

Geoelectric tides observed at Ohgiri geothermal field, Japan

S8O06, D'OREYE, N. and Fonseca, J.,

About the use of long- and short-base tiltmeters for active zone monitoring : water-tube test in Walferdange and electronic spirit levels on Fogo Volcano (Cape Verde)

S8O07, ARNOSO, J., Vieira, R., Velez, E.J., Cai, W.-X., Tan, S.-L., Jun, J. and Venedikov, A.P.,

Monitoring tidal and nontidal tilt variations in Lanzarote Island (Spain)

S8O08, HEKI, K.,

On the seasonal change in the strain build - up in the northeast Japan

PM 16:15-17:30

Session 5: Atmospheric and oceanic loading effects

Conveners: O. Francis and A. Mukai

S5I00, SCHENEWERK, M.S., Marshall, J., Dillinger, W. and Weston, N.,

Vertical ocean - loading deformations derived from a global GPS network

S5O01, BOGUSZ, J.,

Detection of tidal effect in the air pressure changes

S5O02, AOYAMA, Y. and Naito, I.,

Atmospheric wind and pressure variations have complementarily maintained the observed Chandler wobble

PM 17:30-19:30, Room B

Poster Core Time (Sessions 2, 5, 8, 9)

Session 2:

S2P01, KOPAEV, A., Milyukov, V. and Yushkin, V.,

Tide gravity and strain observations near the Mt. Elbrus, Central Caucasus

S2P02, DUCARME, B. and Van Ruymbeke, M.,

Tidal gravity observations along the Atlantic coast of France with LCR G906

S2P03, Berrino, G. and RICCARDI, U.,

Gravity tide at Mt. Vesuvius (Southern Italy): correlations with different geophysical data and volcanological implications

S2P04, Bos, M. and BAKER, T.F.,

Tidal gravity observations and modelling in the near coastal zone

S2P05, YOSHIKAWA, S. and Yamamoto, T.,

Strain measurement by double coaxial borehole strainmeters at Odawara, Japan

S2P06, YAMAMOTO, T., Kamigaichi, O., Naito, H., Yoshikawa, S. and Ishikawa, Y.,

Strain observations at Tsuruga and Imazu stations, Northern Kinki District, Japan

S2P07, NAGAO, T., Kudo, T. and Aoyama, Y.,

Tidal components detected in long span telluric current data

S2P08, ASAI, Y., Aoki, H., Tanaka, T., Kitagawa, Y. and Azuma, S.,

Comparison of tidal changes of ground strain, tilt and groundwater observed in boreholes

- S2P09, ONOUE, K., Mukai, A. and Takemoto, S.,
Tidal strain enhancement observed with extensometers in Donzurubo Observatory,
Nara, Japan
- S2P10, ISHII, H., Yamauchi, T., Matsumoto, S., Hirata, Y. and Nakao, S.,
Multi-component borehole instrument developed by E.R.I. and some interesting results
- S2P11, NAKAI, S., Sugihara, M. and Tamura, Y.,
Evaluation of tidal and non-tidal gravity change from continuous readings
of Scintrex CG-3M gravimeters
- S2P12, DITTFELD, H.-J.,
Tidal results of neighboring stations ("Part III" of an old investigation)
- S2P13, Ishii, H., JENTZSCH, G., Nakao, S., Ramatschi, M. and Graupner, S.,
Observatory Nokogiriyama/Japan: comparison of different tiltmeters

Session 5:

- S5P01, BOGUSZ, J. and Chojnicki, T.,
Seasonal changes in atmospheric tidal waves
- S5P02, AGNEW, D.C.,
Map projections to show the effects of surface loading
- S5P03, NIWA, Y. and Hibiya, T.,
Spatial distribution of internal tides in the North Pacific predicted
using a three-dimensional numerical model
- S5P04, MUKAI, A., Takemoto, S., Higashi, T. and Fukuda, Y.,
Effect of viscosity in oceanic tidal loadings estimated from gravity observations
in Kyoto and Bandung.
- S5P05, BOY, J.-P., Gégout, P. and Hinderer, J.,
Gravity variations and global atmospheric pressure loading

Session 8:

- S8P01, VAN RUYMBEKE, M., Somerhausen, A., Ducarme, B., Vieira, R., Arnos, J. and Velez, E.,
Projects of the Royal Observatory of Belgium (ROB) at the Lanzarote laboratories
- S8P02, MUKAI, A. and Fujimori, K.,
Elastic constants in fault zone determined using strain changes obtained
at an 800M borehole
- S8P03, MATSUMOTO, N. and Roeloffs, E.,
Time-varying hydraulic and mechanical properties estimated by responses
of ground-water level to Earth tides
- S8P04, HARADA, M., Furuzawa, T., Ohya, F., Morii, W. and Yamada, M.,
Measurement of Earth tidal strain at Amagase Observatory
- S8P05, YAMAMURA, K., Sano, O., Utada, H., Fukao, Y., Nakao, S. and Takei, Y.,
Long-term observation of tidal variation of in situ seismic velocity and attenuation
- S8P06 VIEIRA, R., Weixin, C., Arnos, J., Vélez, E., Xiling, T. and Jun, J.,
Tidal and nontidal observations in a volcanic active region, review of the cooperation
between Spain and P. R. China in the Geodynamics Laboratory of Lanzarote

Session 9:

- S9P01, YANG, Z.,
Non-tidal term in secular variation of Earth rotation
- S9P02, TAKANEZAWA, T., Matsumoto, K., Ooe, M. and Naito, I.,
Effects of the long-period ocean tide on Earth rotation, gravity and crustal deformation
predicted by global barotropic model - periods from Mtm to Sa -
- S9P03, TAKANEZAWA, T., Matsumoto, K., Ooe, M. and Naito, I.,
Non-equilibrium characteristics of the long-period ocean tide in dynamics and energetics
- S9P04, IWATA, T., Takahashi, M., Namiki, N., Hanada, H., Kawano, N., Heki, K.,
Matsumoto, K. and Takano, T.,
Mission instruments for lunar gravity measurements using SELENE sub-satellites
- S9P05, MANABE, S.,
Possibility of astrometric detection of stellar motions due to the tidal effects of the nearby galaxies
- S9P06, TAKANEZAWA, T., Hanada, H., Kono, Y., Tsuruta, S., Tsubokawa, T.,
Kawachi, M., Funazaki, K. and ILOM research group,
Possibility of detecting the lunar tidal signal by ILOM (In-situ Lunar
orientation measurement) telescope

- S9P07, HEKI, K., Hanada, H., Iwata, T., Ooe, M., Matsumoto, K., Araki, H.
and ILOM research group,
In-situ measurement of the physical libration and tidal deformation of the Moon
- S9P08, YANG, Z., Zhu, Y. and Shum, C.K.,
The possible effect on rotational evolution of Venus due to
the Venusian non-zonal gravitational field
- S9P09, PING, J.-S., Kono, Y., Kawano, N. and Hanada, H.,
How S/C tip-off and free nutation effect doppler tracking in SELENE

Friday 1 September, Room A

AM 09:15-10:30 (75 min)

Session 5: Atmospheric and oceanic loading effects (continue)

- S5O04, MATSUMOTO, K., Sato, T., Takanezawa, T. and Ooe, M.,
GOTIC2: a software for computation of oceanic tidal loading effect
- S5O05, VAN DAM, T., Wahr, J., Milly, C., Samakin, A. and Francis, O.,
Hydrological loading and gravity observations
- S5O06, RAY, R.D.,
The problematic \square_1 tide
- S5O07, RICHTER, B., Simon, D., Zerbini, S. and Negusini, M.,
Seasonal vertical density variation in the atmosphere and their consequences
for gravity and GPS measurements
- S5O08, FUJIMOTO, H., Mochizuki, M., Mitsuzawa, K., Matsumoto, K. and Sato, T.,
Long-term observation of ocean bottom pressure across the spreading axis of
the southern East Pacific Rise

AM 10:30-11:00 (30 min)

Session 9: Tides on planet

Conveners: C.K. Shum and H. Hanada

- S9I00, YODER, C.F.,
Detection of tides on planets and satellites using orbiting spacecraft and landers
- AM 11:15-PM 13:15**
- S9O01, YANG, Z.,
Atmospheric circulation of Venus and its rotation evolution
- S9O02, WU, X., Yoaz, B.-S., Folkner, W., Williams, J. and Zumberge, J.,
Europa's tides and possible hidden liquid ocean
- S9O03, ARAKI, H.,
Focal processes of deep moonquakes
- S9O04, ABE, M., Ooe, M.,
Tidal history of the Earth-Moon dynamical system
- S9O05, HANADA, H., Kawano, N., Hosokawa, M. and Imae, M.,
Possibility of observations of rotational fluctuations and tidal deformations
of planets by the inverse VLBI method
- S9O06, SHUM, C.K., Yu, N. and Morris, C.,
Accuracy assessment of contemporary Earth ocean tide models

PM 14:30-15:00 Closing Session (30 min)