

**Programme: ILRS Workshop on SLR Tracking of GNSS Constellations  
50 years of Satellite Geodesy & Geodynamics**

Sept. 13, Sunday afternoon: Registration, icebreaker (offered by the Mayor of Metsovo) and program committee meeting

Sept. 14, Monday: **08:30 - 12:30 Registration and opening ceremonies**

K. Tzafeas, Mayor of Metsovo  
Prof. K. Moutzouris, Rector, National Technical University of Athens  
Prof. R. Korakitis, Vice President, School of Rural and Surveying Engineering  
Dr. Mike Pearlman, Director, International Laser Ranging Service  
I. Kolovos, Director, Hellenic Army Mapping Service  
Prof. (Emeritus) D. Balodimos, National Technical University of Athens  
Prof. (Emeritus) A. M. Balodimou, National Technical University of Athens  
Prof. (Emeritus) G. Veis, National Technical University of Athens

**Chair: A.M.Balodimou, H.Billiris, K.Papazissi**

**12:30 - 14:00 Lunch Break**

**14:00 - 15:30 Impact of SLR Tracking on GNSS Constellations** (Position papers)  
PP 01:GPS, T. Springer

PP02: GLONASS, V. Vasiliev, V. Glotov

PP03: GALILEO, T. Springer

**Chair: Mike Pearlman**

**15:30 - 16:00 Coffee Break**

**16:00 - 17:30 Impact of SLR Tracking on GNSS Constellations** (Position papers)  
PP04: COMPASS, X. Wang

PP05: QZSS, S. Nakamura, M. Sawabe

Status of SLR and the ILRS, M. Pearlman

**Chair: E.C.Pavlis**

**19:45 Meeting at Diaselo**

**20:00 Dinner**

Sept. 15, Tuesday: **09:30 - 10:30 Science from SLR and GNSS – A**

Processing large volume GPS data via Bernese V4.2 software  
C. Mitsakaki, A. Marinou, X. Papanikolaou, K. Papazissi

InSAR mapping of surface deformation on Lefkada island during 1992-2006 and its relation to seismic activity  
A. Ganas, V. Korakas

Crustal Deformation from GPS measurements at the Ionian Sea: Preliminary Results

D. Anastasiou, D. Paradissis, A. Ganas, A. Marinou, K. Papazissi, G. Drakatos, K. Makropoulos

**Chair: D. Paradissis**

**10:30 - 11:00 Coffee Break**

**11:00 - 12:30 Science from SLR and GNSS – B**

Accurate Geoid Undulation Determination along a 120 km Long Railway Traverse in Central Greece: Preliminary Results and Validation

V. Gikas, A. Androulaki, A. Bimis, V. Zacharis, K. Fragos

The Eastern Mediterranean Altimeter Calibration Network – eMACnet

E. C. Pavlis, K. Evans, P. Milas, B. A. Massinas, D. Paradissis

The ASI/CGS contribution to the ITRF maintenance: the ILRSA solution

C. Sciarretta, V. Luceri, G. Bianco

Contribution of Future SLR Networks to the Development of ITRF

E. C. Pavlis, M. Kuzmicz-Cieslak, P. Hinkey

The GPS-SLR bias: dynamics, attitude and current experiments

M. Ziebart, T. Springer

**Chair: A. Ganas**

**12:30 - 14:00 Lunch break**

**14:00 - 15:45 Science from SLR and GNSS – C**

Apparent Geocenter Oscillations in GNSS Solutions Caused by the Ionospheric Effect of Second Order

K. Palamartchuk

Adaptive Likelihood Estimator for Forecasting Ionospheric Component on Synthetic Aperture Radar Interferometry (InSAR) Technique

B. A. Massinas, N. Doulamis, D. Paradissis

A Tapped Delay Line Neural Network for Modeling Ionospheric Disturbances Behavior

A. Doulamis, B. A. Massinas, D. Paradissis

Advanced Signal Processing Techniques for Inverse Synthetic Aperture Radar (ISAR) Imaging

A. Karakassiliotis, G. Bouladakis, G. Kalognomos, B. A. Massinas, P. Frangos

Summary of recent and current research on ISAR Signal Processing at the NTUA, Greece

P. Frangos

Deformation of the southern Aegean from continuous Global Positioning System measurements

K. Palamartchuk, M. A. Floyd, P. England, B. Parsons, J.-M. Nocquet, C. Raptakis, D. Paradissis, H. Billiris, J. Galanis

A relation between actual and normal Ricci curvature of the equipotential surfaces of the Earth's gravity field along GOCE track

G. Manoussakis and D. Paradissis

**Chair: K. Katsampalos**

**15:45 - 16:15 Coffee Break**

**16:15 - 18:00 Science from SLR and GNSS – D**

Hellenic Terrestrial Reference System 2007 (HTRS07): A regional realization of ETRS89 over Greece in support of HEPOS  
K. Katsampalos, C. Kotsakis, M. Gianniou

Discussion (Datums)

**Chair: V. Gikas**

**19:00 - 20:00 ILRS Data Formats & Procedures WG**

Sept. 16,  
Wednesday:

**Daily Excursion**

09:30 Departure from Metsovo

10:30 – 12:00 Visit at Archeological Site of Dodoni

13:00 – 16:00 Visit at the Lake of Ioannina

16:30 – 18:30 Visit at the Town of Ioannina

19:00 Arrival at Metsovo

20:00 Gala dinner and live concert music at Diasselo (offered by the Organizing Committee)

Sept. 17,  
Thursday:

**Position paper presentation and discussion**

**08:30 - 12:30 PP 06:** Scientific impact of SLR tracking of GNSS Constellations  
E. C. Pavlis

What is the benefit of tracking GNSS satellites with SLR?  
D. Thaller, R. Dach, G. Beutler, M. Mareyen, B. Richter

An assessment of the value of SLR observations to GNSS  
R. Govind

Collection and processing in TSNIMASH of GLONASS spacecraft ranging data obtained by Russian and global SLR network stations  
V. D. Glotov, N. N. Parkhomenko

SLR Observations of COMPASS – G2  
Y. Fumin, Z. Zhongping, C. Juping, C. Wanzhen, Z. Haifeng, W. Zhibo, M. Wendong

ESOC SLR Activities  
T. A. Springer, C. Flohrer, M. Otten, D. Svehla, J. Dow

Two approaches to build time series of EOP from SLR data  
F. Deleflie, D. Coulot, B. de Saint Jean, J.-M. Lemoine, P. Exertier, O. Laurain

**(10:15 - 10:45 Coffee Break)**

**Chair: J. Ries**

**12:30 - 14:00 Lunch break**

**12:30 – 13:30 ILRS Missions WG meeting (working lunch)**

**14:00 - 18:00 PP 08:** Operational issues

G. Appleby

Scheduling lessons learned from Lunar Laser Ranging

R Ricklefs

Operational 'Best Practices' for the NASA laser systems

H Donovan

Possible strategy for laser tracking the future GPS constellation

S Wetzel

Potential Scheduling Applications to the Tracking of the GNSS Constellations

C Clarke

GOCE orbit predictions for SLR tracking

A. Jäggi, H. Bock, W. Gurtner, R. Floberghagen

Towards 2kHz new SLR system in Metsähovi

K. Arsov, A. Raja-Halli, J. Näränen, M. Poutanen

Routine kHz tracking at Changchun and Shanghai

Z Zhongping, Y Fumin, *et al*

Navigation of the RadioAstron Mission

R. M. Bebenin, Y. N. Ponomarev, V. A. Stepanyants

**(15:45 - 16:15 Coffee Break)**

**Chair: M. Pearlman**

Sept. 18, Friday:

**Position paper presentation and discussion**

**08:30 - 12:30 PP 07:** Technology Challenges

M. Pearlman

Uncoated Cubes for GNSS Satellites

D. Arnold

Proposed Single Open Reflector for the GALILEO Mission

R. Neubert, J. Neubert, J. Munder, L. Grunwaldt

Target signature effects on laser ranging accuracy for the GIOVE satellites

T. Otsubo, P. Gibbs, G. M. Appleby

Relative signal strengths from SLR tracking of the different retroreflector targets onboard HEO satellites using the fullrate data set

M. Wilkinson, G. Appleby

Creation of the new industry-standard space test of laser Retroreflectors for GNSS constellations

S. Dell'Agnello, G. O. Delle Monache, D. G. Currie, R. Vittori, C. Cantone, M. Garattini, A. Boni, M. Martini, C. Lops, N. Intaglietta, R. Tauraso, D. A. Arnold, G. Bianco, M. R. Pearlman, S. Zerbini, M. Maiello, S. Berardi, L. Porcelli

Some conditions necessary to achieve submillimeter accuracy in SLR

M. A. Sadovnikov

HEO and Moon tracking at Grasse (MeO).  
JM Torre, M Aimar, D Féraudy, M Furia, H Mariey.

First T2L2 results and time transfers  
P Exertier, E Samain

**(10:15 - 10:45 Coffee Break)**

***Chair: G. Appleby***

**12:30 - 14:00 Lunch break**

**14:00 - 16:30 Panel discussion with all the PP leaders and a summary and  
action item identification - Closing remarks**

***Chair: E. C. Pavlis***

Sept. 19,  
Saturday:

**09:00 - 12:00 ILRS Analysis Working Group meeting**