

Oral Sessions

Time	Session Name	Article Number	DAY 1 - Nov 11 (Mon), 2013	Room
8:00			Start Registration	hotel lounge
9:30	Opening Kyohei Akiyama	Opening		Fuji
9:35			Fuji-Yoshida City Mayor Mr. Shigeru Horiuchi	
9:45		Welcome	NICT Dr. Mizuhiko Hosokawa	
9:55		Address	Former Director General of NAO, Dr. Yoshihide Kozai	
10:05			ILRS GB Chair, SGF UK, Dr. Graham Appleby	
10:15-10:30		Breack		
10:30	Keynote Lecture		The Impact of SLR Technology Innovations on Modern Science	Fuji
11:00			Sigma Space, John.J.Degnan	
11:30			Seafloor Geodesy - A New Challenge for Approaching Great Earthquakes around Japan Japan Coast Guard, Masayuki Fujita	
11:30	Information from WS Office		ILRS CB Michael Pearlman JAXA Shinichi Nakamura Hitotsubashi Univ. Toshimichi Otsubo	
11:45-13:15	Lunch (90 min)			
13:15	Session 1 Data management, GGOS, Geodsy Chair Daniela Thaller Mathis Blossfeld	13-0101	ICSU-World Data System, New Scientific Data Management Yasuhiro Murayama[1], Mustapha Mokrane[2], Bernard Minster[3] [1] NICT/WDS-Scientific Committee, [2] WDS-Internationao Programme Office, [3] UCSD/WDS-Scientific	Fuji-A
13:30		13-0102	Dissemination of SLR data-related products through a Virtual Observatory Florent Deleflie [1], Christophe Portmann [2], Laurent Soudarin [3], Christophe Barache [4], Jerome Berthier [1], and David Coulot [5,1] [1] GRGS/IMCCE, [2] Solussio, [3] GRGS/CLS, [4] GRGS/Paris Observatory, [5] GRGS/IGN, Univ. Paris	
13:45		13-0103	GGOS Global Space Geodesy Networks and the Role of Laser Ranging Michael Pearlman [1], Erricos Pavlis [2], Carey Noll [3], Chopo Ma [3], Scott Wetzel [4], Graham Appleby [5], Ruth Neilan [6] [1] Harvard - Smithsonian Center for Astrophysics, [2] Univ. of Maryland, [3] NASA GSFC, [4] HTSI, [5] NERC, [6] JPL/Caltech	
14:00		13-0104	NASA's Space Geodesy Project S. M. Merkowitz [1], S. Desai [2], R. S. Gross [2], L. Hilliard [1], F. G. Lemoine[1], J. L. Long [1], C. Ma [1], J. [1] NASA GSFC, [2] JPL, CalTech, [3] Univ. of Maryland, [4] Harvard-Smithsonian Center for Astrophysics	
14:15		13-0105	SLR-GNSS analysis in the framework of the ITRF2013 computation Daniela Thaller [1], Ole Roggenbuck [1], Krzysztof Sosnica [2], Peter Steigenberger [3], Maria Mareyen [1], Christian Baumann [2], Rolf Dach [2], Adrian Jäggi [2] [1] BKG, [2] AIUB, [3] Institut für Astronomische und Physikalische Geodäsie (IAPG), TU München	
14:30		13-0106	Recent Progress and Future Perspectives of the International VLBI Service for Geodesy and Astrometry Shinobu Kurihara, and many colleagues of the IVS Geospatial Information Authority of Japan	
14:45		13-0107	Deployment of SLR colocation sites with one-way RF systems and VLBI for the improvement of the Pasinkov V.V., Kovalev V.V., Fedotov A.A., Shargorodskiy V.D. Open Joint-Stock Company Research-and-Production Corporation	
15:00		13-0117	Laser ranging in Main metrological center of the Russian State service of time, frequency and the Earth rotation parameters determination I. Blinov, I.Ignatenko National Research Institute for Physical-Technical and Radio Engineering Measurements (VNIIFTRI)	
15:15-15:45	Tea Break (30 min)			
15:45	Session 2 Gravity, Earth Model, Reference Frame Chair Giuseppe Bianco Koji Matsuo	13-0108	Earth gravity field recovery using GPS, GLONASS, and SLR satellites Krzysztof Sośnica [1], Adrian Jäggi [1], Daniela Thaller [2], Ulrich Meyer [1], Christian Baumann [1], Gerhard Beutler [1], Rolf Dach [1] [1] Astronomical Institute, Univ. of Bern, [2] Bundesamt für Kartographie und Geodäsie	Fuji-A
16:00		13-0109	Temporal variations in the Earth's gravity field from multiple SLR satellites: Toward the investigation of polar ice sheet mass balance Koji Matsuo [1], Toshimichi Otsubo [2] [1] Kyoto Univ, [2] Hitotsubashi Univ	
16:15		13-0110	Low-frequency gravity change from GPS data of COSMIC and GRACE: potential enhancement from COSMIC-2's GPS and SLR data Chenway Hwang [1], Shin-Fa Lin[1,2], Yan-Ti Chen [1], Tzu-Pang Tseng [3], and B. F. Chao [4] [1] National Chiao Tung Univ., [2]National Space Organization, [3]GPS Science and Application Research Center, National Central Univ., [4]Institute of Earth Sciences, Academia Sinica,	
16:30		13-0111	Earth's low degree gravitational variations from space geodetic data V.Luceri [1], C.Sciarretta [1], G.Bianco [2] [1] e-GEOS S.p.A., Centro di Geodesia Spaziale, [2] Agenzia Spaziale Italiana, Centro di Geodesia Spaziale	
16:45		13-0112	Geophysical fluid models for atmosphere, ocean and hydrology and their impact on SLR analysis Ole Roggenbuck, Maria Mareyen BKG, Federal agency for cartography and geodesy Germany	
17:00		13-0113	Consistent estimation of Earth rotation, geometry and gravity with DGF1's multi-satellite solution Mathis Blossfeld [1], Vojtech Stefka [2], Horst Mueller [1], Michael Gerstl [1] [1] Deutsches Geodaetisches Forschungsinstitut, [2] Astronomical Institute, Academy of Sciences of the Czech Republic	
17:15		13-0114	SLR-derived terrestrial reference frame using observations to LAGEOS-1/2, Starlette, Stella, and AJISAI Krzysztof Sośnica [1], Adrian Jäggi [1], Daniela Thaller [2], Gerhard Beutler [1], Rolf Dach [1], Christian [1] Astronomical Institute, Univ. of Bern, [2] Bundesamt für Kartographie und Geodäsie	
17:30		13-0115	The Error Analysis of SHAO Terrestrial Reference Frame and EOPs Xiaoya Wang, Bing He, Bin Wu, Xiaogong Hu Shanghai Astronomical Observatory	
17:45	13-0116	JCET's Daily-updated State-of-the-art SLR-only TRF Erricos C. Pavlis, Magdalena Kuzmicz-Cieslak, Daniel König and Keith Evans GEST/Univ. of Maryland Baltimore County		
18:30-20:30	Reception			Fuji-B/C

Time	Session	Article Number	DAY 2 - Nov 12, 2013	Room
8:45	Session 3 Dara Quality and its Products, SLR Network Chair Shinichi Nakamura Florent Deleflie	13-0201	Quality of the SLR data 1983-2012 Stanislaw Schillak[1], Pawel Lejba[1], Piotr Michalek[1], Karolina Szafranek[2] [1] Space Research Centre PAS, [2] Military Univ. of Technology	Fuji-A
9:00		13-0202	Quality and possible improvements of the official ILRS products Horst Mueller, Mathis Blossfeld DGF	
9:15		13-0203	Subdaily Quality Check of Laser Ranging Data at Hitotsubashi University Toshimichi Otsubo, Mihoko Kobayashi, Shinichirou Takakura Hitotsubashi Univ.	
9:30		13-0204	Quality assessment of SLR data-related products Jean-Michel Lemoine [1], Florent Deleflie [2], Franck Reinquin [1], and David Coulot [3,2] [1] GRGS/CNES, [2] GRGS/MCCE, [3] GRGS/IGN, Univ. Paris Diderot	
9:45		13-0205	EUROLAS Data Center - Improvements of the Website for the ILRS Community Christian Schwatke DGF	
10:00		13-0206	NASA SLR operational network project overview David McCormick NASA	
10:15		13-0207	Engineering changes to the NASA SLR Network to overcome obsolescence and improve performance and Thomas Varghese NASA/ Cybioms Corporation	
10:30-11:00	Tea Break (30 min)			
11:00	Session 4 POD and its Application Chairs Erricos C Pavlis Daniel Kucharski	13-0208	Orbit Determination and Analysis for STSAT-2C Young-Rok Kim, Eunseo Park, and Hyung-Chul Lim Korea Astronomy and Space Science Institute	Fuji-A
11:15		13-0209	GNSS Satellite Orbit Validation Using Satellite Laser Ranging Oliver Montenbruck [1], Peter Steigenberger [2], Georg Kirchner [3] [1] DLR/GSOC, [2] TUM/IAPG, [3] ÖAW/IWF	
11:30		13-0210	The concept and the preliminary results of the SLR application in the problem of improving the GLONASS V.V. Pasinkov, V.D. Shargorodsky, M.A. Sadovnikov, V.V. Sumerin Russia	
11:45		13-0211	The Accuracy Verification for GPS Receiver of ZY-3 Satellite by SLR Zhao Chunmei[1], Tang Xinming [2], Wei Zhibin [1], Li Qian [1] [1]Chinese Academy of Surveying and Mapping, [2]Satellite Surveying and Mapping Application Center,	
12:00		13-0213	Multi-Static Laser Ranging to Space Debris Targets: Tests and Results Georg Kirchner [1], Franz Koidl [1], Martin Ploner [2], Pierre Lauber[2], Johann Eckl [3], Matthew Wilkinson [4], Robert Sherwood [4], Adolf Giessen [5], Martin Weigel [6] [1] Austrian Academy of Sciences, Space Research Institute, [2] AIUB, [3] SLR Station Wettzell, [4] NERC Space Geodesy Facility, [5] DLR Stuttgart, Institute for Technical Physics, [6] DLR Oberpfaffenhofen	
12:15		13-0214	Progress and Observation of Space Debris Laser Ranging at Shanghai Station Zhang Zhongping, Zhang Haifeng, Wu Zhibo, Li Pu, Wu Bin, Sun Hao, Chen Juping Shanghai Observatory, Chinese Academy of Sciences.	
12:30	13-0215	ENVISAT Spin and Attitude Determination Using SLR Georg Kirchner [1], Daniel Kucharski [2], Franz Koidl [1] [1] Austrian Academy of Sciences, Space Research Institute, [2] Korea Astronomy and Space Science		
12:45-14:45	Lunch (120 min) & WS Splinter Meeting		Reorganizing EUROLAS (13:45-14:45) WPLTN (13:45-14:45)	Sakura Fuji-A
14:45	Session 5 Laser Time Transfer Chairs Stanislaw Schillak Ivan Prochazka	13-0216	Time Transfer: Sideline or Geodetic Objective? Anja Schlicht [1], Ulrich Schreiber [2], Ivan Prochazka [3], Pierre Exertier [4] [1] Technische Universität München, [2] Observatory Wettzell, [3] Technical Univ. of Prague, [4] Observatoire de la Cote d'Azur	Fuji-A
15:00		13-0217	European Laser Time Transfer (ELT) - System delays calibration I. Prochazka [1], K. U. Schreiber [2], J. Kodet [2,1], A. Schlicht [2], J. Blazej [1] [1] Czech Technical Univ. in Prague [2] Forschungseinrichtung Satellitengeodäsie, TU Muenchen, Geodetic Observatory Wettzell.	
15:15		13-0218	European Laser Time Transfer (ELT) and Laser Safety for the ISS Ulrich Schreiber [1], Jan Kodet [1,3], Anja Schlicht [1], Ivan Prochazka [3], Johann Eckl [2], Guenther Herold [1] Geodetic Observatory Wettzell, TU Muenchen, [2] Geodetic Observatory Wettzell, BKG, [3] Czech Technical Univ. in Prague	
15:30		13-0219	Progress Report on the WLRs: Getting ready for GGOS, LLR and Time Transfer Guenther Herold [1], Johann Eckl [1], Matthias Muehlbauer [1], Andreas Leidig [2], Ulrich Schreiber [2] [1] Geodetic Observatory Wettzell, BKG, [2] Geodetic Observatory Wettzell, TU Muenchen	
15:45		13-0220	Local ties control in application of laser time transfer Jan Kodet [1,3], Ulrich Schreiber [1], Johann Eckl [2], Ivan Prochazka [3], Petr Panek [4] [1]TU München, Wettzell Observatory, [2]BKG, Wettzell Observatory, [3]Czech Technical Univ. in Prague, [4]Institute of Photonics and Electronics, Academy of Sciences of the Czech Republic	
16:00-17:00	Long Break (60 min)		Poster Presentation [Posters are posted until Thursday evening]	
17:00	session 6 Space Mission Chairs Zhang Zhongping Ludwig Grunwaldt	13-0221	Russian free-space laser communication experiment "SLS" Grechukhin I.A.[1], Grigoriev V.N. [1], Danileiko N.O. [1], Ivlev O.A. [1], Kovalev V.V. [1], Manzhelye A.I. [3], Nabokin P.I. [1], Slogoda V.V. [2], Sorokin I.V. [2], Shargorodsky V.D. [1], Shevchik A.S.[1], Sumerin V.V.[1] [1]Open Joint-Stock Company Research-and-Production Corporation "Precision Systems and Instruments", [2]Rocket and Space Corporation "Energia", [3] Mission Control Center of TSNIMASH	Fuji-A
17:15		13-0222	Laser Ranging to Nano-Satellites in LEO Orbits: Plans, Issues, Simulations Georg Kirchner [1], Ludwig Grunwaldt [2], Reinhard Neubert [2], Franz Koidl [1], Merlin Baschke [3], Zizung Yoon [3], Hauke Fiedler [4] [1] Austrian Academy of Sciences, Space Research Institute, [2] GFZ Potsdam, [3] TU Berlin, [4] DLR	
17:30		13-0223	SpinSat Mission Overview Andrew Nicholas Naval Research Laboratory	
18:00-21:00	ILRS WG Splinter Meeting		Mission WG Meeting (18:00-19:00) Data Format and Procedures WG Meeting (19:00-20:30) Transponders WG Meeting (19:00-20:30)	Fuji-A Sakura Fuji-A

Time	Session	Article Number	DAY 3 - Nov 13, 2013	Room
8:45	Session 7 SLR Technology and Synergy Chairs Ulrich Schreiber Matthew Wilkinson	13-0301	The Collocation of NGSLR with MOBLAS-7 and the Future of NASA Satellite Laser Ranging J. McGarry [1], S. Merkwitz [1], H. Donovan [2], J. Horvath [2], C. Clarke [2], J. Degnan [3], J. Cheek [3], A. Nelson [2], D. Patterson [2], A. Mann [2], F. Hall [2], R. Ricklefs [4], T. Varghese [4], T. Zagwodzki [4], E. [1] NASA GSFC, [2] HTSI, [3] Sigma Space Corporation, [4] Cybioms Corporation, [5] Univ. of Maryland	Fuji-A
9:00		13-0302	Evaluation of the 2013 NGSLR and MOBLAS-7 Co-location Dataset at GGAO Ericos C. Pavlis [1], Magdalena Kuzmicz-Cieslak [1], Jan F. McGarry [2], Christopher B. Clarke [3], Julie Horvath [3] and Howard Donovan [3] [1] GEST/Univ. of Maryland Baltimore County, [2] NASA GSFC, [3] HTSI	
9:15		13-0303	The results of two-color observations Stanislaw Schillak Space Research Centre PAS	
9:30		13-0304	Modeling spin parameters of Ajisai, LARES and the other geodetic satellites with SLR data Daniel Kucharski [1], Hyung-Chul Lim [1], Georg Kirchner [2], Toshimichi Otsubo [3], Giuseppe Bianco [4], Franz Koidl [2], Joo-Yeon Hwang [1,5] [1] KASI, [2] Space Research Institute, Austrian Academy of Sciences, [3] Hitotsubashi Univ., [4] ASI, Centro di Geodesia Spaziale G. Colombo, [5] Yonsei Univ.	
9:45-10:15	Tea Break (30min)			
10:15	Session 8 SLR Technology and Safety Chairs Graham Appleby Georg Kirchner	13-0305	Upgrade of the NGSLR optical bench and resulting performance improvements H. Donovan, T. Zagwodzki, J. Annen, J. Horvath, F. Hall, D. Patterson, A. Nelson, E. Hoffman, J. Degnan, J. McGarry, J. Cheek NASA/HTSI	Fuji-A
10:30		13-0306	Proposed beam divergence estimation procedure for the ILRS R. Burris[1], J. Rodriguez[2], R. Smith[1], L. Thomas[1], D. Huber[1] [1] U.S. Naval Research Laboratory, [2] NERC Space Geodesy Facility	
10:45		13-0307	Integration of a SBS-3 ADS-B receiver into the SGF, Herstmonceux aircraft safety system Matthew Wilkinson, Jose Rodriguez NERC Space Geodesy Facility	
11:00		13-0308	The new ADS-B based aircraft avoidance system at the MLRO Domenico Iacovone [1], Giuseppe Bianco [2] [1] e-Geos/MLRO, [2] ASI/MLRO	
11:15		13-0309	Hazards & Risks @ SLR Network, Updates and New Challenges Jorge R. del Pino Institute of Astronomy Univ. of Latvia	
11:30-11:45	Move to excursion			
11:45-12:10	Group Photo (weather-dependent) Photo at the edge of Kawaguchiko-lake			
12:10	Lunch in Bus			
13:45	Fujiyoshida -->Arrival at NICT			
	Excursion to NICT Koganei (2.5h)			
16:30	Move to hotel --> Arrival Hotel (18:00)			
19:30-21:30	Banquet			
				Fuji-B/C

Time	Session	Article Number	DAY 4 - Nov 14, 2013	Room
8:45	Session 9 Moon & Deep Space Chairs Hiroshi Araki Jürgen Müller	13-0401	Status of LLRRA-21 and Simulation of Apollo Behavior Douglas Currie [1], Bradford Behr [1], Giovanni Delle Monache [2], Simone Dell'Agnello [2] and Tom Murphy [1] Univ. of Maryland, [2] INFN-Laboratori Nazionali di Frascati dell'INFN (LNF), [3] Univ. of California at San	Fuji-A
9:00		13-0402	Lunar Laser Ranging - What is it Good for? Jürgen Müller [1,2], Liliane Biskupek [1], Franz Hofmann [1], and Enrico Mai [1] [1] Institut für Erdmessung (IFE), Leibniz Universität Hannover, [2] QUEST – Centre for Quantum Engineering and Space-Time Research	
9:15		13-0403	Lunar Laser Ranging : Recent activities of Paris Observatory Lunar Analysis Center S. Bouquillon[1], G. Franco[1], H. Manche[2], J-M Torre[3], C. Le Poncin-Lafitte[1] & C. Lhotka[4] [1] Observatoire de Paris, [2] Observatoire de Paris Astronomie et Systèmes Dynamiques, [3] Université de Nice Sophia-Antipolis Observatoire de la Côte d'Azur Géoazur Caussols, [4] Univ. of Rome Tor Vergata	
9:30		13-0404	Analysis and application of 1-way laser ranging data from ILRS ground stations to LRO S. Bauer [1], D. Dirkx [2], J. Oberst [1,3], H. Hussmann [1], P. Gläser [3], U. Schreiber [4], D. Mao [5], G. Neumann [6], E. Mazarico [6], M. Torrence [7], J. McGarry [6], D. Smith [8], M. Zuber [8] [1] DLR Berlin, [2] TU Delft, [3] TU Berlin, [4] Geodätisches Observatorium Wettzell, [5] Sigma Space Corp., [6] NASA GSFC, [7] SGT Inc., [8] MIT	

9:45		13-0405	LRO-LR: four years of history making laser ranging J. McGarry [1], X. Sun [1], D. Mao [2], J. Horvath [3], H. Donovan [3], C. Clarke [3], E. Hoffman [3], J. Cheek [2], T. Zagwodzki [4], M. Torrence [5], M. Barker [2], E. Mazarico [6], G. Neumann [1], D. Smith [6], M. Zuber [1] NASA GSFC, [2] Sigma Space Corporation, [3] HTSI, [4] Cybioms Corporation, [5] Stinger Ghaffarian Technologies, [6] MIT	
10:00		13-0406	Frequency-dependence of the tidal dissipation on the Moon: Effect of the low-viscosity zone at the Yuji Harada [1], Sander Goossens [2], Koji Matsumoto [3], Jianguo Yan [4], Jinsong Ping [5], Hiroto Noda [3], Junichi Haruyama [6] [1] China Univ. of Geosciences, Wuhan, [2] Univ. of Maryland, [3] National Astronomical Observatory of Japan, [4] Wuhan Univ., [5] National Astronomical Observatories, Chinese Academy of Sciences, [6] JAXA	
10:15		13-0407	Numerical geodesy experiments for a Phobos laser ranging mission concept D. Dirkx, L.L.A. Vermeersen, R. Noomen, P.N.A.M. Visser Delft Univ. of Technology	
10:30-11:00	Tea Break (30 min)			
11:00	Session 10 Retroreflectors (1) Chairs Jan McGarry Linda Thomas	13-0408	Transfer Function of the Lares Satellite David Arnold SAO	Fuji-A
11:15		13-0409	The ring retroreflectors system V.B.Burmistrov, M.A.Sadovnikov, A.L.Sokolov, V.D.Shargorodskiy OJC «RPC «Precision Systems and Instruments», Moscow	
11:30		13-0410	Status of the GPS III Laser Retroreflector Array Linda Thomas [1], Stephen Merkowitz [2] [1] Naval Research Laboratory, [2] NASA GSFC	
11:45		13-0411	Development of the Retro-reflector on the Moon for the Future Lunar Laser Ranging Hiroshi Araki[1], S. Kashima[1], H. Noda[1], H. Kunimori[2], H. Mashiko[3], T. Otsubo[4], M. Utsunomiya[5], and Y. Matsumoto[6] [1]NAOJ, [2]NICT, [3]Iwate Univ., [4]Hitotsubashi Univ., [5]JAXA, [6]PLANET INC.	
12:00		13-0412	Completion of ETRUSCO2, thermal test results and thermal optical simulation of the standard GNSS Retroreflector Array (GRA) C. Cantone [1], Simone Dell'Agnello [1], G. Delle Monache [1], A. Boni [1], G. Patrizi [1], M. Tibuzzi [1], E. Ciocci [1], C. Lops [1], M. Martini [1], L. Salvatori [1], S. Contessa [1], L. Palandra [1], M. Maiello [1], M. Marra [1], F. Piergentili [1], G. Capotorto [1], G. Bianco [3], R. Vittori [1]& [2] [1] INFN- Laboratori Nazionali di Frascati, [2] Aeronautica Militare Italiana, [3] ASI, Centro di Geodesia Spaziale "G. Colombo"	
12:15		13-0413	Processing Single Photon Data for Maximum Range Accuracy Christopher B. Clarke [1], John J. Degnan[2], Jan F. McGarry [3], Erricos Pavlis [4] [1] HTSI [2] Sigma Space Corporation, [3] NASA/GSFC [4]GEST/UMBC	
12:30-14:00	Lunch (90 min) WS Splinter Meeting		Network & Engineering WG(13:15-14:00)	Fuji-A
14:00	Session 11 Retroreflectors (2) and CoM Chairs John Degnan Scott Wetzel	13-0414	SLR energy density estimations and measurements for the Herstmonceux station Matthew Wilkinson, Jose Rodriguez NERC Space Geodesy Facility	Fuji-A
14:15		13-0415	Optical FFDP and interferometry measurement and modeling of retroreflector payloads at SCF_LAB Boni A. [1], Dell'Agnello S.[1], Delle Monache G. O. [1], Cantone C. [1], Intaglietta N. [1], Lops C. [1], Maiello M.[1], Martini M.[1], Patrizi G.[1], Salvatori L.[1], Tibuzzi M.[1], Contessa S.[1], Palandra L.[2], Capotorto G.[2], Marra M.[2], Piergentili F.[2], Bianco G.[4], Vittori R.[3] [1] INFN-LNF, [2] Univ. of Rome "Tor Vergata", [3] Aeronautica Militare Italiana. [4] ASI-CGS	
14:30		13-0416	Thermal/Optical Analysis of Cube Corner Retroreflectors for the Lunar Environment Giovanni O. Delle Monache [1], Douglas Currie [2], Simone Dell' Agnello [1], Bradfor Bher [2] [1] INFN-LNF Frascati Italy, [2] Univ. of Maryland College Park MD	
14:45		13-0417	Attempt to further enhance ranging accuracies to Lageos through de-convolution of the target response Thomas Varghese, Thomas Zagwodzki, Thomas Oldham, Randall Ricklefs Cybioms Corporation	
15:00		13-0418	Centre of Mass corrections for precise analysis of LAGEOS, Etalon and Ajisai data Graham Appleby [1] and Toshimichi Otsubo [2] [1] Space Geodesy Facility, Herstmonceux [2] Hitotsubashi Univ.	
15:15		13-0419	Centre-of-mass Corrections of sub-cm-precision Targets, STARELTTE and LARES Toshimichi Otsubo [1], Robert A Sherwood [2], Graham M Appleby [2], Reinhart Neubert [3] [1] Hitotsubashi Univ., [2] NERC SGF Herstmonceux, [3] GFZ Potsdam	
15:30-16:00	Tea Break (30min)			
16:00	Session 12 SLR Technology and Development, Misc Chairs Hyung-Chul Lim Anja Schlicht	13-0420	Simulation and Research of Transmitting and Receiving Epoch Overlapping Phenomenon on Co-Optical Path kHz Laser Ranging System Zhai Dong-sheng , Li zhu-lian , Fu Hong-lin , Li Yu-qiang , Zhang Yun-cheng , Xiong Yao -heng Yunnan Astronomical Observatory, Chinese Academy of Sciences	Fuji-A
16:15		13-0421	The new CMOS Tracking Camera used at the Zimmerwald Observatory M. Ploner, P. Lauber, M. Prohaska, P. Schlatter, T. Schildknecht, J. Utzinger, A. Jäggi Astronomical Institute, Univ. of Bern	
16:30		13-0422	Recent Advances In Photon-counting 3D Imaging Lidars John J. Degnan, Christopher Field, Roman Machan, Ed Leventhal, David Lawrence, Yunhui Zheng, Robert Upton, Jose Tillard, Spencer Disque, Sean Howell Sigma Space Corporation	
16:45		13-0424	Recent achievements in detector and timing technology for SLR and laser time transfer I. Prochazka [1], K. U. Schreiber [2], J. Kodet [2,1], Petr Panek [3], J. J. Eckl [2] [1] Czech Technical Univ. in Prague, [2] TUM, Geodetic Observatory Wettzell [3] Academy of Sciences of Czech Republic, Institute of Photonics	
17:00		13-0425	Investigation and Compensation of Detector Time Delays caused by Receive Signal Intensity Fluctuations Johann Eckl [1], Guenther Herold [1], Rudolf Motz [1], Andreas Leidig [1], Ulrich Schreiber [2] [1] Geodetic Observatory Wettzell, BKG, [2] Geodetic Observatory Wettzell, Technische Universitaet	
17:15		13-0426	Event Timer A033-ET: Advancement of Performance Characteristics Boole Eugene, Bespal'ko V., Vedin V. Institute of Electronics and Computer Science	
17:30	13-0427	Towards Integrated Communication and Ranging system using 1.5um wavelength fiber technology Hiroo Kunimori [1], Mikio Fujiwara [1] and Tetsuo Hosokawa [2] [1] NICT, [2] Kyoei Optronics Co. Ltd.		
18:00-21:00			Governing Board Meeting	Sakura

Time	Session	Article Number	DAY 5 - Nov 15, 2013	
8:45	Session 13 Operational Aspects and Recent Progress	13-0501	Status of SLR Upgrades at the U.S. Naval Research Laboratory's Optical Test Facility Reed Smith[1], Ray Burris[2], Linda Thomas[3] U.S. Naval Research Laboratory	Fuji-A
9:00		13-0503	Preserving history and technical "know-how" - experience at SLR station Riga Kalvis Salminsh, Jorge R. del Pino Institute of Astronomy Univ. of Latvia	
9:15		13-0504	Challenges and progress with the development of a Lunar Laser Ranger for South Africa Ludwig Combrinck, Roelf Botha Hartebeesthoek Radio Astronomy Observatory	
9:30	Chairs Hiroo Kunimori Chris Moore	13-0505	On Objectives and Some Results of Russian Laser Ranging Network Operation in 2013 Vladimir Glotov [1] and Nataly Parkhomenko [2] [1] Central Research Institute of Machine Building, Korolev, Moscow	Fuji-A
9:45		13-0506	Technical Aspects and Progress of Korean SLR Systems Hyung-Chul Lim, Man-Soo Choi, Eunseo Park, Eunjung Choi, Seung-Cheol Bang, Seong-Yeol Yu, Tae-Keun Kim, Young-Rok Kim, Dong-Jin Kim, Ki-Pyung Seong, Neung-Hyun Ka, Chul-Hee Choi, Ju-Hyun Korea Astronomy and Space Science Institute	
10:00		13-0507	Japanese SLR challenges Shinichi Nakamura, H. Kunimori, S. Kasho, K. Akiyama, M. Sato, S. Watanabe, Hashimoto, T.Otsubo Japan LOC(JAXA, NICT, Hitotsubashi Univ., Japan Coast Guard, etc)	
10:15-10:45	Tea Break (30 min)			
10:45-12:45	Closing Michael Pearlman Shinichi Nakamura	Summarized WS	Summary Report from Each Session Chairs	Fuji-A
			Workshop Summary and Comments : Mike Pearlman	
			Proposals for the next Workshop (2015 - 2016)	
			ILRS General Assembly	
12:45-12:50		Information from Japan LOC	Proceedings: Shinichi Nakamura, Shimosato SLR Station Site Tour : Shun-ichi Watanabe	

Poster Presentations (core time: 16.00-17.00, Nov 12)

Article No	Title	Authors	Affiliations
13-Po01	A Multi-platform Package for the Visualization of the ILRS QC Reports	Erricos C. Pavlis [1], Peter Hinkley [2] and Keith Evans [1]	1 GEST/Univ. of Maryland Baltimore County 2 ProObject, Hanover
13-Po02	A Report on JAXA Tanegashima Station (GMSL)	Sachiyo Kasho, Kyohei Akiyama, Anne Mori	JAXA
13-Po03	Accident in orbit	Natalia Parkhomenko [1], Victor Shargorodsky[1], Vladimir Vasiliev[1], Vasily Yurasov[1]	[1]Open Joint-Stock Company Research-and-Production Corporation "Precision Systems and Instruments"
13-Po04	Accuracy and Stability Assessment of the ILRS Stations Over Two Decades	Erricos C. Pavlis, Keith Evans and Magdalena Kuzmicz-Cieslak	GEST/Univ. of Maryland Baltimore County
13-Po05	Advanced Telescopes, SLR, and Radar capability to support IRNSS at GEO ranges	Thomas Varghese	Cybioms Corporation
13-Po06	Alignment measurement with optical transponder system of Hayabusa-2 LIDAR	Hiroto Noda [1], Takahide Mizuno [2], Hiroo Kunimori [3], Hiroshi Takeuchi [2], and Noriyuki Namiki [4]	[1] National Astronomical Observatory of Japan [2] JAXA [3] NICT [4] Chiba Institute of Technology
13-Po07	Broadening of SLR Network in Chinese Mainland	Liping Ji	Satellite Observatory, Chinese Academy of Surveying & Mapping
13-Po08	Collaboration of ranging and optical communication mission RISESAT	Toshihiro Kubo-oka [1], Hiroo Kunimori [1], Tetsuharu Fuse [1], Hideki Takenaka [1], Morio Toyoshima [1], Toshinori Kuwahara [2], Kazuya Yoshida [2], Yoshihiro Tomioka [2], Kazufumi Fukuda [2], Junichi Kurihara [3] and Yukihiko Takahashi [3]	[1] NICT, [2] Tohoku University, [3] Hokkaido University
13-Po09	COMMISSIONING OF THE NEW LASER STATION IN IRKUTSK	V.A. Emelyanov [1], G.I. Modestova [1], V.V. Kaplenko [1], S.I. Raschetin [1], E.P. Gladkevich [1], E.N. Myasnikova[1], I.N. Bobrik [1], I.Yu. Ignatenko [2]	[1] East-Siberian Branch of National Research Institute for Physical-Technical and Radio Engineering Measurements (VNIIFTRI), Irkutsk [2] National Research Institute for Physical-Technical and Radio Engineering Measurements (VNIIFTRI), Mendeleevo
13-Po10	Comparison of orbit precisions on different types of navigation satellites based on SLR	Zhao Gang, Zhou Shanshi, Zhou Xuhua, Wu Bin	Shanghai Astronomical Observatory
13-Po11	Definition and Realization of the MLRS Calibration Point	Randall L. Rinklefs[1], Peter J. Shelus[1], and Jerry R. Wiant[2]	[1] The Univ. of Texas at Austin, Center for Spave Research [2] The Univ. of Texas at Austin, McDonald
13-Po12	Demonstration of portable frequency transfer using SMF-coupled free-space optical	Miho Fujieda, Yoshinori Arimoto, Nobuyasu Shiga, Kohta Kido, Yuko Hanado, and Hiroo Kunimori	NICT
13-Po13	Detection and timing of laser pulses from Lunar Reconnaissance Orbiter	Szymon Stuglik	Former NASA intern
13-Po14	Development of software for high-precision LLR data analysis	Ryosuke Nagasawa [1], Toshimichi Otsubo [2], and Hideo Hanada [3]	[1] Grad. Univ. Advanced Studies, [2] Hitotsubashi Univ., [3] National Astron. Obs. Japan
13-Po15	Development of the High Speed Differentiation Discriminator for Laser Ranging System	Yuji Miura, Yasuji Suzuki	Universe Ltd.
13-Po16	Educational Activities Related to Satellite Laser Ranging at Hitotsubashi Univ.	Toshimichi Otsubo [1], Mihoko Kobayashi [1], Hiroo Kunimori [2], Daniel Kucharski [3], Graham M Appleby [4]	[1] Hitotsubashi Univ., [2] NICT, [3] KASI, [4] NERC SGF Herstmonceux
13-Po17	Estimation of geocenter motion using GRACE precise orbits	Tzu-Pang Tseng[1],Cheinway Hwang[2], Shin-Fa Lin[2], Yan-Ti Chen[2]	[1] GPS Science and Application Research Center, National Central Univ., Taiwan [2] National Chiao Tung Univ., Taiwan
13-Po18	Estimation of the Earth's gravity field combining SLR and GRACE data	Christoph Haberkorn, Mathis Bloßfeld, Johannes Bouman, Martin Fuchs and Michael Schmidt	Deutsches Geodätisches Forschungsinstitut, München, Germany
13-Po19	EUROLAS Data Center - Status Report 2012-2013	Christian Schwatke	DGFI
13-Po20	Expanding the SLR space segment with the Galileo constellation?	Jose Rodriguez, Graham Appleby	NERC Space Geodesy Facility
13-Po21	ILRS Website Update	C. Noll (1), M. Torrence (2), L. Tyahla (2)	(1) NASA GSFC, (2) SGT, Inc.
13-Po22	Impact of Earth radiation pressure on LAGEOS orbits and on the global scale	Krzysztof Sośnica [1], Carlos Javier Rodríguez-Solano [2], Daniela Thaller [3], Adrian Jäggi [1], Gerhard Beutler [1], Rolf Dach [1]	[1] AIUB, [2] Institut für Astronomische und Physikalische Geodäsie, Technische Universität München, [3] BKG
13-Po23	Improvements of System Stability at Changchun Observatory	HAN Xingwei[1], FAN Cunbo[2], SONG Qingli[3], DONG Xue[4], ZHANG Haitao[5], LIU Chengzhi[6]	Changchun Observatory, NAO
13-Po24	Japanese Altimetry Mission, COMPIRA	Akihisa Uematsu, Kyohei Akiyama, Norimasa Ito, and the JAXA COMPIRA team	JAXA
13-Po25	Linux/RTAI Real-time Control System at MLRS	Rinklefs, R. L.	The Univ. of Texas at Austin, Center for Space Research
13-Po26	LRO Orbit Determination with Laser Ranging Data	Dandan Mao[1], Mark Torrence[2], Erwan Mazarico[3], Xiaoli Sun[4], David Rowlands[4], Jan McGarry[4], Gregory Neumann[4], Mike Barker[1], Jim Golder[1], David Smith[3], Maria Zuber[3]	[1]Sigma Space Corporation, [2]Stinger Ghaffarian Technologies,[3] MIT, [4] NASA GSFC
13-Po27	Near Ground Target for 1.2m Telescope SLR System	Yuncheng Zhang , Zhulian Li, Dongsheng Zhai, Yuqiang Li, Yaoheng Xiong	Yunnan Astronomical Observatory, Chinese Academy of Sciences
13-Po28	New gatable MCP-PMTs and their performances in comparison to semiconductor type detectors for SLR applications	Takeshi Taguchi, Masahiro Nakamura	Hamamatsu Photonics K. K.
13-Po29	New telescope and observatory building to Metsähovi, Finland	Arttu Raja-Halli [1], Jyri Näränen [1], and Markku Poutanen [1]	[1] Finnish Geodetic Institute
13-Po30	NGSLR Collocation Analysis	Julie E. Horvath [1], Christopher B. Clarke [1], Jan F. McGarry [2], Howard L. Donovan [1], John J. Degnan [3], Alice Nelson [1], Donald Patterson [1], Anthony Mann [1], Felipe Hall [1], Thomas Zagwodzki [4]	[1] HTSI, [2] NASA GSFC, [3] Sigma Space Corporation, [4] Cybioms Corporation
13-Po31	Ranage Gate Generator Development for 10kHz Laser Ranging	Seung-Cheol Bang, Nung-hyun Ka, Hyung-Chul Lim	Korea Astronomy and Space Science Institute
13-Po32	Remote Control Southern Hemisphere SSA Observatory	Ian Ritchie	EOS Space Systems Pty Limited

13-Po33	Results and Analyses of Debris Tracking from Mt Stromlo	Jizhang Sang[1], Ian Ritchie[2], Matt Pearson[2], and Craig Smith[2]	[1] School of Geodesy and Geomatics, Wuhan University, China [2] EOS Space Systems Pty limited.
13-Po34	Riga SLR station upgrade and status report	Kalvis Salmīnsh, Maris Abele, Jorge R. del Pino	Institute of Astronomy Univ. of Latvia
13-Po35	Satellite Laser Ranging at the Shimosato Hydrographic Observatory	Mariko Sato, Shun-ichi Watanabe, Takashi Kurokawa, Hiroko Fukura, Miyuki Fujisawa, Mikuto Koike, Masayuki Fujita, and Arata Sengoku	Japan Coast Guard
13-Po36	Satellite Tracking Near Japan 50 Years Ago	Jerry R. Wiant (1), Judit Gyorgyey Ries (2)	(1) Univ. of Texas, (2) Univ. of Texas
13-Po37	SLR configuration and data management software (Debit) using WEB and relational	Hiroo Kunimori [1], Reiko Iwafune, Koji Ohi[2]	[1]NICT, [2]Autex,inc
13-Po38	SLR data processing status of Korean SLR system	Eunseo Park [1], Young-Rok Kim [1], Jay Hyungjik Oh [2], Eun-Jung Choi [1], Mansoo Choi [1], Hyung-Chul Lim [1]	[1] Korea Astronomy and Space Science Institute, [2] Yonsei Univ.
13-Po39	SLR Station Potsdam Software Upgrade based on a Linux Real Time System	André Kloth [1], Jens Steinborn [1], Ludwig Grunwaldt [2]	[1] SpaceTech GmbH, [2] GFZ German Research Centre for Geosciences
13-Po40	SLR Tracking of Envisat Past its End-of-Life	Martin Weigel [1], Georg Kirchner [2], Hauke Fiedler [1]	[1] DLR-GSOC, [2] ÖAW / IWF
13-Po41	Some aspects of the budget of uncertainty in measurement laser station.	I.Ignatenko	National Research Institute for Physical-Technical and Radio Engineering Measurements (VNIIFTRI)
13-Po42	Stability of the SGF, Herstmonceux site and SLR calibration	Graham Appleby, Christopher Potter, Jose Rodriguez, Robert Sherwood, Toby Shoobridge, Victoria Smith,	NERC Space Geodesy Facility
13-Po43	Status of the Zimmerwald SLR station	M. Ploner, J. Utzinger, P. Lauber, M. Prohaska, P. Schlatter, P. Ruzek, T. Schildknecht, K. Sosnica, A. Jäggi	Astronomical Institute, Univ. of Bern
13-Po44	Superconducting single photon detectors for near infrared wavelength with high sensitivity, low noise, and high timing resolution	Shigehito Miki [1], Taro Yamashita [1], Zhen Wang [1][2], and Hirota Terai [1]	[1]NICT, [2]SIMIT
13-Po45	System design of the South African Lunar Laser Ranger	RC Botha, WL Combrinck	Hartebeesthoek Radio Astronomy Observatory
13-Po46	T/R switch development utilizing optical fiber technology	Tetsuo Hosokawa [1], Hiroo Kunimori[2]	[1]Kyoei Optronics Co.Ltd., [2]NICT
13-Po47	T2L2 : Microwave link comparison	E. Samain [1], C. Courde [1], P. Exertier [1], M. Laas-Bourez [1], N. Martin [1], J.-M. Torre [1], Ph. Guillemot [2], S. Leon [3], D. Rovera [4], M. Abgrall [4], P. Urich [4], R. Sherwood [5], G. Appleby [5], J. Kodet [6], U. Schreiber [6], J. Eckl [6], P. Fridelance [7]	[1] OCA, [2] CNES, [3] CNES, [4] OP, [5] NERC, [6] TUM, [7] Phusipus Int.
13-Po48	Terrestrial Reference Frame Realization from GPS and SLR	Jan P. Weiss, Willy Bertiger, Shailesh D. Desai, Bruce J. Haines, Aurore Sibois	JPL, California Institute of Technology
13-Po49	The design of laser retro-reflectors and its application in the docking mission of Chinese Tiangong-1 space lab module	Chen Wanzhen, Li pu, Meng wendong, Wang Yuanming, Yang fumin, Zhang zhongping	Shanghai Observatory, Chinese Academy of Sciences
13-Po50	The Ground Calibration System of Korean SLR System	Sung-Yeol Yu, Seung-Cheol Bang, Eun-Jung Choi, Tae Kenu Kim, Hyung-Chul Lim, Yoon-Kyung Seo, Mansoo Choi, Eunseo Park	Korea Astronomy and Space Science Institute
13-Po51	The Laser Enable Box (LEB) – A tool for local and In-Sky-Laser-Safety	Martin Riederer[1], Johann Eckl[1], Guenther Herold[1] and Ulrich Schreiber[2]	[1] Geodaetisches Observatorium Wettzell, BKG, [2]Geodaetisches Observatorium Wettzell, Forschungseinrichtung Satellitengeodäsie, Technische Universität München
13-Po52	The preliminary Results of Laser Ranging to Satellites with 10 kHz Laser System at Shanghai Station	Chen Juping, Wu Zhibo, Zhang Haifeng, Li Pu, Meng Wendong, Zhang Zhongping	Shanghai Observatory, Chinese Academy of Sciences
13-Po53	The switching device for external and internal calibration at the station «Katziveli»	Yu. Ignatenko	Crimean Laser Observatory, Katzively.
13-Po54	Time Transfer between two Satellite Laser Ranging Stations via Lunar Reconnaissance Orbiter Laser Ranging	Xiaoli Sun [1], David R. Skillman [1], Jan F. McGarry [1] Dandan Mao [2], Mark H. Torrence [3], Evan D. Hoffman [4]	[1] NASA GSFC, [2] SigmaSpace Corp., [3] SGT Inc., [4] Honeywell Technology Solutions Inc.
13-Po55	Ultra-low timing jitter optical pulse trains from mode locked Er-fiber lasers	Tae Keun Kim [1], Youjian Song [2], Kwangyun Jung [2], Chur Kim [2], Hoyji Kim [2], Chang Hee Nam [2] and	[1] KASI, [2] KAIST
13-Po56	Upgrade of SLR station 7841 Potsdam	Ludwig Grunwaldt [1], Stefan Weisheit [1], Jens Steinborn [2]	[1] GFZ German Research Centre for Geosciences Potsdam [2] Spacetechn GmbH Immenstaad
13-Po57	Combined LARES-LAGEOS solutions	Christian Baumann [1], Krzysztof Sosnica [1], Daniela Thaller [2], Adrian Jäggi [1], and Rolf Dach [1]	[1] Astronomical Institute, Univ. of Bern [2] Bundesamt für Kartographie und Geodäsie
13-Po58	NASA SLR Network Key Safety Elements	Chris Quinn, David McCormick	EXELIS Inc., NASA
13-Po59	ILRS Station Reporting	Carey Noll [1], Michael Pearlman [2], Mark Torrence [3]	[1] NASA GSFC, [2] Harvard Smithsonian Center for Astrophysics, [3] SGT, Inc
13-Po60	Ukraine SLR stations: the current state and future.	Zhaborovskyy Vitaliy	Main Astronomical Observatory of NAS of Ukraine