



Second Space for Hydrology Workshop

PROGRAMME

Monday, 12 November 2007

08.00	Registration
09.00	Opening Session
	Global Hydrological Modelling Chairs: P. Bates and P. Bauer-Gottwein
09.20	Using Water Storage Variations Derived from GRACE to Calibrate a Global Hydrology Model <i>Werth, S.; Güntner, A.; Petrovic, S.; Schmidt, R.; Kusche, J.</i>
09.40	Contribution of Lakes and Man-Made Reservoirs to Sea Level Change Since 1993 <i>Cazenave, A.; Burillon, E.; Cretaux, J.F.; Berge-NGuyen, M.; Berge-NGuyen, M.</i>
10.00	Predicting the Onset of Snowmelt using Hydrologic Models and Microwave Satellite Observations <i>Tedesco, M.; Kostas, A.; Lettenmaier, D.; Reichle, R.; Loew, A.</i>
10.20	Coffee Break
	Monitoring Spatio Temporal Changes of surface waters Chair: D. Lettenmaier
10.40	Monitoring Hydrological Regime of the Euphrates-Tigris river Basin using Satellite Observations <i>Zakharova, E.; Kouraev, A.; Al-Yamani, F.; Polikarpov, I.; Cretaux, J.-F.</i>
11.00	Mapping Surface Water Stored in Small Reservoirs in the Volta Basin, West Africa <i>van de Giesen, N.; Liebe, J.; Annor, F.; van der Zaag, P.</i>
11.20	Estimating the Caspian Sea Level and Volga River Runoff from Satellite Altimetry <i>Kostianoy, A.; Lebedev, S.; Cretaux, J.; Vignudelli, S.</i>
11.40	Near-Real Time Monitoring of Global Lakes and Reservoirs: Water Resources, Irrigation Potential and Agriculture <i>Birkett, C.; Beckley, B.; Doorn, B.; Reynolds, C.</i>
12.00	Discussion round
12.30	Lunch
	Monitoring Spatio Temporal Changes of surface waters (cont.) Chair: B. Su and O. Andersen
14.00	Multi-Satellite Remote Sensing of Global Water Surfaces Dynamics 1993-2005 <i>Papa, F.; Prigent, C.; Rossow, W.</i>
14.20	Global Analysis of Jason-1 over Inland Water <i>Berry, P.; Freeman, J.; Smith, R.</i>
14.40	Lake Izabal Water Level Fluctuations from ENVISAT RA-2. Relationships with Water Inputs from a Numerical Runoff Model <i>Medina, C.; Gomez-Enri, J.; Alonso, J.; Villares, P.; Arias, M.; Catalan, M.</i>
15.00	Southern American Lakes. Insights through diverse Space Techniques: Satellite Imagery, Radar and Laser Altimetry <i>Abarca del Rio, R.1; Crétaux, JF2; Calmant, S.2; Berge, M.2; Cazenave, A2; Zambrano, M1; 1DGEO/UDEC; 2Legos</i>
15.20	Coffee Break
	Space Techniques to measure Hydrological variables Chairs: C. Birkett and N. Mognard-Campbell
15.40	Hydrological Mass Variations due to Extreme Weather Conditions in Central Europe from GRACE 4-D Wavelet Expansions <i>Seitz, F.; Schmidt, M.; Shum, C.K.; Chen, Y.</i>
16.00	A New Way of using Altimetry Waveform Data over Continental Waters <i>Enjolras, V.E.; Rodriguez, E.</i>

16.20	Monitoring Rivers and Lakes with a Ka-Band Interferometric Radar Altimeter: An Assessment of the Performances <i>Enjolras, V.; Rodriguez, E.</i>
16.40	Soil Moisture Time Series from Active Radar in Support of Runoff Monitoring on Local, Catchment and Regional Scale <i>Bartsch, A.; Pathe, C.; Sabel, D.; Wagner, W.; Doubkova, M.</i>
17.00	Discussion round
17.30	Social Event - Ice Breaker

Tuesday, 13 November 2007

	Space Techniques to measure Hydrological variables (cont.) Chairs: P. Berry and F. Seyler
09.00	Validation of Lake Levels of Inland lakes in the Ethiopian Highland and Rift Valley Measured Using Radar Altimetry <i>Dost, R.; Maathuis, B.; Ayana, E.</i>
09.20	The Water And Terrestrial Elevation Recovery Hydrosphere Mapper (WATER-HM): a Dedicated Surface Water Mission <i>Mognard, N.; Alsdorf, D.; Cazenave, A.; Rodriguez, E.</i>
09.40	Representation of Rivers and Lakes within the Forthcoming ACE2 GDEM <i>Smith, R.; Berry, P.; Benveniste, J.</i>
10.00	Contribution to Wetland Monitoring of Multi-mission Satellite Radar Altimetry <i>Smith, R.; Berry, P.</i>
10.20	Global Analysis of EnviSat Burst Echoes over Inland Water <i>Berry, P.; Freeman, J.</i>
10.40	Coffee Break
11.00-12.00	POSTER SESSION
	Global Hydrological Modelling
	Modelling the Ob River, in Western Siberia, Using Remotely Sensed DEM and Altimetry Data <i>Biancamaria, S.; Bates, P.; Boone, A.; Mognard, N.; Cretaux, J.</i>
	Surface Water Storage and Runoff: Modelling, In-Situ Data and Remote Sensing <i>Delclaux, F.; LeCoz, M.; Leblanc, M.</i>
	Base Flow Calibration in a Global Hydrological Model <i>Van Beek, L.P.H.; Bierkens, M.F.P.; Department Physical Geography, Utrecht University, The Netherlands</i>
	Monitoring Spatio Temporal Changes of surface waters
	Satellite Observations of the Elephant Butte Reservoir in New Mexico <i>Schmugge, T.; Bleiweiss, M.; Stein, W.</i>
	Full Freezing and Drying Up of River Channel as Opposite Phenomena in High and Low Latitudes <i>Asabina, E.; Asabina, E.</i>
	Study of Prespa and Vegoritits Lakes Using Multisensor Remote Sensing Data <i>Charou, E.; Stefouli, M.</i>
	On the Estimate of Surface Soil Moisture From ASAR Imagery at Basin Scale: The Mulargia Basin Case Study <i>Montaldo, N.; Mancini, M.</i>
	Monthly Land Water Solutions by Least-Square Inversion of GRACE Geoid Data (2002-2006) <i>Ramillien, G.; Groussot, I.; Llovel, W.; Cazenave, A.; Flechtner, F.; Schmidt, R.</i>
	Space Techniques to measure Hydrological variables
	Hydrological Regime of Ob' River System from Multi-Satellite Active/Passive Microwave Measurements <i>Kouraev, A.; Zakharova, E.; Mognard, N.; Cazenave, A.; Legresy, B.; Frederique, R.</i>

	<p>Optimal land Use/Cover Classification Using Remote Sensing Imagery for Hydrological Modeling in a Himalayan Watershed <i>Saran, S.; Sterk, G.</i></p> <p>New Hydrological Products Based on Satellite Altimetry, Space Gravimetry & Satellite Imagery in the HydroWeb Data Base <i>Gennero, M.-C.; Cretaux, J.-F.; Berge-Nguyen, M.; Llovell, W.; Daillet, S.; Cazenave, A.; Calmant, S.</i></p> <p>The Application of Satellite Laser Altimetry: The Determination of Lake Stage, and River Elevation, Slope and Discharge <i>Birkett, C.; Hofton, M.; Dubayah, R.; Bkjerklie, D.</i></p> <p>Exploring the Combined Potential of Altimetric Mission and Product Datasets for Surface Water Elevation <i>Martinka-Preaux, S.; Birkett, C.</i></p> <p>3D Selection of ENVISAT Data for Improved Water Stage Times Series on the Rio Negro and Adjacent Wetlands (Amazon Basin) <i>Santos Da Silva, J.; Roux, E.; Seyler, F.; Calmant, S.</i></p> <p>Comparison Between GRACE-Derived Water Stock Variations and ENVISAT Water Stages in the Amazon Basin <i>Vaz De Almeida, F.; Santos da silva, J.; Ramillien, G.; Calmant, S.; Seyler, F.; Blitzkow, D.; Cazenave, A.</i></p> <p>On the Use of Very high Resolution Optical Images to Map River Bathymetry : Upscaling from Aerial to Satellite Smagery <i>Feurer, D.; Bailly, J.-S.; Le Coarer, Y.; Puech, C.; Viau, A.A.</i></p> <p>Space Hydrology: What We Can Expect Today from the GRACE Mission <i>Biancale, R.; Lemoine, J.-M.; Bruinsma, S.; Perosanz, F.; Balmino, G.; Bourgogne, S.; Ramillien, G.</i></p> <p>Calibration of T/P, Jason-1, Icesat, GFO and Envisat from GPS campaigns over the lake Issykkul, Khirghyztan <i>Cretaux, J.-F.; Calmant, S.; Romanovski, V.; Shabunin, A.; Lyard, F.; Bergé-Nguyen, M.; Cazenave, A.; Hernandez, F.</i></p> <p>Flood Zone Investigation by using Satellite and Aerial Imagery <i>Daneshbod, Y.</i></p> <p>Space and Time Variations of Lack Surface from Satellite Altimetry <i>Calmant, S.; Cretaux, J.-F.; Yi, Y.</i></p> <p>River Water Levels over the Murray-Darling Basin from ENVISAT and Comparison with TOPEX/Poseidon and in situ Data <i>Deng, X.; Shum, C.K.; Willgoose, G.</i></p> <p>Assessing Water Surface Effects on LiDAR Measurements in very Shallow Rivers: A Theoretical Study <i>Allouis, T.; Bailly, J.-S.; Lesaignoux, A.; Feuer, D.</i></p> <p>Hydrologic Validation for Satellite Water Level over River Po Basin <i>Vittucci, C.; Napolitano, F.; Benveniste, J.</i></p> <p>River and Lake Level data from Radar Altimetry in Support of the Tiger Initiative <i>Benveniste, J.; Berry, P.; Milagro-Perez, M.P.; Serpe, D.</i></p> <p>Altimetry Data Product Quality Control <i>Nogueira Loddó, C.1; Faugère, Y.2; Zanife, O.2; Soussi, B.2; Féménias, P.3</i></p> <p>ERS1/2 Scatterometer New Products: Mission Reprocessing and Data Quality Improvement <i>De Chiara, G.1, Crapolicchio, R.1, Lecomte, P.2</i></p>
	Expected potential of data assimilation of space observations applied
	<p>Data Assimilation and Hydrological Distributed Flash Flood Modelling <i>Bessiere, H.B.; Roux, H.; Dartus, D.</i></p>

	<p>Flood Monitoring through Data Assimilation of Space Observations-Nigeria Experience <i>Igbokwe, F.C.; Okpara, J.N.</i></p>
	<p>Strategic combinations of satellite and ground based data</p>
	<p>Enviromental Database and Geographic Information System for Socio - Economic Planning <i>Omidiora, E.B.</i></p> <p>Modelling the Impact of Urban Areas on Precipitation <i>Omidiora, E.B.</i></p> <p>Estimation of Wind Speed Frequency Distribution Application in predicting Wind Erosion <i>Omidiora, E.B.</i></p> <p>River Mapping from Satellite Radar Altimeter Sigma0 <i>Bramer, S.; Berry, P.A.M.</i></p> <p>Local to Regional Hydrological Model Calibration for the Okavango River Basin From In-Situ and Spaceborne Gravity Data <i>Christiansen, L.; Krogh, P.E.; Bauer-Gottwein, P.; Andersen, O.; Leiriao, S.</i></p> <p>Daily water level Estimation From Interpolation of Satellite Altimetry and In-Situ Measurements <i>Burrillon, E.; Roux, E.; Crétaux, J.-F.; Calmant, S.; Mazzega, P.; Santos Da Silva, J.</i></p> <p>Flood prediction in Ungauged Basin using Shuttle Radar Topography Mission (SRTM) DEM Data <i>Adeaga, O.A.</i></p> <p>Importance of breaching and filling for hydrological features extraction using High Resolution DTM <i>Prasad Babu, G.</i></p> <p>Interannual Variations of River Water Storage in the Rio Negro River basin from a Multiple Satellite Approach <i>Frappart, F.1; Papa, F.2; Famiglietti, J.3; Prigent, C.1; Rossow, W.2; Seyler, F.4</i></p>
	<p>Current and future challenges in hydrology</p>
	<p>What has 16 Years of Satellite Radar Altimetry Given us Towards Global Monitoring of the Earth's Inland Water Resources? <i>Berry, P.A.M.</i></p> <p>Challenges in Hydrology of Mountain Areas under Changing Climatic and Human Pressures <i>de Jong, C.</i></p> <p>An overview of the SMOS (Soil Moisture and Ocean Salinity) mission <i>Kerr, Y.H.; Escorihuela, M.J.; Mialon, A.; Waldeufel, P.; Wigneron, J.P.; Cabot, F.; Hahne, A.; Mecklenburg, S.</i></p> <p>SMOS mission products over land <i>Mialon, A.; Escorihuela, M.J.; Kerr, Y.H.; Walteufel, P.; Richaume, P.; Cabot, F.; Wigneron, J.P.; Delwart, S.; Saleh, K.; Mecklenburg, S.</i></p>
12.00	Discussion round
12.30	Lunch
	<p>Space Techniques to measure Hydrological variables (cont.) Chairs: E. Rodriguez and P. Kosuth</p>
14.00	<p>Terrestrial Water Storage Monitoring from GRACE and Satellite Altimetry in Bangladesh and the Okavango Delta (Botswana) <i>Andersen, O.; Freeman, J.; Bauer-Gottwein, P.; Butts, M.; LeMoine, F.</i></p>
14.20	<p>Near-Real-Time Monitoring of Global Rivers and Lake Heights Using EnviSat and Jason-1 Altimeter Data <i>Berry, P.; Freeman, J.; Smith, R.; Benveniste, J.</i></p>
14.40	<p>DEM Generation Using ASAR (ENVISAT) for Addressing Hydrological Characterization of Santa Cruz Island, Galapagos <i>Violette, S.; d'Ozouville, N.; Deffontaines, B.; Benveniste, J.; Wegmuller, U.; de Marsily, G.</i></p>
15.00	<p>Regional Water Budgets From Multi-Sensor, Multi-Satellite Remote Sensing <i>Wood, E.; Sheffield, J.; Ferguson, C.; Vinukollu, R.</i></p>
15.20	<p>Monthly and Weekly EIGEN-GRACE05S Gravity Field Solutions for Monitoring of Mass Variations in</p>

	the Earth System <i>Schmidt, R.; Meyer, U.; Dahle, C.; Kusche, J.; Flechtner, F.</i>
15.40	Coffee Break
16.00	Flood Monitoring from Remote Sensing Multi-Sensors Data Analysis <i>Cretaux, J.-F.; Leblanc, M.; Tweed, S.; Calmant, S.; Ramillien, G.</i>
16.20	River and Lake Level data from Radar Altimetry in Support of the Tiger Initiative <i>Benveniste, J.; Berry, P.; Milagro-Perez, M.P.; Serpe, D.</i>
16.40	Estimation of Flood Water Levels by Merging DTM, Satellite Imagery and Hydraulics Laws through AI <i>Puech, C.; Hostache, R.; Raclot, D.</i>
17.00	Discussion round
19.00	Social Event - Dinner

Wednesday, 14 November 2007

	Space Techniques to measure Hydrological variables (cont.) Chairs: S. Calmant and A. Braun
09.00	Global Waveform Shape Analysis for the Detection and Monitoring of Ephemeral Surface Water <i>Dowson, M.; Berry, P.; Freeman, J.</i>
09.20	Rating curve in the Amazon Basin combining altimetry-derived water stages and discharge propagated from remote stations <i>Leon, J.-G.; Seyler, F.; Bonnet, M.-P.; Calmant, S.</i>
09.40	Real-Time Application of Multi-Satellite Precipitation Analysis For Floods and Landslides <i>Adler, R.; Hong, Y.; Huffman, G.</i>
	Strategic combinations of satellite and ground based data Chairs: C. Puech and M. Mancini
10.00	Hydrograv - Improving Hydrological Models with Ground-Based and Space-Borne Time-lapse Gravity Surveys <i>Bauer-Gottwein, P.; Andersen, O.; Leiriao, S.; He, X.</i>
10.20	Estimation of Irrigation Water Demand in Paddy Fields of Northwestern Bangladesh Using Remote Sensing and GIS <i>Shahid, S.</i>
10.40	Satellite-Based Estimates of River Runoff <i>S. Grünler, S.G.; Romeiser, R.R.; Stammer, D.S.</i>
11.00	Coffee Break
11.20	Status of Hydrological in-situ Networks and Future Developments Including Space-Based Observations <i>Grabs, W.</i>
11.40	On the Spatial Characteristics and Scaling Behaviour of the LISFLOOD and the ERS/SCAT Derived Soil Moisture Fields <i>Laguardia, G.; Niemeyer, S.</i>
12.00	Discussion round
12.30	Lunch
14.00	Roundtable discussion and open exchange of experiences
15.00	Coffee Break
15.20	Conclusions and proposed action agenda
16.30	Concluding remarks and closure