

Monday 6 October, 2014

13:15-13:30 Registration

13:30-13:45 Welcome & Introduction to ISSI
13:45-14:00 Objectives of the workshop

M. Falanga, Science Program Manager
A. Cazenave

Session 1 Introductory session

Chairman: Lennart Bengtsson

14:00-14:45 The continental water cycle

Sonia Seneviratne

14:45-15:30 Space observations of the global water cycle

Eric Wood

15:30-16:00 Coffee break

16:00-16:45 Modeling the continental water cycle; challenges
& prospects

Petra Doll

16:45-17:30 Projections of 21st century hydrology

Hervé Douville

17:30 Welcome reception

Tuesday 7 October, 2014

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| Session 2 | Satellite altimetry & surface waters | <i>Chairman: Andreas Guentner</i> |
| 9:00-9:30 | Global river monitoring by satellite altimetry | Jerôme Benveniste |
| 9:30-10:00 | Lake level & volume monitoring by satellite altimetry & other techniques | Jean François Crétaux |
| 10:00-10:20 | Satellite altimetry for ungauged river basins | Mélanie Becker |
| <i>10:20-10:45</i> | <i>Coffee break</i> | |
| 10:45-11:30 | The SWOT mission for surface waters | Dennis Lettenmaier |
| 11:30-11:50 | High resolution altimetry for flood prediction | Sylvain Biancamaria |
| 11:50-12:10 | Microwave observations for wetland monitoring | Catherine Prigent |
| 12:10-12:30 | Impact of glaciers melting on land hydrology | Rodrigo Abarca Del Rio |
| <i>12:30-14:00</i> | <i>Lunch</i> | |
| Session 3 | Soil moisture from remote sensing | <i>Chairman: Jérôme Benveniste</i> |
| 14:00-14:30 | The Soil Moisture 'Essential Climate Variable' (CCI project) | Richard de Jeu |
| 14:30-15:00 | The SMOS & SMAP missions for monitoring soil moisture | Yann Kerr |
| 15:00-15:30 | Strategies to assimilate satellite radar altimetry observations in hydrological models | Peter Bauer-Gottwein |
| <i>15:30-16:00</i> | <i>Coffee break</i> | |
| 16:00-18:00 | Questions & general discussions | |
| 18:00 | Lecture: Food & water in the 21st century | Ghislain de Marsily |

Wednesday 8 October, 2014

Session 4 Total water storage from GRACE space gravimetry *Chairman: Jianli Chen*

09:00-09:30 The GRACE space mission for land water storage monitoring **Jay Famiglietti**

09:30-10:00 Ground water monitoring from GRACE **Jianli Chen**

10:00-10:20 Land water storage & sea level during ENSO events **Anny Cazenave**

10:20-10:50 Coffee break

10:50-11:20 Hydrological modeling, GRACE & data assimilation **Andreas Guentner**

11:20-11:50 GRACE follow-on missions **Frank Flechtner**

11:50-13:00 Questions & general discussions

13:00-14:00 Lunch

Free time to visit the attractions of Bern. All ISSI facilities are also available for small group discussions afternoon.

18:00 Lecture: The atmospheric water cycle Lennart Bengtsson

19:00 Dinner at the CASINO restaurant, Bern

Thursday 9 October, 2014

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| Session 5 | Water resources: present & future | <i>Chairman: Dennis Lettenmaier</i> |
| 09:00-09:30 | Detecting ground waters in arid regions from space-based IR data | Teodolina Lopez |
| 09:30-10:00 | Effects of dam building on regional hydrology during the 20 th century | Ben Chao |
| 10:00-10:30 | Effects of ground water extraction on regional hydrology (20 th & 21 st centuries) | Y. Wada |
| 10:30-11:00 | <i>Coffee break</i> | |
| 11:00-11:30 | Water resource modeling in highly-anthropogenic river basins (how to account for agricultural & irrigation practices?) | Eric Martin |
| 11:30-12:00 | Water management: link between research products & operational bodies | Jose Achache |
| 12:00-13:30 | <i>Aperitif & Lunch</i> | |
| Session 6 | Water management: General discussions & recommendations | <i>Chairman: Eric Wood</i> |
| 13:30-14:00 | Contribution of ESA missions to surface water hydrology & land cover classification: 20 years of monitoring & future missions | Jérôme Benveniste |
| 14:00-16:00 | Panel discussion on future directions, next steps & recommendations: global space-based & in situ data sets for hydrological products, modeling prospects, user requirements, etc | |
| 16:00-16:30 | <i>Coffee break</i> | |
| 16:30-18:00 | Panel discussion follow-up | |

Friday 10 October, 2014

09:30-12:00

Discussion about the "Space Sciences Series of ISSI"/Springer
Book (chapters & authors, review process and schedule)
