Committee on Earth Science and Applications from Space

Update from Michael King,
Committee Co-Chair

These slides are a personal assessment of issues discussed during recent meetings of the CESAS and should not be cited or quoted as the views expressed do not necessarily reflect those of the CESAS, the SSB, or the National Academies

Committee Roster

CO-CHAIRS

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Joyce E. Penner
University of Michigan

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Chelle L. Gentemann
Earth and Space Research

David L. Skole
Michigan State University

Steven C. Wofsy
Harvard University

Meeting held on Oct 4-5, 2016

- Continuing to aid the Decadal Survey, as appropriate
  - First time that this committee has remained in service during a Decadal Survey
  - Role shifting to evaluate progress on Decadal Survey (future)
    - This will require reappointing and changing membership of committee to eliminate conflicts
    - Current committee formed 4 years ago and has already lost 4 members
- Earth Science Data Symposium
  - Sessions aimed at thinking through issues surrounding Data Management, Data Stewardship, and Data Access, including Big Data issues surrounding and Computational Capabilities, Standardization, Optimization, Management and Delivery
  - Much discussion about a new model for data availability through cloud services
    - Uncertainty of how this would work, and whether NASA would maintain a 'gold standard' data set
    - NOAA/NASA data centers provide more than just data - scientific expertise, organization, curation, but... as data volumes increase, processing data stored on the cloud is more attractive to scientists (and others), so the data center roles may be redefined

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- Earth Science Data Symposium (continued)
  - Commercial cloud services not equipped for long-term support
  - NOAA also considering their upcoming GOES-R data being provided through the cloud
    - Much uncertainty surrounding this option
  - Concern on the training of researchers and students on accessing datasets and documentation through cloud services
    - Recognition that many Universities don't charge overhead on hardware purchases, but do for cloud services, leading researchers to prefer hardware choices to cloud services
- Big data cloud storage, access, distribution, and computation has the potential to democratize earth science research and transform the field

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Earth Science Data Symposium Speakers

Data System Managers

Kevin Murphy
NASA Headquarters

Tsengdar Lee
NASA Headquarters

Ed Kearns
NOAA

Pierre-Philippe Mathieu
ESA

Research Data Users

Sara Graves
University of Alabama

Jeff Dozier
Univ. of California Santa Barbara

People Powered Earth Observations

Lea Shanley
Univ. of North Carolina

Dixon Butler
Independent Consultant

Industry

Steve Adler
IBM