Chair’s Report
4th Meeting of the
Big Data Task Force

March 6, 2017
NASA HQ
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<tr>
<th>Name</th>
<th>Dept./Center</th>
<th>Organization</th>
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<tr>
<td>Charles Holmes - Chair</td>
<td>Retired</td>
<td>Formerly NASA HQ</td>
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<tr>
<td>Reta Beebe</td>
<td>Dept of Astronomy</td>
<td>NMSU</td>
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<td>Eric Feigelson</td>
<td>Center for Astrostatistics</td>
<td>Penn State U.</td>
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<td>Neal Hurlburt</td>
<td>Solar and Astrophysics Lab.</td>
<td>Lockheed Martin</td>
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<td>James Kinter</td>
<td>Center for Ocean-Land-Atmosphere Studies</td>
<td>GMU</td>
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<td>Ashok Srivastava (1)</td>
<td>Chief Data Scientist</td>
<td>Verizon Dev. Labs</td>
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<td>Clayton Tino (2)</td>
<td>Software Architect</td>
<td>Virtustream / EMC</td>
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<td>Raymond Walker</td>
<td>Institute for Geophysics and Planetary Physics</td>
<td>UCLA</td>
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<td>Chris Mentzel (3)</td>
<td>Science Program – Data Driven Discovery</td>
<td>Gordon &amp; Betty Moore Foundation</td>
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<td>Jerry Smith – Exec. Sec.</td>
<td>SMD</td>
<td>HQ NASA</td>
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9/28/16

1. Not present  
2. Remote  
3. Technical expert
Chair’s report to the BDTF

• Gave the BDTF’s 3rd report to the Science Committee via their teleconference on Oct 26.
• Gave the “Interim Report” to SMD leadership on Nov 29, 30.
• Attended 3 data science workshops.
• Visited Dr. David Spergel at the Simons Foundation.
• Prepared for this meeting.
3rd BDTF Report to the Science Committee

The Science Committee held a teleconference on Oct 26 & 27, 2016.

   – I made the TF’s report via WebEx/telephone on the 27th.
   – Well received with some good questions/comments.

The report contained our two findings and recommendation:

**Findings:** 1. “Observing in the Archives”
               2. OCIO & AIST Cloud Computing Initiative

**Recommendation:** Cloud Computing Demonstration of Exoplanet Pipeline Processing
Heliophysics Subcommittee submitted this recommendation to the Science Committee:

In consideration of the pressing oversubscription difficulties across the SMD, the HPS suggested that a rapid survey should be made on the topic of HEC status and plans at other U.S. Agencies* which also sponsor discovery R&A.

- The survey should describe each Agency’s: HEC capability and capacity; numbers of HEC users; expenditure per year (for HEC support personnel and infrastructure, and for new HEC-related hardware); and, the Agency’s HEC allocation policy.
- The purpose of the survey would be to summarize what other Agencies are doing to address their researchers’ needs for HEC resources, as input to NASA decision-making.

*including, e.g., NSF, DOE SC, DOE NNSA, DoD HPCMP
Interim Report of the BDTF

• On Nov 28 and 29 I toured SMD and gave the Interim Report to the AA, Division Chiefs and the program officers for data and computing.
• The report summarized the TF’s activities, findings & recommendations, and a look forward to our 2nd year.
• Well received and some good feedback.
Some Trends and Common Themes

• Adopt “data science” approaches.
  - Establish a Data Science Program Officer w/ a research program.
  - Incorporate data science factors into AOs, selections, mission development reviews, etc.
• Employ commercial cloud services:
  – Science Data processing – for some applications.
  – Science Data storage – probably no!
• Start leveraging on national science data communications programs.
• Evolve to “data analytics” architectures.
Goals of this meeting

1. Revisit with HQ Data and Computing Program Officers for updates and Q&A.
2. Hear about DOE’s Exascale Computing Program and JPL’s Data Science initiatives.
3. Finish up review of NSF Big Data “Hubs” project.
4. Continue work on Study Topics: review research results to date; present outlines of you papers.
5. Generate appropriate findings and recommendations for the BDTF report to the Science Committee (Spring 2017 – tbd date).
Science Committee Reorganization

- The four science subcommittees were elevated to the status of advisory committees under the NAC, each reporting to their respective SMD division directors.
- I still don’t know what this means for the status of the Science Committee as well as the BDTF.
Agenda