Algorithms Workshop Expectations

June 9, 2009

Algorithms Workshop At-a-Glance
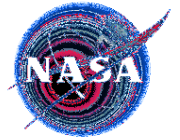
Day 1 (Tuesday June 09, 2009)

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11:20	Level 1 Radiometer Discussion	Jeff Piepmeier
01:10	Level 1 Radar Discussion	Richard West
02:00	Level 3 40 km Soil Moisture One-slide presentations (5) Discussion	Peggy O'Neill et al.
03:15	Level 3 Hi-Res Soil Moisture One-slide presentations (6) Discussion	van Zyl et al.
04:15	Level 3 A/P Soil Moisture One-slide presentations (0) Discussion	Entekhabi et al. (Das)
05:15	Adjourn	

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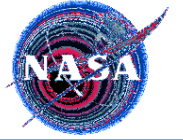
Day 2 (Wednesday June 10, 2009)

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08:30	Level 3 Freeze/Thaw One-slide presentations (1) Discussion	McDonald et al.
09:30	Level 4 Soil Moisture one-slide presentations (0) Discussion	Reichle et al.
10:55	Level 4 Carbon One-slide presentations (0) Discussion	Kimball et al.
01:10	Action Items and Wrap Up	Moghaddam

Algorithms Workshop Expectations (1)
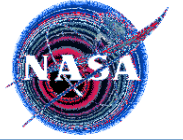
- Critical community assessment of the SMAP Algorithm Theoretical Basis Documents (ATBDs)

  - Review current ATBDs:
    - Will the algorithm outputs meet mission requirements?
    - Are the calibration requirements properly in place?
    - Are the required ancillary data available?
    - Has the validity of these algorithms been demonstrated through enough synthetic or field data?
  - Assess current vs. alternate algorithms
    - Are any existing good algorithms missing?
    - Have these alternate algorithms been properly validated?
  - Identify areas requiring further research and development
    - Are there obvious gaps, where good algorithms don't exist and therefore need to be developed?
   - Any missing ancillary data?

Algorithms Workshop Expectations (2)
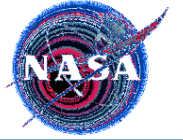
- **Prioritize Algorithm Research and Development Needs**

    - Algorithm attributes
        - Accuracy
        - Efficiency
        - Versatility
        - Need for ancillary data

    - Validation
        - Numerical
        - Field experiments

    - Costs
        - What resources are available?
        - How to optimize resource use?
        - How much time are you willing to spend?

Algorithms Workshop Expectations (3)
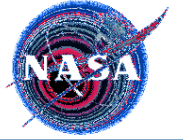
- ## Output of Algorithms Workshop

  - Report
    - Community consensus on algorithms status
    - Prioritized list of research and development needs

  - Action items

- ## Prelude to Cal/Val workshop to follow immediately