National Aeronautics and
Space Administration

Jet Propulsion Laboratory
California Institute of Technology
Pasadena, California

NEWS Integration: Observations

Xiquan Dong

Eric J. Fetzer*

Kyle Hilburn (for Frank Wentz)

Seiji Kato (for Bruce Wielicki)

Sally McFarlane

Bill Olson

Jet Propulsion Laboratory, California Institute of Technology

3rd NEWS Science Team Meeting

Huntsville, Alabama

19 September 2007

Eric.J.Fetzer@jpl.nasa.gov

Overview

- **Theme Objective**
- **Scope of Current Theme-related NEWS Investigation**
- **Progress**
- **Anticipated Accomplishments (near-term and long-range)**
- **Assessment of Overall Science Value (to NEWS and Earth science in general)**
- **Outstanding Issues**

Eric.J.Fetzer@jpl.nasa.gov

Theme Objective

- **Improving the retrieval and validation methodologies for deriving energy and water cycle parameters from remote sensing observations**

Eric.J.Fetzer@jpl.nasa.gov

National Aeronautics and
Space Administration

Jet Propulsion Laboratory
California Institute of Technology
Pasadena, California

Scope of Current Theme-related NEWS Investigation

- **The NEWS investigations in this theme are:**
  - ***Xiquan Dong:*** ***A Study of Arctic Radiation Budget Using CERES/MODIS Satellite and ARM NSA Surface Observations and NASA GISS Model***
  - ***Eric Fetzer:*** ***A Merged Atmospheric Water Data Set from the A-Train***
  - ***Kyle Hilburn & Frank Wentz:*** ***A Hydrologically-Consistent Multi-Satellite Climatology of Water Vapor Transport, Evaporation and Precipitation Over the Oceans***
  - ***Seiji Kato & Bruce Wielicki:*** ***An A-Train Integrated Aerosol, Cloud and Radiation Data Product***
  - ***Sally McFarlane:*** ***Long-term Regional Cloud Vertical Distributions over the ARM Sites***
  - ***Bill Olson:*** ***Calibration and Analysis of Global Latent Heating Estimates Using Passive and Active Microwave Sensor Data***

Eric.J.Fetzer@jpl.nasa.gov

National Aeronautics and
Space Administration

Jet Propulsion Laboratory
California Institute of Technology
Pasadena, California

Scope of Current Theme-related NEWS Investigation: What These Data Sets Provide

- **Water Cycle**
  - *Wentz microwave quantities.*
  - *Fetzer A-Train data.*

- **Energy Cycle**
  - *McFarlane at ARM SGP site.*
  - *Dong at ARM NSA and from satellite.*
  - *Olson from satellites.*
  - *Wielicki from CERES.*

- **Both:**
  - *?*

Eric.J.Fetzer@jpl.nasa.gov

Progress

- **List of publications by team**
- **Adam Schlosser's interim report.**

Eric.J.Fetzer@jpl.nasa.gov

Anticipated Accomplishments (near-term and long-range)

- **Cross-cutting interests by Olson/L'Ecuyer, McFarlane/L'Ecuyer.**
- **Comprehensive picture from ARM and satellite sites.**

Eric.J.Fetzer@jpl.nasa.gov

Assessment of Overall Science Value (to NEWS and Earth science in general)

- **Integrated picture of data products.**

Eric.J.Fetzer@jpl.nasa.gov

Outstanding Issues

- **How important are error estimates at this time?**
- **Do we need a concerted effort to reconcile satellite and ARM views of water cycle processes?**

Eric.J.Fetzer@jpl.nasa.gov

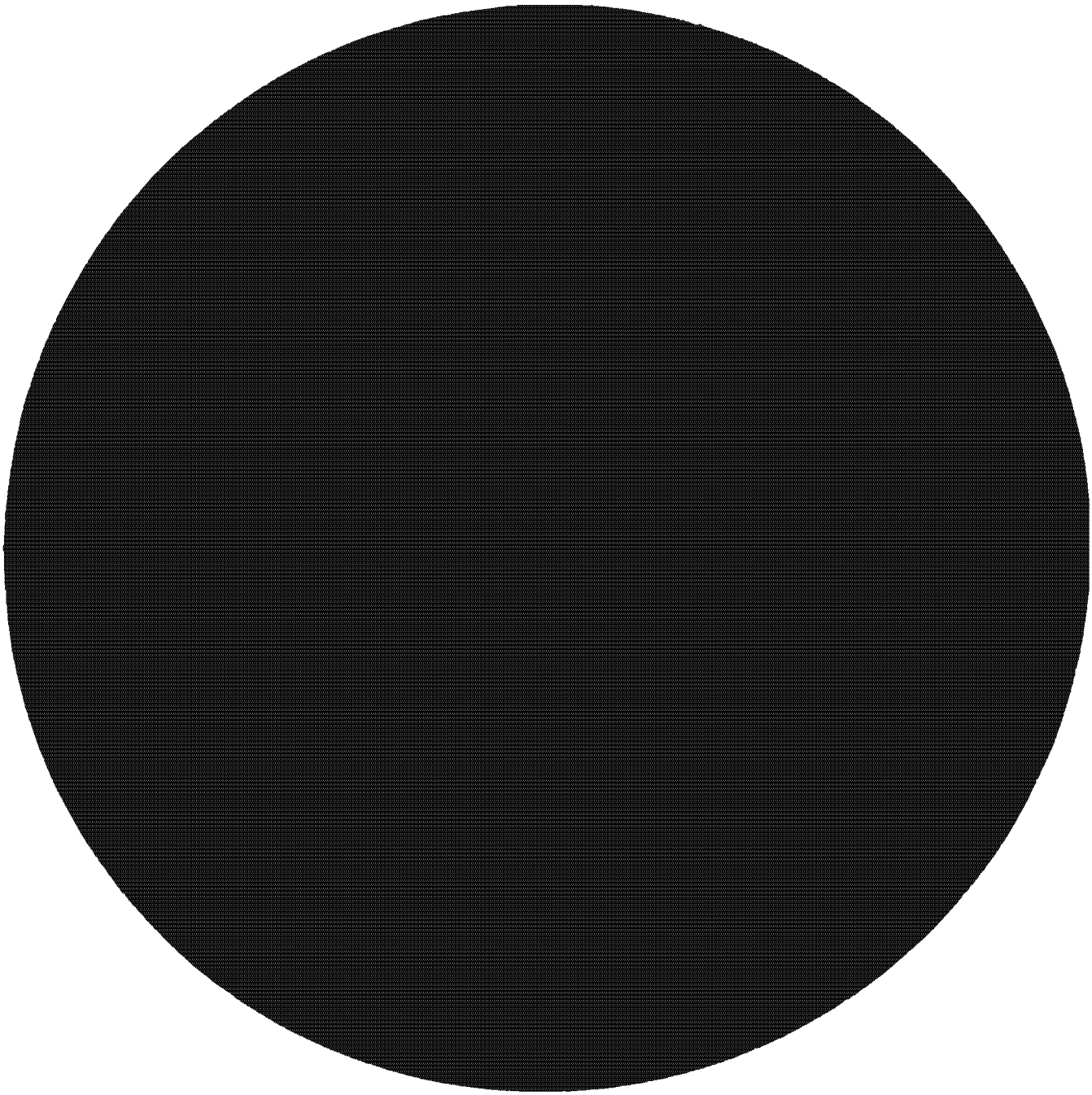
Some Complementary Relationships

- **Wentz, Liu and Curry**
- **L'Ecuyer and several.**
- **Wielicki and Fetzer.**

Eric.J.Fetzer@jpl.nasa.gov

Conclusions

- **We are each progressing steadily.**
- **Need greater dialog between teams**
  - ***Need rationale for greater dialog...***
- **Need reference to Data Table sent by Paul Houser.**

Eric.J.Fetzer@jpl.nasa.gov

End of File