VOCALS DATA MANAGEMENT PLANNING

Steve Williams

NCAR Earth Observing Laboratory (EOL)

Boulder, Colorado

1st VOCALS Regional Experiment Preparatory Workshop

Boulder, Colorado

11-12 June 2007

EOL Data Management Philosophy

- Early involvement in project planning
- Involvement with PIs to develop data management strategy (e.g., plan, policy, format, special collection and processing)
- Consistent implementation of strategy for lifetime of project and beyond
- Reliable and efficient archive and distribution system
- Easy and efficient access to datasets by broader community including stakeholders, educators and students

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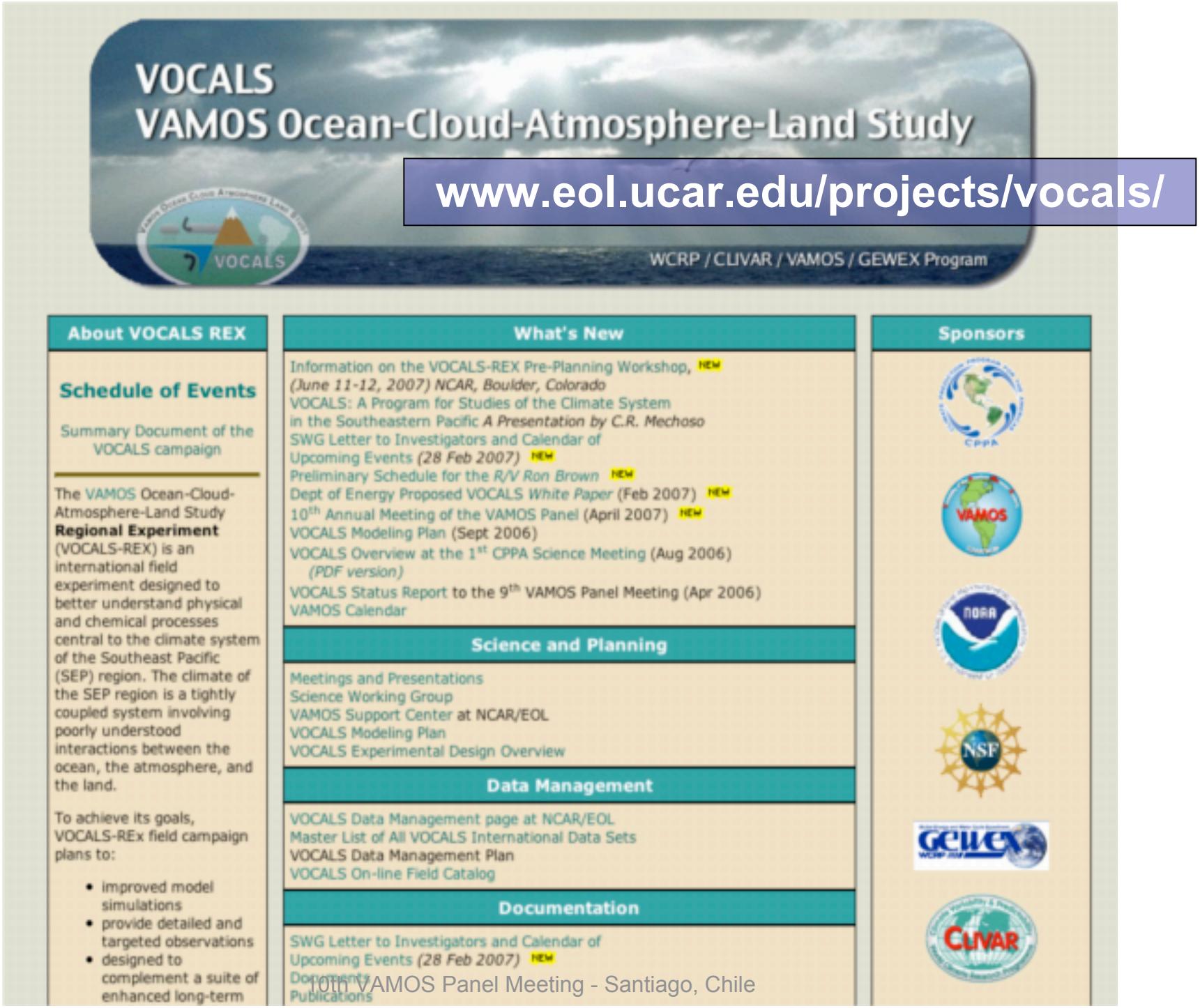
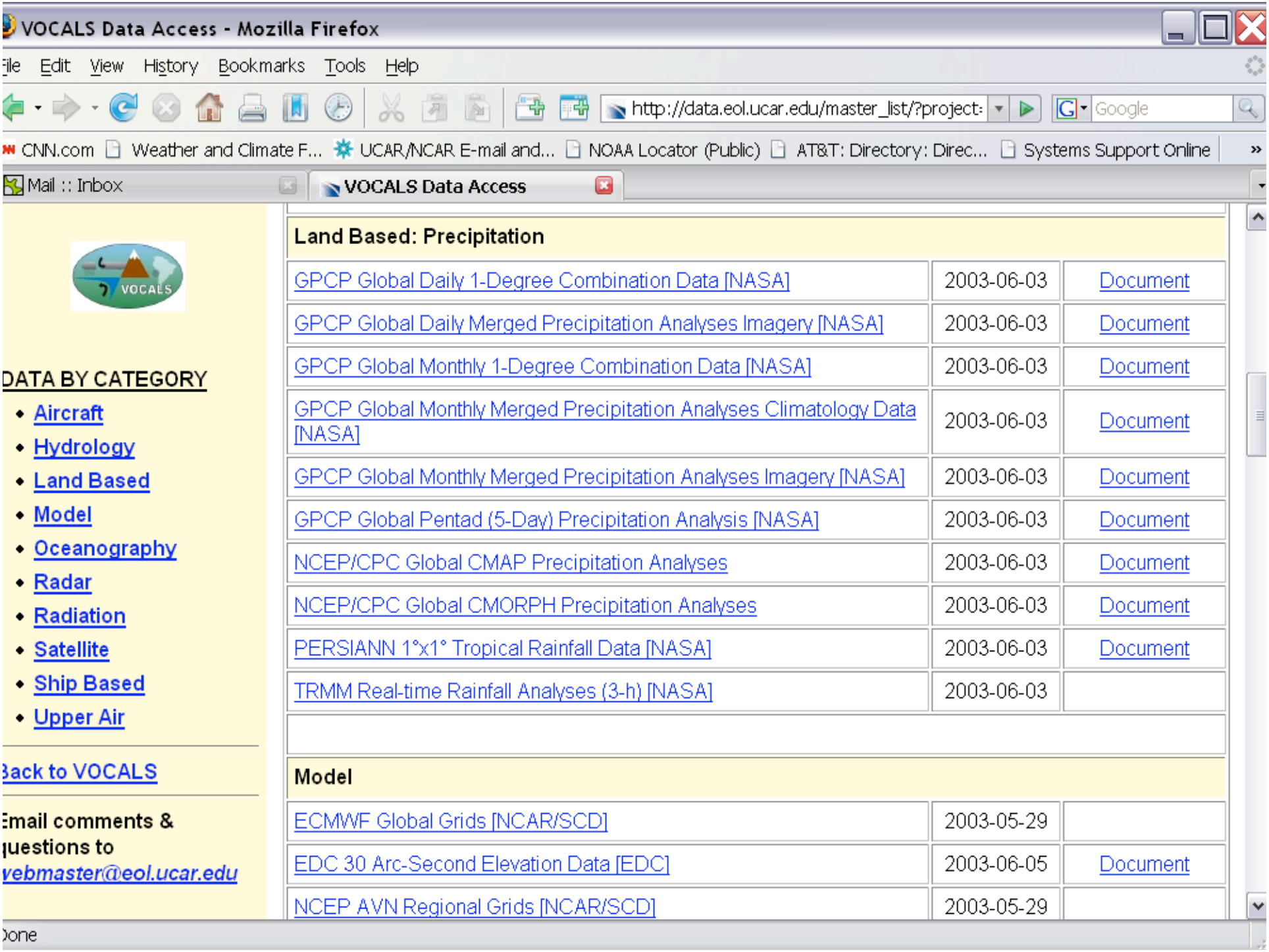

VOCALS
VAMOS Ocean-Cloud-Atmosphere-Land Study
www.eol.ucar.edu/projects/vocals/
VOCALS
WCRP / CLIVAR / VAMOS / GEWEX Program
About VOCALS REX
Schedule of Events
Summary Document of the VOCALS campaign
The VAMOS Ocean-Cloud-Atmosphere-Land Study Regional Experiment (VOCALS-REX) is an international field experiment designed to better understand physical and chemical processes central to the climate system of the Southeast Pacific (SEP) region. The climate of the SEP region is a tightly coupled system involving poorly understood interactions between the ocean, the atmosphere, and the land.
To achieve its goals, VOCALS-REx field campaign plans to:
improved model simulations
provide detailed and targeted observations
designed to complement a suite of enhanced long-term
What's New
Information on the VOCALS-REX Pre-Planning Workshop, NEW
(June 11-12, 2007) NCAR, Boulder, Colorado
VOCALS: A Program for Studies of the Climate System in the Southeastern Pacific A Presentation by C.R. Mechoso
SWG Letter to Investigators and Calendar of Upcoming Events (28 Feb 2007) NEW
Preliminary Schedule for the R/V Ron Brown NEW
Dept of Energy Proposed VOCALS White Paper (Feb 2007) NEW
10th Annual Meeting of the VAMOS Panel (April 2007) NEW
VOCALS Modeling Plan (Sept 2006)
VOCALS Overview at the 1st CPPA Science Meeting (Aug 2006) (PDF version)
VOCALS Status Report to the 9th VAMOS Panel Meeting (Apr 2006)
VAMOS Calendar
Science and Planning
Meetings and Presentations
Science Working Group
VAMOS Support Center at NCAR/EOL
VOCALS Modeling Plan
VOCALS Experimental Design Overview
Data Management
VOCALS Data Management page at NCAR/EOL
Master List of All VOCALS International Data Sets
VOCALS Data Management Plan
VOCALS On-line Field Catalog
Documentation
SWG Letter to Investigators and Calendar of Upcoming Events (28 Feb 2007) NEW
Documents
Publications
Sponsors
CPPA
VAMOS
NOAA
NSF
GEWEX
CLIVAR


VOCALS Data Access - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://data.eol.ucar.edu/master_list/?project:
Google
CNN.com
Weather and Climate F...
UCAR/NCAR E-mail and...
NOAA Locator (Public)
AT&T: Directory: Direc...
Systems Support Online
Mail :: Inbox
VOCALS Data Access
DATA BY CATEGORY
Aircraft
Hydrology
Land Based
Model
Oceanography
Radar
Radiation
Satellite
Ship Based
Upper Air
Back to VOCALS
Email comments & questions to
webmaster@eol.ucar.edu
Land Based: Precipitation
GPCP Global Daily 1-Degree Combination Data [NASA] 2003-06-03 Document
GPCP Global Daily Merged Precipitation Analyses Imagery [NASA] 2003-06-03 Document
GPCP Global Monthly 1-Degree Combination Data [NASA] 2003-06-03 Document
GPCP Global Monthly Merged Precipitation Analyses Climatology Data [NASA] 2003-06-03 Document
GPCP Global Monthly Merged Precipitation Analyses Imagery [NASA] 2003-06-03 Document
GPCP Global Pentad (5-Day) Precipitation Analysis [NASA] 2003-06-03 Document
NCEP/CPC Global CMAP Precipitation Analyses 2003-06-03 Document
NCEP/CPC Global CMORPH Precipitation Analyses 2003-06-03 Document
PERSIANN 1°x1° Tropical Rainfall Data [NASA] 2003-06-03 Document
TRMM Real-time Rainfall Analyses (3-h) [NASA] 2003-06-03
Model
ECMWF Global Grids [NCAR/SCD] 2003-05-29
EDC 30 Arc-Second Elevation Data [EDC] 2003-06-05 Document
NCEP AVN Regional Grids [NCAR/SCD] 2003-05-29
Done

Data Management Considerations for VOCALS

- Establish a project data policy
- Consider data questionnaire to determine needs
- Identify supporting operational datasets
- Will the project data archive be centralized or distributed?
- Consider format and documentation guidelines
- Determine required data for real-time decision making
- Prepare the Data Management Plan
- Identify Data Integration needs (e.g. composites)
- Conduct Analysis Workshop after Field Phase
- Other needs (e.g. mailing lists, CDs)?

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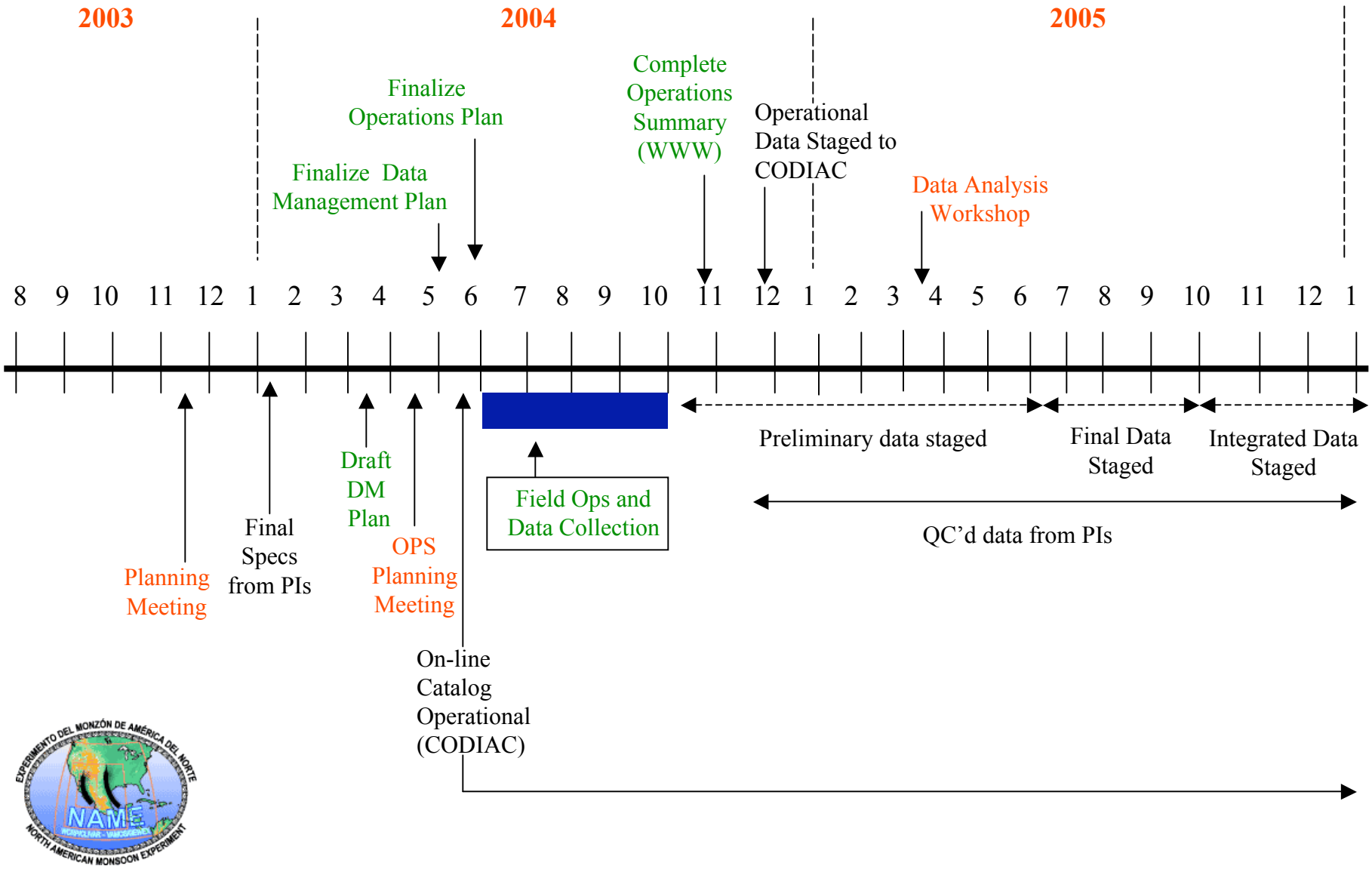
NAME Data Management Timeline



Data exchange guidelines (I) :

(1) To comply with
WMO Resolutions 40 (CG-XII) and 25 (CG-XIII)
in particular: No financial implications.

(2) *Data users* and SDA: Commercial exploitation of SALLJEX data is prohibited.

(3) *Data users*: No transfer to third parties.

(4) Data release to *data users*: Turn-around period.
***Category 1* data (operational, routine): 6 months**
***Category 2* data (research, experimental): 15 months**

Data exchange guidelines (II) :

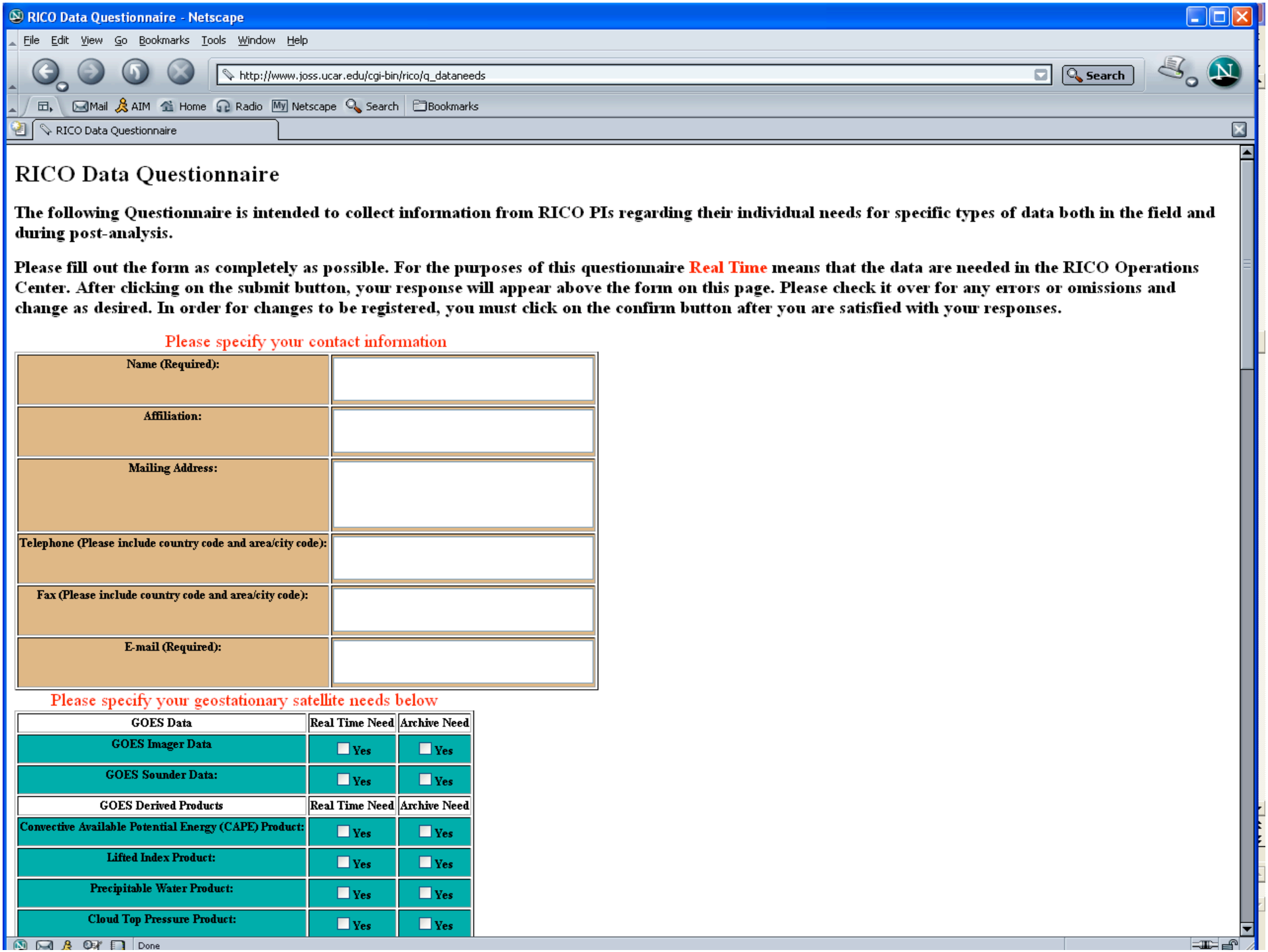
(5) Acknowledgement and citation:

(5.1) *Data users*' publications: SALLJEX, SDA, *Data providers*, funding sources

(5.2) SDA: *Data providers* and their funding sources

(6) Co-Authorship for SALLJEX PIs recommended, collaboration required if PI requests co-authorship (in particular for *category 2* data)

(7) SALLJEX Publication Library at SDA



RICO Data Questionnaire

The following Questionnaire is intended to collect information from RICO PIs regarding their individual needs for specific types of data both in the field and during post-analysis.

Please fill out the form as completely as possible. For the purposes of this questionnaire Real Time means that the data are needed in the RICO Operations Center. After clicking on the submit button, your response will appear above the form on this page. Please check it over for any errors or omissions and change as desired. In order for changes to be registered, you must click on the confirm button after you are satisfied with your responses.

Please specify your contact information

Name (Required):	
Affiliation:	
Mailing Address:	
Telephone (Please include country code and area/city code):	
Fax (Please include country code and area/city code):	
E-mail (Required):	

Please specify your geostationary satellite needs below

GOES Data	Real Time Need	Archive Need
GOES Imager Data	☐ Yes	☐ Yes
GOES Sounder Data:	☐ Yes	☐ Yes
GOES Derived Products	**Real Time Need**	**Archive Need**
Convective Available Potential Energy (CAPE) Product:	☐ Yes	☐ Yes
Lifted Index Product:	☐ Yes	☐ Yes
Precipitable Water Product:	☐ Yes	☐ Yes
Cloud Top Pressure Product:	☐ Yes	☐ Yes

IHOP_2002 DATA MANAGEMENT PLAN OUTLINE

1.0 Introduction/Background
- 1.1 Scientific Objectives
- 1.2 Data Management Philosophy

2.0 Data Management Policy
- 2.1 Data Protocol
- 2.2 Data Processing/Quality Control
- 2.3 Data Availability
- 2.4 Data Attribution
- 2.5 Community Access to Data

3.0 Data Management Functional Strategy/Description
- 3.1 Data Archive and Analysis Centers
- 3.2 Investigator Requirements
  - 3.2.1 Data Format Conventions
  - 3.2.2 Data Submission Requirements
- 3.3 Data Collection Schedule
  - 3.3.1 On-line Field Catalog
- 3.4 Data Processing following the Field Phase
- 3.5 Data Integration
- 3.6 Data Archival and Long-term Access

4.0 IHOP_2002 Data Sets
- 4.1 Data Collection/Processing
- 4.2 Status Update Procedures
- 4.3 In-field Data Display and Analysis Requirements
- 4.4 Coordination with other Programs
- 4.5 Advanced Water Vapor Sensor Intercomparison Data Set

APPENDICES
- A. Research Data Sets
- B. Operational Data Sets
- C. List of Acronyms (LOA)

International H_2O Project
IHOP_2002

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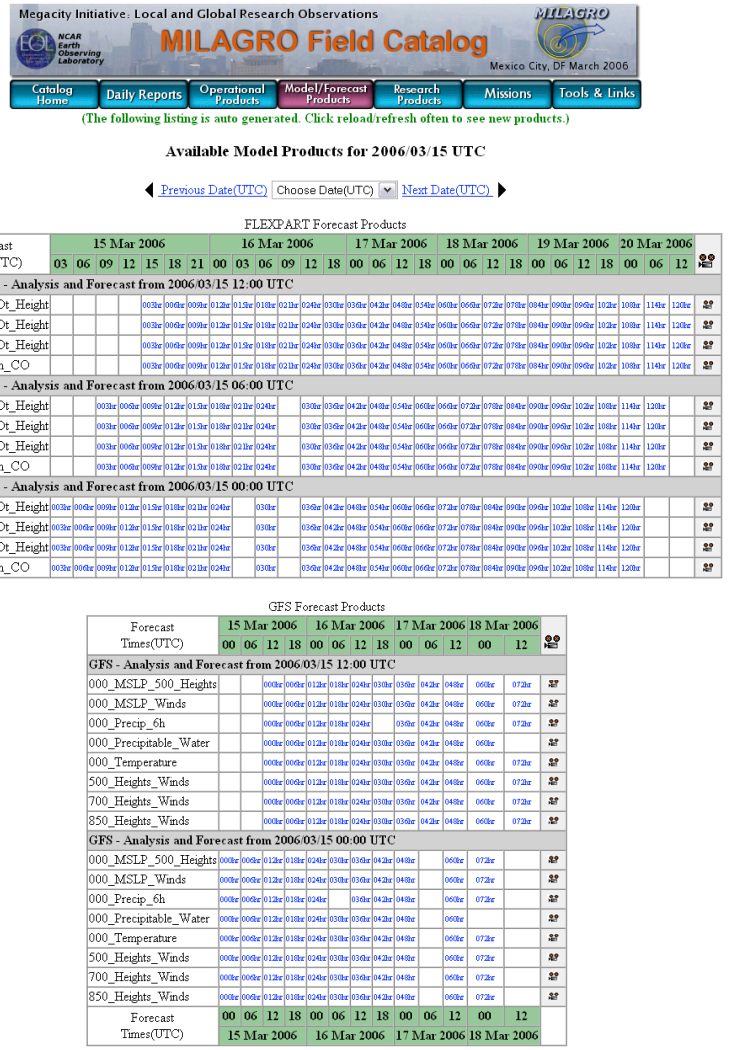
EOL FIELD CATALOG TOOL

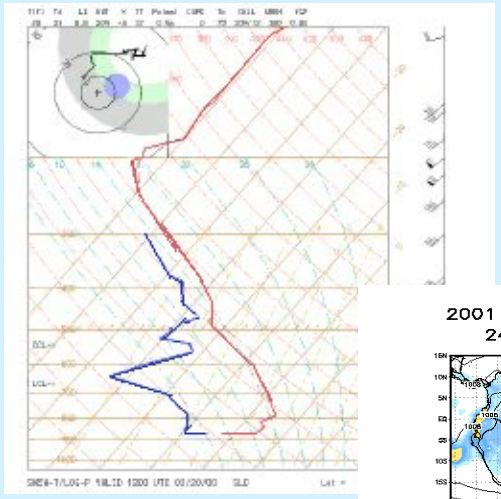
In-field tool to ingest and display operational and preliminary research data and project documentation for making real-time decisions and evaluating project progress

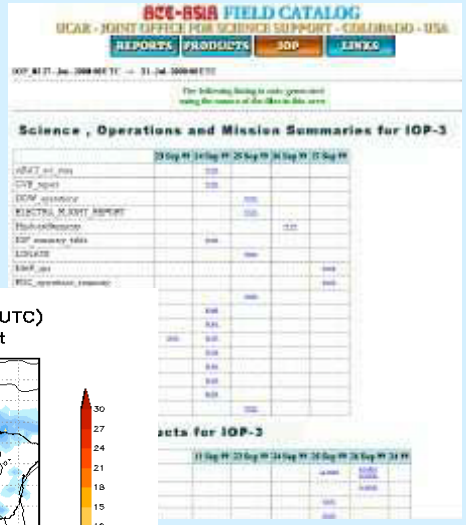
Features:

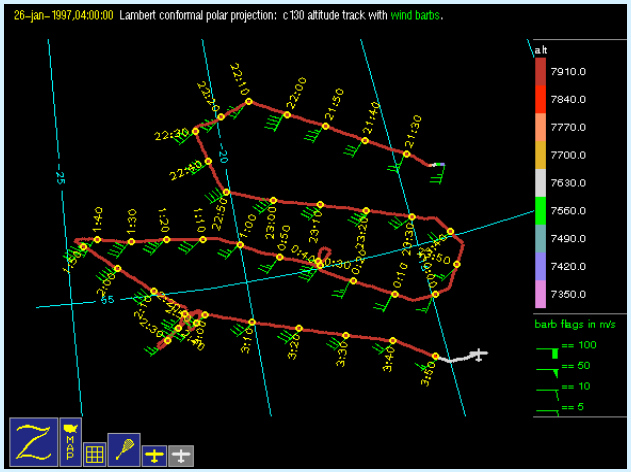
- **Daily Mission Reports**
- **Operations Summary**
- **Facility Status Reports**
- **Data Analysis Products**
- **Authoring Tools**
- **Web-based access**

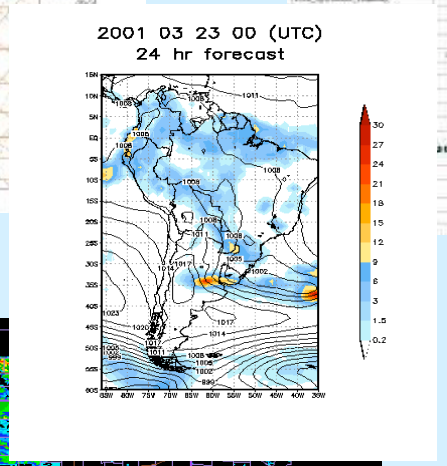


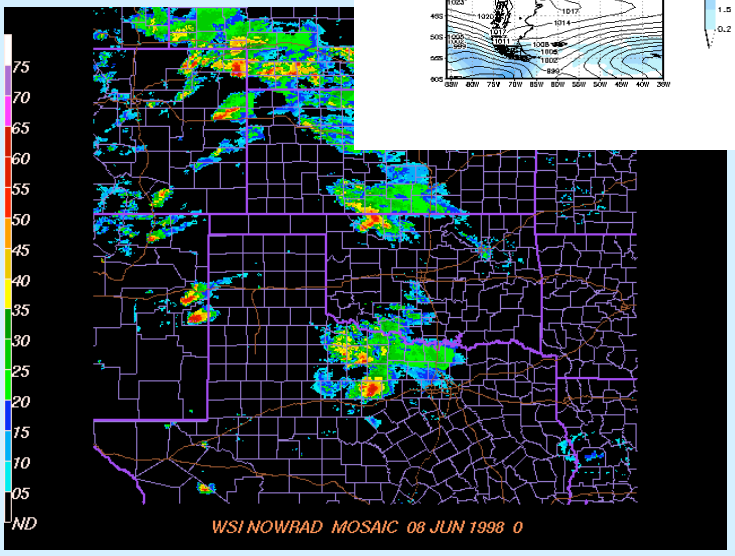
FIELD CATALOG SAMPLE PRODUCTS

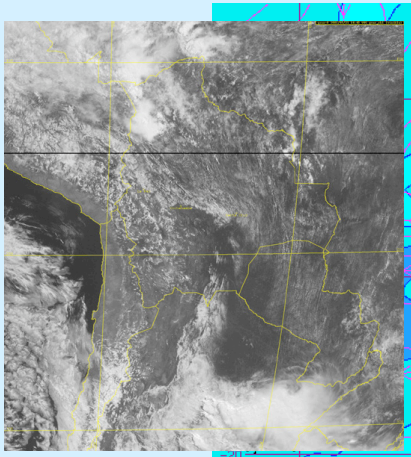


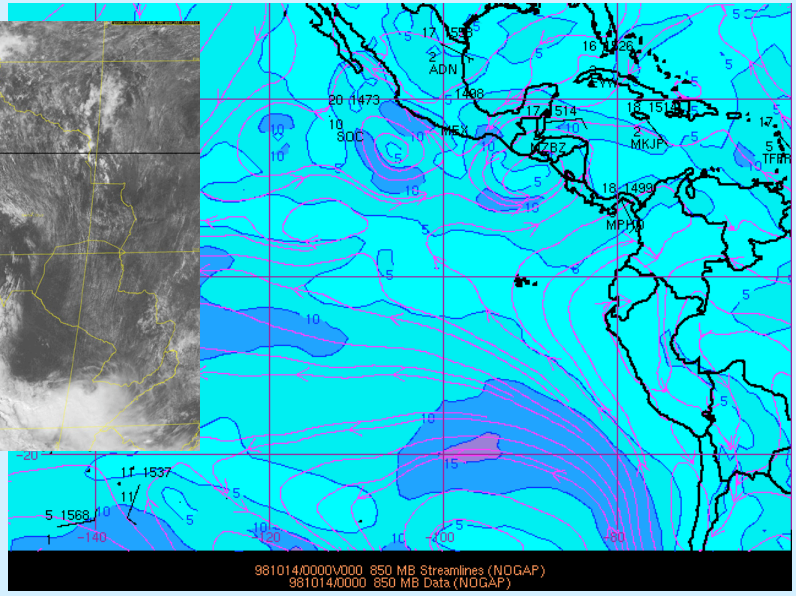




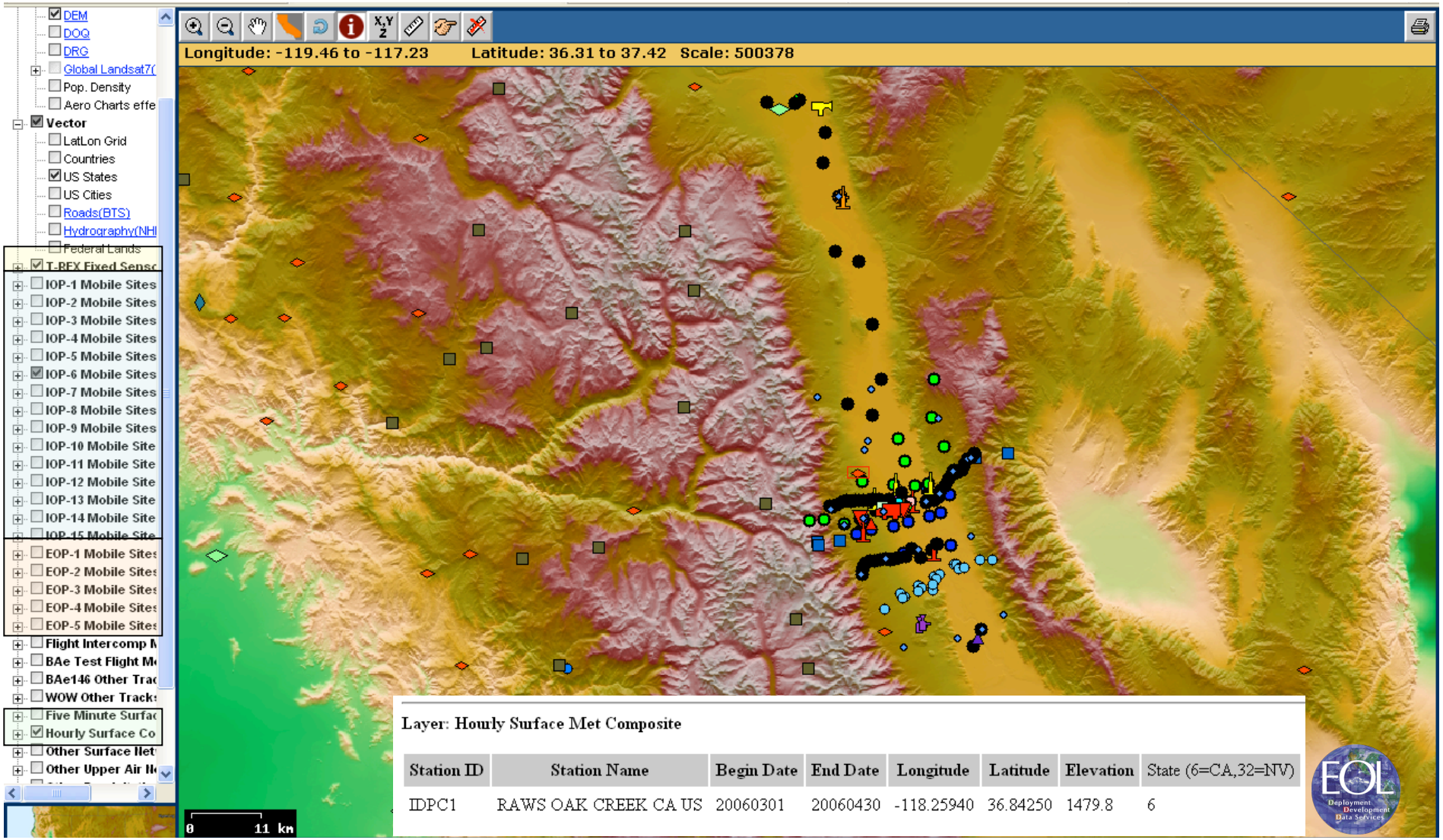








T-REX Map Server



Composite Data Sets at NCAR/EOL

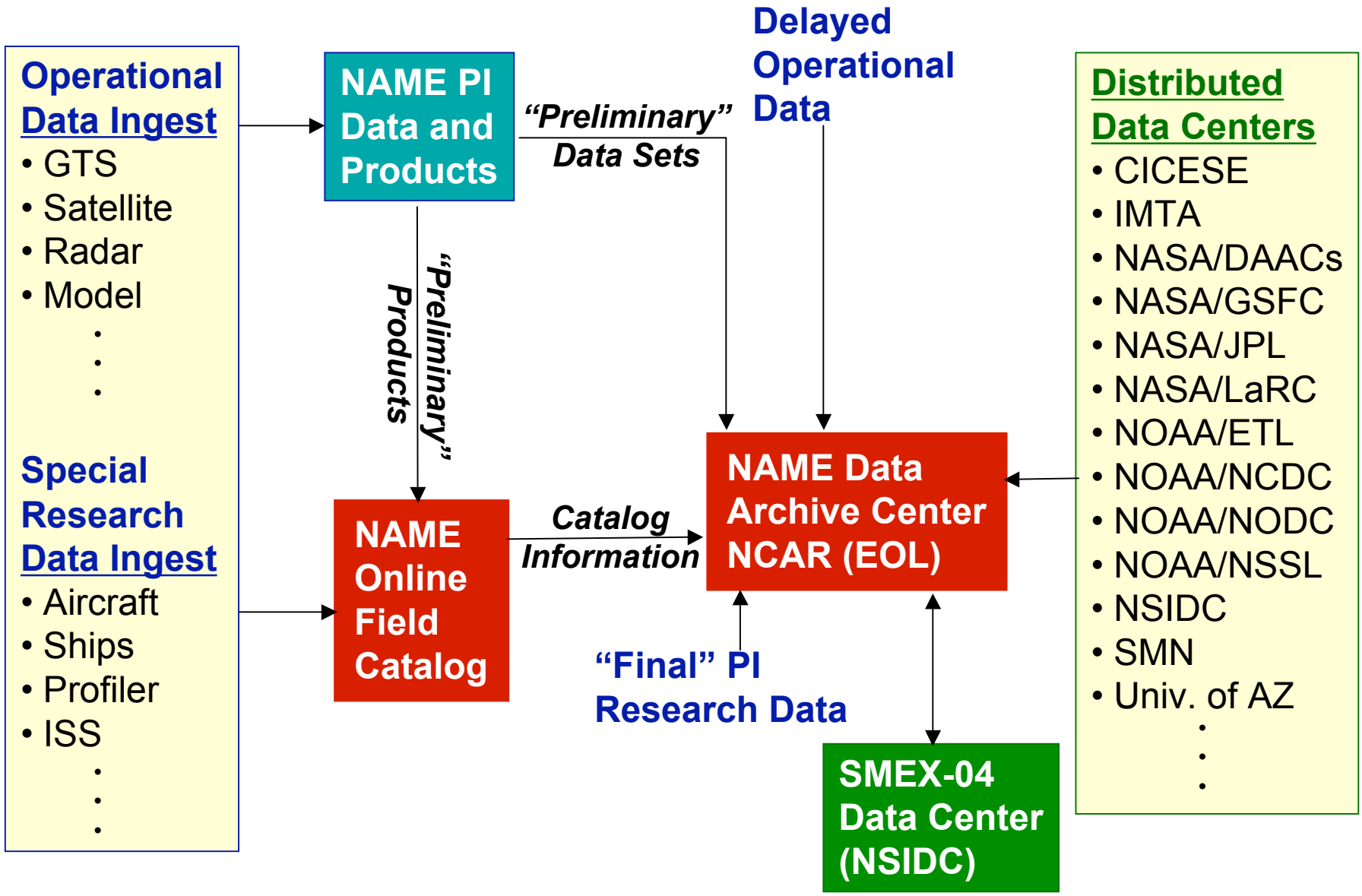
A composite dataset is a collection (over some time period and region) of similar data (e.g. surface meteorological) from a variety of sources, put into a common format, and passed through a uniform quality control.

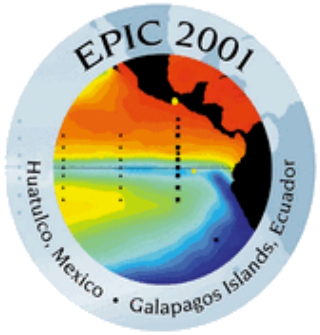
Why does NCAR/EOL develop composites?

- **Provides data in a uniform format with QC.**
- **Allows determination of network/site problems.**
- **Useful for model applications.**
- **Prevents duplication of effort.**

EOL
Deployment
Development
Data Services

NAME Data Flow





EPIC Publication References

- Boccippio, D.J., W.A. Petersen, R. Cifelli, and S.A. Rutledge, 2002: Diurnal cycle of convection in the east Pacific ITCZ during EPIC-2001. Preprint Volume, 25th Conference on Hurricanes and Tropical Meteorology, American Meteorological Society, 29 April - 3 May, 2002, San Diego, CA.

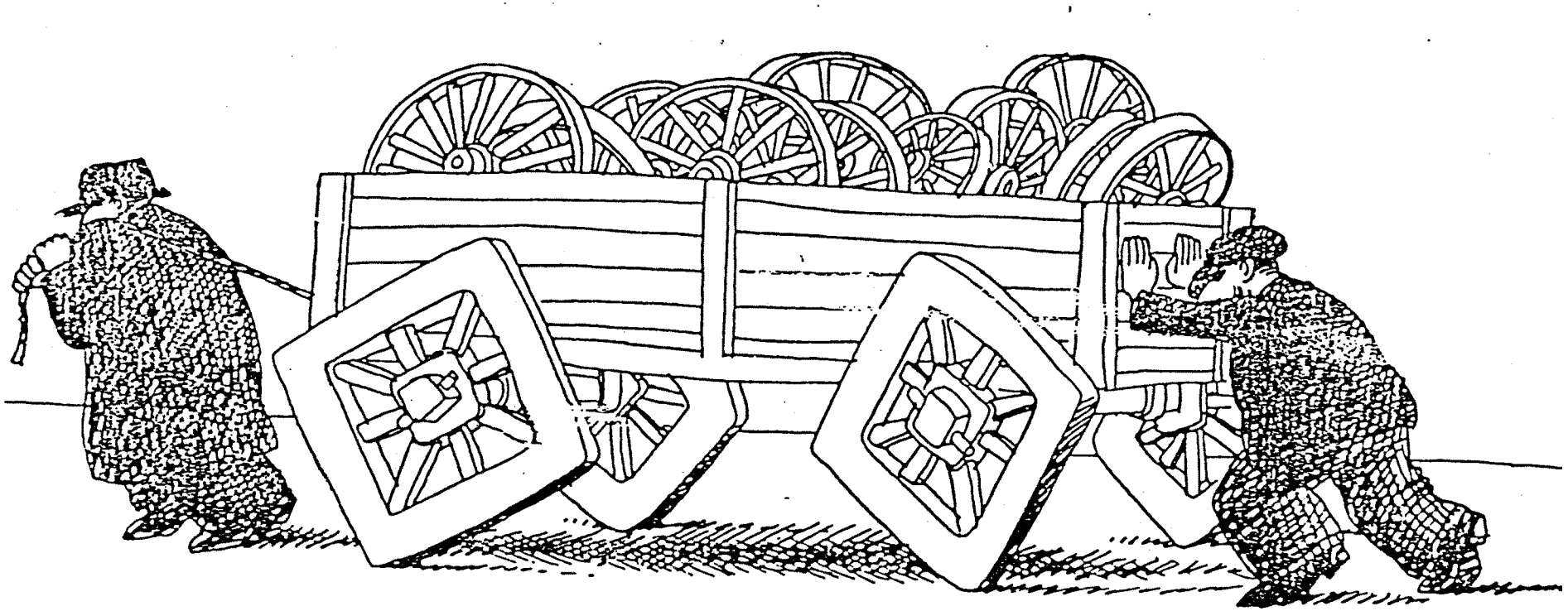
- Bretherton, C. S., T. Uttal, C. W. Fairall, S. Yuter, R. Weller, D. Baumgardner, K. Comstock, R. Wood, and G. Raga, 2004: The EPIC 2001 stratocumulus study. Bull. Amer. Meteor. Soc., 85, 967-977.

- Caldwell, P., C. S. Bretherton, and R. Wood, 2005: Mixed-layer budget analysis of the diurnal cycle of entrainment in SE Pacific stratocumulus. J. Atmos. Sci., 62, 3775-3791.

- Cifelli, R., D. Baumgardner, W. Petersen, S.A. Rutledge, C. Williams, P. Johnston, and K. Gage, 2002: Comparison Z-R Relationships in EPIC-2001. Abstract, 2002 AGU Fall Meeting, 6-10 December, 2002, San Francisco, CA.

- Cifelli, R., S. W. Nesbitt, and S.A. Rutledge, 2003: Convective Variability Across the East Pacific: A Comparison of Precipitation Structure in the TEPPS and EPIC Domains. EPIC 2001 Workshop, 15-16 September, 2003, Boulder, CO.

RESULTS OF BAD OR NO DATA MANAGEMENT PLANNING



THANK YOU!

ANY QUESTIONS?