

XDC MAY 2006 MONTHLY REPORT

1. LOOKING AHEAD

NSA:

SGP:

TWP:

XDC:

BACK-TRAJECTORIES: The aerosol WG frequently needs back-trajectories to analyze in-situ data. They requested the XDC to explore the feasibility of running back-trajectory models on an ongoing basis and store the result in an external data-stream. A Stonybrook graduate student, Howard Teich, is looking into this.

PROBLEM REPORTING FORMS: Need to develop detailed requirements (ECO-545).

XDC QUICKLOOKS: Provide variables and data range or plotting code to the Archive to produce quicklooks for the external data streams.

MANUS:

NAURU:

DARWIN:

DMF:

SDS:

EOP:

2. IOPS AND CAMPAIGNS

3. NEW INSTRUMENTS AND DATA STREAMS

NSA:

SGP:

TWP:

XDC:

DATASETS SUBMITTED TO THE IOP BROWSER THROUGH THE XDC:

PI-DATASETS- (No new data this month.)

BETA-DATA- Updated Collins TDMA beta data with additional data.
<http://iop.archive.arm.gov/arm-iop/0beta-data/tdma/>

SPECIAL-DATA- Continued to add data from the updated (hardware and software) AERI instrument. Needs to be compared to C1 system for several months. This month added new noise filter data for the AERI instrument.

<http://iop.archive.arm.gov/arm-iop/0special-data/turner-aeri/>

Added AMERIFLUX Data for all flux stations in Alaska. Will download additional data as they become available.

<http://iop.archive.arm.gov/arm-iop/0special-data/ameriflux/>

NSA MPACE 2004:

Added Microwave Radiometer Profiler data for the MPACE IOP:

<http://iop.archive.arm.gov/arm-iop/2004/nsa/mpace/cadeddu-mwrp/>

SGP IAP 2006: Uploaded IAP data for April 2006:

<http://iop.archive.arm.gov/arm-iop/2006/sgp/iap/>

DMF:

4. ACCOMPLISHMENTS

NSA:

SGP:

TWP:

XDC:

IOP META-DATA TOOL:

A new IOP metadata DB administrative tool was developed and refined to efficiently enter, review, approve, and implement metadata associations necessary to link our IOP data holdings to the Web-data browse and ordering systems.

DMF:

SDS:

EOP:

5. MEETINGS

NSA:

SGP:

TWP:

XDC:

Rick attended the AGU meeting in Baltimore and the concurrent Earth System Modeling Framework working group meeting.

Rick also gave a public lecture on Hurricanes while serving as the guest scientist on the RCCL Explorer of the Seas (<http://www.rsmas.miami.edu/rccl/>)

EOP:

DMF:

SDS:

6. ISSUES

NSA:

SGP:

TWP:

GENERAL:

MANUS:

NAURU:

DARWIN:

XDC:

PEOPLE DATABASE: Modifications and improvements began on the People DB (ECO-563). Initial modifications include creating a unique user name for each user.

WPDN: Switched source of WPDN data to the UCAR IDD network, since FSL discontinued providing data. We are missing a couple of weeks of data in the interim, but replacement data can be picked up from the MADIS Archive. A DQR will be written to that effect. Also, some minor changes may be required to the ingest, but the data look very similar to the data previously provided by FSL.

GOOGLE: Provided monthly search statistics from the Google Box to Rolanda Jundt, dating back to August 2005. Need to finalize the format of the statistics.

POSTER SUBMISSION: A new web administrative application was developed for extended poster submissions. This application is based on a newly designed poster database (an ECR is upcoming), which will be used in the next STM poster abstract submission. Currently adding the capability to submit either a poster or a poster abstract (but not both).

BARROW RADIOMETER: Continued work on an ingest to convert Barrow surface radiation data (Ells Dutton) from ASCII to netCDF. Final testing and related documentation are underway.

MTSAT WEB APPLICATION: MTSAT composite images are available through (http://www.xdc.arm.gov/data_viewers/twpmatsat_composite). Currently working on new web application to handle all the composite images for NSA, SGP, TWP GOES and TWP MTSAT. The application has been modified to run more quickly and efficiently. (It will go into production when web servers are installed on new production machine.)

MTSAT DATA INGEST: Began review of new MTSAT data format to prepare for ingest development.

PHP VULNERABILITY: Work has begun on reducing the vulnerability in ARM PHP applications. The Research Highlights and People DB PHP Web applications have been updated. Data, Instruments, Measurements, and Education/Ask a Scientist are in review.

Updated the IMMS and DQA systems to remove the “register_globals” vulnerability (EWO-11609). (No new work this month.)

ICRCCM-1 DATA: Continued work on capturing the input requirements for ICRCCM-1, including all historical correspondences, publications and reports, and results for longwave, and shortwave clear-sky and cloudy conditions, as well as aerosols. They will be available through the IOP Browse Tool Web site.

INSTRUMENT MAPS: Continued to retrieve new and updated datasets for the SGP site, i.e. digital elevation model data, satellite data, aerial photographs, soil data, land use/land cover data. It was determined that the resolution of the GPS locations for the instruments at the SGP site is not at enough detail to plot accurately on a fine resolution GIS map. The Suominet GPS data includes very fine resolution location data and will be used for locating the Extended Facility sites at the SGP.

CIMEL DATA TRANSFER: Work began on using the Internet for Cimel data transfer rather than the GOES satellite uplink due to undetected transmitter failures (at SGP) and low sun angle (at NSA). See ECO-00555 for additional details. (No additional work this month.)

GLOBAL FORECAST SYSTEM (GFS) NCEP DATA: Work began on the visualizations for the GFS data stream. Working with the Archive to provide GFS quicklooks. We received NCEP GFS data from Dec 2005 through Feb 2006. After Dec additional points were added to include the Niamey site. The coordinates of 25 points form a 5x5 matrix with 1-degree resolution. The ingest was modified to include the new points. See ECO-00477. (Visualizations are on hold due to higher priority work.)

CIMEL SUNPHOTOMETER: There have been problems and updates to the Cimel Sun-Photometer data. There was a satellite transmitter problem at the SGP Cimel from 5/7/05 – 9/14/05 (P050920.1). Also Aeronet has implemented a new algorithm on all sites. Data will need to be reprocessed. Some changes in processing have been proposed (P050923.1). A BCR will follow. A problem with the battery voltage of the Nauru CSPHOT is being tracked in DQPR-721.

ETA MODEL DATA: Looking into archiving an ETA analysis dataset for the NSA to replace the data we have been collecting, which is large and in GRIB format. We have picked up new sample data from NCEP and are currently comparing the files to those files collected at Penn State to see if they will be suitable. See ECR-00476 for details. Looking at GRIB utility GRADs for converting ETA (and GFS) to netcdf.

TWP RAIN GAUGE DATA: It was decided that the AWS have tipping bucket rain gauges and the existing SMET data logger will collect the precip data directly from the AWS, via wire connectors. (See ECO-00522 and BCR 01213 for details.)

IOP SPECIAL DATA: Moved “dummy” IOP entries in development into production for data under the special-data area of the IOP so they can be included in data searches. Next step is to add pi-instruments and metadata for each.

SAR (SITE ACCESS REQUEST) SYSTEM: No new activity this month.

SGP IAP: Lynn is working with Annette Koontz to install the CMDL IAP ingest and review data (BCR-00989). New fieldnames have been generated, and sample output files have been sent to for review. Annette has begun working on the ingest for data format prior to March 2006. The format changed after that and will require a separate ingest.

AMERIFLUX: (ECR-00288). All Ameriflux data for Alaska have been downloaded to the Special Data area of the IOP Browse Tool (See IOP Browser data section above).

NSA CRN RAINGAUGE: The ingest is on hold, waiting for availability of public ftp access from NOAA/CRN, which was tentatively scheduled for the end of May.

NWS SOUNDINGS: QC'd high resolution soundings were received for February and March 2006 from NCAR. Both the netCDF and raw data have been sent to the ARM Archive (nsa06snwsupabrwx1, sgp06snwsupaddcX1, sgp06snwsupaounX1, sgp06snwsupatopX1).

IOP DOCUMENTATION: Joyce Tichler continues to enter metadata for IOPs and has contacted PIs (along with Jimmy Voyles) to retrieve past IOP data not delivered.

BIRTH OF A DATA STREAM (BODS): (No BODS submitted this month.)

XDC DOCUMENTATION: (No new documentation this month.)

SERVER HARDWARE UPGRADES: Migration of LINUX systems to the new backup server and client software upgrades were completed. The Legato backup system is now fully operational and the old backup system removed from service. The new tape library, SAIT, arrived and was installed.

Two new linux servers are being configured to replace the existing Solaris web-servers.

TWP MANUS PROCESSED AVHRR: Continued processing NOAA-16 2005 data and began processing NOAA-18 data.

TWP NAURU PROCESSED AVHRR: Continued processing NOAA-16 2005 data and began processing NOAA-18 data

TWP KWAJ AVHRR: Processed data for 20060401 – 20060430.

FILE TRANSFER: The XDC sent 20,189 files with a volume of ~452 GB in May.

DMF:

SDS:

EOP:

GENERAL:

NSA:

SGP:

TWP:

7. ONGOING XDC ENGINEERING TASKS