

# ***STP Quarterly Review***

**08 Apr 2009**

**2QFY09**

**Dr. William F. Denig, Chief  
Solar & Terrestrial Physics Division**

**NOAA/NESDIS/NGDC**

**303 497-6323**

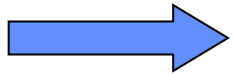
**[William.Denig@noaa.gov](mailto:William.Denig@noaa.gov)**





# OUTLINE

## Solar & Terrestrial Physics Division



### **STP Program Overview**

**Milestones & Performance Measures**

**Awards and Personnel Kudos**

**Accomplishments**

**Special Interest Items**

**Issues & Summary**



# Solar & Terrestrial Physics Division Personnel



## Solar & Terrestrial Physics Division

William Denig/F, Chief

Janet Brown/F, Secretary

Karen Horan/F, Physical Science Tech

Craig Clark/F, Scientific Data Tech

### Space Environment Group (SEG)

#### Eric Kihn/F, Team Lead

- Terry Bullett/C
- Ray Conkright/C
- Ed Erwin/F
- Rob Redmon/F
- Herb Sauer/G
- Dan Wilkinson/F
- Kelly Prendergast/F
- Jim Manley/C
- Helen Coffey/G
- Anu Sunaravel/S

### Earth Observation Group (EOG)

#### Chris Elvidge/F, Team Lead

- Kim Baugh/C
- Ben Tuttle/C
- Tilottama Ghosh/C
- Daniel Ziskin/C

#### Key

F – Federal

C – CIRES/CIRA

S – Student

G – Guest Scientist

### Earth Geophysics Group (EGG)

#### Vacant/F, Team Lead

- Patrick Alken/C
- Rob Prentice/C
- Fran Coloma/C
- Justin Mabie/C
- Andrea Bilich/F, NGS
- Don Herzog/G



# STP Division Overview

## Personnel Changes



- **Gains**

- Kelly Prendergast/Federal – SEG – SWPC Liaison
- Anu Sunaravel/CIRES – SEG – Student Web Designer

- **Losses**

- None

- **Vacancies**

- Space Weather Modeler – Interviews in progress
- NPOESS S/W Engineer – On hold pending IPO action
- SEG Solar Physicist – On hold
- STP Real-time Data Manager – On hold
- EOG Data Manager – Status unknown

- **Inbound**

- Matthew Niznik – Hollings Scholar (SEG) – University of Miami
- Salman Naqvi – Hollings Scholar (EOG) – NJ Institute of Technology

- **Pending**

- Nothing to report



# STP Division Overview

## Agreements – Status



### STATUS

Scope	Team	Type	Partner	NOAA Legal	DOC Legal	NGDC Signed	Partner Signed	Start	End	Status	
DMSPP Archive	SEG	MOA	DMSPP	X	X	X	X	30-Mar-07	30-Sep-09	G	<i>Renewal under discussion</i>
SWx Climatology	SEG	MOU	AFCCC	X	X	X	X	27-May-04	01-Oct-14	G	In place - nothing to report
Ionospheric Data	SEG	MOU	AFWA	X	X	X	X	21-Aug-06	21-Aug-11	G	In place - nothing to report
Ionosonde Sites	SEG	MOU	USGS	X	X	X	X	06-Apr-09	05-Apr-14	G	<i>Finalized</i>
NASIC	EOG	MOU	NASIC	X	X	X	X	09-Mar-06	01-Jan-11	G	In place - nothing to report
CORS Support	EGG	AGR	NGS	n/a	n/a	X	X	01-Oct-03	30-Sep-09	G	In place - nothing to report
Earth Imagery	EOG	MOU	NGA					<i>TBD</i>	<i>TBD</i>	Y	<i>On hold</i>
SEM-N - AFRL	SEG	MOA	AFRL	X	X			<i>TBD</i>	<i>TBD</i>	Y	<i>In final coordination</i>

Updated: 06 April 09



# STP Division Overview

## CDMP – Status



Dataset	Funded in FY08	Submitted - FY09	POC	Contractor (\$K) - Requested - FY09	Contractor (\$K) - Expended YTD	Percentage Expended - FY09
Heat capacity mapping mission (L44)	X	X	Elvidge	680.0	99.8	14.7%
DMSP film scanning (L3)	X	X	Elvidge	2,000.0	53.5	2.7%
Historical solar spectral data (L16)	X	X	Denig/Coffey	65.0	13.9	21.4%
Cosmic rays - Forbush archives (L42)	X	X	Denig/Coffey	85.0	87.2	102.6%
Historical solar observations (L18)	X	X	Horan	90.0	25.5	28.3%
Historical ionosonde records (L7)	X	X	Redmon	100.0	3.3	3.3%

Updated: 08 April 09

***FY09 Allocations Have Not Yet Been Determined***



# STP Division Overview

## Balance Sheet



FTEs					
	STP	EGG	EOG	SEG	Sum
Federal FTEs	0.00	1.08	1.93	6.99	10.00
CIRES FTEs	0.00	3.20	3.05	6.18	12.43
<b>Sub-Total</b>	0.00	4.28	4.98	13.17	22.43
<b>Total Program FTEs:</b>					<b>22.43</b>
Income					
	STP	EGG	EOG	SEG	Sum
Carryover (from FY08)					0
Base Fund Allocation	0	108,466	354,332	902,402	1,365,200
Base Travel Allotment		2,575	3,628	14,717	20,920
Other NOAA	0	275,000	170,000	1,160,062	1,605,062
non-NOAA	0	80,000	287,000	713,000	1,080,000
<b>Sub-total:</b>	0	466,041	814,960	2,790,181	4,071,182
<b>Total Program Income:</b>					<b>\$4,071,182</b>
Expenses					
	STP	EGG	EOG	SEG	Sum
OD Overhead	0	0	28,700	33,500	62,200
Federal Salaries	0	144,583	426,527	1,277,013	1,848,122
CIRES Salaries	0	281,240	322,492	864,642	1,468,374
Other CIRES	0	4,962	15,000	81,220	101,182
Contracts	0	95,605	0	419,500	515,105
Approved Fed Travel (Base)	0	2,575	3,628	14,717	20,920
Approved Fed Travel (Customer)	0	0	16,371	33,387	49,758
Transfers	0	0	0	240,000	240,000
Assorted Costs	0	0	12,000	5,100	17,100
Publications	0	3,000	5,000	7,000	15,000
<b>Sub-total:</b>	0	531,965	829,718	2,976,079	4,337,761
<b>Total Program Expenses:</b>					<b>\$4,337,761</b>



# STP Division Overview

## Proposals Status (Pending: \$219,212)



Group	Proposal	PI	Program	Agency	Status	FY09	Years	Total
EOG	Rapid Assessment of Human Activities for Priority Seascape Designation in the Coral Triangle Region	Elvidge	Coral Reef	NOAA	Accepted \$25,000	\$55,000	2	\$90,000
EOG	Surveillance and reporting on fishing boat, fishing platforms and fish attracting devices (FADs) in the CTI region	Elvidge	Coral Reef	NOAA	Declined	\$85,000	4	\$340,000
EOG	Atlas of Coral Reef Bleaching for Priority Seascape Designation in the Coral Triangle Region	Elvidge	Coral Reef	NOAA	Declined	\$192,000	2	\$384,000
EOG	Delineation of Power Outage Extents from the International Space Station	Elvidge	Earth Sciences	NASA	In review	\$180,000	3	\$381,000
EOG	Estimation of Gas Flaring Volumes Based on MODIS Fire Detection Data	Elvidge	Earth Sciences	NASA	In review	\$110,000	1	\$110,000
EGG	Fundamental Studies of Equatorial Ionospheric Electrodynamics Having Applications to Future DoD Space Weather Products	Maus	CNOFS	AFOSR	In review (declined)	\$108,922	3	\$341,692
SEG	Prototype Cloud Based Storage for Networked Computing	Kihn	HPCC	NOAA	Submitted	\$65,000	1	\$65,000
SEG	Portable Tiled Display VideoWall for Geospatial Visualization	Kihn	HPCC	NOAA	Submitted	\$46,000	1	\$46,000

Updated: 06 April 09

*Only accepted proposals are included in the STP balance sheet*



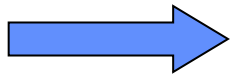


# **OUTLINE**

## **Solar & Terrestrial Physics Division**



### **STP Program Overview**



### **Milestones & Performance Measures**

### **Awards and Personnel Kudos**

### **Accomplishments**

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# Milestones & Performance Measures

## FY09 Milestones



PPBES Program	STP FY09 Milestones (Proposed)	Status	Planned Completion Date	Actual Completion Date	Responsible Person
AOP → Space Weather	Complete data rescue of available synoptic solar drawings from the Wendelstein Solar Observatory for the period 1946-1987.	C	(Q1) 12/31/2008	(Q1) 12/31/2008	Horan / Fischman
AOP → Marine Transportation Systems	Develop a generalized methodology for the detection of coral reef bleaching from satellite-based imagery.	C	(Q1) 12/31/2008	(Q1) 12/31/2008	Ziskin
Marine Transportation Systems	Initiate reprocessing of Defense Meteorological Satellite Program (DMSP) imagery for the period 1992-2005 using new software procedures providing archival product consistency.	C	(Q2) 3/31/2009	(Q2) 2/28/2009	Erwin
Space Weather	Implement new visualization product for energetic particle data from the POES Space Environment Monitor (SEM) that will provide a planetary perspective for this environment. (SWP)	C	(Q2) 3/31/2009	(Q2) 3/31/2009	Wilkinson
AOP → Space Weather	Release version 5 of the NOAA Space Physics Interactive Data Resource (SPIDR) utility including improved database access and metadata editing capabilities. (SWP)	C	(Q2) 3/31/2009	(Q2) 3/31/2009	Kihn
Space Weather	Develop scripts to convert raw magnetometer data into WDC format and make those scripts available to the public to increase the useable of the NOAA data products.	G	(Q3) 6/30/2009		Mabie
AOP → Marine Transportation Systems	Estimate national and global gas flaring levels for 2007 using Defense Meteorological Satellite Program (DMSP) nighttime lights imagery.	G	(Q3) 6/30/2009		Elvidge
Space Weather	Provide functional requirements and mapping to the CLASS Developmental Team for the Simple NOAA Archive Access Portal (SNAAP) API.	G	(Q3) 6/30/2009		Kihn
Marine Transportation Systems	Complete development of a radiance calibrated global nighttime lights product set for Defense Meteorological Satellite Program (DMSP) spanning 1996-2006.	G	(Q4) 9/30/2009		Elvidge
AOP → Space Weather	Acquire and archive historical GOES 8-12 "raw" data files currently maintained by the NWS Space Weather Prediction Center (SWPC) on CD. (SWP)	G	(Q4) 9/30/2009		Wilkinson
Space Weather	Release version 2 of the MIRRION ionospheric sounding data collection, processing, and dissemination system for increased station capabilities and improved reliability.	G	(Q4) 9/30/2009		Redmon

AOP → AOP milestone

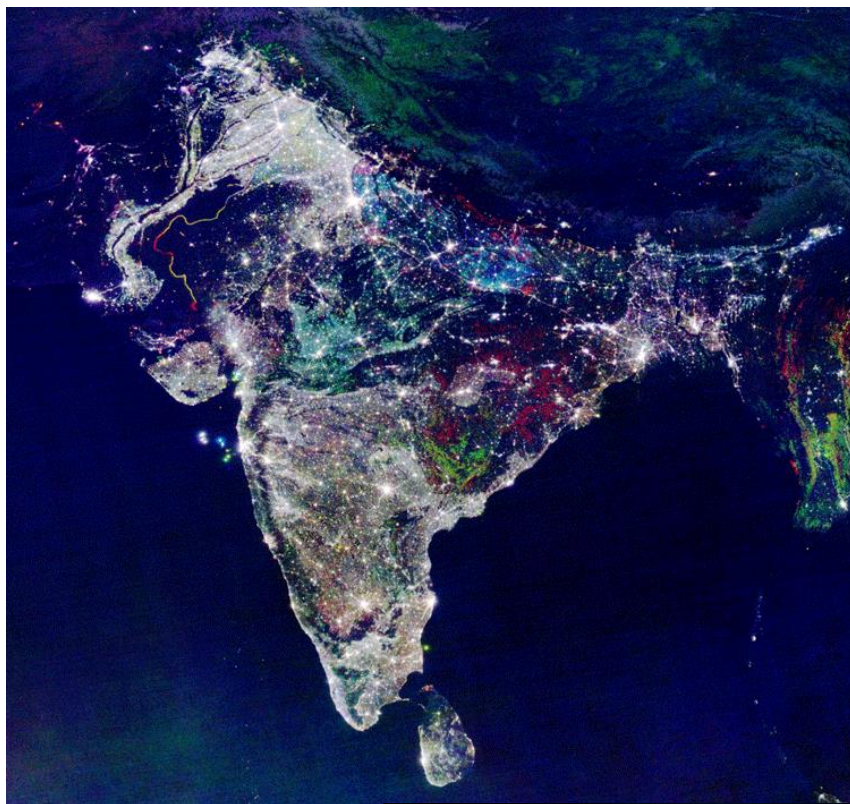
**C** Complete  
**G** On-track

**Y** Watch Item  
**R** Issue



# Milestone (NGDC Internal)

## Nighttime Earth Imagery Datasets



**Color  
Composites  
1992-present  
DMSP F11-16**



**Milestone:** Initiate reprocessing of Defense Meteorological Satellite Program (DMSP) imagery for the period 1992-2005 using new software procedures providing archival product consistency.

**Background:** NGDC archives of DMSP Operational Linescan System (OLS) data contain nighttime earth imagery products having significant value for assessing anthropogenic impacts of artificial lighting, global gas flaring and commercial fishing activities. NGDC has recently developed a technique to provide radiance calibrated imagery to users of NOAA data and products.

**Completion Date:**

Planned (FY09-2Q) 31Mar09

Actual (FY09-2Q) 28Feb09

**Significance:** NOAA environmental datasets are well regarded within scientific and political circles as accurate, definitive and unbiased.





# Milestone (AOP) SPIDR Version 5



The Space Physics Interactive Data Resource (SPIDR) portal to NOAA's space environmental data has been significantly upgraded including the following:

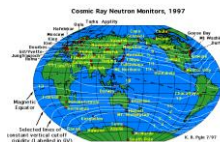
- *Enhanced handling of site-level metadata by data managers & data providers*
- *Clear separation between environmental datasets and descriptive metadata*
- *All maps based on MS Virtual Earth control with active links to metadata*
- *Wiki-style documentation management for data descriptions and user guides*
- *Improved ordering scheme for space weather data & earth imagery products*
- *New environmental datasets added and extended cosmic-ray database*
- *Successfully tested middleware & SWx datasets for cloud computing compatibility*

## Completion Date:

Planned (FY09-2Q) 31Mar09

Actual (FY09-2Q) 31Mar09

STP PMR – 08 Apr 2009



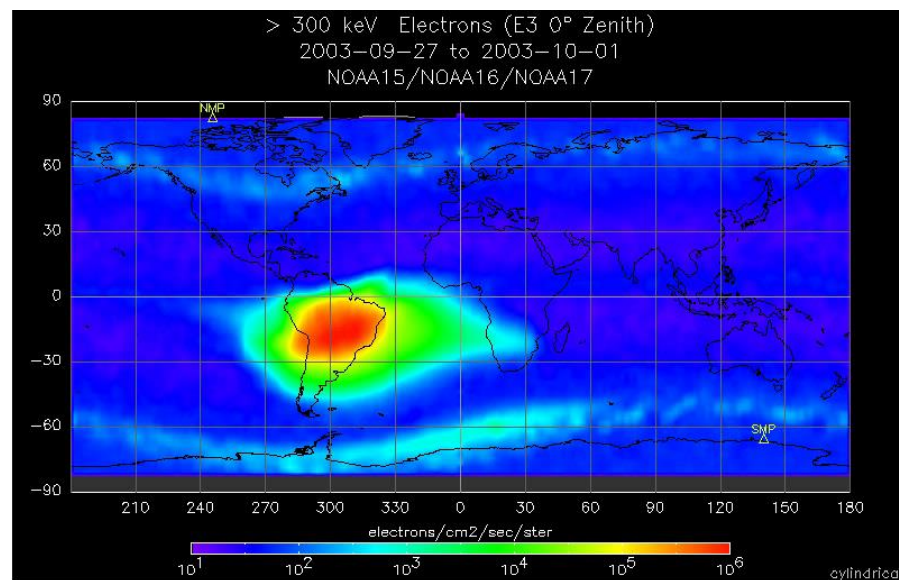
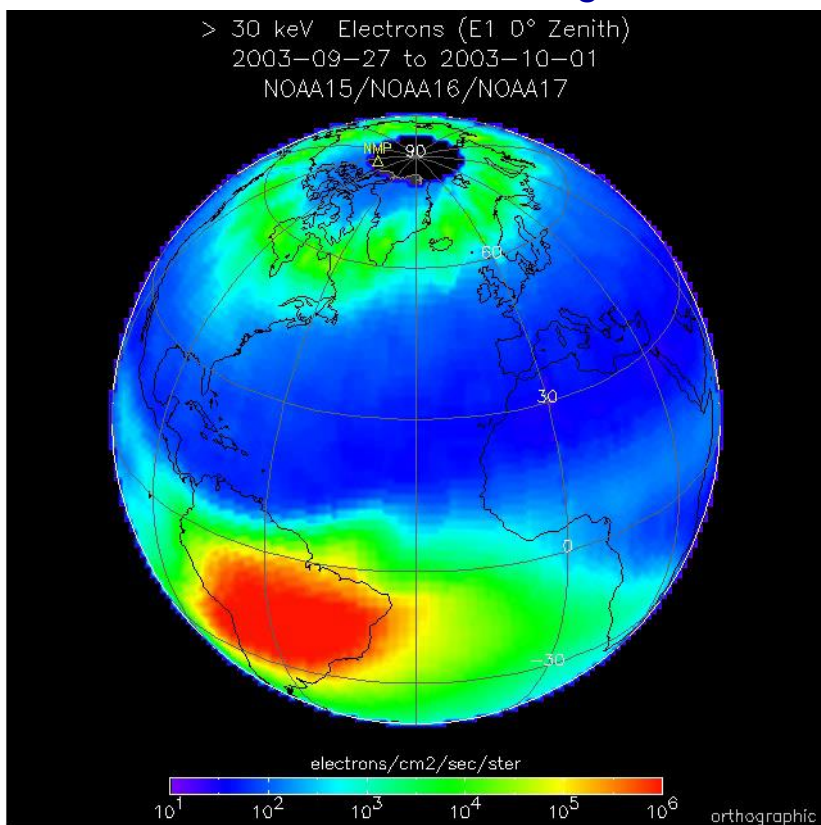
Global map of cosmic ray neutron monitors

# Milestone (Internal)

## New Visualization Product for POES

The POES radiation map is created using Space Environment Monitor (SEM) energetic particle data sorted into a global  $2^\circ \times 2^\circ$  grid. Electron and Proton fluxes are displayed in multiple energy ranges from several tens of keV to several MeV. The resultant maps reveal the flux distribution of energetic electrons and protons present in the South Atlantic Anomaly and the “horns” of the radiation belts.

The software used to create these maps leverages the efforts of Hollings Scholar Ethan Peck.



**Completion Date:** Planned (FY09-2Q) 31Mar09      Actual (FY09-2Q) 31Mar09



# Milestones & Performance Measures

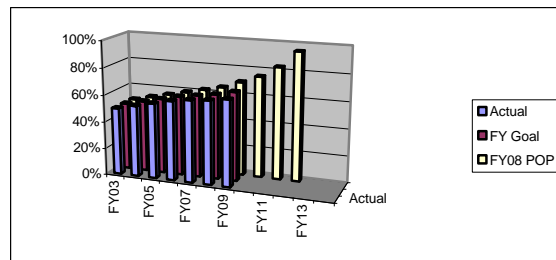
## FY09 Performance Measures



### Performance Measures

#### 1 - Percentage of archived SWx data available to the public on-line

	Actual	FY Goal	FY08 POP
FY03	50%	50%	<b>50%</b>
FY04	53%	53%	53%
FY05	56%	56%	56%
FY06	59%	59%	59%
FY07	61%	61%	62%
FY08	62%	63%	<b>65%</b>
FY09	64%	66%	70%
FY10			75%
FY11			83%
FY12			<b>95%</b>
FY13			
FY14			

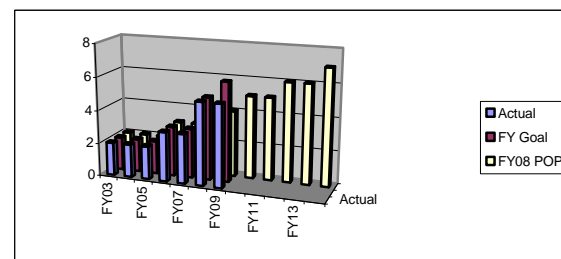


#### Current Month: *Preliminary*

This Q	Actual	FY09
Planned	This Q/Total	Target
64%	64%	66%

#### 2 - Improved retrospective products for understanding the space environment

	Actual	FY Goal	FY08 POP
FY03	2	2	<b>2</b>
FY04	2	2	2
FY05	2	2	2
FY06	3	3	3
FY07	3	3	3
FY08	5	5	<b>4</b>
FY09	5	6	4
FY10			5
FY11			5
FY12			<b>6</b>
FY13			6
FY14			7



#### Current Month: *Preliminary*

This Q	Actual	FY09
Planned	This Q/Total	Target
6	6	6

Updated: 4/06/09

The FY2008 Program Baseline Assessment (FY08 PBA) was released 08 Jun 2005



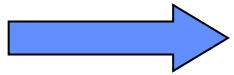
# **OUTLINE**

## **Solar & Terrestrial Physics Division**



**STP Program Overview**

**Milestones & Performance Measures**



**Awards and Personnel Kudos**

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# Awards & Personnel Kudos

## CFC – Outstanding Campaign Chair



NOAA Employee Honored for Work in Combined Federal Campaign. **Karen Horan** of the National Geophysical Data Center was awarded the, "**Outstanding Campaign Chair of the Year**" award for the 2008 Metro Denver Combined Federal Campaign. Karen was selected from Federal Agencies across the Metro Denver area. Karen's diligent efforts to meet one-on-one with Federal staff helped significantly increase participation at NGDC to 65% (up from 50% the previous year) with a 26% net increase in total dollars collected for the Combined Federal Campaign.







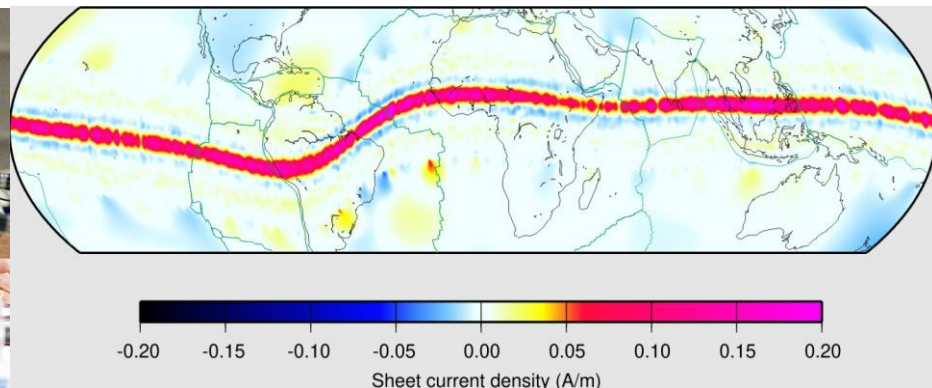
# Awards & Personnel Kudos

## Introducing: DR. PATRICK ALKEN



### Thesis Title: Modeling equatorial ionospheric currents and electric fields from satellite magnetic field measurements

Abstract – This thesis presents results in the modeling of ionospheric currents and electric fields at low latitudes. Understanding these important processes is required for the study of many other ionospheric phenomena. The work presented here pioneered the global climatological modeling of the equatorial electrojet (EEJ) system as well as the estimation of the eastward equatorial electric field (EEF) based on magnetometer measurements from various satellite missions. Remarkably, knowledge of only the magnetic field enables the calculation of so many other important ionospheric parameters. I present studies which use this high quality magnetic field data to extract high accuracy estimates of the global structure of the EEJ and EEF which play a central role in the electrodynamics of the ionosphere.





# Awards & Personnel Kudos

## Ethan Plans to Attend CU



Former Hollings Scholar **Ethan Peck** (Cornell) has accepted a graduate student position in the Department of Atmospheric and Oceanic Sciences at the Univ of Colorado. His specific interest is to study how energy inputs from the ionosphere affect the lower atmosphere. Ethan will pursue a PhD while at CU.

Mr Peck interned with NGDC last summer and was mentored by Dan Wilkinson. Within STP Ethan developed a 10-year statistical map of auroral electron precipitation using the POES data set.

**Colorado**  
University of Colorado at Boulder





# **OUTLINE**

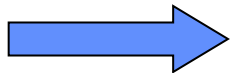
## **Solar & Terrestrial Physics Division**



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# Accomplishment

## Nighttime Lights in the Desert



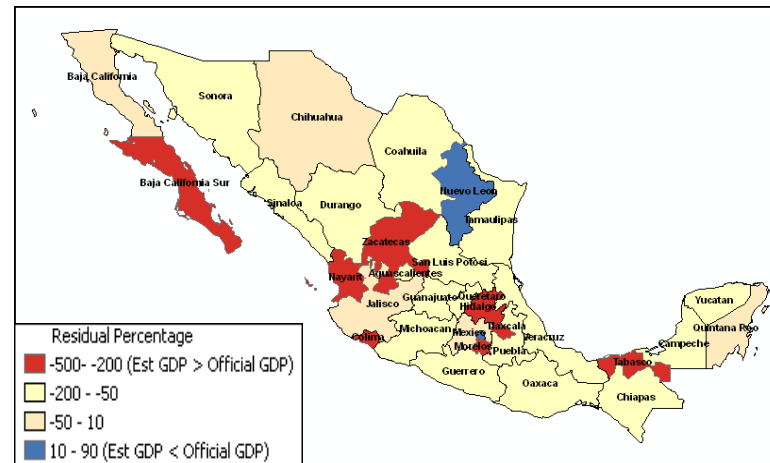
Satellite F16	Visible	Thermal
2009-02-20 0240 GMT		
2009-02-21 0228 GMT		
2009-02-22 0215 GMT		
2009-02-23 0202 GMT		

On 20 Feb 09 CIRES Associate, Mr Ben Tuttle, illuminated the desert sky outside of Mills, NM with 540,000 lumens of light from 4x1,000 Watt high-pressure sodium vapor lamps. The resultant light emission was detected by DMSP F16 (as planned). This ongoing experiment, conducted as part of Ben's doctoral research, is to develop inter-satellite radiance calibration techniques.

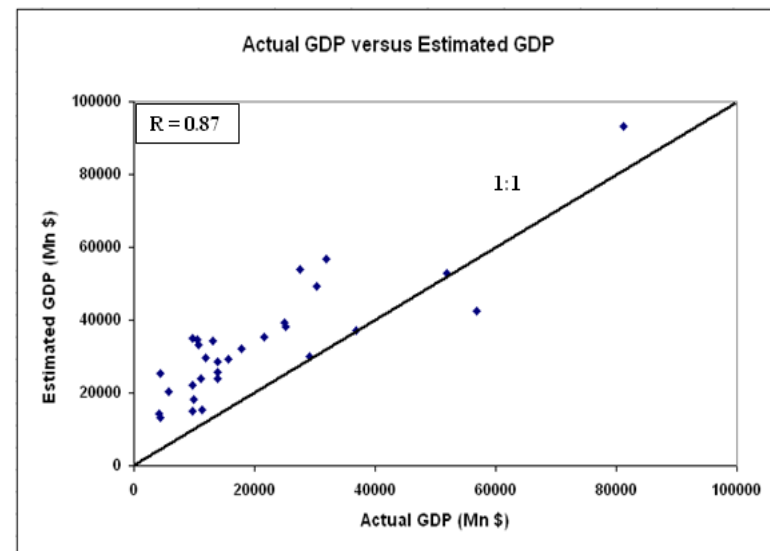


Tilo Ghosh has found discrepancies in official estimates of Mexico's informal economy and remittances when compared to calibrated Nighttime Lights imagery (2000-2001) and Landscan population data (2000)

Predicted underestimation of remittances and informal economy	\$155B
Total official estimates of informal economy and remittances	\$106B
Magnitude of underestimation	~1.5 times



Percentage residual map of the states of Mexico



Actual vs. Estimated GDP of the states of Mexico (excluding Mexico City)







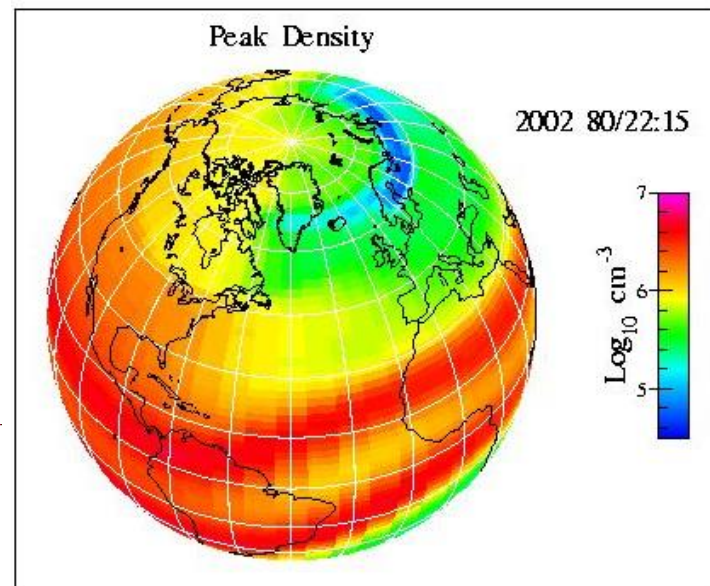
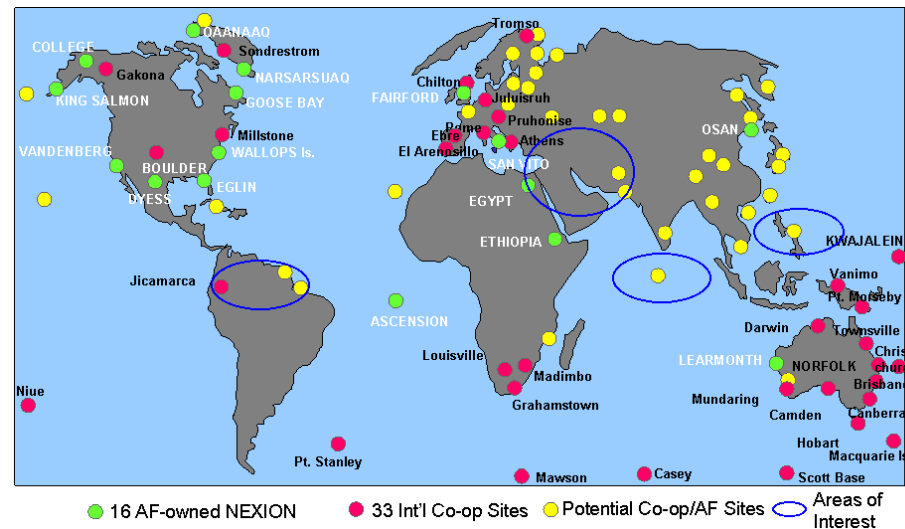
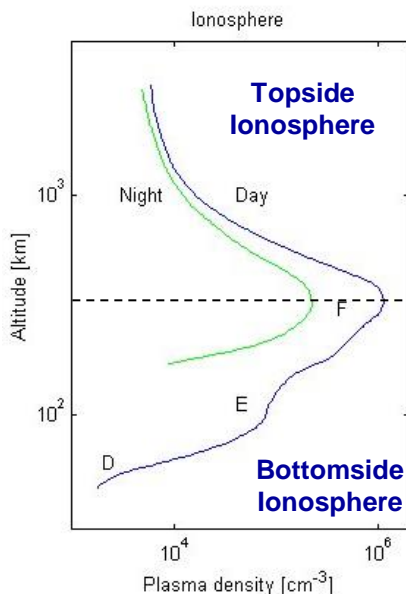
# Accomplishment

## Ionospheric Datasets for the NRL



### NOAA Ionosonde Datasets

NGDC recently provided an extensive dataset of 4,726,730 ionospheric profiles to the Naval Research Laboratory (NRL). The data is being used to validate the Global Assimilation of Ionospheric Measurements (GAIM) model within the National Reconnaissance Office (NRO). The ionospheric dataset provided to NRL was collected from a global ionosonde network through the NOAA World Data Center for Solar-Terrestrial Physics. Provided data is from 2003 to 2008, inclusive. The NGDC ionospheric archives include on-line datasets from 1942 to present.





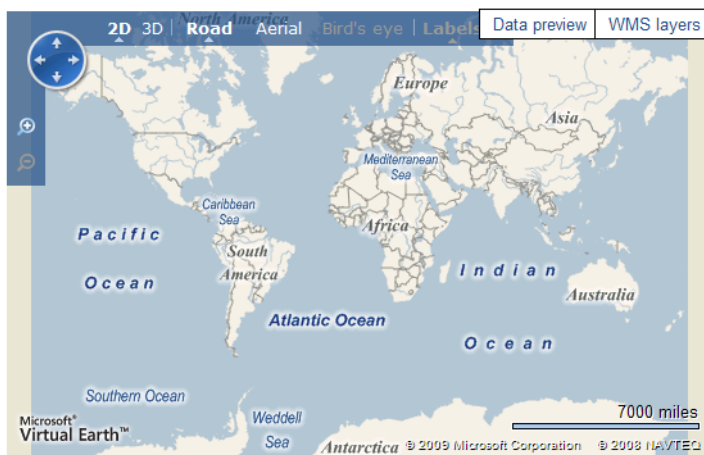
# Accomplishment SNAAP Status Update



## Detailed CLASS data request for: Marine Geology Data

### Location map

Left click map to add point of interest. Left click existing point to remove it.  
Move mouse with pressed left button to select region.



ROI:

### Parameters

Continents  
ETOPO2/MODIS Relief  
Relief from wsearth image  
NOS Bottom Type

WMS layers

10

Resolution (px per deg) Data resolution

png

Image format

format

### Action

The prototype Simple NOAA Archive and Access Portal (SNAAP) is intended to provide front-end access to the Comprehensive Large Array-data Stewardship System (CLASS). The following are recent developments/improvements to SNAAP:

- Delivered Transition Planning Documents to the CLASS development team for implementation in a future CLASS build
- Established plans to include non-granule based asynchronous (i.e. models, transforms) data extractions from CLASS system
- Upgraded SNAAP operational functionally to OGSA-DAI 3.0
- Expanded the proto-type to cover more NOAA and non-NOAA data types and services and documented lessons learned
- Released the work to the public for use and comment - metadata tool is available as VxOware through <http://sourceforge.net/projects/vxoware/>
- Work is continuing with single-user sign-on





# **OUTLINE**

## **Solar & Terrestrial Physics Division**

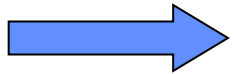


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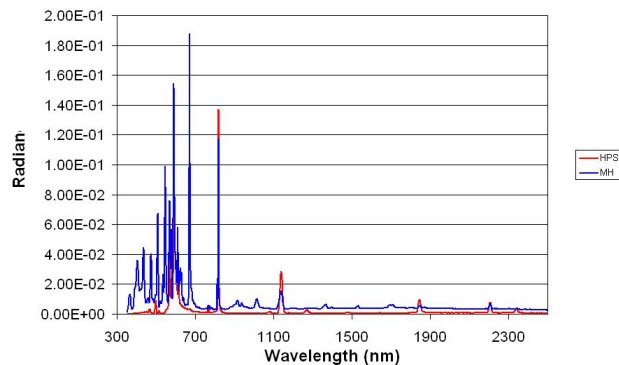
**Issues & Summary**

# Special Interest Item

## EOG Light Source Calibration

On Friday, April 3, the EOG measured the emission spectra from a series of lamps, including incandescent, high-pressure sodium, mercury vapor and metal halide. The final spectra were calibrated in radiance units (watts/cm<sup>2</sup>/ster). Spectral resolution was 3 nm in the visible and 10 nm in the near infrared. The spectral data will be used to better define the NightSat spectral bands.

Metal Halide vs High Pressure Sodium



***“You know what the difference is between you and me. (puts sunglasses on) I make this look good.”***



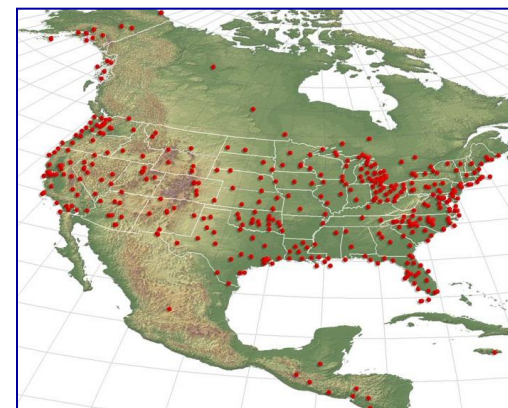
# Special Interest Item

## Baseline Anniversary



Fran Coloma recently participated in the dedication ceremony for the Boulder Baseline 40th Parallel which commemorates the 150<sup>th</sup> anniversary of the original 1859 survey. The 40<sup>th</sup> parallel at the time was the dividing line between the Kansas and Nebraska territories. Colorado became the 38<sup>th</sup> state to enter the Union in 1876. The National Geodetic Survey (NGS) and the NGS Online Positioning Users Service (OPUS) was featured prominently throughout the Baseline ceremony.

2009 is also the 15th anniversary of the Continuously Operating Reference Stations (CORS) program which was celebrated in Silver Spring and locally by phone. NGDC operates the CORS-West parallel site for the NGS.







# Special Interest Item

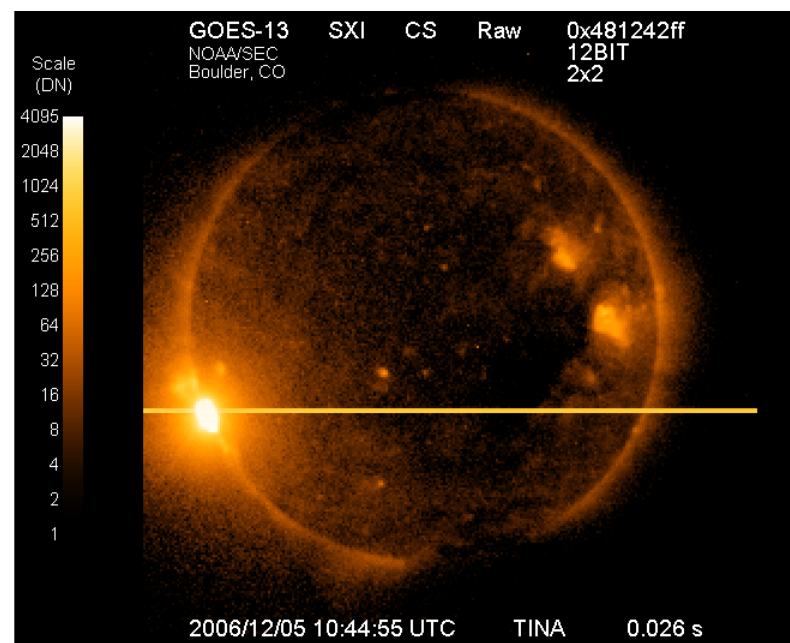
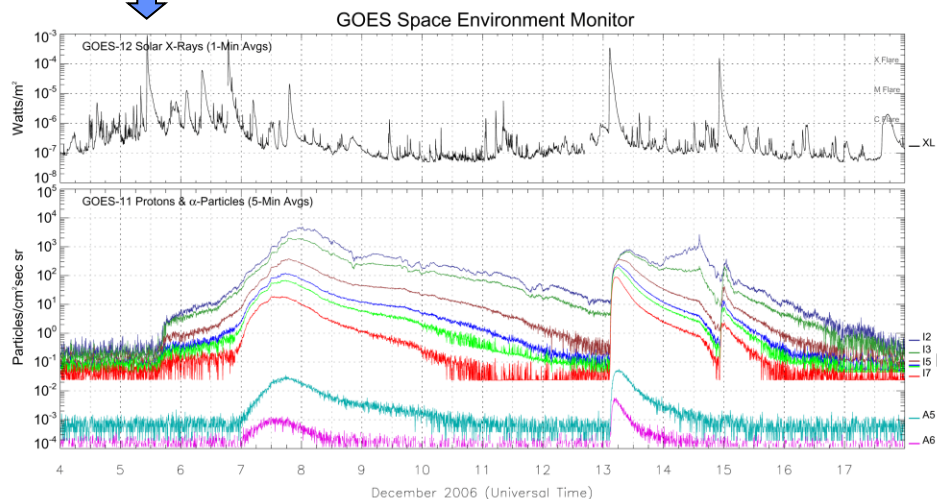
## SXI Radiation Dose Tool



In 2006 GOES-13 was launched with a new generation of Solar X-ray Imager (SXI) onboard. On December 5<sup>th</sup>, 2006 the SXI was permanently damaged by X-rays from an intense X9 solar flare. SWPC is seeking to develop a radiation dose tool that can provide a qualitative link between instrument performance and total radiation dose. The data gathered will be used to (hopefully) extend the usable life of the GOES-13 SXI and the GOES-O SXI.

SWPC is proposing that the software be developed by STAR and run at NGDC where the source data are archived. It is expected that this process will generate an intermediate data product that will require a storage volume similar to the Level-1 data. Discussions with ISD are ongoing.

### X9 Solar Flare 05 Dec 06



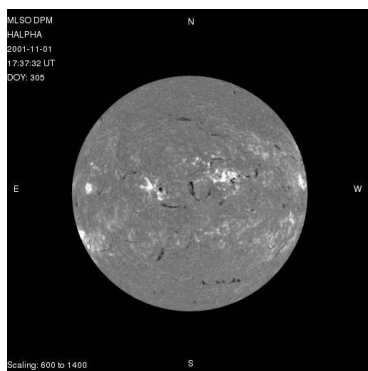


# Special Interest Item

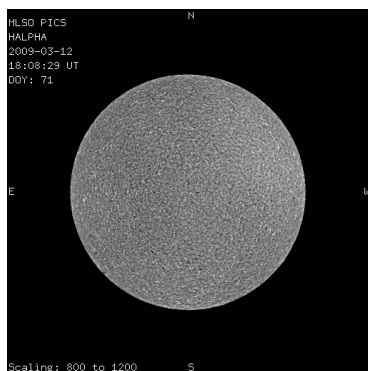
## Quiet Sun



**March 2, 2009** – In May 2007 the Solar Cycle 24 Prediction Panel issued two predictions, for the magnitudes and dates of the upcoming solar maximum. To date, the actual date for the present solar minimum has not yet been determined and as the sun continues in its current quiescent state the date of solar minimum continues to shift to the right. Data from the NGDC archives are being used to assess the current solar cycle with regard to past cycles.

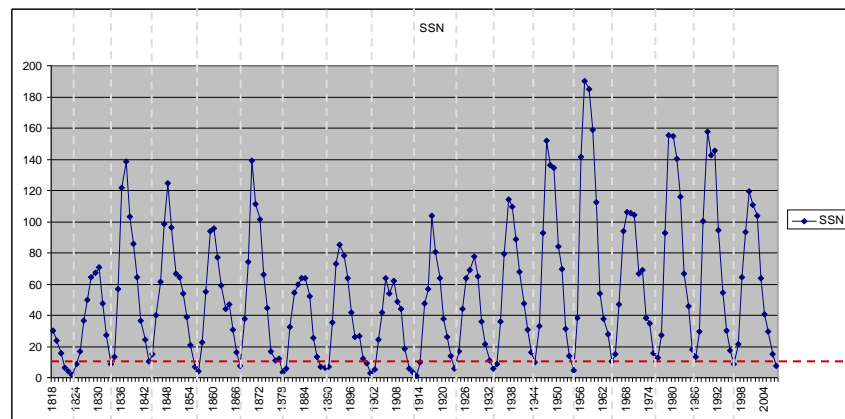


Solar Max  
Solar H-alpha  
01 Nov 01



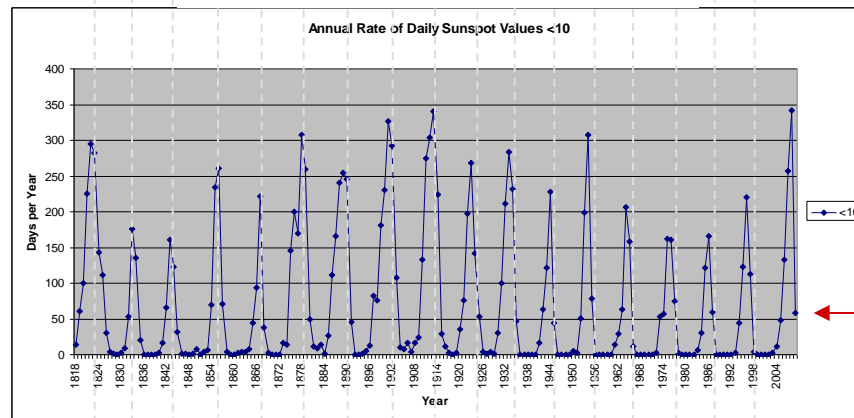
Solar Min?  
Solar H-alpha  
12 Mar 09

### Annual Sunspot Numbers



SSN = 10

### # of Days with SSN < 10



To date



# Special Interest Item

## IHY Africa – Livingston, Zambia



INTERNATIONAL HELIOPHYSICAL YEAR  
2 · 0 · 0 · 7 – 2 · 0 · 0 · 9  
*Livingstone,  
Zambia*

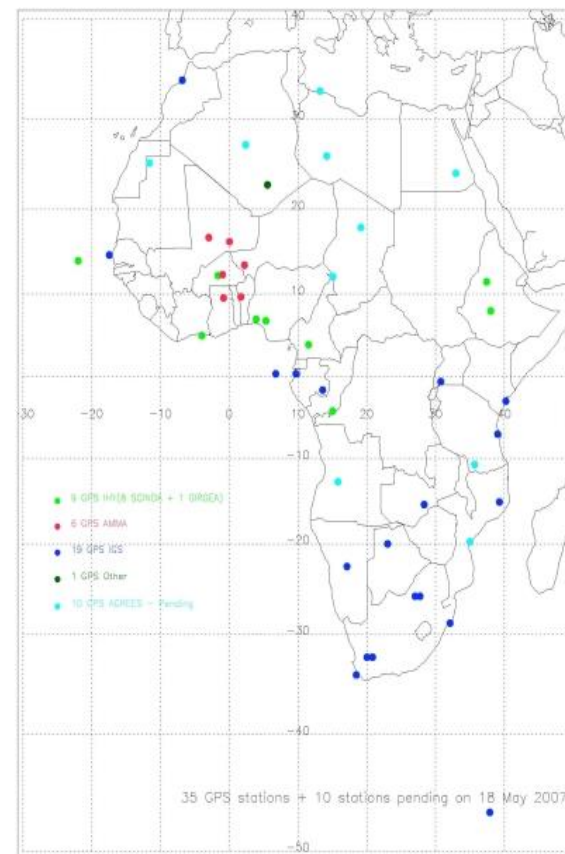


7 to 12 June 2009

IHY-Africa/SCINDA 2009



**Justin Mabie<sup>1</sup>** has been asked to participate in the IHY-Africa meeting in Livingston, Zambia, 07-12 June 2009. He will present a paper on the IHY-Africa database and co-chair a session for data providers. To date many of the data providers have been reluctant to share their data which is counter to the stated goals of the IHY. Tim Fuller-Rowell is taking the lead in “encouraging” data providers to share their data through the IHY-Africa portal for which Justin is responsible.



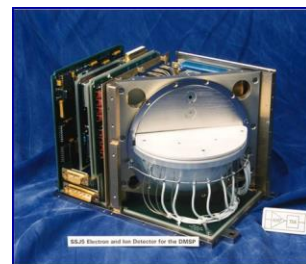
<sup>1</sup>Justin's travel & salary are being paid through CIRES NSF contract

# Special Interest Item

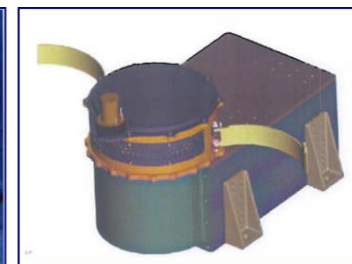
## SEM-N Science Algorithm Development

### Recent Actions:

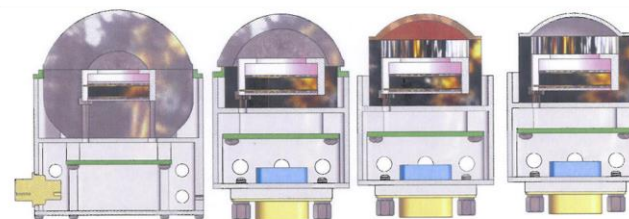
- Participated in JHU/APL SEM-N H/W Sensor Review – System Requirements Review (SRR)
  - Formed Science Algorithm Development Team
    - Received IPO Approval & Initial Funding
      - Limited funding for NGDC oversight
    - AFRL MOA currently in Final Review
      - Issue: Long lead time to fund lab
    - SWPC Agreement; in-house Resources
      - Issue: Direct BOP to NWS/SWPC??
    - JHU/APL Contract Action Initiated
      - Issue: Long lead time for contract award
  - Initiated Bi-weekly Telecoms
    - Initial requirement review per the sensor spec
    - Gained access to IPO's sensor test-bed
  - *Letter of Understanding between NGDC & IPO??*
- NGDC POC: Jim Manley



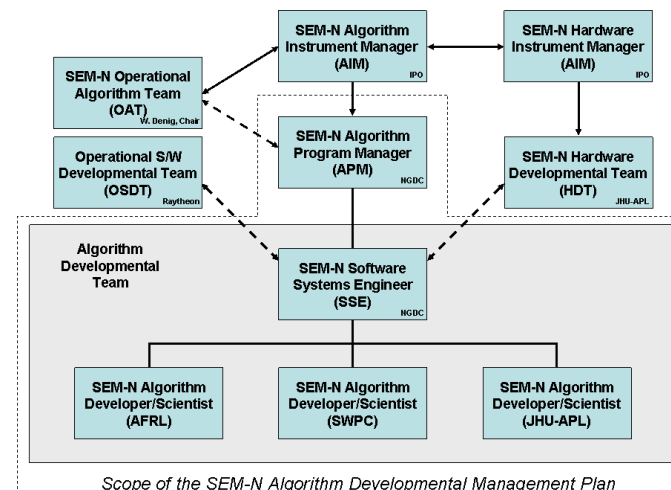
Special Sensor J5 (SSJ5)



Energetic Particle Sensor (EPS)



High Energy Sensor (HES)





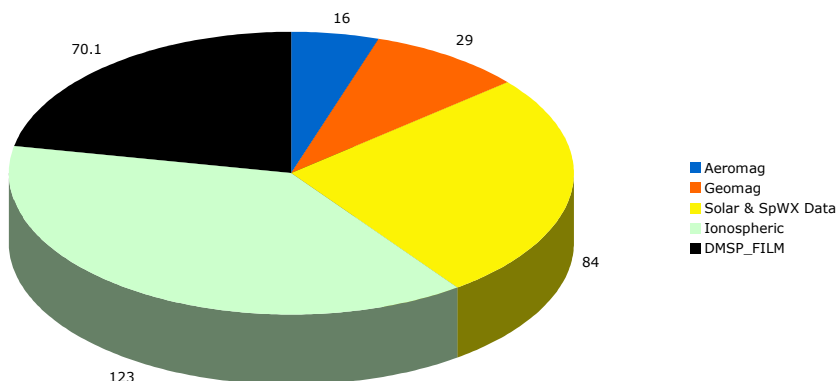


# Special Interest Item

## Tivoli Mound



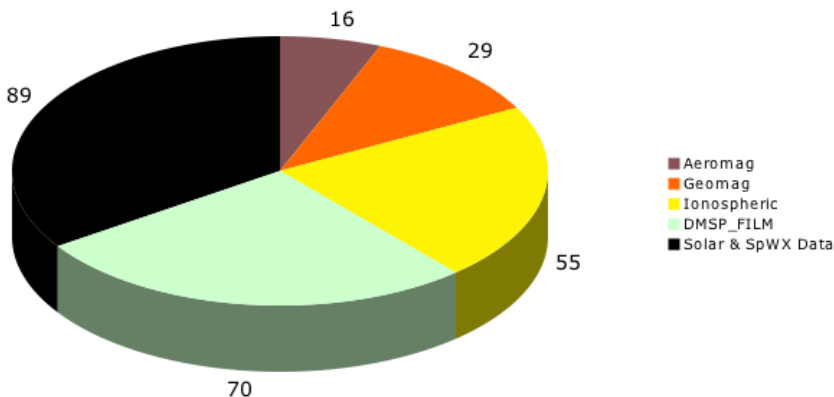
Remaining STP Data in the Tivoli Mound (GB)



1QFY09

Total Size: 322 GB

Remaining STP Data in the Tivoli Mound (GB)



2QFY09

Total Size: 258 GB

	1QFY09	2QFY09
DMSP	70 GB	70 GB
AeroMag	16 GB	16 GB
GeoMag	29 GB	29 GB
Iono	123 GB	55 GB
SWx	84 GB	89 GB
Total	322 GB	258 GB





# **OUTLINE**

## **Solar & Terrestrial Physics Division**



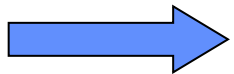
**STP Program Overview**

**Milestones & Performance Measures**

**Awards and Personnel Kudos**

**Accomplishments**

**Special Interest Items**



**Issues & Summary**



# Issues & Summary

## List of Issues from Prior Reviews



- **Continuity of solar data services (1QFY09) – active**
- **Refocus of NWS/SWPC Objectives (2QFY08) – plan in place**
- **NightSat Mission Concept (1QFY08) – active**
- **NGS Aerial Photography (1QFY08) – under discussion**
- **DMSP Data in CLASS (1QFY08) – active**
- ✓ *Federal Enterprise Ionosonde Network (4QFY07) – NLAI*
- ✓ *Station-Level Metadata (4QFY07) – NLAI*
- ✓ *Boulder-StarLight-Moscow (3QFY07) – NLAI*
- ✓ *Manpower Investments in CLASS TET (3QFY07) – NLAI*
- ✓ *CIRES New Hires for EOG (2QFY07) – NLAI*
- **Migrate the DMSP OLS Archive to CLASS (2QFY07) – plan in place**
- ✓ *Relocate National Park Service Nightsky Team (2QFY07) – NLAI*
- ✓ *Need for 20+ Tb of Spinning Disk (1QFY07) – NLAI*
- **ADIC-API Needed (1QFY07) – plan in place**

*NLAI = No Longer An Issue*



# Issues & Summary

## Solar & Terrestrial Physics Division



- All 2QFY09 milestones met & performance measures achieved
- Real-time radiation environment map using POES
- DMSP imagery finds discrepancies in Mexico's GDP
- Proposed SXI total dose tool impacts to NGDC
- Current quiet sun is still within statistical norm
- NPOESS SEM software team formation status

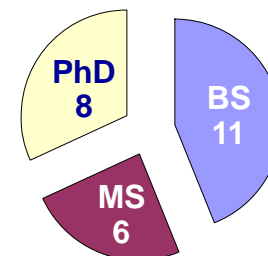
### Metrics (2QFY09/YTD)

Papers published: 6/11    Reports: 9/18

Papers presented: 4/23    Professional Societies: 17

Fellows: 1

Awards: CFC Award





# QUESTIONS?