

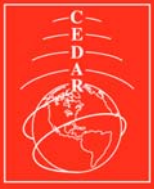


CEDAR Database update and Virtual Observatories

Peter Fox (pfox@ucar.edu)
HAO/ESSL/NCAR



Recent additions to CEDAR database

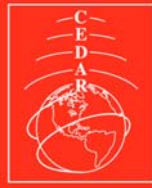


Database:

↖ 3 new instruments:

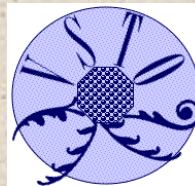
- ↗ Fritz Peak Fabry-Perot red-line (~250 km) neutral winds and temperatures from 1973-1985
- ↗ Ann Arbor Fabry-Perot red-line (~250 km) neutral winds and temperatures from 1986-1987
- ↗ Jicamarca Unattended Long-term Investigations of the Ionosphere and Atmosphere (JULIA) coherent scatter radar proxy F-region ExB ion drifts data from 150-km echoes from 2001-2006





- ↖ Regular Updates from 3 instruments and satellite particle precipitation data:
 - Sondrestrom ISR for 2006-2007
 - Collm LF radar for 2006-2007
 - Wuppertal Spectrometer for 2006
 - Ion and electron precipitation from NOAA-15, -16, and -17 satellites for 2005

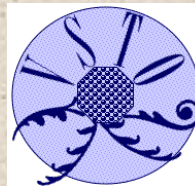
- ↖ Regular Updates from 5 indices:
 - Kp, 10.7 cm solar flux etc
 - hourly IMF
 - hourly Dst
 - Auroral Boundary Index or equatorward aurora boundary at midnight from DMSP
 - Estimated Hemispheric Power (auroral ion and electron inputs) from NOAA, DMSP and intercalibrated for both



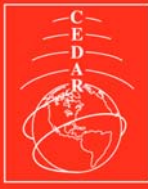
Statistics summary



- ↖ 87 new webnames were made in 2006.
- ↖ 2006 saw the most users (89), the most new users (46), the most foreign users (36), and the most empirical model users (26) to date.
- ↖ The IS radars still drew the largest number of users (29), but that number is decreased from a high of 37 ISR users in 2005.
- ↖ Non-ISR instruments had 23 users, with strong interests in optical instruments < 150 km (11 users), in MLT wind radars (9 users), and in FPI instruments in the F region (7 users).
- ↖ Geophysical indices were taken by 20 users.
- ↖ The most popular data sets in 2006 were: Jicamarca ISR with 13 users, the apex and E-field models with 11 users each, the Weimer and MSIS models with 10 users each, the hemispheric power and auroral boundary indices with 9 users each, and the Arecibo ISR with 8 users.



What's New?



- ⌞ VSTO focus on data selection/services, etc.
- ⌞ VSTO serving CEDAR DB data **since last August**
- ⌞ Migration of CEDARWEB to wiki/VSTO combination
- ⌞ New NASA VxOs querying and accessing CEDAR
- ⌞ Focus for CEDAR DB on revamping data ingest, implement distributed sources
- ⌞ Wiki Forum for workshops
- ⌞ Long-term repository pilot with Madrigal and cross-query
- ⌞ Revamp of user/login handling - works across all interfaces





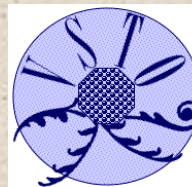
- navigation
- ▀ Main Page
- community
- ▀ 2007 Workshop
 - ▀ Forum
- wiki links
- ▀ Recent changes
 - ▀ Help
- search
- Go Search
- toolbox
- ▀ Upload file
 - ▀ Special pages

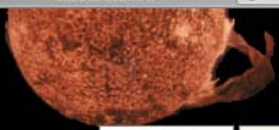
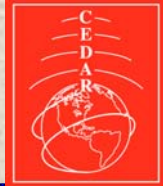
special page

MediaWiki Forum

2007 Workshop

- ▀ **CEDAR Prize Lecture**
2007 Workshop Prize Lecture
- ▀ **Keynote Speech 1**
Neutral dynamics in the upper atmosphere
- ▀ **Keynote Speech 2**
Neutral winds and their role in ionospheric electrodynamics
- ▀ **Wind observations - Rockets**
Wind observations - Rockets
- ▀ **Wind Observations - Meteor radars**
Wind Observations - Meteor radars
- ▀ **Wind Observations - Active optics**
Wind Observations - Active optics
- ▀ **Wind Observations - Passive optics**
Wind Observations - Passive optics
- ▀ **Neutral wind models**
Neutral wind models
- ▀ **VSTO and CEDAR DB update**
Virtual Solar-Terrestrial Observatory and CEDAR DB Update
- ▀ **Putting your degree to work**
Putting your degree to work
- ▀ **Meteors and the upper atmosphere**
Meteors and the upper atmosphere
- ▀ **Short period gravity waves and their effects in the MLT region**
Short period gravity waves and their effects in the MLT region
- ▀ **Equatorial ionospheric challenges and the C/NOFS mission**
Equatorial ionospheric challenges and the C/NOFS mission
- ▀ **NASA Aeronomy of Ice in the Mesosphere (AIM) ground-based update**
NASA Aeronomy of Ice in the Mesosphere (AIM) ground-based update
- ▀ **Tuesday Tutorial #1: Meteor Science**
Tuesday Tutorial #1: Meteor Science





Virtual Solar Terrestrial Observatory



Home Data Communities About Us Login

Start by Instrument | Start by Dates | Start by Parameter

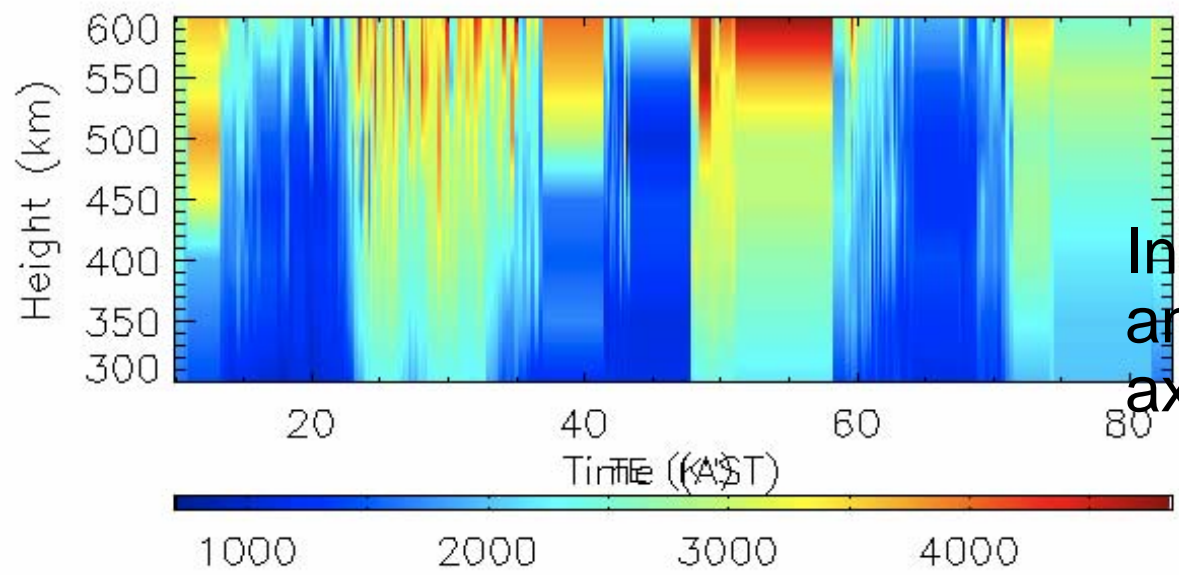
Data Workflow #1c

- Data Request Summary**
- 1. Parameter:
- 2. Start Date:
Stop Date:
- 3. Instrument:

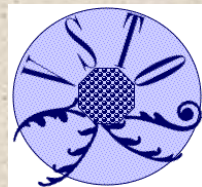
Input Step 1 of 3: Choose Parameter
Please select one parameter from the list
You may filter the parameters selection by one of the following criteria:

Filter by Physical Domain: Filter by Parameter Type:

[?] Parameter:



Inferred plot type and return required axes data



Semantic Web Services



VSTO Query Instrument Web Service

NCAR **Virtual Solar Terrestrial Observatory**

Home Data Communities About Us Login

Guided Workflows: Start by Instrument | Start by Dates | Start by Parameter Web Services: Query Instrument | Query Parameter | Query Data

VSTO Web Services

Query Instrument Web Service

Description: Web Service used to query the VSTO ontology to retrieve all the Instrument instances matching one or more optional constraints.

Input: String parameterClass (optional, must be valid Parameter class name from VSTO ontology)
String startDate (optional, formatted as yyyy-mm-dd)
int nDays (required if startDate is used, must be 1 < nDays < 31)
String domain (optional, must be 'CEDAR' or 'MLSO')
String instrumentClass (optional, must be valid instrument class name from VSTO ontology)

Output: XML/OWL document containing the Instrument instances matching the query. The XML is serialized as a String.

Exception: Thrown if invalid input is used in the query

Endpoint: <http://www.vsto.org:8080/services/VSTOQueryService>

WSDL: <http://www.vsto.org:8080/services/VSTOQueryService?wsdl>

Example: Find all Instruments that measure Neutral Temperature
Input: parameterClass='NeutralTemperature', startDate=null, ndays=0, domain=null, instrumentClass=null

Example: Find all Instruments of type Interferometer that measured data in August 1999
Input: parameterClass=null, startDate='1999-08-01', ndays=31, domain=null, instrumentClass='Interferometer'

Query Input

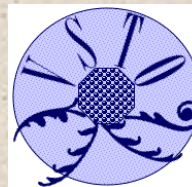
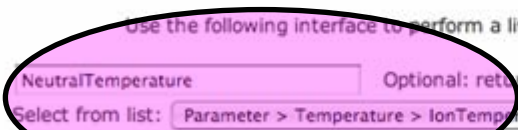
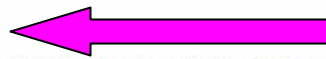
Use the following interface to perform a live test of the VSTO Query Instrument Web Service:

Parameter Type: Optional: return only instruments that measured this type of parameter
Select from list:

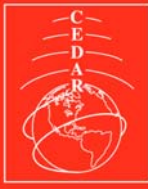
Start Date: (yyyy-mm-dd) **Number of Days:** Optional: return only instruments that measured data within this time interval

Domain: Optional: return only instruments in this domain

Instrument Type: Optional: return only instruments of this kind
Select from list:



Looking forward



- ↖ Help your community facility
 - ↗ We rely on your data. Please tell us about new instruments/ data
 - ↗ Got updates? Please contact us: cedar_db@hao.ucar.edu
 - ↗ Holding onto data? Please consider contacting us to include it
 - ↗ Is there data you would like to see made available through CEDARWEB? Which data?
 - ↗ Feedback is always welcome – cedar_db@hao.ucar.edu
- ↖ Tuesday Workshop - VSTO and related input is being sought - lunch provided!!
- ↖ eGY - Virtual Observatory Conference www.voig.net
- ↖ For more information: contact (pfox@ucar.edu)

