



SSEC / ISRO Collaboration

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many others



Kalpana-1 Data in McIDAS-V

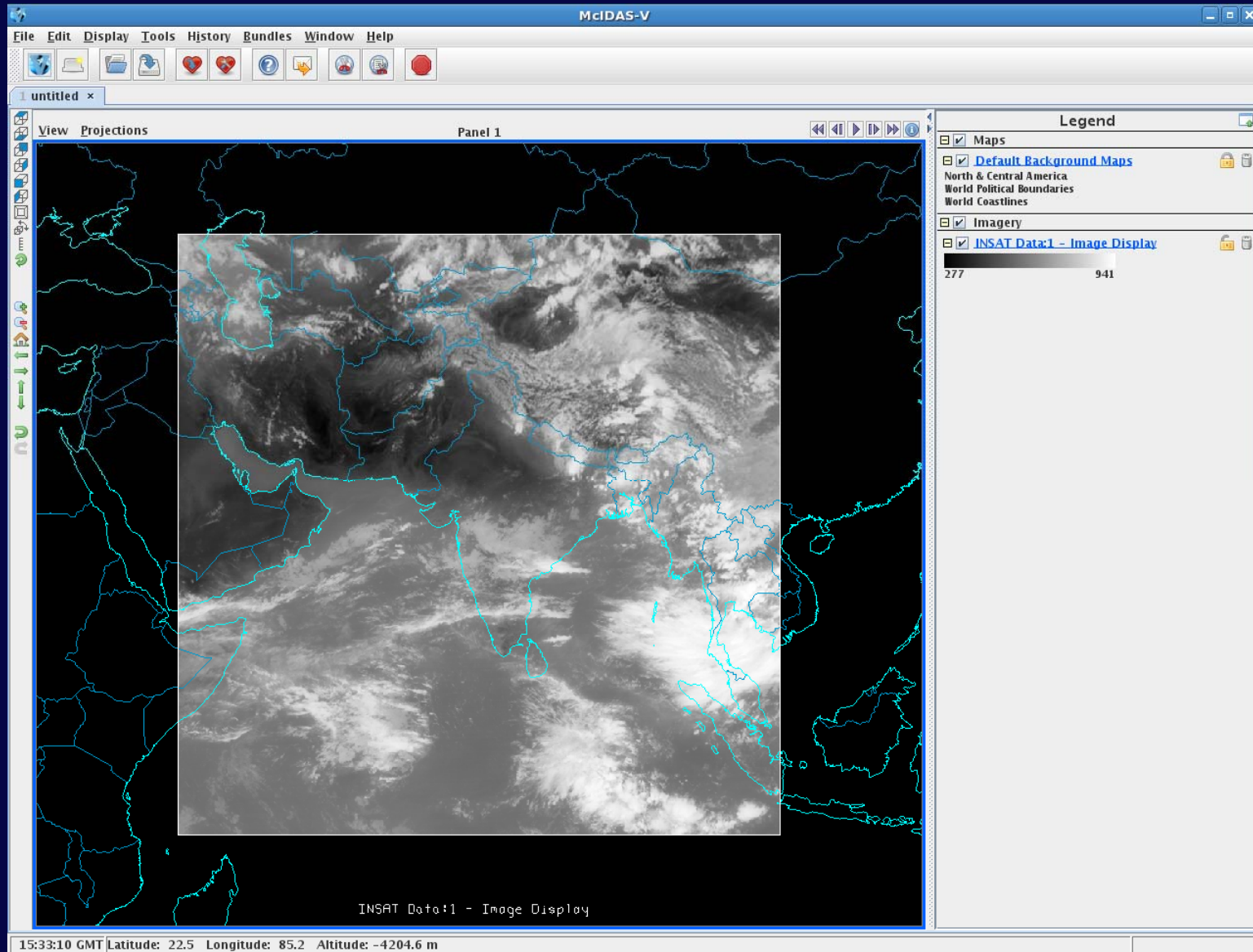
- Data Adapters written
- VisAD optimizations made along the way
- ADDE server developed for HDF5 K1 data,
publicly available:

kalpana.ssec.wisc.edu

Kalpana-1 Data in McIDAS-V

The screenshot displays the McIDAS-V software interface. The main window, titled "untitled x", shows a satellite image of Earth with cyan outlines of landmasses. The interface includes a menu bar (File, Edit, Display, Tools, History, Bundles, Window, Help) and a toolbar with various icons. The main display area is labeled "Panel 1" and contains the satellite image. A legend panel on the right side is titled "Legend" and lists several layers: "Maps" (checked), "Default Background Maps" (checked), "North & Central America", "World Political Boundaries", "World Coastlines", "Imagery" (checked), and "INSAT3 - Image Display" (checked). Below the legend, there is a color scale bar ranging from 362 to 1023. The status bar at the bottom of the window displays the following information: "15:26:18 GMT Latitude: 30.4 Longitude: 79.7 Altitude: -6319.1 m".

Kalpana-1 Data in McIDAS-V



Scientific Workflow Management in McV

- Remember Origami?
- Search – Process – Visualize – Repeat

Plan proposed by ISRO is to provide a GUI to assemble workflows – each node is an algorithm or process.

Each algorithm is accessible as a dynamically discovered web service.

All integrated with McIDAS-V, developed as a plugin.

Scientific Workflow Management in McV

DAG Creation Wizard - /nkaushik/Download/K1VHR.dag

File

```
graph TD; ALGO-1 --> ALGO-2; ALGO-2 --> ALGO-3; ALGO-2 --> ALGO-4; ALGO-3 --> ALGO-5; ALGO-4 --> ALGO-6; ALGO-5 --> ALGO-7; ALGO-6 --> ALGO-8; ALGO-7 --> ALGO-9; ALGO-7 --> ALGO-10; ALGO-9 --> ALGO-11; ALGO-10 --> ALGO-11; ALGO-11 --> ALGO-12; ALGO-12 --> ALGO-13; ALGO-13 --> ALGO-14; ALGO-14 --> ALGO-15; ALGO-14 --> ALGO-16; ALGO-14 --> ALGO-17; ALGO-14 --> ALGO-18; ALGO-18 --> ALGO-19; ALGO-19 --> ALGO-20; ALGO-19 --> ALGO-21; ALGO-19 --> ALGO-22; ALGO-19 --> ALGO-23; ALGO-19 --> ALGO-24;
```

Properties	#
SATID	K1VHR
EXE Path	/gfs1/imdpso...
No of Arguments	6
Args 1	\$SATID
Args 2	\$JOBID
Args 3	1
Args 4	\$SENSOR
Args 5	\$DOP
Args 6	\$TOP

Save

Running Process Completed Process Failed Process Waiting Process

Applications Places System nkaushik@skyl... DAGViewer - N... nkaushik@skyl... DAG Creation ... Fri Oct 22, 11:18 AM

Scientific Workflow Management in McV

DAG Creation Wizard - /nkaushik/Download/K1VHR.dag

File

Properties #

File

Web services published on remote directory

UID	Types	Scope	XAddr
urn:uuid:22064a4a-00f9-4337-a7...	wsdp:Device pub:Computer		http://128.104.110.87:5357/22064a4a-00f9-4337-a7bf-...
urn:uuid:8d42e55d-39fa-446a-94...	wsdp:Device pub:Computer		http://128.104.111.229:5357/8d42e55d-39fa-446a-9425...
urn:uuid:0c11ab08-efa8-40d3-bc...	wsdp:Device pub:Computer		http://128.104.110.25:5357/0c11ab08-efa8-40d3-bc9d-...
urn:uuid:6fad974b-9ab9-4f78-bc...	wsdp:Device pub:Computer		http://128.104.108.5:5357/6fad974b-9ab9-4f78-bc85-b...
urn:uuid:1f4262d9-af56-4998-95...	wsdp:Device pub:Computer		http://128.104.111.215:5357/1f4262d9-af56-4998-958d...
urn:uuid:40458ae0-fe16-4e34-a5...	wsdp:Device pub:Computer		http://128.104.108.208:5357/40458ae0-fe16-4e34-a547...
urn:uuid:205532c1-e25d-490d-a8...	wsdp:Device pub:Computer		http://128.104.110.11:5357/205532c1-e25d-490d-a853-...
urn:uuid:4cd42286-966f-4285-a5...	wsdp:Device pub:Computer		http://128.104.111.163:5357/4cd42286-966f-4285-a525...
urn:uuid:cec49da7-48c8-4ec3-8d...	wsdp:Device pub:Computer		http://128.104.111.152:5357/cec49da7-48c8-4ec3-8d21...
urn:uuid:35f61886-0cf6-4ae4-b5...	wsdp:Device pub:Computer		http://128.104.108.33:5357/35f61886-0cf6-4ae4-b511-...
urn:uuid:bcbf8894-b524-4eb5-9e...	wsdp:Device pub:Computer		http://128.104.109.141:5357/bcbf8894-b524-4eb5-9ecf...
urn:uuid:f8cbb6f5-a46c-40a6-a9...	wsdp:Device pub:Computer		http://128.104.108.104:5357/f8cbb6f5-a46c-40a6-a998...
urn:uuid:9b65aec6-6c17-44d0-89...	:SystemInfoService	urn:sysinfo	http://oslo.ssec.wisc.edu:1970/SystemInfo/SystemInf...

StartProbe

Save

```
graph TD; ALGO-11 --> ALGO-12; ALGO-12 --> ALGO-13; ALGO-13 --> ALGO-14; ALGO-14 --> ALGO-15; ALGO-14 --> ALGO-16; ALGO-14 --> ALGO-17; ALGO-14 --> ALGO-18; ALGO-18 --> ALGO-19; ALGO-19 --> ALGO-20; ALGO-19 --> ALGO-21; ALGO-19 --> ALGO-22; ALGO-19 --> ALGO-23; ALGO-19 --> ALGO-24;
```

Running Process Completed Process Failed Process Waiting Process

Applications Places System nkaushik... DAGView... nkaushik... DAG Crea... Java Fri Oct 22, 11:19 AM