

# Satellite Sounder Science and Products (SSSP)

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[G.Weymouth@bom.gov.au](mailto:G.Weymouth@bom.gov.au), [Walter.Wolf@noaa.gov](mailto:Walter.Wolf@noaa.gov), [uspensky@planet.iitp.ru](mailto:uspensky@planet.iitp.ru), [limin.zhao@noaa.gov](mailto:limin.zhao@noaa.gov), [Lihang.Zhou@noaa.gov](mailto:Lihang.Zhou@noaa.gov), [ilafeuille@wmo.int](mailto:ilafeuille@wmo.int), [Leanne.Avila](mailto:Leanne.Avila),  
[mtirado@infovia.com.ar](mailto:mtirado@infovia.com.ar), [jchira@senamhi.gob.pe](mailto:jchira@senamhi.gob.pe), [solo@ikfia.ysn.ru](mailto:solo@ikfia.ysn.ru), [saldivar@meteofa.mil.ar](mailto:saldivar@meteofa.mil.ar), [galindo@ucol.mx](mailto:galindo@ucol.mx), [elizabeth@cptec.inpe.br](mailto:elizabeth@cptec.inpe.br), [hherrera@imn.ac.cr](mailto:hherrera@imn.ac.cr), [jsalinas@tlaloc.imta.mx](mailto:jsalinas@tlaloc.imta.mx)

17<sup>th</sup> ITSC  
Monterrey Ca  
April 13-22

# Non Web Site Related

- Consistency between Local and Global processing systems (2.6.8)
  - Preprocessing
  - Product processing
  - Formats
- Impact of HIRS FOV from 17 to 10 km (2.6.10)
- Analysis / Visualization Tools (2.6.12)
- Education (2.6.13)

# Web site related

(2.6.2 - 7; 2.6.9; 2.6.11-13)

- SSSP Web Site Map
  - De-bug site
  - Bad / outdated links
  - Content and Organization
  - *Cal/Val*
  - Focal point of WG discussions
- *Procedural Issues*

## Sub Group for Satellite Sounder Science and Products

Co-Chairs: Tony Reale, NOAA/NESDIS/ORA  
Lydie Lavanant, Meteo-France

Soundings

Winds

Clouds

Precipitation

Surface

Trace Gases

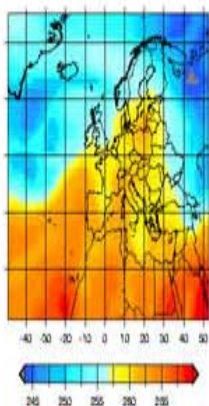
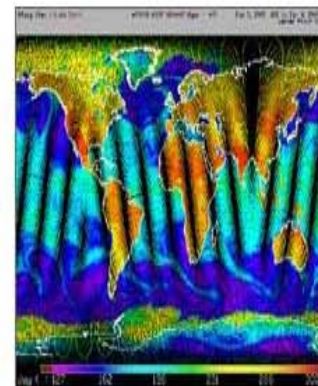
Radiance Products

Users

Satellite Sounder Science and Products (SSSP) is to create a forum for scientific algorithms and products from other satellites, and to promote scientific exchange among the international group of researchers and

to establish a mechanism for the dissemination and exchange of information across the international community on available research, techniques and products.

The contributions are currently divided into science and product areas. Click on a topic to go to a listing of contributions for any area.



[More about SSSP...](#)

### SSSP Survey

The SSSP co-chairs recently conducted a survey of satellite operators who distribute global polar satellite observations and related products and datasets. See more information in our newest section on [Current/Future Weather Satellite Programs](#).

### Want To Share Your Research on this Site?

Find out [how to contribute](#).

[Email the Co-Chairs](#)

[Email the SSSP Webmaster](#)

• Products and Science

• Scientific Processing Packages

• Current/Future Weather Satellite Programs

• Operational Instrument Characteristics and Performance

• Direct Readout

• Cal/Val

• Useful Datasets for Satellite Data Processing

## SSSP - Products and Science

- Soundings
  - Benesch/Werscheck
  - Andrew Collard
  - Lydie Lavanant
  - Anthony Reale
  - Lei Shi
  - Byung-Ju Sohn
  - Alexander Uspensky
  - Joe Waters
  - Jens Wickert \*
  - Xuebao Wu
  - Chris Barnet/Walter Wolf
  - Limin Zhao <http://www.osdpd.noaa.gov/ml/mirs/>
  - Sid Boukabara
- Winds
  - Jennifer Francis
  - Ad Stoffelen
  - Ray Zehr \*
  - Cheng-Zhi Zou
- SSSP Clouds
  - Arlindo Arriaga
  - Karl-Goran Karlsson
  - Filomena Romano
  - Marion Schroedter
- Precipitation
  - Fuzhong Weng
  - Norman Grody
  - Michael Uddstrom
  - StanKidder
  - Sid Boukabara
- Surface
  - Heiner Billing
  - Jennifer Francis
  - Norman Grody
  - Catherine Prigent
  - John Sapper
  - Marion Schroedter
  - Fuzhong Weng
  - Limin Zhao
  - Sid Boukabara
- Trace Gases
  - Chedin
  - Marion Schroedter
  - Beach
  - Chris Barnet/Walter Wolf
  - Trinanés
- Radiance Products
  - Ralf Bennartz \*
  - Jennifer Francis
  - Darren Jackson
  - Kozo Okamoto
  - Michael Uddstrom
  - Lihang Zhou and Thomas King
  - A. K. Sharma
- Users
  - Jorge Chira
  - Ignacio Galindo
  - Hugo Herrera
  - Mauricio Salvidar
  - Vladimir Solovyev
  - Francisco Tirado

# Site Map

NOTE: Red asterisk \* denotes BAD link in page



## International TOVS Working Group Sub Group for Satellite Sounder Science and Products

### SSSP Home

- Products and Science
- Scientific Processing Packages
- Current/Future Weather Satellite Programs
- Operational Instrument Characteristics and Performance
- Direct Broadcast
- Cal/Val
- Useful Datasets for Satellite Data Processing
- ▶ Email the Co-Chairs
- ▶ SSSP Webmaster

Satellite Agencies
Satellite Programs
Main Instruments
Data Access
Prelaunch Datasets
Scientific Packages
Satellite Instrument Information

### Space & Satellite Agencies

§ Brazilian Space Agency (CPTEC)	<a href="http://satellite.cptec.inpe.br/index_in.htm">http://satellite.cptec.inpe.br/index_in.htm</a> <b>**SSSP Survey - CPTEC**</b>	*
§ Canadian Space Agency (CSA)	<a href="http://www.space.gc.ca/asc/eng/">http://www.space.gc.ca/asc/eng/</a>	
§ Chinese Academy of Space Technology (CAST) and Information Service	<a href="http://nsmc.cma.gov.cn/indexe.html">http://nsmc.cma.gov.cn/indexe.html</a>	*
§ European Space Agency (ESA)	<a href="http://www.nesdis.noaa.gov/">http://www.nesdis.noaa.gov/</a>	
§ Europe's Meteorological Satellite Organisation (EUMETSAT)	<a href="http://www.esa.int/esaCP/index.html">http://www.esa.int/esaCP/index.html</a>	
§ Indian Space Research Organization	<a href="http://www.eumetsat.int/">http://www.eumetsat.int/</a> <b>**SSSP Survey - EUMETSAT**</b>	
§ Jet Propulsion Laboratory (JPL)	<a href="http://www.isro.org">http://www.isro.org</a> <b>**SSSP Survey - ISRO**</b>	
§ Meteorological Satellite Center (MSC)	<a href="http://airs.jpl.nasa.gov">http://airs.jpl.nasa.gov</a> <b>**SSSP Survey - JPL**</b>	
§ National Aeronautics and Space Administration (NASA)	<a href="http://mscweb.kishou.go.jp/">http://mscweb.kishou.go.jp/</a>	
§ National Space Development Agency (NASDA) of Japan	<a href="http://www.nasa.gov/home/index.html">http://www.nasa.gov/home/index.html</a> <a href="http://science.hq.nasa.gov/missions/satellite_64.htm">http://science.hq.nasa.gov/missions/satellite_64.htm</a>	
§ National Oceanic and Atmospheric Administration (NOAA)/ Integrated Program Office(IPO)	<a href="http://www.nasda.go.jp/projects/sat/index_e.html">http://www.nasda.go.jp/projects/sat/index_e.html</a>	
§ Russian Space Agency	<a href="http://www.noaa.gov/">http://www.noaa.gov/</a> <a href="http://www.ipo.noaa.gov">http://www.ipo.noaa.gov</a> <b>**SSSP Survey - IPO**</b>	
	<a href="http://sputnik.infospace.ru/">http://sputnik.infospace.ru/</a>	

# Site Map

## Scientific Processing Packages

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- Line by Line RT Models
- Fast RT Models
  - GDAS
  - OPTRAN-6 Fit to LBLRTM
  - Community Radiative Transfer Model (CRTM)
  - Radiative Transfer and Surface Modeling
- Scientific Processing Packages - Satellite Products
  - AAPP
    - NWP SAF <http://www.metoffice.gov.uk/research/interproj/nwpsaf/index.html> \*
    - AAPP web page <http://www.metoffice.gov.uk/research/interproj/nwpsaf/aapp/index.html> \*
  - IAPP
  - ICI
  - 1DVAR--><http://www.metoffice.gov.uk/research/interproj/nwpsaf/1dvar/index.html> \*
  - IMAPP
  - 3I
  - IPOPP

## Current/Future Weather Satellite Programs

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- *space & satellite agencies*
- *current and planned satellite programs*
  - GPS Radio Occultation
- *infrared, microwave and imager instruments*
- *global and local data access protocols*
- *pre-launch and validation datasets*
- *scientific packages for ingesting/processing*
- *Satellite Instrument Information*

## Operational Instrument Characteristics and Performance

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- Satellite Health
- Operational Daily Monitoring
- NOAA AIRS Monitoring
- Instrument Characteristics

NOTE: Red asterisk \* denotes BAD link in page



## International TOVS Working Group

# Sub Group for Satellite Sounder Science and Products

SSSP Home

- Products and Science
- Scientific Processing Packages
- Current/Future Weather Satellite Programs
- Operational Instrument Characteristics and Performance
- Direct Broadcast
- Cal/Val
- Useful Datasets for Satellite Data Processing
- ▶ Email the Co-Chairs
- ▶ SSSP Webmaster

## Direct Broadcast

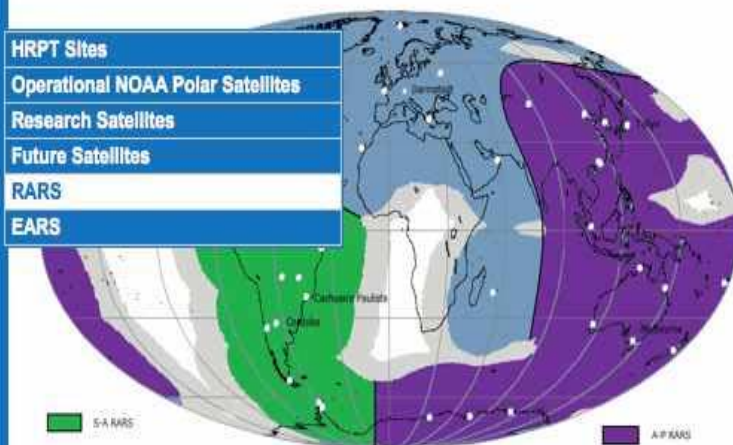
[HRPT sites](#) | [Operational NOAA Polar Satellites](#) | [Research Satellites](#) | [Future Satellites](#) | RARS | [EARS](#)

## Regional ATOVS Retransmission Services (RARS)

The top level objective of the RARS project is to deliver ATOVS data (Level 1c) from at least 90% of the globe within no more than 30 minutes from acquisition.

RARS data from 34 stations are now available over the GTS in an harmonized format which represents 70% of the Globe surface coverage. 45 stations (81%) are planned at end of 2010. Three main networks are available : the EUMETSAT ATOVS Retransmission service (EARS), the ASIA-Pacific and the South-America networks. The progress made by the global RARS network is an important step towards WMO objectives of data standardization, integration and enhanced availability.

Dissemination of data from advances sounder (IASI, CrIs) are planned.



For more information on RARS, see: <http://www.wmo.int/pages/prog/sat/RARS.html>. A page of the site (<http://www.wmo.int/pages/prog/sat/RARS-access.html>) explains how to access the data via the GTS service. It is also possible to access the data of the [EARS network](#) through the EUMETCast service.



## Direct Broadcast

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- HRPT sites
  - HRPT characteristics
  - WMO RARS page
  - EUMETSAT EARS page
- Operational NOAA Polar Satellites
- Research Satellites
- Future Satellites
- RARS
  - Lannion link operated by CMS \*
  - EUMETSAT EUMETCast page

## Cal/Val

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- Integrated Satellite Instrument Calibration/Validation System (NOAA-STAR)
- NOAA IASI/AIRS Sounding Project(s) Validation
- NOAA PROducts Validation System (**NPROVS**)
- Department of Energy (DOE) Atmospheric Radiation Measurements (ARM) network
- GRUAN

## Useful datasets for satellite data processing

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- **Land cover characterization**
  - [http://eros.usgs.gov/#/Find\\_Data/Products\\_and\\_Data\\_Available/Land\\_Cover\\_Products](http://eros.usgs.gov/#/Find_Data/Products_and_Data_Available/Land_Cover_Products)
  - [http://edc2.usgs.gov/glcc/globdoc2\\_0.php](http://edc2.usgs.gov/glcc/globdoc2_0.php)
  - <http://modis-atmos.gsfc.nasa.gov/ECOSYSTEM/>
- **Land surface emissivities**
  - <http://speclib.jpl.nasa.gov/>
  - <http://www.icess.ucsb.edu/modis/EMIS/html/em.html>
  - <http://modis.gsfc.nasa.gov/data/dataproduct/index.php>
  - <http://modis-land.gsfc.nasa.gov/>
  - [http://www.metoffice.com/research/nwp/publications/papers/technical\\_reports/index.html](http://www.metoffice.com/research/nwp/publications/papers/technical_reports/index.html)
  - <http://cimss.ssec.wisc.edu/iremis/>
- SST and albedo
  - [ftp://podaac.jpl.nasa.gov/pub/documents/dataset\\_docs/jpl\\_climatology.html](ftp://podaac.jpl.nasa.gov/pub/documents/dataset_docs/jpl_climatology.html)
  - [http://podaac.jpl.nasa.gov/DATA\\_CATALOG/sst.html](http://podaac.jpl.nasa.gov/DATA_CATALOG/sst.html)
- SNOW
  - <http://www.ssd.noaa.gov/PS/SNOW/index.html>
- Elevation and type atlas
  - [http://eros.usgs.gov/#/Find\\_Data/Products\\_and\\_Data\\_Available/gtopo30\\_info](http://eros.usgs.gov/#/Find_Data/Products_and_Data_Available/gtopo30_info)
  - <http://gmt.soest.hawaii.edu/>
  - IAPP: [http://cimss.ssec.wisc.edu/opsats/polar/iapp/iapp\\_info.htm](http://cimss.ssec.wisc.edu/opsats/polar/iapp/iapp_info.htm)
  - AAPP: <http://www.metoffice.com/research/interproj/nwpsaf/aapp/index.html>
- Global atmospheric circulation statistics/analysis
  - [http://www.ngdc.noaa.gov/ecosys/cdroms/AVHRR97\\_d1/document/avhrrcli/document.htm](http://www.ngdc.noaa.gov/ecosys/cdroms/AVHRR97_d1/document/avhrrcli/document.htm)
  - [http://www.ngdc.noaa.gov/ecosys/cdroms/AVHRR97\\_d1/aareadme.htm](http://www.ngdc.noaa.gov/ecosys/cdroms/AVHRR97_d1/aareadme.htm)
  - [http://gcmd.nasa.gov/records/GCMD\\_NCAR\\_CIRC.html](http://gcmd.nasa.gov/records/GCMD_NCAR_CIRC.html)
  - <http://iridl.ldeo.columbia.edu/SOURCES/.OORT/>
  - <http://dss.ucar.edu/datasets/ds217.0/>

# Site Map

# Summary

- Centralized Information Dissemination
- Core ITSC function (**all invited to participate**)
- Update Respective Areas (... volunteers)
- New areas (Visual and Education)