

# ITWG Products and Software Working Group (PSWG)

## ITSC-25

Co-chairs: Anna Booton, Graeme Martin

**Liam Gumley** is kindly chairing this WG as Graeme is unable to be here in person

# Aims and Scope

Discuss software ideas and issues associated with making satellite data easier to access and use:

- Focus on both **Level 1 and Level 2 satellite data and products**
- **Software tools and packages** for generating, analyzing, and visualizing products
- **Enabling users** to obtain or generate the products they need
- **End user feedback**
- **Information exchange for validation** of products;
- Informing the user community about **requirements for future missions**; and
- **Informing agencies** about users' requirement

# Review of Actions ITSC-24

## Actions about sharing information (via website)

- ITSC-22-PSWG-6: PSWG co-chairs to **update the group web page** by next ITSC, assuming Wordpress is implemented by CIMSS as planned - **DONE**  
**The Website has a new look! Many thanks to Leanne for setting up the pages.**
- ITSC-24-PSWG-1: PSWG co-chairs to **share** on the PSWG web site the **documents related to containers** that were presented at the meeting. - **DONE**  
**Container documents related to satellite software are shared here**

### Technical Notes and Information

- [Directory of software packages and tools: for Direct Broadcast, L1, L2 processing, visualization and analysis](#)
- [AAPP, OPS-LRS, and Metopizer containerized build and run instructions for DBNet operators](#)

### Lessons Learned in GeoSphere Development:

- [Software Containerization](#) (offsite link to Uni. Wisconsin)
- [Deploying software Using Cloud-Friendly Technologies](#) (offsite link to Uni. Wisconsin)

# Review of Actions ITSC-24

## Actions about sharing information (via website)

- ITSC-22-PSWG-6: PSWG co-chairs to **update the group web page** by next ITSC, assuming Wordpress is implemented by CIMSS as planned - **DONE**  
**The Website has a new look! Many thanks to Leanne for setting up the pages.**
- ITSC-24-PSWG-1: PSWG co-chairs to **share** on the PSWG web site the **documents related to containers** that were presented at the meeting. - **DONE**  
**Container documents related to satellite software are shared here**
- ITSC-24-PSWG-2: PSWG co-chairs to **port the current list of software packages** to the new web site (when available) and to **solicit the help of PSWG members** to **update the tables.** – **Almost done**

# Directory of Direct Broadcast and other software packages

We have a directory listing:

## Directory of software packages and tools for Direct Broadcast Level 0, 1, and 2 processing, visualization, and analysis

### Contents

- [Direct Broadcast packages: Level 0 and Level 1](#)
- [Other Level 1 processing packages \(not DB\)](#)
- [Level 2 processing packages](#)
- [Visualization and Analysis tools](#)
- [Appendix](#)
  - [Appendix A: Modification to file ProcUtils.py in ocsw\\_7.5](#)
  - [Appendix B: CADU manipulation](#)

Original authors: Nathalie Selbach and Nigel Atkinson

Page last updated by: Liam Gumley

Please [email us](#) (with the subject "PSWG – package update request") to request page updates.

### Direct Broadcast packages: Level 0 and Level 1

Name	Capabilities	Output format	Reference
RT-STPS	CCSDS decoding software. Outputs CCSDS Level 0 or Raw Data Records (RDRs). Supports Aqua, Terra, NPP, JPSS series.	CCSDS Level 0, HDF5	<a href="#">CIMSS – CSPP</a>
Metopizer	Collection of tools for manipulating CCSDS Instrument Source Packets and other related data types (CADU, t-VCDU packets, Metop L0 products).	EPS Level 0	<a href="#">EUMETSAT – support software</a>
IMAPP: Aqua AIRS/AMSU/HSB Level 1 Processing Package for Direct Broadcast	Level 1 processing for Aqua AIRS and AMSU.	HDF4, BUFR	<a href="#">CIMSS – IMAPP</a>
IMAPP: MODIS Level 1			

**This is the  
only webpage  
curating this  
information  
that we're  
aware of**

Linked from the  
“Technical Notes and  
Information” on the  
PSWG home page

# Review of Actions ITSC-24

## Remaining actions

- ITSC-23-PSWG-1: PSWG co-chairs to liaise with the ASWG and NWPWG co-chairs with the **aim of agreeing a coordinated approach to the cluster analysis of VIIRS radiances on the CrIS footprint.** - **Ongoing**  
**Liam - to provide update**
- ITSC-23-PSWG-1: PSWG co-chairs to **monitor developments in PC representation**, liaising with the ASWG, and report back to PSWG at the next ITSC - **Ongoing**

### Update from Dave Tobin (ASWG)

- The CrIS PCA/RED sample product is in place for NOAA-21 at NASA GES-DISC. This will soon be transitioned to an official product for all CrISes  
(presentation 6.02 Joe Taylor is on NASA's PCA RED Product)
- The GeoXO Sounder PC product is in the design phase, and will follow the Hybrid methodology

# Agenda

1. Welcome
2. Open **actions** and **recommendations** from previous meeting
3. **Items from the CGMS High Level Priority Plan**
  - AI considerations when developing satellite software and best practices
4. **Plans of agencies and software providers related to new and future satellite instruments**
  - Rani - highlighting the Indian satellites/instruments that we can look forward to
  - Liam - status of other major satellite instruments
5. **Cloud services** and cloud data distribution
  - Sreerekha - giving a overview of using European Weather Cloud (EWC)
6. Needs and concerns of **direct broadcast** users
7. Status and **plans** of software packages for **processing sounder data**
  - Liam - overview CSPP updates
  - Anna - overview AAPP, AAPP-AWS, IRSPP (for MTG-IRS) updates
8. AOB