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Report from the Australian RDAC to GHRSSST-XVI

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Netherlands, 20th – 24th July, 2015



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Main Activities since GHRST-XV

Finished building new home!





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Main Activities since GHRSSST-XV

- **IMOS/BoM:** Australian and Antarctic region HRPT AVHRR SST reprocessing back to 1992 complete (see [poster](#) and <http://imos.org.au/sstproducts.html>)
- **IMOS/BoM:** Validated 23 years of IMOS HRPT AVHRR SSTs ([CDRTAG](#) presentation Thurs am and [poster](#))
- **BoM/JAXA:** JAXA AMSR-2 L2P product ingested into Bureau's operational L4 SST analyses (1 Dec 2014) and OceanMAPS ocean model (10 Sep 2014)
- **ACSPO/BoM:** BoM L2P → L3U code modified by NOAA to convert ACSPO VIIRS L2P files to 0.02° GDS2 L3U files to reduce data volumes



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Main Activities since GHRST-XV

- **BoM/NOAA-STAR/JMA:** Himawari-8 SSTs in development (based on regression against drifting buoys)
 - Have RT feed of Himawari-8 standard format data into BoM
 - Can process with GEOCAT using SST algorithm
 - Regression coeffs and cloud mask need further tuning
- **CSIRO/NOCS/BoM:** ISAR installed on RV Investigator Oct 2014 ([ST-VAL](#) Session)
- **IMOS/BoM:** Hull temperature sensors installed on 3 new ships of opportunity
 - 10 IMOS ships report QC'd RT SST to GTS and IMOS Ocean Portal

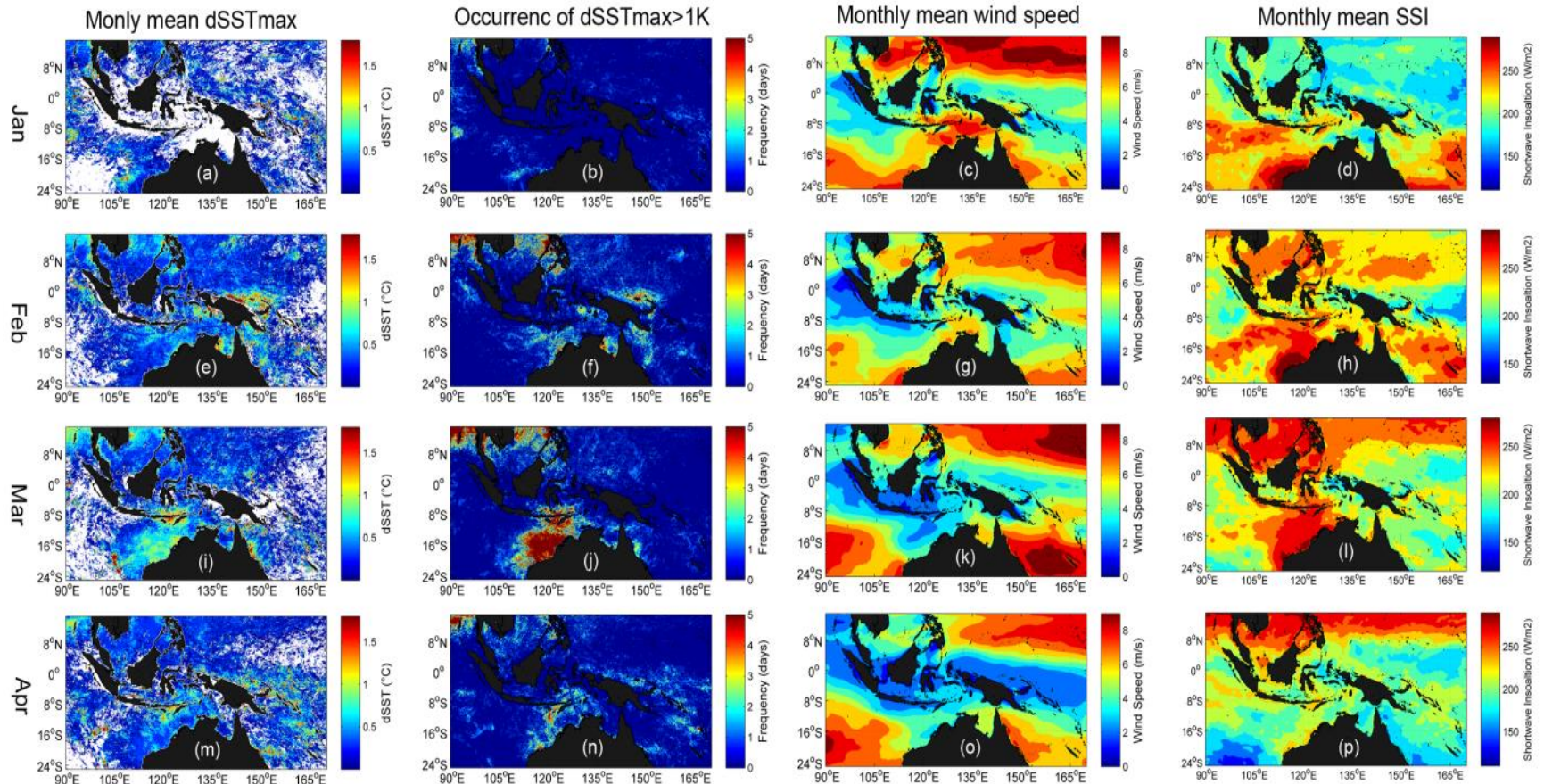


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Main Activities since GHRSSST-XV

- UNSW/BoM: Investigating SST DV over Tropical Warm Pool (see Haifeng Zhang's poster)





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31 Dec 2014

- **Real-time GDS1.7:**

- Daily Regional $1/12^\circ$ SSTfnd **L4** ("RAMSSA")
- Daily Global 0.25° SSTfnd **L4** ("GAMSSA")

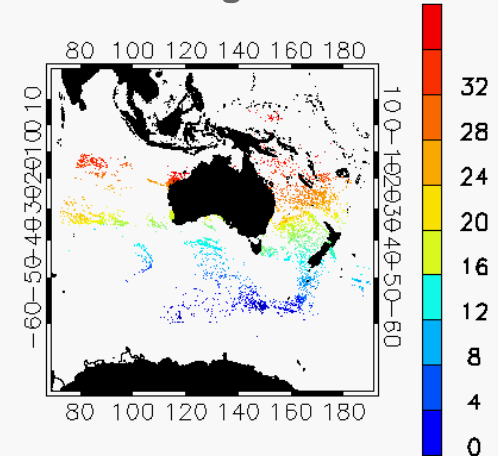
- **Real-time GDS2.0:**

- IMOS **fv01** HRPT AVHRR **SSTskin**
 - L2P and 0.02° **L3U**, 1-day day/night **L3C**, day/night 1/3/6/14-day/1-month **L3S** files
- IMOS **fv01** HRPT AVHRR **SSTfnd**
 - 0.02° day+night 1/3/6/14-day/1-month **L3S** files

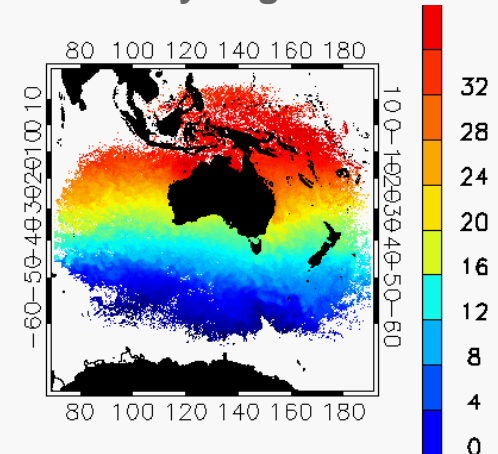
- **Reprocessed GDS2.0:**

- IMOS HRPT AVHRR L2P/L3U/L3C/L3S **fv02** products from 1992 to present (NOAA-11 to 19)
- IMOS MTSAT-1R Hourly 0.05° **L3U** (2006 to 2010)

NOAA-19 Night L3C SSTskin



1 month Day+Night L3S SSTfnd





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Data Availability

- **Real-time GDS1.7**

- Operational L4 (RAMSSA/GAMSSA): GDAC and LTSRF
- Insufficient resources at present to convert to GDS2.0

- **Real-time GDS2.0**

- IMOS **fv01** HRPT AVHRR:
 - L2P: Bureau OPeNDAP server (contact h.beggs@bom.gov.au)
 - L3U/L3C/L3S: IMOS Thredds server at <http://rs-data1-mel.csiro.au/thredds/catalog/imos-srs/sst/ghrsst/catalog.html>
- Shortly to be available as **fv02** files

- **Reprocessed GDS2.0**

- IMOS **fv02** HRPT AVHRR:
 - L2P: Contact h.beggs@bom.gov.au
 - L3U/L3C/L3S: IMOS Thredds server at <http://rs-data1-mel.csiro.au/thredds/catalog/imos-srs/archive/sst/ghrsst-fv02/catalog.html>
- IMOS MTSAT-1R L3U: <http://rs-data1-mel.csiro.au/thredds/catalog/imos-srs/sst/ghrsst/l3u/mtsatsat1r/catalog.html>



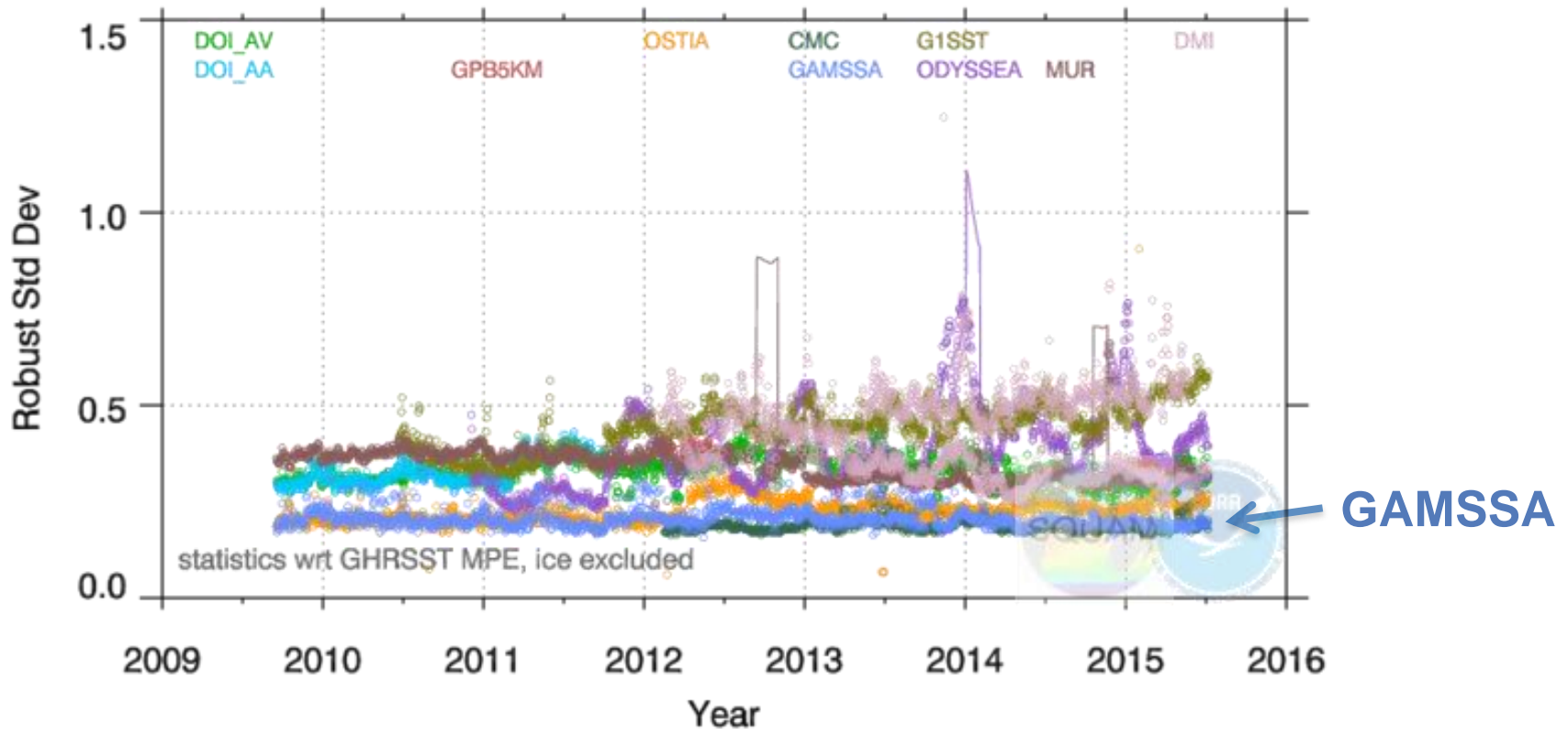
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Daily Global SST Analysis (GAMSSA) verification against GHRSSST Multi-Product Ensemble

<http://www.star.nesdis.noaa.gov/sod/sst/squam/L4/index.html#>

Robust St Dev (SST analysis – GMPE)





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Plans for 2015/2016

- Provide Himawari-8 GDS2.0 L2P files to NOAA/STAR for GOESPOES L4
- Provide [fv02](#) IMOS AVHRR GDS2.0 products operationally in real-time (currently only fv01 products are real-time).
- Repair ISAR SST radiometer on RV Investigator and develop new IMOS ISAR SSTskin data stream
- Test ingesting ACSPO VIIRS 0.02° L3U products into BoM operational SST analyses and ocean models
- Produce IMOS direct broadcast GHRSSST products from METOP-B?
- Ocean Remote Sensing Users Workshop, Melbourne, 9-11 Nov 2015



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Issues to be raised at GHRSSST-XVI

- What sort of Himawari-8 GHRSSST products would be useful?
 - 10-min, ~2 km res L2P products will be supplied in RT from BoM
 - What other L3 products are required?
 - 10-min, 0.02° L3U?
 - Hourly, 0.02° L3C?
- Does GHRSSST have a standard approach for high-res geostationary satellite data?
 - E.g. retrieval algorithms, SSES, quality level, common grids for L3U to merge with other GEOs, etc



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