GHRSST-XIV

Inter-comparison Technical Advisory Group (IC-TAG)

Breakout Session Report

Alexey Kaplan (Chair), Mike Chin (V-Chair, Rapporteur)

21 June 2013

Membership

- Dave Foley (NOAA & U of CA @ Santa Cruz) was added as a member
- David Poulter (now at Pelamis Scientific Software Ltd, working for IFREMER) will be asked to re-join as he is back in business of developing systems with IC-TAG –relevant capabilities.

By its TOR, IC-TAG is focused on the intercomparison systems: **GMPE**, **HRDDS**, and **SQUAM**.

- About 2 yrs ago **HRDDS** became defunct, b/c of funding problems. Now Dave Poulter is back, funded by ESA, developing even more advanced system called **Felyx**, whose capabilities will include HRDDS. The project is lead by Jean-François Piollé. Felyx development plans have been covered elsewhere at this meeting.

- For logistical reasons, in the last year **SQUAM** development only involved work with L2 and L3 products, not L4; **L4-SQUAM** work will restart in August 2013. Considerable progress of SQUAM on L2 and L3 inter-comparison was reported elsewhere at this meeting.

- **GMPE**'s funding situation and a proposal for its further development was presented by Gary Corlett.

- **GMPE**'s current funding by MyOcean2 is coming to an end.
- U.K. MetOffice is willing to keep running it and support updates provided that GHRSST (participating L4 producers) agree to obey certain requirements regarding their products and delivery (GDS 2.0 format, daily delivery by 1300UTC, global region, resolution at least 0.25°, accessibility through PO.DAAC or, at a minimum, by ftp elsewhere, as well as requirements on resilience and validation). L4 producers that were present were not objecting.
- In addition, MetOffice offers to provide software and guidance for establishing: (1) **Secondary GMPE**s, for testing and evaluation of new L4 products (e.g. at GDAC, if they are interested) (2) **Regional GMPEs**, for regional L4 products (e.g., at interested RDACs?). GPO is enthusiastic about these proposals. Present Data Centers' representatives were cautiously interested but concerned about details.
- Gary Corlett and other relevant people will be settling these issues over email.

Analysis methods and development of L4 SST products

Presentations (10 min each):

Sea surface temperature by Barnes' interpolation: current stage (Franca Gutemberg)

Recent updates to the near real time OSTIA system (Jonah Roberts-Jones)

Brief update (5 min):

NOAA Geo-Polar 5km Global SST Analysis for day&night, night-only, and diurnal correction plans (Eileen Maturi)

Discussion (15 min)

8:50-9:35: **Inter-comparison of L4 SST products**

Presentations (10 min each):

A comparison of SST gradients and the impact of going to higher resolution (Jorge Vazquez)

L4 comparison using Reynolds/Chelton spectrum test (Mike Chin)

Discussion (25 min), including:

plans for the IC-TAG-wide inter-comparison based on Reynolds & Chelton approach [Reynolds, R. W., D. B. Chelton, J. Roberts-Jones, M. J. Martin, D. Menemenlis, and C. J. Merchant, 2013: Objective determination of feature resolution in two sea surface temperature analyses, *J. Climate*, **26**, 2514-2533.]

Discussion Results

- Synthetic data used by *Reynolds et al.* (2013) and codes for their spectral analysis have already been made available at PO.DAAC (thanks to PO.DAAC/JPL people: Michelle Gierach, Ed Armstrong, and Mike Chin!) at ftp://grhsst@podaac.jpl.nasa.gov (the password has to be requested by sending an email to Ed.Armstrong@jpl.nasa.gov).
- Mike Chin has examined the data, software, and performed this test on his own L4 analysis (**MUR**).
- While technically any willing L4 producer already can download the package and perform the test, it seems that some streamlining of the procedure would make things easier to perform and to interpret. We would like to avoid (1) need for re-gridding the L4 results on the "4km Pathfinder grid"); (2) need for L4 producers to accommodate the present L3-like input rather than the L2 input format data; (3) the ambiguity in the test data use in the experiment, since their error estimates were not prescribed. L4 producers are asked to send a brief email stating their interest in participation and to voice any concerns.