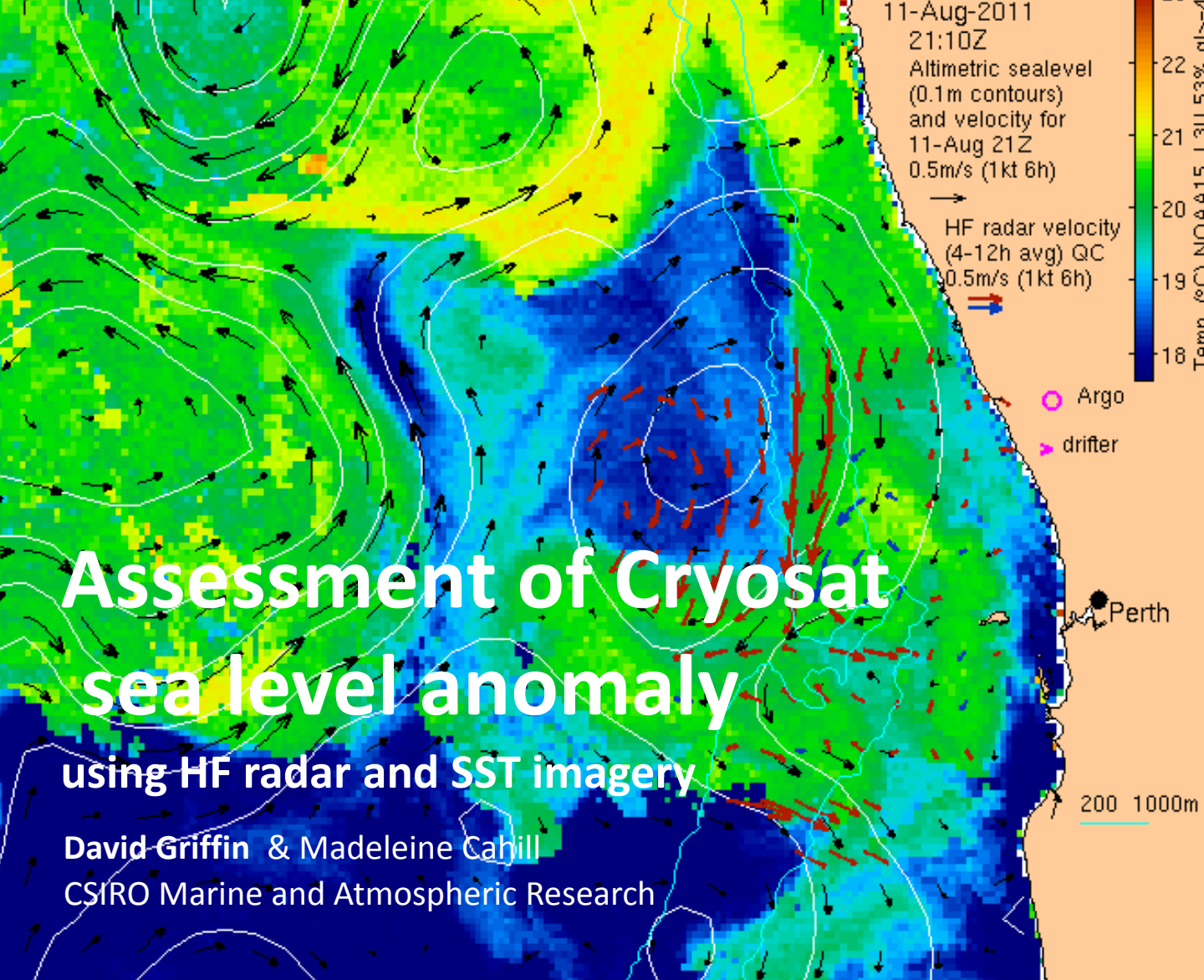


Assessment of Cryosat sea level anomaly

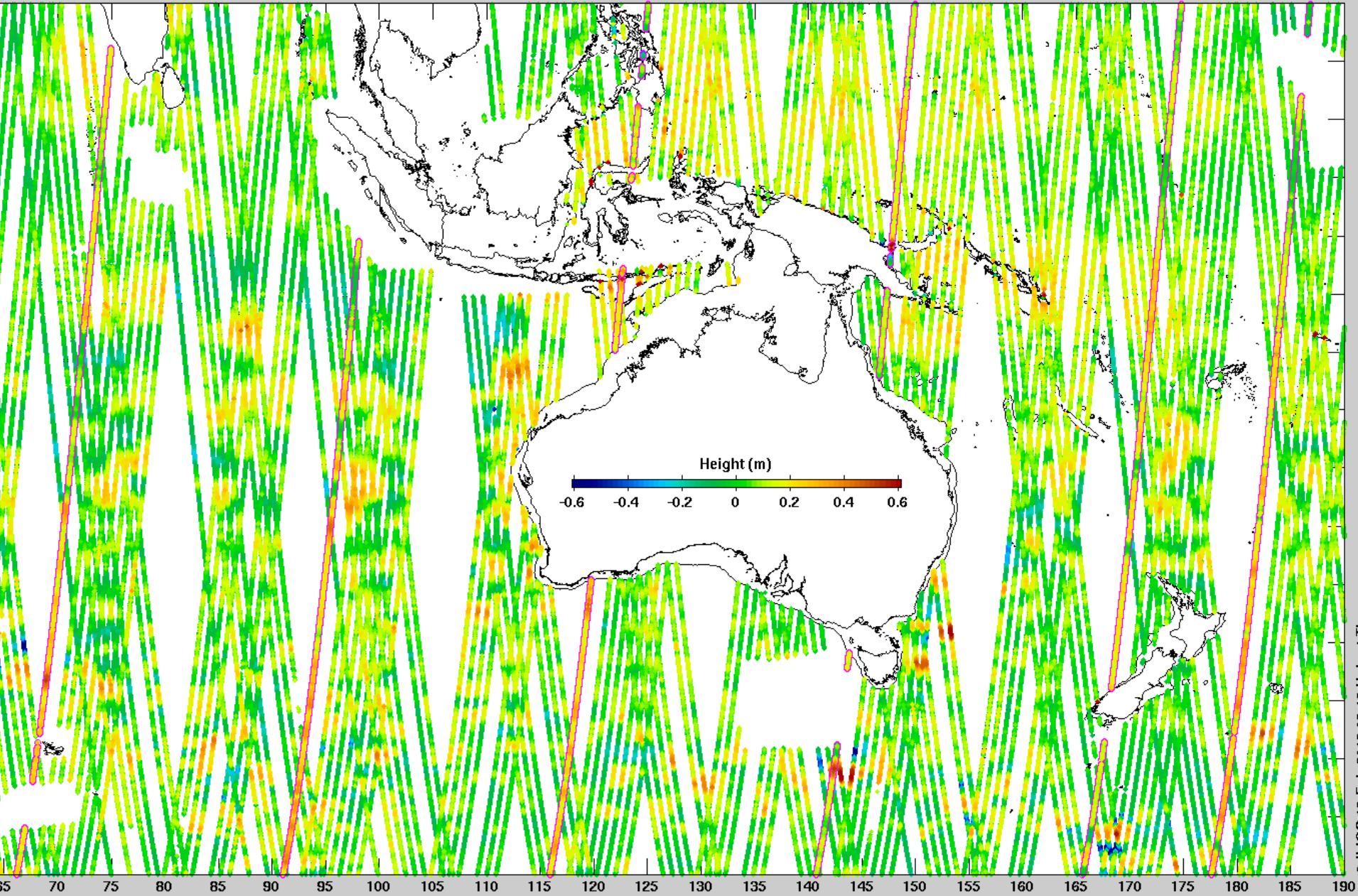
using HF radar and SST imagery

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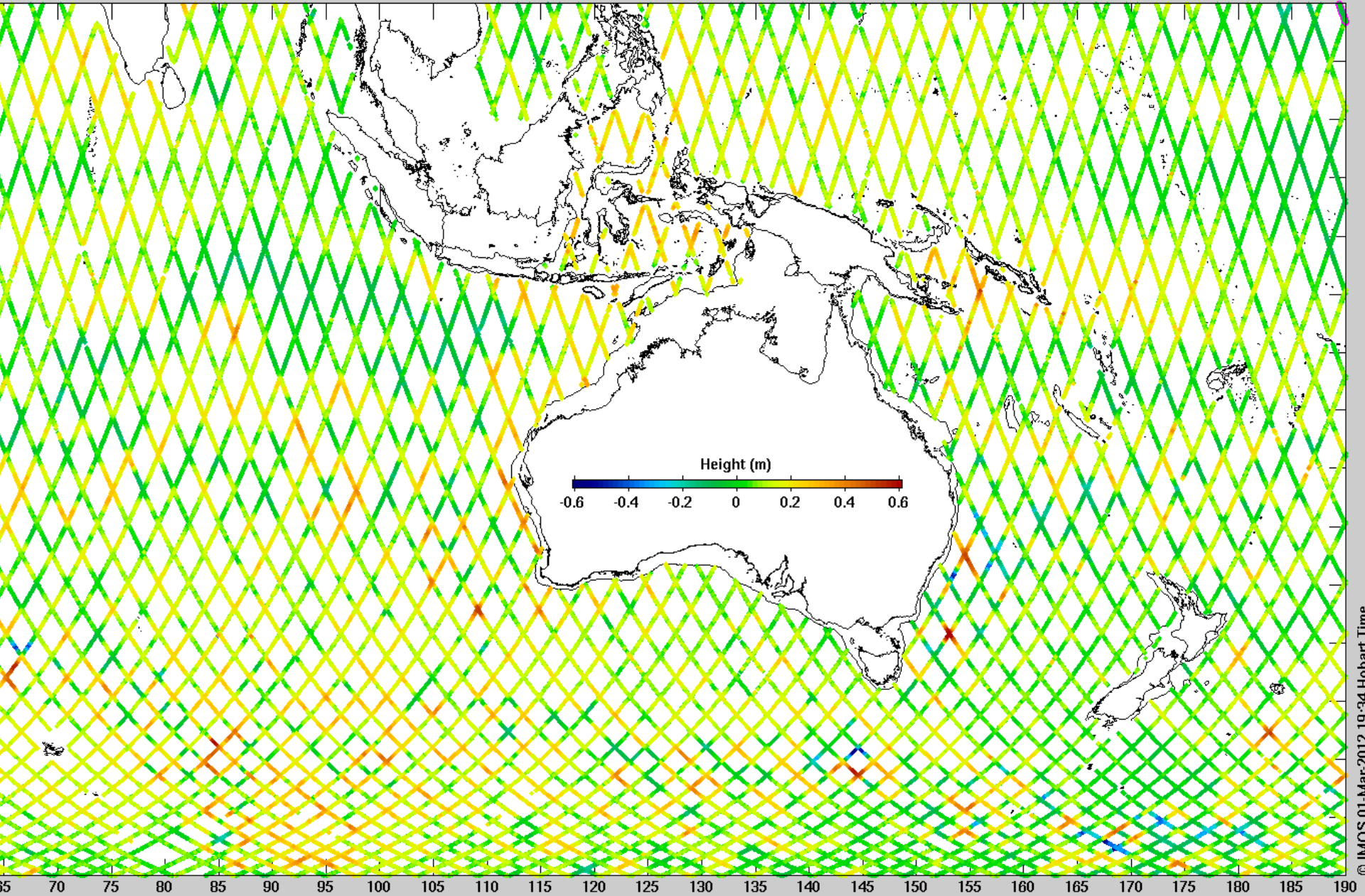


The data drought of early 2012

- Envisat retired on 11 April 2012.
- Jason-1 produced no IGDR 17 Feb – 20 May 2012
- That left us with Jason-2 and the ‘experimental’ Cryosat-2 LRM SLA product made by NOAA from the FDM.
- Demonstrated at San Diego. Distributed via RADS since Dec 2011.
- Here, we evaluate the value of Cryosat-2 data in our real-time SLA mapping system, focusing on a small region off SW Aust where there is an HF radar system, good SST, many eddies and a few drifters.



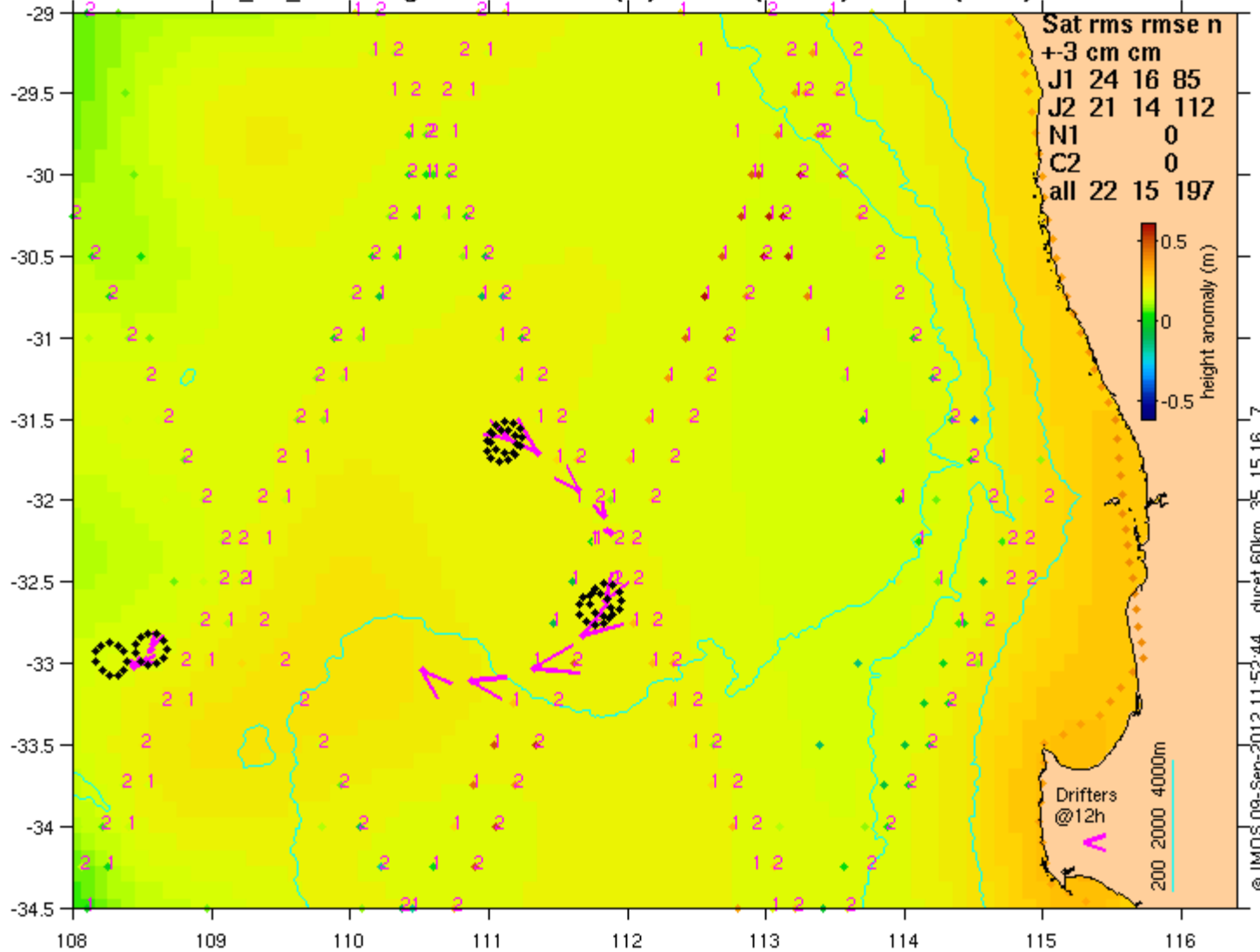
© IMOS 13-Feb-2012 09:12 Hobart Time



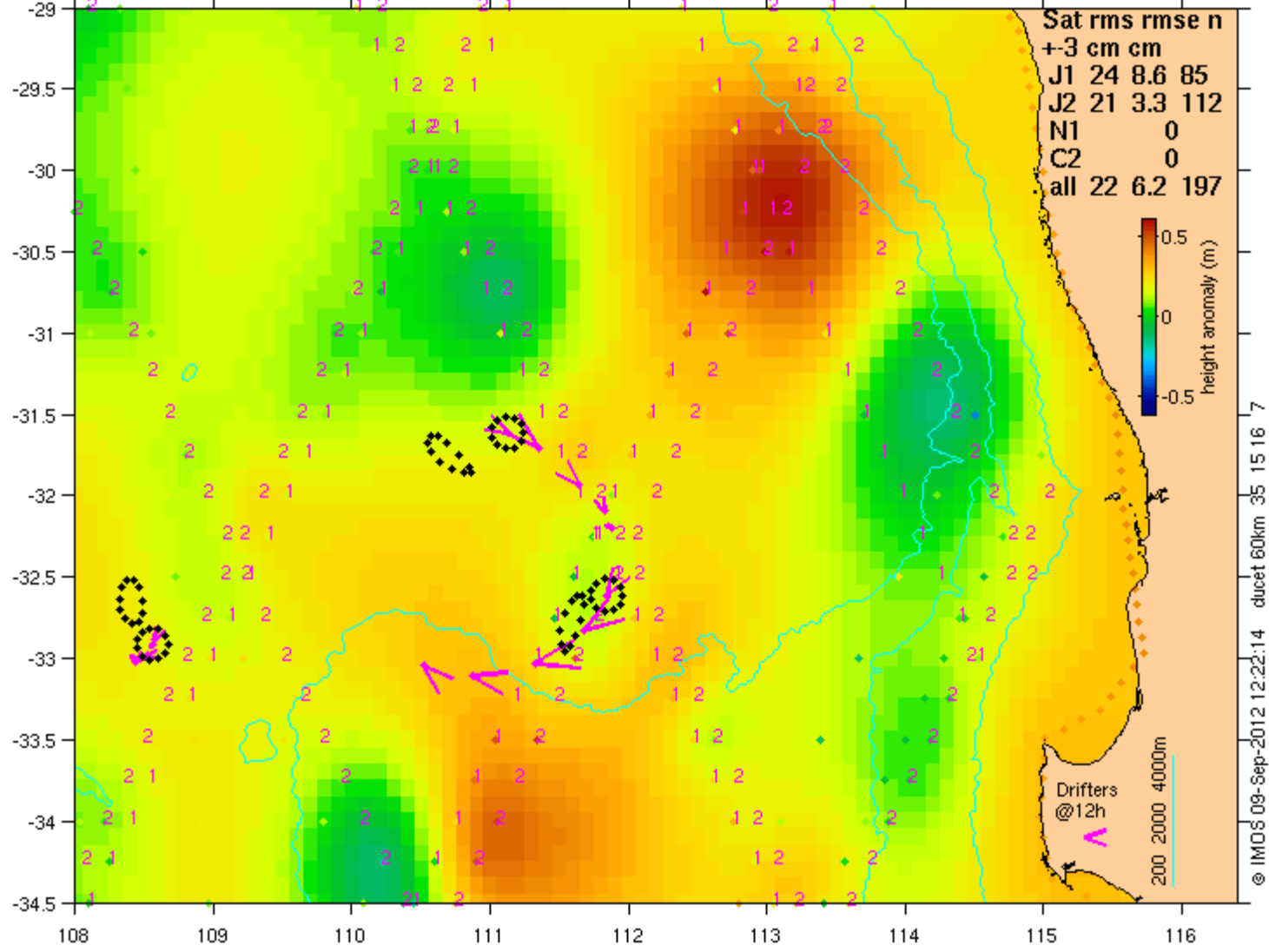
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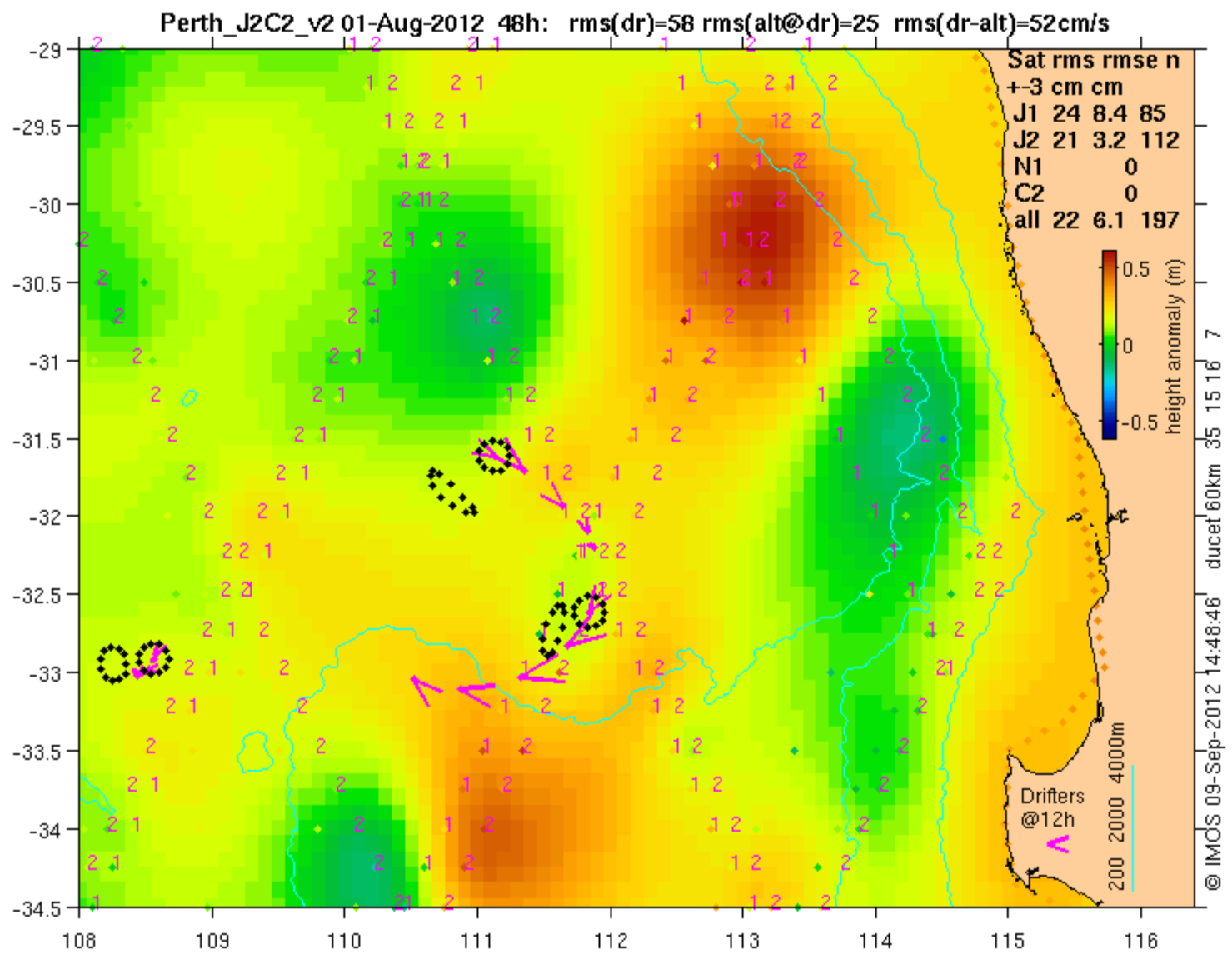
© IMOS 01-Mar-2012 10:34 Hobart Time

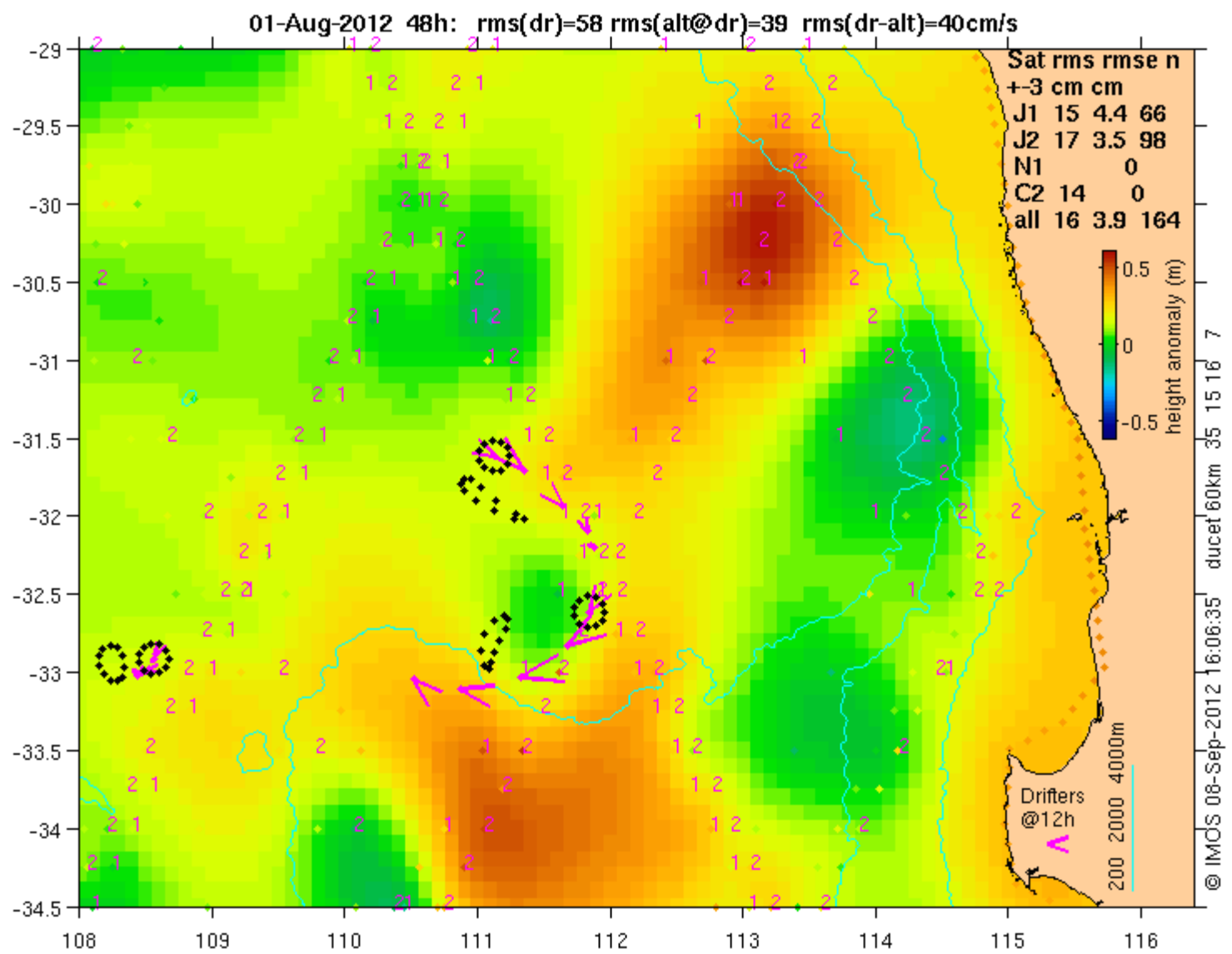
Perth_C2_v2 01-Aug-2012 48h: rms(dr)=58 rms(alt@dr)=10 rms(dr-alt)=56cm/s

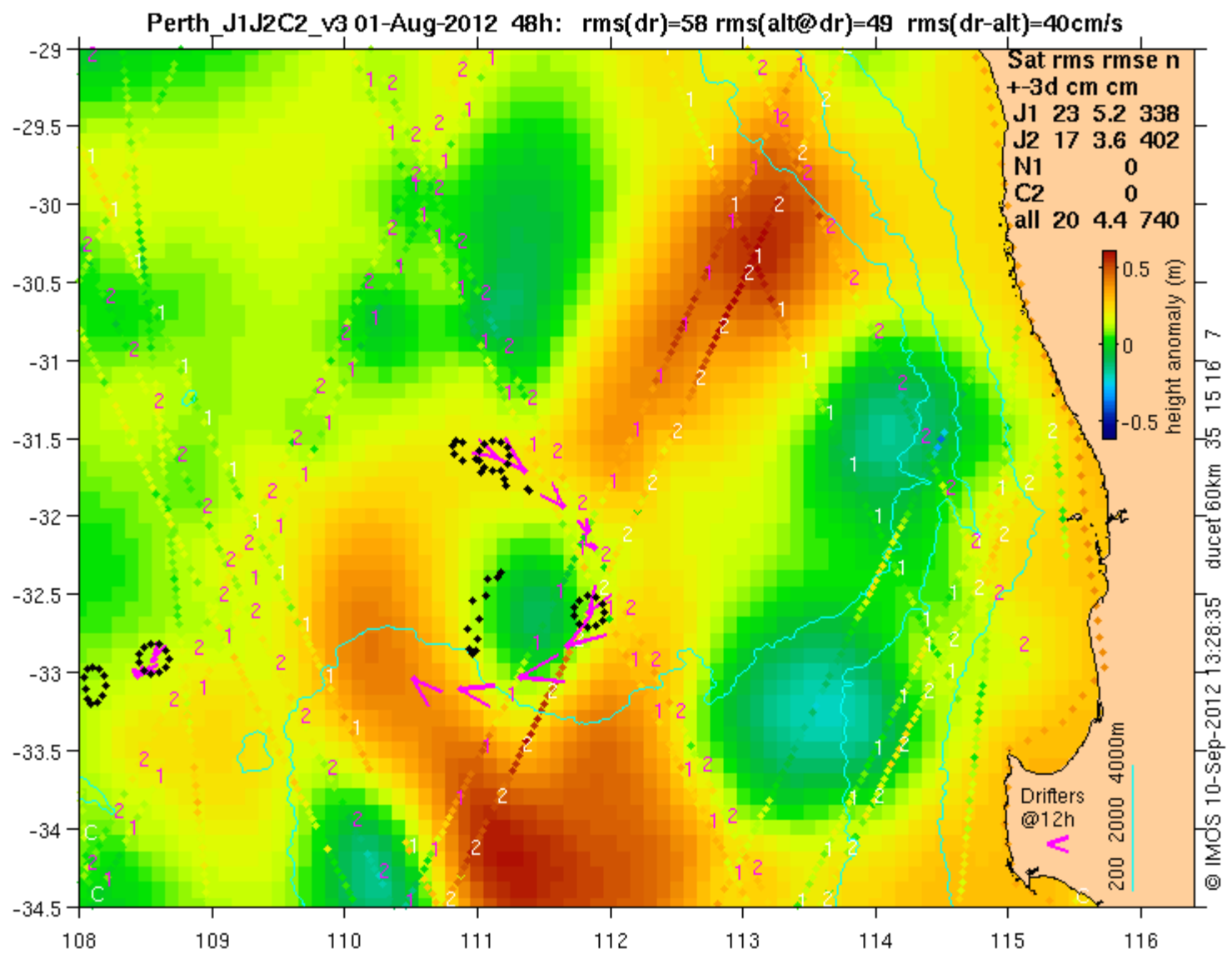


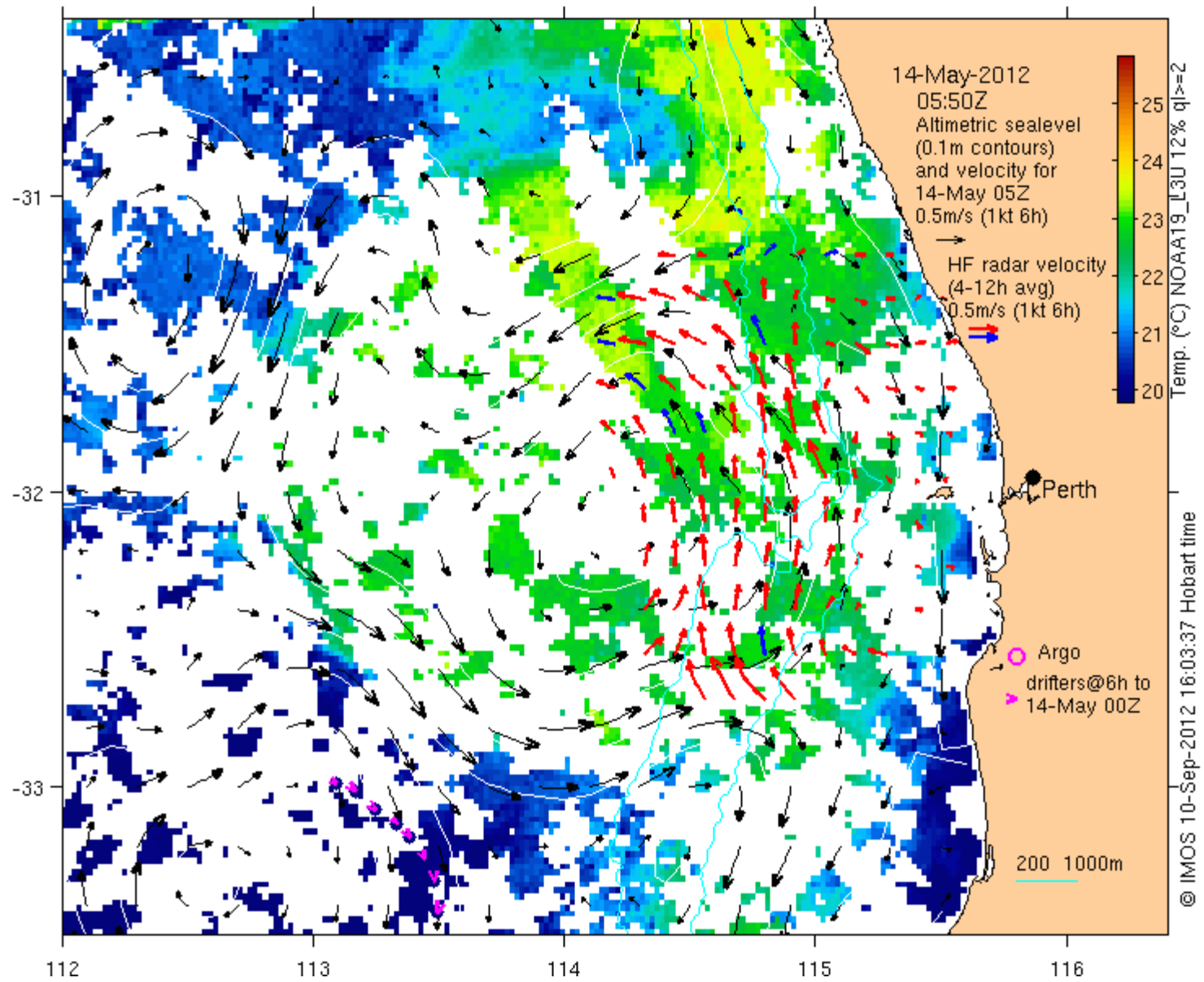
Perth_J2_v2 01-Aug-2012 48h: rms(dr)=58 rms(alt@dr)=23 rms(dr-alt)=56cm/s

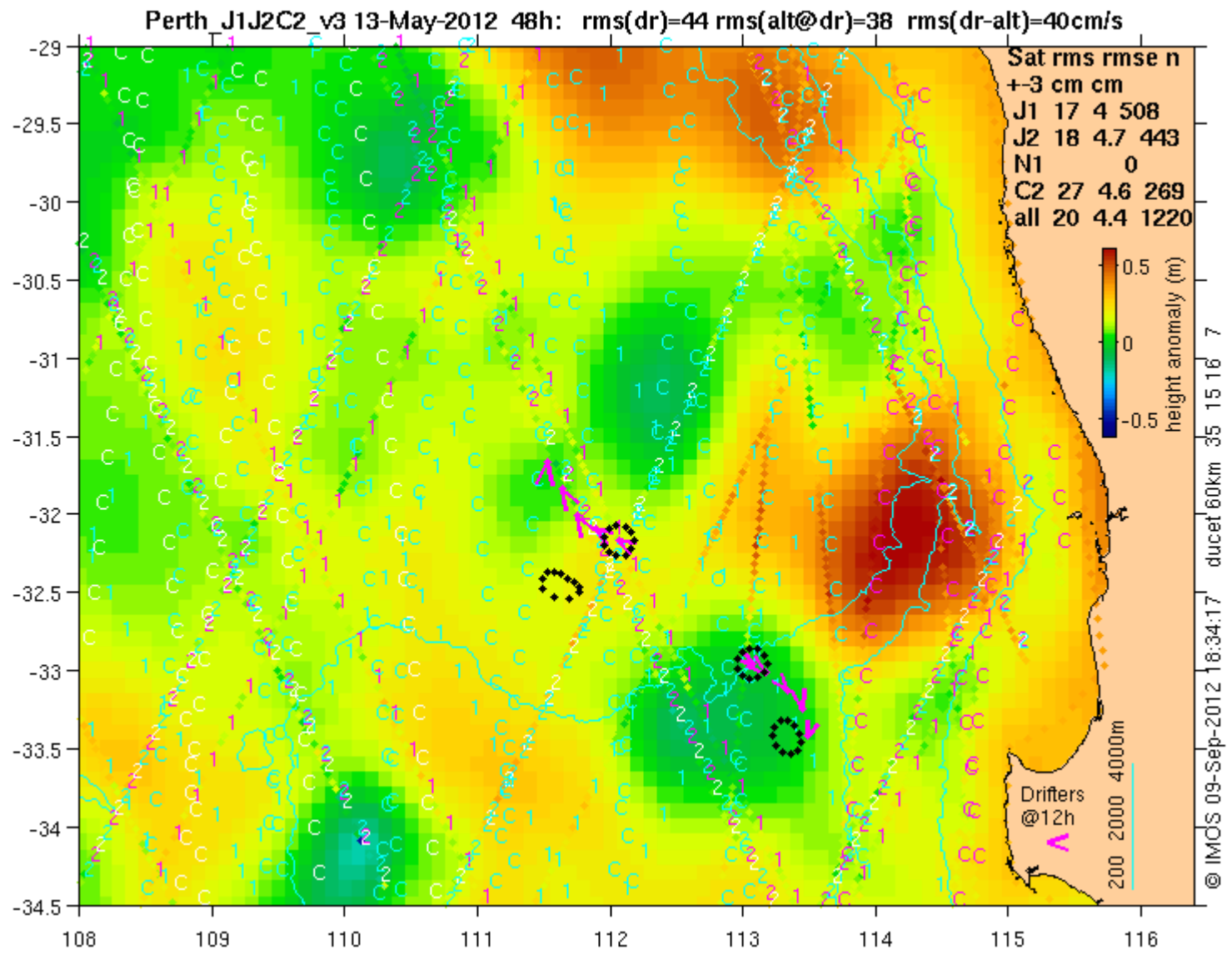


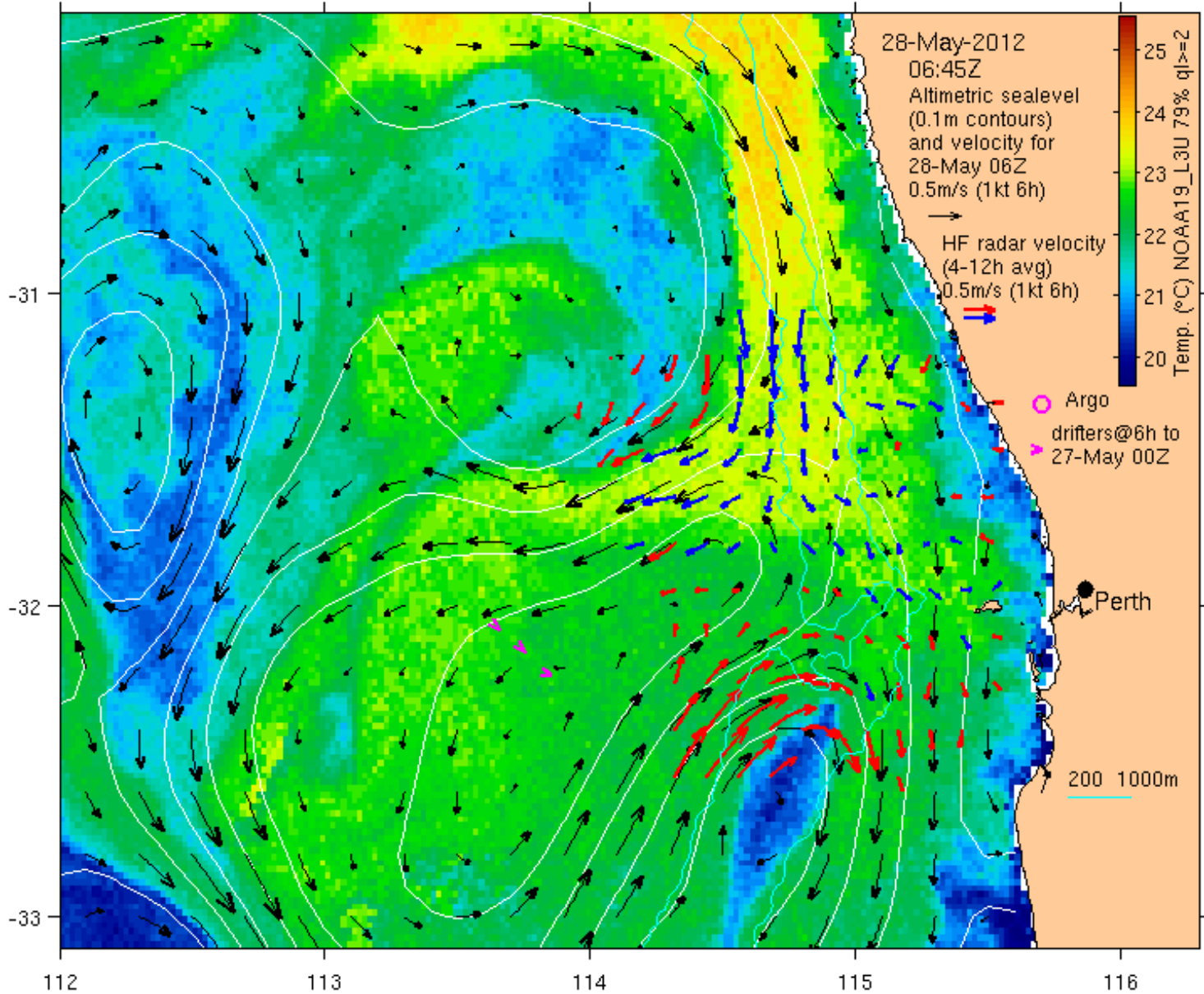




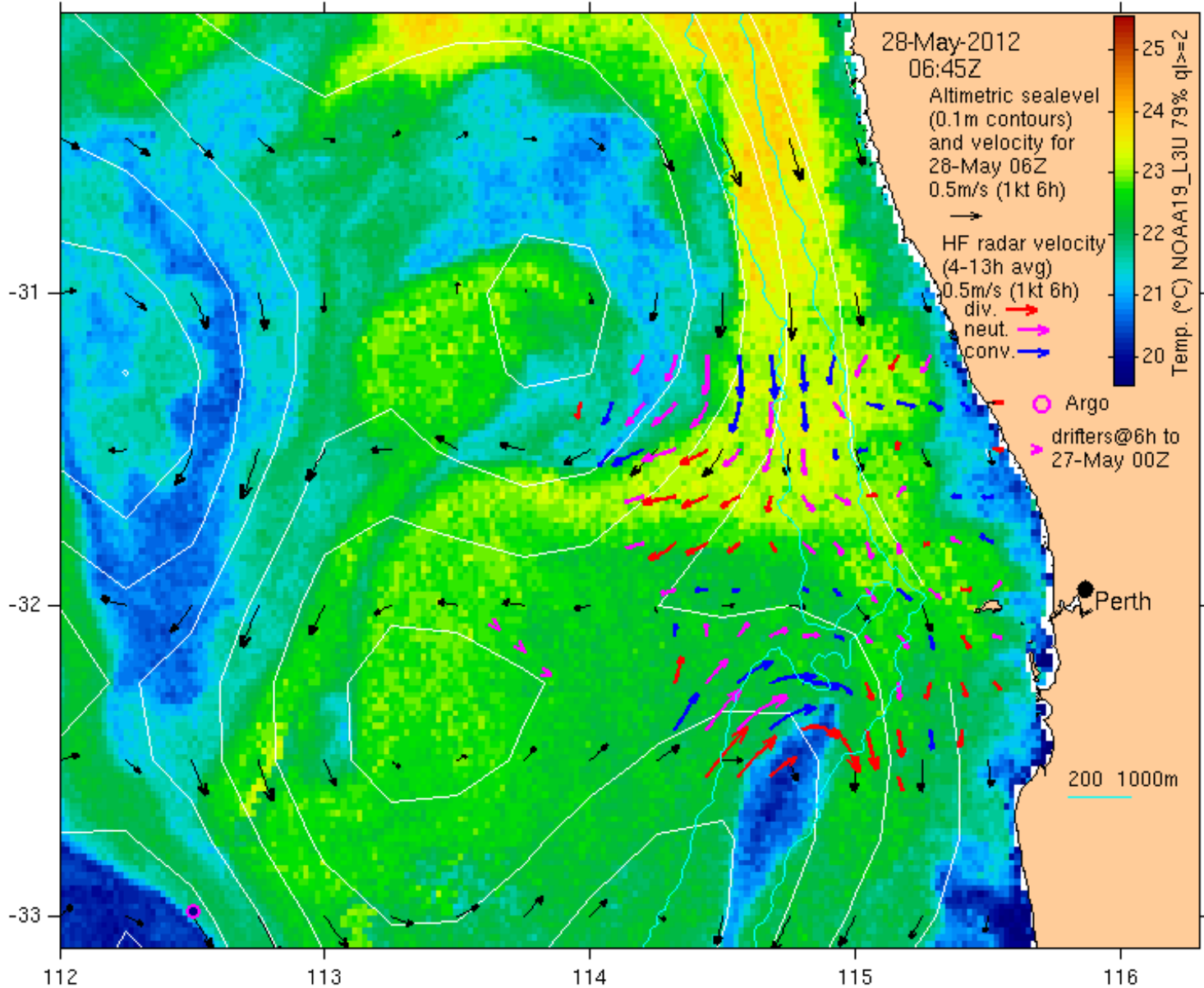


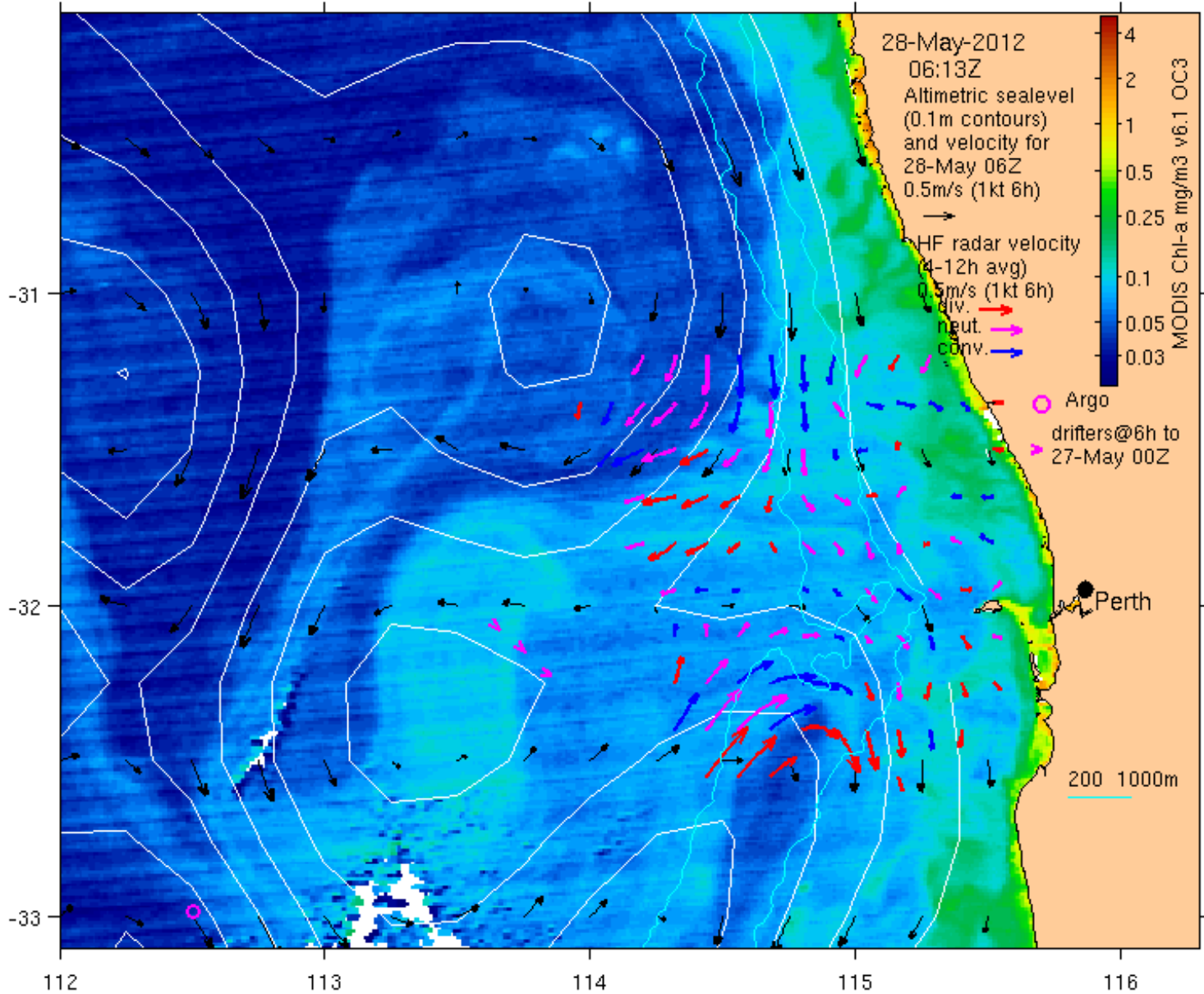






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Conclusion

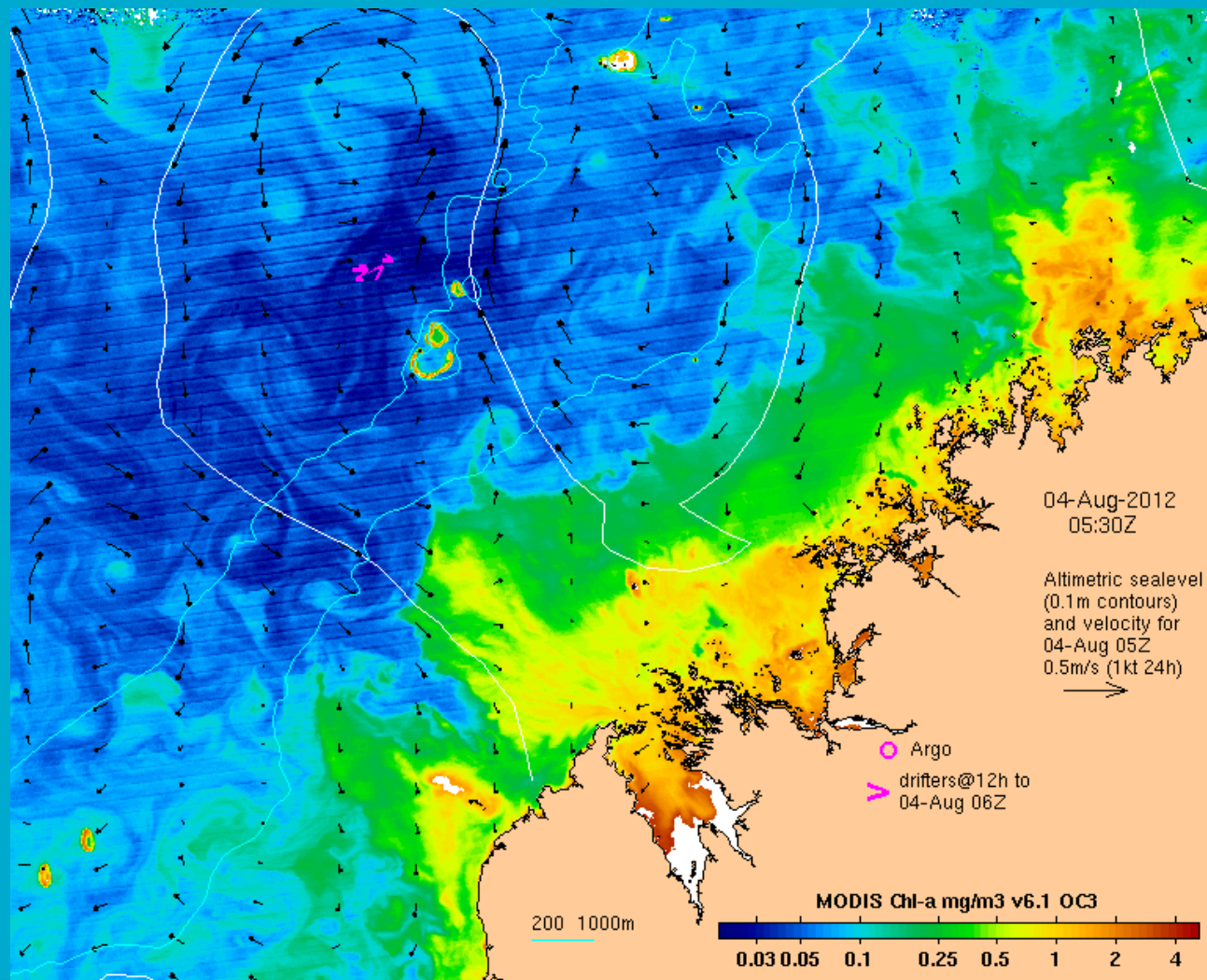
- Cryosat-2 SLA data is an excellent data set for meso-scale applications - half the time.
- The 'moving spotlight' coverage is very different to Jason's. There is a very strong 29-day data density cycle at 30°S.
- A preliminary set of selective withdrawal experiments failed to show a strong difference between the time-averaged value of C2 and J2 or J1.
- The effort to produce an oceanography product from CryoSat-2 has been very successful. Thanks to all involved!
- But J1-J2-C2 are not coordinated. Besides, 3 altimeters do not 'oversample' the mesoscale variability. Eg the strong feature off Perth in May 2012 was only sampled by one (J2).
- So we really need HY2-A and/or AltiKA.

Thank you

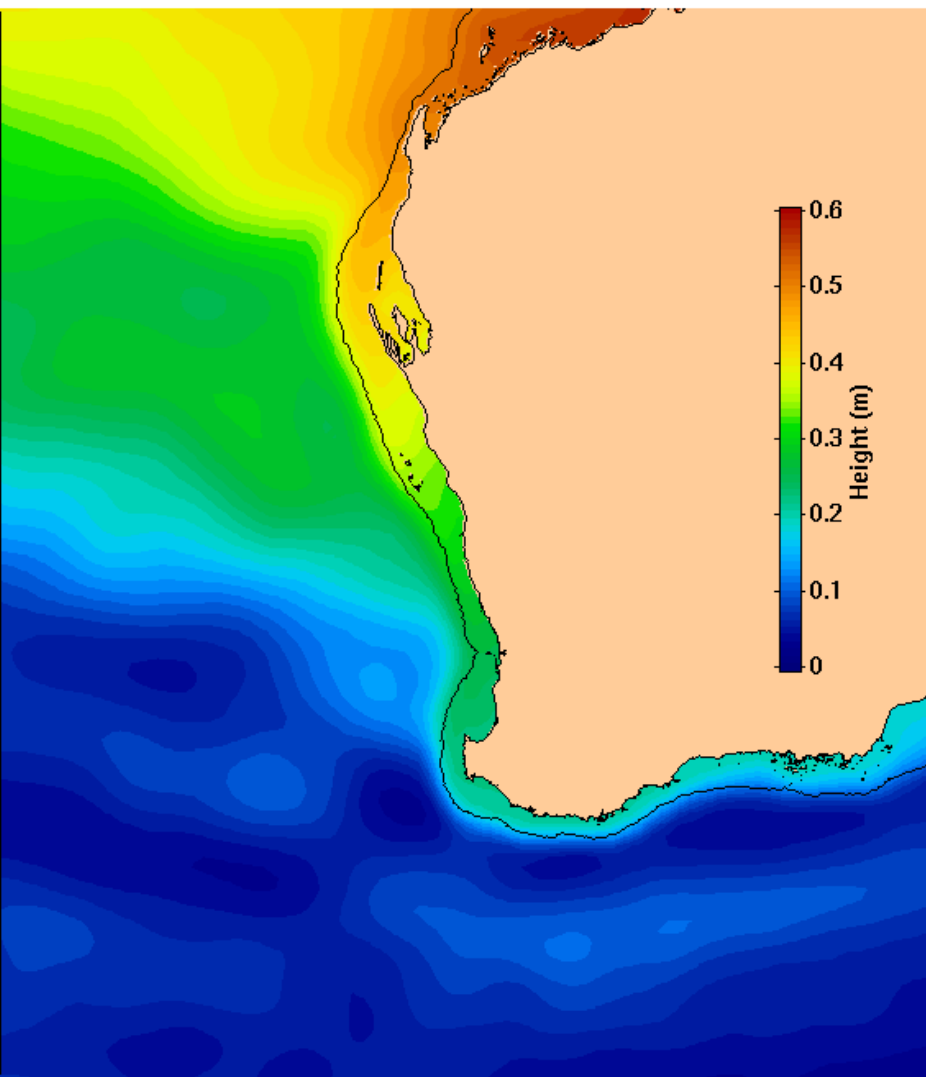
David Griffin & Madeleine Cahill

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David.Griffin@csiro.au

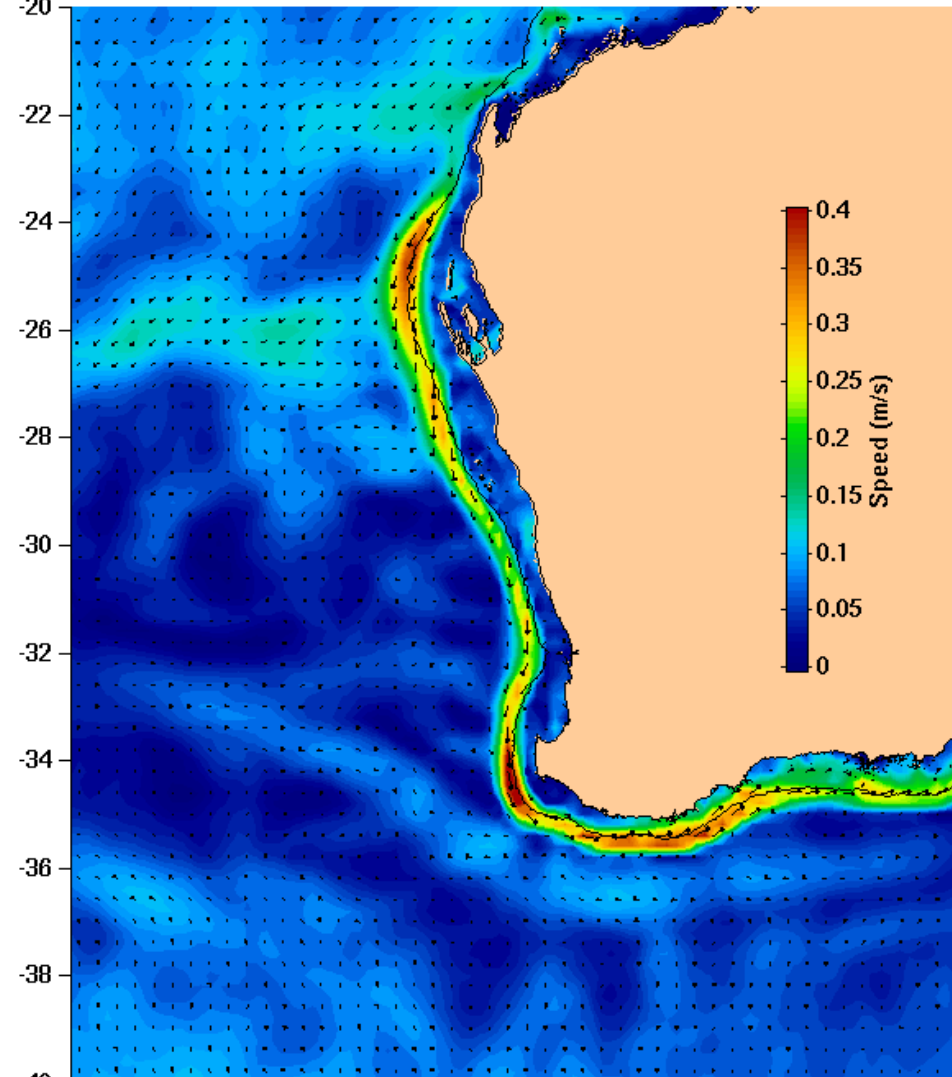
oceancurrent.imos.org.au



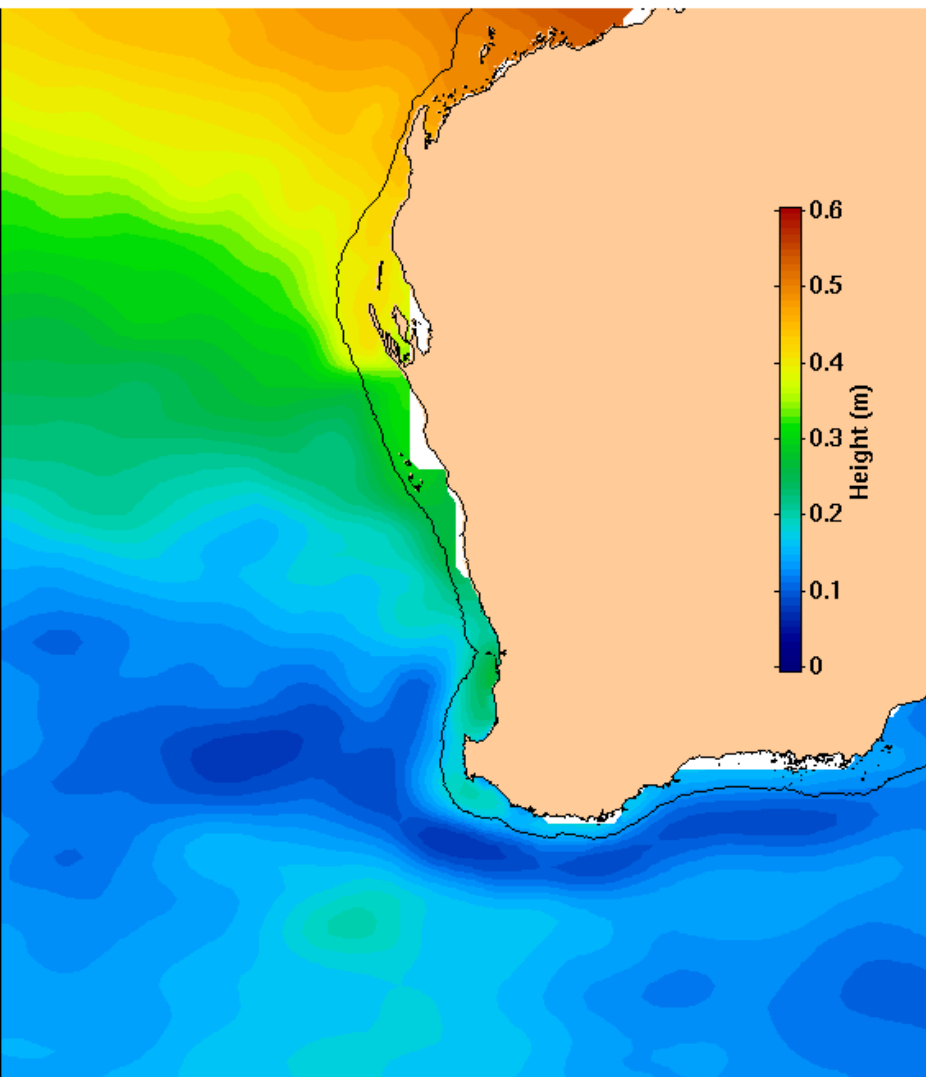
OFAM3 Mean Height 1993-2010



OFAM3 Mean Velocity 1992-2010



Mean Height RIO09



Geostrophic Velocity from Mean Height RIO09

