

There are 2 questions, whether DAC is important (sec.1) and, if so, which one you should choose

## **1 Is DAC really important ?**

DAC is fairly low below  $30^\circ$  of latitude. So I thought it was likely that you may not need surges data for most areas of IRD interest. To let you see for yourself, I did some statistics on the detided output of the run with non-linear tides.

The plot of the average, next, shows that, apart from the Gulf of Venezuela, the Amazon estuary and the southern end of South America, the absolute value of the average is below 12cm.

average of FES+EAF+eto

150W

120W

90W

60W

30W

60N

30N

0N

30S

60S

2

150W

120W

90W

60W

30W

-0.12

-0.1

-0.08

-0.06

-0.04

-0.02

0

0.02

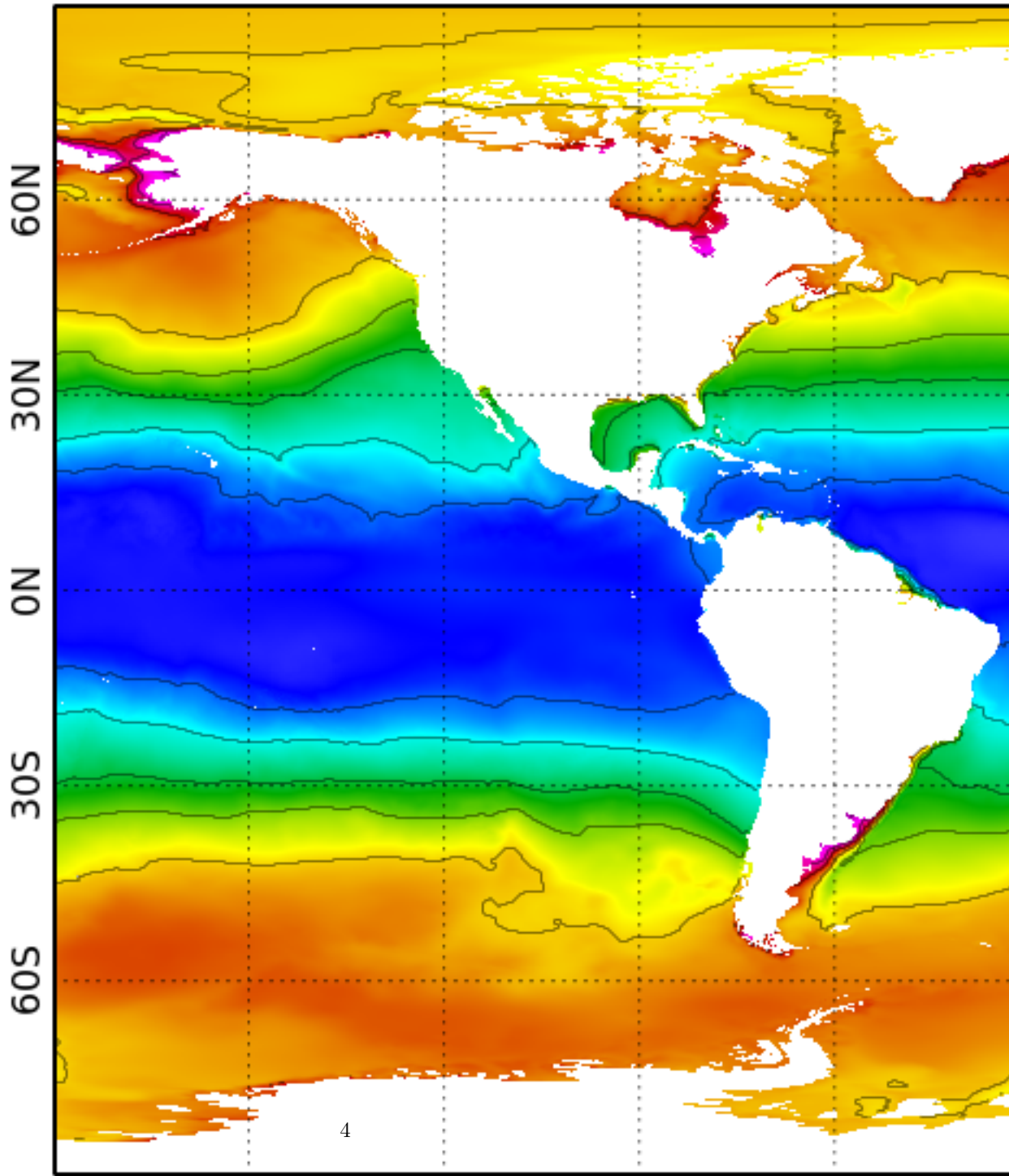
0.04



plot of the standard deviation, next, shows the DAC may not be necessary for most areas apart from the Argentinian plateau, the German Bight, the Gulf of Carpentaria (16S 140E), the Yellow Sea and James Bay (52N 80W).

stddev of FES+EAF+etop

150W 120W 90W 60W 30W



150W 120W 90W 60W 30W

0.01 0.015 0.02 0.03 0.04



Extreme values will occur during storms. I believe that means cloudy conditions. I believe that also means no satellite images.

## **2 Which DAC should you choose ?**

There is a choice of 2 DACs : the one without non-linear tides (readily available) and the one with non-linear tides (that will take at least 2 weeks). The difference of variances is shown below. Basically : blue-ish means with non-linear tides is better, red-ish means without non-linear tides is better. It is most likely coastal areas in red are due to a poor bathymetry, so we may need to iterate. I can not yet explain what happens below 30S in the Pacific Ocean.

201402-201511 jason2d variance of SSHA : TUGOn

