



## Sea Level CCI project

### Phase II 1<sup>st</sup> annual review





# WP2700 (option)

## New retracking techniques for climate-quality sea level observations in the coastal zone

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**National  
Oceanography Centre**  
NATURAL ENVIRONMENT RESEARCH COUNCIL



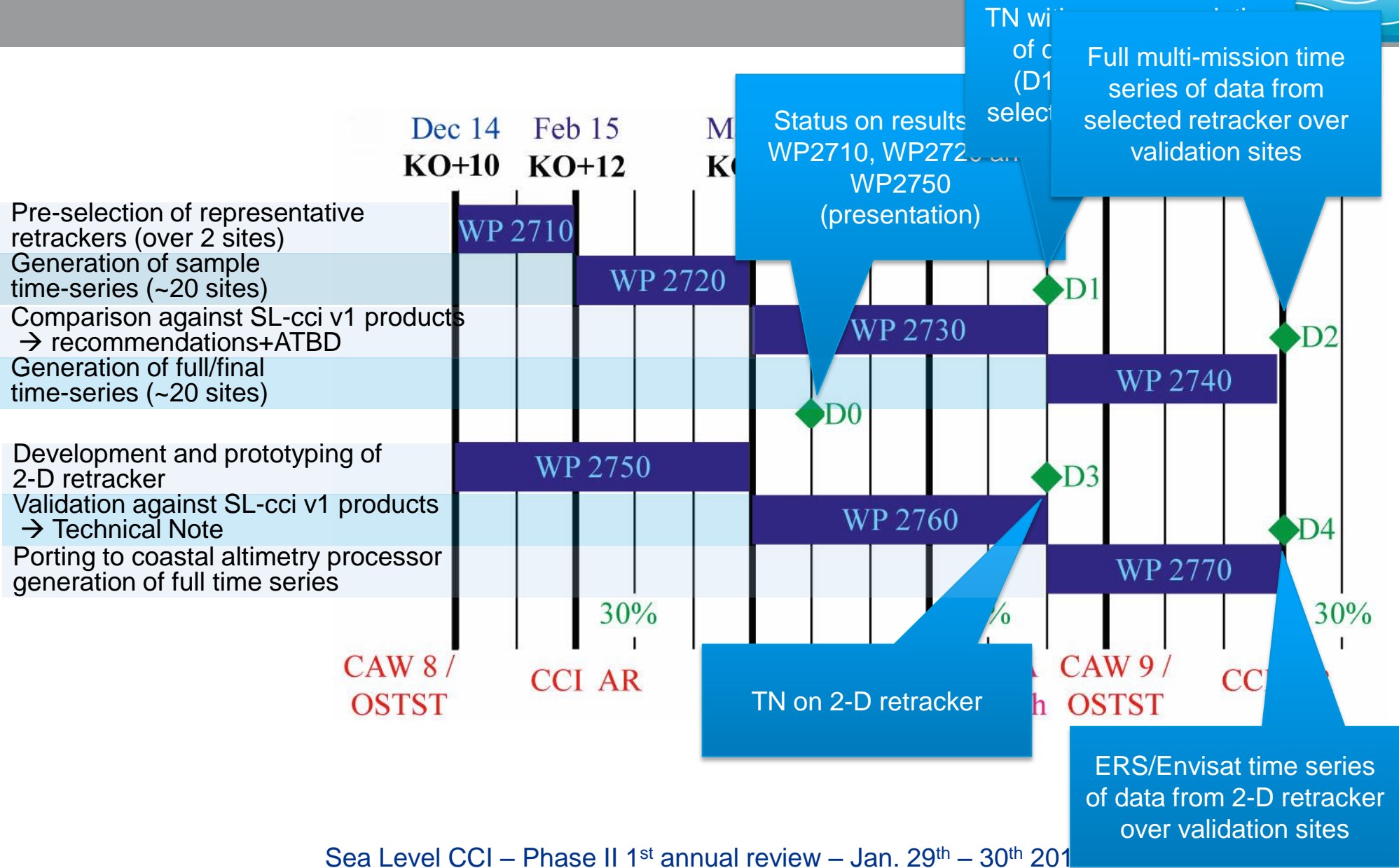
# WP2700 - structure



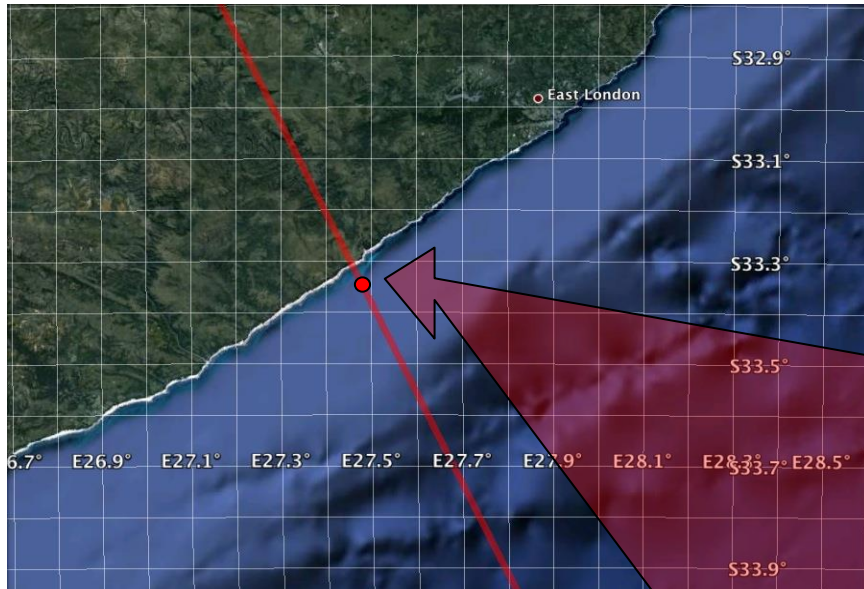
- two series of WPs grouped into two sets based on internal dependencies
- WP2710-2740 assessment and recommendation on coastal retrackerers (led by NOC)
- WP2750-2770 Simultaneous retracking of multiple waveforms (led by PML)

Algorithm	Data output	Covered period	Applicability								
			E1	E2	EN	TP	J1	J2	G2	C2	AL
WP2710-2740	SSH time series from single-waveform coastal retracker(s), with corrections from baseline WP2320, over ~20 well-instrumented coastal sites	[1993,2014]	X	X	X	X	X	X	-	-	-
WP2750-2770	SSH time series from 2-D retracker, with corrections from baseline WP2320, over ~20 well-instrumented coastal sites	[1993,2014]	X	X	X	-	-	-	-	-	-

# Workplan & deliverables

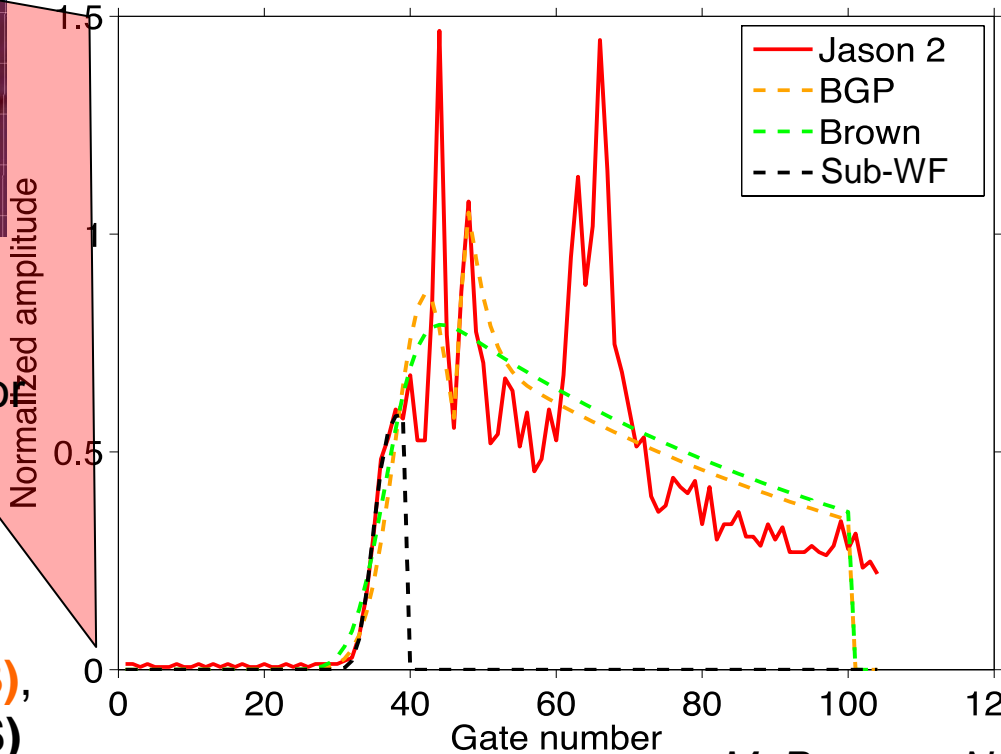


# Families of retrackerers



## Jason-2 Example

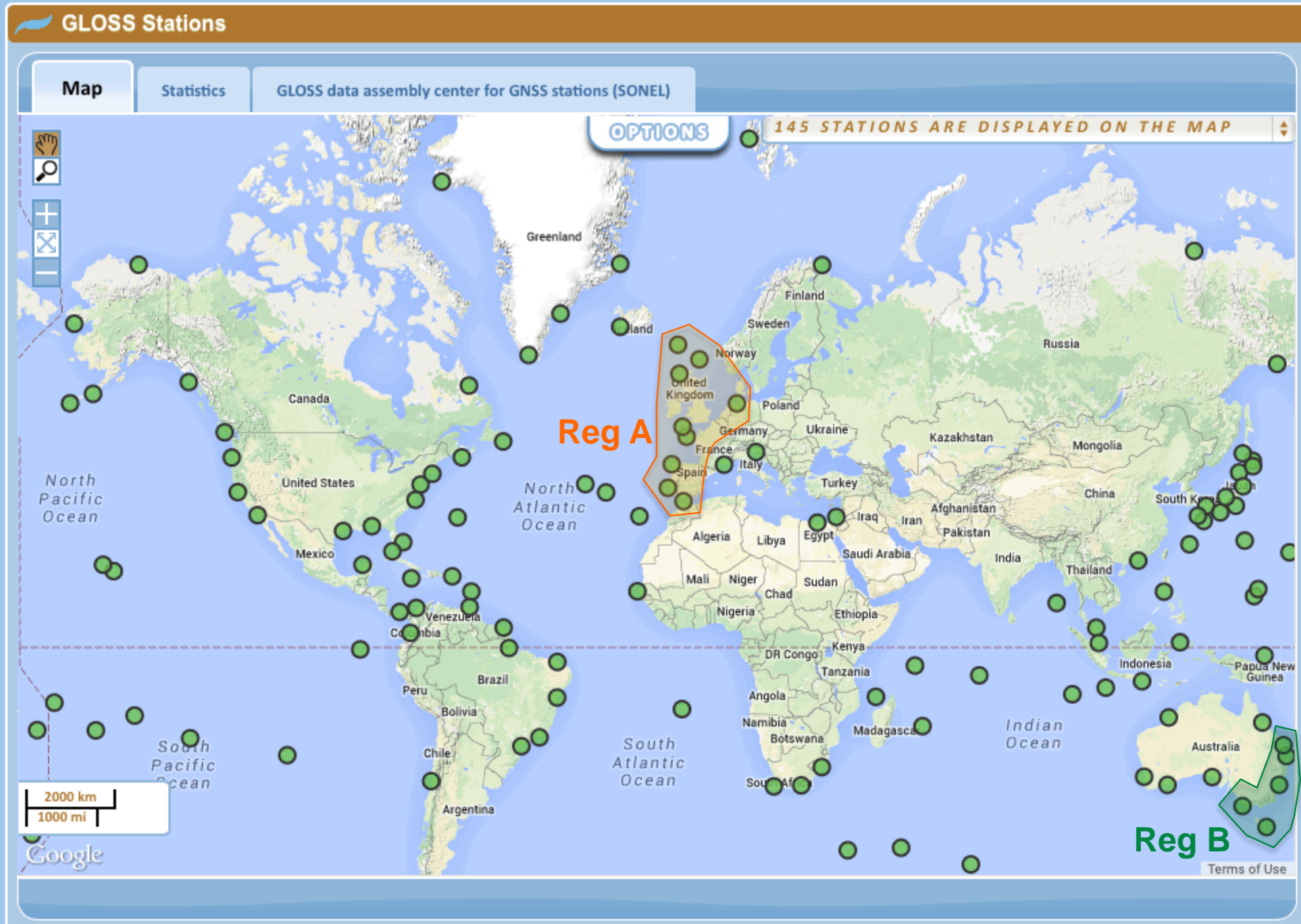
Distance from coast: 3.6163 Km



Jason-2 pass 096 over the coast of South Africa and example of **coastal waveform** for cycle 83 and its retracking with various models:

- **Brown (1977),**
- **Brown+peaks (BGP, Halimi et al., 2013),**
- **Subwaveform (Yang et al., 2012; ALES)**

# Validation regions



# Details of the comparisons (WP2730)



- Time series from the representative retracker of each family will be compared against the SLCCI v.1 products in terms of ocean ECV indicators, i.e.:
  - the temporal evolution of the coastal mean sea level (MSL) with its slope
  - the amplitude and phase of the main periodic signals (annual, semi-annual)
  - Part of the evaluation is checking the quality of the coastally-retracked records as a function of distance from coast and coastal proximity parameter.
- The best algorithm will be selected and will be described in a ATBD, and recommendations will be issued on its usage.



**PML slides follow from here**