
TIDE TOOL: SOFTWARE TO ANALYZE SEA-LEVEL DATA

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Information Center

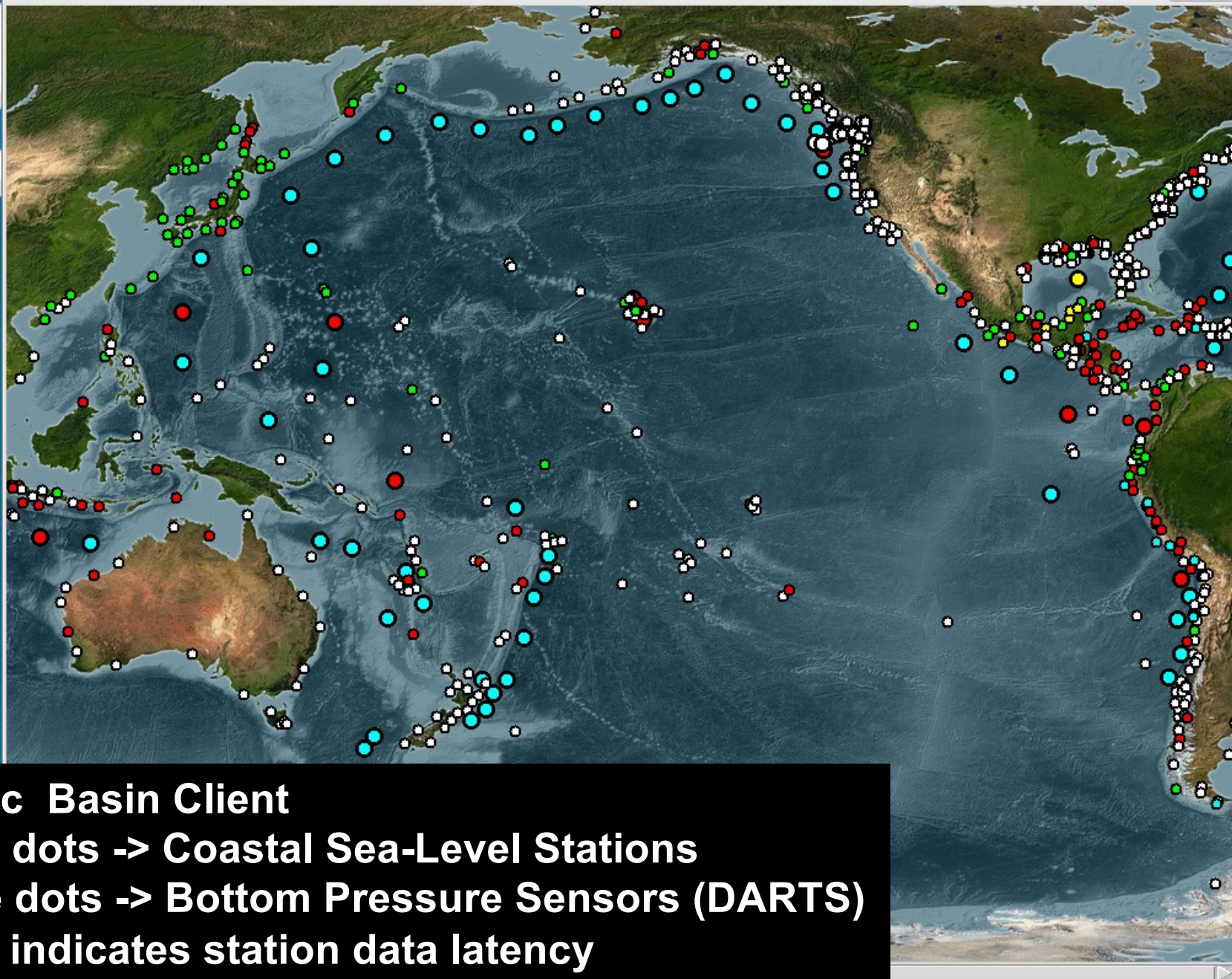
Tide Tool

Tide Tool continuously decodes sea-level messages in real-time and displays the time series using the open source, platform independent, graphical scripting language Tcl/Tk.

Tide Tool consists of three main parts:

1. Data retriever called `get_data` that acquires data from NOAA (GTS) and the IOC webservice.
2. Decoder which reads log files of GTS sea-level messages and a sea-level station metadata base.
3. Dynamic map based clients that allow the user to select a single station or a group of stations to display and analyze.





Pacific Basin Client

Small dots -> Coastal Sea-Level Stations

Large dots -> Bottom Pressure Sensors (DARTS)

Color indicates station data latency

Data Latency <10 Mins <70 Mins <7 Hours <24 Hours > 24 Hours Lon 150.030
Lat 68.000

CONNECTED

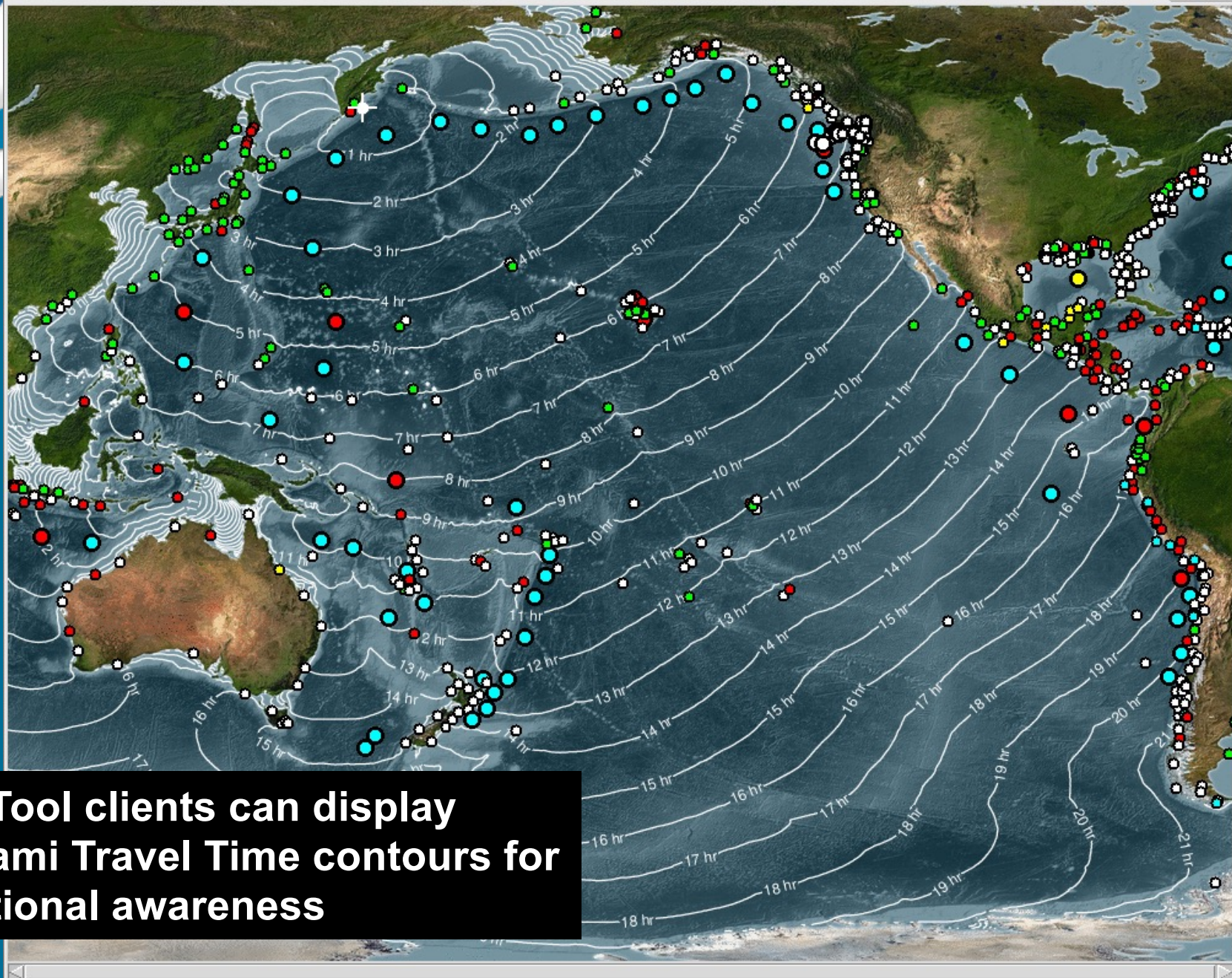
DISP/FIND STATIONS

PLOT EPI

PLOT TTs

PLOT INFO

EXIT



**Tide Tool clients can display
Tsunami Travel Time contours for
situational awareness**

Data Latency <10 Mins <70 Mins <7 Hours <24 Hours > 24 Hours

OT: 23:02 AUG 12

CONNECTED

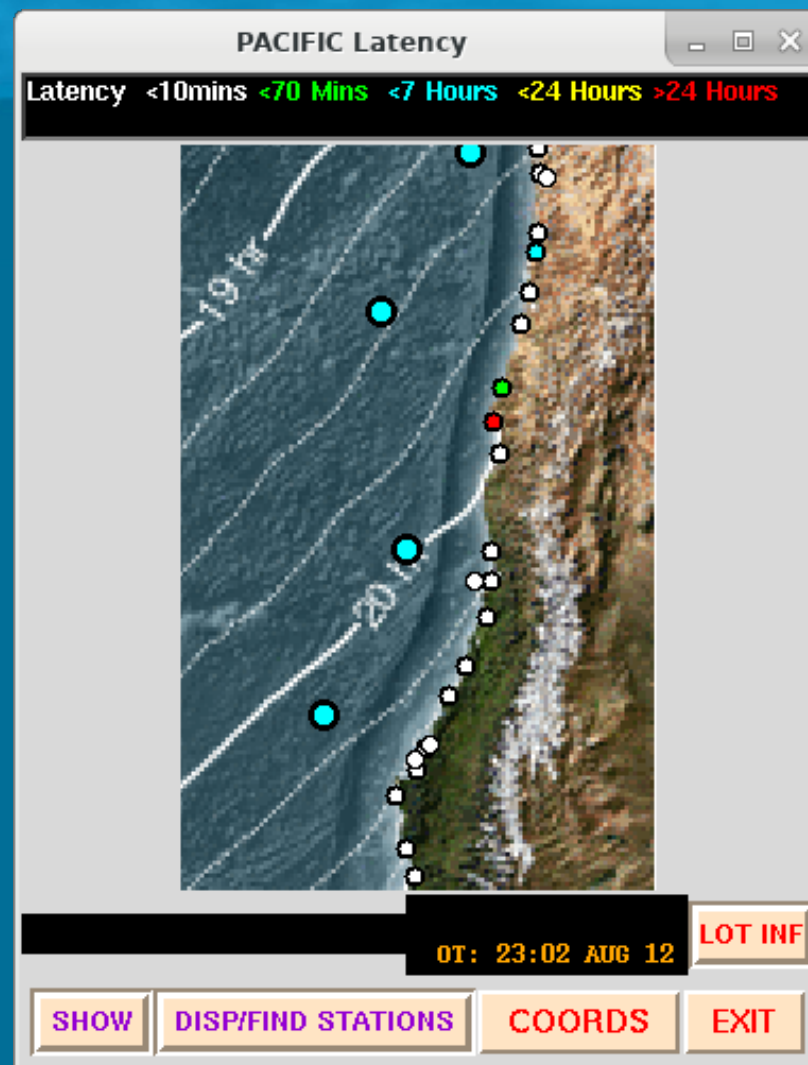
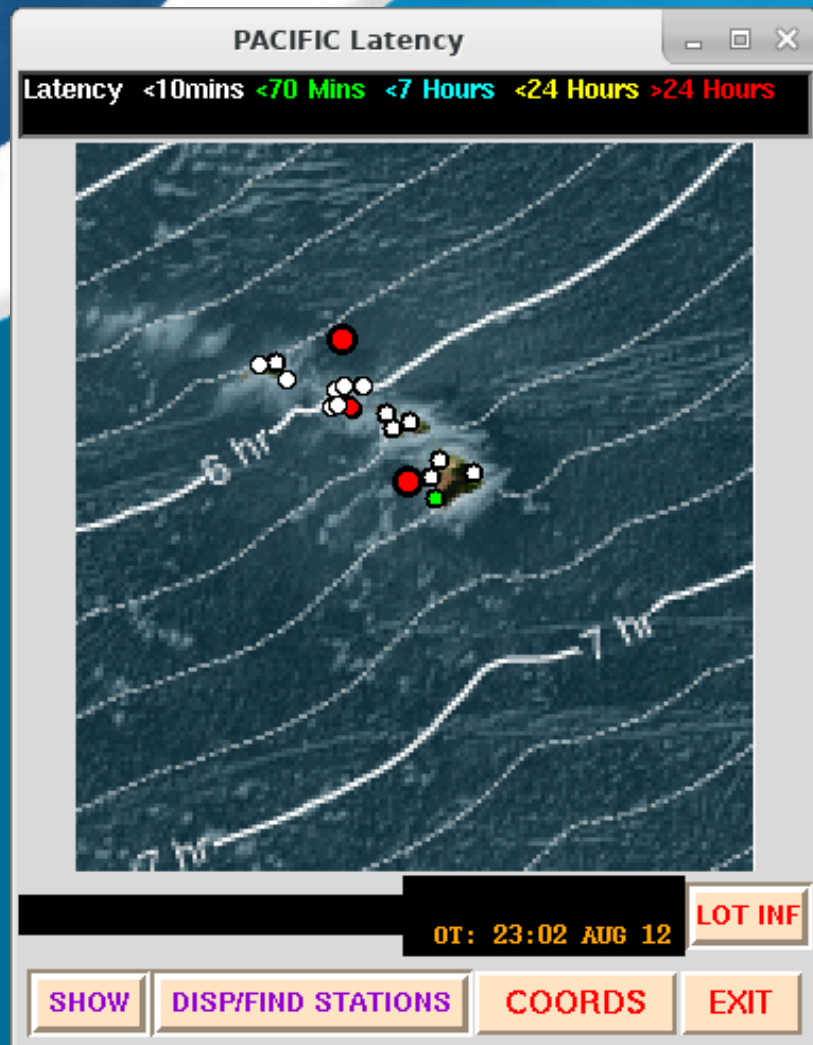
DISP/FIND STATIONS

PLOT EPI

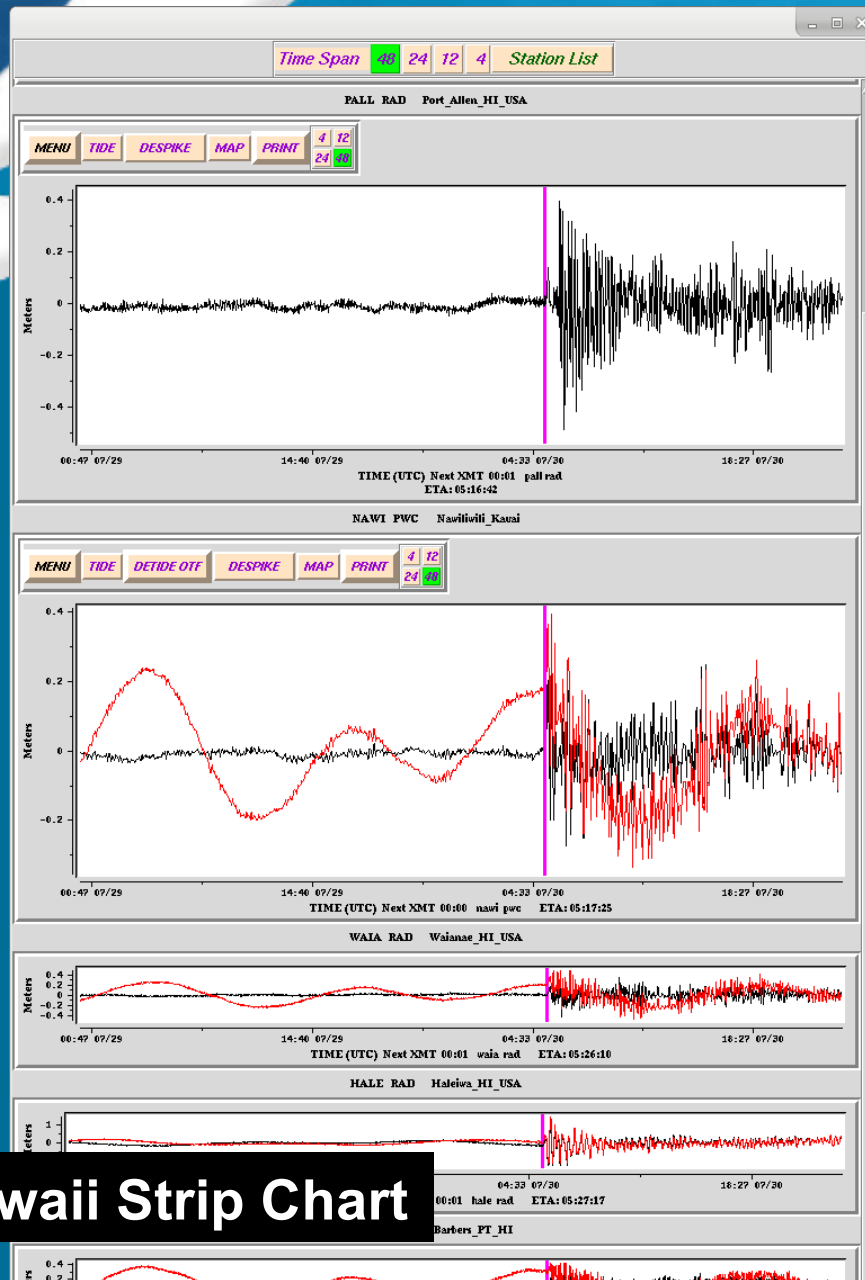
CLEAR TTs

PLOT INFO

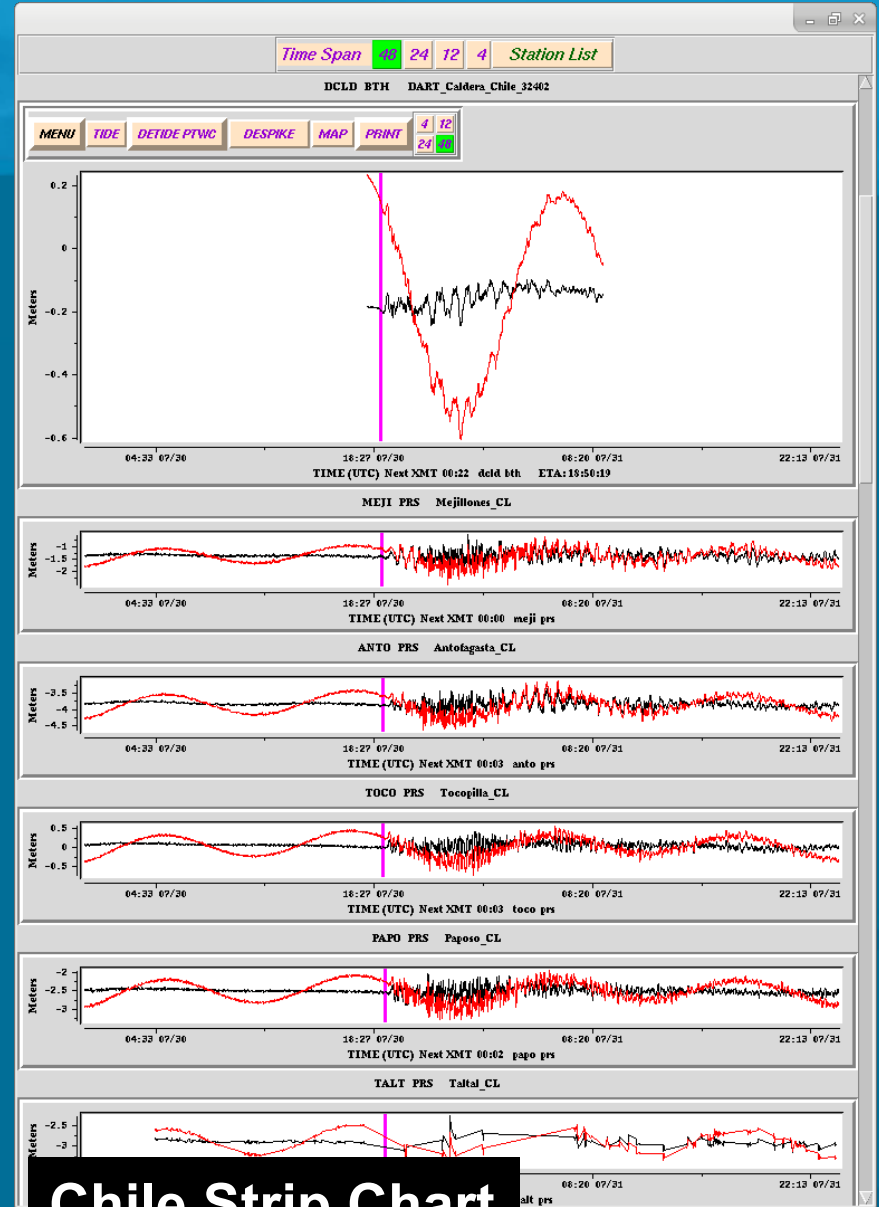
EXIT



You can zoom in on specific regions



Hawaii Strip Chart



Chile Strip Chart



Tide Tool Monitor Widget

- Can display up to three different time series:

Red – Actual time series

Black – De-tided time series

Blue – Predicted time series

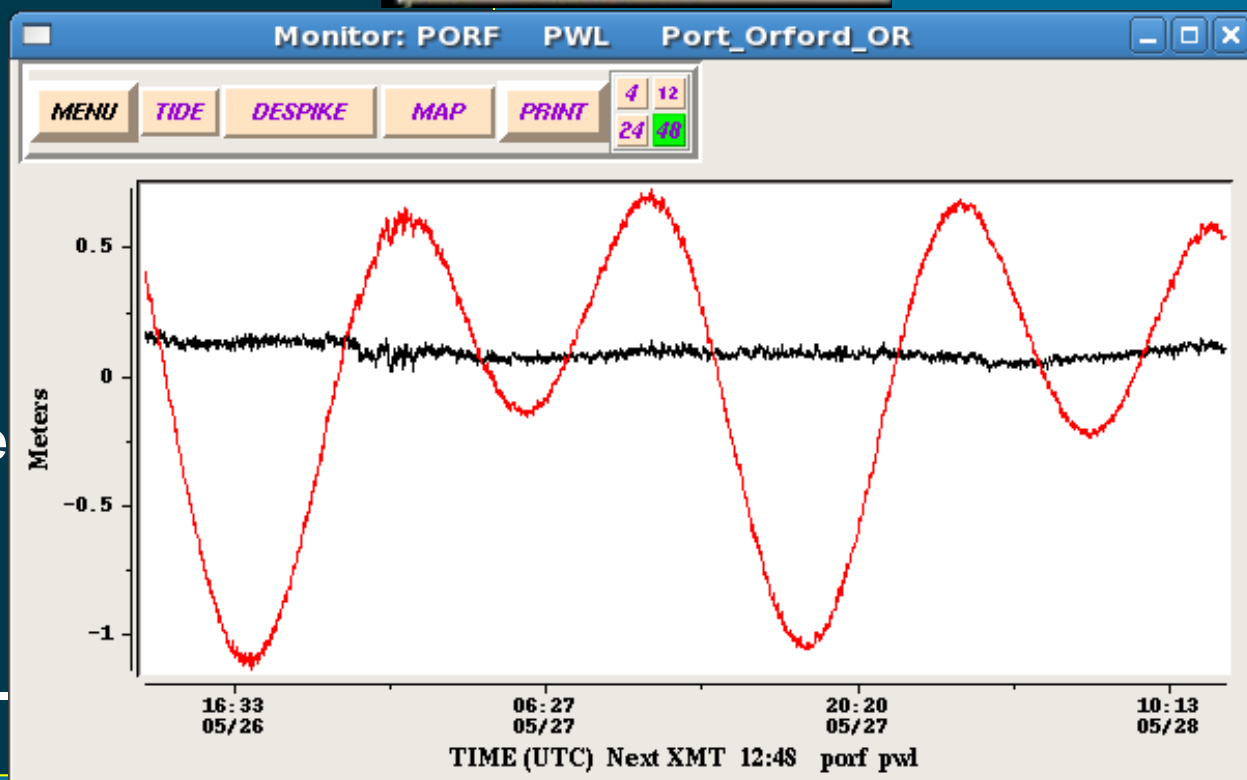
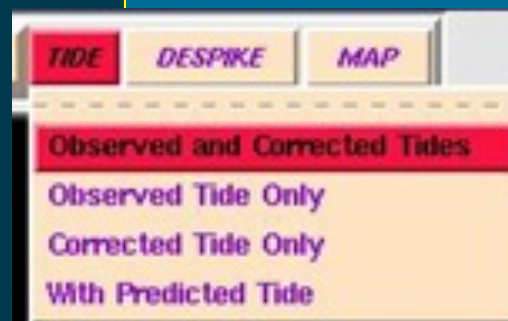
- Two de-tiding options: permanent or on-the-fly coefficients.

- Automatically Updates

- Despike option based on three point median.

- Station location map option showing reverse travel-time contours.

- Rubber banding zoom option to expand time series.



Tide Tool Zoom Widget

- Used to measure tsunami wave arrival time, amplitude, and period with mouse clicks and record measurements in a file. Can zoom recursively.

- Can display up to three different time series:

Red – Actual time series

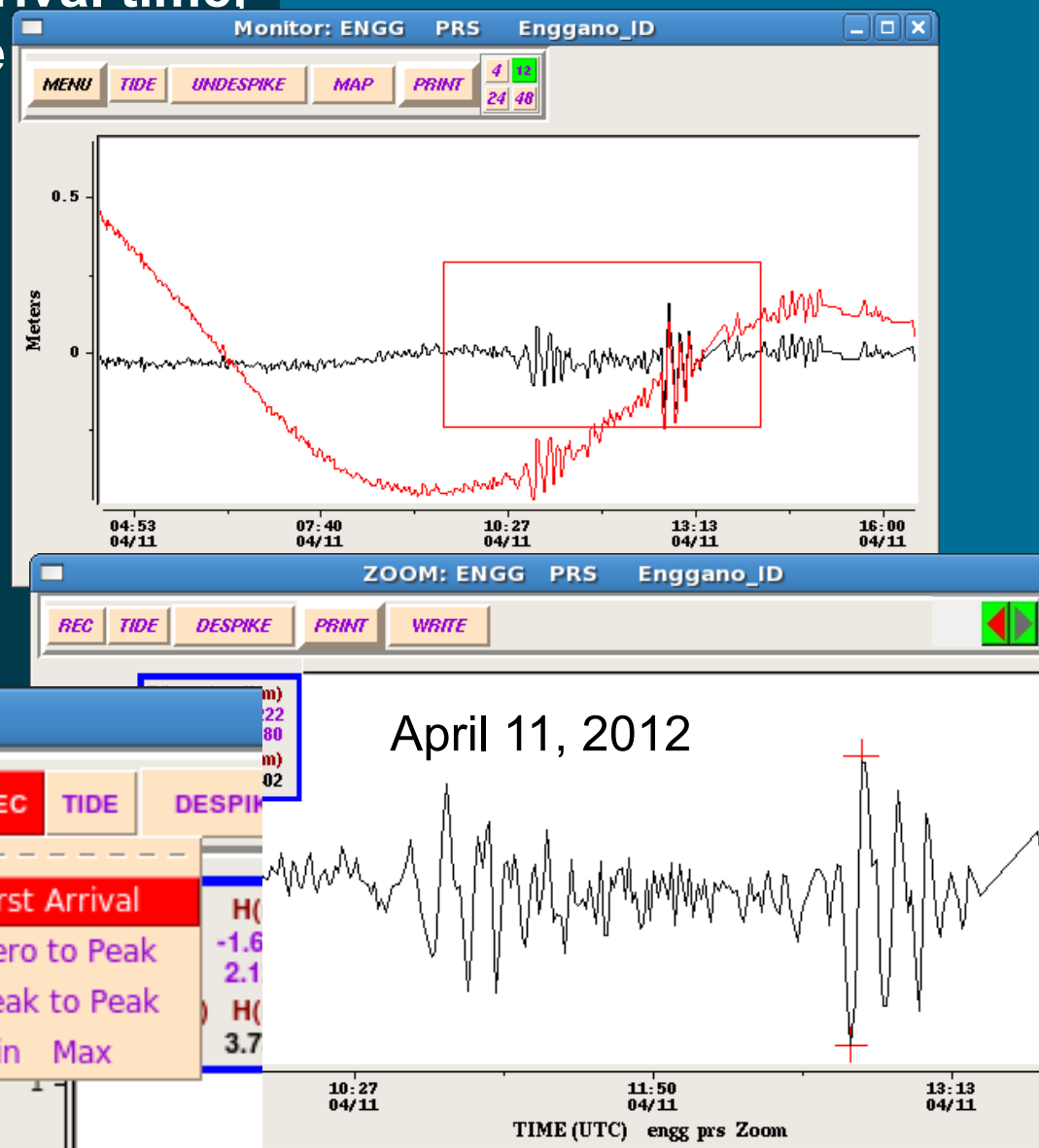
Black – De-tided time series

Blue – Predicted time series

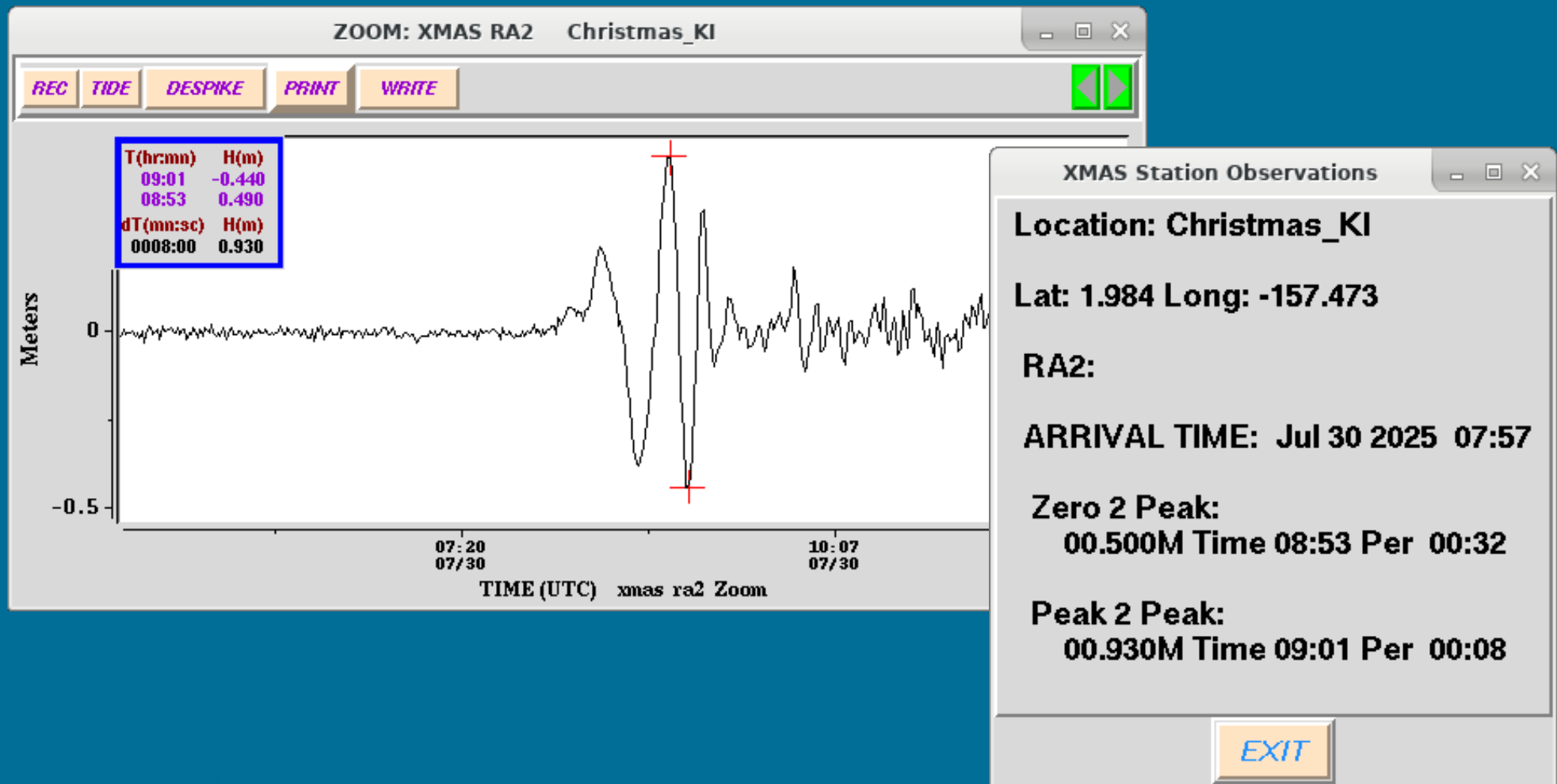
- Two de-tiding options: permanent or on-the-fly coefficients.

- De-spike option based on three point median.

- Zoom History



**You can zoom in and make wave measurements:
Wave Height
Wave Amplitude
Arrival Time**



Thank You!

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