

Short-term Inundation Forecast of Tsunamis (SIFT) and ComMIT Demonstration

presented by
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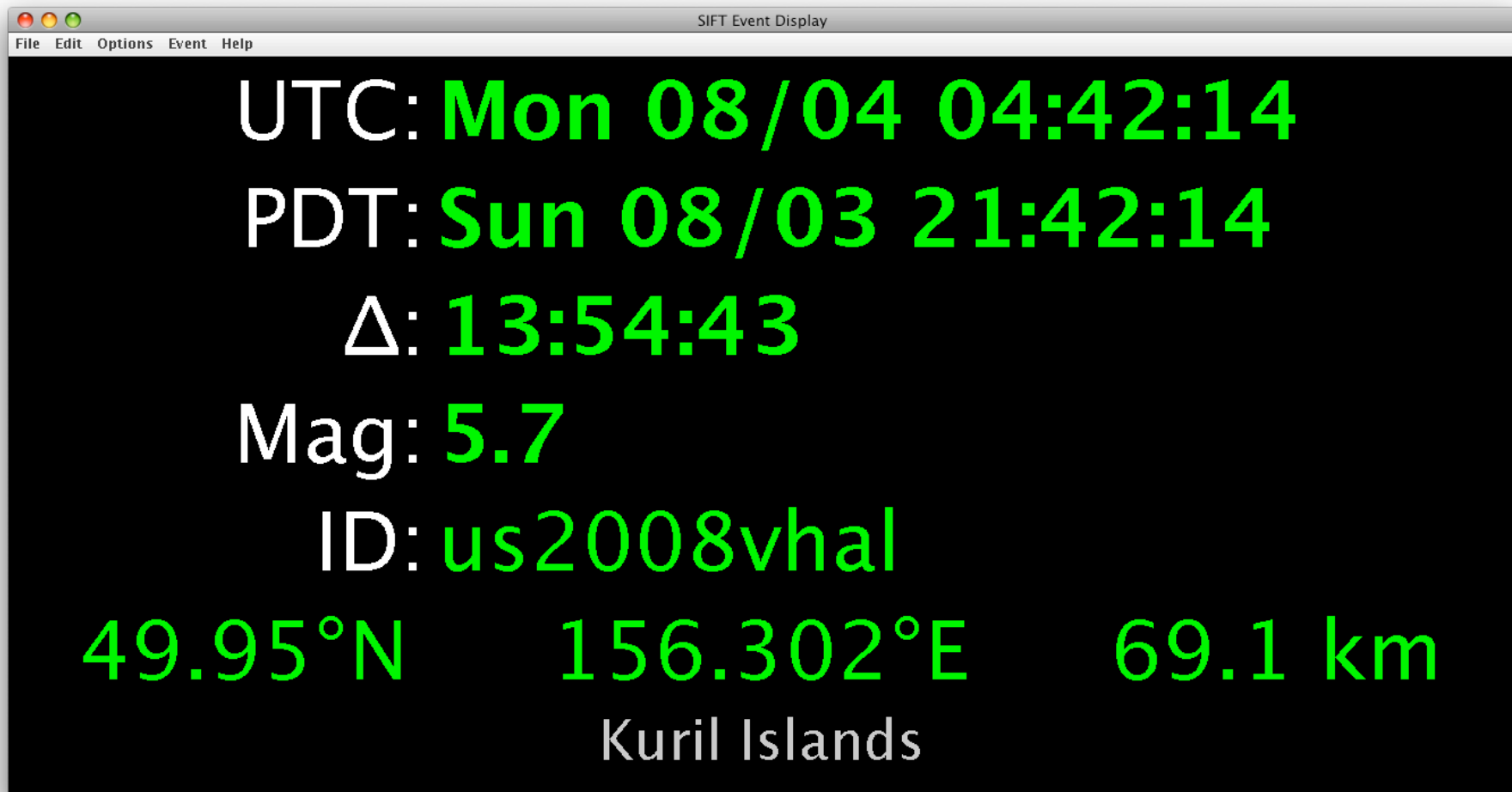
team members include
John 'Oz' Osborne, Clint Pells, and Mike Traum
also
Angie Venturato, Kevin McHugh, Paul Sorvik, Eugene Burger, and Joe Sirott

Outline

- Quick overview of main SIFT screens.
 - Event Viewer
 - DART Workbench
 - Inversion Result
 - SIM Result
- Demonstration of SIFT system.
 - November 2006, Kuril Island 8.1Mw event
 - Synthetic DART data generated.
 - Simulation runs at 20 times normal speed.
- ComMIT demonstration.

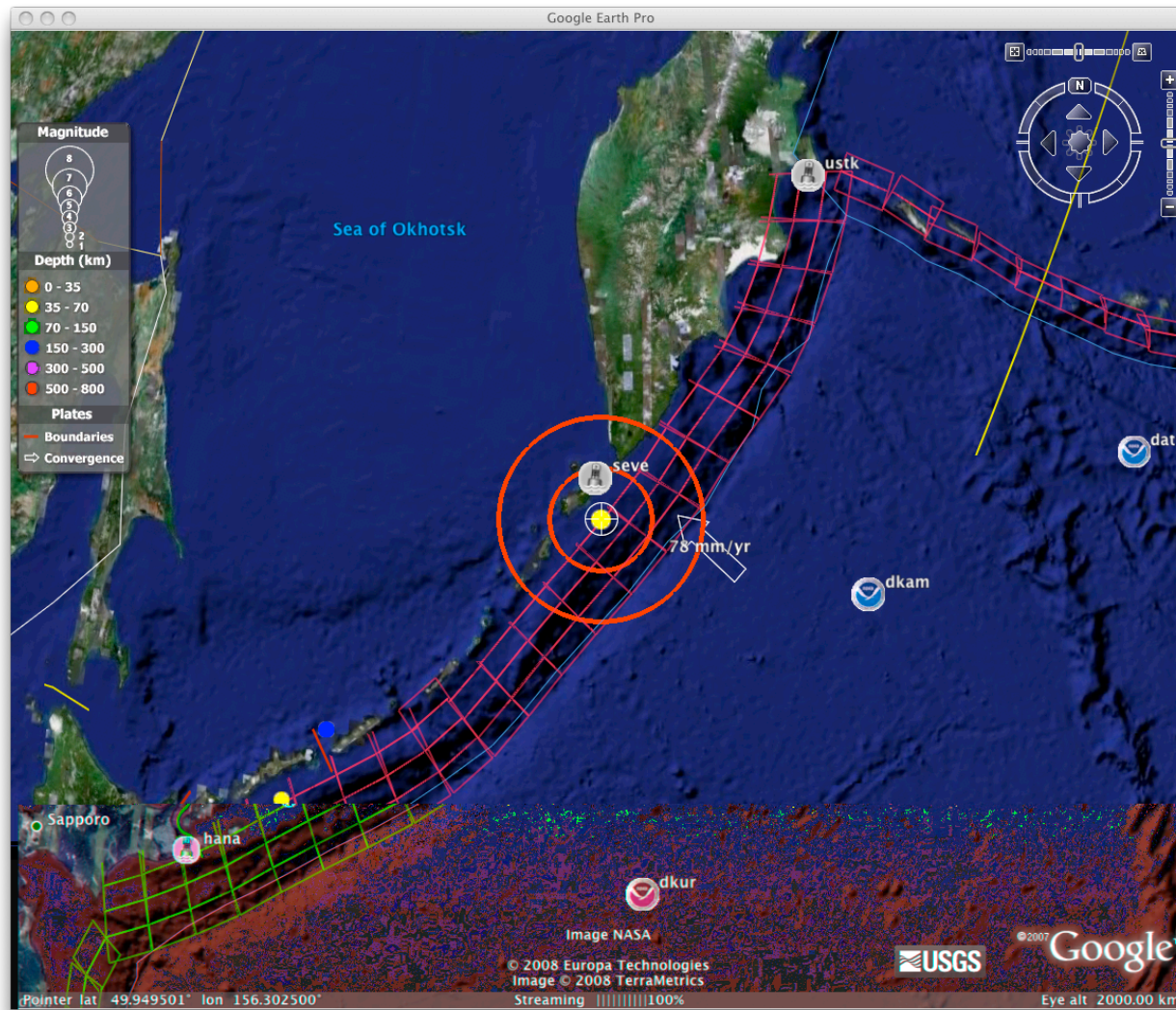
Event Display

Current event time, magnitude, ID, location, and depth.



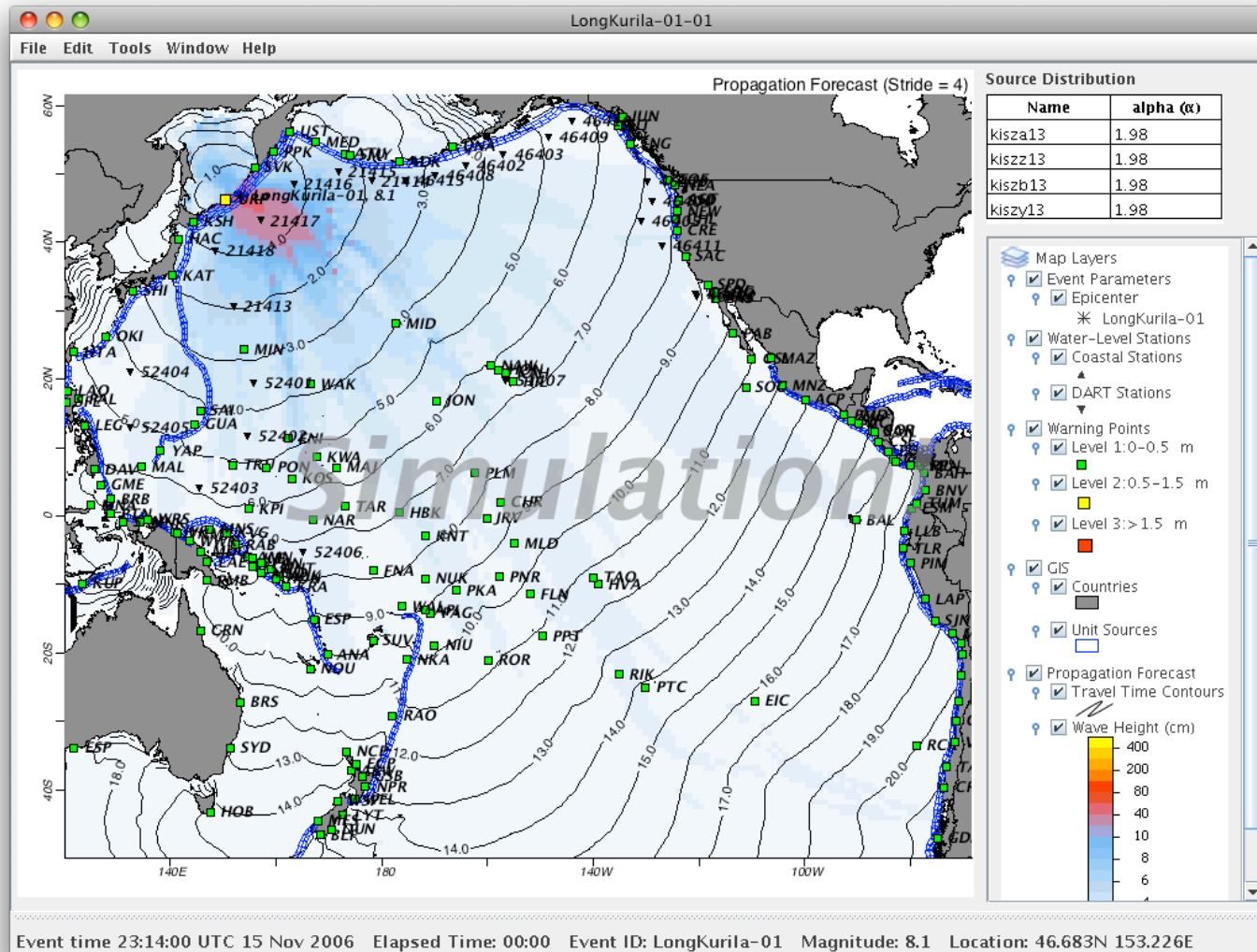
Google Earth

Display of event and unit source location.



Event Viewer

Display of Tsunami maximum amplitude and travel time.



DART Workbench

Select DART buoy, time range, and constraints for Inversion.

LongKurila-01-01: DART Workbench

File Edit Tools Window Help

DART Trigger Status

Code	Name	ETA	Status	Countdown	Data Received
21417:tha	DART_Kuril_Is_21417	23:42:00 UTC 15 Nov 2006	Triggered		368.00 m
21417:tra	DART_Kuril_Is_21417	23:42:00 UTC 15 Nov 2006	Triggered		368.00 m
21416:tha	DART_Kamchatka21416	00:03:00 UTC 16 Nov 2006	Triggered		368.00 m
21416:tra	DART_Kamchatka21416	00:03:00 UTC 16 Nov 2006	Triggered		368.00 m
21418:tha	DART_Sendai_JP21418	00:14:00 UTC 16 Nov 2006	Triggered		368.00 m
21418:tra	DART_Sendai_JP21418	00:14:00 UTC 16 Nov 2006	Triggered		368.00 m
21415:tha	DART_Attu_Is_21415	00:49:00 UTC 16 Nov 2006	Standby		0.00 m
21415:tra	DART_Attu_Is_21415	00:49:00 UTC 16 Nov 2006	Standby		0.00 m
21413:tha	DART_Tokyo_21413	01:13:00 UTC 16 Nov 2006	Standby		0.00 m
21413:tra	DART_Tokyo_21413	01:13:00 UTC 16 Nov 2006	Standby		0.00 m
21414:tha	DART_NW_PAC_21414	01:22:00 UTC 16 Nov 2006	Triggered		368.00 m
21414:tra	DART_NW_PAC_21414	01:22:00 UTC 16 Nov 2006	Triggered		368.00 m

Unit Source and DART Selection



Name
Kisza13
Kiszz13
Kiszb13
Kiszy13
Kisza14
Kiszz14
Kisza12
Kiszz12

Time Range Selection

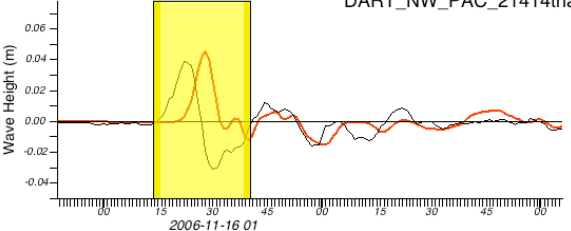
DART_E_ADAK_46413tha DART_E_ADAK_46413tra

DART_NW_PAC_21414tha DART_NW_PAC_21414tra

DART_Kamchatka21416tra DART_Sendai_JP21418tha DART_Sendai_JP21418tra

DART_Kuril_Is_21417tha DART_Kuril_Is_21417tra DART_Kamchatka21416tha

DART_NW_PAC_21414tha



— Model Wave Height — tha: Primary triggered 1 min

Start Date: 2006-11-16 01:13 End Date: 2006-11-16 01:40

Choose DARTs for Inversion

21413:tha (DART_Tokyo_21413)

21413:tra (DART_Tokyo_21413)

21414:tha (DART_NW_PAC_21414)

21414:tra (DART_NW_PAC_21414)

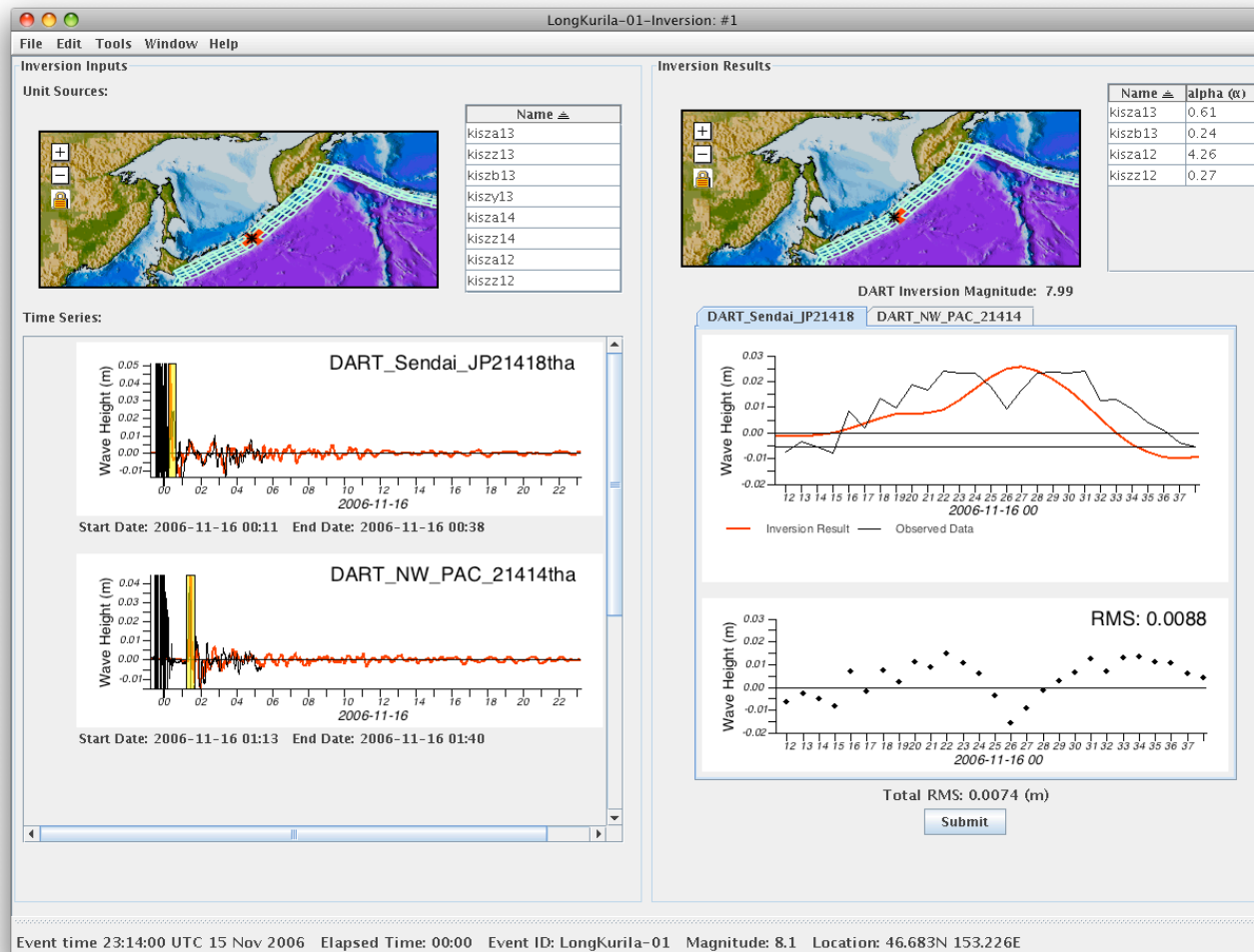
alpha (α) Constraint: Positive Negative None

Run Inversion

Event time 23:14:00 UTC 15 Nov 2006 Elapsed Time: 3975:52 Event ID: LongKurila-01 Magnitude: 8.1 Location: 46.683N 153.226E

Inversion Result

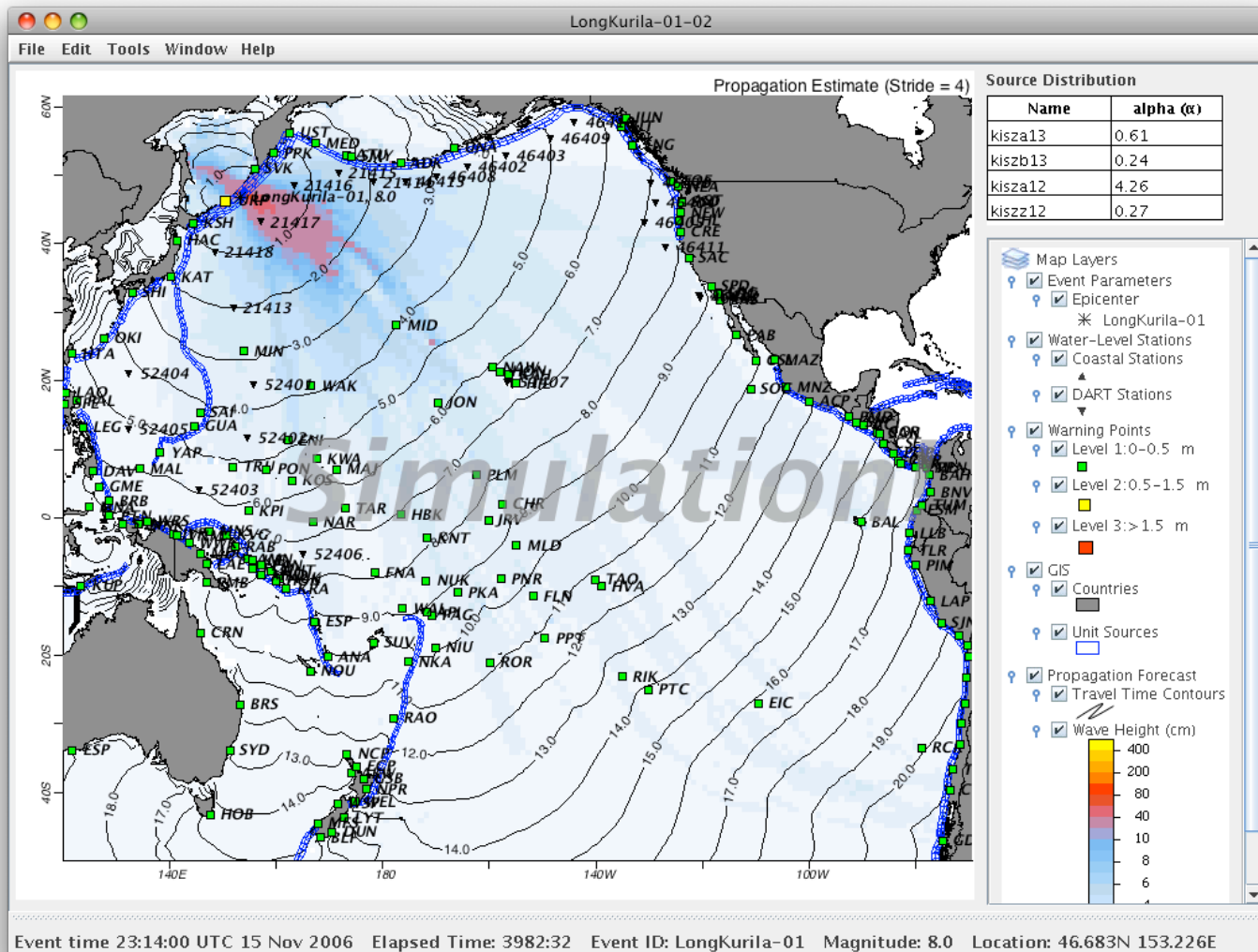
Display of inversion inputs (left) and results (right).



Event Viewer

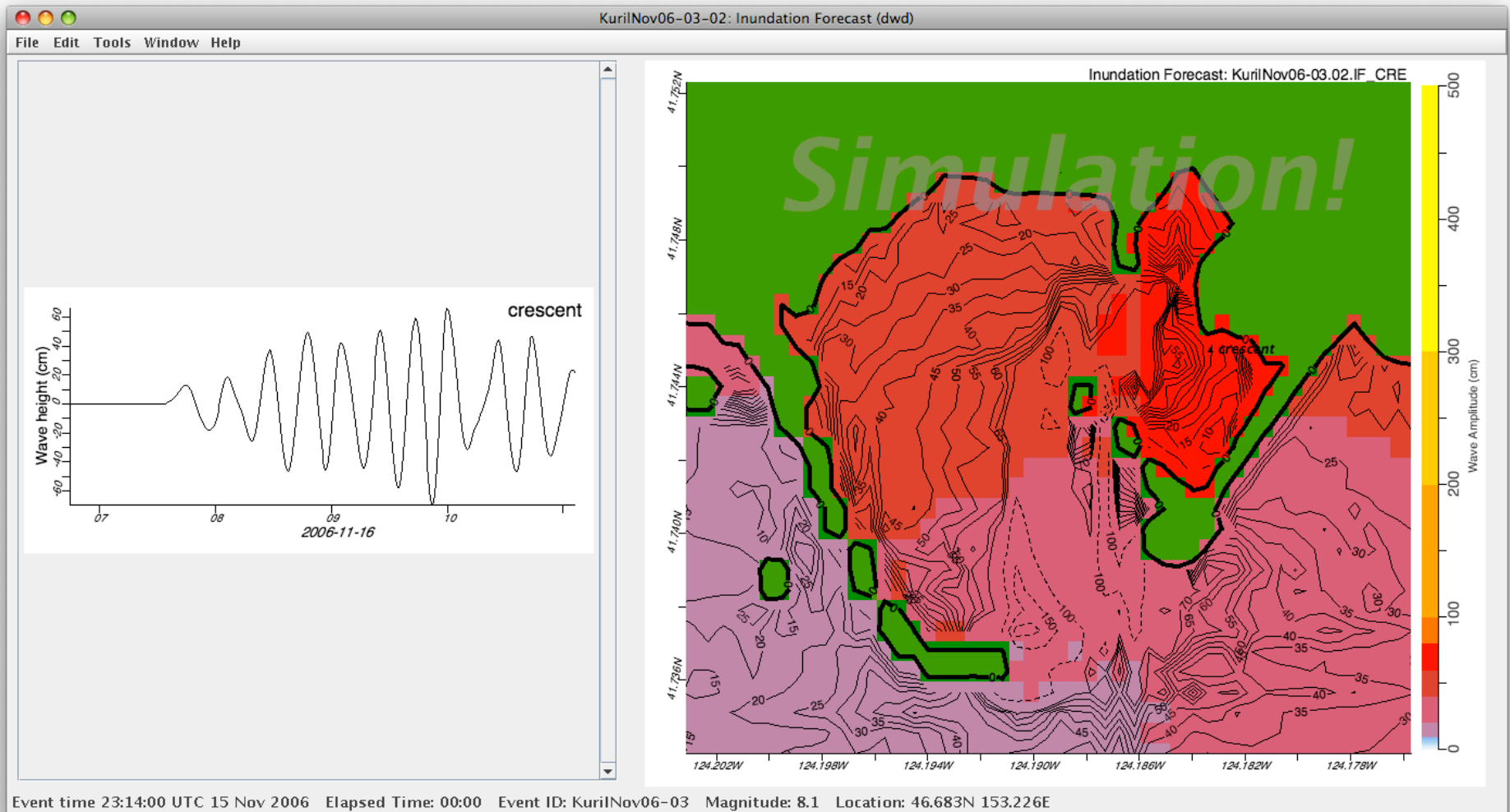
(after inversion)

Display of Tsunami maximum amplitude and travel time of inversion results.



SIM Viewer

Display of Tsunami maximum amplitude from a high resolution SIM of Crescent City, CA.



SIM Inundation - ComMIT

(Community Model Interface for Tsunami)

Inversion results are used to run a site-specific Inundation model (Crescent City)

