EERI - PEER BRIEFING Oct. 18, 2010

Darfield (Canterbury) Earthquake

Sept 3, 2010

4:36 am

M_w 7.1

Presenters: Scott Ashford, Jon Eidinger

Fred Turner, Bill Holmes, and Mary Comerio,


NEW ZEALAND
Auckland
Hamilton
NORTH ISLAND
TASMAN SEA
Napier
Palmerston North
Nelson
Wellington
SOUTH ISLAND
Christchurch
Wanaka
PACIFIC OCEAN
Queenstown
Dunedin
Invercargill
Stewart Island
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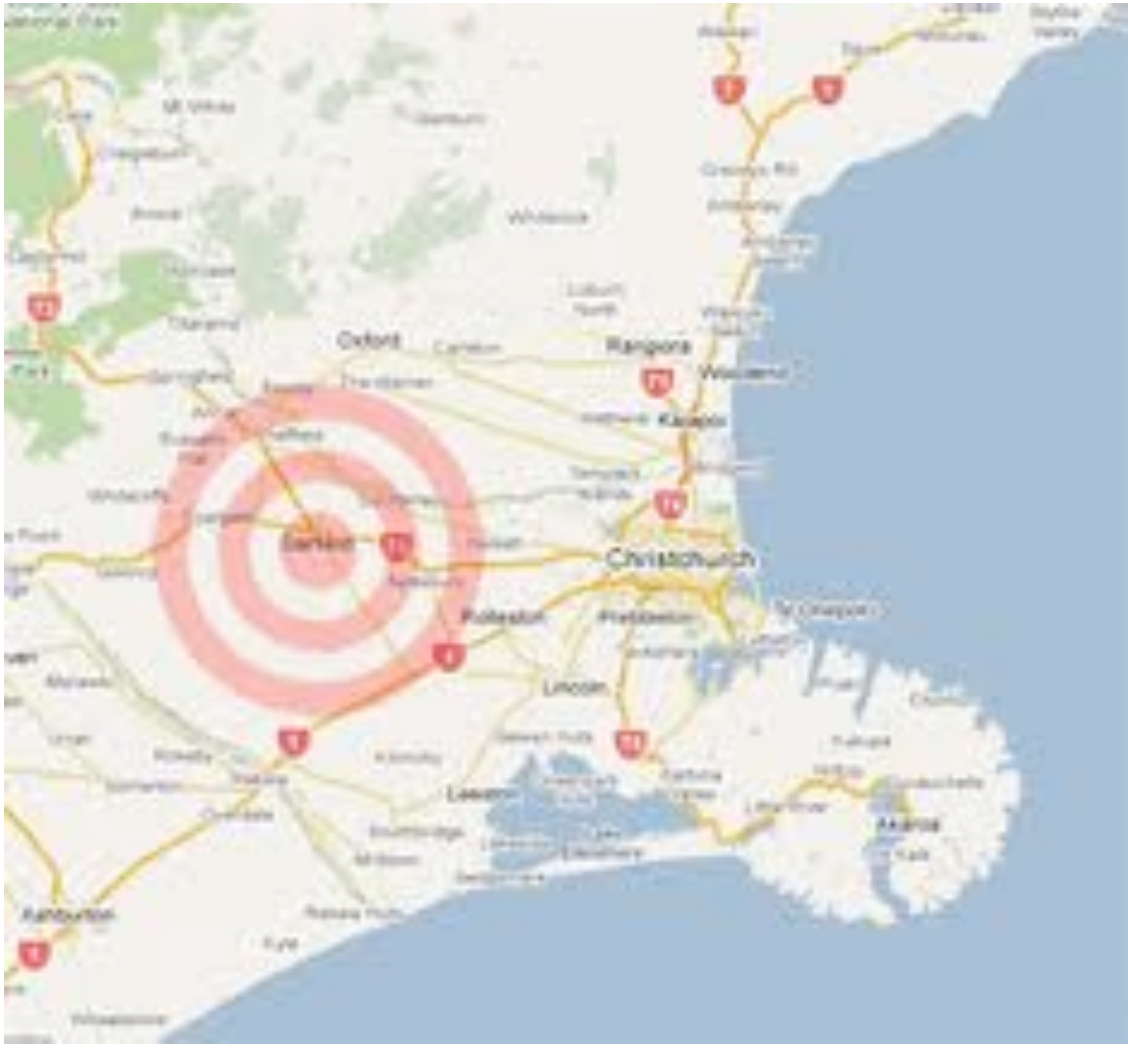
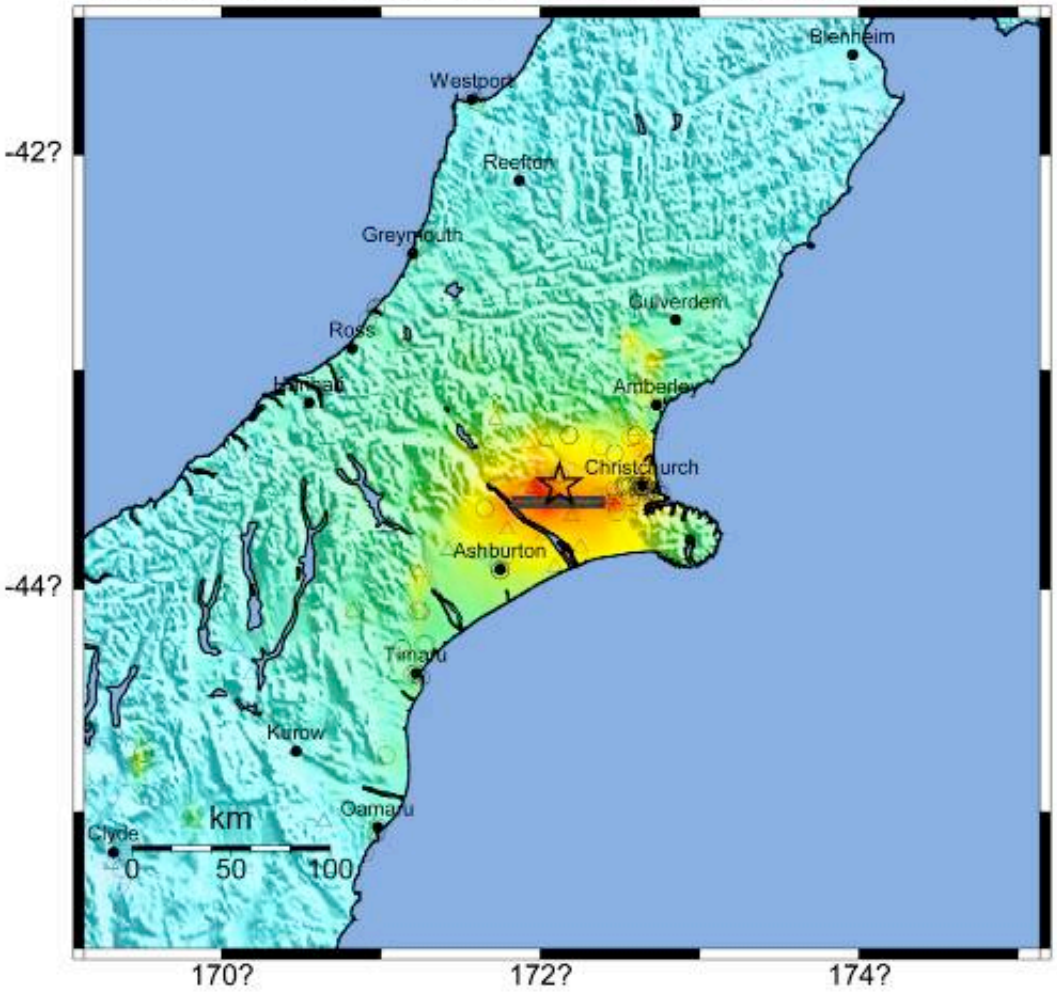

Oxford
Rangiora
Kaiapoi
Christchurch
Lincoln
Leeston

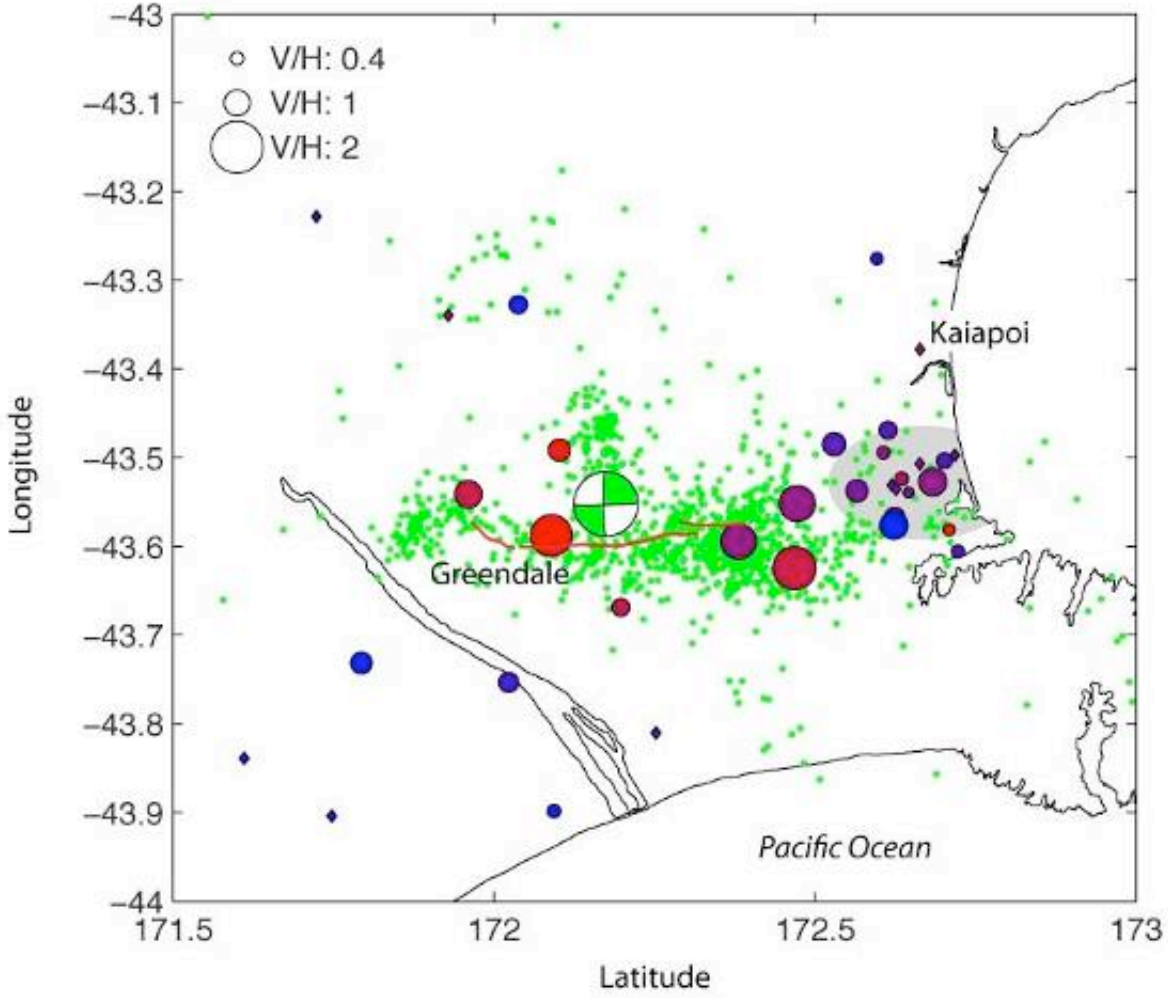
USGS ShakeMap : SOUTH ISLAND OF NEW ZEALAND

Fri Sep 3, 2010 16:35:46 GMT M 7.0 S43.53 E172.12 Depth: 5.0km ID:2010atbj



Map Version 9 Processed Wed Sep 8, 2010 08:02:40 AM MDT -- NOT REVIEWED BY HUMAN

PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Moderate/Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	*<.17*	*.17-1.4*	*1.4-3.9*	*3.9-9.2*	*9.2-18*	18-34	34-65	65-124	>124
PEAK VEL.(cm/s)	<0.1	0.1-1.1	1.1-3.4	3.4-8.1	*8.1-16*	*16-31*	*31-60*	*60-116*	*>116*
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+



Caption: Strong motion stations (circles - size dependent on V/H Arias Intensity; diamonds for V/H Arias Intensity less than 0.4; color of symbols is proportional to horizontal Arias Intensity: red - high, blue - low; Strong motion stations at Greendale and Kaiapoi are noted) overlaid on to Darfield earthquake mainshock focal mechanism (Global CMT Project; www.globalcmt.org) and aftershocks (green circles). The red line is the approximate position and extent of surface rupture. Gray area is the metropolitan area of Christchurch.

Presentations

- Scott Ashford: *Geotechnical Aspects of the 2010 Darfield Earthquake*
- Jon Eidinger: *ASCE/TCLEE overview*
- Fred Turner: *Performance of Unreinforced Masonry and Selected Modern Buildings and Port Facilities*
- William Holmes: *Nonstructural Damage and Other Observations*
- Mary Comerio: *University Impacts; Response and Recovery*