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## Image of earthquake in South Island, New Zealand detected by ALOS/PALSAR

Manabu Hashimoto<sup>1\*</sup>

<sup>1</sup>DPRI,Kyoto University

We detected coseismic deformation from the Canterbury Earthquake (M7.0), South Island, New Zealand, that occurred on September 3, 2010, with ALOS/PALSAR. This earthquake occurred on a previously unknown fault in the Canterbury plane. Beautiful surface ruptures with many jogs and steps were found in this plane by researchers in New Zealand. We utilized both ascending and descending images to produce interferograms and pixel offsets. Resulted interferograms show very complicated rupture of the earth's surface, which implies geometrically complex fault planes. The maximum LOS displacements were measured to be more than 130 cm. We will invert these interferograms to reveal fault motion associated with this inland earthquake.

Keywords: ALOS/PALSAR, InSAR, New Zealand, Canterbury Earthquake, Coseismic deformation