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# An overview of the $M_w$ 6.3 Christchurch earthquake and a preliminary source mechanism

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At 12:51 on Tuesday 22 February 2011 local daylight time (23:51 on 21 February UT) a destructive aftershock of moment magnitude ($M_w$) 6.3 and shallow depth struck approximately 10 km SE of downtown Christchurch, causing extensive damage and loss of life (currently estimated at 180 deaths) in the central city and eastern suburbs. This earthquake was very energetic with recorded maximum vertical accelerations of 2.2 g near the epicentre. It caused much larger levels of building damage, landslides, rock falls and liquefaction than the $M_w$ 7.1 Darfieldmainshock. No surface rupture has been found but the event has been well constrained by geodetic and seismological data. We will present an overview of the extent and variable aspects of the damage, as well as preliminary source models of the earthquake.