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Updates from the Omnisens project, a 6D sensor and active platform for low frequency seismic isolation

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We want the future Einstein Telescope gravitational wave detector to be sensitive from 3Hz onwards. To reach this low frequency sensitivity we need to break the low frequency seismic wall and battle the controls noise that is limiting current detectors at 20Hz.

At Nikhef and the Vrije Universiteit Amsterdam, the Omnisens project is building a prototype of an active platform with a 6D sensor to improve seismic isolation at low frequencies.

This talk will explain how the 6D system works, update with the progress of our prototype, and share the implications of our simulation models for the Einstein Telescope.

Primary author: DONGEN, Jesse van

Co-authors: MITCHELL, Alexandra; MOW-LOWRY, Conor; VALENTINI, Michele; HOLLAND, Nathan; SAF-

FARIEH, Pooya

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