Magellan Workshop - Connecting Neutrino Physics and Astronomy

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## The ejecta of supernova 1987A

Thursday 17 March 2016 16:40 (30 minutes)

Due to its proximity SN 1987A offers a unique opportunity to directly observe the geometry of a stellar explosion as it unfolds. In this talk I will present recent spectral and imaging observations of SN 1987A obtained with the HST and VLT. These observations make it possible to determine the three-dimensional distribution of different elements in the ejecta. The geometry is highly asymmetric, reflecting the conditions at the time of the explosion. The observations also reveal the first detection of molecular hydrogen in a supernova, which provides important diagnostic information about the conditions in the ejecta.

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