The Roque de los Muchachos Observatory campaign in support of Deep Impact Mission

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The Deep Impact mission was designed to have much of the mission-critial science done from Earth-based telescopes. An unprecedent worldwide coordinated campaign was organized. Many observatories around the world and in space observed the comet before, during and after the impact, to follow the effects of the event and its evolution. The Roque de los Muchachos Observatory (ORM) played a substantial role in this campaign. From July 2nd to July 10th a campaign involving three of the largest telescopes at the ORM, the 4.2m William Herschel (WHT), the 3.6m TNG and the 2.5m Nordic Optical Telescope (NOT) was driven by our group. The near-infrared camera and spectrograph LIRIS at the WHT was used from July 3 to 7 to obtain near infrared images in the J and K$_s$ band and near infrared spectra. The visible camera and spectrograph DOLORES at TNG was used from July 2 to 9 to obtain broad-band images and low-resolution spectra in the visible spectral range. The high resolution spectrograph SARG at TNG was used from July 3 to 6 and on July 9 to obtain high resolution spectra in the visible range. The visible camera and spectrograph ALFOSC at NOT was used from July 3 to 10 to obtain deep broad-band images and low-resolution spectra in the visible.

In this talk we present the results of the imaging and low-resolution spectroscopic campaign at ORM. The evolution of the dust cloud ejecta produced by the impact, and the gas production during the impact dates will be discussed.