

Accident damages mirror on telescope slated for dark energy camera

February 27 2012, By Nancy Atkinson



Cracks in the secondary mirror on the Blanco telescope in Chile after an accident on February 20, 2012. Credit: Cerro Tololo Inter-American Observatory

An accident at the Blanco 4m telescope at Chile's Cerro Tololo Inter-American Observatory has severely damaged a secondary mirror. The telescope is currently shut down for installation of the highly anticipated Dark Energy Survey Camera, and on February 20, 2012, the telescope's f/8 secondary mirror was dropped during testing, resulting in fractures in the glass in the center of the mirror. Officials at the telescope said they are analyzing the extent of the damage to the mirror, and whether it extends beyond the visible cracks on the surface. They are also

reviewing how the accident might affect the installation of the “DECam.”

Two staff members were injured during the incident, but are expected to fully recover. According to a [post](#) on the CTIO website, the f/8 had been removed for the installation of the DECam, and the f/8 was on the dome floor to test the focus mechanism. “The mirror and its back end assembly were being transferred to a handling cart to enable the tests. Unfortunately, the mirror was improperly installed on the cart and when the mirror was being rotated on the cart, the entire cart/mirror assembly toppled over injuring two of our technical staff,” said the report.

The mirror itself impacted the dome floor, causing the fractures, pictured above.

At this time, officials say it is not clear if the mirror is repairable or not and are reviewing what needs to be done to stabilize the cracks in the mirror. The accident is being investigated and initially, officials said they didn’t expect the incident delay the installation and commissioning of [Dark Energy](#) Camera as the f/8 is not required for the installation or operation of the Dark Energy Camera system. However, a later update said the DECam installation schedule was being modified to allow for the absence of the f/8 mirror.

The Dark Energy Camera will map 300 million galaxies with an extremely red sensitive 500 Megapixel camera, with a 1 meter diameter, 2.2 degree field of view prime focus corrector, and a data acquisition system fast enough to take images in 17 seconds.

The CTIO [website](#) said they would be providing future updates on the status of the [mirror](#) and the DECam installation.

Source: [Universe Today](#)

Citation: Accident damages mirror on telescope slated for dark energy camera (2012, February 27) retrieved 2 May 2024 from <https://phys.org/news/2012-02-accident-mirror-telescope-slated-dark.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.