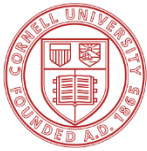


# Arecibo Observatory Upgrade



Cornell University

**Customer:**

Cornell University  
Ithaca, NY 14853



The Arecibo Observatory telescope in Arecibo, Puerto Rico, the largest and most sensitive single dish radio telescope in the world, became a good deal more sensitive. ADC was pleased to contribute instrumentation for this upgrade. In April 2004 the telescope received a new “eye on the sky” that helped turn the huge dish, operated by Cornell for the National Science Foundation, into the equivalent of a seven-pixel radio camera. The complex new addition to the Arecibo telescope was hauled 150 meters (492 feet) above the telescope’s 1,000-foot diameter (305 meters) reflector dish. The device, the size of a washing machine, took 30 minutes to reach a platform inside the suspended Gregorian dome, where ultimately it was cooled and then connected to a fiber optic transmission system leading to ultra-high speed digital signal processors. ADC designed a large turntable capable of positioning the receiver heads to within .5 mm (taking into consideration the weight budget and achieving the required velocity). ADC also designed the positioning systems for the tertiary sub reflector and the eight new receiver heads. This project was part of a \$25 million upgrade to the Arecibo facility.

