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Canada and the Thirty Meter Telescope

The Thirty Meter Telescope (TMT) is a next generation telescope ready for construction. A Canadian contribution is the adaptive optics system which allows the telescope to produce near space quality images, making it some 300 times more powerful than the best current telescope in which Canada participates. The image quality opens up new opportunities in the search for life on other planets, the study of dark matter in the universe, and the physics of black holes. The Government of Canada committed $243.5M in April 2015 to allow us to participate, along with the University of California, Cal Tech, Japan, India, China and potentially the US National Science Foundation. The excitement and some of the complex challenges of this project will be described.