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## NSF should help build massive telescope in Hawaii, says senior appropriator

By Jeffrey Mervis, Adrian ChoMay. 14, 2015, 5:00 PM

Representative John Culberson (R–TX) says he's not butting in. But he wants the National Science Foundation (NSF) to pay a significant share of the \$1.55 billion cost of a massive telescope to be built in Hawaii.

The Thirty Meter Telescope (TMT) is the dream of a consortium of universities, foundations, and national observatories in the United States, Canada, China, India, and Japan. It would be one of the world's largest optical telescopes. The consortium has raised between 75% and 80% of what's needed and has long hoped NSF would be a major backer. But the agency has yet to commit. In 2013, it gave the TMT consortium a 5-year, \$1.25 million grant to study how the agency might participate in the international project, an effort that could lead to a formal proposal to the agency in 2017.

NSF created new rules for vetting proposed large new facilities in the 1990s after scientists complained that the agency's existing approach was not transparent and didn't make clear what was expected of them. However, the process, which includes meeting several interim deadlines, can take many years from start to finish.

Culberson, who chairs NSF's spending panel in the U.S. House of Representatives, would like to speed up that timetable. "NSF is not yet a partner, and they should be," he told *Science* Insider today after his panel <u>marked up a bill that would set NSF's 2016</u> <u>budget</u>. "I intend to talk to Dr. [France] Córdova about it." (Córdova is NSF's director.)

Asked whether his intervention meant he was dissatisfied with the current process, Culberson demurred. "I haven't intervened," he said. "I think they're working it out right now, and I don't want to get in the middle of that other than to encourage them to do so. NSF needs to play a role. After all ... using revolutionary technology."

Culberson's comments were welcomed by Gary Sanders, TMT project manager at the California Institute of Technology in Pasadena. "I'm delighted," Sanders says. "I think TMT is a wonderful opportunity for the U.S. astronomy community."

That community is already solidly behind the project, which would sit atop Mauna Kea on Hawaii's Big Island. A 2011 decadal survey of the field by the National Research Council of the U.S. National Academies ranked a giant segmented-mirror telescope as one of its top three priorities for ground-based optical and infrared astronomy. The report recommended the United States pay for 25% of construction of either TMT or its competitor, the Giant Magellan Telescope, which would sit atop Cerro Las Campanas in Chile. The panel also recommended NSF eventually spend a similar amount in equipping or operating the second telescope.

Researchers hope to start construction of TMT soon and have it completed by 2024. The work is now on hold, as **Native Hawaiian protesters have blocked the road to the construction site**.

Culberson doesn't expect those protests to pose a significant obstacle. "I'm confident that NSF and the local authorities will work things out," he says.

\*Correction, 15 May, 2:36 p.m.: The priority ranking given to a giant segemented-mirror telescope by the 2011 decadal survey has been corrected. It was given third priority, not first, primarily because other projects were more "mature."

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