

# Hawaii land board approves Thirty Meter Telescope (Update)

April 13 2013, by Audrey Mcavoy

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A plan by California and Canadian universities to build the world's largest telescope at the summit of Hawaii's Mauna Kea volcano won approval from the state Board of Land and Natural Resources on Friday.

The decision clears the way for the group managing the Thirty Meter Telescope project to negotiate a sublease for land with the University of Hawaii.

The telescope would be able to observe planets that orbit stars other than the sun and enable astronomers to watch new planets and stars being formed. It should also help scientists see some 13 billion light years away for a glimpse into the early years of the universe.

Construction costs are expected to top \$1 billion.

The telescope's segmented primary mirror, which is nearly 100 feet (30 meters) long, will give it nine times the collecting area of the largest optical telescopes in use today. Its images will also be three times sharper.

But the telescope may not hold the world's largest title for long. A group of European countries plans to build the European Extremely Large Telescope, which will have a 138-foot (42-meter)-long mirror.

Some Native Hawaiian groups had petitioned against the project, arguing it would defile the mountain's sacred summit.

Native Hawaiian tradition holds that high altitudes are sacred and are a gateway to heaven. In the past, only high chiefs and priests were allowed at Mauna Kea's summit. The mountain is home to one confirmed burial site and perhaps four more.

Environmentalists also petitioned to stop the telescope on the grounds it would harm habitat for the rare wekiu bug.

The board approved the project anyway, but imposed two dozen conditions including a requirement that employees be trained in culture and natural resources.

The University of California system, the California Institute of Technology and the Association of Canadian Universities for Research in Astronomy are spearheading the telescope. China, India and Japan have signed on to be partners.

The University of Hawaii is involved because it leases the summit land from the state of Hawaii.

Mauna Kea's peak already hosts about a dozen telescopes.

The dormant volcano is popular with astronomers because its summit is well above the clouds at 13,796 feet, offering a clear view of the sky above for 300 days a year.

The state's isolated location in the middle of the Pacific Ocean also means the area is relatively free of air pollution. Few cities on the Big Island mean there aren't a lot of man-made lights around to disrupt observations.

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