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Environmental statement needed for \$1B telescope

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WAIMEA, Hawaii » Mauna Kea has some of the best atmospheric conditions in the world to build a proposed Thirty Meter Telescope, but a desert mountain in Chile is also in competition for the \$1 billion facility, project officials say.

Officials began the first steps yesterday in writing an environmental impact statement that would detail the effects of putting the enormous instrument on a sloping plain, about 500 feet lower than the summit of Mauna Kea.

Thirty meters translates to 98 feet, the diameter of the composite main mirror of the telescope. That's about a third of the length of a football field.

It also means that the mirror, composed of 492 computer-controlled segments, would be three times the size of the two Keck telescopes on Mauna Kea, already the largest on earth.

The telescope would be built entirely by United States and Canadian universities using funding from private foundations.

With no participation by the U.S. government, the environmental study will be written to state standards. The goal is to deliver it to Gov. Linda Lingle, who will have final approval of the document, by this time next year, said study manager Sandra Dawson.

A similar environmental study, also produced under Dawson's oversight, has already been done for the Chilean government to help officials plan there.

A series of "scoping" meetings for the Mauna Kea documents began Monday evening and will continue through Thursday, that last one at the Neal S. Blaisdell Center starting at 5 p.m.

The study will be written to set standards but the public can still suggest specific items to consider, which is the meaning of "scoping," Dawson said.

For instance, project advocates are committed to contributing a yet-unspecified financial "investment in education" in Hawaii, Dawson said. But project advocates want to know if the public thinks the money should be spent on school textbooks, community college programs or other possibilities, she said.

The reason for the project is an instrument that will be able to gather nine times as much light as each of

the Keck telescopes and will produce pictures three times sharper.

Looking greater distance means looking farther back in time, to an era when the universe, now 13.7 billion years old, was just 400 million years old. It was a time when the first galaxies were being formed, and astronomers don't yet know how it happened.

Both Mauna Kea and the Chilean site are closely equal in the clarity of the atmosphere they will look through, but Mauna Kea, being about 3,000 feet higher and colder, has a generally better set of conditions, said University of California at Santa Cruz astronomer Mike Bolte.

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