



UNIVERSITY OF HAWAII SYSTEM

Legislative Testimony

Written Testimony Presented Before the
Senate Committee on Ways and Means
Thursday, February 25, 2016 at 1:00 p.m.

By

Robert Bley-Vroman, Chancellor

And

Richard Wainscoat, Astronomer

Roy Gal, Assistant Astronomer/Outreach Coordinator/UH NGO
University of Hawai'i at Mānoa

SB 2302 – RELATING TO DARK SKIES PROTECTION

Chair Tokuda, Vice Chair Dela Cruz, and members of the Committee:

The University of Hawai'i strongly supports SB 2302 which establishes of a dark skies advisory committee. Dark night skies are a tremendously important natural, cultural, scientific, educational, and economic resource for Hawai'i. But the dark night sky is under increased threat from urban lighting.

Maunakea observatory has one of the darkest skies in the world, thanks to over 25 years of careful lighting on the Island of Hawai'i. The sky at Haleakalā observatory is less dark, partly due to less stringent lighting rules on Maui, and also due to its proximity to Honolulu.

Dark skies are vitally important for Hawai'i's two major astronomical observatories. These are among the best astronomical sites on the planet. If the sky is allowed to become bright over these observatories, the telescopes will lose their ability to see faint objects. On Haleakalā, the University of Hawai'i is engaged in a NASA sponsored effort to search the sky for dangerous asteroids. The aim is to find any dangerous asteroid that may hit Earth early enough that it can be deflected before impact. This search relies heavily on the dark night sky, and it would be significantly weakened if the sky on Maui becomes any brighter.

The advisory committee described in this bill will bring together representatives from the state, the counties and the public, and will a valuable forum for exchanging information regarding nighttime lighting and for preservation of the dark night sky.

Light Emitting Diodes are rapidly being introduced to replace older forms of lighting. These offer some energy benefits, but their blue light is harmful to astronomy and to endangered species such as birds and turtles. The committee described in this bill will be able to provide excellent advice on limiting blue light, thereby preventing costly mistakes. Kua'i is a prime example of a location where many expensive light replacements have had to be done because of the impact of unshielded lights on endangered birds.

Light travels great distances, and lighting is not simply a county matter. It is important to form this state committee to address lighting issues across the state, and the preservation of dark skies across all of Hawai'i.