

# A brief history of astronomy in Hawai'i

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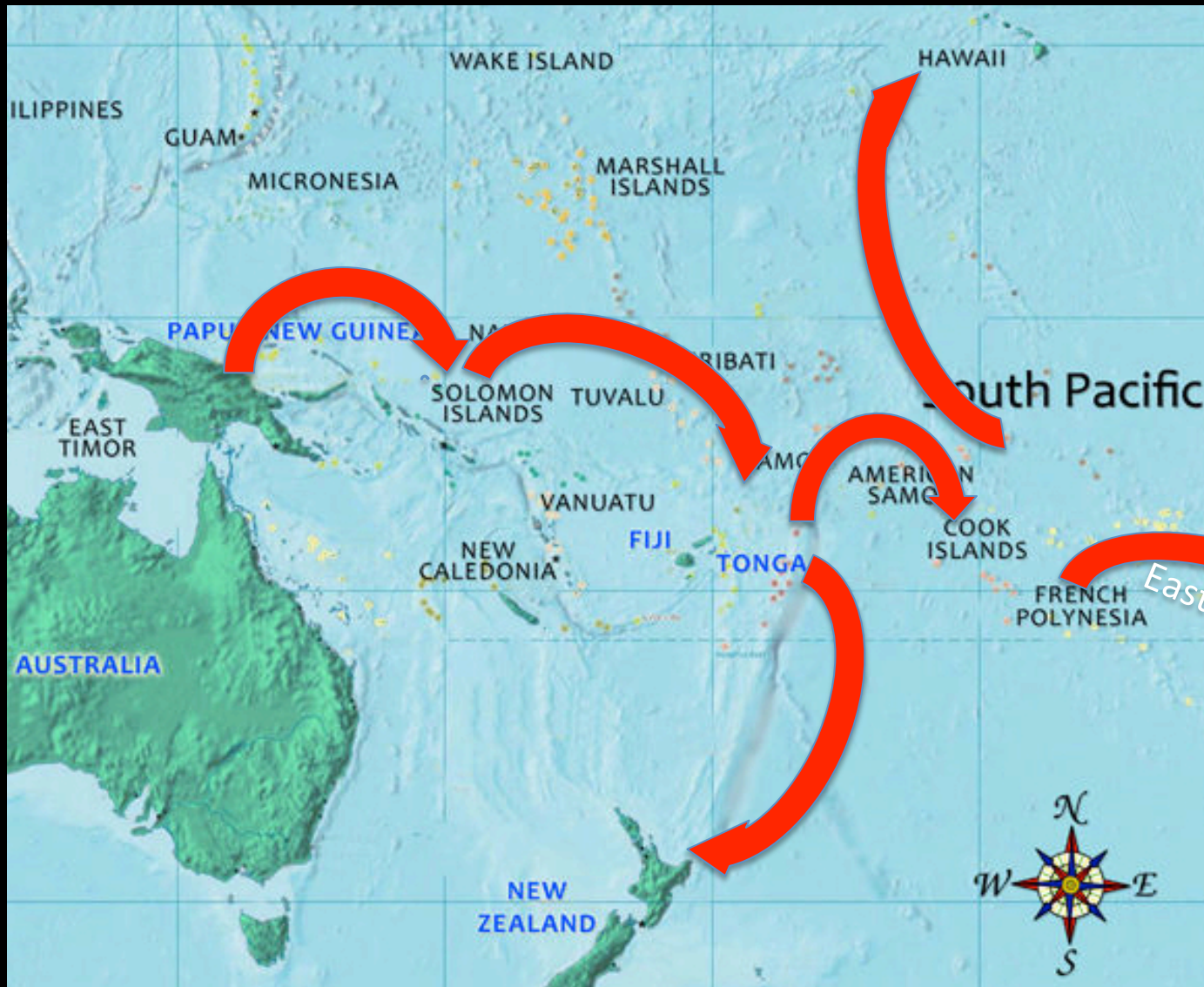
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# Outline of Talk

1. Polynesian astronomy and earliest settlement
2. Early scientific observations
3. Halley's Comet
4. Early Radio astronomy and Grote Reber
5. Hawaiian Astronomical Society
6. International Geophysical Year 1957-58
7. Haleakala beginnings
8. Solar Observatory
9. Kuiper visits Mauna Kea and loses it
10. Birth of the IfA
11. Mauna Kea Science Reserve
12. TMT and opposition to further development

# 1. Polynesian astronomy and earliest settlement



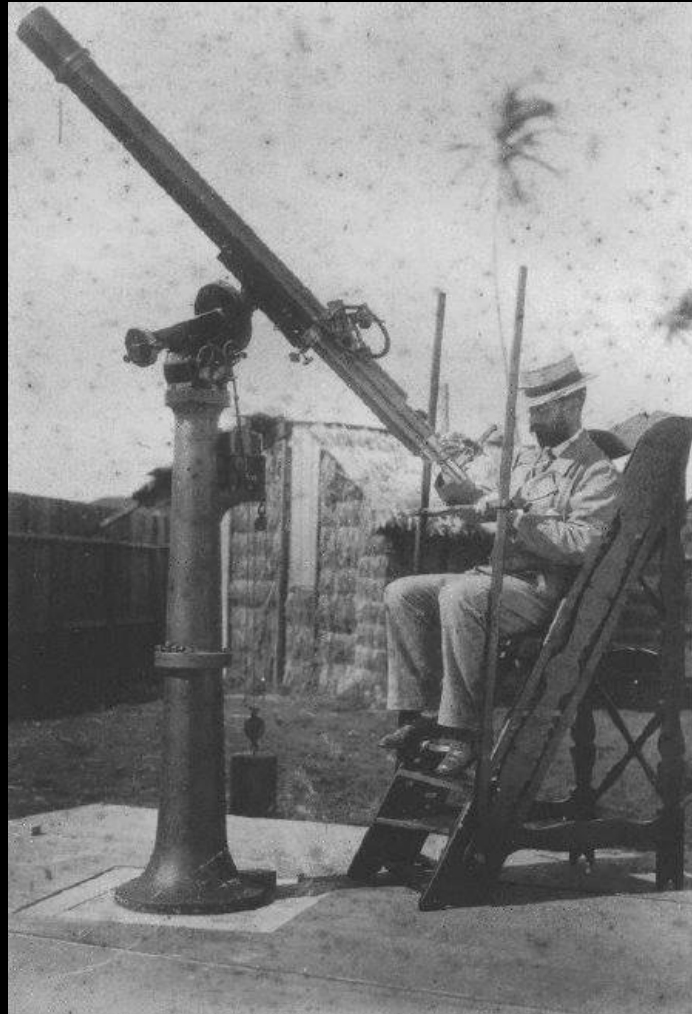


© 2014 POLYNESIAN VOYAGING SOCIETY  
PHOTO: 'ŌIWI TV • PHOTOGRAPHER: KAIPŌ KĪ'ĀHA

Polynesian double-hulled voyaging canoe, the Hokule`a,

Excellent web site <http://www.exploratorium.edu>

## 2. Early scientific observations



Credit: Hawaiian Journal  
of History

Astronomer George Lyon Tupman,  
leader of an 1874 project in Honolulu  
to observe the transit of Venus

### 3. Halley's Comet

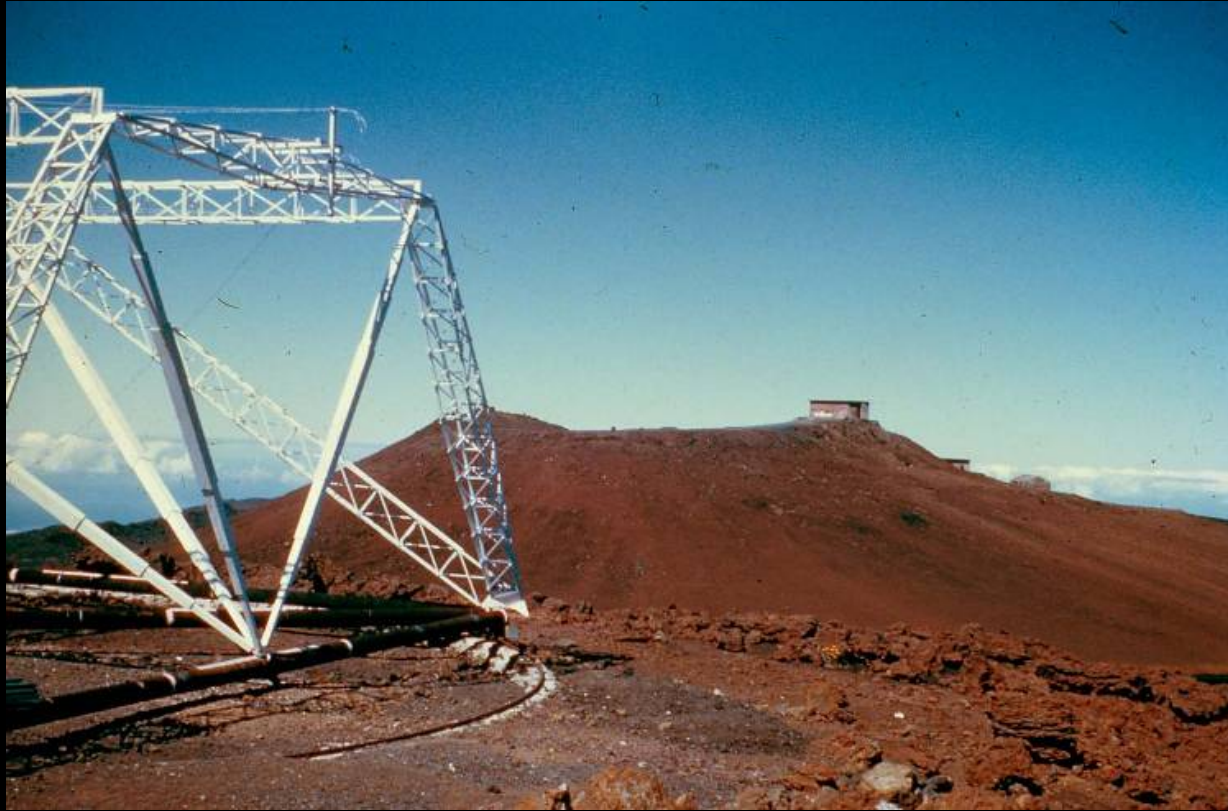


The Astronomical and Astrophysical Society's Comet Halley observatory by Diamond Head in 1910.



Comet Halley as photographed by Prof. Ellerman near Diamond Head in 1910

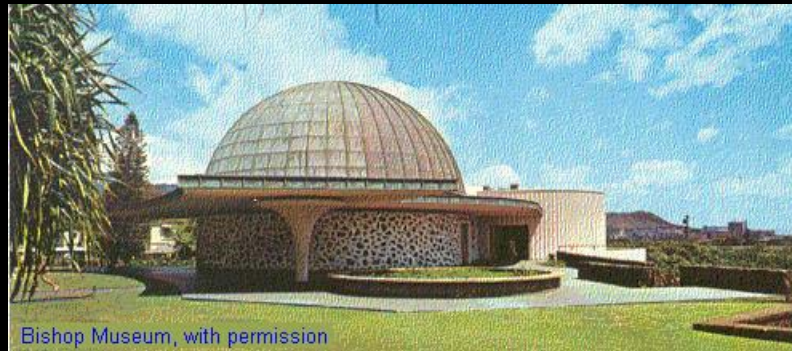
#### 4. Early Radio astronomy and Grote Reber



A portion of Grote Reber's antenna structure showing the circular track upon which it rotates. In the background is Red Hill, the summit of Haleakala, and some remaining WW2 structures. 1955.



## 5. Hawaiian Astronomical Society



The Bishop Museum Planetarium soon after construction in 1962.

## 6. International Geophysical Year 1957-58



Haleakala ~1957: Satellite Tracking - no environmental impact statements and no building permits !



The University of Hawai'i Solar Observatory at Makapu'u Point, Oahu, 1967. The solar radio noise 10-ft dish is at the left. The heliostat mirror is at the left end of the building.

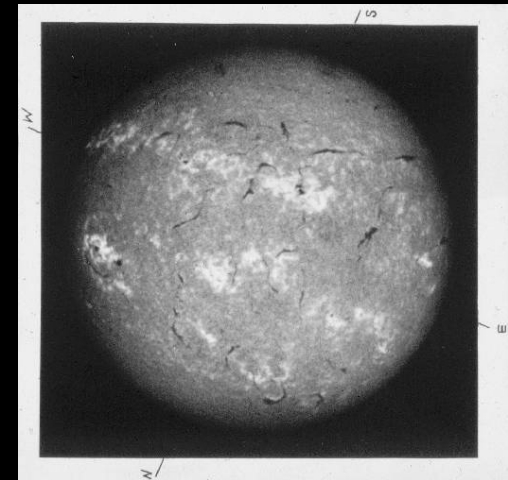


Image of the Sun taken at the Makapu'u Point Solar Observatory on 29 February 1958, in hydrogen light (H-alpha)

## 7. Haleakala beginnings



The Baker-Nunn Satellite Tracking Camera was dedicated on August 2, 1958



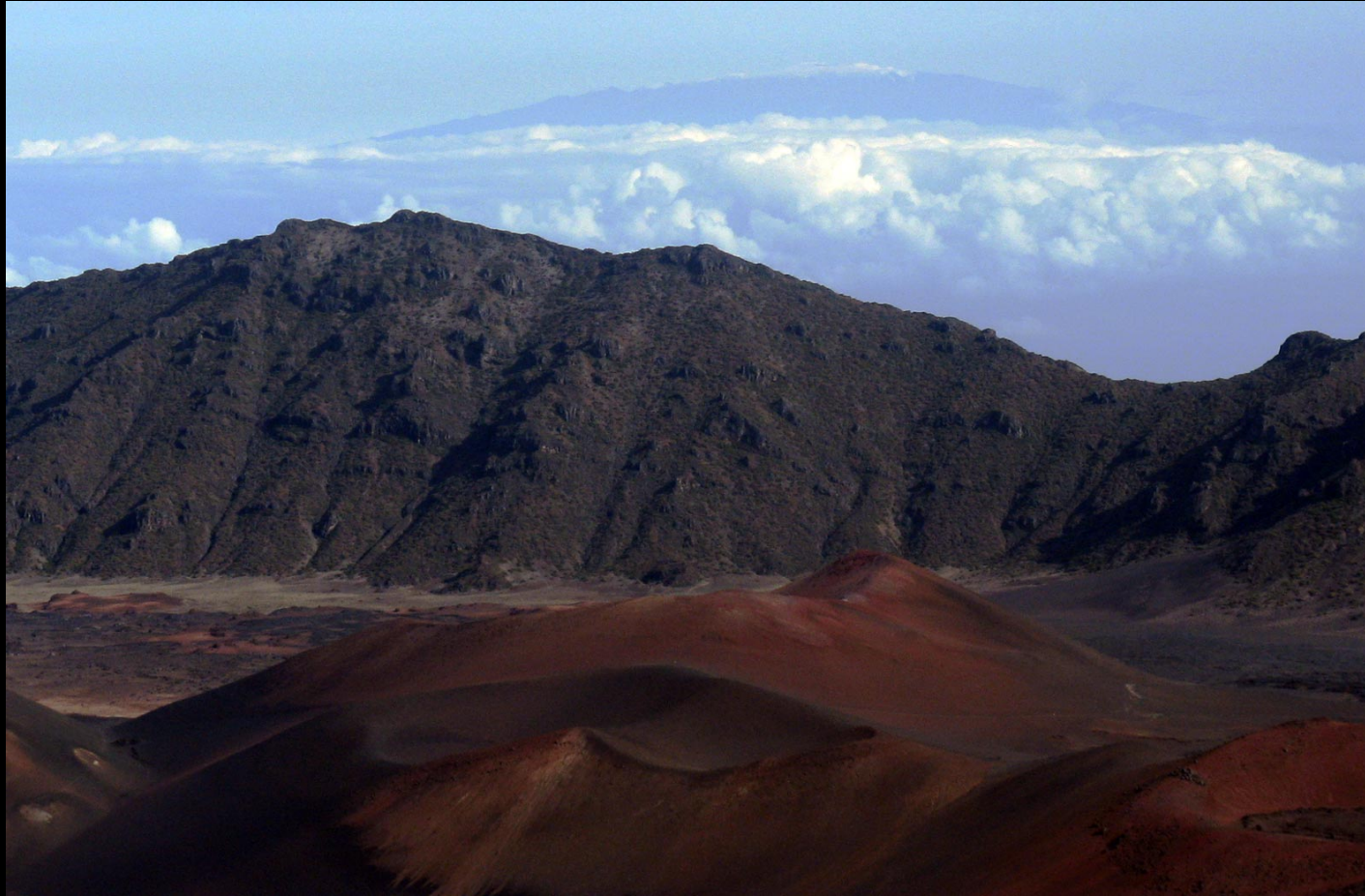
Airglow and zodiacal light photometers. The cluster of telescopes rotates in azimuth while scanning the sky at various altitudes. (1962)

## 8. Solar Observatory



Haleakala solar observatory upon initial completion, November 1962 part of the Hawai`i Institute of Geophysics. The facility was informally called the HIG Haleakala Observatory, or HIGHO !

## 9. Kuiper visits Mauna Kea and loses it



Looking from Haleakala on Maui, the snow-covered summit of Hawaii's Big Island, Mauna Kea can be seen.



University of Hawaii 2.2-meter telescope (began 1970)



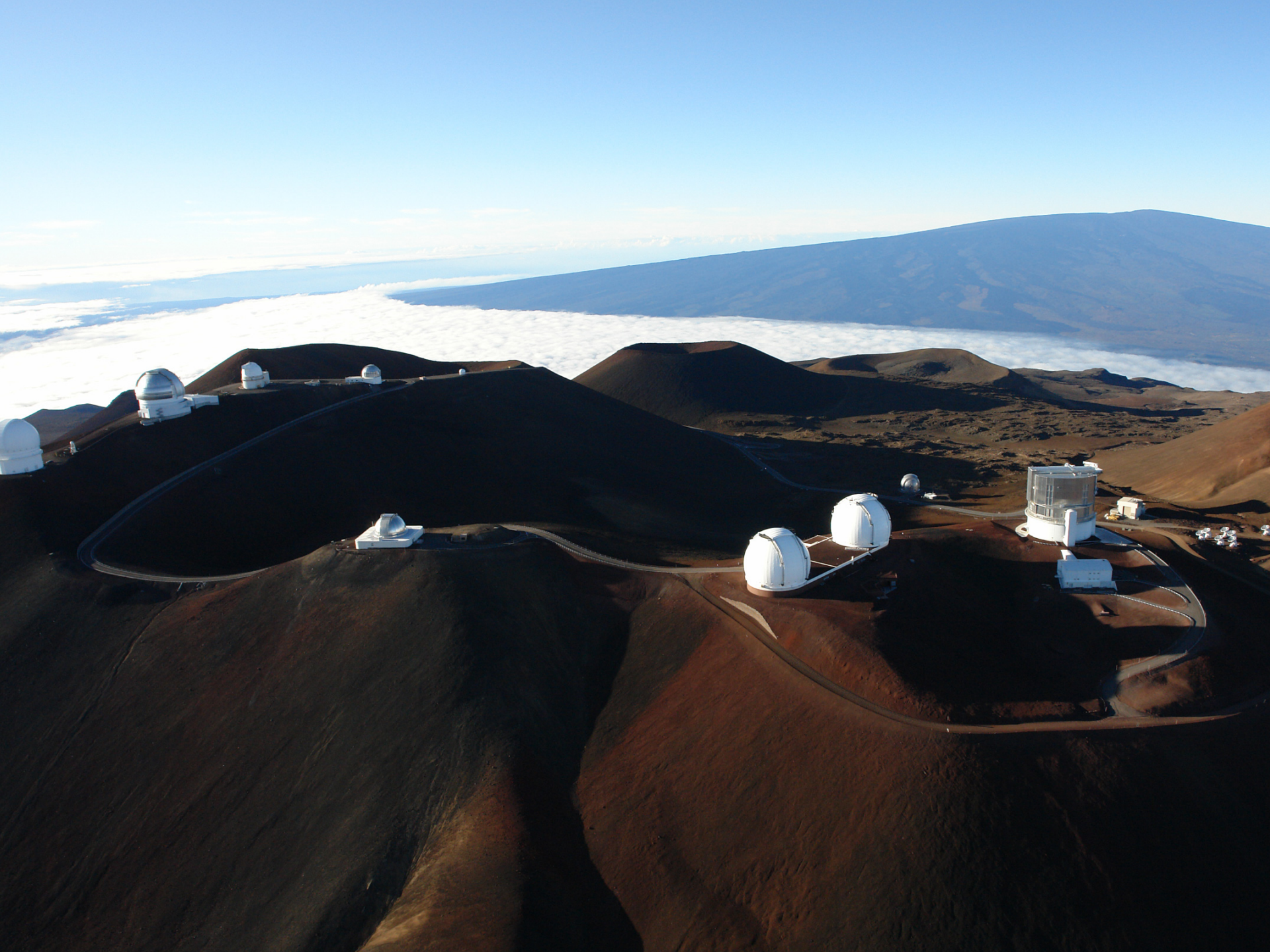
## 10. Birth of the Institute for Astronomy



The IfA in 1978

# 11. Mauna Kea Science Reserve





## 12. TMT and opposition to further development



Side view of TMT

Courtesy TMT International Observatory  
<http://www.tmt.org>



March 26, 2015: Mauna Kea Access Road at Hale Pohaku. Credit: David Corrigan



<https://www.youtube.com/watch?v=zclfWUvbiCg>

Sean Goebel Photography <http://www.sgphotos.com/>

For sales inquiries or general questions, contact Sean at: sean [at] sgphotos [dot] com.

## References and Recommended Reading

### **History of astronomy in Hawai`i (Steiger and Jeffries)**

<https://www.ifa.hawaii.edu/ifa/history.shtml>

A Brief *History of Astronomy* in Hawai'i since 1940 by Andrew Pickles

<http://www.ifa.hawaii.edu/hilo/Images/MercTrans/MKhistory.pdf>

History of Astronomy on Mauna Kea (NRAO)

<http://www.cv.nrao.edu/rocks/pdf/Hawaii.telescopes.pdf>

Polynesian Voyaging Society

<http://www.pvs-hawaii.com/>

<http://www.exploratorium.edu>

The Heart of the Hawaiian Peoples' Arguments Against the Telescope on Mauna Kea

<http://www.smithsonianmag.com/smithsonian-institution/heart-hawaiian-people-arguments-arguments-against-telescope-mauna-kea-180955057/?no-ist>

## Resources

Sean Goebel Photography <http://www.sgphotos.com/>