

NASA/HEAT Rice U Status Report – March 2021

Patricia H. Reiff, Rice University

- *Equinox Event March*

On March 20 we held an in person (2 hours) plus Zoom (1 hour) celebration/explanation of the spring equinox. Dr. Reiff was at the sundial demonstrating how the sundial works (with the length of the shadow giving the day of the year and its east-west motion showing the time of day). The event was outdoors outside the Houston Museum of Natural Science and was free. We had the teachers in the MST program demonstrating the Sunspotter, the sundial model, and the views of the Sun through the H-alpha telescope. Staff and interns from HMNS demonstrated solar cooking, white-light solar images (filtered of course) and solar balloon popping.



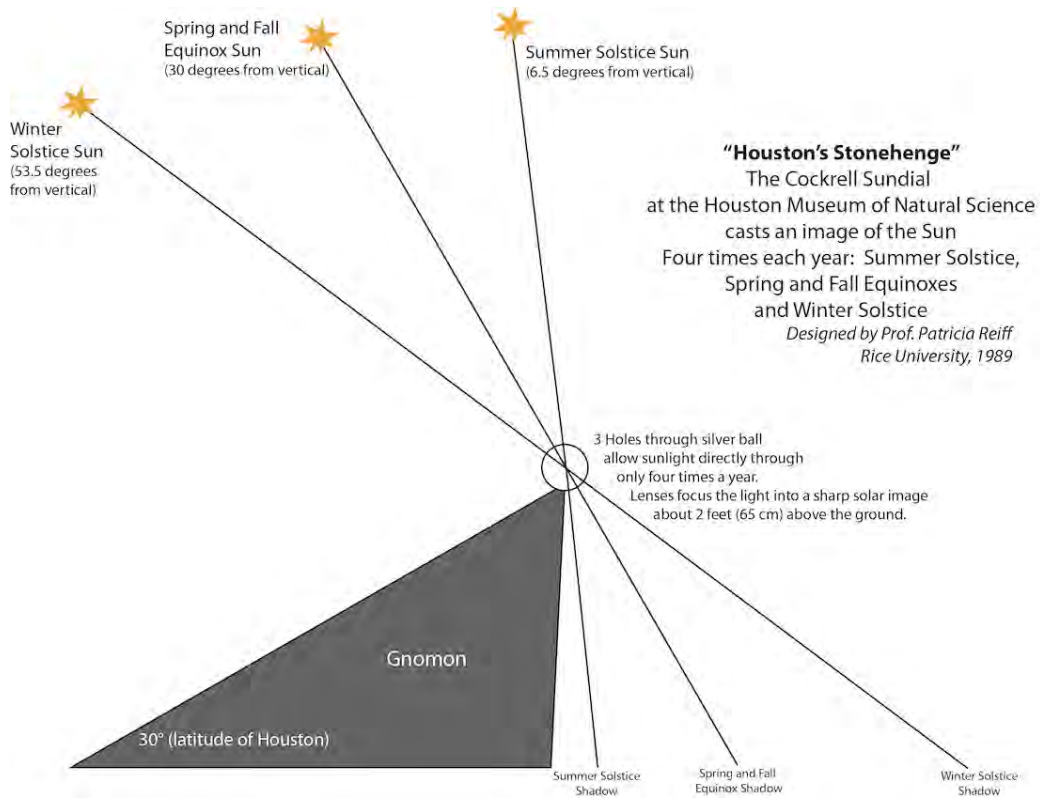
Visitors stopping by the exhibit tables at HMNS.



Visitors looking through the white light solar telescope (filtered).



Visitors using the sunspotter to look for and draw sunspots.



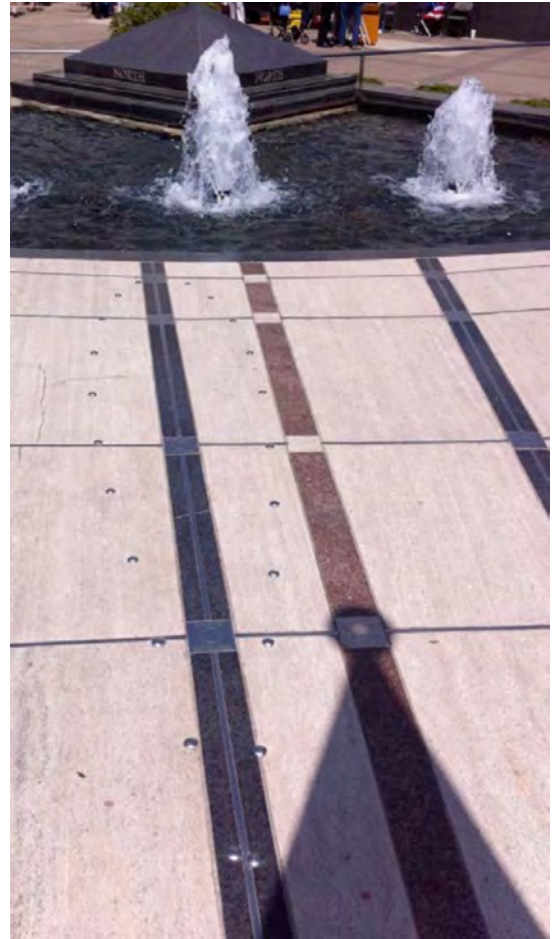
The unique feature of the HMNS telescope is the fact that it casts an image of the sun at the solstices and equinoxes.

This diagram shows how three holes and three lenses create images four times a year. The tilt of the earth's axis makes the sun most vertical in summer and

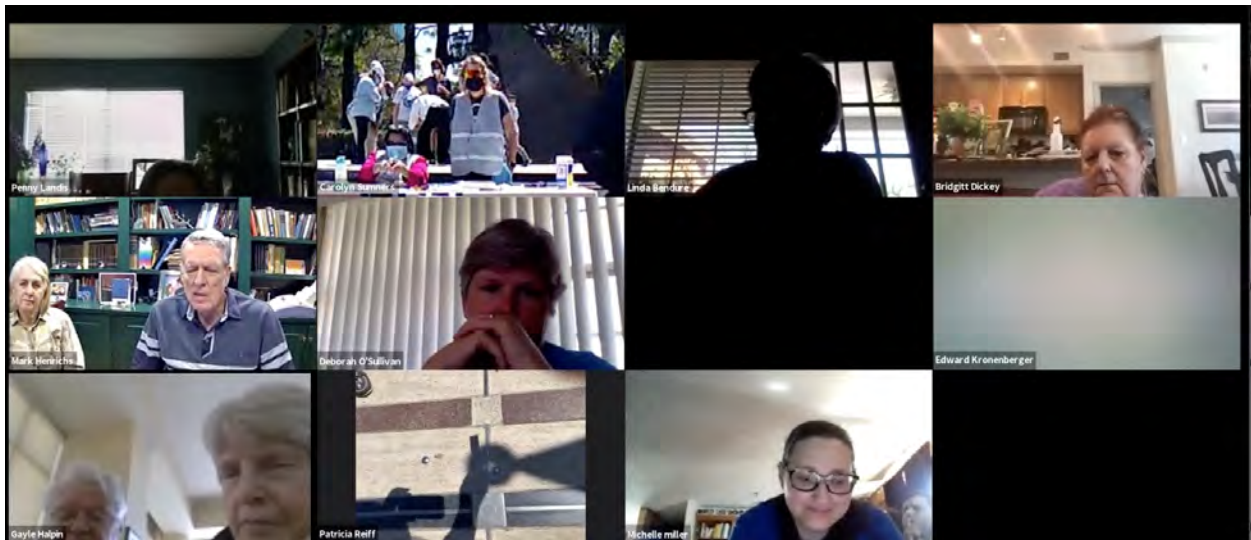
least in winter. The radial lines tell the time of day.

(For more information on the HMNS sundial, see <https://space.rice.edu/sundial/>)

This image to the right shows the shadow of the ball on top of the gnomon just at solar noon (brown line). The shadow has a hole in it because of the hole through the ball aligned with the equinox sun. The gray lines are for 1 and 2 CDT



This image below shows the projected solar image in focus (a few feet above the ground). Dr. Reiff is broadcasting the image live via Zoom.



Screen capture from the live zoom. 33 people were connected but not all showed their images

EVENT	Equinox at the HMNS Sundial March 20, 2021
In person: approx. 40 families (15 black, 20 hispanic) plus 4 K-12 teachers helping, 5 informal educators helping, and one SME	
Via Zoom: maximum online 33 (mostly adults who were visible)	