HIGH-SCHOOL STUDENTS FIND DIFFERENT KINDS OF DUST BLOCKING TABBY’S STAR

A team of students at The Thacher School have been monitoring the brightness of KIC 8462852 ("Tabby's Star" [http://www.wherestheflux.com], often referred to as the most mysterious star in the galaxy) for the past year. Rising Thacher seniors Yao Yin and Alejandro Wilcox have measured how the dimming of Tabby's Star depends on the observed wavelength of light using the California boarding school's newly renovated observatory. Under the supervision of Thacher faculty member Dr. Jonathan Swift and as part of a large, international collaboration of professionals and citizen scientists directed by Dr. Tabetha Boyajian (Louisiana State University), Yin and Wilcox have helped reveal a new insight into the nature of this strange object.

Their measurements suggest that the long timescale and short timescale phenomena observed toward the star are due to dust that differs in either composition or size distribution. This could mean that the obscuring material was produced in a fairly recent event in which the dust has not had time to become well mixed. Or the different events could be due to disparate and unrelated phenomena.

Yin, Wilcox, and Swift will continue to monitor Tabby's Star through the rest of the observing season this year with the goal of characterizing new events and perhaps catching larger events which will trigger, through the international collaboration, spectroscopic observations of the obscuring material.

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About the Thacher Observatory:
The Thacher School has a rich history in science and astronomy, born in large part from the relationship between Sherman D. Thacher and George Ellery Hale. Thacher became the birthplace of the Summer Science Program, one of the country's most successful summer science programs for high school students. And in April of 1965, Thacher joined forces with University of California, Los Angeles, and Caltech to establish the Thacher Observatory with funding from the National Aeronautics Space Administration obtained through the UCLA Space Science Committee (PI: George Abell). After several decades of service the facility fell into disuse in the late 1990s and the original telescope was removed. Today, thanks in large measure to the efforts of Dr. Jonathan Swift, a science and mathematics faculty at the school, and the generosity of anonymous donors, Thacher has fully renovated the observatory, including the addition of a new PlaneWave CDK-700 telescope. The updated facility is a major resource for Thacher students in research-heavy astronomy and data science courses, as well as Dr. Swift's
ongoing research on eclipsing binaries, transiting exoplanets. The Thacher Observatory will once again be home to innovative research and education as Thacher students work alongside professional astronomers from around the world. More information: http://blogs.thacher.org/deepdives/2015/11/12/music-of-the-spheres/

About The Thacher School:
Founded in 1889, The Thacher School is a coeducational boarding high school (grades 9-12) located 85 miles northwest of Los Angeles, California. The School serves approximately 260 academically talented students who benefit from a rigorous college preparatory experience within a diverse and supportive community. In the firm belief that a student's power to access a world-class boarding school education shouldn't be limited by their family's ability to pay full tuition, Thacher commits more than $3 million a year to financial aid. Our students, 41 percent of whom self-identify as students of color, come from 12 countries and 24 states. The faculty and students live and work closely together in a community in which cooperation, trust, honesty, and respect are the cornerstones of school life. Together, we commit to the belief that demands in the academic classroom, when combined with those of mountains and horses, of sports and the arts, produce independent minds, strong bodies, and powerful character. More information: https://www.thacher.org/page