

Abstract Submitted
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The Astrophysics of the Solar Corona at the August 21, 2017, American Total Solar Eclipse JAY PASACHOFF, Williams College — The first total solar eclipse to cross the United States from coast to coast in 99 years will occur on August 21, 2017, with a 70-mile-wide path of totality from Oregon to South Carolina, with cloudiness statistics more favorable in the northwest than in the southeast. I will discuss a series of observations of the solar corona made during recent solar eclipses and related spacecraft observations. I will further discuss plans for using the 2017 eclipse for furthering our studies of the heating of the solar corona to millions of kelvins, of the dynamics of coronal mass ejections and polar plumes, and of the response of the corona to the solar magnetic field. I will conclude by discussing public-education plans for the eclipse, during which the whole U.S., Mexico, Central America, and Canada will enjoy a partial eclipse. My work at solar eclipses has recently been supported by the NSF and the Committee for Research and Exploration of the National Geographic Society, and I thank them both for research grants for our scientific studies of the 2017 total eclipse, including AGS-1602461 from the NSF and 987816 from National Geographic.

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