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The Mysterious Great Dimming of Betelgeuse

Thursday, 8 July 2021 18:50 (30 minutes)

Betelgeuse, a bright star in the shoulder of the Orion constellation has been known for centuries - even appearing in drawing on the walls of the Lascaux Caves in Southwestern France. And an unexpected amazing phenomenon occurred last year.

The bright cool supergiant Betelgeuse became historically faint in February 2020. Various explanations have been offered for its unusual behavior – including conjectures this foreshadows an imminent supernova event. Many astronomical resources – from the ground and space – tracked the star's unusual behavior.

With photometry, direct imaging, spatially resolved spectroscopy, polarization measures, infrared, optical and ultraviolet spectra helped us to unravel what happened to this supergiant star. These measurements allow this historic event to be followed from its origin in the stellar surface, through the extended atmosphere, and into the circumstellar medium. We now think we understand what occurred and caused the anomalous dimming. And this informs fundamental characteristics of the evolution of all stars.

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Session Classification: The "Fall and Rise" of Betelgeuse

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