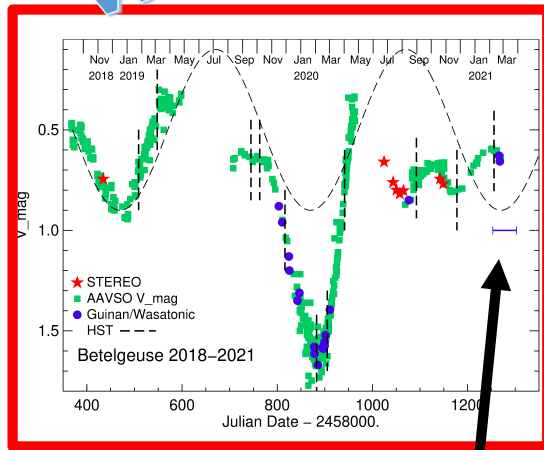




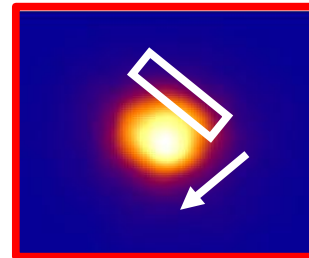
The Mysterious Great Dimming of Betelgeuse

Andrea Dupree (CfA | Harvard & Smithsonian), T. Calderwood (AAVSO),
E. Guinan (Villanova), M. Montargès (Observatoire de Paris)

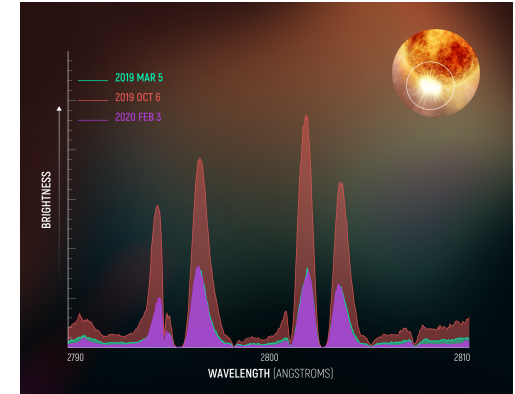


Is Betelgeuse
missing its next
minimum?
AAVSO: PEP data

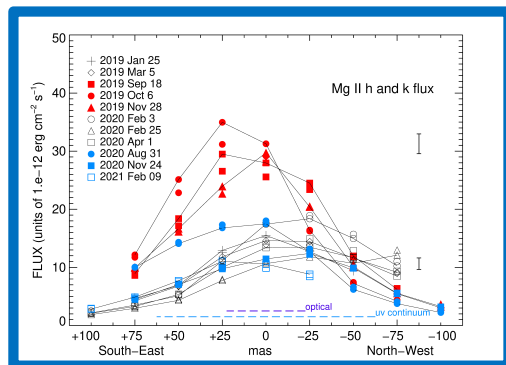
Range of predicted minimum (400-435 d)



HST/STIS spectra
at 8 positions
(25 X 100 mas)



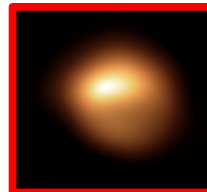
Mg II emission strengthened
substantially Sep.-Nov. 2019



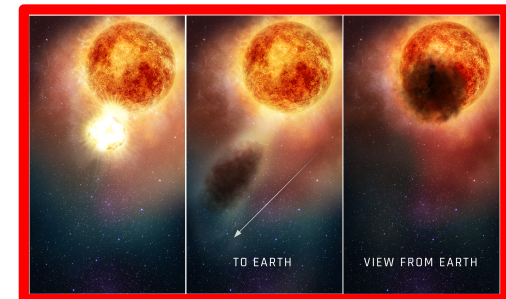
Mg II emission
strengthened
over southern
hemisphere again
in Aug. 2020;
Dense outflowing
chromosphere;
Currently (Feb 2021)
normal/weak Mg II



Jan 2019



Dec. 2019



A possible scenario: Material ejected
from chromosphere, cooled, and
formed obscuring dust. Perhaps it left
a cool low density region in the photosphere.