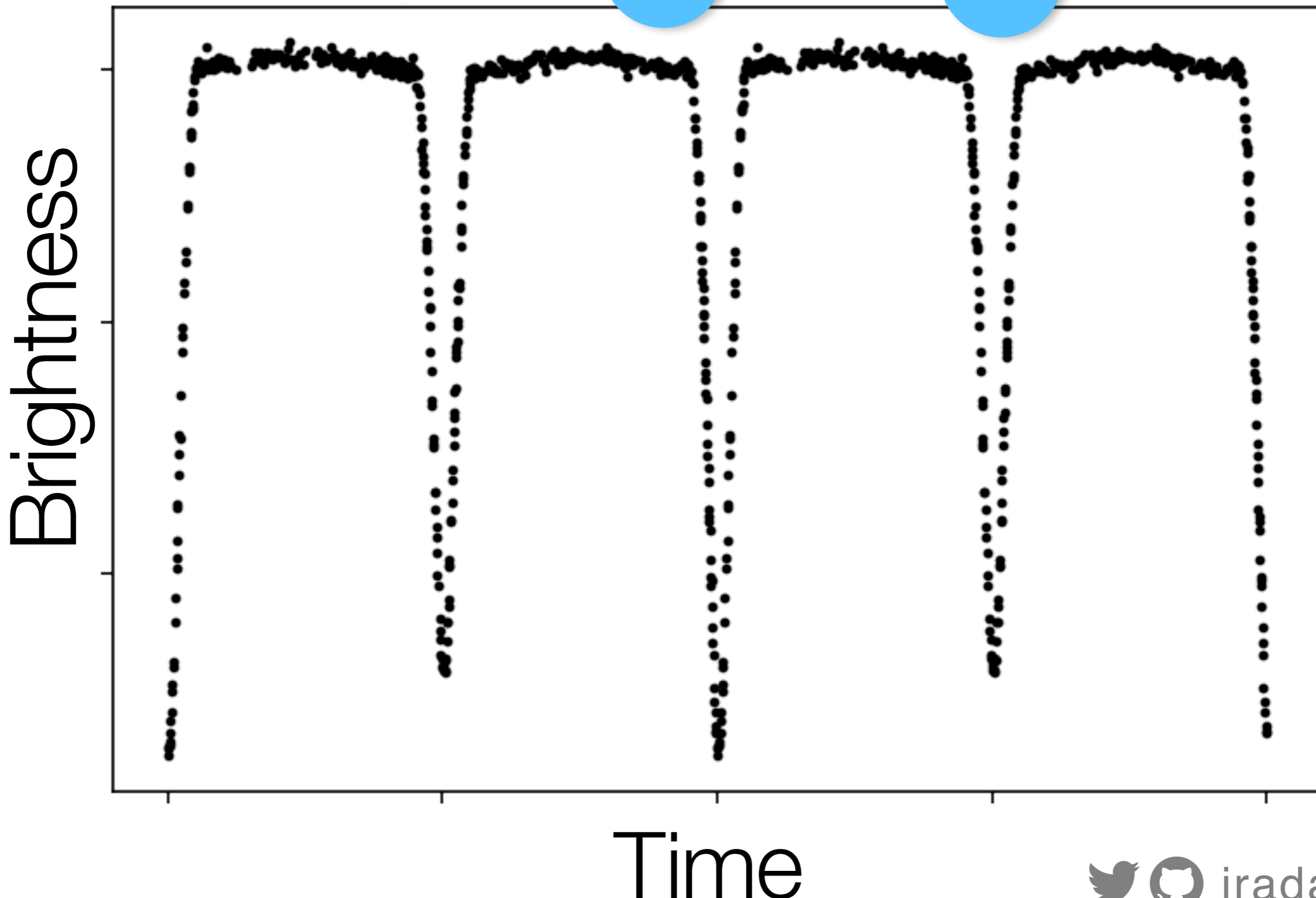
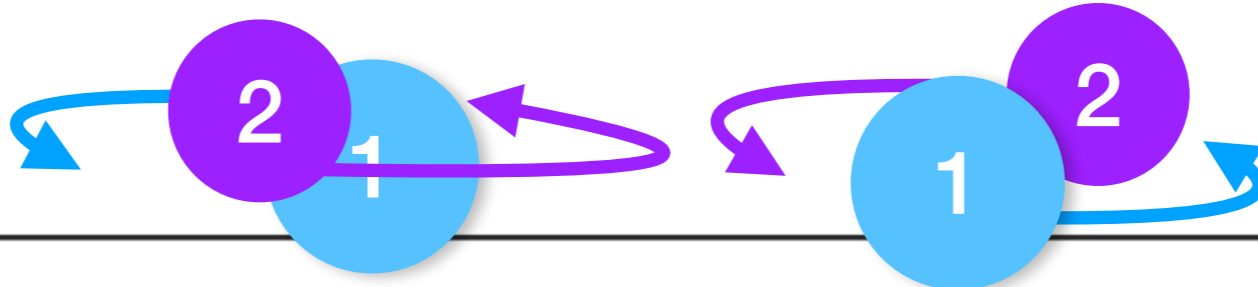


The RISE and FALL of HS Hydrae A Remarkable Eclipsing Binary Star

Prof. James Davenport, Dr. Diana Windemuth, Karen Warmbein,
Erin Howard, Courtney Klein, Jessica Birky

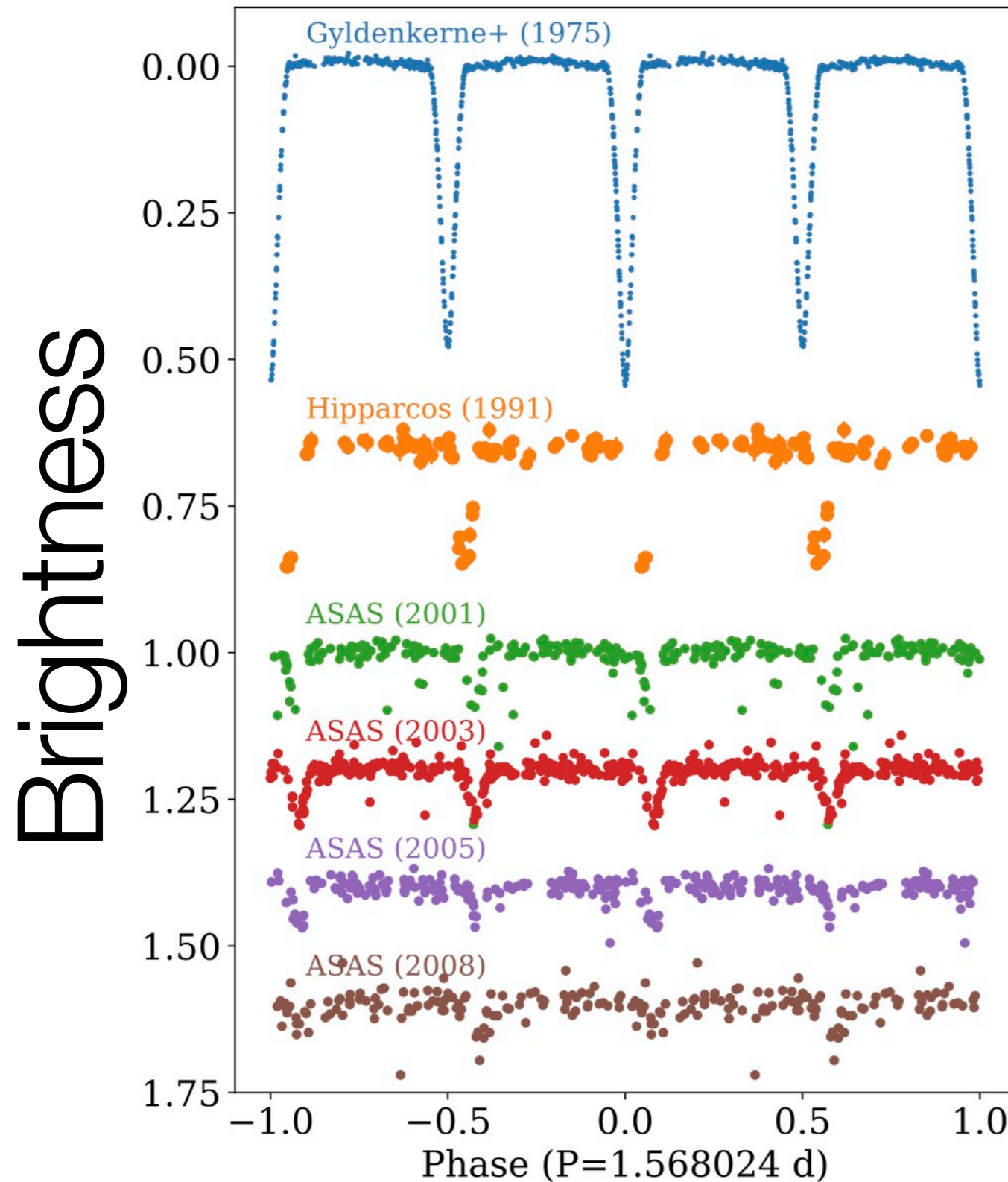


What is an Eclipsing Binary?

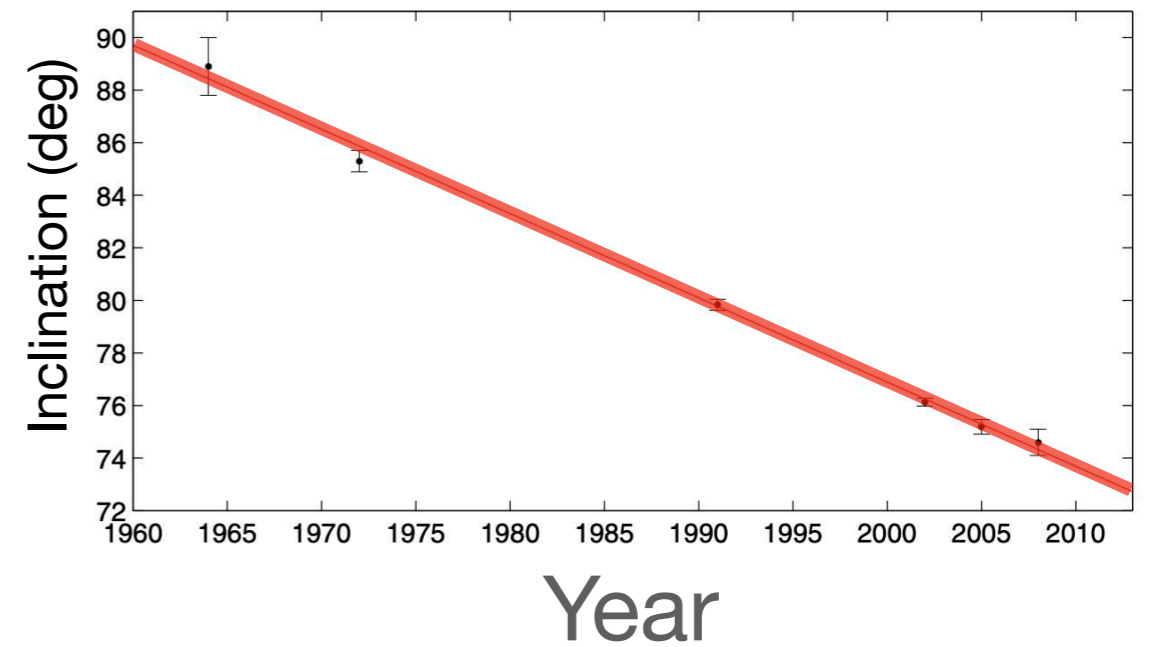


HS Hydrae: Eclipses are Disappearing

A rare type of EB



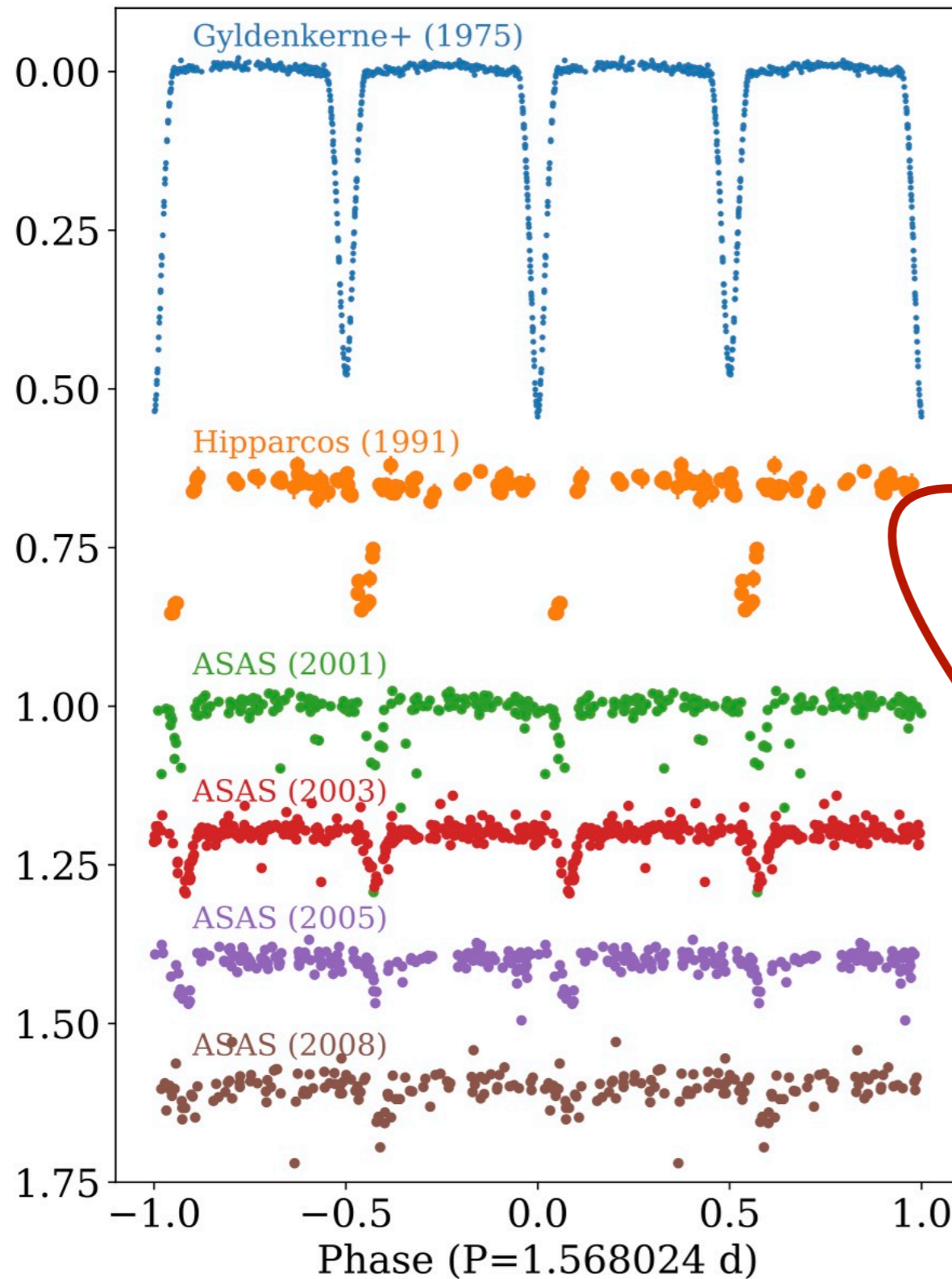
Discovered by
Zasche & Paschke (2012)



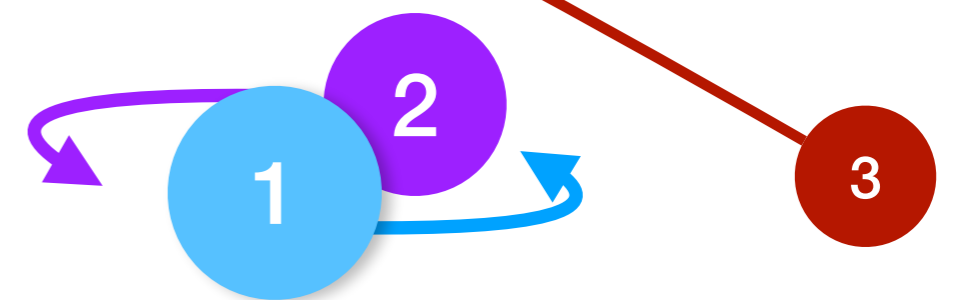
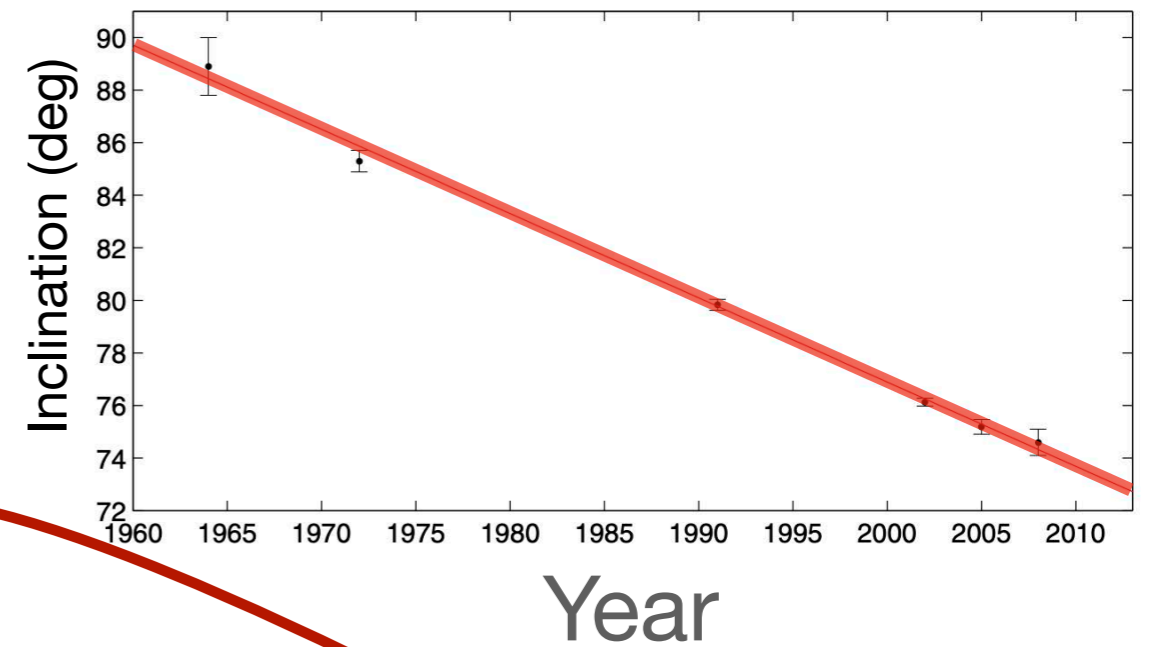
HS Hydrae: Eclipses are Disappearing

A rare type of EB

Brightness



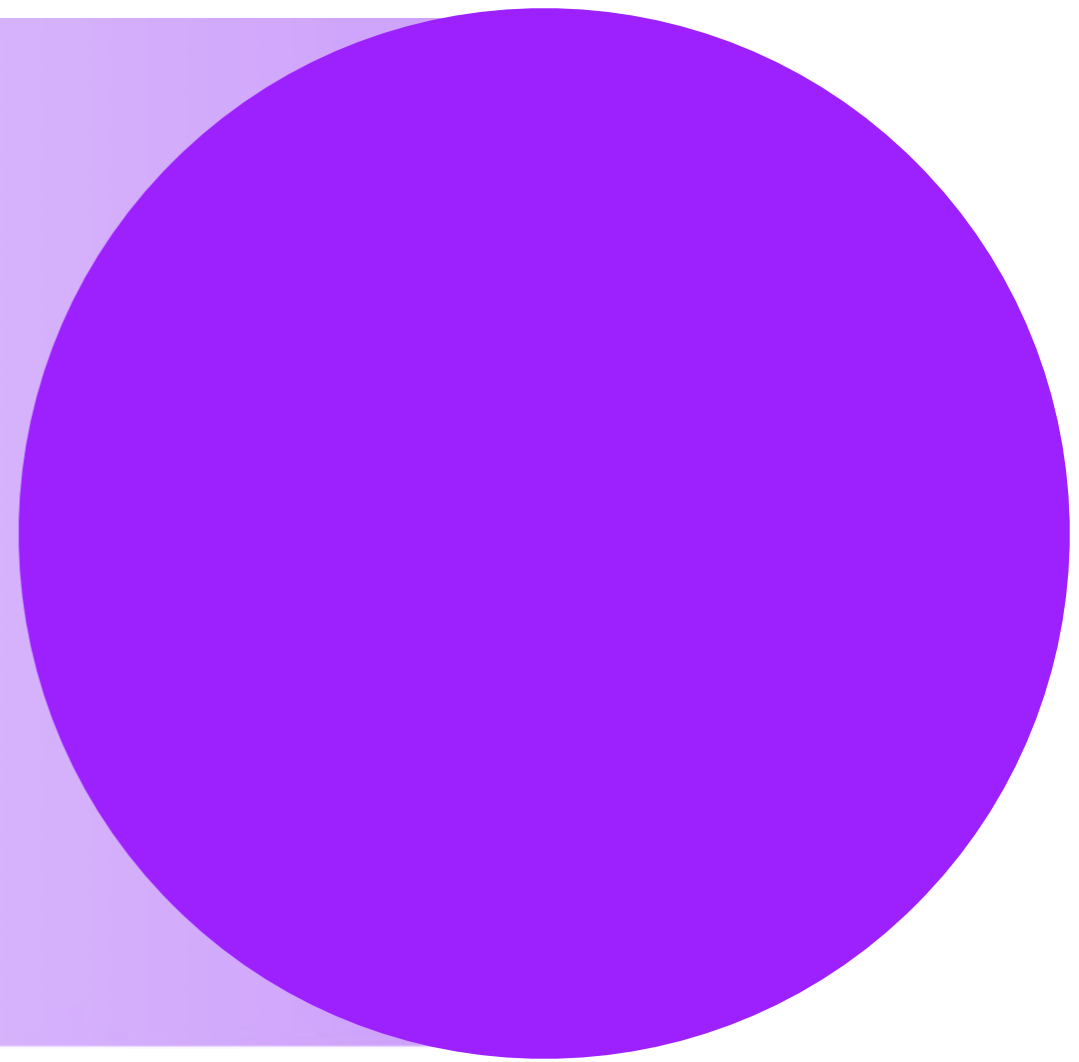
Discovered by
Zasche & Paschke (2012)



HS Hydrae: Eclipses are Disappearing



1975



HS Hydrae: Eclipses are Disappearing



1991

HS Hydrae: Eclipses are Disappearing

2008

HS Hydrae: Eclipses are Disappearing

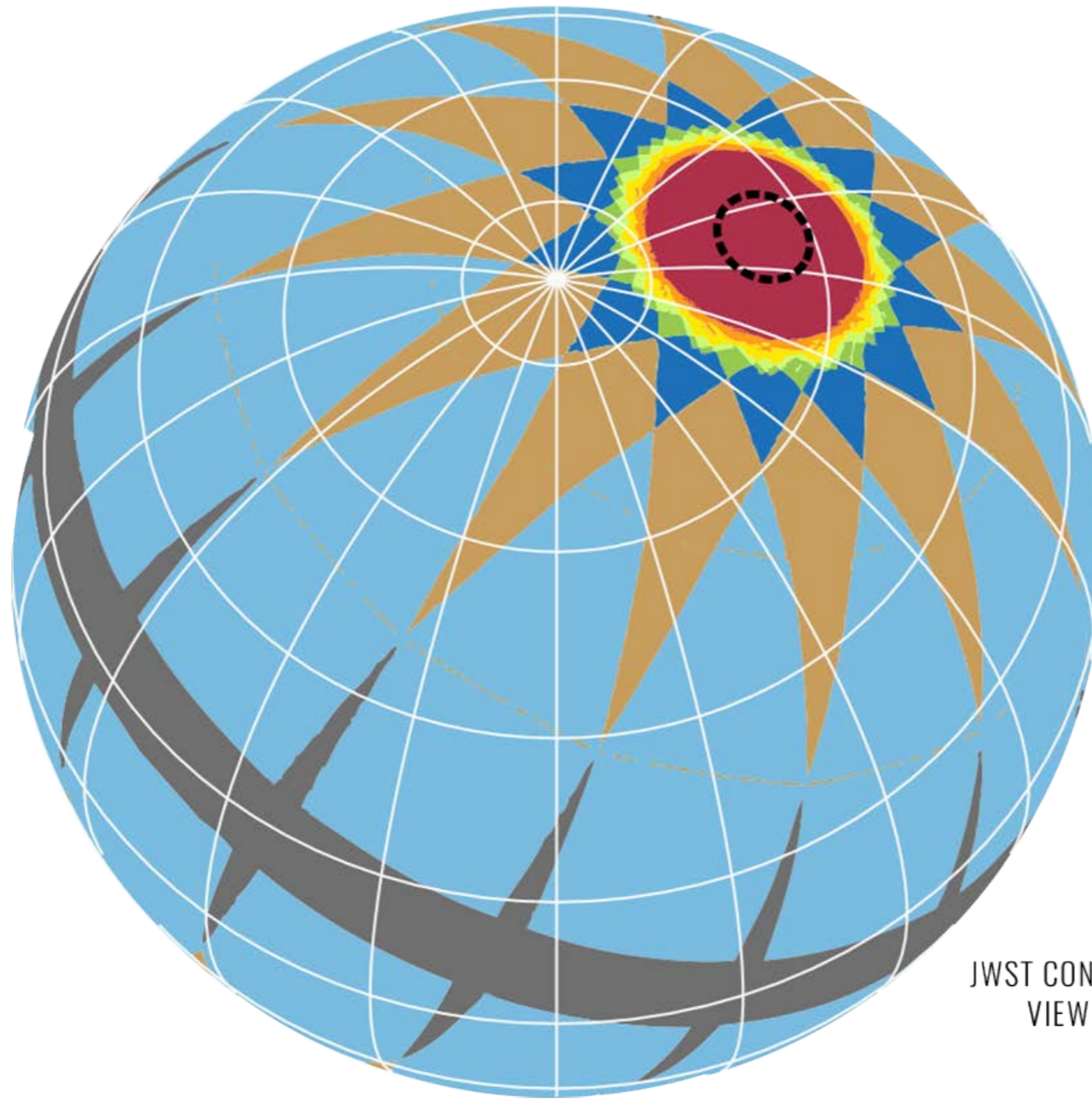
Zasche & Paschke (2012)

Prediction: 2022

Introduce some NEW and some OLD data for HS Hydrae

A Lucky View: TESS

TESS 2-YEAR SKY COVERAGE MAP



27 DAYS

54 DAYS

81 DAYS

108 DAYS

189 DAYS

351 DAYS

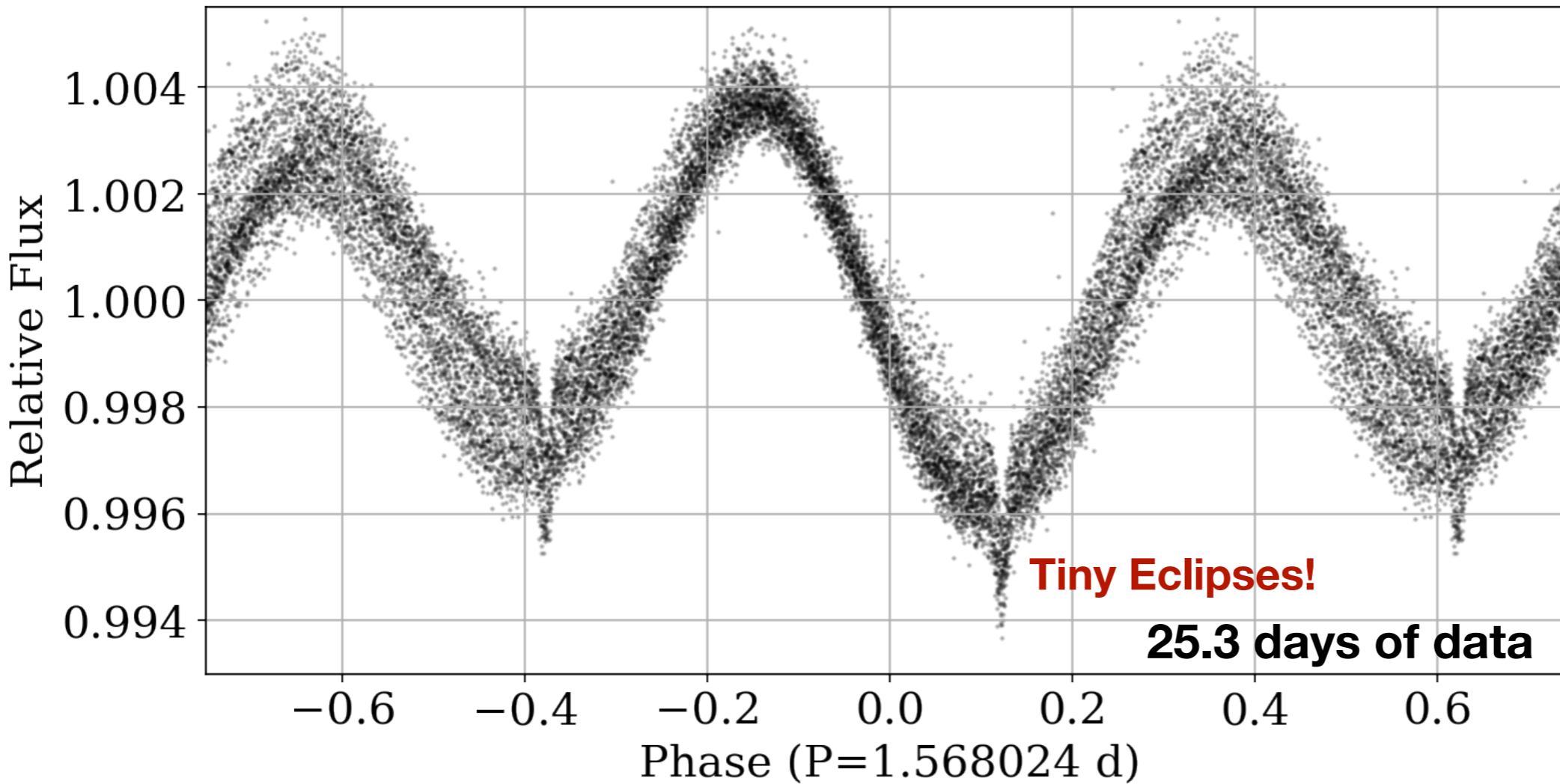
JWST CONTINUOUS
VIEWING ZONE 



A Lucky View: TESS



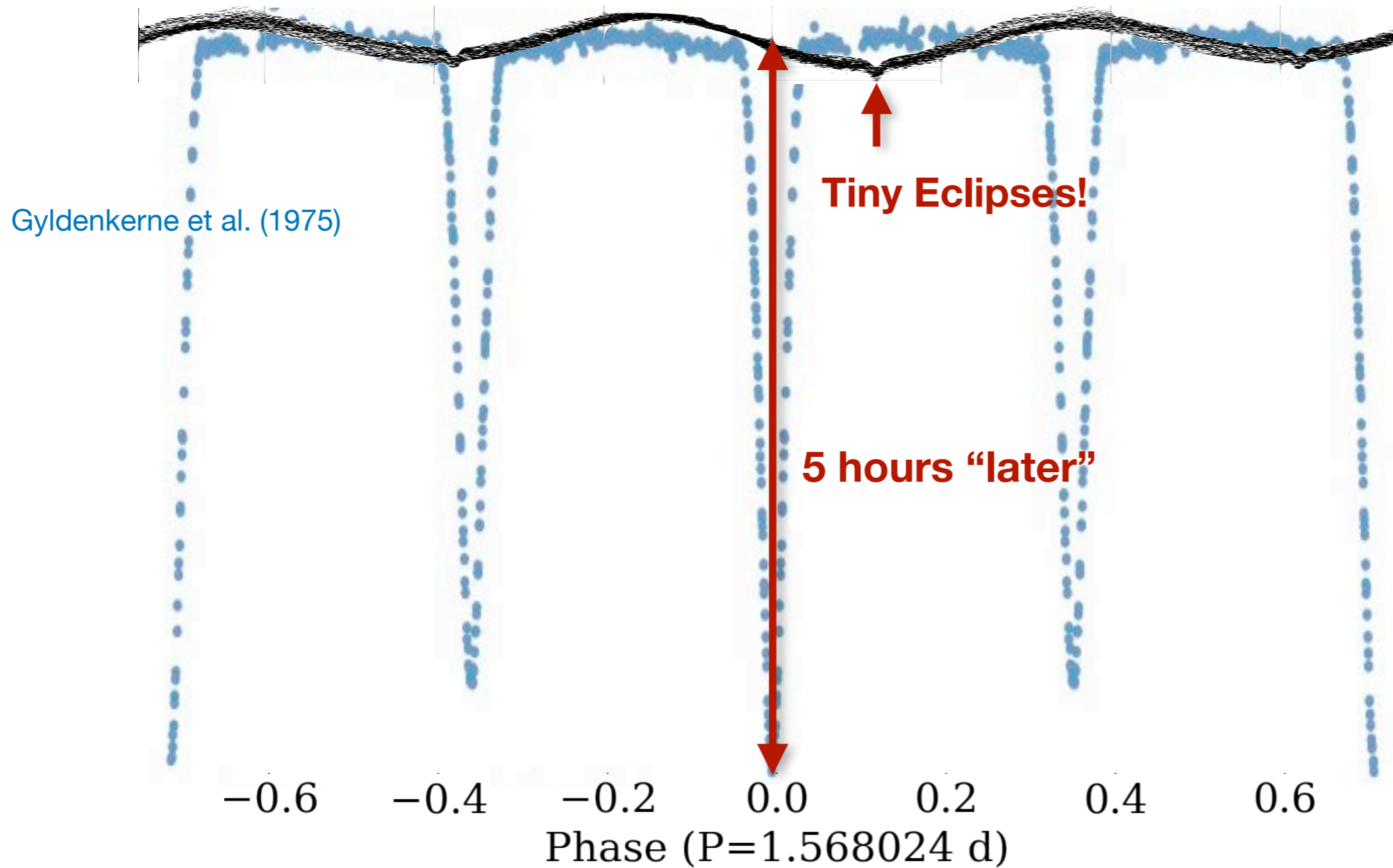
TESS Sector 9 (March 2019)



A Lucky View: TESS



TESS Sector 9 (March 2019)



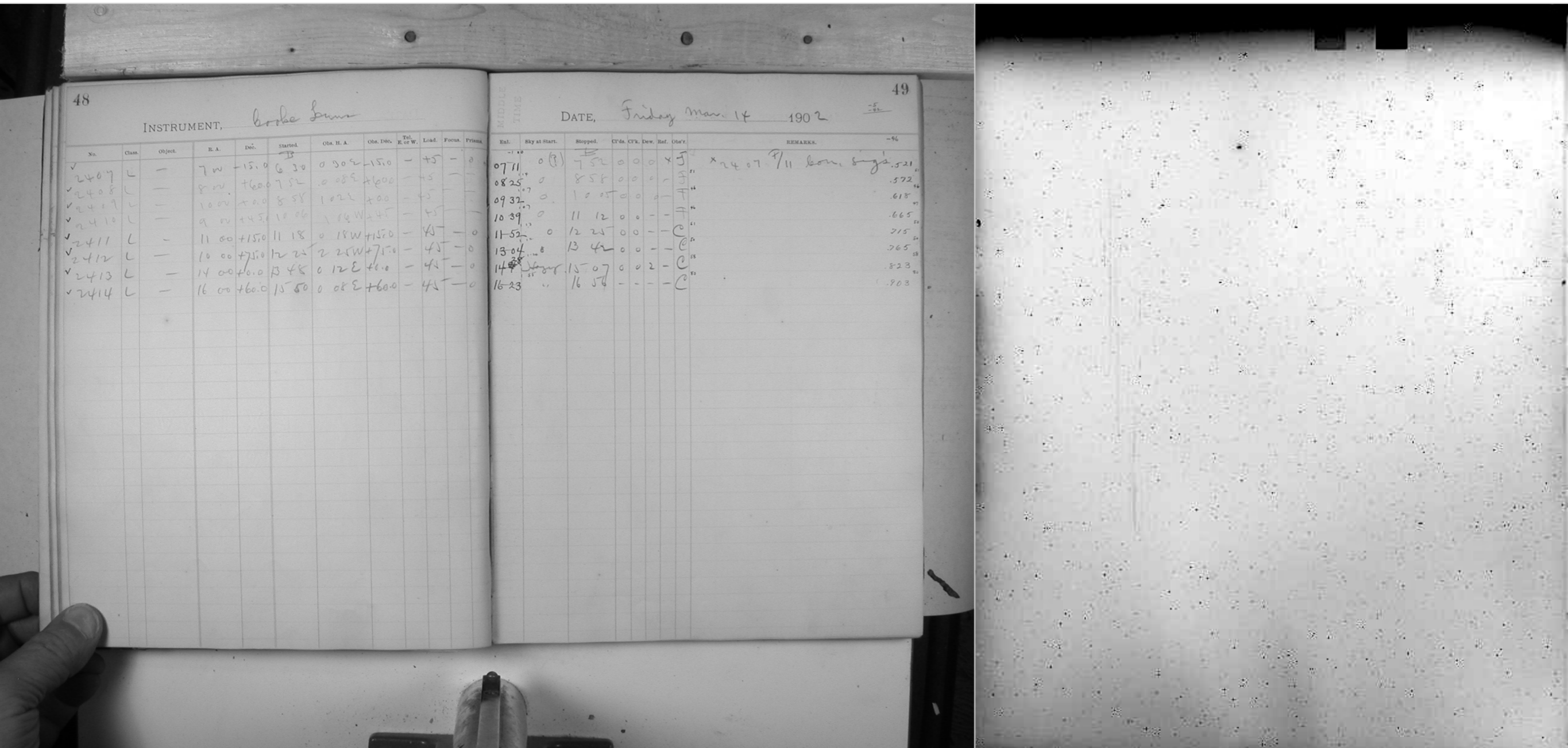
A Lucky View: TESS



2019

Some new OLD data: DASCH

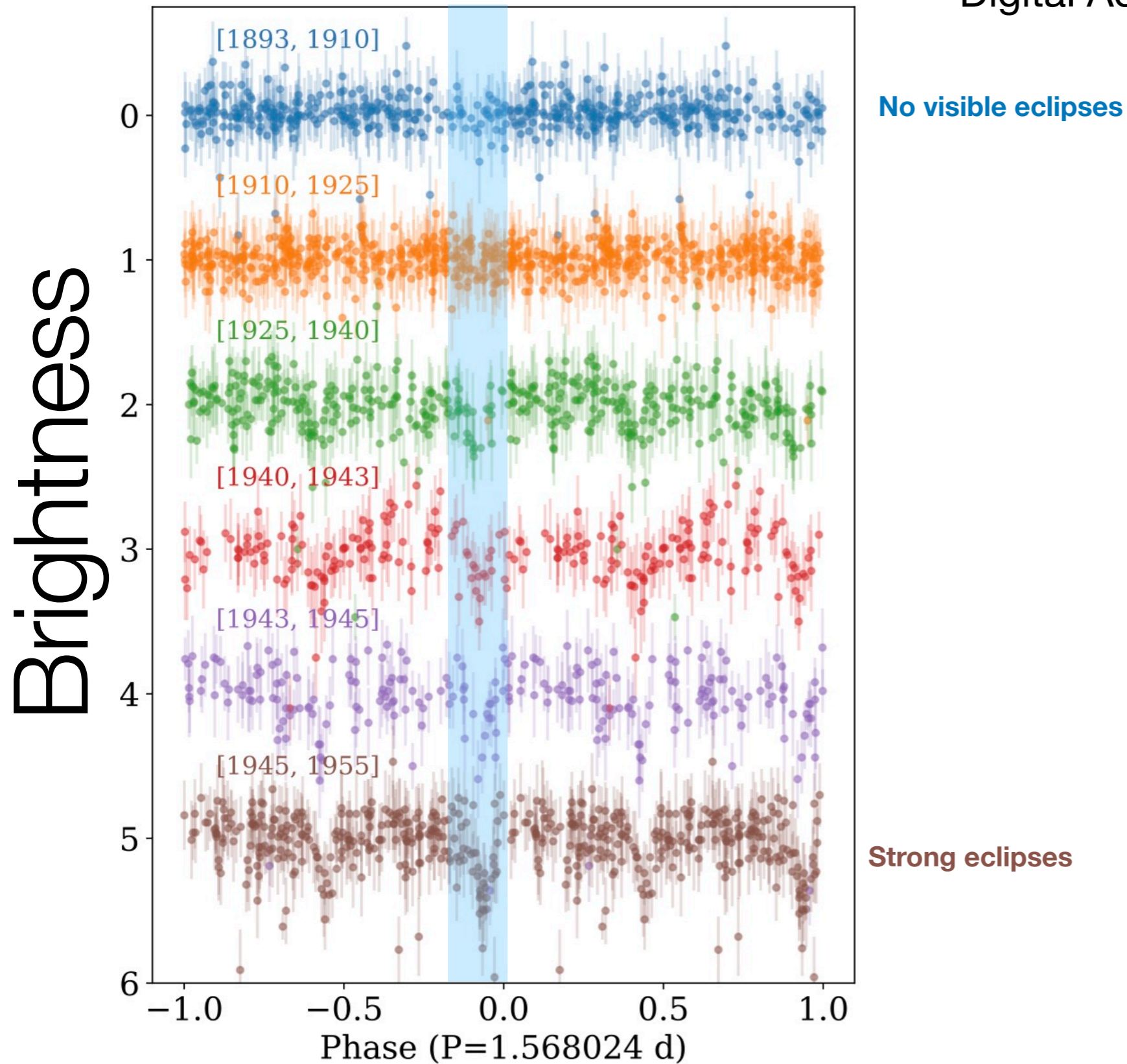
Digital Access to a Sky Century @ Harvard



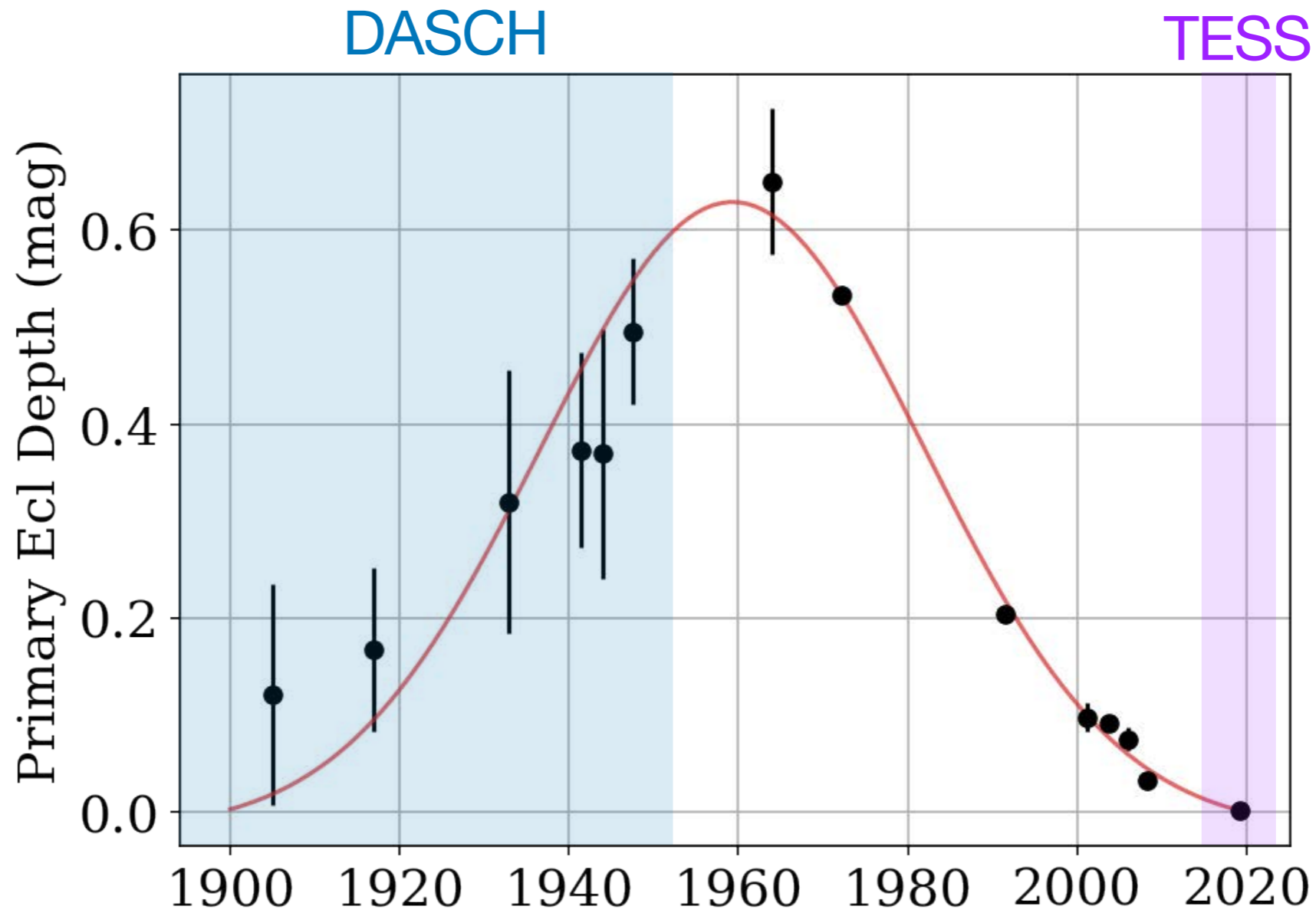
Log book (left) and digitized glass plate (right) from **1902** that includes HS Hydrae

Some new OLD data: DASCH

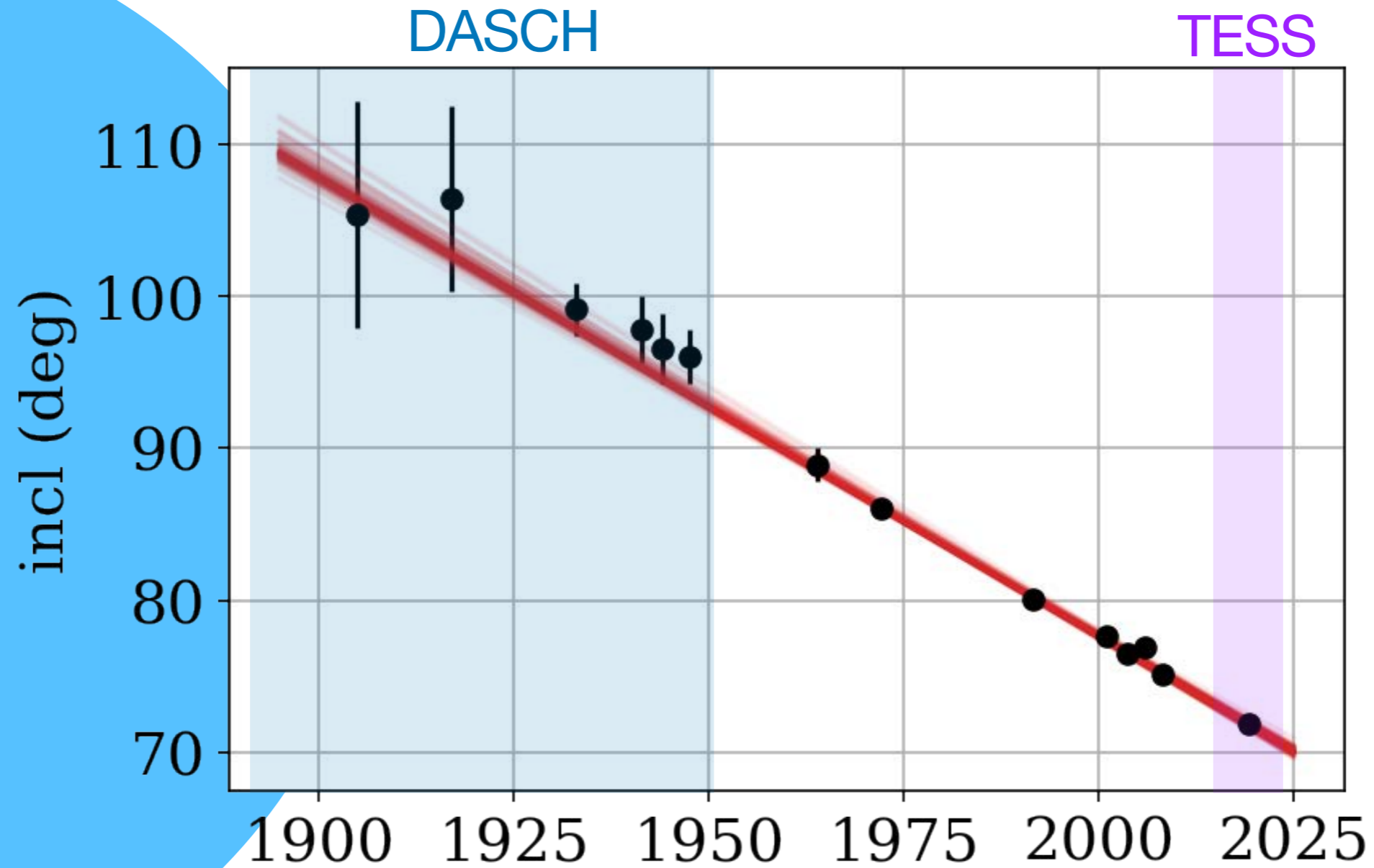
Digital Access to a Sky Century @ Harvard



The Rise and Fall of HS Hydrae



The Rise and Fall of HS Hydrae



Feb 2021

Prediction: 2195

See you at AAS 585



The FUTURE Rise and Fall of HS Hydrae

**Prof. James Davenport, Dr. Diana Windemuth, Karen Warmbein,
Erin Howard, Courtney Klein, Jessica Birky**

