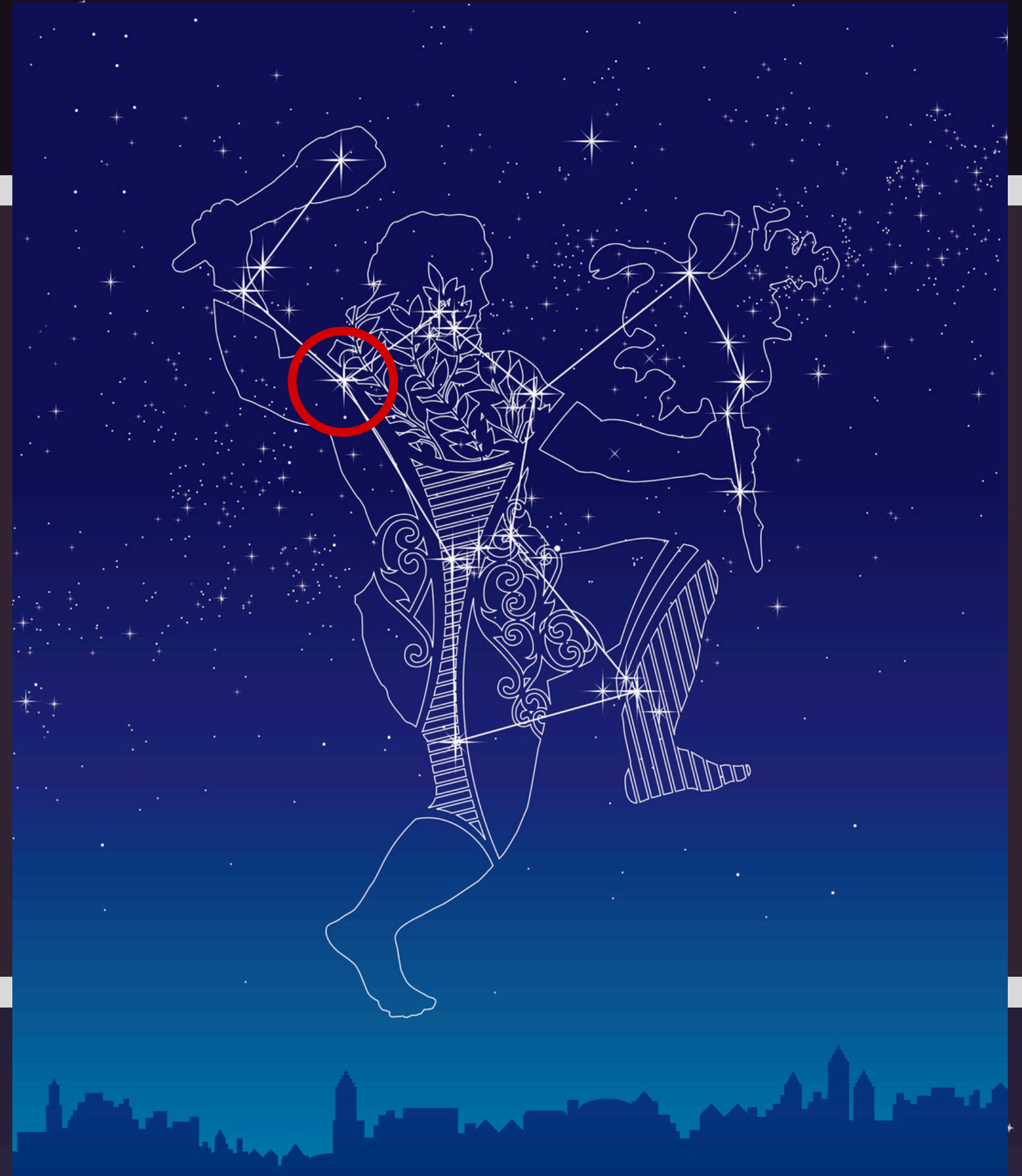


# BETELGEUSE Y BETELBUDDY

Su Compañero Estelar



# A Buddy for Betelgeuse: Binarity as the Origin of the Long Secondary Period in $\alpha$ Orionis

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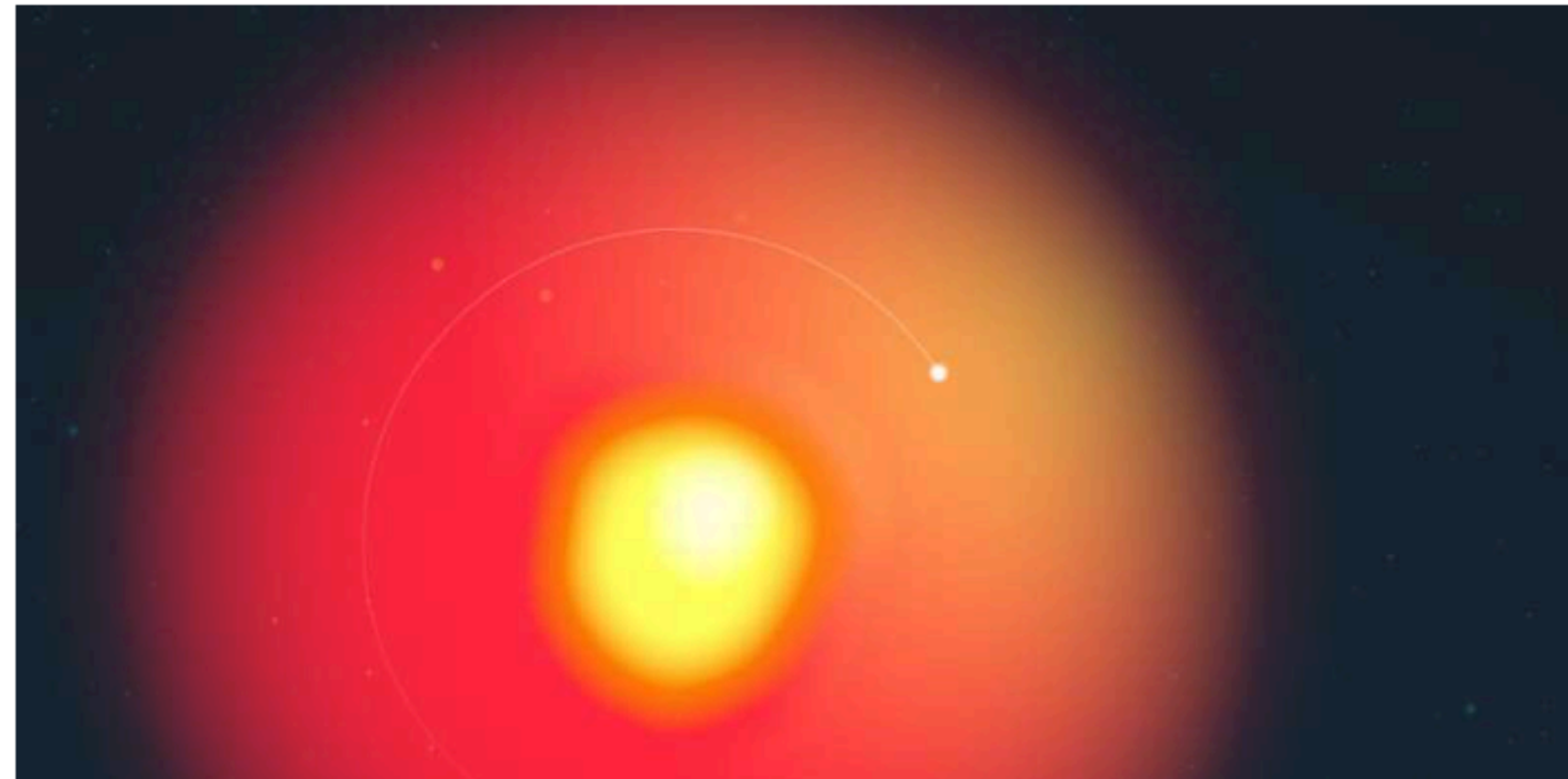
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OCTOBER 21, 2024

Editors' notes

## Betelgeuse Betelgeuse? Bright star Betelgeuse likely has a 'Betelbuddy' stellar companion

by Simons Foundation



# SUPERNOVA

Predicciones realizadas a partir de la variación del brillo de Betelgeuse sugirieron una supernova para la segunda mitad de 2024

NASA Blogs

Betelgeuse! Betelgeuse! Betelgeuse! Stargazers Won't See Ghosts but Supergiant Star for Spooky Season

Sep 6 • By Beth Ridgeway



Astronomical News | Star Walk

Betelgeuse: The Red Supergiant Star on Its Way to Supernova

Apr 12

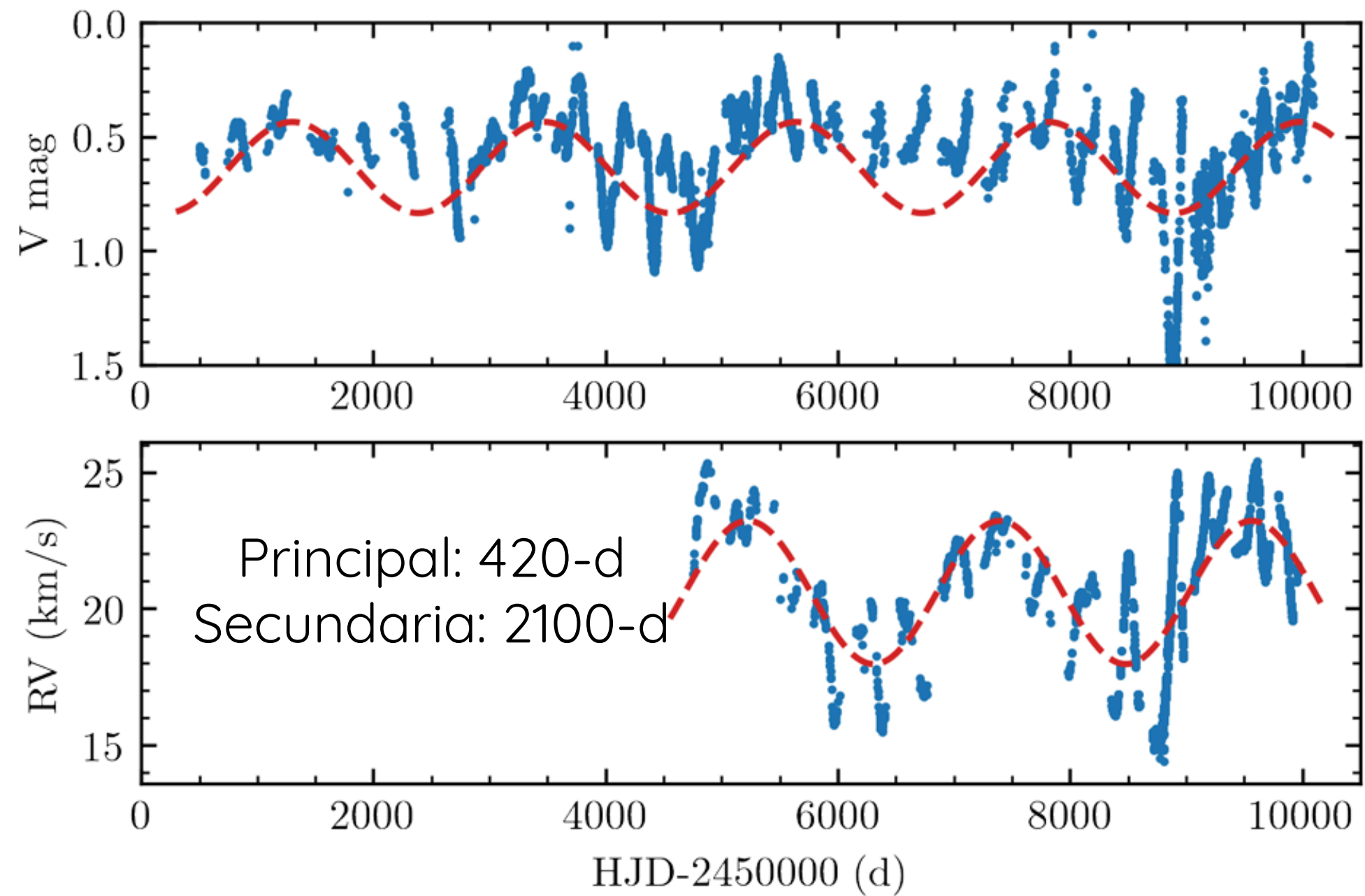


Astrobites

It's gonna blow! Chasing the next Milky Way supernova

Jul 12 • By Katherine Lee





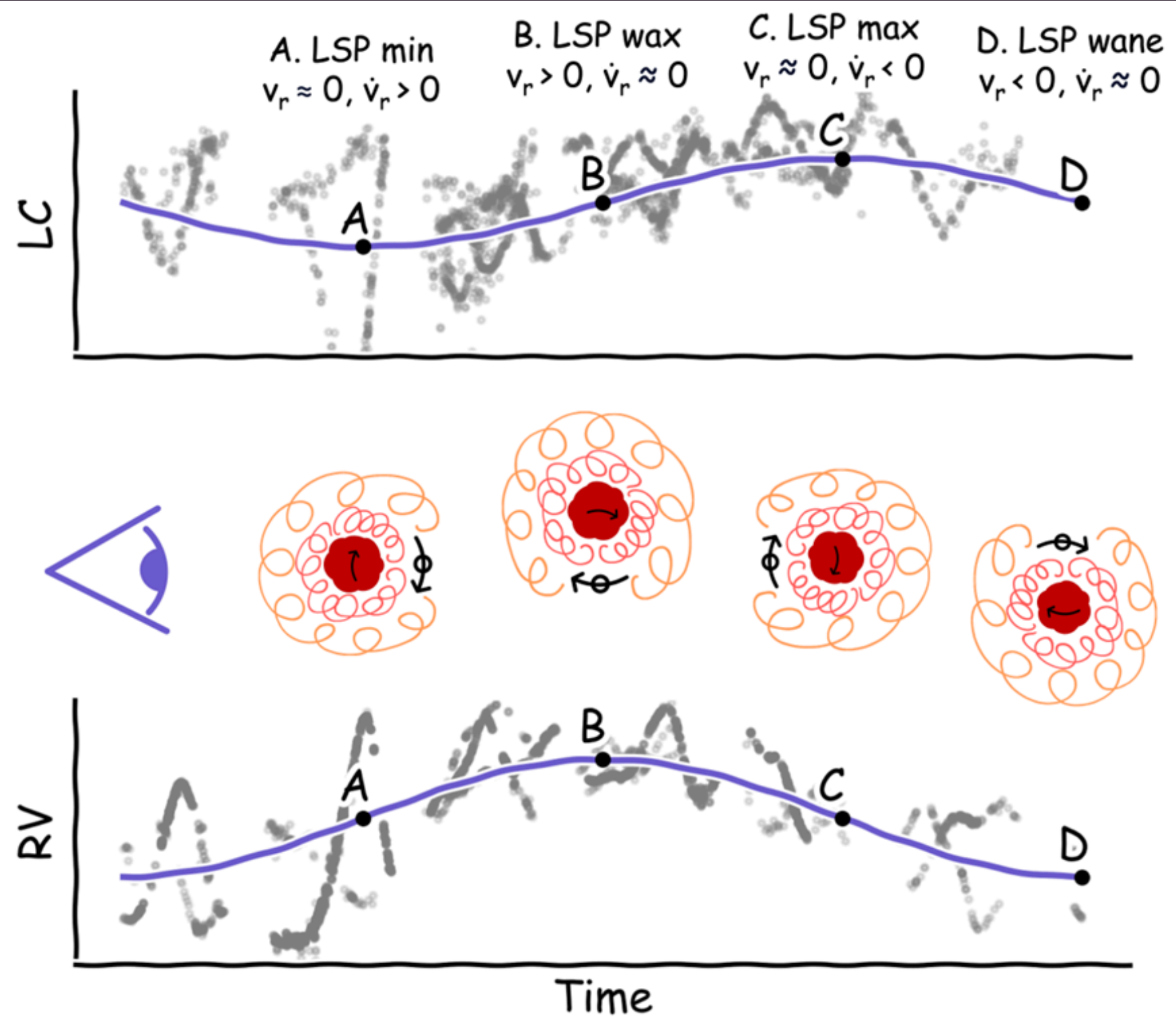
# MAGNITUD

La variabilidad del brillo de Betelgeuse sugieren que la estrella se acerca a su muerte.

# HIPOTESIS

El periodo largo secundario (LSP) aún no se entiende por completo. Diferentes hipótesis surgen para Betelgeuse, apuntando a un compañero estelar.

Hypothesis	Section	Timescale	Properties of RV	Low variation in $T_{\text{eff}}$	Dust-like chromaticity	LC-RV offset	Persistence
Misidentified FM	4.1	✓+	X	?	-	?	✓+
Giant convective cells	4.2	✓	?	✓	-	-	X
Mode interactions	4.3	X	X	-	-	-	X
Rotation	4.4	X	✓	?	?	✓	✓+
Magnetism	4.5	X	-	X	X	?	?
Non-radial pulsation	4.6	✓+	✓	?	?	?	X
Dust- $\kappa$	4.7	✓+	✓+	X	✓+	✓+	✓
Binarity: tidal	4.8.1	X	✓+	?	?	?	✓+
Binarity: occultation	4.8.2	✓+	✓+	✓+	✓+	X	✓+
Binarity: dust modulation	4.8.3	✓+	✓+	✓+	✓+	✓+	✓+



# EL BAILE

Un sistema binario con polvo denso al rededor parece el mejor candidato. Esto alarga el tiempo de vida pensado para Betelgeuse.

Parameter	Value
Radius of Betelgeuse	$764^{+116}_{-62} R_{\odot}$
Mass of Betelgeuse	$18 \pm 1 M_{\odot}$
Radius of Betelgeuse	$764^{+116}_{-62} R_{\odot}$
Orbital Period	$2169 \pm 5.3 \text{d}$
$M \sin i$ of $\alpha$ Ori B	$1.17 \pm 0.07 M_{\odot}$
Orbital Separation $a$	$1850 \pm 70 R_{\odot}$
D/M/Y of next RV min	06/12/2024
D/M/Y of next RV max	26/11/2027
D/M/Y of second RV min	15/11/2030
D/M/Y of second RV max	04/11/2033

## HAY QUE VER

La compañera de Betelgeuse no ha sido detectada directamente aún. Planes de observación se están horneando.

**GRACIAS!**



Noticia en Phys.org



Articulo en Arxiv