

Using April fool papers

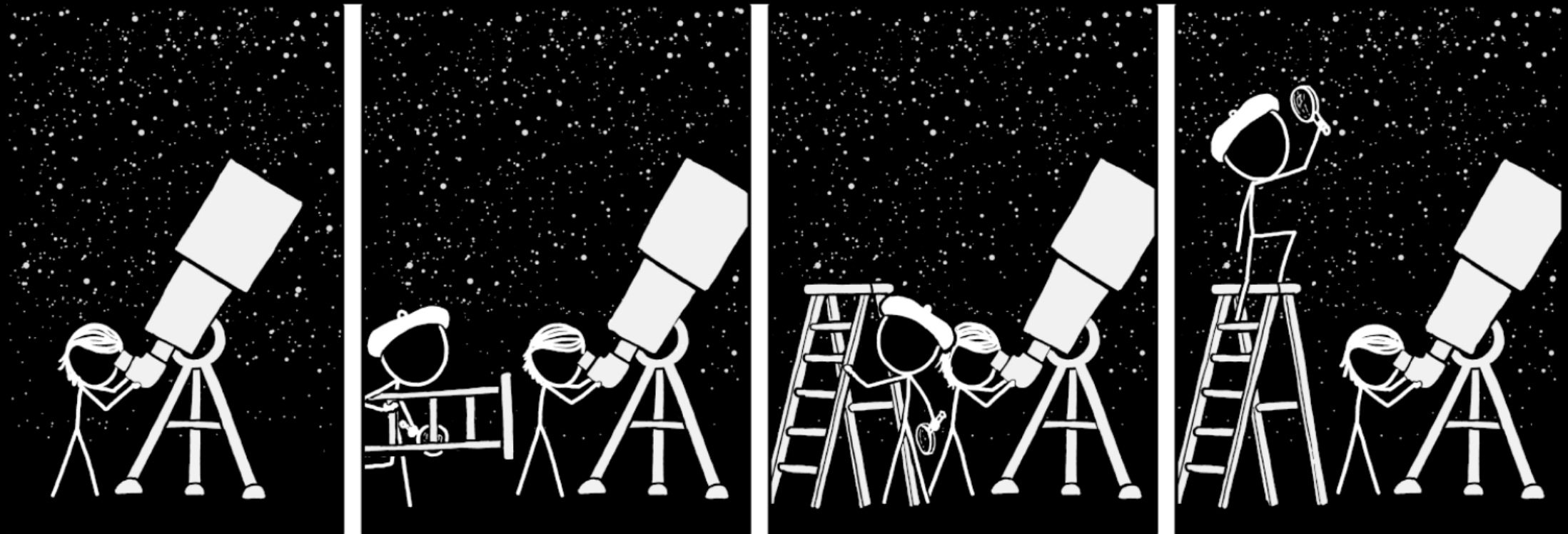


Henri boffin

ESO

“The Universe is made of stories, not of atoms.”

Muriel Rukeyser



<https://xkcd.com/1522/>

MOTIVATION

Use real
research

Papers are too long
and too
complicated

Need to
change
prejudices

Astronomical Farces



Henri M. J. Boffin (Ed.)

<http://eso.org/~hboffin/Attic.html>

Bridging Science and the Humanities

When I Heard the Learn'd Astronomer

Walt Whitman

When I heard the learn'd astronomer,
When the proofs, the figures, were ranged in
columns before me,
When I was shown the charts and diagrams, to add,
divide, and measure them,
When I sitting heard the astronomer where he
lectured with much applause in the lecture-
room,
How soon unaccountable I became tired and sick,
Till rising and gliding out I wander'd off by myself,
In the mystical moist night-air, and from time to
time,
Look'd up in perfect silence at the stars.

Johannes Vermeer – The Astronomer – Musée du Louvre, Paris



***Important
Letter to the Editor***

On the Use of Astronomy: Predicting the Doom of Humankind

***Very Important
Letter to the Editor***

**On the Use of Astronomy: II. The secret of the elixir of youth of
blue straggler stars**

***Very Important
Letter to the Editor***

DO WE GRASP THE PHYSICS OF BINARY STARS?

*Bridging science
and the
humanities*

**Astronomical
Farces**



Henri M. J. Boffin (Ed.)

*Very Important
Letter to the Editor*

DO WE GRASP THE PHYSICS OF BINARY STARS?

Henri M.J. Boffin^{1,★}, A. Wake², and W.H.Y. Can't², I. Sleep²

¹ Extraterrestrial Institute for the Advancement of Earth (EIAE), Secret place, Planet Earth, Solar System

² The Improbable Institute, Flatland

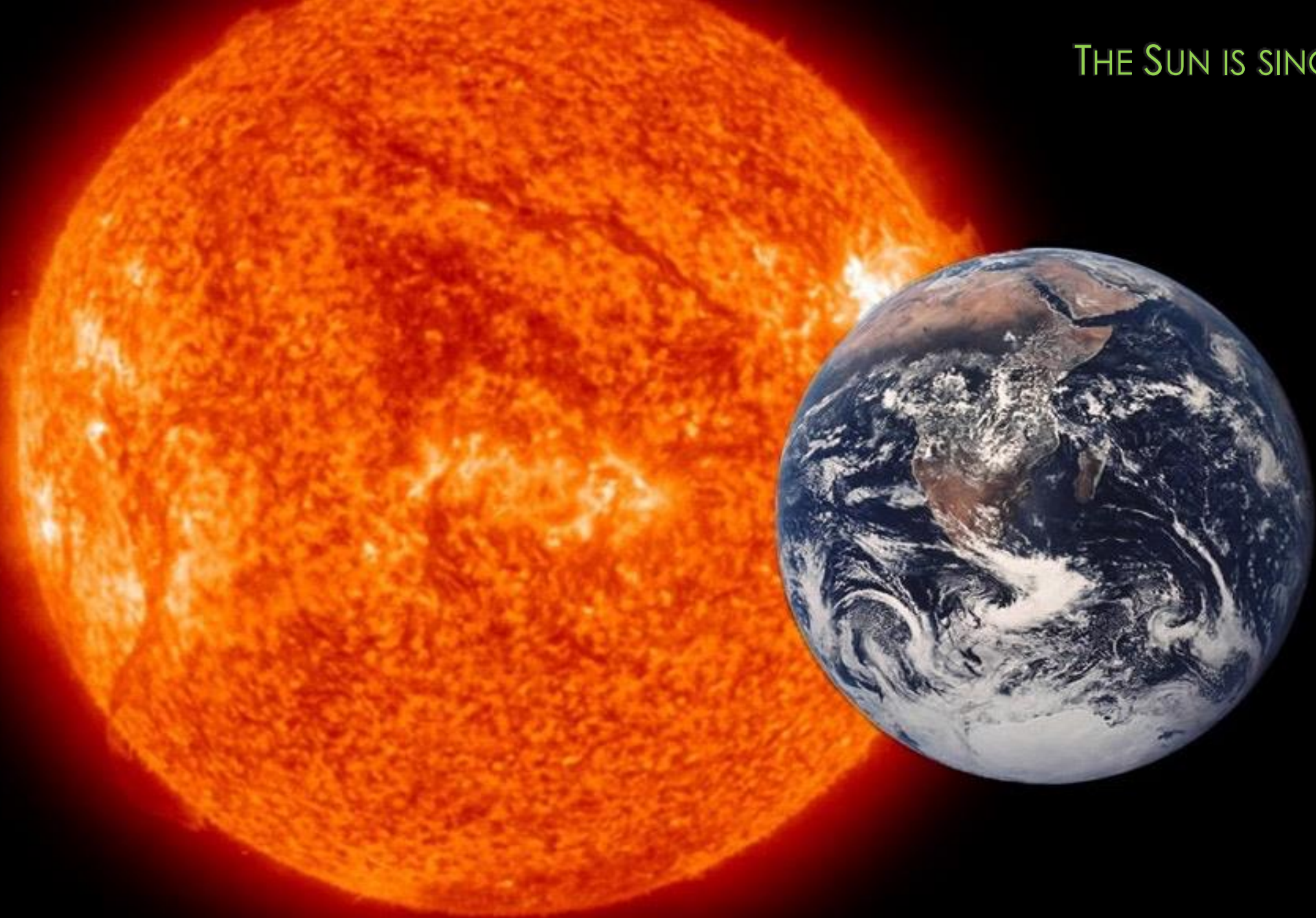
ABSTRACT

No!

Key words. binary stars – planetary nebulae – common sense

THE SUN IS SINGLE...

Credit: NASA



...BUT MOST STARS AREN'T

Star Wars Episode IV: A New Hope.

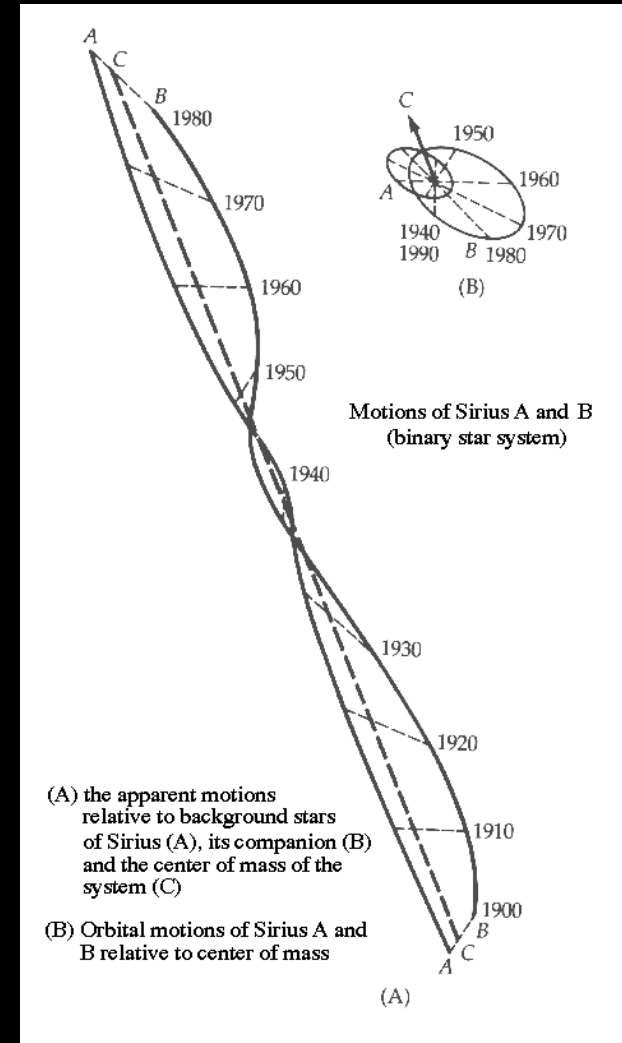


THE BRIGHTEST STAR IN THE NIGHT SKY IS A BINARY

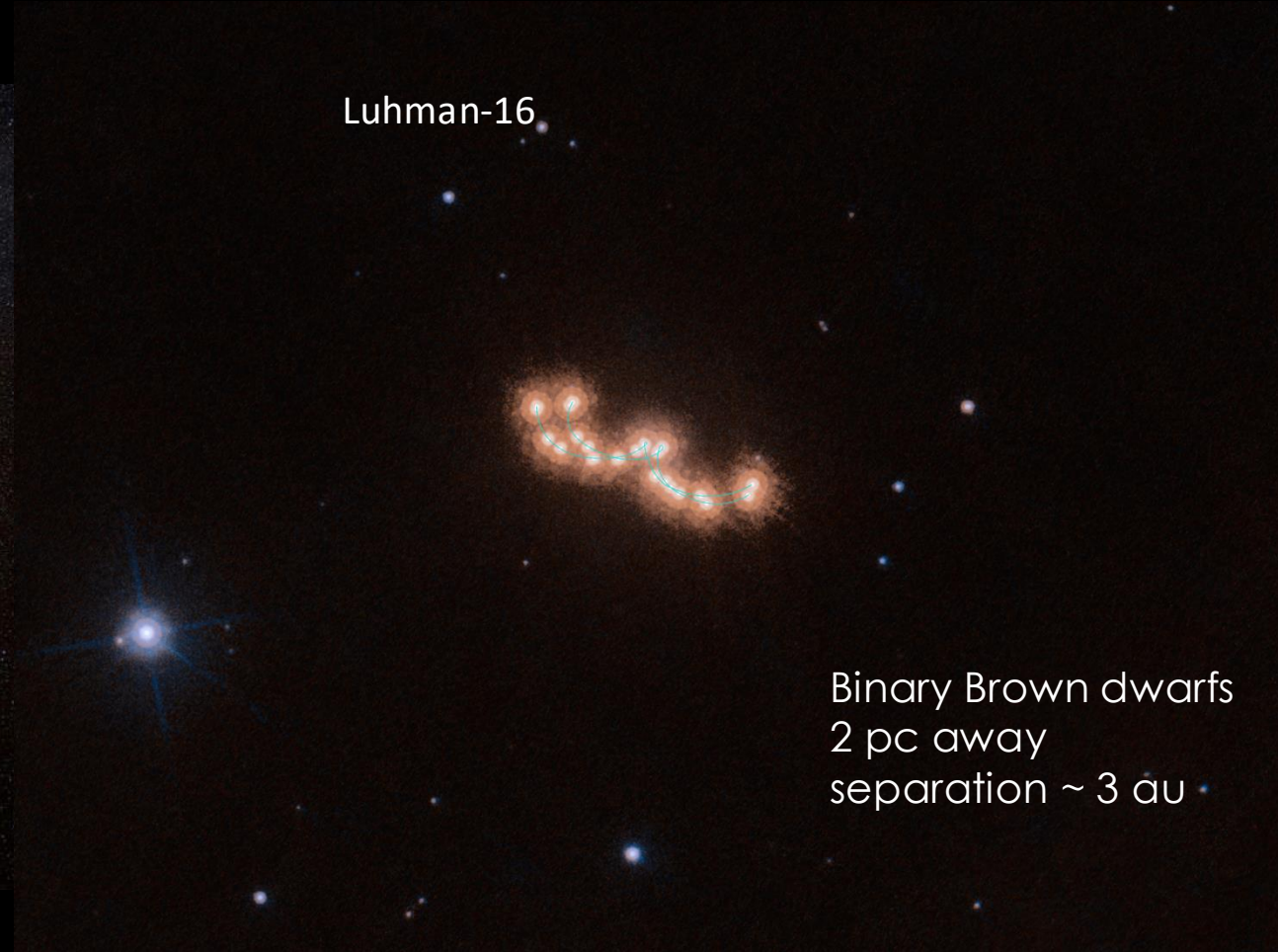
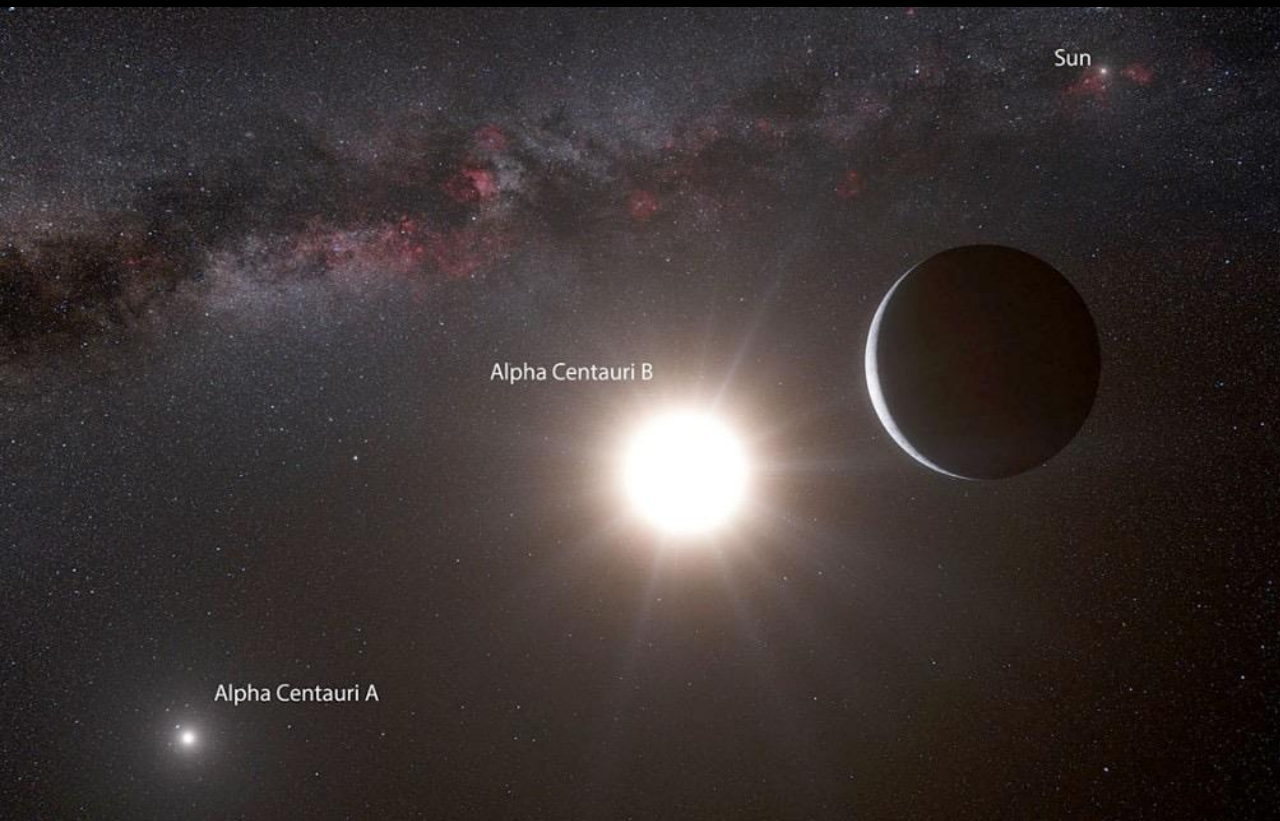


The presence of Sirius B was first detected by observing the wobble in the motion of Sirius A... an Astrometric Binary

A1V + DA2
P=50 yr



SOME OF THE CLOSEST ALSO



PLANETARY NEBULA HEN 2-37



Credits: Movie image courtesy A.M.P.A.S.



NGC 936; Credit: ESO

Star Wars Episode IV

PLANETARY NEBULA HEN 2-37



A textbook
planetary
nebula



Abell 39
© NOAO/WIYN





The Butterfly Hunter

Oct. 10, 2012



COOL FACT

Nearly all stars will eventually become planetary nebulae, including the Sun. Astronomers think that there are probably over 30,000 planetary nebulae just in our galaxy!



The Butterfly Hunter

Oct. 10, 2012



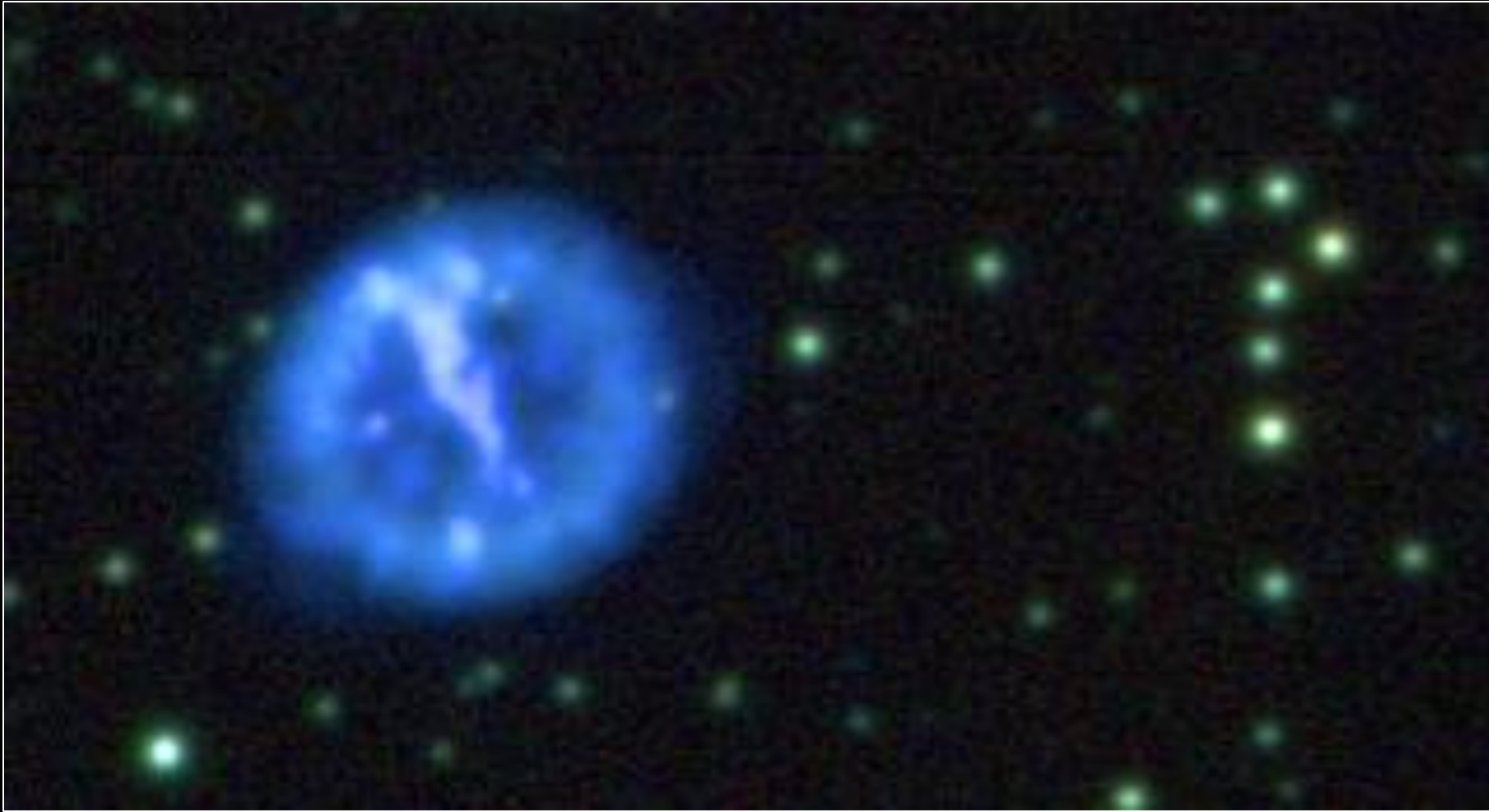
Textbooks need to be rewritten!

Astronomical community is very conservative → Teaching and communication is unfortunately often based on old knowledge

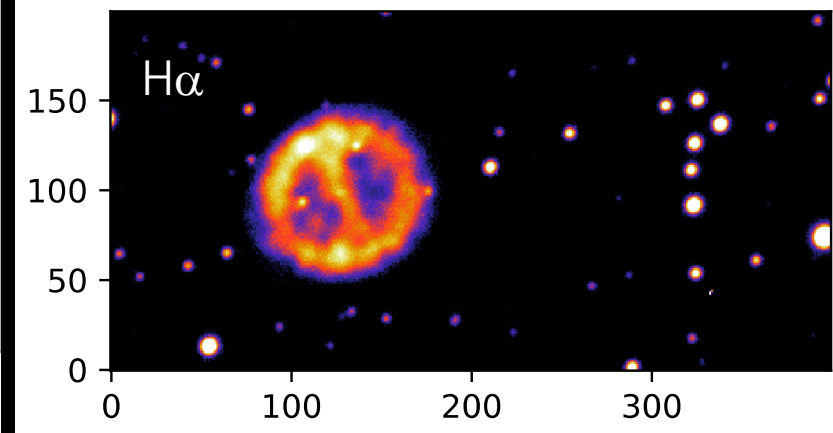
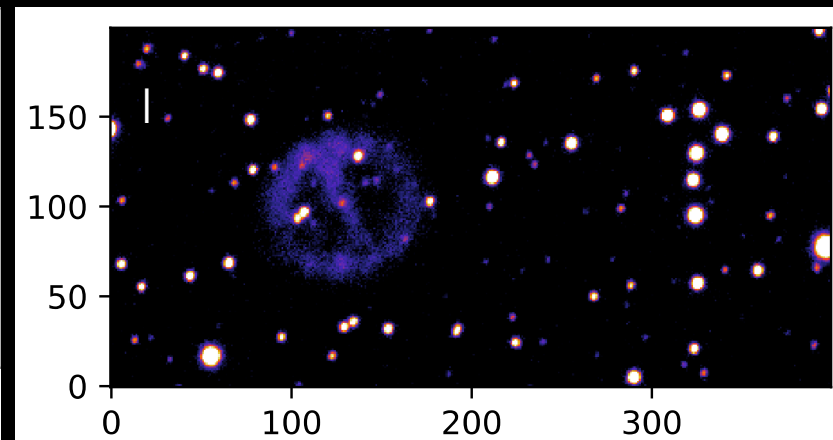
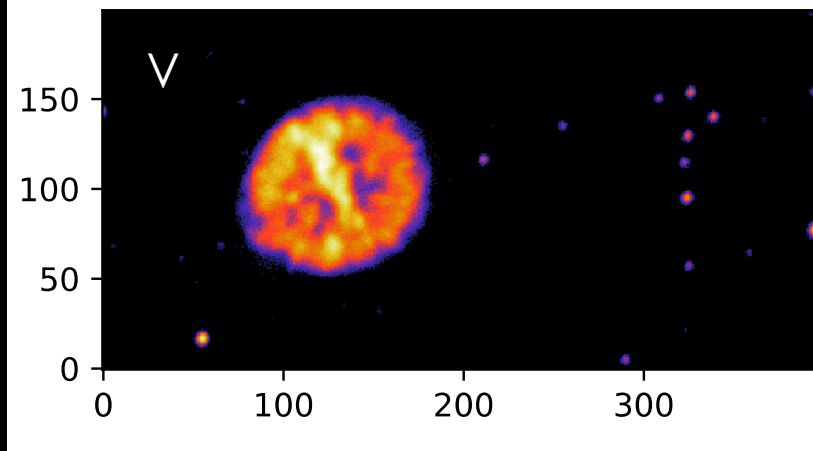
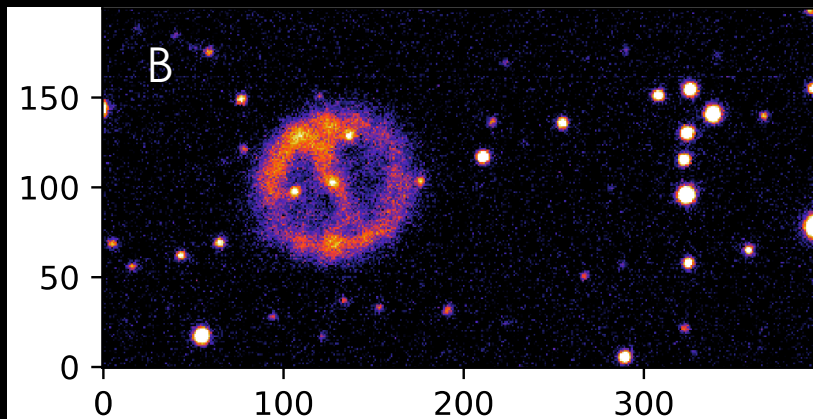
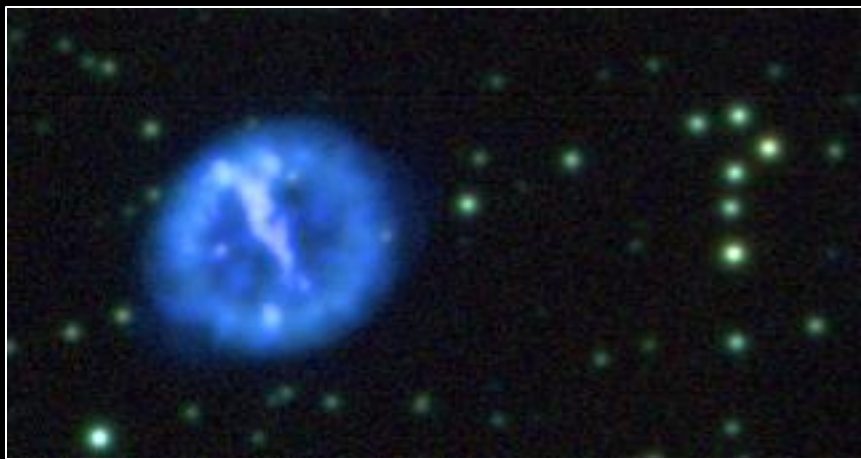
COOL FACT

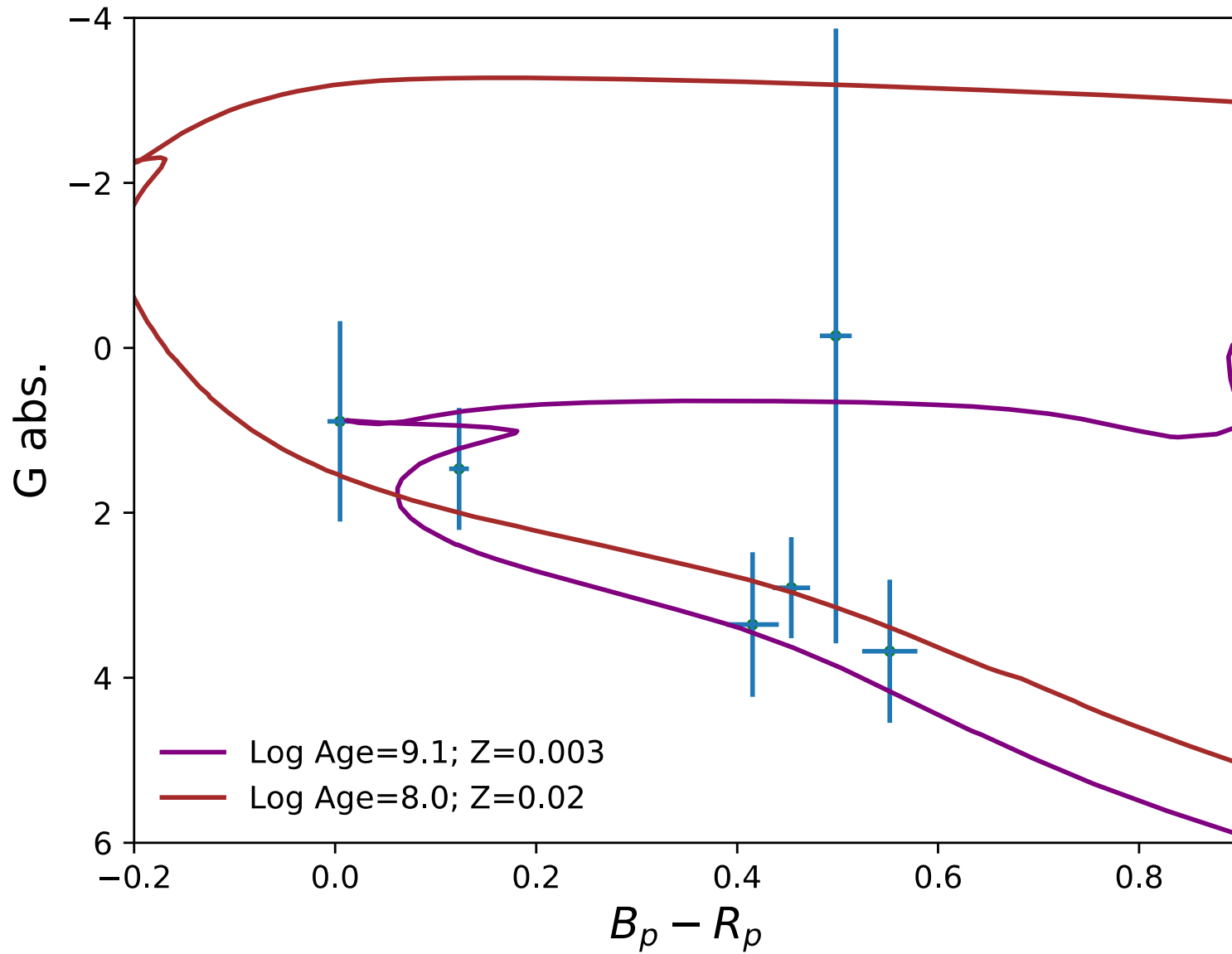
Nearly all stars will eventually become planetary nebulae, including the Sun. Astronomers think that there are probably over 30,000 planetary nebulae just in our galaxy!

NATURE IS TELLING US SOMETHING!

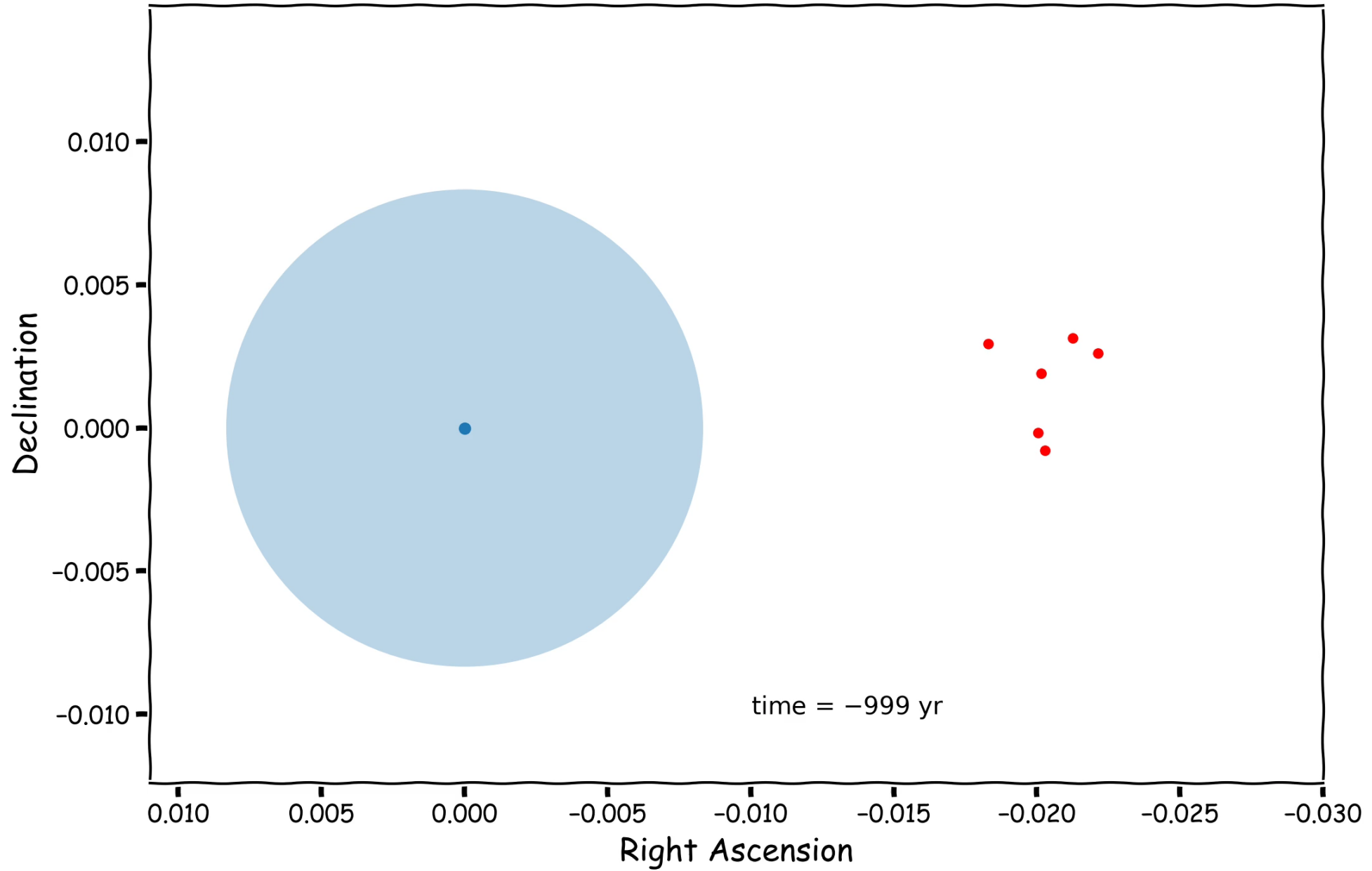


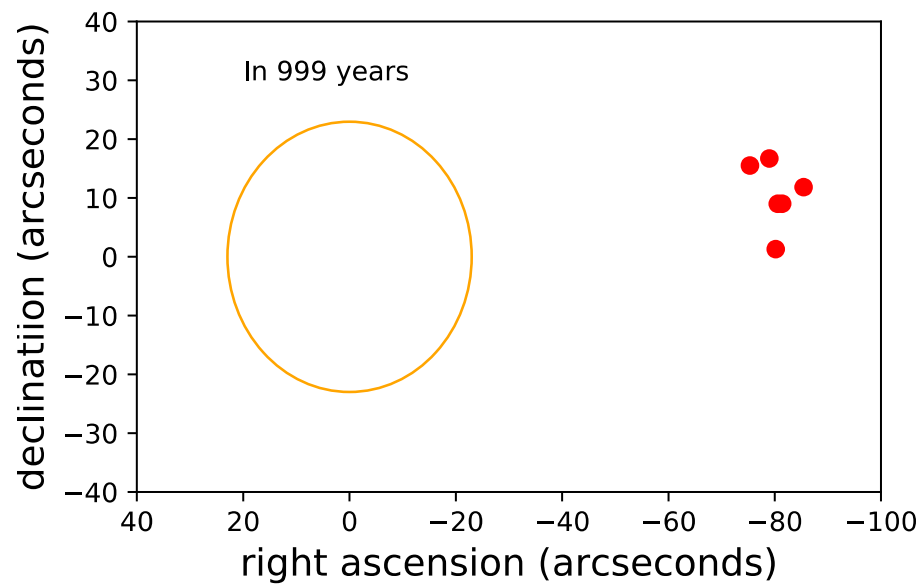
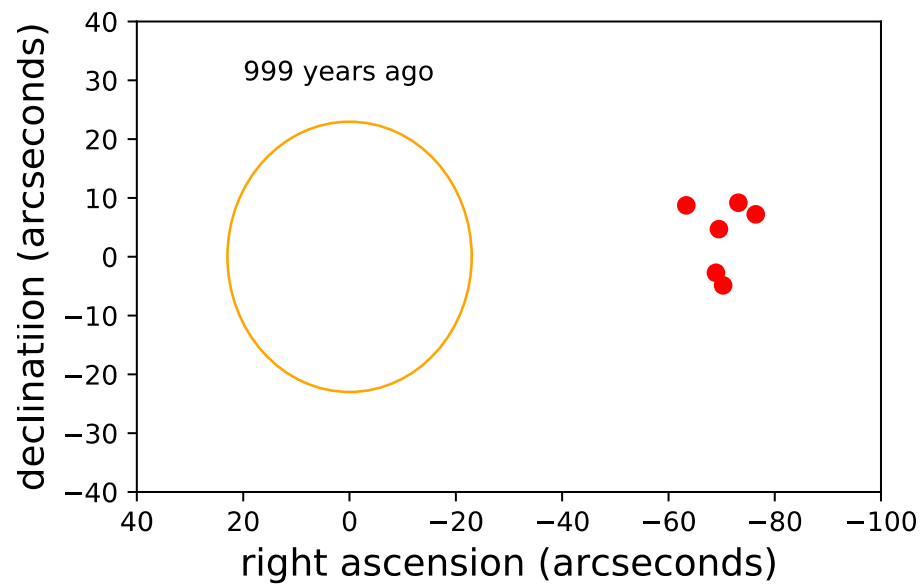
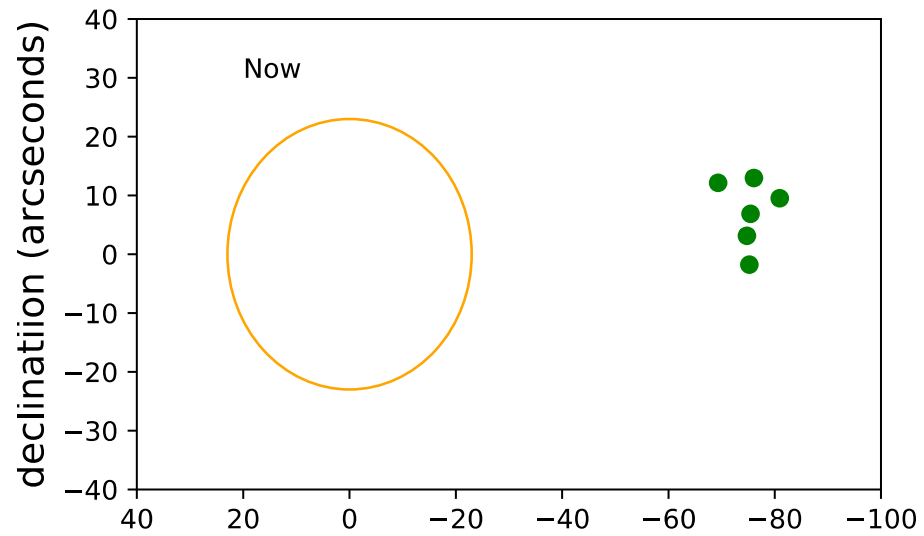
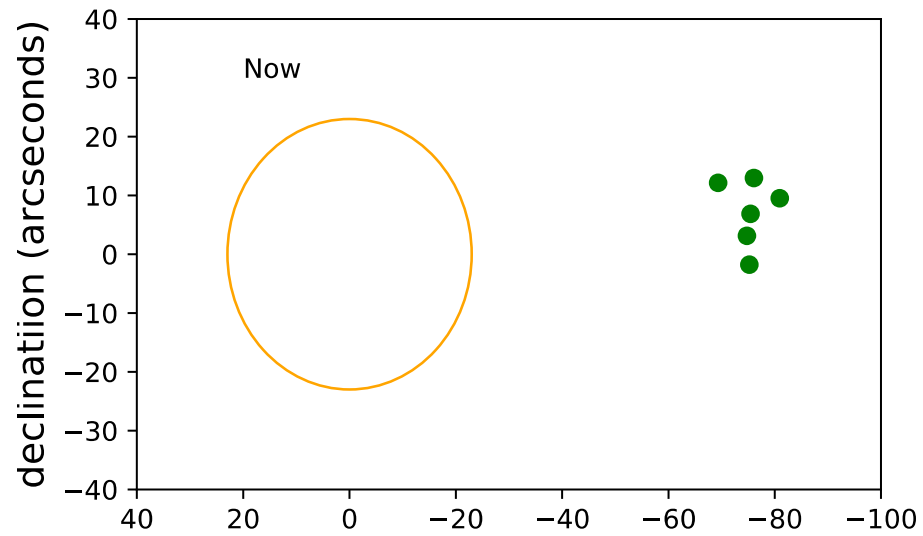
Nature is
telling us
something!





Now is the time!





The cosmic Penguin guarding its egg



Credit: NASA, ESA and the Hubble
Heritage Team (STScI/AURA)

Very Important Letter to the Editor

On the Use of Astronomy: II. The secret of the elixir of youth of blue straggler stars

Henri M.J. Boffin^{1,★}, A. Wake², and W.H.Y. Can't², I. Sleep²

¹ Extraterrestrial Institute for the Advancement of Earth (EIAE), Secret place, Planet Earth, Solar System

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ABSTRACT

Using Gaia EDR3, we study the most spectacular and photogenic cluster of Ptolemy. After deriving its membership, we identify in its colour-magnitude diagram a star that definitively decided to straggle and dress in blue. Further analysis with the FARCE telescope allows us to discover in its light curve the secret of its rejuvenation, which we gladly share in this paper. This research is an important contribution to attain the ultimate goal of astronomy as professed by DJ Format.

Key words. binary stars – blue stragglers – elixir of youth – common sense



**The ultimate goal
of astronomy**

*DJ Format : “starting
a colony deep in the
galaxy must be the
aim of astronomy”*





For the stars I feel pity!

Shining for so long,

For so long...

For them, I feel sorry

Fernando Pessoa

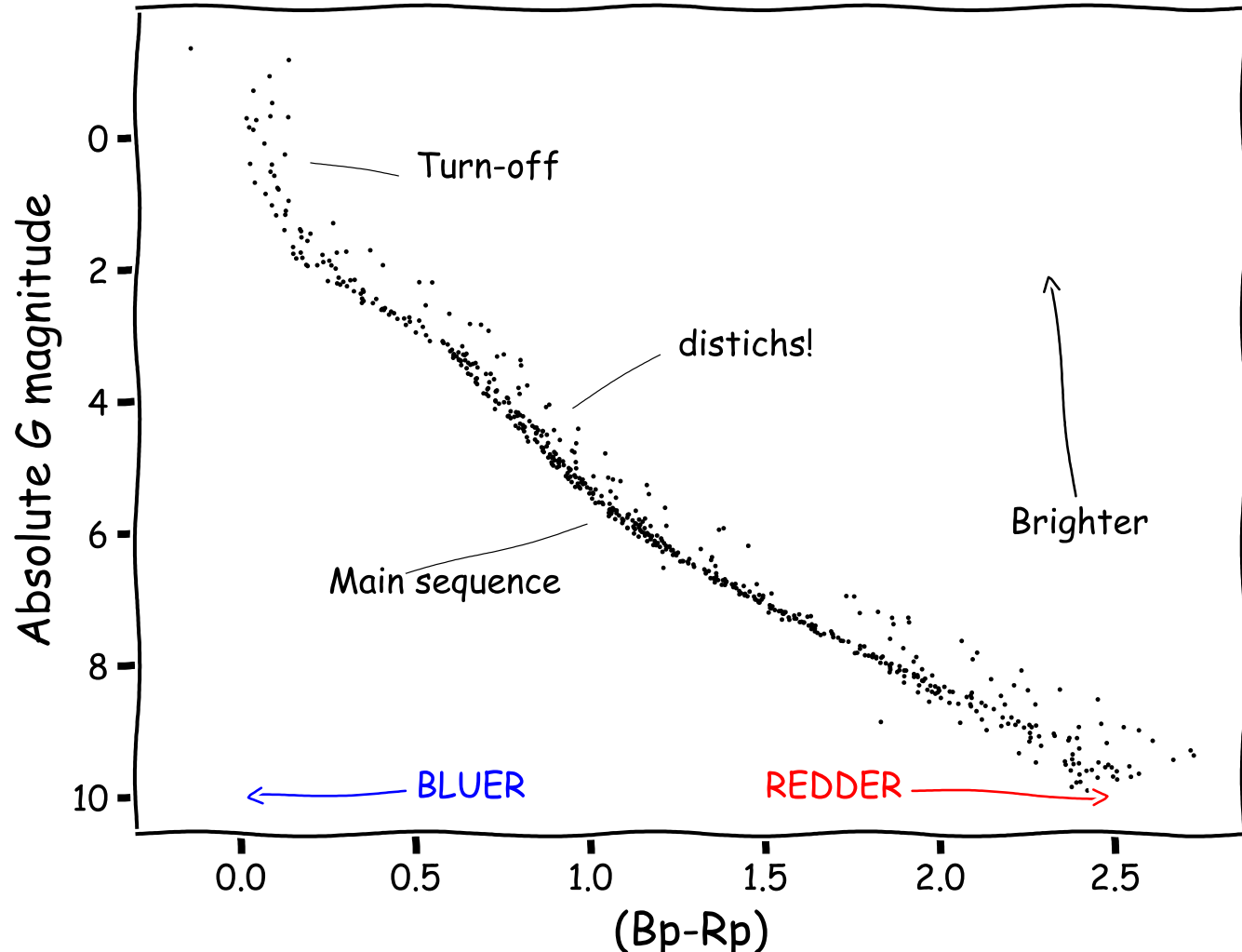
Stars live and die

They are often born together in a cluster and have the same age and chemical composition

Most massive stars have shorter lives → they will disappear at a given age

How do we know which stars belong to a cluster?

Messier 7

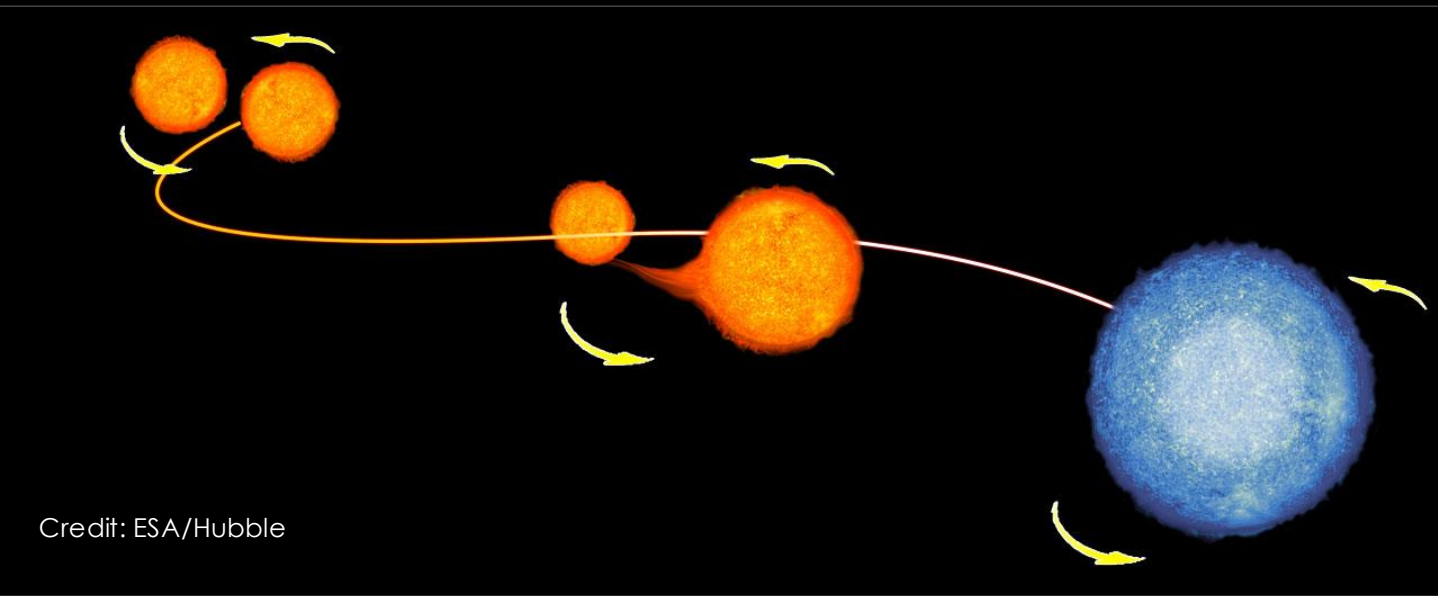
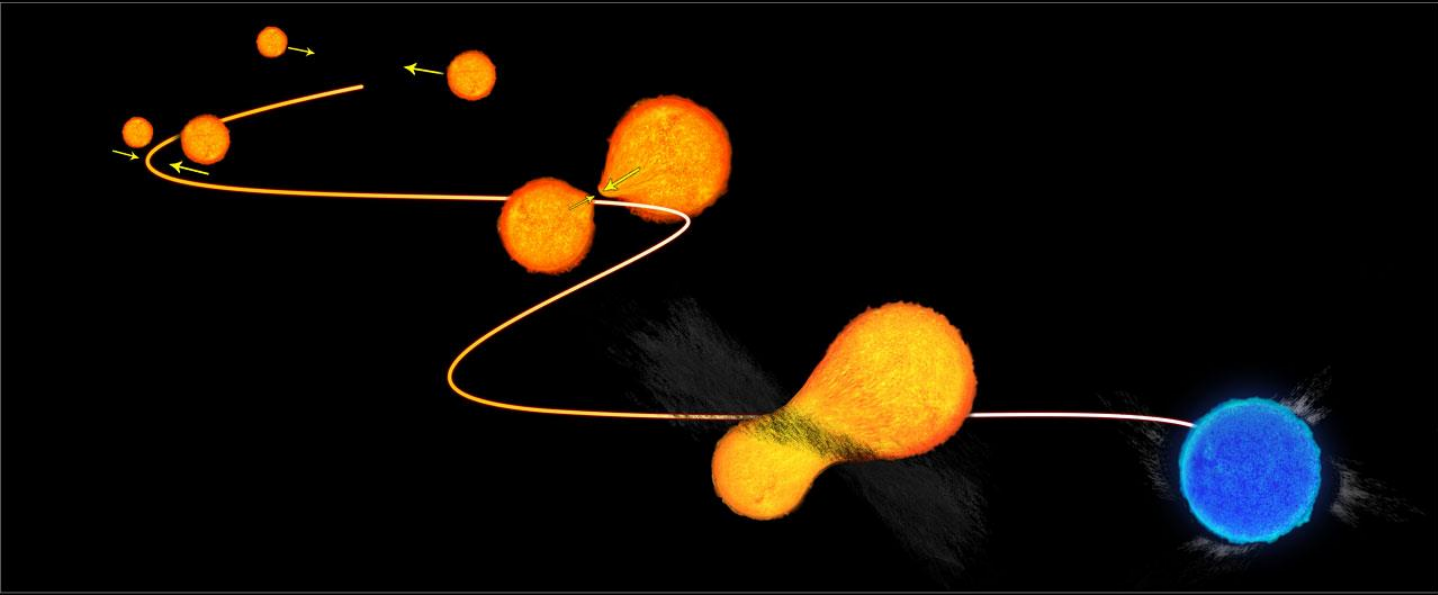


Can use Gaia data to put stars of a cluster in a colour-magnitude diagramme

Colour is proxy for temperature

Brighter stars are more massive

Blue straggler! A star that shouldn't exist!



Blue Straggler Stars
are Binaries!

Credit: ESA/Hubble

OTHER POSSIBLE DISCUSSIONS

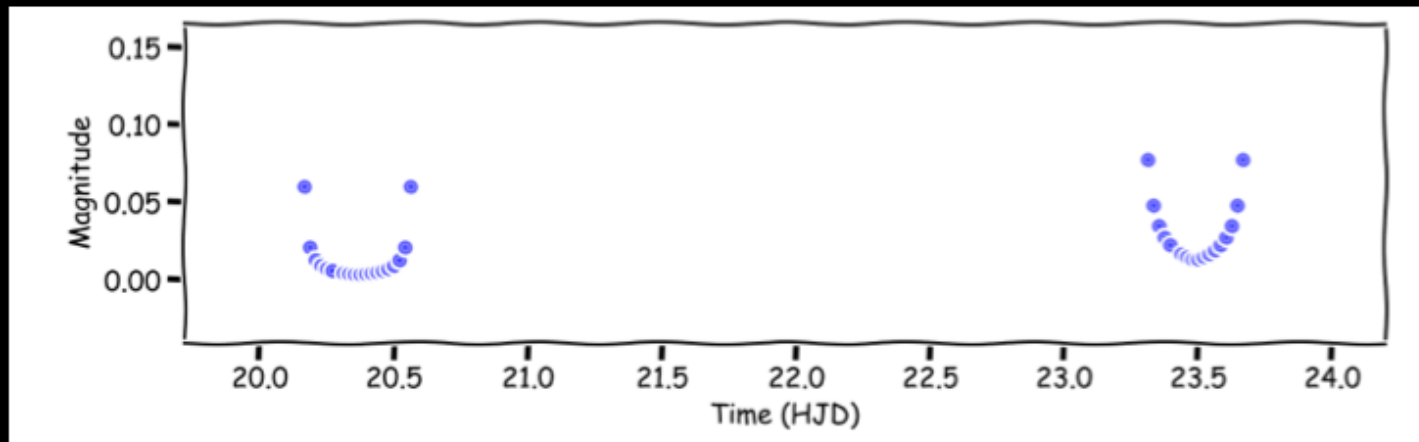
“Stars are natural thermonuclear reactors that shine and often twinkle, twinkle”

“Gaia EDR3 tells us, with an amazing level of detail that you shouldn't trust, that its parallax is $3.6061993706266136 \pm 0.06444364$ milli- arcseconds, and that it is thus located $277.300253598081 \pm 4.955575241028729$ parsecs away”

“the central star is much redder than it ought to be for such a hot star, even accounting for interstellar reddening. As we do not expect it to have only recently consumed all the alcohol that was present in the interstellar liquor cabinet that was the nascent cloud from which it formed, ...”

TAKE HOME MESSAGE

Binary stars are fun and ubiquitous



Most planetary nebulae are likely the outcome of binary interactions and it is not sure if the Sun will become one

TAKE HOME MESSAGE

One can use
“light” articles
(short, funny) to
address some key
astrophysical
topics

Material exist and
more is being
prepared based
on this for various
levels of students.

Real data, in
particular from
Gaia, can be
used to analyse
motions of stars
and stellar
evolution

TAKE HOME MESSAGE

One can use
“light” articles
(short, funny) to
address some key
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HELP
Needed!

prepared based
on this for various
levels of students.

Real data, in
particular from
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used to analyse
motions of stars
and stellar
evolution

hboffin@eso.org



*Some more
whipped cream
in your coffee?*



Current events

MW-Gaia: Bringing the Milky Way to schools 2021
Online Workshop <http://mao.tfai.vu.it/mwschools>

Europlanet 2021 virtual summer school
<http://mao.tfai.vu.it/europlanet2021>

