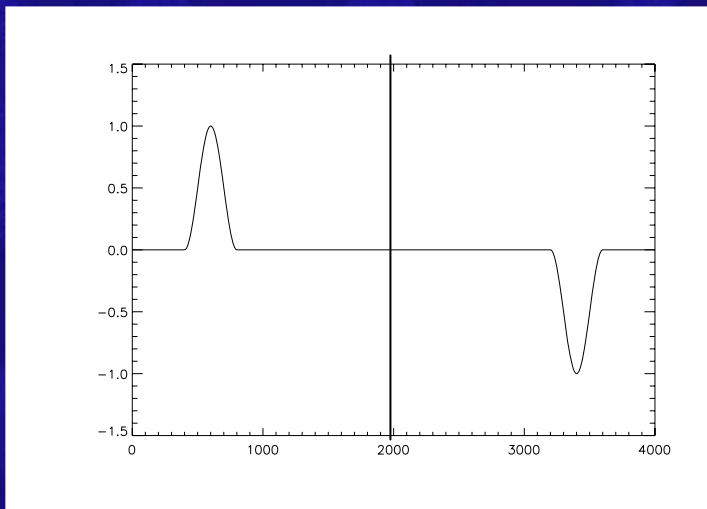
A black and white portrait of Albert Einstein, looking slightly to the right with a thoughtful expression. A white thought bubble is positioned above his head on the left side. The background is a light, textured grey. The image is framed by a dark blue border with a pattern of lighter blue circles.

Albert's Big Quiz

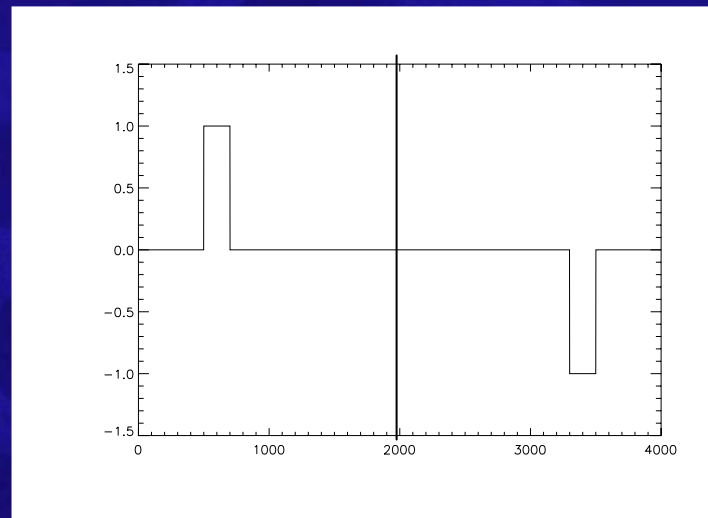
Q1



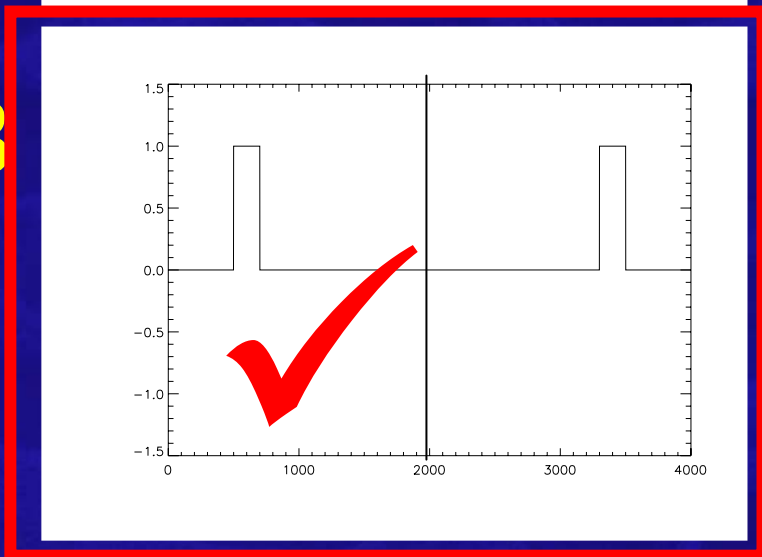
A



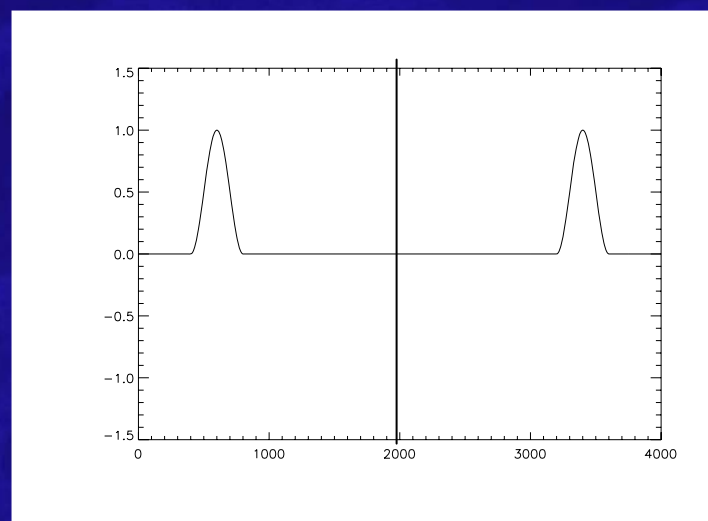
C



B



D



Q2



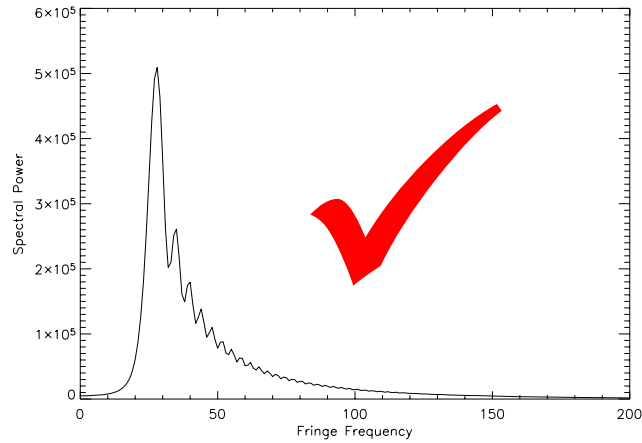
The square shape of the transform of the fringe envelope usually depends on:

- A. The Input Pupil
- B. The Exit Pupil
- ✓ C. The Filter Bandpass
- D. The target stellar structure
- E. The servo bandwidth

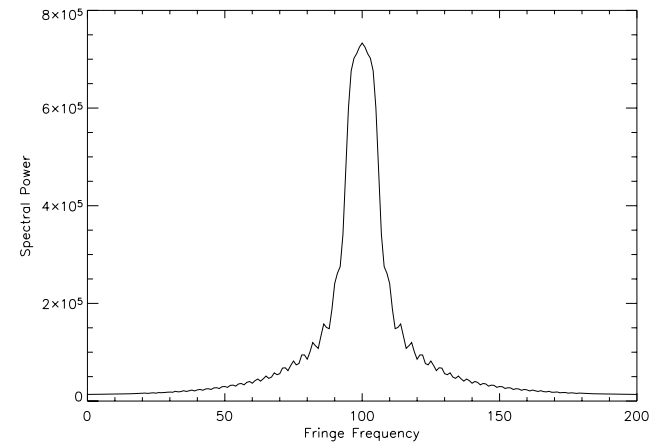
Q3

Slinky Fringes have a frequency spectrum like:

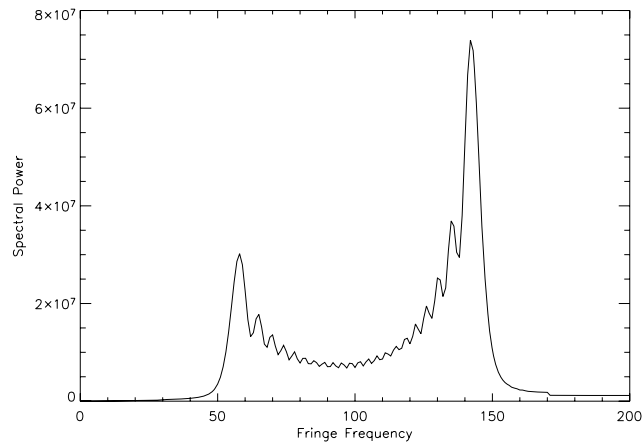
A



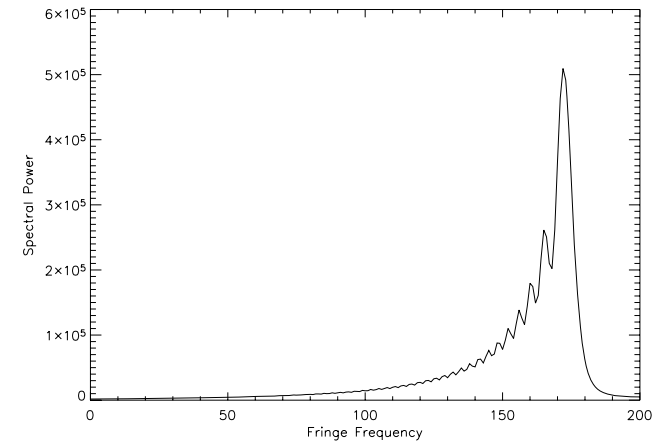
C



B



D



Q4 You are observing with CHARA classic, and you get “slinky” fringes. This means:

A. The Tip-Tilt system is malfunctioning

B. This is bandwidth smearing due to too-wide filter bandpass

C. Everything is fine; CHARA fringes always look like this

✓ D. The Pathlength Compensator is malfunctioning

E. This is a software fault (blame Theo)

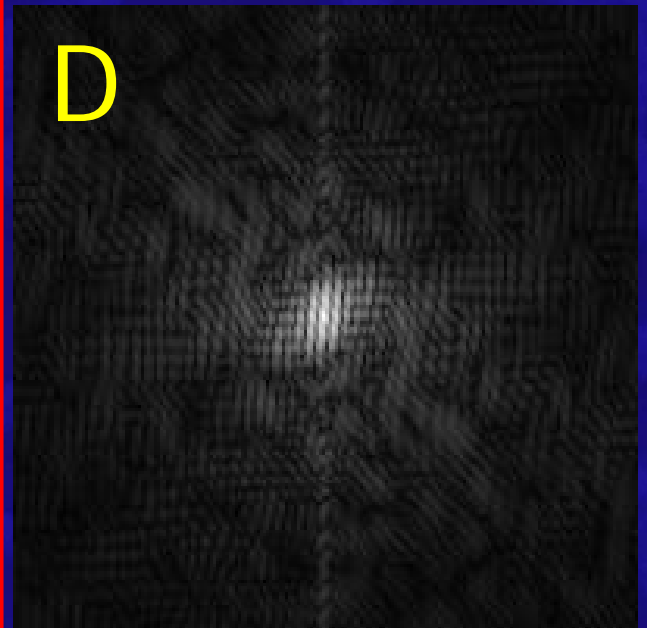
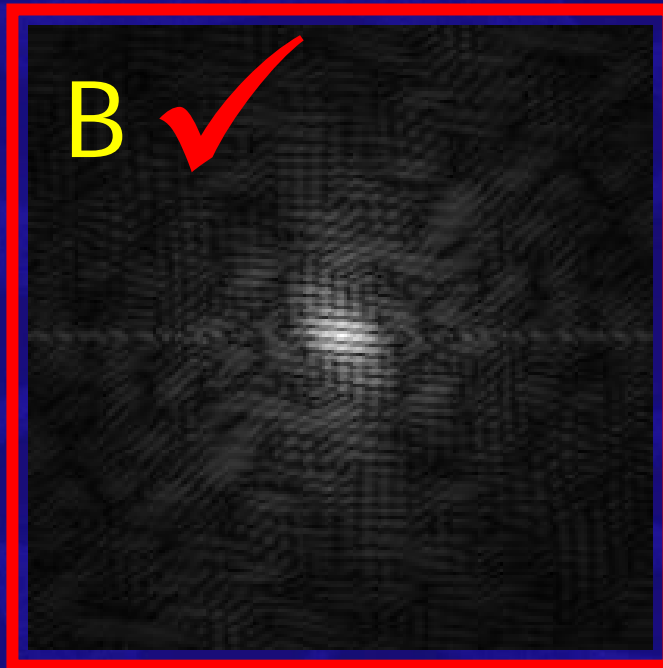
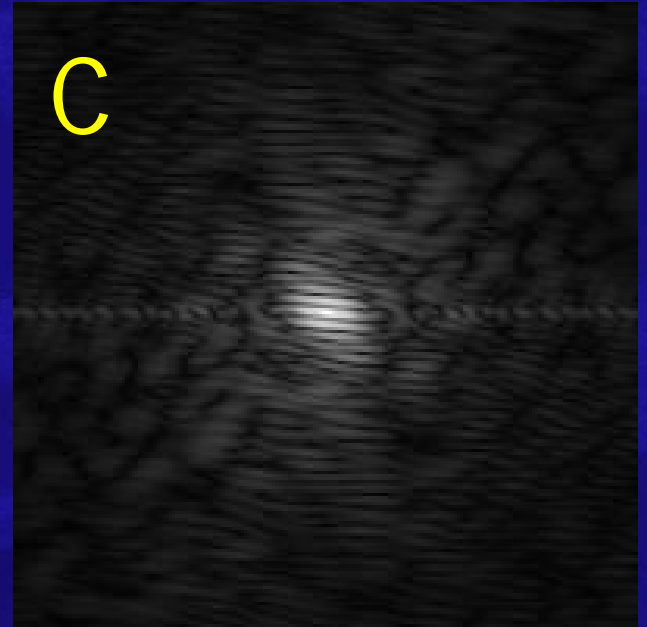
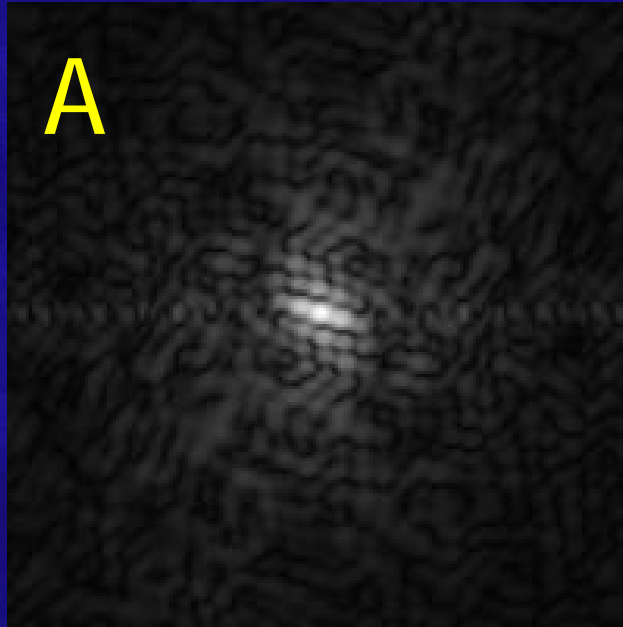
Q5

Albert

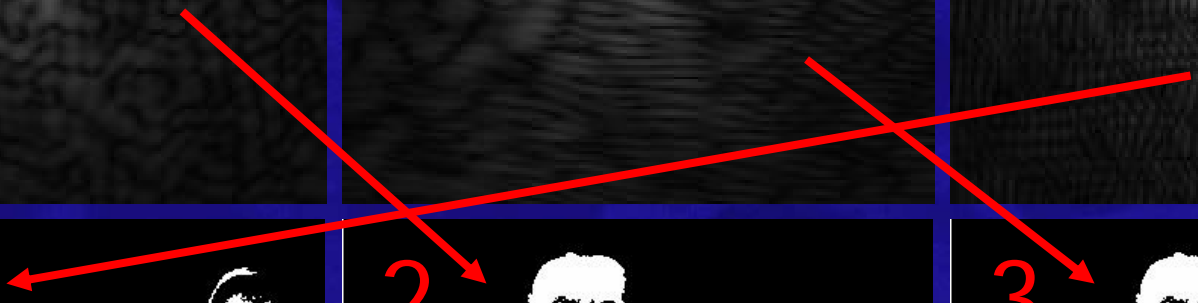
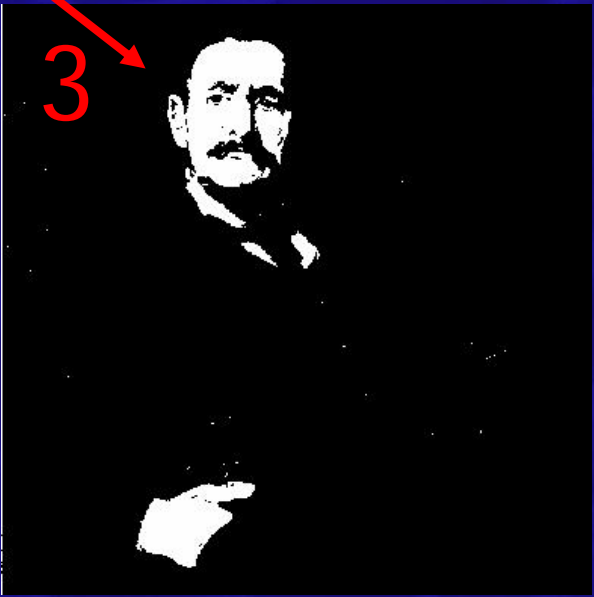
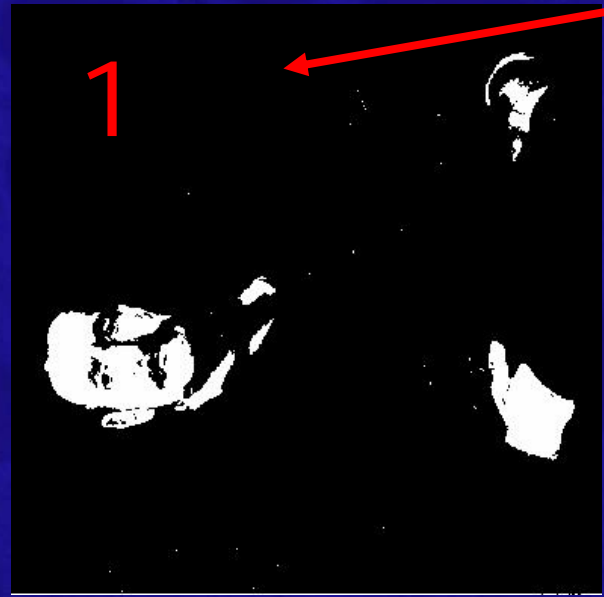
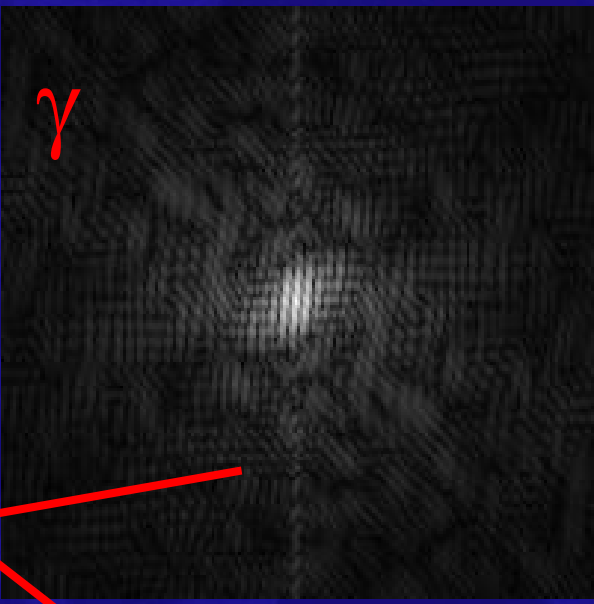
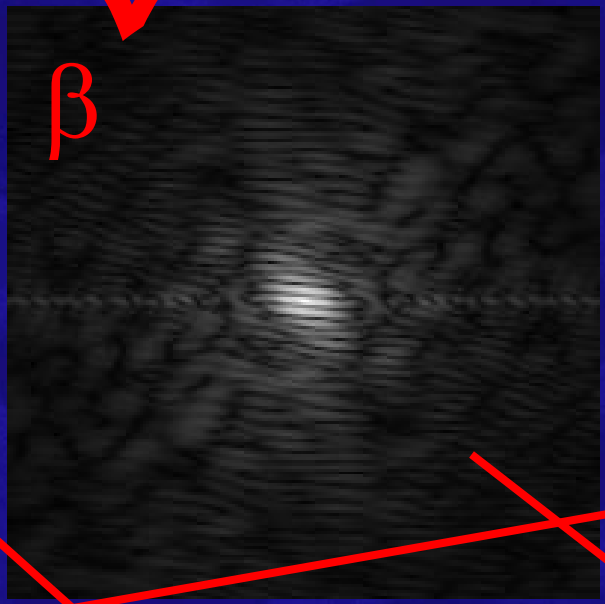
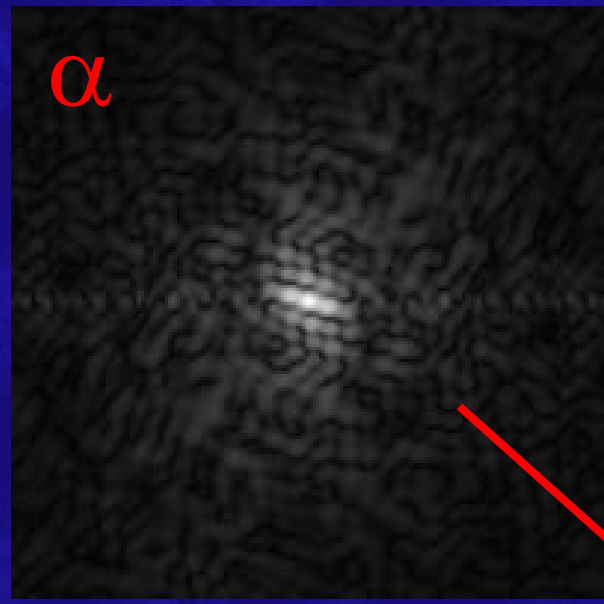




Q5 Albert



Q6 **A** $\alpha 1 \beta 2 \gamma 3$ **B** $\alpha 2 \beta 3 \gamma 1$ **C** $\alpha 3 \beta 1 \gamma 2$ **D** $\alpha 1 \beta 3 \gamma 2$



Q7 Your civilization (on an alien planet) has been imaging the mirrors of Earth's optical interferometers from outer space. Which one gives no Closure Phase Signal?

A. NPOI

B. CHARA

C. SUSI

D. VLTI



E. Keck Interferometer



Q8 You realize that your planet is in imminent danger of discovery from Earth's Nulling Interferometry program. You recommend:

A. Your race paints your planet black

B. Your race paints your planet silver

C. Split your planet in two halves which orbit 180 degrees apart

 D. Scatter clumpy clouds of dust in your solar system

Q9 Having avoided the Nuller, you are now worried about discovery by the new SIM mission (the year is 2035). You recommend:

A. Your race paints your planet black

B. Your race paints your planet silver

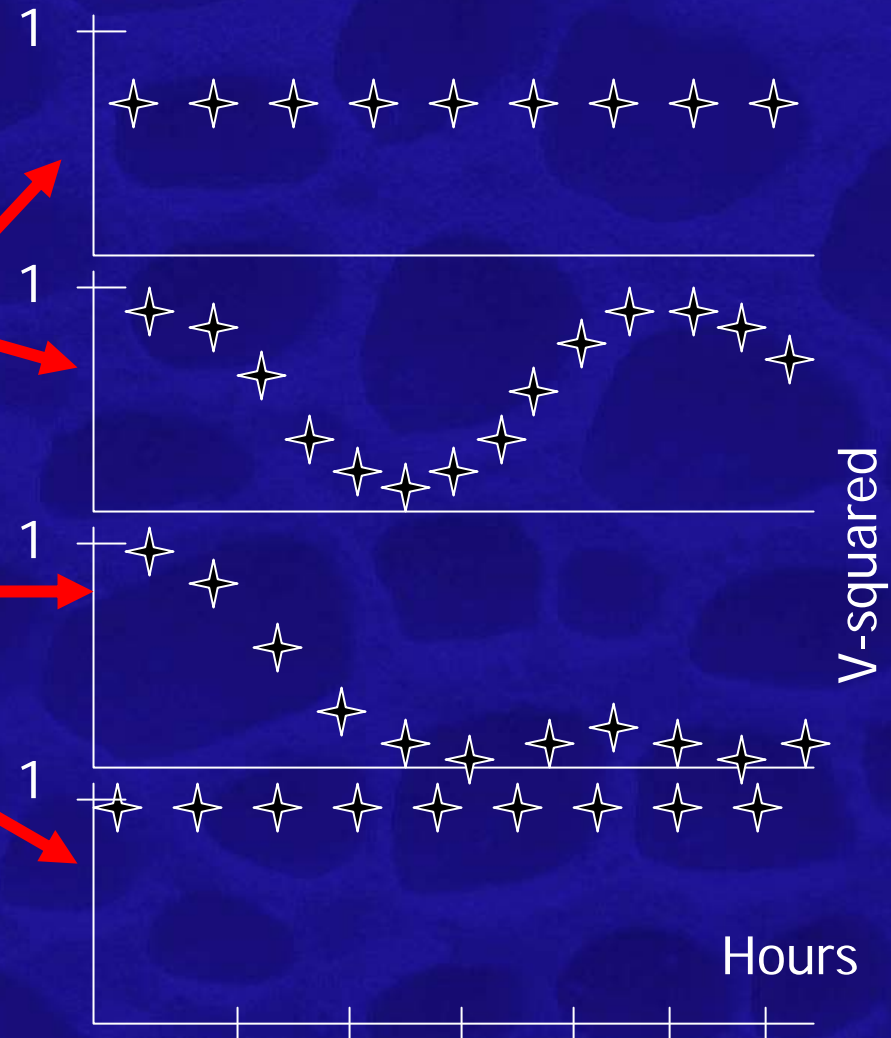
 C. Split your planet in two halves which orbit 180 degrees apart

D. Scatter clumpy clouds of dust in your solar system

Q10

Santa finally gets the North Pole Optical Interferometer (NPOI) online, and the Elves observe 4 stars, but lost the logs. Match the stars with the data:

- Mizar Northern Binary, Sky PA = 0 deg
- 126 Tau Equatorial Binary, Sky PA = 0 deg
- Rigel Equatorial Star. Resolved uniform disk.
- Polaris Polar Star. Resolved uniform disk.



Q11 The efficiency of an optical interferometer, defined as the power recovered from the detected starlight divided by the power taken to run the array, is approximately:

A. 10^{-14}

B. 10^{-19} ✓

C. 10^{-22}

D. 10^{-25}

E. 10^{-31}