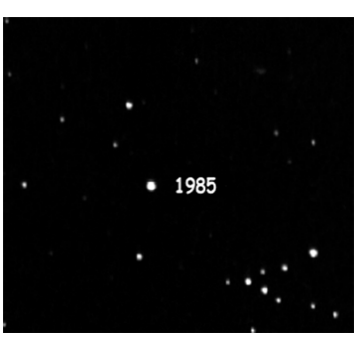
**Appendix 31**

# The Tychos – Our Geoaxial Binary System

20 October 2019, 7:07 pm[1]

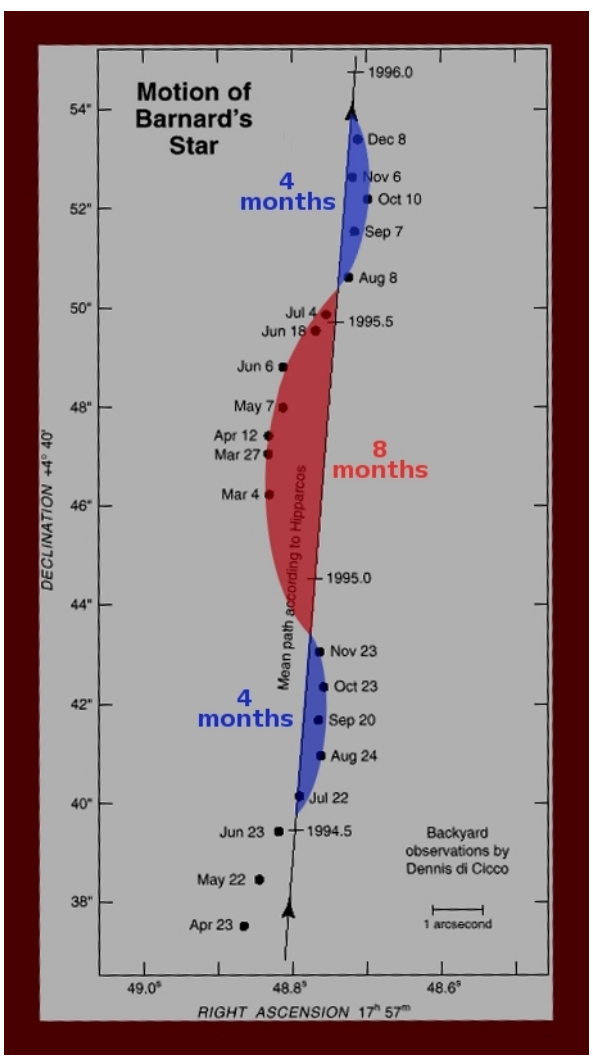
### The motion of Barnard's star confirms the Tychos model

Barnard's star is famed for being the fastest-moving star in our skies. When seen from the northern hemisphere, it is observed to briskly "ascend up and up in our skies" by as much as 10.36 arcseconds every year.

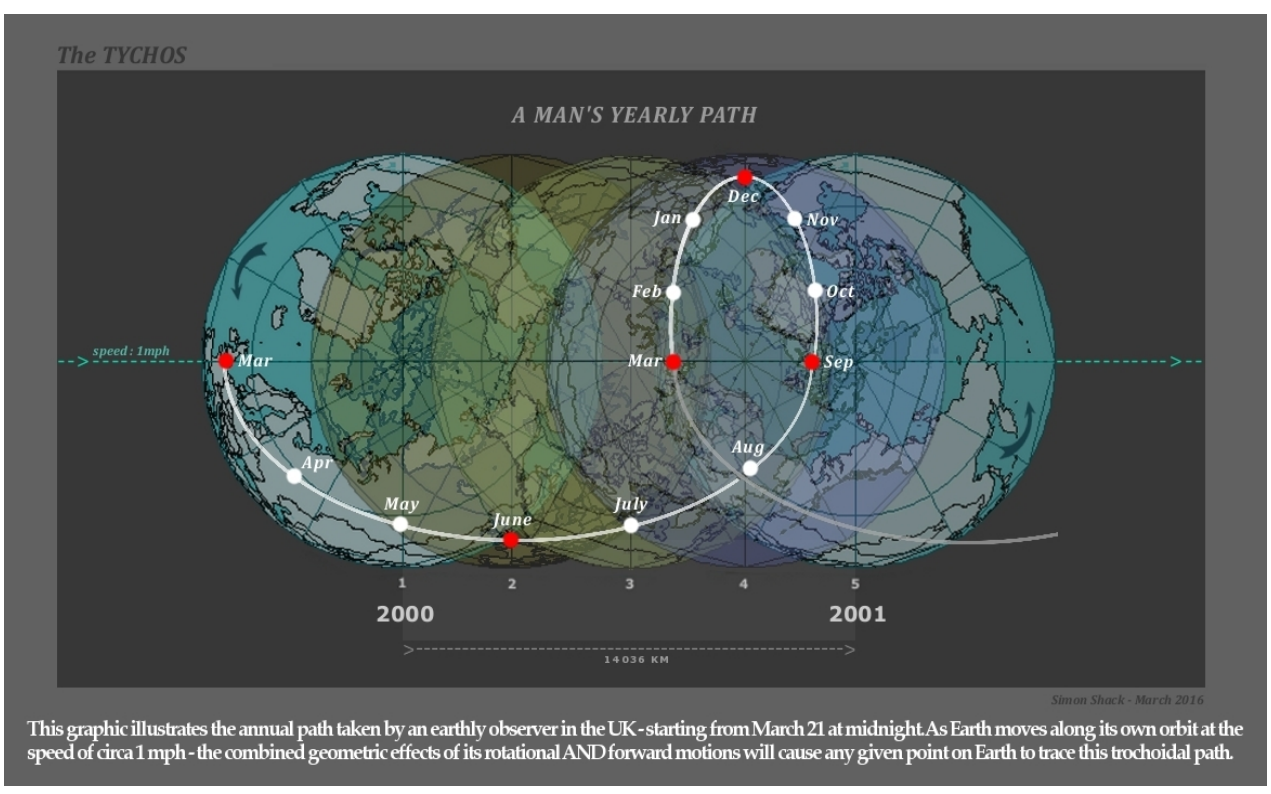



Motion of Barnard's star between 1985 and 2005.[2]

An experienced amateur astronomer, Dennis Di Cicco,[3] is known for having patiently and most accurately photographed this rapidly-moving star between 1994 and 1995 and to have plotted a diagram of his observations posted on a Quora page.[4] As shown below, the diagram clearly shows the "upward-rising path" of Barnard's star. The path exhibits a sinusoidal wobble, oscillating "from left to right", which in fact represents the star's parallactic oscillation. I have highlighted this "wobble" on Di Cicco's diagram with pink and blue colors so as to show how these two asymmetrical "phases" represent, respectively, 8 months and 4 months of the parallactic oscillation.

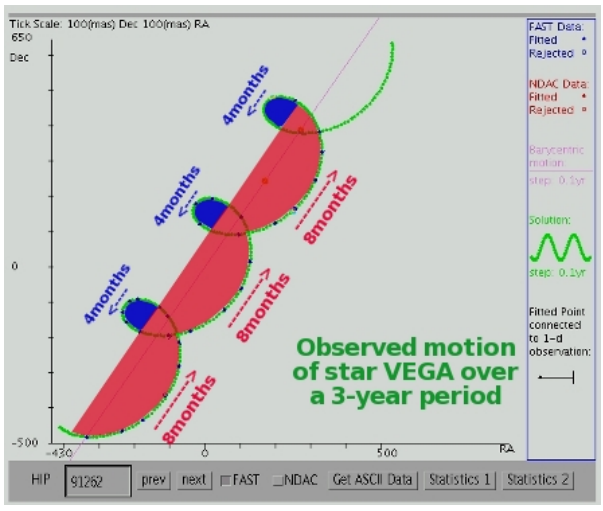



Before proceeding, I would like to remind the reader of a graphic titled "A man's yearly path", featured in my book on the Tychos model. It plots the trajectory that any given point on Earth (or an observational astronomer in his observatory) will trace during the course of a year under the Tychos model, with Earth rotating once every 24 hours and slowly advancing at 1.6 km/h (1 mph). Please understand that the trochoidal path in this diagram is meant to depict a "timelapse trail" (or the successive positions) of, say, an astronomer snapping a picture of a given star every single night at midnight during the course of a full year.

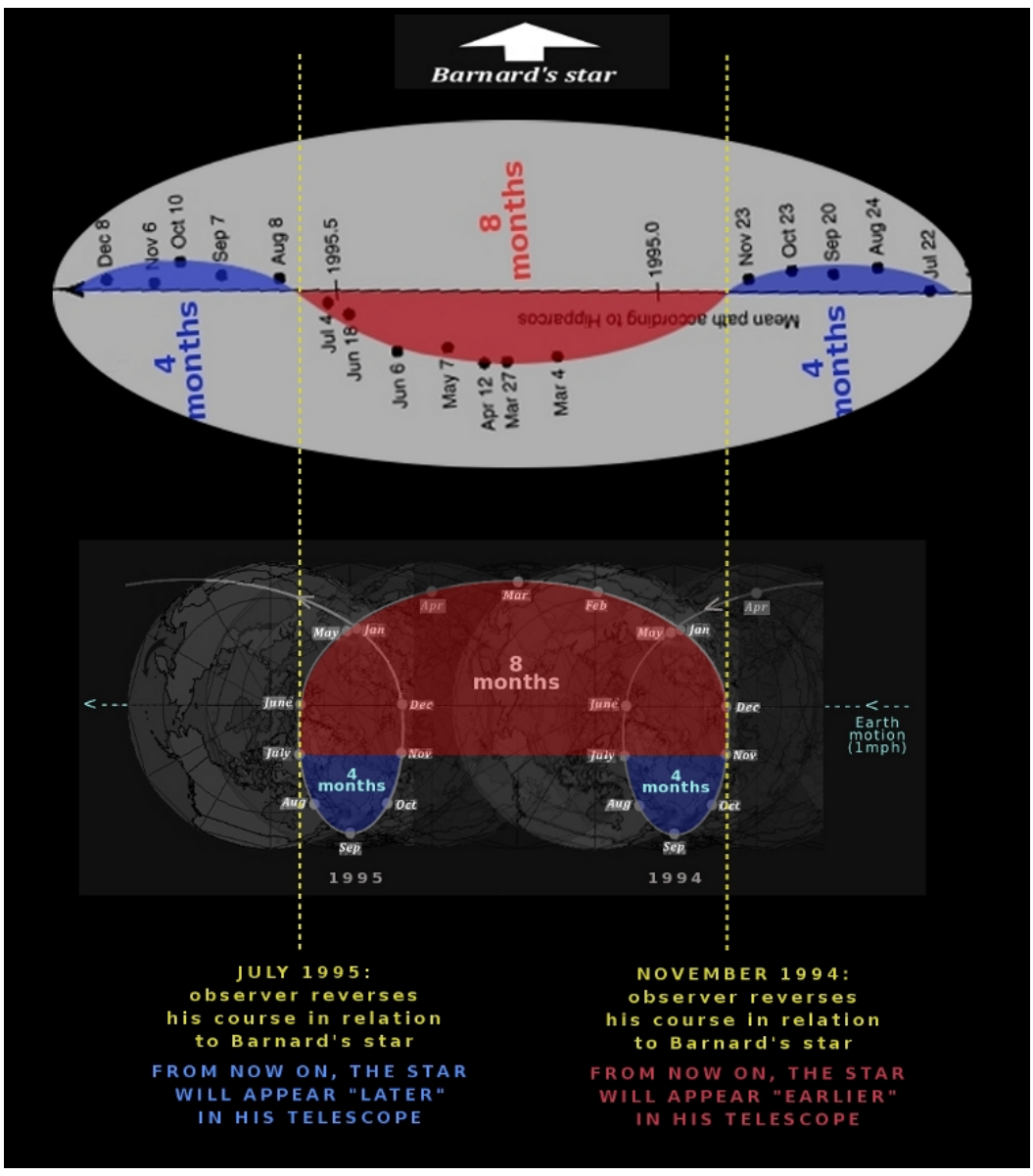



[1] https://cluesforum.info/viewtopic.php?p=2412890#p2412890
[2] http://cseligman.com/text/stars/propermotion.htm
[3] https://en.wikipedia.org/wiki/Dennis_di_Cicco
[4] "Has an amateur astronomer measured a stellar parallax?" https://www.quora.com/Has-an-amateur-astronomer-measured-a-stellar-parallax

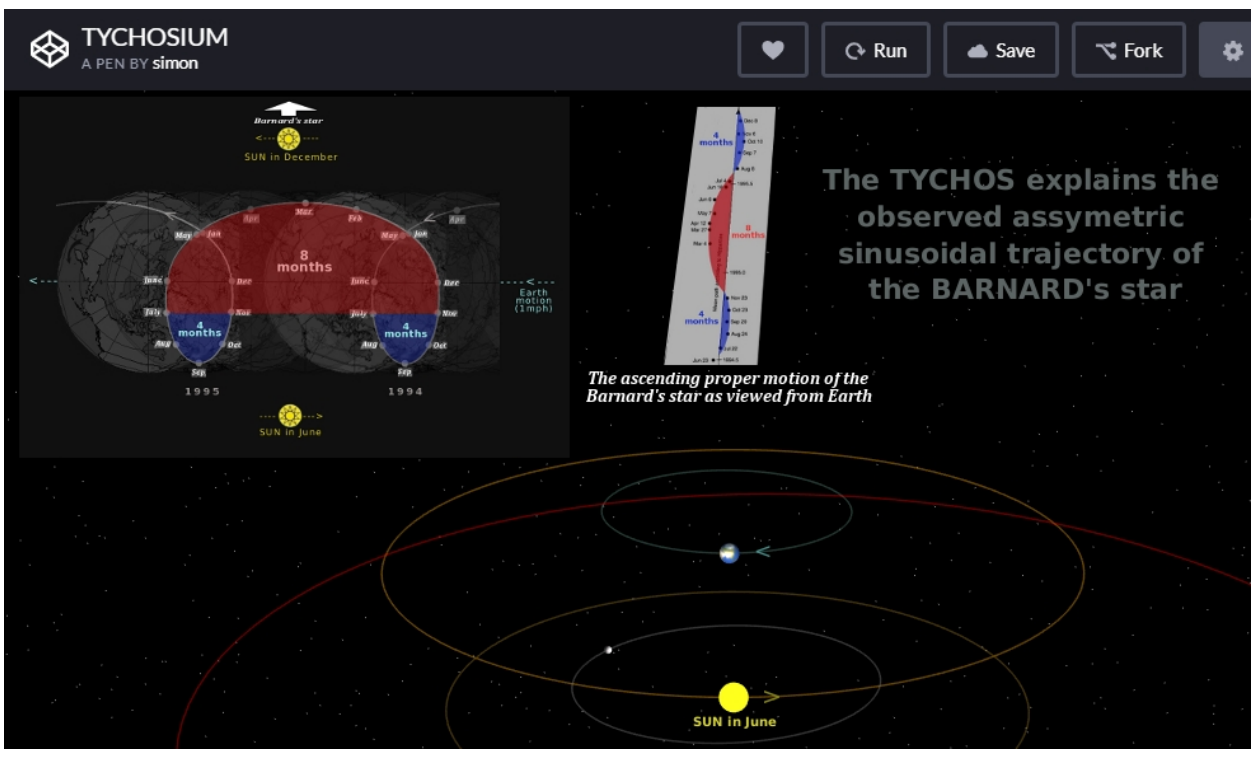
This neatly goes to explain, for instance, why the star Vega (located high above our heads in the northern hemisphere) is observed to move around a trochoidal loop which, in practice, causes every earthly observer to alternately "move forwards or backwards" by 8 months and 4 months, respectively, in the course of a year, in relation to our surrounding universe. In the graphic below[5] I have highlighted in red and blue the 8-month prograde and 4-month retrograde "phases" of this motion:




Now, Barnard's star is not located above our heads, but at a mere +04°41′ declination, which is roughly "level" with Earth's equator, if we consider an annual average of Earth's 23.5° inclination. When viewed from Earth, its path will therefore not exhibit a trochoidal loop like Vega's path, but a sinusoidal one. In reality, of course, Barnard's star does not truly/physically zigzag as it travels across space. The observed pattern is merely the fully expected consequence of our annual trochoidal motion. In my next diagram, we can see how Di Cicco's diagram is a perfect match with the expected 8-month/4-month oscillation predicted by the Tychos model:




And here is how a screenshot of the wondrous Tychosium simulator can help visualize the observed motion of Barnard's star:




In conclusion, it is the oscillating frame of reference (8 months of "prograde" *vs.* 4 months of "retrograde" motion) of any earthly observer that causes the apparent "decelerations" and "accelerations" of our surrounding planets and stars. Kepler had it the other way round: he thought it was the planets and stars that physically accelerated and decelerated. It is up to each reader to judge for themselves which of these two assumptions is the most rational and sensible one.

[5] Original location: http://spiff.rit.edu/classes/phys301/lectures/parallax/parallax.html