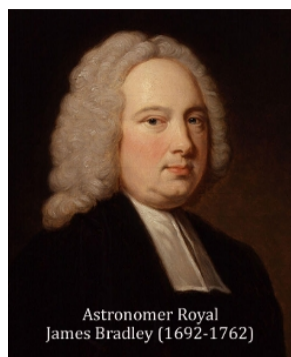


Appendix 43 The Tycho – Our Geoaxial Binary System

24 September 2020, 9:56 pm¹

The strange saga of “stellar aberration”



I'd like to share with you this strange yet hilarious—or even tragicomical—tale behind the concoction of a supposed phenomenon that every good astronomer knows as “stellar aberration”. With the laymen and laywomen readers in mind, I will recount this story in simple words, but perhaps the more technically minded of you and/or those versed in scholarly astronomy may wish to first have some fun reading the howlers to be found on the Wikipedia page dedicated to the topic of “stellar aberration”.² I doubt you have ever read such lame, cringy and painful attempts to justify the unjustifiable.

But let me get on narrating how the fanciful theory of “stellar aberration” came about in clear and concise language, as promised. In fact, the tale of James Bradley’s “discovery of stellar aberration” almost reads like a children’s bedtime story:

Once upon a time, back in 1725, the soon-to-become Astronomer Royal James Bradley was looking at a star called “Gamma Draconis” with his state-of-the-art telescope crafted by George Graham, London’s leading instrument maker. The telescope was fitted into his chimney because the northern star which he chose to observe happened to regularly transit just above London where he lived. At 33 years of age, Bradley was already an experienced astronomer and he had duly calculated just how his chosen star should move against the more distant stars. He looked and looked for weeks on end, but the star didn’t seem to move much in relation to the background stars. However, after a month or so, he finally saw that the star had moved a tiddly weeny bit. But alas, as he checked his calculations, he realized to his great dismay and astonishment that the star had moved in the direction opposite to his predictions. Together with his assistant Molyneux (a wealthy man who had financed their ambitious stargazing project), he feverishly checked and re-checked the equipment but couldn’t find anything wrong with it. The two inquisitive men were vexed and baffled so they decided to undertake a massive survey of the skies over the following years. In all, they eventually registered the motions of 200 other nearby stars but, to their growing consternation and distress, found that all those stars were moving in the “wrong” direction, that is, contrary to their expectations.³ Sadly, Molyneux soon passed away, stepping into his grave without an answer to the upsetting mystery. The task to resolve the pesky puzzle was thus left to Bradley. As the story goes, the solution to the riddle came to him during a boat trip on the river Thames. Here’s how astronomy historian Tony Christie (a.k.a. “thonyc”) recounts Bradley’s “eureka moment” in a blogpost dated 23 Sep 2020 (two days ago):

“Molyneux died in 1728 before Bradley solved the puzzle. The solution is said to have come to Bradley during a boat trip on the Thames. When the boat changed direction, he noticed that the windvane on the mast also changed direction. This appeared to Bradley to be irrational, as the direction of the wind had not changed. He discussed the phenomenon with one of the sailors, who confirmed that this was always the case. The explanation is that the direction of the wind vane is a combination of the prevailing wind and the headwind created by the movement of the boat, so when the direction of the headwind changes the direction of the windvane also changes. Bradley realised that the direction of the light coming from the stars was affected in the same way by the movement of the Earth orbiting the Sun. He and Molyneux had discovered stellar aberration and the first empirical evidence of the Earth’s orbit around the Sun.”⁴

To make a long saga short, Bradley (who was later promoted to Astronomer Royal) then concocted a fantastic theory which goes a bit like this: the stars are seen to move in the “wrong” direction (i.e. opposite to what we should expect, assuming Earth revolves around the Sun) because the “light particles” they emit are just like raindrops slanting at an angle towards the face of a walking man. Perhaps I’d better quote again from the recent blogpost by our “renaissance mathematicus”, Tony Christie, lest readers think I am distorting something:

“Bradley realised that the direction of the light coming from the stars was affected in the same way by the movement of the Earth orbiting the Sun. He and Molyneux had discovered stellar aberration and the first empirical evidence of the Earth’s orbit around the Sun. The more common phenomenon used to explain aberration uses rain. When one is standing still the rain appears to fall vertically but when one is walking the rain appears to slant into one’s face at an angle. The same happens to starlight falling onto the moving Earth.”⁵

Fantastic, huh? Believe it or not, but Bradley’s “stellar aberration” poppycock theory is still today held by academia as one of the strongest empirical proofs in support of the heliocentric model (which of course stipulates that Earth revolves at hypersonic speed around the Sun), along with the utterly failed Michelson-Morley and Dayton Miller interferometer experiments expressively meant to detect Earth’s supposed 107,000 km/h orbital velocity (see Appendix 40 about the many attempts to measure Earth’s orbital speed and how they actually support Earth’s velocity of 1.6 km/h as of the Tycho model).⁶

¹ <http://cluesforum.info/viewtopic.php?f=34&t=1989&sid=bb2bf08de7983b792dc21c74d7da4417&start=180#p2414741>

² https://en.wikipedia.org/wiki/Stellar_aberration_%28derivation_from_Lorentz_transformation%29

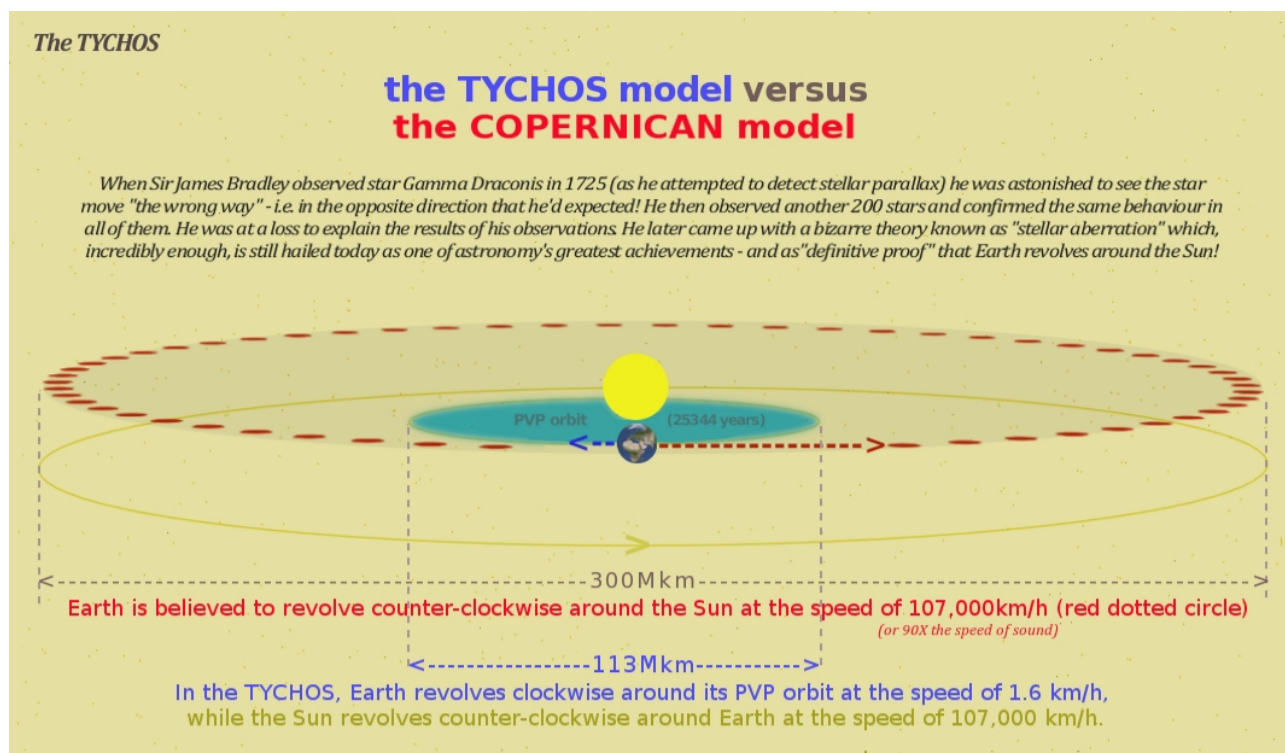
³ For more detail about what James Bradley actually observed, please read my Appendix 5 on why the stars move in trochoidal loops: <http://septclues.com/TYCHOS%20Appendix%20folder/Appendix%2005.pdf>

⁴ <https://thonyc.wordpress.com/2020/09/23/the-emergence-of-modern-astronomy-a-complex-mosaic-part-xlv/>

⁵ <https://thonyc.wordpress.com/2020/09/23/the-emergence-of-modern-astronomy-a-complex-mosaic-part-xlv/>

⁶ <http://septclues.com/TYCHOS%20Appendix%20folder/Appendix%20040.pdf>

All right, so my bedtime story is now over. Sweet dreams. As you wake up tomorrow morning, you may wish to take a good look at this graphic I made today. Hopefully, with a good cup of tea or coffee in your hand, you'll readily see why the 18th-century Astronomer Royal James Bradley saw the stars moving in the "wrong" direction.



It never ceases to amaze me how the purported "definitive proofs" of the heliocentric theory have been based on empirical observations that contradict the same!

As I always like to say, the Tychos won't go away. This said, you are free to keep hurtling around the Sun at 90 times the speed of sound, if that's your thing.