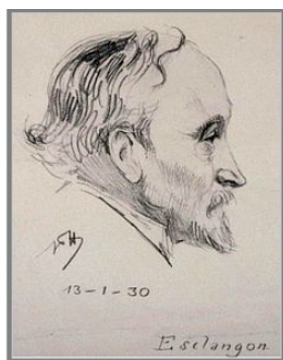


Appendix 45 The Tychos – Our Geoaxial Binary System

13 April 2021, 11:01 pm¹

Esclangon's observations of Earth's daily motion

I never cease to marvel at the amazingly precise observations made by some of the best observational astronomers of yesteryear as they tried to make sense of this solar system of ours. Their tireless dedication to their noble quest of unveiling the secrets of our cosmos has not been in vain, and I'm proud and glad to have contributed to highlight the significance of their lifetime efforts.



Ernest Esclangon (17 March 1876 - 28 January 1954) was the director of the Strasbourg Observatory and the Paris Observatory before becoming the president of the Société Astronomique de France. In 1935, he received the Prix Jules Janssen, the society's highest award. In France, he is acknowledged as one of the most rigorous astronomers of his time. His French Wikipedia page states that “Esclangon was attached to the establishment of the Chart of the Sky; it improved the precision of measurements in the fields of astronomy: measurement of time, variation of longitudes, variation of gravity.” In any event, Esclangon was certainly a major authority in astronomical matters, even though most people will never have heard of him.

I came across his work while browsing the website dedicated to Maurice Allais (the man who definitively disproved Einstein's theory of relativity). Here's an extract from the Maurice Allais Foundation's website describing Esclangon's most peculiar observational program conducted in 1927 and 1928:

The observations of Ernest Esclangon

Between 25th February 1927 and 9th January 1928, Ernest Esclangon carried out, at the Strasbourg Observatory, a programme of optical observations following a very different procedure from that which had been almost exclusively used until then in interferometric observations. It was as follows:

- a) *A refracting telescope placed in the horizontal plane facing north-west, autocollimation is used to cause a horizontal thread located at the focus of the telescope to coincide with its image reflected on a mirror that is integrated with the telescope. The angular displacement required for this coincidence is denoted by c .*
- b) *Turning the device to face north-east, the operation is repeated. The angular displacement required to obtain the coincidence this time is denoted by c' . The magnitude whose evolution has been monitored over time is $(c-c')$.*

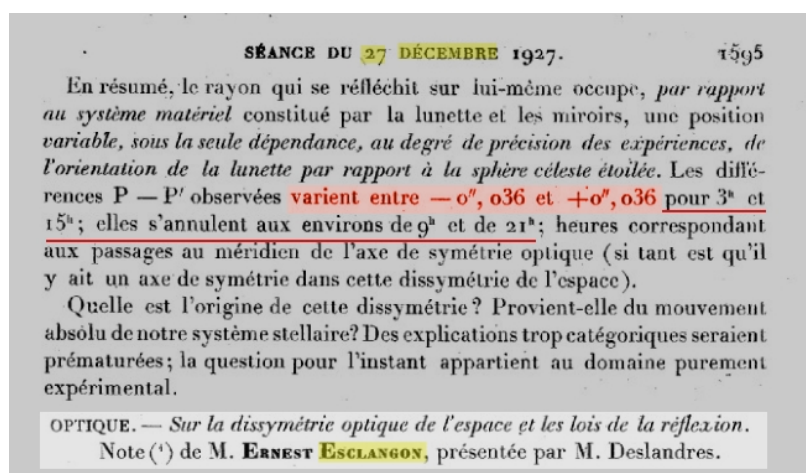
These observations comprised 40 000 sightings carried out by day as well as by night and divided into 150 series. The published reports included, in addition to a detailed description of the equipment used, the values for $(c-c')$ for each series and the average temperature during each series as well as temperature evolution over each series.

By adopting the standpoint of sidereal time, Ernest Esclangon had detected a sidereal diurnal periodic component, whereas nothing in particular emerged when solar time was adopted.

He published his findings in a communication to the Académie des Sciences: “Sur la dissymétrie optique de l'espace et les lois de la réflexion” [On the optical dissymetry of space and the laws of reflection] (December 27, 1927) in the April 1928 issue of the “Journal des Observateurs”, in which he also provided the experimental data collected: “Sur l'existence d'une dissymétrie optique de l'espace” [On the existence of dissymmetry of space]. In making use of these data, Maurice Allais established the presence, in addition to the sidereal diurnal component, of at least one long periodic component (estimated on the basis of a rapid analysis to be half-yearly).²

To the layman, this may all sound like a dreadfully complex affair, and I must admit it took me quite a while to wrap my head around what exactly Esclangon's observational program was all about. “An optical ‘dissymmetry’ [i.e., asymmetry] of space”? Hmm ... What could this possibly signify?

Well, please stay with me as I attempt to illustrate in the simplest possible manner what exactly Esclangon (unwittingly) observed. As you will see, it all amounts to a spectacular confirmation of one of the major tenets of the Tychos model: Earth's proposed orbital speed of 1.6 km/h around its PVP orbit. Here is the conclusive paragraph of Esclangon's paper describing his rigorous observational program of Earth's daily motions:³



¹ <http://cluesforum.info/viewtopic.php?f=34&t=1989&sid=9379804f05a451b18ff6a11a582b1a36&start=195#p2415252>

² <http://www.fondationmauriceallais.org/the-physicist/the-re-examination-of-millers-interferometric-observations-and-of-esclangons-observations/?lang=en>

³ <https://gallica.bnf.fr/ark:/12148/bpt6k31384/f1597.item.r=27%20d%C3%A9cembre%20esclangon>

In short, here's what Esclangon's extremely rigorous series of telescopic observations (in Strasbourg) established:

- Between 3 am and 3 pm (i.e., a 12-hour interval), the star quadrants at either side of Earth appear to be 'offset' by $-0.036''$ and $+0.036''$ (for a total of $0.072''$).
- Between 9 am and 9 pm (i.e., a 12-hour interval), the star quadrants at either side (i.e. looking east and west) of Earth show no such asymmetry in relation to the meridian.

Esclangon's concluding thoughts: "What is the origin of this asymmetry? Does it come from the absolute movement of our star system? Categorical explanations would be premature. The question for now belongs to the experimental domain."

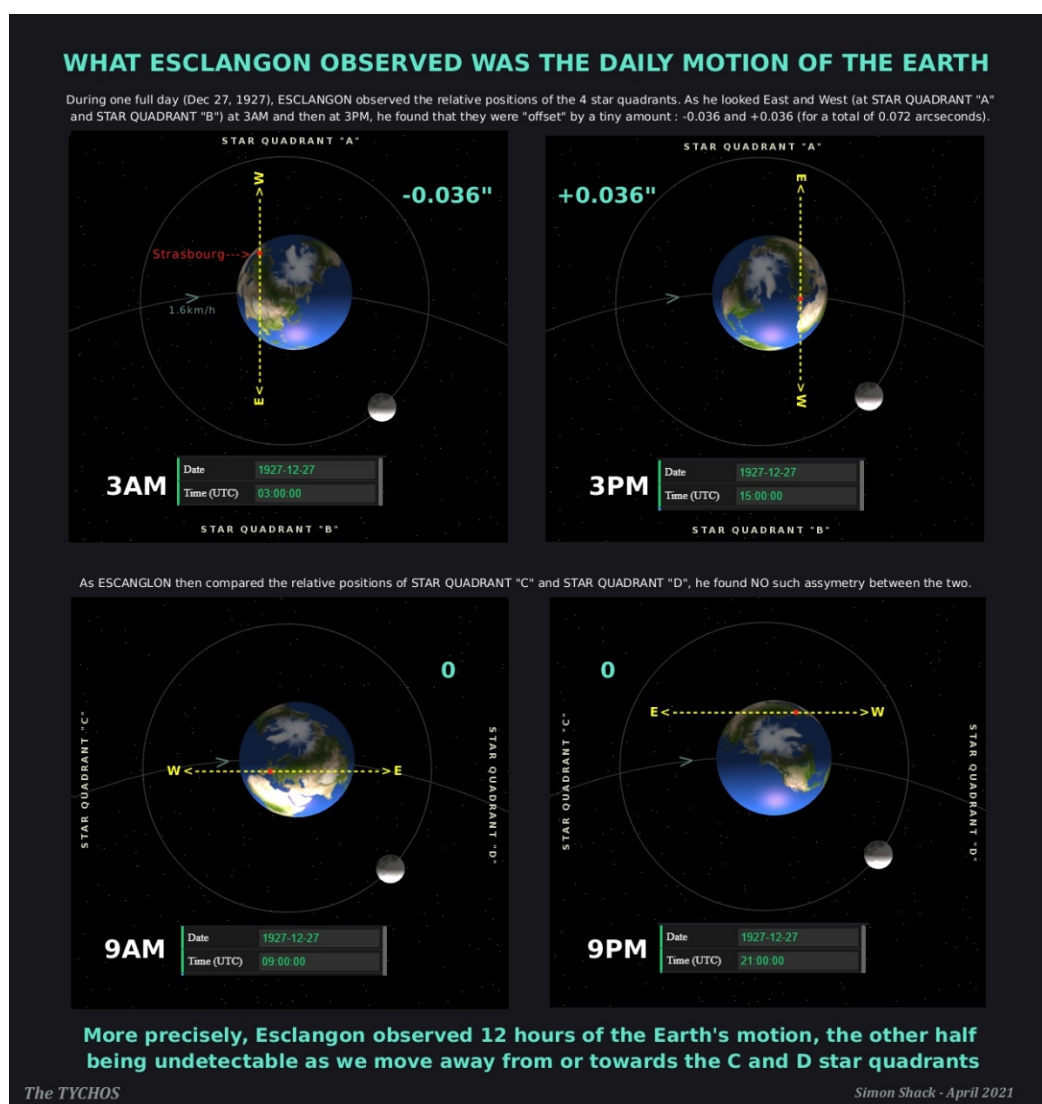
As it is, the Tycho's model offers a categorical explanation for Esclangon's meticulous astronomical observations. But, before proceeding, let us review the following key figures established by my Tycho's research over the years:

- Earth moves at 1.6 km/h around its PVP orbit (completing one orbit every 25,344 years) and thus covers $14,035.85 \text{ km}$ every year.
- This yearly motion of Earth causes the stars (located perpendicularly to Earth's motion) to appear to 'drift sideways' (or 'precess') by 51.136 arcseconds annually.
- In 12 hours, Earth will therefore move by approximately: $1.6 \text{ km/h} \times 12 \text{ h} = 19.2 \text{ km}$.

We see that 19.2 km (the distance covered by Earth in 12 hours) is 0.1368% of $14,035.85 \text{ km}$ (the distance covered by Earth in one year). We also see that Esclangon's observed 'asymmetry' amounts to 0.072 arcseconds. Yet, in a subsequent paper published in 1928, he slightly redacted this figure to ~ 0.07 arcseconds.⁴

And — lo and behold! — $0.07''$ is 0.1368% of $51.136''$, i.e. the annual stellar precession which, as of the Tycho's model, is caused by Earth's 1.6 km/h motion! We may therefore logically conclude that the amount of 'asymmetry' recorded by Esclangon was, in fact, the parallax caused by Earth's motion between 3 am and 3 pm.

As illustrated in my below graphic,⁵ the 12-hour stellar parallax observed by Esclangon concerned the two star quadrants ('A' and 'B') that lie perpendicularly to Earth's direction of motion. No parallax can be seen between the other two star quadrants ('C' and 'D') since we move either away from 'C' or towards 'D' at all times. What Esclangon observed was, quite simply, Earth's 'clockwise' motion around its PVP orbit.



Needless to say, Esclangon had no way of realizing the crucial significance of his observations back in 1928. However, he now has good reasons to be smiling in his grave!

As a final note, I would like to point out that this apparent 'asymmetry of space' observed by Esclangon is most probably what caused Kepler to theorize his bizarre elliptical orbits. This long-held inkling of mine was recently bolstered as I stumbled upon a fascinating paper by Laurence Hecht titled "Optical Theory in the 19th Century - and the Truth about Michelson-Morley-Miller". The entire paper is well worth the read, but the following sentence made me jump in my chair:

*The difference between the major and minor axis of the ellipse, which, as every school child is taught, constitutes the Earth's orbit around the Sun, is about one part in one thousand.*⁶

One part in one thousand? Well, that's indeed most interesting if viewed through the 'Tycho's lens'. If Earth rotates around its axis at about $1,600 \text{ km/h}$ and moves across space at 1.6 km/h , this means that its orbital velocity is $1/1000$ of its rotational velocity. One may thus easily fathom how this circumstance would have brought Kepler to assume that all planetary orbits (not only Earth's presumed orbit around the Sun) are very slightly elliptical rather than circular.

As I always like to say, at the end of the day: the Tycho's model is here to stay.

⁴ Ernest Esclangon: "Sur l'existence d'une dissymétrie optique de l'espace" (1928). <http://adsabs.harvard.edu/full/1928JO.....11...49E>

⁵ Screenshot from <https://codepen.io/pholmq/full/XGPrPd>

⁶ https://21sci-tech.com/Subscriptions/Archive/1998_Sp.pdf