Time Dilation according to Tropical Astrology and Why the Placidus Measurement of Astrographic Regions is Compatible with Relativity Theory

Abstract

• Much more relevant than the simplicity or complexity of a method of measuring the houses is whether such a division remains true to the physics of the sky (i.e. whether it makes any sense at all). • Because astrology has no central institution to decide what is valid and what is not, we believe that the least astrologists should do is to respect the truths confirmed by science. Physics teaches that we cannot separate time from space or space from time, for they stand in an unbreakable or indissoluble relationship which we call continuum¹, a plane made up of four dimensions (i.e. the three of space plus the one of time) regarded as spacetime, and that time is not absolute but **relative** (dependent on frames of reference). • Astrology - which is not horoscopism but one of the consequences of physics – appeals to different methods of measuring segments of our horizon known as houses, sectors, or regions and has classified them into space-based measurements and time-based measurements (according to which of the two concepts decides the subdivision of the diurnal arc)2, but said classification is impertinent according to the reality that governs us. • One that can be confirmed to be compatible with our reality is to be employed at all times for all types of charts, that is to say, one that is truly or essentially spacetime-based without, at the same time, presenting any of the errors characteristic of

other house systems3. We will see that only one will be compatible with relativity, for while the others would have us believe that time is absolute, the Placidus method of house measurement will show us that it is **relative**. • The difference lies in the ability of a method to recognise the different ascensional times of not only the twelve segments of our ecliptic at different latitudes but also of each degree of said circumference simultaneously and uninterruptedly, that is, temporally simultaneously and spatially uninterruptedly during their trajectories from the horizon (ASC) to the midheaven (MC). We concluded, based on the house cusp analysis, that only the Placidean formula can carry out this promise, that is, make it possible to measure the lengths of time under said conditions. • While the Alcabitius and Koch measurements of time assign fictional speeds - i.e. times of oblique ascension - to all degrees contained between the horizon (ASC) and the midheaven (MC), Placidus takes care to measure the speeds or true times for all. The measurement most Newtonian of all the methods of house division, Regiomontanus, in turn, clings to space at the expense of time, the reason for which it cannot reflect the true positions of the planets in spacetime (ignores the relationship between space and time). • During the demonstrational process, we take the opportunity of pointing out that velocity (special relativity) and gravity (general relativity) do not constitute the only two – primary forms of time dilation. The tilt of a reference frame relative to another (that of Earth relative to the plane of our ecliptic, although velocity remains a variable, whereas gravity, in turn, a possibility we will explore in the appendices) constitutes the third form. • We encourage any physicist and/or astronomer to corroborate our observations with their own tools. For our part, we have

¹ Continuum theories or models explain variation through gradual quantitative transitions, i.e. without abrupt changes or discontinuities. Categorical theories or models, on the other hand, explain variation according to qualitatively different states.

² A perhaps creative way to make the classification clearer for the general public might be to think of the former as Newtonian or classical, while of the latter as Einsteinian or non-classical.

³ Among them, ASC and/or MC not coinciding with their corresponding house cusp (e.g. meridian houses, equal houses, Morian houses); houses being not exactly opposite each other (Knegt); a chart not being able to reflect planetary positions accurately in spacetime nor intercepted signs or the heterogeneity of a region, among other lacks.

employed the astrological/astronomical software Solar Fire Gold, although the astrographs come from the astrological/astronomical software Janus.

Key Words

time dilation • Lorentz transformation (length contraction) • special relativity • spacetime • atomic clock • oblique ascension • geocentric ecliptic longitude (λ) • geocentric ecliptic latitude (β) • right ascension (α) • declination (δ) • ascensional times • velocity • speed • gravity • quadrant house systems • Placidus houses • Alcabitius houses • Koch houses • EINSTEIN • MINKOWSKI • time zones • diurnal rotation • diurnal arc • primary directions.

INTRODUCTION (FOR THE ASTROLOGIST)

In the field of relativity, spacetime measurements are considered more complete measurements than spatial measurements alone because they incorporate time into the dimensions of space, thereby resulting in a more accurate representation of the events occurring in our solar system and in the universe in general, especially when working with high speeds (e.g. Earth rotation, orbits, light) or strong gravitational fields (e.g. sun, planets), where space and time are necessarily intertwined. This is the reason why, although we considered the most important method of spatial measurement (i.e. Regiomontanus), we have discarded spatial measurements of house cusps and discussed the three most important time measurements only, for only time-based measurements can have any relation to relativity. Which of these, however, respects more this phenomenon (time dilation) confirmed by science time and again? And, more importantly, why and/or how?

You may ask: "Why would we be interested in this in the first place? It is not important to determine whether a certain component of astrology is compatible with scientifically confirmed theories or proven realities." Although you may think of astrology as only an (occult) art, not also as a science, it is, unequivocally, a natural science, for it is concerned (from a relatively different point of view) with describing, understanding, and predicting natural phenomena (events occurring without human intervention) on the basis of empirical observation and experimentation, regardless of whether (a) its mechanism of action has not yet been elucidated by physics or science (because there has been no interest in doing so, especially when confused with horoscopism or the misnamed sunsign astrology, an industrial product) and (b) of the margins of error of predictions (i.e. to accuse mathematics or meteorology of the error of the mathematician or meteorologist can only be considered an ad hominem argument, that is, a fallacy or error of judgement).

Suffice it to say, for now, that you cannot conduct astrology without the natural existence of all the also natural tools it employs: the planets and the luminaries, the orbital periods or revolutions and the ecliptic and horizon, the rotation of the Earth and the tilt of its axis, among many other indisputable facts about the cosmos and the human being one cannot ignore if one wishes to practise the discipline correctly. Take too the place of organs within the human body, for example, and the number of people that can be born in a two-hour period that day in that place. Nonnatural but man-made disciplines such as spherical trigonometry (mathematics) must also be known and employed (e.g. celestial and terrestrial latitudes and longitudes), as opposed to disciplines such as tarot. However much we wish to treat or practise astrology without considering it a natural science⁴ (as Ptolemy and the Arabs, Galileo, and Morin, among others, considered it), it will always be necessary to study the abovementioned subjects if we intend to become reliable practitioners. The mere fact that we are not shy to assign explanatory power over the human being to the discipline makes it a necessity or responsibility to study these subjects, if not also genetics and/or medicine. As a matter of fact, these subjects were precisely the areas of knowledge of the astrologists of the past (from the 2nd to the 18th century).

We will discover why **time dilation** has always been an inherent reality in astrology and why the Placidus method of measuring astrographic regions is the only one intrinsically compatible with relativity. One thing we can anticipate to the reader, however: although the mechanism of action responsible for the Placidus method has always been found strange or **counterintuitive** by some astrologists (as it is a relativistic effect), this is precisely what makes the method the only truly genuine method from the point of view of spacetime, which is, again, our confirmed reality.

INTRODUCTION (FOR THE GENERAL PUBLIC)

Because the paper is addressed not just to the astrological community, but also to the scientific community, the author will use the introductory paragraphs to explain only and briefly the **source** of the unfounded criticism against astrology: the sad and/or shameful popular confusion between signs and constellations, and between horoscope or horoscopism and astrology or astrologists, respectively.

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As for the astrophysical basis of the discipline or the mechanisms of action that we consider to be responsible for its possibility and/or the apparent close relationship between the structures of the DNA and those of a birth map, please see our molecular theory of the ecliptic in *Astrophysical Justification of the Astrological Symbols* (2024)⁵ and an as of yet unpublished manuscript, *Astrogenesis*, respectively. We have analysed, in the latter, the number of possible astrographical combinations, which as high as the number of possible combinations of the genetic code⁶ (in a two hour period we can establish twelve to thirty astrographical distinctions concerning all twelve regions if we were to distinguish birth maps every four to ten minutes of rotation on average, according to latitude, that is, every 1° to 2.5° of arc).

* * *

Many critics of astrology, including theoretical physicists and astronomers, even many "astrologists", are not aware of the fact that (a) Aries, Taurus, and Gemini, (b) Cancer, Leo, and Virgo, (c) Libra, Scorpio, and Sagittarius, (d) Capricorn, Aquarius, and Pisces are neither supposed to be persons nor constellations (although they did inherit the names of the latter).

These names stand for the specific segments of a circumference we call **ecliptic**, that is, the great circle of the celestial sphere which describes the apparent path of the sun and other celestial bodies from the point of view of the terrestrial observer. Put another way, the twelve segments or sectors into which the belt that the Earth wears, our zodiacal (i.e. tropical, not sidereal) belt, was divided millennia ago. They are thus the twelve months of

⁴ This can be convenient only for those who wish to exercise it arbitrarily or capriciously.

⁵ Published in the PhilPapers research repository:

⁶ Astrographic sequencing is possible. See "The Astrological Delineation Procedure" in *The Mountain Astrologist*, September 2024, No. 232, pp.

^{76-84.} A slightly different version of this paper appears as *El procedimiento de lectura astrológico* in the astrological journal of the Spanish Society of Astrology: SPICA, November of 2023, No. 64, pp. 93-111.

the year or the **twelve great segments of time** on Earth, which is why each of the four groups of three represents a season of the year, each of which is composed of three phases or months. In other words, each segment of the ecliptic, which we call a sign, represents a month. They are, then, signs (i.e. areas of the sky that the sun and other bodies pass through in the course of their respective years), not constellations (although, again, they have inherited their names), much less specific persons or individuals.



The composition of the ecliptic is decided by the influence of the sun's energy together with that of the moon and the rest of the planets which ascend and descend above and below the equator together with the sun throughout their respective years. If the earth were not tilted, we would have no seasons, for the amount of sunlight on the globe would be equal at all latitudes and would modify the content, composition, or molecular structure of the different segments of the ecliptic. Then the twelve segments of the ecliptic, i.e. the twelve signs, would change their constitution (state), element (density), and polarity (electric charge).



Illustration 2

Geometric representation of the zodiacal belt (ecliptic of the Earth).

These segments of our ecliptic have a number of properties not yet investigated by physics. These properties, which we can classify as elements, gases, particles, or molecules, as the case may be, have their apparent origin in the light energy produced by the sun and the moon and the rest of the celestial bodies in our solar system, although we cannot notice or detect the light energy of the rest as we detect that of the luminaries.

Herein lies the reason why the form of astrology referred to above would not be astrology but a consumer good of contemporary western capitalist society, best represented by the now obsolete newspaper horoscope (industrial product of the 20th century). This is a particularly important, or rather fundamental distinction. No one "is" a certain sign. Simply because they cannot be. A person may, however, present the sun in a specific segment of the ecliptic or zodiacal belt in his astrography or natal chart, but that does not make them, say, "a Gemini" (λ 60°-90°), even if they also presented Jupiter and/or Mercury in that sign⁷.

A scientifically valid set of questions, then, would be the following: what segments of the ecliptic (i.e. signs) and/or regions of the horizon (i.e. houses) do the rest of the heavenly bodies (not just the sun) occupy or where do they appear lodged at nativity (exact time of birth in that place)? What regions or houses of the birth map does each sign preside over? These questions would reflect a clearer or less prejudicial understanding of astrology, as everyone "is" the entire Zodiac or is influenced by it (we are all born on Earth). In which area of life we tend to behave according to the characteristics or properties of one sign or another and under the influence of certain bodies (planets), however, can and should be assessed, among many other factors that are inherent to an astrographical auscultation, which bears a close resemblance to a clinical assessment (medicine is not an exact science either, but a science nonetheless, which is why we speak of tendencies, not destiny⁸).

"No one 'is' a certain sign. Simply, because they cannot be."

Some "astrologists" seem to be oblivious to this reality, the vulgar much more, even some of the astronomers who criticise astrology without first distinguishing it from horoscopism and the fairground charlatans who claim to practise it on that basis. (One need only recognise who the astrologists of humanity were before the industrial revolutions of the 19th and 20th centuries to understand how they can stand light years apart from what is now thought to be an astrologist or astrology). Despite their knowledge or scientism, they remain part of the vulgar in this particular respect, including the distinguished, funny, and interesting American astrophysicist and science populariser Niel deGrasse Tyson.

TIME DILATION ACCORDING TO TROPICAL ASTROLOGY

In the northern hemisphere, the segments of the Earth's ecliptic we know as Cancer (λ 90°-120°), Leo (λ 120°-150°), Virgo (λ 150°-180°), Libra (λ 180°-210°), Scorpio (λ 210°-240°), and Sagittarius (λ 240°-270°) take longer to ascend or rise above the horizon than the segments we know as Capricorn (λ 270°-300°), Aquarius (λ 300°-330°), Pisces $(\lambda 330^{\circ}-360^{\circ})$, Aries $(\lambda 00^{\circ}-30^{\circ})$, Taurus $(\lambda 30^{\circ}-60^{\circ})$, and Gemini (λ 60°-90°), for when the sun occupies the former segments of the ecliptic in the northern hemisphere, it rises the slowest, whereas when it occupies the latter, it rises the fastest, and vice versa in the southern hemisphere. This establishes the "length" or "extension" of the days and nights at the location on the Earth's surface where we find ourselves (i.e. whether the days are longer than the nights, or the nights longer than the days, depending on the time of year in that hemisphere). It is also the reason for which the first group of segments has been categorised as the group of *slow signs* (*delayed oblique ascension*), whereas the second as the group of fast signs (swift oblique ascension), and vice versa in the southern hemisphere⁹.

⁷ On how to interpret an astrograph, see the paper referred to above: "The Astrological Delineation Procedure" in *The Mountain Astrologist* (No. 232, September 2024), pp. 76-83. We hope that this work (inspired by Morian pedagogy) will pave the way towards the foundation of procedural astrology as one of the most important branches of the discipline, as it leads to the necessary amendment of errors during the interpretative exercise and many statistical analyses.

⁸ See our Commentary on astrology according to epigenetics (July 2023) in: <u>https://zenodo.org/records/8210414</u> (DOI 10.5281/zenodo.8210420).
⁹ As it is usual to invert things according to the hemisphere, but let this be the only one: the ascensional time of the signs, for he is a fool who, knowing that the tropical Zodiac is fixed or constant, thinks that he has his sun in Leo when he has it in Aquarius, or vice versa, for it would be the same as thinking that, although the sun is above the equator, it is below it, or vice versa.





Illustration 3

The physical explanation for this reality is exactly the same as for the seasons and the length of days and nights in the hemispheres according to the time of year. Due to both the centrifugal force produced by the rotation of the Earth on its own axis and the fact that the pole of the Earth is tilted relative to the plane of the ecliptic (Earth's orbit), the twelve segments referred to above (which "are left with" the "footprints" of the sun¹⁰) do not spend or invest the same amount of time crossing our horizon. Although at the equator the difference is negligible (all the signs or segments ascend at about the same speed, just as the days and nights are about the same length), the slight differences will become greater each time more as we move further away from the equator. As the Earth rotates on its own axis, certain (fixed) regions of our sky - and the planets that occupy or are located there – will appear to pass over our horizon towards the opposite end (setting) more quickly or slowly depending on our distance from the equator.

Let us visualise this form of time dilation graphically with the following examples. We present a tropical astrograph erected for Bogotá D.C., Colombia at 4:33 a.m. on August 12, 2024. It shows the horizon at 00° of the sign (not constellation) of Leo (i.e. segment of the ecliptic from 120° to 150°).



2hr 03min minutes later, the following sign, Virgo, will begin to rise, as that would be the amount of time we would have to wait if the sun had occupied 00° Leo at that latitude (Bogotá D.C.)¹¹. Let us look at the same astrograph for **6:36 a.m.**

¹⁰ Again, see the Molecular Theory of the Ecliptic in the appendix of a paper (on the astrophysical basis of astrology) published in the PhilPapers research repository: <u>https://philarchive.org/rec/BUSJAD</u>. DOI 10.5281/zenodo.10463824.

¹¹ Let us not forget that the basis of tropical astrology lies in the position of the sun on the ecliptic, as explained in the introduction.



It shows the horizon at oo^o of the sign or ecliptic segment (not constellation) of Virgo.

Should we have calculated Kodiak's tropical astrograph for two hours and three minutes after the time at which 00^o Leo appeared at the horizon (4:33 a.m.)¹², we would have noticed that said sign would not have finished crossing, being only at twenty degrees of the sign, that is, the elevation or latitude of the 140^o of the ecliptic would have been the horizon (Figure 1C).



Let us look at the process from its beginning:



Figure 2A

rise. If we were to place the sun at 00° Leo, that is, if we were to draw the same birth map for July 22 of the same year, we would notice that the times at which the sun would have risen above the respective horizons if it had occupied that point on the ecliptic are also the same: 5:57 a.m. in Alaska and 5:57 a.m. in Bogota.

¹² While it is 4:33 a.m. in Kodiak, it is 7:34 a.m. in Bogotá. In this sense, we do not mean that four o'clock in the morning in Bogotá is the equivalent time in Kodiak, but that the 120th degree of the ecliptic (00° Leo) ascends at 4:33 a.m. Bogotá and 4:33 a.m. Kodiak. That is the time at which, at those latitudes at that time of year, that degree will begin to



Figure 2B

It will not be until **7:37 a.m.** only, that is, until three hours and a little over six minutes have elapsed, not two, that the following segment, Virgo, will have begun to rise, because that would be the amount of time we would have to wait if the sun were to be occupying 00^o Leo at that latitude (Kodiak).

These observations at the different latitudes of the globe yield the following table prepared by us:

			NO	RTHERN HEMI	SPHERE			
SEASON		NAME / SIGN	SYMBOL	LAT 05º 00'	LAT 35º 00'	LAT 45º 00'	LAT 55º 00'	ASCENSION
	ECLIPTIC			Bogotá D.C.	Las Vegas	Minneapolis	Nagai, AK	
	SEGMENT			DILATION	DILATION	DILATION	DILATION	
SPRING	008 - 308	ARIES	r	2 hr	1 hr 15 min	1 hr	45 min	SHORT
SPRING	30º - 60º	TAURUS	ŏ	2 hr	1 hr 45 min	1 hr 15 min	1 hr	SHORT
SPRING	60º - 90º	GEMINI	П	2 hr	2 hr	1 hr 50 min	1 hr 40 min	SHORT
SUMMER	90º - 120º	CANCER	8	2 hr	2 hr 15 min	2 hr 30 min	2 hr 35 min	LONG
SUMMER	120º - 150º	LEO	R	2 hr	2 hr 25 min	2 hr 40 min	3 hr 00 min	LONG
SUMMER	150º - 180º	VIRGO	11)	2 hr	2 hr 30 min	2 hr 45 min	3 hr 05 min	LONG
FALL	180 - 210º	LIBRA	Ω	2 hr	2 hr 30 min	2 hr 45 min	3 hr 05 min	LONG
FALL	210º - 240º	SCORPIO	η,	2 hr	2 hr 25 min	2 hr 40 min	3 hr 00 min	LONG
FALL	240º - 270º	SAGITTARIUS	1	2 hr	2 hr 15 min	2 hr 30 min	2 hr 35 min	LONG
WINTER	270º - 300º	CAPRICORN	б	2 hr	2 hr	1 hr 50 min	1 hr 40 min	SHORT
WINTER	300º - 330º	AQUARIUS	*	2 hr	1 hr 45 min	1 hr 15 min	1 hr	SHORT
WINTER	330º - 360º	PISCES	ж	2 hr	1 hr 15 min	1 hr	45 min	SHORT
	SOUTHERN HEMISPHERE							
	ECLIPTIC SEGMENT	NAME / SIGN	SYMBOL	LAT 05º 00'	LAT 35º 00'	LAT 45º 00'	LAT 55º 00'	ASCENSION
SEASON				Bogotá D.C.	Buenos Aires	New Zealand	Ushuaia, Arg	
				DILATION	DILATION	DILATION	DILATION	
FALL	008 - 308	ARIES	r	2 hr	2 hr 30 min	2 hr 45 min	3 hr 05 min	LONG
FALL	30º - 60º	TAURUS	ð	2 hr	2 hr 25 min	2 hr 40 min	3 hr 00 min	LONG
FALL	60º - 90º	GEMINI	П	2 hr	2 hr 15 min	2 hr 30 min	2 hr 35 min	LONG
WINTER	90º - 120º	CANCER	e	2 hr	2 hr	1 hr 50 min	1 hr 40 min	SHORT
WINTER	120º - 150º	LEO	r	2 hr	1 hr 45 min	1 hr 15 min	1 hr	SHORT
WINTER	150º - 180º	VIRGO	Ng	2 hr	1 hr 15 min	1 hr	45 min	SHORT
SPRING	180 - 210º	LIBRA	Ω	2 hr	1 hr 15 min	1 hr	45 min	SHORT
SPRING	210º - 240º	SCORPIO	ղ,	2 hr	1 hr 45 min	1 hr 15 min	1 hr	SHORT
SPRING	240º - 270º	SAGITTARIUS	1	2 hr	2 hr	1 hr 50 min	1 hr 40 min	SHORT
SUMMER	270º - 300º	CAPRICORN	2	2 hr	2 hr 15 min	2 hr 30 min	2 hr 35 min	LONG
SUMMER	300º - 330º	AQUARIUS	**	2 hr	2 hr 25 min	2 hr 40 min	3 hr 00 min	LONG

Table 1

If we were to ask ourselves why it took 3hr 6min for the entire segment or sign of Leo to cross the horizon in the example presented for Kodiak, Alaska, the short answer would be as follows. Because it constitutes roughly one third (1/3) of the amount of time that said segment of the ecliptic accumulates from the time of its ascension to the time of its culmination on any day of the year at that latitude, which is the same as saying that this amount of time constitutes roughly one third (1/3) of the amount of time that the sun accumulates from the time of its ascension to the time of its culmination when it occupies any degree of that segment of the ecliptic (during midsummer) at that latitude, that is, the average one third (1/3) of the amount of time it takes for the sun to travel from the horizon to the midheaven during the midsummer (July 20 - August 20, Leo) at that latitude (Kodiak).

The minimum amount of time at said latitude (Kodiak) would be 2hr 47min or 167 minutes (i.e. one third of 501 minutes or 8,3 hours). The maximum amount of time at said latitude (Kodiak) would be 3hr 26min or 206 minutes (i.e. one third of 618 minutes or of 10,3 hours). The minimum time referred to is produced when the sun occupies 29° Leo, whereas the maximum time is produced when it occupies 00° Leo, for at 29° Leo begins the last phase of the summer (00° Virgo). Why then does the sign of Virgo take longer than the sign of Leo to rise above the horizon? That is, if the sun's time of culmination during its stay in Virgo is less than the sun's time of culmination during its stay in Leo, why does Virgo continue to ascend slower than Leo? In other words, if the days will be shorter from now on, what is happening? We will understand why in the explanation that follows.

There is a time record implicit in the short answer provided above that we may not realise and that very, very few astrologists recognise: while time is elapsing for one sign, or in this case Virgo, time is *still elapsing* for the other signs (or for the rest of the degrees of the ecliptic) simultaneously. In other words, time is still elapsing for Leo, a segment of the ecliptic that has not culminated yet. Let us explain this by answering the original question in another way. If we were to ask again why we would have to wait a little over three hours (in Kodiak) for the entire segment of Leo to rise (or why that is about a third of the time it takes for the sun to travel from the horizon to the midheaven when it occupies that sign), we can also answer the following. Although the answer is as simple as the short answer, it may take longer to explain (as the sign of Leo to rise in the example).

Just as each of the twelve signs or segments of the ecliptic has a specific speed or time of oblique ascension at a given latitude, each of the thirty degrees of each sign as well, which is the same as saying that each three hundred and

sixty degrees of the ecliptic has its own specific speed or time of ascension at a given latitude. (It is because of the former fact that the latter fact can be asserted or otherwise established.) Should we pick, say, the 120th degree of the ecliptic, which is 00° Leo, we will confirm that it takes 6 minutes and 2 seconds for it to cross the horizon. Should we now pick the following degree of the same sign, we would have confirmed that it takes slightly more than it took the previous degree (6min 4s). The amount of time will continue to increase as we continue to select the following degrees, for we know that the following segments of the

ecliptic, Virgo (150°-180°) and Libra (180°-210°), spend an even greater amount of time than Leo (120°-150°) to cross the horizon in the northern hemisphere (due to the fact that time is still elapsing or running for the preceding signs, as noted above, although we will discuss this in detail later when we reveal the Placidus method of astrographic measurement as the most natural and/or accurate of all for that very reason). However, we can also measure the entire amount of time Leo spends crossing the horizon (3hr 6min) and divide that amount into thirty and determine thereby the average amount of time of ascension of each Leo degree: 6.2 minutes.13

Why would this be true? Because that is exactly the same average amount of time that the sun would have spent in crossing the horizon if it had occupied any Leo degree (if it had been the midsummer at said latitude). It is because we know the ascensional times of the sun - according to its ecliptic position - that we know the ascensional times of each degree (i.e. point of the ecliptic).

¹³ For example, if in the above table we see that Virgo takes 3hr 05min to cross the horizon at 55° N, then we know that each degree of Virgo and Libra would take 6min on average to cross the horizon (185min / 30° = 6 min), just as each degree of Aries and Pisces would take 2.5min on average (35min / 30° = 2.5min). Leo and Cancer, on the other hand, would ascend one degree every 4.8 and 5.8 minutes on average,

respectively. Thus, from Cancer to Leo and from Leo to Virgo, as from Virgo to Libra, the time of the zodiacal degrees will pass slower each time, that is, from the point of view of that latitude, the sun would appear to slow down or move slower each time during its passage through those segments of the ecliptic.

And as we measure the times of ascension, we can measure too the times of culmination, that is, the amount of time each degree and/or segment of the ecliptic spends completing the entire half of the diurnal arc. 00° Leo, for example, takes exactly 501 (8hr 21min) minutes to culminate at Kodiak at any time of the year of any year, for that is exactly the amount of time that the sun would have accumulated from the time of its ascension to the time of its culmination if it had occupied said degree at that latitude (i.e. if it had been the beginning of midsummer or 22 July, in the case of year 2024).

The entire segment of Leo, however, would have taken — as we should have guessed — less time to culminate, for when the first degrees of Leo commenced crossing the MC, the last of Libra and the first of Scorpio (when time begins to pick up) began to cross the ASC or horizon. Thus, once Leo has crossed the horizon (when all of its thirty degrees appear above it), it takes it 438 minutes or 7hr 18min to complete half of the diurnal arc, that is, to travel from the horizon to the midheaven (when all of its thirty degrees appear past it). Should we divide that amount of time into three equal parts, we would know the amount of time it takes the sign of Leo — as a whole — to complete one third of the diurnal semi arc (or one sixth of the diurnal arc): 146 minutes or 2hr 26min.

Because of what we have explained earlier, we can also divide the amount of time it takes its tip or head only (00°) to complete the same journey, that is, the first sixth of the diurnal arc (or one third of the diurnal semi arc), and that is by dividing its culmination time (501 minutes or 8hr 21min) into three equal parts, which gives us 167 minutes or 2hr 47min. Expounded differently: 00° Leo will always take the same amount of time (167 minutes) to complete one third (1/3) of the diurnal arc at Kodiak, Alaska, for that is the time the sun took to complete said journey the first time it occupied said degree at said location ever since the Earth's tilt has been twenty three degrees¹⁴, and will continue to be so as long as the tilt remains the same, *in saecula saeculorum* (herein lies the basis or foundation of **tropical**, not sidereal, astrology).

A	AVERAGE RATE OF ASCENSION OF EACH ZODIACAL DEGREE ACCORDING TO LATITUDE						
SIGN	SYMBOL	LATITUDE	LATITUDE	LATITUDE	LATITUDE	LATITUDE	LATITUDE
		35° N	35º S	45° N	45° S	55º N	55° S
ARIES	ന	2,5 min = 1°	5 min = 1º	2 min = 1°	5,5 min = 1°	1,5 min = 1°	6,1 min = 1º
TAURUS	ŏ	3,5 min = 1º	4,8 min = 1º	3,5 min = 1º	5,3 min = 1º	2 min = 1º	6 min = 1º
GEMINI	П	4 min - 1°	4,5 min - 1°	3,6 min = 1º	5 min - 1°	3,3 min - 1º	5,1 min = 1º
CANCER	e	4,5 min = 1º	4 min = 1º	5 min = 1º	3,6 min = 1º	5,1 min = 1º	3,3 min = 1º
LEO	્ર	4,8 min = 1°	3,5 min = 1°	5,3 min = 1º	3,5 min = 1º	6 min = 1º	2 min = 1º
VIRGO	Πž	5 min - 1°	2,5 min = 1°	5,5 min = 1°	2 min = 1°	6,1 min = 1º	1,5 min = 1º
LIBRA	Ω	5 min = 1º	2,5 min = 1º	5,5 min = 1º	2 min = 1º	6,1 min = 1º	1,5 min = 1º
SCORPIO	η,	4,8 min = 1º	3,5 min = 1º	5,3 min = 1º	3,5 min = 1º	6 min = 1º	2 min = 1º
SAGITTARIUS	+	4,5 min = 1º	4 min = 1º	5 min = 1º	3,6 min = 1º	5,1 min = 1º	3,3 min = 1º
CAPRICORN	б	4 min = 1º	4,5 min = 1º	3,6 min = 1º	5 min = 1º	3,3 min = 1º	5,1 min = 1º
AQUARIUS	*	3,5 min = 1°	4,8 min = 1°	2,5 min - 1°	5,3 min = 1°	2 min = 1º	6 min = 1º
PISCES	×	2,5 min = 1º	5 min = 1º	2 min = 1º	5,5 min = 1º	1,5 min = 1º	6,1 min = 1º

Table 2

Because the signs and their degrees carry with them the *footprints of the sun*, this will remain true without regard or concern for any month of the year of any year at that latitude (Kodiak), that is, without regard or concern for the actual ecliptic longitude of the sun at the time of the measurement at a certain latitude. One may conduct the same exercise with any other segment or degree of the ecliptic at any other latitude and would have confirmed the same — beautiful or elegant — truth: time dilation, or **relativity**.

A truth should now be made explicit, although it was alluded to earlier (when we began to explain the long, not the short, answer to the original question). Whatever

¹⁴ Although the sun no longer occupies that segment or degree, it has left its mark there in the same way that it has left its mark on the time zones, even if a particular time zone does not face the sun at one time or another in the Earth's rotation. Although both are entirely imaginary, they are nonetheless a reality whose effects we experience on a daily

basis. Just as the time zones will remain the same without regard for the month or year, so will the times of oblique ascension. We have based our lives on the position of the sun relative to Earth (tropical focus), not on the position of the stars relative to Earth (sidereal focus).

degree or point of the ecliptic whose time we chose to measure, the rest of the times of the rest of the degrees will not cease to elapse for that reason (i.e. because of our choice). Time will continue to elapse for the rest of the circumference at all times, which is why the practise according to which one calculates the intermediate cusps of a chart – during astrographical construction – based upon the time it took for one degree only of the ecliptic to move from the horizon to the midheaven is, by all accounts, an error (or an abbreviation at best), as we will demonstrate in pertinent part, for the degrees that occupy the intermediate cusps of a chart that has been measured naturally, that is, according to the footprints of the sun (inconveniently known as Placidus), would reflect the true amount of time that those particular degrees would have spent in completing their first and second sixths of the diurnal arc. This would be the differentiated, discerned, or **proper** measurement of the intermediate cusps (because the passage of the sun has so decided), rather than the fictitious or abbreviated measurement (Alcabitius, Koch).

Although it may seem strange or **counterintuitive**, in his book *The Biggest Ideas in the Universe: Space, Time, and Motion* (2022), the American theoretical physicist and cosmologist SEAN CARROLL explains the fundamental principle that makes the above possible. This principle is none other than **spacetime**, and he explains it as follows (pp. 119-120) (our description from an astrological or astrological point of view appears in the brackets):

"In a spacetime diagram [i.e. birthchart], an object [i.e. any one point of the ecliptic, or any one degree] will not be represented by a single dot identifying its position but by a **world line** [i.e. continuous or uninterrupted progression] stretching from the past to the future [i.e. from the ASC to the MC], signifying its various positions [i.e. times] at different moments. Your body [i.e. any one degree] takes up a three-dimensional volume in space at any one moment, but your life's history [i.e. history of any one degree] describes a four-dimensional worm extending through spacetime."

And later notes (pp. 143-144):

"[...] But, says relativity, just as the distance — as the crow flies — is generally different from the distance you *actually travel* between two points in space, the duration of time that you experience along your world line generally *won't be the same* as the universal coordinate time. You [i.e. any one degree] experience an amount of time that could be measured by a clock that you [i.e. that degree or all degrees] *carry with you* on the journey. This is the **proper time** [i.e. natural time or natural solar time] along the path."

This is why relativity is foreign not to astrology. (Without recognising such a reality, we could not fairly calculate the intermediate cusps, as we will show later.) It is worth asking, therefore, whether the astronomer and/or physicist has ever divided the Earth's ecliptic into twelve segments of the same length — as suggested by the twelve months of the year — in order to determine whether the observations they can make about the sun during its passage through each ecliptic sector can continue to be made **even when** the sun has left said sector (i.e. sign). Say, measuring the speed or time of ascension of one of said segments of the ecliptic during a time when the sun is not occupying it, which is what tropical astrology does without the need to confuse the ecliptic segments with the object from which they inherited their names (i.e. the constellations).

Until now, for the astronomer and/or physicist, the "Leo segment of the ecliptic", for example, would ascend slowly in the northern hemisphere only when the sun occupies that space of the circumference (June–July). Thanks to tropical astrology (or tropical astrophysics, if you will) we know that it is possible to not only divide the ecliptic into the same number of segments into which we have divided the year — and that each segment has a number of properties determined by sunlight in combination with other sources of light energies — but also that this or any other segment will always spend the same amount of time to rise above the horizon, that is, the same amount of time

as it took when the sun occupied that space (as if it were still occupying it), whether in the northern or the southern hemisphere.

We are now aware, therefore, of a third form of relativity (in addition to velocity and gravity) and confirm, yet again, that time and space do constitute a single dimension. What would this third form of time dilation be? The tilt of the axis of rotation of a celestial object relative to the plane of its orbit (i.e. the tilt of frames of reference). Although velocity remains a variable (the speed at which we spin on our axis at the equator versus at the poles or near the poles is slightly different due to the circumference of the Earth at the equator versus at the poles), it is not the cause. If the Earth were to, say, lose its tilt, all signs would invest the same amount of time to rise above the horizon at both the equator and the poles, even though rotational speeds would be different. Should we, however, were to corroborate that this is not the case, gravity (general theory of relativity) would or could be at play as well. We have explored this possibility (theoretically) in Appendix 2.

RELATIVITY ACCORIDING TO QUADRANT HOUSE SYSTEMS

Let us examine relativity from different vantage point, that of house measurement, not the ecliptic (although it will still be part of the observations). Again, special relativity teaches that time is not absolute, as we were able to see in the examples presented before by using a different explanation than gravity and velocity: the observer's point of view relative to the plane of the ecliptic¹⁵. An identical effect is, nevertheless, produced: the more profound the dilation of time (greater time elapsed), the more profound the contraction of the lengths (less space), and vice versa.



Above is a graph of length contraction (or Lorentz transformations), where coordinates X' and cT' are that of an observer at rest or without motion, whereas coordinates X and cT that of an observer in motion relative to the plane of the bar. Due to the nature of spacetime, even if the first observer were to notice or measure a length (l), the second observer would notice or measure a smaller length ($l/\gamma < l$). An identical phenomenon is verified in the astrographic regions (physical magnitudes) at latitudes far from the equator due to a different reason: the times of oblique ascension (i.e. celestial motion) due to the observer's vantage point on the globe relative to the plane of the ecliptic (as we saw in the examples presented¹⁶), which constitutes, we say again, a third form of time dilation.

¹⁵ At latitudes far from the equator the signs still spend both shorter and longer amounts of time crossing the horizon, not just shorter or just longer. With "velocity" we are referring to the rotation of the Earth, that is, the speed at which it rotates in a certain direction.

¹⁶ Before continuing, we recommend the reader to become acquainted with this phenomenon visually (particularly simple and amusing threedimensional explanation created by Minute Physics): <u>https://www.youtube.com/watch?v=-NN_m2yKAAk</u>



GIF produced by the mathematical painter Thierry Dugnolle

Above appears another way of presenting or showing the same truth. These wheels and their spokes — which bear close resemblance to nothing less than the hour lines of an **astrolabe** — constitute a visual explanation of the consequences of special relativity. Because speed at the top is particularly higher than at the bottom, the top is shown contracted, whereas the bottom is not, as speed there is zero. *The same is true in astrographical terms because of the tilt in one of the frames of reference or observation*, not of velocity (although it is a variable), so that the radii of an astrograph erected at the equator would be temporally equidistant, whereas those of an astrograph erected far from the equator would exhibit either a much shorter or a much longer time length pursuant to the ecliptic segment in question. This, we repeat, is also a **relativistic effect**.

Can quadrant house systems recognise this seemingly indissoluble relationship between space and time? Let us return to Figure 2A. There we see that, at Kodiak (Alaska), the sign of Leo takes three hours to cross the horizon (one hour longer than at the equator). According to Lorentz transformations and/or relativity, we see the houses over which Leo (more time elapsed) looms shrink or contract

(they appear collapse), whereas the houses that face the fast-rising signs (less time elapsed) open widely (they appear blown). The faster the sign or the segment of the ecliptic ascends, the less time elapsed within the region and the wider or the more it stretches: and vice versa, the slower the sign or segment ascends, the more time elapsed within the region and the more it shrinks or contracts¹⁷. As the Earth "needs" to complete a rotation in 24 hours "anyways", the speed or time of oblique ascension of the sign at said latitude makes it necessary to compress space "so that" the segment can travel sufficient distance in two hours (2/24) of elapsed time (i.e. to "make up time"), similar to why the Earth "needs" to rotate faster at the equator versus at the poles: because of the distance that it must travel at the equator being greater than at the poles (the circumference is wider at the equator versus at the poles), where we rotate more slowly.

This decides the amount or number of ecliptic or zodiacal degrees a region of the horizon is able to absorb or "capture" within two hours. In other words, it explains why some houses measure less or more time than others (should we recognise the speed or times of oblique ascension of all zodiacal degrees) or why the sun and other celestial bodies spend more or less time as tenants in some regions of the chart versus others. At, say, 60° N, three or four signs (over ninety degrees ecliptic) may traverse through the first sixth of the diurnal arc around midnight (in our example's date), whereas only one (thirty degrees ecliptic) in two hours around seven at night (in our example's date), and vice versa in the southern hemisphere. In the former case, a house may hold or contain three or four fast rising signs (in which case one of them will appear intercepted or hidden, that is, no cusp will preside),

https://philarchive.org/rec/BUSJAD. DOI 10.5281/zenodo.10463824.

¹⁷ We cannot help but refer to American physicist John Wheeler's famous description of the theory of relativity: "Spacetime [horizon] tells matter [the sun or ecliptic segments] how to move, and matter [the sun or ecliptic segments] tells spacetime [horizon] how to curve." This description, however, was coined in the context of a different variable:

gravity. Because we have paraphrased the description inside the brackets by mentioning the signs, see the molecular theory of the ecliptic in the *Appendix* of an essay published in the PhilPapers research repository:

whereas in the latter, a single slow rising sign may govern up to three houses (in which case one of them would appear intercepted or hidden, that is, these two cusps would not appear presided by two different signs)¹⁸. In the former case, we are before a *heterogeneous* region (multiple influences), whereas in the latter before a *homogeneous* one (single influence)¹⁹.



Time dilation and/or length contraction²⁰

¹⁸ Since long-ascending or slow-ascending signs take longer to rise above the horizon, they are more likely to occupy two cusps in the astrography or birth map (the same planet presiding over two houses, i.e., ruling two different sets of affairs in the native's life). Short rising signs, therefore, are more likely to be intercepted ('trapped' or 'captured' or 'hidden') within a house.

¹⁹ By reflecting reality more accurately than a non-quadrant chart, such diagrams begin to be compatible with genetic facts about the human species (i.e. multiple combinations). It is, for example, possible to establish *homogeneity* or *heterogeneity types 1-6*. See "The Astrological Delineation Procedure", *The Mountain Astrologist*, No. 232 (September 2024), pp. 76-83. See too an as yet unpublished essay: *Astrogenesis*. *Astrology from the genetic point of view, and vice versa*, where we analyse a number of combinations of the "astrographical code" as high as the number of combinations of the genetic code.

²⁰ The above observations regarding house cusps can of course be verified at all diametrically opposite ends of the astrography. Hence the ecliptic degree of one cusp is exactly the same as that of the opposite cusp, but the sign (ecliptic segment) diametrically opposite, for these are

Because only quadrant house calculations divide the diurnal arc, in addition to dividing the ecliptic, only quadrant house measurements begin to reflect the relationship between space and time, especially as they begin to concern themselves with better distinguishing the intermediate cusps. *Can they all do it properly?*

RELATIVITY ACCORDING TO THE PLACIDEAN MEASUREMENT

> Placidus, Alcabitius, Koch

Which of the methods of house measurement would be able to reflect — this third form of — relativity to the fullest extent?²¹ We know that no house system that would not establish two great circles in order to calculate the intermediate cusps can ever present itself as a candidate, which is why the sign houses, the equal houses, and the houses of Porphyry are discarded, as they ignore the relationship of time with space. Quadrant house systems such as Alcabitius²² (10th century), Campanus²³ (13th century), Regiomontanus²⁴ (15th century), and Koch²⁵ (20th century), on the other hand, would become better choices, as they begin to recognise the necessity of distinguishing or

diametrically opposite coordinates. The points of the nocturnal arc are a consequence of the diurnal arc, always.

²¹ The worst mistake of an astrologist, we believe, is to think that he is not obliged or called upon to recognise or respect the laws of physics. This does not mean that he should not do or practise astrology because physics has not proved its validity. It does mean that this should be all the more reason not to contradict confirmed truths.

²² The house system can be traced back to the Arab astrologist, astronomer, and mathematician Alcabitius (died 967).

²³ The house system is named after the Italian mathematician Campanus of Novara (1220-1296).

²⁴ The house system is named after the German mathematician, astronomer, and astrologist Regiomontanus (Johannes Müller of Königsberg, 1436-1476), but was developed by the Spanish Jewish astrologist Abraham ben Meir ibn Ezra (1092-1167), a prominent Andalusian Jewish intellectual (mathematician, astronomer, and astrologist, as well as poet, translator, and grammarian).

²⁵ The house system is named after the German astrologist Walter Koch (1895-1970), but was actually invented by Fiedrich Zanzinger (1913-1967) and Heinz Specht (1925-2017).

identifying the intermediate cusps, that is, the first and second sixths of the diurnal arc, although only Alcabitius and Koch are concerned with accomplishing this in accordance with or based on time, unlike Campanus and Regiomontanus, and therein lies the resemblance of both (especially Alcabitius) to Placidus²⁶. Let us see, then, how they would go about dividing the diurnal arc.

We can see in Figure 4A (Placidus) that neither the degree of the ascending sign (00° Leo) nor the degree of the culminating sign (27° Pisces) are different in relation to the same points depicted in Figures 4B (Alcabitius) and 4C (Koch) for the same time and place.



Figure 4B – Alcabitius



Figure 4A – Placidus



Figure 1C – Koch

method of calculation and that he is drawing on him, Ptolemy was describing primary directions, which, of course, could be considered exactly the same, but for different purposes (prediction versus horoscope construction).

²⁶ Apparently developed by the astronomer, mathematician, cartographer, and astrologist Giovani Antonio Magini (17th century) and popularised by the equally brilliant Placidus of Titis. Although there are references to Placidus claiming that it was Ptolemy who devised this

> Methodological Description

All three calculations, Placidus, Alcabitius, and Koch, like (almost) any other, have recognised with same accuracy the place on the horizon that 00° Leo and 27° Pisces occupy at 4:33 a.m. in Kodiak on that day of the year. It is also possible to say that all three calculations have recognised the amount of time it would have taken the sun to travel one third of the diurnal arc (3/6) on that day at that place, or in having risen above the horizon until having culminated in the midheaven, if its ecliptic longitude (λ) had been 357° (27^o Pisces)²⁷, which is the same as saying: if it had been winter instead of spring. (Let us not forget that ascensional times are decided by the sun just as time zones are decided too by it.) This time is 5hr 52min. However, this is not how each of the three systems established the intermediate cusps, that is, how each divided the diurnal semi-arc or distinguished the segments of the horizon contained between the ASC and the MC. How did they do this in each case? Should you need to read the following paragraphs several times while referring to the figures above and also to illustration no. 4, do not become frustrated, as this would be necessary.

The **Alcabitius** calculation will divide, into three equal parts, the amount of time that the sun would have spent travelling half of the diurnal arc (3/6) *if it had occupied oo*^o *Leo of the ecliptic.* Should the result of said division be *A*, then *A* time *after* the birth hour a new degree will loom over the tenth house cusp which will be assigned to the second region of the diurnal arc, that is, to the eleventh house cusp (11). Should we advance the same amount of time once more (*A x 2*), a new degree will again appear on the tenth house cusp which will be assigned to the first region of the diurnal arc, that is, to the first region of the diurnal arc, that is, to the first region of the diurnal arc, that is, to the first region of the diurnal arc, that is, to the cusp of the twelfth house (12).

Should we advance the same amount of time for the third and last time ($A \times 3$), a new degree would again appear on the tenth house cusp, which is the designated degree of the beginning of the diurnal arc, that is, of the first house cusp (1).

The **Koch** calculation will divide, into three equal parts, the amount of time that the sun would have spent travelling half of the diurnal arc (3/6) *if it had occupied 27° Pisces of the ecliptic*. Should the result of said division be *A*, then *A* time *before* the birth hour a new degree will loom over the horizon which will be assigned to the cusp of the first region of the diurnal arc, that is, the cusp of the twelfth house (12). Should we go back the same amount of time once more (*A x 2*), a new degree will again appear at the horizon which will be assigned to the second region of the diurnal arc, that is, to the cusp of the eleventh house (11). Should we go back the same amount of time (*A x 3*), a new degree would again appear at the horizon, which is the designated degree of the third region of the diurnal arc, that is, of the cusp of the tenth (10).

The **Placidus** calculation, in turn, would divide, into three equal parts, the amount of time that the sun would have spent travelling half of the diurnal arc (3/6) *if it had occupied, as well, 26° Gemini and 7° Taurus of the ecliptic.* Should the result of the first division (time of 26° Gemini) be *A*, then *A* time *after* 26° Gemini has crossed the horizon, the cusp of the twelfth house (12) will be marked (1/3). Should the result of the second division (time of 7° Taurus) be *B*, then *B x 2* time *after* 7° Taurus has crossed the horizon, the cusp of the eleventh region (11) will be marked (2/3). Should the result of a third division (the time of 27° Pisces) be *C*, then *C x 3* time *after*, the cusp (3/3) of the tenth house (10) will be marked.²⁸

²⁷ All quadrant house systems respect this reality for the ASC and MC degrees, although they have long ignored it for all degrees contained between those two points for reasons of convenience and/or dexterity.

See Holden, Ralph (1977). *The Elements of House Division*. Raven. pp. 32-38.

²⁸ But this last amount of time would be recognised by all three methods or (almost) all methods of house division, from which follows the

DISCUSSION

Placidus reveals indeed that the sun, had it occupied oo^o of Leo, would have culminated 501 minutes or 8hr 21min later in said place, as Alcabitius also reflects, from which we can appreciate their resemblance, unlike to Koch, which way of revealing the times of the intermediate cusps is based upon *regression*, not *progression*, that is, upon the division, into three equal parts, of the time that the sun would have taken to culminate if it had occupied 27^o Pisces (MC degree), not oo^o Leo (ASC degree). Let us discuss the **three results** in detail.

The Alcabitius method of house measurement divided the natural time of culmination of 00° Leo (8hr 21min) into three equal parts (167 minutes or 2hr 47min) and therefore indicates that the intermediate cusps are 21° Gemini and 11º Taurus. Koch's method, on the other hand, divided the natural time of culmination of 27º Pisces (5hr 52min) into three equal parts (1hr 58min) and therefore indicates that the intermediate cusps are the 09° Cancer and 09° Gemini. Placidus, in turn, a spatially uninterrupted and temporally simultaneous measurement of the astrographic regions, reveals these to be 26° Gemini and 7° Taurus, respectively. This is because said calculation never ceased or stopped recognising the ascensional times of the signs and their particular degrees, that is, the speed or time of ascension of each of the degrees contained between the ASC and the MC; again, simultaneously and uninterruptedly.

The essence of said discerned or differentiated measurement lies in distinguishing or otherwise recognising the first and the second sixths of the diurnal arc the same way we would have distinguished the ASC and the MC: in accordance with the natural motion of the sky, that is, to the exact amount of time it would have taken the sun to traverse both first and second sixths of the diurnal arc **if it had occupied** said two degrees of the ecliptic at said place, namely, 26° Gemini and 7° Taurus (177 minutes or 2hr 57min for the first sixth of the diurnal arc, had the sun's ecliptic longitude been 86°, that is, 26° Gemini; 150,3 or 7hr 30min for the first and second sixths of the diurnal arc, had the sun's ecliptic longitude been 37°, that is, 7° Taurus). While the Placidean calculation *discerned*, Alcabitius and Koch *distributed*, that is, assigned fictitious speeds or ascensional times to all degrees exactly after the ASC until exactly before the MC.



The Placidean (Placidus de Titis, 17th century) measurement recognises the time of oblique ascension of, also, the two degrees that constitute the two intermediate cusps — between the ASC and the MC — due to the fact that time does not stop elapsing for the rest of the signs and/or degrees (i.e. the time of ascension of any sign or degree is independent not of the time of culmination of the preceding signs or degrees, since they all have a culmination time of their own as well). Each region of that quadrant of the chart will, for that reason, measure one third (1/3) of the time it takes *for that particular point or degree* of the ecliptic to culminate (MC) after it crosses the horizon (ASC). Because every zodiacal or ecliptic degree has an ascensional time of its own, each intermediate cusp represents the true

observations made in *Appendix D* and whose conclusion we can already suspect by asking the following question: if all methods recognise the true time for the ASC and MC, why not for the intermediate cusps? Let

us rephrase our question: if all methods calculate the ASC and the MC the same way (Placidus), why measure the rest of the astrography differently?

latitude or elevation of that ecliptic degree (i.e. the point it actually occupies on the observer's horizon), without regard or care for what value the astrologist or interpreter will attribute to that cusp (interpretation is a human exercise, not nature's).

"Placidus never ceased or stopped recognising the speed or time of ascension of each of the degrees contained between the ASC and the MC simultaneously and uninterruptedly (i.e. temporally simultaneous and spatially uninterrupted measurement)."

Such a subdivision of the diurnal arc might seem strange or counterintuitive, if not super-specialised, and the apprentice would ask us why, for they saw that the table of ascensional times originally provided in the first pages of this paper states that the time of ascension of the sign of Gemini (segment from 60° to 90° of the ecliptic) is one hour and twenty-five minutes at 55° N (Nagai, Alaska), which is a very close latitude to that of our examples (Kodiak). What this table teaches is that 85 minutes (1hr 25min) shall elapse for the sign of Gemini as a whole, that is, all the degrees that make up that segment of the ecliptic, to cross the horizon, not a particular degree of it. Because, in this case, the speed or time of ascension will increase from one sign to another (from Gemini to Cancer), if we were to distinguish the 26th degree of Gemini, for example, once this degree has crossed the horizon, a different speed or time will progressively be recorded for the successive degrees (27°, 28°, 29°). This means that we will see 00° Cancer (a sign of long or delayed ascension in the northern hemisphere) having begun its ascent before 26° Gemini has even completed the first sixth of the diurnal arc. The same measurement (simultaneous and uninterrupted) is then conducted with regard to the cusp of the second sixth of the diurnal arc or the eleventh house cusp, that is, for 7° Taurus.

The sun imposes upon us, as it imposes upon all house systems with regard to the ASC and the MC, the necessity of recognising the time under which it would rise if it were to occupy each of the 360° of the circumference simultaneously. This should not be surprising, for since the Egyptians divided the day into twenty-four hours, the rate or time of ascension of not only each sign but also of each of their degrees has been decided by it, the sun. To put it another way: we are to become aware of the fact that, while we calculate the diurnal path or trajectory of one degree of the circumference (even of one sign), time does not stop elapsing for the other degrees (nor for the other signs), which is why we are not to neglect the ascensional time of each one, even if it were to represent a mathematical challenge or difficulty now solved by software technology. Prior to such technology it was necessary to develop a table identical to the one originally provided in this document, although for each of the 360°, not each of the twelve signs (i.e. each 30°-segment), in order to learn which other degrees could occupy the other house cusps at any possible time and latitude²⁹.

Another way of understanding the above is as follows: the first sixth of the diurnal arc or the twelfth house does not measure the time that the Alcabitius calculation shows, for Cancer is not as fast as it would seem to make one believe when visualising the astrograph (i.e. it is a sign of long, not short, ascension). More, not less, time has elapsed than Alcabitius indicates. We can verify this by determining the time it takes 26° Gemini to travel the first sixth of the

²⁹ While for some this makes the Placidean calculation only seem complete, not really complete, the evidence provided here proves (because it cannot prove otherwise) that it is, for it is not mathematically biased: it holds to nothing but nature, i.e., the natural motion of the sky.

No wonder then that the Placidean calculation had its origin in precisely the primary directions described by Ptolemy (*Tetrabiblos*, III, 10), which are used by the overwhelming majority of professional astrologists.

diurnal arc: 177 minutes or 2hr 57 min. Should we conduct the same exercise trisecting only the time of 00° Leo (Alcabitius), it would have us believe that 26° Gemini travels the first sixth of the diurnal arc in 145 minutes or 2hr 25min.³⁰ This is why Figure 4B (Alcabitius) exhibits 39° ecliptic (9° of Gemini and 30° of Cancer) within that region, while Figure 4A (Placidus) exhibits 34° ecliptic (4° of Gemini and 30° of Cancer).

If the Placidean calculation proves a smaller number of degrees, why do we state that this house measures *more* time? Because relativity says so: **time has elapsed slower** at that latitude under Cancer, whose degrees at 57° N of the equator (Kodiak, Alaska) rise every 5.3 minutes on average, not 4. While the Placidus measurement recognised that all degrees contained between ASC and MC, which are one hundred and twenty three, had different speeds or times of ascension, Alcabitius decided that all rose at the same speed or time, namely 4 min on average (501 minutes / 123 degrees = 4).

The true, proper, or natural length of time of an astrographic region at the equator versus far from the equator can be represented by the Lorentz transformations. Please return to **Graph 1**. What said graph establishes is that the length of time measured by the observer "at the equator" (whose coordinates are cT and X) was, say, **2hr o5min**, while the length of time measured by the observer "far from the equator" (whose coordinates are cT and X) was, say, **2hr o5min**, while the length of time measured by the observer "far from the equator" (whose coordinates are cT and X) was **3hr o5min**. The time coordinates have separated from each other for the observer far from the equator due to both the rotation of the Earth (velocity or centrifugal

force) and the angle from which he observes the sky (reference frame), due to the Earth's tilt.

We recommend to look again at the twelfth region of the birthchart in Figure 4A versus Figure 4B, and Graph 1 (Lorentz).

INTERPRETATIVE IMPLICATIONS

We observe, in the example presented, a difference of 9° in relation to the first sixth of the diurnal arc and 8° in relation to the second sixth of the diurnal arc. These differences may become smaller depending on the speed or time of ascension of the segment of the ecliptic in question and on latitude. What is certain, however, is that between the two methods, as also between Placidus and any other method, the same astrographic region (i.e. house) may shed or change of celestial influence, that is, the governing planet may vary, as the sign looming over the cusp would have varied as well. Take, for example, a map erected for 3:42 p.m. on April 1, 2024 in New York. While Placidus would show that the degree of the ecliptic looming over the twelfth house cusp is 01° Leo (as the sun would have revealed), Alcabitius, on the other hand, would have us believe that it is 26° Cancer (a sign naturally ruled by the moon).³¹

For these reasons, while in Figure 4A the Placidean formula reveals that the sign of Leo presides almost entirely over the first two houses, the Alcabitius formula shows a difference of 6° compared to Placidus with regard to the second region (see Figure 4B), which instead of opening with 01° of the Virgo segment, appears to open with 07° of the same sign,

³⁰ The cusp of the eleventh house is a degree which, in itself, has no particular significance in Alcabitius mathematics. It is simply the degree that the MC occupied when the ascending degree of the chart in question (00° of Leo) had travelled the first sixth of the time it will take to reach the MC (i.e. when it has travelled 167 minutes or 2 h 47 min out of a total of 501 or 8 h 21 min). The same bias or error occurs on the twelfth house cusp (second sixth of the diurnal arc).

³¹ One thing is clear. If you consider valid the philosophy that we should not measure the speed or time of oblique ascension of all the degrees contained between the ASC and the MC but only that of the ASC, you may use the same argument against Placidus and in favour of Alcabitius. However, neither the reader nor we need to dwell on the effects of the moon versus the effects of the sun in order to demonstrate how our diagnosis of that region of the birth map would change when we use one method of house measurement or the other.

that is, it reflects an inaccurate amount of Leo's influence being exerted over the second region, in the same way that it subtracts time from the fifth and eleventh houses: these should present more, not less, zodiacal degrees contained within them, which decides the **true influence** that the planets ruling these signs exert over said regions.

Both discrepancies are due to the fact that Alcabitius, unlike Placidus, holds to the ascending degree (as Koch to the culminating one), rather than to none in particular or to all simultaneously, that is, without bias (for we, not nature, are the observers). To cling or hold to or 'worship' any particular degree is unnecessary when the reason for this (abbreviating) has disappeared. (As laws carry with them the social spirit that made them law, so too house measurement methods carry with them the instrumental reasons that made them preferred, and, like the law, these methods can too be applied blindly, that is, in ignorance of their spirit or *«raison d'être»*.)

There are more examples in light of which we can verify that relativity applies, insistently so, to astrology. Consider the **relativity of aspectual relationships** between celestial bodies placed in signs of short or long ascension at latitudes beyond 45° N or S, a relativistic effect according to which sextiles (60°) can behave or have the effect of a quadrature (90°), while quadratures (90°) can behave or have the effect of a sextile (60°), and trines (120°) of quadratures (90°) when occupying signs of short ascension. While this form of relativity was observed by Ptolemy in the second century as well as by William Lilly in the seventeenth century, the American astrologist and (retired) psychiatrist

³² If this is so, why should we recognise such a reality (spacetime) for the ASC and MC only, not also for the intermediate cusps? We believe that only an instrumental motive or one of convenience, not conscience or reason, could justify such a particularly biased or willfully blind exercise, for we know that the foundation of tropical astrology is the footsteps of the sun, that is, the position of that body on the ecliptic throughout the day of every day of the year.

Anthony Louis explains it in a particularly simple way in *Appendix C* of this paper.

CONCLUSIONS

• The amount of time it takes for any one sign or degree of the circumference to rise over or ascend above the horizon is independent not of the amount of time it takes for the preceding signs or degrees to culminate due to the fact that time **does not stop elapsing** for the rest of the signs and/or degrees simultaneously.32 Each region of that quadrant of the chart will, for that reason, measure one third (1/3) of the time it takes for that particular point or degree of the ecliptic to culminate (MC) after it crosses the horizon (ASC). Because every zodiacal or ecliptic degree has an ascensional time of its own, each intermediate cusp represents the true declination of that ecliptic degree (i.e. the point it actually occupies on the observer's horizon). The Placidus method of measuring the houses of the chart allows us to calculate the **proper time** of each ecliptic degree in its journey from the ASC to the MC and from the MC to the DES according to spacetime displacement (i.e. not exclusively temporal or exclusively spatial). It thus reveals the true positions of the objects in the sky, for a chart is a spacetime diagram, not a spatial (Regiomontanus method) or temporal (Alcabitius, Koch methods) one alone. • Therefore, while the Alcabitius and Koch calculations of the regions would tell us that time is absolute (contrary to relativity), the Placidus calculation would show that it is relative (compatible with relativity)33. • Placidean houses can be renamed as natural, solar, spatiotemporal, relative, or Einsteinian houses, it being a measurement inherently

³³ Without presenting, at the same time, errors common to the rest of the quadrant house systems. Among them, that the ASC and/or MC do not coincide with their corresponding house cusp (e.g. meridian houses, equal houses, Morian houses); that the houses are not exactly opposite each other (Knegt); that it does not reflect the planetary phases accurately or intercepted signs or the heterogeneity of an astrographic region (any not based on time); and so on.

relativistic. • Only when we employ a method that can faithfully reflect the reality of the heavens can astrologists be **tested** in relation to their interpretative skills in the realm of mundane, natal, and/or horary astrology. (Just as we will not test the surgeon's skill after having altered the order of the organs in the human body, neither will we test the astrologist's after having altered the positions of the heavens.) This is especially true if we were to remember that there are no trigonometric properties left to be discovered on the sphere (only biophysical ones³⁴). • To say that we practise tropical astrology when we are willing to disregard the displacement of the sun every day of the year at every latitude for reasons other than instrumental or expediency may be considered **contradictive**. If we are to claim that astrology has explanatory power of the human species, why would we employ a method that does not recognise a truth confirmed by science? Would it be possible for us to ever conduct astrology without, say, the physical properties that make up the discipline (i.e. celestial bodies, ecliptic, horizon, etcetera)? • To date, there are two forms of time dilation (special relativity, or velocity, and general relativity, or gravity). We have shown that there is a third form: the tilt of a - moving - reference frame (Earth) relative to another - inertial - frame of reference (ecliptic, or zodiacal belt), which yields 360 different times of oblique ascension, confirmation or recognition possible during astrographical construction by the Placidean formula only and whose implications - beyond house measurements - may be gravitational in nature (see Appendix B).

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³⁴ See the Molecular Theory of the Ecliptic: <u>https://philarchive.org/rec/BUSJAD</u>. DOI 10.5281/zenodo.10463824.

³⁵ Part of this paper has been presented through literary creation as well: «The Alleged Dialogue between Galileo and Placidus (Perugia, 1640)»: <u>https://sagittariusdb.com/reflexion/placidus-houses-explained/</u>.

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APPENDICES

Appendix A Glossary

ACCELERATION. Describes the rate at which an object speeds or slows down. Does not necessarily describe velocity, as velocity describes both *speed* and *direction* of movement.

ASCENSIONAL TIMES. Each of the lengths of time by means of oblique ascension, which are unique to a sign or to a degree of a sign (i.e. to a specific segment or longitudinal point of the ecliptic, respectively).

ECLIPTIC. "The great circle that is the apparent path of the sun [...] in the course of a year [or] the projection on the celestial sphere of the orbit of the Earth around the sun. The constellations of the zodiac are arranged along the ecliptic [, but they are not the same as the signs, although the latter inherit the names of the former, since the signs are the result of the division of the ecliptic into twelve equal segments of thirty degrees each and respond to the passage of the seasons and the three phases that characterize each one]. The ecliptic is inclined 23.44° to the plane of the celestial equator, an inclination called obliquity of the ecliptic. The two points of intersection of the ecliptic and the plane mark the vernal [spring or 00° Aries] and autumnal [autumn or 00° Libra] equinoxes. In the ecliptic astronomical coordinate system, celestial longitude is measured in degrees East from the vernal equinox along the ecliptic [right ascension]. Celestial latitude is measured in degrees north (positive) or south (negative) from the ecliptic to the ecliptic poles [declination]." Britannica

FAST SIGNS OR SIGNS OF SHORT ASCENSION.

The segments of the ecliptic whose times of oblique ascension are fleeting or ephemeral from the point of view of an observer far from the equator (i.e. beyond 30° N or S).

GENERAL RELATIVITY. The second form of time dilation. It represents the extension of the consequence of special relativity, that is, relativity on a large scale, where gravity is the consequence of the curvature of space (produced by massive objects), which yields spacetime. The closer a clock is to the gravitational well or source (not force) of gravity, the slower its hands will tick or progress (less elapsed time), and vice versa, the further it is from the gravitational well, the faster its hands will tick or progress (more elapsed time). Nonetheless, it is said that an astronaut will age slower outside Earth (away from gravity) than a person on Earth (close to gravity) because the effect of speed will overcome the effect of gravity. In other words, because they move much faster than us, less time will have elapsed for them.

GRAVITY. Spacetime, or the consequence of the curvature of space produced by massive objects. It can be portrayed as the effect produced by an object placed on a sheet: it would create a depression on the surface. It is therefore not a force, but the plane of our reality.

HOROSCOPE. "The word horoscope means quite literally a time map, that is, the horoscope of an individual is in the first place not something directly associated with that person, but rather with the record in diagrammatic form of a particular event occurring at a given time. The event which the horoscope portrays is of course the positions of the bodies of our solar system, which they occupied at a certain time in history of this part of the universe. These positions are then by various mathematical means shown in their relationship to a chosen place on the Earth surface at this given time. The horoscope or birth map is thus simply a convenient tool, not in itself a thing of peculiar or mystical value. It overcomes the great difficulty which faced all ancient astrologists, that of having to make actual observations of the sky at the place and time of the person's birth. [...] The horoscope or birth map seeks to represent on a two dimensional sheet of paper the conditions existing at a particular time in the exceedingly complex three dimensional structure of which we are a part." Ralph William Holden (*The Elements of House Division*, 1977).

HOUSE CONTRACTION (OR

TRANSFORMATION). The effect produced upon the regions (i.e. houses) of the astrography by the difference in ascensional times (due to the inclination of one of the reference frames involved). The signs of rapid or short ascension (less time elapsed) will extend the length of the regions and these will appear wide open (i.e. blown). Signs of delayed or long ascension (more time elapsed) will contract the regions and these will appear to be closed in on each other (i.e. collapsed).

INCLINATION OF REFERENCE FRAMES. The third form of time dilation (i.e. apart from velocity and gravity). The intersection of two planes (or frames of reference) due to the inclination of the axis of a celestial object relative to the plane of its orbit. Said reference frames can, in this context, be considered either inertial (at rest) or moving (centrifugal force produced by the rotation of the Earth) depending on the variable to be observed or measured.³⁶

LORENTZ TRANSFORMATION OR LENGTH CONTRACTION. "Set of equations in relativity physics that relate the space and time coordinates of two systems moving at a constant velocity relative to each other. [...] Lorentz transformations formally express the relativity concepts that space and time are not absolute; that length, time, and mass depend on the relative motion of the observer; and that the speed of light in a vacuum is constant

³⁶ Should we want to discern the influence of a variable such as *gravity* on times of oblique ascension, we must ignore the *velocity* (rotation) variable, even the *tilt* variable. Should we want to discern the influence

of the variable *velocity* (rotation) on the times of oblique ascension, we must ignore the variables *tilt* and *gravity*.

and independent of the motion of the observer or the source. The equations were developed by the Dutch physicist Hendrik Antoon Lorentz in 1904. See also Galilean transformations." (Italics are mine) *Britannica*

REFERENCE FRAMES. "System of graduated lines symbolically attached to a body that serve to describe the position of points relative to the body. The position of a point on the surface of the Earth, for example, can be described by degrees of latitude, measured north and south from the Equator, and degrees of longitude, measured east and west from the great circle passing through Greenwich, England, and the poles. The reference frames used in dynamics are known as coordinate systems with axes (lines) emanating from a point known as the origin. The position of a point moving parallel to a plane (plane motion) can be described by two numbers: (1) either the distances of the point from two lines at right angles to one another on the plane (rectangular coordinates), or (2) the length of a line with one end fixed at the origin and the other end at the moving point and the angle that the line makes with a fixed axis (polar coordinates). Motion in three dimensions can be described by three rectangular coordinates or by the length of a line emanating from the origin and two angles (spherical coordinates); one of these angles is equivalent to *degrees of longitude* and the other to degrees of latitude. In all cases a line from the origin to the point is known as the position vector for the point. As the point moves, the position vector changes in both magnitude and direction, and the velocity of the point is defined in terms of these changes. Strictly speaking, Newton's laws of motion are valid only in a coordinate system at rest with respect to the "fixed" stars. Such a system is known as a Newtonian, or inertial reference, frame. The laws are also valid in any set of rigid axes moving with constant velocity and without rotation relative to the inertial frame; this concept is known as the principle of Newtonian or Galilean relativity. A coordinate system attached to the Earth is not an inertial reference frame because the Earth rotates and is accelerated with respect to the Sun. Although the solutions to most engineering problems can be obtained to a satisfactory degree of accuracy by assuming that an Earth-based reference frame is an inertial one, there are some applications in which the rotation of the Earth cannot be neglected; among these is the operation of a gyroscopic compass. (See centrifugal force; Coriolis force.)" (Italics are mine) Britannica

SLOW SIGNS OR SIGNS OF LONG ASCENSION.

The segments of the ecliptic whose times of oblique ascension are prolonged or extended from the point of view of an observer far from the equator (i.e. beyond 30° N or S).

SPACE. "Boundless, three-dimensional extent in which objects and events occur and have relative position and direction." *Britannica*

SPACETIME. "Single concept that recognizes the union of space and time, first proposed by the mathematician HERMANN MINKOWSKI in 1908 as a way to reformulate ALBERT EINSTEIN'S special theory of relativity (1905). Common intuition previously supposed no connection between space and time. Physical space was held to be a flat, three-dimensional continuum-i.e., an arrangement of all possible point locations-to which Euclidean postulates would apply. To such a spatial manifold, Cartesian coordinates seemed most naturally adapted, and straight lines could be conveniently accommodated. Time was viewed independent of space-as a separate, onedimensional continuum, completely homogeneous along its infinite extent. Any "now" in time could be regarded as an origin from which to take duration past or future to any other time instant. Uniformly moving spatial coordinate systems attached to uniform time continua represented all unaccelerated motions, the special class of so-called inertial reference frames. The universe according to this convention was called Newtonian. In a Newtonian universe, the laws of physics would be the same in all

inertial frames, so that one could not single out one as representing an absolute state of rest. In the MINKOWSKI universe, the time coordinate of one coordinate system depends on both the time and space coordinates of another relatively moving system according to a rule that forms the essential alteration required for EINSTEIN's special theory of relativity; according to EINSTEIN's theory there is no such thing as "simultaneity" at two different points of space³⁷, hence no absolute time as in the Newtonian universe. The MINKOWSKI universe, like its predecessor, contains a distinct class of inertial reference frames, but now spatial dimensions, mass, and velocities are all relative to the inertial frame of the observer, following specific laws first formulated by H.A. LORENTZ, and later forming the central rules of EINSTEIN's theory and its MINKOWSKI interpretation. Only the speed of light is the same in all inertial frames. Every set of coordinates, or particular space-time event, in such a universe is described as a "herenow" or a world point. In every inertial reference frame, all physical laws remain unchanged." Britannica

SPECIAL RELATIVITY. The first form of time dilation. The speed of light is the fundamental component of special relativity and states that the faster we move in space, the less time elapses or the more the coordinates of time stretch or separate from each other, that is, the slower time elapses; and vice versa, the slower we move in space, the less time elapses or the more the coordinates of time close in on each other, that is, the faster time elapses. It thus explains the necessarily indissoluble or inseparable relationship between time and space, which yielded the term spacetime (MINKOWSKI, 1908). Special relativity is also referred as the

³⁷ Because of the difference in the observers' points of view or reference frames, either accelerated versus at rest or tilted versus untilted (as we saw here). Only quantum entanglement could indicate the possibility of such simultaneity. Such simultaneity was proven possible in 1999 in the Canary Islands by theoretical physicist Anton Zeilinger (University of Vienna) and his team, which won him the Nobel Prize in Physics in 2022,

speed of light in a vacuum (i.e. in the absence of gravity, otherwise described as flat spacetime).

SPEED. Speed describes how fast an object is moving or displacing, considering only the magnitude of its motion, whereas velocity describes both how fast an object is moving and its direction. (Acceleration, in turn, describes changes in speed.)

TIME DILATION. It is the principal consequence of special relativity (1905). The higher the speed, the shorter elapsed time relative to the observer. The lower the speed, the greater elapsed time relative to the observer. It is closely related to the Lorentz transformations (i.e. length contraction), as it illustrates the mechanism of action responsible for the phenomenon (i.e. illustrates special relativity). See Graph 1 of this paper.

TIME. "A measured or measurable period, a continuum that lacks spatial dimensions." *Britannica*

TROPICAL ASTROLOGY. Astronomical discipline concerned with the study of the relationship between the celestial bodies of our solar system (luminaries and planets) and life on Earth, reason for which parts from the point of view of the terrestrial observer. Its foundation rests on the position of the sun — and its times of ascension according to latitude — relative to the ecliptic, not to the outer space where the stars lie. All measurements are then based according to the passage of the seasons, not the stars, and the ecliptic is divided into *four* groups of *three* (4 x 3 = 12) segments of the same longitude with distinct properties (polarity, constitution or modality, and element).

https://philarchive.org/rec/BUSJAD. DOI 10.5281/zenodo.10463824).

and could be related to the mechanism of action responsible for the relationship between celestial bodies and life on Earth (see *Astrophysical Justification of Astrological Symbols*, 2023, in the PhilPapers research repository:

VELOCITY. Describes both the speed at which any object is moving and the direction in which it is moving.

ZODIACAL BELT. "A belt around the sky extending 9° on either side of the ecliptic, the Sun's apparent annual path, which contains 12 constellations or astrological signs. The zodiac was divided into 12 astrological signs, each occupying 1/12 (or 30°) of its great circle." *Britannica*³⁸

Appendix B

On What Role, if Any, Gravity Plays in Ascensional Times

"This afternoon went by very slowly" or "This morning went by quite fast", people tend to exclaim on many occasions. So did the author of this paper, when recently, after a very busy day at work, I said to myself: "No wonder the day went by so slowly", even if busy, much more so than I had experienced before during my years residing near the equator (South America and the Caribbean Sea). It would have seemed as if more than three segments of our ecliptic had ascended that day in East Texas, that is, three and a half signs, for it normally takes two hours for all of them to rise above the horizon at or near the equator, and seven hours elapsed. There is a physical explanation for this.

Unlike other days, Saturday 4 August of 2024 I went into work at 10:30 and left at 17:30, when the signs of Libra (180°-210°), Scorpio (210°-240°), and Sagittarius (240°-270°) were ascending above the horizon. Do not these three segments (signs) of the Earth's ecliptic (Zodiac) spend a greater amount of time crossing the horizon in the northern hemisphere? Certainly. Only three signs crossed the horizon, but it took 2.4 hours each to do so (average), not two, which is why my "oblique sensation" would have been as if many more hours had passed. "Time should speed up or start to pick up pace now", I also said to myself, for also three ecliptic segments (signs) will have crossed the horizon by 22:30, although it will have taken them five hours only, not seven (nor even six), as Capricorn (270°-300°), Aquarius (300°-330°), Pisces (330°-360°) will not have got off their butts so slowly in the northern hemisphere.

³⁸ We bring this erroneous or inaccurate definition of the zodiacal belt from the most excellent encyclopaedic dictionary *Britannica* in order to make the non-astrological reader realise how common it is not to distinguish between constellations and signs or to use both concepts interchangeably. It is as if no one could even imagine how or in what way possible can sign and constellation not be the same. In explaining this (as we did in the introduction), the question that follows on the part of

the intelligent being is: why or how? What is the basis for this? The answer must be: "The three phases of each of the four seasons that characterise life on Earth." However, this would not suffice either. Hence the need to verify whatever truth may exist in the Molecular Theory of the Ecliptic posited in 2023, already referred to several times in the footnotes to this paper.

Can we speak of a lesson in physics or thermodynamics in relation to the case described?

What we know as «thermal sensation» constitutes a cognitive response to the state of the thermoreceptors in the human body that describes how we feel thermally. It is highly dependent on exposure history and can be influenced by factors such as temperature and humidity. In astrology or astrophysics, we can also distinguish between (a) elapsed hours or ascensional times and (b) «oblique sensation», in which case it is also a cognitive response to the state of the environment that describes how many hours we feel have elapsed and also is highly dependent on exposure history and can be influenced by environmental variables.

What role, if any, does gravity play here? Thanks to EINSTEIN (1905) and MINKOWSKI (1908), we know that time and space constitute a single dimension, a consequence of gravity produced by a massive object, the Earth, which bends space and compresses or contracts time. Time dilation, in turn, both due to velocity (special theory of relativity) and due to gravity (general theory of relativity), is experienced by an observer who, at a certain speed or altitude, finds that his clocks measure less elapsed time than identical clocks in a reference frame of lower speed or altitude and are therefore either moving at a much lower speed than his own or under a higher gravitational potential.

Let us now put it in astrophysical/astrological language. The oblique, ecliptic, or **zodiacal time dilation** due to the centrifugal force produced by the rotation of the Earth (constant velocity) and the inclination of the Earth's axis relative to the plane of the ecliptic (inclined frame of reference) is experienced by an observer who, at a certain latitude (Alaska), finds that certain segments of the ecliptic (signs) measure less elapsed time than the same segments observed from a lower latitude. It is as if during that period of time at that place, the (time) distance between the regions of the horizon had spread out or stretched (stretched the time coordinates). What is certain, however, is that those same segments will measure *more* elapsed time at an equally higher latitude (away from the equator) in the southern hemisphere, meaning that the segments that measure *less* elapsed time in one hemisphere are the segments that measure *more* elapsed time in the other, and vice versa. Thus, in both hemispheres there will be segments measuring *more* and *less* elapsed time simultaneously.

So far, gravity would not seem to be at play. However, what if we could straighten the Earth's rotational axis and now appeared not tilted but vertical (like Mercury, Venus, and Jupiter, where there are no seasons)? The ecliptic — or apparent path of the sun — would coincide with the plane of the ecliptic (i.e. plane of the Earth's orbit) and all segments of the zodiacal belt would invest the same amount of time to rise or ascend, either at the poles or at the equator. Or would they? What if some segments rose in a slightly different amount of time even in the absence of inclination of the frames of reference? Would we prove, then, without fear for error, that gravity plays a role, and that velocity, for its part, only adds to the cause of the time of ascension of the segments of the ecliptic?

"Not so fast," a rigorous observer would tell us, for one must ask whether this is due to the difference in rotational speed at the poles versus at the equator. Because the circumference would still be much wider at the equator than at the poles, we rotate much faster at the equator than at the poles, while at the poles more slowly, as we travel different distances: more at the equator and less at the poles due, we reiterate, to the width of the circumference at the equator versus at the poles. This is the reason why it would still takes us the same amount of time to complete a rotation: twenty-four hours. **Special relativity** teaches that what happened from the perspective of one person does not happen at the same time as from the perspective of the other person if they are in relative motion, that is, should they appear moving at different speeds. Again, so far, gravity would not seem to be at play as much as speed and the inclination of the frame of reference (third form of time dilation)³⁹. Nonetheless, if gravity would still be higher at the poles than at the equator (because at the poles we are closer to the centre of the Earth, where the density is considerably greater), why wouldn't we register a slight difference in the times of ascension of the segments of our ecliptic at the poles versus at the equator? Especially when physics teaches the indissolubility of time and space.

How could we prove this? Because we know (with more clarity than theoretical physicists thanks to astrology?) that seven hours in Colombia, Venezuela, or Kenya are not the same as seven hours in Portland or Toronto (i.e., while at the equator three signs or segments of our ecliptic will have risen, in Portland or Toronto only two or a little more than two, as a little more than seven hours would have elapsed for the three signs to cross the horizon), what if we could prove that what takes seven hours to be produced or eliminated at the equator *cannot be produced or eliminated in the same amount of time at latitudes* far from the equator? Think, for example, of something more than a physical activity. Something that, at that distance from the equator, requires a greater amount of elapsed time.⁴⁰

Another way of looking at the above idea is as follows. Three metres are not three should we need to jump instead of walk, for we will have invested more energy or calories and our heart would beat faster. From an astrological point of view, does not the same ruling planet have to function for two astrological regions simultaneously when its natural sign spans over both regions of the sky (in individuals born during said speed or time of oblique ascension)?⁴¹ "One engine for two spaces or vehicles", one might say. There must be then, we think, an effect homologous to that of the greatest physical effort (jumping) from the astrophysical point of view (x). Perhaps what we can do in six hours at the equator we cannot do in six at the pole?

It has been shown that gravity can affect both the size of organisms and their physical structure (e.g. whether they have a skeleton) as well as many metabolic functions and balance. In order to discern such effects, however, the difference in gravitational potentials would have to be considerable, not minimal. The question here, then, is not whether a segment of the ecliptic or a specific point on the ecliptic will take an hour longer or shorter to rise or travel half its diurnal arc if we were to also calculate the effect of gravity, but whether slight differences in the oblique ascension times of our signs are sufficient to change or modify the influence exerted on the cusps of the regions of the birth map, and whether, for that reason, the time required for an event to occur will be different at or near the poles versus at the equator.

³⁹ If we were to take into consideration also the perihelion (during the month of January, or Capricorn, where the fast ecliptic signs or segments begin) and the aphelion (during the months of July, or Cancer, where the slow ecliptic signs or segments begin), which are themselves acceleration variables, things would become all the more complicated. ⁴⁰ It cannot be the time we rotate on our own axis at the equator versus

at or near the poles, since a rotation still has 24 hours. What changes, in this case, is our speed, which is greater at the equator than at the poles, because of the greater distance we must travel at the equator than at

the poles (because the circumference of the Earth is greater or wider at the equator than at the poles). If the distance travelled at the poles is different, the elapsed time (24 hours), even if it is the same, must have elapsed more slowly. Is gravity greater at the poles than at the equator? It is. Would this be the key to answering the above question? Again, how, for at or near the poles we experience both: fast signs (when the sun rises quickly) and slow signs (when the sun rises slowly).

⁴¹ As above, so below. Let us fight against this principle no longer. Let us accept it once and for all and we will do ourselves a great deal of good.

We may label this reflection as a **counterintuitive** idea or inference, but it is only the imagination of the manipulation of proven variables that has led us to conceive it as possible, that is, we have not yet overturned or disproved any physical law, but conceived a hypothesis. What if we were to conduct an experiment in which we started an identical task in two different places with the same tools and the same zodiacal degree at the horizon (e.g. on 12 August 2024 at 4.33 a.m. Bogotá versus 4:33 a.m. Kodiak⁴²)? If the experiment were to show that we would have required a different time in Bogotá than in Kodiak, would this prove not only that gravity is at play in relation to ascension times but also the validity of tropical astrology (i.e. astrophysics) from a "scientific" point of view? (In my view, it would only re-prove the validity of astrophysics, but from a different perspective than the conventional one, never considered before.) It would not be strange if this were the case, not if we have understood EINSTEIN or BOHR or particle physics. Because EINSTEIN proved the necessarily quantum nature of light (1905), it would not be classical physics that could one day prove the above or the mechanism of action responsible for astrology, but quantum mechanics.

It is possible that one day we will be able to show that gravity can also be at play in the times of oblique ascension. It would not be possible, however, without the use of supercomputers and/or atomic clocks. Atomic clocks register the passage of time the most accurately. Because any one sign can require a greater or lesser amount of time to cross the horizon at certain latitudes compared to the equator, and vice versa, that is, because waiting for one sign to rise over the horizon at the equator is not the same as waiting for it to rise at latitudes far away from it, what if we could design or develop a universal zodiacal clock, that is, an ecliptic or oblique clock and see the signs rising as the minutes and the hours elapsed (accounting for all variables

- velocity, gravity, and inclination - simultaneously)? "Meet me at the airport at oo Leo", and our watch would tell us the amount of time remaining for that to take place at our location on Earth, and what the difference would be should you move considerably. Or "We'd like to announce that our book will be released at the time of Jupiter's ingress in Gemini this year in the Four Seasons Hotel in New York" (which would be the same time for the entire world). Or, say, "Let's wait until three signs have risen over the horizon [which may be six to nine hours depending on the latitude] to begin our journey or trip, because Saturn is in fall in one of them." It would certainly hold a close resemblance to having Placidus tables on one's wrist watch 24/7, as anywhere on Earth one would actually be able to clock how much time truly elapsed not just for each sign but for each degree of the entire circumference or zodiacal belt down to one-tenth of a minute of arc. Everyone, every citizen would be able to either be an astrologist or at least become aware of how astrology (i.e. terrestrial astrophysics) works, as we would also be able to associate the ascending signs with the changing weather.

⁴² Although it cannot be done simultaneously, as there is a three hour time difference.

Appendix C Can sextiles behave like squares?⁴³ Anthony Louis LaBruzza

Recently an observation of the English astrologist William Lilly (17th century) was brought up, according to which harmonious aspects (sextiles or trines) can sometimes behave like stressful aspects (squares or oppositions), and vice versa. Lilly seems to have taken into consideration a passage from Ptolemy's *Tetrabiblos* in which Ptolemy, for his part, says: "Sometimes, among the signs that ascend slowly, the sextile aspect destroys [...], while, among the signs that ascend rapidly, the trine" (p. 283, Loeb edition).

Apparently, Ptolemy realized that aspects measured along the ecliptic (i.e. apparent path of the sun) can have different dimensions when measured based on the ascensional times of the planets involved, that is, relative to the ascensional times of the segments of the ecliptic (i.e., signs) they occupy.

Here is an example taken from Lilly's *Christian Astrology* (p. 289), in which he was answering a horary question: "Whether the sick man should live or die, and what was his disease". This is a chart of an interrogative nature calculated by a modern computer:



Astrograph erected by Lilly, on a sick person

Lilly observes that the moon has just separated from its sextile to Mercury, ruler of the Ascendant of this nativity, and both bodies are placed in signs of long ascension so that this moon-Mercury sextile "is more properly a square" (*Christian Astrology*, p. 290). Because the Moon is within orb of a zodiacal square to Jupiter, Lilly states that the moon "transferred its virtue to Jupiter, Lord of the 8th". In other words, the moon transmits, through a sextile with Mercury that behaves temporally like a square, the virtue of Mercury (which represents, in this chart, the body and vitality of the sick person) to the planet that rules the 8th house, a sinister region of the chart, suggesting that the sick person is likely to succumb to the disease.

If we look at the zodiacal or ecliptic positions of the moon and Mercury, we see that they hold a partile sextile, since the distance between them is λ 60°. However, *if we take into consideration the ascensional times*, we see that Cancer [the sign occupied by Mercury] ascends over the

⁴³ With the author's permission, we have slightly edited the article to make it compatible with the format and language of our paper without implying any conceptual differences whatsoever. Bold and italics are ours.

horizon as 37.77° have pass over the MC, while Leo and Virgo [the sign occupied by the moon] as 42.63° and 42.72°, respectively, pass over the same point. Because both the moon and Mercury are approximately half-way into their respective signs, the total number of degrees crossing over the MC is approximately:

Cancer:	1/2 of 37,77° or 18,9°
Leo:	42,63 ⁰
Virgo:	1/2 of 42,72°, that is, 21,4°

The total number of ecliptic degrees that pass over the MC from the time Mercury ascends until the moon ascends is approximately $18.9 + 42.6 + 21.4 = 82.9^{\circ}$, *a length much closer to a square* (90°) than to a sextile (60°).

In this sense, Lilly considered that the separation of the moon from Mercury (ruler of the ASC), with whom it holds a sextile from the strictly zodiacal point of view but **behaves**, **temporally or ascensionally**, **like a square**. Thus, the moon is carrying the light of Mercury, which she received as if by a square aspect, and when the moon goes on to square Jupiter, it will be as if Mercury is in square aspect to Jupiter.

Another way to think about such ascensional configurations is to determine the time at which the planets involved ascend. In this case, Mercury rose at 2:46 a.m. and the Moon will rise at 8:09 a.m. There is a difference of 5.4 hours between the two rising times. Because there are 24 hours in a day, 5.4/24 results in 0.23 hours or about a quarter of a circle, *which corresponds more closely to the size of a square*.

As we saw in this interrogatory chart about a sick person, Lilly used these temporal or ascensional configurations to modify the interpretation of the zodiacal aspects. There is another group of non-zodiacal configurations, developed by Placidus as he studied Ptolemy, which Placidus called "mundane aspects".

Claudius Ptolemy, in his discussion of the length of life technique, took into consideration what we today usually call "mundane configurations." These are based on the actual physical positions of the planets [...] taking into account their distances from the Earth [ecliptic] and their positions relative to the horizon and the meridian [rotation]. Aspectual relationships from a zodiacal standpoint, however, use [only] the ecliptic as reference [i.e. a reference frame], while mundane configurations use the Earth's horizon and meridian and are based on the positions of the planets in the mundane houses [i.e. sectors or regions]. In essence, the so-called "mundane aspects" measure the distance between the planets in spacetime as the Earth rotates daily on its axis, rather than merely measuring [only] in space along the ecliptic (i.e. path of the sun in its apparent annual revolution around the Earth).44

[...] Lilly, while considering Jupiter as ruler of the eighth house [because its sign, Pisces, looms over its cusp], also considers Mars as accidental ruler of the same region, since Mars rules the sign of Aries, which is almost entirely enclosed in that region [...]. Lilly writes (CA, p. 290), "the Ascendant was extremely afflicted by the presence of Mars, he being naturally ill [malefic], and accidentally almost Lord of the whole eighth house". Mars, here, also afflicts the moon, which carries the light from Mercury (ruler of the ASC) to Jupiter (ruler of the eighth cusp) through a sextile [from the ecliptic point of view only] that behaves like a

⁴⁴ Louis, here, has explained a relativistic effect from the point of view of aspectual relationships, although only when we take into account the relationship between time (rotation) and space (ecliptic), as Ptolemy did, whether he was aware of relativity or not. If he was not, he was certainly

aware of an effect which is a consequence of this theory or phenomenon; in sum, of a clearly relativistic effect. Again, it should not be surprising that Placidus claimed to have followed Ptolemy when he developed the method of house measurement named after him in the 17th century.

square when measured according to ascensional times of the signs occupied by the planets involved. Appendix D

On the methods described, among others, and the prejudices of astrologists⁴⁵

Both Alcabitius and Koch divide, into three equal parts, the amount of time the sun would have taken to travel from the horizon to culminate in the midheaven if it had occupied a particular degree of the ecliptic. The difference between the two lies in the fact that the former will measure on the basis of the ascending degree (i.e. how long it would have taken the sun to travel that distance if it had occupied the ascending degree of the chart in question), whereas the latter will measure on the basis of the culminating degree (i.e. how long it would have taken the sun to travel that distance if it had occupied the culminating degree of the chart in question). If one of those degrees had taken 7 hours to travel that distance, for example, each of the first three sixths of the diurnal arc would measure 2.3 hours (2 h 20 min). If it took 4 hours, each would be 1.3 hours (80 min). This results in a fictitious or misleading, equated or nondiscerning distribution of the speeds or times of **ascension** of each of the degrees contained between the ASC and the MC, that is, the true longitude or true time of each astrographic region.

We understand that the reason for the first two calculations (Alcabitius, Koch) is nothing other than convenience due to the lack of technology software during the time when both methods were developed, especially in the case of Alcabitius. Alcabitius, however, is to be considered a particularly brilliant simplification of the Placidus method of house measurement, as it saves us both time and mathematical headaches if we were to appeal to our hands and/or tables. However, only a philosophical **belief** or an adherence to a particular astrological tradition can justify a

⁴⁵ See too «Is the belief in (a false) symmetry compromising astrologists' objectivity?»: <u>https://sagittariusdb.com/reflexion/symmetry-astrology-house-systems/</u>

preference for a different method of calculating the intermediate cusps, that is, a preference for a method other than that advised by the sun, the very basis of tropical astrology (unless, of course, we are teaching astrology to the beginner and do not wish to overwhelm them with trigonometric matters just yet). It has too been the case of sign houses (from the Hellenistic astrological tradition): we see, should I be excused, a plain and simple **romanticism**, not a decision based on science and reason.

As for the Koch calculation and even topocentric houses (Polich-Page method), fallacious arguments have been set forth (e.g. that it is the true birthplace system or that it does not "fail" at the poles), which is why one must wonder whether each developer (with the exception of Alcabitius) simply sought to be remembered by history. We exclude the Alcabitius method from the list of those who may have longed said memory because it is a method that clearly sought to represent or describe the motion of the heavens more faithfully than the calculations that preceded it, which are too genuine attempts. We could, perhaps, include the Regiomontanus measurement, as it is undoubtedly Newtonian (i.e. the positions of the planets respond strictly to spatial dimensions). However, because astrology, at least since Ptolemy (primary directions), teaches us that time and space are inseparable, it is perhaps impertinent to conceive such a measurement. Should we reason from the point of view of said method, we might argue: "We say not that the intermediate cusps constitute the points of our horizon which those degrees of the ecliptic have occupied in accordance with their ascensional times, but the points of the ecliptic which the strict spatial division of the horizon reveals at this moment in this latitude." It would be this last consideration that would make of the method an error. Should a planet in a house continue to be considered in that house (i.e. latitude) if we recognise the spacetime continuum, or only when we separate them, that is, when we separate time from space or space from time? Certainly, only when we pretend to **detach** one of the four dimensions of our reality (time) can that be possible. Thanks to EINSTEIN (1905) and MINKOWSKI (1908), we know that reality is made up of the three dimensions of space and the one of time, and that assessing the one at the expense of the other promises either confusion or loose ends only.

The topocentric calculation, for its part, if not identical to the Placidean one, can be considered to be redundant. If we have understood its authors correctly (Tables of Ecliptic Right Ascension with a Manual of Primary Directions, 1961), its possibility arose from reverse-engineering the Placidean formula. This is the reason for which it does not tend to yield a difference of more than one degree of longitude if compared to Placidus intermediate houses cusps, even at latitudes as far from the equator as 55° N (Nagai, Alaska; Copenhagen, Denmark). Needless to say, the topocentric calculation "fails" too in the polar circles (contrary to what is claimed about said method) because astrologists have defined this "failure" as the "distortion" of the houses and/or as the possibility of "circumpolar" degrees, even of the ASC and MC coinciding. Because both Placidean and topocentric measurements can reflect this, both, then, can be considered to "fail".

However, we must ask why this should be consider to be a form of "failure" rather than a true reflection of the life characteristics within the polar regions from an astrophysical point of view. The basal metabolic rate, for example, and life in general is by no means the same, not to mention the absence of **social classes** and the **agricultural** processes that make the very foundation and development of a society or civilisation possible. (Even sports or sex life is not remotely the same, nor are filial relations or political practises.) These latitudes are not suitable for human life and neither are they for animal or plant life. It makes, therefore, nothing less than complete sense for a house like the fifth (pleasures and recreational activities in general) or the twelfth (prison or seclusion) or the sixth (metabolism) to collapse (although they can also open wide), as much as for the MC to coincide with the ASC. Say, to what throne would we aspire at the poles or what struggle towards success and fame (public exposure) will we undertake? On the other hand, should the tenth region appear completely blown, would it not make said region of the chart *exceptionally* heterogeneous, as two or more signs would have been able to trespass or sneak in. Would it not describe, in turn, the nature of political exercise, if any, in such places of the planet, as opposed to those less elevated? An exercise entailing the recognition of social and/or human aspects that tend not to be recognised in nonpolar countries, as their life characteristics and/or social structure do not propitiate said considerations? On the contrary, if such a region were to appear collapsed, very close to the ASC, could it be suggesting that what we know as "government" is non-existent or that each individual or community is or can become self-governed (as opposed to nonpolar countries)?

Because of this, astrologists (including colleagues whom I respect) have been taught to fear what, perhaps foolishly, has been termed the "distortion" of the houses and so do or tend to do everything in their power to avoid this phenomenon and escape its grasp, thus adhering to the house system that least reflects said — supposedly uncomfortable — reality. Both digital and physical literature speak of "house distortion" as if the calculations of the measurements were in error. In summary, astrologists consider this and its consequences (e.g. intercepted signs⁴⁶) as one of the "**problems**" inherent in the division of the houses. *What if we were to have seen*

EINSTEIN struggle with the development of a method that would not reflect "the problem" of time dilation or space curvature and/or gravitational lensing (bending of light)? What if EINSTEIN and MINKOWSKI had seen this as a problem about which we need to find a way to remedy it rather than a reality about which we need to change the way we see or look at it? Will we one day also pretend to do astrology prescinding from the realities that make it possible (planets and ecliptic, nodes and luminaries, etc.)? Why do we insist on circumventing reality? What may be the name of the power that an apparent fear has over our souls? Why attempt to escape the application of the things that would bring astrology closer to the place it held centuries ago? No one has said it nicer or in a more polite way than Anthony Louis:

> "[...] astrological house systems **should be consistent** with the prevailing scientific worldview of the epoch in which they are used. In other words, the astrological houses of a natal chart **must necessarily divide the spacetime** around us at the moment of birth."⁴⁷ (Bold is mine.)

Astrologists are or seem to be afraid of not only the criticism from astronomers and physicists. They are also convinced, clearly wrongfully so, that astrology is not a natural science⁴⁸, even though all we do is to insistently observe the sky and, also insistently, experiment with predictions by observing it in order to present statistical analyses. These are measurements or observations that we cannot conduct with disciplines that are, yes, esoteric or occult (e.g. tarot). We have long pretended to argue that, because it is not also

⁴⁶ That a sign may appear hidden or intercepted reveals even more specific information about what is going on in that region of the astrography. What we have called in a paper "heterogeneity types 1-6" is what truly separates individuals from each other. That is, what makes each birth map unique and unrepeatable.

⁴⁷ Louis, A. (28 December 2022). «Space-Time and Astrological House Systems». *Anthony Louis Astrology and Tarot Blog.*

⁴⁸ A natural science is not necessarily an exact science. In fact, only mathematics and formal logic are truly exact sciences, and neither is natural but human-made, as no one has ever seen a number or a syllogism or a premise in nature. Neither is physics exact (only to a certain extent). Astrology, on the other hand, is a nonexact factual or natural science, as are meteorology and psychiatry, forensic psychology and law, among others. See Bunge, M. (1970). *La ciencia. Su método y su filosofía* (1959). Editorial Laetoli (2014). Pamplona, Spain.

a science but only an art, we do not have to respect wellknown realities or truths while, at the same time, we do not waste time in attributing explanatory power over man on Earth to astrology. What kind or form of dedication to contradiction and/or dishonesty or hypocrisy can this be? As we say in English: "We cannot have it both ways."

The astrographical plane

Here are the four most sensitive regions of an astrography or birthchart: the Ascendant (ASC) or first house (the house of the rising sign); the midheaven or tenth house (where the sun is at its strongest); the Descendant or seventh house (the house of the setting sign); the deep heaven or fourth house (the house of the sign diametrically opposite the midheaven, where the sun is at its weakest). The number of the houses follow the opposite order of the hands of the clock because they emulate or are a reflection of each of the three phases of the four seasons, that is, their order (not movement) is not physical (i.e. diurnal) but analogous (i.e. annual or seasonal⁴⁹), even though they "drop" from the diurnal motion of the sun or the rotation of the Earth in the same way that we unwind a thread from a cylinder and make imaginary marks on it (as we do with time zones, which are better named in English than in Spanish: "husos horarios" or horary spindles). To the extent that they do so, they will represent the development of the individual as the seasons describe the development of life on Earth, including the human species.



⁴⁹ Morin of Villefranche (1661). *Astrologia Gallica. Book 17. The Astrological Houses*. AFA (2008, trans. Holden, James). Arizona, USA.