Francesco Bianchini; De Kalendario et Cyclo Caesaris; 1703

Original Latin text
https://tinyurl.com/y24tuxtw
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(partial) Translation of Part 2: DISSERTATIO SECUNDA De CANONE PASCHALI S Hippolyti, Episcopi & Martyris Pp 91-99; p.100-106; p.114-122; p.134-140

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THE SECOND DISCUSSION ON THE PASCAL CANON

St. Hippolytus, Bishop and Martyr.

CHAPTER ONE

Of the ancient base, or marble seat, on which the Paschal Canon is seen sculptured: and of the history of the excavation of the same.

SUMMARY HEADINGS

1. The ancient basis of the Paschal Canon of St. Hippolytus has not yet been fully explained by several authors. 2. The Paschal Latin Cycle of 112 years was discovered by St. Hippolytus, it is mentioned by Victorius, and on this base, excavated from ancient ruins and dug up in the Verano field in the year of Christ 1551, its insciption is visible. 3. The same Canon is illustrated by a famous commentary by R. P. Bucherio. 4. A view of the canon, and a double partition into brick.

1. In my first dissertation I showed that the spaces of time, the ethnic superstitions known to the Egyptians, Greeks, and Romans, were distorted in their own organization,

while the most elegant order, sought by the Cycles and Calendars, was transferred from the true worship of GOD to the impious mysteries of idols. In this second dissertation, I undertook to vindicate the Chronology of the ancients from the servitude of illiberal error, proposed by the Paschal Cycle of St. Hippolytus, Bishop and Martyr: in which I seem to see the Astronomy of the…

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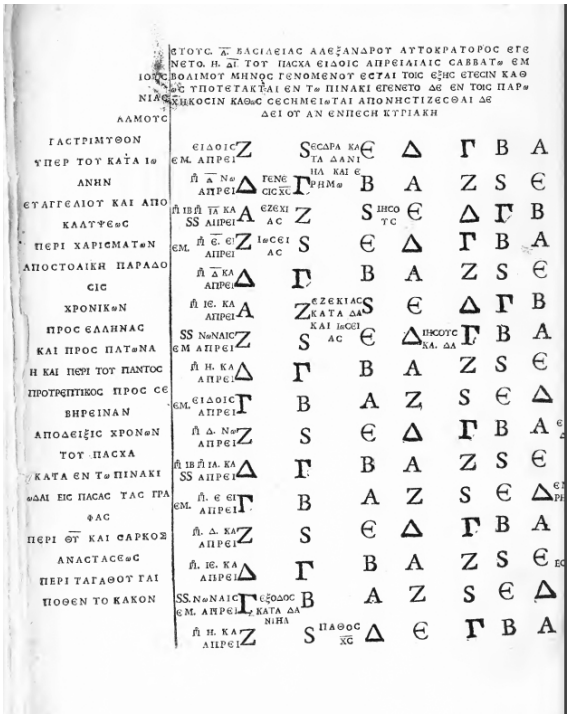
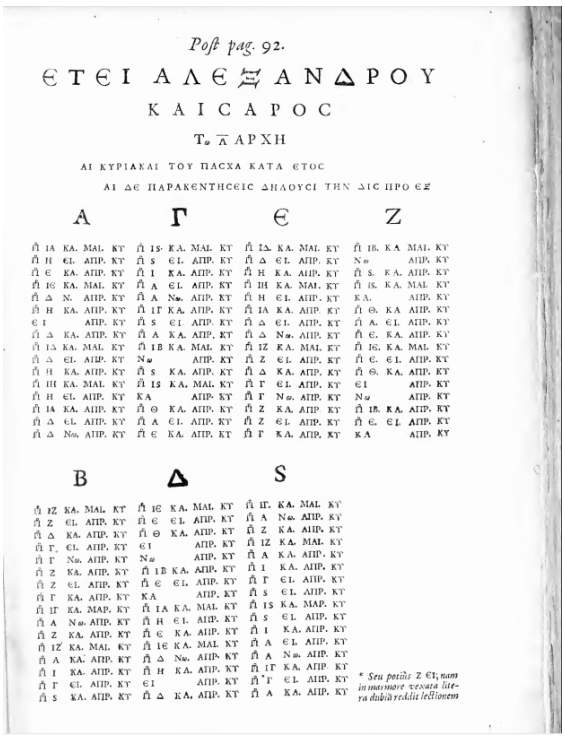
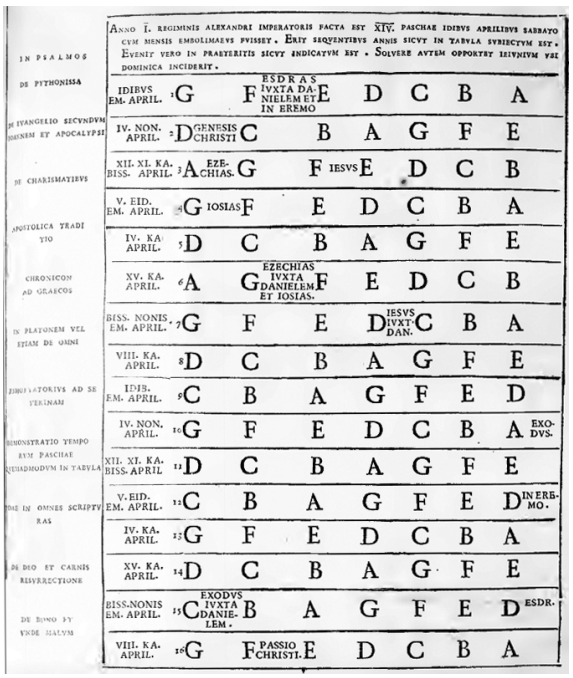
…ancient Fathers; restored as it were in the postliminium, while the caste is used to keep the Sacraments of God and Man JESV Christ every year. I will not run first in this race. They were occupied by men distinguished by learning: in their commentaries many of them are set forth with knowledge, so indicated, or not a few others are left behind, which they have permitted to be collected by posterity. However, the history of the ancient stone, in which the Paschal Canon can be seen carved, was given to B. Hippolytus the Martyr fifteen centuries ago. P. Bucherius Commentary, the excellent illustrator of the monument, collected this in the Paschal Canon page 291 of Victorius, where he says;

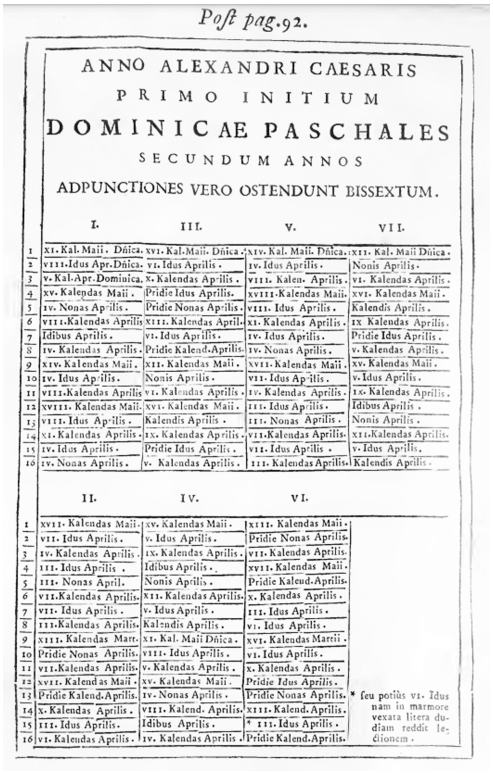
2. Victorius of the Prologue fuo St. mentions the third of the two greatest Paschal Canons before him: the 84-year-old one, who was the first of the Jews, then of the early Christians, at least of the Latins: 112 of another, which is well established by Hippolytus, Bishop of Porto. And after several interjections, it continues in this way. This canon had perished with the rest of the monuments of the same Hippolytus, and nothing else of his name had survived: when behold, good God, and with the great joy of all the learned (as Baronius, Scaliger, and Gruterus testify) in the year of the Lord 1551 from the field of Verano, not far from the Æde St. An ancient marble statue of Lawrence, excavated from the ancient ruins of the memory of Hippolytus, seated on a throne, inscribed in Greek letters on both sides, came to the city. Literally, in two brick chairs they exhibited the Paschal Cycles of 16 years; on the right of the fortnights, on the left of the Paschal Sundays, both 112 years universally included; at which period of years Hippolytus believed that the same holidays would return to the world. The name of Hippolytus was not indeed expressed; but it was easily betrayed by the method of the Heckædecaeterides, and by the theme of the books, which contained the right brick; for Eusebius, Jerome, and others make Hippolytus the bishop of them all. So illustrious, so rare a monument of the primitive Church, Marcellus Cervino, then S. R. E. Cardinali, afterwards also of the same name Pope II, saw the most worthy view, that it was brought thence to Rome, and deposited in the Vatican Library. He then published it in Greek, as it was, with its ancient inscriptions of Gruterus; Scaliger also highlighted the characters. I have decided not so much to expound afresh this Latin rendering as it was rendered, but to show a few things conformable to the Paschals of our Hero, and to the first accounts of the Latins, &c.

3. P. Bucherius showed excellent faith, showing by very learned observations how great was the agreement of this Canon with the ancient Latins' reasonings; and how many absurd insults Scaliger imputed to him….









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I judge that there is a great deal of ingenuity on that side: which perhaps neither Scaliger nor Bucherius detected. Before I explain this, I must place before the eyes a copy of the inscription, first in Greek characters, as it was in the autograph, then rendered in Latin, so that it may be easily compared with the vernacular letters of the Gregorian calendar.

4. Accordingly, the Paschal Canon of St. Hippolytus consists of two bricks, the right, indeed, presenting the fourteenth of the Moons, designated by the Cycle Heptagram of the week's holidays by the first 7 letters of the alphabet; and on the left, referring to the Easter Sundays near the period under the same elements, the seven holiday indices ABrDESZ, which we impostors will express in as many Latin letters as A B C D E F G, so that the comparison is easier for those not used to Greek. By explaining the brick to both, I assigned certain heads. However, I will try to explain the entire system of the Cycle before.

CHAPTER 2

The system of the Paschal Period, produced by S. Hippolytus, extends with surprising ease, both to the year 112, and to other sums of years.

SUMMARY HEADINGS

I. The cycle of St. Hippolytus after 112 Julian years does not strive to establish the mean lunisolar movements on the same day of the calendar year; but he demands that the holiday of the lunar month should be changed to another adherent, that is, to the next eight days. 2. Literally, Caesar's Cycles indicate this eight-day precession very well. 3. The Hippolytus Cycle received many Latin names from an easy connection with the Julian Cycle, with the Olympiades, Octaeterides, used in the age of St. Hippolytus. 4. The minor period of the same Cycle of 112 years agrees wonderfully with the mean movements of the Moon. Seven minor periods of 112 years constitute a major period of 784 years: which establishes two serious phases of the Moon. But this greater Period, evolved four times, if the lesser is added to it, will compose the greatest Period of 3248 years: which constantly keeps the agreement of the Lunar motion. 5. The accession of the Cycle distributed by the Octaeterides….

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…. to the civil system of the times, usurped by the Greeks and Romans, is illustrated by the same great and secular years. 6. St. Hippolytus, when he converted Caesar's Cycle for the use of Christians, looked forward to the chronology both of the past and of the future age.

1. The Lunisolar Cycle of 112 years is collected from each brick of the base, or chair of St. Hippolytus: at which period (says Bucherius) S. Hippolytus believed that the same holidays would return to the world. However, I would not allow this, that St. Hippolytus believed, that during this space of years the Lunisolar holidays would return to the world. Indeed, I affirm, that it must be collected, that Hippolytus observed that after the 112 Lunisolar years, the phases of the Moon were changed to the immediately preceding day of the week, and to the immediately preceding eight days of the Julian year. This is if, in the year 1703, the middle opposition of the luminary, *(=full moon*) immediately following the vernal equinox, fell on the first day of April in the new style (Gregorian calendar) , and on the first holiday of the week *(Luna Pasch XIV = Sunday 1st April Gregorian);* I assert that after 112 Julian years the equinox full moon will come eight days early, if it is referred to the civil year, namely in 1815 on March 24 (which, however, in Gregorian will be called 25 due to the intermission of the leap day in 1800) *(no – though astronomical full moon = 25th; PaschXIV =24th Gregorian!)* and referring to the series of holidays in the week, I assert that spring itself - the Easter opposition - was held on Sunday after 112 years, (*no - equinox was 21st, a Monday* not *Sunday 20th… astronomnical full moon in 1927 is on Sunday 17th April*) which this year had fallen on the first holiday. The result is that after another 112 years have passed, that is in 1927, the Full Moon falls on (Holiday 6), (*OK Luna XIV Pasch is a Saturday*) March 16 *(no its 17th April!)* : which will be held in the common Gregorian style on the 28th *(yes-28th March)* in the year 2040, when another period of 112 years will come to an end, the middle of the Full Moon will be on the 8th *(* typo)* of March *(no- the 28th March!):* which in the Gregorian calendar would be 20 (Holiday 5) (*actually 21st!):* and so consequently: until the sum of the 112 years has evolved seven times (which will give 784 years for the precession of the New Moons, and the Full Moons) would be seven times eight days, namely, 56, and the apocatastasis of the holidays would be established in the new full moon, if there were no account of fractions, namely of several hours, which we shall count below.

2. By the way, I notice that the eight letters arranged in the Julian calendar, and explained to us by the preceding deferral, can very well be adapted to this kind of numbering. For where the letter of the same name occurs in the preceding octet, there a similar aspect of the Moon and the Sun is to be sought after 112 Julian years. If ex. Gr. it

was in the year 1703 the full moon in the middle of the month of April, where the letter Juliana C is seen recorded; I assert that the letter C of the preceding Ogdoad, which prefers the…

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24th of March, will be the day of the Full Moon after 112 years: just as the ninth day of April, which is adorned with the letter of the Ogdoad at least following the day of the month of April, rightly records the day of the Full Moon in Julian years 112 before the leap year 1703.

3. To the Latins, and thus to all, using the Julian astronomical tables for the age of St. Hippolytus, no more expedient system of chronology and lunar computation could be offered, than that which, through eight letters, distributed by Caesar on the days of each civil year, weaves a cycle of 112 years, composed of fourteen Ogdoads. For this greatly contributed to the commendation of the Cycle, which could be divided into the Octaeterides and the Olympiads: namely, the measures of time, famous for that season, among the Greeks as well as the Latins: the repetition of which completes the extension of the Cycle. Hence the frequent use of octaetherids among the ancient Christians is proved by P. Bucherius, page 307, included in the Canon of Victorius from the letters of Dionysius, bishop of Alexandria, from the testimony of Africanus, from Epiphanius, and others, the Fathers, and ancient writers. Epiphanius clearly placed the true nature of the Octaeterides under Christian's eyes, and described the same with Hippolytus, respecting Bucherius, as the latter gathered from the method of intercalation in the embolismic lunations.

4. The equality of the ratios between this Cycle and the mean motions of the stars from the Astronomical Tables must now be demonstrated: which we thus gather.

	Sign.	Grad.	Min.
In year 100 Julian the movement of the Moon to the Sun is a sign	10.	7.	4.
In year 12 Julian the movement of the Moon to the Sun is a sign	5.	2.	3.
Therefore, in 112 Julian years	15.	9.	7.
From this sum subtract the motion of eight days	3.	7.	32.
The movement of the Moon from the Sun remains after the Julian years of 112 days were reduced by Ogdoade	12.	1.	35.

The 35 degrees and minutes of the Moon's progression from the Sun require a space of three hours: that is, three hours before the sum of the years and days is completed, when the Moon has already been restored to the same aspect as the Sun by the means of its motion. Therefore, the sum is repeated seven times, that is, in 784 years, the eight days of the precession are repeated seven times, or 56 days. Moreover, three hours, to be counted in each sum of 112 years, added seven times, constitute the next solid day. Therefore, at the same interval of 784 years, the Moon has preceded the root of the number by 57 days. Adding two days to these, there will be 59 days,

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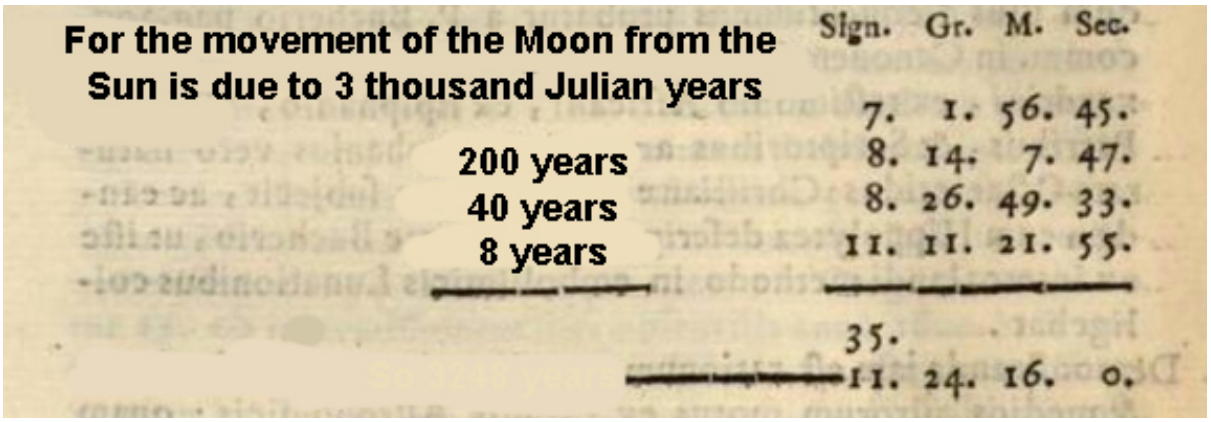
that is, twice the lunar month. The Synod of Luminaries will therefore descend for two days at the first root, or by two letters at the space of 784 Julian years: in which period, having evolved four times, after six and thirty years over three thousand and the center, the Lunisolar motions and the Ogdoads of the Julian Calendar, restored again to the motions of the Moon, will By the same letter of indicating the sun, recorded in Caesar's calendar, but in the Ogdoad next to the root day. Therefore, to this total of 3136 years, if you add another period of 112 years, which gives the precession of the eighth little bit shown before, so that they become the year 3248, I affirm that on the same day of the Julian year, by the same letter assigned to him by Caesar, the same aspect would be restored near the mid-movement of the Luminaries.



5. From this it is true that we may guess how great is the Caesarian Cycle, which is so well established for itself, both in the years 112, then in 7834, and in 3348, to which the certain periods of the Lunations recur, indicated by the Calendar; and the same system of bisextiles is repeated, to be explained by the eight letters of a very simple artronomical table. We may also conjecture that the numbers of this kind of octaetheride, highly commended for their simplicity and elegance, were not entirely pleasing to the ancient Greeks and Romans; for

they were received by the Jews with so much consent, as Africanus shows in Eusebius. Evan. book 8, reported by P. Bucherio page 308; Commentaries on the Victorian Canon, and the Ancient Cycles, expounded by scholars, sufficiently demonstrate. It is true that the use of the octaetheride was very ancient, among the Greeks they show the mysteries of religion, by which they celebrated their octennials at the interval of the duplicate Olympiads. In this space of time the moon was completed its one hundredth cycle, as Pliny observes: how perhaps those ancient poets, recorded by Proclus, expressed a certain *Epic Cycle*, born of Heaven and Earth, to the sons of the three centimans, as many as the …

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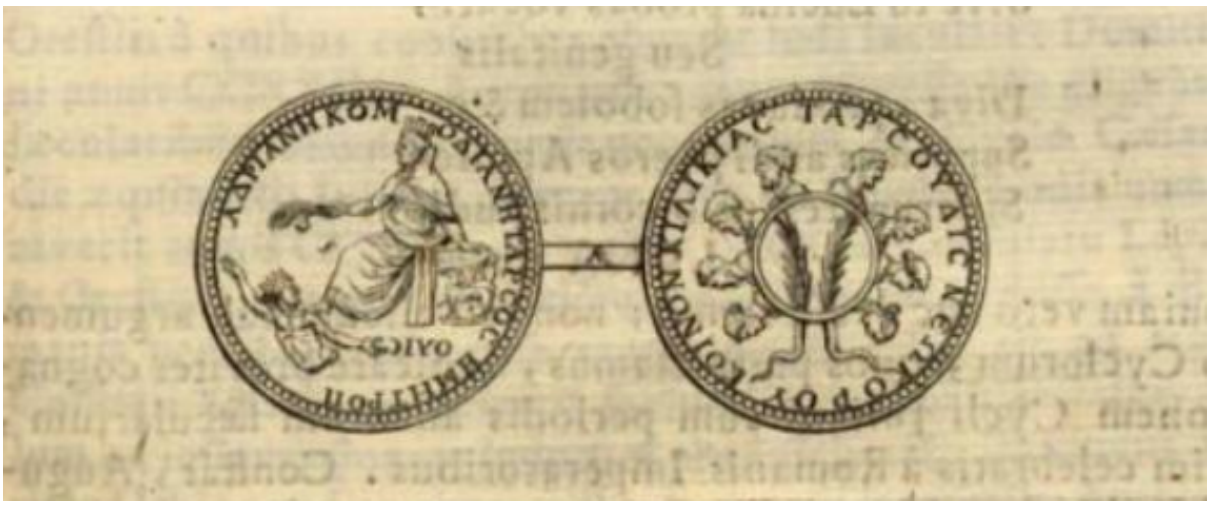
Cyclops. However, the eight-year Chronograph, celebrated by the Greeks at the festival of Daphnephoria, is evidently shown; for it wonderfully illustrates both those things which we enunciate here concerning the octaetheride, and those which were said above in chapter 4, number 10 where it was proved that almost all ethnic superstitions were related to the Sun and the Moon, and that their mysteries, wrapped in so much mystery by the priests, generally hid nothing else from the truth, but the movement of the Luminaries, discovered by long observation by the Egyptians, Assyrians, and Chaldeans, and expressed in various symbols. Others have seen (to touch on it incidentally) whether the coronal medal, struck at Tarsensi, the image of which I took care to exhibit from the Museum of the Eminent, and the Reverend Card Othobon, belongs to the indication of the octaetheris. For he prefers a crown, adorned with eight human heads, in which it appears that Hadrian and his descendants, brought into the Augustan family, were gathered to Commodus the Emperor, and to present that golden standard which the age of the Antonines brought to Rome. This certainly proves what I asserted on the testimony of Suetonius, and on the faith of ancient monuments, in the preceding dissertation concerning the images of gods and princes, inserted in the crowns of the ancients, used for the games of the circus, and the theatre. See above fol. 41 & 43



To be equated with the ceremonies of the Greeks would be a secular parade, instituted or established by Augustus, in an almost Greek rite, to be repeated hundreds of years later, according to Horace's poem: which they think should be read thus:

Definitely joining millions over the years
Orbs and songs and play games,
Three times a day I am grateful
At night frequent :

And near the interval, kept by Septimius Severus from the accounts of the Quindecimvirum, (Board of 15), 220 years after the Games of Augustus,….

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….as the Chronologists observe, to the year of Christ: 204, Urbis Conditæ 957. For in these sacred seculars, just as in the Daphnephoria, the children of the father and mother, coming to the temple of Apollo, sang songs in Greek and Roman voices, and sang hymns; all are almost related to the specific movements of the Sun and the Moon to signify the movements of different gods: indeed the antiquarians note with Rosinus book 5 ch. 21 that sacrifices were received in the secular sacred places of Jupiter, Juno, Apollo, Latonae, Diana, and moreover Parcis., and which they call Ilithyias , then Ceres , and Diti , and Prosperine : namely, to these deities, which we have already shown to indicate the Sun and the Moon , so that by invoking each of the stars, Horace's eternal hymn is delivered:

Phoebe, and the mighty Diana of the forest,
The glory of the bright Heaven, or to be worshipped
Always and faithfully, give us what we pray for
In the sacred season, &c.
Alme SOL, the day that shines in the car
Promises and secrets, and another and the same
You will be born &c.
Lenis Ilithyia protect the mothers:
If you try to be called Lucina,
Or the genitals
Diva, bring forth a child, &c.
Hear the supplications of the children of Apollo.
Listen to the two-horned queen of the stars
LUNA girls

For in truth the conversation escaped here; it will not be alien to the topic of the Cycles, which we are dealing with, to indicate briefly the relationship of the Julian Cycle with the periods of secular years, once celebrated by the Roman Emperors. It is established that the Secular Games of Augustus fell in the year 28 of Julian's reformation, (before the vulgar era of Christ 18), the city was truly founded near Varro in 736, and it is shown that Claudius celebrated it in Parilibus 737 in the year of Christ 47 B.C. 800 next to Varro Domitianus Christi 88 Antoninus Pius next to Eminentiss. Epistle of Norris. Cons. Pag. 89 & 169 in the year of Christ 147 B.C. 900 Septimius Severus Christi 204 Philip Christi 247 concluded the Millennium Century, opened a new one in the following year 248 with the Ninth Century Games. In the year in which Augustus celebrated, in Caesar's Cyclo, the letters Winter, indeed, and Vere B1 In the summer of spring, and in the autumn of the 11th century; for the year 28, ….

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….from the Julian emendation, restored these letters to indicate Novilunia, as is clear from the expansion of the Cycle, pages 15, 16 & 18. But the letter C1 of the color Albati is given in the Julian Calendar for the 24th of September, or the 8th of October: which was the birthday of Octavian Augustus, as it is read in the same Calendar. It is not surprising, therefore, that Augustus wanted to fix the Epoch of the Secular Games in this year, which combined the Novilunium with his Christmas: especially since the Roman Natals were also referred to the Novilunius day in the same year. Nor did they deviate at length from the interval through the Quindecemvirs definitely from the Sibylline books; when in 109 years after the consulship of Lepidus Orestes (who had celebrated the fourth Centennial Games of Coss.) Augustus Quinctos was established. Claudius, however, celebrating in the year 800 of the city, seems to have reckoned a quarter just the distance of 100 from him, who was the first consul of Tarquinius with Brutus, Valerius Poplicola, the instituter of the Games. Dominatianus in the year of Christ 88, and by Caesar's emendation 133 (with which, of course, the seventh of the Enneadeater was completed…..

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CHAPTER THREE

The first later Canon of Hippolytus is expounded, a complex Sacred Chronology of the Old and New Testaments, from the first Passover of Moses to the last Passion Sunday.

SUMMARY HEADINGS

1. St. Hippolytus presented two things in this former brick, which are the System and Use of his Cycle. 2. The system regards three periods, the lesser of 112 years, the greater of 784 years, and the greatest of 3248 years. The practice refers to the comparison of Easter's fourteenth Moon (Paschal XIV), for each year with the week of Feria (Easter week), in which it falls. 3. And with a certain day of the civil year assigned in the Julian calendar. 4. Use for the chronological expansion of the history of the Old Testament from the legal establishment of the Passover by Moses to the implementation of the same by Christ the Lord. 5. The Hippolytus cycle must not be drawn from this system. 6. Some things are indicated which should have been completed in the Cycle code. 6. A catalogue of the books written by St. Hippolytus is contained in the margin of this former brick.

1. In this earlier passage, St. Hippolytus seems to expand the Cycle in such a way that he supposes one thing, that is, the system of the Cycle itself, and presents the other, that is, the use of the same. First, he supposes the harmony of the middle lunations both *for the lesser* Period, constant in years of hundreds and twelves: then *for the greater*, defined in 774 years, which is, of course, gathered from the seven lesser ones; then to the greatest, which consists of 3248 Julian years. Now this reason and harmony may be called the *system of the Cycle*. For the periods thus compared, and arranged in order, he teaches that they should be applied in chronological order to any preceding Easter, mentioned in the sacred codices: so as to suggest the method of calculating the sacred annals from the Hebrew to the Latin calculus, and to the method of the Julian year as if proleptically taken: which method of comparison we call the *use of the Cycle* .

2. The system of the Cycle, or the harmony of the three periods maj., min., & maximus with the weekdays, should be sought from a more fused commentary, in which the Canon of Hippolytus is illustrated by the author himself, the ancient writers, mentioned at Cl. Man. Charles du Fresne in the last edition of the Paschal Chronicle, which Raderus and Panvinius had formerly called the Alexandrian Chronicle, or the feasts of the Sicilians. He indicates the truth there, that that precious monument of such a great Father is missed today: for although the Canon remains, entrusted to this marble; however, the book which he had stolen from the Canon could not be found anywhere until now. They may well consult the learned, if the lost part of the Cycle, and in this expansion supposed, I shall supply it by that substitution which was seen in the motions of the heavenly bodies, and approach the disposition of the same nearest canon. Therefore consider this harmony of the Major, Minor, and Maximal Periods with the weekdays. In the 112th Julian year (the sum of which I said was a minor period), the Luminarium of the Synod *(synodic cycle of the Moon?= full moon)* ascends in the Julian year for eight days, as was shown from the astronomical calculations in the preceding chapter, page 95. They therefore move towards the beginning of the year for one week and one holiday (*day*). Therefore, during the seven lesser periods, the Synods are withdrawn for seven weeks, and for the same number of holidays, *(days)* that is, for eight solid weeks.

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God If the Paschal Moon could be held, which, contrary to the order of the months, has thus receded to the beginning of the year, for *(8 x 7 =)* 56 days: the Cycle would be restored exactly to the greater Period of 784 years. It is true that the Paschal Moon is not so far behind. We must wait for the double half-moon, that is the 59th day, before the Easter month begins. There were 56 days of retrogression, nay, 57 if those three hours are calculated into each of the smaller Periods, which after the seventh firmly ascend to a solid day. 59 days of descent are expected. After deducting the 57 days of ascent from the 59 days of descent, there will remain two days of descent. Why in the Julian calendar will the Paschal synod descend on the double day after the Julian year 784. In this space the holidays move into single simple years, and two bissextiles: the sum of which is 980. If you add to this sum the two days of descent, there will be 982 days divided by seven weekly holidays. When the division is completed, they remain 2. So many days will be advanced in the phases of the Moon after 784 Julian years, which constitute the Major Period. If you assume this number of years four times (namely, 3136 years); Lunar phases will be promoted by eight holidays, *(days)* or (deducted by a week) by a single holiday *(day)*. But to the same sum 3136 we ordered to add a single minor period, so that the

maximum period of 3248 years could be obtained, which restores the phases of the Moon to the same day of the Julian year: the only minor period retracts the phases by one holiday. Therefore complete the maximum period of ann. 3248 the progressed holidays are compensated by the returning holidays in the movements of the Moon and the Sun; and the synod is restored to the same day of the week, just as it is restored in the same number of years (which we have seen before) to the same day of the Julian year.
It is therefore the attitude and harmony of the threefold Period Minor, Major, and Maxima, which we attribute to the Cycle of St. Hippolytus, with the Julian year, and with the holidays; that is, in the following years

The only Minor Period ann. 112 in the calendar
for eight days, he advanced in a week through the first day
Lunar movements of the Sun:
The only major period of the year / 784 of the same movements
will advance in the Calendar for two days, and in a week
during two holidays.
The single greatest period of the year 3348
restores the Moon's movement from the Sun to the same day of the Julian year,
& on the same day of the week.
This is meant to be accomplished in the previous years, on the contrary read on the contrary, that the return should be in progress.

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If, therefore, there were no account of the precession of the Equinoxes, which during the age of St. Hippolytus had either not yet been discovered, or was believed to be too small; The Paschal cycle would always be perpetual; when in solid Julian years 3248 movements of the mean Monday, the weekly week, and the days of the Julian year would begin.

3. In addition to the elegance of the Cycle, the facility of indication is also added, especially at the time when the practice prevailed of describing the Julian Calendar in astronomical tables, and on the parchments together with the eight letters of the Caesarian Cycle, with the addition of the seven letters of the weekly holidays, which are still preserved by the Calendar, drawn up in the fourth century of Christ, & published by Bucherius, Lambecio, and other writers.

In the same way, if the days of the two months, March and April, are described from the Calendar, a compendium of a double order of letters, namely eight of those which belong

to the Cycle of Caesar, and seven others which distinguish the Holidays of the week; I assert that, in the system of St. Hippolytus, the Paschal day was most expeditiously collected, according to the manner of the Jews, as well as ours. This will become clear by an example. I present in the margin each day of each month spread out, one with the letters of the Julian Ogdoad, and of the Christian and Jewish week.

In the first year of Severus Alexander, *(222 A.D.)* says Hippolytus, the *Luna XIV* occurred on that April Saturday. Easter Sunday, extended to the following week, according to the Latin custom of those times, fell on the 21st of April. *(!)* You see that the 13th of April, of those days, is assigned the letter G of Ogdoad and the week "e". Therefore, the Sunday *(Dominical)* letter is "f".

Mart.				*April.*			
Day of the month		Letters of Ogdoad	Week letter or Sunday	Day of the Month		Letters of Ogdoad	Sunday letter
Kal.	1	D	d	Kal.	1	C	g
	2	E	e		2	D	a
	3	F	f		3	E	b
	4	G	g		4	F	c
	5	H	a	Non.	5	G	d
	6	A	b		6	H	e
Non.	7	B	c		7	A	f
	8	C	d		8	B	g
	9	D	e		9	C	a
	10	E	f		10	D	b
	11	F	g		11	E	c
	12	G	a		12	F	d
	13	H	b	Eid.	13	G	e
	14	A	c		14	H	f
Eid.	15	B	d		15	A	g
	16	C	e		16	B	a
	17	D	f		17	C	b
	18	E	g		18	D	c
	19	F	a		19	E	d
	20	G	b		20	F	e
	21	H	c		21	G	f
	22	A	d		22	H	g
	23	B	e		23	A	a
	24	C	f		24	B	b
	25	D	g		25	C	c
	26	E	a		26	D	d
	27	F	b		27	E	e
	28	G	c		28	F	f
	29	H	d		29	G	g
	30	A	e		30	H	a
	31	B	f				

After 112 years, as we have shown above, the 14th Moon *(Luna XIV)* will be eight days later, *(earlier – 13-8=5)* namely on the 5th, when the letter G of the preceding Julian Ogdoad occurs. The letter of the next column is "d": *(go up 8 to previous letter G in diagram below)* The holiday therefore (which goes back in this space by a single step) *(go up 6 in diagram)* will be 6. Therefore "f" *(?)* was the Dominical letter in the year 112 after the first Severus Alexander, that is, in the year of the Era of Christ 334 Easter actually happened on the 7th of April. (true – "alter Stil" or old style calc) Thus also the Paschal Table published a little earlier in the solution of the Paschal Problem, collected from the "Holy Fathers."

After another 112 years, that is, in the year 446 of the Common Era, Luna XIV in the Calendar is to be withdrawn for eight days where the letter G occurs next in the Ogdoads. He looks forward to the 28th of March. The letter "c" of the second column, next to it, indicates Holiday 5 *(?)* , which is only one step smaller than the Holiday period immediately preceding it. Sunday, March 31st, (true – "alter Stil" or old style calc) will therefore be Easter day. In this way they present the Tables of Holy Fathers Cyril, Leo, &c. collected in the solution of the Paschal Problem.

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I would like to take the experiment also about the major periods of 784 years: each of which advances the Moon both in the Calendar and on the Holidays by two days.

From the first year of Severus Alexander, 222 of the Christian Era, count a double Major Period of 784 years. *(222 + 784 +784=1790)* You fall in the year of Christ 1790. The double major period advances the Moon for four days in the Julian calendar, and for as many holidays in the week. When, therefore, in the first year of Alexander Caesar's Ides Aprilis, the Luna XIV was collected on Saturday, the same moon will be observed on the 4th day, but on the 17th of April, 1790. (No) Therefore, Easter Sunday would be said on the 21st of April, (no) if no precession of the equinoxes had intervened for so many centuries. Instead, receding the Equinox to the 11th day of March in the Julian calendar, the preceding Moon will be considered Paschal. On the 18th of March (no) in the old style, which in the Gregorian will be called the 29th of March, will be Luna XIV. The 17th day of April of the same year is the 4th, and it is marked with the letter "b". Therefore, the letter of the Sunday of the same year in the old calendar must be considered according to the system of the letter. St. Hippolyta's account of Paginâ . . . "f" : that when it occurs on the 24th of March in the old style (true – alter Stil) (or the 4th of April in the new style) next after the fourteenth indicated above; shows that in the same year 1790

Easter was to be celebrated on the 4th of April, (true – "neuer Stil" calc or new style calc) as the common Gregorian Tables also report.

This system, therefore, is to be established by the judge of the Cycle of Hippolytus, through that threefold period*, Minor, Major, and Maximal*, which I present elegantly, and I have shown to respond promptly both to the letters of the Ogdoad in the Julian fashion, and to the weeks in the Christian fashion. Moreover, this attitude of the Cycle of Hippolytus, and its *Periods* to the *Holidays*, must be considered not so much the reason of the System, but also part of the custom: which I think will be clearly seen in the subsequent chapter in the declaration of the second brick. It still remains to be indicated, namely, by what means in each year of any Minor, Major, and Maximal Period, from the expansion of this Canon, Feria is indicated, showing the legal Easter, or the fourteenth day of the Cyclary of the Paschal Moon, and the corresponding day of the Julian year: for this seems to be contained in brick just as in the other, according to the Christian Sunday, the Easters of each year are collected throughout the entire minor period of 112 years, indicated by the previous series of legal Easters, to a certain day of the Julian year, and the week's holiday already reduced in this previous brick.

The Index to the Books of Hippolytus, cut in the margin of the Canon, contains the title of that work, in which the most learned Martyr

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explained all these things, and demonstrated them with a more lucid commentary; for there is read among other works of Hippolytus... Greek bit… A DEMONSTRATION OF THE SEASONS OF EASTER EACH DAY ON THE TABLE . Indeed, when this Book is interrupted by the indifference of the times; we will try to explain from the very arrangement of the seven letters, G F E D C B A, a *demonstration* lost in as many seventeen-year columns. Nor will this seem incongruous to Mathematicians: who know well that the most numerous demonstrations of Theorems and Geometrical Problems can be restored, even with no surviving letters, provided that the features of the figures are preserved; Others mention that it once happened when Euclid was collected. This part of the System of Hippolytus, which also concerns the use of the same Cycle, we find it opportune to postpone for a little while, to the number 6 of the present Chapter, after some premises have been made about the other Chronological use, which will facilitate the explanation of the same things.

4. The second use of this former brick is therefore to be expended to present the Chronology of the principal Passovers, which are mentioned in the divine letters,

next to the proleptic Julian years in the Cycle of Hippolytus. This true method of the elegant Chronicle I gather easily from certain traces, cut into tablets, both in the title, and in the columns by those words which are read in the standing places engraved, namely, EXODUS; IN THE DESERT; JESUS (this is Joshua); HEZECHIAS; JOSIAH; Ezra The same is found once, by adding the words SECOND DANIEL: to express EXODUS BESIDE DANIEL; IN THE DESERT, ACCORDING TO DANIEL, &c. However, the two places, in one of which the GENESIS OF CHRIST is read, in the other the PASSION OF CHRIST, are not twinned in this brick: nor is added to them... …. Greek bit… ACCORDING TO DANIEL, which occurred in the previous ones. Scaliger seems to have at least attained to the opinion of this kind of voice: and from the same inquiry P. Bucherius and Petavius, men of great genius, and equal to any learned in disputing, abstained from the same inquiry, as Varro brought forth from Vettius in the Censorina. When, however, Bucherius allowed the discretion of the Readers to interpret the same words; I consulted the title, to test whether I could become Oedipus from Davus. Of course, in the title, the information is read in the Chronicle of the previous Easters, arranged in this table by Hippolytus. The Latin title says: *In the 1st year of the reign of the Emperor Alexander,*

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the 14th of Easter took place on the Saturday of April, when the month would have been an insertion. It will happen in the following years as it is arranged in the table below. IT WAS ACTUALLY DONE IN THE PAST AS INDICATED……..

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- 5. The Compendium, therefore, elegantly comprises in this Period the Chronology of both Ages, before and after the advent of Christ the Lord, from the seven hecædecaeterides, *or Periods of sixteen years*, arranged in as many columns: which P. Bucherius thought could be contracted to a double smaller number of cells, without disturbing the order of the Holidays; when twice in the cycle of 112 years the same series, or the apocatastasis of the Holidays, would be instituted. Indeed, Bucherian's abridgement would not have presented the Chronology of the Centuries so well, as it would have been necessary to expand it into seven cycles, consisting of 112 years, rather than into periods of 14 and 56 years, as it would have been discovered that, in the former number of 112 years, the lunisolar movement of the eight days later

in the Julian calendar was restored, and the holidays were withdrawn into a single step in a week: which two could at least be joined in the lesser number of fifty-six years. Wherefore it would have been much more difficult to compare the Julian year with the Hebrew Lunar calendar, which is wisely used and ordered by the same Hippolytus for the calculation of the Christian Easter, and for digesting the Chronology of the Old Testament. Moreover, consider the system of the Cycle, the causes of embolisms, as I will show below, if it were shortened.

-
- It is to be regretted, indeed, that the more eloquent commentary of Saint Martyr has perished, which D. Du Cange has shown to be highly desirable from the same example. For under his guidance we shall obtain the remainder of what is to be said of the canon. Certain systems adapted to the practice of the Canon are indeed opposed to the mind. In order not to prolong the dissertation too long, I will put an end to the search with the only section of that chapter, assigned to this investigation.
-
- 6. P. Bucherius knew that, in the years of Julian full 112 (which space we have said to be considered the Minor Period), the Luminary Synods could not be restored from the laws of the means of motion. For this interval has already been shown in the preceding chapter, the phases of the moon neither coincided with the fixed day of the Julian year, nor with the Holidays of the same week. As indeed Bucherius observed, in the expansion of 112 years, of which we shall deal in the next chapter, the accounts of the Moon were displaced by two days; it was supposed that Hippolytus, deceived by desire for ease, decided that after a hundred and twelve years the same day of the Julian year should bring back to the world the Christian Easter, neglecting the desperate motion of the Moon, perhaps because St. Hippolytus thought it a little the same. The same P. Bucherius added with Scaliger, several numerous Canons of Hippolytus, which are spread out in the following brick, but the carved faults are evidently known from a comparison with another brick which we are going through.
- Besides the criticism of Bucherius, there was no lack of suspicion of a previous amendment applied to the marble itself a little after it had been brought out of the ground. For one of the codices of Altæmpsianus, which I have before my hands translated with the rest into the Ottobonian Library, by the indulgence of the Most Eminent Moecena, the codex I say was composed in that age in which the stone had been quarried, and signed by John Crispus, and by Horatio his son, the Scribes of the Vatican Library, of this kind it contains observations, which I will

give in Italian, as they are in the autograph: lest I should be accused of having changed anything, while I accuse others of irresponsible (perhaps even incompetent) castigations.

- Errors of the Sunday Table.

- We still find some errors in the Sunday Table, which have been overcome with study and great diligence, & noted in the margin with red letters, if it is credible, that they are not errors of the Author, but of the engravers of the Tables; and the said errors accommodated by annotations, as they should be, are these, that is In the third Column, it is true affixation to the 16th line where it says IX Kal. ap. Must say V Kal. Aprilis. In the fourth column it is true affixing to the 7th line where V Kal says. Aprilis must say V Idus Aprilis. In the same Column at the 12th line where it says XV Kal. must say XV Kal. Mayas. In the 5th Column at the 9th line where it says XVII Kal. Aprilis must say XVII Kal. Mayas. In the 6th column on the 8th line where he says VI Idus Aprilis he must say VI Kal. Aprilis. In the same Column at the 14th line where he says VIII Kal. Aprilis must say XIII Kal. Aprilis. In the same Column at the 15th line where he says III Idus Apr. he must say VI Idus Aprilis.

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- Errors of the Legal Board

- An error is found in the Legal Table, which is clearly known to be an error, and with study and diligence it has been corrected, and it has been calculated, and made to correspond with all its seven checks, which is this, that is . Where in the fourth line he says. XV Idus Aprilis, he must say V Idus Aprilis, why say. XV Idus is very false, since no more than eight Ides are found in the months.

- Regarding the errors attributed to both Tables, defer the case to the next chapter. Show that the business has just been done by the punishments. For I have consulted the table published by Grutero and Bucherio with the marble prototype, in order to ascertain whether the emendations had been made only in the models, or even in the model itself. But by experiment I learned that there were no defects, or even corrections, in certain characters in the model, which John and Hoaratius Crispi considered to be corrected: but I had a little doubt about other places; when they are read in the manner prescribed above, especially in the fourth column where they are indicated lines 7 & 12; for in these places the stone is read in such

a manner as I exhibited after the second chapter of this dissertation on Greece, whence I also rendered such a Latin version as corresponds to the Greek characters now appearing. While writing that truth on the stone, the previously mentioned chastisers, the servants of the Vatican Library, clearly seem to affirm that they had read differently from themselves those letters in particular that compose the Sunday Table.

- The only error which was observed in the Legal Table, the care and skill of long time, as the correctors themselves affirm, has been removed: and it belongs to the column in which the days of the Julian year are recorded. In the marble, however, there seems to have been no certain defect in this place; with the letter I. in front of the E. a little trace of it remains, so that it can be more clearly seen a wound recklessly inflicted on the marble by the iron of the quarries, by an accidental impact on it, when the letter was deliberately incised.
- Therefore, if there was any defect, it belonged to those columns, which do not want the days of the Roman year, in another brick especially the Easter Sundays. And the cells, which are inscribed in the order of seven invincible letters, when they have not experienced the medical hand of any one, seem to me to be more sincere indications of the canon of Hippoytus.
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- P.117
-
- I say, therefore, that the first of these seven letters, A B C D E F G, thus distributed through the same number of sixteen-year columns, presents a total of 112 years: which I previously said was a *Minor period*. A true column is placed on the left side, in which the embolismic years, which are in each column of 16, are known. 1. 4. 7. 9. 12. 15., as the letters E M bolism attached to them indicate.
- In the second place, these seven letters, *(A B C D E F G)* following each other by a definite implicature in each column, designate the holiday of the Luna XIV for each year of each column of 16 next to come, if one descends in order through the column until two embolisms occur: for then it is necessary to jump to the preceding column: and this occurs twice for each seventeen-year-old columns It is exemplified in the first column of 16. The first year of Severus Alexander the first cycle, which is the Christian era 222 is taken from the first column.

(in table below, I=A Sun; II=B Mon; III=C Tue; IV= D Wed; V= E Thur; VI=F Fri; VII=G Sat)

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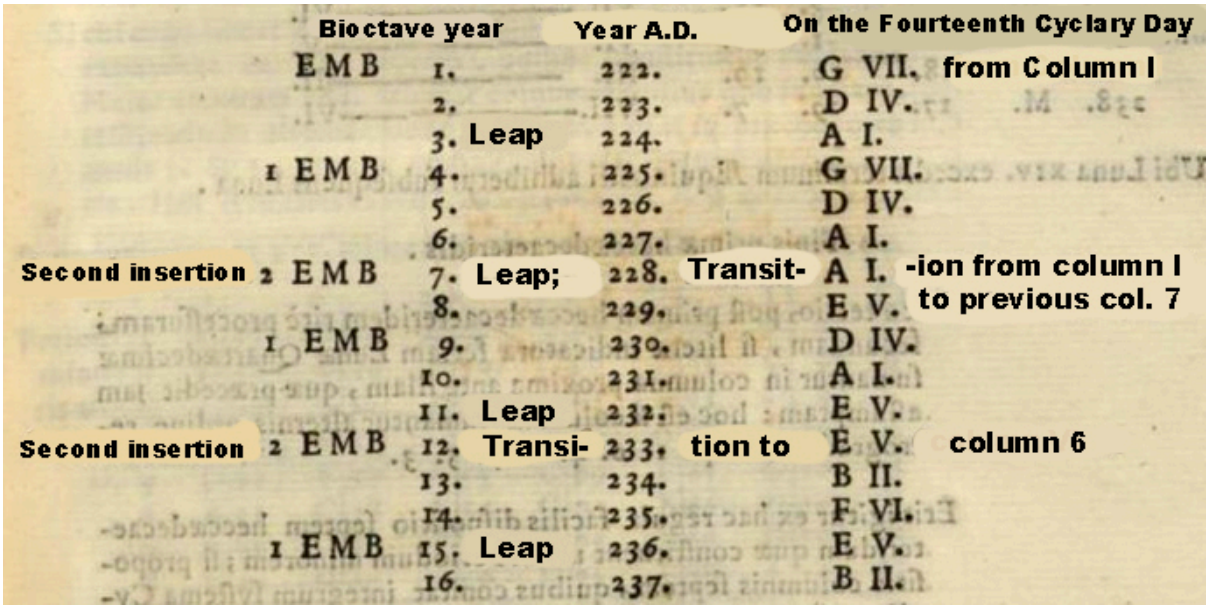

	Bioctave year		Year A.D.		On the Fourteenth Cyclary Day	
	EMB	1.	222.		G VII.	from Column I
		2.	223.		D IV.	
		3. Leap	224.		A I.	
	1 EMB	4.	225.		G VII.	
		5.	226.		D IV.	
		6.	227.		A I.	
Second insertion	2 EMB	7. Leap;	228.	Transit-	A I.	-ion from column I
		8.	229.		E V.	to previous col. 7
	1 EMB	9.	230.		D IV.	
		10.	231.		A I.	
		11. Leap	232.		E V.	
Second insertion	2 EMB	12. Transi-	233.	tion to	E V.	column 6
		13.	234.		B II.	
		14.	235.		F VI.	
	1 EMB	15. Leap	236.		E V.	
		16.	237.		B II.	

-
- In order that it may be declared by experiment that the designation of holidays of this kind, explained in this way from the Cycle, is in accordance with the Moon's mean movements, I show in Table 16 the number of years of the Paschal full moon in the number of the civil day, and the hour, congruent with those which we shall observe from the year 1710 onwards: with the only true number these differences in the order of the Feasts of the past under Alexander, which are thus collected according to the Latin rite of those times.
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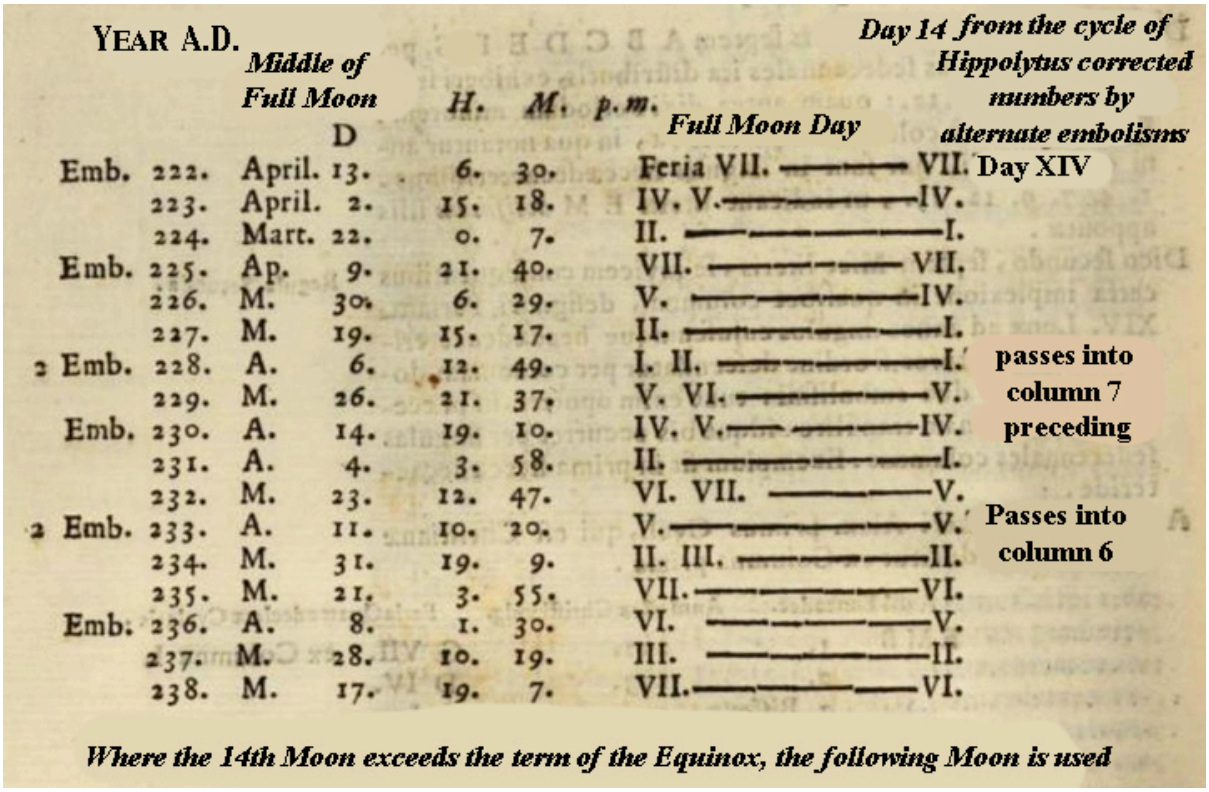
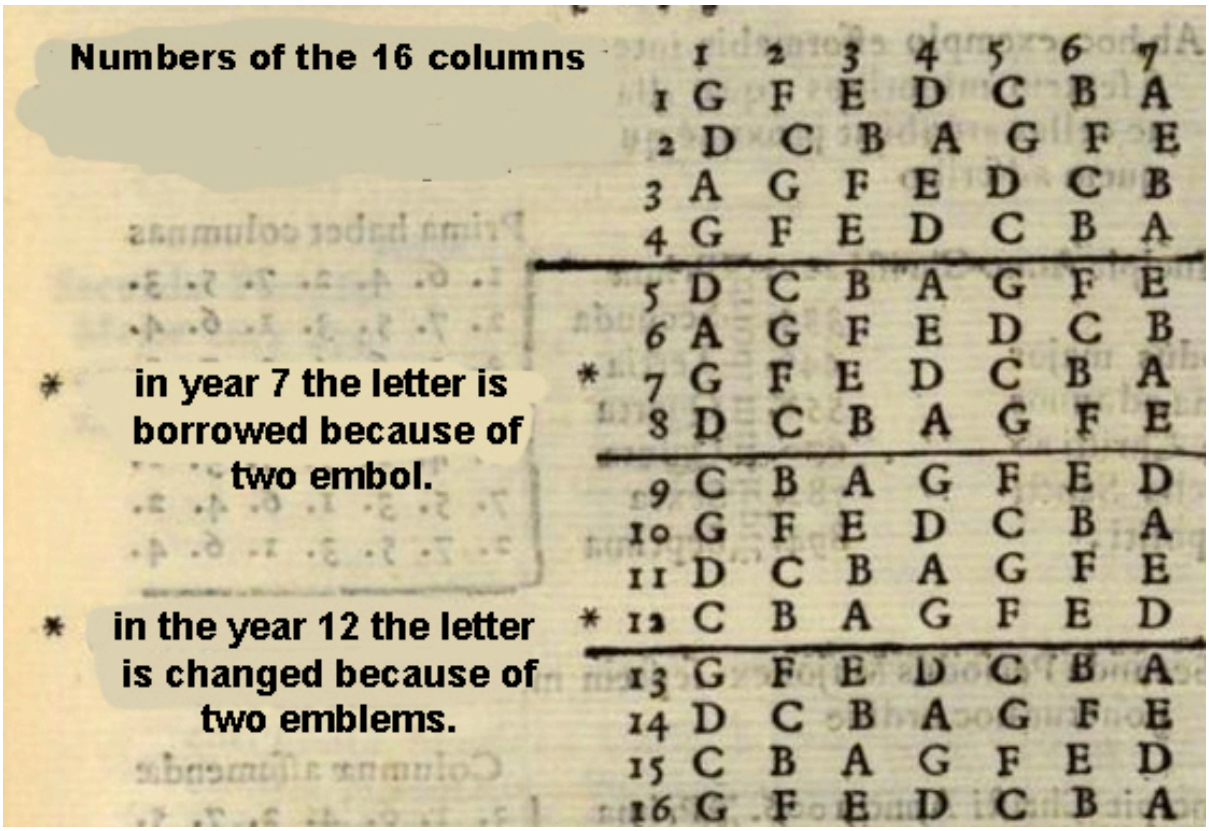


YEAR A.D.		Middle of Full Moon D	H.	M.	p.m.	Full Moon Day	Day 14 from the cycle of Hippolytus corrected numbers by alternate embolisms
Emb.	222.	April. 13.	6.	30.		Feria VII. ——— VII.	Day XIV
	223.	April. 2.	15.	18.		IV. V. ——— IV.	
	224.	Mart. 22.	0.	7.		II. ——— I.	
Emb.	225.	Ap. 9.	21.	40.		VII. ——— VII.	
	226.	M. 30.	6.	29.		V. ——— IV.	
	227.	M. 19.	15.	17.		II. ——— I.	
2 Emb.	228.	A. 6.	12.	49.		I. II. ——— I.	passes into column 7 preceding
	229.	M. 26.	21.	37.		V. VI. ——— V.	
Emb.	230.	A. 14.	19.	10.		IV. V. ——— IV.	
	231.	A. 4.	3.	58.		II. ——— I.	
	232.	M. 23.	12.	47.		VI. VII. ——— V.	
2 Emb.	233.	A. 11.	10.	20.		V. ——— V.	Passes into column 6
	234.	M. 31.	19.	9.		II. III. ——— II.	
	235.	M. 21.	3.	55.		VII. ——— VI.	
Emb.	236.	A. 8.	1.	30.		VI. ——— V.	
	237.	M. 28.	10.	19.		III. ——— II.	
	238.	M. 17.	19.	7.		VII. ——— VI.	

Where the 14th Moon exceeds the term of the Equinox, the following Moon is used

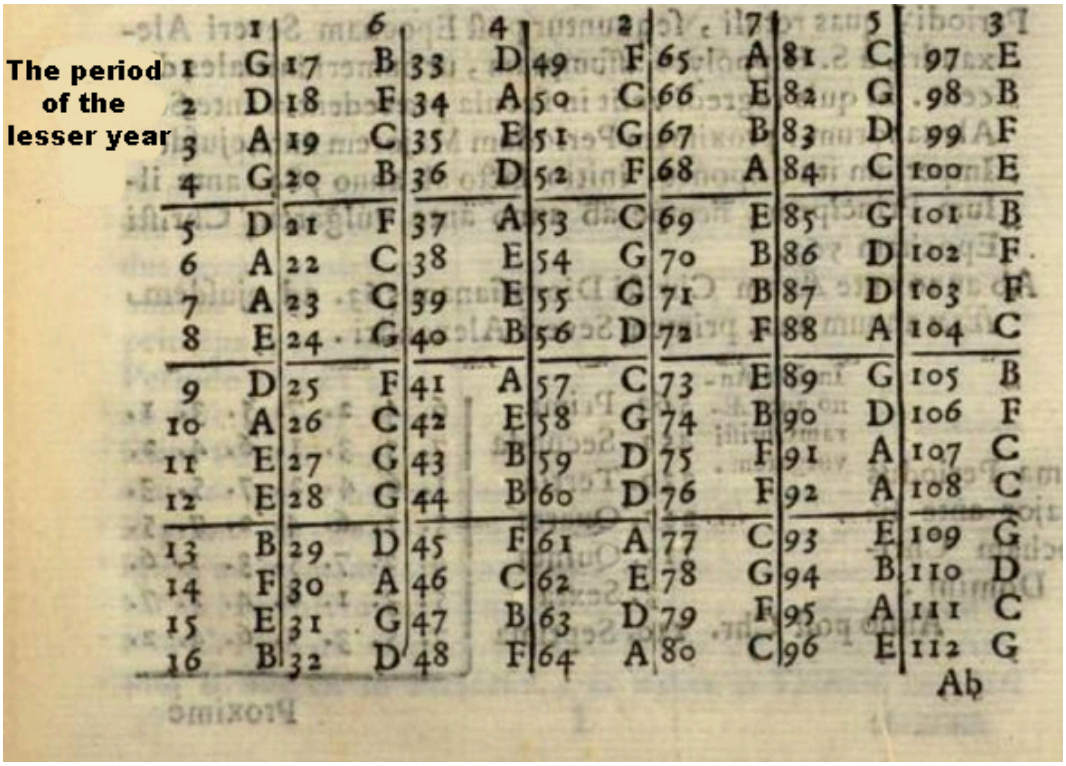
The end of the first hecædecaeterid *(period of 16 years)*

-
- I say thirdly, after the first column of 16, the second, if the literal indication of the day of Luna XIV is taken in the column next before that which precedes the one already taken; this is if the columns are taken alternately in retrograde order, namely 1 6 4 2 7 5 3.
    -
- From this rule, therefore, there will be an easy arrangement of seven colums of 16 which will constitute one minor period; if, with the proposed seven columns, in which the whole system of the Cycle is composed, we should compose the same letters in the order in which we establish the seventeen years of the first column by the second rule. The table is easily expanded from the first column with the 7 letters to obtain in retrograde order G F E &c. *(see first ROW of letters in next table)*



If, therefore, it pleases anyone to expand the first Minor Period of 112 years into the seven that make up the Major Period of 784 years, let him assume the columns in the order I have indicated, and by leaping into alternate ones, he should also jump into the preceding years 7 & 12, because of the double Embolism in the appropriate places. This series of columns will appear as 1.6.4.2.7.5.3.

The first of the 7 minor periods from the year of Christ 222 to 334.



The period of the lesser year	1	6	4	2	7	5	3
1	G 17	B 33	D 49	F 65	A 81	C 97	E
2	D 18	F 34	A 50	C 66	E 82	G 98	B
3	A 19	C 35	E 51	G 67	B 83	D 99	F
4	G 20	B 36	D 52	F 68	A 84	C 100	E
5	D 21	F 37	A 53	C 69	E 85	G 101	B
6	A 22	C 38	E 54	G 70	B 86	D 102	F
7	A 23	C 39	E 55	G 71	B 87	D 103	F
8	E 24	G 40	B 56	D 72	F 88	A 104	C
9	D 25	F 41	A 57	C 73	E 89	G 105	B
10	A 26	C 42	E 58	G 74	B 90	D 106	F
11	E 27	G 43	B 59	D 75	F 91	A 107	C
12	E 28	G 44	B 60	D 76	F 92	A 108	C
13	B 29	D 45	F 61	A 77	C 93	E 109	G
14	F 30	A 46	C 62	E 78	G 94	B 110	D
15	E 31	G 47	B 63	D 79	F 95	A 111	C
16	B 32	D 48	F 64	A 80	C 96	E 112	G

Ab

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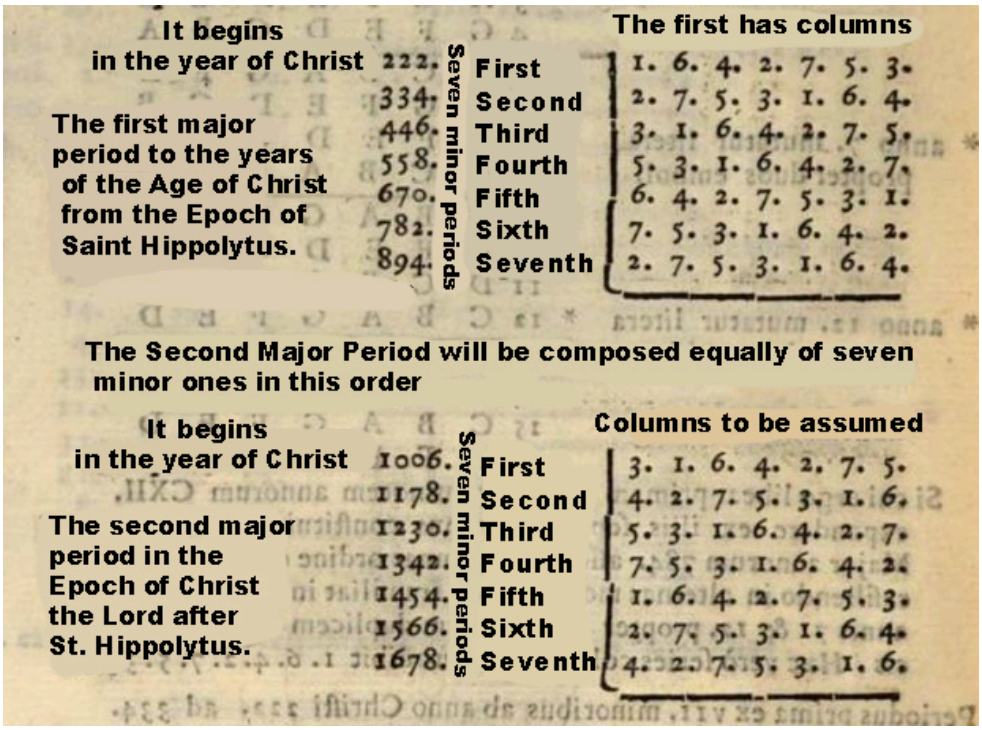
From this example he will form the entire major period, of the seven minor columns which compose it; and let him assign the cells, which are indeed closely arranged, but in the order which I write down



It begins in the year of Christ 222.

The first major period to the years of the Age of Christ from the Epoch of Saint Hippolytus.

Seven minor periods

		The first has columns
334.	First	1. 6. 4. 2. 7. 5. 3.
446.	Second	2. 7. 5. 3. 1. 6. 4.
558.	Third	3. 1. 6. 4. 2. 7. 5.
670.	Fourth	5. 3. 1. 6. 4. 2. 7.
782.	Fifth	6. 4. 2. 7. 5. 3. 1.
894.	Sixth	7. 5. 3. 1. 6. 4. 2.
	Seventh	2. 7. 5. 3. 1. 6. 4.

The Second Major Period will be composed equally of seven minor ones in this order

It begins in the year of Christ 1006.

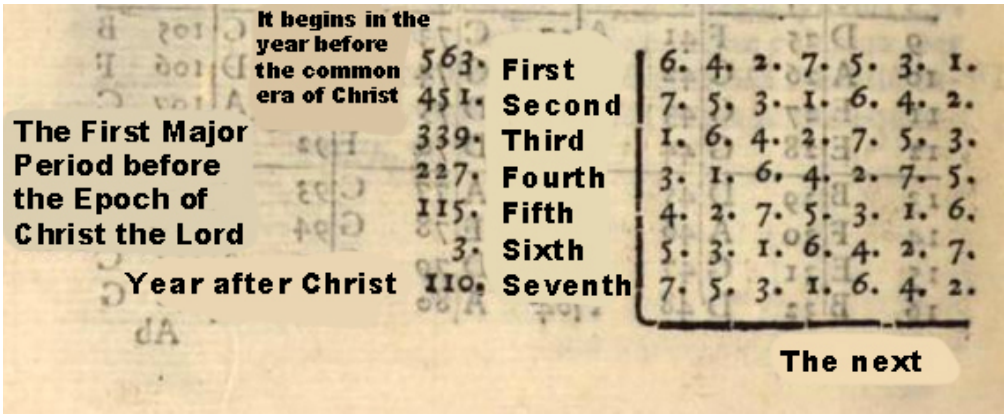
The second major period in the Epoch of Christ the Lord after St. Hippolytus.

Seven minor periods

		Columns to be assumed
1178.	First	3. 1. 6. 4. 2. 7. 5.
1230.	Second	4. 2. 7. 5. 3. 1. 6.
1342.	Third	5. 3. 1. 6. 4. 2. 7.
1454.	Fourth	7. 5. 3. 1. 6. 4. 2.
1566.	Fifth	1. 6. 4. 2. 7. 5. 3.
1678.	Sixth	2. 7. 5. 3. 1. 6. 4.
	Seventh	4. 2. 7. 5. 3. 1. 6.

The periods which I have reported follow after the Epoch of Severus Alexander, assumed by St. Hippolytus, as the initial numbers teach. If anyone wants to go back to the previous centuries before Sev. Alexander He will thus arrange the next Major Period before the same Empire, beginning from the year 784 before that Prince, that is, from the year before the Common Era of Christ 563.

From the year before the Dionysian Era of Christ 563 to the same, the first year of the Era 222 of Severus Alexander.



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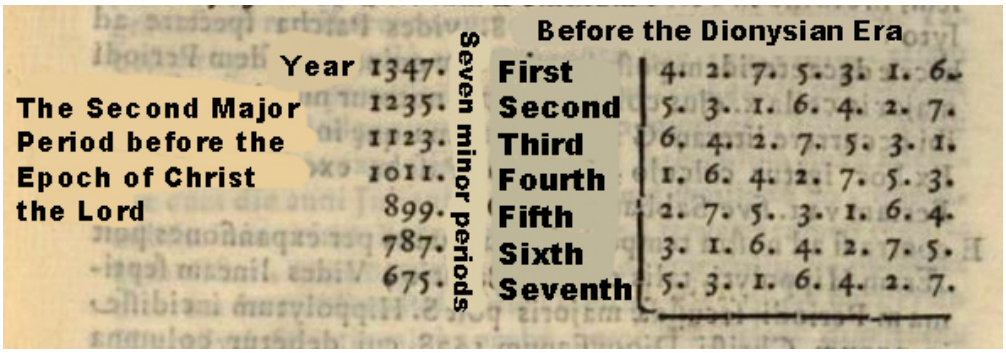
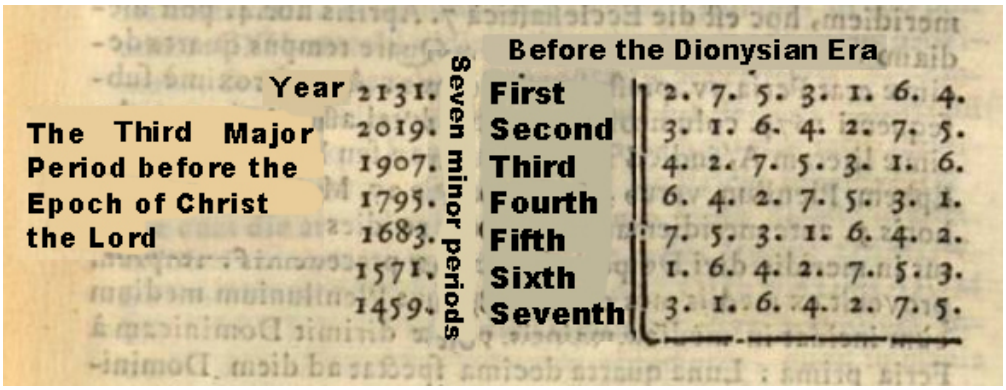
The next major period, which precedes this one, consists of these numbers from the year before the Era of Christ 1347 to the year 563 before Christ the Lord.



Finally, if you wish to add a third Major Period before the Epoch of Alexander, so that the Cycle may include all the years from Moses to Christ the Lord, pre-recorded in the Canon of Hippolytus, it will be thus ordered from the year 1131 to 1347 before the Dionysian Era.



The Third Major Period before the Epoch of Christ the Lord	Year	Seven minor periods	Before the Dionysian Era						
	2131.		First	2.	7.	5.	3.	1.	6.	4.
	2019.		Second	3.	1.	6.	4.	2.	7.	5.
	1907.		Third	4.	2.	7.	5.	3.	1.	6.
	1795.		Fourth	6.	4.	2.	7.	5.	3.	1.
	1683.		Fifth	7.	5.	3.	1.	6.	4.	2.
	1571.		Sixth	1.	6.	4.	2.	7.	5.	3.
	1459.		Seventh	3.	1.	6.	4.	2.	7.	5.

In order that the true use of these expansions may appear there, a method must be given by which the Holiday of any previous Easter in that series of years can be known from this arrangement. According to the Chronology of Hippolytus, the exodus fell in the year before the vulgar Epoch of Christ, 1557. From the year of the chief of both lines, the sixth, and the seventh in this third Major Period before the Epoch of Christ, which we have extracted in the last place, you see that the year 1557 belongs to the space of the sixth minor Period. Since the number 1557 does not fall short of 16 units from the year of the beginning of the entire Period, it is found in the first hecædecaeterid of its cell. It therefore belongs to the first column which is marked there with the number I. It seems that cell 15 was consigned to Hippolytus: to which the letter C was assigned, but because of a double embolism it was promoted to the letter E. This is on Holiday 5, as you have in the regular Table of all Periods.

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CHAPTER FOUR

From the study of another brick of Hippolytus's base: and its connection with the Caesarian Cycle is proposed: then the method of using the same for a more perfect arrangement of the Paschal Tables is shown.

SUMMARY HEADINGS

1. Observation of another brick base, and of the Cycle, prepared by S. Hippolytus, but in marble carved in some places, which are indicated. 2. The emendation of the same places from the Opinion of several Authors. 3. The method of completing this Cycle for Paschal use is shown according to the received custom of the Church. 4. A little

before the Paschal Octagram Cycle was published, the system was claimed by both Cylus, Julian, and Hippolytus.

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Another marble tile of Hippolytus is offered: in which are seen the seven hecædecaeterides, *or Periods of sixteen years*, arranged in as many columns, prefixed to each letter from the previous seven, which we have seen used also on another side to designate the holidays of the week. The sum of seven times sixteen years gives 112 years, that is to say, one of the Periods which I have called the *Minors*. This, however, is the difference between those uppermost columns of the right brick, and these seven arranged in the rear, since in the former seven are described the Easter fortnights with the holidays on which they fall; in the latter version the Easter Sundays of whatever year are ordered: and the days of the Julian month are named and numbered, on which the days of those Easter Sundays, adjudged to the Christian Easter from this Cycle, variously fall. These discourses are promised in the title. For the Epoch of the Cycle begins in the *first year of Severus Alexander*, this is the common Age of Christ, or the Dionysian year 222. ...Greek bit... IN THE FIRST YEAR OF ALEXANDER CAESAR THE BEGINNING. Then the sum of the whole Canon, or Paschal Table, is set forth... Greek bit….EASTER SUNDAY FOR THE SECOND YEAR. Finally; it is added: ...Greek bit... These words, omitted in the Latin version by Bucherio, seem to be correctly interpreted by Scaliger, p. 730. The corrector of the times: he also opportunely warned that the signs of Leap years, indicated by the same words, had not been added by the engraver; which are rendered as follows: "TRULY THE ENGRAVINGS SHOW LEAP YEARS". For from this it is plainly understood that the Author of the Cycle willed that the signs of leap years, which had been affixed to another brick, should also be added to this second one. Which were left when they were; they adduce a very strong argument to confirm the suspicion by which I thought that the engraving of this marble had not been taken care of by the very author of the Cycle, S. Hippolytus; but that he had undertaken the care of the same celebrant, a less expert chronologist of those things which the learned Bishop and Martyr had wished to set forth in the expansion of the Canon: who had found an elegant Period, and a patient of faith much more prominent in the correct assignment of the Paschal day, than this second brick preserves. Scaliger's opinion about those words is as follows: ... (Greek bit) ... *he understands the notes "gg" which I am surprised you omitted here, when we are reminded that they were also attached to this brick. For of course they were to be added.* …(Greek bit)…, *this is the leap year (bissextum); for g or g are six, & gg are...*

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(Greek bit). *In another quarto-decimal note, the corresponding places of the leap year are affixed with this same character g.*

In addition to these, Scaliger observed that several errors were to be attributed to the incompetence of the square and the curator; some of them were also saved by virtue. For he says on page 733, *In the Holy Greek Scriptures there is a fraud by the sculptor, or the stonemason. In the second Heccædecaeterid in the ninth year of the vitiated sculpture* "ñ Γ.ΚΑ.ΜΑΡ".* *To be read:* "ñ ΙΓ.ΚΑ. ΜΑΙ". *In the last line of the third column for* "Θ.ΚΑ" *read* "ñ ε.ΚΑ". *And perhaps it was carved in this way, but it was hardly accepted by the readers, for* Θ *and* ε *have a great affinity.*

**(the marble reads "ΙΓ ΚΑ ΜΑΡ").* Scaliger interpreted them both correctly. For those of us who looked carefully at the marble model itself, it appeared that the latter year had been castigated. *In line 8 of the sixth column, a defect from the Author, not from the stonemason* "Π S. ΕΙ. ΑΠΡ". *It is a hallucination. The Paschal term was placed on the 25th of March, so that the letter of Dominical was B on the terminal panel. Therefore, Easter should be set on the 27th of March.* For "S EI" *read* "S KA". I do not agree with the censor about the author's error, but he accuses Hippolytus. The truth can be read in the marble. From this I infer the truth, that the marble was not cared for by Hippolytus, but rather by an unskilled or careless person. *In the following year, the defect of the stonemason* "MAP" *should be read as* "MAI". *In the penultimate* "Γ ΕΙ ΑΠΡ" *should read* "S EI". There is a doubtful reading in the model, since even the previous year does not present "H KA" sufficiently distinctly, so that the Vatican Scribes on page 115 produced by me were at fault; but more importantly "I Γ" refers to the number 13, although the transverse note is hardly visible, it seems to connect both letters in H, the note of the number 8.

In order that I may tell here what is to be felt about the faulty reading in the passages indicated by both Crispus, Io, and Horatio, after I have compiled each one with a model, which was used in the most brilliant day by several men learned in Greek and Latin, with whom I have been observed more than once, I will enumerate each one.

In the third column, the last line "Θ ΚΑΑ" was corrected to "ε ΚΑΑ". Or a part of the letter is taken, which is folded, and closes the circle; or there was none, except ε, as it now appears.

In the fourth column in the seventh line "v Kal" correct "v Idus". The marble reads "V EI" An obvious error.

In the same column, line 12, it is blamed "15 Kal Aprilis": where it is said to be read "15 Kal Mai". The marble reads "MAI".

In the fifth column, the ninth verse, the name of the month of April is accused of turning into May. This very marble contains MAI.

In the 6th column, eighth line, where the 6th day of April was referred to, the 6th Kalends is corrected. A necessary correction; for Idus 6 is read.

Verses 14 and 15 of the same column are of doubtful reading.

ЄΤЄΙ ΑΛЄΞΑΝΔΡΟΥ
ΚΑΙϹΑΡΟϹ
Τω Ā ΑΡΧΗ

ΑΙ ΚΥΡΙΑΚΑΙ ΤΟΥ ΠΑϹΧΑ ΚΑΤΑ ЄΤΟϹ

ΑΙ ΔЄ ΠΑΡΑΚЄΝΤΗϹЄΙϹ ΔΗΛΟΥϹΙ ΤΗΝ ΔΙϹ ΠΡΟ ЄΞ

Α	Γ	Є	Ζ
Π̂ ΙΑ ΚΑ. ΜΑΙ. ΚΥ	Π̂ ΙS· ΚΑ. ΜΑΙ. ΚΥ	Π̂ ΙΔ. ΚΑ. ΜΑΙ. ΚΥ	Π̂ ΙΒ. ΚΑ ΜΑΙ. ΚΥ
Π̂ Η ЄΙ. ΑΠΡ. ΚΥ	Π̂ S ЄΙ. ΑΠΡ. ΚΥ	Π̂ Δ ЄΙ. ΑΠΡ. ΚΥ	Νω ΑΠΡ. ΚΥ
Π̂ Є ΚΑ. ΑΠΡ. ΚΥ	Π̂ Ι ΚΑ. ΑΠΡ. ΚΥ	Π̂ Η ΚΑ. ΑΠΡ. ΚΥ	Π̂ S. ΚΑ. ΑΠΡ. ΚΥ
Π̂ ΙЄ ΚΑ. ΜΑΙ. ΚΥ	Π̂ Α ЄΙ. ΑΠΡ. ΚΥ	Π̂ ΙΗ ΚΑ. ΜΑΙ. ΚΥ	Π̂ ΙS. ΚΑ. ΜΑΙ. ΚΥ
Π̂ Δ Ν. ΑΠΡ. ΚΥ	Π̂ Α Νω. ΑΠΡ. ΚΥ	Π̂ Η ЄΙ. ΑΠΡ. ΚΥ	ΚΑ. ΑΠΡ. ΚΥ
Π̂ Η ΚΑ. ΑΠΡ. ΚΥ	Π̂ ΙΓ ΚΑ. ΑΠΡ. ΚΥ	Π̂ ΙΑ ΚΑ. ΑΠΡ. ΚΥ	Π̂ Θ. ΚΑ ΑΠΡ. ΚΥ
ЄΙ ΑΠΡ. ΚΥ	Π̂ S ЄΙ. ΑΠΡ. ΚΥ	Π̂ Δ ЄΙ. ΑΠΡ. ΚΥ	Π̂ Α. ЄΙ. ΑΠΡ. ΚΥ
Π̂ Δ ΚΑ. ΑΠΡ. ΚΥ	Π̂ Α ΚΑ. ΑΠΡ. ΚΥ	Π̂ Δ Νω. ΑΠΡ. ΚΥ	Π̂ Є. ΚΑ. ΑΠΡ. ΚΥ
Π̂ ΙΔ ΚΑ. ΜΑΙ. ΚΥ	Π̂ ΙΒ ΚΑ. ΜΑΙ. ΚΥ	Π̂ ΙΖ ΚΑ. ΜΑΙ. ΚΥ	Π̂ ΙЄ. ΚΑ. ΜΑΙ. ΚΥ
Π̂ Δ ЄΙ. ΑΠΡ. ΚΥ	Νω ΑΠΡ. ΚΥ	Π̂ Ζ ЄΙ. ΑΠΡ. ΚΥ	Π̂ Є. ЄΙ. ΑΠΡ. ΚΥ
Π̂ Η ΚΑ. ΑΠΡ. ΚΥ	Π̂ S ΚΑ. ΑΠΡ. ΚΥ	Π̂ Δ ΚΑ. ΑΠΡ. ΚΥ	Π̂ Θ. ΚΑ. ΑΠΡ. ΚΥ
Π̂ ΙΗ ΚΑ. ΜΑΙ. ΚΥ	Π̂ ΙS ΚΑ. ΜΑΙ. ΚΥ	Π̂ Γ ЄΙ. ΑΠΡ. ΚΥ	ЄΙ ΑΠΡ. ΚΥ
Π̂ Η ЄΙ. ΑΠΡ. ΚΥ	ΚΑ ΑΠΡ. ΚΥ	Π̂ Γ Νω. ΑΠΡ. ΚΥ	Νω ΑΠΡ. ΚΥ
Π̂ ΙΑ ΚΑ. ΑΠΡ. ΚΥ	Π̂ Θ ΚΑ. ΑΠΡ. ΚΥ	Π̂ Ζ ΚΑ. ΑΠΡ. ΚΥ	Π̂ ΙΒ. ΚΑ. ΑΠΡ. ΚΥ
Π̂ Δ ЄΙ. ΑΠΡ. ΚΥ	Π̂ Α ЄΙ. ΑΠΡ. ΚΥ	Π̂ Ζ ЄΙ. ΑΠΡ. ΚΥ	Π̂ Є. ЄΙ. ΑΠΡ. ΚΥ
Π̂ Δ Νω. ΑΠΡ. ΚΥ	Π̂ Є ΚΑ. ΑΠΡ. ΚΥ	Π̂ Γ ΚΑ. ΑΠΡ. ΚΥ	ΚΑ ΑΠΡ. ΚΥ

Β	Δ	S
Π̂ ΙΖ ΚΑ. ΜΑΙ. ΚΥ	Π̂ ΙЄ ΚΑ. ΜΑΙ. ΚΥ	Π̂ ΙΓ. ΚΑ. ΜΑΙ. ΚΥ
Π̂ Ζ ЄΙ. ΑΠΡ. ΚΥ	Π̂ Є ЄΙ. ΑΠΡ. ΚΥ	Π̂ Α Νω. ΑΠΡ. ΚΥ
Π̂ Δ ΚΑ. ΑΠΡ. ΚΥ	Π̂ Θ ΚΑ. ΑΠΡ. ΚΥ	Π̂ Ζ ΚΑ. ΑΠΡ. ΚΥ
Π̂ Γ. ЄΙ. ΑΠΡ. ΚΥ	ЄΙ ΑΠΡ. ΚΥ	Π̂ ΙΖ ΚΑ. ΜΑΙ. ΚΥ
Π̂ Γ Νω. ΑΠΡ. ΚΥ	Νω ΑΠΡ. ΚΥ	Π̂ Α ΚΑ. ΑΠΡ. ΚΥ
Π̂ Ζ ΚΑ. ΑΠΡ. ΚΥ	Π̂ ΙΒ ΚΑ. ΑΠΡ. ΚΥ	Π̂ Ι ΚΑ. ΑΠΡ. ΚΥ
Π̂ Ζ ЄΙ. ΑΠΡ. ΚΥ	Π̂ Є ЄΙ. ΑΠΡ. ΚΥ	Π̂ Γ ЄΙ. ΑΠΡ. ΚΥ
Π̂ Γ ΚΑ. ΑΠΡ. ΚΥ	ΚΑ ΑΠΡ. ΚΥ	Π̂ S ЄΙ. ΑΠΡ. ΚΥ
Π̂ ΙΓ ΚΑ. ΜΑΡ. ΚΥ	Π̂ ΙΑ ΚΑ. ΜΑΙ. ΚΥ	Π̂ ΙS ΚΑ. ΜΑΡ. ΚΥ
Π̂ Α Νω. ΑΠΡ. ΚΥ	Π̂ Η ЄΙ. ΑΠΡ. ΚΥ	Π̂ S ЄΙ. ΑΠΡ. ΚΥ
Π̂ Ζ ΚΑ. ΑΠΡ. ΚΥ	Π̂ Є ΚΑ. ΑΠΡ. ΚΥ	Π̂ Ι ΚΑ. ΑΠΡ. ΚΥ
Π̂ ΙΖ ΚΑ. ΜΑΙ. ΚΥ	Π̂ ΙЄ ΚΑ. ΜΑΙ. ΚΥ	Π̂ Α ЄΙ. ΑΠΡ. ΚΥ
Π̂ Α ΚΑ. ΑΠΡ. ΚΥ	Π̂ Δ Νω. ΑΠΡ. ΚΥ	Π̂ Α Νω. ΑΠΡ. ΚΥ
Π̂ Ι ΚΑ. ΑΠΡ. ΚΥ	Π̂ Η ΚΑ. ΑΠΡ. ΚΥ	Π̂ ΙΓ ΚΑ. ΑΠΡ. ΚΥ
Π̂ Γ ЄΙ. ΑΠΡ. ΚΥ	ЄΙ ΑΠΡ. ΚΥ	Π̂ *Γ ЄΙ. ΑΠΡ. ΚΥ
Π̂ S ΚΑ. ΑΠΡ. ΚΥ	Π̂ Δ ΚΑ. ΑΠΡ. ΚΥ	Π̂ Α ΚΑ. ΑΠΡ. ΚΥ

* *Seu potiùs* Ζ ЄΙ; *nam in marmore vexata litera dubiā reddit lectionem*

Poſt pag.92.

ANNO ALEXANDRI CAESARIS PRIMO INITIUM DOMINICAE PASCHALES SECUNDUM ANNOS ADPUNCTIONES VERO OSTENDUNT BISSEXTUM.

	I.	III.	V.	VII.
1	XI. Kal. Maii. Dñica.	XVI. Kal. Maii. Dñica.	XIV. Kal. Maii. Dñica.	XII. Kal. Maii Dñica.
2	VIII. Idus Apr. Dñica.	VI. Idus Aprilis.	IV. Idus Aprilis.	Nonis Aprilis.
3	V. Kal. Apr. Dominica.	X. Kalendas Aprilis.	VIII. Kalen. Aprilis.	VI. Kalendas Aprilis.
4	XV. Kalendas Maii.	Pridie Idus Aprilis.	XVIII. Kalendas Maii.	XVI. Kalendas Maii.
5	IV. Nonas Aprilis.	Pridie Nonas Aprilis.	VIII. Idus Aprilis.	Kalendis Aprilis.
6	VIII. Kalendas Aprilis	XIII. Kalendas April.	XI. Kalendas Aprilis.	IX Kalendas Aprilis.
7	Idibus Aprilis.	VI. Idus Aprilis.	IV. Idus Aprilis.	Pridie Idus Aprilis.
8	IV. Kalendas Aprilis.	Pridie Kalend. Aprilis.	IV. Nonas Aprilis.	V. Kalendas Aprilis.
9	XIV. Kalendas Maii.	XII. Kalendas Maii.	XVII. Kalendas Maii.	XV. Kalendas Maii.
10	IV. Idus Aprilis.	Nonis Aprilis.	VII. Idus Aprilis.	V. Idus Aprilis.
11	VIII. Kalendas Aprilis	VI. Kalendas Aprilis.	IV. Kalendas Aprilis.	IX. Kalendas Aprilis.
12	XVIII. Kalendas Maii.	XVI. Kalendas Maii.	III. Idus Aprilis.	Idibus Aprilis.
13	VIII. Idus Aprilis.	Kalendis Aprilis.	III. Nonas Aprilis.	Nonis Aprilis.
14	XI. Kalendas Aprilis.	IX. Kalendas Aprilis.	VII. Kalendas Aprilis.	XII. Kalendas Aprilis.
15	IV. Idus Aprilis.	Pridie Idus Aprilis.	VII. Idus Aprilis.	V. Idus Aprilis.
16	IV. Nonas Aprilis.	V. Kalendas Aprilis.	III. Kalendas Aprilis.	Kalendis Aprilis.

	II.	IV.	VI.	
1	XVII. Kalendas Maii.	XV. Kalendas Maii.	XIII. Kalendas Maii.	
2	VII. Idus Aprilis.	V. Idus Aprilis.	Pridie Nonas Aprilis.	
3	IV. Kalendas Aprilis.	IX. Kalendas Aprilis.	VII. Kalendas Aprilis.	
4	III. Idus Aprilis.	Idibus Aprilis.	XVII. Kalendas Maii.	
5	III. Nonas April.	Nonis Aprilis.	Pridie Kalend. Aprilis.	
6	VII. Kalendas Aprilis.	XII. Kalendas Aprilis.	X. Kalendas Aprilis.	
7	VII. Idus Aprilis.	V. Idus Aprilis.	III. Idus Aprilis.	
8	III. Kalendas Aprilis.	Kalendis Aprilis.	VI. Idus Aprilis.	
9	XIII. Kalendas Mart.	XI. Kal. Maii Dñica.	XVI. Kalendas Martii.	
10	Pridie Nonas Aprilis.	VIII. Idus Aprilis.	VI. Idus Aprilis.	
11	VII. Kalendas Aprilis.	V. Kalendas Aprilis.	X. Kalendas Aprilis.	
12	XVII. Kalendas Maii.	XV. Kalendas Maii.	*Pridie Idus Aprilis.*	
13	Pridie Kalend. Aprilis.	IV. Nonas Aprilis.	Pridie Nonas Aprilis.	* ſeu potiùs VI. Idus nam in marmore vexata litera dubiam reddit lectionem.
14	X. Kalendas Aprilis.	VIII. Kalend. Aprilis.	XIII. Kalend. Aprilis.	
15	III. Idus Aprilis.	Idibus Aprilis.	* III. Idus Aprilis.	
16	VI. Kalendas Aprilis.	IV. Kalendas Aprilis.	Pridie Kalend. Aprilis.	

From these errors, which the fourth and sixth columns can be disguised; and from the omission of the leap year signs which were promised in the title, who does not see that the author of the title, and the Cycle, did not stand by the sculptor of this particular panel, which now appears to be corruptly concealed? Compare now the excellence of Canon Hippolytus, the constancy, the faithfulness, in consigning the holidays, days, and years of the preceding Easters, from the Chronology with absolute numbers, for almost eighteen centuries before Alexander Caesar; Besides the lunar numbers with the Julian years, in such a series of centuries, produced by a wonderful agreement from the triple period of the *minor, major*, and *greatest*, explained by us; compare these discoveries which I have made, which are gathered from the disposition of the earlier panels already exposed, with the unfortunately bad expansion of this minor period, the first after Alexander. It is necessary to admit that Hippolytus would have taken care of many important Easter Sundays close to his period of 112 years, who had thus wisely looked forward to the Paschal feasts of both Testaments, which were ordained for many years of chastisement; if, like the Septagram, he had arranged that table of Sunday letters with wonderful skill, he would have expanded the Period depending on it. I believe that this was given by the most learned Martyr in the lost books of the *Passover Demonstrations*. I would never admit that they had been arranged in this way by him in this tablet, until I learned from a suitable witness that he had seen them with the same expertise that the system of the Cycles expounded manifests.

Add to the confirmation of Hippolytus's apology the expedient facility of gathering the Paschal days from the mean movements of the Moon: which could not have been unknown to the Author of the above Table, when he had woven a corresponding arrangement of the Holidays, (corresponding to the same laws) which we have seen, in the columns, from the onslaught of the insertions, as I have before advised. For what we have done there on Page 124 for the first heccaterid, it is necessary to have done it in order to dispose of the remaining six. In fact, for seven hundred years, the 14 Paschal days were once compared with the days of the Julian year, and with the Sundays, the only aspect of the Sunday letter, in the first usurped Hippolytus Cycle, and most chastisingly the lesser Period itself, this second so ostentatiously treated in brick.

It was necessary to desist from the power, not even from Hippolytus, but from the same century to investigate the mode of the precession of the equinoxes: which had not been sufficiently determined by the astronomers and also by the Egyptians, suffering from the scarcity of ancient observations. Moreover, that once the quantity of the turning year had been known, we shall see that it was successfully

defined in the Gregorian century in the Opusculo *de Nummo*, & *Gnomone Clementino*; The period of Hippolytus could not be without this praise of constancy.

I will give the shortest method. In the previous chapter, page 120, we have shown that according to the arrangement of the letters of Canon Hippolytus, in the Julian years a certain day was assigned to the fortnight of Easter, and its Feria to several Minor, Major, and Maximal Periods. We actually used the letters of Caesar's Octogram Cycle in the establishment of each minor period, which won the greatest ease even for those who are least skilled in the tricks of numbers.

Now the rule was established to bring out the lunation with an additional 30 days, when beyond the limits of the equinoctial Ogdoads the moon would withdraw. Nothing therefore remains to be done, except that we should fix on each of the Minor and Major Periods the definite Paschal boundaries of the equinoxes, which in the Julian year gradually ascend to the head of the year. For thus he will answer in the Gregorian way, who takes care of the same terms by the elision of the Leap day established in three hundred years, allowing it to be interpolated on the fourth day. In each *major* Period, composed of seven minor ones, if you advance the seat of the Equinox on a single day through each of the *Minors*, except in the last one; the same you will firmly perform in the Julian year, which Gregory's correction brings to it. For from the year of the Epoch of Hippolytus to the year 1790 of the Era Vulgaris, in which we saw the completion of the double Major Period in the years 1468, the Equinox receded towards the Kalends by almost 12 days. But *Major* Hippolytea, a double period of 12 days, will withdraw according to this position. The Gregorian method, and that which I consider to be used for the Hippolyte Period in the Julian year, will do the same. I exhibit the Tables on the reverse side of the page in which I exhibited the Latin version of the Canon of Hippolytus.* I collected the Tablets, and there indicated the Holiday, and the Julian day of the 14th Easter Monday, and also the Sunday following each year in the Julian style, both before and after the Era of Christ. The boundaries of the equinoxes, attached to each major period, indicate when the full moon should be inserted according to the established rules. * *“after p.93” (??) = between p.92 & p.93*

And that the use may appear to be most expedient to order the Sacred Paschal Chronology from such Tables, Periods, and the Canon of Hippolytus with wonderful

ease, and with equal chastisement, or for centuries far apart; I will give an example of Hippolyte's greatest Period, after the completion of the years 3248

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(at the beginning of 3249) the movement of the Moon, and a Holiday on the same day of the Julian year. For it opportunely happens that at the first Passover of Moses the most auspicious year of our age meets us, counting the sum of the years, that is, the year of the Jubilee which has just passed, and the very same Centurion of 1800 CLEMENT XI PRIMUS, who establishes this Great Period at the Passover of Moses in that sentence which established the Exodus years before the vulgar era of Christ 1549.

I had prefaced above on p.106, and the following, among the various opinions of the ancient and recent chronologists, most proved in supposing the years from the Exodus to the common era of Christ, those which make such an interval neither shorter than 1500 years, nor longer than 1550 or 1560, as appears from the individual bricks, after You are reviewing the same page. I therefore assume the Epoch of the years 1549, eight years shorter than that assigned by Hippolytus. To this sum, when you add the years approximately equal to 1551 in the era of Christ, when the Hippolytus statue was excavated from the summer field; the sum of the years will be three thousand and one hundred. There are 148 years remaining to complete the Great Period. Add this sum to the year of the excavation of this marble, 1551. The year of the Common Era of Christ will be 1699, when the solid Great Period will be completed, counted from the Passover of the Exodus to the same year 1699 in that sentence, which established the Exodus of the People years before the Era of Christ 1549. The year 1700, therefore, which was the last of the Secular, will establish the Greatest Period of the Cycle of Hippolytus. Wherefore the full moon, and the rest of the days of the lunar age, shall be restored to the same day of the Julian year, and to the same holiday.

In Porrò in 1700, the Era of Christ, the 3rd of Gregorian April (which was the 23rd of Julian March) happened to be the full moon at half past 11 o'clock in the afternoon on Saturday. Before Julian years 3248, that is, in the same year, which this sentence assigns to the exodus of the Israelites from Egypt, the middle of the full moon refers to the same day taken proleptically in the Julian year, that is to say, to the 23rd of March at the hours of the 12th city, that is to say, Saturday, but about the hour of noon. The day preceding the 22nd of March, that is, Holiday 6, was the 14th moon of the equinox 32 centuries ago, and it happened 24 days later in the Julian year. When therefore in the year 1700 the true equinox was observed on the ninth day of Julian March, and on the eleventh the middle

equinox; 3248 years ago the equinox was true on the 3rd of Julian April. Therefore, the full moon falling on the 23rd of March was not Easter. Nor was Easter the fourteenth moon, which fell on the day before the 22nd of March, Holiday 6. Therefore, if you count

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30 days, you will have the fourteenth day of Easter Monday, April 21: which was Sunday. This sentence therefore assigns to Exodus the day of Sunday, the figure of Easter for the Christian, namely that night which robbed the Egyptians and enriched the Hebrews, as we sing every year in the Easter sermon with the Catholic Church.

P.140-176 MISSING