

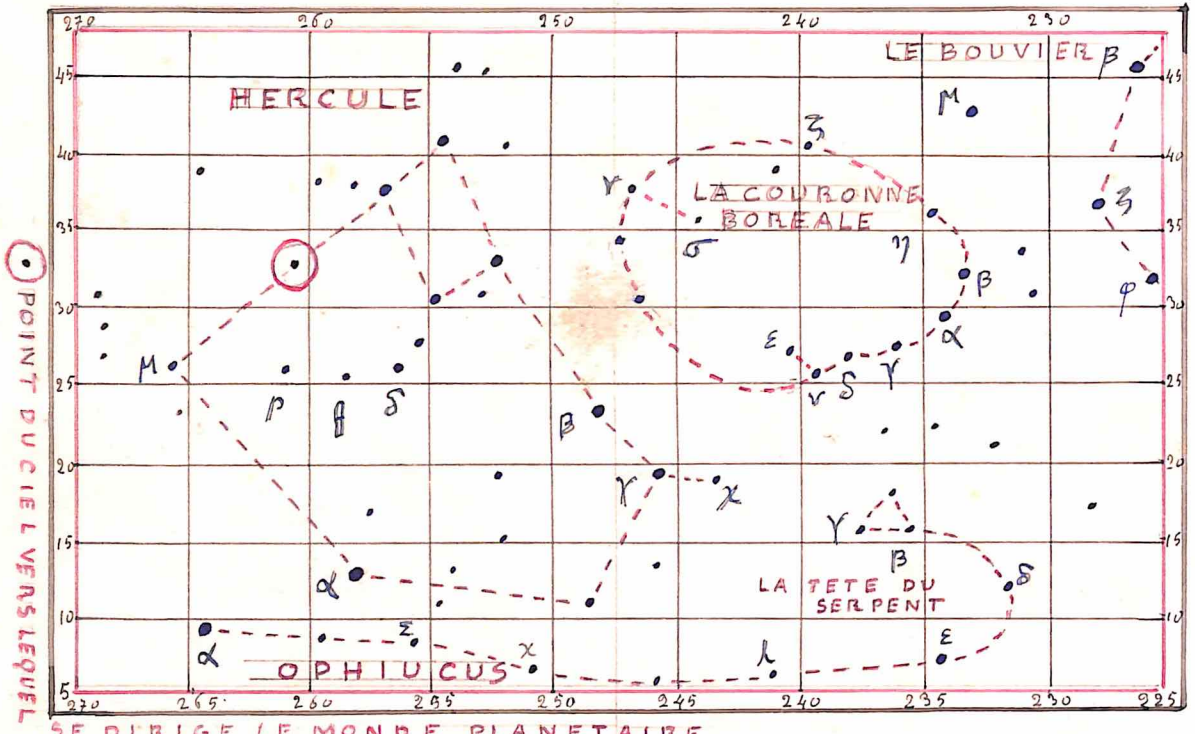
ASTRONOMIE

LA MUSIQUE SIDERALE

DE 32 A 2069 VIBRATIONS

2^{me} PARTIE

L'INFINI DES ETOILES

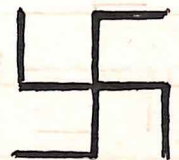


SE DIRIGE LE MONDE PLANETAIRE

PAR

F DE LA TOMBELLE

FAYRAC 1920



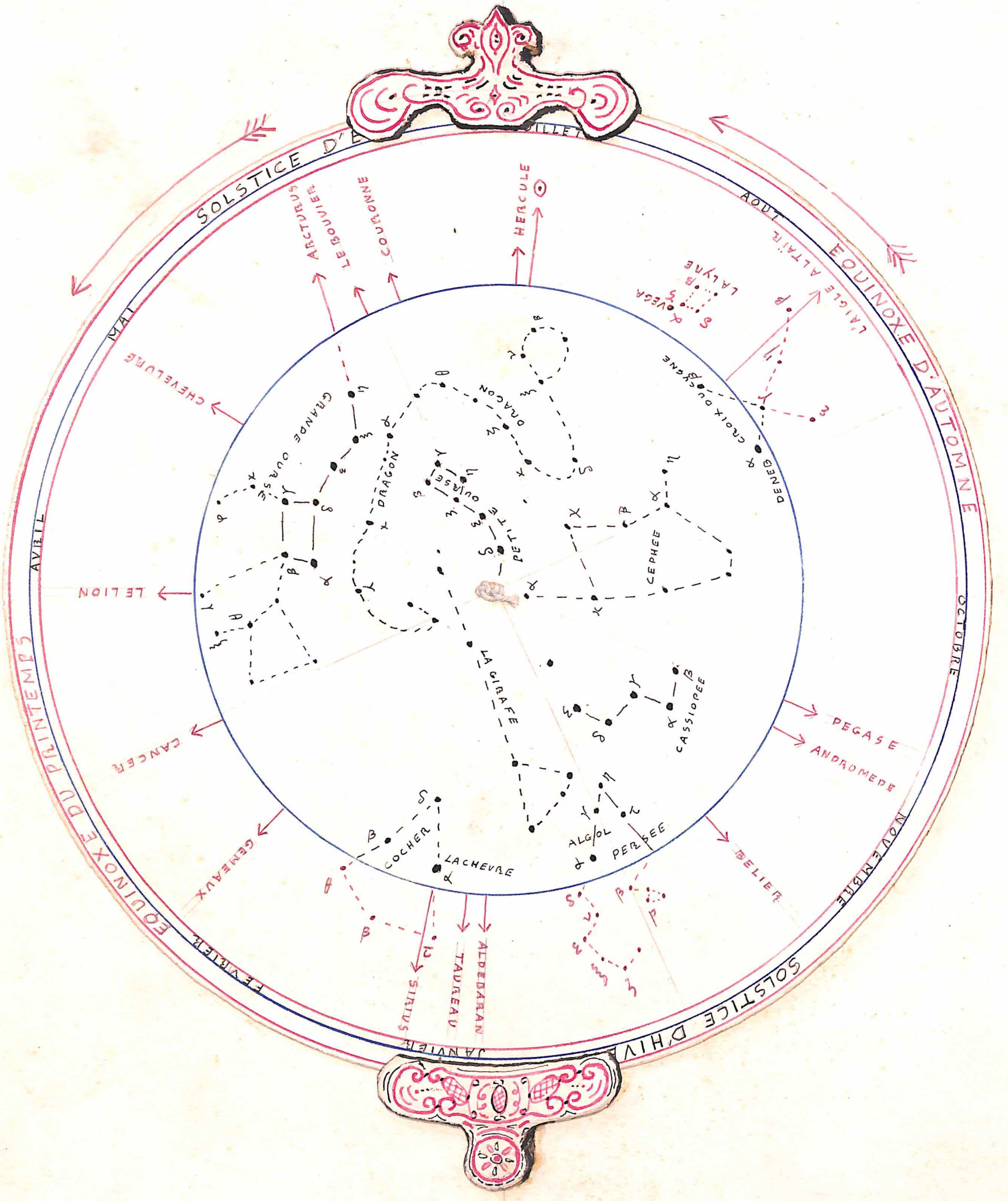
Musical notation on the left side of the page, including a treble clef, a common time signature, and various rhythmic values (quarter, eighth, and sixteenth notes) and accidentals (sharps and flats).

Musical notation on the right side of the page, including a treble clef, a common time signature, and various rhythmic values (quarter, eighth, and sixteenth notes) and accidentals (sharps and flats).

10 11 12 13 14 15 16 17 18

DEPASS L'ORGILLE HUMAINE - - - - - ∞ 32 - - - - - ∞ 31 32 28 29 30 31 28 27 28 26 27 28 25 26 27 28 24 25 26 27 28 23 22 21 20

LES CIRCUMPOLAIRES ET LEURS DIRECTIONS DE L'HORIZON JUSQU'AU ZENITH

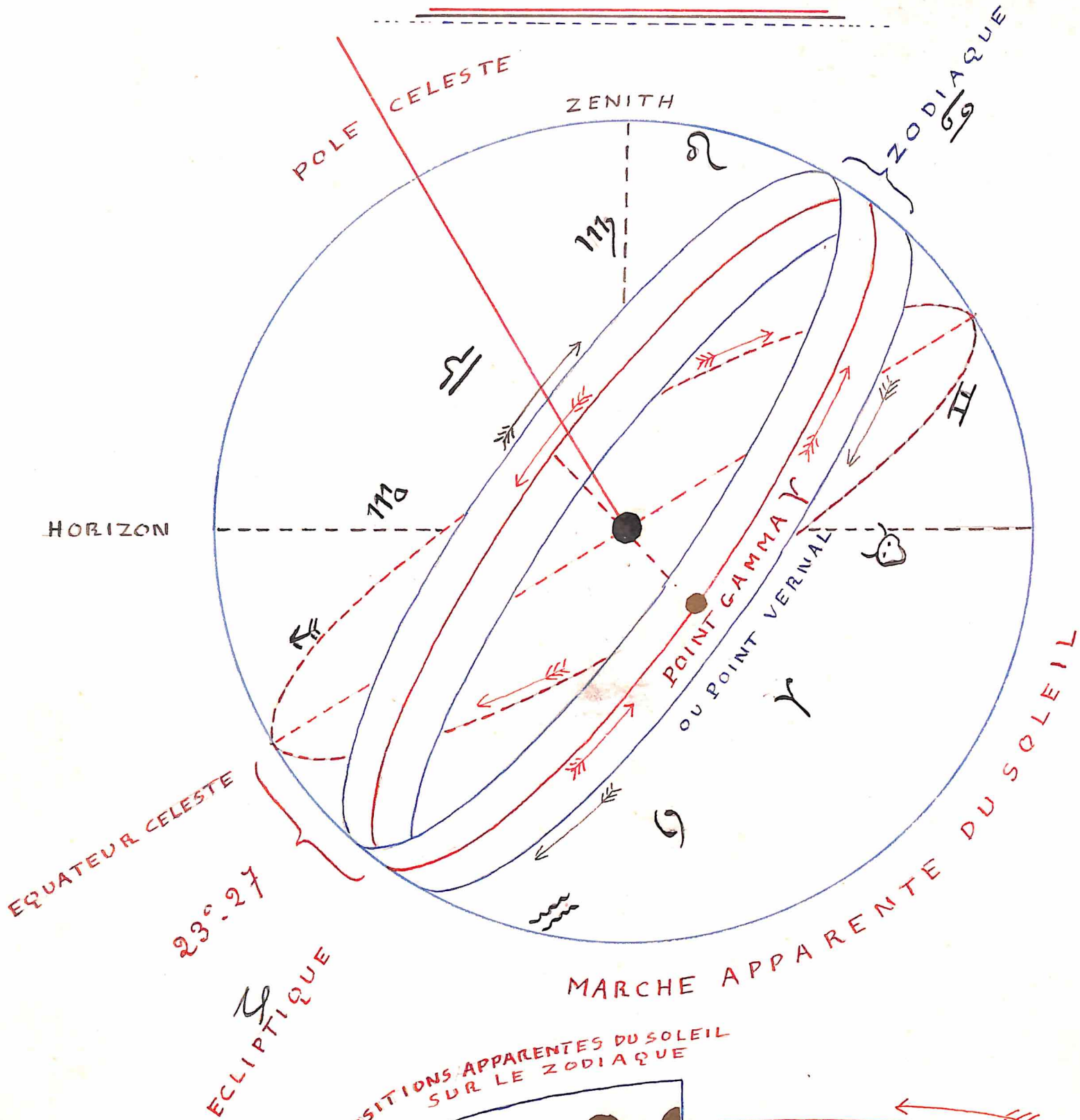


MERIDIEN

VERS IX HEURES DU SOIR

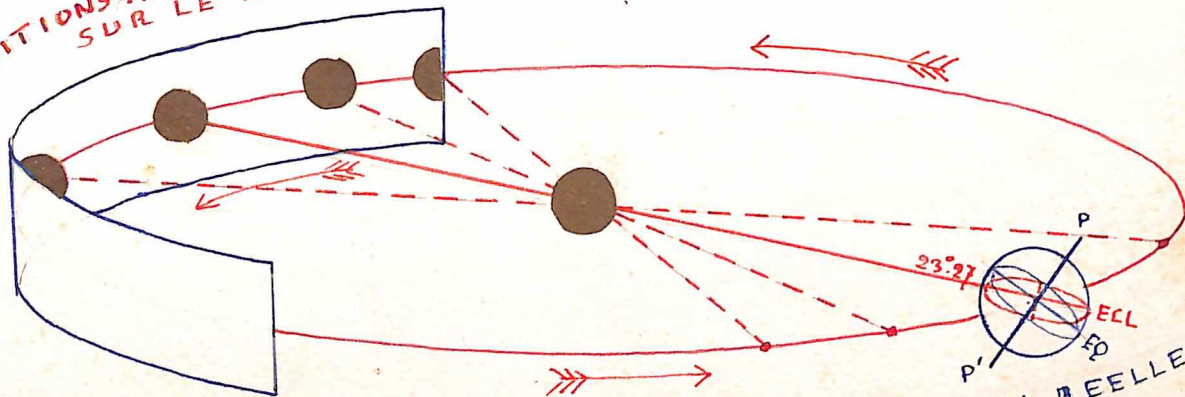
POUR MINUIT AVANCER DE 45 DEGRES

LE POINT GAMMA

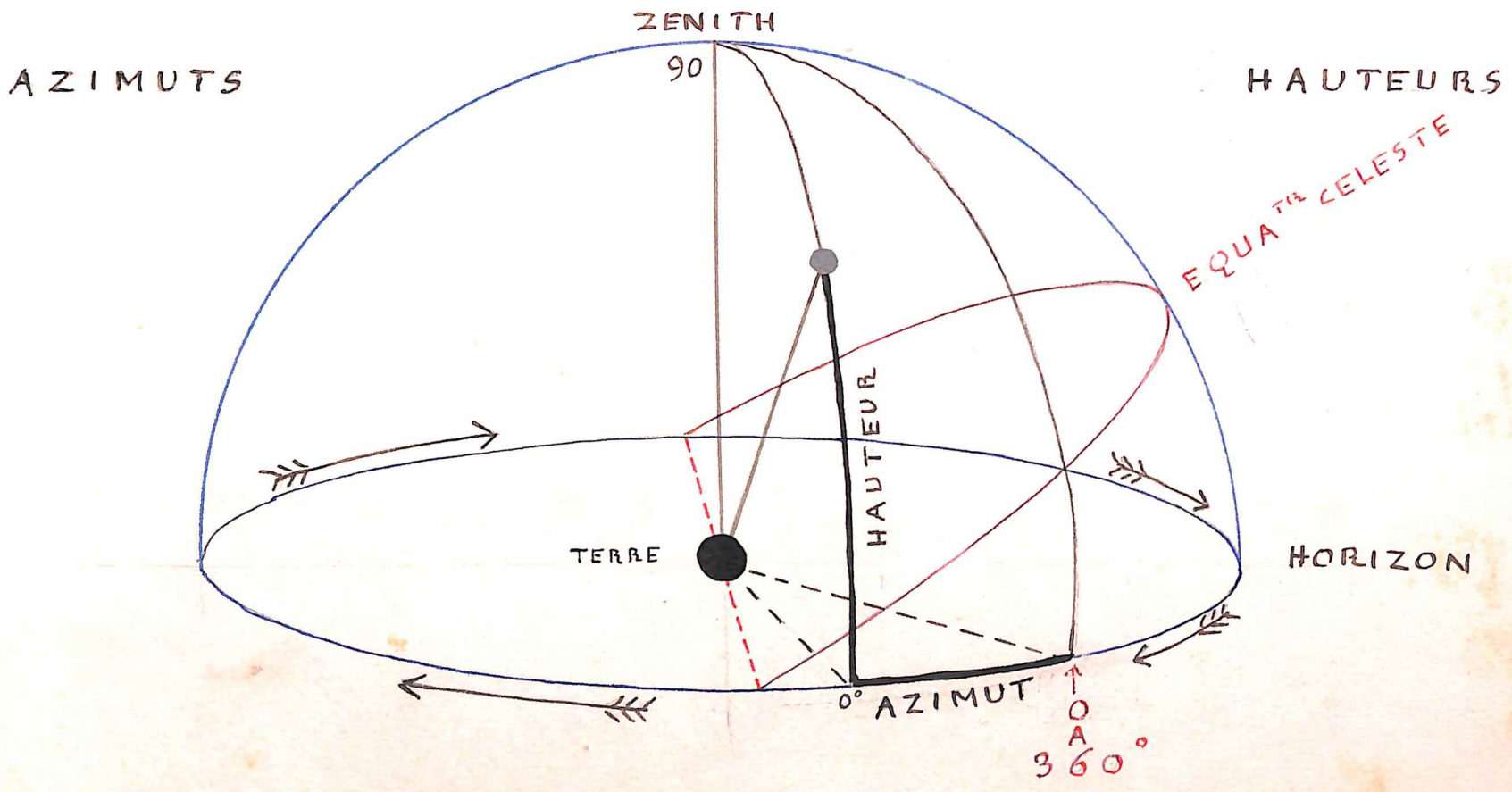
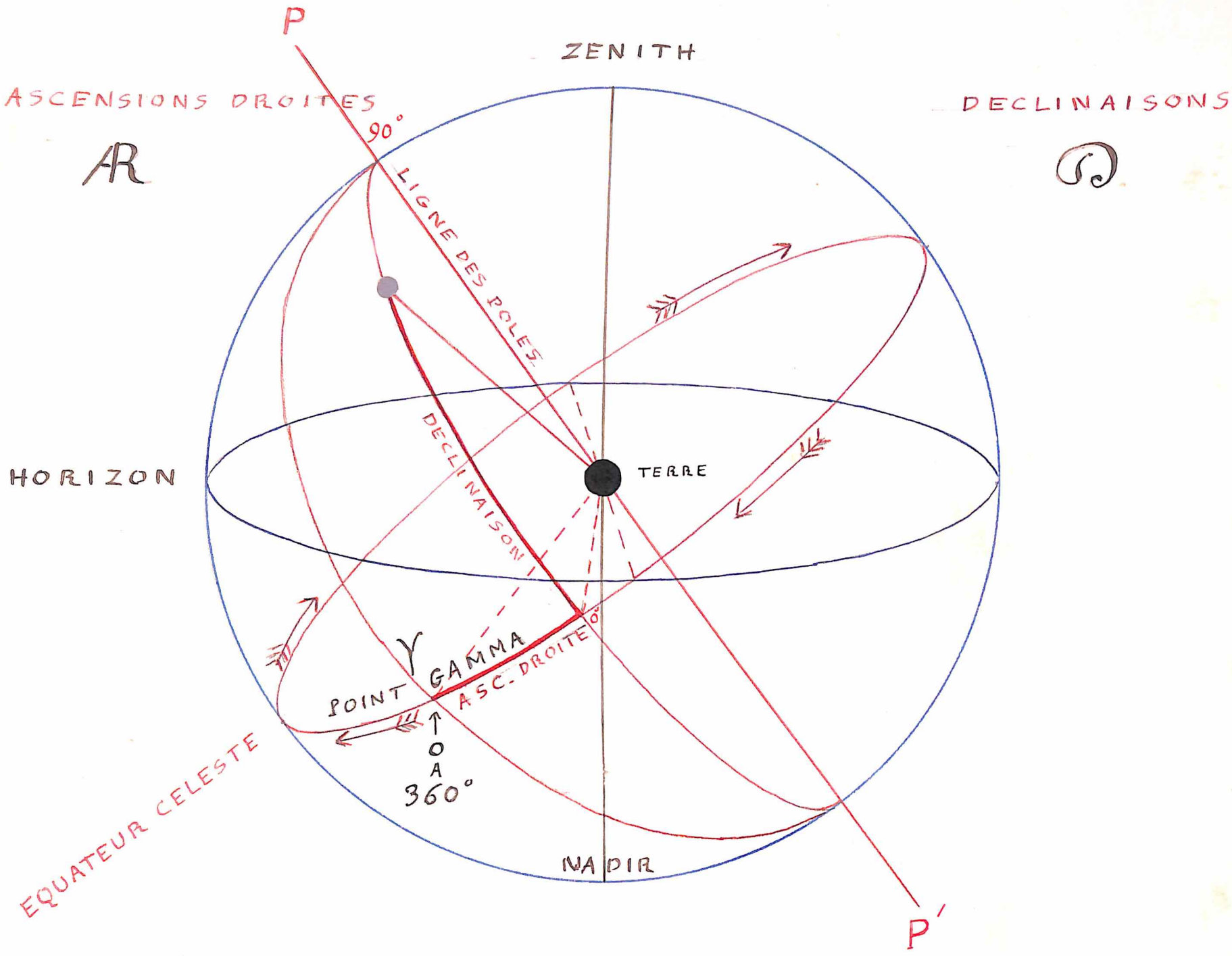


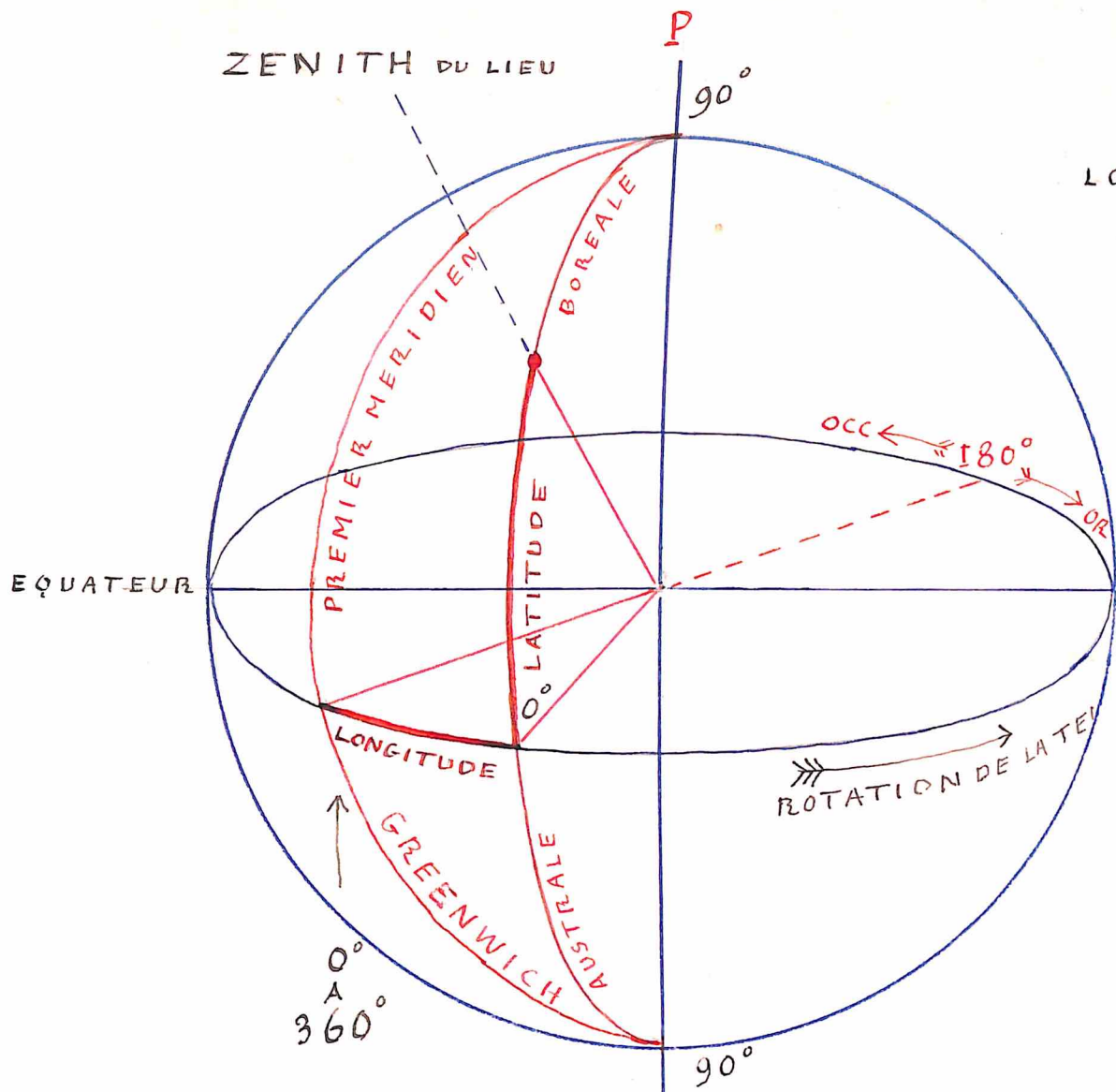
23° 27'
ECLIPTIQUE

POSITIONS APPARENTES DU SOLEIL
SUR LE ZODIAQUE



TRANSLATION REELLE
DE LA TERRE

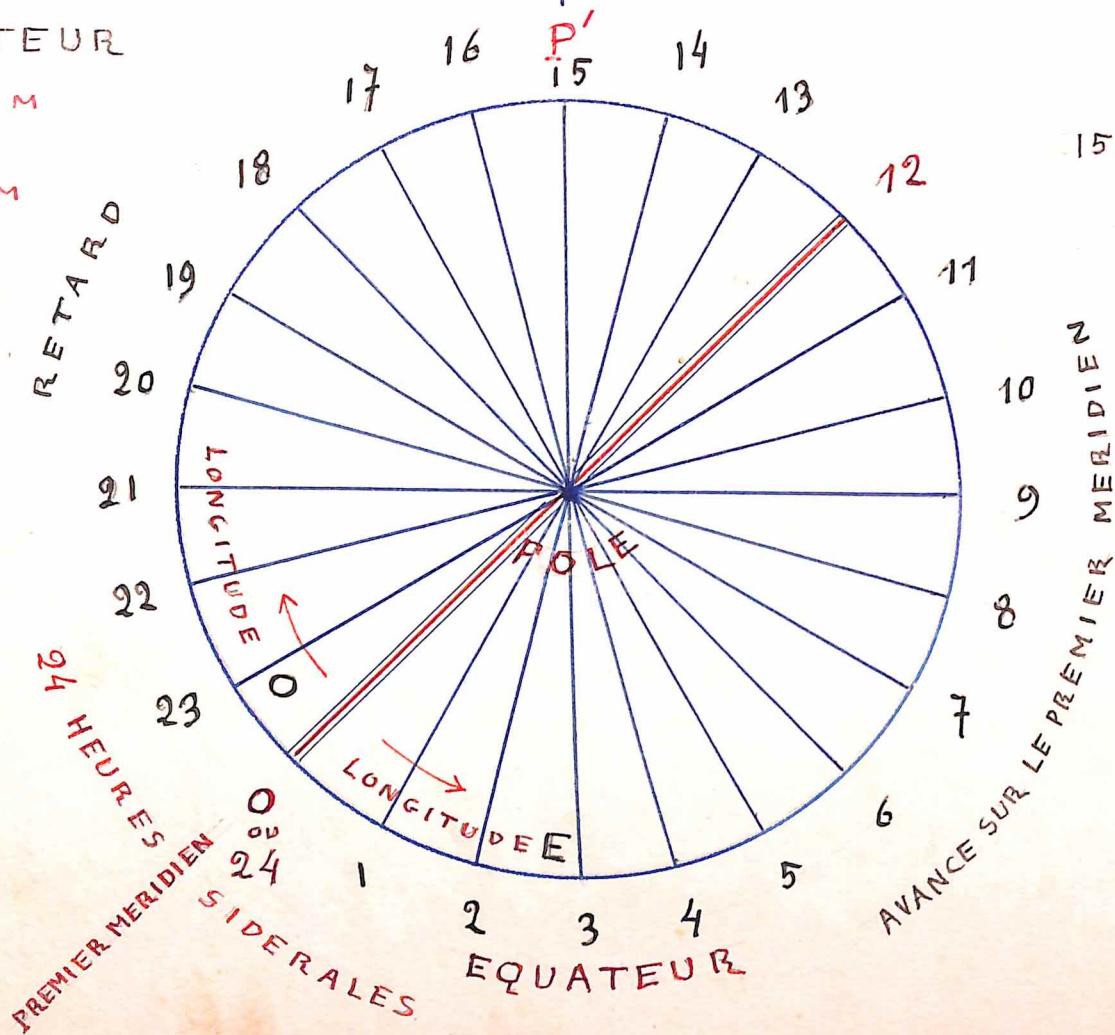




LONGUEUR DU DEGRE
 SUIVANT LA LATITUDE
 DE
 $110^{\text{KIL}} 608^{\text{M}} \text{ LAT } 0^{\circ}$
 $111^{\text{A}} 918^{\text{M}} \text{ LAT } 60^{\circ}$
 MOYENNE LAT 45°
 $111^{\text{KIL}} 212^{\text{M}}$

A L'EQUATEUR

$1659^{\text{KIL}} 120^{\text{M}}$
 $27^{\text{KIL}} 645^{\text{M}}$
 460^{M}

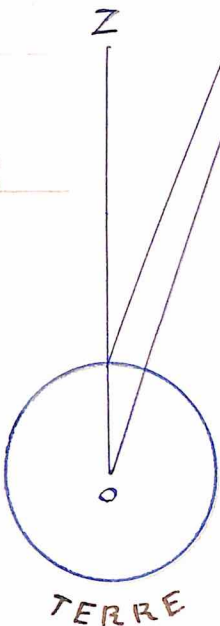


15 DEGRES PAR HEURE
 15' PAR MINUTE
 15" PAR SECONDE

24 HEURES
 PREMIER MERIDIEN
 SIDERALES

PARALLAXE DE LA LUNE

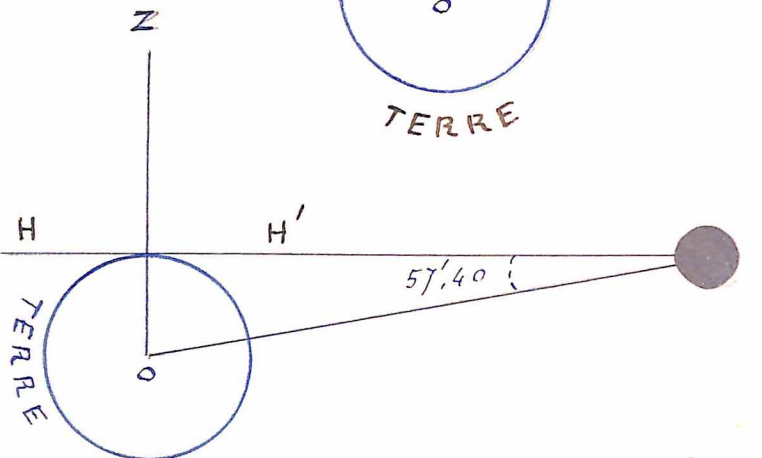
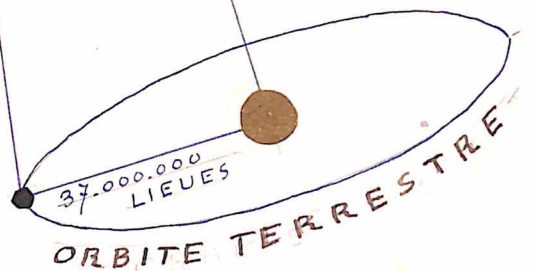
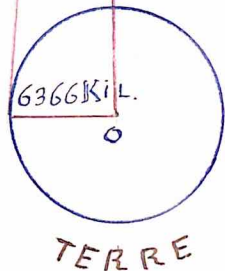
ANGLE	RAYONS TER. ^{TRÉ}
1°	= 57
30'	= 114
20'	=
10'	=
1'	= 3438



DU SOLEIL

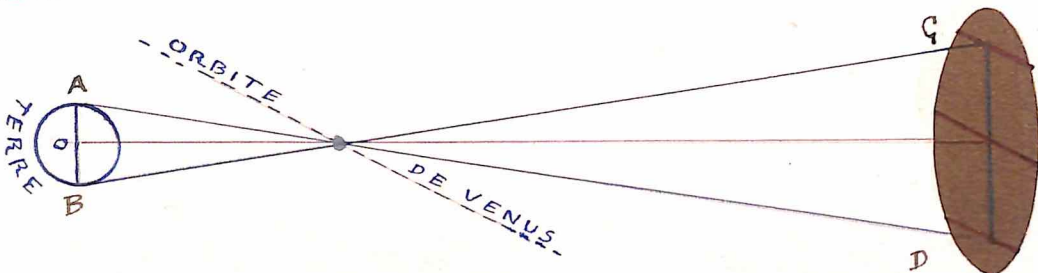
PARALLAXE DES ETOILES

ANGLE	DEMI ORB. ^{ITE} TER. ^{TRÉ}
1''	= 2.062.650
2''	= 1.031.320
3''	= 687.500
4''	= 515.660
0'	= ∞



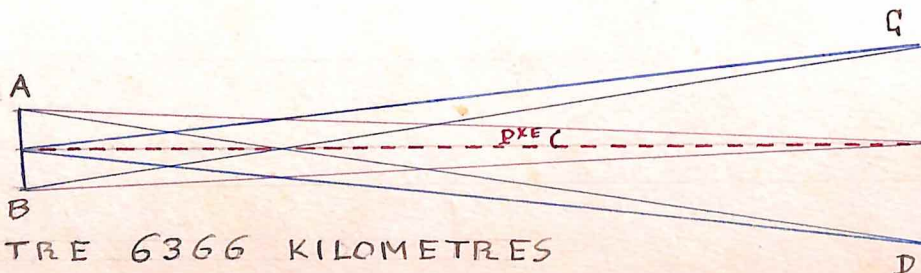
PARALLAXE HORIZONTALE 57'40"
 { = 60 RAYONS TERRESTRES
 { = 384.000 KIL

PARALLAXE HORIZONTALE DU SOLEIL PAR LES PASSAGES DE VENUS



PASSAGE SUPERIEUR

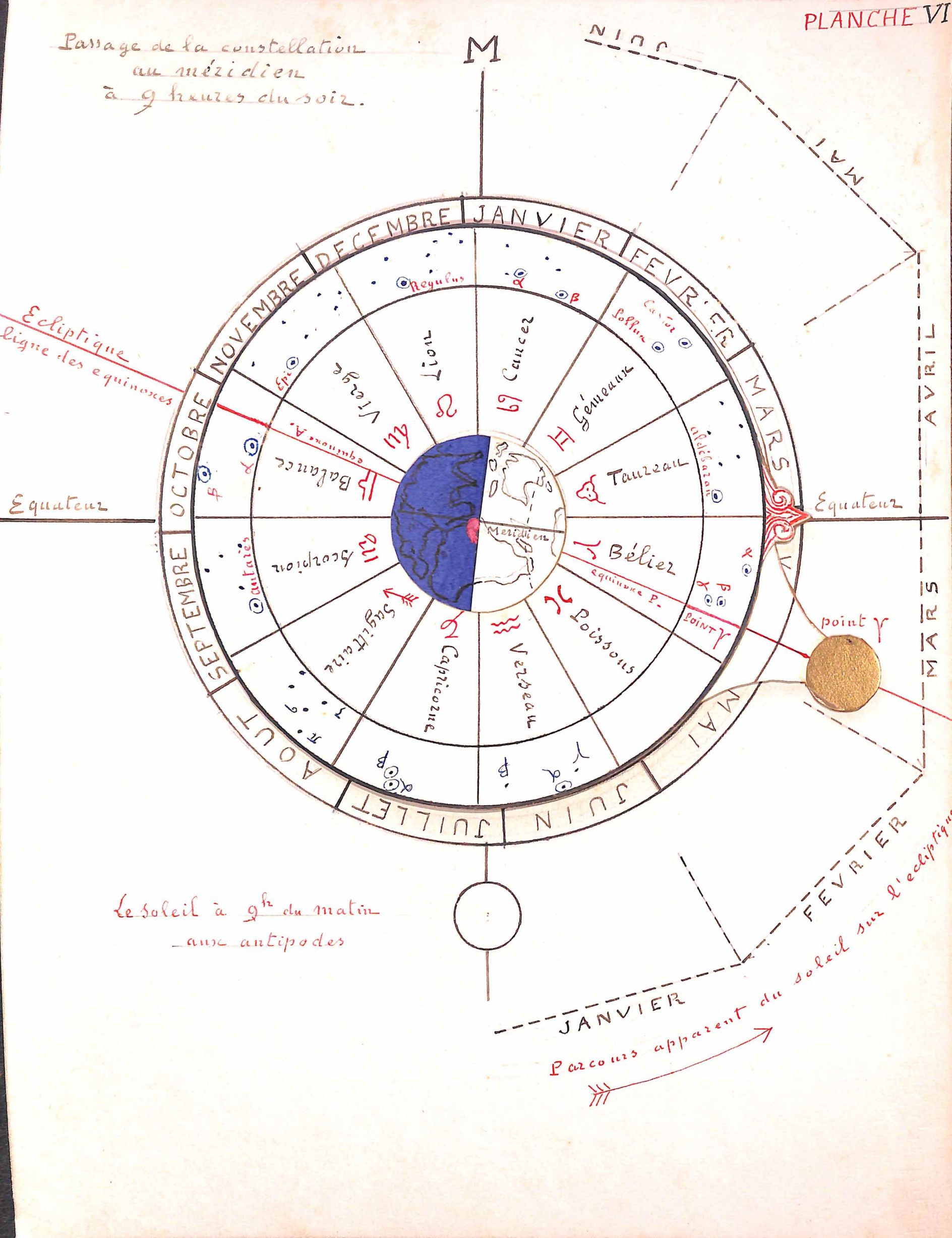
PASSAGE INFÉRIEUR



RAYON TERRESTRE 6366 KILOMETRES

PARALLAXE 8",8
 { = 23.400 RAYONS TER.^{TRÉS}
 { = 149.000.000 KIL.

Passage de la constellation au méridien à 9 heures du soir.



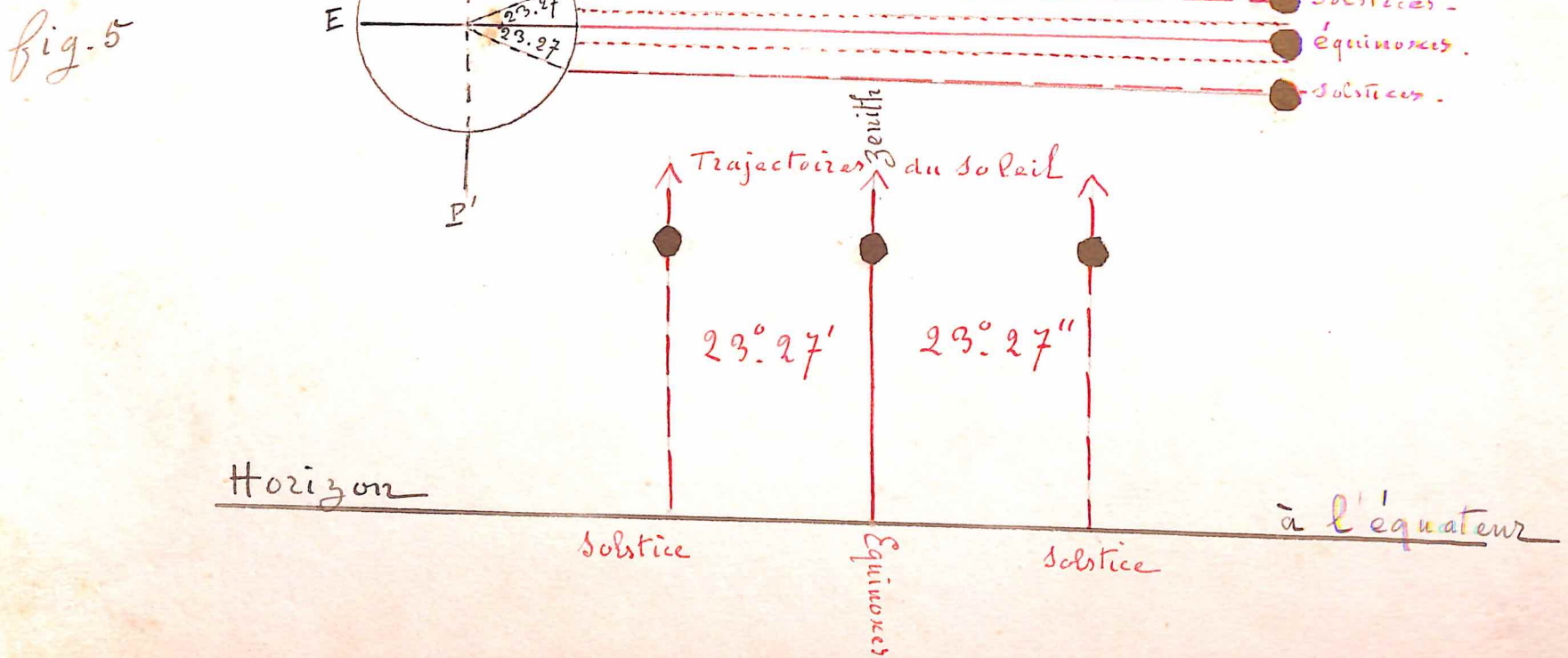
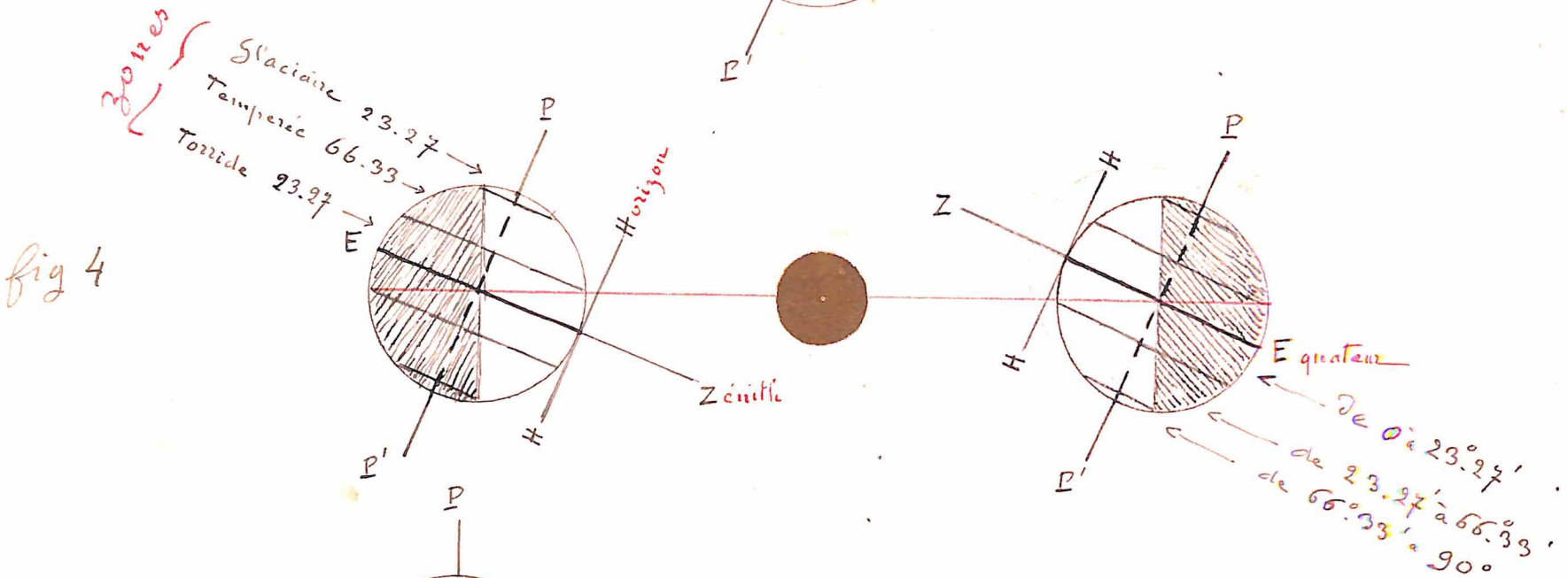
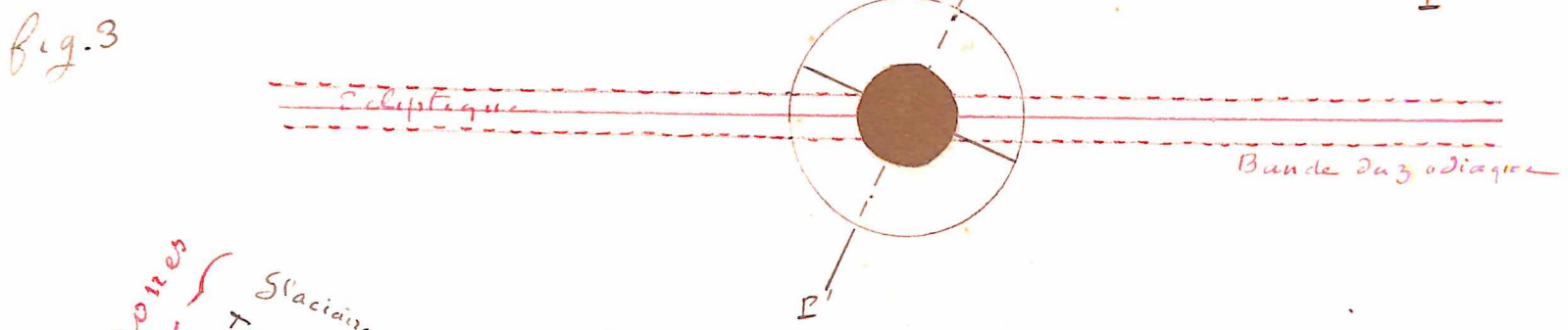
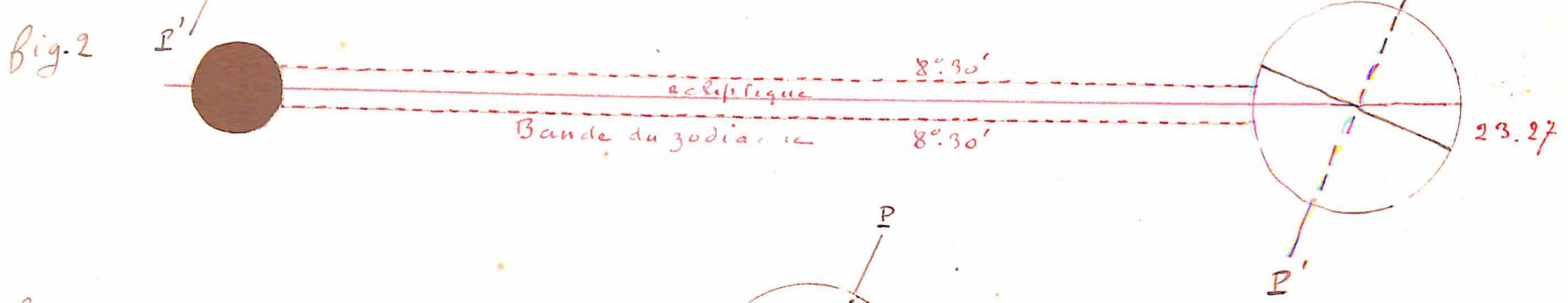
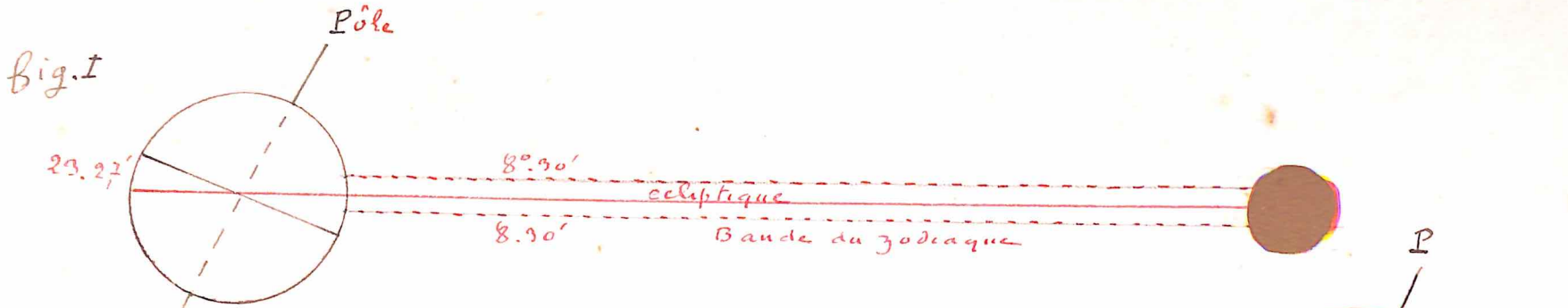


fig 6

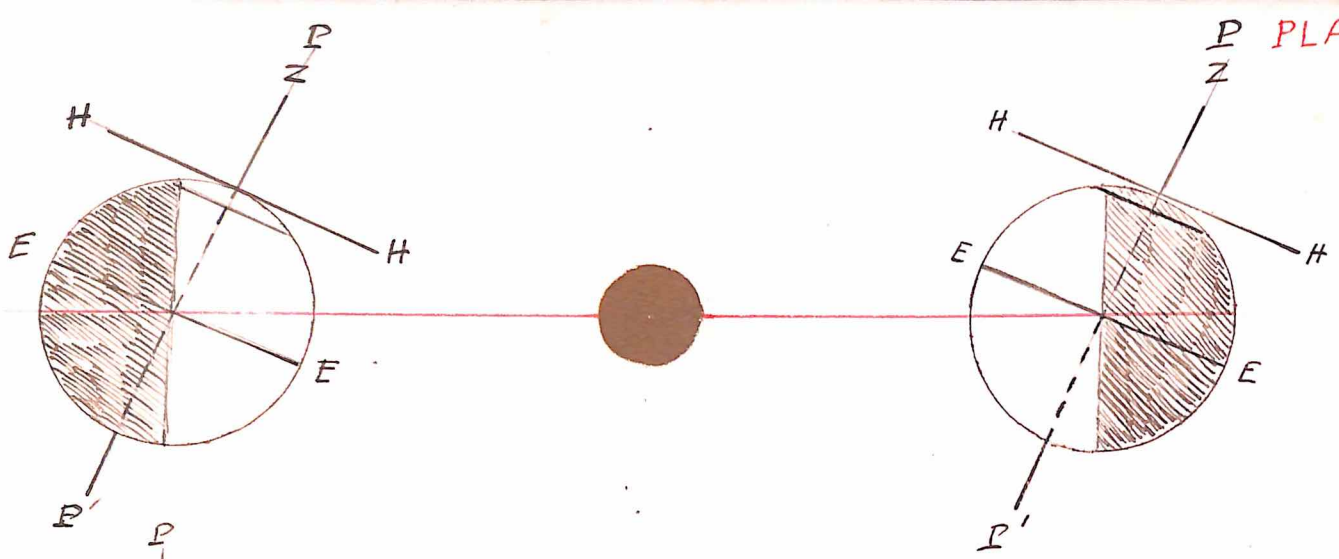
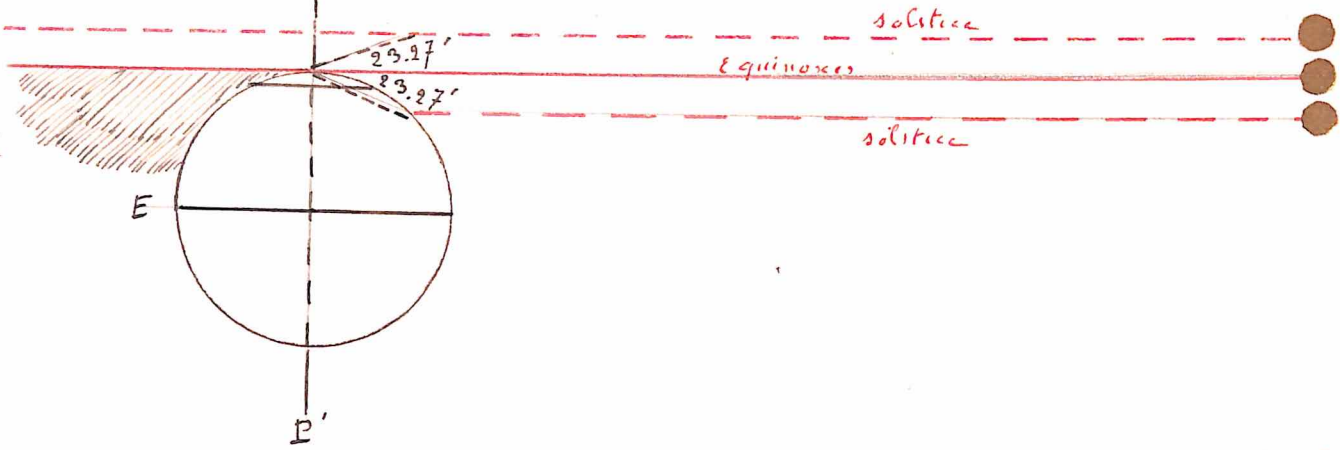


fig.7



Solstice

Trajectoire du soleil diurne

Equinoxes

Trajectoire du soleil nocturne

Solstice

fig.8

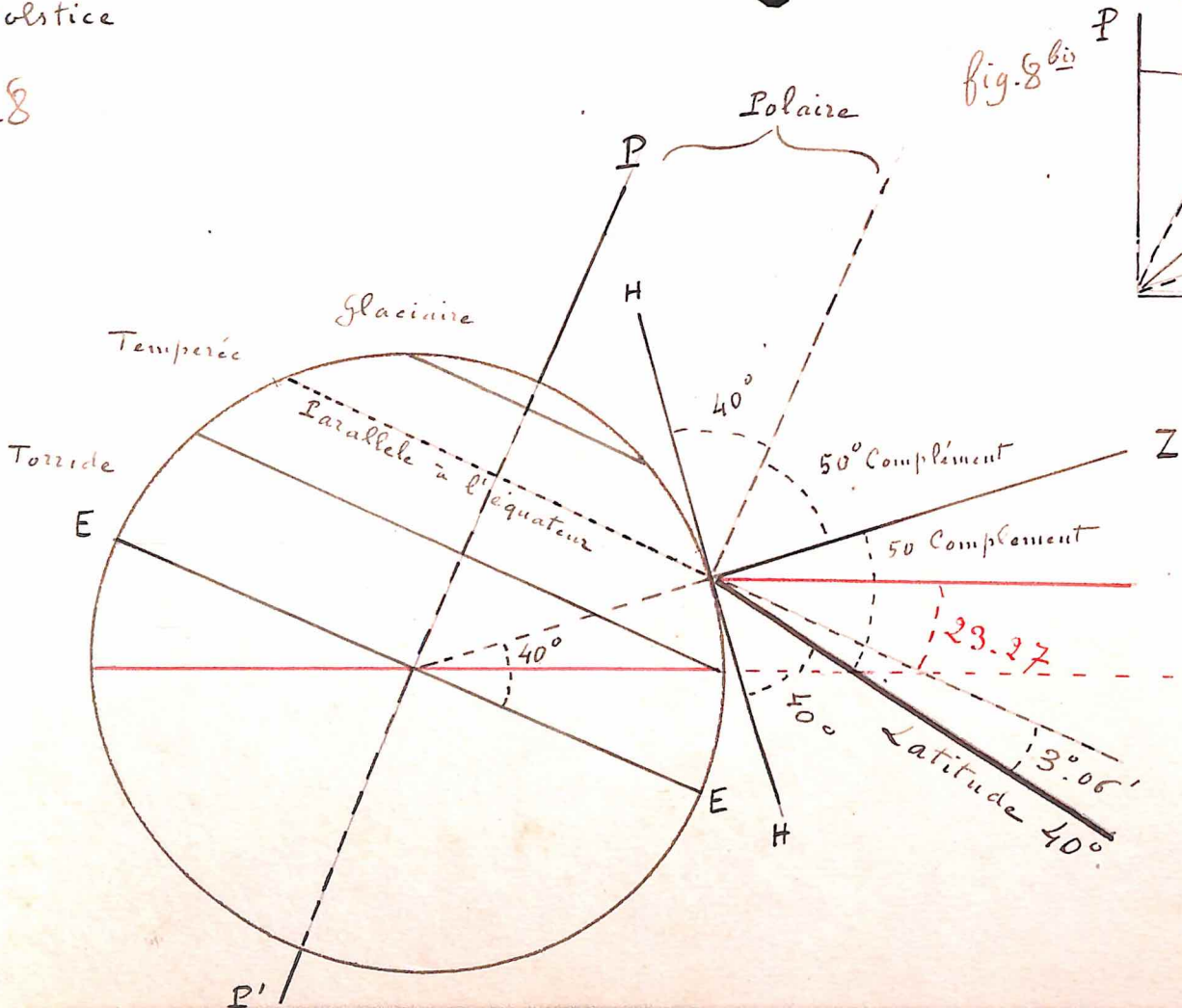


fig.8 bis

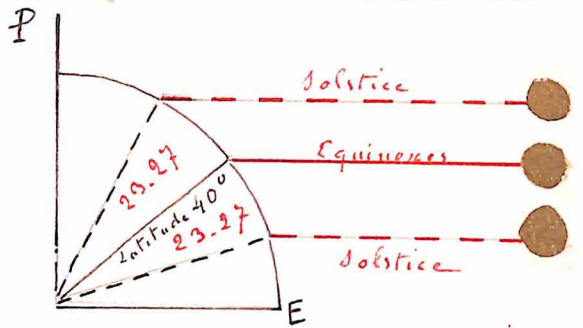
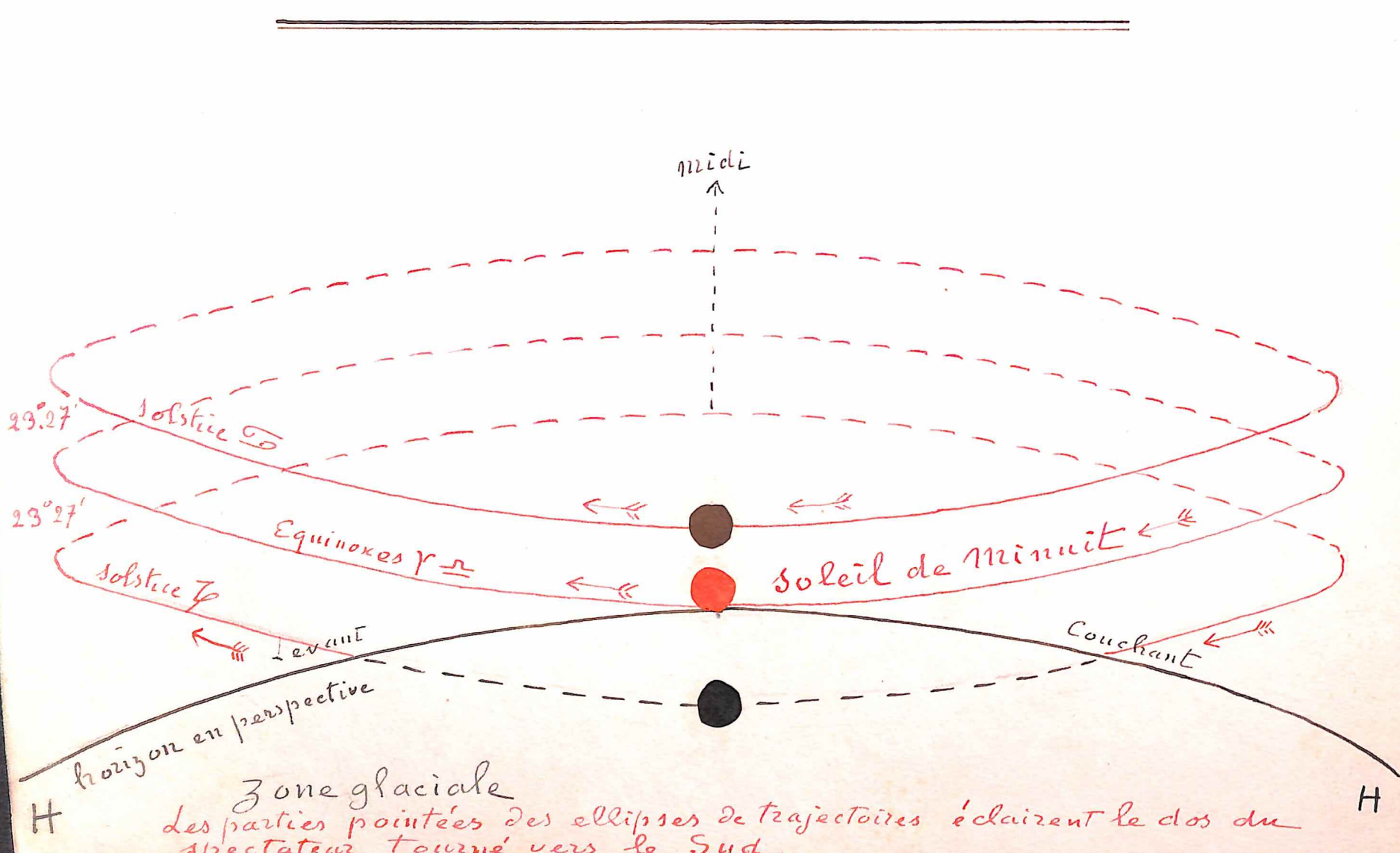
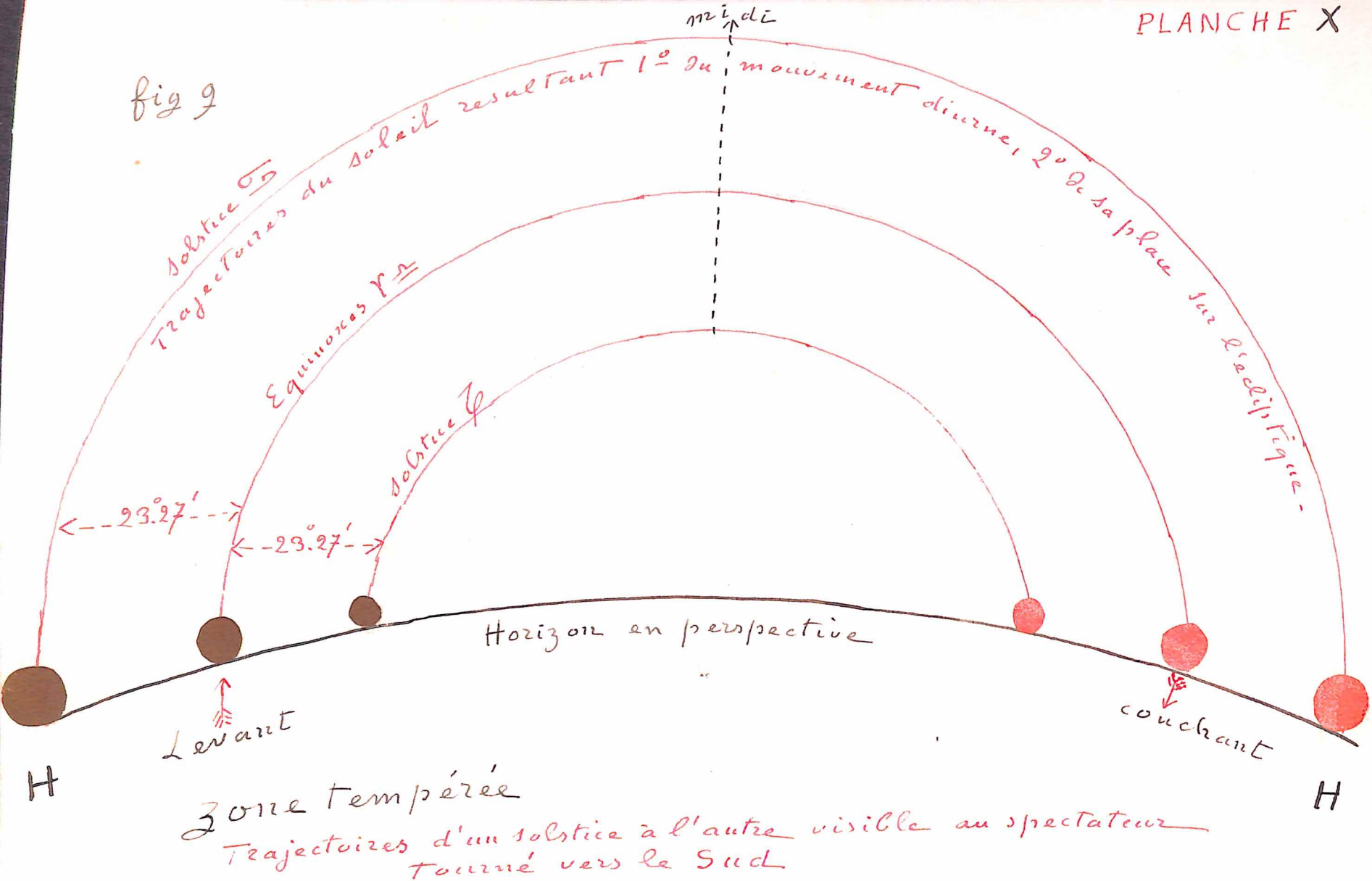


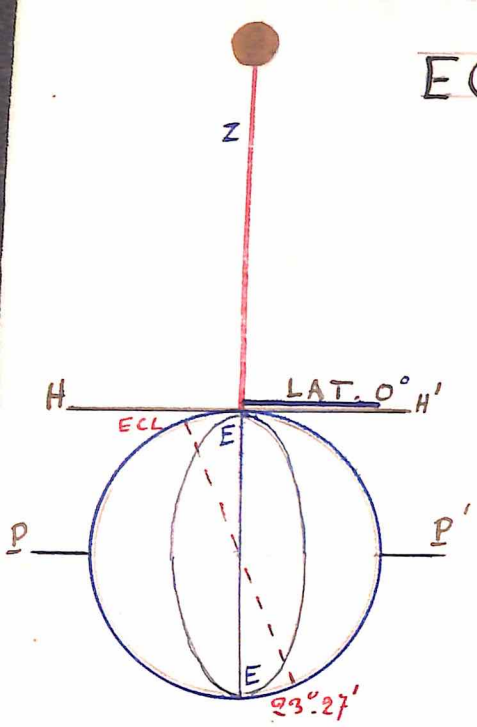
fig 9



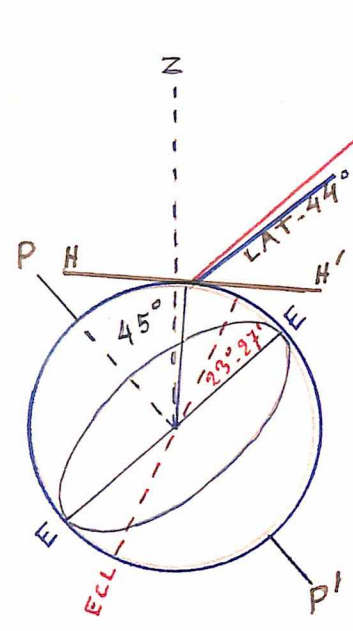
EQUINOXE A MIDI

PLANCHE XI

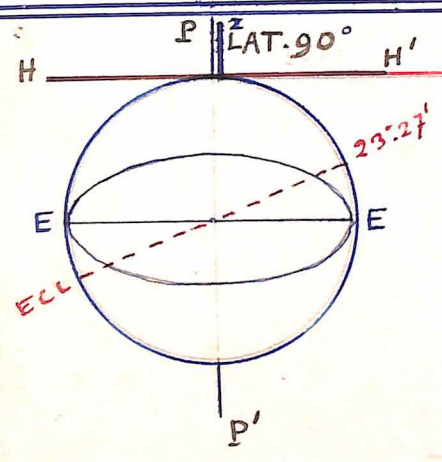
ZONE TORRIDE
OMBRES PROJETEES



TEMPEREE



GLACIALE

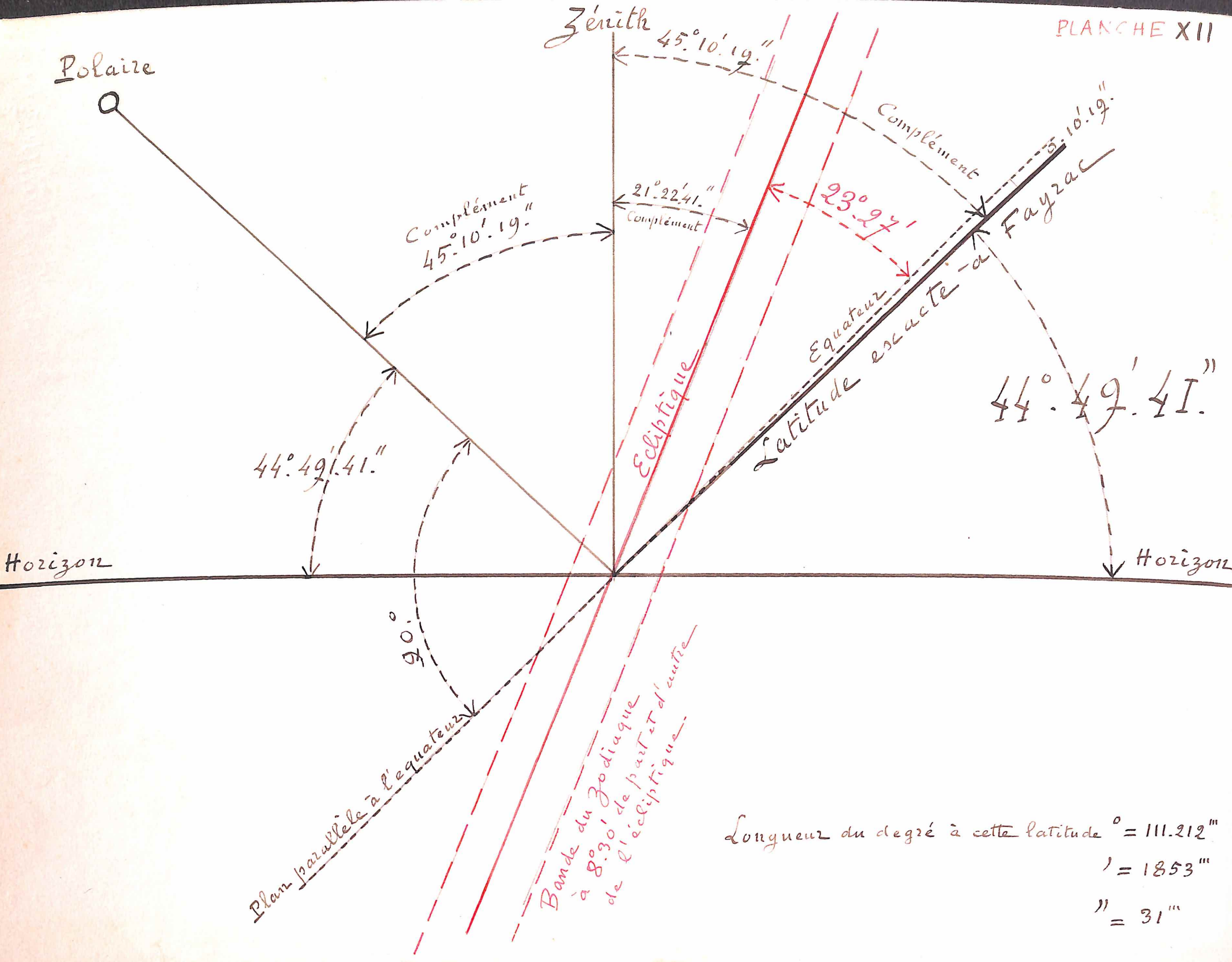


Polaire

Zénith

Horizon

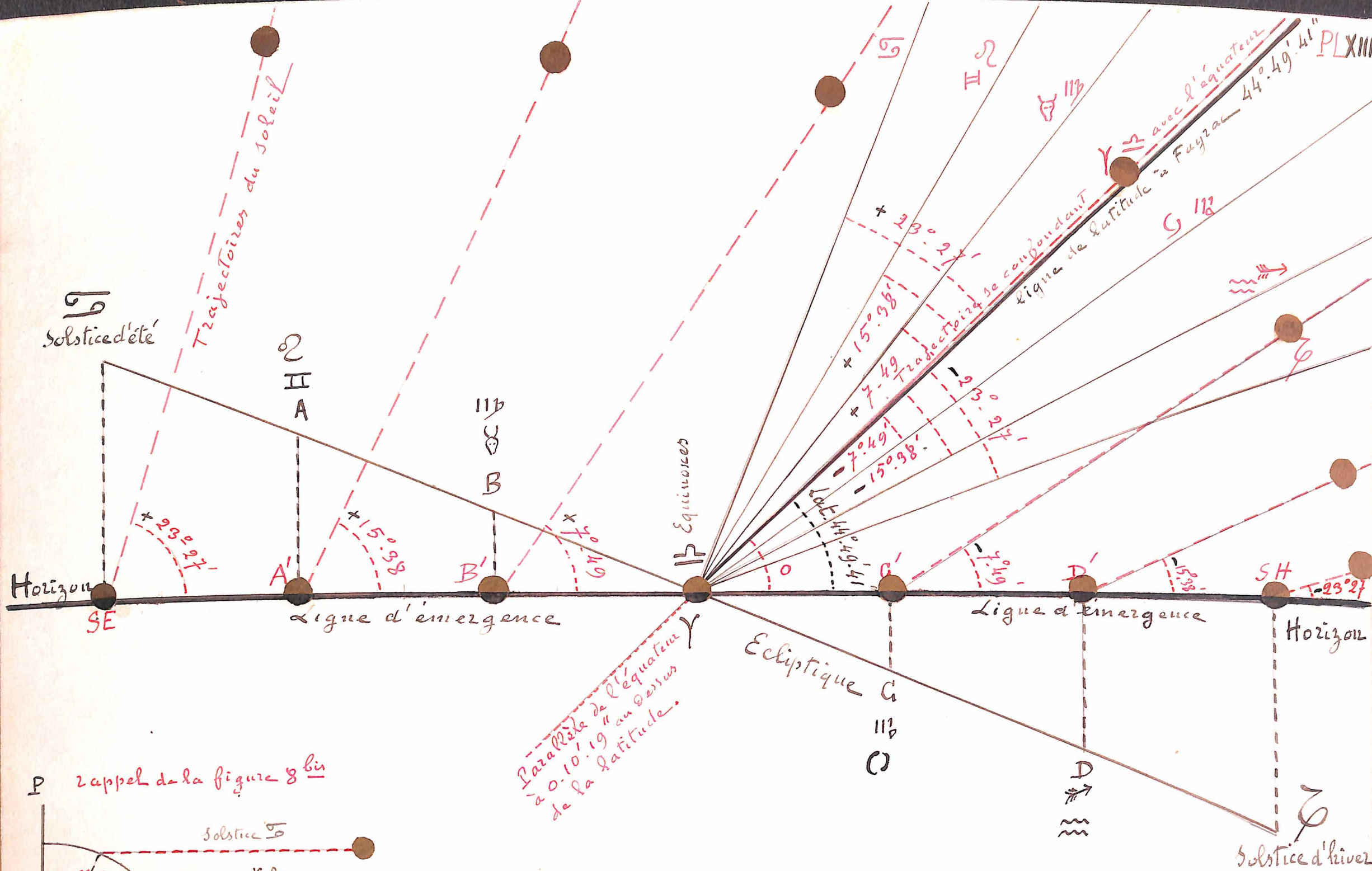
Horizon



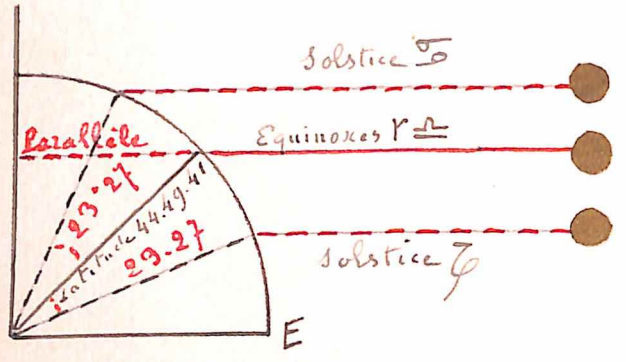
Plan parallèle à l'équateur

Bande du zodiaque à 8° 30' de part et d'autre de l'écliptique.

Longueur du degré à cette latitude $^{\circ} = 111.212''$
 $' = 1853''$
 $'' = 31''$



P 2 appel de la figure 8 bis



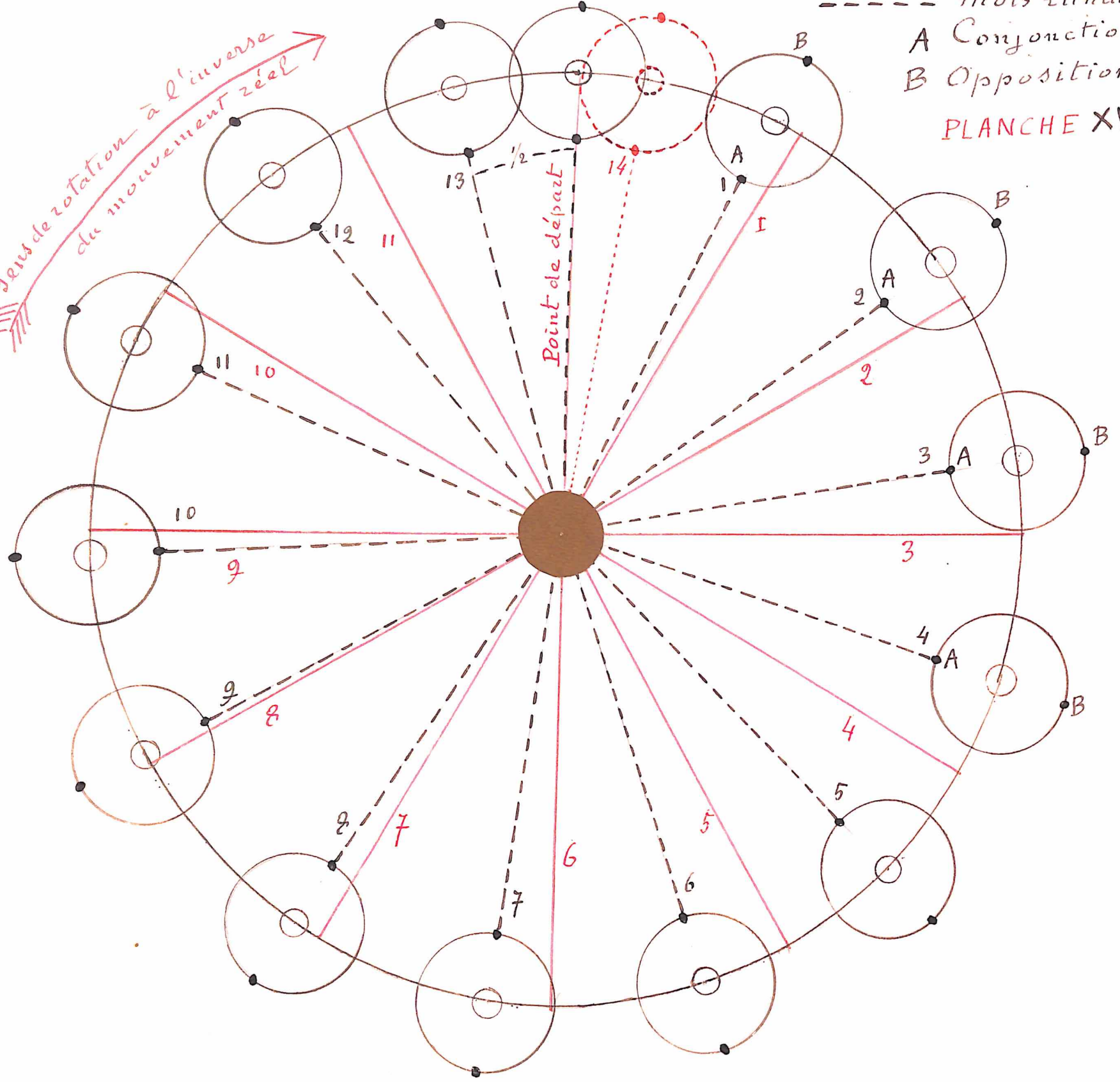
14^e mois lunaire dépassant l'année

— mois solaires
- - - mois lunaires

A Conjonctions
B Oppositions

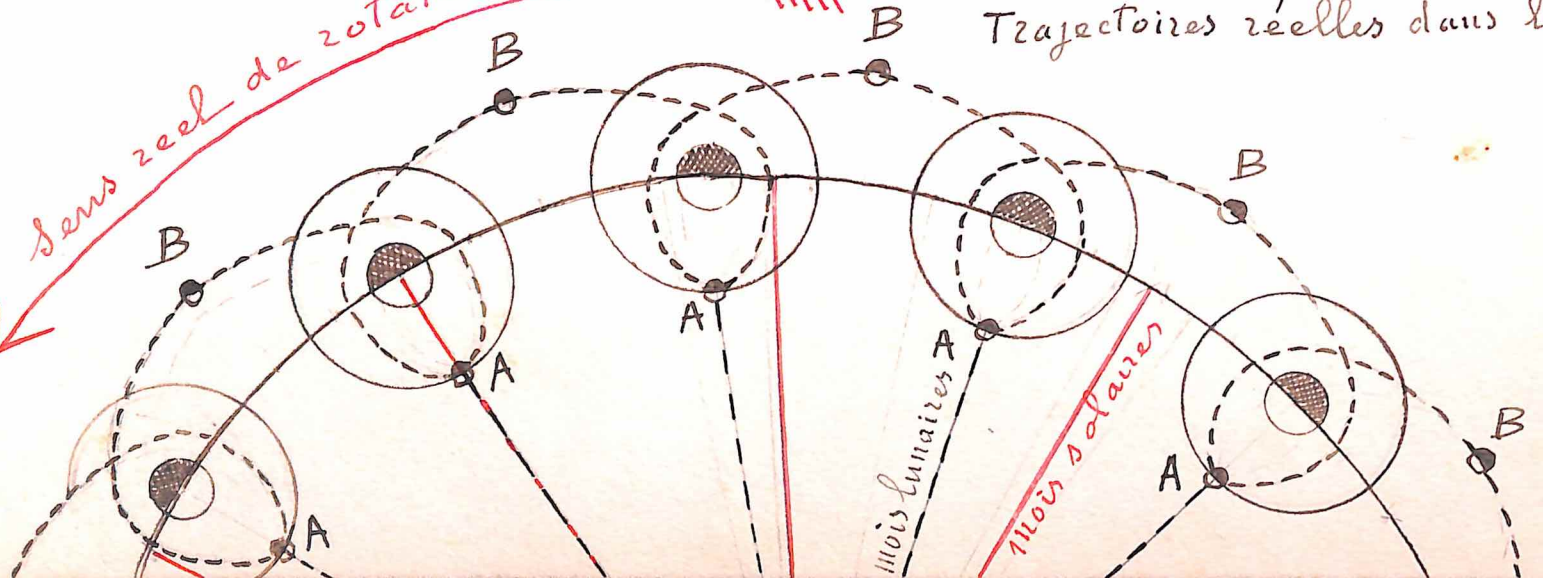
PLANCHE XV

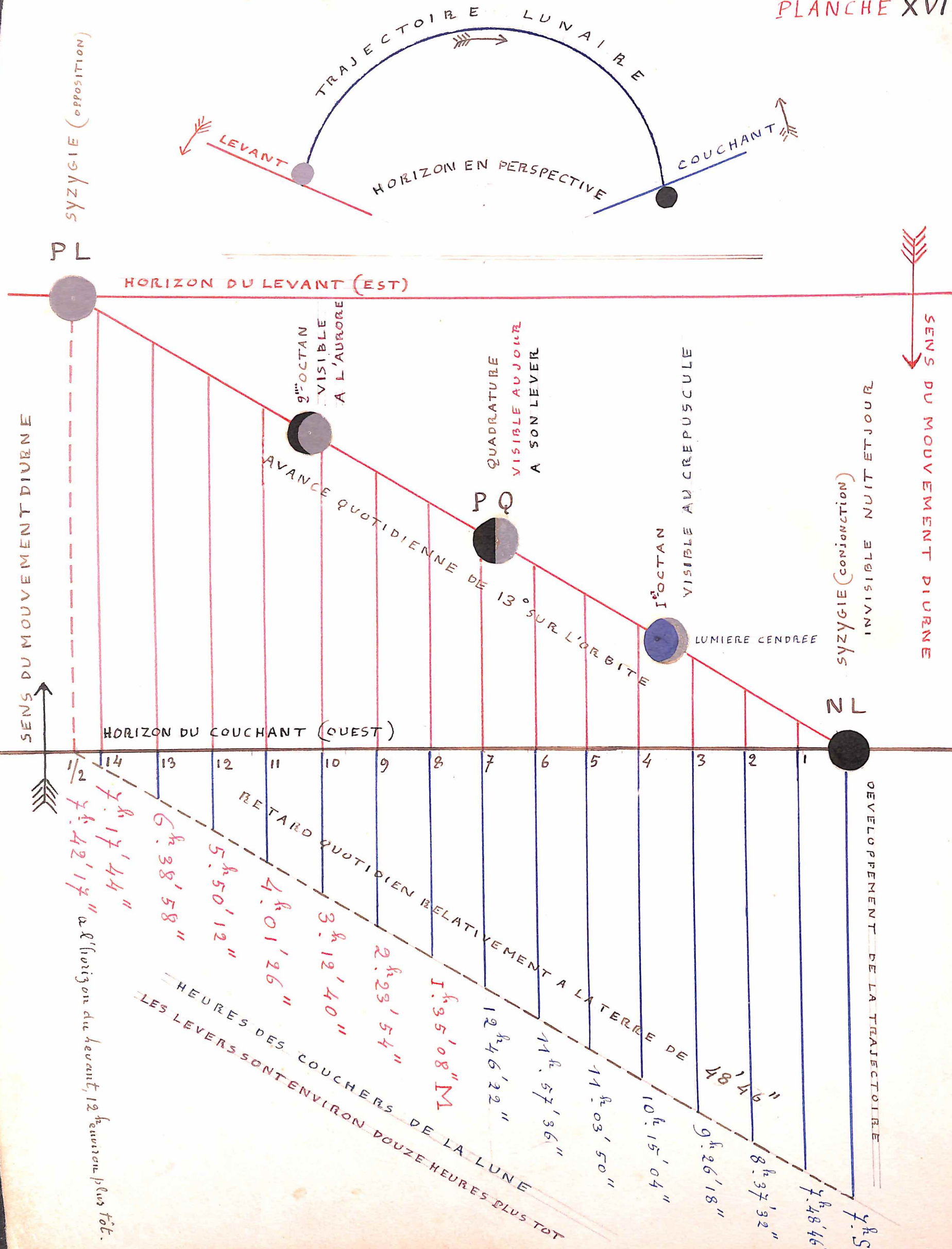
Sens de rotation à l'inverse
du mouvement réel

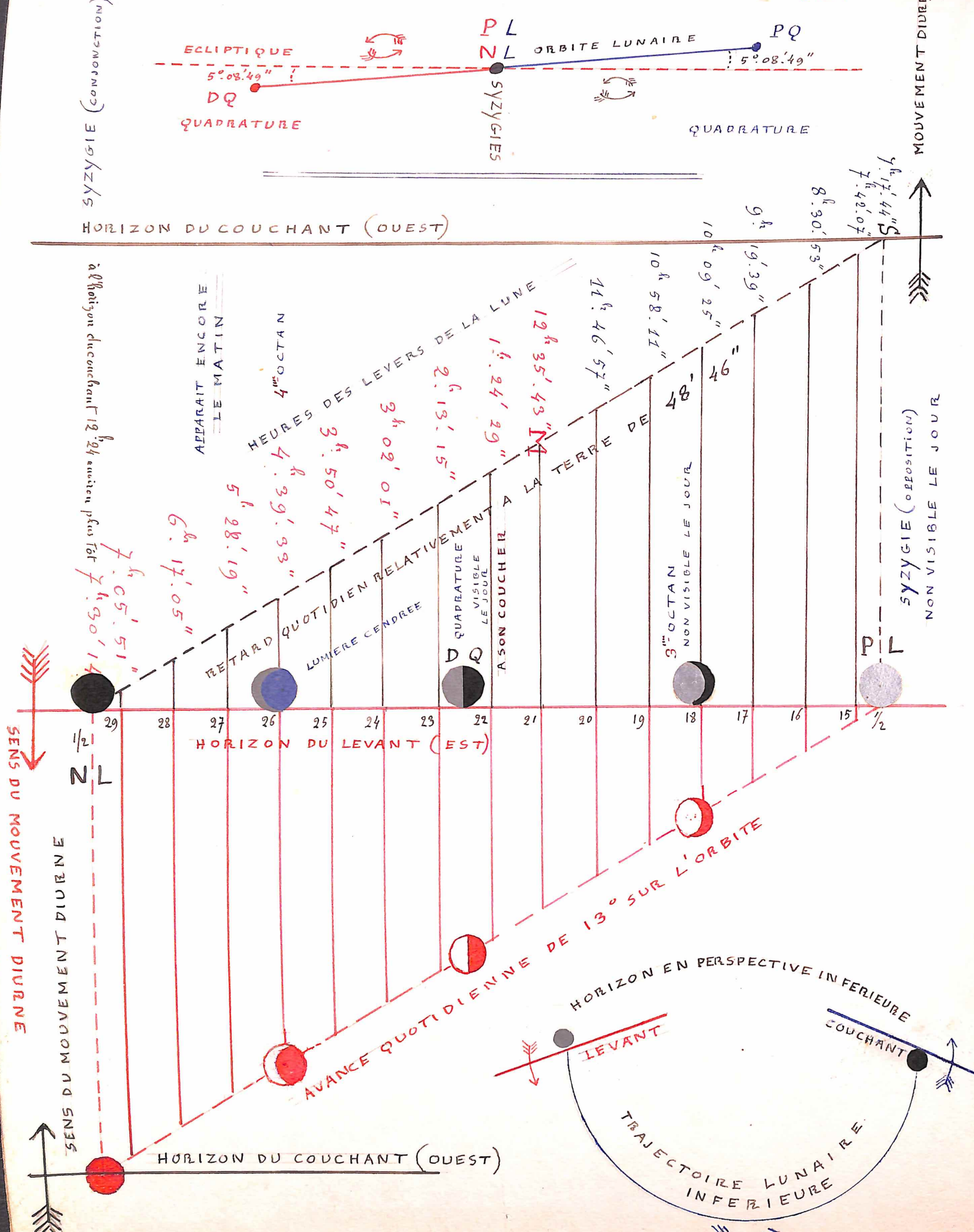


Sens réel de rotation annuelle

Trajectoires réelles dans l'espace

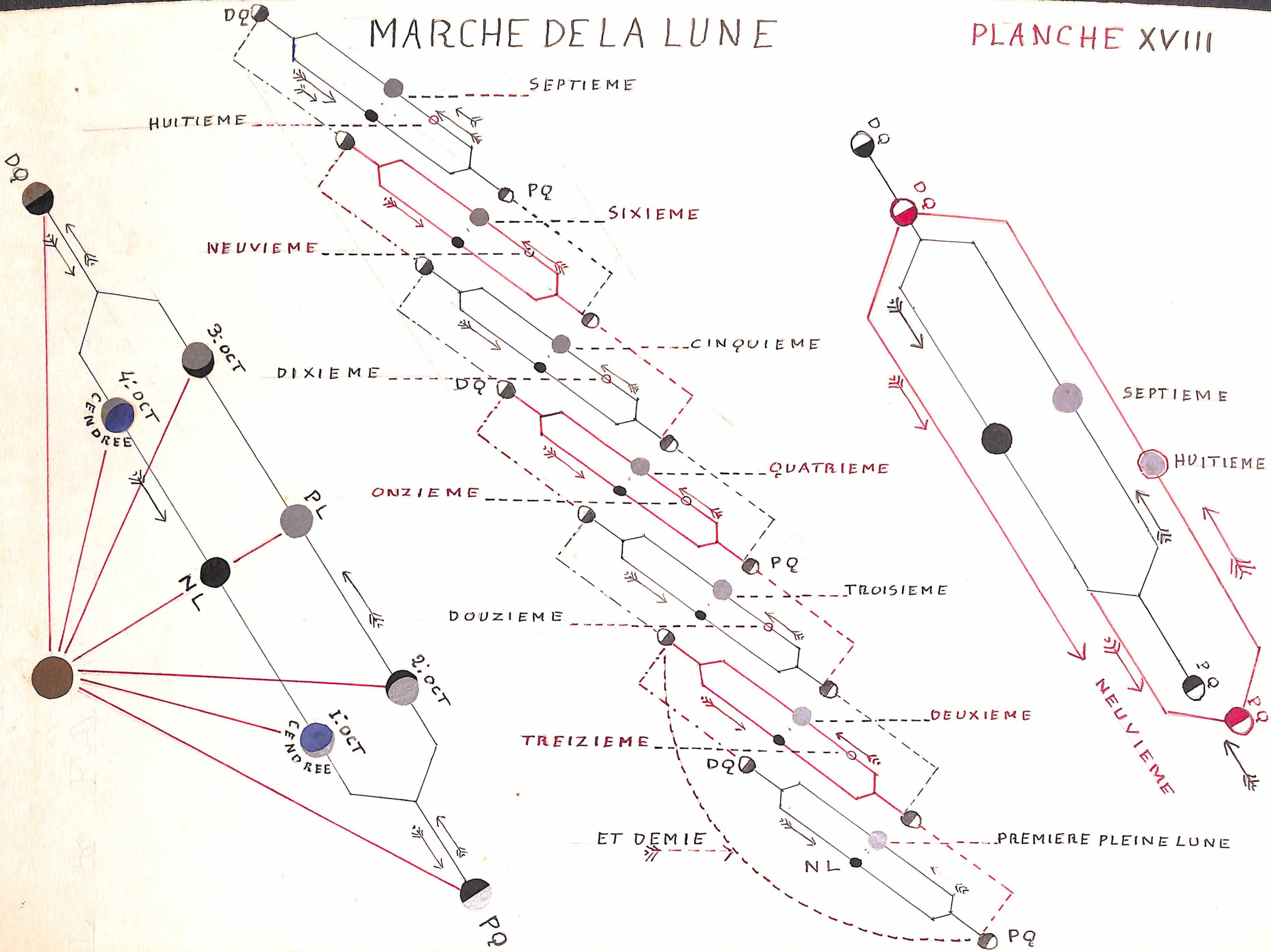


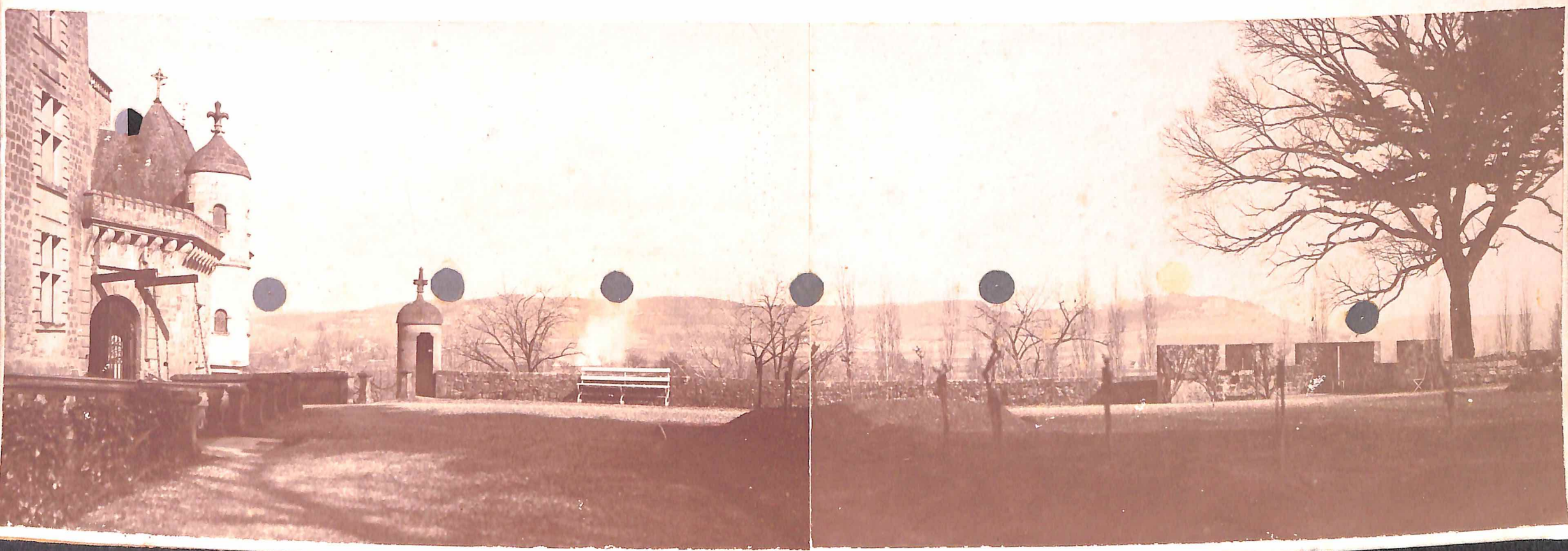
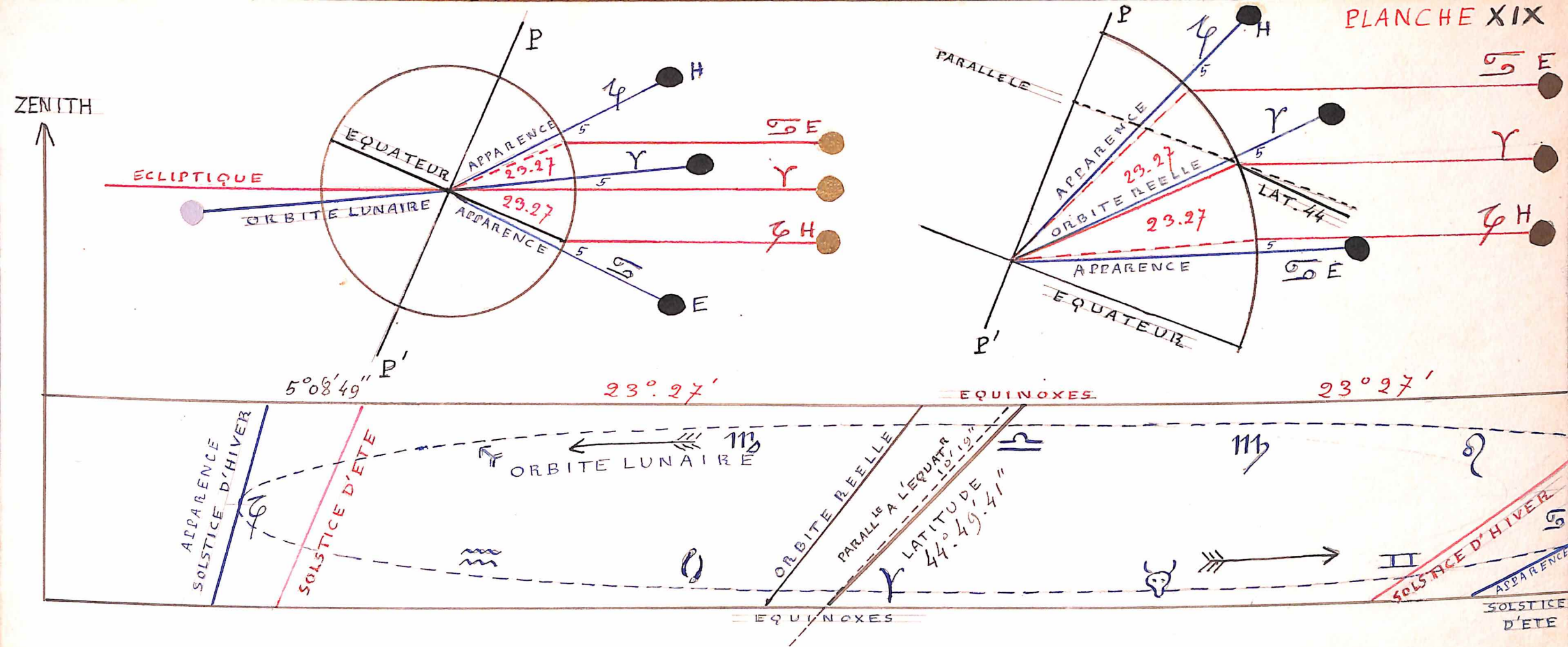




MARCHE DE LA LUNE

PLANCHE XVIII



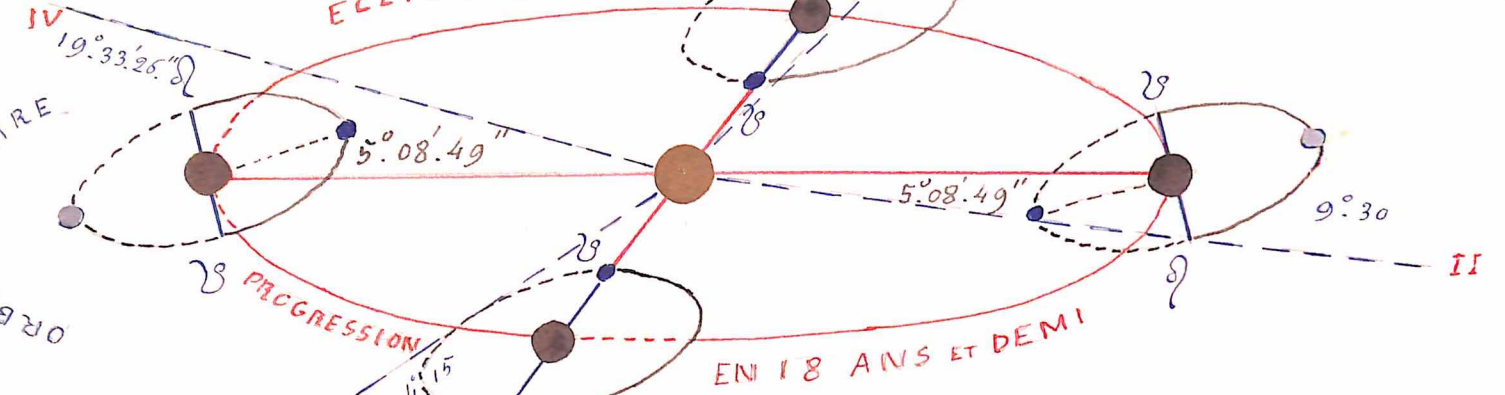


LA LIGNE DES NOEUDS

PROGRESSION EN 12 MOIS

ORBITE LUNAIRE

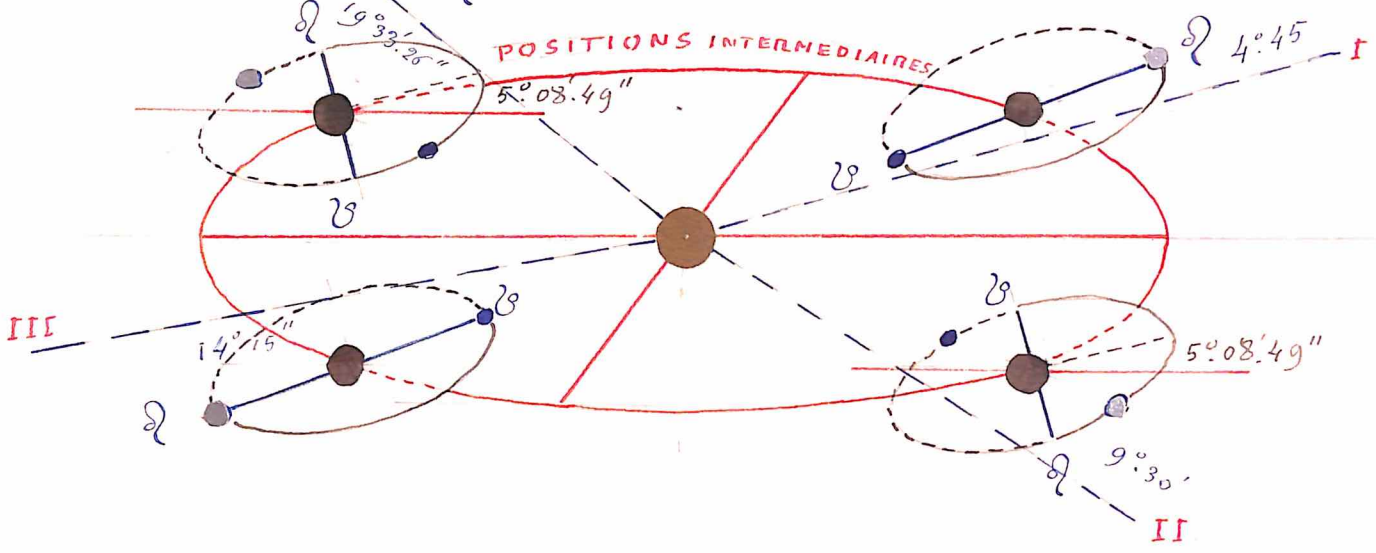
ECLIPTIQUE



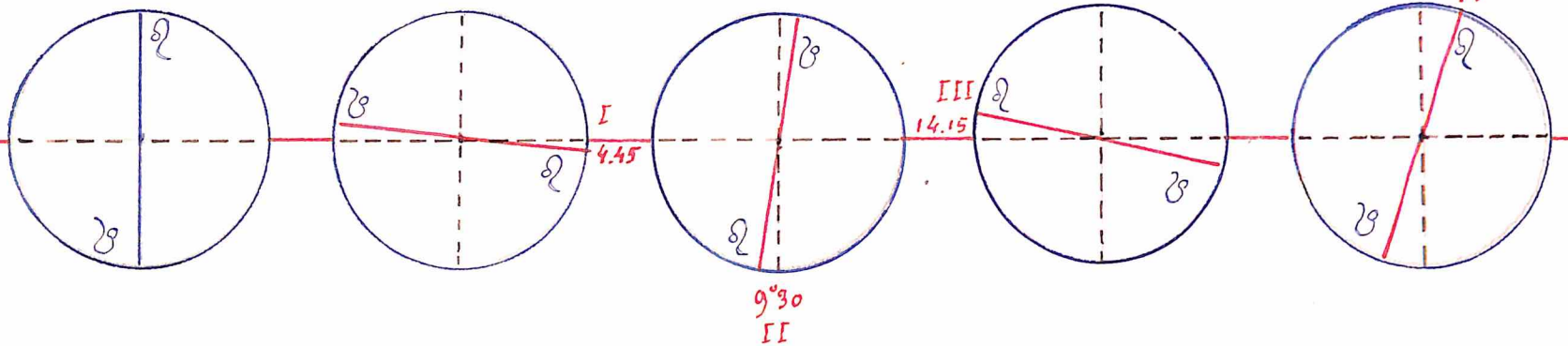
III

IV

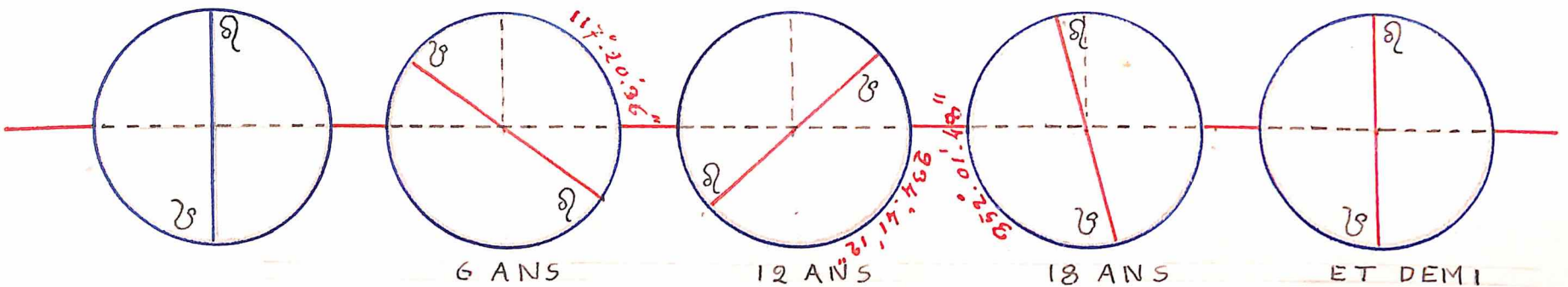
POSITIONS INTERMEDIAIRES



PROGRESSION ANNUELLE DE LA LIGNE DES NOEUDS



CYCLE DE LA LIGNE DES NOEUDS EN DIX-HUIT ANS ET DEMI



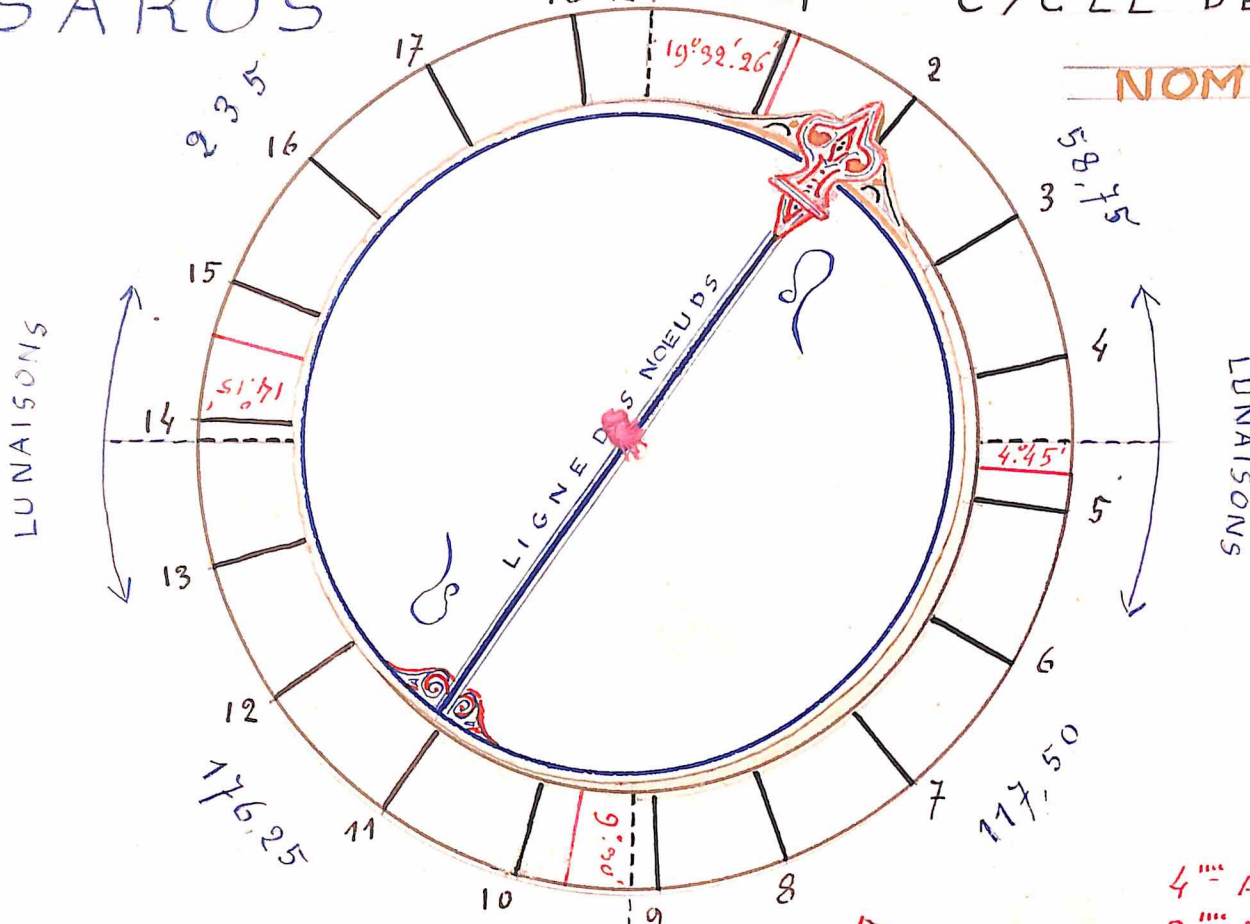
POSSIBILITE D'ECLIPSE

LE SAROS

18 1/2 ANNEES

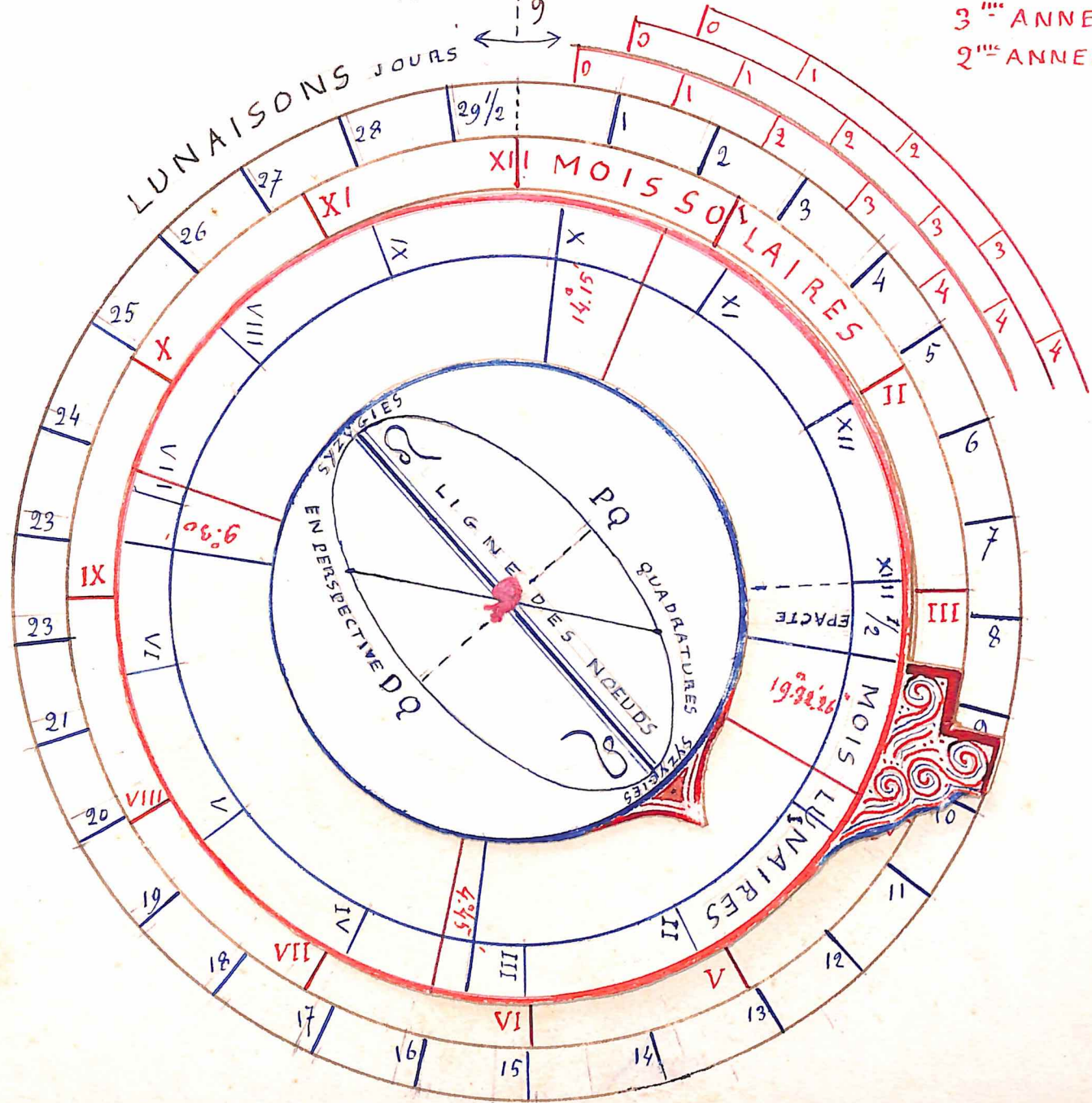
PLANCHE XXI
CYCLE DE METON

NOMBRE D'OR



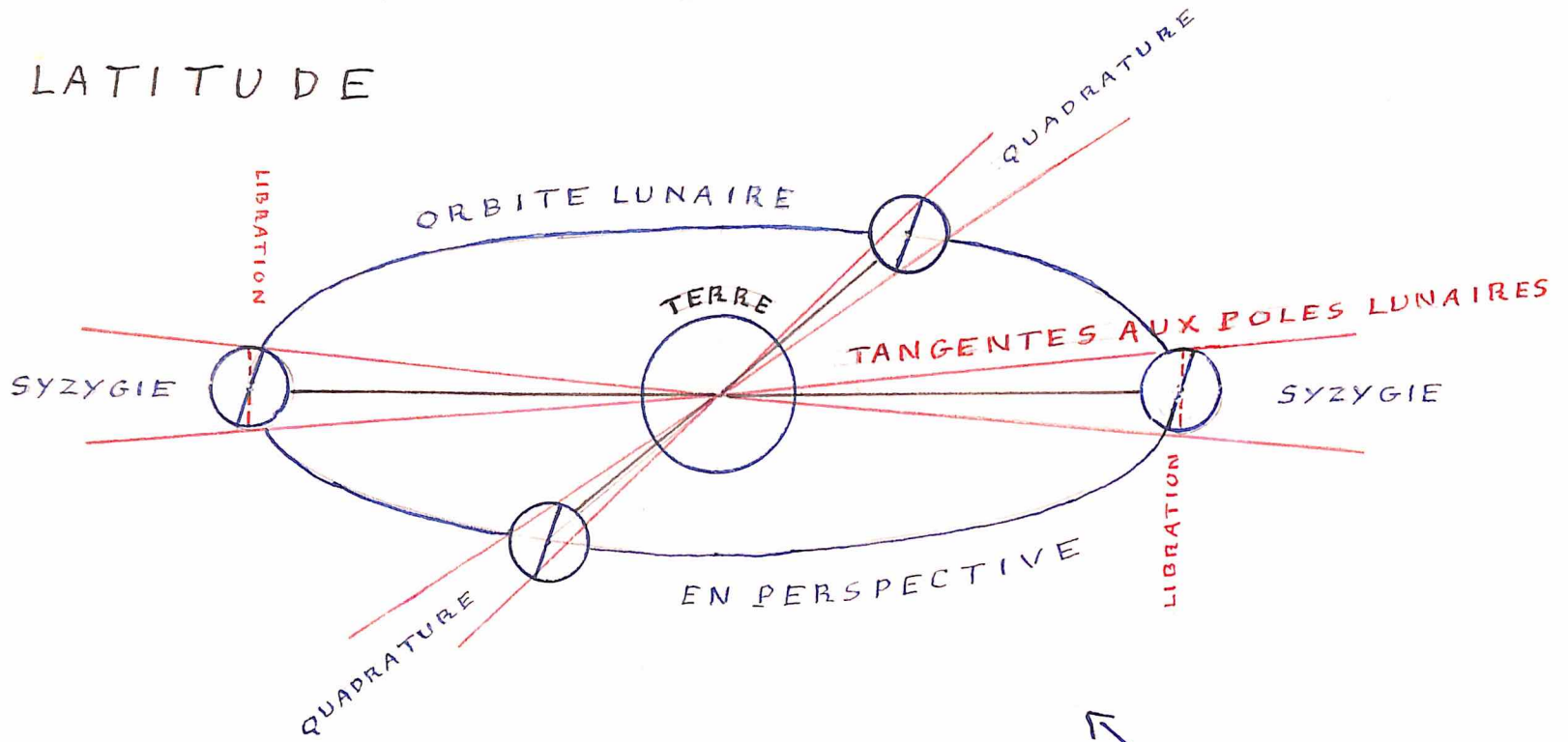
4^{me} ANNEE. ETC.
3^{me} ANNEE
2^{me} ANNEE

EPACTE

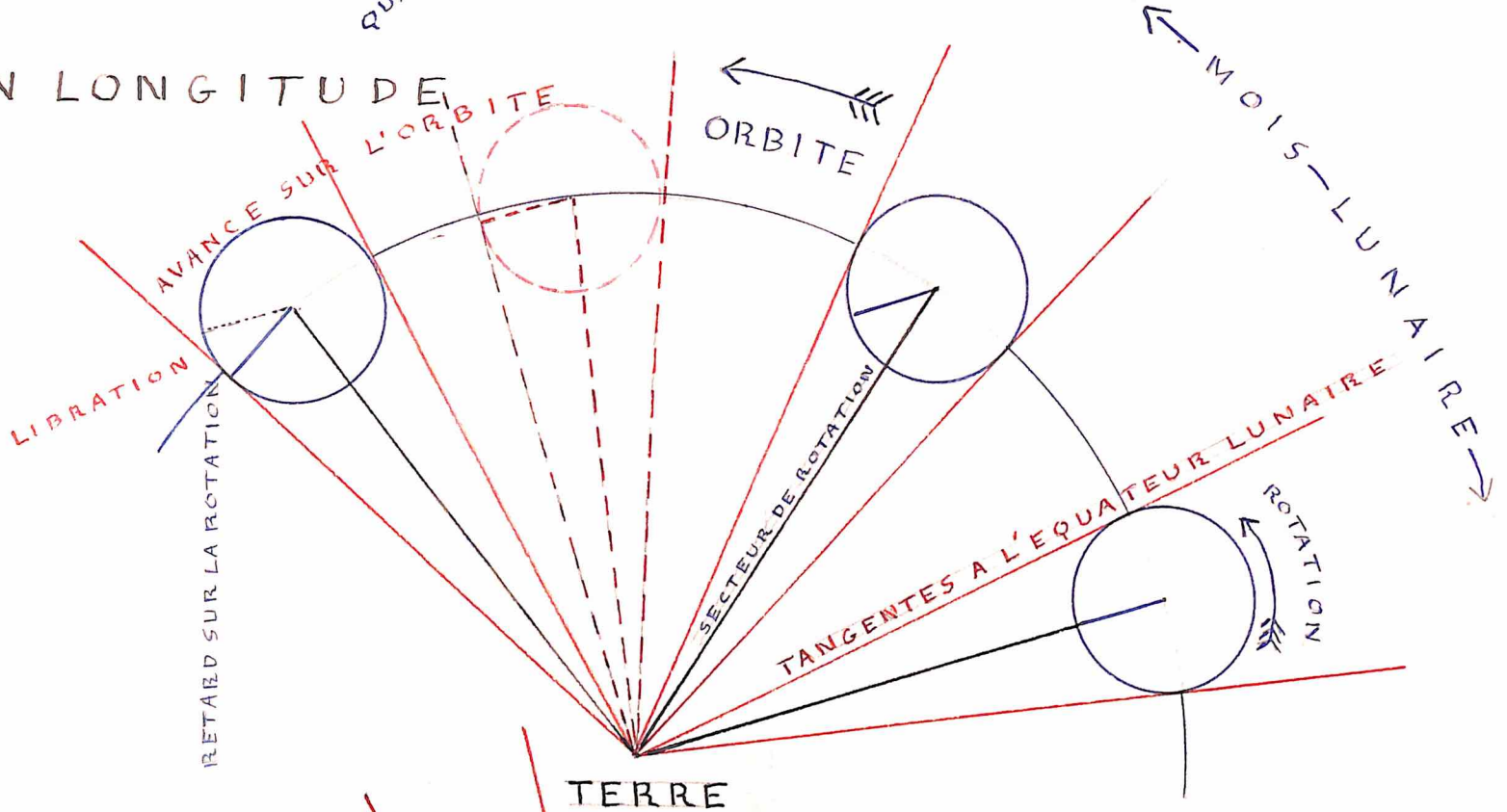


LES LIBRATIONS

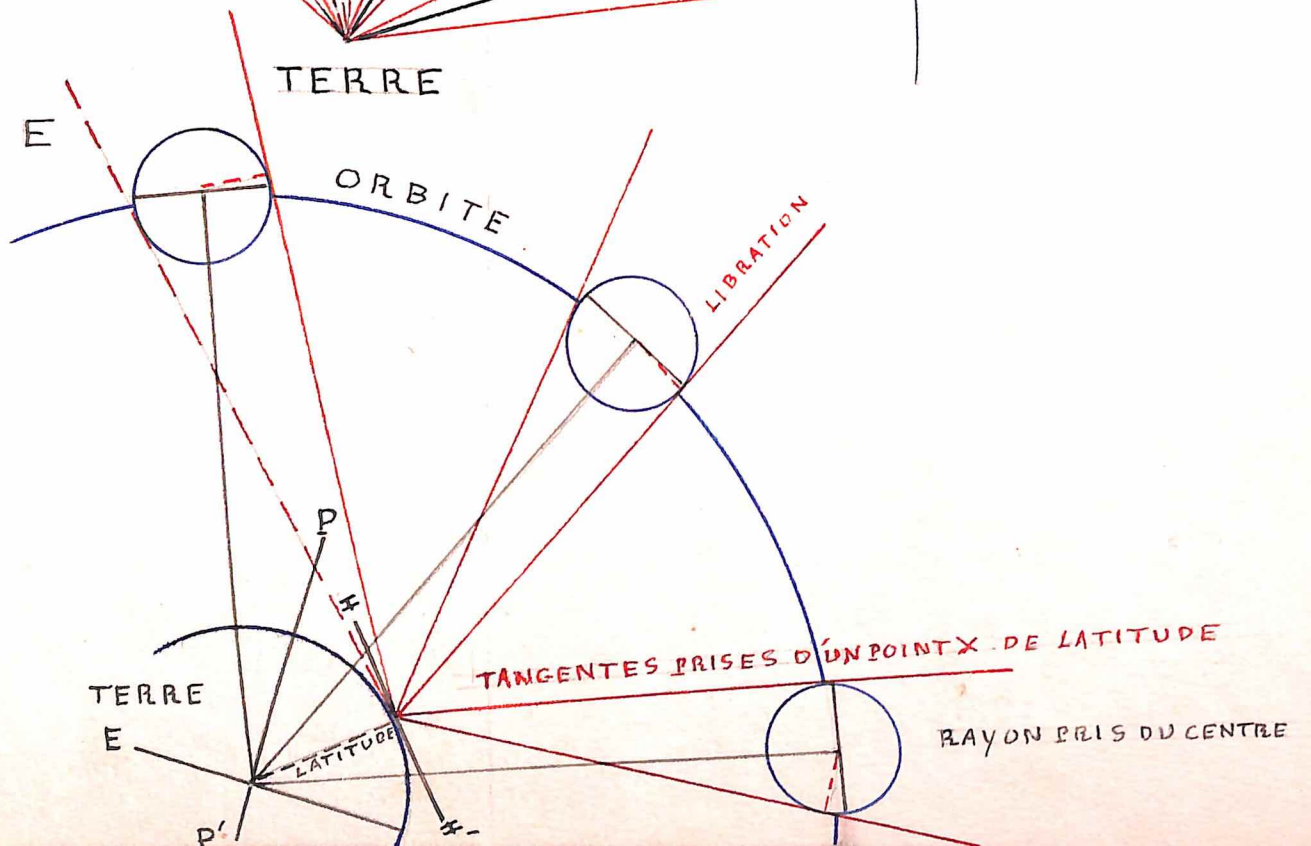
EN LATITUDE DE

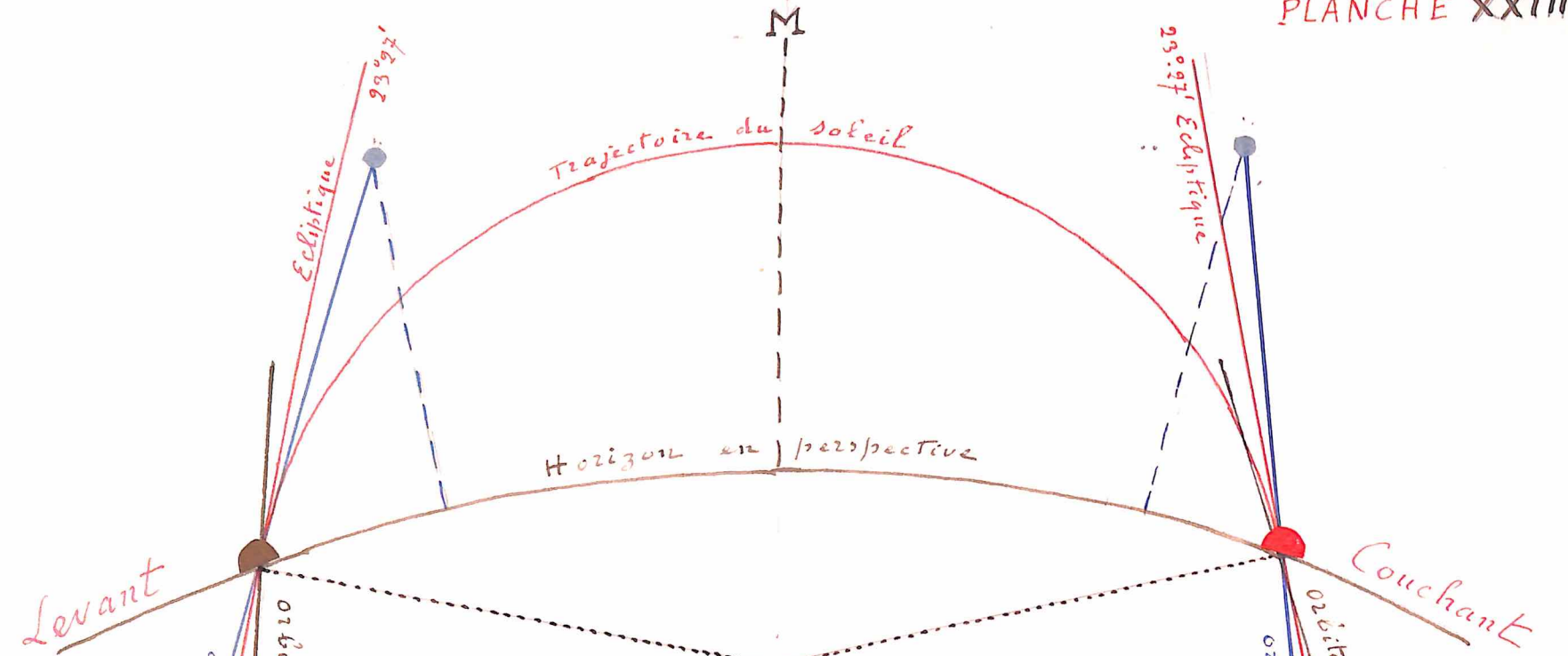


EN LONGITUDE DE



DIURNE





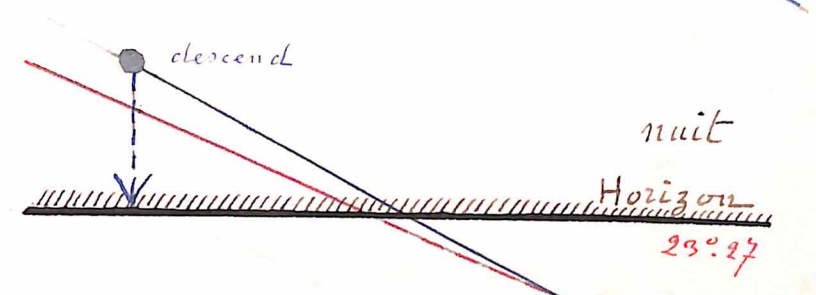
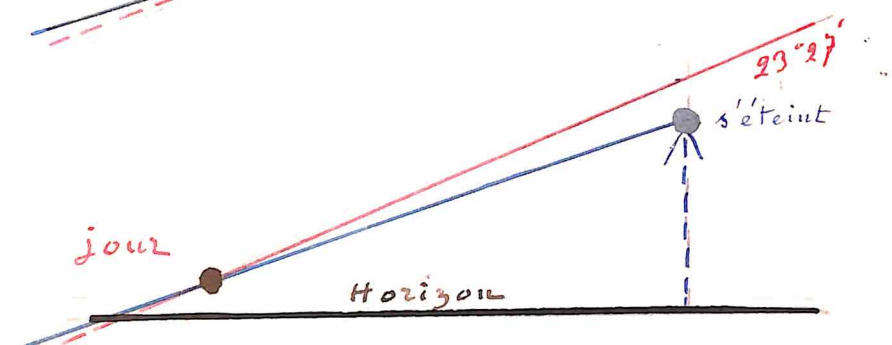
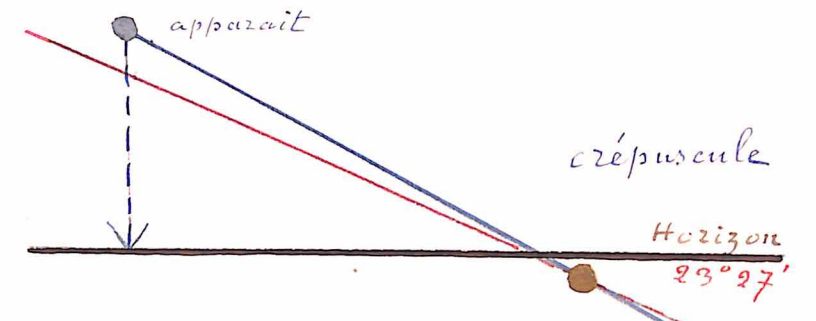
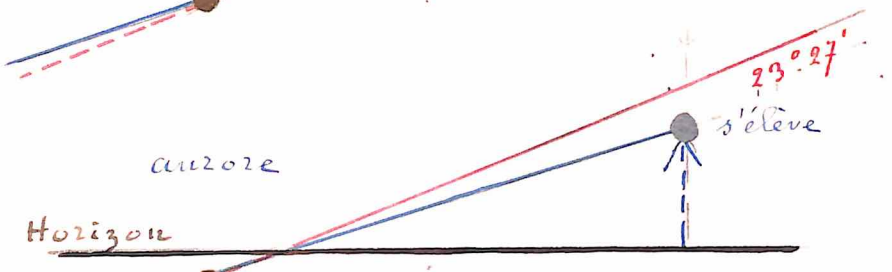
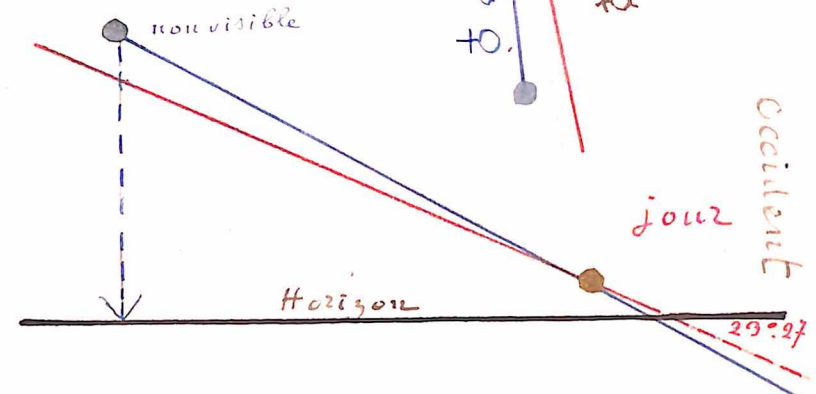
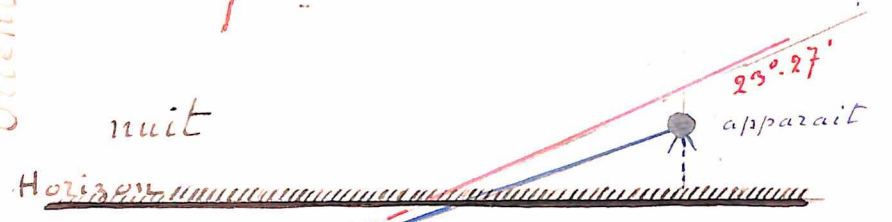
LES PLANETES VENUS ET MERCURE

♀

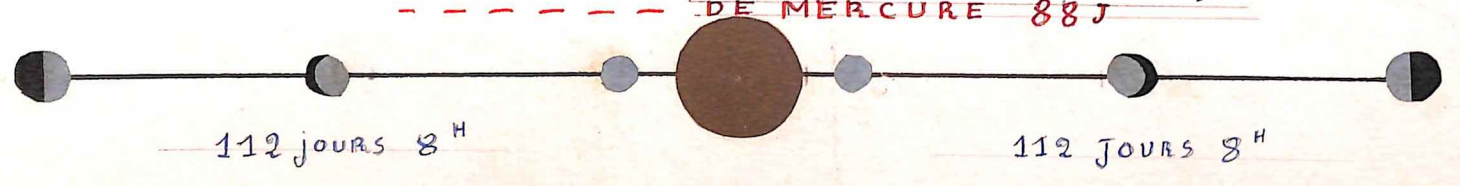
♿

Orient

Occident

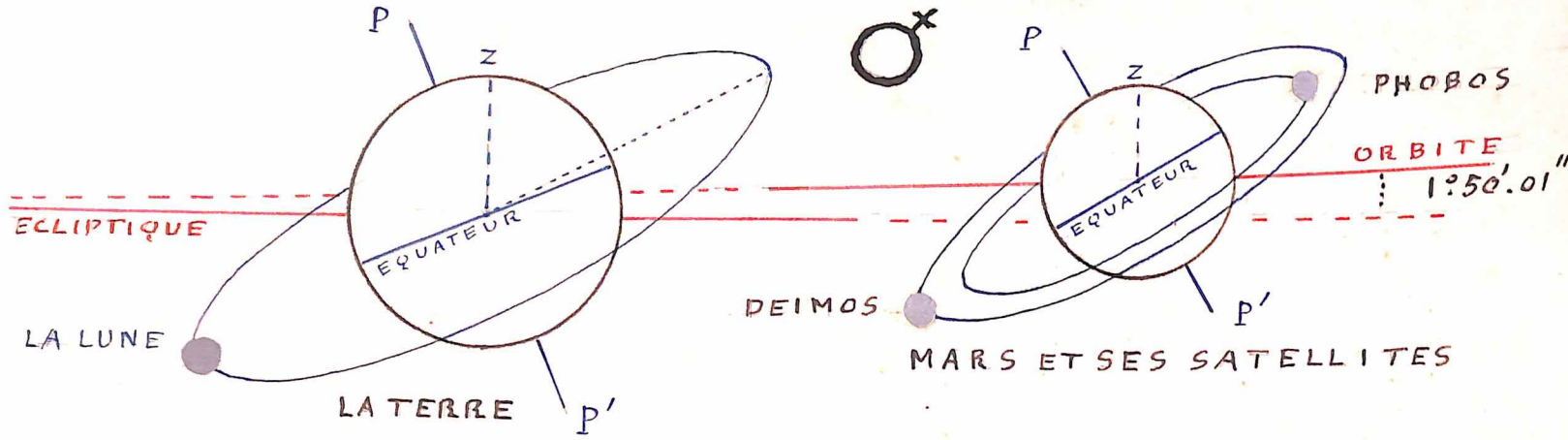


REVOLUTION DE VENUS 224^J 16^H 49'
 DE MERCURE 88^J



LA PLANETE MARS

MARS ♀



LA TERRE ♀

VENUS ♀

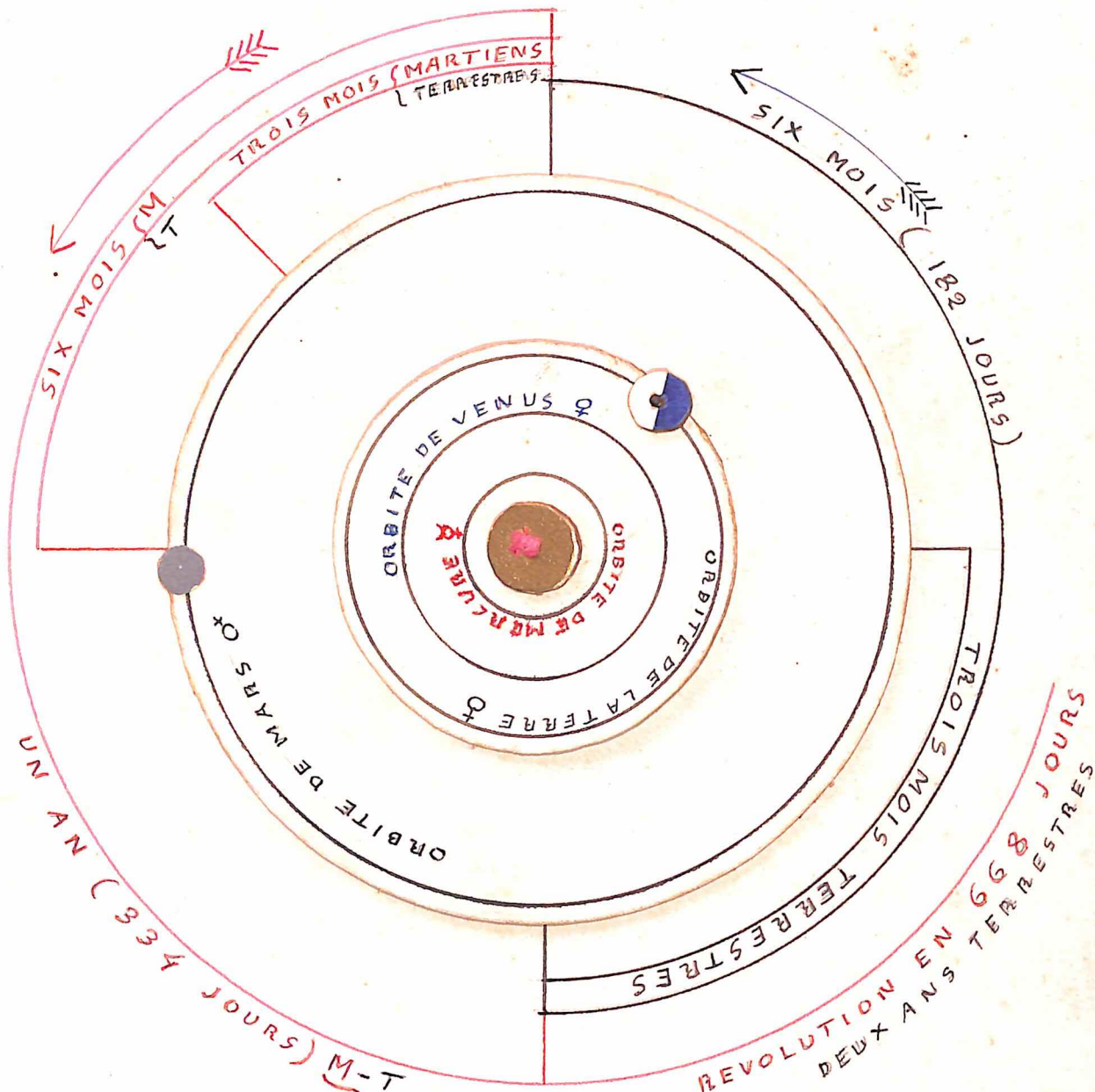
MERCURE ♀

ECLIPTIQUE

LA LOI DE BODE

0	3	6	12	24	48	96	192
4	7	10	16	28	52	100	196
3.9	7.2	10	15.2	25	52	95	192

DISTANCES COMPARATIVES REELLES

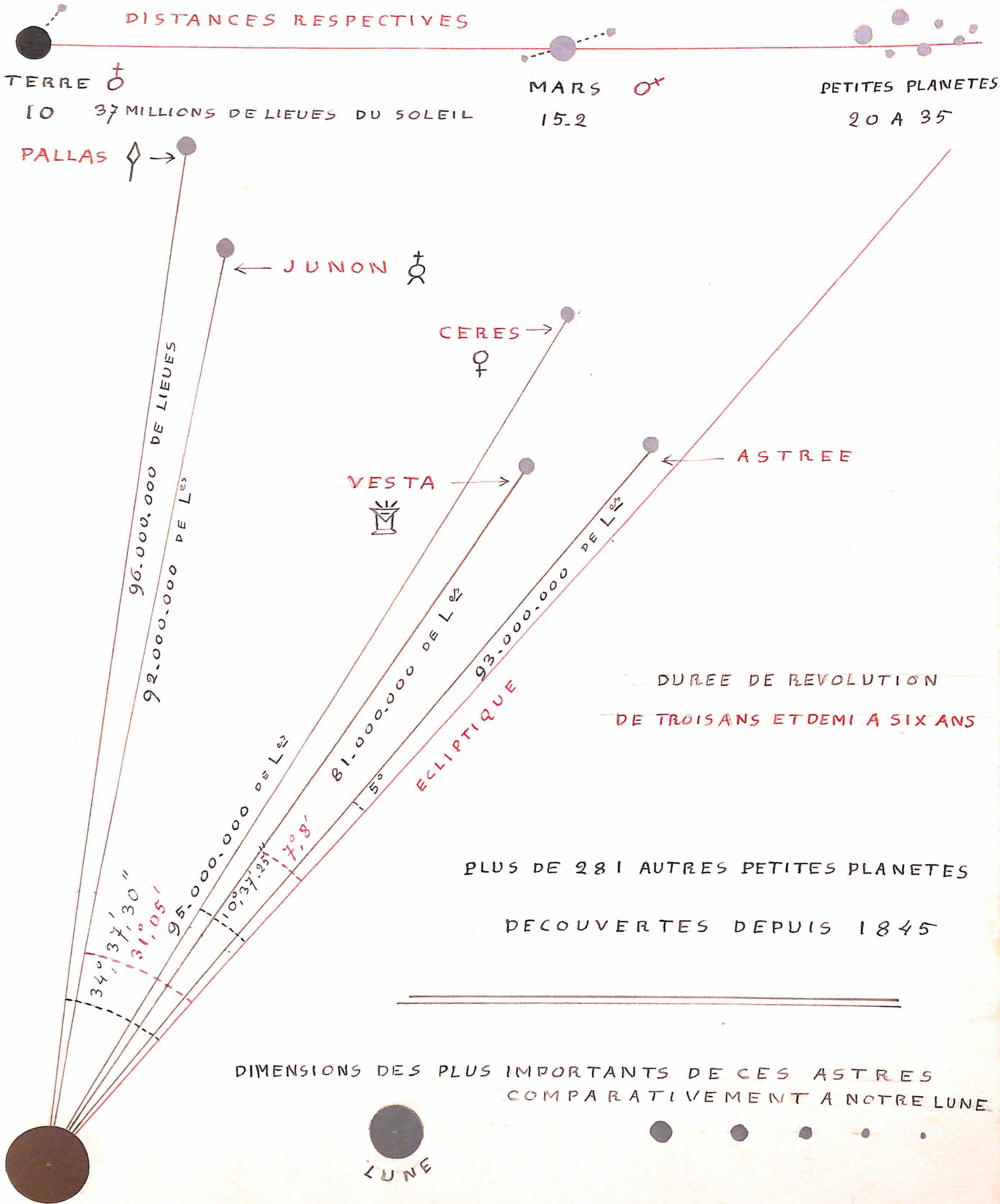


MARCHE APPARENTE



DISTANCE MAXIMUM 118 MILLIONS DE LIEUES
 " MINIMUM 14 " " "

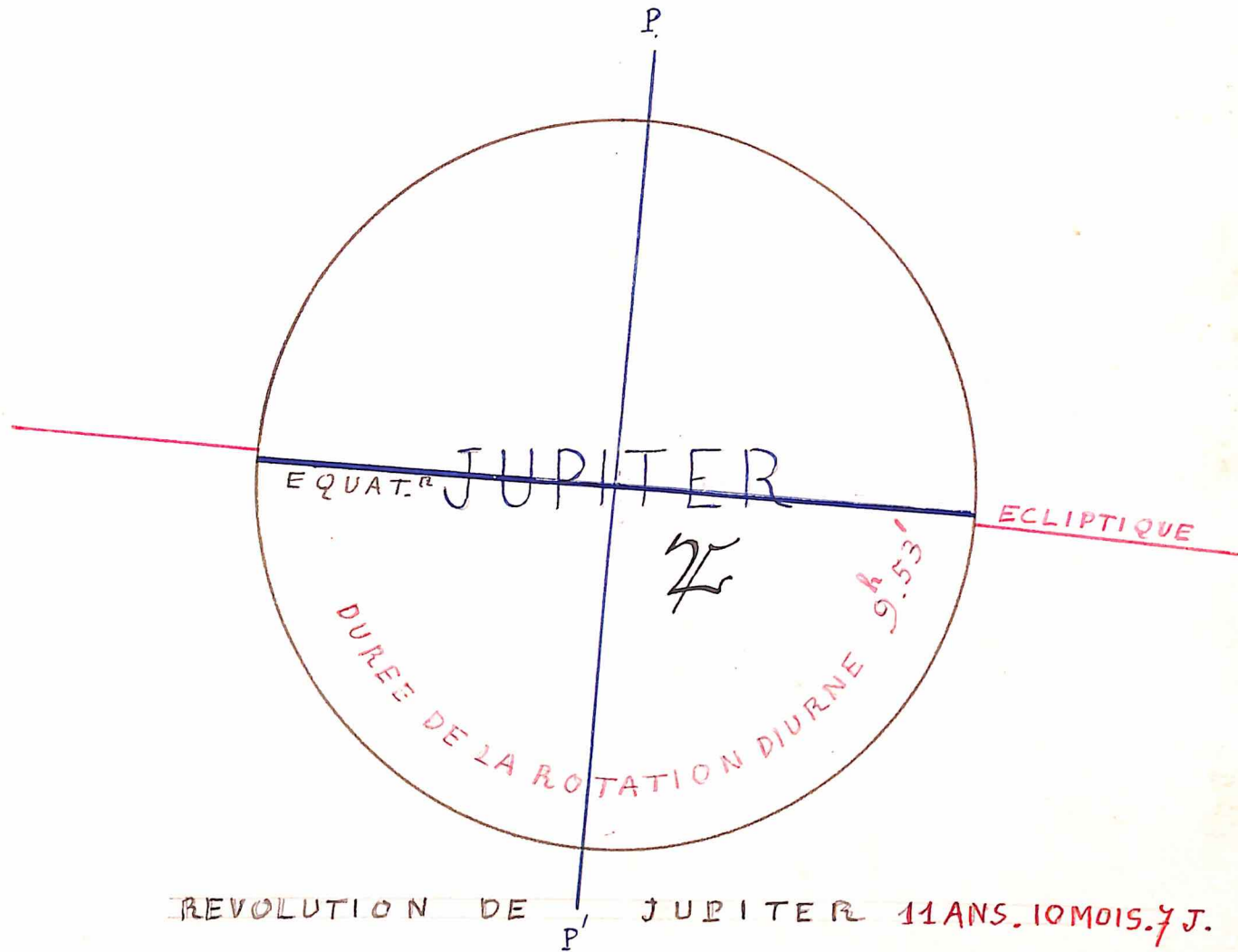
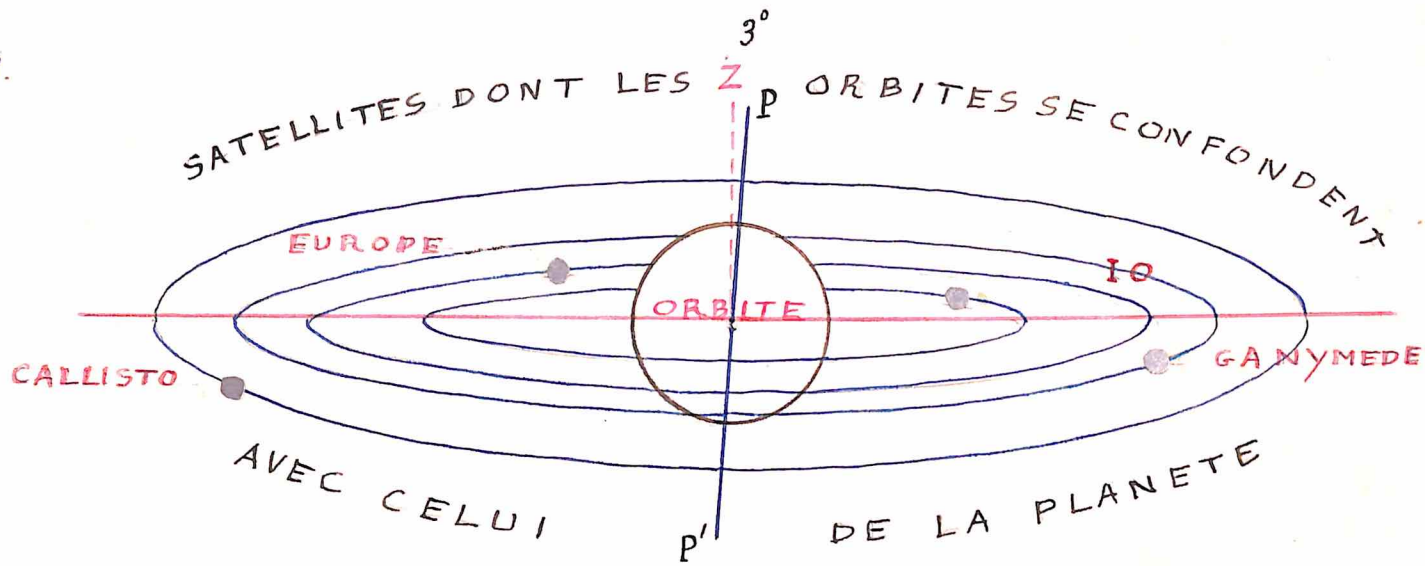
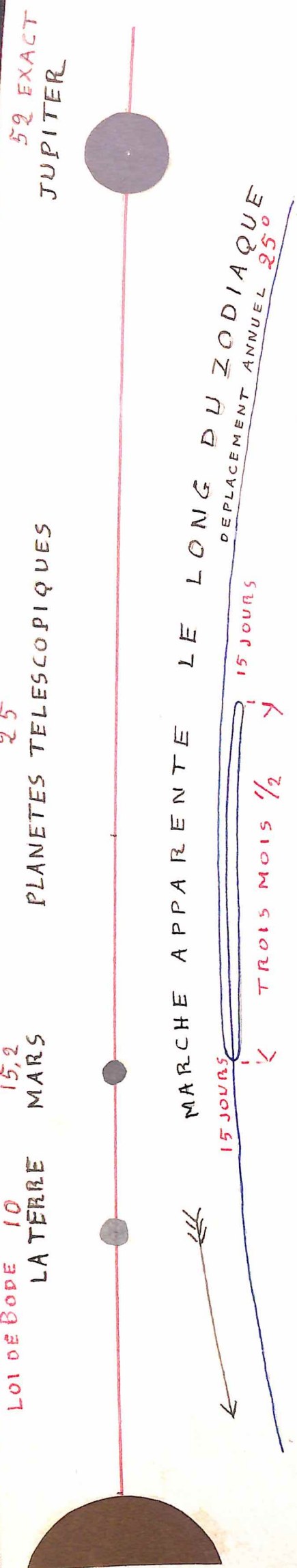
LES PLANETES TELESCOPIQUES



LA PLANETE JUPITER

PL XXVI

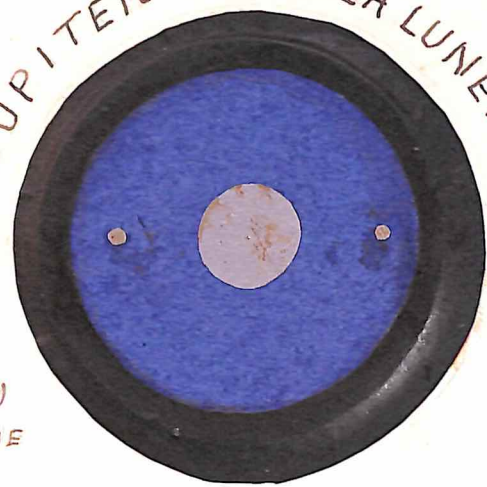
Handwritten symbol



DIMENSIONS COMPARATIVES DE JUPITER. ET DE LA TERRE

JUPITER DANS LA LUNETTE

Z

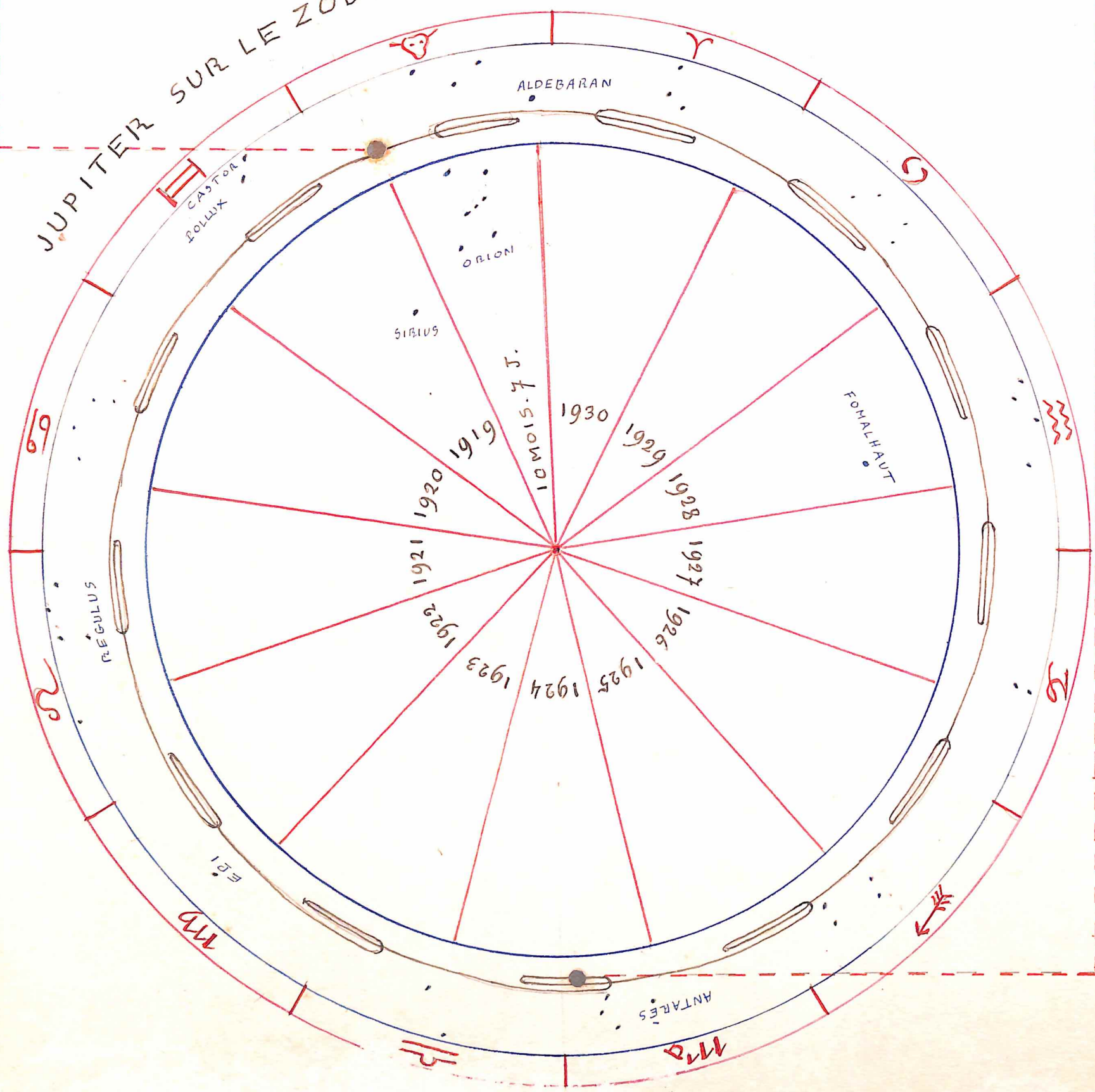


Z

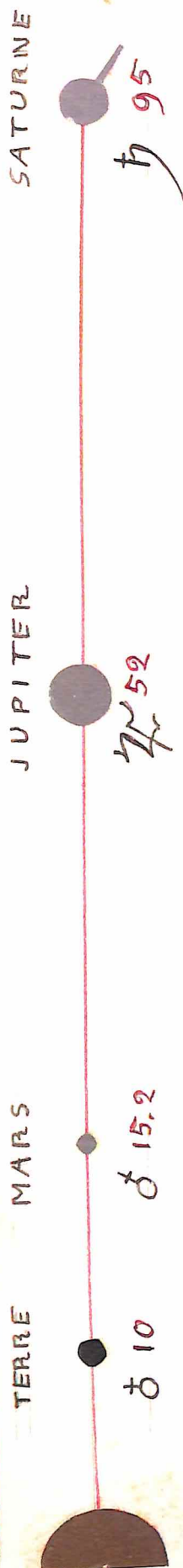
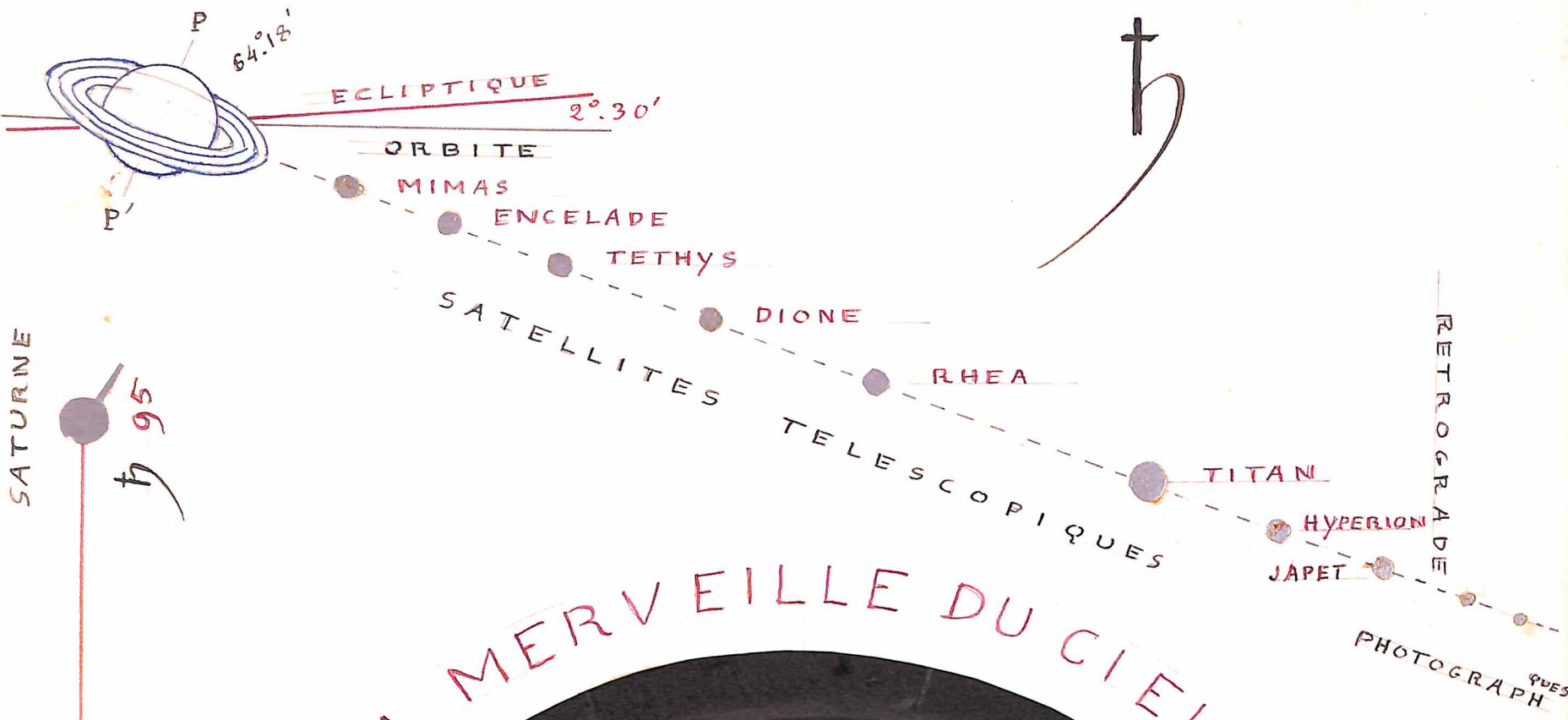
PLACE LE 18 JANVIER 1919
CHUTE DE L'EMPIRE D'ALLEMAGNE
1^{RE} CONFERENCE A PARIS

PLACE LE 18 JANVIER 1871
CREATION DU MEME EMPIRE
A VERSAILLES

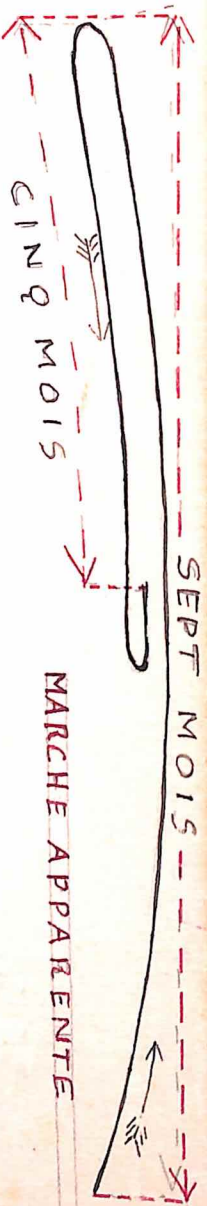
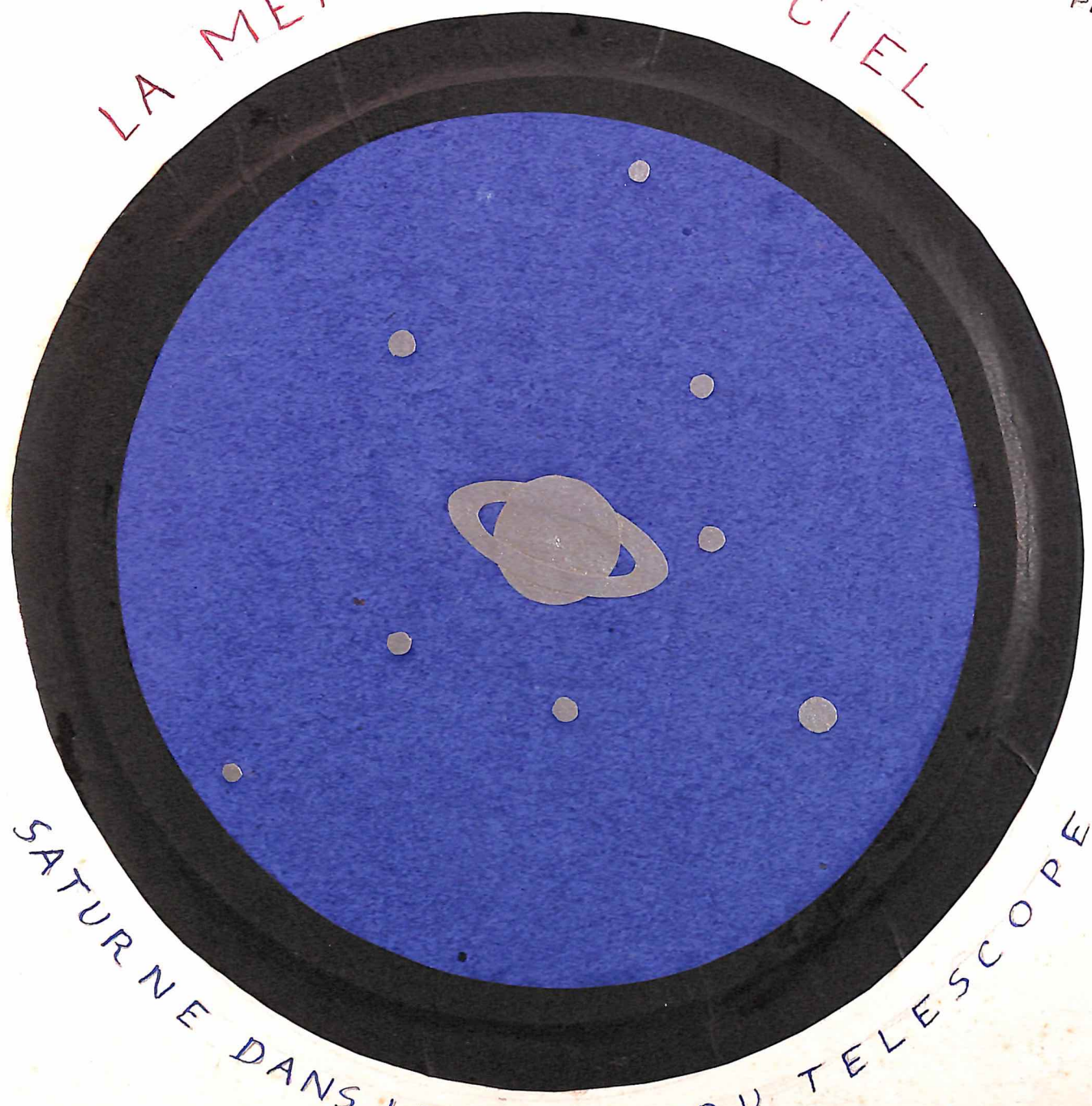
JUPITER SUR LE ZODIAQUE



LA PLANETE SATURNE



LA MERVEILLE DU CIEL

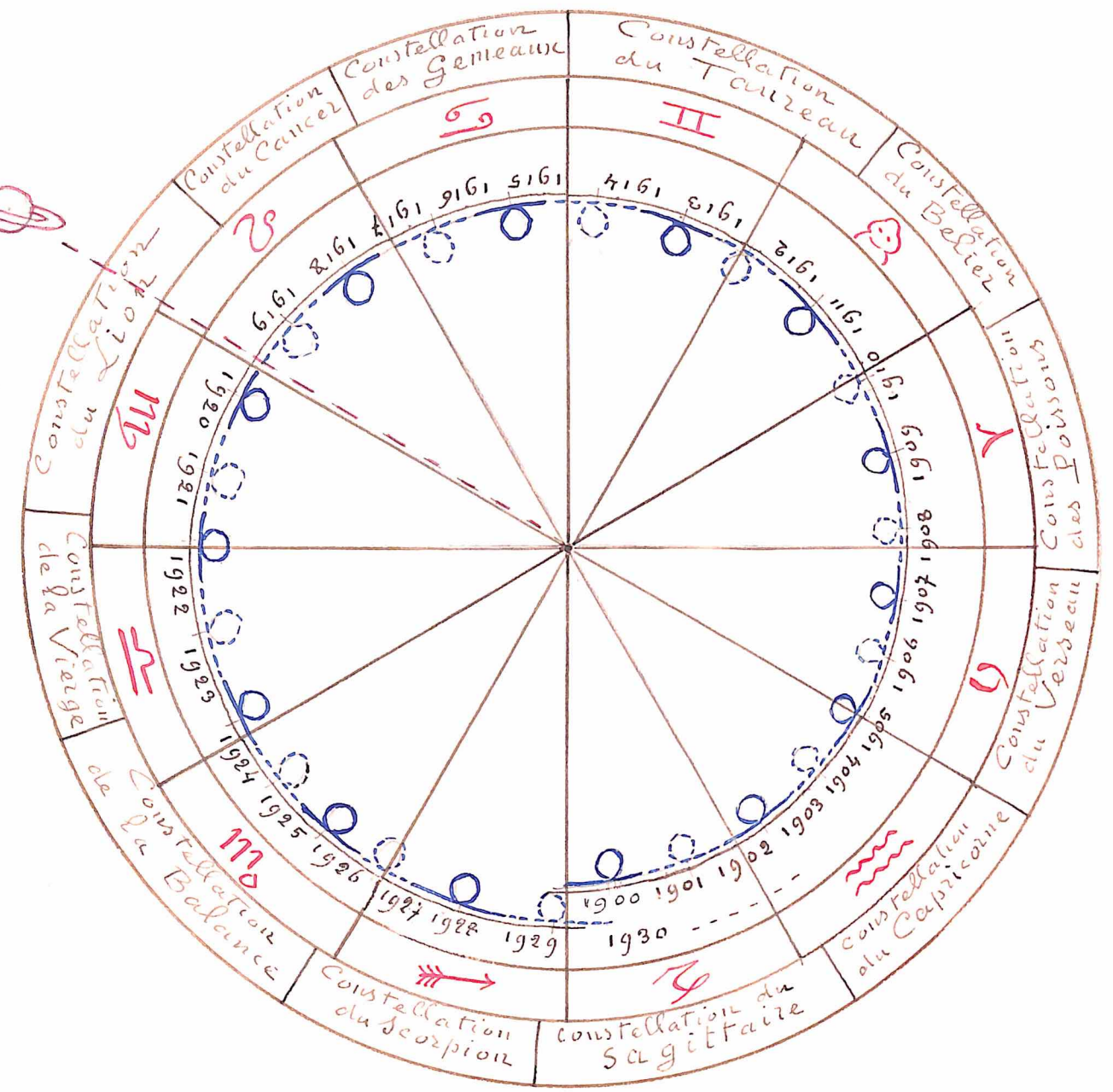


REVOLUTION DE SATURNE 29 ANS

LA PLANETE SATURNE

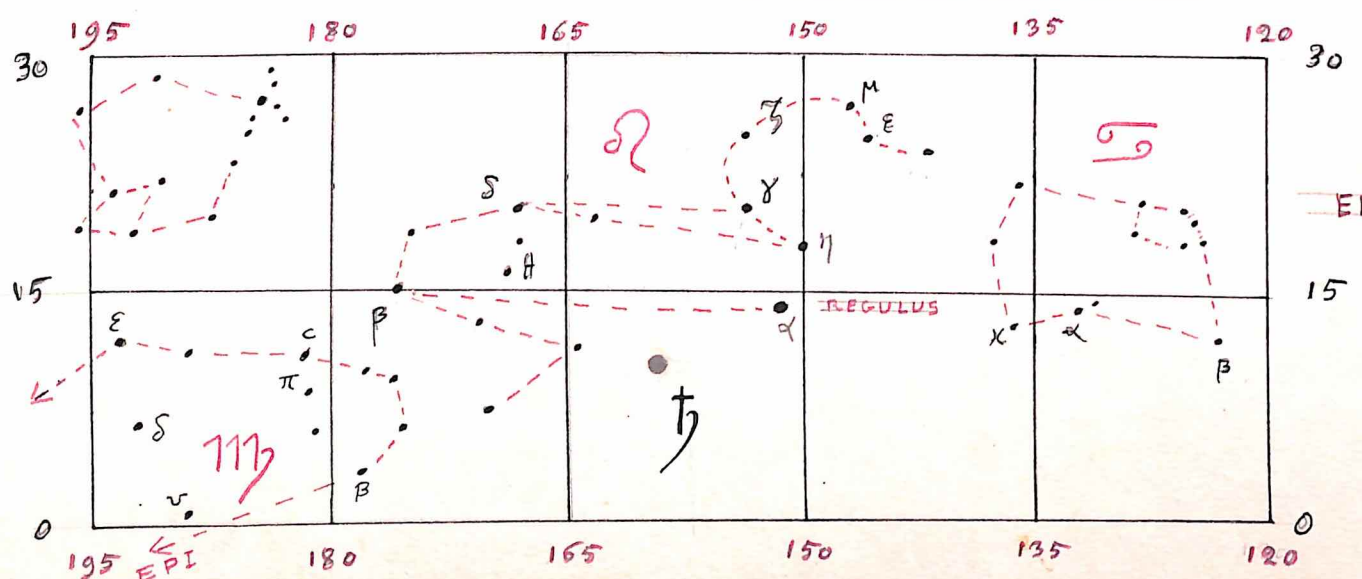
h

EN MAI 1920



ASCENSION DROITE

DECLINAISON BOREALE



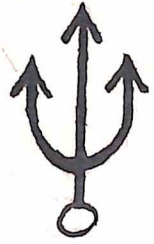
EN 1920

LA PLANETE NEPTUNE PL XXIX

LA FILLE STELLAIRE DE LE VERRIER

CALCULEE PAR LUI EN 1846

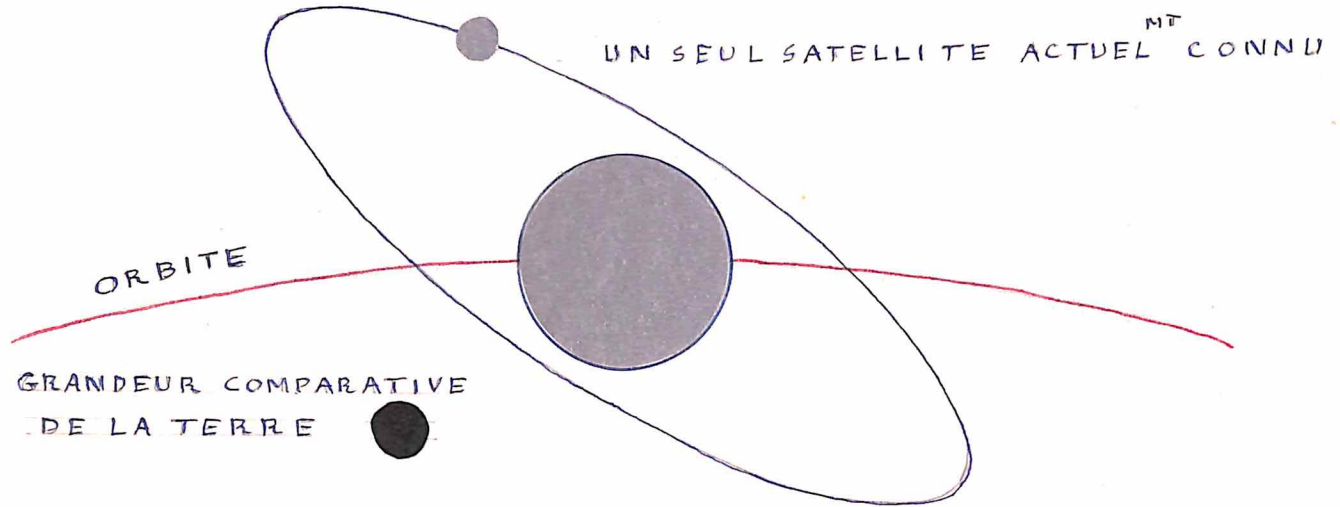
A MOINS D'UN DEGRE DE LA REALITE



384
388
300
♄

192
194
192
♁

LA SERIE QUI SEMBLE NE PAS SE CONTINUER SERAIT DE BASE AUX CALCULS DE LE VERRIER



DISTANCE AU SOLEIL 1.112.000.000 (LIEUES)

DUREE DE LA REVOLUTION 164 ans ET 281 jours TERRES

Moderato *p*

Lu - cete al - lait chan -

p

-tant l'ar - re pie ver - do

f

-yant



10 DEGRES
SIX MOIS

MARCHE APPARENTE

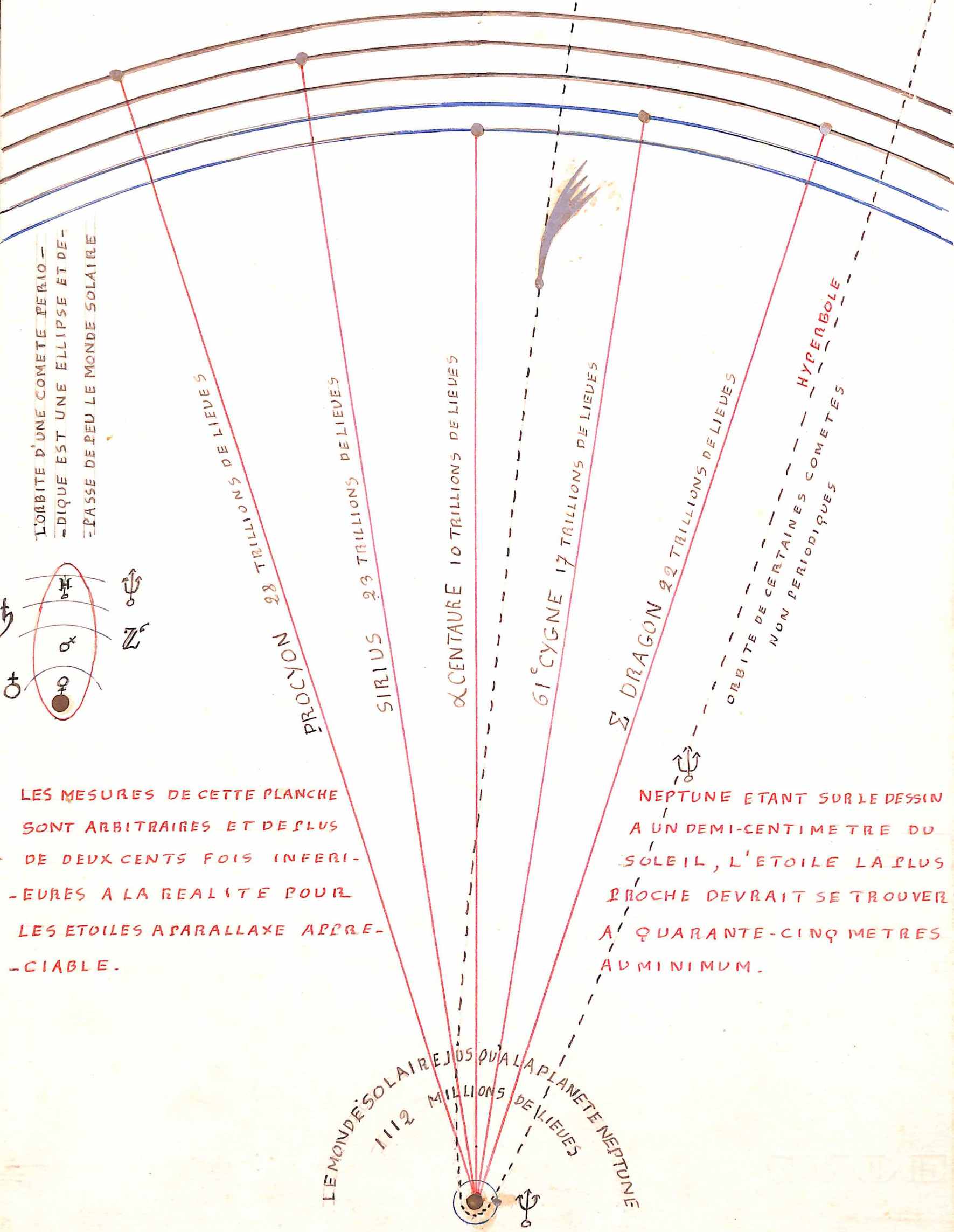
musique qu'elle chantait si bien!

f de La Cornelle

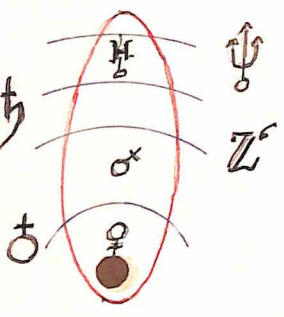
48
96
100
95

THEORIE DE TITIUS
LOI DE BODE
DISTANCES REELLES

LA VERITABLE FILLE DE LE VERRIER



L'ORBITE D'UNE COMETE PERIO-
-DIQUE EST UNE ELLIPSE ET DE-
-PASSE DE PRES LE MONDE SOLAIRE



PROCYON 28 TRILLIONS DE LIEUES

SIRIUS 23 TRILLIONS DE LIEUES

α CENTAURE 10 TRILLIONS DE LIEUES

61^e CYGNE 17 TRILLIONS DE LIEUES

Σ DRAGON 22 TRILLIONS DE LIEUES

ORBITE DE CERTAINES COMETES
NON PERIODIQUES
HYPERBOLE

LES MESURES DE CETTE PLANCHE
SONT ARBITRAIRES ET DE PLUS
DE DEUX CENTS FOIS INFERI-
-EURES A LA REALITE POUR
LES ETOILES A PARALLAXE APPRE-
-CIABLE.

NEPTUNE ETANT SUR LE DESSIN
A UN DEMI-CENTIMETRE DU
SOLEIL, L'ETOILE LA PLUS
PROCHE DEVRAIT SE TROUVER
A QUARANTE-CINQ METRES
AU MINIMUM.

LE MONDE SOLAIRE JUSQU' A LA PLANETE NEPTUNE
1112 MILLIONS DE LIEUES