

Satellites de Saturne I à VIII : configurations pour 1995

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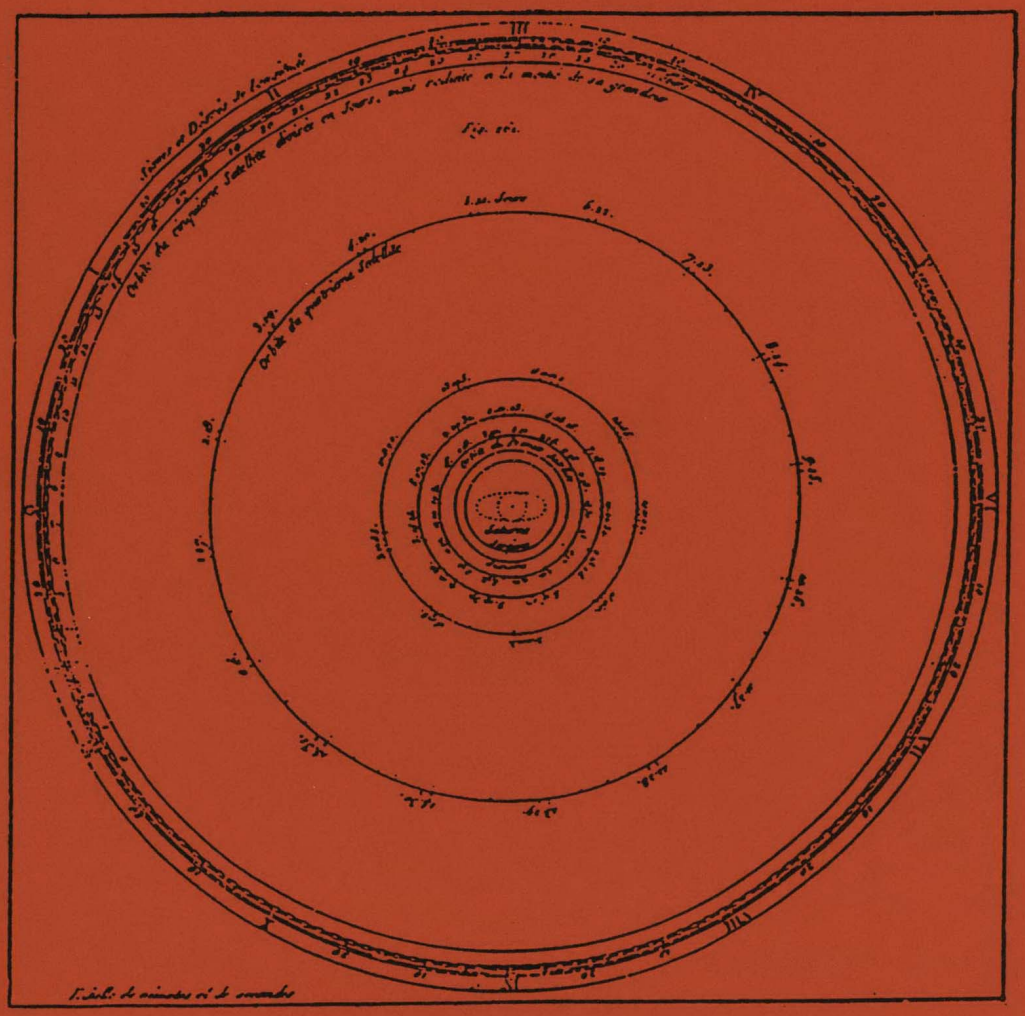
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SATELLITES DE SATURNE

I à VIII

CONFIGURATIONS POUR 1995



Supplément à la CONNAISSANCE DES TEMPS

à l'usage des observateurs

Bureau des Longitudes, URA N° 707 du CNRS

Paris, décembre 1994

Couverture : "Instrument pour trouver les configurations des satellites de Saturne", extrait de Lalande 1792, Astronomie tome 3.

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Avertissement

Le Bureau des Longitudes publie chaque année dans la Connaissance des Temps, les positions des planètes, du Soleil et de la Lune sous forme de coefficients de Tchébycheff. Des suppléments à la Connaissance des temps sont publiés également et donnent :

— les positions des satellites de Mars, des satellites galiléens de Jupiter, des huit premiers satellites de Saturne et des cinq satellites d'Uranus sous forme de fonctions mixtes dépendant directement du temps ;

— les positions des satellites faibles de Jupiter (VI, VII, VIII et IX) et de Phoebé (satellite IX de Saturne) sous forme de coefficients de Tchébycheff;

— les configurations et les phénomènes des satellites galiléens de Jupiter;

Le présent supplément donne les configurations des huit premiers satellites de Saturne dans le but, principalement, d'aider les observateurs à identifier ces satellites. La précision de lecture des courbes permet une précision de positionnement de l'ordre de 10 à 15 secondes de degré (").

Il donne également les dates des phénomènes (éclipses, occultations, passages devant la planète et passages d'ombres) et celles des phénomènes mutuels (éclipses et occultations des satellites les uns par les autres) ces phénomènes se produisent tous les quinze ans.

Foreword

The Bureau des Longitudes publishes each year in the Connaissance des Temps, the positions of the Planets, the Sun and the Moon as Chebychev polynomials. Several supplements to The Connaissance des Temps are also published and give :

— the positions of the satellites of Mars, the Galilean satellites of Jupiter, of the first eight satellites of Saturn and of the five satellites of Uranus as mixed functions depending directly on the time ;

— the positions of the faint satellites of Jupiter (VI, VII, VIII and IX), of Phoebe (satellite IX of Saturn) as Chebychev polynomials ;

— the configurations and the phenomena of the Galilean satellites of Jupiter ;

The present supplement gives the configurations of the first eight satellites of Saturn in order to help the observers to identify those satellites. The precision of the curves allows an accuracy in the position of about 10 to 15 seconds of degree (").

Besides these informations the present bookelet gives the dates of phenomena (eclipses, occultations, transit in front of Saturne, transit of shadows) and the dates of mutual phenomena (the satellites eclipse and occult each other). These phenomena occur every fiveteen years.

J.-E. ARLOT
Directeur du Bureau des Longitudes
URA 707 du CNRS

LE SERVICE MINITEL

DU BUREAU DES LONGITUDES

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Le Service Minitel du Bureau des Longitudes met à la disposition des professionnels et des amateurs les informations suivantes :

— les heures du lever et du coucher du Soleil et de la Lune, les azimuts et hauteurs du Soleil en n'importe quel lieu, de -4000 à 2500 ;

— les phases de la Lune et les dates des saisons de -4000 à 2500 ;

— les éclipses du Soleil et de la Lune pour cinq années ;

— les positions apparentes géocentriques, les hauteurs et azimuts, les heures du lever et du coucher du Soleil, de la Lune et des planètes de 1900 à 2020 ;

— les coordonnées héliocentriques moyennes de la date des planètes du système solaire de 1900 à 2020 ;

— les positions des satellites naturels et les phénomènes des satellites galiléens pour trois ans ;

— les définitions et les concordances des calendriers, les fêtes légales et religieuses, l'heure légale en France, les dates de changement d'heure et le calcul du jour de la semaine.

Il fournit également des informations ponctuelles comme les passages des comètes et des astéroïdes, les pluies d'étoiles filantes...

DONNÉES SUR LES SATELLITES DE SATURNE

DATA ON THE SATELLITES OF SATURN

	NOM	masse	rayon	période rotation sidérale	albédo géométrique	magnitude visuelle	période orbitale	élongation maximale	1/2 grand axe	excentricité	inclinaison sur l'équateur de Saturne
	unité →	masse de Saturne	km	jour			jour	(') (")	10^3 km		degré
I	Mimas	6.5×10^{-8}	199	(S)	0.53	12.9	0.942 421 95	30	184.85	0.0191	1.56
II	Enceladus	2.1×10^{-7}	251	(S)	0.99	11.7	1.370 218 081	38	237.39	0.0049	0.026
III	Tethys	1.09×10^{-6}	524	(S)	0.88	10.2	1.887 802 524	48	293.99	0.	1.098
IV	Dione	1.95×10^{-6}	559	(S)	0.65	10.4	2.736 915 55	1 01	376.37	0.00216	0.014
V	Rhea	4.1×10^{-6}	764	(S)	0.67	9.7	4.517 502 66	1 25	525.58	0.000 27 (6)	0.347
VI	Titan	2.367×10^{-4}	2 575	(S)	0.21	8.28	15.945 446 3	3 17	1 217.66	0.029 09	0.30
VII	Hyperion	$3. \times 10^{-8}$	370 x 280 x 225		0.3	14.19	21.276 673 3	3 59	1 476.0	0.103 46	0.644
VIII	Iapetus	2.8×10^{-6}	718	(S)	0.5-0.05	11.2	79.330 954	9 34	3 549.77	0.028 30	18.460 (1)
IX	Phoebe	$7. \times 10^{-10}$	221 x 212	0.4	0.06	16.45	(R) 550.48	34 51	12 952.	0.163 2	177. (1)
X	Janus (5)		110 x 100 x 80	(S)	0.4	14.	0.694 5	24	151.472	0.007	0.14
XI	Epimetheus (5)		70 x 60 x 50	(S)	0.4	15.	0.694 2	24	151.422	0.009	0.34
XII	Hélène (2)		18 x 16 x 15		0.5	17.	2.736 9	1 01	377.40	0.005	0.2
XIII	Telesto (3)		17 x 14 x 13		0.6	18.	1.887 8	48	294.66		
XIV	Calypso (3)		17 x 11 x 11		0.8	18.5	1.887 8	48	294.66		
XV	Atlas		20 x 10		0.4	18.	0.601 9	22	137.670		0.3
XVI	Prometheus (4)		70 x 11 x 40		0.6	15.	0.613 0	23	139.353		0.
XVII	Pandora (4)		55 x 45 x 35		0.6	15.5	0.628 5	23	141.700	0.004	0.1
XVIII	Pan						0.5750	21	133.583		

	NAME	*mass*	*radius*	*sidereal period*	*geometrical albedo*	*visual magnitude*	*orbital period*	*greatest elongation*	*semi major axis*	*eccentricity*	*inclination on Saturn's equator*
	unit →	*Saturn's mass*	*km*	*day*			*day*	*(') (")*	*10^3 km*		*degree*

NOTES

(S) : révolution synchrone
(R) : révolution rétrograde
(1) : inclinaison par rapport à l'écliptique. Les éphémérides de Phœbé sont données sous la forme de coefficients de Tchébycheff dans le *« Supplément à la Connaissance des Temps : Satellites faibles... »*
(2) : Hélène : même orbite que Dioné
(3) : Telesto et Calypso : même orbite que Téthys
(4) : satellites coorbitaux « gardiens » de l'anneau F
(5) : Janus et Epimetheus : même orbite
(6) : excentricité propre. L'excentricité forcée due à Titan est de 0,0010

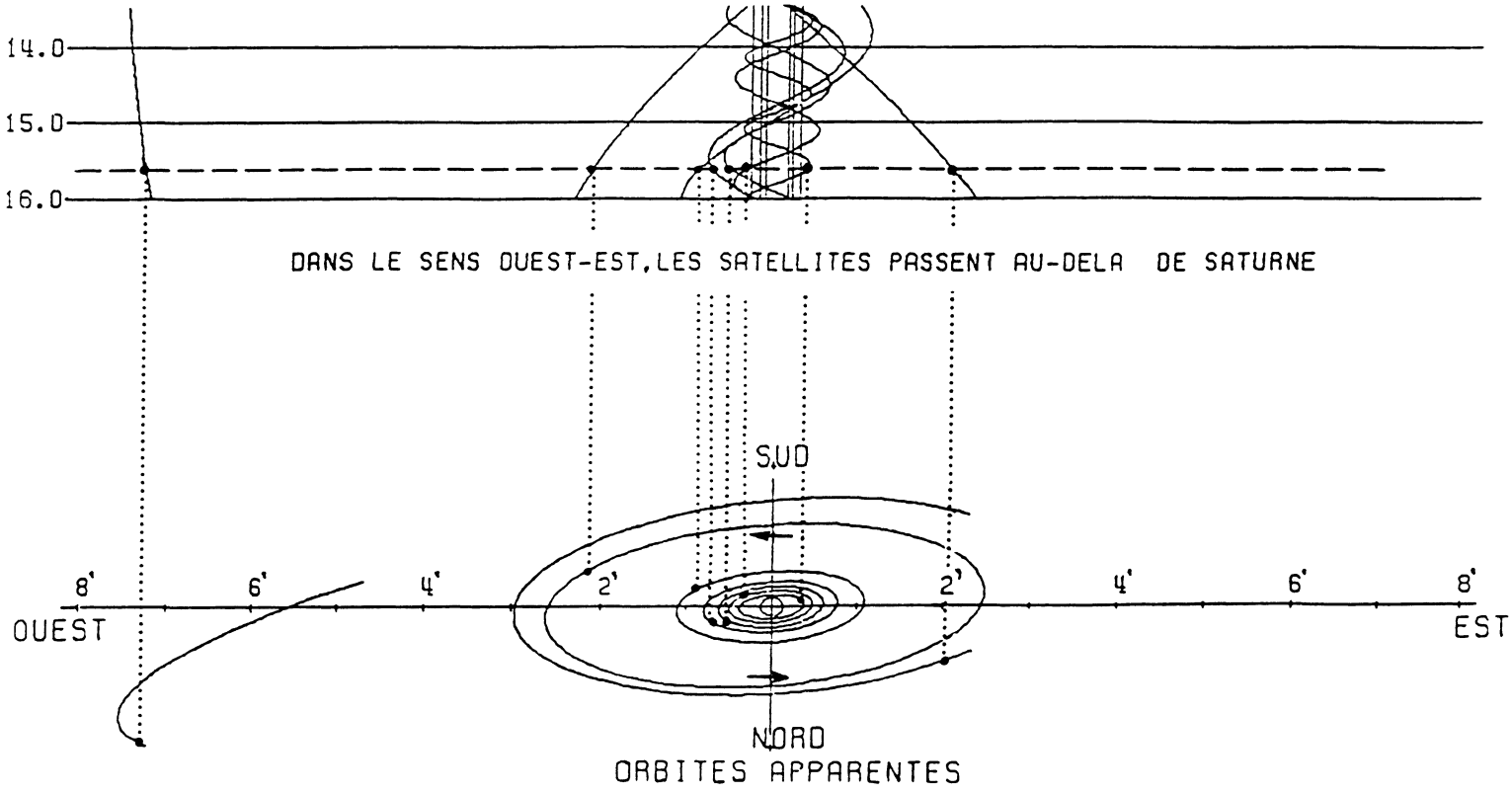
(S) : synchronous revolution
(R) : retrograde revolution
(1) : inclination on the ecliptic. The ephemerides of Phœbe are given as Chebychev coefficients in the « Supplément à la Connaissance des Temps : Faint Satellites... »
(2) : Helene : same orbit as Dione
(3) : Telesto and Calypso : same orbit as Tethys
(4) : satellites on the same orbit « shepherding » F ring
(5) : Janus and Epimetheus : same orbit
(6) : proper eccentricity. The forced eccentricity due to Titan is 0.0010

USAGE DES CONFIGURATIONS

Les configurations permettent d'identifier les satellites et de déterminer leur position en coordonnées tangentielles équatoriales relatives à Saturne avec la précision suivante (pour une lecture des courbes à 0,5 millimètre près) :

I	:	2 à 10"	V	:	2 à 3"
II	:	2 à 8"	VI	:	2 à 3"
III	:	2 à 6"	VII	:	2 à 3"
IV	:	2 à 4"	VIII	:	2 à 3"

L'exemple suivant montre comment procéder :



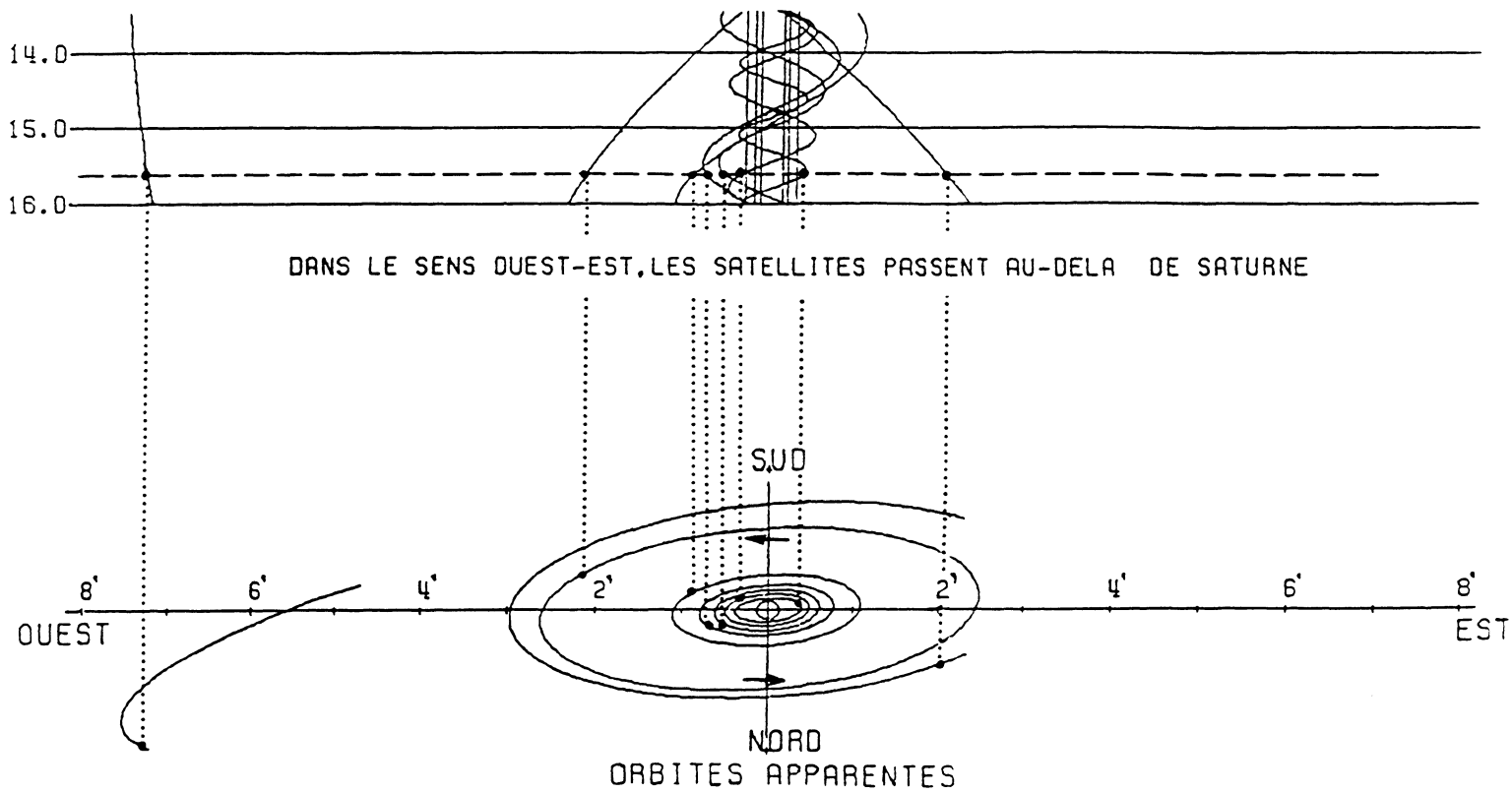
On reporte en abscisse sur l'axe ouest-est les distances $\Delta\alpha \cos\delta$ mesurées, pour la date voulue, sur les courbes. L'ordonnée est donnée par les orbites apparentes. L'indétermination avant/arrière est levée grâce au sens de rotation des satellites.

THE USE OF CONFIGURATIONS

The configurations allow the identification of the satellites and the determination of their position in tangential equatorial coordinates referred to the planet Saturn with the precision as follow (for a lecture on the curves with an accuracy of 0.5 millimeter) :

I	:	2 to 10"	V	:	2 to 3"
II	:	2 to 8"	VI	:	2 to 3"
III	:	2 to 6"	VII	:	2 to 3"
IV	:	2 to 4"	VIII	:	2 to 3"

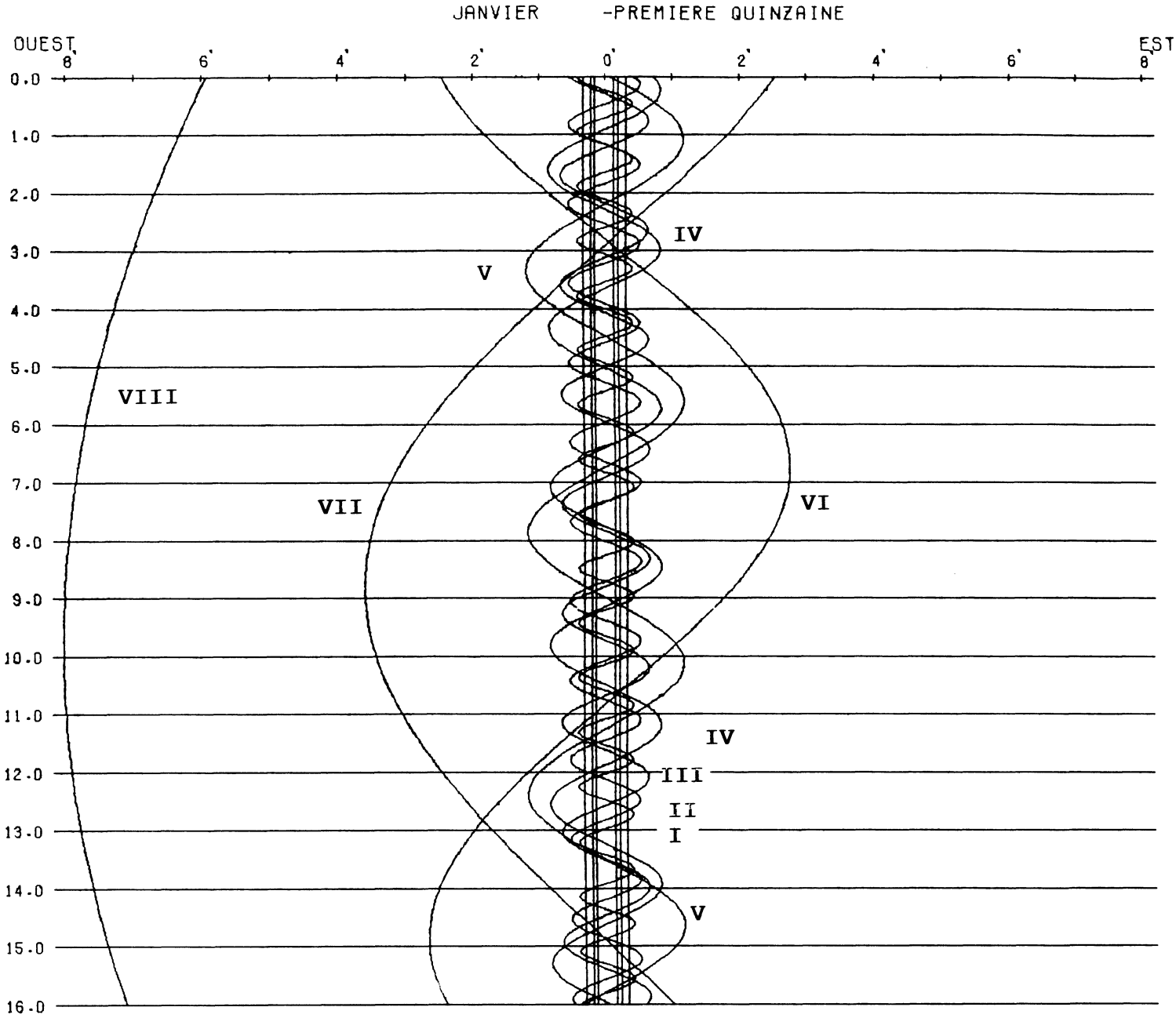
This example shows how to proceed :



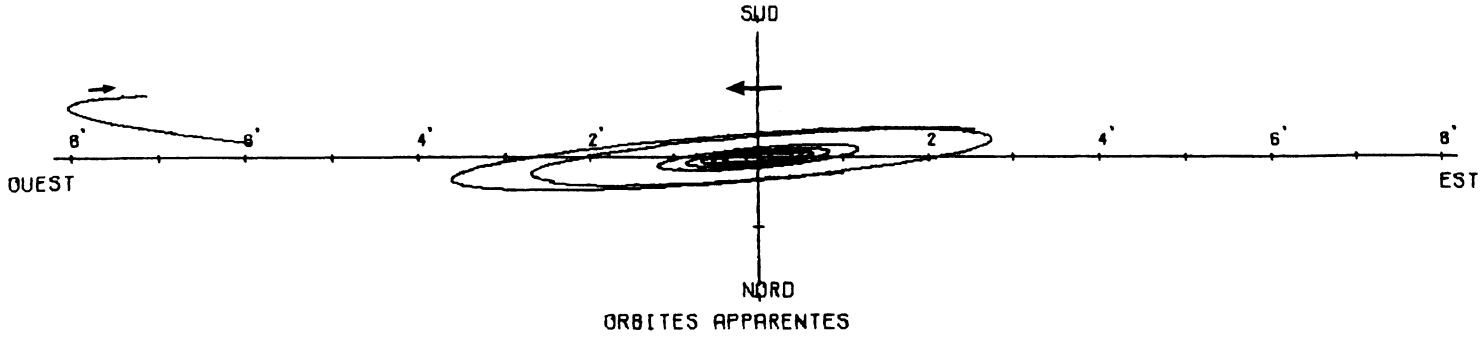
The distances $\Delta\alpha \cos\delta$, measured on the curves for the choosen date, are plotted in abscissa on west-east axis. The ordinate is given by the apparent orbits. The direction of the rotation indicates if the satellite is before or behind the planet on its orbit.

CONFIGURATIONS

1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE



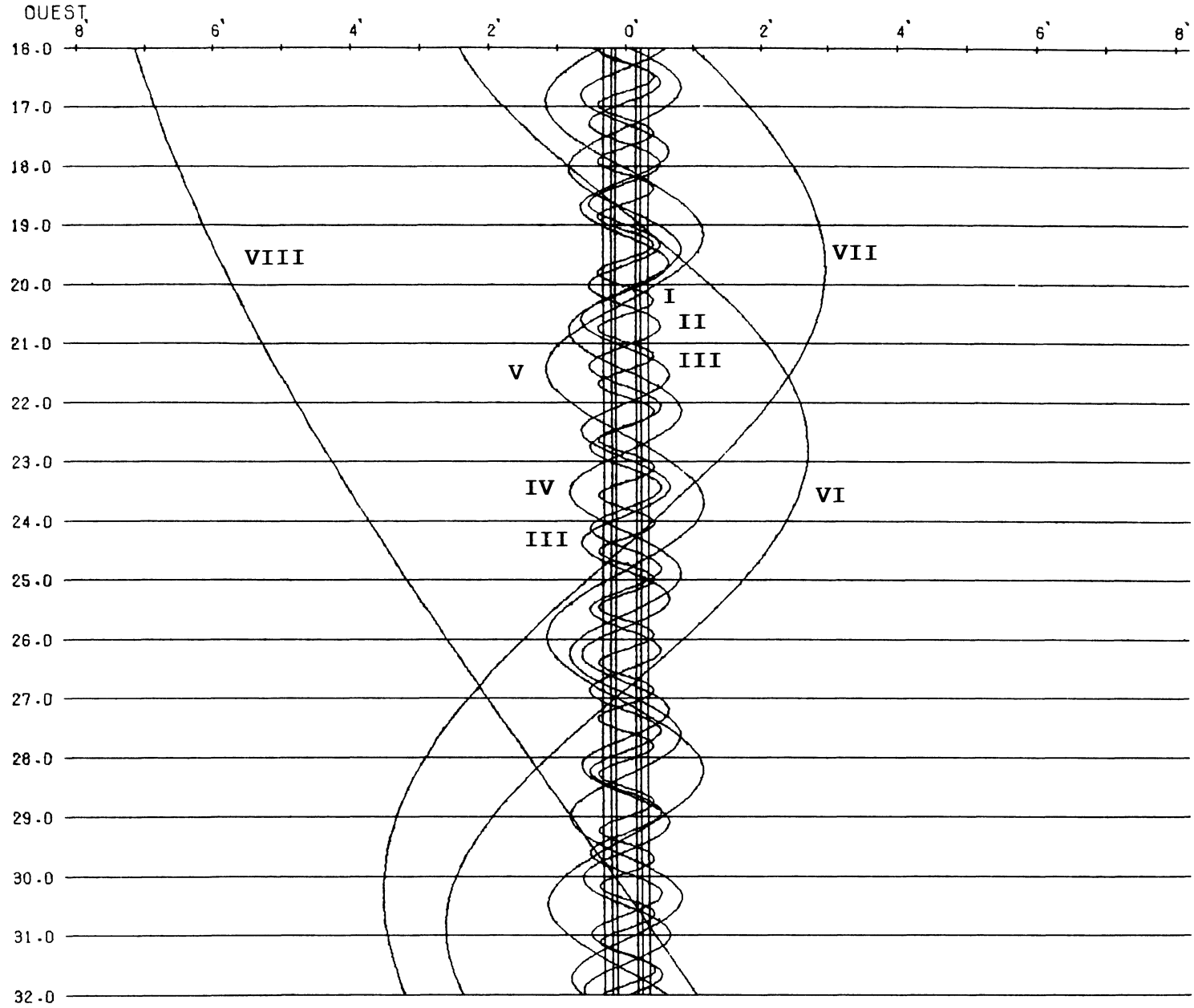
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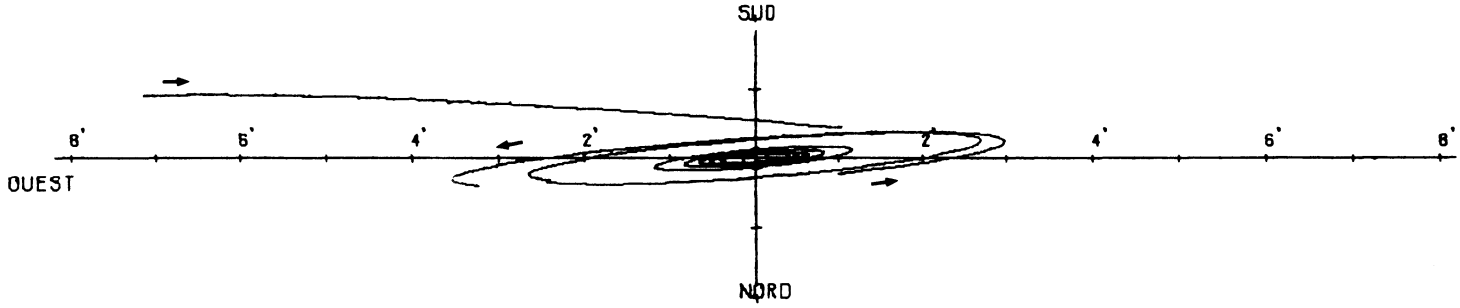
ORBITES APPARENTES

1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

JANVIER -DEUXIEME QUINZAINE



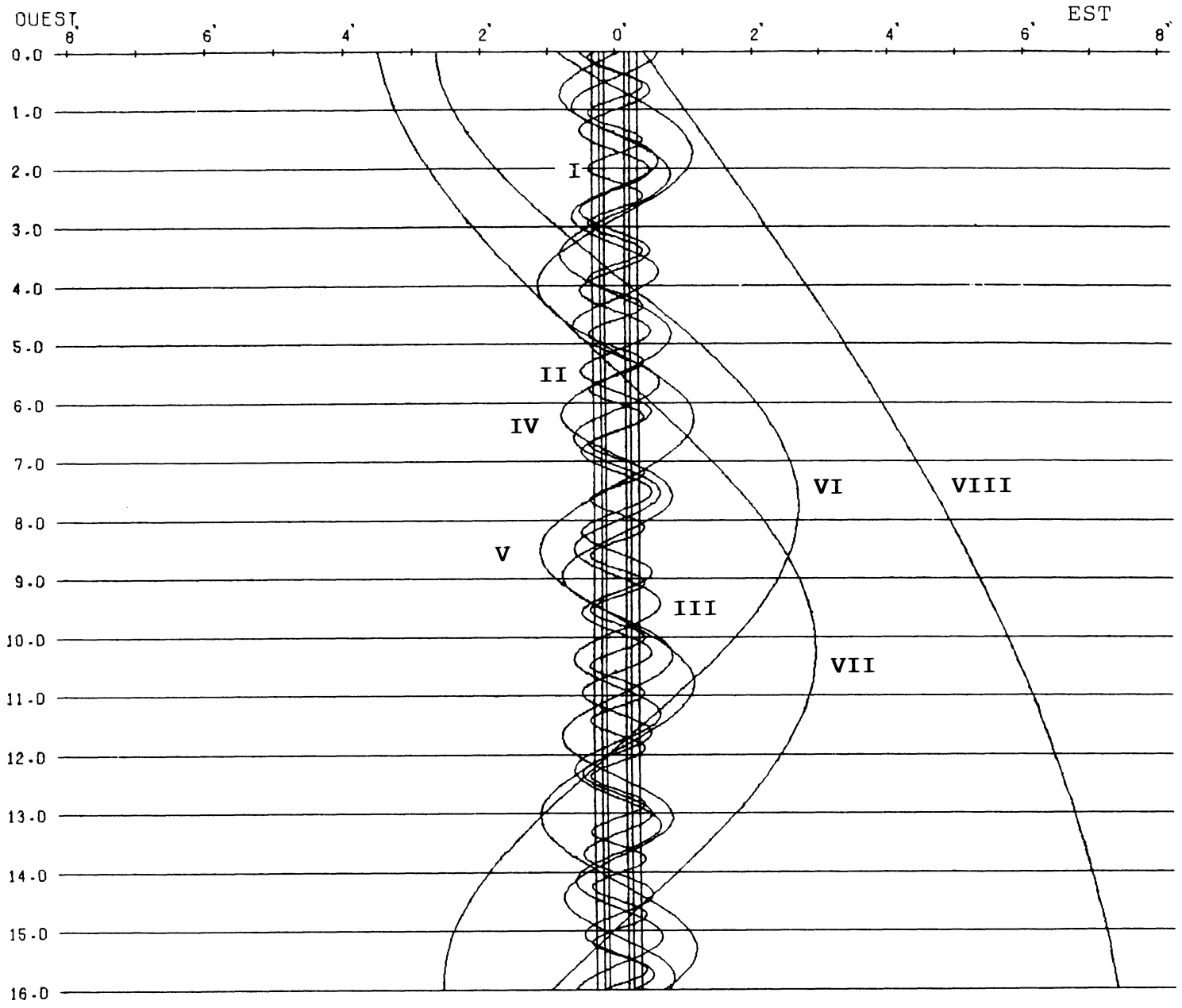
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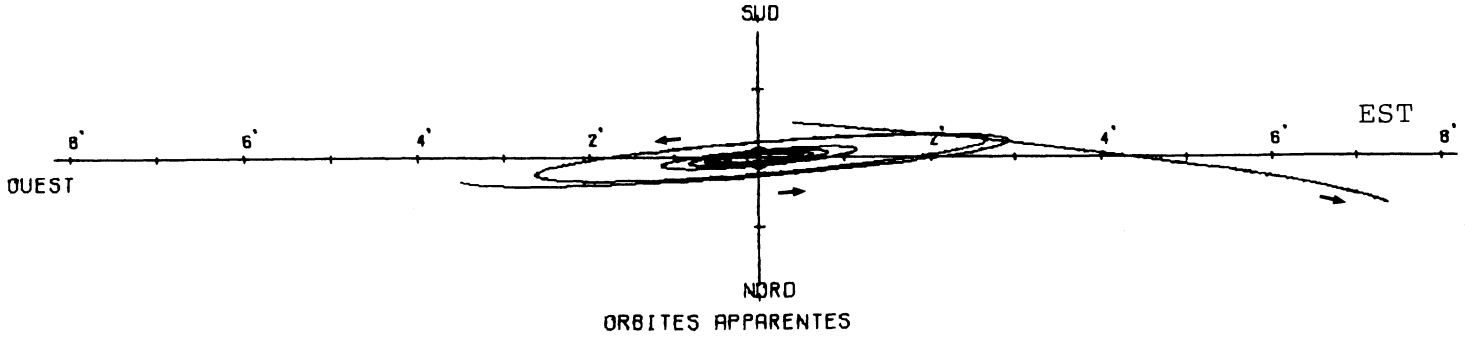
ORBITES APPARENTES

1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

FEVRIER -PREMIERE QUINZAINE



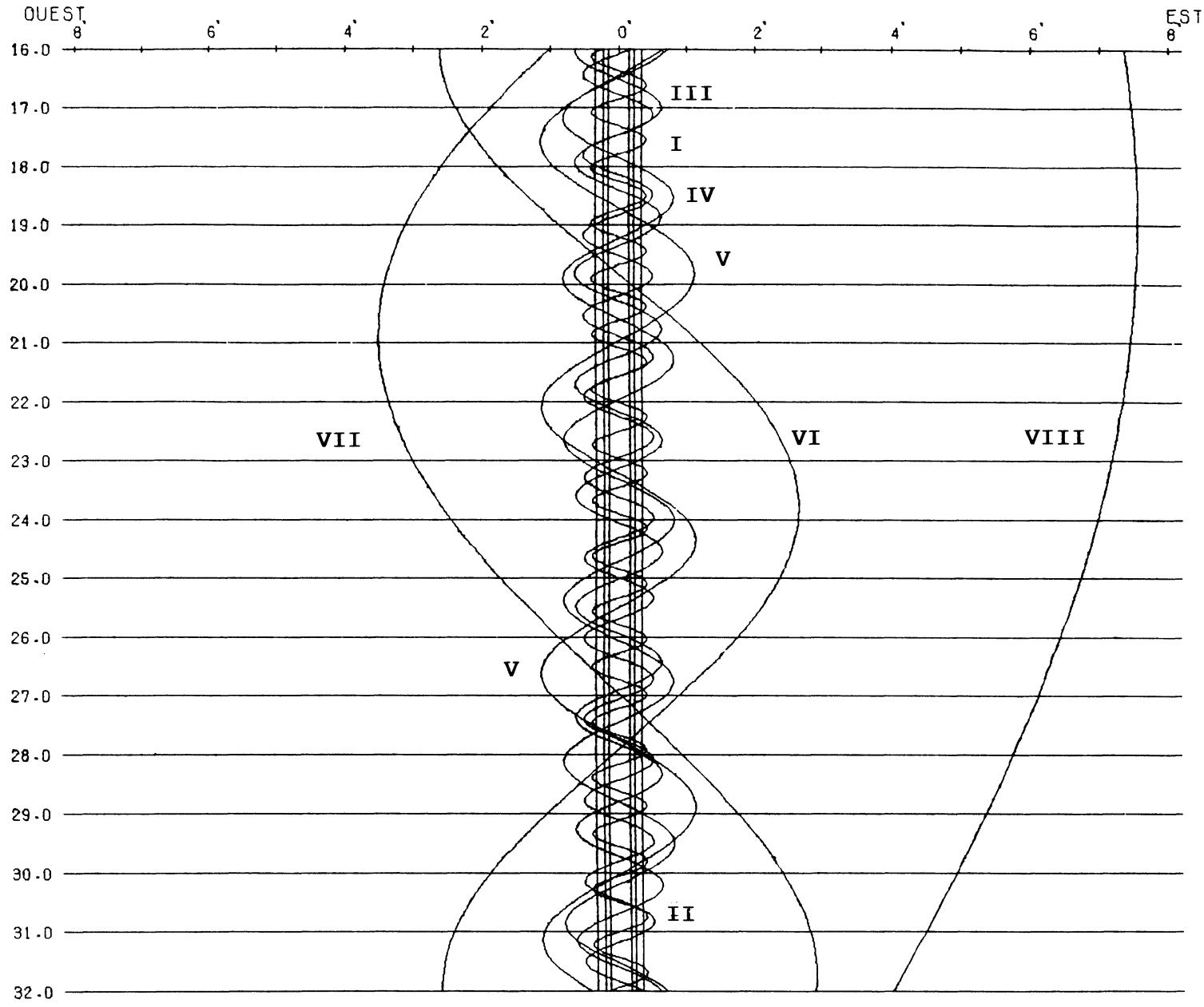
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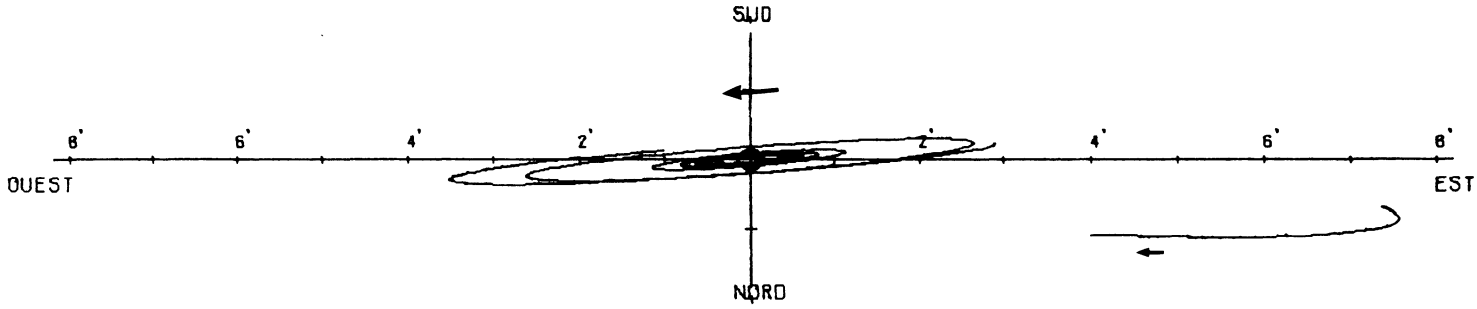
ORBITES APPARENTES

1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

FEVRIER -DEUXIEME QUINZAINE



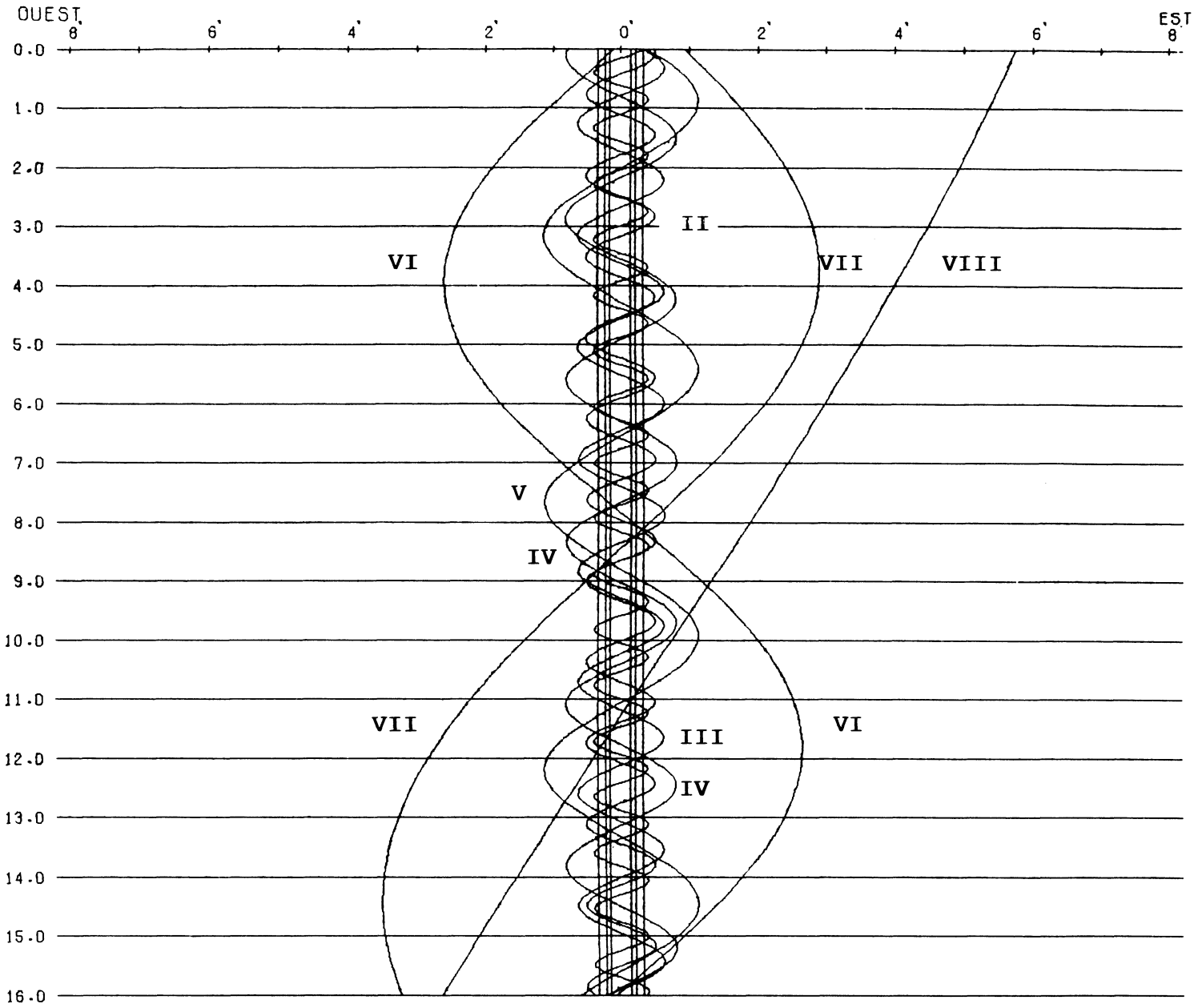
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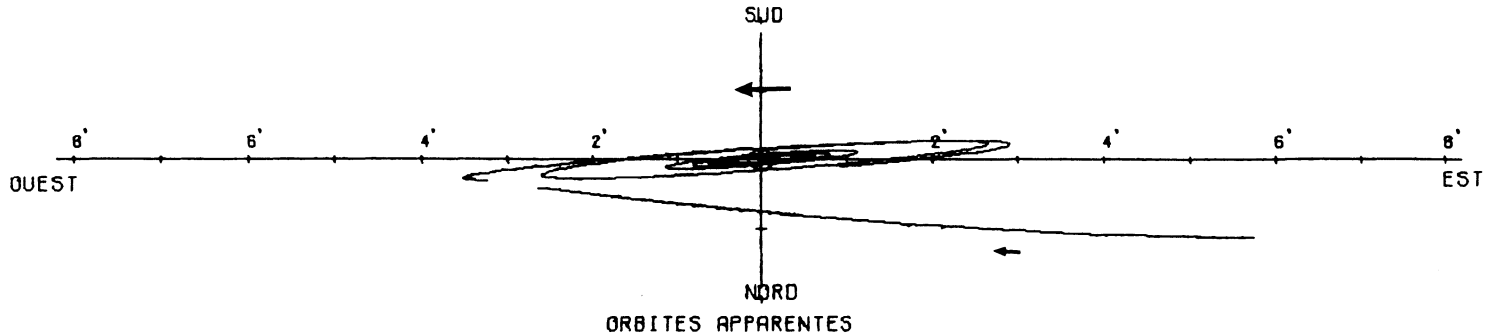
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MARS -PREMIERE QUINZAINE



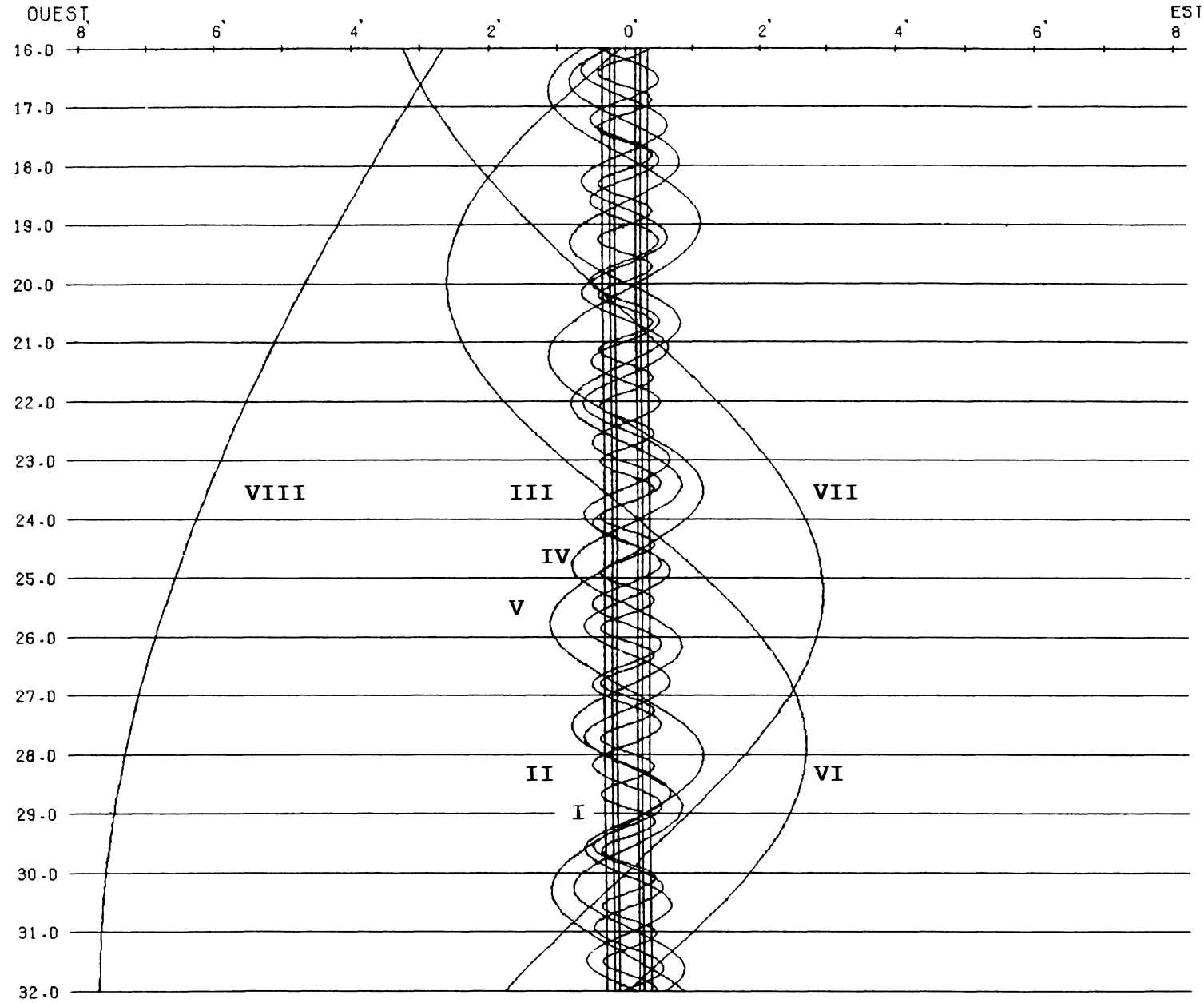
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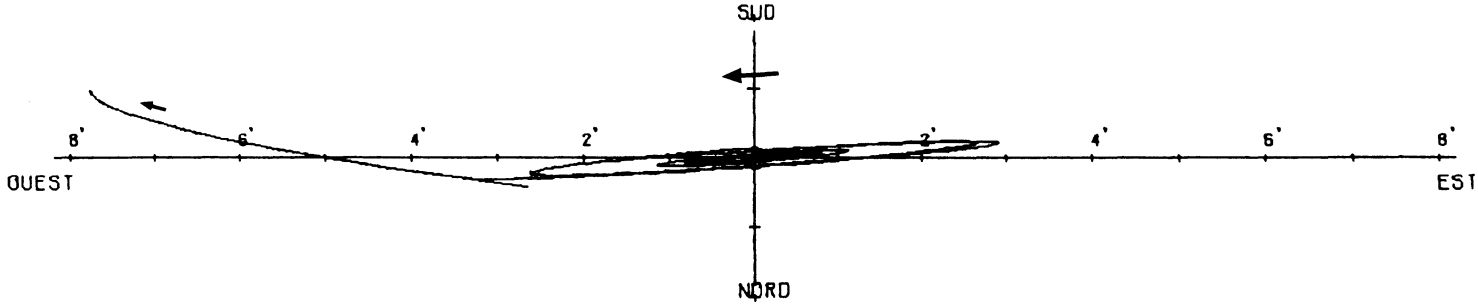
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MARS -DEUXIEME QUINZAINE

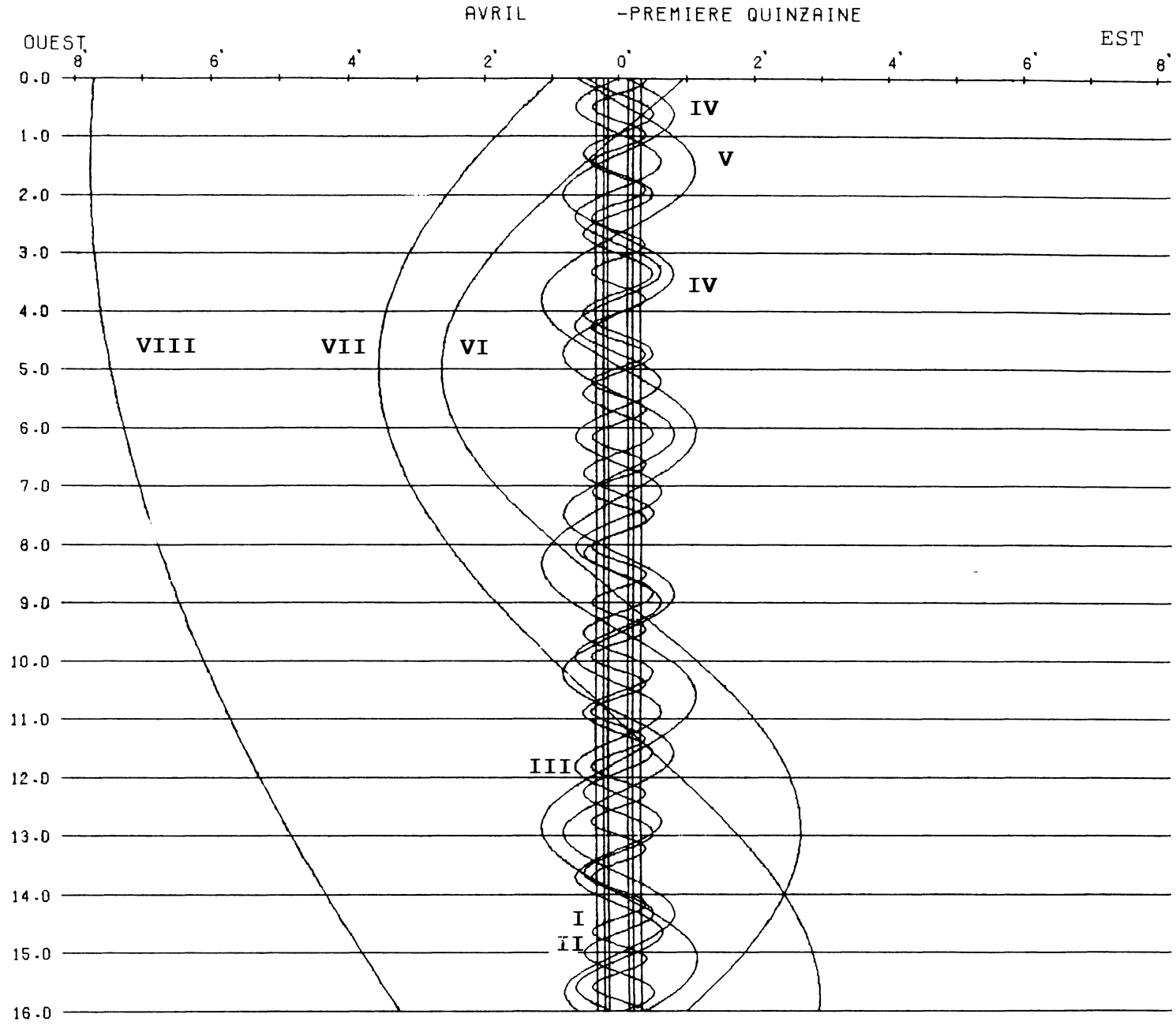


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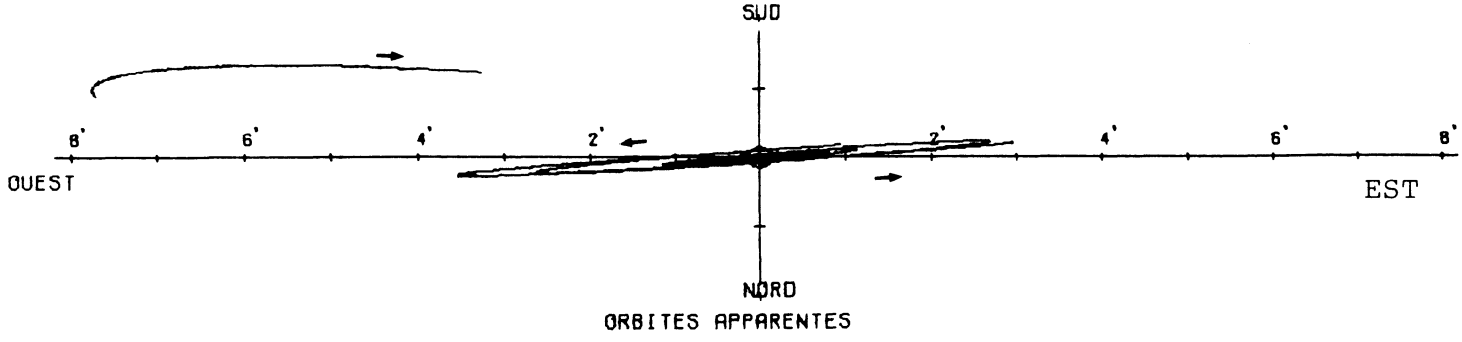


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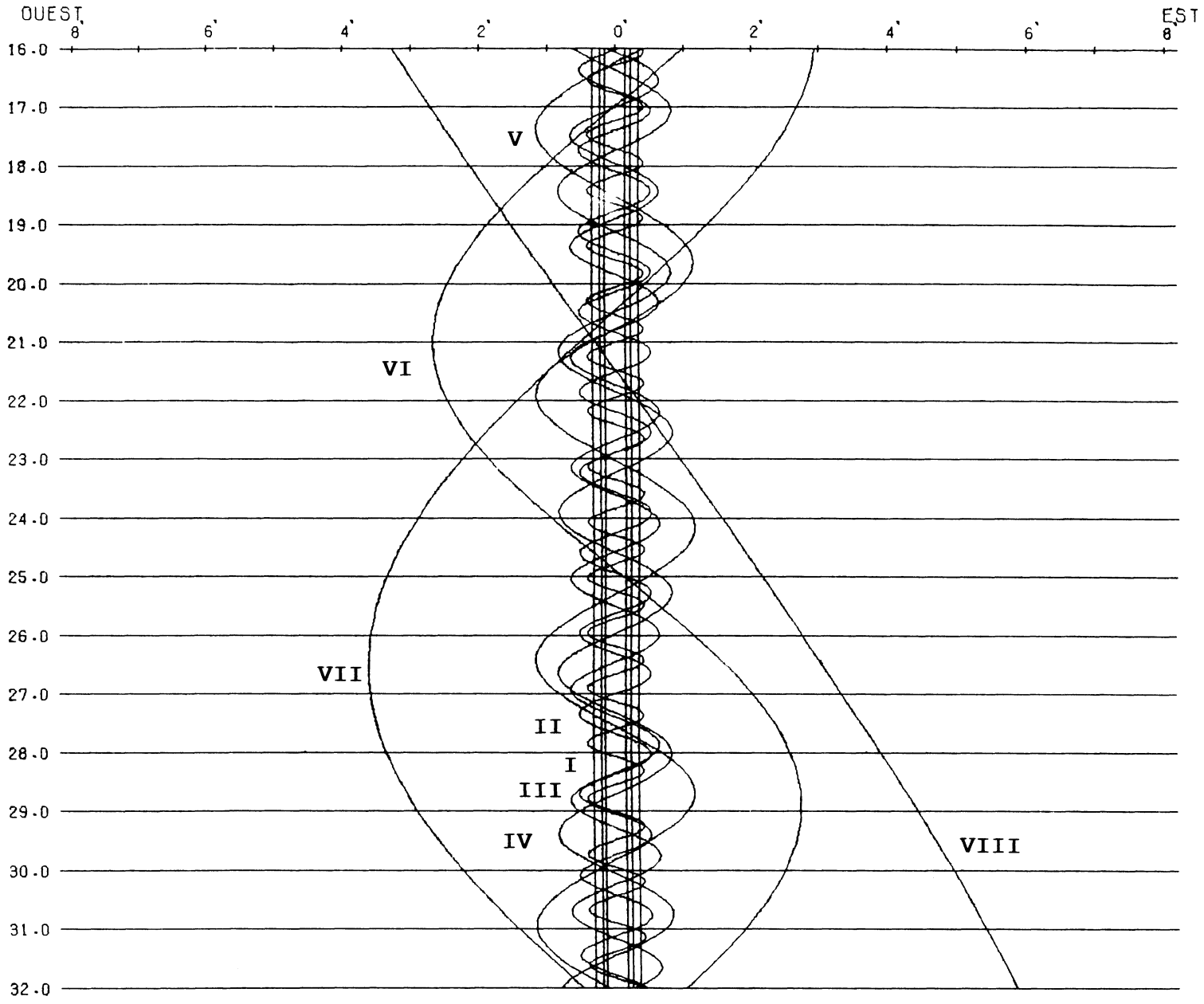


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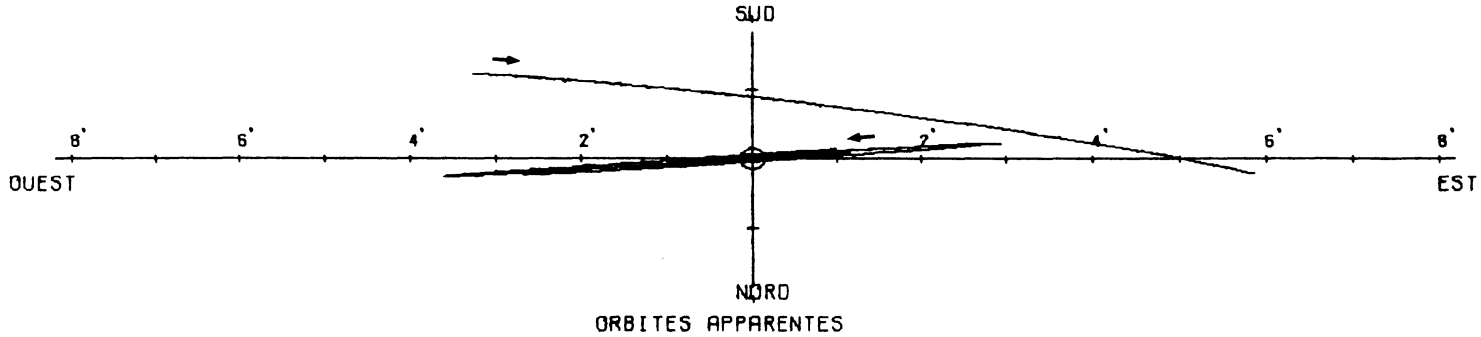


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AVRIL -DEUXIEME QUINZAINE



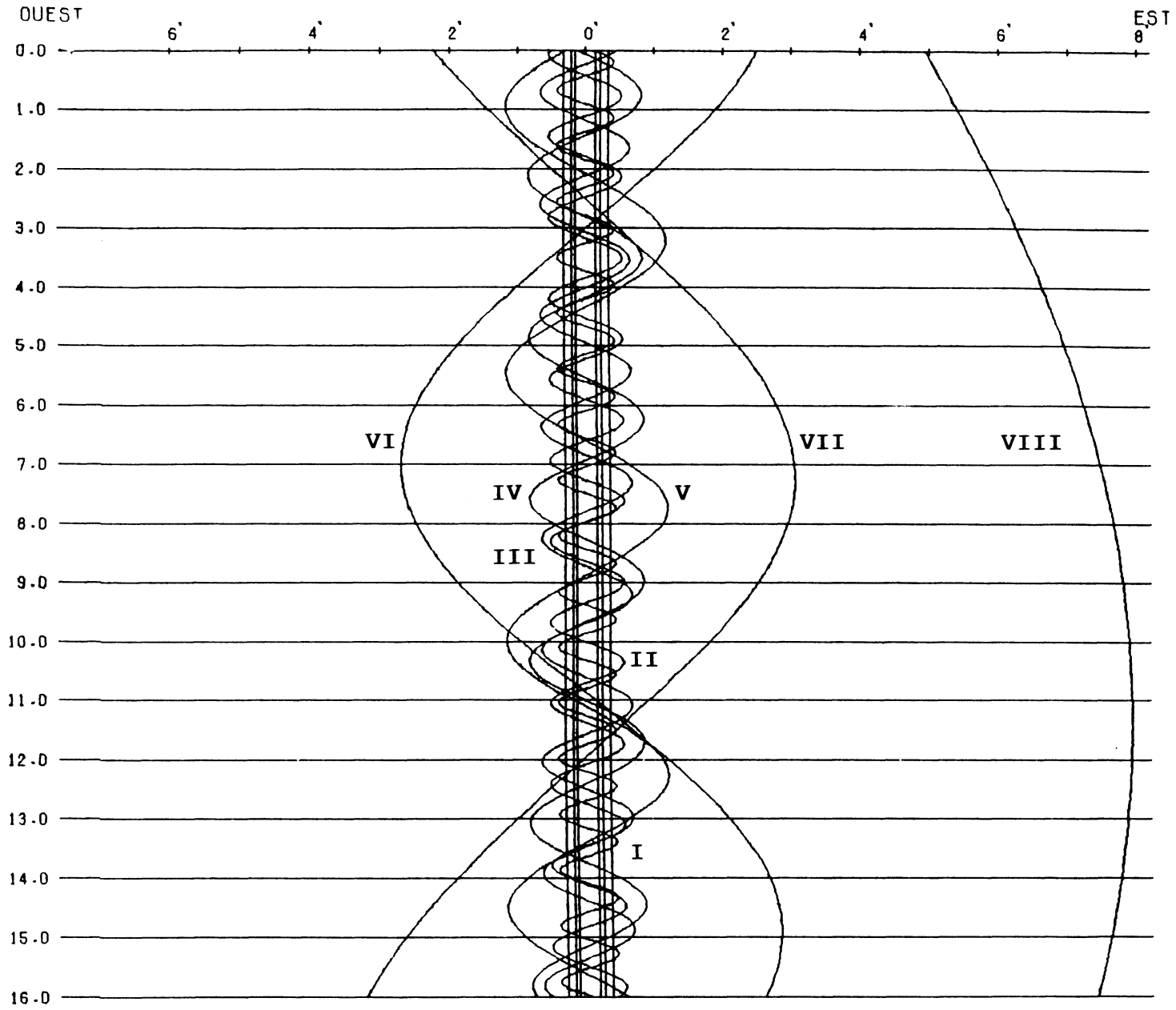
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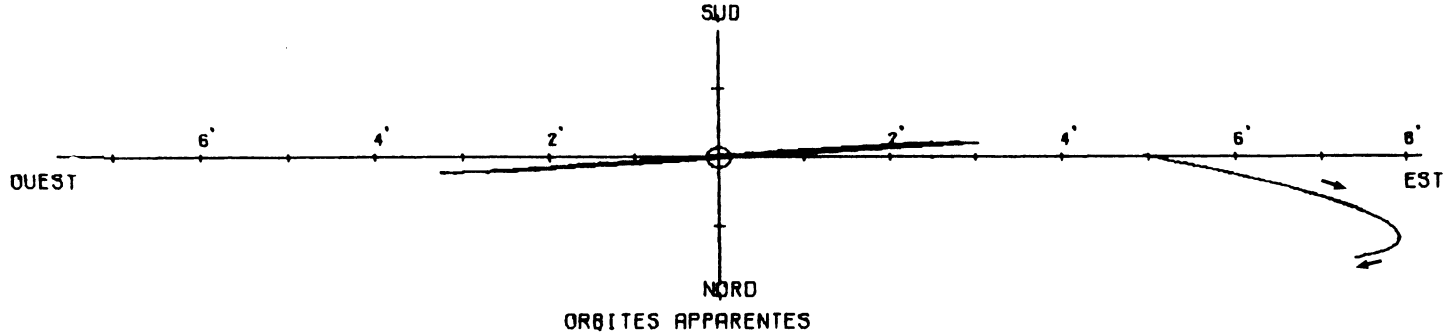
ORBITES APPARENTES

1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

MAI -PREMIERE QUINZAINE



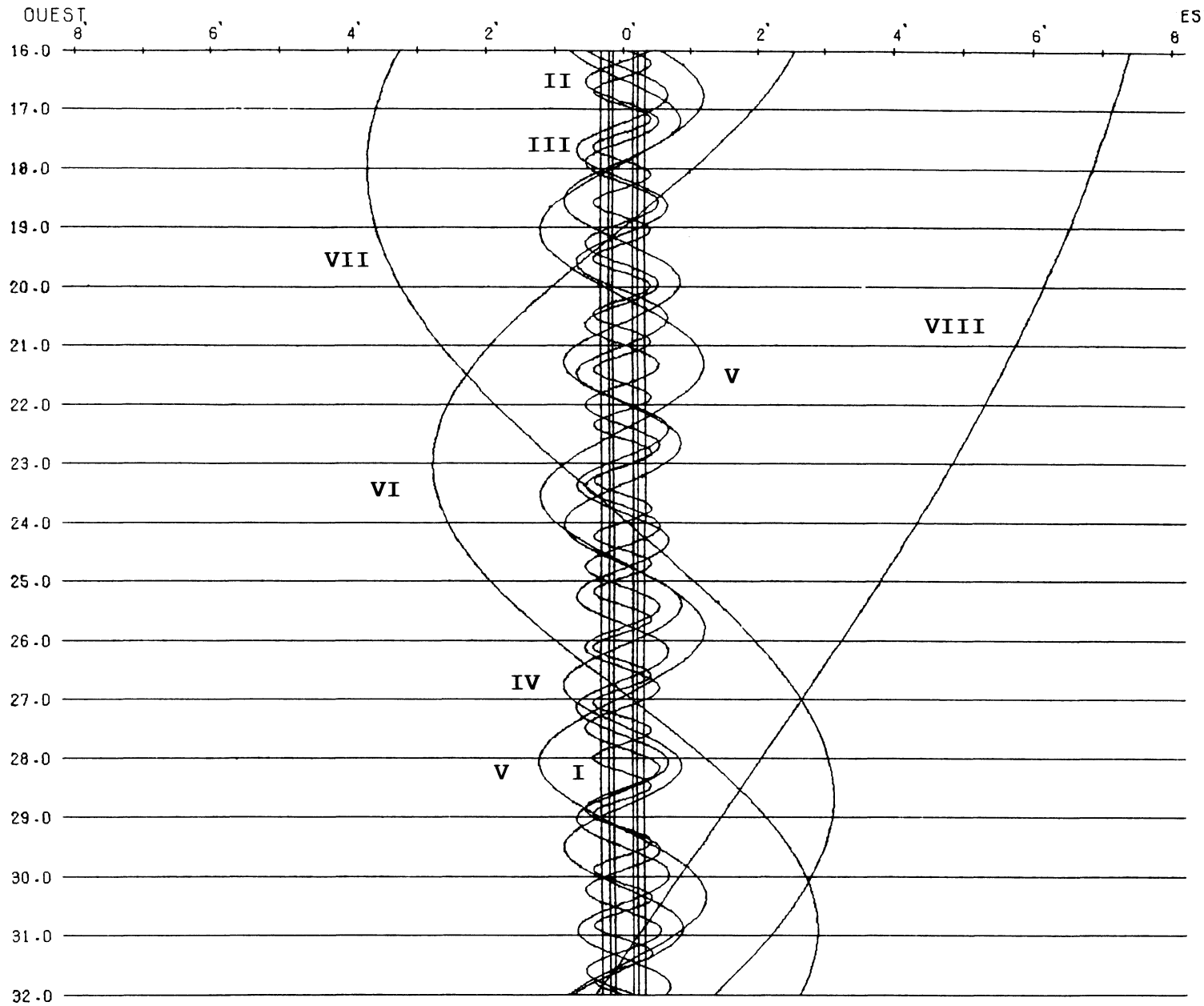
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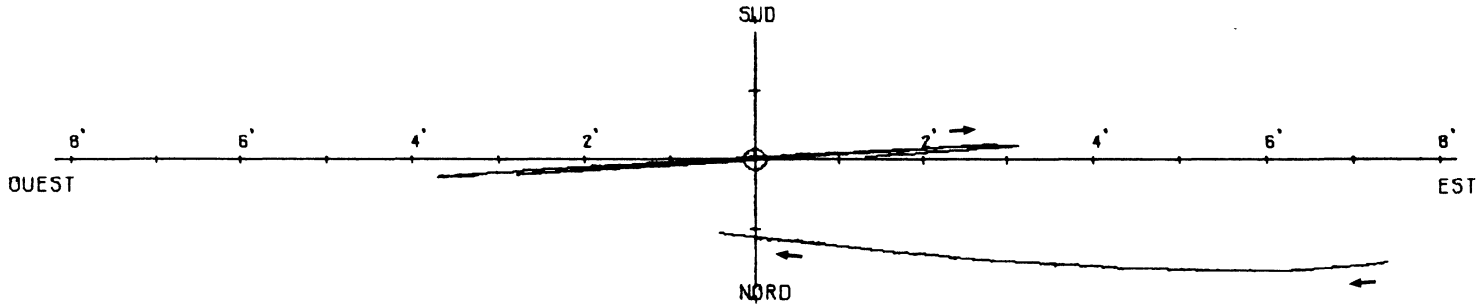
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MAI -DEUXIEME QUINZAINE

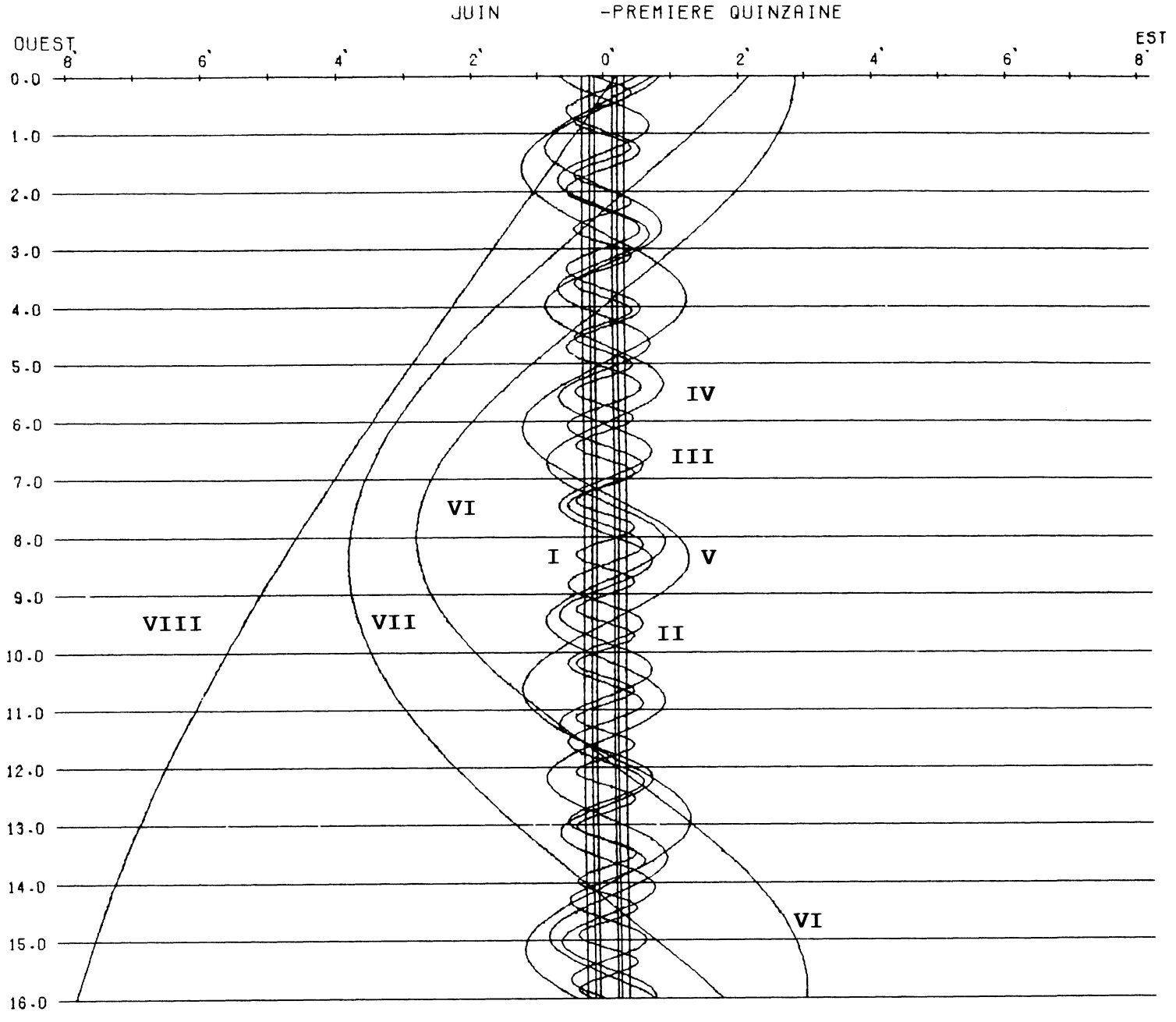


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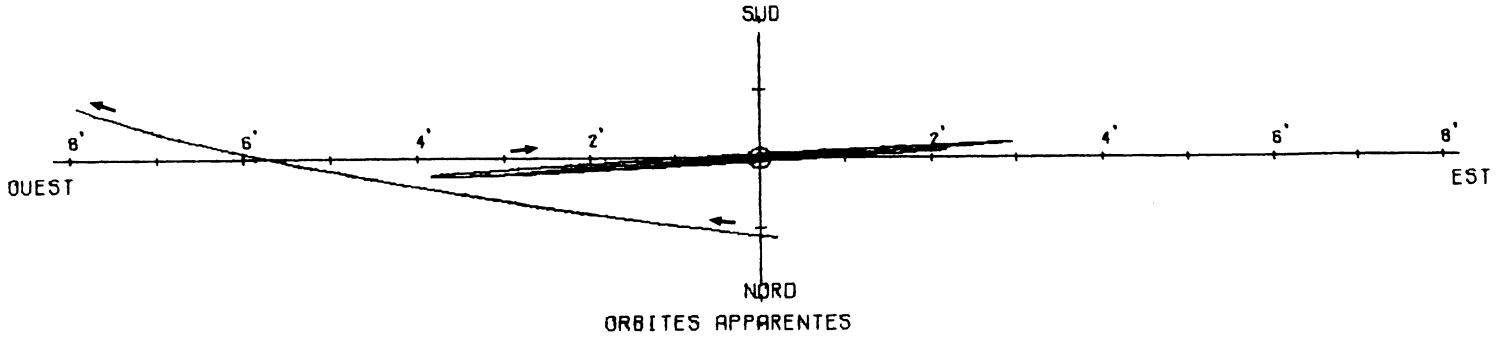


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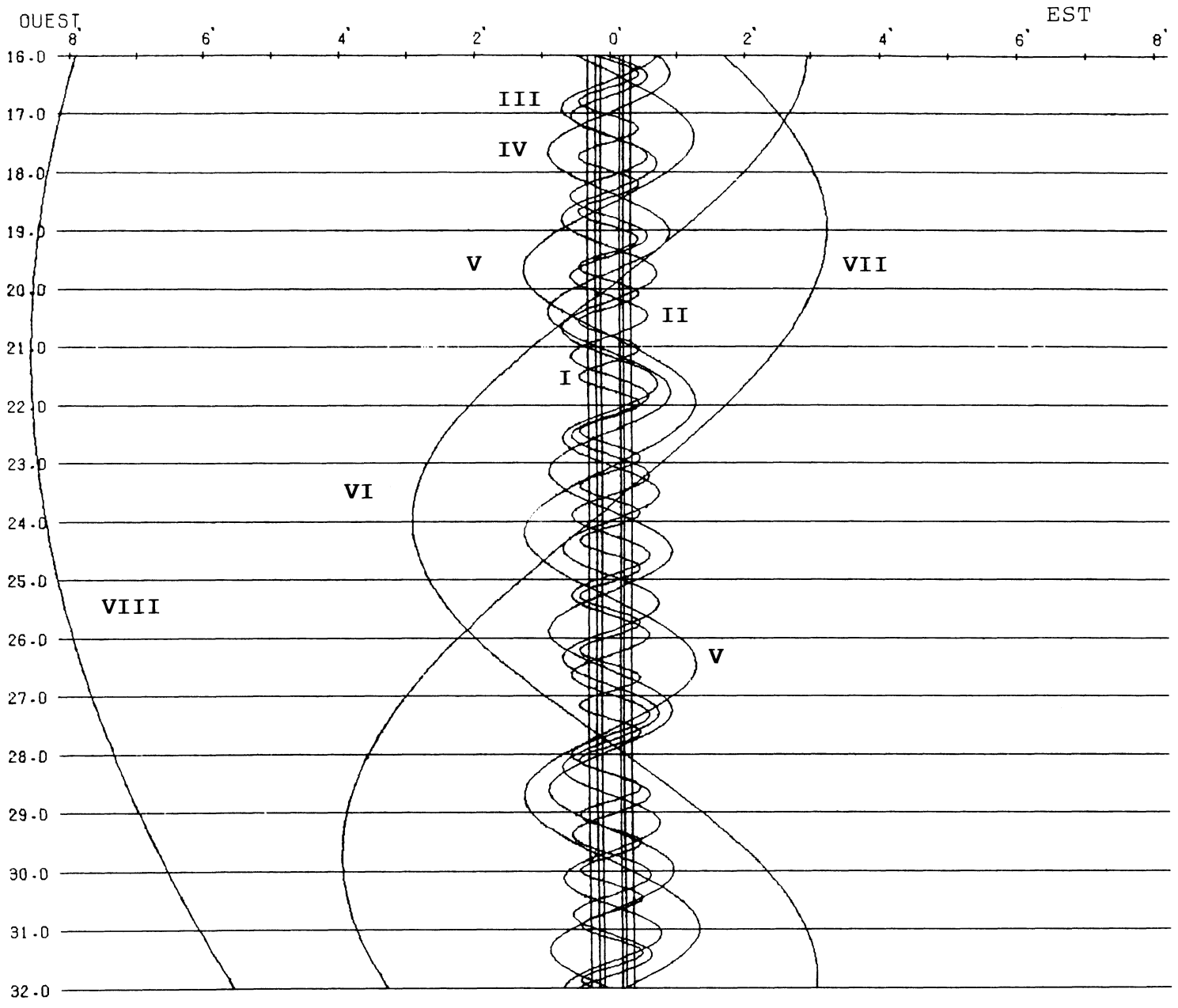
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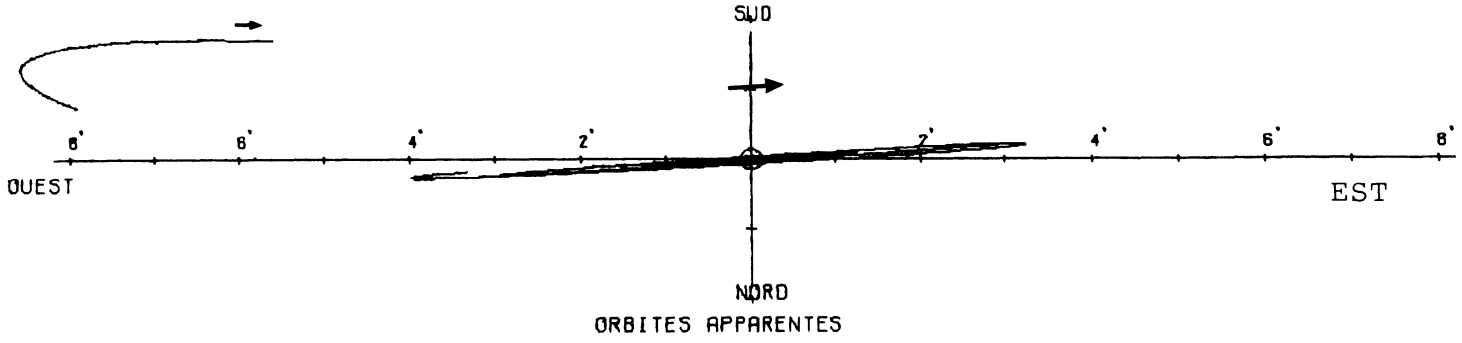
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JUIN -DEUXIEME QUINZAINE



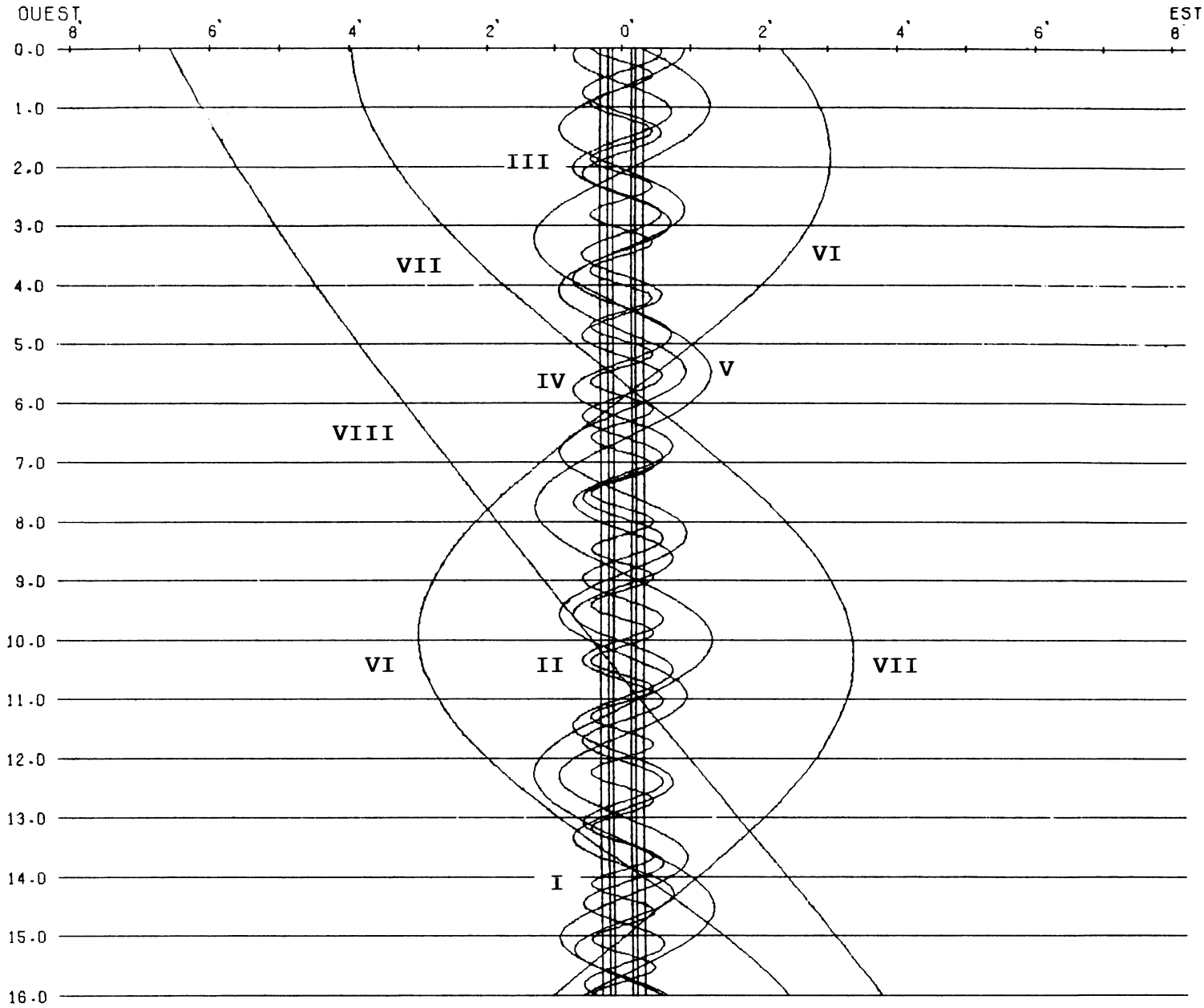
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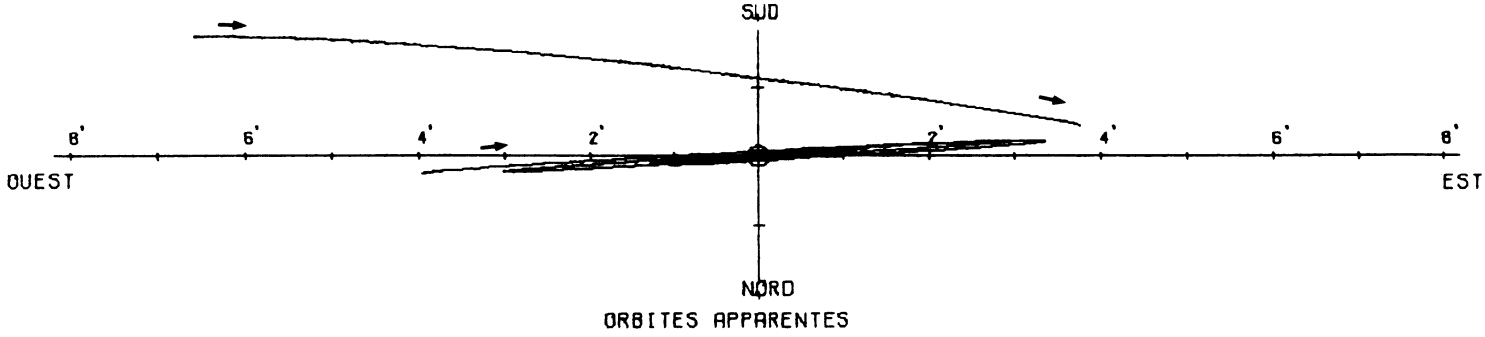
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1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

JUILLET -PREMIERE QUINZAINE



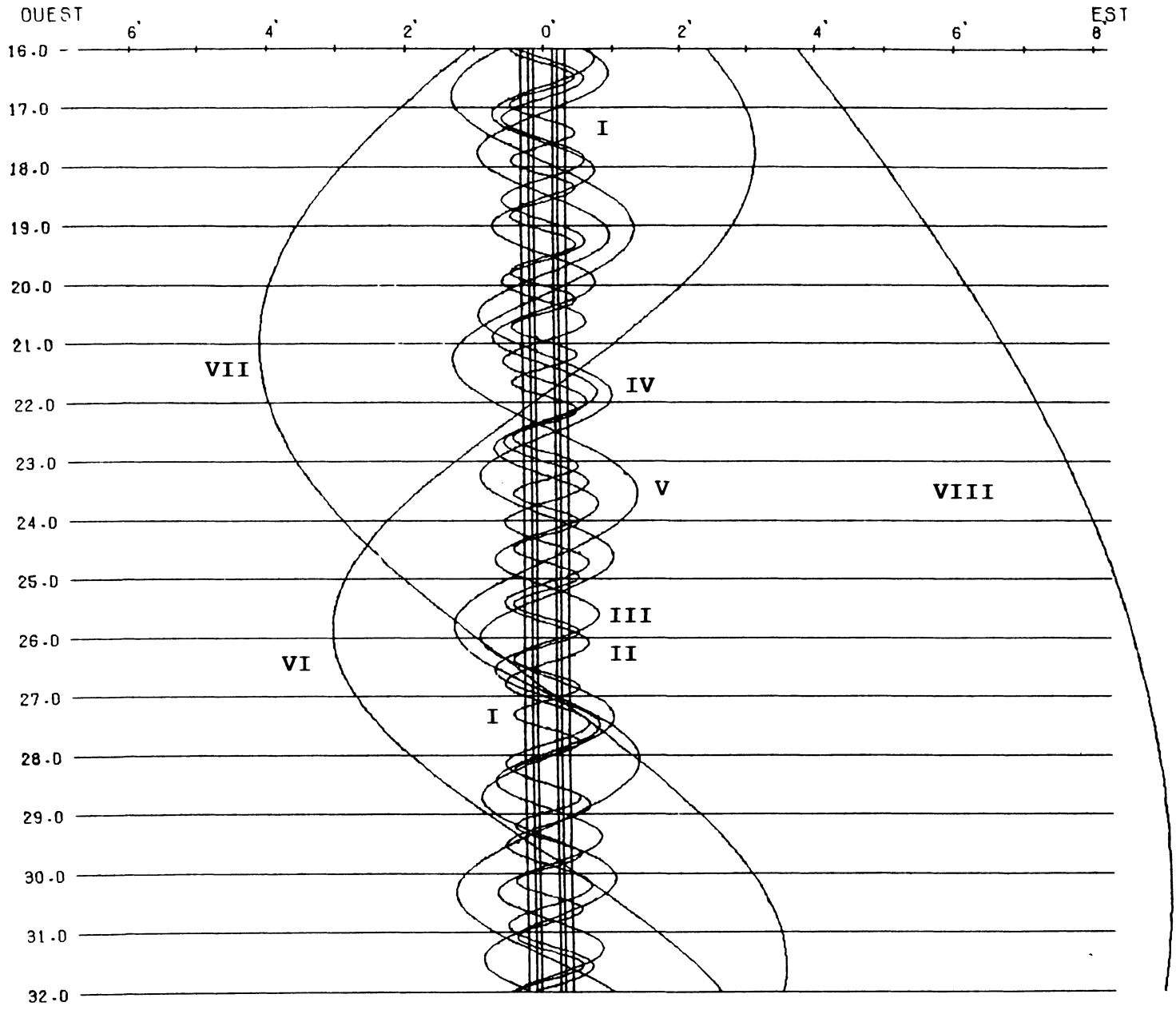
DANS LE SENS OUEST-EST.LES SATELLITES PASSENT AU-DELA DE SATURNE



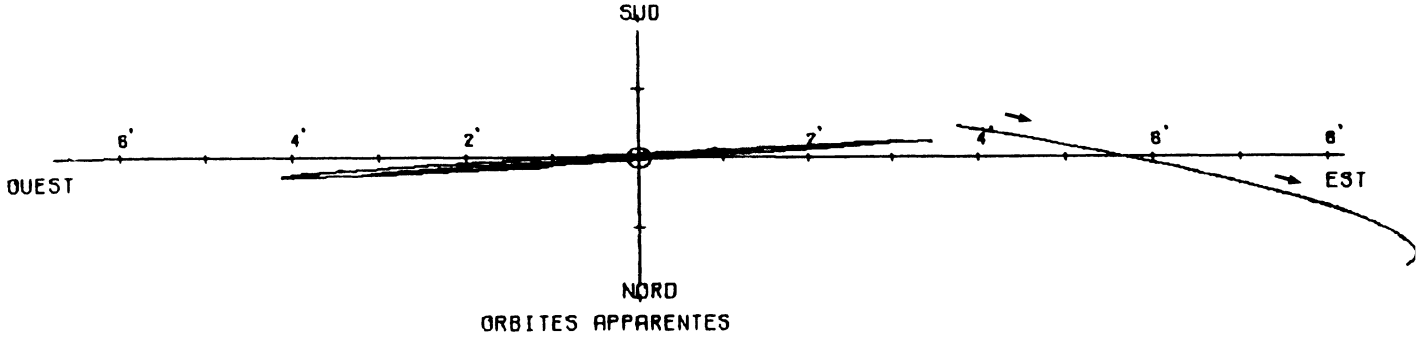
ORBITES APPARENTES

1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

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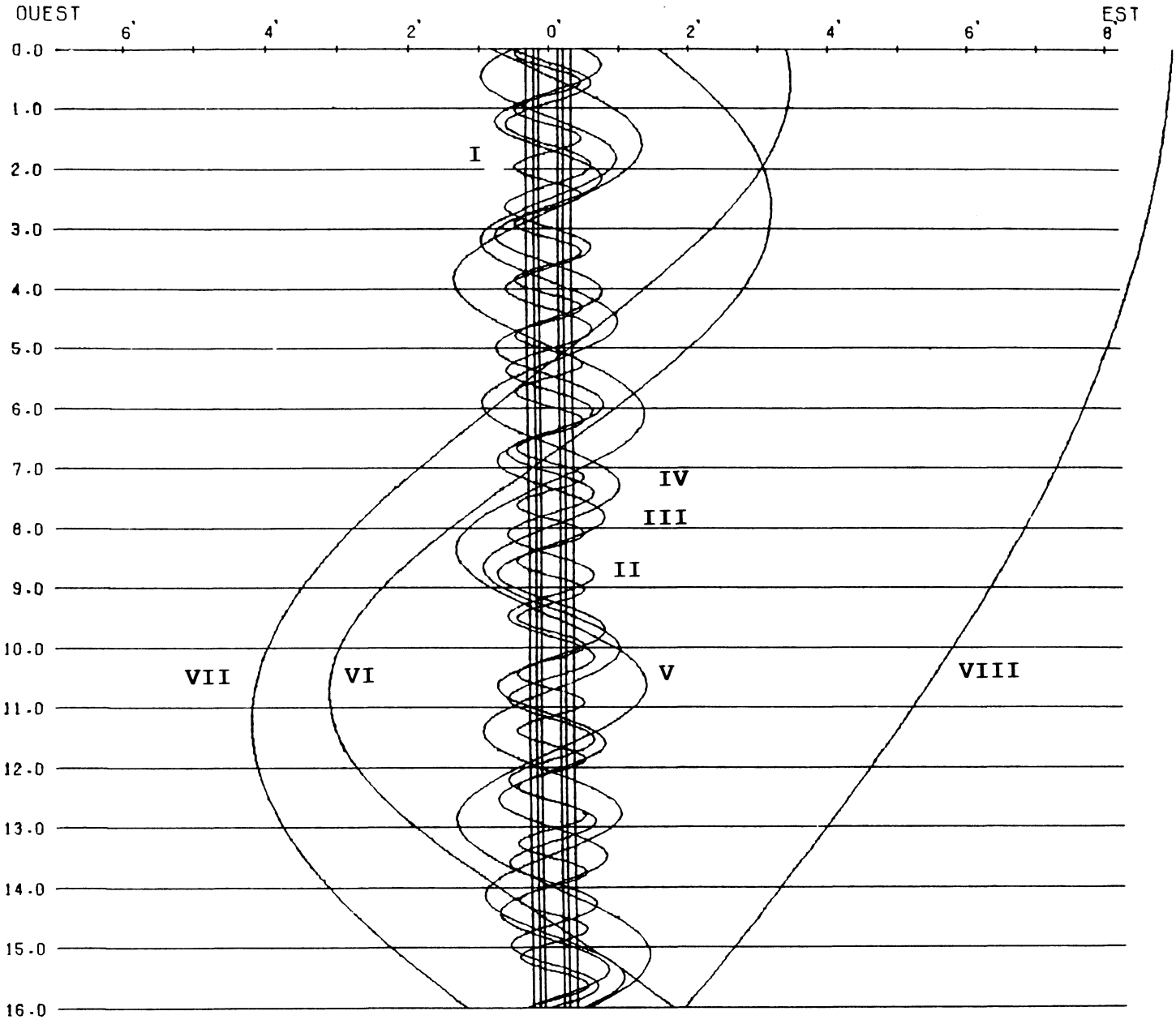
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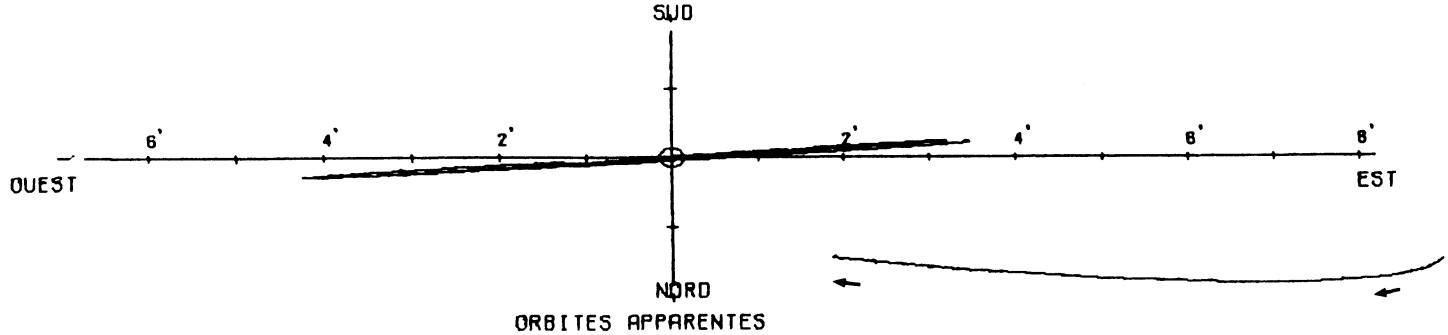
ORBITES APPARENTES

1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

AOUT -PREMIERE QUINZAINE

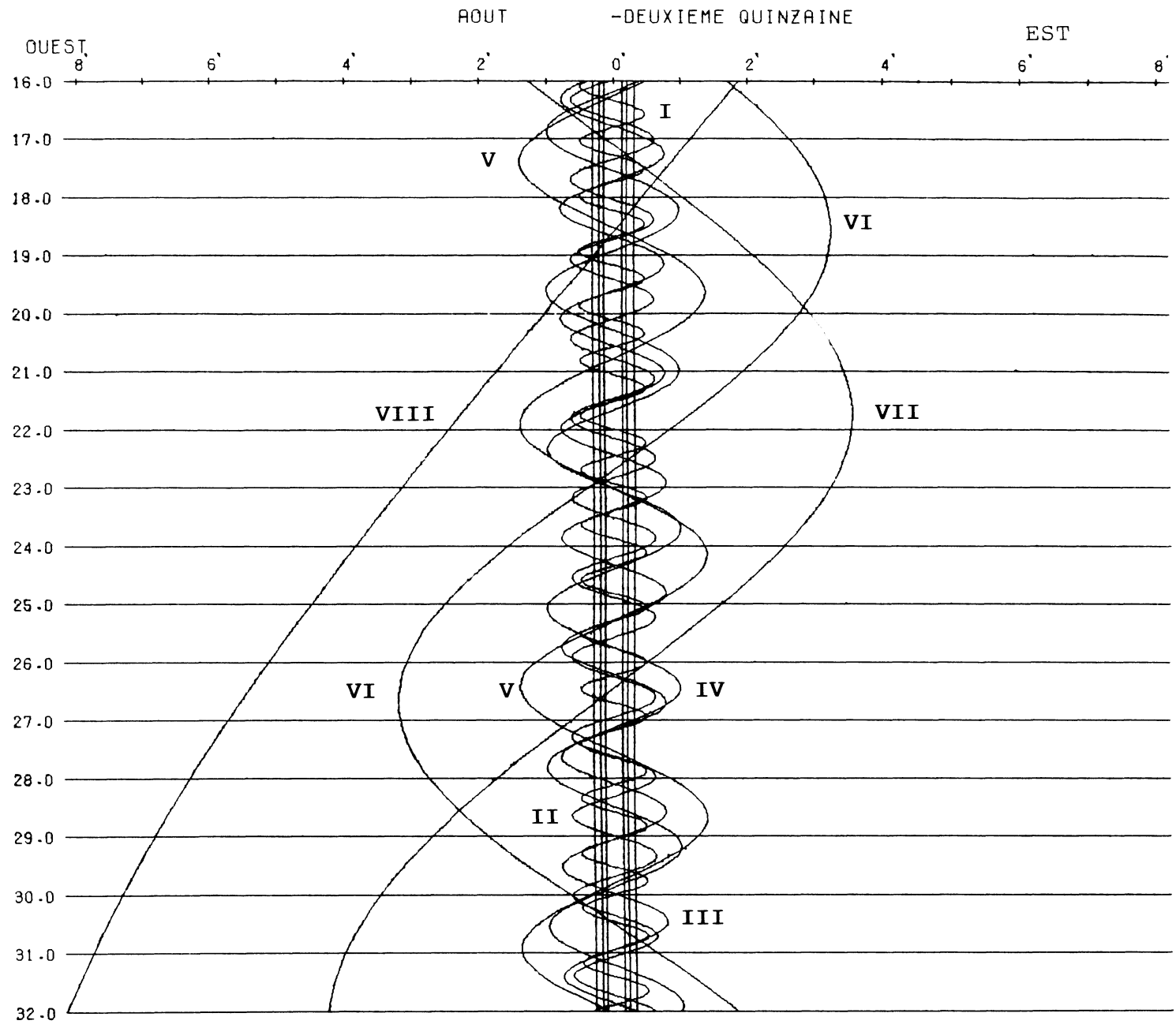


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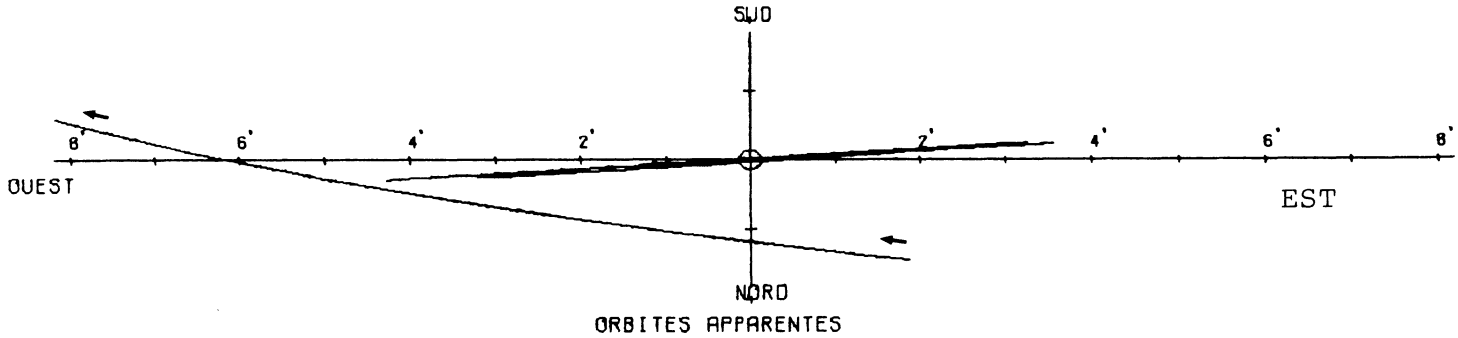


ORBITES APPARENTES

1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE



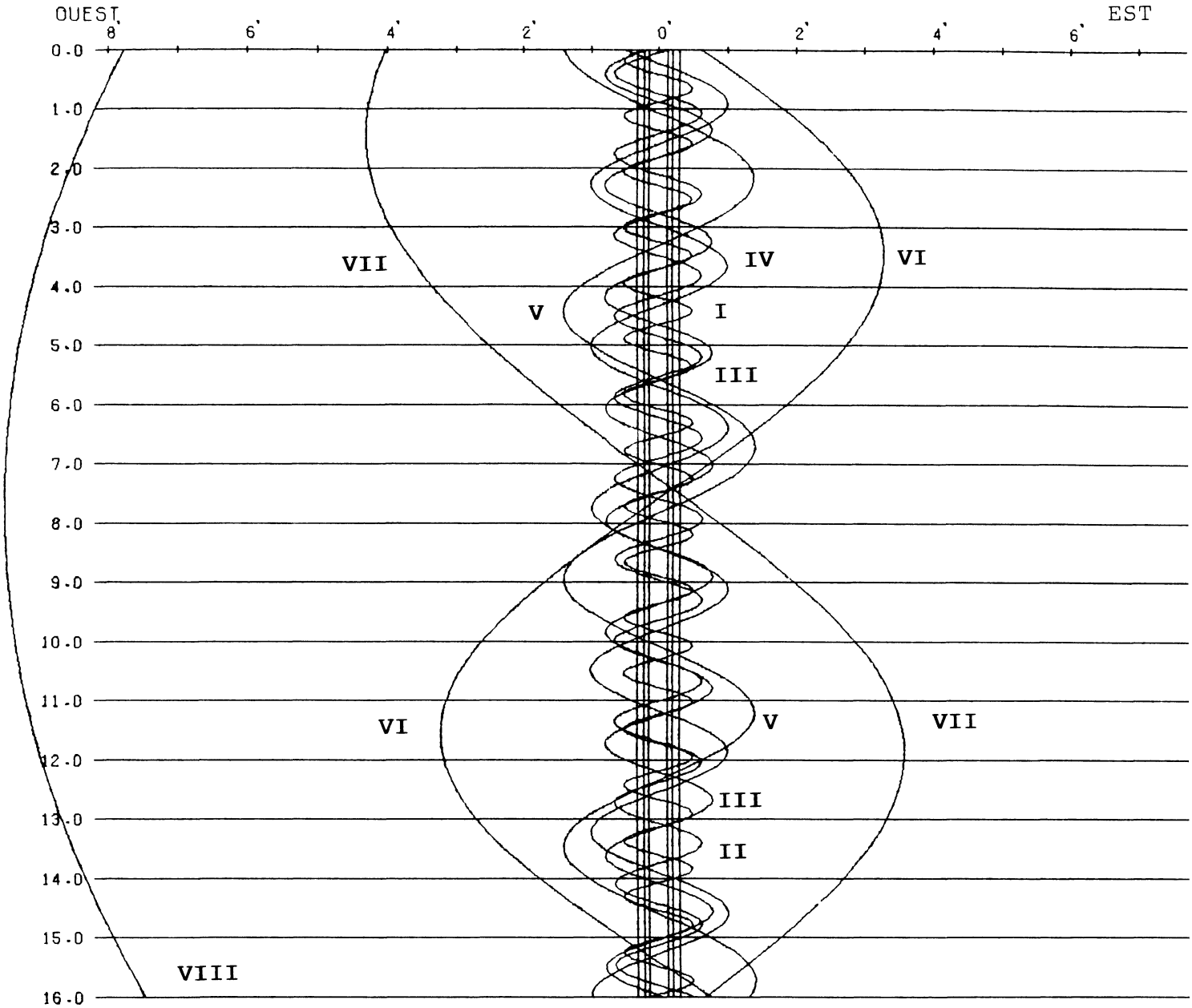
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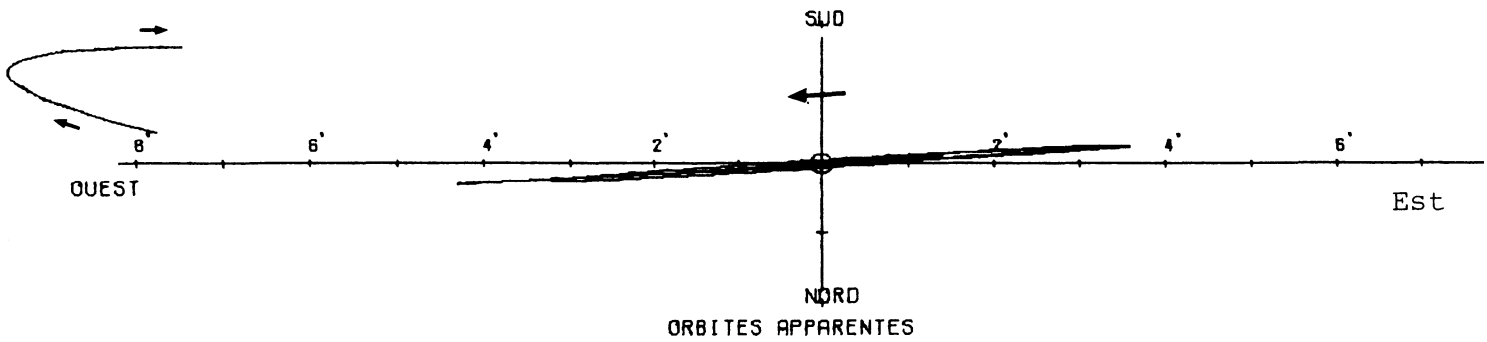
ORBITES APPARENTES

1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

SEPTEMBRE -PREMIERE QUINZAINE



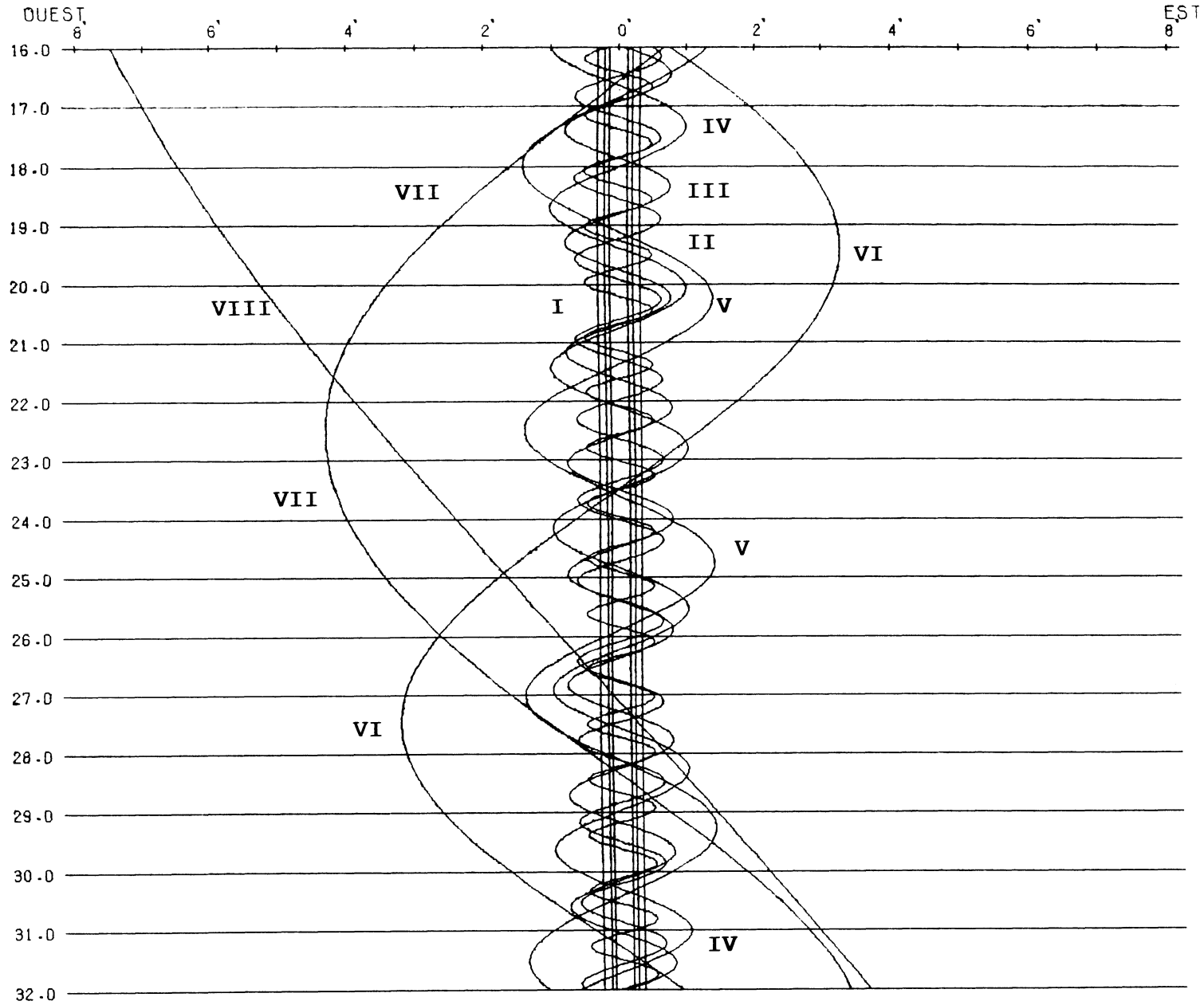
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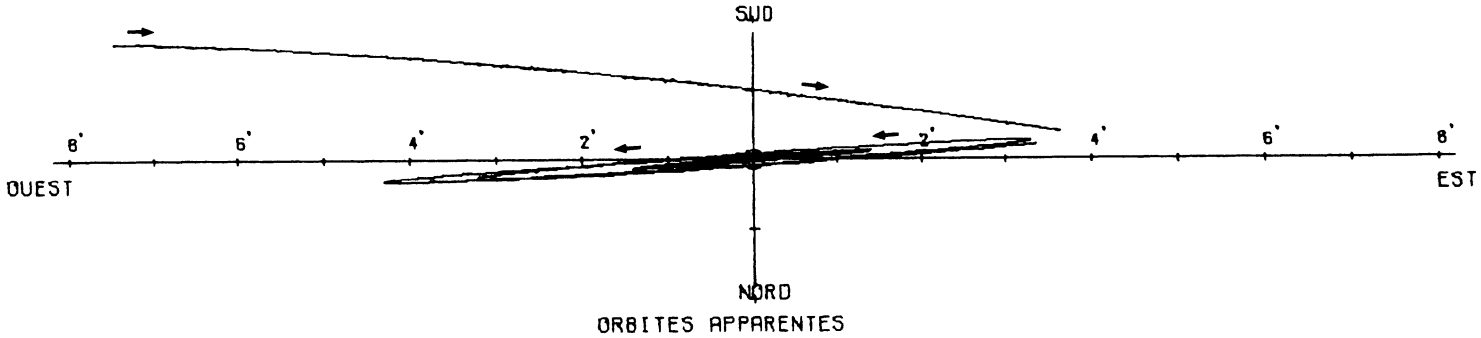
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1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

SEPTEMBRE -DEUXIEME QUINZAINE



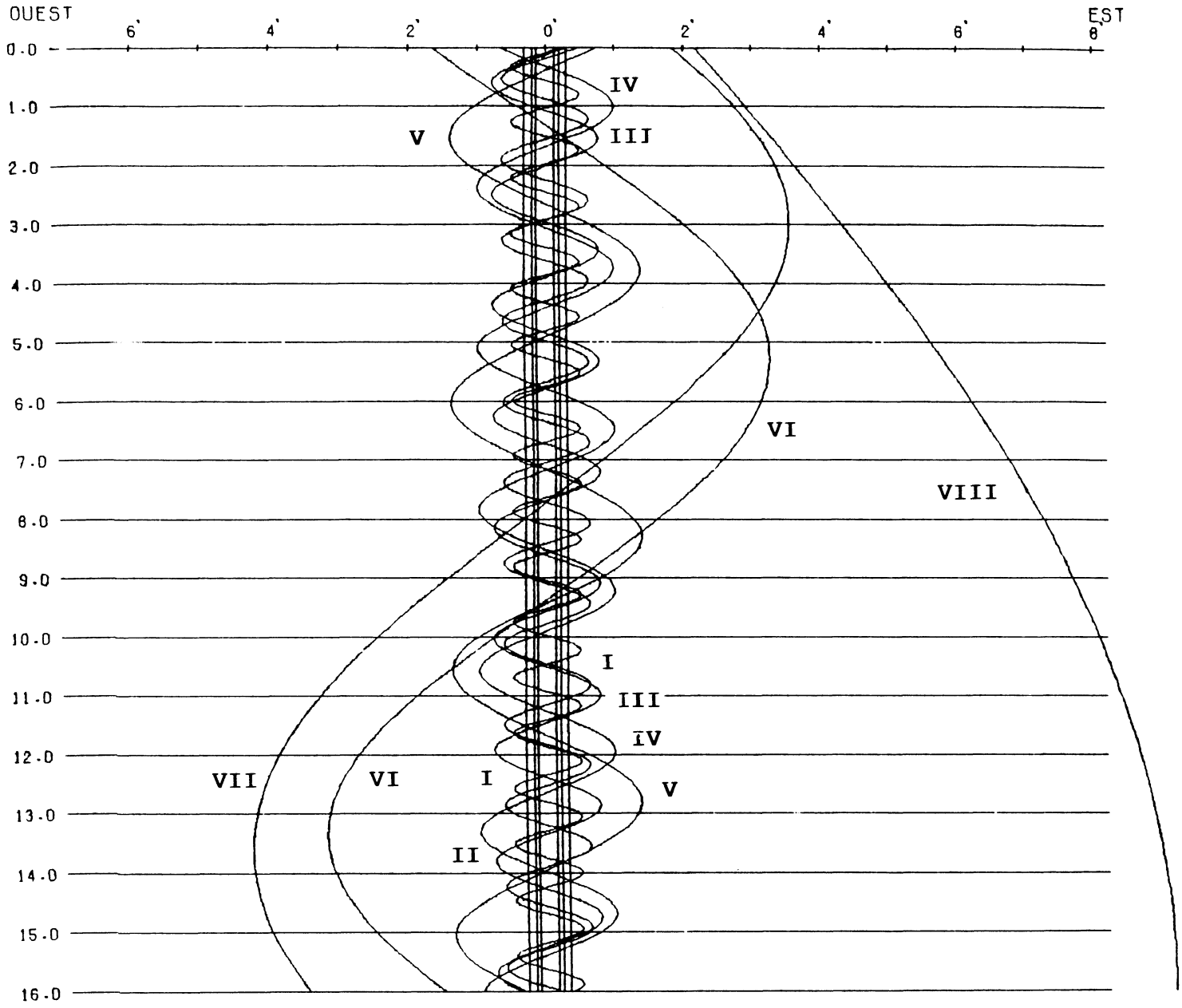
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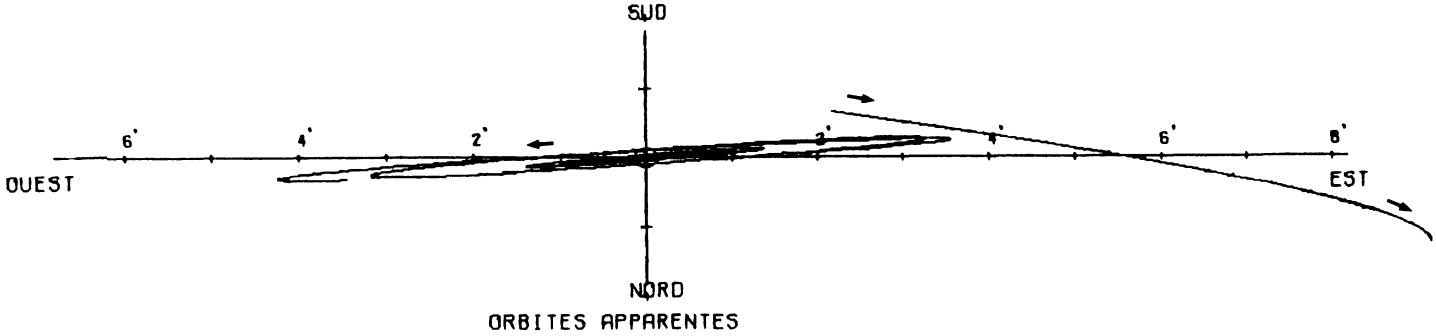
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1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

OCTOBRE -PREMIERE QUINZAINE



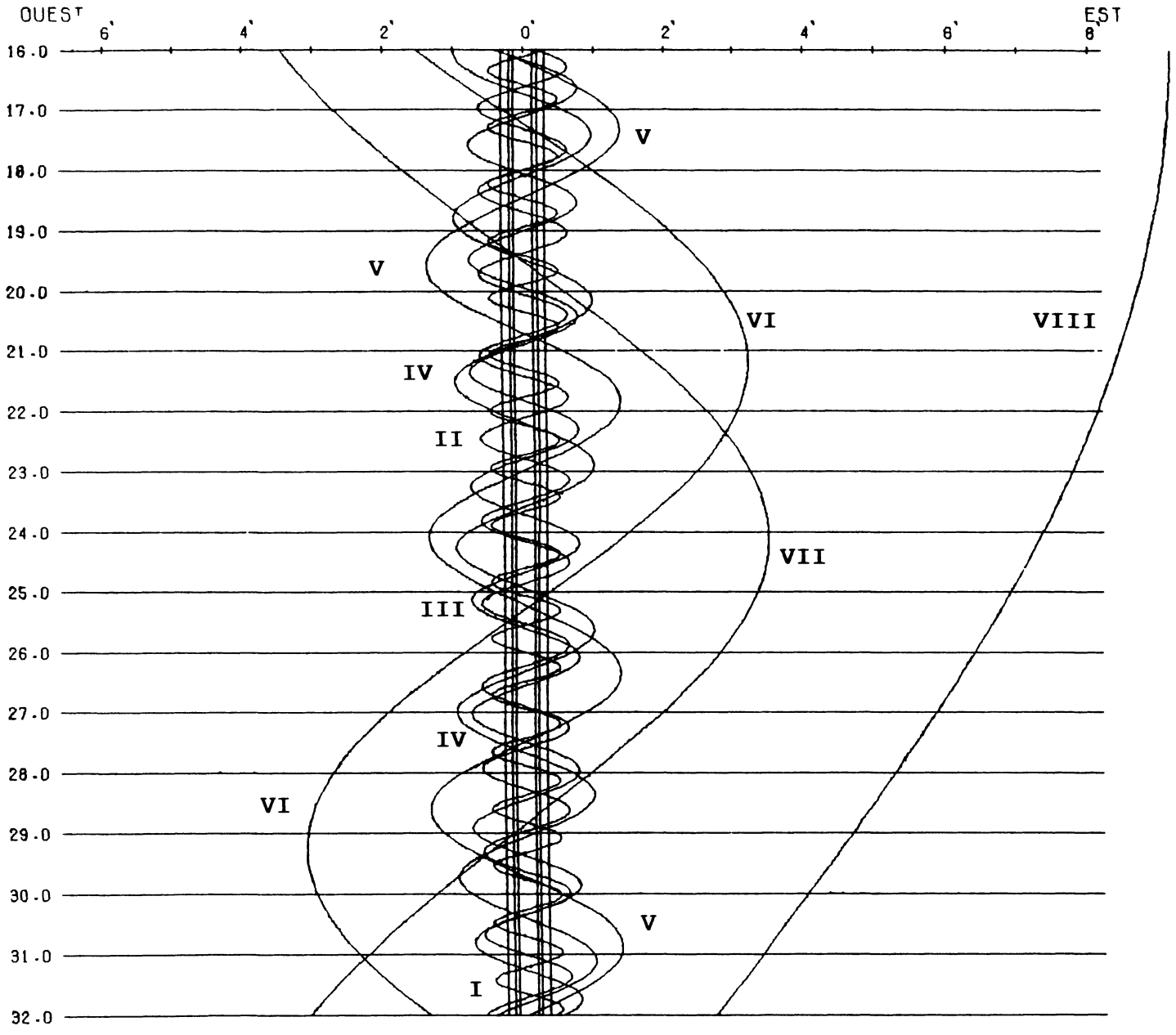
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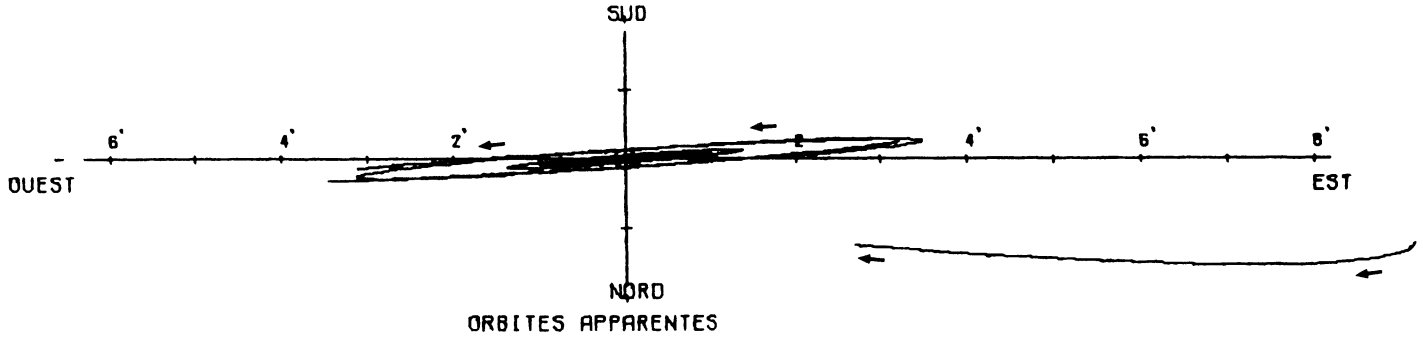
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1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

OCTOBRE -DEUXIEME QUINZAINE



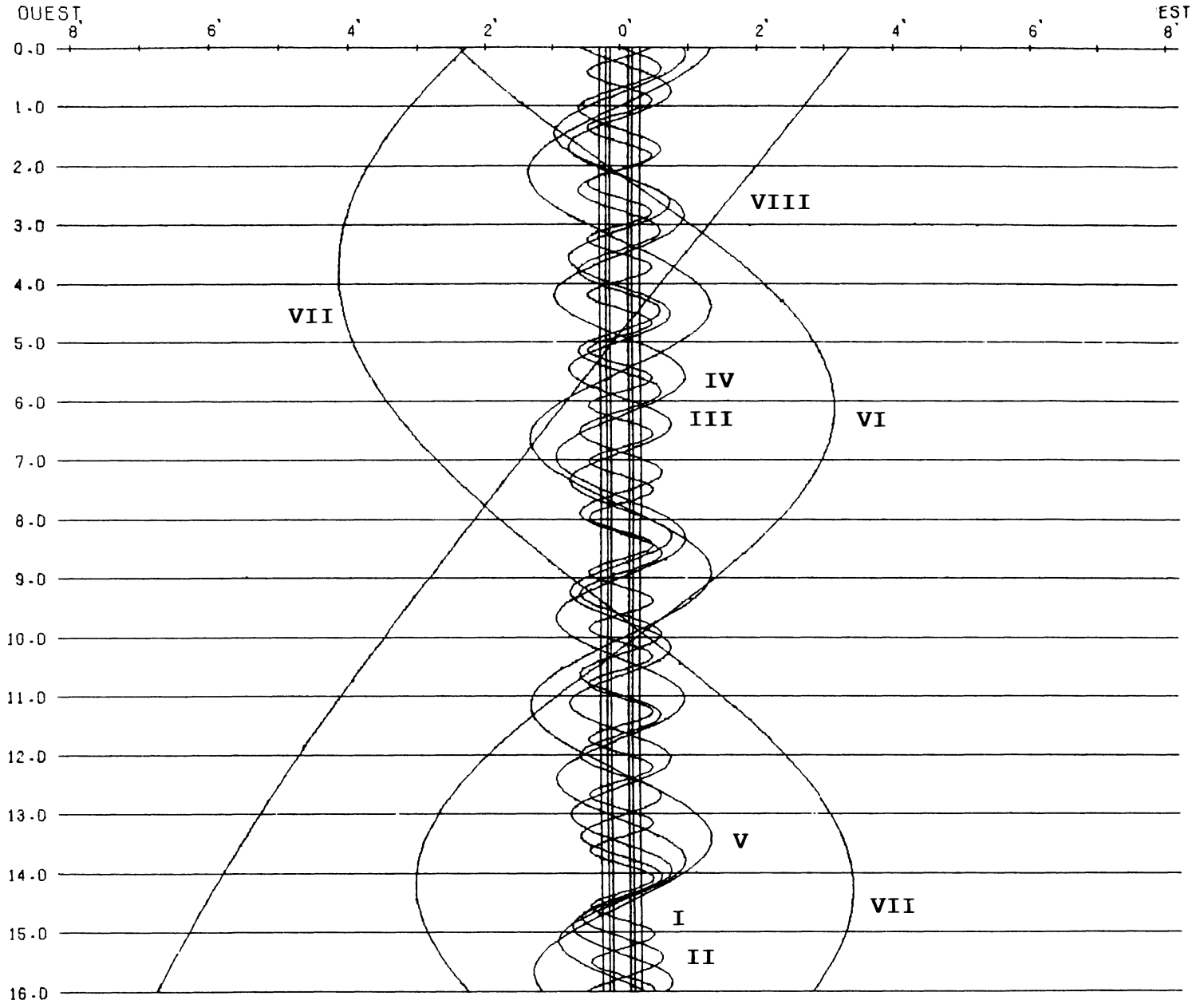
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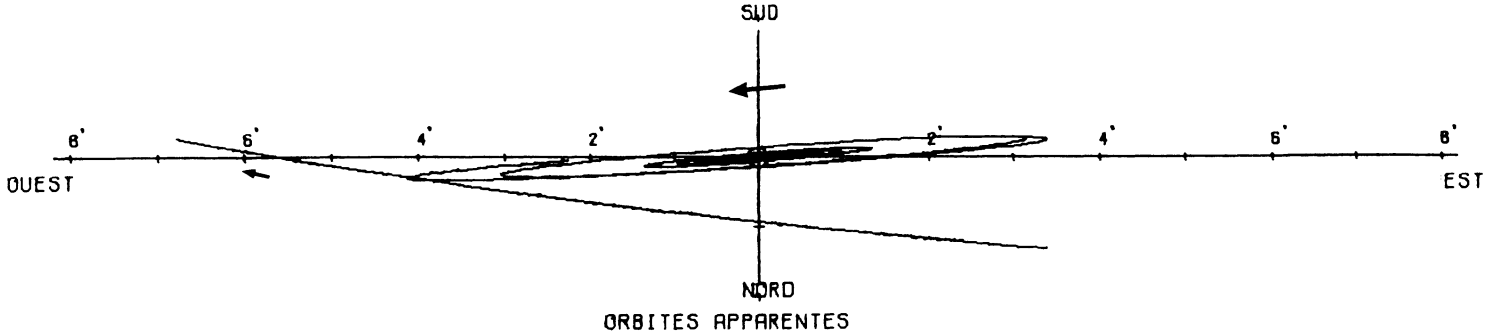
ORBITES APPARENTES

1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

NOVEMBRE -PREMIERE QUINZAINE



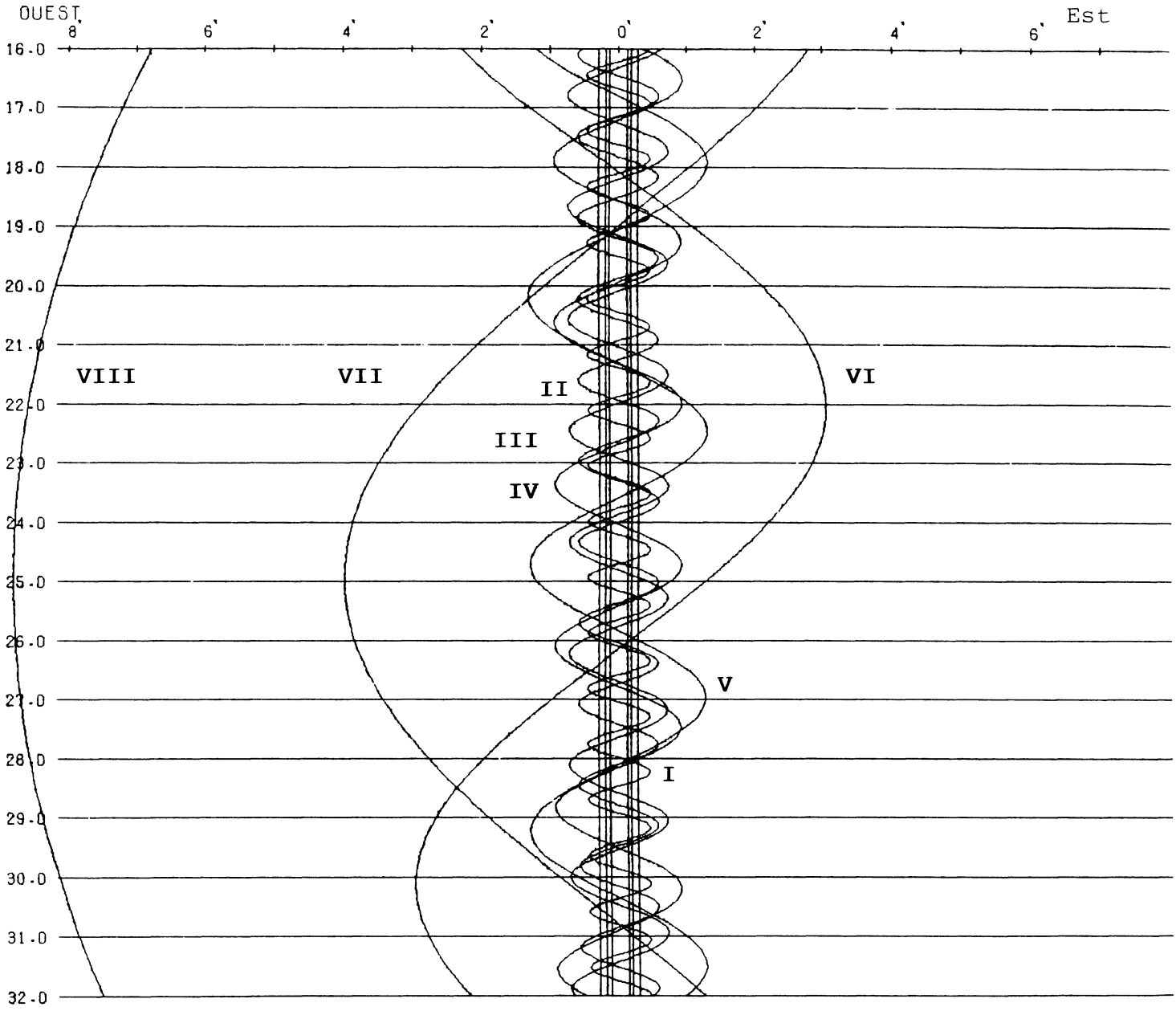
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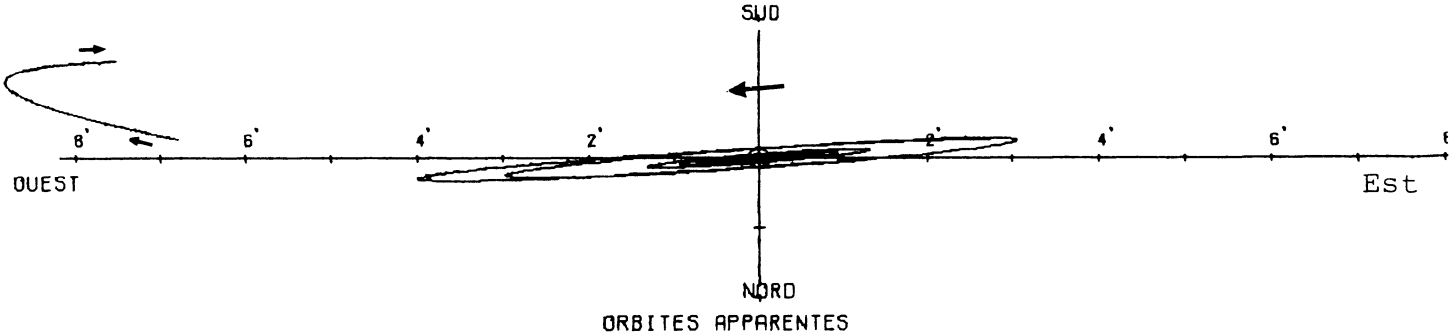
ORBITES APPARENTES

1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

NOVEMBRE -DEUXIEME QUINZAINE



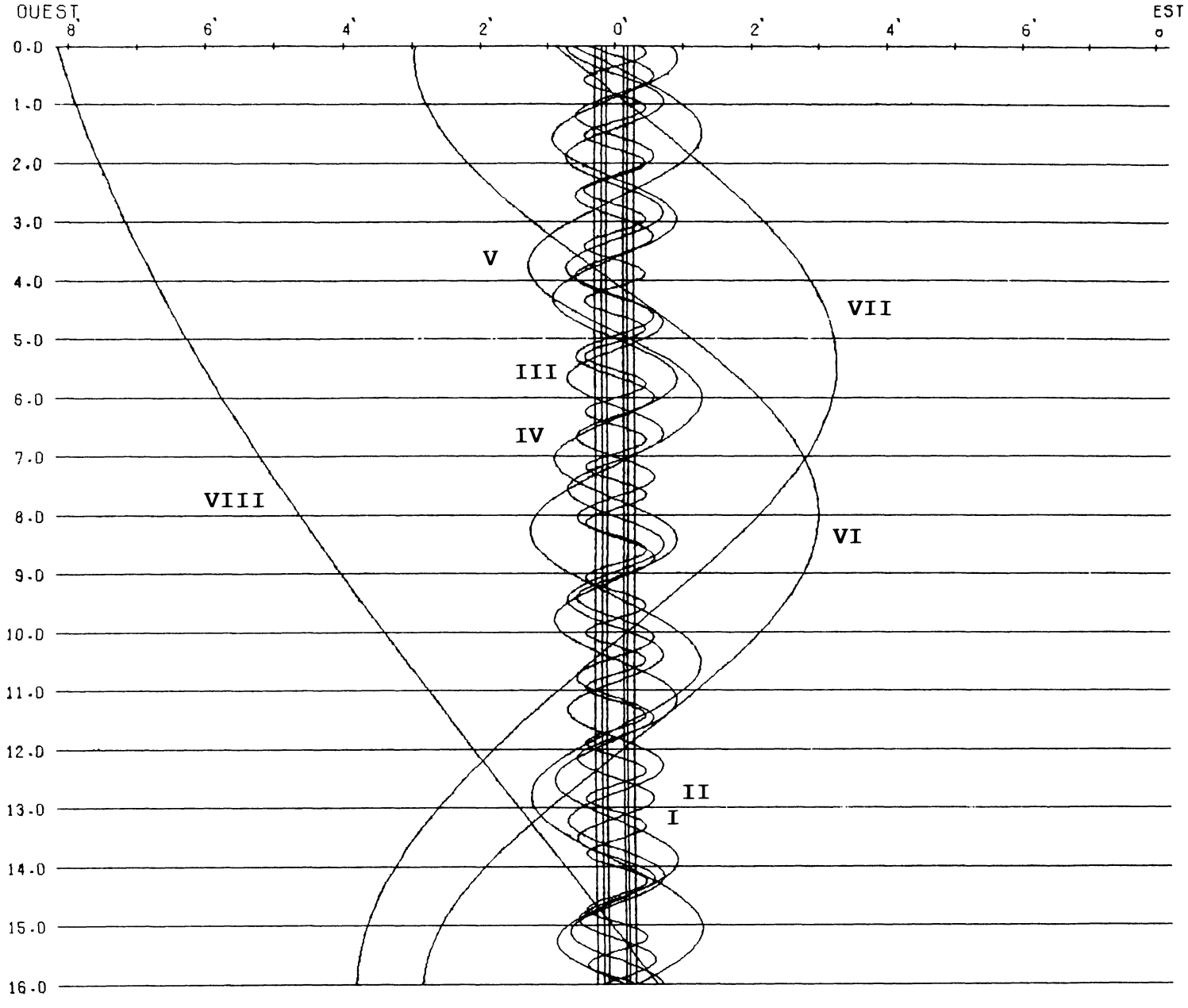
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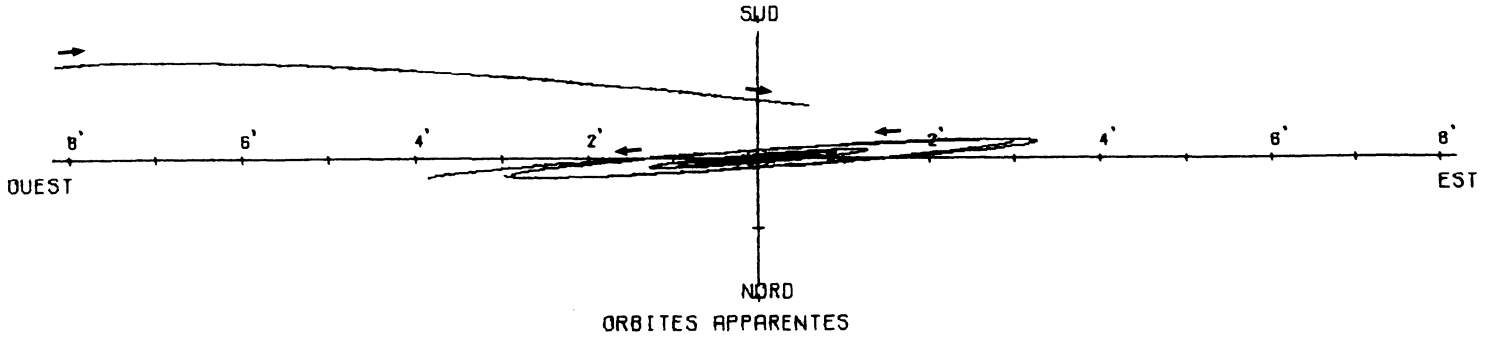
ORBITES APPARENTES

1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

DECEMBRE -PREMIERE QUINZAINE



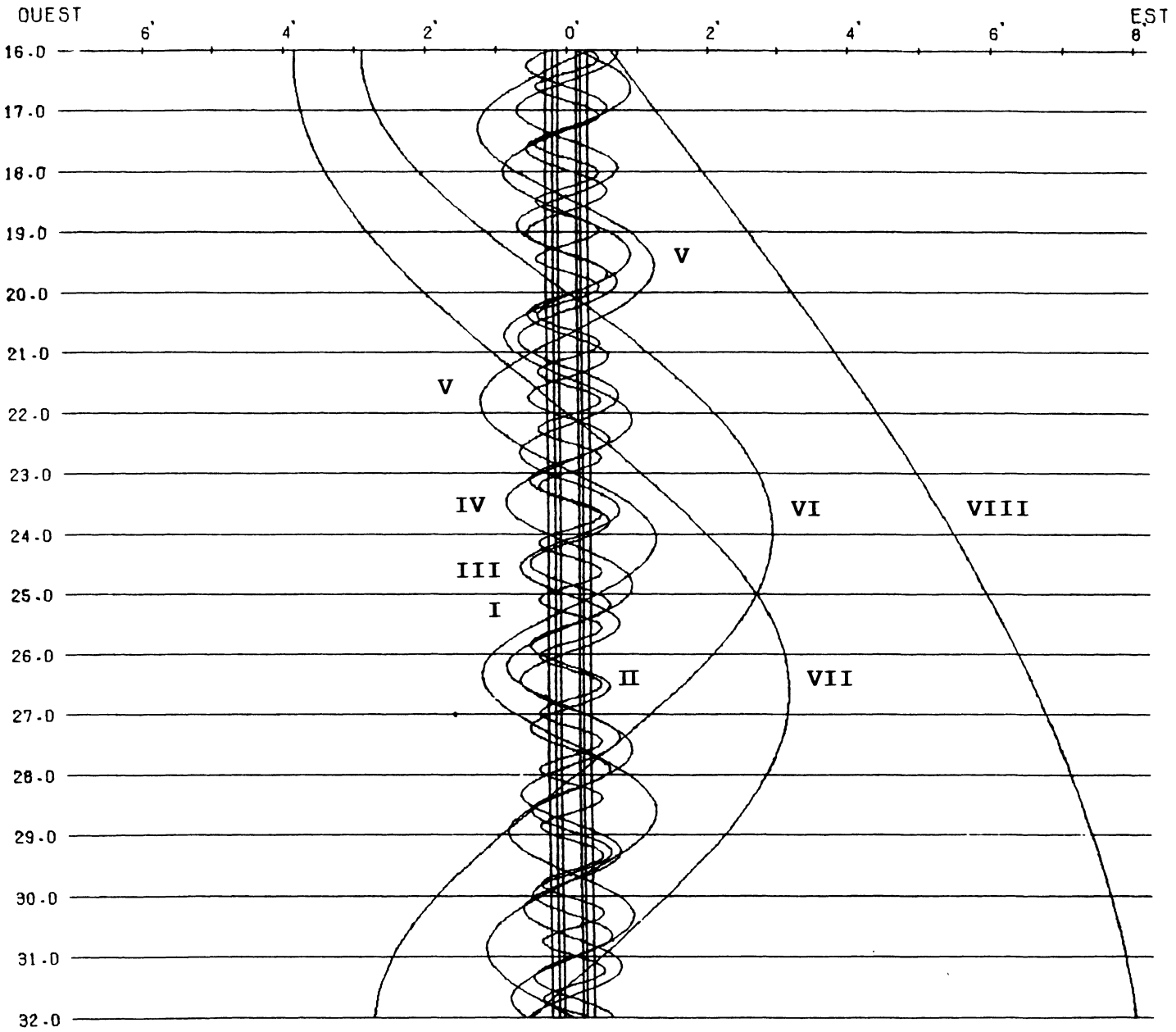
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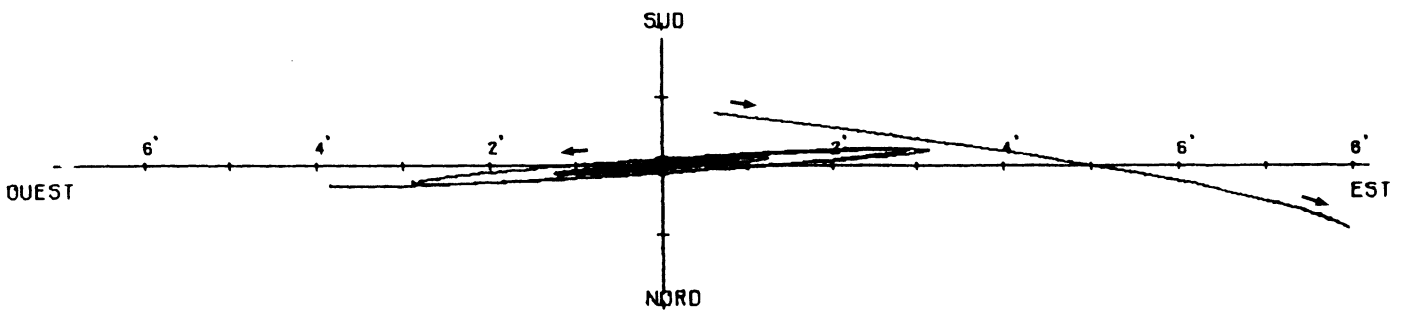
ORBITES APPARENTES

1995 .-CONFIGURATIONS DES SATELLITES DE SATURNE

DECEMBRE -DEUXIEME QUINZAINE



DANS LE SENS OUEST-EST,LES SATELLITES PASSENT AU-DELA DE SATURNE



ORBITES APPARENTES

PHÉNOMÈNES DES SATELLITES DE SATURNE POUR 1995

PHENOMENA OF THE SATURNIAN SATELLITES FOR 1995

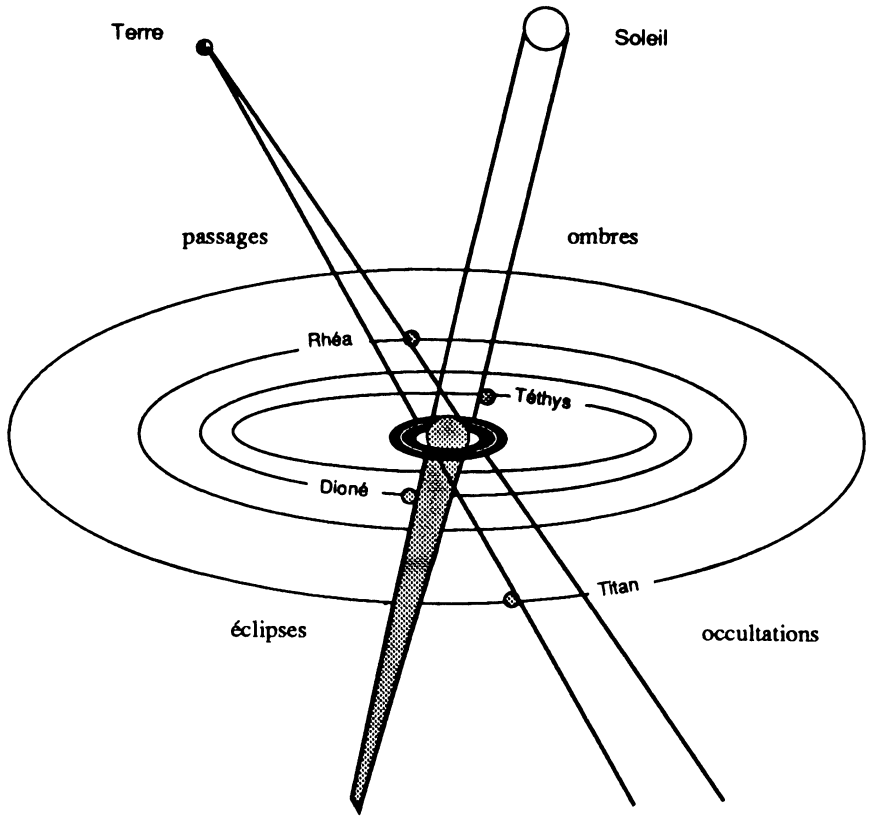


Fig. 1. Phénomènes des satellites de Saturne. Eclipse de Dioné, occultation de Titan, passage de Rhéa devant la planète et passage de l'ombre de Téhys sur Saturne.

EXPLICATIONS CONCERNANT LES PREDICTIONS DES PHENOMENES DE SATURNE

Tous les quinze ans la Terre et le Soleil traversent le plan orbital des satellites de Saturne. Il est alors possible d'observer des phénomènes semblables aux phénomènes bien connus des satellites galiléens de Jupiter: éclipses et occultations des satellites par Saturne, passages de satellites devant le disque de Saturne ou passages de leur ombre projetée sur ce disque. Dans les pages suivantes on trouvera les prédictions de ces phénomènes. Pour les distances apparentes du satellite au Soleil inférieures à 30° et des distances apparentes à la Lune inférieures à 5°, le type de phénomène est marqué d'un astérisque signifiant la plus grande difficulté d'observation. C'est aussi le cas de certaines éclipses pour lesquelles le satellite se trouve à moins de 4" du bord de Saturne. Ces prédictions de phénomènes ont été réalisées à partir de la théorie des mouvements des satellites de Saturne de Dourneau (1993). On trouvera des détails sur ces prédictions dans (Arlot et Thuillot, 1993).

Nous donnons les dates des débuts et fins de passages devant Saturne (Pd et Pf), des débuts et fins de passages des ombres sur le disque de Saturne (Od et Of), des débuts et fins d'éclipses par Saturne (Ed et Ef) ainsi que celles des débuts et fins d'occultations par la planète (Im pour immersions et Em pour émersions). Ces calculs ne tiennent pas compte du diamètre des satellites et ne concernent que leur centre: ces dates correspondent donc au milieu du phénomène. Elles sont données dans l'échelle du Temps Terrestre.

Pour une trajectoire apparente équatoriale, l'intervalle de temps séparant le début et la fin des phénomènes (premiers et derniers contacts) va de 14s pour Mimas (S1) à 450s pour Titan (S6).

COMMENTS ON THE PREDICTIONS OF THE PHENOMENA BY SATURN

Every fiveteen years the Earth and the Sun pass through the orbital planes of the Saturnian satellites. It is then possible to observe phenomena similar to the well known phenomena of the Galilean satellites of Jupiter: eclipses and occultations of the satellites by Saturn, transits in front of the planetary disk, transits of the shadows of the satellites projected on the disk of the planet. In the following pages we give a list of these phenomena. Some phenomenon may be difficult to observe, they are labeled with an asterisk. This is the case for the phenomena surrounding when the sun is at less than 30°, or the moon at less than 5°. This is also the case for eclipses of satellites located at less than 4" from the edge of Saturne. The predictions have been made using Dourneau's theory of the motion of the Saturnian satellites (Dourneau, 1993). Further details on these predictions can be found in (Arlot and Thuillot, 1993).

We give the dates of the beginning and the end of the transits in front of Saturn (Pd and Pf), of the transits of the shadow (Od and Of), of the eclipses by Saturn (Ed and Ef), of the occultations by the planet (Im for immersions and Em for emersions). These computations are made with no consideration of the diameter of the satellites but concern their center: these dates are the dates of the mid events. They are given in the Terrestrial Time scale.

For an equatorial apparent orbit, the time interval between the beginning and the end of these phenomena (first and last contacts) is from 14s for Mimas (S1) up to 450s for Titan (S6).

REFERENCES

Arlot, J.-E., Thuillot, W.: 1993, Eclipses and mutual events of the first eight Saturnian satellites during the 1993-1996 period, *Icarus* **105**, 427-440.

Dourneau, G.: 1993, Observations et études du mouvement des huit premiers satellites de Saturne, *Astron. Astrophys.* **267**, 292-299.

1995- PHÉNOMÈNES DES SATELLITES DE SATURNE

Jan.	h	m			21	57.4	2Pd		15	40.5	1Ef*		14	34.9	2Pf		7	26.9	2Im
1	0	22.3	4Of		22	14.4	2Od		17	10.9	2Im		14	59.8	2Of		9	45.2	5Of
	2	55.3	2Im		22	34.1	1Ef*		17	33.8	3Pf		17	54.6	1Pd		10	12.6	2Ef*
	2	57.2	1Im	6	0	16.3	2Pf		18	11.5	3Of		18	6.0	1Od		11	1.8	1Pd
	4	26.5	3Pd		0	45.1	2Of		19	57.9	2Ef*		18	43.4	5Od		11	12.4	1Od
	4	50.4	3Od		0	54.0	3Ef*	11	0	47.4	1Pd		20	5.5	1Pf		13	13.3	1Pf
	5	27.8	1Ef*		7	40.1	1Pd		0	59.5	1Od		20	22.0	1Of		13	28.5	1Of
	5	43.0	2Ef*		7	52.9	1Od		2	57.8	1Pf		21	15.6	5Of		22	4.6	1Im
	6	53.0	3Pf		8	40.5	4Pd		3	15.4	1Of		22	34.6	4Im		23	47.9	2Pd
	7	35.8	3Of		9	1.7	4Od		6	17.0	5Od	16	1	44.8	4Ef*	21	0	2.1	2Od
	14	32.8	1Pd		9	50.1	1Pf		8	45.9	5Of		4	45.7	2Im		0	20.2	3Im
	14	46.3	1Od		10	8.8	1Of		9	32.1	2Pd		4	57.0	1Im		0	30.6	1Ef*
	16	42.4	1Pf		10	38.2	4Pf		9	48.2	2Od		7	1.5	3Pd		2	11.4	2Pf
	17	2.0	1Of		11	47.7	4Of		11	49.5	1Im		7	22.2	3Od		2	33.8	2Of
	19	16.5	2Pd		14	29.9	2Im		11	52.6	2Pf		7	24.1	1Ef*		3	26.8	3Ef*
	19	34.1	2Od		17	17.3	2Ef*		12	19.2	2Of		7	32.0	2Ef*		9	39.3	1Pd
	21	34.1	2Pf		17	50.7	5Od		13	42.9	3Im		9	34.6	3Pf		9	49.7	1Od
	22	4.5	2Of		18	42.0	1Im		14	17.8	1Ef*		10	8.8	3Of		9	59.2	4Im
2	1	34.7	1Im		20	16.1	5Of		16	51.4	3Ef*		16	32.1	1Pd		11	50.8	1Pf
	3	6.1	3Im		20	24.5	3Pd		20	4.4	4Pd		16	43.3	1Od		12	5.8	1Of
	4	5.0	1Ef*		20	47.4	3Od		20	25.8	4Od		18	43.1	1Pf		13	9.9	4Ef*
	5	24.3	5Od		21	11.4	1Ef*		22	9.9	4Pf		18	59.3	1Of		16	20.6	2Im
	6	4.9	4Im		22	53.4	3Pf		23	13.0	4Of		21	6.8	2Pd		19	6.1	2Ef*
	6	15.7	3Ef*		23	33.2	3Of		23	24.8	1Pd		21	21.9	2Od		20	42.2	1Im
	7	46.1	5Of	7	6	17.6	1Pd		23	36.8	1Od		23	29.0	2Pf		23	.0	3Pd
	9	11.6	4Ef		6	30.2	1Od	12	1	35.3	1Pf		23	53.3	2Of		23	7.9	1Ef*
	11	48.9	2Im		6	51.1	2Pd		1	52.7	1Of	17	3	34.6	1Im		23	19.1	3Od
	13	10.3	1Pd		7	7.9	2Od		2	4.6	2Im		5	41.2	3Im	22	1	35.5	3Pf
	13	23.6	1Od		8	27.6	1Pf		4	51.4	2Ef*		6	1.4	1Ef*		2	6.1	3Of
	14	36.6	2Ef*		8	46.1	1Of		10	27.0	1Im		7	28.8	4Pd		8	16.7	1Pd
	15	19.9	1Pf		9	10.3	2Pf		12	22.7	3Pd		7	49.7	4Od		8	26.9	1Od
	15	39.4	1Of		9	38.7	2Of		12	44.3	3Od		8	48.7	3Ef*		8	41.6	2Pd
3	0	12.1	1Im		17	19.5	1Im		12	55.0	1Ef*		9	41.6	4Pf		8	55.5	2Od
	1	45.8	3Pd		17	28.5	4Im		14	54.1	3Pf		10	38.3	4Of		10	28.4	1Pf
	2	9.4	3Od		19	4.1	3Im		15	30.6	3Of		13	39.4	2Im		10	43.1	1Of
	2	42.3	1Ef*		19	48.7	1Ef*		18	25.7	2Pd		15	9.5	1Pd		11	5.5	2Pf
	4	10.1	2Pd		20	36.9	4Ef		18	41.6	2Od		15	20.6	1Od		11	27.3	2Of
	4	13.1	3Pf		22	13.1	3Ef*		20	46.7	2Pf		16	25.5	2Ef*		15	59.2	5Ef
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	4	54.9	3Of	8	2	10.8	2Ef*		22	2.3	1Pd		17	36.6	1Of		19	13.7	4Od
	6	28.2	2Pf		4	55.0	1Pd		22	14.1	1Od	18	2	12.1	1Im		19	19.7	1Im
	6	58.1	2Of		5	7.6	1Od	13	0	12.9	1Pf		3	29.7	5Ef		21	13.4	4Pf
	11	47.7	1Pd		7	5.1	1Pf		0	30.0	1Of		4	21.0	3Pd		21	39.7	3Im
	12	.9	1Od		7	23.4	1Of		4	52.5	4Im		4	38.7	1Ef*		21	45.2	1Ef*
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	16	52.5	4Pf		18	4.4	2Pf		11	32.3	1Ef*		7	27.9	3Of		6	54.2	1Pd
	18	5.0	4Of		18	6.4	3Od		13	45.0	2Ef*		8	23.1	2Pf		7	4.2	1Od
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	1	19.6	1Ef*	9	2	22.4	4Pd		22	50.4	1Pf		16	13.9	1Of		17	57.2	1Im
	3	34.9	3Ef*		2	30.4	5Ef		23	7.4	1Of		16	16.9	4Im		19	59.7	2Pf
	10	25.2	1Pd		2	43.7	4Od	14	3	19.4	2Pd		19	27.4	4Ef*		20	19.5	3Pd
	10	38.3	1Od		3	32.5	1Pd		3	35.0	2Od		22	33.2	2Im		20	20.8	2Of
	11	35.9	5Ed*		3	44.9	1Od		5	40.8	2Pf	19	0	49.6	1Im		20	22.5	1Ef*
	12	35.0	1Pf		4	24.1	4Pf		6	6.3	2Of		1	19.1	2Ef*		20	38.1	3Od
	12	54.1	1Of		5	30.4	4Of		7	42.0	1Im		3	.7	3Im		22	55.8	3Pf
	13	3.8	2Pd		5	42.7	1Pf		9	42.1	3Pd		3	16.0	1Ef*		23	25.2	3Of
	13	21.0	2Od		6	.8	1Of		10	3.3	3Od		6	7.7	3Ef*	24	3	41.7	4Im
	14	.6	5Ef		8	17.3	2Im		10	9.6	1Ef*		12	24.4	1Pd		5	31.6	1Pd
	15	22.2	2Pf		11	4.3	2Ef*		12	14.3	3Pf		12	35.1	1Od		5	41.4	1Od
	15	51.6	2Of		14	34.5	1Im		12	49.7	3Of		14	35.7	1Pf		6	52.5	4Ef*
	21	27.1	1Im		16	23.5	3Im		13	46.6	4Pd		14	51.2	1Of		7	43.5	1Pf
	23	5.1	3Pd		17	3.2	1Ef*		14	7.8	4Od		14	54.2	2Pd		7	57.6	1Of
	23	28.4	3Od		19	32.2	3Ef*		15	55.8	4Pf		15	8.7	2Od		10	8.1	2Im
	23	46.6	4Im	10	0	38.4	2Pd		16	55.7	4Of		17	17.3	2Pf		12	53.1	2Ef*
	23	56.8	1Ef*		0	54.7	2Od		19	17.2	1Pd		17	40.3	2Of		16	34.7	1Im
5	1	33.2	3Pf		2	9.9	1Pd		19	28.7	1Od		23	27.1	1Im		18	59.2	3Im
	2	14.1	3Of		2	22.2	1Od		19	52.0	2Im	20	1	11.1	4Pd		18	59.7	1Ef*
	2	54.3	4Ef		2	58.5	2Pf		21	28.0	1Pf		1	31.7	4Od		19	36.3	5Od
	5	36.2	2Im		3	25.7	2Of		21	44.7	1Of		1	40.5	3Pd		19	50.3	5Pd
	8	23.7	2Ef*		4	20.2	1Pf		22	38.5	2Ef*		1	53.3	1Ef*		20	9.1	5Pf
	9	2.6	1Pd		4	38.1	1Of	15	6	19.5	1Im		2	.2	3Od		22	5.0	3Ef*
	9	15.6	1Od		11	10.4	4Im		8	21.7	3Im		3	27.5	4Pf		22	14.8	5Of
	11	12.5	1Pf		13	12.0	1Im		8	46.9	1Ef*		4	15.2	3Pf	25	2	29.1	2Pd
	11	31.4	1Of		14	19.6	4Ef		11	29.6	3Ef*		4	20.9	4Of		2	42.3	2Od
	20	4.6	1Im		15	3.2	3Pd		12	13.1	2Pd		4	47.0	3Of		4	9.0	1Pd
	21	44.7	3Im		15	25.3	3Od		12	28.5	2Od		7	9.9	5Od		4	18.7	1Od

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	4	53.8	2Pf		21	24.9	10d		14	31.0	10d*		8	18.8	40f*		16	36.1	4Pd*
	5	14.3	20f		21	43.1	2Im		16	36.6	1Pf*		9	44.3	1Pf*		16	49.1	40d*
	6	21.1	1Pf		23	28.8	1Pf		16	45.3	2Pd*		9	53.7	10f*		17	39.8	3Pf*
	6	34.9	10f		23	41.2	10f		16	47.5	10f*		11	59.5	2Im*		17	54.7	30f*
	12	36.1	4Pd	30	0	27.1	2Ef*		16	56.1	20d*		14	41.4	2Ef*		19	20.1	4Pf*
	12	55.7	40d		8	20.0	1Im		19	12.9	2Pf*		18	35.5	1Im*		19	43.7	40f*
	14	59.3	4Pf		10	43.5	1Ef*		19	28.6	20f*		21	36.1	3Im*		23	14.7	1Pd*
	15	12.3	1Im		10	58.0	3Im	4	1	27.7	1Im*	9	0	37.3	3Ef*		23	20.1	10d*
	15	46.1	40f		14	2.1	3Ef*		2	32.4	4Im*		4	20.4	2Pd*		23	34.7	2Im*
	17	37.0	1Ef*		14	4.1	2Pd		3	50.0	1Ef*		4	29.5	20d*	14	1	29.6	1Pf*
	17	39.1	3Pd		14	15.9	20d		4	17.0	3Pd*		6	7.7	1Pd*		1	37.0	10f*
	17	57.0	30d		16	30.4	2Pf		4	31.6	30d*		6	14.2	10d*		3	20.1	5Im*
	19	1.8	2Im		16	48.2	20f		5	42.6	4Ef*		6	49.5	2Pf*		6	25.4	5Ef*
	20	16.2	3Pf		19	53.6	1Pd		6	58.0	3Pf*		7	2.5	20f*		10	20.8	1Im*
	20	44.3	30f		20	2.1	10d		7	19.6	30f*		8	21.9	1Pf*		13	35.1	3Im*
	21	46.6	2Ef*		22	6.4	1Pf		9	18.2	2Im*		8	30.9	10f*		15	55.5	2Pd*
26	2	46.5	1Pd		22	18.5	10f		12	1.0	2Ef*		13	58.3	4Im*		16	3.0	20d*
	2	55.9	10d	31	0	1.4	4Pd		13	.7	1Pd*		14	53.7	5Im*		16	34.3	3Ef*
	4	58.6	1Pf		0	19.6	40d		13	8.2	10d*		17	7.5	4Ef*		18	26.0	2Pf*
	5	12.2	10f		2	31.1	4Pf		15	14.1	1Pf*		17	13.0	1Im*		18	36.2	20f*
	11	22.8	2Pd		3	11.2	40f		15	24.7	10f*		17	56.3	5Ef*		21	52.0	1Pd*
	11	35.7	20d		6	36.9	2Im	5	0	5.3	1Im*		20	16.0	3Pd*		21	57.3	10d*
	13	48.0	2Pf		6	57.5	1Im		1	39.1	2Pd*		20	28.3	30d*	15	0	7.1	1Pf*
	13	49.8	1Im		9	20.6	2Ef*		1	49.4	20d*		20	53.3	2Im*		0	14.2	10f*
	14	7.8	20f		9	20.8	1Ef*		2	28.8	5Im*		22	59.1	3Pf*		1	24.4	4Im*
	16	14.3	1Ef*		9	37.8	3Pd		2	56.8	3Im*		23	16.7	30f*		4	32.3	4Ef*
	16	18.8	3Im		9	53.8	30d		4	7.0	2Pf*		23	34.9	2Ef*		8	28.5	2Im*
	19	24.0	3Ef*		12	17.2	3Pf		4	22.1	20f*	10	4	45.1	1Pd*		8	58.3	1Im*
	21	24.2	4Im		12	41.5	30f		5	27.2	5Ef*		4	51.4	10d*		12	15.0	3Pd*
27	0	35.0	4Ef*		14	6.2	5Im		5	59.2	3Ef*		6	59.4	1Pf*		12	24.9	30d*
	1	23.9	1Pd		16	57.9	5Ef*		11	27.0	4Pd*		7	8.1	10f*		15	.2	3Pf*
	1	33.2	10d		18	31.0	1Pd		11	38.1	1Pd*		13	14.2	2Pd*		15	13.7	30f*
	3	36.2	1Pf		18	39.4	10d		11	43.4	40d*		13	22.9	20d*		20	29.4	1Pd*
	3	49.4	10f		20	43.9	1Pf		11	45.4	10d*		15	43.6	2Pf*		20	34.5	10d*
	3	55.6	2Im		20	55.7	10f		13	51.7	1Pf*		15	50.6	1Im*		22	44.7	1Pf*
	4	28.6	5Ef		22	57.8	2Pd		14	2.0	10f*		15	55.9	20f*		22	51.4	10f*
	6	40.1	2Ef*		23	9.3	20d*		14	2.8	4Pf*		18	55.8	3Im*	16	0	49.3	2Pd*
	12	27.4	1Im					–	14	36.3	40f*		21	56.3	3Ef*		0	56.3	20d*
	14	51.6	1Ef*	Fév.	h	m			18	11.9	2Im*		22	53.0	4Pd*		3	20.2	2Pf*
	14	58.6	3Pd	1	1	24.6	2Pf*		20	54.5	2Ef*		23	7.2	40d*		3	29.6	20f*
	15	15.9	30d		1	41.7	20f*		22	42.8	1Im*	11	1	34.4	4Pf*		7	35.9	1Im*
	17	36.5	3Pf		5	35.1	1Im*	6	1	36.7	3Pd*		2	1.2	40f*		9	35.1	5Pd*
	18	3.4	30f		7	58.1	1Ef*		1	50.5	30d*		3	22.5	1Pd*		9	48.7	50d*
	20	16.6	2Pd		8	17.6	3Im*		4	18.4	3Pf*		3	28.6	10d*		10	19.2	4Pd*
	20	29.1	20d		8	49.6	4Im*		4	38.6	30f*		5	37.0	1Pf*		10	31.0	40d*
	22	42.1	2Pf		11	21.2	3Ef*		10	15.5	1Pd*		5	45.3	10f*		10	54.8	3Im*
	23	1.3	20f		12	.1	4Ef*		10	22.6	10d*		5	47.1	2Im*		12	1.6	5Pf*
28	0	1.3	1Pd		15	30.6	2Im*		10	32.9	2Pd*		8	28.3	2Ef*		12	41.2	50f*
	0	10.4	10d		17	8.4	1Pd*		10	42.8	20d*		14	28.1	1Im*		13	5.8	4Pf*
	2	13.7	1Pf		17	16.6	10d*		12	29.2	1Pf*		17	35.6	3Pd*		13	26.1	40f*
	2	26.7	10f		18	14.0	2Ef*		12	39.2	10f*		17	47.2	30d*		17	22.3	2Im*
	6	18.7	4Pd		19	21.5	1Pf*		13	1.2	2Pf*		20	19.4	3Pf*		19	6.8	1Pd*
	6	37.6	40d		19	33.0	10f*		13	15.6	20f*		20	35.7	30f*		19	11.6	10d*
	8	45.2	4Pf	2	4	12.6	1Im*		20	15.3	4Im*		21	8.2	5Pd*		21	22.2	1Pf*
	9	28.7	40f		6	35.4	1Ef*		21	20.4	1Im*		21	22.2	50d*		21	28.6	10f*
	11	4.9	1Im		6	57.4	3Pd*		23	25.0	4Ef*		22	8.0	2Pd*	17	6	13.4	1Im*
	12	49.3	2Im		7	12.7	30d*	7	0	16.4	3Im*		22	16.3	20d*		9	34.7	3Pd*
	13	28.9	1Ef*		7	51.6	2Pd*		3	5.7	2Im*		23	20.5	5Pf*		9	43.1	2Pd*
	13	38.4	3Im		8	2.7	20d*		3	18.3	3Ef*	12	0	12.1	50f*		9	43.8	30d*
	15	33.6	2Ef*		9	37.6	3Pf*		5	47.9	2Ef*		0	37.7	2Pf*		9	49.7	20d*
	16	43.1	3Ef*		10	.5	30f*		8	42.7	5Pd*		0	49.3	20f*		12	14.3	2Pf*
	22	38.7	1Pd		10	18.7	2Pf*		8	52.9	1Pd*		1	59.9	1Pd*		12	20.5	3Pf*
	22	47.7	10d		10	35.2	20f*		8	55.7	50d*		2	5.8	10d*		12	23.1	20f*
29	0	51.3	1Pf		15	45.8	1Pd*		8	59.8	10d*		4	14.5	1Pf*		12	32.6	30f*
	1	4.0	10f		15	53.8	10d*		10	38.3	5Pf*		4	22.5	10f*		17	44.2	1Pd*
	5	10.3	2Pd		17	44.2	4Pd*		11	6.8	1Pf*		7	41.3	4Im*		17	48.8	10d*
	5	22.5	20d		17	59.0	1Pf*		11	16.4	10f*		10	49.9	4Ef*		19	7.6	4Im*
	7	36.3	2Pf		18	1.5	40d*		11	42.9	50f*		13	5.7	1Im*		19	59.7	1Pf*
	7	54.8	20f		18	10.2	10f*		19	26.6	2Pd*		14	40.9	2Im*		20	5.8	10f*
	7	58.5	5Pd		20	16.9	4Pf*		19	36.2	20d*		16	15.4	3Im*		22	14.7	4Ef*
	8	2.8	50d		20	18.9	5Pd*		19	57.9	1Im*		19	15.3	3Ef*	18	2	16.1	2Im*
	9	7.6	5Pf		20	29.3	50d*		21	55.3	2Pf*	13	0	37.3	1Pd*		4	51.0	1Im*
	9	42.4	1Im		20	53.8	40f*		22	9.0	20f*		0	43.0	10d*		8	14.5	3Im*
	10	44.2	50f		21	54.5	5Pf*		22	56.3	3Pd*		2	52.1	1Pf*		15	47.5	5Im*
	12	6.2	1Ef*		23	13.6	50f*		23	9.4	30d*		2	59.8	10f*		16	21.6	1Pd*
	12	18.2	3Pd	3	0	24.4	2Im*	8	1	38.7	3Pf*		7	1.7	2Pd*		16	25.9	10d*
	12	34.8	30d		2	50.2	1Im*		1	57.6	30f*		7	9.6	20d*		18	36.9	2Pd*
	14	56.9	3Pf		3	7.5	2Ef*		5	10.0	4Pd*		9	31.9	2Pf*		18	37.3	1Pf*
	15	6.9	4Im		5	12.7	1Ef*		5	25.3	40d*		9	42.8	20f*		18	42.9	10f*
	15	22.4	30f		5	37.2	3Im*		7	30.3	1Pd*		11	43.2	1Im*		18	43.0	20d*
	18	17.6	4Ef*		8	40.2	3Ef*		7	37.0	10d*		14	55.3	3Pd*		18	54.4	5Ef*
	21	16.2	1Pd		14	23.3	1Pd*		7	48.6	4Pf*		15	6.0	30d*		21	8.4	2Pf*

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	21	16.5	2Of*		22	15.8	2Pf*		17	26.9	1Od*		5	44.7	3Em*		2	20.4	1Pd*
19	3	28.5	1Im*	17	1	44.6	1Od*		17	30.6	1Pd*		6	29.5	4Em*		4	33.5	1Of*
	4	2.5	4Pd*		1	46.9	1Pd*		18	59.9	4Em*		9	9.0	1Od*		4	42.7	1Pf*
	4	12.9	4Od*		4	3.0	1Of*		19	45.6	1Of*		9	14.2	1Pd*		6	14.9	2Od*
	6	51.5	4Pf*		4	6.9	1Pf*		19	51.4	1Pf*		11	28.1	1Of*		6	24.4	2Pd*
	6	54.4	3Pd*		7	29.9	4Em*	23	2	24.7	2Em*		11	35.8	1Pf*		8	50.3	2Of*
	7	2.6	3Od*		14	48.8	2Em*		7	1.5	1Em*		14	.5	2Em*		9	3.1	2Pf*
	7	8.5	4Of*		15	15.7	1Em*		9	22.1	3Od*		22	47.1	1Em*		14	13.1	5Od*
	9	40.8	3Pf*		17	25.9	3Od*		9	30.1	3Pd*	29	1	18.3	3Od*		14	26.8	4Ed*
	9	51.6	3Of*		17	30.8	3Pd*		12	12.9	3Of*		1	29.3	3Pd*		14	36.3	5Pd*
	11	9.9	2Im*		20	16.4	3Of*		12	24.5	3Pf*		1	46.7	5Od*		15	55.0	1Em*
	14	58.9	1Pd*		20	24.3	3Pf*		16	2.2	2Od*		2	4.9	5Pd*		17	27.6	5Of*
	15	3.1	1Od*		22	11.0	5Em*		16	3.9	1Od*		3	35.2	2Od*		17	58.8	4Em*
	17	14.8	1Pf*	18	0	21.7	1Od*		16	7.9	1Pd*		3	43.1	2Pd*		18	18.6	5Pf*
	17	20.1	1Of*		0	24.2	1Pd*		16	8.0	2Pd*		4	9.4	3Of*		18	35.0	3Ed*
20	2	6.1	1Im*		2	40.1	1Of*		18	22.7	1Of*		4	24.6	3Pf*		21	44.6	3Em*
	3	30.7	2Pd*		2	44.3	1Pf*		18	28.8	1Pf*		4	59.3	5Of*	3	0	51.0	1Od*
	3	36.4	2Od*		4	29.1	2Od*		18	37.2	2Of*		5	43.2	5Pf*		0	57.7	1Pd*
	5	34.3	3Im*		4	32.9	2Pd*		18	45.7	2Pf*		6	10.5	2Of*		1	36.1	2Em*
	6	2.5	2Pf*		7	3.9	2Of*		20	5.2	6Im*		6	21.4	2Pf*		3	10.5	1Of*
	6	9.9	2Of*		7	9.8	2Pf*		21	52.1	6Em*		7	46.0	1Od*		3	20.0	1Pf*
	12	50.9	4Im*		13	10.8	4Od*	24	0	34.3	4Od*		7	51.4	1Pd*		14	32.6	1Em*
	13	36.3	1Pd*		13	17.1	4Pd*		0	44.4	4Pd*		10	5.2	1Of*		15	8.1	2Od*
	13	40.2	1Od*		13	53.4	1Em*		3	35.9	4Of*		10	13.2	1Pf*		15	18.1	2Pd*
	15	52.3	1Pf*		16	11.5	4Of*		3	54.8	4Pf*		11	57.7	4Od*		17	14.4	3Od*
	15	57.3	1Of*		16	25.0	4Pf*		5	39.1	1Em*		12	11.6	4Pd*		17	28.4	3Pd*
	20	3.7	2Im*		19	4.4	3Em*		11	4.7	3Em*		15	.1	4Of*		17	43.6	2Of*
	22	3.0	5Pd*		22	58.7	1Od*		11	18.7	2Em*		15	24.3	4Pf*		17	56.9	2Pf*
	22	15.2	5Od*		23	1.5	1Pd*		13	20.3	5Od*		21	24.7	1Em*		20	5.8	3Of*
21	0	41.8	5Pf*		23	42.8	2Em*		13	33.5	5Pd*		22	13.2	7Pd*		20	24.4	3Pf*
	0	43.7	1Im*	19	1	17.2	1Of*		14	40.9	1Od*		22	54.4	2Em*		23	21.0	4Od*
	1	10.2	5Of*		1	21.8	1Pf*		14	45.1	1Pd*		23	57.6	3Ed*		23	28.0	1Od*
	4	14.1	3Pd*		12	31.0	1Em*		16	30.9	5Of*	30	2	24.3	7Pf*		23	34.9	1Pd*
	4	21.5	3Od*		13	22.4	2Od*		16	59.8	1Of*		3	4.7	3Em*		23	38.9	4Pd*
	7	1.2	3Pf*		13	26.7	2Pd*		17	6.2	1Pf*		6	23.0	1Od*	4	1	47.6	1Of*
	7	10.6	3Of*		14	44.6	3Od*		17	7.3	5Pf*		6	28.7	1Pd*		1	57.4	1Pf*
	12	13.7	1Pd*		14	50.6	3Pd*	25	0	55.4	2Od*		8	42.3	1Of*		2	24.4	4Of*
	12	17.4	1Od*		15	57.3	2Of*		1	1.8	2Pd*		8	50.6	1Pf*		2	53.5	4Pf*
	12	24.5	2Pd*		16	3.8	2Pf*		3	30.5	2Of*		12	28.4	2Od*		7	40.8	2Ed*
	12	29.7	2Od*		17	35.2	3Of*		3	39.6	2Pf*		12	36.9	2Pd*		10	30.0	2Em*
	14	29.8	1Pf*		17	44.4	3Pf*		4	16.7	1Em*		15	3.8	2Of*		13	10.2	1Em*
	14	34.5	1Of*		21	35.8	1Od*		6	40.8	3Od*		15	15.3	2Pf*		15	53.7	3Ed*
	14	56.7	2Pf*		21	38.8	1Pd*		6	49.8	3Pd*		20	2.3	1Em*		19	4.5	3Em*
	15	3.3	2Of*		23	54.3	1Of*		9	31.7	3Of*		20	45.1	4Ed*		20	24.8	5Ed*
	21	45.7	4Pd*		23	59.2	1Pf*		9	44.6	3Pf*		22	37.0	3Od*		22	5.0	1Od*
	21	54.7	4Od*	20	0	53.9	5Od*		12	44.7	4Em*		22	49.0	3Pd*		22	12.1	1Pd*
	23	21.2	1Im*		1	2.4	5Pd*		13	17.9	1Od*	31	0	14.2	4Em*	5	0	1.4	2Od*
22	0	37.1	4Pf*		1	14.9	4Em*		13	22.4	1Pd*		1	28.2	3Of*		0	11.9	2Pd*
	0	50.9	4Of*		4	2.5	5Of*		15	36.9	1Of*		1	44.5	3Pf*		0	24.6	1Of*
	2	54.0	3Im*		4	30.9	5Pf*		15	43.6	1Pf*		5	.0	1Od*		0	34.4	5Em*
	4	57.5	2Im*		8	36.8	2Em*		20	12.6	2Em*		5	5.9	1Pd*		0	34.7	1Pf*
	10	51.0	1Pd*		11	8.6	1Em*	26	2	54.3	1Em*		7	19.3	1Of*		2	36.9	2Of*
	10	54.5	1Od*		16	24.5	3Em*		8	24.7	3Em*		7	27.9	1Pf*		2	50.8	2Pf*
	13	7.3	1Pf*		20	12.8	1Od*		9	48.7	2Od*		7	48.4	2Em*		8	8.4	4Ed*
	13	11.7	1Of*		20	16.0	1Pd*		9	55.6	2Pd*		7	58.4	5Ed*		11	43.3	4Em*
	21	18.3	2Pd*		22	15.7	2Od*		11	55.0	1Od*		11	59.3	5Em*		11	47.8	1Em*
	21	23.0	2Od*		22	20.5	2Pd*		11	59.7	1Pd*		18	39.9	1Em*		14	33.1	3Od*
	21	58.8	1Im*		22	31.4	1Of*		12	23.8	2Of*		21	16.3	3Ed*		14	48.0	3Pd*
	23	50.8	2Pf*		22	36.6	1Pf*		12	33.5	2Pf*		21	21.7	2Od*		16	34.1	2Ed*
	23	56.7	2Of*	21	0	50.6	2Of*		14	14.0	1Of*		21	30.6	2Pd*		17	24.5	3Of*
23	1	33.8	3Pd*		0	57.7	2Pf*		14	21.0	1Pf*		21	38.2	6Pd*		17	44.3	3Pf*
	1	40.3	3Od*		6	52.6	4Od*		18	16.0	4Od*		23	57.0	2Of*		19	23.9	2Em*
	4	15.8	5Im*		7	.7	4Pd*		18	28.0	4Pd*						20	42.0	1Od*
	4	21.5	3Pf*		9	46.2	1Em*		21	18.0	4Of*	Avr.	h	m			20	49.4	1Pd*
	4	29.5	3Of*		9	53.7	4Of*		21	39.6	4Pf*	1	0	9.2	2Pf*		23	1.7	1Of*
	6	34.1	4Im*		10	10.0	4Pf*		23	23.7	5Em*		0	24.7	3Em*		23	12.0	1Pf*
	7	23.3	5Ef*		12	3.3	3Od*	27	1	31.9	1Em*		1	3.7	6Pf*	6	8	54.6	2Od*
	9	28.4	1Pd*		12	10.3	3Pd*		3	59.5	3Od*		3	37.0	1Od*		9	5.6	2Pd*
	9	31.6	1Od*		14	54.1	3Of*		4	9.5	3Pd*		3	43.2	1Pd*		10	25.3	1Em*
	11	44.9	1Pf*		15	4.5	3Pf*		5	6.6	2Em*		5	39.4	4Od*		11	30.2	2Of*
	11	48.9	1Of*		17	30.8	2Em*		6	50.6	3Of*		5	55.3	4Pd*		11	44.6	2Pf*
	13	51.3	2Im*		18	49.8	1Od*		7	4.6	3Pf*		5	56.4	1Of*		13	12.4	3Ed*
	20	36.3	1Im*		18	53.3	1Pd*		10	32.0	1Od*		6	5.3	1Pf*		16	24.4	3Em*
					21	8.5	1Of*		10	36.9	1Pd*		8	42.3	4Of*		17	2.7	4Od*
Mars	h	m			21	14.0	1Pf*		12	51.0	1Of*		9	9.0	4Pf*		17	22.5	4Pd*
16	5	29.5	1Pf*	22	7	8.9	2Od*		12	58.4	1Pf*		16	42.3	2Em*		19	19.0	1Od*
	5	54.8	2Em*		7	14.2	2Pd*		18	42.0	2Od*		17	17.5	1Em*		19	26.6	1Pd*
	16	38.1	1Em*		8	23.9	1Em*		18	49.3	2Pd*		19	55.7	3Od*		20	6.4	4Of*
	19	35.9	2Od*		9	43.9	2Of*		21	17.2	2Of*		20	8.7	3Pd*		20	37.9	4Pf*
	19	39.1	2Pd*		9	51.7	2Pf*		21	27.5	2Pf*		22	47.0	3Of*		21	38.8	1Of*
	21	44.3	3Em*		10	47.6	5Em*	28	0	9.5	1Em*		23	4.5	3Pf*		21	49.4	1Pf*
	22	10.6	2Of*		13	44.6	3Em*		3	3.4	4Ed*	2	2	14.0	1Od*	7	1	27.3	2Ed*

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	2	39.5	5Od*		20	27.5	2Od		18	34.4	2Em	21	0	54.3	1Of		17	59.5	1Of
	3	7.9	5Pd*		20	40.5	2Pd		19	18.3	1Em		1	8.8	1Pf		18	15.0	1Pf
	4	17.7	2Em*		23	3.3	2Of		21	9.1	6Pd		9	56.3	1Ed*		20	54.1	4Od
	5	55.9	5Of*		23	19.9	2Pf		22	25.2	3Od		10	39.9	2Od		21	27.2	4Pd
	6	53.5	5Pf*	12	2	10.7	1Em		22	45.8	3Pd		10	56.3	2Pd	26	0	.6	4Of
	9	2.9	1Em*		4	26.0	4Od	17	1	17.1	3Of		12	25.9	1Em		0	46.3	4Pf
	11	51.8	3Od*		4	49.7	4Pd		1	43.0	3Pf		13	16.0	2Of		3	2.3	1Ed*
	12	7.7	3Pd*		5	8.4	3Ed*		2	28.8	6Pf		13	36.2	2Pf		5	33.3	1Em
	14	43.3	3Of*		7	30.6	4Of		4	5.8	1Od		15	41.7	3Ed*		5	52.0	2Ed*
	15	4.1	3Pf*		8	6.5	4Pf		4	15.9	1Pd		18	18.1	4Ed*		8	50.4	2Em
	17	47.8	2Od*		8	23.9	3Em		6	26.2	1Of		19	2.4	3Em		8	58.4	3Od
	17	56.0	1Od*		11	.9	1Od		6	39.7	1Pf		21	10.6	1Od		9	23.5	3Pd
	17	59.3	2Pd*		11	9.9	1Pd		8	.3	2Od		21	21.9	1Pd		11	50.7	3Of
	18	3.8	1Pd*		13	.1	2Ed*		8	15.3	2Pd		22	8.4	4Em		12	21.1	3Pf
	20	15.8	1Of*		13	21.0	1Of		10	36.3	2Of		23	31.4	1Of		14	15.4	1Od
	20	23.5	2Of*		13	33.3	1Pf		10	55.0	2Pf		23	46.0	1Pf		14	27.7	1Pd
	20	26.7	1Pf*		15	53.0	2Em		15	27.3	1Ed*	22	3	12.4	2Ed*		16	36.5	1Of
	20	38.5	2Pf*	13	0	48.2	1Em		15	49.3	4Od		6	9.4	2Em		16	52.2	1Pf
8	1	50.0	4Ed*		3	47.8	3Od		16	16.8	4Pd		8	33.5	1Ed*		22	12.7	2Od
	5	27.7	4Em*		4	6.6	3Pd		17	55.9	1Em		11	3.4	1Em		22	30.8	2Pd
	7	40.5	1Em*		5	20.7	2Od		18	54.6	4Of		14	21.1	3Od	27	0	49.0	2Of
	10	20.5	2Ed*		5	34.2	2Pd		19	34.7	4Pf		14	44.5	3Pd		1	10.9	2Pf
	10	31.0	3Ed*		6	39.6	3Of		21	4.4	3Ed*		17	13.3	3Of		1	39.6	1Ed*
	13	11.6	2Em*		7	3.5	3Pf	18	0	23.1	3Em		17	42.0	3Pf		4	10.8	1Em
	13	44.2	3Em*		7	56.5	2Of		0	32.9	2Ed*		19	33.1	2Od		5	41.2	4Ed*
	16	33.0	1Od*		8	13.7	2Pf		2	42.7	1Od		19	47.6	1Od		7	37.5	3Ed*
	16	41.0	1Pd*		9	37.9	1Od		2	53.1	1Pd		19	49.9	2Pd		9	35.9	4Em
	18	52.9	1Of*		9	47.1	1Pd		3	28.2	2Em		19	59.0	1Pd		10	36.6	5Ed
	19	3.1	6Im*		11	58.1	1Of		5	3.3	1Of		22	8.4	1Of		11	1.2	3Em
	19	4.0	1Pf*		12	10.6	1Pf		5	17.0	1Pf		22	9.3	2Of		12	52.4	1Od
	23	36.4	6Em		13	13.3	4Ed*		9	43.9	5Ed*		22	10.2	5Ed*		13	4.9	1Pd
9	2	41.1	2Od		16	56.3	4Em		14	4.6	1Ed*		22	23.3	1Pf		14	45.1	2Ed*
	2	53.1	2Pd		21	17.5	5Ed*		14	16.9	5Em		22	29.9	2Pf		15	13.5	1Of
	5	16.7	2Of		21	53.3	2Ed*		16	33.4	1Em	23	2	50.1	5Em		15	22.8	5Em
	5	32.3	2Pf		23	25.7	1Em		16	53.5	2Od		3	12.5	4Od		15	29.4	1Pf
	6	18.0	1Em	14	0	46.8	2Em		17	8.9	2Pd		3	43.7	4Pd		17	44.1	2Em
	8	51.2	5Ed*		1	43.2	5Em		19	29.6	2Of		6	18.6	4Of	28	0	16.8	1Ed*
	9	10.5	3Od		2	27.1	3Ed*		19	43.8	3Od		7	2.5	4Pf		2	48.3	1Em
	9	27.4	3Pd		5	43.6	3Em		19	48.8	2Pf		7	10.7	1Ed*		6	17.0	3Od
	10	44.4	4Od		8	14.9	1Od		20	5.4	3Pd		9	40.9	1Em		6	43.0	3Pd
	11	6.1	4Pd		8	24.3	1Pd		22	35.8	3Of		12	5.6	2Ed*		7	5.9	2Od
	12	2.1	3Of		10	35.1	1Of		23	2.7	3Pf		13	.3	3Ed*		7	24.4	2Pd
	12	24.0	3Pf		10	47.9	1Pf	19	0	36.5	4Ed*		15	3.1	2Em		9	9.4	3Of
	13	9.1	5Em		14	13.9	2Od		1	19.7	1Od		16	22.0	3Em		9	40.7	3Pf
	13	48.5	4Of		14	27.9	2Pd		1	30.3	1Pd		18	24.5	1Od		9	42.2	2Of
	14	22.3	4Pf		16	49.8	2Of		3	40.3	1Of		18	36.2	1Pd		10	4.6	2Pf
	15	10.0	1Od		17	7.5	2Pf		3	54.2	1Pf		20	45.4	1Of		11	29.3	1Od
	15	18.3	1Pd		22	3.3	1Em		4	24.4	4Em		21	.5	1Pf		11	42.1	1Pd
	17	29.9	1Of		22	7.6	4Od		9	26.1	2Ed*	24	4	26.3	2Od		13	50.5	1Of
	17	41.4	1Pf		22	33.3	4Pd		12	21.9	2Em		4	43.6	2Pd		14	6.6	1Pf
	19	13.7	2Ed*	15	1	6.5	3Od		12	41.8	1Ed*		5	47.9	1Ed*		14	35.7	4Od
	22	5.4	2Em		1	12.6	4Of		15	10.9	1Em		7	2.5	2Of		15	10.5	4Pd
10	4	55.6	1Em		1	26.3	3Pd		18	23.0	3Ed*		7	23.6	2Pf		17	42.5	4Of
	7	49.7	3Ed*		1	50.7	4Pf		21	42.8	3Em		8	18.4	1Em		18	30.0	4Pf
	11	4.1	3Em		3	58.4	3Of		23	56.7	1Od		11	39.8	3Od		22	54.0	1Ed*
	11	34.3	2Od		4	23.3	3Pf	20	0	7.5	1Pd		11	59.7	4Ed*		23	38.3	2Ed*
	11	46.8	2Pd		6	46.5	2Ed*		1	46.7	2Od		12	4.1	3Pd	29	1	25.7	1Em
	13	46.9	1Od		6	51.8	1Od		2	2.6	2Pd		14	32.0	3Of		2	37.8	2Em
	13	55.5	1Pd		7	1.5	1Pd		2	17.3	1Of		15	1.6	3Pf		4	56.2	3Ed*
	14	10.0	2Of		9	12.2	1Of		2	31.5	1Pf		15	52.2	4Em		8	20.7	3Em
	14	26.1	2Pf		9	25.2	1Pf		4	22.8	2Of		17	1.5	1Od		10	6.3	1Od
	16	7.0	1Of		9	40.6	2Em		4	42.5	2Pf		17	13.4	1Pd		10	19.2	1Pd
	16	18.7	1Pf		18	12.9	1Ed*		9	.0	7Pd		18	46.6	6Im		12	27.5	1Of
	19	31.7	4Ed*		20	40.8	1Em		9	30.9	4Od		19	22.4	1Of		12	43.8	1Pf
	22	56.5	7Im		23	7.1	2Od		10	.3	4Pd		19	37.7	1Pf		15	59.0	2Od
	23	12.0	4Em		23	21.6	2Pd		11	19.0	1Ed*		20	58.8	2Ed*		16	18.1	2Pd
11	3	33.1	1Em		23	45.7	3Ed*		12	36.6	4Of		23	56.8	2Em		16	51.3	5Od
	4	6.9	2Ed*	16	1	43.1	2Of		13	18.7	4Pf	25	0	17.8	6Em		17	45.4	5Pd
	4	44.5	7Em		2	1.3	2Pf		13	48.4	1Em		4	25.0	5Od		18	35.4	2Of
	6	29.1	3Od		3	3.4	3Em		15	22.3	7Pf		4	25.1	1Ed*		18	58.2	2Pf
	6	47.0	3Pd		3	32.2	5Od		15	58.6	5Od		5	14.1	5Pd		20	16.2	5Of
	6	59.2	2Em		4	11.1	5Pd		16	42.6	5Pd		6	55.8	1Em		21	31.2	1Ed*
	9	20.9	3Of		5	28.8	1Od		17	2.5	3Od		7	48.2	5Of		21	40.7	5Pf
	9	43.8	3Pf		5	38.7	1Pd		17	25.0	3Pd		9	8.2	5Pf		23	22.8	4Ed*
	12	23.9	1Od		6	52.2	5Of		18	19.3	2Ed*		10	18.9	3Ed*	30	0	3.2	1Em
	12	32.7	1Pd		6	54.9	4Ed*		19	20.2	5Of		13	19.5	2Od		3	19.5	4Em
	14	44.0	1Of		7	49.2	1Of		19	54.6	3Of		13	37.2	2Pd		3	35.6	3Od
	14	56.0	1Pf		8	1.8	5Pf		20	22.3	3Pf		13	41.6	3Em		4	2.5	3Pd
	15	5.9	5Od		8	2.4	1Pf		20	35.3	5Pf		15	38.5	1Od		6	28.1	3Of
	15	39.5	5Pd		10	40.4	4Em		21	15.6	2Em		15	50.6	1Pd		7	.2	3Pf
	18	24.0	5Of		15	39.7	2Ed*		22	33.6	1Od		15	55.8	2Of		8	31.5	2Ed*
	19	27.9	5Pf		16	50.1	1Ed*		22	44.7	1Pd		16	17.3	2Pf		8	43.3	1Od

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	8	56.4	1Pd		20	52.0	3Ed*		14	8.7	3Od	14	0	49.0	1Ed*		20	31.2	1Em
	11	4.5	1Of	5	0	19.1	3Em		14	39.4	3Pd		1	23.0	2Ed*		20	47.5	2Pd
	11	21.0	1Pf		1	48.0	1Od		16	30.2	4Of		3	24.4	1Em		21	.7	6Pd
	11	31.4	2Em		2	2.2	1Pd		17	1.6	3Of		4	27.1	2Em		23	.3	2Of
	20	8.4	1Ed*		3	31.8	2Od		17	23.6	4Pf		7	25.0	3Ed*		23	27.8	2Pf
	22	40.6	1Em		3	52.4	2Pd		17	37.2	3Pf		10	55.7	3Em	19	0	41.7	3Od
					4	9.6	1Of		18	52.8	1Od		11	57.6	1Od		1	15.6	3Pd
Mai	h	m			4	27.0	1Pf		19	7.9	1Pd		12	13.5	1Pd		3	11.3	6Pf
1	0	52.2	2Od		6	8.3	2Of		21	14.6	1Of		14	19.6	1Of		3	13.5	4Ed
	1	11.7	2Pd		6	32.7	2Pf		21	32.8	1Pf		14	38.4	1Pf		3	34.9	3Of
	2	14.8	3Ed*		10	45.9	4Ed*		22	43.6	2Ed*		17	43.9	2Od		4	13.3	3Pf
	3	28.7	2Of		13	14.4	1Ed*	10	1	46.5	2Em		18	7.1	2Pd		5	2.4	1Od
	3	51.9	2Pf		14	46.5	4Em		6	20.3	1Ed*		20	20.8	2Of		5	19.1	1Pd
	5	40.2	3Em		15	47.8	1Em		8	54.9	1Em		20	47.4	2Pf		7	21.9	4Em
	7	20.2	1Od		19	31.5	3Od		12	47.8	3Ed*		23	26.1	1Ed*		7	24.6	1Of
	7	33.6	1Pd		20	.7	3Pd		15	4.4	2Od	15	0	45.1	4Od		7	44.0	1Pf
	8	17.3	4Od		20	4.1	2Ed*		15	26.6	2Pd		1	29.4	4Pd		12	55.5	2Ed*
	8	53.8	4Pd		22	24.2	3Of		16	17.2	3Em		2	1.8	1Em		16	1.0	2Em
	9	41.5	1Of		22	58.5	3Pf		17	29.8	1Od		3	54.0	4Of		16	32.0	1Ed*
	9	58.2	1Pf		23	5.9	2Em		17	41.2	2Of		4	49.7	4Pf		19	8.6	1Em
	11	24.5	4Of	6	0	25.0	1Od		17	45.0	1Pd		6	4.5	3Od		23	20.7	3Ed*
	12	13.5	4Pf		0	39.3	1Pd		18	6.9	2Pf		6	37.2	3Pd	20	0	48.2	5Ed
	17	24.6	2Ed*		2	46.6	1Of		18	37.0	6Im		8	57.6	3Of		2	53.3	3Em
	18	45.6	1Ed*		3	4.1	1Pf		19	51.6	1Of		9	35.0	3Pf		3	39.3	1Od
	20	25.0	2Em		11	29.2	5Ed		20	9.9	1Pf		10	16.1	2Ed*		3	56.2	1Pd
	21	18.1	1Em		11	51.5	1Ed*		22	9.0	4Ed*		10	34.5	1Od		5	16.5	2Od
	23	2.9	5Ed		12	24.9	2Od		23	55.5	5Ed		10	50.6	1Pd		5	41.0	2Pd
2	0	54.3	3Od		12	46.0	2Pd	11	0	27.8	6Em		12	21.9	5Ed		5	58.9	5Em
	1	21.9	3Pd		14	25.2	1Em		2	13.0	4Em		12	56.6	1Of		6	1.6	1Of
	3	46.8	3Of		15	1.5	2Of		4	57.5	1Ed*		13	15.5	1Pf		6	21.1	1Pf
	3	55.0	5Em		15	26.2	2Pf		4	57.9	5Em		13	20.6	2Em		7	53.5	2Of
	4	19.6	3Pf		16	26.7	5Em		7	32.3	1Em		17	28.6	5Em		8	21.2	2Pf
	5	57.2	1Od		18	10.6	3Ed*		7	36.7	2Ed*		22	3.3	1Ed*		12	8.2	4Od
	6	10.7	1Pd		19	40.4	4Od		10	40.1	2Em	16	0	39.1	1Em		12	55.1	4Pd
	8	18.6	1Of		20	20.3	4Pd		11	27.3	3Od		2	37.1	2Od		15	9.1	1Ed*
	8	35.4	1Pf		21	38.5	3Em		11	58.7	3Pd		3	.6	2Pd		15	17.8	4Of
	9	45.4	2Od		22	48.3	4Of		14	20.2	3Of		4	43.6	3Ed*		16	15.5	4Pf
	9	55.2	7Im		23	1.9	1Od		14	56.5	3Pf		5	14.0	2Of		17	45.9	1Em
	10	5.2	2Pd		23	16.5	1Pd		16	6.7	1Od		5	40.9	2Pf		21	48.7	2Ed*
	12	21.9	2Of		23	40.3	4Pf		16	22.1	1Pd		8	14.9	3Em		22	.3	3Od
	12	45.5	2Pf	7	1	23.6	1Of		18	28.6	1Of		9	11.5	1Od		22	34.7	3Pd
	16	30.6	7Em		1	41.3	1Pf		18	47.0	1Pf		9	27.7	1Pd	21	0	53.5	3Of
	17	4.3	4Ed*		4	57.3	2Ed*		19	58.9	7Pd		9	32.0	4Ed		0	54.4	2Em
	17	22.8	1Ed*		7	59.4	2Em		23	57.6	2Od		11	33.6	1Of		1	32.4	3Pf
	19	55.5	1Em		10	28.7	1Ed*	12	0	20.1	2Pd		11	52.7	1Pf		2	16.3	1Od
	21	3.1	4Em		13	2.7	1Em		2	34.4	2Of		13	39.1	4Em		2	33.3	1Pd
	21	4.5	6Pd		16	50.1	3Od		2	34.9	7Pf		19	9.3	2Ed*		4	38.6	1Of
	23	33.4	3Ed*		17	20.1	3Pd		3	.4	2Pf		20	40.5	1Ed*		4	58.2	1Pf
3	2	17.8	2Ed*		19	42.9	3Of		3	34.6	1Ed*		22	14.1	2Em		13	46.3	1Ed*
	2	59.7	3Em		20	17.8	3Pf		6	9.6	1Em		23	16.5	1Em		14	9.7	2Od
	3	6.0	6Pf		21	18.1	2Od		7	3.5	4Od	17	3	23.1	3Od		14	34.4	2Pd
	4	34.1	1Od		21	38.9	1Od		7	46.4	4Pd		3	56.4	3Pd		16	23.2	1Em
	4	47.9	1Pd		21	39.5	2Pd		10	6.4	3Ed*		6	16.2	3Of		16	46.7	2Of
	5	18.7	2Em		21	53.6	1Pd		10	12.1	4Of		6	54.1	3Pf		17	14.7	2Pf
	6	55.6	1Of		23	54.7	2Of		11	6.7	4Pf		7	48.5	1Od		20	39.3	3Ed*
	7	12.6	1Pf	8	0	.6	1Of		13	36.5	3Em		8	4.8	1Pd		20	55.1	4Ed
	15	60.0	1Ed*		0	18.4	1Pf		14	43.7	1Od		10	10.6	1Of	22	0	12.4	3Em
	18	33.0	1Em		0	19.8	2Pf		14	59.2	1Pd		10	29.8	1Pf		0	53.3	1Od
	18	38.6	2Od		4	27.4	4Ed*		16	29.8	2Ed*		11	30.2	2Od		1	4.7	4Em
	18	58.8	2Pd		8	29.8	4Em		17	5.6	1Of		11	54.1	2Pd		1	10.4	1Pd
	21	15.1	2Of		9	5.9	1Ed*		17	24.2	1Pf		14	7.1	2Of		3	15.6	1Of
	21	39.1	2Pf		11	40.1	1Em		19	33.6	2Em		14	34.3	2Pf		3	35.3	1Pf
	22	12.9	3Od		13	50.4	2Ed*	13	2	11.8	1Ed*		18	26.6	4Od		6	41.8	2Ed*
	22	41.3	3Pd		15	29.2	3Ed*		4	47.0	1Em		18	36.7	5Od		7	3.0	5Od
4	1	5.5	3Of		16	53.0	2Em		6	10.3	5Od		19	12.3	4Pd		8	18.4	5Pd
	1	39.1	3Pf		17	44.0	5Od		7	18.1	5Pd		19	17.6	1Ed*		9	47.9	2Em
	1	58.8	4Od		18	47.4	5Pd		8	45.9	3Od		19	48.4	5Pd		10	35.2	5Of
	2	37.1	4Pd		18	57.8	3Em		8	50.7	2Od		21	35.9	4Of		12	15.5	5Pf
	3	11.1	1Od		20	15.9	1Od		9	13.6	2Pd		21	53.9	1Em		12	23.4	1Ed*
	3	25.0	1Pd		20	30.7	1Pd		9	18.0	3Pd		22	7.4	5Of		15	.5	1Em
	5	6.4	4Of		21	11.9	5Of		9	39.7	5Of		22	32.6	4Pf		19	18.9	3Od
	5	17.7	5Od		22	37.6	1Of		11	15.1	5Pf		23	45.5	5Pf		19	53.9	3Pd
	5	32.6	1Of		22	44.1	5Pf		11	27.6	2Of	18	2	2.1	3Ed*		22	12.2	3Of
	5	49.8	1Pf		22	55.6	1Pf		11	38.9	3Of		4	2.4	2Ed*		22	51.5	3Pf
	5	57.0	4Pf	9	6	11.3	2Od		11	53.9	2Pf		5	34.1	3Em		23	2.8	2Od
	6	16.5	5Pd		6	33.0	2Pd		12	15.7	3Pf		6	25.4	1Od		23	27.8	2Pd
	8	44.0	5Of		7	43.1	1Ed*		13	20.6	1Od		6	42.0	1Pd		23	30.2	1Od
	10	12.6	5Pf		8	47.9	2Of		13	36.4	1Pd		7	7.5	2Em		23	47.5	1Pd
	11	11.0	2Ed*		9	13.3	2Pf		15	42.6	1Of		8	47.6	1Of	23	1	39.9	2Of
	14	12.3	2Em		10	17.5	1Em		15	50.5	4Ed		9	6.9	1Pf		1	52.6	1Of
	14	37.2	1Ed*		13	22.0	4Od		16	1.3	1Pf		17	54.8	1Ed*		2	8.1	2Pf
	17	10.4	1Em		14	3.4	4Pd		19	56.1	4Em		20	23.4	2Od		2	12.3	1Pf

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	5	49.7	4Od		12	35.0	3Ed*		5	51.7	3Od		6	30.6	1Of		23	35.6	1Of
	6	37.8	4Pd		16	9.5	3Em		6	28.9	3Pd		6	51.0	1Pf		23	56.1	1Pf
	8	59.6	4Of		16	35.1	1Od		8	45.4	3Of		15	40.4	1Ed*	10	0	45.6	4Ed
	9	58.2	4Pf		16	52.9	1Pd		9	26.5	3Pf		15	54.3	2Od		5	1.0	4Em
	11	.6	1Ed*		18	14.3	2Ed*		9	39.9	1Od		16	21.3	2Pd		8	46.0	1Ed*
	13	37.9	1Em		18	57.6	1Of		9	58.3	1Pd		18	19.7	1Em		11	5.5	2Ed*
	15	28.3	7Ed		19	17.7	1Pf		12	2.6	1Of		18	31.7	2Of		11	25.8	1Em
	15	34.9	2Ed*		21	21.4	2Em		12	22.9	1Pf		19	1.4	2Pf		14	14.3	2Em
	17	47.0	7Ef	28	4	6.3	1Ed*		13	14.8	2Od		22	17.4	4Od		16	24.6	3Od
	17	57.9	3Ed*		6	44.4	1Em		13	41.4	2Pd		23	7.8	3Ed		17	3.1	3Pd
	18	41.3	2Em		10	35.4	2Od		15	52.2	2Of		23	10.0	4Pd		19	18.6	3Of
	20	24.9	7Im		11	1.4	2Pd		16	21.6	2Pf	6	1	28.8	4Of		19	49.8	1Od
	21	31.5	3Em		11	14.6	3Od		19	41.1	4Ed		2	30.1	4Pf		20	.5	3Pf
	22	7.2	1Od		11	51.0	3Pd		21	11.9	1Ed*		2	44.1	3Em		20	8.9	1Pd
	22	24.6	1Pd		13	12.6	2Of		23	50.7	1Em		2	44.8	1Od		22	12.6	1Of
24	0	29.6	1Of		13	41.6	2Pf		23	54.7	4Em		3	3.7	1Pd		22	33.1	1Pf
	0	49.4	1Pf		14	8.1	3Of	2	0	15.7	7Od		5	7.6	1Of	11	3	26.8	2Od
	2	39.8	7Em		14	48.6	3Pf		3	24.5	7Of		5	28.1	1Pf		3	54.4	2Pd
	7	56.0	2Od		15	12.0	1Od		4	30.7	3Ed		8	26.1	2Ed*		6	4.4	2Of
	8	21.2	2Pd		15	30.0	1Pd		5	46.8	2Ed*		11	34.6	2Em		6	34.4	2Pf
	9	37.7	1Ed*		17	12.8	4Od		6	16.2	7Pd		14	17.6	1Ed*		7	23.1	1Ed*
	10	33.1	2Of		17	34.6	1Of		8	6.4	3Em		16	57.0	1Em		9	40.4	4Od
	11	1.5	2Pf		17	54.7	1Pf		8	16.9	1Od		21	47.4	3Od		10	3.0	1Em
	12	15.2	1Em		18	3.0	4Pd		8	35.4	1Pd		22	25.6	3Pd		10	34.1	4Pd
	13	14.5	5Ed		20	23.3	4Of		8	54.7	2Em	7	0	41.3	3Of		12	52.4	4Of
	14	36.6	4Ed		21	23.3	4Pf		10	39.6	1Of		0	47.4	2Od		13	48.2	6Ed
	16	37.4	3Od	29	1	40.9	5Ed		10	60.0	1Pf		1	14.6	2Pd		13	54.1	4Pf
	17	12.9	3Pd		2	43.4	1Ed*		12	20.0	7Pf		1	21.8	1Od		14	59.9	5Ed
	18	28.6	5Em		3	7.4	2Ed*		14	7.2	5Ed		1	23.0	3Pf		15	3.5	3Ed
	18	47.4	4Em		5	21.7	1Em		19	26.5	5Em		1	40.7	1Pd		16	50.6	6Ef*
	19	30.8	3Of		6	14.8	2Em		19	49.1	1Ed*		2	33.6	5Ed		17	50.7	6Im
	20	10.6	3Pf		6	57.8	5Em		22	8.0	2Od		3	24.9	2Of		18	26.8	1Od
	20	44.2	1Od		9	53.6	3Ed*		22	28.0	1Em		3	44.6	1Of		18	40.3	3Em
	21	1.7	1Pd		13	28.5	3Em		22	34.7	2Pd		3	54.7	2Pf		18	46.0	1Pd
	23	6.6	1Of		13	49.0	1Od	3	0	45.4	2Of		4	5.1	1Pf		19	58.6	2Ed*
	23	26.5	1Pf		14	7.1	1Pd		1	14.9	2Pf		7	4.1	4Ed		20	22.5	5Em
25	0	28.1	2Ed*		16	11.6	1Of		3	10.3	3Od		7	54.8	5Em		20	49.6	1Of
	3	34.7	2Em		16	31.8	1Pf		3	47.9	3Pd		11	19.0	4Em		21	10.1	1Pf
	8	14.9	1Ed*		19	28.6	2Od		4	35.8	4Od		12	54.7	1Ed*		23	7.5	2Em
	10	52.5	1Em		19	54.7	2Pd		5	27.7	4Pd		15	34.2	1Em		23	34.4	6Em
	15	16.4	3Ed*		22	5.8	2Of		6	4.0	3Of		17	19.3	2Ed*	12	6	.2	1Ed*
	16	49.1	2Od		22	34.9	2Pf		6	45.4	3Pf		20	26.4	3Ed		8	40.2	1Em
	17	14.6	2Pd	30	1	20.5	1Ed*		6	53.9	1Od		20	27.8	2Em		12	20.0	2Od
	18	50.5	3Em		1	59.6	4Ed		7	12.5	1Pd		23	58.8	1Od		12	47.6	2Pd
	19	21.1	1Od		3	58.9	1Em		7	47.0	4Of	8	0	2.8	3Em		13	43.1	3Od
	19	26.3	2Of		6	12.4	4Em		8	47.9	4Pf		0	17.8	1Pd		14	21.8	3Pd
	19	38.8	1Pd		8	33.2	3Od		9	16.6	1Of		2	21.6	1Of		14	57.6	2Of
	19	54.8	2Pf		9	10.0	3Pd		9	37.0	1Pf		2	42.1	1Pf		15	27.6	2Pf
	21	43.6	1Of		11	26.8	3Of		14	39.9	2Ed*		9	40.5	2Od		16	37.2	3Of
	22	3.6	1Pf		12	.5	2Ed*		16	57.7	6Od		10	7.9	2Pd		17	3.8	1Od
	23	31.2	4Od		12	7.6	3Pf		17	48.0	2Em		11	31.8	1Ed*		17	19.2	3Pf
26	0	20.4	4Pd		12	26.0	1Od		18	26.2	1Ed*		12	18.1	2Of		17	23.0	1Pd
	2	41.5	4Of		12	44.2	1Pd		18	52.3	6Of		12	47.9	2Pf		18	27.1	4Ed
	3	40.8	4Pf		14	48.6	1Of		20	45.1	6Pd		14	11.4	1Em		19	26.6	1Of
	6	52.0	1Ed*		15	8.1	2Em		21	5.2	1Em		15	58.9	4Od		19	47.1	1Pf
	9	21.2	2Ed*		15	8.8	1Pf	4	1	49.3	3Ed		16	52.1	4Pd		22	42.9	4Em
	9	29.8	1Em		23	57.7	1Ed*		2	49.8	6Pf		19	6.0	3Od	13	4	37.3	1Ed*
	12	28.0	2Em	31	2	36.2	1Em		5	25.2	3Em		19	10.6	4Of		4	51.7	2Ed*
	13	56.0	3Od		4	21.7	2Od		5	30.9	1Od		19	44.4	3Pd		7	17.4	1Em
	14	32.0	3Pd		4	48.1	2Pd		5	49.5	1Pd		20	12.1	4Pf		8	.7	2Em
	15	13.2	6Ed		6	59.0	2Of		7	1.1	2Od		21	59.9	3Of		12	22.1	3Ed
	16	49.5	3Of		7	12.1	3Ed*		7	28.0	2Pd		22	35.8	1Od		15	40.8	1Od
	17	10.1	6Ef*		7	28.2	2Pf		7	53.6	1Of		22	41.8	3Pf		15	59.0	3Em
	17	29.6	3Pf		7	55.8	5Od		8	14.0	1Pf		22	54.8	1Pd		16	.1	1Pd
	17	58.1	1Od		9	17.3	5Pd		9	38.5	2Of	9	0	58.6	1Of		18	3.6	1Of
	18	15.8	1Pd		10	47.5	3Em		10	8.1	2Pf		1	19.1	1Pf		18	24.1	1Pf
	18	21.5	6Im		10	54.3	4Od		13	22.6	4Ed		2	12.4	2Ed*		21	13.1	2Od
	19	29.4	5Od		11	3.0	1Od		17	3.3	1Ed*		5	21.0	2Em		21	14.9	5Od
	20	20.6	1Of		11	21.3	1Pd		17	36.9	4Em		8	48.5	5Od		21	40.8	2Pd
	20	40.6	1Pf		11	30.5	5Of		19	42.5	1Em		10	8.9	1Ed*		22	42.1	5Pd
	20	48.1	5Pd		11	45.4	4Pd		20	22.1	5Od		10	14.3	5Pd		23	9.0	7Ed
	23	2.8	5Of		13	14.0	5Pf		21	46.0	5Pd		12	25.7	5Of		23	50.8	2Of
27	0	12.3	6Em		13	25.6	1Of		23	33.0	2Ed*		12	48.6	1Em	14	0	20.8	2Pf
	0	45.0	5Pf		13	45.9	1Pf		23	58.1	5Of		14	10.5	5Pf		0	53.2	5Of
	1	42.3	2Od		14	5.1	4Of	5	0	28.9	3Od		17	45.0	3Ed		2	38.0	5Pf
	2	8.0	2Pd		15	5.6	4Pf		1	6.7	3Pd		18	33.7	2Od		3	10.4	7Ef
	4	19.5	2Of		20	53.7	2Ed*		1	42.5	5Pf		19	1.1	2Pd		3	14.4	1Ed*
	4	48.2	2Pf		22	34.8	1Ed*		2	41.3	2Em		21	11.2	2Of		3	21.9	4Od
	5	29.1	1Ed*						3	22.7	3Of		21	12.8	1Od		4	16.0	4Pd
	8	7.1	1Em	Juin	h	m			4	4.2	3Pf		21	21.6	3Em		5	45.7	7Im
	8	18.1	4Ed	1	0	1.4	2Em		4	7.9	1Od		21	31.9	1Pd		5	54.6	1Em
	12	29.9	4Em		1	13.5	1Em		4	26.6	1Pd		21	41.2	2Pf		6	34.2	4Of

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	7	35.9	4Pf	19	4	17.8	3Ed		11	52.8	2Pd		19	6.2	3Of		9	15.4	2Ed*
	11	1.7	3Od		7	22.8	1Od		12	32.3	7Of		19	15.4	1Pd		9	27.7	3Ed
	11	24.3	7Em		7	42.2	1Pd		13	25.4	1Ed*		19	47.5	3Pf		12	1.3	1Od
	11	40.5	3Pd		7	54.8	3Em		14	3.0	2Of		19	49.6	4Od		12	20.3	1Pd
	13	44.8	2Ed*		8	45.6	2Od		14	32.7	2Pf		20	43.7	4Pd		12	23.8	2Em
	13	55.8	3Of		9	13.5	2Pd		15	13.1	7Pd		21	18.9	1Of		13	3.8	3Em
	14	17.8	1Od		9	45.7	1Of		16	6.1	1Em		21	38.6	1Pf		14	24.1	1Of
	14	37.1	1Pd		10	6.0	1Pf		17	13.2	4Ed		22	36.5	6Em		14	43.3	1Pf
	14	37.9	3Pf		11	23.5	2Of		20	46.3	7Pf		23	3.2	4Of		23	36.2	1Ed*
	16	40.6	1Of		11	53.4	2Pf		21	29.3	4Em	28	0	3.4	4Pf	3	1	37.1	2Od
	16	53.8	2Em		14	45.0	4Od		21	34.5	3Od		6	30.8	1Ed*		2	4.1	2Pd
	17	1.1	1Pf		15	30.4	6Od		22	13.4	3Pd		6	36.0	2Ed*		2	17.0	1Em
15	1	51.6	1Ed*		15	39.4	4Pd	24	0	28.0	1Od		9	11.6	1Em		4	15.2	2Of
	4	31.8	1Em		17	57.8	4Of		0	28.9	3Of		9	44.8	2Em		4	44.0	2Pf
	6	6.2	2Od		18	41.2	6Of		0	47.3	1Pd		14	50.6	3Ed		7	12.7	4Od
	6	34.0	2Pd		18	57.0	1Ed*		1	10.6	3Pf		17	33.1	1Od		8	5.9	4Pd
	8	43.9	2Of		18	59.2	4Pf		2	50.8	1Of		17	52.4	1Pd		8	7.3	3Od
	9	13.9	2Pf		20	8.4	6Pd		3	10.8	1Pf		18	27.1	3Em		8	45.2	3Pd
	9	40.6	3Ed		21	37.5	1Em		3	56.7	2Ed*		19	55.9	1Of		10	26.8	4Of
	12	8.6	4Ed	20	1	17.3	2Ed*		7	5.7	2Em		20	15.6	1Pf		10	38.4	1Od
	12	54.8	1Od		2	4.8	6Pf		12	2.5	1Ed*		22	57.6	2Od		10	57.3	1Pd
	13	14.1	1Pd		2	57.4	3Od		14	43.2	1Em		23	25.1	2Pd		11	2.1	3Of
	13	17.7	3Em		3	36.3	3Pd		20	13.4	3Ed	29	1	35.7	2Of		11	25.6	4Pf
	15	17.6	1Of		4	26.4	2Em		20	18.2	2Od		2	4.9	2Pf		11	42.5	3Pf
	15	38.1	1Pf		5	51.7	3Of		20	45.9	2Pd		4	36.2	4Ed		13	1.1	1Of
	16	24.6	4Em		5	59.9	1Od		22	56.2	2Of		5	7.9	1Ed*		13	20.3	1Pf
	22	38.0	2Ed*		6	19.3	1Pd		23	5.0	1Od		7	48.7	1Em		18	8.5	2Ed*
16	0	28.7	1Ed*		6	33.7	3Pf		23	24.3	1Pd		8	51.8	4Em		21	16.8	2Em
	1	47.0	2Em		8	22.7	1Of		23	25.8	2Pf		13	30.2	3Od		22	13.3	1Ed*
	3	8.9	1Em		8	43.0	1Pf		23	50.3	3Em		14	8.6	3Pd	4	0	54.0	1Em
	3	26.3	5Ed		15	52.7	5Ed	25	1	27.8	1Of		15	29.1	2Ed*		5	12.1	5Ed
	8	20.3	3Od		17	34.1	1Ed*		1	47.8	1Pf		16	10.2	1Od		6	46.3	3Ed
	8	49.8	5Em		17	38.8	2Od		2	8.0	4Od		16	24.8	3Of		9	15.4	1Od
	8	59.2	3Pd		18	6.6	2Pd		3	2.4	4Pd		16	29.4	1Pd		9	34.3	1Pd
	11	14.4	3Of		20	14.7	1Em		4	19.1	5Ed		16	45.6	5Ed		10	22.1	3Em
	11	31.8	1Od		20	16.6	2Of		5	21.4	4Of		17	5.9	3Pf		10	30.2	2Od
	11	51.2	1Pd		20	46.5	2Pf		6	22.1	4Pf		18	32.9	1Of		10	33.8	5Em
	11	56.5	3Pf		21	16.5	5Em		9	42.8	5Em		18	37.8	2Em		10	57.1	2Pd
	13	54.6	1Of		23	31.7	4Ed		10	39.6	1Ed*		18	52.5	1Pf		11	38.1	1Of
	14	15.1	1Pf	21	1	36.3	3Ed		12	49.8	2Ed*		22	8.5	5Em		11	57.2	1Pf
	14	59.4	2Od		3	47.8	4Em		13	20.3	1Em	30	3	45.0	1Ed*		13	8.4	2Of
	15	27.2	2Pd		4	36.9	1Od		15	58.7	2Em		6	25.8	1Em		13	37.0	2Pf
	17	37.1	2Of		4	56.3	1Pd		18	53.1	3Od		7	50.8	2Od		15	59.3	4Ed
	18	7.1	2Pf		5	13.4	3Em		19	31.8	3Pd		8	18.1	2Pd		20	13.8	4Em
	21	3.4	4Od		6	59.7	1Of		21	42.0	1Od		10	28.9	2Of		20	50.4	1Ed*
	21	57.8	4Pd		7	19.9	1Pf		21	47.6	3Of		10	58.0	2Pf		23	31.1	1Em
	23	5.8	1Ed*		10	10.4	2Ed*		22	1.4	1Pd		12	9.1	3Ed	5	3	1.6	2Ed*
17	0	16.0	4Of		13	19.5	2Em		22	29.1	3Pf		13	31.1	4Od		5	25.9	3Od
	1	17.6	4Pf		16	11.2	1Ed*	26	0	4.8	1Of		14	24.8	4Pd		6	3.4	3Pd
	1	46.1	1Em		18	51.8	1Em		0	24.7	1Pf		14	47.2	1Od		6	9.8	2Em
	6	59.2	3Ed	22	0	15.9	3Od		5	11.3	2Od		15	6.4	1Pd		6	37.9	7Ed
	7	31.1	2Ed*		0	54.9	3Pd		5	39.0	2Pd		15	45.5	3Em		7	52.5	1Od
	10	8.8	1Od		2	31.9	2Od		7	49.3	2Of		16	45.0	4Of		8	11.3	1Pd
	10	28.2	1Pd		2	59.7	2Pd		8	18.9	2Pf		17	10.0	1Of		8	20.7	3Of
	10	36.3	3Em		3	10.3	3Of		9	16.7	1Ed*		17	29.5	1Pf		9	.8	3Pf
	10	40.2	2Em		3	13.9	1Od		10	54.7	4Ed		17	44.6	4Pf		10	15.2	1Of
	12	31.6	1Of		3	33.3	1Pd		11	57.4	1Em						10	34.1	1Pf
	12	52.0	1Pf		3	52.2	3Pf		15	10.6	4Em	Jui.	h	m			11	37.9	7Ef
	21	42.9	1Ed*		5	9.8	2Of		17	32.0	3Ed	1	0	22.2	2Ed*		13	28.2	7Im
	23	52.5	2Od		5	36.7	1Of		20	19.1	1Od		2	22.1	1Ed*		14	17.0	6Od
18	0	20.3	2Pd		5	39.6	2Pf		20	38.4	1Pd		3	30.9	2Em		18	16.2	6Of
	0	23.2	1Em		5	56.9	1Pf		21	8.7	3Em		5	2.8	1Em		18	54.8	7Em
	2	30.3	2Of		8	26.5	4Od		21	42.9	2Ed*		10	48.8	3Od		19	4.1	6Pd
	3	.3	2Pf		9	21.0	4Pd		22	41.9	1Of		11	26.9	3Pd		19	23.3	2Od
	5	38.8	3Od		11	39.6	4Of		23	1.7	1Pf		13	24.3	1Od		19	27.5	1Ed*
	5	50.1	4Ed		12	40.7	4Pf	27	0	51.3	2Em		13	43.4	1Pd		19	50.1	2Pd
	6	17.8	3Pd		14	48.3	1Ed*		7	53.8	1Ed*		13	43.5	3Of		22	1.6	2Of
	8	33.1	3Of		17	28.9	1Em		10	34.2	5Od		14	24.2	3Pf		22	8.1	1Em
	8	45.8	1Od		19	3.5	2Ed*		10	34.5	1Em		15	47.0	1Of		22	29.9	2Pf
	9	5.2	1Pd		22	7.7	5Od		12	2.1	5Pd		16	6.4	1Pf	6	0	54.2	4Od
	9	15.1	3Pf		22	12.6	2Em		12	34.2	6Ed		16	43.9	2Od		0	58.4	6Pf
	9	41.3	5Od		22	54.9	3Ed		14	4.5	2Od		17	11.1	2Pd		1	46.8	4Pd
	10	6.3	4Em		23	36.0	5Pd		14	15.8	5Of		19	22.0	2Of		4	4.9	3Ed
	11	8.7	1Of	23	1	48.3	5Of		14	32.0	2Pd		19	51.0	2Pf		4	8.6	4Of
	11	9.3	5Pd		1	50.9	1Od		15	57.5	5Pf		22	17.8	4Ed		5	6.6	4Pf
	11	29.0	1Pf		2	10.3	1Pd		16	11.6	3Od		23	.7	5Od		6	29.6	1Od
	13	20.7	5Of		2	31.9	3Em		16	19.9	6Ef*	2	0	27.7	5Pd		6	48.3	1Pd
	15	5.0	5Pf		3	31.5	5Pf		16	42.5	2Of		0	59.2	1Ed*		7	40.3	3Em
	16	24.2	2Ed*		4	13.8	1Of		16	50.2	3Pd		2	32.9	4Em		8	52.2	1Of
	19	33.3	2Em		4	33.8	1Pf		16	57.8	6Im		2	43.3	5Of		9	11.1	1Pf
	20	20.0	1Ed*		8	3.6	7Od		17	11.9	2Pf		3	39.9	1Em		11	27.2	5Od
	23	.4	1Em		11	25.1	2Od		18	56.1	1Od		4	23.0	5Pf		11	54.7	2Ed*

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	12	52.7	5Pd		6	55.9	20d		16	5.7	50f		7	54.6	30d		23	47.6	20d
	15	2.7	2Em		7	21.9	2Pd		16	40.4	10d		8	28.0	3Pd	25	0	10.3	2Pd
	15	10.8	5Of		9	34.3	2Of		16	58.0	1Pd		9	45.9	10d		1	10.8	3Ed*
	16	48.1	5Pf		10	1.7	2Pf		17	36.7	5Pf		10	2.8	1Pd		2	26.3	2Of
	18	4.5	1Ed*		11	9.9	1Ed*		18	10.9	3Em		10	49.9	3Of		2	50.3	2Pf
	20	45.1	1Em		12	17.3	4Od		18	56.6	4Em		11	25.6	3Pf		2	51.6	1Od
7	2	44.5	3Od		13	8.3	4Pd		19	2.9	1Of		12	8.3	1Of		3	7.5	1Pd
	3	21.6	3Pd		13	50.3	1Em		19	20.3	1Pf		12	24.9	1Pf		4	40.7	3Em
	4	16.5	2Od		15	32.2	4Of	16	2	6.7	2Ed*		21	8.1	2Od		4	45.3	4Od
	4	43.1	2Pd		16	28.1	4Pf		4	15.2	1Ed*		21	20.5	1Ed*		5	13.8	1Of
	5	6.6	1Od		20	.6	3Ed		5	13.0	2Em		21	31.9	2Pd		5	29.4	1Pf
	5	25.3	1Pd		22	12.0	1Od		6	55.2	1Em		23	46.7	2Of		5	30.1	4Pd
	5	39.4	3Of		22	30.1	1Pd		13	17.4	3Od	21	0	.0	1Em		8	1.4	4Of
	6	19.0	3Pf		23	27.3	2Ed*		13	52.1	3Pd		0	11.8	2Pf		8	50.2	4Pf
	6	54.8	2Of		23	34.8	3Em		15	17.5	1Od		2	8.8	4Ed		14	25.8	1Ed*
	7	22.9	2Pf	12	0	34.6	1Of		15	35.0	1Pd		6	17.4	4Em		16	18.7	2Ed*
	7	29.3	1Of		0	52.6	1Pf		16	12.6	3Of		6	33.6	3Ed*		17	4.7	1Em
	7	48.0	1Pf		2	34.4	2Em		16	49.6	3Pf		8	23.1	1Od		19	22.7	2Em
	9	40.9	4Ed		9	46.9	1Ed*		17	39.9	1Of		8	39.8	1Pd		23	50.4	3Od
	13	54.7	4Em		12	27.3	1Em		17	57.2	1Pf		10	4.9	3Em	26	0	21.7	3Pd
	16	41.6	1Ed*		15	49.1	2Od		18	28.6	2Od		10	45.4	1Of		1	28.7	1Od
	19	22.2	1Em		16	14.8	2Pd		18	53.4	2Pd		11	1.8	1Pf		1	44.5	1Pd
	20	47.9	2Ed*		18	27.5	2Of		21	7.1	2Of		13	10.1	6Od		2	45.9	3Of
	23	55.7	2Em		18	40.2	3Od		21	33.3	2Pf		13	39.2	2Ed*		3	19.3	3Pf
8	1	23.4	3Ed		18	54.6	2Pf		23	40.5	4Od		16	44.3	2Em		3	50.9	1Of
	3	43.7	1Od		19	16.0	3Pd	17	0	29.4	4Pd		17	30.9	6Pd		4	6.3	1Pf
	4	2.3	1Pd		20	49.1	1Od		2	52.3	1Ed*		17	45.2	6Of		8	40.8	2Od
	4	58.5	3Em		21	4.0	4Ed		2	55.9	4Of		19	57.6	1Ed*		9	3.1	2Pd
	6	6.3	1Of		21	7.1	1Pd		3	49.3	4Pf		22	37.0	1Em		11	19.5	2Of
	6	24.9	1Pf		21	35.3	3Of		5	32.2	1Em		23	30.9	6Pf		11	43.1	2Pf
	13	9.6	2Od		22	13.4	3Pf		10	59.8	2Ed*	22	5	13.2	3Od		13	2.8	1Ed*
	13	36.0	2Pd		23	11.6	1Of		11	56.4	3Ed		5	46.0	3Pd		13	32.0	4Ed
	15	18.7	1Ed*		23	29.5	1Pf		13	54.6	1Od		6	1.2	2Od		13	41.8	7Ed
	15	47.9	2Of	13	1	16.1	4Em		14	5.9	2Em		6	24.7	2Pd		15	41.6	1Em
	16	15.9	2Pf		6	5.2	5Ed		14	11.9	1Pd		6	58.4	5Ed		17	37.7	4Em
	17	38.6	5Ed		8	20.4	2Ed*		15	29.0	3Em		7	.2	1Od		19	24.0	7Im
	17	59.2	1Em		8	24.0	1Ed*		16	17.0	1Of		7	16.7	1Pd		19	25.1	5Ed
	18	35.8	4Od		11	4.3	1Em		16	34.1	1Pf		8	8.6	3Of		22	29.5	3Ed*
	19	27.6	4Pd		11	22.9	5Em		18	31.8	5Ed		8	39.9	2Of	27	0	5.8	1Od
	21	50.4	4Of		11	25.7	6Ed		23	46.7	5Em		8	43.5	3Pf		0	21.4	1Pd
	22	47.4	4Pf		11	27.3	2Em	18	1	29.3	1Ed*		9	4.6	2Pf		0	32.8	5Em
	22	58.6	5Em		17	19.2	3Ed		3	21.7	2Od		9	22.5	1Of		1	11.8	2Ed*
9	0	3.1	3Od		19	26.2	1Od		3	46.3	2Pd		9	38.7	1Pf		1	13.9	7Em
	0	39.8	3Pd		19	44.1	1Pd		4	9.2	1Em		11	3.7	4Od		1	58.6	3Em
	2	20.8	1Od		20	52.9	3Em		6	.3	2Of		11	49.9	4Pd		2	28.0	1Of
	2	39.2	1Pd		21	19.5	6Em		6	26.1	2Pf		12	10.0	5Em		2	43.2	1Pf
	2	58.0	3Of		21	48.7	1Of		8	27.2	4Ed		14	19.5	4Of		4	15.4	2Em
	3	37.2	3Pf		22	6.5	1Pf		10	36.0	3Od		15	10.0	4Pf		11	39.9	1Ed*
	4	43.4	1Of	14	0	42.3	2Od		11	10.1	3Pd		18	34.6	1Ed*		14	18.6	1Em
	5	1.8	1Pf		1	7.7	2Pd		12	31.7	1Od		21	13.9	1Em		17	33.9	2Od
	5	41.0	2Ed*		3	20.7	2Of		12	37.1	4Em		22	32.4	2Ed*		17	55.9	2Pd
	8	48.6	2Em		3	47.5	2Pf		12	48.9	1Pd	23	1	37.1	2Em		20	12.7	2Of
	13	55.7	1Ed*		5	58.9	4Od		13	31.3	3Of		3	52.2	3Ed*		20	35.8	2Pf
	16	36.2	1Em		6	48.9	4Pd		14	7.6	3Pf		5	37.3	1Od		21	9.0	3Od
	22	2.8	2Od		7	1.1	1Ed*		14	54.1	1Of		5	53.7	1Pd		21	39.5	3Pd
	22	28.9	2Pd		9	14.1	4Of		15	11.0	1Pf		7	22.8	3Em		22	27.0	4Od
	22	42.0	3Ed		9	41.2	1Em		19	52.9	2Ed*		7	59.6	1Of		22	43.0	1Od
10	0	41.1	2Of		10	8.8	4Pf		22	58.7	2Em		8	15.6	1Pf		22	58.4	1Pd
	0	57.9	1Od		15	33.4	7Od	19	0	6.4	1Ed*		14	54.4	2Od		23	10.1	4Pd
	1	8.8	2Pf		15	58.8	3Od		2	46.1	1Em		15	17.5	2Pd	28	0	4.6	3Of
	1	16.2	1Pd		16	34.1	3Pd		9	15.0	3Ed*		17	11.7	1Ed*		0	37.2	3Pf
	2	16.7	3Em		17	13.5	2Ed*		11	8.8	1Od		17	33.1	2Of		1	5.1	1Of
	3	20.5	1Of		18	3.3	1Od		11	25.8	1Pd		17	57.5	2Pf		1	20.1	1Pf
	3	22.4	4Ed		18	21.0	1Pd		12	14.9	2Od		19	50.4	4Ed		1	43.2	4Of
	3	38.8	1Pf		18	53.9	3Of		12	39.1	2Pd		19	50.9	1Em		2	30.3	4Pf
	7	35.4	4Em		19	31.5	3Pf		12	47.0	3Em		23	57.6	4Em		10	5.0	2Ed*
	12	32.8	1Ed*		20	20.2	2Em		13	31.2	1Of	24	2	31.8	3Od		10	17.0	1Ed*
	14	34.1	2Ed*		20	25.8	1Of		13	47.9	1Pf		3	3.8	3Pd		12	55.5	1Em
	15	13.2	1Em		20	43.4	1Pf		14	53.5	2Of		4	14.4	1Od		13	8.2	2Em
	17	41.5	2Em		20	54.1	7Of		15	19.0	2Pf		4	30.6	1Pd		19	48.1	3Ed*
	21	21.6	3Od		22	22.0	7Pd		17	22.1	4Od		5	27.2	3Of		21	20.1	1Od
	21	57.9	3Pd	15	4	1.7	7Pf		18	9.7	4Pd		6	1.4	3Pf		21	35.3	1Pd
	23	34.9	1Od		5	38.1	1Ed*		20	37.7	4Of		6	36.7	1Of		23	16.4	3Em
	23	53.2	1Pd		8	18.2	1Em		21	29.7	4Pf		6	52.5	1Pf		23	42.2	1Of
	23	53.7	5Od		9	35.4	2Od		22	43.4	1Ed*		7	25.5	2Ed*		23	57.0	1Pf
11	0	16.6	3Of		10	.5	2Pd	20	0	46.9	5Od		10	29.9	2Em	29	1	40.2	5Od
	0	55.3	3Pf		12	13.9	2Of		1	23.1	1Em		13	13.5	5Od		2	27.1	2Od
	1	17.1	5Pd		12	20.3	5Od		2	4.3	5Pd		14	27.2	5Pd		2	48.6	2Pd
	1	57.5	1Of		12	40.4	2Pf		4	33.2	5Of		15	48.7	1Ed*		2	49.5	5Pd
	2	15.7	1Pf		13	41.0	5Pd		4	46.1	2Ed*		17	.7	5Of		5	5.9	2Of
	3	38.2	5Of		14	37.8	3Ed		6	.3	5Pf		18	23.3	5Pf		5	28.2	5Of
	5	12.6	5Pf		14	45.6	4Ed		7	51.5	2Em		18	27.8	1Em		5	28.6	2Pf

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	6	46.0	5Pf		16	30.5	3Pf		3	32.9	5Pd		19	51.0	5Pf		6	8.4	4Pf
	7	13.6	4Ed		16	47.8	1Of		6	21.3	3Ed*		21	58.3	2Of		6	38.1	1Ed*
	8	54.0	1Ed*		17	1.6	1Pf		6	23.3	5Of		22	15.7	2Pf		7	18.5	5Of
	10	20.9	6Ed		17	55.8	5Of		7	29.8	5Pf		23	38.2	3Od		8	11.9	5Pf
	11	17.7	4Em		19	8.1	5Pf		7	31.8	1Od		23	42.1	4Ed*		9	12.7	1Em
	11	32.4	1Em		21	37.7	2Ed*		7	44.7	1Pd	12	0	1.1	3Pd		14	29.6	2Ed*
	18	27.6	3Od	3	0	39.0	2Em		9	45.0	3Em		0	37.8	1Od		16	54.7	3Ed*
	18	57.3	3Pd		1	59.3	1Ed*		9	53.6	1Of		0	49.4	1Pd		17	25.5	2Em
	18	58.2	2Ed*		4	36.8	1Em		10	6.1	1Pf		2	34.2	3Of		17	43.8	1Od
	19	42.7	6Em		11	44.0	3Ed*		16	39.5	2Od		2	58.8	3Pf		17	54.0	1Pd
	19	57.3	1Od		13	3.1	1Od		16	57.7	2Pd		2	59.4	1Of		20	5.3	1Of
	20	12.3	1Pd		13	17.0	1Pd		19	4.6	1Ed*		3	10.6	1Pf		20	13.0	3Em
	21	23.3	3Of		13	59.9	2Od		19	18.5	2Of		3	36.3	4Em		20	15.2	1Pf
	21	55.0	3Pf		14	19.6	2Pd		19	37.7	2Pf		11	50.0	2Ed*		20	18.0	7Ed
	22	.9	2Em		15	9.7	3Em		21	13.6	4Od		12	9.8	1Ed*	17	5	15.1	1Ed*
	22	19.3	1Of		15	25.0	1Of		21	41.2	1Em		14	45.4	1Em		6	14.1	7Em
	22	33.9	1Pf		15	38.5	1Pf		21	49.3	4Pd		14	47.7	2Em		6	52.1	2Od
30	7	31.1	1Ed*		16	38.8	2Of	8	0	30.7	4Of		22	17.4	3Ed*		7	6.4	2Pd
	10	9.3	1Em		16	59.6	2Pf		1	9.7	4Pf		23	15.0	1Od		7	49.5	1Em
	11	20.3	2Od		18	37.0	4Ed		5	.8	3Od		23	26.3	1Pd		9	31.3	2Of
	11	41.4	2Pd		22	37.4	4Em		5	25.8	3Pd	13	1	36.6	1Of		9	46.4	2Pf
	13	59.1	2Of	4	0	36.3	1Ed*		6	9.0	1Od		1	37.9	3Em		11	5.6	4Ed*
	14	21.4	2Pf		3	13.7	1Em		6	21.6	1Pd		1	47.5	1Pf		14	55.1	4Em
	16	8.6	4Od		6	30.8	2Ed*		7	56.8	3Of		4	12.4	2Od		15	34.2	3Od
	16	50.0	4Pd		9	31.7	2Em		8	23.6	3Pf		4	28.4	2Pd		15	53.8	3Pd
	17	6.7	3Ed*		10	23.5	3Od		8	30.7	1Of		6	51.5	2Of		16	21.1	1Od
	18	34.4	1Od		10	50.5	3Pd		8	43.0	1Pf		7	8.4	2Pf		16	31.0	1Pd
	18	49.2	1Pd		11	40.3	1Od		9	10.4	2Ed*		8	37.1	4Od		18	30.5	3Of
	19	25.1	4Of		11	53.9	1Pd		12	9.7	2Em		9	8.5	4Pd		18	42.5	1Of
	20	10.3	4Pf		13	19.4	3Of		17	41.6	1Ed*		10	46.9	1Ed*		18	51.5	3Pf
	20	34.2	3Em		13	48.2	3Pf		20	18.0	1Em		11	54.6	4Of		18	52.1	1Pf
	20	56.5	1Of		14	2.1	1Of	9	1	32.7	2Od		12	28.9	4Pf		23	22.8	2Ed*
	21	10.8	1Pf		14	15.4	1Pf		1	50.4	2Pd		13	22.2	1Em	18	2	18.1	2Em
31	3	51.3	2Ed*		20	18.6	5Ed		3	40.0	3Ed*		20	43.2	2Ed*		3	52.2	1Ed*
	6	8.1	1Ed*		22	37.9	7Od		4	11.8	2Of		20	56.8	3Od		6	26.3	1Em
	6	53.6	2Em		22	53.1	2Od		4	30.4	2Pf		21	12.3	5Ed		9	39.3	5Ed
	7	51.8	5Ed		23	12.3	2Pd		4	46.2	1Od		21	18.7	3Pd		14	13.5	3Ed*
	8	46.2	1Em		23	13.4	1Ed*		4	58.6	1Pd		21	52.2	1Od		14	20.2	5Em
	12	55.2	5Em	5	1	17.1	5Em		6	.4	4Ed*		22	3.2	1Pd		14	58.3	1Od
	15	46.3	3Od		1	32.1	2Of		7	2.7	3Em		23	40.3	2Em		15	7.9	1Pd
	16	15.0	3Pd		1	50.6	1Em		7	7.9	1Of		23	53.0	3Of		15	45.3	2Od
	17	11.6	1Od		1	52.3	2Pf		7	19.9	1Pf	14	0	13.7	1Of		15	59.0	2Pd
	17	26.1	1Pd		3	31.9	4Od		8	45.4	5Ed		0	16.4	3Pf		17	19.7	1Of
	18	42.0	3Of		3	45.7	7Pd		9	56.8	4Em		0	24.4	1Pf		17	29.0	1Pf
	19	12.8	3Pf		4	9.6	4Pd		13	38.5	5Em		1	59.6	5Em		17	30.5	3Em
	19	33.6	1Of		4	34.9	7Of		16	18.7	1Ed*		9	19.3	6Ed		18	24.6	2Of
	19	47.7	1Pf		6	48.9	4Of		18	3.6	2Ed*		9	23.9	1Ed*		18	39.0	2Pf
	20	13.5	2Od		7	30.0	4Pf		18	54.9	1Em		11	59.1	1Em		20	.6	4Od
	20	34.1	2Pd		9	2.7	3Ed*		21	2.4	2Em		13	5.6	2Od		20	27.4	4Pd
	22	52.4	2Of		10	1.1	7Pf	10	2	19.5	3Od		13	21.0	2Pd		23	18.4	4Of
	23	14.1	2Pf		10	17.4	1Od		2	43.5	3Pd		15	44.8	2Of		23	47.7	4Pf
					10	30.8	1Pd		3	23.4	1Od		16	1.1	2Pf	19	2	29.2	1Ed*
Août	h	m			12	27.4	3Em		3	35.5	1Pd		17	23.8	4Ed*		5	3.1	1Em
1	0	55.3	4Ed		12	39.3	1Of		5	15.5	3Of		17	44.9	6Em		8	16.0	2Ed*
	4	45.2	1Ed*		12	52.3	1Pf		5	41.2	3Pf		19	36.0	3Ed*		11	10.7	2Em
	4	57.6	4Em		15	24.0	2Ed*		5	45.0	1Of		20	29.4	1Od		12	52.9	3Od
	7	23.1	1Em		18	24.4	2Em		5	56.8	1Pf		20	40.2	1Pd		13	11.3	3Pd
	12	44.5	2Ed*		21	50.5	1Ed*		10	25.9	2Od		21	15.8	4Em		13	35.5	1Od
	14	25.4	3Ed*	6	0	27.5	1Em		10	43.0	2Pd		22	50.9	1Of		13	44.9	1Pd
	15	46.3	2Em		7	42.2	3Od		13	5.0	2Of		22	55.4	3Em		15	49.2	3Of
	15	48.8	1Od		7	46.3	2Od		13	23.1	2Pf		23	1.4	1Pf		15	56.9	1Of
	16	3.1	1Pd		8	5.0	2Pd		14	55.3	4Od	15	5	36.4	2Ed*		16	5.9	1Pf
	17	51.9	3Em		8	8.2	3Pd		14	55.7	1Ed*		8	1.0	1Ed*		16	9.1	3Pf
	18	10.7	1Of		8	54.6	1Od		15	28.9	4Pd		8	32.9	2Em	20	0	38.6	2Od
	18	24.6	1Pf		9	7.8	1Pd		17	31.7	1Em		10	35.9	1Em		0	51.6	2Pd
2	3	22.2	1Ed*		10	25.3	2Of		18	12.6	4Of		18	15.5	3Od		1	6.3	1Ed*
	5	6.7	2Od		10	38.1	3Of		18	49.3	4Pf		18	36.2	3Pd		3	17.8	2Of
	5	26.9	2Pd		10	45.0	2Pf	11	0	58.7	3Ed*		19	6.6	1Od		3	31.6	2Pf
	5	60.0	1Em		11	5.9	3Pf		2	.6	1Od		19	17.1	1Pd		3	40.0	1Em
	7	45.6	2Of		11	16.4	1Of		2	12.4	1Pd		21	11.7	3Of		4	47.3	4Ed*
	8	6.8	2Pf		11	29.2	1Pf		2	56.8	2Ed*		21	28.1	1Of		8	34.4	4Em
	9	50.3	4Od		12	7.6	6Od		4	20.3	3Em		21	34.0	3Pf		11	32.2	3Ed*
	10	29.9	4Pd		12	18.6	4Ed*		4	22.2	1Of		21	38.3	1Pf		12	12.8	1Od
	13	4.9	3Od		15	33.1	6Pd		4	33.7	1Pf		21	58.8	2Od		12	21.8	1Pd
	13	7.0	4Of		16	17.1	4Em		5	55.0	2Em		22	13.7	2Pd		14	34.1	1Of
	13	32.8	3Pd		17	10.5	6Of		13	32.8	1Ed*	16	0	38.0	2Of		14	42.8	1Pf
	13	50.2	4Pf		20	27.5	1Ed*		15	.6	5Od		0	53.7	2Pf		14	48.0	3Em
	14	6.9	5Od		21	40.6	6Pf		15	54.1	5Pd		2	18.8	4Od		15	54.4	5Od
	14	25.9	1Od		23	4.3	1Em		16	8.6	1Em		2	47.9	4Pd		16	35.5	5Pd
	14	40.0	1Pd	7	0	17.2	2Ed*		18	50.9	5Of		3	27.5	5Od		17	9.2	2Ed*
	15	11.4	5Pd		2	33.7	5Od		19	19.2	2Od		4	14.9	5Pd		19	46.1	5Of
	16	.7	3Of		3	17.1	2Em		19	35.7	2Pd		5	36.5	4Of		20	3.3	2Em

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	20	32.4	5Pf		8	1.5	3Pf		22	25.3	10d		2	30.5	2Pd		7	23.9	3Pd
	23	43.3	1Ed*		8	13.7	5Of		22	31.2	1Pd		5	4.1	2Of		9	36.3	1Of
21	2	16.8	1Em		8	52.5	5Pf	30	0	46.3	1Of		5	10.3	2Pf		9	38.5	1Pf
	9	31.8	2Od		12	11.6	2Od		0	52.1	1Pf		5	28.5	1Em		10	16.1	3Of
	9	44.3	2Pd		12	22.2	2Pd		1	15.2	3Em		6	11.6	4Od		10	20.7	3Pf
	10	11.6	3Od		14	51.0	2Of		7	21.9	2Ed*		6	23.2	4Pd		13	57.8	2Od
	10	28.9	3Pd		15	2.1	2Pf		8	20.3	6Ed		9	30.4	4Of		14	1.1	2Pd
	10	50.0	1Od		16	10.9	4Ed*		10	11.3	2Em		9	42.8	4Pf		16	37.4	2Of
	10	58.7	1Pd		16	48.6	1Ed*		12	24.6	1Em		14	9.0	1Od		16	40.7	2Pf
	12	11.1	2Of		19	20.7	1Em		15	26.5	6Em		14	13.0	1Pd		17	35.4	4Od
	12	24.3	2Pf		19	52.9	4Em		20	45.3	3Od		16	29.9	1Of		17	41.7	4Pd
	13	8.0	3Of	26	3	28.4	3Ed*		20	56.4	3Pd		16	33.7	1Pf		20	54.5	4Of
	13	11.3	1Of		3	56.2	1Od		21	2.6	1Od		17	7.4	3Em		21	.8	4Pf
	13	19.8	1Pf		4	3.4	1Pd		21	8.2	1Pd		21	41.6	2Em		21	9.0	1Em
	13	26.6	3Pf		4	42.2	2Ed*		23	23.6	1Of	5	4	5.2	1Em	10	3	58.7	5Em
	13	42.3	4Od		5	15.6	7Od		23	29.0	1Pf		11	17.9	2Od		5	52.9	1Od
	14	6.7	4Pd		6	17.4	1Of		23	41.9	3Of		11	23.2	2Pd		5	54.8	1Pd
	17	.4	4Of		6	24.4	1Pf		23	44.7	2Od		11	27.7	5Ed*		8	13.6	1Of
	17	27.1	4Pf		6	40.4	3Em		23	52.7	2Pd		12	41.6	3Od		8	15.5	1Pf
	22	20.4	1Ed*		7	33.7	2Em		23	53.8	3Pf		12	46.3	1Od		8	59.5	3Em
22	0	53.6	1Em		7	54.9	7Pd	31	2	24.2	2Of		12	48.9	3Pd		9	11.8	2Em
	2	2.5	2Ed*		11	37.5	7Of		2	32.5	2Pf		12	49.9	1Pd		19	45.8	1Em
	4	55.9	2Em		14	34.8	7Pf		3	34.6	4Ed*		13	57.4	2Of		22	51.2	2Od
	8	50.9	3Ed*		17	57.5	1Em		7	11.0	4Em		14	2.9	2Pf		22	53.7	2Pd
	9	27.2	1Od		21	4.9	2Od		11	1.4	1Em		14	58.4	4Ed*	11	1	30.8	2Of
	9	35.7	1Pd		21	14.8	2Pd		19	3.9	2Em		15	7.1	1Of		1	33.2	2Pf
	11	8.5	6Od		23	44.3	2Of		19	24.6	3Ed*		15	10.7	1Pf		4	30.2	1Od
	11	48.5	1Of		23	54.7	2Pf		19	39.9	1Od		15	38.4	3Of		4	31.8	1Pd
	11	56.7	1Pf	27	1	6.0	4Od		19	45.1	1Pd		15	39.5	5Em		4	38.0	3Od
	12	5.5	3Em		1	25.4	4Pd		22	.8	1Of		15	46.0	3Pf		4	41.4	3Pd
	13	19.9	6Pd		2	7.8	3Od		22	6.0	1Pf		18	29.1	4Em		5	47.0	4Em
	16	33.2	6Of		2	21.4	3Pd		22	32.6	3Em	6	2	42.0	1Em		6	50.8	1Of
	18	25.1	2Od		2	33.5	1Od		23	.5	5Ed*		6	34.1	2Em		6	52.4	1Pf
	18	36.9	2Pd		2	40.4	1Pd						11	23.6	1Od		7	34.9	3Of
	19	26.7	6Pf		4	24.4	4Of	Sep.	h	m			11	26.9	1Pd		7	38.1	3Pf
	20	57.5	1Ed*		4	45.5	4Pf	1	3	20.0	5Em		13	44.4	1Of		18	4.3	2Em
	21	4.4	2Of		4	54.6	1Of		8	38.0	2Od		13	47.6	1Pf		18	22.5	1Em
	21	16.9	2Pf		5	1.3	1Pf		8	45.3	2Pd		14	24.8	3Em	12	3	7.5	1Od
	22	6.3	5Ed*		5	4.3	3Of		9	38.2	1Em		20	11.2	2Od		3	8.8	1Pd
	22	29.1	4Ed*		5	18.9	3Pf		11	17.5	2Of		20	15.8	2Pd		5	28.1	1Of
	23	30.4	1Em		10	33.3	5Ed*		11	25.1	2Pf		22	50.8	2Of		5	29.4	1Pf
23	2	13.7	4Em		13	35.4	2Ed*		12	29.7	4Od		22	55.5	2Pf		6	10.3	5Od
	2	40.5	5Em		15	.4	5Em		12	43.9	4Pd		23	53.5	4Od		6	16.8	5Pd
	7	30.3	3Od		16	26.2	2Em		15	48.4	4Of	7	0	2.5	4Pd		6	16.9	3Em
	7	46.4	3Pd		16	34.3	1Em		16	3.7	4Pf		1	18.7	1Em		7	44.5	2Od
	8	4.5	1Od	28	0	47.1	3Ed*		18	4.1	3Od		2	27.2	7Ed*		7	46.4	2Pd
	8	12.6	1Pd		1	10.8	1Od		18	13.9	3Pd		3	12.5	4Of		10	4.6	5Of
	10	25.7	1Of		1	17.3	1Pd		18	17.1	1Od		3	21.8	4Pf		10	10.2	5Pf
	10	26.8	3Of		3	31.9	1Of		18	22.1	1Pd		9	55.3	7Em		10	24.1	2Of
	10	33.6	1Pf		3	38.2	1Pf		20	38.1	1Of		10	.4	3Od		10	25.8	2Pf
	10	44.0	3Pf		3	57.8	3Em		20	42.9	1Pf		10	.9	1Od		11	17.4	4Od
	10	55.7	2Ed*		5	58.1	2Od		21	.7	3Of		10	3.9	1Pd		11	21.0	4Pd
	13	48.5	2Em		6	7.4	2Pd		21	11.2	3Pf		10	6.4	3Pd		14	36.6	4Of
	19	34.5	1Ed*		8	37.6	2Of	2	3	56.5	2Em		10	12.5	6Od		14	39.8	4Pf
	22	7.1	1Em		8	47.3	2Pf		8	14.9	1Em		11	2.5	6Pd		16	59.3	1Em
24	3	18.3	2Od		9	52.8	4Ed*		16	43.4	3Ed*		12	21.7	1Of	13	1	44.8	1Od
	3	29.5	2Pd		13	32.0	4Em		16	54.4	1Od		12	24.6	1Pf		1	45.8	1Pd
	5	57.7	2Of		15	11.1	1Em		16	59.0	1Pd		12	57.2	3Of		1	56.9	3Od
	6	9.5	2Pf		22	28.6	2Ed*		17	31.3	2Od		13	3.4	3Pf		1	58.9	3Pd
	6	9.6	3Ed*		23	26.5	3Od		17	37.9	2Pd		15	26.7	2Em		2	56.9	2Em
	6	41.7	1Od		23	38.9	3Pd		19	15.3	1Of		15	54.1	6Of		4	5.4	1Of
	6	49.5	1Pd		23	48.0	1Od		19	19.9	1Pf		16	50.8	6Pf		4	6.4	1Pf
	7	24.1	4Od		23	54.3	1Pd		19	50.0	3Em		17	43.0	5Od		4	53.8	3Of
	7	46.1	4Pd	29	1	18.8	2Em		20	10.8	2Of		17	56.5	5Pd		4	55.5	3Pf
	9	2.9	1Of		2	9.1	1Of		20	17.7	2Pf		21	36.9	5Of		15	36.0	1Em
	9	10.5	1Pf		2	15.2	1Pf		21	16.5	4Ed*		21	51.1	5Pf		16	37.8	2Od
	9	22.9	3Em		2	23.1	3Of	3	0	50.1	4Em		23	55.5	1Em		16	39.0	2Pd
	10	42.4	4Of		2	36.4	3Pf		5	15.7	5Od	8	5	4.5	2Od		19	17.5	2Of
	11	6.3	4Pf		13	47.8	1Em		5	36.4	5Pd		5	8.4	2Pd		19	18.4	2Pf
	18	11.6	1Ed*		14	51.4	2Od		6	51.7	1Em		7	44.1	2Of		23	25.9	4Em
	19	48.9	2Ed*		15	.0	2Pd		9	9.1	5Of		7	48.1	2Pf	14	0	22.1	1Od
	20	43.9	1Em		16	48.6	5Od		9	31.8	5Pf		8	38.2	1Od		0	22.7	1Pd
	22	41.1	2Em		17	16.2	5Pd		12	49.0	2Em		8	40.8	1Pd		2	42.7	1Of
25	4	21.5	5Od		17	30.9	2Of		15	22.8	3Od		10	59.0	1Of		2	43.3	1Pf
	4	49.1	3Od		17	39.9	2Pf		15	31.4	3Pd		11	1.6	1Pf		3	34.3	3Em
	4	55.9	5Pd		18	47.8	4Od		15	31.7	1Od		11	42.1	3Em		11	49.4	2Em
	5	3.9	3Pd		19	4.7	4Pd		15	36.0	1Pd		12	8.0	4Em		14	12.8	1Em
	5	19.0	1Od		20	41.4	5Of		17	52.6	1Of		22	32.3	1Em		16	17.8	5Em
	5	26.5	1Pd		21	12.2	5Pf		17	56.8	1Pf	9	0	19.2	2Em		22	59.5	1Od
	7	40.2	1Of		22	5.9	3Ed*		18	19.5	3Of		7	15.5	1Od		22	59.7	1Pd
	7	45.5	3Of		22	6.4	4Of		18	28.6	3Pf		7	17.8	1Pd		23	15.7	3Od
	7	47.5	1Pf		22	24.6	4Pf	4	2	24.6	2Od		7	19.2	3Od		23	16.5	3Pd

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15	1	20.1	10f		15	9.2	3Pd		19	18.3	5Pd		12	12.2	1Im		16	41.5	10d
	1	20.3	1Pf		15	12.2	30d		19	32.6	50d		19	40.6	2Im		17	20.7	2Pf
	1	31.2	20d		15	41.5	2Pf		23	7.3	5Pf		23	29.2	1Pd		17	22.4	4Im
	1	31.7	2Pd		15	44.3	20f		23	28.2	50f		23	34.5	10d		17	30.5	3Pd
	2	12.6	30f		16	19.1	4Pd	26	0	33.2	2Pd						17	31.7	20f
	2	12.9	3Pf		16	23.4	40d		0	38.1	20d	Oct.	h	m			17	43.5	30d
	4	10.8	20f		17	2.2	1Pf		3	12.0	2Pf	1	0	16.2	3Im		18	54.7	1Pf
	4	11.0	2Pf		17	4.0	10f		3	17.8	20f		1	49.5	1Pf		19	1.7	10f
	4	59.3	40d		18	5.0	3Pf		3	38.0	4Pd		1	54.8	10f		20	24.7	3Pf
	5	.3	4Pd		18	9.3	30f		3	47.5	40d		3	23.5	3Ef*		20	40.8	30f
	8	18.7	40f		19	36.7	4Pf		6	23.9	1Pd		5	34.7	6Im		21	1.5	4Ef*
	8	18.8	4Pf		19	43.0	40f		6	27.7	10d		10	49.0	1Im	6	3	52.9	1Im
	12	49.5	1Em	21	2	4.7	1Im		6	54.8	4Pf		12	4.1	2Pd		7	11.5	2Im
	21	36.7	1Pd		5	31.9	2Im		7	2.0	3Pd		12	11.7	20d		10	2.6	2Ef*
	21	36.8	10d		6	57.6	5Pd		7	7.3	40f		12	11.7	6Ef		15	11.7	1Pd
	23	57.3	1Pf		7	5.1	50d		7	8.9	30d		14	42.6	2Pf		15	18.9	10d
	23	57.4	10f		10	48.3	5Pf		8	44.3	1Pf		14	51.4	20f		16	9.4	3Im
16	9	1.1	1Im		11	.3	50f		8	48.0	10f		14	57.1	4Pd		17	31.8	1Pf
	10	24.3	2Pd		13	18.8	1Pd		9	57.3	3Pf		15	11.7	40d		17	39.0	10f
	10	24.5	20d		13	20.9	10d		10	6.0	30f		18	13.0	4Pf		19	20.3	3Ef*
	11	27.9	70d		13	48.0	3Im		17	2.6	2Im		18	31.6	40f		23	35.2	2Pd
	11	29.0	7Pd		15	39.2	1Pf		17	45.2	1Im		22	6.3	1Pd		23	45.3	20d
	13	3.6	2Pf		15	41.3	10f	27	5	1.0	1Pd		22	11.9	10d	7	2	9.8	5Im
	13	4.2	20f		21	55.0	2Pd		5	5.1	10d		22	55.0	3Pd		2	13.4	2Pf
	13	45.9	4Im		21	58.0	20d		5	40.8	3Im		23	5.6	30d		2	16.6	4Pd
	17	48.8	7Pf	22	0	34.1	2Pf		7	21.3	1Pf	2	0	26.5	1Pf		2	25.1	20f
	18	5.1	70f		0	37.7	20f		7	25.4	10f		0	32.2	10f		2	29.7	1Im
	18	37.1	5Pd		0	41.5	1Im		9	25.9	2Pd		1	49.7	3Pf		2	35.9	40d
	18	37.6	50d		1	4.6	4Im		9	31.5	20d		2	2.8	30f		5	3.2	1Ef*
	20	13.7	1Pd		11	55.8	1Pd		12	4.6	2Pf		4	33.3	2Im		5	31.4	4Pf
	20	14.2	10d		11	58.2	10d		12	11.2	20f		7	22.4	2Ef*		5	56.0	40f
	20	34.0	3Pd		12	26.8	3Pd		12	23.5	4Im		9	25.8	1Im		6	36.0	5Ef*
	20	34.5	30d		12	31.1	30d		15	54.9	4Ef*		13	48.3	5Im		13	48.8	1Pd
	22	29.3	5Pf		14	16.3	1Pf		16	21.9	1Im		18	8.1	5Ef*		13	56.3	10d
	22	32.5	50f		14	18.6	10f	28	1	27.2	5Im		20	43.3	1Pd		14	48.3	3Pd
	22	34.3	1Pf		14	24.6	2Im		1	55.2	2Im		20	49.3	10d		15	2.4	30d
	22	34.7	10f		15	22.4	3Pf		3	38.0	1Pd		20	56.9	2Pd		15	5.0	7Pd
	23	30.2	3Pf		15	28.2	30f		3	42.4	10d		21	5.1	20d		16	4.3	2Im
	23	31.5	30f		23	18.2	1Im		4	19.7	3Pd		21	33.9	3Im		16	8.9	1Pf
17	2	54.1	2Im	23	6	47.7	2Pd		4	27.8	30d		23	3.6	1Pf		16	16.4	10f
	7	37.8	1Im		6	51.3	20d		5	40.1	5Ef*		23	9.5	10f		17	17.9	70d
	18	50.7	1Pd		8	53.2	6Pd		5	58.4	1Pf		23	35.3	2Pf		17	42.3	3Pf
	18	51.5	10d		9	19.2	60d		6	2.7	10f		23	42.7	4Im		17	59.7	30f
	19	12.8	3Im		9	26.7	2Pf		6	58.3	7Im		23	44.9	20f		18	56.0	2Ef*
	19	17.0	2Pd		9	31.1	20f		7	14.7	3Pf	3	0	42.4	3Ef*		20	8.6	7Pf
	19	17.9	20d		9	58.5	4Pd		7	25.0	30f		3	19.3	4Ef*	8	0	1.4	70f
	21	11.3	1Pf		10	5.4	40d		14	39.1	7Ef		8	2.5	1Im		1	6.5	1Im
	21	12.0	10f		10	32.8	1Pd		14	58.7	1Im		13	26.0	2Im		3	40.3	1Ef*
	21	56.2	2Pf		10	35.6	10d		18	18.6	2Pd		16	15.8	2Ef*		8	28.1	2Pd
	21	57.6	20f		11	5.6	3Im		18	24.9	20d		19	20.4	1Pd		8	38.8	20d
	22	39.7	4Pd		12	53.3	1Pf		20	57.3	2Pf		19	26.7	10d		11	2.2	4Im
	22	41.3	40d		12	56.0	10f		21	4.6	20f		20	12.8	3Pd		11	6.2	2Pf
18	1	57.7	4Pf		13	6.4	5Im		21	17.5	4Pd		20	24.5	30d		11	18.5	20f
	2	.8	40f		13	15.7	4Pf		21	29.6	40d		21	40.6	1Pf		12	25.9	1Pd
	6	14.5	1Im		13	25.1	40f	29	0	33.8	4Pf		21	46.9	10f		12	33.6	10d
	11	46.7	2Im		13	58.4	6Pf		0	49.4	40f		23	7.2	3Pf		13	27.2	3Im
	17	27.7	1Pd		15	13.5	60f		2	15.1	1Pd		23	21.8	30f		14	43.7	4Ef*
	17	28.8	10d		17	12.2	5Ef*		2	19.8	10d	4	5	49.7	2Pd		14	46.0	1Pf
	17	51.6	3Pd		21	54.9	1Im		2	58.5	3Im		5	58.5	20d		14	53.8	10f
	17	53.4	30d		23	17.2	2Im		4	35.4	1Pf		6	39.3	1Im		16	39.3	3Ef*
	19	48.3	1Pf	24	9	9.9	1Pd		4	40.1	10f		8	28.0	2Pf		23	43.3	1Im
	19	49.3	10f		9	13.0	10d		6	4.5	3Ef*		8	36.8	4Pd	9	0	57.0	2Im
	20	47.6	3Pf		9	44.4	3Pd		10	47.9	2Im		8	38.3	20f		2	17.4	1Ef*
	20	50.4	30f		9	50.0	30d		13	35.5	1Im		8	53.8	40d		3	49.4	2Ef*
19	0	45.8	5Im		11	30.3	1Pf	30	0	52.1	1Pd		11	52.2	4Pf		7	2.7	6Pd
	4	9.7	2Pd		11	33.3	10f		0	57.2	10d		12	13.8	40f		8	22.1	5Pd
	4	11.2	20d		12	39.8	3Pf		1	37.3	3Pd		17	57.5	1Pd		8	28.6	60d
	4	51.3	1Im		12	47.1	30f		1	46.7	30d		18	4.1	10d		8	55.6	50d
	6	48.8	2Pf		15	40.4	2Pd		3	11.4	2Pd		18	51.6	3Im		10	57.9	6Pf
	6	50.9	20f		15	44.7	20d		3	12.4	1Pf		20	.5	5Pd		11	3.0	1Pd
	7	25.3	4Im		18	19.3	2Pf		3	17.4	10f		20	17.7	1Pf		11	11.0	10d
	16	4.8	1Pd		18	24.5	20f		3	18.3	20d		20	24.3	10f		12	5.6	5Pf
	16	6.2	10d		18	44.1	4Im		4	32.2	3Pf		20	27.9	50d		12	6.2	3Pd
	16	30.4	3Im		20	31.7	1Im		4	43.9	30f		22	1.4	3Ef*		12	21.4	30d
	18	25.3	1Pf		22	12.7	4Ef*		5	50.0	2Pf		22	18.8	2Im		12	52.0	50f
	18	26.6	10f	25	7	46.9	1Pd		5	58.0	20f		23	45.9	5Pf		13	23.0	1Pf
	20	39.3	2Im		7	50.3	10d		6	3.1	4Im	5	0	24.0	50f		13	31.2	10f
20	3	28.0	1Im		8	9.9	2Im		7	39.3	5Pd		1	9.2	2Ef*		14	31.6	60f
	13	2.3	2Pd		8	23.2	3Im		8	.2	50d		5	16.1	1Im		14	59.9	3Pf
	13	4.6	20d		10	7.3	1Pf		9	37.1	4Ef*		14	42.4	2Pd		15	18.7	30f
	14	41.8	1Pd		10	10.7	10f		11	26.5	5Pf		14	51.9	20d		17	20.9	2Pd
	14	43.5	10d		19	8.4	1Im		11	56.1	50f		16	34.6	1Pd		17	32.2	20d

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	19	56.4	4Pd		12	28.2	2Im	19	1	28.3	3Pf		15	29.0	4Pf		7	39.3	10d
	19	58.9	2Pf		15	23.0	2Ef*		1	53.7	30f		15	50.7	3Im		8	17.4	2Ef*
	20	12.0	20f		15	24.3	1Im		7	31.0	2Pd		16	9.6	40f		9	6.2	3Pd
	20	18.1	40d		18	.3	1Ef*		7	46.3	20d		16	39.9	1Pf		9	31.3	30d
	22	20.1	1Im	15	2	45.7	1Pd		8	28.6	1Im		16	52.3	10f		9	45.8	1Pf
	23	10.8	4Pf		2	55.5	10d		9	42.1	4Im		19	11.4	3Ef*		9	59.4	10f
	23	38.3	40f		3	59.8	3Pd		10	8.5	2Pf	24	1	33.0	1Im		11	57.8	3Pf
10	0	54.6	1Ef*		4	18.3	30d		10	26.1	20f		2	38.3	2Im		12	28.8	30f
	9	40.1	1Pd		4	52.3	2Pd		10	39.4	7Im		4	11.8	1Ef*		18	37.7	1Im
	9	48.4	10d		5	5.6	1Pf		11	6.0	1Ef*		5	37.1	2Ef*		19	8.8	7Pd
	9	49.8	2Im		5	5.9	20d		13	32.8	4Ef*		12	57.3	1Pd		21	17.6	1Ef*
	10	45.0	3Im		5	15.6	10f		19	51.4	1Pd		13	9.6	10d		21	41.9	2Pd
	12	.1	1Pf		6	52.8	3Pf		20	2.5	10d		14	29.9	3Pd		22	.6	20d
	12	8.6	10f		7	15.6	30f		20	3.4	7Ef		14	53.3	30d		22	13.5	7Pf
	12	42.8	2Ef*		7	16.3	4Pd		21	14.6	3Im		15	17.0	1Pf		22	50.0	70d
	13	58.3	3Ef*		7	30.0	2Pf		22	11.3	1Pf		15	29.7	10f		23	37.8	4Pd
	20	56.9	1Im		7	42.5	40d		22	22.6	10f		17	21.9	3Pf	29	0	13.8	40d
	23	31.7	1Ef*		7	45.7	20f		23	59.6	2Im		17	50.7	30f		0	18.9	2Pf
11	2	13.7	2Pd		10	29.7	4Pf	20	0	33.4	3Ef*		19	2.9	2Pd		0	40.4	20f
	2	25.6	20d		11	2.8	40f		2	56.8	2Ef*		19	20.2	20d		2	49.1	4Pf
	4	42.0	4Im		14	1.1	1Im		7	5.4	1Im		21	2.6	4Im		3	34.2	40f
	4	51.7	2Pf		16	37.4	1Ef*		9	43.2	1Ef*		21	40.1	2Pf		5	31.0	70f
	5	5.4	20f		21	21.0	2Im		15	16.0	5Im		21	60.0	20f		6	3.3	1Pd
	8	17.2	1Pd	16	0	16.5	2Ef*		16	24.0	2Pd	25	0	9.9	1Im		6	16.7	10d
	8	25.8	10d		1	22.8	1Pd		16	39.8	20d		0	57.4	4Ef		7	45.1	3Im
	8	26.0	4Ef*		1	32.9	10d		18	28.6	1Pd		2	49.0	1Ef*		8	23.0	1Pf
	9	24.0	3Pd		2	38.7	3Im		18	36.6	4Pd		3	38.9	5Im		8	36.9	10f
	9	40.3	30d		2	53.6	5Im		18	39.9	10d		5	40.2	6Pd		11	8.6	3Ef*
	10	37.2	1Pf		3	42.8	1Pf		19	1.4	2Pf		7	40.3	60d		14	10.1	2Im
	10	46.0	10f		3	53.0	10f		19	7.0	40d		7	58.2	6Pf		16	2.1	5Im
	12	17.5	3Pf		5	55.3	3Ef*		19	19.6	20f		8	28.2	5Ef		17	10.9	2Ef*
	12	37.7	30f		7	32.0	5Ef		19	53.7	3Pd		11	31.2	2Im		17	14.6	1Im
	14	31.5	5Im		12	38.0	1Im		20	.1	5Ef		11	34.5	1Pd		19	54.8	1Ef*
	18	42.6	2Im		13	45.2	2Pd		20	15.3	30d		11	47.0	10d		20	56.3	5Ef
	19	4.0	5Ef		13	59.4	20d		20	48.4	1Pf		13	8.8	3Im	30	4	40.5	1Pd
	19	33.8	1Im		15	14.6	1Ef*		21	.0	10f		13	48.4	60f		4	54.2	10d
	21	36.2	2Ef*		16	2.0	4Im		21	49.1	4Pf		13	54.2	1Pf		6	24.3	3Pd
	22	8.8	1Ef*		16	22.9	2Pf		22	27.3	40f		14	7.1	10f		6	34.9	2Pd
12	6	54.3	1Pd		16	39.2	20f		22	46.1	3Pf		14	30.5	2Ef*		6	50.4	30d
	7	3.2	10d		19	50.5	4Ef*		23	12.7	30f		16	30.5	3Ef*		6	54.1	20d
	8	2.9	3Im		23	60.0	1Pd	21	5	42.3	1Im		22	46.9	1Im		7	.1	1Pf
	9	14.3	1Pf	17	0	10.3	10d		8	20.3	1Ef*	26	1	26.1	1Ef*		7	14.3	10f
	9	23.4	10f		1	17.7	3Pd		8	52.5	2Im		3	55.9	2Pd		8	23.5	4Im
	11	6.6	2Pd		1	37.3	30d		11	50.2	2Ef*		4	13.7	20d		9	11.9	2Pf
	11	17.3	3Ef*		2	19.9	1Pf		17	5.7	1Pd		5	57.3	4Pd		9	15.8	3Pf
	11	19.1	20d		2	30.4	10f		17	17.4	10d		6	31.5	40d		9	33.9	20f
	13	36.3	4Pd		3	54.3	6Im		18	32.7	3Im		6	33.0	2Pf		9	47.8	30f
	13	44.5	2Pf		4	10.6	3Pf		19	25.6	1Pf		6	53.4	20f		12	22.0	4Ef
	13	58.8	20f		4	34.6	30f		19	37.4	10f		9	8.9	4Pf		15	51.6	1Im
	14	.3	40d		6	13.9	2Im		21	52.4	3Ef*		9	51.9	40f		18	32.0	1Ef*
	16	50.2	4Pf		9	9.9	2Ef*	22	1	16.9	2Pd		10	11.7	1Pd		23	3.1	2Im
	17	20.5	40f		11	14.8	1Im		1	33.2	20d		10	24.5	10d	31	2	4.3	2Ef*
	18	10.6	1Im		11	25.8	6Ef		3	22.3	4Im		11	48.0	3Pd		3	17.7	1Pd
	20	46.0	1Ef*		13	51.7	1Ef*		3	54.3	2Pf		12	12.3	30d		3	31.6	10d
13	3	35.4	2Im		22	37.1	1Pd		4	13.0	20f		12	31.4	1Pf		5	3.3	3Im
	5	31.4	1Pd		22	38.1	2Pd		4	19.2	1Im		12	44.6	10f		5	37.4	1Pf
	5	40.7	10d		22	47.7	10d		6	57.5	1Ef*		14	39.8	3Pf		5	51.7	10f
	6	29.6	2Ef*		22	52.9	20d		7	15.1	4Ef		15	9.7	30f		8	27.6	3Ef*
	6	41.9	3Pd		23	56.6	3Im		15	42.9	1Pd		20	24.2	2Im		14	28.5	1Im
	6	59.3	30d	18	0	56.4	4Pd		15	54.8	10d		21	23.8	1Im		15	28.0	2Pd
	7	51.4	1Pf		0	57.0	1Pf		17	11.8	3Pd		23	24.0	2Ef*		15	47.6	20d
	8	.8	10f		1	7.8	10f		17	34.3	30d	27	0	3.3	1Ef*		17	9.1	1Ef*
	9	35.2	3Pf		1	15.7	2Pf		17	45.4	2Im		8	48.9	1Pd		17	18.4	4Pd
	9	56.7	30f		1	24.7	40d		18	2.7	1Pf		9	1.9	10d		17	56.1	40d
	16	47.4	1Im		1	32.6	20f		18	14.9	10f		9	52.0	5Pd		18	4.9	2Pf
	19	23.1	1Ef*		3	14.3	3Ef*		20	4.0	3Pf		10	26.9	3Im		18	27.4	20f
	19	59.4	2Pd		4	9.4	4Pf		20	31.7	30f		10	47.1	50d		20	29.3	4Pf
	20	12.5	20d		4	45.0	40f		20	43.6	2Ef*		11	8.6	1Pf		21	16.5	40f
	20	44.0	5Pd		9	6.3	5Pd		21	28.9	5Pd		11	22.0	10f		22	15.4	5Pd
	21	23.4	50d		9	51.2	50d		22	19.1	50d		12	48.9	2Pd		23	15.1	50d
	22	21.9	4Im		9	51.7	1Im	23	1	7.0	5Pf		13	7.2	20d				
	22	37.2	2Pf		12	28.9	1Ef*		2	16.0	50f		13	28.5	5Pf	Nov.	h	m	
	22	52.3	20f		12	46.1	5Pf		2	56.1	1Im		13	49.5	3Ef*	1	1	50.6	5Pf
14	0	25.6	5Pf		13	48.0	50f		5	34.6	1Ef*		14	43.0	4Im		1	54.9	1Pd
	1	20.0	50f		15	6.7	2Im		10	9.9	2Pd		14	44.1	50f		2	9.0	10d
	2	8.2	4Ef*		18	3.3	2Ef*		10	26.7	20d		15	25.9	2Pf		3	12.1	50f
	4	8.5	1Pd		21	14.3	1Pd		12	16.9	4Pd		15	46.9	20f		3	42.6	3Pd
	4	18.1	10d		21	25.1	10d		12	47.2	2Pf		18	39.7	4Ef		4	9.4	30d
	5	20.8	3Im		22	35.7	3Pd		12	49.2	40d		20	.7	1Im		4	14.6	1Pf
	6	28.5	1Pf		22	56.3	30d		13	6.5	20f		22	40.5	1Ef*		4	29.2	10f
	6	38.2	10f		23	34.1	1Pf		14	20.1	1Pd	28	5	17.1	2Im		6	33.9	3Pf
	8	36.3	3Ef*		23	45.2	10f		14	32.2	10d		7	26.1	1Pd		7	6.9	30f

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	7	56.1	2Im		3	21.6	20d		12	7.4	1Pd		3	52.5	2Ef*		10	39.1	70f
	10	57.8	2Ef*		4	39.9	4Pd		12	23.3	10d		5	13.8	1Pd		10	49.4	1Im
	13	5.5	1Im		5	20.8	40d		13	4.1	60f		5	30.5	10d		13	33.0	1Ef*
	15	46.3	1Ef*		5	37.1	2Pf		14	14.3	3Pd		7	30.3	3Im		19	52.4	2Pd
2	0	21.1	2Pd		6	1.4	20f		14	26.9	1Pf		7	33.3	1Pf		20	16.8	20d
	0	32.2	1Pd		6	10.5	1Im		14	43.6	10f		7	50.8	10f		21	5.4	4Pd
	0	41.1	20d		7	50.3	4Pf		14	44.7	30d		11	.3	3Ef		21	52.7	40d
	0	46.5	10d		8	41.2	40f		17	5.0	3Pf		16	21.0	1Im		22	20.4	1Pd
	2	4.1	4Im		8	52.2	1Ef*		17	42.2	30f		17	12.6	2Pd		22	28.9	2Pf
	2	21.6	3Im		17	38.4	1Pd		22	7.6	2Im		17	36.2	20d		22	37.6	10d
	2	34.4	6Im		17	53.6	10d		23	15.6	1Im		18	28.7	4Im		22	56.5	20f
	2	51.8	1Pf		19	28.3	2Im	11	1	12.1	2Ef*		19	4.2	1Ef*	20	0	15.3	4Pf
	2	57.9	2Pf		19	37.5	3Pd		1	58.2	1Ef*		19	49.1	2Pf		0	39.8	1Pf
	3	6.6	10f		19	57.9	1Pf		10	44.7	1Pd		20	15.9	20f		0	47.0	3Pd
	3	20.9	20f		20	6.6	30d		11	.8	10d		22	36.2	4Ef		0	58.0	10f
	4	47.3	6Em		20	13.8	10f		12	53.4	3Im	16	3	51.1	1Pd		1	13.1	40f
	5	46.7	3Ef*		22	28.4	3Pf		13	4.2	1Pf		4	7.9	10d		1	20.1	30d
	6	4.4	4Ef		22	31.7	2Ef*		13	21.0	10f		6	9.8	3Pd		3	37.4	3Pf
	10	38.9	6Ef		23	4.1	30f		14	33.0	2Pd		6	10.6	1Pf		4	17.7	30f
	11	42.5	1Im	7	4	47.5	1Im		14	55.7	20d		6	28.2	10f		9	26.5	1Im
	14	23.5	1Ef*		7	29.4	1Ef*		16	1.8	4Pd		6	42.0	30d		12	10.2	1Ef*
	16	49.1	2Im		11	53.5	2Pd		16	22.1	3Ef		9	.3	3Pf		12	19.8	2Im
	19	51.2	2Ef*		12	15.1	20d		16	45.5	40d		9	39.5	30f		15	26.5	2Ef*
	23	9.4	1Pd		13	25.6	4Im		17	9.6	2Pf		9	40.2	2Im		20	57.7	1Pd
	23	23.9	10d		14	30.2	2Pf		17	35.4	20f		12	46.0	2Ef*		21	15.1	10d
3	1	.9	3Pd		14	54.9	20f		19	11.8	4Pf		14	58.1	1Im		23	17.2	1Pf
	1	28.5	30d		16	15.6	1Pd		20	6.0	40f		17	39.1	5Im		23	26.1	3Im
	1	29.0	1Pf		16	31.0	10d		21	52.7	1Im		17	41.4	1Ef*		23	35.5	10f
	1	44.0	10f		16	49.8	5Im	12	0	35.4	1Ef*		22	48.8	5Ef	21	2	57.6	3Ef
	3	52.0	3Pf		17	29.1	4Ef		5	14.3	5Im	17	2	5.9	2Pd		4	45.7	2Pd
	4	25.8	5Im		18	16.5	3Im		7	.7	2Im		2	28.4	1Pd		5	10.4	20d
	4	25.9	30f		18	35.2	1Pf		9	22.0	1Pd		2	29.8	20d		5	51.4	4Im
	9	14.2	2Pd		18	51.2	10f		9	38.2	10d		2	45.3	10d		6	4.4	5Im
	9	24.4	5Ef		21	43.9	3Ef		10	5.6	2Ef*		3	24.1	4Pd		7	22.2	2Pf
	9	34.6	20d		21	52.5	5Ef		10	20.7	5Ef		4	10.3	40d		7	50.0	20f
	10	19.5	1Im	8	3	24.5	1Im		11	32.8	3Pd		4	42.4	2Pf		8	3.7	1Im
	10	59.1	4Pd		4	21.4	2Im		11	41.5	1Pf		4	47.9	1Pf		10	1.0	4Ef
	11	38.5	40d		6	6.6	1Ef*		11	58.5	10f		4	48.9	3Im		10	47.4	1Ef*
	11	50.9	2Pf		7	25.1	2Ef*		12	3.8	30d		5	5.7	10f		11	17.0	5Ef
	12	14.4	20f		14	52.9	1Pd		14	23.4	3Pf		5	9.4	20f		19	35.0	1Pd
	13	.7	1Ef*		15	8.5	10d		15	1.3	30f		6	34.0	4Pf		19	52.5	10d
	14	9.7	4Pf		16	55.9	3Pd		20	29.7	1Im		7	30.7	40f		21	13.1	2Im
	14	58.9	40f		17	12.4	1Pf		23	12.6	1Ef*		8	19.4	3Ef		21	54.5	1Pf
	21	46.6	1Pd		17	25.7	30d		23	26.2	2Pd		13	35.2	1Im		22	5.7	3Pd
	22	1.3	10d		17	28.7	10f		23	49.2	20d		16	18.6	1Ef*		22	12.9	10f
	23	39.8	3Im		19	46.7	3Pf	13	0	47.6	4Im		18	33.4	2Im		22	39.2	30d
4	0	6.2	1Pf		20	23.1	30f		2	2.7	2Pf		21	39.5	2Ef*	22	0	20.0	2Ef*
	0	21.5	10f		20	46.7	2Pd		2	28.9	20f	18	1	5.7	1Pd		0	56.0	3Pf
	1	42.1	2Im		21	8.7	20d		4	53.8	4Ef		1	21.3	6Im		1	36.8	30f
	3	5.8	3Ef*		22	20.8	4Pd		7	59.3	1Pd		1	22.8	10d		6	40.8	1Im
	4	44.7	2Ef*		23	3.1	40d		8	15.6	10d		2	50.2	6Em		9	24.6	1Ef*
	8	56.5	1Im		23	23.3	2Pf		10	11.8	3Im		3	25.2	1Pf		13	39.0	2Pd
	11	37.9	1Ef*		23	48.4	20f		10	18.8	1Pf		3	28.4	3Pd		14	3.9	20d
	18	7.3	2Pd	9	1	31.0	4Pf		10	35.9	10f		3	43.1	10f		14	46.9	4Pd
	18	28.1	20d		2	1.5	1Im		13	41.2	3Ef		3	59.4	6Ed*		15	35.1	40d
	19	44.8	4Im		2	23.6	40f		15	53.8	2Im		4	1.1	30d		16	15.5	2Pf
	20	23.9	1Pd		4	43.8	1Ef*		18	59.0	2Ef*		6	18.8	3Pf		16	43.5	20f
	20	38.7	10d		13	14.5	2Im		19	6.8	1Im		6	58.6	30f		17	56.8	4Pf
	20	44.0	2Pf		13	30.1	1Pd		21	49.8	1Ef*		9	51.1	6Ef		18	12.3	1Pd
	21	7.9	20f		13	45.9	10d	14	6	36.5	1Pd		10	59.1	2Pd		18	29.9	10d
	22	19.2	3Pd		14	44.2	7Im		6	53.1	10d		11	23.3	20d		18	55.5	40f
	22	43.4	1Pf		15	34.9	3Im		8	19.4	2Pd		12	10.0	4Im		20	31.8	1Pf
	22	47.5	30d		15	49.7	1Pf		8	42.7	20d		12	12.3	1Im		20	44.8	3Im
	22	58.9	10f		16	6.1	10f		8	51.3	3Pd		13	35.6	2Pf		20	50.4	10f
	23	46.7	4Ef		16	18.6	2Ef*		8	56.0	1Pf		14	3.0	20f	23	0	16.7	3Ef
5	1	10.2	3Pf		17	18.5	7Em		9	13.3	10f		14	55.8	1Ef*		5	18.0	1Im
	1	45.0	30f		18	48.1	7Ed*		9	22.9	30d		16	18.6	4Ef		6	6.3	2Im
	7	33.5	1Im		19	3.0	3Ef		9	42.9	4Pd		23	29.8	7Pd		8	1.8	1Ef*
	10	15.0	1Ef*		23	3.5	5Pd		10	27.9	40d		23	43.1	1Pd		9	13.4	2Ef*
	10	35.2	2Im	10	0	11.3	50d		10	55.9	2Pf		23	53.3	5Pd		12	18.8	5Pd
	10	39.3	5Pd		0	38.6	1Im		11	22.4	20f	19	0	.2	10d		13	35.8	50d
	11	43.2	50d		1	5.7	7Ef		11	28.2	5Pd		1	6.4	7Pf		15	51.8	5Pf
	13	38.2	2Ef*		2	36.9	5Pf		11	41.8	3Pf		1	7.6	50d		16	49.7	1Pd
	14	13.4	5Pf		3	21.0	1Ef*		12	20.4	30f		2	2.5	1Pf		17	7.3	10d
	15	40.2	50f		4	8.4	50f		12	39.4	50d		2	7.5	3Im		17	32.8	50f
	19	1.1	1Pd		5	39.8	2Pd		12	52.8	4Pf		2	20.6	10f		19	9.1	1Pf
	19	16.2	10d		6	2.2	20d		13	48.3	40f		3	26.1	5Pf		19	24.3	3Pd
	20	58.2	3Im		6	54.1	60d		15	1.1	5Pf		3	26.6	2Im		19	27.8	10f
	21	20.7	1Pf		7	6.6	4Im		16	36.5	50f		4	9.6	70d		19	58.3	30d
	21	36.3	10f		8	16.4	2Pf		17	43.9	1Im		5	4.6	50f		22	14.7	3Pf
6	0	24.9	3Ef		8	41.9	20f		20	27.0	1Ef*		5	38.5	3Ef		22	32.3	2Pd
	3	.4	2Pd		11	11.5	4Ef	15	0	47.0	2Im		6	33.0	2Ef*		22	55.9	30f

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	22	57.4	20d		12	35.1	10f		3	21.6	10d		11	20.2	1Ef*		20	43.8	2Pf
	23	32.8	4Im		12	41.0	3Im		5	22.7	1Pf		15	26.3	2Pd		21	13.0	20f
24	1	8.8	2Pf		16	14.1	3Ef		5	42.3	10f		15	52.9	20d		21	27.9	3Ef
	1	37.1	20f		17	39.5	2Im		5	58.4	3Pd		16	1.8	4Im		21	51.6	4Pf
	3	43.4	4Ef		20	47.4	2Ef*		6	33.9	30d		18	3.1	2Pf		22	52.3	40f
	3	55.1	1Im		21	1.0	1Im		8	48.9	3Pf		18	32.4	20f	12	1	30.4	6Pd
	6	39.0	1Ef*		23	45.1	1Ef*		9	31.5	30f		20	10.1	1Pd		1	42.5	1Im
	14	59.6	2Im	29	8	33.7	1Pd		12	46.0	2Pd		20	15.4	4Ef		3	46.4	6Pf
	15	27.0	1Pd		8	51.9	10d		13	12.2	20d		20	28.6	10d		4	26.4	1Ef*
	15	44.8	10d		10	5.7	2Pd		13	33.7	4Pd		22	29.7	1Pf		5	27.7	60d
	17	46.5	1Pf		10	31.6	20d		14	7.1	1Im		22	49.5	10f		10	33.5	2Im
	18	3.5	3Im		10	53.2	1Pf		14	24.8	40d		23	15.4	3Im		11	31.7	60f
	18	5.3	10f		10	56.1	4Im		15	22.6	2Pf	8	2	49.7	3Ef		13	17.0	1Pd
	18	6.9	2Ef*		11	12.5	10f		15	51.8	20f		7	13.4	1Im		13	35.6	10d
	21	35.8	3Ef		11	20.6	3Pd		16	44.3	4Pf		7	53.2	2Im		13	42.4	2Ef*
25	2	32.3	1Im		11	55.7	30d		16	51.3	1Ef*		9	57.5	1Ef*		15	36.8	1Pf
	5	16.2	1Ef*		12	42.3	2Pf		17	45.1	40f		11	1.9	2Ef*		15	56.7	10f
	7	25.6	2Pd		13	11.2	20f		23	49.6	6Im		18	47.5	1Pd		16	33.3	3Pd
	7	51.0	20d		14	11.1	3Pf	4	1	40.6	1Pd		19	6.0	10d		17	9.4	30d
	8	28.4	4Pd		14	53.2	30f		1	59.0	10d		21	7.1	1Pf		19	24.4	3Pf
	9	17.5	40d		15	8.2	4Ef		1	59.7	6Em		21	27.0	10f		20	7.1	30f
	10	2.2	2Pf		19	38.2	1Im		3	12.9	6Ed*		21	55.2	3Pd	13	0	19.8	1Im
	10	30.6	20f		22	22.4	1Ef*		4	.1	1Pf		22	31.2	30d		3	.3	2Pd
	11	38.4	4Pf	30	2	32.8	2Im		4	19.7	10f	9	0	19.8	2Pd		3	3.7	1Ef*
	12	37.9	40f		5	40.9	2Ef*		4	37.6	3Im		0	46.1	3Pf		3	26.1	4Im
	14	4.3	1Pd		6	56.3	5Im		5	12.9	2Im		0	46.4	20d		3	27.0	20d
	14	22.2	10d		7	11.1	1Pd		8	11.4	3Ef		0	57.7	4Pd		5	37.4	2Pf
	16	23.8	1Pf		7	29.3	10d		8	21.4	2Ef*		1	28.8	30f		6	6.6	20f
	16	42.7	10f		9	30.6	1Pf		9	2.2	6Ef		1	49.7	40d		7	40.2	4Ef
	16	43.1	3Pd		9	50.0	10f		12	44.3	1Im		2	56.7	2Pf		11	54.4	1Pd
	17	17.4	30d		9	59.8	3Im		15	28.5	1Ef*		3	26.0	20f		12	13.0	10d
	18	30.1	5Im		12	13.3	5Ef		19	22.8	5Im		4	9.0	4Pf		14	14.2	1Pf
	19	33.4	3Pf		13	33.2	3Ef		21	39.4	2Pd		5	9.9	40f		14	34.1	10f
	20	15.0	30f		18	15.4	1Im		22	5.8	20d		5	50.6	1Im		15	12.6	3Im
	23	45.2	5Ef		18	36.7	7Im		22	19.8	4Im		7	49.8	5Im		18	47.1	3Ef
	23	52.9	2Im		18	59.1	2Pd	5	0	16.1	2Pf		8	34.7	1Ef*		19	27.0	2Im
26	1	9.4	1Im		19	25.1	20d		0	17.9	1Pd		13	9.6	5Ef		20	17.2	5Im
	3	.4	2Ef*		19	51.8	4Pd		0	36.4	10d		16	46.6	2Im		22	35.9	2Ef*
	3	53.5	1Ef*		20	42.3	40d		0	41.5	5Ef		17	24.8	1Pd		22	57.1	1Im
	6	10.0	60d		20	59.6	1Ef*		0	45.3	20f		17	43.4	10d	14	1	37.8	5Ef
	12	18.6	60f		21	24.6	7Em		2	33.0	4Ef		19	44.5	1Pf		1	40.9	1Ef*
	12	41.7	1Pd		21	35.7	2Pf		2	37.5	1Pf		19	55.4	2Ef*		10	31.8	1Pd
	12	59.6	10d		22	4.7	20f		2	57.2	10f		20	4.4	10f		10	50.4	10d
	15	1.2	1Pf		23	2.2	4Pf		3	17.3	3Pd		20	34.4	3Im		11	53.9	2Pd
	15	20.2	10f		23	50.1	7Ed		3	53.0	30d	10	0	8.8	3Ef		12	20.6	20d
	15	22.2	3Im						6	7.9	3Pf		3	7.8	7Pd		12	22.2	4Pd
	16	19.0	2Pd	Déc.	h	m			6	50.6	30f		4	27.9	1Im		12	51.7	1Pf
	16	44.5	20d	1	0	2.7	40f		11	21.6	1Im		6	19.7	7Pf		13	11.6	10f
	17	14.4	4Im		5	48.5	1Pd		14	5.7	1Ef*		7	11.9	1Ef*		13	14.6	40d
	18	55.0	3Ef		5	51.6	7Ef		14	6.3	2Im		9	13.3	2Pd		13	52.4	3Pd
	18	55.5	2Pf		6	6.7	10d		17	14.9	2Ef*		9	23.3	70d		14	28.6	30d
	19	24.1	20f		8	8.0	1Pf		22	55.3	1Pd		9	39.9	20d		14	31.0	2Pf
	21	25.8	4Ef		8	27.4	10f		23	13.8	10d		9	43.9	4Im		15	.1	20f
	23	46.6	1Im		8	39.5	3Pd	6	1	14.9	1Pf		11	50.2	2Pf		15	34.3	4Pf
27	2	30.7	1Ef*		9	14.8	30d		1	34.6	10f		12	19.5	20f		16	34.8	40f
	8	46.2	2Im		11	26.2	2Im		1	56.5	3Im		13	57.8	4Ef		16	43.6	3Pf
	11	19.0	1Pd		11	30.0	3Pf		5	30.6	3Ef		15	31.1	70f		17	26.2	30f
	11	37.0	10d		12	12.3	30f		6	32.9	2Pd		16	2.2	1Pd		21	34.4	1Im
	11	53.9	2Ef*		14	34.4	2Ef*		6	59.3	20d		16	20.8	10d	15	0	18.2	1Ef*
	13	38.5	1Pf		16	52.6	1Im		7	15.6	4Pd		18	22.0	1Pf		4	20.5	2Im
	13	57.6	10f		19	36.8	1Ef*		8	7.2	40d		18	41.8	10f		7	29.4	2Ef*
	14	1.8	3Pd	2	3	52.5	2Pd		9	9.6	2Pf		19	14.2	3Pd		9	9.2	1Pd
	14	36.5	30d		4	18.7	20d		9	38.9	20f		19	50.3	30d		9	27.8	10d
	16	52.2	3Pf		4	25.8	1Pd		9	58.8	1Im		22	5.2	3Pf		11	29.1	1Pf
	17	34.1	30f		4	37.9	4Im		10	26.6	4Pf		22	47.9	30f		11	49.0	10f
	22	23.8	1Im		4	44.1	10d		11	27.5	40f	11	1	40.1	2Im		12	31.7	3Im
28	0	44.7	5Pd		6	29.2	2Pf		12	43.0	1Ef*		3	5.2	1Im		16	6.2	3Ef
	1	7.9	1Ef*		6	45.4	1Pf		21	32.7	1Pd		4	48.9	2Ef*		20	11.8	1Im
	1	12.4	2Pd		6	58.3	20f		21	51.2	10d		5	49.2	1Ef*		20	47.4	2Pd
	1	38.0	20d		7	4.9	10f		22	59.7	2Im		14	5.1	5Pd		21	8.5	4Im
	2	4.1	50d		7	18.7	3Im		23	52.3	1Pf		14	39.6	1Pd		21	14.1	20d
	2	10.0	4Pd		8	50.6	4Ef	7	0	12.1	10f		14	58.2	10d		22	55.4	1Ef*
	2	59.9	40d		10	52.3	[illegible]f		0	36.2	3Pd		15	29.0	50d		23	24.6	2Pf
	3	48.9	2Pf		13	11.1	[illegible]d		1	12.1	30d		16	59.4	1Pf		23	53.6	20f
	4	17.7	20f		14	32.4	50d		1	37.9	5Pd		17	19.3	10f	16	1	22.6	4Ef
	4	18.3	5Pf		15	29.9	1Im		2	8.4	2Ef*		17	42.2	5Pf		2	32.7	5Pd
	5	20.2	4Pf		16	45.5	5Pf		3	.7	50d		17	53.5	3Im		3	57.4	50d
	6	1.0	50f		18	14.0	1Ef*		3	27.0	3Pf		18	6.8	2Pd		6	11.5	5Pf
	6	20.3	40f		18	29.1	50f		4	9.7	30f		18	33.5	20d		7	46.6	1Pd
	9	56.4	1Pd		20	19.6	2Im		5	13.5	5Pf		18	39.9	4Pd		7	53.6	50f
	10	14.5	10d		23	27.9	2Ef*		6	57.3	50f		19	25.4	50f		8	5.2	10d
	12	15.9	1Pf	3	3	3.2	1Pd		8	36.1	1Im		19	32.1	40d		10	6.5	1Pf

1995- PHÉNOMÈNES DES SATELLITES DE SATURNE

	10	26.4	1Of		23	54.8	2Od		18	21.9	4Od		20	40.6	1Of		3	37.1	1Ef*
	11	11.5	3Pd	20	0	39.5	4Od		19	52.9	2Pf		21	47.6	3Pd		12	30.6	1Pd
	11	47.7	3Od		1	50.2	6Em		20	21.3	2Of		22	23.2	3Od		12	48.5	1Od
	13	14.0	2Im		2	5.5	2Pf		20	43.2	4Pf	26	0	40.0	3Pf		13	41.7	4Im
	14	2.9	3Pf		2	16.3	1Pd		21	13.5	5Im		1	20.9	3Of		13	43.6	2Pd
	14	45.3	3Of		2	28.0	6Ed*		21	42.0	4Of		3	29.0	2Im		14	9.6	2Od
	16	22.9	2Ef*		2	34.3	2Of		22	8.5	1Pd		5	2.7	1Im		14	51.0	1Pf
	18	49.1	1Im		2	34.8	1Od		22	26.9	1Od		6	37.3	2Ef*		15	10.2	1Of
	21	32.7	1Ef*		3	.1	4Pf	23	0	28.7	1Pf		7	45.3	1Ef*		15	58.5	5Pd
17	5	41.0	2Pd		3	59.6	4Of		0	48.4	1Of		16	38.3	1Pd		16	21.5	2Pf
	6	4.6	4Pd		4	36.3	1Pf		1	48.4	3Im		16	56.4	1Od		16	26.3	3Pd
	6	7.7	2Od		4	56.1	1Of		2	34.0	5Ef		18	58.6	1Pf		16	49.0	2Of
	6	24.0	1Pd		5	49.8	3Pd		5	22.6	3Ef		19	18.0	1Of		17	1.4	3Od
	6	42.6	1Od		6	25.9	3Od		9	10.6	1Im		19	56.3	2Pd		17	22.5	5Od
	6	57.0	4Od		8	11.9	6Ef		9	41.8	2Im		19	58.8	4Im		17	54.5	4Ef
	8	18.2	2Pf		8	41.6	3Pf		11	53.5	1Ef*		20	22.5	2Od		19	19.1	3Pf
	8	44.0	1Pf		9	23.5	3Of		12	50.3	2Ef*		20	27.0	3Im		19	43.2	5Pf
	8	47.2	2Of		13	18.5	1Im		20	46.0	1Pd		22	34.0	2Pf		19	59.1	3Of
	9	3.8	1Of		15	.9	5Pd		21	4.3	1Od		23	2.0	2Of		21	17.9	5Of
	9	17.1	4Pf		15	54.6	2Im		23	6.2	1Pf	27	0	.9	3Ef		23	32.4	1Im
	9	50.8	3Im		16	1.7	1Ef*		23	25.8	1Of		0	12.1	4Ef	30	2	14.4	1Ef*
	10	17.2	4Of		16	25.7	5Od	24	0	28.3	3Pd		3	40.1	1Im		6	9.9	2Im
	13	25.3	3Ef		18	41.5	5Pf		1	4.1	3Od		6	22.6	1Ef*		9	17.8	2Ef*
	17	26.4	1Im		19	3.4	2Ef*		2	9.0	2Pd		9	42.3	5Im		11	8.0	1Pd
	20	9.9	1Ef*		20	21.7	5Of		2	16.1	4Im		12	22.6	2Im		11	25.8	1Od
	22	7.6	2Im	21	0	53.7	1Pd		2	35.4	2Od		15	2.0	5Ef		13	28.5	1Pf
18	1	16.4	2Ef*		1	12.1	1Od		3	20.5	3Pf		15	15.7	1Pd		13	47.6	1Of
	5	1.5	1Pd		3	13.8	1Pf		4	1.8	3Of		15	30.8	2Ef*		15	5.7	3Im
	5	20.0	1Od		3	33.5	1Of		4	46.6	2Pf		15	33.7	1Od		18	39.1	3Ef
	7	21.4	1Pf		4	29.2	3Im		5	14.9	2Of		17	36.0	1Pf		22	9.8	1Im
	7	41.3	1Of		8	3.5	3Ef		6	29.8	4Ef		17	55.4	1Of		22	37.3	2Pd
	8	30.6	3Pd		8	21.7	2Pd		7	48.0	1Im		19	6.9	3Pd		22	38.1	4Pd
	8	45.1	5Im		8	33.4	4Im		10	30.8	1Ef*		19	42.3	3Od		23	3.1	2Od
	9	6.8	3Od		8	48.3	2Od		18	35.4	2Im		21	59.5	3Pf		23	29.3	4Od
	11	22.3	3Pf		10	59.2	2Pf		19	23.4	1Pd		22	40.0	3Of	31	0	51.6	1Ef*
	12	4.4	3Of		11	27.8	2Of		19	41.6	1Od	28	0	7.9	6Pd		1	15.3	2Pf
	14	5.9	5Ef		11	55.8	1Im		21	43.6	1Pf		2	17.5	1Im		1	42.5	2Of
	14	34.6	2Pd		12	47.4	4Ef		21	43.8	2Ef*		4	6.4	6Pf		1	53.2	4Pf
	14	50.9	4Im		14	39.0	1Ef*		22	3.2	1Of		4	47.2	6Od		2	49.2	4Of
	15	1.2	2Od		22	35.4	7Im		23	7.7	3Im		4	49.9	2Pd		7	25.3	7Pd
	16	3.8	1Im		23	31.1	1Pd	25	2	41.8	3Ef		4	55.2	4Pd		9	45.4	1Pd
	17	11.8	2Pf		23	49.5	1Od		3	29.5	5Pd		4	59.8	1Ef*		10	3.2	1Od
	17	40.7	2Of	22	0	48.2	2Im		4	54.1	5Od		5	16.0	2Od		12	6.0	1Pf
	18	47.2	1Ef*		1	51.2	1Pf		6	25.4	1Im		5	46.8	4Od		12	25.0	1Of
	19	5.0	4Ef		2	10.9	1Of		7	12.1	5Pf		7	27.8	2Pf		12	42.9	7Pf
19	3	38.9	1Pd		3	4.3	7Em		8	49.8	5Of		7	55.5	2Of		13	45.7	3Pd
	3	57.4	1Od		3	9.1	3Pd		9	8.0	1Ef*		8	9.7	4Pf		14	20.5	3Od
	5	58.9	1Pf		3	45.0	3Od		11	2.6	2Pd		9	6.8	4Of		14	38.3	7Od
	6	18.7	1Of		3	56.9	2Ef*		11	12.4	4Pd		10	43.2	6Of		15	3.5	2Im
	7	1.1	2Im		4	50.3	7Ed		11	28.9	2Od		13	53.1	1Pd		16	38.7	3Pf
	7	10.0	3Im		6	1.0	3Pf		12	4.4	4Od		14	11.1	1Od		17	18.2	3Of
	10	9.9	2Ef*		6	42.7	3Of		13	40.3	2Pf		16	13.5	1Pf		18	11.3	2Ef*
	10	44.4	3Ef		10	27.0	7Ef		14	8.4	2Of		16	32.8	1Of		20	11.7	7Of
	14	41.1	1Im		10	33.2	1Im		14	26.4	4Pf		17	46.3	3Im		20	47.2	1Im
	17	24.4	1Ef*		13	16.2	1Ef*		15	24.4	4Of		21	16.2	2Im		22	11.5	5Im
	22	24.6	6Im		17	15.4	2Pd		18	.8	1Pd		21	20.0	3Ef		23	28.9	1Ef*
	23	28.1	2Pd		17	29.7	4Pd		18	19.0	1Od	29	0	24.3	2Ef*				
	23	47.1	4Pd		17	41.9	2Od		20	21.1	1Pf		0	55.0	1Im				

PHÈNOMÈNES MUTUELS

LES PHENOMENES MUTUELS

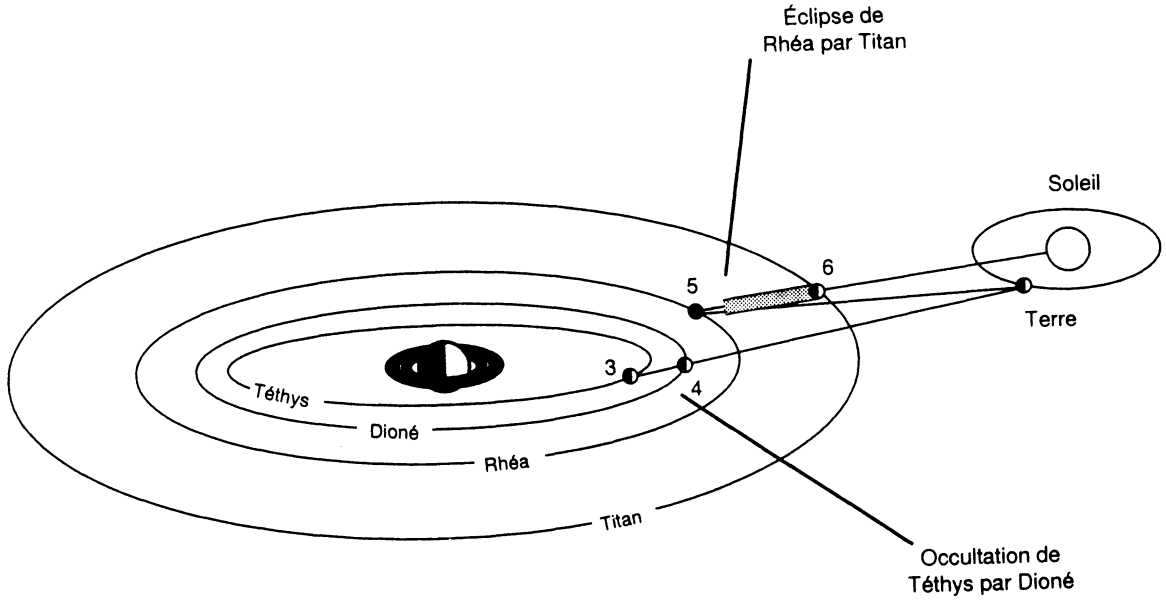
Une période favorable de quelques mois en 1995 va rendre possible l'observation de phénomènes mutuels des satellites de Saturne.

La configuration des orbites des satellites de Saturne permet l'apparition de phénomènes mutuels deux fois durant chaque révolution de Saturne, soit tous les quinze ans. Les orbites des satellites (exceptée celle de Japet) se trouvent quasiment dans le plan équatorial de Saturne. Quand la Terre traverse ce plan, c'est-à-dire quand la déclinaison satunicentrique de la Terre s'annule, un observateur terrestre peut voir les satellites s'occulter l'un l'autre (voir fig. 2).

MUTUAL PHENOMENA

In 1995 a favorable period of several months allows the observation of mutual phenomena involving the Saturnian satellites.

The configuration of the orbits of the Saturnian satellites induces phenomena between the satellites themselves twice each Saturnian year of 15 years. Except Iapetus, the Saturnian satellites have orbits which are nearly in the equatorial plane of Saturn. When the Earth goes through this plane, i.e. when the Saturnicentric declination of the Earth becomes zero, the satellites may occult one another for a terrestrial observer (see fig. 2).



dessin S. Pottier

Fig. 2. Phénomènes mutuels des satellites de Saturne; éclipse de Réa par Titan et occultation de Téthys par Dioné.

De la même façon, quand le Soleil traverse le plan équatorial de Saturne, c'est-à-dire quand la déclinaison saturnicentrique du Soleil s'annule, un satellite peut se trouver dans l'ombre ou la pénombre d'un autre satellite.

Du fait de leurs petites tailles et de la faible inclinaison de leur orbite sur l'équateur de Saturne, les satellites ne présentent pas de phénomènes mutuels pour chaque conjonction géocentrique (pour les occultations) ou héliocentrique (pour les éclipses) pendant la période favorable. Cette période a lieu quand les déclinaisons saturnicentriques de la Terre et du Soleil sont plus petites qu'une quantité donnée. Ces phénomènes sont facilement calculables avec les ordinateurs actuels et leur observation qui ne présente pas de difficultés majeures donne des informations très intéressantes sur les satellites eux-mêmes.

LES PREDICTIONS POUR 1995

Pour les calculs des dates des phénomènes, nous avons utilisé les éphémérides des satellites de Saturne (Dourneau, 1993). Nous avons utilisé également les éphémérides des planètes VSOP82 (Bretagnon, 1982).

EXPLICATION DES TABLES

Les tables donnent les dates prévues pour les phénomènes mutuels. Ces dates sont donnés dans l'échelle de temps terrestre TT. Cette échelle de temps est très proche du Temps des Ephémérides ou du Temps Atomique International plus 32 secondes (TAI + 32 s). On obtient les dates des phénomènes en Temps Universel (UT) en soustrayant 61 secondes aux dates données dans les tables.

On trouve dans ces tables:

— le mois, le jour, l'heure et la minute (au dixième près) du maximum du phénomène ;

— la définition du phénomène sous la forme A E B pour l'éclipse du satellite B par le satellite A, A O B pour l'occultation du satellite B par le satellite A;

— le type de phénomène:
P signifie partiel
A signifie annulaire
T signifie Total
C signifie conjonction et désigne un rapprochement de satellites pouvant éventuellement donner lieu à une occultation ou une éclipse.

Similarly, when the Sun goes through the equatorial plane of Saturn, i.e., when the Saturnicentric declination of the Sun becomes zero, the satellites may enter in the umbra or the penumbra of the other satellites.

Because of the small size of the satellites and the very small inclination of their orbit to the Saturnian equator, mutual phenomena do not occur for each geocentric conjunction (for the occultations) or heliocentric one (for the eclipses) during the favorable period. This favorable period occurs when the Saturnicentric declinations of the Earth and the Sun are smaller than a defined quantity. These phenomena are easily predictable with modern computers and their observation - which presents no major difficulties - gives interesting information about the satellites themselves..

BASIS OF THE PREDICTIONS FOR 1995

For the calculations of the dates of the phenomena, we used the Dourneau's ephemerides (Dourneau, 1993) of the Saturnian satellites. We used also the ephemerides of the planets VSOP82 (Bretagnon, 1982).

EXPLANATION OF THE TABLES

The tables gives the dates of the predicted phenomena. These dates are given in the TT scale (Terrestrial Time). This time scale is very close to the Ephemeris Time (ET) or to the International Atomic Time plus 32s (TAI + 32s). One obtains the times of the mutual phenomena in the Universal Time scale (UT) by subtracting 61 seconds of time from the times given in the tables.

Are given in the tables:

— the month, day, hour and minute (to the nearest tenth of minute) of the maximum of the phenomenon;

— the definition of the phenomenon:
A E B means eclipse of satellite B by satellite A,
A 0 B means occultation of satellite B by satellite A;

— the type of phenomenon:
P means partial
A means annular
T means total
C means conjunction and corresponds to the close approach of two satellites which could eventually lead to the observation of an eclipse or an occultation ;

Lorsque le type de phénomène n'est pas indiqué, il s'agit d'une éclipse par la pénombre;

— la grandeur qui est donnée dans une échelle de 0 à 1 et caractérise la chute en flux lumineux. A désignant une disparition totale;

— la durée qui est donnée en secondes de temps.

no type is given for the eclises by the penumbra;

— the light flux drop given in a scale from 0 for no light flux drop to 1 for total disappearance of the satellite;

— the duration in secondes of time.

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1995 - PHÉNOMÈNES MUTUELS DES SATELLITES DE SATURNE

jour	h	m	phén.		grand.	dur.
Jan.						
13	8	50.1	2E3	P	0.185	4199
	10	35.4	203	C *		
16	6	22.5	1E2	C		
31	9	25.7	1E2	C		
	10	5.7	102	C		
	11	54.0	1E2	C		
Fév.						
17	5	26.0	3E2	C *		
	10	44.8	3E2	P *	0.593	1080
	11	1.7	302	C *		
Mars						
8	12	45.3	201	C *		
	12	49.3	2E1	C *		
16	12	36.5	8E7	C *		
23	13	40.0	2E1	C *		
	13	53.0	201	C *		
24	2	56.7	2E3	C *		
	3	8.8	203	A *	0.182	419
Avr.						
3	23	25.5	401	C *		
7	15	5.0	2E1	C *		
8	7	57.3	2E3	C *		
9	22	5.8	403	C		
12	22	51.5	302	P	0	25
16	12	34.7	102	C		
17	16	25.9	203	P	0.117	121
21	4	37.5	503	P	0.013	221
22	5	46.2	304	A	0.473	283
	10	30.0	302	C		
	16	39.2	2E1	P	0.366	282
	21	59.2	2E1	P *	0.665	758
25	10	28.6	201	P	0	1
27	4	34.6	203	C		
	23	6.8	305	P	0.134	195
28	1	8.8	3E2	C *		
	4	39.1	301	C		
29	0	1.1	403	C		
30	1	56.3	301	T	0.120	74
Mai						
1	20	23.8	407	C		
	22	49.5	302	C		
	23	13.6	301	P	0.007	26
2	14	14.6	104	C		
	17	18.1	104	C *		
3	2	56.5	407	C		
	20	30.8	301	C		
	22	57.3	401	P	0.024	92
4	5	29.1	401	P *	0.108	354
	8	45.7	102	A	0.381	59
	13	16.0	403	C		
	16	12.4	503	T	0.324	179
	21	54.0	504	C		
5	7	56.3	104	P	0.018	57
	17	31.1	304	C		
6	8	22.9	105	A	0.062	375
	11	21.0	105	P	0.010	200
	16	59.8	203	P	0.058	49
	17	14.0	401	C		
7	3	28.8	102	C		
	18	17.2	2E1	P	0.981	240
8	0	8.3	201	C *		
	2	32.3	104	C		
	14	55.0	501	C		
	23	15.5	501	C *		
9	11	57.9	401	C		
	19	46.2	506	A	0.081	924
	19	49.8	403	P	0.066	2106
11	4	44.2	406	C		
	7	13.0	304	C		
	7	46.8	306	P	0.017	243
	8	51.4	305	P	0.008	52
	9	36.9	706	C		
	11	17.7	302	T	0.182	69
	16	47.0	405	P	0.334	455
12	3	29.6	701	C *		
	10	51.9	403	C *		
13	4	31.1	3E2	T	1.000	812
	6	58.9	201	C		
	9	35.2	3E2	*	0.014	450
	13	35.0	502	T	0.096	765
	16	44.8	502	T	0.096	702
15	7	56.4	402	C		
	22	37.2	205	A	0.097	143
16	1	47.0	201	C		
	5	29.6	203	P *	0.048	42
	7	48.3	204	C		
17	11	38.0	504	C		
	14	57.0	504	P	0.040	2268
18	0	40.4	403	C		
	1	22.0	503	C		
	1	41.3	402	C		
	2	28.0	502	T	0.096	109
	11	13.9	504	C		
	11	17.5	603	P	0.006	202
	12	24.8	602	T	0.009	564
	20	36.9	602	T *	0.009	798
	20	38.9	201	P *	0.238	32
	20	39.6	601	T *	0.006	282
19	1	33.3	204	C		
	3	43.3	604	T *	0.045	404
	4	7.4	304	P *	0.018	44
	5	13.8	603	T	0.041	1096
	9	52.0	602	T	0.009	422
	16	44.2	605	P	0.009	220
20	4	20.4	203	C		
	5	48.3	205	A *	0.097	96
	9	41.7	405	P	0.199	137
	19	26.2	402	T	0.166	86
	23	48.1	302	C *		
21	15	32.3	201	C *		
	19	18.2	204	A	0.166	84
22	4	26.7	504	P	0.248	145
	9	11.6	502	P *	0.096	83
	12	30.8	501	C *		
	19	57.3	2E1	P	0.914	204
23	2	55.1	201	C		
	13	10.9	402	P	0.114	74
24	3	17.1	405	C		
	10	26.0	201	C *		
	12	29.5	205	P	0.045	70
	13	3.0	204	P	0.019	39
	20	.3	105	C		
	20	44.2	405	C		
	22	36.5	302	C		
25	18	.2	203	C *		
	21	28.3	403	C		
26	6	55.6	402	C		
	16	11.9	502	P	0.033	81
27	3	41.0	501	C		
	6	47.8	204	C		
28	20	52.3	205	P	0.092	243
29	0	40.2	402	C		
	4	43.9	205	C *		
	10	48.5	105	C		
	13	49.5	103	C *		
	16	44.7	203	C		
30	12	18.1	302	C *		
	13	52.4	102	C *		
	21	28.3	504	P	0.330	473
31	11	5.8	103	C *		
	11	14.9	403	C *		
	14	49.6	501	T	0.062	591
	17	15.9	501	C		
Juin						
1	14	55.5	304	C		
	23	9.9	2E3	C		
	23	40.7	104	A *	0.109	350
2	8	22.2	103	A *	0.120	54
	8	44.6	102	C *		
3	10	55.0	302	C		
4	5	38.5	103	A *	0.120	58
	6	29.2	203	C		
5	3	35.7	102	P	0.157	32
6	2	54.8	103	P *	0.001	11
	16	16.0	405	P	0.078	264
	21	38.7	2E1	P	0.979	182
7	4	32.3	304	P	0.008	41
	22	24.0	102	C		
8	0	11.0	103	C *		
9	0	45.2	302	C		
	21	27.2	103	C *		
11	7	10.0	201	C *		
	12	52.7	305	C		
13	11	15.9	504	C		
	18	53.7	203	C		
14	2	.2	201	P	0.248	39
16	20	45.3	201	C		
17	1	57.8	2E3	A	0.225	459
	11	20.4	203	C		
18	13	4.9	302	T	0.182	101
19	11	39.2	403	C		
20	11	31.9	305	C		
21	23	21.0	2E1	P	0.622	151
23	0	12.5	102	C		
	7	5.3	203	C		
25	18	51.8	102	C		
26	5	14.0	304	P	0.029	92
	18	3.8	104	C		
27	4	27.4	503	P	0.284	222
28	3	30.9	401	P	0.091	90
	4	33.2	1E2	A	0.584	1215
29	5	18.6	104	C *		
	12	26.4	104	P	0.059	106
30	16	50.3	401	C *		
Jui.						
1	18	40.2	304	C		
	22	33.1	201	T	0.381	56
3	15	11.9	302	P	0.039	55
	22	27.6	305	C		
5	2	23.3	3E1	C		
6	21	28.0	3E2	C		
	23	40.5	3E1	C		
7	1	4.1	2E1	C		
8	9	14.3	203	P	0.029	60
	12	27.0	403	C		
	20	57.8	3E1	C		
10	18	15.1	3E1	C		
	20	37.8	102	C		
12	15	32.4	3E1	C		
13	2	24.6	305	C		
	5	34.5	1E2	P	0.179	359
	7	54.7	102	P	0.362	1068
	10	35.0	105	A *	0.062	331
	23	4.4	203	C		
14	1	44.7	403	P	0.350	139
	12	49.8	3E1	C		
15	22	48.5	1E2	C		
16	1	9.5	3E4	A	0.820	738
	10	7.2	3E1	C		
17	0	19.1	201	C		
18	17	16.2	302	T	0.182	88
19	15	21.2	403	C		
	19	7.0	503	P	0.079	141
22	0	5.8	3E2	T	1.000	352
	2	48.0	2E1	C		
23	11	20.1	203	C		
24	6	57.5	302	C		
25	22	22.5	102	C		
26	8	43.1	304	C		
	20	59.9	104	P	0.023	62
27	22	21.4	401	C		
28	6	16.9	401	P	0.039	94
	7	3.4	1E2	C		
	7	41.5	102	C		
	9	24.3	4E3	P	0.263	352
	20	52.5	502	C		
29	0	49.3	503	C		
	1	6.4	203	A	0.182	74
	2	47.0	502	C *		
31	22	16.5	304	C		
Août						
1	2	3.4	201	C		
2	9	46.6	3E1	P	0.685	137
	13	38.9	501	P	0.061	456
	18	2.1	402	C		
3	14	43.4	203	P *	0.039	39
4	7	4.7	3E1	P	0.664	139
	17	10.5	305	C		
5	5	4.3	105	P	0.008	214
	11	44.4	402	C		
6	3	29.9	3E2	C		

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jour	h	m	phén.		grand.	dur.
	4	22.8	3E1	P	0.605	139
	4	32.7	2E1	C		
	7	36.1	302	C	*	
	8	23.1	3E2	C		
	11	44.1	204	C		
	11	57.9	304	P	0.037	58
	21	35.8	504	P	0.140	138
7	3	23.6	502	C	*	
	5	31.5	102	C		
8	1	41.1	3E1	P	0.506	137
	5	26.5	402	P	0.024	55
	8	57.7	302	C	*	
9	4	18.2	203	C	*	
	5	26.8	204	P	0.094	59
	6	42.9	205	A	0.097	104
	17	.0	3E4	C		
	22	59.5	3E1	P	0.371	132
10	0	6.0	102	C		
	19	39.2	2E3	P	0.050	171
	23	8.6	402	T	0.166	108
11	10	34.6	502	P	0.042	101
	20	18.0	3E1		0.222	121
	22	12.9	504	P	0.093	108
	23	9.5	204	A	0.166	72
12	1	42.0	304	C	*	
	9	3.2	102	P	0.321	239
13	16	50.6	402	P	0.102	87
	16	57.8	405	C		
	17	36.7	3E1		0.099	103
	22	17.6	406	P	0.042	456
	22	33.0	302	C	*	
	23	19.1	305	C	*	
14	4	32.5	306	C		
	6	1.7	106	A	0.006	5868
	7	48.0	205	C		
	14	43.8	206	A	* 0.009	304
	16	52.2	204	C		
	17	55.2	203	C		
	19	46.2	106	A	0.006	218
15	3	31.9	406	A	0.045	3445
	8	9.5	406	P	0.037	2391
	14	55.5	3E1		0.019	88
16	3	46.3	201	T	0.381	61
	10	32.5	402	C		
	11	54.2	502	T	0.096	117
	19	54.3	504	C		
17	12	14.5	3E1	C		
	15	26.2	304	C	*	
	15	49.9	104	C		
18	15	18.4	205	C		
	17	37.0	405	C		
19	1	23.7	401	C		
	4	14.4	402	C		
	9	33.6	3E1	C		
	12	8.6	302	C		
	12	30.5	102	C		
20	10	40.4	104	A	0.109	78
	13	26.6	103	C	*	
	22	31.7	501	P	0.004	32
21	6	31.1	201	C		
	6	53.0	3E1	C		
	20	9.6	401	P	0.030	50
22	0	27.1	4E3	C		
	7	16.2	102	P	0.380	51
	10	42.0	103	C	*	
	20	37.4	601	C	*	
	23	42.2	405	P	* 0.255	1642
23	4	12.6	3E1	C		
	4	33.0	301	C		
	5	7.7	304	C		
	5	20.8	104	C		
	5	31.8	305	C		
	5	50.5	105	P	0.028	73
	13	32.5	405	P	0.201	783
24	0	52.5	201	C		
	7	57.5	103	P	* 0.017	26
25	1	32.5	3E1	C		
	1	48.7	102	C		
	1	49.7	302	T	0.182	85
	1	51.9	301	C		
	5	30.2	503	C	*	
	16	1.1	201	C		
	16	22.0	5E3	P	0.209	429
	22	9.6	2E3	P	0.029	199
26	5	12.9	103	A	* 0.120	55
	7	3.7	703	C	*	
	7	39.8	702	C	*	
	19	34.7	201	C		
	22	52.6	3E1	C		
	23	11.1	301	P	0.071	189
28	2	28.4	103	P	* 0.105	47
	6	48.4	104	C		
	10	48.2	201	P	0.328	45
	18	42.0	304	P	0.003	36
	20	13.1	3E1	C		
	20	30.6	301	T	0.120	272
29	0	33.8	102	C	*	
	14	22.7	201	C		
	16	16.7	401	C		
	23	43.8	103	C	*	
30	4	20.6	102	P	0.025	35
	15	43.7	3E2	C		
	15	54.6	302	C		
	17	50.5	301	P	0.048	191
31	5	28.2	201	C		
	19	25.6	102	P	* 0.216	32
	20	59.3	103	C	*	
Sep.						
1	9	12.9	201	T	* 0.381	34
	10	54.3	305	A	0.325	229
	15	10.8	301	C		
	22	57.4	102	C		
3	7	43.9	3E4	C		
	7	55.9	304	P	0.293	202
	12	31.7	301	C		
	14	15.6	102	C		
4	4	4.0	201	C	*	
	9	44.1	203	C		
	17	44.1	102	C		
8	8	28.9	304	C	*	
	8	43.1	3E4	C		
10	1	1.9	2E3	C		
	1	7.1	203	C		
14	18	3.7	3E2	P	0.989	204
	18	4.4	302	P	0.058	124
15	7	9.4	2E1	C		
	10	55.8	7E5		0.005	215
	15	.1	4E3	C		
18	1	18.4	2E1	C		
	16	2.1	1E2	C		
19	5	49.0	2E1	C		
	11	50.1	2E3	C		
21	3	15.6	403	P	0.272	388
	3	21.7	4E3	C		
	10	47.9	1E2		0.021	38
22	0	41.0	2E1	C		
24	1	17.5	3E5	A	0.461	334
	5	17.5	1E2	P	0.098	78
	19	31.6	2E1		0.309	49
25	9	16.5	1E2	C		
26	0	38.5	6E7	C		
27	14	19.1	2E1		0.177	50
	22	10.8	3E4	C		
28	4	10.4	1E2	C		
	6	39.0	1E7	C		
29	20	20.2	302	C		
	20	30.5	3E2	C		
30	8	58.3	2E1	C		
	18	33.2	5E3	C		
	23	3.6	1E2	A	* 0.304	51
Oct.						
1	12	47.5	2E1	C	*	
2	19	45.8	1E5	C	*	
3	3	.4	2E1	P	0.542	160
	11	.3	3E4	C		
	17	54.5	1E2	C		
4	7	39.7	2E1		* 0.200	41
	14	5.8	2E3	A	0.200	160
5	3	17.0	5E1		0.108	74
6	12	39.9	1E2	C		
7	2	31.6	2E1		* 0.062	32
	4	14.2	7E3	C	*	
	10	33.3	1E5		0.031	164
	10	37.2	7E5	C		
	13	3.5	7E3	C		
	16	15.6	1E2	C		
	18	27.7	7E2	C		
8	0	54.5	7E1	C		
	7	35.2	6E5	C		
	9	3.4	7E3	C		
	13	27.2	1E4	C		
9	7	7.5	1E2	C		
	8	8.3	3E2		0.114	81
	16	47.1	5E1	C		
	21	22.2	2E1	C		
	22	58.4	4E1	C		
10	5	22.7	4E3		0.048	110
	11	9.5	1E2		* 0.057	34
11	8	25.9	1E4		* 0.015	51
12	17	54.7	4E1	P	* 0.838	87
13	6	3.5	1E2		* 0.035	31
	19	46.9	2E1	C	*	
14	2	12.5	2E3	C	*	
	3	22.4	1E4		0.116	92
	23	11.3	3E2	C		
15	12	47.7	4E1		0.376	77
	18	30.2	4E3	C		
16	0	56.7	1E2	C		
	14	38.6	2E1		* 0.087	34
	22	13.7	1E4		0.003	40
18	7	33.9	4E1	C		
	11	28.6	5E1	C		
19	0	.6	5E4	C		
	5	54.9	3E7		0.133	215
	9	30.9	2E1		* 0.022	25
	11	24.2	2E7	C	*	
	16	25.2	2E3	C	*	
	16	53.2	1E4	C	*	
20	10	9.4	4E7	C	*	
	19	10.0	1E5		* 0.048	104
21	2	2.8	4E1	C	*	
22	10	52.6	1E4	C	*	
	12	30.8	3E4	P	0.461	167
	18	9.0	1E2	C		
23	2	48.4	5E1		* 0.350	90
	9	29.9	5E3	C	*	
24	10	22.0	3E2	P	0.292	107
	20	59.7	3E1	C		
25	10	27.5	1E5	C		
	13	3.0	1E2		* 0.174	43
	19	18.6	4E5	P	0.191	277
	19	43.3	6E1		0.696	519
26	15	5.1	4E2	C		
	18	17.1	3E1	C		
28	7	57.1	1E2	C		
	15	34.5	3E1	C		
	21	38.3	2E1	C		
29	4	24.1	2E3	A	0.223	121
	7	21.6	7E3	C		
	8	48.7	4E2	C		
	12	41.6	7E5		0.014	183
	22	4.7	7E4		0.007	182
30	2	16.0	2E5		0.010	103
	2	19.2	3E5	P	0.162	178
	2	39.7	3E2	C		
	7	25.5	3E2	C		
	12	51.9	3E1	C		
31	7	8.4	7E6		0	135
	16	30.2	2E1	A	* 0.475	49
	17	29.3	4E1	C	*	
Nov.						
1	2	32.2	4E2	C	*	
	6	7.0	5E2	C	*	
	10	9.3	3E1	C	*	
	13	11.8	4E6	A	0.045	1689
	14	5.1	5E6	A	0.084	694
	14	29.5	5E4	P	0.819	356
	23	38.5	4E6	A	* 0.047	2083
2	0	31.2	3E6	A	* 0.036	1431
	2	56.8	1E4	C	*	
	3	32.6	3E4		* 0.001	328
	3	36.8	1E6		* 0.001	156
	3	48.8	2E6	C	*	
	4	49.8	304	C	*	
	11	41.9	304	P	0.151	874
	19	48.5	3E6		0.035	557

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jour	h	m	phén.		grand.	dur.
	22	36.3	3E2	P	0.377	86
3	7	26.6	3E1	C		
	9	30.4	2E5	C		
	10	36.6	4E5	C		
	11	22.6	2E1	C		
	12	25.9	4E1	*	0.323	65
	19	40.8	4E3	P	0.590	161
	20	15.8	4E2	C		
4	21	55.9	1E4	*	0.117	83
5	4	44.0	3E1		0.007	32
	10	49.7	5E1	C		
	12	51.5	5E2	C		
	18	54.0	5E3	P	0.844	186
6	7	23.5	4E1	*	0.330	66
	13	59.2	4E2	C *		
	20	2.9	1E2	*	0.041	32
7	2	1.3	3E1		0.123	69
	16	10.1	2E5	C		
	16	46.4	2E3		0.002	33
	16	55.0	1E4	C		
	18	30.4	1E5	*	0.036	97
8	9	33.9	4E5		0.009	188
	12	37.7	3E2	C		
	23	18.6	3E1	P	0.357	87
9	2	20.7	4E1	C		
	7	42.7	4E2		0.086	104
	14	56.9	1E2	C		
	16	5.8	1E3	C		
	19	48.5	5E2	C		
	22	2.2	6E2	T	1.000	845
10	2	8.9	5E1	*	0.274	77
	4	25.4	6E1	T	1.000	362
	5	19.7	6E2	T *	1.000	1046
	6	7.7	5E4	P *	0.428	178
	8	19.0	2E4	C *		
	9	40.8	6E4	P *	0.955	469
	13	3.6	3E4		0.009	55
	15	57.9	6E1	T	1.000	1103
	19	18.6	6E2	P	0.938	438
	19	24.7	6E1		0.066	317
	20	35.8	3E1	P	0.649	99
11	13	22.5	1E3	C		
12	0	16.6	2E5	C		
	0	56.2	4E5	C		
	1	26.1	4E2	P	0.465	156
	9	32.5	2E5	A *	0.106	538
	11	2.3	3E2	C *		
	11	19.1	3E5	P	0.173	152
	16	22.5	2E5	C		
	17	53.1	3E1	P	0.868	106
	23	30.2	2E1	C		
13	2	3.9	2E4	*	0.004	36
	6	36.9	2E3	C *		
	10	39.3	1E3	C *		
14	15	10.4	3E1	P	0.988	110
	19	9.5	4E2	P	0.884	184
	21	19.7	5E2		0.053	77
15	4	23.8	5E4	C		
	7	56.1	1E3	C		
	18	22.2	2E1	*	0.176	40
	19	48.9	2E4	*	0.067	81
16	2	47.4	3E4		0.003	45
	12	27.6	3E1	T	1.000	112
17	0	57.4	2E5		0.015	86
	1	41.4	4E5		0.117	160
	4	37.3	2E1	P *	0.184	420
	5	12.9	1E3	C *		
	5	15.3	2E3	C *		
	6	38.4	2O1	C		
	12	52.8	4E2	T	1.000	197
	15	47.4	4E6		0.005	311
18	0	47.5	3E2	C		
	3	48.2	1E6	*	0.006	314
	5	58.6	3E6	*	0.040	435
	9	44.8	3E1	T	1.000	111
	10	53.9	2E6		0.009	363
	13	33.9	2E4	*	0.160	97
	18	49.7	5E6		0.084	628
	20	26.0	5E4	P	0.607	200
19	2	29.6	1E3	C		
	3	3.9	1E2	C		
	3	42.5	5E3	*	0.095	111
	4	21.5	5E2	*	0.247	91
20	0	21.6	4E1	T *	1.000	376
	6	36.1	4E2	P	0.995	197
	7	2.0	3E1	T	1.000	110
	23	46.5	1E3	C		
21	0	45.5	4E5	P	0.117	6096
	7	18.9	2E4	*	0.137	95
	7	38.0	2E5	*	0.032	100
	9	59.6	1E5	A *	0.035	310
	21	57.0	1E2	*	0.265	48
	23	32.0	3E2	C *		
22	4	19.1	3E1	T	1.000	107
	18	56.9	2E3		0.026	63
	20	11.1	4E3	A *	0.654	138
	21	3.2	1E3	C *		
23	0	19.3	4E2	P	0.749	183
	11	4.3	5E2		0.453	122
	21	11.9	5E4	C		
24	1	3.9	2E4	*	0.047	74
	1	36.3	3E1	P	0.955	104
	16	51.0	1E2	C		
	18	20.0	1E3	C		
25	14	45.2	2E5		0.078	173
	15	58.2	4E5		0.075	148
	17	56.9	1E5	C		
	18	2.5	4E2	P	0.302	153
	20	3.7	3E5	*	0.009	71
	22	53.5	3E1	P	0.869	100
26	4	33.7	6E1		0.110	120
	14	44.8	6E3	C		
	15	36.9	1E3	C		
	16	.7	6E4	C		
	16	31.7	1E4	C		
	17	46.3	2E3	C		
	18	48.9	2E4	C		
27	13	12.2	3E2		0.384	78
	14	43.3	5E4	P	0.409	680
	20	10.6	3E1	P	0.762	95
	20	21.0	5E2	T	1.000	620
28	0	36.0	5E2	P *	0.263	544
	1	22.4	2E1	C *		
	1	29.8	5E1	T *	1.000	121
	1	56.6	4E1	C *		
	8	16.1	5E4	C *		
	11	45.6	4E2		0.040	94
	12	53.7	1E3	C		
29	11	27.1	1E4	*	0.073	80
	12	33.9	2E4	C *		
	13	26.0	3E4	*	0.125	101
	17	27.8	3E1	P	0.650	91
30	9	15.0	1E5	C		
	10	10.5	1E3	C		
	20	14.6	2E1	C		
	20	52.2	4E1	P *	0.908	85
Déc.						
1	5	28.6	4E2	C *		
	12	2.4	3E2	C *		
	14	44.9	3E1	P	0.546	87
2	6	18.9	2E4	C		
	6	25.4	1E4	C		
	7	25.1	2E3	A *	0.113	80
	7	27.3	1E3	C *		
	12	28.4	5E3	C *		
3	12	2.0	3E1	P	0.451	82
	15	49.8	4E1	C		
	16	39.7	3E6		0.013	488
	23	11.6	4E2	C		
4	4	44.1	1E3	C		
	4	58.0	1E2	C		
	8	60.0	4E5	A	0.525	551
5	3	15.2	3E4	C		
	9	19.1	3E1		0.368	78
6	2	.9	1E3	C		
	6	17.0	2E3	C		
	6	44.8	4E3	C		
	16	54.5	4E2	C		
	23	51.1	1E2	*	0.169	44
7	1	41.6	3E2	P *	0.671	82
	6	36.2	3E1		0.304	74
	23	17.8	1E3	C		
8	13	59.4	1O2	C		
9	3	53.2	3E1		0.254	71
	4	56.9	3E5	C		
	10	37.4	4E2	C		
	20	34.6	1E3	C		
11	0	31.3	3E2	C		
	1	10.3	3E1		0.216	67
	3	43.6	5E4	P	0.305	354
	14	1.7	5E1	T *	1.000	604
	17	51.4	1E3	C *		
	19	56.0	2E3	*	0.155	83
	20	33.4	4E3	P *	0.282	116
12	4	20.1	4E2	C *		
	22	27.4	3E1		0.187	65
13	0	4.9	3E4	C		
	3	14.9	2E1	*	0.238	43
	15	8.3	1E3	C *		
	17	50.9	1E5	C *		
14	19	44.4	3E1		0.167	62
15	12	25.1	1E3	C		
	18	44.5	2E3	C		
	21	37.8	5E3	C		
	22	7.3	2E1	C		
16	1	2.3	5E1	P	0.963	143
	14	12.1	3E2	P *	0.840	85
	17	1.4	3E1		0.153	61
17	5	59.5	4E1	T *	1.000	641
	9	41.9	1E3	C *		
	22	47.0	4E5	C *		
18	8	40.1	1E5	C *		
	13	48.6	3E4	A *	0.588	141
	14	18.5	3E1		0.143	59
19	6	52.0	1E2	*	0.004	21
	6	58.8	1E3	C *		
20	11	35.5	3E1		0.138	58
21	4	15.6	1E3	C		
	6	21.9	1E4	C		
	8	27.0	2E3	A *	0.201	89
22	1	45.1	1E2	C *		
	8	52.5	3E1		0.137	58
	14	44.1	3E5	C		
	15	37.6	4E1	C		
23	1	32.4	1E3	C		
	15	48.1	1O2	P	0.277	133
24	1	5.2	1E4	*	0.085	95
	3	37.0	3E4	C *		
	6	9.5	3E1		0.138	58
	22	49.2	1E3	C		
25	7	16.0	4E3		0.120	123
	10	16.3	2E1	C		
	10	25.6	4E1	P	0.998	96
26	2	41.5	3E2	T *	1.000	94
	3	26.5	3E1		0.142	58
	14	11.4	3E4	C		
	19	58.0	1E4	*	0.002	30
	20	6.1	1E3	C *		
27	0	10.4	3O4	P	0.018	860
	5	8.7	3O4	P	0.002	327
28	0	43.5	3E1		0.148	58
	5	7.6	2E1	*	0.305	45
	5	19.8	4E1	C *		
	17	22.9	1E3	C *		
29	9	53.1	5E3	P	0.913	969
	22	.4	3E1		0.156	58
30	14	39.8	1E3	C		
	20	55.4	2E3	A	0.172	96
	20	57.3	4E3		0	19
31	13	54.9	1E2	C		
	19	17.4	3E1		0.165	59