ON THE RECONSTRUCTION OF CALENDARICAL SECTIONS OF THE MAYAN CODICES

by Nancy Kelly Owen

Abstract. Sequential sets of day glyphs are shown to occur as special tables in each of the three codices, *Dresden, Madrid,* and *Paris.* They reproduce the order of the appearance of the day glyphs in the calendarical sections of those pages of the codices which are reasonably complete. These sets are more general in scope than the orders of arrangement observable on particular pages which were previously used in the reconstruction of mutilated pages.

It is suggested that the sequential sets, hereinafter described, can be used with confidence to reconstruct the calendarical section of any page in any of the codices if at least one of it's day glyphs is legible, and enough of it's number signs are legible to descern its interval.

An index is prepared which lists the appropriate sets associated with each page of the Madrid and Dresden Codices, and complete readings of certain calendar sections are presented for the first time.

Although calendarical tabulations offer obvious advantages to anyone engaged in the reconstruction of mutilated manuscripts, the Mayan codices are complicated by what appears to be the simultaneous representation of several distinct calendar systems. Nevertheless, where the mutilation is minimal, the regularities observed on any given page afford a "local" set, or order, of symbols which can be interpolated with confidence. In such a situation various authors arrive at identical results. On the other hand, as the number of legible symbols becomes relatively small, the reconstructions proposed by different authors are in serious disagreement. [1] The need for a general guide, applicable to all codices and particularly to the almost illegible Paris Codex, is apparent.

[1] See the Index and Comparison of readings of the Madrid and Dresden Codices at the end of this article.

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It is to be expected that such a guide may have been written into the codices themselves. That this is indeed the case is suggested by the appearance of a small number of special tables containing only sequential sets of twenty day glyphs. This sharply differentiates the "tables" from the large number of calendarical sections which contain only four or five day glyphs and sequences of numerals alternately written in black and red. Furthermore the characteristic intervals observed in the calendars can always be found to apply uniquely to one, or a pair of columns, or lines, of a table. These columns, or lines, can therefore serve as convenient "sets" by which we can classify those calendars which are clearly legible, and can complete those which are not. The intervals between the day glyphs all take on a significance characteristic of the lunar, Venus, solar, or religious years. For brevity, the sets of day glyphs will be identified by a number and letter, as Sets 3A, 5B ... 4E, etc., and calendar sections of the codices will hereafter be referred to in terms of the set upon which it is constructed. Thus, calendar 1C is based upon Set 1C, and if two intervals are involved the calendar is described in terms of a double set, such as 4C1C. One purpose of this article is to identify these sets, point out their locations and to demonstrate their general applicability.

The various tables appearing in the codices are collected in table I, and II.

The first line assigns an identifying letter to each table, and shows its location[2] in a codex. The second line identifies the sets formed by reading the columns downward in the A, C, and D Tables, and by reading the lines from left to right in the B Table. Since these are the only sets needed to classify all of the calendars, it is unnecessary to use a more general system for naming all[3] of the columns and lines. The remaining lines are taken directly from the codices without change, and represent sequencies of day glyphs which are here represented by the numerals, 0-19, instead of the Mayan day names. The following code[4] is used:

[2] The abbreviations D, M, and P for Dresden, Madrid, and Paris Codex is followed by the page numbers. Thus M26-7c refers to pages 26 to 27c of the Madrid Codex.

[3] The lines of the E Table yield the same sets as those of the B Table. No application of the columns of the E Table, used as sets, is apparent in the legible calendarical sections.

[4] The Russian authors (EKU) employ this code. See the author index at the end of this article for references. Zero is conveniently used as an identifying symbol for ahau rather than 20, because of its ease of recording.

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0	ahau	5	chicchan	10	oc	15	men
1	imix	6	cimi	11	chuen	16	cib
2	ik	7	manik	12	eb	17	caban
3	akbal	8	lamat	13	ben	18	eznab
4	kan	9	muluc	14	ix	19	cauac

The interval between the five day names appearing in any one column of the A Table is always 156 days for this set, corresponding to a 780 days calendar. Since a particular day name appears only in one column, any calendar belonging to A Sets can be reproduced if one day name is legible and enough numbers are present to confirm the 156 days interval. If two day glyphs are legible, then the interval is established and the Set identified, even though no numbers can be read. The A Sets appear only once in each of the three codices (M2a, D23a, and P plate 21). The AA Sets shown in Table II are from D13c and 21a, and describe the double sets designated 4A1A, etc. These double sets appear often in the codices, and represent a 1,560 days calendar.

The B Table describes B Sets taken from D16-7a. The interval between the day names is always 65 and represents a 260 days calendar. The B Table differs from the others in that it is read horizontally left to right as lines rather than vertically. In the calendar sections, B Sets almost always repeat the beginning day glyph in the fifth position, although there are only four day glyphs in the B Sets. This may be simply a matter of symmetry, but it could indicate that the day names are to be read five times repeating the first day. A calendar belonging to a B Set can be reproduced if one day name is legible and enough numbers are present to establish the 65 days interval. The B Sets are frequently used in the construction of calendars.

The C Table records C Sets but is does not occur *as a table* of Sets[5] in the codices. It was taken from the expanded table by the author to represent the C Sets which are the basis for the majority of the calendars. It is possible that the very general use of these important C Sets made their tabulation as a Set appear superfluous to the Mayas. The C Sets have a 52 days interval between day glyphs, and represent a 260 days religious year. The CC Sets which appear in D9c and 15c, have the same 52 days interval between day glyphs, and therefore construct a 520 days calendar. They are very frequently used in the codices.

[5] A completely expanded C Table appears in M65-73.

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The D Table is found on D32a with an interval of 104 days. There are only a few times that D Sets appear in the codices (M10-3a, D30-3c, D38-41b, D45a, and D64-9a, b).

The E Table is found on D30c, and has an interval of 117 days between day glyphs. The E Sets have not been found to describe the calendar sections on any legible pages of the Madrid and Paris codices. [6]

The usual reading of the calendar sections is universally accepted as one or more 260 days religious years. Calendars conforming to B and C Sets are read by all authors as 260 days, and those based on A and D Sets are read as $3 \times 260 = 780$, and $2 \times 260 = 520$ days, respectively. When it comes to calendars conforming to double sets, there is disagreement as to how they should be read. This will be discussed in the section showing the reconstruction of double sets. A much more general reading of the calendars is strikingly brought out in the application of the Sets. Thus, a calendar classified as belonging to a given Set, when read horizontally, may be classified as belonging to another, different Set when read vertically, or even diagonally. Furthermore some of these unorthodox readings have astronomical implications. For example the A Table can be read vertically as six intervals of 780 to complet 4,680 days, which is the interval from the lunar to the solar eclipse. The B and C Tables read vertically, yield a Venus revolution of 2,920 days, with five 584 days intervals for B, and eight intervals of 365 days for C. For the D Table an interval of 1,820 days, read vertically four times, results in 7,280 days, which is the interval from the solar to the lunar eclipse.

The tight correlation and interconvertibility of Tables of Sets implies a correlation of the calendars, and strongly suggests that the calendars should be read as a continuous sequence identifying any particular day of the 151,840 days round in terms of each calendar system. If this is indeed the case, then the order of the first twenty three pages of the Dresden Codex should be ultimately demonstrable unambiguously. This would not only be of the highest importance in the decipherment of the unread portions of the pages, but also could be the basis for reconstruction of mutilated calendar sections for which it cannot now be determined with certainty what should be the starting number and the day glyph for the application of the proper set. It should be remarked that the inter-

[6] E Sets are used on D30c-33c.

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relation of the Tables is much more involved than the simple identity of intervals in the lines of the B and E Tables. Thus the A Table columns read down have the same interval as the D Table columns read up, and the A Table lines read from right to left have the same interval as the B Table columns read down or the C Table diagonals read from the lower left-hand corner. Since all of the calendars can be described in terms of only the seventeen named sets, 1A ... to 4D, the existence of the E Table and the close interrelation of the others indicates that the tables serve other purposes besides listing the sets. The most compelling evidence for this is the astronomical significances of the tables when read in expanded form. [7]

An AA Set and a CC Set are reconstructed according to the diagram below.

M6b 1A4A p.17, EKU
6X130=780 and 5X156=780 or 1560 days

2,1	.....	2,11
7	.....	17
13	.....	3
19	.....	9
5	.....	15
(11)	.....	(1)

M8 2C3C p.20, EKU
5×26=130 and 5×78=390 or 520 days
20×26=520

11,6	.....	11,12
18	.....	4
10	.....	16
2	.....	8
14	.....	0
(12)	.....	(18)*

The dotted lines of AA Set represent horizontal intervals of 130 days, and the solid lines represent return intervals of 156 days. The day opposite is always plus 130 days, therefore if just one day is legible, then the others can be reconstructed. Also, 1 is opposite 11, 7 is opposite 17, etc., and this series is easy to reconstruct. AA Set can be read as some multiple of 1,560 days. The dotted lines of CC Set equal 26 days and the solid return lines equal 26. Since the days opposite is always 26 days in advance, this calendar can be reconstructed. Note that the addition of 26 to day 12 leads to day 18 and not to day 6, suggesting that this calendar is to be read more times than the ten day glyphs listed, which would lead to some multiple of 520 days. [8] Table II locates the AA and the CC Sets in the Dresden Codex.

[7] As indicated by JT, EF, LS, and others.
[8] See the CC Sets in Table III.

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TABLE I

SINGLE SETS A, B, C, D, and E

M26-7c A Table

4A	3A	2A	1A
11	10	9	8
7	6	5	4
3	2	1	0
19	18	17	16
15	14	13	12

D16-7a B Table
(read left to right, horizontally)

15	0	5	10 1B
16	1	6	11 2B
17	2	7	12 3B
18	3	8	13 4B
19	4	9	14 5B

(constructed) C Table

1C	3C	4C	2C
17	10	3	16
9	2	15	8
1	14	7	0
13	6	19	12
5	18	11	4

D32a D Table

1D	2D	3D	4D
11,7	16	5	14
11	0	9	18
15	4	13	2
19	8	17	6
3	12	1	10

D30c E Table

1E	2E	3E	4E
11,0	5	10	15
17	2	7	12
14	19	4	9
11	16	1	6
8	13	18	3

TABLE II

DOUBLE SETS (AA AND CC)

D13c AA Set

4A	2A
2,15	2,5
1	11
7	17
13	3
19	9

D21a AA Set

3A	1A
7,10	7,0
16	6
2	12
8	18
14	4

D9c CC Set

4C	1C
3,19	3,13
11	5
3	17
15	9
7	1

D15c CC Set

2C	3C
3,8	3,14
0	6
12	18
4	10
16	2

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Table III identifies and locates the calendars in the Madrid and Dresden Codices which conform to double sets. The first column indicates the page in the codex, the second column gives the double set, and the third column shows the characteristic interval between the two starting days of the double calendar. Table IV represents these days (and calendar starting number) in terms of their distance from 4,0. For example, M8, the first CC Set in Table III, contains the starting days 11,12 and 11,6, which are 72 and 46 days, respectively, from 4,0 according to Table IV. The interval, 26 days, is characteristic of CC Sets, and 130 days in the interval for AA Sets.

Since there is no uniformity in the transliteration of the 260 days Mayan calendar by various authors, the set method is described here in ordinary artithmetical terms, in the hope that the simplicity of this representation will recommend its general use. Pages 13-14b of the Dresden Codex will serve for illustrations and comparison, since all the day glyphs and numbers are clearly legible and the reading is agreed upon by all authors. JV and EKU show the arrangement of the numbers and day glyphs on the page, which is a help in checking a damaged page. This is also done when depicting a page in terms of a set. The bracketed numbers 1) through 6) beside the number and the day glyph number refer to positions on the page in

D13-4b 2C (the set number) 52X5=260 days

6,0					
1)+13=6,13	2)+9=2,2	3)+7=9,9	4)+7=5,16	5)+7=10,3	6)+9=6,12
12					
4					
16					
8					

the Codex. Note that in Set representation the column headings are ordinary numerals separated by a comma, and both Roman numerals and letters are avoided. Thus 6,0 heading the first column is represented as 6 Ahau by JT, VI Ahau by EF and JV, and VI 0 by EKU, as shown below. [9]

[9] See Author Index at the end of this article.

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TABLE III

INDEX FOR DOUBLE SETS

M6b	2A4A	141—11=130	D40a	3A1A	200—70=130
			D44b	1A3A	246—116=130
M22b	2A4A	147—17=130	D60b	1A3A	200—70=130
M24b	4A2A	221—91=130	M8	3C2C	72—46=26
M30b	4A2A	171—41=130			
M38c	2A4A	259—129=130	M26d	1C4C	87—61=26
M42b	1A3A	140—10=130	M32b	4C1C	273—247=26
M44a	1A3A	168—38=130	M39b	3C2C	26— 0=26
M44c	1A3A	240—110=130	M44b	2C3C	256—230=26
M46b	3A1A	140—10=130	M45b	3C2C	60—34=26
M46c	3A1A	130— 0=130	M48b	3C2C	26— 0=26
M47b	3A1A	170—40=130	M49b	2C3C	86—60=26
M47c	1A3A	146—16=130	M49c	3C2C	86—60=26
M48c	1A3A	188—58=130	M52a',a"	1C4C	217—191=26
M49a	1A3A	204—74=130	M53a',a"	2C3C	218—192=26
M51c	1A3A	130— 0=130	M55b	4C1C	127—101=26
M54b	4A2A	143—13=130	M61a	4C1C	115—89=26
M55c	1A3A	232—102=130	M73a	4C1C	191—165=26
M79a	3A1A	130— 0=130	M82a	2C3C	246—220=26
M80a	3A1A	250—120=130	M82b	3C2C	178—152=26
M83a	4A2A	259—129=130	M85a	2C3C	272—246=26
M85c	3A1A	130— 0=130	M86c	3C2C	106— 80=26
M88c	2A4A	253—123=130		3C2C	126—100=26
M90d	3A1A	146—16=130	M87a	3C2C	266—240=26
M96a	3A1A	130— 0=130	M88a	3C2C	276—250=26
M104c	1A3A	240—110=130	M101b	4C1C	239—213=26
M106b	2A4A	207—77=130	M103c	1C4C	57— 31=26
D13c	2A4A	245—115=130	M109a	2C3C	136—110=26
D21a	1A3A	250—120=130	D9c	4C1C	259—233=26
D21b	1A3A	250—120=130	D15c	2C3C	194—168=26
D30a	3A1A	140—10=130	D42a	3C2C	176—150=26

JT fig. 61 Dresden 13b-14b divided into five sections of 52 days each.

6Ahau,	+13=6Ben,	+9=2Ik,	+7=9Muluc,	+7=3Cib,	+7=10Akbal	+9=6 Eb.
6Eb,	6Chicchan,	2Ix,	9Imix,	3Lamat,	10Men,	6Kan.
6Kan,	6Caban,	2Cimi,	9Ben,	3Ahau,	10Manik	6Cib.
6Cib,	6Muluc,	2Etz'nab,	9Caban,	3Kan,	10Chuen,	6Ahau.

EF p. 85 and JV p. 36-8. 52X5=260 days

VI 13 VI 9 II 7 IX 7 III 7 X 9 VI
Ahau
Eb
Kan
Cib
Lamat

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EKU v. 2, p. 44-5. D13b-14b

VI													
0													
12													
4													
16	1)+13	VI	2)+9	II	3)+7	IX	4)+7	III	5)+7	X	6)+9	VI	
			(2-14-6-18-10)				(16-8-0-12-4)				(12-4-16-8-0)		
8	(13-5-17-9-1)				(9-1-13-5-17)				(3-15-7-19-11)				

TABLE IV

260 DAY TABLE AND THE DISTANCE OF DAYS FROM 4 AHAU

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 imix	101	141	181	221	1	41	81	121	161	201	241	21	61
2 ik	62	102	142	182	222	2	42	82	122	162	202	242	22
3 akbal	23	63	103	143	183	223	3	43	83	123	163	203	243
4 kan	244	24	64	104	144	184	224	4	44	84	124	164	204
5 chicchan	205	245	25	65	105	145	185	225	5	45	85	125	165
6 cimi	166	206	246	26	66	106	146	186	226	6	46	86	126
7 manik	127	167	207	247	27	67	107	147	187	227	7	47	87
8 lamat	88	128	168	208	248	28	68	108	148	188	228	8	48
9 muluc	49	89	129	169	209	249	29	69	109	149	189	229	9
10 oc	10	50	90	130	170	210	250	30	70	110	150	190	230
11 chuen	231	11	51	91	131	171	211	251	31	71	111	151	191
12 eb	192	232	12	52	92	132	172	212	252	32	72	112	152
13 ben	153	193	233	13	53	93	133	173	213	253	33	73	113
14 ix	114	154	194	234	14	54	94	134	174	214	254	34	74
15 men	75	115	155	195	235	15	55	95	135	175	215	255	35
16 cib	36	76	116	156	196	236	16	56	96	136	176	216	256
17 caban	257	37	77	117	157	197	237	17	57	97	137	177	217
18 eznab	218	258	38	78	118	158	198	238	18	58	98	138	178
19 cauac	179	219	259	39	79	119	159	199	239	19	59	99	139
20 ahau	140	180	220	0	40	80	120	160	200	240	20	60	100

The Set Method differs in two important ways from the Russian authors (EKU).

1) The first column begins with Roman numeral VI followed by O the day glyph ahau in the first position, while in the Set Method

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the two are side by side separated by a coma 6,0. This conserves space and is easier to record.

2) The Russian authors (EKU) record all five of the days beneath the bracketed numbers. In the set method, only the first day glyph is needed, since each Set has unique day sequences under headings 4C, 1C, etc., and can be readily transcribed making the recording easier and lessening the chance for error. See Table I.

There is nothing wrong with any of these methods but they are not uniform, and in some cases rather time-consuming to record.

Since neither JV or EKU agree with the Set reading of the atypical 1B (65×4=260 days) calendar on M32a, this provides a good example to show this calendar belongs to 1B because of the following observations.

1) The black numbers add up to 65 days, the interval between day glyphs for B Sets.

2) Any legible day glyph, such as 5 (chicchan) in the second position in the column fits into 1B, and therefore the beginning day glyph would have to be 0 (ahau) even though it were illegible.

3) There are only four different day glyphs, since the first and the fifth glyph are identical (ahau). See Table I (1B).

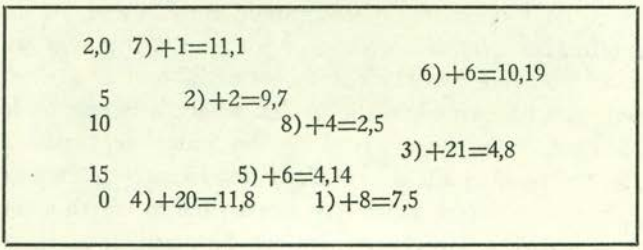
4) Two day glyphs, for example, the second 5 and the third 10 establish the interval as 65 days, even though the black numbers were not legible.

Now the calendar has been thoroughly demonstrated to belong to 1B, it only remains to establish the beginning number, which on this particular page is obliterated. EKU selected ten for this purpose, and the calendar can be sucessfully read on this basis. The number ten occurs as an answer in the upper right hand corner. In general, when the order of the sums is atypical, the answer appears in a more conspicuous feature of the picture. [10] In this case the most likely locations would appear to be in the shield, or the spear. Neither of the numbers 11 and 4 in the spear can be made to fit the interval 65 and agree with the answers shown. On the other hand, the number 2, centrally and very conspicuously displayed in the shield, is a completely satis-

[10] *Cf.* M3-6a, M7b, M9, M29d, M32b, M33b, and M52c.

factory beginning number. This does not prove that the beginning number 10 used by the Russian authors (EKU) is any less satisfactory, but this disagreement is an illustration of the importance of considering the position, or location, of certain numbers in determining the most probable reading.

M32a 1B 65X4=260 days



2C 3C Set on M8 is typical of some of the pages in the Paris Codex [11]

Also, since none of the authors agree on how to read this Double Set, it is an opportunity to show how the 2C3C Set fits this calendar, and how to apply it to reconstruct damaged sections.

1). The black numbers are at the foot of the seated god, and in front of him. They total 52, or the number for a CC Set, rather than 26 which is the total of black numbers for a AA Set.

2). The second column has all the day glyphs legible except the first glyph. See Table I (3C) which reads 18, 10, 2, 14, 6. Six is the only one missing from the Set, therefore 6 is the first day glyph in column two. The last glyph of the first column is visible and is 0 (ahau), therefore the first column can be reconstructed using (2C) 12, 4, 16, 8, 0.

3). Two day glyphs, 18 and 10, establish the interval as 52 days, thus the black numbers need not be legible to know it is a CC Set.

4). Using the diagram on page 183, the set can be reproduced if it fits the diagram for CC Sets, 11,6.....11,12
18..... 4, etc. It fits the requirements. Now it remains to establish the beginning number, which on this particular page is obliterated. The numbers and answers are located starting

[11] *Cf.* Paris Codex, plate 15, 16, 17, and 18.

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at the foot of the seated god and going up to his head dress. There are only two red numbers, nine and eleven, one of these is the starting number. Either red numbers will fit the Set, so we must choose one or the other. The Russian authors (EKU) read the number above the CC Set as two and used this to start the Set. The two is clear in the Russian copy of the page but a red five is also visable beside the glyphs and therefore this should be used. However using de Rosny's 1883 uncolored photographic copy, these numbers are very doubtful, but even if correct and we read it this way, it would be necessary to make two black numbers of 20 and 17 at the foot of the seated god. Elsewhere in the Codex where a twenty is followed by a black number the two are read together unless separated by a red answer, so the reading should be 37. If this is correct, then two as a starting date is incorrect, since it is impossible to arrive at both red numbers as answers. However there can be question as to which is correct 9 or 11, until it can be shown how the calendars are joinned.

M8 2C3C 52X10=520 days

11,12 6	
4 18	
	2)+15=11,18
16 10	
8 2	
	1)+37=9,3
0 14	

The last two examples of the determination and application of the Sets were chosen to emphasize the difficult problem of identifying the intended beginning day number in atypical calendarical represensentations where the glyphs and numbers are distributed throughout a pictorical design rather than in a regular matrix of columns and lines. If further use of the Sets eventually results in ordering the firts 23 pages of the Dresden Codex as a continuous complete 151,840 days round correlating the three calendar systems (260, 365, 584), then the problem of the selection of the correct starting day for the atypical and badly mutilated pages is resolved. The most important immediate results of the use of Sets are the resolution of misunderstandings regarding many calendars which have been read differently by several authors, [12] and the presentation of the

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following twelve readings of calendars for which readings have not previously been proposed. Among the later, of course, are to be found those which are most seriously mutilated, and some which are so complicated that their construction requires the use of a double set.

(Page numbering is from the original Paris Codex found in the National Library of Paris. Madrid and Dresden Codex numbering of pages same as EKU's but a' a", b' b", c' c" or d' d" are the authors indication of new readings not recorded by any other author.)

P pl. 17 3C 52X5=260 days
6,10+22=2,12+11=13,3+12=12,15+7=

#1

6,10
1)+22=2,12 3)+12=12,15
2
2)+11=13,3 4)+7=6,2
14
6
18

P pl. 18 2C 52X5=260 days
11,0+13=11,13+19=4,11+10=1,2+4=5,6+6=

#2

11,0
1)+13=11,13 3)+10=1,2 5)+6=11,12
12
2)+19=4,11 4)+4=5,6
4
16
8

M1a 2B 65X4=260 days
13,1+20=7,1+20=1,1+20=8,1+5=

#3

3)+20=8,1
2)+20=1,1
1)+20=7,1
4)+5=13,6
13,1

[12] See the Index and Comparison of Codex Readings.

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M1b (con't of M1a)
13,6+20=7,6+20=1,6+20=8,6+5=

#4

3)+20=8,6
2)+20=1,6
1)+20=7,6
4)+5=13,11
13,6

M42b' 1A3A 26X10=260 days
1,0 & 10+2=3,12+1=4,13+3=7,16+11=5,7+2=7,9+7=

#5

1,0 & 10
6 16
12 2
18 8
4 14

6)+7=1,16
6
3)+3=7,16
6
4)+11=5,7
17
1)+2=3,12
2
5)+2=7,9
19
2)+1=4,13
3

M43a' 2A4A 26X10=260 days
10,7 & 17+7=4,4+12=3,16+7=

#6

10,7 & 17
3 13
19 9
15 5

1)+7=4,4
14
2)+12=3,16
6
3)+7=10,3
13

M43b' 5B 65X4=260 days
1,14+12=13,6+7=7,13+12=6,5+9=2,14+12=1,6+3=4,9+7=11,16+3=

#7

1,14
19
4
9

1)+12=13,6 3)+12=6,5 5)+12=1,6 7)+7=11,16
2)+7=7,13 4)+9=2,14 6)+3=4,9 8)+3=1,19

M42c' 1B 65X4=260 days
9,5+10=6,15+10=3,5+7=10,12+10=7,2+16=10,18+3=13,1+7=7,8+2=

#8

9,5		
1) +10=6,15	3) +7=10,12	5) +16=10,18 7) +7=7,8
10		
2) +10=3,5	4) +10=7,2	6) +3=13,1 8) +2=9,10
15		
0		

M52a' 1C4C 52X10=520 days
13,17 & 11+13=13,4+13=13,17+13=13,10+13=

#9

13,17 &	11	4) +13=13,3
9	3	3) +13=13,10
1	15	2) +13=13,17
13	7	1) +13=13,4
5	19	

M52a" 1C4C 52X10=520 days
11,17 & 11+13=11,4+13=11,17+13=11,10+13=

#10

11,17 &	11	
		4) +13=11,3
9	3	
		3) +13=11,10
1	15	
		2) +13=11,17
13	7	
		1) +13=11,4
5	19	

M53a' 2C3C 52X10=520 days
1,12 & 18+13=1,11+13=1,4+13=1,17+13=

#11

1,12 &	18	4) +13=1,10
4	10	3) +13=1,17
16	2	2) +13=1,4
8	14	1) +13=1,11
0	6	

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M53a" 2C3C 52X10=520 days
12,12 & 18+13=12,11+13=12,4+13=12,17+13=

#12

12,12 & 18		
		4)+13=12,10
4	10	
		3)+13=12,17
16	2	
		2)+13=12,4
8	14	
		1)+13=12,11
0	6	

INDEX AND COMPARISON OF CODEX READINGS

The figures in the first column refer to pages in the Codex, and those in the second column describe the set to which the calendar belongs. The numbers in columns three and four refer to pages in the references of the authors indicated at the column headings. The fifth column refer to this authors comments followed by capital letters which are abbreviations for the following comments:

A — Agreement. The set agrees with the calendar arrangement of the authors, indicated. (All are in agreement)

B — Blank calendar. The calendar section of this page of the Codex is blank.

C — Changed order of reading. The arrangement, or reading, of the authors does not agree with the Set.

D — Date. The section is an initial series date, not a calendar.

O — Omitted. The authors fail to comment upon the calendarical section of this page of the Codex.

S — Starting glyphs missing. There is disagreement in choice of the day glyph with which to begin the calendar, but there is agreement in the number arrangement.

T — Table. The section is a table, not a calendar.

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Page	*Set*	*JV*	*EKU*	*Comments*
1 & 2-3b	2B	226-30	9 & 14	JV, EKU M1 B, 2-3b C.
2a	2A	228	10	JV, EKU upper part C.
3-6a	5B	230-4	11-2	A11 A.
4b	3B	232	15	JV 3)+9 5)+14 C, EKU A.
5b	3B	234	16	JV 2)+9 5)+14 6)+13 C, EKU 1) 6) C.
6b	2A4A	236	17	EKU, JV 1) 4) C, EKU, JV O (add 2nd Set).
7a	1C	238	13	JV 2)+13 5)+5 C, EKU A.
7b	3B	238	18	JV 1)+17 4)+20 C, EKU 1) 6) C.
8	2C3C	240	20	JV, EKU 1)+37 2)+15 C.
9	3C	242	22	JV, EKU 1) 7) C and S.
10-3a	1D	244-50	23-5	JV 5) 11) C, EKU A.
10-1b	3B	244-7	27-30	A11 A.
10-1c	1B	244-7	31-3	A11 A.
12-8b	248-60		42-8	B Table 52X364=18,520 T.
14a	2C	252	34	A11 A.
15a	2C	254	35	A11 A.
16a	2C	256	36	A11 A.
17a	2C	258	37	A11 A.
18a	3C	260	39	JV 2) 5) 6) C, EKU A.
19a	3C	262	40	A11 A.
19b	2C	262	50	JV 4) C, EKU A.
20a	3C	264	41	JV last glyph 2 not 14 S, EKU A.
20-1b	2C	264-6	54-5	JV lst number 7 S, EKU A.
20c	1C	264	58	A11 A.
21-2a	1B	266-8	52-3	A11 A.
21c	4C	266	59	A11 A.
21-2d	1B	266-8	66-7	A11 A.
22-3a	1B	268-70	62-3	A11 A.
22-3b	4A2A	268-70	56-7	JV 4)+5 C, EKU A.
22c	1C	268	60-1	JV 5)+6 not 12 C, EKU A.
22-23d	1B	268-70	69	A11 A.
23b	3C	270	57	JV 2) 4) 6) C, EKU A.
23c	2C	270	68	A11 A.
24a	5B	272	70-1	A11 A.
24b	2A4A	272	74	A11 A.
24c	5B	272-4	80-3	A11 A.
24d	1C	272	86	A11 A.
25a	2C	274	72-3	JV 4)+9 5)+9 C, EKU A.
25b	3C	274	75	A11 A.
25d	2C	274	87	A11 A.
26-7a	2C	276-8	76-7	JV 1)+11 3)+8 4)+11 C, EKU A.
26-7b	2C	276-8	78-9	A11 A.
26-7c		276	84-5	A Table 156X5=780 T.

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Page	*Set*	*JV*	*EKU*	*Comments*
26-7d	1C4C	276-8	88-9	A11 A.
27-8a	2B	278-80	90	JV, EKU C.
27-8b	3C	278-80	91	A11 A.
28d	3C	280	96	A11 A.
29a	4C	282	97	JV, 1)+8 2)+7 6)+9 C, EKU A.
29b	4C	282	97	JV, EKU 1)+10 4)+17 5)+9 C.
29c	2C	282	98	A11 A.
29d	4C	282	99	JV 3)+14 5)+14 C, EKU 1) 5) C.
30a	2C	284	100	A11 A.
30b	4A2A	284	101	EKU 1) 7) C, JV A.
31a	1C	286	102	JV 2)+4 4)+4 5)+5 C, EKU A.
31b	2C	286	103	A11 A.
32a	1B	288	104	JV, EKU 2)+2 3)+21 7)+1 8)+4 C.
32b	4C1C	288	105	JV 2)+2 3)+2 4)+2 C, EKU C.
33a	3B	290	106	JV 16)+1 17)+17 C, EKU A.
33b	4B	290	107	JV 3)+13 4)+10 5)+13 C, EKU 1) 6) C.
34-7		292-8	109-11	B Table 52X365=18,960.
38-9	2C	300-2	112	JV 2)+13 5)+7 C, EKU A.
38b	2C	300	114	JV C, EKU A.
38b'	2C	300	114	JV O EKU A (add a 2C calendar).
38c	2A4A	300	115	A11 A.
39b	3C2C	302	116	JV 4)+5 5)+5 6)+4 C, EKU A.
39c	3C	302	117	A11 A.
40-1a	2C	304-6	118	A11 A.
40-1b	1C	304-6	120-1	A11 A.
40-1c	1C	304-6	122-3	A11 A.
42a	3C	308	124	JV, EKU S.
42b	1A3A	308	125	JV, EKU C, S.
42b'	1A3A	308	125	JV, EKU O, S.
42c	3C	308	126-7	JV 2)+2 3)+22 5)+9 C, EKU A.
43a	3B	310	128-9	A11 A.
43a'	2A4A	310-0	none	JV 1) 3) O.
43b	3C	310	130-1	A11 A.
43b'	5B	310	132-1	JV, EKU O.
43c	3C	310	132-3	A11 A.
43c'	1B	310	132-3	JV, EKU O.
44a	1A3A	312	134	A11 A.
44b	2C3C	312	135	JV 1) 7) C, EKU A.

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Page	*Set*	*JV*	*EKU*	*Comments*
44c	1A3A	312	136	A11 A.
45a	1B	314	137	A11 A.
45b	3C2C	314	138	A11 A.
45c	3C	314	139	A11 A.
46-7a	3C	316-8	140-1	A11 A.
46b	3A1A	316	142	A11 A.
46c	3A1A	316	143	A11 A.
47b	3A1A	318	144	A11 A.
47c	1A3A	318	145	A11 A.
48a	4C	320	146	A11 A.
48b	3C2C	320	147	A11 A.
48c	1A3A	320	148	A11 A.
49a	3A1A	322	149	A11 A.
49b	2C3C	322	150	A11 A.
49c'	3C2C	322	151	JV 1) 7) C, EKU A.
49 50c	2C	322-4	154-5	A11 A.
50a	5B	324	152	A11 A.
50b	2B	324	153	A11 A.
51a	2C	326	156	A11 A.
51b	3B	326	157	A11 A.
51c	1A3A	326	158	JV, EKU 3)+3 4)+13 C.
52-3a	1C	328-30	159-60	A11 A.
52a'	1C4C	328	159	A11 O.
52a"	1C4C	328	159	A11 O.
53a'	2C3C	330	160	A11 O.
53a"	2C3C	330	160	A11 O.
52b	2C	328-30	161-2	A11 A.
52c	5B	328	163	JV, EKU S.
53c	4C	330	164	JV 8)+7 C, EKU A.
54a	4C	332	165	JV 4)+8 6)+11 C, EKU 3)+5 5)+5 7)+14 C.
54b	4A2A	332	167	A11 A.
54c	3C	332	169	JV, EKU S.
55a	4C	334	166	A11 A.
55b	4C1C	334	168	A11 A.
55c	1A3A	334	170	JV, EKU 1)+9 2)+9 3)+8 C.
56-7a	1C	336-8	171	JV, EKU S also 1) 6) C.
56-7b	3C	336-8	172	JV, EKU S, also 1) 4) C.
56-7c	1C	338-42	none	JV, 1) 4) C.
57-9a	1B	338-42	173-4	JV, EKU 1) 8) C.
57b	3C	338	175	JV, EKU 1) 6) C.
58-9b	3C	340-2	177-8	A11 A.
58-62c		340-8	180-4	D Table 20X91=1820 T.
59-60a	2C	342-4	176	JV S (number 9) EKU A.
60b'	2C	344	179	A11 A.
60-1b	2C	344-6	187	A11 A.
61a	4C1C	346	185	A11 A.

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Page	*Set*	*JV*	*EKU*	*Comments*
61b	2C	346	188	A11 A.
62a	5B	348	186	A11 A.
62b	2C	348	189	A11 A.
63a	2C	350	190	A11 A.
63b	2C	350	191	A11 A.
63-4c	2C	350-2C	193-4C	JV, EKU 1)+9 3)+7 4)+5 C.
64a	3C	352	192	A11 A.
64b	2C1C	352	195	A11 A.
65-73		354-70	196-212	C Table 521X2=1042 T.
73-4a	4C1C	370-2	213-4	JV, EKU A.
73-4a	4C	370-2	213-4	JV, EKU O (add calendar).
74b	3B	372	215	A11 A.
75-6		374-6	216-7	JV, EKU O, Calendar Correction Table, T.
77-78		378-80	218-9	B Table T.
79a	3A1A	382	220	JV 5)+1 C, EKU A.
79b	1C	382	227	A11 A.
79c	2C	382	229	JV 1)+28 C, EKU A.
80a	3A1A	384	221	A11 A.
80b'	2B	384	228	A11 A.
80-1b	2C	384-6	230-1	A11 A.
80c	1C	384	232	JV 2)+10 4)+6 5)+11 C, EKU A.
81a	5B	386	222	A11 A.
81c'	2C	386	233	A11 A.
81c"	3C	386	234	A11 A.
82a'	2C3C	388	223	JV 2)+9 6)+12 C, EKU A.
82-3a	2C	388-90	224	JV 1)+13 4)+8 C, EKU A.
82b	2C3C	388	235	A11 A.
82c	2C	288	252	A11 A.
83-4a	4A2A	390-2	225	A11 A.
83b	2C	390	236	A11 A.
83c	3C	390	253	A11 A.
84a	3C	392	226	JV 1)+6 2)+6 C, EKU A.
84b	4B	392	237	A11 A.
84c	4C	392	254	A11 A.
85a	4C	394	238	EKU 8)+9 9)+6 10)+6 C, JV A.
85b'	4B	394	243-4	A11 A.
85-6b	3C	394-6	245-6	A11 A.
85c	3A1A	394	255	JV 1)+5 3)+5 4)+5 C, EKU A.
85-6b	2C3C	394	239	A11 A.
86-7b	3C	396	247-8	A11 A.
86c	3C2C	396	256	A11 A.
86c'	1A3A	396	256	JV, EKU O (add calendar).
87-8a	3C2C	398-400	240-1	A11 A.

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Page	*Set*	*JV*	*EKU*	*Comments*
87-8b	2C	398-400	249-50	A11 A.
87c	4C	398	257	JV 1) 5) C, EKU A.
88a	3C2C	400	242	A11 A.
88b	1C	400	251	A11 A.
88c	2A4A	400	258	A11 A.
89-90		402-4	259-60	D Table T.
89b	4C	402	264	JV 2)+11 C, EKU A.
89c'	4C	402	267	A11 A.
89-90c	5B	402-4	268	A11 A.
89d	1C	402-4	269-70	A11 A.
90-2a	2C	404-8	261-2	A11 A.
90b	2C	404	265-6	JV 2)+8 7)+8 C, EKU 2)+8 3)+8 C.
90-2d	3A1A	104-8	277-8	A11 A.
91b'	2C	406	271	A11 A.
91-2b	4C	406-8	273-4	A11 A.
91c	2C	406	272	JV 4)+11 C, EKU 2) 5) C.
92-3a	2B	408-10	263	A11 A.
92-3b	2C	408-10	275	A11 A.
92c'	5B	408	276	A11 A.
92-3c	2C	408-10	283-4	A11 A.
93-4a	3C	410-12	279-80	A11 A.
93-4b	3C	410-12	281-2	A11 A.
93-4d	2C	410-12	287-8	A11 A.
94-5c	2C	412-14	285-6	A11 A.
94-5d	1C	412-14	289	A11 A.
95a	3C	414	290	A11 A.
95b'	3B	414	291	A11 A.
95-6b	3C	414-16	293	JV 1) 2) C, EKU A.
95-6d	2C	414-16	297-8	A11 A.
96a	3A1A	416	292	A11 A.
96b	2C	416	294	JV 2) 5) C, EKU 1) 5) C.
96c	2C	416	295-6	A11 A.
97a	4C	418	299-300	A11 A.
97-8b	1C	418-20	301-2	A11 A.
97-8c	4C	418-20	303-4	A11 A.
98a	2C	420	308	JV 2)+13 C, EKU A.
98-9c	4C	420-22	317	JV 4)+6 7)+6 C, EKU A.
98d	2C	420	307	A11 A.
99-100a	2B	422-4	309-10	A11 A.
99-100b	3C	422-4	313-4	JV 3)+7 5)+7 6)+6 C, EKU A.
99-100c	1C	422-4	319-20	JV 5)+4 C, EKU A.
99d	2C	422	318	A11 A.
100d	2C	424	321	A11 A.
101-2a	2C	426-8	311-2	A11 A.
101b	4C1C	426	315	JV 3)+19 C, EKU A.
101c	2C	426	322	A11 A.

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Page	*Set*	*JV*	*EKU*	*Comments*
101d'	2B	426	324	A11 A.
101d"	2C	426	325	JV 3)+26 C, EKU A.
102b	4C	428	316	A11 A.
102c	2C	428	323	A11 A.
102d	2C	428	326	A11 A.
103a	4B	430	327	A11 A.
103-6b		430-6	331-4	C Table 260X3=780 T.
103c	1C4C	430	335	A11 A.
103-4c	5B	430-2	336	A11 A.
104a	1C	432	328	A11 A.
104-5c	1A3A	432-4	337-8	A11 A.
105a	3B	434	329	A11 A.
105-6c	3B	434-6	339-40	A11 A.
106a	3B	436	330	JV 1)+10 C, EKU 1) 6) C.
106-8b	2A4A	436-8	343-4	A11 A.
106-7c	3B	436-8	354-5	JV 1)+27 2)+6 C, EKU A.
106-7c	2C	436-8	354-5	JV, EKU O (add second calendar).
107a	1C	438	341-2	JV 3) 6) C, EKU 1) 6) C.
107-8c	3B	438-40	356	JV 1)+20 2)+13 3)+23 4)+9 C, EKU A.
108a	1C	440	345-6	JV, EKU S.
108-9b	4C	440-2	350-1	JV 3)+12 6)+6 C, EKU A,
108-9c	3C	440-2	357	JV 1) 4) C, EKU A.
109a	2C3C	442	347	JV 3)+7 4)+6 C, EKU A.
109-10b	4B	442-4	352	JV 1)+27 3)+9 C, EKU A.
110a	2C	444	348	JV 1)+13 S, EKU S.
110b	2B	444	353	JV 10)+8 C, EKU A.
110c	1C	444	359	A11 A.
111a	3B	446	360	JV 1)+24 2)+11 4)+18 C, EKU 1) 4) C.
11b'	3B	446	362	A11 A.
111-2b	3B	446-8	363	JV 2)+4 4)+13 5)+24 C, EKU 1) 2) 5) C.
111c'	1C	446	364	JV 1)+20 2)+20 3)+5 4)+7 C, EKU A.
111c"	2C	446	365	A11 A.
112a	1C	448	361	JV 1) 4) C, EKU 1)+17 3)+16 4)+10 C.
112c	3B	448	366	A11 A.

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DRESDEN CODEX

Page	*Set*	*WG*	*EF*	*JT & CT*	*EK*	*JV*	*EKU*	*Comments*
1a	2C	1^{0}	55B		44	12	5	A11 B, except WG A.
1b	1C	1^{1}	55		44	12	5	A11 B, except EK C.
1c	2C	1^{2}	55		44	12	5	WG, EKU, EF, JT, EK, C, JV, EKU B.
2a	4C	2^{3}	56	45	45	14	6	A11 A.
2b	3C	2^{4}	57		45	14	7	EF, EK A, WG, JV, EKU C.
2b	2C	2^{4}	57		45	14	7	A11 O.
2c	3C	2^{5}	58		45	14	8	EF, EK A, WG, JV, EKU C.
2c	2C	2^{5}	58		45	14	8	A11 O.
2d	2C	2^{6}	59		45	14	9	A11 A.
3a	2C	3^{7}	61	CT (284)	3	16	10	CT, EKU A, WG, EF, EK, JV C.
3b		3	59		3	16	none	A11 B.
3c		3	59		3	16	none	A11 B.
4-10a	1C	4^{8}	61		4	18-30	12-18	EF, EKU A, WG, EK C, JV A.
4-5b	3C	4^{14}	68		4	18-20	20	A11 C.
4-5c	4C	4^{24}	77		4	18-20	33	A11 A, except JV 4)+9=C.
5-6b	4C	5^{15}	70		5	20-2	25	A11 A.
5-6b	4B	5^{25}	78		5	20-2	34	A11 A.
6-7b	2C	6^{16}	71		6-7	22-4	26	A11 A.
6-7c	4C	6^{26}	79		6-7	22-4	35	A11 A.
8b	4C	8^{17}	72		8	26	27	A11 A.

DRESDEN CODEX

Page	*Set*	*WG*	*EF*	*JT & CT*	*EK*	*JV*	*EKU*	*Comments*
8c	2C	8^{27}	80		8	26	36-7	A11 A.
9b	5B	9^{18}	73		9	28	28	WG, EF, EKU A, EK, JV C.
9c	1C4C	9^{28}	81		9	28	38-9	A11 A, except EKU C.
10a	2C	10^{9}	69		10	30-4	22-3	A11 A.
10b	3C	10^{19}	74		10	30	29	A11 C, except EK A.
10-1b	4C	10^{20}	75		10-1	30-2	30-1	A11 agree, except JV C.
10-1c	1C	10^{29}	82		10-1	30-2	40-1	A11 S, JV C.
10-1c	3C	10^{29}	82		10-1	30-2	40-1	A11 S, JV C.
12a	2C	12^{10}	70	JT (fig. 63)	12	34	24	A11 A, except EF C.
12a	3C	12^{10}	70	JT (fig. 63)	12	34	24	A11 A, except EF C.
12b	3C	12^{21}	76	JT (fig. 62)	12	34	32	A11 A.
12c	2B	12^{30}	83	JT (fig. 63)	12	34	42	A11 A.
13a	1C	13^{11}	84	JT (fig. 63)	13	36	43	A11 A.
13-4b	2C	13^{22}	85	JT (fig. 61)	13-4	36-8	44-5	A11 A.
13-4c	2A4A	13^{31}	86	JT (fig. 63)	13-4	36-8	46-7	A11 A.
14-5a	2C	14^{12}	85	JT (fig. 63)	14-5	38-40	48	A11 A, except WG C.
15a	2C	15^{13}	88		15	40	49	A11 A.
15-6b	3B	15^{23}	88		15-6	40-2	50-1	A11 A.
15c	2C3C	15^{32}	89	JT (fig. 62)	15	40	52	A11 A.
16a	2C	16^{34}	90		16	42	53	A11 A, except EK 1)+21 C.
16-7a		16^{35}	90		16	42-4	54-5	B Table, EF O, rest T
16-7b	1C	16^{39}	96		16-7	42-4	64	A11 A, except JV 3)+20 4)+15 C.
16-7c	5B	16^{47}	98		16-7	42-4	68-9	WG, EKU A, EF, JV, EK +10 C.

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Page	*Set*	*WG*	*EF*	*JT & CT*	*EK*	*JV*	*EKU*	*Comments*
17-8b	2C	17^{40}	97		17-8	44-6	66-7	A11 A.
17-8c	2C	17^{48}	99		17-8	44-6	70	A11 A.
18-9a	3C	18^{35}	92		18-9	46-8	71	A11 A.
18-9c	2C	18^{49}	100		18-9	46-8	71	A11 A.
19-21a	1B	19^{36}	93		19-21	48-52	58-9	A11 A, except EK 5)+13 C.
19b	3C	19^{41}	101		19	48	74	A11 A.
19-20b	2C	19^{42}	101		19-20	48-50	75	A11 A.
19-20c	2C	19^{50}	100		19-20	48-50	72-3	A11 A.
20b	4C	20^{43}	102		20	50	76	A11 A, except JV 3)+13 C.
21-2a	1A3A	21^{37}	93		21	52-4	60-1	A11 A, except EF 18X 20=360, EK 1)+3 C.
21b	1A3A	21^{44}	103		21	52	77	A11 A.
21-2c	1C	21^{51}	104		21-2	52-4	78-9	A11 A.
22a		22^{38}	95		22	54	62	A Table 156X5=780 & 195X4=780 T.39×20=780
22b	4C	22^{45}	107		22-3	54-6	82-3	A11 A.
22-3c	3C	22^{50}	105		22-3	54	80-1	A11 A.
23a	3A	23^{39}	95		23	56	63	A11 A.
23b	5B	23^{46}	108		23	56	84-5	A11 A, except WG 5) C.
24		24	110		24	58	86-7	Venus Table 2920, 8X365 & 5X584 T.
25-8		25	120	JT (fig. 64)	25-8	60-6	88-94	B Table 13X52=18,980 T.
29-30a	4B	29^{53}	132		29-30	68-70	96-7	A11 A.
29-31b	3C	29^{58}	150		29-31	68-72	115-8	A11 A.

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Page	*Set*	*WG*	*EF*	*JT & CT*	*EK*	*JV*	*EKU*	*Comments*
29-31b	4B	29^{58}	150		29-31	68-72	115-8	A11 S, except EF, EK A.
29-30c	5B	29^{64}	167		29-30	68-70	135	A11 A, except JV, EK 4)+17 C.
30-1a	3A1A	30^{54}	133		30-1	70-2	98-9	A11 C, EF O.
30c		30^{65}	168		30	70	136	E Table 20X117=2340 T.
30-3c	2D	30^{65}	168	JT (fig. 2)	30-3	70-6	136-8	A11 A, except EF S.
31-5b	4B	31^{58}	152		31-5	72-80	119-122	A11 A, except JV, EKU C.
32a		32^{55}	138	CT (253)	32	74	100	D Table 5X364=1820 T.
32-9a	4D	32^{55}	138		32-9	74-88	100-8	WG, EK 12)+8 EKU 5)+12 6)+19 C, EF S.
33-9c	1B	33^{66}	170		33-9	76-88	139-46	A11 A.
35-7b	1C	35^{60}	156		35-7	80-4	123-4	A11 A.
38-41b	1D	38^{61}	159		38-41	86-92	125-8	A11 A.
40-1a	1A3A	40^{56}	144		40-1	90-2	109-10	A11 A, except EK 6)+8 C.
40-1c	2C	40^{67}	176		40-1	90-2	145-6	A11 A.
14-3b	1C	41^{61}	162		41-3	92-6	129-30	A11 A.
42-4a	2C3C	42^{57}	146		42-3	94-8	111-3	A11 A, except WG 8)+7 C.
42-5c	1B	42^{68}	178	CT (75)	42-3	94-100	147-150	A11 A, except EF 1) 7) C.
43-4b		43-4	164	JT(fig. 161)	1-2	96-8	131-2	A Table 10X78=780 T.
44-5b	1A3A	44^{62}	164	JT (fig. 64)	1-2	96-8	133-4	A11 A, except JV C.

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Page	*Set*	*WG*	*EF*	*JT & CT*	*EK*	*JV*	*EKU*	*Comments*
45a	4D	45	148	CT (253)	2	100	114	A11 A, except EKU, JV 364X5=1820 C.
46-50		46	182	CT (256)	45-50	102-10	152-71	Venus Table 2920X13=37,960 T.
51-2a		51	197		51-2	112-4	172-3	Eclipse Table 7280+4680=11,960 T.
51-8		51-8	200		51-8	112-126	172-200	Eclipse Table 6X177-1X148-9X177-1X178=11,960 T.
59		59	216	CT (253)	59	128	203	A Table 20X780 T.
60a	4A2A	60a	219-0		60	130	205	A11 C +75.
60b	1A3A	60b	219-0		60	130	206	A11 C +76.
61		61	230-2		61-2	132-4	208-9	Serpent numbers D.
63-4		63-4	222-35	CT (255)	63-4	136-8	212	D Table 91X20=1820 T.
64-9a	3D2D	65-9a	235-8		65-9	140-8	214-32	A11 S, 5X364=1820.
64-9b	1D4D	65-9b	235-8		65-9	140-8	226-32	A11 S, 5X364=1820.
69-70		69-70	260		69-70	148-50	234-6	A11 D, IS Date.
71-70		70-1	251-3		70-3	150-52	238-9	Eclipse Table T. 17X702 (+26)=11960.
73b-71c	2B	73b-71c	245	JT (fig. 46)	71-3	156-57	244-49	A11 A, except EF S, JV C.
74		74[77]	265		74	158	250	A11 A, except EK 1)+5 C. EF O.

AUTHORS INDEX

The abbreviations of Personal Names shown here are used in this paper. Following the abbreviation is the authors name and his work which is referred to.

(DB) Daniel Brinton, "Essays of an Americanist" (1890).

(EKU) E. V. Evreinov, Yu. G. Kosarev, and V. A. Ustinov, *An Analysis of Maya Manuscripts with the Aid of Electronic Computor* (1961).

(EF) Ernst Förstemann, "Commentary on the Maya Manuscript" (1901).

(WG) W. E. Gates, "Maya and Tzental Calendars" (1900).

(EK) E. K. Kingsborough, "Antiquities of Mexico" (1831-48), vol. 3.

(LR) Leon de Rosny, *Madrid Codex* (1883).

(LS) Linton Satterthwaite, "Concepts and Structure of Maya calendarical arithmetics" (1947).

(HS) Herbert Spinden, Maya Art and Civilization (1957).

(CT) Cyrus Thomas, "Aids" (1904).

(JT) J. Eric Thompson, *Introduction of Maya Hieroglyphic Writing* (1950).

(JV) J. Antonio Villacorta, *Maya Codex* (1930) (1961).

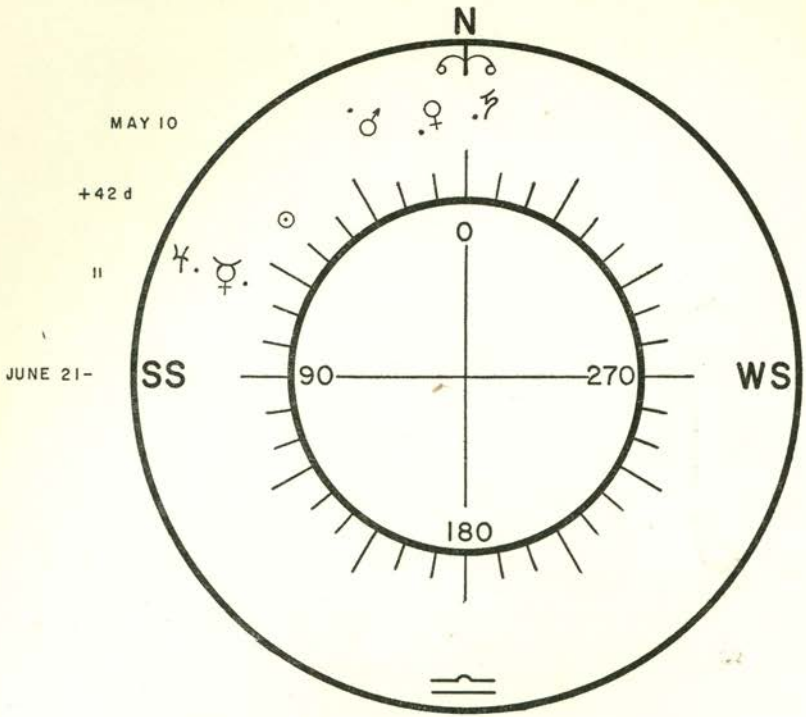

Diagram Number 32

Page D 52 bl/F
Maya day count 1412848 9.16.4.10.8 12 lamat 1 muan
Julian day count 1901986 495 may 10
Multiplication tables 78 and 91
Sun's longitude 50°
Moon's age new

	Planets	*Elong.*	*from long.*	*Number of days since superior conjunction*
Mercury	☿	21.8°	71.8°	35d 12h
Venus	♀	—42.4°	7.6°	336d
Mars	♂	—32.8°	17.2°	153d 12h
Jupiter	♃	20.8°	70.8°	373d 12h
Saturn	♄	309.6°	359.6°	63d 12h

New Moon
Partial solar eclipse visible in Chiapas on May 10, 495.
See Maud Makemson, page 6, publication No. 6.

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