

.2006 2 22

maltaie@yu.edu.jo

المخلص

Some Solar Eclipse Events in Islamic History

M.B. Altaie

Department of Physics, Yarmouk University, 21163 Irbid – Jordan

maltaie@yu.edu.jo

Abstract

In this paper we study some of the solar eclipse events that has been mentioned in history monographs. Part of the study is devoted to verify the given dates of events of some historical importance, whereas the other part of the study tries to verify dates of solar eclipses that have been mentioned in the general context of events that took place within a given year. The study aims at verifying the credibility of the mentioned historical sources in this respect. We found that the dates of some known historical events are misplaced and would need a correction, while the verification of most other dates lead us to the fact that a scientifically proper criterion for the definition of the birth of a crescent is needed for the correct dating of events using the Hijri calendar.

مقدمة

()

()

()

()

1

حركة القمر في السماء

: 1

: 2

0.55

13

أطوار القمر

53

27-25

Phases

()

180

90

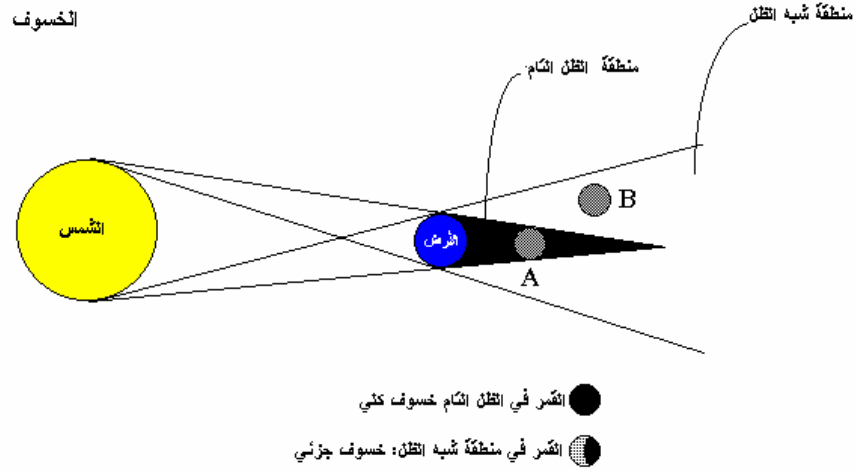
()

المحسوف والكسوف

:

Total Lunar Eclipse

(1) .Partial Lunar Eclipse



(1)

(2))

.Total Solar Eclipse

. Partial Solar Eclipse

."Annual Eclipse "

."Partial Solar Eclipse "

أسباب الخسوف والكسوف وشروطها:

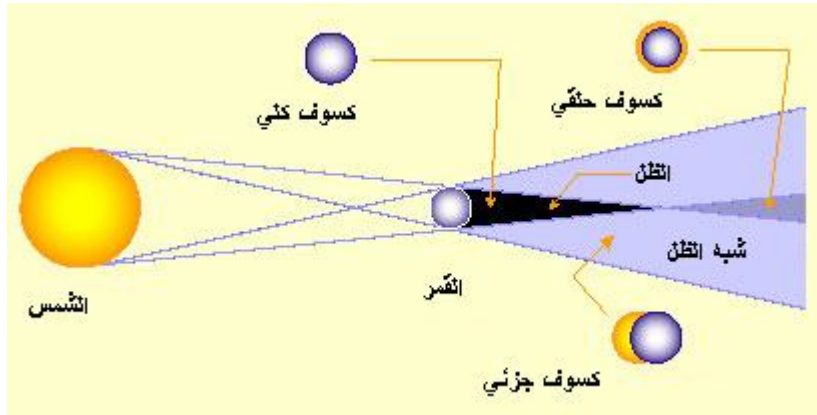
5

.()

."Nodes "

"Ascending Node"

"Descending Node"



(2)

Path of

"

"Totality

2000

"

"

2

مشاهدة حوادث الخسوف والكسوف

الولادة الشرعية والولادة الفلكية للهلال³

" ()

4"

"

5 "

كس السنين القمرية والنسيء

11

12

:

13

354

⁶.

()

632

6

10

9

)

⁷(

حساب مواقيت الخسوف والكسوف

" " " "

()

()

8

.Celestial Mechanics

19

11 18

18

" "

11

120

34 54

Astronomical Almanac

DK Multimedia

Redshift3

JPL

()

DE200

9

التقويم الهجري

()

12

()

. 622

15

.¹⁰ 622

16

. 622

14

تحقيق بعض حوادث الكسوف في التاريخ الإسلامي

1. حوادث تاريخية مشهورة

()

()

11

" :

12"

13

14

()

/27

10/ /29

632/

10

()

15

()

" 16

:

"

" 17

:

"

" 18

:

:

:

:

:

:

:

."

:

" .19

" : ."

.20"

.	23/	/30	644/11/5		
644/11/2		23/	/26		()
		. 644/11/5		23 /	/30

()

.21

50

. 671/1/18 670/1/29

. 50

. 51/ /29 671/12/7

10

. 51

51

50

12

"

51

50

22"

()

()

61

"

"

23"

24" ...

حوادث کسوف ذُکرتِ یے سباق عام

203/	/28	25	.1
	. 819/6/25		
	. 819/6/26		
26			.2
. 912/6/17		229/ /29	
233/	/28	27	.3
		. 848/8/2	
. 269/	/28	28	.4
		29	
30		28	
		. 269/ /29	
. 882/8/17		269/ 29	.5
31		355/ /28	
	. 966/7/19		
	. 355/ /29	.966/7/20	

. 411/ /28 32 .6
. 1021/2/13

.1021/2/14
. 411/ /29
.7
. 1046/4/30
. 437/ /30

33

/28 . /11 /22 .
34 .8

. 453/1

36

. 1061/6/19

. 1061/6/20
. 453/1 /29
37 .9

. 471/ /28
. 1079/6/30

. 1079/7/1

. 471/ /29
/28 38 .10

. 570/2
. 1174/11/25

. 1174/11/26

. 570/ /29

571/ /29 39 .11

/ /27 40
29 . 571
. 1176/4/10
. 1176/4/11

/29 41 .12
/29 42 . 574/
574/
. 1178/9/13
. 1178/9/13

. 693/ /29 43 .13
. 1294/6/24
1294/6/25

. 692/ /30 1293/7/5
/28 44 . 692/ /30 .14
. 694/
. 1295/11/7
. 1295/11/8
. 694/ /29

. 742/	/28	45	.15
	. 1341/12/8		
	. 1341/12/9		
	. 742/	/29	
. 836/	/28	46	.16
	. 1433/6/16		
	. 1433/6/17		
	. 836/	/ 29	
		47	.17
		. 964/	/28
		. 1557/7/24	
	. 964/	/29	1557/10/22
. 1118/	/28	48	.18
	. 1706/5/11		
. 1118/	/29		. 1706/5/12
. 1120 /	/	49	.19
	. 1709/3/11		
	. 1709/3/11		
		50	.20
		. 1177/	/29
		. 1764/3/31	
. 1177/	/30	1764/4/1	
/29		51	.21
		. 1202/	

. 1433/6/3

. 1202/ /30

. 1433/6/4

. 1287/

/29

52

.22

. 1870/12/22

. 1870/12/22

الخلاصة

:

()

.1

. 10/

/10

(

)

. 10/ /29

()

.2

. 23

()
51

.3

50

.4

()

.5

						ت
		632/1/27	632/6/15	10/1 10 <u>10/ /29</u>		.1
		644/11/5	644/11/2 644/11/5	23 / /26 <u>23/ /29</u>		.2
		671/12/7	670/1/28	50/(1) <u>51/ /29</u>		.3
			() 680/10/9	() 61/ /10		.4
		1433/6/26	819/6/25 819/6/26	203/ /28 <u>203/ /29</u>	148/5	.5
		912/6/17	() 912/6/17	() 299/ /29	247/1	.6
		882/8/17	() 882/8/16 () 882/8/17	() 269/ /28	560/5	.7
		966/7/20	() 966/7/19 966/7/20	355/ /28	261/1	.8
		1021/2/14	() 1021/2/13 () 1021/2/14	() 411/ /28	196/4	.9
		1046/4/30	() 1046/4/30	() 437/ /30	35/1	.10

		1061/6/20	() 1061/6/19 () 1061/6/20	() 453/1 /28	221/8	.11
		1079/7/1	() 1079/6/30 () 1079/7/1	() 471/ /28	74/1	.12
		1174/11/26	() 1174/11/25 () 1174/11/26	() 570 /2 /28	250/10	.13
		1176/4/11	() 1176/4/10 () 1176/4/11	() 571/ /29	78/10	.14
		1178/9/13	1178/9/13 1178/9/13	574/1 /29	283/10	.15
		() 1293/7/5	() 1294/6/24	() 693/ /29 692/ /30	90/1	.16
		1295/11/8	() 1295/11/7 () 1295/11/8	() 694/ /28	91/1	.17
		1433/6/17	1433/6/16 1433/6/17	() 836/ /28	215/4	.18
		() 1557/10/22	() 1557/7/24	() 964/ /28 () 964/ 29	88/2	.19
		1706/5/12	() 1706/5/11 () 1706/5/12	() 1118/ /28	110/3	.20
		1709/3/11	1709/3/11	1120 / /29	59/1	.21

		1764/4/1	() 1764/3/31 () 1764/4/1	1177/ /29 /()	85/3	.22
		1788/6/4	()1788/6/3 ()1788/6/4	()1202/ /29	54/2	.23
		1870/12/22	()1870/12/22	1287/ /29	123/3	.24

المراجع:

1. / / / .1965
2. / : / / .1997
3. / / /
4. / / /
5. / / / .1993
6. / / : / /
7. / / / / . 1358
8. / / / .1998
9. / / / / .2003
10. / / / / . 1407
11. / : / /
12. / / / / .1995
13. / / / : / / .1983

الهوامش

"	"	:		1				
			.2003					
			.135	2				
"		:		3				
			.1998	"				
			(1766)	4				
			.(1796)	5				
			.62	6				
			.37:	7				
				8				
O. Neugebauer, Exact Science in Antiquity, Dover.								
	2000	1999		9				
			. 1999					
			.70-67	10				
				:				
13 :	1 :	17 :	5 :	311 :	5 :	11		
		.87 :	2 :	12 :	4 :	(257)		
				(985)		12		
				.311:	5 :	13		
				.12 :	4 :	(257)		
				.60		15		
				.561 :	2 :	16		
				.470		17		
				.353		18		
				.136 :	1 :	19		
						20		
228 :	5 :	(257)	319 :	3 :	45 :	8 :	:	21
			.35:	3 :	138 :	1 :		
					.398 :	4 :	:	22

		.231 : 6 :	23
		.207 : 1 :	24
		.148 :5	25
	.247: 1:		26
		.450: 5:	27
		.560: 5:	28
		.65 : 5 : (257)	29
		.329 : 6 :	30
	.261 : 1 :		31
		.196 : 4 :	32
1046	6	": .35 : 1 :	33
	1046	22	
			"
		221 : 8 : (257)	34
		.86 : 12 :	35
		.356 : 8 :	36
	.74 : 1 :		37
		.250 : 10 : (257)	38
		": .78 : 10 :	39
		.258 : 10 : (257)	40
		.283 : 10 : (257)	41
		.93 : 10 :	42
	.90 : 1 :		43
	.91 : 1 :		44
		.195 : 14 :	45
		.215 : 4 :	46
	.88 : 2 :		47
	.110 : 3 :		48

		.59 : 1 :	49
.85 : 3 :			50
		.54 : 2 :	51
.123 : 3 :			52