The Elephantine Letters

There are more than twenty ancient letters that are double dated, collectively called "The Elephantine Letters". These letters are unique because each provides both a lunar calendar date and an Egyptian calendar date for when the letter was written. This fact provides the opportunity to precisely establish absolute dates for events occurring during the reigns of some of the kings of Babylon and Persia, including the return of Ezra's priests to Jerusalem's Temple. These letters, most written in Aramaic between 485 BC and 351 BC, were correspondence between Israelite priests and their relatives in Jerusalem, Babylon, and the Nile island of Elephantine in Egypt. These years are very important because they coincide with the rebuilding of the Second Temple in Jerusalem.

These ancient letters are mostly correspondence between blood-relation who were active Israelite priests and their children. The Israelite priests commanding the fully functioning Temple in Jerusalem started by Ezra; these priests wrote letters back and forth with their blood relation Israelite priests who were commanding the fully functioning Temple of YHWH on the island of Elephantine. Yes, animal sacrifices and "all" were being done in the Elephantine Temple too! Jerusalem was not the only place on earth were YHWH was worshiped as prescribed by the Torah. Later in history another Temple to YHWH was erected in Alexandria Egypt.

The unique double dating of these letters allows historians to figure out exactly how the Temple priests of Israel calculated the lunar calendar they used. There is no "guesswork" because the Egyptian calendar is a fixed 365 days per year cycle, it never changes. Therefore, a letter giving an Egyptian calendar date is just like stamping the exact astronomical-day it was written.

A lunar calendar date is not nearly as exact. The moon does not follow the same pattern as the 24 hour day, and so lunar months will start on different days each year. But because we can use the Egyptian date and calculate exactly which astronomical-day a letter was written, we can thereby deduce exactly how their lunar calendar was calculated.

For example, a letter that is dated in the lunar month of Nisan that also has an exact Egyptian date in early-April, reveals that the Israelite priests did not allow Nisan to start in winter, not even by one day. Instead they waited another lunar-month for Nisan to start in spring. In like manner all of the "little rules" of the ancient lunar calendar can be reconstructed with full confidence.

All Elephantine Letters match the exact same lunar calendar rules, there are no acceptations. This is significant. By matching all letters, firm evidence is established that the ancient observed calendar was based upon a defined and unwavering set of simple rules, and that the same observed calendar was used by the governing officials of ancient Persia, which included the territories from India to Egypt.

Some may not be aware that Elephantine is historically extremely significant. The significance of the Elephantine Island in the Nile river is that Israel had a huge and fully functioning Temple of YHWH built on this island. In this Temple they kept the Mowadahs of YHWH and the sacrificial ceremonies for hundreds of years. In this Temple the Levitical priests of Israel proclaimed and presided over the Mowadahs during the time when Solomon's Temple was destroyed, and later they held the Mowadahs in parallel with the Second Temple, until the time Elephantine was destroyed. As a matter of historical record, **the demonstration herein that both Temples of YHWH used the exact same calendar is monumental in its significance**.

Following is a list of the Elephantine letters, with the corresponding Julian Dates. All computations were performed by the software product: "Interactive Astronomy and Historical Calendars Reconstruction", offered by this author through Z2 Computer Solutions (www.z2cs.com).

Some Background Information:
The Egyptian fixed-length calendar always has 365 day years, each month has 30 days, with a 13th "month" having only five days (each day was a holy day). The correlation between this Egyptian calendar and the Julian Day Numbering system has been verified by thousands of artifacts, and is not in dispute.
The Julian Day = 1448242 + 365Y + 30M + D
where Egyptian date (Y,M,D) = (1,1,1) is Julian date 2/26/-746 00h:00m:00s GMT.

Names of Months Used In Letters:

	Egyptian		Babylon	Jewish / Syrian	
1		Thoth	Nisanu	Nisan	1
2		Phaophi	Aiaru	Iyyar	2
3		Athyr	Simanu	Sivan	3
4		Choiak	Duzu	Tammus	4
5		Tybi	Abu	Ab	5
6	II PRT	Mechir	Ululu	Elul	6
7	III PRT	Phamenoth	Tashritu	Tishri	7
8		Pharmuthi	Arahsamnu	Marcheshvan	8
9	I SMW	Pachons	Kislimu	Kislev	9
10		Payni	Tebetu	Tebeth	10
11		Epiphi	Shabatu	Shebat	11
12		Mesore	Addaru	Adar	12
13		Epagomense(5 days long)		Adar II	13

Reigns of Kings:

It is very important to understand how the ancients determined the year of a king's reign. The Egyptians incremented a king's reign on Thoth 1, which was around the first two weeks of December in the time-frame of these letters. Another counting used the Egyptian Sothic Calendar, which incremented around July 20 in the time-frame of these letters. The Persians incremented a king's reign on Nisan 1, which was in March or April.

"**Babylonian Chronology 626 B.C. - A.D. 75**", by Richard Parker and Waldo Dubberstein. Copyright 1956 by Brown University Press, Providence, Rhode Island. Library of Congress CCN 56-10735, Page 3, quote:

> "However, the Egyptian regal year of a given Persian king began with the Egyptian calendar year, on Thoth 1 [the Egyptians had two calendars that called its first month 'Thoth'.
>
> In one calendar Thoth slid backwards in the Julian calendar so that between –530 and –431 Thoth 1 moved from January 3 down to December 9.
>
> The other Sothic calendar had Thoth begin with the helical rising of the star Sirius, nearly always Julian July 19th], which during the fifth century b.c.
>
> fell four to five months before [eight to nine months with the Sothic calendar] Nisan, the first month of the Babylonian calendar.
>
> The reader is reminded that although the Persians used the accession year system, calling the interval between the accession of a king and the next New Year's Day 'accession year',
>
> the Egyptians called the interval between the king's accession and the next Egyptian New Year's Day "year 1".
>
> Therefore the Egyptians began any regal year of a Persian king several months earlier than the Persians themselves did.
>
> Hence, any Egyptian document dated after Thoth 1, and before the Persian New Year's Day in spring, had a regal year number which was higher by one than the corresponding Persian year number."

The Elephantine Letters:

Book: "The Elephantine Papyri in English: Three Millennia of Cross-Cultural Continuity and Change (Documenta Et Monumenta Orientis Antiqui, Vol 22), Bezalel Porten (Author):

http://books.google.nl/books?id=qdrO1O5UcD0C&printsec=frontcover&dq=Elephantine+Papyri&source=bl&ots=o5QZ7wTotG&sig=EFhKjVfuYPFHAo3Ir4eYmivT61M&hl=nl&ei=ze5CTPfOAsuoOP2XoM4M&sa=X&oi=book_result&ct=result&resnum=7&ved=0CDcQ6AEwBg#v=onepage&q&f=false

Papyrus No.	Egyptian Date	Jewish Date	Reign Of king	Matching Julian Date
C 10	THOT 4	KISL 7	Yr 9 (Egyptian) Artaxerxes III	
	01/04/398	9/7	1593545.75	(w=5) 11/22/-350
	Written after sunset.			
	Letter Ya`uhan to Meshullam b. Zaccur.			
Kr 10	CHOI 8	ADAR 20	Yr 3 (Egyptian) Artaxerxes II	
	04/08/346	12/20	1574659.75	(w=5) 03/09/-401
	Evidence that they waited for the spring new crescent, and did not use the alleged "Spring Passover Rule".			
	Letter references Anani b. Azariah.			
Kr 9	MESO 29	MARC 24	Yr 1 (Persian) Artaxerxes II	
	12/29/344	8/24	1574190.75	(w=5) 11/25/-403
	Intercalated Adar II, not allowing a Nisan having its first 15 days in the winter. Written after sunset.			
	Letter references Anani b. Azariah.			
AP 28	ATHY 9	SHEB 24	Yr 14 Egyptian, 13 Persian Darius II	
	03/09/338	11/24	1571710.75	(w=3) 02/10/-409
	Written after sunset.			
	Letter references Yedoniah and Mehseiah, sons of Nathan, in Egypt.			
AP 25	THOT 12	KISL 3	Yr 9 Egyptian, 8 Persian Darius II	
	01/12/333	9/03	1569828.75	(w=4) 12/16/-415
	A Babylonian Tablet shows 3/25/-415 was an Adar II. This year was a very close call. They could have determined the observed spring equinox to be either on the 2nd or the 3rd day of the month in question. They did intercalate, waiting a full month for Nisan. Also, notice that the whole region was unified by a single determination. Written after sunset.			
	Letter Yedoniah b. Uriah to Yedoniah and Mehseiah, sons of Nathan (whoes mother was Mibtahiah).			
Kr 6	PHAR 8	TAMU 8	Yr 3 (Sothic) Darius II	
	08/08/328	4/08	1568209.75	(w=2) 07/11/-419
	Nothing special about calendar computations.			
	Letter references Anani b. Azariah.			
Kr 5	PHAM 7	SIVA 20	Yr 38 (Persian) Artaxerxes I	
	07/07/321	3/20	1565623.75	(w=6) 06/12/-426

Did not intercalate, as spring equinox was on Nisan 1 day.
Letter references Meshullam b. Zakkur, Haggai, and Micaiah b. Ahio.

Kr 4 EPIP 25 TISH 25 Yr 31 (Persian) Artaxerxes I
11/25/314 7/25 1563206.75 (w=4) 10/30/-433
Intercalated the crescent seen 14 days in winter, not allowing the alleged "Spring Passover Rule".
Letter references Ananiah b. Azariah and Bagazust.

AP 10 THOTH 4 KISLEV 7 Yr [29] (Egyptian) Artaxerxes I
01/04/312 09/07 1562155.75 (w=3) 12/13/-436
Intercalated the crescent seen 11 days in winter, not allowing the alleged "Spring Passover Rule".
A proposed alternative reading Yr [9] has no match.

Kr 3 PAYN 9 ELUL 7 Yr 28 (Persian) Artaxerxes I
B 37 Yr 29 (Egyptian) Artaxerxes
10/09/311 06/07 1562066.375 (w=4) 09/14/-436

Evidence did not do “Spring Passover Rule” (intercalated, so that spring was on 13/11). Written after Lunar 7th Elul starts, before midnight.
Letter references Ananiah b. Azariah and Bagazust b. Bzw.

AP 14 PACH 19 AB 14 Yr 25 (Persian) Artaxerxes I
09/19/308 5/14 1560950.75 (w=2) 08/26/-439
"Settlement of Claim", Intercalated the crescent seen 8 days in winter, not allowing the alleged "Spring Passover Rule".
Written after sunset.
Letter Pi` to Mibtahiah, daughter of Yedoniah.

AP 13 MESO 11 KISL [2] Yr 19 (Persian) Artaxerxes I
12/11/302 9/02 1558842.75 (w=1) 11/18/-445
Calculating 1st Month of this Lunar Year: In previous year’s 12th month, missed new crescent, so that 12th month had 30 days. Spring equinox was prior to daybreak on 1st daybreak, so Nisan 1 (03/26/-445) was declared. Written after sunset.
Letter Mahseiah b. Yedoniah to Miphtahiah, his daughter.

Kr 2 PHAR [3] [TAMMUS] 18 Yr 16 (Persian) Artaxerxes I
08/03/299 4/18 1557619.75 (w=3) 07/13/-448
Nothing special about calendar computations.
Letter references Ananiah b. Azariah and Meshulliam b. Zakkur.

Kr 1 PHAM 25 SIVA 20 Yr 14 (Persian) Artaxerxes I
07/25/297 03/20 1556881.75 (w=7) 07/06/-450
Intercalated the crescent seen 6 days in winter, not allowing the alleged "Spring Passover Rule". Written after sunset.
Letter references Mahseiah b. Yedoniah as a witness.

AP 6 THOT [17] KISL 18 Yr 21 (Persian or Sothic) Xerxes
Beginning Artaxerxes I ascension year
01/17/284 09/18 1551948.75 (w=2) 01/02/-463
Written that night.
Intercalated the crescent seen 3 days in winter, not allowing the alleged "Spring Passover Rule". Written after sunset.

An Alternative Reading of AP 6:

AP 6 THOT [07] KISL 18 same letter as above but alternative reading:
01/07/285 09/18 1552303.75 (w=7) 12/23/-463
"A Conveyance", December would be Xerxes Year 22 by Egyptian counting. (This alternative is probably not correct)

AP 5 PACH 28 ELUL 18 Yr 15 (Persian or Sothic) Xerxes
09/28/277 06/18 1549644.75 (w=1) 09/12/-470
"Grant of Building Rights", Nothing special about calendar computations.

C 17 EPIPHI 30 MARCH 19 Yr 37 (Persian) of “Artaxerxes at the accession of Xerxes”
11/30/263 08/19 1544596.75 (w=7) 11/16/-484
Nothing special about calendar computations.
Letter proves that “Artaxerxes” is a title, not a specific king’s name, as Darius I, being called Artaxerxes, who is the king at Xerxes accession.
Letter is Zadok to Mahseiah b. Yedoniah.

Elephantine Letters Having Major Problems (according to Horn & Wood, 1954):

AP 8 MESO 1 KISL 21 Yr 6 Artaxerxes I
12/01 09/21
("Artaxerxes" is a title, not a name)

matches	1490942.75	(w=5) 12/24/-631	
matches	1500067.75	(w=5) 12/18/-606	
matches	1509192.75	(w=2) 12/12/-581	
matches	1513207.75	(w=6) 12/09/-570	
12/21 09/01 matches	1553378.33	(w=3) 12/01/-460	

[There has to be something wrong with AP8's dates, these matches do not fit the year of reign.]
But does match if was Marcheshvan, not Kislev, and used Sothic dating, written at night.
12/01/288 08/21 matches 1553723.33 (w=5) 11/11/-459
Letter is Mahseiah b. Yedoniah to Mibtahiah.

KR 8 PAYNI 22 TISHRI 6 Yr 8 (Persian) Darius II
10/22/332 07/6 (was probably a scribal error)
10/22/332 06/6 matches 1569743.75 (w=3) 09/22/-415
See AP25, two months later a letter has the correct lunar month. So the options are:
1. The scribe provided a totally bogus double date, and therefore KR 8 does not represent a valid data point. It must be totally thrown out of the list of letters.
2. The scribe erred in the Egyptian month: Epiphi 22 and Tishri 6 matches to October 22, 416 BC. Notice that to obtain this match there was no Spring Passover Rule used.
3. The scribe erred in the Jewish month: Payni 22 and Elul 6 matches to September 22, 416 BC. Notice that to obtain this match there was still no Spring Passover Rule used.
4. That year there was a close call for when to begin Nisan. It is possible that this scribe believed it was Tishri, even though other data shows that this year was indeed intercalated. Even so, option #4 only demonstrates a “close-call” with the new crescent and the spring equinox. Option #4 does not show a Spring Passover Rule being used either.
Letter references Widrang, commander of Syene and Yedoniah.

KR 7 EPIPHI TISHRI Yr 4 (Persian) Darius II
Fits, if allow EPIPHI 1 to equal TISHRI 1, and Elul had 30 days, not 29. This is very likely as they only had 48.8 minutes to see a 1.11% illuminated crescent, which could be easily missed.
11/01/328 07/1 1568292.75 (w=1) 10/02/-419

AP 20 PAYNI ELUL Yr 4 (Egyptian) Darius II
Fits, if allow PAYNI 1 to equal ELUL 1.
10/01/328 06/1 1568262.75 (w=6) 9/02/-419
Letter references Yedoniah and Mahseiah, sons of Ashor b. Zeho.

The Elephantine letters are charted below. Notice that all 22 letters are reconciled, even the letters reported to have major problems. In the following chart, the "problem letters" are enclosed in parenthesis.

B.C.	Selucid		Persian		Sothic		Egyptian	
01/01	near 04/17		near 04/17		near 07/20		near 12/12	
491								
490	Darius I		32					
489			33					
488			34					
487			35					
486			36					
485	-173		37 Xerxes 1		Acc. Xerxes 1	11/16/37 C17		
484	Xerxes		2		2			
483	-171		3		3			
482	-170		4		4			
481	-169		5		5			
480	-168		6		6			
479	-167		7		7			
478	-166		8		8			
477	-165		9		9			
476	-164		10		10			
475	-163		11		11			
474	-162		12		12			
473	-161		13		13			
472	-160		14		14			
471	-159		15		15	9/12/15 AP5		
470	-158		16		16			
469	-157		17		17			
468	-156		18		18			
467	-155		19		19			
466	-154		20		20			
465	-153		21		1		1	
464	Artax-erxes I	1/02/21 AP6	1		2		2	
463	-151		2		3		3	
462	-150		3		4		4	
461	-149		4		5		5	
460	-148		5		6	(11/11/6 AP8)	6	
459	-147		6				7	
458	-146		7				8	
457	-145		8				9	
456	-144		9				10	
455	-143		10				11	
454	-142		11				12	
453	-141		12				13	
452	-140		13				14	

451	-139		14	7/06/14 KR1			15	
450	-138		15				16	
449	-137		16	7/13/16 KR2			17	
448	-136		17				18	
447	-135		18				19	
446	-134		19			11/18/19 AP13	20	
445	-133		20				21	
444	-132		21				22	
443	-131		22				23	
442	-130		23				24	
441	-129		24				25	
440	-128		25			8/26/25 AP14	26	
439	-127		26				27	
438	-126		27				28	
437	-125		28			9/14/28 KR3	29	9/14/29 B37 12/13/29 AP10
436	-124		29					
435	-123		30					
434	-122		31			10/30/31 KR4		
433	-121		32					
432	-120		33					
431	-119		34					
430	-118		35					
429	-117		36					
428	-116		37					
427	-115		38	6/12/38 KR5				
426	-114		39					
425	-113		40					
424	Artax-erxes I Darius II		41				1	
423	-111		1		1		2	
422	-110		2		2		3	
421	-109		3		3		4	
420	Darius II		4	07/11/3 KR6 (Sothic)	4	(9/02/4 AP20) (10/2/4 KR7)	5	
419	-107		5		5		6	
418	-106		6		6		7	
417	-105		7		7		8	

416	-104		8		8	(9/22/8 KR8)	9	12/16/9 AP25
415	-103		9		9		10	
414	-102		10				11	
413	-101		11				12	
412	-100		12				13	
411	-99		13				14	
410	-98	2/10/14 AP28	14				15	
409	-97		15					
408	-96		16			9/18/16 Ululu II		
407	-95		17					
406	-94		18					
405	-93		19				1	
404	Artax-erxes II		1			11/25/1 KR9	2	
403	-91		2				3	
402	-90	03/09/3 KR10	3				4	
401	-89		4				5	
400	-88		5				6	
399	-87		6					

Other Double Dated Records:

Ptolomy recorded a lunar eclipse in the seventh year of Cambyses on Phamenoth (Egyptian month 7) 17. Newton Page 131 lists a Babylonian record of the same eclipse occurring on IV,14 523 BC, which is 7/16/-522 Julian. This record confirms that the Egyptian Calendar's 365 day year pattern was uninterrupted between Ptolomy's time and 523 BC.

SIGNIFICANCE:

All Babylonian / Egyptian / Jerusalem dates are computed using a consistent set of calendar determination rules. Because all of the double dated Elephantine letters reconcile using these rules, firm evidence is provided which demonstrates that the greater region of Babylon, Jerusalem, and Egypt were all using the exact same calendar system between 485 to 351 BC. This evidence demonstrates that two fully functional Temples of YHWH both used the exact same calendar system of rules. With Ptolomy's record we have evidence that the same rules were used back to 523 BC.

The evidence shows that the ancient calendar scholars did not follow a fixed calendar cycle based on 19 years, nor did they follow an alleged "Spring-Passover" intercalating rule. The single set of rules employed demonstrates that they did strictly adhere to visual sightings of the new crescent moon, and based their intercalation's on ensuring that the 2rd of Nisan or later should never be in winter, and that the 10th of Tishri or later (the 10th is

the first day of the year for the count of the Sabbatical and the Jubilee cycle, which is the Holy Day of Atonement or Yom Kupper) should never be in summer.

Further evidence of this is also provided by two Jewish Astrology Tablets, MLC 1870 and BM 33667. These tablets provide astronomical positions of the major planets, tied to a specified month, day, and year of the observed calendar. These tablets therefore represent precise dates, as only one date can satisfy the specified positions for all of the planets, the sun, and the moon for each specified calendar reference. These dates are then fixed and verified by astronomical ephemera.

The first tablet dates to Julian April 4, 263 BC and the second gives two dates of Julian March 17 and then December 17, 258 BC. These dates are significant in that they occur in a year in which intercalation occurred. The rules for when the ancient astronomers intercalated are thereby further confirmed. In these years they followed the same calendar determination rules, giving evidence that the regional calendar remained unchanged down to 258 BC.

Still further, Babylonian records (see "Babylonian Chronology, 626 B.C. - A.D. 75" by Richard A. Parker and Waldo H. Dubberstein: Brown University Press) specify intercalated years between 626 B.C. and 75 A.D. These records also demonstrate that the same determination rules were used as far back as 517 BC.

In Service To The Brethren,
Wayne L. Atchison, an Elder in the Body of the Messiah

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