

Solar Eclipse Newsletter

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The **Solar Eclipse Newsletter** is a monthly newsletter about Solar Eclipses edited by Patrick Poitevin. Financial support from **Rainbow Symphony**. The author started the SENL in November 1996.

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<http://www.MrEclipse.com/SENL/SENLinde.htm>

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28 November 2000

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General

From the editor

Please find herewith the Solar Eclipse Newsletter of October 2000 which covers all solar eclipse related messages of September 2000.

A tale of two 7 March Eclipses

From:
<Skywayinc@aol.com> To:
<eclipse@hydra.carleton.ca> Sent: Friday,
September 08, 2000 2:09 PM Subject: [eclipse]
Unusual eclipse anniversary coming up!

A TALE OF TWO MARCH 7TH ECLIPSES

March 7th, 2001 will be the 50th anniversary of a rather obscure, yet notable event for those who have a special interest in eclipses: it marked the first time that a solar eclipse was televised live to a national audience. The March 7th, 1951 eclipse was visible in varying degrees across much of the United States. It was associated with an annular eclipse that swept across New Zealand, the Pacific Ocean and Central America. From New York City (from where the telecast originated) the eclipse magnitude was rather small - a mere 17 percent of the Sun's diameter was covered at the maximum, which occurred at 5:43 p.m. EST. Ironically, a plea was made that day by the then-curator of the Hayden Planetarium, Robert Coles to keep news of the eclipse quiet and not to publicize it at all! In a small announcement that appeared in that day's edition of The New York Times, Coles begrudgingly explained that, ". . . if we get people expecting a big show they'll be disappointed. Then they won't pay attention when

we have a genuine celestial wonder to call to their attention."

Despite Coles protestation, this relatively unspectacular eclipse made television history on one of the most-watched television shows of that era. It was during the live half-hour children's show "Howdy-Doody" that the NBC Network broadcast the eclipse as seen from a camera atop the 70-story RCA Building. Reminiscing about this 1951 episode in his 1987 memoir "Say Kids! What Time Is It?" author Stephen Davis wrote: "NBC used Howdy to inaugurate all sorts of new TV technology - the split screen, matte effects, strange fades. I remember watching that (eclipse) broadcast at home and my mother telling me not to look directly into the screen. She was afraid I would go blind!"

Interestingly, nineteen years (or one Metonic cycle) later, in 1970, there would come another March 7th solar eclipse. This one, however, was a total eclipse that ran across Mexico's Yucatan Peninsula and eventually paralleled the U.S. Eastern Seaboard. That event also marked yet another television first for eclipses: a solar eclipse that was televised in living color! Millions of people - many of who experienced totality for the first time -- still vividly remember the March 7, 1970 eclipse with great fondness.

And to be sure, it certainly ranked as a "genuine celestial wonder" of the kind that Robert Coles was probably alluding to back in 1951! -- joe rao

From: Cathy Conwill
<cconwill@tkb.att.ne.jp>

So would that eclipse be the one that was referred to in "You're So Vain" (1972) ?

"...and you flew your women to Nova Scotia to see the total eclipse of the sun..." Cathy

From:
<Skywayinc@aol.com>

"...and you flew your women to Nova Scotia to see the total eclipse of the sun..." >>

No . . . that was the totality that came after March 7, 1970 . . . namely, the one that cross both Nova Scotia and Prince Edward Island on July 10, 1972. -- joe rao

By the way . . . I think the line is: " . . . and you flew your LEAR JET up to Nova Scotia . . . "

From: Olivier Staiger
<olivier.staiger@span.ch >

probably. But if the song came out in very late 1972 it may also be the total eclipse of July 10, 1972. See Fred's map at <http://sunearth.gsfc.nasa.gov/eclipse/SEmap/TSENorAm1951.gif> and you'll see that both were

visible in N.S. By the way, I believe, the text is not "you flew your women to.." but it is "you flew your Learjet to .." . Klipsi

From:
<Skywayinc@aol.com>

"...and you flew your women to Nova Scotia to see the total eclipse of the sun..."

From page 89 of my 1989 book "Your Guide to the Great Solar Eclipse of 1991":

"At times certain portions of the earth's surface will seem particularly favored by eclipse tracks. The Canadian province of Nova Scotia is a fine example. On July 20, 1963, the track of totality passed from northwest to southeast over the extreme southern tip of Nova Scotia, Clarkes Harbor seeing 23 seconds of total eclipse. Less than seven years later on March 7, 1970, totality came up from the southwest and swept the east coast of Nova Scotia, including its capital, Halifax.

"A little more than 28 months after this episode, on July 10, 1972, totality again swept in from the northwest and came to Prince Edward Island and north-central Nova Scotia. Some places like Sheet Harbour were within the path of two consecutive total eclipses (1970 and 1972)!"

"It is also this last eclipse that singer Carly Simon was likely alluding to in the song "You're So Vain" (Number 1 for three weeks in January 1973 according to Billboard magazine)."-- joe rao

From: Mark Gradwell
<mark1961@cwcom.net>

According to:
http://www.bbhq.com/shol_yr.php3 the lyric goes:

"Well I hear you went up to Saratoga and your horse naturally won Then you flew your Lear jet up to Nova Scotia To see the total eclipse of the sun."

The song as far as I can make out was written on or before 1972 according to this page:
http://www.ubl.com/ubl_artist.asp?artistid=4767&p_id=P+++++5430

"Her third album, the gold number one No Secrets (November 1972), was produced by Richard Perry and contained the gold number one hit "You're So Vain," which aroused speculation about its subject. Mick Jagger, one of those suggested, sang backup on the recording."

Hmm.....
...

Presumably the identity of the one who is so vain could be established if

A: the party was there at the '70 Nova Scotia eclipse (it must have been the '70 one since

Learjets weren't in existence in '63). Obviously the '73 one is discounted.

B: He owned a Learjet in 1970 and did actually use it to visit Nova Scotia at the time in question.

Perhaps a search of local newspaper archives for celebrity arrivals by executive jet for the purpose of eclipse observation is in order.

Then again maybe not. Investigation in this area may prove fruitless due to artistic licence on the part of the lyricist-Carly Simon. The deliciously devious irony of the lyric "You probably think this song is about you, don't you...." intrigues me. I have no idea what to make of this...

The plot thickens.....;)).
Yours, Mark Gradwell

From:
<KCStarguy@aol.com>

I always thought that the song dealt with the 1972 eclipse where I saw my first total. I was in Arasaig, Nova Scotia on the centerline across from the Northumberland straits. The shadow came up off the water and up our hill from the northwest and it very impressive along with a rainbow shaped prominence.

Yes it says a Lear jet in the song too but I did not see one in the sky!!!!!!!!!!!!

5 totals later and 1 annular and several partials and many lunars I am ready for my 7th in Africa next year. Dr. Eric Flescher

From:
<NinaSandy@aol.com>

Let me finally now that I have time to respond to the great question:

Who took the Lear Jet up to Nova Scotia? I had not heard Mick Jagger's name mentioned in connection with that. But I always thought (an old friend of mine disagrees with me) it was Warren Beatty since he was romantically linked with Simon at the time. My old friend thought it was James Taylor but I suggested he'd written a song about the eclipse.

Just a thought on a burning question. Sandy from Virginia

From: Cathy Conwill
<cconwill@tkb.att.ne.jp>

At the time, Warren Beatty was most often mentioned as the likely culprit.

Thanks to all who corrected my rendition of the lyrics. It must have been my wishful thinking that he flew some women up to see the eclipse. Cathy

From:
<NinaSandy@aol.com>

It is always possible Beatty or whoever never went to the eclipse at all - let alone flew some woman to see it.

If he took the Lear Jet, it probably was in the company of a female. But maybe that was the excuse Beatty gave to Simon as to what he did (instead, he was with an aforesaid female not Carly Simon). What Beatty did not count on was the effect of a songwriter scorned - a legacy on a hit song.

My next question:

Have any of our Presidents ever gone to totality - either before or during or after their service in the White House.

Likely candidates for Chief Executives in totality are:

Thomas Jefferson - observed and reported annularity from Monticello.

Martin Van Buren - the 1806 eclipse went over his home town (Kinderhook, NY) at a time he was living there.

William Henry Harrison - was in Ohio at the time of the 1806 totality (which Tecumseh found out about and had his prophet "predict" to strengthen his hand in uniting the Native Americans)

Theodore Roosevelt - Naturalist and explorer. I do not know of any expeditions to totality

Richard Nixon - had 1970 totality during his presidency

Jimmy Carter - 1970 totality was not far from Plains.

Any others?

Yours wishing he could go to Africa but probably cannot, Sandy from Richmond

From: <KCStarguy@aol.com>

Interesting. George Bush could not have seen one as he was more interested in Points of Light instead of Points of darkness :) Clinton-didn't he say " I did not see the eclipse with that woman."? Dr. Eric Flescher

Almost Famous

From: Evan Zucker <ez@totality.com> To: <SOLARECLIPSES@AULA.COM>
Sent: Sunday, September 24, 2000 6:03 AM
Subject: [SE] "Almost Famous"

I just saw the movie "Almost Famous," which opened yesterday in the U.S. One of the final scenes of the movie shows the cover of a 1973 edition of Rolling Stone magazine, and the headline of the lead story (other than the main cover story) is, "Solar Eclipse of the Century."

I immediately recognized this as referring to the 30 June 1973 eclipse in Africa, which was the second longest of the century after the 1955 eclipse from the same saros.

More information about the movie and Rolling Stone (but not about the eclipse) is at <http://www.rollingstone.com/sections/special/ameroncrowe/>. Evan H.

Zucker San Diego, California

Barabbas

From: Olivier Staiger <olivier.staiger@span.ch>
To: <SOLARECLIPSES@AULA.COM>
Sent: Thursday, September 07, 2000 7:30 PM
Subject: [SE] image of 1961 solar eclipse / Barabbas

doing a little websearch I found this interesting site

<http://amoreamore.com/italy> which shows a photo of the scene from Barabbas with the 1961 eclipse. Olivier "Klipsi" Staiger

From: Jean Marc Larivière <jeanmarc.lariviere@sympatico.ca>

Looking at the Barabbas photograph that Olivier so kindly pointed to I'm reminded how aghast I was when I saw the film a year ago. As is clearly evident from the photograph, the director of photography lit the scene so that the actors could be clearly seen against the dark background of the sky. Thankfully, the extras, at least those who weren't blinded by the lights, were facing in the right direction, but what of the poor actor who played Jesus. Not only did he find himself in a most uncomfortable position, he is facing away from the eclipse. Food for thought for all those who have ever been clouded out - Klipsi knows what I'm talking about. Just imagine

being in the path of totality under perfectly clear skies and not being able to look at the corona! Now that really has to hurt. On the other hand, that actor probably had the best view of the receding shadow cone :>) Jean Marc

Book by Duncan Steele

From: janita hill
<janitah@senet.com.au>
To:
<SOLARECLIPSES@AULA.COM>
Sent: Tuesday, September 05, 2000 2:55 AM
Subject: [SE] Duncan Steel's Eclipse Book

For those who were interested, I now have further details on the "Eclipse" book, (and a couple of others) by Duncan Steel as below:

-----Original Message-----
--

From: Duncan Steel
<D.I.Steel@salford.ac.uk>
>

Dear Janita, Here is the basic book info. Please circulate as you see fit.

(1) ECLIPSE book.
ECLIPSE: The celestial phenomenon which has changed the course of history. Duncan Steel, Foreword by Paul Davies. Hardback published by Headline Books, London, July 1999. ISBN 0-7472-7385-5 Pic of cover attached as a jpeg (write to me if you want this sent privately - Janita) The revised paperback edition (post-August 11 1999 eclipse) has recently appeared: ECLIPSE. Duncan Steel,

Foreword by Paul Davies. Hardback published by Headline Books, London, July 2000. ISBN 0-7472-6284-5 Sterling 7.99. The above is only published in the British Commonwealth etc. (i.e. not in the USA). There will be a radically-revised and Americanized version published in about April 2001 by the Joseph Henry Press, Washington DC, with a slightly different title/subtitle. In the meantime, prospective US purchasers could likely get a copy via amazon uk. Elsewhere, try a bookshop or your favourite on-line supplier.

(2) MARKING TIME.
MARKING TIME: The Quest to Invent the Perfect Calendar. Duncan Steel. John Wiley & Sons, New York, 2000. ISBN 0-471-29827-1 US\$27.95 Pic of cover attached as a jpeg (write to me if you want this sent privately - Janita) Paradoxically, the availability of this book is the converse of the above: only published in North America (US & Canada). People elsewhere *can* get a copy via amazon.com (USA). I have no plans to publish it elsewhere.

(3) TARGET EARTH. Whilst writing I might mention (free advert!) that my new book: TARGET EARTH: The Search for Rogue Asteroids and Doomsday Comets that Threaten Our Planet. Duncan Steel. Foreword by Andrea Carusi and Brian Marsden (President and Vice-President of The

Spaceguard Foundation); Afterword by Sir Arthur C. Clarke. ...will be published in November 2000. The publisher in most of the world is Readers Digest; in the UK it is Time-Life. This is a heavily-illustrated book (over 250 pics) telling about the subject made clear by the sub-title.

Cheers, Duncan

Concorde and Eclipse

From: Emmanuel Laurent
<emlaurent2@yahoo.com>
To:
<solareclipses@Aula.com>
Sent: Tuesday, September 19, 2000 6:01 PM
Subject: [SE] Concorde and Eclipse

All, I would like to see some photos, take from the Concorde, of the Lunar shadow during the 99's eclipse. Some news paper Websites gave descriptions of the observations or about the trip but no photo: Have got any good websites?? thanks, E. LAURENT

From: Olivier Staiger
<olivier.staiger@span.ch>
>

views from another aircraft , above France:
http://perso.cybercable.fr/eclipses/990811/envol_eng.htm

from MIR:
<http://antwrp.gsfc.nasa.gov/apod/ap990830.html>
Klipsi

Dolores Claiborne

From: Michael Gill
<eclipsechaser@yahoo.com>

> To: <SOLARECLIPSES@AULA.COM>
 Sent: Saturday, September 09, 2000 5:29 PM
 Subject: [SE] For the UK Based SEML Subscribers...

...And those who can receive transmissions from UK TV stations: -

Dolores Claiborne
 Monday, 18th September
 22:00 Channel 4

See the following link for the thread on this film, and the eclipse in it, which was discussed on the SEML...
<http://www.mreclipse.com/SENL/SENL9902/SENL902ap.htm>

From: Katherine LOW
 <katherine.low@worldonline.be>

I happen to buy the movie Dolores Clairborne on DVD. The 'extras' on the DVD include a very long monologue by the director about the making of the film. Actually, they play almost the entire film again and the director, Taylor Hackford, is giving his non-stop comments. He also explains how this eclipse has been filmed. For those who have seen the film, the eclipse is occurring during the climax of the film: at the moment of the dramatic argument between Dolores Clairborne and her husband. The director said that this was impossible to film during a real eclipse. Actually, for the whole scene of the argument,

the film crew has created a huge set in which they put tons of earth, re-created the vegetation, against a blue wall as background. Later the sky is then projected on the blue wall. The whole set is created outdoors and the action is filmed in the late afternoon with the low sun shining on the actors, to have the effect of the light of the eclipse as real as possible (according to the director). This was filmed on one of the few sunny days the crew had at Nova Scotia, the location of the film set (the story is supposed to run on an island in Maine, during the 20 July 1963 eclipse according to Stephen King's book). In the meanwhile another crew filmed during the whole day the sky, with some passing clouds. The eclipse images itself have been digitally put in the sky. In spite of some incorrectness as has been mentioned before, the overall result is satisfying and I enjoyed the movie.
 Regards, Kris Delcourte

Historic Eclipse

From: Michel Andre Levy
 To: SOLARECLIPSES@AULA.COM
 Sent: Monday, September 04, 2000 1:00 PM
 Subject: Re: [SE] HISTORIC ECLIPSE

For sure there is a part of fiction in Le Roi de Fer, like in the other books of the complete opus Les Rois Maudits. Only Maurice Druon himself could answer our

questions. As he is a member of the "Academie Francaise" (one of the 40 "immortels", as we say in French), I just sent an e-mail to this honourable institution. We could get an answer one day or another : I already wrote to them for another question, and I received quite rapidly an interesting answer. I let you know when I receive something, if ever.
 Michel-Andre LEVY

"Ing. Francisco
 Guadarrama Sánchez"
 wrote:

TO ALL ECLIPSE LOVERS & ECLIPSE GURUS Concerning my query about the eclipse in 11/08/1314 and the data calculated by Jean-Paul Godard I think now we could guess why the writer Maurice Druon wrote in "Le roi of Fer" "the King of France Philip The Fair died on November 29, 1314 and this day was an eclipse" :

A).- If the "real date" of the eclipse", i mean the date in the Julian Calendar in use in that time was October 29 1314, as Jean-Paul Godard wrote, then it's very probable the writer could have had an error and write November 29, 1314. However I think the date October 29 1314 was wrong because that day the Moon's age was 19.7 days and so can't be an eclipse. By the way, Jean-Paul, what does it mean "Corrected date of the eclipse (Julian Calendar)". I suppose you got this date subtracting 10 days from

the date 11/08/1314, but it's not clear what this it mean.

B).- Another most probable explanation is that the writer tried to convert the Julian Date of the eclipse in 11/08/1314 to a Gregorian Date and so he added 11 days to 11/08/1314 and got 11/19/1314. After this he made an error and wrote 11/29,1314 instead of 11/19/1314. So far so good but a problem remains : If really was an eclipse when the King died and this eclipse was visible in France then the value of Delta T of 443 secs was wrong. I know that Shinobu Takesako, the author of the Emapwin software used data from the book "HISTORICAL ECLIPSES AND EARTH'S ROTATION" by F.R. Stephenson and I wonder between what values Maximum and Minimum can change Delta T for the eclipse were visible in France ?. Can be an error here ?. The writer for his part is very assertive and in his book adds an additional commentary about an astrologue Martin who predicted the eclipse and said with sibyline words " That day a great shadow will fall over the the Kingdom of France". I think is valuable to know the true here. If there are another independent historical testimonies about this eclipse we can fix the value of Delta T in that time. Thank very much for your answer.Francisco Guadarrama Sanchez

From: Michel Andre Levy

Maurice Druon (from Academie Francaise) answered my question about the Eclipse mentionned in his book Le Roi de Fer, in november 1314. He did it quite rapidly, sending his letter (paper made ...) just 2 days after I sent my e-mail. I will send the complete transcription of his letter, in french, to those who ask me. To summarize, he says that he found the prediction of the astrologue Martin through a chronicler (is this a good translation for the french « chroniqueur » ?). As he wrote this book 45 years ago, he can't remember precisely which chronicler. But he insists on the point that on that age, the chroniclers often wrote according to oral accounts, possibly much later than the events. Their accounts were brief and imprecise (by the way, he writes that there was no precise day for this prediction...). There could have been some confusion in the memories or in the transcriptions. He decided to mention this prediction mainly for the symbolic sentence : a great shadow will fall over the Kingdom of France (« Une grande ombre se fera sur le royaume »).

What is sure, for me, is that the evocation of the eclipse is not pure fiction. I don't think either ther was a confusion on dates with

Julian and Gregorian calendar. It stands on historical documents, who could be imprecise. By the way, does really the author pretend that this TSE occured that very day, or does he only speak of the prediction ? On that case, according to the knowledge about astronomy in the 14th century, this astrologue Martin appears to be a very smart guy, being able to predict a TSE, and doing a mistake only about the place from where it is visible. To receive the complete text of Maurice Druon's letter, send an e-mail directly to my adress. Michel-Andre LEVY malevy@sinopia.fr

Long duration TSEs

From: Sheridan Williams <sheridan@clock-tower.com> To: <SOLARECLIPSES@AULA.COM>
Sent: Saturday, September 23, 2000 5:36 PM Subject: [SE] Long duration TSEs

I have been perusing Fred Espenak's List of TSEs with durations longer than 6 minutes from 1001 to 3000, and notice the following fascinating facts: The only consecutive years with TSEs longer than 6 minutes are: 1256/1257, 1274/1275, 1292/1293, 1592/1593

There are no more pairings before year 3000.

Is it possible to have consecutive years with durations longer than 7 minutes?

Has anyone noticed that there are no TSEs longer than 7 minutes for over 1,000 years from 2903AD to 3973AD. Sheridan Williams

From: Michael Gill
<eclipsechaser@yahoo.com>

Very interesting. Several people on this list however, artificially managed to accomplish this feat (two 6 minute eclipses in successive years) in 1991 and 1992.

By taking to the air on a DC-10 for the June 30th 1992 eclipse, we managed to get 6 m 15 s of totality.

Many on board had been in Baja California for over 6 minutes of totality 355 days earlier.

> There are no more pairings before year 3000.

Glad we grabbed the opportunity!

The following account on Glenn Schneider's website may be of interest:-

http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_92/ECLIPSE92_REPORT.html Michael Gill.

From: Jean Meeus
<JMeeus@compuserve.com>

I can confirm that indeed there will be no total solar eclipses with a duration of totality longer than 7 minutes between A.D. 2903 and 3973. This is

really remarkable. The longest total solar eclipses during the 4th millennium will be on

3973 July 13, maximum duration 7 minutes 12 seconds

3991 July 25, maximum duration 7 minutes 17 seconds

However, there was another long gap from A.D. 1098 to 1937.

From the year 0 to A.D. 4000, there are only 33 total solar eclipses with a maximum duration of totality longer than 7 minutes, and no two of them occur on successive years. Jean Meeus

From: Carton, WHC
<Wil.Carton@corusgroup.com>

Sir, I think it is impossible to have consecutive TSE's with both durations longer than seven minutes. Here is my idea to investigate this question.

1. See how much the 1991 TSE grew in duration along its path: on Haway in the local early morning 4 minutes, and the increment of 3 minutes to Baja was in majority gained by the growing eastward component of Earth rotation, that in the Tropics reaches higher maximum than near high geographic latitudes.

2. See how much the parameter Gamma varies between consecutive TSE's, due to the 19 days shorter 'eclipse year' than the earth

completes one orbit around the sun.

Consequently not both consecutive TSE's can cast their umbral path in the tropics, even not near the tropics. Now I ask your attention for your investigational fact, how rarely two consecutive TSE's both can reach SIX minutes of totality! I suppose: there the Gamma of these eclipses will lie rather symmetrical to north - respectively to south of the projection of the equator on the fundamental plane (= about minus sinus 23,5 degrees), or vice versa. Wil Carton, HOLLAND.

Pharaoh and the solar eclipse

From: Patrick Poitevin
To: SE Mailing List
Sent: Thursday, September 14, 2000 9:12 PM
Subject: [SE] Pharaoh and the TSE

From: Larry Klaes
September 2000 Astronomy Digest
<<http://astronomydigest.com>><http://astronomydigest.com>

The Philosopher Pharaoh and the Total Solar Eclipse by Aymen M Ibrahim - Egypt

Sequence of eclipse in 30 to 31 BC

From: S. Kalyanaraman
<kalyan97@yahoo.com>
To: <solareclipses@Aula.com>
Sent: Monday, September 11, 2000 2:29 AM
Subject: [SE] Sequence of lunar and solar eclipses in ca. 30th and 31st centuries BC

Hi, Many ancient Indian texts contain precise astronomical information; the Great Indian Epic, the Maha_bha_rata and the Bra_hman.a text, S'atapatha Bra_hman.a are examples which are cited in the following paragraphs. We have an ongoing discussion on the egroup <http://www.egroups.com/group/IndiAncivilization> about the use of this information to establish a chronological of historical events. I request members of this list to help us with their expertise and guide us with modern astronomical computations about eclipses in ancient times. These may help resolve many contentious historical problems often faced in Indian civilization studies. Members may like to peruse Prof. Narahari Achar's vivid computer-generated pictures of the skies near Delhi on various, ancient dates: <http://www1.shore.net/~india/ejvs/issues.html> Figure 5 [delhi5.gif] is a sky map orresponding to August 16, 2927 BC, when kRttikAs (actually, just eta-tauri) rise exactly in the east.

Achar notes that in the S'atapatha brAhmaNa, in section called the nakSatra brAhmaNa, the following verse occurs: kRttikAsv agnI AdadhIta / etA vA agninakSatraM yat kRttikAH / tad vai saloma yo agninakSatre agnI AdadhAtai / tasmAt kRttikAsv AdadhIta //

(II. 1. 2.1) "He may set up the two fires under kRttikAs; for they, the kRttikAs are doubtless Agni's asterism, so that if he sets up his fires under Agni's asterism, (he will bring about) a correspondence (between his fires and the asterism): for this reason he may set up his fires under the kRttikAs" (tr. Eggeling [5])

Prof. Srinivasa Raghavan, using Indian ephemeris and the Indian astrological tradition, computes the date of the Mahabharata war absolutely on 22nd Nov. 3067 BC: <http://sarasvati.simplenet.com/datemb1.PDF>

The Maha_bha_rata refers to an unusual sequence of eclipses; the dates are computed by Srinivasa Raghavan as follows:

The field sacrifice at Kurukshetra was on 13 Oct. 3067 BC. New Moon - 601488 Julian day - Sunday 0.25, with the sun and moon at 224.89 and Rahu at 219.74. It was a solar eclipse day with the eclipse at Midday. The previous full moon was on 28 Sept 3067 BC 601473 Julian day - Saturday 6.51 with the sun at 2100.32 and Moon at 300.32 and Rahu at 2200.55. It was a lunar eclipse day, with the eclipse immediately after sun set (moonrise).

Is it possible to verify using current astronomical

calculations if such a rare phenomenon had recurred on any date after say 3067 BC?

The MBh verse is: - "Chaturdas'im, p;anchadas'im, bhu_ ta pu_rva_m cha shoda'im/ima_mtu_na_bhi ja_na_mi ama_va_syam trayodas'im". 'Chandra surya yubhau grasta vekahne hi trayodas'im aparvani graha_ vetau praja_ sams'aya yis.yatah." (Bheeshma Parva-3-32 Meaning: "A lunar fortnight has hitherto consisted of 14 days or 15 days or 16 days. Up to now I have not known of ama_va_sya coming on the 13th day." "But on the 13th day and in the course of the same month, two eclipses have taken place."

A month means a lunar month, and ama_va_sya is the last day of the month. Hence the eclipses must be lunar followed by solar.

A lunar eclipse followed by a solar eclipse within a 13-day fortnight (with three tithis occurring on one day) is a rarity.

Is this a rare phenomenon indeed? Can we verify the occurrence of another such lunar-solar eclipse sequence in astronomical history, say, after 3102 BC?

(a) Lunar eclipse on 29 Nov. 3032 BC -- a day of three tithis, mentioned by Sri Krishna; (b) Solar eclipse on 14 Nov 3032 BC, The two phenomena occurring together is a

rare feature, and its repetition in 35 years (Ya_dava Civil War) is again very rare, notes Prof. Srinivasa Raghavan.

Another extraordinary phenomenon is the clustering of planets as already mentioned. The correct apparent position of the planets on the midnight of Sat/Sun, 10/11 Jan. 3104 BC according to the traditional Indian astrological computations is as follows:

Mercury 298058'
 Venus 298deg. 016'
 Mars 299deg. 025'
 Jupiter 299deg. 010'
 Saturn 299deg. 05'
 Rahu 230deg. 022'

That is, at 1 AM on the 10th Jan. 3104 BC the planets were seen rising clustered together at Mid Sravishta, with the crescent Moon. (The difference in longitude between the planets and the sun is about 150 or one hour). Hence, Sunday, 11th Jan. 3104 BC the Magha Sukla Pratha of Veda Vyayas is the beginning of the astronomical Kali Yuga Era.

Thanking you all for your consideration.
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<http://clubs.yahoo.com/sarasvatisindhu>
<http://communities.msn.com/sarasvati>

State of Dogs

From: Michael Gill
 <eclipsechaser@yahoo.com>
 To: <SOLARECLIPSES@AULA.COM>
 Sent: Monday, September 04, 2000 9:53 AM
 Subject: Re: [SE] 1999 solar eclipse featured in German movie

> >And has there ever been a case where a real eclipse that happened to 'hit' a film crew was integrated into the script of a movie?

According to David Dalgleish's review of the film 'State of Dogs', this is exactly what happened during the March 1997 total solar eclipse. The review can be read at:-

<http://wlt4.home.mindspring.com/fafr/reviews/state.htm>

Michael Gill.

Zydygy Zyzygy Syzygy

From: Olivier Staiger
 <olivier.staiger@span.ch>
 To: <SOLARECLIPSES@AULA.COM>
 Sent: Thursday, September 14, 2000 4:47

AM Subject: [SE] I: zydygy

HI, does anybody know about this word Zydygy? Anything to do with eclipses? Olivier

From: <Dribalz@aol.com>

the word may be syzygy-- which is simply an alignment of 2 objects in the sky--such as might occur during an eclipse.

From: Jean Meeus
 <JMeeus@compuserve.com>

The correct term is syzygy, not zydygy. Syzygy simply means conjunction or opposition of the Moon with the Sun. New Moon and Full Moon are syzygies. Jean Meeus

From: Michel Andre Levy
 <malevy@sinopia.fr>

Exactly the same definition for the french syzygie, from the greek suzugia.

From: J.P. van de Giessen
 <jpvdingiessen@gelrevisie.nl>

Olivier, It is Syzygy. The (nearly) straight-line configuration of three celestial bodies, such as the Earth, Moon, and Sun during an eclipse. It is from the Greek word "suzugia" meaning: union, from suzugos, paired : sun-, syn- + zugon, yoke. It is a word used by the ancient Greek astronomers, if directly translated in Latin "conjugatio" we

recognize our modern word for it conjunction.

Here are some hyperlinks about the meaning of the word:

<http://features.learningkingdom.com/word/archive/1999/01/12.html>
(explanation of the word)

<http://www.yorku.ca/dept/psych/classics/Baldwin/Dictionary/C4defs.htm>
(see under Conjugation (linguistic))

<http://www.treasure-troves.com/astro/Syzygy.html>

<http://mathworld.wolfram.com/Syzygy.html>

<http://www.britannica.com/bcom/eb/article/4/0,5716,71044+1+69250,00.html>

<http://www.novaspace.com/DIGI/Syzygy.html>

<http://www.encyclopedia.com/articles/12574.html>

Jan Pieter van de Giessen

From: Dale Ireland
<direland@drdale.com>

The closest match is Zymurgy The scientific study of the fermentation process in brewing and distilling.

From: janita hill
<janitah@senet.com.au>

Hi Olivier - I once told Michael Quinion that my favourite astronomical word was "Syzygy" so he included it in his next list of curious English words (see below).
Janita

3. Weird Words: Syzygy
'sIzIdZI/

A conjunction or opposition, especially

of the moon with the sun. If you look up at the sky and see the full moon, you're witnessing an example of 'syzygy'. From our point of view the sun is then on the opposite side of the sky to the moon, and so is said to be in opposition to it. The three are also in syzygy at new moon, this time with the moon and the sun next to each other in the sky - a state called conjunction. The word appeared in English in the seventeenth century, and at first could apply only to conjunctions. It comes via late Latin from the Greek 'suzugia', which derives from 'suzugos', yoked or paired. It was not until a century later that its meaning was extended to cover opposition, in defiance of its etymology. The word also has a couple of rarer meanings in mathematics and poetry. Lovers of wordplay may know it as the shortest word in the language containing three 'y's.

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<<http://www.quinion.com/words/>>.

From: Joel M. Moskowitz, M.D.
<moskowi@attglobal.net>

It is actually Zyzygy. It describes when elements of the solar

system are aligned in a straight line. It means nothing except to believers of astrology.

From: Jean Meeus
<JMeeus@compuserve.com>

No, the correct term is Syzygy, not Zyzygy. And it has nothing to do with astrology.

Syzygy means "New of Full Moon". I agree that this word is not much used today, but during the 19th century several famous astronomers (for instance Oppolzer) published "Syzygies Tables", intended to calculate times of New and Full Moon.

Oppolzer himself begins as follows the "Einleitung" (the Introduction) of his famous "Canon der Finsternisse" (1887) :
"Durch meine "Syzygientafeln fu"r den Mond" Jean Meeus

21 June 2001

Eclipse safari

From: Continental Capers Travel Center, Inc.
<eclipse@flycapers.com>

To: <solareclipses@Aula.com>
Sent: Wednesday, September 06, 2000 11:16 P
Subject: [SE] Total Eclipse of the Sun Safari - Southern Africa 2001

Total Eclipse of the Sun Safari - Southern Africa

Travel with a Small Group of 28 Guests Escorted by Professional Astronomers and Safari

Guides on a Once-in-a-Lifetime Safari to Botswana and Zimbabwe. View the Total Eclipse from the Mana Pools National Park in Zimbabwe, an area that attracts a staggering profusion of wildlife from May through October. Visit our website for more information. (www.flycapers.com)

"Why Choose Us for Your Eclipse Safari?" Experience: Continental Capers Travel Center, Inc., has been creating unique itineraries for our clients for more than 30 years. We pride ourselves on offering meaningful travel experiences that enrich the lives of our travelers.

The Best Safari Guides: We have chosen to partner with Wildlife Safari (www.wildlife-safari.com), one of Africa's best luxury safari operators with over 25 years of experience. Their guides are the best in the business. They are full-time employees, unlike the independent guides employed by other operators. Every guide is an expert game tracker with an encyclopedic knowledge of the history, geography, people, flora and fauna of the area.

Limited Group Size: We have intentionally limited the total number of guests to 28 so that each of you will have full access to the two professional astronomers

that will be escorting the trip.

Finest Accommodations: We have chosen some of the finest hotels, resorts, safari lodges and camps in Africa for your Safari. Hotels are centrally located and well appointed. Safari lodges and camps are situated in the center of Africa's best wildlife viewing sanctuaries.

TRIP FEATURES INCLUDE:

- . Round-trip air transportation via South African Airways from Atlanta (Air add-ons from all US cities available)
- . Experienced safari guides
- . Professional astronomers
- . Luxury accommodations with private facilities
- . Most Meals
- . Sightseeing as specified in tour itinerary
- . Transfers
- . Much, much more...visit our web site at www.flycapers.com for more details.

For reservations and additional information call: 1-800-446-0705 and ask for Marian or e-mail us at eclipse@flycapers.com or visit our website at www.flycapers.com

GPS Waypoints

From: Rigel (Peter Tiedt)
<rigel@stars.co.za> To: Solar Eclipse Mailing List
<SOLARECLIPSES@AULA.COM>
Sent: Thursday,

September 14, 2000 7:21 PM Subject: [SE] GPS Waypoints for 2001 TSE

I have added a downloadable zip archive (19KB) containing waypoint data of the centreline, southern and northern limits to the Africlipse Website, <http://www.eclipse.za.net> The archive contains an Excel spreadsheet, a .csv file, a .txt file and a .wpt Waypoint file readable by Waypoint+, a popular freeware package. The waypoints cover the area from 22E to 36.75E in increments of 0.25 deg. Thanks to Fred for the raw data. The download archive is TSE2000June21 Waypoints.zip and can be found from the 2001 page, and the Zambezi page.

<http://www.eclipse.za.net/html/2001.html>
<http://www.eclipse.za.net/html/zambezi.html>

Or, the file can be obtained by e-mail - just request (off the list) or click here http://www.eclipse.za.net/html/pix/TSE2000June21_Waypoints.zip that should get the file directly. Data is WGS84 - that doesn't differ much from the Garmin "Cape" datum (Clarke 1880 spheroid) which is used for maps in this part of the world. At my location the difference between the two datums is 37 metres lat and 12 metres longitude, almost within the GPS units accuracy limits ;-).Peter

New Travel Book

From: <Orionman1@aol.com> To: <SOLARECLIPSES@aula.com>
 Sent: Friday, September 08, 2000 11:26 PM
 Subject: Re: [SE] New travel book

I looked it up in Barnes and Noble and it said it was not shipping until Nov. Where did you a copy of it? thanks
 Dr.Eric In a message dated 8/15/00 8:37:21 AM, u32fe@lepvax.gsfc.nasa.gov writes:

>It's out NOW. Bradt Travel Guides Africa & Madagascar Total Eclipse 2001 & 2002 ISBN 1-84162-015-7 UK price 10.95 pounds sterling US Price \$15.95 by Globe Pequot Press It gives all the info you'll need to plan your own trip.

Update Africlipse website

From: Rigel (Peter Tiedt) <rigel@stars.co.za> To: Solar Eclipse Mailing List <SOLARECLIPSES@AULA.COM>
 Sent: Saturday, September 09, 2000 10:08 PM
 Subject: [SE] Updates and Additions to Africlipse Website

I have updated and added to the Africlipse website
<http://www.eclipse.za.net>

The Safari Page has been updated to include Birding Links, including links to SA Best Birding Spots in all areas from Zambia and Zimbabwe to

the Western Cape.
<http://www.eclipse.za.net/html/safari.html>

Updates have been made to the Lunar Eclupse Page, giving coverage of the Lunar Eclipse of 2001 January 9.
http://www.eclipse.za.net/html/lunar_eclipse.html

A new page has been added - details of Mvuu Lodge, located on the northern (Zambian) bank of the Zambezi, and in the path of totality.

I have just heard that this lodge (3' 11" of totality on 2001 June 21) has several vacancies for the Eclipse. Those who have not yet made plans may be interested. Transport is provided to the centreline on eclipse day as well (if you don't want to lie in your bed and observe the eclipse :-)
<http://www.eclipse.za.net/html/mvuu.html>

From: Jean Meeus <JMeeus@compuserve.com>

3'11" of totality?

I suppose you mean 3 minutes and 11 seconds of *time*? So you should use the symbols "m" and "s": 3 m 11 s. The symbols ' and " should be used only for minutes and seconds of *arc*.
 Jean Meeus