

SOLAR ECLIPSE NEWSLETTER

SUBSCRIBING TO THE SOLAR ECLIPSE MAILING LIST

**THE SOLAR ECLIPSE
MAILING LIST IS MAINTAINED BY THE LIST OWNER PATRICK POITEVIN AND WITH THE SUPPORT OF JAN VAN GESTEL**

HOW TO SUBSCRIBE:

**IN THE BODY OF THE
MESSAGE TO
listserv@Aula.com SUB-
SCRIBE SOLARECLIPSES
name, country.**

The Solar Eclipse Mailing List

The Solar Eclipse Mailing List (SEML) is an electronic newsgroup dedicated to Solar Eclipses. Published by eclipse chaser Patrick Poitevin.

solareclipsewebpages@bopenworld.com

It is a forum for discussing anything and everything about eclipses.

Thanks to the voluntary efforts of Jan Van Gestel of Geel, Belgium, the Solar Eclipse Mailing List (listserv) has been in operation since 10 December 1997. This is the first mailing list devoted solely to topic of solar eclipses on the internet.

You can send an e-mail message to the list server solareclipses@Aula.com, which will then forward your e-mail to all the subscribers on the list. Likewise, you'll receive e-mail messages that other subscribers send to the listserv. Only subscribers can send messages.

The sole Newsletter dedicated to Solar Eclipses

Dear All,

Another Solar Eclipse Newsletter (SENL) you have to read. February was rather calm on the Solar Eclipse Mailing List (SEML). The annular eclipse of 31 May, the total solar eclipse of 2003 are both of some less interest for the chasers. Nevertheless, there are more tours and expeditions available for the Antarctic eclipse in November. Though, Joanne and I have to pass on this on. They are still too expensive.

For those preparing the Antarctic frost, see on this front age the partial solar eclipse of 21 May 1993 which I observed from Svalbard, Spitsbergen. The haze was do to the thin film of clouds. See our WebPages for more details.

The report of Totality Day is in this SENL issue, though as well on the Solar Eclipse WebPages (SEWP). Quite a few presentations and contributions have been added to the SEWP as well. Please have a visit and let us know your thoughts.

In the meanwhile, the preparations for the next international Solar Eclipse Conference (SEC2004) of August 2004 started. We have already quite a few international speakers lined up. We keep it still in suspense, but we make sure the first announcement will be made by the end

of March. Our aim is, being better than SEC2000. Those whom attended SEC2000 in Antwerp will say it is impossible. Well ...

Moreover, we are doing our best to make the conference as well within the budget range of every eclipse enthusiast. If you want to contribute or are willing to sponsor in any matter, please contact us. We will open a bank account and we are currently investigating to accept credit cards as well. We keep you posted via the mailing lists SEML and SEWP and this SENL. The SEC2004 WebPages will be updated soon.

Enjoy the SENL and ...

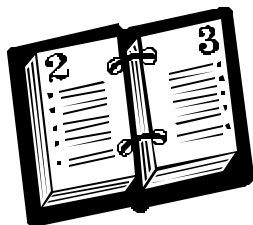
keep those solar eclipse related messages coming ...

Best regards,

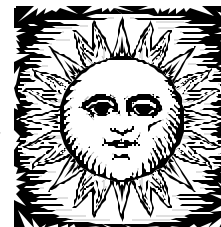
Patrick & Joanne



SECalendar



March 2003



Dear All, Please find herewith the solar eclipse calendar (SECalendar) for March. If you have any additional information, queries or remarks, please drop us a mail.

For the whole Solar Eclipse Calendar, see our Solar Eclipse WebPages at

<http://solareclipsewebpages.users.btopenworld.com>

March 01, 1737 "A little before the annulus was complete, a remarkable point or speck of pale light appeared near the middle part of the Moon's circumference that was not yet come upon the disc of the Sun . . . During the appearance of the annulus the direct light of the Sun was still very considerable, but the places that were shaded from his light appeared gloomy. There was a dusk in the atmosphere, especially towards the north and east. In those chambers which had not their lights westwards the obscurity was considerable. Venus appeared plainly, and continued visible long after the annulus was dissolved, and I am told that other stars were seen by some." Refers to the total solar eclipse of 1 March 1737. From: Maclaurin, Philosophical Transactions, vol xi, pp181, 184, 1737. Quoted in UK Solar Eclipses from Year 1 by Williams.

March 01, 1891 Minor Planet (306) Uitas Discovered 1891 March 1 by E. Millosevich at Rome. Named in honor of the Italian astronomer Angelo Pietro Secchi (1818-1878) {see planet (4705)} and also for the unity of Italy. The citation reads: "Al pianeta, scoperto ... dal E. Millosevich, e da lui pregato di denominarlo, do il nome di Uitas, associando in questo nome due idee, la prima il ricordo d'un libro classico del mio illustre predecessore ed amico A. Secchi, la seconda l'unità della patria." (AN 127, 167 (1891)) Named by P. Tacchini (1838-1905), director of the Modena Observatory in 1859. He went to Palermo in 1863 and succeeded Secchi in 1879 as director of the Osservatorio del Collegio Romano. He was a pioneer of solar spectroscopy, paying particular attention to solar prominences which he showed to obey the 11-year period (H 35). Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

March 02, 1904 There are 3 eclipses in March 1904: 1904 Mar 02 Penumbral Lunar Eclipse, 1904 Mar 17 Annular Solar Eclipse and 1904 Mar 31 Penumbral Lunar Eclipse. The next March with 3 eclipses is 2295: 2295 Mar 02 Penumbral Lunar Eclipse, 2295 Mar 16 Annular Solar Eclipse and 2295 Mar 31 Penumbral Lunar Eclipse. Ref. FE 6/00

March 02, 2002 The Institute for Solar Physics of the Royal Swedish Academy of Sciences announces that its new solar telescope on the island of La Palma, Spain, will have first light on Saturday March 2. The telescope design includes a technique that counteracts blurring caused by the atmosphere. This will enable the researchers to see and photo-graph details of smaller size than previously possible. The new telescope will address current and important questions concerning solar magnetic fields and the dynamics of the upper solar atmosphere and also be used to improve our understanding of the formation of stellar spectra. Ref. SENL 0402.

March 02, 2910 Not before 2910 March 2 will the island of Tahiti see its first total solar eclipse since that of 1698 April 10. Ref. JM 06/1999.

March 03, 1337 Johannes de Muris remarked that the eclipse occurred about 16 minutes earlier than expected from the Alfonsine tables (ref. PG 3/99).

March 03, 1956 Death of Willem H. Keesom, Dutch physicist. Researched on lower temperature whereas he brought helium in solid condition (1926). He discovered the two kind of helium (Helium I and II). In 1942 he wrote the book Helium. Born in 1876. Ref DD 3/99

March 03, 1959 Launch of Pioneer 4 (US). Passed Moon at 60.000km, first satellite in orbit around the Sun. Ref. DD 03/99.

March 03, 1985 Death of Iosif S. Shklovskii, Russian astronomer. He studied the corona and proved a temperature of millions degrees. Born in 1916. Ref. DD 03/99. Also wrote a landmark book about SETI, later translated to English (with Carl Sagan as co-author) and published in 1966 under the title "Intelligent Life in the Universe". Ref. Fraser Farrell 28.02.02

(Continued on page 3)

SECalendar

March 03, 1987 Pioneer 9 (US) stops, was a solar satellite. Ref. DD 3/99.

March 03, 1990 Death of Charlotte E. M. Sitterly, American astronomer. End 20s, she worked together with Charles E. St. John and Harold Babcock at Mount Wilson Observatory on the study of the solar spectrum. She analyzed the lines in the spectrum of sunspots. Published books about solar spectra till she was 90 years old. Born in 1898. Ref. DD 3/99

March 04, -0180 (181 BC) "Year 121 (SE), King An(tiochus), month XII, 29 solar eclipse beginning on the north-west side. In 15 deg day [. . .] over a third of the disk was eclipsed. When it began to become bright, in 15 deg day from north-west to east it became bright. 30 deg total duration. [During this eclipse] east (wind) went. During this eclipse [. . .], Venus, Mercury and Saturn [stood there]. Towards the end of becoming bright, Mars rose (?) The other planets did not stand there. (Began) at 30 deg (= 1) beru after sunrise." Refers to a partial solar eclipse of 14 March 190 BC. Babylon. Babylonian tablet in the British Museum. Quoted in Historical Eclipses and Earth's Rotation, by F Richard Stephenson, Cambridge University Press, 1997, pages 121 and 135.

March 04, -0180 (181 BC) The Empress Dowager died on 18 August 180BC. The eclipse and the Empress' reaction are described in detail in the of Shih-chi, a work composed some 150 years before Han-shu. This is clearly based on an eyewitness report (ref. PG 3/99).

March 04, 1802 Matthew Flinders and his crew aboard "HMS Investigator", while performing the first circumnavigation of Australia, observe a 97percent partial eclipse from (what is now) Port Lincoln. A few weeks later the Flinders expedition met a French expedition commanded by Nicholas Baudin in what is now called Encounter Bay (~36d S 139d E). Although England and France were at war at the time - and both ships were naval vessels - science fortunately prevailed over the affairs of state. Both captains recorded the meeting as a friendly one. And if it had happened there on March 4 then both ships would have seen a total solar eclipse. Meanwhile 200 years later we have a flotilla of sailing ships currently re-enacting these expeditions around the South Australian coastline, which carries place names bestowed by both captains. Ref. Fraser Farrell 28.02.02

March 04, 1866 Sir Norman Lockyer started his spectroscopic observations of the Sun. He proved quite quick that sunspots were colder places. Ref. DD 3/99

March 04, 1923 Birth of (Sir) Patrick Alfred Caldwell Moore. Parents Gertrude and Charles Caldwell Moore. Author or co-author of almost 200 books, compose 2 operas and host one of the longest running shows on television The Sky at Night (launch 26 April 1957) without a break. His first book was in 1952. He joined the BAA when he was 11 years old and the RAS in 1946. He observed many solar eclipses. (ref. A-S 03/98)

March 04, 1932 Minor planet (1241) Dysona 1932 EB1. Discovered 1932 March 4 by H. E. Wood at Johannesburg. Named in honor of Sir Frank Watson Dyson (1868-1939), Astronomer Royal of England, director of the Greenwich Observatory and president of the International Astronomical Union 1928-1932. (RI 814, H 114) Dyson is also honored by a lunar crater. Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

March 04, 1968 Launch of OGO 5, American geophysics satellite. Studied Solarwind and magnetosphere.

March 05, -1222 (1223 BC) In references the oldest record of a verifiable solar eclipse, on a clay tablet found in the ruins of Ugarit (Syria). This was a total solar eclipse in North Africa and the Middle East. Totality at maximum was 3m55s. Other references say "the sun went down" which also has the expression for "to set".

March 05, 1973 2001 Einstein 1973 EB. Minor Planet discovered and later named in honor of Albert Einstein (1879-1955), American theoretical physicist, mainly known for his relativity. (Ref. Rc 1999)

March 05, 1989 Minor Planet (4105) Tsia 1989 EK. Discovered 1989 March 5 by E. F. Helin at Palomar. Named in honor of the ancient sun symbol used by Indians of the Zia Pueblo in central New Mexico (one of the Seven Golden Cities of Cibola sought by Coronado). Although the symbol's name is normally written "Zia", "Tsia" is the spelling in Keresan, the native language of the Zia Pueblo Indians. The symbol now adorns the New Mexico state flag and is often taken as an emblem of the state. It represents first and foremost the sun, the giver of life. From this symbolic sun there radiate four rays consisting of four tongues each; these repre-

(Continued on page 4)

SECalendar

sent the four cardinal directions (north, south, east and west), the four seasons (spring, summer, fall and winter) and the four stages of life (childhood, youth, adulthood and old age). Also, as ascribed in the official salute to the New Mexico state flag, the Zia is the "symbol of perfect friendship among united cultures". (M 16443) Name proposed by the discoverer, following a suggestion of Louie V. Burke as part of a project during an undergraduate astronomy class at New Mexico State University. Citation prepared by Alan Hale, instructor of the class. Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

March 06, 1787 Birth of Joseph von Fraunhofer in Straubing, Bavaria. The 11th and youngest child of a poor glazier. He contracted tuberculosis in 1825 and died in Munich on 7 June of the following year. Ref. The Bibliographical Dictionary of Scientists, edited by David Abbott, 1994.

March 06, 1915 Death of James Francis Tennant (1829-1915). During an eclipse seen from the Red Sea through India to Malaysia and New Guinea, prominences are first studied with spectroscopes and shown to be composed primarily of hydrogen by James Francis Tennant (1829-1915), UK, John Herschel (UK - son of John F.W. Herschel, grandson of William), Pierre Jules Cesar Janssen (1824-1907, France), George Rayet (France), and Norman Pogson (UK/India). (Ref. Rc 1999)

March 06, 1975 Death of Roderick Oliver Redman. On August 31, 1932 G.G. Cillie (UK) and Donald H. Menzel (US) uses eclipse spectra to show that the Sun's corona has a higher temperature (faster atomic motion) than the photosphere. Confirmed, with much higher temperature, by Roderick Oliver Redman (1905-1975) during an eclipse in South Africa on October 1, 1940. (ref Rc 1999)

March 06, 1975 Minor Planet (2273) Yarilo 1975 EV1. Discovered 1975 March 6 by L. I. Chernykh at Nauchnyj. Named for the ancient Slavic god of the Sun, spring, fertility and love. (M 7783) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

March 07, 1951 Annular eclipse which was seen from New York as a small partial eclipse. Buffalo Bob Smith, died in 1998 at the age of 80 years in North Carolina, broadcasted this eclipse on NBC in 1951 with a camera on top of the RCA building. He had the famous childrens TV show Howdy Doody. (ref. ENB 9/98)

March 07, 1962 Launch of OSO 1, American solar satellite. Studied prominences, corona, XUV and X rays of the sun.

March 07. 1970 Total solar eclipse across Mexico and up the east coast of the United States was observed by millions of people and is widely considered as being largely responsible for beginning today's eclipse tourist industry. This was also the first total eclipse observed by many of today's leading eclipse chasers, including Fred Espenak and Glenn Schneider, as well as some less fanatical eclipse chasers, such as Evan Zucker. Ref. SENL 04.02.

March 07, 1981 Minor Planet (5365) Fievez 1981 EN1. Discovered 1981 March 7 by H. Debehogne and G. DeSanctis at La Silla. Named in memory of Charles Fievez (1844-1890), the pioneer of astrophysics in Belgium. His scientific career at the Observatoire Royal de Bruxelles was short (1877-1890) but very fruitful. In 1880 he started the first spectroscopic laboratory in Belgium. He published two dozen papers on spectroscopy, including an atlas of the solar spectrum, and in 1885 he observed the broadening effect of spectral lines due to the presence of a magnetic field (but without finding the correct interpretation) eleven years before Zeeman. (M 23138) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

March 08, 1967 Launch of OSO 3 and 4, American solar satellites, see 7 March 1962.

March 09, 1611 Johann Fabricius observed sunspots and conclude de rotation period of the sun.

March 10, 0601 On 10th March there was an eclipse of the sun, recorded on a stone tabled. Ref. BAA 6/00

March 11, 1811 Birth of Urbain Jean Joseph Le Verrier (1811-1877), Verrier (1811-1877), French astronomer. Believer of the existence of planet Vulcan. (ref. Rc 1999)

March 12, 1835 Birth of Simon Newcomb (1835-1909). He used carefully analyzed measurements of stellar and planetary



SECalendar

positions to compute motions of the sun, moon, planets, and their satellites. Measured distance to the Sun.

March 12, 1977 Minor Planet (6218) Mizushima 1977 EG7. Discovered 1977 March 12 by H. Kosai and K. Hurukawa at Kiso. Named for a site in the city of Kurashiki {see planet (4578)} near the birthplace of the first discoverer. Mizushima is a scenic spot in the Inland Sea and includes an old battlefield from the conflict between the Genji and Heike samurai families. This battle occurred during an annular eclipse of the sun in 1183, and Heike gained a great victory. (M 26765) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

March 13, 1977 Minor Planet (4009) Drobyshevskij 1977 EN1. Discovered 1977 March 13 by N. S. Chernykh at Nauchnyj. Named in honor of Ehdvard Mikhajlovich Drobyshevskij, physicist and astrophysicist at the Ioffe Physical and Technical Institute in St. Petersburg, author of some original cosmological ideas and theories of the origin of the planets and the minor bodies of the solar system, also known for his research on the magnetic fields of the sun and other stars. (M 19694) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

March 14, -0189 (190 BC) "Year 121 (SE), King An(tiochus), month XII, 29 solar eclipse beginning on the north-west side. In 15 deg day [. . .] over a third of the disk was eclipsed. When it began to become bright, in 15 deg day from north-west to east it became bright. 30 deg total duration. [During this eclipse] east (wind) went. During this eclipse [. . .], Venus, Mercury and Saturn [stood there]. Towards the end of becoming bright, Mars rose (?) The other planets did not stand there. (Began) at 30 deg (= 1) beru after sunrise." Refers to a partial solar eclipse of 14 March 190 BC. Babylon. Babylonian tablet in the British Museum. Quoted in Historical Eclipses and Earth's Rotation, by F Richard Stephenson, Cambridge University Press, 1997, pages 121 and 135.

March 14, 1879 Birth of Albert Einstein (1879-1955), American theoretical physicist, mainly known for his relativity. (Ref. Rc 1999)

March 15, 1713 Birth of Nicolas Louis de Lacaille, French astronomer. Did measurements of the parallax of the sun and the moon. Observed transit of Venus in 1761.

March 15, 1975 Helios 1, German Solar mission reached the sun at 48 million km. That time a record.

March 16, 1485 "In the year of salvation 1485, in the month of January, according to the ancient custom, the consuls of Augsburg . . . were elected. On the 16th day of March, at the 3rd hour, during meal-time, the Sun was totally eclipsed. This produced such horrid darkness on our horizon for the space of half an hour that stars appeared in the sky. Crazy birds fell from the sky and bleating flocks and fearful herds of oxen unexpectedly began to return from their pastures to their stables." Refers to a total solar eclipse in Augsburg, Germany, of 16 March 1485. From: Achilli Pirmini Gassari, Annales Augustburgenses. Quoted in Historical Eclipses and Earth's Rotation, by F Richard Stephenson, Cambridge University Press, 1997, page 408.

March 16, 1485 (Wednesday) "On the 16th day of March, at the 3rd hour during meal-time, the Sun was totally eclipsed". Achilli Pirmini Gassari : Annales Augustburgenses (ref. PG 3/99).

March 17, 1846 Death of Friedrich Wilhelm Bessel (1784-1846), German astronomer and mathematics. Studied precession, nutation, aberration and inclination of the ecliptic. Known for the Bessel elements needed to calculate solar eclipses.

March 17, 1991 Minor Planet (5377) Komori 1991 FM. Discovered 1991 March 17 by S. Otomo and O. Muramatsu at Kiyosato. Named in honor of Yukimasa Komori, owner of the Astro-Dome Company and a committee member of the Gotoh Planetarium and Astronomical Museum. Born in 1900, he is the oldest known amateur astronomer in Japan, and he had the pleasure of watching Halley's Comet in both 1910 and 1986. His main interests are in observing lunar occultations and solar eclipses. Long active in the popularization of astronomy, particularly over Japanese national radio, he planned and carried out a minute-by-minute broadcast of the total solar eclipse in 1936, linking observers at various stations. (M 21957) Name proposed by the discoverers following suggestions by S. Kimura and E. Kobayashi. Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

(Continued on page 6)

SECalendar

March 18, 0489 T'ai-ho reign period, 13th year, 2nd month, day i-hai, the first day of the month. The Sun was 8 fifteenths eclipsed. Wei-shu, chap. 105 (ref. PG 3/99).

March 18, 2360 The next total solar eclipse on Everest will be on march 18th 2360 (totality : 94 sec) and the last one occurred on Jan 18th 1898 (65 sec). Everest will experience a 97% eclipse during the total of 2009. Ref. PA/MS 5/00

March 20, 0071 "As there was going to be an eclipse on his birthday, through fear of a disturbance, as there had been other prodigies, he put forth a public notice, not only that the obscuration would take place, and about the time and magnitude of it, but also the causes that produce such an event." Refers to solar eclipse of AD 45, on the birthday of the Roman Emperor, Claudius. From: Dion Cassius. "(Lucies) smiled thereat and said . . . 'Now grant me that nothing that happens to the Sun is so like its setting as a solar eclipse. You will if you call to mind this conjunction recently which, beginning just after noonday, made many stars shine out from many parts of the sky and tempered the air in the manner of twilight. If you do not recall it, Theon here will cite us Minnermus and Cydias, Archilochus and Stesichorus besides, and Pindar, who during eclipses bewail "the brightest star bereft" and at "midday night falling" and say that the beam of the Sun [is sped] the path of shade." "Even if the Moon, however, does sometimes cover the Sun entirely, the eclipse does not have the duration or extension; but a kind of light is visible about the rim which keeps the shadow from being profound and absolute." Both these quotations probably refer to a total solar eclipse of 20 March AD 71. Ref FE 01/01

March 20, 0071(?) The Greek philosopher and biographer Plutarch gives a vivid account of a total eclipse in one of his dialogues entitles The Face on the Moon. In this same work, he also makes a brief reference to the corona (ref. PG 3/99).

March 20, 1140 "Afterwards in lent the Sun and the day darkened about the noontide of the day, when men were eating, and they lighted candles to eat by; and that was the 13th of the Calends of April [20 March]. Men were greatly wonderstricken." The Anglo Saxon Chronicle Refers to the total solar eclipse of 20 March 1140.(Quoted in UK Solar Eclipses from Year 1 by Williams.)

March 20, 1140 "During this year, in Lent, on the 13th of the Calends of April, at the 9th hour of the 4th day of the week, there was an eclipse, throughout England, as I have heard. With us, indeed, and with all our neighbours, the obscuration of the Sun also was so remarkable, that persons sitting at the table, as it then happened almost everywhere, for it was lent, at first feared that Chaos had come again: afterwards, learning the cause, they went out and beheld the stars around the Sun. It was thought and said by many not untruly, that the King [Stephen] would not continue a year in government." William of Malmesbury Historia Novella, Lib. ii sec.35.Refers to the total solar eclipse of 20 March 1140. (Quoted in UK Solar Eclipses from Year 1 by Williams.)

March 20, 1140 (Wednesday) "There was an eclipse of the Sun throughout the whole of England, as I have heard...". Willelmi monachi Malmesburiensis Historia Novella, lib II; Potter (1955, pp 42-43) (ref. PG 3/99).

March 21, 1762 Death of Nicolas Louis de Lacaille, French astronomer. Did measurements of the parallax of the sun and the moon. Observed transit of Venus in 1761.

March 21, 1928 Death of Edward Walter Maunder F.R.A.S.. Born: 1851 April 12, Middlesex, England and died: 1928, March 21, Greenwich, London, England. Ref. AK 5/00.

March 22, 1868 Birth of Alfred Fowler (1868-1940), British astronomer and physicist. Studied spectra of the Sun. (Rc 1999)

March 23, 1938 Minor planet (1492) Oppolzer 1938 FL. Discovered 1938 March 23 by Y. Väisälä at Turku. Named in honor of Hofrath Professor Theodor Ritter von Oppolzer (1841-1886), professor of astronomy in Vienna and author of the monumental Canon der Finsternisse. (M 2278) Name suggested by Jean Meeus. Oppolzer is also honored by a lunar crater. Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

March 27, 1951 Birthday of Jan Van Gestel from Belgium. The Solar Eclipse Mailing List (SEML) runs since 10 De-

(Continued on page 7)

SECalendar

ember 1997 on the server of Jan Van Gestel. Happy Birthday Jan.

March 28, 1998 The Solar Eclipse Section (Patrick Poitevin) organized for the VVS Belgium DDD2 (De Duistere Dag 2 or The Dark Day 2) in the Europlanetarium Genk, Belgium. Speakers were Wasyl Moszowski (Total Solar Eclipses since 1983), Jan Janssens (FNOES and EAGB eclipse observations) and Patrick Poitevin et al (Eclipse of February 26, 1998).

March 30, 1882 Minor Planet(224) Oceana Discovered 1882 March 30 by J. Palisa at Vienna. Named for the Pacific Ocean. (H 27) The discoverer communicated from Honolulu on return from the solar eclipse expedition of May 6, 1883 that Governor von Dessarts of Tahiti has named this planet (BAJ Circ., No. 210 (1883)). Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

March 30, 1981 Minor planet (2452) Lyot 1981 FE. Discovered 1981 March 30 by E. Bowell at Anderson Mesa. Named in memory of the French astronomer Bernard Lyot (1897-1952). One of the outstanding experimental astronomers of the twentieth century, Lyot invented the solar coronagraph and the birefringent filter. He developed the study of the polarization of light from planets to a perfection that has hardly been surpassed. (M 6531) Lyot is also honored by craters on Mars and the Moon. Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

March 31, 1984 Minor Planet (3078) Horrocks 1984 FG. Discovered 1984 March 31 by E. Bowell at Anderson Mesa. Named for Jeremiah Horrocks (1619-1641), the English astronomer who predicted the transit of Venus across the face of the Sun in 1639 Nov. and became the first to see such an event. From his observations he improved the orbital elements and the diameter of Venus. He believed the Moon to have an elliptical orbit with the Earth at one focus - a fact that Newton {see planet (8000)} was later to acknowledge. (M 10846) Name proposed by the discoverer following a suggestion by B. Hetherington. Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

and ... keep those solar eclipse related messages coming ...

Best regards, Patrick and Joanne

solareclipsewebpages@btopenworld.com
<http://solareclipsewebpages.users.btopenworld.com>



SECalendar for March - March 10, 0601

From: Gerard M Foley To: SOLARECLIPSES@AULA.COM Date: Wed, 26 Feb 2003 06:31:33

<solareclipsewebpages@btopenworld.com> Sent: Tuesday, February 25, 2003 3:05 PM <snip> March 10, 0601 On 10th March there was an eclipse of the sun, recorded on a stone tabled. Ref. BAA 6/00 <snip>

The program WINEclipse indicates that this total eclipse of the sun began in what is now Mauritania, passed across North Africa to Suez and on to Eastern Siberia. Gerry

SECalendar for March - March 07, 1970 eclipse

From: Evan Zucker To: SOLARECLIPSES@AULA.COM Date: Wed, 26 Feb 2003 05:40:35

At 12:05 PM 2/25/2003, Patrick wrote: March 07. 1970 Total solar eclipse across Mexico and up the east coast of the United States was observed by millions of people and is widely considered as being largely responsible for beginning today's eclipse tourist industry. This was also the first total eclipse observed by many of today's leading eclipse chasers, including Fred Espenak and Glenn Schneider, as well as some less fanatical eclipse chasers, such as Evan Zucker. Ref. SENL 04.02.

SECalendar

Although it is certainly an honor to be mentioned in the same sentence as Fred and Glenn, I guess I should be pleased to be described as "less fanatical" <g>. Evan H. Zucker San Diego, California

From: solareclipsewebpages@bopenworld.com

Evan Zucker wrote Date: Wed, 26 Feb 2003 05:40:35

At 12:05 PM 2/25/2003, Patrick wrote: March 07. 1970 Total solar eclipse across Mexico and up the east coast of the United States was observed by millions of people and is widely considered as being largely responsible for beginning today's eclipse tourist industry. This was also the first total eclipse observed by many of today's leading eclipse chasers, including Fred Espenak and Glenn Schneider, as well as some less fanatical eclipse chasers, such as Evan Zucker. Ref. SENL 04.02.

Although it is certainly an honor to be mentioned in the same sentence as Fred and Glenn, I guess I should be pleased to be described as "less fanatical" <g>. Evan H. Zucker San Diego, California

>From PP dated 27 Feb 2003: Hi, Please note page 9 of the April 2002 SENL where you wrote your self: From : Evan Zucker <ez@AbacusTotality.com> To : SOLARECLIPSES@AULA.COM Date : Sat, 02 Mar 2002 How about this addition: March 07, 1970 Total solar eclipse across Mexico and up the east coast of the United States was observed by millions of people and is widely considered as being largely responsible for beginning today's eclipse tourist industry. This was also the first total eclipse observed by many of today's leading eclipse chasers, including Fred Espenak (<http://www.mreclipse.com/SEphoto/SEgallery1.html>) and Glenn Schneider (<http://nicmosis.as.arizona.edu:8000/Biography.html>), as well as some less fanatical eclipse chasers, such as Evan Zucker <g>. [Add other names as appropriate.]

--- end message E. Zucker March 2002

SEDates

Totality Day 2003 - the venue

From: Barrie W. Jones To: SOLARECLIPSES <SOLARECLIPSES@AULA.COM> Date: Mon, 03 Feb 2003 15:08:57

Totality Day 2003 approaches - Saturday 8 February. Instructions for getting to the Open University in Milton Keynes can be found on the website <http://solareclipsewebpages.users.bopenworld.com> under 'TD2003 page'.

TD2003 PAGE

The map of the Open University campus that you will find under 'Maps OU' shows the Berrill Building near the Main (east) Entrance. To park a car you can use the area marked Visitors Parking or East Parking. The entrance to the Berrill Building is up the ramp on its east face. This leads straight into Reception (on the first floor) where you will be registered. Just beyond Reception is the exhibition area and just beyond that is the Berrill Theatre where the talks will be delivered. The lunch and coffee areas are down one floor.

The link to 'Physics OU', which gives information on the OU Department of Physics & Astronomy, will only work if you cut the URL back to <http://physics.open.ac.uk/> I hope to see some of you next Saturday.
Barrie W Jones



SEDates

**Solar Eclipse related dates**

Wednesday 2003 March 19

BAA Ordinary and Special General Meeting. With as well reports on the December eclipse coordinated by Dr. John Mason. 17h30-20h00. Venue: The Geological Society, Burlington House, London SW1. See: <http://www.britastro.org/> or <http://www.britastro.org/journal/>

Saturday 2003 April 26

SPA Meeting. With as well (time permitting) Jerry Workman, outlining opportunities for observing May's annular eclipse from Scotland. Venue: The Cockburn Theatre, St Mary's Hospital, Paddington London. See: www.popastro.com

Saturday 2003 May 10

Eclipse, with focus on the past 1999 eclipse and the forthcoming 2003 annular eclipse. 10h30 to 16h15. Venue: The Open Museum, National Maritime Museum, Greenwich London SE10 9NF. Speakers: Francisco Diego, Richard Harrison, Robert Massey, Francis Stephenson. Entrance £28.00. See www.nmm.ac.uk or e-mail Openmuseam@nmmac.uk

2004 June 7 to 11

The University of Central Lancashire is planning an international conference From Transits to the twenty First Century to link together Jeremiah Horrocks' historical observation of a transit of Venus made from Much Poole near Preston in 1639 and the transit of 8 June 2004. Contact Peter Hingley, 6 Wolseley Rd. London, N8 8RP or e-mail grobromage@uclan.ac.uk

Please do not contact us or the SEML for info. Please have a look at the web-pages mentioned and contact them one way or the other.



Best regards,

SEScannings

Totality Day 2003

From: solareclipsewebpages@btopenworld.com To: SOLARECLIPSES@AULA.COM Date: Mon, 10 Feb 2003

Hi, Just a quick note to let you know that Totality Day 2003 was a truly success. What a quality of speakers we had. Thank you all. Without you, it would not have been possible.

A detailed report will be posted in the next coming days and presentation will be posted to the Solar Eclipse WebPages soon. We keep you posted. Best regards, Patrick

SENL Index February 2003

Dear all, Please find herewith the Index of the February 2003 issue of the Solar Eclipse Newsletter (SENL). Beside the topic, the page number is listed. Please post your solar eclipse related contributions to us. Thank you.



.../...

See the latest SENL and also the complete SENL Index since November 1996 at our Solar Eclipse WebPages at

<http://solareclipsewebpages.users.btopenworld.com>

The SENL will be soon on the WebPages of Fred Espenak/NASA. See

<http://sunearth.gsfc.nasa.gov/eclipse/SENL/> and the index at

<http://www.mreclipse.com/SENL/SENLinde.htm> with example: [SENL0011.pdf](#)

<http://sunearth.gsfc.nasa.gov/eclipse/SENL/SENL0011.pdf>

Comments and contributions are welcome at solareclipsewebpages@btopenworld.com

And ... keep those solar eclipse related messages coming ...

Best Regards, Patrick and Joanne solareclipsewebpages@btopenworld.com <http://solareclipsewebpages.users.btopenworld.com>

SEScannings

Totality Day (TD2003) 8 February - REPORT

In continuation of the last Totality Day in 2001, we had our second year of TOTALITY DAY (TD2003) on 8th February. Totality Day is organized after each total solar eclipse. To give the participants the time to evaluate their data, Totality Day is one or two months after a total solar eclipse. Totality Day is a one-day meeting with short lectures and presentations about the last total solar eclipse. As with TD2001, the number of participants was again 70. Mainly UK eclipse enthusiasts but attendees came as well from Germany, Ireland and Slovakia.

The doors of the Open University of Milton Keynes opened at 8 a.m. Eclipse enthusiasts had the opportunity to set up their posters, trade or PC in the lobby of the Berill Building.

Prof. Dr. Barrie W. Jones of the Open University held opening of Totality Day 2003. Barrie, as for TD2001, volunteered being the moderator of the conference.

First Contact of the meeting and the first lecture was by Chris O'Byrne (Ireland) about his Eclipse Calculator On-Line. Chris explained his interesting tool, which works with a Psion handheld. Every eclipse chaser should be able to calculate easily local circumstances, as Chris is offering free of charge. Quite soon all eclipse chasers will be able to evaluate local circumstance predictions with mobile phones or Palm or GPS. It was an excellent presentation and quite unique for the audience. His next project will be a count down facility. The eclipse calculator can be downloaded from his WebPages at <http://www.chris.obyrne.com/>

Daniel Fischer is a traditional speaker who presented at SEC2000 and TD2001. This time his presentation was: The Great Escape - beating the clouds in Limpopo. In Daniel's own presentation style, his spectacular Mini DV show started with the clouded out annular eclipse in Costa Rica. Mexico was clouded as well but was spicy enough by travelling in a stormy sea towards the path. Nearly all were sick on the boat, and it was clearly shown on the tape. The last eclipse, in Limpopo, South Africa was a true chasing. Off topic shots of animal behaviour, never shown by Sir David Attenborough. It looks like, if you drop a bag of cornflakes, all South African birds will be present at the party. The eclipse was a chase to an open patch in the sky. Ignoring the signs at a gate, the German escort sieged the park and observed the eclipse nearly cloudless. Totality during being 1 minute 14 seconds, it was 20 sec cloudless. The shots at the Baobab made it of course a truly South African eclipse. The following slides showed as well some simple, though beautiful Southern night sky.

Time for a break. To promote the contacts between the par-

ticipants, the tea breaks were 40 minutes long. Time for Second Contact. Dr. Eric Jones presented the famous videotape of Eric Strach of Shadow Bands. Eric Strach was currently recovering from a heart operation, which he had at the same time of totality at Australia location on 4 December. The Shadow Band recording was of the 1998 total solar eclipse. Those who have seen the tape before know it is an excellent view and of course entertained with the usual eclipse screams and comments.

The shady side of the Moon by David Forshaw was the next presentation on the programme. David, as well a member of the Liverpool Association, as Eric Strach and Eric Jones (and later the day, Andrew and Val White) had his video made in Woomera, Australia. The wind made the tripod set up difficult, though wonderful shots, which included as well sunset. Eclipsed sunsets are different. Due to the rush of his group, there was no time left to see the complete sunset and to see if the green flash could be seen. David ended his presentation with a surprise eclipse birthday cake, which he had Down Under. We all wished we could have a piece of that ...

Co-organiser of the eclipse conference, Joanne Poitevin showed her videotape of the eclipse observed from Singelele Camp north east of Musina in South Africa. It was the second eclipse Joanne taped, but one could see how the eclipsed sun beautifully could be zoomed in and out during totality. This presentation ended in an interesting public debate about video, exposure timings and zooming, as well as shadow bands, visibility and perception.

Time for Totality and the lunch break was from 12.00 to 14.00. Time enough for contacts and debates and experience exchange. Two book trade stands, Aurora and Andromeda were present and the many displays and tables of the participants could be visited. The catering of the Open University offered different sandwiched but as well Jacked Potatoes or Pizza.

Third Contact of the meeting. The eclipse observed by Olivier "Klipsi" Staiger (Switzerland). A tape presented by Patrick Poitevin while Olivier could not made it to the meeting. Klipsi's style is quite well known. Though this Hollywood style presentation still amused everybody. Shots of the Australian eclipse, with of course all kind of sounds in the background. But he also introduced his Antarctic adventure for this year November. "When the icebergs stopped melting due to the total solar eclipse" and "What will the Penguins do". Klipsi ended his tape with a compilation of all his eclipse expeditions.

The 2002 Total Solar Eclipse in Botswana by Prof. Dr.

(Continued on page 11)

SEScannings

Barrie W. Jones was next. Barrie explained in detail, though briefly the origin of shadow bands and showed his video of the shadow bands filmed in Botswana. The shadow bands had a mottled pattern and they were best seen 20 seconds before totality. The conference audience saw it quite defined on the screen. Barrie also showed the video with shadow bands made by George Madden during the 2001 total solar eclipse.

The 2003 Annular Solar Eclipse and visibility from Scottish locations by Sheridan Williams was the lecture many were waiting for. Sheridan showed different animations, which showed the understanding of the path. It was very well expressed with the Eclipse Win program and gave a clear explanation the physics behind the motions.

Sheridan showed many pictures of location he visited last year, the time of the eclipse on 31 May. Where to go and where not to go and the pictures showed the view over the horizon for each location. Sheridan showed and described the location, which are at annularity but as well at the edge of annularity. At some locations the eclipse could be watched from a pub, a shelter or even from the car or campervan on a parking. A wonderful presentation where the audience easily could make up their mind of where to. Sheridan showed as well some animations and eclipse simulations for all those places and ended with Reykjavik. A warning that all NASA Bulletin weather predictions are for the sun in the zenith and not for the horizon.

The 2005 annular eclipse over Spain is the next target and Sheridan finished with his Umbraphile total solar eclipse rank of which many of the audience were present. See as well <http://www.clock-tower.com/eclipse2003> or <http://eclipse2003@clock-tower.com>

Measuring the Diameter of the Sun during Solar Eclipses was the next lecture by Dr. Eric Jones. Eric started off with the importance of Liverpool and the observing of eclipses in history. Eric started off in 1973 where he observed the eclipse from Mauritania. It was a time long before the PC and all calculations happened with the old mainframe computers at work. The computer language used was FORTRAN. Next 1976 in Zanzibar and it was there that a difference was noticed between the calculated duration prediction and the observed duration. An extended paper appeared about the Lunar Ephemerides in the BAA Journal.

Disagreement occurred between the calculations of the Royal Greenwich Observatory, the US Naval Observatory, David Herald and Jean Meeus. Is the Sun shrinking? Over 100.000 years? A paper by Leslie Morrison, John Parkinson and Richard Stephenson appeared in 1980. The transit telescope of Greenwich did not seem to be the best to determine

the diameter of the Sun. Timings of solar eclipses seemed to be the solution. By different methods, different positions, Richard Stephenson, Eric Strach and Eric Jones agreed with the results of the 1980 eclipse in Kenya. Kazakhstan in 1981 was he next, but again, more precise.

In the meanwhile, Eric observed 14 total solar eclipses, keeps working on timings and wrote about the topic quite a few papers. Is the Sun shrinking or expanding? Is there a possible periodicity of 76 to 80 years? We need more cycles to investigate and conclude. We need to observe at least some 280-year more. Total solar eclipses are still useful to determine the diameter of the Sun.

The Total Solar Eclipse 2002 as seen from the Australian Outback by Derek Hatch and Mike Foulkes was the next presentation. The contribution they had was as well by Paul Carter and Ann Davies whom could not be present in this meeting. The team observed totality from Lyndhurst. A wonderful professional presentation with many pictures of the eclipse but as well some of the set up. The Fiat 500 race in the middle of nowhere remains a question for all of us. It was very windy and man should shelter behind the 4 wheel drive vehicles which were all parked and station in row next to the dirt track.

The audience were amazed about the resolution and detail of the wonderful pictures of the eclipse. The team had 29 seconds of totality, but as seen from the pictures, they did not have a problem with that. A 2 seconds lap sequence showed with the 5 inch Maksutov telescope the lunar profile in the Baily's beads and chromosphere. Exposures varied from 1/2000 sec to 1/250 sec to the end. Never have such detailed pictures been made before of a sunset eclipse. So wonderful and detailed!

Again no green flash pictured but at least the stacked beer cans in as well azimuth as equatorial side... Eye safety discussions were the topic in Australia. The Australians were wondering why coming over from so far for an eclipse. Once witnessed their self, they understood, and as many ... all want to see it again!!

Time for a Break and after 40 minutes of chats and information exchange it was time for Fourth Contact with Solar and Background Fluxes in the Visible and Infra Red by Alan Ridgeley and Brian Sheen of the Roseland Observatory in Cornwall. Alain and Brian could not show any observations of the 2002 eclipse, though worked together with Williams College, Jay Pasachoff's team, on coronal infrared. This was never done before and both presenters were quite enthusiastic about the topic. Many graphs remain unexplained. In their furious presentation Alain forgot that

(Continued on page 12)

SEScannings

earlier showed slides of the 2001 eclipse set up in Lusaka where shown already.

The Messina December 4, 2002 white-light corona by Voyto Rusin (Slovakia) and Miloslav Druckmuller (The Czech Republic) was presented by Voyto whom is in the International Astronomical Union committee for Eclipses. Voyto varied his wonderful 40 minutes presentation with PowerPoint, slides and video. He explained the different parts of the corona, being K Kontinium, F Fraunhoffer, E Emission, T Thermal, S Sublimated, etc. The coronal physical properties can be studied via satellites, but Voyto made it clear ground observations remain necessary. Many aspects of the corona remain unexplained. Such as the temperature, density, dynamics, etc.

The team observed from the Eric Louw High School in Musina, South Africa. Voyto could not present the full results of his "Santa Claus" eclipse but concluded that the corona was an intermediate shape, very faint features with loops, thin rays, voids and cavities. Druckmuller's method to analyse the corona seems very good. Voyto ended his presentation with slides of his trip in Africa and a video of some local dances.

TV Reports on the Eclipse by Andrew and Val White. Andrew presented his tape of TV reports taken from different television stations. Very interesting and quite humoristic and entertaining. Of course he had to make a selection but it was quite clear that TV presenters misses the plot now and then and can not control their reactions all the time. It is quite obvious that they cannot understand the event and the reason of all the hype prior to the eclipse. Once passed, it makes a difference. The "Flower Power" type audience appears everywhere these days with eclipse festivals and songs as Blue Moon and Let's the Sun shine ...

Ted Thurgur was closing the conference presentations with his video of the Eclipse taken at Woomera. Considering himself as an amateur eclipse video recorder, the audience enjoyed the presentation, which included the rocket base in Woomera. Although an over exposed corona it showed very well the shape of it.

The end of the meeting was concluded for those whom wanted to present some additional pictures, slides or videos. Nigel Evans showed some slides of the green flash he photographed during the eclipsed sunset. Amazing where the green flash appears at the crescent sun. Voyto, in his enthusiastic presentation forgot to show his wonderful computer enhanced pictures that he made together with Druckmuller. His pictures where also for sale in the lobby. He presented pictures of the 1998, 1999, 2001 and 2002 eclipse.

Daniel Fischer showed a tape of Friedhelm Dorst, a German eclipse chaser, whom conquered the heavy clouds at the eclipse in Mozambique. Daniel also showed some pictures of high resolution, but never earlier published by Dorst. Daniel concluded with some reworked shots of Wolfgang Strickling's shadow bands where were presented the last meeting TD2001. Sheridan Williams showed some more animations of future and passed eclipses. The difference in cone diameter of the 1991 and 2002 was clear.

That was the end of the second edition of Totality Day, held in the Open University of Milton Keynes. Barrie Jones thanked the speakers and specially Joanne and Patrick Poitevin for organising the meeting. Patrick presented the next International Solar Eclipse Conference next year SEC2004 for 20 - 22 August. See http://solareclipsewebpages.users.btopenworld.com/SEC_files/SEC2004.html

Joanne ended to thank all people who made this day so successful: Barrie Jones, Tracey Moor, the technicians Andrew Lee and Mark Butler and the catering arranged by Pauline Stimpson, all from the Open University. Without the speakers Totality Day 2003 would not have taken place: Chris O'Byrne (Ireland), Daniel Fischer (Germany), Eric Strach (UK), David Forshaw (UK), Olivier "Klipsi" Staiger (Switzerland), Sheridan Williams (UK), Eric Jones (UK), Derek Hatch (UK), Mike Foulkes (UK), Alan Ridgeley (UK), Brian Sheen (UK), Voyto Rusin (Slovakia), Miloslav Druckmuller (The Czech Republic), Andrew White (UK), Val White (UK), Ted Thurgur (UK).

The doors closed at 20 o'clock but many had dinner and a few drinks together in the hotel near to the University. See you all next year in August?

Joanne and Patrick Poitevin

**Tracey Moore, Mrs. Jones
and Barrie Jones at
TD2003 (Picture B. Jones)**



SEScannings

Update SEWP

Hi, Since the latest conference, we have been working hard on our Solar Eclipse WebPages (SEWP). Please have a look at following updates and changes:

1. Totality Day 2003 (TD2003)

Presentations and contributions of TD2003

- Full report at http://solareclipsewebpages.users.btopenworld.com/TD_files/TD2003Report.html

- Contributions of the speakers at http://solareclipsewebpages.users.btopenworld.com/TD_files/TD2003Program.html

Please note, we expect still some more contributions. We'll keep you posted.

2. Links (SELinks)

- Reports and contributions on the TSE of 4 december 2002 at http://solareclipsewebpages.users.btopenworld.com/SECalendar_files/TSE20021204Links.html

- Links to next eclipses as ASE2003, TSE2003, HY2005 and TSE2006 at http://solareclipsewebpages.users.btopenworld.com/SELinks_files/SELinksNext.html

- Links to Books and Magazines at http://solareclipsewebpages.users.btopenworld.com/SELinks_files/SELinksMagazines.html

- Links to General solar eclipse related items at http://solareclipsewebpages.users.btopenworld.com/SELinks_files/SELinksGeneral.html

- Links to individual WebPages related to solar eclipses at http://solareclipsewebpages.users.btopenworld.com/SELinks_files/SELinksIndividuals.html

- Links to solar eclipse related expeditions, maps, geonames, etc. at http://solareclipsewebpages.users.btopenworld.com/SELinks_files/SELinksExpeditions.html

3. Solar Eclipse Newsletter (SENL)

- Latest Newsletter: February at http://solareclipsewebpages.users.btopenworld.com/SENL_files/Senl200302A.PDF

and http://solareclipsewebpages.users.btopenworld.com/SENL_files/Senl200302B.PDF

- Full updated SENL Index at http://solareclipsewebpages.users.btopenworld.com/SENL_files/SENLIndex.PDF

4. Solar Eclipse Calendar (SECalendar)

- Updated SECalendar at http://solareclipsewebpages.users.btopenworld.com/SECalendar_files/SECalendar.PDF

If you have remarks, queries or links to add, please let us know. Next time more about the International Solar Eclipse Conference (SEC2004) 20 - 21 -22 August 2004. Best regards,

SEScannings March issues

From: solareclipsewebpages@btopenworld.com To: SOLARECLIPSES@aula.com Date: Fri, 28 Feb 2003

SEScannings Astronomy
Now March 2003

Your Views: Cloudless totality by Kryss Katsiavriades page 18

Your Views: Clear skies at Plumtree by Jeffrey Eccleston page 18

Sir Patrick - 80, not out by Iain Nicolson pages 26 to 28 with Patrick Moore's first eclipse accounts

Annular eclipse by Astronomy Now page 37

Focus: The Ancients pages 53 to 63 with solar eclipse related contributions by Chris Kitchin, Roger O'Brien and Alan Chapman Picture Gallery page 84 to 86 with a picture of the TSE of 2002 by Steve Arnold

SEScannings Sky and Telescope March 2003

Full Moon not full by Joe Rao page 110

December's Brief Totality by Dennis di Cicco page 124
Gallery pages 130 to 137 with all TSE 2002 pictures



SEScannings

SENL February 2003 NOW ONLINE!

From: Fred Espenak To: SOLARECLIPSES@AULA.COM
Date: Fri, 21 Feb 2003 21:59:09

Joanne Rbtevin has prepared a new issue of the SENL (Solar Eclipse Newsletter) for the month of February 2003. It is composed of two parts: A and B.

The details are:

SENL - 2003 February - Part A (0.7 MB pdf file*)

SENL - 2003 February - Part B (0.7 MB pdf file*)

Joanne and Patrick have also prepared a special 3-part newsletter covering the recent total solar eclipse of 2002 December 4:

SENL - 2002 Total Eclipse Special - Part A (0.9 MB pdf file*)

SENL - 2002 Total Eclipse Special - Part B (0.9 MB pdf file*)

SENL - 2002 Total Eclipse Special - Part C (0.9 MB pdf file*)

These issues may be downloaded via the SENL index page of MrEclipse.com:

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

Other recent issues currently linked from the above page include:

SENL - January 2002 - Part A (0.7 MB pdf file*)

SENL - January 2002 - Part B (1.3 MB pdf file*)

SENL - February 2002 (1.2 MB pdf file*)

SENL - March 2002 - Part A (0.7 MB pdf file*)

SENL - March 2002 - Part B (0.8 MB pdf file*)

SENL - April 2002 (1.1 MB pdf file*)

SENL - May 2002 - Part A (1.1 MB pdf file*)

SENL - May 2002 - Part B (0.6 MB pdf file*)

SENL - June 2002 - Part A (0.5 MB pdf file*)

SENL - June 2002 - Part B (0.8 MB pdf file*)

SENL - July 2002 - Part A (0.8 MB pdf file*)

SENL - July 2002 - Part B (1.0 MB pdf file*)

SENL - August 2002 - Part A (1.2 MB pdf file*)

SENL - August 2002 - Part B (1.3 MB pdf file*)

SENL - August 2002 - Part C (0.9 MB pdf file*)

SENL - September 2002 (1.3 MB pdf file*)

SENL - October 2002 - Part A (1.1 MB pdf file*)

SENL - October 2002 - Part B (1.0 MB pdf file*)

SENL - November 2002 - Part B (1.1 MB pdf file*)

SENL - December 2002 (0.9 MB pdf file*)

Note that all these files are in Adobe pdf format and can only be read with Adobe Acrobat Reader. This software is free and can be downloaded from Adobe's web site (<http://www.adobe.com/>).

As always, thanks for the hard work Joanne! - Fred Espenak



SETalk

Congrats Olivier

From: Dale Ireland To: Solar Eclipse List
<SOLARECLIPSES@AULA.COM> Date: Mon, 03 Feb
2003 15:47:17

Congrats Olivier for your nice images of the Dec. eclipse
published in the latest Astronomy Now magazine! Dale

Fred's SEML Archive pages

From: Dale Ireland To: Solar Eclipse List
<SOLARECLIPSES@AULA.COM> Date: Mon, 03 Feb

Hello I am using Internet Explorer 6 and when I view Fred's
SEML archive page <http://www.mreclipse.com/SENL/SENLarc.htm> all the links to archived issues are not visible.
They appear in the html source code but do not appear on
my browser at home or at work. We are wondering if it just
my setup, or if others are having this problem. Would a cou-
ple of you take a peek at the page and let Fred know if you
DO NOT see the archives. My setup also includes Norton
Internet security which could be a source of the problem.
Dale

From: Dave Balch, The Stay-at-Home CEO

I cannot see them either, and I am using Explorer 5.5

I looked at the HTML code and it looks like he has com-
mented them out... there are lines both before and after the
index entries that looks like this

<!-----!>

And when I bring up the page in an editor all of the index
entries are grayed out. If I remove that line, they all pop into
the screen.\

Just an oversight, I'm sure. Dave

From: "Dale Ireland"

I agree. There seems to be a lot of HTML links that do not
appear in Clicking on the apparent link to the index brings
me back to the short page I was already on. Gerry

From: Donald Watrous

The problem is with comment lines of the form

<!-----!>

in the source. Change them to

<!-----!>

and all the links appear. Don

From: Fred Espenak

Done! Thanks for catching this. Please let me know offline
if you find any more html or link problems. - Fred

From: Evan Zucker

I am using Internet Explorer 6 SP1 and can see all the links
from 2003 back to October 1998. I am not running Norton
Internet Security; I do run ZoneAlarm.

I have no idea what is causing the problem, but you might
want to check to be sure you have SP1 installed. -- EVAN

ECLIPSE by John Banville

From: F.Podmore To: Solar Eclipses Mailing List
<solareclipses@aula.com> Date: Mon, 03 Feb 2003

Last week I bought a copy of "KEPLER" by John Banville
from a friend, and what an excellent and rewarding book it
is. That led me to an earlier book, "DR COPERNICUS",
which I really want to get hold of, and the website <http://www.fantasticbooks.co.uk>

also lists "ECLIPSE" by the same Irish author.

See <http://www.fantasticfiction.co.uk/books/n5/n26992.htm?authorid=151>

for a summmary. But it seems to have v little (nothing?) to
do with our sort of eclipses, or does it? Has anyone read it?

And has anyone compiled a bibliography or annotated list
of all (all??) the books there are about ECLIPSES? If so, it
should be made accessible and announced to SEML, I
think. Francis

From: solareclipsewebpages@btopenworld.com

Look at our webpages at http://solareclipsewebpages.users.btopenworld.com/SECalendar_files/References.PDF

There you will find all the books we have but not all article
are compiled yet (still about 6 ten kilogram boxes to do).
Best regards, Patrick

SETalk

Help -lost e-mail

From: Chris Malicki To: SOLARECLIPSES@AULA.COM Date: Tue, 04 Feb 2003 03:14:00

Unfortunately, I disagree with Patrick about the entire SENL list being available. My computer crashed in Sept. 1999 and I lost a large number of emails from the Aug. 1999 eclipse. When I tried to access them from the SENL archive, they were not, and are still not available. I am referring here to the Sept. 1999 archive (it's not available). I had wanted to respond a week ago but was unable to verify this because Fred's site did not display the archive. Now that his site is functional again, I see that the Sept 1999 archive is still not available. This being said, I am still very grateful to Patrick and Fred for the tremendous service they provide for us eclipse enthusiasts with their SENL forum. Chris Malicki <http://webhome.idirect.com/~kmalicki>

From: solareclipsewebpages@btopenworld.com

Besides a few backissues (Jan to June 2000), which I still have to complete, all SENL (since November 1996 - the start) are ready to add to Fred's webpages. If you need the files for September 1999, I will send the pdf files to anyone who likes. The September 1999 SENL is two files, in total 1MB. Best regards, Patrick

Comet C/2002 V1 (NEAT) visible on SOHO images

From: BAA mailing list To: baalist1@blueyonder.co.uk Date: Mon, 17 Feb 2003

BAA electronic circular No. 00087 <http://www.britastro.org/>

Maurice Gavin points out that Comet C/2002 V1 (NEAT) has now moved into the field of view of the SOHO LASCO C3

coronagraph. This comet was an impressive object in the evening sky but it is now too close to the sun for observation. It reaches perihelion on February 18 when it will pass within 0.1 AU of the Sun (15 million km). There is speculation it might not survive.

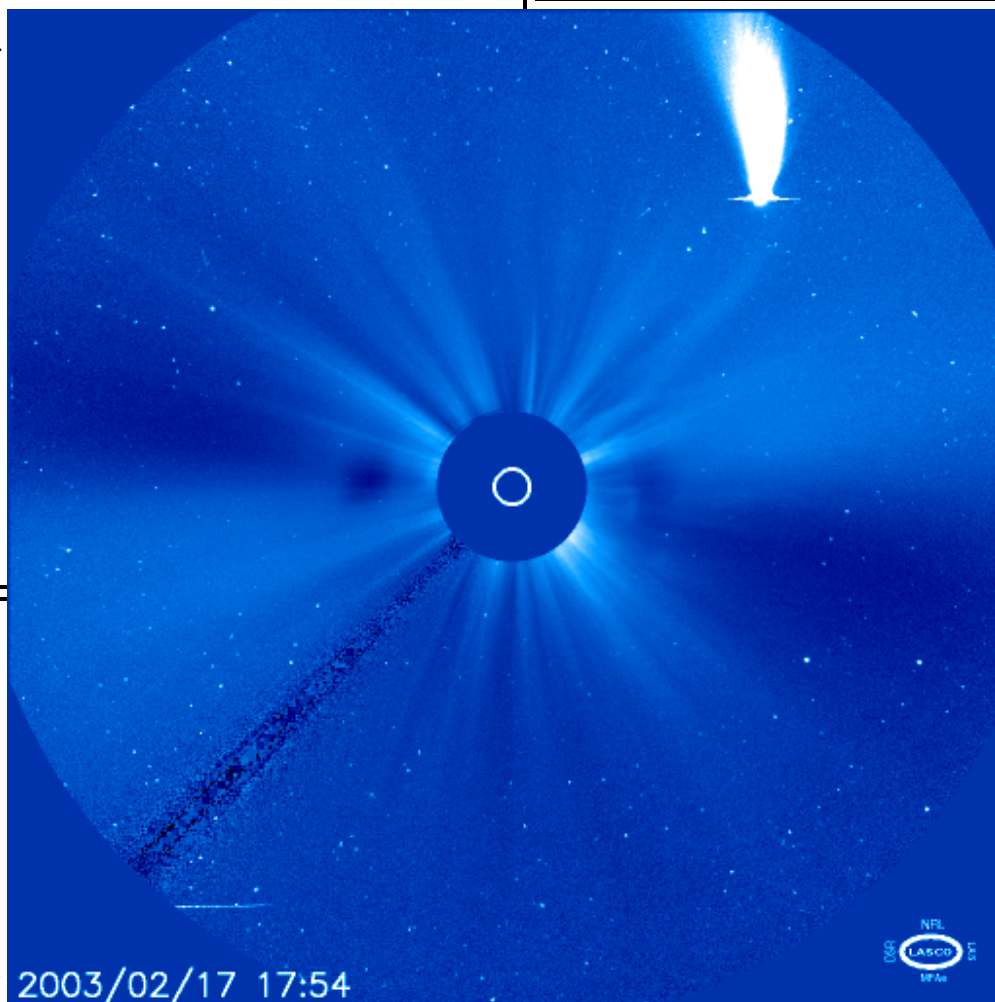
Keep an eye on the comet here: <http://sohowww.nascom.nasa.gov/data/realtime/> Nick James.

Delta T

From: Jean Meeus Date: Tue, 04 Feb 2003 11:17:14

On 2003 January 1, the difference Delta T between the uniform Dynamical Time and the Universal Time was 64.47 seconds.

The IERS announces that no leap second will be introduced at the end of June 2003. Jean Meeus



SETalk

Interesting mailing list about solar eclipses

From: solareclipsewebpages@btopenworld.com To: SOLARECLIPSES@AULA.COM Date: Thu, 06 Feb 2003

Dear SEML subscribers, It is only a short while ago that we had to remind the SEML on the SEML rules. As usual, I doubt anybody did read them at all. Though, more surprising, you all do silently agree to them.

Nevertheless your, what I might call commitments in less than a month SEML subscribers:

- submit attachments
- do not keep the topics solar eclipse related
- send congratulations and thank you messages
- mention non working webpages
- try to post messages although in the READ ONLY file (never replied to the questionnaire)
- try to post HELP commands to the server (which is switched off anyway)
- have full post boxes, so messages bounces back to the server
- have out of office messages installed, so bounces back to the server

etc., etc.

Probably, not many SEML will read this message either. Sound a bit pessimistic, but I am afraid, noticing the commitments you all have, must be the case.

Please try all and keep the SEML solar eclipse related. Leave comments about politics, religions, etc off the SEML list. Do NOT even reply to any of these comments anyway. It is food for the hungry and it only provokes other messages, and other, and other ...

Thank you all for your understanding! Best regards, Patrick

**Lunar Eclipse**

From: J.P. van de Giessen To: SOLARECLIPSES@AULA.COM Date: Tue, 04 Feb 2003 18:47:57

Hello all, I have found some materials that Herod's death was not in -4 C.E. but in -1 C.E.

Now I'm searching for lunar eclipses in the range from 0 C. E till -4 C.E. seen in de Middle East, but more important I'm searching for sources with observations about this period (not Flavius Josephus). Jan Pieter van de Giessen janpieter@giessen.fol.nl

From: Jean Meeus

May I draw the following to the attention of Jan Pieter van de Giessen?

< I have found some materials that Herod's death was not in -4 C.E. but in -1 C.E.

First remark: "C.E." ("Common Era") is what some people nowadays write instead of A.D. However I see no reason to make the change! Why not simply continue to use the classical "AD" ?

Second remark: instead of B.C., those same people now write BCE ("Before Common Era"). Consequently, for years before the year 1 the indication "C.E." is, anyway, incorrect.

Third remark: When you use BC (or BCE), then this means you are using the way the historians count the years before the Christian era. As you know, there is a difference of one year between the historians' and the astronomers' way of counting the years, because the historians don't use a year zero. For instance, the year 585 B.C. of the historians is the same as the year -584 of the astronomers. Either you should use the astronomical counting (with negative sign for the years before the year zero), or the historical counting, but not a mixing of both!

So "-4 C.E." is incorrect. If you use the minus sign, then you should not mention "BC" nor "BCE" (and certainly not "CE"); and if you use "BC" or "BCE", then you should not use the minus sign! Jean Meeus

From: Evan Zucker

I must assume that you know why some people are uncomfortable with A.D.: because it stands for Anno Domini, which means the Year of our Lord, the Lord being Jesus

(Continued on page 18)

SETalk

Christ.

Some non-Christians would prefer not to refer to Jesus Chris as their Lord, hence the use of C.E. instead of A.D. -- EVAN

From: J.P. van de Giessen

Jean, I know this discussion and you are completely right.

As christian I prefer AD and BC, but many Arab friends don't like this, and not hurting them I use CE.

Second, after sending the email, I saw the error -1 CE. In my documents I always write in the astronomers way of counting. Some minutes before sending the question to the group I also wrote a simular question to some Arab historians and that's the way I make this stupid mistake.

I am looking for lunar eclipses in the range 0 and -4, some historians (M. Moise Schwab, E.L. Martin) think that Herod died on 28th of Januari. Now I found 3 eclipses:

0000 Jan 09 23:20 Tm 63 -0.041 2.801 1.794 107m 50m 7.1 7.28 22.5

-0001 Jan 20 12:04 P 53 0.685 1.646 0.587 82m - 7.8 8.06 21.3

-0002 Jan 31 07:55 N 43 1.436 0.293 -0.814 -- 8.5 8.85 19.2

So I was wondering if there is a connection between one of these eclipses and the death of Herod. Further I found in a bad copy of a Babylonian tablet there was in the month Tebetu = Januari an eclipse. Looking to the typesetting I think this tablet was written in the same years. Important notice the writer didn't see the eclipse by himself. Now when you are studying Flavius you see that he also didn't see all phenomenae he wrote about. So who else saw one of these eclipses and wrote about it and can we identify one of these eclipses with the eclipse of Herod? That's my question and I hope someone has more information about this subject.

Because I don't know this is interesting for the group I send it direct to you. Jan Pieter van de Giessen

From: Jean Meeus

CE or AD? Yes, of course I know that "AD" means "Anno Domini". I prefer to continue to use "AD", not because I am a Christian (in fact, I am not a 'believer'),

but simply because "AD" is a classical term that has been in use for such a long time.

Evan wrote : Some non-Christians would prefer not to refer to Jesus Chris as their Lord, hence the use of C.E. instead of A.D.

However, on page 35 of my "More Mathematical Astronomy Morsels" I wrote:

"One of my correspondents (Prof. J.R.H.) wrote that 'American writers are beginning to use 'C.E.' for 'Common Era' in place of 'A.D.', and 'B.C.E.' for 'Before Common Era', because they don't want to risk offending Jews, Moslems, Hindus, Shinto, etc. I think the reason for calling it 'common' is that the year 1 C.E. or 1 A.D. - whatever it is called - is *commonly* understood by citizens of all countries. (...)

I have NEVER met a Buddhist, Moslem, Jew, Shinto or Confucianist who was offended by the use of 'A.D.' or 'B.C.!' So I, apparently in agreement with you, think the whole argument is nonsense. But that is the argument that is used." Jean Meeus

From: Robert B Slobins

The terms BC and AD have a Christian meaning. For those who are not Christian, and that is at least half of the world's population, and who are not comfortable with saying or writing anything that would agree with basic Christian theology, the terms CE and BCE are appropriate. Otherwise, it needs to be understood that year zero is equivalent to 1 BC or BCE. cheers/rbs

From: Cliff Turk

Interesting. I live in a country which has many Jews and many Moslems, plus Hindus and other religions. Until I saw it on the SEML I had never heard of CE or BCE. Thank you Jean for explaining these new heiroglyphics to me - and I agree with your opinion and shall continue to use AD and BC. Cliff Turk

From: T. Grant Leffingwell

In fact, the use of Common-Era dating is quite more than political correctness. It is considered more accurate (in its design, at least). BC & BCE are not necessarily interchangeable.

The system as designed does not depend on the translation of ancient calendars into present-day ones, as most Western calendars do today. Therefore, there is less confusion, and there are no conversion factors to account for the discrepancies with the Julian and Gregorian calendars (and the way the latter accounts for the fomer).

The system is gaining popularity among most historians due to the consistency it offers with what are referred to as

(Continued on page 19)

SETalk

"absolute dates" (dates which are known with extreme accuracy, such as ancient Persia's invasion of the Babylonian Empire). If something happened 2,356 years after a given date, by using CE/BCE all that is theoretically needed is addition and subtraction. It has the bonus of being universal, since we all know exactly how long a year is, and since historians from differing cultures consistently use these certain "absolute dates" as a jumping off point.

There are fewer astronomical purposes for CE, considering the way we tend to

1) date things in millions or billions of years of age (where a week or two doesn't matter), and
2) define time and distance as a function of one another. But there are a modest number of applications, particularly in the dating of (relatively) recent astronomical events. But, since we tend to have the conversions already accounted for, with most of these types of astronomical events it ends up being a case of six to half dozen. --Grant L.

From: Gerard M Foley

"Jean Meeus" <JMeeus@compuserve.com> May I draw the following to the attention of Jan Pieter van de Giessen?

< I have found some materials that Herod's death was not in -4 C.E. but in -1 C.E.

First remark: "C.E." ("Common Era") is what some people nowadays write instead of A.D. However I see no reason to make the change! Why not simply continue to use the classical "AD"

<snip>

I hate to prompt such a respected authority as Jan Meeus, but CE and BCE have been used because a very large number of people who use our calendar are not Christians, and do not recognize the Lord referred to in the abbreviation AD. Gerry

From: Jean Meeus

Perhaps this is an excuse to try to eliminate all what smells of Christianity?

Anyway, although I am not myself "comfortable" with "AD" and "BC", I wish to continue to use these abbreviations because they have been in use since a long time.

Perhaps the best solution is to count the BC years astronomically, that is by using a minus sign. In that case, use of AD and BC, or CE and BCE, is no longer needed. Jean Meeus

From: Michel-André LEVY

At least half, indeed. I think that three quarters of the world's population would still be an undervaluation. But I am afraid we are deeply off topic ... Michel-Andre Levy

From: Robert B Slobins

The first time I saw the terms BCE and CE was in Hebrew school (Jewish religious classes in an orthodox synagogue). Otherwise, it was BC and AD. I did not feel that I was compromising myself by using Christian terms.

The first time I saw negative years was in solar eclipse canons while I was in university.

It all depends on who the audience is. The public uses AD or CE. Scientists use negative numbers. cheers/rbs

From: Francis Graham

Dear Solar Eclipse Friends: In regards to this matter, without in any way being disrespectful to Christian/Non-Christian beliefs, it seemed to me that history and history of astronomy would be best served by moving a the year zero to 10,000 BC(E)and having only positive years for most historical events. Some advantages:

1. The histories of ancient cities like Athens, Sumer, Ur, Memphis, Jericho could all be related in positive numbers.
2. All of human history since the invention of writing would be related in positive years. It would instantly give the reader a perspective lacking with the current system
3. Often obscure Hellenistic persons are referenced thus: "flourished ca. 100" which brings to mind: is that AD(CE) or BC(BCE)? The context would tell only a specialist, and the nonspecialist reader is left wondering.
4. Persons who existed wround the change of era (such as Jesus Himself) would have only positive numbers in the history of their lives, and the tricky question of whether one is on a system which includes the year zero or not would be avoided.
5. The change of era would be pushed back to a time when great historical events were not happening.
6. The renumbering proposed would be religiously neutral, and still recognize that people can count years from the birth of Christ, the Hejira, the traditional beginning of the world, the founding of Rome, or any other calendar system, as is their choice. But the proposed shift would have utility for historical comparison purposes. Ideas like this will be not adopted, though. I read of Achelis and the trouble trying to get the World Calendar adopted, which, in spite of a

(Continued on page 20)

SETalk

UN resolution in its favor, and many, many advantages over the Gregorian system, failed to happen. Francis Graham

From: Robert B Slobins

It appears that with two months gone since the last total solar eclipse, we are now trying to keep things alive here with silly BC/AD arguments and other things that wander off-topic.

We need more totality. Or an interesting problem:

Let's say a Kuiper belt object of necessary darkness and sufficient size, say, 1000 km diameter, gets perturbed and starts falling in an orbit where its node crosses Earth's orbit. How can Earth capture it and get a second moon, this time with the proper orbital inclination? What would the consequences of such a capture be?

What would it take to put an occulting sphere in geosynchronous orbit, say, over Africa or Brazil, that maintains totality? (At least we return to science) cheers/rbs

From: Michael Gill

Robert, A couple of drawbacks with the artificial occulting body at geostationary orbit:

Firstly, at 35,000km out Earth-orbiting satellites move faster across the sky than the Moon does at 380,000km (about 0.25 degrees per minute - the same rate that the Earth turns). The whole eclipse (P1 to P4) would be compressed into a few minutes.

Secondly, to subtend 0.5 degrees (the apparent diameter of the Sun and Moon as seen from Earth) from a range of 35,000km your occulting sphere would need to be over 300km in diameter (bigger than Long Island).

So, as much as I enjoy seeing total solar eclipses I wouldn't support any enterprise that attempts to put Long Island-size objects out to geostationary orbit for total solar eclipses lasting seconds!

Instead, I'll be patient and wait for the Earth, Moon and Sun to come into alignment so I can stand in the lunar umbra.

Cheers, Michael Gill Ps. All geostationary orbits are geosynchronous - not all geosynchronous orbits are geostationary... <http://celestrak.com/columns/v04n07/>

From: Klipsi S

sorry for my stupid question, but I didn't follow this for

some time. what is BC/AD standing for ? Before Corona and After Diamondring ? (just kiddin' , hehe.. ;-) Klipsi

From: Robert B Slobins

Francis: That has already been done. Astronomers use Julian days, the number of days since 4713 BC. Jews count from 3760 BCE ;-) the beginning of civilisation or the year of the world, so 2003 is AM 5763. Freemasons add 4000 to the year, so to them in their ceremonies it is 6003. Byzantines (Orthodox Christian) go further back, for them we are in their 76th century or something like that.

The choice of calendar years is generally a political act to support religious and secular power systems. Only the Julian day is regarded as neutral enough for astronomers worldwide to use to do their calculations more simply (the primary function), let alone to mitigate any political issues that may interfere with research (most likely not even the intent of this reckoning method's use). cheers/rbs

From: Francis Graham

I had forgotten about Julian Days! Yes, that is good for some of the purposes I mentioned, because, although there was some history before Julian Day 0, there was not much of it. But I guess I forgot about Julian Days because they are not usually grouped into Julian Years, but instead, are actual sequentially numbered rotations of the Earth with respect to the Sun. So while a certain Pharaoh did come to power on a specific Julian Day, and a plague did break out in such-and-such a city on such a Julian day, historians are lucky to know the date to better than plus or minus 30 days. But it is indeed an already accepted, neutral system that could be grouped into Julian Years and used for the advantages suggested. Francis

From: J.P. van de Giessen

Hi all, After reading many comments on one little fault in my question '1 CE', now I know everything about time, calendars and so on, and I'm sure the whole group now knows in what time range the lunar eclipses are I am searching for: Has some of you information about historical sources of a lunar eclipse in the period -4 till 0 and especially those of the Middle East or Europe?

Some historians (M. Moise Schwab, E.L. Martin) think that Herod died on 28th of Januari. Now I found 3 eclipses:
0000 Jan 09 23:20 Tm 63 -0.041 2.801 1.794 107m 50m 7.1 7.28 22.5
-0001 Jan 20 12:04 P 53 0.685 1.646 0.587 82m - 7.8 8.06 21.3

(Continued on page 21)

SETalk

-0002 Jan 31 07:55 N 43 1.436 0.293 -0.814 - - 8.5 8.85 19.2

So I was wondering if there is a connection between one of these eclipses and the death of Herod. Further I found in a bad copy of a Babylonian tablet there was in the month Tebetu = Januari a lunar eclipse. Looking to the typesetting I think this tablet was written in the same years. Important notice the writer didn't see the eclipse by himself. Now when you are studying Flavius you see that he also didn't see all phenomenae he wrote about. So who else saw one of these eclipses and wrote about it and can we identify one of these eclipses with the eclipse of Herod? That's my question and I hope someone has more information about this subject. Jan Pieter van de Giessen

From: Robert B Slobins

Jan: You may want to investigate coin designs of the period. Astronomer Dr Michael Molnar, late of Rutgers, the State University of New Jersey, wrote a book that, from the interpretation of astrological symbols on coins and other information, determines the birth of Jesus as 17 April -7.

That day, the Moon occulted Jupiter, visible in South America, the Caribbean, and Eastern North America before sunrise. The Caribbean was treated to an annular solar eclipse the following day that crossed Britain. If something like this happened right now, I am sure that this entire mailing list would be on some kind of eclipse tour!

You may want to research this end. And despite our, to say the least, scepticism about astrology, back then, it was in wide use and there may be some records somewhere with astrological references to dying or dead kings.

I may want to caution you: Records can be severely edited. Unlike today, when we are drowned in data and information, where it seems that every minute is accounted for, ancients just took major events and drew connections between them despite the actual time distance. For example, the ten plagues in Exodus most likely occurred over a space of several years, but it reads as if they happened in quick and frightening succession. People now discount the scores of successful Space Shuttle missions that took place between Challenger and Columbia.

I am sure that people back then had a different perspective on time, and we do as well, as we remember events in our own distant past that from our current distance, seemed to occur on top of each other when in fact there were many days between them. One sees ten total eclipses in thirty years, for say, forty minutes of totality. He remembers these totalities, and the time span between them somehow disappears when he recalls his eclipse experiences.

Indeed, I have touched on the subject of time perception before, whereby, say three minutes of totality is three minutes, period. We only perceive it as a short three minutes, as opposed to being held to a dead stop in what should be moving traffic for that same period of time.

I hope this helps in your research. Regrettably, the periods, places and people in history where objective observation of the universe is looked upon favorably have seldom occurred. cheers/rbs

From: Crocker, Tony (FSA)

How about altering the moon's orbit to an inclination of 1 degree instead of 5? Then there would be a central eclipse nearly every month. Zero degrees would confine the eclipses to the tropics.

Jay Pasachoff Receives National Astronomy Award

>From Noelle Lemoine <Noelle.A.Lemoine@williams.edu> >04 Feb 2003

[The following is a press release from Williams College-ed.]

WILLIAMSTOWN, Mass., Jan. 9, 2003-The American Astronomical Society (AAS) will award its 2003 Education Prize to Jay M. Pasachoff, Field Memorial Professor of Astronomy and Director of the Hopkins Observatory at Williams College.

Announcement of the award, for "outstanding contributions to the education of the public, of students and/or of the next generation of professional astronomers," was made Jan. 8 in Seattle at the society's 201st Meeting. Previous recipients of education awards from the AAS include Carl Sagan, Dorrit Hoffleit, Andrew Fraknoi, Donald Goldsmith, Fred Hoyle, Frank Drake, and Michael Zeilik.

The citation reads:

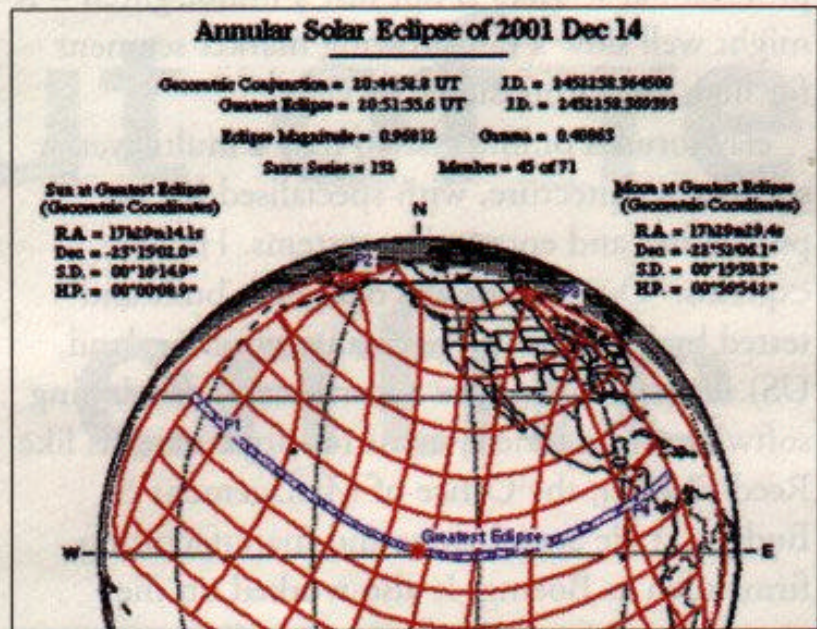
For his eloquent and informative writing of textbooks from junior high through college, For his devotion to teaching generations of students, For sharing with the world the joys of observing eclipses, For his many popular books and articles on astronomy, For his intense advocacy on behalf of science education in various forums, For his willingness to go into educational nooks where no astronomer has gone before, the AAS Education Prize is awarded to Jay M. Pasachoff.

SETalk

He is vice president of the International Astronomical Union's (IAU) Commission on Education and Development and is scheduled to assume the presidency this summer at the union's General Assembly in Sydney. A two-time former chair of the Astronomy Division of the American Association for the Advancement of Science, he is currently chair of the IAU's Working Group on Eclipses and has observed 35 solar eclipses, to which he typically leads scientific expeditions that prominently include undergraduate students.

Pasachoff is the author of the "Peterson Field Guide to the Stars and Planets" in addition to widely used astronomy texts. He is co-author, with Leon Golub, of the trade book "Nearest Star: The Surprising Science of Our Sun," published in 2001 by Harvard University Press.

He has spoken about eclipses and astronomy in general to countless groups around the world, from elementary school students to adults. He earned his A.B. and Ph.D. from Harvard University, was a postdoctoral fellow at Harvard and Caltech, and has taught at Williams since 1972.



ECLIPSE HOME PAGE

NASA/Goddard Space Flight Center, Planetary Systems Branch, may not have an eye for exciting layout or graphics, but it enjoys its lists. This interesting site catalogues solar eclipses over 5,000 years (ending in AD3000), with links to similar resources and stacks of information about past eclipses: maps, charts, tables and reams of explanatory material, which is informative and challenging without being patronising or impenetrable. This may not be one for the browser who demands fancy graphics, but it's a worthy effort. <http://sunearth.gsfc.nasa.gov/eclipse/>

NASA Eclipse Web site review

From: Andrew J White To: solareclipsewebpages@btopenworld.com
 Date: Mon, 17 Feb 2003

In the latest copy of "Information World Review, Oct 2002, p.34 there is a review of Fred's NASA Eclipse site in the "Resources" section. I have scanned the appropriate bit and attach it for you/Joanne. Best wishes Andrew

SETalk

S CORONA

From: barr derryl To: SOLARECLIPSES@AULA.COM Date: Mon, 17 Feb 2003 02:56:23

Although I greatly enjoyed the report on Totality Day 2003, I do have a question regarding the presentation of Voyto Rusin. Mention was made of the K, F, E, T, and S coronas studied during the eclipse. While the K and F are probably familiar first hand to nearly all on the list, and the E and T are discussed at length in most contemporary coronal literature, the S or "Sublimated" corona is new to me. What sublimates? Is not all mass in the sun already in a gaseous state? Or is it referring to the transition from a gas to a solid? But in the corona?? Or am I misinterpreting the intended meaning of the word "sublimated?" Golub and Pasachoff in both their 1997 "The Solar Corona," and their more layman accessible 2001 "Nearest Star," intimate the possible existence of additional coronal emissions. Is the "S" corona one of them? Any answers to the many questions above would be greatly appreciated.

From: Jay.M.Pasachoff@williams.edu

I forwarded the question to Dr. Rusin and here is his reply.

----- Forwarded Message Return-Path: vrusin@ta3.sk Date: Mon, 17 Feb 2003 11:46:10 +0100 From: Vojtech Rusin <vrusin@ta3.sk>

B/ Term 'S corona' was taken from the paper R.A. Gulyaev and P.V. Shcheglov: 'Interferometric observations of emission features in the F-corona', published in Contr. Astron. Obs. Skalnaté Pleso 28, (1999), 237-242. Now available at <http://www.ta3.sk/caosp.html>.

Shortly:

1/ The E - corona is familiar known and fixed.

2/ The T - corona (thermal) is under discussion in literature

3/ The S - corona (sublimation) was introduced for the first time by above mentioned authors. The term 'S' follows from 'sublimation' of dust particles when coming in orbital motions to the Sun at the distances of 5 to 20 solar radii. This emission should be originate from atomic and ion emissions in H and K lines, and due to the Doppler shift these emissions are shifted, however, in opposite wavelengths regarding to the opposite position to the Sun (E or W). Detection of this shift was observed by Gulyaev in 1998 eclipse. Details see in above paper.

Discussion to the Golub and Pasachoff Lyman-alpha-line in above mentioned books and Gulyaev proposal of the 'S - corona' for atomic and ion emissions should be done between all authors directly.

Seems me the question of 'S - corona' is open still, especially for the material that bring sungrazing comets to the Sun. When, where and how is going evaporation of these comets, and how long it exist in a neutral state? For example, I observed some emission lines in the solar spectrum very close to the solar surface (I did regular observations of the green and red coronal lines spectroscopically at Lomnický štít coronal station, Slovakia) that were later identified as emission lines belonging to the evaporated material of sungrazing comet in 1979. Best, Voyto

From: Glenn Schneider

Jay et al: The spectroscopic signature of cometary infall in the dusty circumstellar environments of stars with known debris disks (with established existence by imaging and/or thermal IR excess) such as Beta Pic and HR 10, has been well established. While the distances at which the sublimation of cometary ices is, physically, further out for these stars which are spectrally earlier (hotter) than the Sun, the phenomenology may be similar. It would be interested for those involved to consider this question/problem as it relates to transient species enhancement in the circumstellar region of our own star also in light of what is seen in exosolar systems. I think, together, we may glean a more complete understanding of the underlying physics of



(Continued on page 24)

SETalk

what is going on. We all sometimes get too narrowly focused (I have to plead guilty of that myself), but this seems an area where cross-discussions could be quite fruitful. Thanks for calling this paper to our attention. Cheers, Glenn Schneider

From: Bharat Adur

Hello, It is very interesting to hear about different kinds of coronas during an eclipse. And some of them have been seen in eclipses during 1983 eclipse also. However I little confused about the S corona, as it is mentioned as sublimated corona. I however use to call such regions around the solar corona as " Coronal Mass Condensate- CMC" , this I understood as certain coronal mass was entrapped between the entwined magnetic fields; and was at lower temperature than the corona. Bharat Adur

Bright comet during a total eclipse

From: Klipsi To: SOLARECLIPSES@AULA.COM Date: Tue, 18 Feb 2003 20:32:25

ever wonder what a bright comet would look like during a total eclipse , near the eclipsed Sun ? Check out what Soho is seeing right now ! An extremely bright comet very close to the Sun. <http://sohowww.nascom.nasa.gov/data/realtime/realtime-c3.html> Darn ! Why can't we have this kind of event during a earth-bound TSE ? Even March 9 1997 HaleBopp was not that obvious. Just look at that picture ! The comet's tail is several times the size of the Sun . What a show this would be in real, as seen from Earth. Could you imagine this kind of bright comet last December 4 ? Absolutely stunning ! Has there ever been a total eclipse with a bright comet, I mean way brighter than Halebopp in March 1997 ? Some lucky folks in Sibiria saw it. But has there been a brighter comet during a previous TSE at all ? I doubt it. Olivier "Klipsi" Staiger Paparazzo del cielo Sa-tigny-Geneva Switzerland tel +41.79.449 4630 <http://eclipse.span.ch> klipsi@bluewin.ch DANCES WITH PENGUINS <http://eclipse.span.ch/antarctica2003.htm>

Solar flares vs. coronal mass ejections

From: Jay.M.Pasachoff@williams.edu To: solareclipses@aula.com Date: Wed, 19 Feb 2003 21:05:00

>Dear Jay, With respect to the discussion of the SOHO images of the comet, what's the difference between a solar flare and a coronal mass ejection? Perhaps other SEMI members might be interested to know as well.... Jim Huddle

Hi, Jim. That's a good question. Here is what I have written in my forthcoming "The Complete Idiot's Guide to the Sun," to be published in April. (Some of the readers may know that there is a series of about 300 "Complete Idiot's Guides" to various topics, with the theme "You aren't an idiot in your own field, but in this field....")

"Monitoring the Sun in hydrogen light, as has long been carried out at solar observatories, has provided movies of solar flares. In views looking downward at the solar disk, the brightening appears abruptly and spreads along magnetic field lines. The first brightening takes place in seconds while the whole region may then remain bright for hours. When seen on the solar limb, flares explode outward into space. While some of its matter falls back, much of the matter is ejected from the Sun at high speed. The coronal mass ejections discussed in an earlier chapter used to be thought of as caused by flares, but the present view is that the ejection and flare are both aspects of a large-scale rearrangement of the magnetic field in the corona."

Flares can reach temperatures as hot as 10 million or even 20 million degrees. Coronal mass ejections are made of coronal gas at a temperature of 1 to 4 million degrees (Celsius). Jay

SETalk

Bright comet during a total eclipse

From: Klipsi To: SOLARECLIPSES@AULA.COM Date: Tue, 18 Feb 2003 20:44:08

now of course, the comet would, if seen from Earth during a TSE, not be that bright, not as bright as on the Lasco C3 image. After all the C3 shows many faint stars. That coronagraph is way more light sensitive than what we can detect from Earth. Therefore the comet appears so huge, so bright. Still, according to http://cfa-www.harvard.edu/iau/Ephemerides/Comets/2002V1_1.html the comet is right now in negative magnitude ! It would be brighter than Sirius ! What a show this would be. un be lie va ble !

From: Evan Zucker

You can view an animation of these photos at <http://sohowww.nascom.nasa.gov/data/realtime-images.html>. Click on one of the links at the bottom of the page. -- EVAN

From: Gerard M Foley

<snip> Wonderful pictures. Are the bright blobs at 2 o'clock from 2003/02/17 0054-0654 and from 2003/02/18 0354-0554 flares? Big and bright, aren't they? Gerry

From: Robert B Slobins

This comet would definitely appear in photographs as a comet. I would use the 105/2.5 Nikon at f/4, ISO 800 at 3 seconds. This would most likely get as much tail as possible. It would be better to observe such an apparition at high altitude; the atmosphere is such a nuisance.

It looks brighter than -2. It reminds me of Comet West in 1976.

To get back to subject---there is a CME that looks as if it is moving toward the comet. Let's see what happens as it passes by it. cheers/rbs

From: Klipsi

yes, they are CME's (coronal mass ejections). What a show !

the mpeg videos are stunning. <http://sohowww.nascom.nasa.gov/data/realtime/mpeg/> two CMEs before the comet appears, doubleblow, then a major nearmiss CME in front of the comet, and another CME nearmiss behind it. It is unclear if it was hit. Nice try ! ;-)

what I find surprising also is that , despite almost no sunspots, and rather getting towards 11-year low solar activity

period (was the peak in 1999/2000 ?), the corona is quite multi-directional, not that strongly bidirectional. We are still a couple of years away from the low, it seems. Klipsi

From: Daniel Fischer

"It looks brighter than -2" Robert B Slobins writes about C/2002 V1 (NEAT) in SOHO's field of view - but one should be careful: If the amount of CCD blooming is a measure of brightness, the comet was fainter; see e.g. <http://www.flatoday.com/space/explore/images/2000a/051600a.jpg> with several planets in 2000. Also, a friend of mine who's an expert in telescopic observations very close to the Sun could not find NEAT yesterday, while he has no trouble spotting Venus or even Jupiter at similar elongations in the daytime sky. Thus we presume that most of the amazing SOHO view of NEAT is due to dust with rather low surface brightness, and that the coma was not all that impressive. Still, it's a pity there is no eclipse now ... Daniel

From: klipsi@bluewin.ch

yes. and even without the comet, the eclipse would be a great event ;-) by the way, if you look closely at the Lasco C3 images, you can distinguish the faint plasma tail to the right of the main bright tail. Klipsi

From: Robert B Slobins

I observed the comet on Feb 13.00. It was 4 degrees altitude. The colour was white, and that has to be due to dust reflecting sunlight. I figured that any blue had been scattered away by the atmosphere.

Earlier images show the ion tail with the big dust tail.

And yes, not only a pity that there is no eclipse now, but the moon is as far as possible from eclipsing the sun.

Jupiter at this elongation would be -2 magnitude.

Incidentally, we should be able to make out +2 magnitude points naked-eye during totality. Also, if one looks closely at his 1991 totality shots, Delta Geminorum fainter than +3 magnitude shows plainly in a gap in the corona in long (>1/4 second) exposures. Dennis DiCicco told me that people were spotting out that star. I would love to see and scan the Einstein plates of 1919 and 1922.

Bottom line: An exposure >1 second during totality would render that comet. It would depend on one's altitude to be able to obtain the maximum outer corona and comet tail. It

(Continued on page 26)

SETalk

(Continued from page 25)

would be a terrific imaging exercise to get all of the available detail in the corona and comet.

Question: Are there images of the eclipses of 1882 and 1948 available? cheers/rbs

From: Klipsi

yes, Lasco C3 is much more light sensitive than what we see. But... I remember some time ago, at a solar eclipse conference in Paris, a french guy (named Alerich ? I believe... sorry if I am wrong) showed us a stunning hi res photo he took in 1998 feb 26, with his photos showing stars around the eclipsed Sun of mag 6 and 7 during totality, maybe even mag 8 . Klipsi

From: Michael Gill

It was Christian Viladrich: <http://perso.club-internet.fr/viladric/astro/eclsol/260298m.jpg> A wonderful image! Michael Gill

From: Egan Mark

Hi Perhaps it was Christian Viladrich?

See <http://perso.club-internet.fr/viladric/> for his home page and

<http://perso.club-internet.fr/viladric/astro/eclsol/260298m.jpg> for a photo of the '98 total w/ star magnitudes labeled.

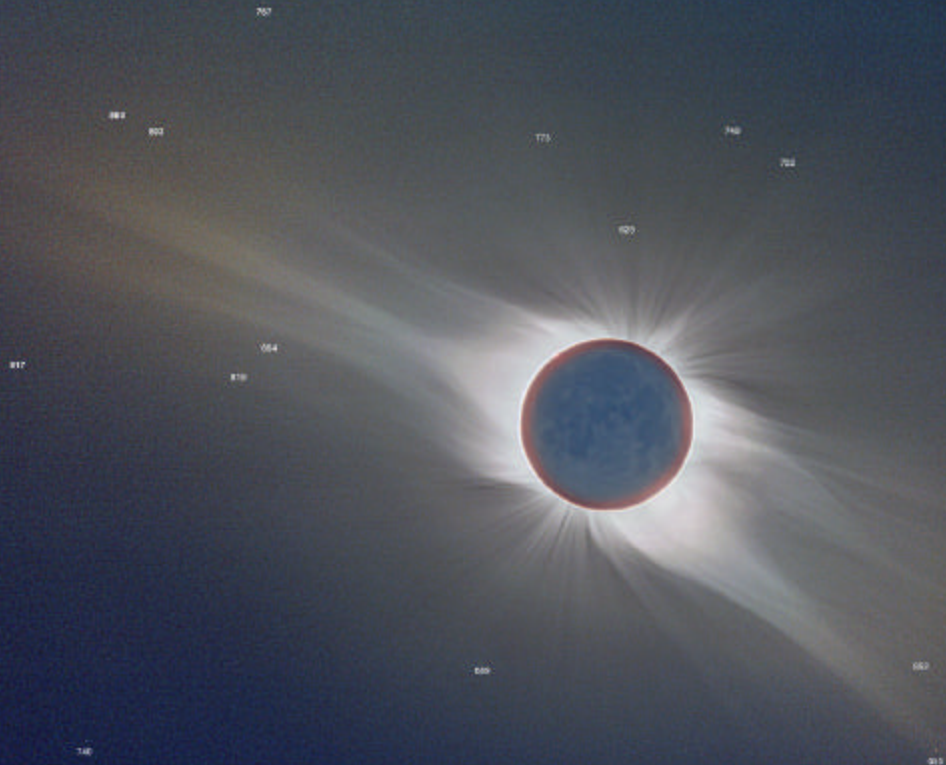
Great shot! Mark astrophoto@yahoo.com

From: Robert B Slobins

Mark: Christian Viladrich's shot is not at all great...it is stupendous, an absolute winner!

I want to know what he used to produce it. Also, with these star images in the background, it is easy for one to mistake them for dust spots and other irregularities. I wonder if we ought to rescan our material.

Guadeloupe - 26 feb 98 - Christian Viladrich



(Continued on page 27)

SETalk

I gather that Christian knew the star background so as to retain the stars.

Of course, the Einstein cameras had to use stars this faint. I use a 300 mm f/2.8 at f/4, and a 400 mm f/4 at f/5.6 for my coronal images. As soon as I get my setup, I would be looking for these stars in my negatives.

Also, with this in mind, would we be able to repeat the Einstein experiment with our equipment: either film or digital imaging? cheers/rbs

From: solareclipsewebpages@btopenworld.com

Robert B Slobins wrote: Question: Are there images of the eclipses of 1882 and 1948 available?

See webpages <http://www.mreclipse.com/SENL/SEComets/COMINDEX.htm> where we have listed all eclipse comets (and those false "eclipse comets". PP

From: christian viladrich

> Christian Viladrich's shot is not at all great...it is stupendous, an absolute winner!

Thanks a lot for your comments Robert :-)

> I want to know what he used to produce it. Also, with these star images in the background, it is easy for one to mistake them for dust spots and other irregularities. I wonder if we ought to rescan our material.

> I gather that Christian knew the star background so as to retain the stars.

It was very difficult to find out the two stars necessary to re-align the negatives to be composited.

For the hardware, I had a 120 Mhz laptop, no planetarium software, the images were 50 Mo each and I had only 48 Mo ram....

At first, I had the negatives scanned by a photograph with a Nikon LS1000. I spent a number of hours on these scans but there were too many scratches and starlike dots. It was impossible to find any stars for sure.

Then I bought a Nikon LS2000 and it made a tremendous difference. This scanner has an infra-red diode which is used to "remove" surface film defects by comparison of IR signal and RVB signal. It works very well (but not on BW neg), and furthermore with no loss in resolution. Now, I guess

there are many other film scanners with this kind of device.

Even, after this job being done by the scanner, there were still many starlike features. So I looked at all of them to find out if they appeared at the same place in all images. It turned out only two dots were at the same place on all the neg. It was two 6.6 magnitude stars.

Then I removed all linear scratches with Photoshop, but I left all dot like features. Afterward, the compositing increased the S/N, in other words made more apparent real stars while film defects were softened.

The limiting magnitude is around 8.6 from a composite of seven 1s images taken with a 55 mm F/8 fluorite refractor. If you want to go deeper you basically need better resolution and/or longer focal length and/or darker sky (otherwise better S/N).

Obviously, looking for stars is made easier if the neg is scratch free (easier to said than to do). There is a definite advantage to digital equipment for that purpose. Now, the use of planetarium software like Guide or others saves a lot of time because we know where the stars should be.

A last word on compositing. It is much easier if you know the exact orientation of the field and the time between successive images. Then, you just have to calculate the motion between the moon and sun and compensate for this. I have done this on CCD images taken in Angola 2001. It is a straightforward process. Hope I have not been too long Best regards Christian Viladrich <http://perso.club-internet.fr/viladric/>

From: Robert B Slobins

Christian: I have some questions and comments in response to your reply, which I will make in-line:

>It was very difficult to find out the two stars necessary to re-align the negatives to be composited.

>For the hardware, I had a 120 Mhz laptop, no planetarium software, the images were 50 Mo each and I had only 48 Mo ram....

Incredible; it must have taken forever to do this. And you were not using a Mac.

>At first, I had the negatives scanned by a photograph with a Nikon LS1000. I spent a number of hours on these scans but there were too many scratches and starlike dots. It was impossible to find any stars for sure.

(Continued on page 28)

SETalk

>Then I bought a Nikon LS2000 and it made a tremendous difference. This scanner has an infra-red diode which is used to "remove" surface film defects by comparison of IR signal and RVB signal. It works very well (but not on BW neg), and furthermore with no loss in resolution. Now, I guess there are many other film scanners with this kind of device.

I am in the process of buying a Coolscan 4000, with a marketing Dmax of 4.2.

>Even, after this job being done by the scanner, there were still many starlike features. So I looked at all of them to find out if they appeared at the same place in all images. It turned out only two dots were at the same place on all the neg. It was two 6.6 magnitude stars.

>Then I removed all linear scratches with Photoshop, but I left all dot like features. Afterward, the compositing increased the S/N, in other words made more apparent real stars while film defects were softened.

To everyone on this list who has yet to try this: Digital ICE removes stars. Cleaning up images must be done manually!

>The limiting magnitude is around 8.6 from a composite of seven 1s images taken with a 55 mm F/8 fluorite refractor.

With what film and camera? It looks as if your focal length is 440 mm. This means that my setup of 400/5.6 would do just fine.

Did you bracket exposures? I am not clear on this. Did you render the stars by combining seven one-second exposures and to get the detail in the inner corona, you used images from other shorter exposures? Or did you just layer only these seven exposures?

>A last word on compositing. It is much easier if you know the exact orientation of the field and the time between successive images. Then, you just have to calculate the motion between the moon and sun and compensate for this. I have done this on CCD images taken in Angola 2001. It is a straightforward process.

This confuses me. I always want to know how does the compositing process keep the moon registered? After all, the moon does move, and one sees differences with each successive image of a total solar eclipse. cheers/rbs

Author question: Southern hemisphere astronomical event

From: Franz Krojer To: HASTRO-L@LISTSERV.WVU.EDU
Date: Fri, 21 Feb 2003 09:25:58

Mary Anna Evans wrote: I am a mystery writer, and I am developing the plot of my second novel. Does anyone know of a unique astronomical event that was visible in the southern hemisphere between 1500 and 1800 C.E.? It would need to be readily identifiable, such that if you saw a drawing of the sky at that time, you would be able to infer the approximate date and you would know that the observer was located south of the equator.

There is a very well known total solar eclipse from March 30 1680, which has even much importance for the chronology of Congo's history, and which was observed near the rivers Kasai and Sankura (5 degrees south of the equator). It is originally described in Emil Torday's book „On the trail of the Bushongo“ (1925) or later in some of Basil Davidson's books, but it is also mentioned here:

<http://www.webstories.co.nz/focus/etiopia/lost1.html>
<http://www.nbufront.org/html/MastersMuseums/JHClarke/Contemporaries/LumumbaCongo.html>

Bye -- Franz Krojer

From: Gent van R.H.

Hi, Compare with the map of solar eclipse paths between 1661 and 1680

<http://sunearth.gsfc.nasa.gov/eclipse/SEAtlas/SEAtlas2/SEAtlas1661.GIF>

from Fred Espenak's eclipse website. If the Bushongo kingdom is near to the centre of present-day Congo then the description of a noon-time eclipse would agree very well with the date of 30 March 1680 (but see below).

More maps of solar eclipse paths from AD 1000 to 2000 can be inspected at

<http://sunearth.gsfc.nasa.gov/eclipse/SEAtlas/SEAtlas2.html>

A few more early African accounts of solar eclipses are discussed in:

Richard Gray, "Eclipse Maps", *The Journal of African History*, vol. 6 (1965), pp. 251-262.

Gray's article includes a reference to a possible observation of the same eclipse of 3 March 1680 from Uganda but notes that the eclipse of 11 July 1619 was also virtually total at noon from

SETalk

Mushenge, the capital of the Bushongo kingdom.

Moreover, the 1680 eclipse would have occurred during the rainy season when the sky is more likely to have been overcast while the 1619 eclipse would have occurred during the dry season.

* Robert H. van Gent * * E-mail: r.h.vangent@astro.uu.nl * * Homepage: <http://www.phys.uu.nl/~vgent/homepage.htm> *

From: Mary Anna Evans

Hello, all, I am overwhelmed with all the generous assistance you gave regarding my question about southern hemisphere astronomical events. I believe I have the raw data I'll need to reach a conclusion. Here's the general outline:

I had asked how an old painting of the night sky might be used to locate its painter's physical location, as well as the approximate date that the painting was made. I had further specified that the location should be in the southern hemisphere and that the date should be between 1500 and 1700. Suggested astronomical events included:

1. A solar eclipse like the one observed in the Congo in 1680. (FRANZ KROJER and R.H. VAN GENT).
2. Apparitions of Halley's Comet, including some that weren't spectacular in the north, but may have been brighter in the south due to its orbital geometry. This is yet more plausible, since we don't have records made by southern observers for all its apparitions in those days. (CRAIG WUFF).
3. Variations in the brightness of Eta Carinae. (PAOLO AMOROSO).

All these factors were pulled together in a very cogent discussion by JOHN WESTFALL, who explained how a drawing that showed the horizon, cardinal directions, and constellations could be used to estimate latitude, then a unique astronomical event (comet, eclipse, conjunction, supernova) could be used to estimate the date. And ROLF SINCLAIR reminded me of the classic, but wrong, solar eclipse scene in King Solomon's Mines.

My conclusion: There are at least 8 solar eclipse paths that crossed Brazil (my preferred locale) in the 1600s. I will choose one based on other plot needs (Brazilian history, etc.), have an astronomer friend use his software to show me which planets and bright stars would have been visible during the eclipse, and I believe I will have an exact date and a location limited to the narrow swath of totality. For fun, I may have Eta Carinae be one of the bright stars, unless someone tells me that we know for sure that it wasn't bright at that time.

A dark horse candidate would be the Brazilian solar eclipse on May 2, 1835--Eta Carinae was bright that year and Halley's comet came through, although I haven't checked to see whether Halley was bright and visible that day. An intriguing possibility, but the date's a little late for my purposes. Too bad.

So, if RH van Gent, Rolf Sinclair, Franz Krojer, Craig Wuff, Paolo Amoroso, and John Westfall will send me their snail mail addresses off-list, I will send them the promised autographed copies of my current book, ARTIFACTS. There's no astronomy in it, but with a name like ARTIFACTS, you can bet that there's history. And my next book, probably called RELICS, will use the information you all gave me.

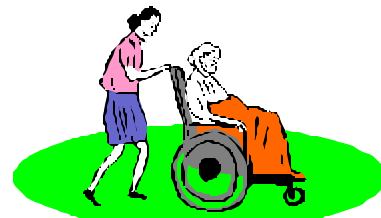
If you'd like to know when RELICS is coming out, you can sign up for my e-newsletter at my website: www.maryannaevans.com I also have a synopsis and an author bio posted, and my travel schedule will be there as my promotional plans for ARTIFACTS firms up. Thanks again for all your help!

Mary Anna Evans ARTIFACTS Poisoned Pen Press, May 2003 www.maryannaevans.com

Early 18th century solar eclipses

From: J.P. van de Giessen To: SOLARECLIPSES@AULA.COM
Date: Sat, 01 Mar 2003 12:23:59

Hello all, A sample the journal History of Science <http://www.shpltd.co.uk/hs.pdf> (>1Mb) is on the web with an very interesting story about 18th century solar eclipses: "EPHEMERAL EVENTS: ENGLISH BROADSIDES OF EARLY EIGHTEENTH-CENTURY SOLAR ECLIPSES" from Alice N. Walters, University of Massachusetts Lowell. Jan Pieter van de Giessen



SETalk

"Eclipse" as a Sports Team Nickname

From: Craig Waff To: HASTRO-L@LISTSERV.WVU.EDU Date: Mon, 24 Feb 2003 16:23:26

I never expected to find two of my favorite research interests--the history of astronomy and the history of organized baseball--combined in a single thread of messages on a listserv, but that indeed happened recently on SABR-L, which is anaged by the Society for American Baseball Research. As the messages, which I have copied below, indicate, they concern the use of "Eclipse" as a nickname for several 19th-century baseball teams (and two notable racehorses as well)

Alan Smiley, a librarian in Northville, Michigan, speculates that a local baseball team in his area may have received the nickname "Eclipse" because of a solar eclipse that was visible across the Midwest US on August 7, 1869. On the other hand, John Thorn, the author of the second message, suggests that the nickname may have ultimately derived from the English racehorse Eclipse, who was foaled on April 1, 1764, during a solar eclipse that was apparently seen in England (the Eclipse Award for Horse of the Year is named after him).

Can anyone on the list provide more details on these two solar eclipses, such as (1) their actual tracks; (2) whether they were total, annular, or partial near the localities mentioned; and (3) whether there was anything particular significant about them--duration, eclipse expeditions mounted to observe them, etc.--that might have made the general public much more aware than usual of solar eclipses? If you have no objection, I'll cross post any responses to the SABR-L listserv. Craig B. Waff Encyclopedia Americana

Date: Wed, 12 Feb 2003 09:48:26 -0500 From: Alan Smitley <smitley@TLN.LIB.MI.US> Subject: Eclipse as team name

As Local History Librarian at Northville District Library in Michigan, I have done some research with regard to early accounts of baseball in this town. A renewal of this endeavor was prompted by an inquiry from a resident who is attempting to form a new 'vintage' baseball team here.

The first documented baseball game here took place on Aug. 30, 1869 by the "Eclipse Base Ball Club of Northville". We found that on Aug. 7, 1869 there was a rather significant solar eclipse which affected the Midwest. There was even a waltz and polka published and dedicated to the event. The speculation that this phenomenon might have been the reason for the local baseball team's name makes a potentially good story, but it is only speculation.

I have noticed that "Eclipse" is a rather common name for 19th C base ball teams. I wonder if anyone is familiar with documented use of "Eclipse" for a base ball team prior to August of 1869. Al Smitley

Date: Thu, 13 Feb 2003 12:05:23 -0500 From: John Thorn <john@TOY-DEPARTMENT.COM> Subject: Re: Eclipse as team name

Replying to Alan Smitley's query about the origins of the prolifically employed term "Eclipse," I think we need to look not only to the heavens for the source of inspiration but also to the horse-race tracks. In May of 1823, at a race course in Queens, the northern-bred horse Eclipse defeated a southern challenger named Henry. Eclipse was also known as "American Eclipse," to distinguish it from the Arabian horse of the same name that won fame in the previous century (and whose name still honors champions through the Eclipse Award for Horse of the Year). This "English Eclipse" was foaled on April 1, 1764, during a solar eclipse, so there you have the tenuous celestial connection.

American Eclipse was nine years old at the time of the race with Henry in 1823 and had been put out to stud three years earlier. However, his owner brought him out of "retirement" whenever the wager was high enough to justify a race. The Virginian challenger, Henry, was only four years old.

Endurance was then the prize virtue in a horse (and in a man), not the sprinter speed that, in the coming age of photography, came to be called a "flash in the pan." The horses were to run three heats, each four miles long, all on that epochal day in American sporting history, of which there are many detailed accounts. Henry captured the first heat in a then-record time of 7 minutes 37 seconds. This was the first time Eclipse had ever lost a heat. But then the old hero captured the next race, in

(Continued on page 31)

SETalk

a remarkable 7:47, a record for second heats. And he captured the third heat, too, leaving the exhausted Henry a half-mile behind. American Eclipse then returned to pasture as the undefeated champion.

The symbolic value of this race was not lost upon the sporting community and "Eclipse" came to be synonymous with fortitude, endurance, supreme athletic ability, and high character. Interestingly, there were three subsequent North-South matches in the years before the Civil War: in 1835, 1842, and 1845, with the winner in 1842 being the celebrated northern horse Fashion, who gave his name to the race course at which baseball played its first all-star game before its first paid crowd, on July 20, 1858.

The connections between horse racing, yacht racing, gambling, and the rise of baseball form a subject worthy of further study. Melvin Adelman's book *A Sporting Time* is a wonderful starting point; so is Foster Rhea Dulles' *America Learns to Play*. Please forgive the length of my reply. John Thorn

Date: Thu, 13 Feb 2003 19:03:32 -0500 From: Paul Wendt <pgw@THEWORLD.COM> Subject: Re: Eclipse as team name

An account of the 1823 match race is central to chapter 2, part II, of John Dizikes, *Sportsmen & Gamesmen: From the Years that Shaped American Ideas About Winning and Losing and How to Play the Game*, Boston: Houghton Mifflin, 1981.

The subject of ch 2:II is Colonel William Ransom Johnson, whom Dizikes calls "the first great American gamesman". According to Dizikes, Johnson "dominated the Southern scene and emerged as the master arranger and organizer" for the sectional match races that followed, with more than forty races, mainly at the Union Grounds outside Brooklyn, 1823-1845.

Of general interest re the 1823 event at the Union Grounds, Dizikes says "a new form of excitement had been introduced into American sports: the excitement of the crowd itself."

Paul Wendt, Watertown MA, USA <pgw@world.std.com> Chair, 19th Century Committee, SABR Owner-Administrator, 19cBB (egroup at Yahoo)

From: Steven Wepster

Hi Craig, The track of the 1869 aug 7 total eclipse is on Fred Espanak's eclipse pages, and indeed covers the Mid-West: <http://sunearth.gsfc.nasa.gov/eclipse/SEmap/SEmapNA/TSENorAm1851.gif>

The 1764 april 1 annular eclipse was visible over parts of W Europe, Scandinavia, and N Siberia. I suspect that partial phases of the eclipse were visible in all parts of England. <http://sunearth.gsfc.nasa.gov/eclipse/SEAtlas/SEAtlas2/SEAtlas1761.GIF>

I am sorry that I have no information on other circumstances that you asked for. Notwithstanding, I hope this is useful to you. Regards, Steven

From: dick.steve@USNO.NAVY.MIL

Craig, The 1869 total eclipse was a famous one, and the Naval Observatory mounted a full-scale expedition to the Midwest. I append below what I wrote about it in my history of the USNO, *Sky and Ocean Joined*, pp. 199 ff. It was the eclipse where William Harkness discovered the famous "coronal K line." And note the public reports that Newcomb gathered. The eclipse is described in a 218 page report in the Observatory's *Washington Observations for 1867 (1870)*, Appendix II. Steve Dick

***** Excerpt from *Sky and Ocean Joined*, The U. S. Naval Observatory, 1830-2000 *****

The official reports of the eclipses of 1869, 1870 and 1878 reveal the goals of the observations. For the 1869 event, Newcomb, Harkness and Eastman were sent to Des Moines, Iowa, while Hall was sent to the Bering Strait. Although Hall was troubled by clouds, the Des Moines party had favorable weather. For Newcomb the "main object" of observation was to search for anything near the Sun that normally could not be seen without an eclipse. "More especially was it determined to search in the neighborhood of the sun for an immense group of very minute intra-mercurial planets, the existence of which had been rendered so probable by the researches of LeVerrier on the motion of Mercury." Failing to detect any new planets, Newcomb then concentrated on studying the corona. Another important task for Newcomb was to compare the times of totality observed with the predictions from tables, again checking the theory of the motion of the Sun and Moon; Newcomb found discrepancies on the order of several arcseconds, or several tenths of a second of time. Finally, Newcomb had issued a call for observations by "intelligent citizens" of the duration of totality within one to 10 miles of the limits of totality. The several dozen reports for which Newcomb gave data testify to the avid interest of the public along the path of totality.

Harkness and Eastman set up at a site in the city separate

(Continued on page 32)

SETalk

from Newcomb (Fig. 5.18). Harkness had decided to use photographic techniques to obtain the times of contact, and "attached very little importance to the making of optical observations of the times of contact." His prime object was spectroscopic observations to learn more about the physical constitution of the corona, visible only during eclipse. The nature of the corona at this period was not at all understood. There were those who still believed it was an effect due only to sunlight passing through the Earth's atmosphere, or through a supposed lunar atmosphere. Using a spectroscope built by Desaga of Heidelberg for chemical purposes but greatly altered for his astronomical observations (Fig 5.19), Harkness obtained a coronal spectrum that was continuous except for a single bright green line, later known as the coronal line K 1474. He concluded from this single spectroscopic observation, as well as visual and photographic observations (Fig 5.20), that the corona was "a highly rarefied self-luminous atmosphere surrounding the sun, and, perhaps, principally composed of the incandescent vapor of iron." The true origin of the line, the first of many to be discovered, remained a mystery for seven decades until B. Edlén and others found their origin as resulting from iron atoms at high ionization levels at coronal temperatures exceeding 2 million degrees Kelvin .

The 1869 eclipse was also an early instance of the use of photography in astronomy, in some ways a preparation for the transit of Venus photographs five years later. In charge of the photographic telescope (Fig. 5.21) was Assistant Surgeon Dr. Edward Curtis, skilled in photography and sent on the expedition especially for that purpose. Curtis described the telescope and the photographic process in great detail in his report in the same volume of Washington Observations, giving a colorful picture of the state of the art at the time. He used the 7.75 inch Alvan Clark refractor, loaned by the Naval Academy for the expedition, and altered by instrument-maker William F. Gardner for photographic purposes. Making use of the experience of De la Rue with the 1860 eclipse in Spain and Vogel's photographs of the 1868 eclipse in Arabia, Curtis obtained 113 photographs of the partial phase, and two "exquisite" negatives of totality, so excellent in quality that Curtis believed they marked "an era in eclipse photography." Curtis's conclusions about the corona agreed with those of Harkness: "difficult and perplexing though it may be to conceive of an atmosphere that will exist above a layer of extremely rarefied hydrogen gas, yet the evidence afforded by these photographs that the corona is such an atmosphere seems incontestable."

From: Axel Harvey

In London, the 1 April 1764 eclipse attained over 86 per-

cent obscuration. It was also quite a long event - 2 h 55 m from first to last contact at London.

This information comes from www.calsky.com . It lets you find the local circumstances of an eclipse for any point on Earth, but it's not very user-friendly. Still, an excellent site.

From: Dr. B. Pfeiffer Tel.: 06131/3925317

Dear all, has anyone on the list additional information on the famous element coronium derived from the coronal K line. Had there ever been proposals how to include it in the Medeleev chart of the elements? In 1869, there were still some unoccupied places. Or did chemists disregard this observation as the spectral line of Helium? Up till now, in some chemist books on the elements, the discovery of Helium is cited under the year 1895 when the element was extracted from minerals containing Uranium.

Greetings from a nuclear physicist working in a nuclear chemistry institute on explosive nucleosynthesis! Bernd Pfeiffer

P.S.: There is nowadays again a search program going on to find small asteroids (vulcanoids) closer to Sun than Mercury. But now, they use two-seated fighter aircrafts or U2 spy planes.

From: Gale, George

> From: Robert Michaelson Sent: Monday, February 24, 2003 4:58 PM To: Gale, George; history of chemistry Subject: Re: Forward from H-ASTRO re: Coronium

>

> J. W. van Spronsen's "The Periodic system of chemical elements: a history of the first hundred years" (Elsevier, 1969) discusses, pp 227-228, etc., the case of "coronium". After talking of Lockyer's coronal observations, and speculation that he had discovered a new element, van Spronsen says "Mendeleev was fascinated by the assumed discoveries of new elements, but not by the discovery of the electroon, which interfered with his concept of the elementary essence of atoms. In 1904 he threw out suggestions as to the atomic weights of coronium and ether, calling the latter newtonium and regarding both as zerovalent elements. He assumed the ration of the atomic weights of helium and coronium to be 10, so that coronium would have an atomic weight of 0.4..."

>

> It seems that Mendeleev's instincts sometimes could lead him astray!

>

(Continued on page 33)

SETalk

> van Spronsen also discusses attempts of John William Nicholson, Kendall Emerson, and others to assign coronium.

>
> Bob Michaelson Northwestern University Library Evanston, IL USA rmichael@northwestern.edu

>
> At 03:33 PM 2/24/2003 -0600, Gale, George wrote: Here is a query from today's communications on H-ASTRO, during a discussion of the solar eclipses of 1869, '70 and '78. I'll forward any responses to HASTRO. g

From: Gale, George

More on coronium. g

> There is a discussion of coronium at <http://home.achilles.net/~jtalbot/spectra/Coronium.html>. It is not the same as helium. Lockyer observed a line in the eclipse of 1868 (a year before the one where a green "coronium" line was observed) that could not be identified as from a known element. He concluded it was a new element, which he named helium. The elements was isolated on earth in 1895 by Ramsey.

>
> I have the 1886 edition of Lockyer's "Studies in Spectrum Analysis". The chapter on elements present in the sun does not mention helium (or coronium), and the element is not listed in the book's index. Perhaps Lockyer had doubts. Keeping in mind that his discovery was based on a single line, the following sentence from the book (p. 245) is significant: "Where, however, there is only one line, as with Lithium, Rubidium, &c., the evidence cannot be considered final, and until a larger number of coincidences is determined, the presence of these metals in the sun's reversing layer can only be said to be probable." Marvin Margoshes

From: Gale, George

Here is a response from Chem-Hist. g

> --- From: Michael Gordin Sent: Monday, February 24, 2003 4:41 PM To: Gale, George Subject: Re: Forward from H-ASTRO re: Coronium

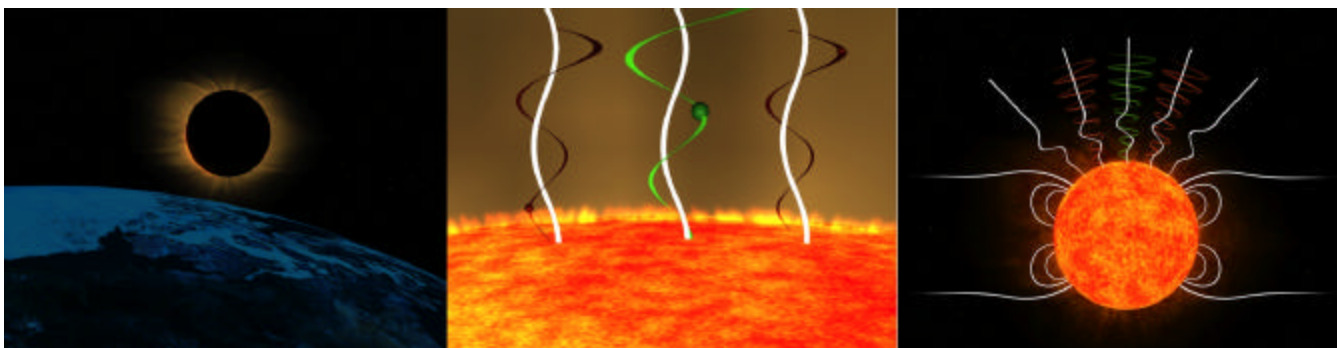
>
> Yes, there is actually a debate about coronium, especially where it is supposed to fit into the periodic table. There are two articles I can think of that address parts of these issues. The first is by me:

> Michael Gordin, "Making Newtons: Mendeleev, Metrology, and the Chemical Ether." Ambix 45 (1998): 96-115.

> And the second is on the "false" elements more generally:

> Karpenko, V. "The Discovery of Supposed New Elements: Two Centuries of Errors." Ambix 27 (1980): 77-102.

> I hope this is useful. Michael Gordin -- Michael D. Gordin, Ph.D. Society of Fellows Harvard University 78 Mount Auburn Street Cambridge, MA 02138 617-496-4329



Solar Wind by SOHO

SETalk

New Moon March 3, 2003

From: Rybrks1@cs.com To: SOLARECLIPSES@aula.com Date: Fri, 28 Feb 2003 07:11:47

The next new moon is March 3, 2003 at 02:36 UT

This new moon is quite close to the date of Feb 22, 2003 which marks splitting the nodes associated with the Dec 4, 2002 Australia/Africa TSE and the May 31, 2003 Scotland/Iceland ASE.

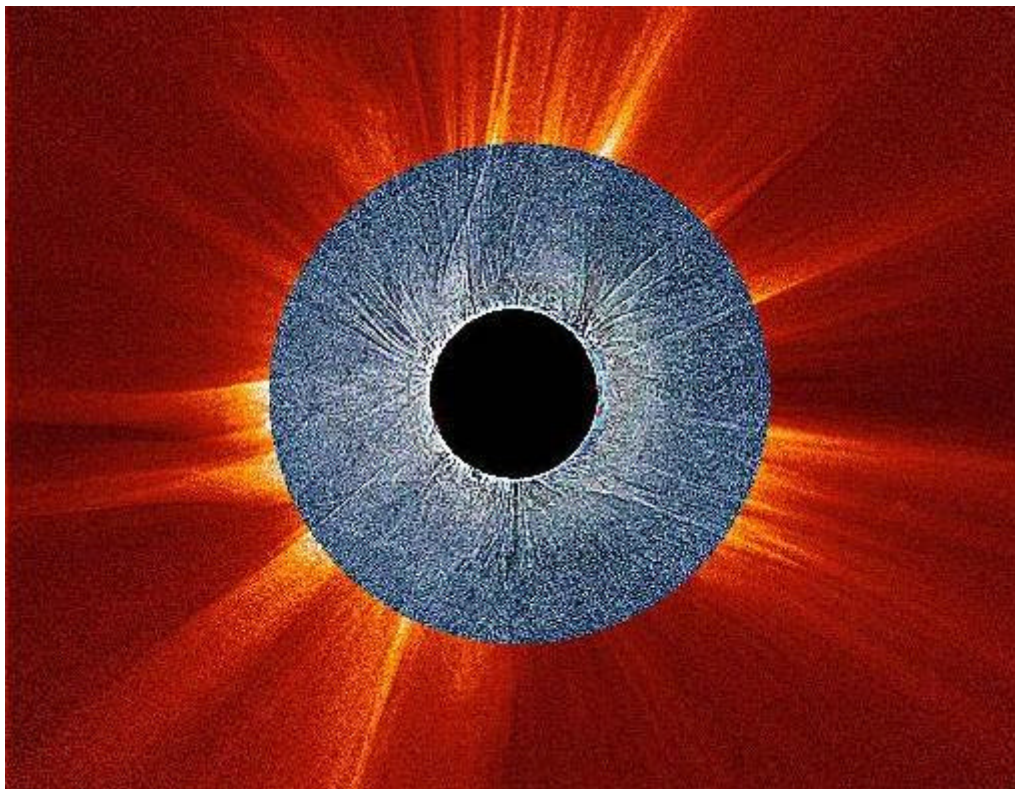
A new or full moon close to splitting the nodes means the saros in which each resides is nearly ending or just starting. This new moon is an old saros (number 33) and will end in only 14 more saros increments on July 23, 2237 and then evolve into saros 256. Saros 33 had 16 totals, 4 hybrids and 23 annulars. Saros 256 will have 21 totals, 14 hybrids and 7 annulars, coming back up to Earth in November 4851.

Since this new moon is quite far (late) from its descending node, its pass is very low beneath the Sun. We are enjoying clear weather in the midwest now and this old crescent is now rising about the same time as the Sun due to its southerly declination.

This new moon is rather distant so it would appear as an annular eclipse from the Earth's Vertical Centerline with a duration of 4 min, 37 seconds.

The full moon which occurred Feb 16, 2003 was also close to splitting the nodes and was very high above the ecliptic. These rather high (or low) full moons allow one to see under (or over) the terminator exactly at full moon; it is very apparent using even a small pair of binoculars. The full moon Feb 16 is in saros 230 and started 29 saros increments ago having evolved from saros 7 on March 1480.

Note that the evolution of both full moons (lunar eclipse) and new moons (solar eclipse) usually increase the saros number by 223 which is the number of new moons in one saros increment of 18 years 10 days. Raymond Brooks



**LASCO C2
composite 11
August 1999**

T
S
E2
0
0
2**TSE 2002 again (the rest of the images)**

From: Glenn Schneider To: SOLARECLIPSES@AULA.COM Date: Tue, 04 Feb 2003 07:47:44

FYI, I have (finally) posted the rest of the TSE 2002 images I had taken from Fortville Boire, South Australia to my web server. The URL is the same as before:

http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_02/TSE2002.html

but RELOAD if you have been there before to pick up the updated page. Glenn Schneider <http://nicmosis.as.arizona.edu:8000/>

From: Geoff

Glenn, Your compilation of images is absolutely fantastic. Well done. They are just absolutely beautiful. Your diamond ring photos are like no others... usually the delicate crescent sun is overexposed, but this is not so in your photographs. The golden totality is amazing, as is the perfect sunset sequence.

Congratulations on such a successful photographic program!! --Geoff The Total Solar Eclipse of December 04, 2002 - Report/Photogra

From: Bob Morris

What was the artistic license? Is this not the way the scene appeared? Bob Morris

From: Glenn Schneider

That image on http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_02/TSE2002.html *MAY* indeed be what it looked like from that location, but it was about 1.5 km from where we observed the eclipse. I said "artistic license" as it is a composite. The eclipse image is real enough, but the foreground image of the pond and the Lindon homestead were actually taken the morning after the eclipse. I put them together, post facto (and added the "reflection" of totality over the water) with the intention of indicating what it may indeed have looked like with a telephoto view. I didn't want to deceive anyone who looked at it casually. I had done this because the station owners/manager Raylene Ogilvy has asked me if I could send her a picture of the eclipse over her property, and I thought she (and others) might like one in this "artistically rendered" form. Glenn Schneider <http://nicmosis.as.arizona.edu:8000/>

From: Fabio Pettinati

Glen, Just for kicks, go back to Photoshop and apply a ripple

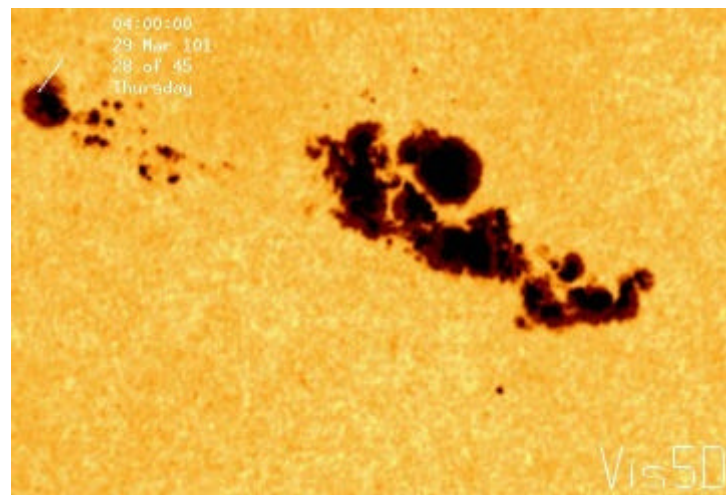
effect on the reflection on the water. Then your artistic license will be even more compelling... especially since composites are so prevalent today that yours is not even a little "pecadillo" :-). Fabio San Jose, CA

From: Glenn Schneider

Good idea. I had applied a TEXTURIZER effect to the semi-transparent and edge-gradient masked reflection layer to seem it to the water - but I'll try a ripple tonight (if I can generate a "matching" ripple to the water itself). Thanks. -GS-



Sunspot from SOHO WebPages



31 May 2003 Eclipse Lunar Limb correction

From: Stefano Rosoni To: SOLARECLIPSES@AULA.COM Date: Tue, 04 Feb 2003 17:14:21

Hello and a good day to all amateur astronomer and eclipse chasers!

After visiting the very good Espenak' site, (<http://s.unearth.gsfc.nasa.gov/eclipse/ASE2003/ASE2003.html>) it is obvious that a person wants to organize an eclipse expedition. In search of the best Icelandic place in which operate for the observation of next Solar Annular Eclipse, I was consider Espenak's Figure 1.7 (Lunar Limb Profile) and table 1.7 (Local circumstances for Iceland).

By disposition of curves in Fig. 1.7 it seems this time there will not be an enhancement of duration (as in 1999) but rather a depletion (sigh!), and for several minutes, in every city one will observe.

Therefore I asked me which would be the city or geographic site (in terms of coordinates) which represents the best choice for an eclipse expedition (besides we must consider a Sun elevation near zero, 2,9 degree at maximum eclipse, that means no mountains in the east-north-east horizon).

For example (data from table 1.7 and graphical calculation on figure 1.7):

Bakkagerdi 2° contact P=266° and 3° contact P=64° but Anthumbral Depth is 0.808 and Anthumbral Duration is 3m 34s; for these data depletion in time would be (on fig. 1.7) about 4 sec. It seems to be the less depletion, with a real duration of 3m 30s.

Bordeyri 2° contact P=255° and 3° contact P=75° but Anthumbral Depth is 0.999 and Anthumbral Duration is 3m 37s; for these data depletion in time would be (on fig. 1.7) about 8 sec. It would means a real duration of 3m 29 s, less than the former.

Is it correct and possible? Which other locations with advantages, if there are? Best regards and clear skies. Stefano Rosoni

A
S
E

2
0
0
3

Partial sunrise 2003

From: Marc Weihrauch To: SEML <SOLARECLIPSES@aula.com> Date: Tue, 11 Feb 2003 23:23:33

Dear eclipse chasers, I want to ask you a question about the "partial sunrise" of May 31, 2003. This is probably a question to those of you who have experience with low-altitude-events:

What will it look like? Well, I know what a partial eclipse looks like, but what may I expect the sky to appear?

In my home town Halle (Saale) at 12°E, 51.5°N we will have

First Contact at 2:32 UT 2.75° below the horizon
Sunrise (about 50% eclipse magnitude) at 3:01 UT (right at the horizon, I assume...)
Maximum (86.7%) at 3:27 UT 2.5° above the horizon
Last Contact at 4:26 UT 10.5° above the horizon



Such a deep partial will surely affect the colour & brightness of the sky. Towards maximum eclipse the sky should get slightly darker, but at the same time the rising sun should make it brighter. What do you think we will see? Will the early brightening stagnate at some point, will it even get darker again? Will we notice the beginning eclipse before sunrise by some subtle change in the dawning skies?

Any ideas would be appreciated. Perhaps someone who has already seen one or more sunrise or sunset eclipses can answer from memory, or perhaps someone can give a theoretical answer considering the extinction as a function of altitude. Best regards Marc

From: Robert B Slobins

I recall from 4 January 1992 that after sunset, the sky did indeed brighten for about 20 - 30 minutes. I was not timing it.

Some of you may have seen my partial eclipse image of last June. I did not use a metal filter; I shot the image at f/64 at 1/2000 using Fuji Velvia. The haze and cirroform clouds of the thunderheads attenuated the light. But that attenuation is unpredictable. I recommend being prepared for anything, take all precautions, have at least a fresh roll of film in the camera and bracket. cheers/rbs

From: solareclipsewebpages@btopenworld.com

Marc Weihrach wrote: What will it look like? Well, I know what a partial eclipse looks like, but what may I expect the sky to appear?

Sunrise eclipses are rather interesting. See the sunrise eclipse skybrightness curve in Uruguay in 1992 at

http://solareclipsewebpages.users.btopenworld.com/SECalendar_files/19920630.html

And the more or less sunrise eclipse in Bolivia in 1994 at

http://solareclipsewebpages.users.btopenworld.com/SECalendar_files/19941103.html

Uruguay had a sun altitude of 8 degrees at totality, while Bolivia, rather low at the start, 36 degrees at totality. Finland 1990 was only 4 degrees in the morning at totality, though my skybrightness measurements could not be recovered. Best regards, Patrick

2003 Iceland/Norway Annular Eclipse Tour

From: Howard L. Cohen To: solareclipses@Aula.com Date: Fri, 21 Feb 2003 02:56:55

Greetings, Readers of the eclipse list may be interested in a fascinating and spectacular tour to Iceland and Norway that includes observing the annular solar eclipse of 2003 May 31.

Continental Capers Travel & Cruise Center has arranged an exciting trip that combines a chance to view the annular solar eclipse from Iceland with scenic tours of this Island's natural wonders. This outstanding trip continues with visits to Oslo and Bergen that includes a seven-hour scenic rail trip between these cities, one of the world's most beautiful train rides.

A spectacular finish to this trip is a seven-day cruise along the imposing Norwegian coast to above the Arctic Circle where the midnight sun shines. "The World's Most Beautiful Voyage" is a phrase often cited about this cruise. The ship travels from Bergen to Kirkenes allowing visits to some of the most northernmost towns in the world. Here the Sun does not set from mid-May to nearly August and the Moon does not always rise (or set)!

All guests will have outside cabins aboard this modern Norwegian Coastal Vessel (NCV). Norwegian Coastal Ships provide life-lines to small communities along a stretch of coast characterized by vast distances, sparse populations and dramatic scenery. Passengers will thrill to sweeping views of ever-changing, breathtaking and thrilling scenery from the comfort of a deck chair or from the ship's glass-enclosed panoramic lounge.

This fourteen-day trip (2003 May 28 to June 10) is loaded with perks and amenities including:

- All air fares (Icelandair): New York to Reykjavík (Iceland) with return from Oslo (Norway)
- Three nights in Iceland
- Reykjavík city tour and scenic natural wonder tour in Iceland
- Transportation within Iceland to view the annular solar eclipse
- Icelandair from Iceland to Oslo, Norway
- A day in Oslo and Bergen, both with city tours
- Scenic seven hour Bergen Railway Train from Oslo to Bergen



A
S
E

- Best accommodations available including one of the world's leading five star hotels in Oslo
- All breakfasts and most other meals as specified in the itinerary
- Northbound seven day voyage on the MS Kong Harald, one of NCV's Contemporary Ships, to above the Arctic Circle
- All outside cabins on the MS Kong Harald
- All meals aboard ship
- Opportunity to purchase an optional escorted Norway shore excursion package at discounted price
- Added extensions available as options
- Tour limited to 30 guests

A Continental Capers travel specialist with more than twenty years experience in the travel business, and experienced local guides, will escort this tour. I will go along as a professional consultant (astronomer) and plan to give several enrichment talks during the trip.

Continental Capers Travel & Cruises, an American Express Travel Agency, has served travelers worldwide since 1970. This agency, has successfully taken small groups around the world on eclipse and nature tours at affordable prices.

Continental Capers Travel & Cruises has a very extensive and complete web site about this "Iceland and Norway Solar Eclipse Tour and Midnight Sun Cruise." Their web site details the eclipse, itinerary, hotels, cruise, shore excursions, costs and much more. See: <http://www.flycapers.com>

2
0
0
3

To reserve your space, contact: Continental Capers Travel & Cruises, Inc. 5522 NW 43rd Street, Suite A Gainesville, FL 32653-3301 USA

Telephone: 352-240-1004 Toll-Free: 800-446-0705 (USA and Canada) Fax: 352-378-0937 Email: marian@flycapers.com

Cheers, HLC - Howard L. Cohen Department of Astronomy P.O. Box 112055, University of Florida Gainesville FL 32511-2055 USA 352-392-2052, Ext. 211 cohen@astro.ufl.edu



T
S
E

Sneak preview

From: klipsi@bluewin.ch To: SOLARECLIPSES@AULA.COM Date: Sat, 08 Feb 2003 17:07:02

dear friends, sneak preview, you might want to bookmark this page ... <http://eclipse.span.ch/antarctica2003.htm> have a great weekend ! Klipsi

French language antarctica project

From: Klipsi To: SOLARECLIPSES@AULA.COM Date: Tue, 11 Feb 2003 22:09:08

dear friends, please visit www.antarctica2003.ch . school project from Geneva, with me, involving schools from France, Belgium, Canada. Klipsi

Eclipse painting contest

From: Klipsi To: SOLARECLIPSES@AULA.COM Date: Fri, 14 Feb 2003 05:10:11

dear friends, check out <http://eclipse.span.ch/antarctica2003.htm> we have now a contest open for kids of all ages to paint penguins and the eclipse. and to share their artwork. have fun ! Olivier "Klipsi" Staiger Pappazzo del cielo Satigny-Geneva Switzerland

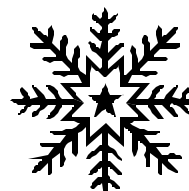
AIR OVER ANTARCTICA

A Unique View of a Total Eclipse of the Sun (Advertisement)

2
0
0
3

SKY & TELESCOPE and TravelQuest International, in cooperation with LanChile Airlines, announce an exclusive chartered flight over Antarctica to view the total solar eclipse on November 23, 2003. You'll see 2 minutes 26 seconds of totality (29 seconds longer than is possible from the ground) at an altitude of 38,000 feet, where you're practically assured of a cloud-free cosmic spectacle. Space is limited to 84 participants; optional pre/post tour packages of Chile are available.

For more information or reservations, contact TravelQuest International at 800-830-1998 (toll-free in the U.S. and Canada), +1 928-445-7754 (outside the U.S.), or send an e-mail to eclipse@tq-international.com. More details about the Antarctic eclipse tour will be available soon at <http://www.tq-international.com>.



Sky & Telescope to the South Pole

From Kelly Beatty

Dear Eclipse Enthusiast... Sky & Telescope magazine and TravelQuest International, in cooperation with LanChile Airlines, are proud to announce an exclusive chartered flight over Antarctica to view the total solar eclipse of November 23, 2003. Note that this airborne expedition will be dedicated to observing the eclipse -- this is not a modified sightseeing flight. To assure great eclipse viewing for everyone on board, we are limiting the capacity on our 266-passenger Airbus 340-300 aircraft to just 84 observers.

Our flight will depart from Punta Arenas, Chile, on the afternoon of Sunday, November 23rd, then intercept the eclipse path to provide 2 minutes 26 seconds of totality -- 29 seconds longer than is possible from the ground -- with the Sun positioned 12 degrees above the horizon. The planned intercept altitude of 38,000 feet will virtually assure that your view of this cosmic spectacle will be completely unhindered by clouds. Our LanChile aircraft is outfitted with state-of-the-art navigation systems, and our flight crew is dedicated to maximizing the duration of totality.

Of course, the scenery below will be breathtaking as well, and we will provide expert commentary about the Antarctic landscape. As an added bonus, we plan to fly directly over the Amundsen-Scott Station at the South Pole during our return to Punta Arenas!

This flight is tailored for eclipse observers of all interests and budgets. Professional-quality video and photographs will capture the event, with each traveler receiving keepsake copies, so you may simply enjoy this eclipse with your eyes. If you choose, you may purchase the exclusive use of a viewing window, which includes any adjacent seat, to assure plenty of room for you and your photographic equipment, or you may share a row with someone and save!

Traveling to the eclipse via Punta Arenas provides the shortest and most convenient routing for residents of North America, and you can take advantage of the special airfares we have arranged from LanChile's gateways in the U.S. and Europe.

In addition to the eclipse flight itself, we are offering an optional 6-night land package in southern Chile that includes a visit to famous Torres del Paine National Park and to the nesting site of more than 10,000 Magellanic penguins. You may also opt for one of our five pre/post-tour add-on programs, which include Machu Picchu, Easter Island, the Atacama Desert, the Chilean Wine Country, and a special Chilean Observatories tour.

Viewing seats start at just \$5,500 per person. As an incentive to book your reservation now, the first 27 travelers will receive guaranteed First Class or Business Class seating during the portions of the flight leading up to and following the eclipse. (We expect the flight to last approximately 12 hours.)

Please join us on this thrilling Antarctic experience! To reserve your space, contact TravelQuest International at 800-830-1998 (toll-free in the U.S. and Canada), +1 928-445-7754 (outside the U.S.), or send an e-mail to eclipse@tq-international.com. More details will be available soon at <http://www.tq-international.com>. Clear skies, Kelly Beatty Executive Editor SKY & TELESCOPE <http://SkyandTelescope.com>

Antarctica program availability

From: Roy Mayhugh To: Eclipse Chaser <roy@mayhugh.com> Date: Fri, 28 Feb 2003 21:17:28

Dear Clients, Both of these programs are nearly full and I expect both to fill up in the next week or so. Here are the specifics for each program: Total Solar Eclipse expedition to Antarctica - Team lecturers Dr. Fred Espenak and Prof. John Parkinson - 30 days on working ice breaker. Port Elizabeth, South Africa to Hobart, Tasmania (Australia). There is space for 9 people: 3 double cabins, 1 corner suite available and 1 single share (male non-smoker). For more information go to <http://astronomyvacations.com/antarctica.html>

If you wish to go on either vacation I urge you to call me as soon as possible. I will be in the office and available this weekend. Best Wishes, Roy --- Roy Mayhugh Astronomy Vacations by Mayhugh Travel Toll Free (888) 412-5317 Direct (760) 446-0050 Fax (760) 446-0049 <http://astronomyvacations.com>

Back from Antarctica!

From: Jen Winter - ICSTARS Astronomy To: sOLARECLIPSES@AULA.COM Date: Mon, 17 Feb 2003 07:33:22

Greetings everyone from "70 South". I'm back, survived, unpacked and very very excited about this upcoming eclipse expedition. I am working on my formal report and am finding it entirely too long to post to the group. I will therefore try to summarize what I feel will be important for this group; and post the remainder on the website when it is finished.

Basic details: I traveled to Cape Town for interviews, site inspections, and meetings with governing authorities and operations staff responsible for the expedition. - Then on Friday, February 7th - I flew from Cape Town to Antarctica's Novo station for 2 (long) days to inspect the location with the specific intent of viewing circumstances for our expedition in November.

Goals: Ascertain viability of the expedition and clear governmental requirements Confidently establish a viewing location with a zero-degree horizon for viewing the eclipse Inspect facilities at the Airstrip base-camp, Novolazarevskaya and Maitrii Collect weather and environment data relevant to eclipse viewing Make contact with staff at Novo and/or Maitrii for future communications. Develop a grasp of preparedness and packing requirements for expedition members. Pre-tour location and photograph the daylights out of it.

- I was successful in every count. I came back in one piece, and with an observing spot in-hand I feel 100% confident in for near- horizon eclipse viewing. I was surprised and amazed at a number of aspects. Here is a summary.

Eclipse Viewing location:

70deg 52.374' S

11deg 25.649' E

745m alt.

Zero-degree Southern horizon... - no obstructions.

Biggest Surprises: Height of accommodation: The base camp was well-prepared to host 50+ visitors in reasonable comfort. Scale: Nothing can prepare a mind for the size and distance of nothingness that is the Antarctic. Everything that seems a few hundred yards away is a few kilometers away. In dozens of my iceberg photos, I examined closer and found penguins and seals speckling the edges. Beauty: - I won't waste time attempting to describe this here. Temperature: Winter in the midwest is harsher than what we encountered there. Barely freezing temps were par. Camaraderie: The universal kinship between international strangers was deafening. Relentless daylight: Even after the Sun set in February, the midnight twilight was mentally confusing. Marvelous TOYS! Earthmovers, balloon-tire vehicles, prop-planes, snowmobiles, bulldozers and things I don't have names for became an intricate part of my day. I still don't know what that red

thing was, and am thinking of naming it Thor.

A few hours after landing, the intensity of the notoriety of being in Antarctica began to wane, and I was able to open my eyes and absorb the environment. The sensation grew and dimmed throughout the time there. When desperately grasping for any hope in translation to our Russian friends, we might as well have been standing in Montana. However, with a lens hanging out the open door of a bi-plane, soaring over splendid icebergs, sea ice and penguins, it all became a dream again.

Regarding the facilities and accommodations at the base-camp: The Airstrip base camp has 220 electrical power, dining, sleeping and toilet facilities in full-height polar tent-style. Operations for incoming guests are managed through the Airstrip base-camp - from here, all movement is coordinated. All base camp buildings are double-wall inflatable tents, heated by forced air ke rosene heat. The kitchen/mess tent is the common location for all visitors of all nationalities and expeditions. Guests sleep in heated 10-man tents on cots with sleeping bags - with electrical and bathroom service (w/hot water vanity) Travelers are supervised at all times and not permitted to separate from the group or wander off.

Regarding the science stations, Novolazarevskaya and Maitri: Neither station will be able to view the eclipse at the low altitude from anywhere at their stations. These spots are very low altitude, costal spots to the North of elevation and mountains. (Our spot will be 9.6km SW of the Airstrip base camp) Neither station have science officers working or terribly interested in Astronomy. Most studies are in earth-sciences areas, and microbiology. Both stations are using IMARSAT satellite communications; with email and telex only - and no web through their base communications. Maitri meteorologists indicate that the ice-fog is not typically a problem, that late November offer good aspects of clear sky, that weather systems come from the ocean (North the opposite direction of the eclipse viewing) with wind out of the SW.

T
S
E

My equipment findings showed no battery problems with Lion battery function. My GPS ran low on batteries (AA) after being left on for 2 days straight. Temperatures were not cold enough to prevent use of camera equipment without gloves for long periods of time. All-in-all, I only experienced 2 equipment difficulties: 1: Laptop was allowed to run completely down overnight and the battery failed to take a charge after being frozen. 2: Once, while in a heated vehicle, humidity condensed in my 80-200mm zoom lens and made its operation later in freezing temperatures stiff.

I brought back-up equipment everywhere and wish in retrospect to have trusted my first-string digital camera. I wish I had more electronic media. This would allow me to leave the laptop behind and just return with the chips. I wish I had taken the longer lens on the flight to 'the barrier', as much wildlife was seen. (I only had the 80-200mm) Carrying all of my gear, and juggling lenses in various pockets of my snowsuit was a big burden.

Equipment weight does not appear to be of great issue for the flight to Antarctica. Eclipse viewing with equipment shouldn't be a problem. Bulk and weight seem a liability in moving around between stations.

In all, I came with a healthy dose of fear for the unknown. I left with a high regard for the Russian mindset to conquer the elements through experience and determination. Naturally, with a better understanding of the environment, Antarctica may still be immense, distant and un-tamable, but it is certainly not unattainable or frightening to me anymore.

2
0
0
3

I will post my report within the next 2 days to: www.AstronomicalTours.net - under the reference: MIDNIGHT ECLIPSE

- I have much more data collected. Please ask if you have more questions. Clear Skies, Jen Winter - Owner JPL / NASA Solar System Ambassador ICSTARS Astronomy - www.ICSTARS.com Astronomical Tours - www.AstronomicalTours.net Southern Skies Star Party - www.SSSP.org StarGarden Foundation - www.StarGardenFoundation.org Astronomical League Reflector Editors - www.AstroLeague.org 660-747-9458

From: Glenn Schneider

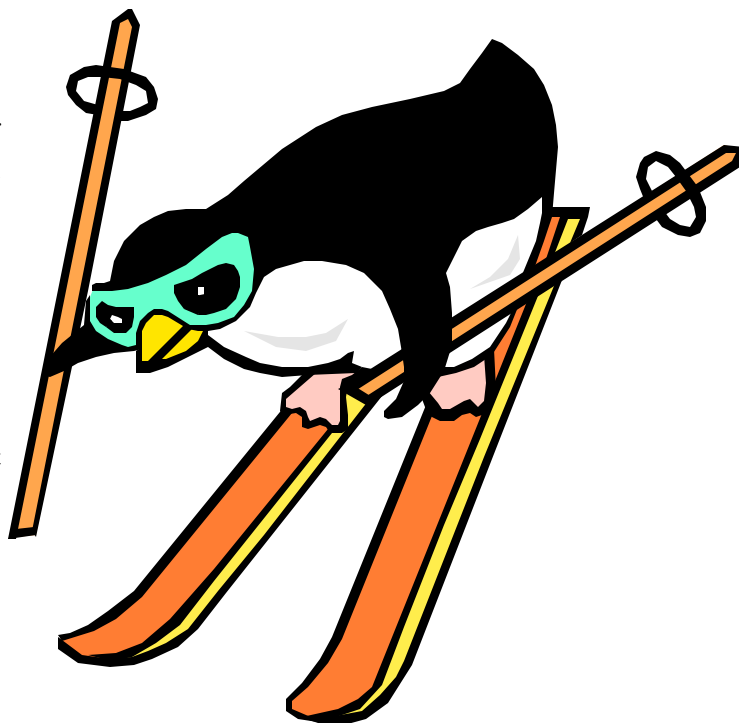
Welcome back. The Antarctic is indeed an awe inspiring place (at least until you have been there for too long...).

One thing you and others who will be 40,000 ft. below us for TSE 2003 may consider: "self-heating" gel packs. These are available from camping/outdoor suppliers, usually sold as hand or sock warmers - and last a few hours. I have used these successfully to keep electronic and mechanical equipment (such as laptops and cameras) warm and happy under thermally challenged conditions (as noted for example in http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_97/ECLIPSE_1997.html).

I never actually used them in the Antarctic when I worked there, as we provided electrically radiant heat as needed for equipment we installed, but these "heat packs" worked quite well in the Siberian winter. Glenn Schneider <http://nicmosis.as.arizona.edu:8000/>

From: Joan Kaufman

Hi, Jen - Three of us are seriously considering your trip. My son turns 21 on November 22, and my husband and I think that would be an awesome way for the three of us to celebrate together. My son has already been to one eclipse, in France a few summers ago. I am the "member" on the list and love reading everyone's reports!! So perhaps this time I'll get to see it too. Please send us more information about the trip as it becomes available. Best regards - Joan Kaufman





Joanne & Patrick

The sole Newsletter dedicated to Solar Eclipses



THE SOLAR ECLIPSE NEWSLETTER IS A MONTHLY NEWSLETTER ABOUT SOLAR ECLIPSES EDITED BY PATRICK POITEVIN & JOANNE EDMONDS. FINANCIAL SUPPORT FROM THE RAINBOW SYMPHONY.

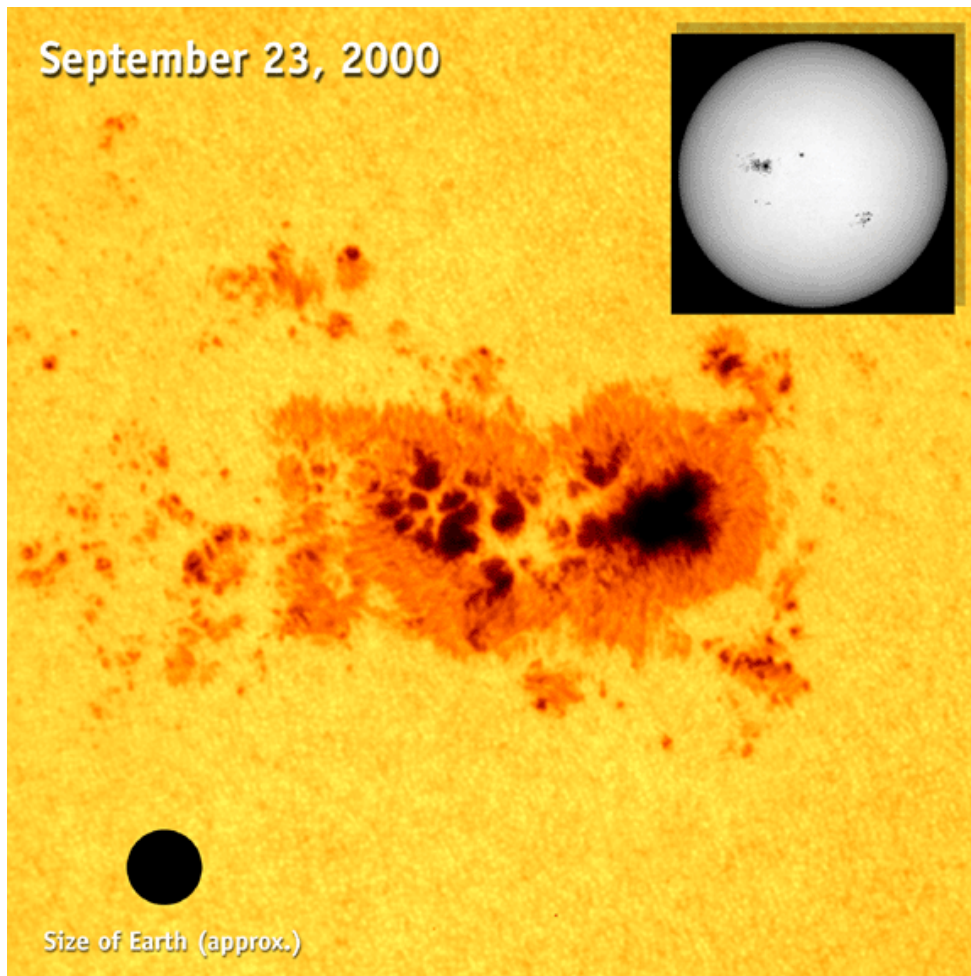
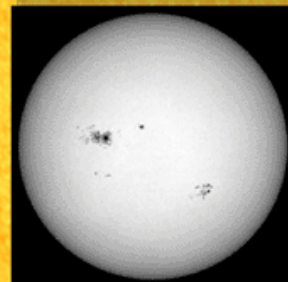


THE ELECTRONIC VERSION OF THE SOLAR ECLIPSE NEWSLETTER IS AVAILABLE ON THE WEB PAGE OF FRED ESPENAK.



THE SOLAR ECLIPSE NEWSLETTER IS FREE OF CHARGE, BUT IS NOT AVAILABLE IN HARD COPY.

September 23, 2000



From SOHO Web-Pages

Size of Earth (approx.)