Volume 8, Issue 4
SOLAR ECLIPSE NEWSLETTER

April 2003

SOLAR ECLIPSE NEWSLETTER

The sole Newsletter dedicated to Solar Eclipses

Dear All,

March is finished and here we have the March issue of the Solar Eclipse Newsletter. It seems that the total solar eclipse of December 4 is forgotten. Africa, Australia? You can still find reports on the various WebPages. See picture at the right by Geoff Sims from Australia.

This newsletter is rather thin in pages. Only 35 pages. Quite a few topics on Transits. May 7th is the Mercury Transit by the way. Do not miss that! The same month a Lunar Eclipse and as well "our" annular eclipse of 31 May. Joanne, Laura and Patrick will drive and fly up north to Scotland. Derryl and Pam Barr will join us on our trip and we can not wait to leave.

About another part of the mailing list will travel to Iceland. But any other destinations have not been reported, as yet. But there will be many of us going to the Antarctic for the total solar eclipse of 23 November. Quite a few trips and options are available in the meanwhile. Though, for the budget traveller, there is no option, unless watch form a live webcam...

The international Solar Eclipse Conference of 20, 21 and 22 August 2004 is getting some shape. Quite a list has been gathered for the speakers. As we write this newsletter intro, we have following speakers confirmed:

- Jay Anderson (Canada)
- Ralph Chou (Canada)
- Friedhelm Dorst (Germany)
- Fred Espenak (USA)
- Nigel Evans (UK)
- Mike Foulkes and Derek Hatch (UK)

- Pierre Guillermier (France)
- Peter Hingley (UK)
- Jean Paul Godard and Martine Tlouzeau (France)
- Barrie Jones (UK)
- Serge Koutchmy (France)
- Jean Marc Lariviere (Canada)
- Eli Maor (USA)
- Jean Meeus (Belgium)
- Chris O'Byrne (Ireland)
- Jay Pasachoff (USA)
- Vojtech Rusin (Slovakia) and Miloslav Druckmuller (Czech Republic)
- Eckehard Schmidt (Germany)
- F. Richard Stephenson (UK)
- Peter Tiedt (South Africa)
- Tom Van Flandern (USA
- Robert van Gent (The Netherlands)

We start soon with the WebPages to register. We try to finalize the entrance fees. As soon as we know some sponsors and donations, we will keep you posted.

And … keep those solar eclipse related messages coming …

Patrick & Joanne

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IN THE BODY OF THE MESSAGE TO listserv@Aula.com SUBSCRIBE 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.

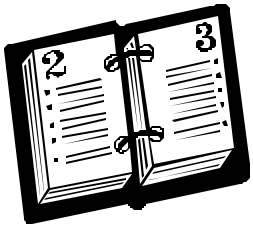
solareclipsewebpages@btopenworld.com

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 (listserver) 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 listserver. Only subscribers can send messages.

SECalendar



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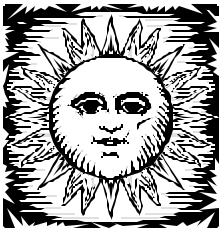

Dear All, Please find herewith the solar eclipse calendar (SECalendar) for April. If you have any additional information, queries or remarks, please drop us a mail.

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

http://solareclipsewebpages.users.btopenworld.com

April 01, 0637 Total solar eclipse on April's fool day. Beside this date, and the last and next April's fool day total solar eclipses in the years 740 and 2899, are these 3 total solar eclipses the only total solar eclipses on April 1 between 0 and 3000. April 01, 0740 is the last total solar eclipse on April's fool day. April 01, 1764 Annular eclipse visible in Ukkel and on April's fool day. The altitude was 42 degrees. The other central eclipses between 0 and 3000 where partial in Ukkel, Belgium: in 740 (total), 1621 (annular), 2136 (annular), 2899 total) with magnitudes 0.053; 0.553; 0.636; and 0.245. April 01, 1783 was the last solar eclipse on April fools day. This was a partial solar eclipse. The next solar eclipse on this day will be in 2098; also a partial solar eclipse. Next total solar eclipse on April's fool day is April 01, 2899.

April 01, 1764 "It will be Eclipse first, the rest nowhere." Dennis O'Kelly (at Epsom, 3 May 1769) (Quoted in The Penguin Dictionary of Quotations by Cohen and Cohen. In UK Solar Eclipses from Year 1, Sheridan Williams says: "One of the world's most successful racehorses was born around the time of this [annular eclipse of 1 April 1764] and was named Eclipse. The Eclipse Stakes, named after that horse, are still run today, and the horse of the year awards in the U.S. are called Eclipse Awards after him."). Ref. SW.

April 01, 1764 In a letter Reverend W. Stukely, Rector of St. George in Kent, to the Whitehall Evening Post (out of his dairy, volume XX p. 44): In regard to the approaching solar eclipse of Sunday April 1, I think it advisable to remark that, it happening in the time of divine services, it is desired you would insert this caution in your public paper. The eclipse begins soon after 9, the middle a little before 11, the end a little after 12. There will be no total darkness in the very middle, observable in this metropolis, but as people's curiosity will not be over with the middle of the eclipse, if the church service beordered to begin a little before 12, it will properly be morning prayer, and an uniformity preserved in our duty to the Supreme Being, the author of these amazing celestial movements. (Ref. SLK 06/99).

April 01, 1764 Probably the first solar eclipse map with the complete eclipse visibility (including the zone of partial phase) drawn by Robert Health in <A General and Particular account of the Annular Eclipse of the Sun of 1763 April 1>. Since 1830, the English yearbook The Nautical Almanac, published eclipse maps. (Ref. SLK 06/99).

April 01, 1970 Minor planet (1976) Kaverin 1970 GC. Discovered 1970 April 1 by L. I. Chernykh at Nauchnyj. Named in memory of Aleksej Aleksandrovich Kaverin (1904-1976), an instructor in astronomy at Irkutsk Pedagogical Institute, expert in the field of the theory of eclipses. (M 4190) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

April 01, 1976 Minor Planet (2849) Shklovskij 1976 GN3. Discovered 1976 April 1 by N. S. Chernykh at Nauchnyj. Named in honor of Iosif Samuilovich Shklovskij {1916-1985}, corresponding member of the USSR Academy of Sciences, professor at Moscow University and member of the staff at the Space Research Institute. A brilliant popularizer of astronomy, he has also made substantial contributions to research on the solar corona, galactic radio emission and various cosmic objects. (M 8543) Obituaries published in Astron. Zh., Tom 62, Vyp. 3, p. 618-619 (1985); Kosm. Issled., Tom 23, Vyp. 3, p. 495 (1985); Pis'ma Astron. Zh., Tom 11, No. 4, p. 319-320 (1985); Ríse hvezd, Vol. 66, No. 6, p. 113 (1985); Astron. Vestn., Tom 19, No. 4, p. 359-361 (1985); Sky Telesc., Vol. 70, No. 2, p. 109 (1985); Sov. Astron., Vol. 29, No. 3, p. 364-365 (1985); Sov. Astron. Lett., Vol. 11, No. 2, p. 131-132 (1985); Sterne, 61. Band, Heft 4, p. 232-234 (1985); Sterne Weltraum, 24. Jahrg., Nr. 8-9, p. 427 (1985); Zemlya Vselennaya, No. 4, p. 44-46 (1985); Astron. Zh., Tom 63, Vyp. 5, p. 835-838 (1986); Q.J.R. Astron. Soc., Vol. 27, No. 4, p. 700-702 (1986); Sov. Astron., Vol. 30, No. 5, p. 495-497 (1986). Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

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April 01, 1976 Minor Planet (4165) Didkovskij 1976 GS3. Discovered 1976 April 1 by N. S. Chernykh at Nauchnyj. Named in honor of Leonid Vladimirovich Didkovskij (1948-), astrophysicist and deputy director of the Crimean Astrophysical Observatory {see planet (1725)}. He is known for his research on the brightness oscillations of the sun, for his development of scientific instrumentation for the Soviet space telescope "Astron" and for his work with the active main mirror on the 1.7-m Space Telescope "Spectrum UV", an international project. (M 34340) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

April 01, 1976 Minor planet (4683) Veratar 1976 GJ1. Discovered 1976 April 1 by N. S. Chernykh at Nauchnyj. Named in honor of Vera Petrovna Tarashchuk, an astrophysicist at the Astronomical Observatory of Kiev University. An active observer of major planets, minor planets and comets, she is known for her contribution to photometric and spectroscopic research on minor bodies. She also studied the association of cometary processes with solar activity, as well as the structure and rotation of minor planets. (M 30095) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

April 02, 1925 Death of Johann Palisa, Austrian astronomer. Discovered 125 minor planets (Ref. A by EE). He gave many names of Minor Planets to solar eclipse related places or persons. He also observed eclipses.

April 02, 1952 Death of Bernard Ferdinand Lyot in Cairo, French astronomer and engineer. Studied polarization of moonlight and planets. Later mainly solar research. Constructed coronograph in 1930 and the 'lyot-filter' or monochromatic polarizing filter.

April 02, 1998 Launch of Trace, American Satellite for research of the sun in UV and XUV.

April 03, 0033 "And I will show portents in the sky above, and signs on the earth below - blood and fire and drifting smoke. The Sun shall be turned to darkness, and the moon to blood, before that great, resplendent day, the day of the Lord, shall come." Peter in Acts of the Apostles. This reference to a blood-red Moon, and the following references in the Gospels to a darkening sky, have been interpreted as placing the date of the crucifixion to 24 November AD 29, when there was an eclipse of the Sun, or Friday, 3 April AD 33, when there was a partial eclipse of the Moon over Jerusalem. Ref. FE 01/01.

April 03, 1976 Minor planet (3493) Stepanov 1976 GR6. Discovered 1976 April 3 by N. S. Chernykh at Nauchnyj. Named in memory of Vladimir Evgen'evich Stepanov (1913-1986), a corresponding member of the former Soviet Academy of Sciences, well-known for his work in solar physics and solar-terrestrial relations. For many years he led the solar researches at the Siberian Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation, and he did much for the development of astronomy in Siberia. (M 20835) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

April 04, 1807 Death of Joseph Jerome le Francois de Lalande (1732-1807), French astronomer. Calculated the distance of the sun in 1771 to 154,198 mio km. (Ref. Rc 1999)

April 06, -0647 (648BC) "Nothing can be surprising any more or impossible or miraculous, now that Zeus, father of the Olympians has made night out of noonday, hiding the bright sunlight, and . . . fear has come upon mankind. After this, men can believe anything, expect anything. Don't any of you be surprised in future if land beasts change places with dolphins and go to live in their salty pastures, and get to like the sounding waves of the sea more than the land, while the dolphins prefer the mountains." May refer to a total solar eclipse of 6 April 648 BC. Archilochus, Greek poet (c680-640 BC). Quoted in Historical Eclipses and Earth's Rotation, by F. Richard Stephenson, Cambridge University Press, 1997, page 338. Partly quoted in Encyclopaedia Britannica CD 98. Ref. FE 01/01

April 06, -0647 (648BC) "Zeus, the father of the Olympic Gods, turned mid-day into night, hiding the light of the dazzling Sun; and sore fear came upon men." Archilochus (c680-c640 BC), Greek poet. Refers to the total solar eclipse of 6 April 648 BC. Ref. FE 01/01

April 06, 1852 Sir Edward Sabine (1788-1883) mentioned a correlation between sunspots and magnetic disturb on earth. (Ref. Rc 1999).

April 06, 1855 Minor Planet (34) Circe Discovered 1855 April 6 by J. Chacornac at Paris. Named for the enchantress, daughter of the Sun, celebrated for her knowledge of magic and venomous herbs. Circe changed the companions of Odysseus {see planet

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(1143)} into pigs. She had no influence on Odysseus because Hermes protected him. Odysseus lived a year with Circe, his friends were retransformed into men. (H 6) The planet was named by the members of Paris observatory. Ref. Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

April 06, 1916 Minor Planet (857) Glasenappia Discovered 1916 April 6 by S. I. Belyavskij at Simeis. Named in honor of Sergej Pavlov Glasenapp (1848-1937), director of the Observatories in Pulkovo (1870-1877) and St. Petersburg (1893). Glasenapp worked on visual binaries and on the satellites of Jupiter. He observed the transits of Venus and Mercury and several solar eclipses. Glasenapp was a founder of the Russian Astronomical Society. (H 84) Glasenapp is also honored by a lunar crater. Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

April 08, 1652 ". . . [the Sun was reduced to] a very slender crescent of light, the Moon all at once threw herself within the margin of the solar disc with such agility that she seemed to revolve like an upper millstone, affording a pleasant spectacle of rotatory motion." Dr Wyberg, observing the total solar eclipse of 8 April 1652 at Carrickfergus, Scotland. Ref. SW.

April 08, 1947 Largest sunspot group ever observed. Surface 18.1 billion square km.

April 08, 1968 Death of Harold Delos Babcock, American astrophysics. Studied laboratory spectra, magnetic field of the sun, constructed solar magnetograph.

April 09, 1046 <Ch'ing-li reign period, 6th year, 3rd month, day hzin-szu, the first day of the month. The Sun was eclipsed by 4 1/2 divisions. At 3 marks in the hour of shen it was restored> Wen-hsien, T'ung-k'ao, chap283 (Ref. PG 3/99)

April 09, 1567 Christoph Clavius (1537-1612) witnessed two spectacular Eclipses of the Sun in the space of 7 years. <The other I saw at Rome in the year 1567 also about midday in which although the Moon was placed between my sight and the Sun it did not obscure the whole Sun as previously but a narrow circle was left on the Sun, surrounding the whole Moon on all sides.>. Clavius 1593 p 508 In sphaeram Ioannis de Sacrobosco, Commentarius. (Ref. EJ 98, PG 3/99)

April 09, 2043 The only non-central total solar eclipse in that century. The central line of this total solar eclipse is missing the surface of the earth near the North Pole. The last century there weree 3 such total solar eclipses: 19 May 1928, 23 October 1957 and 2 November 1967 all near the South Pole. The years 1957 and 2043 do have two non-central solar eclipses while also the central line of the annular eclipse does miss the earth. (Ref. SLK 6/99).

April 10, 0628 <36th year of Empress Suiko, spring, 2th month, 27th day. The Empress took to her sick bed. 3rd month, 2nd day. There was a total eclipse of the sun. 6th day. The Empress' illness became very grave and death was unmistakably near. 7th day. The Empress died at the age of seventy-five> Translation Aston 1972, p155 (Ref. PG 3/99)

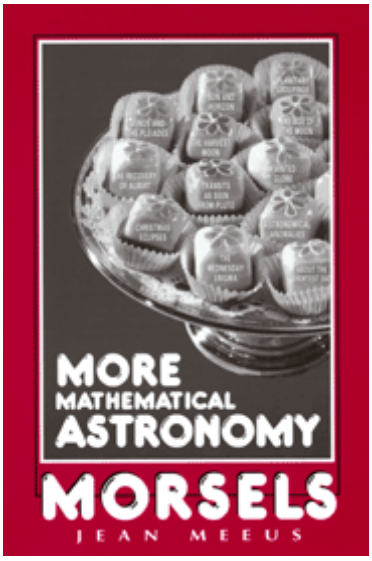
April 10, 1698 This was the last total solar eclipse visible on Tahiti. Not that strange in time, but knowing that the next will be 2 March 2910. Ref. JM 09/99.

April 10, 1813 Death of Joseph Louis Lagrange (1736-1813), French mathematician and astronomer. Described the 3 points, later called Lagrange Points.

April 11, -0368 (369 BC) <Artaxeres II, year 35, month XII. In 6 deg daytime 1/3 of the disk was covered> British Museum tablet 37097 and 37211 (Ref. PG 3/99)

April 11, 1176 "In this year 1487 (Seleucid), on New Sunday, the 11th of the month of Nisan [April], at daybreak, at the end of Office, that is, after the reading of the Gospel, the Sun was totally obscured; night fell and the stars appeared; the Moon itself was seen in the vicinity of the Sun. This was a sad and terrifying sight, which caused many people to lament with weeping; the sheep, oxen and horses crowded together in terror. The darkness lasted for two hours; afterwards the light returned. Fifteen days after, in this month of Nisan at the decline of Monday, at dusk, there was an eclipse of the Moon in the part of the

New Book Jean Meeus



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sky where the eclipse of the Sun had taken place . . ." Refers to a total solar eclipse at Antioch of 11 April 1176. From: Chronicle of Michael the Syrian. Ref. FRS 1997.

April 11, 1176 "In this year the Sun was eclipsed totally and the Earth was in darkness so that it was like a dark night and the stars appeared. That was the forenoon of Friday the 29th of Ramadan at Jazirat Ibn 'Umar, when I was young and in the company of my arithmetic teacher. When I saw it I was very much afraid; I held on to him and my heart was strengthened. My teacher was learned about the stars and told me, 'Now, you will see that all of this will go away', and it went quickly." Refers to a solar eclipse of 11 April 1176. Jazirat Ibn 'Umar is now Cizre in Turkey. From: Ibn al-Athir.. Ref. FE 01/01.

April 11, 1176 "The Sun was eclipsed and it became dark in the daytime. People were frightened and stars appeared." Refers to the solar eclipse of 11 April 1176. From: Imad al-Din, Islamic. Chronicle of the crossing of the Orontes River, near Hamah (in present-day Syria) by Saladin and his army. Quoted in Encyclopedia Britannica CD 98. Ref. FE 01/01.

April 11, 1176 (Sunday) <In this year 1487 (Seleucid), on New Sunday, the 11th of the month of Nissan, at daybreak, at the end of Office, that is, after reading the Gospel, the Sun was totally obscured, night fell and the stars appeared, the Moon itself was seen in the vicinity of the Sun. This was sad and terrifying sight which caused many people to lament with weeping, the sheep, oxen and horses crowded together in terror. The darkness lasted for two hours, afterwards the light returned. Fifteen days after, in this month of Nissan at the decline of Monday, at dusk, there was an eclipse of the Moon in the part of the sky where the eclipse of the Sun had taken place> Chronicle of Michael the Syrian, book XX, chap 3, translation from the rendering into French by Chabot (1905, vol3, p367). Ref. PG 3/99

April 11, 1862 Birth of William Wallace Campbell (1862-1938), American astronomer. Studied spectra of comets, corona and atmosphere of the sun. (Ref. Rc 1999). Dr. Campbell had been to many total solar eclipses: 1898 in India, 1900 in Georgia, 1905 in Spain and 1908 in Flint Island of the South Pacific. He had been to other total eclipses as well, but on the ones just mentioned he had secured spectra of the sun's chromosphere, the pinkish-hued atmo s-phere of the sun that gives, when the moon covers the bright, shining surface, a spectrum of bright lines.... Ref. SENL 04.02.

April 11, 1875 Death of Samuel Heinrich Schwabe (1789-1875), German amateur astronomer. Searched for the planet in the orbit of Mercury. Discovered in 1843 the sunspot cycles. (Ref. Rc 1999)

April 11, 1898 Birth of Robert d'Escourt Atkinson at Rhayader in Wales. On November 01, 1948 the Eclipse Comet, only 2 degrees from the Sun, and observed during totality in Nairobi, Kenya, photographed by R. d' E. Atkinson. After, the comet was observed till April 3, 1949 in the southern hemisphere. Ref. The Bibliographical Dictionary of Scientists, edited by David Abbott, 1994.

April 12, 1851 Birth of Edward Walter Maunder F.R.A.S. in Middlesex, England. Died 1928, March 21, Greenwich, London, England. Ref. MK 5/99

April 12, 1889 Death of Warren de la Rue (1815-1889), UK. Royal Society also mentions 12 or 19 April 1889. Warren de la Rue (1815-1889), UK and Angelo Secchi (1818-1878), Italy, use photography during a solar eclipse in Spain to demo n-strate that prominences (and hence at least that region of the corona) are part of the Sun, not light scattered by the Earth's atmosphere or the edge of the Moon, because the corona looks the same from sides 250 miles apart. (Ref. Rc 1999)

April 13, 1763 The only central eclipse which will be visible in Mecca (21.4333N and 39.8166E) and in the (mathematical) Ramadan month is the annular eclipse of Wednesday 13 April 1763 or on 29 Ramadan 1176.

April 14, 1905 Death of Otto Wilhelm von Struve (1819-1905) in Karlsruhe, Russian astronomer. Discovered 547 double stars, studied rings of Saturn and parallax of the Sun. (Ref. Rc 1999)

April 14, 1972 Launch of Prognoz 1, Russian satellite for research of the sun and X-rays.

April 14, 1976 Helios 2, German Solar mission comes close to the sun at 43,4 million km.

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April 14, 1991 Minor planet (6558) Norizuki 1991 GZ. Discovered 1991 April 14 by K. Endate and K. Watanabe at Kitami. Named in memory of Sojiro Norizuki (1912-1995), founder of Norizuki Technical Works. Under the guidance of H. Tanaka, he constructed the first parabolic antenna for solar observations in Japan in 1949. He was later engaged in the construction of the interferometer at the Nobeyama Solar Radio Observatory and for other radio telescopes. After 1972 he extended his work to infra red and optical telescopes. (M 30099) Name proposed by the second discoverer following a suggestion by K. Tomita. Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

April 15, -0135 (136 BC) <Year Se 175, month XII. the 29th, at 24 deg after sunrise, solar eclipse, when it began on the south-west side, in 18 deg day towards noon it became entirely total> British Museum tablet 34034 and 45745, translation Hunger (Ref. PG 3/99)

April 15, -0656 (657 BC) <On the 28th day, at 2 1/2 double hours of the day in the west it also covered 2 fingers towards it made an eclipse> Assyrian British Museum tablet, translation Hunger 1992, p63 (Ref. PG 3/99)

April 15, 1707 Birth of Leonhard Euler (1707-1783), Swiss mathematician and astronomer. Observed the transit of Venus in 1769 and concluded that the sun has a distance of 151.225.000 km. (Ref. Rc 1999)

April 15, 1985 (5100) Pasachoff 1985 GW. Discovered 1985 April 15 by E. Bowell at Anderson Mesa. Named in honor of Jay M. Pasachoff, Field Memorial professor of astronomy, director of the Hopkins Observatory and chair of the astronomy department of Williams College, Williamstown, Massachusetts. Pasachoff's broad range of astronomical research has centered on the sun, and especially on studies of solar eclipses. He is also well known for an extensive series of college-level textbooks and popular-astronomy textbooks and articles. Besides being an indefatigable public lecturer, Pasachoff has served as chairperson of the astronomy section of the American Association for the Advancement of Science, as a committee member of the American Association of Physics Teachers and on the Astrophysics Council of the National Aeronautics and Space Administration. (M 21956) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

April 15, 1997 Dr. Richard Tousey, a physicist and long-time employee at the Naval Research Lab, died of pneumonia at Prince Georges Hospital Center on 15 April 1997; he was 88. One of his experiments involved an expedition to Peru to observe a Solar Eclipse at sunset from an airplane. The experiment came to nothing because the 4 engine airplane lost 2 engines over the Andes mountains. Fortunately the airplane managed to return safely.

April 16, -1177 (1178BC) ". . . and the Sun has perished out of heaven, and an evil mist hovers over all." Said to refer to a total solar eclipse of 16 April 1178 BC. From: Homer (Greek), The Odyssey (8th century BC).

April 16, 1893 As per E.S. Holden, Schaeberle discovered a comet like object on the plates of the eclipse from Chili. The comet was 0,8 moondiameters from the moon. In May 1894 Schaeberle identified the comet on the plates of the British eclipse expeditions to Brazil and Africa, and the measured distances were respectively 1,15 en 1,5 moondiameters.

April 16, 1993 Minor Planet (6201) Ichiroshimizu 1993 HY. Discovered 1993 April 16 by K. Endate and K. Watanabe at Kitami. Named in honor of Ichiro Shimizu (1923-1996), who began work for the Tokyo Astronomical Observatory in 1945 and was heavily involved in the construction of the Corona Observing Station on Mt. Norikura. He was later a key astronomer in the solar physics division of the Observatory until he retired in 1984. (M 29146) Name proposed by the second discoverer following a suggestion by K. Tomita. Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

April 17, 1912 Previous central solar eclipse in Belgium, prior to 1999. This eclipse of April 17, 1912 was annular (nearly total) in Belgium. The line of centrality went just west of Paris. The weather in Paris and London (and also surrounding areas) was absolutely perfect. This may have been, in 1912, the most observed eclipse in history. In a ma-


7/2/03 De Standaard

Zonsverduistering wiegt boom in slaap

"Eclipse makes tree asleep"

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jor Paris newspaper, an observer likened one phase of the eclipse to <an engagement ring>. Since an engagement ring traditionally has diamonds, unless anyone can find an earlier reference, this is the very first eclipse at which what we now know as Baily's Beads were liked to <diamonds>. Ref Bob Morris 04/01 SEML

April 18, 0497 Marcellini: "Comitic V.C. Chronicon" "(A. C. 497.) Ind. V, consulship of Anastasius Aug. solar eclipse happened." The Annals of Ulster, The Chronicon Scotorum, The Annals of Tigernach (Ireland) AU496, CS493, AT497: "An eclipse of the sun was visible." Ref. SENL 0402.

April 18, 1955 Death of Albert Einstein (1879-1955), American theoretical physicist, mainly known for his relativity. (Ref. Rc 1999)

April 19, 1064 The first solar eclipse in russian chronicles (letopises), described together with famous apparition of comet Halley (of Hastings). "The year of 6573 [Byzantian era: 5508 should be subtracted, but the beginning of the year could be March or Septem-ber] ... These times there was a portent on the East: the star great, having beams as bloody, rising from evening after sunset and was for 7 days ... Before this time and the sun changed, and was not bright but as a crescent it was." Ref SENL0402.

April 19, 1882 Minor Planet (225) Henrietta Discovered 1882 April 19 by J. Palisa at Vienna. Named in honor of the wife of the French astronomer Pierre J. C. Janssen (1824-1907), pioneer of solar spectroscopy and director of the Meudon Observatory. (H 27) Named (BAJ Circ., No. 213 (1883)) by P. J. C. Janssen. Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

April 19, 1989 Warren de la Rue (1815-1889) died in London. Warren de la Rue (1815-1889), UK and Angelo Secchi (1818-1878), Italy, use photography during a solar eclipse in Spain to demonstrate that prominences (and hence at least that region of the corona) are part of the Sun, not light scattered by the Earth's atmosphere or the edge of the Moon, because the corona looks the same from sides 250 miles apart. (Ref. Rc 1999). January 15, 1815 born in Guernsey UK as oldest son of Thomas de la Rue, a printer. Ref. The Bibliographical Dictionary of Scientists, edited by David Abbott, 1994.

April 19, 1941 Minor planet (3892) Dezsö 1941 HD. Discovered 1941 April 19 by L. Oterma at Turku. Named in honor of the Hungarian astronomer Dezsö Loránt, an old friend of the discoverer, founder of the Observatory for Solar Physics in Debrecen and its director for many years. (M 18454) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

April 21, 1697 Of the 14 summits, higher then 8000 meter, this total solar eclipse is visible on 7: Mount Everest, Lothse, Makalu, Cho Oyu, Dhaulagiri, Manaslu, and Annapurna.

April 23, 1984 Minor planet (4478) Blanco 1984 HG1. Discovered 1984 April 23 by W. Ferreri at La Silla. Named in honor of Carlo Blanco, professor of astronomy at Catania University. Known for his intense activity in the observation and analysis of the mutual eclipses of the major satellites of Jupiter and Saturn, he is also involved in international campaigns devoted to observations of minor planets and the Pluto-Charon system. Furthermore, he has contributed to the study of solar-type stellar activity, in particular to analyses of stellar chromospheres and coronas. (M 17224) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

April 24, 1932 Minor Planet (1862) Apollo 1932 HA. Discovered 1932 April 24 by K. Reinmuth at Heidelberg. This object is named for the god of the Sun, child of Zeus and Leto {see planets (5731) and (68)}. (M 3758) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

April 24, 1967 Images of Surveyor 3 have been made of the 24 April 1967 lunar eclipse. This was a lunar eclipse across East Asia, Australia and the Pacific. Surveyor 3 made unusual views of a lunar eclipse: A total solar eclipse as seen from the moon. (Ref. OE by R, S, 1995). The crew of Apollo 12 visited Surveyor III in 1969. They brought back the Streptococcus mitis bacterium which was 31 months on the moon. Surveyor III camera system operated by having a TV camera aim up through a tube to a rotating mirror, which can be turned by radio command on Earth. Because the

(Continued on page 8)

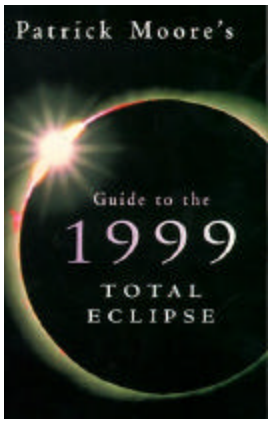
SECalendar

spacecraft tilted, a view of the earth was visible (which was not foreseen). The lunar eclipse of 24 April 1967 was video filmed. Surveyor III, and Jet Propulsion Lab scientists saw a beautiful scintillating ring of sunlight, refracted through the Earth's atmosphere. Very colorful and splendid. The halo was broken into beads. These beads have been measured by filters and their colors plotted on a chromatically diagram. Temperature took a plunge from 100 Fahrenheit to - 150 Fahrenheit (minus). There was another eclipse of the sun by the Earth on October 18, 1967 and Surveyor V was functioning then. Unfortunately, the mirror could not be tilted to see the Earth, although temperature measurements were obtained. Apollo 12 also brought back its TV mirror, the first human articraft to catch light from a lunar eclipse on the moon, to its makers on Earth. (Ref. S, LE O 1943-1993, FG)

Picture by Friedhelm Dorst

April 25, 0822 <C'hang-ch'ing reign period, 2nd year, 4th month, day hsin-yu. The first day of the month. The Sun was eclipsed> Chiu-t'ang-shu, chap36 (Ref. PG 3/99) This eclipse was also visible on 4 of the 14 summits, higher then 8000 meter: Mount Everest, Lothse, Makalu, and Cho Oyu. Ref. PA 06/00.

April 25, 1979 Minor planet (3885) Bogorodskij 1979 HG5. Discovered 1979 April 25 by N. S. Chernykh at Nauchnyj. Named in memory of Aleksandr Fyodorovich Bogorodskij (1907-1984), Soviet astrophysicist, director of the Astronomical Observatory of Kiev University, well known for his works on Einsteinian gravitation, solar physics and planetary nebulae. (M 19693) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg



April 26, 1957 (Sir) Patrick Alfred Caldwell Moore launched his first program, the longest running show on television The Sky at Night. He is host of the program without a break. He observed many solar eclipses and he showed them many times in his program. (Ref. A-S 3/98)

April 28, 1774 Birth of Francis Baily (1774-1844) in Newbury, Berkshire, British astronomer and Co-founder of the Royal Astronomical Society. Baily's beads have been named to him although Edmond Halley (1656-1742 or 1743) did notice them before. Baily studied the phenomenon more in detail. (Ref. Rc 1999). Died in London 30 August 1844. Ref. The Bibliographical Dictionary of Scientists, edited by David Abbott, 1994.

April 29, 1921 Birth of Cornelis de Jager, Dutch astronomer. Studied the Sun and solar eclipses. Still active astronomer and gives many lectures.

April 29, 2014 Next annular solar eclipse which will not be a central solar eclipse on earth. This limit solar eclipse is like the one of 3 October 2043 a miss, the two only exceptions next century. The central line of the solar eclipse will not be visible on earth. Both central lines are near the South Pole. This century there where as well two misses, 18 March 1950 near the North Pole and 30 April 1957 near the South Pole. The value of Gamma for the April 29, 2014 eclipse will be (to 3 significant figures) exactly equal to minus 1.000 (-1.000). This is fairly rare. Following solar eclipses that have a value of Gamma equal to 1.000 (both positive and negative) at maximum eclipse

(Continued on page 9)

SECalendar

are -1339 Jul 03 (A-), -1320 Jun 04 (T+), -0869 Sep 25 (A+), -0196 Feb 01 (P), 2014 Apr 29 (A-), 2507 Apr 13 (A-) and 2662 Jan 12 (A+). (Ref. SLK 6/99 and Michael Gill 4/01).

April 30, -0462 (463 BC) In his book, Les Eclipses de Soleil, M.G.Bigourdan mentioned four eclipse comets. Besides the ones of 418, 1882 and 1893, he notes that Posidonius did observe a comet during the eclipse in -462. No other references have been found.

April 30, -0462 (463BC) "Beam of the Sun! O thou that seest from afar, what wilt thou be devising? O mother of mine eyes! O star supreme, reft from us in the daytime! Why has thou perplexed the power of man and the way of wisdom by rushing forth on a darksome track? Art thou bringing a sign of some war, or wasting of produce, or an unspeakably violent snow-storm, or fatal faction, or again, some overflowing of the sea on the plain, or frost to bind the earth, or heat of the south wind streaming with raging rain? Or wilt thou, by deluging the land, cause the race of men to begin anew? I in no wise lament whate'er I shall suffer with the rest!" "God can cause unsullied light to spring out of black night. He can also shroud in a dark cloud of gloom the pure light of day" Both these quotation probably refer to the solar eclipse of 30 April 463 BC, which was nearly total at Thebes. Pinder (Greek poet) Ninth Paean, addressed to the Thebans. Quoted in Historical Eclipses and Earth's Rotation, by F Richard Stephenson, Cambridge University Press, 1997, page 344, and, in part, in Encyclopedia Britannica CD 98. Ref. FE 01/01.

April 30, 0059 Simultaneous eclipse in Italy and Armenia: Pliny, "Natural History", Pliny, II, 180, LCL, v.330. "An eclipse of the sun that occured on April 30 in the consulship of Vipstanus and Fonteius a few years ago was visible in Campania between 1 and 2 p.m. but was reported by Corbulo commanding in Armenia as observed between 4 and 5: this was because the curve of the globe discloses and hides different phenomena for different localities." Tacitus, "The Annals", XIV, 12 "There occurred too a thick succession of portents, which meant nothing. A woman gave birth to a snake, and another was killed by a thunderbolt in her husband's embrace. Then the sun was suddenly darkened and the fourteen districts of the city were struck by lightning. All this happened quite without any providential design; so much so, that for many subsequent years Nero prolonged his reign and his crimes." Tacitus, "The Annals", XIII, 41 "Corbulo then encamped on the spot, and considered whether he should push on his le-gions without their baggage to Artaxata and blockade the city, on which, he supposed, Tiridates had fallen back. [...] Then too there was a wonderful occurrence, almost a divine interposition. While the whole space outside the town, up to its buildings, was bright with sunlight, the enclosure within the walls was suddenly shrouded in a black cloud, seamed with lightning-flashes, and thus the city was thought to be given up to destruction, as if heaven was wroth against it." Cassius Dio, Roman History, LXII, 16, LCL, Translation by Earnest Cary "Nevertheless, in the midst of the sacrifices that were offered in Agrippina's honour in pursuance of a decree, the sun suffered a total eclipse and the stars could be seen." Ref. SENL 0402.

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

Best regards, Patrick and Joanne

Another Cornish Eclipse

PROPER CORNISH, the Bodmin-based "real pasty" manufacturer, has installed two Eclipse print and apply labelling systems from Alpha Dot as part of a packaging line modernisation programme.

The fully automatic, stand-alone machines with integrated conveyors are installed on both the company's chilled and frozen packaging lines, increasing the efficiency of its packing operation by over 200 per cent. Using thermal transfer head technology, they are said to print labels "with exceptional clarity"

Bodmin-based Proper Cornish has installed two Alpha Dot Eclipse print and apply labellers

the quantity required. Once printed and applied the labels are read by a barcode reader for print clarity and as a check of case content and label information.

Proper Cornish produces over 60 different lines. Its current 65,000 item/day throughput represents over 30,000 cases/week, with packing operations running 24 hours a day, six days a week. The company supplies businesses ranging from from shops and small bakeries to supermarket chains.

Says Proper Cornish production director Gerald Allen:

SEScannings

Index SENL March

Dear all, Please find herewith the Index of the March 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.

The SENL can be downloaded free of charge. You only need Adobe Acrobat Reader on your computer. For Adobe see

http://www.adobe.com/products/acrobat/readstep2.html

.../...

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

SENL March 2003 NOW ONLINE!

From: Fred Espenak To: SOLARECLIPSES@AULA.COM Date: Mon, 10 Mar 2003

Joanne Poitevin has prepared a new issue of the SENL (Solar Eclipse Newsletter) for the month of March 2003. The details are:

SENL - 2003 March (1.3 MB pdf file*)

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

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*)

SENL - January 2002 - Part A (0.7 MB pdf file*)
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SENL - February 2002 (1.2 MB pdf file*)
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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/). Thanks again for the hard work Joanne! - Fred Espenak

SETalk

A great comet and an eclipse nearly 93 years ago...

From: John Leppert To: SOLARECLIPSES@AULA.COM Date: Sat, 01 Mar 2003 23:02:57

Friends, I thought you may enjoy reading the following excepts form a long defunct weekly newspaper, the Hansboro News. Today, Hansboro is a very small community, perhaps less than 15 souls. It's located in northeastern North Dakota within 3 miles of the North Dakota/ Manitoba international border. The following appeared in the paper nearly 93 years ago as pioneer farmers were planting their spring crops. Using calendar generating software, it appears from the edition dates that it was published on Fridays. The first excerpt appeared in the 6 May 1910 edition...

>Haley's Comet will be its brightest on May 18.

Note the spelling; that date fell on a Wednesday. The last excerpts are from the 20 May edition. Since the paper was published on a Friday, the previous Monday mentioned below would have fallen on 16 May. Lastly, I have no idea whether or not my grandfather and great uncle were in town to perhaps deflect the heaven-sent thunderbolts the great comet had been forecasted to produce when earth's orbit swung the planet through Halley's tail...

>LOCAL NEWS

>Did you see the comet?

>ECLIPSE AND COMET

>Monday evening being a very clear evening, many citizens had the pleasure of witnessing a total eclipse of the moon at about the hour of 11:00 and also observing in the western sky at the same time the much heralded comet which was plainly visible to the naked eye. This is a strange coincidence and a sight that was never witnessed in the history of the comet and may never occur again. The comet will probably continue to make periodical visits and there will be more eclipses, but the chances for them to appear simultaneously is one in many thousand.

>There was all sorts of speculation as to the effect the tail of the comet would have upon the earth, when the earth passed through its tail but up to the present time we have not hearing of any calamity to either the earth or the tail. When last seen the comet was making its get-away and it's several million of miles of tail was unimpaired and the earth was none the worse for having come in contact with it. The most delicate instruments failed to show the slightest tremor of the earth.

>Leppert Bros of Sarles, local agents and J.T. Horr, state agent for Dodd & Struthers lightning rods were in town Wednesday with an auto load of fixtures, looking for business.

John Leppert

From: Fraser Farrell

Actually, given that Halley is a naked-eye object for a couple of months before & after perihelion, there is more than a "one in many thousand" chance that a solar or lunar eclipse will occur during its visits. If you stretch these times to include Halley's small binocular visibility then your chances are greatly increased.

The 1758-1759 apparition presented no naked-eye opportunities, but Comet Halley was a 3rd magnitude object during the total solar eclipse on 1835 November 20. Totality crossed western and southern Africa; and astronomical calculation was good enough in those days to have predicted the circumstances. Was the comet noticed?

And during the total lunar eclipse of 1986 April 24; lots of us watched a 5th magnitude Comet Halley enliven that boring bit of sky between Crt and Hya. I even saw a short dust tail without binoculars...

But Halley won't repeat its 1910 or 1986 performances soon. It isn't naked eye during the total lunar eclipses of 2061 (April 4, 11th mag, and September 29, 8th mag), nor for the total solar eclipse on 2061 April 20. The 2136 return presents no decent opportunities either.

Of course this doesn't prevent a great comet swooping in at short notice to enliven our future eclipses. Many of you will recall Hale-Bopp's appearance during the 1997 March 9 total solar eclipse! cheers, Fraser Farrell

Delta T

From: Jean Meeus Date: Wed, 05 Mar 2003 06:53:31

On 2003 February 1, the difference Delta T between the uniform Dynamical Time and the Universal Time was 64.49 seconds. Jean Meeus

SETalk

An unusual eclipse challenge ...

From: Daniel Fischer To: SOLARECLIPSES@AULA.COM Date: Thu, 06 Mar 2003 12:34:50

Recently my mother discovered an old black and white postcard showing the thin crescent of a solar eclipse through smoke from a fire (see http://www.astro.uni-bonn.de/~dfischer/challenge.jpg for a full view and http://www.astro.uni-bonn.de/~dfischer/challenge2.jpg for a detail) - only the name of the photographer ("Dipl. Ing. Popp") is given on the back but no hint about the date or place.

>From the way the postcard was produced (it's a direct print from the negative) and its labeling I guess it was made in (West) Germany, some time between, say, 1945 and 1970. Playing around with Redshift I think that of the 'famous' eclipses in that interval (that were deep partials in Germany) the one of Feb. 15, 1961 fits quite well.

The 'challenge' is now to p r o v e that the picture does indeed show this eclipse, i.e. that there is one and only one solution to the inverse problem presented here, and to determine limits for the time and locationgvg. Any takers? Daniel Fischer

From: Michael Gill

Daniel, The first step is to try and find the altitude of the Sun when the picture was taken:

I estimated the distance from the centre of the Sun to a point on the picture where I guessed (sorry for the low precision) the horizon would be. The Sun is about 16 diameters (~8 degrees) above the arbitrary point that I assigned as the horizon.

So, we can discount any solar eclipse for the 1945-1970 time span that you give, where the Sun doesn't pass through 8-degrees altitude as seen from West Germany.

Second piece of information is that the eclipse was of quite a large magnitude as the Sun passed through this altitude. The location where the photograph was taken had to be reasonably close to the path of a central eclipse.

Looking at Fred's maps for the time span given...

http://sunearth.gsfc.nasa.gov/eclipse/SEatlas/SEatlas2/SEatlas1941.GIF

http://sunearth.gsfc.nasa.gov/eclipse/SEatlas/SEatlas2/SEatlas1961.GIF

...The two best candidates in my opinion are the TSEs of 1954 and 1961:

http://sunearth.gsfc.nasa.gov/eclipse/SEplot/SEplot1951/SE1954Jun30T.gif

http://sunearth.gsfc.nasa.gov/eclipse/SEplot/SEplot1951/SE1961Feb15T.gif

Of these two candidates, the 1954 eclipse would have been at maximum fairly close to local noon in Germany a few days past summer solstice, so it would have been nowhere near 8-degrees altitude while the eclipse magnitude was so great.

A winter eclipse would be a much better fit, which might explain why the deciduous trees look bare.

The crescent Sun is consistent with a location north of the central line. Germany was to the south of the 1954 TSE track.

Some of my assumptions are a bit crude, but I agree with you – for the picture to have been taken in West Germany between 1945 and 1970, the 1961 eclipse is the best candidate. Cheers, Michael Gill

From: Klipsi

using www.cybersky.com , here is what the eclipse looked like at 9 AM in Berlin, on Feb 15 1961, with the Sun at 12 deg. elevation >

http://eclipse.span.ch/berlin.gif

so, it is quite likely the 1961 Feb 15 TSE.

P.S. are there pinetrees in the Berlin area ? the postcard shows pinetrees. Could be a bit further south, Alps or Black Forest. No big difference . Klipsi

From: J.P. van de Giessen

Daniel, First are there further details on the backside of the postcard like a stamp (to determe the year of sending, most stamps are only used for some years), publisher etc.

If the photo was made in 1961 in Germany, totality was about 95%. On http://www.deutsches-museum.de/ausstell/dauer/astro/sofi1.htm and http://www.nzz.ch/dossiers/dossiers1999/sonnenfinsternis/sonne19610216.html there are some photos made in Germany about this eclipse, maybe we can compare them with the photo.

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If the photo was made in 1954 see http://www.nzz.ch/dossiers/dossiers1999/sonnenfinsternis/sonne19540627.html for some drawings made in Zurich. Jan Pieter van de Giessen

100,000 and thanks

From: Fraser Farrell To: eclipses <solareclipses@aula.com> Date: Wed, 05 Mar 2003 16:57:34

To all, A modest milestone: my website on the 2002 Dec 4 eclipse received its 100,000th visitor a couple of hours ago.

And thanks for the 1000+ messages of appreciation rece

33rd anniversary

From: Evan Zucker To: SOLARECLIPSES@AULA.COM Date: Fri, 07 Mar 2003 08:49:26

Happy 33rd anniversary for those of us who got our first taste of total eclipses on 7 March 1970. I remember it well! -- EVAN

From: Jim Low

I remember that eclipse well-- it was my second. My first was in 1963 -- so my 40th anniversary is coming up soon.

Several of us who have been on a number of eclipses together keep talking about reunions. There are plans for the six of us who travelled together and observed the eclipse of 1973 in board the "Canberra" off the coast of Africa, to get together this June, for the 30th anniversary. Wouldn't it be nice if we could make it a BIG reunion of that eclipse for all those who were on the "Canbera" for that eclipse?

I've decided we should hold eclipse reunions at regular intervals, and suggest 18 years plus 10 or 11 days. ;-) Jim Low

From: Kidinvs@aol.com

I thought Id throw in my 2 cents worth... I, too, saw my very first Solar Corona 33 years ago... In Va. Beach USA. I swore that I would see another. I have now seen 8. But it was 33 years ago that I caught the "bug".... and it will never go away. Rick Brown EclipseSafaris

Réunioin 1874 mystery photograph

From: Gent van R.H. To: HASTRO-L@LISTSERV.WVU.EDU Date: Wed, 12 Mar 2003 15:20:48

Hi, In the Utrecht Observatory archives relating to the Dutch Transit of Venus expedition of 1874 to the island of Réunion (Indian Ocean) there is a photograph that we think is misplaced:

http://www.phys.uu.nl/~vgent/images/reunion_1874.jpg

The Dutch astronomers in the expedition were J.A.C. Oudemans, P.J. Kaiser and E.F. van de Sande Bakhuyzen with their assistants but none of these persons appear on this photograph.

During the homeward journey from Réunion to Aden (5 to 20 January 1875) on the 'Dupleix', the Dutch astronomers travelled together with a company of British and German astronomers from Mauritius including David Gill, J.G. Lohse, ?. Löw & Carl Frederick Pechüle (cf. Dun Echt Observatory Publications, vol. 3, chpt. IX & XIII).

There is a possibility that some of these persons are portrayed on the above photograph and I would be grateful if any list members could either verify or refute this.

Otherwise, the photograph may be totally unconnected with the 1874 Transit of Venus expedition and date from perhaps around 1900. Nr. 1 on the photograph does in fact somewhat resemble the Utrecht astronomer Antoine A. Nijland though on later photographs in the observatory collection he usually wears glasses.

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

From: Thomas R. Williams

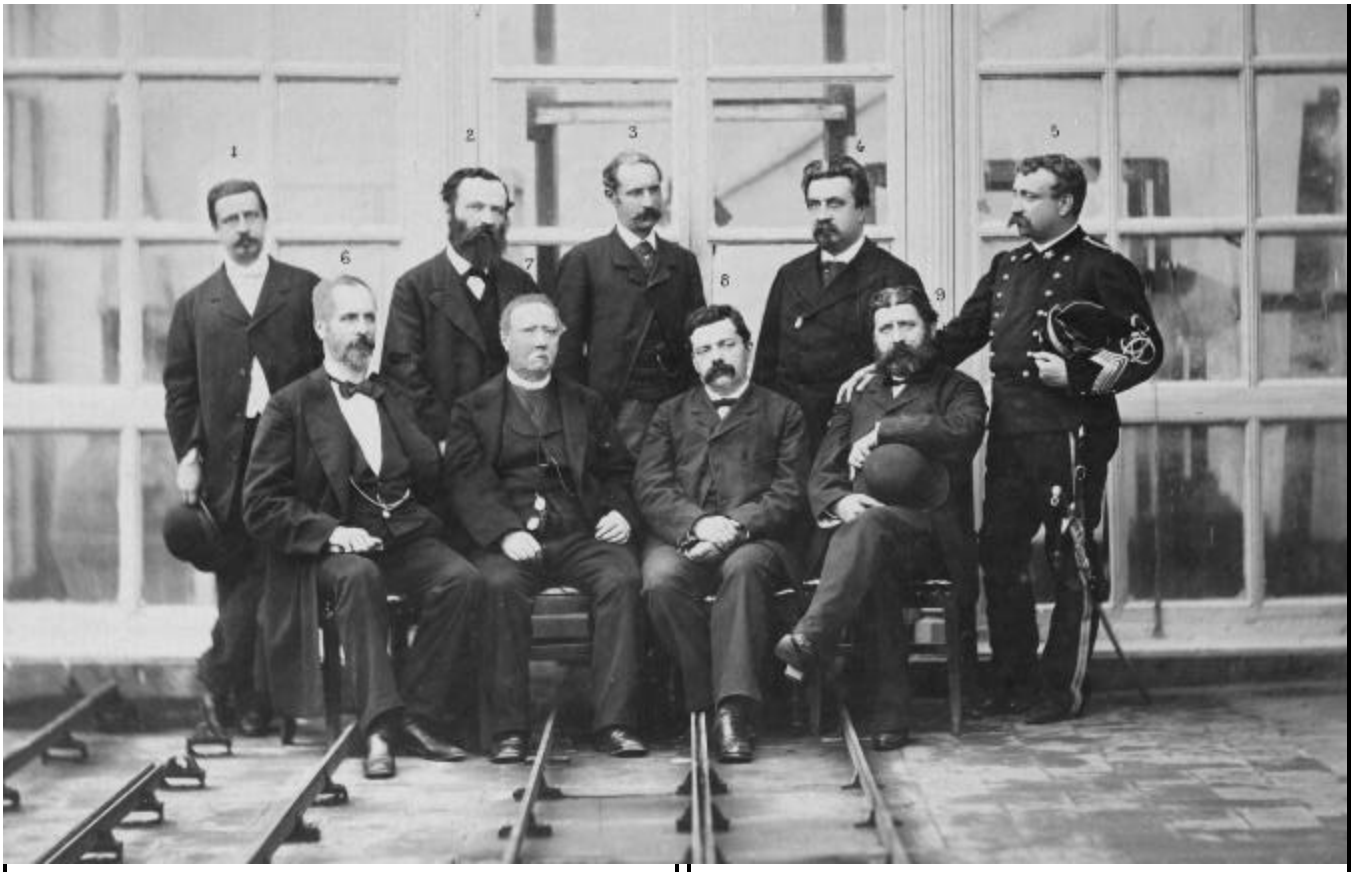
This may not be much help, but the person identified as 6 in this picture bears some resemblance to David Gill. The problem with making this identity is that all the portraits of Gill to which I have access were likely taken some twenty-five years later. See

Evans, David S. Under Capricorn: Southern Hemisphere Astronomy, Adam Hilger, 1988 page 99

Moore, Patrick and Pete Collins. The Astronomy of Southern Africa. Robert Hale and Company, 1977. page 72

(Continued on page 14)

SETalk



Warner, Brian. Astronomers at the Royal Observatory Cape of Good Hope. A. A. Balkema, 1979. page 81

What you really need is a much younger picture of Gill to establish this identity. Perhaps the ASSA or ROCGH can come up with a better comparison portrait. Thomas R. Williams, Associate Editor Biographical Encyclopedia of Astronomers 1750 Albans Road Houston, TX 77005-1704 trw@rice.edu http://www.ruf.rice.edu/~trw

From: Joe Tenn

I also thought no. 6 might be David Gill, and that was before Tom's message. Number 2 bears some resemblance to Henry Draper (see http://americanhistory.si.edu/archives/images/d8121-1.jpg) who directed the photographic department of the U.S. commission to observe the transit of Venus (see http://www.phys-astro.sonoma.edu/BruceMedalists/Huggins/HugginsesDrapers1.html). Draper died in 1882. Cheers, Joe Tenn http://phys-astro.sonoma.edu/people/faculty/tenn/

From: Barbara Becker

oops -- I got out the magnifier and discovered that the caption under the lower illustration reads "MORE members of the various Expeditions". I was wondering how come there were 14 people in the picture!!!

===

According to Eli Maor (_June 8, 2004: Venus in Transit_, 2000; p. 120) Gill observed the transit from Mauritius. I'm still sifting through the section on the 1874 transit to see what else is there to glean -- there's a neat photo on p. 116 of an article from the Daily Graphic (New York) with illustrations of two group portraits -- the top one shows the Irish expedition and the lower one is simply identified as "Nine members of the various Expeditions" -- no names. It's not based on the same photo posted, however.

From: Barbara Becker

just one more note regarding Gill -- Hermann Bruck discusses in great detail the mounting of the transit exped to Mauritius in _Lord Crawford's Observatory at Dun Echt: 1872-1892_ (1992). On page 92, we find the following:

"Having dispatched to Dun Echt an abundance of observational data for analysis Gill left Mauritius on January 8,

(Continued on page 15)

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1875. He sailed in the company of two members of the Mauritius-based German expedition first to the island of Reunion to compare chronometers with those of a Dutch expedition stationed there, and then via the Seychelles to Aden and Suez."

Perhaps the photo in question was taken at this later time, and does include Gill after all.

From: R.H. van Gent

Wayne Orchiston wrote: The following message just appeared on a history of astronomy list, and you may like to respond to its sender

Hi Wayne, Thomas, Joe, Barbara & Mary, Thanks so far for all your kind help in trying to interpret my 1874 Réunion mystery photograph.

http://www.phys.uu.nl/~vgent/images/reunion_1874.jpg

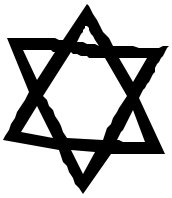
Mary Bruck has replied to me (off list) that nr. 4 looked vaguely familiar but she could not yet suggest a name.

Mary Bruck also wrote "Number 6 is not David Gill Gill had dark hair at that stage, in fact his hair was still dark in 1884 when his portrait was painted - the one in the Royal Astronomical Society, reproduced in Bruck's paper Vistas in Astronomy 35, page 81, 1992. There is a photo of him somewhere in ROE taken at Dun Echt in 1874 showing him with a scraggly small black beard. Also, Lohse was not on that expedition. He was appointed to Dun Echt only in 1877."

Nr. 2 was suggested to perhaps be Henry Draper. I see a small problem here as (if I am not mistaken) Draper did organize the photographic department of the U.S. commission to observe the transit of Venus but did not actually travel with the expedition.

Of course, it is very well possible that the photograph does not portray any astronomers at all. Presently I am exploring the possibility that it may just be a group of citizens of Saint-Denis (the capital of Réunion) who assisted or took an interest in the Dutch ToV expedition (although then one would then expect that the Dutch astronomers would also be included on the photograph). Regards,

Lets Talk Stars with David Levy



From: Jen Winter - ICSTARS Astronomy To: SOLARECLIPSES@AULA.COM Date: Tue, 18 Mar 2003 06:13:06

David and Wendee Levy have invited Vic and Jen Winter again on their weekly radio program, "Let's Talk Stars" again Tuesday, March 18th to talk more about their upcoming Land-Based Antarctic Eclipse expedition.

David and Wendee are guest-hosts for the land-based program at the Antarctic Novo station via a flight out of Cape Town. David's radio program is broadcast live on local radio station, KTKT 990 Tuscon , but is archived on the internet. Here, listeners can tune-in from anywhere in the world to listen.

Tuesday will be the our second appearance on the radio program. The topic for the previous broadcast of February 25, 2003 was "Observing a Solar Eclipse at midnight". We expect to answer further questions about the eclipse and our successful site inspection visit of February of 2003.

Transmissions are not broadcast live on the web, but rather archived in Real Player streaming audio files off the website, www.LetsTalkStars.com Yours, Vic & Jen Winter JPL / NASA Solar System Ambassador www.icstars.com www.StarGardenFoundation.org 660-747-9458

SETalk

Original 'Canon der Finsternisse' for sale

From: Wil Carton To: SE <SolarEclipses@Aula.com> Date: Mon, 24 Mar 2003 11:21:49

For sale: "Canon der Finsternisse", author Prof. Theodor von Oppolzer, published 1887 by the Imperial Academy of Sciences in Vienna, Austria. This unique book is a very rare, original copy of the famous 'eclipse-bible' that contains calculated details of all 8000 solar eclipses and 5200 lunar eclipses from 1208 BC untill 2162 AD. With 34 pages geometrical introduction in the German language, 320 pages solar eclipse elements enabling you to compute exact contacttimes and locations, 160 charts approximated solar eclipse paths, 52 pages lunar eclipses (date, times, magnitude). The american monthly "Sky and Telescope" of November 1989 dedicated a four pages memorial paper to this monumental book.

The present rare copy was part of the inheritance of the Dutch professor George van den Bergh (1890-1966) and is now put up for sale by his descendant family.

The demand price is $ 800 or EUR 800, plus shipping.

People who wish to negotiate seriously with familymembers Van Den Bergh are invited to send e-mails to mr. Wil Carton in Holland: wil_carton@hotmail.com

BAA Meeting about 04. Dec 2002 eclipse

From: solareclipsewebpages@btopenworld.com To: SOLARECLIPSES@aula.com Date: Thu, 20 Mar 2003

Went last night to the BAA meeting and was delighted to see the different presentations of latest total solar eclipse. Following people had a presentation: John Mason, Nick James, Mike Maunder, Nigel Evans, Derek Hatch and Mike Foulkes.

It was a pleasure when Mike Foulkes mentioned our organised meeting Totality Day TD2003. We always appreciate when our efforts, such as the Solar Eclipse Mailing List (SEML), the Solar Eclipse Newsletter (SENL), the international Solar Eclipse Conference (SEC) and Totality Day (TD) are mentioned or published. Too often we see non of it is mentioned or referred in publications or meetings, although we know that information of SEML mails have been used. Thank you Mike, we really appreciate you mentioned TD2003 in the BAA meeting. Patrick

IAU WG on Transit of Venus

From: Sara Schechner To: HASTRO-L@LISTSERV.WVU.EDU Date: Sun, 23 Mar 2003 23:20:03

Steve, I notice an error in your last message.

At 10:11 AM 3/21/03 -0500, you wrote: IAU Commission 41 Working Group on Transit of Venus -- Objectives
>.....
>9) working with the Scientific Instrument Society in developing a joint transit of Venus web site.

It should read the Scientific Instrument Commission of the IUHPS/DHS. We are different from the SIS. Sara Schechner Secretary of the Scientific Instrument Commission /and/ member of the SIC Transit of Venus Committee

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Plaques for the transit of Venus

From: dick.steve@USNO.NAVY.MIL To: HASTRO-L@LISTSERV.WVU.EDU Date: Fri, 21 Mar 2003

Peter, A plaque commemorating one of the 8 American Transit of Venus expeditions in 1874 is located in Queenstown, New Zealand. It reads "From this site a transit of the planet Venus across the solar disc was observed on 1874 December 9 by an American scientific expedition which came to Otago in the ship Swatara." The plaque is pictured on p. 272 of my history of the US Naval Observatory, Sky and Ocean Joined (CUP, 2003), at the end of a long chapter on the American expeditions of 1874 and 1882. When I last saw the plaque in 1986, it was somewhat hidden in a grove of trees; I understand there is now a hotel on the site, but that the plaque has been incorporated into the hotel somehow.

As the new chair of IAU Commission 41 Working Group on Transits of Venus (taking over from Wayne Orchiston), I would appreciate any information relevant to the charge of the Working Group, listed below, particularly # 3 on ToV sites marked/preserved, or sites that could be marked, just as Peter and the RASC are doing in exemplary fashion. Thanks, Steve Dick

From: dick.steve@USNO.NAVY.MIL

This chapter on the American ToV expeditions has now been posted to the web, and the plaque is pictured in the final figure. http://www.usno.navy.mil/pao/History/ToV_Chapter_7.htm Steve

From: Craig Waff

The transit-of-Venus plaque that I photographed in 1991 reads (except for accent marks) as follows:

LA ASOCIACION CULTURA
DE LAS CALIFORNIAS
TRIBUTA MERECIDO HOMENAJE AL
ASTRONOMO FRANCES
ABATE, JUAN CHAPPE D'AUTEROCHE
QUIEN OBSERVO, EN EL SITIO DE LA
MISION VIEJA,
EL DIA 3 DE JUNIO DE 1769,
EL PASO DE VENUS
POR EL DISCO SOLAR
FALLECIENDO EL PRIMERO DE AGOSTO
SIGUIENTE, DESPUES DE HABER

JEREMIAH HORROCKS

CUMPLIDO SU MISION CIENTIFICA.

SAN JOSE DEL CABO B.C. ABRIL DE 1974

Translated, the plaque states:

"The Cultural Association of the Californias pays homage to the French astronomer Abbe Jean Chappe d'Auteroche who observed at the site of the old mission, on the 3rd of June 1769, the passage of Venus across the solar disk [and] who died on the 1st of August following after having completed his scientific mission.

San Jose del Cabo, B.C. April 1974"

Harry Woolf remarks on pp. 158-159 of his book 'The Transits of Venus' (Princeton UP 1959) that Chappe and his assistants observed the transit "at the tip of the lower California peninsula [Baja California] near Cape Lucas, in a Spanish mission known today as San Jose del Cabo. ... Shortly after the transit took place, an epidemic disease struck the village and mission of San Jose, killing about three-fourths of the population, including all of Chappe's assistants except the engineer Pauly. But Chappe continued to observe long after he caught the disease. Indeed, the epidemic was at its height when he made the important observation of the lunar eclipse [on 18 June to determine the longitude of his position]. However, on 1 August 1769, at the age of forty-one, he too succumbed. Only the engineer Pauly survived, to bring back Chappe's papers, the instru-

(Continued on page 18)

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(Continued from page 17)

JEREMIAH HORROCKS

ments, and the narrative of their misfortune."

Based on the above information, I suspect that the plaque hangs on a wall of a building associated with the old mission.

I have an extra print as well as the negative of the photograph. If anyone desires a print of the photograph, please contact me offlist. Craig B. Waff Encyclopedia Americana

From: John Westfall

In (partial) answer to Peter Broughton's question about plaques commemorating historic transits of Venus, I have seen two such plaques.

One is located on the grounds of the Hulihee Palace in Kailua- Kona, Island of Hawaii, Hawaii. It adjoins the sales office and is a few feet from the remnants of the transit instrument pier. The plaque is a cement panel set into the ground and is pretty uninformative, simply lettered:

HTS 1929
TRANSIT OF VENUS
1929

I have no idea what "HTS" stands for. 1929 is simply the date the plaque was installed. Although it doesn't say so, it marks the observing site of the British party, led by George Forbes, in 1874.

The second plaque was mentioned by Craig Waff. Rather than being in a church in Cabo San Lucas, it is located in the Casa de Cultura in San Jose del Cabo, Baja California Sur, Mexico (at least that's where it was in 1991 when I saw it). Made of brass, it commemorates the French-Spanish expedition led by Chappe in 1769. The wording is upper-case Spanish (I regret that I cannot reproduce accents here):

LA ASSOCIACION CULTURAL
DE LAS CALIFORNIAS
TRIBUTA MERECIDO HOMENAJE AL
ASTRONOMO FRANCES
ABATE, JUAN CHAPPE D'AUTEROCHE
QUIEN OBSERVO, EN EL SITIO DE LA
MISION VIEJA,
EL DIA 3 DE JUNIO DE 1769,
EL PASO DE VENUS
POR EL DISCO SOLAR
FALLECIENDO EL PRIMERO DE AGOSTO
SIGUIENTE, DESPUES DE HABER
COMPLIDO SU MISION CIENTIFICA.

SAN JOSE DEL CABO, B.C. ABRIL DE 1974.

From: Trudy Bell

A stained-glass window in Westminster Abbey commemorating Jeremiah Horrocks' observation of the 1639 transit appears near the bottom of http://www.uclan.ac.uk/facs/science/physastr/dept/jhorrks.htm . Hoole Church in Lancashire apparently also has a commemorative window in its chapel (reference but no photo is at http://www.dcs.warwick.ac.uk/bshm/zingaz/H.html). There is a pillar commemorating the transit of Venus of 1882 in South Africa (photo visible halfway down the page at http://canopus.saao.ac.za/~wpk/tov1882/tovwell.html). At Burnham, New Zealand, there is a tablet in the grounds recording the sighting of the Transit of Venus on 7 December 1882 by a party of British scientists (reference occurs at http://www.pacificislandtravel.com/new_zealand/about_destin/canterbury/burnham.html but there are no photos). Capt Cook's observations in 1769 were commemorated with a plaque at Point Venus in Tahiti (now disappeared) and a cairn at Cook's Beach in Mercury Bay in New Zealand (see http://pages.quicksilver.net.nz/jcr/~cookmem.html). Actually, a 10-minute Web search indicates there may be quite a few neat plaques dedicated to these events. This search is by no means exhaustive. Hope this is a helpful lead! - Trudy E. Bell

From: Peter Broughton

Thanks to those who responded to my enquiry about plaques marking sites of former Transits of Venus observations, here is a very brief summary of the plaques you've come up with:

1639 Obs by Horrocks - at Carr House between Much

(Continued on page 19)

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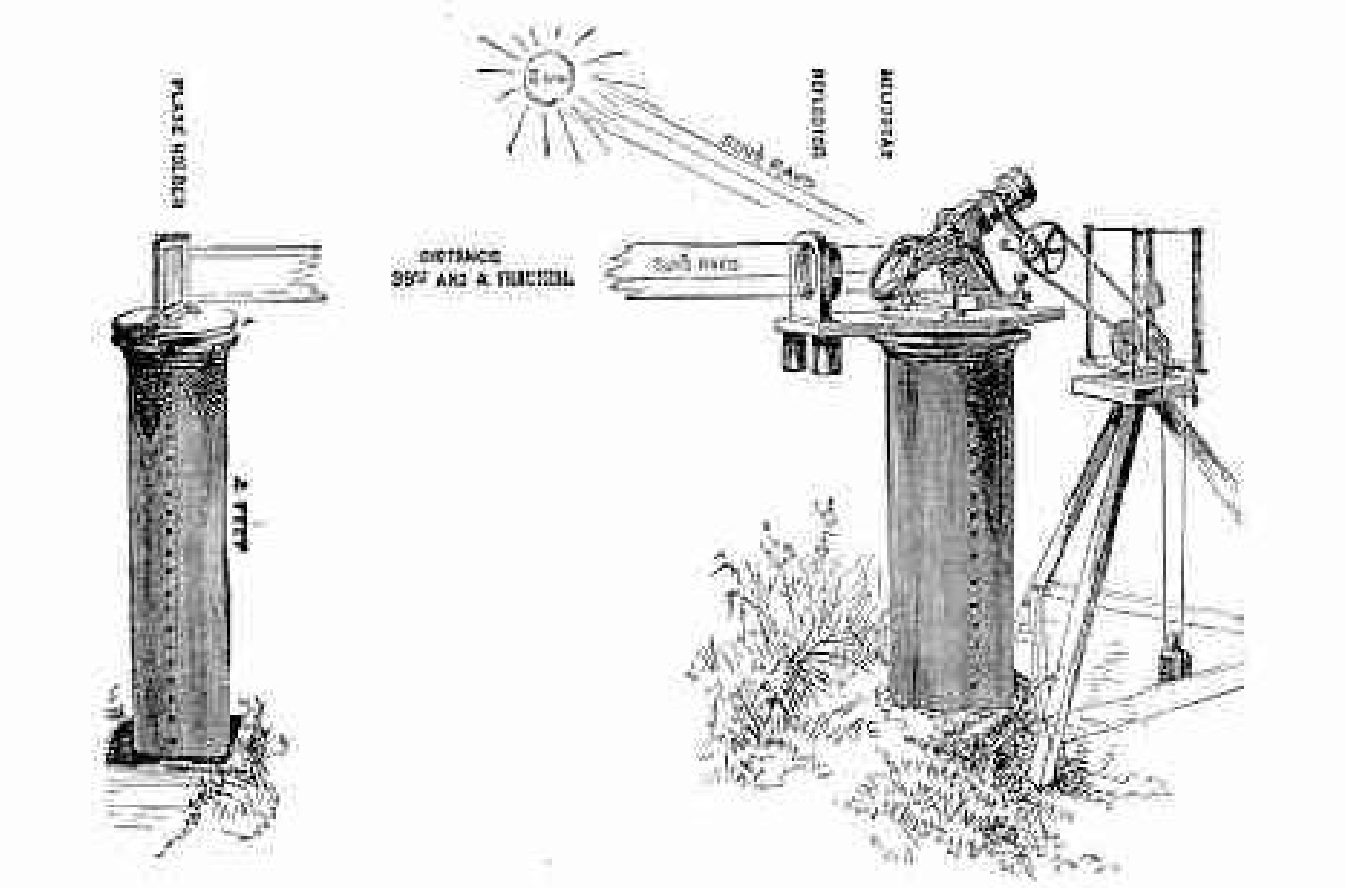

Hoole and Bretherton in Lancashire (also plaque in Westminster Abbey and stained glass window in Hoole)
1639 Obs by Crabtree - in "The Cliff" district of Manchester
1769 Obs by Abbe Jean Chappe d'Auteroche - Casa de Cultura in San Jose del Cabo, Baja California Sur, Mexico
1769 Obs by Cook - Venus Point, Tahiti
1874 Obs by American scientists at Queenstown, NZ
1874 Obs by George Forbes et al at Hulihee Palace in Kailua-Kona, Island of Hawaii
1882 Obs by British scientists at All Saints Garrison Church, Burnham, NZ
1882 Obs by Marth, Stevens and Thornton, Wellington, South Africa
1882 Obs by ? at the summit of Transit Hill on Lord Howe Island, Australia

If we get a plaque at St. John's, it might be the only one for the 1761 transit! Thanks again Peter Broughton

Espenak

From: Jean Meeus To: Solar Eclipses <solareclipses@aula.com> Date: Fri, 21 Mar 2003

I am happy to let me know that minor planet 14120 has been named Espenak. This is the citation that appeared in the Minor Planet Circulars of this March 18:

(14120) Espenak = 1998 QJ54 Discovered 1998 Aug. 27 by the Lowell Observatory Near-Earth Object Search at the Anderson Mesa Station. Fred Espenak Jr. (b. 1952), of NASA Goddard Space Flight Center, is widely recognized for his calculations of solar eclipses, his magnificent maps of these phenomena and his book 'Totality: Eclipses of the Sun'.

The name Espenak was suggested by me, but apparently this has not been mentioned in the citation. Congratula-

(Continued on page 20)

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tions, Fred! Jean Meeus

From: F.Podmore

Before Patrick bans a flood of messages, let me start by saying

WELL DONE FRED !!!!!!!!!!!!!!!!!!!!!!!! I'm *SURE* the whole eclipse community joins me in celebrating this permanent recognition of your outstanding services to astronomy. Francis

From: Marc Weihrauch

Dear eclipse friends, I'm glad to hear that. If I may say so, it is an honour deserved. Congratulations!

However, I didn't find any orbital elements. Could someone send me some information on Espenak's orbit, please? Have a nice weekend! Marc

From: Fraser Farrell

The orbit is regarded as "chaotic", because Espenak is usually seen only at eclipses....moving from one piece of observing equipment to another, or rushing around trying to avoid clouds. ;-)))

From: Jean Meeus

Two persons asked me the orbital elements of minor planet Espenak. As more people may be interested, here they are.

14120 Espenak

Epoch = 2002 November 24 at 0h Dynamical Time

semimajor axis a = 2.38348507
eccentricity e = 0.08848360
inclination i = 5.989505 degrees
arg. perihelion w = 212.265195 degrees
long. asc. node Node = 223.222751 degrees
mean anomaly M = 347.289237 degrees

The four last values are in degrees and DECIMALS. The elements i, w and Node are referred to the ecliptic and mean equinox of J2000.0.

These are osculating elements, NOT mean elements. They are strictly valid only for the Epoch. As they vary with time, they cannot be used as such, unchanged, for times more than a few weeks away from the Epoch. Instead, they are to be used as starting elements for a numerical integration.

From the above elements, it follows that the sidereal period of revolution of minor planet 14120 Espenak is 1344 days. Its perihelion distance is q = 2.1726 a.u. = 325 millions kilometers, and its aphelion distance is Q = 2.5944 a.u. or 388 millions km.

The asteroid was at opposition on 2002 November 22, and at that same day was closest to the Earth: 178 millions km. Jean Meeus

From: Glenn Schneider

Congradulations, indeed, to Fred. Though it would have been more fitting to have an Apollo asteroid in his name - so we would at least have a chance of seing it eclipse (well, OK, transit of course) the Sun. No hope with q = 2.17 AU (at least from Earth). Up for a short trip, Fred, to stand in the umbra of your namesake?

VERY well deserved. Glenn Schneider http://nicmosis.as.arizona.edu:8000

From: Carter Roberts

Jean, Fred greatly deserves the honor. Thanks for suggesting it.

The restrictions on citations change with time. I recently worked on one and found that it had to be kept to no more than 50 words which greatly limits what can be included and tends to rule out mentioning the person who submitted the citation. Then again there were suggestions that the proposer should now be included after a period when it was discouraged.

Since the number of discovered minor planets has snowballed recently the citation length has been reduced to keep the overall list of citations down somewhat. Carter Roberts

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Conference updates

From PP

Dear All, Some updates on the Solar Eclipse Conferences:

1. Totality Day February 2003 - Proceedings

Some more papers and presentations have been added to the WebPages of TD2003. Due to the sizes of the files, the pictures do not show their beauty in its maximum. Have a look at our WebPages for TD2003 at

http://solareclipsewebpages.users.btopenworld .com/TD_files/TD2003Program. html

2. International Solar Eclipse Conference August 2004 - Preliminary Program

Nearly all speakers have been confirmed. We are waiting for some more final confirmations but keep you posted.

In alphabetical order we got confirmations from following speakers. Some of the titles are still in draft. We give you soon a final update:

Jay Anderson (Canada): 2005 and 2006 Eclipse Weather Predictions
Ralph Chou (Canada): Eye Safety update
Friedhelm Dorst (Germany): Three Exciting Black Moons
Fred Espenak (USA): Eclipse Predictions for 2006 and Beyond
Mike Foulkes and Derek Hatch (UK): The Best of ...
Jean Paul Godard and Martine Tlouzeau (France): Eclipse Stamps
Pierre Guillermier (France): Ancient Eclipse Paintings
Peter Hingley (UK): Historical Eclipse Images
Barrie Jones (UK): Shadow Bands
Serge Koutchmy (France): Angola Expeditions
Jean Marc Lariviere (Canada): Eclipses in Films
Eli Maor (USA): Transit of Venus
Jean Meeus (Belgium): New Eclipse Morsels
Chris O'Byrne (Ireland): Eclipse Calculator update
Jay Pasachoff (USA): Solar Eclipse Science
Vojtech Rusin (Slovakia) and Miloslav Druckmuller (Czech Republic): Image Processing
Eckehard Schmidt (Germany): Nurnberg Eclipses
F. Richard Stephenson: Historical Eclipses
Peter Tiedt (South Africa): African Eclipses
Tom Van Flandren (USA): Near Edge Eclipses
Robert van Gent (The Netherlands): Periods, Cycles and 18th Century Eclipse Maps

See our WebPages for SEC2004 at

http://solareclipsewebpages.users.btopenworld.com/SEC_files/SEC2004.html

If you have donations or want to support the conference in any matter, please contact us. It is our aim to have the entrance fee as low as possible. Best regards,

St. John's/Transit

From: John M. McMahon To: HASTRO-L@LISTSERV.WVU.EDU Date: Tue, 25 Mar 2003

I received this info from a Classics colleague in St. John's whom I contacted about Winthop's 1761 transit observation. Perhaps it may be of some help in the current investigation, at least as far as some local contact possibilities.

I think the chief contact would be: frsmith@mun.ca

cited below.

Apologies if this individual and his work is already familiar to anyone. John McMahon Classics Le Moyne College

—

>>From: James Butrica <jbutrica@morgan.ucs.mun.ca> Subject: Re: Venereal query Date: Fri, 21 Mar 2003 19:13:46 -0330

>Hi, yes Fred Smith (frsmith@mun.ca) has done extensive research on it, including plans next year to commemorate the event. He lectured last month at the St. John's Centre of the Royal Astronomical Society of Canada.

>>Now that I have your attention ... Is there anyone on campus familiar with the activity of the astronomer John Winthrop, who observed a transit of the planet Venus from St. John's in June of 1761? I will be receiving from the CNS a copy of the article in which he published his observations, but I am particularly interested in finding out whether his achievement has been commemorated in any way in the city or the province .... J.L.Butrica Classics

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Major update to "Transits" web page

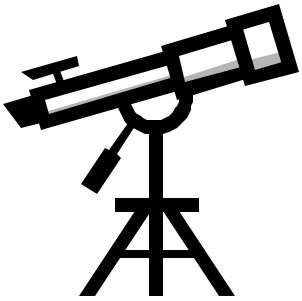
From: Fred Espenak To: SOLARECLIPSES@AULA.COM eclipse@hydra.carleton.ca Date: Mon, 24 Mar 2003 21:31:12

Major update to "Transits" web page Greetings to all, I am so honored and fortunate that the IAU saw fit to name minor planet 14120 "Espenak." I now know that Jean Meeus and Patrick Poitevin both lobbied the IAU's Committee for Small-Body Nomenclature for years on my behalf. All this happened behind the scenes. I was caught completely by surprise with the news last Friday. Thank you so much my friends. I appreciate all the messages of good will and congratulations from many of you about "my" asteroid.

I also appreciate the fact that poor Patrick must be turning blue holding his breath with these "off-topic" messages. So before he passes out, I will shift the subject back to eclipses and specifically to transits. After all, aren't transits just annular eclipses of very, very, very small magnitude?

I have just completed a major update for the NASA "Transits of the Sun" web page located at:

http://sunearth.gsfc.nasa.gov/eclipse/transit/transit.html



The web site now features two major catalogs of transits:

Seven Century Catalog of Mercury Transits:
http://sunearth.gsfc.nasa.gov/eclipse/transit/catalog/MercuryCatalog.html

Six Millennium Catalog of Venus Transits:
http://sunearth.gsfc.nasa.gov/eclipse/transit/catalog/VenusCatalog.html

These catalogs were generated using elements published in Jean Meeus' excellent book "Transits" (Willmann-Bell, 1989).

There is also a discussion on how to calculate the Sun's altitude from any geographic location and for any transit using parameters listed in the catalogs:

http://sunearth.gsfc.nasa.gov/eclipse/transit/catalog/Visible.html

Each catalog also features two downloadable Excel 97 files which break the catalog into two pieces (around 90 KB each). The Excel spreadsheets are designed so that you can enter any set of geographic coordinates, and the spreadsheet will then calculate the Sun's altitude for all the transits in the catalog at every contact time as well as at the time of maximum transit. This should be useful for quickly determining whether a transit is visible from a given location. The accuracy is good to 2 degrees or better.

You must have Excel 97 or newer in order to read these files. When you download them, Excel will automatically launch and open a file as a spreadsheet where you will be able to enter the coordinates of any geographic location to calculate the transit circumstances. The spreadsheets are protected so that you can not accidently delete or edit any information required by the calculations. Only the name and coordinates of the geographic location (in the green box of each spreadsheet) may be modified.

Special thanks to eclipse chaser Michael Gill for enthusiastically and rigorously beta-testing these pages and for catching a number of typographic errors.

Please contact me off the SEML list about any additional typos, corrections or suggestions. Best regards, - Fred Espenak

From: NinaSandy@aol.com

My hats off to Mr. Eclipse on having a minor planet named after him! If it occults a star, than Espenak can CAUSE an eclipse instead of talking about it! Sandy Sanders

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2024 Eclipse Viewing Site

From: Crocker, Tony (FSA) To: SOLARECLIPSES@AULA.COM Date: Thu, 27 Mar 2003 00:33:01

Last week I went skiing in Vermont and Quebec because the well-subsidized annual ski journalist convention was in Quebec City and Charlevoix. On March 18 I skied a blue sky day at Jay Peak, the northernmost Green Mountain peak just south of the Canadian border. Jay is on centerline of the 4/8/2024 TSE and has a completely unobstructed view from 3,500+ feet to both east and west.

There is an enclosed tram to the top of the mountain. Backup mobility plans would be advisable as Jay Peak is the snowiest location in North America east of the Rockies.

From: Evan Zucker

Wow -- what a week! First Fred has a minor planet named after him, and now Jay Pasachoff has a mountain named after him! And it's not even too far from his home in Williamstown, MA. How appropriate that Jay Peak is on the centerline of the 2024 eclipse.

The only thing more appropriate would be if I had waited 6 days to post this message. -- EVAN

From: Jim Low

I hope to make the 2024 eclipse, as it passes close to my home of Toronto. Since I'll be 84 then, I may not be in shape to travel far! But it will be my first chance to catch 4 eclipses in the same saros series, having seen the ones of 1970 and 1988, and expect to make the one in 2006.

My first eclipse was 1963 and saw that saros again in 1999, missing the one in 1981. Darn! Had I made that one, I could claim 4 saros in 2017.

Now I know why astronomers tend to live to ripe old ages. They say "just one more eclipse..."

How many people have seen 4 total eclipses in the same saros series? Five?

After 2024, I'll say "just one more eclipse."

From: Dale Ireland

Hopefully my corneas will see this eclipse even if the rest of me is in Hell.

From: Gerard M Foley

Don't give up too soon. At 86 I made it to South Africa and back, to fail to see the December 4 TSE.

Gerry I am a good German. I did not vote for the Nazis. I don't care who they send to the camps or what they do there as long as they don't send me.

Good German??? Why is this here???

From: Dribalz@aol.com To: SOLARECLIPSES@aula.com Date: Fri, 28 Mar 2003 01:10:02

In a message dated 3/27/2003 10:44:58 AM Eastern Standard Time, gfoley@columbus.rr.com writes: I am a good German. I did not vote for the Nazis. I don't care who they send to the camps or what they do there as long as they don't send me.

What kind of trash is this?? You know it was the good Germans like you who didn't speak loud enough that were responsible for the murder of 6 million Jews and countless others as well. Or are you one of those Holocaust deniers who claim it never happened?

Patrick, get me off this list if this is the kind of crap you are allowing. Andrew Hans

From: John Leppert

Yes, I agree wholly with your sentiment. His was an appalling statement --- a diseased mind.John Leppert

From: Evan Zucker

I took it as a joke. Maybe I was wrong. Evan H. Zucker San Diego, California

From: Robert B Slobins

Yes, I agree wholly with your sentiment. His was an appalling statement --- a diseased mind. John Leppert Deneb Observatory

From Robert B Slobins

I wonder if he was neing sarcastic and sent off this message as a part of his auto signature that e-mail software has. He is probably dissenting from the political atmosphere in the USA.

However, he needs to be careful about that. Sort of like my return receipts that somehow got propogated through my

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messages to this list a couple of months ago. cheers/rbs

From: solareclipsewebpages@btopenworld.com

Please do not send or publish any provocating messages or statements. Of course we do not allow any statements like this on the mailing list. Though, those whom react and keep replying on such provocating statements on the entire list, should know and trust the SEML Owner that actions are taken behind the screens.

Do NOT react or reply to the entire list but send your messages to me. I'll keep repeating, but your messages do violate nearly as much as the initial message!

Thank you for your understanding and ...

Keep those solar eclipse related messages coming... Best regards, Patrick

Next Total Solar Eclipse in San Francisco, CA, USA?

From: Eric Pauer To: SOLARECLIPSES@aula.com Date: Sat, 29 Mar 2003 12:13:33

Can anyone tell me when the next total solar eclipse will be visible in San Francisco, California (USA)? Looking at Fred Espenak's North American maps, I see a near miss on 12 Aug 2045 but none until at least 2101. Regards, Eric Pauer

From: Peter Tiedt

Eric, based on the following co-ordinates, and searching WinEclipse for a 99% eclipse, I get

Co-ordinates: SanFrancisco CA -122 24.7 37 46.7 20

2252 Dec 31, 3m 33s at maximum, at SF 22h33m48s duration about 2m 20s

also 2397 March 29 (exactly 394 years time ;-)) 3m12s duration at SF 18h42m54s duration about 3m10s

then
2451 May 1
2591 April 14
2683 Nov 10
3044 Jun 17

Peter Tiedt

From: Jean Meeus

Eric Pauer asked for the next total solar eclipse at San Francisco.

Indeed the eclipse of 2045 August 12 will be a miss there. I calculate that the magnitude of the eclipse will be 0.947 at San Francisco.

Two larger partial eclipses will occur on 2110 Feb 19 (magnitude 0.975) and on 2124 May 14. In the latter case, the magnitude at San Francisco will be 99%, but that will take place just before sunrise, the Sun being 3 degrees below the horizon.

The first next total solar eclipse at San FRancisco will occur in the afternoon of 2252 December 31. The Sun will be 21 degrees above the horizon, and totality will last a little longer than 2 minutes. Jean Meeus

Publications on Transits by George Biddell Airy, Edward Singleton Holden, Simon Newcomb and Richard Anthony Proctor

By PP

Account of Observations of the transit of Venus, 1874, December 8, made under the authority of the British Government: and of the reductions of the observations
Edited by George Biddell Airy, 1881 London, 29 x 22.5 cm, 512 pp, 17 plates, +21 pp Appendix

British Expeditions for the Observation of the transit of Venus, 1874, December 8. Instructions to Observers
George Biddell Airy, 1874 London, 30.5 x 25 cm, pp 3 - 15

On a Method of Determination the Mass of the Moon from Transit Observations of Venus, near het interior conjunction
George Biddell Airy, RAS Memoirs, November 1829

Report of the Telescopic Observations of the transit of Venus, 1874, made in the expedition of the British Government, and on the conclusion derived from those Observations
George Biddell Airy, 1877 London, 33 cm, 33 pp, 6 plates

The Transit of Venus, 1874 and 1882. On the preparatory arrangements for the observations of Transits
George Biddell Airy, Extracted from RAS, Monthly Notices, 1869 London, 21 cm, 23 pp, +10 plates

Index-Catalogue of Books and Memoirs on the Transits of Mercury
Edward Singleton Holden, Library of Harvard University, 1878 Cambridge, 25 cm wraps, pp 3 - 6

On the Application of Photography to the Observations of the transits of Venus
Simon Newcomb, 1872 Commission on the Transit of Venus, December 9, 1874, 29.5 cm, pp 14-25, 1 fig

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Astronomical Papers prepared for the use of the American Ephemeris and Nautical Almanac
Simon Newcomb, 1882, Discussion ... of ... Transits of Mercury; 1891 Discussion of Observations of the transits

Discussion of Observations of the Transit of Venus in 1761 and 1769
Simon Newcomb, Astronomical Papers, 1891 Navy Department, 30 cm, pp 259-405

Instructions for Observing the Transit of Mercury, May 5-6, 1878
Simon Newcomb, 1878, 30 cm printed wraps, pp3-8, plates, 2 figs

Instructions for Observing the Transit of Venus, December 8-9, 1874. Prepared by the commmission authorized by congress and printed for the use of the observing parties
Anomymous, written by Simon Newcomb as secretary of the commission, 1874, 30 cm printed wraps, pp 9-28

Instructions for Observing the Transit of Venus, December 6, 1882. Prepared by the commission authorized by congress and printed for the use of the observing parties
Anomymous, written by Simon Newcomb as secretary of the commission. 1882, 30 cm printed wraps, pp 3-50, +4 maps

Observation of the Transit of Venus, Dec. 8-9, 1874. Made and reduced under the direction of the commission created by congress. Part 1. General discussion of Results
Simon Newcomb, 1880, 30 cm, pp 7-157, +2 multifoldout plates (incl 5 figs)

Essays on Astronomy: A series of papers on planets and meteors, the sun and sun-surrounding space, stars and star cloudlets; and a dessertation on the approaching Transits of Venus. Prepared by a sketch of the life and work of Sir John Herschel
Richard Anthony Proctor, 1872 London, 22.5 cm cloth, foldout frontis, pp 1-401, appendixes, 10 plates, 24 figs, +2pp ads

Studies of Venus-Transits, an investigation of the circumstances of the Transits of Venus in 1874 and 1882
Richard Anthony Proctor, 1882 London, 22.5 cm, pp 78, 10 plates, 7 figs

Transits of Venus. A popular account of past and coming transits from the first observed by Horrocks A.D. 1639 to the Transit of A.D. 2012
Richard Anthony Proctor, 1874 London, 20 cm cloth, pp 236, 20 plates (incl 12 tinted, incl 2 foldout), 43 figs, 6 tables, +32 pp ads

The Universe and the coming Transits: Prsenting researchers into and new views respecting the constitution of the heavens: together with an investigation of the conditions of the coming transits of Venus. Recently confirmed by a unanimous vote of the chief astronomers of Great Britain
Richard Anthony Proctor, London 1874, 23 cm cloth, pp 1-303, 22 plates, 22 figs, +24 pp ads

From: Robert B Slobins

Patrick: I am sure that by now, we know the dimensions of the solar system, as we have sent several probes to Venus and Mercury. That means that timing transits are not important to astronomy. However, I wonder if the schools of Europe and Asia would use the transit to recreate these 19th century experiments.

Have you heard of any initiatives in this regard.

Also, they did not have H-alpha filters in 1874-1882. I may be using mine. I understand that using the chromosphere will lengthen the transit time, as it is up to 8000 km above the photosphere. Is there any value to this.

Additionally, I would prefer locating myself on a Greek island to the south and east of the island. This would ensure steadier seeing. However, there is a chance that the area could become dangerous. Are there any alternatives to the eastern Medi-

(Continued on page 26)

SETalk

terranean? What about Lake Balaton, Hungary, provided that the weather is nice? cheers/rbs

From: solareclipsewebpages@btopenworld.com

Robert B Slobins wrote: I am sure that by now, we know the dimensions of the solar system, as we have sent several probes to Venus and Mercury. That means that timing transits are not important to astronomy. .../...

All respect for eclipse, including "transit", travellers, do not forget the objective of SEML:

3. Objective of SEML

Main purpose of this Solar Eclipse Mailing List is to share information between all Solar Eclipse enthusiasts. Our objective is to permit and encourage world wide contacts among eclipse observers, calculators, scientists, ancient researchers, etc. It is a media where you can send questions, answers, items wanted, items for sales, announcements, reports, observations, discussions, information, introductions, etc. All topics should be related to Eclipses and Planetary Transits. Contact the SEML Owner for advertisements and commercial announcements.

--- > We aim to cover all aspects of solar eclipses, including transits. Strolling in those ancient books might give your observation a different taste. We are sometimes far too previliged in knowing and expecting what to see. Remember, once upon a time scientists thought the corona was part of the moon ...

PS: Avoid provocating statements such as dangerous places or whatever. The SEML is not the place to express and it only creates chain reactions. PP

From: Jay.M.Pasachoff@williams.edu

The European Southern Observatory is indeed arranging a widespread observation of the 8 June 2004 transit of Venus to recreate the 19th-century measurements, as Mr. Slobins asks.

See the link to "Transit of Venus" on our site at www.williams.edu/astronomy/eclipse. There is a link to the ESO site there.

To answer Mr. Slobins's second question, the chromosphere would indeed lengthen the transit a tiny bit by enlarging the size of the sun that is measured. The measurements of the last transit of Mercury from the Transition Region and Explorer spacecraft (TRACE) showed that. The same site of ours has a link to my paper on use of the white-light image from that transit. See measurements at different wavelengths at http://solar.physics.montana.edu/handy/trace/mercury/ Jay Pasachoff Williams College

From: Robert B Slobins

Correction... I should have said that transit timing probably does not have importance to cutting-edge astronomy. Would a journal admit accounts of transit observations or timings? cheers/rbs

From: Assoc Prof J R Huddle

It depends on the journal. Although I'm not an editor, I'd think that "The Physics Teacher" and/or "American Journal of Physics" would accept such a submission, if it showed how students could make a measurement of the distance between the Sun and Earth, and otherwise conformed to their editorial policies. Jim Huddle

ASE 2003

Partial sunrise of May 31st

From: Marc Weihrauch To: SEML <SOLARECLIPSES@aula.com> Date: Tue, 18 Mar 2003 21:14:36

Dear eclipse friends, some time ago I asked about the change of brightness during the partial sunrise eclipse as visible in my hometown on May 31st. Especially I wanted to know whether the deepening eclipse could make it grow darker again after sunrise (we will see a maximum magnitude of almost 87% at 2.5° altitude). I received kind help from several sides, so I could find an answer in the meantime: Peter Tiedt sent me some software to calculate obscuration from magnitude and the ratio of the apparent sizes (thanks again!) and a colleague gave me some rules of thumb for atmospheric extinction.

These are the local circumstance for my hometown Halle at 12°E, 51.5°N:

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

Ratio moon/sun: 0.9381 ==> moon/sun 1.066

As a rule of thumb I assume the following extinction values (from Erik Wischnewski: Astronomie fuer die Praxis, Vol. 2, Wissenschaftsverlag Mannheim, Leipzig, Wien, Zurich):

altitude extinction (mag)
1° 5.2
2° 3.4
3° 2.61

At sunrise there will be about 40% obscuration, compared to 84% at maximum eclipse. So between sunrise and maximum the obscuration will double, thus the light received from the sun will be halved: A darkening of about 0.75 mag.

So, even by rising from 1° to 2° alone the reduced extinction will more than compensate the darkening by the proceeding eclipse: It will not get darker after sunrise.

However, the break of day will be noticeably delayed: At maximum eclipse only one sixth of the solar disc will be visible, corresponding to a darkening of about 2 mag - as if the sun was not more than two degrees above the horizon but only one.

I know there are larger errors in this consideration. For instance I do not allow for the fact that only the dimmer solar limb is visible around maximum eclipse, not the brighter center of the solar disc. But most of all I know that I only have a rough guess for the extinction, possibly wrong for 1 mag or more, depending on the actual atmospheric conditions. However, I have a rough result at least and know a little better what to expect.

If I had to decide on the weather of that morning I would chose cloudfree but slightly hazy skies for a deep red sunrise easily observable with the unproteced eye. But that's another matter :) Best regards Marc

From: Fraser Farrell

I've had numerous reports from people who comfortably observed the partially eclipsed setting sun on 2002 Dec 4; sometimes using no more protection than standard sunglasses. There was significant dust-related sunset dimming because of the strong and gusty southwesterly wind across South Australia that afternoon.

The dust had other unexpected effects. One of the most striking sights for me was just after Third Contact. The umbra was momentarily outlined, upon the many plumes of red dust to the east near Lyndhurst, as a vast grey "bite" climbing swiftly into space.

(Continued on page 28)

ASE 2003

But I'm told that Iceland doesn't get dust storms, unless there's a volcanic eruption in progress? cheers, Fraser Farrell

From: Evan Zucker

I lived in Keflavik, Iceland for 13 months from 1984-85. While we had all sorts of exotic weather during my time there -- including snow pellets and windy fog -- I don't recall any dust storms. I frequently flew F-4 Phantoms over the island and never saw any dust storms, although we frequently could not see the ground because of clouds. There weren't any volcanic eruptions while I was there, and so I can't comment about what effect they would have on the weather.

NAS Keflavik: http://www.naskef.navy.mil

Naval Atlantic Meteorology and Oceanography Detachment, Keflavik, Iceland: https://www.nlmod-keflavik.navy.mil/nlmod-keflavik/ Evan H. Zucker San Diego, California

From: Stig Linander

40% obscuration means 60% of Sun visible.
84% obscuration means 16% of Sun visible.
So the darkening will be about 1.4 mag.

Best regards, Stig.

From: Marc Weihrauch

Hi Stig, OK, let me look it over once more:

> 40% obscuration means 60% of Sun visible.
> 84% obscuration means 16% of Sun visible.
> So the darkening will be about 1.4 mag.

When I compute the darkening due to the obscuration of 40% at sunrise I do the following (Let m(0) be the apparent brightness of the uneclipsed sun):

m(sunrise)-m(0) = -2.5*log(eclipsed/uneclipsed) = -2.5*log(0.6/1) = 0.55 (I)

Am I doing something wrong? If not, then the sun is dimmed by about half a magnitude of brightness due to the eclipse at sunrise.

For the instant of maximum eclpise, compared to the uneclipsed sun, I receive:

m(max)-m(0) = -2.5*log(0.16/1) = 1.99 (II)

When I compare the darkening at maximum eclipse to that of sunrise to see whether it will get darker despite the rising of the sun I consider the situation at sunrise as reference:

m (max)-m(sunrise) = -2.5*log(0.16/0.6) = 1.43 (III)

Now (I) and (III) nicely add up to (II) as they should. You're right! Where did I have my mind? Thanks for the hint, Stig. I hope there are no other errors.

As a result, the light will be subdued stronger than I first expected. This will not be sufficient to make it grow darker again after sunrise, but the daybreak will be even slower than I thought. Best regards Marc

ASE 2003

Internet providers in Scotland

From: Hans Zekl To: SEML <SOLARECLIPSES@aula.com> Date: Tue, 18 Mar 2003 22:28:56

I will be in Durnes during the annular eclipse on May 31st. Because I would like to get the latest weather informations from the internet I am asking if someone can provide some informations about internet providers which offer a dial-in connection. Here in Germany phone companies provide special numbers for modem or ISDN connections.

Which type of cable do I need to connect my laptop to the telephone line? Regards Hans Zekl

From: Klipsi

Virgin Net may be a way to do it. I received this answer last year when asking about free internet access in Scotland :

"...You can sign up for a free virgin.net Pay-As-You-Go account through our website, www.virgin.net, which can be used anywhere in the UK. The easiest way of arranging this is for you to call our local rate new customer line on 0845 650 0000 when you are in Scotland and we can help you through the process..."

meanwhile, I am no more going to Scotland. Will fly over.

From: Sheridan Williams

Hans Zekl asks if someone can provide some informations about internet providers which offer a dial-in connection.

A very good free ISP is "Freewire". Sign up to them via: www.freewire.net or www.freewire.co.uk I can't remember which is correct.

Centerline highest point

From: Þorvaldur To: solareclipses@Aula.com Date: Fri, 21 Mar 2003 23:52:50

Im sending this table and asking if anyone is able to calculate where the centerline of May 31. eclipse will reach the highest altitute. All this altitude points lies on a glacier in Iceland which name is "Eyjafjallajokull" and I believe that somewhere in this area the highest point on the Earth, possible for the axle of the shadow cone to touch (The line that goes through the center of mass of the Sun and the Moon). When approximate points has been calculated I will narrow the altitude net. When this point has been calculated, there I will be watching the eclipse.

The column to the left is arcminutes north from 63 degrees North and the top row is arcminutes west from 19 degrees West an the table contains meters above mean sealevel.

34.50	34.00	33.50	33.00	32.50
38.00	1442m	1370m	1353m	1347m	1340m
37.75	1493m	1453m	1421m	1413m	1405m
37.50	1519m	1502m	1464m	1415m	1382m
37.25	1445m	1418m	1376m	1351m	1326m
37.00	1384m	1352m	1280m	1266m	1237m

Thanks. Valdi.

From: Timo Karhula

ASE 2003

Hi Valdi, If you by 'altitude' mean the height above sea level, then I would let you find out the elevation of the points west of long = 19 deg 34.50 min W. As you see, there appears no altitude maxima in your table. The further west you go, the higher the eclipse point appears to be.

I will fly to Iceland to watch this eclipse but the local weather forecast shall decide my choice of the observation site. Best Regards, /Timo Karhula

From: Þorvaldur

Hi Timo Karhula. Im glad to hear that you are coming to Iceland. We (me and 7 others) are going to walk from the beutiful waterfall "Skogafoss" on the famos foot-path "Fimmvorduhals" (ridge of 5 cairns) which destination is Thorsmork. The reason why I did not include heights west of this longitude is that roughly inaccurate measurement indicate that the centerline highest point is around 1400-1500m at 63 deg 37-38 min N and 19 deg 33-34 min W. But nothing is certain, here is more points:

37.00	36.50	36.00	35.50	35.00
38.00	1475m	1560m	1470m	1420m	1370m
37.75	1530m	1555m	1540m	1500m	1435m
37.50	1565m	1570m	1545m	1490m	1435m
37.25	1605m	1575m	1495m	1445m	1410m
37.00	1550m	1470m	1430m	1390m	1340m

The highest point of the glacier is "Gudnasteinn" at1666m (63 deg 37.15 min N, 19 deg 37.2 min W)

It is interesting that the first recorded visit to this place is August 16. 1793 just 3 veeks before the last

annular eclipse seen from Iceland and he carved the letters "P. 1793" on this rock but that has not yet been found. Best Regards, Valdi.

Annular eclipse 31st may 2003

From: K. Wiersema To: SOLARECLIPSES@AULA.COM Date: Tue, 11 Mar 2003 08:26:46

Hello everyone, I will be in Scotland for the annular eclipse in may, in the village Durness. Is anyone else from this list going to Durness for the ASE? Or some other place in Scotland? Regards, Klaas Wiersema

From: Kelly Beatty

Klaas... I will be on the Isle of Lewis, probably in or near Stornoway. I know that a group of Scottish amateurs are headed to the Orkneys. A very good web site, if you haven't found it already, is this one devoted to the eclipse as (potentially) seen from Scotland, complete with *photos* of observing locations: http://www.clocktower.demon.co.uk/eclipse2003/ clear skies, Kelly Beatty Executive Editor SKY & TELESCOPE

From: Philippe JACQUOT

Hi Klass, I will be in Scoltand in May with friends (9) We stay at Inverness on may 29 evening, and go to the best spot tomorrow (Wheather...) Durness is not our first choice, we prefer go first to Wick, John O'Groats or Dunnead Head. East of Higland is a little wet than West, and we can move at the last time (to Durness or to Inverness) if the weather is better in these countries. Regards, Philippe JACQUOT Annecy - France

From: Barrie W. Jones

I will be in Durness, with 4-8 other people. Looks like this little village will be well endowed with eclipse-chasers! Barrie W Jones

From: Francisco A. Rodriguez Ramirez

ASE 2003

Hi all, SAROS group will be in Durness (about seven members). Best Regards Francisco A. Rodriguez Ramirez www.saros.org http://eclipsechaser.astroeduca.com www.astroeduca.com

From: Katherine Low

Hi, I noticed from some recent mail exchange that quite some eclipse chasers will be going to Durness to observer the annular eclipse on 31-May. Katherine and myself will also be located in Durness around that time. Shall we arrange a get together at a pub in Durness the day before? By preference not too late since the eclipse is in the early morning! Greetings, Kris De lcourte

From: K. Wiersema

Great plan! I will (weather permitting) see the eclipse in Durness together with a friend. This will be our first annular.

I'l probably arrive in Durness rather late (around 7 pm) on the 30th. I guess that there's a pretty big chance of meeting fellow eclipse-chasers on the morning of the 31st as well, Durness is a very small village. Regards, KLaas Wiersema

From: Govert Schilling

Sounds good! I'll bring my family to Scotland, but we don't know yet where we will watch the eclipse. We arrive on 29 May in Glasgow, so we have about one day (rental car) to arrive at a good spot. If that happens to be Durness, I'd certainly like to meet other eclipse chasers. However, it may be a bit too far... --Govert http://www.govertschilling.nl

From: solareclipsewebpages@btopenworld.com

Joanne, Laura and I are travelling together with Derryl and Pam Barr from Nebraska. We fly to Glasgow as well and drive with a 4 wheel drive up north. PP

From: brian seales

Hi All, Chris O'Byrne and myself are bringing 14 other eclipse chasers to Scotland as well. We are basing ourselves in Inverness and plan to travel to Durness. Perhaps if Sheridan, or someone who knows the area well, might suggest a meeting place. It would be great to meet up on the evening of the 30th and swap stories and ideas. Clear skies, Brian Seales www.ecliptomaniacs.com

From: Sheridan Williams

The Smoo Falls Bar/Hotel has a super bar where you could all meet. Hilary Bradt of the Bradt Travel Guides is staying there, and I stayed there last year. It's about 200 metres up a side road to the north of the main road and very easy to find.

An alternative is the Loch Croispol Bookshop and Restaurant in Balnakeil village. Another option is the bar at the Cape Wrath Hotel.

From: Philippe JACQUOT

Hi I also fly to Glasgow on 29th morning (with family and friends), and stay in Inverness in the evening (Eastgate hotel). We decide of the good spot Friday (Durness, Thurso or Wick). We want, after the eclipse, go to the Barnakeil Craft Village (artist village near Durness). Perhaps it will be a good meeting point to talk about event and see movie and photos with eclipse chasers ? Philippe JACQUOT Annecy-France

Mystic Meg's vision?

TSE 2003

TSE2003 Antarctica overflight via Chile

From: Jay Friedland To: "SOLARECLIPSES@AULA.COM" <SOLARECLIPSES@aula.com> Date: Sat, 01 Mar 2003

Just got this via a Sky and Telescope update email. You can do TSE2003 from Chile. For those of you who didn't get a spot on the Croyden/Australia originating Antarctica overflight.... I wonder who is navigating this flight and if they are licensing Glenn Schneider's software? Don't leave home without it! - Jay

---

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

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.

From: Glenn Schneider

Jay et al., In reply to your query, let me provide a bit of background information regarding the recently advertised S&T eclipse flight out of Punta Arenas, Chile. First, as is also the case for the Croydon flight (which I will be on, and navigating the eclipse run on the flight deck), I have no commercial affiliation with Sky & Telescope, Lan Chile, or Travel Quest - and this email is neither an endorsement nor an advertisement.

Last summer Kelley Beatty and Rick Feinberg at Sky & Telescope contacted me and asked if I would be willing to assist them by defining and developing and eclipse flight scenario from Chile. At the time, the specific details of aircraft/platform availability, and hence performanceand capabilities, were unclear. I advised them as to my prior commitment to, and intention to fly on, the QANTAS/Croydon flight launching from Australia. None-the-less, recognizing the need for and clear benefits of co-ordinated intra-Antarctic flight operations, I outlined a near "minimum-distance" intercept flight from Punta Arenas, which was describe in summary on:
http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_03/2310.html

As the S&T flight concept matured, and with mutual agreement of all parties then concerned (Croydon, Sky & Tel, QANTAS and Lan Chile) and a clear understanding of the benefits for flight co-ordination, I continued to coordinate and work on the Sky & Tel flight in parallel with the Croydon flight.

The Croydon flight evolved more rapidly, and to my knowledge is fully subscribed (but anyone with an interest in that should query Phil Asker at Croydon Travel). Indeed I will be meeting with Cpt. John Black (who will be piloting the QANTAS/Croydon flight) next Monday in Los Angeles to review the flight requirements and work out specific operational details, procedures, and interface issues. Two intercept runs under consideration are outlined on:
http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_03/CROYDON_ECLIPSE.html
and several other possibilities as functions of flight altitude and UT of intercept may be found in a series of files at:
http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_03/E2003_BASELINES/
Of course, as needed we can re-define the intercept profile in situ to compensate for windage, etc., using the EFLIGHT S/W. As a result of this meeting we will very likely decide upon the nominal target intercept point (time) and flight altitude. It is my intention to provide further information to those interested after that meeting.

An Airbus 340 under charter from Lan chile was selected for the S&T flight, which will be under the command of Cpt. Hans Peter Fuchslocher. Over the past several months, I have been iterating with him, Kelley, Rick and Patricio Prubalcaba from Lan Chile. I presented four flight options (developed using EFLIGHT as a planning tool), and prior to the recent advertisement which was noted by Jay (and also earlier on SEML). The one selected is for a mid-eclipse intercept at 23:06:02UT giving, nominally, a duration of totality of 2m 26.5s with the sun 11.8 degrees above the astronomical horizon at mid-eclipse. This flight concept will includes an overflight of the Amundsen-Scott South Pole station on the return to Punta Arenas after the eclipse. This is shown schematically on

(Continued on page 33)

TSE 2003

two charts at:
http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_03/PUENTA_ARENAS_FULL.gif
http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_03/PUNTA_ARENAS_CLOSE.gif

Background information describing the four flight options considered (including the 23:06:02 UT intercept selected) for the S&T/Lan Chile flight may be found at:

http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_03/LANCHILE_4OPTIONS.html
....
To answer Jay's questions:

(1) I do not know who will be navigating the flight, but, I have thus far been communicating and working with Cpt. Hans Peter Fuchslocher. whom I believe will be the pilot in command of the flight.

(2) I have been using my EFLIGHT S/W in the, thus far, planning stages for this flight, and will continue to so so with additional work which will likely be done in preparation. The question of "licensing" it for in situ use by by S&T/Lan Chile, tc. has not come up - but if necessary I'm sure we could work that out.
....
Note that the QANTAS and LanChile flights will not operate in the same airspace, so we avoid the problem of two groups "independently" arriving at the same optimal location at the same time. I will continue to act as a "point of contact" and technical liaison to assure coordination and co-operation to the degree needed, and as long as both groups continue to agree that this is mutually beneficial. Cheers, Glenn Schneider http://nicmosis.as.arizona.edu:8000/

Antarctic eclipse-flight details

From: Kelly Beatty To: solareclipses@Aula.com
Date: Tue, 18 Mar 2003 04:21:55

Folks... We have finalized the planning and pricing for the Sky & Telescope/TravelQuest International flight over Antarctica to intercept the total solar eclipse on November 23rd. With Patrick's permission, I'll provide a few details here.

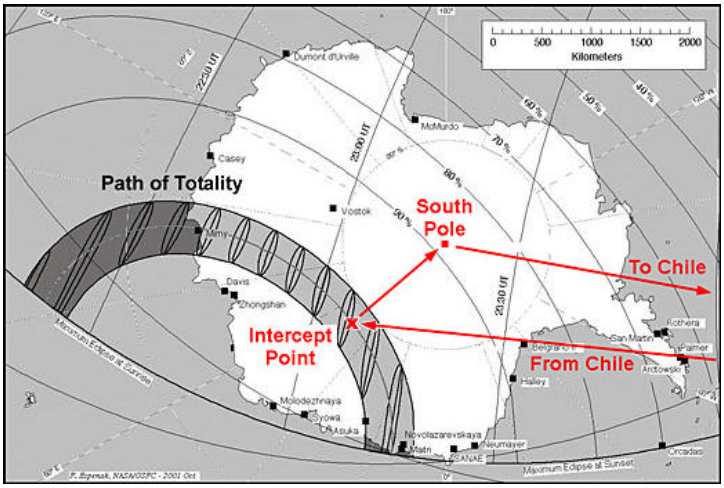
We are chartering one of LanChile Airline's brand-new Airbus 340-300 aircraft. We have personally inspected the plane (clean windows!) and developed

a conservative seating plan for a maximum of 76 passengers -- no more than two viewers per window. We will depart from Punta Arenas Airport in the early afternoon of 23 November for our ~12-hour flight.

The flight plan has been optimized by Glenn Schneider. Once over Antarctica we'll experience 2 minutes 26 seconds of totality -- 29 seconds more than is possible from the ground -- with the Sun positioned 12° above the true (undepressed) horizon and visible directly off the aircraft's left wing.Our planned intercept altitude of 11.6 kilometers (38,000 feet) virtually assures that views of the eclipse will be unhindered by clouds. Glenn's flight plan calls for us to reach the centerline at 23:06:02 Universal Time at 78.7° south, 51.9° east. We will assume our final intercept heading approximately 7 minutes before totality begins and maintain it for at least a few minutes after it ends. En route back to Chile we plan to fly over Amundsen-Scott Station at the South Pole.

More information, including a seat map, pricing, and details of add-on tours to Chile's Torres del Paine National Park and other destinations, can be found here: http://www.travelquestinternational.com/AntarcticaFly/AntarcticaFlyHome.htm

Please contact Rick Fienberg <rfienberg@SkyandTelescope.com> or me if you have questions or comments. Clear skies, Kelly Beatty Sky & Telescope



Pictures:

1. **Logo from WebPages**
2. **Plane seats from WebPages**
3. **Flightschedule and totality path over the Antarctic**

TSE 2003

TSE 2003 Flight Maps

From: Glenn Schneider To: SOLARE-CLIPSES@AULA.COM Date: Sat, 22 Mar 2003 00:48:16

FYI, As many of you know, I have been fortunate to be involved in the definition and planning of the flight plans for the Croydon/QANTAS and Sky & Telescope/ LanChile eclipse flights for TSE2003. For those joining, or having interest in either of these, I have put some maps on my server which might be of interest to you. These show the BASELINE flights now in the planning stages. Both are subject to changes based upon actual flight conditions.

http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_03/EFLIGHT2003_RTOPO_MAPS.html

I would be happy to answer any technical questions, but please direct any questions regarding flight bookings to the charter operators.

I hope to have a more detailed posting in the not too distant future. Cheers, Glenn Schneider http://nicmosis.as.arizona.edu:8000

TSE 2006

Weather in March

From: Klipsi To: SOLARECLIPSES@AULA.COM Date: Thu, 13 Mar 03

dear friends, as we are approaching late March, keep in mind the next real big TSE, 29 March 2006. Just 3 years to go ! I invite you to keep an eye each day on what the weather looks like in Turkey, Lybia, NW Egypt, or whereever you plan to be for March 29, 2006. Olivier "Klipsi" Staiger

From: solareclipsewebpages@btopenworld.com

Please note as well that our famous meteorologist Jay Anderson will give a lecture on the next Solar Eclipse Conference (SEC2004)in August 2004. HE will talk about the weather predictions for the 2005 and 2006 eclipses but as well about long term cycles. Be there!

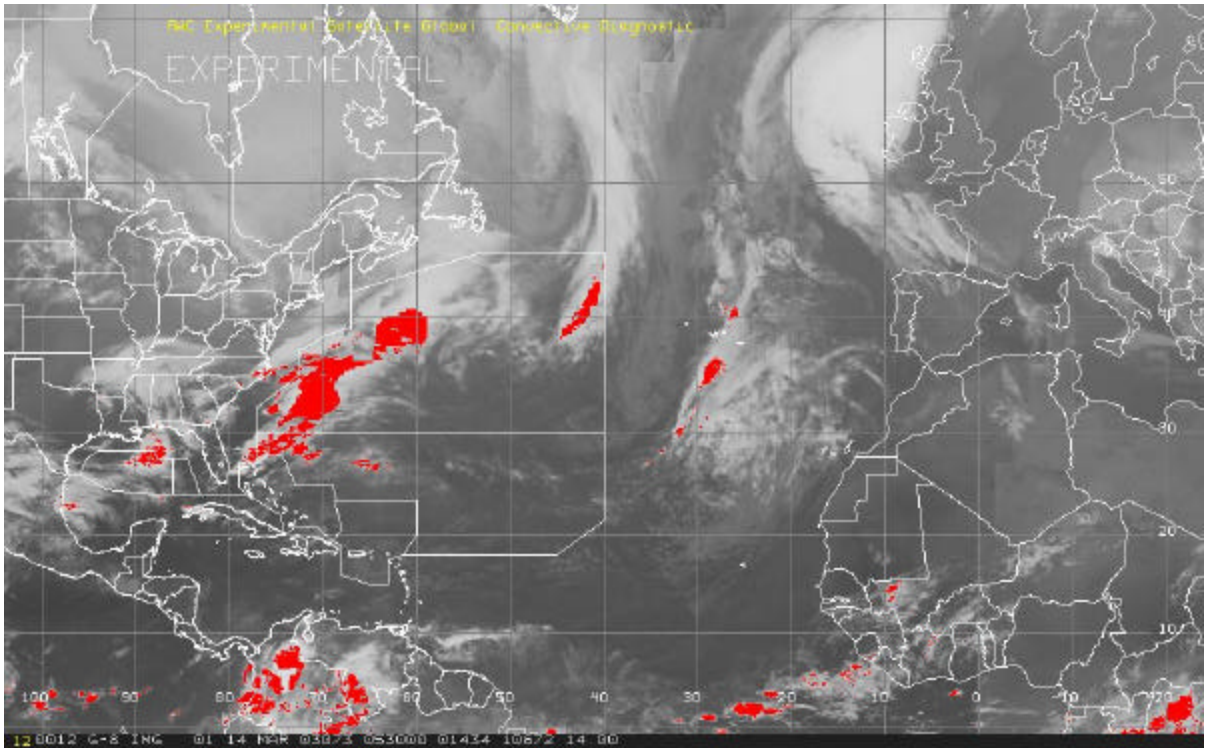
Why do not you have a sneek preview in the list of speakers we currently have for SEC2004:

http://solareclipsewebpages.users.btopenworld.com/SEC_files/SEC2004.html Comments are welcome. PP

From: Klipsi

further to my message of yesterday, to help look at the big picture of weather in Lybia / Turkey, here are a few links for real/time data :

large and hi-res satellite pictures http://www.sat.dundee.ac.uk/pdus.html (need to register) specially the fullsize images in visible light are a rare treat.



Joanne & Patrick

The sole Newsletter dedicated to Solar Eclipses

WE'RE ON THE WEB AT
http://www.Mr.Eclipse.com/SENL/SENLinde.htm
and
http://solareclipsewebpages.users.btopenworld.com

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

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

(Continued from page 34)
It is updated every 6 hours, so you best look for the image at high noon 12 UT. The eclipse will be greatest over south Lybia at 10.11 UT , and total over central Turkey around 11 UT, so the 12 UT picture comes handy.

another of my favourites www.wetterzentrale.de (looks like Ankara may get some snow later next week ?)

it has great links, such as http://www.wetterzentrale.de/pics/avnanim4.html for rain forecast animation
or
9-day prec forecast http://www.wetterzentrale.de/pics/avnpanel4.html

and another huge links page for Europe weather is http://www.westwind.ch/

lightning activity , hourly, includes Turkey but only northern Lybia http://129.13.102.67/wz/pics/Rsfloc2.html

Lybia can be seen on this link http://www.wetterzentrale.de/pics/atlight.html for clouds and thunderstorms

jetstream http://virga.sfsu.edu/gif/jetstream_norhem_00.gif

OK, that's enough. Don't wanna get off-topic here... ;-) Klipsi

From: Peter Tiedt

Turkey looks REAL BAD All of Africa Clear Skies (again) Peter Tiedt

From: Harvey Wasserman

Turkey looks much better today! Harvey