Volume 7, Issue 7
SOLAR ECLIPSE NEWSLETTER

July 2002

SOLAR ECLIPSE NEWSLETTER

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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 (patrick_poitevin@hotmail.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.

The sole Newsletter dedicated to Solar Eclipses

Dear All,

June 2002 is history and many of us witnessed (or did not) parts of the annular eclipse of 10–11 June. What an experience for all of us. A rough boat trip or a rough bus or 4x4 trip. Joanne and I went with Derryl Barr to Chimo, an experience we never will forget. This issue is full of reports and pictures on this solar eclipse. Please enjoy!!!

The meeting in the Hard Rock Café was not one of the best we ever organised. We all had to run out due to the amount of decibels the rock group were playing. We continues our meeting next door in a more quite establishment. We were pleased though to meet and see those who made it. Some of us had to leave earlier though. And some other did make it on time and missed all of us.

Joanne and I experienced some problems with our return into England and were forced to continue our activities without sleep. Joanne had the day of our return her MSc exams, and I had to continue work. Worse of all, I lost quite a bit of files of the solar eclipse mailing list. Thanks to Jan Van Gestel, we could recover all the messages and this SENL could be completed.

We all are ready for the full preparation of the December total eclipse and many of us make plans for even the 2003 total and annular eclipse or transits in 2003 and 2004. Lets not forget Totality Day 2003 and the Solar Eclipse Conference 2004 though!

The solar eclipse webpages (SEWP) are in continue progress. The latest eclipse reports with pictures are available and we hope many links to next eclipses are useful. If you have remarks or recommendations, please send us a message.

Let us end here with a picture of Joanne, together with the pyramid of the Sun and the pyramid of the Moon in Mexico. As Joanne states in her Chimo report, lets meet together once we are aligned again (4 December 2002).

Best regards,

Patrick and Joanne

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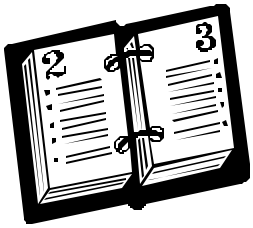

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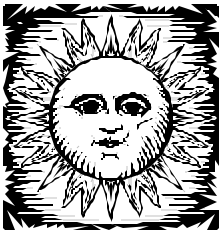

July 01, 1916 Iosif S. Shklovskii, Rusian astronomer was born. He researched the corona and proved the temperature of million degrees. (ref. DD 6/99).

July 01, 1943 Birthday of Professor Jay Pasachoff. Asteroid 5100 Pasachoff was named after him. "Pasachoff's broad range of astronomical work has centered on the sun, and especially on studies of solar eclipses."

July 01, 2000 The last occurance that there were 3 eclipses in one month, and of which two solar eclipses. For July 2000 being on 1st[t] a partial solar eclipse, 16th a total lunar eclipse, and 31st a partial solar eclipse. The next occurance with a month with 3 eclipses will be December 2206 with a partial solar eclipse on 1st and 30th and a totla lunar eclipse on 16th. Ref. Fred Espenak 06/00 SEML.

July 02, 1963 Death of Seth B. Nicholson, American astronomer. Besides the discovery of some Jupiter moons and Minor Planets, his mean task was observing the sun. He published for many years the annual reports of sunspots and magnetism of the sun. (ref. DD 6/99).

July 07, 1339 This was an annular-total eclipse, with the total part of the track finding its way between the Orkney and Shetland Islands without touching either. At this location the track of totality was only 1 km wide, with a duration of 1 second! Presuming that you could position a boat to an accuracy of 1 km, totality must have been a ring of Baily's Beads. (SW-UK Eclipse's)

July 08, 1842 "The hour for the beginning of the eclipse approached. Nearly twenty thousand people, with smoked glasses in hand, examined the radiant globe projected on an azure sky. Scarcely had we, armed with our powerful telescopes, begun to perceive a small indentation on the western limb of the sun, when a great cry, a mingling of twenty thousand different cries, informed us that we had anticipated only by some seconds the observation made with the naked eye by twenty thousand unprepared astronomer. A lively curiosity, emulation and a desire not to be forestalled would seem to have given to their natural sight unusual penetration and power. Between this moment and those that preceded by very little the total disappearance of the sun we did not remark in the countenances of many of the spectators anything that deserves to be related. But when the sun, reduced to a narrow thread, commenced to throw on our horizon a much-enfeebled light, a sort of uneasiness took possession of everyone. Each felt the need of communicating his impressions to those who surrounded him: hence a murmuring sound like that of a distant sea after a storm. The noise became louder as the solar crescent was reduced. The crescent at last disappeared, darkness suddenly succeeded the light, and an absolute silence marked this phase of the eclipse so that we clearly heard the pendulum of our astronomical clock. The phenomenon in its magnificence triumphed over the petulance of youth, over the levity that certain men take as a sign of superiority, over the noisy indifference of which soldiers usually make profession. A profound calm reigned in the air; the birds sang no more. After a solemn waiting of about two minutes, transports of joy, frantic applause, saluted with the same accord, the same spontaneity, the reappearance of the first solar rays. A melancholy contemplation, produced by unaccountable feelings, was succeeded by a real and lively satisfaction of which no one thought of checking or moderating the enthusiasm. For the majority of the public the phenomenon was at an end. The other phases of the eclipse had hardly any attentive spectators, apart from devoted to the study of astronomy." Refers to the total solar eclipse in the south of France, 8 July 1842 From: Camille Flamarion, Popular Astronomy, 1894. The words are those of François Arago. Reprinted, with permission, from The Sky: Order and Chaos by Jean-Pierre Verdet, copyright Gallimard 1987, English Translation copyright Thames and Hudson Ltd, London, and Harry N Abrams, Inc., New York, 1992. Ref FE 01/01

July 08, 1842 Dominique Francois Jean Arago (1786-1853) observed this solar eclipse and attempts that the sun does exist of gas.

July 08, 1842 First attempt to photograph a total eclipse was made by the Austrian astronomer Majocci. He failed to record totality, though he did succeed in photographing the partial phase.

July 08, 1842 Following anecdote appeared according Dominique Francois Jean Arago (1786-1853) in the Journal of the Lower Alps, July 9, 1842: A poor child of the commune of Sieyes was watching her flock when the eclipse commenced. Entirely ignorant of the event which was approaching, she saw with anxiety the sun darken by degrees, for there was no cloud or vapour visible which might account for the phenomenon. When the light disappeared all at once, the poor child, in the height of her terror, began to weep, and call out for help. Her tears were still flowing when the sun sent forth his first ray. Reassured by the aspect, the child crossed her hands, exclaiming in the patois of the province, “O beou Souleou !” (O beautiful Sun !). ref. History of Physical Astronomy

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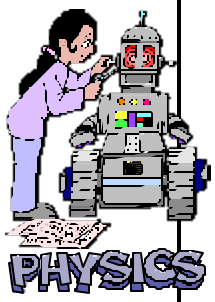
July 08, 1842 Francis Baily (1774-1844) UK, at an eclipse in Italy, focuses attention on the corona and prominences and identifies them as part of the Sun's atmosphere.

July 09, 1945 Canadian astronomers, J. F. Heard and P. M. Millman, while in the RCAF, got moderately good photographs of the corona and flash spectrum during this solar eclipse. They were high above the clouds in Bredenbury, Saskatchewan where ground-based astronomers saw nothing of the eclipse. (HASTRO 24/6/97-Peter Broughton)



July 09, 1974 American Satellite OSO 7, Orbiting Solar Observatories, falls back. (ref. DD 7/98)

July 09, 1996 With the satellite SOHO, they discover that solar flares causes sun quakes. (ref. DD 7/98)

July 10, 0028 This two and a half minute eclipse crossed south western Ireland and Cornwall before the Sun set in France shortly afterwards. (SW-UK Eclipse's)

July 10, 1910 Death of German astronomer Johann Gottfried Galle. Besides the discovery of Neptun, he calculated the paralax of the sun from measurements of Minor Planets. (ref. DD 7/99)

July 10, 1972 Chukotka 2509 (1977 NG): Minor planet discovered July 14, 1977 by Nikolaj S. Chernykh at Nauchnyj. Named for a National Area of the R.S.F.S.R., situated in the northeastern part of the USSR. The discoverer participated in an expedition there to observe the 1972 Total Solar Eclipse (MPC 7472). Ref. VK 6/97

July 10, 1983 Minor planet (3222) Liller 1983 NJ. Discovered 1983 July 10 by E. Bowell at Anderson Mesa. Named in honor of William Liller, formerly Robert Wheeler Wilson Professor of Applied Astronomy at Harvard University, on the occasion of his sixtieth birthday. A premier observer, he has made substantial contributions through observations of a broad range of astronomical objects and phenomena: planetary nebulae, minor planets, comets, novae, variable stars, globular clusters, X-ray sources, quasars, solar eclipses and stellar occultations. Now living in Chile, he has in recent years participated in the PROBLICOM survey and has discovered several novae. During the recent passage of Halley's Comet he was a crucial member of the IHW Island Network. He has been a leader in astronomical education and an important supporter of amateur astronomy. His enthusiastic encouragement has been greatly appreciated by his colleagues and students. (M 12015) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

July 11, 1732 Birth of French astronomer Joseph Jerome le Francois de Lalande (1732-1807). Calculated the distance to the sun in 1771 and being 154,198 million km. (ref. DD 7/98, Rc 1999)

July 11, 1909 Death of Simon Newcomb (1835-1909), American mathematician and astronomer. He used carefully analyzed measurements of stellar and planetary positions to compute motions of the sun, moon, planets, and their satellites. Studied the velocity of light and calculated the distance to the sun.

July 11, 1991 The so called Great Eclipse which was visible in Mexico and Hawaii.

July 13, 0158 This was the first total eclipse to have passed over London since 1 AD. It provided for them 1 minute of glory. (SW-UK Eclipse's)

July 13, 2018 Next solar eclipse on a Friday the 13 th. The last solar eclipse on a Friday 13 th was in December 1974. Both are partial solar eclipses. There are 24 solar eclipses on a Friday the 13 th between 0 and 3000. Of which 13 partial, 9 annular and 2 total solar eclipses. The most odd is the one of 13.03.313 which was an annular eclipse.

July 14, 1977 Minor planet (2509) Chukotka 1977 NG. Discovered 1977 July 14 by N. S. Chernykh at Nauchnyj. Named for a National Area of the R.S.F.S.R., situated in the northeastern part of the U.S.S.R. The discoverer participated in an expedition there to observe the 1972 total solar eclipse. (M 7472) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

July 15, 1975 During the nine-day mission launched July 15, 1975, astronauts Thomas P. Stafford, Vance D. Brand and Donald K. Slayton rendezvoused and docked their Apollo spacecraft with the Soyuz 19 spacecraft with cosmonauts Aleksey Leonov and Valeriy Kubasov onboard.

July 16, 0809 "The sun darkened at the beginning of the fifth hour of the day on Tuesday, July 16th, the 29th day of the moon." Refers to a solar eclipse in AD 809. From: The Anglo Saxon Chronicles translated and collated by Anne Savage, CLB Publishing Ltd. Ref FE 01/01

July 16, 1330 A short Eclipse at under 1 minute, but yet another for northern Scotland. The Orkney and Shetland Islands are

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blessed with more Total Eclipses than anywhere else in the UK. Although this Eclipse did not cross these islands, it came pretty close. The Eclipse track traveled into Holland, Germany, Czechoslovakia, Austria, Hungary, Romania, Bulgaria and sets in Turkey. (SW-UK Eclipse's)

July 17, -0187 (188 BC) "Before the new magistrates departed for their provinces, a three-day period of prayer was proclaimed in the name of the College of Decemvirs at all the street-corner shrines because in the daytime at the third hour darkness had covered everything." Probably refers to the solar eclipse of 17 July 188 BC. Livy, Roman. Quoted in Encyclopedia Britannica CD 98.

July 17, -0187 (188 BC) "Emperor Hui, 7th year, 5th month, day ting-mao, the last day of the month. The Sun was eclipsed; it was almost complete. It was in the beginning of (the lunar lodge) Ch'i-hsing" Refers to a partial solar eclipse of 17 July 188 BC. Pan Ku Han-shu (AD 58-AD76). Quoted in Historical Eclipses and Earth's Rotation, by F Richard Stephenson, Cambridge University Press, 1997, page 234.

July 17, 0334 Firmicus (Sicily) is first to report solar prominences, seen during an annular eclipse.

July 17, -0708 (709 BC) "Duke Huan, 3rd year, 7th month, day jen-ch'en, the first day (of the month). The Sun was eclipsed and it was total." Refers to a total solar eclipse of 17 July 709 BC.From: Ch'un-ch'iu, book I (Chinese). Quoted in Historical Eclipses and Earth's Rotation, by F Richard Stephenson, Cambridge University Press, 1997, page 226.Stephenson says: "This is the earliest direct allusion to a complete obscuration of the Sun in any civilisation. The recorded date, when reduced to the Julian calendar, agrees exactly with that of a computed solar eclipse." Reference to the same eclipse appears in the Han-shu ('History of the Former Han Dynasty') (Chinese, 1st century AD): ". . . the eclipse threaded centrally through the Sun; above and below it was yellow."

July 17, 1905 Birth of Roderick Oliver Redman. On August 31, 1932 G.G. Cillie (UK) and Donald H. Menzel (US) uses eclipse spectra to show that the Sun's corona has a higher temperature (faster atomic motion) than the photosphere. Confirmed, with much higher temperature, by Roderick Oliver Redman (1905-1975) during an eclipse in South Africa on October 1, 1940. (ref Rc 1999)

July 18, 1860 "At the commencement of the obscuration, the sky was overcast, with heavy masses of cloud in the east, and there was much reason to fear that the celestial phenomenon would not be at all apparent hereabouts. But a brisk gale of wind having scattered the clouds, shortly before six o'clock the sun became visible to the eager gaze of thousands, and again astronomical prediction was verified. The black shadow had eaten its way a considerable distance into the surface of the bright orb, and slowly but steadily the darkness appeared to extend itself over that dazzling surface. What a scrutiny the great change was attracting from all quarters of the earth! What an array of telescopes were eagerly searching the blue vault above during those precious moments!" Refers to a solar eclipse of 18 July 1860, at Upper Fort Garry, Manitoba (outside the path of totality). From: William Coldwell and William Buckingham, Nor'Wester. Reprinted, with permission, from Chasing the Shadow, copyright 1994 by Joel K Harris and Richard L Talcott, by permission of Kalmbach Publishing Co. Ref FE 01/01

July 18, 1860 "But at the moment of totality, all became silent and dumb. Neither a cry nor a rustling, nor even a whisper (was heard), but everywhere there was anxiety and consternation. To everyone the two minutes of the eclipse were like two hours. I do not exaggerate or imagine any of these details. Several people whom I questioned after the eclipse regarding the duration of totality replied that it had lasted for two hours." Refers to a total solar eclipse in Sudan of 18 July 1860. From: M Bey, Comptes Rendus. Quoted in Historical Eclipses and Earth's Rotation, by F Richard Stephenson, Cambridge University Press, 1997, page 385.

July 18, 1860 First wet plate photographs of an eclipse; they require 1/30 of the exposure time of a daguerreotype.

July 18, 1860 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.

July 18, 1898 The authors, Meeus-Grosjean-Vanderleen, started as close as possible with the 20 th century for their Canon Of Solar Eclipses 1898-2510 in 1966. They started with eclipse number 7401 of von Oppplozers' Canon der Finsternisse, which was the solar eclipse of 18 July 1898 and so 600 eclipses could be compared from both Canons.

July 19, 0418 First report of a comet discovered during a solar eclipse, seen by the historian Philostorgius in Asia Minor. Many chronicles do mention this observation (12 western, 3 Byzantine). Philostorgius mentions that the sun was eclipsed at the 8 th hour of the day. In his sketch there is a comet. This Total Solar Eclipse was from the Caribbean, Bay of Bengal, north

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Spain, central Italy, little Asia and ends in the north of India.

July 19, 1975 The Apollo and Soyuz spacecraft undocked at 8:02 am EDT. While the spacecraft were in station-keeping mode, the crews photographed them. The Apollo spacecraft served as an occulting disk, blocking the sun from the Soyuz and simulating a Solar Eclipse, the first man-made Eclipse. Leonov and Kubasov photographed the solar corona as the Apollo backed away from the Soyuz and toward the sun.

July 21, 1979 Minor Planet (4013) Ogiria 1979 OM15. Discovered 1979 July 21 by N. S. Chernykh at Nauchnyj. Named in memory of Maiya Borisovna Ogir' (1933-1991), solar physicist and staff member of the Crimean Astrophysical Observatory for more than 30 years, known for her research on the active processes on the Sun. (M 22500) Dictionary of Minor Planet Names - ISBN 3-540-14814-0 - Copyright © 1999 by Springer-Verlag Berlin Heidelberg

July 21, 1990 -- Meteorologist Joe Rao was able to coerce American Trans-Air Airlines to alter the course of one of their regularly-scheduled flights in order to be in the right position to experience the total phase of the July 22-21, 1990 total solar eclipse. The eclipse began on Sunday, July 22, with the path of totality passing over Helsinki, Finland. The shadow path then moved across northernmost sections of Russia, then crossed the International Date Line, causing the eclipse date to change to Saturday, July 21. The totality track swept southeast over Alaska's Aleutian Island chain, before reaching its end at a point midway between Honolulu, Hawaii and San Francisco, California. American Trans-Air Flight 403 normally flies from Hawaii to San Francisco on Saturday afternoons. A few weeks in advance of the eclipse, Rao informed the airline that by delaying the flight by 41 minutes out of Honolulu, that Flight 403 would likely be in position to catch the total phase. The airline agreed to make the attempt, allowing most of the 360 persons on board their Lockheed L-1011 jet the opportunity to witness totality. Rao, his wife Renate, and two friends, flew out of New York's JFK airport late on Friday night, July 20 . . . arrived in San Francisco early on Saturday morning for a few hours of sleep, before boarding ATA Flight 402 to Hawaii. They were in Honolulu for 45 minutes before turning around and heading back for San Francisco (encountering the eclipse along the way). After spending the night in San Francisco, they returned to New York the next day, having traveled over 11,000 miles in 46 hours just to see 73 seconds of a total eclipse! Ref. Pers. Corr. Joe Rao.

July 22, 1784 Astronomer Friedrich Wilhelm Bessel (1784-1846) was born in Muiden. Son of a government employee. Friedrich W. Bessel, German astronomer and mathematicus determined precession, nutation, aberration and inclination of the ecliptic. Famous for his Bessel elements for the calculation of Solar Eclipses. (ref. DD 7/98, Rc 1999)

July 22, 1990 The Finland-Russia eclipse, which was clouded out for many eclipse chasers.

July 22, 2028 Christmas Island will get a total solar eclipse on 22 July 2028 with almost 4 minutes of totality. There will be a Partial Solar Eclipse on Christmas Day, December 25, 2038 (mag. of 0.845). On December 26, 2019 there is a partial eclipse of magnitude 0.658 on the same island.

July 22, 2381 The maximum theoretical length for a British total eclipse is 5.5 minutes. The eclipse of June 16, 885 lasted for almost 5 minutes and the same will be true for the Scottish total eclipse of 22 July 2381. This TSE will be the first total solar eclipse in Amsterdam since 17 June 1433. Ref WC 7/01 SEML

July 23, 0594 The Sun was well up (17°) at 6:11 am when totality occurred. On a warm summer's morning it must have got surprisingly cold as totality approached, giving a clue that something unusual was about to happen. At 258 km wide this was an Eclipse with a very wide track and a good duration of over 3 minutes. The Eclipse track traveled into Denmark, Norway, Sweden, Finland, Estonia and Russia. (SW-UK Eclipse's)

July 24, 1853 Birth of Henri Alexandre Deslandres (1853-1948) in Paris, French physicist and astronomer did spectroscopic research. Designed, independent from Hale but at the same time, the spectra helio graph. (ref. DD 7/98, Rc 1999)

July 25, 6337 Is in Santiago de Compostela, a religion place in Spain, the day July 25 on a Sunday, then the year is called Ano Santo Compostelano. The next central eclipse visible in Santiago de Compostela will be the annular eclipse of 3 October 2005. For a total solar eclipse the pelgrims have to wait till 4 October 2480. Because this is a total eclipse at sunrise, the next favorite will be 30 October 2665. The last total solar eclipse was 16 March 1485. But an eclipse in Santiago de Compostela and in an Ano Santa Compostelano? On 16 februari 2743 there is an annular eclipse. The same year 25 July is on a Sunday which is Ano Santo Compostelano. Maximum is 4 degrees under the horizon. The total solar eclipse of 16 June 1406 was in an Ano Santo Compostelano as well. Between –1000 and 8000 there is only one solar eclipse on a Sunday July 25 and visible in Santiago de Compostela: The partial solar eclipse of Sunday 25 July 6337 with maximum mag-

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nitude of 0.328 at 15h23.

July 27, 1801 Birth of Sir George Biddell Airy (1801-1892), British Astronomer and Astronomer Royal from 1835 till 1881, president of the Royal Society from 1871 till 1873. Calculated distance to the sun and observed transit of Venus, etc. (ref. DD 7/98, Rc 1999). Born in Alnwick, Northumberland. Died in Greenwich London on 2 January 1892. Ref. The Bibliographical Dictionary of Scientists, edited by David Abbott, 1994.

July 28, 0873 "This solar eclipse was observed by Abu al-'Abbas al-Iranshahri at Nishapur early in the morning on Tuesday the 29th of the month of Ramadan in the year 259 of al-Hijrah . . . (date on the Persian calendar) . . . He mentioned that the Moon's body (i.e. disk) was in the middle of the Sun'd body. The light from the remaining uneclipsed portion of the Sun surrounded it (i.e. the Moon). It was clear from this that the Sun's diameter exceeded in view that of the Moon." Refers to an annular eclipse of 28 July AD 873. From: al-Biruni al-Qanun al-Mas'udi (1030). Quoted in Historical Eclipses and Earth's Rotation, by F Richard Stephenson, Cambridge University Press, 1997, page 467.

July 28, 1851 "The observations were tolerably successful. although the full beauty of the corona was not seen at Christiania, owing to the prevalence of thin clouds during the totality. The prominences were clearly visible, especially a large hooked protruberance. This remarkable stream of hydrogen gas, rendered incandescent while passing through the heated photosphere of the Sun, attracted the attention of nearly all the observers at the different stations. I succeeded in noting accurately the mean solar times of the beginning of the eclipse, and of the beginning and end of totality. As at Christiania the total darkness lasted only a few seconds more than 2-1/2 minutes, I could only examine in a hurried manner the various phenomena visible in the telescope. So absorbed was I during this short interval that when the limb of the Sun reappeared I could scarcely realize the fact that 2-1/2 minutes had elapsed since the commencement of totality. These were truly exciting moments, and although I had hastily witnessed most of the phenomena, I felt somewhat disappointed that more had not been accomplished. Few can imagine how much I longed for another minute, for what I had witnessed seemed very much like a dream. As a spectacle, those who were not encumbered with telescopic work had the best of it. Several persons in different positions were requested to note the effects of the darkness on the landscape, plants, and animals. I kept my eye devotedly fixed to the eye-piece of the telescope during nearly the whole time of totality. I only removed it in order to obtain a few seconds' glance at the marvellous transformation around me, for the landscape had lost all its natural aspect, being tinted with various shades of colour over the intermixture of land and water. Some of my friends described the appearance, as the darkness gradually crept onwards, as truly awful." Refers to the total solar eclipse of 28 July 1851, as seen from within the northern edge of the path of totality, in Scandinavia. From: Edwin Dunkin, Autobiography, unpublished. Compiled by Peter Hingley, Royal Astronomical Society. Ref FE 01/01

July 28, 1851 First American eclipse expedition to Europe when G. P. Bond led a team to Scandinavia.

July 28, 1851 Robert Grant and William Swan (UK) and Karl Ludwig von Lottrow (Austria) determine that prominences are part of the Sun because the Moon is seen to cover and uncover them as it moves in front of the Sun.

July 28, 1851 Sir George Biddell Airy (1801-1892) (UK) is the first to describe the Sun's chromosphere: he calls it the sierra, thinking that he is seeing mountains on the Sun, but he is actually seeing small prominences (spicules) that give the chromosphere a jagged appearance. Because of its reddish color, Sir Joseph Norman Lockyer (1836-1920), in 1868, names this layer of the Sun's atmosphere the chromosphere.

July 28, 1851 The first photograph of a total eclipse was taken in 1851 by Berkowski in Konigsbert, East Prussia using the 6.25 in Königsberg heliometer and giving an exposure of 24s.

July 29, -0430 (431 BC) ". . . the sun assumed the shape of a crescent and became full again, and during the eclipse some stars became visible." Thucydides (Greek, c460-400 BC).Refers to an annular solar eclipse of 3 August (29 July) 431 BC. Ref FE 01/01

July 29, -0430 (431 BC) "The same summer, at the beginning of the new lunar month (the only time by the way at which it appears possible), the Sun was eclipsed after noon. After it had assumed the form of a crescent, and some of the stars had come out, it returned to its natural shape." Refers to an annular solar eclipse of 3 August (29 July) 431 BC. Thucydides (Greek historian, c460-400 BC) History of the Peloponnesian War. Quoted in Historical Eclipses and Earth's Rotation, by F Richard Stephenson, Cambridge University Press, 1997, page 346, and, in part, in Encyclopaedia Britannica CD 98.

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July 29, 1878 Height of search for intra-Mercurial planet Vulcan using eclipses to block the Sun. Several observers claim sightings, but they are never confirmed. The problem is finally resolved by Albert Einstein (1879-1955) in his general theory of relativity in 1916.

July 29, 1878 Possible observation of comet Encke (Johann Franz Encke (1791-1865)) during the eclipse of 29 July 1878 by J.B.Rutherford from Colorado Springs. Besides the comet he also observed Procyon, Regulus, Mercury and Mars with the naked eye and "... feels sure he saw ..." But no other observer did notice the comet. Even not F. Hess, whom specially searched for the comet during this eclipse.

July 29, 1878 Samuel Pierpont Langley (1834-1906), and Cleveland Abbe (US), observing from Pike's Peak in Colorado, and Simon Newcomb (1835-1909) (US) observing from Wyoming, notice coronal streamers extending more than 6 degrees from the Sun along the ecliptic and suggest that this glow is the origin of the zodiacal light.

July 31, 1995 European spacecraft Ulysses passes the northern pole of the Sun at 9,78. (ref. DD 7/98)

SECalendar for June

From : Skywayinc@aol.com To : eclipse@hydra.carleton.ca Date : Fri, 31 May 2002 09:36:04 EDT

<< June 03, 1925 Death Camille Nicolas Flammarion in Juvsy sur Orge. He was born on February 26, 1842 in Montigny le Roi in Hauter Marne. Ref. The ibliographical Dictionary of Scientists, edited by David Abbott, 1994. >>

I thought about Flammarion quite a bit on August 11, 1999 -- the day of the "Great European Solar Eclipse." It was an event that he probably contemplated many times, yet could not possibly ever see. In his late 19th century classic work "Popular Astronomy" (translated from the original French by J. Ellard Gore), Flammarion alluded to the 1999 eclipse in a few places. On pages 200-204, he provided maps and tables for the principal total or annular eclipses which would pass over France or not far from France through the end of the twentieth century. In all likelyhood, Flammarion obtained all of his data from the then "newly published" Canon der Finsternisse, by Oppolzer. In fact, Flammarion's eclipse maps very much resemble those found in Oppolzer (except they were of a smaller scale and centered on France).

Of the August 11, 1999 eclipse (the final one in his listings), Flammarion commented: "TOTAL FOR FRANCE; It will pass over Paris at 10:30 a.m.; great and beautiful eclipse, several minutes duration." Later he added: "I do hope dear reader, that you remain on this planet with me up to the last, and that you may verify the truth of these predictions. However little our inventions of steam and electricity progress, and however slowly other inventions may come to their aid, the earth will very soon be but a single country, and we shall travel from here to Pekin with much less difficulty than travellers could go last century from Paris to Saint Cloud." -- joe rao

SECalendar for June - Venus Transit

From : Rybrks1@cs.com To : SOLARECLIPSES@AULA.COM Date : Wed, 5 Jun 2002 13:27:46 EDT

In the SEC Calendar for June: June 04, 1769 Six hours after the transit of Venus there was a total solar eclipse.

This is just a corona transit and not a transit of the planet over the solar disc. Venus is about one solar radii from the eclipsed suns disc. For a Mercury corona transit you have to wait till 3269 and 3853.

>From Ray Brooks I believe this really was a disc transit. What a fantastic view one would have had of Venus through a telescope during midtotality. It would have been a solid white ring of white light around the clouds of Venus.

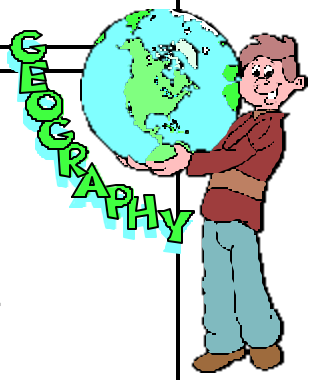
SECalendar

Uw lijst van juni

From : Jean Meeus <JMeeus@compuserve.com> To : Patrick Poitevin <Patrick_Poitevin@hotmail.com> Date : Fri, 31 May 2002 06:47:08 -0400

Beste Patrick, Bij 3 juni (dood van Flammarion): in plaats van Hauter Marne moet het zijn Haute Mame.

En dan bij 29 juni: was de eclips van 1927 de laatste in Engeland???? Die van 11 augustus 1999 liep toch door Cornwall, en Cornwall ligt toch in Engeland, niet? De groeten. Jean



SECalendar for June, addendum

From : "Michael L. Gorodetsky" <gorm@HBAR.PHYS.MSU.RU> To : HASTRO-L@WVNVM.WVNET.EDU Date : Fri, 31 May 2002 13:51:20 +0300

Several additional solar eclipses in June: from my collection

Jun. 6 346, Theophanes, 9th C., Bonn, I, 1839, 58; Teubner ed. C.de Boor, I, 1883, 39. "In the same year the Sun again became impoverished in the second hour of the Lord's Day" (Schove p.52, Newton, 1972)

June 13, -363 Diodorus, Historical Library XV 80 "[15.80.2] When the common council of the Boeotians convened and the envoys had explained the matters on which they had been instructed, the Boeotians concurred with the Thessalians in every matter, gave Pelopidas seven thousand men and ordered him speedily to assist as requested; but as Pelopidas was hastening to leave with his army, the sun, as it happened, was eclipsed. [15.80.3] Many were superstitious about the phenomenon, and some of the soothsayers declared that because of the withdrawal of the soldiers, the city's "sun" had been eclipsed. Although in this interpretation they were foretelling the death of Pelopidas, he notwithstanding set out for the campaign, drawn on by Fate."

Plutarch, Pelopidas "At this time, Alexander the Pheraean falling back to his old nature, and having seized many of the Thessalian cities, and put garrisons upon the Achaeans of Phthiotis, and the Magnesians, the cities, hearing that Pelopidas was returned, sent an embassy to Thebes requesting succours, and him for their leader. The Thebans willingly granted their desire; and now when all things were prepared, and the general beginning to march, the sun was eclipsed, and darkness spread over the city at noonday. Now when Pelopidas saw them startled at the prodigy, he did not think it fit to force on men who were afraid and out of heart, nor to hazard seven thousand of his citizens; and therefore with only three hundred horse volunteers, set forward himself to Thessaly, much against the will of the augurs and his fellow-citizens in general, who all imagined this marked portent to have reference to this great man."

June 16, 0364 This eclipse was precalculated and observed by Theon Theon's commentary to the Ptolemy's "Almagest" and Handy Tables.

a. "[...] the time reckoned by civil days and equinoctal hours of the exact ecliptic conjunction which have discussed, and which took place according to the Egyptian calendar in the 1112th year from the reign of Nabonassar, 2 5/6 equal or equinoctial hours after midday on the 24th of Toth, and according to the Alexandrian calendar reckoned by simple civil days in the 1112th year of the same reign, 2 5/6 equal or equinoctial hours after midday on the 22nd of Payni [...]. And moreover we observed with the greatest certainty the time of the beginning of contact, reckoned by civil and apparent time, as 2 5/6 equinoctial hours after midday, and the time of the middle of the eclipse as 3 4/5 hours, and the time of complete restoration as 4 1/2 hours approximately after the said midday on the 22nd of Payni." (Newton, 1970, p.152,154; Stephenson, p.364-365, Schove p.59)

June 17 -187 ? Titus Livius, The History of Rome, XXXVIII, 36, 4 "Before the new magistrates left for their provinces, special intercessions for three days were ordered on the authority of the Keepers of the Sacred Books to be offered at all the cross-roads owing to a darkness which came over in broad daylight between the third and fourth hours. Sacrifices were also enjoined for nine days in consequence of a shower of stones on the Aventine." (Stephenson, p.367)

SECalendar

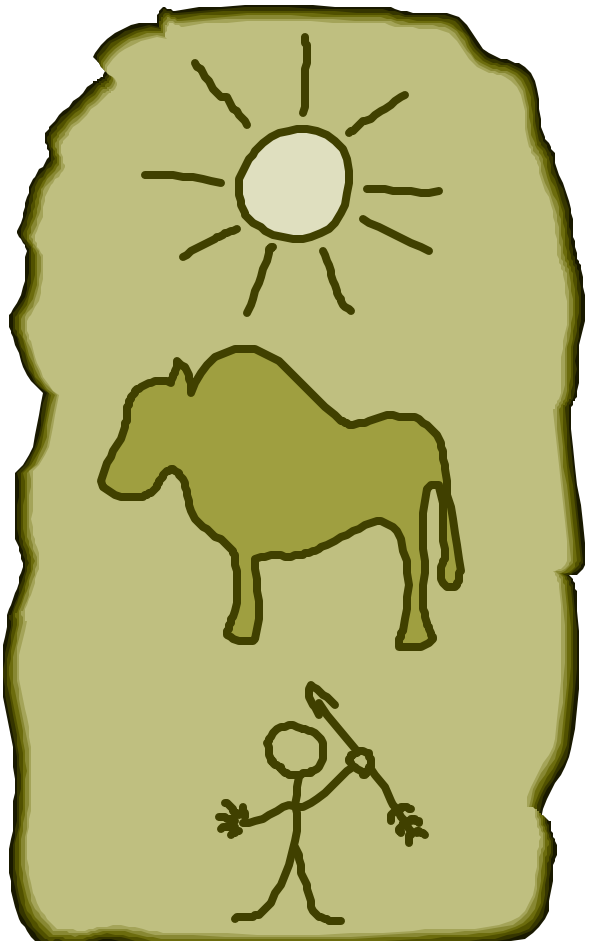
June 21, -339 Cicero, "De Republica", I, (XVI, 25) Loeb Classical Library, v.213.

(XVI, 25) "... On a later occasion the point was also noted that by our own Ennius. He writes that about three hundred and fifty years after the foundation of Rome on June the fifth the moon and night blocked out the sun."

June 26, 1321, This eclipse is accurately reflected in several russian chronicles originating from Novgorod. Novgorod I, II, IV, Pskov II. This eclipse was also noted on one manuscript wit easter table.

"In the year 6829 (1321) at 3-d hour of the day the sun died and it was as a crescent on the second day, and it was dark like in winter night, adh after one hour it became complete again and everybody were glad." (my translation).

June 29, 0512 Short note on this eclipse may be found in many sources like AU512, CS510: "An eclipse of the sun was visible"
Marcellini Chronicon
Paschale Campanum
The Annals of Ulster
The Chronicon Scotorum
Michael I, Chronicle of Zacharias of Metilen



SEScannings

SEScannings: Le Guide du Ciel 2002-2003 by Guillaume Cannat

Herewith some solar eclipse related items out of (french) Le Guide du Ciel 2002-2003 (Guillaume Cannat). The Guide, in contrast with many astronomical year books, runs from June 2002 to 2003.

Important astronomical events in 2001 pages 11 to 14

29 March The biggest sunspot since 10 years is visible on the sun. The size is about 14 times of that of the Earth.
2 April The most spectaculaire eruption of the sunspot since 12 years.
31 July For the first time since 1996, the Russians plced a satellite in orbit: Coronas F, which has instruments on board to observe the Sun (as SoHo). The orbit is at about 500 km the diameter, while Soho is more than 1.5 mill. km from the Earth.
8 August Launch of the satellite Genesis, which collect particles of the solar wind during 30 months.
30 October End of one of the longest missions, IMP 8, after 28 years service. One of the studies was the solar wind.
6 November MDI, one of the SoHo instruments, made it possible to understand the sunspots better.
10 December The four European satellites Cluster is in orbit at a anti aurora zone.

Further readings at www.leguideduciel.net

The Moon Monthly page 25: With a graph of perihilium and apogeum of te moon, indicating thew nodes and the sun and lunar eclipses. The graph is in minimum (356 410 km) and maximum (406 740 km) distance plot.

June 2002 page 32

10 The central annular solar eclipse.

July 2002 pages 44 to 46

03 Tenth aniversary of the launch of SAMPEX (Solar Anomalous Magnetospheric Particle Explorer). See ddwilson.gsfc.nasa.gov/SMEX/sampex.htm
09 Jupiter passes in the coronograph Lasco C3 of SoHo from 9 to 31 July. See sohowww.nascom.nasa.gov/data/realtime-images.html
14 Mercury passes in the coronograph Lasco C3 of SoHo from 14 to 29 July.
15 Mars passes in the coronograph Lasco C3 of SoHo from 15 July to 6 September.
19 Thirty fifth anniversary (1967) of the Explorer 35 launch, which also studied solar wind.
21 Launch of satellite SORCE (SOlar Radiation and Climate Experiment). See lasp.colorado.edu/sorce
22 Messier 44 will pass in the coronograph Lasco C3 between 22 July and 8 August.

Observing the young crescent of the Moon pages 49 and 50: With table of dates, hours, age, degrees, etc.

September 2002 pages 72 to 73

08 Thirty fifth (1967) anniversary of the launch of Surveyor V to the Moon which landed in Mare Tranquillity on 11 September. Apollo 11 went to the same place after. See nssdc.gsfc.nasa.gov/nmc/tmp/1967-084A.html
24 From 24 September to 3 October, Mercury passes in the coronograph Lasco C3 of SoHo.

The end of Solar Maximum pages 76 and 77: Besides a full page text as well table and graphs of cycle 23, and all over the centuries.

November 2002 pages 98 and 101 to 102

01 Mercury passes in the coronograph Lasco C3 from 1 November to 29 November.
14 Mercury in conjunction and will be acculted by the Sun.

(Continued on page 11)

SEScannings

19 Third and last Lunar eclipse of 2002.

December 2002 page 115 and 120

04 Central total solar eclipse.
27 The comet 28P/Neujmin passes closed to the Sun at 232 mill. km.

The Solar eclipse of 4 December 2002 page 121: Text, table and maps of Africa and Australia.

January 2003 page 131

08 Mercury passes in the coronograph Lasco C3 from 8 to 15 January.

March 2003 page 156

05 Start of year 1424 in the Moslim Calendar (see www.bdl.fr/minitel/calendrier/calendriers.html).

May 2003 page 180 and 182 to 183

07 Transit of Mercury.
16 Total Lunar Eclipse.
31 Annular Solar Eclipse.

The Transit of Mercury page 184: With text, table and graph of all future Mercury transits.

The Total Lunar Eclipse page 185 and 186: With text, graphs and table about the lunar eclipse.

The annular solar eclipse page 187: Text, table and graph about the annular solar eclipse.

Joanne and a 360 degrees halo at the Piramid of the Sun and the Moon in Mexico in June 2002 Picture by PP

SEDates

IAU Symposium 219: ``Stars as Suns''

From : "Patrick Poitevin" <patrick_poitevin@hotmail.com> To : SOLARECLIPSES@AULA.COM Date : Fri, 31 May 2002 05:10:27 +0000

>From "Arnold O. Benz" <benz@astro.phys.ethz.ch> 17 May 2002

There will be a full symposiu m on solar/stellar physics at the IAU General Assembly in Sydney entitled "Stars as Suns: Activity, Evolution and Planets" (July 21 to 25, 2003, Benz, Dupree) It will concentrate on the results of new instruments (including RHESSI, SOHO, Chandra, XMM) relevant to solar activity, its physics and its history. Such a symp osium enhances the visibility of a field to astronomy in general. It will also be scientifically exciting, particularly if you let Andrea Dupree or me know what your latest results are and how we could present them.

In addition there will be three comp lementary solar Joint Discussions in Sydney the week before the Symposium: "Magnetic Fields and Helicity in the Sun and Heliosphere" (July 16; Schmieder, Rust) "The Sun and the Helisophere as an Integrated System" (July 17, Poletto, Suess) " Astro/Helioseismology" (July18-19, Bedding, Leibacher)

With all the new data coming in, it looks like exciting days in Sydney. See you there! Arnold O. Benz , President of Div II (Sun and Heliosphere)

SEScannings

SEScannings - Sky and Telescope June 2002

From : "Patrick Poitevin" <patrick_poitevin@hotmail.com> To : SOLARECLIPSES@AULA.COM Date : Fri, 31 May 2002 05:23:06 +0000

Sky and Telescope June 2002

Front page with Fred Espenak's wonderful picture of the 2001 total solar eclipse

Africa or Australia by Fred Espenak and Jay Anderson (pages 32 to 37)

NASA's 2002 Solar Eclipse Bu lletin (page 37)

High Astronomy Adventure from the Land Down Under by Paul Rogers (page 70 to 74) - for travelers to the upcoming total eclipse in South Australia

Tips for Travelers to the Australian Outback (page 74)

Star trails: Shakespeare's Eclip se Return by David H. Levy (pages 75 to 76)

June's Transpacific Solar Eclipse by Roger W. Sinnott (pages 93 to 95)

The Near Sky: Noneclipse Shadow Bands by Fred Schaaf (page 98)

See links to Sky and Telescope or Sky Publishing at http://www.j.w.edmonds. btinternet.co.uk PP

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Jean Meeus Books

From : rybrks1@cs.com To : SOLARECLIPSES@AULA.COM Date : Mon, 17 Jun 2002 16:50:26 -0400

Hip-Hip to the recent words on Jean's "Morsels" books.

I thought they were required reading to join this SEML..they should be.

His other books on computing various heavenly motions are what allowed me right a program for my only personal interests. Thanks, Jean. Ray Brooks

High, lows and eclipse migraine

From : KCStarguy@aol.com To : SOLARECLIPSES@AULA.COM Date : Mon, 17 Jun 2002

Wow such a high from a sliver. Imagine if it was completely clear. But there are lows too. I got only one really bad low after an eclipse. After the 1998 eclipse aboard the Galaxy, I got an eclipse migraine . Anybody ever get something like that? Dr. Eric Flescher (kcstarguy@aol.com)

From : "76630,2206" <76630.2206@compuserve.com>

Well, after totality, I have to strike my set. That is more difficult than set-up. It is hard for me to do so, because there already is enough energy out of me.

You may want to have some Noni juice with you, so that the migranes may be alleviated. --Robert B Slobins

Sunset TOTAL eclipse photo - 1991 TSE

From: Glenn Schneider To: SOLARECLIPSES@AULA.COM Date: Thu, 20 Jun 2002 18:50:38

All, I am forwarding along an email I received from Clive Jackson regarding the marvelous TSE at sunset photo: http://www.cdepa.pt/sol.jpg

which Michael Gill had brought to our attention. Now I *REALLY* am ready for TSE 2002 at sunset! Glenn Schneider

From: SMTP%"cdepa@mail.telepac.pt" 20-JUN-2002 10:49:17.33 To: gschneider@stsci.edu Subj: Re: Sunset Eclipse Photo on Your Web Site

Hi Glenn, Thanks for your e-mail regarding my total Eclipse photo. This was taken from the middle of Brazil at sunset on the July 11 1991 eclipse. The scope used was a 70mm f5.6 vixen refractor with a pentax Slr and Ektachrome 200 slide film.

I worked out the end of the path of totality with a simple DOS program and managed to navigate to the right spot at the right time. This was not easy to do, we had to travel 1000 kms inland

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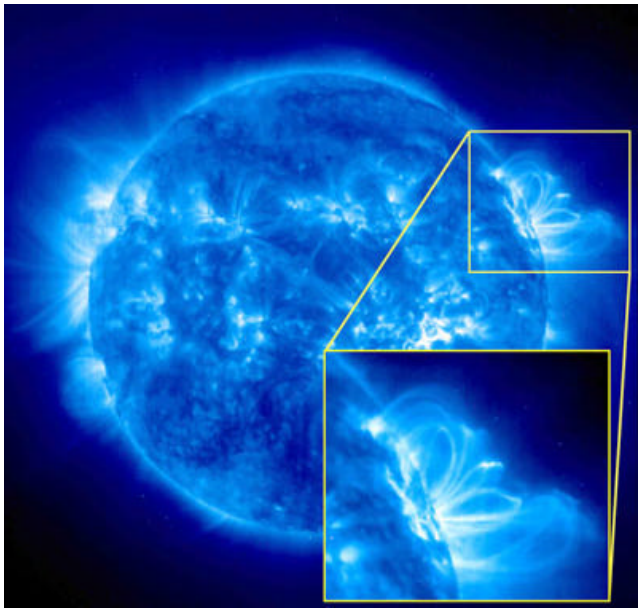
from Salvador, Brazil. This took 3 days in a 20 year old chevrolet I bought for $500 to get us there. We had plenty of adventures on that trip, but it was worth it. Best wishes, Clive Jackson

From: Jay.M.Pasachoff@williams.edu

The caption from the horizon photo in Astronomy now from October 1991, p. 41, reads " The eclipse's last witness While on holiday in Brazil, Clive Go ckson took this picture of the total eclipse of the Sun back in July. For this shot, he, his wife and three friends travelled 500 miles from where he was staying to a calculated spot at the end of the path of totality. He relied on atmospheric refraction in his computations; as it turned out, he writes "totality happened just before the lower limb of the Sun reached the horizon and third contact occurred as it slipped down". The effort was handsomely rewarded and Mr Gockson winds this month's Picture of the Month prize." It's a great picture. Jay Pasachoff

Stormy solar weather plays the Sun like a guitar

NASA-GSFC NEWS RELEASE Posted: June 17, 2002



Huge loops of very hot, electrified gas rising above the Sun's surface vibrate with enormous energy at times of solar storms, like the strings of an immense guitar. This is the latest surprise from a flotilla of spacecraft -- the Solar and Heliospheric Observatory (SOHO), Ulysses and the four Cluster satellites -- with which scientists are trying to make sense of how disturbances on the Sun affect the Earth. The vibrating loops are a new piece in the complex puzzle of solar storms, revealing intense, local, and short-lived activity of a kind that had escaped the scientists' notice.

This is a false-color image of loops of hot, electrified gas on the rim of the Sun, taken with the Extreme-ultraviolet Imaging Telescope on board the SOHO spacecraft. These familiar features have the same shape as the hot vibrating loops now detected. Credit: SOHO/EIT (ESA & NASA)

Dr. Werner Curdt of Germany's Max-Planck-Institut für Aeronomie will report on the solar vibrations today at a scientific meeting on the Greek island of Santorini. He is in charge of an instrument on SOHO, called the Solar Ultraviolet Measurements of Emitted Radiation (SUMER), which can measure the speeds of electrified gas structures moving in the Sun's atmosphere.

SUMER has seen many hot loops, invisible to other instruments, which sway from side to side. After careful study, the scientists investigating them are now sure that the vibrating loops play a key role in the Sun's most violent activity. "It's like twanging a guitar string, although one that's tuned to a very low bass note," Curdt says. "Nobody knew about these vibrations before. They occur only in extremely hot gas, which can be seen nice and clearly by the instrument as if it were designed for this purpose. But to be honest, when SUMER was built, we didn't expect anything as amazing as this."

SUMER observes the hot loops most plainly when they stand like enormous arches at the rim of the Sun, seen sideways-on by SOHO. The intense heat in the gas loops, between 9 and 20 million degrees Kelvin (16.2 million and 36 million degrees Fahrenheit), removes electrons from iron atoms in the gas, causing the iron atoms (ions) to emit ultraviolet light, which is invisible to the human eye but detectable by SUMER. The "color", or wavelength, of the ultraviolet light changes slightly when the loops sway back and forth, allowing scientists to measure the loop's vibration speed with SUMER.

In a typical case, a hot loop 350,000 kilometers long (about 220,000 miles long) rocks to and fro every 20 minutes. The

(Continued on page 15)

SETalk

hot gas moves along the line of sight at speeds of up to 100 kilometers per second (approximately 62 miles/second). The gas quickly cools and the motion dies down after two or three oscillations.

The tension in the solar guitar string comes from an intense magnetic field that runs along the loop of gas. The "finger" that twangs it is probably a burst of very energetic particles coming from low in the Sun's atmosphere. When the gas in the loop is hit, the atoms lose almost all their electrons. That starts intense emission from hot iron ions and an oscillation of the entire loop.

When the vibrations die down they release energy into the Sun's outer atmosphere. The link to particle outbursts low in the solar atmosphere may help scientists to understand why the outbursts are sometimes so strong that they disrupt the loops and unleash a solar flare. Storms on the Sun can damage spacecraft and electric power systems. That's why NASA, ESA, and other space agencies put much effort into exploring the causes and effects of solar storms. Only by tracing connections between the different kinds of eruptions on the Sun can scientists expect to be able to issue reliable early warnings of solar outbursts affecting the Earth and its neighborhood.

Curdt's institute has organized the Santorini meeting jointly with the National Observatory of Athens. Its purpose is to draw together the results of observations of the Sun from the ground and from spacecraft to see what's understood, and what's not, in the behavior of the solar atmosphere. The Santorini meeting is looking ahead to future spacecraft, including ESA's Solar Orbiter due in about 10 years' time. The scientists planning their space instruments will now want to make sure they are well tuned to the solar rock and roll found by SUMER.

The European Space Agency-NASA Ulysses spacecraft explores the heliosphere, the vast region around the Sun filled by the solar wind, where shocks can shake and squeeze the Earth's protective magnetic bubble, the magnetosphere. ESA's Cluster satellites investigate these solar effects near the Earth. SOHO itself uses many instruments to monitor the solar storms, including the huge explosions called flares, which are outbursts of light associated with energetic particles, and the billion-ton blasts of electrified gas called Coronal Mass Ejections.

SOHO is a project of international cooperation between ESA and NASA. The spacecraft was built in Europe for ESA and equipped with instruments by teams of scientists in Europe and the USA. NASA launched SOHO in December 1995, and in 1998 ESA and NASA decided to extend its highly successful operations until 2003.

Auguries following Solar Eclipses?

From : Brian Whatcott <betwys@DIRECTVINTERNET.COM> To : HASTRO-L@WVNVM.WVNET.EDU Date : Wed, 12 Jun 2002 06:55:57 -0500

In conversation about the recent event, I mentioned that the Romans were apt to see eclipses as portending events. I was unable to provide any detailed insight as to the likely perceived significance, in that culture, of a sunset eclipse (here) with Jupiter and Venus becoming readily visible in that quadrant after dusk.

Is there a record of the Romans' view of such an event? Brian Whatcott Altus OK Eureka!

From : Brian Whatcott <betwys@DIRECTVINTERNET.COM>

Marilynn, it does indeed help. Thanks for making the effort.

And now, a dumb question: You said, "Ptolemy described the effects of eclipses in Book II.5-7"

This reference is not to Book II of the Almagest, as far as I can see. Which of Ptolemy's works is it, then? With thanks, Brian, Brian Whatcott Altus OK Eureka!

From : Lester Ness <lesterness@HOTMAIL.COM>

Can anyone look into Enuma Anu Enlil? Lester

From : Nicholas Campion <ncampion@CAOL.DEMON.CO.UK>

Brian, all Ptolemy's astrological works are in the Tetrabiblos. This was for him the practical application of the Almagest. There are two available English translations (at least) of which the preferred is by Robbins (Loeb Classic Library). Nick Campion

From : Hermann Hunger <Hermann.Hunger@UNIVIE.AC.AT>

At 16:57 15.06.2002 +0800, you wrote: Can anyone look into Enuma Anu Enlil? Lester

Generally speaking, I can - although in the case of solar eclipses it would be slightly complicated because the section of Enuma Anu Enlil on solar eclipses is not well published (it is not well preserved either). It is however very unlikely that something like "go and make an augury"

(Continued on page 16)

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would occur in Enuma Anu Enlil. These omens only list the future events indicated by the solar eclipse and its circumstances, not what to do about them. Nevertheless, one can suppose from other evidence that at least sometimes omens from eclipses were "checked" by means of liver divination, which was always easily available. There is one instance in the Mari texts (earlier half of the 2nd millennium BC) where a lunar eclipse is seen but its portent is unknown, so extispicy is performed (see most recently J.-M. Durand, Documents epistolaires du palais de Mari, tome III, Paris 2000, p. 97f. No. 947). Another case is a lunar eclipse in 714 BC during the reign of Sargon II of Assyria attested in his inscriptions. It happened while the king was on campaign, and although it was considered favorable (of course - otherwise it would not have been reported in the inscription), an extispicy was performed to corroborate it (see, e.g., A. L. Oppenheim, The city of Assur in 714 B.C.: Journal of Near Eastern Studies 19, 1960, 133-147).

Hermann Hunger Institut fuer Orientalistik Spitalgasse 2 A-1090 Vienna Austria Hermann Hunger Institut fuer Orientalistik Spitalgasse 2 A-1090 Wien

From : "R.H. van Gent" <r.h.vangent@PHYS.UU.NL>

Lester Ness wrote: Can anyone look into Enuma Anu Enlil?

Hi, The solar omina in Enuma Anu Enlil (tablets 23[24] to 29[30]) are edited and translated in:

W.H. van Soldt, _Solar Omens of Enuma Anu Enlil: Tablets 23(24)-29(30)_ (Nederlands Historisch-Archaeologisch Instituut, Istanbul, 1995 [= Publication de l'Institut historique-archaéologique néerlandais de Stamboul, nr. LXXII]).

If I am not mistaken, it also contains a few solar eclipse omina.

The introduction to S. Parpola, _Letters from Assyrian Scholars to the Kings Esarhaddon and Assurbanipal_, 2 vols (Verlag Butzon & Bercker Kevelaer, Neukirchen-Vluyn, 1971-'83 [= Alter Orient und Altes Testament, nr. 5])

also contains information on the curious ritual of the "substitute king", a person who apparently was briefly appointed to sit on the king's throne and otherwise act as the king during the period that an ill-omened eclipse was about to occur. After the danger period had passed, it seems that this person was put to death.

I would be interested to know if there are more recent studies on this ritual. Regards,

Landless Corners - Herb Koenig

From : Hal Couzens <hal@dneg.com> To : <SOLARECLIPSES@AULA.COM> Date : Mon, 10 Jun 2002 09:25:54 +0100

Hi all, Clear Skies to all in PV, this will be my 1st webcam eclipse experience... I am doing my best to raise my spirits by convincing myself that even this is a necessary experience to have (over being present) at least once. darn.

Does anyone have contact details for Herb Koenig of San Diego? Or failing that can anyone tell me who was who was running the Landless Corners camp -site in Zambia? I met Herb there, need to contact him now and have mislaid a file with his contact details in.

While we are about it, I am also trying to track down Jim Baker from Iowa. Neither of these two were on this mailing list. Thank you, Hal Couzens VFX Supervisor Secret Laboratory +44 7958 613 466 56B Lawford Road, London, N15BL 'Do you want to know more?'

Friedhelm Dorst. Picture by Klipsi 16 February 1999 in Western Australia

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A true veteran - Herb Koenig

From : Evan Zucker <ez@AbacusTotality.com> To : SOLARECLIPSES@AULA.COM Subject : [SE] A true veteran Date : Tue, 11 Jun 2002 11:59:01 -0700

While observing the partial eclipse yesterday outside San Diego, I met an older man named Herb Koenig. He told me he first became interested in eclipses when he realized there would be a total solar eclipse in the U.S. the year he turns 100, in 2024.

He told me he had seen 16 total solar eclipses. Naturally, I was skeptical -- I've seen 5, and that's more than most people -- and so I challenged him to list them. (My wife thought that was disrespectful of me, or maybe it was how I said it. I might have been more deferential if I wasn't in the middle of setting up my equipment prior to first contact.)

To my amazement, he started tallying them, starting in Maine in 1963 and continuing on through Mauritania in 1973 until he reached Africa in 2001. There's a photo of him on this page: http://www.shaunakelly.com/travel/africa2001/10favouritephotos/10favouritephotos.html

Apparently, he's had incredibly good luck with weather, rarely being clouded out.

I told him I thought that 16 TSE's ranks him near the very top of the worldwide list for the total time spent within the umbra. I just checked the spreadsheet entitled "Total Solar Eclipse Spectator Statistics (Seen)" and note that only Glenn Schneider and Jay Pasachoff have seen more eclipses, and Fred Espenak is tied with Herb. That's pretty good company!

Herb said his goal is to accumulate a full hour within the umbra. He just might make it.

Unfortunately, Herb does not use a computer, and so I can't communicate with him electronically. I gave him my business card. He was one of the few people who understood and appreciated my California license plate, "TOTLITY". I suspect that more than a few of you folks must have encountered him on various expeditions. Evan H. Zucker Totality Software, Inc. San Diego, California

From : Madden <iluvelx@netacc.net>

At our hotel in Lusaka we were introduced to an elderly gentleman who claimed 18 of 19 the evening before June 21, 2001. That would be 19 of 20 after.

Does anyone here know who I am talking about? I foolishly neglected to get his name. madden

From : "76630,2206" <76630.2206@compuserve.com>

I have been with Herb Koenig on tours in 1988 and 1991, I believe. Actually, I need his address too; a while back he inquired about obtaining some photographs. cheers/Robert B Slobins

From : Evan Zucker <ez@AbacusTotality.com>

I spoke with Herb Koenig yesterday -- his phone number is in the San Diego phone book -- and it turns out I misunderstood what he had said about his 100th birthday.

He became interested in eclipses not just because he turns 100 in 2024 but because the U.S. total solar eclipse that year takes place precisely on his 100th birthday, April 8, 2024.

Now get this: he will have ANOTHER birthday eclipse in 3 years, on April 8, 2005.

Is there anybody on this list who will have two birthday eclipses in their lifetime? Evan H. Zucker San Diego, California

From : "Bryan Brewer" <bryanb@earthview.com>

My older son, Devin Brewer, has actually observed two total solar eclipse on two of his birthdays. First, we celebrated his 2nd birthday in the shadow of the Moon on Feb. 26, 1979, at Goldendale, WA, USA. Then on Feb. 26, 1998, we celebrated his 21st birthday aboard the cruise ship Galaxy in the Caribbean (the "party eclipse.")

The next event in this 19-year Metonic cycle is an annular eclipse on Feb. 26, 2017 across the S. Atlantic. In 2036 it shifts to Feb. 27th.

I suspect that there are lots of folks whose birthdays coincide with different Metonic cycles of eclipses. -- Bryan Brewer

Still space available on my tour to view Dec. 4, 2002 TSE in Australian Outback. See: http://www.earthview.com/travel/eclipse2002tour.htm

From : Evan Zucker <ez@AbacusTotality.com>

Once I raised this question I figured I should research it for my family. Lo and behold, I found that my 5-year-old son, whose "eclipse birthday" was 2 days ago, will have another

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birthday eclipse when he turns 24, on June 10, 2021. But I didn't find any birthday eclipses for my wife, other son, or me.

In reviewing the dates of all the 21st century solar eclipses in Fred's 50-year canon, I found that several dates of well-known total solar eclipse repeated. For example, I saw repeated instances of February 26 and July 11. I also found a partial eclipse on September 11, 2007 (not visible in New York or Washington).

Has anybody done a month and day distribution chart showing the number of eclipses on each day of the year for a specified range of years? -- EVAN

From : "Crocker, Tony (FSA)" <Tony.Crocker@transamerica.com>

Yes. My 50th this December and 19 years later. The latter is in the Antarctic Saros and thus a longshot. There are quite a few of these 19-year pairs. There should be some SEML members who saw June 30 of both 1954 and 1973, but were any of them celebrating birthdays?

From: Evan Zucker [mailto:ez@AbacusTotality.com]

I spoke with Herb Koenig yesterday -- his phone number is in the San Diego phone book -- and it turns out I misunderstood what he had said about his 100th birthday.

He became interested in eclipses not just because he turns 100 in 2024 but because the U.S. total solar eclipse that year takes place precisely on his 100th birthday, April 8, 2024.

Now get this: he will have ANOTHER birthday eclipse in 3 years, on April 8, 2005.

Is there anybody on this list who will have two birthday eclipses in their lifetime? Evan H. Zucker San Diego, California

From : Evan Zucker <ez@AbacusTotality.com>

On a related note, Herb told me that one of his goals is to see 4 eclipses from the same saros. Has anybody done that before? Obviously, it would take 54 years.

He said he's currently working on No. 3, and it's the best saros of them all: he saw 1973 in Mauritania and 1991 in Cabo. He's hoping to see 2009 in Tibet, although he and I were uncertain whether the totality path reaches Tibet. It definitely crosses Nepal. Too bad he missed 1955, which, I believe, was the longest eclipse of the millennium. At least I have an excuse -- it was the year I was born. Herb was 31 that year. -- EVAN

From : "Govert Schilling" <mail@govertschilling.nl>

> Has anybody done a month and day distribution chart showing the number of eclipses on each day of the year for a specified range of years?

I bet Jean Meeus has done that. If not, he will certainly do so after he read your mail... ;-) Anyway, the 19-year Metonic cycle is very well-known, as has been pointed out earlier. Actually, almost exactly 19 years before this year's June 10 partial eclipse, I saw my first TSE, on June 11, 1983, in Java. --Govert http://www.govertschilling.nl

From : "Peter Tiedt" <rigel@stars.co.za>

I will - I am also an April 8th baby - but 22 years after Herb ;-)

These eclipses and other "same dates" belong to a Metonic Cycle/

Peter Tiedt rigel@stars.co.za Visit my website at http://www.eclipse.za.net

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SETalk

From : rybrks1@cs.com

He is not just legend. My wife, Dori, and I spent a week with him in Africa.

I am embarrassed to say that at first I had fleeting doubts of his veracity as he laid claim to "Espenakian" and "Schneiderian" feats of duration and frequency of trips as he engaged in his second most favorite activity, puffing on cigars. But he knew his stuff on each eclipse.

Then my faith was further tested as he claimed there were 3 beautiful California gals waiting for him in Victoria Falls a plane ride away. The second night, as we sat with him on the restaurant terrace facing the fall mist, puffing away, three lovely ladies appear in evening gowns and shower him with hugs, kisses and more lore.

He is a great guy. Part of why I love this affliction with the Sun and Moon. Wonderful people.

It was really nice to finally meet some of the nice folks associated with this SEML. Sincerely Ray Brooks

From : "76630,2206" <76630.2206@compuserve.com>

We can all do that. Dr Pasachoff has the best shot to be first: 1959, 1977, 1995, 2013.

(I believe Herb was with me in 1973 and 1991.)

The 4th eclipse in the saros of 1970 is 2024. I have seen 1988 and expect to see 2006. The smart money would be on Mexico, not the USA in 2024.

For 1973 and 1991, we have 2009 and 2027 and 2045. (Evan would be 90, I, 91. However, Nepal would not be recommended, as in understand that the monsoon would be a factor. The air pollution in China precludes any serious observations, either. --Robert B Slobins

From : Evan Zucker <ez@AbacusTotality.com>

My ignorance is showing. Mea culpa. After all my years of chasing eclipses -- 32 to be exact -- I had not previously heard of the Metonic cycle. It's always nice to learn something new about your passion, but I'm surprised and embarrassed that I hadn't known of this before.

Thanks to all who have now educated me, publicly and privately. -- EVAN

From : "Govert Schilling" <mail@govertschilling.nl>

Hey, don't be embarassed! Learning is one of the best things one can do in one's life. Anyway, the Metonic cycle is a strange beast, so it's little wonder that not many people have heard about it. There's more at http://www.rog.nmm.ac.uk/leaflets/metonic/metonic.html. --Govert http://www.govertschilling.nl

From : FRED ESPENAK <u32fe@lepvax.gsfc.nasa.gov>

In Jean Meeus' new book "More Mathematical Astronomy Morsels" there is a chapter on the Metonic cycle which discusses this topic in some detail. Furthermore nearly 150 out of 429 pages in the book are devoted to the topic of eclipses.

THIS BOOK IS A MUST FOR ALL SERIOUS STUDENTS OF ECLIPSES!

I give it my highest recommendation. In fact, I bought two copies! One for home and one for the office. Thanks Jean for a wonderful collection of fascinating essays! - Fred Espenak

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From : Evan Zucker <ez@AbacusTotality.com>

> In Jean Meeus' new book "More Mathematical Astronomy Morsels" there is a chapter on the Metonic cycle which discusses this topic in some detail. Furthermore nearly 150 out of 429 pages in the book are devoted to the topic of eclipses.

THIS BOOK IS A MUST FOR ALL SERIOUS STUDENTS OF ECLIPSES!

I'm surprised it's not listed on amazon.com. They do list the original book, Mathematical Astronomy Morsels, but only a used version for $46, http://www.amazon.com/exec/obidos/ASIN/0943396514/qid=1023978927/sr=1-3/ref=sr_1_3/103-3896882-1425454.

Meanwhile, you can buy the original book new for just $24.95 from Willmann-Bell at http://www.willbell.com/math/mc16.htm. W-B also has the "sequel" for $24.95 at http://www.willbell.com/math/moremorsels.HTM. Evan H. Zucker Totality Software, Inc. San Diego, California

From : Michael Gill <eclipsechaser@yahoo.com>

For an extensive listing of eclipse periodicities including the Metonic Cycle, check out R.H. van Gent's interesting page: http://www.phys.uu.nl/~vgent/calendar/eclipsecycles.htm Michael Gill

From : "Govert Schilling" <mail@govertschilling.nl>

Micheal: For an extensive listing of eclipse periodicities including the Metonic Cycle, check out R.H. van Gent's interesting page: http://www.phys.uu.nl/~vgent/calendar/eclipsecycles.htm

Now *I* am the one to be embarassed. I should certainly have known about this nice page of my fellow Dutchman Rob van Gent, whom I know quite well... Thanks for the hint! --Govert http://www.govertschilling.nl

From : Evan Zucker <ez@AbacusTotality.com>

I spoke with Herb Koenig on the phone and told him that if he sent me information about the eclipses he has observed I would forward them on the Sheridan Williams, who I understand compiled the spreadsheet summarizing the eclipse data for many of the members of the SEML.

Herb doesn't use computers, and so he snail mailed me his eclipse data and the following poem, which I assume he wrote:

The Quest for Totality

We have a passion for totality,
Which we have lusted for throughout the globe,
Like those who might pursue carnality,
The more the mysteries of sex to probe.

In our pursuit we feel vitality,
A sense of wild adventure and romance
That culminates in grand totality,
A time when eclipse chasers sing and dance.

In search of sheer totality, we seek
A meaning to our mere mortality,
Upon the Face of God, we strive to peek
When we encounter sweet totality.

Our quest surpasses all normality
And shoots for ultimate reality.

December 7, 1995

Evan H. Zucker San Diego, California

From: 76630,2206

I believe that Herb Koenig was with Joel Harris' group to Bangka Island for the 18 March 1988 eclipse. Glenn Schneider and I were on that expedition. He may have been with me in Akjoujt, Mauritania on 30 June 1973 with AAI. I do remember him in 1991.

Anyone here, please confirm. Or better yet, donate a computer and e-mail account so that he can join this party ;-) --Robert B Slobins

From: Chris Malicki

I was very interested to read all the posts about Herb Koenig because I suspect that I may have met him in the Philippines in March 1988. I looked up my journal from Friday, Mar. 18, 1988 and found that I had written this: "At GSC (General Santos City) airport ... I had a very interesting talk with a 55 y.o. German man who had come to the far east in Sept. '87 for the annular eclipse in Okinawa. Rather than return home, he travelled over the far east and came to the Philippines for today's eclipse. He had taken the the ship from Manila to Davao. Because the weather in Davao was poor, he came to GSC by bus several days ago. He said that on Tues. & Wed. at 9:05 (eclipse time) the weather was terrible - either totally overcast or raining. Thursday, of course, was sunny and he said that if only the eclipse could occur that day. This man, who had just seen

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his 13th total solar eclipse said that he was so nervous that he didn't sleep all night. In the morning he was constantly afraid that the sun would be covered by cloud at the critical moment, and even 5 minutes before totality he was uncertain whether he would see it. But, this eclipse addict, who is so much more addicted to eclipses than even I, saw the entire totality under perfect skies from only 600 meters from city hall. He told me that a group of Germans who went to the centre line for that extra second of totality were clouded out." Unfortunately, like Madden I did not get the name of this very interesting eclipse chaser. It all fits with the description (13 totals in 1988), except for the disparity in age (55 in 1988). Perhaps I was incorrect in recording his age in 1988 - maybe it was 65 instead at that time. Perhaps Evan Zucker or someone else who knows H. Koenig could confirm whether Mr. Koenig saw the annular in Sept. 1987, and the total in GSC, Philippines in March 1988. Chris Malicki

From: Jörg Schoppmeyer

Is it maybe Friedhelm Dorst ? I don't know exactly his age, but he saw really a lot of total and annular eclipses. I think 1999 in Australia was his 33rd eclipse. Look at http://eclipse.span.ch/16fe99astronomers.htm

From: Glenn Schneider

Robert, This didn't quite jog with my memory, so I dug up my notebook from the 1988 eclipse. I did do this one with a group - but it was with Explorer's Travel out of the UK, not Joel's group. I *DID* observe the eclipse from the same stretch of beach as Joel's much larger group - but Herb Koenig was not with the Explorer's group. Indeed, I *THINK* I met you first only after the eclipse - it may have been on Banka, but certainly by the time we returned to LAX. Indeed, I have in front of me dated 21 March 1988 my original notes for building ROSE, the progenitor of UMBRAPHILE, which I wrote up when we shared a room awaiting overnight flight connections. -GS-

From: Michael Gill

Hi Chris - I don't know about Sept. '87, but Herb Koenig was definitely in Bangka Island, Indonesia in March '88 and not GSC, Philippines. Cheers, Michael Gill

From: 76630,2206

Glen: OK, that set the record straight. We were all together on Penyak Beach. Herb and I were with Joel.

I called Herb last night. He wrote me a while back for copies of my eclipse images, so I will send him postcards. Herb and I were together in 1973, 1988, and 1991.

I will share with the SENL group as to why I came up with the name ROSE. At the time, I had been involved with a female named Rose for about 16 months. It was getting clear that she had no appreciation for any of my activities or interests, but expected I appreciate hers. She was the type of person who wanted everything like everyone else, mechanically. She had a kitty-fit over my decision to go to Indonesia. She was clearly not wife material as far as I was concerned and was out of my life six weeks later.

So, I figured that a mechanical device named ROSE would be appropriate.

I told my wife that ROSE was named after a girlfriend of mine. She started to pout about it until I explained that she really did NOT want to be commemorated under such circumstances. Instead, Elisabeth and not Rose shares my credit line in the astronomy magazines. That is much more fitting. cheers/Robert B Slobins

From: Evan Zucker

At 09:57 PM 6/24/02, Robert wrote: I believe that Herb Koenig was with Joel Harris' group to Bangka Island for the 18 March 1988 eclipse. Glenn Schneider and I were on that expedition. He may have been with me in Akjoujt, Mauritania on 30 June 1973 with AAI. I do remember him in 1991. Anyone here, please confirm. Or better yet, donate a computer and e-mail account so that he can join this party ;-)

Herb was on Bangka Island in 1988, although I don't know if he was with that particular group. Herb sent me a list of all his eclipse viewings, which I forwarded to Sheridan Williams for inclusion on his Umbraphiles web page, http://www.clocktower.demon.co.uk/tse.htm.

Herb called me today. I told him that there were many people on the SEML eager to communicate with him. He said that his son has a computer and that he'd see if his son could show him how to use it. I explained all that he needed was e-mail and that I'd send him the instructions for joining the SEML. He said he'd get back to me.

Evan H. Zucker San Diego, California

From: Evan Zucker

At 10:27 PM 6/24/02, Chris wrote: Perhaps Evan Zucker or someone else who knows H. Koenig could confirm whether Mr. Koenig saw the annular in Sept. 1987, and the total in

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GSC, Philippines in March 1988.

The list Herb sent me does not list annular eclipses, and so I don't know if he saw that one. the 1988 eclipse was the 11th on his list, and so it sounds as if he was not the guy you met. -- EVAN

From: Chris Malicki

Thank you so much to everyone who answered my request for information about the German eclipse chaser whom I met in the Philippines in 1988 and who had seen his 13 TSE by that time. Well, it looks like it's not Herb K. Perhaps it is Friedhelm Dorst . I looked up his picture on the web page that was posted on the SE list - maybe it's him but I'm still not sure. As a final request to the group, perhaps someone would know F. Dorst's email (if he has one) so that I can confirm whether he is in fact the very interesting eclipse chaser I met in GSC. All I know is that the person I met is also a true veteran eclipse chaser, as deep as they come. Regards, Chris Malicki

From: Jörg Schoppmeyer

One example of Friedhelm Dorsts eclipses : I read a report about the one from December 24 1973 (Remember the famous picture of Dennis de Chico from Costa Rica). Friedhelm Dorst saw this eclipse at sunset (!!) in the sahara desert. At his position he saw the smallest ratio from Moon to Sun (0.905) for the next at least 500 years. If somebody is interested, I have a lot of his reports (including 1973) which I can scan and send via e-mail, but there are in german language.

This reports inspired me to become an eclipse chaser.....

From: David Makepeace

While in PV, Daniel Fisher relayed a fun bit of folklore about Friedhelm Dorst. Amongst eclipse chasers in Germany he is known for seeing as many eclipses as he can, but in as little time as possible. He'll fly into the eclipse path, see the eclipse, and come straight home - an approach now known as "Dorsting."

"So, are you going to do a little vacationing after the eclipse?" "No, too busy. I'm just Dorsting."

David Makepeace Toronto, Canada UmbraLog 1257

From: Jörg Schoppmeyer

>While in PV, Daniel Fisher relayed a fun bit of folklore about Friedhelm Dorst. Amongst eclipse chasers in Germany he is known for seeing as many eclipses as he can, but in as little time as possible. He'll fly into the >eclipse path, see the eclipse, and come straight home - an approach now >known as "Dorsting."

This explains to me a really quaint report from a weekend trip !! to an annular eclipse 1977 in Namibia (from Germany).

From: Jörg Schoppmeyer

the reports from 1973 from Friedhelm Dorst are available on ftp://ftp.kwsoft.de/outgoing/dorst.zip

Friedhelm Dorst and Daniel Fischer

Picture by Olivier Staiger 16 february 1999
in Western Australia

SETalk

Penumbral lunar eclispse of 24th Jun 2002

From : premkar@netscape.net (Prem Karsan) (by way of Barry McLarnon <bdm@bdmcomm.ca>) To : eclipse@hydra.carleton.ca Date : Wed, 19 Jun 2002

Could any one please assit with the timings for the lunar eclipse of 24th june. thanks prem

From : Michael Gill <eclipsechaser@yahoo.com>

Prem, Timings for the penumbral lunar eclipse are available from Fred Espenak's site:

http://sunearth.gsfc.nasa.gov/eclipse/LEplot/LEplot2001/LE2002Jun24N.gif

If you bookmark Fred's Eclipse Home Page...

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

...Any eclipse-related information you need will only be a few mouse clicks away. Regards, Michael Gill

Eclipse sighting

From: KCStarguy@aol.com To: SOLARECLIPSES@AULA.COM Date: Mon, 24 Jun 2002 15:14:30

Infoworld 06/17/02 p. 17

IBM is spearheading a project called Eclipse to challenge the open source Sun microsystems framework.

There Is not information regarding whether there is three flavors: partial, annular and total . I am also not sure if the project works when it is cloudy ;) Dr. Eric Flescher (kcstarguy@aol.com) http://www.ericsblacksuneclipse.com

Greeting's

From: Raymond Badgerow To: solareclipses@Aula.com Date: Tue, 25 Jun 2002 01:26:14

Hello everyone, let me introduce myself. My name is Ray Badgerow,and I have been around here for some time lurking on the SENL,and decided to join in. My experience chasing eclipses is a bit limited but here it is:

May 10,1994 Annular Binbrook,Ontario (my backyard) 5m30s Aug.11,1999 Total Hasankeyf ,Turkey 2m07s December 25,2000 Partial My Place June 21,2001 Total Malambanyama, Zambia 3m37s June 10,2002 Annular Punta Penitas Beach 1m07s (that was a squeaker). I met a number of you at the HRC in PV,and later at the beach on eclipse day. I was the guy beside the fence on the towel which had the 3 wild chickens hanging around it.There were also some people from Guadalajara who set up right in front of me. I tried to photograph the eclipse using a 300mm lens that I bought a week earlier.Regrettably ,they were underexposed. Oh well, better luck next time. That's all for now, hope to hear from you guys soon. Ray Badgerow

From: Rybrks1@cs.com

Welcome Aboard to Ray Badgerow, Ray Brooks

From: Raymond Badgerow

Thanks Ray, glad to hear from you.

Glenn Schneider and Ray Brooks on 9 June 2002 in the Hard Rock Café Picture by PP

Ring of fire panoramas

From: KCStarguy@aol.com To: SOLARECLIPSES@AULA.COM Date: Sun, 23 Jun 2002 22:13:57

Greetings, I know some people have used fish eye and wide angle but wanted to see if I could make a panorama shot of the landscape before and during totality from my video.

I took a 360 degree video of the pre ring of fire landscape in Hungary 1999 . Also 2001 during totality in Africa. When I got back, I decided to see if I could make a panorama using photoshop elements . The results are at http://members.aol.com/kcstarguy/blacksun/ringoffire.htm

The 1999 results are a little fuzzy as frames were taken from hi 8mm mm. Comments , suggestion, ideas welcome. Dr. Eric Flescher (kcstarguy@aol.com) http://www.ericsblacksuneclipse.com

SETalk

New webpage locations

From: Bill Ronald To: SOLARECLIPSES@AULA.COM Date: Wed, 26 Jun 2002 00:33:28

Hi all, For those of you who have linked to my eclipse pages, I have moved them as follows:

Introductory page: http://members.shaw.ca/totality/eclipse.html

Caribbean 1998 page: http://members.shaw.ca/totality/1998/eclipse98.html

Black Sea 1999 page: http://members.shaw.ca/totality/1999/eclipse99.html

Zimbabwe 2001 page: http://members.shaw.ca/totality/2001/eclipse01.html

Sorry about this but when @home.com went, my pages had to move to @shaw.ca. Hopefully they will remain there ... (;>) Cheers ... Bill, Bill Ronald, Vancouver, B.C. ronaldb@shaw.ca Vice President/Webmaster - RASC Vancouver Centre http://members.shaw.ca/rascvan/index.html 49° 15'00"N : 123°10'40"W

From: KCStarguy@aol.com

Ronald, I just looked at your 2001 pics at your site. Well done and you have quite a variety. I like the very clear "doctored" picture of people on the elephant with the total eclipse in the background. What did you take it with regular camera?

I appreciate your summarizing a little bit about the photoshop technique and link to produce the bevel type appearance. I have seen that before by some other chasers and will consuit it.

I see that you also got shadow bands on your video and your wrote about them. In Zambia , we also saw shadow bands because I told people to look for them after totality. (I did not even try to look for them before due to cirumstances although others saw them around me in 1999 in Hungary but I could not see them). However they lasted for 3-4 minutes after totality and was surprised they lasted and when on for so long. It was an extra added highlight and enjoyment (elixir) to a nice eclipse.

Just like you I can see them faintly on my video but have not been able to isolate them. Dr.Strickling has done a great job of isolating the bands through several techniques that has developed . You might be able to borrow some of his techniques and try with photoshop. If we put our heads together maybe we figure a method to isolate them from our videos with photoshop.

His website is http://home.t-online.de/home/Dr.Strickling/shadowbands.htm

I will take a look at rest of your website when I can. I also see that you are part of the eclipse webring I belong to.

Once again nice job. ? questions, let me know Dr. Eric Flescher (kcstarguy@aol.com) http://www.ericsblacksuneclipse.com

Zimbabwe 2001 page: http://members.shaw.ca/totality/2001/eclipse01.html >>

SpaceWeather.com uploads

From: Evan Zucker To: SOLARECLIPSES@AULA.COM Date: Fri, 28 Jun 2002 09:26:45

Can somebody please tell me the e-mail address or other procedure for submitting eclipse photos to SpaceWeather.com? I searched and searched the web site and don't see a link for submitting photos or any sort of e-mail address.

I'm posting this to the list because I figure there may be other people interested in submitting photos who, like me, can't figure out the e-mail address or other procedure. Thanks. Evan H. Zucker San Diego, California

From: Matthew Poulton

I've just had a look at the site, and there is a request for Aurora photographs linking to: webmaster@spaceweather.com

I assume, given the non-specific nature of this address, the same applies for eclipse photos etc. Matthew.

SETalk

Saying (the psychology of eclipse chasing)

From: Egan Mark To: SOLARECLIPSES@AULA.COM Date: Tue, 25 Jun 2002 08:08:40

"Give the heavens above more than just a passing glance..."
>
> (From the song "I Hope You Dance", by Lee Ann Womack)

--- KCStarguy@aol.com wrote: I like that saying. thanks for posting. Dr. Eric Flescher (kcstarguy@aol.com)

It's a very good song, too. I encourage everyone to look up the lyrics on any search engine.

I try my best to live my life that way.... not to worry about the petty things, LIVE the best way that I can, and enjoy each moment that I have on this earth.

I was thinking today, "Hmmm, I wonder if I should send this response to the group. It's a bit off topic. Patrick and Joanne may get upset. :-) So.... how can I make this topical to the group....?"

And then it hit me.....

"The Psychology of Eclipse Chasing"

Indeed, the song (in part) talks about taking chances and being humbled by life. In a sense, that's what we eclipse chasers do. We run the risk that we could be clouded out at the cruical moment. Sure, we do our best to go to the "clearest" area based on climate, but there's always that chance.

And, oh yeah, there's the fact that the main event lasts so short a time.

And there's the effort that it takes to get to some of our eclipse sites.... (as many of us experienced in Mexico this June)

But there's always things to fall back on: we get to see interesting places, some of which are very far off the "beaten track", as Joanne so eloquently put in her discussion about the road to Chimo.

But I'm sure we all have our own personal reasons for chasing. What do we REALLY chase for? And what causes part of our brain to go "I want more!"

Is it the opportunity to see the beauty of the corona again?

Is it the challenge of seeing a never- before seen feature?

Is it the realization that we will NEVER see this again? (referring to the fact that each eclipse is different) (see below for more on this)

Is it the incredible RUSH we get when the shadow of the moon envelops us? (see below for a personal comment on this one)

Is it what I call "The Video Game Syndrome". You know, no matter how good you do in a video game (even if you break a world's record), you pop in that extra quarter and see how much better you can do. My point on this is: I've read many eclipse reports with phrases such as "I'll look more next time." Do we chase for the simple fact of "I want to do better..."?

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SETalk

Is it for the challenge of travelling to unfamiliar places?

For that matter, is it for the thrill of travelling to unfamiliar places? Does this fact about eclipse chasing perhaps even make us enjoy eclipses a bit more?

Or perhaps are there other reasons why we chase?

And what makes some of us chase only totals, while others will chase both total and annular eclipses?

BTW: (commenting on the RUSH of the shadow:)

I saw the corona but no intricate details (due to a moderately thick cloud at my first (and so far, only) total in 1999.) But OH MY GOD the rush of the shadow was so cool. I want to feel that again. Yeah. I said "feel". Not just "see". You know what I'm talking about.

Regarding the fact that each eclipse is different, I may want to take this a step further (although I haven't officially decided.) In some ways, I'd like to experience:

-- at least one eclipse from the edge of the path

-- at least one eclipse near sunrise

-- at least one near sunset (done! w/ the Mexico annular; I'd like to see a total this way)

-- at least one from the air (I hear it's not quite as good, but hey, it's different)

I know that some of these are extra risks (esp. sunrise and sunset, due to clouds) but I want to see something different.

It's funny, I'm asking these questions, yet, I really don't know why I plan to chase eclipses around the world. Something just "clicked" in me.

So, why do the rest of us chase? Looking forward to comments....

From: 76630,2206

Interesting post.

The total solar eclipse is astronomy's answer to the Olympics, except that the only competition is for page space for photographs in magazines or grant money for projects. The joy of our pursuit is that there is hardly anyone save our own selves that get in the way of our own chosen goals (except Romanians). And so we have a genuine fraternity from a common interest. This is an increasingly rare occurrence. -- Robert B Slobins

From: KCStarguy@aol.com

Psychology of the eclipse- very good

In tennis, there are the "highs the elixir " when you are in the "zone . " See and hear everything and playing so well and everything is flowing. And when you win especially a tournament it seems like the whole universe is before you.

anyway back to the sky

The remarkable thing is to be in the path when the environment becomes unique. And there is nothing like it. There is so much to hear and see and what people do.

I captured this partially in my ring of fire taken 1 minutes before totality in 1999 and during totality real ring of fire 2001. http://members.aol.com/kcstarguy/blacksun/ringoffire.htm

With eclipse chasing, the trip is the thing. It is the people, the places the anticipation and the wait and the approaching eclipse.

In Hungary it was waking up with the thunderstorm and rain and then magic clouds starting to break. Then the chase to the site and a perfect eclipse. The bells ringing in the churches nearby, the lights in town coming on, seeing the shadow coming from about 50 miles away, and then capturing all this on video with the sounds etc.

And then after main event the shadow bands which makes the experience last longer. Each part of the event creates the sum of the whole but it is more then the sum of its parts.

I call it eclipse elixir which pervades your mind throughout (my poem about it in astronomy Dec1999)

That "dream zone environment when that shadow starts coming in. You can't stop it, it is coming. Time and the Earth seems to stands still for us but not for the shadow.

There are not many exhilirations like that. Closet I have come is my storm chase near Lubbock , TX and witnessing awesome wallclouds, hailstorms and much more weather stuff. In fact, the elixir feeling is very similar in many ways to eclipse chasing. But there are differences from eclipse chasing. On my way back to Kansas in ealry June I started

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to compare eclipse chasing with stormchasing. Someday I will post it. Dr. Eric Flescher (kcstarguy@aol.com) http://www.ericsblacksuneclipse.com

From: Crocker, Tony (FSA)

Same thing with skiing, especially in fresh powder. But I'll bet the best sport analogy to eclipse-chasing is surfing: the short-lived but intense high of being completely enclosed in the tube of a wave. Are there any expert surfers on SEML who care to comment?

From: KCStarguy@aol.com [mailto:KCStarguy@aol.com]

Psychology of the eclipse- very good

In tennis, there are the "highs the elixir " when you are in the "zone . " See and hear everything and playing so well and everything is flowing. And when you win especially a tournament it seems like the whole universe is before you.

Upcoming Transits of Venus and Mercury

From: FRED ESPENAK To: SOLARECLIPSES@AULA.COM eclipse@hydra.carleton.ca Date: Tue, 25 Jun 2002

Many people on this list are looking forward to the upcoming 2004 and 2012 transits of Venus with great anticipation. I recently prepared a presentation on these two events which I have just posted on the web:

http://sunearth.gsfc.nasa.gov/eclipse/transit/venus0412.html

Of particular interest is the figure which shows the path of Venus across the Sun's disk during both transits:

http://sunearth.gsfc.nasa.gov/eclipse/transit/venus/Sun2004+2012-1.GIF

Note that Venus will be about 1/32 the diameter of the Sun and should be visible to the unaided (but solar filtered) eye if your eyesight is excellent.

The global zones of visibility of the 2004 transit are illustrated in:

http://sunearth.gsfc.nasa.gov/eclipse/transit/venus/Map2004-1.GIF

Similarly, the global zones of visibility of the 2012 transit are illustrated in:

http://sunearth.gsfc.nasa.gov/eclipse/transit/venus/Map2012-1.GIF

Note that higher resolution versions of these figures are all available through links from the first URL address in this message. Furthermore, this primary web page has links to tables of local circumstances for nearly two hundred cities for each transit.

And speaking of transits, the next transit of Mercury is less than a year away (2003 May 07) and occurs just three weeks before the Iceland/Scotland sunrise annular eclipse (2003 May 31). The transit will be best seen from Europe, Africa and Asia. You can read all about it in my article in the Royal Astronomical Society of Canada's Observers Handbook for 2003. There is a map showing the global visibility as well as Mercury's path across the Sun. A table gives local circumstances for dozens of cities around the world. The entire article is posted online at:

http://sunearth.gsfc.nasa.gov/eclipse/OH/transit03.html

(Continued on page 28)

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Please send all comments or corrections to me. Thanks, Fred Espenak

From: Mike Simmons

Great pages, Fred -- as usual!

Though it hasn't been announced publicly yet this seems to be a good time and place to mention that I am organizing a trip to Iran for the 2004 Venus transit. I just returned from four weeks in Iran and met with friends on the staff of Nojum (Astronomy) Magazine, tour guides, archaeologists and the best tour agency in the country about arrangements. I also made presentations on the Venus transit to several astronomy groups that hosted us during our trip. This was a return trip, our first being in 1999 for the total solar eclipse. The trip is planned for no more than 30 people in order to keep it manageable and friendly. It will start with a conference on transits in Tehran (trip participants will be invited to make presentations as well as attend but this is all optional) and will feature meetings with astronomers throughout Iran, dark-sky observing (optional, of course), ancient historical sites, nature and the many cultures of Persia during a 15-day tour. Cost will be reasonable but the final cost is not yet set. I will make a more detailed announcement by the end of this summer.

Fred's map at http://sunearth.gsfc.nasa.gov/eclipse/transit/venus/Map2004-1.GIF shows that the Persian Gulf is the best location for visibility of the transit but the logistics and climate of that location leave a great deal to be desired.<g> We'll be east of there in southern Iran, probably on an open plane amongst the remains of 2500-year old palaces of one of the first capitols of the Persian empire.

I filed a series of articles on astronomy in Iran during my travels this time to Astronomy.com, Astronomy Magazine's online version at http://www.Astronomy.com. Unfortunately, only three of the articles have been posted so far, beginning at http://www.astronomy.com/Content/Dynamic/Articles/000/000/000/859zfwzo.asp. I will update my own web site with a report, many more photos and the series if it is not used at Astronomy. If you can read Farsi or just want to see a few photos you can see a brief report on our participation at a Tehran conference at http://www.nojum.net/News/konam.asp?page=1.

A report on my 1999 trip with photo album is available at http://webpages.charter.net/msimm/Iran/Eclipse99/Report.html. Mike Simmons

Automated eclipse photography with Pentax MZ7

From : "Peter Tiedt" <rigel@stars.co.za> To : "Solar Eclipse Mailing List" <SOLARECLIPSES@AULA.COM> Date : Mon, 17 Jun 2002 19:03:00 +0200

Has any member of the group attempted / succeeded with automating an eclipse photo sequence using a Pentax MZ7? Or a similar camera with an electronic remote cable release

I am now the owner of such a beast.

Umbraphile is not an option as I am not a MAC person ;-) I have Eric Pauer's software which triggers signals on a serial port.

Now I wish to drive the camera via the electronic remote cable release (a three pin socket situated on the LH side of the lens barrel).

I have tried e-mailing Pentax Europe, but deafening silence.

Would love some help on this one.

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

The first question is: Does the camera trigger if you short out 2 of the contacts? It probably does, as the remote shutter re-

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lease is probably just a switch. If that is so, ask Eric Pauer how he outputs his signal from the serial port. If you filter the output signal, you can use it with an appropriate transistor to trigger the 2 "shorting" contacts. I have used this technique to trigger the electronic port on my Nikon F5. Don't give up on Glenn Schneider's Umbraphile. It has really minimal requirements in terms of computing power, so it runs on older Powerbooks. You can pick up an older Powerbook for as little as $100 and just use at as a dedicated camera controller for your eclipse trips. Even building the interface that Glenn has on his website will trigger across "shorted" contacts if your camera will trigger that way. -- Joel M. Moskowitz, M.D. 7 (total) solar eclipses and counting

From : "Richard Monk" <richard.i.monk@ntlworld.com>

You can do the same sort of thing with a Canon T series. I have used T70s for the past few years, coupled to a simple PIC controller that both triggers the shutter and increments or decrements the shutter speed as desired. An ideal hands-free scenario giving ample time to eyeball the eclipse while bracketing 37 odd shots. Am currently modifying the PIC program for Australia - but I doubt whether the camera can take 37 shots in 30 seconds!

The main question is what sort of exposure times do we have to plan for for this type of sunset eclipse? I noticed that on last Mondays eclipse people were using 1/60th sec with 400ASA and a 500mm f8 mirror lens - heck, does that mean I will have to use a faster film? Any ideas? Richard Monk (lost count!)

From : Eric Pauer <pauer@bit-net.com>

The circuit I use filters out the stop bits from the serial port transmit data signal, yielding a single pulse of the desired exposure length. This is used to close the contacts on a Reed Relay, which are connected to the cable release wires. The pulse shorts the cable release wires and takes the exposure. A transistor could also work in a similar fashion. Eric

From : "76630,2206" <76630.2206@compuserve.com>

This is a challenge.

In Indiana, I was shooting f/64 on Velvia (ISO50) and bracketed 1/2000, 1/1000, 1/500 seconds thunderheads over Illinois 150 km away. Mind you, this was not easy and very risky, especially in aiming the camera, without any protection. But the clouds were quite thick enough to permit this.

It seems that it depends on how clear the air is near the horizon. Perhapsa test can be run on the moon at certain altitudes, use Barry Gordon's fx system and determine your exposure accordingly. But if there is cirrostratus there, all bets are off.

You should be able to do 37 shots in that time, it all depends on your motor drive. However, I would be cautious with the shutter speeds and intervals. You could be risking camera motion from mirror slap and shutter movement. I avoid the speed range 1/30-1/8 second, for example. I also use Gitzo tripods with heavy heads (Bogen 3057 for example) for a weight rating of 2X the equipment (if the camera and lens and drive weigh 13 pounds, I use support rated for 26 pounds).

In India, I had 41 seconds. I was able to get diamond rings and corona at 4-second intervals. I had about 12 good shots per roll.

I also brought 5 tripods for 5 camera-lens assemblies. It is good to have backup. --Robert B Slobins

From : Jay Friedland <jay@cinemagic.com>

Hi Richard, Did you have to modify the Canon T70s to increment and decrement the shutter speed? I've been trying to figure out if I can use Glenn Schneider's Umbraphile with the T70 and just trigger the shutter electronically for the right duration. I've done some simple testing with the T70 command back (which I use all the time and it works great) showing that

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you can trigger one camera to another (or many) at up to 1/1000 sec. If you have a pointer to your circuit, I'm sure folks would be interested and I'll be happy to post mine when I get it working. I'm using Dan McGlaun's circuit as my starting point: http://balder.prohosting.com/stouch/DAN_INTERFACE.gif Thanks, - Jay

From : Glenn Schneider <gschneider@mac.com>

"76630,2206" wrote: but I doubt whether the camera can take 37 shots in 30 seconds!

My old "bottom of the line" NIKON EM with its motor winder can do 4 frames per second, 37 in 30s (appx 1 per second) I would think can be handled by almost any camera/winder (?).

> The main question is what sort of exposure times do we have to plan for for this type of sunset eclipse? I noticed that on last Mondays eclipse people were using 1/60th sec with 400ASA and a 500mm f8 mirror lens - heck, does that mean I will have to use a faster film?

See my last posting. It really depends on where you will be (i.e., how close to the horizon the sun will be). But, yes indeed, you will need significantly longer exposure times than you are used to using. A clock drive is in order for this one... -GS-

From : Glenn Schneider <gschneider@mac.com>

Hi Peter, Dan McGlaun (not on SEML, but an eclipse chaser none-the-less) has used an electronic interface with his Pentex'es and Umbraphile. At least I *THINK* he uses Pentex's but it may be a Cannon. I'm sure he would be happy to provide details. His web site, by the way, is:

http://www.mcglaun.com/eclipses.htm

It may be as simple as providing a contact closure on 2 of the three pins, or a shaped (filtered) pulse to the "electronic" shutter input. Some cameras are a bit balky, but both Dan and Joel Moskowitz have found simple work-arounds for that, and Eric Pauer might (?) have specific advice for that model - but I am not familiar with it.

As to Umbraphile - you don't HAVE to be a Mac person. That's the point. You can pick up an old used Series 100 powerbook form 10 years ago on ebay or elsewhere for < $50 US. Dan's old PB's floppy died before the Zambia eclipse last year and he bought one for $35 just to run Umbraphile. Think of it as a camera controller, not as a computer. Of course, if your a Mac user like me, UMBRAPHILE is an adjunct program to your other uses - but its a very small H/W cost these days if you think of it for a dedicated specific purpose.

http://balder.prohosting.com/stouch/UMBRAPHILE.html Glenn Schneider

From : "Peter Tiedt" <rigel@stars.co.za>

I think I had better rephrase my question ....

I have the software (thanks Eric) to drive an electronic circuit (Eric's circuit mentioned below). Now I need to trigger the camera shutter.

What I need to know is ...

Die anyone know which of the three pins in the connector to the camera do what? On the electronic cable release (ECR) there is also an AF function besides the shutter release. I am reluctant to chop up my ECR before knowing what I am doing.

Ideally I would like to get one of the little 3-pin conector plugs that go into the camera, with a cable already attached, but without the trigger box on the end (which is the expensive bit I suppose). However the frustration levels are building up as

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Pentax do not seem to respond to e-mails and the SA agents are worse than useless.

So - perhaps the rephrasing will help - there must be another MZ-7 owner out there somewhere - we can't all afford Nikons ;-) beside which - I already have the lenses.

From : "ccmlt" <ccmlt@wanadoo.fr>

Dear friends,

Richard : The main question is what sort of exposure times do we have to plan for for this type of sunset eclipse? I noticed that on last Mondays eclipse people were using 1/60th sec with 400ASA and a 500mm f8 mirror lens - heck, does that mean I will have to use a faster film? Any ideas?

I used a Meade ETX 90 FD 13 (focal 1200 mm ; german EQ mount manual driving) and a 100 ISO Kodak Royal film and exposure time ranging from 1/125 to 1 sec. I just saw the negative this evening : appart from some shift caused by the strong wind on some photos, all images are rather good showing the eclipsed sun between clouds. The exposures lasting from 1/15 to 1/2 sec are the best, even showing some red clouds around the sun. Unfortunately I can't show you this images until late june.

> You can do the same sort of thing with a Canon T series. I have used T70s for the past few years, coupled to a simple PIC controller that both triggers the shutter and increments or decrements the shutter speed as desired. An ideal hands-free scenario giving ample time to eyeball the eclipse while bracketing 37 odd shots. Am currently modifying the PIC program for Australia - but I doubt whether the camera can take 37 shots in 30 seconds!

I was asking myself about this hard problem ; what I expect for the next sunset eclipse in australia is to see this "once in a life sunset" with naked eyes without having to manage several camera at the same time... 22 second is a very short time ! Your T70 seems to be promising. Can you explain exactly what is a PIC controller ? Did you try this camera on some eclipse ? Taking 36 shots in a minute should cause some vibrations and maybe some blurred images when using a long focale (>1000 mm) ? Did you ever notice that ? Christophe Marlot

From: Jay Friedland

I'm hoping this helps (Among several cameras, we have a Pentax ZX-5N, so I was curious too. All of my "semi"-automated photography has been done with Canon T70s since they have an interface where one camera can trigger another (or many) and you get an array of cameras. The best example of this is what the Dutch Meteor Society does to capture the Leonids: http://delpsurf.www.cistron.nl/haas_array.html This was incredibly inspirational and caused me to buy my own array of 3 on eBay (at <$100/camera).

Here is the specific interface of the Canon t70 which should help you figure out your own three connector setup - two pins live creates the effect of pushing the shutter halfway to focus, hence your autofocus switch on the remote. With an ohmmeter you should be able to figure out the pins, especially if you know the two down trick. Here's a great Canon page on its interface: http://home.dsp.net/~chantal/remoteControl.htm (specifically look at the "Theory of Operation" page) I also looked (via Google) for a similar interface on the Pentax but came up dry. Good luck! - Jay

From: Evan Zucker

I believe that one or more of you folks were planning to try out the new Canon D60 digital camera at the June 10 eclipse. Has anybody gotten there hands on one yet? I know they're in short supply and are back ordered.

I'd love to hear how that camera worked under the tough lighting conditions of a deep eclipse. Evan H. Zucker

From: Joel M. Moskowitz, M.D.

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On 6/18/02 8:17 AM, "Eric Pauer" <pauer@bit-net.com> wrote: The circuit I use filters out the stop bits from the serial port transmit data signal, yielding a single pulse of the desired exposure length. This is used to ...

Yes, that is how the Nikon gets triggered. The question is, will his Pentax trigger by shorting the release?

From: Joel M. Moskowitz, M.D.

I would bet that you could trigger the shutter by shorting 2 of the 3 contacts. -- Joel M. Moskowitz, M.D.

From: Fred Bruenjes

I managed to get my hands on a Canon D60 in time for the PV eclipse. I was on a waiting list for five weeks, which is shorter than average. Canon grossly underestimated demand on this model.

I was very pleased with its performance. During the eclipse I just shot away, while keeping an eye on the histogram. It usually did a very good job. Let me tell you, it is SO reassuring to see the image you've just taken. I left it in Program exposure mode, except for when the Sun was out for those few minutes, at which point I forced it through a range of shutter speeds. The ability to change ISO speed on the fly came in real handy. The IS (image stabilizer) lens I used (a 28-135mm F3.5) also did a real good job, the IS allowed me to get handheld 1/8 second exposures tack sharp. Due to the clouds I used that lens a lot more than I had planned to.

All of the pictures in my PV report (http://www.moonglow.net/eclipse/2002jun10/index.html) have exposure/lens information. Just stop your mouse pointer over an image and you should get a popup that lists the camera used, shutter speed, aperture, lens focal length, and ISO speed. Fred Bruenjes fred@moonglow.net

From: Peter Tiedt

Hi List, I have received the following reply to a query submitted to various Pentax service centres in the US. I know this list is archived, so I am posting the answer for future reference by others. The answer came from Dave Sleeth of Advance Camera Inc. who was the only one of about 16 queried who bothered to give me a decent reply.

Thanks to everyone for their help - it is much appreciated.

> As long as you do not feed any current into the camera threw the cable socket @ keep the camera isolated using the relay you should have no problems. As you mentioned the 3 steps are used to set up the exposure sequence from locking the focus to setting the exposure and the release of the shutter. I checked with parts and found the cable end is not available separately. I can give you a net discount of 34.00 s/h should not be more than 5.00. If the top 2 contacts on the connector are shorted together the shutter will fire. If it is in the bulb mode the camera will stay open as long as the short is applied. If you use a relay to pull a set of switches closed the camera will remain isolated from the relay power and then the camera will think the connector is hooked up. Remember in only using the top 2 pins that the focus will not function and the meter will not set
>
> Option 2; use a relay of the type used by remote controlled devices. This type would work with the computer the same way but would not connect to the camera but rather would push out a pin that would act like your finger. This could be positioned over the cable switch and would press it just as you would. These can be purchased at most hobbies shops. Good luck I hope the shots come out well. Drop me a line if you have any other questions.
>
> Thanks dave@advancecamera.com Dave Sleeth Advance Camera Inc. 503-292-6996-x25

From: Richard Monk

Jay, Yes. It is not too difficult when you have the workshop manual! Simple, if not precision, solder connections to

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the cameras switch circuit and one to the trigger circuit, brought out onto the base of the camera body on to 5 pins. I abandoned the idea of the data back as it did not give me the flexibility which I wanted. My PIC circuit had an adjustable delay, so I can set the time increments I need depending on the length of totality, simply by setting switches on an input port. I successfully ran two T70s from the one PIC controller in Zimbabwe last year.

The initial idea sprung from a desire to be hands free in the sub-zero Mongolia of 1997 - boy was I thankful for the effort! The intention is to write an article - but one or two people have already beaten me to the punch with similar ideas and inertia took over.

With such a late eclipse in Oz on the 4th December, I suspect that I will have to bracket between 1/250 and 2secs rather than from 1/100th. I am hoping that the cameras will cope with at least 15 shots during the 30 seconds. What hope for a "green flash"? Richard Monk

From: Richard MONK

Christophe et al: Ahhhgh! I tried a 1250mm f10 in the guise of a Celestron 5 in Peru, 1994 and it got trashed in transit! Never again. I have a trusty Tamron 500mm f8 and it gives very respectable results. I also have a reserve in the form of a Vivitar 500mm f8 - not good!

The Canon T70 built-in motor drive delivers about 1 frame per second and I allow another second for the system to stabilize between each frame - more for the longer exposures of course. Stability is also greatly enhanced by using Gitzo tripods (extremely light but small and robust) and Manfrotto heads. These heads support slo-mo adjusters for fine positional control.

The PIC is a small programmable controller chip - I use the 16x64 which is electrically erasible and programmable. I programmed in assembly language but there are high-level language compilers and one in BASIC that will do the job for you. The object code gets downloaded into a programmer unit and written to this 16-pin PIC chip!

Because of the interest, I will put photographs of the camera modifications and the controller unit on my web site this weekend. Will post a notice when it is done. Richard Monk mailto: richard.i.monk@ntlworld.com

From: 76630,2206

My question about these automation techniques: How does one make the system fault-tolerant? If either the camera or the computer fails, what would one do? What is the backup plan? --Robert B Slobins

From: Glenn Schneider

"76630,2206" wrote: My question about these automation techniques: How does one make the system fault-tolerant? If either the camera or the computer fails, what would one do? What is the backup plan? --Robert B Slobins

Computer: I *ALWAYS* bring two cable releases a cable release, a "manualy" operate the camera in case the computer goes belly-up. I wouldn't get the nicely timed Umbraphillic sequence planned, but this is "Plan B".

Camera: I *ALWAYS* bring an extra camera body and motor drive. One of the reasons I use relatively cheap cameras...

Eyes: Hmmm... Hanen't worked that one out yet. -GS-

From: Mike Simmons

>Eyes: Hmmm... Hanen't worked that one out yet.

I always take two eyes. Sorry, I just couldn't help myself! Mike Simmons

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To Bill, Jay, Glen, Christophe et al, I have put a page on my web site that describes the PIC controller that I have been using at my last four eclipses. http://homepage.ntlworld.com/rimonk/index.htm

Time pressures have prevented me giving more than just an overview. Detailed descriptions, programming and construction information will appear in due course. BW Richard

From: Jay Friedland

Re: [SE] Automated eclipse photography with Pentax MZ7 Hi Peter, I had one more idea for you (I'm going to try this as well). Rather than just cutting up your Pentax shutter release cable, why not try cutting it and inserting a stereo mini jack and plug. Since the jack has three conductors you should be in good shape and then you can use this interface to hook into whatever driver circuit/software, like Umbraphile, you need. Hope that was worth it... Please let us know how it turns out. - Jay

From: Glenn Schneider

Thanks for the info. I will add a link to your PIC infor from my UMBRAPHILE page on its next update.

The precursor to UMBRAPHILE was not too dis-similar, but run a more generic 6502 processor. Still, it's nice to know I'm not one of the only dinosaurs left to do machine/assambly language programming. The code for ROSE was a LOT smaller than UMBRAPHILE, of course. If you are interested, you can see the source code for the last version of it ever to see the light of day (or darkness of eclipse) at:

http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_91/ASEC_1.8.0_SOURCE.html

I wonder if anyone ever found that link on my server. Certainly no-one ever commentyed on it! Maybe too arcane/obscure/obsolescent for most...

and it was described by me many years ago on:

http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_91/ECLIPSE_91_REPORT.html

Cheers, Glenn Schneider http://nicmosis.as.arizona.edu:8000/

From: Richard Monk

Thanks for your comments, Glenn. My first designs for this device of mine was done using 8085 code back in the late 80's. The design only needed 3 * 40-pin chips. But I had a problem programming the 8257 EPROM and thought more of 2764s but the redesign of the PCB was too great a task. Did some development work using 6502 on my BBC micro and later on an 8501 development kit. However, the PIC provided an ideal solution just in time for Mongolia.

Have accessed your source code - were you aware that the links at the top of that page don't go anywhere? BW Richard Monk

From: Joachim Draeger

Hello! I am using remotely controlled Canon T-70s, too. Usually, they are orking fine. Last time in Lusaka 2001, however, I have had a curious experience. Two of these cameras have produced blank film, though both the film transport and the mirror of these cameras seem to have worked fine. Is there a special problem known concerning the shutter of the T-70, perhaps due to heat sensitivity? A malfunction of the electronics? Has someone else made a similar experience ever? Best wishes Joachim

From: Richard Monk

Sorry to hear about your "disasters". The heat would not be a problem, especially if you positioned your equipment during the last half hour before totality (and afterwards) as things got noticeably cooler. If you need to take pictures of partial phases then

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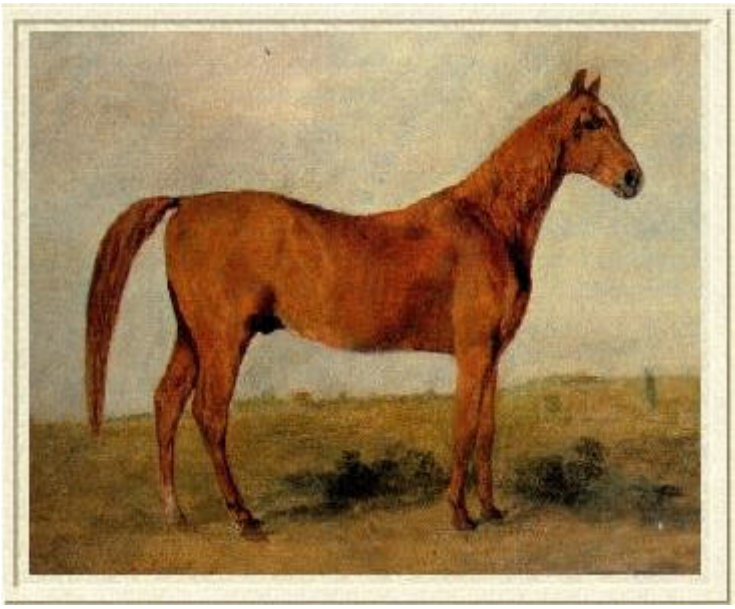
a sunshade is advisable! My T70s worked very well in Zimbabwe last year.

The lesson must be to "REHEARSE" everything. Use out-of-date film, but rehearse before you leave home to make sure that you have not forgot anything (and get the films processed) and perhaps the day before the event. You might not be able to get the films processed locally but the mechanics, electronics and the program get a final run through. BW Richard Monk

American Eclipse



chestnut colt, 1814 (by Duroc - Miller's Damsel by Messenger) Family 3

American Eclipse was bred by General Nathaniel Coles of Queens County, Long Island, New York. Foaled on May 25, 1814, his dam, Miller's Damsel, was described by turf historian John Hervey as "the Queen of the Northern Turf" during her racing days. She was a daughter of imported Messenger, a sire more famous for his influence on the Standardbred breed. Eclipse's sire was Duroc, next to Sir Archy, one of the best sons of imported Diomed. Eclipse, named for the great English racehorse of the mid-1700's, was put into training at three, made an impressive trial that year, then turned out to mature. He raced for the first time as a four-year-old (in 1818), defeating Black-Eyed Susan and Sea Gull in three mile heats for a $300 purse at New York's Newmarket course at Hempstea.

Eclipse was purchased by Cornelius W. Van Ranst on March 15, 1819 for $3,000 and opened his five-year-old season with a victory over Little John, Bond's Eclpse, and James Fitzjames in four mile heats, and closed it with a similar venture in October of the same year, with Little John again falling as his hapless victim, both races with a $500 purse.

With nothing left to prove, Van Ranst retired him to stud as a six-year-old, covering mares for a fee of $12.50. Into his second season at stud, clamor for his return as the North's champion was so great that Van Ranst put him back into training, in addition to serving 87 mares. He returned in time for one race that season, over four mile heats for $500 at the new Union Course on Long Island. It was opening day, and the runners competed on the new "skinned" surface, thus introducing America's version of "dirt racing." After winning the first heat, trouncing Lady Lightfoot, Flag of Truce, and Heart of Oak, Eclipse scared away all but Lady Lightfoot, who was distanced, in the second heat. Back in peak form, he returned at eight to remain undefeated in three more races. In the spring, he bested the good horse Sir Walter at four mile heats for the $700 purse. He returned in the fall to again face Sir Walter for $1,000. Eclipse took the first heat against Sir Walter, Duchess of Marlborough and Slow and Easy, and in the second heat, only Sir Walter went postward against him, and sulked, allowing Eclipse to win without the slightest exertion.

A great North-South match was arranged with Van Ranst's Eclipse representing the North and James J. Harrison's Sir Charles, a Virginia-bred son of Sir Archy, representing the South. The match was arranged at $5,000 a side, over four mile heats at the Washington D. C. course that November. Days from the race, Sir Charles rapped a tendon and was forced to forfeit. A rematch was called, equally as unsatisfying, as Sir Charles broke down in the final mile, leaving Eclipse the victor.

Eclipse stayed in training as a nine-year-old and defended his championship in May (1823), in a high-stakes event at the Union Course. The conditions were $20,000 put up on either side (North-South), $3,000 to forfeit, Eclipse to run against the best horse from the South, which turned out to be Lemuel Long's Henry (Sir Henry), a four-year-old chestnut son of Sir Archy. The race attracted a crowd of 60,000, making it a landmark in sports history, the biggest sporting event ever witnessed. Shockingly, Henry defeated Eclipse (the first horse to ever do so) by a length in the first heat in a new record time of 7 min-

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utes 37 seconds for four miles. The victory wasn't the sweetest, since Eclipse, carrying 126 pounds, was giving away 16 pounds to his five years younger rival, who carried 108. Eclipse was also said to be the victim of a bad ride and his jockey, William Craft whose cruel use of the whip left a cut on the stallion's testicle, was set down for the next heat, to be replaced by Purdy. Duroc's brave son duly won and evened the score, then came back in the third heat to win by three lengths against a valiant Henry.

Eclipse finally got the reward he deserved, final retirement to stud, after an undefeated racing career that spanned five seasons, eight victories and earnings of $25,000. He entered stud in 1824 at John Snedeker's farm in New York state, commanding a stud fee of $75.00 and $100.00. While standing in New York, he sired Medoc, an outstanding racehorse and later an important sire. Offered at auction after a few seasons, American Eclipse began a lengthy road trip that was to last almost to the end of his days. He was purchased by Walter Livingstone for $8,050 and continue standing in New York State. In 1833, he was purchased by James J. Harrison of Virginia to replace his old rival, the leading sire Sir Charles, who had died that same year. Over the next few seasons he stood at various locations including Boydton, Virginia and Baltimore, Maryland before being sold to Kentucky in 1837. In 1839 and 1840 Eclipse stood in Tennessee at James Swanson's Stable, Independence, near Franklin, Williamson County for a fee of $100. In 1841, he found himself at A. Whitlock's stud in Limestone County, Alabama. He returned to Kentucky to stand at Colonel Edward M. Blackburn's Farm in Woodford County, and died at the advanced age of 34, at the farm of .... in Shelby County Kentucky on July 10, 1847.

Although never a leading sire like his rival Sir Charles, or his son, Medoc, Eclipse proved outstanding and influential. His best runner was Medoc (ch.c. 1829 out of Young Maid of the Oaks by Expedition), a champion runner and America's Leading Sire in 1840 and 1841. He also sired two outstanding fillies, Ariel (gr.f. 1822 out of Young Empress by Financier), winner of 42 races in 57 starts; and Black Maria (bl.f. 1826 out of Lady Lightfoot by Sir Archy) who defeated another daughter of Eclipse, the southern champion Trifle (f. out of....) in famous match race at the Union Course in 1832. Eclipse's other top runners included Mingo, Goliah, Lance, Shark, Monmouth Eclipse, Fanny Richards, Paul Clifford, Forward, and Bay Maria.

Besides twice leading sire Medoc, American Eclipse also sired the stallion Brawner's Eclipse, whose daughter Nantura (dam by Henry) produced the great champion Longfellow. Another daughter, Lize, became the second dam of Enquirer (by Leamington), while Gloriana produced Jack Malone and Pat Malloy, both sire sons of Lexington. Gipsy (a sister to Medoc) produced Pryor and the famous Sister to Pryor. An unnamed daughter produced Mattie Gross (by Lexington). Other daughters that appear in pedigrees include Miss Peyton, Lady Thomkins, Maria Downing, and Ann Innis.

Several portraits exist of American Eclipse, thanks to his number one fan, Charles Henry Hall of the Harlem Stud in New York. Hall, who bred Black Maria, commissioned Alvan Fisher (1792-1863) to paint several portraits of the great champion. The image that accompanies this article is the famous portrait by Edward Troye that hangs in the National Sporting Library in Middleburg, Virginia. It shows American Eclipse as an attractive, well-made, lengthy chestnut with a star on the forehead and his left hind ankle white. He was said to stand 15.1 hands, with good bone. His speed, durability and courage were never questioned; his adaptability and hickory constitution proven over many years at stud. In every sense, he lived up to his namesake, as America's Eclipse. -- Anne Peters


'ECLIPSE' 2002 PREMIERES AT BLACKPOOL PLEASURE BEACH

VLADIMIR TAKES 'CORRIE' STAR CLARE McGLINN'S BREATH AWAY!

lackpool has enjoyed its reputation as Magazine Celebrity Opening Night Gala

About the ECLIPSE circus in the magazine OK!, 10 July 2002

ASE 2002

Changes - won't make it to Puerto Vallarta

From : Alejandra León-Castellá <leonale@racsa.co.cr> To : SOLARECLIPSES@AULA.COM Date : Sat, 01 Jun 2002 15:49:10 -0600

Dear eclipse followers, Because of personal reasons, I will not be able to travel to Puerto Vallarta. I am sorry I will not meet many of you -some only known through the list and others that came to Costa Rica and I met in person- in the Hard Rock Cafe. I will have to rely on your stories and pictures. So please, send the details, tell us how good -or bad- it all was. I will be following up from here.

And... I won't be able to take posters for all the ones who requested them. We have redone our main Annular Eclipse web page to include the products distributed in our national campaign last year. You can find them here: http://cientec.or.cr/astronomia/eclipse/index.html

Have fun!! I wish you all clear skies and good shooting opportunities. Maybe we will meet in 2005 and meanwhile I hope to keep track of all your travels through the list. All my best, Alejandra León Castellá, San José, Costa Rica

LIVE! ECLIPSE 2002 Annular

From : Eiichi Wada <ewada@nikkeibp.co.jp> To : SOLARECLIPSES@AULA.COM Date : Wed, 05 Jun 2002 05:34:30

Dear all eclipse friends, Here is another KOREA-JAPAN project.

We'll webcast the ASE from Tinian, Korea, Japan and Puerto Vallarta. This is our 7th live webcast of solar eclipses since 1997 TSE.

LIVE! ECLIPSE 2002 Annular http://www.live-eclipse.org/eng/index.html

Sorry, still underconstruction.

As we are not natvie English speakers, it'll be very helpful to point out miss translation on our webpages.

Thanks in advace. See you at Hard Rock cafe in PV! Eiichi Wada, LIVE! UNIVERSE

Jose Portoles of Barcelona and Joanne in the airport of Madrid, 7 June 2002 Picture by PP

Weird Sunset

From : "F.Podmore" <podmore@science.uz.ac.zw> To : solareclipses@aula.com Date : Wed, 5 Jun 2002 13:53:48 +0200 (CAT)

I just got this news-email - the website continues some very nice photos.

Date: Mon, 3 Jun 2002 16:12:02 -0500 From: NASA Science News <snglist@snglist.msfc.nasa.gov> To: NASA Science News <snglist@snglist.msfc.nasa.gov> Subject: Weird Sunset

NASA Science News for June 3, 2002

On June 10, 2002, something extraordinary will happen to the setting Sun over North America.

FULL STORY at http://science.nasa.gov/headlines/y2002/03jun_sunset.htm?list522896

ASE 2002

Topo map of Northern Limit ASE 2002

From : Jay Friedland <jay@cinemagic.com> To : "SOLARECLIPSES@AULA.COM" <SOLARECLIPSES@AULA.COM> Date : Tue, 04 Jun 2002 22:59:16 -0700

Hi all, Thanks to Fred Espenak's coordinates (and some interpolation) I have just posted two versions of a 1:50,000 topographic map of the region around the Northern Limit of the June 10, 2002 Annular Solar Eclipse. These maps are very detailed and unfortunately quite large (1.7MB JPEG and 8.6MB TIF) but they really show lots of roads and villages in the area south of Puerto Vallarta in the land below the Bahia de Banderas and the Cabo Corrientes. Sorry for the shading issues on the map, but I wanted to get it up as quickly as possible after scanning them and piecing it back together. The map does not include the Central Line (it would be off the bottom). We look forward to seeing (and meeting) everyone in PV. Here are the map links: http://www.transitofmercury.com/images/ASE2002topomap.jpg http://www.transitofmercury.com/images/ASE2002topo.tif Clear skies, - Jay, Likes Shadows... Totals: 1991 Baja, 1994 Bolivia, 1995 Thailand, 1998 Galapagos, 1999 Austria Annulars: 1992 Catalina Island (clouded out), 1994 Erie, PA, 2002 Puerto Vallarta (fingers crossed!)

Meeting in PV

From : "Patrick Poitevin" <patrick_poitevin@hotmail.com> To : SOLARECLIPSES@AULA.COM Date : Tue, 04 Jun 2002 11:29:04 +0000

Dear All eclipse chasers, To all traveling to PV for the annular solar eclipse of 10 June 2002:

We will meet you all in the evening of the 9th in The Hard Rock Cafe of Puerta Vallarta. We think it is a good opportunity to make latest arrangements for travel to the path and back and discussions about equipment and weather conditions.

See you all there. Do not forget: No "Safe Journey" or "Happy Eclipse" messages on this SEML and ... keep those solar eclipse related messages coming ... Best regards, Patrick

David Makepiece, Olivier Staiger, Derryl Barr and Daniel Fischer in their hotel in PV 9 June 2002 Picture by PP

Eclipse weather forecasts

From : Egan Mark <astrophoto@yahoo.com> To : SOLARECLIPSES@AULA.COM Date : Wed, 5 Jun 2002 23:09:56 -0700 (PDT)

Hey Folks Thought you might be interested, if you haven't seen this already.

There's a good website that gives detailed weather forecasts, several days in advance. It's at:

http://www.arl.noaa.gov/ready-bin/arlplot1.pl?metdata=avn+191+km

You put in your lat/long, and in "field 1", choose "total cloud cover" (or any other detail) and in "countour type" choose "color filled".

and then choose the date.

I can't really say how accurate it is on a regular basis -- and it's probably more accurate the closer to the actual date it gets. But I can say this: it was quite accurate for the night of the Leonid Meteor shower in Nov. 2001

The site was pointed out to me by Barbara Wilson of the Houston Astronomical Society.

Of course there are lots of other weather websites:

www.weather.com
www.intellicast.com
www.wunderground.com
www.cnn.com

all of whom give slightly different forecasts for Mon. we'll see. hope this is useful. see ya'll there. Mark Egan, astro-

ASE 2002

Reports and pictures- Mexico

From : Alejandra León-Castellá <leonale@racsa.co.cr> To : SOLARECLIPSES@AULA.COM Date : Thu, 13 Jun 2002 10:00:36 -0600

Hello to all! It has been great to follow from a distance, first through live web cams and then through pictures and reports. It took some of the sorrow away from not being able to participate directly in Puerto Vallarta...

Thank you to all the ones who hurry to post their accounts and share them. I specially wondered how the meeting in the Hard Rock Cafe went. I could recognize a few people in Fred Bruenjes pictures. I think Fred Espenak is talking to Olivier Staiger in the bottom left corner.

I was also concerned about the report on the ship venture. We were going to do exactly that, and it seems to have been rough.

On the other hand, I have seen the pages by spaceweather.com with lots of images from the USA, Canada and even Tokyo. But there seems to be a great silence from Mexico and Mexicans. Or maybe I don't know where to find these?

Does anyone have other sources of local information?

Info in PV (Picture by PP

Looking forward to more stories... From rainy Costa Rica, Alejandra

From : Michael Gill <eclipsechaser@yahoo.com>

A source from Saipan, CNMI is...

http://www.tribune.co.mp/archive.cfm?Display=yes&ID=20394

>From Jalisco, Mexico there is this report...

http://www.mural.com/ed_impresa/notas/020611/comunid/textos/mcom0003.htm Michael Gill

From : Alejandra León-Castellá <leonale@racsa.co.cr>

Thank you Michael! The recognition in the picture is a little more difficult since there are many people not facing the camera and dressed in blue, but the addresses to news around the world and in Mexico are very useful.

Soon there will be more from other eclipse chasers, I hope. Alejandra

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

Here are a couple of frame grabs from my video that shows what we saw at centerline on the coast south of Puerto Vallarta: http://homepage.mac.com/joelmoskowitz/PhotoAlbum4.html

From : rybrks1@cs.com

Joels pic frames show more of the le ft side of the sun than we got on the ship.

Jalisco, Mexico

From : GMadden <iluvelx@netacc.net> To : Solar Eclipses <SOLARECLIPSES@AULA.COM> Date : Tue, 18 Jun 2002

All, Spaceweather.com has a fabulous shot of annularity by Jimmy Herrera and Lonnie Pacheco. madden

ASE 2002

PV eclipse report - at sea

From : David Makepeace <imoon@interlog.com> To : Solar Eclipse Mail List <SOLARECLIPSES@AULA.COM> Date : Thu, 13 Jun 2002 21:50:01 -0400

Further to Ray Brooks' brief report of our ocean-bound adventure to see annularity, here are additional details --

A number of us chose, at the last minute, to join Jay Pasachoff on the cruise into annularity off the coast of Mexico near Cabo Corrientes. With tropical storm Boris still waving its ugly hand in the air, I believe we were the only organized team to attempt an observation by sea. For some it was well worth it. For others a nightmare.

Our poor vessel, the Princesa Yelapa, had never seen such stormy seas. During our harrowing three hour journey inside the northern limit, over half of our passengers became extremely sea sick, retching and vomiting beyond capacity. Then the gift shop exploded - the incessant pitching and keeling of the boat becoming too intense. The glass display cases and stands snapped into shards sending souvenirs flying as we buckled under the pressure of the waves. To make things even worse, there was water crashing in the windows on the lower deck every time we hit hard. And we weren't even there yet.

Still, the mayhem didn't stop Jay Pasachoff from presenting a great slide show about what we were expecting to see. And I thought the eclipse was super-human!

By the time we entered the zone of annularity, it was only the most keen of us paying any attention to what was happening. Great beds of clouds ruled the skies with only scattered breaks where the Sun was supposed to be. I was sure we would see partial phases in part but I was wrong. Holding on for dear life and juggling a 300ml lens (which was futile) we got our only treat of the trip. A brilliant tangerine diamond burst out of the clouds - growing like a diamond ring at third contact. Then another! It was both sides of annularity! Through a break in the clouds less than a quarter of a degree wide we observed the nine and three o'clock positions of the ring for about ten seconds. Prayers went skyward for a reappearance on the horizon - but it was not meant to be. I know both Jay and I tried our best to record the event, but it was Daniel Fisher that got the best results with his video camera. The rest of us were just lucky to be alive.

The return journey was less rough and extremely subdued but I still had that post-eclipse glow. We dragged our soggy bottoms back into port about 11:30pm.

I consider the chase to be a complete success and one of the most outrageous of my career. I loved it! But there are many who would beg to differ.

On 04 December 2002 I'll be in the sky in a twin-prop, six-seater aircraft northwest of Woomera if anyone wants to look up and wave.

Cheers to Patrick and Joanne for having us at the Hard Rock in PV and for giving many of us a chance to meet in person - and hats off to Klipsi for his tireless efforts on his website and for being the best PR guy we've got. David Makepeace Toronto, Canada UmbraLog 1257

Visit my website at http://www.eclipseguy.com

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

That is exactly what we saw on land at centerline, plus a few minutes later the bottom end of the sun as it set.

Michael Gill and Derryl Barr in the Hard Rock Café orf PV on 9 June 2002
Picture by PP