

## The IAU Transits of Venus Working Group. 3: progress report

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This Progress Report follows the introductory report on the Working Group, which was published in the December 2002 *ICHA Newsletter* (pp. 30-34) and in the *Journal of Astronomical History and Heritage* (see Orchiston *et al.*, 2002, below). With the up-coming June transit, it is no surprise that there has been a worldwide flurry of recent interest in transits of Venus.

As would be expected, various historic re-enactments of earlier transit observations have been arranged for June 2004. The National Trust of Australia (New South Wales) has arranged for observations to be carried out at Woodford, in the Blue Mountains west of Sydney, a site used by one of the Sydney Observatory transit expeditions in 1874. In South Africa, Willie Koorts has arranged for observations to be made at Wellington, the site where the 1882 US transit party was based, and where women from the Huguenot Seminary for Girls also carried out observations. From Touws River (known as Montagu Road until 1883), the site of the 1882 British expedition to South Africa, the local tourism office is busy arranging a Transit Festival and observations from this site, where the hand-inscribed piers of the expedition have survived. At the former "Royal Observatory" in Cape Town, where David Gill observed the transit, re-enactments are planned, which

will involve the public and particularly school groups. Sara Schechner (Curator of Harvard University's Collection of Historical Scientific Instruments) is organizing a re-enactment at Harvard of John Winthrop's observations of the 1769 transit of Venus from Cambridge (Mass.). Winthrop also observed the 1761 transit (from Newfoundland), and some of the instruments from both transits may be used in the re-enactment. Meanwhile, Rolf Willach (Switzerland) is planning to view the transit through an historic eighteenth century heliometer.

Peter Broughton (Canada) has compiled a list of transit of Venus plaques, with the aid of various colleagues around the world, and on 2003 March 22 provided a list on H-ASTRO. Since then, others have supplied further examples, and we end up with the following list:

- 1639: Horrocks, at Carr House, near Much Hoole, UK
- 1639: Crabtree, in 'The Cliff' district of Manchester, UK
- 1769: French-Spanish expedition, in the Casa del Culura, San Jose del Cabo, Baja California Sur, Mexico
- 1769: Cook, at Venus Point, Tahiti
- 1874: US expedition, in Queenstown, New Zealand

- 1874: British expedition, at the Hulihee Palace, Kailua-Kona, Hawaii  
 1882: German expedition, at Trinity College, Hartford, Conn., USA  
 1882: British expedition, at the All Saints Garrison Church, Burnham, New Zealand  
 1882: Marth, Stevens and Thornton, in Touws River, South Africa  
 1882: On the summit of Transit Hill, Lord Howe Island, Australia

Peter Broughton also reports that "... a plaque will definitely be erected in St. John's, Newfoundland, to recognize the observations near there by John Winthrop on 6 June 1761 ... the initiative is coming from the RAS of Canada ... [and] Professor Frederick Smith of the Memorial University of Newfoundland has determined the site as Kenmount Hill (see JRASC, 97:291 for details)." Meanwhile, in South Africa, Willie Koorts and some colleagues plan to install a plaque and sundial at Wellington, South Africa, to commemorate transit of Venus observations made there in 1882.

Various museums, observatories, planetariums, and science centres have arranged special transit of Venus displays, and in addition to those already mentioned in the previous report these include an exhibit titled "Chasing Venus: observing the transits of Venus, 1631–2004" which opened at the National Museum of American History in Washington, D.C., on March 23. This was organized by the Smithsonian Libraries, with support from the Peter Gruber Foundation, NASA, and the U.S. Naval Observatory. At Harvard, Sara Schechner is organizing a display for the permanent gallery featuring instruments used by John Winthrop and Harvard students to observe the 1761 and 1769 transits, and both the National Trust's Woodford Academy in Australia and the Wellington Museum in South Africa are busy planning temporary transit of Venus displays. NASA organized a Sun-Earth day on 19 March, in connection with the upcoming transit of Venus, and the following web site contains details of the various activities:

[http://www.sunearth.gsfc.nasa.gov/sunearthday/2004/index\\_vthome.htm](http://www.sunearth.gsfc.nasa.gov/sunearthday/2004/index_vthome.htm)

There is also a plethora of transit of Venus special lectures, seminars, workshops and conferences. The key conference is IAU Colloquium 196 "Transits of Venus: New Views of the Solar System and Galaxy", organized by Gordon Bromage and Don Kurtz from the University of Central Lancashire in Preston, UK (where the Conference will be held). C41/ICHA is well-represented, with Suzanne Débarbat (France), Steven Dick (USA), Julieta Fierro (Mexico), Wayne Orchiston (Australia), Jay Pasachoff (USA), and Luisa Pigatto (Italy) on the Scientific Organising Committee; Peter Hingley (UK) on the Local Organising Committee; Allan Chapman (UK) as a Keynote Speaker; and Steven Dick, Wayne Orchiston and Richard Strom (Netherlands) as Invited Speakers. For further details of this Conference see the following web site:

<http://www.transit-of-venus.org.uk/conference>

Immediately prior to the IAU Colloquium, Paul Marston (also from the University of Central Lancashire) has organized a weekend residential conference on "Jeremiah Horrocks and Transits Ancient and Modern" for amateur astronomers and

interested members of the general public. C41/ICHA members speaking at this event are Allan Chapman, Mary Brück (Scotland), and Wayne Orchiston.

On 2004 January 9 a seminar was held in Germany to mark the 65th birthday of Dieter B Hermann, Director of the Archenhold Observatory and a renowned astronomical historian, and Hilmar Duerbeck gave a paper on "Big science at the Kaiser's time: the German Venus transit expeditions". Each year, Sydney Observatory features its prestigious annual *By the Light of the Southern Stars Lecture*, and on 2004 March 26 Wayne Orchiston lectured on "Transits of Venus: Uncovering the Human Face of History". Last September he gave a paper on Cook's 1769 transit expedition at the Annual Convention of the Antique Telescope Society in Denver (USA), and the following month presented a research seminar at the University of Washington (Seattle) on the 1769 and 1874 transits. On May 7 the Australian Science History Club will hold a one-day seminar on "The Transit of Venus" at Sydney Observatory, and speakers include Wayne Orchiston and Nick Lomb (C41/ICHA member, and Curator of Astronomy at the Observatory). On June 1, a transit of Venus colloquium will be held in Utrecht, Holland, and in South Africa, an international conference will be held in the Pilanesberg National Reserve to coincide with the transit. A public lecture is planned for nearby Sun City the night before the transit, which will then be viewed from the Bakubung Game Lodge (for details see: <http://www.tuningfork.co.za>). In July, Sara Schechner will deliver the Helen Sawyer Hogg Public Lecture of the Royal Astronomical Society of Canada and the Canadian Astronomical Society on John Winthrop and the transits of Venus.

Further to the list of references that appeared in the December 2002 *Newsletter*, other transit of Venus publications we have noted are:

- Brück, H., 1992. Lord Crawford's Observatory at Dun Echt 1872-1892. *Vistas in Astronomy*, **35**:81-138 [pages 88-89 and 111 deal with the ToV expedition to Mauritius].  
 Brück, M., 2003. The C41/ICHA Transits of Venus Working Group. 2: Lord Lindsay's Transit of Venus expedition to Mauritius 1874. *Journal of Astronomical History and Heritage*, **6**:64.  
 Dick, S.J., 2004. The Transits of Venus. *Scientific American*, May issue, in press.  
 Duerbeck, H.W., 2004a. The 1882 transit of Venus—as seen from Chile. *Orion*, **2**(321):10-15.  
 Duerbeck, H.W., 2004b. The beginnings of German governmental sponsorship in astronomy: the solar eclipse expeditions of 1868 as a prelude to the Venus transit expeditions of 1874 and 1882. In *Development of Solar Research*, 2003 Colloquium of the Working Group for the History of Astronomy, in press.  
 Duerbeck, H.W., 2004c. Venusdurchgänge zu Kaisers Zeiten: die Deutschen Expeditionen von 1874 und 1882. *Sterne und Weltraum*, **43**(June): 34-40.  
 Gent, R. van, 1993a. De Nederlandse Venus-expedities van 1874 en 1882. *Zenit*, **20**:332-337.  
 Gent, R. van, 1993b. *De reizende astronoom: Nederlandse sterrenkundige expedities naar de Oost en de West*. Leiden, Museum Boerhaave.  
 Hudon, D., 2004. A (not so) brief history of the transits of Venus. *Journal of the Royal Astronomical Society of Canada*, **98** (6), in press.

- Koorts, W.P., 2003. The 1882 transit of Venus and the Huguenot Seminary for Girls. *Monthly Notices of the Astronomical Society of South Africa*, **62**:198-211.
- Koorts, W.P., 2004. The 1882 transit of Venus: the British expeditions to South Africa. *Monthly Notices of the Astronomical Society of South Africa*, **63**:34-57.
- McDonald, P., 2002. The transit of Venus on 2004 June 8. *Journal of the British Astronomical Association*, **112**:319-324.
- Orchiston, W., 2004. New South Wales observations of the 1874 transit of Venus. *Anglo-Australian Observatory Newsletter*, **104**:12-14.
- Orchiston, W., Dick, S., Gurshtein, A., and Pigatto, L., 2002. The C41/ICHA Transits of Venus Working Group. 1: An introduction. *Journal of Astronomical History and Heritage*, **5**:185-188.
- Simaan, A., 2002. *La Science au Pêril de sa Vie. Les Aventuriers de la Mesure du Monde*. Paris, Vuibert & Adapt [a section of this book deals with the French 1761 and 1769 transit of Venus expeditions].
- Simaan, A., Blamont, J., Cannat, G., Delaye, Y., Laudon, M., Luminet, J.-P., Sellers, D., et Roode, S. M. van, 2003. *Vénus Devant le Soleil. Comprendre et Observer un Phénomène Astronomique*. Paris, Vuibert & Adapt.
- Smith, F.R., 2003. Observation of the 1761 transit of Venus from St. John's, Newfoundland. *Journal of the Royal Astronomical Society of Canada*, **97**:291-293.
- Young, A.T., 2001. Venus and refraction. *The Observatory*, **121**:176-178 [about contact timings and the 'black drop' effect].
- Zuidervart, H., 1999. *Van 'Konstgenoten' em Hemelse Fenomenen: Nederlandse Sterrenkunde in de Achttiende Eeuw*. Rotterdam, Erasmus Publishing [Ph.D. Thesis, University of Utrecht; the transits are treated in Chapters 12-17].

The 2004 June issue of the *Journal of Astronomical History and Heritage* will be devoted to transits of Venus, and will contain the following papers:

- Clark, B.A.J. and Orchardson, W. The Melbourne Observatory Dallmeyer photoheliograph and the 1874 transit of Venus.
- Duerbeck, H.W. The German transit expeditions of 1874 and 1882: organization, methods, stations, results.
- Edwards, P. Charles Todd's observations of the 1874 and 1882 transits of Venus.
- Orchiston, W., and Buchanan, A. 'The Grange', Tasmania: survival of a unique suite of 1874 transit of Venus relics.
- Pigatto, L. and Zanini, V. The 1882 transit of Venus observed in Italian observatories.
- Sterken, C., and Duerbeck, H.W. The 1882 Belgian transit of Venus expeditions to Texas and Chile—a reappraisal.

All of these papers (except Clark and Orchardson) derive from the WG4 (Transits of Venus) meeting at the 2003 July General Assembly of the IAU in Sydney.

Meanwhile, the next issue of the *Journal of Astronomical Data (JAD 10)*, to appear at the end of 2004) will have a special Transit of Venus section. Foreseen contributions are:

- Gent, R.H. van. Transits of Venus bibliography.
- Misch, A. & Sheehan, W. The 1882 transit of Venus reanimated.
- Orchiston, W. The nineteenth century transits of Venus: an Australian and New Zealand overview.

These are provisional titles and have yet to be finalized. Since *JAD* is issued on CD, contributions containing extensive observational data, tables, colour and B&W images, archive listings, etc., are especially welcome, but also standard historical articles are accepted. Since the papers go through a refereeing process, submission before July 1 is encouraged, but late submissions are possible if the editors are informed about the contents and approximate size of the contribution by July 1. The editors are Chris Sterken (csterken@vub.ac.be) and Hilmar Duerbeck (hduerbec@vub.ac.be).

Those wanting to find already-published papers about different transits of Venus should consult the excellent bibliography prepared by Robert van Gent:

<http://www.phys.uu.nl/~vgent/venus/venustransitbib.htm>.

And for a comprehensive transits of Venus web site, with plenty of historical information, readers are referred to the following URL:

<http://www.transitofvenus.org>

In the previous Newsletter we erroneously reported that the Scientific Instruments Society was jointly developing a transit of Venus web site. In fact, this web site is the work of the SIC Transit of Venus Committee of the Scientific Instrument Commission of the IUHPS/DHS. We regret this error, and look forward to working closely with the Commission and its Committee. Sara Schechner reports that the web site is still under construction, and contains a searchable database of linked instruments, people, places, and transits with relevant photographs. The site is organized as follows, and encourages people to contribute to it:

- Introduction—what is a transit of Venus, and who observe it?
- Stories—highlights from our resources
- Browse—explore the online collection through categories, people, places, and dates
- Search—a free-text search for detailed questions
- Links—online resources, museum exhibits and events, and web sites devoted to the 2004 transit of Venus
- Contributors—view the contributors to the site and find out how to add your own resources to this web site.

