

*Boerhaave Museum Salon: Newton and the Vis Viva*      *Press communiqué*      3

Not directly related to sundials, this topic would seem to appeal to the same public. On Sunday, January 29, the Leiden museum will repeat the famous 's Gravesande experiment of 1722, in which balls falling in clay proved the motional energy of a body to be proportional to the *square* of its speed, instead as to the speed proper as Newton maintained. The reason, according to 's Gravesande, was the 'living force' or *vis viva* that every object possessed. Did this mean that God did not directly control all natural phenomena? And could 's Gravesande really have seen all that he claimed?

*Report: meeting of 24 September 2011*      *Secretariat*      4

Fifteen attended, Taudin Chabot presided. Topics: who has a beamer we can borrow for presentations; housing the Sundial archive; the Sundials in The Netherlands column; Hagen slides; the 2012 field trip; meeting dates fixed; which dials archived. Other matters: Echten sundials 16 Sep unveiled (see picture elsewhere); the leap second, abolition thereof; Hollander's astronomy class for school children – a five-foot gnomon is to be erected on the south roof, and pupils will mark the whole hours during the year; his CD nocturnlabe cut-out (see the Analemma site for download); Pals' puzzlement: why would a certain aperture in the Voortrekkers Monument, according to a Können lecture, produce a certain light spot *once* a year (rather than twice)? ; Kepler museum sundials visited, the Deil Dial unveiled, and a primary school play featuring same; what with bequests to the Sundial Society – is the Utrecht University museum willing to open a sundial dept?

Inset: a sundial, bought for 70 cents, was valued at 8500 euros.

*Report: meeting of 14 January 2012*      *Secretariat*      6

Attendance: twenty-two. De Groot presiding. A guest: Chaterina Toebes, a master clockmaker. Today's topics: Field trip (not Greenwich after all, perhaps Leiden), lecture (Jaipur?); Sundial Archive; more collections, clocks e.g., need shelter. Many clubs face problems of the sort, and for some materials, simply chucking it would be best. In other business: Jaipur sundials visited – how do they work?; new terrace dial in Capelle/IJssel; meeting reminders per email? (no); Deil Dial unveiled on St. Michaels Day, 9/29; Holman to place QR codes on Ootmarsum sun calendar and objects along a new sundial/clock/instrument trail; how accurate are sundials *in practice?*; English sundials; 2011 chronicles proposal; a dial in need of restoration; the last copies of *ABC van de Zonnewijzer* (Sundial ABC); a sun temple in Sri Lanka compared to that in Lierop.

*Cadran Info 24, summary* *A. vd Hoeven* 8

Papers on: A New Timescale (about leap seconds); A Rose-shaped Sundial; A Circular Inverse Analemmatic Dial; Noon Dials; A Sundial for Princess Henriette; Setting up a Polar Gnomon; some papers on various aspects of circular apertures; The Canonical Sundials of Thaon; various special dials (for whatever reason) in And This is all True; The Polyhedral Sundial of Colmar; The unknown sundialmaker of Queyras; A Sundial on a Hyperbolic Paraboloid; and a section on new work and papers by members.

*On the apparent diurnal motion of the Sun* *J.P.C. Hoogenraad* 10

The full title is: Some consequences of the apparent diurnal motion of the Sun about the Earth – and that is exactly what the paper is about. The author describes in some detail the model in which the sun revolves about the axis of the earth, in planes parallel to the equatorial, one for every day, according to the solar declination. Then, he explains the differences in the durations of daylight, and the speed and steepness of sunrise and set. The noon altitude of the sun is calculated, as well as the azimuths of sunrise and set. The effect of the position of the observer is investigated.

*Times of Sunrise and Sunset calculated* *J.P.C. Hoogenraad* 13

Even more calculus manifests itself in this paper, in which a detailed discussion of the calculation of these events takes place. After a preliminary exercise on the length of the daily arc, some more subtle effects are added into the equation: first the effect of the diameter of the sun, then that of diffraction in the atmosphere. The increasingly accurate calculation results are compared with the published values for the day.

The derivation of the equations is included at the end.

*Analemma's New Year card: use and background* *H.J. Hollander* 20

This elegant card is really a sundial of the analemmatic variety. The projection used makes it an equiangular dial, on which the hour lines are all 15 degrees apart even if the gnomon is vertical.

*Celtic Moon Calendar* *Kennislink* 22

A popular article about the Celtic tomb on Magdalen Hill in the Black Forest. Dr. Mees of the Roman-German Central Museum in Mainz not only states that the neighbouring graves represent constellations, but also claims to be able to date the year they depict as exactly 618 BC – which, frankly, would be quite a feat, given the slowness of precession. Nevertheless, the article does contain many interesting links on the Web.

*Annual report and estimate* *Treasury* 24

*Summary of the current Bulletin* *R. Hooijenga* 25

*Colour pages* *Editors* 27