

*Meeting dates for 2014* Secretariat 2

*Annual general meeting of 23 March 2013* Secretariat 3

Vesters and Hoogenraad are planning the trip to Greenwich. - Fer de Vries was to be presented an inscribed crystal carafe and glasses in recognition for his promotional work, the upkeep of the website and three articles on the site every single month.

Unfortunately, Fer suffered a severe cerebral infarction and cannot be present at the meeting. De Groot and Hollander will visit him later. A plan is made for the maintenance of the website [to date, this is not working; it proves to be difficult to do any work without the underlying database]. - The Zonnewijzerkring donates 2500 euros for the Mercator Sundial of the Geldermalsen Sundial Walk. - De Groot resigns as chairman; members Vesters and Hoogenraad join the committee as new chairman and as member, respectively.

On 31 december 2012, there were 107 full members and 2 honorary members.

*Corrections, AGM 2012* Editors 5

Text clarification: Hollander and Hooijenga resigned and were re-elected; the editor should preferably be a member of the committee. - Some spelling corrections.

*Meeting of 21 September 2013* Secretariat 6

Fer de Vries is still convalescing. - The Greenwich bus trip took place a week before the meeting. Twelve members went. Curator Dr. Richard Dunn had removed a choice selection of sundials from the depot and displayed them. Frans Maes explained and commented on the sundials. A successful trip! - In 2013, there was no May-Bulletin; editor Hooijenga did not find time to produce it. Hoogeland offers help; Schoorel already did before the meeting.

Sasbrink brought an actual Lansbergen quadrant, as well as pictures of other dials. - Hollander shows pictures of a Groningen park sundial he was involved with. He is also helping with a sundial called 'The Last Straw': a 50-foot grain stalk with a spider dial around it; and with an analemmatic terrace dial (with sand pit) in Winterswijk, to be completed this fall. - Allan Griffiths recently received his PhD. For his doctorate work he encountered some old sundials with unequal hours, as well as texts about them. He is preparing a lecture on the subject and would like to speak on the subject at the next meeting.

*The curious case of the missing sundial* H. Beekhuis LL M 8

Having seen a copy of the Mauritshuis sundial, the author decided to find the original and have it reinstated.

Although the first attempt to gain approval for this plan met with objections, a second proved fruitful. Now to locate the actual dial. In the fall of 2009, the metal armillary, severed from its plinth, was found in the Mauritshuis loft. The damaged plinth turned up at an art carrier firm in The Hague. According to the plaque on it, the early 18<sup>th</sup> century sundial was a present on the 150<sup>th</sup> anniversary of the Mauritshuis Museum in 1966.

Investigations show that only a few months after its installation, the sundial was

damaged when the then director of the The Hague municipal museum hit it with his car. It was repaired, and so again in 1968, at which occasion the XI turned into IX! In 1980, the sundial fell victim to a The Hague museum director's car again. Although repairs were commissioned, it never came to that, possibly because of a planned restoration of the museum, which would involve digging up the larger part of the forecourt.

When it was clear to the author that a return of the dial to its original place was no longer an option, he suggested it be placed in some other place of historic interest. In a short ceremony on 16 September 2011, the care of the sundial was transferred from the Mauritshuis to the Council of State.

The sundial is now safe in the French garden of the Council's Kneuterdijk Palace, which is open to the public.

*Three obituary notices* Secretariat 14

Schepman (87) and Horikx (86) passed away; so did the wife (76) of Van den Beld.

*An armillary sphere with no days off* A. Hoekstra 15

An armillary of 360 degrees shows all the sunny hours, except on the equinoxes. One of 180 degrees is not bothered by any equinox auto-shadowing, but cannot show more than twelve sunny hours.

A combination of the two makes an armillary sphere show all the sunny hours on every day, much like a horizontal dial. Well, almost – there is a difference of about twenty minutes between sunset and sunrise in spring and fall. The dial therefore fails during the first or last ten minutes of the equinox day. A theoretical drawback, as existing shadowing from the dial's environment is likely to have more impact.

*The oldest 'clock' of Northern Europe* city of Zutphen 16

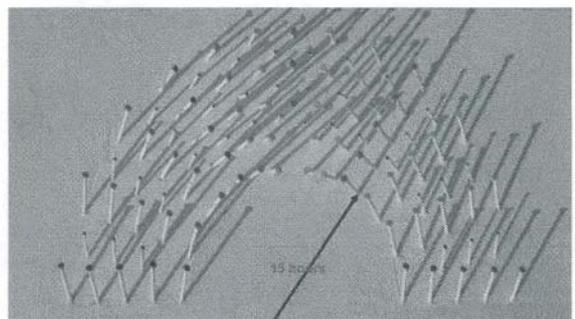
An archaeological survey in the centre of Zutphen turned up an early 14<sup>th</sup> century quadrant. There is only one other of its kind in Europe north of the Alps, and just a few worldwide. The quadrant or horologium was used to tell time or measure latitude. Because it measures altitudes up to 63 degrees, the lowest latitude at which it can be used is 51 degrees, about the latitude of the Hansa town of Brugge. The useable range coincides with that of Zutphen's active trade area at the time, from Flanders to Bergen, Norway.

A study of the alloy (which contains zinc) supports the theory that the quadrant was manufactured on the Continent, possibly Flanders.

The quadrant is now on display in the Zutphen municipal museum.

*Contents of Cadran Info October 2012* A. vd. Hoeven 19

1. Effect of refraction on sundials. 2. Reflection dials, heavy math. 3. Natural node dial: Mt. La Meije, Grenoble. 4. Cahon dial: equatorial flower petals cast shadows on their neighbours. 5. Shadow plane sundial with nails (see example). 6. St. Guen Multiple Dial returned. 7. Remote display optic fiber dial, clear explanation on technical aspects. 8. Polyhedral dial returns to Haut-Rhin. 9. Volpaia family altitude dials.



<i>Hospice Wallon Sundial</i>	J.G.T.M. Taudin Chabot	20
The sundial in this building's court was taken down in 2007 and has not returned since. The present users of the building, who are vacating it, sent a note promising that they will try to convince the next occupants of the importance of restoring the sundial to its rightful place.		
<i>Contents of Cadran Info Special 2012</i>	A. vd. Hoeven	21
1. Shadow properties. 2. Pin-hole dials. 3. Shadow of a straight filament. 4. The sun image in a pin-hole dial. 5. Shadow of cylinder style. 6. Shadow sharpeners. 7. Early Chinese diaphragms for precise altitude determination. 8. Which diaphragm opening. 9. Theoretical study of diaphragms. 10. An elliptic diaphragm. 11. Calculation of the projected patch of light. 12. Shadow of the gnomon tip. 13. Foreign (non-French) diaphragms. 14. Diaphragm of Nanjing Observatory. – Five more articles on diaphragms and a vocabulary.		
<i>Mercator Sundial leaflet</i>	S.walk Geldermalsen	23
A description and 'making of' of the Mercator dial in Beesd. This is a reprint of the visitor's handout made available by the Geldermalsen Sundial Walk and Sundial Centre Rupelmonde (B).		
<i>Equation of Time and Declination for 2014</i>	T.J. de Vries	25
An indispensable tool for anyone who does any serious sundial work at all.		
<i>Call: who recognizes this compass sundial?</i>	Secretariat	25
An unknown small sundial with a built-in magnetic compass. Any ideas?		
<i>Statistics and budget</i>	Treasurer	26
<i>EOT and Declination tables 2014</i>	T.J. de Vries	28
<i>Contents of Bulletin 112, September 2013</i>	R. Hooijenga	30
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