

# Contents of ZON & TIJD 2019.2 (nr. 129, June 2019)

Editors

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<b>Editorial</b>	3	<b>A homemade heliochronometer - part 2. Error analysis-</b> <i>André Reekmans</i>	24
On the occurrence of 'sun' and 'solar' in our language, or 'summer solstice': the next one is 21 June, 17:54 CEST.		The heliochronometer constructed by André (Zon & Tijd 2018.3) appeared to be correct within 2 min. in July 2018. The effects of possible inaccuracies in construction are analyzed.	
<b>Excursion 2019 - Board</b>	4	<b>'Ruin-church' in Bergen got its sundial back -</b> <i>Editors</i>	26
The annual excursion will visit the Royal Eise Eisinga Planetarium in Franeker, the oldest working planetarium in the world.		The sundial on this church (the remaining choir of a larger church, damaged in the 16th c.) had been peeling off, but was recently restored on initiative of Thibaud Taudin Chabot.	
<b>Double sundial in 's-Graveland - Peter de Groot</b>	5	<b>Report of the meeting of 23 March in Tricht -</b> <i>John Souverijn</i>	27
An interactive shadow-plane dial ('cord dial') has been combined with a regular horizontal dial. All made with natural materials.		The AGM was held. Ruud Hooijenga was elected as new Board member. Rob van Gent explained how the islamic astrolabe quadrant was used to tell time as well as prayer times, fests etc. The 'open table' attracted varied contributions by members.	
<b>7 July: Sun observation day in The Netherlands and Flanders -Editors</b>	9	<b>Large armillosphere found in Steenberg-</b> <i>Frans Maes</i>	29
In both countries amateur astronomers invite the general public to have a (safe) view at the sun.		An old postcard showed an armillosphere in a newly laid out park in the '50's. It is not in our registry, but does still exist.	
<b>From local solar time to (atomic) clock time, part 1- Willy Ory</b>	10	<b>The islamic prayer times - Frans Maes</b>	30
In-depth analysis of the relationship between solar and clock time.		Following up on Rob van Gent's presentation, the prayer times are listed.	
<b>Röttingen, sundial village at the Romantic Road (Bavaria) - Frans Maes</b>	13	<b>Puzzle: hour glasses and qibla- Frans Maes</b>	31
Some 30 sundials can be found here, of various types. Worth the detour!		The old puzzle asked which timepiece has the most moving parts. The hour glass, of course. The new puzzle is how to determine the <i>qibla</i> in an easy manner.	
<b>New 'old' sundial in Ridderkerk - Astrid van der Werff</b>	14	<b>Hour glasses, a brief history - Frans Maes</b>	31
Volunteers restored an armillosphere in Ridderkerk cemetery, which was thought to be from 1954. Afterwards Astrid discovered that it was a copy from 2005.		A follow-up on the previous puzzle.	
<b>An antique, ninefold stone sundial - John Souverijn</b>	16	<b>Heliostat in the city of Heerlen's 'Maankwartier' - Frans Maes</b>	33
A multiple stone sundial was reported, an octagon with seven dials around the edge and two dials on its sides, made for latitude 50°N.		A large mirror (Ø 6.2 m) is reflecting sunlight down into the parking garage below this new quarter bridging the railway station.	
<b>Analemmatic sundial in Wageningen - Editors</b>	19	<b>Contents of this issue - Editors</b>	34
Sculptor Joost Barbiers made an analemmatic sundial, major axis 6 m, for the sculpture garden of Arboretum 'De Dreijen' in Wageningen in 2015. Willy Leenders gave gnomonic advice.		<b>Information on the Netherlands' and Flemish Sundial Societies</b>	35
<b>The sundials of W.G. ten Houte de Lange, part 2. The equatorial dial - Frans Maes</b>	20		
The development of the equatorial dial designed by W.G. ten Houte de Lange (1885-1967) was explored, and a brief biography provided.			