Bulletin 03.1 English summary
R. Hooijenga, T. Brandsmastraat 42, 1964 BV Heemskerk, The Netherlands
Email: r.hooijenga@rhayward.demon.nl (home) or r.hooijenga@lvnl.nl (office)

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the staff in two different ways, and because of the two different sights. The subranges are 1º – 1º55', 6º15' – 13º, 1º55' – 7º30' and 12º15'– 40º.

The *Universal Ring Dial* is classic, and this kit is beautifully done. The guide is excellent, but it is still advisable to read ahead one or a few points to see what lies ahead, and to test moving parts before applying glue.
The ring dial has a declination scale as well as a date scale. It is truly universal, in that it works in both northern and southern latitudes – something not often seen in sundials.
For more information, find Ipacity on www.ipacity.nl

14 The Met Office's sundial M. Hugenholtz
The Royal Dutch Meteorological Office publish suntrack graphs for 51, 52 and 53 degrees latitude. The author describes a sundial construction that uses the numbers from these graphs. Referring to Fig. 1, β is the latitude. Let OPP' be a style triangle rotated about OP into the horizontal plane left of the N-S line, and UPP" the edges of a vertical surface A, also rotated into the horizontal plane. The azimuth AZ, from the graph determines line S. P'P" = PP'. Line H is determined by the altitude h, also from the graph. The intersection of H and S, U, is a point of the hour line OU for that time.

An advantage is that date or declination lines are easily found as well as the hour lines: connecting all the U's gives the declination line for the declination chosen for the construction. – Fig. 2 shows the construction for a declining vertical dial.

17 Locating the sun in the sky H.W. van der Wyck
The author establishes a reference system and then introduces the various variables dealt with. Next, using spherical trigonometry, he derives equations to calculate local co-ordinates for the sun from latitude, longitude, date and time.

18 Sundial Park Genk #5: The Euro-meridian F.W. Maes

22 Introduction to Gnomonics, part 2 F.J. de Vries
Co-ordinate systems, terrestrial navigation and celestial navigation are in this part. Some stress is placed on the need for rigorous conventions as regards signs, reference points and so on. From the local horizon system, we progress through declination and hour angle, declination and right ascension, and finally ecliptic latitude and longitude are treated.

27 1564 polyhedron - continued F.J. de Vries

28 Zaltbommel book dial F.W. Maes
When in Zaltbommel, the author went to see the book dial. This is in the collection of the museum in the beautiful house built in 1535 for Maarten of Rossum, field marshal for Charles duke of Gelre. Unfortunately, the dial was in storage, but manager Bulthuis was very kind and fetched it.
Mr. Maes had ample opportunity to measure and draw the book dial, and a description follows, together with his thoughts about classifications of sundials, and a mention of the modern catalogue database used by five museums in Gelderland (the then Gelre).

32 Shifted Italian hours F.J. de Vries
A noon line in San Giuseppe Cathedral in Brescia, Italy, gives the time for the summer solstice transit as XV^{45} for Hora Meridiei. Remember, these are Italian hours, which start at sunset. However, there was a system of "shifted" Italian hours, for civil use, which started at 30 minutes past sunset.
Testing the Brescia solstitial Hora Meridiei using "ordinary" Italian hours, we would have to conclude from the formula $\cos T = -\tan \varphi \tan \delta$ and $T = XXIV - XV^{45} = 8h15m$ (123.75˚), that φ for Brescia is 52˚. Of course it is not; actually it is 45.5˚.
Working the other way around, we find that T = 116.18˚ or 7h45m, which is 30 minutes different from what we found earlier. We may therefore conclude that the Hora Meridiei was XV^{45} in *shifted* hours.

33 "*De Zonnewijzerkring*", text and music by: H.W. van der Wyck
A two verse ditty extolling the virtues of the Society and the objects of its affection. Tempo di marcia.

34 Index of names of Dutchmen related to sundials H.W. van der Wyck
Two-page list of names and sources where mentioned. Of considerable value for historical research.