



THE SUNDIAL PAGE

A shattering experience

Glass sundials are rare. They usually take the form of stained-glass window dials and most of them date from the 17th century or the early 18th century. There are more dials of this kind in this country than in any other but even so, due to the ravages of time, few have survived in England and Wales to the present day (see 'Sundials in stained glass', *Clocks*, April 1988).

Undoubtedly the rise in popularity of the game of tennis contributed to the demise of this beautiful class of sundial, since the tennis ball had no more respect for the window dial than it did for the ordinary glass panel in the common window!

Christopher Daniel

Noon-marks and mean-time dials are also rare forms of sundial. In the September issue of *Clocks* I described such a dial, declining $23^{\circ} 15'$ East of South at Green College, Oxford (the Sundial Page, 'Figures of Eight'), designed to commemorate the bicentenary of the Radcliffe Observatory. The dial is not only an accurate scientific instrument that indicates *clock* time for the benefit of staff and students alike, but an outstanding work of art that excites interest and arouses curiosity.

Glass mean-time noon-mark dials are an even greater rarity as a form of sundial. However, quite remarkably, just such a dial exists. Set up earlier this year, within the confines of a government office and accessible to only a few who are permitted to pass through the portals of these exclusive premises, the sundial is sited in the south-facing window of a building belonging to the Defence Evaluation and Research Agency (DERA), at Farnborough, Hampshire.

DERA, formerly known as the Royal Aircraft Establishment, Farnborough, may seem to be the most unlikely situation for a sundial, let alone a glass sundial, that theoretically might suffer the repercussions of an aircraft breaking the sound barrier. Nevertheless, the glass mean-time noon-dial is a precision instrument and therefore it is wholly appropriate that it should adorn the offices of an organisation that demands precision.

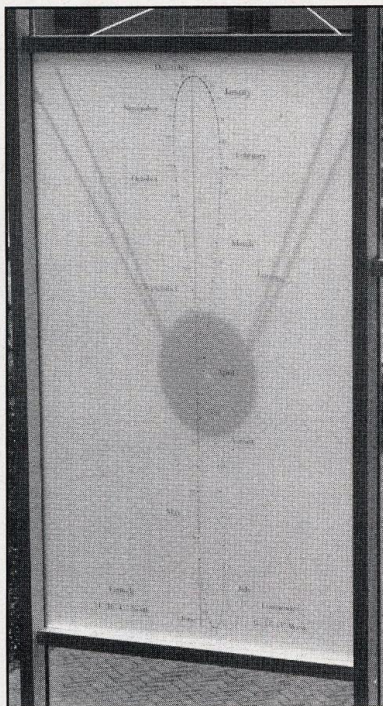


Figure 1. The glass mean-time noon sundial at the Defence Evaluation and Research Agency, Farnborough. Picture courtesy of DERA.

Designed by Douglas A Bateman of the Weapons Sector, a keen horologist and an active member of the British Sundial Society, the sundial has been calculated and delineated to allow for the difference in longitude from Greenwich and for the declination of the wall in which the window is sited, at $13\frac{1}{2}$ degrees West of South.

The figure-of-eight analemma is marked off in the days of the month, so not only may one tell the time, either 12 o'clock noon GMT or 1pm BST, when the spot of light projected by the nodus crosses the analemma, but the date may be read off as well. Also, for those who are interested, the moment of noon, when the sun is on the meridian of the establishment, may be readily determined.

I have not yet seen this fine sundial, made by T & W Ide, Glasshouse Fields, East London, but I look forward to the privilege. Its location has been checked using WGS 84, the Global Positioning Satellite system used to determine the

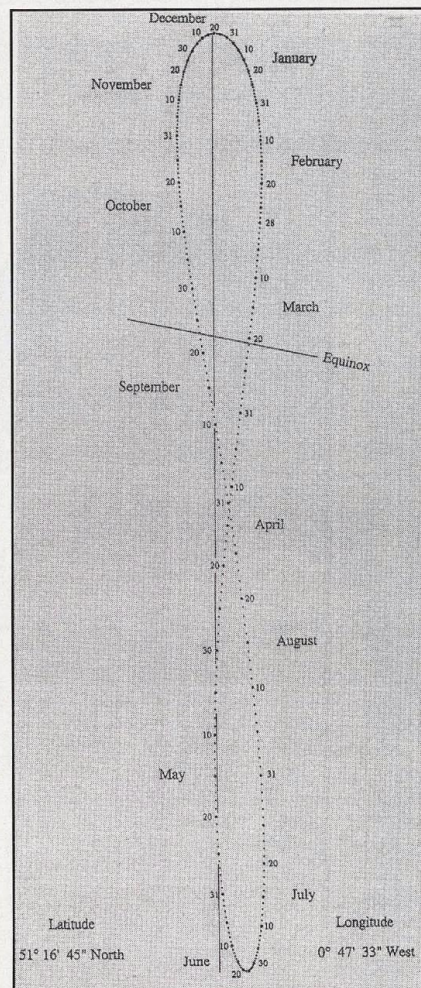


Figure 2. Drawing of the DERA glass sundial. Picture courtesy of DERA.

position of the horizontal sundial designed for the UK Hydrographic Office at Taunton (*Clocks*, October 1995, 'A nautical fix'). These would seem to be the first two sundials to have been sited by this method.

The DERA sundial, which may well be unique, is of course read from inside the building. It must surely be an exciting experience for all those who observe the moving shadow of the gnomon and the spot of light projected by the sun as midday approaches. One must hope that no pilot in a low-flying aircraft chooses the moment to break the sound barrier: it might be a shattering experience! ☘