

Ancient astronomers of the New and Old Worlds

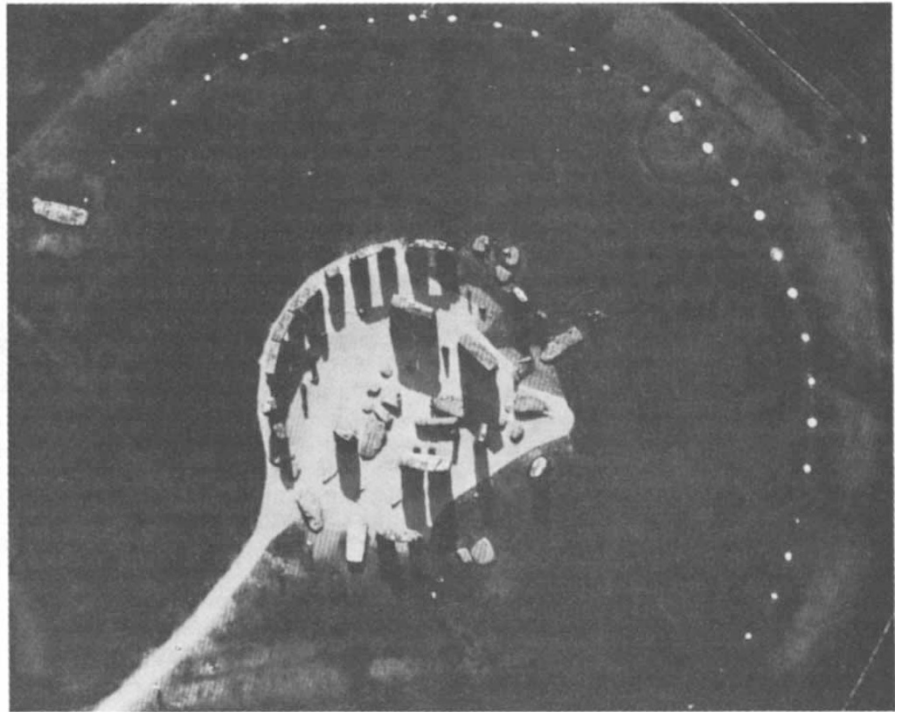
from Aubrey Burl

STONEHENGE has its astronomical counterparts and some, as the participants at a recent symposium* were reminded, are in the Americas. The symposium, held at Queens College, Oxford, took as its major themes the trends and progress in archaeo-astronomical studies in the Americas and Europe.

A.F. Aveni (Colegate University, New York) began by describing the six sources of information on the astronomical practices of early American societies: codices, stelae, ceramic inscriptions, Hispanic literature, modern ethnology and the architecture of surviving structures. These riches were far beyond the impoverished relics European prehistorians have to work with but our envy was modified when other speakers, including G. Brotherton (Essex University) and J. Remington (University of New Mexico), revealed the problems of reconciling Mesoamerican Long Counts with the astronomical calendars. To understand that the number 2,914 might have been devised to integrate the Venusian, solar and lunar cycles was, perhaps, not grossly difficult but why the Maya should have computed a reckoning of 3,669,565 years most Europeans must have found incomprehensible.

Conversely, when speakers discussed ancient American societies and their use of celestial events the participants were at one, for these were questions that confronted all of us, numerate and innumerate alike. F.G. Lounsbury (Yale University) offered us a splendid piece of detection, showing how a glyph at the little-known Maya site of Bonampak revealed that its people had calculated a favourable date for a raid on a neighbouring kingdom. The augural and ceremonial rather than 'scientific' use of astronomy was a favoured theme. Whether discussing the ceque system of the Incas (R. Zuidema, University of Illinois) or the symbolism of the Hopi Indians (S. McCluskey, West Virginia University), a people who paradoxically laid out precise alignments without the aid of astronomer-priests, there were few suggestions of 'science for science's sake'. Instead, it seemed that the Sun, moon, Venus and the Pleiades were objects observed for practical purposes, to establish a calendar, to determine the time for planting and to indicate propitious days for ritual.

These interpretations were repeated when the fragmentary evidence for early



Aerial view of Stonehenge. From *Rites of the Gods* A. Burl (Dent, 1981).

European astronomy was discussed.

The orientation of Early Copper Age graves in Hungary (K. Barlai, Konkoly Observatory, Budapest) and of North European Neolithic burials (W. Schlosser, Astronomisches Institut der Ruhr-Universität) supported the belief that in prehistoric Europe people had regarded the Sun and moon, in part, as symbols of death. Accordingly they laid out graves, albeit rather casually, so that corpses might face the Sun or moon. This is an astronomical interpretation quite different from that advocated in recent years by Alexander Thom and his co-workers. From their researches they have concluded that megalithic alignments were often very precise, sometimes designed to permit observers to discern such minuscule celestial events as the moon's 'wobble' at its standstills. A. Thom did discuss this, demonstrating the accuracy of 42 lunar lines, but it was a view disputed by C. Ruggles (Cardiff University) whose own field data offered no support for such precision.

Throughout the symposium there was an insistence that more rigorous criteria should be accepted by anyone engaging in archaeo-astronomical studies. The writer of this report asked that sites should be examined not in isolation but in culturally related groups to avoid the mischance of analysing an unrepresentative monument. Others (E.W. MacKie of the Hunterian Museum, Glasgow, and P. Freeman, Leicester University) requested that a

balanced consideration of astronomy and geometry should be adopted and proposed that an austere use of statistical material would prove advantageous.

It was with this healthy controversy still alive that on Tuesday morning the participants were guided around some megalithic sites in Wiltshire by R. Atkinson of Cardiff University. The current policy (if that is an appropriate word) of the Department of the Environment restricts scientific visits to Stonehenge to between 8am and 9am on Tuesdays in summer and meant that a 6 am departure from Oxford was necessary. After the privilege of entering the sarsen circle we visited other monuments — Woodhenge, Avebury, West Kennet and Silbury Hill.

It was a good conference. There was a marvellous site at Fajada Butte, New Mexico, where, high on the sacred slopes, Amerindians had propped three slabs to show the times of the solar solstice and the lunar extremes. These finely positioned stones cast shadows onto two carved spirals almost identical with those known in the British Isles.

Understanding Fajada Butte may help European researchers to understand their own silent megaliths better and it is to be hoped that another symposium can be arranged in the near future . . . and certainly not a Maya Long Count away! □

Aubrey Burl is a lecturer and broadcaster and author of Stone Circles of the British Isles, Prehistoric Avebury and Rings of Stone.

*An archaeo-astronomical symposium, sponsored by the International Astronomical Union and the International Union for the History and Philosophy of Science, was held at Queen's College, Oxford, from September 4 to 9. It was organized by M.W. Hoskin of Churchill College, Cambridge, and limited to seventy invited participants.