ASTRONOMICAL ARCHÆOLOGY IN WALES.

A SOCIETY for the astronomical study of ancient monuments in Wales is being formed in imitation of a society for the same purpose which has been for some time at work in Cornwall. The movement was inaugurated in August of last year at Swansea, where Sir Norman Lockyer delivered a lecture to the members of the Royal Institution of South Wales, the oldest scientific society in Wales, on the antiquity of the Gorsedd. At the close of the lecture a resolution was passed in favour of forming "a society for the astronomical study of stone monuments in Wales." Since then other local scientific societies have given formal pledges of support to the work, such as the Cardiff and Rhondda Naturalists' Societies, and the Astronomical Society of Wales. The Swansea Scientific Society, under the leadership of the experienced archæologist, Colonel W. Ll. Morgan, have surveyed several monuments with an accuracy sufficient to meet the requirements of the astronomical inquiry. A small society at Bridgend has started work in the same direction.

The Swansea men first showed their appreciation of the work by printing Sir Norman Lockyer's lecture, to which diagrams were added to make the pamphlet a handy field-book for workers.

In the spring Sir Norman visited Anglesey and Carnarvonshire, and the present writer joined him. Anglesey is regarded as the last home of Druidism in Wales, and we were very pleased to find the measures of the monuments there, so to speak, so uniformly orthodox. Both before and since the visit Eórd Boston and Mr. Neil Baynes have also been working on the monuments.

The results of the measurements made are as follows. They have already been communicated to the fellows of the new society:—

Theoretical Solar Azimuths, computed for sun's radius (2' showing), taking refraction into account.

Alignment and conditions	Elevation of horizon		
	0°	1°	2°
Summer Solstice ... N. 46° 40' E. ... N. 48° 45' E. ... N. 50° 36' E.			
Winter Solstice ... S. 49° 40' E. ... S. 47° 34' E. ... S. 45° 32' E.			
May Sun ... N. 60° 48' E. ... N. 62° 32' E. ... N. 64° 12' E.			
November Sun ... S. 63° 9' E. ... S. 61° 24' E. ... S. 59° 40' E.			

Latitude taken generally as 53° N., magnetic variation as 18° W.; in calculating the solar declinations it is assumed that 2' of the sun's radius was showing, and refraction has been taken into account.

Measures made by Sir Norman Lockyer and Rev. J. Griffith.

Summer Solstice, Rising (present declination, N. 23° 27').

Bryn Celli Ddu.

Magnetic, 69°; true, 51°; (value along creepway); hill estimated 2°.
Az., N. 51° E.; dec., 23° 31' N.

Summer Solstice, Setting.

Presaddfed.

Magnetic, 152°; true, 134°; through cromlech to back stone. Amp.=E. 44° S. reversed; take 1° hill.
Az., N. 46° W.; dec., 25° 2' N.

Winter Solstice, Rising.

Pen y Cnw.

Magnetic, 328°; reversed, 148°; true, 130°. Amp. E. 40° S.; sea horizon.
Az., S. 50° E.; dec., 23° 28' S.

Glyn.

Mag., 330°; reversed, 150°; true, 132°. Amp. E. 42° S.; take 1° hill.
Az., S. 48° E.; dec., 23° 25' S.

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Ty Newydd, line of two supporters.

Mag., 155°; true, 137°. Amp., E. 47° S.; take 1° hill.
Az., S. 43° E.; dec., 25° 47' S.

Cefn Isaf, at right angles to big back stone (approximate).

Mag., 147°; true, 129°. Amp., E. 39° S.; hill, 0°.
Az., S. 51° E.; dec., 22° 58' S.

Llanfechell.

Line from cromlech to Meini Hirion (25-inch map); true, S. 50° E.; hill (from 1-inch map) about 26'; dec., 22° 35' S.

May Year (declination 16° 20' N. or S.).

May.

Pant-y-Saer.

Mag., 77°; true, 59°; sea horizon (visible).
Az., N. 59° E.; dec., 17° 22' N. May 10, August 4.

November.

Plas Newydd.

Mag., 137°; true, 119°. Amp., E. 29° S.; outlook toward Snowdon; hill, 3°.
Az. = S. 61° E.; dec. = 14° 53' S. November 2, February 9.

Pleiades.

Plas Newydd Mound.

Mag., 269°; reversed, 89°; true, 71°; hill, 0°.
Az. = N. 71° E.; dec., 10° 50' N. Pleiades, 1000 B.C.

Ystum Cegid (Criccieth).

Mag., 279°; reversed, 99°; true, 81°; hill, 4°.
Az. = N. 81° E.; dec., 8° 30' N. Pleiades, 1400 B.C.

Clock Star.

Lligwy, outstanding stone.

Mag., 208°; reversed, 28°; true, 10°; hill, 1°.
Az., N. 10° E.; dec., 36° 15'. Capella, 1000 B.C.; Arcturus, 1200 B.C.

Measures by Lord Boston and E. N. Baynes, Esq.

Summer Solstice, Rising.

Bryn Celli Ddu.

Mag., 70°; true, 52°; hill (as above) estimated 2°.
Az., N. 52° E.; dec., 23° 0' N.

Ty Newydd.

Mag., 71° 30'; true, 53° 30'; hill (as above), take 1°.
Az., N. 53° 30' E.; dec., 21° 18' N.

November.

Bodowyr (mean value of N. and S.E. stones).

Mag., 315°; reversed, 135°; true, 117°; hill (say), 2°.
Az., S. 63° E.; dec., 14° 50' S. November 3, February 9.

Equinoctial.

Lligwy, angle of left opening stone; value from chamber under capstone.

Mag., 110°; true, 92°. Amp., E. 2° S.; sea horizon.
Az., S. 88° E.; dec., 1° 50' S.

Henblas, direct outlook between supporters (approximate).

Mag., 108°; true, 90°=E.; hill (say), 1°; dec., 0°.

It is the aim of the society to bring together the workers on the astronomical inquiry. The annual subscription is three shillings. It is proposed to issue brief reports of progress. Besides the planning and orienting of the monuments, workers in Wales can help greatly by sending in all available information about them.

Now that the Prime Minister has promised to appoint a Royal Commission to inquire into the condition of the ancient monuments of Wales, it is to be hoped that advantage will be taken of such a golden opportunity to carry out an adequate astronomical survey of the stone monuments of the Principality.

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