Fig. 3 shows the results of a power spectral analysis of the records shown in Fig. 1. Forty seconds of each record were digitized and the spectral density was computed on an IBM-1620 computer. The computational procedure has been described by Blackman and Tukey[2]. The Nyquist frequency is taken to be 10·4 c/s for the Socorro record and 12·5 c/s for the Mountain record. For Socorro, the maximum energy is found at 1·35 c/s with smaller maxima at 3·74 and 5·20 c/s. For the Mountain Laboratory, the maximum energy is at 1·13 c/s with a smaller maximum at 4·25 c/s.

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Noctilucent Clouds observed in Antarctica

FOGLE[1] recently directed attention to the paucity of observations of noctilucent clouds in the southern hemisphere; in fact he was able to cite only three observations of doubtful reliability and concluded that "the question of whether noctilucent clouds do occur in the southern hemisphere is still an open one". However, he himself has since answered this question with observations and photographs of a display over Punta Arenas[2].

We kept a watch at the Australian National Antarctic Research Expedition's station, Mawson (67·6° S., 62·9° E.), on every evening and morning in the periods October 19–November 6, 1964, and February 4–February 23, 1965, while the solar depression angle was greater than 6°. Noctilucent clouds were observed on three occasions.

On October 30, 1964, from 1900 U.T. to 1930 U.T. the display consisted of two moderately bright bands to the south-west. On February 8, 1965, the display lasted from the commencement of observations at 1830 U.T. until 2030 U.T. It consisted initially of bands of moderate brightness developing into bright bands and waves, then waning over a period of an hour as bands and veil. The display extended from azimuth 152° to 193° east of north between elevations 7·4° and 25·2°; colour photographs were obtained. On February 12, 1965, between 2030 U.T. and 2115 U.T., veil and moderately bright bands were observed and photographed to the south-east.

Towards the end of the display of February 8, extremely thin, bright filaments, not visible to the naked eye, were observed through a theodolite telescope of × 6 magnification. This structure is probably similar to that reported by Paton[3].

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Ancient Continental Configurations

DR. K. M. CREER'S attempt[1] to superimpose the palaeomagnetically derived polar wandering paths of the various continents is a promising new method which may eventually help to solve the problem of the former continental configurations. At present, however, many of the palaeomagnetic results are still too doubtful, as Van Hilten[2] pointed out, to eliminate the guess-work in the construction of the paths of polar wanderings. Van Hilten's acceptance of Creer's paths of polar wanderings for Africa and South America makes it desirable to point out some of the uncertainties and discrepancies contained in Creer's data:

(1) *The Silurian pole.* Neither the Silurian age of the Urucum beds nor that of the Table Mountain Series has been proved by fossils. The Silurian pole, as derived from the Urucum beds, seems to lie too far from the thick glacial deposits of the Silurian Zapla beds[3] to fit the geological evidence.

(2) *The Devonian pole.* The reconstruction shows the Devonian pole situated on northern Africa. Such a position is contradicted by the extensive development of Devonian coral reefs in West Africa[4]. The only well-documented Palaeozoic glacial deposit in northern Africa is of Ordovician age[5]. This discrepancy between the geological facts and the palaeomagnetic measurements casts doubt on the age of the magnetization of the South American Devonian red-beds as used by Creer. The fact that Devonian glacial deposits have been reported from Argentina[6] and from Brazil[7,8], though the evidence is perhaps not completely conclusive, strengthens this suspicion. No evidence for a Devonian pole has as yet been derived from African rocks.

(3) *The Pennsylvanian pole.* The pole position used for the reconstruction of the polar wandering path would harmonize with the geological observations, but the palaeomagnetic data cannot be regarded as reliable according to Irving's list of palaeomagnetic pole positions[9].

The conclusion seems unavoidable that the polar wandering paths of Africa and South America have not yet been satisfactorily established. In Africa the almost complete Palaeozoic succession, which exists in northern Africa, should offer opportunities for the much-needed additional palaeomagnetic studies.

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Nomenclature of the Keuper–Lias Facies of the Bristol Channel Region

WHILE working on the Keuper, Rhaetic and Lower Lias strata of the Cowbridge district in the Vale of Glamorgan, which are typical of those of the Bristol Channel region, it was felt that the terms in present use for the two main facies developed in these strata were inadequate. Some of the terms previously used are misleading and may suggest palaeoecological or palaeogeographical relationships which may not exist.

Buckland and Conybeare[1] considered the Dolomitic Conglomerate of the Keuper to represent screes accumulated on the sides of steep hills. This may be so for part of the Dolomitic Conglomerate, but it does not account for the majority of occurrences which are horizontally bedded. This interpretation does not agree with the evidence from the Rhaetic and the Lias.

De la Beche[2] attributed a beach origin to the same conglomerate. Although ahead of his time, his conception is not supported by evidence from these rocks which indicates accumulation under continental, and possibly sub-aerial, conditions.

The term 'abnormal deposits' was introduced by Moore[3] when referring to the coarse-grained facies. He used 'normal deposits' for the fine-grained facies. Both