depth of 780 ft in its south-east corner. In March the surface temperatures were lower near the shore but by the end of April this horizontal temperature gradient had reversed and attained a maximum in June. In October there was a warming in the north-west corner attributed to the discharge of the Niagara river. Mr T. L. Richards discussed estimates of evaporation from the Great Lakes using ratios of evaporation over land to evaporation over water. Mr J. P. Bruce then dealt with critical meteorological conditions likely to influence dam construction in the Quebec North Shore area. Maximum precipitation could be handled by existing methods but the addition of snow melt was a factor on which much was still to be learned. In computing upper limits of the latter it had been found that an energy-budget approach yielded more realistic values than obtained from the conventional degree-day calculations. For a large section of the Canadian prairies snowmelt is the major source of water supply. For this reason great interest is taken in the snowpack for seasonal planning. Mr G. A. McKay described a method of estimation which had given a standard error of 0·7 in. of water.

Mr C. L. Mateer reviewed the problems of obtaining satisfactory exposure for radiation instruments on the Canadian Ocean Weather Ship under the rigorous conditions which prevailed in the Gulf of Alaska. Measurements of solar radiation were related to average daily cloudiness by regression techniques in an endeavour to develop equations for the estimation of average daily insolation. Dr A. E. Carte read a paper on hail investigations in Alberta from which he had concluded that patchiness of hail patterns in swaths was indicative of discontinuity in hail generation. Mr J. L. Galloway, in the only paper in the Congress concerned with practical weather forecasting, pointed out that the presence of a 'trowal' (trough of warm aloft, located by frontal contour analysis) was a danger signal for the possible occurrence of cumulonimbus, particularly if thunder had been reported in the warm sector. Thunder occurring over snow or with snow could be attributed to a 'trowal'. In the final paper Mr G. R. Kendall presented maps showing the distribution of thunderstorm days in Canada. South-western Ontario had the greatest annual number of days, 35, but it was noted in the discussion that over the country as a whole the occurrences of thunder were probably under-recorded.

This concluded the business, but the memory of discussion and association will linger long. The arrangements made by the authorities at McMaster, as hosts, were perfect. The provision of a refreshment tent on the lawn for use during breaks in the sessions was thoughtful, and particularly appreciated.

J.L.G.

FORTHCOMING MEETINGS

Wednesday, 19 December: in the Society's Rooms at 5 pm (tea from 4.30 pm). Papers to be read: (1) R. H. Clarke: 'Pressure oscillations and fall-out downdraughts' (*Q.J.*, October 1962). To be read by Mr C. E. Wallington. (2) J. S. Sawyer: 'Gravity waves in the atmosphere as a three-dimensional problem' (*Q.J.*, October 1962).

SCOTTISH CENTRE. *Friday, 30 November:* in the Department of Natural Philosophy, the University, Edinburgh, at 5 pm (tea from 4.30 pm). Professor S. K. Runcorn, of Durham University, will speak on 'Palaeomagnetism and the climates of the past'.

MANCHESTER CENTRE. *Friday, 23 November:* at the University, Manchester at 5.45 pm. Dr G. B. Tucker, of the Meteorological Office, will speak on 'Some aspects of the general circulation'.