

The research station is also developing for use in buildings a variety of fibre-reinforced cements and plasters. The incorporation of fibres in cements and plasters provides a composite material with an impact resistance 20 times greater than that of the plain binder and with a tensile strength between two and four times greater than that of the unreinforced matrix. It now seems probable that the first practical application of these new materials will be in the form of glass reinforced plaster partitioning in new school buildings.

#### ROAD RESEARCH

### Roundabouts Observed

THE Road Research Laboratory, now a dependant of the Ministry of Transport, seems to have been uplifted a little in spirit by the occupation of its new laboratory at Crowthorne in Berkshire. Certainly the latest annual report (*Road Research 1967*, HMSO, £1) is smarter and fuller than for many years, and replete with metric units as well. It is also plain that the scope of the laboratory's work is being extended. The new laboratory, which has cost £4 million, now houses, as well as the four research divisions, the Transport Research Assessment Group, with staff drawn from the Atomic Energy Authority, the Royal Aircraft Establishment and British Rail. Although it is too soon for the group to have produced tangible results, there is optimistic talk about the possibilities of automatically guided bus systems, electric auto-taxis for cities and ways of easing the transfers.

During the past year, the Road Traffic Division has embarked on a study of the effect of the size of roundabouts on the capacity of road intersections. There will be some head-shaking in the offices of borough treasurers at the discovery that the capacity of an intersection is often greatest for circles which are smaller than those usually provided for circulatory roundabouts. The laboratory is also testing a number of instruments being developed under contract by commercial manufacturers and designed for use in schemes for imposing charges on road vehicles using city streets. It seems quite plain that the Road Research Laboratory, having in its recent years willed the ends of traffic pricing, is now determined to will the means as well.

Accident statistics yield some unexpected results. A survey of accidents in Rutland and Leicestershire has shown that despite jack-knifing and other handling problems peculiar to articulated vehicles, their accident rate is virtually identical with that of rigid vehicles in the same conditions. Another survey made by the Road Safety Division justifies the introduction of the 70 mph speed limit on motorways; the casualty rate per million vehicle-miles which until 1966 had risen every year fell to the lowest value ever recorded and the total accident and injury accident rates were lower than ever before. The safety division's work on street lighting and other furniture with break away joints has been completed and the new columns are ready for use in roads where there are few pedestrians. Some of the 200 people who die annually through collisions with lamp posts may survive. Experiments with central crash barriers on the M1 motorway have shown that they do not reduce the number of fatal and serious accidents.

#### SUN

### Solar Eclipse

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from our Astronomy Correspondent

A partial eclipse of the Sun was visible from Britain on Sunday, September 22, and Mr Colin Ronan took this photograph at 10.05 GMT from a location in West Suffolk (longitude  $0^{\circ} 26' E$ , latitude  $52^{\circ} 6' N$ ). There was light cloud on Sunday morning, some of which is drifting in front of the Sun in this picture, and some observers in southern England were able to observe the eclipse without using protective filters when the Sun's disk was all but obscured by cloud. When *Nature* went to press this week, no reports had been received from observers within the path of totality, which passed through the Soviet Union to the east of the Ural Mountains. The day of the eclipse also saw gatherings of druids on Primrose Hill and on Parliament Hill in London, to celebrate the autumnal equinox. (*Photograph, Ronan Picture Library.*)

#### EXPLORATION

### South to Deception

PLANS for the joint expedition of the Royal Society and the British Antarctic Survey to Deception Island will have been confirmed at a meeting in Birmingham on Friday, September 27. The expedition is to be led by Dr P. E. Baker, a geologist from Oxford. With him are going two other geologists, a biologist and two assistants.

The island was overwhelmed by earthquakes and volcanic eruptions on December 4 last year, and its fifty-two inhabitants, members of Argentine, Chilean and British research teams, were forced to evacuate. Large areas were blown out of the coast, and a new island, half a mile across, made an appearance near by. But Antarctic research should profit from the cataclysm. Dr Baker and his colleagues intend to carry out a full geophysical and ecological survey of the consequences of the eruption. The new island and the new dents in the coastline will be mapped, and a full analysis of ash distribution will be made. The accumulated data should make it possible to assess the explosive force of the eruption.