4. *Feldspar.*—The plagioclases are free from clouding, and generally water-clear. There is no great tendency for twinning[1,15] (Fig. 2).

The writer has recently put forward the suggestion that there are charnockites of two different ages, an earlier type formed by the regional metamorphism of pre-existing rocks, and a later type derived from metasomatism and rheomorphism.[16,17] The former is gneissic or granulitic, and the latter granitic and coarse-grained.

In the light of the above explanation, it follows that these so-called charnockite dykes belong to the earlier phase when basic dykes of Dharwar age were regionally metamorphosed and reconstituted into granulitic or gneissic charnockites containing hypersthene and clear plagioclase.

The post-Archæan dykes of various petrographic types, some of which are hypersthene-bearing, have chilled against the charnockites of the earlier period, generally retained their igneous textures such as ophitic, and have had clouding induced in plagioclase, pyroxene, and olivine, due to the regional thermal metamorphism caused by the later formed metasomatic charnockites.

The two groups of dykes can, therefore, be clearly distinguished by their field relations, texture, and clouding of minerals.

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LUNIK II—THE RUSSIAN MOON ROCKET

WHAT will go down as a remarkable achievement in the history of cosmic space rocketry was the successful launching by Russia of the Moon Rocket, Lunik II, which landed on the moon almost to the minute according to schedule, thus accomplishing the first space flight from the earth to another celestial body. The rocket was launched on the afternoon of Saturday, September 12, 1959. The final stage of the rocket hit the moon at 00 hours 2 minutes 24 seconds (Moscow Time) on Monday morning, September 14, 1959.

The rocket moved along a trajectory near to that calculated in advance and the time and place of its hitting the moon had been accurately forecast. The time of impact was to be at 1 minute 1 second past midnight, September 14, and the place of impact was to be in the triangular region of the moon's surface bounded by the Sea of Serenity, the Sea of Vapours and the Sea of Tranquillity.

The last stage was a guided rocket weighing 1,511 kg. (3,324 lb.), without fuel, and included scientific and measuring equipment, energy sources and container, of total weight 390 kg. (860 lb.). It contained a remote control device which would correct its "very small" deviation from the planned trajectory as it sped towards the moon. The accuracy of 1 minute 23 seconds on a journey of a quarter of a million miles proves a "tremendous achievement of radio navigation".

The rocket took approximately 34 hours to travel from the earth to the moon which was 374,000 km. (233,600 miles) away at the time of impact.

A sodium cloud emitted by the rocket on the first night of its flight was observed and photographed.

The rocket was sending back continuous radio signals and these were heard clearly but faintly until 20 minutes before it hit the moon. The signals began to fade badly and shortly afterwards were inaudible altogether, which was the indication that the rocket had landed on the moon. The giant radio telescope at Jodrell Bank kept track of the rocket till its impact "less than 90 seconds behind schedule".

The impact would not have been visible even through the world's most powerful telescope. A space ship hitting the moon would have to be at least 200 yards in diameter for the landing to be visible from the earth.

The Budapest Observatory, however, reported that at the time of the rocket's landing on the moon a black circle was noticed through the observatory's 7-inch refractor, on the surface of the moon in the region of the expected impact. The black ring remained visible for 58 minutes and is believed to be the moon's surface dust raised by the impact.

Special steps were taken to ensure that no earthly micro-organisms were carried to the moon by the rocket.