In Table II corresponding results obtained with soils saturated with the divalent alkaline earth cations are reported.

TABLE II

Ion	Radius of the ion Å	Rate of percolation of water in inch per hour	
		Observed	Calculated
Mg	0·65	0·150	0·153
Ca	0·99	0·275	0·272
Sr	1·13	0·350	0·345
Ba	1·35	0·500	0·504

It is significant that the percolation rate follows the order

$$Ba^{++} > Sr^{++} > Ca^{++} > Mg^{++}.$$

The observed rates conform to the relation

$$P = 0{\cdot}127\, e^{1{\cdot}705r}.$$

It is clear that the rate of percolation is an exponential function of the radius of the ion which saturates the soil complex.

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Lucknow University, M. R. NAYAR.
June 2, 1943. K. P. SHUKLA.

* This work has been carried out under the auspices of the Irrigation Dept. (Research Section), U.P. Government.

1. Ram Das and Mallik, *Proc. Ind. Acad. Sci.*, 1942, **16**, 1. 2. Jenny and Reitmer, *J. Phy. Chem.*, 1935, **39**, 593.

ZODIACAL LIGHT AT POONA

ZODIACAL light has been discussed from many points of view by various people.[1,2,3] In this note the intensity of the Zodiacal light as seen at Poona in the evening after sunset on a moonless night at the western horizon like a dome vertically up has been studied visually. The maximum intensity of the Zodiacal light at different hours is compared with that of the star canopus, the observations being made from the second floor of a certain building (Wakekar's quarter) some forty feet high from the ground, on the Fergusson Road.

Table I gives the intensity of the Zodiacal light on 4-4-1943 from 20·55 hours to 21·30

TABLE I

Time in I.S.T.	20·55	21·00	21·05	21·10	21·15	21·20	21·25	21·30
Intensity of Zodical Light	4	3	2	2	1	·8	·6	·6

hours I.S.T., that of canopus being taken as 10. Graph 1 shows the relation between the time and the intensity as given in Table I.

Weather Office,
Poona, JAGDEO SINGH.
May 10, 1943.

1. *Science and Culture*, 1939–40, 312. 2. *Meteorology* by A. E. M. Geddes, p. 342 (Plate XX facing p. 342). 3. Spectrum of night sky and Zodiacal light—c Hoffmeister, *Zeits. f. Astrophysik*, 1939, **19**(2), 116–131.

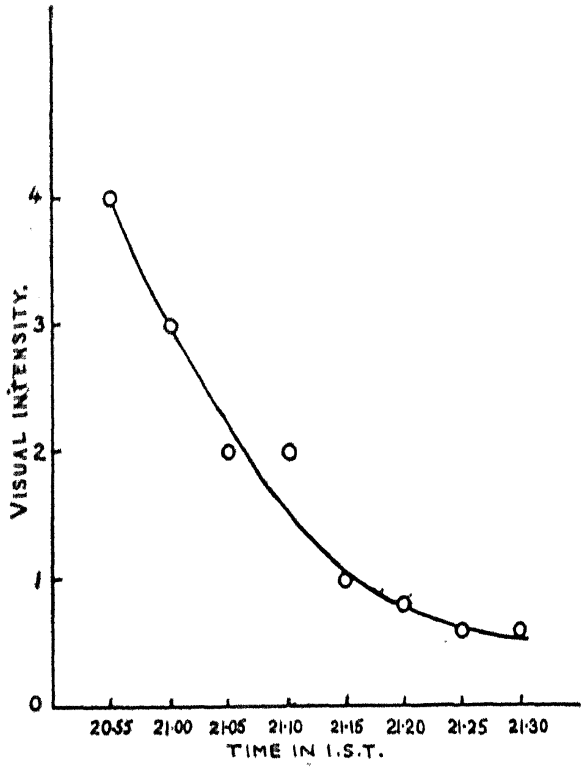

FIG. 1

ALGAL STRUCTURES FROM THE CUDDUPAH LIMESTONES (PRE-CAMBRIAN), SOUTH INDIA

IN the course of a detailed examination of some of the limestones from the lower Cuddupahs collected from near Royalcheruvu,

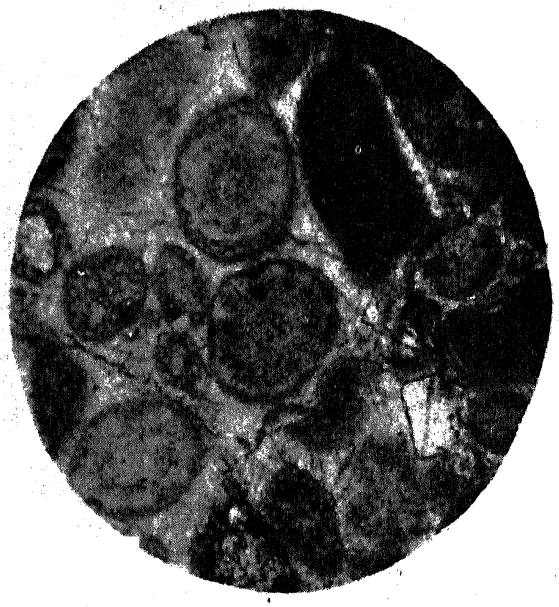

FIG. 1

Anantapur District, certain remarkable algal structures have been noticed. In hand specimens, the limestone is a dark coloured fine-grained marble, showing in places an oolitic