

Letters to the Editor.

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Oxygen in Solar Prominences.

IN *Kodaikanal Observatory Bulletin* No. 107 the existence of oxygen in the solar chromosphere was demonstrated by spectrograms taken in full sunlight. The dismantling of the spectrograph for use at the solar eclipse of June 19th, 1936 makes it opportune to report progress on the results of observations of the oxygen lines in solar prominences. The lines used were the infra-red triplet at λ 7770.

When a solar prominence is on the slit of the spectrograph, the oxygen triplet is found to be present, although always very faint. The conditions for photographing the oxygen triplet in a prominence are more easily attained than those for photographing it in the chromosphere since there is less difficulty with the tremor of the sun's limb, but the demonstration of the oxygen triplet reversals in a prominence is less frequently successful on account of the faintness of these lines in prominences compared with the sky spectrum. It is necessary to have a bright prominence and a blue sky to show the oxygen triplet brightly reversed against the sky spectrum.

The best results so far were obtained in a narrow prominence on the 11th December,

1935. The lines of the oxygen triplet were found in this prominence at a height of about 20" above the chromosphere, or 9,000 miles. There was no possibility of these lines being due to [chromospheric light, as the reversals were short in length corresponding to the short length of the prominence on the slit.

The photometry of these faint lines in full sunlight will always be a matter of difficulty on account of the presence of the sky spectrum and it seems best to wait until eclipse photographs are available for oxygen lines.

Kodaikanal Observatory, A. L. NARAYAN.
March 20, 1936. T. ROYDS.

Absorption Spectra of Halides and Oxyhalides of S, Se, and Te.

IN continuation of earlier work on the chlorides and oxychlorides of sulphur,¹ we have measured the absorption spectra of a number of halides and oxyhalides of S, Se, and Te in the vapour state. The observed maxima of selective absorption together with their long wave limits are listed in Table I and we have added also the bond energies (in K. cal/mol) corresponding to the correlated