1939, while a spectrogram just after the star had begun brightening gave a velocity of $+95 \text{ km/sec}$.

A NEW INSTRUMENT FOR THE OBSERVATION OF SOLAR PROMINENCES

By John W. Evans

In 1938 Ohman described a quartz polarizing monochromator which transmitted a narrow spectral band forty angstroms wide, centered on the Hα line. With it he was able to observe solar prominences through an ordinary refracting telescope.

During the last year a similar monochromator transmitting a narrower band five angstroms wide has been made at the Chabot Observatory in Oakland, California. The essential element of the instrument is composed of a series of six crystal quartz disks cut with surfaces parallel to the crystal optic axes, with thicknesses proportional to $1:2:4:8:16:32$. These disks are mounted between sheets of polaroid film so oriented that light of undesired wave-lengths is eliminated by interference. The overall length of the instrument is less than half a meter.

When attached to the 8-inch refractor of the observatory the monochromator shows the prominences in excellent contrast, and brings out details considerably finer than those which can be photographed by means of the spectroheliograph. The possibilities of the monochromator for the photography of prominences have been tested crudely by holding a camera to the eyepiece and snapping the shutter. The results have been encouraging, and it is hoped that an adequate apparatus for taking motion pictures of the prominences can soon be installed.

A full account of the Chabot monochromator and the results which have so far been obtained with it will appear shortly in the Publications of the Astronomical Society of the Pacific.

THE ABSOLUTE DIMENSIONS OF A WOLF-RAYET ECLIPSING BINARY, BD +38°4010 = H.D. 193576 = H.V. 11111

By Sergei Gaposchkin

The Wolf-Rayet star H.D. 193576 is shown to be an eclipsing binary with the period of $4^d.21238$, and with the ranges of $8^m.39$-$8^m.70$ and $8^m.39$-$8^m.53$. The star received the Harvard Variable Number 11111.

One thousand and eighty-four photographic estimations obtained on Harvard Patrol plates yield a reasonable light curve. A straightforward interpretation of the light curve as that of an eclipsing binary combined with the spectroscopic elements given by O. C. Wilson lead to the absolute dimensions of the system. The relative elements are:

\[
\begin{align*}
L_1 &= 0.151 \\
L_2 &= 0.849
\end{align*}
\]

\[
\begin{align*}
r_s &= 0.160 \text{A} \\
r_i &= 0.266 \text{A}
\end{align*}
\]