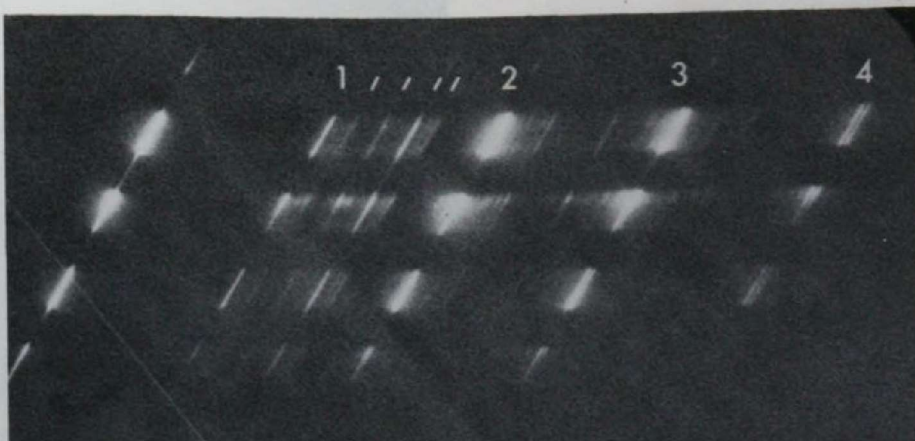


hour had the radiant stood directly overhead.

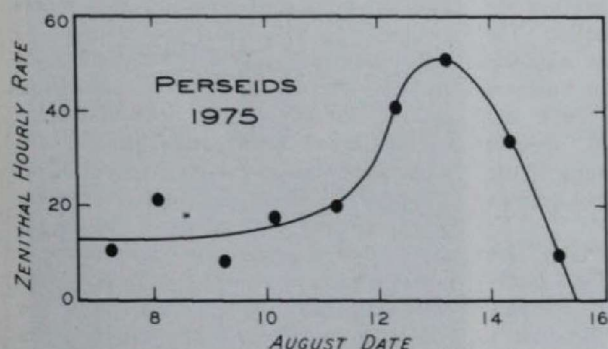
The peak of this year's shower, about 50 Perseids per hour, occurred near August 13.1 (Universal time). The sun's geocentric longitude was then  $139^{\circ}.4$  (referred to the equinox of 1950.0), so the earth was in heliocentric longitude  $319^{\circ}.4$  when it encountered the core of the Perseid meteor stream.

The spectrum at right is of a yellow Perseid of magnitude  $-6$ ; it left a blue train that lasted about 20 seconds. At the left edge is the zero-order spectrum (direct image) of the meteor and to the right are the first-, second-, and third-order spectra, and part of the fourth order.

In each order the brightest feature, directly below the number, is the doublet of singly ionized calcium. Note that this pair of lines at 3934 and 3969 angstroms wavelength (near ultraviolet) is clearly re-



A Perseid meteor's spectrum was recorded August 15th at 23:42 UT by H. Betlem with an  $f/2.9$  camera at Elsloo, Holland. In front of the lens were a transmission grating with 50 lines per millimeter and a rotating shutter that interrupted the exposure about 40 times a second. Crossing the meteor spectrum is the image of Epsilon Pegasi (left) and its first-order spectrum (near center). See the text for further description.



Daily averages of zenithal hourly rates were derived from 178 counts of Perseids by individual observers. The tick marks on the horizontal scale are for 0 hours Universal time. Diagram by L. J. Robinson.

solved in the fourth order, where the dispersion is greatest and the lines are not overexposed. Rightward, along the top segment in the first order, the tick marks identify lines of singly ionized magnesium (4481), neutral magnesium (a blend of lines at 5170 and 5184), an unresolved neutral-sodium doublet (5890 and 5896), and a neutral-silicon pair (6347 and 6371).

SKY AND TELESCOPE thanks the many readers who have submitted reports and photographs of this Perseid display.

P  
A  
R  
K  
S

W. R. PARKS has been making telescope accessories for 21 years. We are now able to offer you complete telescopes and tube assemblies of the highest American-made quality.

Complete Parks Telescopes:

4 1/4" ..... \$149

6" ..... \$225

Tube Assemblies — completely mounted and ready for use:

6" ..... \$200

8" (f/7) ..... \$225



10" (f/5.6) ..... \$300



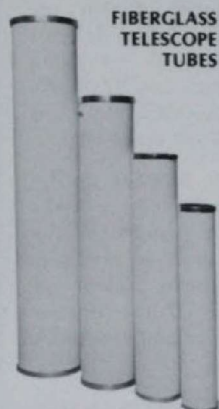
#### FOCUSERS

Universal focusing mount fits all sizes of tubes. Takes standard 1 1/4-inch eyepiece. Helical rack-and-pinion type. \$15.00

Total helical focusing system. Consists of two tubes, with a main focus using eight threads per inch. Inner tube has 20 threads per inch for extreme fine focus. Specify telescope tube size when ordering. \$25.00



#### FIBERGLASS TELESCOPE TUBES



These fine Parks tubes at amazing wholesale prices. 21 years unsurpassed quality. Glass-smooth finish, low thermal conductivity, rugged and lightweight, not a heavy, filled, brittle tube, but 100% fiberglass. All lengths available for 6" to 16" mirrors.

Popular Sizes and Prices:

7" I.D. X 52" ..... \$23.00

9 1/2" I.D. X 60" ..... \$32.50

12" I.D. X 48" ..... \$44.00

12" I.D. X 62" ..... \$48.00

15" I.D. X 60" ..... \$71.00

15" I.D. X 80" ..... \$88.00

We also have 18" and 20" tubes. Rings available at slight additional cost.

#### MIRROR CELLS

Designed for easy collimation, these top-grade cast aluminum mirror mounts are available in the sizes below:

6" (for 7" I.D. tube) ..... \$10.50

8" (9 1/2" I.D.) ..... \$11.30

10" (12" I.D.) ..... \$13.30

12 1/2" (15" I.D.) ..... \$16.40



#### SPIDERS

Fully adjustable. Four-vane spring-loaded with three-point collimation. Fiberglass diagonal holder for minimum thermal conductivity. \$17.50

Sizes available:

1.52" (for 6" f/8 tube)

1.83" (8" f/7 tube) ..... 2.14" (10" f/5.6 tube)



#### ASTRONOMICAL MIRRORS

Mirrors of the highest quality. Finest annealed Pyrex blanks with 1:6 thickness ratio. All mirrors are parabolized and polished to  $\pm 1/25$ -wave. Matching diagonal flat included.

4 1/4" (f/10.5) ..... \$26.60

6" (f/8) ..... \$50.55

8" (f/7) ..... \$83.45

10" (f/5.6) ..... \$123.05

**W. R. PARKS**

P. O. Box 6683 Torrance, Calif. 90504  
(213) 532-6066