TABLE II. MAGNITUDES AS A FUNCTION OF REDSHIFT

Observational set-up	Redshift $\Delta\lambda/\lambda$	m_{pg}	m_{bol}
$n = 25$	.05	15.6	15.1
$m_1 = 21.5$	.1	17.5	16.6
$m_2 = 20.5$	.2	19.6	17.9
	.4	20.3	16.9
$n = 25$	.05	15.8	15.4
$m_1 = 20.5$	.1	17.8	16.9
$m_2 = 18.5$	.2	18.3	16.6

line. The numbers in the tables depend upon the assumptions made about $G_v(t)$ and $\theta(\xi, m)$, which are now poorly determined. The assumptions made (Neyman, Scott and Shane 1952) are believed to be the best currently available. However, the figures given should be interpreted only as an indication of the effects of selection on the quantities studied. The effects are so large that they must be taken into account before the observations can be interpreted.

Behr, A. 1951, *A. N.* 279, 97.

Neyman, J., Scott, E. L. and Shane, C. D. 1952, *Ap. J.* 117, 92

*Statistical Laboratory,
University of California,
Berkeley, Calif.*

Wagman, N. E. The parallax of Luyten 726-8.

The low altitude and faintness of this star make parallax observations difficult at Allegheny. However, 147 images taken on 48 nights since August 1949 have been measured. The images are usually elongated, fuzzy, and weak but sometimes the two components of the star are almost separated. In any case the estimated center of gravity of the images is measured. Poor distribution of the plates between morning and evening also detracts from this determination.

Solutions for the parallax in α and δ were made for all 48 plates. Then the plates best suited for a parallax determination were selected and new solutions made. The results were:

α (48 plates)	$+0''.323 \pm 0''.022$
α (27 plates)	$+ .324 \pm .018$
δ (48 plates)	$+ .371 \pm .041$
δ (26 plates)	$+ .383 \pm .043$
π (48 plates)	$+ .333 \pm .019$
π (27 and 26)	$+ .333 \pm .016$

The last two lines result from combining the solutions in α and δ . The value $+''333$ is considerably lower than the value $+''41$ obtained from short series of observations at other places. However, the likelihood remains that each of the

components of Luyten 726-8 is less massive than Ross 614 B, or 0.08 of the mass of the sun.

*Allegheny Observatory,
University of Pittsburgh,
Pittsburgh, Pa.*

Wallace, Lloyd V. Surface brightness of comet models.

Model isophotes representing the surface brightness of comets have been constructed on the basis of the fountain model using the density law derived by Eddington (1910). In the first set of models it was assumed that all particles were ejected with the same speed. The effects of photo-dissociation and photo-ionization were neglected. In the first case studied it was assumed that the same number of particles was ejected in all directions. Here it is shown that, independent of the observer's position relative to the comet, circular isophotes concentric about the nucleus will result. The intensity is inversely proportional to the distance from the nucleus. This seems to represent to a certain degree of accuracy the isophotes observed for some small comets. In three additional cases it was assumed that the number of particles ejected was a maximum in the direction of the sun and zero away from the sun. These models showed noticeable similarity to the isophotes of the larger comets.

The photoelectric isophotes of Comet 1955g obtained by Liller at this observatory have been compared quantitatively with the predictions of a model similar to the first case, but including a range of ejection speeds and decay of the emitting molecules. Two relations were found between the mean ejection speed $\bar{g}$, the net repulsive force $(1 - \mu)$, and the lifetime of the C_2 molecule α^{-1} . If we assume that $\bar{g} = 0.5$ km/sec, then $(1 - \mu) = 2.0$ and $\alpha^{-1} = 94$ hours. If $\bar{g} = 1.0$ km/sec, then $(1 - \mu) = 4.9$ and $\alpha^{-1} = 47$ hours. These values seem consistent with the present estimates.

Eddington, A. S. 1910, *M. N.* 70, 442.

*University of Michigan Observatory,
Ann Arbor, Mich.*

Whipple, Fred L. and Hynek, J. Allen. The optical tracking program for IGY satellites.

The success as scientific vehicles of satellites launched during the International Geophysical Year will depend to a large extent on the ease and accuracy with which they can be tracked, so that their future positions may be predicted, secular changes in orbital elements calculated,