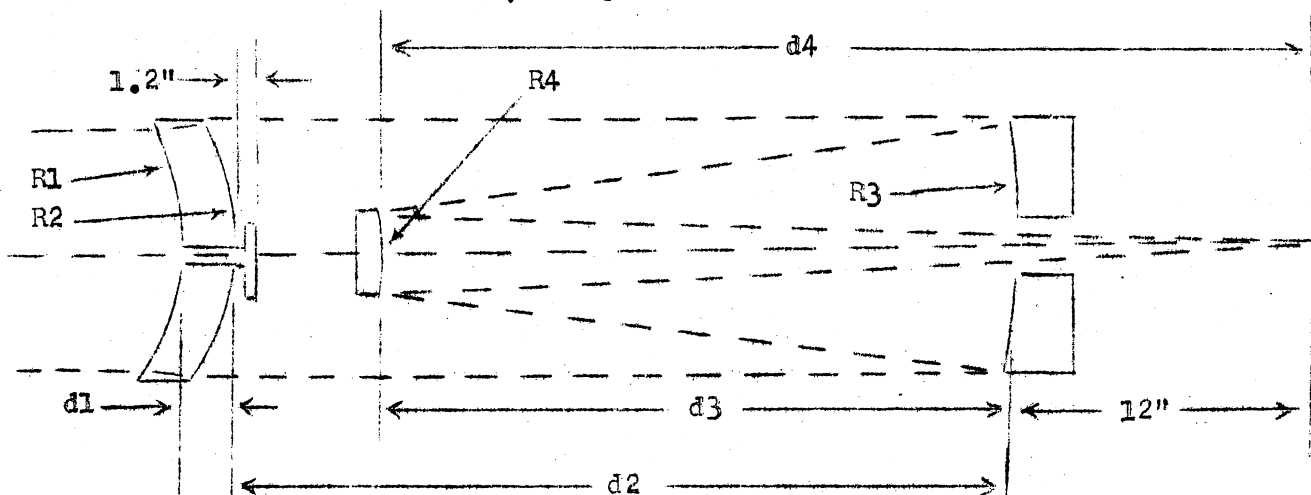


THE MAKUTOV CLUB.

Circular No. 30.

Design for Cass.-Newtonian Photographic Maksutov Telescope

By Joseph A. Raab and John Gregory.



Clear aperture	11"
Mirror dia.	12 1/4"
R1	- 16.754
d1	1.226
R2	- 17.446
d2	47.45
R3	- 90.555
d3	37.886
R4	- 19.953
d4	49.886
e.f.l.	44.13
Prime focus at f/4 is	46.2465
Distance between photographic plane and corrector	1.2"
Distance between surface of primary and Cass. focus	12"

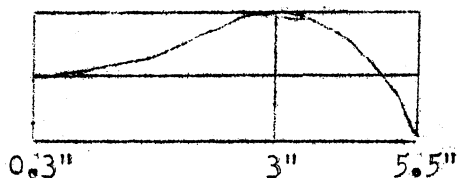
e (eccentricity) of hyperboloidal R4 of secondary is 1.4
 Amplification of Cass. secondary is 6.

A 3" Newtonian diagonal placed in the same position as the Cass. secondary gives 100% illumination over a .75" field.

Coma flare at the ^{Prime} ~~Cass.~~ focus is .0005" one inch off axis.

Spherical aberration:

- + 46.2455
- 46.2465
- 46.2477



Comments on the design by Joe Raab.

I don't want to claim full credit for this design, John improved it considerably and a large part of the credit is due to him.

Between us, we finally got the spherical aberration well within bounds. On my design the aberration was still 0.0045", so John adjusted it slightly and it is now 0.0010" at the 3" zone and - 0.0012" at the 5.5" zone.

John says that there is .0005" coma flare one inch off axis at the Cass. focus, which is O.K., and he says that the colour correction is O.K. also.

J.R.
Jan. 1958

(Whoever gets the credit, the members of the Hak Club have now got another fine design on which to try their hands. Our grateful thanks to Joe Raab and John Gregory, jointly. - A.M.)