



25 September 1961

Dear Jim:

Re: a) Meeting held at [REDACTED]
15 August 1961
b) [REDACTED] Letter dated 19 September 1961

The following is a brief description of the Zenith Camera and is submitted as an interim measure pending completion of the data promised you in reference (b):

1) ZENITH CAMERA - This camera is suitable for establishing highly accurate astronomic positions in remote unsurveyed areas. The instrument is easily transportable and operable by personnel with minimum knowledge and training in geodetic astronomy.

The vertical reference unit is an autocollimator with the index reflecting from a mercury pool. Although parallelism between the collimator and camera axis is maintained with a few minutes of arc, maximum position accuracy is provided by the operation procedure of camera exposure at various rotational settings about the vertical axis. This permits exploitation of collimator precision rather than dependence upon absolute accuracy.

Electrical contacts on the shutter blades are provided together with the circuitry necessary for supplying a make or break signal to a precision time recorder. The battery power supply is included as well as a control unit for controlling shutter actuation and other related functions.

The camera system has been designed and constructed with the objective of producing positions with a probable error of no more than 0.5 seconds of arc. Primary consideration has been given to production of a field system with maximum observing ease and minimum observing time.

Very truly yours,

Declassified and Released by the N R O

In Accordance with E. O. 12958

on NOV 26 1997