[redacted] NRO - March

MODIFICATION TO THE CORONA CAMERAS TO INCORPORATE A PANORAMIC RESEAU

The CORONA panoramic lenses operate with two simultaneous motions: the panoramic scan across the line of flight, and a movement in the line of flight to compensate for the computed image motion.

The Panoramic Reseau in the CORONA system will consist of two main components.

The first consists of the "Holy Rails" and the associated changes. Small holes will be made in the film restraining rails. A light mounted on the scan arm will shine through the holes and mark the film at the instant the image of the terrain is being recorded on the film. The CORONA lens has a field flatner which rides on the scan arm and is now very close to the film. The lens is being modified to provide space for the lights between the field ~~xxxxxx~~ flatterner and the film. The combination of the lights and holes in the rails enable us to determine film distortions and the position of the lens in the crosstrack direction at any instant.

The second component is a collimator approximately one inch in diameter mounted on the objective lens. This collimator will make a trace or points on the film which will tell us the position of the lens in the direction of flight at the instant of exposure.

The combination of measurement of film distortion and the lens position provide the elements of the reseau to reconstruct the panoramic geometry.

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