[redacted]

14 000382240

full VAM

TO: [redacted]

FROM: [redacted]

SUBJECT: Mission 1112-1 Performance

Mission 1112 utilized for the first time a glass (BK7) plate which had an evaporated coating that closely matches the W23A in the aft unit and the W25 in the forward unit. Each unit has a primary and alternate filter position and used an 0.037 inch thick filter for the primary position with an 0.040 inch for the alternate position. This permitted a shift in operation.

Prior to operation the peak resolution positions were determined with the primary .037 filter. By positioning the .040 filter in the optical path during operation one may in effect shift (+ or longer) by .001. This action was taken during pass D-15 and pass D-48.

Mobile Corns were deployed in a way that permitted imagery to be obtained with the primary and alternate filters during each operation. The atmospheric conditions were excellent during both operations. This permitted excellent opportunity to evaluate the Mobile Corns and surrounding imagery under nearly simultaneous conditions.

Fig. 1 shows the curves of average ground test resolution for both units. Added to the curves are the estimated relative filter performance levels of the primary and alternate filters as determined by evaluation of in flight imagery.

The optical imagery was evaluated by three techniques with all three showing close agreement. These techniques were reading of the Mobile Five to one Corn by three readers, evaluation of the imagery as acquired on photography taken prior to the filter change and after the filter change, and third, the V.E.M. technique was utilized.

The results of these evaluations indicated that both units produced their best imagery with the primary filter. The forward unit image quality change was just detectable indicating that the optimum operational setting fell close to the mid-point of the two positions. The aft unit image quality change was more easily detected indicating that the optimum operational setting fell nearly identical to the pre-operational setting. The mission pre-operational peak was set for an approximate temperature of 60°F. This mission came very close to this condition. Fig. 1 also shows that peak resolution positions for both instruments was probably set as near optimum as current technology permits.

[redacted]

[redacted]

cc: [redacted]

RELATIVE PERFORMANCE MISSION 1112-1

FIG-1

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INST 305

WR-23A GL 35

[redacted]

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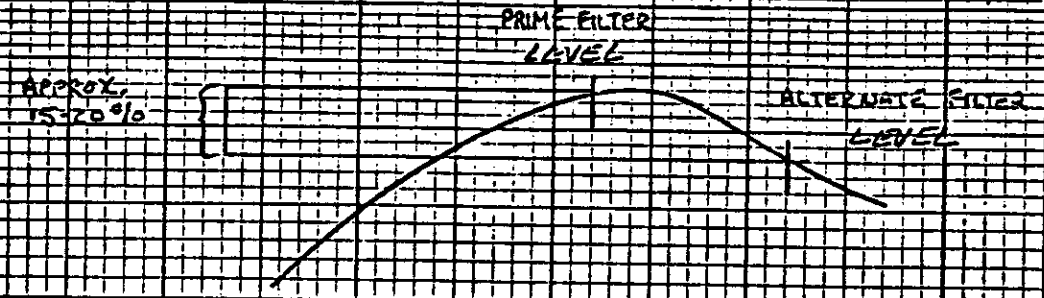

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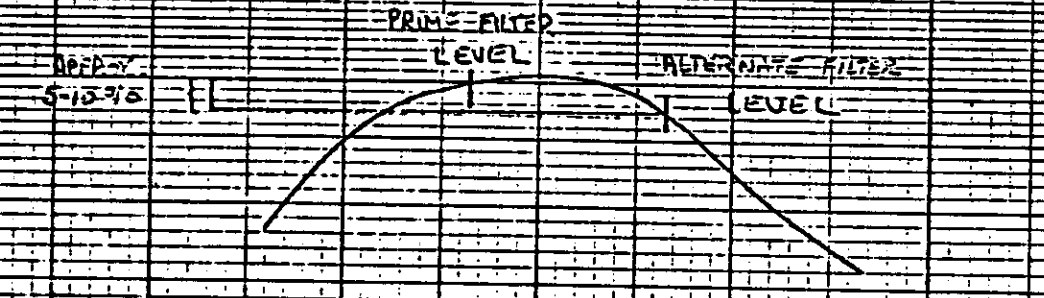
INST 301

WR 24 GL 53



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