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Attachment 1 to
2914/69

Subjective Comparison of Wratten 25, 21, and SF-05
Filtered Records, Mission 1102

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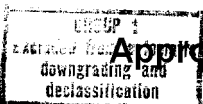
Reference: TWX 3133, February 1968

Conclusions: The contrast range is significantly reduced when the SF-05 is used in place of the Wratten 21 or the Wratten 25 filter.

Apparent image sharpness is reduced by a noticeable degree on the SF-05 photography compared to the Wratten 21 and Wratten 25 filtered photography.

The effect of image quality degradation caused by the use of the SF-05 filter is minimized when the photography is viewed in stereo with the higher quality, higher resolution photography exposed through the Wratten 25 filter.

The resolution of the green filtered record is generally comparable to that of a normal J-1 mission.



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Attachment 2 to
[REDACTED]-2914/69

Comparison of SO-230 and 3404 Film Types
from Mission 1102-2

Reference: Photographic Evaluation Report, Mission 1046,
TCS-24630/68, August 1968

Conclusions: The conclusions are based strictly on the operational material from Mission 1102. Film type SO-230 produces imagery which at higher magnification (50X and above) appears slightly grainier. This apparent graininess, however, does not adversely affect the information content of the material at the magnifications normally used by the photointerpreters.

The potential advantage of SO-230 is in its additional emulsion speed (approximately 2/3 stop) which will allow shorter exposure times, thereby reducing the effects of uncompensated image motion.

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Attachment 3 to
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SO-180 Evaluation, Mission 1104

Reference: Photographic Evaluation Report, Mission 1104,
TCS-24680/68, December 1968

Conclusions: It should be emphasized that, (1) the coverage obtained was not over the intended areas, (2) portions of the material are severely degraded by fog from corona static, and (3) approximately 30 percent of the SO-180 film is obscured by clouds.

Regardless of these factors, portions of the SO-180 imagery obtained on this mission closely approximate the expectations of this lens/film combination. Some of the existing imagery contains significant added information from an intelligence standpoint, provided the analyst is allowed sufficient time to interpret (study) it, has a working knowledge of the film characteristics, and is familiar with the infra reflectivity of the various objects photographed.

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Attachment 4 to
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SO-180 Supplement, Mission 1104
Image Restoration Techniques

Reference: Photographic Evaluation Report, Mission 1105,
TCS-20058/69, April 1969

Conclusions: Comparisons of selective printing techniques (prints made through separation filters that represent the information contained in one or more emulsion layers of the SO-180 film where the film is degraded by corona fog) indicates that the prints made through the red filter are very poor in quality. Prints made through a green and/or a blue filter are fair in quality and appear comparable although those prints made through the green filter are slightly superior. Therefore, it is recommended that if high quality black and white reproductions are needed from the corona fog degraded areas of SO-180 film, a green filter be used to maximize the information.

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SO-121 Evaluation, Mission 1105

Reference: Photographic Evaluation Report, Mission 1105,
TCS-20058/69, April 1969

Conclusions: Twenty-two targets were nominated for color coverage on this mission but only one of these targets was actually covered. No additional intelligence information concerning this target was obtained from the color photography.

The image quality and interpretability are poor due to the out-of-focus condition that prevails throughout the color acquisitions. This degraded condition precludes a detailed analysis of the potential of color photography in this system.

SO-121, approximately 1.5 mil thicker than SO-380 (UTB), results in a shorter film load capability and therefore reduced area coverage.

The color balance is good and the exposure is adequate.

The use of the color imagery from this mission as a stereo partner with the high resolution black and white imagery is limited due to the out-of-focus condition of the color acquisitions.

The best ground resolution that can be expected from SO-121 in this system (approximately 15 feet) is not compatible with detailed target readout. Color oriented requirements should be directed against targets which do not require resolutions beyond the capability of the system. The requirement for color must be color resolution oriented rather than spatial resolution oriented.

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Photo Interpretability of SO-121, Mission 1106

Reference: Photographic Evaluation Report, Mission 1106,
TCS-20094/69

Conclusions: If only color film had been received, the fifteen priority targets that were photographed would have been rated poor, instead of fair, and most would have been categorized as "identification only." In most instances no intelligence information was derived from the SO-121.

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