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DE RUXQBA 656 3242334  
ZNY XXXXX KKR ZNM  
P 202330Z

BT

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GUARD 230, WITCH 027, CALUMET 178, [REDACTED]

GUARD PASS WHIG. WAHOO

CALUMET PASS [REDACTED]

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HANDLE VIA BYEMAN

CONTROL SYSTEM

~~SECRET~~ 202330Z NOV 74 CITE CHARGE 9039.

PRIORITY WHIG, WAHOO, WITCH, [REDACTED]

HANDLE VIA BYEMAN CONTROL SYSTEM

HEXAGON

FOR: WHIG/HUTCHISON; WAHOO/MALAHV; WITCH [REDACTED]

FROM: [REDACTED]

SUBJECT: HEXAGON PHOTO QUALITY DEGRADATION STUDY.

1. MANY ASPECTS OF THE PHOTO QUALITY PROBLEM HAVE BEEN ADDRESSED IN THE PAST, BUT THE ATMOSPHERIC FACTORS HAVE RECEIVED LIMITED DETAILED ATTENTION. ALTHOUGH HAZE HAS BEEN TAGGED REPEATEDLY AS BEING THE SEVERE QUALITY DEGRADER, STUDIES HAVE SHOWN THAT CIRRUS CLOUDS WERE THE MOST PROBABLE DEGRADER OF THE IMAGES TAGGED WITH THE

PAGE 2 CHARGE 9039 ~~SECRET~~

HAZE LABEL. IN OTHER INSTANCES THERE WAS NO APPARENT METEOROLOGICAL JUSTIFICATION FOR THE HAZE LABEL. KNCHARGE IS INITIATING AN EXTENSIVE STUDY TO DETERMINE WHAT ATMOSPHERIC FACTORS AFFECT PHOTO QUALITY AND TO WHAT EXTENT EACH CONTRIBUTES TO QUALITY DEGRADATION. IN ADDITION, STUDY RESULTS SHOULD BE SUFFICIENT TO EITHER SUPPORT OR REFUTE THE GROWING INTEREST IN DEVELOPING OPERATIONAL HAZE AND CIRRUS PREDICTION CAPABILITIES.

2. BRIEFLY, THE STUDY APPROACH IS AS FOLLOWS:

A. A DATA BASE WILL BE GENERATED WHICH CONTAINS OAK AND SUPPLEMENT TARGETS FROM HEXAGON MISSIONS 1207 AND 1208.

B. THE DATA BASE WILL BE TRANSMITTED TO KWWITCH TO OBTAIN ACTUAL WEATHER OBSERVATIONS FOR EACH TARGET AT THE TIME OF ACQUISITION IN THEIR RESPECTIVE MISSIONS. WEATHER PARAMETERS TO BE CONSIDERED AS POSSIBLE DEGRADERS WILL BE IDENTIFIED BY KWWITCH.

C. THE DATA BASE WILL THEN BE RETURNED TO KNCHARGE FOR PARAMETRIC ANALYSIS OF THE RELATIONSHIPS BETWEEN WEATHER PARAMETERS, PI READOUT LABELS, AND NIRS RATINGS. ANALYSIS WILL BE CONDUCTED IN ACCORDANCE WITH A MUTUALLY AGREEABLE PLAN BETWEEN KWWITCH AND KNCHARGE.

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3. PROJECTED COMPLETION DATES ARE AS FOLLOWS:
    - A. BUILD BASIC DATA BASE BY 15 DEC 74
    - B. INTEGRATE WEATHER BY 15 JAN 75.
    - C. ANALYSIS COMPLETED BY 1 FEB 74.
    - D. STUDY REPORT PUBLISHED BY 15 FEB 75.
  4. FOR KRWITCH: REQUEST A STATEMENT OF CAPABILITY TO SUPPORT THE STUDY BY PROVIDING THE APPROPRIATE WEATHER DATA ON THE PROPOSED SCHEDULE.
  5. FOR [ ] REQUEST A STATEMENT OF CAPABILITY TO PROVIDE THE DATA BASE DESCRIBED IN PARA 3. A. TO INCLUDE THE FOLLOWING: TARGET ID, LOCATION, ALTITUDE, SUN ANGLE, ZULU TIME OF ACQUISITION, ACQUISITION DATE, ORBITALITY, REV, FRAME, OP NUMBER, PI READOUT CODES, AND MIIRS RATINGS.
  6. THIS STUDY IS NOT TO PRECLUDE THE EFFORT TO INSTRUMENT CORN CREWS TO OBTAIN REAL TIME ATMOSPHERIC DATA IN CONJUNCTION WITH ON-ORBIT R AND D OPERATIONS.
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