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PP RUXQAA RUXQAAG
DE RUXQBA 656 3242334
ZNY XXXXX KKR ZNM
P 2023302
BT
XXXXX
GUARD 230, [redacted] 027, CALUMET 178, [redacted] 638
GUARD PASS WHIG. WAHOO
CALUMET PASS [redacted]

S E C R E T 2023302 NOV 74 CITE CHARGE 9039.
PRIORITY WHIG, WAHOO, [redacted]
HANDLE VIA BYEMAN CONTROL SYSTEM
HEXAGON
FOR: WHIG/HUTCHISON, WAHOO [redacted]
[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 S E C R E T
HAZE LABEL. IN OTHER INSTANCES THERE WAS NO APPARENT
METEROLOGICAL JUSTIFICATION FOR THE HAZE LABEL. KWCHARGE
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 MISSION'S 1207 AND 1208.
    B. THE DATA BASE WILL BE TRANSMITTED TO [redacted] 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 KWCHARGE FOR
PARAMETRIC ANALYSIS OF THE RELATIONSHIPS BETWEEN WEATHER
PARAMETERS, PI READOUT LABELS, AND NIIRS RATINGS. ANALYSIS
WILL BE CONDUCTED IN ACCORDANCE WITH A MUTUALLY AGREEABLE
PLAN BETWEEN [redacted] AND KWCHARGE.

SF: HV

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 ▓▓▓▓▓ 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, OBLIQUITY, REV, FRAME,
OP NUMBER, PI READOUT CODES, AND NIIRS 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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~~S E C R E T~~
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