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FINAL
Karen to Herman

POINT PAPER

ON

DAMON

o DAMON is an early Shuttle experiment to develop and test management, technical and operational Shuttle interfaces for NRO payloads

o Objectives

- Establish precedent for reconnaissance from Shuttle
- Develop transition to Shuttle experience

  -- Payload planning/integration/flight development
  -- Security procedures
  -- Integrated Shuttle payload operational procedures
  -- Shuttle support capability (mechanical, electrical)
  -- Shuttle enviroment (contamination, thermal acoustics, stable platform)
  -- Payload/facilities interfaces development

- Data bank - "lessons learned"

  -- Acquires knowledge which will benefit [redacted], and all NRO (as well as DoD) programs
  -- Knowledge gathered early with inexpensive experiment rather than later with multi-million dollar critical and sensitive operational satellites. Without DAMON, critical and sensitive [redacted] becomes Pathfinder at KSC
  -- DAMON leads [redacted] adequately to preclude serious problems or compromise

- Acquire useful intelligence to supplement [redacted] HEXAGON between now and 1984 (b)(1) (b)(3)

  -- Orbit could be optimized for crisis with up to three accesses per day for six days
  -- Synoptic coverage in seven days - up to 80,000 feet of black and white, color [redacted] (b)(1) (b)(3)
  -- NIIRS 3-5 stereo
  -- Sixty day launch capability after first flight and refurbishment

- Evaluate utility of man in mission enhancement
- Evaluate benefits/impacts of orbiter services

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o Shuttle schedule issue

- Shuttle will become the sole avenue to space
- Possible Shuttle schedule slips of up to one year will not impact DAMON

  -- DAMON can fly on any available Shuttle schedule
  -- Could fly on first operational flight or even an operational test flight

- DAMON program includes no-cost storage contingency if Shuttle is delayed
- Whenever DAMON flies--it still precedes--and benefits--NRO programs (and DoD programs)

o Costs

- DAMON termination

  -- Only saves $21.7M in FY 81
  -- Potential value of Shuttle knowledge exceeds cost; could save [redacted] from costly technical, procedural, or security impact (b)(1) (b)(3)

- DAMON delay of one year

  -- Program stretch costs more than payload completion and no-cost storage
  -- May miss Shuttle availability with minimum Shuttle schedule slip
  -- Pre-launch planning/integration "lessons learned" may not accrue to near term NRO launches

o DAMON Shuttle experiment is built around a film-based imagery payload

- HEXAGON spares: known system, inexpensive
- Demonstrate ability to integrate, operate a complex, sensitive payload (non-trivial experiment)

o Conclusions

- DAMON is a cost-effective NRO experiment to:

  -- Enhance NRO programs' Shuttle use (security, planning, integration)
  -- Maximize NRO's ability to exploit Shuttle

- DAMON is not completely sensitive to Shuttle schedule adjustments
- DAMON will provide useful imagery; may serve as a temporary backup

o Recommend continuation of DAMON

- Most cost effective to continue DAMON regardless of Shuttle schedule adjustments
- Benefits to NRO programs are:

  -- Timely, vital, and necessary
  -- Inexpensive