

## Why NOT LFC on OFT-2 ?

A summary of arguments raised against early deployment of LFC, and responses:

### Argument

- Insufficient funds are available in FY 78 to accelerate LFC procurement to meet the OFT-2 schedule.
- Flight on a mission as early as OFT-2 exposes the LFC hardware to an unnecessary risk.
- Operation of the LFC on Shuttle imposes prohibitive constraints on either camera utilization or normal spacecraft functions.

### Response

- Approximately \$2.5M must be added to the FY 78 funding for LFC, either from a supplemental appropriation or from reprogramming.
- The flight is manned. The benefits of early delivery of imagery with which to develop processing techniques outweigh the small risk to the camera.
- Skylab experience with the Earth Resources Experiment Package serves as a precedent for successful ~~completion~~<sup>integration</sup> of photographic and other mission requirements. Approximately 5 million square miles of the Earth's surface can be covered in 2-3 hours elapsed operating time from OFT-2, out of 96 hours planned earth-oriented mission time.

- LFC coverage from shuttle will be obtained from various altitudes and inclinations and with variable illumination conditions. These factors complicate data reduction.

- LFC is outside NASA's charter since it verges on an operational capability and has limited scientific benefit. LFC is not an R&D project.

- LFC imagery will reduce demand for LANDSAT imagery and erode support for the LANDSAT program.

- Eventually, LFC could be flown in a free-flying spacecraft in a circular, sun-synchronous orbit, if problems due to orbit variations are apparent in early usage. ~~One of~~ The key objective of <sup>the</sup> OFT-2 mission for LFC is to validate the data reduction process and determine ~~planned~~ <sup>optimum</sup> operational mission parameters. The cost of a free-flying satellite for LFC, if required, is estimated at \$50M.

- True, but NASA is the only viable source of funds and management resources for a quick-reaction program of high potential benefit. Ample precedents exist for this type of applications <sup>development</sup> mission. LFC can be developed with little technical risk.

- Probably true, although the two systems provide complementary data types. If LANDSAT support is significantly eroded by availability of an LFC imagery data base in the 1980's, this may be indicative of a lack of responsiveness of LANDSAT to a major segment of imagery users.