

MEMORANDUM

TO: TOM FREEDMAN, MARY L. SMITH

FROM: DREW HANSEN

RE: NASA PROGRAMS

DATE: JULY 10, 1997

SUMMARY

The following is a synopsis of some important NASA programs that are occurring in the next few years. Programs are listed in chronological order.

NASA PROGRAMS

- **Crystallography research.** Crystallography research enables us to understand the 3-dimensional structure of proteins and nucleic acids. This knowledge allows us to design pharmaceuticals and biotechnology products. Research has already helped us to understand "Factor D", a protein that activates the body's hyper-response to heart surgery. Other applications include research into diabetes, the flu, and AIDS. **Ongoing.**
- **Galileo.** A mission to Jupiter, currently 68 days from visiting Callisto 10. **Ongoing.**
- **Cassini Orbiter.** A mission to send a craft to orbit Saturn by June, 2004. Launch is scheduled for **October, 1997.**
- **Shuttle missions.** A variety of shuttle missions will go up in the next year, with one launch occurring almost every month. A possible focus is the first assembly flight for the International Space Station, currently scheduled for **July 9, 1998.**
- **DS1.** A program to test space exploration equipment for the 21st century. The mission will launch in **July, 1998** and will complete a flyby of asteroid McAuliffe (named for Christa McAuliffe) at a distance of 5-10km in **January, 1999.**
- **Stardust.** A mission to fly close to a comet and for the first time bring material from a comet back to earth. Launch date is **February, 1999.**
- **Origins Program.** A multifaceted program of research that helps us to understand the origins of our universe. The program proceeds in several stages and includes the Hubble Space Telescope and ground-based astronomy. A long-term project, the Space Infra-Red Telescope Facility will be launched on **December 12, 2001.**