

TEN MINUTES IN THE LIFE OF PHOBOS BASECAMP. T. H. Sweetser, Jet Propulsion Laboratory, California Institute of Technology, 4800 Oak Grove Dr., Pasadena, CA 91109; ted.sweetser@jpl.nasa.gov.

Introduction: The Phobos basecamp concept is of a permanent facility at Phobos designed for long-term habitation, which would be initially devoted to telerobotic exploration of Mars. Rather than describe a Phobos basecamp with yet another set of viewgraphs, this presentation would show what operations at Phobos would be like by presenting a skit. The form of the skit would be a reading by four actors to be recruited from the participants of this workshop.

Setting: A brief description of the setting would be given directly. We are inside the habitation module for operations in a permanent facility dug in to Phobos on the side which faces Mars. The set includes a console represented by a couple of laptops and a tethered free-floating teleoperations virtual presence suit (rather like an exoskeleton) which would be only be described (both initially and implicitly in the dialogue).

Characters: Four astronauts (Bob, Alice, Carol, and Fyodor, perhaps)

The Scene: We are at shift change in the Phobos basecamp. Bob is handing off to Alice at the consoles and Fyodor is helping Carol out of the teleops suit. There will be a short team meeting and then Carol will help Fyodor into the teleops suit for his exercise/exploration session.

Points to be made via dialogue:

- The team teleoperates multiple mobile and stationary probes on the surface of Mars as well as in orbit (several probes are discussed in the hand-over process).
- Exploration with these probes is rapid and adaptable (discussion of past shift shows this)
- Extended sessions are possible with each probe.
- Phobos offers radiation protection (a CEM event is imminent and preparations are discussed).
- Virtual presence on the surface is a popular form of outreach (high ratings on Discovery are mentioned)
- Zero-g teleops can simultaneously provide strenuous exercise.
- Samples can be obtained from the surface of Mars and analyzed in shirtsleeve laboratories (retrieval of sample from orbit is discussed).
- New probes with new instrumentation can be deployed in rapid response to new discoveries (design and build of new probe is planned).
- Development of Phobos basecamp and participation in it is international and involves all NASA centers (indicated indirectly in passing comments).