Space Flight Resource Management Training for International Space Station Flight Controllers

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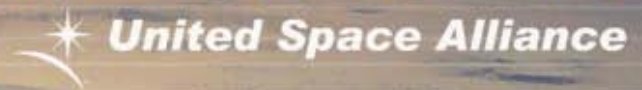Houston, Texas, USA

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Overview

- Short summary of Space Station SFRM skills

- How five Lessons Learned are being implemented

- Status of SFRM training in Mission Operations Directorate at the Johnson Space Center

Our Team Skills Model

Communication

Conflict Management

Teamwork

Stop
Think
Act
Review

Team Care

Cross Cultural

Situation Awareness

Decision-Making

Leadership/Followership

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5 Lessons Learned about SFRM Training

SFRM

- is an integrated set of skills

- must be used daily

- must be embedded in technical training

- must be trained formally and learned informally

- must be learned from senior flight controller mentors

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SFRM is an Integrated Set of Skills

- Each skill affects and is affected by the other 7 skills
- Failure to do any skill properly may result in a failed team effort

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SFRM Used Daily

- If you use SFRM skills

    – At daily status meetings,

    – When making routine decisions, and

    – When you don't think SFRM is required

- You don't put links in an error chain

- That might eventually result in an incident that requires 'time critical' SFRM

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SFRM Embedded in Technical Training

- SFRM training must be
  - Introduced in the full mission and team context
  - Introduced early
  - Reinforced continually
- When a flight controller learns a procedure, s/he also learns
  - How to assess the situation
  - What factors dictate if/when the procedure is executed
  - What decisions must be made
  - To whom to talk, about what and how
  - How to resolve conflicts

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SFRM Trained Formally, Learned Informally

- Formal training is the lessons in the training programs

- Informal learning is through observations, practice and talking to others

  – To take advantage of informal learning, we developed guides for

    - New Flight Controllers

    - Mentors

SFRM Learned from Senior Mentors

- Senior Flight Controllers bring their experience to provide the full mission and team context

- How 'real life' experiences are subtly different from training and from each other

- How mistakes happen, how they are resolved and what are the lessons learned

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Status of SFRM Training in JSC MOD

- Training includes both SFRM-dedicated lessons and SFRM training embedded into technical lessons

- Goal is to reduce certification times by 50% and integrated simulations by 75-90%

- SFRM is practiced, evaluated and debriefed in part task trainers and full-task simulation lessons

- SFRM model and training are constantly being evaluated against student/ management feedback, best practices from industry/ military, and latest research

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