



Human Factor Considerations in Space Flight

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Overview



Work environment

Isolation

Confinement

Multiculturalism



Work Environment



- Ergonomics
 - Easy-to-access workstations
 - Multi-function workstations to avoid crowding
- Appropriate work-rest balance
 - Engaging work assignments for all mission stages for all crew
 - *en route*
 - on planetary surfaces
 - Adequate personal quarters/sleep areas



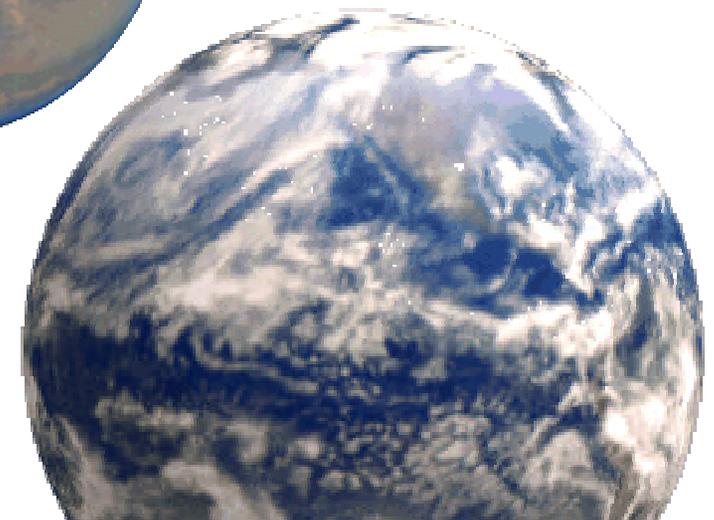
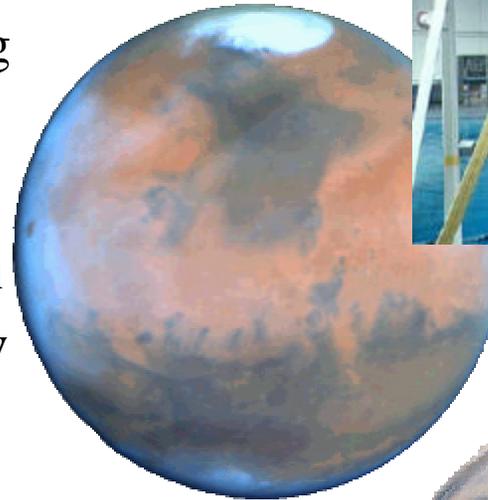
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Isolation



- Distance from friends and family
 - Real and significant communications time lag
 - Prolonged periods of absence
- Limited interaction with people other than fellow crew
- Separation from humanity

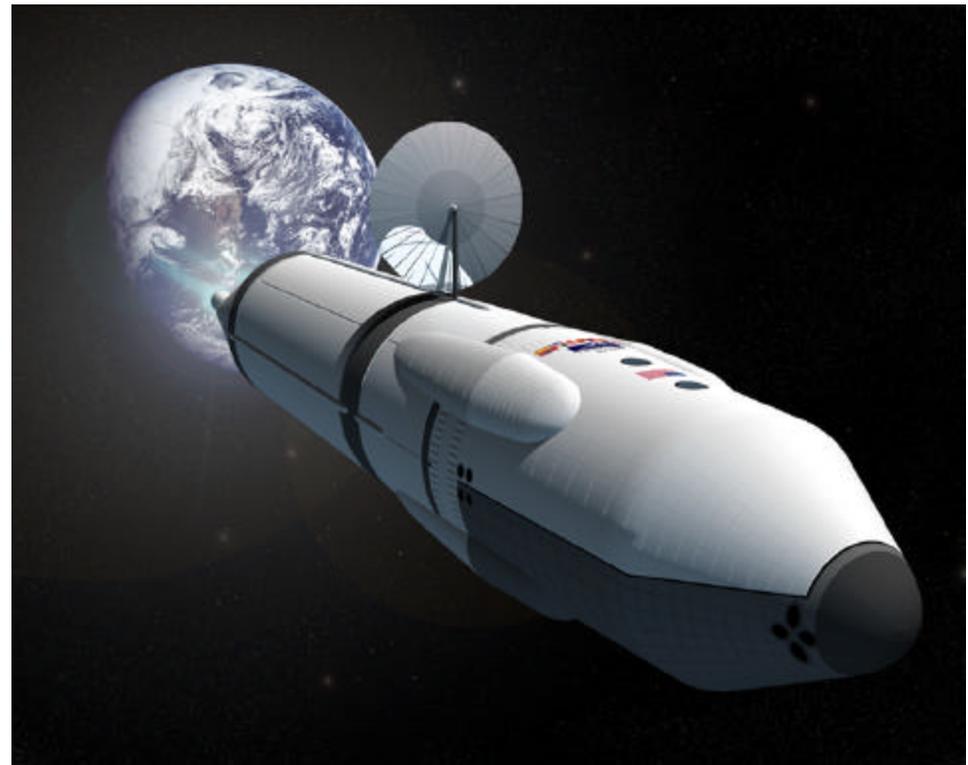




Confinement



- Privacy
 - Limited spacecraft size
 - Physical and audio aspects to privacy
- Enforced intimacy
 - Small crew size
 - Heavy daily interactions
- Prolonged enclosure
 - Confined space from months to years
 - Lack of environmental variation





Multiculturalism



- Language
 - Working language of the voyage
 - Verbal and physical communication differences (unrelated to vocabulary)
- Culture
 - Behavioral expectations
 - Religious celebrations



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