



# Dissenting Opinions

## Senior Management ViTS Meeting

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This and previous presentations are archived at  
<https://sma.nasa.gov/safety-messages>

# What If?

- In 1961, the U.S. had been informed of the death of a young Ukrainian cosmonaut during a training exercise in a chamber with a pure oxygen environment, poor materials control, and an in-swinging hatch?
- In 1961, John Houbolt had not spoken up and convinced the powers that be that a lunar-orbit rendezvous was the only feasible way to meet President Kennedy's schedule requirement for the end of the decade?
- In 1986, Roger Boisjoly's warnings of low temperature effects on the dual O-ring seal had been fully supported by Thiokol Program Management?
- In 2003, the Shuttle Program had approved the request to use Department of Defense assets to image *Columbia* two days after launch?



**Shuttle Team Sought View From Satellite, NASA Official Says**

By EDWARD WONG

Published: March 13, 2003

# Dissenting Opinions

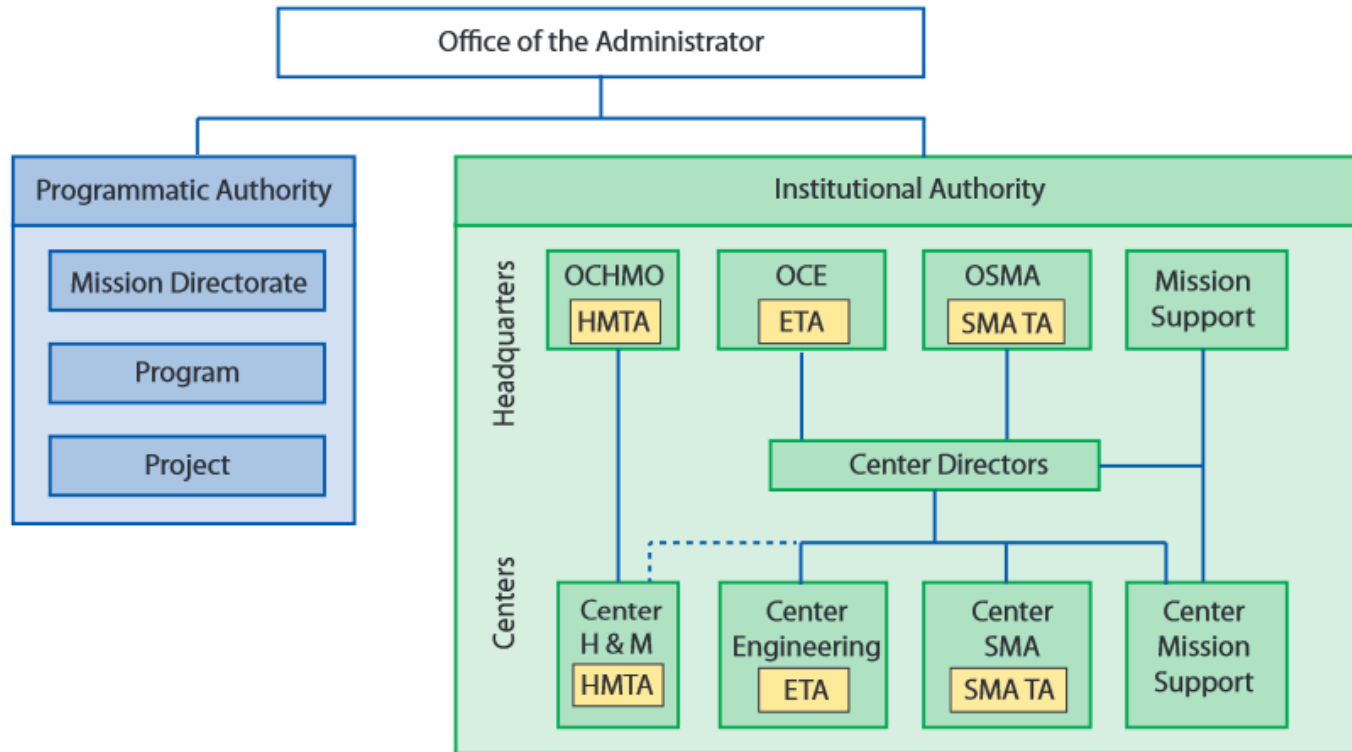
- When faced with a decision made by a Project/Program Manager, an individual has three choices:
  - Agree
  - Disagree, but be willing to fully support the decision
  - Disagree and register a dissenting opinion
    - The dissenter feels that decision results in excessive residual risk
- Definition and description of the Dissenting Opinion Process is succinctly defined in Agency documentation:
  - NPD 1000.0B, NPR 7120.5E (NASA Spaceflight Program and Project Management Handbook—Sections 5.2 and 5.3)
  - “A substantive disagreement with a decision or action that an *individual* judges is not in the best interests of NASA and is of sufficient importance that it warrants a timely review and decision by higher-level management” (emphasis added)
    - Dissenting opinion may be raised by any individual or organization, regardless of seniority, as long as the opinion meets the above standards
- A dissenting opinion cannot be registered until a decision has been made:
  - All too often the tendency is to “jump the gun” before the dissenting opinion is necessary

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- Also clear in Agency documentation is that the dissenting opinion
  - Is appealed through the Technical Authority pathway, not Programmatic Authority
    - Project/Program may reclama any reversal of their decision at any stage in the appeal pathway, up to and including the level of the Chief of the Office of Safety and Mission Assurance (OSMA), Office of the Chief Engineer (OCE), or Office of the Chief Health and Medical Officer
    - Reversal decisions at the Associate Administrator, or Administrator level are final, except for the risk taker, whose decision trumps all
  - Must be documented, including all subsequent decisions
  - Should be handled in an expeditious manner wherever possible
    - Note that this precludes the use of the process in the spacecraft operations timeframe which should be handled by the Mission Management Team process
- Expectations of the Project/Program Manager
  - Actively solicit dissenting opinions at the decisional meeting
    - Ideally this should be addressed during opening remarks and at the decision point
- Expectations of the appeal meeting organizer
  - Clearly indicate that the purpose of the meeting is to address the dissenting opinion and that a decision is required
  - Document the results of the meeting—decision reversed, next level appeal requested or decision accepted by dissenter

# Separation of Programmatic and Institutional Authorities

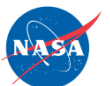
Source: NASA Spaceflight Program and Project Management Handbook



**Legend:** ---- indicates that not all Centers have HMTA. Sometimes that function is served by Engineering and SMA TAs.

**Acronyms:** OCE = Office of the Chief Engineer; OCHMO = Office of the Chief Health and Medical Officer; OSMA = Office of Safety and Mission Assurance; TA = Technical Authority.

**Figure 2-3 Separation of Programmatic and Institutional Authorities**





# Two Recent Examples

- Decision made by Multi-Purpose Crew Vehicle (MPCV) Program Manager to reduce the scope of the vehicle abort testing
  - After the very successful Pad Abort -1 Test, the Program reduced the remainder of the campaign to one test, Ascent Abort 2 (AA2)
  - Decision to reduce the scope of the baseline scenario of AA2 prompted a dissenting opinion
- Dissent voiced by Johnson Space Center (JSC) Safety and Mission Assurance (SMA) individual
- Dissenting opinion heard by JSC SMA Director, JSC Center Director and both OCE and OSMA Chiefs (with Associate Administrator of the Human Exploration and Operations Mission Directorate in attendance).
- Dissenter satisfied with Technical Authority decision to uphold Programmatic decision
- Decision made by MPCV Program Manager to implement a zero fault tolerant, series design for the two European Service Module propulsion tanks
- Dissent voiced by three entities at JSC
  - Dissent based upon degree of mission coverage for a parallel tank design versus series
- Dissenting opinion heard by JSC Center Director who upheld the dissenting opinion
- Forward plan is for JSC Center Director and Program Manager, MPCV to discuss the decision with OSMA, OCE, Associate Administrator for Human Exploration and Operations Mission Directorate and the Agency Associate Administrator

# Well?

- All of the introductory questions were either rhetorical or the answers to them may not have changed the end result.
- But they all serve to remind us that there are individuals within and outside of our Agency that have technically sound, differing views that never occurred to the decision-maker primarily because that decision-maker never got to hear them.

So do you actively seek out those sound opinions before you make a critical decision?

# Summary

- Dissenting opinions are an essential element of the decision process.
- Dissenting opinions should be actively solicited by the decision maker.
- The dissenter should be treated in a fair and equitable manner throughout the appeal process and reprisals or retribution against any dissenter will NOT be tolerated.
- Dissention appeal pathway is through the Technical Authority, not Programmatic Authority pathway.
- Decisions of reversal or support of original decision must be documented and distributed.
- Expectations for the appeal meeting must be understood, especially by the individual who is hearing the appeal.