Eugene "Gene" Kranz receives SpaceOps Exceptional Achievement Medal.

(**Huntsville**) On April 29th 2010 Gene Kranz, the Flight Director legend from the early days of human space flight up to the Shuttle era, received the international SpaceOps "Exceptional Achievement Medal" for his life-time achievements at a Gala Diner in the Huntsville Davidson Center for Space Exploration under a suspended life sized Saturn V and standing ovations.

"Eugene Kranz receives the SpaceOps Exceptional Achievement Medal for his pioneering the concepts and procedures that laid the foundation for human spaceflight operations, many of which are still in use today, and for his inspirational leadership that raised the awareness of the importance of spaceflight operations throughout the world."

Gene Kranz started his NASA career as mission control procedures officer assigned to Flight Director Christopher Columbus Kraft for the Mercury and Gemini flights at the Cape. From the fourth Gemini flight onwards he acted as Flight Director for the remaining Gemini flights, Apollo missions including Apollo 1, 7, 9, 11 (LM "Eagle" Moon landing) and Apollo 13 ("Houston we have a problem"). After Apollo 17 (end of Apollo mission) he was promoted to Deputy Director of NASA Mission Operations in 1974, becoming Director in 1983. After the successful STS-61 flight (first Hubble repair mission) he retired from NASA in 1994.

SpaceOps News (SoN) had the rare opportunity to conduct an e-mail interview with Eugene "Gene" F. Kranz (EFK) about flight operations aspects of the past and today.

SoN: Gene, with your riveting speech at the award ceremony you presented a vivid recall of critical events you experienced during your long career, like the Apollo 11 LM computer program alarm during the landing process. It was a split- second human decision to disregard the alarm and signal a "Go" for landing. With today's emphasis on computer automation, we might not have had the same outcome. Would this be a plea for a simpler, more robust design, e.g., like the Russians are using?
EFK: Today's technology is dazzling as are the young engineers, operators and scientists. If we went to the moon this decade I believe that most of the information we had in Mission Control would be available to the crew onboard the landing module. This would allow the crew to make earlier trajectory adjustments for the landing and provide a critical assessment of systems status for each of the Go-NoGo points. I believe that a systems engineer should be included as a crew member in future spaceflights. The ground should do planning, manage communications and data, operate some of the experiments, etc…will need a good trade study to work out the crew /ground role for future missions.

SoN: Since we had our SpaceOps 2010 conference at the Von Braun Center it would be interesting to know how attentive Wernher von Braun was with respect to flight operations aspects of vehicle design, and did your German background yield a special relationship with him?
EFK: MSFC Speer and Belew detailed a branch of engineers to work in the Flight control division. Scott Hamner was the initial Chief, and later replaced by Frank Van Rennsselaer. They were a superb team working in the "Trench" with my trajectory controllers. The team and their IBM engineers transitioned to Skylab and were instrumental in developing the patches to the IU software to keep the program going. "They were us" was the accolade given by the Trench at the splashdown on the final mission

SoN: The limits of operations support have been demonstrated during the Columbia reentry accident: The operations team had very few indications of what was going to happen, but if they had – what could have been done?
EFK: My only fault with their actions is that they did not use DOD assets to obtain pictures to verify assess for any damage. I do not think the team had any options available that would have saved the crew.

SoN: The "human factor" as defined by you[1] had its peak during the Apollo program. Can it be maintained in the future with big, long term projects being threatened by cost overruns or even to be cancelled on short notice?
EFK: There will be good and bad times for every complex and high risk Project. The "Human Factor" is characterized in every high risk project by Leadership, Trust, Values and Teamwork is essential to carry project through difficulties and make proper risk judgments..

SoN: What is the better concept: More crew autonomy, e.g., as requested by the Apollo 7 commander , or increased support from the ground?
EFK: The best answer always comes from what WE CALLED A "Baseline Operations Plan" that conducts crew/ground/technology/risk trades for a proposed program.. This must be done by a well balanced and highly experienced team of operators, program managers and systems designers. It must provide clear statements of objectives, roles and missions, risk trades that are sufficient to develop a conceptual flight profile that will lead to flight and ground systems requirements. The Operations plan must evolve in detail in parallel with the design of a space system

SoN: Considering NASA's new direction, what would be your interpretation of "game changing technologies"? Which ones would be important to Operations?
EFK: I am frankly tired of the terms game "changing technologies", "robust", etc. These are words to avoid making decisions and charting a course. You have first to define an objective, then address available technologies to determine what is needed. Use of existing technology minimizes risk, preserves schedule and reduces cost. The new technologies should be focused toward the end objectives where they are needed. Let technology evolve as it has in military and commercial aviation.

SoN: Please allow some insight to your personal, but related, interests: Do you like science fiction?
EFK: I prefer the outdoors, mountains, skiing, hiking. I kept flying until recently when I felt no longer proficient. My reading preference is military history and adventure and I have been on a military lecture circuit. I do most of the work around the house and like to cut grass with a riding mower. I am a Catholic and spend time supporting my church.

Gene, we would like to thank you very much for your frank and open answers and we wish you definitely to stay healthy enough and human spaceflight goes fast enough to see the humans move once again beyond LEO.

See the Gene's complete 50min presentation at the SpaceOps Gala Dinner live by klick!

***References**:*

*1) Gene Kranz (the **human factor**): " …they were people who were energized by a mission. And these teams were capable of moving right on and doing anything America asked them to do in space"*

2) Gene Kranz :"Failure is not an Option" (ISBN 0-425-17987-7)

3) Wikipedia

Interview by joachim J. Kehr (Editor SpaceOps News)