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MIKE MULLANE

“I HAVE NO PLANS PAST MECO”

I made my last flight to Kennedy Space Center as a member of a Prime Crew on February 19, 1990. With our T-38 afterburners tagging us with twin streaks of blue fire, we roared down the Ellington Field runway and shot into the dark. At our cruise altitude of 41,000 feet, we skimmed across the tops of massive thunderstorms associated with a cold front pushing through Dixie. Lightning illuminated the nimbus heads in colors of white and gray and blue. Fantastic shapes of electricity jumped from cloud to cloud. The charged atmosphere produced a St. Elmo’s fire that painted the leading edge of our wings in a blue haze. As if that wasn’t enough, I looked upward into a star-misted deep black.God, how I’ll miss this—the beauty and purity that is flight .

At the KSC crew quarters, Olan Bertrand outlined the next three days of our lives. We were reminded to stay in health quarantine at all times, to not leave the quarters without telling Olan, to eat meals only cooked by the dieticians, to claim all meals on our travel voucher as “Government Furnished Meals.” As employees of Uncle Sam we traveled on official orders, the itinerary of which read,FROM: Houston, TX. TO: Earth Orbit. All of our meals, transportation, and lodging would be provided by NASA, so we would only receive a standard per diem of a few dollars a day. A typical spaceflight earned an astronaut an extra $30 to $50 total.

We were also reminded not to carry anything personal on board the orbiter. When we climbed intoAtlantis, everything on our persons, from the condoms on our penises to the LES helmets on our heads, was the property of the U.S. taxpayer. Gone were the days of astronauts stuffing their pockets with rolls of coins, corn beef sandwiches, and golf balls before their trips into space. In the early days of the space program these colorful items of contraband added a human interest touch to missions. Now they were forbidden, due in large part to an Apollo-era incident in which astronauts carried philatelic items they later sold. NASA felt it was inappropriate for crews to profit from items transported aboard a taxpayer-funded vehicle and imposed tight control over shuttle-flown material. Shuttle astronauts were restricted to twenty items in a Personal Preference Kit (PPK), which, together, could not exceed 1.5 pounds in weight. Weeks before launch, the PPK items were submitted to NASA HQ for approval and packed in a shuttle locker. In the PPK for my STS-36 mission, I had included the crucifix from my dad’s casket, the wedding bands of my daughter Amy and her husband, Steve, a gold medallion that would be imprinted with the mission patch after landing, and some other small items of personal significance for the rest of the family.

Olan also reminded us to pack our clothes and wallets and mark the bag EOM (End of

Mission) before leaving for launch. The items would be delivered to us at Edwards AFB after landing. “Also, include some civilian clothes in case of an abort.” This was a standard request, but I knew some astronauts refused to pack their civvies out of a superstitious dread that to do so wouldcause an abort. I was one. If an abort occurred, I would just have to walk around Zaragoza, Spain, in my underwear.

As the VITT briefing ended, the family escorts arrived with our wives. They would be joining us for our midnight lunch. Unlike STS-41D and STS-27, both of which had banker’s hours for launch windows, STS-36’s window was from midnight to 4A.M . This necessitated a killer sleep/awake schedule. We were going to bed at 11A.M . and waking at 7P.M . Breakfast was at 8P.M ., lunch at midnight, and supper at 6A.M . A vampire kept better hours.

The wives were exhausted. Besides being Prime Crew spouses and wanting to see their men in the few opportunities remaining, they were also family entertainers for the week. Relatives and friends who were on a normal sleep schedule sought them out for KSC tour information, weather forecasts, and information on launch-day bus schedules. Cheryl Thuot and Chris Casper also had young children to deal with. If our wives were getting three hours of sleep a night, I would have been surprised.

They certainly didn’t get much sleep this night. We met them again at the beach house for an L-2 barbecue dinner…at 8A.M . Each of us was allowed an additional four health-screened guests, so this was a real crowd. In fact the gathering was too much. Introductions consumed a significant part of our time. The guests were also frantic to use this once-in-a-lifetime opportunity to get photos in every imaginable permutation: the STS-36 crew alone, the crew with wives, the crew with parents. All of this was being done on the outside deck so a billion no-see-um bugs also wanted to be in the picture. Photos were delayed while we slapped and danced and scratched them away. Inevitably we would pose for one shot and be into the next permutation when some old lady would scream, “I forgot to take off my lens cap. We’ll have to pose that one again.” Or, “I need to change film, so hold on.” Or, “I left Aunt Betty’s camera inside. Wait while I get it.” Meanwhile I was thinking,This is bullshit! I had no patience for the extended families of the others and, no doubt, the other crewmembers were thinking the same thing as my mom jumped into firing position and started fiddling with her camera. I just wanted to be alone with my mom and children and Donna. I didn’t want to share this time making small talk with people I had never met before.

During our first break from the Kodak moments I pulled my family to the beach. I would see Donna again, so I devoted my time to my mom and children. The kids were now old enough to make the beach house visit after being cleared by the flight surgeon. As I had been in previous launch good-byes, I was honest with them now about the risks. I didn’t talk up the danger, but neither did I paint a Potemkin village for them. SinceChallenger ’s loss I was even more determined to keep them informed. I had heard that one of the older children watchingChallenger ’s destruction from the

LCC roof had screamed, “Daddy, you said this could never happen!” I wanted my children and mom to know it could happen and to be prepared as much as possible.

I was filled with a father’s pride as I watched my children. Pat was in the final weeks of his senior year at Notre Dame. He had attended the school on an ROTC scholarship and upon graduation was to be commissioned as a second lieutenant in the air force. He had matured into a real leader. He had also developed a wonderful wit. Friends who knew Pat and me would frequently joke, “The nut doesn’t fall far from the tree.” They were right. In many ways Pat was my clone—the most notable exception being his very good looks. But we did share the same crappy eyesight. As it had for me, his less than 20/20 vision was keeping him from air force pilot training. I had made calls to some general officer friends hoping they might know of a way for Pat to gain a medical waiver, but the Berlin Wall had come down, the Cold War was over, peace was going to reign forever, the air force had too many pilots, blah, blah, blah. All I heard were excuses. But I hadn’t left it there. TheChallenger disaster had shown me that dead astronauts had more cachet than live ones. Astronaut widows were consoled by presidents who told them to call if they needed anything. If I died on this mission I intended to posthumously use my celebrity status to get Pat into pilot training. Before leaving Houston, I had written a letter to fellow TFNG and USAF colonel Dick Covey on that topic. “…I’d like to thank you for taking care of Donna and the kids. I’ve always hated paperwork and I imagine dying generates more of it than anything else. At least I don’t have to worry about it…I’ve told Donna to tell the president himself of Pat’s desire to serve his country as a pilot. You might tell General Welch he’s going to be getting the order from above, so he might just want to get ahead of the game by approving Pat’s application right now…” Donna was holding the letter with my instructions to give it to Covey in the event of my death. (Visual acuity defects that are correctable have no flight safety impact—many military pilots wear glasses—and waivers have been given in the past for officers with glasses to enter pilot training.) There was also one other favor I had already asked of Covey: “If I die on this mission and there’s anything left of my body, I don’t want any of the female docs in the office doing an autopsy on me. I worry they’ll get back at my sexist bullshit by telling everybody in the office I had a little dick.” (A damnable lie!) Covey had a great laugh at that, but he promised to make my wishes known.

Amy, Pat’s twin, was now married and living in Huntsville, Alabama. I didn’t need to write any letters on her behalf. She was completely fulfilled as a wife and looking forward to the day she would be a stay-at-home mom. I had only recently come to accept her as she was. As obsessive-compulsive-West Point-engineer-astronaut fathers are apt to do, I attempted to fashion her into my own image and was frustrated by my repeated failures. I wanted her to graduate from college, but she dropped out after just one semester. I wanted her to have skills that would make her financially independent, if ever that was required, but she acquired none. Donna set me straight. “She’s a sweet, good-hearted young woman. She doesn’t want what you want. You just have to accept that.” I finally had and was happy for her.

Laura was now nineteen and a freshman at DePaul University in Chicago majoring in the single degree field most guaranteed to drive an obsessive-

compulsive-West Point-engineer-astronaut father into madness…theater. Laura wanted to be an actress. At least I had the experience of my older daughter to learn from—I accepted Laura's dream and enthusiastically supported her. I knew most theater degrees ended up being degrees in waiting tables, but it was her dream, and—as a man who had made a similar journey toward a long-odds prize—I wasn't about to discourage it.

As I walked the beach with my children beside me I was struck by the swiftness of life. TheFiddler on the Roof song "Sunrise, Sunset" came to mind. "Is this the little girl I carried? Is this the little boy at play?" It seemed like just yesterday I was running alongside bikes as the kids made their first no-training-wheels rides. Now, I walked with adults who would be doing the same thing with their children in the not-too-distant future. How swiftly fly the years.

I had missed a lot in those years, all in the name of career. How many times had I left for work with the kids asleep and returned after they were in bed for the night? How many evenings had there been no time to read to them or play with them because I had graduate school homework? How many birthdays had I missed? I didn't want to count. I had been a good father but not a great one. I had missed a lot that was irretrievable. The thought bolstered my confidence in the decision to retire from NASA. I didn't have many years left to build memories with my children and future grandchildren. I was forty-five years old—I was entering middle age. One glance in the mirror told me that. A proto-spare tire was faintly visible at my waist, and either my sink was going through puberty or my hair was thinning. I suspected the latter. I was only twenty-one years from the age of my dad's death. I had only thirty years left in an average life span. Of course, with a shuttle launch pending, all of those years were hypothetical. L-2 days to launch might mean two days until my death. So I gathered in this memory of my children as young adults…strong, healthy, attractive, their eyes and hearts set on the distant horizons of their lives.

Finally, our time was up. I hugged and kissed the kids. As I embraced my mom, she handed me a note. It was Psalm 91:We live within the shadow of the Almighty, sheltered by the God who is above all gods.… Now you don't need to be afraid of the dark any more, nor fear the dangers of the day; nor dread the plagues of darkness, nor disasters in the morning. I wasn't afraid of the dark or plagues. It was the "disasters in the morning" I feared.

Mom also handed me a card she had prepared and reproduced and was passing out to guests who had come to watch the launch. It was a prayer to Our Lady of Space.Blessed Mary, Mother of our Savior and of mankind, watch over our men and

women in space, and through your intercession, obtain for them protection from all harm and evil, grace to do God's will, and the courage and strength to fulfill their mission for the honor and glory of God. Amen. Watch over the crew of STS-36.

That was my mom. She had the faith of ten people. Between her and Donna's prayers I should have been bulletproof. I just hoped Mom, the papist, didn't end up proselytizing to some Baptists in the family viewing area and find herself in a fistfight.

As they were climbing into the van for the ride back to the condo, Donna and Amy were wiping away tears. My mom, Pat, and Laura had their Pettigrew shields up. Their faces were pictures of worry, but they were dry-eyed.

Back at the crew quarters I went to the conference room to find that it had become a real bachelor pad. J.O., John, and Pepe had tossed money in the cash box, grabbed some beers, and were reviewing checklists while watching the Playboy Channel. I wondered how this was going to square with Our Lady of Space. Pepe's EKG recorder was on the table. As part of a life-science experiment, which would continue in weightlessness, he had been wired for heart data for the past week. I was glad I didn't have one. I could imagine what the docs would say when they saw my heartrate during one of my Prime Crew night terrors…Holy shit!They would never let me on the rocket. And I wasreally happy I didn't have to wear a bowel sound monitor. In their efforts to solve the mystery of space nausea, experimenters had requested some astronauts wear a microphone taped to their gut and a recorder on their hip to catch all the wheezes, pops, growls, and gurgles in their intestines. When the monitors were carried on secret DOD missions, the tapes could not be released to NASA until a USAF security official listened to them to be certain they hadn't captured a classified orbit discussion. That would be one heck of a job title to have on a résumé—bowel sound screener.

Pepe showed us his heart-activities log. The doctors had required him to record the time of every heart-affecting moment: bowel movements, meals, and each time he had intercourse. I noticed the "intercourse" column was blank. "Cheryl's not giving you any, huh?"

Dave Hilmers entered our company just as the TV was showing a topless Iowa coed doing naked handstands on a boat dock in a feature titledFarmer's Daughter. He was not happy. "Come on, guys…You shouldn't be watching this." I was surprised by Dave's complaint. Before I had been excommunicated from the office Bible study, I had learned he was one of the more religiously conservative astronauts. He wasn't the type of guy who would watch the Playboy Channel himself, but I had never heard him be openly critical of others who didn't share his belief system. Maybe it was the looming prospect of meeting Saint Peter and having to explain away the naked nineteen-year-old on the TV. I knew Dave was as scared as I was. While jogging with him, he had quoted a Scripture passage that he found helpful in calming his fears. At

one of our crew parties, when asked about some postflight activity, he had dismissively replied, “I have no plans past MECO.” Those six words spoke volumes. The threat to our lives was so real and immediate during the eight-and-a-half-minute ride to MECO, there was no reason to waste time with post-MECO plans. A post-MECO life was hypothetical.

Dave’s criticism of our TV channel selection hung in the air. Our choice was either to appease him or watch the coed do naked handsprings off the dock and into a lake. It was a no-brainer. Pepe dismissed him. “Dave, a woman’s body is a beautiful thing.”

Hilmers shot back, “But not to be laughed at.”

I defended Pepe. “We’re not laughing…. We’re lusting.”

Dave just shook his head in resignation that our sorry souls were beyond saving. He picked up a checklist and began his review.

On L-1 we drove to the beach house for a midnight lunch with our wives and some NASA support personnel. There were no other family guests this time, thank God. On the drive I noticed J.O.’s cough was getting worse. It had been bothering him for the past several days. I wondered if the flight surgeon was aware of it. Knowing aviators, I doubted it. He probably wouldn’t go to the doc until he coughed up a lung.

After the meal, the NASA guests departed and we were left with our spouses for the final good-bye. Donna and I bundled up and walked to the beach. Earlier at the crew quarters I had jogged under a crescent new moon, but it had set and the sky now offered a planetarium view of the winter constellations. There was enough starlight to illuminate the foam of the surf but the night air was chilly so we steered clear of the water. On the walk our eyes were continually drawn to the northern horizon. The xenon lights of Pad 39A sketched the salt air in shafts of white.Atlantis was being readied.

By now Donna and I were wizened veterans of shuttle launch good-byes. That’s not to say this one was easier. It was actually harder. We had already confessed to each other that we were more terrified of this mission than either of the others because now there was an end in sight. It was hard not to recall all those Hollywood movies where the hero died on his last mission, and our last mission loomed. For me there was just one more time to surrender myself to the terrors of ascent. For Donna there was just one more T-9 minute climb to the LCC roof (or so she prayed). There was just one more adrenaline-draining launch. And then it would be over. We would finally close the NASA chapter of our lives and begin to write the post-MECO chapter. It would be a chapter filled with the fun and beauty of southwest living, of getting back to the deserts and mountains of our youth. It would be a chapter that would record the joys of watching Patrick and Laura follow Amy’s lead into the bans of matrimony. And

it would include the most wonderful part of life…grandchildren. Those were still glimmers in the eyes of our children, but we knew they would come. Yes, a wonderful post-MECO life awaited us. But to get there required one more “Go for main engine start.”

With only the stars as witnesses, Donna and I kissed in a long and passionate embrace that we both knew could be our last.

By noon on February 21, 1990, I should have been an hour into sleep, but instead I was staring into the dark of my room. Even a sleeping pill hadn’t done the trick. I could hear doors opening and closing, murmurs of conversation, J.O.’s worsening cough. I couldn’t imagine he was going to be able to hide it from the flight surgeon and prayed it wouldn’t generate a delay.

But it wasn’t the faint noises keeping me awake. I was suffering a full-blown case of “last mission syndrome.” I had experienced it in Vietnam. Then, the last mission had been identical to the other 133, but because it was my last, my fears had been magnified ten-fold. As I navigated the pilot to our reconnaissance target, I imagined every Viet Cong gunner in South Vietnam had my helmet in their sights. Now I envisioned every bug, glitch, and gremlin inAtlantis ’s hardware and software was conspiring to end my life on STS-36. There was an SSME failure awaiting me, an APU fire, a turbo-pump ready to fly into a million pieces. My heart pounded in deep, thudding explosions. The adrenaline in my veins was eating the narcotic of the sleeping pill, like Pac Man munching through dots in his maze.

I got up, went to my desk, and switched on the light. I wrote to Donna and the kids:

21 Feb 1990, 12:22P.M.

Dearest Donna, Pat, Amy, and Laura,

…I have no premonitions about this flight. I expect I will come home and we will pursue our other dreams in New Mexico. But there is no denying the danger. It is extreme, far beyond any other flying I’ve done. In spite of that I feel it is what I was born to do…. If it is God’s intention to call me, then I want you to know how much I have loved you before I leave. Darling, I have loved you. I haven’t always shown it but I love you with all my heart and soul. You are the first and greatest gift God has given me. The children are the second. There are many others—my health, your health, the kids’ health, my dreams, and the wings to reach those dreams. I want you and the children to remember that. I have been blessed beyond all human reason. Nobody should ever think that God was cruel to take me at this moment. Most people never come close to the self-fulfillment I’ve been blessed with.

I then wrote a separate letter to my mom:

21 Feb 1990, 12:47P.M.

Dear Mom,

Just wanted to tell you for a last time how much I have loved you and Dad. You are the source of my mortal life and have filled it with such abundant love.

Please don't mourn my death. I've had the dreams of a thousand lifetimes fulfilled and died doing what I loved—to fly!

Your Psalm 91 was beautiful and I thank you for giving it to me and for praying so hard for me. Though in your grief you may feel God did not fulfill the promises of that Psalm, I think He did so wonderfully. He fulfilled every word of it.

Please continue to pray for me, as I will for you. I hope God allows me to get back to Dad. There's so much I would like to tell him. Also, tell Tim, Pat, Chipper, Kathy, and Mark that I loved each of them and wish them all the blessings I have known. I love you, Mom. Mike

I folded the letters and slipped them inside a pocket of my T-38 flight coveralls. Those were packed in my EOM bag and would be held for me at Edwards AFB. If I didn't make it back to claim the letters, I knew they would find their way to Donna and my mom. I climbed back into bed and somewhere in midafternoon a shallow sleep finally took me.

I awoke to the depressing news that the mission had been postponed for forty-eight hours. J.O. had been diagnosed with an upper respiratory infection. It marked the first time sinceApollo 13 that a mission had been delayed for crew health reasons. That J.O. had gotten sick didn't surprise me—we were all exhausted. The week of JSC quarantine to progressively shift our sleep cycle had been completely inadequate. And the sleeping pills were useless at inducing good periods of refreshing sleep. I was certain all of our immune systems were in chaos.

To prevent J.O. from infecting the rest of us, he was moved out of the crew quarters and into an unused room next door. He was being quarantined from the quarantine. At our 6A.M . supper the rest of us put on germ masks and took him his meal. His room was an abandoned Apollo-era spacesuit facility painted brilliant white and illuminated with a full ceiling of intense fluorescent lights. Except for a small table, chair, and bed, the room was deserted. J.O. was seated at the table and, in the supernova lighting, he appeared remarkably like the old astronaut at the end of2001: A Space Odyssey. We wished him a quick recovery but none of us wanted to go anywhere near him. We placed his food tray on the floor and used a long-handled push broom to shove it close to his table and then immediately retreated from the room. He croaked a laugh at that.

J.O.’s sickness was just the beginning. John Casper began to feel poorly and went on medication. Dave Hilmers quickly followed. Then one of the mission support astronauts rushed from a briefing to vomit. The crew quarters had suddenly become a biohazard. Health-and-safety technicians entered in full-body moonsuits to swab the quarters for viruses. The flight surgeons also ordered urine and stool samples from all of us. I tried to ignore the turd request but I couldn’t escape. I returned to my room from a briefing to find doctors Phil Stapaniak and Brad Beck had left me a not-so-subtle reminder—a Baby Ruth candy bar inside a collection container. My next bowel movement was into a Cool Whip dish. While I was forking a sample of the mess into a smaller container I screamed at the bathroom door, “This wasn’t in the brochure!”

I sealed the smeared collection container in a plastic bag and dropped it in the garbage can. That contained more medical waste than a New Jersey beach: snotty tissues, other fecal collection bowls, packaging for antibiotics and decongestants, and an empty Pepto-Bismol bottle. STS-36 was being crewed by the walking wounded.

Pepe and I were the only healthy ones remaining. I prayed it would stay that way. If the bug slowly worked its way through all of us, there was the potential for a significant delay. If I was the last to be infected, I could get the giant screw. I could envision being pulled from the flight and a substitute MS taking my place. My old paranoia was back with me…that I would get to within hours of launch only to have the mission snatched away. In spite of the fact it was my third mission, that it wasn’t going to make my astronaut pin any more “golden,” and that I was scared out of my wits, I stillneeded this mission as desperately as a heroin addict needs his fix. The flight surgeons were going to have to pry my jaws open to get a tongue depressor in my mouth.