

Time Out

By Eugene S. Strout MD

Black holes ain't so black. Stephen W. Hawking

1.

Space Corps Test Flight Facility, Yuma, Arizona. Monday 10 June, 2047. 1650 hours.

“Have a seat, Colonel,” Chief of Space Corps Special Operations Lieutenant General Andrew Jackson Shaw, a wiry, graying black man said.

He lit up an illegal Venezuelan cigar with a wooden kitchen match scratched on his thumbnail and took a deep drag.

Thirty-eight year old Astropilot Colonel Philip Evans, still clad in his FTL flight gear, flapped an ineffectual hand at the cloud of tobacco fumes drifting across Shaw’s desk. He stifled a sneeze.

“Got your message, sir. Just finished postflight debriefing.”

“I know. Lucky sonofabitch,” the General said with a paternal wink as he scrolled data on his computer screen.

“If I was thirty years younger, I’d have flown the DA VINCI myself. What do you think?”

“Heck of a bird, General. Slight delay in inertial damper reaction on reentry was the only glitch. Professor Lynch said she’d fix it.”

General Shaw’s widened in surprise. “You’ve met Dr. Lynch?”

“She was at the debriefing, sir.”

A speculative frown from the General.

“Reclusive lady. She avoids such functions and the press as though they were infected with Ebola virus. How do you rate?”

“She was envious, I think. Wanted to fly the prototype herself but had to be age forty-five at max. She’s gotta be over sixty.”

“Almost seventy. Tough lady. PhD and a Nobel Prize in physics when she was twenty-eight,” General Shaw said.

“The DA VINCI’s gravity drive engine is her design. First faster than light spacecraft to be fitted for a manned crew.”

Colonel Evans brushed a hand over his dark military brush cut.

“I tried to read some of her stuff, sir. Understood about six words.”

“Same with me, Colonel. Think you’d have any problems relating to another very intelligent lady?”

“I don’t believe so, sir.”

“Good. Stand by.”

2.

A slim attractive woman with ash blond curls clinging tight to her scalp entered, gave Evans a noncommittal glance.

“Is this my driver, General Shaw?”

The General leaned back, hands clasped behind his neck.

“Colonel Philip Evans, meet Mission Specialist and Professor of Astrophysics Susan Rundquist.”

Evans stood, extended a hand. “Pleasure, Susan.”

She returned a firm, cool grip. “Colonel.”

General Shaw nodded with satisfaction.

“Tomorrow 0900 hours. My office. Be on time.”

He departed, trailing a pungent cloud of cigar smoke.

“Doesn’t he know those things will kill him?” Susan gasped.

“Too old to change his ways, Prof,” Evans said.

“He’s aced every required physical exam. Pulmonary cancer antibody screens always come back negative. Space Corps medics gave up on him.”

“Hmpf. He’ll most likely outlive both of us.”

Colonel Evans tapped a finger on his wristwatch.

“It’s 1730 hours, Susan. Happy Hour at the O Club. I’m buying.”

Rundquist gave him a half-lidded glance and a thin smile.

“I could handle a Coors. Maybe two.”

Sincere chuckle from the Colonel.

“I’m a Bud man myself. You could be my kind of partner.”

A skeptical squint. “Perhaps. I understand you’re a better than average spacecraft pilot.”

“Over ten thousand hours outside Earth’s gravitational pull. Command pilot for our Mars landing.”

Another tiny smile. “I knew that.”

“You married, Susan?”

“Divorced.”

“Me too. Side effect of the job.”

“You got any kids, Colonel?”

“A son, Jeff. Plebe at Annapolis. You?”

“One daughter. Michelle’s a freshman at Stanford.”

“So what’s going down, Prof?”

A secretive smile. “Tomorrow.”

“Let’s go get those brewskis.”

3.

June 11. 0905 hours:

“You’re late,” General Shaw admonished.

“Susan beat you by six minutes. Understand you guys tipped a few last night. You’ve got a tad of conjunctival congestion there, Colonel Evans.”

Susan gave Evans a quick wink and handed him a vial of Visine. “This will help, Phil.”

He gave her a tired smile. “Thanks. Four cups of black coffee helped a little. You look pretty bright eyed, Prof.”

A nod. “My cure is a liter of Arrowhead Spring Water and six Extra Strength Tylenols.”

“Enough commiseration,” the General grumbled. “You may begin, Professor.”

Dr. Rundquist clicked a remote. An arc of dusty silver split the stygian blackness of the large screen next to the General’s desk.

“Recognize this, Colonel?”

“Sure. It’s part of a star map. Celestial North Pole. Polaris, Ursa Major and Minor. The area behind that curve of particles is a blank. No stars. It doesn’t fit.”

“Real time tachyon-enhanced image from the Hubble IV orbital telescope. Twenty-six thousand light years distant. Ring any bells?”

A head shake. “Not a clue, Prof.”

“The Sagittarius-A star anomaly, Colonel. A singularity, or black hole if you prefer. It makes its home at the center of our galaxy.”

“Wait one,” Evans said. “You’re telling me black holes are invisible?”

“Please don’t interrupt,” Shaw admonished.

Dr. Rundquist held up a hand in a pacifying gesture.

“Colonel Evans is right in a way, General. We don’t actually visualize black holes. We learn of their presence by effects on their surroundings.”

She lasered the screen again.

“This arc of glowing gases and particulate dust is the accretion disc. It delineates the boundary of the aberration’s event horizon. Nothing crossing that boundary can escape the gravitational pull. Not even light.”

She tapped another remote stud.

“The following is a transmission from an unmanned probe powered by a third generation Westinghouse cold fusion drive. Sag-A in person.”

The starless aberration filled the screen, encircled by the accretion disc.

“That’s not all,” Susan observed. “Something is different here.”

Evans approached the screen, squinted, shrugged.

“What am I missing?”

4.

“It’s okay, Colonel. I missed it at first also.”

Rundquist coiled tangled curls around an index finger, lips pursed in concentration.

“Something quite unusual.”

“Show the Colonel what you showed me,” General Shaw said.

She clicked the remote again.

“This image was captured just before the probe was devoured by Sag-A’s gravitational pull.”

A faint sinuous distortion appeared peripheral to the accretion disc as she enhanced the image. It faded and reappeared at regular intervals.

“It’s pulsating.”

“I agree, “ Evans said, his voice hushed with wonder.

“What the hell is it?”

“A disruption in normal space caused by proximity to the singularity. I believe space has become folded at this point. The pulsation represents a wormhole. It’s circling the anomaly in a stable orbit.”

“I’m sure of it now.”

Evans swallowed two Tylenols without water.

“Where are you going with this, Prof?”

She tapped the remote. Complex equations and graphs scrolled down the screen.

“Data from the probe combined with what we know from similar anomalies we’ve investigated. They suggest that a spacecraft entering such a wormhole might attain faster than light speeds far in excess of the DA VINCI’s capability.”

“Like warp-ten in the old classic Star Trek movie chips? You’re putting me on.”

Deep sigh, impatient tattoo of high-heeled pumps on the tile deck.

“I’m not indulging in humor, Colonel Evans.”

General Shaw crushed his cigar butt out in his coffee cup.

“Ignore our spacecraft driver’s lack of mathematical skills, Prof.”

“Give him the bottom line.”

5.

She sat next to Evans, her face inches from his, her voice aflame with conviction.

“Where’s your sense of adventure, Phil?”

“Imagine reaching the rim of the universe. The ultimate pursuit. Another Medal of Valor to pin on your chest.”

“And for you, Professor?”

She took a deep tremulous breath, did a slow exhale.

“The chance for proof after six years of grinding out volumes of theory. Siren song of the unknown. My Holy Grail of astrophysics.”

“What does Dr. Lynch think?” General Shaw asked.

“Hypothetical possibility, she said. Otherwise wouldn’t commit. I think she was fascinated by the idea.”

“Long as it’s not her ass with us on the DA VINCI,” Evans said.

“She volunteered, Phil,” Susan huffed.

“Medical shot her down. Her age plus a cardiac arrhythmia. We owe her one.”

Evans raised a hand.

“Suppose we accept this mission, Prof. Uncharted territory, different sets of celestial parameters. How do we get back?”

“Our NAV computer is state of the art technology with accurate predictive capability. It will recall our exact course coordinates and return us to Delta Echo Station, planet Earth.”

She unfolded a precisely notated star chart printout, traced a sinuous course through myriads of constellations with a fingertip.

“A hardcopy backup. Our route to Sagittarius-A.”

Evans leaned back, hands behind his neck. Cervical vertebrae gave gratifying pops as he stretched.

“I’m seeing a lot of ifs here. Gazillions of parsecs of uncharted space. Folded space. Wormholes. What if the universe is steady state? Eternal, not finite? We could be on an endless journey to nowhere.”

“A lot of bigger brains than ours would be back to square one. Kepler, Galileo, Einstein, Hawking and our ship’s namesake as well.”

She clasped her hands together in an attitude of prayer.

“Chance of a lifetime, Colonel. We can be the first. What do you say?”

Evans closed his eyes, took several deep breaths, blinked, nodded. “What the hell. Let’s go get a beer.”

A knowing smile broke across General Shaw’s face.

“Next launch window is in forty hours. I’ll be there to see you off.”

6.

Thirty-six hours post launch (estimated):

Evans peered through the DA VINCI’s forward viewport, blinking in confusion.

“Where are the stars, Susan?”

Professor Rundquist stared. The blackness was total, all-encompassing. It pressed at the tiny aperture, held at bay only by the tenuous red glow of the cockpit’s instrument panel. She unfolded her star chart, held it up to the faint light, gave a sigh of frustration.

“Damn. Where indeed?”

Evans jiggled a switch. “No external navigation lights.”

He grabbed a flashlight from his utility pack and aimed it outside. The beam halted at the plastiglass port.

“Weird. Have we cleared the wormhole?”

Dr. Rundquist scanned the instrument console, disbelief etched on her face.

“Unknown. I’ve got no data input. Look here.”

The time-date chronometer blinked 00.00.

“It won’t reset.”

Evans tried. “It’s frozen.”

“My wristwatch reads zeroes also,” Susan said, tapping its dial with a fingertip.

“Nothing.”

“Mine too,” Evans agreed.

Rundquist tried again to punch up FTL data.

“Damn. NAV computer screen’s frozen too. Won’t reboot.”

“Let me try.”

Evans's efforts were futile as well. Overrides were unresponsive. Subspace COMM frequencies were silent and the emergency beacon release mechanism failed.

"Its gotta be distortion of your wormhole, Susan. The NAV computer's flight program is complete. Inertial dampers have shut down and we've got artificial gravity."

Rundquist chewed her lower lip.

"All the backup systems are off-line. And listen . . ."

"I don't hear anything."

"Me neither. There's no elemental particle hiss from the shields. The slingshot effect around Sagittarius-A should have more than tripled our speed across the fold in space."

She tapped a fingernail on the digital velocity display. "Zero. We're not moving at all."

7.

"I'll try sublight engines."

Evans punched SOLID PROPELLANT START. No response.

"Damn."

He popped an access panel, pulled the manual start lever. Nothing. He pounded the console with a fist.

“We’ve been sucked through Sag-A’s event horizon, Susan.”

“Come on, Phil, we’d be shredded into spaghetti by now. We’re somewhere else.”

Evans’s voice oozed cynicism.

“Slingshot acceleration around a black hole through an allegedly stable wormhole. Billions of light-years in an eyeblink. Explore vast uncharted areas of folded space. And what did we get, Susan? Lost, that’s what.”

“We knew the risks when we volunteered, Colonel. There had to be a malfunction.”

“The computer should have aborted the FTL program.”

She took a deep breath, exhaled through pursed lips.

“There must have been a minuscule fluctuation in the event horizon’s attraction. Too small for the external microsensors to pick up in time to cancel.”

“So where are we?”

“Not where, Phil. When.”

“That makes no sense.”

“The space-time continuum’s been compromised. The sudden wormhole displacement has caused a major temporal and spatial shift.”

“Dammit, Prof. Give me the English translation.”

“I think we’ve become unstuck in time.”

“Time travel? Come on, Susan.”

“Stephen Hawking predicted that when collapsing matter at the core of a black hole reached a state of zero volume, a singularity would be created. Infinite curvature of the space-time continuum would occur. Time would cease to exist as we know it. And we were close enough to the anomaly to be affected.”

“Theory, Susan. There’s gotta be a rational explanation.”

“Listen to me, Phil,” she pleaded.

“Nothing’s working. NAV computer frozen. Chronometers pegged at zero. Light not acting normal. We’re not in the wormhole. The shift. Random fast-forward or reverse through time.”

“Okay. So when are we?”

Her face was ashen in the dim emergency lighting. Beads of sweat decorated her brow.

“I can only speculate.”

“If we shifted forward we’d still see star fields and we’d have some big numbers on the NAV computer and chronometer readouts. So it’s gotta be back.”

“Come on, Susan, give me numbers. You’re the PhD.”

“Fifteen, twenty billion years, give or take a billion or two. Before the Great Big-Bang Singularity.”

Colonel Evans gnawed a thumbnail.

“Why are we still here, then?”

“I can only give you theory, Phil. Best I can come up with we may be enclosed in a bubble of normal space.”

“More Star Trek, Professor?”

“I still believe in a finite universe.”

“Doubtful, Susan,” Evans said. “Too bad our external digital cameras are off line. Professor Lynch is gonna be pissed there’s no video chip.”

There was a sudden flash of blinding orange-white light outside the viewport where only total blackness had existed an instant before. Colonel Evans flipped his polarized visor

down, turned to his partner with a gaze of fearful amazement.

“Oh my God I apologize, Susan . . .”

There was a tiny sound, echoing like a cannon shot in the confined cockpit space.

The time-date chronometer clicked to 00:01.

The End