

Fade to Black

By E.S. Strout MD

There is considerable material in the universe that emits very little or no light. This has been discerned through observation of interruptions in the flow of intergalactic hydrogen streams by gravitational forces . . .

Dark Matter haloes were first objects in Universe.
Spaceflightnow.com

1.

Thursday 21 May, 2054. Space Corps/NASA Headquarters, Cape Canaveral, Florida.

U. S. Air Force General Andrew J. Shaw, a slender black man with graying temples, drank some coffee. He turned his computer screen to show his guest.

“You were right, Prof.”

28 year old dark haired, olive skinned astrophysicist Arturo Spadaccini took a gulp of bottled glacial ice melt water.

“I knew they would agree.”

The General selected a cigar from an ornate humidor, clipped the end and lit up.
“Montecristos. Have one. You’ve earned it.”

“I don’t smoke.”

Shaw clicked a remote to silence the intrusive smoke alarm. “Too bad. Shot of brandy, then?”

Spadaccini nodded. “Okay.”

Shaw poured. They clinked glasses and drank.

“I’ve approved your request. The professors at Stanford and Cal Tech agree with your dark matter thesis.”

Arturo exhaled a relieved breath. “I can have the scientific package here within a month, General.”

“You will have a Lynch Gravity Drive FTL probe, the Lyra. It’ll be refitted to your specs.”

“There’s been one small problem.”

“What’s that, sir?”

“Finding you a driver.”

2.

General Shaw clicked the remote. A lifelike hologram of a young woman hovered over his desk. Short blond hair and grim, foreboding features. A hint of dark shadows under pale, ice-blue eyes. She wore a military uniform.

“She looks mad about something,” Spadaccini said.

Shaw nodded. “Major Katya Andreyev. She’s Ukranian, age 33. Fourteen year veteran pilot of the FTL battle frigate KIEV. Awarded the Star of Valor for exemplary bravery in combat against the Arcturians.”

Spadaccini said, “Yeah. I remember. I was in high school. She was on Fox HoloVid. Much younger and happier looking then.”

He smiled. “I had a teenage crush on her.”

Then he assumed a puzzled expression. “Why would she volunteer to pilot a research probe?”

“Good question.”

Shaw tapped an extension.

“Please send Major Andreyev in, Beth.”

3.

Major Andreyev’s uniform was spotless and sharply creased. Six rows of military campaign ribbons adorned her blouse. They were topped by the gold medallion and bright red trappings of the Star of Valor.

She stood at attention and saluted.

“At ease, Major,” Shaw said. “Please sit.”

“No disrespect, sir. I’ll stand,” she said with a soft Slavic accent.

Shaw blew cigar smoke over his head. "Very well."

"Physicist Spadaccini will be your partner. He has a question."

Arturo stood and offered his hand. "My pleasure, Major."

She nodded, gave him a single shake with a cool hand.

"I've been impolite, Major Andreyev," he said. "Sitting while you stood. Forgive me. Please sit beside me."

She blinked, hesitated, then eased into the second chair in front of General Shaw's desk.

"Please ask your question, Professor."

"Why would you, a decorated FTL combat pilot, volunteer for something as mundane as a research probe?"

She rose abruptly and headed for the door.

"That is my concern only, sir."

Arturo turned to the General and shrugged.

Shaw grinned through a cloud of smoke. "She likes you, Prof."

"I'd never have guessed. Any other candidates?"

"None have Major Andreyev's experience. She's passed a rigorous deep background check. She'll give you a good trip."

4.

Three months later. On board *Lyra* :

Astrophysicist Spadaccini pressed computer keys, shook his head in frustration, glowered at the monitor.

"Nothing. Not a flicker."

"We should perhaps choose a more peripheral galactic arm, Professor Spadaccini," Major Andreyev suggested.

He gave her an intuitive glance. "Thank you, Major. Our Milky Way's spiral arm Orion has drawn a blank. Let's try Cygnus."

She tapped command computer keys.

“Cygnus arm in ten minutes, Professor. Name a location, please.”

“Wow. You’re good.”

She nodded. “A piece of pie. I have flown many galactic missions.”

Spadaccini smiled. “Okay. Let’s try the Cygnus-Norma intersection. And piece of cake is the preferred idiom.”

Arturo detected a faint blush as Andreyev responded. “Piece of cake. Yes, I’ll remember. Cygnus-Norma junction in one minute.”

“Thank you, Major. I was wondering.”

“Yes?”

“I’d like to hear about your Star of valor.”

“Perhaps later. You must have been a child then.”

“I was seventeen, a senior in high school. I watched you receive the award on the HoloVid. You were very young, too.”

A faint smile of reminiscence broke through her dour countenance. “I was 22. My third year as an FTL pilot.”

She breathed a nostalgic sigh and continued. “My reflexes were much better then.”

Arturo held up a hand. “I don’t mean to pry, Major.”

Her response came through gritted teeth.

“Too old, they said. Neural reflex response time reduced by a nanosecond. Tests confirmed. I was offered a promotion and a desk job.”

“You resigned?”

Her glare was sharp and penetrating.

“I’m thirty-three. Too slow for FTL combat. That’s why I’m flying your piece of crap research mission.”

Spadaccini placed a hand on her arm.

“I’m very glad you’re here, Major. I know I’m in expert hands.”

A sudden smile lit her features. “Please call me Katy.”

Arturo extended a hand. “I’m Art.”

“Let us see if we can find your gravity-disrupted hydrogen flow streams, Professor Art.”

5.

Spadaccini blinked. “You read the project’s scientific abstract, Katy. I’m impressed.”

“It is like military mission. One must know enemy.”

“I don’t know if dark matter qualifies as an enemy. It’s just an entity that’s aroused a lot of curiosity. Much of the composition of the universe is unknown.”

“Do you think it is alive?”

“Good question. Maybe we’ll find out.”

There was a sudden beep from the search array.

“Hydrogen flow configuration change,” Arturo said. He fired up the ionization chamber, pressed keys.

“Damn. Not cold enough.”

“Our astrophysics mavens were sure absolute zero was the catalyst for a dark matter reaction.”

Andreyev brushed pale blond tresses from her forehead. “There is no such thing as true absolute zero, Professor Art.”

He nodded. “True. My research data suggests we must get within a thousandth of a degree.”

“Uh-oh, Katy. External temp sensor is showing a sharp drop. It’s close. Opening silicon crystal shutter now.”

Both started at a sudden sharp ping. A brilliant green spike cleaved the scintillation counter’s screen.

“Wow,” Dr. Spadaccini said, his voice quivering with elation. “Look at this, Katy.”

“I agree. It is different than background noise, yes?”

“It doesn’t match any known elemental structure,” he said.

“The temp. Only a thousandth of a degree off. It coincides exactly with the time of the spike.”

“So you think it is real, your dark matter? More likely a computer glitch or micrometeorite. Perhaps message from UFO.”

“Don’t be so negative, Katy.”

“Take us to your leader, Professor Art,” she teased.

“No glitch, and a micrometeorite couldn’t pass through the silicon crystal’s one-angstrom window.”

“I just drive FTL spacecraft. Ask me anything about Lynch Gravity Drive. I can not get my pantyhose in a twist over dark matter.”

“And do you know you blush when you are excited?”

“Are you hitting on me, Major Andreyev?”

A pout of indignation. “How could you believe such a . . .?”

“Now who’s blushing?”

“So tell me, Professor Art,” she asked with a faint stutter, “What should I think about this dark matter? Will we collide with dead neutron star, undiscovered planet? Perhaps stray black hole?”

“Those are structures of known atomic composition, Katy. I believe dark matter is composed of theoretical particles, their existence unproven.”

“Like that little green blip on your screen?”

“Right. Now all I’ve gotta do is repeat it, enhance it, run it through the Space Corps computers and . . .”

“Get yourself another Nobel Prize? You will mention me in your acknowledgements, yes?”

He smiled. “You will be my co-author, Katy. Can you match up the receipt of our blip with time and coordinates?”

She winked. "Piece of cake."

6.

The monitor screen reflected Dr. Spadaccini's jubilation as multiple green pings lit it up. "That was quick. I'm impressed, Katy."

She gave him a contrived pout.

"Hmpf. If I could not plot celestial coordinates, I would not have been piloting KIEV for all those years. You would be stuck with male anal-retentive egotistical overachieving American instead of me."

A soft chuckle from Spadaccini. "Wow. I agree."

Another beep.

"Why is your screen pulsating, Professor Art?"

He stared. "That's new. I wonder . . ."

"You wonder? It is contact from UFO, perhaps."

"Pretty far out concept, Katy."

"Hah!" Andreyev sniffed. "Just because you did not think of it first? I am expert."

"I was trained always to be suspicious of unexpected contacts," she continued.

"We had three. Two were reflections from Zeta II Reticuli ice planet surface. Third was cloaked Arcturian spy ship. I sent it packing with concentrated neutron burns all over its sorry ass."

"I remember," Dr. Spadaccini said with reverence. "Your Star of Valor."

Her answer was a dispirited, "Yes."

"What is it, Katy?"

Andreyev exhaled a soft sigh. "I miss the thrill, the moments of terror and chaos of combat."

"I am distrustful of *Lyra*. No cloaking device, no missile shields, no hot laser weapons. Just an egghead scientist . . ."

She covered her face to hide the sudden hot blush. "No offense meant, Professor

Art.”

“I understand, Katy.”

She peered between her fingers. “I apologize. I enjoy your company, your sense of humor, your . . .”

“You’re hitting on me again, Major Andreyev.”

“Strap in, Professor. We are headed home.”

7.

General Shaw lit a cigar, blew a perfect smoke ring.

“Major Andreyev, Professor Spadaccini, I congratulate you on a mission accomplished. Your dark matter contact within our galaxy is a major scientific event. I am authorized to grant you two weeks of R & R.”

Katya nudged Arturo with an elbow.

“Odessa is beautiful restful city on Black Sea, Professor Art. My family has dacha nearby. I will show you many places of interest.”

“I appreciate the offer, Katy,” Spadaccini stammered. “But I need to confirm our mission findings.”

General Shaw scowled through a haze of cigar smoke. “Your choice, Professor.”

“Thank you, General. I need some time with the computer geeks.”

Andreyev nodded. “Okay. Meet me later at Officers Club. How is seven? I will get us drinks.”

8.

Electronics technician Narindar Singh popped Spadaccini’s data chip into the HoloVid. “From your spiral arm mission, Professor?”

“Yes. Definite dark matter contact. It fits within all the parameters, Nari. My concern is this fluctuation on the second hit.”

Technician Singh tapped computer keys.

“I agree. Single spike on the first contact, repeating hits on the second. Definite fluctuations.”

“They appear rhythmic. Let me plug in some diagnostic software. This could take some time but I have the duty this evening. Where can I reach you?”

“The Officers Club.”

9.

Katya stood and gave Arturo an enthusiastic wave. “I knew you would be here.”

She motioned the waitress over. “Another Stolichnaya for me, and one for my Professor Art.”

Spadaccini raised a questioning eyebrow. “Your second, Katy? It’s only seven-thirty.”

“Third, Professor Art. In Ukraine we have vodka before and after dinner from age fifteen. I have built up good strong tolerance. Drink up now. Nice Russian vodka.”

Dr. Spadaccini raised his drink. “To your indestructible liver, Katy.”

She clinked his ice crusted glass. “To your dark matter aliens, Professor Art.”

Spadaccini’s VidCell alerted him with a snippet of Mozart.

His conversation was brief. “Gotta go, Katy. The spooks are interested in our dark matter chip.”

Andreyev drained her glass with a single gulp, then finished Arturo’s. “Ghosts? I must come and protect you from spooks.”

10.

“I called Intelligence after downloading your dark matter chip contents,” technician Singh said. “The results are quite odd.”

“Agent Mary Howell, Dr. Spadaccini,” the graying, expressionless woman introduced herself, offering a brittle handshake.

“Mr. Singh is correct. Very peculiar.”

Dr. Spadaccini’s face betrayed puzzlement. “In what way, peculiar?”

Howell’s countenance was unreadable. “We have some serious doubts about the origin of this chip’s contents. Standard translation software was used to decipher it. Nothing fancy

at all.”

She tapped the keypad. The green spikes were replaced by multicolored overlapping sine waves.

“This is the fluctuation you described.”

“Very pretty. Like aurora borealis over arctic circle,” Major Andreyev commented.

“Hush, Katy,” Dr. Spadaccini cautioned. “What does it say, Agent Howell?”

“Come with me.”

Spadaccini and Major Andreyev watched over Agent Howell’s shoulder at her computer screen in the Space Corps Intelligence Laboratory.

“Can you assure me that this is not some private little joke?”

“Professor Art was under my direct observation the entire mission,” Major Andreyev said with an icy glare.

“No screwing around, as you Americans say.”

Howell nodded. “Very well, Major.”

She handed Dr. Spadaccini a computer printout.

“This is your translation. In English, transmitted in a simple variation of a light wavelength frequency code.”

Spadaccini read, his brow furrowed in confusion. “English? In the clear? You’re certain?”

“As you can see, Professor, we had concern regarding possible fabrication.”

The printout read:

We sense vital light and warmth.

He handed the sheet to Major Andreyev. She took a look, then laughed out loud.

“You see, Professor Art. UFOs, like I said. Your dark matter aliens are freezing their little green butts off. They just want to get warm.”

Suddenly her eyes grew wide and she covered her mouth with a hand to stifle a gasp.

“General Shaw will not be pleased, I think.”

11.

Shaw viewed the printout with a contemptuous eye. “Major Andreyev, I’m within a gnat’s eyebrow of recommending your court martial.”

“Sir, I can explain . . .”

“Enough. This sort of foolishness is for plebes at the Space Corps Academy.”

His wrath then flashed like Darth Vader’s light saber at Spadaccini. “And you, Professor. A transmission in the clear and in our language? What degenerate sense of humor . . .?”

Arturo’s neck reddened, betraying his smoldering anger.

“I’ve been a Space Corps mission specialist for almost six years. I was awarded the Nobel Prize in Theoretical Astrophysics last year.”

”You, sir,” he continued, “recommended me for this position. And may I add, Major Andreyev was following your direct orders.”

“This is a real contact in our galaxy. No bullshit.”

Katya fluttered dark eyelashes and whispered, “Thank you, dear.”

General Shaw’s voice was suddenly subdued, contrite.

“What should we do now, Dr. Spadaccini?”

“Try to contact them again.”

12.

One week later. On board *Lyra*:

“This is right place, Professor Art. I entered location in Lyra’s celestial navigation database.”

Another flutter of dark lashes. “Pretty good, yes?”

Spadaccini shrugged into his shirt collar to hide the blush.

“Loading Howell’s translation module. Opening silicon crystal port now.”

The screen displayed only background noise.

“Wild turkey chase,” Major Andreyev said. “Your dark matter aliens seem to have . . .”

“Oh wow, as you say.”

The dark screen had come alive with sinuous multicolored interweaving coils of light.

“What are they saying, Professor Art?”

Spadaccini pressed a key.

Do you come from light and warmth?

Andreyev punched his shoulder. “Well, answer them. They are your friends, yes?”

Dr. Spadaccini tapped the keyboard, lips pursed in concentration.

“We are sentient organic beings from a bright, warm world.”

Organic means what?

“Carbon based mammalian species. Homo Sapiens. And you?”

We are myriad cohesive particles. Not organic. We have existed alone in cold and darkness since the Great Singularity.

“Exotic entities here since the Big Bang, Katy. A form of matter never before encountered. I was right.”

“You must ask General Shaw’s question, yes?”

He typed, “How do you know our language?”

We have learned all languages of this universe. There are many. You are the first in uncounted eons to respond.

“How do we know . . .?”

A new message lit the screen.

We will absorb all brightness and warmth.

“Oh, oh. What means this, Professor Art?”

“Absorb? Please explain.” Dr. Spadaccini typed.

Wait.

“I don’t like this, Major Andreyev. We’re moving.”

13.

Seconds later:

“It is my Odessa dacha,” Andreyev exclaimed with unrestrained wonder and joy as she stepped from *Lyra’s* exit ramp to a rustic wooden floor covered with hand woven rugs.

She opened a series of walnut cabinets next to a wall-sized plasma HoloVid screen.

“Look here. Movie, literature and music chips in both our languages. Must be all ever recorded. And next door, clothes and sleeping quarters.”

She opened another door to reveal a large kitchen loaded with modern appliances. She searched cabinets and refrigerators.

“Enough food to supply Russian army for century.”

Then a bright grin. “Stolichnaya! Liters of it in freezers.”

“How could this happen, Professor Art? It is dark outside windows. No stars.”

Bewildered, Arturo turned to the dark matter communicator-translator. “I don’t understand,” he typed.

All universal warm organic beings, all light giving bodies absorbed. Except you. We owe you one.

Professor Arturo Spadaccini nodded. He cracked open a liter bottle of Stoli, poured two chilled glasses, handed one to Major Katya Andreyev.

“Looks like we could be here for a while, Katy.”

She clinked his glass and smiled. “Good.”

The End