

## Coronal Mass Ejection

“Look,” Manny said, pointing out the left window of the jet. “I’ve never seen the auroras this far South.” Cynthia and Elena had a better view from their side of the cabin. Their ooh’s and ah’s expressed excitement at the glowing reds and blues on the tips of the higher-up greens and yellows. They were somewhere over Iowa by now – flyover country as David called it.

“It’s amazing how few people understand how Auroras come from the sun,” Manny said. “Have you ever thought what will happen to our society when the earth finally gets hit by a direct CME?” Manny seemed to be in a mood to chat. “It’s bound to happen sooner or later you know, especially with that strange blackout we had a few weeks back.”

This was not a conversation David wanted to have right now, especially with Manny Volynsky. He was tired. It was late. He had already made David’s day miserable with his endless chatter about the red dust falling all around us. The worst part was he had everyone in the airport lounge believing his explanations. He was a damn near celebrity because somebody filmed his little tirade at the bar and put it on the six o’clock news.

Manny had a captive audience. We were on our way to Washington DC. Even with the top-secret clearance, the captain of our Gulfstream 650 was not happy to fly today. Every commercial flight in the United States was grounded because of the dust. An occasional abrupt maneuver to one side or the other made his displeasure known. He then announced his apologies over the PA, explaining he was trying to avoid the red dust.

“Yes, Manny, I have thought about it. I’m a scientist and an advisor to the president of the United States. Don’t you think we have plans for these kinds of things?”

Manny’s look revealed a mixture of disgust and mistrust. “I know lying has always been part of any government’s plan to control their people,” he said. “But don’t you think it’s going to be a little hard to explain away the failure of so many power generators?”

David sighed, looked out the window, then over to the girls. “I’m only an astronomer, Manny. My job is to talk about the comet and that’s all.”

“Then you’re not doing a very good job,” Manny said. “You haven’t said anything about the connection between the comet and the sun.” He paused, raised his voice. “In fact, you lied when that reporter asked if they were related.” The girls stopped chattering and looked over at them. David felt his face redden.

“Listen, you old...” Seeing Cynthia’s face, he caught himself, lowered the finger he had raised. “...friend. One simply does not tell the public things they won’t understand.” Years of practice calmed his voice. “Trust me. It’s better this way. Details only confuse people, makes them upset. We don’t need that right now.”

Manny cold stare unnerved him. “David, this is not the time to keep people in the dark.” Keeping his eyes on David’s face, Manny pointed out the window next to the girls. “The color of the auroras is not normal and you know it.” Looking out the window behind David, his eyes widened. David followed his gaze. “It looks like they are now south of us.”

The girls jumped out of their seats, sat on the divan just behind David, pointed out the right side of the jet. “That’s either Missouri or Southern Illinois down there,” Cynthia said. “In fact, isn’t that St. Louis?”

“It looks like the auroras are stretching down as far as Arkansas and Tennessee,” Elena said. “I’ve never heard of auroras so far South before.”

“I have,” Manny said. “And David has but he won’t admit it.”

David glared at Manny.

“1859. You know the story. There was so much electromagnetic energy hitting the earth that telegraph operators didn’t need batteries to send messages. Some lines caught fire. They called it the Carrington event after the British Astronomer who was watching the sun that day. Say, that’s your job these days, isn’t it, David?”

The girls were listening closely. David said nothing.

Manny continued. “Auroras were seen all over the world, even over the Caribbean. Gold miners in the Rocky Mountains started preparing breakfast because it was so bright they thought it was morning. You could read a newspaper by the aurora’s light. It was seen as far from the poles as Cuba and Hawaii, but you already know all about this, don’t you David?”

“What’s happening today has nothing to do with the sun,” David said. He heard his voice falter. Cynthia looked at him funny. Even Elena did a double-take. David felt that red flush rising in his face again. He would have to come up with something quick.

David smiled broadly, showed open palms. “Guys, of course we’re talking about a solar storm, but this is nothing like the Carrington event.” He folded his arms. “We’re on the same team here. Are you going to help me do my job or what?”

“And just what is your job, David?” It was Cynthia this time. “I don’t know what’s going on between you and dad. But it is strange you’re the one the news folks have turned to for help in explaining what’s so different about this comet.”

Elena chimed in, “If I remember correctly, the first time we saw you on the news a few weeks ago you said the red dust had nothing to do with the comet. Why should we believe you that these auroras, so beautiful, so extraordinary, so unusual, have nothing to do with the sun?”

“Alright, you got me,” David said. “Of course auroras are caused by the sun, but this is not all that unusual. They come as far south as the Minnesota and Wisconsin all the time.”

“David, I think we’re passing Louisville now,” Manny said. “As far as I can see, the auroras are down in Tennessee and Kentucky. I’d say that’s a little unusual. What’s going on?”

Long pause of silence. David said nothing. He thought hard.

“OK. We’ll know more tomorrow,” David said. “I wasn’t going to say anything until I was sure. That’s always been my number one rule when talking to the public.”

“We’re not the public, David,” Elena said. “We’re like family. You need to tell us the truth.” He never could resist Elena’s combination of beauty and intelligence all through college. “Besides, we’re all on the same team here. Now give.”

Suddenly tired, David leaned forward, dropped his head into his hands and shook it. He stood up and faced the three of them, still sitting in front of him. He looked toward the front of the jet where Dr. Grady slept in his chair. No need to wake him. He’ll know soon enough.

David looked directly at Manny as he spoke. “A few hours after this comet came back into view from behind the sun, we recorded the largest single outburst of electromagnetic energy flowing from the sun directly toward the earth.”

“Go on,” Manny said.

“We’re not sure how, but somehow, because it’s so large, this comet is affecting the sun. Do you remember the blackout a few weeks back?”

“Of course we do,” Cynthia said. “The whole world saw it.” You said on the news we were waiting for the data to come from the satellites recording something on the far side.”

“That’s right,” David said. “What they recorded was a similar electromagnetic plasma flow between the comet and the sun that we’re seeing today between the sun and the earth.”

“I don’t understand,” Elena said.

“When we saw the sun turn black, it was because all the energy was flowing toward the comet on the far side of the sun,” David said. “It has now reversed. The comet, or as Manny likes to say, the planet, is now in front of the sun.”

Manny picked up the story. “The attraction between the sun and the planet between us and the sun pulled energy toward it. The flow probably went right past it and is now hitting the earth with the full force of half the sun. I’ll bet the other side is dark right now.”

“Probably,” David said. “And even though this is amazing new science, which I had hoped to publish at the conference tomorrow, it really doesn’t matter anymore.”

“Why?” they all three said at the same time.

“Because if my calculations are correct,” David said, “there’s enough electromagnetic energy flowing down onto the earth right now to fry every satellite on this side of the world and every large power transformer.” David looked genuinely sad.

“I’m not talking about your local power pole transformer,” He continued. “As long as that energy flows, and it probably will for 36 to 72 hours, every major electric system in the world will be fried as it turns toward the sun.”

“Wait,” Cynthia said, “you’re talking about mass destruction of power, communications, transportation and eventually every device that depends on electric power. Is it possible that this flow of energy could destroy electronic chips?”

“Like an EMP?” Elena said.

“I’m afraid so,” David said. “There’s nothing we can do to stop it. The president asked me to keep this domino effect quiet as long as possible. I guess I’ve done my job distracting people. Not a single news outlet picked up the connection between the planet and the sun.”

“So now you’re flat out telling us it is a planet and not a comet.” Manny said.

“It’s the strangest thing,” David said. “It’s a planet that behaves like a comet. Even with the massive size of this thing, it has a tail just like a comet. Only we can’t see it right now because we’re passing right through it. The red dust is coming from the planet.”

“Will it hit us?” Elena asked, a quiver in her voice.

“As far as we can tell, no,” David replied. “We should pass through the dust for a few days, then we’ll see the comet or planet go by and we should be free and clear...for a few years.”

“What do you mean?” Cynthia said.

Manny chimed in. “It will be back. Our paths will intersect again. Depending on how close the planet comes, there will be massive destruction like I explained in the airport.”

Silence all around as the magnitude of the situation sunk in. Cynthia spoke first.

“Will you let daddy speak tomorrow at the conference?”

“We might as well,” David said, dejection in his voice. “I will explain all I can with what we know but there’s so much we don’t know. Mr. Blackstone will try to stop him, so we’ve got to make sure he’s on the podium, ready to speak as soon as I announce him.”

“There will be TV crews from all over the world,” Elena said. “This may be the only chance to get the word out before the power fails everywhere. What will you tell them?”

“I’m going to tell the truth,” Manny said. “Billions of people are going to die, either from the massive storms, earthquakes and Tsunamis or from slow starvation until we can rebuild our infrastructure. I know it’s not good news, but people have the right to know what awaits them.”

“Why?” said Dr. Grady.

Everyone turned. Nobody noticed he had awakened.

“How much did you hear?” David asked.

“Everything. From the beginning. I wasn’t asleep,” John said.

“And…” David began.

“You can count on me. If you want to introduce me just before Manny, I can describe the effects of Tsunamis and how to prepare for them.”

“I can tell the people where the volcanos will most likely occur,” Elena said.

Everyone looked at Cynthia.

“You don’t need me,” she said. “Earthquakes will be everywhere. The closer this planet gets the more intense they will become.”

“God help us all,” John said.

“God helps those who help themselves,” Manny said. There are some things people can do to protect themselves. Mainly stay indoors or underground. I’ll explain all that tomorrow.”

The captain turned on the “Fasten Seat Belt” sign and announced, “Landing at Dulles in five minutes. It’s going to be rough. They’re reporting several fires close to the airport.”

Cynthia sat next to Manny, David next to Elena as they watched the fires outside the window in the city below. There was that strange blue glow on the leading edges of the wings.

“Brace yourselves,” the captain announced. “We just lost communication with the tower. We have no way of knowing the condition of the runway. The lights just went out.”