Penumbra

Welcome to the twilight zone.

Gregory Benford

The cloud of flies lifted off our table and pursued the corpse coming by on a wooden plank. Mary turned to look at the shrivelled woman being carried on the wood, followed by a little crowd of mourners who fruitlessly batted away the flies. "Was she —?"

"Outside? Guess so. Looks like her hair caught fire," I said.

"We were so lucky, taking a nap."

I hoisted my piña colada. "A day later and we'd have been in California." The ice was cool but not at all reassuring. "And maybe dead."

"You're ... sure?" Mary's eyes jittered. "I know you're an astrophysicist, but really? Is everybody we know ...?"

"The flash, I saw it from the window. In the distance — bright blue at first, then so brilliant I couldn't see."

"But not right here."

"Right, that's what doesn't make sense. We got glare, small fires, but not that —" I pointed to the greasy pall building on the offshore horizon, beyond the warm waves. "That's been building for hours."

She blinked. "But there's no land west of here."

"Those dirty brown clouds must've blown in. Big fires farther away."

Mary's eyes danced. Her hands clenched and relaxed, clenched and relaxed.

"But ... how widespread can this be?"

"Didn't burn us here much, so it's not worldwide. Not a supernova, or we'd see it in the sky." I pointed up. The mottled blue high above was thickening with smoke.

"Then what?"

"I'd say must've been a gamma-ray burster. Why we didn't get it full on, I don't know."

"A ... burster?"

I peered at the sky, looking for some clue. I was more a theorist, not an observer. "We think it's a narrow beam of intense radiation, coming out when a rotating, high-mass star collapses to form a black hole."

The gamma-ray satellites had seen hundreds at safe cosmological distances, but none in our Galaxy. Maybe this was the first. I went through a quick description of what happened when gamma-rays hit the top of our atmosphere. Particle cascades,

ultraviolet flares, blaring hard light, ozone depletion, mesons lacing down.

"How did we survive it, then?"

"Dunno." The flies came buzzing back. I waved them off our steaming chicken mole. "Eat," I said. "Then we go to the market and buy whatever we can."

But there was no market. Crowds had picked the stalls clean.

"We have to live here for a while," I said as we walked back to our hotel. After I'd finished my observing run at the Las Campanas Observatory, Mary had joined me for diving in the Galapagos. Guayaquil was a sightseeing stopover before heading home. We'd seen the cathedral yesterday, echoing and nearly deserted then, but now

a huge crowd surrounded it, listening to a priest blaring out his message with a handheld mike.

Mary struggled with her high-school Spanish. "He says this shows God's favour on them," she reported. "Preservation for them and their families, and liberation from the ... North Americans. And, uh, Europeans."

"How's he know that?" I looked up at the sky again, learning nothing — but saw an antenna on the church roof.

I pointed. Mary was an electronics tech type and she said immediately: "They have a satellite link. Non-commercial. Private."

It took an hour to talk our way through, first with the priest and then a bishop, no less. But their connection was live and took me to the academic satellite links. The downlook cameras showed blazes everywhere north and south of us. Europe, west Africa — a hemisphere burning. Except in a spot several thousand kilometres wide, an

ellipse right at the equator. Where we were.

No link worked to the gamma-ray working group, where a burster signature would show up. But I didn't need one now.

Then the satellite link failed. I didn't try to pursue it. I got up with Mary and walked out into the rosy sunset and acrid air.

Some mestizos by the church, dressed in the sombre black of mourning, turned and looked at us, eyes narrowing. Mary noticed and said: "I wonder if they blame us, somehow."

"Wouldn't surprise me," I said. "We run their Universe, don't we?"

"So they may think, how can something like this possibly be natural? Gringos are the traditional candidates."

"Hasn't happened before, so maybe somebody's to blame."

"Let's get out of here," she said. We strolled away, deliberately casual, but as we approached the hotel, everyone on the cobblestone streets seemed to be looking at us.

"Go up and pack," I said, and went to the travel agent. I was amazed that he was still at his desk. Our tickets to Los Angeles were obviously not going to work, so I tried to rebook to an Asian airport. Any Asian airport. But his connection was dead. The blazing cone of light had come in late morning. That meant it got most of Europe and the Americas, except for that blessed oval where we had been following local custom and taking

siesta in the hushed, indoor cool of a thick-walled hotel. Asia had been in darkness.

We stumbled out into the night air and then I saw it. The crescent moon hung there to our west. "Got it," I said.

She saw it too. "You mean ...? The gamma-ray burster was just behind our view of the Moon."

"That's why the trees weren't burning here. That woman's hair was like tinder — it caught fire, maybe drove her into some accident. We were in the Moon's penumbra, the twilight zone that caught just some of the burst. Anybody on this side of the planet not shielded by the Moon is dead. Or soon will be."

"So now it goes to Asia," Mary said slowly. "The future."

Somehow I smiled. "At least we have one."

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