

SEARCHLIGHT

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"Will she hear you?"

"If she's on this face of the Moon. If she was able to get out of the ship. If her suit radio wasn't damaged. If she has it turned on. If she is alive. Since the ship is silent and no radar beacon has been spotted, it is unlikely that she or the pilot lived through it."

"She's got to be found! Stand by, Space Station. Tycho Base, acknowledge."

Reply lagged about three seconds, Washington to Moon and back. "Lunar Base, Commanding General."

"General, put every man on the Moon out searching for Betsy!"

Speed-of-light lag made the answer sound grudging. "Sir, do you know how big the Moon is?"

"No matter! Betsy Barnes is there somewhere—so every man is to search until she is found. If she's dead, your precious pilot would be better off dead, too!"

"Sir, the Moon is almost fifteen million square miles. If I used every man I have, each would have over a thousand square miles to search. I gave Betsy my best pilot. I won't listen to threats against him when he can't answer back. Not from anyone, sir! I'm sick of being told what to do by people who don't know Lunar conditions. My advice—my official advice sir is to let Meridian Station try. Maybe they can Work a miracle."

The answer rapped back, "Very well, General! I'll speak to you later. Meridian Station! Report your plans." Elizabeth Barnes, "Blind Betsy", child genius of the piano, had been making a USO tour of the Moon. She "wowed 'em" at Tycho Base, then lifted by jeep rocket for Farside Hardbase, to entertain our lonely missilemen behind the Moon. She should have been there in an hour. Her pilot was a safety pilot; such ships shuttled unpiloted between Tycho and Farside daily.

After lift-off her ship departed from its programming, was lost by Tycho's radars. It was ...somewhere .

Not in space, else it would be radioing for help and its radar beacon would be seen by other ships, space stations, surface bases. It had crashed—or made emergency landing—somewhere on the vastness of Luna.

"Meridian Space Station, Director speaking—" Lag was unnoticeable; radio bounce between Washington and the station only 22,300 miles up was only a quarter second. "We've patched Earthside stations to blanket the Moon with our call. Another broadcast blankets the far side from Station Newton at the three-body stable position. Ships from Tycho are orbiting the Moon's rim—that band around the edge which is in radio shadow from us and from the Newton. If we hear—"

"Yes, yes! How about radar search?"

"Sir, a rocket on the surface looks to radar like a million other features the same size. Our one chance is to get them to answer ... if they can. Ultrahigh-resolution radar might spot them in months—but suits worn in those little rockets carry only six hours air. We are praying they will hear and answer."

"When they answer, you'll slap a radio direction finder on them. Eh?"

"No, sir."

"In God's name, why not?"

"Sir, a direction finder is useless for this job. It would tell us only that the signal came from the Moon—which doesn't help."

"Doctor, you're saying that you might hear Betsy—and not know where she is?"

"We're as blind as she is. We hope that she will be able to lead us to her ... if she hears us."

"How?"

"With a Laser. An intense, very tight beam of light. She'll hear it—"

"Hear a beam of light?"

"Yes, sir. We are jury-rigging to scan like radar—that won't show anything. But we are modulating it to give a carrier wave in radio frequency, then modulating that into audio frequency—and controlling that by a piano. If she hears us, we'll tell her to listen while we scan the Moon and run the scale on the piano—"

"All this while a little girl is dying?"

"Mister President—shut up!"

"Who was THAT?"

"I'm Betsy's father. They've patched me from Omaha. Please, Mr. President, keep quiet and let them work. I want my daughter back."

The President answered tightly, "Yes, Mr. Barnes. Go ahead, Director. Order anything you need."

In Station Meridian the director wiped his face. "Getting anything?"

"No. Boss, can't something be done about that Rio station? It's sitting right on the frequency!"

"We'll drop a brick on them.Or a bomb. Joe, tell the President"

"I heard, Director. They'll be silenced!"

"Sh! Quiet!Betsy—do you hear me?" The operator looked intent, made an adjustment.

From a speaker came a girl's light, sweet voice: "—to hear somebody! Gee, I'm glad! Better come quick—the Major is hurt."

The Director jumped to the microphone. "Yes, Betsy, we'll hurry. You've got to help us. Do you know where you are?"

"Somewhere on the Moon, I guess. We bumped hard and I was going to kid him about it when the ship fell over. I gotunstrapped and found Major Peters and he isn't moving. Not dead—I don't think so; his suits puffs out like mine and I hear something when I push my helmet against him. I just now managed to get the door open." She added, "This can't beFarside ; it's supposed to be night there. I'm in sunshine, I'm sure. This suit is pretty hot."

"Betsy, you must stay outside. You've got to be where you can see us."

She chuckled. "That's a good one. I see with my ears."

"Yes. You'll see us, with your ears. Listen, Betsy. We're going to scan the Moon with a beam of light. You'll hear it as a piano note. We've got the Moon split into the eighty-eight piano notes. When you hear one, yell, 'Now!' Then tell us what note you heard. Can you do that?"

"Of course," she said confidently, "if the piano is in tune."

"It is. All right, we're starting—"

"Now!"

"What note, Betsy?"

"E flat, the first octave above middle C."

"This note, Betsy?"

"That's what I said."

The Director called out, "Where's that on the grid?In MareNubium ? Tell the General!" He said to the microphone, "We're finding you, Betsy honey! Now we scan just that part you're on. We have to change the setup. Want to talk to your Daddy meanwhile?"

"Gosh! Could I?"

"Yes indeed!"

Twenty minutes later he cut in and heard: "—of course not, Daddy. Oh, a teensy bit scared when the ship fell. But people take care of me, always have."

"Betsy?"

"Yes, sir?"

"Be ready to tell us again."

"Now!" She added, "That's a bullfrog G, three octaves down."

"This note?"

"That's right."

"Get that on the grid and tell the General to get his ships up! That cuts it to a square ten miles on a side! Now, Betsy—we know almost where you are. We are going to focus still closer. Want to go inside and cool off?"

"I'm not too hot. Just sweaty."

Forty minutes later the General's voice rang out: "They've spotted the ship! They see her waving!"