

## Katacala Nights

### Sci-fi Setting

The human race has spread out among the Milky Way. Hundreds of habitable planets and moons now bear the mark of humanity. A massive anomaly in space - colloquially known as "the Dot" - shines brightly over the colony Maridma. All across the galaxy, thousands are flocking to Maridma to attend the vaunted Katacala, the nights during each solar cycle where the Dot glows with a surreal - and haunting - luminosity. The Katacala has enthralled the public imagination, enshrining the Dot in a pantheon of idols whose significance strikes a chord with astronomers, poets, and thrill-seekers alike. Millions of others are virtually attending the wild festival for the first time. Others still are massing for protests. A solitary astrophysics research group - and dysfunctional family - depends on the success of the Katacala for funding, and their survival as a lab.

### Players

Rajah Blackwell - principal investigator for the lab, desperately believes the Dot is not simply another star or the accretion disk of a black hole, even more desperate for continued funding and support from the rest of the physics community.

Esther Marstell - chief automation engineer and Rajah's partner, now seeks to abandon her spouse's research into the Dot - along with all its negative political and mythical connotations - and move to the city Al-Luneska.

Cinta Evorett - a part-time assistant in the lab and skeptic of the Katacala, wishes that the hype surrounding the Dot would die down and eventually, burn out.

Cyrus Goodard - a rivalrous physicist from the past of Rajah, Esther, and Cinta, styles himself as the intellectual savior those around him, desires nothing more than to take all the glory, and leave not much else.

Length: 10 min ~30 seconds

OPENS TO A MEETING ROOM WITH LOUD MUSIC PLAYING IN THE BACKGROUND - ESTHER, RAJAH, AND CINTA ARE STANDING NEAR THE CONFERENCE TABLE.

Rajah

(barely audible to Cinta but should be so for the audience)

So you see, the reason the Dot could not be a black hole is because the light jets being shot from the accretion disk are *coming off in regular intervals*. And as we feel obligated to explain in every paper we write - as though we really have to remind physicists *what* an accretion disk is - the light produced in the matter collisions outside the event horizon of a black hole could not explain the regularity. Anyways, I think we've said enough about that. Cinta? ... Cinta? ... Cinta!

Cinta

Yeah, that sounds great Rajah. BUT I CANNOT HEAR YOU!

Rajah

It's all that damn noise on the observation deck! Wait, wasn't the party supposed to be last night?

Cinta

That *is* the party from last night! The Katakala just never ends!

-- Rajah walks to the left and slams the door --

Rajah

Any better? My ears are shot.

Esther

By the margins, Rajah. We can hear you.

Rajah

Oh hell, I need to say it all again, don't I?

Esther

When matter falls into a black hole, it starts to accelerate, reaching velocities near the speed of light. The falling matter gets backed up as it waits to be consumed - like bad plumbing or like the queue at a busy nightclub. The matter collides with the particles in front, generating friction, and glowing like nobody's business.

The ironic thing is, of course, black holes trap photons and are responsible for the brightest known objects in the universe. Like you said, same old same old. We've got it, dear.

Rajah

Decisions need to be made then. Important decisions. We're meeting a representative from the council in Al-Luneska.

Cinta

Are they coming to tell us to turn the rapture down a notch? If that's true, I say let them in!

Rajah

No, we're *running* out of funding.

Cinta

What else is new?

Rajah

We *ran* out of funding.

Cinta

That is new.

Esther

Is Cinta firmly opposed to having a mindless good time of drinking, flirting, and stargazing? Remember you're as young as the Bohemians upstairs, Cinta!

Cinta

I like a stiff drink as much as anyone! But you don't need to deify stardust to get blitzed. It's not personal. I just feel like my friends make too big a deal about the Katakala.

Rajah

It's our observation deck. We can charge the price of admission. Twice that for drinks. The young people love it. QED, you need to chill out.

Cinta

(kind of sassy)

Oh I'm chill! I am 0 degrees Kelvin. Maridyans can believe whatever they want about the Dot, and hey, maybe they're right. Maybe the Katakala is the sweet embrace of a celestial bug. Not just another supermassive black hole. Wouldn't that be so flipping cool?

Esther

The "BUT" is flying in from kilometers away.

Cinta

BUT - the Katakala started off as a get together to look at an accretion disk through our telescope. It was informal. How did it turn into...this? Doesn't that bother you?

Esther

Oh Cinta, it's like you want physics and society to sleep in separate. Are they getting a divorce?

Cinta

Well I fail to see what's so wrong with that? I want my physics here. My culture there. Physics. Culture. You see? Much ado about nothing on social media when your status has not changed for a few billion years. "Taking up space", "Hacking up Hawking Radiation", and "Nothing much in particular."

Rajah

The Katakala - young lady - is a living dossier of our attitudes toward the Dot. Doesn't that fascinate in its own way? Must we sow our lips shut to ourselves and the world? You're being unrealistic.

Cinta

You two give me more anxiety than the druggos and Katakala-goers upstairs.

Rajah

(acknowledging)

I admit people are anxious about the Katakala. Some don't like where it's going. Too bad for them I need the money from drink sales.

Cinta

All the more reason to rethink the whole thing!

Esther

All this may be a moot point...Rajah, you're not going to want to hear this. I was delaying telling you the news.

Rajah

What? What?

Esther

Our guest sent a message ahead of his visit. An *ultimatum*, in fact.

Rajah

Who is it?

Esther

You won't be happy. Neither will you Cinta.

Cinta

Don't tell me.

Esther

Cyrus Goodard is coming back for a visit. He'll be here any moment.

Rajah

Back again, like a cancer taped to an ulcer.

(steels himself)

I know we have a history with Cyrus, but we'll have to deal with it.

Cyrus

(sardonic, flamboyant entrance)

And what a juicy history it is. Full of twists and turns. Plots and subplots.

Rajah

*Cyrus.*

Cinta

*Homewrecker.*

Cyrus

Let this be a lesson learned. Spouses are speed bumps, not stop signs.

Cinta

Ugh.

Cyrus

When are you going to get over this?

Cinta

Not before our sun goes out.

Cyrus

(first apologetically, then lovingly and longingly, and then pointed)

Your father and I *met* at that conference in Al-Luneska at least a decade before you were born. There were long walks. Fancy dinners. Romantic tours of Maridma's particle collider. I wish he was still with us. So let me tell you something, kid. A homewrecker presupposes there was a home to wreck!

Esther

It was a long time ago, Cinta. Maybe Cyrus has changed.

Cyrus

I haven't.

Esther

Or maybe he hasn't.

Cinta

You think this is funny, don't you? Sometimes, I wonder if these so-called *academic conferences* are really just excuses to hook up and drink.

Rajah

(fake sincerity)

That's preposterous! I've - I've never heard of anything more ridiculous.

Cyrus

Yes, I fail to see what's amiss with this feature of civilization.

Esther

Rajah, Cyrus, please.

(turns to Cinta)

Cinta, dear, your father was, to use a phrase, "a dirty rotten scoundrel." Always was. Paul Evorett and Cyrus Goodard were made for each other. And your mother never cared. Not really. She was a workaholic. Never the one to really put work into her relationships.

Cyrus

Cinta, I could give you a better life than this hovel. Away from Rajah's toxic fantasy of riding on a unicorn into the Maridyan Physical Association and telling them "I told you so." It won't happen. Not until long after he and I and all of us are dead. That's how history goes.

Cinta

That's a hard pass from me.

Rajah

My destiny is not to become some dead figure "waiting to be discovered." I will be that unicorn, Cyrus. Mark my hooves upon the proverbial sand.

(turns to Esther)

Let's have it then, Esther. I'm ready. Tell us what the council said.



Esther

They said -

Cyrus

(interrupts, oozes)

Actually, Esther, if you don't mind, I'd like to be the bearer  
of bad news.

Esther

(heavy sigh)

Go ahead.

Cyrus

The ultimatum - decreed from the joint council of Al-Luneska -  
"delegations from the planets Nyua and Acrille with the  
mediation of the United Coalition of Earth and Mars have  
unanimously agreed that it would be *best* that the Dot remains a  
black hole with an accretion disk this year."

If you pursue *any so-called "alternate theories"* of the Dot, the  
Katacala is off. Kaputt. Your sponsors will withdraw, along  
with any hopes of funding. Deliciously heavy handed, I have to  
say.

Cinta

I can't believe this! Is astrophysics a democracy now?

Rajah

So that's it, we're done? This is a political gambit, Cyrus.

-- Cyrus flashes and waves the document around his head --

Cyrus

Well, yes. Of course it's political. This piece of paper literally says so. Anybody confused about that fact? Anyone at all?

Esther

Cinta, I thought you'd be pleased. Didn't you say we were peddling snake oil?

Cinta

The Katakala is poisonous. Don't get me wrong. But it wasn't supposed to go like this.

Cyrus

Oh relax. In the fine print it says - *for one solar cycle*. One year in the doghouse, and then you're back.

Cinta

How gracious of you. The council is asking us to fart around for a whole year?

Esther

Cyrus, you're asking us to abandon our research identity due to political pressure. You must see something wrong with that.

Cyrus

I admit that the judgment passed down here was hot to the touch. Perhaps overzealous.

Cinta

Insanity.

Rajah

Oh, this isn't the end. Not by a long shot. Cyrus would not have volunteered himself to tell us if it was.

Cyrus

We do have an alternative to your predicament. You don't want to be set back an entire year, do you? You don't have *funding* for another year. Such is your lot.

Rajah

We've known each other a long time, haven't we Cyrus?

Cyrus

We have.

Rajah

And we've been through a lot.

Cyrus

That's true.

Rajah

Then you don't mind me calling you a snub-nosed son of a bitch?

Cyrus

Please, no need to be so formal!

Esther

Rajah, is this worth it? The writing's on the wall. We could pack our bags and leave this behind. We've done enough.

Cinta

No, no, I want to hear this. What's your plan?

Cyrus

(begins a long-drawn out speech - proclamatory)

At the dawn of modern physics, Galileo wrote that the world is written in the book of numbers! Yet this ol' stick in the mud - that disciple of Aristotle - Cremonini - he refused to look through Galileo's telescope! Delaying the revelation -

Rajah

What the hell are you doing! Get on with it, Cyrus!

Cinta

Can you just get to the point?

Cyrus

Well, I guess we're skipping the first 20 minutes of my presentation. Hmmm...where to start? A colleague of mine came to my office a year ago asking about the Dot. Then we wondered, what is the most pressing mystery?

Esther

The light jets of the Dot are predictable. Hence, we host the Katakala on regular intervals.

Cyrus

Exactly. The leading conjecture is that the Dot is a slightly out of the ordinary blackhole.

Cinta

And they're right, aren't they?

Cyrus

My team has, like you, been monitoring the Dot. And unlike you, we've made real progress.

Rajah

They let you study the Dot? I don't believe it. New studies on the Dot are almost untouchable. It's a taboo.

Cyrus

Secrecy, flattery, and bribery - what can I say - I have my ways.

Rajah

Add treachery. Who'd you blackmail, Cyrus?

Cyrus

(clears his throat)

Now some of our colleagues explain the mystery away by noting that many celestial objects have well-defined periods of heightened luminosity.

Esther

Well, in effect, they're denying that the radiation from the Dot is a light jet. Beams of light that shoot out of black holes are linked to their accretion disks, but *these events* occur when black holes devour other objects. Not because they're periodic.

Cyrus

Correct. So we went looking for other explanations. Outlandish, scandalous ones.

Rajah

Wait, are you talking about my proposal?

Cyrus

We reached out to 12 other research groups on Earth, Acrille, and Victoria. We did an intense cycle of data collection for about six weeks. At the very edge of the Dot's light cone. Besides the Katakala, we thought the Dot's brightness was mostly the same year-round.

Esther

You would expect to find a well-defined perimeter of light. But you didn't, did you?

--long dramatic pause - Cyrus looks at everyone --

Cyrus

We identified fluctuating spacetime geometries around the Dot.  
The measurements -

Rajah

YES! FUCKING YES! YES! That was my proposal! You tested my idea! Oh my god! Oh my -

Cyrus

Rajah, you were Galileo in my artful analogy. The rest of them are Cremonini. We only made progress because of your work.

Cinta

WHAT? The Dot is *not* a black hole? Are you kidding me? How?

Rajah

Nothing like a good metaphor to make the medicine go down. Our idea was, we kept getting wrong measurements about the Dot because the fluctuations in the space surrounding it throws off our methods. Very roughly, the Dot is like a drowsy eyelid that puffs and opens wide during the Katakala. Cool right?

Esther

That's why no one could measure its mass, spin, nothing. It's not a black hole!

Cinta

I don't believe it. I just don't believe it. What in the hell people?

Cyrus

Now unfortunately, before we break out the champagne, you should know...

Rajah

(not aggressive, but warning)

Cyrus, don't you screw us on this. You weasel.

Cyrus

Your names - your names will not be on the first round of publications that comes out of this research. They *can't* be. Because you *host* the Katakala.

Esther

Cyrus, are you serious? You'll kill the lab anyways. You know Rajah's desperate.

Cyrus

I told you I was the bearer of bad news. Emphasis on "bearer."  
Squared emphasis on "bad."

Rajah

(explodes with a mocking grin)

CYRUS GIVETH. AND CYRUS TAKETH AWAY! Isn't that right, you -  
low-balling, bottom-feeding tadpole!

Cyrus

(recites dryly, lazily)

This was a joint decision among all the researchers who put  
their credentials at risk to gather data for your thesis. And  
repeat - the ultimatum was -

Cinta

No, this is you undercutting us so you can steal the credit!

Cyrus

(again, dryly)

Oh please, I have more than enough credit already. I could use  
scraps of my CV instead of wall paper.

Esther

Rajah, hold on a minute. Let's keep this in context. The  
Katacala has no pull with the physicists across the galaxy.  
We're a puddle of excess and eccentric fascinations to them.

Cyrus

Speak reason, Esther. You get that my hands are tied.

Rajah

Bullshit.

Cinta



Ditto.

Cyrus

(stern but with composure)

No, you don't get out enough. Don't you understand? Don't you remember? To them, you're a pack of sunworshippers chasing an occult ideology!

Rajah

(short pause then emphatically)

Funny...I THOUGHT THE SAME OF YOU.

Cyrus

Well, you have to chase the *right* ideology to get ahead in life, obviously. That's just 101.

Cinta

I, for one, am not surprised in the least by your antics. You never tire of world domination do you, Cyrus?

Rajah

World domination...

(trails off, as if to say, "not even")

Didn't you spend the last hundred cycles gushing about your delusions of grandeur?

Cyrus

I've been on a hiatus. We overbooked the last round of talks.

Rajah

(slowly, with gravity)

Heavy is the head that wears the wireless mic, eh Cyrus?

Cyrus

(points to his shirt)

Actually it pins to the second button.