## JAN 14, 2023 What exactly is the 'Eye of Aldhani' in Andor?

It may look like a meteor shower on steroids—but it doesn't act like one.

In Andor, the groundbreaking new *Star Wars* show starring mid-level bureaucrats and petty criminals, daily life inside Palpatine's Empire is visible as never before. But for a show focused on uncharacteristically humble narratives, like a disgraced security guard's quest for justice and the plight of workers inside an imperial prison, Andor still delivers audiences one big cosmic spectacle: A celestial fireworks show known as the "Eye of Aldhani."

It's an event of spectacular beauty. But if you're like me, the Eye also left you with an astronomical question: What the heck is it?

The event, which a group of rebels uses as cover to pull off an Ocean's 11-style heist of an imperial base, is described as looking like "fifty meteor showers all at once." That's certainly an apt visual comparison, and it's better than a "recurrent band of crystalized noctilucent microdensities," the impenetrable technobabble explanation offered later. But the Eye has some peculiar characteristics that suggest it's no ordinary meteor shower, and that another astronomical event — or even a biological one — might better explain it.

Before we get into the Eye, a quick refresher on meteor showers: There are **billions** of balls of ice and rock, called comets, orbiting our Sun and leaving trails of dust and debris in their wake. Terrestrial meteor showers occur when Earth's orbit intersects one of those debris trails, causing countless pebble to sand-grain-sized bits of rock to burn up in our atmosphere.

"Think of it like a car driving through a cloud of bugs," Andria Schwortz, an astronomy professor at Quinsigamond Community College in Worcester, Massachusetts, told The Science of Fiction. Except instead of a windshield of chitinous slime, you get a sky full of what looks like shooting stars. Occasionally, larger chunks of debris make it into the mix, producing **brilliant fireballs**.

The visual effects team behind Andor did a good job making the Eye of Aldhani *look* like a meteor shower on steroids: As the heist is taking place, the sky transforms into a curtain of streaking neon lights and smoking, crackling fireballs, all emanating from what looks like a single point on the horizon. (Meteor showers similarly <u>have a point in</u> **the sky** from which they appear to radiate.) The "meteors" themselves are mostly blue, green, and yellow, all colors that are **frequently seen during showers** and indicate the presence of magnesium and sodium, elements commonly found in space debris.

Still, Schwortz isn't convinced that the Eye *is* space debris. Meteor showers, she notes, should come around every single year as Earth (or Aldhani) intersects the comet's orbit. But in Andor, we learn that the Eye of Aldhani only occurs every three years. While it's possible that a more milquetoast meteor shower *does* occur each year — some meteor showers, **like the Leonids**, peak at regular intervals, as Earth passes through the debris trail left behind the parent comet more recently — we're given no indication of that in the show. And there's another problem: In Andor, we're told the Eye is predictable down to the minute.

Meteor showers aren't like that. Typically, the number of shooting stars visible in the sky increases to a peak over the course of several nights before tapering off. Stargazers will often plan a specific night to go out and watch the meteor shower at its best and brightest, but it's not like attending the Times Square Ball Drop.

Meteor shower spectators can also go to just about any dark location to see a shower, assuming they're on the side of the Earth facing into the comet's debris trail. But on Aldhani, pilgrims travel to a specific spot to view the Eye each year, suggesting it is a more localized event—although it's possible that viewing location is based on culture and tradition rather than science.

If the Eye isn't a meteor shower, what else could it be? Perhaps it's some sort of space weather event, like a **geomagnetic storm**. These storms, which can disrupt satellites and fry power grids, occur when the Sun hurls a blob of high-energy plasma, called a coronal mass ejection (CME), in our direction. When that CME reaches Earth, it induces currents in the upper atmosphere that can produce beautiful aurorae while at the same time wreaking havoc on technology.

But while we see a *bit* of an aurora-like ripple effect in the sky during the Eye, geomagnetic storms here on Earth don't feature radiant streaks of shooting light. And while the imperials speculate during the heist that their communications might be down as a result of the Eye, the rebels' communications still work—as do the electronics aboard their getaway ship. So, not much evidence for electromagnetic interference. Geomagnetic storms as we know them also can't be predicted down to the minute, years in advance.

Schwortz prefers a more exotic explanation: Perhaps the Eye is some sort of space life.

The Star Wars canon already includes large animals that are native to space, like the **purrgil**, which Wookipedia describes as "a semi-sentient species of massive whales." Perhaps the Eye is caused by migratory space whales that produce a bioluminescent glow to guide their trek through the crepuscular cosmos—just as many animals living in the inky depths of Earth's oceans **generate their own light**. Or maybe the meteorequse streaks and fireballs visible from Aldhani's surface are **bits of slime trail from a giant space slug** burning up in the atmosphere. If the cosmic creatures behind the Eye followed the same exact migratory route every three years as they swim from star to star to spawn, that could explain the predictability of the event.

Sure, there are some problems with the idea of an interstellar space whale migration. Tiny animals called tardigrades can **temporarily survive the vacuum of space** by transforming their bodies into freeze-dried protein packs, but no life that we know of can actually thrive there. But remember, this is the universe where **steel can survive plasma sword strikes** and wizards levitate ships with their minds. The laws of nature are, well, bendy.

"I think if we wanted to fit real-world science, the meteor shower sounds the most realistic but there are some flaws," Schwortz said. "If we wanted something fun, space whales."