



Outtakes #4: Crash Course Astronomy

Outtakes

<https://youtube.com/watch?v=3njU20j7chE>

<https://nerdfighteria.info/v/3njU20j7chE>

Phil Plait: All of these properties are brain-melting, but are they real? Could an object like this (nonsense) 'cause you know, honestly, no, they can't.

(Intro plays)

The result of a rule in quantum mechanics that says that electrons vehemently rezzzzist... The result of a rule in quantum mechanics that says that electrons vehemently resist being squeezed together. Who wrote this?

Is the hands? Is the hands good? Is the...? Are the...?

Female voice off screen: Is hands good?

Stan Muller: Hands good are.

Phil: Is there owls?

But that's what we in the science business call a selection or ssss, ahhh... a selection, or selection.

What if the mass is more than mooore is mooore is is moore than...

Only that one? Good job Phil, why don't you write a ton of stuff?

Plenty of time for any stores, any storings barn with it...

And some tip the cosmic scale. (smacks lips)

Stan: It was good, though.

Phil: Yeah. Doing pretty well until I started salivating too much.

Alright, black holes make me drool a little bit.

Open clusters are loosely bound and (slurred) irregularly shaped, irregularly shaped. Irregularly.

Such a star would be extremely weird or really just extreme.

(hesitates, laughs) its mass...

We think that they were among the first objects in the universe to form after the universe itself formed in the universe.

This one is never-ending. It's like the universe itself.

Stan: Maybe.

Phil: This episode is 45--

Lady: No edge.

Phil: yeah. No edge! Except right here is the edge.

Unlike open clusters, though, globulars are OLD. Very old. (freezes, Stan laughs)

Phil: Are we boring you Nicole? Sorry.

Voice OS: I'm yawning a little.

Phil: I know. It's 'cause there's no oxygen in this room, I think I'm using it all up is the problem. (laughs)

Phil: However, galaxies really are that big and they truly are mind-bogglingly dis-- mind-bogglingly cl-- alright. However galaxies really are that big, and they truly are mind-bogglingly distant.

Voice OS: Mind-numbingly distant

Phil: Mind-numbingly distant. Yeah, mind-bogglingly..

Voice OS: (laughs)

It's actually just a bubble sitting on the edge of a much much larger mo- uh molecular... much much larger okay.

(mouth sounds)

Um that was- hold on my face was funny there.

Phil: Got a little.. a little dark matter stuck in there. Alright.

Voice OS: Probably makeup

Phil: (laughs)

Phil: I sneaked a breath in there.

Voice OS: You sneaked?

Other voice OS: Sneak snuck.

Phil: Snuck is not a word, as my wife will be more than happy to tell you.

Voice OS: But it's so fun to write. Snuck, snuck. It's fun to say.

Snuck, snuck, snuck, snuck.

Voice OS: Because you're referencing Episode 1 so uh...

Phil: I think my glasses are crooked. Can you- can you tell?

Voice OS: No

Phil: Okay

Phil: Over time, these interactions tend to flick the lower stars out of the cust... out of the cluster, out of the cluster...

Phil: And I haven't even mentioned magnetars yet, humph

VoiceOS: You leaned into it

Phil: Oh, Sorry, yeah

Voice OS: No, you're fine to do that

Phil: OK, oh yeah I'm gonna do that. By the way...

Phil: These are... are you done? What was that noise? Was that just the water slurping in the bottle? OK.

Phil: Just outgassing a little bit there. Haha...see, it's just a astronomy term.

Phil: Excuse me, boy, that one was just waiting in the middle of that paragraph.

VoiceOS laughs.

Phil: Mmmm, coffee and bacon.

Phil: Neutron stars with the strongest magnetic fields are called 'magnetars' (burps) and are capable of colossal ff (laughs)

Phil: Black holes come in different sizes, but for all of them the escape velocity is greater than the speed of light, so nothing....argh, so nothing, so nothing, so there.

Phil: Just in case Nicole uses this for the outtakes. Now she's like Big Brother and we're terrified of anything she might put on....

Nicole: That's right!

Phil: On YouTube

(Outro plays)