

## Blueshift – July 17, 2009

**Maggie:** Welcome to the July 17th, 2009 episode Blueshift, the podcast brought to you from the Astrophysics Science Division at NASA's Goddard Space Flight Center. I'm Maggie Masetti.

So, here it is, mid-July and you know what that means! Well, for me, it means packing about where my summer has gone. But what it really means is that the movies are full of summer blockbusters. When you work somewhere like NASA, everyone's got a bone to pick when a new sci-fi movie comes out. Sometimes Hollywood gets the science right... but more often than not, it's terribly, painfully wrong.

Sara Mitchell and I walked around and asked our friends and co-workers what really annoyed them about how astronomy (and science in general) is portrayed in Hollywood. We really expected the major complaint to be about things like sound in space, and though that did bother a few people...

**Meredith:** Sound in space...

**Bryan:** Sound in space...

**Derek:** There's no medium for sound to travel through.

**Maggie:** ...in the end, we got a much wider variety of answers than we thought we would. We had people sound off about old movies as well as newer ones, but either way, there might be plot spoilers, so keep that in mind! First up, Independence Day.

**Brendan:** There's the part of the movie where the main spaceship is supposed to be like a quarter of the mass of the moon and it sits between the Earth and the Moon and doesn't, you know, peel off our atmosphere or cause tides to go, you know, 900 feet tall, or whatever. And then they blow the thing up in the end, and it falls down to Earth, and it's a quarter of the mass of the moon and nobody gets hurt really, and it looks like the 4th of July...because it's Independence Day. Yeah, that's one of the ones that really bothers me.

**Tommy:** Well, in the recent Star Trek movie, I found the scene where Spock somehow manages to watch the destruction of his home planet from like, across the galaxy really frustrating. You know, this kind of like lack of representation of distance in astronomy is often frustrating in movies. And also, anything where anyone gets sucked into a black hole. From far away. That is also very frustrating to me. Mainly because it took me such a long to develop an understanding, as a scientist, of how black holes actually do accrete material.

**Brendan:** Not to mention the fact if that they're really that advanced, then, you know, why wouldn't they just genetically engineer a virus to kill all humans and dump it in the atmosphere?

**Laura:** There was the scene in Tomraider where they were talking about the supposed planetary alignment of all the planets ...aligned perfectly. Yeah, that doesn't happen. There was also the fact that she could walk up to her in-house observatory, look through a telescope, and see all the planets simultaneously aligning. That also doesn't happen.

**Brendan:** Or grab an asteroid on their way in, and slam it into the ocean, and kill everybody, and just wait a few days, and then take over the Earth.

**Eric:** Probably the worst offender that I can think of lately is the movie Mission to Mars. That movie I had great hopes for, because at the time, at the time I was working on the Mars Global Surveyor mission. But as my kids and I were watching the movie, and we saw them getting ready to explore Mars, and then I noticed that their landing site was Cydonia. Cydonia is the location of The Face. And unfortunately the movie went downhill from there. On the whole, giving credence to the Face on Mars movement was extremely disappointing. Another movie that came out at about the same time called Red Planet with Val Kilmer and Carrie Ann Moss, wasn't a whole heck of a lot better because suddenly Mars had a breathable atmosphere, which surprised the heck out of me.

**Brendan:** Or why that advanced a civilization would really need to, like, kill all the humans and take over the Earth when there are all kinds of planets out there to grab resources from.

**Maggie:** Ok, ok, Independence Day aside, when does bad science matter, and when can we just suspend our disbelief?

**Peter:** The number one thing is they portray that it's that easy. You just look at a bit of data, and oh, that's the right answer. It just falls into your lap. That is not true. Finding the right answers takes a lot of effort and legwork and generally investigation. It's not as if you can just run an observation of some object and know everything about it five minutes later.

**Tommy:** I think movies set in space tend to not ever really be about science at some level. So in that kind of situation, I can forgive explosions in space, or people leaping across from starship to starship with no breathing apparatus or anything, right? But in movies where science is like a central theme? I'm thinking specifically of The Day After Tomorrow here...that sometimes gets so bad, that watching the movie becomes incredibly difficult. Yeah, I'm willing to be forgiving most of the time, but if science is central to the plot, then no way! Get it right, you know! Call someone at Goddard!

**Maggie:** Well, I'm sure we'd all like to see them get it right more often. You know, like, in that movie Signs, when the aliens who are allergic to water try to take over a planet that is mostly water? I mean, it even falls from the sky here. What's up with that? And don't even get me started on Armageddon! Of course, all the opinions in this episode are of individuals and not of NASA. So now we want to know, have you seen any good movies lately? Or were you driven crazy by impossible physics in Transformers 2? You can sound off about astronomy in the movies at our website ([universe.nasa.gov/Blueshift](http://universe.nasa.gov/Blueshift)) or you can find us on Twitter... We're @NASABlueshift (all one word). We'll see you in a couple of weeks with another episode. This is Maggie Masetti, bringing the universe closer to you, with Blueshift.