

Why are we told to stand on one foot and crouch low to the ground during a lightning storm? Can't a circuit through the body still be formed?

why does light travel slower when it travels through a medium (air, glass, etc)?

How does polarizing light work on the atomic scale? E.g. in polarized sunglasses.

Last week in class we were talking about a magnetic dipole that exists around the earth, blocking out harmful radiation. And I know that the poles of the planet have reversed in the past. My question is: When is earth due for another pole switch? And what will happen to the planet when it does? For example, will our technologies or coordinate-marking systems need to change? Will the planet's natural ability to block external radiation remain the same?

Why does the Asteroid belt and the Kuiper belt exist? Why didn't they form more planets instead?

We obviously know that the sun fuses hydrogen to make helium at its core, but how do we know this? How are we certain that this is what happens?

Is it possible for us to utilize modern methods to cause a star's life cycle to become accelerated? For example, would dropping a heavy element into a star kill it?

I know that the inner bones of the ear are what cause us to hear pitch, but why do we only hear certain tones? For instance, why does 440Hz sound almost identical to 445Hz? Also, in terms of physics, what causes people to have perfect pitch?

How can gravity affect light if light is massless... And what's up with light being treated as both a particle and a wave?

What causes the Casimir effect and how can it be reasoned/explained?

After the bomb explosion, why sometime does the smoke look like mushroom?

How does so much information pass wirelessly (phone conversations/wireless internet/etc) without interfering with the data itself?

what are the other dimensions? What would it mean to see things in 4D or 5D?