

What causes atmospheric airflow and wind?

Why exactly is it that arches create support for structures like bridges? How is it that they can support so much weight?

Last week we were talking about different states of matter and how you can change a materials state by changing temperature and/or pressure (and looked at the graph of temperature against pressure) but I was wondering about plasma. How does it fit into the graph?

We talked about the surface tension last week. Does this tension only happen in liquid? We know that molecules are always moving in the temperature above 0 K. I assume this phenomenon happens in any condition( liquid evaporate because of this and some solids would stick together after long time). If we put a pore solid object in vacuum, is there any possibility the object would have less mass because of molecule movements? If not, can we explain in terms of surface tension?

What is chaos theory?

What is the difference between AC and DC?

What are the differences between Van der Graff machines and Tesla Coils? How did they come about and how are they used today?

What is Brownian motion and what is the physics behind it?

What exactly are gravitons and can they be detected experimentally?

How is it that the observable universe has a radius of 46 billion light-years, but the universe is thought only to be ~14 billion years old. How can the universe expand faster than the speed of light?

What is the theory of super symmetry and how is it different from the standard model of particle physics we have today?

What is the theory of Copenhagen Interpretation and the Many Worlds Interpretation of Quantum Mechanics? Why do we even need an interpretation of Quantum Mechanics in our understanding of nature?

What is the black hole information paradox? What are the underlying principles that shape this paradox?