Game 12

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Describe what was the challenge and the Physics had in the first decade of 20th century regarding the "Black Body Radiation"

Black body radiation is when an object in a dark room appears grey in colour due to the energy being emitted being on the infrared spectrum, and therefore cannot be percieved by human eyes. It is something that seems bizzare since the item would achive thermal equilibrium, the black body would radiate all of its energy instantly until it was finished. This action would be coined as "ultraviolet catastrophy".

What was the challenge, describe it clearly, and how was it solved, by whom and what was the idea that the solution was based on.

Max Planck was the person who came with an answer to the ultraviolet catasatrophy, he comes to the conclusion that energy distribution is not continious. He was able to get an equation related with what was occuring to help create greater understanding for what was occuring. He was able to come to such a conclusion by analysing the waves of electrons coming from the black body's radiation.

Einstein was using the attribute of light being quantiumtised, and as he shot different coloured lights at a plate, there would be a difference as he would continue with the experiment, with blue light allowing an electron to get freed, however red, no matter how many times he tried, would not free an electron.

Please write more, and put your thoughts in it.

Being able to measure objects' temperatues from a distance is incredibly cool, the name comes because they absorb almost all light cast upon them, and would radiate it with near perfection. Objects that are extremely hot tend to have more blue colouration while a cooler object has more red colouration. The wavelength changes as the temperature increases within an object.

If I understand this correctly, it will absorb all of the light it can while dumping all of it as it radiates it away in the invisible light spectrum. Is the energy level that much higher that it does not emit any colour of visible light? Does it do anything special if it is in a truly lightless room?