How to measure the universe

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The Royal Observatory Greenwich is giving free presentations of "Measuring the Universe: from the Transit of Venus to the Edge of the Cosmos" from now until September 1.

Measuring distance doesn't sound like a very challenging thing to do — just pick your standard unit of choice and corresponding tool calibrated to it, and see how the numbers add up. Use a meter stick, a tape measure, or perhaps take a drive, and you can get a fairly accurate answer. But in astronomy, where the distances are vast and there's no way to take measurements in person, how do scientists know how far this is from that and what's going where?

Luckily there are ways to figure such things out, and the methods that

astronomers use are surprisingly familiar to things we experience every day.

The video above is shared by the Royal Observatory Greenwich and shows how geometry, physics and things called “standard candles” (brilliant!) allow scientists to measure distances on cosmic scales.

Just in time for the upcoming transit of Venus, an event which also allows for some important measurements to be made of distances in our solar system, the video is part of a series of free presentations the Observatory is currently giving regarding our place in the Universe and how astronomers over the centuries have measured how oh-so-far it really is from here to there.

Source: Universe Today