The Cosmic Uroboros

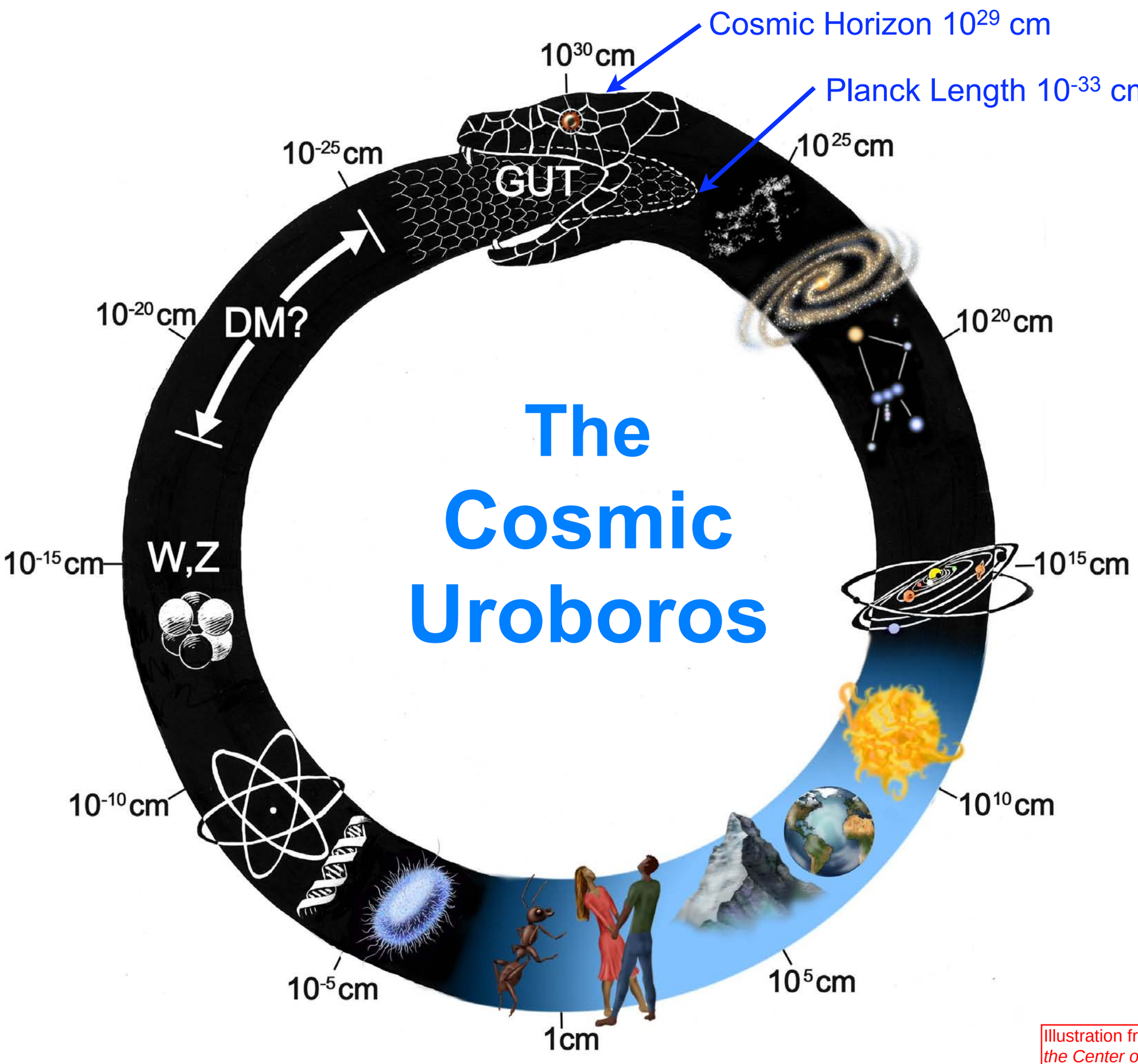


Illustration from *The View from the Center of the Universe*

Superstrings?

Dark Matter?

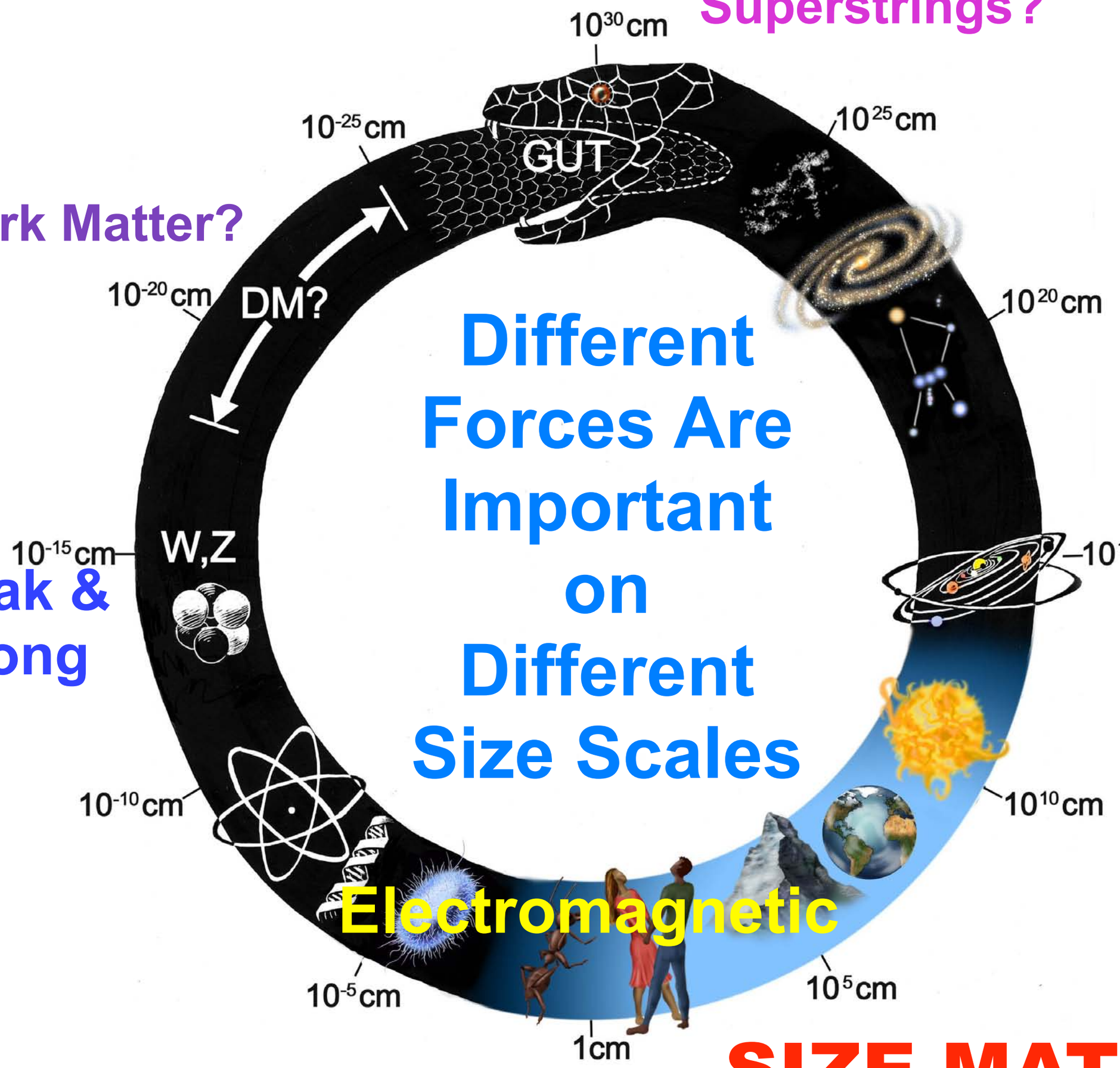
Different Forces Are Important on Different Size Scales

Weak & Strong

Electromagnetic

Gravitation

SIZE MATTERS!



SIZE MATTERS!

No animal could be 3 times its normal height and stay the same shape, simply scaled up.

If height increases 3 times,
strength of bones increases 3x3 = 9 times.
But weight increases 3x3x3 = 27 times.
Its weight would crush its bones!

That is why an elephant does not look like a large gazelle.

Bone of small animal

Bone of animal
3 times longer

From Galileo's last book, *Discourses On Two New Sciences* (1638).

King Kong