

Feeling Earth's Spin

Just Another Straw Man

The flat Earth claim that we should feel the Earth's spin is a classic straw man fallacy. Flat Earth proponents often share diagrams depicting high speeds at the Earth's surface, suggesting that these speeds should be impossible because we would supposedly feel such motion. While these surface speeds are correct, the argument fails to acknowledge a basic distinction we encounter daily: the difference between velocity and acceleration.

Consider the experience of being a passenger on a commercial jet compared to riding in a car leisurely cruising down the road. With eyes closed could a passenger distinguish between them? The reason they feel similar is that the sensation of motion isn't determined by how fast you are going but arises only when there is a change in speed or direction. For instance, the pull back into your seat when accelerating quickly in a car or the sideways force felt when taking a roundabout too fast are real-life examples of how we actually perceive motion.

Speed does however play a part in what we feel when combined with a change of direction. Imagine driving into a roundabout at a high speed of 100 km/h. The outcome is predictable: unless the vehicle has the grip of a Formula 1 racer, it will likely pull the car off the road as the tires lose traction. Now, contrast this with entering the same roundabout at a much slower speed of 20 km/h. At this lower speed, there is only a gentle pull away from the center.

There is of course more than just speed that effects what we feel. Now, think about driving along a wide, gentle curve on a traffic-free freeway while maintaining a constant speed of 100 km/h. What do you notice about the forces acting on you? In this case, you experience only a mild pull away from the curve's center, similar to the sensation when navigating a roundabout at a lower speed. This gentle force is due to the larger radius of the curve.

Let's scale this up to a cosmic level — our planet Earth, with surface speeds at the equator comparable to a passenger jet. Shouldn't we, as passengers on this enormous rotating sphere, feel its immense spin? If that were the case, how would we determine the intensity of this grand rotation?

As it rotates the earth is like a roundabout so vast that it takes 24 hours to complete a full circuit. This is precisely why we don't feel the Earth's rotation. The speeds involved are negligible in comparison to the Earth's massive radius. Although the effect is small, it does exist, as explained

by Newton's laws of motion. This phenomenon, known as the Coriolis effect, is represented by the formula $\mathbf{F}_c = \mathbf{Mv}^2/\mathbf{R}$, where M is mass, v is velocity, and R is radius.

On Earth's enormous scale, the vast radius results in extremely subtle forces, far too gentle for us to notice in our everyday experience. The sheer size of our planet, combined with the consistency of its motion, makes the sensation of its spin virtually imperceptible.

Another flaw in the flat Earth argument is the failure to acknowledge that Earth's atmosphere moves largely in sync with the planet as a connected system. The atmosphere is held to the Earth by gravity and interacts with the surface through friction, creating a cohesive system where both the ground and the surrounding air rotate together. Because of this shared motion, we don't feel any rushing wind or sense a 'whoosh' of air — there is no relative motion between us and the atmosphere. It's similar to sitting inside a moving car with the windows closed: you don't feel the air rushing past because it moves with you. In the same way, the Earth's atmosphere acts as a protective shell, rotating alongside us, which is why we don't notice its motion in our daily lives.

Force Calculator

This calculator estimates the tiny centrifugal effect caused by Earth's rotation. It shows why the "we should feel the spin" argument confuses speed with acceleration: even at high surface speed, Earth's enormous radius makes the acceleration very small.

<https://wiki.flatearthabsurdity.com/tools/earth-spin-force-calculator/>

If the calculator does not appear, open it directly at </tools/earth-spin-force-calculator/>.

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