

# Eötvös gravity compensator is not suitable for the observation of gravitational absorption

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**Abstract:** The Hungarian inventor Loránd Eötvös (1848-1919) created an apparatus, the Eötvös gravity compensator, for the examination of alterations in the gravitational field. This instrument is highly sensitive, because the lead quadrants applied strengthen any small movement of the pendulum. However, the Eötvös compensator is not suitable for investigations of gravitational absorption.

The negative results of the experiments with the Eötvös compensator serve as a basis for the pulling gravity model. However, the suppositions involved in the theory behind these experiments include a mistake. Eötvös and his coworkers [1] presumed that the gravitational waves emitted by one material mass (the Earth) would be absorbed by another material mass (the lead quadrants used to increase the sensitivity in this experimental device [2]).

They should not have made this assumption because either both masses emit gravitational waves or both absorb them. The supposition that the Earth emits, whereas lead absorbs gravitational waves appears to be arbitrary and illogical.

What happens if we try to shade the pulling force emitted by the Earth? Since the lead quadrants emit a pulling force, similarly to the Earth, the symmetrical emissions of the two lead quadrants will extinguish each other, and accordingly the position of pendulum will not change.

On the other hand, we might make the supposition that the Earth does not emit a pulling force (otherwise this emission is an absurdity), but absorbs gravitational waves to be found in the vacuum of space. Only in this case can we assume that such lead sectors absorb gravity. The upper quadrant absorbs waves coming from above, while the bottom quadrant does so for waves coming from beneath (which have naturally previously passed through the Earth). As the lead quadrants are symmetrical, the balance will not change here either.

It was presumed by Eötvös that only the lower quadrant would participate in the absorption of gravity, and not the upper one. This is a mistake, and consequently the Eötvös gravitational compensator is unsuited for experiments with the aim of the measurement of gravitational absorption. Positive results are not to be expected from the application of this instrument for this purpose.

## References

1. R. Eötvös, D. Pekár, and E. Fekete, *Ann. Phys (Leipzig)*. **68**, 51 (1922).
2. R. Stomfai, Z. Szabó, *Élet és Tudomány (Budapest)*. **LIII** / 50, 1580 (1998).