Title: Determining Acceleration Using Electromagnetic and Gravitational Interference

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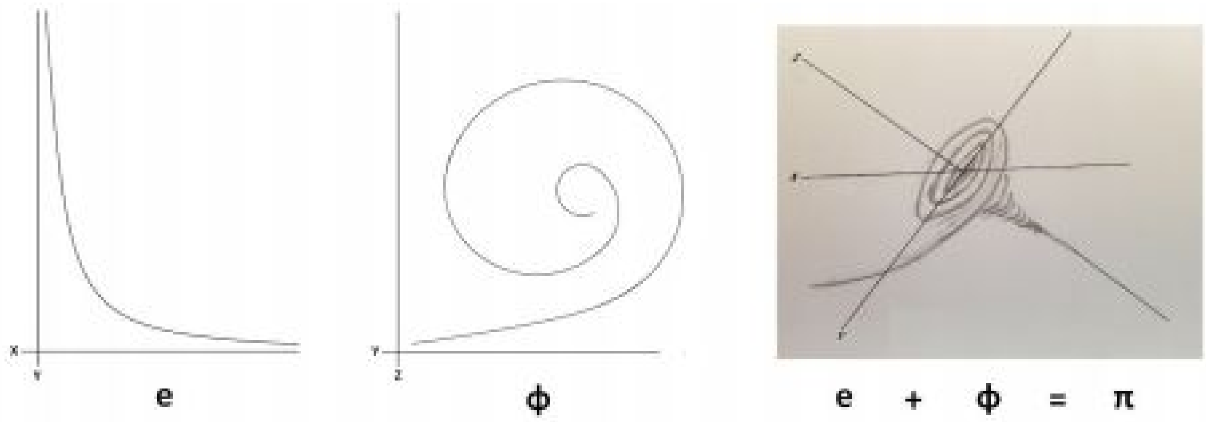
Abstract: All mass experiences the effects of gravity, and all electrical equipment experiences the effects of electromagnetic interference. A series of circuits programmed to calculate specific irrational numbers will experience differences in these types of interference, which we can use to our advantage to determine the relative difference in gravity between us and some reference point, giving us our net acceleration.

Content: The effects of acceleration and electromagnetism on computer processing speeds are well documented. Typically this interference needs to be taken out of the system. In this case, however, we will use it to our advantage to do something that's never been done before: **We will develop a method for determining our current acceleration.** As a bonus, since our acceleration rate will not be dependent on calculating mass, we will show how mass can be completely removed from Einstein's mass/energy equivalence.

But to do this we first need to understand a mathematical concept known as *irrationality*. For our purposes, this means that trying to calculate the exact value of these types of numbers is not possible; the numbers are infinitely long and never repeat. The actual calculation never ends, but after a few decimal places we can typically stop because the increased accuracy is usually not needed in everyday life. Here, however, we flip that around, and we do so with three very specific irrational numbers: **e**, **phi**, and **pi**, two of which can almost be combined to produce the third.

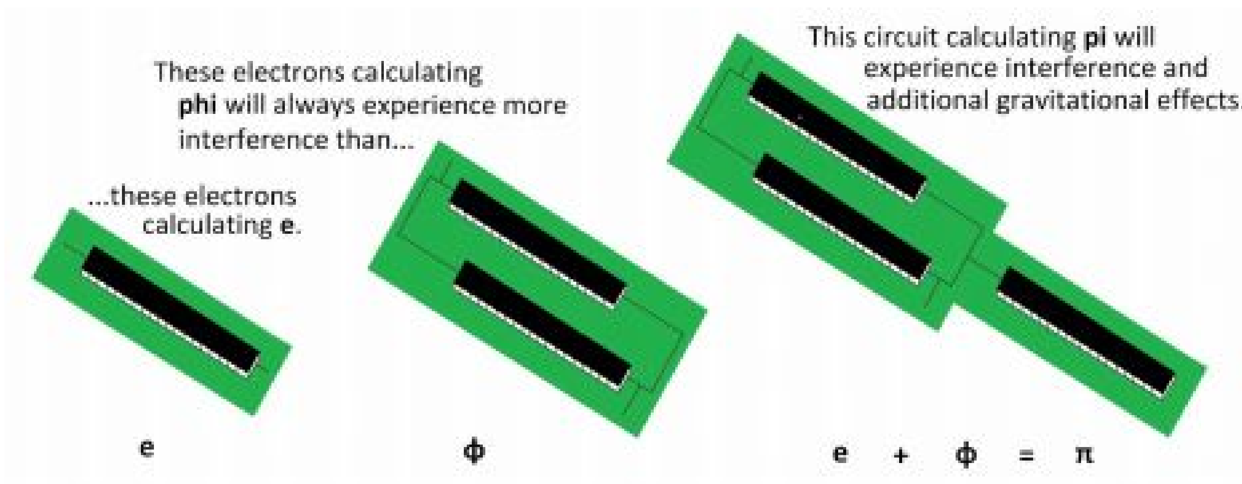


Artistic rendering of the graphs of e and phi (ϕ), and a possible interpretation of pi (π) as a combination of both.

These three numbers are interesting because the electronic circuitry needed to calculate **pi** is built on top of the circuitry needed to calculate **phi**, which itself is built on top of the circuitry needed to calculate **e**. This is important because, if the circuitry is being added together, then so is any electromagnetic or gravitational interference, meaning we can intelligently subtract it out, and since the calculations get slower and slower with each digit, any interference present will become more and more noticeable.

The different mathematical operations necessary to calculate each number is the source of this difference in circuitry:

- **pi** requires division, which uses two components in a loop and one in a straight line,
- **phi** is recursive, so only requires two components in a loop, and
- **e** is exponential, so only requires one component in a straight line



Simplified circuit designs for e, phi, and pi. We can exploit this to determine our net acceleration.

The exploits here are twofold: First, since **phi** requires a loop, and **e** does not, the electrons moving through **phi**'s path will always move in two directions relative to the ones in **e**'s path. This guarantees that, between the two of them, they will experience all available electromagnetic interference.

Second, since **pi**'s path contains exactly the circuitry of **phi** and **e**, that path will also experience the same electromagnetic interference, but will also be affected by gravity just a bit more due to its larger total circuit size. This means we can subtract out the electromagnetic interference and isolate the effects of gravity, either relative to some local source or to some outside observer.

This result is important because this method of determining net gravitational influence does not require calculating relative velocity. This is what allows us to remove mass from Einstein's mass/energy equivalence. Normally this just means hiding mass somewhere else, but here we are actually going to remove it completely.

The acceleration value we just calculated is relative, meaning it is in reference to some point in space somewhere. As it just so happens, these are the exact two ingredients you need to model any piece of matter: a reference point to act as your “center-of-mass,” and an acceleration value to tell you how the “force” of gravity will behave relative to that point. We can now take $\mathbf{E=mc^2}$ and completely replace the mass (**m**) portion with this new force/acceleration (**F/a**) model we have come up with. We now have $\mathbf{E=(F/a)c^2}$, which can be rearranged as $\mathbf{Ea=Fc^2}$.

This arrangement is not new; what is new is that we were able to get here without ever needing to calculate mass at any point.