

Re: Since k varies but not G suggests an Eather

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Source: <http://sci.tech-archive.net/Archive/sci.physics.relativity/2006-06/msg01270.html>

- *From:* "guskz@xxxxxxxxxxxx" <guskz@xxxxxxxxxxxx>
 - *Date:* 16 Jun 2006 22:12:05 -0700
-

Sue... wrote:

guskz@xxxxxxxxxxxx wrote:

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guskz@xxxxxxxxxxxx wrote:

Sue... wrote:

Igor wrote:

Randy Poe
wrote:

guskz@xxxxxxxxxxxx
wrote:

$F =$
 kQq/r^2
 F
 $=$
 GMm/r^2

k
varies

No,
the
electrostatic
CONSTANT
does
not
vary.
That's
why
they

Re: Since k varies but not G suggests an Eather

call
it
a
constant.

but
never
G:

1.
k
VARIES*

depending
on
the
density(or
structure)
of
the
other
charges
in
the
medium
(since
medium's
are
made
of
electrons
and
protons)
excluding
Q&q.

No,
it
doesn't.

But k will
certainly
have
different
values in
different
media, since
it
depends on

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the total
permittivity
of the
medium.

Sorry... all media
manufacturers get their
electrons from the
same supplier.

<http://hyperphysics.phy-astr.gsu.edu/Hbase/electric/elefor.html>

Sue...

That's a poor explanation Sue, that link
simply explains that "k" is
constant in space THEREFORE FOR THE
ELECTRIC FORCE EXERCISED
BETWEEN TWO
CHARGES IN ***AIR*** OR
WATER IS *****NOT THE
SAME*****
AS THE ELECTRIC FORCE EXERCISED
BETWEEN TWO CHARGES IN SPACE: F
=
 KQq/R^2 (K VARIES WITH THE
MEDIUM.....

...MEANING K VARIES WITH THE
PRESENCE OF OTHER CHARGES IN
THE SAME
REGION WHERE AS "G" DOES NOT
VARY WITH THE PRESENCE OF
OTHER
OBJECTS(MASSES) IN THE SAME
REGION OF M&m ($F= GMm/R^2$).

You just answered your own question so I contend the URL
is
effective. ;-)

k is summed over all space because it is radiative.
G is summed over all the matter because it is induced.

coils induce magnetism or current, G is neither

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The analysis of the Tajmar-de Matos experiment would indicate otherwise.

cooling reduces motion such as freezing your food slows down the rotting process.

supercooling reduces resistivity....whatever that means since it's only a terminology, I guess it helps the electron jump to it's neighbor valences with less interference from other electrons of the neighbors atom?

eitherway by INCREASING the MOTION gradually (spinning motion),

you may also be gradually contradicting the FREEZING MOTION of the superconductor therefore it may still be an electromagnetic effect.

(Brief from above: gradually increasing motion of spin may be gradually negating the freezing motion of supercooling effect).

You have to apply forces to move a mass from moon to earth.

not if there's no moon and only earth & mass

If you can remove the moon but leave the debris on its surface in place I'll accept that. Something tells me the debris is going to tag along. :o)

?? I don't know what you were getting at since you started the debate but likewise you if you can remove a positive charge but leave it's pairing negative charge in place I'll accept that also????

You do not have to apply force to move a charge from one plate to another plate of a charged capacitor.

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WELL DONE!

That's because the attractive charge force along the wire is stronger than the attractive charge force between the dielectric plate.....

Therefore "k" indeed varies with the medium (dielectric medium versus copper medium) and the main difference between mediums is the electron density (& proton) that surrounds Q&q!

Where as "G" remains constant regardless of the other planets(objects) or mass densities that surround M&m!

$$F = k_{\text{medium}} (Qq/r^2) \quad F = G_{\text{invariant}} (Mm/r^2)$$

So... You see some important difference in the behavior of fundamental and composite particles ?

k even varies with the person that is using it, which is why you have to be careful about the assumptions made in different unit systems.

Well according to Randy in another thread k in $F = k Qq/r^2$ remains the constant permittivity of space REGARDLESS of which medium it's in, I find that illogical (why would the velocity decrease due to permittivity but not the force of a charge.....especially since the main difference between mediums is the charge density)?

<< Any discussion of magnetism is complicated because the physical notation for magnetic fields is not standardized. mks-SI system regards magnetism as an effect of electric currents - where as - cgs system begins with forces between poles >>
<http://www.geo.mtu.edu/~jdiehl/magnotes.html>

So it is imprudent to accept the assumptions of a particular metrology, especially when you have evidence the assumptions may not hold in practice.

Sue...

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