

Re: Since k varies but not G suggests an Eather

Source: <http://sci.tech-archive.net/Archive/sci.physics.relativity/2006-06/msg01972.html>

- *From:* "Randy Poe" <poespam-trap@xxxxxxxxxx>
 - *Date:* 23 Jun 2006 09:26:38 -0700
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guskz@xxxxxxxxxx wrote:

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Why do you say nothing is neutral? If you have equal amounts of positive and negative charge, the net charge is zero.

Ok, the dipole moment then aint zero, $P = Qd$ and it's Q aint zero.
Otherwise H₂O would never form?

What?

My mistake, if a dipole moment is never zero

Any moment can be either zero or nonzero.

why does a quadrupole moment = zero when it's spherical?

If it's spherically SYMMETRIC there are no higher moments than monopole, because higher-order moments measure various ways in which a distribution is not symmetric.

Re: Since k varies but not G suggests an Eather

The expression for the force from a charge Q and a charge -Q on a charge q is $F = kQq*(1/r_1^2 - 1/r_2^2)$.

If r is the same distance as the separation, then the