

# Re: intrinsic energy

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- *From:* aegis <[aegis@xxxxxxxxxxxxxxxxxxxx](mailto:aegis@xxxxxxxxxxxxxxxxxxxx)>
  - *Date:* Sat, 14 Jul 2007 20:15:33 -0000
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On Jul 14, 1:02 pm, Sam Wormley <[sworml...@xxxxxxxx](mailto:sworml...@xxxxxxxx)> wrote:

aegis wrote:

On Jul 14, 11:56 am, Sam Wormley <[sworml...@xxxxxxxx](mailto:sworml...@xxxxxxxx)> wrote:

aegis wrote:

What exactly is intrinsic energy and how does the premise of quantum uncertainty, which includes the properties of energy and time, imply that empty space has intrinsic energy? Also, how can one conclude that Einstein's formula leads to the conclusion that the vacuum of space can generate particles?

Most uses of the phrase "intrinsic energy" are just pseudoscience garbage. What "Einstein formula" are you referring to that relates to "the vacuum of space can generating" particles?

Perhaps you are revering to "vacuum energy".  
[http://en.wikipedia.org/wiki/Vacuum\\_energy](http://en.wikipedia.org/wiki/Vacuum_energy)

Physics FAQ" What's the Energy Density of the Vacuum?  
<http://math.ucr.edu/home/baez/vacuum.html>

$E = mc^2$  is the formula I'm referring to.

Re: intrinsic energy

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aegis

OK--This is more complete and takes into account an object's momentum, which is observer dependent.

$$m^2 = E^2/c^4 - p^2/c^2$$

For the case of rest mass only

$$E = mc^2$$

is sufficient. See: Mass-energy equivalence  
[http://en.wikipedia.org/wiki/Mass-energy\\_equivalence](http://en.wikipedia.org/wiki/Mass-energy_equivalence)

But how does that suggest that the vacuum of space can generate particles?

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aegis

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