

Re: PBS Einstein's big idea, $E=mc^2$

Source: <http://sci.tech-archive.net/Archive/sci.optics/2005-10/msg00107.html>

- *From:* <salmonegg@xxxxxxxxxxxxxx>
 - *Date:* Thu, 13 Oct 2005 06:31:29 GMT
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On 10/12/05 8:58 PM, in article
TXk3f.6033\$5I2.22374@xxxxxxxxxxxxxxxxxxxxxxxxxxxx, "Do Little2"
<listed@xxxxxxxx> wrote:

>
> <salmonegg@xxxxxxxxxxxxxx> wrote in message
> <news:BF72C3FC.A470%salmonegg@xxxxxxxxxxxxxx>
>
> [snip]
>
>> The other one is related more closely to classical mechanics. It implied
>> that Newton did not understand the conservation of energy.
>
> The concept of energy and its conservation seems self evident today,
> but it was a novel idea as late as the 1850's and had eluded such man
> as Galileo (1564 – 1642) and Newton (1642 – ??).
>
>
>

I think that the conservation of energy problem you are talking about had more to do with how different kinds of energy transformed into one another. For example, the transformation Count Rumford observed of mechanical energy into heat.

What I find difficult to comprehend is that Newton did not know that if you dropped a mass a distance h in a gravitational field, for example, that $M^*g^*h = m^*v^2/2$, or indeed that for any force applied to an initially stationary mass

$\text{Integral}(F^*ds) = m^*v^2/2$.

Bill

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- *References:*

Re: PBS Einstein's big idea, $E=m\cdot c^2$

◆ *PBS Einstein's big idea, $E=m\cdot c^2$*

◇ *From:* salmonegg

◆ *Re: PBS Einstein's big idea, $E=m\cdot c^2$*

◇ *From:* Do Little2

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