

Re: Endless Oil?

Source: <http://sci.tech-archive.net/Archive/sci.energy/2004-09/1195.html>

From: Dan Bloomquist (EXTRApblic21_at_lakeweb.com)

Date: 09/29/04

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charlie2 wrote:

> *Dan Bloomquist wrote:*

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>>charlie2 wrote:

>>

>>>Dan Bloomquist <EXTRApblic21@lakeweb.com> wrote in message

>>>news:4159CIA8.5070002@lakeweb.com...

>>>

>>>>The mixing is not 'just' from turbulence. The average velocity of

>>>>molecules in the air is some third of a mile a second.

>>>

>>>>But ... escape velocity is 7 miles per second, so gravity is strong

>>>>enough to capture earth's atmosphere and maintain it. Gravity is

>>>>also strong enough to allow you to measure the weight of the

>>>>atmosphere (e.g., 14.7 lb/in² at sea level, which is quite

>>>>substantial)

>>>

>>>>The point? Without constant mixing and turbulence, it is likely that

>>>>something as dense as Freon 12 would tend to sink towards the

>>>>ground. In fact, this sounds like something open to

>>>>experimentation. A still room containing air with 10% Freon 12 in

>>>>it (well mixed) should show some "unmixing" over time. Has this

>>>>experiment been performed anywhere?

>>

>>This was worked out back when Maxwell was alive. See 'the kinetic

>>theory of gases'. You can set a container with freon and hydrogen

>>aside for years. When you come back, the gases will still be

>>perfectly mixed.

>>

>>Best, Dan.

>

>

> So, how "heavy" must a gas be to "settle out" of a well mixed solution of

> two gases?

Hi Charlie,

Even with radon and hydrogen. And because the velocity of the molecules

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will so overwhelm gravity.

Consider just one molecule in the container. As a gas, this molecule is subject to thermal velocity. So you will be just as likely to find it in the top of the container as the bottom. Adding and mixing molecules doesn't change this.

Best, Dan.

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<http://lakeweb.net>

<http://ReserveAnalyst.com>

No EXTRA stuff for email.