

Re: USA urges scientists to block out sun

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- *From:* Willie.Mookie@xxxxxxxx
 - *Date:* 4 Feb 2007 16:10:01 -0800
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On Feb 3, 3:45 pm, Ian Stirling <r...@xxxxxxxxxxxxxxxxxxxx> wrote:

Willie.Moo...@xxxxxxxx wrote:

On Feb 2, 2:31 pm, Ian Stirling <r...@xxxxxxxxxxxxxxxxxxxx> wrote:

steve <stephen.colbou...@xxxxxxxxxxxxxxxxxxxx> wrote:

Well the good news for you is that at one tonne per sqkm = 1 gram per square metre.

That should make your space shield much more practical– Hide quoted text –

– Show quoted text –

Doh! You're right. I slipped a digit and a factor of 1,000! .

The plastics from which GBO is made are 1.2 metric tons per cubic meter, so 1 gram per square meter is a thickness of 0.83 mm – that's

No, it's not.

There are a thousand litres in a cubic meter.

A thickness of a millimeter with an area of 1m has a volume of one litre, which has a weight of one kilogram.

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830 um – far larger than I was thinking. – Two layers 100 um thick – one transparent, the other reflective, filled with a very low pressure gas – to create a pressure stabilized structure. At 1/2 gram per sq meter. A 3 km diameter mirror would then weigh 7 tonnes. 70 tons would be 16.5 km in diameter. 660 tons 29.1 km diameter. 191,440 of the larger mirrors would be needed to cover the entire surface of the Earth. 1,915 mirrors would intercept 1% of the sunlight. Over a 5 year period that's 1 launch per day. With a 30 day turn around, that's a fleet of 30 of the more massive vehicles.

At \$6 billion each that's \$180 billion – a far far smaller program.

The system could still beam 300 TW to Earth, which could pay for it all.– Hide quoted text –

– Show quoted text –

Yes, I listened to you and was confused! lol. So, is your original point correct or not?

<sigh>

Well, lets figure it out – haha..

1000 gram = 1 kg
1000 kg = 1 tonne

1,000,000 grams = 1 tonnes

1 mm = 1/1,000 meter
1 um = 1/1,000 mm
1,000,000 um = 1 m

At 1.2 gams per ml or 1.2 tonnes per cubic meter for the types of plastics used for GBO then layers 1 square meter in are are;

830 nm = 1 gram per sq meter
830 um = 1 kg per sq meter

haha.. SO, MY ORIGINAL NUMBERS ARE THE CORRECT ONE!

And your original point in error.

To obtain the sorts of masses you were putting out there, and which I wrongly agreed to, by assuming I missed 3 digits, we'd have to use

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nano-scale structures like butterfly wings – which i originally said.
It may be possible to attain these weights, but we won't be able to
use gases to create the structures. We'd have to use electet type
charges between the transparent and reflective sheets.

Sheez

haha..

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