

Re: USA urges scientists to block out sun

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- *From:* Ian Stirling <root@xxxxxxxxxxxxxxxxxxxx>
 - *Date:* 03 Feb 2007 20:45:27 GMT
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Willie.Mookie@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–
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– 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.

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,

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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.