

Re: plasma clouds algorithm ?

Source: <http://sci.tech-archive.net/Archive/sci.fractals/2004-11/0026.html>

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A lot of ray tracing programs have cloud algorithms built in.

Brice does, I think.

With IFS it is easy to get cloud/ turbulence effects by detuning the ratio in a 3d IFS.

Noise is what gases as clouds behave like: Gaussian diffusion.

Another reference is Falconer's fractional Brownian definition in his Fractal Geometry.

anastasiA wrote:

>Thanks to Stewart and Roger for their prompt responses.

>

>Roger's pages are more general and theoretical in nature; they will
>come handy on a second stage, once I get to actually create such clouds
>as they show intersting variations and fields of application. Stewart's
>reference show the precise mathematical background for this fractal,
>but alas, I'm the visual type of guy and my maths skills are lacking
>(how the hell do you guys actually pull out an algorithm out of a
>statement like "For each of the four corners we use a Gaussian
>random variable $N(\mu, \sigma^2)$ to generate heights". ;-)

>

>The reference to the book "The Science of Fractal Images" was precious
>though. Most of what is contained in these pages are obviously pulled
>from this book BUT the latter has actual algorithms. I will study
>them carefully. Then, I might understand what N , μ and σ actually
>mean:-)

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>Good show. Thanks to all of you.

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Respectfully, Roger L. Bagula

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