Implementation of Real Time Atmospheric Scattering

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1 Mathematical and Physical Background

Rayleigh scattering phase function [Preetham, 2003]

$$f_R(\theta) = \frac{3}{16\pi}(1 + cos^2\theta) \tag{1}$$

Henyey-Greenstein Approximation of the Mie scattering phase function: [Henyey and Greenstein, 194
Preetham, 2003]

$$f_{HG}(\theta) = \frac{1}{4\pi}\frac{1 - g^2}{(1 - 2g\cos\theta + g^2)^{3/2}} \tag{2}$$

References

[Henyey and Greenstein, 1941] Henyey, L. and Greenstein, J. (1941). Diffuse radiation in the galaxy. *The Astrophysical Journal*.

[Preetham, 2003] Preetham, A. (2003). Modeling skylight and aerial perspective. *ATI Research, ACM SIGGRAPH*.