

リスト 2.11	fog.frag
<pre> varying vec3 P; varying vec3 N; uniform int fogMode; void main(void) { vec3 L = gl_LightSource[0].position.xyz - P; float d = length(L); //光源までの距離 //減衰計数 float attenuation = 1.0 / (gl_LightSource[0].constantAttenuation + gl_LightSource[0].linearAttenuation * d + gl_LightSource[0].quadraticAttenuation * d * d); L = normalize(L); N = normalize(N); vec4 ambient = gl_FrontLightProduct[0].ambient; float dotNL = dot(N, L); vec4 diffuse = gl_FrontLightProduct[0].diffuse * max(0.0, dotNL); vec3 V = normalize(-P); vec3 H = normalize(L + V); float powNH = pow(max(dot(N, H), 0.0), gl_FrontMaterial.shininess); if(dotNL <= 0.0) powNH = 0.0; vec4 specular = gl_FrontLightProduct[0].specular * powNH; //統合 gl_FragColor = (ambient + diffuse + specular) * attenuation; //フォグ float fog; float a = gl_Fog.density * gl_FogFragCoord; if(fogMode == 0) fog = exp(- a); else if(fogMode == 1) fog = exp(- a * a); else fog = (gl_Fog.end - gl_FogFragCoord) * gl_Fog.scale; fog = clamp(fog, 0.0, 1.0); gl_FragColor = mix(gl_Fog.color, gl_FragColor, fog); } </pre>	