The above images are using the same number of directions $N_d$ and the same number of linear search steps $N_s$ per direction to integrate the ambient occlusion equation. The number of texture samples per pixel is $N_d + N_s$ for our horizon-based method, and $N_d + N_s + N_r$ for the standard ray marching method. By finding the horizon angle for every direction $N_d$, our horizon-based method can achieve similar quality to ray marching with a shorter computation time per pixel. The images have been generated at 1024x768 on a GeForce 8800 GTX Ultra.