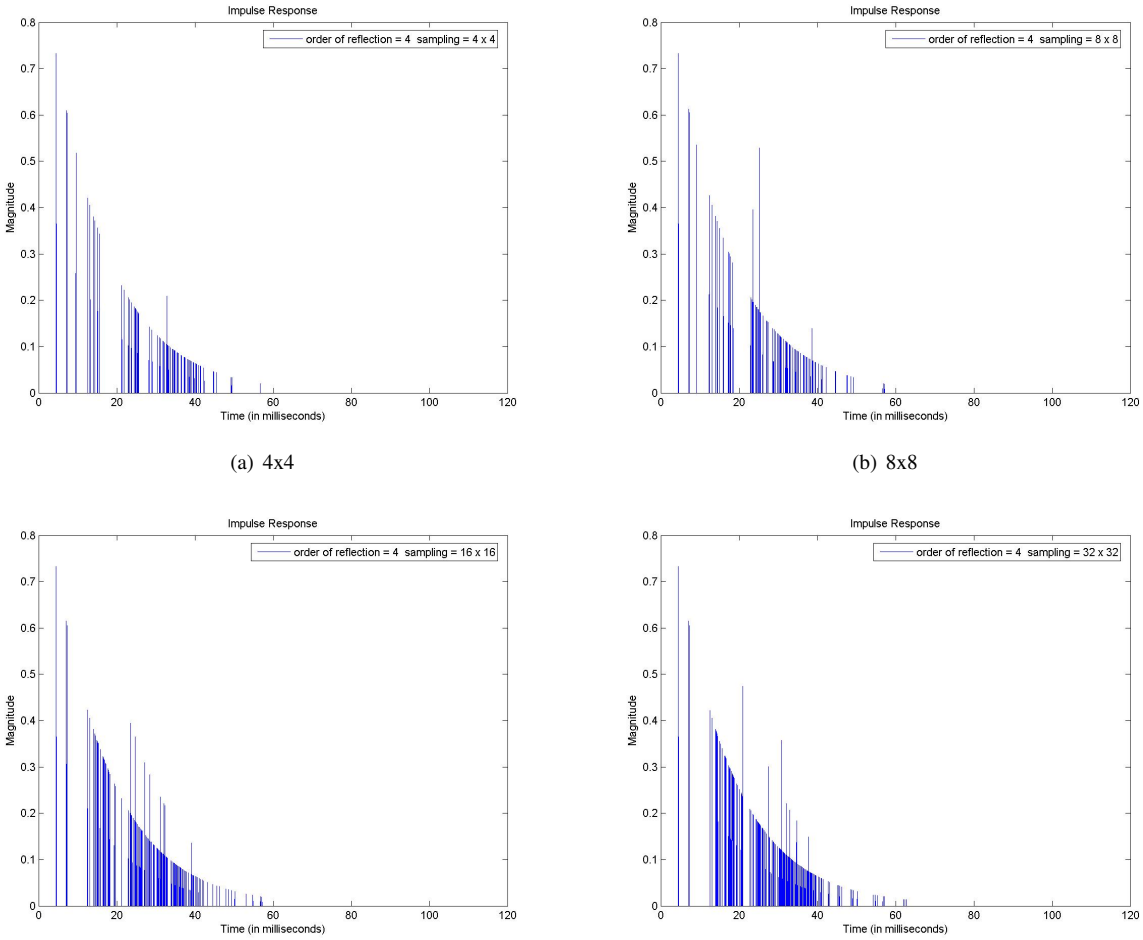


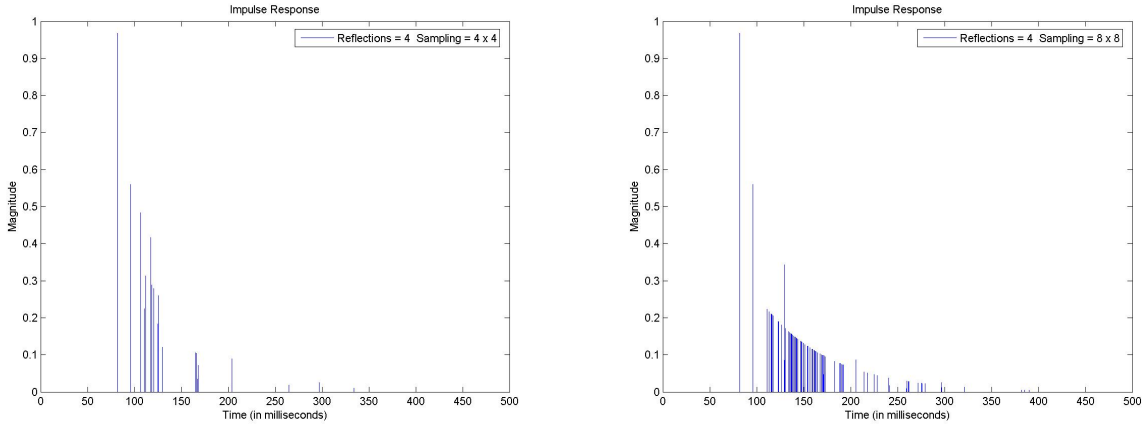
(a) 4x4

(b) 8x8

(c) 16x16

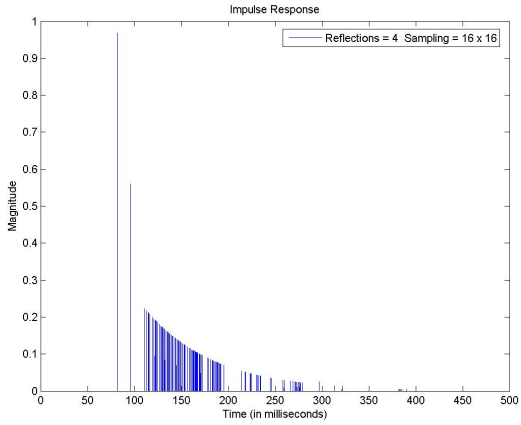
(d) 32x32

Figure 1: **Impulse Response (IR) vs Sampling Resolution**: The above picture shows IRs genererated from our frustrum-tracing approach for the **box scene** with reflection order = 4 and varying frustum sampling resolution {4x4, 8x8, 16x16, 32x32}. Notice that sampling resolution of 4x4 captures most contributions to IR. As the sampling resolution increases, the accuracy of our method approaches that of the beam tracing method. These results indicate that the accuracy of our method for 4X4 or 8X8 sampling resolution is close to that of beam tracing

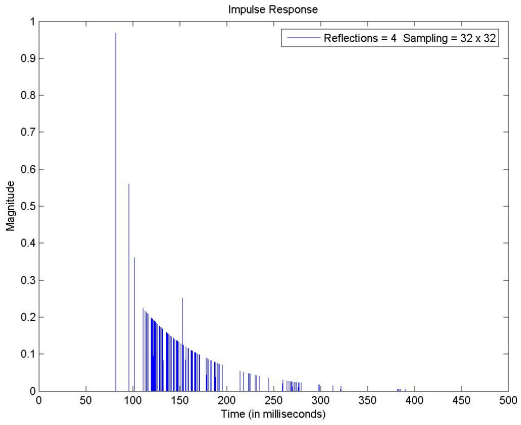


(a) 4x4

(b) 8x8

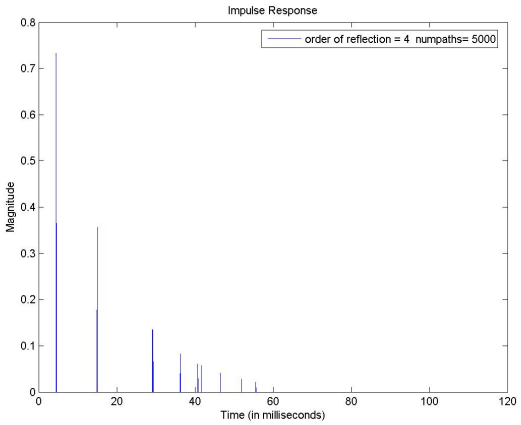


(c) 16x16

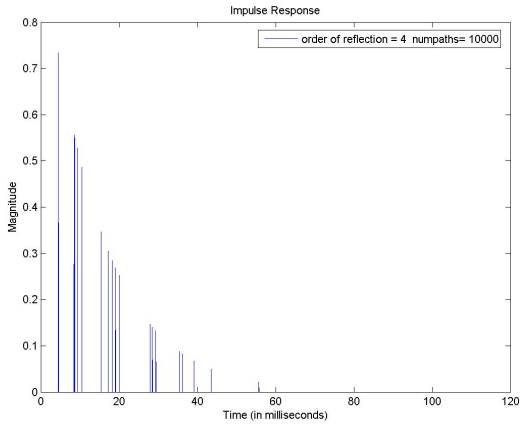


(d) 32x32

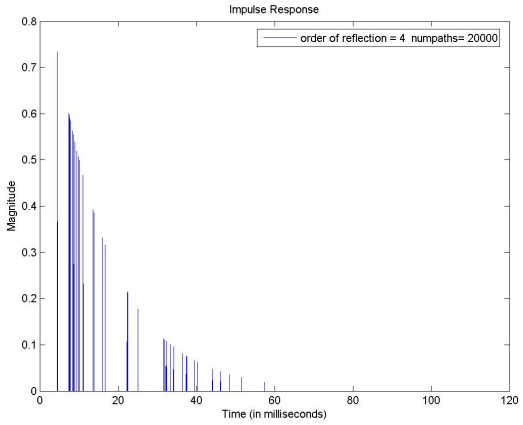
Figure 2: **Impulse Response (IR) vs Sampling Resolution**: The above picture shows IRs genererated from our frustrum-tracing approach for the **Theater scene** with reflection order = 4 and varying frustum sampling resolution {4x4, 8x8, 16x16, 32x32}. Here, the sampling resolution of 4x4 captures most early contributions to IR. Also, it converges quickly with increasing sampling resolution.



(a) 5000

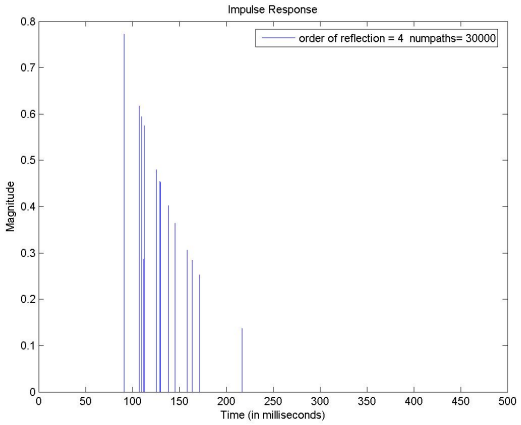


(b) 10000

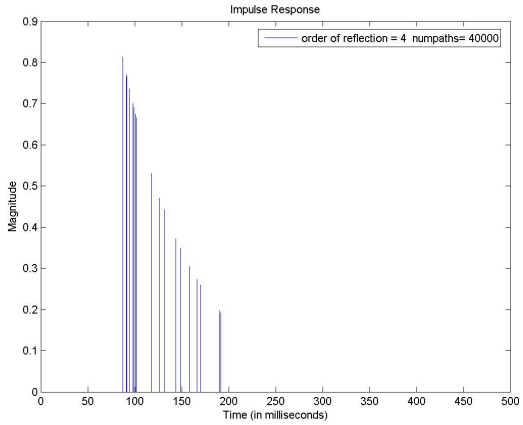


(c) 20000

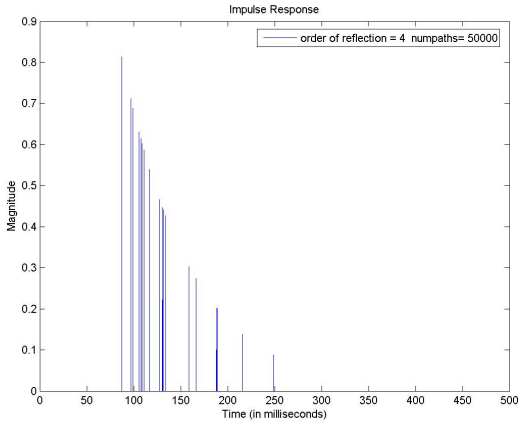
Figure 3: **Path Traced Impulse Response (IR)**: Above are the IRs generated for the Box as Figure 1 using path tracing with different number of paths traced {5K, 10K, 20K}.



(a) 30000



(b) 40000



(c) 50000

Figure 4: **Path Traced Impulse Response (IR)**: Above are the IRs generated for the Theater scene as Figure 2 using path tracing with different number of paths traced {30K, 40K, 50K}. Note that the sampling and aliasing errors increase as the model complexity increase. Thus, path tracing does not scale with the complexity of the scene.