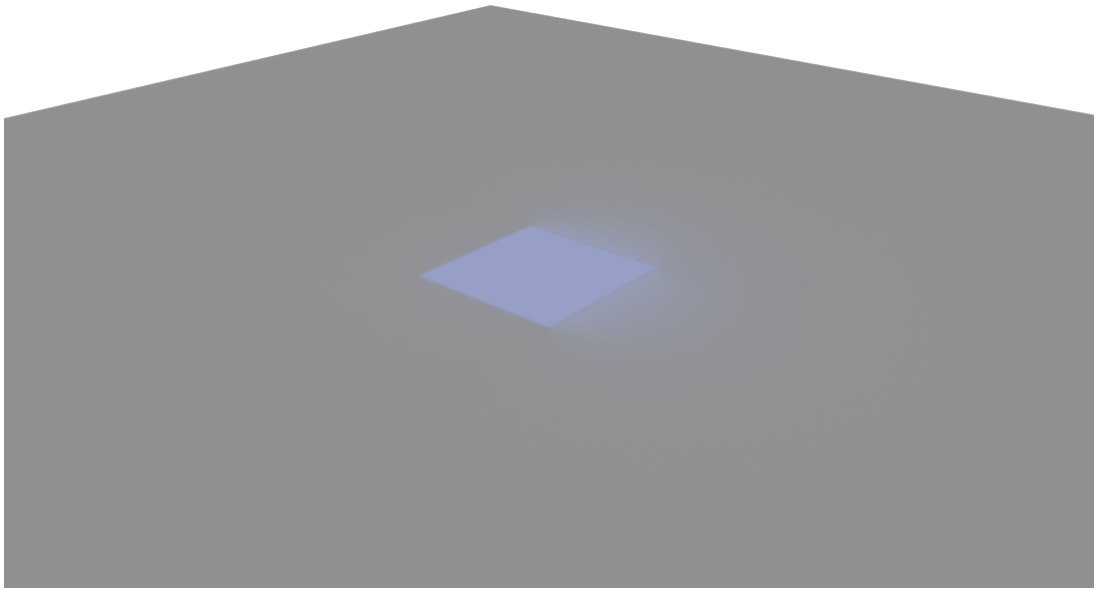
1. There is a discrepancy between CPU/GPU results, with GPU being more incorrect. Below are some test stills using identical scenes. The center cube has a blue diffuse and the ground plane has been assigned a white diffuse. Shadowcatcher was only enabled on the ground plane.

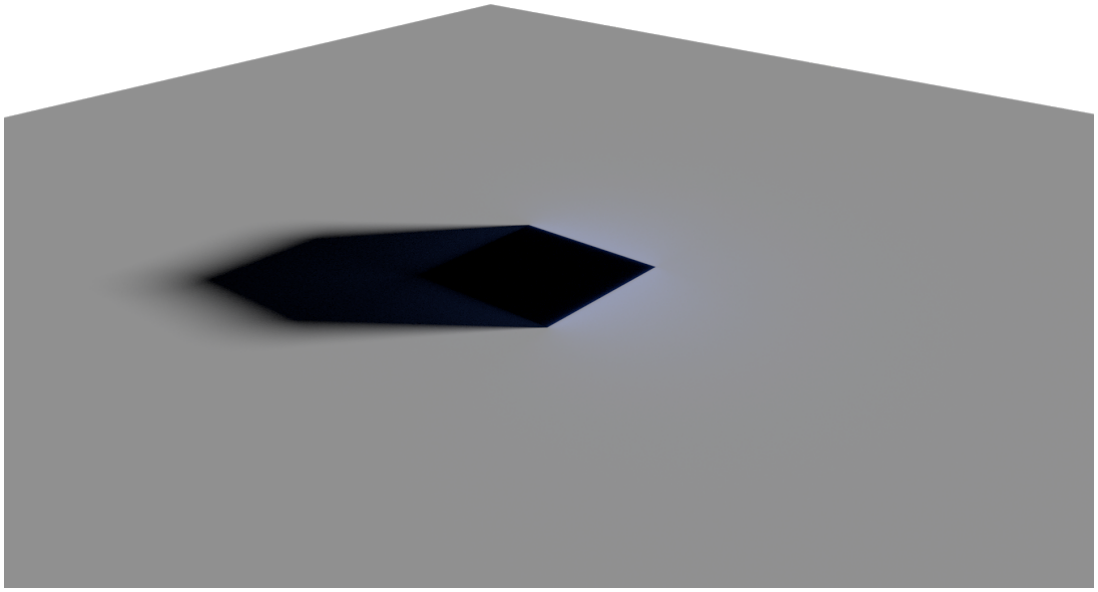
GPU:
Without shadowcatcher enabled:



with Shadowcatcher enabled:

Both are incorrect. In the non-shadowcatcher, the cube appears to cast no shadow and looks like it's emitting light even though it's set to a straight diffuse. In the shadowcatcher version, we can see a shadow (not visible in non-shadowcatcher render or in rendered viewport) but the shadow density where the cube meets the plane is much lighter than the shadow being cast.

CPU appears more correct in both instances:
Without shadowcatcher enabled:

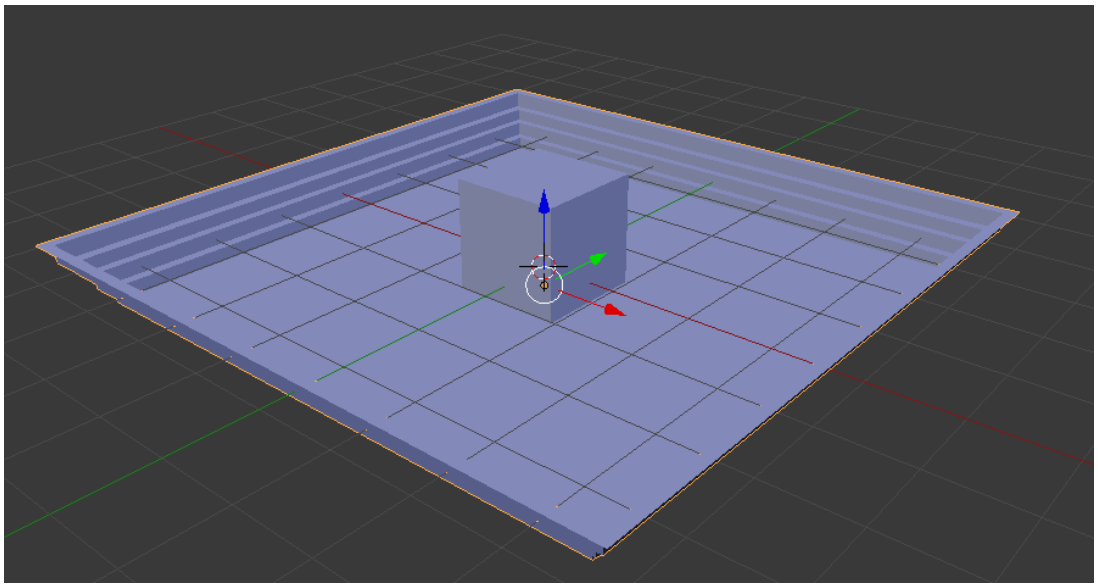


with shadowcatcher enabled:

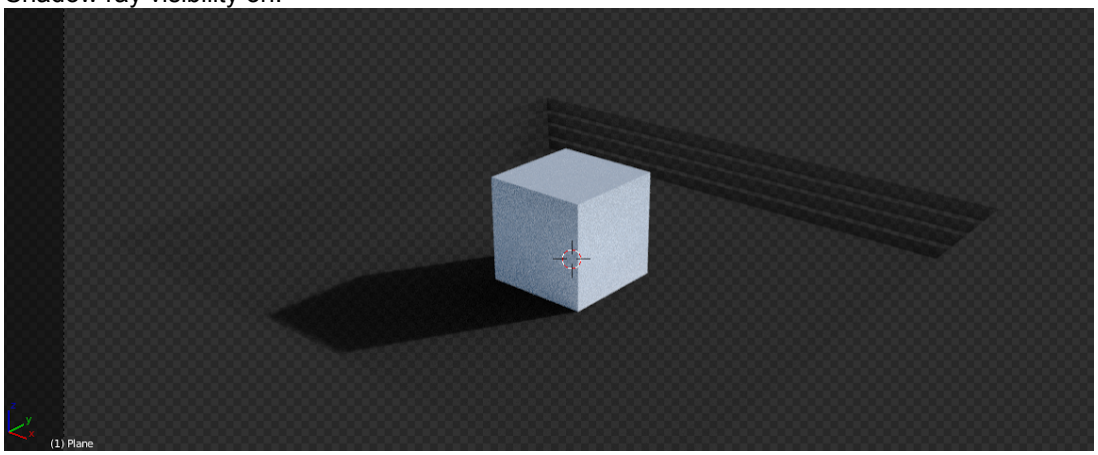
These results are the same with both light objects and HDR, respectively.

2. Self-shadowing of the catcher object appears to be functioning correctly when shadow ray visibility is toggled off on the caster object.

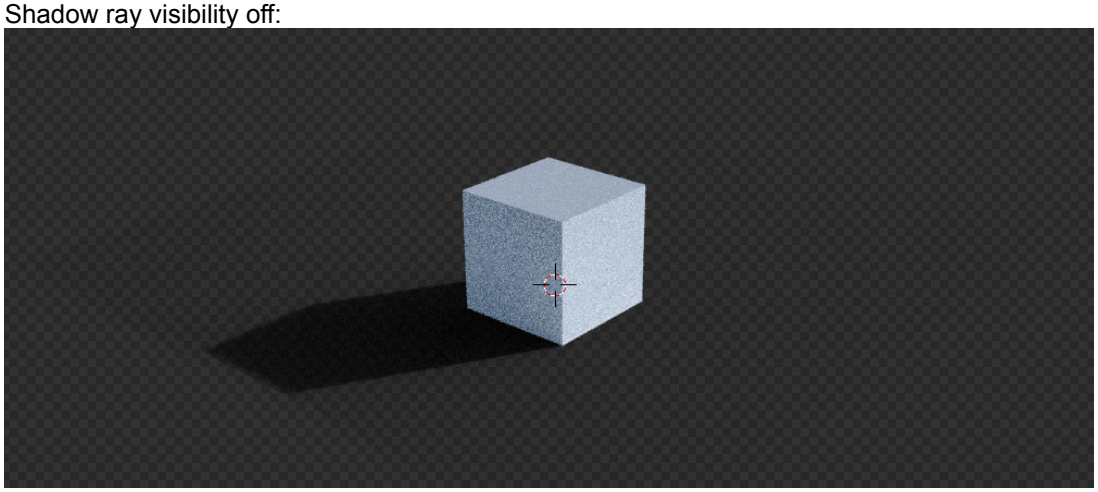
I created a more complex object than a plane for self-shadow testing, here is a reference of the setup:



Shadow ray visibility on:

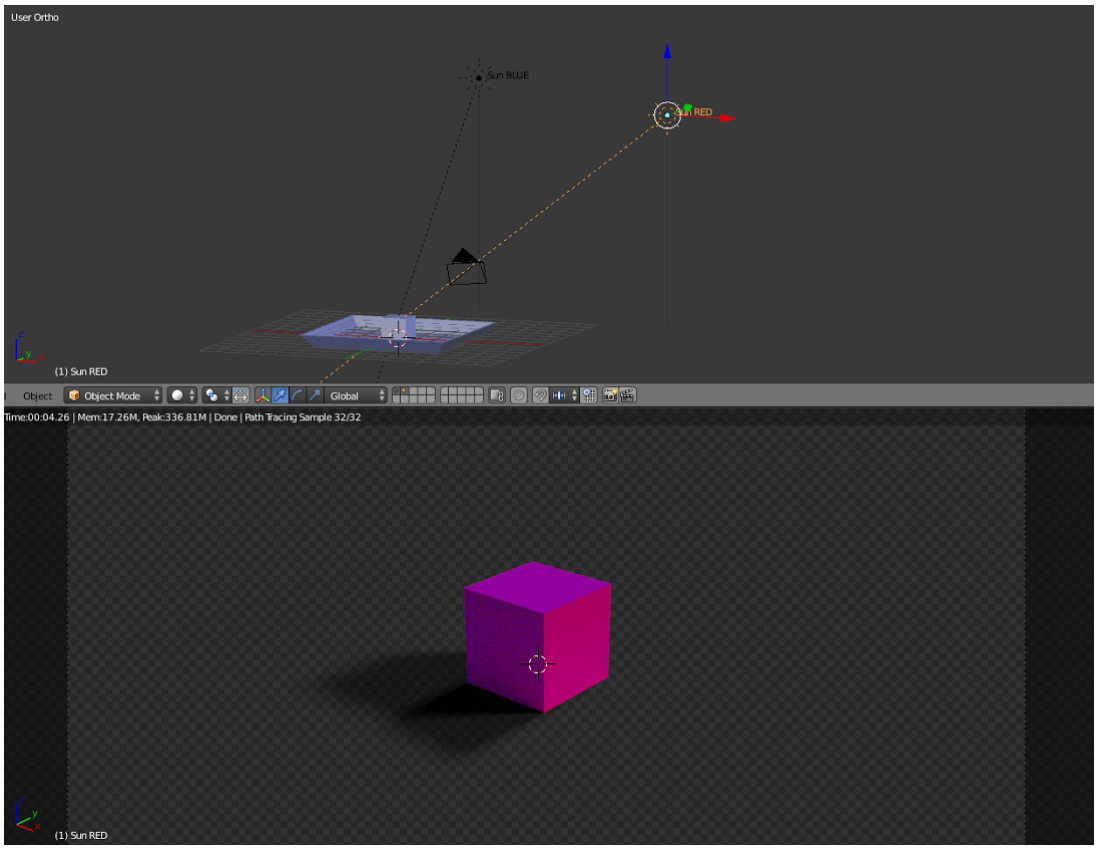


Shadow ray visibility off:



This is as expected, but it may be useful to make this a default of the Shadow Catcher function, or at least make it more obvious to the user that they will receive unwanted self-shadowing on the catcher if they don't also disable the ray visibility option.

3. Shadow color. I'm not really clear on how this shadow catcher functions, but I tried a variety of colored lights as well as multi-point lighting setups and was not able to achieve any sort of coloring for the shadows. Example of a simple setup I used to test this:



Maybe this is how it was intended to function, or maybe it's a bug, but I'm receiving no color data regardless of the color or intensity of the light sources. Other suites sometimes bypass this by having a "shadow color" tint option, sometimes in conjunction with a density option, since any sort of color would (I think) be the result of additive mixed light. I am a layman when it comes to the physics but I wanted to make the observation. :)

Casi

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Barnstorm
VISUAL EFFECTS