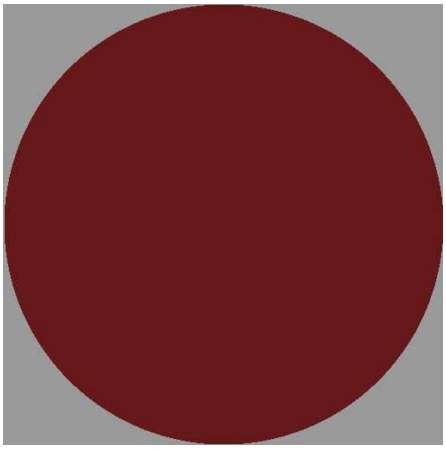
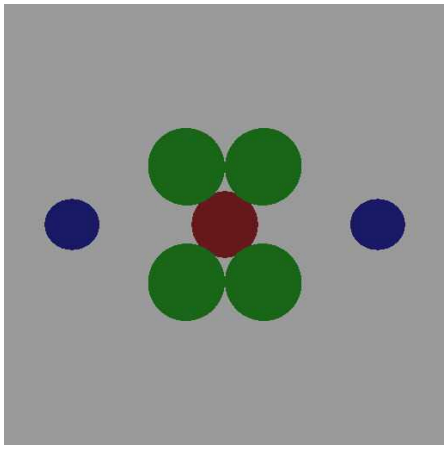
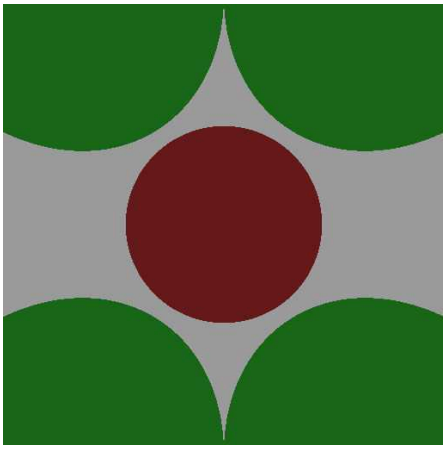
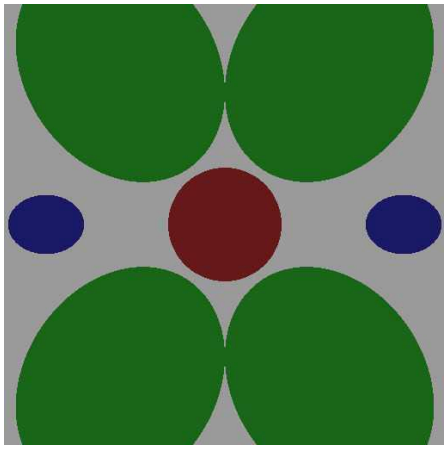
There are 6 key viewing parameters that must be present in the input file and especially affect the output image. The first interesting parameters are the eye location and view direction, together they effectively define where the camera is located within the scene. As the eye point gets further from the defined geometry the smaller they appear in a perspective projection. The view direction heavily affects the definition of the viewing window, where the rays are cast and subsequently if any geometry is even visible in the output image. Below are close and far eye locations.





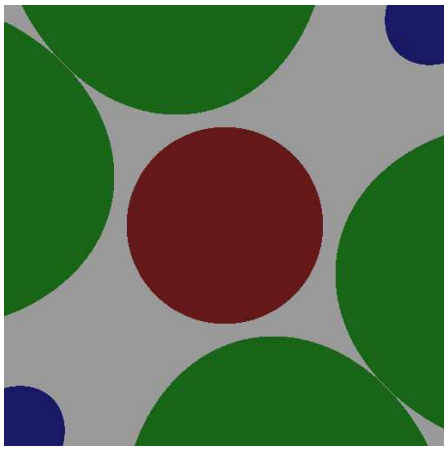
The next parameters is the horizontal field of view which determines the angle of the view frustum and in conjunction with the aspect ratio give the width and height of the frustum. A small field of view results in a narrowed focus around the view direction with little peripheral vision of the scene. A large field of view shows much of the area surrounding the view direction.





Above are 60°, and 90°  horizontal field of views, all spheres are the same radius the green ones are closer to the screen and the blue ones are further. As you can see not only does the higher fov increase the area shown but it also exaggerates the visual distortion of perspective lines. The effect of the field of view is also much greater towards the periphery of the image. This makes sense as rays projecting from the center of the viewing window at the eye are going to be straight on and more like a parallel projection. While towards the edges of the image the

rays are cast at wider angles. This also means that the view direction parameter plays a role in the amount of perspective distortion as well.



Another impactful viewing parameter is the updir and how changes to it affect the perceived rotation of the scene. The images above show an up direction of just positive y, a value of x or z would result in the camera facing but below sets the up direction to (1, 1, 0), looking down the negative z axis gives the effect of rotating the camera counter clockwise 45°.
However changing the up direction to face towards or away from the view direction has little effect on the image. It's just used to determine the u vector, as the v vector is determined by creating an orthogonal basis with the view and u vectors . So changing the up direction along that plane doesnt affect the orientation of the view window.