Four balls each have a number of circular depressions that allow them to be packed tightly together inside a pyramid shaped cage. A ball can rotate only if it sits in the depressions of at least two other balls. The goal is to rotate the balls so that each side is a single color (red, green, blue, or yellow). Here are the other two sides:

By observing that the green and blue faces have only one depression, Jaap's Page observes that a relatively simple solution proceeds by solving green and blue first (to allow more depressions available for the remainder of the solution). That is, position the red-green-blue corner, then the green-blue-yellow corner, then the third planet on the blue side, and finally the remaining planet, where the last step may require some temporary rotations of the other balls.

Further Reading