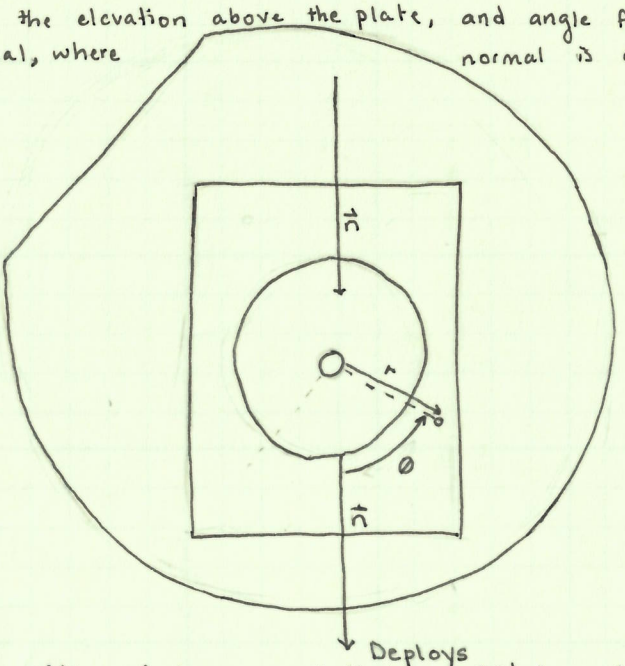
Overview : The Hephaestus arm assembly will be comprised of a mechanical arm with articulating joints mounted on a rotating plate that will be secured to the base plate. The OBC shall generate test points for the arm to reach. The test points should be on the payload base plate.

Coordinate Composition: The target location shall be determined by 3 values: radius, height, and angle from normal, where radius is the radial distance from arm mount to target point, height is the elevation above the plate, and angle from normal is the radial angle from normal, where normal is deployment direction.

Polar coordinates

$\varnothing$ = angle from normal
$\hat{n}$ = normal vector
r = radius
h = height



Position Information : The position of the arm shall be tracked in a similar manner to the target locations. The tip of the arm will be the tracked point. One again, the position will be represented by a triple of $\varnothing$, r, and h, as defined above.