When $y_r$ and $x_v$ are large, the distance $d_2$ is very close to the distance $d_2' = d_1 - dsin\theta$, and the model which says $dsin\theta = d_1 - d_2$ is exact. This is equivalent to saying that $\phi$ is very small so that $d_2$ projects identically onto $d_2'$. The model assumes a plane wave is arriving at the sensors.