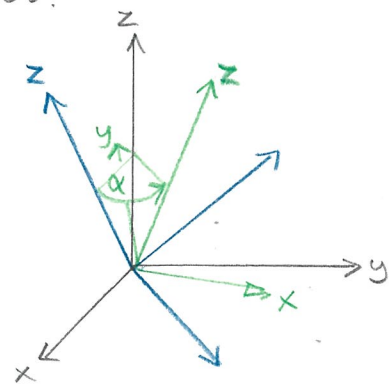
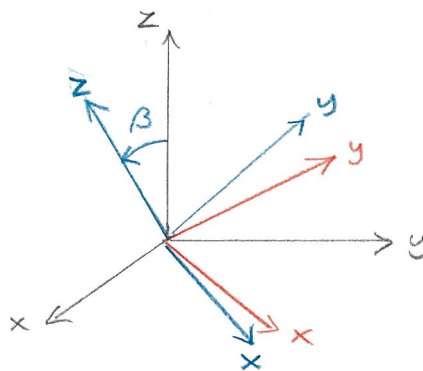
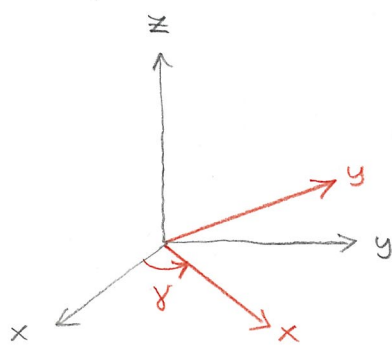
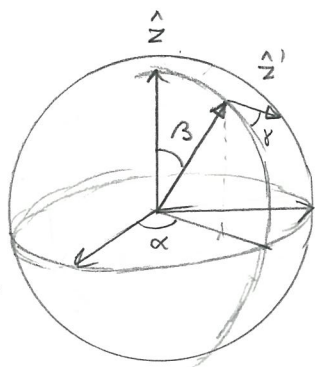


2<sup>nd</sup> definition of Euler angles : all rotations around the original axes.



- Perhaps easier to think about just the  $\hat{x}$ -direction located at the tip of the  $\hat{z}$  vector
- See DB-3 for the 1<sup>st</sup> definition of  $\alpha, \beta, \gamma$

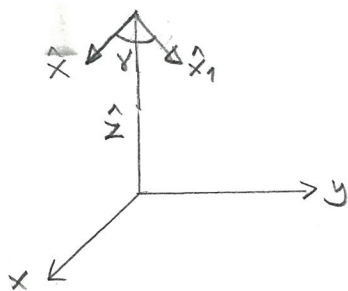


$(\beta, \alpha) = (\theta, \phi)$  of new  $\hat{z}'$

If  $\gamma = 0$  then  $\hat{x}'$  points along the original  $\phi$  meridian

$\therefore \gamma$  is the angle between the new  $\hat{x}'$  direction (located at  $\hat{z}'$ ) and the  $\phi$  meridian

In the 2<sup>nd</sup> definition this rotation is performed at the original  $\hat{z}$ .



Then  $\hat{z}$  is moved to  $(\theta, \phi) = (\beta, 0)$   
and to  $(\beta, \alpha)$

If I had not rotated by  $\gamma$  at first,  
 $\hat{x}'$  would now point along the original  $\phi$  meridian.

Because of the original  $\gamma$  rotation, it now is  $\gamma$  from it.