

### In equation III

(Coordinates using LEP axes  $y, z$ )

$(C_{py}, C_{pz})$  center of pressure  
 $(G_y, G_z)$  wing center of mass  
 $(P_y, P_z)$  Pilot position, where  $P_y = \text{"calage"}$   
 $(DL_y, DL_z)$  Lines drag point of application  
 $(GL_y, GL_z)$  Lines+rivers center of mass

} points

Solve for  $P_y$ :

$$\begin{aligned} P_y = & \left( -(C_{py} - G_y) W_{\text{wing}} \cdot \cos \alpha - (C_{pz} - G_z) W_{\text{wing}} \cdot \sin \alpha \right. \\ & - (C_{py} - GL_y) W_{\text{lines}} \cdot \cos \alpha - (C_{pz} - GL_z) W_{\text{lines}} \cdot \sin \alpha \\ & - C_{py} W_{\text{pilot}} \cdot \cos \alpha - (C_{pz} - P_z) W_{\text{pilot}} \cdot \sin \alpha \\ & + (C_{py} - DL_y) D_{\text{lines}} \cdot \sin \alpha + (C_{pz} - DL_z) D_{\text{lines}} \cdot \cos \alpha \\ & \left. + C_{py} D_{\text{pilot}} \cdot \sin \alpha + (C_{pz} - P_z) D_{\text{pilot}} \cdot \cos \alpha \right) / \\ & (D_{\text{pilot}} \cdot \sin \alpha - W_{\text{pilot}} \cdot \cos \alpha) \end{aligned}$$

Where  $\alpha \stackrel{\text{def}}{=} \gamma - \alpha$

Then  $P_y \leftarrow \text{"calage"}$