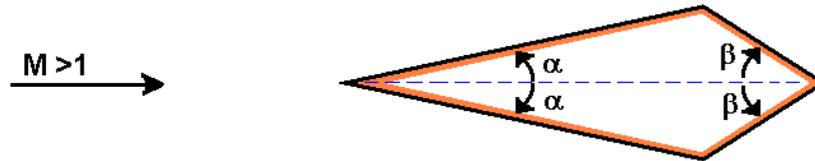


### Problem 340A

Find an expression for the drag coefficient (based on frontal projected area) of a thin diamond-shaped body in a supersonic flow (Mach number =  $M$ ) in terms of  $M$ ,  $\alpha$  and  $\beta$ : Use the theory for small angles



of turn assuming that both  $\alpha$  and  $\beta$  are small. If  $\alpha$  is smaller than  $\beta$  how does the drag differ when the body is turned around so that the end with the half-angle  $\beta$  becomes the leading edge?