Terminal invariant sets X_f with closed-loop trajectory and MPC predictions

$X_{f,x}$ **proj** (w_y, β)

$X_{f,x}$ **proj** (w_y, v_x)

$X_{f,x}$ **proj** (β, v_x)

$X_{f,z}$ **(1D) for** v_z

$X_{f,y}$ **proj** (w_x, α)

$X_{f,y}$ **proj** (w_x, v_y)

$X_{f,y}$ **proj** (α, v_y)

$X_{f,\text{roll}}$ **for** (ω_z, γ)

open-loop predictions — closed-loop