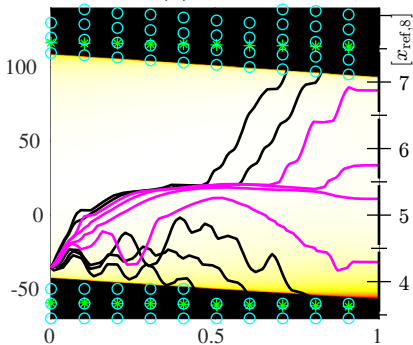


Redundant coordinate φ_z in deg

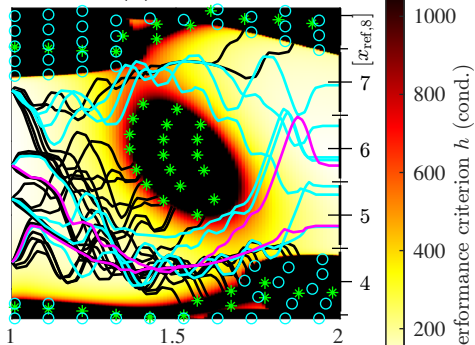
— invalid — valid — optimal * singularity ○ collision

(a) stage 1



Norm. traj. progress s

(b) stage 2



Norm. traj. progress s

Performance criterion h (cond.)