flight pahse C	Design		Modes	ζ	ωd(F1)	T2	τ
Iter 1	With Weight	long.	phugoid (3)	0.009742			
			sp (1)	0.617551			
		lateral	spiral (4)			7.22664	
			roll (1)				0.036039
			dutch (2)	0.121115	0.728307		
Iter 2	With Weight	long.	phugoid (3)	0.018865			
			sp (1)	0.378027			
		lateral	spiral (4)			6.14956	
			roll (1)				0.066946
			dutch (2)	0.077998	0.650641		
Iter 3	With Weight	long.	phugoid (3)				
			sp (1)				
		lateral	spiral (4)				
			roll (1)				
			dutch (2)				
Iter 4	With Weight	long.	phugoid (3)				
			sp (1)				
		lateral	spiral (4)				
			roll (1)				
			dutch (2)				

Design	Modes	ζ	ωd(F1)	T2	τ
Without Weight	hugoid (3)	0.009491			
	sp (1)	0.674			
	spiral (4)			6.47386	
	roll (1)				0.032238
	dutch (2)	0.135635	0.727863		
Without Weight	hugoid (3)	0.017979			
	sp (1)	0.430617			
	spiral (4)			5.36392	
	roll (1)				0.057557
	dutch (2)	0.091964	0.655326		

NOTES

Make sure inertia extracted from solidworks/fusion is wrt the same axes corresponding to those in xflr5
assumed dutch maximum wd=.6

LVL 1 (Best)

LVL 2

LVL 3 (Least)

Dangerous

Too much stability

Damping ratio

Damped natural frequency () or F1

Time to double (T2) or (t2) (for unstable system)

Time constant ()