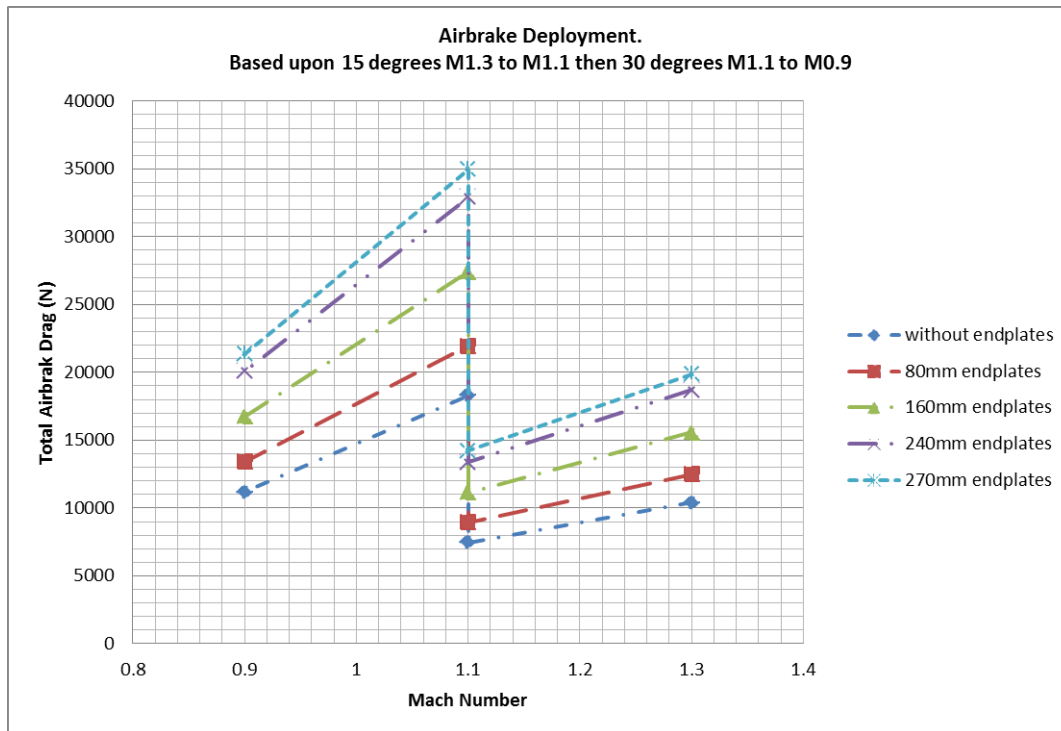


Summary of Airbrake Drag Calculations

Paul Martin

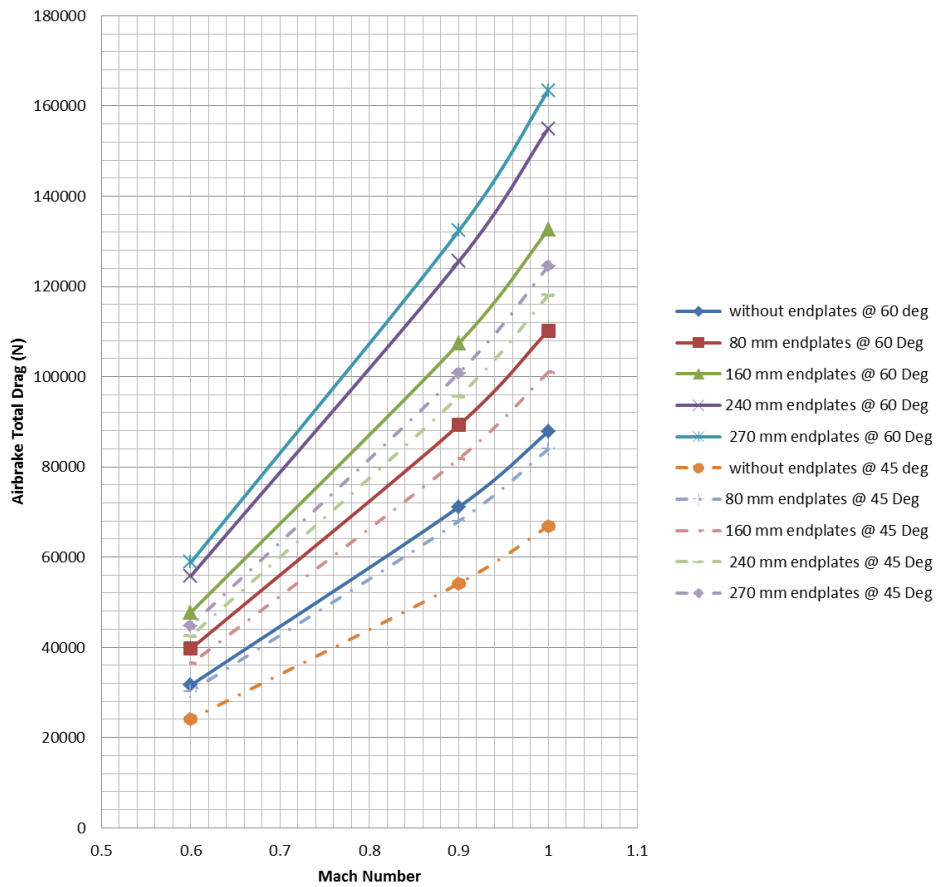
4 July 2014



estimation of AI airbrake drag based on area rule							
mach number	deployment angle	q	without endplates	80mm endplates	160mm endplates	240mm endplates	270mm endplates
			1.000	1.199	1.497	1.796	1.908
1.3	15	119867	10410	12478	15586	18695	19861
1.1	15	85822	7453	8934	11160	13386	14220
1.1	30	85822	18324	21963	27435	32907	34959
0.9	30	57451	11185	13406	16747	20087	21339
total combined endplate area		0.572	m2				

effective endplate area

Airbrake total force as a function of deployment angle & endplate height



Mach number	q	Aussie invader airbrakes without endplates	Aussie invader airbrakes with 80 mm endplates	Aussie invader airbrakes with 160 mm endplates	Aussie invader airbrakes with 240 mm endplates	Aussie invader airbrakes with 270 mm endplates	deployment angle
1	70928	87790	110195	132600	155004	163406	60
0.9	57451	71110	89258	107406	125554	132359	60
0.6	25534	31604	39670	47736	55802	58826	60
1	70928	66858	83920	100983	118046	124444	45
0.9	57451	54155	67975	81796	95617	100800	45
0.6	25534	24069	30211	36354	42496	44800	45

