

Appendix 3 All models grouped by stage of selection, then ordered by increasing AIC_c. Lowest AIC_c was 7098.769. *K* is the number of model parameters. For relative model likelihoods and AIC_c weights, see Table 2 (All but the top eight models have zero relative likelihood).

Stage	Model	<i>K</i>	Deviance	ΔAIC _c
Final	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus} + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	22	7054.12	0
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus} + \text{Day} + \text{Day}^2\}$	21	7056.56	0.39
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus} + \text{Cloud} + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	23	7053.19	1.13
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus} + \text{Cloud} + \text{Day} + \text{Day}^2\}$	22	7056.03	1.92
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus}\}$	19	7062.56	2.28
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus} + \text{Windspeed}\}$	20	7060.56	2.34
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus} + \text{Cloud} + \text{Windspeed}\}$	21	7058.81	2.63
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus} + \text{Cloud}\}$	20	7061.33	3.10
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	16	7088.30	21.88
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Day} + \text{Day}^2\}$	15	7091.24	22.78
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Cloud} + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	17	7087.60	23.23
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Cloud} + \text{Day} + \text{Day}^2\}$	16	7090.89	24.47
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Cloud} + \text{Windspeed}\}$	15	7103.98	35.52
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Cloud}\}$	14	7107.06	36.56
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2 + \text{Windspeed}\}$	14	7107.41	36.91
	$p\{\text{Team} + \text{Alt} + \text{Alt}^2\}$	13	7109.74	37.20
	$p\{\text{Team} + \text{Wingspan} + \text{Genus} + \text{Day} + \text{Day}^2\}$	19	7146.29	86.01
	$p\{\text{Team} + \text{Wingspan} + \text{Genus} + \text{Cloud} + \text{Day} + \text{Day}^2\}$	20	7144.24	86.01
	$p\{\text{Team} + \text{Wingspan} + \text{Genus} + \text{Cloud}\}$	18	7148.86	86.53
	$p\{\text{Team} + \text{Wingspan} + \text{Genus} + \text{Cloud} + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	21	7143.08	86.91
	$p\{\text{Team} + \text{Wingspan} + \text{Genus} + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	20	7145.59	87.36
	$p\{\text{Team} + \text{Wingspan} + \text{Genus} + \text{Cloud} + \text{Windspeed}\}$	19	7147.94	87.66
	$p\{\text{Team} + \text{Wingspan} + \text{Genus}\}$	17	7152.19	87.82
$p\{\text{Team} + \text{Wingspan} + \text{Genus} + \text{Windspeed}\}$	18	7151.75	89.42	

Stage	Model	K	Deviance	ΔAIC_c
Final, cont.	$p\{\text{Team} + \text{Day} + \text{Day}^2\}$	13	7172.98	100.44
	$p\{\text{Team} + \text{Cloud} + \text{Day} + \text{Day}^2\}$	14	7171.43	100.93
	$p\{\text{Team} + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	14	7172.46	101.96
	$p\{\text{Team} + \text{Cloud} + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	15	7170.58	102.12
	$p\{\text{Team} + \text{Cloud}\}$	12	7184.19	109.63
	$p\{\text{Team} + \text{Cloud} + \text{Windspeed}\}$	13	7183.45	110.91
	$p\{\text{Team}\}$	11	7188.99	112.39
	$p\{\text{Team} + \text{Windspeed}\}$	12	7188.70	114.13
	$p\{\text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus} + \text{Cloud} + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	13	7211.95	139.42
	$p\{\text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus} + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	12	7214.28	139.72
	$p\{\text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus} + \text{Cloud} + \text{Windspeed}\}$	11	7217.58	140.98
	$p\{\text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus} + \text{Windspeed}\}$	10	7221.03	142.41
	$p\{\text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus} + \text{Day} + \text{Day}^2\}$	11	7219.59	142.99
	$p\{\text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus} + \text{Cloud} + \text{Day} + \text{Day}^2\}$	12	7218.17	143.60
	$p\{\text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus} + \text{Cloud}\}$	10	7223.87	145.24
	$p\{\text{Alt} + \text{Alt}^2 + \text{Wingspan} + \text{Genus}\}$	9	7226.21	145.56
	$p\{\text{Alt} + \text{Alt}^2 + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	6	7246.57	159.85
	$p\{\text{Alt} + \text{Alt}^2 + \text{Cloud} + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	7	7244.63	159.93
	$p\{\text{Alt} + \text{Alt}^2 + \text{Day} + \text{Day}^2\}$	5	7252.26	163.53
	$p\{\text{Alt} + \text{Alt}^2 + \text{Cloud} + \text{Day} + \text{Day}^2\}$	6	7251.11	164.40
	$p\{\text{Alt} + \text{Alt}^2 + \text{Cloud} + \text{Windspeed}\}$	5	7260.70	171.97
	$p\{\text{Alt} + \text{Alt}^2 + \text{Windspeed}\}$	4	7265.84	175.10
	$p\{\text{Alt} + \text{Alt}^2 + \text{Cloud}\}$	4	7267.68	176.94
	$p\{\text{Alt} + \text{Alt}^2\}$	3	7271.52	178.77
	$p\{\text{Wingspan} + \text{Genus} + \text{Cloud} + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	11	7288.52	211.92
	$p\{\text{Wingspan} + \text{Genus} + \text{Cloud} + \text{Windspeed}\}$	9	7293.73	213.07
	$p\{\text{Wingspan} + \text{Genus} + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	10	7293.31	214.69
	$p\{\text{Wingspan} + \text{Genus} + \text{Cloud} + \text{Day} + \text{Day}^2\}$	10	7293.52	214.89

Stage	Model	K	Deviance	ΔAIC_c
Final, cont.	$p\{\text{Wingspan} + \text{Genus} + \text{Cloud}\}$	8	7298.58	215.91
	$p\{\text{Wingspan} + \text{Genus} + \text{Day} + \text{Day}^2\}$	9	7297.08	216.42
	$p\{\text{Wingspan} + \text{Genus} + \text{Windspeed}\}$	8	7299.70	217.03
	$p\{\text{Wingspan} + \text{Genus}\}$	7	7303.22	218.52
	$p\{\text{Cloud} + \text{Windspeed} + \text{Day} + \text{Day}^2\}$	5	7314.28	225.55
	$p\{\text{Windspeed} + \text{Day} + \text{Day}^2\}$	4	7318.12	227.38
	$p\{\text{Cloud} + \text{Day} + \text{Day}^2\}$	4	7318.42	227.68
	$p\{\text{Day} + \text{Day}^2\}$	3	7321.31	228.55
	$p\{\text{Cloud} + \text{Windspeed}\}$	3	7326.62	233.87
	$p\{\text{Cloud}\}$	2	7330.94	236.18
Initial: Observer	$p\{\text{Windspeed}\}$	2	7333.76	239.00
	$p\{\text{Team} + \text{Day} + \text{Day}^2 + \text{Hour}\}$	14	7170.55	99.82
	$p\{\text{Team} + \text{Day} + \text{Day}^2\}$	13	7172.98	100.24
	$p\{\text{Team} + \text{Day} + \text{Hour}\}$	13	7173.99	101.25
	$p\{\text{Team} + \text{Day}\}$	12	7176.34	101.60
	$p\{\text{Team}\}$	11	7188.99	112.24
	$p\{\text{Team} + \text{Hour}\}$	12	7188.26	113.51
	$p\{\text{Day} + \text{Day}^2 + \text{Hour}\}$	4	7317.80	227.03
	$p\{\text{Day} + \text{Hour}\}$	3	7320.58	227.81
	$p\{\text{Day} + \text{Day}^2\}$	3	7321.31	228.54
	$p\{\text{Year}\}$	2	7323.95	229.19
	$p\{\text{Day}\}$	2	7323.97	229.20
	$p\{.\}$	1	7336.82	240.05
	$p\{\text{Hour}\}$	2	7335.50	240.74
Initial: Flight	$p\{\text{Alt} + \text{Alt}^2 + \text{BPH}\}$	4	7269.00	178.24
	$p\{\text{Alt} + \text{Alt}^2\}$	3	7271.52	178.75
	$p\{\text{Alt} + \text{BPH}\}$	3	7291.06	198.29
	$p\{\text{Alt}\}$	2	7293.64	198.87

Stage	Model	K	Deviance	ΔAIC_c
Initial: Flight (cont.)	$p\{\text{Year}\}$	2	7323.95	229.19
	$p\{BPH\}$	2	7333.16	238.39
Initial: Species	$p\{\text{Wingspan} + \text{Genus}\}$	7	7303.22	218.46
	$p\{\text{Wingspan} + \text{Wingspan}^2\}$	3	7311.71	218.94
	$p\{\text{Wingspan}\}$	2	7314.54	219.77
	$p\{\text{Wingspan} + \text{Wingspan}^2 + \text{Genus}\}$	8	7302.91	220.15
	$p\{\text{Genus}\}$	6	7308.41	221.65
Initial: Weather	$p\{\text{Year}\}$	2	7323.95	229.19
	$p\{\text{Cloud} + \text{Windspeed}\}$	3	7326.62	233.85
	$p\{\text{Cloud} + \text{Windspeed} + \cos(\text{Wind dir.})\}$	4	7325.68	234.91
	$p\{\text{Cloud} + \text{Windspeed} + \text{Temperature}\}$	4	7326.32	235.55
	$p\{\text{Cloud} + \text{Windspeed} + \cos(\text{Wind dir.}) + \text{Temperature}\}$	5	7324.65	235.88
	$p\{\text{Cloud} + [\text{Windspeed} \times \cos(\text{Wind dir.})]\}$	3	7328.85	236.08
	$p\{\text{Cloud}\}$	2	7330.94	236.18
	$p\{\text{Cloud} + \cos(\text{Wind dir.})\}$	3	7329.17	236.41
	$p\{\text{Cloud} + [\text{Windspeed} \times \cos(\text{Wind dir.})] + \text{Temperature}\}$	4	7328.41	237.65
	$p\{\text{Cloud} + \cos(\text{Wind dir.}) + \text{Temperature}\}$	4	7328.77	238.00
	$p\{\text{Cloud} + \text{Temperature}\}$	3	7330.94	238.18
	$p\{\text{Windspeed}\}$	2	7333.76	239.00
	$p\{\text{Windspeed} + \text{Temperature}\}$	3	7332.54	239.77
	$p\{\text{Windspeed} + \cos(\text{Wind dir.}) + \text{Temperature}\}$	4	7330.78	240.01
	$p\{.\}$	1	7336.82	240.05
	$p\{\text{Windspeed} + \cos(\text{Wind dir.})\}$	3	7333.17	240.41
	$p\{[\text{Windspeed} \times \cos(\text{Wind dir.})]\}$	2	7335.53	240.76
	$p\{\cos(\text{Wind dir.})\}$	2	7335.64	240.87
	$p\{[\text{Windspeed} \times \cos(\text{Wind dir.})] + \text{Temperature}\}$	3	7334.11	241.34
	$p\{\cos(\text{Wind dir.}) + \text{Temperature}\}$	3	7334.22	241.46
$p\{\text{Temperature}\}$	2	7336.45	241.68	