

Flight Results for Rocket Rally 2012

	Flight #1	Flight #2	Flight #3	Flight #4	Flight #5
Owners	Sarah & Kelsi	Lindsey & Marissa	Davis & Justin	Matt & Isaac	Jalen, Chance & Josh
Rocket Name	Tangled	Rainbow Volcano	Uncle Sam	Retro	Warrior
Rocket Type	Astrobee	Arcas	G-Force	G-Force	Astrobee
Rocket Mass	810 g	795 g	1000 g	1006 g	807 g
Motor Used	G76-7G	G53-5FJ	G77-4R	G76-4G	G75-7M
Estimate Altitude	1252 ft	750 ft	700 ft	453 ft (G77-4R)	1350 ft (G80-7T)
Estimated Cd	0.45	0.5	0.615	0.5	0.8
Apogee Altitude	1242 ft	694 ft	800 ft	** 1615 ft **	1295 ft
Top Speed	195 mph	153 mph	154 mph	150 mph	211 mph
Burn Time burn	1.4 s	1.4 s	1.6 s	1.3 s	1.4 s
Peak Acceleration PAcc	14.9 g	10.9 g	11.6 g	15.0 g	11.0 g
Avg Accerleration AAcc	6.4 g	5.1 g	4.5 g	5.2 g	6.9 g
Coast to Apogee C2AP	7.4 s	4.7 s	6.0 s	5.7 s	7.6 s
Apogee to Eject AP2E	-0.4 s	-0.8 s	-3.7 s	0.0 s	0.3 s
Ejection Altitude EALt	1235 ft	667 ft	579 ft	858 ft	1293 ft
Descent Speed dESc	10 mph	11 mph	1.3 mph	20 mph	10 mph
Flight Duration durA	89.4 s	43.2 s	34.2 s	36.1 s	90.2 s
Notes	Fin fell off on landing	Lowest Arcas flight ever!!!	Did not come apart. Spiraled down to landing	G77 would not ignite. Did not come apart. Spiraled down to landing. Apogee error	G80 would not ignite. 4 tries to get airborne

	Flight #6	Flight #7	Flight #8	Flight #9	Flight #10
Owners	Austin & Ian	Kim & Maddison	Chris	Nick O & Zach	Nick C & Kevin
Rocket Name	Tebow	Dave the Minion	Air Force	Crush	Baby Ruth
Rocket Type	Arcas	G-Force	G-Force	Arcas	Astrobee
Rocket Mass	609 g	1060 g	1022 g	620 g	813 g
Motor Used	G64-7W	G76-4G	G64-7W	G76-7G	G80-7T
Estimate Altitude	1448 ft	775 ft	850 ft	1530 ft	1475 ft
Estimated Cd	0.7	0.4	0.4	0.47	0.66
Apogee Altitude	1597 ft	829 ft	823 ft	1608 ft	1508 ft (record)
Top Speed	234 mph	144 mph	141 mph	263 mph	251 mph
Burn Time burn	1.9 s	1.4 s	1.8 s	1.4 s	1.3 s
Peak Acceleration PAcc	12.1 g	10.9 g	6.9 g	14.1 g	13.0 g
Avg Accerleration AAcc	5.6 g	4.6 g	3.5 g	10.4 g	9.0 g
Coast to Apogee C2AP	6.5 s	5.3 s	6.0 s	8.2 s	8.5 s
Apogee to Eject AP2E	-1.4 s	-0.9 s	-1.0 s	-1.2 s	-1.9 s
Ejection Altitude EALt	1501 ft	772 ft	799 ft	1572 ft	1458 ft
Descent Speed dESc	23 mph	11 mph	10 mph	11 mph	76 mph
Flight Duration durA	50.4 s	51.2 s	59.5 s	100.7 s	21.0 s
Notes					Did not come apart. Crashed. New altitude record

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	Flight #11	Flight #12	Flight #13	Flight #14	Flight #15
Owners	Brad C & Hayden	Bryanna	Shelby	Sami	Zach S
Rocket Name	Marlin	Glitterazzi	Red Solo Rocket	Imagination Destination	Minecraft
Rocket Type	Arcas	Arcas	Arcas	Arcas	Arcas
Rocket Mass	593 g	622 g	630 g	590 g	595 g
Motor Used	G64-7W	G80-7T	G77-7R	G53-7FJ	G64-7W
Estimate Altitude	1573 ft	1560 ft (G76-7G)	1416 ft	1560 ft	1600 ft
Estimated Cd	0.451	0.44	0.55	0.6	0.475
Apogee Altitude		1870 ft	1418 ft	1329 ft	1615 ft
Top Speed		350 mph	250 mph	215 mph	225 mph
Burn Time burn		1.3 s	1.5 s	1.3 s	1.9 s
Peak Acceleration PAcc		15.6 g	9.2 g	16.2 g	12.7 g
Avg Accerleration AAcc		12.8 g	7.4 g	7.5 g	5.5 g
Coast to Apogee C2AP		8.8 s	7.3 s	7.8 s	8.1 s
Apogee to Eject AP2E		-1.0 s	-1.5 s	-1.1 s	-1.1 s
Ejection Altitude EAlt		1842 ft	1343 ft	1302 ft	1586 ft
Descent Speed dESc		11 mph	12 mph	12 mph	24 mph
Flight Duration durA		115.2 s	82.1 s	77.5 s	54.1 s
Notes	Did not come apart. Crashed. Altimeter totaled	Arcas altitude winner	Prediction winner. Best ever	Launch lug came off. Fin off on landing	Parachute did not deploy but did come apart

	Flight #16	Flight #17	Flight #18	Flight #19	Flight #20
Owners	Zac H & Shawn	Kyle, Katelyn & Emma	Tessa & Jenny	Kalley & Courtney	Hunter, Brad S. & JT
Rocket Name	Mystery Machine	Glee	Beatles	Love Pink	ESPN
Rocket Type	G-Force	Arcas	Arcas	Arcas	Arcas
Rocket Mass	1012 g	692 g	600 g	602 g	592 g
Motor Used	G76-4G	G76-7G	G64-7W	G77-7R	G76-7G
Estimate Altitude	833 ft	1720 ft	1600 ft	1550 ft	1692 ft
Estimated Cd	0.5	0.38	0.6	0.594	0.4
Apogee Altitude	880 ft	1742 ft	1496 ft	934 ft	1659 ft
Top Speed	154 mph	277 mph	218 mph	257 mph	
Burn Time burn	1.4 s	1.4 s	1.9 s	1.5 s	
Peak Acceleration PAcc	14.8 g	20.1 g	13.1 g	14.0 g	
Avg Accerleration AAcc	5.1 g	9.0 g	5.3 g	7.6 g	
Coast to Apogee C2AP	5.5 s	6.8 s	7.0 s	6.9 s	
Apogee to Eject AP2E	-1.7 s	-0.6 s	-1.4 s	-0.9 s	
Ejection Altitude EAlt	815 ft	1655 ft	1420 ft	830 ft	
Descent Speed dESc	10 mph	10 mph	11 mph	12 mph	
Flight Duration durA	56.1 s	112.4 s	93.3 s	51.9 s	
Notes	G-Force altitude winner			Igniter clips did not release and pulled rocket. Went sideways	Used Altimeter One so no extra data