

APRS (RADIO) DATA

DATA REPORTED FROM BigRedBee APRS, 23FEB2013 Flight

| time, EST <i>(derived)</i> | time, UTC | longitude | latitude | altitude <i>(derived)</i> | altitude <i>FALSE*</i> | altitude <i>TRUE</i> | speed | direction |
|-------------------------------|--------------|-----------|-----------|------------------------------|---------------------------|-------------------------|-------|-----------|
| (hr:min:sec) | (hr:min:sec) | (degrees) | (degrees) | (feet) | (m) | (m) | (???) | (???) |

(ASCENT)

| | | | | | | | | |
|-----------------|----------|-----------|----------|-------|------|-------------|----|-----|
| 13:38:19 | 18:38:19 | -73.71000 | 42.52033 | 774 | 72 | 236 | 24 | 314 |
| 13:39:27 | 18:39:27 | -73.71300 | 42.52483 | 2008 | 187 | 612 | 24 | 321 |
| 13:39:59 | 18:39:59 | -73.71400 | 42.52767 | 2680 | 249 | 817 | 54 | 347 |
| 13:40:31 | 18:40:31 | -73.71483 | 42.53267 | 3225 | 300 | 983 | 57 | 351 |
| 13:41:02 | 18:41:02 | -73.71400 | 42.53850 | 3701 | 344 | 1128 | 63 | 2 |
| 13:41:43 | 18:41:43 | -73.71167 | 42.54433 | 4242 | 394 | 1293 | 50 | 28 |
| 13:42:10 | 18:42:10 | -73.70867 | 42.54883 | 4866 | 452 | 1483 | 48 | 33 |
| 13:42:44 | 18:42:44 | -73.70483 | 42.55300 | 5312 | 493 | 1619 | 56 | 49 |
| 13:43:16 | 18:43:16 | -73.70000 | 42.55650 | 5840 | 543 | 1780 | 72 | 40 |
| 13:43:49 | 18:43:49 | -73.69517 | 42.56000 | 6424 | 597 | 1958 | 54 | 64 |
| 13:44:23 | 18:44:23 | -73.69100 | 42.56300 | 7060 | 656 | 2152 | 63 | 51 |
| 13:45:01 | 18:45:01 | -73.68700 | 42.56583 | 7661 | 712 | 2335 | 37 | 55 |
| 13:45:31 | 18:45:31 | -73.68217 | 42.56817 | 8333 | 774 | 2540 | 37 | 58 |
| 13:46:04 | 18:46:04 | -73.67717 | 42.57017 | 8960 | 832 | 2731 | 52 | 52 |
| 13:46:38 | 18:46:38 | -73.67167 | 42.57150 | 9531 | 885 | 2905 | 59 | 76 |
| 13:47:11 | 18:47:11 | -73.66683 | 42.57317 | 10072 | 936 | 3070 | 61 | 75 |
| 13:47:45 | 18:47:45 | -73.66000 | 42.57550 | 10476 | 973 | 3193 | 57 | 53 |
| 13:48:18 | 18:48:18 | -73.65450 | 42.57750 | 11083 | 1030 | 3378 | 52 | 62 |
| 13:48:51 | 18:48:51 | -73.64833 | 42.57933 | 11700 | 1087 | 3566 | 61 | 54 |
| 13:49:25 | 18:49:25 | -73.64133 | 42.58200 | 12320 | 1145 | 3755 | 83 | 75 |

| | | | | | | | | |
|-----------------|----------|-----------|----------|-------|------|-------------|-----|----|
| 13:49:58 | 18:49:58 | -73.63233 | 42.58483 | 12995 | 1207 | 3961 | 102 | 70 |
| 13:50:32 | 18:50:32 | -73.62250 | 42.58833 | 13530 | 1257 | 4124 | 107 | 66 |
| 13:51:05 | 18:51:05 | -73.61200 | 42.59183 | 14124 | 1312 | 4305 | 107 | 62 |
| 13:51:44 | 18:51:44 | -73.60183 | 42.59483 | 14724 | 1368 | 4488 | 109 | 68 |
| 13:52:11 | 18:52:11 | -73.59200 | 42.59733 | 15266 | 1418 | 4653 | 111 | 74 |
| 13:52:44 | 18:52:44 | -73.58050 | 42.59967 | 15843 | 1472 | 4829 | 111 | 67 |
| 13:53:22 | 18:53:22 | -73.56800 | 42.60267 | 16463 | 1529 | 5018 | 115 | 60 |
| 13:53:52 | 18:53:52 | -73.55567 | 42.60683 | 17054 | 1584 | 5198 | 113 | 58 |
| 13:54:28 | 18:54:28 | -73.54200 | 42.61150 | 17713 | 1646 | 5399 | 122 | 74 |
| 13:55:34 | 18:55:34 | -73.52967 | 42.61550 | 18317 | 1702 | 5583 | 130 | 65 |
| 13:56:38 | 18:56:38 | -73.50600 | 42.62383 | 19554 | 1817 | 5960 | 107 | 59 |
| 13:57:13 | 18:57:13 | -73.49317 | 42.62850 | 20135 | 1871 | 6137 | 139 | 67 |
| 13:57:54 | 18:57:54 | -73.46450 | 42.63550 | 21335 | 1982 | 6503 | 133 | 81 |
| 13:58:24 | 18:58:24 | -73.44683 | 42.63833 | 22077 | 2051 | 6729 | 148 | 82 |
| 13:58:57 | 18:58:57 | -73.42883 | 42.64100 | 22700 | 2109 | 6919 | 187 | 77 |
| 13:59:34 | 18:59:34 | -73.40933 | 42.64450 | 23356 | 2170 | 7119 | 194 | 73 |
| 14:00:03 | 19:00:03 | -73.38950 | 42.64900 | 23983 | 2228 | 7310 | 181 | 75 |
| 14:00:39 | 19:00:39 | -73.36833 | 42.65383 | 24587 | 2284 | 7494 | 180 | 75 |
| 14:01:09 | 19:01:09 | -73.34583 | 42.65817 | 25194 | 2341 | 7679 | 215 | 70 |
| 14:01:43 | 19:01:43 | -73.32067 | 42.66283 | 25804 | 2397 | 7865 | 222 | 72 |
| 14:02:20 | 19:02:20 | -73.29483 | 42.66767 | 26503 | 2462 | 8078 | 243 | 78 |
| 14:03:00 | 19:03:00 | -73.26833 | 42.67350 | 27234 | 2530 | 8301 | 246 | 71 |
| 14:03:27 | 19:03:27 | -73.24200 | 42.67900 | 27776 | 2580 | 8466 | 248 | 72 |
| 14:04:11 | 19:04:11 | -73.21433 | 42.68483 | 28422 | 2640 | 8663 | 261 | 76 |
| 14:04:35 | 19:04:35 | -73.18533 | 42.69150 | 29085 | 2702 | 8865 | 283 | 72 |
| 14:05:43 | 19:05:43 | -73.15550 | 42.69833 | 29806 | 2769 | 9085 | 276 | 69 |
| 14:06:17 | 19:06:17 | -73.09617 | 42.71333 | 31138 | 2893 | 9491 | 283 | 67 |
| 14:06:52 | 19:06:52 | -73.06517 | 42.72133 | 31788 | 2953 | 9689 | 267 | 75 |

| | | | | | | | | |
|-----------------|----------|-----------|----------|-------|------|--------------|-----|-----|
| 14:07:28 | 19:07:28 | -73.03617 | 42.72883 | 32546 | 3024 | 9920 | 272 | 69 |
| 14:07:58 | 19:07:58 | -73.00733 | 42.73533 | 33235 | 3088 | 10130 | 259 | 72 |
| 14:08:38 | 19:08:38 | -72.97883 | 42.74267 | 33845 | 3144 | 10316 | 257 | 72 |
| 14:09:04 | 19:09:04 | -72.94867 | 42.74967 | 34511 | 3206 | 10519 | 289 | 76 |
| 14:09:37 | 19:09:37 | -72.91833 | 42.75717 | 35144 | 3265 | 10712 | 285 | 75 |
| 14:10:11 | 19:10:11 | -72.88733 | 42.76450 | 35774 | 3324 | 10904 | 280 | 72 |
| 14:10:45 | 19:10:45 | -72.85717 | 42.77067 | 36483 | 3389 | 11120 | 257 | 76 |
| 14:11:18 | 19:11:18 | -72.83000 | 42.77650 | 37083 | 3445 | 11303 | 226 | 79 |
| 14:11:52 | 19:11:52 | -72.80317 | 42.78183 | 37743 | 3506 | 11504 | 220 | 75 |
| 14:12:25 | 19:12:25 | -72.77633 | 42.78683 | 38451 | 3572 | 11720 | 274 | 74 |
| 14:13:01 | 19:13:01 | -72.74767 | 42.79217 | 39167 | 3639 | 11938 | 256 | 79 |
| 14:13:33 | 19:13:33 | -72.72083 | 42.79650 | 39902 | 3707 | 12162 | 239 | 74 |
| 14:14:06 | 19:14:06 | -72.69433 | 42.79933 | 40640 | 3776 | 12387 | 222 | 84 |
| 14:14:40 | 19:14:40 | -72.66900 | 42.80100 | 41447 | 3851 | 12633 | 230 | 83 |
| 14:15:13 | 19:15:13 | -72.64583 | 42.80250 | 42185 | 3919 | 12858 | 211 | 90 |
| 14:15:47 | 19:15:47 | -72.62200 | 42.80300 | 42920 | 3987 | 13082 | 206 | 89 |
| 14:16:20 | 19:16:20 | -72.59733 | 42.80383 | 43661 | 4056 | 13308 | 237 | 89 |
| 14:16:53 | 19:16:53 | -72.57217 | 42.80383 | 44291 | 4115 | 13500 | 219 | 97 |
| 14:17:26 | 19:17:26 | -72.54967 | 42.80333 | 45030 | 4183 | 13725 | 187 | 84 |
| 14:18:00 | 19:18:00 | -72.52783 | 42.80317 | 45771 | 4252 | 13951 | 191 | 87 |
| 14:18:39 | 19:18:39 | -72.50683 | 42.80350 | 46388 | 4310 | 14139 | 204 | 84 |
| 14:19:08 | 19:19:08 | -72.48800 | 42.80283 | 47241 | 4389 | 14399 | 180 | 87 |
| 14:19:39 | 19:19:39 | -72.47067 | 42.80183 | 47946 | 4454 | 14614 | 141 | 104 |
| 14:20:44 | 19:20:44 | -72.45450 | 42.80067 | 48629 | 4518 | 14822 | 163 | 89 |
| 14:21:20 | 19:21:20 | -72.42200 | 42.79950 | 50144 | 4659 | 15284 | 130 | 99 |
| 14:21:53 | 19:21:53 | -72.40650 | 42.79967 | 50892 | 4728 | 15512 | 139 | 89 |
| 14:22:30 | 19:22:30 | -72.38983 | 42.80033 | 51532 | 4787 | 15707 | 122 | 93 |
| 14:23:00 | 19:23:00 | -72.37517 | 42.79967 | 52205 | 4850 | 15912 | 124 | 98 |

| | | | | | | | | |
|-----------------|----------|-----------|----------|-------|------|--------------|-----|-----|
| 14:23:37 | 19:23:37 | -72.36150 | 42.79983 | 52910 | 4916 | 16127 | 100 | 90 |
| 14:24:09 | 19:24:09 | -72.34767 | 42.79900 | 53730 | 4992 | 16377 | 98 | 99 |
| 14:24:42 | 19:24:42 | -72.33350 | 42.79817 | 54469 | 5060 | 16602 | 130 | 102 |
| 14:25:15 | 19:25:15 | -72.32000 | 42.79650 | 55305 | 5138 | 16857 | 94 | 102 |
| 14:25:52 | 19:25:52 | -72.30633 | 42.79483 | 56204 | 5222 | 17131 | 119 | 127 |
| 14:26:24 | 19:26:24 | -72.29450 | 42.79333 | 56873 | 5284 | 17335 | 93 | 117 |
| 14:26:58 | 19:26:58 | -72.28367 | 42.79250 | 57615 | 5353 | 17561 | 119 | 93 |
| 14:27:33 | 19:27:33 | -72.27217 | 42.79300 | 58465 | 5432 | 17820 | 80 | 93 |
| 14:28:08 | 19:28:08 | -72.25983 | 42.79117 | 59288 | 5508 | 18071 | 126 | 100 |
| 14:28:40 | 19:28:40 | -72.25050 | 42.78867 | 60098 | 5583 | 18318 | 87 | 97 |
| 14:29:47 | 19:29:47 | -72.24333 | 42.78733 | 60922 | 5660 | 18569 | 70 | 125 |
| 14:29:52 | 19:29:52 | -72.23783 | 42.78517 | 61624 | 5725 | 18783 | 59 | 103 |
| 14:30:37 | 19:30:37 | -72.23317 | 42.78367 | 62270 | 5785 | 18980 | 2 | 182 |
| 14:30:58 | 19:30:58 | -72.22900 | 42.78417 | 63241 | 5875 | 19276 | 72 | 66 |
| 14:31:34 | 19:31:34 | -72.22267 | 42.78617 | 63793 | 5927 | 19444 | 104 | 59 |
| 14:32:15 | 19:32:15 | -72.21550 | 42.78900 | 64600 | 6002 | 19690 | 72 | 50 |
| 14:32:44 | 19:32:44 | -72.20600 | 42.79117 | 65371 | 6073 | 19925 | 104 | 91 |
| 14:33:14 | 19:33:14 | -72.19683 | 42.79183 | 66024 | 6134 | 20124 | 67 | 68 |
| 14:33:55 | 19:33:55 | -72.18883 | 42.79150 | 66647 | 6192 | 20314 | 76 | 105 |
| 14:34:55 | 19:34:55 | -72.18350 | 42.78983 | 67612 | 6281 | 20608 | 31 | 156 |
| 14:35:28 | 19:35:28 | -72.17617 | 42.78833 | 69012 | 6411 | 21035 | 30 | 55 |
| 14:36:03 | 19:36:03 | -72.17167 | 42.78983 | 69560 | 6462 | 21202 | 7 | 53 |
| 14:36:36 | 19:36:36 | -72.16600 | 42.79133 | 70282 | 6529 | 21422 | 44 | 61 |
| 14:37:09 | 19:37:09 | -72.16167 | 42.79067 | 71030 | 6599 | 21650 | 61 | 80 |
| 14:37:46 | 19:37:46 | -72.15733 | 42.79017 | 71663 | 6658 | 21843 | 43 | 86 |
| 14:38:16 | 19:38:16 | -72.15167 | 42.78867 | 72244 | 6712 | 22020 | 80 | 131 |
| 14:38:49 | 19:38:49 | -72.14817 | 42.78933 | 72926 | 6775 | 22228 | 15 | 28 |
| 14:39:22 | 19:39:22 | -72.14400 | 42.78983 | 73681 | 6845 | 22458 | 109 | 80 |

| | | | | | | | | |
|-----------------|----------|-----------|----------|-------|------|--------------|----|-----|
| 14:39:58 | 19:39:58 | -72.13917 | 42.79017 | 74400 | 6912 | 22677 | 65 | 100 |
| 14:40:31 | 19:40:31 | -72.13383 | 42.78900 | 75151 | 6982 | 22906 | 59 | 142 |
| 14:41:39 | 19:41:39 | -72.12900 | 42.78733 | 76027 | 7063 | 23173 | 20 | 101 |
| 14:42:18 | 19:42:18 | -72.12067 | 42.78683 | 77530 | 7203 | 23631 | 52 | 99 |
| 14:42:46 | 19:42:46 | -72.11483 | 42.78633 | 78212 | 7266 | 23839 | 50 | 147 |
| 14:43:21 | 19:43:21 | -72.10983 | 42.78683 | 79039 | 7343 | 24091 | 28 | 73 |
| 14:44:04 | 19:44:04 | -72.10450 | 42.78817 | 79846 | 7418 | 24337 | 57 | 51 |
| 14:44:31 | 19:44:31 | -72.09933 | 42.78917 | 80515 | 7480 | 24541 | 33 | 84 |
| 14:45:08 | 19:45:08 | -72.09300 | 42.79033 | 81263 | 7550 | 24769 | 78 | 84 |
| 14:45:41 | 19:45:41 | -72.08717 | 42.79133 | 82008 | 7619 | 24996 | 31 | 94 |
| 14:46:12 | 19:46:12 | -72.08100 | 42.79233 | 82733 | 7686 | 25217 | 48 | 53 |
| 14:46:45 | 19:46:45 | -72.07483 | 42.79317 | 83451 | 7753 | 25436 | 56 | 83 |
| 14:47:19 | 19:47:19 | -72.06883 | 42.79317 | 84108 | 7814 | 25636 | 35 | 102 |
| 14:47:53 | 19:47:53 | -72.06433 | 42.79400 | 84708 | 7870 | 25819 | 46 | 84 |
| 14:48:28 | 19:48:28 | -72.05933 | 42.79417 | 85384 | 7932 | 26025 | 59 | 114 |
| 14:48:59 | 19:48:59 | -72.05467 | 42.79350 | 86089 | 7998 | 26240 | 59 | 72 |
| 14:49:35 | 19:49:35 | -72.04850 | 42.79333 | 86736 | 8058 | 26437 | 44 | 107 |
| 14:50:10 | 19:50:10 | -72.04117 | 42.79317 | 87539 | 8133 | 26682 | 65 | 79 |
| 14:50:45 | 19:50:45 | -72.03283 | 42.79283 | 88228 | 8197 | 26892 | 70 | 87 |
| 14:51:18 | 19:51:18 | -72.02567 | 42.79150 | 88983 | 8267 | 27122 | 59 | 89 |
| 14:52:00 | 19:52:00 | -72.01933 | 42.78817 | 89793 | 8342 | 27369 | 61 | 110 |
| 14:53:00 | 19:53:00 | -72.01250 | 42.78717 | 90486 | 8406 | 27580 | 63 | 74 |
| 14:53:34 | 19:53:34 | -72.00050 | 42.78567 | 91903 | 8538 | 28012 | 46 | 119 |
| 14:55:01 | 19:55:01 | -71.99467 | 42.78633 | 92687 | 8611 | 28251 | 56 | 90 |
| 14:55:59 | 19:55:59 | -71.97017 | 42.78683 | 95220 | 8846 | 29023 | 72 | 67 |
| 14:56:23 | 19:56:23 | -71.96350 | 42.78650 | 95955 | 8914 | 29247 | 54 | 94 |
| 14:56:57 | 19:56:57 | -71.95633 | 42.78750 | 96680 | 8982 | 29468 | 74 | 87 |
| 14:57:30 | 19:57:30 | -71.94867 | 42.78917 | 97320 | 9041 | 29663 | 87 | 82 |

| | | | | | | | | |
|------------------|------------------|------------------|-----------------|------------------|-----------------|-----------------|--------------|------------------|
| 14:58:04 | 19:58:04 | -71.93783 | 42.79100 | 97999 | 9104 | 29870 | 120 | 88 |
| 14:58:19 | 19:58:19 | -71.98717 | 42.78717 | 93540 | 8690 | 28511 | 80 | 79 |
| 14:58:38 | 19:58:38 | -71.92650 | 42.79217 | 98730 | 9172 | 30093 | 107 | 92 |
| 14:59:11 | 19:59:11 | -71.91450 | 42.79250 | 99488 | 9243 | 30324 | 102 | 92 |
| 14:59:29 | 19:59:29 | -71.97867 | 42.78783 | 94377 | 8768 | 28766 | 72 | 94 |
| 14:59:48 | 19:59:48 | -71.90233 | 42.79350 | 100358 | 9324 | 30589 | 119 | 89 |
| 15:01:02 | 20:01:02 | -71.88700 | 42.79467 | 101073 | 9390 | 30807 | 150 | 84 |
| 15:01:27 | 20:01:27 | -71.86017 | 42.79717 | 101322 | 9413 | 30883 | 120 | 79 |
| | | | | | | | | |
| <i>time, EST</i> | <i>time, UTC</i> | <i>longitude</i> | <i>latitude</i> | <i>altitude</i> | <i>altitude</i> | <i>altitude</i> | <i>speed</i> | <i>direction</i> |
| <i>(derived)</i> | | | | <i>(derived)</i> | <i>FALSE</i> | <i>TRUE</i> | | |
| (hr:min:sec) | (hr:min:sec) | (degrees) | (degrees) | (feet) | (m) | (m) | (???) | (???) |
| | | | | | | | | |
| (DESCENT) | | | | | | | | |
| 15:02:00 | 20:02:00 | -71.85000 | 42.79833 | 93061 | 8646 | 28365 | 67 | 84 |
| 15:02:37 | 20:02:37 | -71.84283 | 42.79767 | 85905 | 7981 | 26184 | 59 | 99 |
| 15:03:09 | 20:03:09 | -71.83767 | 42.79733 | 80092 | 7441 | 24412 | 43 | 76 |
| 15:03:40 | 20:03:40 | -71.83300 | 42.79783 | 74911 | 6960 | 22833 | 43 | 115 |
| 15:04:13 | 20:04:13 | -71.82783 | 42.79700 | 70407 | 6541 | 21460 | 46 | 89 |
| 15:04:50 | 20:04:50 | -71.82350 | 42.79650 | 66234 | 6153 | 20188 | 48 | 132 |
| 15:05:53 | 20:05:53 | -71.81550 | 42.79800 | 62536 | 5810 | 19061 | 56 | 77 |
| 15:06:28 | 20:06:28 | -71.79917 | 42.79617 | 55850 | 5189 | 17023 | 102 | 102 |
| 15:07:02 | 20:07:02 | -71.78517 | 42.79483 | 52835 | 4909 | 16104 | 130 | 88 |
| 15:07:37 | 20:07:37 | -71.76783 | 42.79467 | 52835 | 4644 | 15237 | 146 | 100 |
| 15:08:11 | 20:08:11 | -71.75000 | 42.79383 | 49990 | 4411 | 14472 | 181 | 90 |
| 15:08:44 | 20:08:44 | -71.72933 | 42.79350 | 47480 | 4184 | 13728 | 211 | 94 |
| 15:09:19 | 20:09:19 | -71.70483 | 42.79350 | 45039 | 3980 | 13057 | 211 | 89 |

| | | | | | | | | |
|-----------------|----------|-----------|----------|-------|------|--------------|-----|-----|
| 15:09:54 | 20:09:54 | -71.68000 | 42.79450 | 42838 | 3776 | 12389 | 230 | 81 |
| 15:10:26 | 20:10:26 | -71.65183 | 42.79850 | 40646 | 3590 | 11779 | 250 | 75 |
| 15:10:57 | 20:10:57 | -71.62433 | 42.80317 | 38645 | 3415 | 11203 | 274 | 79 |
| 15:11:34 | 20:11:34 | -71.59000 | 42.81017 | 36755 | 3233 | 10607 | 306 | 72 |
| 15:12:46 | 20:12:46 | -71.52500 | 42.82217 | 34800 | 2900 | 9514 | 285 | 77 |
| 15:13:17 | 20:13:17 | -71.49500 | 42.82733 | 31214 | 2738 | 8982 | 261 | 80 |
| 15:13:48 | 20:13:48 | -71.46800 | 42.83117 | 29468 | 2590 | 8496 | 235 | 80 |
| 15:14:22 | 20:14:22 | -71.44250 | 42.83533 | 27874 | 2443 | 8015 | 219 | 78 |
| 15:15:28 | 20:15:28 | -71.39917 | 42.84283 | 26296 | 2171 | 7124 | 176 | 81 |
| 15:16:06 | 20:16:06 | -71.38100 | 42.84483 | 23373 | 2036 | 6679 | 146 | 84 |
| 15:16:42 | 20:16:42 | -71.36583 | 42.84733 | 21913 | 1909 | 6262 | 124 | 72 |
| 15:17:12 | 20:17:12 | -71.35217 | 42.85000 | 20545 | 1782 | 5847 | 104 | 80 |
| 15:18:03 | 20:18:03 | -71.33900 | 42.85300 | 19183 | 1648 | 5407 | 102 | 70 |
| 15:18:22 | 20:18:22 | -71.32667 | 42.85533 | 17739 | 1530 | 5019 | 106 | 79 |
| 15:18:58 | 20:18:58 | -71.31550 | 42.85683 | 16467 | 1404 | 4606 | 89 | 72 |
| 15:19:31 | 20:19:31 | -71.30583 | 42.85850 | 15112 | 1292 | 4238 | 94 | 82 |
| 15:20:08 | 20:20:08 | -71.29617 | 42.85967 | 13904 | 1169 | 3834 | 70 | 76 |
| 15:20:37 | 20:20:37 | -71.28967 | 42.86000 | 12579 | 1066 | 3496 | 48 | 77 |
| 15:21:13 | 20:21:13 | -71.28483 | 42.86100 | 11470 | 963 | 3159 | 35 | 59 |
| 15:22:19 | 20:22:19 | -71.27583 | 42.86433 | 10364 | 750 | 2461 | 39 | 44 |
| 15:22:55 | 20:22:55 | -71.27050 | 42.86650 | 8074 | 642 | 2107 | 61 | 63 |
| 15:23:30 | 20:23:30 | -71.26700 | 42.86817 | 6913 | 534 | 1753 | 26 | 46 |
| 15:24:06 | 20:24:06 | -71.26433 | 42.87050 | 5751 | 444 | 1457 | 37 | 45 |
| 15:24:41 | 20:24:41 | -71.26250 | 42.87317 | 4780 | 339 | 1112 | 26 | 356 |
| 15:25:08 | 20:25:08 | -71.26450 | 42.87550 | 3648 | 248 | 814 | 43 | 329 |
| 15:25:43 | 20:25:43 | -71.26700 | 42.87783 | 2671 | 156 | 512 | 33 | 300 |
| 15:26:16 | 20:26:16 | -71.26883 | 42.87933 | 1680 | 71 | 233 | 17 | 335 |
| | | | | | | | | |

APRS (RADIO) DATA

CALCULATIONS, 23FEB2013 Flight

| time into flight | time change | W-E change | W-E speed | N-S change | N-S speed | change in altitude | change in altitude | ascent rate | wind speed | wind speed | wind direction |
|---------------------|----------------|---------------|--------------|---------------|--------------|-----------------------|-----------------------|----------------|---------------|---------------|-------------------|
| (min, sec) | (seconds) | (m) | (m/sec) | (m) | (m/sec) | (m) | (ft) | (m/sec) | (m/sec) | (mph) | (angle) |

| | | | | | | | | | | | |
|---------|-----|-----|----|-----|----|-----|------|-----|-----------|----|------------|
| 0m 0s | 0s | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0 | 0 | 0 |
| 1m 8s | 68s | -38 | -1 | 500 | 7 | 376 | 1234 | 5.5 | 7 | 16 | 176 |
| 1m 40s | 32s | -13 | -0 | 316 | 10 | 205 | 673 | 6.4 | 10 | 22 | 178 |
| 2m 12s | 32s | -11 | -0 | 556 | 17 | 166 | 545 | 5.2 | 17 | 39 | 179 |
| 2m 43s | 31s | 12 | 0 | 648 | 21 | 145 | 476 | 4.7 | 21 | 47 | 1 |
| 3m 24s | 41s | 34 | 1 | 648 | 16 | 165 | 541 | 4.0 | 16 | 35 | 3 |
| 3m 51s | 27s | 46 | 2 | 500 | 19 | 190 | 623 | 7.0 | 19 | 42 | 5 |
| 4m 25s | 34s | 60 | 2 | 463 | 14 | 136 | 446 | 4.0 | 14 | 31 | 7 |
| 4m 57s | 32s | 78 | 2 | 389 | 12 | 161 | 528 | 5.0 | 12 | 28 | 11 |
| 5m 30s | 33s | 79 | 2 | 389 | 12 | 178 | 584 | 5.4 | 12 | 27 | 12 |
| 6m 4s | 34s | 70 | 2 | 333 | 10 | 194 | 636 | 5.7 | 10 | 22 | 12 |
| 6m 42s | 38s | 68 | 2 | 314 | 8 | 183 | 600 | 4.8 | 8 | 19 | 12 |
| 7m 12s | 30s | 84 | 3 | 260 | 9 | 205 | 673 | 6.8 | 9 | 20 | 18 |
| 7m 45s | 33s | 88 | 3 | 222 | 7 | 191 | 627 | 5.8 | 7 | 16 | 22 |
| 8m 19s | 34s | 97 | 3 | 148 | 4 | 174 | 571 | 5.1 | 5 | 12 | 33 |
| 8m 52s | 33s | 87 | 3 | 186 | 6 | 165 | 541 | 5.0 | 6 | 14 | 25 |
| 9m 26s | 34s | 124 | 4 | 259 | 8 | 123 | 404 | 3.6 | 8 | 19 | 26 |
| 9m 59s | 33s | 101 | 3 | 222 | 7 | 185 | 607 | 5.6 | 7 | 17 | 24 |
| 10m 32s | 33s | 115 | 3 | 203 | 6 | 188 | 617 | 5.7 | 7 | 16 | 29 |
| 11m 6s | 34s | 132 | 4 | 297 | 9 | 189 | 620 | 5.6 | 10 | 21 | 24 |

| | | | | | | | | | | | |
|---------|-----|------|----|------|----|-----|------|------|-----------|-----|-----------|
| 11m 39s | 33s | 172 | 5 | 314 | 10 | 206 | 676 | 6.2 | 11 | 24 | 29 |
| 12m 13s | 34s | 192 | 6 | 389 | 11 | 163 | 535 | 4.8 | 13 | 29 | 26 |
| 12m 46s | 33s | 209 | 6 | 389 | 12 | 181 | 594 | 5.5 | 13 | 30 | 28 |
| 13m 25s | 39s | 206 | 5 | 333 | 9 | 183 | 600 | 4.7 | 10 | 22 | 32 |
| 13m 52s | 27s | 202 | 7 | 278 | 10 | 165 | 541 | 6.1 | 13 | 28 | 36 |
| 14m 25s | 33s | 239 | 7 | 260 | 8 | 176 | 577 | 5.3 | 11 | 24 | 43 |
| 15m 3s | 38s | 264 | 7 | 333 | 9 | 189 | 620 | 5.0 | 11 | 25 | 38 |
| 15m 33s | 30s | 266 | 9 | 462 | 15 | 180 | 591 | 6.0 | 18 | 40 | 30 |
| 16m 9s | 36s | 302 | 8 | 519 | 14 | 201 | 660 | 5.6 | 17 | 37 | 30 |
| 17m 15s | 66s | 278 | 4 | 444 | 7 | 184 | 604 | 2.8 | 8 | 18 | 32 |
| 18m 19s | 64s | 554 | 9 | 926 | 14 | 377 | 1237 | 5.9 | 17 | 38 | 31 |
| 18m 54s | 35s | 307 | 9 | 519 | 15 | 177 | 581 | 5.1 | 17 | 39 | 31 |
| 19m 35s | 41s | 708 | 17 | 778 | 19 | 366 | 1201 | 8.9 | 26 | 57 | 42 |
| 20m 5s | 30s | 442 | 15 | 314 | 10 | 226 | 742 | 7.5 | 18 | 40 | 55 |
| 20m 38s | 33s | 455 | 14 | 297 | 9 | 190 | 623 | 5.8 | 16 | 37 | 57 |
| 21m 15s | 37s | 500 | 14 | 389 | 11 | 200 | 656 | 5.4 | 17 | 38 | 52 |
| 21m 44s | 29s | 518 | 18 | 500 | 17 | 191 | 627 | 6.6 | 25 | 56 | 46 |
| 22m 20s | 36s | 564 | 16 | 537 | 15 | 184 | 604 | 5.1 | 22 | 48 | 46 |
| 22m 50s | 30s | 610 | 20 | 482 | 16 | 185 | 607 | 6.2 | 26 | 58 | 52 |
| 23m 24s | 34s | 695 | 20 | 518 | 15 | 186 | 610 | 5.5 | 25 | 57 | 53 |
| 24m 1s | 37s | 728 | 20 | 538 | 15 | 213 | 699 | 5.8 | 24 | 55 | 54 |
| 24m 41s | 40s | 763 | 19 | 648 | 16 | 223 | 732 | 5.6 | 25 | 56 | 50 |
| 25m 8s | 27s | 773 | 29 | 611 | 23 | 165 | 541 | 6.1 | 37 | 82 | 52 |
| 25m 52s | 44s | 830 | 19 | 648 | 15 | 197 | 646 | 4.5 | 24 | 54 | 52 |
| 26m 16s | 24s | 891 | 37 | 741 | 31 | 202 | 663 | 8.4 | 48 | 108 | 50 |
| 27m 24s | 68s | 938 | 14 | 759 | 11 | 220 | 722 | 3.2 | 18 | 40 | 51 |
| 27m 58s | 34s | 1960 | 58 | 1667 | 49 | 406 | 1332 | 11.9 | 76 | 169 | 50 |
| 28m 33s | 35s | 1050 | 30 | 889 | 25 | 198 | 650 | 5.7 | 39 | 88 | 50 |

| | | | | | | | | | | | |
|---------|-----|------|----|------|----|-----|------|------|-----------|-----|------------|
| 29m 9s | 36s | 1006 | 28 | 833 | 23 | 231 | 758 | 6.4 | 36 | 81 | 50 |
| 29m 39s | 30s | 1020 | 34 | 722 | 24 | 210 | 689 | 7.0 | 42 | 93 | 55 |
| 30m 19s | 40s | 1030 | 26 | 816 | 20 | 186 | 610 | 4.7 | 33 | 73 | 52 |
| 30m 45s | 26s | 1112 | 43 | 778 | 30 | 203 | 666 | 7.8 | 52 | 117 | 55 |
| 31m 18s | 33s | 1142 | 35 | 833 | 25 | 193 | 633 | 5.8 | 43 | 96 | 54 |
| 31m 52s | 34s | 1191 | 35 | 815 | 24 | 192 | 630 | 5.6 | 42 | 95 | 56 |
| 32m 26s | 34s | 1178 | 35 | 686 | 20 | 216 | 709 | 6.4 | 40 | 90 | 60 |
| 32m 59s | 33s | 1078 | 33 | 648 | 20 | 183 | 600 | 5.5 | 38 | 85 | 59 |
| 33m 33s | 34s | 1079 | 32 | 592 | 17 | 201 | 660 | 5.9 | 36 | 81 | 61 |
| 34m 6s | 33s | 1093 | 33 | 556 | 17 | 216 | 709 | 6.5 | 37 | 83 | 63 |
| 34m 42s | 36s | 1183 | 33 | 593 | 16 | 218 | 715 | 6.1 | 37 | 82 | 63 |
| 35m 14s | 32s | 1120 | 35 | 481 | 15 | 224 | 735 | 7.0 | 38 | 85 | 67 |
| 35m 47s | 33s | 1114 | 34 | 314 | 10 | 225 | 738 | 6.8 | 35 | 78 | 74 |
| 36m 21s | 34s | 1069 | 31 | 186 | 5 | 246 | 807 | 7.2 | 32 | 71 | 80 |
| 36m 54s | 33s | 981 | 30 | 167 | 5 | 225 | 738 | 6.8 | 30 | 67 | 80 |
| 37m 28s | 34s | 1010 | 30 | 56 | 2 | 224 | 735 | 6.6 | 30 | 67 | 87 |
| 38m 1s | 33s | 1048 | 32 | 92 | 3 | 226 | 742 | 6.8 | 32 | 71 | 85 |
| 38m 34s | 33s | 1069 | 32 | 0 | 0 | 192 | 630 | 5.8 | 32 | 72 | 90 |
| 39m 7s | 33s | 955 | 29 | -56 | -2 | 225 | 738 | 6.8 | 29 | 65 | 93 |
| 39m 41s | 34s | 926 | 27 | -18 | -1 | 226 | 741 | 6.6 | 27 | 61 | 91 |
| 40m 20s | 39s | 891 | 23 | 37 | 1 | 188 | 617 | 4.8 | 23 | 51 | 88 |
| 40m 49s | 29s | 798 | 28 | -74 | -3 | 260 | 853 | 9.0 | 28 | 62 | 95 |
| 41m 20s | 31s | 733 | 24 | -111 | -4 | 215 | 705 | 6.9 | 24 | 53 | 99 |
| 42m 25s | 65s | 682 | 10 | -129 | -2 | 208 | 682 | 3.2 | 11 | 24 | 101 |
| 43m 1s | 36s | 1366 | 38 | -130 | -4 | 462 | 1516 | 12.8 | 38 | 85 | 95 |
| 43m 34s | 33s | 652 | 20 | 19 | 1 | 228 | 748 | 6.9 | 20 | 44 | 88 |
| 44m 11s | 37s | 702 | 19 | 73 | 2 | 195 | 640 | 5.3 | 19 | 43 | 84 |
| 44m 41s | 30s | 617 | 21 | -73 | -2 | 205 | 673 | 6.8 | 21 | 46 | 97 |

| | | | | | | | | | | | |
|---------|-----|-----|----|------|-----|-----|------|------|-----------|-----|------------|
| 45m 18s | 37s | 575 | 16 | 18 | 0 | 215 | 705 | 5.8 | 16 | 35 | 88 |
| 45m 50s | 32s | 581 | 18 | -92 | -3 | 250 | 820 | 7.8 | 18 | 41 | 99 |
| 46m 23s | 33s | 594 | 18 | -92 | -3 | 225 | 738 | 6.8 | 18 | 41 | 99 |
| 46m 56s | 33s | 563 | 17 | -186 | -6 | 255 | 837 | 7.7 | 18 | 40 | 108 |
| 47m 33s | 37s | 568 | 15 | -186 | -5 | 274 | 899 | 7.4 | 16 | 36 | 108 |
| 48m 5s | 32s | 490 | 15 | -167 | -5 | 204 | 669 | 6.4 | 16 | 36 | 109 |
| 48m 39s | 34s | 447 | 13 | -92 | -3 | 226 | 741 | 6.6 | 13 | 30 | 102 |
| 49m 14s | 35s | 476 | 14 | 56 | 2 | 259 | 850 | 7.4 | 14 | 31 | 83 |
| 49m 49s | 35s | 508 | 15 | -203 | -6 | 251 | 823 | 7.2 | 16 | 35 | 112 |
| 50m 21s | 32s | 382 | 12 | -278 | -9 | 247 | 810 | 7.7 | 15 | 33 | 126 |
| 51m 28s | 67s | 292 | 4 | -149 | -2 | 251 | 823 | 3.7 | 5 | 11 | 117 |
| 51m 33s | 5s | 223 | 45 | -240 | -48 | 214 | 702 | 42.8 | 66 | 147 | 137 |
| 52m 18s | 45s | 188 | 4 | -167 | -4 | 197 | 646 | 4.4 | 6 | 13 | 132 |
| 52m 39s | 21s | 169 | 8 | 56 | 3 | 296 | 971 | 14.1 | 8 | 19 | 72 |
| 53m 15s | 36s | 257 | 7 | 222 | 6 | 168 | 551 | 4.7 | 9 | 21 | 49 |
| 53m 56s | 41s | 294 | 7 | 314 | 8 | 246 | 807 | 6.0 | 10 | 23 | 43 |
| 54m 25s | 29s | 391 | 13 | 241 | 8 | 235 | 771 | 8.1 | 16 | 35 | 58 |
| 54m 55s | 30s | 378 | 13 | 73 | 2 | 199 | 653 | 6.6 | 13 | 29 | 79 |
| 55m 36s | 41s | 330 | 8 | -37 | -1 | 190 | 623 | 4.6 | 8 | 18 | 96 |
| 56m 36s | 60s | 219 | 4 | -186 | -3 | 294 | 965 | 4.9 | 5 | 11 | 130 |
| 57m 9s | 33s | 300 | 9 | -167 | -5 | 427 | 1401 | 12.9 | 10 | 23 | 119 |
| 57m 44s | 35s | 185 | 5 | 167 | 5 | 167 | 548 | 4.8 | 7 | 16 | 48 |
| 58m 17s | 33s | 234 | 7 | 167 | 5 | 220 | 722 | 6.7 | 9 | 19 | 54 |
| 58m 50s | 33s | 178 | 5 | -73 | -2 | 228 | 748 | 6.9 | 6 | 13 | 112 |
| 59m 27s | 37s | 178 | 5 | -56 | -2 | 193 | 633 | 5.2 | 5 | 11 | 107 |
| 59m 57s | 30s | 232 | 8 | -167 | -6 | 177 | 581 | 5.9 | 10 | 21 | 126 |
| 60m 30s | 33s | 143 | 4 | 73 | 2 | 208 | 682 | 6.3 | 5 | 11 | 63 |
| 61m 3s | 33s | 171 | 5 | 56 | 2 | 230 | 755 | 7.0 | 5 | 12 | 72 |

| | | | | | | | | | | | |
|---------|-----|-----|----|------|----|-----|------|------|-----------|----|------------|
| 61m 39s | 36s | 198 | 6 | 38 | 1 | 219 | 718 | 6.1 | 6 | 13 | 79 |
| 62m 12s | 33s | 219 | 7 | -130 | -4 | 229 | 751 | 6.9 | 8 | 17 | 121 |
| 63m 20s | 68s | 197 | 3 | -186 | -3 | 267 | 876 | 3.9 | 4 | 9 | 133 |
| 63m 59s | 39s | 339 | 9 | -56 | -1 | 458 | 1503 | 11.7 | 9 | 20 | 99 |
| 64m 27s | 28s | 238 | 8 | -56 | -2 | 208 | 682 | 7.4 | 9 | 19 | 103 |
| 65m 2s | 35s | 204 | 6 | 56 | 2 | 252 | 827 | 7.2 | 6 | 13 | 75 |
| 65m 45s | 43s | 218 | 5 | 149 | 3 | 246 | 807 | 5.7 | 6 | 14 | 56 |
| 66m 12s | 27s | 212 | 8 | 111 | 4 | 204 | 669 | 7.6 | 9 | 20 | 62 |
| 66m 49s | 37s | 260 | 7 | 129 | 3 | 228 | 748 | 6.2 | 8 | 18 | 64 |
| 67m 22s | 33s | 240 | 7 | 111 | 3 | 227 | 745 | 6.9 | 8 | 18 | 65 |
| 67m 53s | 31s | 255 | 8 | 111 | 4 | 221 | 725 | 7.1 | 9 | 20 | 66 |
| 68m 26s | 33s | 255 | 8 | 93 | 3 | 219 | 718 | 6.6 | 8 | 18 | 70 |
| 69m 0s | 34s | 248 | 7 | 0 | 0 | 200 | 656 | 5.9 | 7 | 16 | 90 |
| 69m 34s | 34s | 187 | 5 | 92 | 3 | 183 | 600 | 5.4 | 6 | 14 | 64 |
| 70m 9s | 35s | 207 | 6 | 19 | 1 | 206 | 676 | 5.9 | 6 | 13 | 85 |
| 70m 40s | 31s | 193 | 6 | -74 | -2 | 215 | 705 | 6.9 | 7 | 15 | 111 |
| 71m 16s | 36s | 255 | 7 | -19 | -1 | 197 | 646 | 5.5 | 7 | 16 | 94 |
| 71m 51s | 35s | 303 | 9 | -18 | -1 | 245 | 804 | 7.0 | 9 | 19 | 93 |
| 72m 26s | 35s | 345 | 10 | -38 | -1 | 210 | 689 | 6.0 | 10 | 22 | 96 |
| 72m 59s | 33s | 295 | 9 | -148 | -4 | 230 | 755 | 7.0 | 10 | 22 | 117 |
| 73m 41s | 42s | 259 | 6 | -370 | -9 | 247 | 810 | 5.9 | 11 | 24 | 145 |
| 74m 41s | 60s | 278 | 5 | -111 | -2 | 211 | 692 | 3.5 | 5 | 11 | 112 |
| 75m 15s | 34s | 487 | 14 | -167 | -5 | 432 | 1417 | 12.7 | 15 | 34 | 109 |
| 76m 42s | 87s | 237 | 3 | 73 | 1 | 239 | 784 | 2.7 | 3 | 6 | 73 |
| 77m 40s | 58s | 998 | 17 | 56 | 1 | 772 | 2533 | 13.3 | 17 | 39 | 87 |
| 78m 4s | 24s | 271 | 11 | -37 | -2 | 224 | 735 | 9.3 | 11 | 26 | 98 |
| 78m 38s | 34s | 293 | 9 | 111 | 3 | 221 | 725 | 6.5 | 9 | 21 | 69 |
| 79m 11s | 33s | 314 | 10 | 186 | 6 | 195 | 640 | 5.9 | 11 | 25 | 59 |

| | | | | | | | | | | | |
|---------|-----|-------|------|------|-----|-------|-------|-------|------------|-----|-----------|
| 79m 45s | 34s | 446 | 13 | 203 | 6 | 207 | 679 | 6.1 | 14 | 32 | 66 |
| 80m 0s | 15s | -2012 | -134 | -426 | -28 | -1359 | -4459 | -90.6 | 137 | 307 | 78 |
| 80m 19s | 19s | 2505 | 132 | 556 | 29 | 1582 | 5190 | 83.3 | 135 | 302 | 77 |
| 80m 52s | 33s | 496 | 15 | 37 | 1 | 231 | 758 | 7.0 | 15 | 34 | 86 |
| 81m 10s | 18s | -2621 | -146 | -519 | -29 | -1558 | -5112 | -86.6 | 148 | 332 | 79 |
| 81m 29s | 19s | 3162 | 166 | 630 | 33 | 1823 | 5981 | 95.9 | 170 | 380 | 79 |
| 82m 43s | 74s | 637 | 9 | 130 | 2 | 218 | 715 | 2.9 | 9 | 20 | 78 |
| 83m 8s | 25s | 1122 | 45 | 278 | 11 | 76 | 249 | 3.0 | 46 | 103 | 76 |

| time into | time | change | W-E | change | N-S | change | change | descent | wind | wind | wind |
|------------------|---------------|------------------|---------------|---------------|---------------|-----------------|-----------------|----------------|--------------|-------|------------------|
| flight | change | West-East | change | N-S | change | altitude | altitude | rate | speed | speed | direction |
| (min, sec) | (seconds) | (m) | (m/sec) | (m) | (m/sec) | (m) | (ft) | (m/sec) | (m/sec) | (mph) | (angle) |
| 83m 41s | 33s | 426 | 13 | 129 | 4 | -2518 | -8261 | -76.3 | 13 | 30 | 73 |
| 84m 18s | 37s | 300 | 8 | -73 | -2 | -2181 | -7156 | -58.9 | 8 | 19 | 104 |
| 84m 50s | 32s | 216 | 7 | -38 | -1 | -1772 | -5814 | -55.4 | 7 | 15 | 100 |
| 85m 21s | 31s | 196 | 6 | 56 | 2 | -1579 | -5180 | -50.9 | 7 | 15 | 74 |
| 85m 54s | 33s | 216 | 7 | -92 | -3 | -1373 | -4505 | -41.6 | 7 | 16 | 113 |
| 86m 31s | 37s | 181 | 5 | -56 | -2 | -1272 | -4173 | -34.4 | 5 | 11 | 107 |
| 87m 34s | 63s | 335 | 5 | 167 | 3 | -1127 | -3698 | -17.9 | 6 | 13 | 64 |
| 88m 9s | 35s | 681 | 19 | -203 | -6 | -2038 | -6686 | -58.2 | 20 | 45 | 107 |
| 88m 43s | 34s | 582 | 17 | -149 | -4 | -919 | -3015 | -27.0 | 18 | 40 | 104 |
| 89m 18s | 35s | 720 | 21 | -18 | -1 | -867 | -2844 | -24.8 | 21 | 46 | 91 |
| 89m 52s | 34s | 739 | 22 | -93 | -3 | -765 | -2510 | -22.5 | 22 | 49 | 97 |
| 90m 25s | 33s | 856 | 26 | -37 | -1 | -744 | -2441 | -22.5 | 26 | 58 | 92 |
| 91m 0s | 35s | 1015 | 29 | 0 | 0 | -671 | -2201 | -19.2 | 29 | 65 | 90 |

