The season opened with one of the best flying days on Saturday I can remember in a long time as the wind forgot to show up. Friday was no slouch either, with morning activities running at a brisk pace. A light north—north east breeze developed ramping up 10 to 15 with gusts to about 30 in the afternoon then retreating for the evening activities. Of most interest was the direction of the wind whereas we typically expect a south-west flow the N-NE flow occasionally felt cool. As a result, dust devil's were popping up across the playa with the warm-cool air mix.

Saturday was flyers paradise with no one willing to jinx it by uttering the “W” word. A few times during the warmest part of day, it actually felt hot when the breeze faded away. The lack of afternoon air movement provided ample opportunity for those little biting bugs to make an appearance and do some chomping. A light N-NE cooling breeze that evening pushed the night launches towards the south.

Sunday morning the traditional light breeze returned from the southwest building to a point of vengeance in retaliation for our great flying prosperity we enjoyed on Saturday. Range activities trailed off by 10 am when hats were being removed from heads by the winds. We broke down the range being mostly secured by noon. Thanks to all who helped get the range packed up as we are a 100% volunteer organization. All in all a great Fathers Day weekend.

Derek Jameison’s NOTORIOUS BETTIE
We really do need to acknowledge our Launch Director + Equipment Boss for the Mudroc launch, Darryl Paris. Tony Alcocer conducted the flyers meeting and Ken Biba provided additional information on range activities. Darryl brought out and returned the trailer from Empire to provide the infrastructure to have the launch. Darryl set range head orientation and provided the few available hands a place to start setting up. Thanks to all that helped to get the range up and operational.

We also want to thank our vendors for supporting us at Mudroc:

**WHAT’S UP HOBBIES**

**FRUITY CHUTES**

**BAY AREA ROCKETRY**

All was not without some minor issues; we do need to refresh some batteries as we just squeaked by with enough to get the job done. Richard Hagen put us on notice that many of the gel cells have succumbed to the heat and are mostly dust. We load tested the inventory and the majority showed voltage until placed under a load. Under load they drop to voltages insufficient to perform the job.

Range operations were not 100% staffed, however we did manage to operate thanks to the gracious volunteers who provided their time and services especially in support of the model rocket pads that got a respectable work out.

A big thanks goes out to John & Donna Ballard for assisting a participant who’s auto became disabled by providing a tow to Gerlach.
(Continued from page 2)

As dry as it may appear we did have a participant get stuck for a number of hours, in a place known as PIUS COVE. Some of us old timers know how it got its name sake. Remember that areas near mountain drainages and on the edge of the playa can look dry on the surface but retain sub surfaces moisture or deep loose sand.

Darryl also wanted to pass along a big thanks to Eric K. and Erik E. for the help getting the spare tire swapped on the equipment trailer so he could go on down the road.

-Ken A
## FLIGHT DATA

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Totals 174 22

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Congratulations on the new certifications, flyer’s Jason W. H-123 and James F. on a l-195.
Doug Green  
Rocket Name: HAWK  
H 80” Dia. 7.5” 41 Lbs. L-1390G

Derek Jamieson  
Rocket Name: Notorious Bettie  
H 9.0’ Dia. 5.5” 14 Lbs. Research K-666.

As a reminder we still need some volunteer’s for the upcoming AERONAUT launch Thursday August 2 ~ Sunday August 5th. To support trailer haul out and back from Empire as well a volunteer Launch Director for the launch. Sign ups for RSO, LCO shift slots can be done at [http://aeropac.org/lunchduty.html](http://aeropac.org/lunchduty.html) Please contact Tony Alcocer for further information.
Father and son team Michael & Adam Levi

Name: Shock & Awe H: 11’ Dia: 4

M3700 to an L2020G? It had an excellent start however, the sustainer failed to light. I hope they will bring it back for another try. Michael and Adam had many great flights over the weekend, including a flight with a carbon fiber rocket on an L1030 R to 18.5 K utilizing a nose cone mounted Garmin 220 with excellent rocket recovery results.
John Ballard sent in a very detailed flight report utilizing a GPS Telemetry system and corresponding track maps.

Rocket name: Diablo Deal
Make: Giant Leap Firestorm 54
Diameter: 54mm (Minimum diameter)
Weight: approximately 8 lbs take off weight
Motor: Aerotech K185W
Dual deploy with Missile Works altimeter

GPS telemetry System:

MEW, Balloon Boy Airborne Package
MEW, Crystal Ball ground station
Acer A100 Android tablet running GPS recording and mapping applications "BluetoothGPS4Android ver1.2.4" and "Back Country navigator"
Motorola DROID phone running free Android apps "BluetoothGPS4Android ver 1.2.3" and "GPS Essentials".

Both ground based systems record real-time GPS flight data (one fix per second) to the their respective micro SD flash memory card.

Max altitude: ~ 10,900 ft AGL

GPS fix at apogee.
$GPRMC,153608.00,A,4050.42613,N,11908.49324,W,49.595,21.53,160612,,,A*7C
$GPGGA,153608.00,4050.42613,N,11908.49324,W,1,10,1.15,4523.3,M,,*57

NMEA sentences at time of apogee indicate:
date: 160612 = 16 June 2012
time: 153608.00 = 15 hours 36 minutes and 08.00 seconds universal time ( approx 8:36 AM local)
Lat: 40 deg 50.42613 minutes north
Lon: 119 deg 8.49324 minutes west
SPS fix using 10 satellites for solution
HDOP = 1.15 (in the excellent range)
Altitude: 4523.3 meters MSL
Horizontal speed at apogee: 49.595 knots and heading at 21.53 deg true north

Takeoff altitude from previous fixes while on launch pad: 1191.8 meters MSL
net altitude gain = 3331.5 meters (slightly more than 10,900 feet AGL)

(Continued on page 9)
MAX Altitude 9860 ft AGL from barometric altimeter. (looks like its time to get a new altimeter!)
It was a very nice flight even though deployment and landing appeared to be out of sight of all who were looking.

Landing GPS fix:
$GPRMC,153821.00,A,4050.40489,N,11908.65410,W,10.421,219.15,160612,,,A*4D$
$GPGGA,153821.00,4050.40489,N,11908.65410,W,1,11,0.81,1193.3,M,-22.0,M,*58$

Last received GPS fix was approximately 2 or 3 meters above the ground and was used to drive the recovery truck directly to the landing spot.
Duration of flight: 2 minutes 39 seconds
This is the highest accurately documented flight so far for Diablo Deal.