

# Stratofox Aerospace Tracking Team

AeroPAC To100K  
Aug & Sept 2005

Paragon Dragoon IIB  
Sept 2005



presented by Ian Kluff, James Robertson & Sean Lynch  
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# About Stratofox

- We're an amateur group which performs aerospace tracking services for rocket launches
- Our team has familiarity with the Black Rock Desert region
- Members have experience in high-power rocketry, Ham Radio, 4x4, amateur astronomy, search & rescue, wilderness first responder, etc
- Our goal is to get invitations to “all the cool launches” for our members and help the alternate aerospace industry get off the ground

# 2005: The Season of Hard Knocks

- Following 2004 season with first amateur space launch success, Stratofox recovered CSXT space rocket payload and booster
- As we all know, pushing the envelope has risk
- All the high-altitude launches at Black Rock in 2005 ended in “shovel recoveries”
- If you're not familiar with the term, you will be soon

# AeroPAC To100K

- Aero-PAC is the Association of Experimental Rocketry of the Pacific, the TRA high-power rocketry regional group for northern CA/NV including the Black Rock Desert
- To100K is a club project to set a 100,000ft altitude record for a high-power rocket (under NFPA 1127 regulations)
- Because 100K waivers available at Black Rock
- Stratofox coordinated searches following the Aug 5 & Sept 24 launches

# AeroPAC To100K

- Aug 5 launch
  - booster (1<sup>st</sup> stage) OK
  - sustainer (2<sup>nd</sup> stage) didn't deploy drogue chute
  - sustainer broke up on main chute deployment
- Sept 24 launch
  - Booster (1<sup>st</sup> stage) OK, reused from Aug 5
  - Sustainer didn't light due to computer failure
  - Shovel recovery – sustainer pieces recovered from underground

# AeroPAC To100K



# Paragon Dragoon IIB

- Paragon Astronautics is from Denver CO
- Developing suborbital payload launch capability
- Dragoon IIB launch was under FAA/AST space launch permit
- Launch occurred Sept 27
- Airframe failure and premature payload separation during flight
- Booster continued to fly without payload

# Paragon Dragoon IIB

- Stratofox cleared the downrange areas with air/ground surveillance
- Stratofox is the only amateur group who has performed space launch Range Safety\* to the FAA's satisfaction. All others are government organizations.

\* Range Safety in this case means clearing downrange areas of people



# Paragon Dragoon IIB



# Stratofox injury accident

- Stratofox member was in a rollover accident
- badly broken arm necessitated helicopter evac
- prompted more members to get emergency medical training



# Amateur Radio Repeater

- Stratofox installed an Amateur Radio repeater at Black Rock just before the Paragon launch
- Used during faster-than-911 rescue response to our member's rollover accident
- Directly overlooks Gerlach and Empire
- Handheld transceiver (HT) OK south of “8 -mile”
- Mobile or HT w/ yagi antenna north of 8-mile
- Ham Radio license required to use it
- For Hams: KS2R repeater on 444.675+ pl 123.0

# Coming up in 2006

- support UP Aerospace launch at New Mexico Spaceport in... July?
- support To100K at AeroPAC HPR launch meets at Black Rock in June, Aug & Sept
- Install WiFi data link between Reno and Stratofox repeater site at Black Rock (all equipment has already been contributed)