

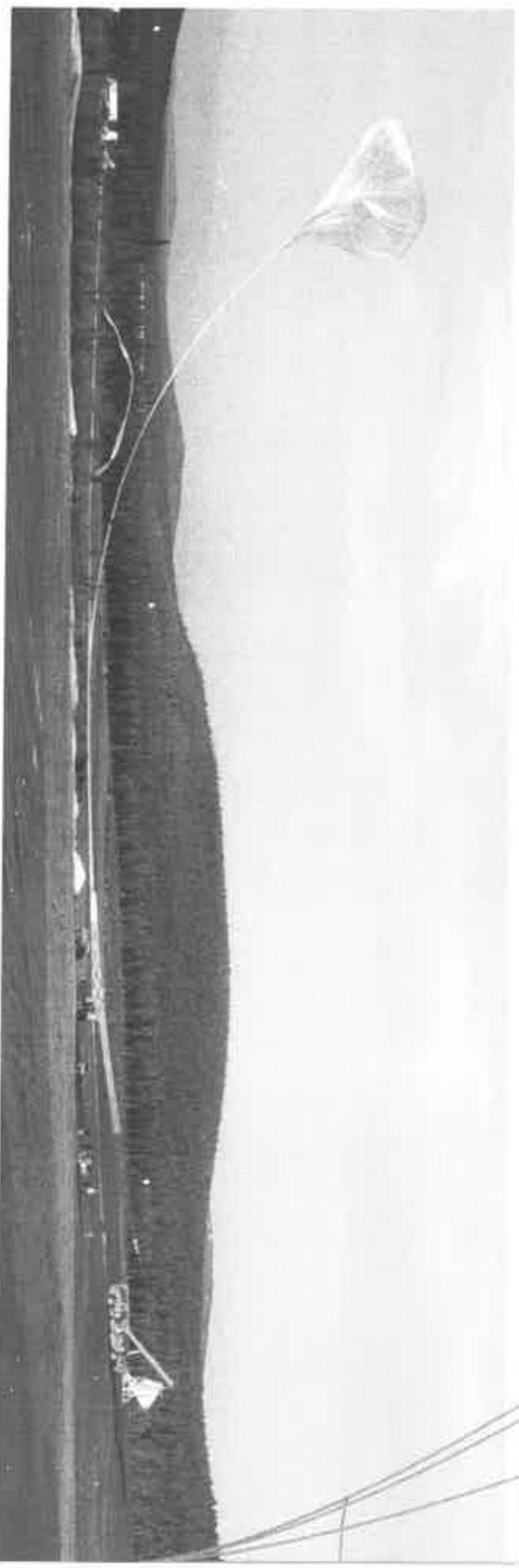
NASA Balloon Operations Contract (NBOC)

Industry Day Briefing

Presented By:

*Debora Fairbrother, Mickey Merritt, Gabriel Garde,
Jennifer McIntyre, Bob Savage, and Jim Debelius*

August 20, 2013



Agenda

- Welcome and Industry Day Logistics **Debbie Fairbrother**
- Acquisition Information **Mickey Merritt**
- Balloon Program Office Overview **Debbie Fairbrother**
- Walking Tour **Gabe Garde and Debbie Fairbrother**

Logistics

- Emergency – 911
- Emergency Exits
- Rest Room
- Tour Locations:
 - Administration – Bldg 1
 - Engineering Support – Bldg 23
 - Flight Operations – Bldg 4
 - Balloon Support – Bldg 28
 - Staging Building – Bldg 11
 - Test and Evaluation (T&E) – Bldg 25
 - Operational Control Center – Bldg 12
 - Vehicle Storage II – Bldg 13
 - Balloon Storage – Bldg 14
 - West Launch Pad

Guidelines for Communication

- Offerors will submit their questions in writing to the Contracting Officer at the end of the conference on the index cards provided.
- Questions received from this event will be combined with questions formerly submitted regarding the Draft RFP and responses shall be posted to NASA Acquisition Internet Service (NAIS) and FedBizOpps websites collectively.
- Any changes to the Draft RFP will be incorporated into the final version of the RFP.

Information Exchange

- After release of the **final** RFP, communication will be restricted to exchanges with the Contracting Officer.
- Presentation materials, written questions and answers, and solicitation revisions will be provided to all prospective Offerors via NAIS and FedBizOpps.
- Offeror's questions about the RFP should be asked in a manner that does not disclose the Offeror's proprietary or confidential information as all questions and answers will be published by the Government NAIS and Fed Biz Ops.

Disclaimer

- These slides are not to be interpreted as a comprehensive description of the requirements in the Draft Request for Proposal (DRFP).
- To the extent there are any inconsistencies between this briefing and the final RFP, the final RFP shall govern.
- Any response to general questions verbally during the conference shall not be interpreted as an official answer.

Contract Information

- Cost Plus Fixed Fee (CPFF) Core with, CPFF Indefinite Delivery/Indefinite Quantity (IDIQ) Portion.
- Single Award
- 5 Year Period of Performance- 2-Year Base with one 2-Year Option and one 1-Year Option
- Full and Open Competition
- NAICS Code – 541330(Engineering Services) \$35.5M



Acquisition Schedule

- Final RFP Release October 1, 2013
- Proposals Received November 15, 2013
- Selection July 10, 2014
- Phase-In Award* July 31, 2014
- Phase-In Complete September 29, 2014
- Contract Start October 1, 2014

*Separate contract vehicle

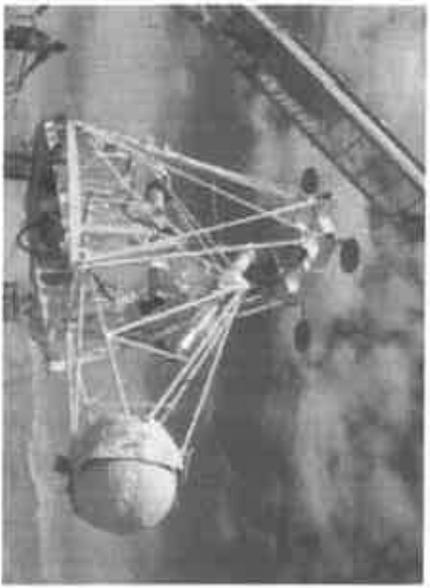


Goddard Space
Flight Center

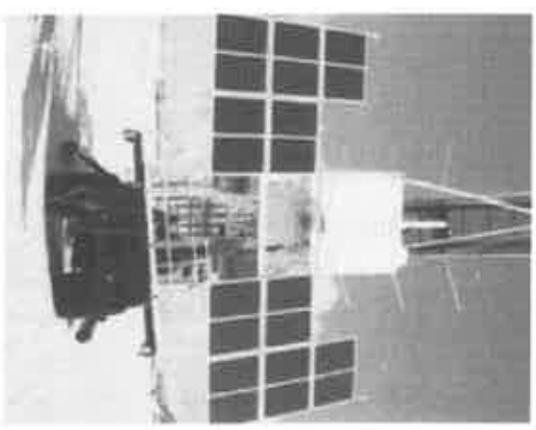
Mission of the NASA Balloon Program

Wallops Flight Facility

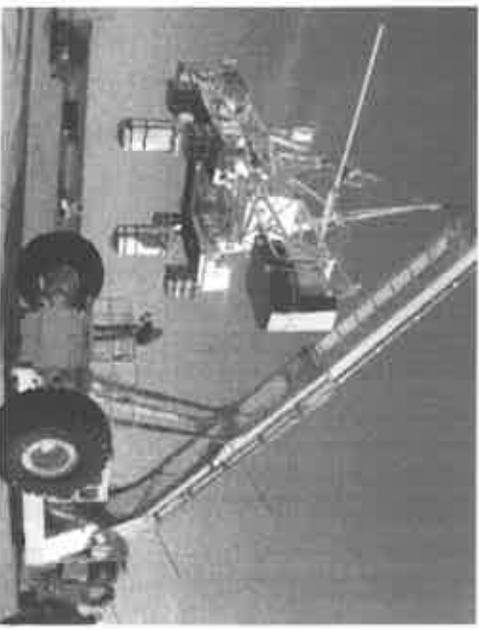
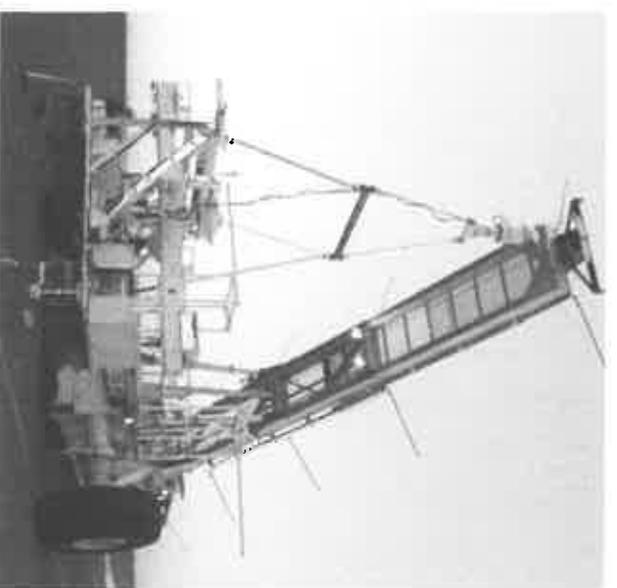
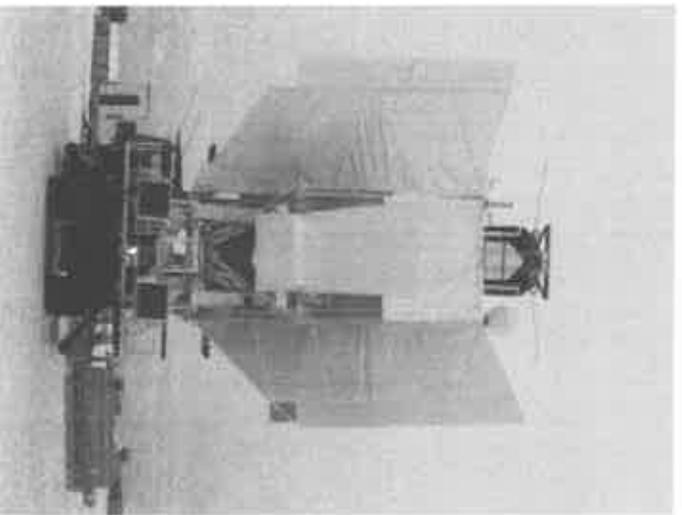
- The NASA Balloon Program provides low-cost, quick response, near space access to NASA's science Community for conducting Cutting Edge Science Investigations



- Serve as a technology development platform



- Excellent training for NASA scientists and engineers

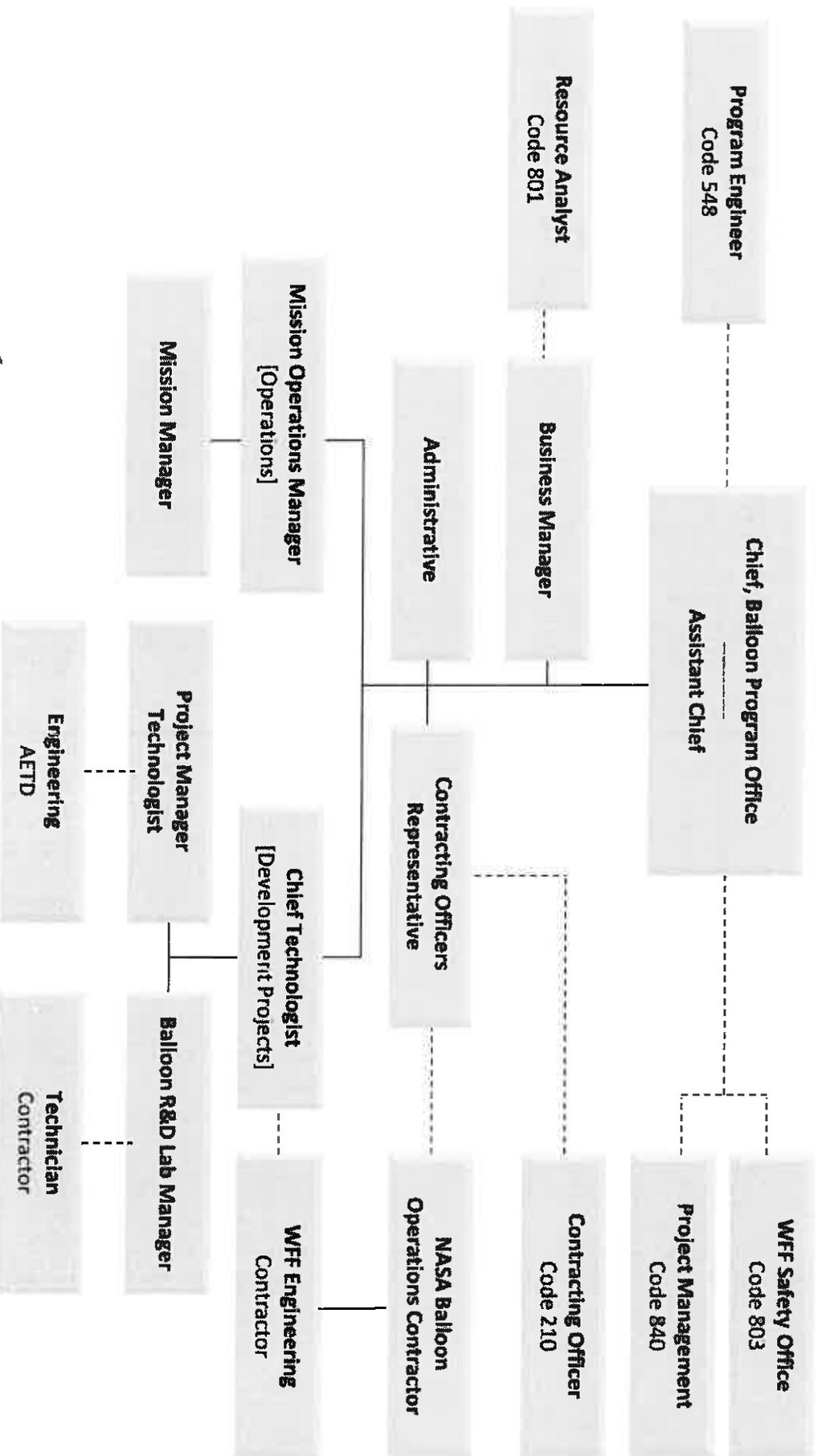




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The Balloon Program Office

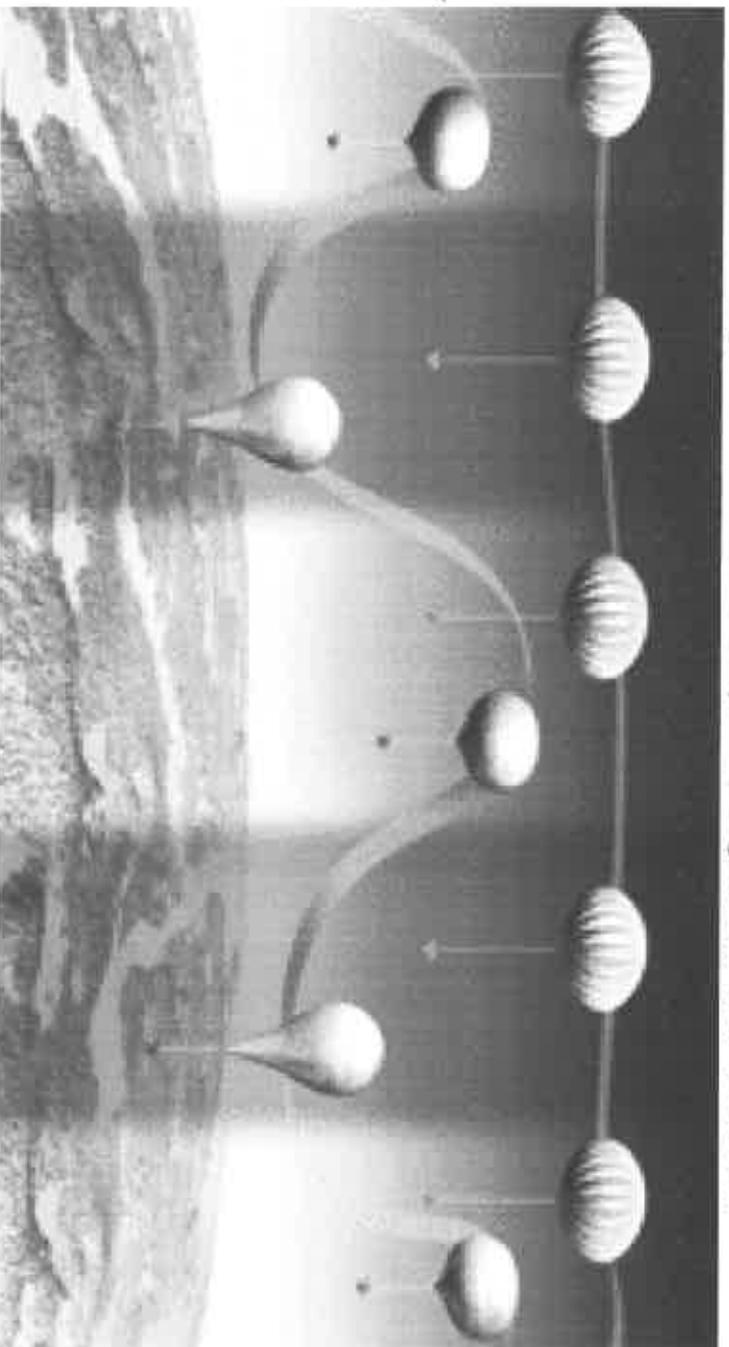
Wallops Flight Facility



Two Types of Balloons

Super-Pressure Balloon maintains nearly constant volume

- Allows Ultra Long Duration Balloon (ULDB) Flights
- Provides stable altitude Long Duration Balloon (LDB) flights at mid-latitudes



Zero-Pressure Balloon changes volume due to temperature changes

- Used for Conventional Flights and Polar LDB Flights

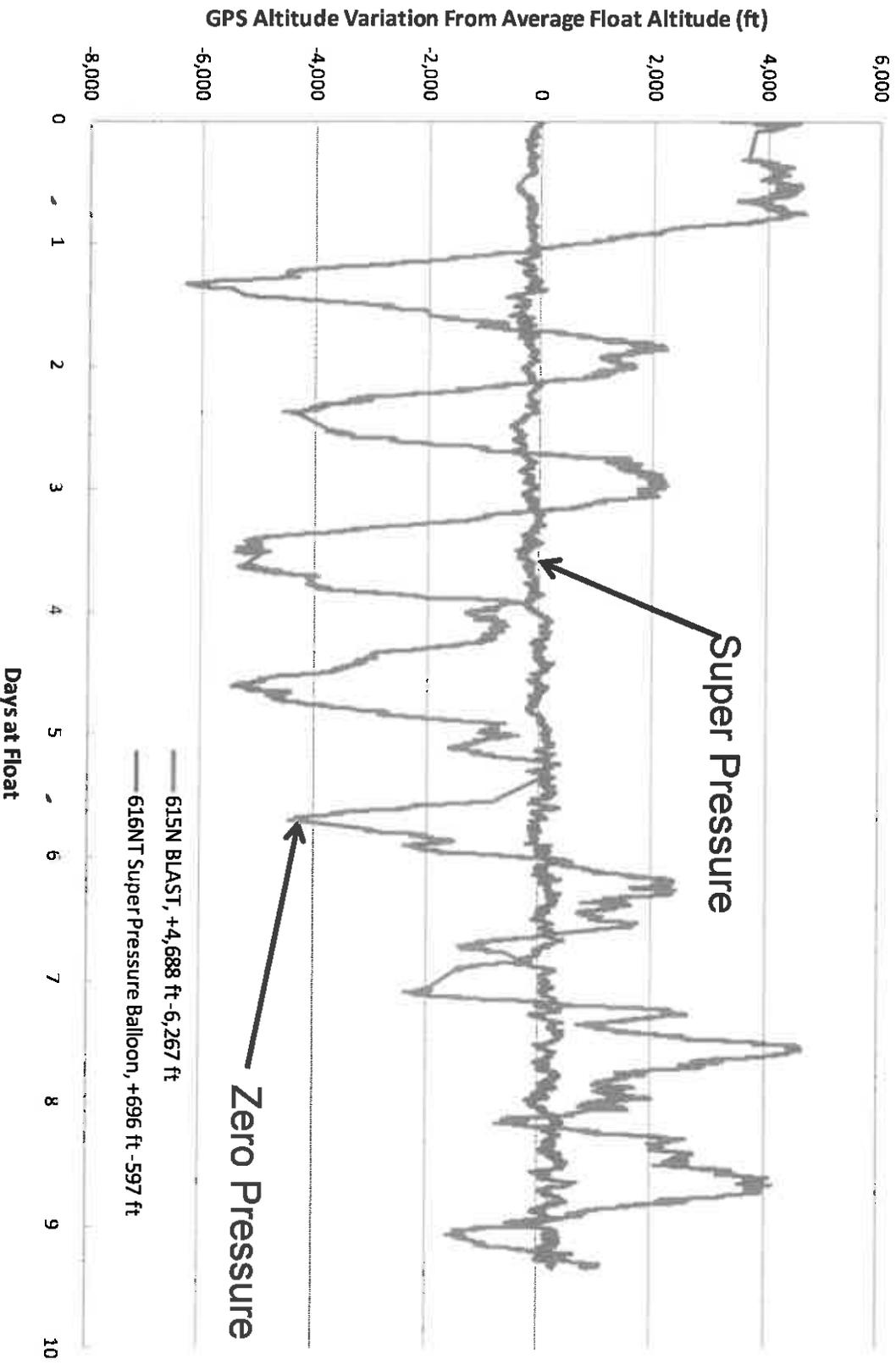


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Altitude Stability

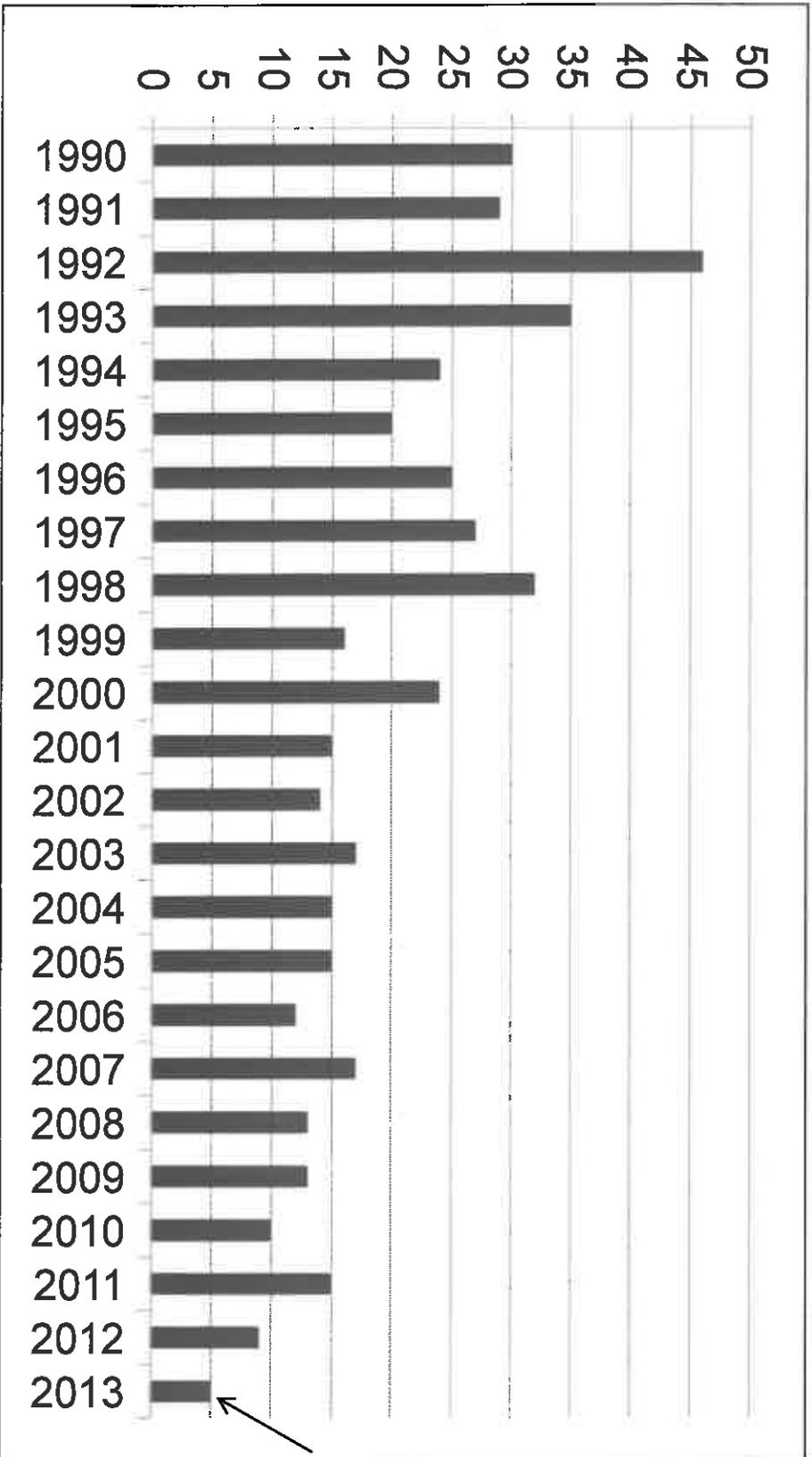
Wallops Flight Facility

Representative Average Float Altitude Variation for ~9 Days for
615N BLAST and 616NT Super Pressure Balloon



Historical: Total Flights Per Fiscal Year

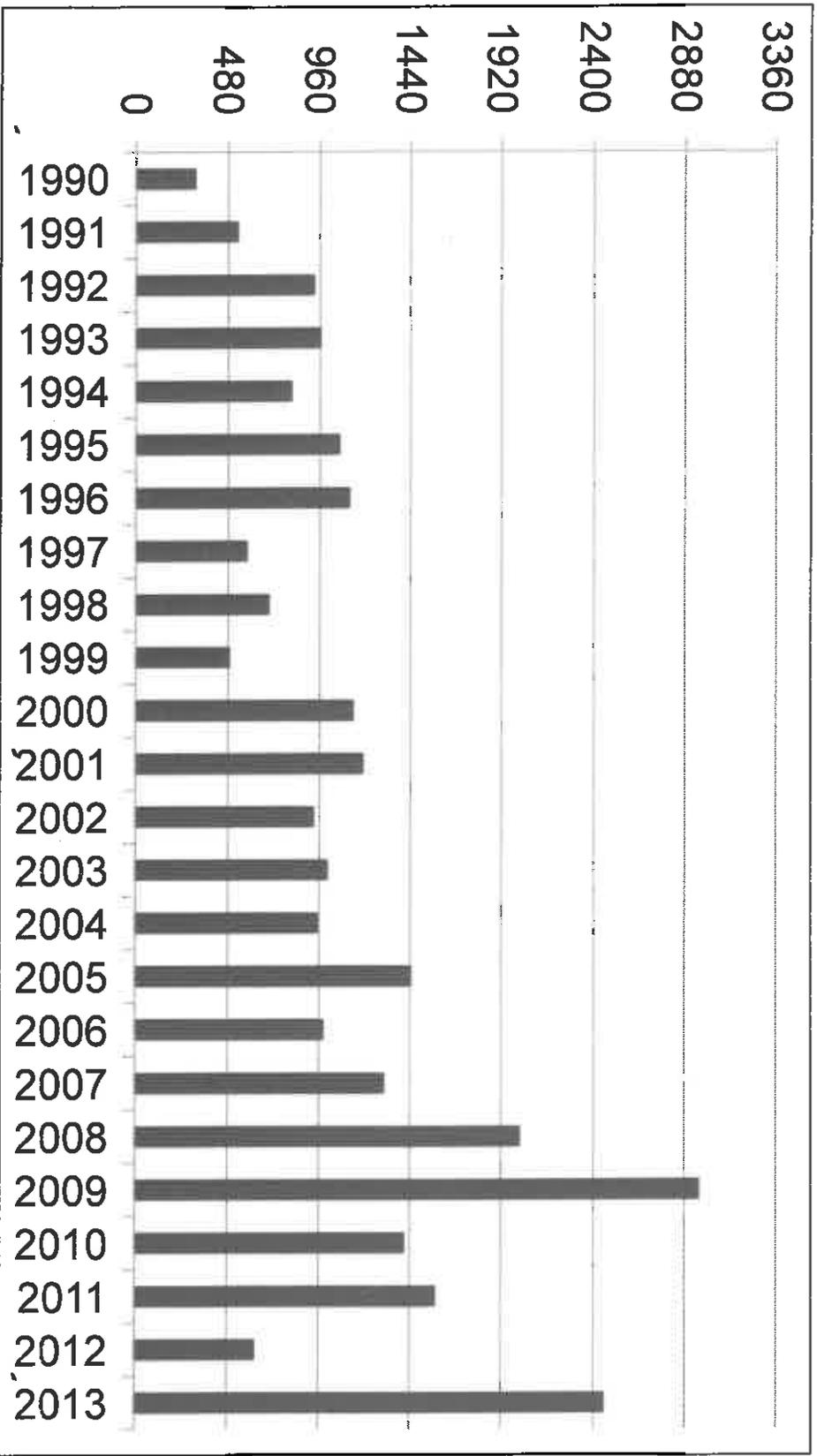
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Not Including
Current Fall
Ft. Sumner
Campaign

Total Flight Hours Per Fiscal Year

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Baseline Mission Model

BASELINE MISSION MODEL													
Campaign	FY15			FY16			FY17			FY18		FY19	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Conventional													
Fort Sumner ¹				9				9			3	9	
Australia												3	
Palestine ²							2						
LDB/ULDB													
New Zealand ³		1				1				2			
Sweden ⁴									4				
Antarctica	3				3					4		4	
IDIQ MISSION MODEL													
Special IDIQ ⁵			3										
FY Total			16			15			16		18	16	

Assumptions:

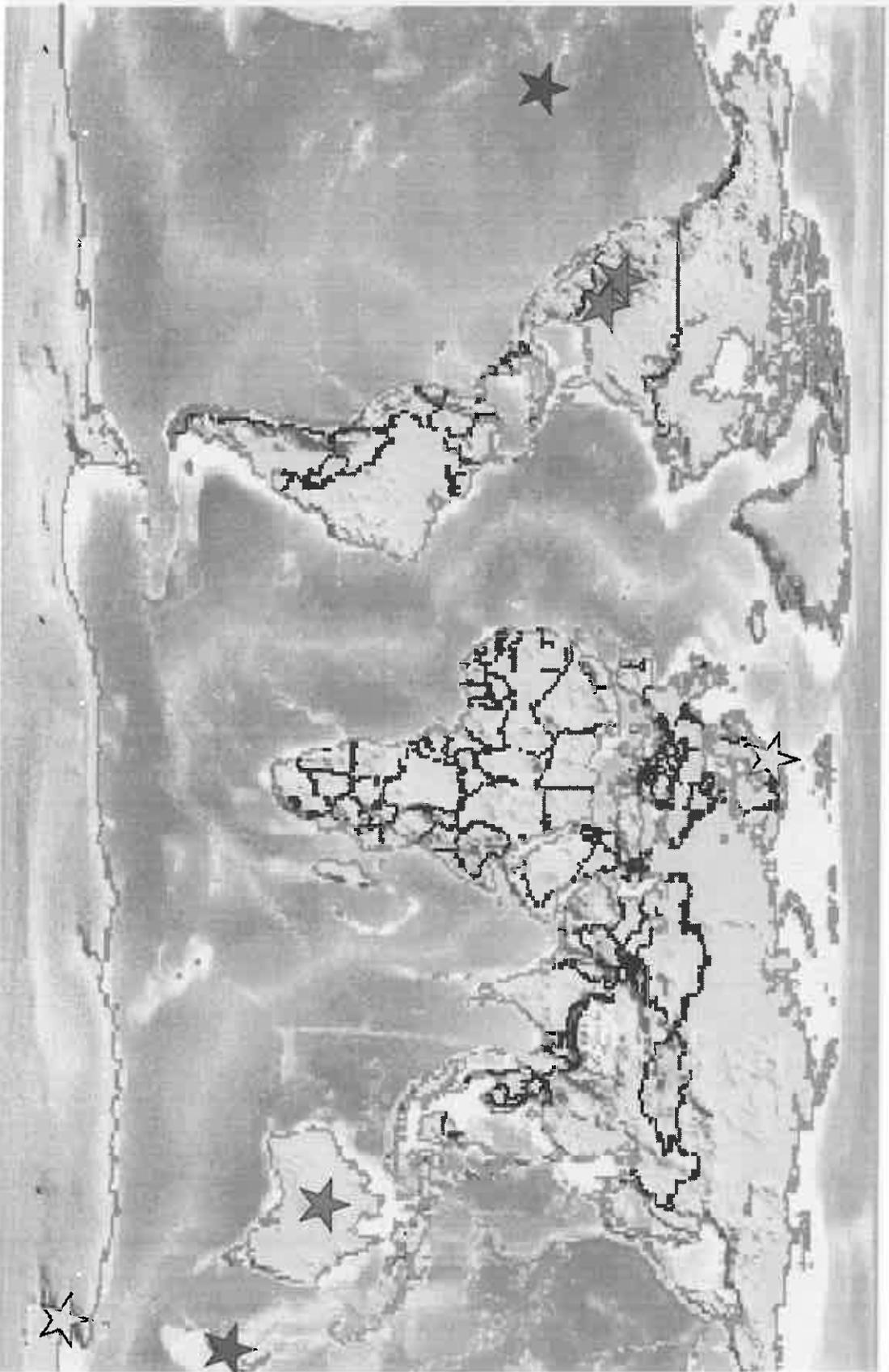
- Fall Fort Sumner flights planned for a given Fiscal Year (FY) may actually be flown in the following FY schedule as a carryover flight. Carryover flights are those launched on October 1 or later.
- Palestine flights currently include "hand-launch" or small scale missions due to safety restrictions.
- New Zealand missions are ULDB global circumnavigation with recovery in South America or New Zealand/Australia;
- Sweden missions are from Sweden to Canada and have flight durations of four to six days; and
- Special IDIQ campaigns or missions will require supplemental funding and a specific TO.



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Launch Locations

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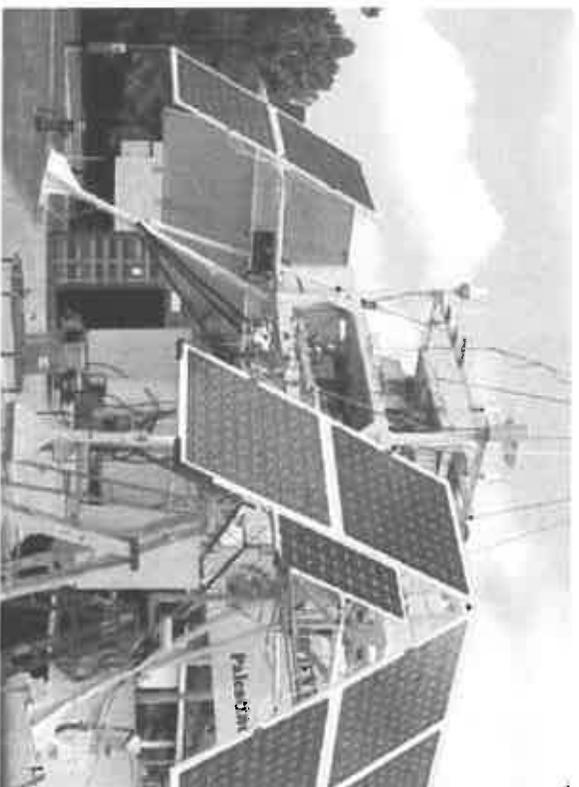


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Palestine, Texas

Wallops Flight Facility

- **Columbia Scientific Balloon Facility**
 - Primary Facilities for NBOC
 - Conventional Campaign (Safety limited)
 - Payload Staging / I&T Support
 - Operations Control Center (OCC)





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Fort Summer, New Mexico

Wallops Flight Facility

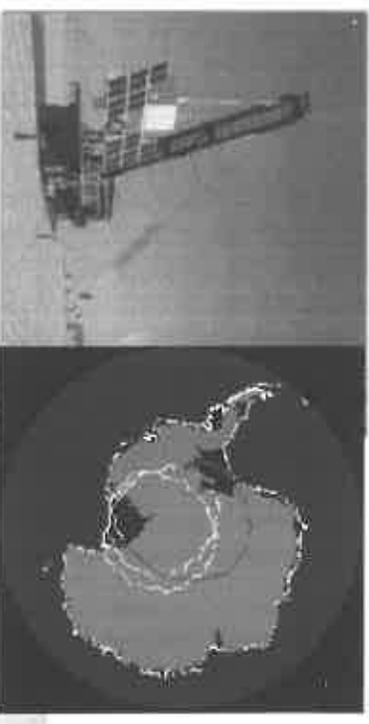
- Annual Conventional Fall Campaign
- Spring Conventional Campaign (As Required)
- Support Equipment
 - Overhead hoists / cranes
 - Forklifts
 - Launch Vehicle
 - Spool
- Support Requirements
 - Payload I&T
 - LOS Telemetry
 - Aircraft / Aircrew
 - Downrange Station
 - Recovery Crew



Antarctica

Wallops Flight Facility

- Long-Duration Balloon (LDB) flights
 - Reasonable to achieve flight durations of up to 4-6 weeks.
- NSF
 - Accommodations & Meals
 - Campaign Support
 - Transport
 - Recovery Aircraft
- Support Equipment
 - Overhead hoists / cranes
 - Forklifts
 - Launch Vehicle
 - Spool
 - Manlifts
- Support Requirements
 - Payload I&T
 - LOS / OTH Telemetry
 - Recovery Crew
 - OCC



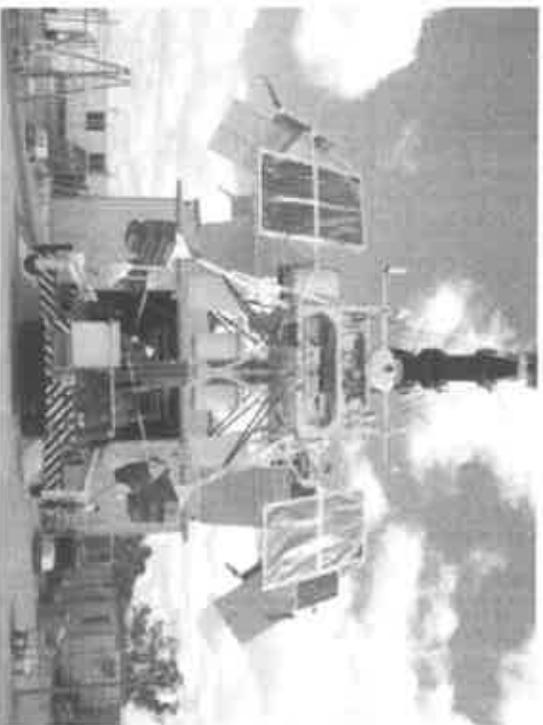


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Alice Springs, Australia

Wallops Flight Facility

- Alice Springs Launch Site
 - Successful Operations in April 2011
 - Conventional/Turnaround Missions with Downrange Stations: ~ 2- 3 day flights
- New Australian Payload Building
- Support Requirements
 - Payload I&T
 - LOS Telemetry
 - Aircraft / Aircrew
 - Downrange Station
 - Recovery Crew



Kiruna, Sweden

Wallops Flight Facility

- **ESRANGE Facilities and Services**
 - Accommodations
 - Integration and Testing Facilities
 - Mission Support
- **ESRANGE Launch Equipment Support**
 - Mobile launch vehicle (Hercules)
 - Heavy lift forklift with man cage
 - Bucket truck / yard crane / HIAB-equipped truck
- **ESRANGE Telemetry/Electronic Equipment Support**
 - ATC transponders
 - LOS downlinks
 - Data recording
- **Support Requirements**
 - Payload I&T
 - OTH Telemetry
 - Termination & Recovery
 - Aircraft/Aircrew in Canada
 - OCC

Ballloon Pad Facilities



Wanaka, New Zealand

Wallops Flight Facility

- **BPO requires a new mid-latitude launch site in Southern Hemisphere for long duration super pressure flights**
- **Site identified (launch weather, flight safety, logistics support)**
 - **Wanaka, New Zealand 44.42S, 169.09E**
- **This launch location has not been established to date.**

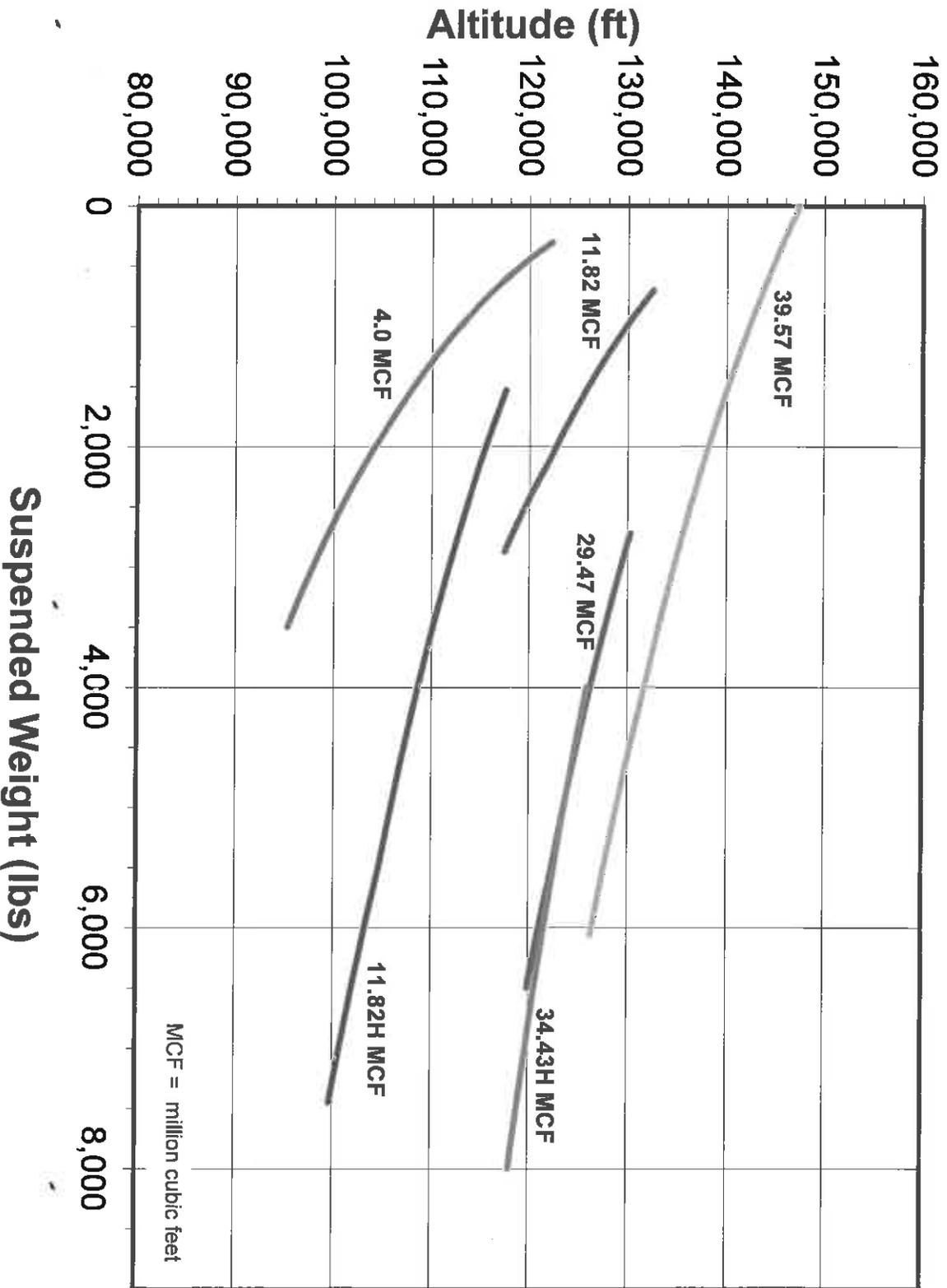




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NASA Standard Balloons

Wallops Flight Facility



Balloon Procurement Model

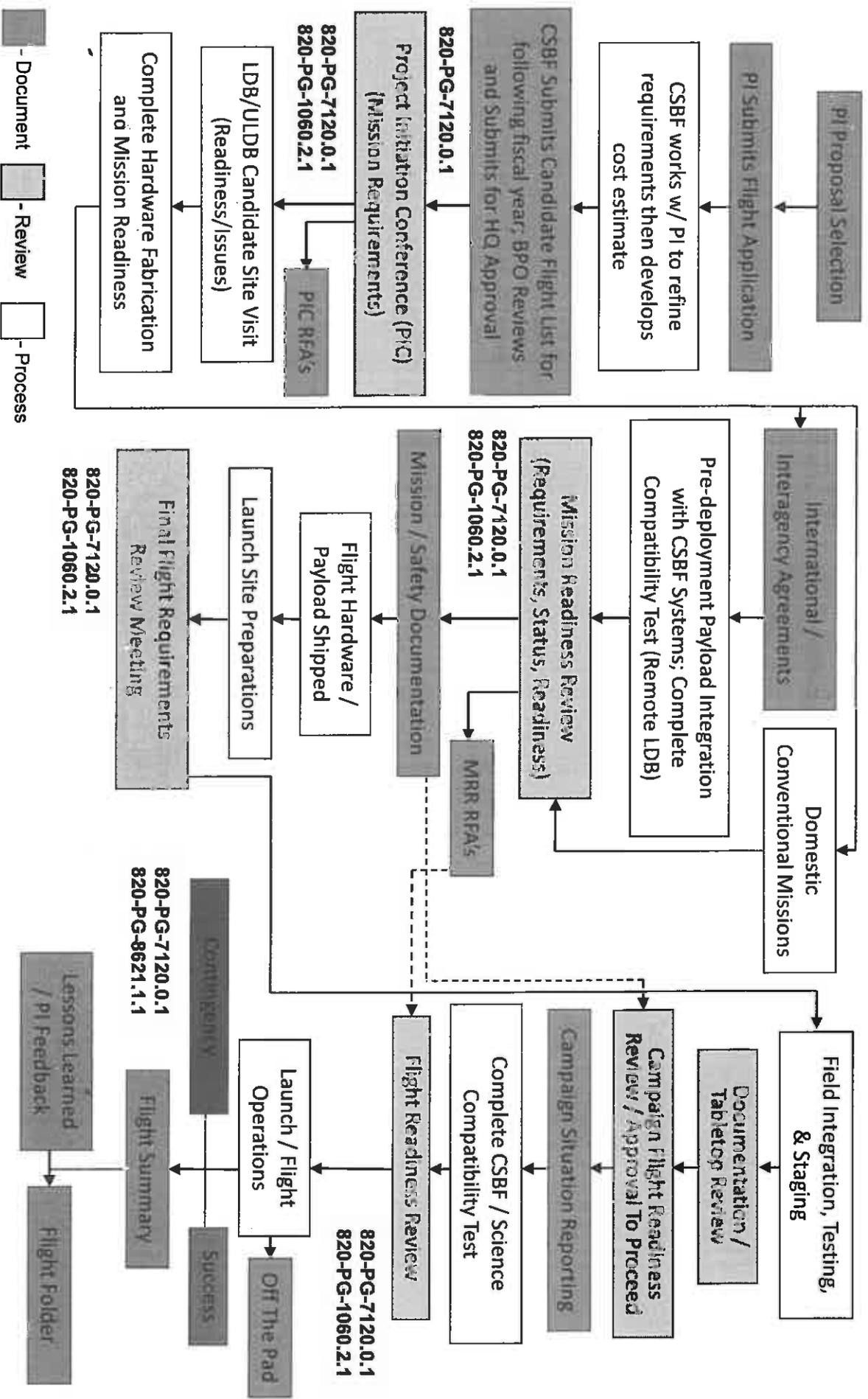
BASELINE BALLOON PROCUREMENT MODEL					
Std. Size	FY15	FY16	FY17	FY18	FY19
Zero Pressure					
4	3	2	2	3	2
11.82	2	3	3	4	3
11.82-H	1	1	1	0	1
29.47	4	3	4	4	3
34.43-H	5	3	2	2	3
39.57	4	5	5	5	5
Super Pressure					
18.8	1	1	1	1	
FY Total	20	18	18	19	17

Assumptions:

- Hand launch and pathfinder balloons not included.
- For Super Pressure Balloon missions, no back-up (spare) balloon allocated.
- The Zero Pressure Balloons above are approved Qualified NASA Standard Balloons.
- Science requirements may require a new design to be formulated and qualified.

Actual quantity of balloon sizes may change due to science requirements.

Mission Lifecycle

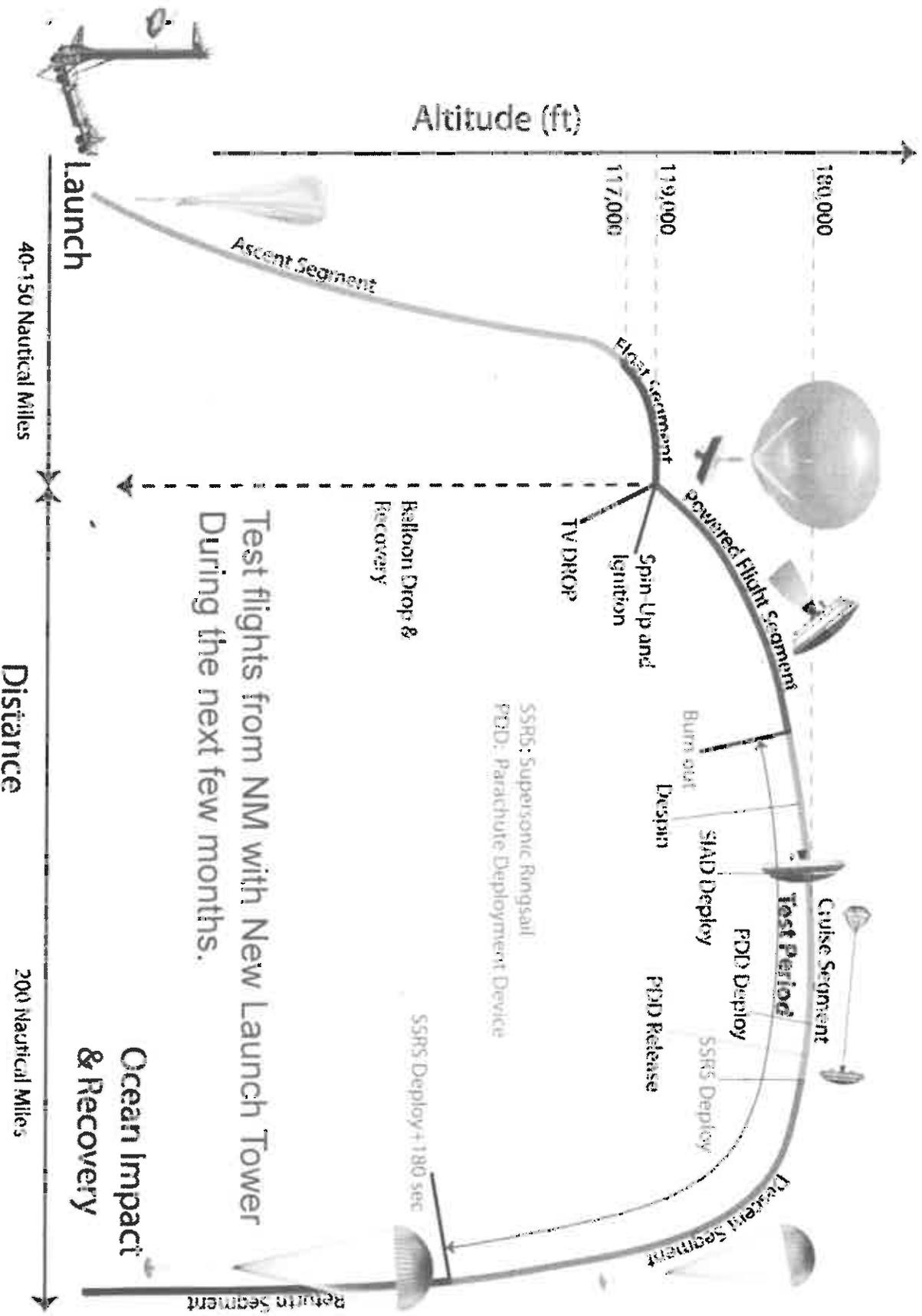


Anticipated IDIQ Tasks

- Super Pressure Balloon Support
 - Analysts
 - Developmental Tests
- Low Density Supersonic Decelerator Project

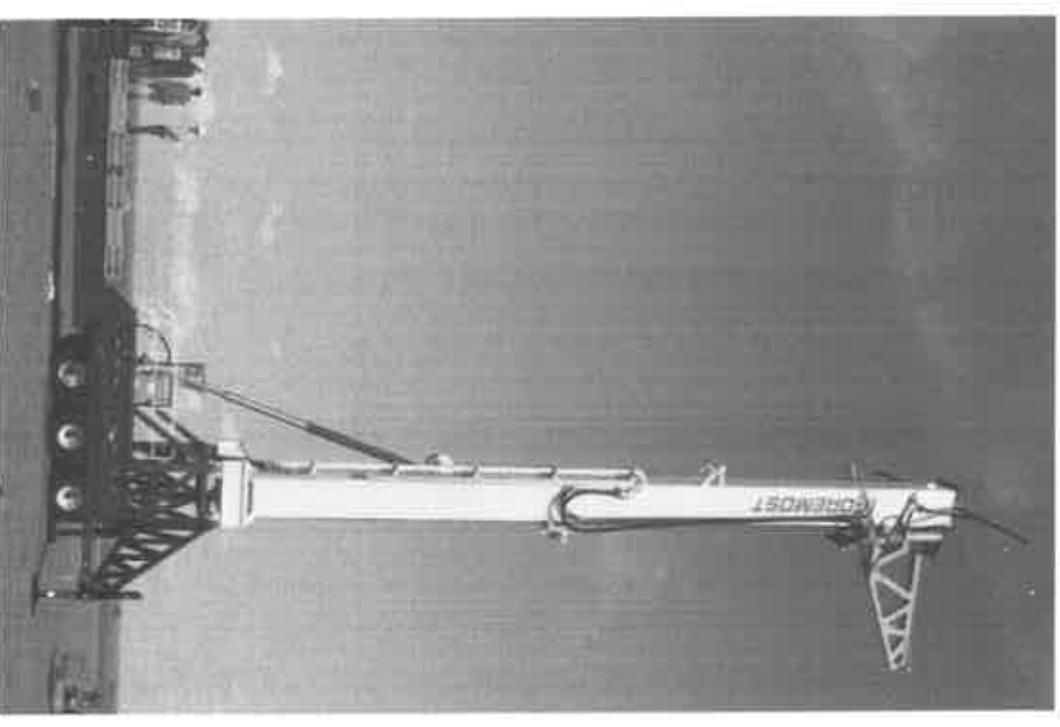
Low Density Supersonic Decelerator (LDSD)

Wallops Flight Facility



LDSD Schedule

- *FY13: Test launches from Ft. Sumner*
- *FY14: One flight from PMRF*
 - 6/3/14 -6/13/14
- *FY15: Three flights from PMRF*
 - 6/2/15 – 6/12/15
 - 7/1/15 – 7/15/15
 - 8/4/15 – 8/9/15



Questions?

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- Email questions to: Mickey.M.Merritt@nasa.gov
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BALLOON INDUSTRY DAY ATTENDANCE SIGN IN SHEET
CSBF- PALESTINE TEXAS
AUGUST 20, 2013

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BALLOON INDUSTRY DAY ATTENDANCE SIGN IN SHEET

Fort Sumner- New Mexico

AUGUST 22, 2013

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