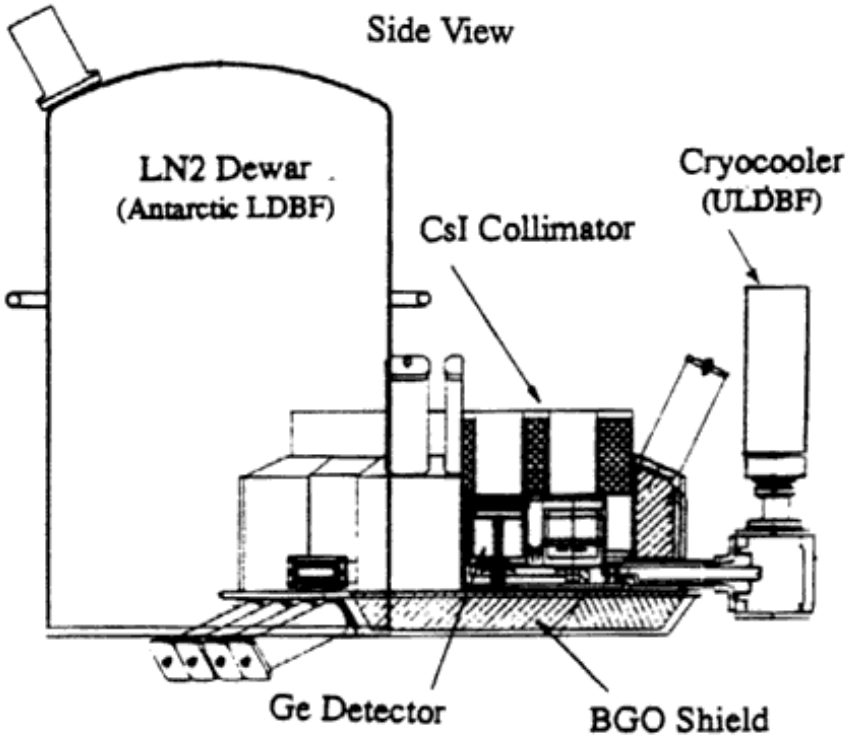
Candidate Science Payloads

ULDB
WALLOPS FLIGHT FACILITY

Discipline	PI	INSTITUTION
Gamma Ray	Lin (HIREGS)	UC Berkeley
Gamma Ray	Kroeger (GRIS)	NRL
InfraRed	Cheng (NSTBO)	GSFC
InfraRed	Lubin (ACE)	UC Santa Barbara
Cosmic Ray	Binns (TIGER)	WashU St. Louis
Cosmic Ray	Evenson (BACH)	Bartol Inst.

HIREGS Requirements Summary

ULDB
WALLOPS FLIGHT FACILITY

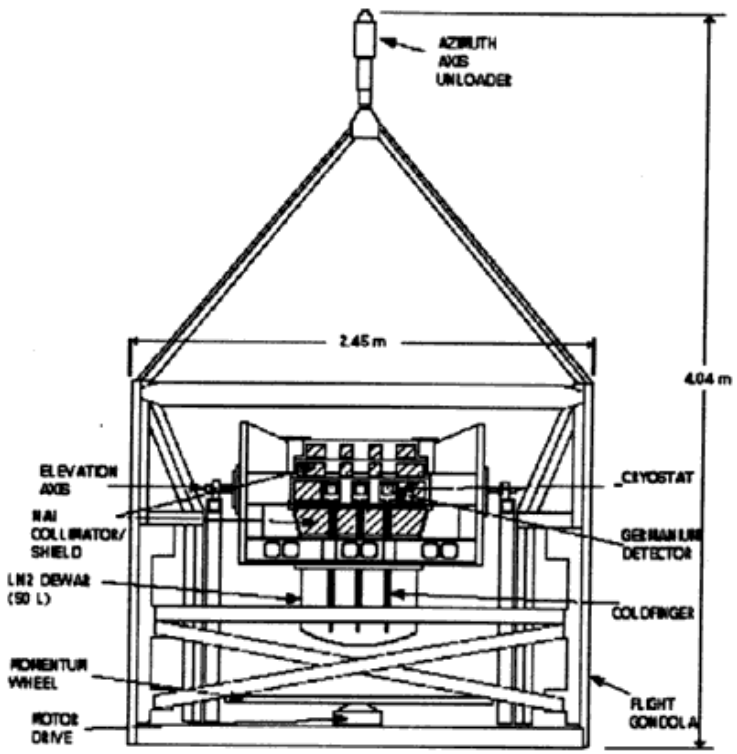


• Telemetry	10 kbps
• Cryogenics	3 x cryo
• Mass	1360 lbs.
• Power	627 W
• Rotator	Complex
• Minimum Altitude	>110 K-ft
• Other	Gondola & Thermal

GRIS Requirements Summary

ULDB

WALLOPS FLIGHT FACILITY

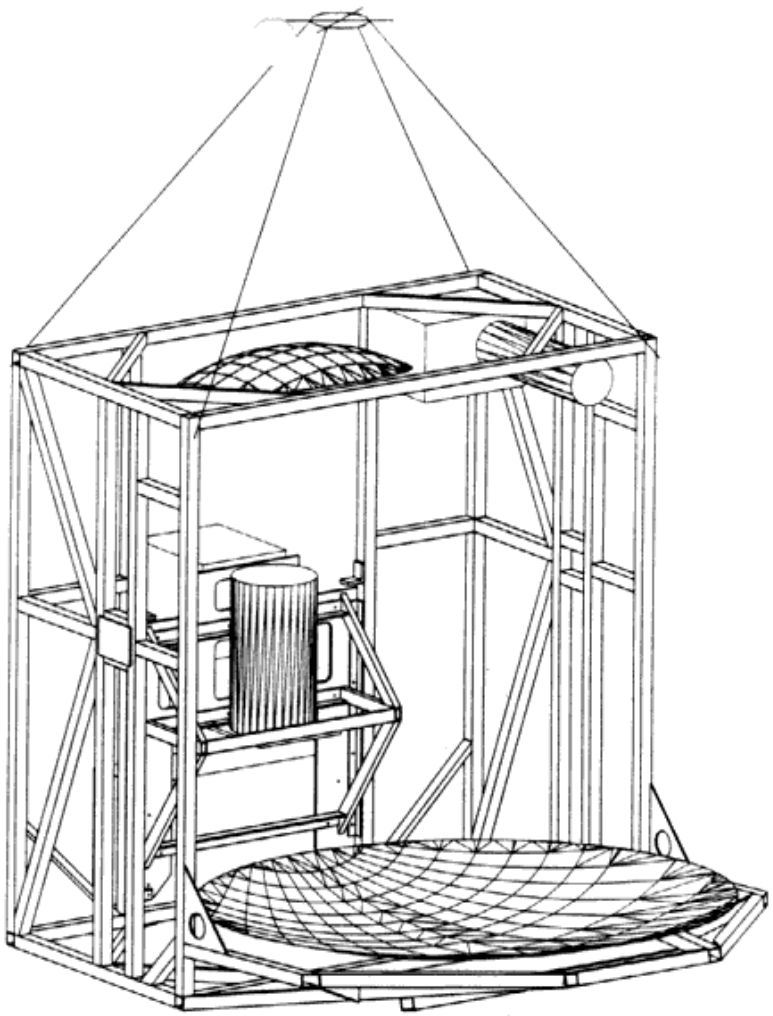


• Telemetry	1-10 kbps
• Cryogenics	2 x cryo
• Mass	1652 lbs.
• Power	414/200 = 614 W
• Rotator	Sun/day & Spin/night
• Min. Altitude	>115 K-ft
• Other	Gond. & Cool. loop

ACE Requirements Summary

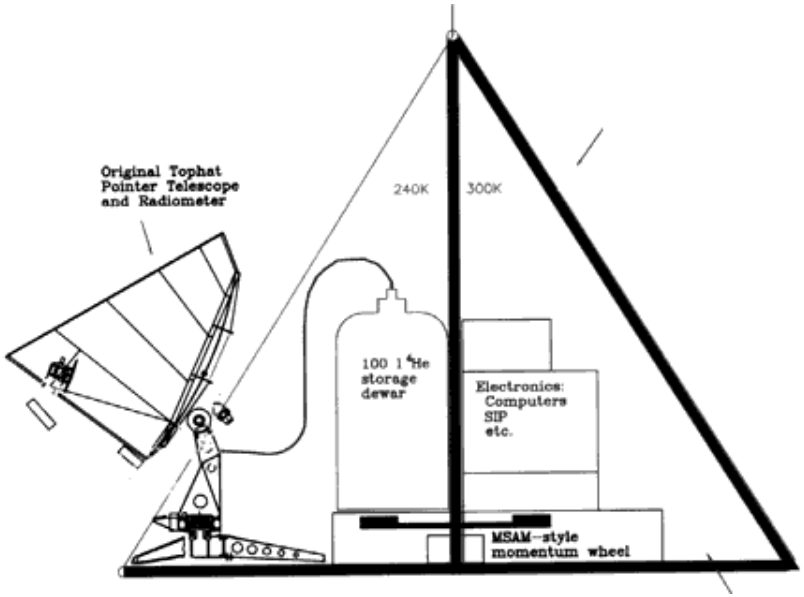
ULDB

WALLOPS FLIGHT FACILITY



• Telemetry	50-60 kbps
• Cryogenics	1 x cryo
• Mass	811 lbs.
• Power	600 W
• Rotator	Their own
• Minimum Altitude	>80 K- ft

NSTBO Requirements Summary

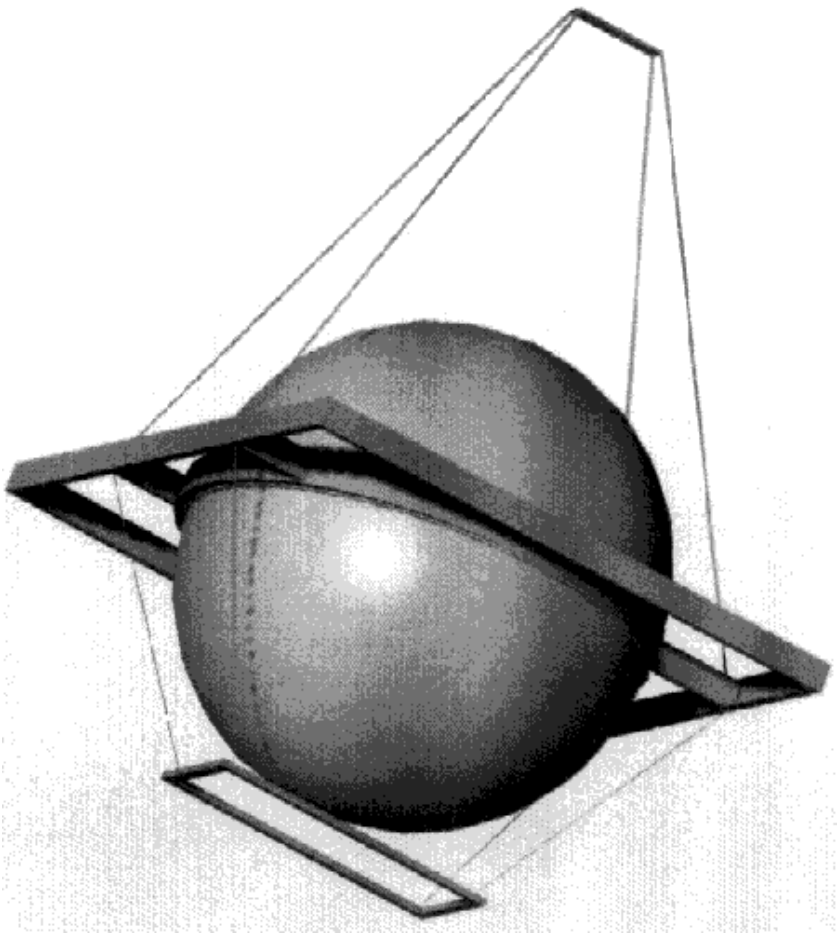


- **Telemetry** **10-50 kbps**
- **Cryogenics** **He4**
- **Mass** **860 lbs.**
- **Power** **295 - 395 W**
- **Rotator** **Their own**
- **Minimum Altitude** **>110 K- ft**

TIGER Requirements Summary

ULDB

WALLOPS FLIGHT FACILITY

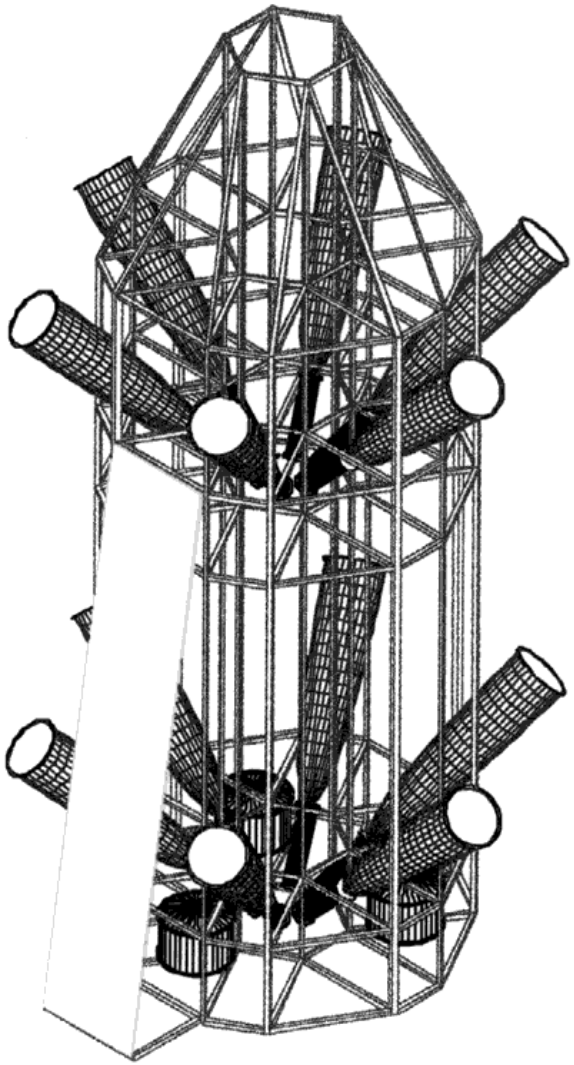


• Telemetry	4.4-5.7 kbps
• Cryogenics	N/A
• Mass	1192 lbs.
• Power	222 W day, 522 W night
• Rotator	No requirement
• Minimum Altitude	100 K- ft
• Other	Gondola

BACH Requirements Summary

ULDB

WALLOPS FLIGHT FACILITY



• Telemetry	10 bps
• Cryogenics	N/A
• Mass	1185 lbs.
• Power	<20 W day,
	525 W night
• Rotator	Moon avoidance
• Minimum Altitude	100 K- ft / 117 K- ft
• Other	Gondola &
	Data storage