Partial-Vacuum Lift (PVL) for Persistent C5ISR

Anumá Aerospace Corporation
Diana Little, CEO
diana.little@anumaaerospace.com
(919) 229-9540
https://anumaaerospace.com

ARGUS C5ISR Dirigible

Airborne Reconnaissance and Geospatial Intelligence Utility System



Autonomous Dual Partial-Vacuum Lift (PVL) Cell Dirigible

Solution Specifics

- Partial-Vacuum Lift (PVL) behaves like a submarine in an ocean of air - air is pumped out to ascend and bled back in to descend, up to and including zero static lift on the surface
- Enhanced buoyancy control improves maneuverability, ground crew safety, and ease of launching/landing
- In-situ energy harvesting with solar photovoltaics
- No lift gas or fuel required

Impact and Technical Approach

- Partial-Vacuum Lift (PVL) is a game-changer
- Station-keeping with unprecedented persistence prevents gaps in intelligence and opportunities for enemy incursion
- Elimination of lift gas refills reduces handling requirements, keeps operators safe, and reduces operational costs
- Elimination of lift gas combined with in-situ energy harvesting increases logistical security

Performance

- Autonomous Medium Altitude Long Endurance (MALE) UAS
- Zero consumables
- Airborne persistence and endurance of up to 2 years between maintenance cycles
- Can remain aloft for up to 730 days
- 227 kg (500 lb) payload at 3,048 m (10,000 ft) altitude

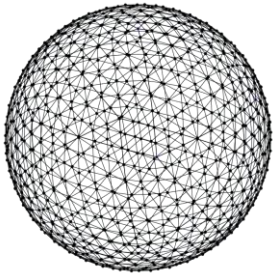
Company Proprietary

Anumá Aerospace

Use Cases, Missions, and Markets

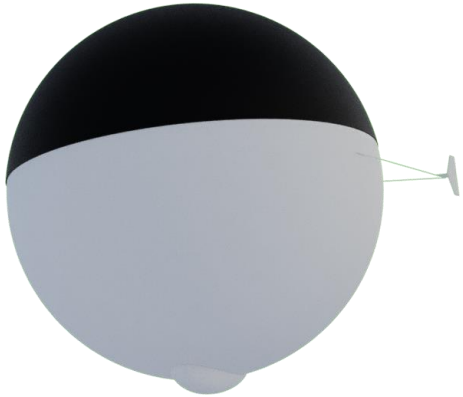
Home | Anumá Aerospace
www.anumaaerospace.com

Partial Vacuum Lift (PVL) Cells
+ Licensing of Patented Tech
- Replace helium in existing aerostat and airship programs
- Design per use case



$430 M TAM
$10 M SAM
$8 M SOM

PEGASUS Weather Airships
+ Energy Harvesting
+ Autonomous Navigation
- Weather Data Collection
- NOAA SBIR Phases I & II



$13 B TAM
$560 M SAM
$100 M SOM
(DaaS ARR)



ARGUS C5ISR Dirigible
+ Electric Propulsion
+ Station Keeping
- Persistent C5ISR
- Domain Awareness
- Warfighter Support
- Communications
- 2024 NSIN Vector Accelerator

NATIONAL SECURITY INNOVATION NETWORK

$21 B TAM
$300 M SAM
$150 M SOM

2023 NOAA Phase I

2024 NOAA Phase II

2025 PVL Revenue $1M

2026 PEGASUS revenue $125K

2027 PEGASUS revenue $2M

Company Proprietary