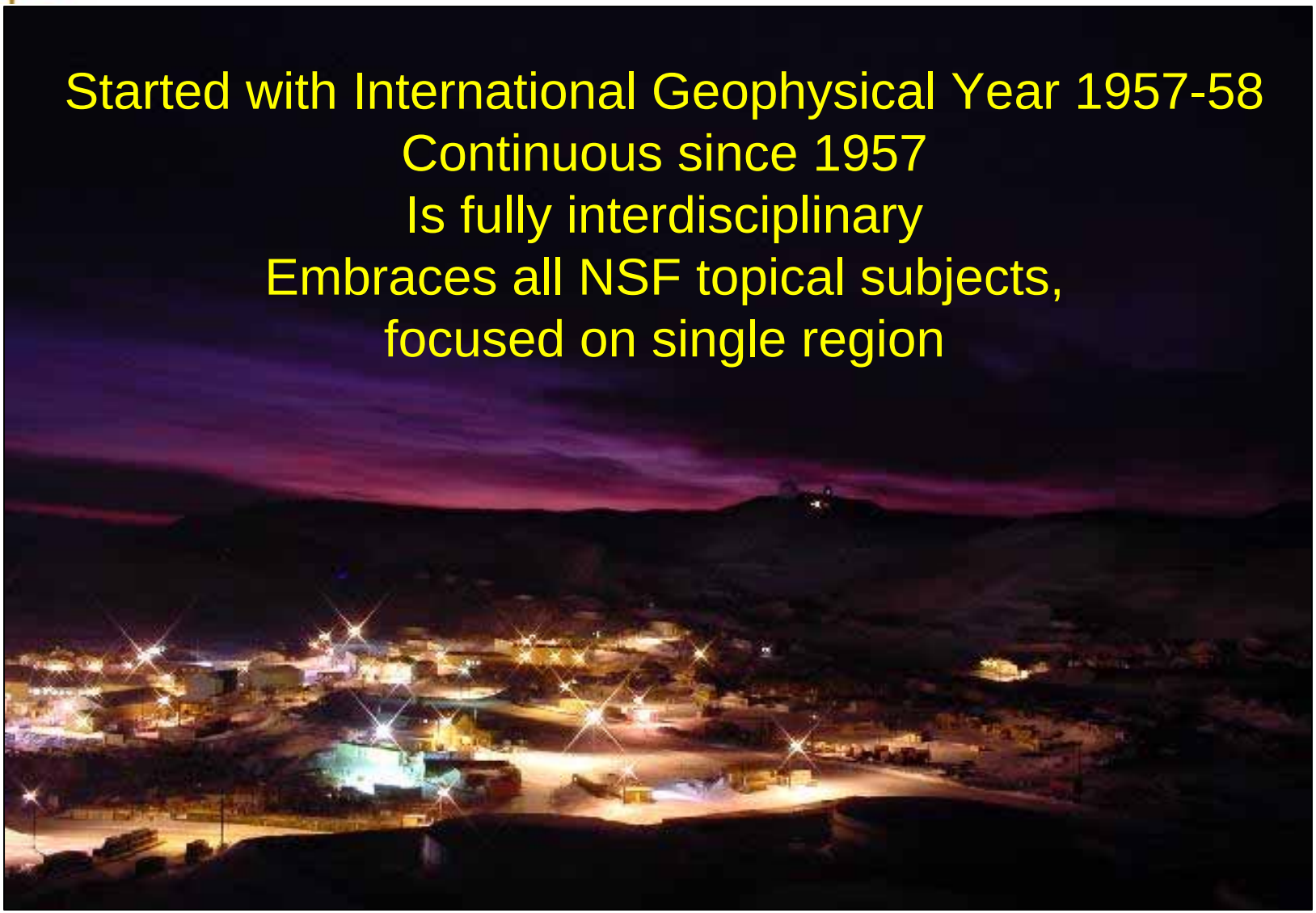
Overview of Operations Function
in the
US Antarctic Program

US Antarctic Program

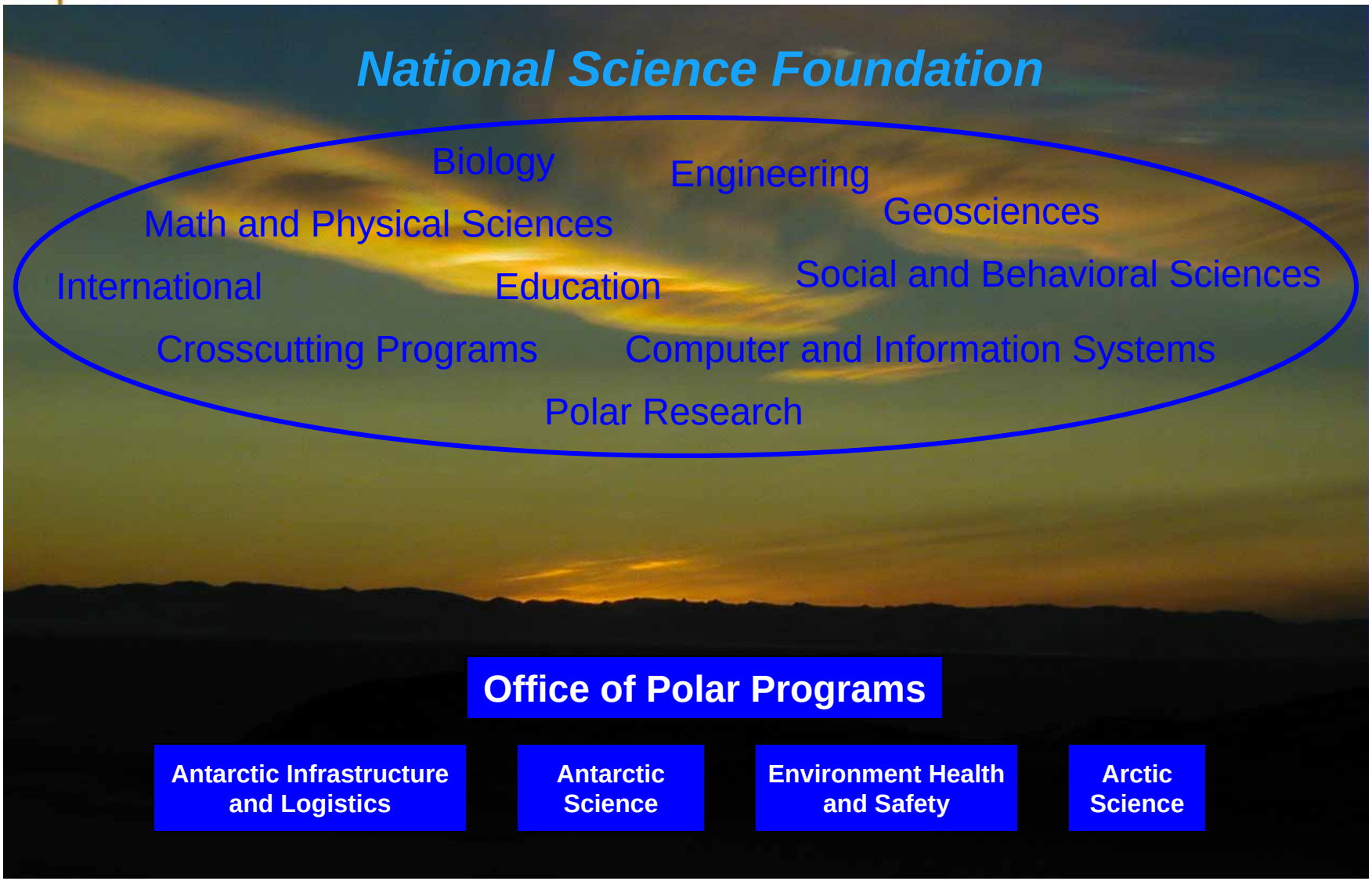
USAP maintains a US Antarctic presence through performance of world-class research that is best done, or can only be done, south of 60º S.

Established by Presidential Directive
Single Point Manager of US Antarctic Activities
NSF is Responsible Agency

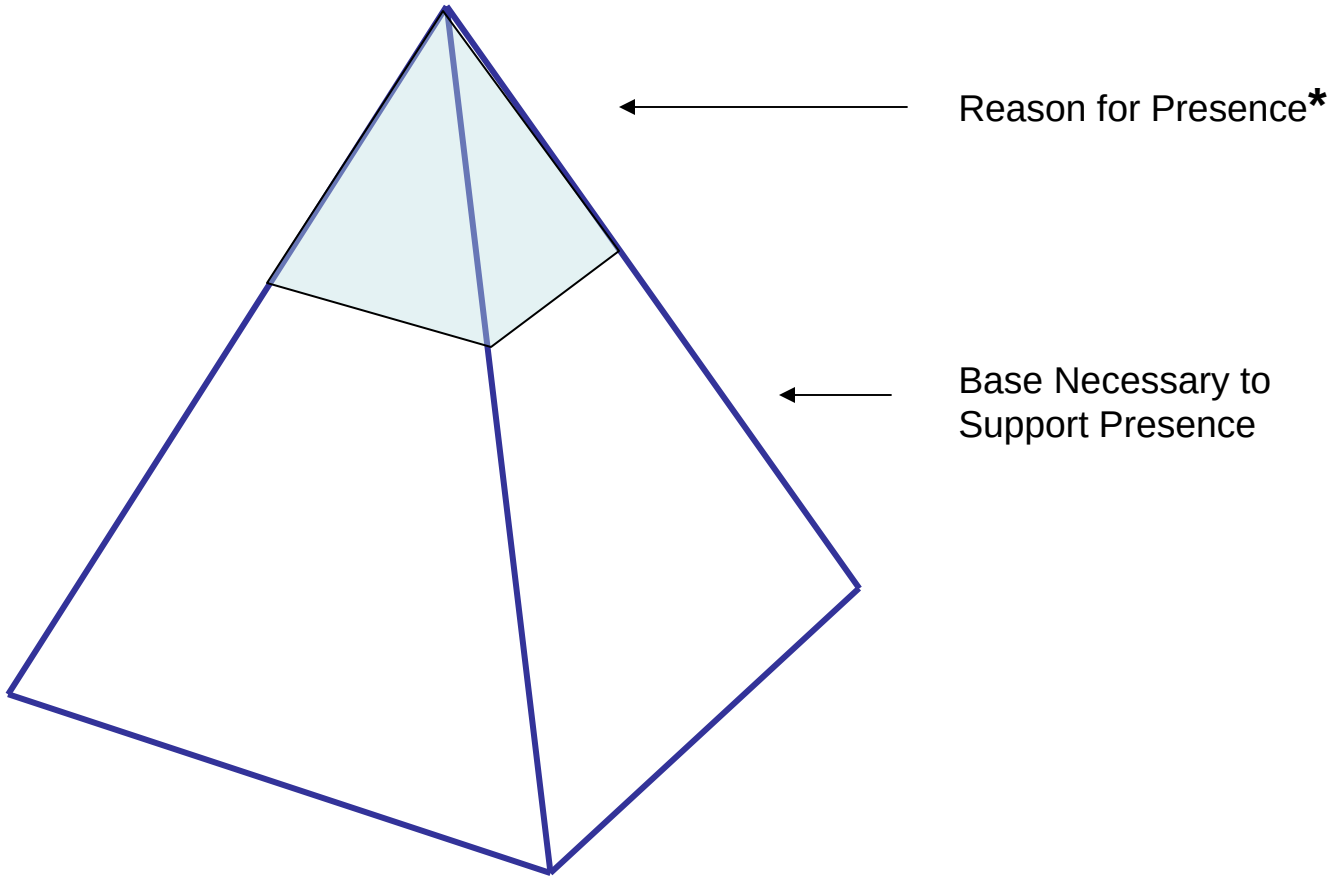
US Antarctic Presence



How USAP Fits



Support Pyramid



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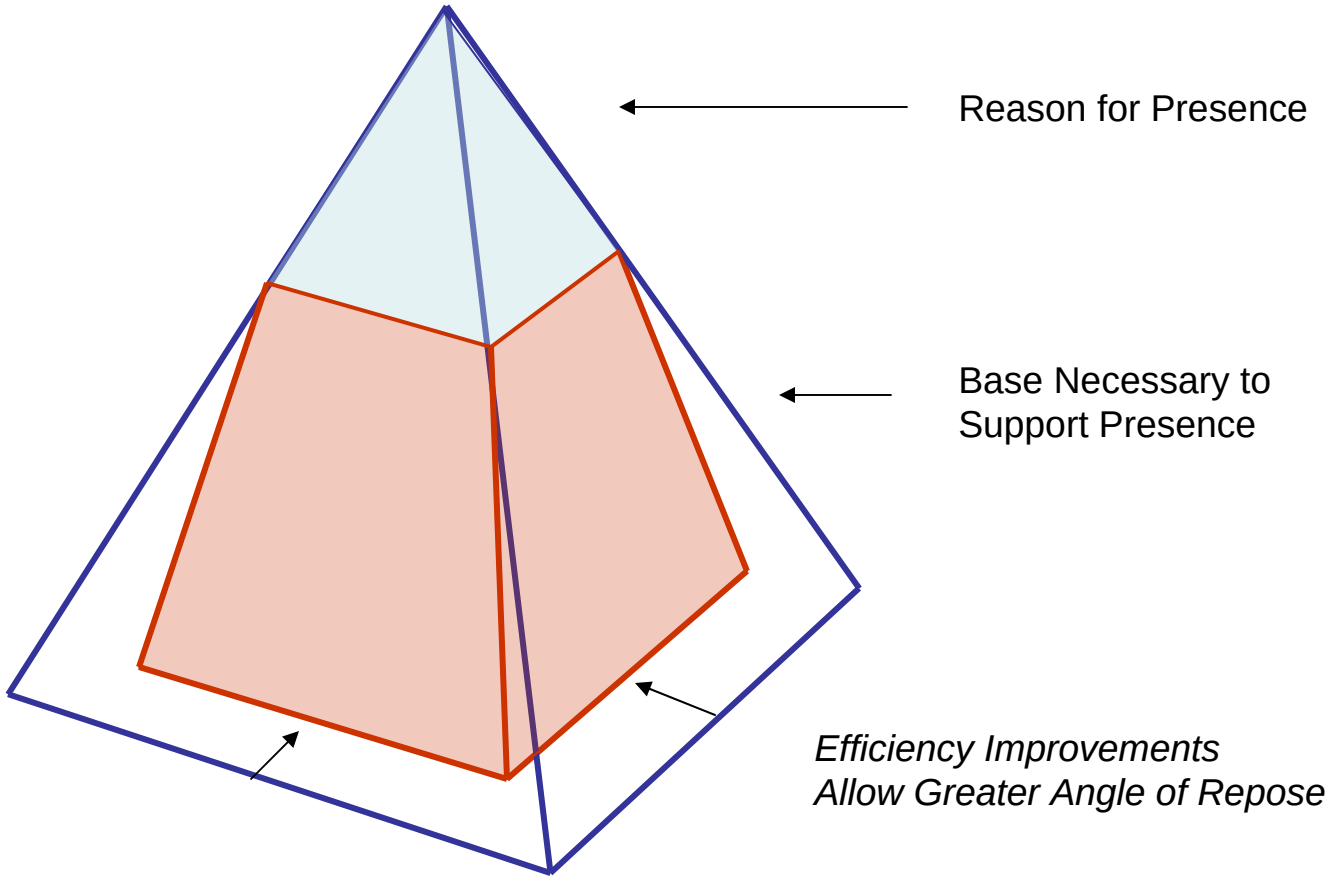
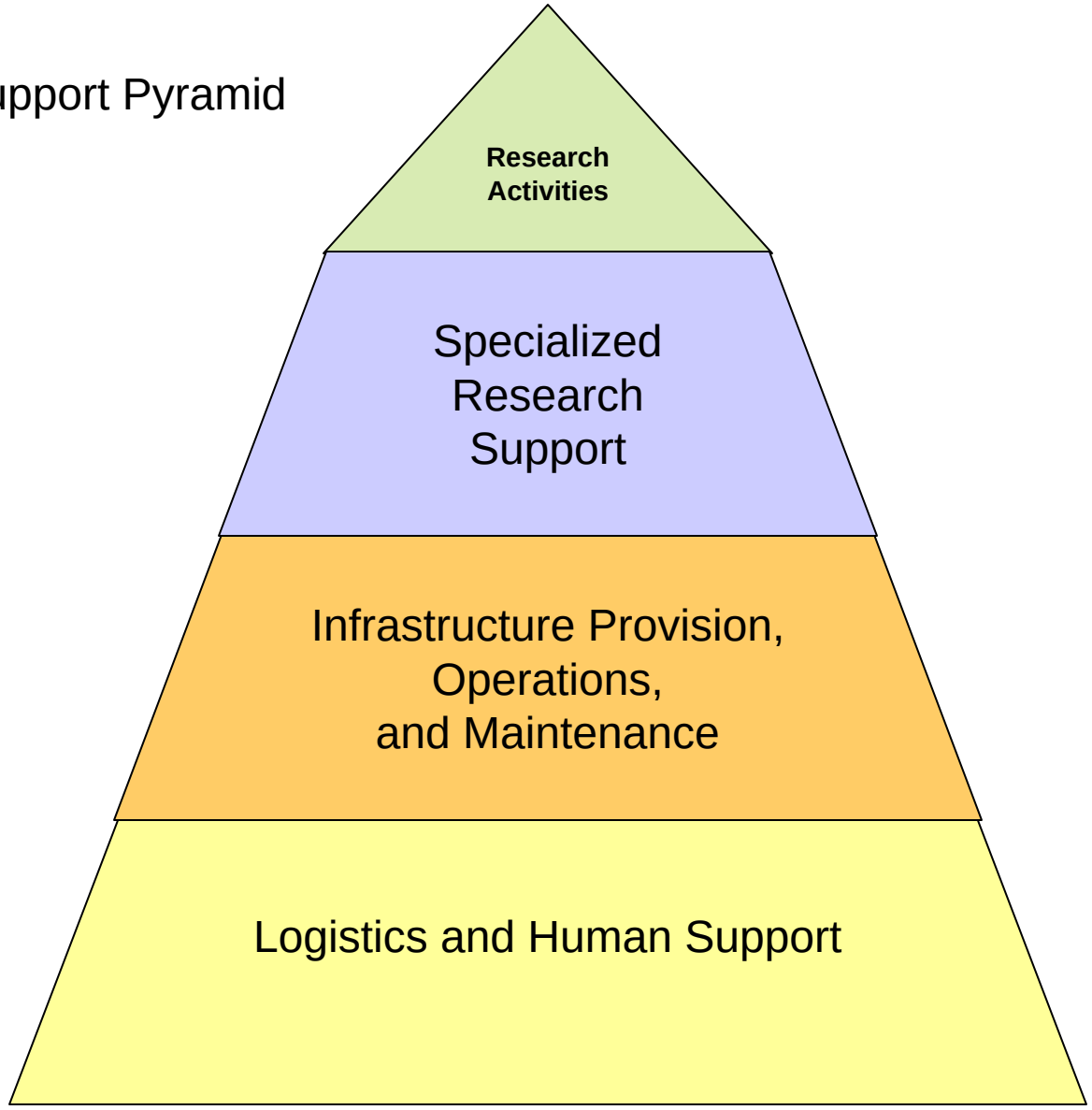
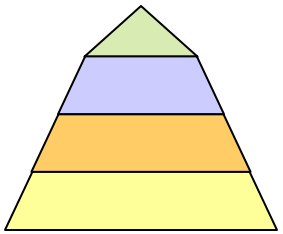
Support Pyramid



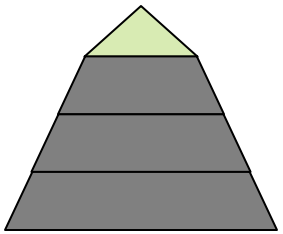
Support Pyramid





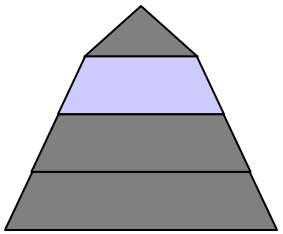
USAP Research Areas

Glaciology
Earth Sciences
Ocean & Atmospheric Sciences
Organisms and Ecosystems
Integrated Systems
Aeronomy & Astrophysics
Artists & Writers



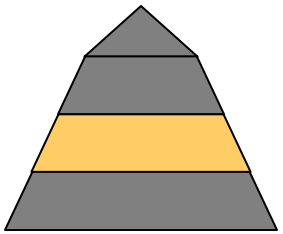
Specialized Research Support

Marine equipment and technicians
Chemical, biological, and mechanical laboratory supplies
Laboratories, cold rooms, aquariums, core storage
Field/camping equipment and food
Field safety/operating training
Transportation (helicopters, aircraft, ground vehicles, boats)
Ice and rock drilling/coring equipment and services
Sample packaging and transport
Diving support
Traverse platforms
Equipment and shelter construction and maintenance
Heavy equipment
Laboratory and field technicians



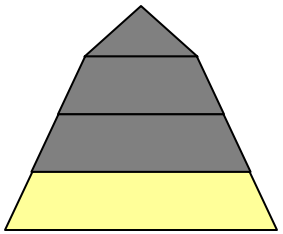
Infrastructure, Operations, Maintenance

Laboratory complexes
Dormitories and office complexes
Dining and recreation facilities
Operational centers (flight, weather, computing, waste)
Utilities production and distribution (water, power)
Roads and runways
Airfield support (navaids, aircraft maintenance and support)
Equipment and construction (facilities, tools and services)
Trades (electrical, plumbing, mechanical, carpentry, vehicle maintenance)
Fuel storage and distribution
Warehouses (dry, heated, frozen, hazardous)
Ship accommodation (piers, bollards, manifolds and other offload equipment)
Outdoor staging and storage
Communications (UHF, VHF, microwave relays, TV, repeaters, satellite, teleco)
Medical clinic
Fire station
Logistics traverse platforms
Aircraft (airdrop, ski-equipped planes)
Icebreaking



Logistics and Human Support

Full service procurement, tracking, delivery system
Full service personnel travel system
Emergency and routine medical/dental services
Full service structural and airfield fire protection
Hostelry
Full service dining and catering services
Recreational activities
Essential retail services
Automatic Teller Machine (ATM)



Office of Polar Programs

- Antarctic Infrastructure and Logistics
- Antarctic Science
- Environment Health and Safety
- Arctic Science

Aircraft Management Division (DoI)

- Helicopters (PHI)
- Light Fixed Wing (KBAL)

Prime Contractor (Raytheon)

- Research Ship(s) (NBP)
- Palmer Resupply Ship(s) (LMG)
- Environmental Assessment (M&E)

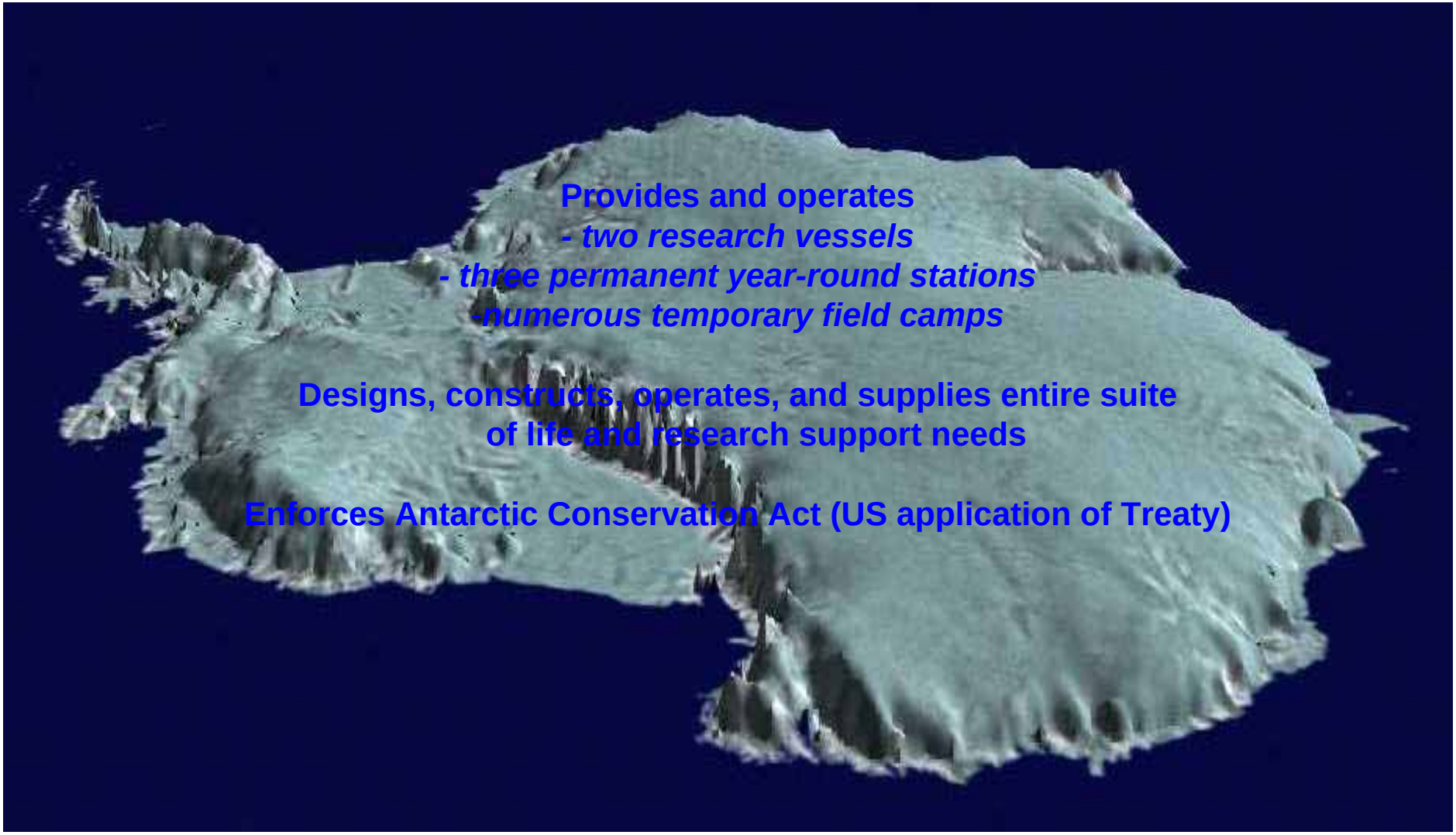
Support Forces Antarctica (DoD)

- Heavy Ski Airlift (NYANG)
- Heavy Intercontinental Airlift (SAAM)
- Resupply Cargo &Tanker Ships (MSC)
- Bulk Fuel (DFA)
- USCG (Icebreaker)
- Other (eg. APO, Chaplain, TRANSCOM)

SPAWARS (Navy)

Others (eg. NAVFAC, CRREL, Air New Zealand)

Antarctic Infrastructure and Logistics

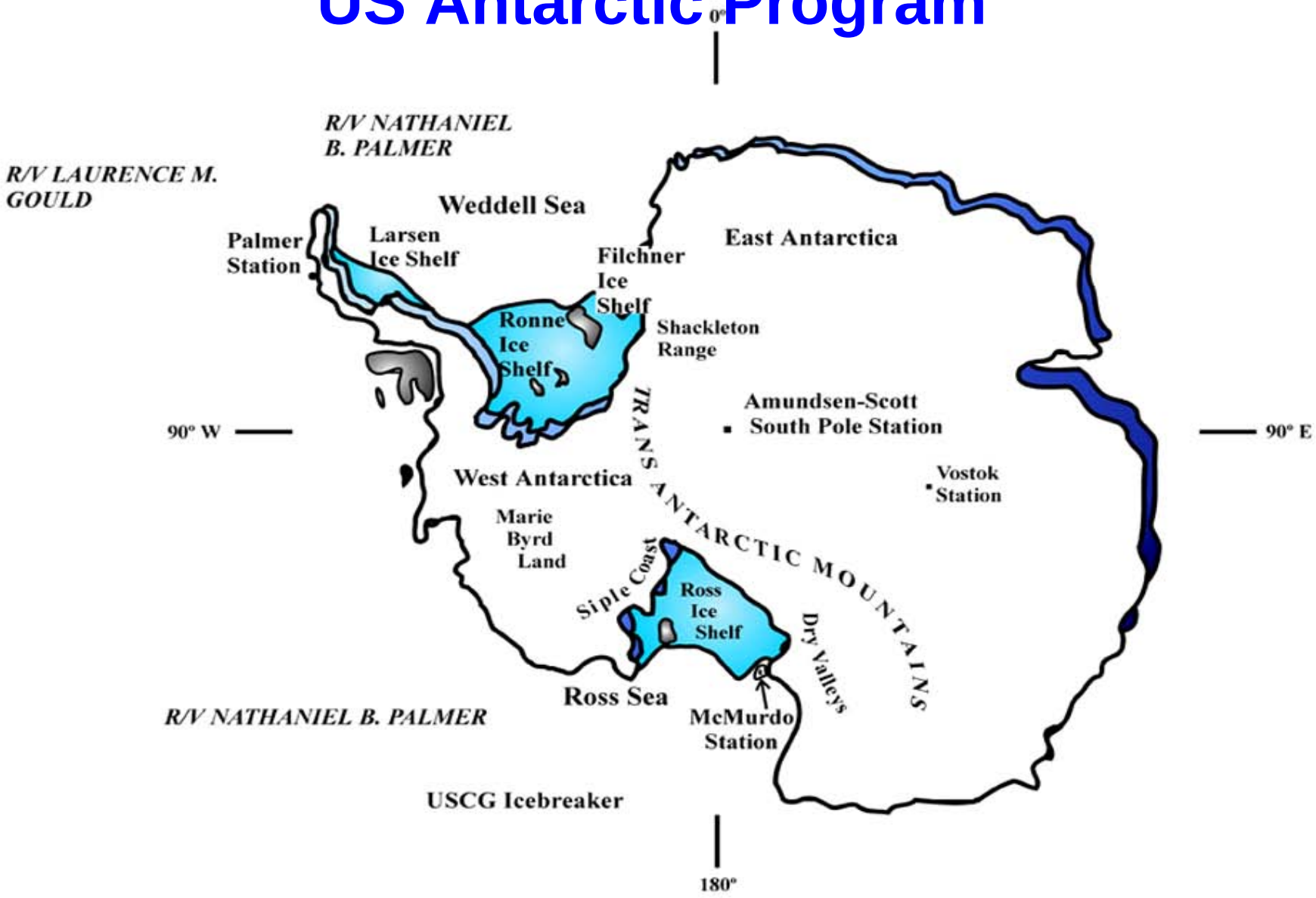


Provides and operates
- two research vessels
- three permanent year-round stations
-numerous temporary field camps

Designs, constructs, operates, and supplies entire suite of life and research support needs

Enforces Antarctic Conservation Act (US application of Treaty)

US Antarctic Program



Typical Seasonal Calendar

Month(s)	McMurdo	South Pole	Palmer	Field
August thru September	WINFLY De-winterize. Prep runways, roads, fuel lines, science gear.	Winter projects. Prep skiway, summer camp.	Summer staff arrive.	
October thru November	Rapid ramp up. Sea Ice science. Local science.	First flights. Summer opening. Construction and science.	Summer science. Boating operations.	Dry Valleys opens. Deep field put-ins.
December thru January	Sea Ice closes. Icebreaking. Heavy support to field activities.	Science in full swing. Concentrated resupply.	Field, lab, ship science in full swing. Snow ends/rain begins. Outdoor maintenance.	Deep field pull-outs.
February	Vessel resupply. End flight ops. Winter begins.	End flight ops. Winter begins.	Field, lab, ship science in full swing.	
March thru April	Winterization. Vessel receiving.	Winterization. Winter projects.	Winter staff arrive. Summer science ends. Snow returns.	
May thru July	Winter ops projects. Winter science. Prep for WINFLY.	Winter ops projects. Winter science.	Winter ops projects. Winter science. R/V continue ops.	

Your Questions…