

14th Weather Squadron

Collect...Protect...Exploit



Mission Brief

(CAO Apr 2023)



U.S. AIR FORCE

Overview



- Organization
- Requirements Mapping
- Resourcing/Capabilities/Definitions
- Information Warfare Applications



Veach-Baley Federal Complex in downtown Asheville, NC

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Mission Statement



Collect, protect, and exploit authoritative climate data to develop competitive advantages for the DoD, Intelligence Community, and NATO operations.



64-member unit is a mix of 37 military (15W, 1W, 1D7, 3F) and 27 civilian (1340, 2210, 0080, 0318)

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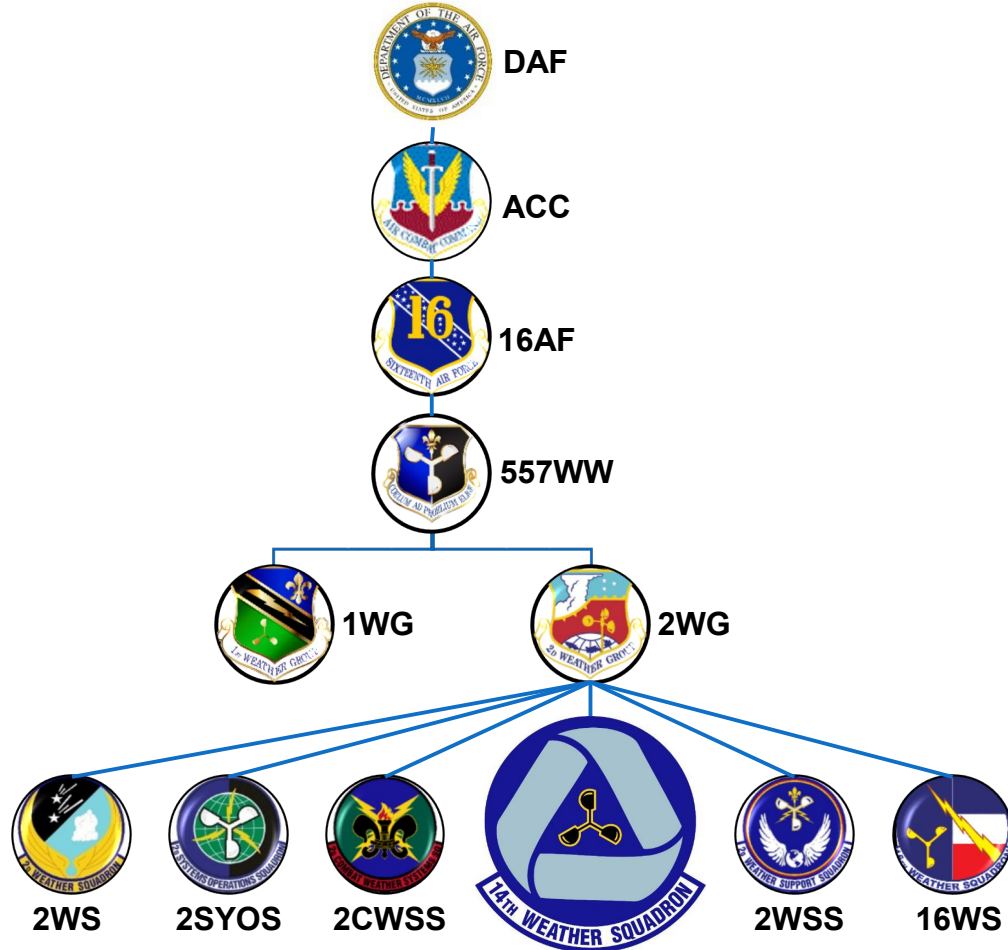


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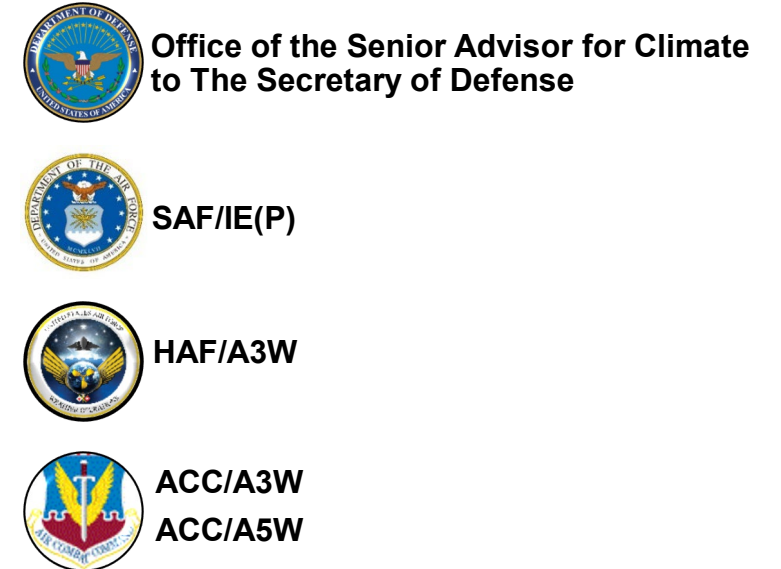
Organization



Chain of Command



Climate Functionals



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Requirements Mapping

CJCS Instruction 3810.01F (2019) - *“U.S. Air Force is responsible for: Climate monitoring and analysis and prediction capabilities for all elements of the DoD.”*

Air Force Doctrine Publication 3-59 (2020) - *“DAF weather climate support is the authoritative source for climate data for the Department of Defense and other US Government agencies and produces specialized climate studies and assessments used to optimize military and intelligence operations and planning.”*

Air Force Policy Directive 15-1 (2019) - *“It is the Air Force’s policy to: Provide past, current, and predicted terrestrial weather, climate, hydrometeorological, and hydrological services for all elements of the Air Force, designated parts of the Intelligence Community (IC), and the U.S. Army in accordance with CJCSI 3810.01F...Provide terrestrial weather, climate, hydrometeorological, and hydrological studies and expertise in support of climate change impacts to the DoD.”*

NATO Technical Arrangement (2018) - *“USA was nominated as the IMETOC Assisting Nation (AN) for Climatology and Space Weather support to NATO Operations and Missions.”*

CHAIRMAN OF THE JOINT CHIEFS OF STAFF INSTRUCTION

AIR FORCE DOCTRINE PUBLICATION 3-59

BY ORDER OF THE SECRETARY OF THE AIR FORCE AIR FORCE POLICY DIRECTIVE 15-1
14 NOVEMBER 2019
Weather
WEATHER OPERATIONS
COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

NATO UNCLASSIFIED

TECHNICAL ARRANGEMENT BETWEEN
THE DEPARTMENT OF DEFENSE
OF THE UNITED STATES OF AMERICA (USA)
AND
THE SUPREME HEADQUARTERS ALLIED POWERS EUROPE (SHAPE)
REGARDING
THE PROVISION OF CLIMATOLOGY AND SPACE WEATHER SUPPORT AS THE
INTEGRATED METEOROLOGICAL AND OCEANOGRAPHIC ASSISTING NATION
FOR NATO OPERATIONS AND ACTIVITIES

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Capabilities/Resourcing/Definitions



Fully Mission Capable
Partially Mission Capable
Non-Mission Capable

Not Resourced

Data Ingest, Quality Control, Archive

Monitoring & Analysis
Monitor real-time data to assess the state of the climate and place current conditions in historical context. Identify anomalies and risk.

Prediction
Predict subseasonal-to-seasonal anomalies that vary from the climatological average in the 2 weeks to 1yr time horizon.

Historical Climatology
Exploit historical data to characterize the environment in the 1 to 10yr time horizon.

Projection
Assess the impacts of a changing climate in the 10 (5 in the Arctic) to 80yr time horizon.

Under Resourced

Systems/Cyber Operations
Software Engineering, Database Management, Systems Management, Cyber Security



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Decision-Making



	<u>Data:</u>	<u>Information:</u>	<u>Knowledge:</u>	<u>Wisdom:</u>
<u>Monitoring:</u>	It rained 4" in Red/Blue location in January 2023	Rainfall is more/less than normal and by how much	Verification of claims by foreign actors that climate has caused some effect	Contribute to IO campaigns supporting Blue and countering Red narratives
<u>Prediction:</u>	The temp in Red/Blue area will be 3 degrees above normal	Winter thaw in AOR will occur earlier this year	Muddy conditions will impact Red/Blue ops at this time/location	When/where will/should Red/Blue attack in 3 months?
<u>Historical Climatology:</u>	The average high for Red/Blue location in January is 54F	Averages, Extremes valid 1 to 10 yrs out	Time of year environmental impacts have least/greatest impacts to Red/Blue operations	When/where will/should Red/Blue attack in two years?
<u>Projection:</u>	Scenarios indicate that Red/Blue location will be 1.2 degrees warmer in 2035	Tropical cyclones will occur in different locations and at different strengths	By 2035, Red/Blue Naval Station will be at risk of significant damage due to hurricane impacts	Planning in 2022 for a relocation of Red/Blue pier-side ops by 2035

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2022 By the Numbers



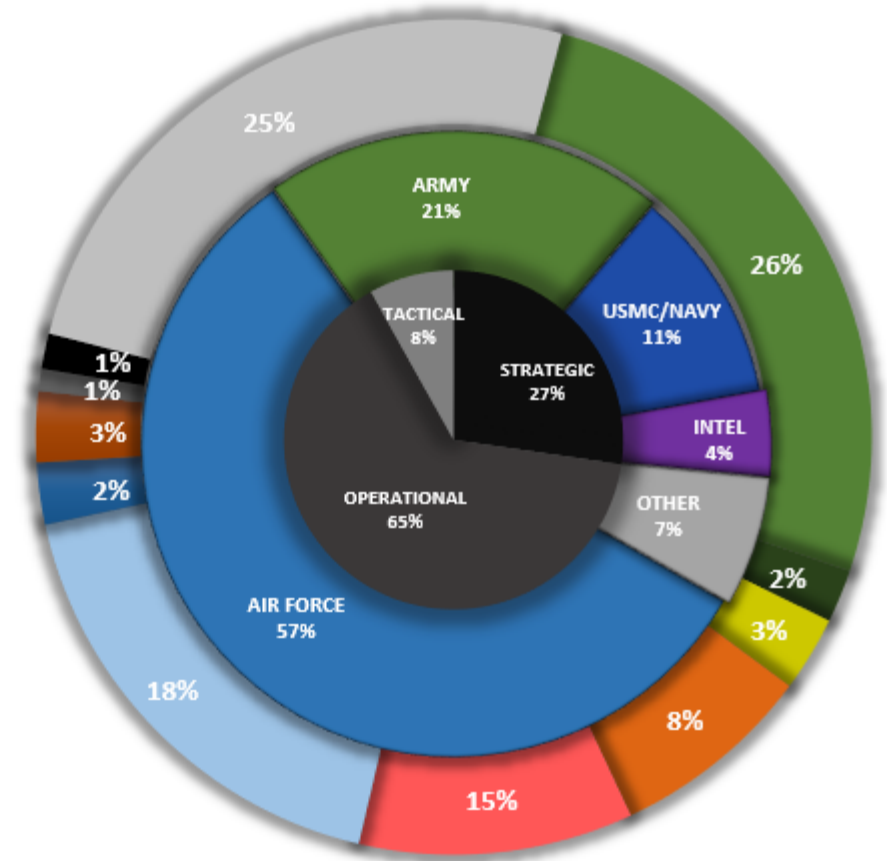
- 1.4 billion observations collected
- 69.9 million data quality database audits applied
- 99.9% website/system up-time
- 584 support requests addressed
- 319 distinct organizations supported
- 290 thousand web hits sustained

Supported Operations/Exercises

- | | | |
|------------------------------|--|--------------------------|
| • Hill AFB 2024 Airshow | • USAF/USSF Brave 1 | • TEAK NET |
| • Freedom Shield 2023 | • Hackathon | • Commando Sling |
| • Operation Inherent Resolve | • Joint Pacific Multinational Readiness Capability | • Saber Strike 22 |
| • Talisman Sabre 2023 | • Resolute Dragon 22 | • BOLT |
| • Adamant Serpent | • Operation New Normal | • Tanuki Wrath 22 |
| • Operation Atlantic Resolve | • Operation Europe Assure Deter Reinforce | • Red Flag |
| • Resolute Sentinel 2023 | • Operation Deep Freeze | • Green Flag |
| • Yudh Abhyas 2023 | • Defense of Guam | • Black Flag |
| • Operation Juniper Shield | • Warfighter Exercise (WFX) 23-1 | • Neptune |
| • Operation Spartan Shield | | • Cobra Gold |
| | | • Steadfast Jupiter 2022 |

Support Request By Category

- NORTHCOM
- SOUTHCOM
- AFRICOM
- CENTCOM
- EUCOM
- INDOPACOM
- STRATCOM
- SOCOM
- TRANSCOM
- CYBERCOM
- SPACECOM
- OTHER

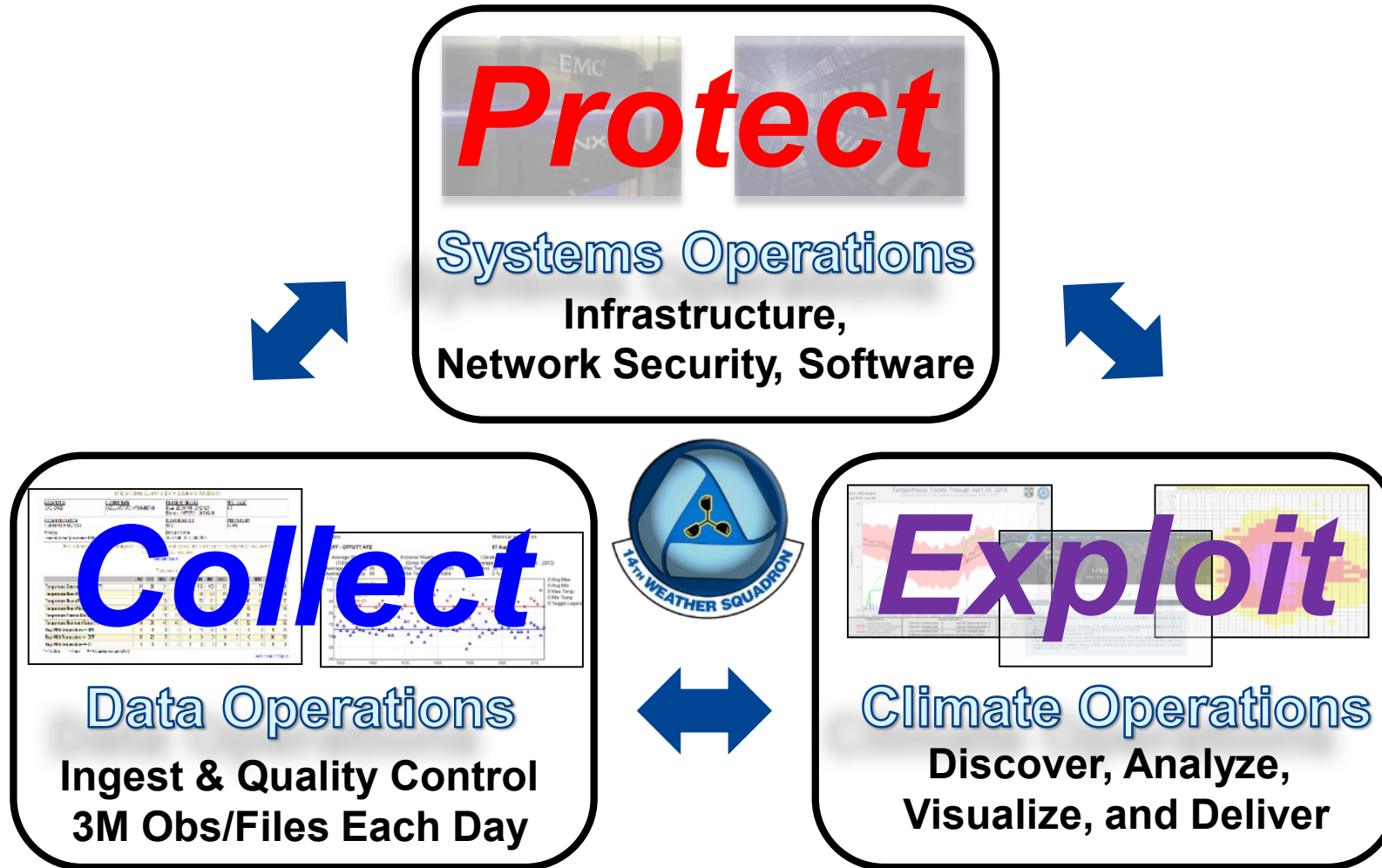




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Flow of Operations



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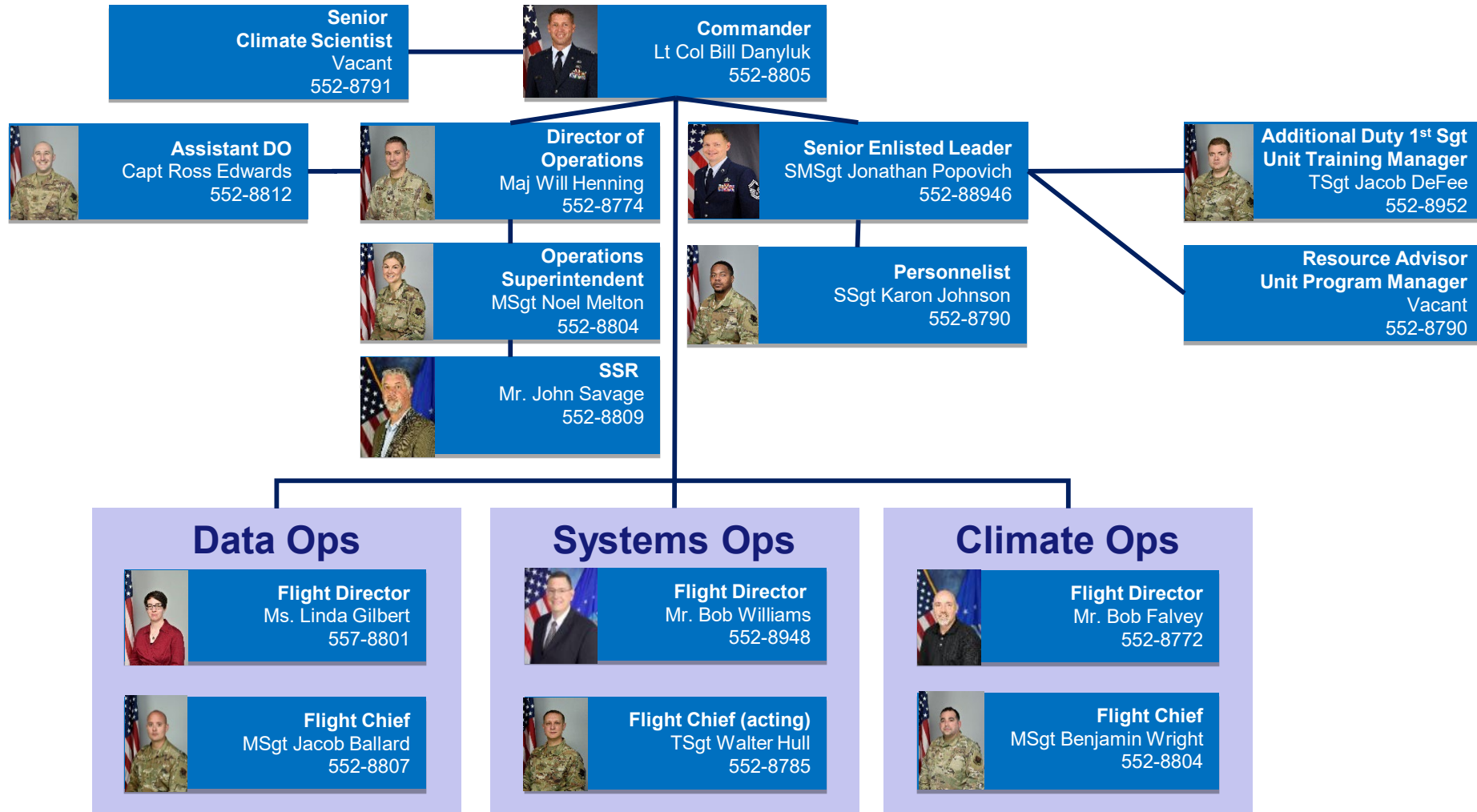


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Squadron Organization



DSN: 322 / Comm: 828



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Questions

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