

# The 557th Weather Wing

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**U.S. AIR FORCE**

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**Colonel William J. Carle**  
**Commander**



**Lt. Gen. Thomas S. Moorman Building**



# 557 WW Mission / Vision



***Mission: Maximize America's Power through the Exploitation of Timely, Accurate, and Relevant Weather Information; Anytime, Everywhere***



**Air & Space  
Superiority**



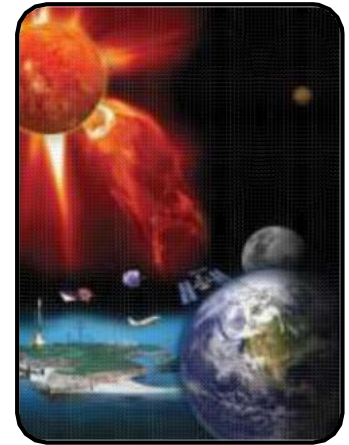
**Rapid Global  
Mobility**



**ISR**



**Global Strike**



**Command &  
Control**

***Vision: World-class Airmen...the DoD's provider of choice for innovative, actionable, and authoritative terrestrial and space weather information to win the fight...today and tomorrow.***

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# Organizational Structure



## 557 Weather Wing

### Wing Staff

- **Support Today's Fight:** *Provide 24/7 World-Class Environmental Intelligence for Global Ops*
- **Transform for Tomorrow's Fight:** *Meet the Future Demands Across Air, Ground, Space & Cyberspace*
- **Leader in Innovation:** *Advance Air Force Weather Ops Through Leading-Edge Science & Technology*
- **Take Care of our Airman/Families:** *Build Strong and Resilient Wingman*
- **Telling Our Story:** *Communicate Strategically and Effectively*

### 1st Weather Group Offutt AFB

15 OWS  
Scott AFB

17 OWS  
Hickam

21 OWS  
Kapaun AB

25 OWS  
D-M AFB

26 OWS  
Barksdale AFB

28 OWS  
Shaw AFB

OL-K  
Norman, OK

### 2nd Weather Group Offutt AFB

2 WS  
Offutt AFB

2 SYOS  
Offutt AFB

16 WS  
Offutt AFB

14 WS  
Asheville, NC

2 CWSS  
Hurlburt Fld, FL

Det 1, HQ 2 WXG  
Offutt AFB

Local Offutt  
AFB





# 557 WW's Team

## GLOBAL VIGILANCE



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# Decision Superiority & Risk Mgmt for Warfighter Ops





# 1 WXG Mission & Organization



**1st Weather Group**  
Offutt AFB

**Mission – Provide timely, accurate, and relevant environmental characterizations in support of AF, Army, and Joint Total Force ops**



**15 OWS**  
Scott AFB, IL



**25 OWS**  
D-M AFB, AZ



**17 OWS**  
JB Hickam, HI



**28 OWS**  
Shaw AFB, SC



**21 OWS**  
Kapaun, GE

**OL-K (ROC)**  
Norman, OK



**26 OWS**  
Barksdale AFB, LA

- Terminal Aerodrome Forecasts for 129 Airfields
- Resource Protection for 534 Total Force Locations
- Worldwide Graphic Aviation Hazards Forecasts
- Aircrew Mission-Execution Weather Briefings
- Remotely-Piloted Aircraft Support both at Home and Downrange
- Backup for NWS Storm Prediction and Aviation Weather Centers
- IMETOC lead for NATO Resolute Support and Air Policing
- Training – Provide Initial and Upgrade Training for All Weather Officers and 33% of Enlisted Weather Personnel
- JTWC: Tropical Cyclone (TC) Reconnaissance / Director and Typhoon Duty Officers/Assistants

## Mission Execution



Forecaster Characterization



F-16s Flying for Homeland Defense



Developing Airmen

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# 1 WXG Global Synergy



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# 2 WXG



**2nd Weather Group**  
Offutt AFB

**AF's 24/7 Strategic Weather Production Capability** – Six unique squadrons optimizing joint military and intelligence operations and readiness

**2 WS**  
Offutt AFB

**2 SYOS**  
Offutt AFB

**2 CWSS**  
Hurlburt Fld, FL

- Weather and Space analyses/forecast: CCMDs, JSpOC, NORAD, Space Ops, HF/GPS users and national intelligence operations
- Global volcanic ash advisories
- High Performance Computing: *Home to \$303M Strategic Weather Center & AF's Largest Special Purpose Processing Node*; providing global collection/processing/dissemination of terrestrial & space weather information
- Develops/exploits leading-edge weather forecasting models, web services
- Live, Virtual, and Constructive weather modeling and simulation
- Comprehensive weather archive and applied warfighter climate services
- Fielded weather system SMEs: deployment training and deployed (WSSC)/reach-back maintenance on tactical weather systems
- Conducts Operational Test & Evaluation for SPO capability releases
- 24/7 global focal point providing support, troubleshooting and cyber services for the weather enterprise's Strategic Center and fielded systems

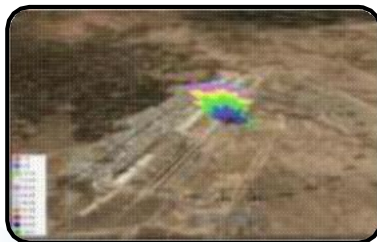
**14 WS**  
Asheville, NC

**16 WS**  
Offutt AFB

**Det 1, 2WXG**  
Offutt AFB



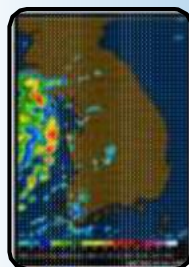
MetSat Exploitation



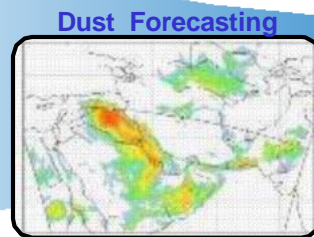
Wind Rose Climatology  
to support Aerostat



Solar Analysis  
& Warning



Forecast Radar



Surface Visibility



Pre-Deployment  
Trng



Airmen in the Fight



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# ***Unique DoD Missions***



- **24/7 operational support for Intelligence Community**
- **Global cloud analysis and forecast modeling**
- **Global NWP for USAF & US Army ops**
- **Operate global network of solar observatories**
  - **Holloman, Learmonth, San Vito, Kaena Point, Sagamore Hill**
- **24/7 DoD mission-tailored space environment analyses, alerts, forecasts, and warnings for JSpOC, NORAD, Space Operators, DoD HF and GPS users**
- **USAF/DoD's climate monitoring, analysis, and prediction capability**
- **Global snow cover/snow depth analyses**
- **American Forces Network (AFN) Weather Center**
  - **Produce shows tailored to DoD/DoS deployed/stationed OCONUS**
- **USAF/DoD's center for airborne volcanic ash products & backup**
- **Aviation Weather Center/Storm Prediction Center/SWPC back up**



# ***Numerical Modeling***



- **AF authoritative NWP model is the Global Air-Land Weather Exploitation Model (GALWEM)**
  - **Running to 156 hours now, 4x/day, 17km resolution**
  - **Legacy sub-global scale models initialized with GALWEM**
- **GALWEM Way-Ahead**
  - **Data assimilation at 557 WW**
  - **Nested high-resolution GALWEM domains**
  - **Run to 10-days; contribute to our global ensembles (GEPS) for the National Earth Systems Prediction Capability (ESPC)**





# *Membership*

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## ■ **COPC**

- **Col Bill Carle (557 WW/CC)**
- **Mr. Chris Finnigsmier (557 WW/TD)**

## ■ **CSAB**

- **Mr. Ted Vroman (557 WW/XP)**

## ■ **JAG-CCM**

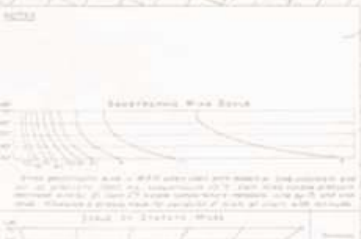
- **Mr. Jason Rance (557 WW/XP)**

## ■ **WG-OD**

- **Mr. Mark Surmeier (557 WW/XP)**



# Questions?



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