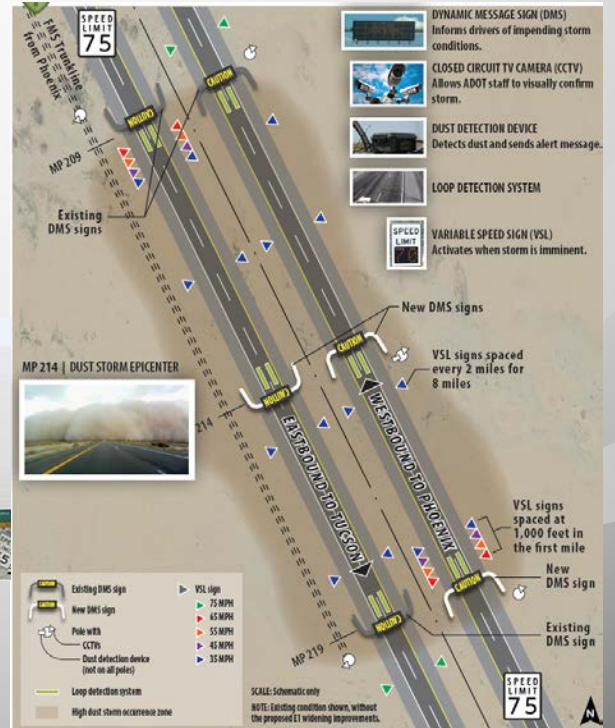


# Dust Detection and Driver Warning



# SYSTEM OVERVIEW



- X-BAND RADAR (RANGE-X5)
- CLOSED CIRCUIT TV (5)
- SPOT DETECTOR (13)
- DYNAMIC MESSAGE SIGN (4)
- VARIABLE SPEED LIMIT SIGN (16)
- SPEED FEEDBACK SIGNS (2)

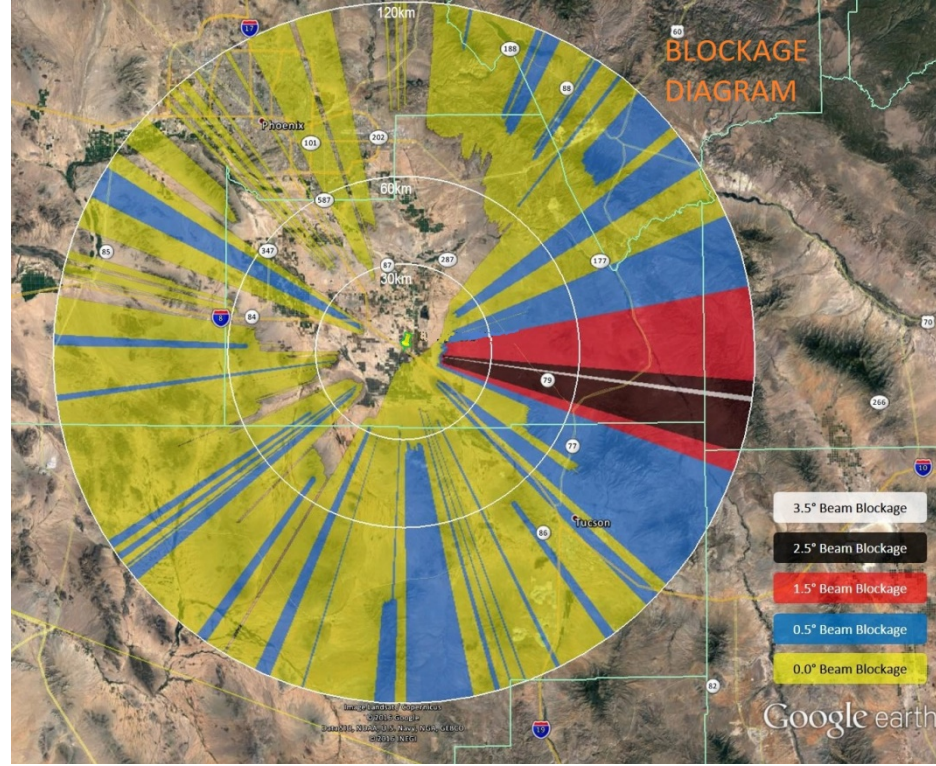
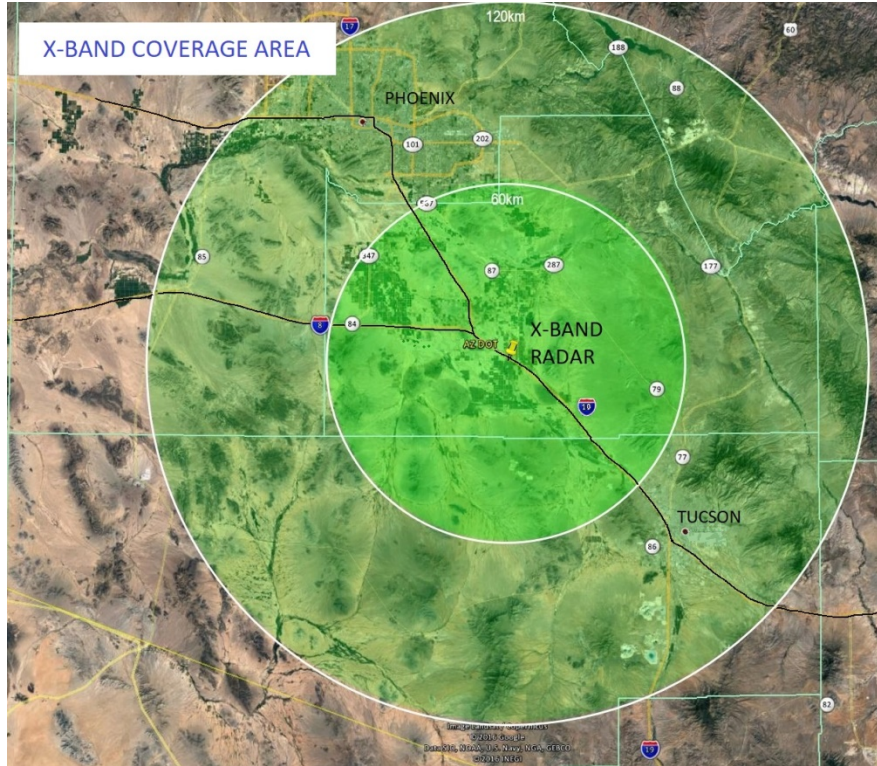
# EEC's Ranger Weather Radar

## What is Ranger?

- Solid-State, Dual-Polarization Doppler Weather Radar
- Operates in the X-Band frequency range
- Compact, affordable, short-to-medium range view



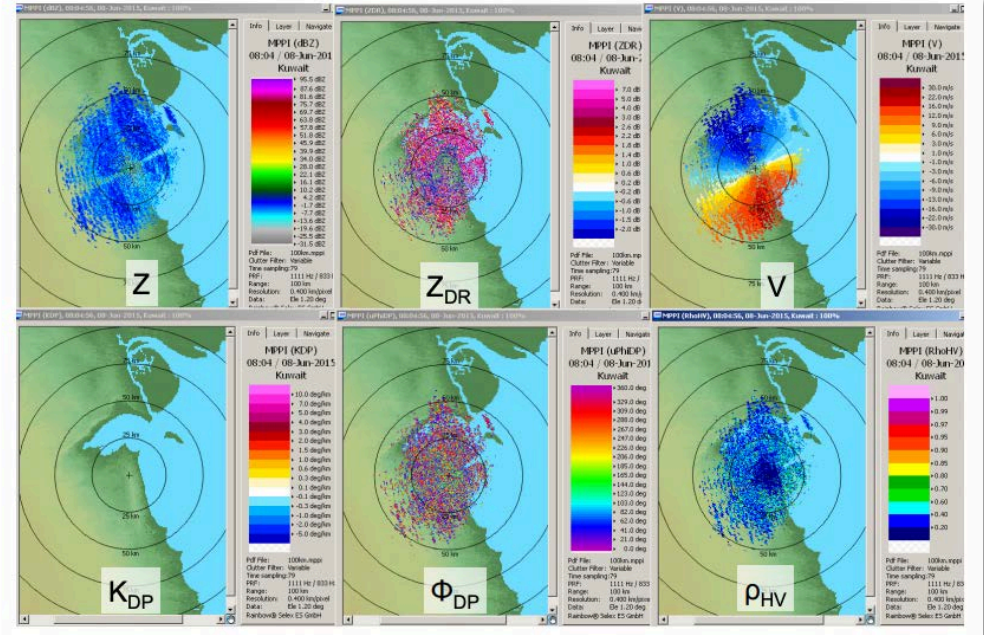
# RANGER-X5 WEATHER RADAR SYSTEM



# EEC's Ranger Weather Radar

## How Ranger Helps

- Data from Ranger will be provided to ADOT decision-makers and NWS forecasters to help better detect, monitor and alert on dust storm events
  - Data from the Ranger can be outputted in standard formats accepted by ADOT and NWS systems
- Dual-polarization data allows for better interpretation of hydrometeors (aka “what’s falling from the sky”)
  - Dust vs. rain vs. hail, etc.
- Ranger will produce higher resolution (both temporally and spatially) data for use in dust storm alerting




*Dust Storm Event in Kuwait Detected by X-Band Weather Radar*

# Dust Storm Detection and Alerting System

- EEC's Ranger weather radar, combined with additional new ground sensors, aims to improve detection and alerting of dust storm events in the I-10 Phoenix-to-Tucson corridor
- System will produce high-resolution, in-situ data to provide a more accurate picture of the surrounding weather situation
- EEC is thrilled to be part of this first-of-its-kind, advanced project
- Working with ADOT and the NWS, this new system aims to provide decision-makers and forecasters with more tools to better protect people and assets during dust storms
- This system could be the basis for other similar systems in the future, both in Arizona and other states impacted by dust storms





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