# ARM Aerosol Measurements Supporting ASR Science

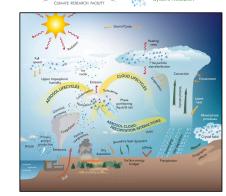
Aerosol Processes Working Group Aerosol Measurement Science Group

Agenda:

- Introduction and Charge [McComiskey]
- Summary of Progress on Implementation Plan (IP) [Springston]
- Hygroscopicity Measurement [Uin]
- Status of Current IP Projects [Springston]
- Upcoming IP Projects [Springston]
- Summary of Best Practices for Instrument Operation and Calibration [Smith]
- Review of recent ARM Aerosol Measurements Survey [Riemer]
- Discussion: ARM Measurement Strategy Moving Forward [Mather]



ASR-ARM PI Meeting • Bethesda, MD • June 10, 2019



ARM



## A Decade of new era ARM Aerosol Measurements



		Then.	••	and	Now	/				
	Instrument	AMF1 AOS00	SGP AOS09	AMF1 AOS01	AMF2 AOS02	AMF3 AOS03	ENA AOSO6	MAOS <sup>*1</sup>	SGP AOS07	
	ACSM/Q									
S	ACSM/TOF				Guest for MOS	AiC				
System (AOS)	Aethalometer									
	APS									
	CAPS									
	СО			 						
	CCN	CCN-100	CCN-100	CCN-200	CCN-200	CCN-200 non	CCN-100		CCN-200	
'S1	CPC			 						
ŝ	µCPC GHG									
	HTDMA			removed for CA	CTI	non winter				
n§	1-10-μm Impactor			removed for CA		nonwinter				
Observing	n-SMPS									
5 L	Neph, Amb									
Se	Neph, Dry									
þ	Nox									
O	03									
	PASS-3			sunset					sunset	New AOS: SC
SC	PILS							removed		
Aerosol	PSAP									
	PTRMS									ATT L'AND
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he	SP2		ļ	 	Guest for MOS	AiC				
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-	UHSAS									
	WXT520									

# ARM Aerosol Measurements Supporting ASR Science

Needs	Community Engagement	Solutions
Ensuring a complete and relevant suite of instruments	<ul><li>Working Group Meetings</li><li>Breakout Meetings</li></ul>	Aerosol Measurement Strategic Plan
<ul> <li>Appropriate geographic deployments</li> <li>Appropriate Sampling strategies</li> </ul>	<ul> <li>AP Working Group Surveys</li> <li>DOE sponsored Workshops</li> <li>AMSG sponsored workshops</li> </ul>	(arm.gov/about/ constituent-groups) ➤ Aerosol Measurement Implementation Plan
<ul> <li>Meeting community standards for calibrations</li> <li>Quality Assurance / Quality</li> </ul>	<ul> <li>Instrument Mentor Meetings</li> <li>Reviews of ASR Funded Science Proposals &amp; publications</li> </ul>	<ul> <li>Best Practices for Instrument Operation and Calibration</li> </ul>
<ul> <li>Control</li> <li>Appropriate and accessible data products</li> </ul>	<ul> <li>AMSG (and predecessor AOS Committee)</li> </ul>	<ul> <li>AOS Harmonization</li> <li>Upcoming AMSG workshop</li> </ul>

## Meeting Charge

#### **Overarching Goal**:

> Facilitate measurements and data products that meet DOE science goals

### **Meeting Objectives:**

- > Obtain guidance for building upon and refining the Aerosol Measurement Strategic Plan
  - > Affirmation of the plan
  - > Adjustments to the plan
- > Obtain guidance for building upcoming AMSG workshop agenda

#### **Consider:**

- > Are current instruments/measurements relevant?
- > How can calibrations and standards protocols be improved?
- > Are locational and temporal sampling strategies appropriate for your science?
- > What are critical data quality concerns?
- > What data products are needed for your science?