PROCESS DRIVEN SAMPLING STRATEGIES FOR ARM INSTRUMENTS

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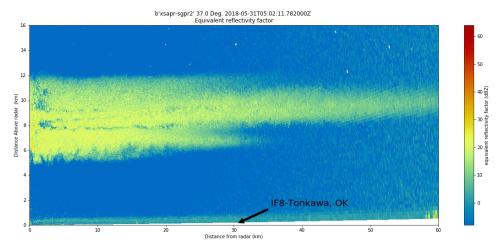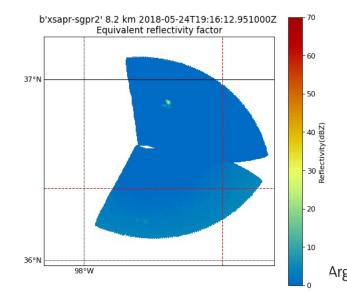**ANDREI LINDENMAIER**

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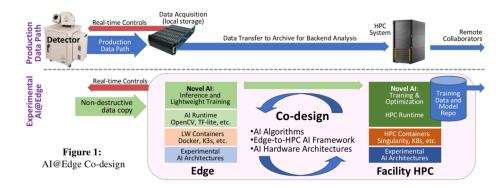NATIONAL LABORATORY

THIS SESSION

Aims… Big Aims..

- The X-SAPR sampling experiment is an attempt to see how we can configure an instrument in order to maximize science.

- Not easy. Programmatically, scientifically and to a degree, socially. Creates winners and losers.

- *In my view* new instrumentation forces ARM to things more **Agile.** A facility with scanning complex instruments lends itself to more sophisticated observing.

b'xsapr-sgpr2' 37.0 Deg. 2018-05-31T05:02:11.782000Z
Equivalent reflectivity factor

IF8-Tonkawa, OK

b'xsapr-sgpr2' 8.2 km 2018-05-24T19:16:12.951000Z
Equivalent reflectivity factor

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NOT JUST RADARS…..

Figure 1: AI@Edge Co-design

- RWP: Adaptive modes.
- Are we making the best use of the Scanning Doppler LIDARS?
- Should we be perusing scanning MPL? Aerosol heterogeneity.
- Drones?
- Adaptive scanning is currently a labor intensive activity in the program. Can we get clever with middleware/Edge? Automate with CNN/LSTM? Bias?

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IN A NUTSHELL: HOW DO WE BEST CONFIGURE ARM INSTRUMENTS TO MEET STAKEHOLDER SCIENCE NEEDS?

16:00   Scott Collis: Framing and motivation for the session
16:15   Marcus van Lier-Walqui, Brenda Dolan, Andrei Lindenmaier And Sara E. Lytle: The Summer Sampling Experiment at the SGP.
16:30   Paytsar Muradyan: Adaptive Sampling Modes for Radar Wind Profilers.
16:45   Ann Fridlind: Advancing observational constraints on high-latitude cloud processes.
17:00   Stephen Nesbitt: Process- and hardware-driven scanning radar scanning in CACTI ← Remote

17:15 - 18:00   Panel session with presenters discussing the merits of homogeneous versus processed based sampling. Gathering input from attendees on what ARM should be doing next. Ideas of epochs.

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