ARM Value-Added Product (VAP) development has historically taken more time than we’d like and resources are limited. Could intensive in-person collaboration between ARM developers and science leads accelerate VAP development?

**What is a code sprint?**

“A sprint is a get-together of people involved in a project to further a focused development of the project. Sprints typically last from one week up to three weeks.”

**VAP Code Sprint Synopsis**

**When**

June 23 – 30, 2016

**Where**

Stony Brook University, NY

**What**

Goal was to convert 4 Scanning ARM Cloud Radar (SACR) science codes into ARM VAPs

Science Leads: Pavlos, Eugene, Katia, Mariko

Developers: Tami, Meng, Karen

**Result**

All codes were converted into 3 ARM VAPs

Data available in Evaluation Area

**VAP Development Paradigms**

Below are highly-idealized models of VAP development. Notice that the blue ‘usual paradigm’ of VAP development takes more hours than either sprint-based paradigm.

**VAP Sprint Diary**

**POST-Sprint Work...**

by developers and translator

July 2016 - March 2017

**SACRADV-VAD**

(see adjacent poster by T. Toto)

1. SACRADV-VAD

The SACRADV-VAD VAP applies the velocity-azimuth display method to SACR HSRHI scans to provide in-cloud profiles of wind speed and direction.

2. SACRADV-QVP

The SACRADV-QVP VAP creates quasi-vertical profiles of reflectivity and polarization and considers SPCR PPI scans.

3. SACRADV-3D3C

The SACRADV-3D3C VAP converts SACR CWRHI data from radar coordinates to a Cartesian grid, including 3-dimensional Cloud Cover and CFADL.

**SACRADV-3D3C Evaluation data soon for SGP 201208

**Benefits of Sprint Paradigm and Future Suggestions**

**Benefits of our 1st VAP Sprint**

- Focused time for science sponsor – developer interactions—very helpful!
- Multiple developers speeds problem solving
- Learning opportunities for all
- Strengthened relationships within ARM
- Three SACR VAPs available for evaluation!

**Recommendations for Future Sprints**

- Careful selection of sprint target products
  - Look for high impact potential
  - Consider overall ARM VAP Priorities
  - Mature codes, tested on diverse data sets
  - Assess target products for ‘VAP-ification’ ease

- More PRE-sprint work
  - Literature reviewed by developer
  - Implementation Plan done
  - Consider input data quality
  - Code previewed by developer

- Post-sprint science-lead commitment
  - Consult on data issues if needed
  - Review results prior to release