

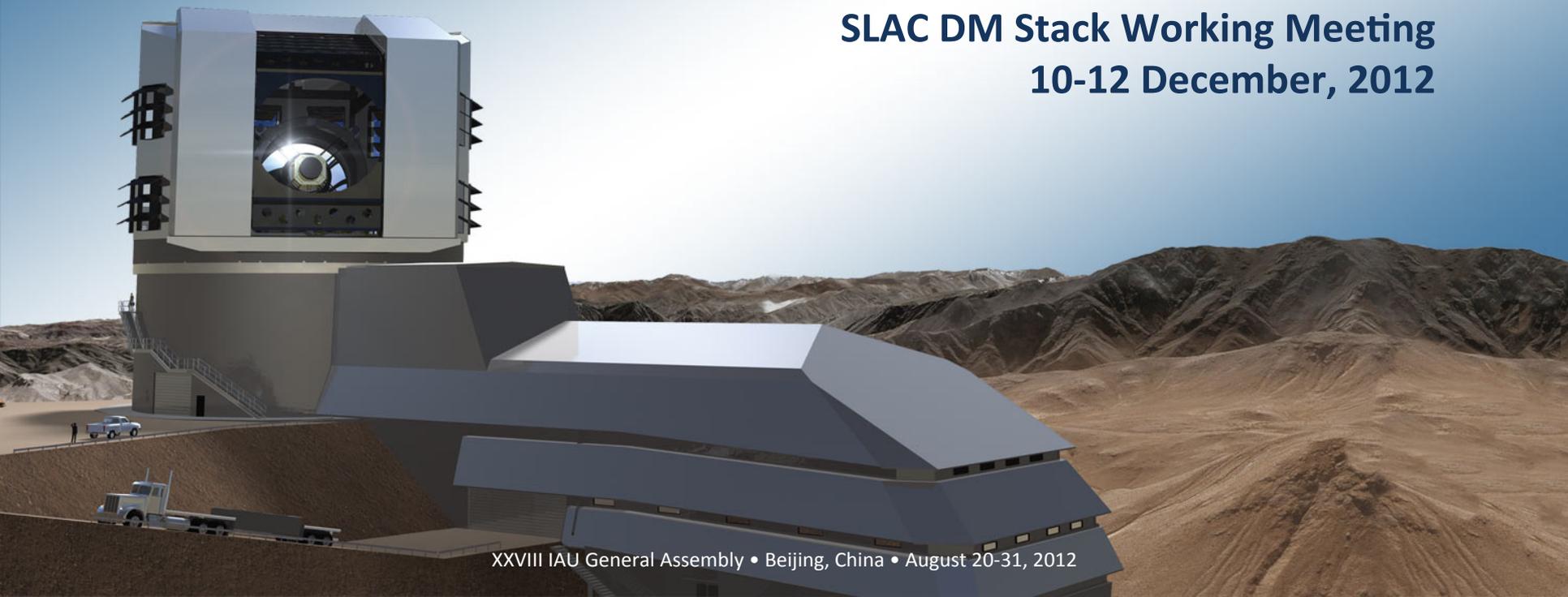


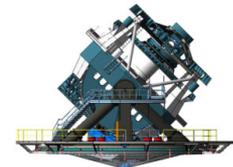
# Data Management Stack Tutorial

**Mario Jurić**

LSST Data Management Project Scientist

SLAC DM Stack Working Meeting  
10-12 December, 2012





# The Plan and the Goals for the Workshop



- Plan: Understand the Camera team needs. Provide an overview of Data Management, DM software components, tools, and processes. Teach how to use them in the context of Camera's needs.
- Goals: By Wednesday afternoon, we hope to achieve a common understanding of:
  - The components present in DM stack, and their level of maturity
  - Which of those components are relevant for Camera's work
  - How to begin using those components
  - Who to talk to in DM to facilitate that usage
  - A first outline of a plan for writing Sensor I&T pipelines with DM components
  - A plan on how to continue two-way communication and collaboration on software issues



### Robert Lupton (Princeton)

- Astronomical algorithms guru
- Image processing codes for SDSS, ACT, HSC-Survey, ...
- **LSST DM Applications Lead**
- Designed/wrote most of the Applications Framework (afw) and Measurement Algorithms (meas\_algorithm) code
- Also (co-)wrote EUPS, SuperMongo, ...
- [rhl@astro.princeton.edu](mailto:rhl@astro.princeton.edu)



Kian-Tat Lim (SLAC)

- **DM Middleware Lead and Software Architect**
  - Designed/wrote a large fraction of LSST DM middleware, including the Data Butler
- [ktl@slac.stanford.edu](mailto:ktl@slac.stanford.edu)



Gregory Dubois-Felsmann (SLAC)  
<gpdf@slac.stanford.edu>

### **DM Interface Scientist and System Architect**

Responsible for communication  
with other subsystems



Jacek Becla (SLAC)  
<becla@slac.stanford.edu>

### **DM Database Lead**

Leading the group developing the  
multi-PB distributed database for  
LSST catalogs.



Mario Juric (LSST)

- **LSST DM Project Scientist**
- DM's analog of some linear combination of Steve Kahn and Andy Rasmussen
- DM stack's BDFTDOE
  - "Benevolent Dictator for the Duration of Employment"
- [mjuric@lsst.org](mailto:mjuric@lsst.org)



## – Day #1 (9am-12noon):

- Introductions and Goals (this talk)
- DECam CCD test analysis code (Donna)
- DM Stack Overview (Mario)
- Application Framework Classes (Robert)
- Measurement Algorithms Classes (Robert)

## – Day #1 (2pm-5pm):

- Tutorial/walk-through: Fe55 processing example - Robert/Mario/KTL
- Cross-talk measurement example - Robert/Mario/KTL
- Design discussion for converting DECam scripts - All



- **Day #2: Morning, 9am-12pm**
  - DM Data Butler: Dataset organization/persistence layer - KTL
  - DM pipe\_tasks: Task framework - KTL
  - Design discussion continued - All
  - DECam app conversion – All
- **Day #2: Afternoon, 1-5pm**
  - DECam app conversion (cont'd) - All
  - Plans for future development and Camera-DM communication (Gregory et al.).



## Day #3 (Wednesday)

- **Morning:**
  - Continued app development and design discussion
- **Afternoon (1-3pm):**
  - Continued app development and design discussion
  - Final notes
- Note: RHL & MJ leave for SFO around ~3pm.



- We hope this tutorial will be audience driven. Consider the slides as conversation starters; feel free to ask questions at any time.
- We ~~may~~ will change the agenda depending on feedback. It's important we cover areas you feel are critical.
- This is the first time we do this! Expect the unexpected 😊.