Introduction to HPS Software

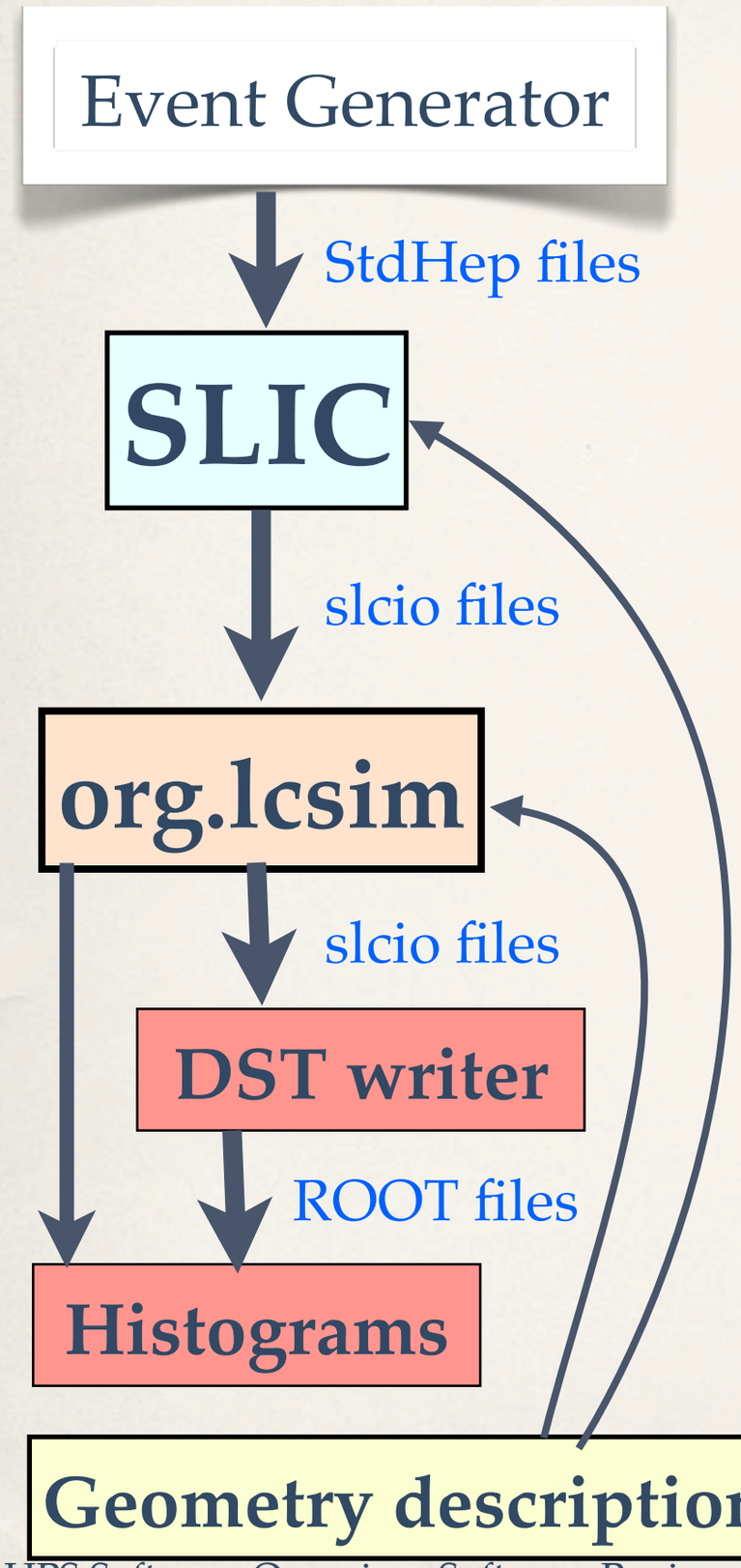
HPS Software Review 2014

Maurik Holtrop
University of New Hampshire

Agenda

Time	Title	Speaker
8:30	Introduction to HPS Software	Maurik Holtrop (UNH)
8:45	Physics Generators for HPS	Takashi Maruyama (SLAC)
9:00	Status of the HPS Monte Carlo	Sho Uemura (SLAC)
9:15	Online Software	Jeremy McCormick (SLAC)
9:30	Tracker Software I	Omar Moreno (USCS)
9:50	Tracker Software II	Per Hansson (SLAC)
10:05	Offline Analysis Plans	Matt Graham (SLAC)
10:30	Coffee Break	
10:45	Calorimeter Software	Stuart Fegan (*INFN)*
11:15	Data Handling and Storage	Homer Neal (SLAC)
11:30	Schedule and Manpower	Maurik Holtrop (UNH)

Monte Carlo Chain



A' events &
Background events

Takashi Maruyama

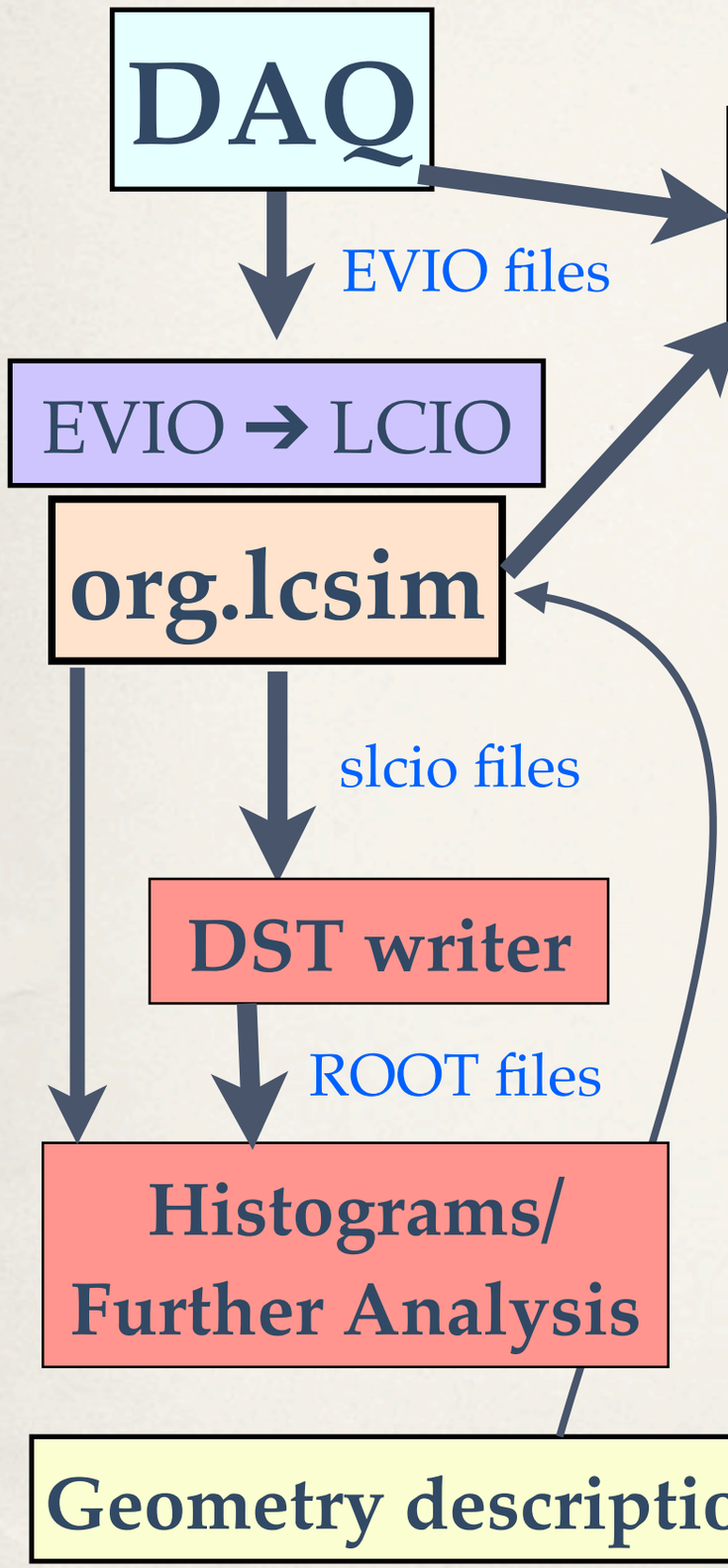
Main GEANT4 based simulation. Sho Uemura

Analysis framework:
SVT
ECAL
Tracking

Omar Moreno
Stuart Fegan
Pelle Hansson
Matt Graham

Part of org.lcsim that computes geometries.

Online & Data Analysis Chain



Data Acquisition System

Jeremy McCormick

Data translation layer

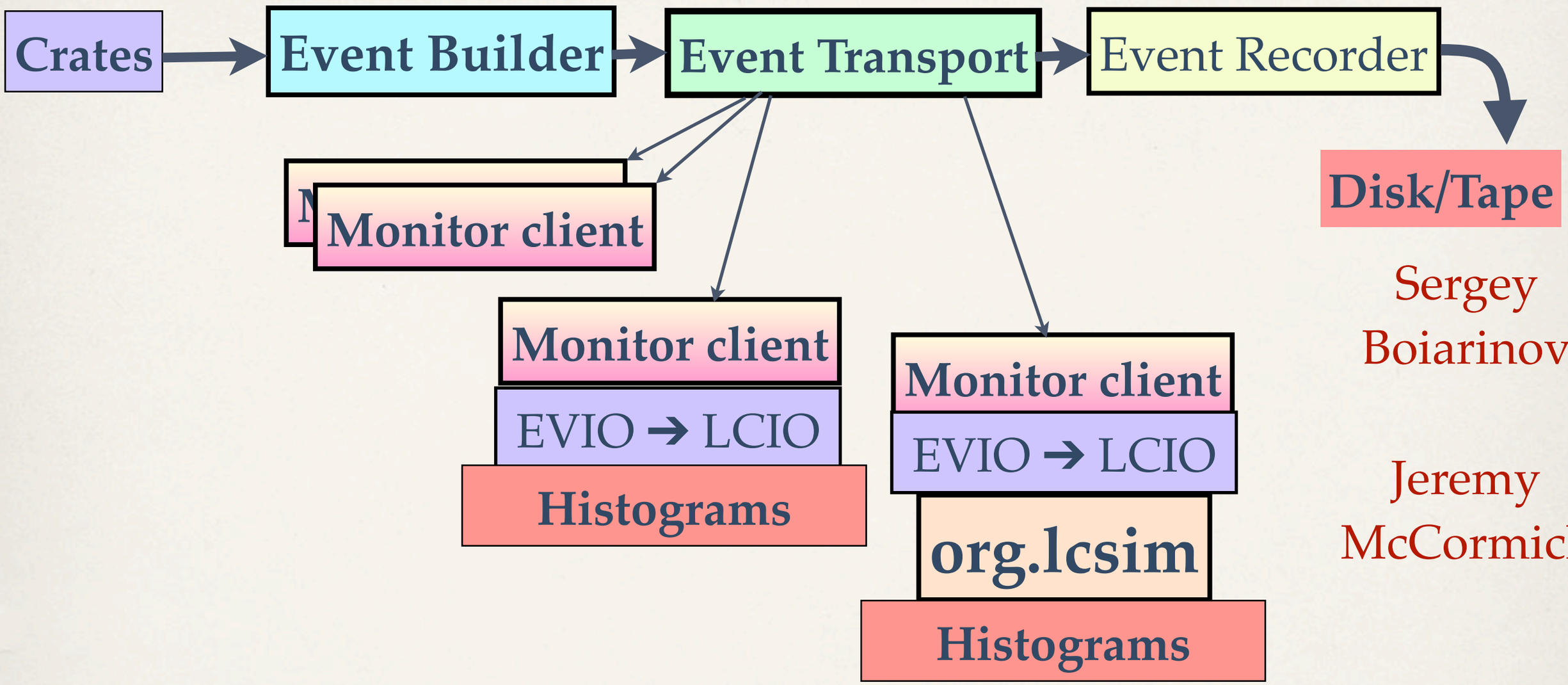
Analysis framework:
SVT
ECAL
Tracking

Omar Moreno
Stuart Fegan
Pelle Hansson
Matt Graham

Matt Graham

Part of org.lcsim that computes geometries.

Online Software



Sergey Boiarinov

Jeremy McCormick

DAQ will use the EVIO format internally for data and store raw data in EVIO format

Monitoring clients can use the EVIO → LCIO translation layer.

HPS Software Team

HPS has a strong and involved software team:

- Many contributors
  - 17 members with active tasks on the schedule
- Some new contributors just starting
  - This week's software workshop is there to help them get up to speed.
- All contribute for a fraction of their time
- Weekly Software & Analysis meetings (alternating)
- Active mailing list: HPS-Software@slac.stanford.edu

HPS Software Team

"Go to" people:

Generators	→ Takashi	SLAC
Monte Carlo	→ Sho	SLAC
SVT	→ Omar	USC
Tracking	→ Pelle & Matt	SLAC
ECAL	→ Stuart	INFN
Framework	→ Jeremy & Norman	SLAC
Monitor App	→ Jeremy	SLAC
Conditions DB	→ Jeremy	SLAC
DAQ	→ Sergey	JLAB
Data Handling	→ Homer*	SLAC

*Will need to be replaced by new person

HPS Software Team

Allesandro Rizzo	ECAL, INFN
Andrea Celentano	ECAL, INFN
Daria Sokhan	ECAL, Glasgow
Gabriel Charles	ECAL, IPNO
Holly Vance	ECAL, ODU
Homer Neil	SLAC
Jeremy McCormick	SLAC
Jlab batch	JLAB
Ken Livingston	CLAS12
Kyle McCarty	ECAL, UNH
Luca Colaneri	ECAL, INFN
Matt Graham	SLAC, SVT
Maurik Holtrop	UNH
Milestones	
Natalia Toro	
Norman Graf	SLAC
Omar Moreno	SVT, UCSC
Per Hansson	SLAC, SVT
Raphaël Dupré	ECAL, IPNO
Sho Uemura	ECAL, SLAC, SVT
Stuart Fegan	ECAL, INFN
Takashi Maruyama	SLAC
Yuri Gernstein	Rutgers

New members to be added shortly.

*Will need to be replaced by new person

HPS Software Status

- Test run and test run analysis show that the (very) basics are in place.
- Many, many improvements have been made since.
- Quite a lot more improvements are critical to very desirable.
- Schedule in place to get there.
- Recruiting more collaborators to contribute to software.