MINERvA's FIFE Experience
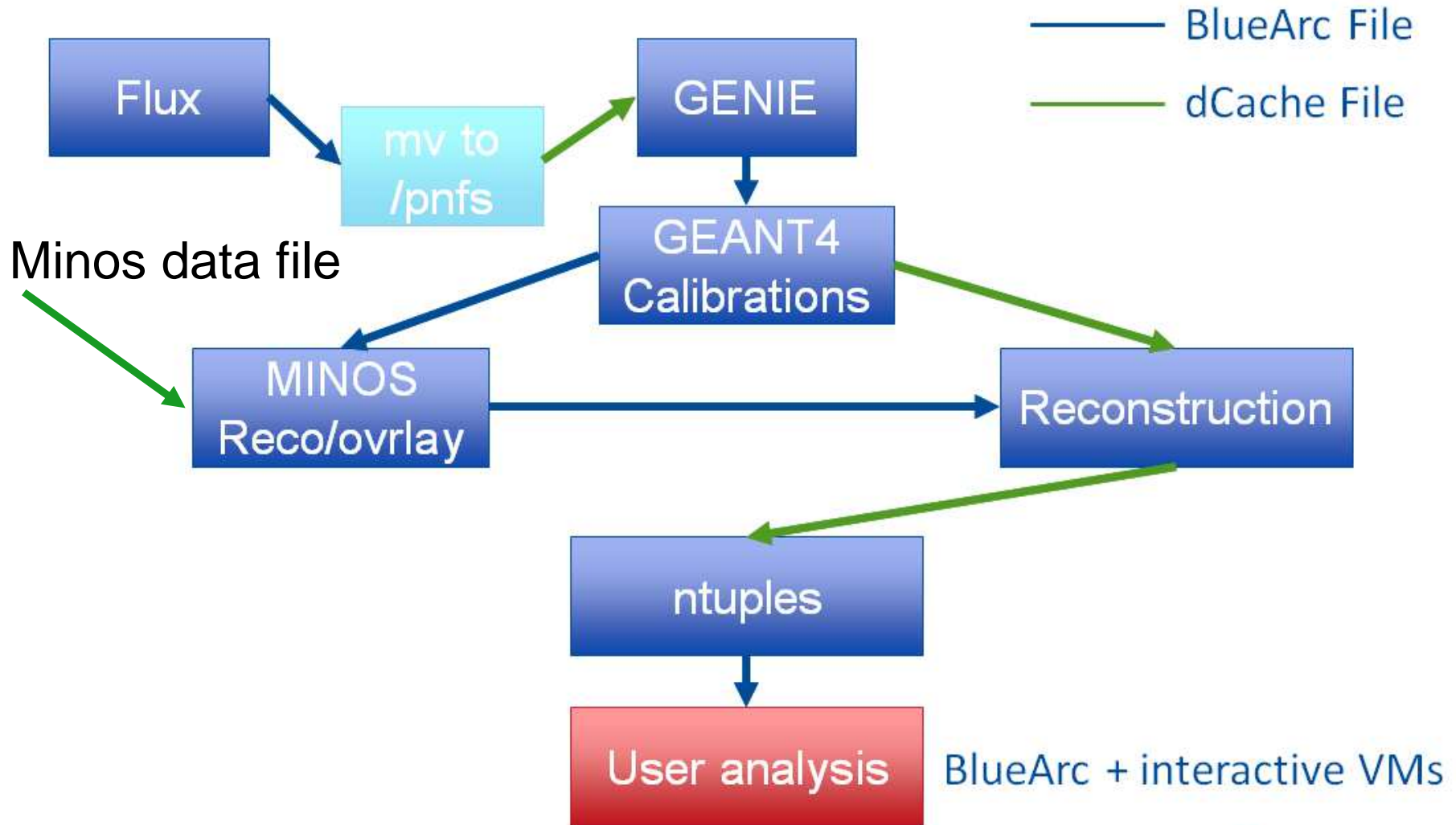
D. Ruterbories

FIFE Users Meeting

June 1st, 2015

Outline

- MINERvA workflow
- Projects over the previous year
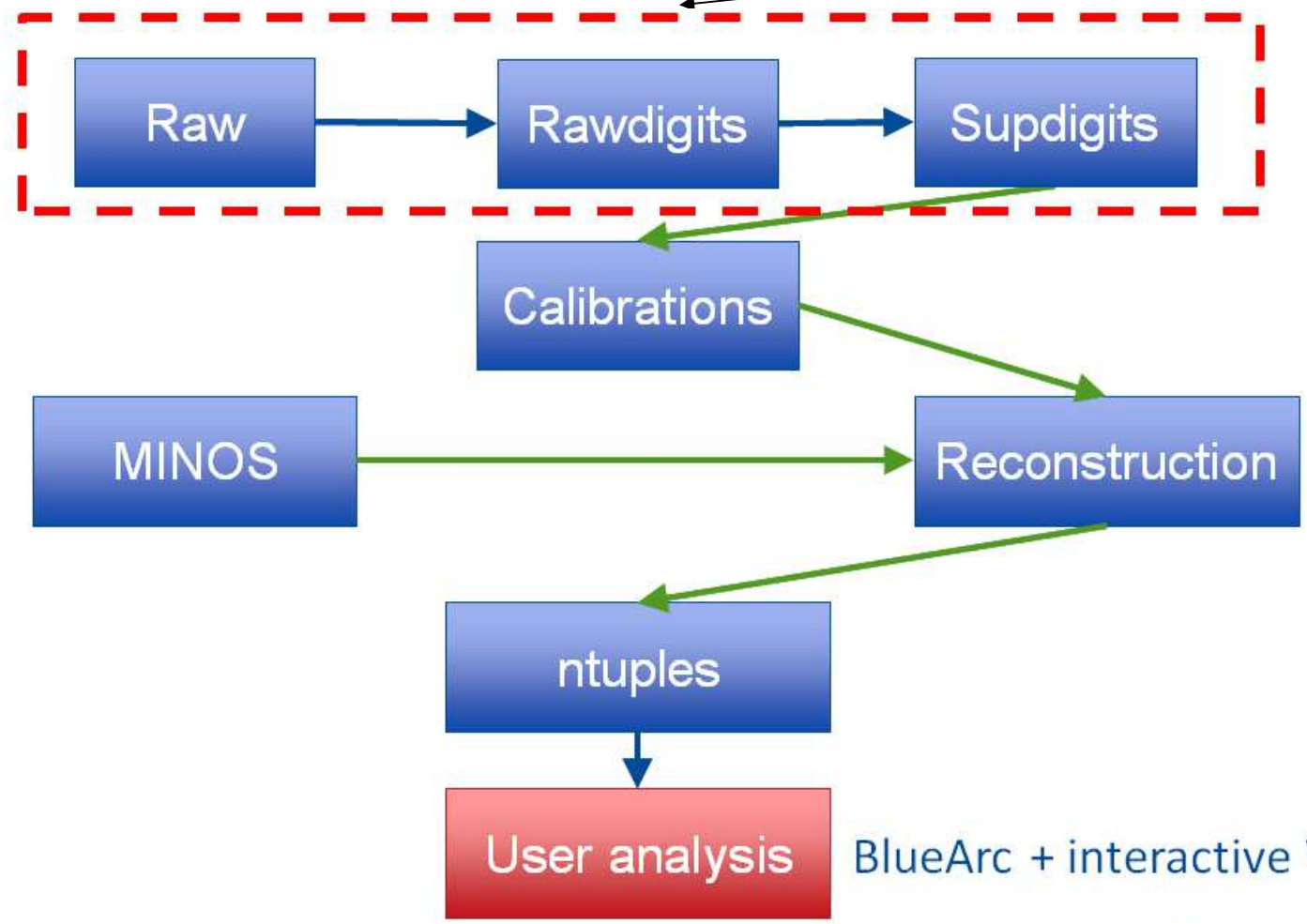- Difficulties and challenges
- Future projects
- Requests?

MC File Flow

Data File Flow

BlueArc File

dCache File

keepup

Raw → Rawdigits → Supdigits

Calibrations

MINOS → Reconstruction

ntuples

User analysis   BlueArc + interactive VMs

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Services MINERvA Uses

- FermiGrid
- Jobsub_client
- Ifdhc
- SAM
- FTS
- dCache
- Conditions database
- ELog

Projects over the past year

- sam –> samweb
  - Transition was mostly smooth except for a couple issues with a couple parameters being slightly different in the new system
- SL5 –> SL6
  - Made the deadline, but lots of work to move. When is SL7 slated?
- BlueArc –> dCache
  - Currently use dCache scratch areas for production. Moving to test out persistent dCache!
  - This will, hopefully, fix our periodic issues with locks on BlueArc

Projects over the past year

- jobsub −> jobsub_client
  - Went smoothly for the majority of our use cases thanks to FIFE support. Shared accounts have been trickier, but almost there!

- OPOS group integration
  - Been both very positive and helpful

Difficulties and challenges

- BlueArc+dCache input/output files in same submission

- jobsub_client and shared accounts

- Different performance of dags between jobsub and jobsub_client

- Conditions database heavy jobs see large drops in node CPU efficiency.

Ongoing projects and the future

- Hierarchal quotas
- Expanding use of the OPOS group
- Persistent dCache integration
- samweb projects
- CVMFS with the goal of running off site

Requests

- Way to stagger job starts of certain job types
- Ability to have concurrent limit on a stage within a dag
- Ability to kill/hold/release all jobs in queue
  - Really useful if a certain user has gigantic efficiency issues due to any sort of issue

Conclusion

- FIFE products and services are critical to MINERvA's physics program
- A lot of progress made to adopt the newest and best practices from FIFE over the past year
- Looking forward to continue working with FIFE to adopt services to better help MINERvA meet physics goalsfs