# Revamp of High Energy Physics Laboratory's Computer Systems

Josef Bostik Eric Pereira Ryan Wojtyla

February 15, 2019

Milestone 4 Goals

GEM Computers

Compute Cluster

Muon Tomography Station

Existing MTS

Development MTS

Milestone 5 Goals



## Milestone 4 Progress

Milestone 4 Goals

GEM Computers

Compute Cluster

Tomography
Station
Existing MTS

Milestone 5 Goals

Questio

Task	% Completion	Eric	Josef	Ryan	To Do	
Integrate cluster components.	0%	0%	0%	0%	find new solutions	
Rewire the existing MTS.	90%	70%	20%	0%	miscellaneous touch ups	
Resolve software issues with development MTS.	60%	0%	40%	20%	reinstall AMORE	

# **GEM Computers**

Milestone 4 Goals

GEM Computers

Compute Cluster

Muon Tomography

Existing MTS

Milestone 5

#### Compute Cluster

Milestone 4

GEM Computers

Compute Cluster

Tomography
Station
Existing MTS

Milestone 5 Goals

- Ideally:
  - node boots into ROCKS Kernel CD
  - node notifies head node of its existence
  - onode requests kickstart file from head node

- In Reality:
  - node boots into ROCKS Kernel CD
  - node notifies head node as soon as networking is enabled within the installer
  - In what state does the node request a kickstart file?

# Existing MTS

- C
- GEM
- Compute
- Cluster
- Muon Tomography Station
- Existing MTS
- Milestone 5
- Questions

- cable lengths have been optimized
- cables have been tidied up
- obtained FEC firmware!



## Development MTS

- attempted a reinstall of ROOT and AMORE to help solve issues
- reinstallation of ROOT solved ROOT problems
- tried to reinstall AMORE only to find that its repository has been decommissioned and AMORE no longer supported
- fortunately, we are in communication with former lab member who has access to the AMORE source on CERN's private GitHub

Hello Ryan.

AMORE has been discontinued for good. Its target was to support the ALICE experiment at LHC for LHC Run 1 and Run 2. There will be no further development and no more releases, the AMORE system has been definitively de-commissioned. You can remove the repository from your database. What you have right now is the last release ever

For further communications on this subject, please contact Vasco Barroso (here in

CC). Desolate.

Roberto Divià

Development MTS

As concerns AMORE no problem, we have the sources also on our github. I have the sources also for DATE. I need to find them but I will do it today.

StefanoC

#### Milestone 5 Goals

Milestone 4 Goals

GEM Computers

Compute Cluster

Tomography
Station
Existing MTS

Milestone 5 Goals

Task		Josef	Ryan
Continue to Care for Existing MTS		20%	20%
Compile Instructions for MTS Operation		40%	40%
Prepare Development MTS Machine		50%	30%
Integrate Nodes into Cluster		10%	80%
Assist Researchers		10%	20%

# Questions

Milestone 4

GEM Computers

Compute Cluster

Muon Tomography Station

Existing MTS

Development MT

Milestone 5

