ECAL Alignment 2018: Monitoring

MoCa Meeting
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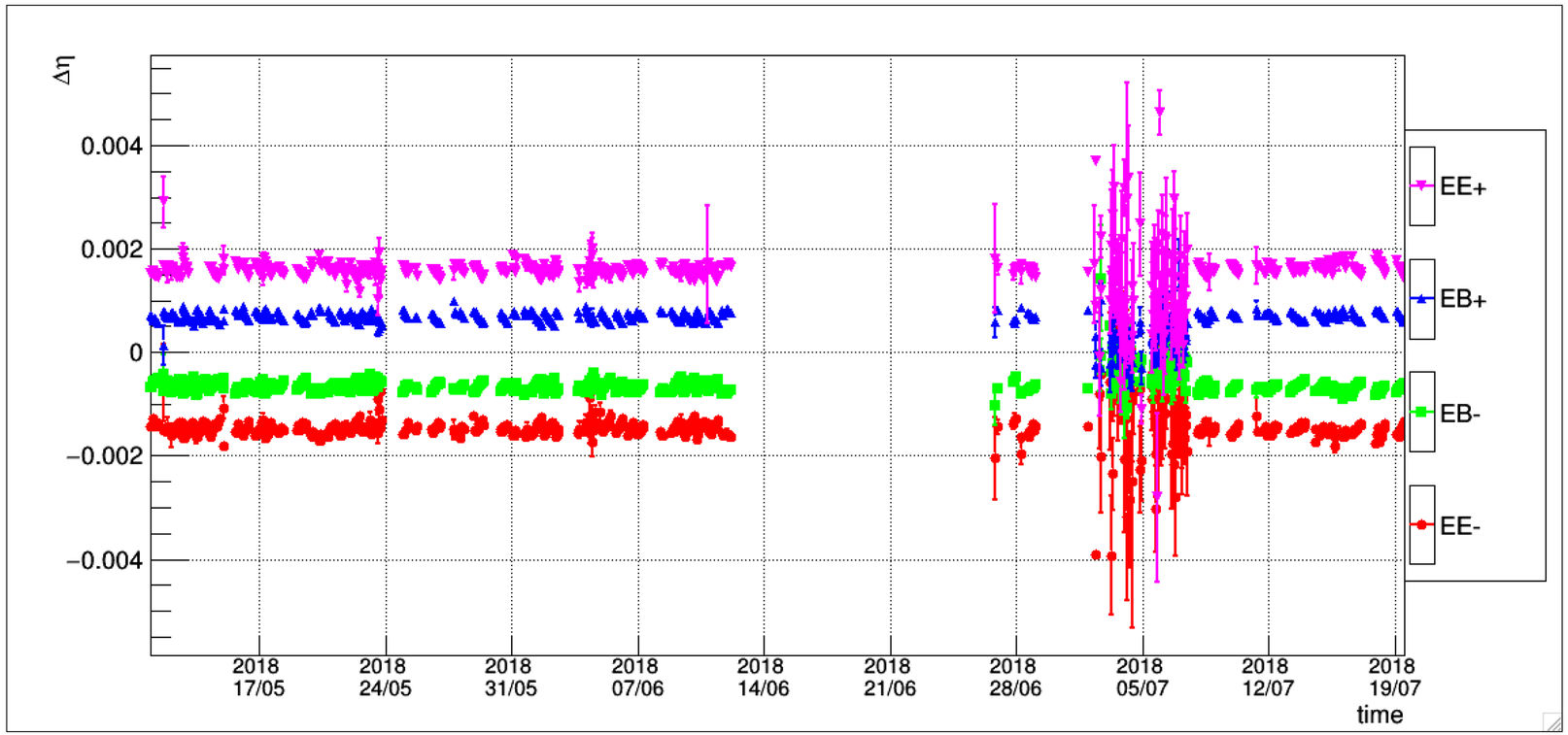
Tanvi Wamorkar
Northeastern University

ECAL Alignment Monitoring

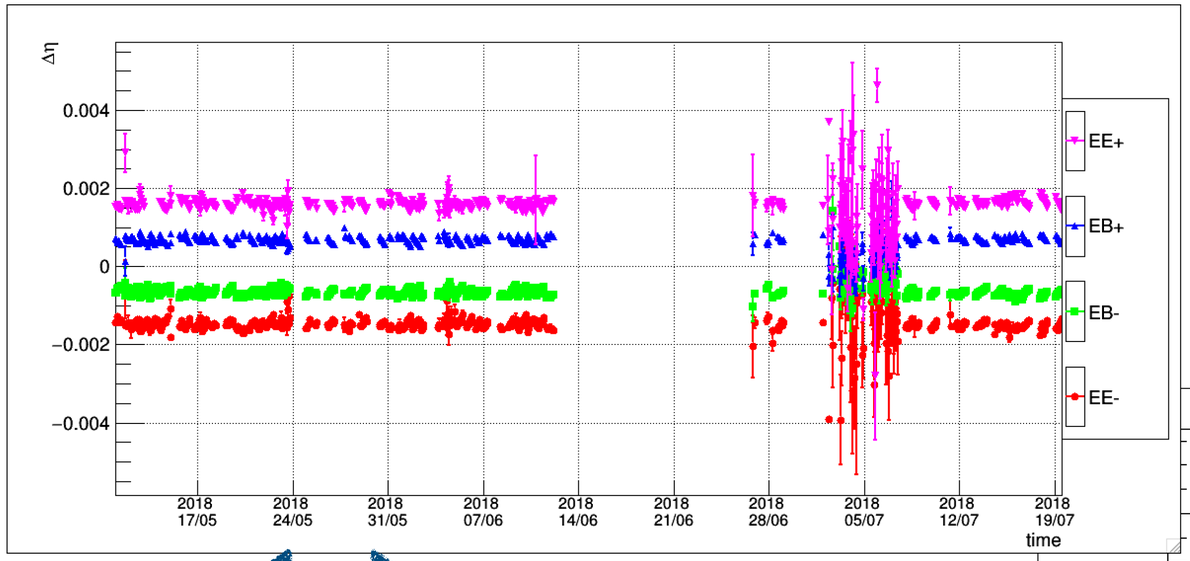
- In 2018, ECAL alignment was deployed in prompt on 10th May Link to presentation
- Since then, tracker has deployed new alignment conditions a few times
- We monitor the $\Delta\eta$ variable to ensure stability of ECAL alignment conditions using prompt GT and prompt reco
- For monitoring, the following datasets were used:
  - /EGamma/Run2018A-ZElectron-PromptReco-v2/RAW-RECO
  - /EGamma/Run2018A-ZElectron-PromptReco-v3/RAW-RECO
  - /EGamma/Run2018B-ZElectron-PromptReco-v1/RAW-RECO
  - /EGamma/Run2018B-ZElectron-PromptReco-v2/RAW-RECO
  - /EGamma/Run2018C-ZElectron-PromptReco-v1/RAW-RECO
  - /EGamma/Run2018C-ZElectron-PromptReco-v2/RAW-RECO
  - /EGamma/Run2018C-ZElectron-PromptReco-v3/RAW-RECO

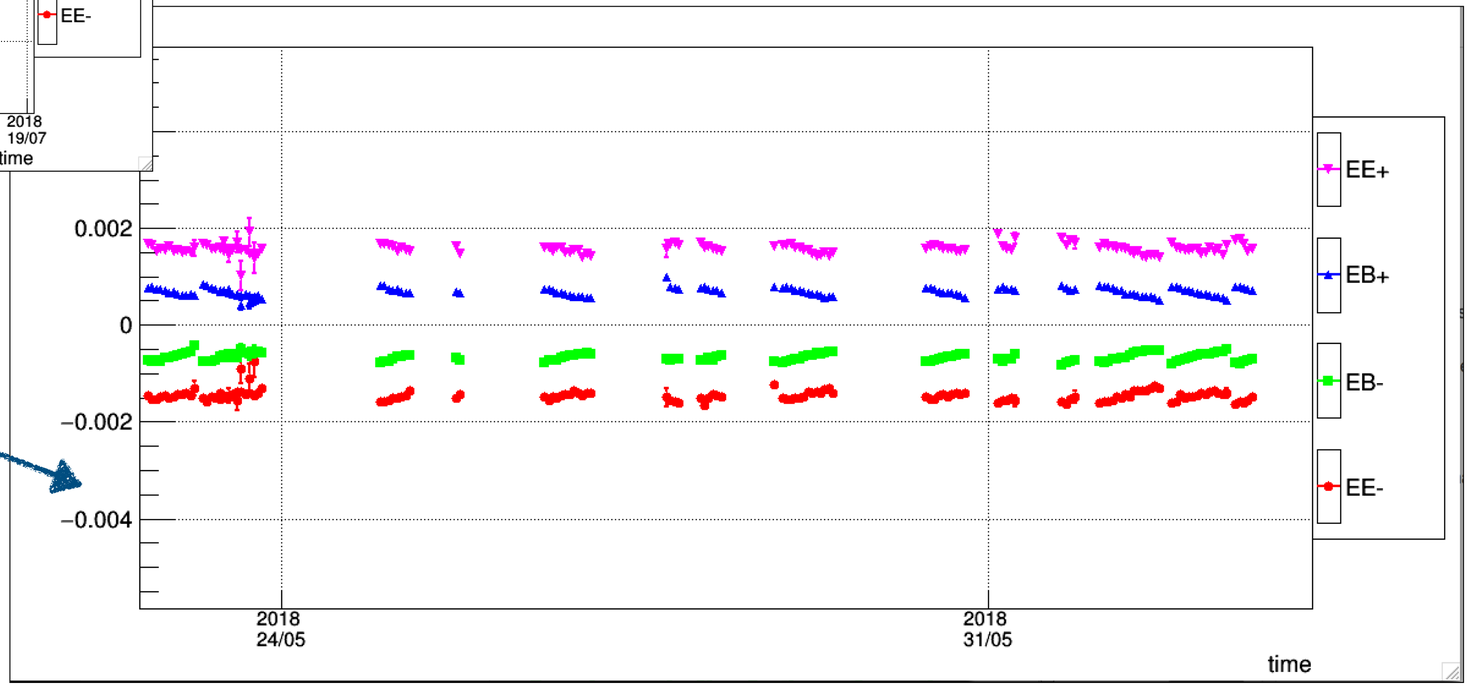
Δη trend



- Δη vs time
- Points granularity based on ~ 2 hours time window

Δη trend





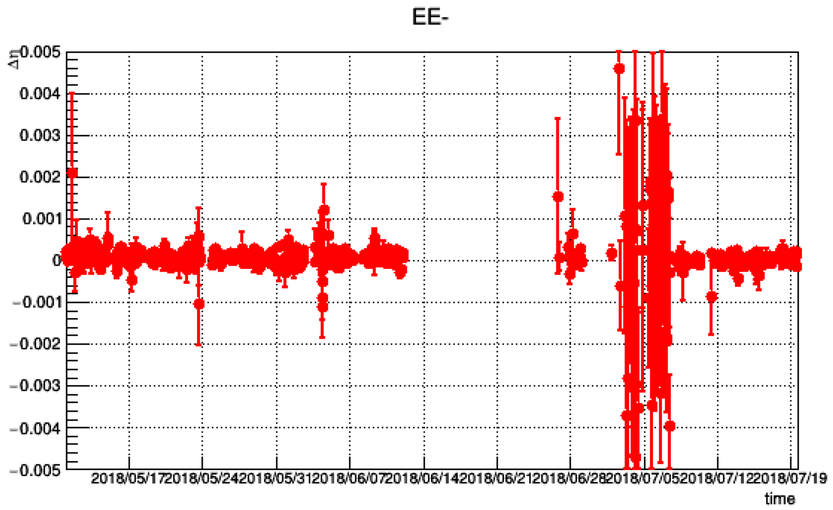
- Different runs can be distinguished

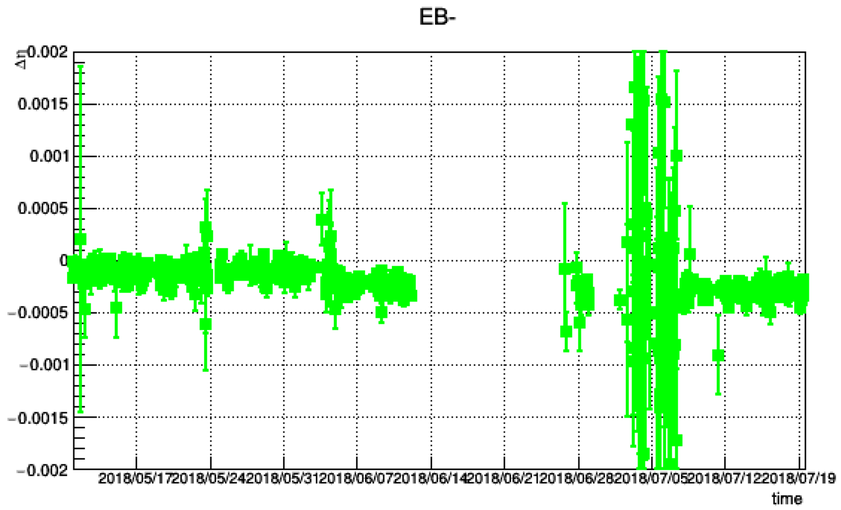
Conclusion

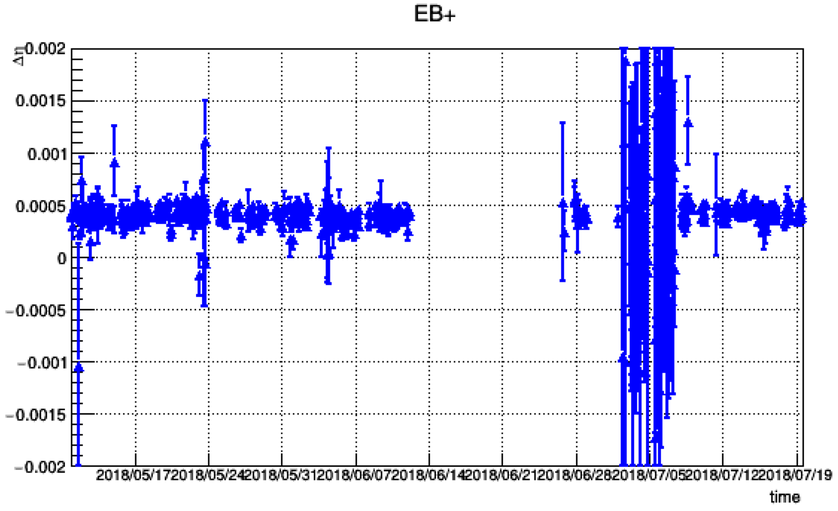
- Monitoring the $\Delta\eta$ value is a good way of keeping track of the ECAL alignment conditions
- No changes observed; good ECAL alignment stability (as expected)
- Tracker group will provide the final (best) tracker alignment conditions soon
- ECAL will then provide the best ECAL alignment conditions to be deployed in prompt (after validation)

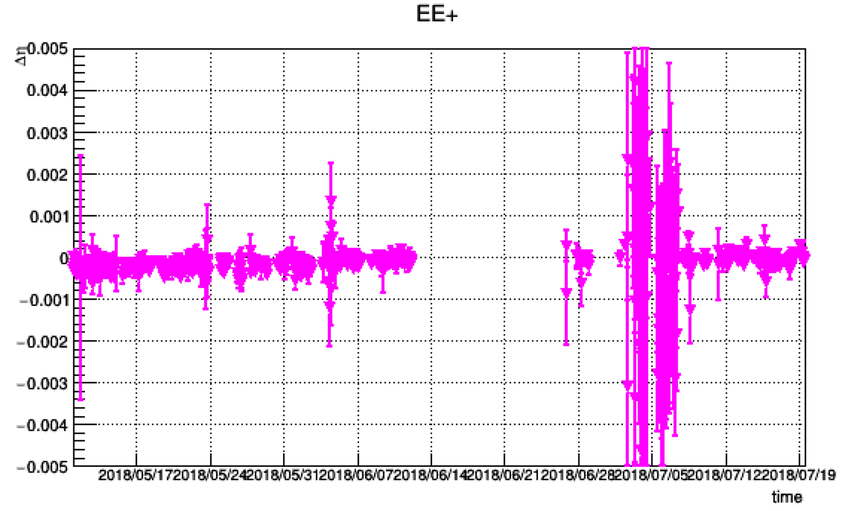
Backup

Δφ trend



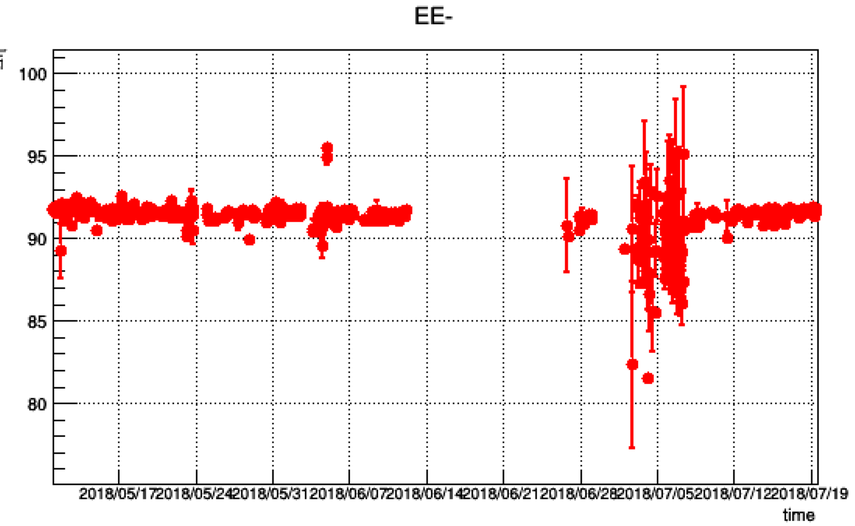


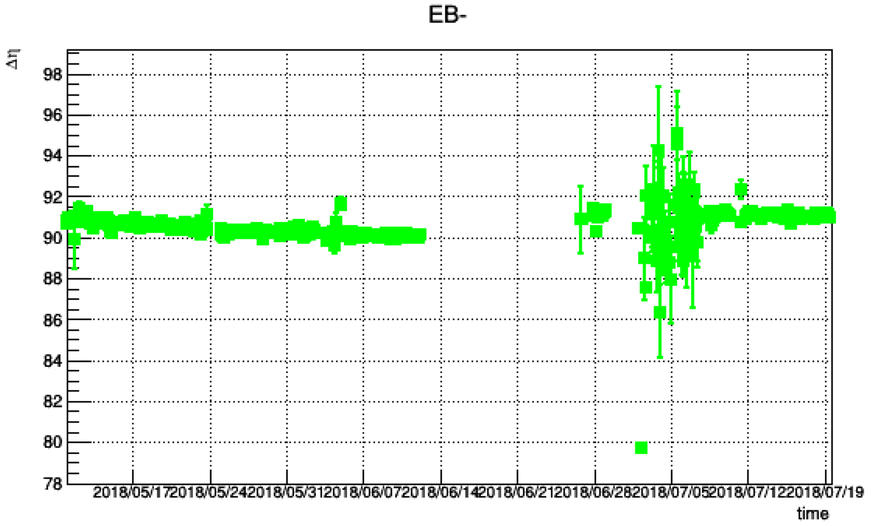


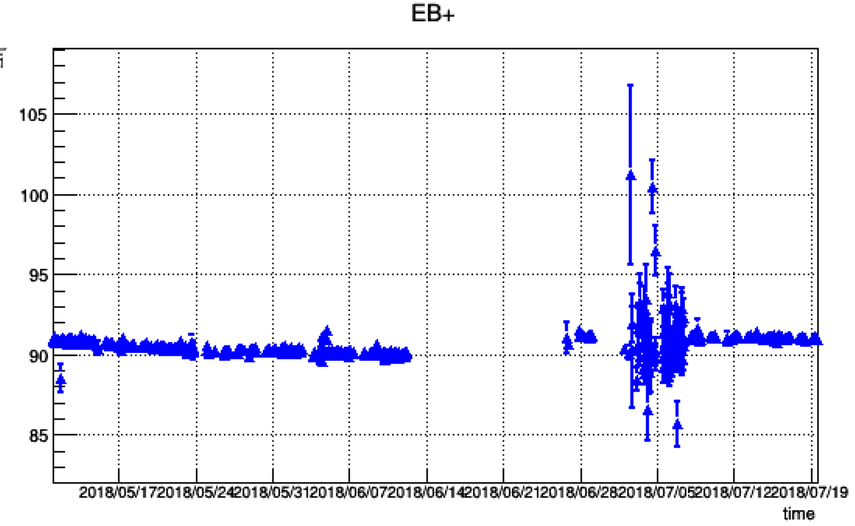


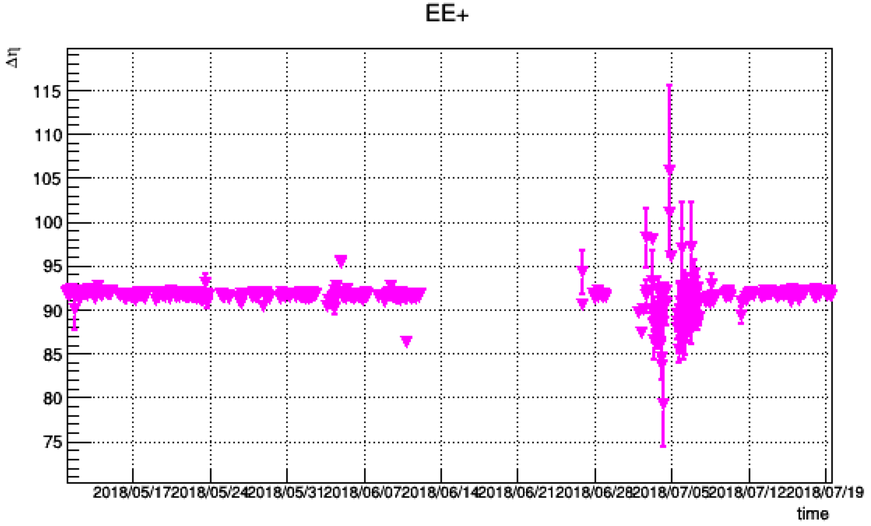
- From 17th May - 19th July 2018
- Shown for EE+/- and EB+/- separately

Z mass trend









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