

# TRT Qualification Tasks

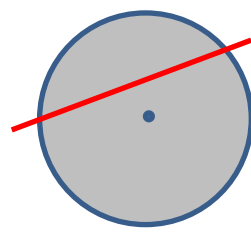
overview and activities since the (June) TRT Days

ID Week, 29<sup>th</sup> October 2013

## Contents

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## Twiki links

[Atlas/TrtQualification](#)

Task details, and links  
to presentations / documentation.

[Atlas/TrtTasks](#)

Important uncovered TRT tasks are a  
preferred source of qualification topics.

## Recent qualified:

[Jenny Ivarsson](#), [Anum Qureshi](#)

## Ongoing QTs:

[Kyungeon Choi](#), [Dimitriy Krasnopevtsev](#), [Mikhail\(Misha\) Levchencko](#),  
[Artem Maevskiy](#), [Diane Shoaleh-Saadi](#), [Enis Yazıcı](#), [Konstantin Vorobev](#)

# What Qualification Tasks are about

The idea of a qualification task is that a new researcher makes a substantial contribution to ATLAS, after doing this the person becomes qualified to be on the ATLAS author list.

Further to this is the aim that the researcher becomes a useful expert who can continue to help to operate the experiment.

The TRT relies on such qualifiers for many crucial technical tasks and there are many opportunities for them to take on important long-term roles.

Your qualification task is therefore a means by which you can become a technical expert, making significant contributions to the TRT and to your home institute in the form of FTE, expertise ....

The knowledge, habits and connections you gain performing technical work will lead to better decisions and practices in your physics analysis.

# Requirements from the TRT

A TRT qualification task is defined such that it constitutes important work that fits within the one-year qualification period.

If a qualifier does not make reasonable progress with the tasks then this creates the situation where *an important task is held up, but no one else can be assigned to it!*

With this in mind the TRT requires a qualifier to give a short status report in the Thursday TRT SW or Monday Operations meetings at least once a month until the end of the qualification period.

On completion of a qualification task the qualifier is also required to document the work – usually in the form of an internal ATLAS note.

# Scheduled status reports

A complete schedule for each qualifier's status report is given in the TRT qualification task twiki: [Atlas/TrtQualification](#)

Note that the date of the last status report is the deadline for your qualification work to be completed. Tasks are usually completed well before this date, with the write up occasionally taking the rest of the period to complete.

Of course you are welcome to present as frequently as you like (some qualifiers present weekly), and presentations elsewhere can be counted. We are interested in your work and ready to give feedback and guidance.

If you have any questions/problems please feel free to contact us:

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Andrew.Beddall@cern.ch

Anatoli.Romaniouk@cern.ch

## Recently completed qualification tasks

Jenny Ivarsson

(Lund)

## Optimization of Validity Gates for the TRT at High Luminosities

CDS:

ATL-COM-INDET-2013-066

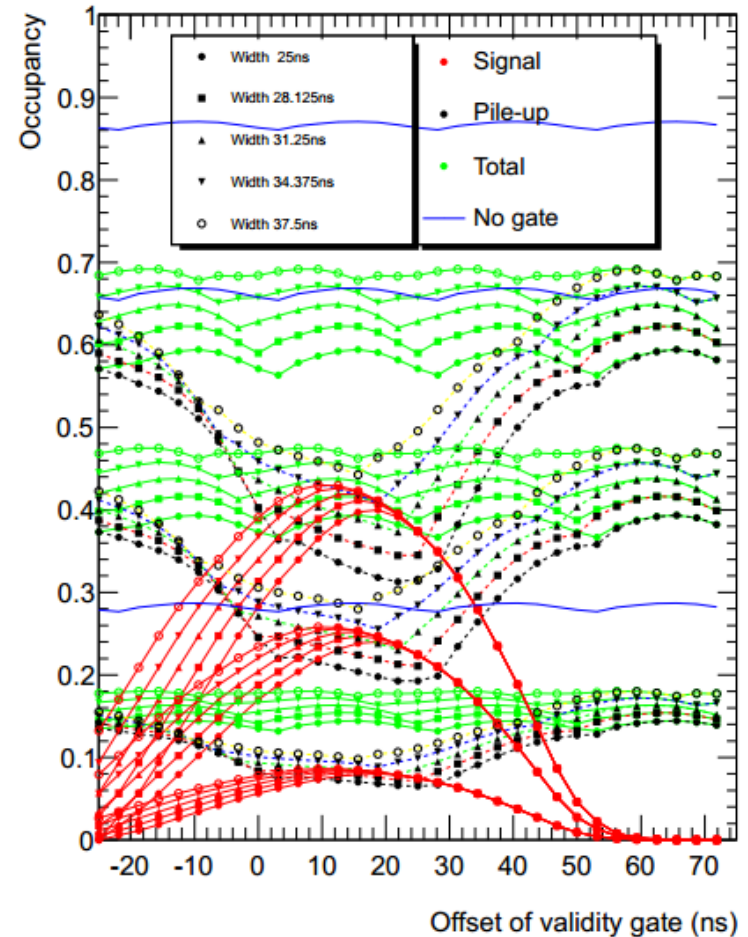
<https://cds.cern.ch/record/1608680>

SVN:

[Documentation/ValidityGateOptimization2013](#)

Jenny has a talk tomorrow in

“TRT Meeting (Day 2): Software & FastOR”



Anum Qureshi

(York, CA)

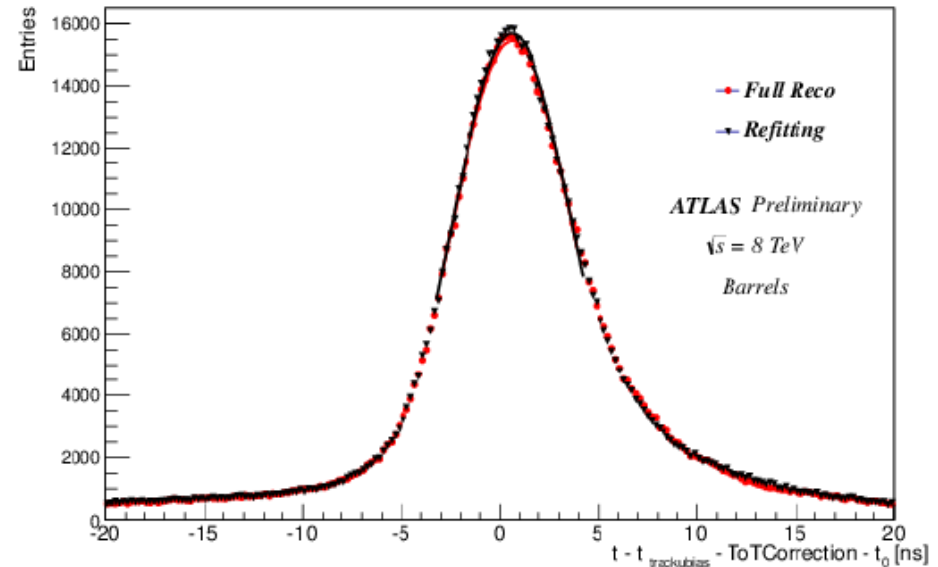
## Calibration of TRT Using Track Refitting Instead of Full Reconstruction

CDS:

ATL-COM-INDET-2013-037

<https://cds.cern.ch/record/1596284>

SVN: [Documentation/TrackRefittingCalibration2013/](#)





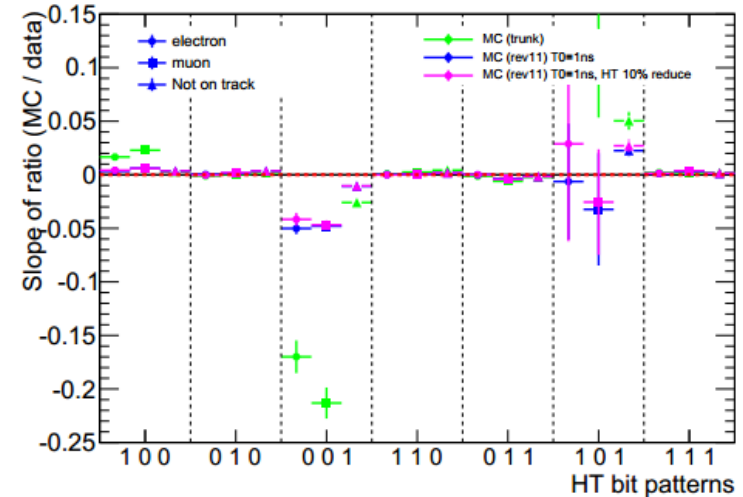
## On going qualification tasks

Most of these have talks on Thursday

“TRT Meeting (Day 3): TRT qualification task summaries”

**Kyungeon Choi**  
(Indiana University)

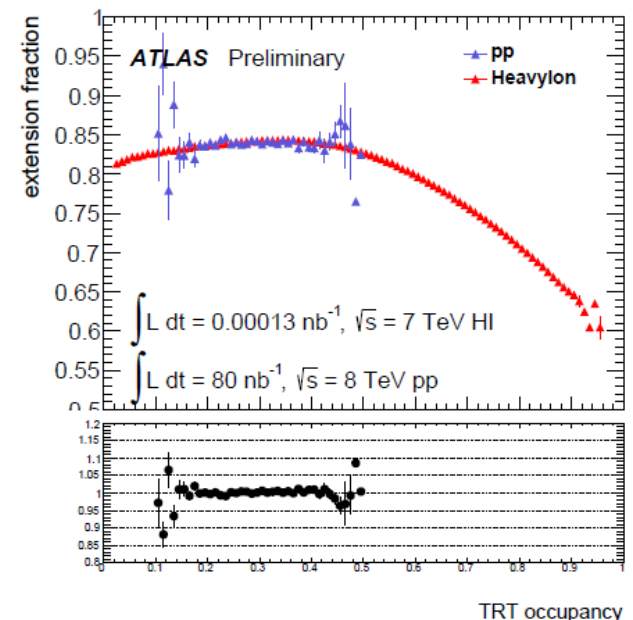
## Evolution of TRT time over high threshold bits with luminosity



**Dimitriy Krasnopevtsev**  
(Moscow MEPHI)

## Study of TRT performance at high occupancy

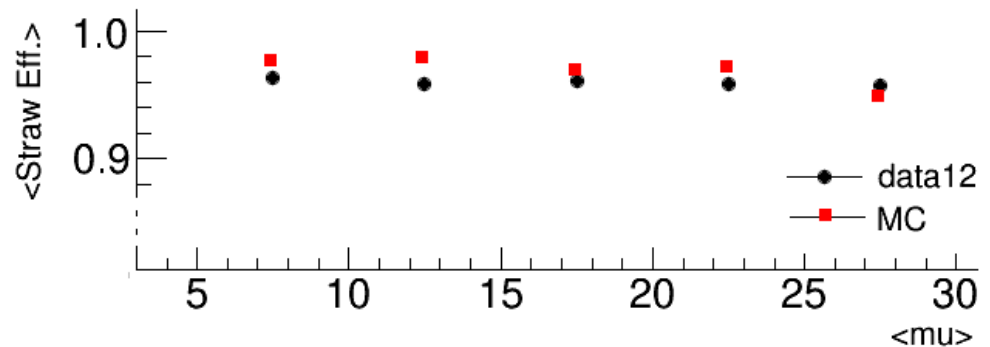
Waiting for final MC results.  
ATLAS note already drafted.



Mikhail(Misha) Levchencko  
(Petersburg NPI)

**Study of digitization tuning  
evolution with  $\langle\mu\rangle$**

Very nice indication that the Digitization model is responding well to pileup.

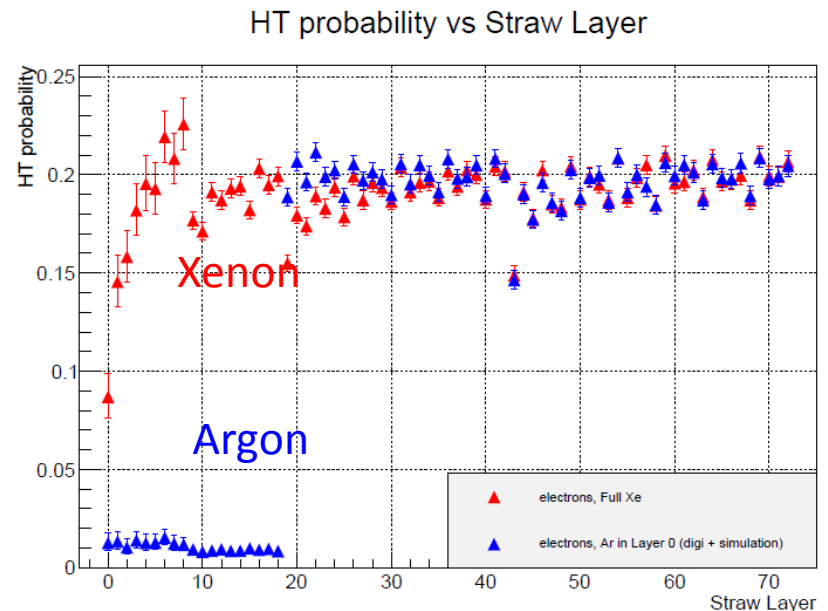


Artem Maevskiy  
(Moscow SU)

**Study of Electron Identification performance  
with combined Xe/Ar TRT operation**

Started recently, already some very interesting results, allowing us to debug/validate the simulation.

Artem has a talk tomorrow in  
“TRT Meeting (Day 2): Software & FastOR”



**Diane Shoaleh-Saadi**

(Montreal, CA)

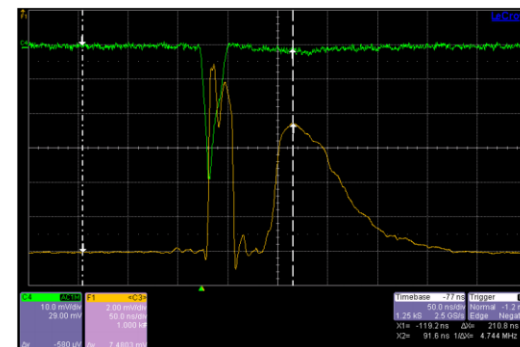
**Improve Argon implementation in the Monte-Carlo. Tune the TRT digitization**

Started recently

**Konstantin Vorobev**

(Moscow MEPHI)

**Study of the TRT performance with alternative gas mixtures**



**Enis Yazıcı**

(Boğaziçi, TR)

**TRT offline monitoring**

Starting soon

- \* We expect collaborators to follow the spirit of the ATLAS authorship policy:  
[https://twiki.cern.ch/twiki/bin/viewauth/Atlas/AuthorShipCommittee#ATLAS\\_Authorship\\_policy](https://twiki.cern.ch/twiki/bin/viewauth/Atlas/AuthorShipCommittee#ATLAS_Authorship_policy)
- \* Qualification tasks are playing a crucial role in the TRT.
- \* The TRT has a dedicated QT twiki page:  
<https://twiki.cern.ch/twiki/bin/viewauth/Atlas/TrtQualification>
- \* There is always expert interest in a qualification task – please report your progress in the TRT SW or Operations meetings, you are sure to get useful feed-back and guidance.
- \* If you are interested in performing your qualification on TRT then please discuss this with your institute supervisor and with us.

**Big thanks to our qualifiers for their hard work on these very important tasks .**

**Thanks also to all those who are providing support and feedback to our qualifiers.**