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# Introduction

This twiki summarises the activities in the cluster of ATLAS VLQ analyses in preparation for full Run-2 results

# Contacts

Single production: Janet Dietrich [janet.dietrich@SPAMNOTcernNOSPAMPLEASE.ch](mailto:janet.dietrich@SPAMNOTcernNOSPAMPLEASE.ch)

mailing list: [atlas-phys-exotics-singlevlq-fullrun2@SPAMNOTcernNOSPAMPLEASE.ch](mailto:atlas-phys-exotics-singlevlq-fullrun2@SPAMNOTcernNOSPAMPLEASE.ch)

Pair production: Trisha Farooque [trisha.farooque@SPAMNOTcernNOSPAMPLEASE.ch](mailto:trisha.farooque@SPAMNOTcernNOSPAMPLEASE.ch)

mailing list: [atlas-phys-exotics-vlqpair-fullrun2@SPAMNOTcernNOSPAMPLEASE.ch](mailto:atlas-phys-exotics-vlqpair-fullrun2@SPAMNOTcernNOSPAMPLEASE.ch)

# Meetings

Thursdays 16:00

## Schedule of topical meetings

Organisational meeting [↗](#): 12th July, 2018

Combination issues [↗](#): 19th July, 2018

# List of full Run 2 analyses

The tables below list the analyses expected to contribute to the VLQ search programme with full Run 2 data.

Institutes listed are those who expressed interest in these channels at the HQT kick-off meeting [🔗](#) on 14th May 2018

**Please add your analysis/team to the table if it is missing and let Trisha and Janet know**

# Pair production

Analysis	Previous results	Institutes	Code repository
$TT \rightarrow Wb + X$		Oklahoma S.	
All-had		Oklahoma S.	
$TT \rightarrow Ht/Zt + X$		MSU + IFAE	
OS-ML		Dortmund + LIP	
$Z(\nu\nu)t + X$		Wuppertal	
HqZq		Bogazici	
SS + b			
$BB \rightarrow Wt + X$			

# Single production

Analysis	Previous results	Institutes	Code repository
B -> bH(yy)		Dortmund + N. Illinois	
B -> bH(bb)		UCL	
B -> Wt (1lep)		Ankara, UBC+TRIUMF	
T -> Ht/Zt		MSU + IFAE	
All-had		Toronto	
T/Y -> Wb (1lep,0lep)		Berlin, Bonn	
OS-ML (Z-tagged)		UT Austin	
T -> Z(vv)t			

## Common tools

Common-use software tools should be added to the two git repositories below:

Pair-production git repository: [https://gitlab.cern.ch/groups/atlas-phys/exot/hqt/VLQ\\_Pair\\_Run2](https://gitlab.cern.ch/groups/atlas-phys/exot/hqt/VLQ_Pair_Run2)

Single-production git repository: [https://gitlab.cern.ch/groups/atlas-phys/exot/hqt/VLQ\\_Single\\_Run2](https://gitlab.cern.ch/groups/atlas-phys/exot/hqt/VLQ_Single_Run2)

These can include:

- Signal coupling reweighting macros for single VLQ
- Branching ratio reweighting macros
- Code snippets to calculate event selection variables
- Statistical tools and macros related to combination

# Common tasks

## Task list

The task list will be added as issues on the git repositories above. Progress of tasks can be tracked in discussion threads on those issues.

## Cutflow challenge

Survey on current object definitions and event preselections: [Spreadsheet](#)

## Data/MC live-page

Please add **any** R21 data/MC plots you have to the live-page below:

<https://indico.cern.ch/event/743304/>

Indicate the following information on the slides:

- Analysis framework (AnalysisTop / SUSYTools / other)
- Object definitions and selection criteria
- Event selection criteria

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%RESPONSIBLE% Main.TrishaFarooque

%REVIEW% **Never reviewed**

-- TrishaFarooque - 2018-07-10

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This topic: Sandbox > V1qCluster

Topic revision: r6 - 2018-07-19 - TrishaFarooque



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