

ATHENA

A Totally Hermetic Electron-Nucleus Apparatus

A new EIC experiment at IP6 at BNL

<https://sites.temple.edu/eicatip6/>

Daria Sokhan

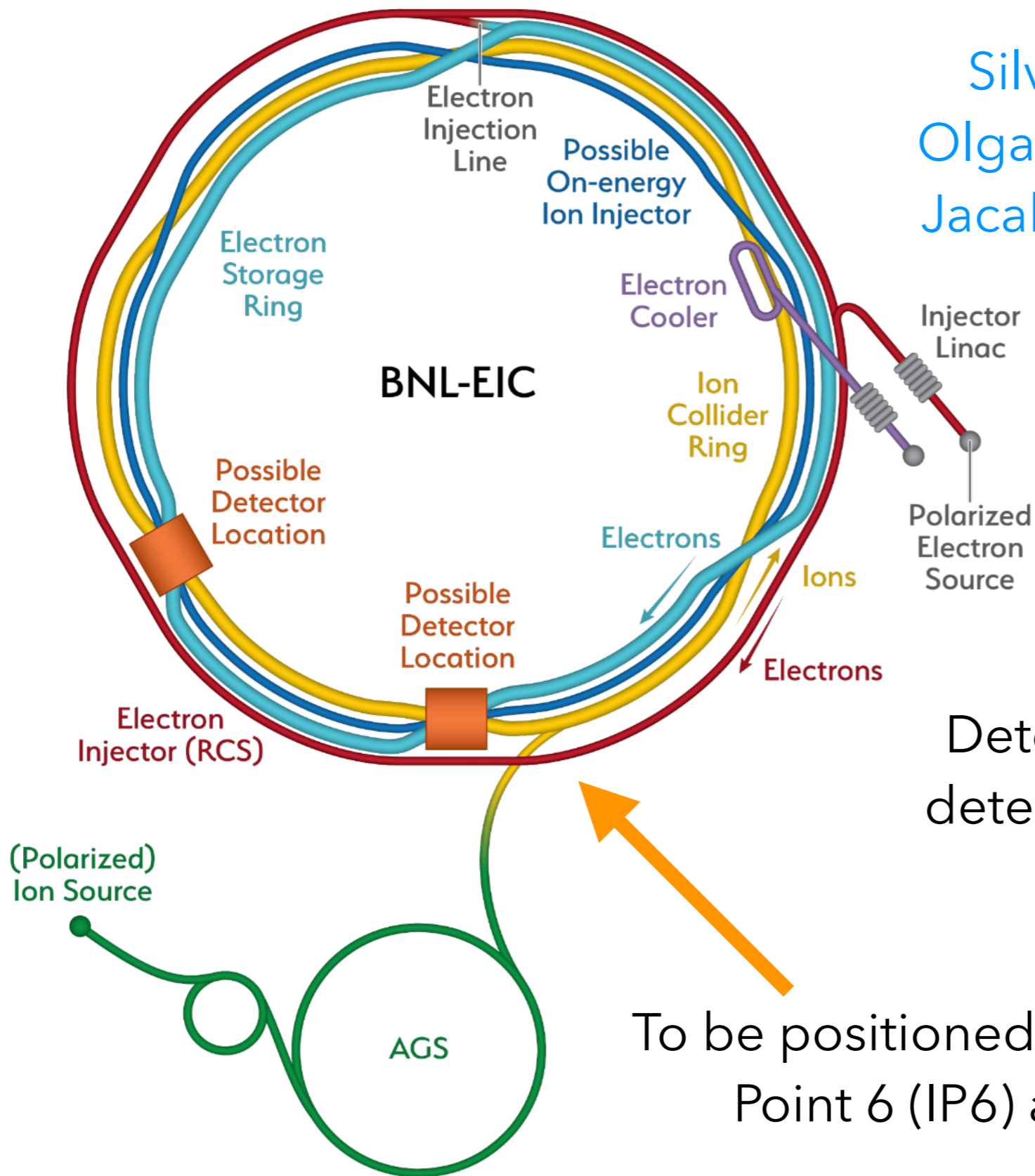


University
of Glasgow

UK EIC Meeting – 20th May 2021

ATHENA organising committee:

Silvia Dalla Torre, Abhay Deshpande,
Olga Evdokimov, Yulia Furletova, Barbara
Jacak, Alexander Kiselev, Franck Sabatié,
Bernd Surrow

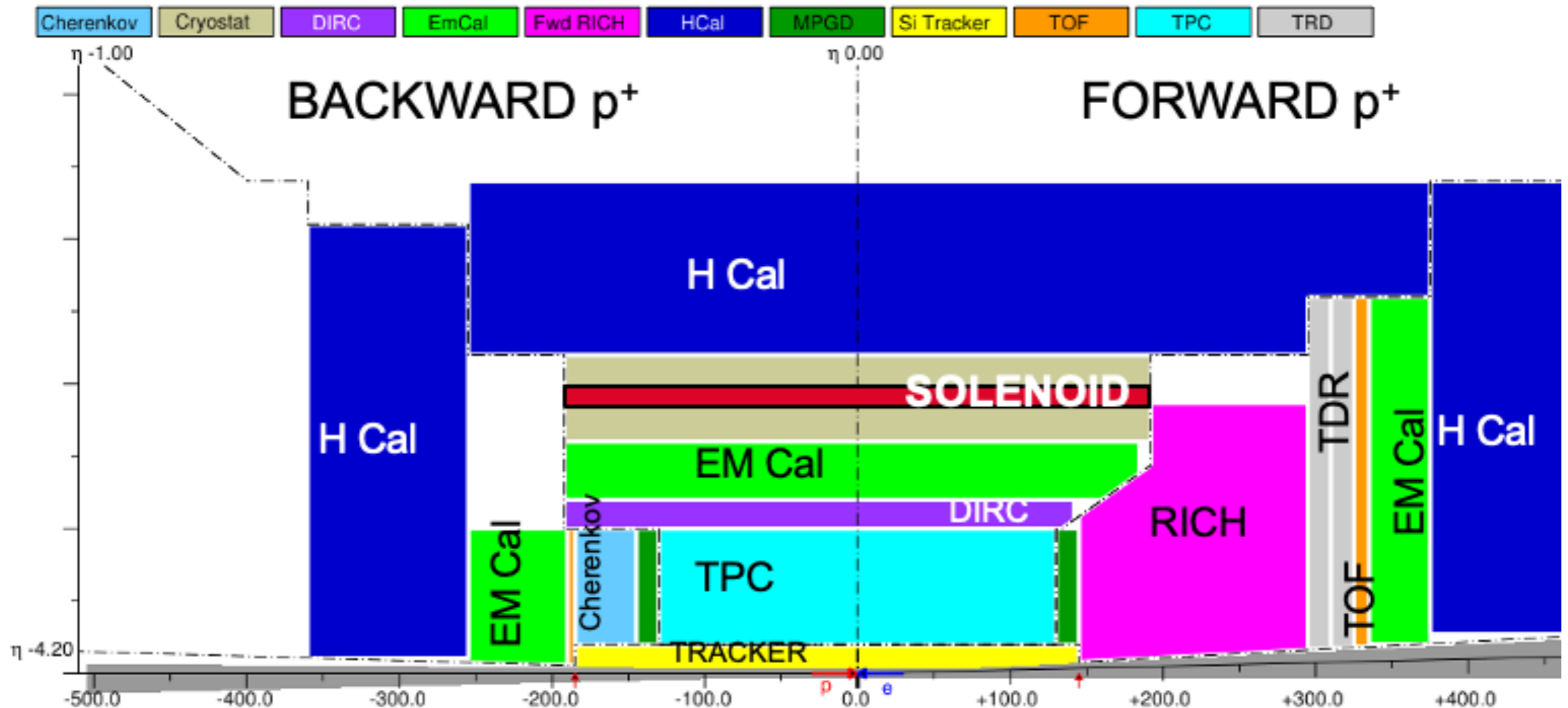


Detector inspired by the Yellow Report
detector concept - "Reference Detector"

<https://arxiv.org/abs/2103.05419>

To be positioned at Interaction
Point 6 (IP6) at the EIC

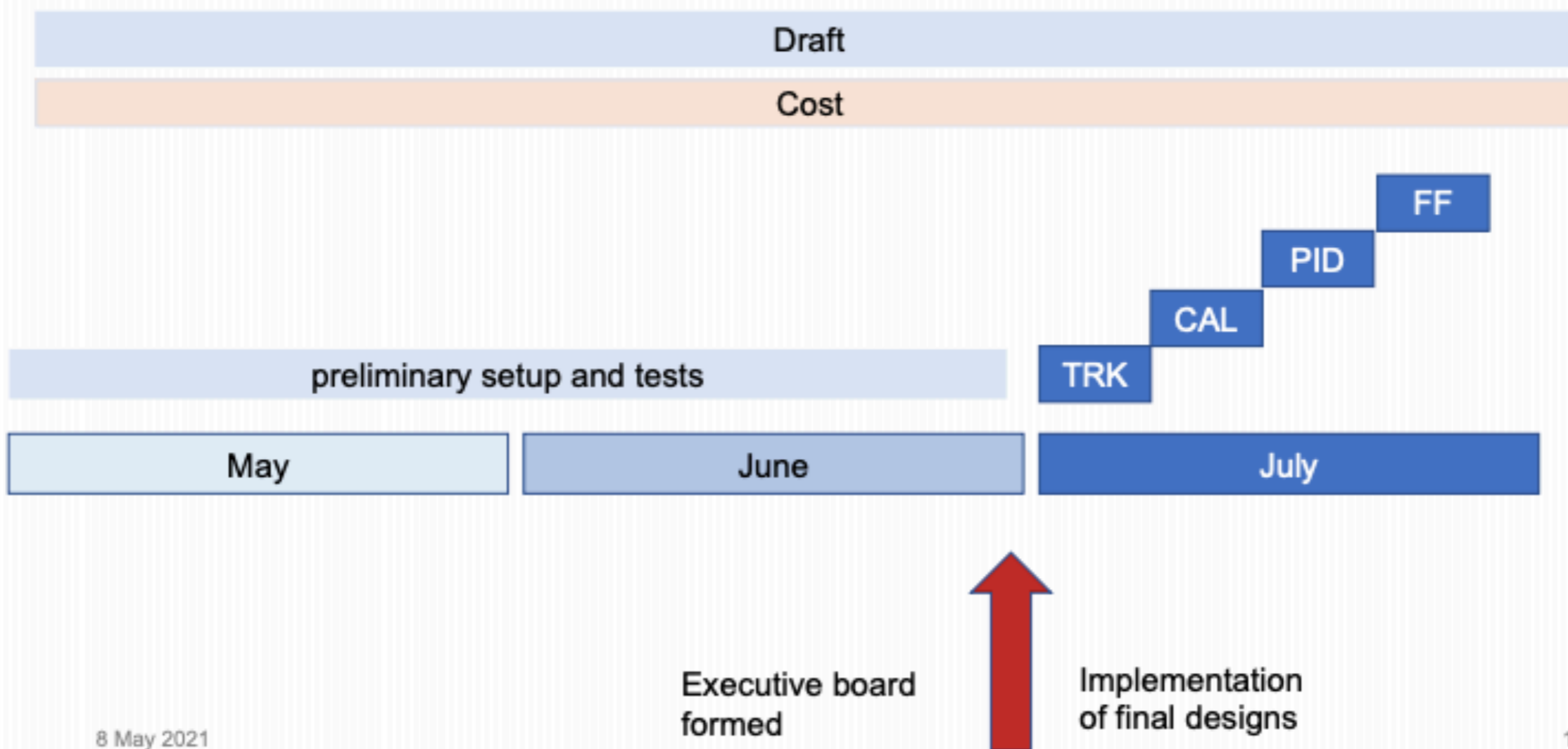
ATHENA detector will be based around a new 3T magnet:



Desired magnet characteristics (under discussion):

- $B_{IP} = 3.0 \text{ T}$
- Bore Diameter = 3.2 m
- Length $\approx 3.6 \text{ m}$
- Homogeneity tracker region = 10%
- Homogeneity TPC region = 5%
- Projectivity RICH for $1.5 \leq \eta \leq 3.5$
- *field lines parallel to particles trajectories*

Timeline overview



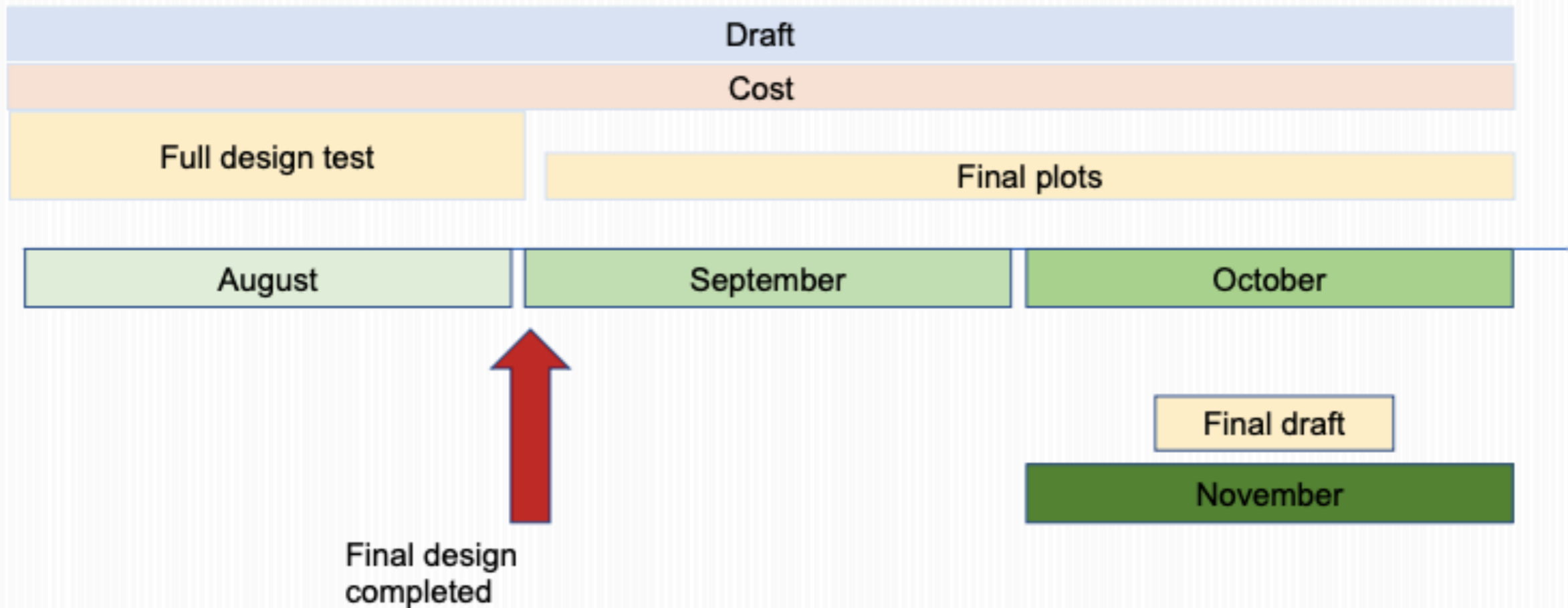
8 May 2021

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Silvia Dalla Torre and Yulia Furletova

Charter-writing in progress (Daria Sokhan on committee) - collaboration will be formed upon the adoption of the charter and formation of executive board.

Timeline overview



Organisation

ATHENA meetings are fortnightly: Thursday 4pm UK time – next meeting 27th May

Also a monthly meeting at 1am UK time aimed at collaborators in Asia.

Detector WGs:

Tracking - Laura Gonella
(Birmingham) co-convener

PID

Calorimetry

Far-forward

Far-backward

Polarimetry

Physics Validation WGs:

Inclusive – Paul Newman
(Birmingham) co-convener

Semi-inclusive

Exclusive / Tagging – Daria Sokhan
(Glasgow) co-convener

Jets / HF / EW-BSM

Software & Computing WG:

First software tutorial tomorrow (Friday 21st May).

Register your participation at: <https://forms.gle/sWkywDAZ925HKQC68>

Sign up for mailing lists / find meeting info:

<https://sites.temple.edu/eicatip6/working-groups/>



**Come
join
us!**

<https://sites.temple.edu/eicatip6/>