



UNIVERSITY OF  
BIRMINGHAM



## Discussion on path forward

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Laura Gonella  
EIC Silicon Consortium meeting  
4 February 2021

# Outline

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- Organisation of EIC SC
- Collaborative work with ITS3
- Continuation of YR activities
- Joining EIC detector collaborations

# Organisation of the EIC SC

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- Proposal to meet once a month
- Next meeting beginning of March
  - Thursday 4 March, same time?
  - Shall we keep first Thursday of the month?
- Goal of next meeting would be to map groups to tasks and make a real start
  - As Leo suggested, proposals by groups exchanged over the next few weeks by email to the consortium list
  - Arrive at the next meeting with tasks grouped into WP (Leo/Laura)
- At the next meeting
  - Agree on assignment of groups to tasks...
  - ... and how to integrate these efforts where needed into ITS3 WP
  - Identify next step(s) for each task to get people started
- It would be good to understand what effort is available now and what the envisaged scale of involvement would be for each group

# Collaborative work with ITS3

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- ITS3 is moving forward rapidly and we need to join relevant efforts (WP2/3/4/5) soon
  - First step is get ourself organised and that should be done on the timescale of the next meeting
- It is clear that the main issue is availability of funding on the required timescale
  - What is the best way to engage with funding agencies to access R&D funding? (Both EIC project funding and non-US funding agencies)

## ~~ITS3-WP1: Physics studies, Simulation and Reconstruction~~

- ~~• Physics performance studies~~
- ~~• Detector functional requirements~~
- ~~• Detector model and simulation~~
- ~~• Reconstruction~~

## • ITS3-WP2: Pixel chip design

- Test structures and validation of the technology
- Optimization of the pixel layout
- Large area building block prototypes
- Full scale prototypes
- Final chip

## • ITS3-WP3: Pixel chip characterization

- Development of HW and SW for the pixel chip characterization
- Laboratory, Beam and Radiation tests
- Pixel chip device simulation

## • ITS3-WP4: Pixel sensor thinning, bending and interconnection

- Tests with existing material (ALPIDE wafers)
- Tests with 300 mm dummy wafers
- Test with full-scale prototypes
- Mechanical, electrical and functional validation of the procedures

## • ITS3-WP5: Mechanics and cooling

- Selection and characterization of carbon materials (structural and thermal properties) Development and production of support structures
- Development, production and validation of the Engineering Module based on dummy chips
- Development, production and validation of the Qualification Module based on prototype chips
- Production of the Final Module based on final chips

- A lot of momentum gathered by the tracking working group, especially on simulations that should continue alongside technical work, and a lot of good work came out of this group
  - It was also a nice forum for PhD students to learn about the project, show results and get expert feedback
- So far the EICUG management has not coordinated a continuation
  - Will this restart as part of the new detector collaboration(s)?
- Can we restart this effort? Does this still make sense/is useful in the current status of the EIC project?
- A tracking working group could meet once a month, interleaved with EICSC meeting, involving other tracking groups
  - For example the eRD6 community working on gas detectors
  - And more generally all those involved in the YR tracking WG

# Joining EIC detector collaborations

*Review after EICUG meeting on 4 Feb.  
as we might learn more...*

- Detector collaborations are starting to form, process however not completely clear (to me and Leo at least)
- Some initiatives coming out of EOIs
  - See ECCE workshop next week <https://www.ecce-eic.org>
- We should make the EIC SC effort visible to EIC interested parties and engage with known proto-collaborations and initiatives
  - First opportunity: ECCE workshop next week, do we all agree to have a talk there?
  - Shall we start thinking of a web page/TWIKI/other format to advertise our effort?
- Open Call for Detector Collaborations
  - How do we engage?