**LhARA WP6 Meeting**

**Notes and Actions from meeting held on 8th November 2022**

**LhARA wiki location for documents related to this meeting:** [**here**](https://ccap.hep.ph.ic.ac.uk/trac/wiki/Research/DesignStudy/DesignAndIntegration)

**Present:** Neil Bliss, Ajit Kurup, Jaroslaw Pasternak, William Shields, Colin Whyte.

**Apologies:** Kenneth Long, Hywel Owen.

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| **Action** | **Description** | **Status** |
| 22-11-01-01 | **Will Shields** to provide Excel file with input from Jaroslaw. 1 -2 weeks timescale | In progress |
| 22-11-01-02 | **Action: All** the coordinate system and origin described in the previous meeting notes to be implemented at various part of the accelerator complex. | Complete |

**Agenda:**

1. Actions from last meeting.
2. Simulations.
3. Transfer of data between Simulations & CAD.

**Presentation by:**

* Will Shields, document: [20221108\_WShields](https://ccap.hep.ph.ic.ac.uk/trac/wiki/Research/DesignStudy/DesignAndIntegration/Meetings/2022/2022-11-08#no1)
  + Simulation & Geometry Update
    - Excel Sheet Generation
      * Automatic generation of Excel spreadsheet
      * CAD Conversion
      * Alternative Baseline Design
      * Summary
        + Done
        + Ongoing
        + To do

**Action 22-11-08-01: Neil Bliss** to e-mail ITRF SharePoint link

**Action 22-11-08-02: All** return e-mail confirming if you do not have access and access will be implemented.

**Action 22-11-08-03: Will Shields** to send the latest BDSIM file he has been working on to Jaroslaw.

**Action 22-11-08-04: Will Shields** to explore the capability of GPT Optimisation programme (GDFSOLVE) for:

* Optimise Gabor Lens strengths in capture section to produce parallel beam at section exit
* Switch from ideal to HTs beam.

**Action 22-11-08-04: Will Shields/** **Jaroslaw Pasternak** agreed it was a good time to raise the baseline and alternative design simulations to v4.4 and v5.4.

Further work on the alternative design is required before it can be considered a viable option to be reviewed in comparison to the baseline design.

Jaroslaw is considering the possibility of a double spiral configuration for the FFA instead of a single spiral magnet for the 10 cells. The second spiral magnet in each cell would be smaller in size, mechanically connected by non magnetic material and magnetically disconnected. The 2 magnets would be very close to each other and would need to be modelled and measured as one. Modelling would be needed to study the cross talk between the 2 spiral magnets. A similar but not identical configuration is being studied by ISIS, that will be prototyped. The intention is that Jaroslaw will study the potential of the new configuration in the next month. If the results look interesting then a comparison to the baseline design could be considered and reviewed, before an informed decision on how to proceed.

**Action 22-11-08-05**: Jaroslaw Pasternak study a double spiral magnet configuration for the FFA.