



Proposal for Undergraduate Student Placement

Proposal Title: Beamlines Layout Web App

Date: Jan 8, 2018

Supervisor and co-supervisor(s):

Carla Barquest, Thomas Planche

Total number of hours per week available for supervision:

4*2

Goal of the proposal:

Produce a web-based interactive layout (2D and 3D) of the TRIUMF beamlines defined in the XML database.

Scope of work:

- Produce layout plot from XML database
- Develop interactive features like: seeing the status of beamline components, calling existing applications (beamenvelope, tunedisplay) from selected sections of beamlines, etc.
- Compare layout plot with design office drawings (to check for errors in our database).

Anticipated benefits to the student in terms of experience and career. For example could a conference paper emerge from the project:

- web development
- UI design: produce a simple interface to display complex 3D path.

Anticipated benefits to TRIUMF. What is the deliverable at the end of the project and how does it fit the goals and priorities of the Accelerator Division. Could the work potentially lead to graduate studies that would augment or expand our core competencies:

- With the complexity of the ARIEL beamlines we need a more efficient way of visualizing beamlines and all potential beampaths. It would also benefit existing non-2d beamlines (ISAC, cyclotron injection line).
- It would also become a convenient way to select beam path for HLAs.
- Provide an additional way to cross-check our data base with as-build drawing.

