CPS related tasks and required manpower.

1. Magnet design:

* Using the program that Bogdan uses, calculate different magnetic fields for different magnet deigns to optimize the CPS magnet for KLF.
* Postdoc level or advanced graduate student.
* 20% of his time until the CPS design is complete.

1. Calculate the heat deposition:

* Estimate heat deposition in the copper radiator and in the copper core inside CPS using FLUKA or GEANT4.
* Compare Hall D results with Hall C results.
* Provide the deposition maps to engineer to calculate the temperature profile.
* Postdoc level
* 20% of his time until CPS design is complete.

1. Calculate radiation levels for the CPS:

* Using FLUKA or other program calculate the radiation levels in the tagger hall.
* Work with RADCON group to estimate the radiation levels outside of the tagger hall.
* Postdoc level
* 20% of his time until CPS design is complete.

1. Calculate temperature profiles:

* Using the heat deposition map, calculate the temperature distribution of the copper core (not sure which program to use).
* Talk to Hall C (probably Bogdan) to use the techniques and procedures they already have to simplify our work and compare Hall D and Hall C results.
* Work with the engineers to optimize the cooling system.
* Postdoc or an engineer
* 20% of his time until the CPS design is complete.

1. Evaluate the deformations in the copper core:

* Evaluate the stresses and deformations in the copper core for different configurations of CPS.
* Follow what Hall C is doing to model the stress.
* Postdoc or engineer
* 20% of his time until the CPS design is complete.