

Present: CB, MC, KL, JP, CW

1. JP presented his slides describing the capture system in the current baseline and defining a potential issue with the space requirements for vacuum pumps coupling for the GL1 currently sandwiched between the target vessel and GL2 without any extra space. Additional consideration might arise if the GL1 needs to be externally filled from its own electron source off axis. He tried to study, if there is any possibility to add some space. It was found that an extra 15cm space could be added, if we use the most recent distribution after nozzle coming from 2D target simulations by HT. He commented that the confirmation of the HT distribution with 3D simulation would be desirable.

2. CB commented that it is being considered as a baseline to fill GLs from the electron source on axis. The plasma could be made stable for sufficiently long period of time so the source on axis could be removed for the proton beam operations.

3. All: discussion than started on the aspects of the baseline and possible modifications. CW commented on the possible addition of the iron to properly shape and terminate the B field. MC mentioned that this goal was already achieved in some designs (Hurst et al., Phys. Plasmas 22 073503 (2015)). KL commented that he would be careful with modifications of the baseline based on the HT's distribution due to the simulations being an extrapolation of the 2D simulation into 3D and due to the fact it dramatically differs from the previously assumed distribution.

4. Summary of findings: It was proposed to keep the baseline of the capture system (the first two GLs coupled to the target system) unchanged – similar to ‘Acc.’ design of the positron accumulator. The filling of both GL1 and GL2 is planned to be performed using the movable electron source on-axis, from the downstream direction from the drift between GL2 and GL3. It is hoped that the plasma will be stable for sufficiently long time so the electron source could be removed for the proton operations. The space for vacuum pumps coupling for GL1 on the side of the target vessel seems sufficient, but pumping can be also located downstream including the source chamber, so no changes proposed. Beam parameters based on HT's simulation of the target was advised to be checked with the target group, as they are very different from the ones used in preCDR based calculations.