**TG Edge&Divertor**

**Subgroup Fueling & Exhaust**

**Gas fueling proposal discussion**

**15.03.2022 from 1000 to 1105**

**Attendees:**

Thierry, Philipp, Erik, Maciej, Golo.

**Meeting objective:**

Discuss proposals on how to utilize gas fueling as a recycling proxy

**Gas injection as recycling proxy presented by Thierry:**

Maciej: Instead of pre defining the number of particles per injection, use 2-3 preparatory programs to find the amount needed for a desired density increase. An increase of 5E+18 m³ is enough to result in a good signal that can be analysed. This should prevent overfueling and drowning in recycling.

Since the different valves have different fueling efficiencies, the valve with the lowest efficiency should be used to get the minimum signal.

To reduce the number of used valves, one could only use valve 1, 3, and 5.

The effects of a developing toroidal current were mentioned. It was chosen to ignore them for this proposal. Philipp will write a separate proposal to address this issue. A way to address this in this proposal would be to reverse the valve order of the repetition; so use valve 1;2;3;4;5;5;4;3;2;1. This way both measurements for valve 1 are as far apart as possible and should see the largest effect.

Philipp commented that it would be interesting to fuel in an island that is connected to the MPM and one that is not, to study transport in between islands. The gas injection in HM50 and HM51 could be used for this.