Questions on the PTOLEMY project

At a preliminary reading of the paper, the description appears to be aimed at demonstrating the working principle so it is difficult to try to have a critical analysis of the experimental aspects. There are therefore initially some general questions which tend to obtain basic information of the proposed set up.

1) Please provide a block diagram of the experiment by dividing the part of the tritium source from that of the RF antennas, the transverse filter and the calorimeters. For each part, please provide specifications of the components and the performance tables expected according to their features.

2) Please provide the diagram of the applied potentials and the required accuracies regarding all the potential systems of the RF part Antennas and Transverse drift filter

3) Specify the required accuracies on the amplitude and frequency measurements of the cyclotron radiation signal received by the RF antenna.

4) Please provide a description of the accuracy of the harmonic components of the applied magnetic field

5) Please provide a mechanical Layout of the installation indicating the alignment constraints of the different parts

6) Please provide an estimate of the required electrode correction speed in Volt / sec or the electric field in V / cm / sec

7) Please provide start to end simulations of particle motion in the different systems and specify which methodologies and estimated calculation errors are. Provide information on how the motion invariance requirement was integrated into the simulations

8) Please give details on how the terms of invariance have been considered with respect to the required resolutions (currently there is only an inequality written, but we would like to understand the order of magnitude of the quantities much less than ...)