MC studies of the FDC beam hole size

Three related problems to be studied:

- A. Background on the FDC, TOF, FCAL originating from the copper material in the FDC cathodes
 - 1. The background rates define the size of the hole in the strip planes
 - 2. Proposed geometries to be studied: 1.3 cm, 1.7cm, 2.1 cm hole radius, same for all FDC packages
- B. Tracking problems: efficiency of the track reconstruction, resolution
 - 1. The efficiency studies will define the radius of the wire deadening zone
 - 2. This radius of the wire deadening zone must be at least 1cm larger than the radius of the hole in the strip planes, to avoid edge effects
 - **3.** Proposed geometries to be studied: 2.3cm, 2.7cm, 3 cm hole radius, **same for all FDC packages**
 - 4. What reactions to be used for tracking efficiency?
 - 5. Simulations: must include pile up effects, due to high occupancy levels
 - 6. What information from the fADC to be used? Let's start with the time and amplitude of the first hit for a given track
- C. Requirements to DAQ: depending on the results for the tracking efficiency what additional fADC information is needed to improve the track reconstruction