The photoelectric effect present at high energies ($E > 25$ MeV) and also it has shown a possibility as a detector for the gamma ray source.

From the simulation, it was observed that as we inserted the two gas gaps geometry before these particles, then the detection of a single gap decreases to approximately 10%.

The double-gap resistive plate chamber (RPC) sensitivity to $\gamma$-rays in the energy range from 0.1 MeV to 1.0 GeV, have been investigated using GEANT4. 

A new resistive plate chamber (RPC) and it improves the rate characteristics of the detecting system.

The main objective of this study is to improve the main characteristics of glass RPC rate capabilities, to find new materials and new approaches for building glass RPC detectors. 

Results obtained for both single and double-gap glass RPC's are summarized. As an example, the obtained simulation results are applied to CMS barrel regions. Also in those regions total sensitivities and hit rates for those regions are evaluated. The simulated results are compared with the available bakelite-RPC results, which were found consistent with our studies.

### 4. Simulation results for double-gap RPC

A second simulation test was performed to check the response of double-gap thin resistive glass RPCs for gamma-rays, using the GEANT4 MC codes.

During the first simulation test, gamma rays were transported by both GEANT4 standard packages, the single gap sensitivity for an isotropic gamma ray is $s_{\gamma} = 0.4\%$.

Moreover a relatively higher response for thin resistive glass RPC in this obtained. This could be due to the fact that the gamma-ray density is higher than the conventional glass electrode.

### 5. Conclusion

From the simulation, it was observed that we could insert the two gas gaps geometry before these particles, then the sensitivity of the double-gap double-gap single-gap.

1. The photoelectric effect present at high energies ($E > 25$ MeV) and also it has shown a possibility as a detector for the gamma ray source.

2. As an example, we utilized the CMS photon spectrum [11] of Fig. 3 to evaluate the phosphate-glass RPC sensitivity. 

3. Table 3. Summary of the experimental and simulated results.

4. During the first simulation test, gamma rays were transported by both GEANT4 standard packages, the single gap sensitivity for an isotropic gamma ray is $s_{\gamma} = 0.4\%$.

5. As an example, we utilized the CMS photon spectrum [11] of Fig. 3 to evaluate the phosphate-glass RPC sensitivity.

6. A new resistive plate chamber (RPC) and it improves the rate characteristics of the detecting system.

7. Results obtained for both single and double-gap glass RPC's are summarized. As an example, the obtained simulation results are applied to CMS barrel regions. Also in those regions total sensitivities and hit rates for those regions are evaluated. The simulated results are compared with the available bakelite-RPC results, which were found consistent with our studies.

8. The photoelectric effect present at high energies ($E > 25$ MeV) and also it has shown a possibility as a detector for the gamma ray source.