**Proposal:** **PR12-16-010 Hall B RG-K "Confinement & Strong QCD"**
**Title:** A Search for Hybrid Baryons in Hall B with CLAS12.

**Contact:** Annalisa D'Angelo

**Description:** This proposal is the lead proposal of RG-K and defines the run conditions.

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|---|---|
| **Beam time request** | 100 days |
| **Tune up time included?** | No |
| **Configuration changes included?** | NA |
| **Electron beam energy:** | 6.6 GeV & 8.8 GeV |
| **Electron beam current/luminosity:** | $L = 10^{35} cm^{-2} s^{-1}$ |
| **Electron beam polarization:** | High, $P_e \sim 0.85$ |
| **Targets** | $LH_2$ |
| **Basic instrumentation** | CLAS12 base equipment and the Forward Tagger. |
| **Non-standard instrumentation?** | Forward Tagger |
| **Trigger:** | Scattered electrons in the HTCC combined with energy deposited in PCAL & EC |
| **Magnetic field settings:** | Torus magnet field configuration with electrons bending away from the beam line,<br>Torus current $I_T$ = - 3375A, Solenoid field 4-5T |
| **Special requirements/requests:** | N/A |

**Comments**:

1) The proposal raises no technical concerns that were not already addressed in previously approved proposals of Hall B Run Group A. The setup is identical to the one used in the approved experiments.

2) As the beam energy is lower than for all other Hall B approved experiments the background simulations were all redone at the lower energies. The results showed that the lower energies cause no or only a very small increase in the expected background contributions to the occupancy in the drift chamber system.