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| **Summer Placement Project Proposal** |
| Supervisor(s): Prof. Daniela Bortoletto  Nominees in case of absence:  Duration of Placement: about 3 months  Date restrictions: none  Number of Placements available: Two |
| **Section 1: Project description:**  Project title: **Evaluation of HV-CMOS sensors**  Include project aims here  The High Luminosity LHC (HL-LHC) project will require the replacement of the ATLAS tracker and pixel detector. Research and development is currently taking place to develop the optimal sensor technology for these projects. The candidate will work on High-Voltage particle detectors in commercial CMOS technologies that open up the possibility of incorporating read-out electronics into the sensing element.  This development is generating large interest in particle physics since it could provide low-cost, thin, and radiation-tolerant detectors with high time resolution. The candidate will evaluate the performance of these sensors, denoted as HV-CMOS, before and after irradiation. The measurements can includes the study of the current and the capacitance of the devices on a probe station or the study of the response of the devices to lasers and radioactive sources. |
| **Section 2: Special requirements (skills and experience required):**  Required skills: Education in physics or electronic engineering; experience in or keen interest to acquire knowledge in testing of semiconductor devises  Desired skills: Electronics, Interaction of particle with matter, knowledge in semiconductor or microsystem technology |