The GEFE project

Common Digital Front-End for Beam Instrumentation

The GEFE board

- General purpose FPGA-based radiation tolerant board
  - Rad-Hard FPGA ProAsic3 (ACLA3PE3000-FFG896) from Microsemi
  - Rad-Hard high-speed (4.8 Gbps bidirectional) GBT-Versatile Link from CERN PH-ESE
  - Optical & Electrical interfaces (FMC HPC, etc.)
- Target Total Ionizing Dose (TID): up to 750 Gy

Status & Outlook

- The GEFE board
  - Validity test of the first 2 prototypes of GEFE v1 (November 2015)
  - Rad-Hard qualification of components (Second half of 2015) and full board (First half 2016)
  - Pre-production stage (First half of 2016) (small orders for prototyping)
  - Production stage (First half of 2017)
- The GEFE community
  - Open HardWare Repository (OHWR) Wiki and Email Lists
  - 3 projects involved and 6 interested so far (New MOPOS SPS, Wire-scanner, CHARM, New WorldFIP, etc.)
  - More than 350 pieces requested