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Current status of Hamamatsu Si detectors mainly for High Energy Physics Experiments

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We have been developing various types of Si detectors for HEP(High Energy Physics) Experiments. Hamamatsu SSD(Silicon Strip Detectors) has been used as a tracking detector in many collider experiments [ATLAS, CMS, BELLE, etc.] and space experiments [FGST(GLAST), AGILE, etc.]. Hamamatsu APD(Avalanche Photo Diodes) is used as a photo detector of PWO4 scintillator in the CMS electromagnetic calorimeter. Hamamatsu MPPC (Multi-Pixel Photon Counter, Hamamatsu trade mark) is one of the detectors called Si-PM(silicon photomultiplier), and it matches well for detecting weak emission of scintillator or Cherenkov light etc. For example, MPPC has been used for T2K experiment, and is under preparation for MEG experiment and CTA experiment. As a new effort, we are also developing large-area Si PAD detectors by using 8-inch wafer process, for the calorimeter of next experiments like HL-LHC(High Luminosity-LHC) or ILC. In addition to the above HEP application, APD and MPPC are used for analysis, measurements and medical application(mainly for PET). In this conference, we will also talk about the status of medical application in addition to talking mainly for HEP.

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