

ASIC evolution for particle physics and astrophysics

Tuesday, 23 October 2018 10:45 (15)

Construction of the advanced megascience facilities, basing on advanced particle detector technologies, is closely connected with development of read-out electronics, having as a core element – application specific integrated circuit (ASIC). In order to reach limit specifications of multichannel detector setups a whole set of factors defines ASIC design. Today application specific chips should provide new level of functionality, fitting to a new set of constraints and trade-offs on technical specifications (like an integration scale, power consumption, speed, radiation hardness) as well as economic- and technology-related ones. The talk presents overview of the state of the art and evolution in ASIC design for particle physics and astrophysics.

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Session Classification : Facilities and Advanced Detector Technologies

Track Classification : Facilities and advanced detector technologies