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The DoTPiX Project: A vertex detector technology for high energy physics experiments

Recently (2023 (1)) we set up a collaboration aimed for the development of the DoTPiX pixel device (2). This type of device is designed to improve the spatial resolution of pixel detectors planned to be used in future detectors such as the ILD. The vertex detector is the part in which the DoTPiX device is primarily intended. The development plan is segmented into three main phases. The first phase relies on simulation work. We use so-called TCAD to assess the detection and electrical performances of the device, and to outline the different fabrication steps that are necessary. Much of this phase concerning electrical performance has reached its goals. There exists still many open questions in the material processing necessary to achieve a testable device. This is the aim of the second phase. We are now currently studying the different processing steps with a material science point of view, in order to quantify all of these to obtain a reliable process flow. We will describe this here and how it is organized within the DoTPiX collaboration. Finally, we 'll introduce the following development steps, and how these depend on the former development phases.

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Classifica Sessioni: Wine tasting