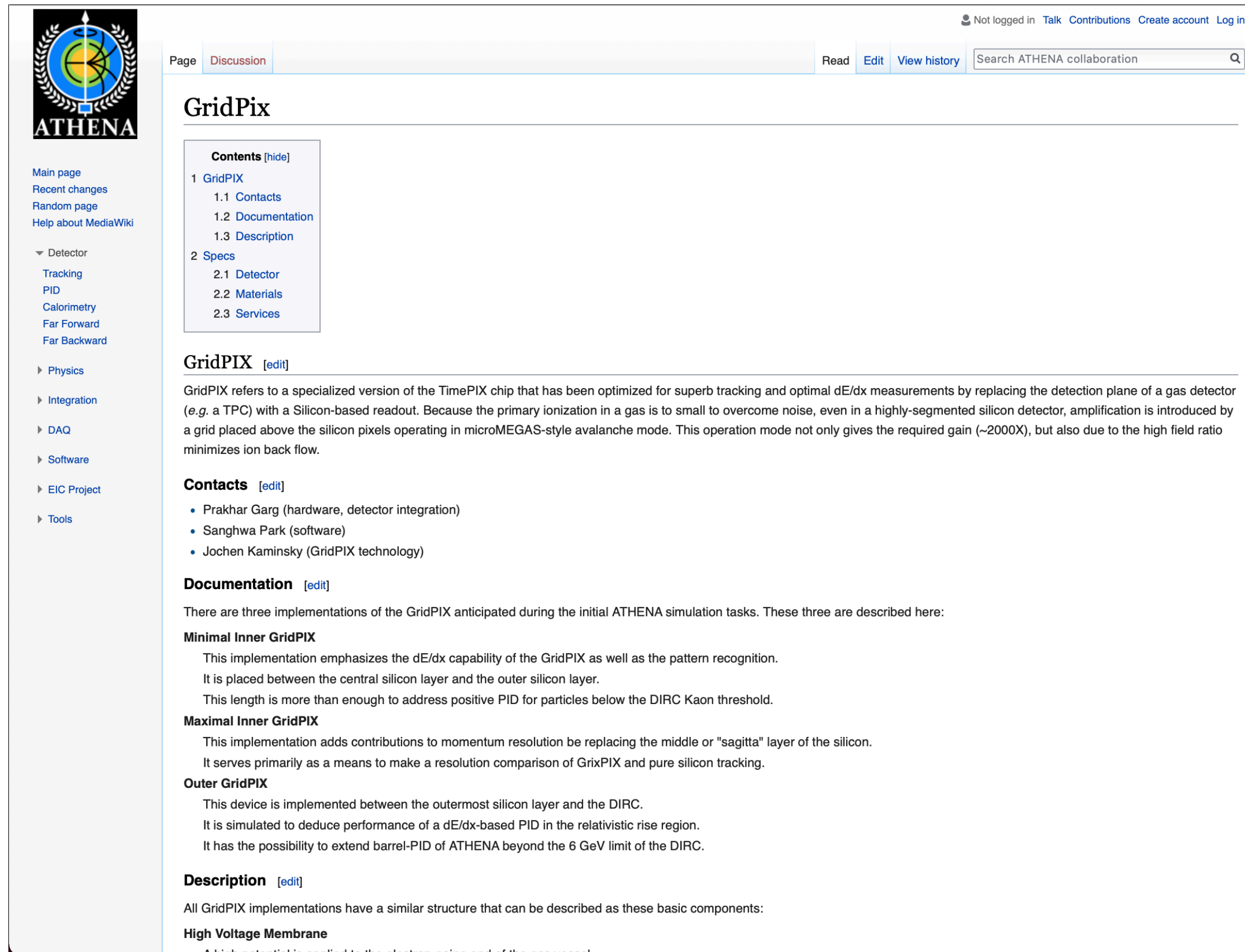


PID wiki pages have been added for GridPix details now: (More information will also be incorporated soon)

<https://wiki.bnl.gov/athena/index.php/GridPix>



The screenshot shows the GridPix wiki page on the ATHENA collaboration website. The page title is "GridPix" and it includes a navigation menu with options like "Page", "Discussion", "Read", "Edit", and "View history". A search bar is present with the text "Search ATHENA collaboration". The main content area is divided into sections: "Contents [hide]", "GridPIX [edit]", "Contacts [edit]", "Documentation [edit]", and "High Voltage Membrane". The "Contents" section lists sub-topics such as "GridPIX", "Contacts", "Documentation", "Specs", "Detector", "Materials", and "Services". The "GridPIX" section provides a detailed description of the detector's design and operation. The "Contacts" section lists individuals involved in the project. The "Documentation" section mentions three implementations of the GridPIX. The "High Voltage Membrane" section describes the application of a high potential to the electron-going end of the gas vessel.

High Voltage Membrane

A high potential is applied to the electron-going end of the gas vessel.

No readout is located here to minimize thickness at this end.

Field Cage

The field cage provides a potential gradient via a series of potential stripes.

The technology is presumed to be derived from the sPHENIX TPC.

This yields a radiation length of below 1% for the inner devices and 1.25% for the outer device (sPHENIX has 1.25%)

Specs [edit]

(in preparation)

Detector [edit]

Item	Minimal Inner	Maximal Inner	Outer
eta coverage	+/- 1.1	+/- 1.1	+/- 1.1
Inner Radius	6.2 cm	23.7 cm	39 cm
Outer Radius	37 cm	37 cm	100 cm
Volume	250 liters	420 liters	5900 liters
Gas Flow	0.7 lpm	1.2 lpm	16 lpm
Gas	T2K	T2K	T2K
Technology	TimePIX3	TimePIX3	TimePIX4
Number of Chips	904	1768	4750
Idle Power	0.68 kW	1.33 kW	7.12 kW
Maximum Power	2.71 kW	5.30 kW	28.5 kW

Materials [edit]

- High Voltage Membrane: Nomex Honeycomb (5 mm) & FR2 (10 mils)
- Field Cage: C-fiber sheet, Nomex honeycomb, Cu-Kapton circuit cards
- Detection Plane: C-fiber/rohacell rings, GridPIX, FR4 mounting board, FPGA, GapPad, Liquid-Cooled Ring

Services [edit]