

White Paper: “Novel Sensors for Particle Tracking: a Contribution to the Snowmass
Community Planning Exercise of 2021”

Status Report

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Instrumentation Frontier Working Group 3
Solid State Detectors and Tracking

The first draft has been written. It incorporates the full text of the following LoI's:

#156: https://www.snowmass21.org/docs/files/summaries/IF/SNOWMASS21-IF3_IF0_H_Kagan-130.pdf

#158: https://www.snowmass21.org/docs/files/summaries/IF/SNOWMASS21-IF3_IF0_N_Fourches-107.pdf

#162: https://www.snowmass21.org/docs/files/summaries/IF/SNOWMASS21-IF3_IF0_Seidel-198.pdf

#165: https://www.snowmass21.org/docs/files/summaries/IF/SNOWMASS21-IF3_IF2_Jessica_Metcalf-154.pdf

The pdf is posted at <https://indico.fnal.gov/event/51653/contributions/227098/attachments/149169/191979/detectors.pdf>

Additional text from Nicolas is being incorporated by Sally this week, and an updated document will be posted to today's indico page (<https://indico.fnal.gov/event/52322/>).

9 pages long

Page 1 – Author list and abstract

Page 2 – I. Introduction, II. Silicon Sensors in 3D Technology (Boscardin, Dalla Betta, Hoferkamp, Seidel, Sultan)

Page 3 – III. 3D Diamond Detectors (Kagan, Trischuk)

Page 4 – IV. Beyond CMOS: Submicron Pixels for Vertexing (Fourches, Renard, Barbier)

Page 5 – V. Thin Film Detectors (Kim, Metcalfe, Sumant)

Page 6 – Thin Film, continued

Page 7 – VI. Conclusion, References

Pages 8-9 – References, continued