Vacuum in place of Glue Dots

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Beamtest EVO Meeting
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Intro

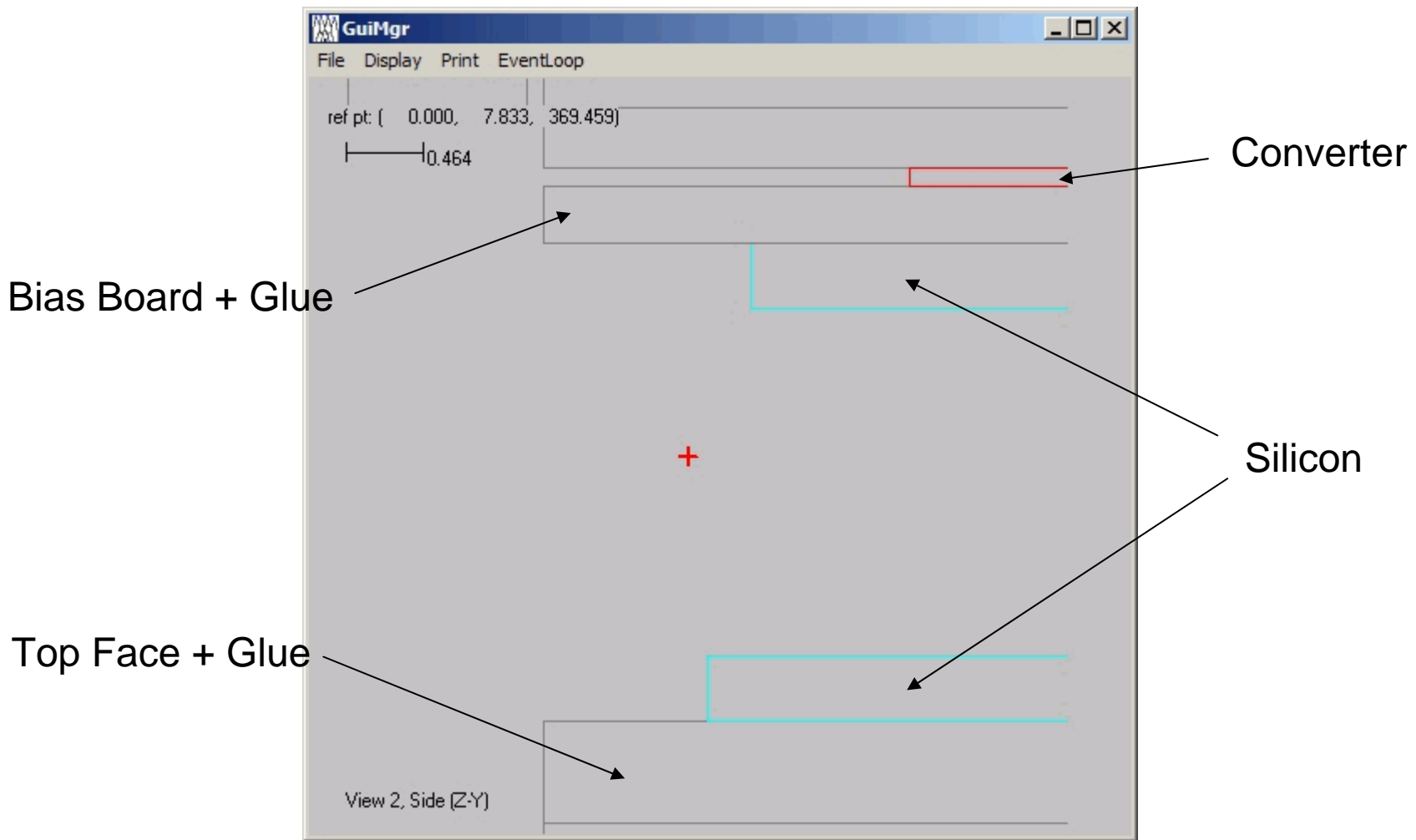The tracker wafers are attached to the bias board by a small number of glue dots.

The current Gleam geometry lumps these dots together with the bias board and other elements and assigns the composite an average density. This puts more material close to the silicon than is actually the case. This material may be absorbing delta rays, causing fewer hits in the Monte Carlo than in the data.

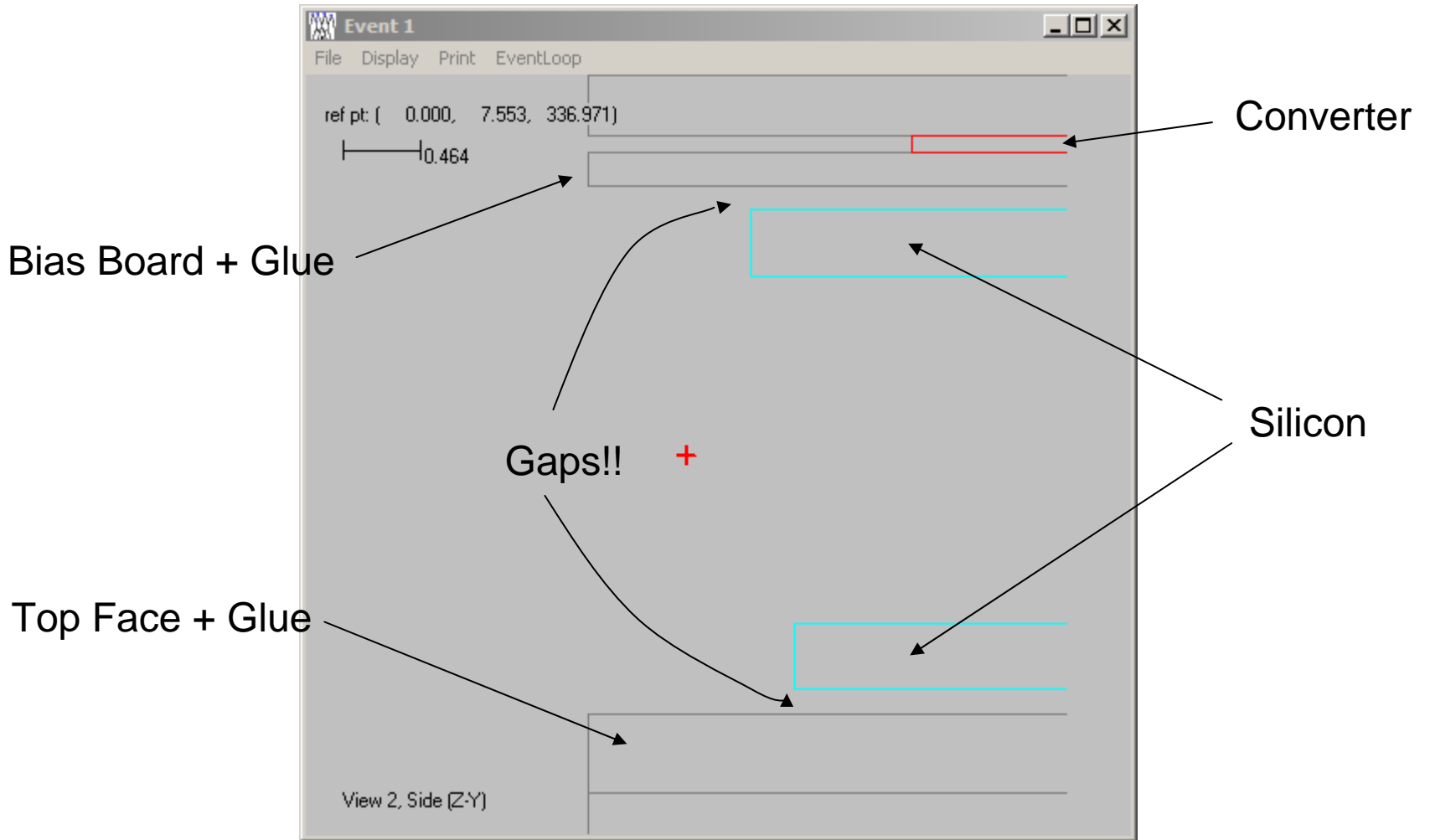I present a geometry that addresses this issue.

Strategy

- Remove the glue-dot layer from the composite structures.

- Increase the density of these structures to compensate for the thinner material

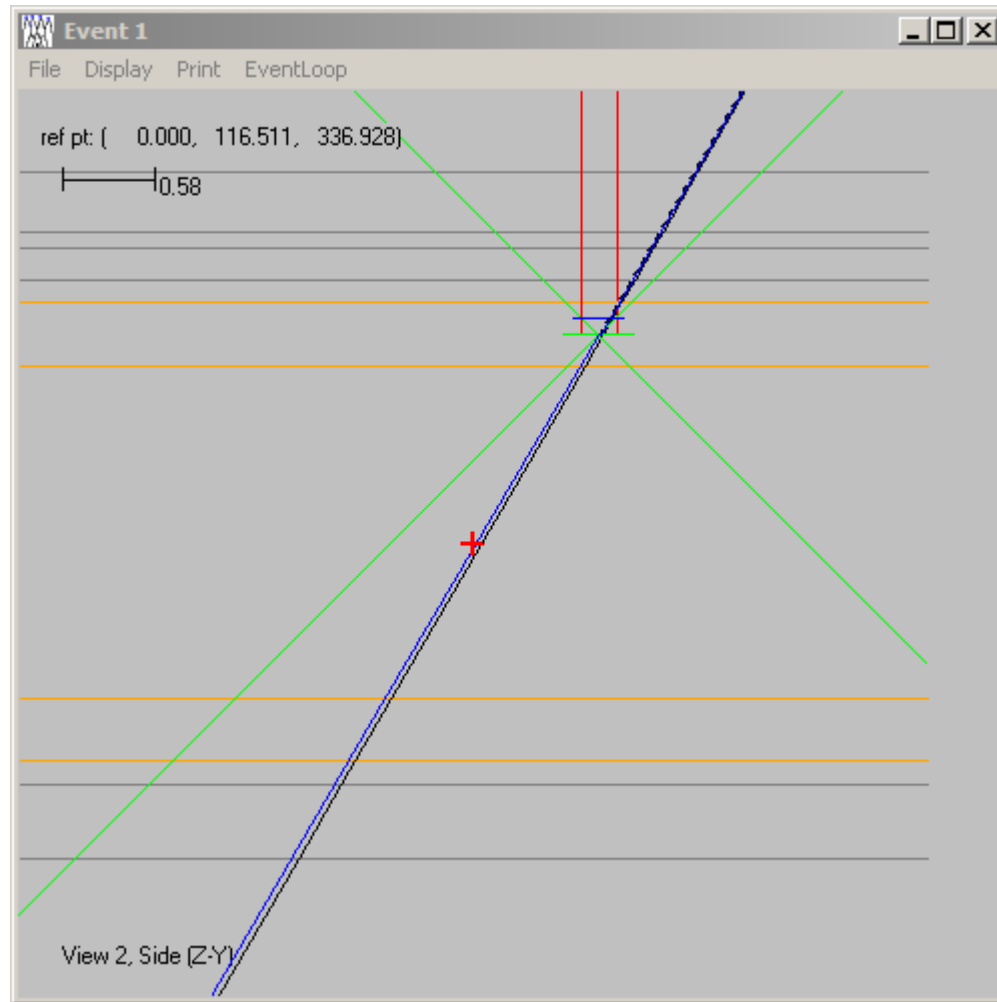- Add a gap of 150 microns to simulate the glue-dot layer

Before

Converter

Bias Board + Glue

Silicon

Top Face + Glue

View 2, Side (Z-Y)

After

Converter

ref pt: (0.000, 7.553, 336.971)

0.464

Bias Board + Glue

Silicon

Gaps!!   +

Top Face + Glue

View 2, Side (Z-Y)

Track

Detail: Hit is correctly placed