SiliMap Status and Plans

Kurt Rinnert

University of Karlsruhe

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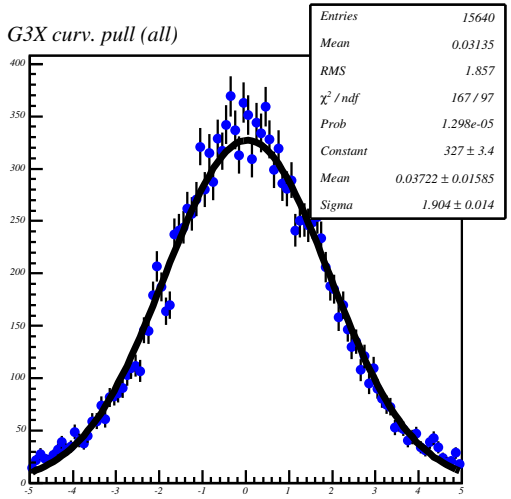
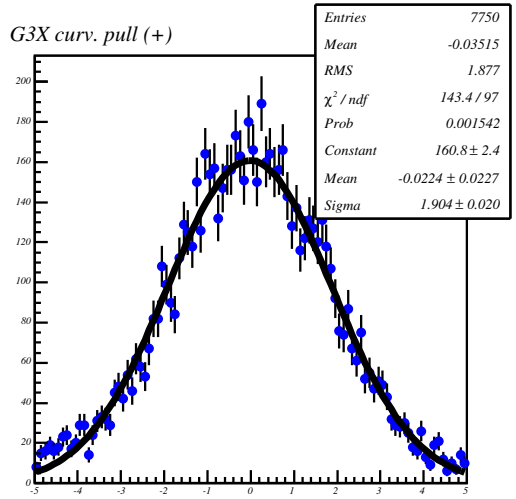
Outline

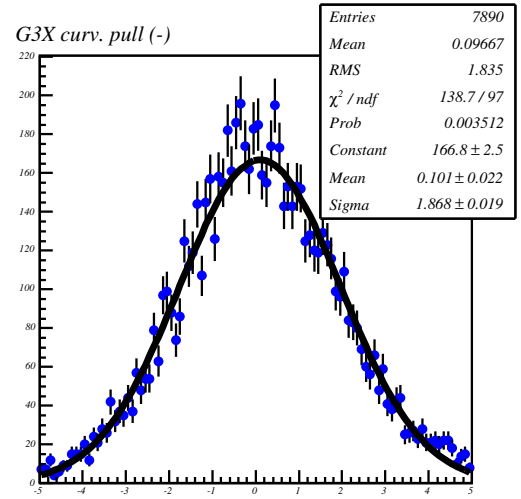
- Performance
- Code Status
- Usage
- Next Steps

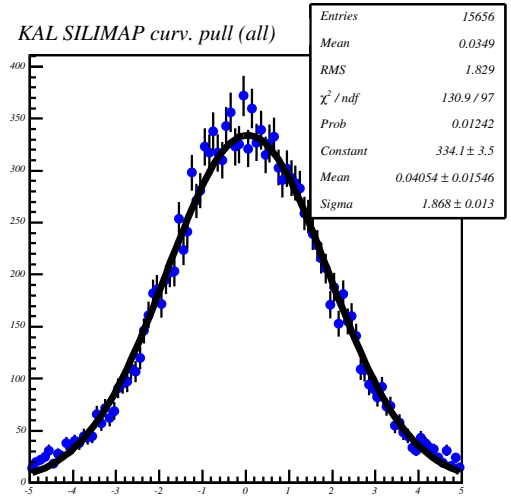
Curvature Pull: SiliMap vs. G3X

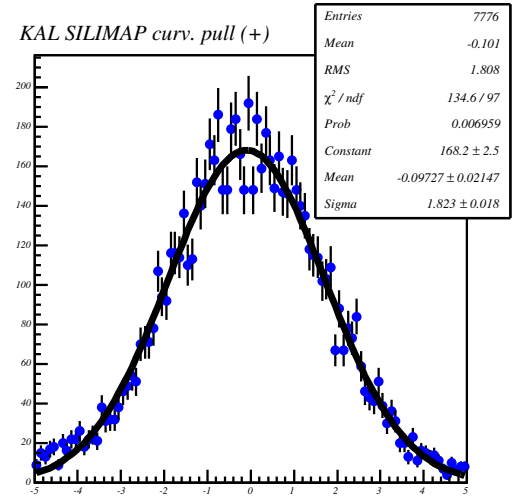
Single μ MC with $|\eta| < 1, p \in [0.5, 2]$ GeV, 5.0.0int4 OI Tracks

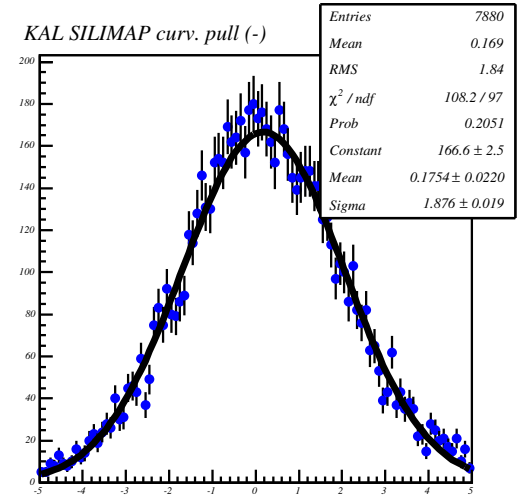






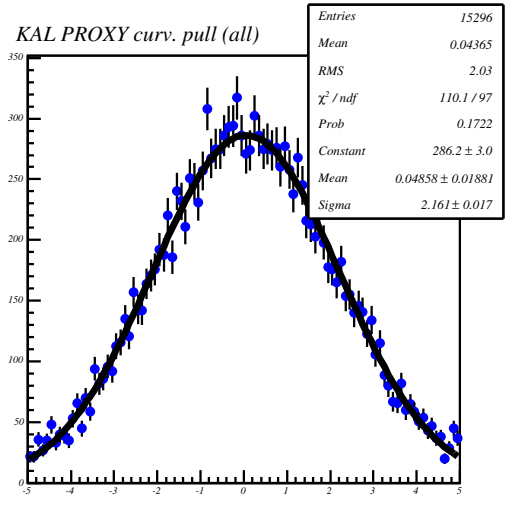


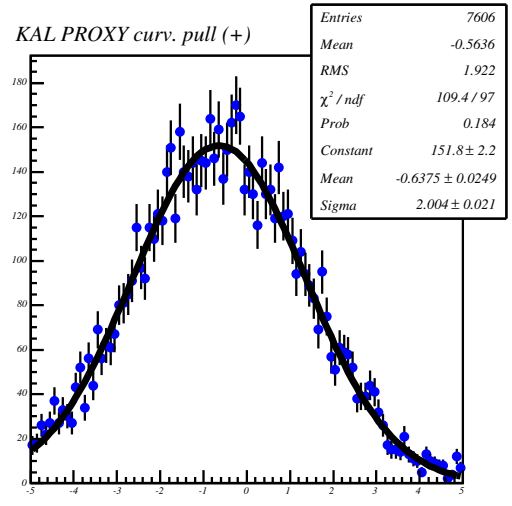


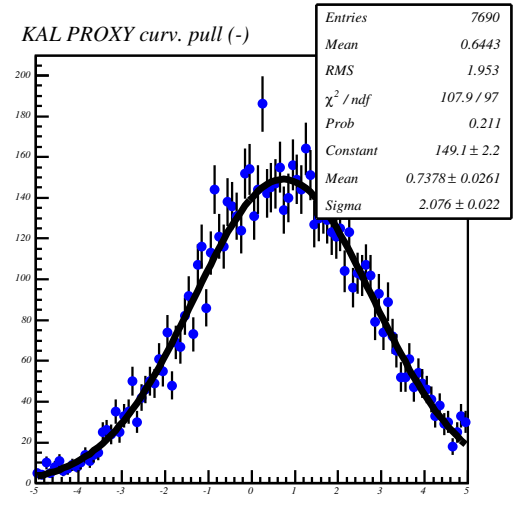


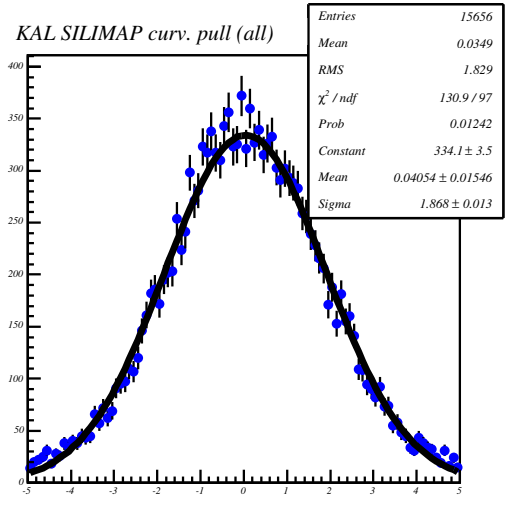
Curvature Pull: SiliMap vs. Proxy

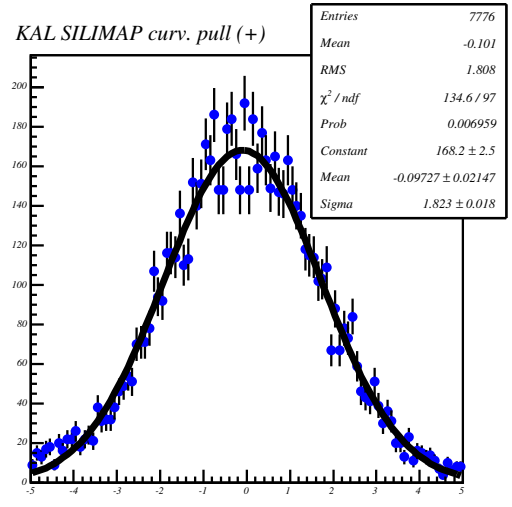
Single μ MC with $|\eta| < 1, p \in [0.5, 2]$ GeV, 5.0.0int4 OI Tracks

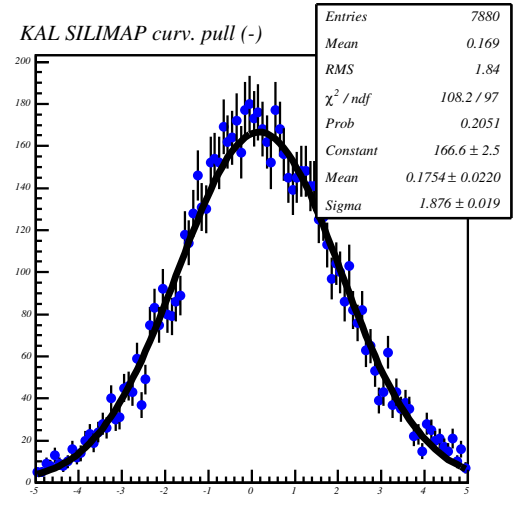






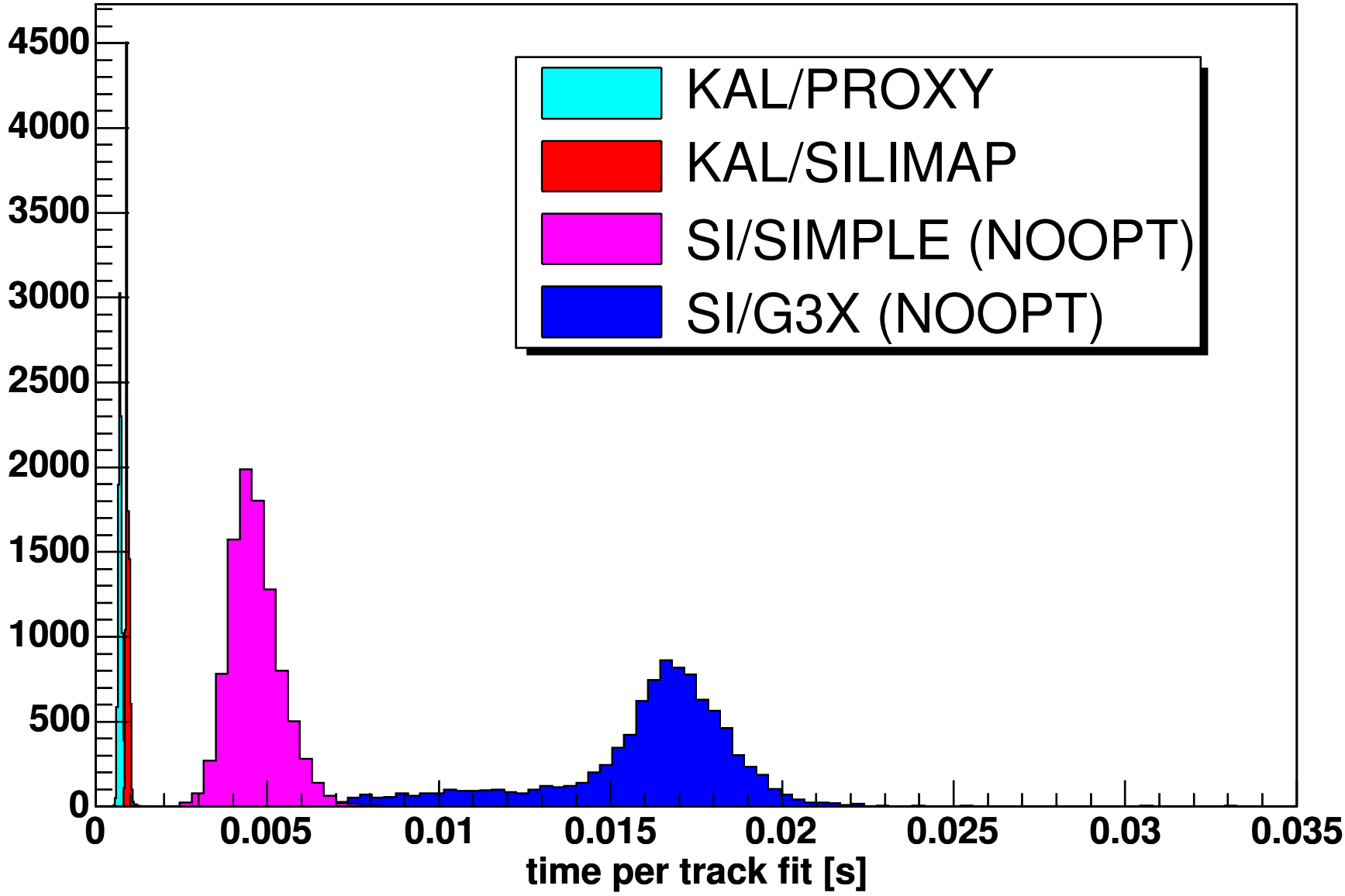






Timing Performance

Time per track fit, measured with **`ZMtimer`** on AMD Opteron 240



Code Status

- job startup (vs. compile time) switch for Kal now implemented
- this does not allow real runtime switching
- numerous packages affected:
  - almost **`Tracking*`**
  - **`SiliconGeometry`**
- implemented and tested using 5.3.1int1 + HEAD
- default behaviour unchanged (was validated)

New Integration Release would be helpful!

Usage: Preconditions

Currently

- 5.3.1(int1) work release with updated packages:
  `TrackingCT, TrackingKal, TrackingObjects, TrackingUserHL, TrackingUtils, TrackingHL, TrackingMods, TrackingSI, SiliconGeometry`
- get latest SiliMap from e.g.
  `fcdfsgi2:/cdf/home/rinnert/Maps/SiliMap_0503010[01].root`
- create symbolic link '**`silimap.root`**' and point **`$SILIMAP_DIR`** to the directory where it resides

Future

- None – SiliMap is bundled and set up with the release

Usage: Job Configuration

- in a module, *before* any instance of **`TrackRefitter`** is constructed do

```
#include "TrackingKal/KalConverter.hh"
      ... snip ...
KalConverter::instance()->useSiliMap(true);
      ... snip ...
```

- **`GeometryManager`** Configuration:

```
talk GeometryManager
   SiliconGeometryMenu
      ReadSiliMapROOT set t
   exit
exit
```

- for tracking, configure **`PVFinder`**:

```
talk PVFinder
   SAS3DPVFinderUseSiliMap set t
exit
```

(works, but *not validated*)

Next Steps

- validate on physics data (mass plots)
- complete documentation
- automatic generation of fool-proof scan job for CAF-like interfaces
- make SiliMap a UPS/UPD product and distribute it with releases
- change default for fitting, keep Proxy for tracking?