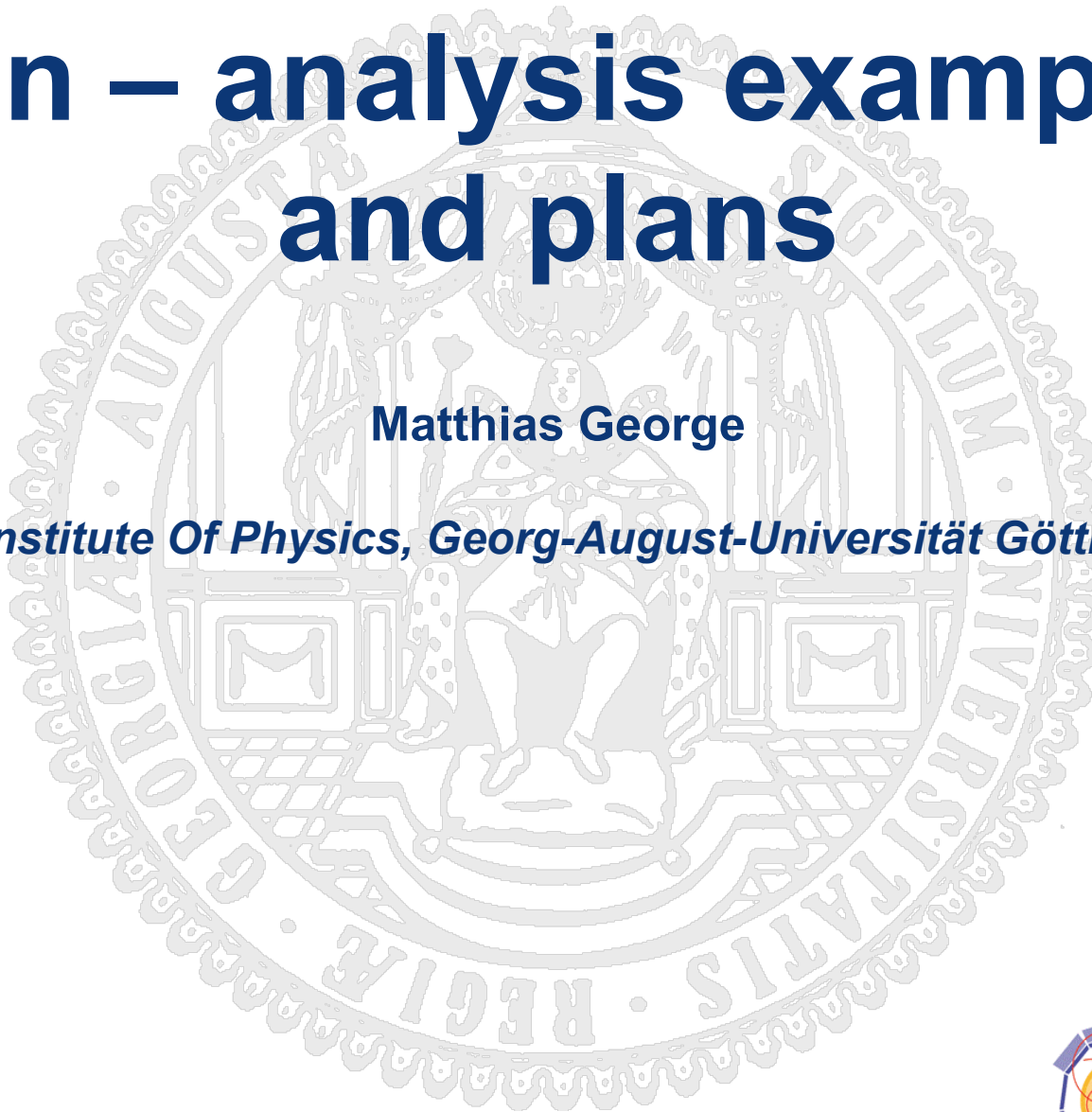# Tbmon – analysis examples and plans

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- Standalone analysis tool for tbtrack-tuples

- Uses output of APIXtbtracktupledumper (could be named "trackdumper" ;-))

- Used for all testbeam analyses of ATLAS planar pixel, 3D pixel and Diamond Beam Monitor groups

- Currently code is quite messy, will be improved in near future (student hired)

- Code is still growing each day

- ## Track-map for an ATLAS pixel sensor
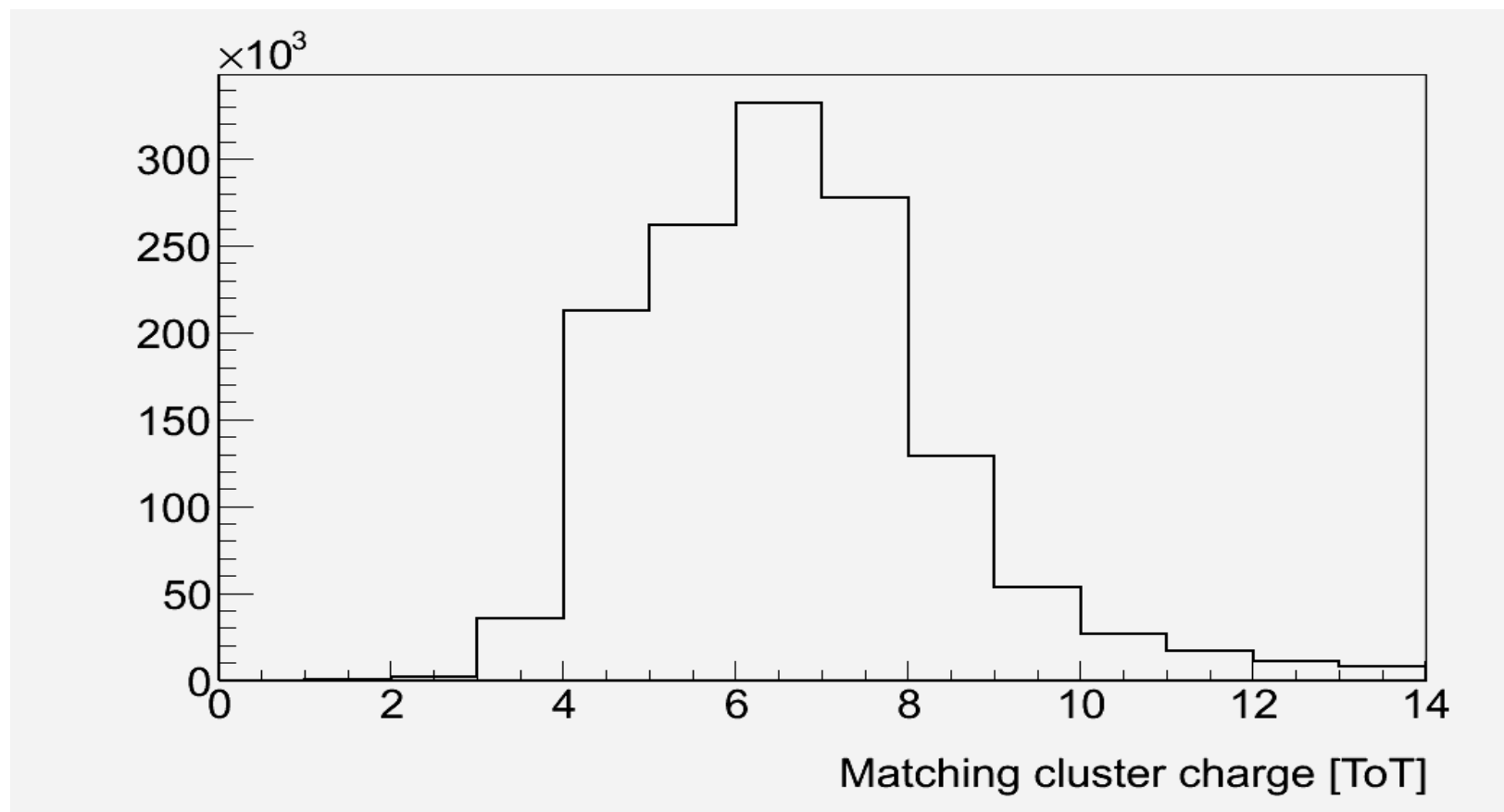
GEORG-AUGUST-UNIVERSITÄT
GÖTTINGEN
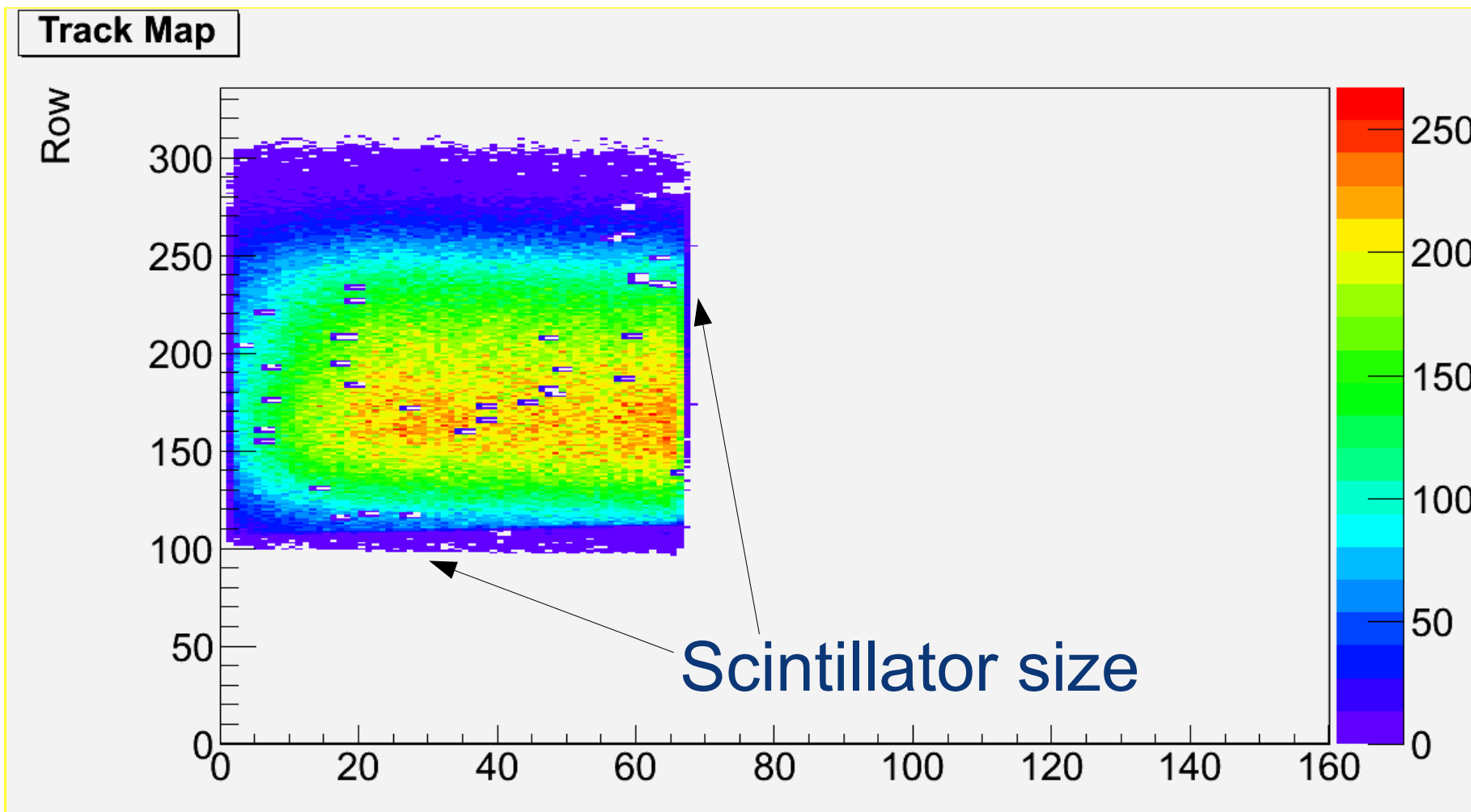
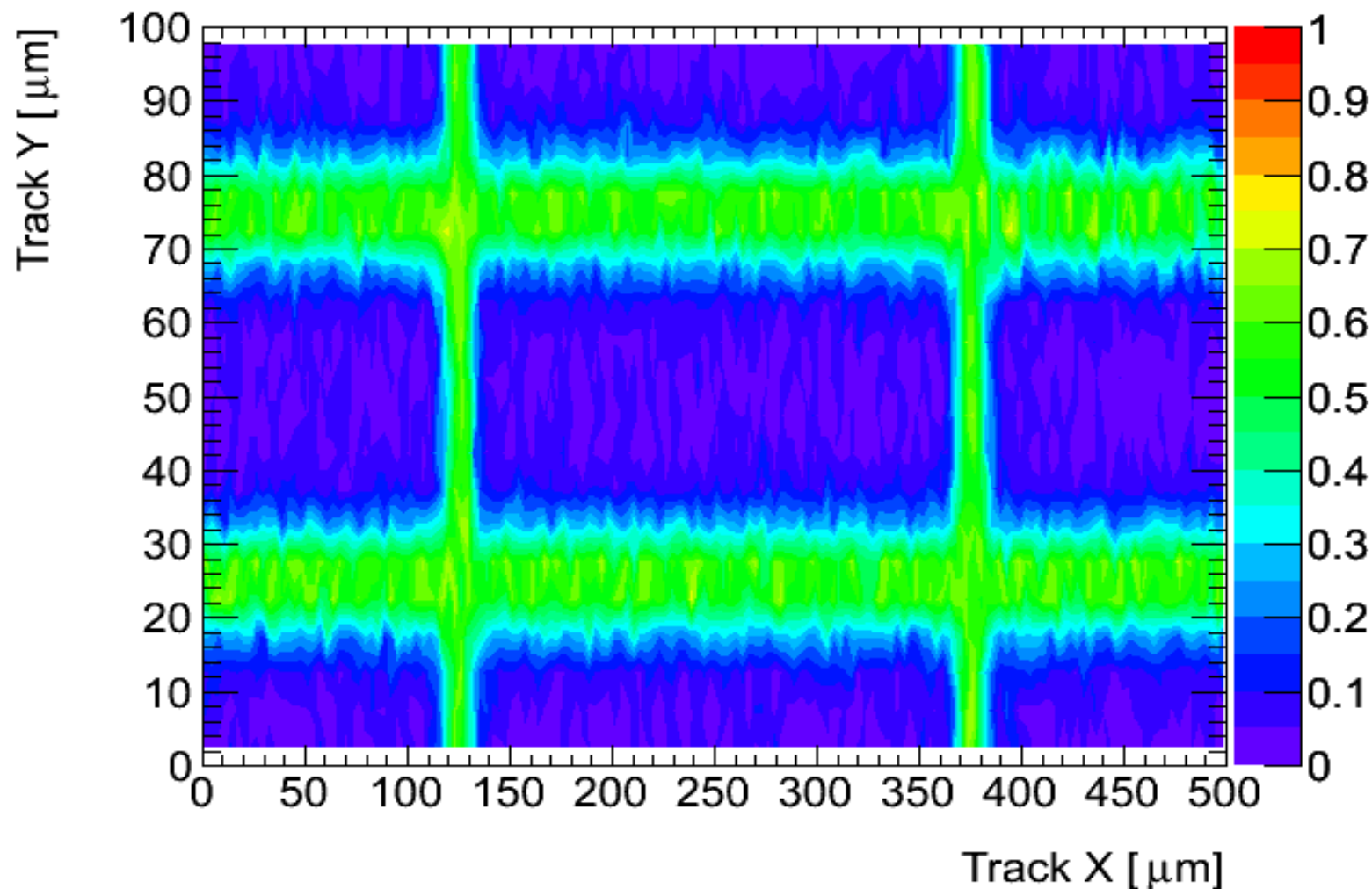- Efficiency-map for a pixel sensor
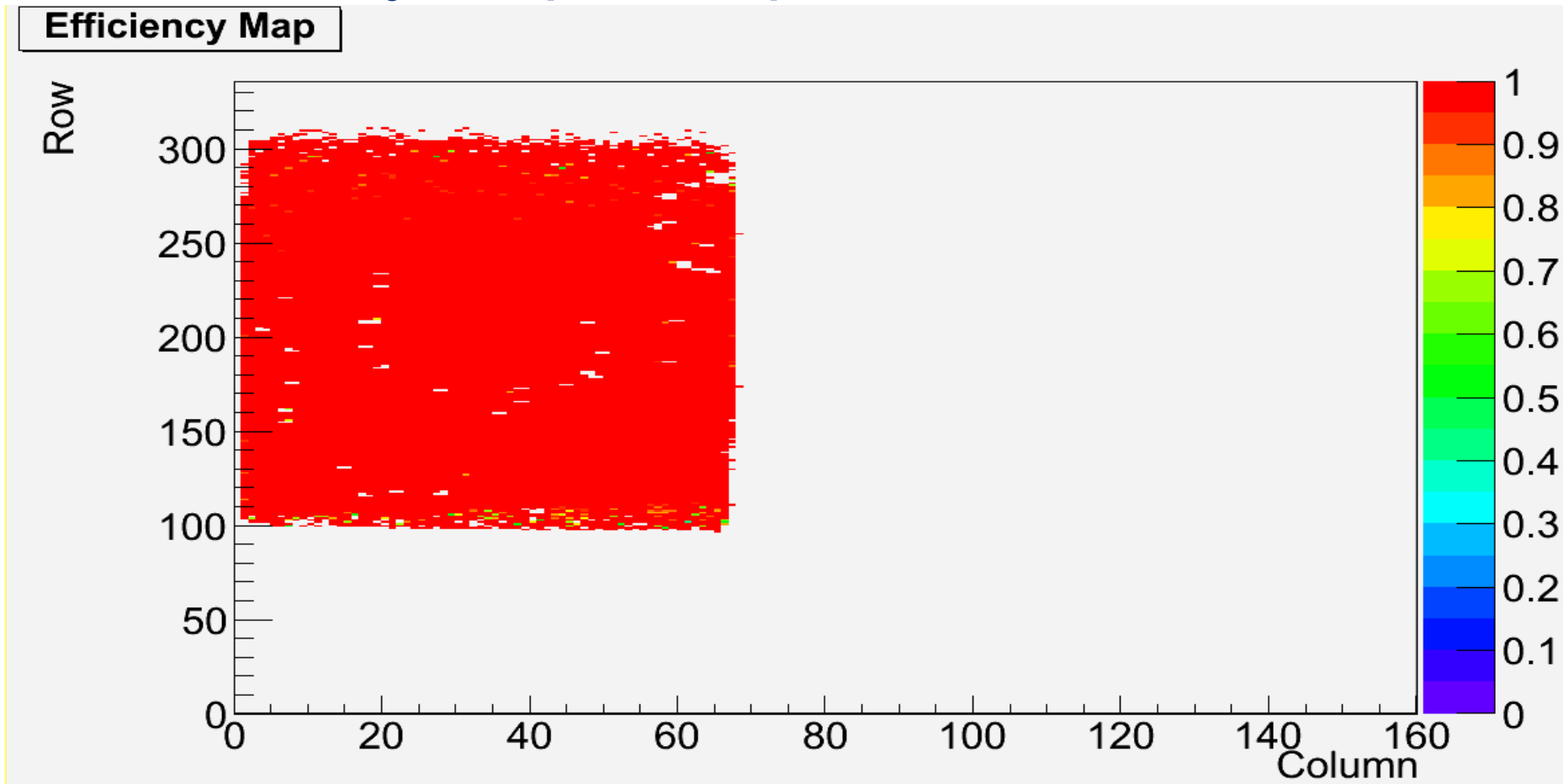
- Efficiency now dumped as text output → can be written into the plot
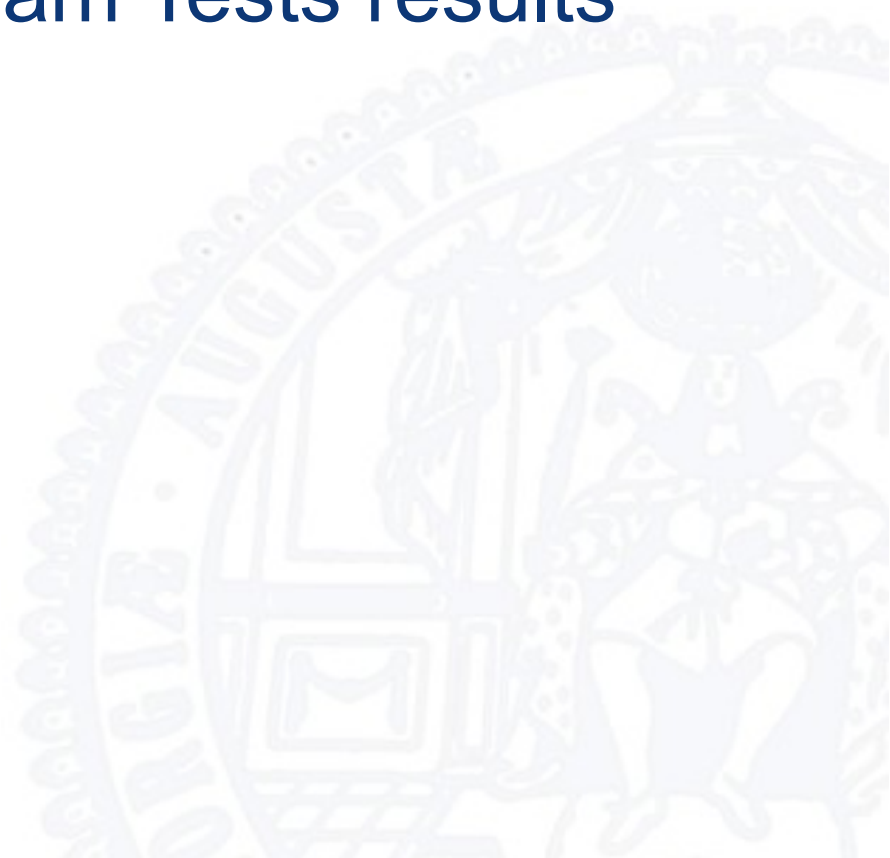
- Matched cluster ToT (also available for any fixed clustersize)

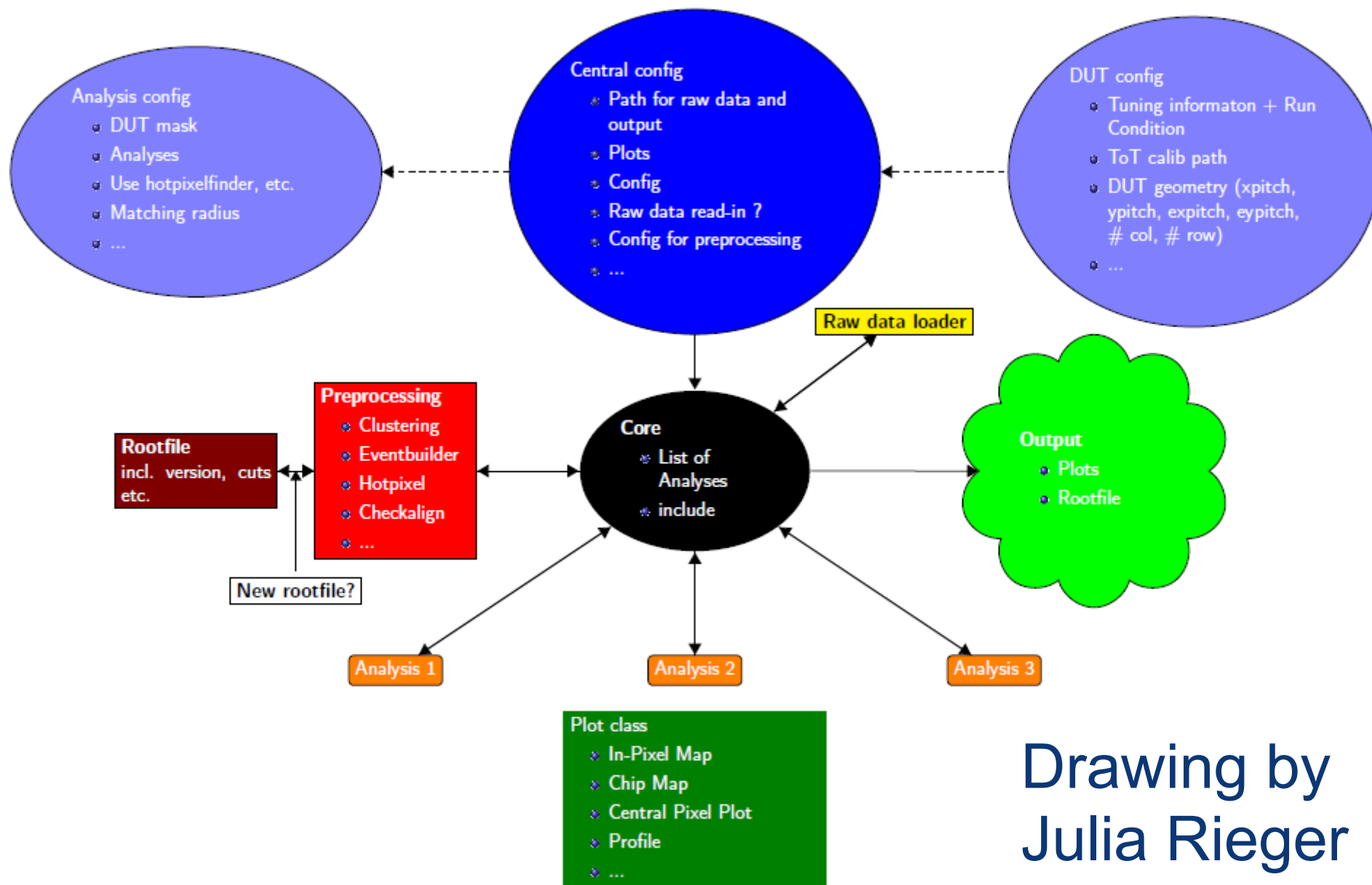- Plugin for conversion to charge available

- In-Pixel plot; charge sharing fraction

- ...and many more

- More detailed descriptions can be found in

- JINST 7 P10028 (2012), Planar Pixel Sensors for the ATLAS Upgrade: Beam Tests results

- IBL TDR

- 3D pixel testbeam paper

- …

- ## Clean up and organize SW structure

Drawing by
Julia Rieger

- Dump SW-version, used cuts, logging in output root-file

- Provide a general (pixel) geometry description

- Needed for L-shaped, shifted, … pixels

- Idea:

  - DUT description allows several different pixel shapes per DUT

  - Several pixel geometries based on rectangular shapes covered

  - Predefined "standard" geometries, e.g. "standard FE-I4"

- Pixel Type 1:

- Shape, pos X/Y, periodicity, ...

- Pixel Type 2:

- Shape, pos X/Y, periodicity, ...

- Pixel Type N:

- Shape, pos X/Y, periodicity, ...

- Tbmon is availble on svn

- After SW is generalized, could be interesting for more groups

- After yesterday´s discussion: maybe add to EUTelescope branch?

- Should stay a standalone tool

- New analysis plug-ins, ideas, … always welcome

- Implementation of new parts should be easy in new SW structure

- For access rights, ask Andre Rummler

- One of the main focusses at the moment: analysis of data at high incidence angles

- Quite tricky especially for irradiated sensors

- See next presentation by Stefano