

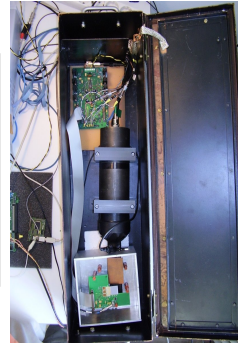
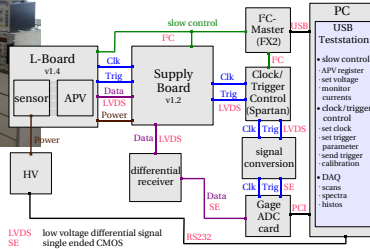
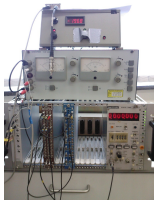
# Update on the Si-Strip Tests

Hans-Georg Zaunick

HISKP  
Universität Bonn

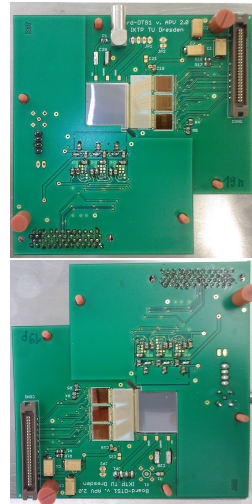
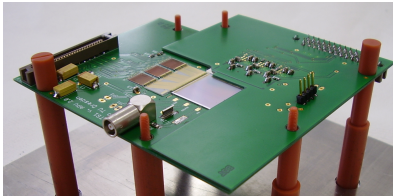
PANDA collaboration meeting, GSI, March 3, 2008

# Si-Strip test station in Dresden

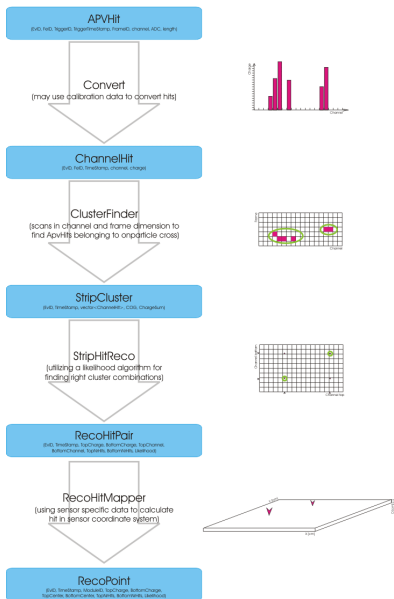


# Sensor-PCB

- L-shape for double sided mounting
- mechanical support for sensor/pitch adaptor/FEs
- supply/bias voltage distribution



## Data Analysis



## Low Level Feature Extraction Framework

- light weight framework set up for current data structures
- merged Dresden/Bonn low level hit/cluster processing+reco
- merged with PANDARoot but may be also used stand alone

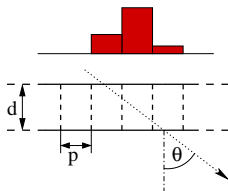
## SVN Repository Checkout

feel free to use/contribute,  
please contact me for checkout

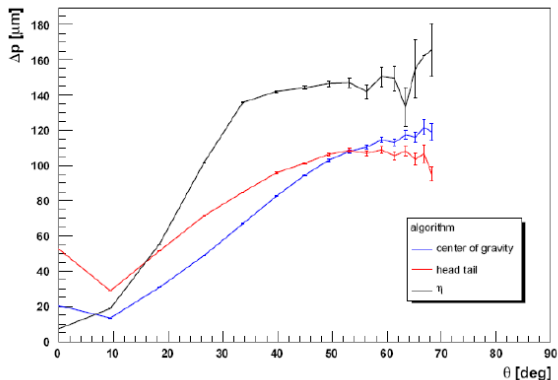


# Clustering

- comparison of different clustering algorithms
- resolution dependent on
  - 1 cluster sizes
  - 2 incident angle
  - 3 algorithm



L. Ackermann (Dresden)



# Module Parameter MySQL Database

DB containing information about all characterized Modules set up by F. Krüger (Dresden)

File Edit View History Bookmarks Tools Help

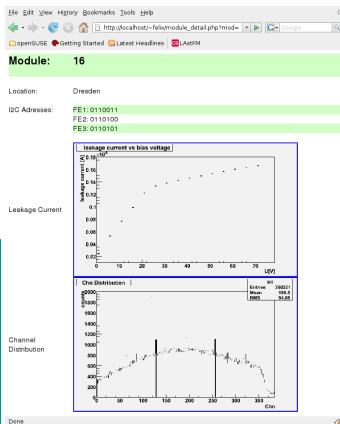
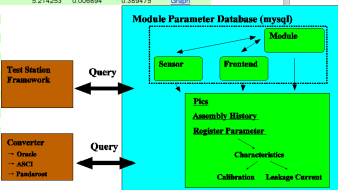
http://localhost/~felix/calib.php?mod=16

openSUSE Getting Started Latest Headlines LAUFM

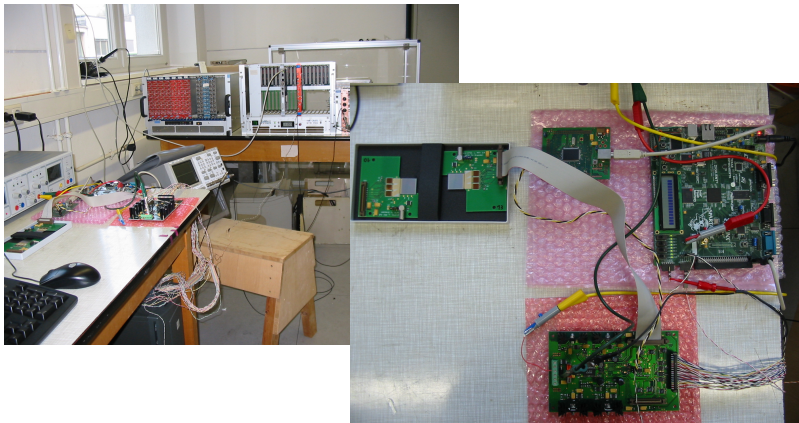
### Calibration Module: 16

FeID	Channel	Parameter	Error	Chi2	
0	0	5.328376	0.04956	29.995182	Graph
0	1	6.113114	0.038668	1.090123	Graph
0	2	6.167943	0.005545	0.418843	Graph
0	3	6.199384	0.005166	0.359924	Graph
0	4	6.160224	0.004263	0.250523	Graph
0	5	6.146802	0.004647	0.285985	Graph
0	6	6.126975	0.005177	0.370097	Graph
0	7	6.021127	0.00481	0.290785	Graph
0	8	5.176104	0.021612	3.882887	Graph
0	9	5.40176	0.004009	0.165988	Graph
0	10	5.438323	0.005163	0.27171	Graph
0	11	5.475609	0.005491	0.302987	Graph
0	12	5.439668	0.005059	0.260595	Graph
0	13	5.434866	0.005205	0.278417	Graph
0	14	5.409358	0.006049	0.376762	Graph
0	15	5.309277	0.005976	0.329211	Graph
0	16	5.052722	0.011119	1.078926	Graph
0	17	5.210939	0.006873	0.387589	Graph
0	18	5.239659	0.005077	0.243906	Graph
0	19	5.262302	0.005009	0.235435	Graph
0	20	5.214253	0.006894	0.389475	Graph
0	21				
0	22				
0	23				
0	24				
0	25				
0	26				
0	27				
0	28				
0	29				
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0	31				
0	32				
0	33				

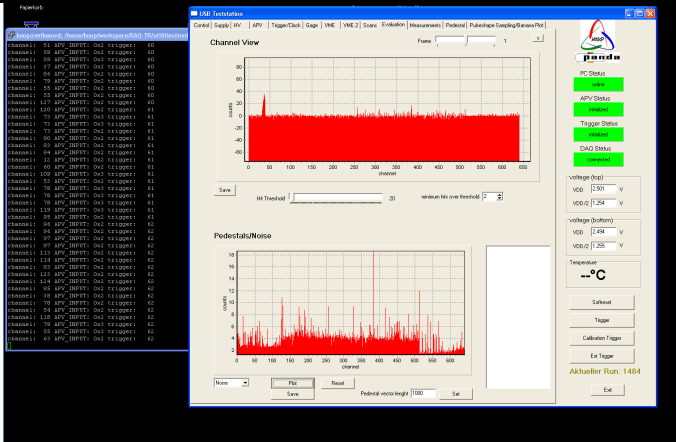
Done



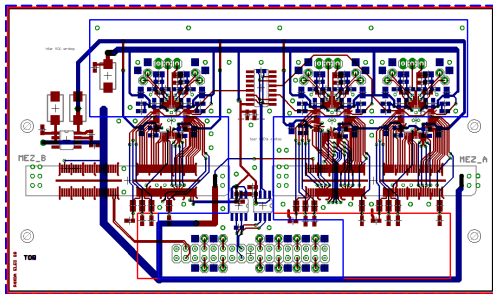
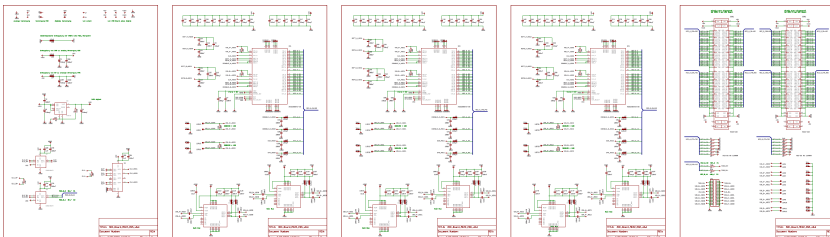
# Lab setup in Bonn



- Implementation of VME-based R/O
- high modularity → ease of table top setups



- Feature Extraction and data Sparsification implemented in FPGA
- first tests running with 10MHz R/O clock
- fast ADCs with up to 65 MSPS coming soon...

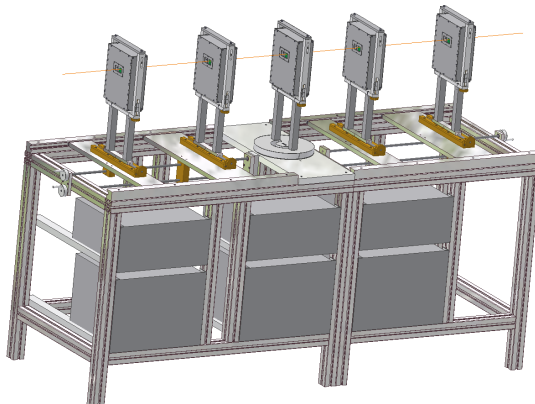


- Fast-ADC Mezzanine Card for VME-FPGA R/O card (custom CB-Module)
  - submission this week
- R.Schnell (Dresden)

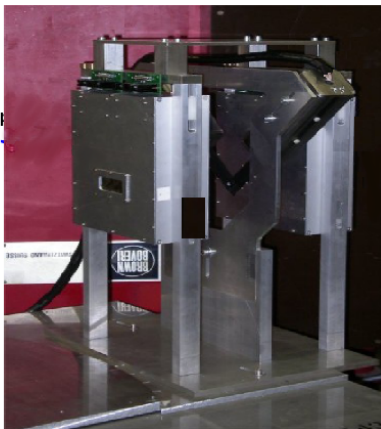
# Tracking Station

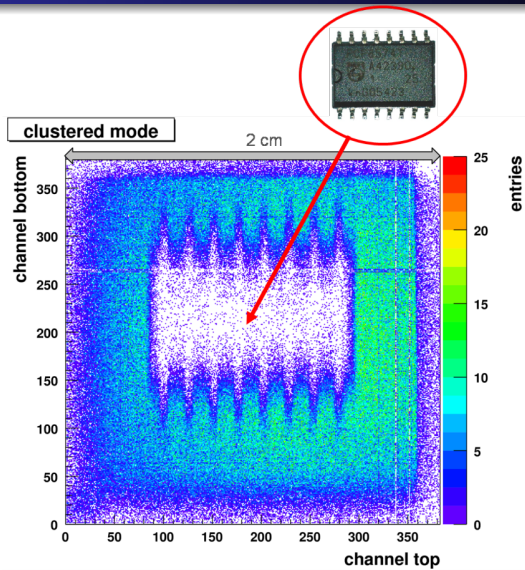
goals:

- resolution studies at Si-Sensors
- measurement of multiple scattering for various materials/configurations for MVD case



# ELSA beam setup for TPC Testbench







# Conclusion

- evaluation of fully mounted modules w/ double sided readout has begun
- set up of DB for characterisations of prototype modules and to get familiar with QA processes
- modular construction of Si-Strip-Sensor “building blocks”

# Whats next?

- tracking station to study "real life" track resolution and multiple scattering in compound material samples (for MVD-Mec), will be done by two Diploma Students in Bonn (M.Becker, K.Koop)
- Integration of Strip-FEE readout into Jülich MVD-R/O-Framework

## PANDA-FE-DAQ Workshop Bavarian Forest, April 22-24 (Organisers: I. Konorov, W. Kühn)

- all subdetector groups should introduce their requirements on FE-DAQ interface (bandwidth, format, link types, synchronization etc.)
- discussion of common issues like global clock, compute nodes etc.
- Online Detector Data Processing - Algorithms, implementations, hardware requirements
- informations will be collected and made available online

more information can be found at:

**<http://www.e18.physik.tu-muenchen.de/research/panda/FEDAQmeeting09.html>**