Short Summary of Meeting with the Gutachter-Ausschuss and Representatives of the BMBF („Projektträger“)

Purpose of the Meeting:

4 (new) groups (Bonn2, Gießen, LMU, TUM) have submitted funding requests to the BMBF

The GA advises the BMBF on the quality of the application and makes a recommendation for/against funding

Place: Gustav-Stresemann-Institut, Bonn, 13.9.2010

Participants

GA members:

T. Behnke, C. Hagner, K. Jakobs (chair), T. Mannel, G. Quast,
U. Uwer, R. Voss, D. Zeppenfeld

BMBF-Representatives: K. Ehret, M. Hempel, H. Mahlke

DEPFET: M. Feindt, P. Fischer, C. Kiesling, H. Krüger, H.-G. Moser,
T. Müller, I. Peric, N. Wermes

Agenda of the Meeting

8.30h - Vortreffen GA-Mitglieder

9.00-12.30h: Besprechung mit Vertretern der deutschen Belle II Gruppen

TOP 1 Überblick über das Gesamtprojekt	C.K.
TOP 2 Geplante deutsche Beteiligung bei Belle-II	
TOP 3 Status DEPFET Sensorentwicklung	HG. M
TOP 4 Ausleseelektronik	I.P.
TOP 5 Belle-II PXD DAQ System	C.K.
TOP 6 PXD Integration: Mechanik und Infrastruktur	
TOP 7 Längerfristige Pläne der dt. Belle-II Gruppen	M.F.

Funding Situation of the Machine

KEKB upgrade plan has been practically approved

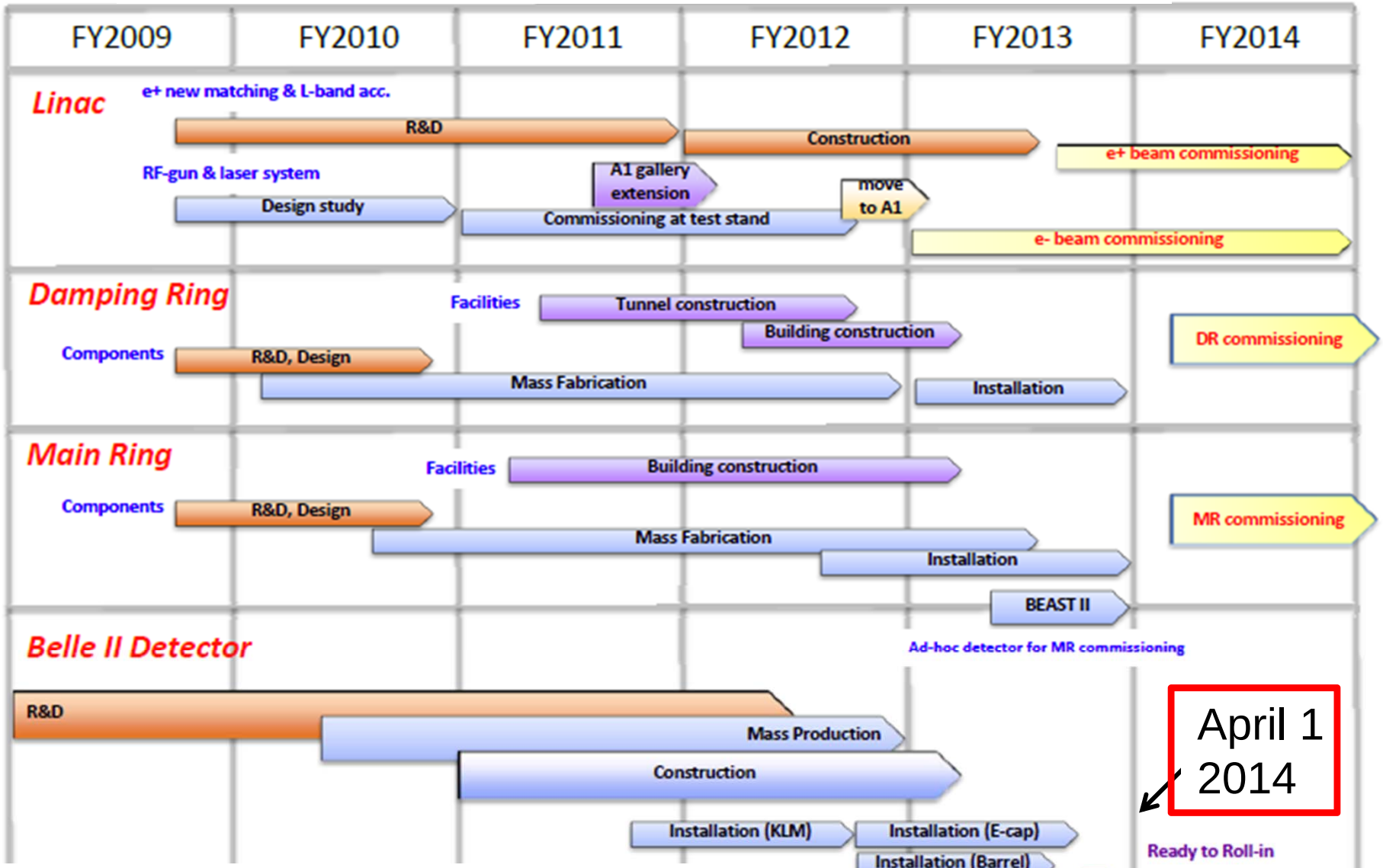
June 23, 2010 High Energy Accelerator Research Organization (KEK)

The MEXT, the Japanese Ministry that supervises KEK, has announced that it will appropriate a budget of 100 oku-yen (approx $110M) over the next three years starting this Japanese fiscal year (JFY2010) for the high performance upgrade program of KEKB. This is part of the measures taken under the new "Very Advanced Research Support Program" of the Japanese government.

Now officially called „SuperKEKB"

Final decision expected by the end of this year

Overall Schedule: SuperKEKB Project



presented by Y. Ushiroda (Technical Coordinator) on July 5, 2010

Geplante Deutsche Beteiligung bei Belle-II

Gesperrte Mittel, Neuanträge

	T€
Bonn	362
Heidelberg	38 (76)
Karlsruhe	0 (30)
Summe	400

	T€	FTE	
Gießen	75	105	(1.0)
TUM	102	42	(0.4)
LMU	10	105	(1.0)
Bonn2	40	105	(1.0)
	227	357	

Förderperiode Okt. 2010 – Jun 2012
= 1.75 Jahre 1 FTE Jahr = 60 T€

Neuanträge könnten weitgehend aus den gesperrten Mitteln finanziert werden

Mechanics and Cooling

Mechanics´and Cooling

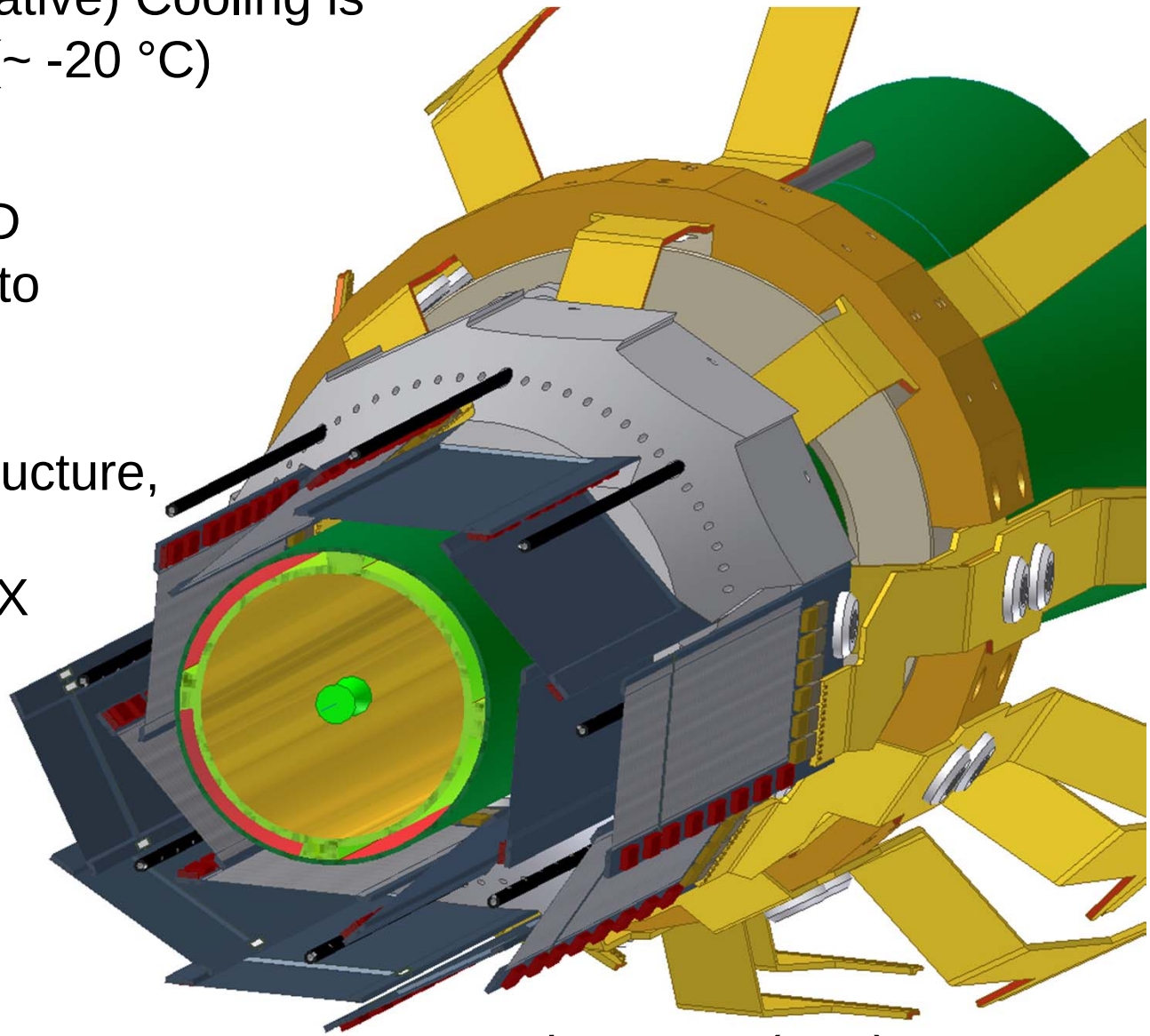
CO2 (2-phase evaporative) Cooling is baseline for the PXD (~ -20 °C)

CO2 pipes within the PXD support structure (needs to stand 120 Bar)

➔ new design of support structure, based on novel 3D manufacturing using INOX („rapid prototyping“)

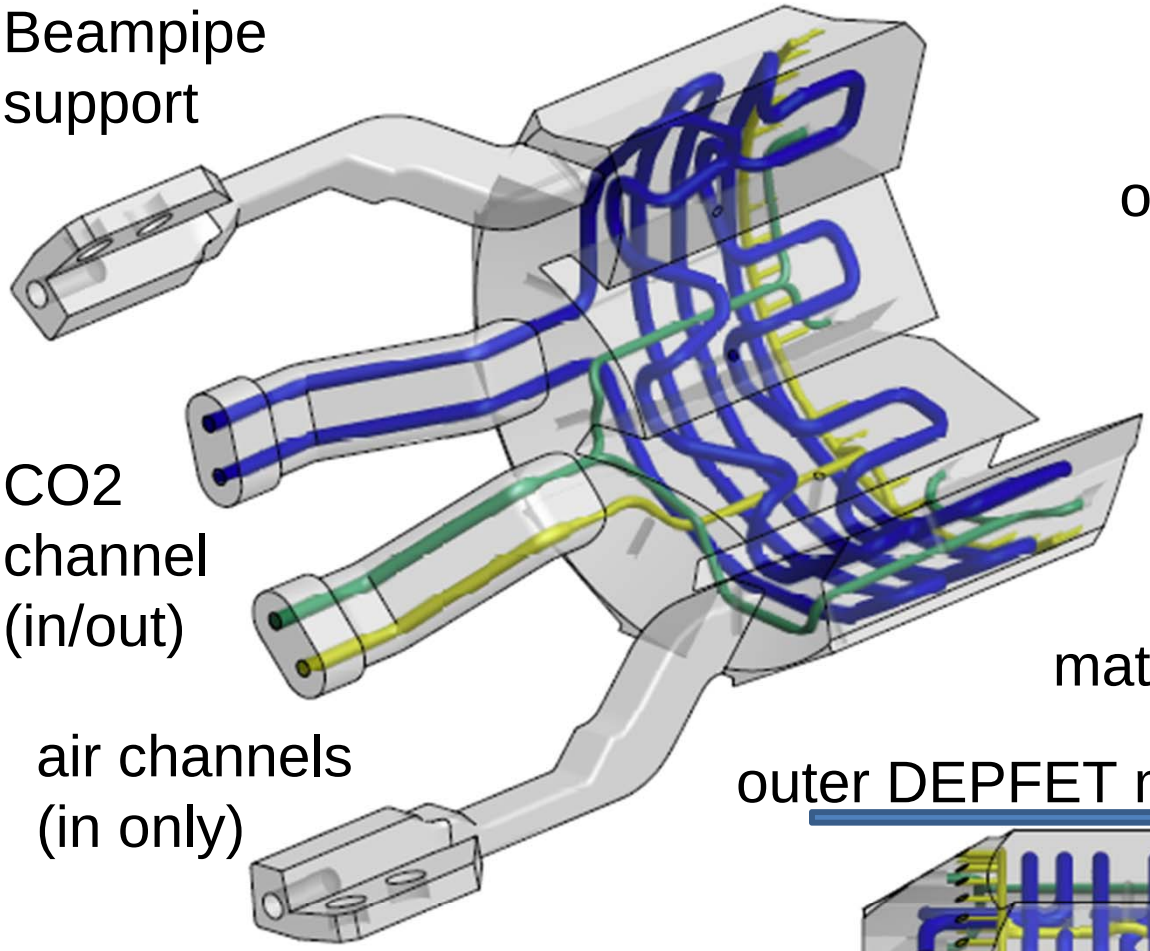
New idea for air flow:

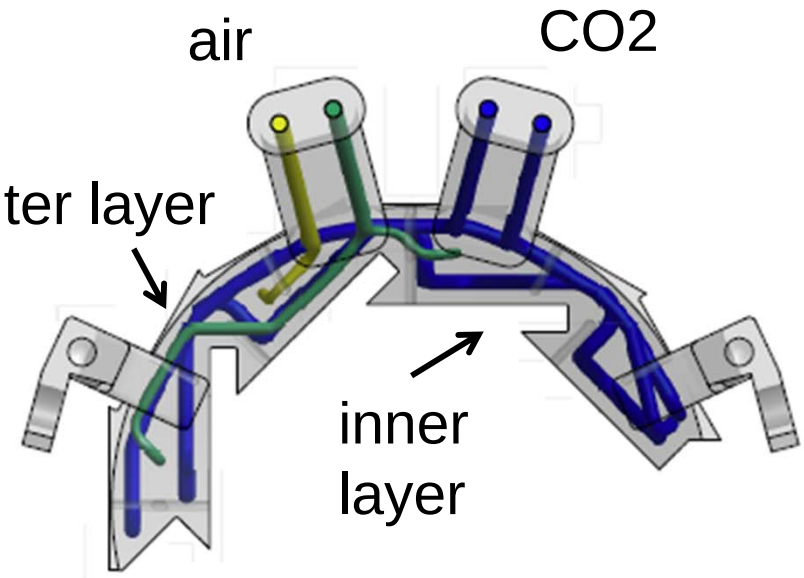
additional carbon pipes for direct air cooling of the switcher chips



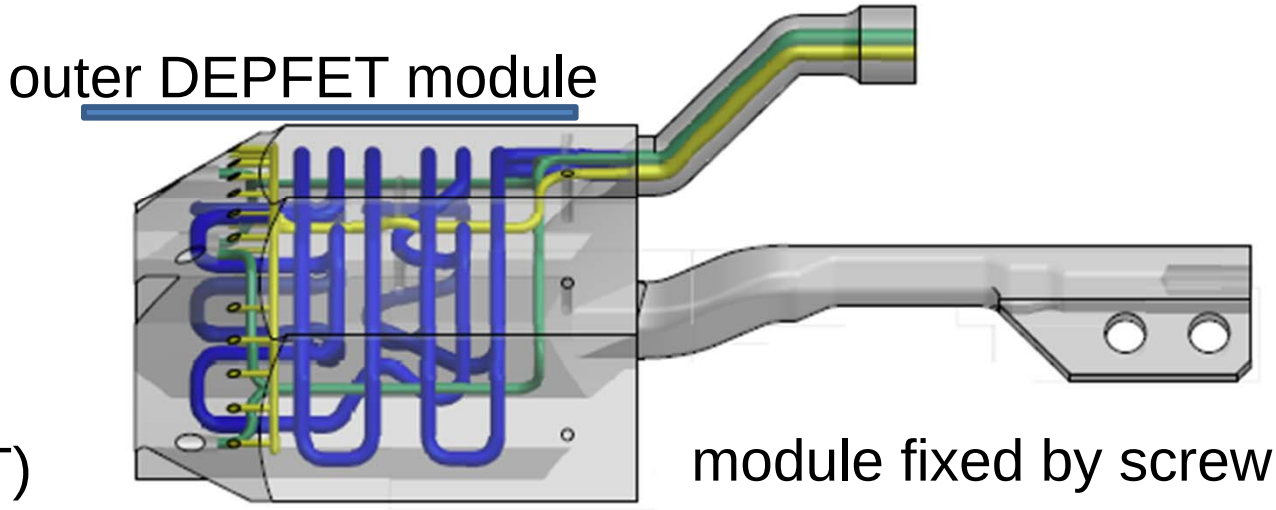
K. Ackermann (MPI)

Mechanics and Cooling (cont.)



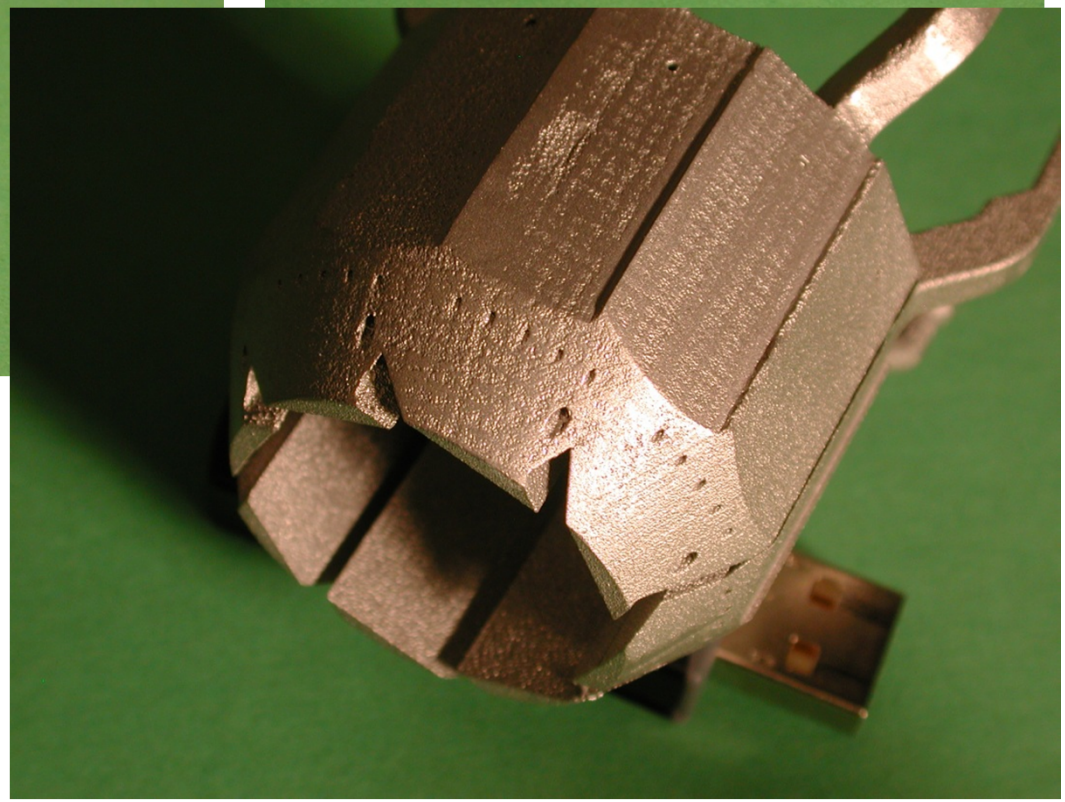


material INOX



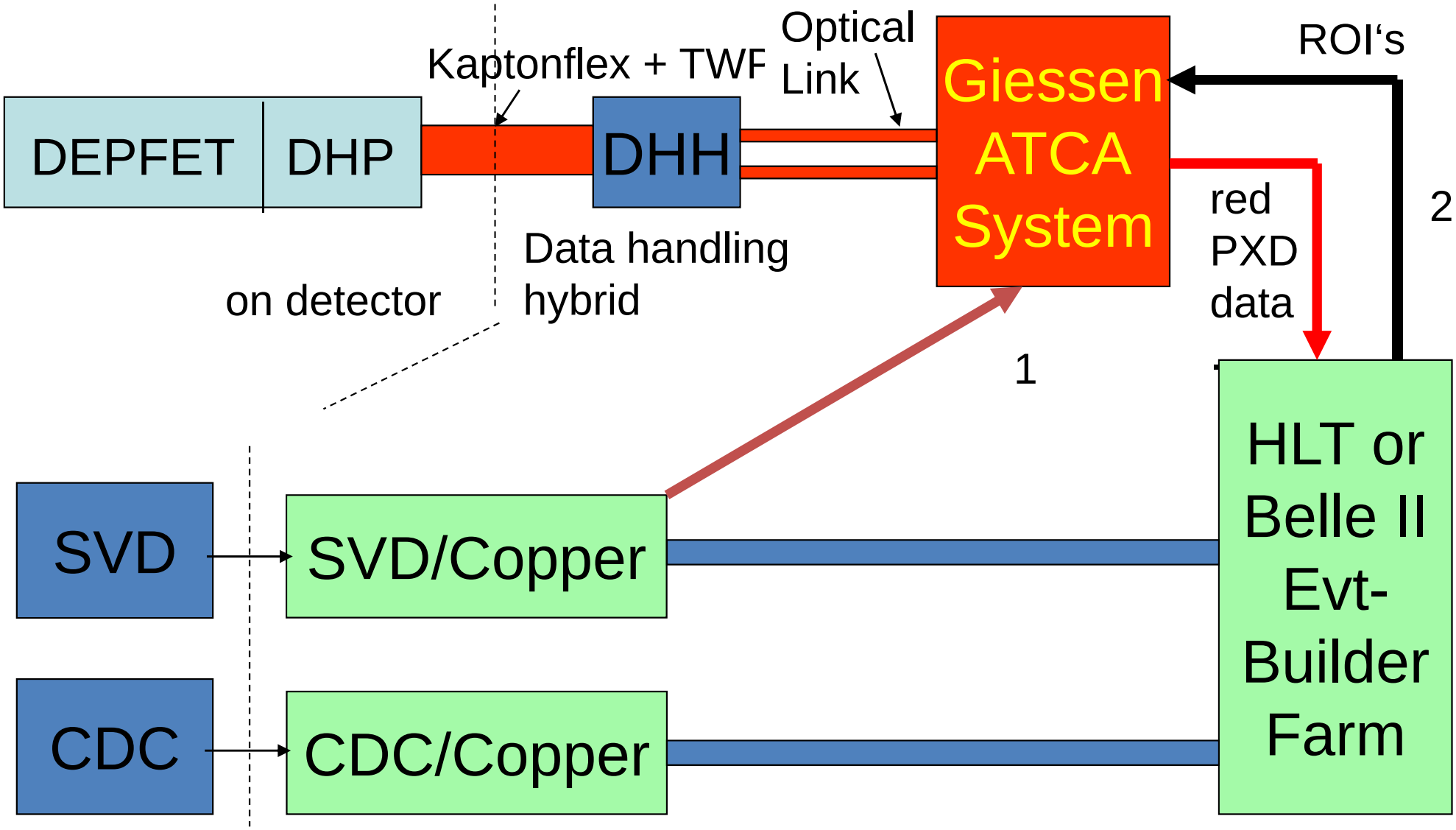
design: K.A. (MPI)
manufactured by Fruth Innovative Technology (FIT)

First parts have arrived at MPI



PXD DAQ System

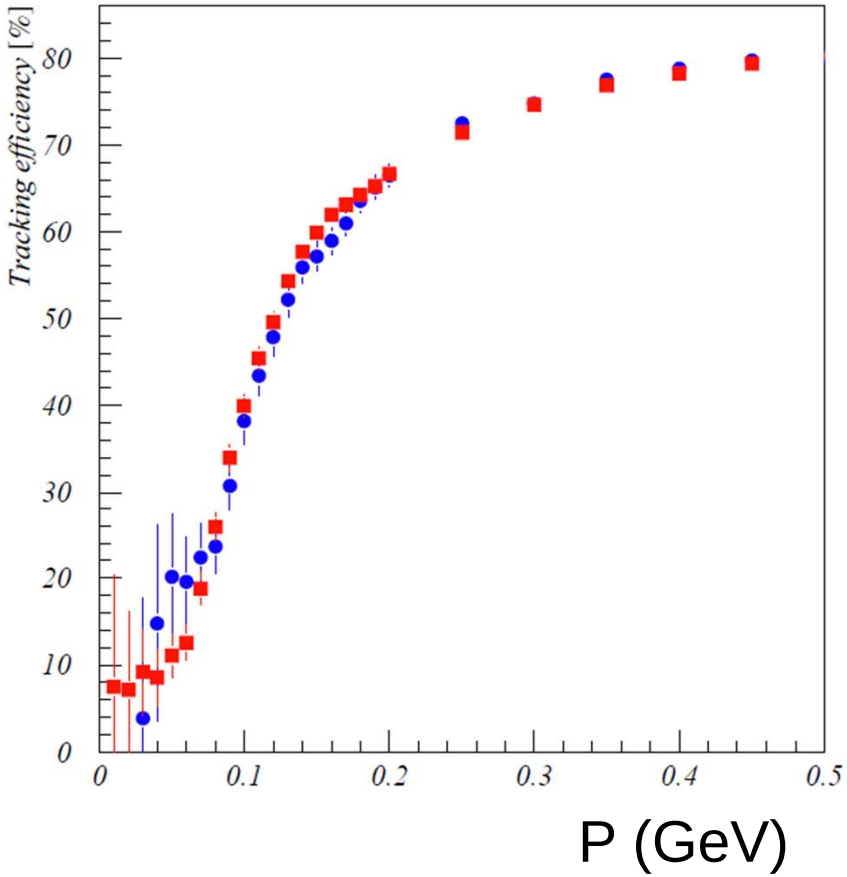
Options for the PXD DAQ



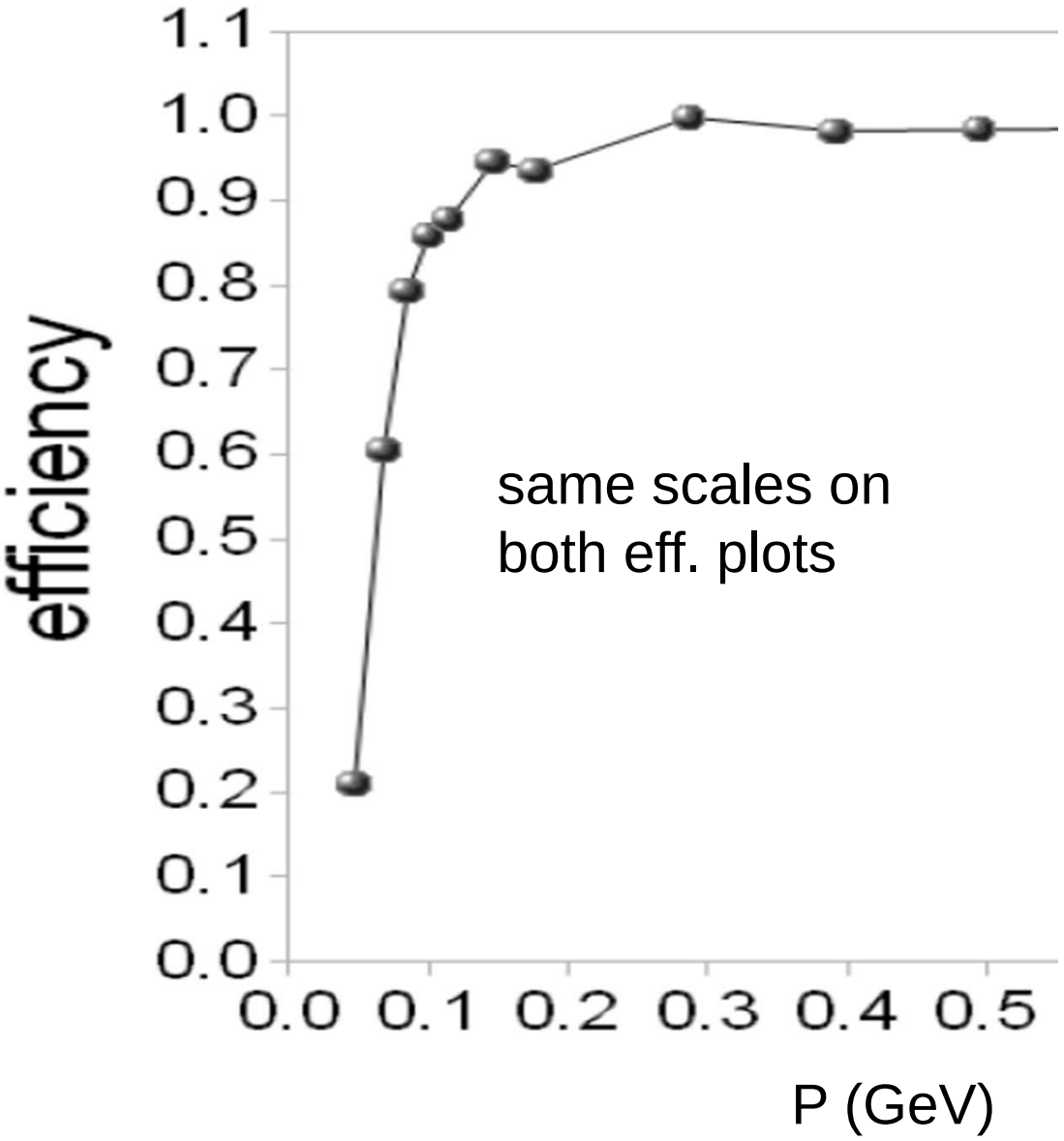
Option 3: No ATCA system, PC for each DHH instead (no SVD data)

Track Efficiencies

Full reconstruction, Belle
SVD + CDC



Hough with SVD, Belle-II



Background Studies

Occupancy very important for PXD operation

QED processes (e+e- pairs) seem not to dominate

Now: concentrate on beam-related background (KEK & MPI)

Work share:

generators by KEK, full simulation by MPI

cross checks for generators desired

most important: Bhabha scattering

at MPI so far BHLumi and BHWide:

but: cannot be used for forward scattering

New Bhabha generator

BBBREM: Monte Carlo simulation of radiative Bhabha scattering in the very forward direction.
R. Kleiss, (NIKHEF, Amsterdam) , H. Burkhardt, (CERN) .
NIKHEF-H-94-01, CERN-SL-94-03-OP, Jan 1994. 13pp.
Published in Comput.Phys.Commun.81:372-380,1994.
e-Print: hep-ph/9401333