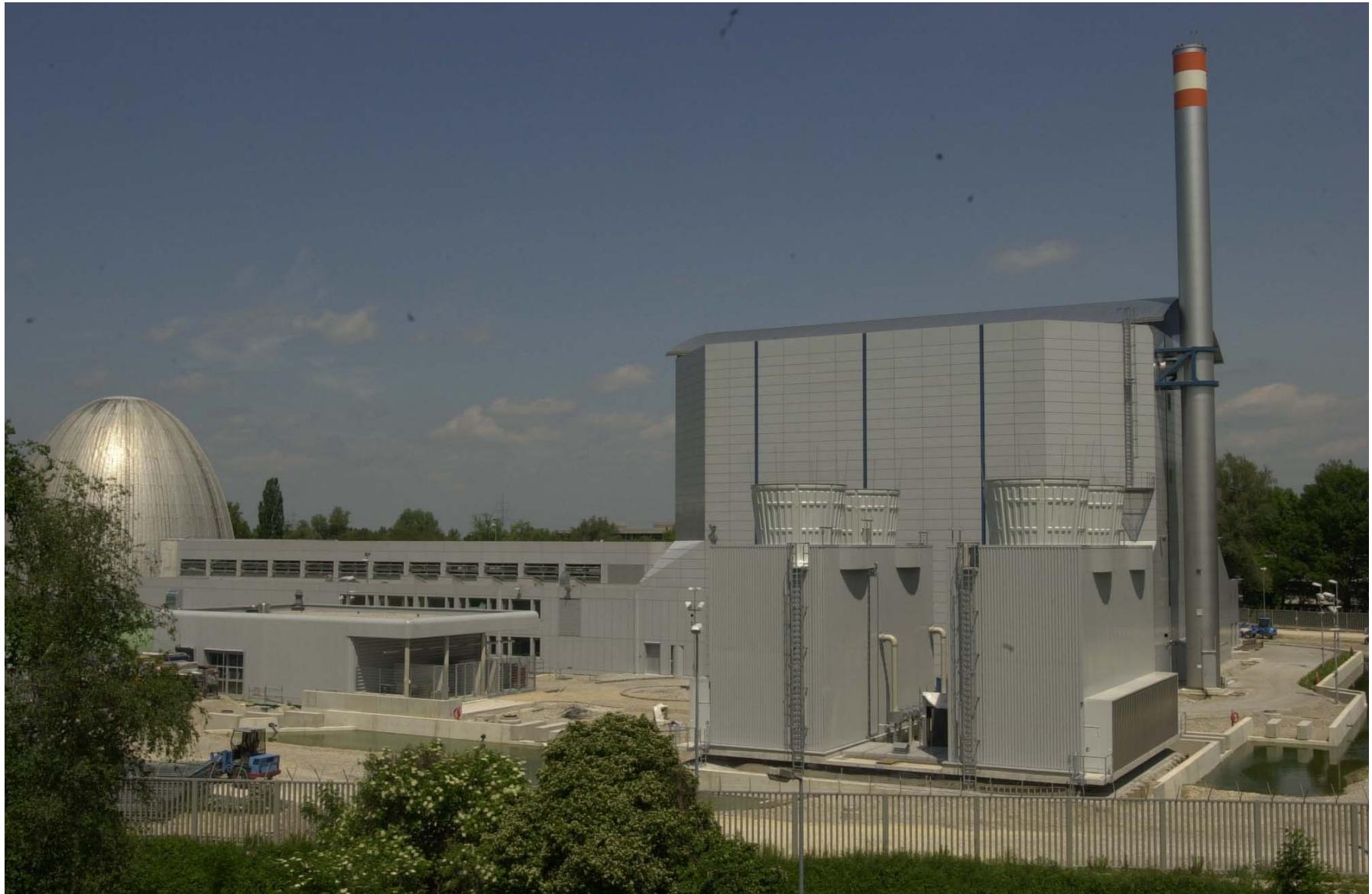




TACO Installation at the FRM-II

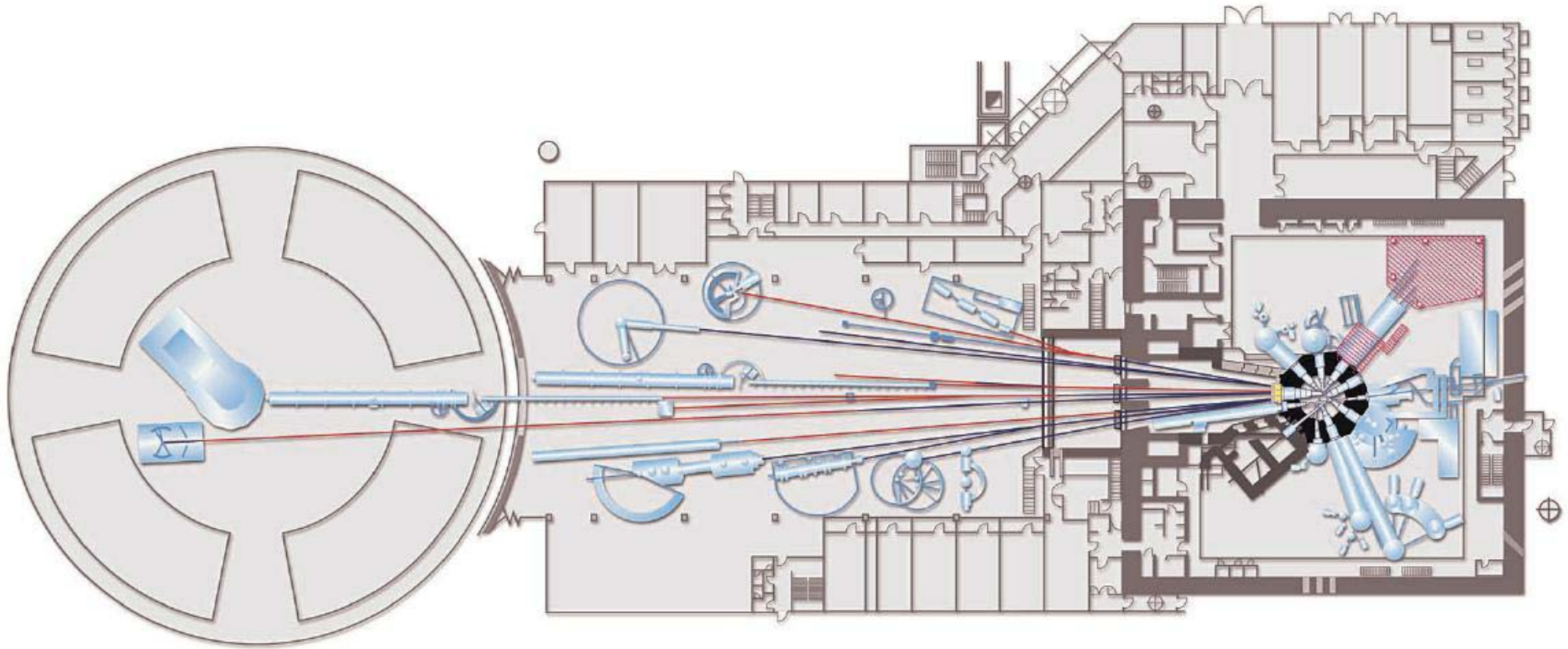


Jürgen Neuhaus, ZBE FRM-II
Workshop, ESRF, 14.-15.11.2001

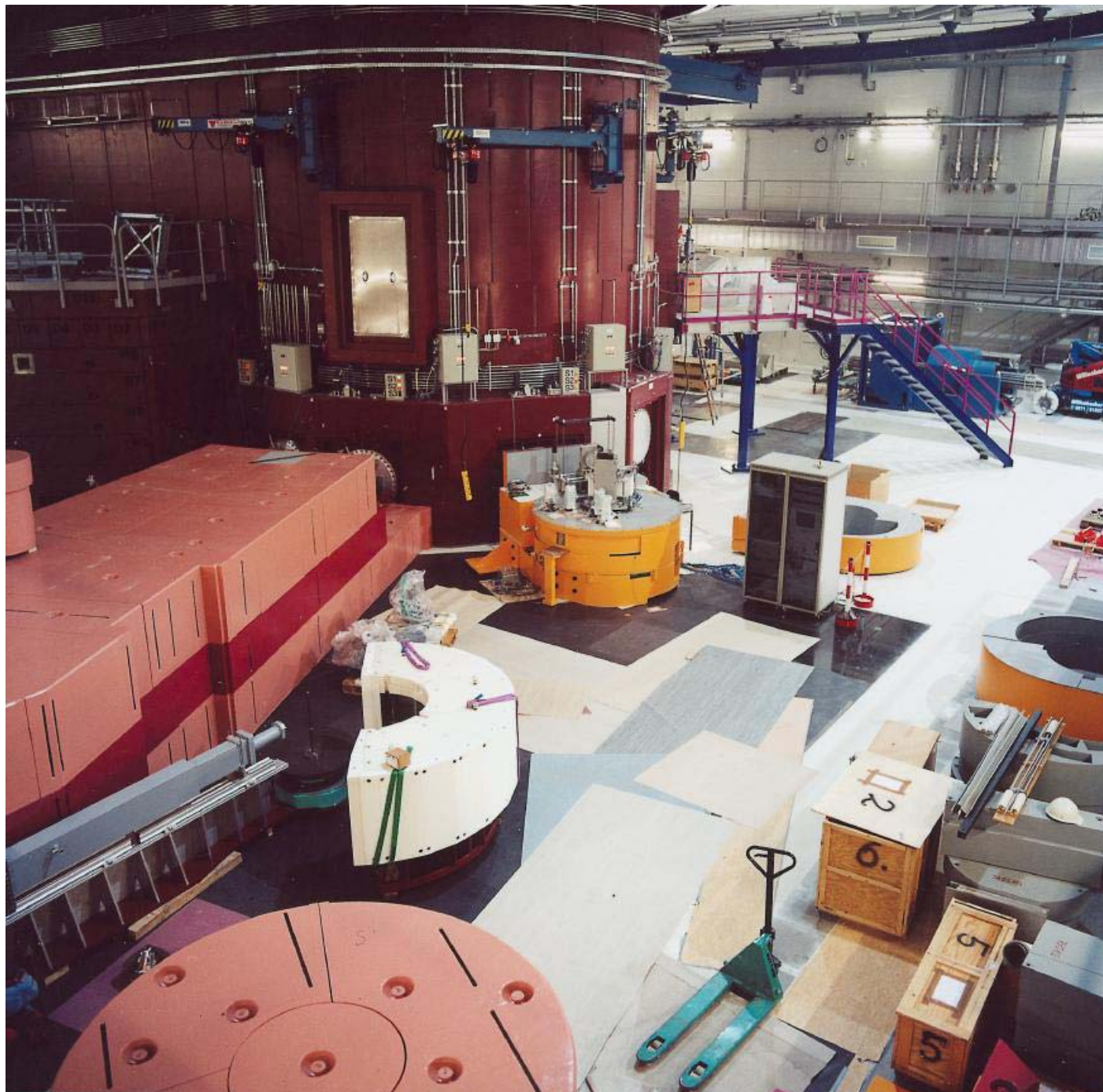




Experimental Facilities FRM-II



Today 18 instruments under construction
8 instruments actively using TACO



Experimental hall, 9.9.2001



Group Members



Jens Krüger

Tobias Unruh

Jörn Beckmann

(Bjørn Pedersen)

Students:

Thomas Zauner (Time-Of-Fight electronics)

Sebastian Huber (Samle environment server)

Zhen Zhang (OpenDave for Winows)

Christof Thies (HKL server)

Andreas Fuchs (Chopperserver for TOF)

Claudio Wieland (cPCI counter)

Stephan Schwärzler (OpenDave modules)

Markus Erlacher (OpenDave modules)



Basic concepts



- " Hardware is represented by TACO server
- " Communication (`dev_putget()`) is encapsulated by C++ client classes
- " Instrument control is based on NICOS
- " Data storage by NeXus server
- " Instrument control and display are separated (NeXus "interface")
- " Online display and data treatment uses OpenDave



Hardware for TACO



Interfaces on cPCI crates (VME for special electronic)

x86 processors

Linux OS

conventional connections:

"serial lines

"Profibus

"GPIB

"cPCI interface

"PCI-VME bridges



Software for TACO



Server are written in C++ (incl. client classes)

GUI test clients with Qt interface

Phyton interface from C++ client with SWIG

auto tools for programming and installations

GUI with Phyton-Qt or Qt lib (C++)



Actual work



TACO Distribution for Instruments at FRM-II rpm for SuSe (6.4, 7.2) RedHat, tar balls

TACO base installation (ESRF)

TACO supplement FRM-II

Client - Server components for:

- "RS232

- "RS485 (Modbus)

- "Steppermotor (own development, IPCSMS)

- "Encoder (Heidenhain)

- "Field bus modules

- "Profibus (cPCI master from FZ-Jülich)

- "Digital I/O (AddiData cPCI 1500)

- "Temperature controler (Lake Shore 340)



Work in progress



cPCI counter board (8 detectors, collaboration with FZ-Jülich)

NeXus data collector

Sample environment (high temperatures, Eurotherm)

GPIB server for Linux Kernel 2.4

TOF counter (VME electronic)

Crystallographic libraries (hkl-server)

MySQL database for TACO

Modular components:

"TOF-Chopper server

"Monochromator

"Collimator changer

"Detector



Contact



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