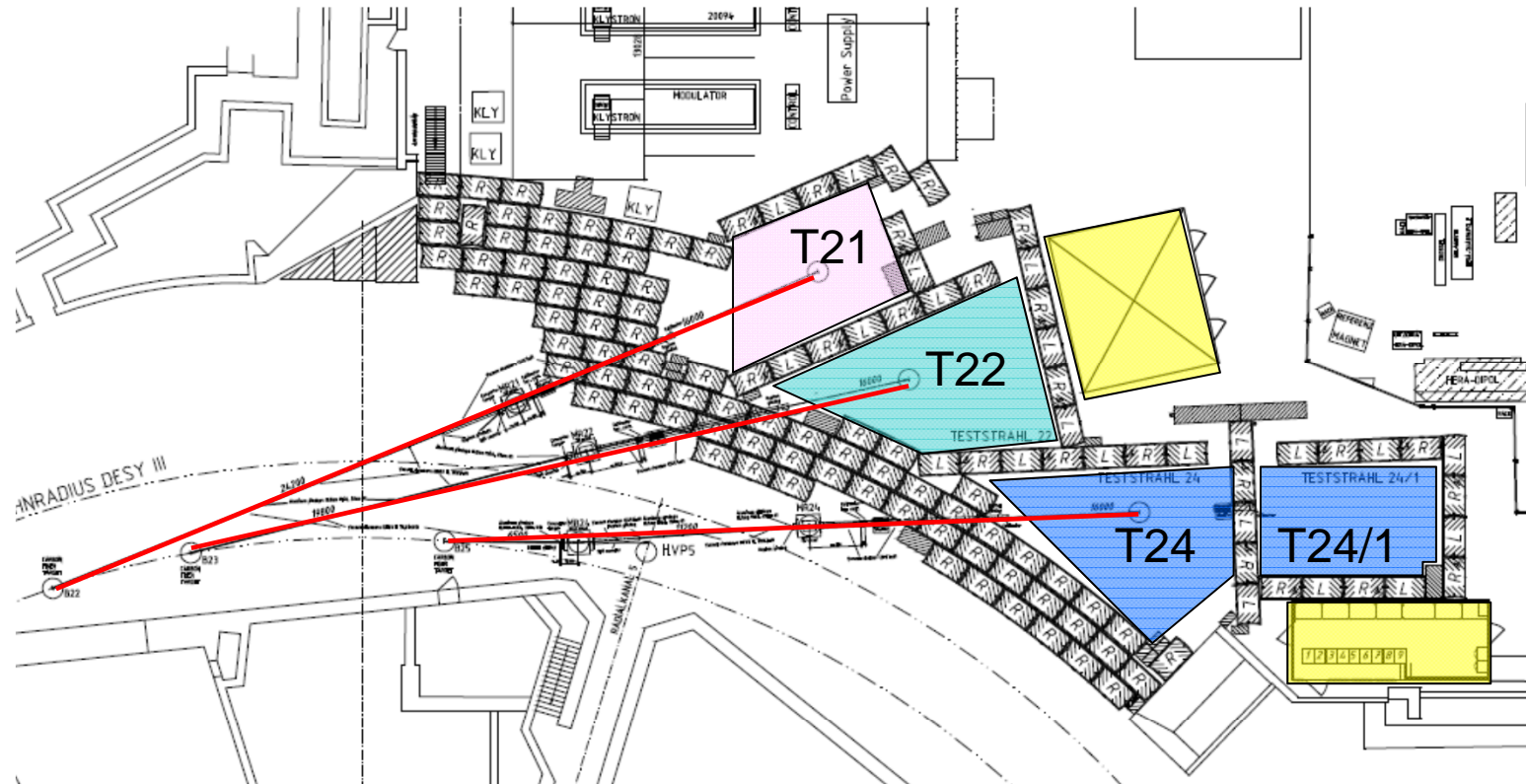


Overview report from WP5: DESY TA

Natalia Potylitsina-Kube
DESY



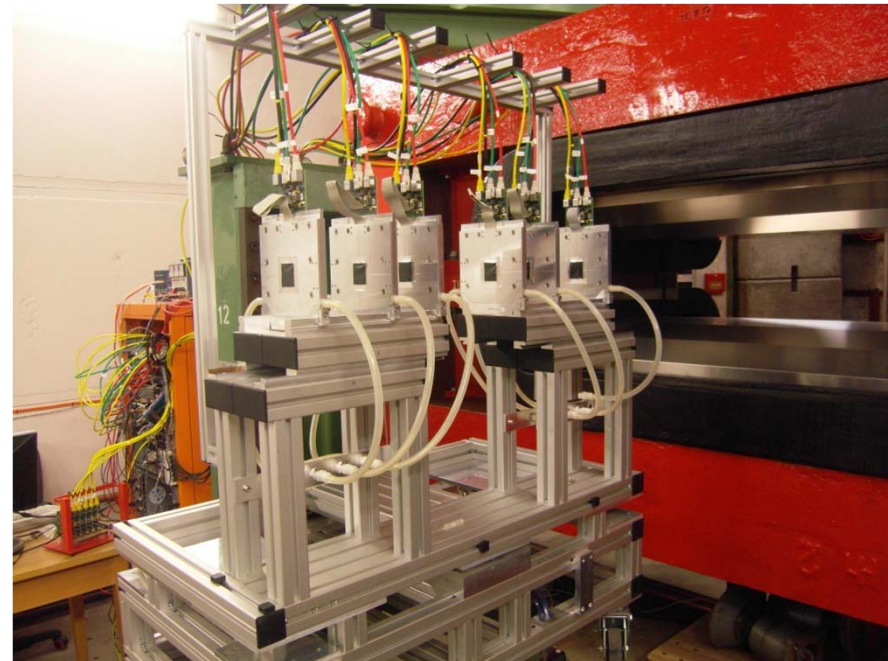
DESY Test Beam Layout



DESY provides three test beam lines (21, 22 and 24). These electron or positron beams are converted into bremsstrahlung beams from carbon fibre targets in the lepton synchrotron DESY II with up to 5000 particles per cm^2 (depending on beam line and target), and with an energy variable from 1 to 6 GeV and an energy spread of $\sim 5\%$.

Facilities for Test Beam Users

- All three test beam lines have
 - Interlock systems
 - Magnet control
 - Patch panels with pre-installed cables
 - Gas warning systems
 - Fast internet connection (DHCP)
- The user can get:
 - Translation stages
 - Pre-mixed gases
 - Superconducting Magnet (1T)
 - Beam Telescopes (with high and medium precision)
- They have to bring:
 - Data Acquisition incl. computers
 - Trigger scintillators



High resolution beam telescope ($3\mu\text{m}$) based on monolithic active pixel sensors was developed within the EUDET collaboration and optimised for the use at the low energy electron beam at DESY.

A copy of the telescope will be permanently at DESY from summer 2012 on.



WP5: planned TA-activity

- Total budget is 166.400 EUR (70.400 EUR personal costs + 96.000 EUR travel costs)
- Average TA project: 5 users for ~1,6 TB week
- Access to the DESY test beam facility is free of charge

Traveling reimbursement (direct costs)

DESY subsistence reimbursement = 24 EUR per day



Applications from 2011

AIDA_DESY-2011-01: Tests of several alternative layouts of both planar and **3D** pixel sensors for the **ATLAS IBL**. With this tests the sensor performances after severe radiation damage was studied and compared to the results of un-irradiated samples.

AIDA_DESY-2011-02: Development of **GEM** based detector, based on ceramic elements to be used in the Large Prototype TPC.

AIDA_DESY-2011-03: Tests of the prototype of **LumiCal** (detector for luminosity measurements of the very forward region for future linear colliders ILC/CLIC) with the full readout chain including silicon sensors, fan-out and readout front-end ASIC.

AIDA_DESY-2011-04: Tests of the prototype of LumiCal with the full readout chain including silicon sensors, fan-out and readout front-end ASIC.

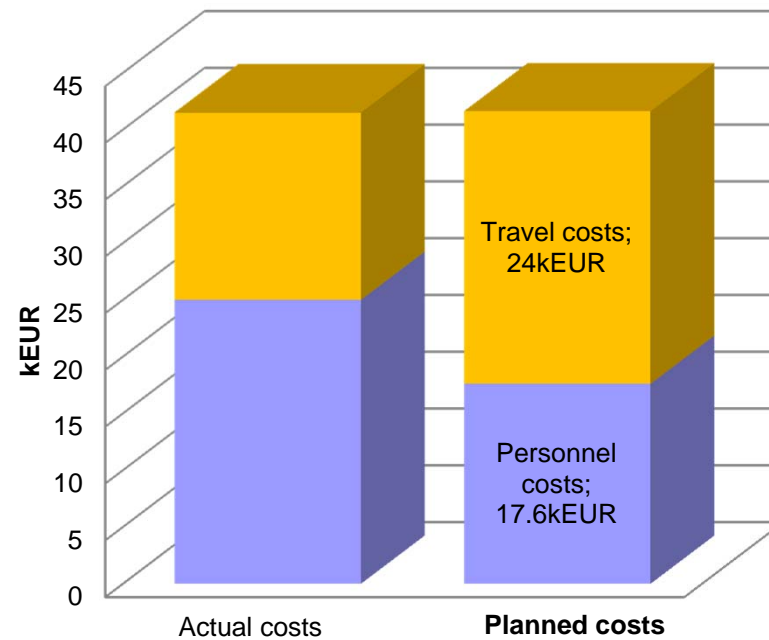
TA- activities in 2011

	User-projects (see Annex 2 for details)		Users supported (see Annex 3 for details)	Units of access (DESY = TB week=7days with 24 hours)
	Eligible submissions	Selected		
Year 1 (M1-M12)	4	4	20 (from 8 countries)	9
Foreseen for project (M1-M48)	25 (~6 per year)		130 (~32 per year)	40 (10 per year)

2011: Total accrued costs

Total travel and subsistence costs: 16,5 kEUR

Total personal costs: 25 kEUR





Actual & Planned Test Beam Campaigns for 2012

Up to now:

AIDA-DESY-2012-06: ATLAS insertable B-layer Project

AIDA-DESY-2012-05: ATLAS planar Pixel Upgrade

AIDA-DESY-2012-04: ATLAS 3D Pixel R&D collaboration

AIDA-DESY-2012-03: Commissioning of the CALICE Silicon-Tungsten ECAL technical Prototype

AIDA-DESY-2012-02: DEPFET Collaboration

AIDA-DESY-2012-01: Commissioning of the ALIBAVA System

Further 4 projects are already planned.

We expect in 2013 much more TA projects and we received already now over 12 pre-requests



AIDA vs. EUDET (2006-2010)

Total number of projects in frame of EUDET during the 5 years of project life time (with 6 months shut-down): 48

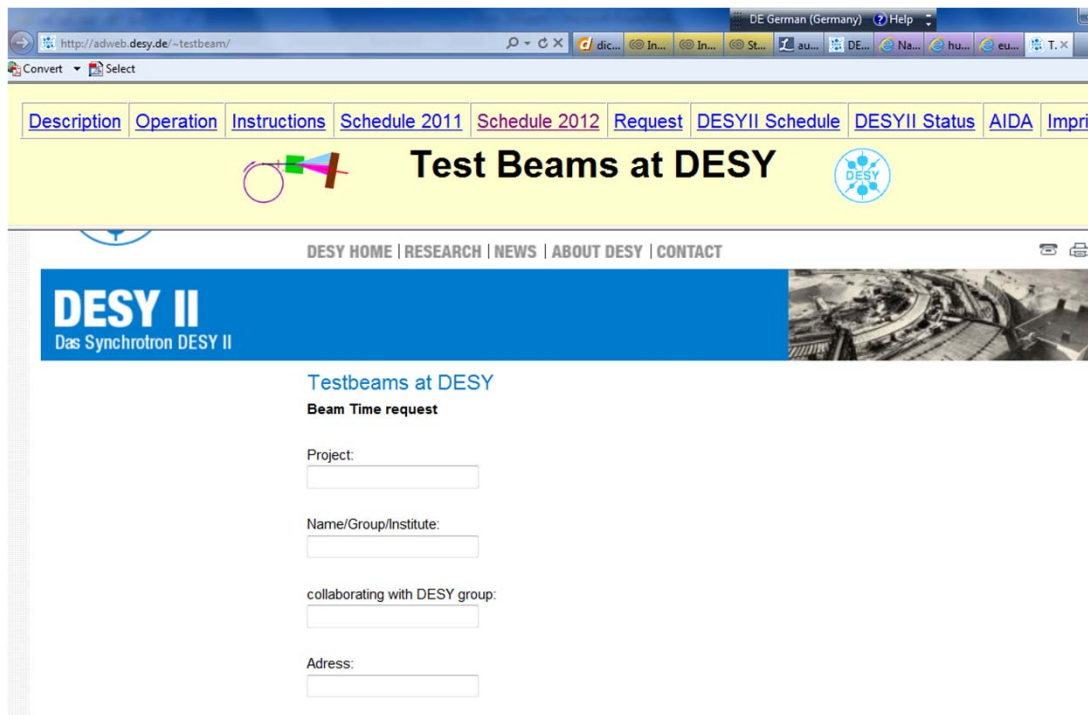
Total number of supported users: 201 over 20 different European countries and partly from outside of Europe

Scientific output after the projects performed at the facilities ~ 70 publications & talks (*estimation; it was always difficult to obtain this information*)

Reporting issues

In order to simplify the filling out of the TA-EXCEL Sheets during reporting periods we would like to improve TA-application procedure and replace the WORD-application form with WEB(INDICO)-based procedure. In this case all needed data for the TA report could be saved from the very beginning as an EXCEL file

...We are currently starting to reform this system...



The screenshot shows a web browser window with the URL <http://adweb.desy.de/~testbeam/>. The page features a navigation menu with links: [Description](#), [Operation](#), [Instructions](#), [Schedule 2011](#), [Schedule 2012](#), [Request](#), [DESYII Schedule](#), [DESYII Status](#), [AIDA](#), and [Imprin](#). Below the navigation is a yellow banner with the text "Test Beams at DESY" and the DESY logo. A blue header bar contains "DESY II" and "Das Synchrotron DESY II". The main content area is titled "Testbeams at DESY" and "Beam Time request". It contains four input fields: "Project:", "Name/Group/Institute:", "collaborating with DESY group:", and "Adress:".

current beam time
request form