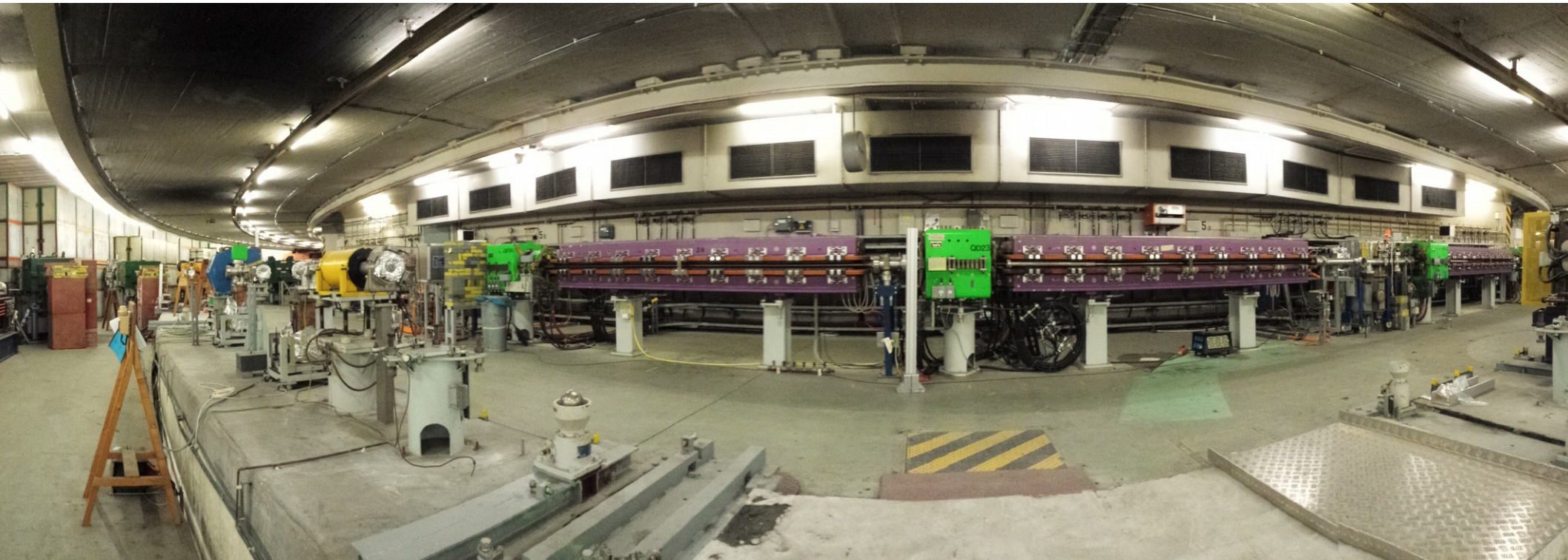


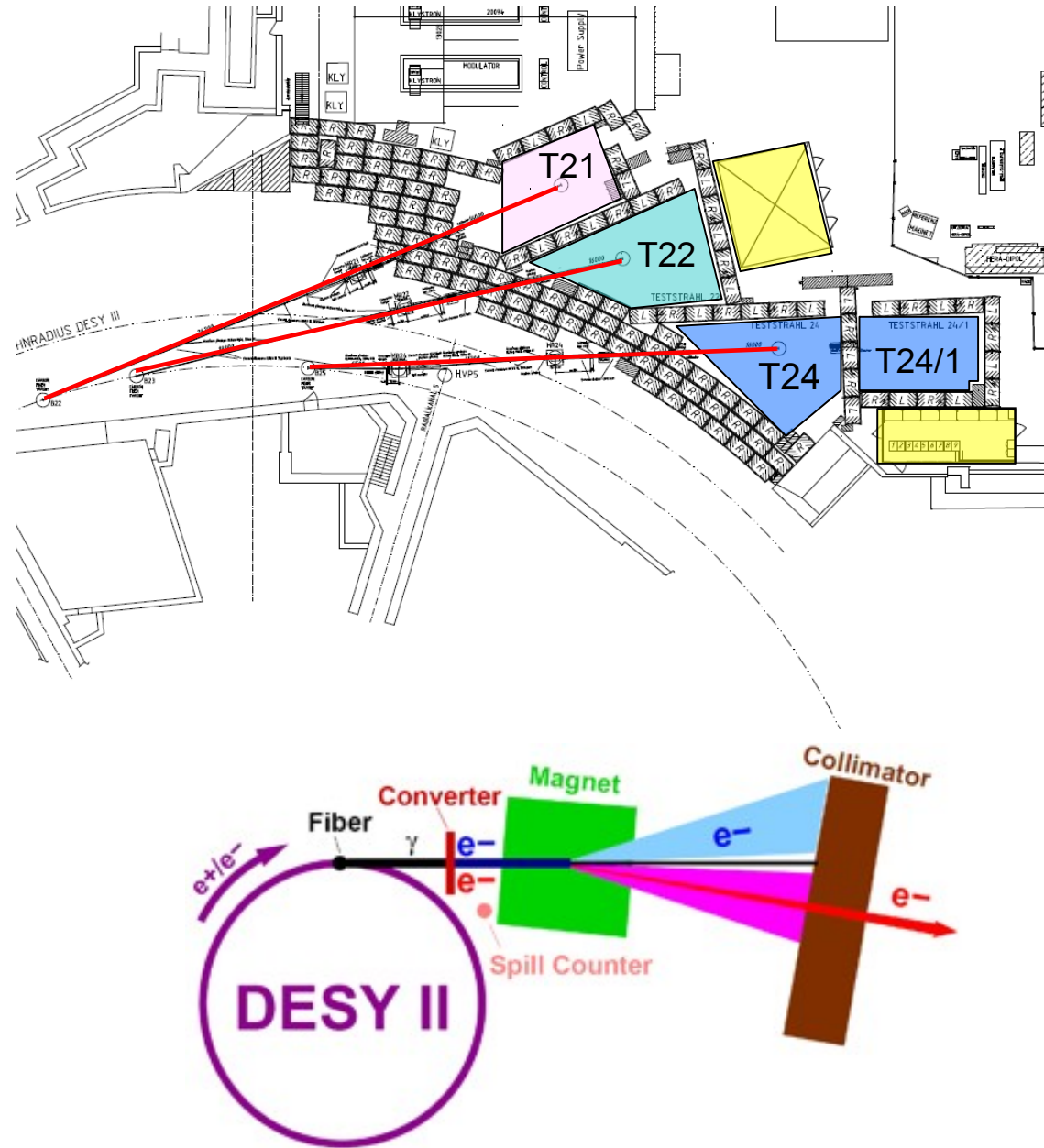
WP5: Access to DESY Test Beams

 AIDA Final Meeting 2014



Ralf Diener, Ingrid-Maria Gregor, Natalia Potylitsina-Kube
DESY

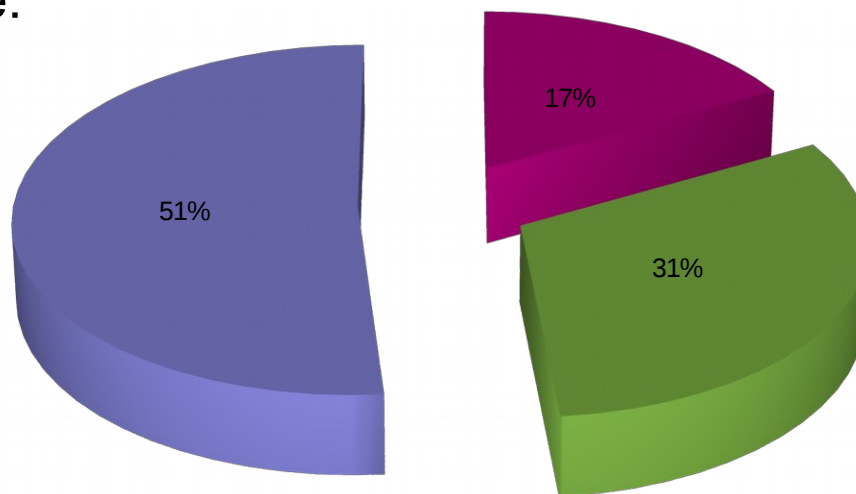
- Three test beam lines
- Electron or positron beam from 1-6 GeV (spread: ~5%)
- Generation:
 - DESY II beam converted into bremsstrahlung at carbon fiber targets
 - Converter target: e^- / e^+
 - Magnet to select type and energy
 - Rates up to several kHz depends on beam line, energy, target material, collimator setting



- 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
 - Premixed gases
- They have to bring
 - Data acquisition incl. computers
 - Trigger scintillators (except T24/1)



- Beam telescopes
 - Hardware, Trigger, Reconstruction software
 - 6 MAPS pixel planes, 1x2 cm²
 - 3 μm resolution, trigger rates up to 3 kHz
 - A copy permanently at DESY since summer 2012
- Magnets
 - 1 T superconducting solenoid in T24/1 (mounted on movable stage)
 - 1 T Dipole in T21
- Use of infrastructure:



■ Telescope
■ Magnetic field
■ without telescope or magnetic field

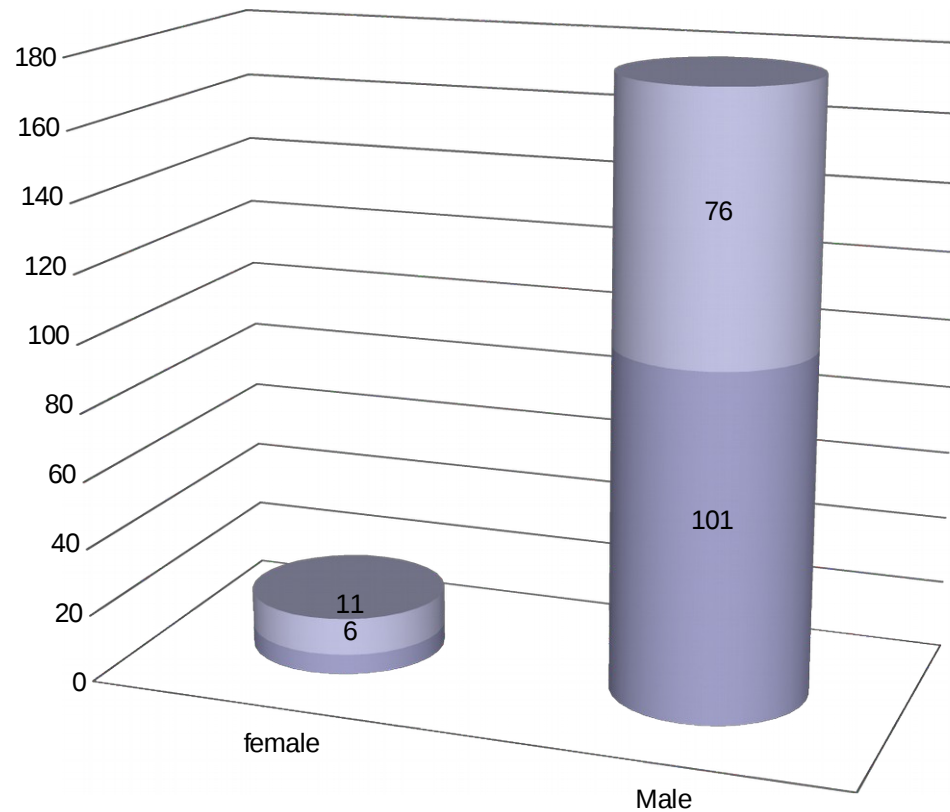
- Total budget is 172.733 EUR:
66.400 EUR personnel costs as own contribution +
EU-contribution of 106.333EUR for users support

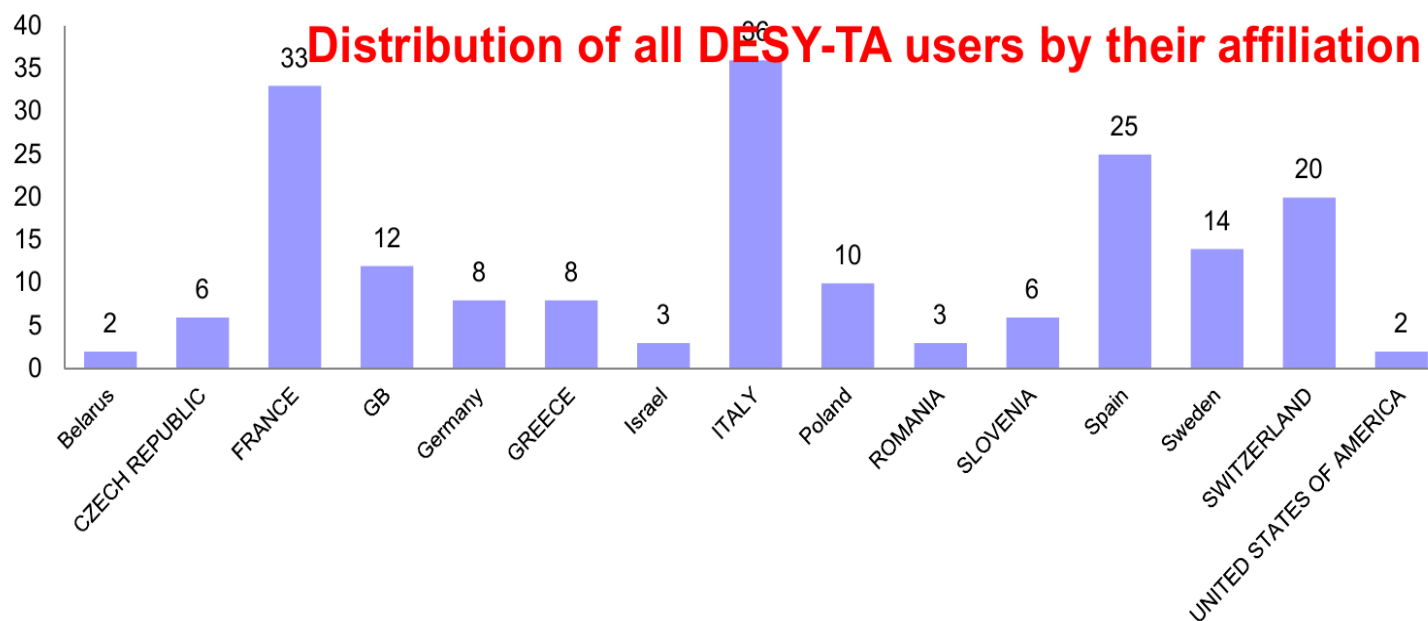
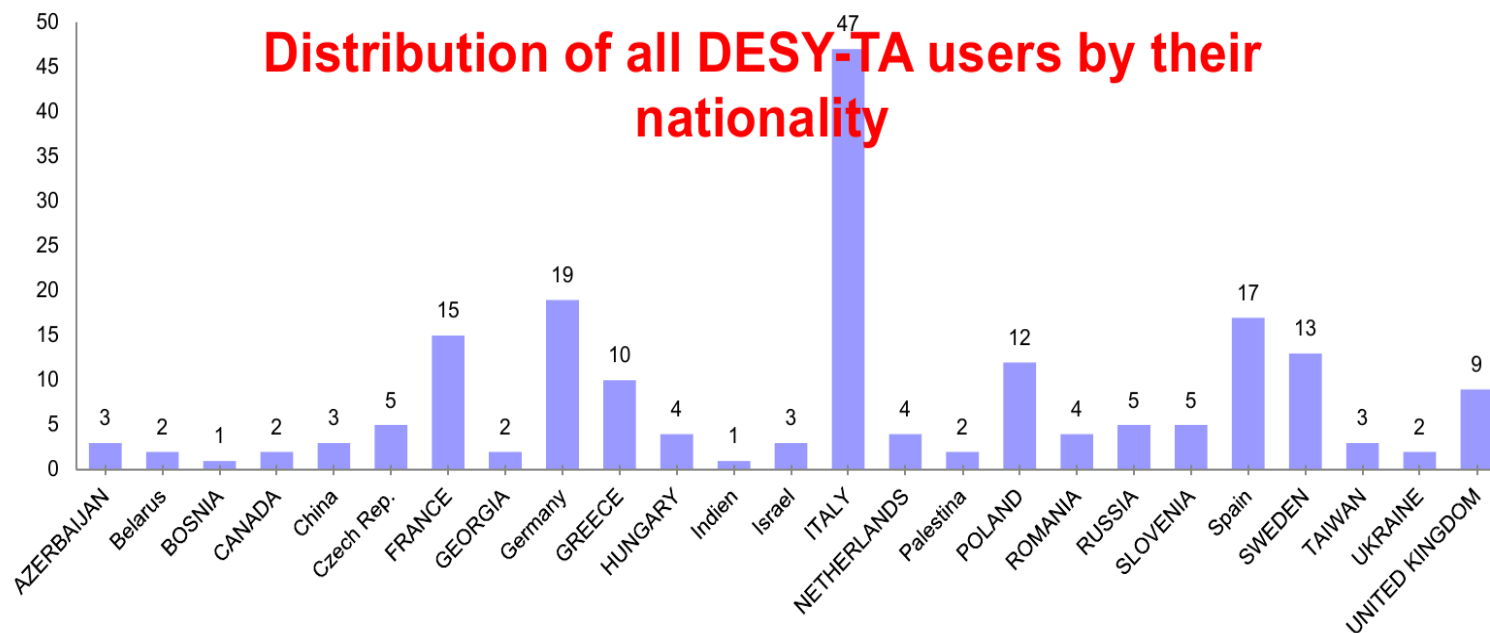
	Eligible submissions	Selected	Users supported (see Annex 3 for details)	Units of access (DESY = TB week=7days with 24 hours)
P1 (M1-M18)	13	13	61 users, of which 47 received financial support over TA	24,0
P2 (M19- M36)	25	25	125 users, of which 78 received financial support over TA	45,0
P3 (M37- M48)	2	2	8 users with support over TA-funds	3,5
TOTAL:	40	40	194/133	72,5
Foreseen for project (M1-M48)		25	130	40

- For an average DESY TA project: ~ 5 (4 paid) users for ~ 2 TB weeks

- Nearly half of the users are new users
- Less than 10% of the users are female

Gender / New Users (“Yes”, “No”)





Test Beam Schedule 2013/2014

- Due to SPS shutdown increased use of DESY electron test beam facility
- Test beam schedule completely full until End of February 2014
- Most user groups request one or more infrastructure such as 1T magnet or a telescope
- Shutdown from Mar-Dec 2014
→
Maintenance/improvement:
 - Beam delivery (carbon fiber targets, magnet steering ...)
 - Areas (new floors, electrical installations, beam counter, IP cameras, laser alignment ...)
 - New access system (DACHS)

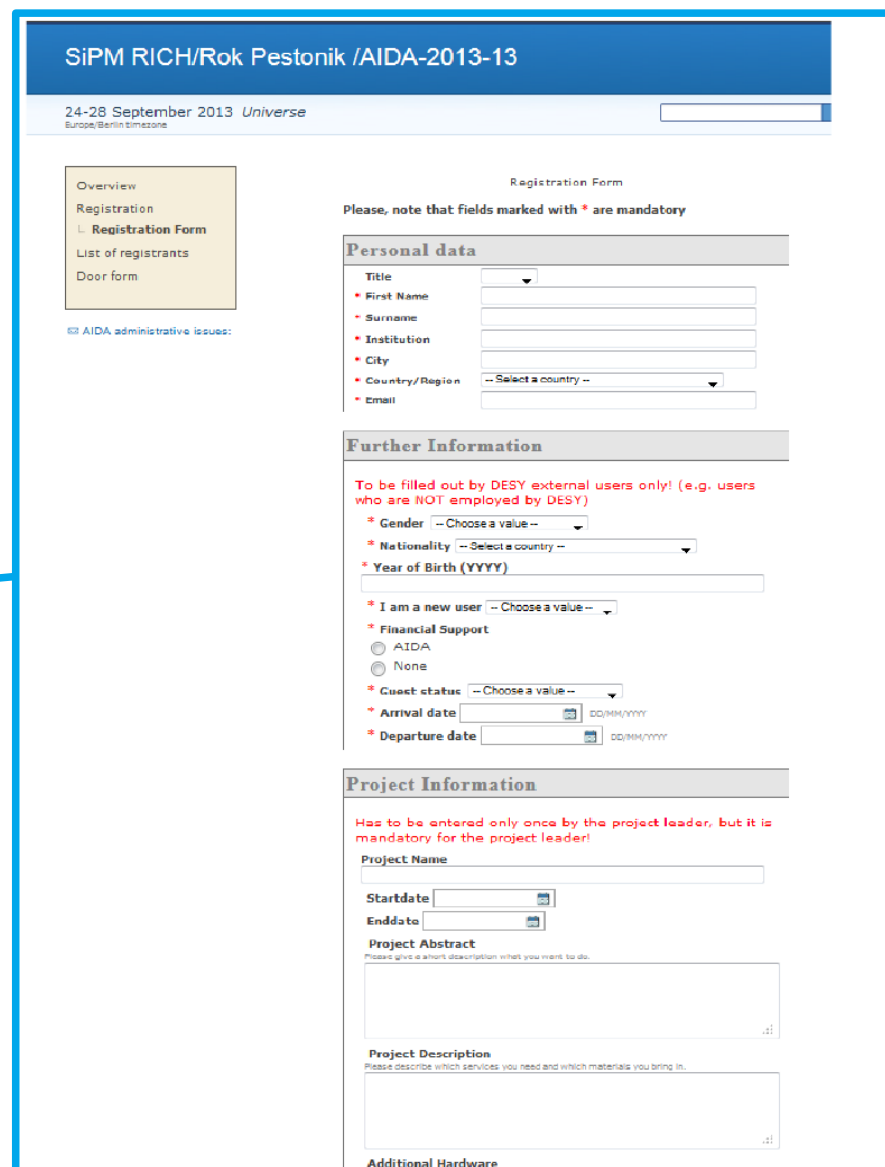
Week		TB21		TB22		TB24/1		TB24
		DATURA	none	ACONITE/ANEM ONE	CAL	EUDET in PCMAG	PCMAG	none
	2	---	---	---	---	---	---	---
14-Jan-13	3	---	ITER	Tele setup				
21-Jan-13	4	X0			CALICE AHCAL			
28-Jan-13	5	CMS Pix-irrad			CALICE AHCAL		TPC MMG	ECAL
4-Feb-13	6	CMS Pix-fwd					TPC MMG	
11-Feb-13	7	CLICpix				LorAngle		
18-Feb-13	8		SIW ECAL			LorAngle		
25-Feb-13	9		Sc ECAL				DESY TPC	
4-Mar-13	10							
11-Mar-13	11	ALICE ITS		MuPix			DESY TPC	
18-Mar-13	12	CMS Pix-irrad		APIX PPS			DESY TPC	
25-Mar-13	13	CMS Pix-KA		APIX PPS			LCTPC Time	
1-Apr-13	14	CMS Pix-ro		APIX IBL			LCTPC Time	
8-Apr-13	15	X0		APIX DBM		LorAngle		
15-Apr-13	16	ITER						
22-Apr-13	17	ILCPOL		Tele study		SBS GEM		
29-Apr-13	18	ILCPOL			RD50	SBS GEM		
6-May-13	19	DEPFET			RD50	LorAngle		
13-May-13	20	FE-14		COMPASS-II			GridPix	
20-May-13	21	CMS Pix-ro			CALICE AHCAL			Belle 2 PID
27-May-13	22	X0			CALICE AHCAL			
3-Jun-13	23	CLICpix			CALICE AHCAL		LCTPC Time	
10-Jun-13	24	CMS Pix		MuPix	CALICE AHCAL		ATLAS MMG	
17-Jun-13	25	ALICE ITS		APIX 3D				AIDA
24-Jun-13	26	CMS Trk II		DIA-SiGe				AIDA
1-Jul-13	27		SIW ECAL		CAL MMG			
8-Jul-13	28		SC ECAL		CAL MMG			XFEL
15-Jul-13	29	APD		APIX 3D				Gossipo
22-Jul-13	30	CMS Ph2			CALICE AHCAL			Gossipo
29-Jul-13	31	CMS Pix		ALICE ITS			Surveying	
5-Aug-13	32	Telescope MD		APIX IBL		LorAngle		
12-Aug-13	33	CMS high rate		APIX PPS		LorAngle		
19-Aug-13	34	CLICpix		APIX PPS				PICSEL
26-Aug-13	35	CLICpix		FCAL				PICSEL
02. Sep 13	36		BRM Maintenance					
09. Sep 13	37						PCMAG stage work	
16. Sep 13	38	CMS Pix		XFEL				
23. Sep 13	39	ALICE ITS		ALICE ITS				Belle 2 PID
30. Sep 13	40							
07. Okt 13	41	ALICE ITS		MuPix4		LorAngle		
14. Okt 13	42	CMS TrkPh2-J						
21. Okt 13	43	CLICpix			CALICE AHCAL	LorAngle		
28. Okt 13	44	no beam 2/13/2013	CMS FPix		GSI-DIRC	LorAngle		
04. Nov 13	45		CMS Pix		GSI-DIRC	LorAngle		
11. Nov 13	46	ALICE ITS		APIX PPS		LorAngle		
18. Nov 13	47	CMS TrkPh2-E		APIX PPS			DESY-TPC	
25. Nov 13	48	CMS TrkPh2		APIX PPS				
02. Dez 13	49	CLICpix		APIX PPS				Belle-II Installation
09. Dez 13	50	SiPM			CALICE AHCAL			
16. Dez 13	51	End of beam 30/12/2013 1300	ALICE ITS	X0	CALICE AHCAL			
23. Dez 13	52							
2014								
6-Jan-14		FCAL			CALICE AHCAL	Belle II VXD		
13-Jan-14	3	FCAL			CALICE AHCAL	Belle II VXD		
20-Jan-14	4	SBS GEM		APIX 3D		Belle II VXD		
27-Jan-14	5	SBS GEM		DIAPIX		Belle II VXD		
3-Feb-14	6	LHCb VELO		MuPix		LorAngle		
10-Feb-14	7	LHCb VELO		ATLAS Strip				PLUME
17-Feb-14	8	ATLAS Lucid		ATLAS Strip			LCTPC Time	
24-Feb-14	9		SiPM	APIX PPS			LCTPC Time	

- Only a sample (do not all fit here)

Project Number	Project and Project Leader	Delivered Weeks	Number of Users
AIDA-DESY-2013-01	CALICE SiW ECAL/ Roman Poeschl	1,4	5
AIDA-DESY-2013-02	ATLAS Planar Pixel Upgrade/ Marco Bomben	2,6	3
AIDA-DESY-2013-03	Ceramic Support Structure for GEM Detectors/ Leif Joensson	3,9	2
AIDA-DESY-2013-04	CLICpix/ D.Dannheim	4,1	5
AIDA-DESY-2013-05	BelleII-ARICH / Rok Pestotnik	1,4	3
AIDA-DESY-2013-06	JLab/SBS GEM based Front Tracker/ Evaristo Cisbani	2,1	10
AIDA-DESY-2013-07	Spatial resolution studies of dedicated charge-multiplication silicon sensors with the Alibava beam telescope/ Ilya TSURIN	2,1	4
AIDA-DESY-2013-08	APD/ Marcel Vos	1,1	5
AIDA-DESY-2013-09	Micromegas/ Leif Joensson	2,3	2
AIDA-DESY-2013-10	BEAM CHARACTERIZATION OF 3D PIXEL SENSORS/ Sebastian Grinstein	2,9	5
AIDA-DESY-2013-11	ATLAS MICROMEAS/ Paolo Iengo	2,3	23
AIDA-DESY-2013-12	CALICE/ Roman Poeschl	1,4	4
AIDA-DESY-2013-13	SiPM/ Rok Pestotnik	0,9	3
AIDA-DESY-2014-03	FCAL/L.Zawiejski	2,1	8
AIDA-DESY-2014-06	Belle II /M.Vos	1,6	3
AIDA-DESY-2012-09	CALICE SiW ECAL	1,6	7
AIDA-DESY-2012-04	Beam Characterization of 3D Pixel Sensors	2,1	5
AIDA-DESY-2011-02	Ceramic Support Structure for GEM Detectors	2	3
AIDA-DESY-2011-03	STUDY OF THE LUMICAL PROTOTYPE. STAGE II.	1,3	6

- In order to simplify the reporting for transnational access and the filling out of the TA-EXCEL Sheets:
- Improved the TA-application procedure:
WORD-application form completed (or partly replaced) with WEB(INDICO)-based procedure

Current
TA application
form



The screenshot shows a web-based registration form for AIDA. The header includes the user name 'SiPM RICH/Rok Pestonik /AIDA-2013-13' and the date '24-28 September 2013 Universe'. A sidebar on the left contains navigation links: Overview, Registration, Registration Form (selected), List of registrants, and Door form. The main content area is titled 'Registration Form' and includes a note: 'Please, note that fields marked with * are mandatory'. The form is divided into three sections: 'Personal data', 'Further Information', and 'Project Information'. The 'Personal data' section includes fields for Title, First Name, Surname, Institution, City, Country/Region, and Email. The 'Further Information' section includes fields for Gender, Nationality, Year of Birth, I am a new user, Financial Support (AIDA or None), Guest status, Arrival date, and Departure date. The 'Project Information' section includes fields for Project Name, Startdate, Enddate, Project Abstract, Project Description, and Additional Hardware. The form is designed to be user-friendly and accessible, with clear instructions and mandatory field indicators.

- Planning for first half of 2015:

	Week	TB21		TB22		TB24/1		TB24
		DATURA	none	ACONITE/DURA NTA	none	EUDET in PCMAG	PCMAG	none
5-Jan-15	2							
12-Jan-15	3		Startup	Startup		Startup		
19-Jan-15	4		CMS-Pixel-Ph1					
26-Jan-15	5							
2-Feb-15	6			TOTEM				
9-Feb-15	7		ALICE-ITS	CLIC-PIX				
16-Feb-15	8					LCTPC96-InGrid		
23-Feb-15	9			CALICE-AHCAL		LCTPC96-InGrid		
2-Mar-15	10			Mue3		LCTPC-Micromegas		
9-Mar-15	11			TOTEM		LCTPC-Micromegas		
16-Mar-15	12			ATLAS ITK Pixel				PICSEL
23-Mar-15	13		Bonn-CMOS	ATLAS ITK Pixel				
30-Mar-15	14		ALICE-ITS	ATLAS ITK Pixel				
6-Apr-15	15		CMS-Pixel-Ph1					
13-Apr-15	16							
20-Apr-15	17		CMS-Pixel-KA			LorentzAngle		
27-Apr-15	18					LorentzAngle		
4-May-15	19			ATLAS-Strip-Module				
11-May-15	20			ATLAS-Strip-Module				SiPM
18-May-15	21		CMS-TRK-EPI					SiPM
25-May-15	22							
1-Jun-15	23			CALICE-AHCAL		LorentzAngle		
8-Jun-15	24					LorentzAngle		
15-Jun-15	25		CMS-Pixel-Ph1					PICSEL
22-Jun-15	26		CMS-Pixel-Ph2					
29-Jun-15	27							

- Latest schedule and more information on the DESY test beam available on: <http://testbeam.desy.de>
- Contact over web page or via email: testbeam-coor@DESY.de

- Continue the success from AIDA
- TA procedures not foreseen to change
- Strong support from DESY directorate

- Pixel Telescopes a key piece of the success
 - Many AIDA users have been using this infrastructure
 - DESY will continue to provide this as infrastructure