

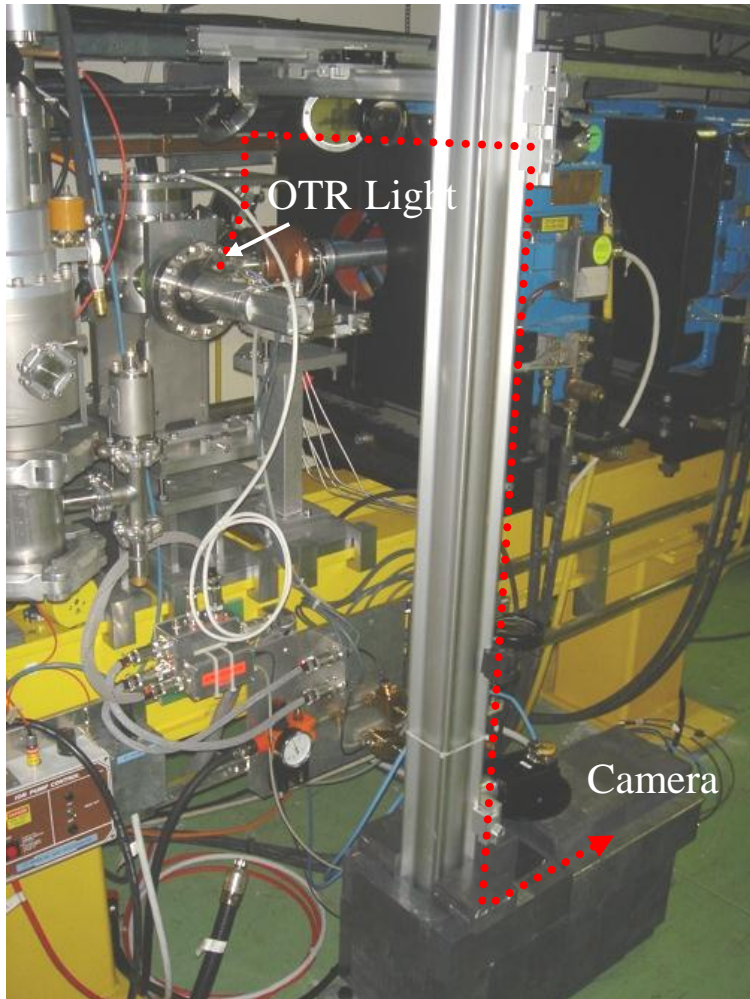
DITANET

« novel Diagnostic Techniques for future particle Accelerators:
A Marie Curie Initial Training NETwork »

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A „typical“ Accelerator Diagnostics



- Material sciences
 - Thermodynamics
 - Electro-Magnetism
 - Optics
 - Mechanics
 - Electronics
 - Nuclear Physics
 - ...
- ➔ Multi-disciplinary field !

What is DITANET ?

- Largest-ever EU funded training network in beam instrumentation and diagnostics;
- Aim: Training of early stage researchers (*18 ESRs, 3 ERs*)
- Gives industry an important role;
- Presently 31 partners (*and growing...*)
- Recognized importance of beam diagnostics at European level !
(only 68 from 905 selected - with 11 in physics)

C.P. Welsch, Proc. BIW 2010, IPAC 2011

The DITANET Consortium

Network Participants



Associated Partners



Adjunct Partners

- Part of a long term strategy – DITANET is growing



DITANET

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News

The DITANET School on complementary skills took place at the University of Liverpool (UK) 15th-19th March 2010. Further information.

DITANET Prize - Winner 2010

Partners Area and DITANET

Blog: Login to VOCAL

DITANET

The development of novel Diagnostic Techniques for future particle Accelerators is the goal of a new European Network (DITANET) that was installed within the Marie Curie ITN scheme.



In this frame, several major research centers, leading Universities, and partners from industry will develop beyond-state-of-the-art diagnostic techniques for future accelerator facilities and jointly train students and young researchers within a unique European structure.



Without an adequate set of beam instrumentation, it is impossible to operate a particle accelerator - let alone optimize its performance.

www.liv.ac.uk/ditanet

Community Events 2011



Diagnostics School
Stockholm, Sweden – March
Indico: 112220
> 80 participants and lecturers



Topical Workshops
CI, France, Slovenia, Seville, Hamburg
Indico: 145063, 145066, 145070, 135829, 154172
~ 40 participants each



Diagnostics Conference
Seville, Spain – CNA
Indico: 135831
Proceedings + PRST-AB special edition

DITANET Topical Workshops

- Low energy, low intensity beam diagnostics (*GSI, HIT*)
- Longitudinal beam profile measurements (*CI*)
- Ultra cold electron beam diagnostics (*CI*)
- High intensity proton beam diagnostics (*CEA*)
- Technology transfer (*i-tech*)
- Detector technology (*CNA*)
- Beam loss monitoring (*DESY*)
- Beam position monitoring (*CERN*)

Full information: Homepage and CERN indico.

Symposium on beam diagnostics: May 16th @ CI.

And oPAC – 1.12.2011

- Optimization of Particle Accelerators
 - 22 ESRs
 - 22 Partner Institutions
 - 6 M€



www.liv.ac.uk/opac



OPAC

OPEN POSITIONS WITHIN THE OPAC PROJECT

The optimization of the performance of any particle accelerator critically depends on an in-depth understanding of the beam dynamics in the machine and the availability of simulation tools to study and continuously improve all accelerator components. It also requires a complete set of beam diagnostic methods to monitor all important machine and beam parameters with high precision and a powerful control and data acquisition system.

Within the oPAC project these aspects will be closely linked with the aim to optimize the performance of present and future accelerators that lie at the heart of many research infrastructures.

The network is currently aiming to recruit a pool of talented, energetic, strongly motivated, early stage researchers with a degree in physics, electrical engineering or a closely related field. Possibilities for enrolling into a PhD program exist. Women are especially encouraged to apply.

Deadline for applications:
March 9th 2012

Each researcher will benefit from a wide ranging training program that will take advantage of both local and network-wide activities, as well as of schools, conferences, and workshops. Excellent salaries will be offered. Most positions are for starting in summer 2012.

You will find more information about oPAC, all research projects and the application details at:
<http://www.liv.ac.uk/opac>

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Summary

- Employed ~20 DITANET Fellows
- Many events for the whole community
- **Aim:** Improved training standards

- New initiatives based on DITANET experience

Get involved !

