



ILIAS status

Integrated Large Infrastructures for Astroparticle Science

G. Gerbier

CEA Saclay, DAPNIA, France

4th annual meeting

Chambéry, february 26-28 2007

The N2 team @ Paris IAP 18 july 2005

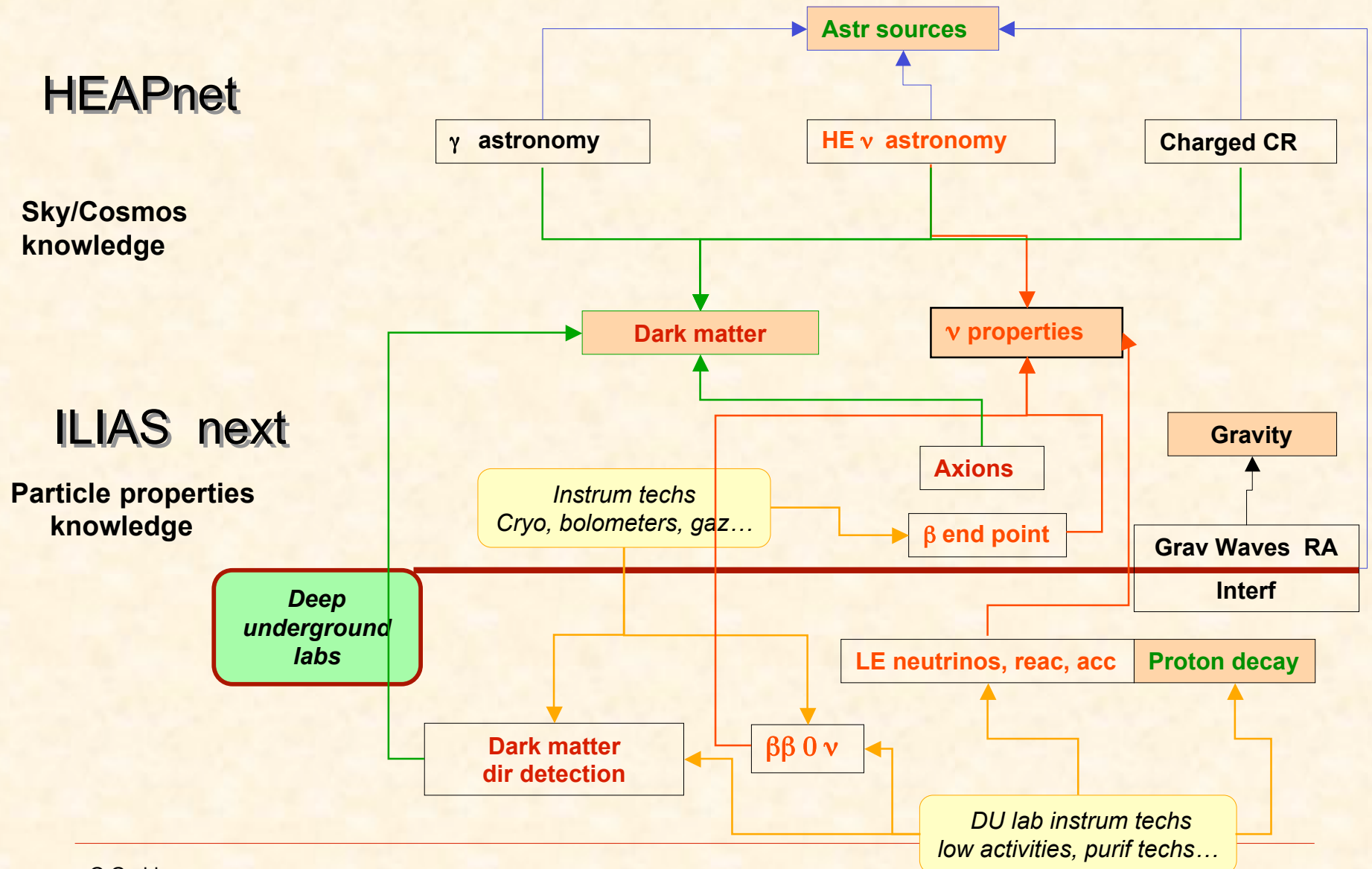


Nicola

Outline

- Short history of actual ILIAS
- How ILIAS is running
- Some highlights of year 3
- Evaluations
- FP7
- Some details about this meeting

Astroparticle Physics : fields and links



Initially, all AP in...

- But look rather « disparate »
- => ILIAS with DUL and GW infrastructures
- FP7 : preparing ILIAS next and HEAPnet
- Status of ILIAS follows...

Activity		Title	Amount (M€)	
NEW#	Old#		Request April 03	EC August 03
N_1	N_1	Management of the IA (see below)		
N_2	N_2	Deep Underground Science Laboratories	0,400	0,370
N_3	N_3	Direct Dark Matter Detection	0,484	0,480
N_4	N_4	Low-Background Physics	0,130	
N_5	N_5	Search on Double β Decay	0,300	0,280
N_6	N_6	Sub-Energy Tones of Ice Cream	1,000	
N_7	N_7	Search on Neutrino Oscillation	0,700	
N_8	N_8	Gravitational Wave Research	0,600	0,550
N_9	N_9	Theoretical Astroparticle Physics	1,000	0,500
Sub-Total (N_i)			5,510	2,180
J_1	J_1	Low Background Techniques for Deep Underground Science	1,718	1,580
J_2	J_2	Advanced TRC Testing for Tritium Accelerator	1,004	
J_3	J_3	Integrated Double- β -Decay European Activities	1,255	1,150
J_4	J_4	Development of Advanced Neutrino Detectors	2,002	
J_5	J_5	Development of Radio β Active Neutrino Detectors	0,800	
J_6	J_6	Study on Thermal-noise Reduction in GW Detectors	1,500	1,390
Sub-Total (J_i)			9,259	4,120
A_1	A_1	Deep Underground Science Laboratories	1,365	0,692
Sub-Total (N_i + J_i + A_i)			16,134	6,992
N_1	N_1	Management of the IA (7%)	1,130	0,488
TOTAL			17,264	7,480

Deep Underground Labs



BOULBY

Institute of Underground
Science, Boulby Mine, UK



Pyhasalmi lab

CUPP

Finland



LSM Fréjus

Laboratoire Souterrain
de Modane, France

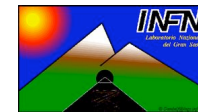
Solotvina lab

Ukrain



CANFRANC

Laboratorio Subterraneo
de Canfranc, Spain



Gran Sasso

Laboratori Nazionali del
Gran Sasso, Italy

Gravitational Waves Interferometers

GEO-600



Virgo



ILIAS = contract between EC and a consortium of contractors

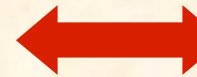
- start date: April 1st, 2004, 5 years duration
- 21 contractors from 12 countries; ~ 70 labs
- main participants: France, Germany, Italy, Spain, UK
- other labs foreseen to contribute: ~ 70 from 20 countries with 6 outside EC

□ Total budget: ~ 10 M€

□ EC support: ~ 7.5 M€



Deliverables



Annual reports

- **Joint Research Activities : 4.1 M€**
- **Networking Activities : 2.7 M€**
- **Transnational Access: 0.7 M€**

Scientific Officers:

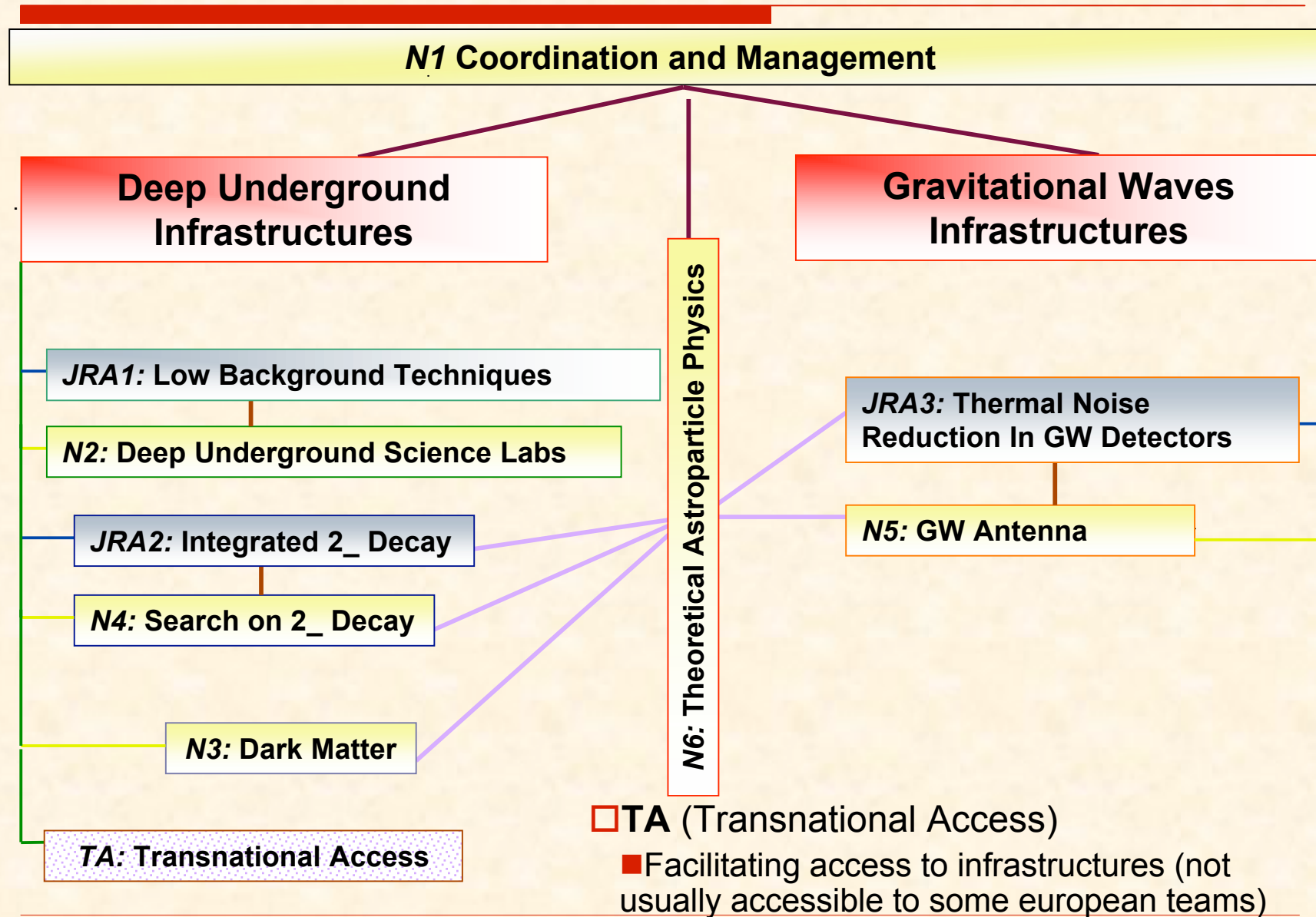
Dr. Gerburg Larsen

Dr. Elena Righi – Steele

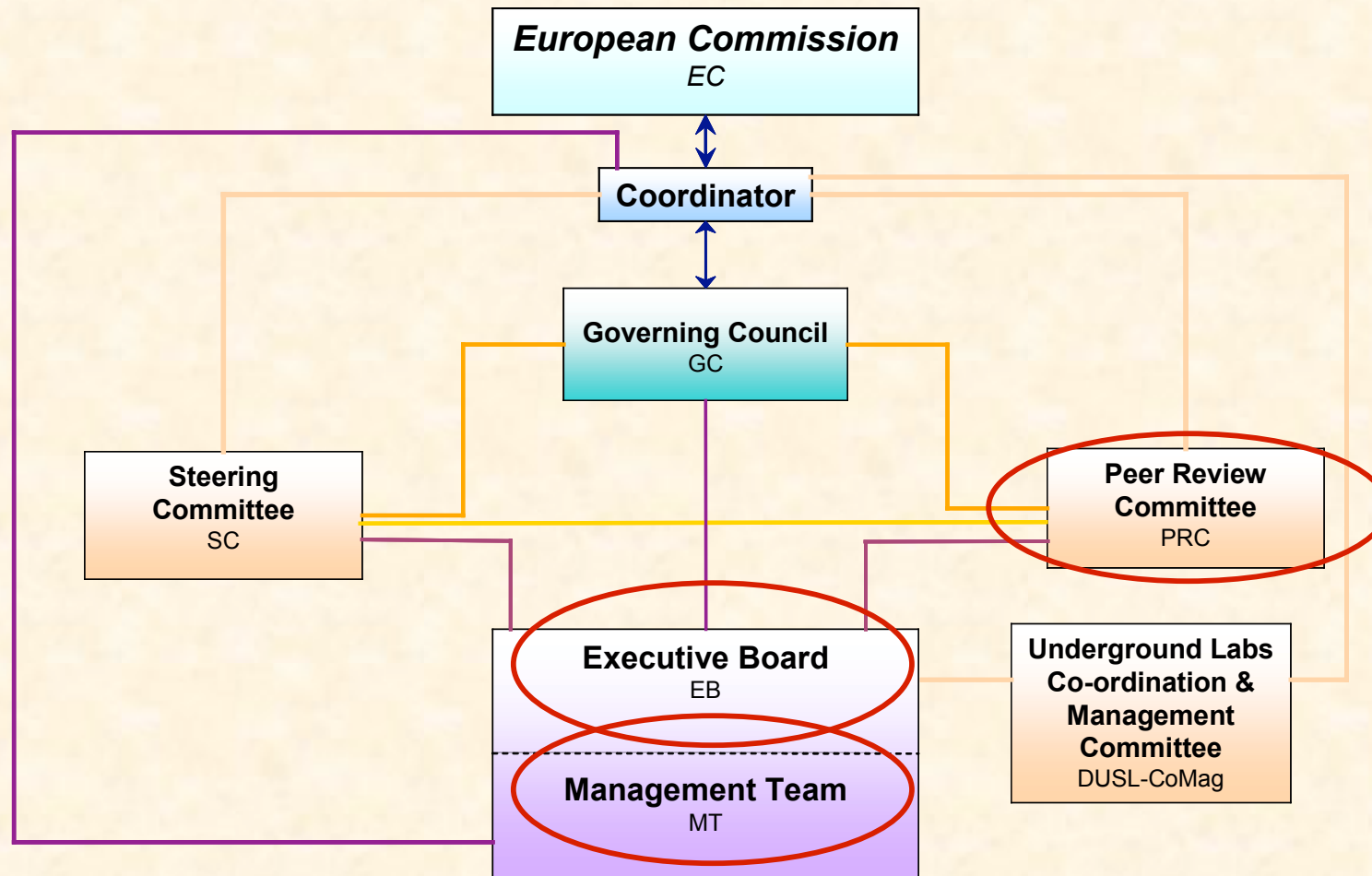
Contract Manager - Audit Liaison Officer:

Dr. Ulrich Schmid

ILIAS activities



Management structure



Executive Board in 2007

Function	Name	Institution	Activity	Name	Institution
Project Scientist	G. Cagnoli	Glasgow Univ.	Networking	N2: N. Spooner F. Piquemal	Sheffield Univ. IN2P3
Project Coordinator	G. Gerbier	CEA		N3: J. Jochum G. Chardin	Tübingen Univ. CEA
Project Deputy-Coordinator	M. Laubenstein	INFN		N4: D. Lalanne	IN2P3
Project Deputy-Scientists	J. Jochum	Tübingen Univ.		N5: R. Flaminio	IN2P3 & EGO
	E. Coccia	INFN		N6: G. Sigl L. Roszkowski	INFN Sheffield Univ.
Communication & dissemination	C Bosaro G Miu	IN2P3		Transnational Access	A1: L. Pandola
Coordinating Team	L. Pandola	INFN	Joint Research Activities	J1: J. Morales J Carmona	Zaragoza Univ.
	J. Jochum	Tübingen Univ.		J2: A. Giuliani	INFN
	G. Gerbier N. Spooner	CEA Sheffield Univ.		J3: G. Cagnoli	Glasgow Univ.

Management Team @ CEA/DAPNIA

- Gilles Gerbier, Project coordinator (from jan 2006)
- *Gabriela Miu, Project assistant (from jan 2006)*
- Florence Hubert Delisles, Financial assistant (from jan 2007)
- *Rachid Lemrani, Webmaster (from jan 2007), part time*
- *Laetitia Hemery, secretary (up to april 2007), part time*

Some 3rd year highlights

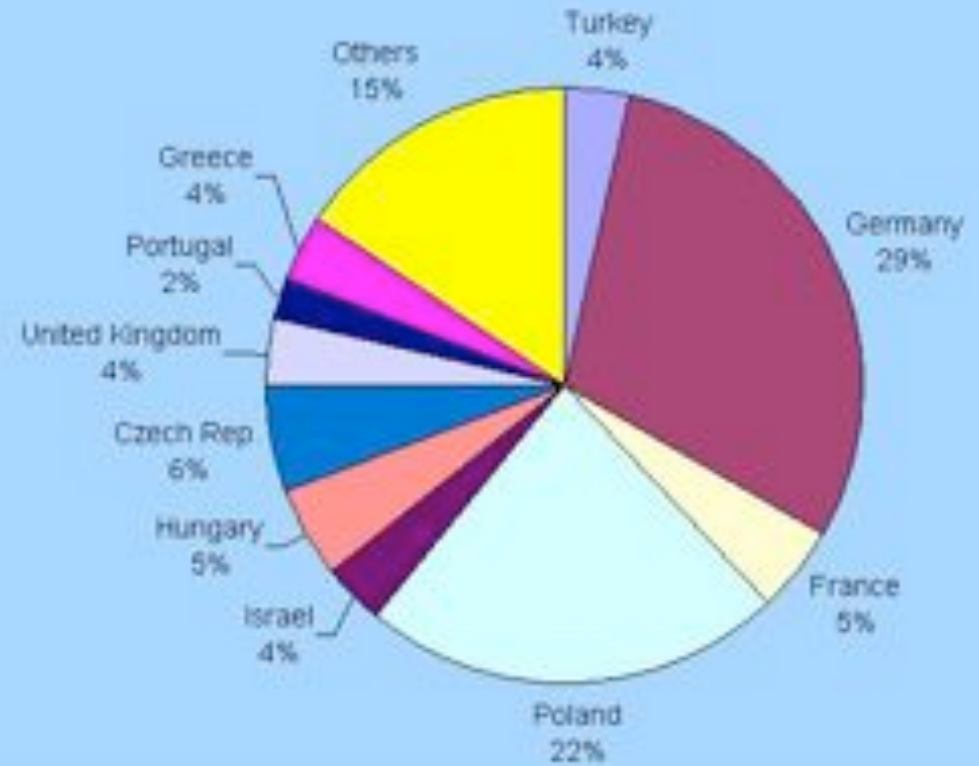
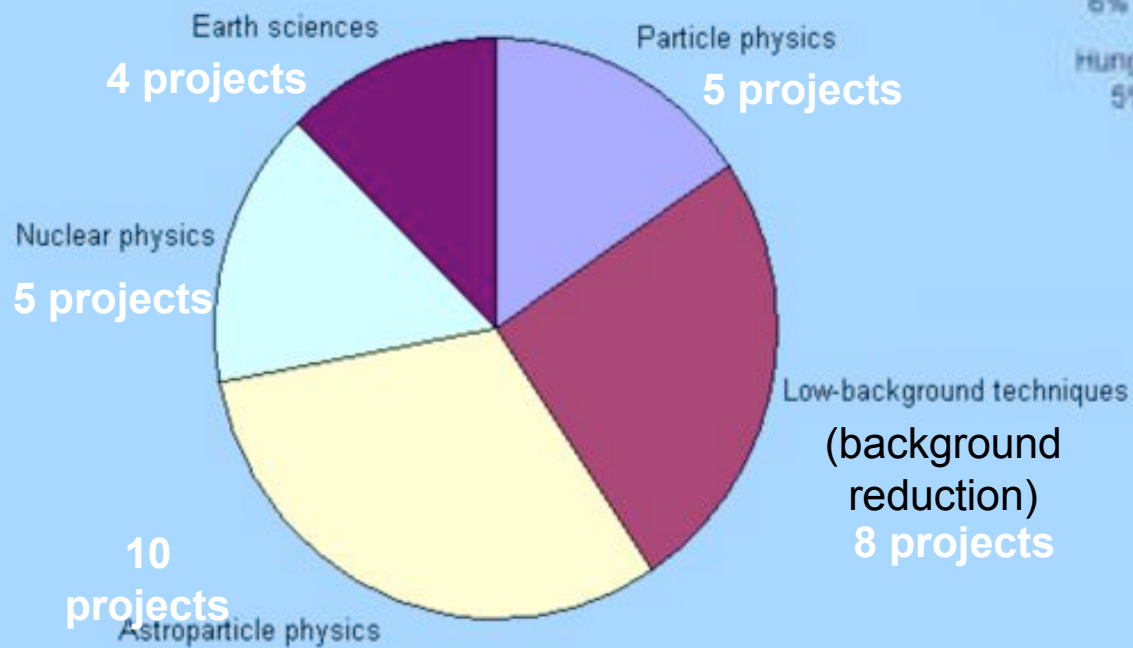
- Transnational access : global goal (total number of days delivered) reached
- Networking
 - DUL
 - Lab extension meeting : emerging projects
 - Very effective safety cooperation
 - DM
 - New web page for direct det DM calculations and exclusion diagrams
 - Starting of a co driven thesis
 - DBD
 - Intense exploration of ways of production of $\beta\beta$ isotopes
 - GW first joint analysis VIRGO AURIGA ROG
- JRA
 - DM,DBD : shared approach of bolometric surface background evts pb (CUORE/Edelweiss)
 - DM,DBD,GW : common interest in solving cryogenic vibrations induced background
 - DM,DUL,DBD : cosmogenic induced radioactivity
- Theory
 - Th/exp successful « training » sessions and visitors programs (axions, SUSY)
- General : new ILIAS web site to come soon
 - More ergonomic and updated with news, Data base on publications
- ILIAS serves as input/forum for roadmap ASPERA process
 - First gathering of all DM european experiments on future strategy

Transnational Access global goal fulfilled

	LNGS	LSM	LSC	Boulby	Total
Delivered years 1+2	671	70	9	15	765
Delivered year 3 (9 months)	914	186	3	80	1183
Total delivered	1585	256	12	95	1948
Committed	556	36	263	251	1106
Total	2141	292	275	346	3054
Deliverable (5 years)	1500	500	250	250	2500

Transnational access : data

Physics fields



Origin of users
(weighted by days)
Total 1948 days

Evaluations

□ Peer Review Committee

- Evaluation done on september 9th 2006
- Very positive general appreciation even if structure looks complex ”
- Recommendations ...

□ Coming EC Mid Term Review

- scientific and management reports
- this wednesday afternoon with EC scientific officers and activity coordinators

”

Peer Review Committee
Frank Avignone, chair [§]
Lars Bergstrom
Paolo Lipari [§]
Benoît Mours [§]
Thomas Shutt
Yoichiro Suzuki
[§] Member of the ApPEC PRC

FP7

- « => March 3rd 2006 meeting in Gran Sasso
 - Present letters of intentions from ILIAS + LE neutrinos
 - Start structuring « ILIAS next » integrating activity
- Next goals : structure and fit all projects within adequate FP7 instruments »
- => Status feb 2007
- Two I3 proposals
 - « ILIAS next » status on thursday, open concourse for new name
 - HEAPnet, on going
- Design Studies proposals
 - EURECA : DM cryogenic
 - ELIXIR : DM Xenon
 - LAGUNA : LE Neutrino, proton decay (meeting on Friday)
 - ICR : bb isotope production
 - + CTA , 3rd generation GW ITF, KM3 CNI
- Presentations of projects @ ApPEC meeting of march 30th

This meeting : talks and speakers




□ ILIAS speakers

- This year no activity coordinators reports : WG leaders or ILIAS « workers »
- No parallel sessions, not all topics covered, not all

□ Invited speakers

- P. Cushman (Univ. of Minnesota)
Status of DUL projects in US : DUSEL
- E. Fernandez (U. A. Barcelona)
ApPEC Astroparticle Roadmap
- L. Gurvits (JIVE)
Advanced Radio Astronomy in Europe: RadioNet today and in the next decade
- G. Bélanger (LAPTH)
Astroparticle physics - LHC : complementarities, links
- A. Morselli (INFN Roma 2)
Report on HEAPNet proposal
- F. Raab (Caltech Univ.)
Status and perspectives of GW search in the US with LIGO
- F. Avignone (Univ. of South Carolina)
Report of ILIAS Peer Review Committee

Some informations on this week events



L'Association Science-Actions de Chambéry,
Les Clubs Sciences et Citoyens du CNRS,
La Galerie Eureka, le CCSTI de la Ville de Chambéry,
L'Université de Savoie

vous invitent à un

CAFÉ SCIENCES ET CITOYENS, DEBAT

Le Chaos

Mercredi 28 février 2007 à 20h
Restaurant "LE BEAUJOLAIS"
155, rue Nicolas Parent, Chambéry
Tél : 04 79 69 22 96

Lionel CAIN, professeur de philosophie
Hervé COUZINIER, responsable du pôle finance à l'ESC Chambéry
Jean-Luc GAUTERO, épistémologue, professeur de philosophie,
Université de Nice Sophia Antipolis
Chauqi MISBAH, directeur de recherche au CNRS, laboratoire de
Spectrométrie Physique
Modération : Cyrille LIPS, Science-Actions

Summary

Let's have a fruitful meeting and a pleasant time !

ILIAS activities jargon

- **N**etwork -ing
 - Talking, thinking, meeting, exchanging experience, learning, coordinating, converging...
- **JRA** -ing (Joint Research Activities)
 - « Working » (for experimentalists)
 - Developing measurement tools, techniques,
 - Developing codes, data base
 - R&D (detectors, ...)
- **TA** -ing (Transnational Access)
 - Facilitating access to infrastructures (not usually accessible to some european teams)