



# ALICE Electronic Logbook

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**MEST-CT-2005-020216**

**Vasco Barroso**

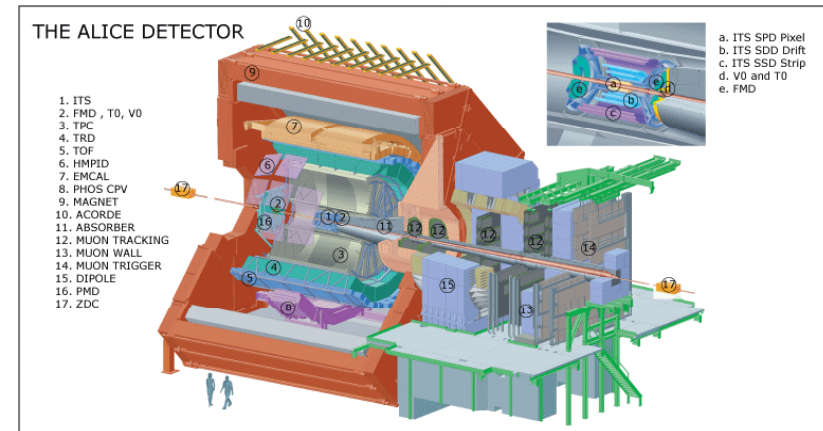
**PH/AID**



# ALICE and DAQ

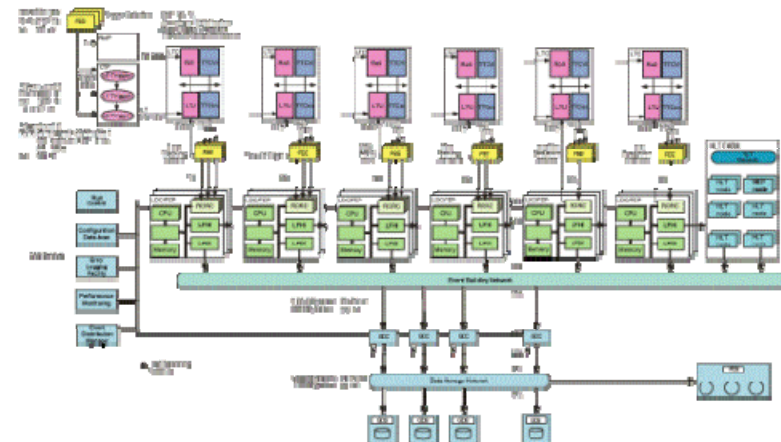
## ■ ALICE (A Large Ion Collider Experiment)

- What happens to matter when it is heated to 100,000 times the temperature at the centre of the Sun ?



## ■ ALICE Data AcQuisition

- 18 detectors
- 5 online systems
- 100's of computers





# Marie Curie Fellowship

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- Job description

- "...identify the relevant information to be stored in the logbook system for archiving."
- "Design, implement, and deploy the relevant database architecture and Web services..."
- "...participate in all the aspects of a high-energy physics experiment..."

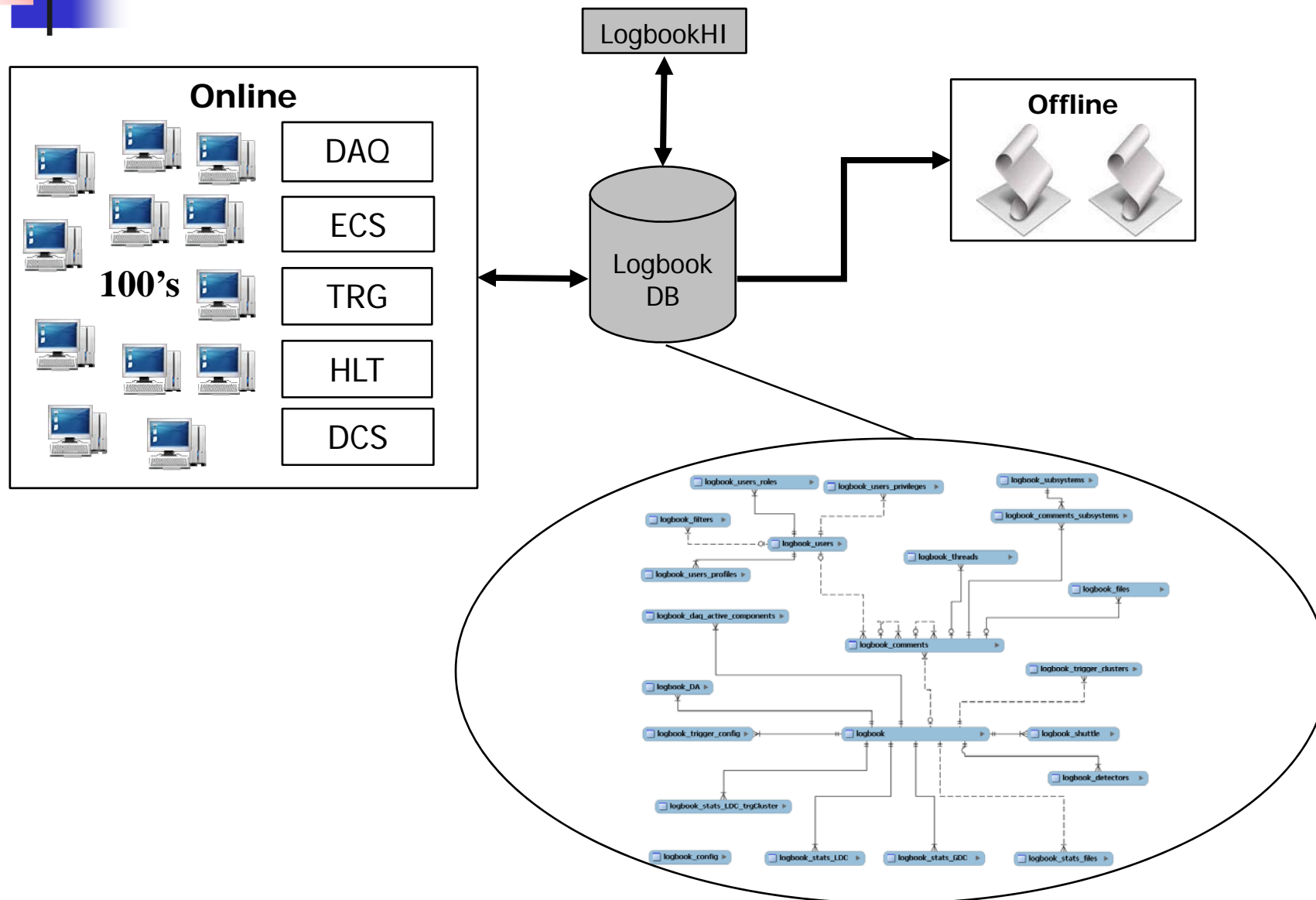
- Electronic replacement of paper logbook

- Custom-made:
  - Extend an existing database
  - Use the most recent web technologies
- Security, performance, reliability, user-friendly

- Information repository

- good run candidates for offline processing based on overall running conditions

# Information Repository



# Web Interface

1-20 of 35 (Page 1 of 2) Start Time: Current Shift Run # Export ru

60411

Run Conditions Run Statistics Trigger Clusters

**General**

Run #: 60411  
 Period: LHC08d  
 Partition: PHYSICS  
 Detectors: TOF, TPC, TRD, TRIGGER

**Recording**

LDCs Local Recording: No  
 GDCs Local Recording: No  
 GDCs mStreamRecording: Yes  
 Event Building: Yes  
 Data Migrated: Yes

Run	Duration	LDCs	GDCs	Total Data (MB)
63479	6 m	1	0	0
63477	1 m	1	0	16
63475	0 m	1	0	< 1
63473	4 m	1	0	158
63468	43 m	1	1	109
63467	4 m	1	1	109
63466	0 m	1	1	549
63465	0 m	1	1	551
63464	0 m	1	1	570
63463	0 m	1	1	549
63462	0 m	1	1	565
63461	0 m	1	1	553
63460	0 m	1	1	548
60705	8 h	44		
60462	1 m	14		
59993	1 m	2		
60691	4 h	53		
60447	1 m	4		
60305	2 h	48		

Detectors Filter

Number of Detectors

Min: (numeric)  
 Max: (numeric)

Detectors List

Exactly  At least  One of

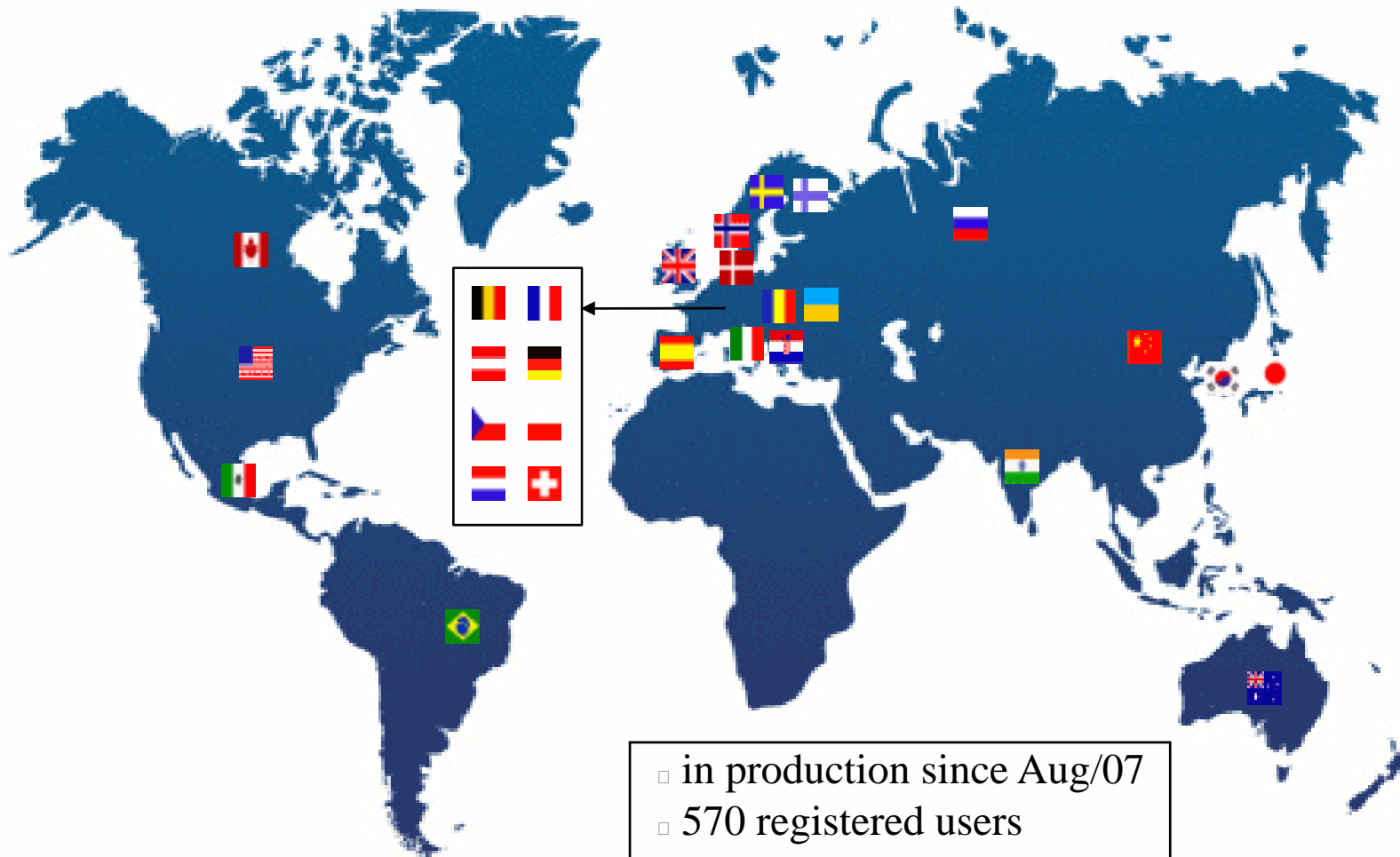
Detectors: EMCal, FMD, HMPID, MUON\_TRG, MUON\_TRK, PHOS, PMD, SDD, SPD, SSD

Submit Cancel

Apply filter

Run: 62537 4127 events

# ALICE Electronic Logbook Usage



- in production since Aug/07
- 570 registered users
- 30 different countries

# More than a Logbook ?

Electronic replacement of paper logbook



Central piece of the experiment's activities

■ Real-

Run	PARTITION	HALT	DUPLICATE	SUBVENT	ACQUIRE	CPV	DAQ	EMCAL	FMCD	HMPID	MUON	MUON	PHOS	PPMD	SPDD	SPDD	SSD	TOF	TOFC	TRD	TRIGGER	V0	ZDC	Actions

**Detectors participating in runs at 11:37:13**

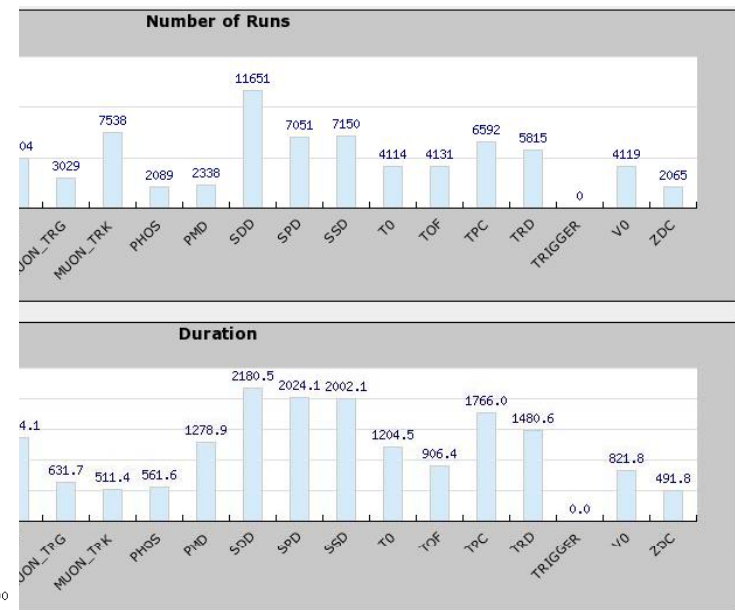
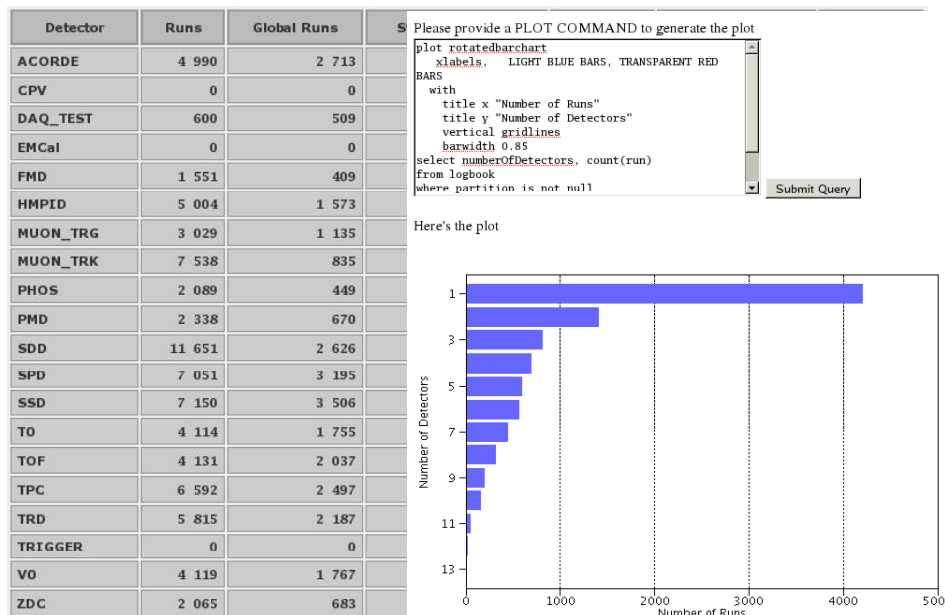
No results found

**Dashboard**

**announced: Plan for this night: attempt stable data taking with**

# Data-mining

- Huge repository
- Make it relevant (for data analysis, papers, management, ...)







# Training

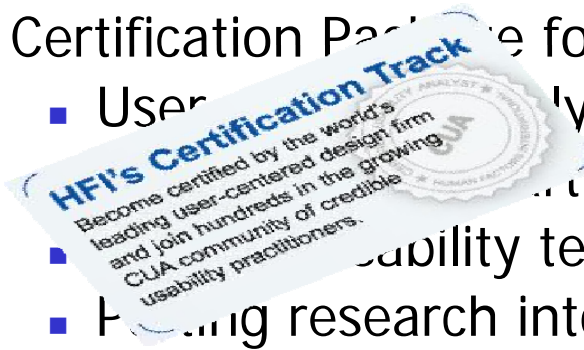
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## ■ Management & Communication

- French course Level 4-5-6, January-June 2007, CERN
- Managing Time, April-June 2008, CERN
- Service Orientation, to be scheduled, CERN

## ■ Technical

- On-the-job training in web technologies
- CERN School of Computing, August 2007, Dubrovnik
- Certification Programme for Usability, February-June 2008, London
  - User requirements analysis and conceptual design
  - Design of effective Web and application design
  - Usability testing
  - Translating research into practice
- Software Engineering in the Small and the Large, to be scheduled, CERN





# Dissemination

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- **ALICE Weeks** (oral presentation, audience = 10's)
  - July 2007
  - March 2008
  - October 2007
  - October 2008
- **ALICE Technical Forum, July 2008** (oral presentation, audience = 10's)
- **Marie Curie Conference, Barcelona, July 2008** (poster, audience = 100's)
- **CHEP 2009, Prague** (abstract submitted)



# Other points

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- Collaboration in the development of the DATE software package
- Participation in the day-to-day activities of the ALICE DAQ team
- Contribution to the ALICE experiment commissioning and startup both as DAQ expert (presential and on-call) and shift leader



# Conclusion

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- Objectives in the job description achieved
- Excellent environment that allowed me to evolve personally and technically
- The Alice Electronic Logbook has delivered even more than expected and will continue to evolve