

IFAE's History

(a personal/pictorial account)

Enrique Fernández UAB/IFAE

November 1983: letter from Rector of UAB



A. Serra Ramoneda

UNIVERSIDAD AUTÓNOMA DE BARCELONA

RECTOR

Bellaterra, 7 de Noviembre de 1983

Dr. Enrique Fernández
SLAC, BN-43
P.O. Box 43-49
STANFORD, CA-94305

Querido Dr. Fernández,

Como probablemente Ud. ya sabrá, coincidiendo con la reciente entrada de España en el CERN, el Gobierno ha aprobado un plan movilizador en el campo de las Altas Energías. Uno de los objetivos de este plan es el establecimiento de grupos experimentales en distintos puntos de España, y en concreto la creación de un grupo importante en Barcelona, en el campus de esta Universidad Autónoma.

- A busy year 84-85

April 84: 5-6, visited UAB for the first time.

Sept.: Visited again UAB (and AiguaBlava; CERN School of Computing).
Firm offer to come to Barcelona
Expressed the interest in ALEPH

Fall: Serra-Ramonedà visits Stanford/SLAC

Steinberger invited to visit Barcelona

Jan. 85: ALEPH collaboration meeting at CERN

May 85: I become an employee of UAB

Jun-Sep 85: ALEPH or DELPHI ?

- Who were the 6 students ?

M.P. Alvarez, F. Calviño, Q. Casulleras, Ll. Garrido,
M. Martínez, P. Mató,
S. Orteu (summer 84).

Summer 85	R. Miquel, J.A. Perlas + R. Pere (Technician)
Summer 86	A. Pacheco
October 86	Ll. Garrido, M. Martínez (Drs.)
January 87	M. Delfino (Dr.)
Summer 87	Ll. Mir, E. Tubau
Summer 88	R. Alemany, V. Gaitán (undergrad.) + J. M. Guijarro (IT technician)
Summer 90	F. Ariztizabal, P. Comas, A. Pascual + C. Cárdenas (Secretary)

Sept. of 1986

ALEPH Meeting in
Munich

FALCON is presented
to the collaboration

Far from ideal :
processing
station decoupled
from CERN
computer center

ABOVE CONSIDERATIONS \Rightarrow

WE NEED ALEPH-OWNED COMPUTING FACILITY

REQUIREMENTS :

FACILITY SHOULD BE ABLE TO DO THE DATA PROCESSING
(6 UNITS OF COMPUTING POWER)

SHOULD BE EXPANDABLE

DATA PROCESSING
GENERAL PURPOSE

SHOULD BE ABLE TO SHARE AS MUCH AS POSSIBLE
THE RESOURCES OF THE CERN COMPUTER CENTER

SHOULD HAVE A NAME :

FALCON

FACILITY
ALEPH
COMPUTING
NETWORKING

IDEAL :

GENERAL PURPOSE MAINFRAME
RUNNING VMS OR VM/CMS

CLOSE TO IDEAL :

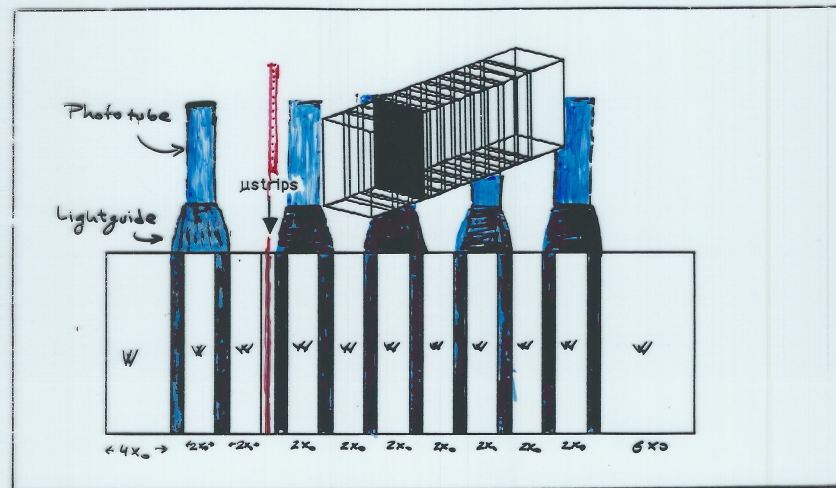
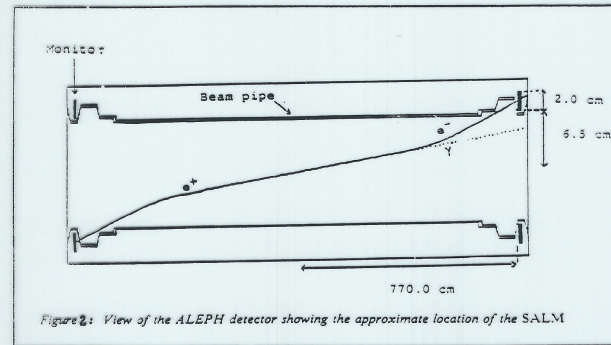
EXPANDABLE, MEDIUM SIZE HOST COMPUTER
WITH ATTACHED PROCESSORS, STRONGLY
COUPLED TO CERN COMPUTER CENTER

FAR FROM IDEAL :

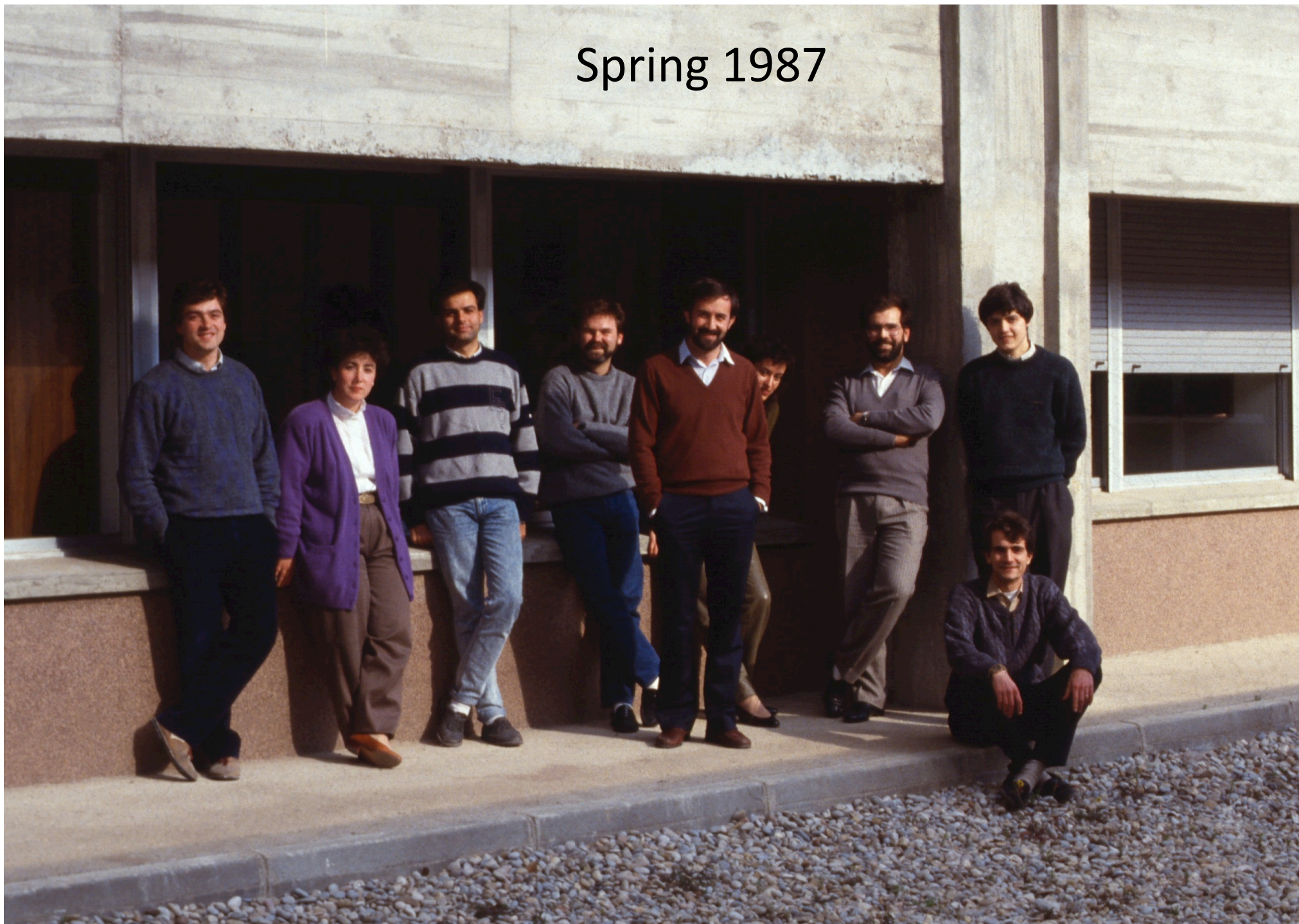
PROCESSING STATION, DECOUPLED FROM CERN
COMPUTER CENTER

BCAL
May 1987:
ALEPH Coll.
meeting at
CERN

SALM (SMALL ANGLE LUMINOSITY MONITOR)
BCAL (BHABHA CALORIMETER)



Spring 1987



Ca. July 1988

BCAL Test-Beam
at CERN



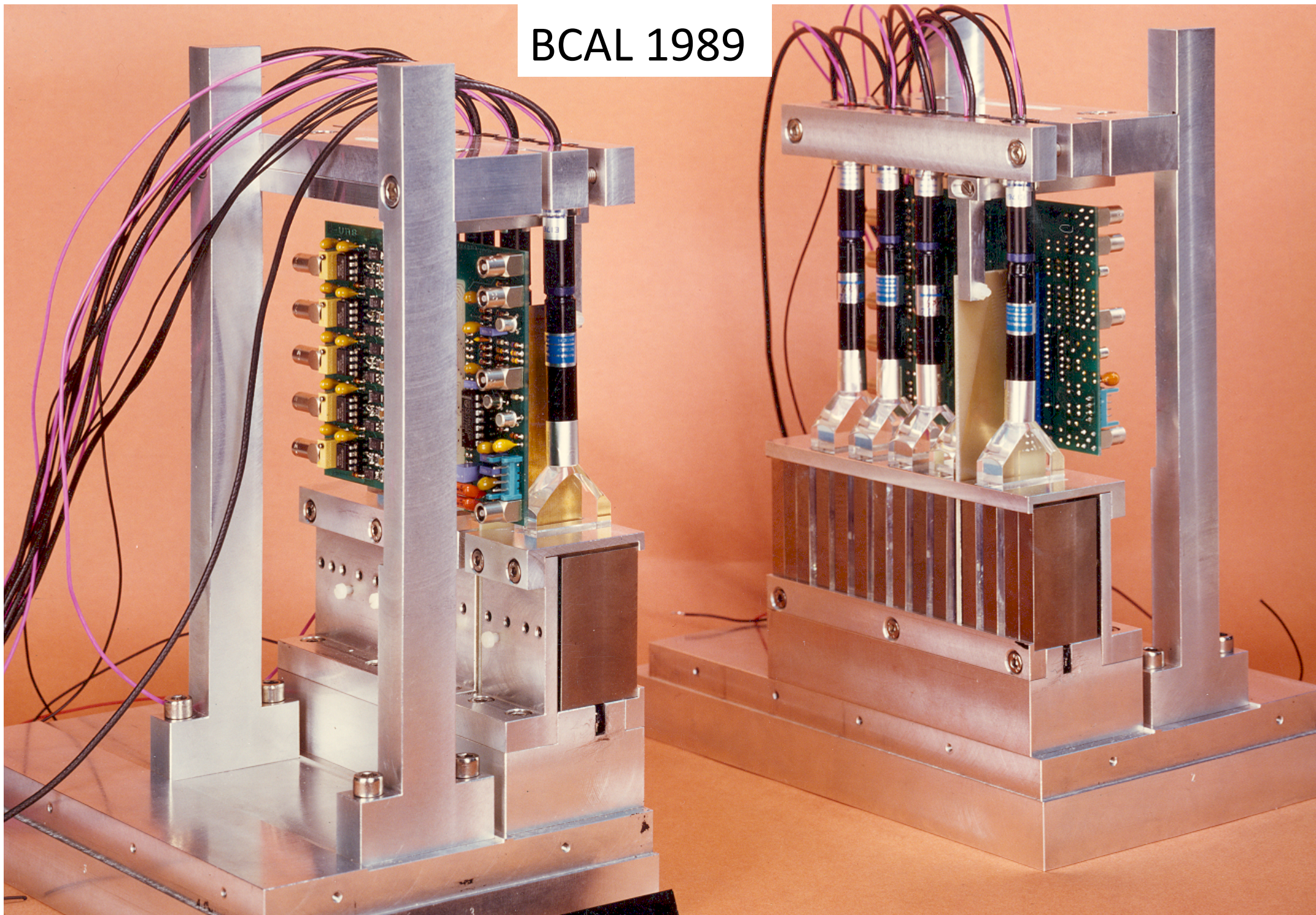
Xmas 1988



Ca. June 1989: FALCON delivered to CERN



BCAL 1989



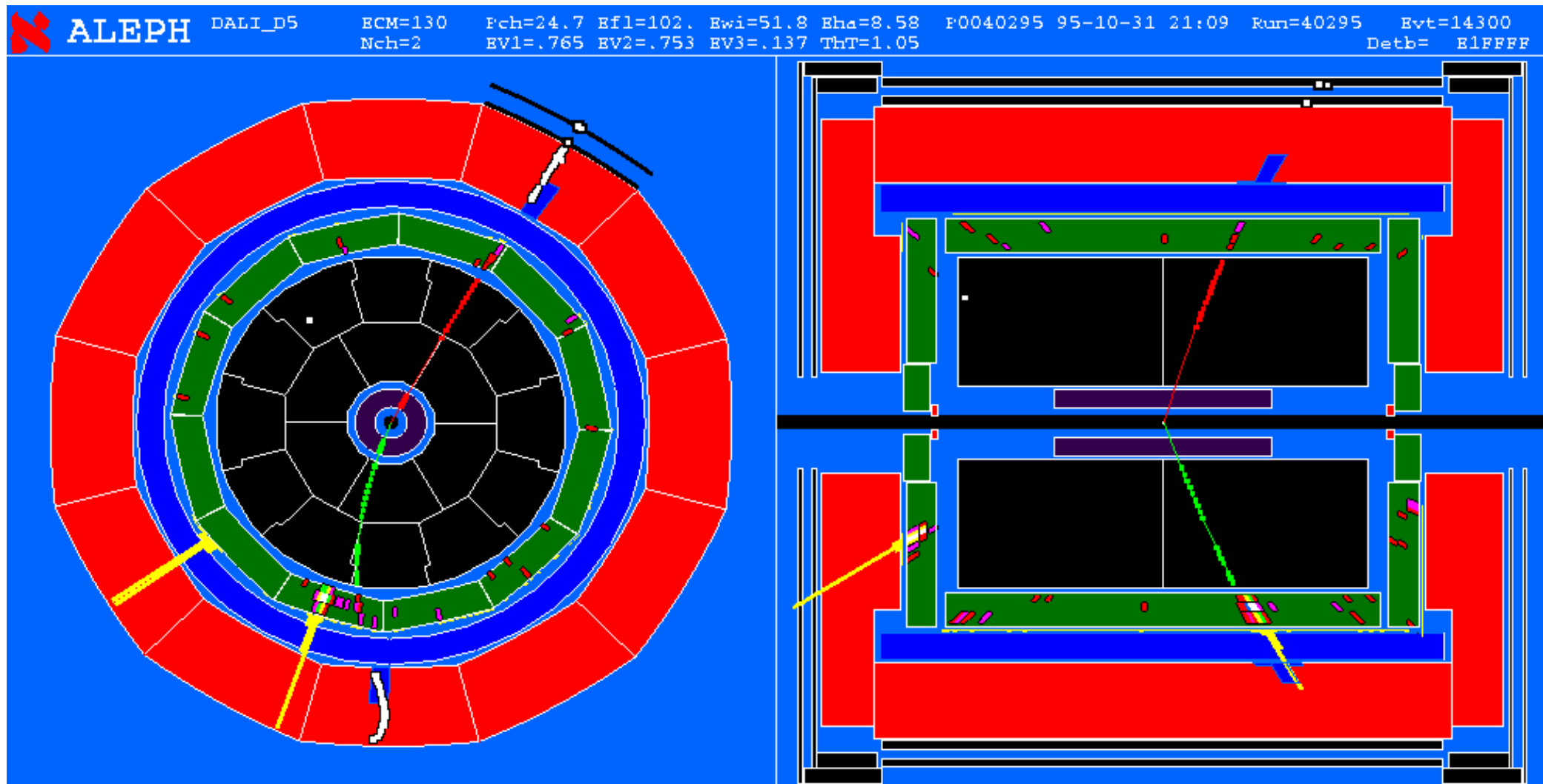
Summer 89

13/08/89



A very busy summer at CERN again ...

First collisions ... and some tension



ALEPH Thesis

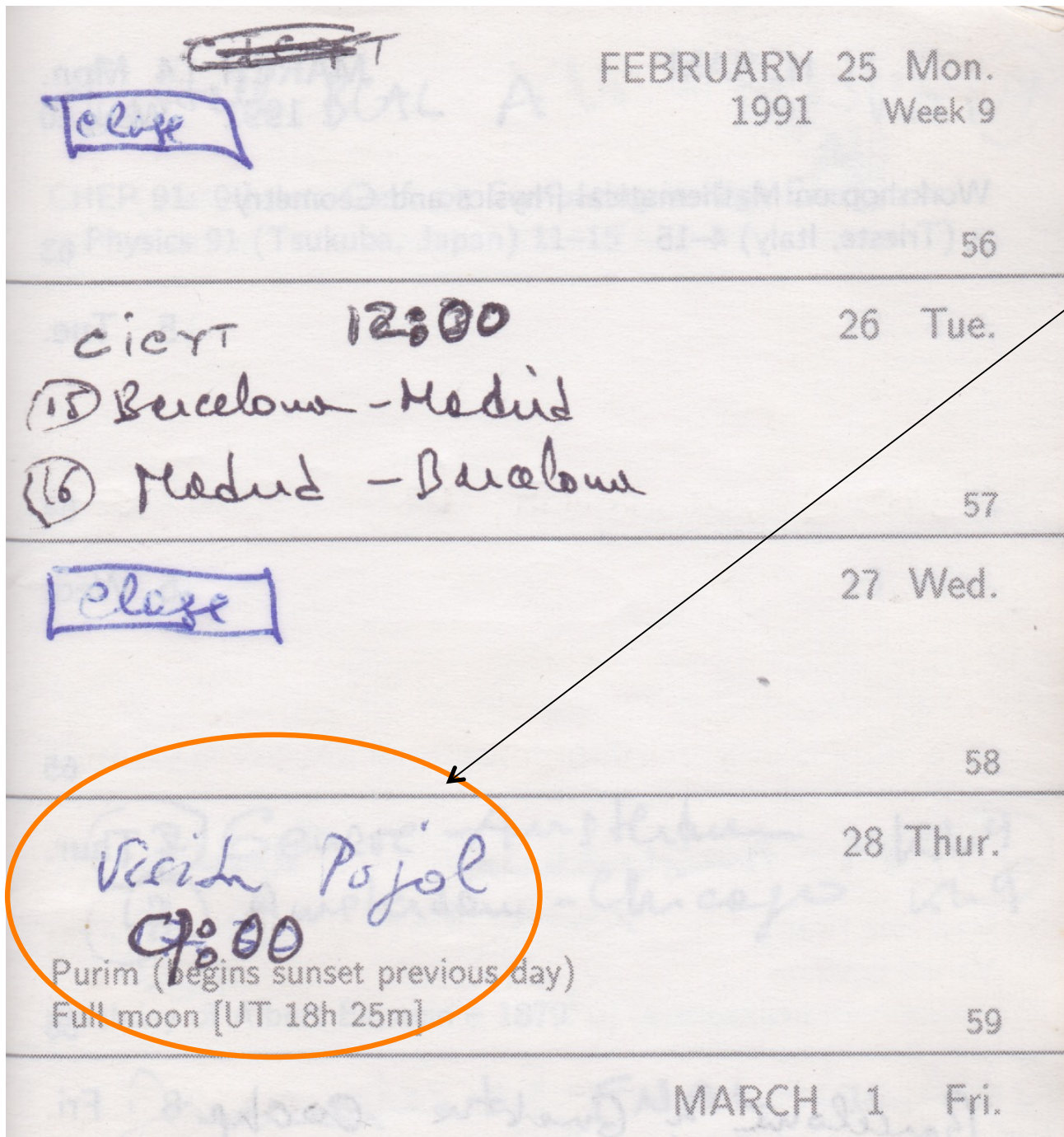
1989 - 2002

Name	Project Thesis	Director Thesis	Date Thesis
Ramon Miquel	ALEPH	M. Martínez	28/9/89
Salvador Orteu	ALEPH	M. Delfino	09/10/89
Josep Antoni Perlas	ALEPH	E. Fernández	01/06/90
Andreu Pacheco	ALEPH	E. Fernández	07/09/90
Pere Mato	ALEPH	R. Tarrach	Sep.90
Lluisa Mir	ALEPH	S. Orteu	13/3/92
Pere Comas	ALEPH	M. Martínez	23/6/93
Ricard Alemany	ALEPH	E. Fernández	28/5/93
Vicent Gaitan	ALEPH	Ll. Garrido	13/12/93
Francisco Ariztizabal	ALEPH	M. Delfino	08/09/94
Anna Pascual	ALEPH	M. Bosman	13/6/95
Cristobal Padilla	ALEPH	Ramon Miquel	28/9/95
Frederic Teubert	ALEPH	M. Martínez	23/10/96
Federico Sánchez	ALEPH	E. Fernández	03/12/96
Aurelio Juste	ALEPH	Ll. Garrido	22/6/98
Inma Riu	ALEPH	Ll. Mir	14/12/98
Eugeni Grauges	ALEPH	A. Blondel	15/5/00
Gonzalo Merino	ALEPH	M. Martínez	17/7/00
Pilar Casado	ALEPH	E. Fernández	29/3/01
Gaelle Boix	ALEPH	P. Janot	25/6/01
Silvia Bravo	ALEPH	G. Dissertori	31/10/01
Hugo Ruiz	ALEPH	F. Teubert	20/12/02

After some years it became clear that within the university frame we could not grow, or even stabilize.

President of the Generalitat was invited to visit CERN (after some preparation). This happened on 15/January/1991.

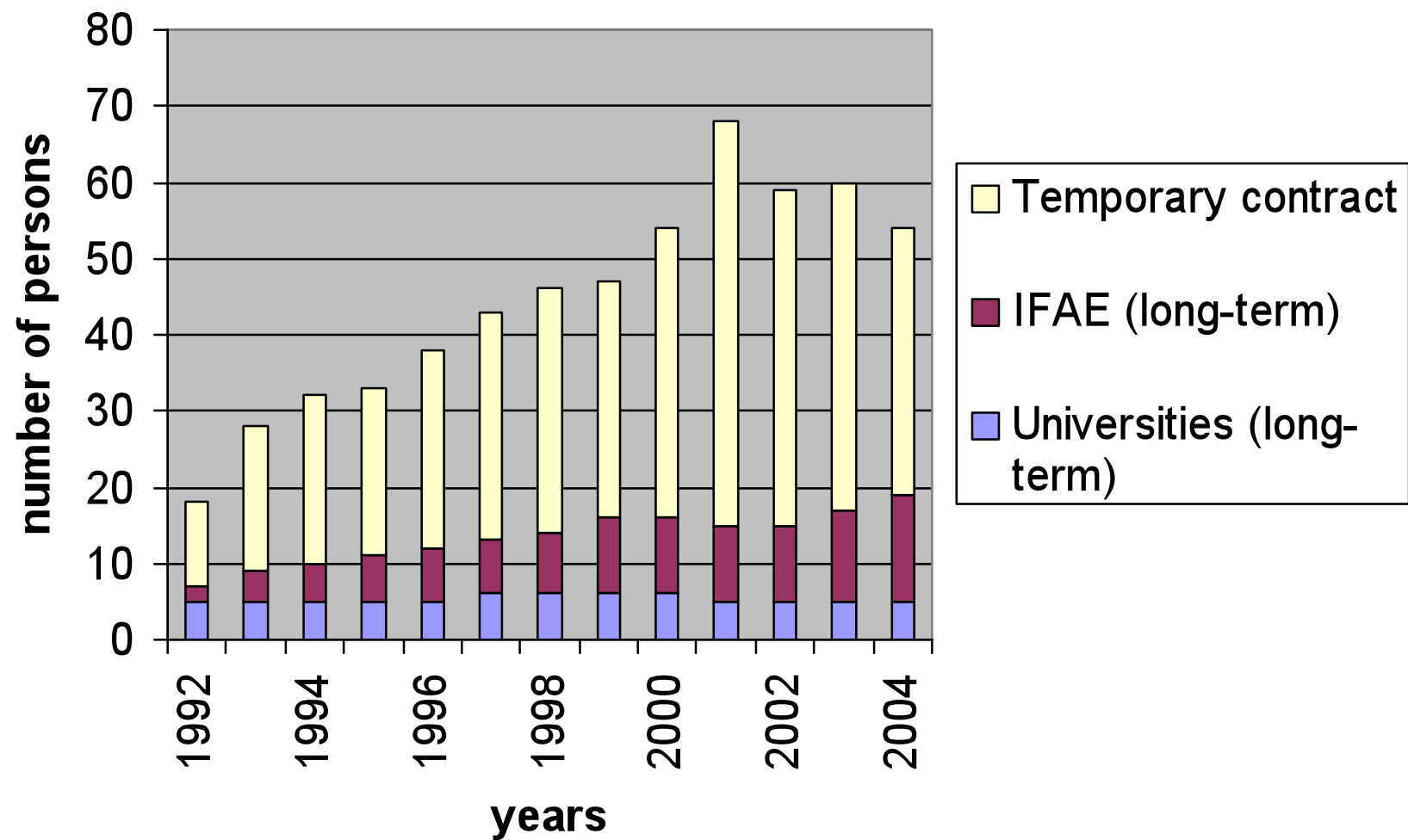
The visit went very well. We visited the ALEPH experiment and had lunch with the D.G. (C. Rubbia), J. Steinberger...



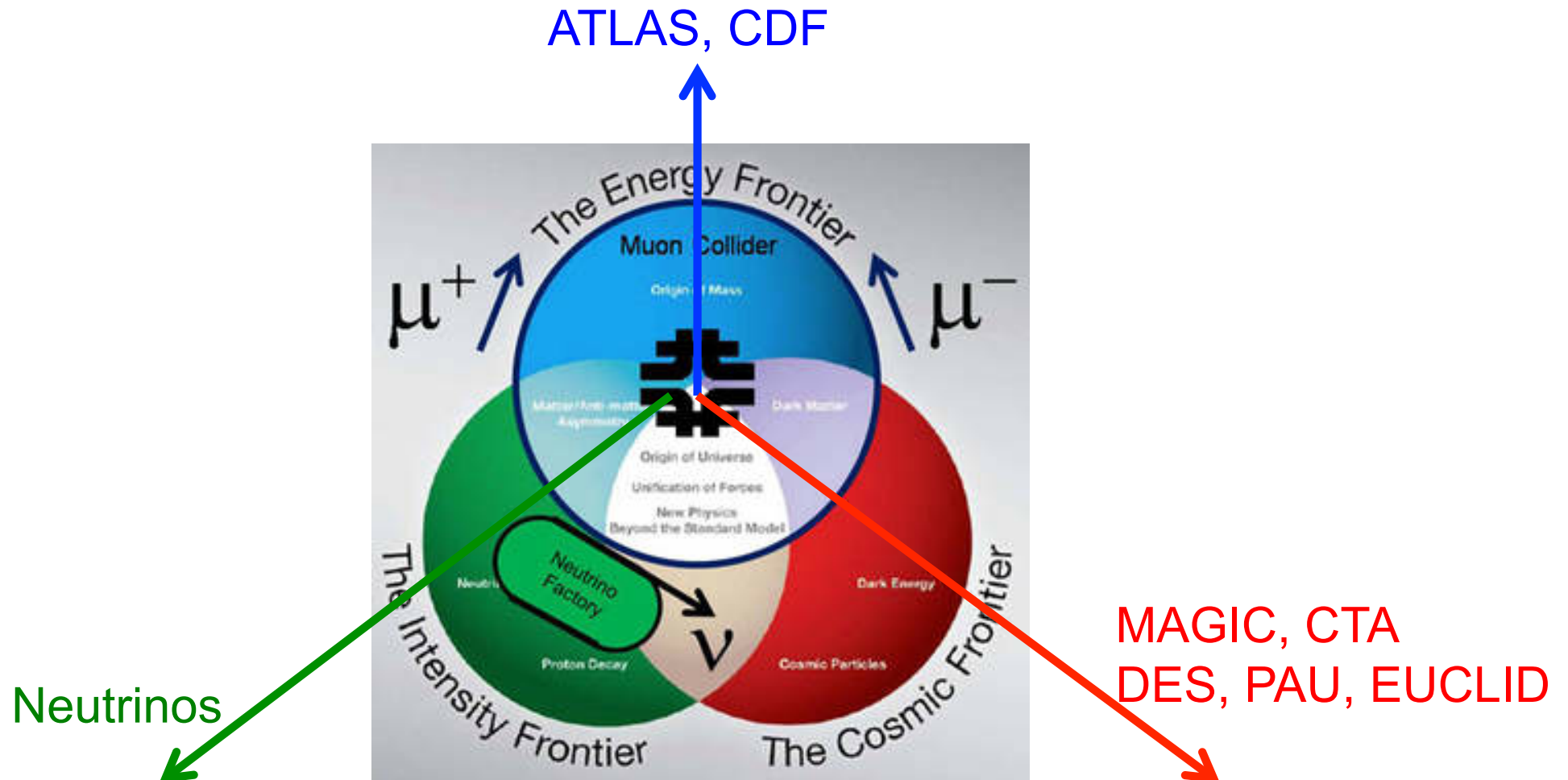
After the visit
to CERN

The
IFAE was born
on Thursday
28-February-1991

IFAE (exp.) personnel by contract type



After the end of LEP ... Diversification



July 5, 1992

Energy (and intensity) frontier: the LHC

Peter Jenni
CERN-PPE Div.
CH-1211 Geneve 23

Dear Friedrich and Peter,

We are writing to you as representatives of the ASCOT-EAGLE Collaboration. As you know, we have been considering for some time getting involved in the LHC effort and have in fact joined the RD3 project. We believe it is now the time for us to start the participation towards an actual experiment and see ASCOT-EAGLE as the best choice.

We therefore would like to join the ASCOT-EAGLE Collaboration at this time in order to participate in the work being done to further specify the detector. We can discuss at your convenience all the details of the formal and actual participation, including names of persons and future commitments. Please let us know how to proceed on this matter.

We thank you for your consideration and look forward to a fruitful collaboration.

Yours truly,

Fernando Barreiro
Prof. of Physics
Univ. Autónoma de Madrid

Enrique Fernández
Director, Institut de Física
d'Altes Energies
Univ. Autònoma Barcelona

- Who could lead the
effort ? → Matteo

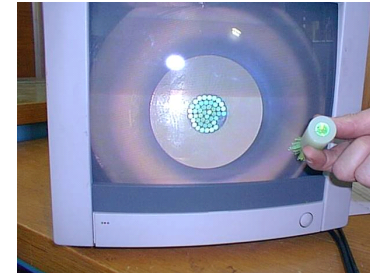
•ASCOT/EAGLE →
→ ATLAS

•CDF (preparation for
LHC, now finished)

1995 ?



Construction 1996-2002.



Various optical components used for instrumentation

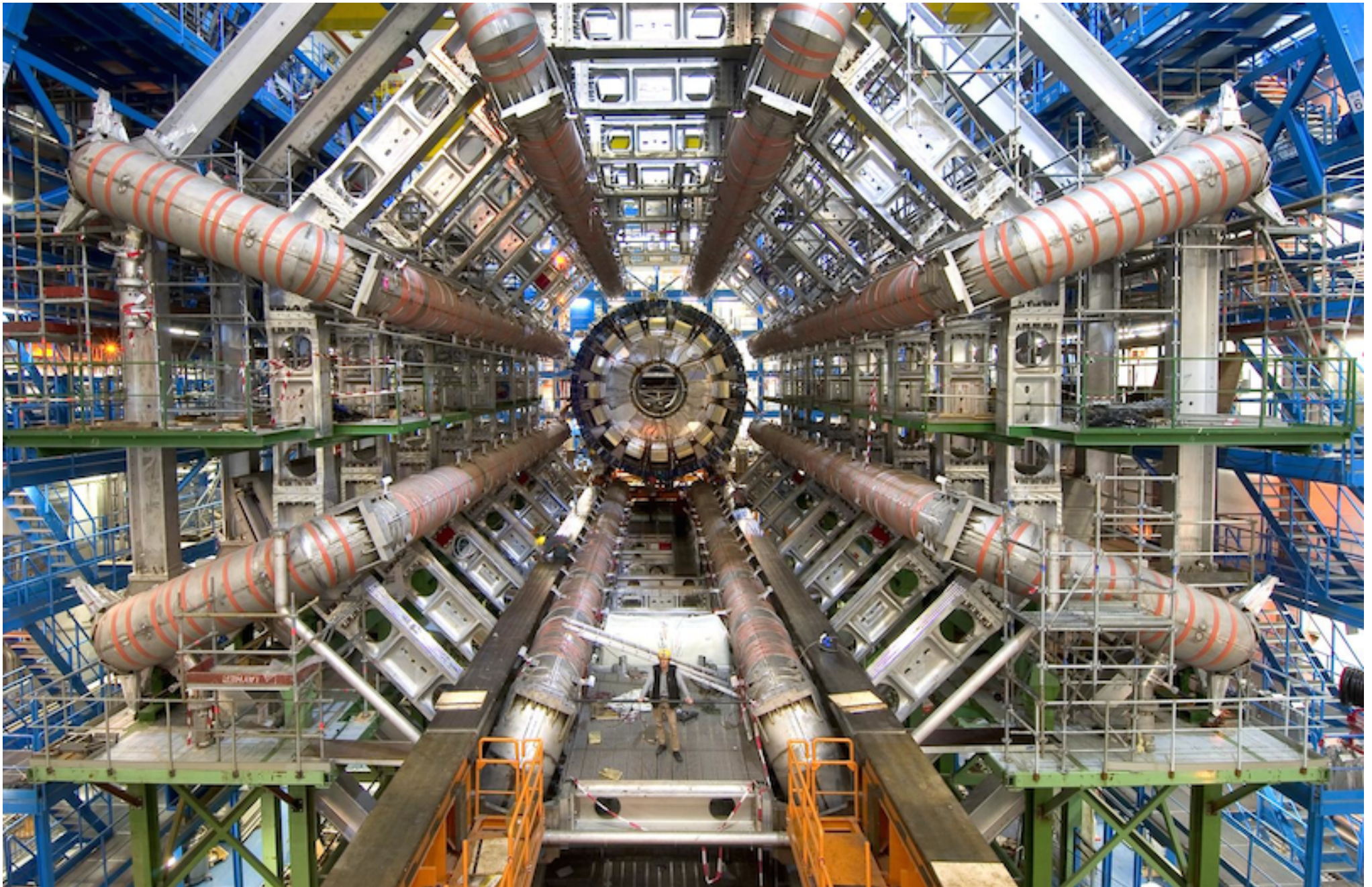


Do we build Swiss watch or a calorimeter?

-Bob Stanek

No tengas miedo a la perfección, nunca la alcanzarás. -Salvador Dali

March 2008 issue of the National Geographic Magazine



Felguera Construcciones Mecánicas, La Felguera, Asturias



Preparation for LHC

IFAE CDF Group at Fermilab



Cosmic Frontier:

- High Energy Gamma Rays (MAGIC, CTA)

Date: Mon, 09 Oct 1995 11:32:33 +0100
From: fernandez@vxcern.cern.ch
Subject: talk
Apparently-to: <fernandez@ifae.es>
To: fernandez@IFAE.ES
Message-id: <9510091032.AA13714@dxmint.cern.ch>
X-VMS-To: DXMINT::fernandez@ifae.es
Content-transfer-encoding: 7BIT

Eckart Lorentz talk at IFAE

October 1995

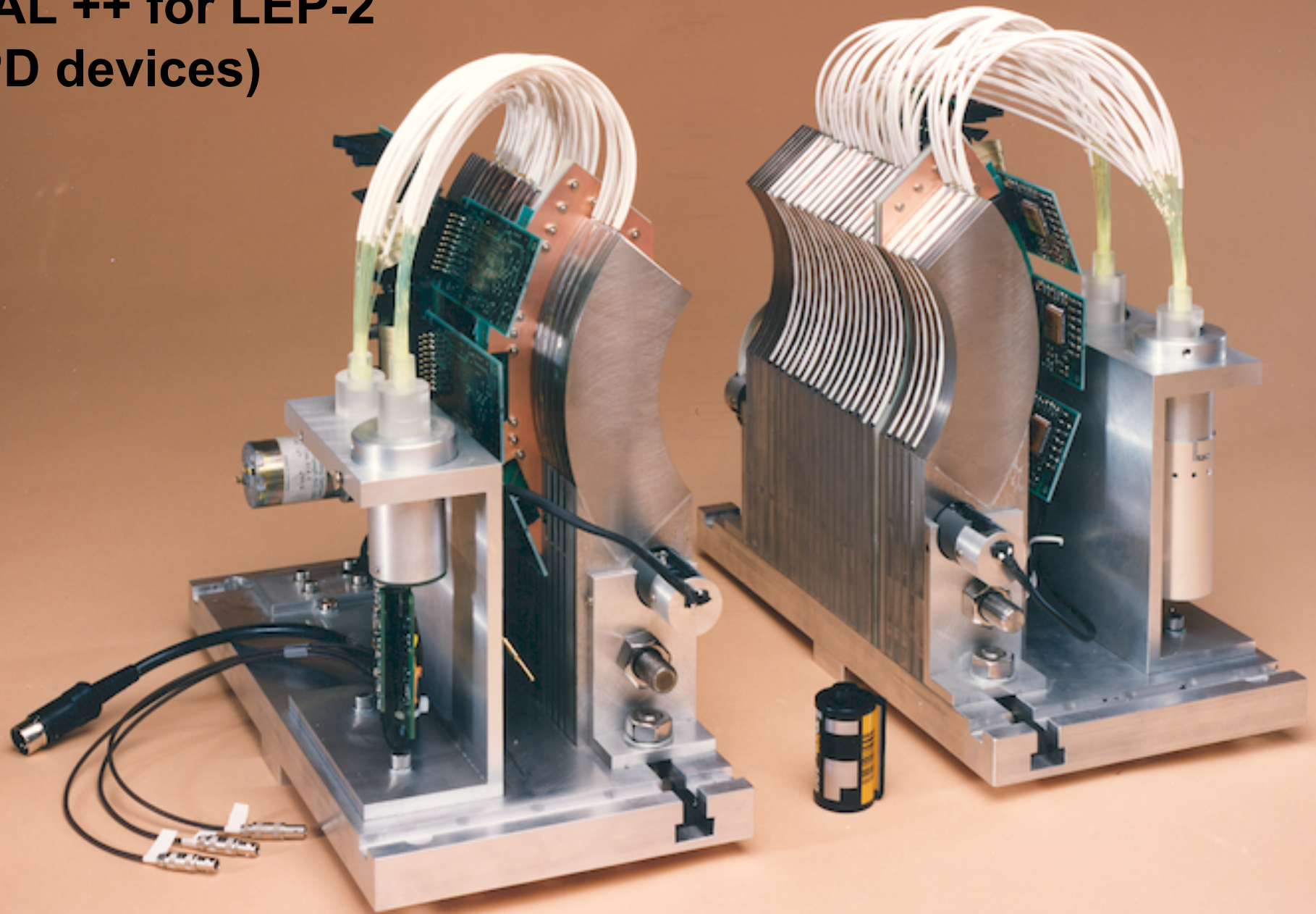
From: DXMINT::"ECL@DMUMPIWH.BITNET" 6-OCT-1995 20:26:03.56
To: enrique <vscrna::fernandez>
Subj: Re: Barcelona\

dear enrique thanks for your message. wednesday is ok, so i go and book my flight. about the time: how long do i need from the airport to the institute? very likely the best time for the talk would be sometimes in the afternoon. The title:

The MAGIC telescope projekt for the observation of cosmic gamma sources above 15-50 GeV. Short abstract: A project for a new air Cerenkov telescope on the basis of a decommissioned 17 m diameter solar concentrator will be described. Using some novel detector features like adaptive optics and high QE, red extended photosensors one expects a threshold between 15-50 GeV. The telescope will bridge the up to now unexplored energy range between 15-300 GeV. The expected sensitivity is 10-20 milliCrab. best regards eckart

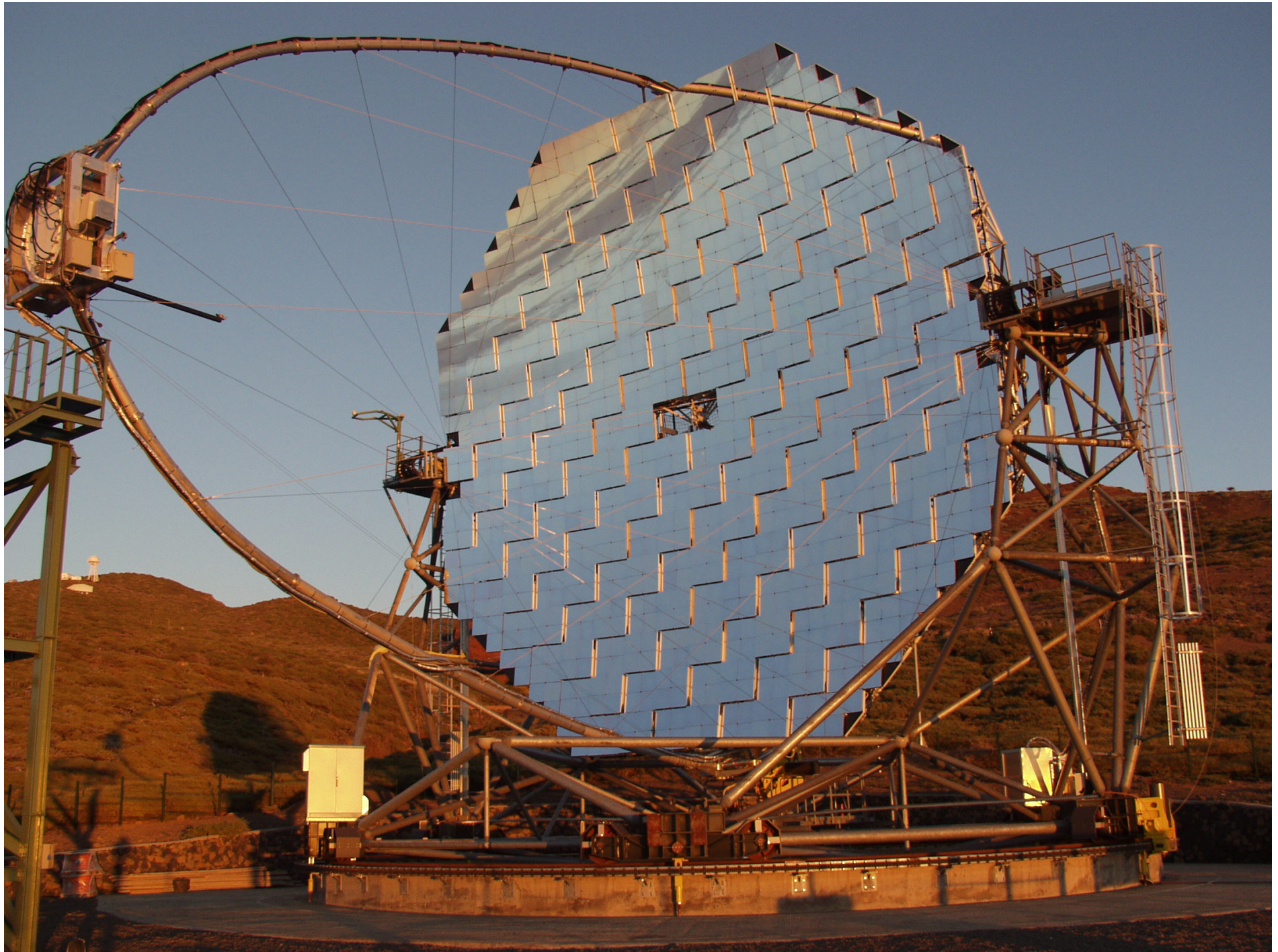
===== RFC 822 Headers =====

BCAL ++ for LEP-2 (APD devices)



When MAGIC was just a
name (1996 ?)







Intensity frontier:

- Neutrinos (K2K, T2K)

K2K-Europe at CERN (Ca. Jan. 2003)



K2K Meeting at
Stony Brook, NY
Sept. 2004



Cosmic Frontier:

- DES, PAUS, EUCLID

Neutrino 2004 in Paris → DES

Consolider Project → PAU

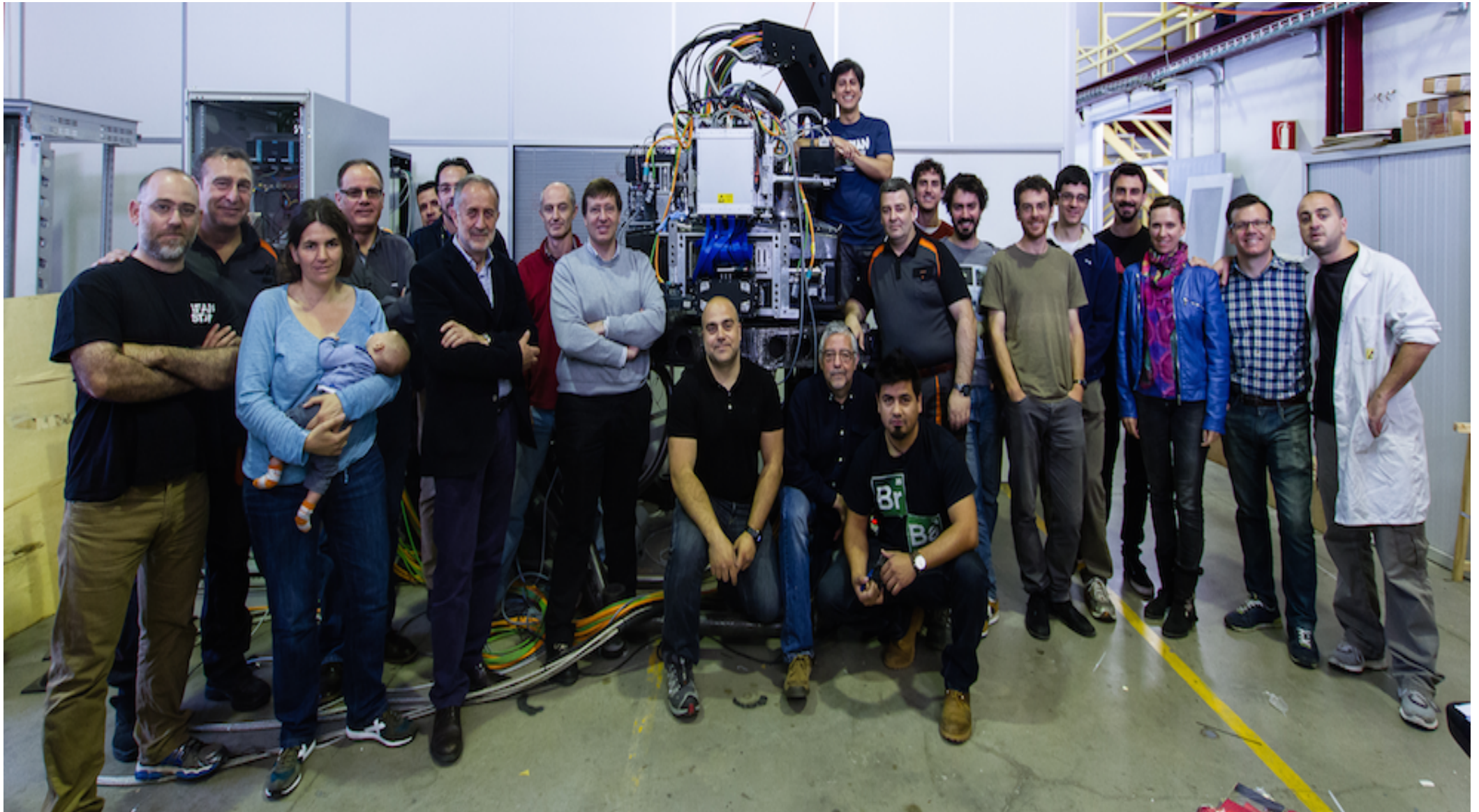
Space Program → EUCLID

DES Collaboration at KICP, Chicago, June 2017



The PAU Camera and the IFAE/IEEC/PIC PAU Teams

28-April-2015



IFAE-generated funds allowed us (in the past) to put some effort in “applied projects” (e.g. medical imaging)

Medipix, DearMama, LisaPathfinder, VIP...



Several projects at IFAE on applied physics.

May be a breakthrough project in the future ?

Port d'Informació Científica (PIC)

This is a long and interesting story ...

2001: Manuel Delfino, Head of CERN's IT Division. He knew in detail the plans and challenges of LHC computing. The GRID concept.

He sent letters to DURSI, UAB and IFAE, explaining the interest of a data-intensive, grid-connected computing facility.

Interest of Catalan and Central (CIEMAT) governments on the project.

Cronología

18/03/2001	Documento "Establishment of a center for Data-Intensive Analysis of Scientific Information" de M. Delfino.
Primavera 2001	Presentaciones a Generalitat de Catalunya, Rector UAB, IFAE. Identificación de CIEMAT como posible partner.
22/11/2001	Presentación PIC a Director General CIEMAT.
10/10/2002	Firma de convenio DURSI-IFAE-UAB que crea un PIC con 49% del equipamiento y 20% del personal inicialmente propuesto. M. Delfino nombrado Director. Consell de Govern del IFAE como Comisión Gestora interina del PIC.
12/06/2003	Firma de convenio CIEMAT-DURSI-IFAE-UAB que crea un PIC con 77% del equipamiento y 42% del personal originalmente propuestos.
10/11/2003	Primera reunión de la Comisión Gestora del PIC (2 ² / ₃ años después de la propuesta original)

IFAE “indicators”:

IFAE “indicators”:

Pere Mató: First person from Spain to hold applied physicist position at CERN

Frederic Teubert: First experimental particle physicist at CERN from Spain

Aurelio Juste: first scientist from Spain with permanent position at Fermilab, now ICREA

Ramon Miquel: first HEP scientist from Spain with permanent position at LBNL, now ICREA

Manuel Delfino: first IT Division Leader at CERN from Spain (and 2nd D.L. in any Division)

Manel Martínez: first spokesperson from Spain of a major international collaboration

IFAE gave administrative support to Barcelona Synchrotron Project

IFAE created the PIC (Port d'Informació Científica) (LHC Tier-1 Center)

Created spin-off company (x-Ray Imatek)

Narcís Monturiol Plate

Severo Ochoa Center (first at UAB Campus)