

CURRICULUM VITAE

(April 2007)

General information

First name: Eric
Last name: Kajfasz
Date of birth: December 31, 1960 in France
Citizenship: French
Professional address: CPPM (Centre de Physique des Particules de Marseille)
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Membership: Member of the French Physical Society (SFP)
Motto: Never give up, never surrender!

Education

1983 Graduated ranked 1st (Prix Cotton 1983) from
Ecole Nationale Supérieure de Physique de Marseille
1983 Graduated ranked 1st from DEA de Physique Théorique de Luminy (Aix-Marseille II)
1985 PhD in Physique des Particules at Luminy, Aix-Marseille II.
subject: "Studies on some calorimetric issues for the ALEPH detector"
2002 Habilitation to supervise researches, May 24, 2002.
CPPM, Université de Provence, Marseille.
subject: "Some experiments revolving around the mass generation issues"

Appointments and mobility

Oct 85 hired as a CNRS Researcher CR2 at CPPM
Jun 89 promoted to CNRS Researcher CR1
Jul 92 - Aug 95 on leave at Fermilab to work on CDF
Feb 98 - Oct 01 on leave at Fermilab to work on D0
Feb 02 - Jan 03 on leave at Fermilab to work on D0
Oct 05 promoted to CNRS Director of Research DR2

Experiments and themes I worked on over the years

Jul 82 - Sep 82	CERN Summer Student Time of Flight optimization
Sep 83 - Apr 85	ALEPH Electromagnetic Calorimetry and Search for toponium
Oct 85 - Jul 92	BUGEY III Neutrino Oscillations Online and analysis
Jan 91 - Jan 92	BUGEY Neutrino Decay Online and analysis
Aug 92 - Jul 95	CDF Silicon vertex detector (SVX') and top search (and discovery)
Aug 95 - Dec 97	ANTARES The beginning of a new window to observe the universe
Jan 98 - now	D0 Silicon Microstrip Tracker (D0SMT) and search for SUSY Together with being the D0-IN2P3 spokesperson, representing since 2004 the seven IN2P3 Labs taking part in D0, I presently work on SUSY searches at D0 in jets+MET topologies and more specifically on the search for s-bottom pair production and very soon I'll be working on Higgs search in that same final state.

Main responsibilities over the years

1985-1992	In charge of the online of BUGEY neutrino oscillation experiment
1987-1991	Elected member of the CPPM Lab Council
1991-1992	In charge of the online of BUGEY neutrino decay experiment
1992-1993	In charge of the electrical tests of the CDF SVX' micro-vertex detector
1993-1995	In charge of the commissioning and operations of SVX' at CDF
1995-1997	In charge in ANTARES of: the simulation group, the site evaluation group, and the ship requests to the CIRMED committee
1998-2000	In charge of the production of the D0 Silicon Tracker (D0SMT)
1999-2000	Member and chair of the D0 Speakers Bureau
Jan 2000 - Jun 2003	In charge of the D0SMT installation, commissioning and operation
Jan 2000 - Nov 2001	D0 Silicon Tracker group co-convener
Aug 2000 - Aug 2002	Elected member of the D0 Advisory Council (chair in 2001).
Nov 2001	Member of the D0 RunIIb Silicon Review Panel
Jun 2002 - Jun 2003	D0 Silicon Tracker group co-convener
Mar 2003 - Jul 2003	Member of the D0 Front-End-Busy task force
Sep 2003 - now	In charge of students at CPPM (trainings and theses)
Feb 2004 - now	Spokesperson for D0-IN2P3, a group of 7 French laboratories (CPPM,IPHC,IPNL,LAL,LPC,LPNHE,LPSC)
Feb 2004-now	Member of the D0 International Finance Committee
Feb 2004-now	Member of the D0 Editorial Board EB022 dealing with top properties other than mass Became EB022 chair in 2005
2004 - 2006	Deputy member of Specialists Committee CSE-29 of the Université de la Méditerranée
2004 - 2005	Member of the D0 Installation to Physics Standing Committee
May 2004-now	Member of the Orientation and Survey Committee of the IN2P3 Computing Center (CCIN2P3)
May-Jun 2004	Chair of the 2004 D0 co-spokesperson Election Committee
Oct 2004-now	co-supervision of Samuel Calvet's thesis on s-bottom search at D0
2005-now	member of the Plenary ECFA (European Committee for Future Accelerators)
2005-now	member and secretary of the CPPM Scientific Council
Oct 2006-now	member of the D0 Speakers Bureau
Nov 2006-now	member of the DAPNIA/SPP Scientific Council

Brief summary of my activities in D0

My first contribution to D0 is related to the Silicon Microstrip Tracker. From May 98 until end of 2000, I was in charge of the production of the modules of the SMT. From Jan 2001 until the end of 2001, I was co-leading the Silicon Tracker group and supervised the installation, debugging, and commissioning of the SMT hardware and of the associated software. Both during production and commissioning, I not only supervised but also got my hands quite dirty, so to speak. From Jan 2002 until Jun 2002, I worked on improving the SMT online tools and on finishing to debug detector and software. I took also some time during that period to write my habilitation thesis I defended on May 24th that year. From Aug 2000 until Aug 2002, I was a member of the Advisory Council. From Jul 2002 until Jun 2003, I was co-leading D0SMT again. My goal was then to increase the operations stability of the SMT (more monitoring tools and documentation for shifters). One problem I also started looking at was the presence of an abnormal noise in the F-wedges the sensor of which had been manufactured by Micron. From Mar 2003 until Jul 2003, I was member of the D0 Front-End-Busy task force. In Jul 2003, back to Marseille, I started working with Arnaud Duperrin on the jets+MET analyses. In 2004 and 2005 I was member of the D0 Installation to Physics Standing Committee. I've been a member of the EB022 (top properties other than mass) since Feb 2004 and I've been chair since 2005. So far, our EB took part in the publication of 1 PRL and 2 PRD papers. I was member of the Speakers Bureau from 1999 to 2000, and I've been back as a member since Oct 2006. As for my contribution to the search for supersymmetry in events with jets+MET topologies, with Arnaud Duperrin and our PhD student Samuel Calvet, we published results in 2006 with p14 data (310pb^{-1}) improving substantially previous limits on the pair production of s-bottom quarks (PRL 97 171806 (2006)). I am also co-author of a paper published in 2007 about improved limits on the pair production of stop quarks (PLB 645, 119 (2007)). Samuel Calvet's thesis is about extending the s-bottom pair production search using the whole Run IIa data set.

I've been the spokesperson for the D0-IN2P3 groups (CPPM,IPHC,IPNL,LAL,LPC,LPNHE,LPSC) since 2004. As such I'm a member of the D0 International Finance Committee, and in addition to having to bargain with our funding agency to get enough financial support for the D0 IN2P3 groups, enough D0 postdoctoral positions, and enough computing power for D0 at the IN2P3 Computing Center, I also try to do my best to find solutions to help the collaboration when manpower is needed (e.g. L1CAL commissioning, jet energy resolution). Finally, I was an SMT expert on call during the whole time I was stationed at Fermilab and the number of shifts I took since the beginning of Run II is somewhat above average.

Publications

I'm the co-author of 14 D0-notes. As chair of the EB022, I took part in the publication process of 3 papers (1 PRL and 2 PRD) and my complete publication list can be accessed on SPIRES at the following URL:

<http://www.slac.stanford.edu/spires/find/hep/www?rawcmd=fi+a+kajfasz>

The total number of papers in SPIRES of which I am co-author is: 268

They include 3 “Renowned papers” (500+ cites) and 3 “Famous papers” (250-499 cites)

- D0 (127)
- ANTARES (6)
- CDF (118)
- BUGEY neutrino decays (6)
- BUGEY neutrino oscillations (8)
- ALEPH (2)
- other (1)

The most recent publications for which I am part of the primary authors list are:

- “Search for Pair Production of Scalar Bottom Quarks in $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV,”
Phys. Rev. Lett. **97** (2006) 171806
- “Search for Pair Production of Scalar Top Quarks in the acoplanar charm jet final state ,”
Phys. Lett. B **645**, 119 (2007)

Talks at conferences and seminars I gave over the years

- At Centre de Physique Théorique (Luminy, Marseille) between 1985 and 1988 I gave seminars on the following subjects:
 - Toponium at LEP
 - Fifth Force
 - Bugey II results and the new Bugey III experiment
- “Bugey II Results and the New Bugey III experiment” - seminar given at Los Alamos National Laboratory in June 1988
- “Neutrino Oscillations Near Reactors” at Cargese Particle Physics Summer School - 1989, Cargese, France
- “The Neutrino Puzzle” to the Société Française de l’Energie Nucléaire - Apr 1990, Lyon, France
- “Neutrinos In and Beyond the Standard Model” - seminar at GANIL (Caen, France) - Jun 1991
- “Bugey III Neutrino Oscillation Experiment: Preliminary Results” - Moriond - Les Arcs - Jan 1992
- “Bugey Neutrino Decay Experiment: Improved Limits” - LEWI’92 - Dubna, Russia - Jun 1992
- “CDF New Silicon Vertex Detector” - Int. Workshop on Vertex Detectors - Bloomington, IN, USA - 1994
- “CDF Quest for the Top Quark” - seminar given at CPPM - Jun 1994
- “CDF Silicon Vertex Detectors: Present and Future” - seminar given at CPPM - Jun 1994
- “High Energy Cosmic Neutrinos” Particle Physics Yearly Meeting - 30-31 Jan 1996 - Centre de Physique Théorique de Marseille - Luminy - Marseille.
- “High Energy Neutrino Detectors” at the Workshop on High Energy Cosmic Neutrinos - Marseille - Jun 1997.
- “Status Report on Baikal and AMANDA” at the XVIth Internat. Workshop on Weak Interactions and Neutrinos - Capri - Jun 1997.
- “ANTARES Demonstrator - towards a High Energy Neutrino Undersea Telescope” at the XVIth Internat. Workshop on Weak Interactions and Neutrinos - Capri - Jun 1997.
- “The Mass of The Top Quark” at the Congress of the French Physical Society - Jul 1997.
- “Heavy Quark Physics” - 4 session course at the Ecole de GiF in 1998

- “The D0 Silicon Microstrip Tracker for Run IIa” - 7th International Conference on Advanced Technology and Particle Physics - Como, Italy, Oct 2001
- “The Tevatron Status” at the GDR-SUSY Workshop - Lyon, France, Nov 2001
- “D0 Status” at the GDR-SUSY Workshop - Lyon, France, Nov 2001
- “The D0 Silicon Microstrip Tracker for Run IIa” - Vertex 2002 - Hawaii, USA, Nov 2002
- “b-production at the TeVatron” for CDF et D0 at Moriond QCD - Les Arcs, France, Mar 2003
- “Search for Extra-Dimensions at ep and $p\bar{p}$ colliders” pour CDF/D0/H1/ZEUS at ICHEP 2004 - Beijing, China, Aug 2004
- “From TeVatron to LHC, Run II Physics Perspectives”, Physique ATLAS France, Autrans, Mar 27-29, 2006
- “Search for New Physics with D0 Detector”, ICHEP 2006 - 33rd International Conference on High Energy Physics -Moscow, Jul 26 - Aug 2, 2006
- “Status of some New Physics Searches at D0”, CERN Seminar, Geneva, Sep 12, 2006
- “Status and perspectives at D0”, Seminar at LPSC, Grenoble, Dec 21, 2006

Teaching and students supervision

TEACHING:

Being a full time researcher I do have to teach. However, I like to keep a connection with the younger generations, and I also find it a great way to try to interest some physics students in considering a research carrier in Particle Physics.

from 1988 to 1992:

- "Introduction to Particle Physics", 2nd year of Ecole Nationale Supérieure de Physique de Marseille

in 1996 and 1997:

- "Introduction to Particle Physics" Physics master of Faculté des Sciences et Techniques de Saint-Jérôme (Aix-Marseille I)
- "Detection Techniques in Particle Physics" for graduate students at Faculté des Sciences de Luminy (Universit Aix-Marseille II) (Aix-Marseille II)

in 1998:

- "Heavy Quark Physics" - 4 session course given at the Ecole de GiF '98

in 2006 and 2007:

- "Particle Physics and Tests of the Standard Model and Beyond" for graduate students at Faculté des Sciences de Luminy (Universit de Provence)

in 2007:

- "Introduction to Particle Physics", 2nd year of Ecole Centrale de Marseille

STUDENTS SUPERVISION SINCE 1998:

- 1998-2003: during the production, installation and commissioning of D0SMT, I supervised quite a few students to initiate them to the joys and mysteries of the D0 Microstrip Silicon Tracker.
- 2003: supervised for two months two Applied Physics Master students for a project on energy measurements with silicium detectors.
- Sep 2003-now: in charge at CPPM for theses and DEA/Master2 projects.
- 2004: supervised a student from the Grenoble Physics Master2 for a 3 months project (April thru June), on "Search for s-bottom quarks at D0".

- Oct 2004-now: co-advising Samuel Calvet's thesis on the "Search for pair production of s-bottom quarks at D0".

PARTICIPATION TO THESIS JURY:

- Sebastien Corréard (CPPM) - ATLAS thesis - 02/09/06
- Benoit Clément (IPHC) - D0 thesis - 04/28/06
- Vincent Lesné (LPC-Clermont) - D0 thesis - 07/11/06
- Nicolas Kerschen (DAPNIA/SPP) - ATLAS thesis - 09/28/06
- Fabrice Hubaut (CPPM) - ATLAS Habilitation thesis - 03/29/07
- Florent Chevallier (LPSC) - D0 and ATLAS thesis - 05/10/07