

Welcome to Photon2013

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A preface with a bit of history and a conclusion.

*Photon 2013,
20-24 May 2013
Paris, France*



*Speaker.

1. From Southampton to Paris

After Southampton official withdrawing on september 2012, the IAC agreed to have a Photon Conference in Paris end of may 2013, ten years after Frascati and 40 years from the beginning. Requests were sent to various places but none succeeded. So you escaped from the Hôtel de Ville de Paris, the Ministry of Research located at the "Old Ecole Polytechnique" and the Centre des Cordeliers of the Faculty of Medicine, University Pierre and Marie Curie.



Finally, welcome to the LPNHE, a laboratory located in the UPMC still under reconstruction, mainly involved in LHC experiments (ATLAS, LHCb), the future Linear Collider, Astroparticles (AUGER, HESS, CTA), Cosmology linked to Super Novae Observation and Dark Energy.



We would like thank our sponsors the Fundamental Interactions Research Federation (FRIF) directed by J.B. Zuber and the "Physique des 2 Infinis et des Origines" (P2IO) LabEx (Laboratory of Excellence : a french initiative).



Photon2013 flavor reflects the choice of conveeners and the conveeners choices.

2. Program and Committees



This conference is a part of the series initiated in 1973 in Collège de France (Paris), as an International Colloquium on Photon-Photon Collisions at Electron-Positron Storage Rings, devoted to the hadronic interaction of photons. The latest Photon conferences took place in Spä(2011), Hamburg/DESY (2009), Paris (2007), Warsaw (2005) and in Frascati (2003). At the conference, recent progress in understanding photon-photon and photon-proton processes is presented. In addition, recent results on astrophysics and other related topics are discussed.

This year conference covers the following topics: QCD and photons at high energy, jets, quarkonia and heavy flavours (Dr. Yuri Dokshitzer, Prof. Stefano Moretti), Higgs and photons, electroweak interactions and physics beyond the standard model (Prof. Maria Krawczyk), Small x , diffraction, and total cross sections (Dr. Christophe Royon), Exclusive channels and resonances (Dr. Bernard Pire), Low-energy photon experiments, vacuum polarisation and light-by-light scat-

tering (Dr. François Couchot), Photons in astroparticle physics (Prof. Guenter Sigl), Photon collider prospects and new acceleration techniques and future accelerators (Prof. Mayda Velasco),g-2 related topics (Dr. Marc Knecht).

International Advisory Committee	Local Organizing Committee	Program Committee
<p>S. Brodsky (SLAC, Stanford) A. de Roeck (CERN, Geneva) J. Engelen (NIKHEF, Amsterdam) V. Fadin (INP Novosibirsk) J. H. Field (Geneva U.) A. Finch (Lancaster U.) I. Ginzburg (IM Novosibirsk) M. Greco (INFN, Rome) J. Gronberg (LLNL Livermore) J. Gunion (UC Davis) K. Hagiwara (KEK, Tsukuba) R.-D. Heuer (CERN, Geneva) F. Kapusta (LPNHE, Paris) U. Karshon (Weizmann I., Rehovot) M.N. Kienzle-Focacci (Geneva U.) R. Klanner (Hamburg U.) M. Klasen (Inst. Theor. Phys., Münster U.) M. Krawczyk (Warsaw U.) E. Laenen (NIKHEF, Amsterdam) K. Moenig (DESY Zeuthen) G. Pancheri (INFN, Frascati) K. Piotrzkowski (CP3-UCL, Louvain U.) M. Risse (Siegen U.) S. Söldner-Rembold (Manchester U.) Y. Sakai (KEK, Tsukuba) T. Takahashi (Hiroshima U.) V.I. Telnov (INP, Novosibirsk) S. Uehara (KEK, Tsukuba) M. Velasco (Northwestern U.) S.-S. Yu (FNAL) F. Zomer (LAL Orsay)</p>	<p>W. da Silva (LPNHE, Paris) M. Guidal (IPNO, Orsay) F. Kapusta (LPNHE, Paris) G. Pancheri (INFN, Frascati) B. Pire (CPHT, Palaiseau) C. Royon (Irfu/CEA, Saclay)</p>	<p>F. Couchot (LAL, Orsay) W. da Silva (LPNHE, Paris) Y. Dokshitzer (LPTHE, Paris) M. Guidal (IPNO, Orsay) F. Kapusta (LPNHE, Paris) M. Knecht (CPT, Marseille) M. Krawczyk (FPUW, Warsaw) S. Moretti (SHEP, Southampton) G. Pancheri (INFN, Frascati) B. Pire (CPHT, Palaiseau) C. Royon (Irfu/CEA, Saclay) G. Sigl (Hamburg U.) M. Velasco (Northwestern U.) G. Venanzoni (INFN, Frascati)</p>

Note a special seminar from of our LKB colleagues: "Determination of the fine structure constant using atom interferometry : recent advances and perspectives for the future" given by Dr. Pierre Cladé from LKB.

More details on the agenda and slides on <https://indico.in2p3.fr/conferenceDisplay.py?confId=7399>

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3. 1973-2013 : a bit of history

"Colloque international sur les collisions photon-photon dans les anneaux de stockage électron-positron", 3-4 sept. 1973, Collège de France (Paris)



The screenshot shows the homepage of the **Journal de Physique Archives**. At the top, there's a banner featuring a portrait of a man and the text "Journal de Physique Archives". Below the banner, there's a navigation bar with links for "Accueil", "Tous les numéros", "Recherche avancée" (with a "Rechercher" button), and "S'identifier comme abonné". A language selection bar shows "Liste des revues d'EDP Sciences" with icons for French and English.

1872-1962

J. Phys. Théor. Appl. **Numéro précédent** **Sommaire** **Numéro suivant**

Radium (Paris)

J. Phys. Radium

J. Phys. Phys. Appl.

Le Journal de Physique Colloques

Vol. 35 No. C2 (Mars 1974)

1963-1990

J. Phys. **Colloque international sur les collisions photon-photon dans les anneaux de stockage électron-positron / International colloquium on photon-photon collisions in electron-positron storage rings**

J. Physique Lett.

J. Phys. Colloques

J. Phys. Phys. Appl.

Rev. Phys. Appl. (Paris)

• I. EXPÉRIENCES PASSÉES ET FUTURES / I. PAST AND FUTURE EXPERIMENTS

RESEARCHES IN FRASCATI ON THE REACTIONS $e^+ e^- \rightarrow e^+ e^- + X$. THE RESULTS OF THE "YY GROUP" p. C2-1

G. SALVINI

Abstract | PDF file (479.5 KB)

1991-2006

J. Phys. I France

J. Phys. II France

J. Phys. III France

J. Phys. IV France

• INVESTIGATION OF PHOTON-PHOTOPN INTERACTIONS BY $e^+ e^-$ BEAMS COLLIDING WITH 2.7 GeV TOTAL ENERGY p. C2-9

F. CERADINI, M. CONVERSI, S. D'ANGELO, M. L. FERRER, L. PAOLUZI, R. SANTONICO, G. BARBIELLINI, S. ORITO, T. TSURU and R. VISENTIN

Abstract | PDF file (171.0 KB)

Current journals

The European Physical Journal

• EXPERIMENTS ON ELECTROPRODUCTION OF $e^+ e^-$ PAIRS WITH COLLIDING BEAMS AT NOVOSIBIRSK p. C2-15

V. A. SIDOROV

Abstract | PDF file (337.7 KB)

Pour les lecteurs

Mon compte EDP Sciences

Accès par vol./page

• II. EXPÉRIENCES PASSÉES ET FUTURES / II. PAST AND FUTURE EXPERIMENTS

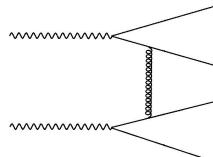
ELECTRON-POSITRON INTERACTIONS AT 5 GeV IN THE CENTER-OF-MASS : BHABHA SCATTERING AND MULTIHADRON PRODUCTION

b. C2-21

40 years after we have to pay a tribute to the LPC Collège de France Legacy from the Paul Kessler group. Among them N. Arteaga and C. Carimalo retired recently from LPNHE, currently writing papers related to the Helicity Amplitude computation and the Helicity Coupling techniques extensively used in their past publications and never published. A few quotes :

QED factorized amplitudes : exact expression of $\gamma\gamma \rightarrow l\bar{l}L\bar{L}$.

Remember the QCD "Stan" diagram :



Brodsky-Lepage approach and exclusive processes.

1973 : QCD and the 80's with PETRA.

In France Aurenche and Fontannaz took care of the hadronic photon structure.

Two Photon physics has followed the construction of e^+e^- colliders.

TOO

4. Pentecost : monday wishes



In a way similar to these pictures of special meetings, I wish us a fruitful and inspiring conference, on the structure and the interactions of the photon.

5. Conclusion

Hope to see you at Photon2015 organized by Valery Telnov in Novosibirsk.

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