Science Communication and Science Museums: Prospects and New Ideas

Rome, 18 - 19 May 2017



Science communication and outreach: How to hit the target

Learned Societies and science communication

Luisa Cifarelli Centro Fermi and University of Bologna Learned Societies have the goal to promote physics & physicists' interests

Their means are:

- Membership
- Prizes
- Meetings, conferences
- Bulletins, newsletters, social media
- Scientific publications
- Declarations, statements, surveys, reports
- Initiatives & actions
 - The International Year of Light 2015 (13,000 events take place with an impact that reached 147 countries)
 - The International Year of Science for Development 2022...
 - March for Science 2017

An example for all ...

The European Physical Society (EPS)

The European Physical Society was founded in Geneva, Switzerland in **1968** – through the inspired leadership of Gilberto Bernardini (CERN Research Director)

"as a further demonstration of the determination of scientists to collaborate as close as possible in order to make their positive contribution to the strength of European cultural unity"





- The European Physical Society encompasses:
- **42 MEMBER SOCIETIES** (DPG, IOP, SFP, SIF ... Cyprus)
- OVER 40 ASSOCIATE MEMBER INSTITUTIONS (CERN, DESY, ESRF, JINR, GSI, ESA... CEA, MPI, FOM, INFN, Centro Fermi... IHA, IIT, IPTI... CAEN, EDISON)
- OVER 4000 INDIVIDUAL MEMBERS
- The EPS represents as a whole a community of OVER 10⁵ PHYSICISTS (mostly from DPG & IOP)
- The EPS has bilateral agreements with:
- OVER **20** COLLABORATING SOCIETIES (APS, AAPPS ... EuCheMS)
- The EPS provides an INTERNATIONAL FORUM for physicists and acts as a FEDERATION of physical societies
- The EPS works to **PROMOTE** the interests of **PHYSICISTS & PHYSICS** in Europe and the world over
- The EPS headquarters are in Mulhouse, F (with PoP in Brussels, B)

The EPS promotes EXCELLENT PHYSICS RESEARCH through its DIVISONS (11) and GROUPS (7)



- Atomic, Molecular & Optical Physics Division–AMOPD (3 Sections)
- Condensed Matter Division–CMD (7 Sections)
- Division of Physics in Life Sciences–DPLS
- Environmental Physics Division–EPD
- European Solar Physics Division–ESPD
- High Energy Particle Physics Division-HEPPD
- Nuclear Physics Division–NPD
- Physics Education Division—PED
- Plasma Physics Division–PPD (2 Sections)
- Quantum Electronics & Optics Division–QEOD
- Statistical & Nonlinear Physics Division–SNPD
 - Accelerator Group–AG
 - Computational Physics Group–CPG
 - Energy Group–EG
 - Experimental Physics & Control Group–EPCG
 - History of Physics Group–HoPG
 - Physics for Development Group–PDG
 - Technology & Innovation Group–TIG

The renown of EPS PRIZES & CONFERENCES & WORKSHOPS is very high: these EPS meetings – some of which jointly organized with Collaborating/Member Societies – remain as model meetings for the whole international physics community



(several thousands of attendants/year)

- The EPS has a number of ACTION COMMITTEES
- to supply a European view on important questions relating to physics and to society at large
- to act as a catalyst for bringing together physicists in different fields and different countries
 - Forum on Physics & Society–FPS
 - Equal Opportunities–EOC
 - European Integration–CEI
 - Conference Committee–CC
 - Young Minds–EPSYM
 - Historic Sites-HS ...

The EPS Historic Sites Award commemorates places in Europe important for the development and the history of PHYSICS

Sites with national or European/international significance to physics and its history can be considered for the Historic Site distinction from the EPS

 \rightarrow places (laboratories, buildings, institutions, universities, towns etc...) associated with an event, discovery, research or body of work, by one or more individuals, that made long lasting contributions to physics

EPS Historic Sites Committee:

Martin Huber Maciej Kolwas Ove Poulsen Peter Maria Schuster – HoP Group Fritz Wagner Alan Chodos (APS) Enrique Sanchez (EPS YM) LC – Chair

Nominations are open throughout the year from the EPS website and reviewed 3 times/year

The EPS works with the nominators to obtain local authorisations for placing a plaque and in organising the commemorative ceremony

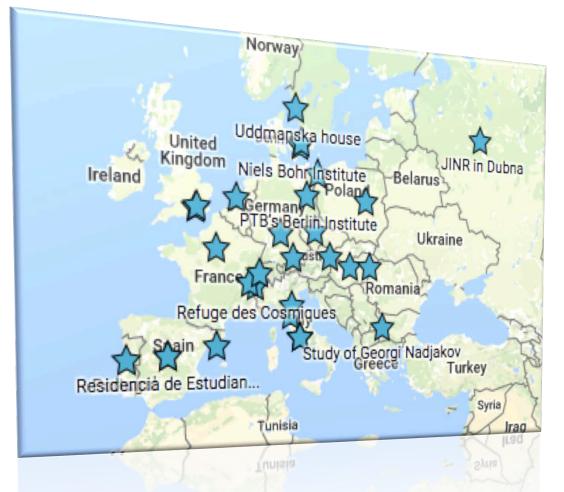
For each EPS HS award ceremony:

- Involvement of local national Member Society & Associate Member Institution & Authorities
- Presence of EPS delegation
- News in e-EPS electronic newsletter
- Article in EPN magazine



Already 54 proposals received from 22 different countries since the establishment of the EPS HS distinction (2011)

- Spontaneous
- Channelled through national Physical Societies (e.g. DPG)



Through March 2017 33 EPS Historic Sites have been inaugurated in 18 different Countries

- The Goldfish Fountain of the Physics Institute of Panisperna Street – Fermi Centre, Rome, Italy, 20 April 2012
- 2. Laboratory "Les Cosmiques", Col du Midi, Chamonix, France, 23 July 2012
- **3.** Hoza 69, Warsaw, Poland, 10 January 2013
- The Study of Bruno Pontecorvo JINR, Dubna, Russia, 22 February 2013
- 5. The Hill of Arcetri, Florence, Italy, 17 May 2013
- 6. The Villa Griffone in Pontecchio Marconi, Bologna, Italy, 26 May 2013
- **7.** The Observatory of Tycho Brahe, Hven Island, Landskrona, Sweden, 11 September 2013
- 8. The LAL-LURE Accelerator Complex, Orsay, Paris, France, 13 September 2013
- **9.** PTB, Formerly PTR, The National Metrology Institute, Berlin, Germany, 8 October 2013

10. The Cathedral, Kamien Pomorski, Poland, 11 October 2013
11. The Neutrino Experiment at MTA Atomki, Debrecen, Hungary, 25 October 2013

- 12. The Niels Bohr Institute, Copenhagen, Denmark, 3 December 2013
- **13.** The AdA Storage Ring at the INFN Frascati National Laboratory, Frascati, Rome, Italy, 5 December 2013
- **14.** The European Birthplace of the Atomic Timekeeping NPL, Teddington, UK, 31 January 2014
- **15.** Blackett Laboratory Imperial College, London, UK, 30 April 2014
- **16.** The Fabra Observatory, Barcelona, Spain, 9 May 2014
- Georgi Nadjakov's Study Bulgarian Academy of Sciences, Sofia, Bulgaria, 24 May 2014
- **18.** The **Synchro-Cyclotron**, SC CERN, Geneva, Switerland, 19 June 2014
- **19.**The Kamerlingh Onnes Laboratory and Lorentz Institute, Leiden, The Netherlands, 9 February 2015.
- **20.** Fasor Lutheranian High School, Budapest, Hungary, 23 April 2015

- The Ludwig Maximilian University, Munich, Germany, 6 May 2015
 The "Residencia de Estudiantes", Madrid, Spain, 13 May 2015
 The Mount Vesuvius Observatory, Hercolaneum, Naples, Italy, 23 May 2015
- 24. The Vienna Institute for Radium Research, Vienna, Austria, 28 May 2015
- **25.** The Einstein House, Bern, Switzerland, as Joint APS-EPS Historic
- Site, 14 September 2015
- **26.** The Hotel Metropole, Brussels, Belgium, 24 October 2015
- **27.** The Ernst Mach Physics Institute, Prague, Czech Republic, 18 February 2016
- **28. The Cabinet of Physics** of the University of Coimbra, Coimbra, Portugal, 11 March 2016
- **29.** The Former Physical Institute of the University of Würzburg, Würzburg, Germany, 7 June 2016

30. The "Piersanti Mattarella Tower of Thought" of the Ettore Majorana Foundation and Centre for Scientific Culture, Erice, Italy, 21 August 2016

- **31.** Uddamanska House, Kungälv, Sweden, 29 October 2016
- **32.** The Institute for Advanced Study, Princeton, NJ, USA, as Joint APS-EPS Historic Site, 9 November 2016

33. "Les Bastions" of the University of Geneva, Geneva, Switzerland,29 March 2017



Rome, Italy – 20 April 2012

EUROPEAN PHYSICAL SOCIETY - EPS HISTORIC SITE

THE GOLDFISH FOUNTAIN OF THE PHYSICS INSTITUTE OF PANISPERNA STREET – FERMI CENTRE

Using the water of the goldfish fountain of his Institute, Enrico Fermi established for the first time, in the afternoon of 22 October 1934, the crucial role of hydrogenous substances on neutron induced radioactivity, thus opening the way to the use of slow neutrons in nuclear fission chain reactions

SITO STORICO DELLA SOCIETÀ EUROPEA DI FISICA – EPS La fontana dei pesci rossi dell'Istituto Fisico di Via Panisperna – Centro Fermi

USANDO L'ACQUA DELLA FONTANA DEI PESCI ROSSI DEL SUO ISTITUTO, ENRICO FERMI STABILÌ PER LA PRIMA VOLTA, NEL POMERIGGIO DEL 22 OTTOBRE 1934, IL RUOLO CRUCIALE DELLE SOSTANZE IDROGENATE NELLA RADIOATTIVITÀ INDOTTA DA NEUTRONI, APRENDO COSÌ LA STRADA ALL'USO DEI NEUTRONI LENTI NELLE REAZIONI DI FISSIONE NUCLEARE A CATENA

Rома – 20 Aprile 2012

Alla presenza del Presidente della Repubblica G. Napolitano







Chamonix, France – 23 July 2012

EUROPEAN PHYSICAL SOCIETY - EPS HISTORIC SITE LABORATORY 'LES COSMIQUES'

IN 1943, DURING THE WAR, HERE AT 3613 M ABOVE SEA LEVEL, THE FRENCH CNRS-NATIONAL CENTRE FOR SCIENTIFIC RESEARCH ESTABLISHED A HIGH ALTITUDE LABORATORY UNDER THE AEGIS OF LOUIS LEPRINCE-RINGUET TO STUDY THE COSMIC RAYS AND THEIR APPLICATIONS IN NUCLEAR PHYSICS. IN 1946, THE LABORATORY WAS INAUGURATED IN THE PRESENCE OF IRÈNE JOLIOT-CURIE AND CONTINUED TO BE OPERATED UNTIL 1955. HIGH VOLTAGE LINES SUSPENDED ABOVE THE GLACIERS SUPPLIED THE NECESSARY ELECTRIC POWER. "THIS IS HOW UP THERE – IN THE WORDS OF LEPRINCE-RINGUET – IN REALLY SPORTY CONDITIONS, WITH AN ELECTRIC CABLE, A LOCAL ELECTRICITY POWER SOURCE, SOME ELECTRON COUNTERS, A SMALL WILSON APPARATUS, WE MANAGED TO STUDY PARTICLES FROM COSMIC RADIATION ..."

SITE HISTORIQUE DE LA SOCIÉTÉ EUROPÉENNE DE PHYSIQUE - EPS LABORATOIRE DES COSMIQUES

EN 1943, PENDANT LA GUERRE, ICI À 3613 M AU-DESSUS DU NIVEAU DE LA MER, LE CNRS-CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE DEVAIT CRÉER SOUS L'ÉGIDE DE LOUIS LEPRINCE-RINGUET UN LABORATOIRE DE GRANDE ALTITUDE POUR L'ÉTUDE DU RAYONNEMENT COSMIQUE ET SES APPLICATIONS EN PHYSIQUE NUCLÉAIRE. LE LABORATOIRE FUT INAUGURÉ EN 1946 EN PRÉSENCE D'IRÈNE JOLIOT-CURIE ET FONCTIONNA JUSQU'EN 1955. DES LIGNES DE HAUTE TENSION SUSPENDUES SUR LES GLACIERS FOURNIRENT LA PUISSANCE ÉLECTRIQUE NÉCESSAIRE. "C'EST AINSI QUE LÀ-HAUT – DIT LEPRINCE-RINGUET – DANS DES CONDITIONS RÉELLEMENT SPORTIVES, ON RÉUSSIT AVEC UN CÂBLE ÉLECTRIQUE, UNE SOURCE LOCALE D'ÉLECTRICITÉ, DES COMPTEURS D'ÉLECTRONS, UN PETIT APPAREIL WILSON, À ÉTUDIER LES PARTICULES DE RAYONNEMENT COSMIQUE ..."



EN PRÉSENCE DES SIX ASTRONAUTES AUTEURS DE L'INSTALLATION SUR LA STATION SPATIALE INTERNATIONALE DU DÉTECTEUR DE RAYONS COSMIQUES AMS-ALPHA MAGNETIC SPECTROMETER ET À L'OCCASION DU CENTENAIRE DE LA DÉCOUVERTE DES RAYONS COSMIQUES

Florence, Italy – 17 May 2013

EUROPEAN PHYSICAL SOCIETY – EPS I THE HILL OF ARCETRI

THE EUROPEAN PHYSICAL SOCIETY (AND SCIENTIFIC INTEREST, AS AN EP FOLLOWING ORDER:

- THE HEADQUARTERS OF THE FOF 1921. A GROUP OF BRILLIANT PHY OCCHIALINI, GIULIO RACAH, FRANCO NA-ENRICO FERMI WROTE HIS FUNDAMENTAL WORK

– The National Institute of Optics, founded in 1927 $_{\rm DT}$ rebirth of optics in Italy.

- THE ASTROPHYSICAL OBSERVATORY OF ARCETRI, BUILT IN 1872 ON THE INITIAM. AMICI AND GIOVAN BATTISTA DONATI. GIORGIO ABETTI WAS LATER TO PLAY A CRUCIAL ROLL DEVELOPMENT.

– VILLA IL GIOIELLO, LYING HIGHER UP THE HILL JUST OUTSIDE THE COMPLEX. THIS IS WHERE GALILEO GALILEI SPENT THE LAST YEARS OF HIS LIFE (1631-1642) AND FINISHED WRITING HIS FUNDAMENTAL WORK ENTITLED "DISCOURSES AND MATHEMATICAL DEMONSTRATIONS RELATING TO TWO NEW SCIENCES" (1638).

SITO STORICO DELLA SOCIETÀ EUROPEA DI FISICA – EPS HISTORIC SITE LA COLLINA DI ARCETRI

IN QUESTO LUOGO, DESIGNATO COME SITO STORICO DELLA SOCIETÀ EUROPEA DI FISICA (EPS), SALENDO LUNGO LA COLLINA SI TROVANO EDIFICI DI VALORE STORICO E SCIENTIFICO, NEL SEGUENTE ORDINE:

– LA SEDE DELL'ALLORA ISTITUTO DI FISICA, COSTRUITA NEL 1921 GRAZIE AD ANTONIO GARBASSO, DOVE HA OPERATO UN GRUPPO DI BRILLANTI FISICI QUALI GILBERTO BERNARDINI, ENRICO FERMI, GIUSEPPE OCCHIALINI, GIULIO RACAH, FRANCO RASETTI E BRUNO ROSSI. QUI ENRICO FERMI SCRISSE NEL 1926 IL SUO FONDAMENTALE LAVORO SULLA STATISTICA DEGLI ELETTRONI.

- L'Istituto Nazionale di Ottica, fondato nel 1927 da Vasco Ronchi, protagonista della rinascita dell' ottica in Italia.

– L'OSSERVATORIO ASTROFISICO DI ARCETRI COSTRUITO NEL 1872 SU INIZIATIVA DI GIOVAN BATTISTA AMICI E GIOVAN BATTISTA DONATI E AL CUI SVILUPPO CONTRIBUÌ IN MODO DETERMINANTE GIORGIO ABETTI.

– PIÙ IN ALTO, AI CONFINI DEL COMPRENSORIO, È COLLOCATA LA VILLA IL GIOIELLO DOVE GALILEO GALILEI TRASCORSE GLI ULTIMI ANNI DELLA SUA VITA (1631-1642). QUI COMPLETÒ LA SCRITTURA DELLA SUA FONDAMENTALE OPERA "DISCORSI E DIMOSTRAZIONI MATEMATICHE INTORNO A DUE NUOVE SCIENZE" (1638).

Pontecchio Marconi (Bologna), Italy – 26 May 2013

EUROPEAN PHYSICAL SOCIETY – EPS HISTORIC SITE THE VILLA GRIFFONE IN PONTECCHIO MARCONI

HERE, IN SUMMER 1895, AT THE AGE OF 21 GUGLIELMO MARCONI ESTABLISHED THE FIRST LONG RANGE ELECTROMAGNETIC WAVE COMMUNICATION BETWEEN THE LOFT OF VILLA GRIFFONE AND A PLA OUT OF SIGHT BEHIND THE CELESTINI HILL ABOUT 2 KM AWAY USING TRANSMITTER AND RECEIVER MADE BY HIMSELF. THIS EXPERIMENT STARTED IN THE LAST CENTURY THE FUNDAMENTAL STUDIES OF THE RADIO WAVES PHYSICS AND THE DEVELOPMENTS OF TODAY'S WORLDWIDE WIRELESS COMMUNICATION TECHNOLOGY.

SITO STORICO DELLA SOCIETÀ EUROPEA DI FISICA – EPS La Villa Griffone di Pontecchio Marconi

QUI GUGLIELMO MARCONI ALL'ETÀ DI 21 ANT TRASMETTITORE E UN RICEVITORE DA DEL 1895 STABILÌ LA PRIMA ONDE ELETTROMA PUNTO NON IN VI DISTANZA. QUEST DEL SECOLO SCOR MONDIALE DELL'ODIL

RADIO DAYS - PO

Hven Island (Landskrona), Sweden 11 September 2013

EUROPEAN PHYSICAL SOCIETY - EPS HISTORIC SITE THE OBSERVATORY OF TYCHO BRAHE

HERE, FROM 1577 TO 1597, THE ASTRONOMER TYCHO BRAHE – BORN IN 1546, AT KNUTSTORP CASTLE, KÅGERÖD, DIED IN 1601, IN PRAGUE – MADE HIS FAMOUS OBSERVATIONS OF THE PLANETARY SYSTEM. HIS OBSERVATORY WAS THE MOST ADVANCED ASTRONOMICAL RESEARCH CENTRE IN EUROPE. HIS WORK, THE SUMMIT OF THE PERIOD OF SYSTEMATIC VISUAL SKY OBSERVATION WITHOUT TELESCOPE, PLAYED AN ESSENTIAL PART IN SHAPING OUR MODERN KNOWLEDGE OF THE WORLD.

HVEN ISLAND - 11 SEPTEMBER 2013





Orsay (Paris), France – 13 September 2013

EUROPEAN PHYSICAL SOCIETY – EPS HISTORIC SITE THE LAL – LURE ACCELERATOR COMPLEX

THE "LABORATOIRE DE L'ACCÉLÉRATEUR LINÉAIRE-LAL" (CNRS/IN: SUD UNIVERSITY) WAS SET UP IN 1956 TO OPERATE AN ELECTRON LINAA NUCLEAR PHYSICS AND PARTICLE PHYSICS EXPERIMENTS. FROM 1958 TO LINAC WAS THE HEART OF A COMPLEX OF STATE-OF-THE-ART FACILITIES AN ELECTRON-POSITRON CONVERTER, SPECTROMETERS, COLLIDERS AND RINGS FOR SYNCHROTRON LIGHT. PART OF THESE FACILITIES WERE SHAR "LABORATOIRE POUR L'UTILISATION DU RAYONNEMENT ELECTROMAGN LURE" WHICH WAS SET UP IN 1973.

MAJOR ACHIEVEMENTS AT LAL - LURE WERE:

 1962-1963: FIRST OBSERVATION EVER OF ELECTRON-POSITRON COLLISIO ADA RING (BUILT IN FRASCATI) AND DISCOVERY OF THE TOUSCHEK EFFEC 1965: COMMISSIONING OF THE ACO ELECTRON-POSITRON COLLIDER WHE PIONEERING MEASUREMENTS IN ACCELERATOR PHYSICS AND IN VECTOR ME PHYSICS WERE PERFORMED.

• 1973: OPENING AT ACO OF A SYNCHROTRON BEAMLINE, THE FIRST EVER TO BE FED BY A STORAGE RING.

• 1983: FIRST OPERATION OF A FREE ELECTRON LASER IN THE WORLD FED BY A STORAGE RING BEAMLINE (ACO).

 \bullet 1979-1984: Record production of 9 million J/ ψ by the DCI electron-positron collider, later converted into a hard X-ray source.

 1987: SUPER-ACO SUPERSEDING ACO (SUPER-ACO WAS PHASED OUT IN 2003, SOLEIL TOOK OVER IN 2006).

• 1991: COMMISSIONING OF THE CLIO FREE ELECTRON LASER TO EXTEND IN THE INFRARED RANGE THE SPECTRUM PROVIDED BY THE ORSAY LIGHT SOURCES.

ORSAY, 13 SEPTEMBER 2013

Frascati (Rome), Italy – 5 December 2013

EUROPEAN PHYSICAL SOCIETY - EPS HISTORIC SITE

THE ADA STORAGE RING AT THE INFN FRASCATI NATIONAL LABORATORIES

HERE, IN FEBRUARY 1961, THE FIRST PARTICLE-ANTIPARTICLE ACCELERATOR IN THE WORLD, CALLED **ADA**: **A**NELLO **D**I **A**CCUMULAZIONE (STORAGE RING), STARTED OPERATION. IN **ADA** ELECTRONS AND POSITRONS WERE MADE TO CIRCULATE WITH EQUAL VELOCITY BUT OPPOSITE DIRECTION IN THE SAME RING, AND BROUGHT TO COLLIDE. IN THE ANNIHILATION, ALL THE INITIAL ENERGY COULD BE MADE AVAILABLE TO THE CREATION OF NEW PARTICLES.

ADA WAS PROPOSED BY THE AUSTRIAN PHYSICIST BRUNO TOUSCHEK AND BUILT BY HIM TOGETHER WITH A SMALL GROUP OF SCIENTIFIC AND TECHNICAL STAFF FROM THE LABORATORIES. ADA SHOWED THE FEASIBILITY OF ELECTRON-POSITRON MACHINES AND OPENED THE WAY TO THE LARGE ACCELERATOR COLLIDERS SUBSEQUENTLY BUILT ALL OVER THE WORLD.

LATER ON, THE MUCH LARGER ACCELERATORS ADONE (1969) AND DAFNE (1999), WHICH YIELDED FUNDAMENTAL CONTRIBUTIONS TO THE DEVELOPMENT OF ELEMENTARY PARTICLE PHYSICS, WERE ALSO BUILT AT THE INFN FRASCATI NATIONAL LABORATORIES.

SITO STORICO DELLA SOCIETÀ EUROPEA DI FISICA - EPS

L'ANELLO DI ACCUMULAZIONE ADA DEI LABORATORI NAZIONALI DI FRASCATI DELL'INFN

QUI, NEL FEBBRAIO 1961, ENTRÒ IN FUNZIONE IL PRIMO ACCELERATORE AL MONDO DI PARTICELLE E ANTIPARTICELLE, CHIAMATO **ADA**: **A**NELLO **DI A**CCUMULAZIONE. IN ADA ELETTRONI E POSITRO-NI CIRCOLAVANO NELLO STESSO ANELLO CON UGUALE VELOCITÀ E IN SENSO OPPOSTO, COSÌ DA ANNICHILARSI NELLO SCONTRO E LIBERARE TUTTA L'ENERGIA INIZIALE PER LA CREAZIONE DI NUOVE PARTICELLE.

IL COLLISORE ADA FU PROPOSTO DAL FISICO AUSTRIACO BRUNO TOUSCHEK E DA LUI COSTRUITO ASSIEME A UN PICCOLO GRUPPO DI SCIENZIATI E TECNICI DEI LABORATORI. ADA DIMOSTRÒ LA FATTIBILITÀ DEI COLLISORI ELETTRONE-POSITRONE E APRÌ LA STRADA AI GRANDI ACCELERATORI DI QUESTO TIPO COSTRUITI IN SEGUITO IN TUTTO IL MONDO.

SUCCESSIVAMENTE, NEI LABORATORI NAZIONALI DI FRASCATI CON ADONE (1969) E DAFNE (1999) DUE CONTRUCTORI DI FRASCATI CON HANNO DATO CONTRUCTORI (1999) DUE



Teddington, UK – 31 January 2014



NPL, National Physical Laboratory

- Hysical Society - EPS Historic Site

The birthplace of atomic timekeeping

The world's first atomic clock to keep time better than the Earth's rotation was designed and built by Louis Essen, with support from Jack Parry, and brought into operation at the National Physical Laboratory (NPL) in 1955. NPL has remained at the forefront of time measurement ever since, providing time for the UK and driving progress through innovative world-class science.



London, UK – 30 April 2014

Imperial College, Blackett Laboratory



Sofia, Bulgaria – 24 May 2014





EUROPEAN PHYSICAL SOCIETY – EPS HISTORIC SITE THE STUDY OF GEORGI NADJAKOV

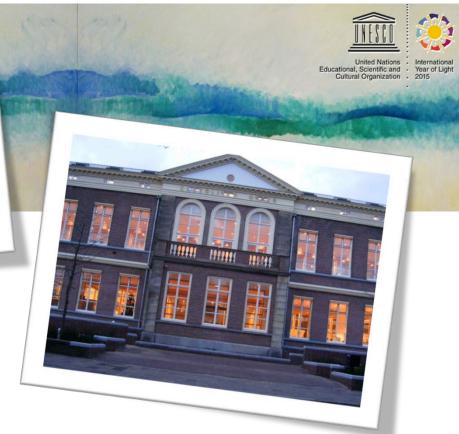
IN 1937 THE DISCOVERY OF PHOTOELECTRETS BY GEORGI NADJAKOV (1896, 1981) FROM SOFIA UNIVERSITY INSPIRED GENERAL INTEREST IN PHOTOELECTRIC PHENOMENA IN SOLIDS. GEORGI NADJAKOV SUCCEEDED IN PRESERVING UNIVERSITY PHYSICS FACULTIES IN BULGARIA AND IN SUPPORTING THE BULGARIAN INDUSTRIAL DEVELOPMENT BY ESTABLISHING A MODERN CENTRE OF PHYSICS AT THE BULGARIAN ACADEMY OF SCIENCES. HERE, IN HIS PERSONAL STUDY AT THE INSTITUTE OF SOLID STATE PHYSICS, A PERMANENT EXHIBITION DEDICATED TO THIS DISTINGUISHED BULGARIAN PHYSICIST BEARS WITNESS FOREVER TO HIS MAIN ACHIEVEMENTS.

Европейско физическо дружество – Историческо място Работният кабинет на Георги Наджаков

ОТКРИВАНЕТО НА ФОТОЕЛЕКТРЕТИТЕ ОТ ГЕОРГИ НАДЖАКОВ (1896 – 1981) В СОФИЙСКИЯ УНИВЕРСИТЕТ ПРЕЗ 1937 ГОДИНА ПОРАЖДА ВСЕОБЩ ИНТЕРЕС КЪМ ФОТОЕЛЕКТРИЧНИТЕ ЯВЛЕНИЯ В ТВЪРДИ ТЕЛА. ГЕОРГИ НАДЖАКОВ СЪУМЯВА ДА ОПАЗИ АКАДЕМИЧНИЯ СЪСТАВ НА ФИЗИЧЕСКИЯ ФАКУЛТЕТ ПРИ СОФИЙСКИЯ УНИВЕРСИТЕТ И ДА ПОДПОМОГНЕ ИНДУСТРИАЛНОТО РАЗВИТИЕ НА БЪЛГАРИЯ ЧРЕЗ СЪЗДАВАНЕТО НА МОДЕРЕН ФИЗИЧЕСКИ ЦЕНТЪР ПРИ БЪЛГАРСКАТА АКАДЕМИЯ НА НАУКИТЕ. ПОСТОЯННАТА ИЗЛОЖБА, ПОСВЕТЕНА НА ТОЗИ ВИДЕН БЪЛГАРСКИ ФИЗИК В НЕГОВИЯ РАБОТЕН КАБИНЕТ ПРИ ИНСТИТУТА ПО ФИЗИКА НА ТВЪРДОТО ТЯЛО, ЗАВИНАГИ СВИДЕТЕЛСТВУВА ЗА НЕГОВИТЕ ГЛАВНИ ДОСТИЖЕНИЯ.

Leiden, The Netherlands – 9 February 2015





The Kamerlingh Onnes Laboratory and Lorentz Institute

Madrid, Spain – 13 May 2015



The "Residencia de Estudiantes"

Budapest, Hungary – 23 April 2015



United Nations Educational, Scientific and Cultural Organization International Year of Light 2015

European Physical Society - EPS Historic Site

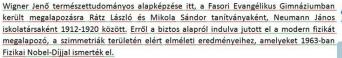
Fasor Lutheranian Highschool



Eugene P. Wigner received his primary education in natural sciences, here in the Budapest <u>Fasori</u> Lutheran Secondary Grammar School as a student of Professor <u>László Rátz</u> and Professor <u>Sándor Mikola</u> and as the schoolmate of John von Neumann during 1912-1920. Based on this solid background he laid down the foundation for the theory of symmetry principles, and he was awarded a Nobel Prize in Physics for his contribution to modern physics in 1963.

Európai Fizikai Társulat-EPS történelmi Emlékhely





Budapest, 2015

Vienna, Austria – 28 May 2015

Educational, Scientific and

Cultural Organization . 2015

Year of Ligh



In 1910, in this building, the "Vienna Institute for Radium Research" of the Imperial Austrian Academy of Sciences, was established and inaugurated as the first of its kind worldwide. Under Stefan Meyer the new institute dedicated extensive research to the physical properties of the radioactive element radium.

The major contributions of Victor F. Hess, the discoverer of cosmic radiation, and George de Hevésy, the discoverer of the use of isotopic tracers in the study of chemical processes, as well as those of Marietta Blau, pioneer in nuclear emulsion detectors, and Karl Przibram, leader in radio-photoluminescence of glass and minerals, were achieved here.

Fizikai Nobel-Dijjal ismertek el.

ted Nations

Year of Light

HAUPTANSICHT

Already scheduled inaugurations in 2017, in 4 different countries:

- The Institute of Physics of the Georg-August University of Göttingen, Göttingen, Germany, 7 June 2017
- H.H. Wills Physics Laboratory (Royal Fort) of the University of Bristol, Bristol, UK, 13 September 2017
- IBM Research Laboratory, Rüschlikon, Zürich, Switzerland, 26 September 2017
- The Milan Milankovic Climate Research Centre, Belgrade, Serbia (already declared on 3 October 2014, inauguration date t.b.d.).



For each EPS HS award ceremony so far:

- Improvement of mutual relations between EPS and local national Member Societies & Associate Member Institutions & Authorities
- Increase of EPS impact & visibility
- Enhancement of some 'spirit of belonging' to EPS

Moreover

 Awareness that not only ARTISTIC CULTURAL HERITAGE & NATURAL HERITAGE should be preserved for humankind but also SCIENTIFIC CULTURAL HERITAGE

This was the goal!