

SHORT CURRICULUM VITAE

Prof. Panos Razis

1. GENERAL

Born: February 19, 1957 – Limassol, Cyprus
Address: Physics Department, University of Cyprus, P.O.Box 20537,
1678 Nicosia, CYPRUS
Telephone: +357-22892872
e-mail: razis@ucy.ac.cy

2. EDUCATION

1986: PhD, Physics Department, Yale University, USA
1982: Master of Philosophy (MPh.), Physics Department, Yale University, USA
1982: Master of Science (MSc.), Physics Department, Yale University, USA
1980: “Ptychion” (BSc., summa cum laude), Physics Department, University of Athens, Greece
1975: Apolytirion (summa cum laude, 19^{12/14} out of 20), Lanition Gymnasium, Limassol, Cyprus

3. CURRENT POSITION

2002–2017: Professor of Physics, Physics Department, University of Cyprus, Nicosia, Cyprus

4. PREVIOUS POSITIONS

2008-2011: President of the Rectors Conference of Cyprus.
2003-2011: Chairman of the Governing Board, Open University of Cyprus.
2003-2006: Vice Chairman of the Cyprus Council for the Recognition of Higher Education Qualifications (ΚΥΣΑΤΣ).
1991-2002: Associate Professor, Physics Department, University of Cyprus.
1990-1991: Research Associate at the European Laboratory for Particle Physics, CERN, University of Alabama, Tuscaloosa, USA.
1986-1990: Wissenschaftlicher Mitarbeiter, Swiss Federal Institute of Technology, ETH-Zürich.
1986: Post-Doctoral Fellow, Physics Department, Yale University, USA.

5. FELLOWSHIPS AND AWARDS

2007-2008: Ambassador of Cyprus for Fair Play.
2007, 2011: Honoured for contributions to Sports, Cyprus Olympic Committee.
2001: Honoured for contributions to Sports, Cyprus Track and Field Federation.
1999: UNESCO Fellowship, 1999 UNESCO Bank-Scheme.
1997: Honoured for contributions to Science.
1980-1982: Wanderbuilt Scholarship, Yale University.
1980: Recitation of the oath at graduation as the student with the highest grades.
1976-1979: Annual Fellowships, Greek National Fellowship Organisation (IKY).
1972-1975: Athletic Medals as member of the Greek and Cyprus national track & field teams.

6. TEACHING ACTIVITIES

1993-2017: **University of Cyprus, Cyprus.**

Advanced Topics in Particle Physics, Special Topics in Particle Physics, Graduate Laboratory in Particle Physics, Final Year Thesis (2-semester course supervising students' projects), Particle Physics, Electromagnetism II & Special Relativity, Advanced Physics Laboratory (atomic and nuclear physics), Principles of Physics, General Physics (electromagnetism), General Physics Laboratory (electromagnetism & thermodynamics), General Physics Laboratory (mechanics), Physics & Applications.

1987-1990: **ETH Zurich, Switzerland.**

Electromagnetism, General Physics, Modern Physics, Physics Practicum.

1982-1986: **Yale University, USA.**

Teaching Assistant: Experimental High Energy Physics Laboratory, Advanced Physics Laboratory, General Physics Laboratory, History of Science, Special Relativity, General Physics.

7. PATENT(S) / INCUBATOR PROGRAMS

2005: Biometric Identification Method, International Patent No: PCT/RU2005/000473.

2006-2008: DactoLive, Opto-electronical Identification Systems using Novel Dactyloscopy Technology, ERMIS Research & Incubator Center, Nicosia, Cyprus.

8. FUNDED RESEARCH PROGRAMS

1982–1986: E-715 Experiment, Fermi National Accelerator Laboratory, USA.

1986–1993: L3 Experiment at LEP, European Laboratory for Particle Physics, CERN.

1993–1996: “Physics in the Framework & Beyond the Standard Model with L3 Experiment at CERN”.

1995–1998: “High Energy Physics with the L3 and CMS Experiments at CERN.

1999–2003: “International Research Program in High Energy Physics at CERN”.

1998–1999: “UNESCO Fellowships Bank Scheme”.

1999–2007: “High Energy Physics with the CMS Experiment at CERN”.

2000: “Multiscale Materials Phenomena in Harsh Environments”.

2001–2003: ΗΜΠΕΔΙΑ: “Charting the intensity levels of Electromagnetic Fields in Cyprus. Safety limits with respect to their possible influence on human health”.

2002–2004: ΗΛΕΔΙΚ: “Comparison of the intensity levels of Electromagnetic Fields at the Installations of the Electricity Network with simulation results based on Finite Element Analysis”.

2004-2005: ΕΒΗΚ: “Calibration and Control of the Very Front Electronic Modules of the CMS Electromagnetic Calorimeter, ECAL”.

2004-2008: ΕΠΕΦ: “Spectrum Monitoring and Control Laboratory”.

2006-2007: ΑΛΓΗΚ: “Development of a Computational Algorithm for the Calibration of the dead Crystals of the CMS Electromagnetic Calorimeter at CERN”.

2006-2007: ΕΠΗΣΚ: “Study of the Specifications of the Data Acquisition Electronic Cards of the CMS Electromagnetic Calorimeter at CERN”.

2006-2009: ΚΜ3NeT: A European Deep-Sea Research Infrastructure (Neutrino Telescope).

- 2007-2008: "Detection, Recording and Study of the Characteristics of the Non-Ionizing Electromagnetic Radiation in the Environment", INTERREG IIIA, Greece-Cyprus.
- 2007-2009: "Measurements of the intensity of Electromagnetic Fields at the Mobile Telephony Base Stations Network of the Cyprus Telecommunications Authority (CYTA).
- 2007-2012: FUTURE-CY: "FUsion Transnational Unit for REsearch in Cyprus".
- 2007-2012: "High Energy Physics with the CMS Experiment at LHC, CERN".
- 2008: "CMS Week CYPRUS"
- 2008-2011: "Search for light charged Higgs bosons with the $H^\pm \rightarrow \tau^\pm \nu$ decay in the fully hadronic final state".
- 2008-2011: "Search for Light Neutral NMSSM Higgs Bosons".
- 2009-2012: KM3NeT-PP: Preparatory Phase for the KM3NeT Neutrino Telescope.
- 2011-2013: LocMe: "Localization of Wireless Mobile Terminals".
- 2011-2013: THALES - development of novel detector instrumentation and techniques.
- 2011-2014: "Search for Neutral SM and MSSM Higgs bosons in the decay channel $H/A/h \rightarrow \tau\tau$ ".
- 2012: "Charting the intensity of the Electromagnetic Fields at the Base Stations of the Mobile Telephony Network of the Cyprus Telecommunications Authority.
- 2012-2013: HERMES Network
- 2013-2016: "High Energy Physics with the CMS Experiment at LHC, CERN".
- 2013-2017: LHC Grid: High Performance Computer Cluster
- 2015-2019: COST Action TD1401: "Fast Advanced Scintillator Timing (FAST).
- 2016-2019: "Construction of a Cyclotron Center facility in Cyprus"
- 2017-2019: "Highly Miniaturised ASIC Radiation Detector".
- 2016-today: "High Energy Physics with the CMS Experiment at LHC, CERN".

9. FUNDING OF THE CYPRUS HIGH ENERGY PHYSICS GROUP

As Team Leader of the Cyprus High Energy Physics Group, I secured the necessary funds for the implementation of our Group's research programs through several sources: the European Union, the Cyprus Research Promotion Foundation, the University of Cyprus, USA Government, UNESCO and the Electricity Authority of Cyprus. The total funding secured for my Cyprus Group only, over the period 1993-2017, was over €4,500,000, while the construction of the Cyclotron Center facility, which is currently planned under my coordination, is expected to cost approximately another €10,000,000. So far we also funded for the University of Cyprus 10 Postdoctoral Fellows/Research Associates, 16 Research Assistants and 25 PhD and master students.

10. SUPERVISION

- 1992-2017: Team Leader, High Energy Physics Group (15 members), University of Cyprus.
- 1990-1991: Coordinator, New Particles Search Group (40 faculty members, postdoctoral and doctorate researchers from several international universities), L3 Experiment, CERN.
- 1987-2017: Supervised 10 Postdoctoral Fellows/Research Associates, 16 Research Assistants, 14 PhD Students, 11 MSc Students and 50 Undergraduate Students conducting their Final Year Projects.

11. ORGANISATION OF INTERNATIONAL CONFERENCES / WORKSHOPS

- 2017: Chairman of the Organising Committee, COST Action TD1401 FAST (Fast Advanced Scintillator Timing), March 2017, Larnaka, Cyprus.
- 2013: Chairman of the Local Organising Committee, CERN School of Computing, CSC2013, August 2013, Nicosia, Cyprus.
- 2012: Kounnas Fest, International Symposium honoring Prof. Costas Kounnas, Research Director of Ecole Normale Supérieure (Paris, France), on the occasion of his 60th birthday, September 2012, Nicosia, Cyprus.
- 2012: ASPERA, AStroParticle ERAnet/ApPEC Workshop, September 2012, Nicosia, Cyprus.
- 2008: Superstrings Cyprus, Member of the Organising Committee, September 2008, Ayia Napa, Cyprus.
- 2008: Chairman of the Local Organising Committee, CMS Week, June 2008, Limassol, Cyprus.
- 2007: Co-organiser, "Quality Assurance and Recognition in Higher Education", November 2007, Nicosia, Cyprus.
- 2007: Co-organiser, 4th International Conference on Open and Distance Learning – Forms of Democracy in Education: Open Access & Distance Education, November 2007, Athens, Greece.
- 2000: Co-organiser, 1st International Conference on Multiscale Materials Phenomena in Harsh Environments, for Directors of international funding agencies, June 2000, Limassol, Cyprus.
- 1993: Co-organiser, 5th Common Conference of the Greek Physical Society and the Cyprus Physical Society, Fall 1993, Nicosia, Cyprus.

12. INSTITUTIONAL RESPONSIBILITIES (University of Cyprus)

- 1992-1995: First Chairman of the Research Committee of the University of Cyprus.
- 1993-1995: Interim Vice Dean of the School of Pure and Applied Sciences.
- 1996-1998: Chairman of the Department of Physics.
- 1993-2010: Coordinator of teaching laboratories, Physics Department, University of Cyprus.
- 1993-2017: Founder & Team Leader of the High Energy Physics Group (and corresponding Laboratory) and of the Laboratory for Certification & Monitoring of the Electromagnetic Spectrum.
- 1993-2017: Member of the Students' Advisor Committee, Physics Department, University of Cyprus.
- 1995-1997: Member of the Senate of the University.
- 2001-2003: Chairman of the Safety Committee of the University.
- 1995-2015: Director of one teaching and two research laboratories, Physics Department, University of Cyprus.
- 1997-1999: Chairman of the Buildings Organisation and Planning Committee of the University.
- 1997-1999: Chairman of the University Committee on Health Insurance.
- 2002-2004: Member of the University Committee for the 2004 Olympic Games in Athens.
- 1991-2017: Chairman/Member of committees for the election & promotion of faculty staff.

- 1991-2017: Member in several ad-hoc committees of the University.
 2015-2017: Coordinator of the Committee on the establishment of a Cyclotron Center on the University Campus.

13. NATIONAL RESPONSIBILITIES

- 2008-2011: President of the Rectors Conference of Cyprus.
 2016-2020: Scientific Delegate of Cyprus at CERN.
 2016-2020: Member of the National Committee for CERN and the Cyprus-CERN Committee.
 2003-2011: Chairman of the Governing Board of the Open University of Cyprus.
 2007-2008: Ambassador of Cyprus for Fair Play.
 2003-2006: Vice Chairman of the Cyprus Council for the Recognition of Higher Education Qualifications (ΚΥΣΑΤΣ).
 2007-2010: Chairman of the Special Committee for reforming the Cyprus Police Academy.
 2010-2018: Vice President of the Cyprus University Sports Federation (ΚΟΠΑ).
 1998-2004: Member of the National Olympic Academy of Cyprus.
 2012-2020: Member of the National Olympic Academy of Cyprus.
 2011-2015: Vice Head of the Cyprus Delegations to the 26th, 27th, 28th and 29th Universiade Games (Shenzhen-China 2011, Kazan-Russia 2013, Gwangju-South Korea 2015, Taipei-Taiwan 2017).
 2006-2008: Vice Chairman of the Rectors Conference of Cyprus.
 2004-2006: General Secretary of the Rectors Conference of Cyprus.
 2008-2010: Member of the Cyprus Council of Higher Education.
 2011-2019: Member of the Council, European University Cyprus.
 2017: Advisor of the Cyprus Investment Promotion Agency (CIPA) on the establishment of a Proton Therapy Center in Cyprus.

14. INTERNATIONAL RESPONSIBILITIES

- 2015-2016: President of the Cyprus-CERN Committee.
 2016-2020: Member of the Cyprus-CERN Committee.
 1990-1991: Coordinator of the New Particle Search Group of the L3 Experiment.
 1997-1999: Representative of the Other Non-CERN Member States, CMS Management Board, CERN.
 1995-1997: Representative of the Other Non-CERN Member States, CMS Conference Committee, CERN.
 1995-2017: Scientific Team Leader & Representative of Cyprus, CMS and L3 Experiments at CERN.
 1995-2017: Member of the CMS Resources Review Board, CERN.
 1992-2017: Member of the Collaboration & Finance Boards of CMS & L3 Experiments at CERN.
 1997: Member of the Election Committee for the Spokesperson of CMS Experiment.
 2006-2013: Chairman/Member of International Committees evaluating the Physics Departments of several Universities.
 2002-2006: Member of the Evaluation Committee for Distance Learning Programs (ΕΠΕΑΕΚ, Greece).

2017-2021: Member of the Scientific Council of the National Research and Innovation Council of Greece in the Sector of Natural Sciences.

15. MEMBER OF SCIENTIFIC SOCIETIES

Hellenic Society for the study of High Energy Physics
Greek Physical Society
European Physical Society

16. MAJOR COLLABORATIONS

1995-today CMS Collaboration, LHC proton-proton physics.
1986-2000: L3 Collaboration, LEP electron-positron physics.
2005-2017: KM3NeT Collaboration, neutrino telescope.

17. RESEARCH AND TEACHING RECORDS

- 994 publications in International Refereed Journals
- Participation in 45 Technical Design Report Books and Experimental Proposals
- 42 Internal Notes on Technical Report Series
- Participation in International Conferences and Workshops
- Supervised the research work of 25 PhD and Master students
- Supervised 10 Postdoctoral Fellows and 16 Research Associates
- Supervised 50 Final Year Projects
- Reports and Presentations on a regular basis to professional societies, schools and the general public

18. LANGUAGES

Greek (mother tongue), English, German, some French.

19. OTHER INFORMATION

- Ex-Member of the National Track and Field teams of Greece and Cyprus.
- Ex-Member of the National Volleyball team of Cyprus.
- First President and co-founder of APOK, the University Athletic Club of Cyprus.
- Served as member of the Scientific Committee of the Cyprus Athletic Research Center.
- Served as member of the Futsal Federation of Cyprus.
- Served as member of the Volleyball Federation of Cyprus.
- Served as Ambassador of Fair Play of Cyprus (2007-2008).
- Member of the National Olympic Academy of Cyprus (2000-2004, 2012-2020).

20. OUTLINE DESCRIPTION OF MAIN RESEARCH PROJECTS

1. L3 Experiment at LEP

The aim of the L3 experiment at the Large Electron Positron Collider (LEP) of CERN was to perform precision tests of the Standard Model, from the scale of the Z^0 boson up to the $\approx 200\text{GeV}$ energy regime and to search for signatures of new physics and for the missing ingredients of the Standard Model. The L3 run started in July 1989 and came successfully to an end in November 2000, whereas the analysis of its accumulated data continued for several more years. Prof. Razis and, later-on, the Cyprus group he founded, had an active participation in the construction, calibration, monitoring and analysis of the L3 Muon Spectrometer, in Monte Carlo production of simulated data on several channels and in the physics analysis of real data, in particular searches for new particles and rare events. Prof. Razis served as Convenor of the New Particle Search Group of L3.

2. CMS Experiment at LHC

Cyprus joined CMS in 1995. The project initially involved the construction and successful operation of the CMS Experiment at LHC, CERN. The principal aim of CMS, which started taking collision data in 2009, was to search for the Higgs boson and for signatures of new physics beyond the Standard Model (SM) - supersymmetry, additional Higgs bosons, extra dimensions etc.-, by identifying and precisely measuring muons, electrons and photons over a large energy range, as well as the energies of jets and the missing energy at high luminosities and center of mass energies 7-8TeV (now 13TeV).

The Cyprus group participated in the design of the CMS Barrel Yoke, the construction of the CMS Electromagnetic Calorimeter, the calibration/testing of problematic data acquisition electronics (VFE boards), test beam runs, production of Monte Carlo events and offline analysis of data. In particular, they contributed to the searches for the SM Higgs to 2 photons and tau jets, to the search for charged Higgs via its τ -decays in fully hadronic data, and NMSSM Higgs via the decay $h \rightarrow \alpha_1 \alpha_1$. They also contributed to the simulation and analysis of the background, to the quality of reconstruction, matching charged leptons with particle tracks across the CMS subdetectors, to the construction, calibration and algorithm building of the Electromagnetic Calorimeter, which is the heart of the CMS accurate measurements of photons and electrons. Two members of the group also worked on B-B(bar) asymmetry, on the quality of data in the central tracker (one served as a convenor) and on the trigger improvement.

3. EBHK - Calibration and Control of the Very Front Electronic Modules of the CMS Electromagnetic Calorimeter

The project was devoted to the calibration and control of the Very Front End electronic boards of the CMS Electromagnetic Calorimeter. Considering the special conditions of a multipurpose experiment, like CMS, running at a hadron collider like LHC, we developed a strategy to optimize the Higgs searches. For channels where the Higgs decays into photons (or, through intermediate vector bosons, into electrons and positrons), to observe its peak significantly over background we had to perform detailed studies to understand the operation of the Electromagnetic Calorimeter and control its systematics arising from its Crystals, Avalanche

PhotoDiodes, Very Front End (VFE) and Front End electronics. For the VFE boards we ran tests, inspecting their electronic components, power feed, measuring their pedestals, noise, output voltage, leakage current and gain on Multi Gain Pre-Amplifiers. We accounted for their failure rate, voltage and temperature dependence of signals, linearity of response and dynamic range covered. These studies were performed with known pulses injected in the system.

4. ΑΛΓΗΚ - Development of a Computational Algorithm for the Calibration of Dead Crystals of the CMS Electromagnetic Calorimeter

This project was devoted to the mathematical extraction of the correction factors needed by the CMS analysis software to correct for the energy of particles impinging on “dead” crystals of the CMS calorimeter, based on the energy sharing between neighboring crystals. The algorithm developed by the group was implemented in the offline analysis software of the CMS Experiment.

5. ΕΠΗΞΚ - Study of the Specifications of the Data Acquisition Electronic Cards of the CMS Electromagnetic Calorimeter

In this project the optimum technical specifications of the DAQ cards of the CMS Electromagnetic Calorimeter were checked, based on a software program developed for this purpose and running on a computer controlled electronic platform to test these specifications.

6. Search for Light Neutral NMSSM Higgs Bosons

This project focused on the development of the CMS analysis for the search for a higgs boson of the NMSSM model. In the framework of the NMSSM, the μ -problem of the MSSM is solved by introducing an additional neutral singlet superfield S. The two additional neutral scalar bosons, contained in S, mix with the MSSM higgs bosons to form the five neutral higgs bosons of NMSSM: three CP-even h_1, h_2, h_3 and two CP-odd a_1, a_2 . The phenomenology of the charged higgs bosons h^\pm is only modified marginally with respect to MSSM. The project studies the lightest CP-even higgs particle h_1^0 , which has enough phase space for its decay into the two pseudoscalar higgs particles, $h_1^0 \rightarrow a_1^0 a_1^0$. Concerning the further decay of the lightest pseudoscalars, there are two possibilities: either $M_{a_1^0} \geq 10\text{GeV}$ and the a_1^0 boson decays into a pair of b quarks or a pair of tau leptons, leading to $h_1^0 \rightarrow a_1^0 a_1^0 \rightarrow 4\tau, 4b$ and $2\tau 2b$ final states, or $M_{a_1^0} \leq 10\text{GeV}$ and the dominant decay mode of the a_1^0 boson is into a pair of tau leptons, leading to $h_1^0 \rightarrow a_1^0 a_1^0 \rightarrow 4\tau$ final state.

7. Search for Neutral SM and MSSM Higgs Bosons in the Decay Channel $H/A/h \rightarrow \tau\tau$

This research program aimed at the development of the analysis, within the framework of CMS, for the discovery of the Standard Model (SM) and Minimal Supersymmetric Standard Model (MSSM) neutral higgs boson(s), based on its(their) decay channels into taus.

8. KM3NeT - A European Design Study for Deep Sea Facility in the Mediterranean for Neutrino Astronomy and Associated Sciences

This research program is a European project concerning the technical study, design and near future construction of a massive neutrino detector in the deep sea waters of the

Mediterranean, at a very big scale (10^{12} kg), equipped with a 3-dimensional array of photomultipliers arranged in leak-tight boxes under pressure. The neutrinos are detected via the Cerenkov radiation emitted by the energetic muons produced in the interaction of neutrinos with the Earth's crust as they penetrate it from one side to the other. KM3NeT is expected to be funded by the European Union under the ESFRI program.

9. KM3NeT-PP

This project was a continuation of KM3NeT. It dealt with the Preparatory Phase of KM3NeT, with the formulation of several working groups addressing the development of the necessary physics and instrumentation tools, leading to the preparation of the Technical Design Report (TDR), which was submitted to the European Union for funding the construction of the project.

10. LHC Grid: High Performance Computer Cluster

This program is linked to the Grid Initiative, aiming to the development of a worldwide High Performance Computing Network and the formulation of a distributed remote processing environment, with high throughput, high processing power, very fast access to large databases, extensive storage media across the globe and intelligent middleware tools, in order to provide the capabilities for efficient data analysis. Due to the high computer power demand of the LHC physics program, with enormous production and analysis of several Petabytes of data per year, the field of High Energy Physics is considered a natural testing ground for the evaluation of the Grid (thus LHC Grid, LCG). The strategy is to develop sufficient computer nodes, networking and software tools to operate across the Grid in a decentralized way. As far as Cyprus is concerned, these developments led to the set-up of a High Performance Computer Cluster dedicated to the high energy physics analysis needs of our Group.

11. ΗΜΠΕΔΙΑ, ΗΛΕΔΙΚ - Charting the intensity levels of Electromagnetic Fields in Cyprus at various installations and comparison with simulation results based on Finite Element Analysis

This research performed an accurate simulation, using finite element analysis, of the low frequency (50Hz) electromagnetic fields in areas surrounding the installations of the Cyprus Electricity Authority network. The results were compared to the actual measurements obtained by precise electronic instrumentation set-up in a properly equipped mobile unit. We also compared the levels at the mobile telephony network, radars, radio and TV stations with the safety limits adopted by the International Commission on Non-Ionizing Radiation Protection (ICNRP).

12. ΕΠΕΦ - Electromagnetic Spectrum Certification and Monitoring Laboratory

In this research program we set-up a new Laboratory devoted to the detection, monitoring and control of the emission of non-ionizing electromagnetic radiation by different sources of non-ionizing frequencies. For this purpose we developed a mobile unit, comprising of a special vehicle on which an Esmeralda XE system was attached, possessing a fully controlled rotatable RA-190 directive antenna, which is automatically read by a computer system and is connected to a compass and a GPS. The system was calibrated with high accuracy (1%) and used for detecting electromagnetic radiation sources in frequencies up to 3GHz.

13. INTERREG - Detection, Recording and Study of the Characteristics of Non-Ionizing Electromagnetic Radiation in the Environment

The aim of this project, in collaboration with the University of Aegean and the Hellenic Open University (Greece-Cyprus INTERREG frame), was the development of a network for the measurement, observation and monitoring of non-ionizing electromagnetic radiation in the environment. The network performed measurements and collected data on the distribution of non-ionizing radiation and developed fully automated methods for data recording, processing and filing in dedicated databases.

14. HERMES

Establishment of an international network, formulated between CERN and several higher institutions from Greece and Cyprus, with the aim to contribute significantly towards the development of new, innovative detector instrumentation and their application for diagnostics purposes and therapy of cancer by utilizing hadron beams. First stage: establish 20 fellowships funded by the State Scholarships Foundation (IKY).

15. COST Action TD 1401: Fast Advanced Scintillator Timing (FAST)

The main objective of the Action is to establish a multidisciplinary Network that brings together European experts from academia and industry to ultimately achieve scintillator-based detectors with time precision of better than 100ps, in particular to enable significant breakthroughs in diagnostic medicine and high luminosity particle physics in order to increase the discovery potential of LHC for rare reactions that could potentially lead to new physics beyond the Standard Model.

16. Establishment of a Cyclotron Center facility in Cyprus

This project will lead to the construction and commissioning of a Cyclotron Center dedicated to the production of radiopharmaceuticals for diagnostic purposes and their usage by a PET-CT system. The Cyclotron will also accommodate various research programs in scientific areas compatible to its operational plan. For example, it will be used for low-energy calibration of detector devices and their electronics, radiation damage studies, material studies, biological system studies, beam-orbit studies etc.

17. Highly Miniaturised ASIC Radiation Detector

The main objective of this project, funded by the European Space Agency (ESA), is the exploitation of innovative materials and technology for the development of active dosimeters for radiation monitoring. Such dosimeters are very useful and present advantages over the use of conventional passive-type dosimeters, in radiation-hot areas (such as reactors and nuclear facilities) and in the space program.

21. REFERENCES

Available on request.