

# **PUBLICATIONS**

## **TECHNICAL JOURNALS and BOOKS**

- “An Assessment of Power Generated with Plasma Processing of Sludge from Wastewater Treatment Plants”, Edbertho Leal-Quiros, Ph.D and C. Villafane, IEEE Transactions on Plasma Science, December 2007.
- “Prototype Plasma Flux Analyzer” Edbertho Leal-Quiros. Current Trends in International Fusion Research-Proceedings of the fourth Symposium, Pag 489-503. Edited by Charles D. Orth and Emilio Panarella. NRC Research Press, National Research Council of Canada, Ottawa , ON K1A 0R6 Canada, 2007
- “Fundamentals of Pollution Control of the Planet Earth Systems” Edbertho Leal-Quiros, Aluisio Pimenta,Hugo Pelaez and Maximo Cerame Vivas. NASA-ESE21. Edited by Polytecnic University of Puerto Rico, June 2007. (English)
- Fundamentos del control de la contaminación de los sistemas del Planeta Tierra. Edbertho Leal-Quiros, Aluisio Pimenta,Hugo Pelaez and Maximo Cerame Vivas. NASA-ESE21. Edited by Polytecnic University of Puerto Rico, June 2007. (Spanish)
- “Plasma Processing of Municipal Solid Waste”, Dr. Edbertho Leal-Quiros, Brazilian Journal of Physics, Vol. 34, No.4B, December 2004.
- “Electron Beam Diagnostics in Plasma Based on Electron Beam Ionization”. Darrin Leonhardt, Edbertho Leal-Quiros, David Blackwell, Scott Walton, Donald Murphy, Richard Fernsler, Robert Meger. US Naval Research Laboratory, Plasma Physics Division, 54<sup>th</sup> Annual Gaseous Electronics Conference, October 9-12, 2001, Pennsylvania State University State College, Pennsylvania. (GEC01 – RF1.005).
- “Electron Beam Diagnostics in Plasma Bases on Electron Beam Ionization”. Darrin Leonhardt, Edbertho Leal-Quiros, David Blackwell, Scott Walton, Donald Murphy, Richard Fernsler, Robert Meger. US Naval Research Laboratory, Plasma Physics Division. 2001 Gaseous Electronics Conference.
- “Fundamentals of Physics”, David Halliday, Robert Resnick, Jearl Walker. 6<sup>th</sup>. Edition, John Wiley and Sons, 2001. ISBN # 0-471-33235-6 (V.1) Edbertho Leal, Polytechnic University of Puerto Rico, External Reviewer.
- “Imaging of High Energy Particulate and Electromagnetic Radiation Using Diamond Sensors”. M. Prelas, M. West, W. Miller, F. Golshani, R. Tompson, E. Leal, S. Loyalka, T. Gosh, C. Kwon. Nuclear Engineering Program and Particulate System, Research Center, University of Missouri-Columbia; Polytechnic University of Puerto Rico,” Current Trends in International Fusion Research. Proceedings to the Second Symposium, edited by E. Panarella, NRC Research Press, National Research Council of Canada, Ottawa, ONK1A 0R6 Canada, pp 485--504 (2002).
- “Calculation of the SO<sub>2</sub> Concentration at Any Location from a Coal Power Plant using Sutton Equation”, presented at the Pan-American Congress of Engineering COPIMERA, Quito, Ecuador, (November, 2000).
- “Diagnostics for Electron-Beam Produced Process Plasma”, D.D. Blackwell, S.G. Walton, D.

- Leonhardt, D.P. Murphy, R.F. Fernsler, E. Leal-Quiros, W.E. Amatucci and R.A. Meger. Plasma Physics Division, US Naval Research Laboratory, DC 20375-5346. 2000 Gaseous Electronics Conference.
- “Journal of Wide Bandgap Materials”, Vol. 7, No. 1 - July 1999. Edbertho Leal, Polytechnic University of Puerto Rico. Associate Editor..
  - “Advanced Analyzers and Probes for Fusion-Plasma Diagnostics”, Current Trends in International Fusion Research. Proceedings to the Second Symposium, edited by E. Panarella, NRC Research Press, National Research Council of Canada, Ottawa, ONK1A 0R6 Canada, pp 1-23 (1999).
  - “The Feasibility of Diamond as a Detector Material in Plasma Diagnostics”. M. West, M. Prelas, E. Leal, R. Tompson, T. Ghosh, S. Loyalka, F. Goshani, C.W. Kwon. ”, Current Trends in International Fusion Research. Proceedings to the Third Symposium, Washington, March 8-12, 1999.
  - “Advanced Analyzers and Probes for Fusion-Plasma Diagnostics”, Current Trends in International Fusion Research. Proceedings to the Second Symposium, edited by E. Panarella, NRC Research Press, National Research Council of Canada, Ottawa, ONK1A 0R6 Canada, pp 1-23 (1999).
  - “Advanced Analyzers and Probes for Fusion-Plasma Diagnostics”, Current Trends in International Fusion Research. Proceedings to the Second Symposium, edited by E. Panarella, NRC Research Press, National Research Council of Canada, Ottawa, ONK1A 0R6 Canada, pp 1-23 (1999).
  - “The Identification of Hot Electron Rings in Spindle Cusp Using a Magnetic Dipole Analyzer”. E. Leal-Quiros and Mark A. Prelas. Fusion Technology, Vol. 20 No. 4 (Dec. 1991).
  - “The Hyperbolic Energy Analyzer: A Novel Diagnostic - Ion Probe”. E. Leal-Quiros, Mark A. Prelas and Eduardo García-Otero, Proceedings of the 10<sup>th</sup> International Workshop on ECR Ion Sources. ORNL and US-DOE. Conf. 9011136, pages 97-119. Editors: F.W. Meyer and M.I. Kirkpatrick. (Jan. 1991).
  - “Plasma Diagnostics Part I and Part II”, E. Leal-Quiros. Polymerization and Plasma Surface Modification of Materials. Editor H. Yashuda, (May 1990).
  - “Focused High Intensity Proton Beam from Lithium Source by Using EXB Stigmatic Selector”, E. Leal-Quiros and M.A. Prelas. Rev. Sci. Instrum, 61 (1) 636 (Jan 1990).
  - “Electron Population in the Hot Electron Ring Region of Mirrors and Cusps, Measured by a Hyperbolic Energy Analyzer”. E. Leal-Quiros, M.A. Prelas and Eduardo García-Otero. Rev. Sci. Instrum. 61 (10), 3304 (Oct. 1990).
  - “Advanced Analyzers and Probes for Transport Studies in Mirrors”, E. Leal-Quiros and M.A. Prelas. DOE Q - 115 US - Japan Workshop on Magnetic Mirrors. University of Wisconsin, Madison (Sept. 25-29, 1990).
  - “Cold Fusion Experiments Using Maxwellian Plasmas and Sub-Atmospheric D. Deuterium Gas”, M.A. Prelas, F. Boody, W. Gallagher, E. Leal-Quiros, D. Mencin and S. Taylor. Journal Fusion Energy, Vol. 9, No. 3, 309 (1990).
  - “Magnetic Cusp Contours and Measured ECRH Surfaces”, M.A. Prelas, E. Leal-Quiros, J.F.

Kunze, T.J. Dolan, F.P. Boody, W. Miller, W. Wei, G. Gu, J. Javedani, T. Pennington, R. Hane, M. Mosquera and J. Burnett. *Fusion Technology*, 15 (2), 1119 (April 1989).

- “Plasma Parameter Measurements with the Variable Energy Analyzer and the Magnetic Moment Meter”. E. Leal-Quiros, M.A. Prelas, Proc. 16<sup>th</sup> European Conference on Controlled Fusion and Plasma Physics, Venice. Vol. 13B, Part IV, p. 1529 (March 1989).
- “A new Tilted Poles Wien Filter with Enhanced Performance”, E. Leal-Quiros, M.A. Prelas. *Rev. Sci. Instrum.* 60 (3), 350 (March 1989).
- “EXB Wien Analyzers”, E. Leal-Quiros, M.A. Prelas, *Rev. Sci. Instrum.*, 59, 1738. (August 1988).
- “An Enhancement of Ion Energy Spectra and Sensitivity in Multigrid Energy Analyzer with Retarding Grid Potential: The Variable Energy Analyzer (VEA)”. E. Leal-Quiros and M.A. Prelas. *IEEE Transaction on Plasma Science*. Vol. 16, No. 6,66 (December 1988).
- “The Physicist in Venezuela”, E. Leal-Quiros. *EIDOS*, Rev. of Metropolitan University, Caracas, Venezuela (1983).
- “The Variable Energy Analyzer of Retarded Field”, E. Leal-Quiros, Rev. of Simon Bolivar University, Caracas (1983). Oral Presentation in the Radiation on Plasma College ICTP, Trieste, Italy (1983).
- “The Noise”, E. Leal-Quiros, Environmental Ministry of Venezuela Government, Caracas, Venezuela (1981).
- “Several Experiments with Two Kinds of Wien Filters”, E. Leal-Quiros, Rev. of Simon Bolivar University, Caracas, Venezuela (1981). Oral presentation at The International Center for Theoretical Physics, Spring College on Plasma Physics and Fusion, ICTP, Trieste, Italy (1981).
- “Some Experimental Facts that Indicate the Elimination of Astigmatism in Ion Beams with Separators EXB”. E. Leal-Quiros, *Journal of Applied Physics* 52, 1152, (March 1981).
- “A Variable Geometry Analyzer with External Micrometrical Control”, J. Puerta, E. Leal, G. Donoso. Abstract to the IEEE International Conference on Plasma Science, 1, 21 (1981)”.
- “Stellar Evolution and the Hertzsprung Russell Diagram”, E. Leal-Quiros, Internal Publications of the National Astronomical Observatory of Colombia, Santa Fe De Bogotá (November 1972).
- “Review on Electromagnets Design and Construction Manual”, E. Leal-Quiros, *Rev. Col. Física*, Vol. 13,74 (1973).

## **PROCEEDINGS AND PRESENTATIONS,**

- “Power Generated with Plasma Processing of Sludge from Water Treatment Plants”, Dr. Edberto Leal-Quirós and Carlos Villafañe, 2<sup>nd</sup> International Workshop and Exhibition on Plasma Assisted Combustion (IWEPAC), Quality Inn Governor, Falls Church, Virginia, September 19-21, 2006.
- “Moon-Mars Exploration: The NASA mission” and “Plasma Processing of Municipal Solid Waste”, Dr. Edberto Leal-Quirós, SAEED MOFTEE Auditorium, Faculty of Engineering & Technology, Mechanical Engineering Department, University of Jordan, February 27, 2006.
- “Integration of an Optimal Cooling System to the PUPR Plasma Machine”, Dr. Edberto Leal-Quirós (Mentor), David Leal Escalante, Lenuel Rodríguez, Samuel Jiménez and Dennis Morales, Second Exhibition of Scientific Research Posters and Capstones Design by PUPR Students and Faculty”, Polytechnic University of Puerto Rico Library, November 23, 2005.
- “Determination of Plasma Parameters in the PUPR Mirror and Cusp Plasma Machine Via Electrostatic Probe Methods”, Dr. Edberto Leal-Quirós (Mentor), Ryan Meyer, Miguel Rivera, Franklyn Colmenares, David Leal Escalante, Ramon Rivera, Dr. Angel Gonzales, Second Exhibition of Scientific Research Posters and Capstones Design by PUPR Students and Faculty”, Polytechnic University of Puerto Rico Library, November 23, 2005.
- “Determination of the Local Magnetic Dipole Moment of the Plasma at the PUPR Cusp-Mirror Machine”, Edberto Leal-Quirós (Mentor), Second Exhibition of Scientific Research Posters and Capstones Design by PUPR Students and Faculty”, Polytechnic University of Puerto Rico Library, November 23, 2005.
- “Vacuum Technology”, Dr. Edberto Leal-Quirós (Mentor), Ramón Rivera, Second Exhibition of Scientific Research Posters and Capstones Design by PUPR Students and Faculty”, Polytechnic University of Puerto Rico Library, November 23, 2005.
- “Impedance Mismatch Study Between the Microwave Power Generator and the PUPR Plasma Machine”, Dr. Edberto Leal-Quirós (Mentor), Franklyn Colmenares, Ryan Mayer, Ramón Rivera, Natyaliz Zavala, Kabir Encarnación Jorge Gaudier, Ligeia Castellanos, David Leal Escalante, Second Exhibition of Scientific Research Posters and Capstones Design by PUPR Students and Faculty”, Polytechnic University of Puerto Rico Library, November 23, 2005.
- “Identification of Electron Cyclotron Resonance Heating (ECR) Surfaces in the PUPR-Plasma Device Operating in the Cusp And Mirror Mode”, Dr. Edberto Leal-Quirós (Mentor), Franklyn Colmenares, David Leal Escalante, Second Exhibition of Scientific Research Posters and Capstones Design by PUPR Students and Faculty”, Polytechnic University of Puerto Rico Library, November 23, 2005.
- “The Magnetic Moment Analyzer Experimental Measurements”, Edberto Leal-Quirós, IPELS 05 Workshop, Tromso, Norway, July 4-8, 2005.
- “Advanced Analyzers and Probes For Fusion Plasma Diagnostic”, Dr. Edberto Leal-Quirós, TVI Community College, Albuquerque, New Mexico, May 31-June 4, 2005.
- “Plasma Processing of Waste For Our Environment’s Protection”, Dr. Edberto Leal-Quirós, TVI Community College, Albuquerque, New Mexico, May 31-June 4, 2005.
- “World Status of Fusion Research”, Dr. Edberto Leal-Quirós, TVI Community College, Albuquerque, New Mexico, May 31-June 4, 2005.
- “Determination of the Local Magnetic Dipole Moment of the Plasma at the PUPR Cusp-Mirror Machine”, *Edberto Leal-Quiros*, XI Latin American Workshop on Plasma Physics (XI – LAWPP) OC– 3, Mexico City, 5 – 9 December 2005.

- “Independence mismatch study between the microwave power generator and the PUPR Plasma Machine, Jorge R. Gaudier, L. Castellanos, K. Encarnación, N. Zavala, N. Farahat, L. León, M. A. Rivera, David Leal, R. Rivera, F. Colmenares, R. Meyer and *Edbertho Leal-Quiros*”, XI Latin American Workshop on Plasma Physics (XI – LAWPP) PSI-3, Mexico City, 5 – 9 December 2005.
- “Plasma Processing of Municipal Solid Waste”, Dr. Edbertho Leal-Quiros, X Latin American Workshop on Plasma Physics XLAWPP, 7<sup>th</sup> Meeting on Plasma Physics EBF, Hotel Fazenda Fonte, Colina Verde, Sao Pedro, Brazil, November 30<sup>th</sup> – December 5<sup>th</sup>, 2003.
- “Determination of Plasma Parameters in the PUPR Mirrors and Cusp Plasma Machine via Electrostatic Probe Methods”, Ryan M. Meyer, M. A. Rivera, F. Colmenares, David Leal, Ramón Rivera, G. Lleonart, Angel González, and *Edbertho Leal-Quiros*. XI Latin American Workshop on Plasma Physics (XI – LAWPP) PSI-10, Mexico City, 5 – 9 December 2005.
- “Hydrogen Storage in Diamond Powder Utilizing NaF Plasma Surface Treatment for Fuel Cell Applications”, David A. Leal, F. Colmenares, M. A. Prelas, *Edbertho Leal-Quiros* and T. K. Ghosh. XI Latin American Workshop on Plasma Physics (XI – LAWPP) PS2-4, Mexico City, 5 – 9 December 2005.
- “Integration of an Optimal Cooling System to the PUPR Plasma Machine”, David A. Leal, L. Rodríguez, S. Jiménez and D. Morales, G. Burgos and *Edbertho Leal-Quiros*, Second Exhibition of Scientific Research Posters and Capstone Design by PUPR Students and Faculty, Polytechnic University, San Juan PR, November 23 – December – 23 / 2005.
- “Experimental Design of a High Vacuum System for PUPR Plasma Machine”, Ramón Rivera Varona, F. Colmenares, G. Lleonart, David Leal Escalante, *Edbertho Leal-Quiros*, Second Exhibition of Scientific Research Posters and Capstone Design by PUPR Students and Faculty, Polytechnic University, San Juan PR, November 23 – December – 23 / 2005.
- “Identification of Electron Cyclotron Resonance Heating (ECR) Surfaces in the UPPR – Plasma Device Operating in the Cusp and Mirror Mode” David Leal Escalante and Franklyn Colmenares, A. González and *Edbertho Leal-Quiros*. Second Exhibition of Scientific Research Posters and Capstone Design by PUPR Students and Faculty, Polytechnic University, San Juan PR, November 23 – December – 23 / 2005.
- “The Magnetic Moment Analyzer”, Dr. Edbertho Leal-Quirós, IPELS 05 Workshop, Tromso, Norway, July 4-8, 2005.
- “Basic Plasma Diagnostic; Probes & Analyzers”, Dr. Edbertho Leal-Quirós, TVI Community College, Albuquerque, New Mexico, May 31-June 4, 2005.
- “Advanced Analyzers and Probes For Fusion Plasma Diagnostic”, Dr. Edbertho Leal-Quirós, TVI Community College, Albuquerque, New Mexico, May 31-June 4, 2005.
- “Plasma Processing of Waste For Our Environment’s Protection”, Dr. Edbertho Leal-Quirós, TVI Community College, Albuquerque, New Mexico, May 31-June 4, 2005.
- “World Status of Fusion Research”, Dr. Edbertho Leal-Quirós, TVI Community College, Albuquerque, New Mexico, May 31-June 4, 2005.
- “Status of Investigation and Mars Exploration by NASA”, Dr. Edbertho Leal, Floral Park Salon, Library of Polytechnic University of Puerto Rico, August 27, 2003.

- “Magmavication-Vitrification, Gasification and Generation of Energy with High Temperature Plasma Processing of Waste”, E. Leal-Quiros, Ph.D., 5<sup>th</sup> Symposium on Current Trends in International Fusion Research, Washington DC, March 24-28, 2003.
- “Status of Fusion in the World”, Dr. Edberto Leal, Encuentro de la Red de Astronomía de Colombia, Salón Rojo, Tequendama Hotel, Bogotá, Colombia, August 16, 2003.
- “Status of Investigation and Mars Exploration by NASA”, Dr. Edberto Leal, Encuentro de la Red de Astronomía de Colombia, Salón Rojo, Tequendama Hotel, Bogotá, Colombia, August 16, 2003.
- “Introduction to Nuclear Power Plant”, Dr. Edberto Leal-Quiros, Naval Research Laboratory NRL, Washington DC, September 2002.
- “Plasma Flux Analyzer”, E. Leal-Quiros, Ph.D., 4<sup>th</sup> Symposium on Current Trends in International Fusion Research”, Washington DC, March 12-16, 2001.
- “Dispersal of Pollutants in the Atmosphere – Calculation of SO<sub>2</sub> Concentration at Any Location from a Coal Power Plant using Sutton Equation”, Presentation to the College of Engineers and Architects of Puerto Rico, COINAR 2001, March 30, 2001.
- “Estatus de Investigación en Fusión en el Mundo”, Edberto Leal-Quiros, Ph.D., T.J. Dolan, Ph.D., D.F. Duchs, C. Orth, J. Reece Roth, G.V. Oost, E. Panarella, June 2001.
- “Journal of Wide Bandgap Materials”, Associate Editor, Sage Publications, Volume 1-10, ISSN 1524-511X, October 2001-Present.
- “Calculation of the SO<sub>2</sub> Concentration at Any Location from a Coal Power Plant Using Sutton Equation”, Edberto Leal-Quiros, Ph.D., XVIII COPIMERA Congress, Quito, Ecuador, November 26-30, 2001.
- “Electron Beam Diagnostic in Plasma Bases on Electron Beam Ionization”, Darrin Leonhardt, Edberto Leal-Quiros, David Blackwell, Scott Walton, Donald Murphy, Richard Fernsler, Robert Meger. Gaseros Electronics Conference, US Naval Research Laboratory, Plasma Division, 2001.
- “The Flux Analyzer ( $\Gamma$ -Analyzer)”, E. Leal-Quiros, Current Trends in International Fusion Research – Fourth Symposium. Edited by Charles D. Orth, E. Panarella and R. Post, NRC Research Press, NRC of Canada, Ottawa, ON KIA 0R6 Canada, 2001.
- “Fundamentals of Physics”, David Halliday, Robert Resnick, Jearl Walker, 6<sup>th</sup> Edition, John Wiley and Sons, 2001, ISBN # 0-471-33235-6 (V.1), Edberto Leal-Quiros, Ph.D., Polytechnic University of Puerto Rico, *External Reviewer*.
- CP1 68 “The Double Energy Analyzer”, Edberto Leal-Quiros, Ph.D., Scientific Research and Development Director, Polytechnic University of Puerto Rico. 42<sup>nd</sup> Annual Meeting of the Division of Plasma Physics and the 10<sup>th</sup> International Congress on Plasma Physics, Quebec City, Canada (October 23-27, 2000).
- “Measurements of Distribution Functions, Densities and Temperatures of Electrons and Ions using a Novel Plasma Diagnostic Device: The Hyperbolic Energy Analyzer (HEA)”. Edberto Leal-Quiros, Ph.D., IX Latin American Workshop in Plasma Physics, La Serena, Chile (November 13-17, 2000).
- “Diagnostic for Electron-Beam Produced Process Plasma”, D.D. Blackwell, S.G. Walton, D. Leonhardt, D.P. Murphy, R.F. Fernsler, E. Leal-Quiros, W.E. Amatucci and R.A. Meger. Gaseous Electronics Conference, Plasma Physics Division, US Naval Research Laboratory, 2000.

- “The Feasibility of Diamond as a Detector Material in Plasma Diagnostics”, M. West, M.A. Prelas, E. Leal, R. Tompson, T. Ghosh, S. Loyalka, F. Goshani, C.W. Kwon.
- “Imaging of High Energy Particulate and Electromagnetic Radiation Using Diamond Sensors”, M. Prelas, M. West, W. Miller, F. Golshani, R. Tompson, E. Leal-Quiros, S. Loyalka, T. Ghosh, C. Kwon. Nuclear Engineering Program and Particulate System, Research Center, University of Missouri-Columbia; Polytechnic University of Puerto Rico.
- “Journal of Wide Bandgap Materials”, Vol. 7, No. 1 – July 1999, Edbertho Leal-Quiros, Polytechnic University of Puerto Rico, Associate Editor.
- “Advanced Analyzers and Probes for Fusion-Plasma Diagnostics”. E. Leal-Quiros, XVII COPIMERA Congress, San Salvador (October 11-14, 1999).
- “Journal of Wide Bandgap Materials”, Associate Editor, Technomic Publishing Co. Inc., Volume 7, October 1999. ISSN 1524-511X.
- “Advanced Analyzers and Probes for Fusion-Plasma Diagnostics”, Current Trends in International Fusion Research. Proceedings to the Second Symposium, edited by E. Panarella, NRC Research Press, National Research Council of Canada, Ottawa, ONK1A 0R6 Canada, pp 1-23, 1999.
- “Double and Single Steady State Plasma Machines”, E. Leal-Quiros, UCLA Department of Physics, Plasma Physics Seminar, (November 1996).
- “North Anna Power Station Quality Assurance Trend Analysis Report”, First Quarter 1994. E. Leal-Quiros, J. Smith. Virginia Power, NAPS (May 1994).
- “Trend Issues Identified by the Quality Review Board (QRB) at North Anna Nuclear Power Station during the First Half of 1994”. E. Leal-Quiros, Virginia Power (NAPS) (August 1994).
- “A Historical Perspective of the American Nuclear Society Virginia Section, North Anna Nuclear Power Station Branch”. E. Leal-Quiros, and Utility Working Conference, Amelia Island Plantation, Amelia, Florida. (August 7 -11, 1994).
- “North Anna Power Station Quality Assurance Trend Analysis Report”, Second Half 1993. E. Leal - Quiros, Virginia Power, NAPS (February 1994).
- “State of Quality”. Nuclear Quality Assurance Report: North Anna Power Station, Surry Power Station and Corporate Technical Center, Virginia Power. E. Leal-Quiros, J. Dietz and R. Yates (January 1993).
- “North Anna Power Station Quality Assurance Trend Analysis Report”, Reporting Period from April 1 - June 30, 1993. E. Leal-Quiros, Virginia Power (NAPS) (July 1993).
- “The Physicist in Radiotherapy, Diagnostic, Nuclear Medicine and Other Fields in Medicine”. E. Leal-Quiros, Physics Department, National University of Colombia, Santa Fe de Bogotá, Colombia (September 1993).
- “The Design of QATT: Quality Assurance Tracking and Trending Program for Virginia Power”. J. Dietz, E. Leal-Quiros and R. Yates. National Meeting of Quality Assurance Supervisors, Columbia, South Carolina (September 1993).

- “North Anna Power Station Quality Assurance Trend Analysis Report from July 1 - September 30, 1993”. E. Leal-Quiros, Virginia Power, NAPS (October 1993).
- “An Approach toward the Identification of Quality in Functional Areas”. E. Leal-Quiros, Virginia Power Plant, NAPS (October 1993).
- “Introduction to the QA - Trend Analysis of Non-Significant Events from January 1, 1992 to August 28, 1992 and Comparison with Institute of Nuclear Power Operations INPO Analysis”. E. Leal-Quiros, Virginia Power (NAPS) (October 1992).
- “The Quality Assurance Trend Analysis of the Quality Assurance Activities Report” (QA-AR’s) from January 1 - December 31, 1992. E. Leal-Quiros, Virginia Power, NAPS (January 1992).
- “System Head Losses (Heat Exchangers), Pump-Curves and Operating Point of Nuclear Power Thermal Hydraulic Systems”. B. Sturgill and E. Leal-Quiros. Virginia Power, North Anna Nuclear Power Station (Feb. 1991).
- “Electric Probes for Collisionless Plasma Diagnostics”. E. Leal-Quiros, Department of Physics Seminar, College of William and Mary Williamsburg, Williamsburg, VA. (April 1991).
- “Radiation Dosimetry, Detector’s Physics and Introduction to the Ninety-nine Radiation Monitors at North Anna Nuclear Power Station”. (NAPS). E. Leal-Quiros, Virginia Power, NAPS (October 1991).
- “Introduction to the Predictive Analysis in Nuclear Power Plants”, E. Leal-Quiros, Virginia Power, NAPS (October 1991).
- “Introduction to Infrared Thermography (IR-T) and Applications to Electrical Components in a Nuclear Power Plant”. E. Leal-Quiros, Virginia Power (NAPS), October 1991.
- “Vibration Analysis, Theory and Applications”. E. Leal-Quiros, Virginia Power (NAPS) (October 1991).
- “Measurements of Fourier Transform Vibration Spectrum of the Nine Bearings of the Turbine Generator System at Unit One of North Anna Nuclear Power Plant”. E. Leal-Quiros, Virginia Power, (NAPS) (November 1991).
- “Advanced Analyzers and Probes for Transport Studies in Mirrors”. E. Leal-Quiros and Mark A. Prelas. DOE Second Meeting US - Japan on Magnetic Mirrors. University of Wisconsin (September 25-29, 1990).
- “Cathodic Protection: A Method to Delay Corrosion of the Service Water System in PWR Units”. E. Leal-Quiros and C. Stevens. Virginia Power, NAPS. (Dec. 1990).
- “Plasma Parameter Measurements with the Variable Energy Analyzer and the Magnet Moment Meter”. E. Leal-Quiros, M.A. Prelas. Book of Proceedings of the 16<sup>th</sup> European Conference on Controlled Fusion and Plasma Physics”. Venice, Italy (March 13 -17, 1989).
- “Experiments to Produce Cold Fusion in Maxwellian Plasmas”. M.A. Prelas, F.P. Boody, W. Gallagher, E. Leal-Quiros, David Mencin and Scott Taylor. Cold Fusion Meeting, LANL, Santa Fe, NM. (May 22 - 26, 1989).
- “The Pitch Angle Detector: PADE”. E. Leal-Quiros, M.A. Prelas. IEEE Meeting on Plasma Physics, Buffalo, NY. (May 1989).
- “Ion Diagnostics in Plasmas Part I and Part II”. E. Leal-Quiros. Spring College on Plasma Physics. ICTP.

Trieste, Italy (May 15 - June 9, 1989).

- “Novel Probes and Analyzers for Plasma Diagnostic and Fusion”. E. Leal-Quiros and M.A. Prelas. Spring College on Plasma Physics, ICTP, Trieste, Italy (May 15 - June 9, 1989)
- “The System: Lithium - Proton and Stigmatic Wien Filter as a Source of Protons of High Intensity”. E. Leal-Quiros, M.A. Prelas. International Conference on Ion Sources. Lawrence Berkeley Laboratory and University of California, Berkeley, CA. (July 10 - 14, 1989).
- “Novel Analyzers for Plasma Edge Transport Diagnostics”, E. Leal-Quiros, M.A. Prelas, and F.P. Boody. First TTF Transport Meeting, San Diego, CA. (Aug. 21- 24, 1989).
- “Ideal Roll of a University Research Nuclear Reactor”. E. Leal-Quiros. Nuclear Radiation Center, Washington State University, Pullman, WA, (October 27, 1989).
- “Precision Automatic Radial Probe Driver and Probe Sweeper”, J. Chiang, S. Taylor, E. Leal-Quiros, F. Boody, J. Javedani and M. Prelas. APS Plasma Physics. (Nov. 13-17, 1989).
- “Double Langmuir Probe Measurements of the M4X Cusp Mode Plasma”. E. Leal-Quiros, W. Wei, W. Gallagher, D. Mencin, J. Javedani, S. Taylor and M.A. Prelas. APS Plasma Physics. (Nov. 13-17, 1989).
- “Mass Focused Stigmatic Proton Beam”. E. García-Otero, E. Leal-Quiros and M.A. Prelas. APS Plasma Physics. (Nov. 13-17, 1989).
- “The Use of the Maxwellian Plasmas to Initiate Cold Fusion in Palladium”. M.A. Prelas, F.P. Boody, W. Gallagher, E. Leal-Quiros, D. Mencin and S. Taylor. APS Plasma Physics (Nov. 13 - 17, 1989).
- “Caviton Formation in Magnetized Plasma”. J. Javedani, E. Leal-Quiros and M.A. Prelas. APS Plasma Physics (Nov. 13 - 17, 1989).
- “Measurement of Transport Parameters: Magnetic Dipole Moment, Ion Current Densities, Pitch Angles in Cusps and Mirrors Using Novel Analyzers”. E. Leal-Quiros and M.A. Prelas. APS Plasma Physics. (Nov. 13 - 17, 1989).
- “EXB Wien Analyzer”. E. Leal-Quiros and M.A. Prelas. 7<sup>th</sup> Topical Conference on High Temperature Plasma Diagnostic. Napa, CA. (March 13-17, 1988).
- “Magnetic Cusp Contours and Measured ECRH Surfaces”. M.A. Prelas, J.F. Kunze, E. Leal-Quiros and F. Boody. 8<sup>th</sup> Topical Meeting on Technology of Fusion Energy, Salt Lake City, Utah (Oct. 9-13, 1988).
- “Results from the Hyperbolic Analyzer”, E. Leal-Quiros and M.A. Prelas. APS Plasma Physics. (Oct. 28 - Nov. 5, 1988).
- “Diagnostics of M4X Plasma”. F. Boody, E. Leal-Quiros, J. Javedani, H. Tseng, R. Hane, M. Mosquera, T. Dolan, J. Kunze, G. Gu and M.A. Prelas. APS Plasma Physics (Oct. 28 - Nov. 5, 1988).
- “The Variable Energy Analyzer”. M.A. Prelas and E. Leal-Quiros. APS Plasma Physics. (Oct. 28 - Nov. 5, 1988).
- “Initial X-Ray Imaging Results on the Missouri Mirror”, H.K. Tseng, T.J. Dolan, C.D. Estelman, E. Leal-Quiros, R. Hane, J. Javedani and Mark Prelas. APS Plasma Physics. (Oct. 28 - Nov. 5, 1988).
- “Measurements on an ECRH Driven Plasma at 2.45 GHZ in a Magnetic Cusp Configuration”. F.P. Boody,

- M.A. Prelas, J.F. Kunze, T.J. Dolan, E. Leal-Quiros and R.E. Schmunk. Bult. Am. Phys. Soc. (Nov. 1987).
- “A Hyperbolic Energy Analyzer”. E. Leal-Quiros, M.A. Prelas and F.P. Boody. Bult. Am. Phys. Soc. (Nov 1987).
  - “Double and Single Steady State Plasma Machines” E. Leal-Quiros, UCLA Department of Physics, Plasma Physics Seminar. (Nov. 1986).
  - “A Variable Geometry Analyzer with External Micrometrical Control”, J. Puerta, E. Leal, G. Donoso, Abstract to the IEEE International Conference on Plasma Science, 1,21, 1981.