PROFILE OF Dr. B. PRASADA RAO, PhD

Scientist and Research fellow

Prof. Prasada Rao Bayyarapu PhD in Physics, Visiting Professor of Andhra University Visakhapatnam, Jawaharlal Nehru Technological University, Kakinada and Hyderabad, Sri Krishnadevaraya University Physics faculty, was born in the city of Vijayawada of Andhra Pradesh in India on 11th September, 1955. He passed out from Andhra Loyola College ,Vijayawada of Andhra Pradesh with distinction in B.Sc.,(Physics Main) in 1975 and M.Sc.,(Master in Science-Physics) from the globally renowned Indian Institute of Technology (IIT) Madras, Chennai, India in 1977. He got high rank in Indian Civil Services,in an All India competitive examination with Physics as Main subject in 1979 in first attempt. He was awarded PhD for his outstanding research : 'Studies on the Wave-Particle Duality of Light' by Sri Krishnadevaraya university in 2014.

As a Visiting Professor of several Universities he has been extensively conducting workshops, delivering lectures for Post-Graduate students of Physics and guiding research scholars besides teaching. He presented papers in numerous conferences such as Indian Science Congress,Banaglore which was addressed by the then Hon'ble Prsident of India Dr.A.P.J. Abdul Kalam, National Conference on Spectro Physics in Chennai,India etc. His works were published in many National and International Journals. He has widely toured and addressed several conferences of International Association of Public Transport in France and Hong Kong in 2010 and in Dubai in 2011. Dr. Prasada Rao is also a member of Indian Science Congress Association,Director on Board of Governors, Holy Mary Institutions of Education, and Board of Studies, Department of Physics, Kakatiya University.

He has spent most of his career in discovering the secrets of nature such as birth and evolution of universe, nature of light, sub- atomic particles, dark matter and dark energy, and Big Bang Theory. His thoughts and research have definite solution for the dynamics of the universe and disputes the Big Bang Theory. In this context he established Bayyarapu Physics Laboratories (BPL), Hyderabad, India and has been conducting experiments on wave theory

of nature of light since 1997. Further, he has experimentally proved that wave nature of light is absolutely not necessary to explain Interference and Diffraction, whereas for the last three centuries the scientific fraternity has been under the impression that the phenomena of Interference and Diffraction can only be explained with the wave nature of light. From the foregoing experiments, he has unraveled the mystery and complexity of universe which itself is a major breakthrough in this early part of 21st century.

The anomalies in the Big Bang model have kindled his thinking and led him to surmise that there might be something wrong with the wave nature of light because the Big Bang model is based on the wave theory of light. The red shift of spectrum of celestial bodies is interpreted as akin to Doppler shift in acoustics treating light as a wave and the red shift occurring on account of receding source (celestial body). Every Celestial body in the Universe is perceived through light – Visible and non – Visible. The particle nature of light has been vindicated in the experiments of Photoelectric effect, Compton effect, etc.

To understand more about the nature of light, he has been conducting series of path breaking experiments with varied samples relating to wave nature of light, especially the experiments in which Interference and Diffraction phenomena are studied. Wave theory of light was postulated by Christian Huygen and later refined by Fresnel to explain Interference and Diffraction.

PATH BREAKING RESEARCH

From these series of experiments, Dr. Prasad Rao discovered a path breaking theory that a 'fluid layer' which is found adhering on all solid and liquid surfaces in normal atmospheric conditions, is responsible for Interference and Diffraction phenomena. The fluid state is assumed to be an intermediate state between a gas and a liquid. The fringes are nothing but ripples of density that are formed due to mechanical pressure exerted on this layer and also due to thermal cause. Interference fringes and Diffraction patterns are explained in terms of absorption, reflection, refraction and scattering of photons in the density ripples existing in the fluid layer. This fluid is known as "Super fluidity layer" at very low temperature of liquid Helium. These experiments have led him to the irrevocable conclusion that particle nature is the only correct description of light and the wave nature does not exist. Since an alternative explanation for Interference and Diffraction pattern is given by means of particle nature of light, wave nature of light, which is fraught with

several flaws, can be dispensed with. Hence photons are the only description of light and photons are to be designated by their mass and velocity. His work on 'Studies on the Wave-Particle Duality of Light' has been acclaimed globally. His experimental work can be seen at: www.natureoflight-particleonly.com

National and International presentations:

1. Presentation of his work on nature of light in the Indian Science Congress at Bangalore Session on January 5th, 2003.
2. National Conference on Spectro Physics in Chennai.
3. On invitation, he made a presentation of his paper entitled "Interference and Diffraction – A New Theory" in the 3rd International Conference on Physics Science and Technology – ICPST 2012, December 29-30, 2012, Hong Kong and Chaired a Scientific Session in the Conference.

PUBLICATIONS IN NATIONAL AND INTERNATIONAL JOURNALS:

1. *Wave theory of Light - A historical blunder?? Bayyarapu Prasada Rao; Proceedings of Indian Science Congress – Vol.Jan 2003.*
2. *New Light on LIGHT - Bayyarapu Prasada Rao; Atti Della "Fondazione Giorgio Ronchi" Anno LIX 2004, Italy.*
3. *Discovery Disputes Wave Theory of Light – Bayyarapu Prasada Rao; India Tribune, Chicago, U.S.A., March 30, 2012.*
4. *Interference and Diffraction - A New Theory – Bayyarapu Prasada Rao; International Journal of Applied Physics and Mathematics (IJAPM) January, 2013 edition.*
5. *Experiments on nature of light incorporated in the Website www.natureoflight-particleonly.com.*

CURRENT RESEARCH :-

Presently, Dr. Prasada Rao is doing research on Big Bang theory, Dark matter, Dark energy, Evolution of Universe and Neutrino Physics.