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Author: Mr. John Harlow
Aerojet Rocketdyne, United Kingdom, member@jharlow.fsnet.co.uk

Ms. Mali Perera
Commercial Space Technologies Ltd., United Kingdom, cst@commercialspace.co.uk

THE FATHER OF THE HIGH THRUST ION ENGINE

Abstract

This paper reviews the life, works and technical legacy of David Gordon Fearn.

David was born in 1938 and from early times it was clear that he possessed that grasp and understanding of technical issues which would stand him in good stead for his future education and later career. After Bridport Grammar School he went on to achieve a 1st Class Honours degree in Physics from Imperial College. So impressed were his tutors that he was asked to stay on to do a Doctorate.

Research into Plasma Physics continued at the University College of Wales at Aberystwyth and later at Royal Holloway College after which there was the possibility of continuing this work at the Royal Aircraft Establishment (RAE) at Farnborough which he joined as a Senior Scientific Officer in 1967.

Despite the progress of his career that occurred in the 1970's and 1980's David's heart was still in plasma propulsion. To that end he continued applying himself to the application of Ion engine propulsion as a means to realizing missions requiring such high velocities that would otherwise be impossible to achieve by other means, such as chemical propulsion.

During this time David won several prestigious awards, mainly from the Institute of Mechanical Engineers. In addition, in 1979, David joined the British Interplanetary Society and was elected a Fellow the same year as becoming a Vice President in 1997. He was also elected a Member of the International Academy of Astronautics at this time.

David was a very caring individual and he took great pains to try and achieve a balanced view in discussions and debates. This showed itself later in his career when he would try and engage in rational debate with those in authority who stubbornly refused to give their support to one or other of his ion engine projects. The fact that he succeeded as far as he did has left mankind a legacy of a practical and efficient method of exploring the entire Solar System.