



# George Francis Fitzgerald

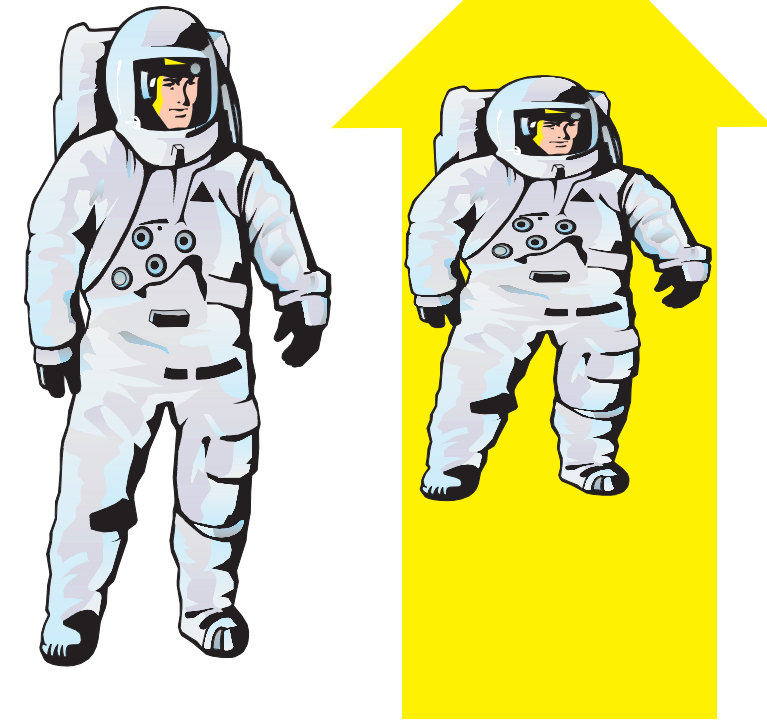
1851 - 1901

George Francis Fitzgerald was the leader of the Maxwellians, an "invisible college" of eminent physicists who perfected Maxwell's theory and applied it widely. They included Lodge, Larmor, Heaviside, Hertz and Thomson (JJ, but not Kelvin, who remained sceptical). Together they developed the theory of electromagnetism, in which light is seen as an electromagnetic wave.

He was born into the intellectual community of Trinity College, Dublin, where his father was a professor. His uncle George Johnstone Stoney coined the name "*electron*". Eventually he was to marry the daughter of the Provost, who was also a physicist. He had the makings of an establishment figure but temperamentally he was a restless spirit, challenging authority and lamenting the old fashioned ways of his academic colleagues, especially in later life. To his colleagues in research he was a generous and imaginative correspondent and he was an outspoken advocate of scientific education and research.



*Fitzgerald about  
to take off in his new glider*



*A consequence of relativity theory  
is the apparent shortening of a body  
due to its motion relative to the observer*

**Today his name is mainly associated with the Fitzgerald contraction in Relativity.** This is the apparent shortening of a body due to its motion relative to the observer. The idea came upon him when he was sitting with his friend Oliver Lodge in Liverpool. Characteristically, he published it only as an obscure note in a minor American journal. He was embarrassed when Hendrik Lorentz later had the same idea. Both names are now attached to this effect.

Fitzgerald's interests extended to practical physics. In 1895 he purchased the new Lilienthal glider and flew it (at a prudently low altitude, and still wearing his top hat) in the college grounds, towed by a team of students and enduring the sarcasm of the Dublin citizenry, who looked on in amazement through the railings. This is probably the first flight with a glider in the British Isles.

When he died, it was said that he had worn himself out with his many preoccupations. Few have been remembered with such evident gratitude by colleagues all over the world, including the pupils who left Trinity to be pioneers of physics in far off places. For example, Thomas Ranken Lyle set up in Melbourne the first physical laboratory south of the equator.

D.W.