

Open Letter to the President of the Royal Society

The Double Helix Theory of the Magnetic Field

Dear Lord Rees:

Consider an electron undergoing a mutual central force orbit with a positron such that the axis of rotation is perpendicular to a line joining the electron to the positron. Now imagine a column of such rotating electron positron dipoles stacked in their mutual axial plane, with the electrons angularly phased above the positrons in a twisted rope ladder fashion.

You will agree that a Coulomb force of attraction will prevail along the axis. We will effectively have a helical spring. Now imagine a sea of these rotating electron positron dipoles forming an elastic solid and such that their axes of rotation connect together to form solenoidal field lines **H**.

These **H** field lines will cross directly between the north pole of a magnet and the south pole of another magnet. The Coulomb force will cause the two magnets to attract each other as if they are being pulled together by helical springs.

When two magnetic north poles are brought close together, the **H** field lines will spread away from each other. Centrifugal repulsion acting laterally between the **H** field lines will cause the two magnets to repel each other.

The hydrodynamics of this arrangement are treated in detail in James Clerk-Maxwell's 1861 paper 'On Physical Lines of Force'. Would you consider this double helix model to be a viable physical explanation for the magnetic field?

The corollary of this arrangement is that charged particles will experience a Coriolis/Lorentz force $\mathbf{F} = \mathbf{v} \times \mathbf{H}$ as they traverse the **H** field lines at right angles. **H** will of course represent vorticity.

I look forward to hearing from you.

Yours sincerely
Frederick David Tombe

Ex-Physics teacher at Belfast College of
Technology and Royal Belfast Academical Institution.

e-mail: sirius184@hotmail.com 17 th March 2007, Philippine Islands

For further detail see "The Aether and the Electric Sea" at
<http://www.wbabin.net/science/tombe12.pdf>

