

**Plasma-like behaviour in partially-ionised liquids:  
the Canal Transport Model of phloem translocation**

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The behaviour of ionised gas plasma in space will be compared to the behaviour of partially-ionised liquid in the Floating Water Bridge. The distribution of electric charge will be shown to be important in both media. The comparison will suggest an explanation of some otherwise puzzling aspects of the Floating Water Bridge.

Evidence for a similar charge distribution within the sieve tube elements of the phloem will be presented. Consideration of the effect of concentration gradients in the distributed charges leads to a new model of phloem translocation. The proposed Canal Transport Model can explain all the experimental evidence which contradicts the currently-favoured Münch osmotically-generated pressure flow model.

We conclude that electromagnetic forces are an important factor in the metabolism of plants.