Abstract Submitted
for the APR07 Meeting of
The American Physical Society

Gravity like forces in sap conducting tissue in plants. ORVIN WAGNER, Wagner Research Laboratory — I used miniature brass shielded Entran accelerometers in small holes in tree tissue to measure forces (penetrating the brass shield) in the direction of sap flow. These forces increased with sap flow up to 22% of gravity magnitude. It is assumed that measured forces would have been larger except for the presence of the distorting hole. These forces were measured in horizontal roots and vertical trunks (here a gravity decrease). Distances of mm. between the tissue and the accelerometer, over which the measured forces acted, could only be compared to gravity. The force's penetration of the brass shield also indicates gravity like forces. See e.g. *Physiol. Chem. Phys. & Med. NMR* (1995) 27: 31-34 and other publications of the author. The present generally presented controversial explanation of sap flow up tall trees apparently needs modification. Plant produced forces provide an incredible alternative. The macroscopic behavior of plants has so far been mostly ignored by physicists. The study of plants may answer some fundamental questions about gravity. (Earlier observations of weight loss in hanging weights in sap conducting tissue in bent trees led to the above work).

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Date submitted: 05 Jan 2007 Electronic form version 1.4