difficult to measure *all* the heat gained or lost in any of the changes here contemplated. That friction, agitation of fluids, condensation of gases, conversion of gases into fluids and liquids into solids, produce heat, is undoubted: and that the quantity of such heat may be measured by the mechanical force which produces it, or which it produces, is a generalization which will very likely be found a fertile source of new propositions, and probably of important consequences.

As an example of the conclusions which Professor Thomson draws from this doctrine of the mutual conversion of motion and heat, I may mention his speculations concerning the cause which produces and sustains the heat of the sun.[1] He conceives that the support of the solar heat must be meteoric matter which is perpetually falling towards the globe of the sun, and has its motion converted into heat. He inclines to think that the meteors containing the stores of energy for future Sun-light must be principally within the earth's orbit; and that we actually see them there as the "Zodiacal Light," an illuminated shower, or rather tornado, of stones. The inner parts of this tornado are always getting caught in the Sun's atmosphere, and drawn to his mass by gravitation.

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[1] On the Mechanical Energies of the Solar System. *Edinb. Trans.* vol. xxi. part i. (1854), p. 67.