

AbstractID: 4027 Title: Einstein 1905 and Beyond: The “Revolutionary” Paper, Plus Four, Plus Five

In the short duration of six months, one week, and two days, Einstein, in 1905, wrote five papers that stand today at the bedrock of physics. Only one of these papers was, according to Einstein himself, revolutionary. This paper, on the nature of light, made him the father of quantum physics. In the other four papers, Einstein clearly eschewed trivialities as he demonstrated the reality of atoms and examined their dimensions (the reality of atoms was still debated in 1905), put the laws of thermodynamics on a new footing as he established the validity of the kinetic theory, enhanced the significance of the speed of light, and purged the basic concepts of space, time, mass, and energy of profound fallacies. But Einstein did not retire after 1905. He continued a career that, in sum, stands alone in the annals of physics.