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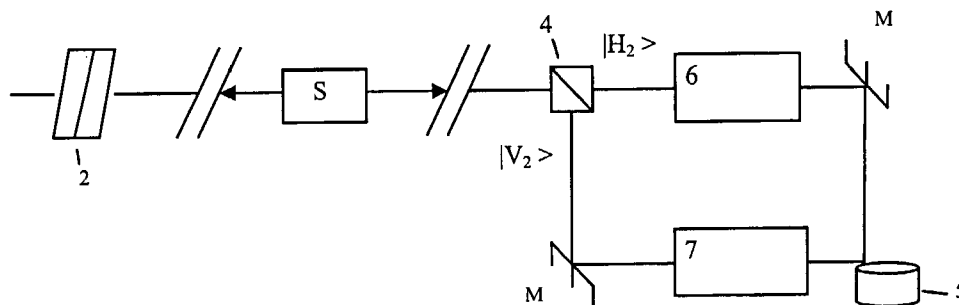
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(54) Title: A DETECTION ARRANGEMENT FOR PARTICLES WITH TWO BRANCHES USING SUPERPOSITION



(57) Abstract: A detection arrangement comprising: a splitter; a detector, first and second paths being defined between the splitter and the detector and the splitter being arranged to direct an incoming particle along the first or second path depending upon the value of a parameter of the incoming particle; and a manipulation arrangement located on at least one of the first and second paths, so that, if a particle in a superposition of values of the parameter impinges on the splitter and a wavefunction of the particle is directed along both the first and second paths, the manipulation arrangement will act on the wavefunction to allow interference, at or near the detector, between the portions of the wavefunction that were directed along the first and second paths.



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