Detecting fractional statistics in anyon interferometry employing thermal excitation CHEOLHEE HAN, HEUNG-SUN SIM, KAIST — In this work, we propose an interferometry setup of anyons, a setup slightly modified from a usual Fabry-Perot interferometry.\textsuperscript{1} In this interferometry, there appears anyon braiding between thermally excited anyons and an anyon injected from a source of the setup. This braiding process, which has unnoticed before and does not exist in bosons and fermions, results in a temperature dependent phase shift of the interference pattern of the setup. Experimental observation of the phase shift will provide a direct evidence of fractional statistics.