Experimental evidence of particle-size sorting due to preferential concentration in polydisperse turbulent suspensions JEFF PARSONS, University of Washington — A series of laboratory experiments of a stratified particle-laden mixed layer have documented an enrichment of particles with Stokes number approximately equal one being removed from the mixed layer. Due to the particular geometry used in the experiments, plumes of preferentially concentrated particles were isolated and measured. Enrichment of particles that had Stokes numbers close to one was not well correlated with the particle concentration or the dissipation rate, but was present in all twelve of the experiments performed.