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Time-Resolved Protein Superstructure Disassembly at the Single Particle Level JASON PUCHALLA, KELLY KRANTZ, JULIE VIEHWEG, HAYS RYE, Princeton University, Dept. of Mol. Biology, PETER GALAJDA, ROBERT AUSTIN, Princeton University, Dept. of Physics — Many proteins are able to spontaneously self-organize *in vivo* into large, complex structures. These superstructures are often disassembled through the action of key enzymes to fulfill a specific biological role. Yet, the mechanisms of disassembly of such complex structures are poorly understood. We demonstrate the ability to monitor the kinetics of the enzyme assisted disassembly of fluorescently labeled clathrin-coated vesicles in a micro-fluidic flow cell using photon burst and correlation spectroscopy.

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