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**Analysis of T lymphocyte activation measured by Super-Resolution Microscopy** LEONARD CAMPANELLO, University of Maryland at College Park, MARIA TRAVER, Uniformed Services University of the Health Sciences, HARI SCHROFF, National Institute of Biomedical Imaging and Bioengineering, BRIAN SCHAEFER, Uniformed Services University of the Health Sciences, WOLFGANG LOSERT, University of Maryland at College Park — Tight regulatory control of the activation signal in T lymphocytes is necessary to prevent the immune response from getting too large or persisting too long. Utilizing cutting-edge super-resolution imaging technologies in combination with quantitative image analysis, we explore one aspect of this regulation in activated cells: the dynamics of the protein MALT1. Our goal is to analyze how the motion of MALT1 within the cell affects the transduction and regulation of the activation signal. A focus of our analysis is to measure anisotropies in the spatial organization of MALT1 and the shape of the related larger scale protein complex that it is a part of, the POLKADOTS Signalosome.

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