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Flow structure of polymer solutions close to walls, at less than one correlation length PATRICK TABELING, ZHENZHEN LI, MARC YONGER, FABRICE MONTI, EMMANUEL TERRIAC, CHOONGYEOP LEE, Microfluidics MEMS and Nanostructures Laboratory - ESPCI, MICROFLUIDICS MEMS AND NANOSTRUCTURES LABORATORY - ESPCI TEAM — We measure flow profiles in semi-dilute PEO solutions at distances less than a correlation length, close to smooth walls, using an evanescent wave technique we have been developing in the lab for a number of years. We observed unexpected flow structures in the first two correlation lengths from the wall, albeit consistent with recent numerical studies.

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