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Wetting layer dynamics in colloid polymer mixtures by evanescent wave dynamic light scattering BENOIT LOPPINET, PANGIOTIS VOUDOURIS, GIORGOS PETEKIDIS, IESL-FORTH Heraklion Greece — Evanescent wave obtained at the total internal reflection can be used as the incident beam of a dynamic light scattering experiment where its short penetration depth allow to selectively probe fluctuations close to a hard wall. Colloid concentration fluctuation in gas-liquid phase separated colloid-polymer mixtures obtained with PMMA hard spheres (R=120nm) and polystyrene polymer in index match cis/trans decalin were investigated in the vicinity of a vertical hard wall with in particular the dense colloidal layer wetting the hard wall in the top (gas) phase. There, the q-dependent collective dynamics reveal a liquid like behaviour similar to the one observed in the bottom phase dynamics, both marginally slower than the dynamics measured in the bottom (liquid) phase bulk and very different from the dilute like dynamics observed in the bulk top phase. Results are discussed in terms of hydrodynamic interactions.

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