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Two dimensional Confinement of 5CB between Lipid Bi-layers¹ BRADLEY KIRKWOOD, KEVIN SOBCZAK, DUSTIN HEMPHILL, ERIC HARDIN, RIZWAN MAHMOOD, Slippery Rock University — We have confined 5CB (4-Cyano-4'-Pentyl-1, 1'-biphenyl), a calamitic thermotropic liquid crystal, between lamellar bilayers formed by the lyotropic lipid DDAB (diodecyldimethylammoniumbromide). DDAB bilayers were swollen by the addition of an anisotropic liquid, 5CB. Initial phase transition and optical birefringence data have suggested demixed phase(s) 25% =5CB =85% in 88% (DDAB + 25% water). Isotropic to Lamellar transition was observed in all the samples of less than 27% 5CB.

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