

W0410

Towards Structures of Membrane Proteins in 2D Crystals Using X-ray Free Electron Lasers.

Michael Becker¹ and Edgar Weckert², ¹Biology Dept., Bldg. 463, Brookhaven National Laboratory, P.O. Box 5000 Upton, NY 11973 USA, ²HASYLAB at DESY, Notkestr. 85, D-22607 Hamburg, Germany.

Membrane proteins play important roles in biology, and they are important targets in treating diseases. They constitute roughly 30% of the proteins encoded by genomes, yet they represent < 0.1% of the atomic structures deposited in the Protein Data Bank. High brightness, hard X-ray Free Electron Lasers may be particularly amenable to determining structures of such proteins in 2-dimensional crystals near atomic resolution. Calculations to address this possibility will be presented.