

Experimental report

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During these shifts, we planned first to pursue the effort in getting high resolution data for the ground state of pSRII. 8 crystals of SRII were tested. Because of the high flux, rapid degradation of the crystals can be observed not only from the diffraction, but also from the crystal bleaching. After estimating the irradiation time which is acceptable for these crystals, a complete data set to 2.3 Å resolution was obtained from a crystal shaped as a long thin needle. Because of the length of this crystal, the data set could be collected by translating 10 times the crystal by 25 micron steps during the data collection. A complete data set (over 140 degrees) was obtained and integrated to 2.3 Å resolution with an R_{sym} of 8.5%. The lower mosaicity for these data (0.5°) compared to the value obtained for the data collected on ID14-EH2 (1.75°), might be related to the data collection strategy. The electron density maps obtained from these data are of very good quality and therefore very used in parallel with the first data during the model building, this was particularly helpful in the loops. Additionally to pSRII, we collected a few data sets from bacteriorhodopsin crystals and tested a few crystals from other membrane proteins.

Second, based on the optimization in to push the limits