

Report on experiment MX1068: Online microspectrophotometry: structural basis for lightinduced switching in photochromic fluorescent proteins.

This experiment aimed at investigating the photoswitching mechanisms of two photoswitchable fluorescent proteins named IrisFP and Padron. Concerning Padron, a so-called negatively photoswitchable FP, we obtained the structure of both the non-illuminated and the illuminated state of the protein, revealing cis trans isomerization between both states. Concerning IrisFP, the experiment was not successful, due to the poor quality of the crystals, that apparently melted during the experiment. This might have been the result of the temperature rise in the experimental hutch due to the use of the high-power argon ion laser, generating 2 kW of heat in the hutch.