Run LS-2477 ID 27 22-26 July, 2016

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Beam parameters $\lambda = 0.37.8$ Å Distance = 306.64815 mm Detector MARCCD165

Data collection

No technical problem during the run.

If pressure is raise directly above 400 MPa, the Ras crystals are degraded. We found that waiting overnight at a pressure around 200 MPa, then going above 400 MPa was a way to keep intact the diffraction.

The presence of two pressurization devices help us greatly to put under pressure two crystals in parallel each night.

Several data sets were collected on wild-type Ras apo and soaked in Zn²⁺-BPA, and on a new mutant D33K

Scientific results

The new mutant D33K seems very interesting with a different behavior than the wild-type. The compressibility curve of this D33K mutant compared to the wild-type highlight that its adaptability to pressure is different. The D33K structures are currently under refinement.

The Zn²⁺-BPA is an inhibitor which binds close to the nucleotide, according to a previous NMR structure, but its binding site differs from the Zn²⁺-cyclen binding site. It is not visible at ambient pressure, but high pressure structure of the complexes should allow its visualization.