



PROXIMA 1: Structural study of biological macromolecules using crystallography - 1

SOLEIL staff:

A. Thompson (Head of beamline)

P. Legrand (Scientist)

B. Guimarães (Scientist)

P. Gourhant (Technical assistant)

Areas of application, instrumentation and methodologies used

Energy range: 5-15 KeV

PROXIMA 1 is one of two beamlines at SOLEIL, together with PROXIMA 2, used for measurements in macromolecular crystallography.

PROXIMA 1 delivers an intense, parallel and tunable X-ray beam for high-resolution measurements or those from large unit-cell crystals. The beamline has been upgraded with a very large surface-area detector (PILATUS 6M). The 3 circle "kappa" geometry goniostat is in routine use for advanced data collection strategies. A new CATS sample-changing robot has been installed on the beamline and is operational for cryogenically cooled samples. A crystallization plate screening option is also available. Beamline optics permit a range of focusing conditions which can then be adapted to the sample being studied (e.g. beam focused on sample or detector).

Biological crystallography. Determination of the three-dimensional structure of macromolecules and their complexes.

Experimental phasing, including using a very low anomalous signal (S-SAD).

Data collection for very large unit-cell crystals.

Major disciplines

Structural biology.