

Research Infrastructures and COVID-19 Research



ACCELERATE is funded by the European Union Framework Programme for Research and Innovation Horizon 2020, under grant agreement 731112



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Responses to the questionnaire

Synchrotron SOLEIL

Synchrotron SOLEIL is the French synchrotron facility, located on the Saclay Plateau near Paris, with 29 beamlines in operation. Synchrotron SOLEIL, a unique tool for both academic research and industrial applications across a wide range of disciplines including physics, biology, chemistry, environmental and earth sciences, etc., is used by over 5 000 researchers coming from France and abroad. It is based on a state-of-the-art 3rd generation 2.75 GeV synchrotron source, both in terms of brilliance and stability, designed to cover a very wide range of techniques from infrared to hard x-rays.

SERVICE/S IMPLEMENTED

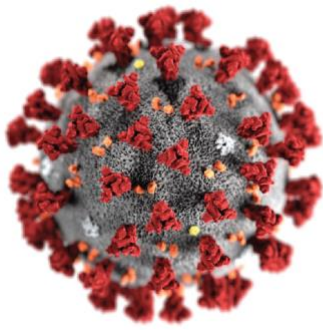
Synchrotron SOLEIL [referred to below as SOLEIL], which welcomes up to 5000 visitors per year as facility users as well as the general public, has been temporarily closed in line with government recommendations, in order to limit the propagation of the coronavirus Covid-19. Nonetheless, scientific research into the nature of the virus, the means to protect against it and reduce its virulence, remains a high priority. For this reason SOLEIL has taken several actions :

- a) Efforts have been made to remain in close contact with French research teams with activity in virus research, particularly on Covid-19. SOLEIL has a strong group of biologists (Heliobio team) and all scientists will strongly support any request and will offer their scientific and technical expertise, from tissues/cellular to atomic resolution.
- b) A mechanism to re-open SOLEIL, for short periods, in order to allow urgent Coronavirus specific research projects, has been put into place. This mechanism will be available only for urgent experiments, via the Rapid Access proposal system, and experiments will be evaluated by the SOLEIL management on a case by case basis. Any temporary reopening of the storage ring will strictly respect social distancing recommendations, with a maximum of operations carried out via remote access to instruments. For any enquiries, contact Andrew.Thompson@synchrotron-soleil.fr.
- c) Once the current restrictions (social distancing) have been relaxed, SOLEIL will give high priority to reprogramming the pharmaceutical research projects that were postponed due to the storage ring closure.
- d) SOLEIL's scientists are working closely with our on-site pharmaceutical industry partners (the LBS3 laboratory), in order to maintain a minimal program whilst respecting social distancing criteria.

▪ What stage in COVID-19 intervention your RI is addressing?

Basic virus function / immune response

▪ Instruments/databases involved:



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Principally X-ray diffraction and scattering methods and UV-Vis Imaging

How is the proposal submitted?

First, the applicant needs to contact Andrew Thompson to describe the demand. After acceptance by SOLEIL management, you will be invited to detail the proposal online via the SUN set web interface : <https://sun.synchrotron-soleil.fr/sunset/bridge/sunset/>

Who evaluates the proposal?

Experiments will be evaluated by the SOLEIL management on a case by case basis for urgent requests.

Is the submission continuous, or linked to a deadline?

The submission is continuous

What is the estimated time from the submission to the access / service provision?

Several days (only because we have to restart the machine, proposal evaluation will be faster) - we are aiming at 72 hours, but this will depend on a number of factors, including examination of project feasibility

CHARACTERISTICS OF THE ACCESS

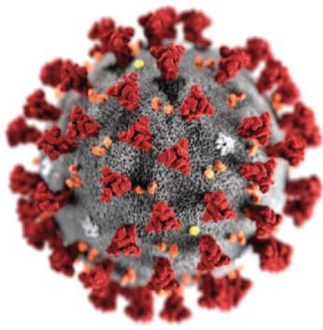
Restrictions: No restriction

In the case of analytical facilities, modality of access allowed: Remote and on-site access

Comment for remote access only: X-ray diffraction facilities can be accessed remotely

If on-site access is allowed, is mobility support available?	YES
Is the access free for non-proprietary research?	YES
Is commercial access available at reduced prices?	YES
Are there limitations regarding the type of samples?	YES
Are there special requirements for shipment of the samples?	YES
Are there specific requirements regarding the preparation or handling of the samples?	YES

Additional comments related to the questions above: Shipment of crystalline samples via cryogenic dry shipper and mounted according to standards explained on our web pages (for example <https://www.synchrotron-soleil.fr/en/beamlines/proxima-1> and <https://www.synchrotron-soleil.fr/en/beamlines/proxima-2a>). SWING Beamline for SAXS experiments (3D molecule shape, samples in solution) and DISCO Imaging for tissues or cells/macromolecules screening/imaging. Biosafety level 2 samples can be accepted on site (even on beamlines



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under practical conditions) and if necessary, sample state control or final step purification can be done in the L2 Biology Laboratory before the analysis on the beamline. Biosafety level 2 samples can be accepted, but not manipulated on site.

ACCESSIBILITY OF THE PUBLICATION AND DATA

Is there any requirement to publish in open access journals?	NO
Is the data generated associated to metadata and is it publicly available?	YES
If yes, what is the embargo period?	All raw data and the associated metadata obtained via public research conducted at SOLEIL will be open access after an embargo period. The embargo period is for 3 years with a possibility to extend it to 5 years under certain conditions
Where is the data or metadata published? (e.g. in the institution's catalogue, in other open data repositories, etc).	A data catalogue is currently being prepared.
Do you have further comments about data or metadata?	In many cases, data reduction can be performed on site.