Preparing a beamtime application for beamline 01B2-01 Far-IR

Along with the scientific merit of an application for beamtime, there are several other points which will be considered in the evaluation process. Please make sure that the following points are clearly addressed in your proposal.

1) *Need for synchrotron radiation*, the major advantage of synchrotron radiation in the Infrared region is increased brightness. This brightness is critical in achieving high throughput across a small aperture. The most common examples of experiments for which this would be important are:
    a. *Ultra-High resolution: To achieve resolutions greater than 0.002 cm^{-1} a very small aperture is required and therefore a very bright source offers a significant advantage. Hence, the need for spectral resolutions of 0.002 cm^{-1} or better clearly demonstrates the need for a synchrotron.*
    b. *Need for small apertures: For some experiments a small aperture is required as part of the experiment. For example high pressure studies using diamond anvil cells. However, be sure to account for the diffraction limit.*

    Note, it is not sufficient to simply state that you need one of the above criterion for your experiment you must explain why it is important for your experiment. For example if you need High Spectral Resolution, you must explain why high spectral resolution is critical to your experiment.
2) *Capability to make efficient use of beamtime. It is important that when you are allocated beamtime that said beamtime be used effectively. Several factors that can show you capable of effective beamtime use are;*
    a. *Previous experience in Vibrational Spectroscopy*
    b. *If you have collaborators who will be helping with data analysis indicating their involvement and expertise will help.*
    c. *Previous experience in synchrotron work.*
    d. *Size of the team of experimentalists compared to the proposed experiment. Indicate clearly that you have enough team members to perform the experiments. For example: If you have beamtime 24 hours a day for a week (which is common) one person is not sufficient to make use of the beamtime.*
    e. *Experimental plan. Provide adequate details to show that you have carefully considered how to make the best use of your beamtime.*

Note that many of the above items are not critical but they can affect the evaluation of the proposal. For example, a proposer without any experience in synchrotron infrared can have a successful proposal by presenting a compelling scientific problem along with a well thought out experimental procedure.

3) *It is **highly** recommended that you contact the beamline scientist prior to submitting your proposal. The beamline scientist is the best source for determining how to tailor your experiment to make the best use of the beamline.*