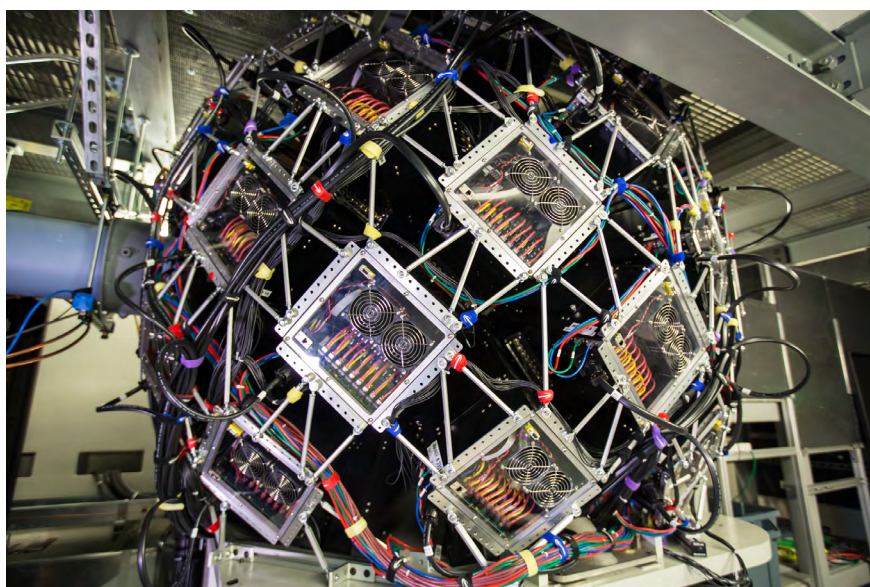


# MANDI

## Macromolecular Neutron Diffractometer

MaNDi is a single-crystal diffractometer optimized for high signal-to-noise data collection by exploiting wavelength-resolved Laue diffraction coupled with a 30 m flight path. The wavelength bandwidth is  $\Delta\lambda=2.15$  or  $4.3 \text{ \AA}$ , which can be selected anywhere between 1 and  $10 \text{ \AA}$ . The divergence of the neutron beam can be selected between  $0.12$  and  $0.80^\circ$  FWHM at the sample position.

Data can be collected on samples of  $0.1 \text{ mm}^3$  or larger with unit cells in the range of  $15\text{--}300 \text{ \AA}$  on edge. An experimental temperature range of  $80\text{--}400 \text{ K}$  is provided by an in-built Oxford diffraction cryostream.



Anger cameras surround the sample, enabling rapid data collection.

### SPECIFICATIONS

Source-to-sample distance	30 m
Sample-to-detector distance	39–45 cm
Angular detector coverage	4.1 sr (40 detectors)
Detector angles	$20\text{--}160^\circ$
Wavelength bandwidth	$\Delta\lambda = 2.16/4.30 \text{ \AA}$
Sample size	$>0.1 \text{ mm}^3$
Divergence	$0.12$ to $0.80^\circ$

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### APPLICATIONS

A range of very different crystalline materials from small compounds to large protein molecules can currently be studied on MaNDi.

- Enzymes
- Protein drug complexes
- Membrane proteins

#### For more information, contact

Andrey Kovalevsky, [kovalevskyay@ornl.gov](mailto:kovalevskyay@ornl.gov), 505.310.4184

Flora Meilleur, [meilleurf@ornl.gov](mailto:meilleurf@ornl.gov), 865.576.2779

Dean Myles, [mylesda@ornl.gov](mailto:mylesda@ornl.gov), 865.574.0548

[neutrons.ornl.gov/mandi](http://neutrons.ornl.gov/mandi)