

# Multiphonon: Phonon Density of States tools for Inelastic Neutron Scattering Powder Data

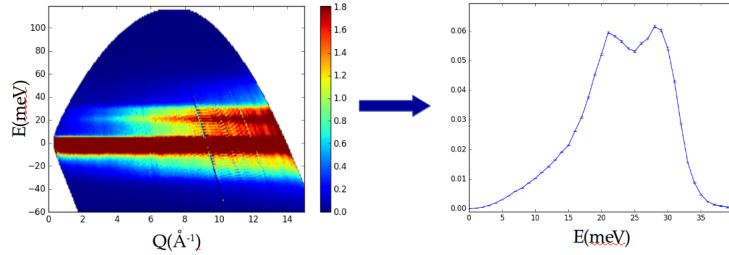
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September 2017

## 1 Summary

multiphonon is a python package that calculates phonon density of states from inelastic neutron scattering (see, for example [1]) spectrum from a powder sample. The algorithm is a self-consistent iterative procedure that finishes when the measured spectrum can be accounted for by the one-phonon scattering, multiphonon scattering, and multiple scattering from the deduced phonon density of states, assuming incoherent approximation (Appendix of [2] and Section 6.5 “Calculation of Multiphonon Scattering” of [1]).



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### 3 Acknowledgements

This work is sponsored by the Laboratory Directed Research and Development Program of Oak Ridge National Laboratory, managed by UT-Battelle LLC, for DOE. Part of this research is supported by the U.S. Department of Energy, Office of Science, Office of Basic Energy Sciences, User Facilities under contract number DE-AC05-00OR22725.

### References

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