

Documentation

Dataset for manuscript "Phase structure of below-threshold harmonics in aligned molecules: a few-level model system"

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1 General Information

Dataset title:	Dataset for manuscript "Phase structure of below-threshold harmonics in aligned molecules: a few-level model system"
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Type:	Simulation results
Language:	English
Rights:	CC BY-NC 4.0
DOI of the repository:	10.18453/rosdok_id00005151
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2 Description

This document provides the data for all figures, which are discussed in the publication [1]. Simulation parameters and details are explained therein.

3 Usage

The data is provided in the form of ".txt"-files containing the research data in tables. It can be easily accessed in python with the numpy library using the "numpy.loadtxt("filename.txt")" command or in matlab with "readtable("filename.txt")". All entries use double-precision floats. Minimal plotting examples written in python and requiring the numpy and the matplotlib library are provided.

4 Repository Structure

The data is grouped into the following sub-folders and files:

```
Phase_BTH_Few_Level_Model_Repository
├── Fig1_TLS_Intensity_Fieldstrength
│   ├── Field_Strength.txt
│   ├── HHG_Intensities.txt
│   ├── Omega.txt
│   └── Minimal_Plot_Data1.py
├── Fig2_TLS_Intensity_Frequency
│   ├── Driver_Frequency_Axis.txt
│   ├── Harmonic_Order_Axis.txt
│   ├── HHG_Intensity_Grid.txt
│   └── Minimal_Plot_Data2.py
├── Fig3_TLS_Phase_Frequency
│   ├── Driver_Frequency_Axis.txt
│   ├── Harmonic_Order.txt
│   ├── HHG_Phase_Grid.txt
│   └── Minimal_Plot_Data3.py
└── Fig4_Fig5_4LS_Intensity_Polarization
    ├── Harmonic_Order.txt
    ├── HHG_Intensities.txt
    ├── HHG_Polarization.txt
    ├── Laser_Polarization.txt
    └── Minimal_Plot_Data4.py
```

References

- [1] Samuel Schöpa, Lina Bielke, Falk-Erik Wiechmann, Franziska Fennel, Dieter Bauer, *Phase structure of below-threshold harmonics in aligned molecules: a few-level model system*, Phys. Rev. Research, 10.1103/5fjm-8ps7 (2026)