

Data in “Determination of Intrinsic Effective Fields and Microwave Polarizations by High-Resolution Spectroscopy of Single NV Center Spins”

**Data.xlsx**

<b>Figure</b>	<b>Data Sheets</b>	<b>Notes</b>
Fig2	Fig2A	2-D plot
	Fig2B	1-D plot
	Fig2C	2-D plot
	Fig2D	2-D plot
Fig3	Fig3	4x 1-D plots (Panel 1, 2, 3, 4)
Fig4	Fig4A	6x 1-D plots (NV1, NV2, NV3, NV4, NV5, NV6)
Fig5	Fig5A	2-D plot

**Code**

Esrfit Npeak.m:

Code used to normalize the ESR spectra with a well-defined number of observed peaks

Esrfit xN.m:

Code used to normalize the ESR spectra with an unknown number of peaks

GaussianFunc.m:

Single Gaussian function used for fitting low-power ESR spectra

Gaussian xN Func.m:

Superimposed Gaussian functions used for fitting low-power ESR spectra

LorentzFunc.m:

Single Lorentzian function used for fitting high-power ESR spectra

Lorentz xN Func.m:

Superimposed Lorentzian functions used for fitting high-power ESR spectra

Rabifit xN.m:

Code used to normalize and fit the Rabi oscillations

Rabi xN Func.m:

Superimposed harmonic functions used for fitting the Rabi oscillations

FourierTransformRabi.m:

Code used to calculate the Fourier transformation of time evolution spectra