**Data Sheet for paper titled: Strong Rotational Anisotropies Affect Nonlinear Chiral Metamaterials**Produced by David Hooper (d.c.hooper@bath.ac.uk) and Joel Collins (j.collins@bath.ac.uk)

* The folders TI-539A and TI-540A contain SHG continuous polarization data for the left- and right-handed nanohelices, respectively. The data found in these folders is used to produce figures 2c-f, 3, 4 in the manuscript and figures S2-S6 in the supporting information.
  + The subfolders are split into measurements performed at normal incidence and 45 degrees incidence.
    - The subfolders give information about the sample geometry such as the polarizer-analyzer configuration and which parts were rotated.
      * The data files are then named such as 20160218\_Pol\_0\_Ana\_0\_Sample\_0\_QWP\_0to360Step5\_17h07m18s  
        which should be read as:  
        DateStamp\_PolarizerAngle\_AnalyzerAngle\_SampleAngle\_QWP\_Range&Step\_TimeStamp
        + There are two columns within each data file. The 1st column contains the angle (in degrees) of the Quarter-wave plate (QWP) over the range and in steps given in the file name. The 2nd column contains the SHG counts per second recorded by the photon counting system. (The zero degree angle means that the fast axis of a component is horizontal with respect to the bench. 90 degrees then means the fast axis is vertical (normal to the bench). The angle of the components (not sample) is recorded from the frame of reference looking against the direction of propagation, zero on the left-hand side horizontal and the fast axis rotated clockwise. This information should be enough to reconstruct the polarization state incident on the sample.)
* The folder “Linear Polarization Anisotropy P-in P-out TI540A” contains the data for the continuous polarization measurement displayed in Figure 2a of the paper. These measurements are performed at 45 degrees incidence.
  + The file format is the same as explained above.
* The “Linear Spectrum” folder contains the data for figures 2b and S1. It contains its own read me file.