Data analysis flow:

1) Convert raw data files to 'compressed' files
    a. 8 byte channel -> 1 byte
    b. 8 byte timetag -> 8 byte timetag
    c. 8 byte transfer number -> 2 byte integer
2) Create hdf5 file with sync pulse information
    a. Use GPS signals to identify when to start correlating Alice and Bob data
    b. Start on first sync after a common pulse-per-second GPS signal from Alice and Bob has been identified
    c. We will use data before the common GPS signal to estimate rates to determine the stopping point in the data analysis to compute p-value
    d. Identify bad trials due to problems with the data taking such as
        i. Laser losing modelock
        ii. Refrigerator warming up
        iii. Keep trials where there is a massive time jump in timetags momentarily. This seems to be a problem with the operating system (Windows) and the timetagger driver.
        iv. Keep the trial with the first bad sync because we didn't know the trial would be bad
3) Create hdf5 file with setting information
    a. Occasionally both the "0" and "1" setting fires. Map this to "0" in the analysis
4) Create hdf5 file with information about clicks in the detectors, pockel cell slot number, coincidences, etc. Merge with other hdf5 files
5) Convert hdf5 file to text formats for further processing into hypothesis testing.

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