# 6b Flagging corrupt files

- During the manual processing stage, it is advisable to log any files which may contain corrupted data. This is because no noise detection system is perfect, and therefore when the data is processed the decision will have to be made whether to exclude this data from analysis (or particular hours from the analysis).

- This stage may have already been done when reviewing the quality of the trace on download. It is important to log these traces when noticed (example log sheet)

- There are different types of corruption that can occur to a trace, below are a few examples, but be sure to log anything that looks out of the ordinary with a trace and which may question the integrity of the data

Complete corruption of HR and Accelerometer data: Any data before corruption begins may still be able to be processed, be sure to mark in log when corruption started and finished
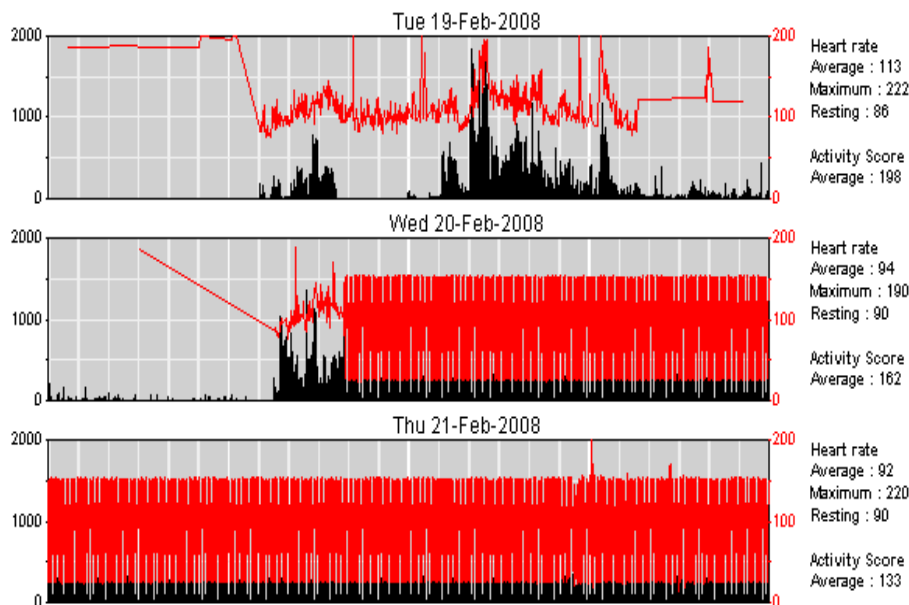
No Accelerometery: Where heart rate is increasing suggesting the person is being active, but no movement is registered on the monitor, suggested a problem with the accelerometer. This could affect the whole trace or parts of the trace. Log when corruption started and finished
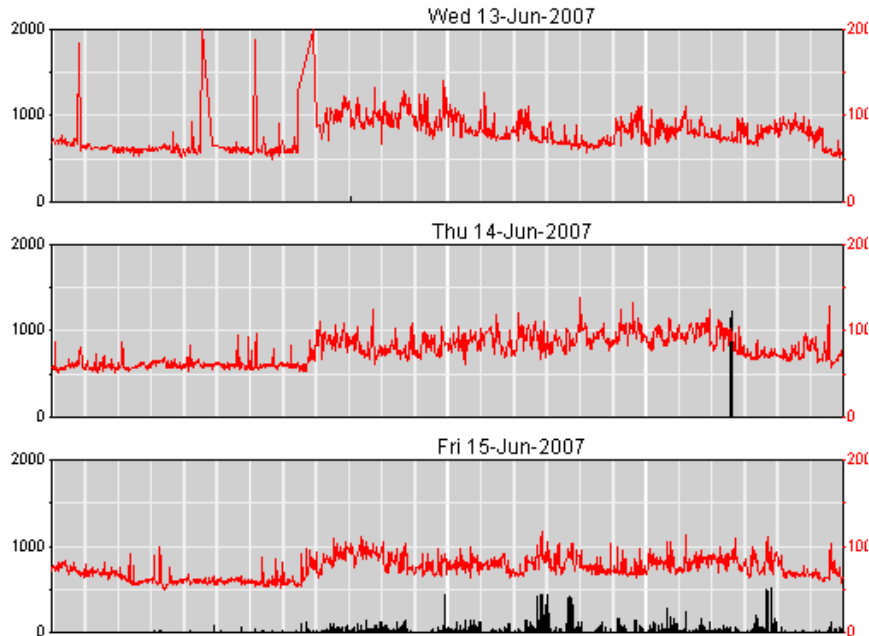
Abnormally high Accelerometery: The Accelerometery levels look unrealistic for a normal trace. Large blocks of movement throughout trace, even when sleeping suggest there was a fault with the accelerometer or the trace became corrupt during download.
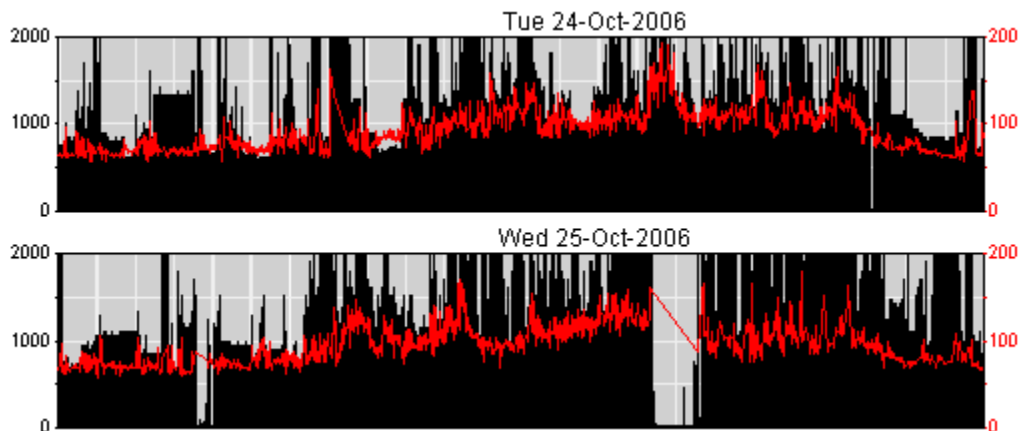
Time shift: There has been a corruption, whereby the data is shifted so that the trace looks like the volunteer is moving at night and sleeping during the day. This is of course not entirely impossible, e.g., the participant could be a shift-worker, so you will have to use a bit of common sense.

If you are giving the trace feedback to your volunteers and they phone you up and say, there is something wrong with their data, log it!

Also, if you have information from the participant about the time the monitor was removed, it is advisable to use this information when downloading your monitor as part of your quality control procedure.

This trace has a corruption which causes a time shift. On the volunteer's information sheet they mentioned the monitor was removed at 10.30am on the Friday, whereas it appears they removed it at 6.30pm, thus suggesting a time shift of 8 hours.
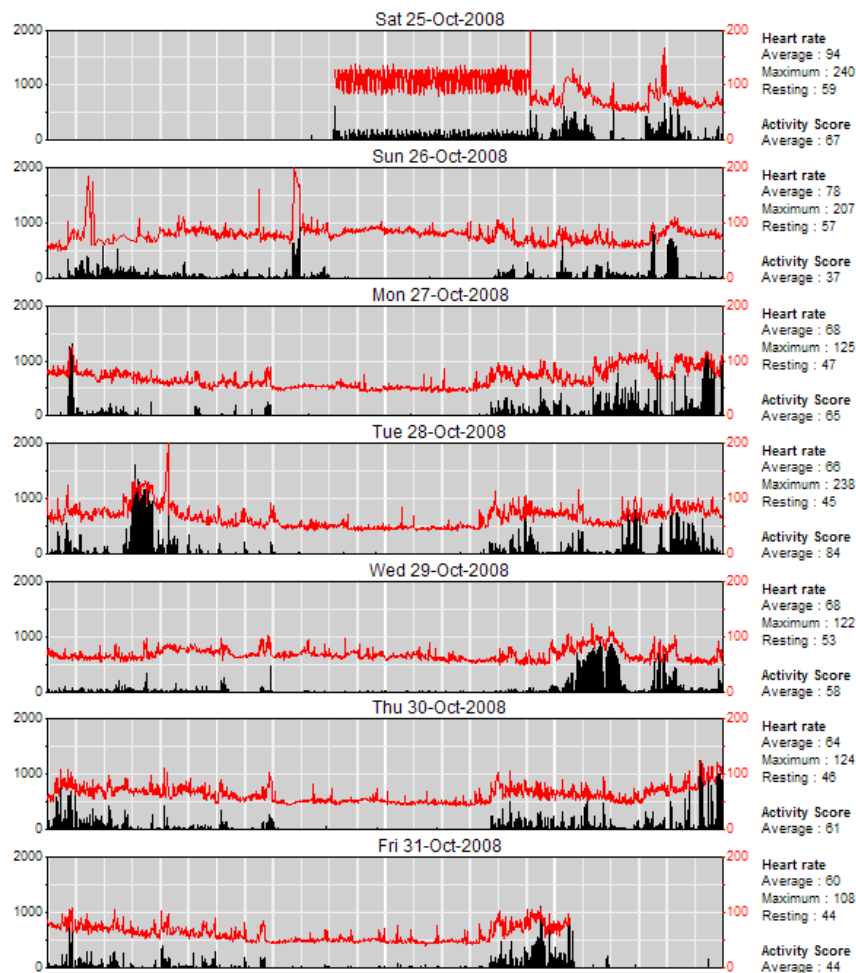
- This time shift may not always be associated with a corruption, so may be more difficult to spot. The example below shows a less obvious time shift. On the volunteer's information sheet they mentioned the monitor was removed at

12.45pm on the Thursday, whereas it appears they removed it at 8.15pm, thus suggesting a time shift of 16-17 hours.
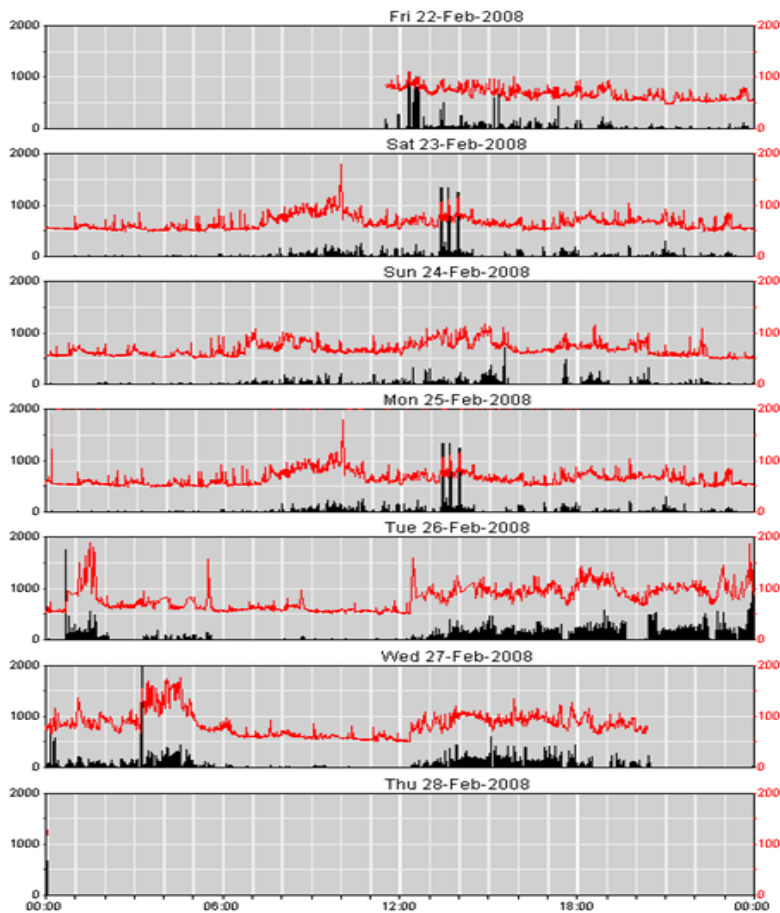
- Those listed above are some example corruptions that occur with traces, by noting them down they can be flagged in the software and scientific decisions made on whether to exclude this participant from analysis.