Description of dataset

Each folder is a different experiment setup. The distance measurement (ex. 1.5mm) is the distance of a magnet from the molecule. The force measurement (ex. 35.14pN) is the amount of force applied by the magnet. Inside the folder is a series of excel files. Each file is one experiment recording or movie.

Each row of an excel file includes a frame number and an event intensity. The intensity is not relevant to the project, we only need to know what frames had events. The frame rate is 20 fps or one frame per 0.05 secs. Frames with no event are not recorded.

Each experiment ran for 20mins; 24,000 frames

|  |  |
| --- | --- |
| Folder | Total number of files |
| 50\_nM\_AR | 640 |
| 100\_nM\_AR | 499 |
| 400\_nM\_AR | 477 |
| 800\_nM\_AR | 564 |
| 1200\_nM\_AR | 794 |
| 1800\_nM\_AR | 888 |

Total 3862

The following are some stats on the different experiment setup.

|  |  |  |
| --- | --- | --- |
| 50 nM AR +--------------------  | total # of experiments: 640  | min: 35  | max: 327  | average: 53.6  | median: 46.0  | mode: 35, count 45  | std: 24.5  | average difference: 21.0  +------------------ | 100 nM AR  +--------------------  | total #of experiments: 499  | min: 50  | max: 382  | average: 72.7  | median: 64.0  | mode: 50, count 23  | std: 28.9  | average difference: 24.6  +------------------ | 400 nM AR  +--------------------  | total #of experiments: 477  | min: 50  | max: 289  | average: 93.8  | median: 81.0  | mode: 53, count 15  | std: 43.3  | average difference: 44.8  +------------------ |

|  |  |  |
| --- | --- | --- |
| 800 nM AR  +--------------------  | total #of experiments: 564  | min: 55  | max: 321  | average: 99.3  | median: 87.0  | mode: 56, count 16  | std: 40.7  | average difference: 43.5  +------------------ | 1200 nM AR  +--------------------  | total #of experiments: 794  | min: 40  | max: 335  | average: 88.8  | median: 71.0  | mode: 40, count 30  | std: 52.3  | average difference: 52.5  +------------------ | 1800 nM AR  +--------------------  | total #of experiments: 888  | min: 40  | max: 314  | average: 90.4  | median: 72.0  | mode: 40, count 22  | std: 51.6  | average difference: 53.0  +------------------ |