Update 20230316

**This update include two features: the relative density 2 and ROI\_set.**

1. the calculation of relative density 2: relative density 2 = absolute density in cluster/[# of nonclustered events/total size of ROI].
2. ROI\_set: all events in the 3dlp file are loaded in an excel sheet. Each event is labeled by 1) whether they are clustered or non clustered and 2) whether they are in colocalized clusters or non colocalized clusters. To do so, please see “readme.txt” under Para>clus>groupbydoc.

**Instructions on running the new clusdoc program:**

For two-color dstorm images:

1. Please use all clusdoc related scripts (esp. findallformat.py) under the Para folder.

New computer in P215: Desktop> para; analysis computer in P040: D:\Para.

1. Generate the 1. Txt file and load it into the new clusdoc.m program. Note the color of the two channel. **Make sure the green dots match the GRN.3dlp file and the red dots match the Red. 3dlp file.**
2. Run by click “clus doc for all” button. Note that “DBSCAN for all” will not work.
3. Obtain relative density 2 in the excel sheet “DBSCAN Results. xls”.
4. Obtain the ROI\_set folder for further analysis.

For single-color dstorm images:

1. A decoy GRN.3dlp file needs to be added to the same folder as the Red. 3dlp. The decoy can be found in the folder Para>decoy

Follow steps 2-5 as in the two-color dstorm image analysis.