

# WEEKLY ANALYSIS UPDATE

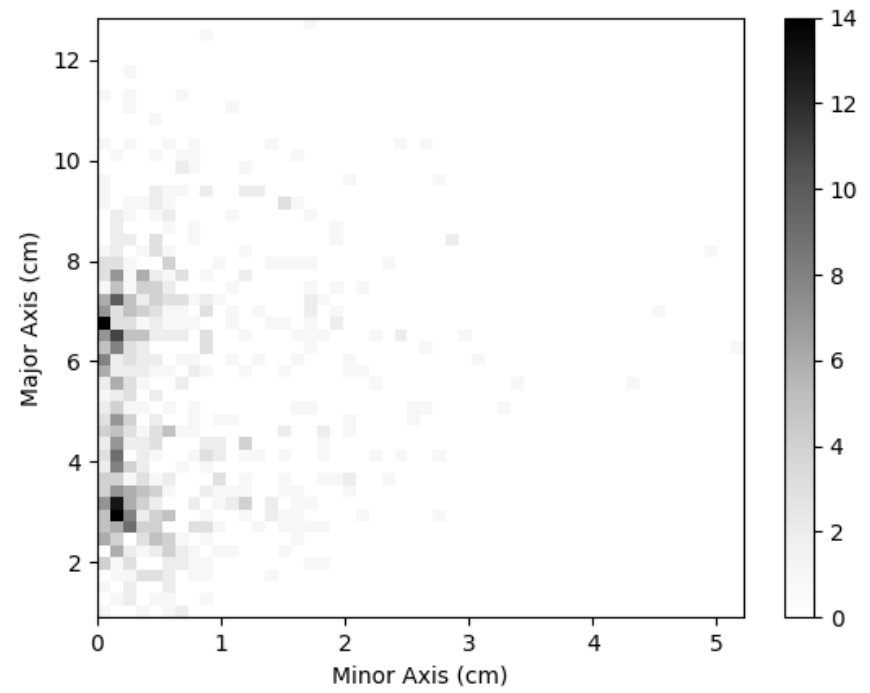
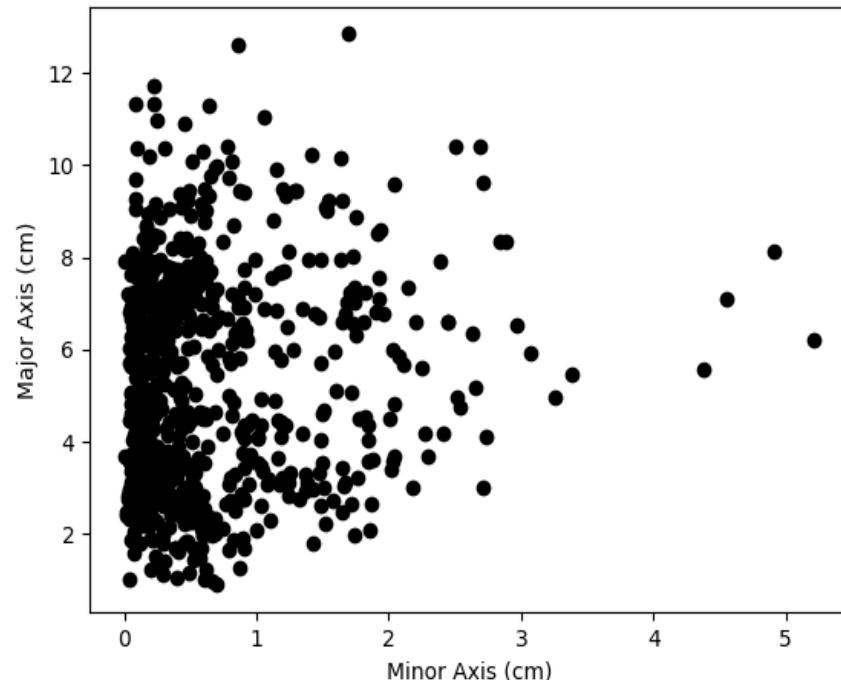
26 April 2024

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# Outline

- Dennis's `Cluster_Finder` using DBSCAN to perform Clustering on Trigger Primitives
- Clustering parameter: Channel number and Time peak of the TPs
- Normalisation of the two parameters:
  - Channel range: 0 - 3071
  - Time range:  $\sim 10^{18}$
- Visualisation of the minor axes (depicts channel number) and major axes (depicts time peak)

## For a Single Time-Fragment



## Further Tasks

- Normalisation and Visualisation for the entire Data file
- Cosmic ray trigger from the Major - Minor axes plot
- Separate analysis for the Collection and Induction wires

**THANK YOU!**

## STEPS :

- Read the fragment using `trgtools.TPReader`
- Perform the clustering using `cluster_finder.db_cluster_tps`
- Creating an array that contains the clusters as its elements with the clusters in array formats having the TP indices within them using `cluster_finder.create_clusters_array`
- Getting the corresponding time peak and channel number values for each clustered TP using the `cluster_finder.make_ak_slicer`
- Making a similar array as the third step for Channel and Time peak and plotting them