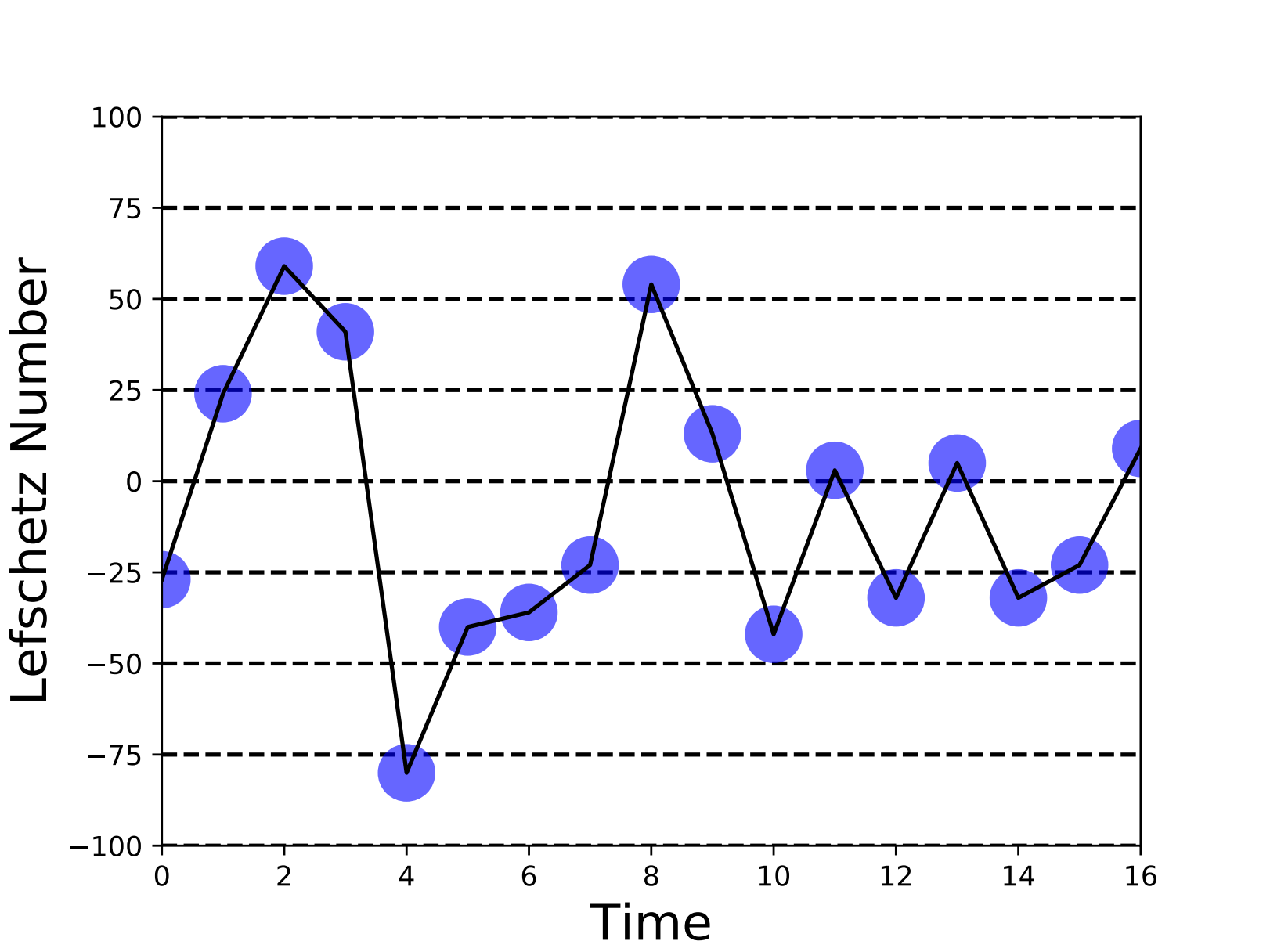
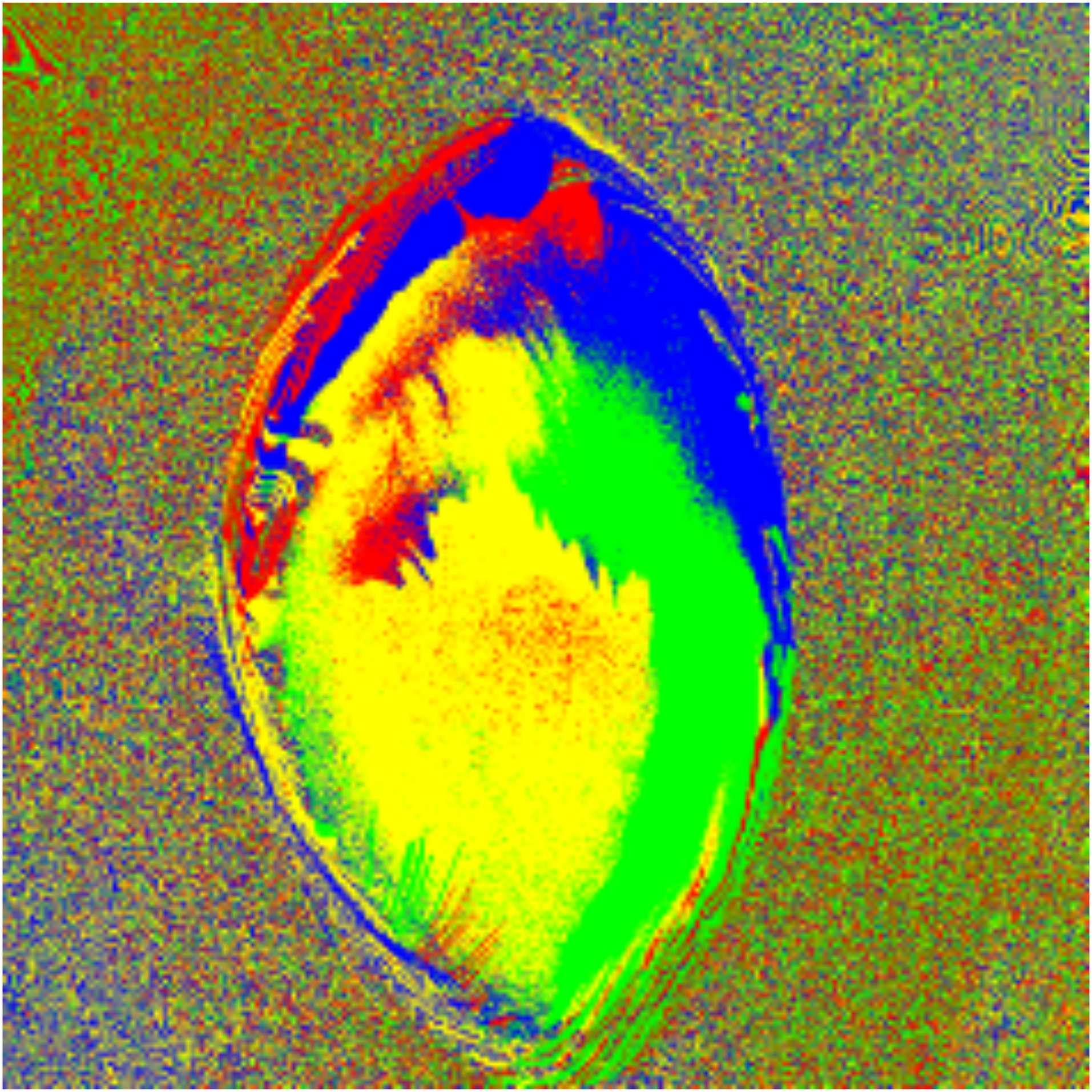
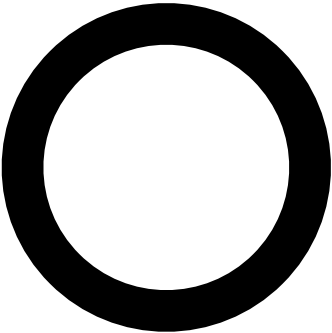
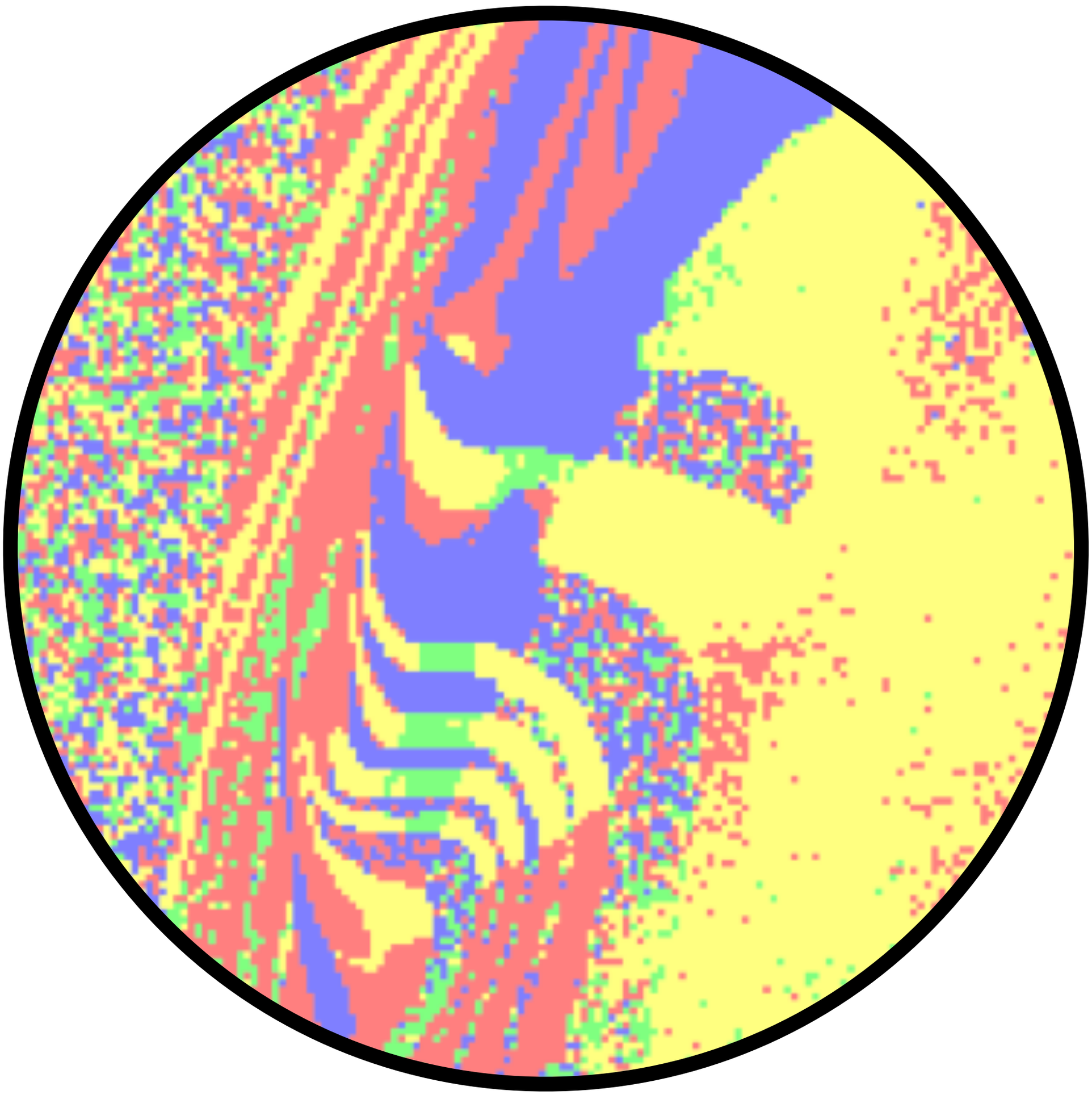

Lefschetz Number
Time
100
75
50
25
0
−25
−50
−75
−100
0
2
4
6
8
10
12
14
16

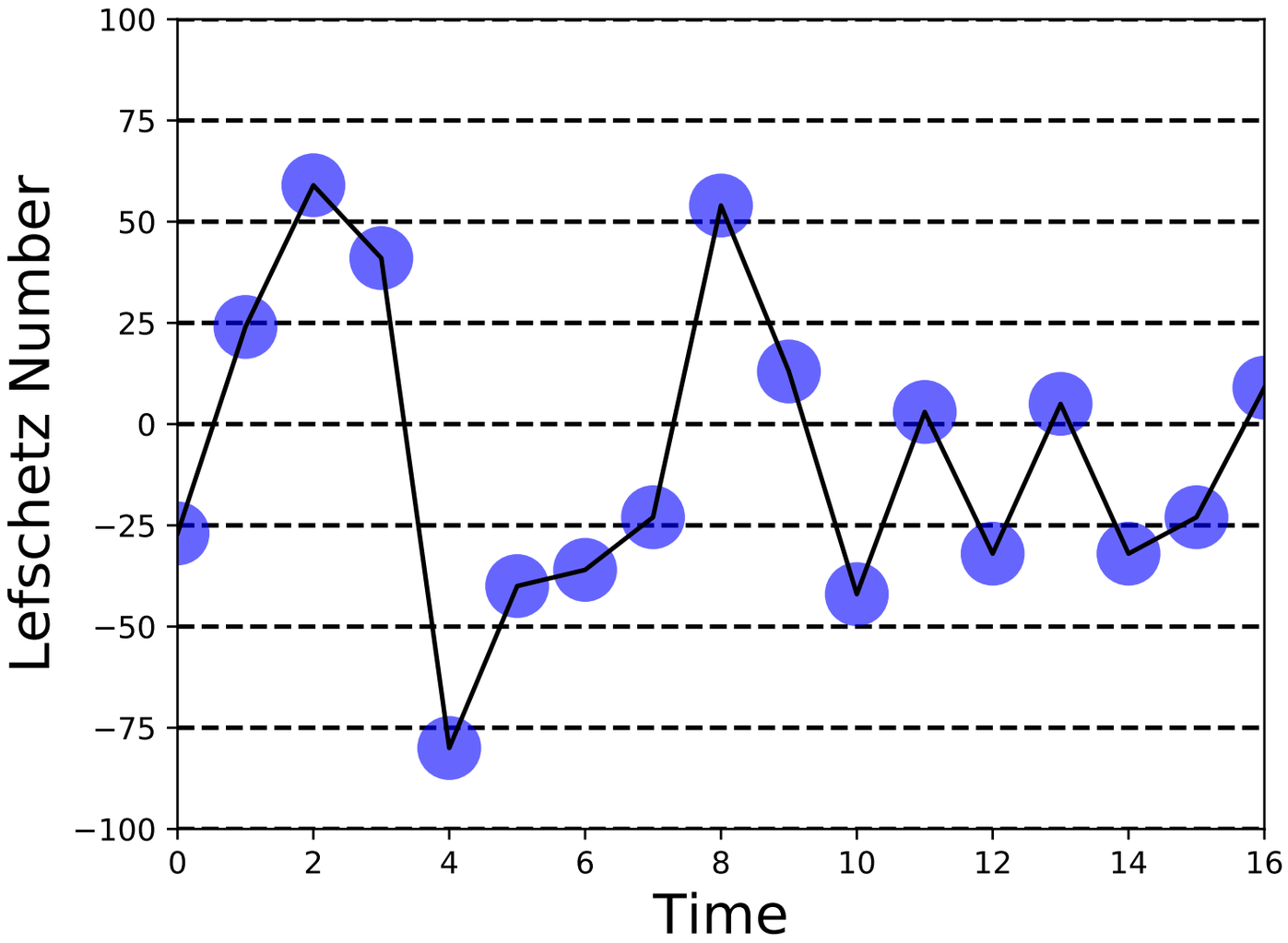
Examples from reconstructed MFRs

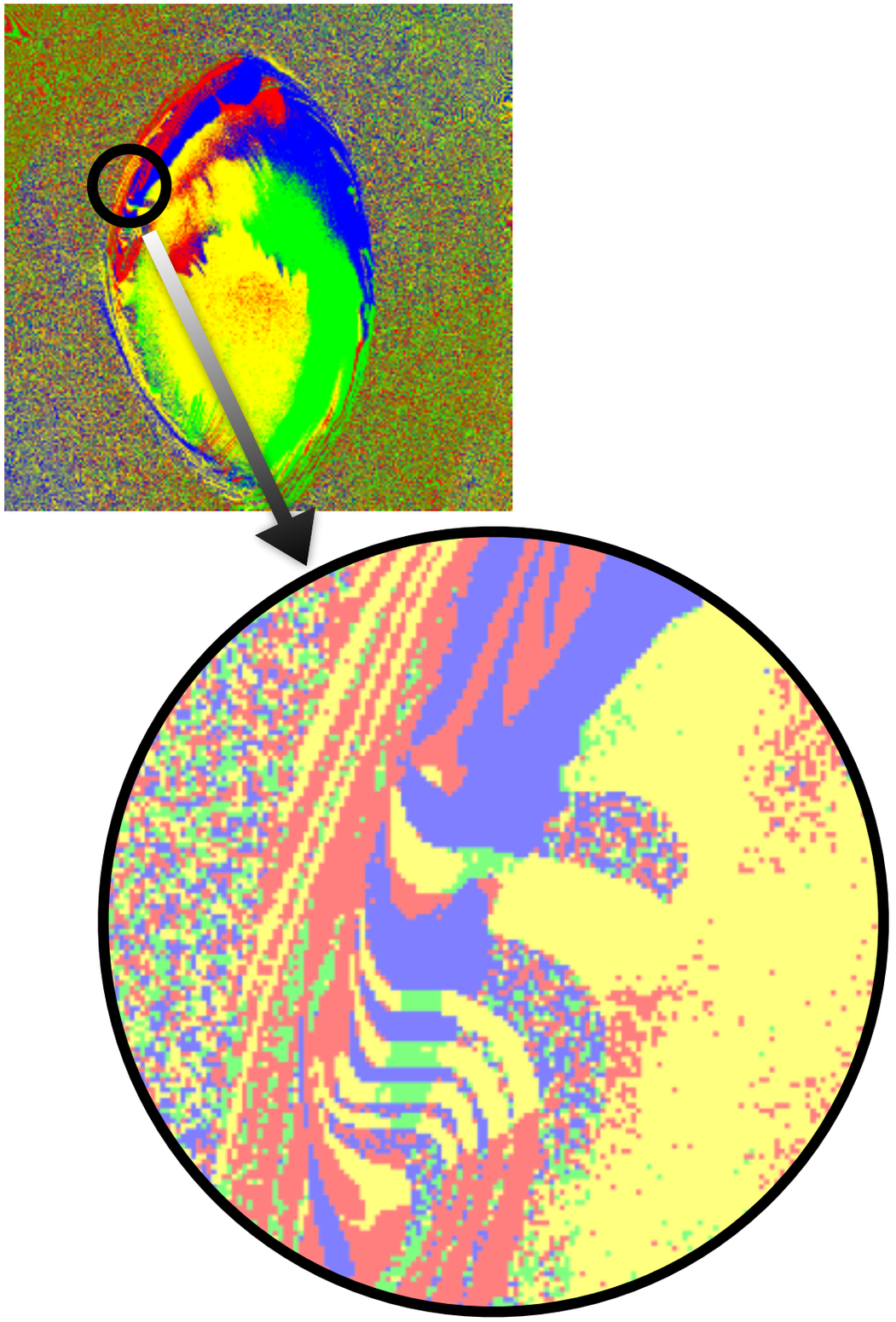






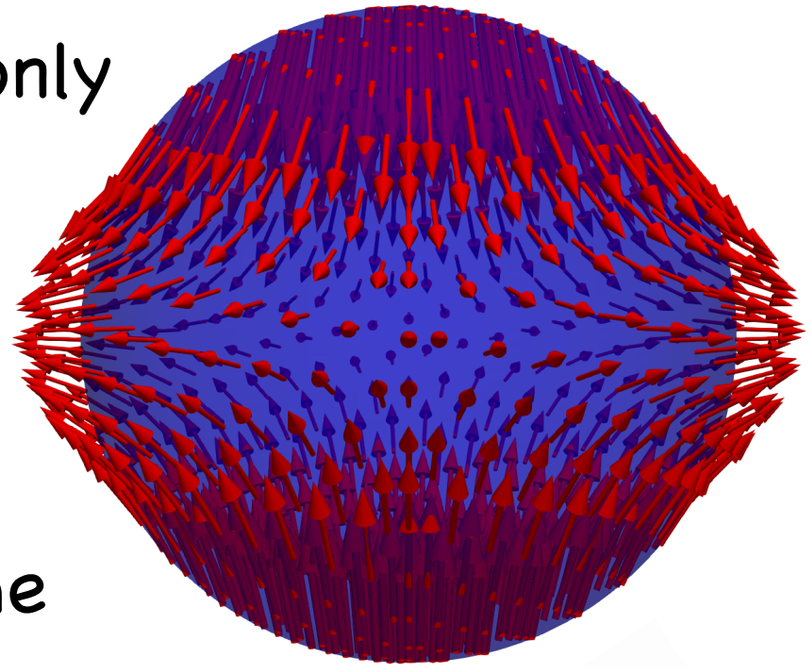
Examples from reconstructed MFRs





What is Difference and New

1. Previously, the topological degree can be only used in the mapping of M_B: $\mathbf{r} \rightarrow \mathbf{B}(\mathbf{r})/|\mathbf{B}(\mathbf{r})|$ and the analysis of it is limited to the classification of the type of null points.



2. The new one can take the advantage of the field line mapping. The way it changes with time during non-ideal MHD is still unclear.

3. It's a 2D version of the Gauss-linking number, it seems more conserved during the MHD relaxation.