original data set

## 20 specimens: variations on a theme

Computer processing provides an immediate result which allows for generating variations relatively easily. One benefit to rapid generation is that one can assess a certain command or quality of visual expression by the body of work that is generated. One can start to assess that certain qualities are good in one form of visualization over another.

A parallel way to think about this process is to think of the specimens in terms of music. Variations work in the same way where a melody can act as structure or a unifying them. Variations are constructed to retain the same melody or qualities of the melody. composers use varitiosn of a theme to enhance particular tones, harmonies or chords—each highlighting a different feeling—while retaining an echo of the inner structure of melody. Likewise, developing neurographic specimens involved the same principle.

The following specimens are organized into two categories: succession of events and refractory periods.
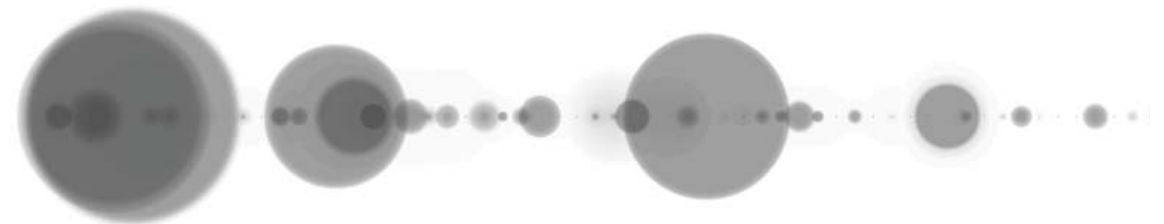
specimen 1: successive events

A graphic object reacts to data of event. Size decreases, while increasing in height for successive events. Emphasis is placed on refractory event.
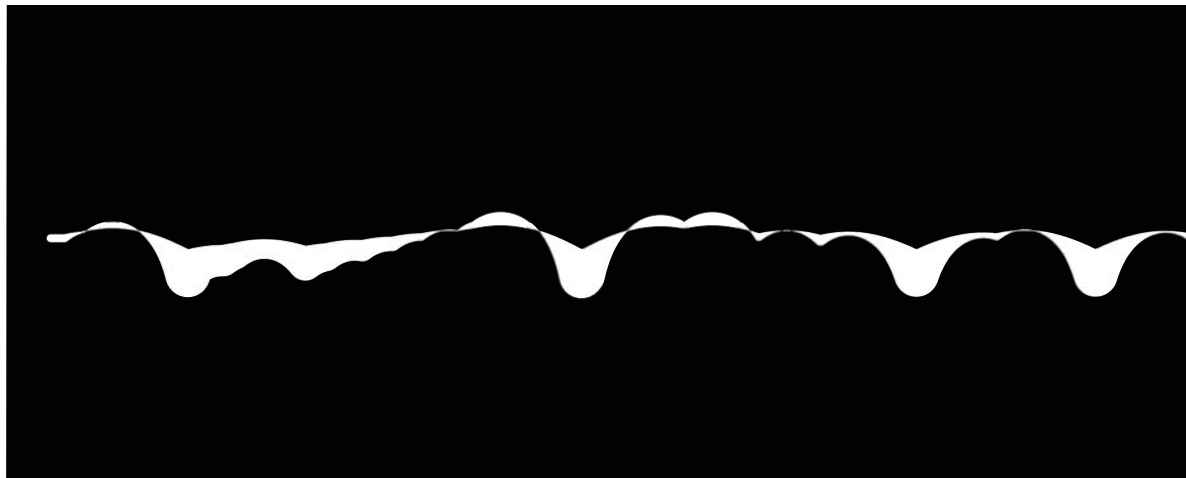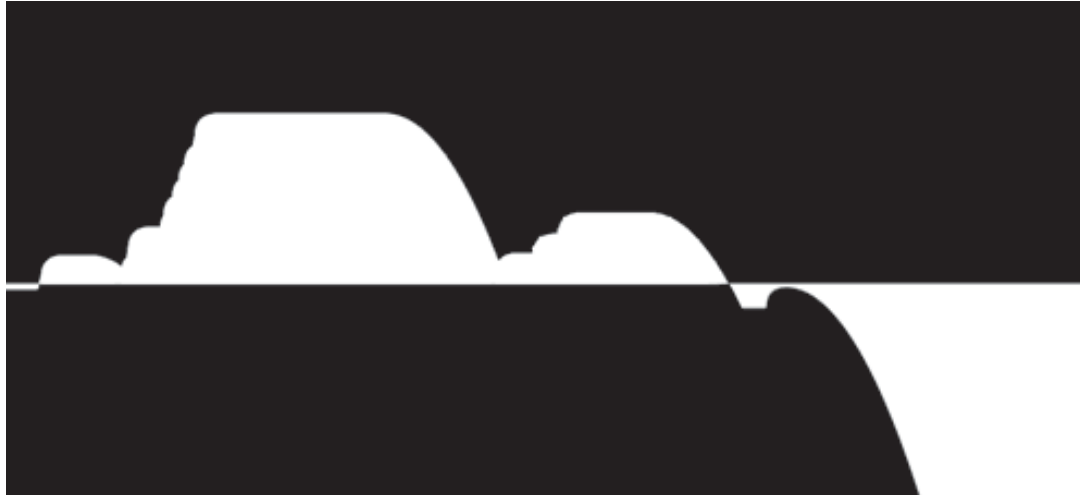
specimens 2, 3 : successive events:

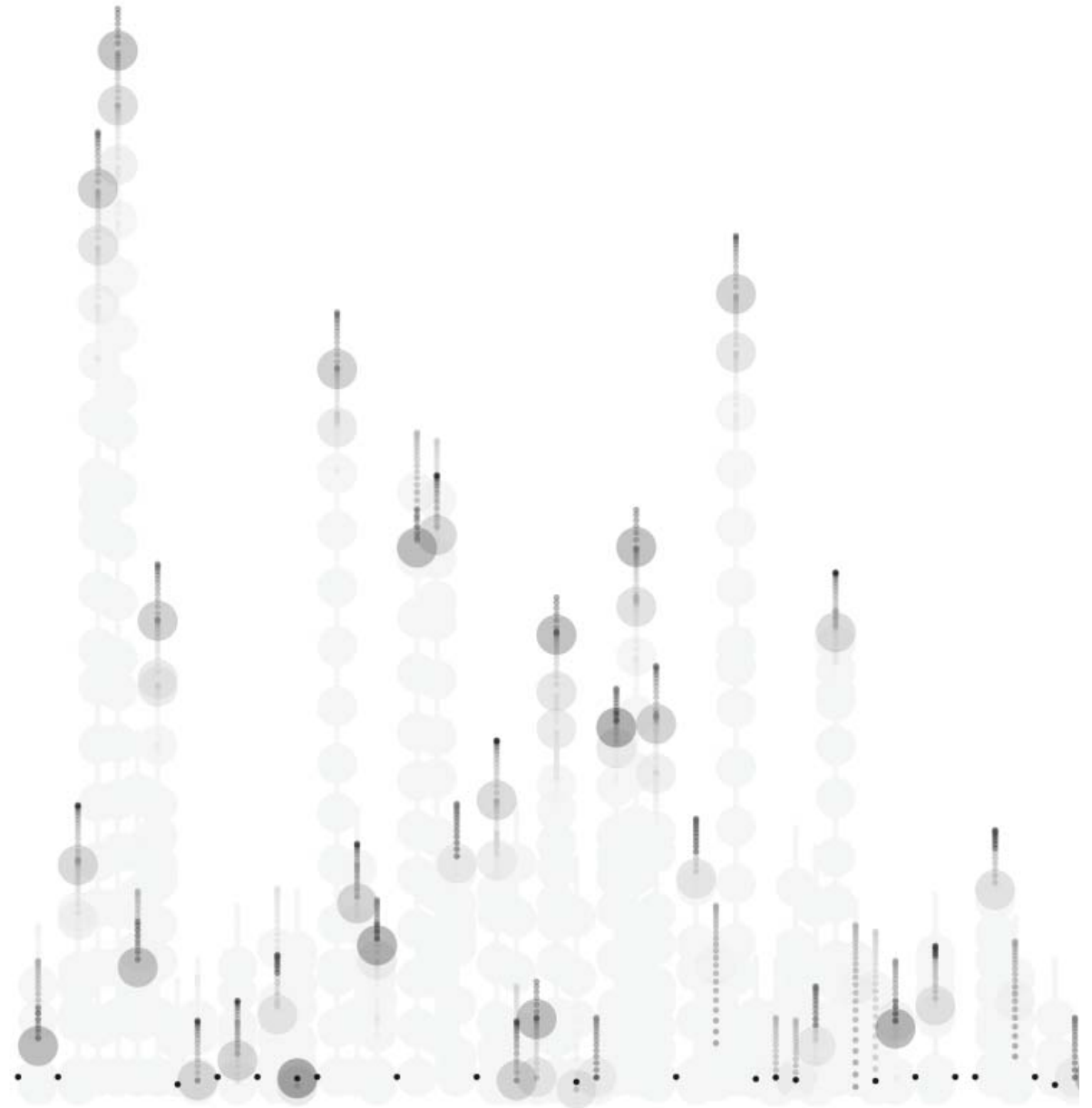Each event triggers a size increase–when there are no events, the size decreases to rest state.

Graphic elements create or draw an image, driven by data of event.

specimens 4, 5 : successive events

At each event, graphic object increases its height. When there are no events, then the object returns to '0.' Large circles are used as markers for when the event occurred.

Graphic elements create or draw an image, driven by data of event. When the values reach a certain parameter, the graphic elements are instructed to behave differently.
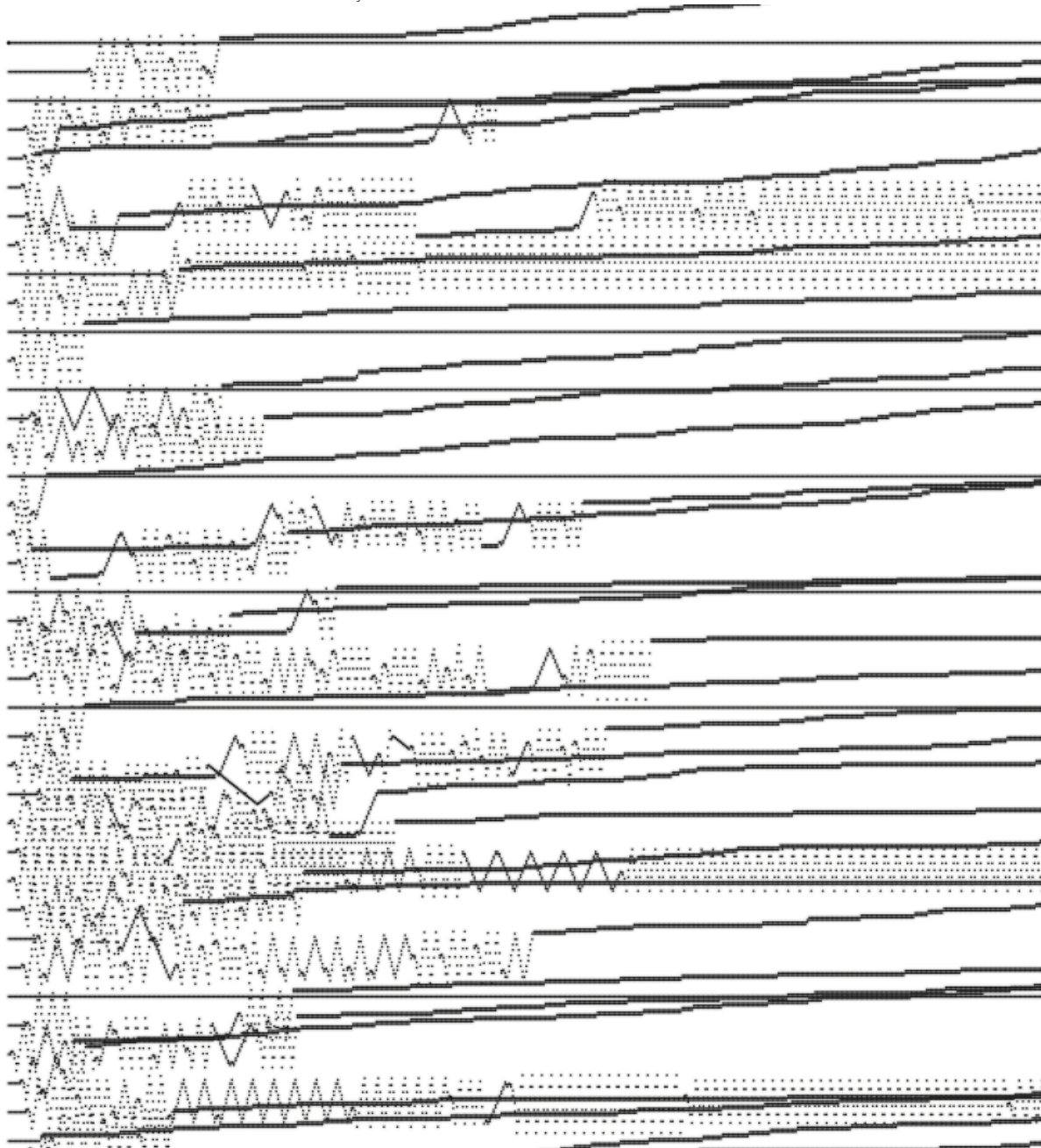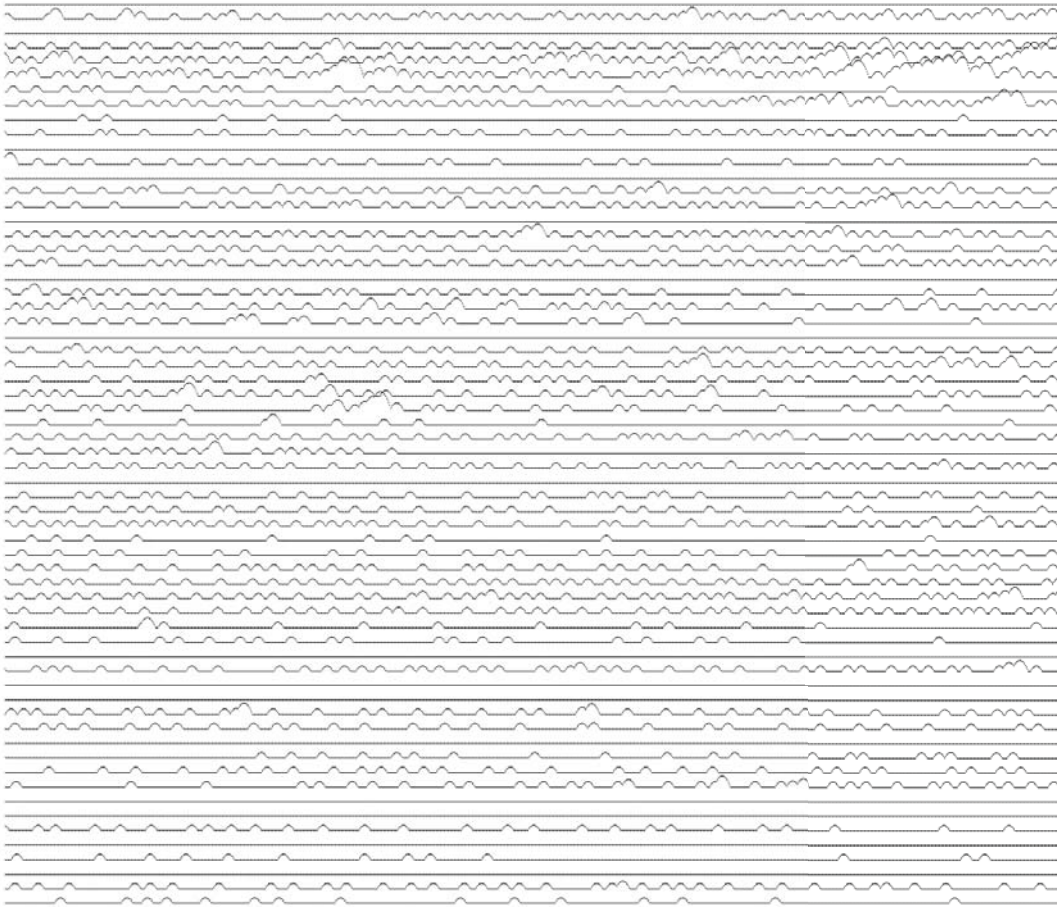

specimens 6, 7 : successive events

A line is drawn from left to right and as events occur, the line acts simliarly to a bouncing ball, increasing in its y value, with each successive event. When there are no events, the line returns to its original state.

Lines are drawn from left to right, according to time. When the successive events causes the 'y' value of the line to reach a certain value, the line is broken or altered.

specimens 8, 9 : successive events
At each event, a dot appears. When there are events that occur sucessively, the dots increase in size to indicate a 'build up' of events.
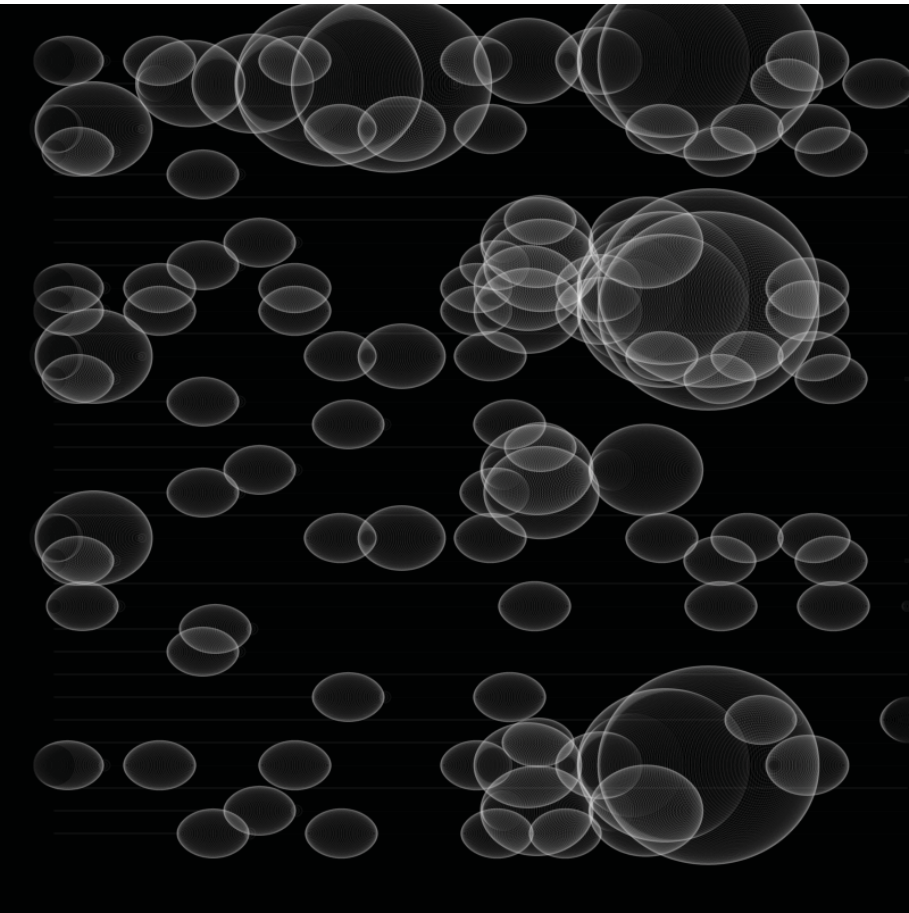
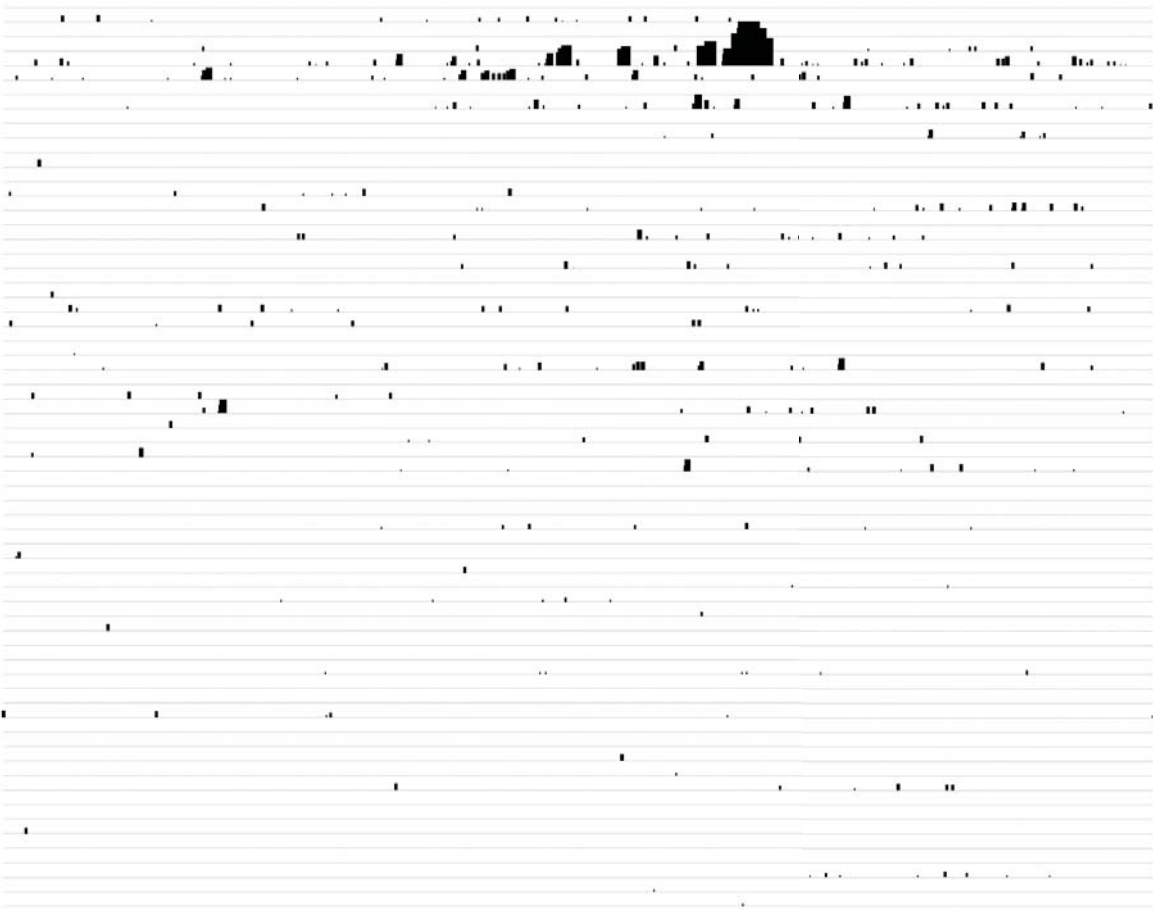Events effect line change and are accentuated by added weight at event.

specimens 10, 11 : successive events

Objects are drawn from left to right and grow in size per events when set threshold values have been reached.

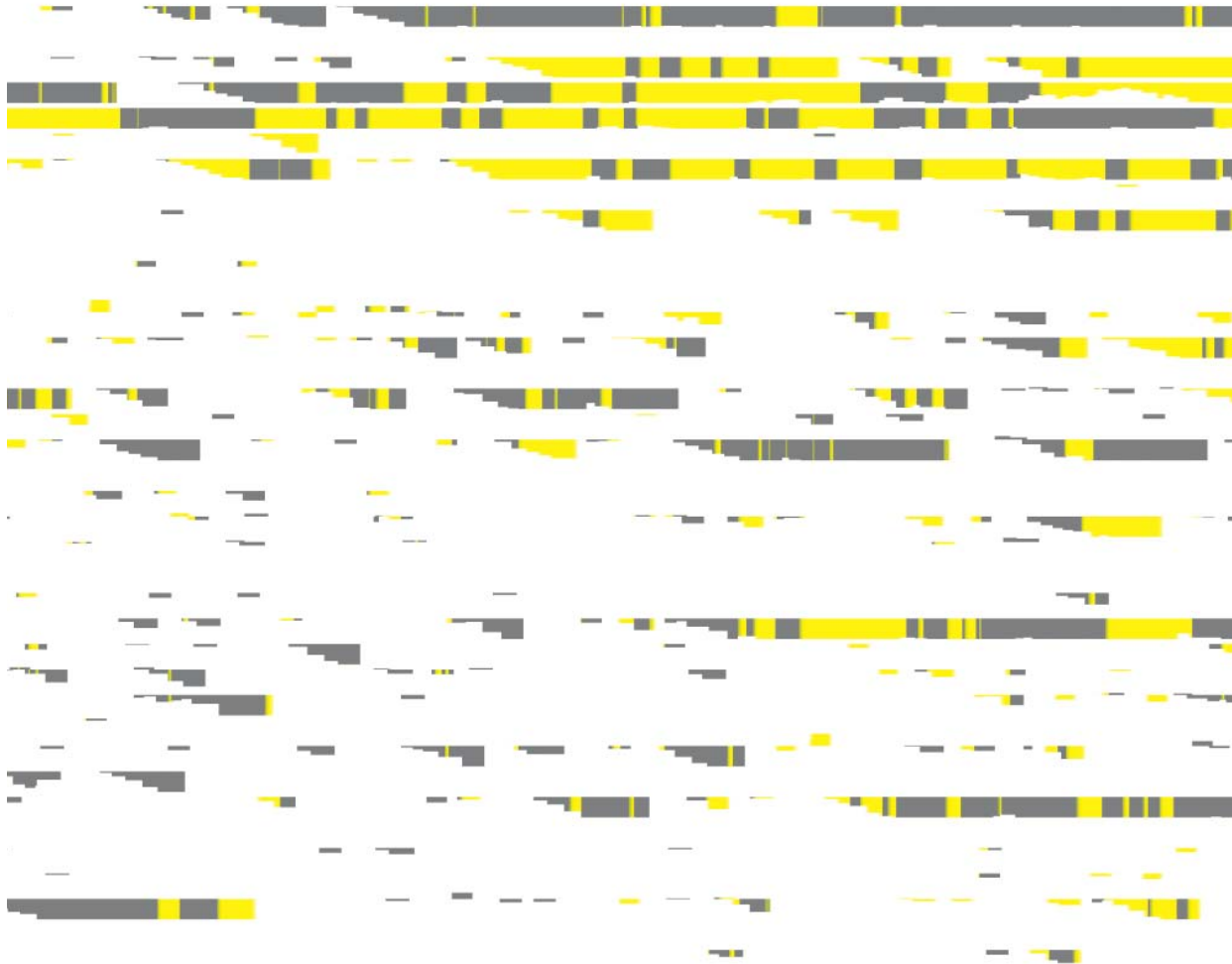Marks incate when a very narrow range of values are met.

specimens 12, 13 : successive events

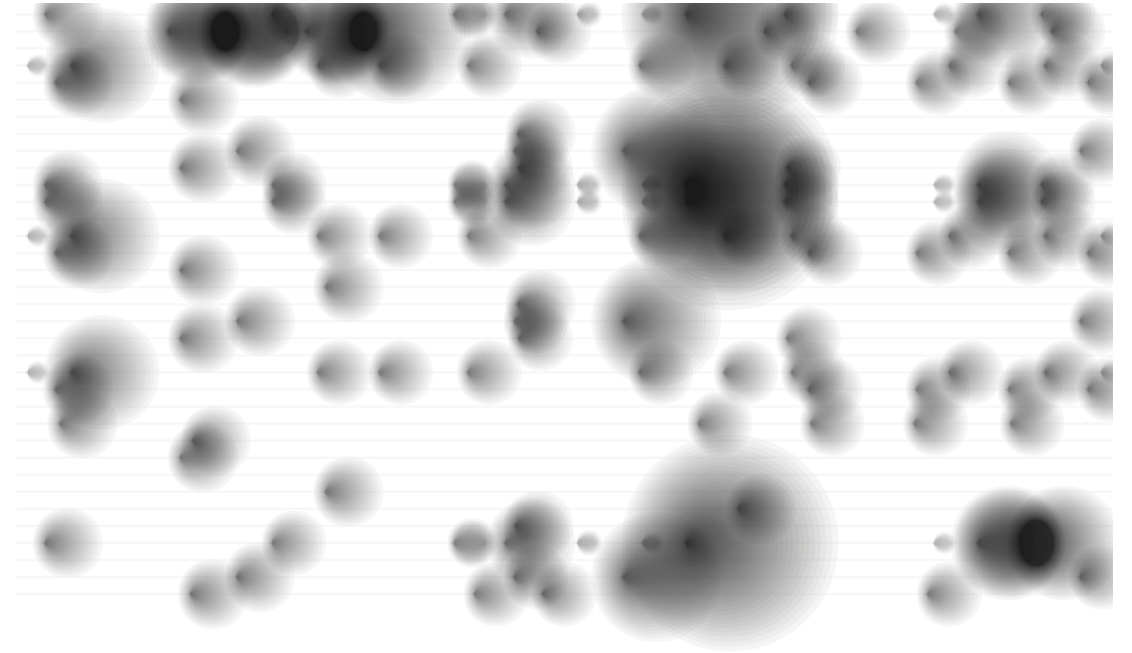Events trigger growth in size and graphics allowed to overlap to create positive / negative shapes.

Color is used to indicate when threshold has been reached.

specimen 14 : successive events
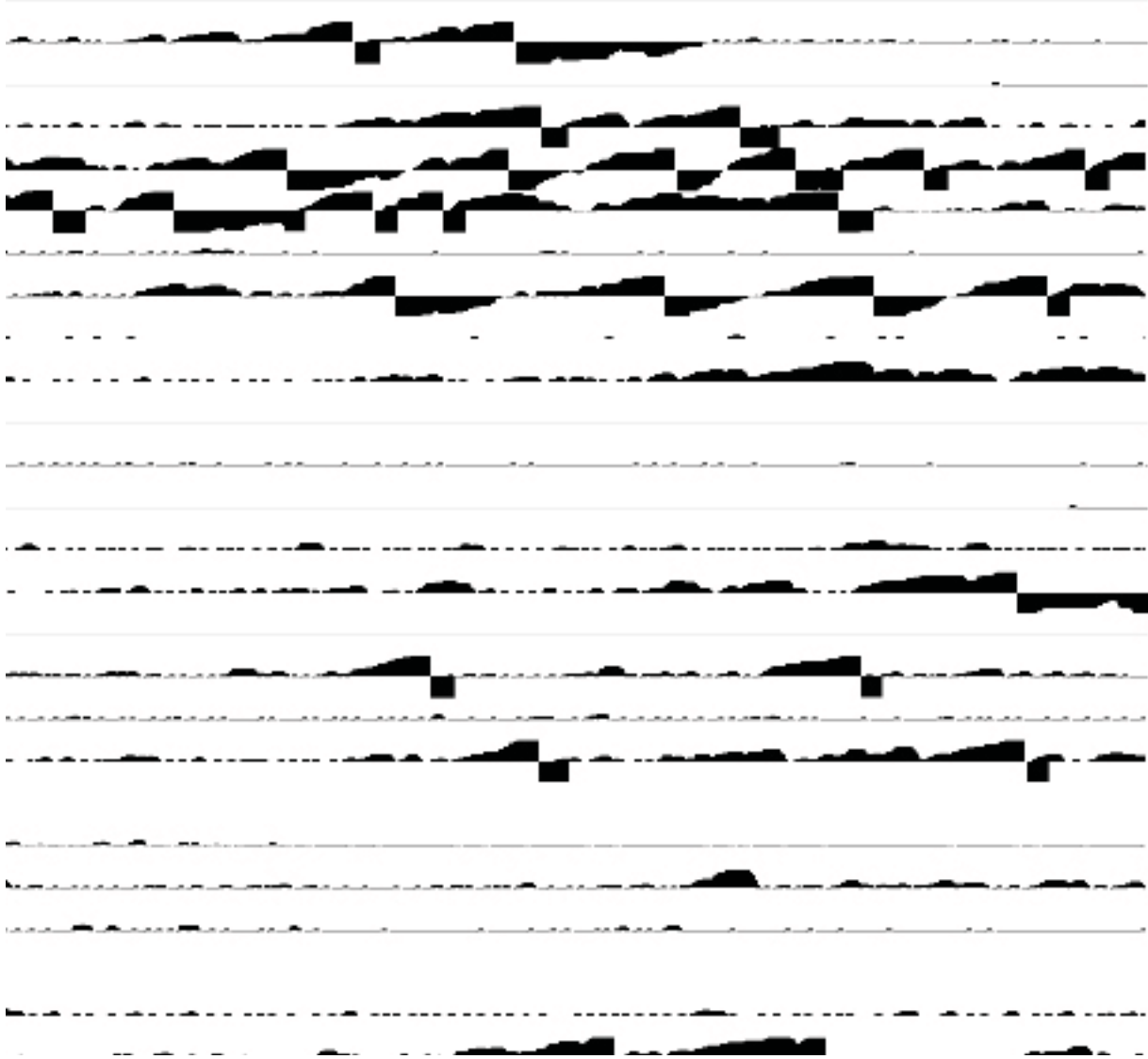Opacity effect is used as a way for successive events to create shapes.

specimen 15: refractory period

Length of line indicates refractory period, as do the green dots.

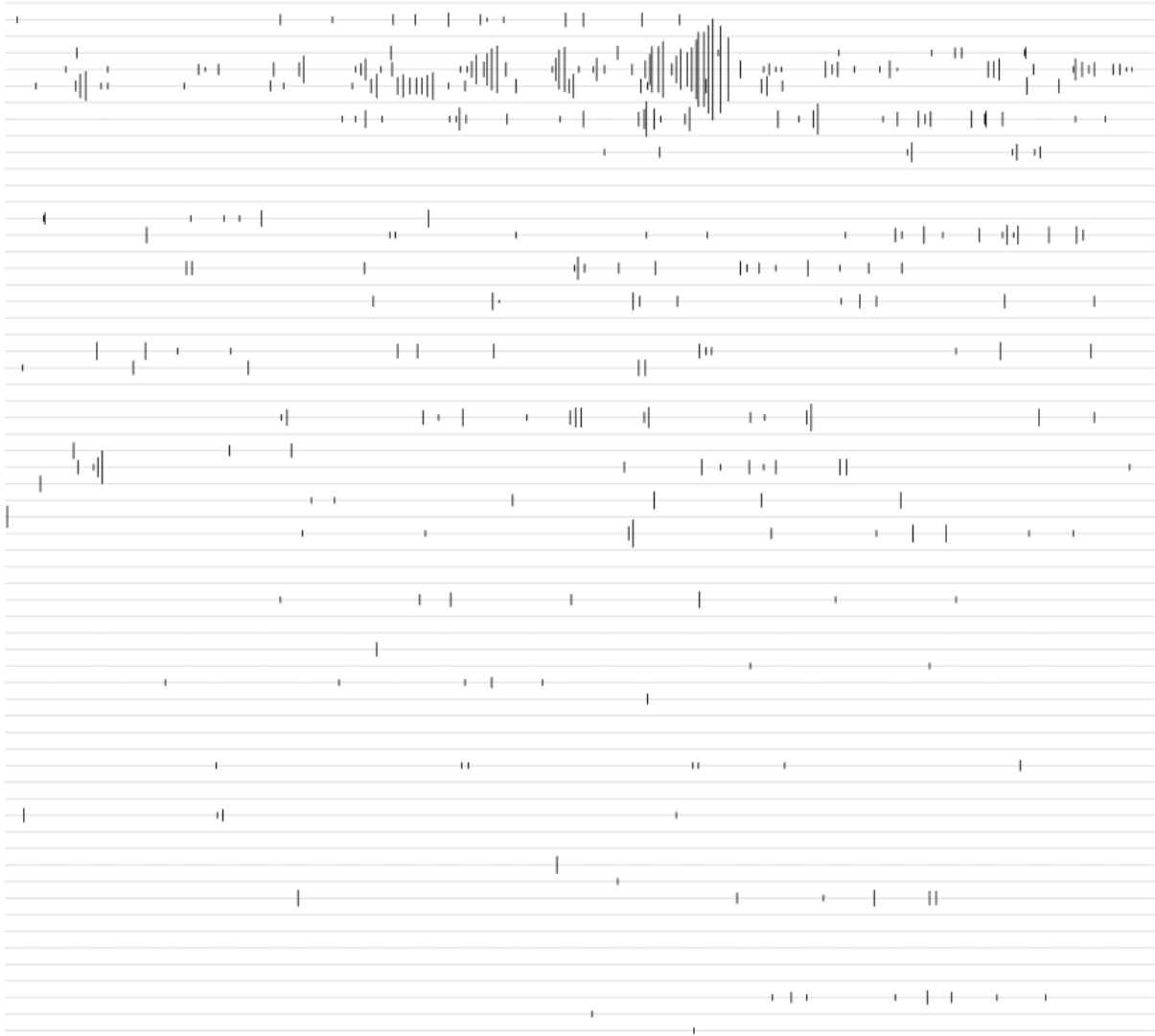## specimens 16, 17 : refractory period

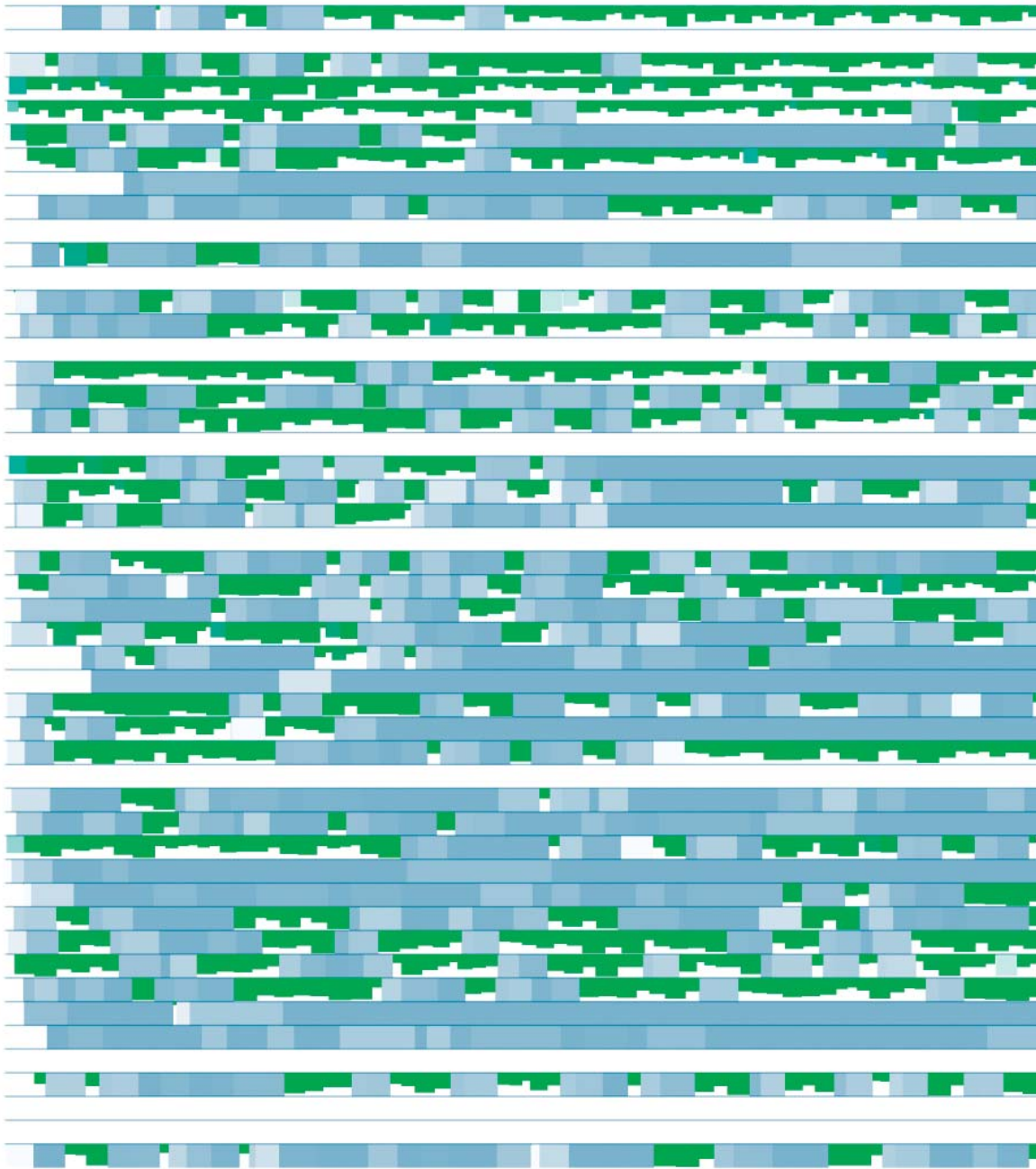Refractory period is used to as the data to create shapes.

Data is compressed when there are litter or no refractory periods, otherwise refractory periods of data are indicated by length of vertical lines.

Color is used to distinguish between refractory periods. Grey indicates little or no event (refractory period) and green indicates high occurance of events.

Combination of parameters are used to indicate refractory period differences. When refractory periods are greated then set value, grey bars will appear, otherwise, refractory periods of shorter lengths are shown by vertical length of lines. Green Dots are used to increase visibility line length changes.
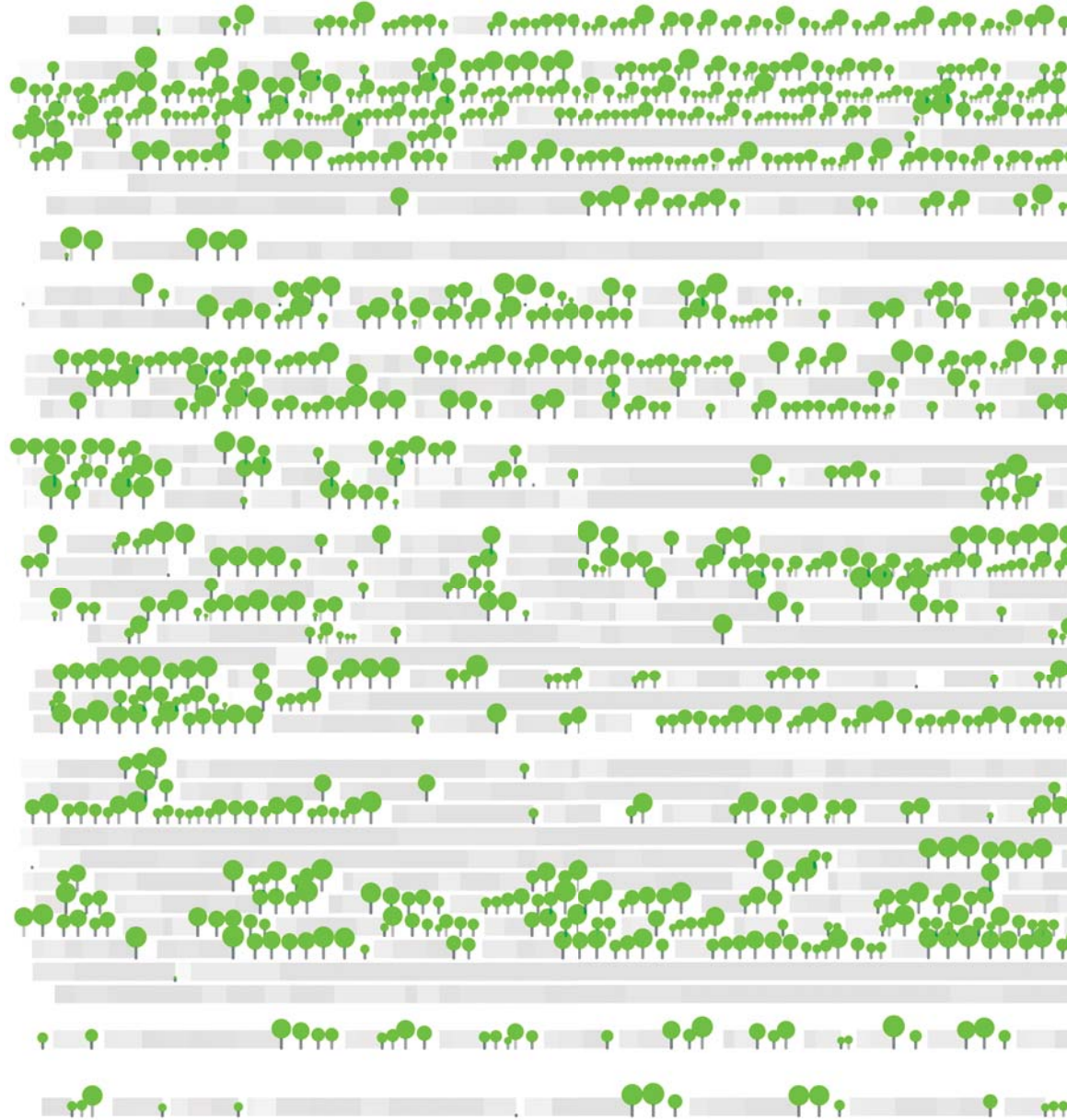
specimen 20, 21: refractory period
Refractory periods parsed by lengh of duration. When durations are greater then set values, line weight is light. When durations are shorter, line weight is increased and refractory periods are indicated by height difference from original starting point.
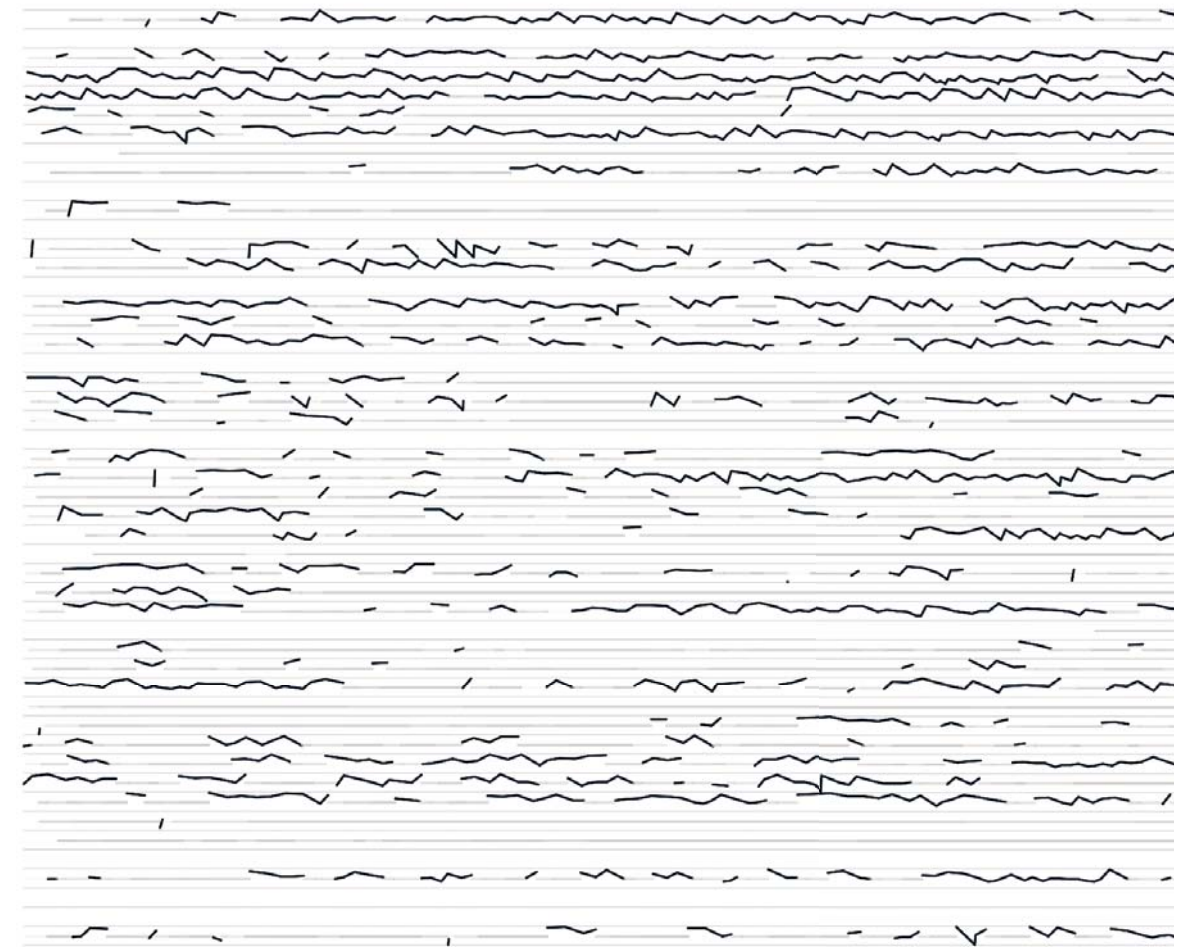
Length of refractory periods, horizontal length changes per shorter durations,
verses vertical length for longer durations.