

ASHTON, OUNDLE, MAGNETOMETER SURVEY

NOTES ON COMPUTER PLOTS

Report no. G 23/81

NG: TL 049889

The enclosed plots represent a fluxgate magnetometer survey carried out by the Nene Valley Research Committee on the line of the proposed Oundle by-pass, and sent to the A M Laboratory for processing. The site is known to contain a Roman road with occupation alongside. Readings were taken at 1m intervals on a grid of 10m squares. The plots are at 1:400 scale.

1. Plot of initial data

A least-squares fitted plane surface was first subtracted from each 10m square section to correct for changes in the instrument zero setting, and the readings then combined into a single block. The sign of the data was reversed so that positive anomalies are upright in relation to the initial sheet of readings (orientation not known). Numerous magnetic anomalies are visible in the plot, but the effect is noisy and fragmented.

2. & 3. Smoothed and filtered data

The general strength and distribution of the anomalies conform to the expected character of the site. In these two plots anomalies likely to be archaeologically significant have been emphasised first by smoothing (with a narrow low-pass filter, radius 1), and then by filtering to improve their resolution relative to that of any broader features (high-pass filter radius 3). Isolated extreme readings likely to be caused by pieces of iron were also suppressed.

The distribution of features is clear: there is a group of anomalies which might indicate an enclosure with features within it in the left hand half of the plot, and part of another less disturbed enclosure is visible towards the right. Between the enclosures are two similarly aligned ditches.

The stronger anomalies are shown outlined in plot 3 in an attempt to trace the plan of these features on the ground. Various ditches are present but it is not possible to follow any complete boundaries, perhaps because the response from the site is variable and incomplete. The cluster of anomalies at the centre of the left hand group would be consistent with the presence of a building, but its existence cannot be proved from magnetic evidence alone. Some of the stronger anomalies (eg where shaded) might indicate the presence of burnt material.

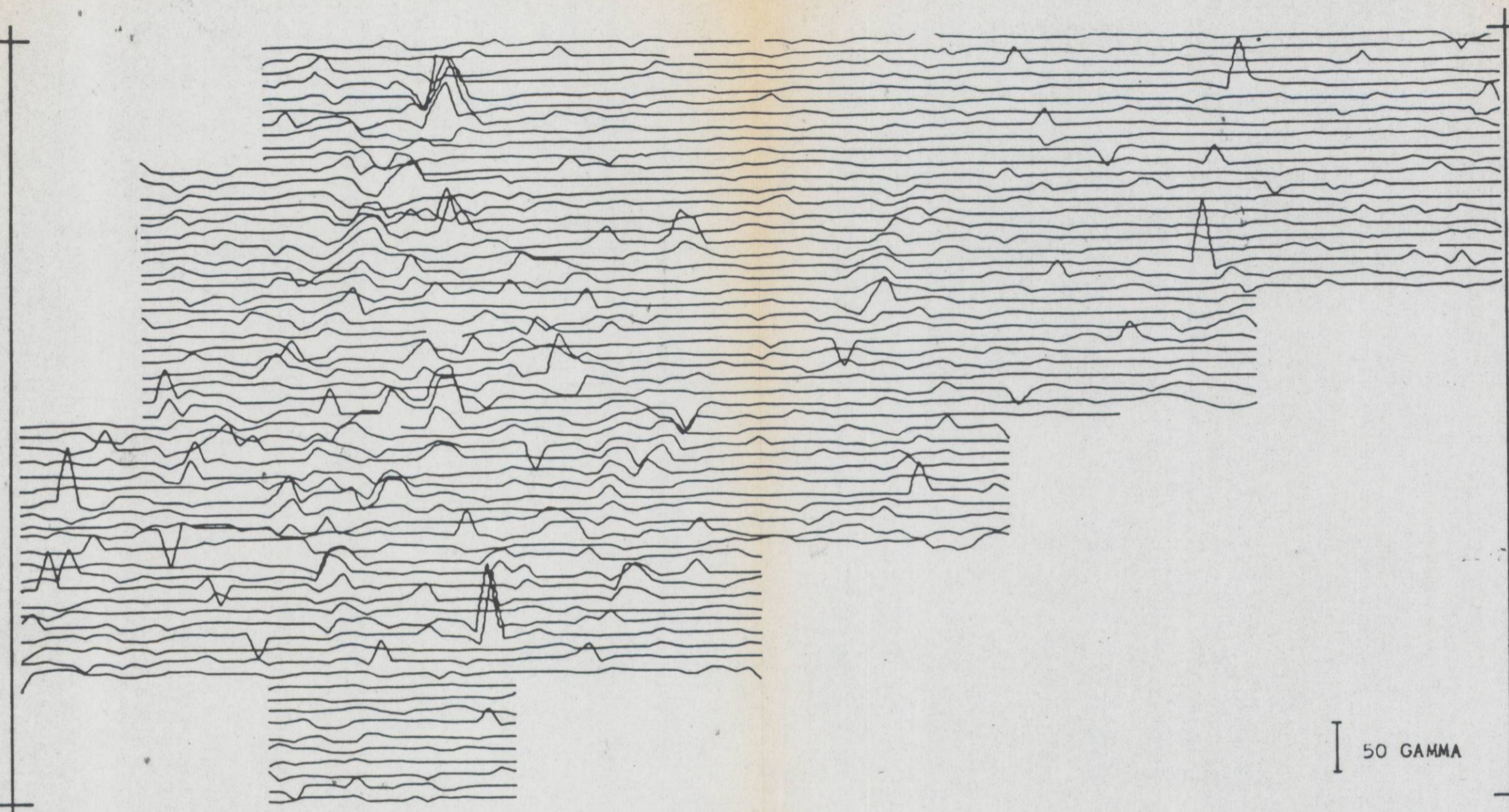
4. Dot-density plot

This gives a less selective plan of the anomalies than the outlines drawn on plot 3. A general rectilinearity is apparent in the features, but again the degree of continuity that is visible is limited.

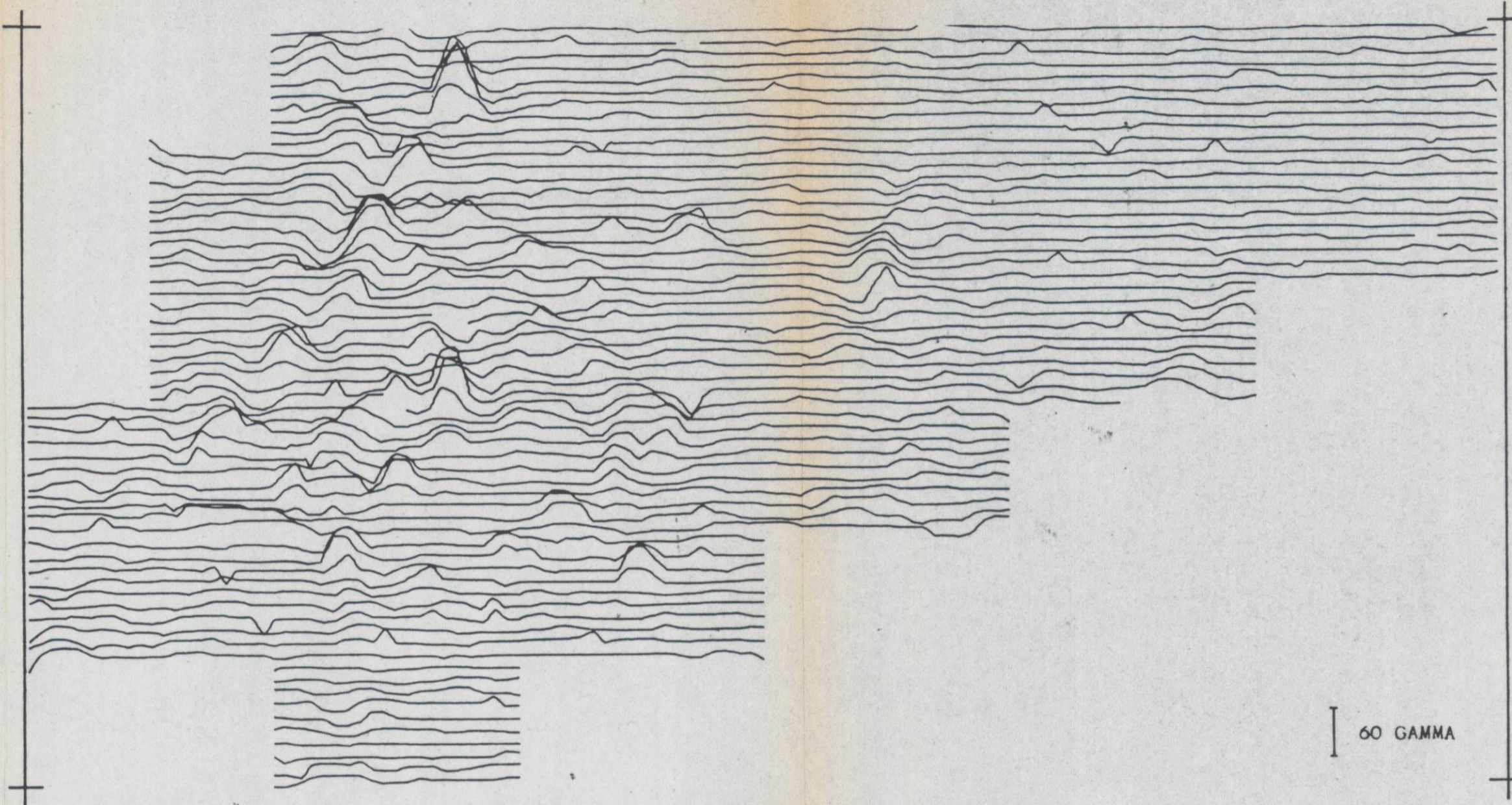
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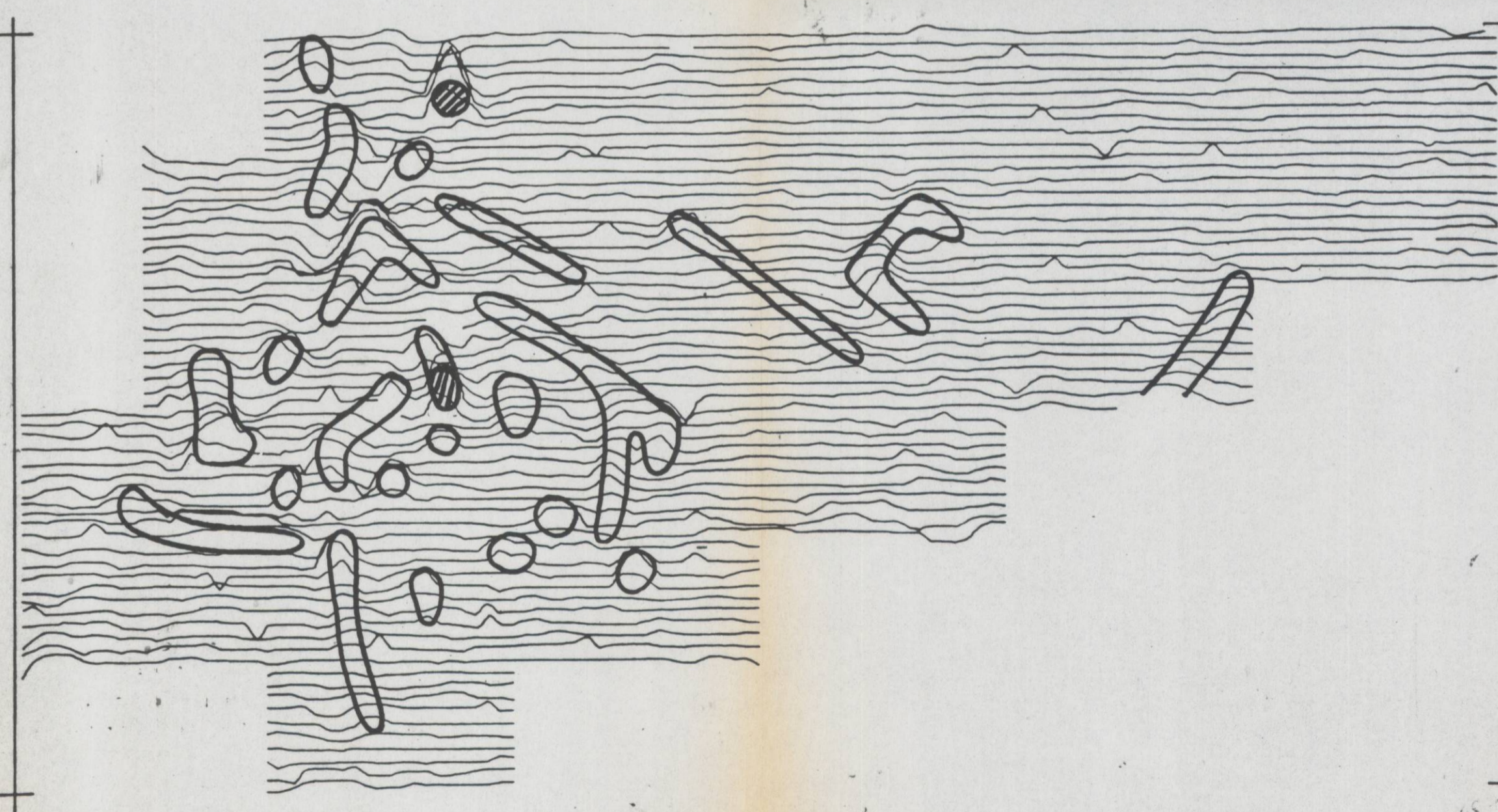
8th October 1981



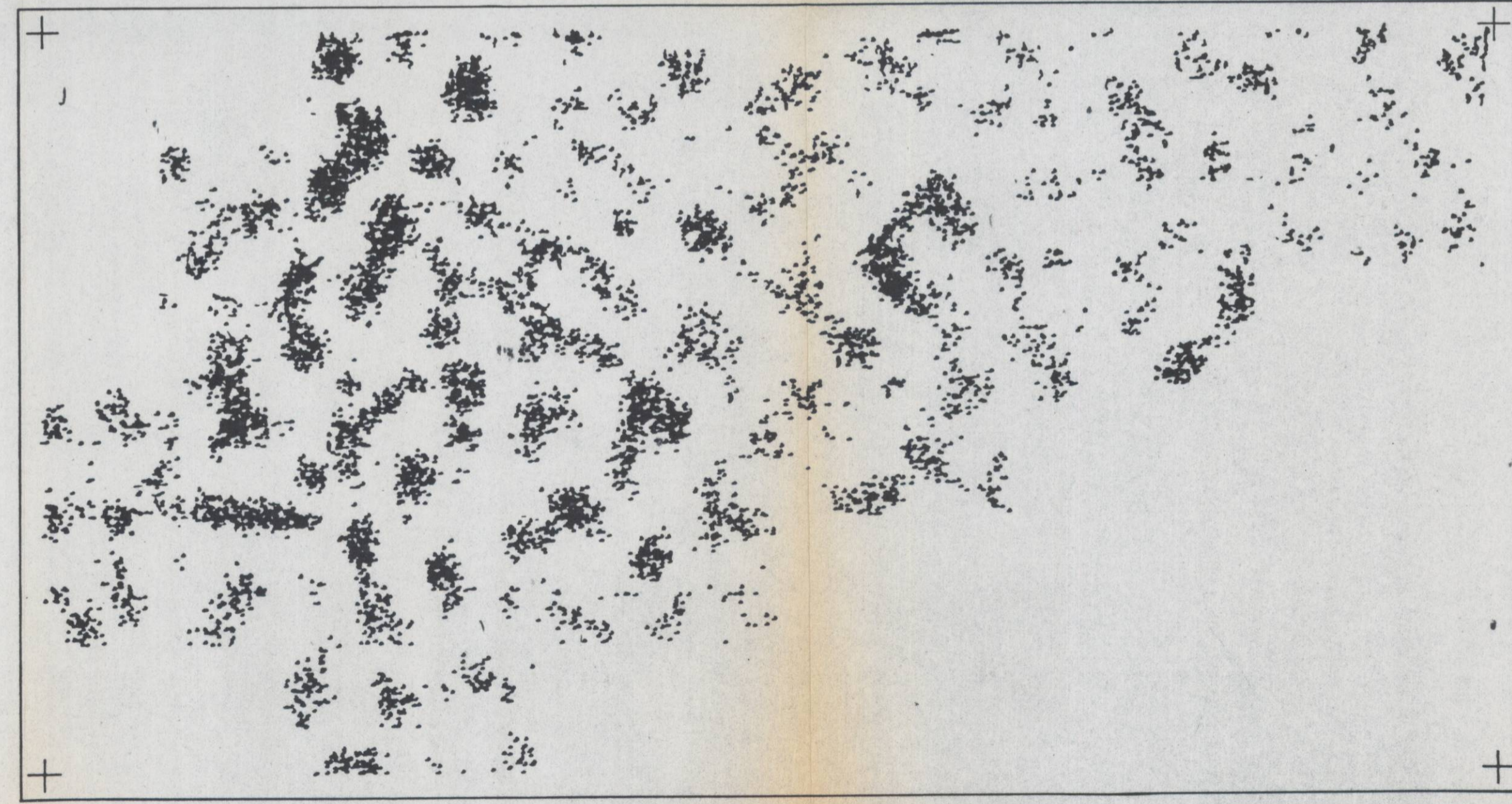
1. INITIAL DATA (SECTIONS EQUALIZED AND SIGN REVERSED)



2. DATA SMOOTHED AND FILTERED; SPIKES REMOVED



3. DATA AS FOR PLOT 2; ANOMALIES OUTLINED



4. DOT-DENSITY PLOT: TREATMENT AS FOR PLOT 2; RANGE MEAN TO MEAN + 2 STANDARD DEVIATIONS