Photo ©Lucy Pringle

Crop Formation: East Meon Crescents, UK, 1995

Laboratory Code: KS-03-37

Material: wheat stems and heads, *(Triticum aestivum)*

Formation: July 23/24, 1995, consisting of crescents within crescents (around 200 ft. dia. total) formed around a center circle about 14 ft. diameter.

Sampled: by Mr. Peter Stammers et al, on August 2, 1995

Laboratory Results:

In Fig.1 are the summarized results from detailed analyses of the node lengths in sample groups containing 12-16 plants each. To simplify the figure, the data shown here represent the N-S radial sampling. The location from which the samples were taken is indicated by the lines drawn from Mr. Stammers excellent diagram to the superimposed bar chart. The alterations in the apical (A) node lengths are shown as a percent change relative to the total control population (N=62 control plants). The percent change in node length at the penultimate (P) positions on the plant were consistent with the (A) nodes, but of lesser magnitudes, due to their having tougher, more mature tissue.

With the exception of sample S22 the node length changes within sample groups taken from the downed crescent plants were statistically significant at the 95% confidence level. Most of the upright samples taken within the formation do not disclose significant node expansion. The one exception, sample S19, probably experienced a local, energy "spill-over", an effect frequently observed in previous studies. This spill-over energy was not, however, sufficient to produce expulsion cavities in the S19 sample. In fact all of the plants from the upright sampling, as well as all of the controls were free of expulsion cavities.

Typical expulsion cavities are shown in the photograph in Fig.2, along with normal nodes. The lines extend to samples taken along the N-S diameter, which disclosed the presence of expulsion cavities. In every case the plants from downed samplings contained expulsion cavities, and this also includes samples S14, S24 and S27 lying on the E-W diameter (S23 was not included in the submitted samples). The distribution of the expulsion cavities appear to be asymmetrical along the N-S sampling, with the heaviest concentrations in plants taken at the periphery of the

south radius. The levels of expulsion cavities are given in Table 1, for both the S and N radii, each list starting from the epicenter (level in S12 is 38%) outward.

Table 1.

Distribution of expulsion cavities in (P) nodes, along S and N radii.

Sample	S-level	Sample	N-level
S10	31%	S14	15%
S8	31%	S16	11%
S6	60%	S18	10%
S4	55%	S20	44%
S2	79%	S22	30%
S1	82%	---	---

Comments:

Since these samples were taken at a mid to late stage of development the growth had stabilized and,as a consequence,the node size variations were minimal. For example the six control groups disclosed a plus or minus 4% variation about the mean. This very uniform node size also indicates that the moisture levels were all within a narrow range when the samples were taken and remained so during the sample drying period. This uniformity allows one to assign greater confidence to subtle differences between the control and formation samples.

This formation provides a distinctly clear-cut manifestation of the spatial partitioning of plasma energies within the formation complex. As shown in Fig.1, most of the plants within each of the downed crescents have significant node expansion (only one exception out of fourteen sample sets). By contrast the interspersed crescents formed by upright plants have eleven sample sets out of twelve with no significant node expansion. These lines of demarcation are equally apparent when comparing the frequency of node expulsions-again only appearing in the downed plant material. With the detailed sampling carried out in this formation, expulsion cavity data were obtained (Table 1),from which it was possible to suggest the gradient of energy distribution across the formation.

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Fig. 1

RS-03-37

East Meon 'Cyclic Crescents'

Samples taken 2nd August 1995

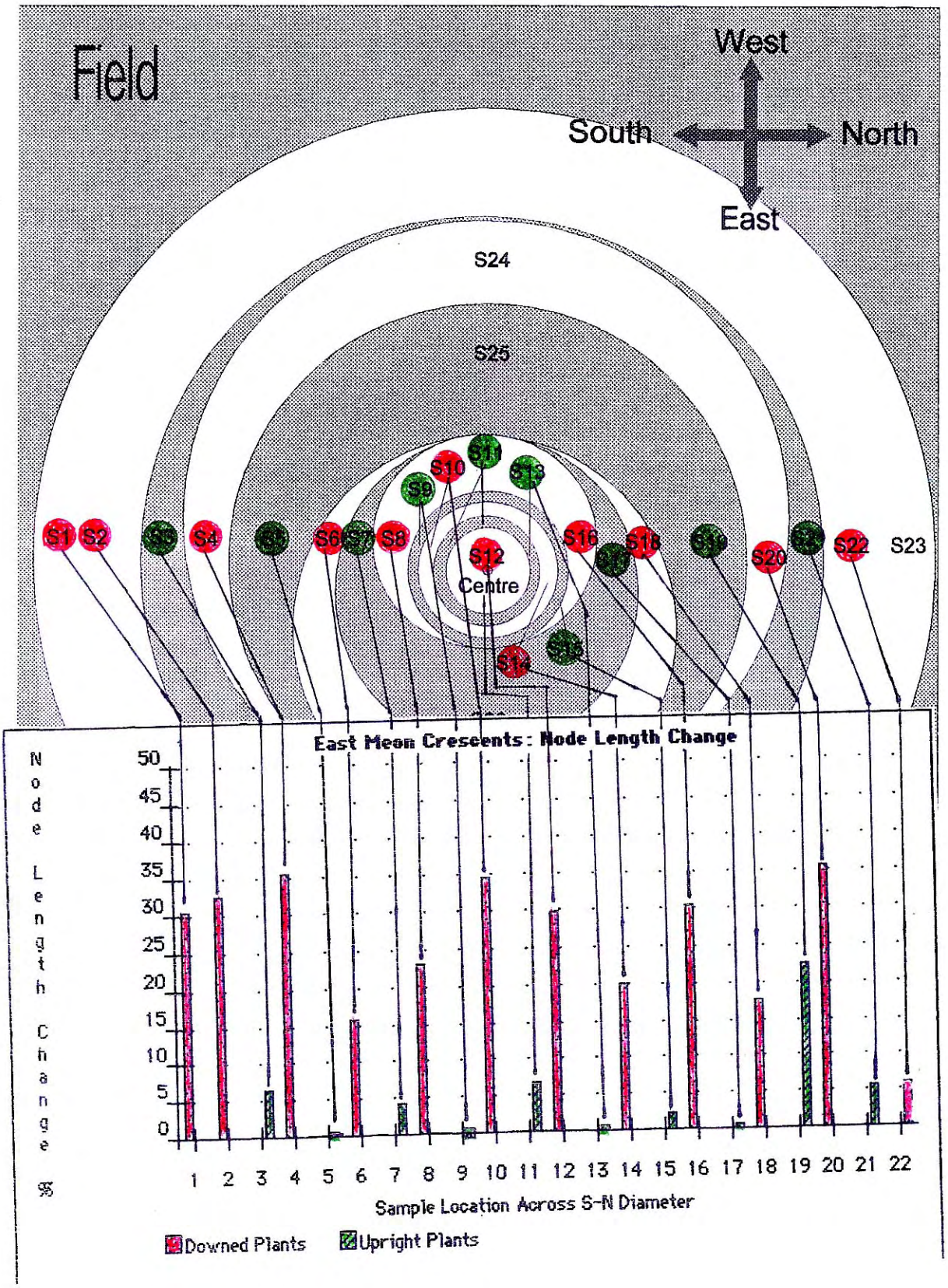
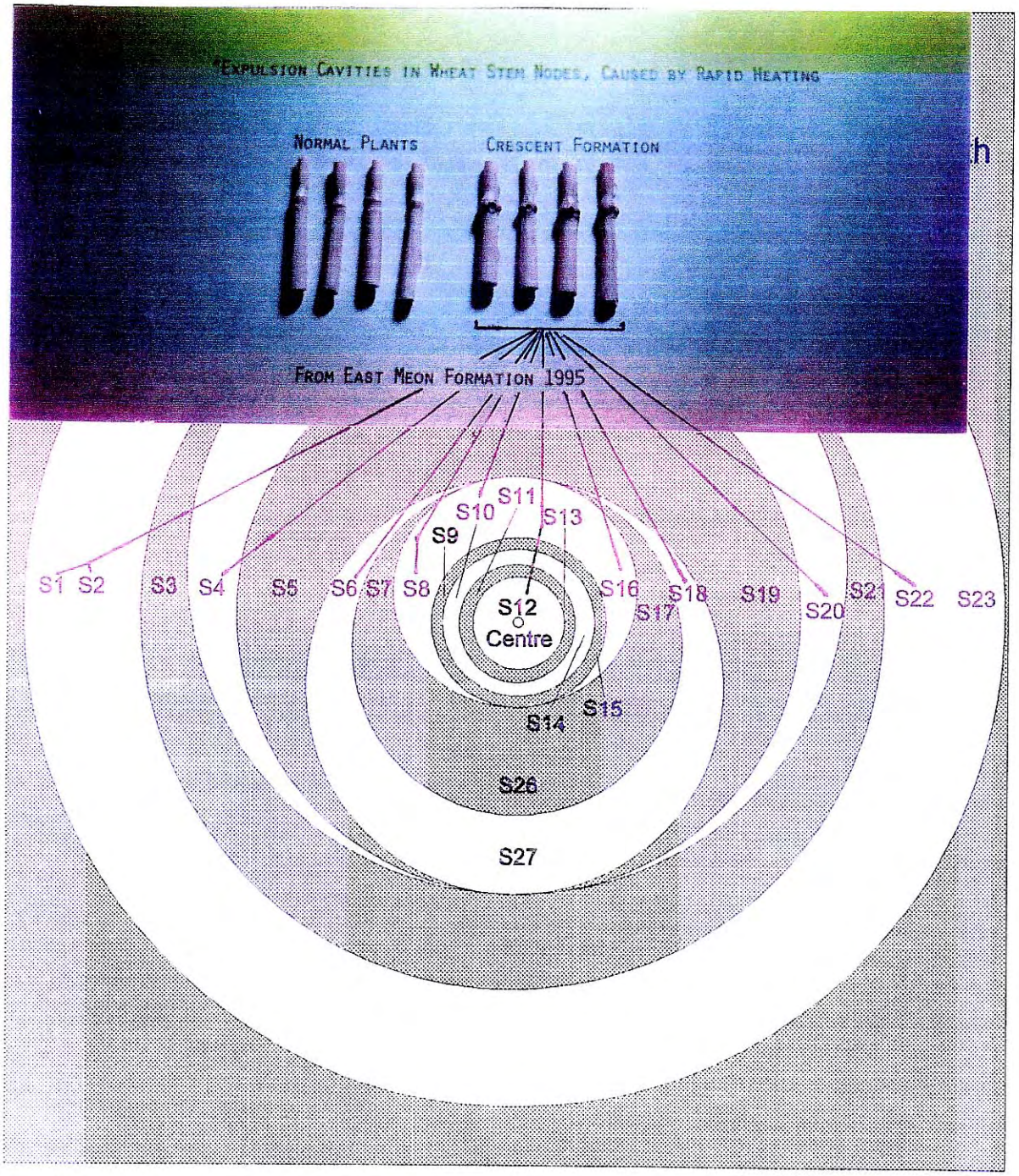


Fig. 2 11-05-51

East Meon 'Cyclic Crescents'

Samples taken 2nd August 1995



Control samples were taken 2 feet, 15 and 60 feet on an East/West axis outside the main formation with the following sequence ;

C1 West 2 '
C2 West 15'
C3 West 60'
C4 East 2'