Figure 1
The central zone eddy
Gr = 1.26 x 10^5

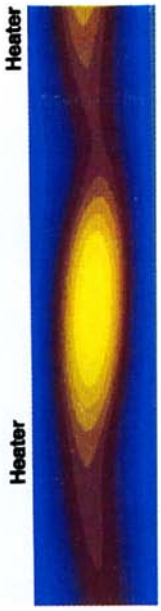

Figure 2
Computation for the
central zone eddy
Gr = 10^5

Figure 3
Top trailing corner vortex

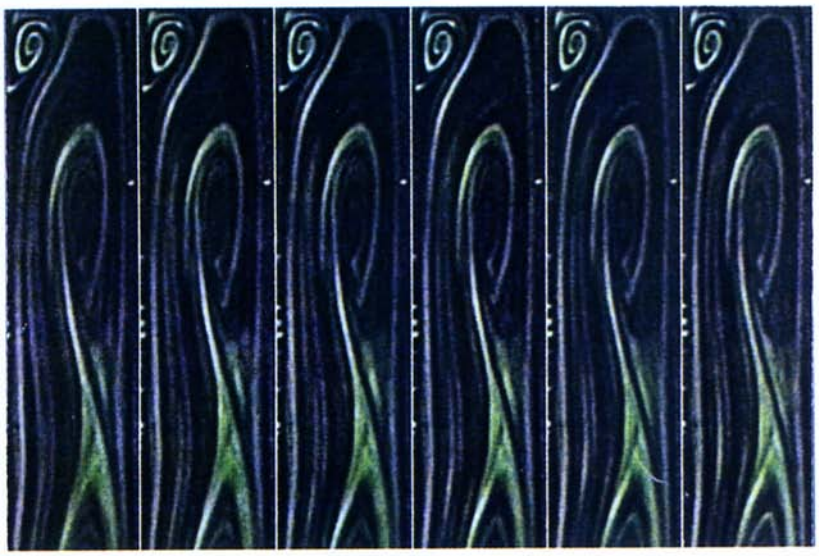

Figure 4. Mosaic of the top quandrant of the enclosure flow Gr = 1.8 x 10^5

EDDY STRUCTURES IN A SLOT WITH PERIODIC HEATING

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The photographs illustrate the buoyancy driven motion in an air-filled enclosure with a periodic heat flux along the left hand wall. Based on the cavity width l, the vertical aspect ratio is 20 and each heater is of length 2l. Figure 1 shows an eddy near the central zone of the cavity. The Grashof number is defined in terms of the applied heat flux.

A computational representation of the equivalent location is given in Figure 2, see Liakopoulos et al (1991). A close-up of the corner of the cavity is illustrated in Figure 3. Motion in the top corner of the cavity is illustrated as a mosaic in Figure 4. This image has been digitally enhanced using a three-frame averaging proceedure.