

Figure 4.2: Typical Youngs fringes and corresponding auto-correlation plane.

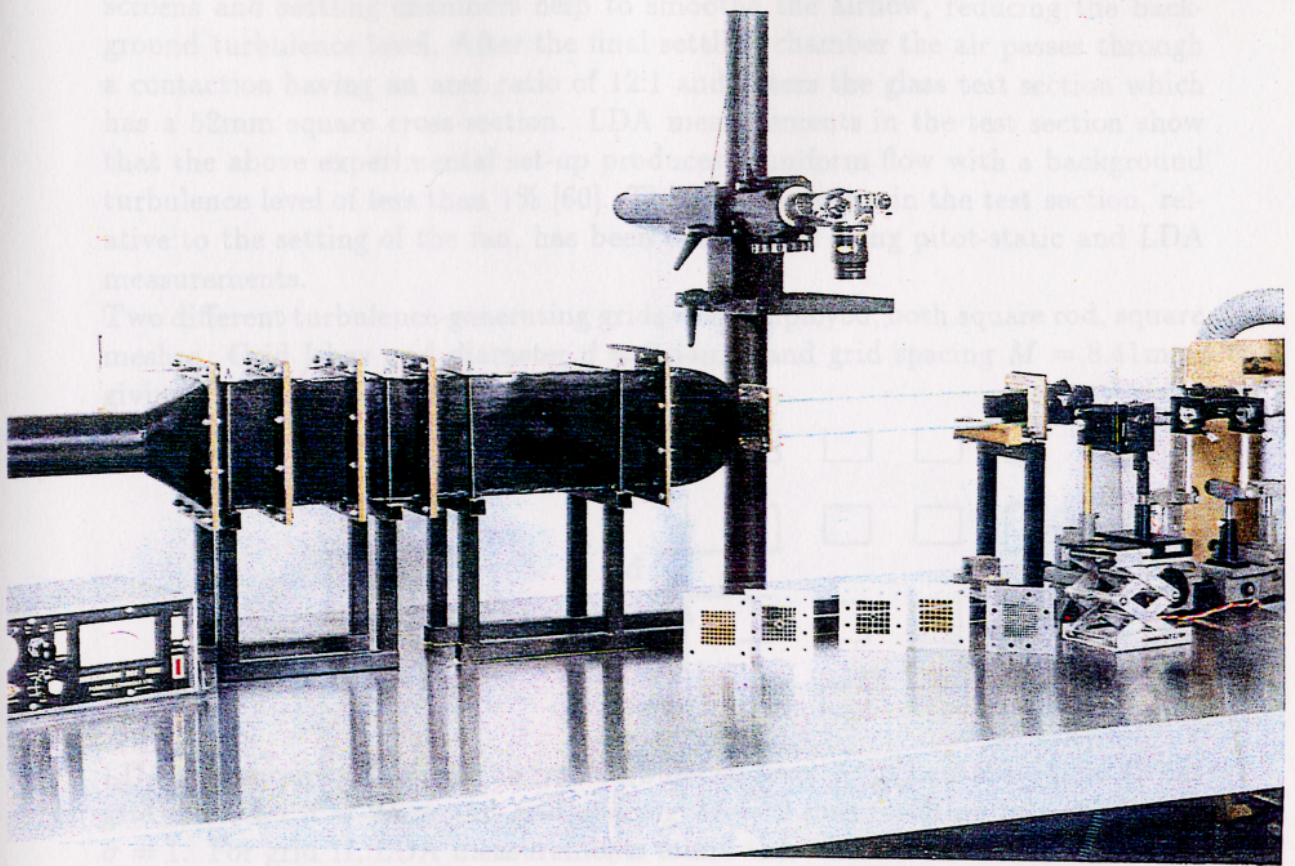


Figure 6.1: The miniature windtunnel.

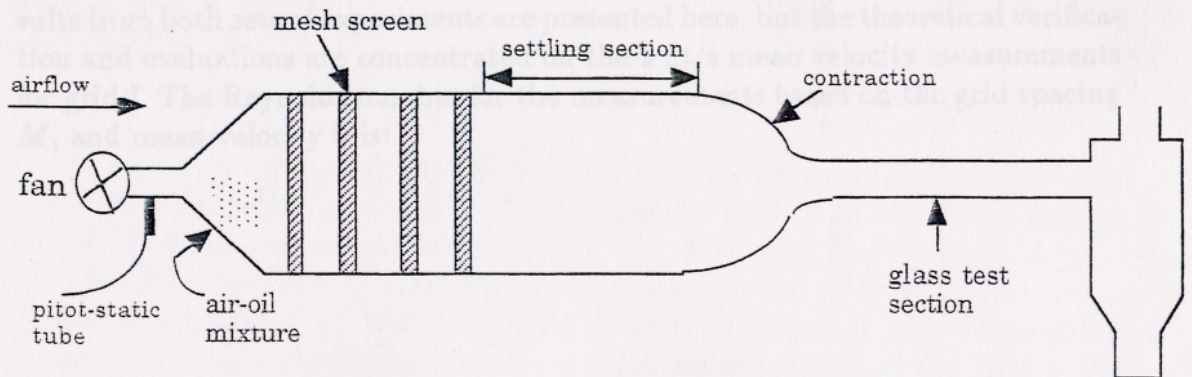


Figure 6.2: A schematic diagram of the windtunnel experimental set-up.

\bar{U}	GRID I	Grid II
1 m/s	R = 561	R = 133
2 m/s	R = 1121	R = 267

The camera, a Nikon F801 autofocus with a AF Micro-Nikkor 60 mm lens, was mounted horizontally over the glass test section at a distance giving a magnification of 0.5, Figure 6.3 shows the mounted camera.

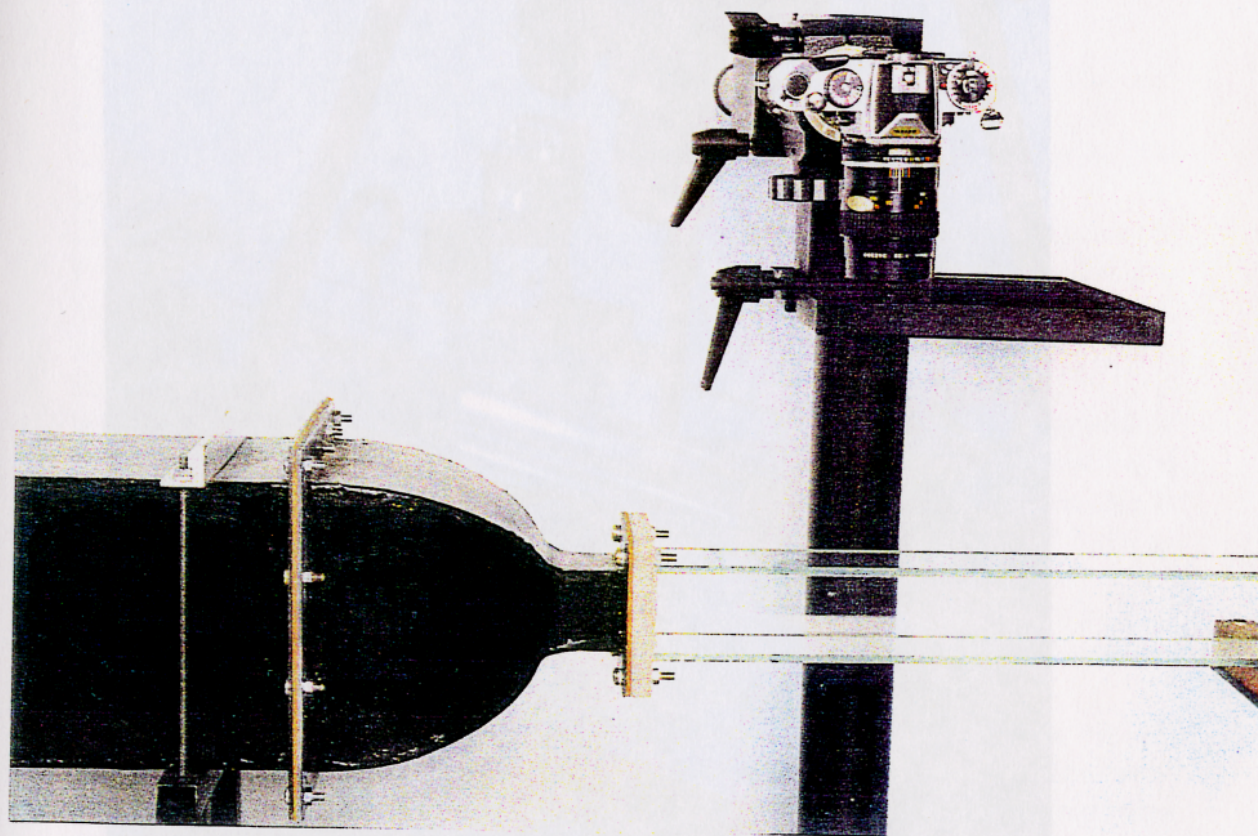


Figure 6.3: The glass test section with the camera mount.

The film used was a Kodak Tmax 400 with a resolution of 100 lines/mm. As seen in Chapter 2, the image diameter on the film is given by Adrian (5) as:

$$d = (4f^2 + f^2 \lambda^2 + d^2)^{1/2}$$

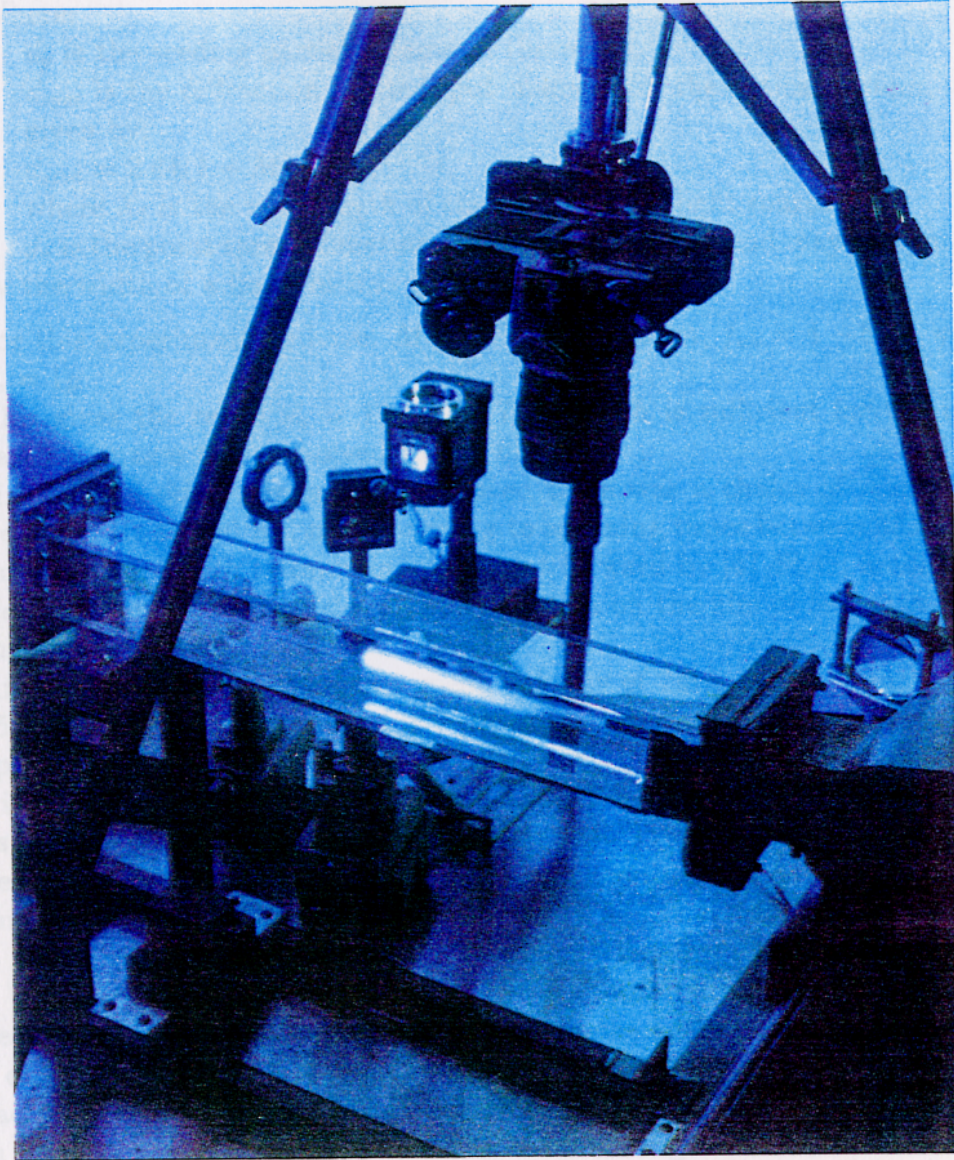


Figure 6.4: Illuminating equipment as used for a particle roping measurement (Courtesy of Dr. D.R.McCluskey).

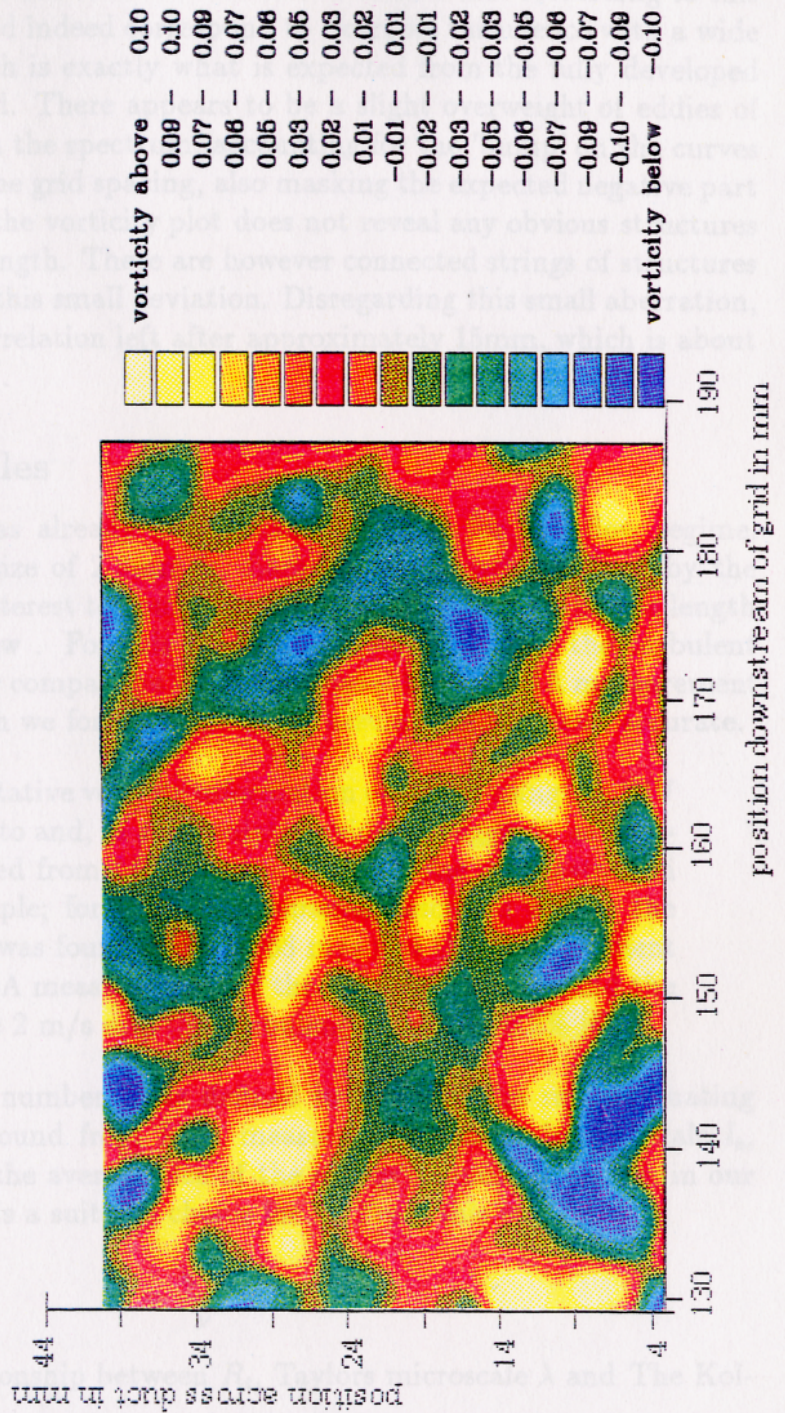


Figure 6.10: Vorticity plot of the flow field shown in Figure 6.8.

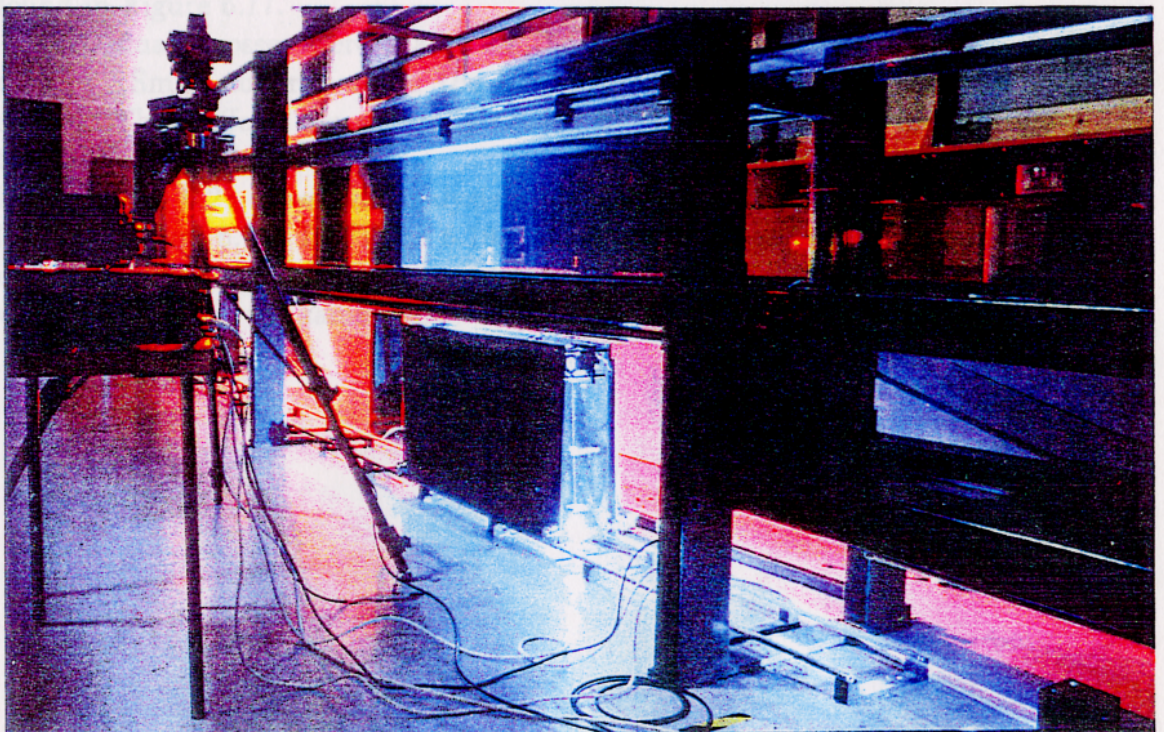
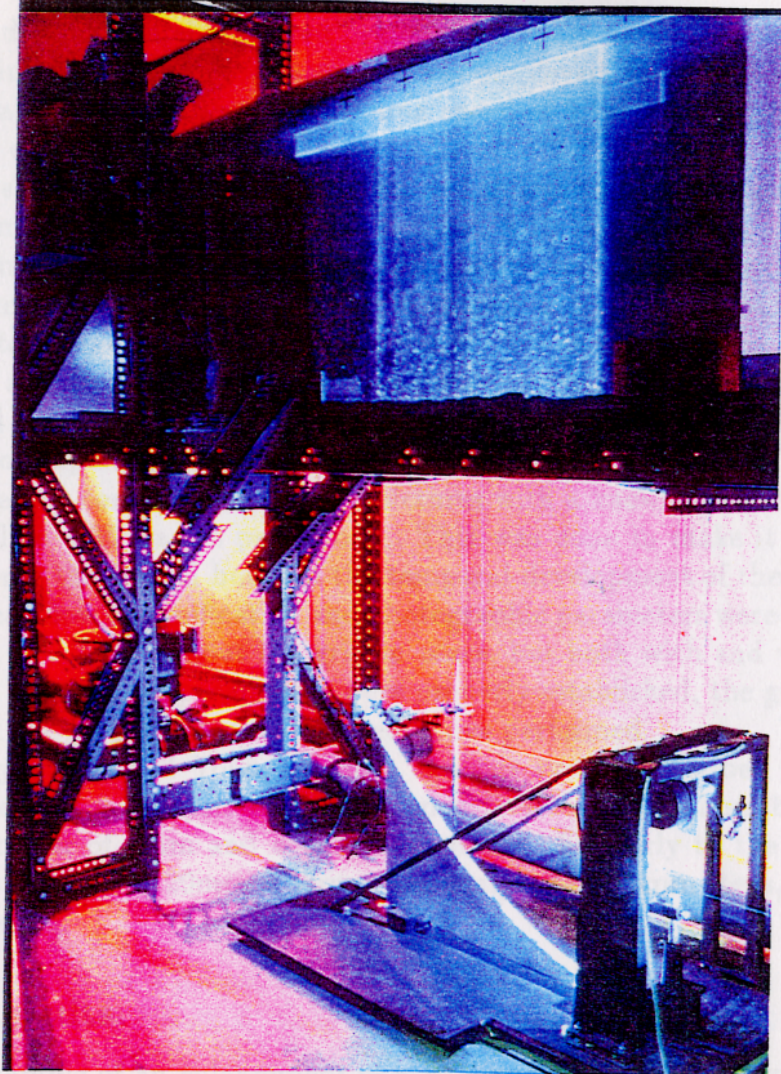


Figure 6.16: The wavetank and the illuminating scanning beam arrangement.

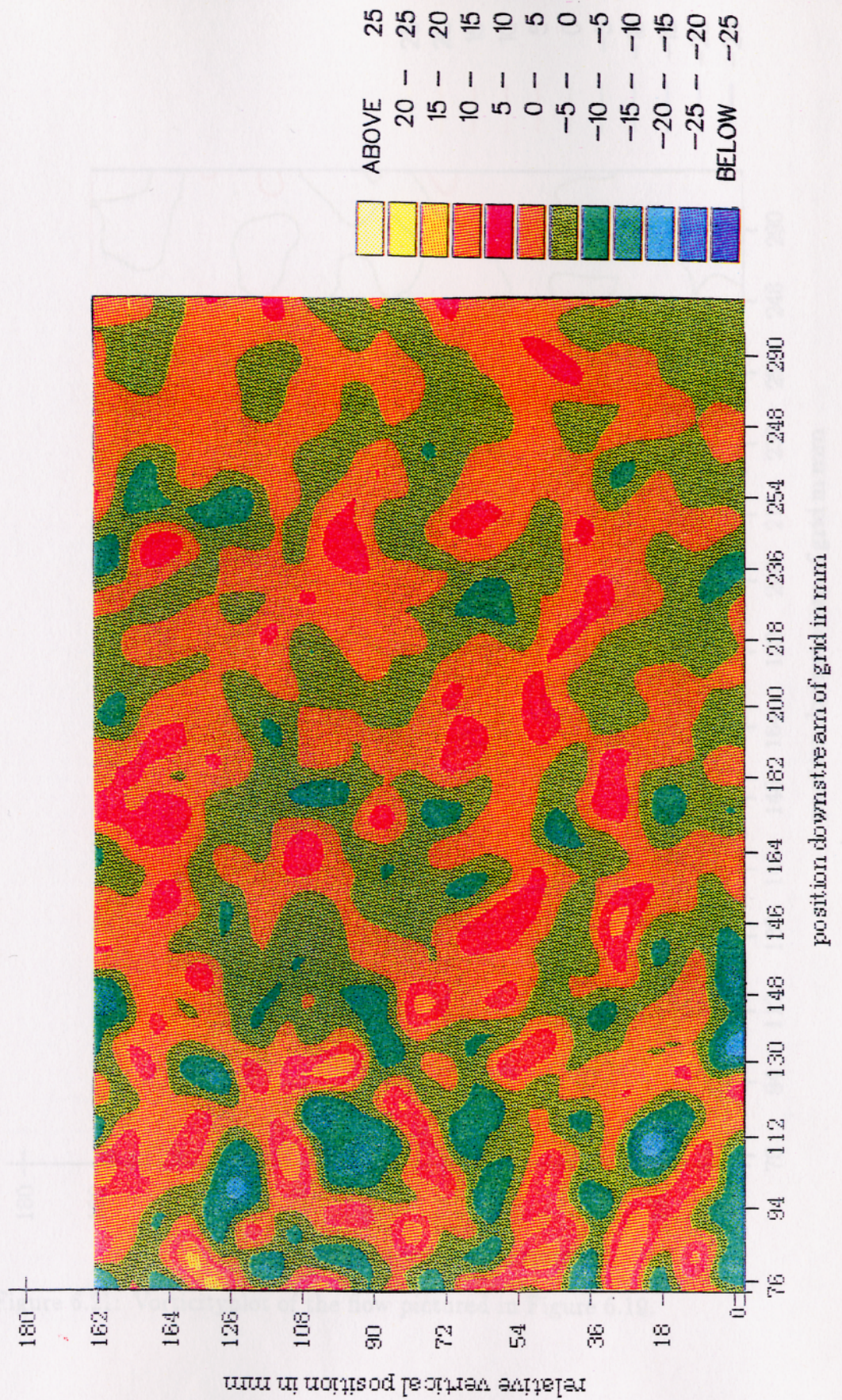


Figure 6.20: Vorticity plot of the flow pictured in Figure 6.19.

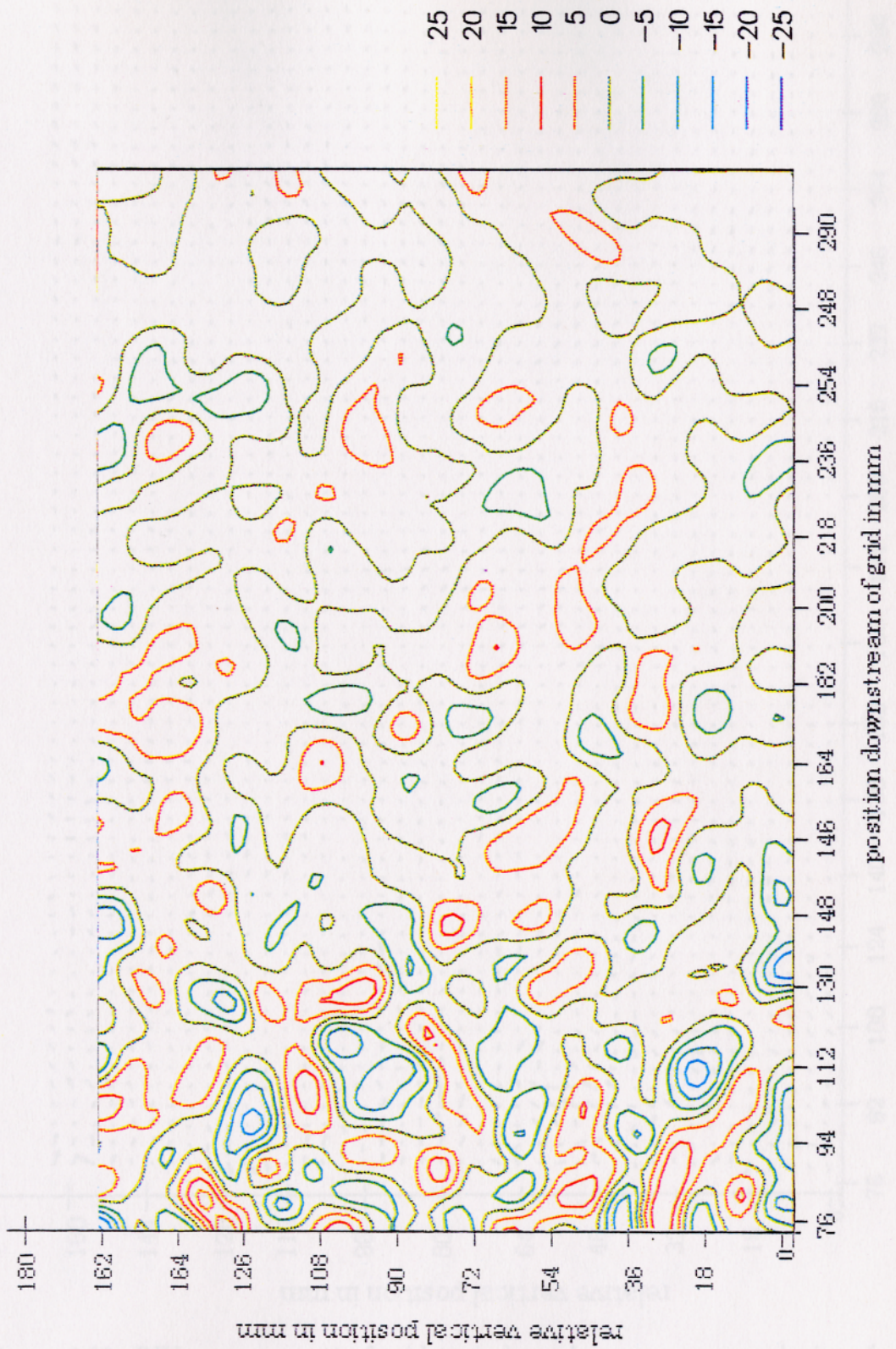


Figure 6.21: Vorticityplot of the flow pictured in Figure 6.19.

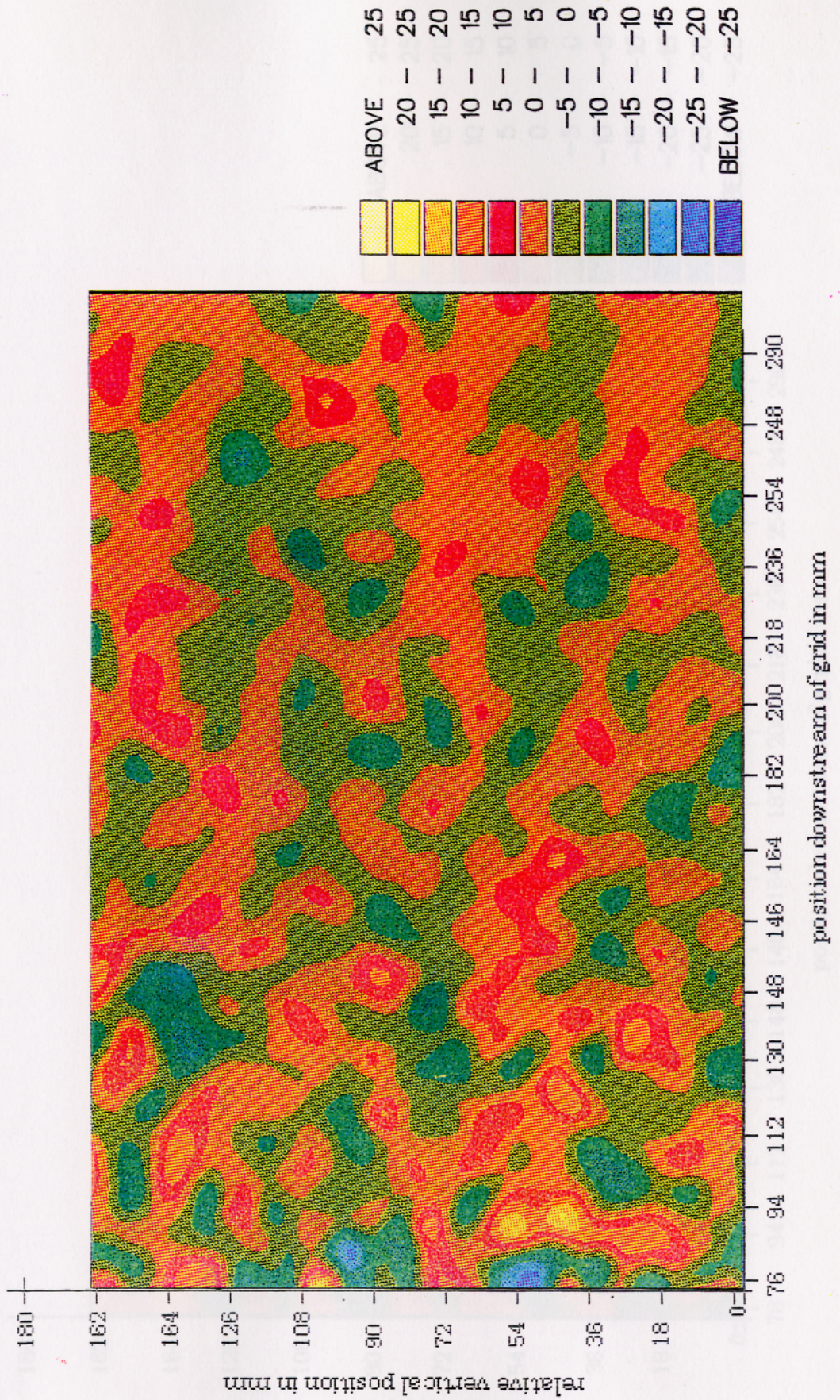


Figure 6.29: Vorticityplot of the flow shown in Figure 6.22. Frame 1, $T=0$.

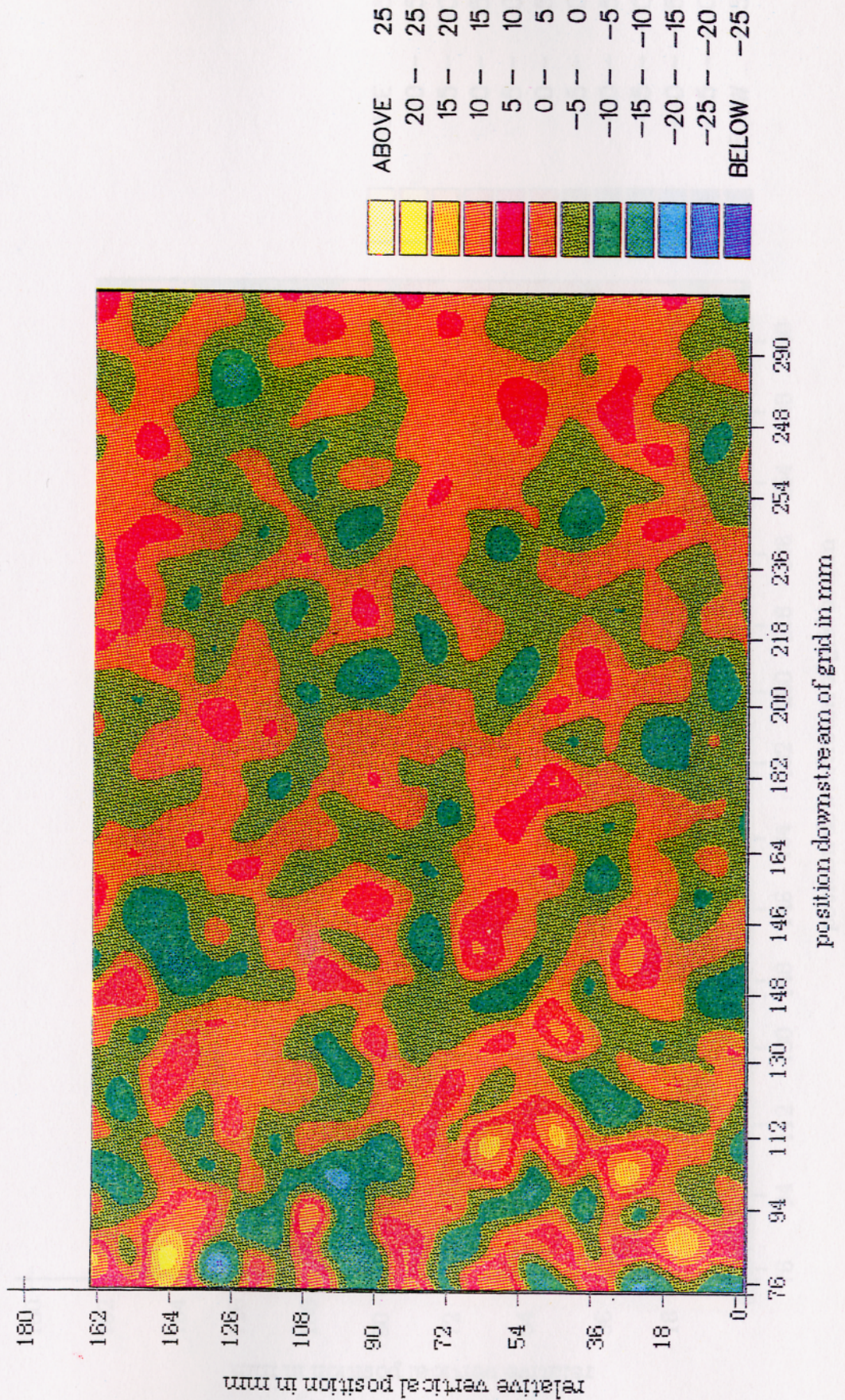


Figure 6.30: Vorticityplot of the flow shown in Figure 6.23. Frame 2, $T=230$ ms.

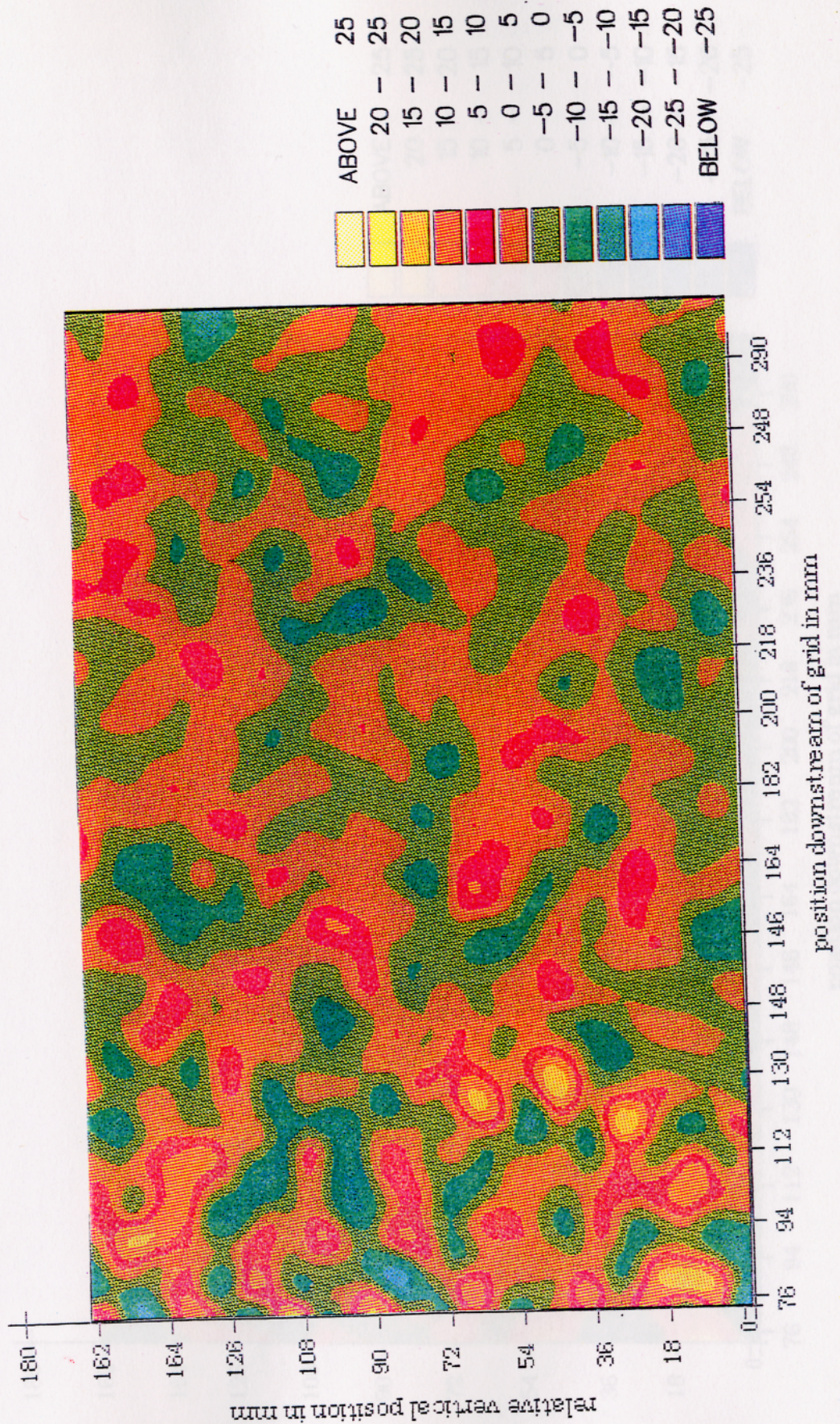


Figure 6.31: Vorticity plot of the flow shown in Figure 6.24. Frame 3, $T=460$ ms.

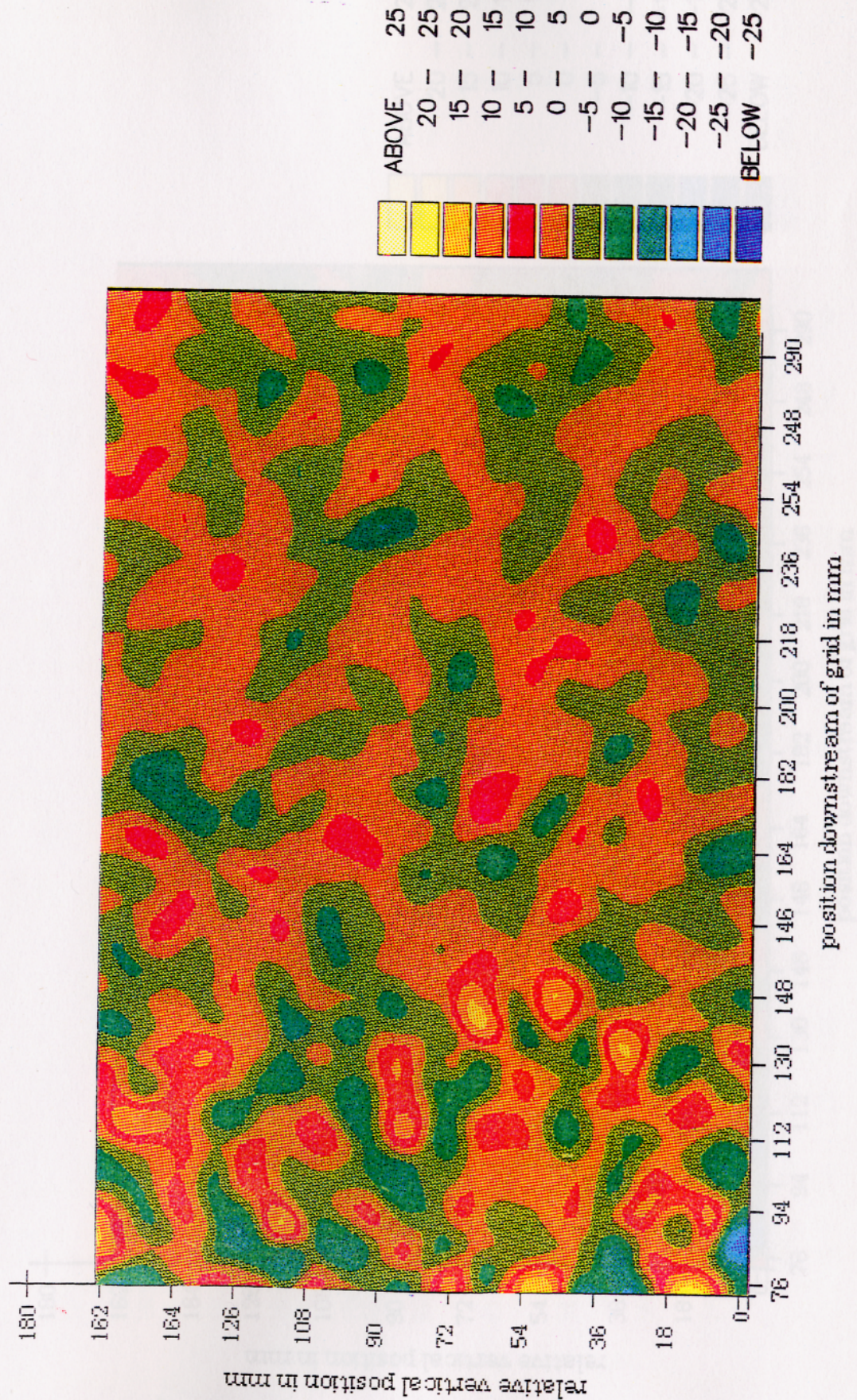


Figure 6.32: Vorticityplot of the flow shown in Figure 6.25. Frame 4, $T=690$ ms.

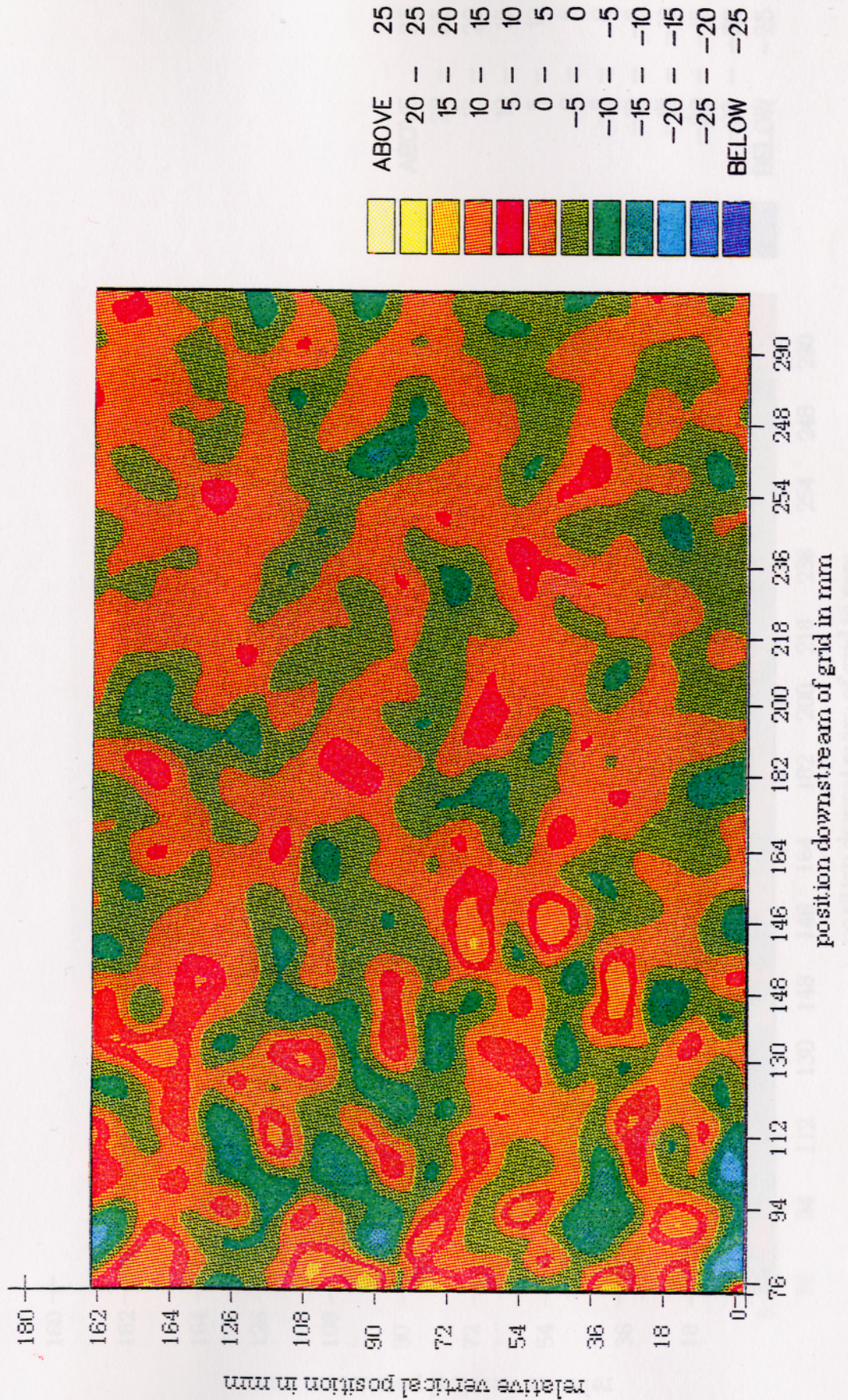


Figure 6.33: Vorticityplot of the flow shown in Figure 6.26. Frame 5, $T=920$ ms.

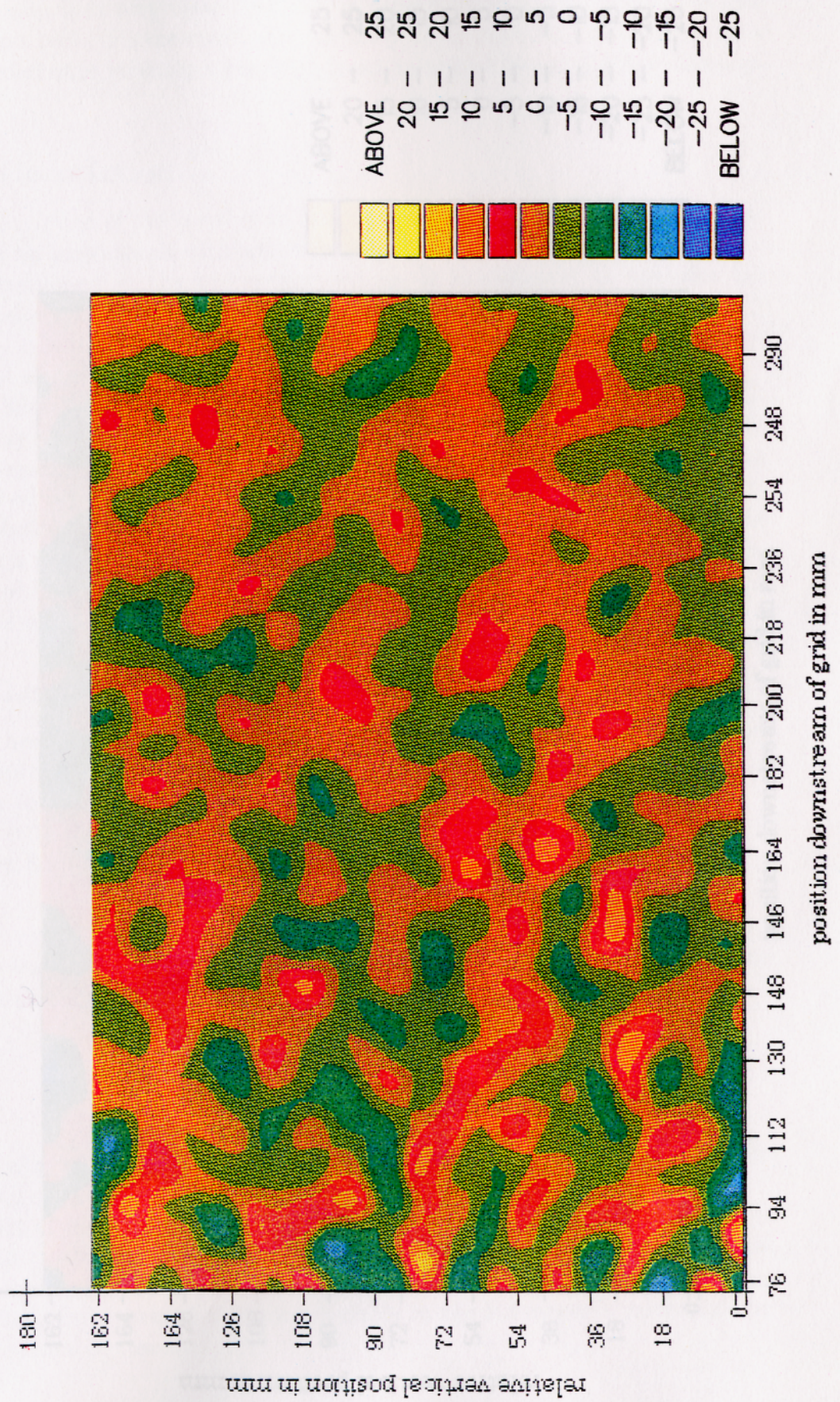


Figure 6.34: Vorticity plot of the flow shown in Figure 6.27. Frame 6, $T=1150\text{ms}$.

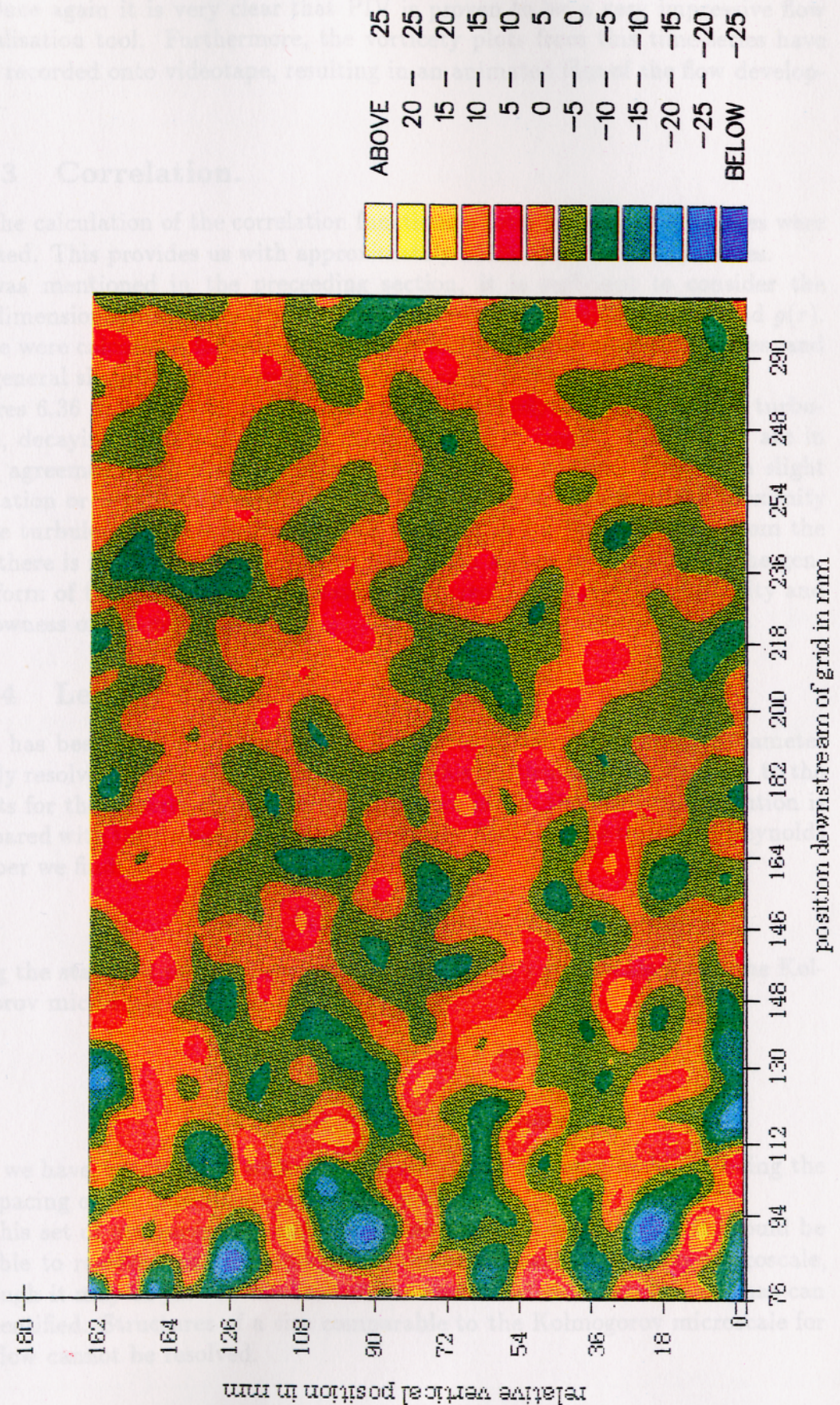


Figure 6.35: Vorticityplot of the flow shown in Figure 6.28. Frame 7, $T=1380$ ms.