

Figure 10 is a 13x13 grid heatmap showing the spatial distribution of the maximum value of the normalized velocity gradient magnitude. The color scale ranges from 0.0 (dark blue) to 1.6 (dark red). A red rectangular box highlights the region from x=1 to x=11 and y=1 to y=11. A green rectangular box highlights the region from x=2 to x=10 and y=2 to y=10. The highest values (red) are concentrated in the center of the grid, particularly within the green box.

y \ x	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	0.0	0.02	0.057	0.087	0.077	0.065	0.053	0.052	0.067	0.056	0.028	0.014	0.005
2	0.0	0.047	0.158	0.479	0.538	1.158	1.114	1.03	0.991	0.928	0.848	0.067	0.023
3	0.0	0.066	0.53	0.795	1.632	1.681	1.4	1.335	1.261	1.196	1.376	0.485	0.021
4	0.0	0.094	0.601	0.963	1.406	0.92	1.438	1.368	1.396	1.604	1.409	0.553	0.018
5	0.0	0.161	0.698	1.037	1.404	0.74	0.872	0.867	0.872	1.031	1.017	0.589	0.031
6	0.0	0.145	0.737	1.083	1.427	0.741	0.843	0.87	0.871	0.981	0.96	0.568	0.034
7	0.0	0.15	0.743	1.104	1.486	0.805	0.909	0.956	0.95	1.0	0.981	0.586	0.046
8	0.0	0.108	0.731	1.145	1.526	0.905	1.04	1.143	1.056	1.011	0.994	0.607	0.051
9	0.0	0.112	0.624	1.38	1.75	1.057	1.229	1.329	1.06	1.039	1.062	0.663	0.068
10	0.0	0.067	0.531	1.513	1.64	0.952	0.922	0.904	0.845	1.025	1.118	0.78	0.095
11	0.0	0.029	0.116	0.986	1.075	0.672	0.602	0.638	0.678	0.69	0.85	0.743	0.12
12	0.0	0.01	0.012	0.068	0.098	0.055	0.04	0.039	0.047	0.074	0.084	0.092	0.101

