

If we define a grain boundary (GB) as a region (at the retinal margin) at which the domain orientation rotates by 10 degrees or more at the time of photoconversion, the following table (and following p-value for significance of grain boundary growth) applies:

Fish Label	# of Y-Junctions Added Between Photoconversion and Later Imaging	Mean Distance Between New Y-Junction and Nearest GB if Uncorrelated (μm)	Median Distance Between New Y-Junction and Nearest GB if Uncorrelated (μm)	Actual Distance Between new Y-Junctions and GB (μm)
1	6	84	73	[9, 2, 15, 12, 12, 46]
2	2	91	73	[24, 4]
3	3	87	73	[1, 2, 65]
4	4	45	44	[24, 1, 5, 1]
5	1	73	73	1
6	2	75	73	[4, 1]
7	3	74	73	[11, 123, 42]
9	2	73	73	[18, 20]
10	2	94	78	[2, 2]
11	8	43	39	[12, 23, 45, 1, 0, 95, 20, 69]
12	4	39	36	[15, 5, 11, 36]

$p < 0.000001$

If we define a grain boundary (GB) as a region (at the retinal margin) at which the domain orientation rotates by 12 degrees or more at the time of photoconversion, the following table (and following p-value for significance of grain boundary growth) applies:

Fish Label	# of Y-Junctions Added Between Photoconversion and Later Imaging	Mean Distance Between New Y-Junction and Nearest GB if Uncorrelated (μm)	Median Distance Between New Y-Junction and Nearest GB if Uncorrelated (μm)	Actual Distance Between new Y-Junctions and GB (μm)
1	6	84	73	[9, 2, 15, 12, 12, 46]
2	2	91	73	[24, 4]
3	3	87	73	[1, 2, 65]
4	4	45	44	[24, 1, 5, 1]

6	2	75	73	[4, 1]
10	2	94	78	[2, 2]
11	8	99	88	[12, 23, 158, 205, 203, 108, 20, 69]
12	4	39	36	[15, 5, 11, 36]

$$p < 0.00006$$

If we define a grain boundary (GB) as a region (at the retinal margin) at which the domain orientation rotates by 14 degrees or more at the time of photoconversion, the following table (and following p-value for significance of grain boundary growth) applies:

Fish Label	# of Y-Junctions Added Between Photoconversion and Later Imaging	Mean Distance Between New Y-Junction and Nearest GB if Uncorrelated (μm)	Median Distance Between New Y-Junction and Nearest GB if Uncorrelated (μm)	Actual Distance Between new Y-Junctions and GB (μm)
1	6	84	73	[9, 2, 15, 12, 12, 46]
2	2	91	73	[24, 4]
3	3	87	73	[1, 2, 65]
4	4	45	44	[24, 1, 5, 1]
10	2	94	78	[2, 2]
11	8	99	88	[12, 23, 158, 205, 203, 108, 20, 69]
12	4	39	36	[15, 5, 11, 36]

$$p = 0.0003$$