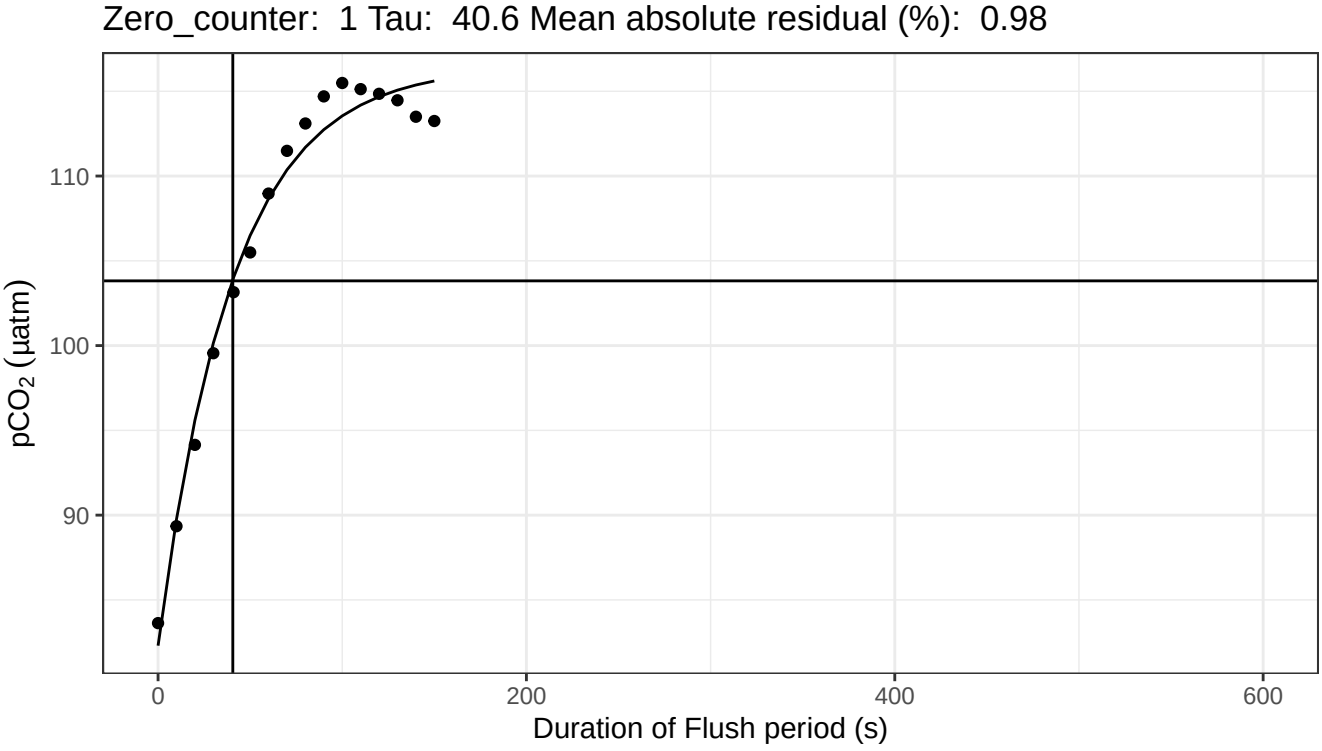
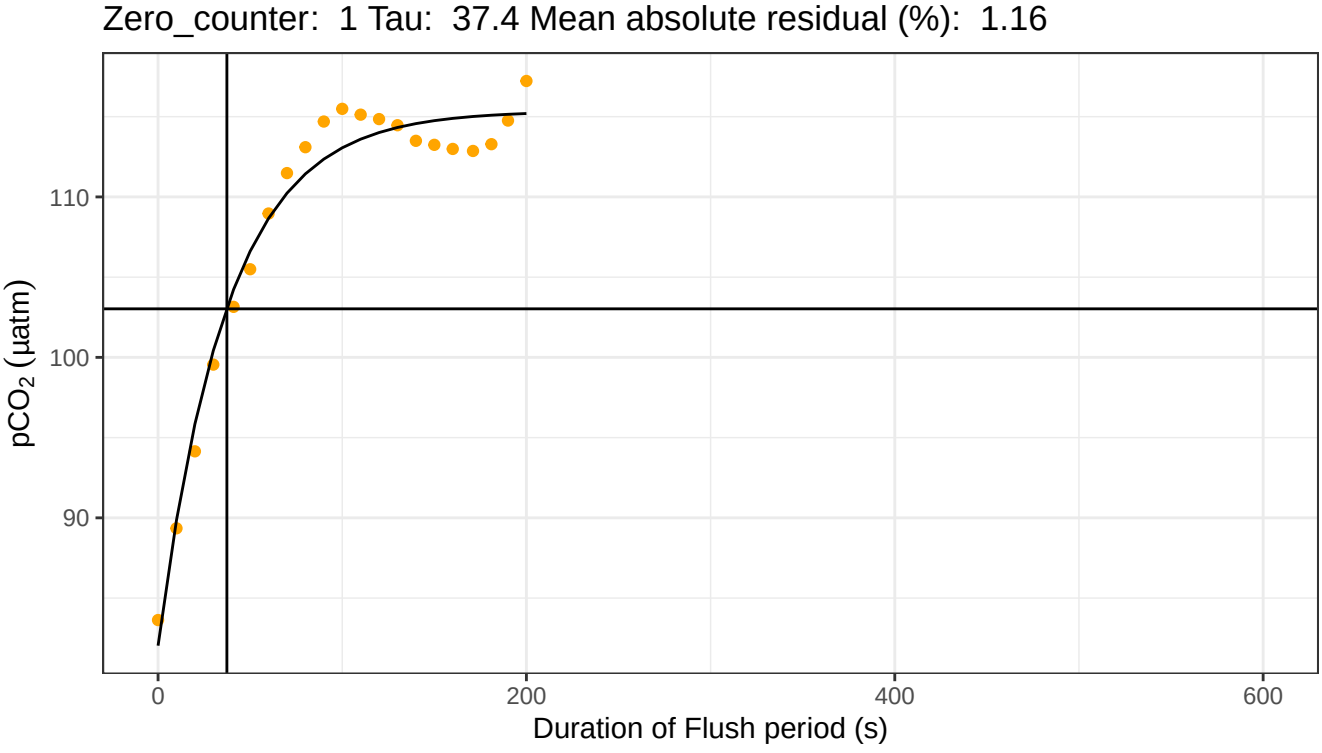
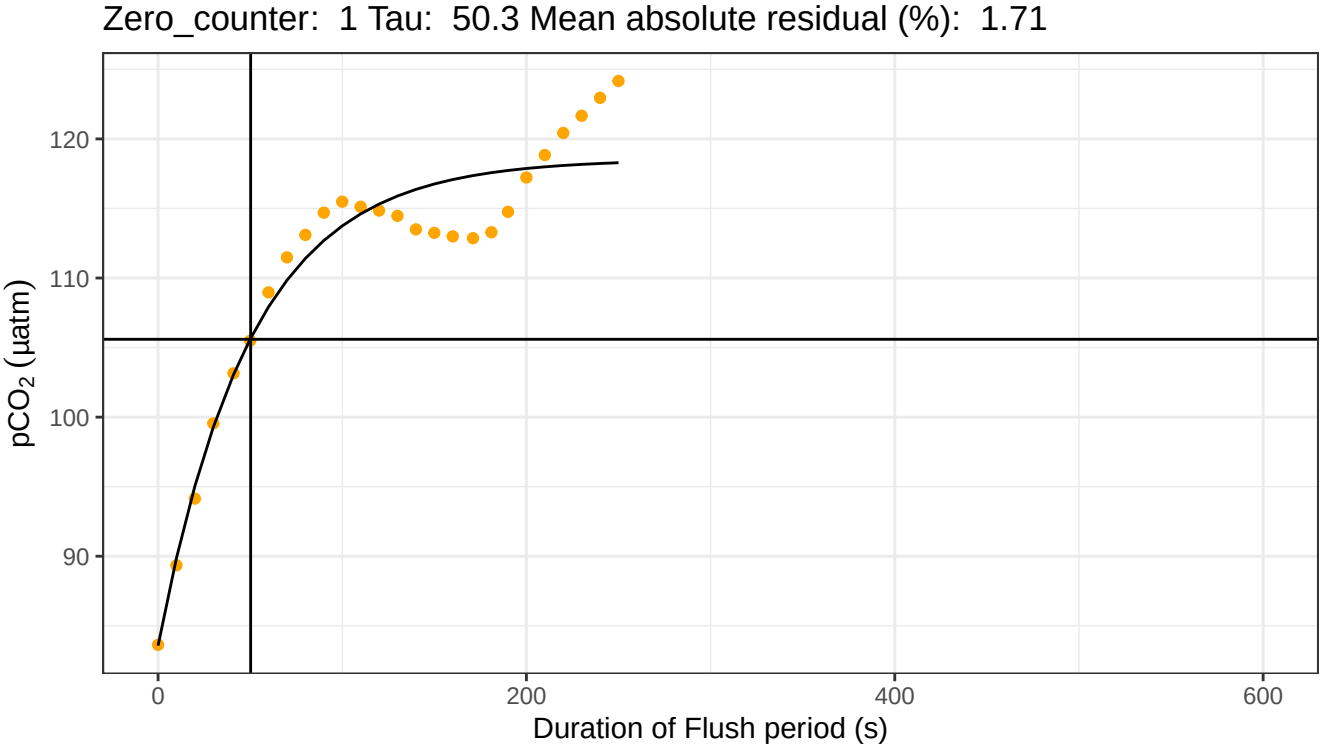
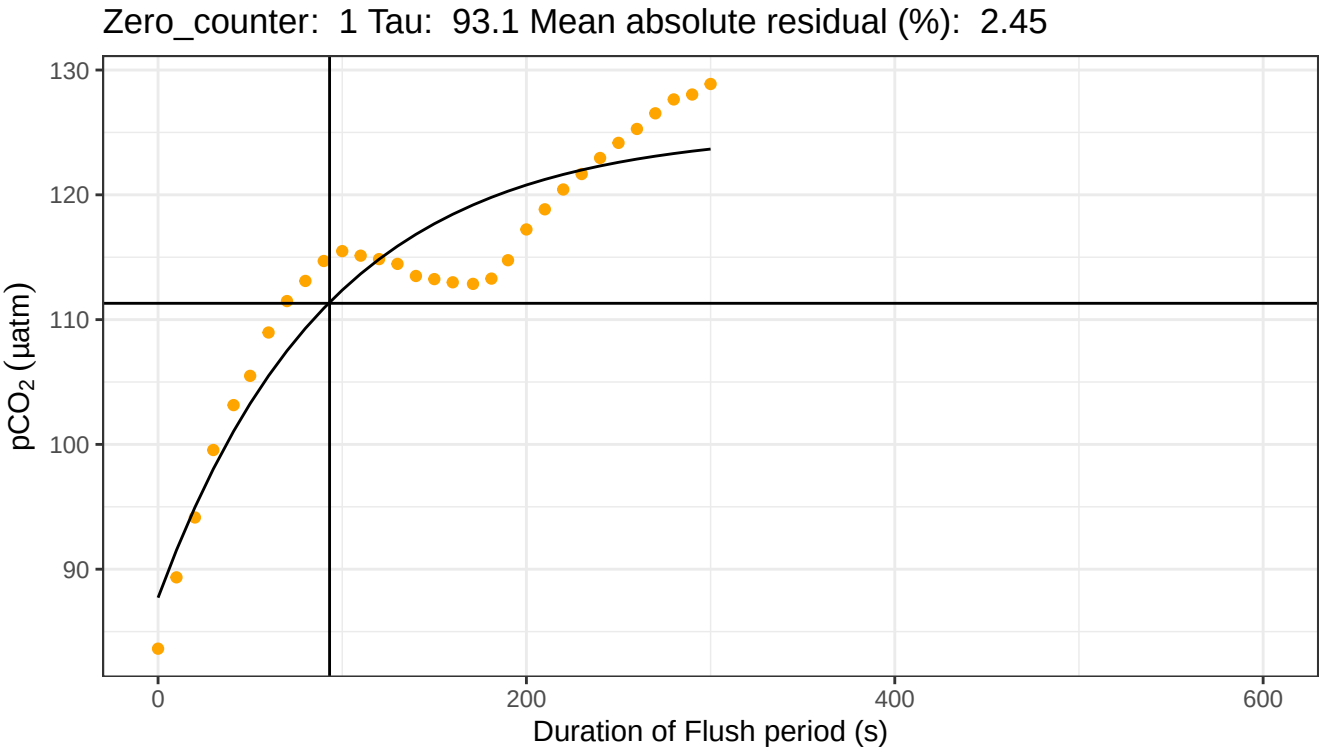
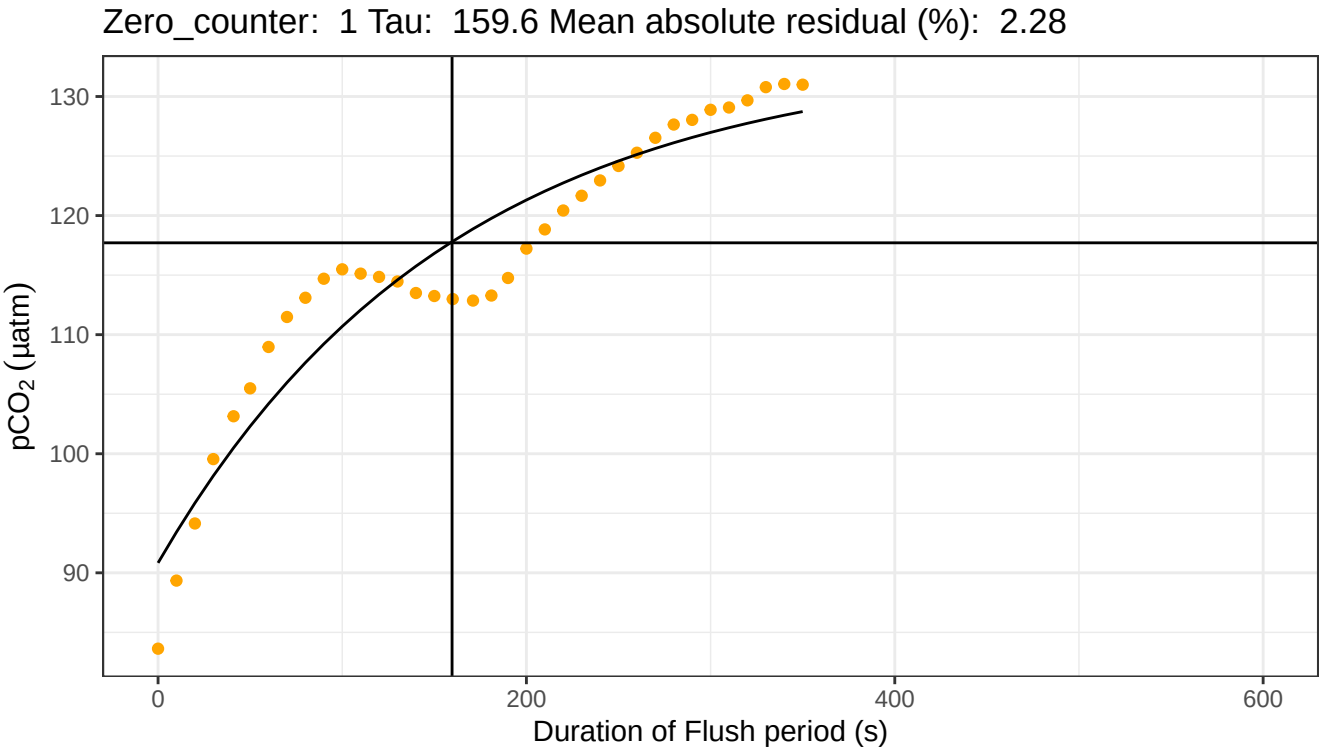
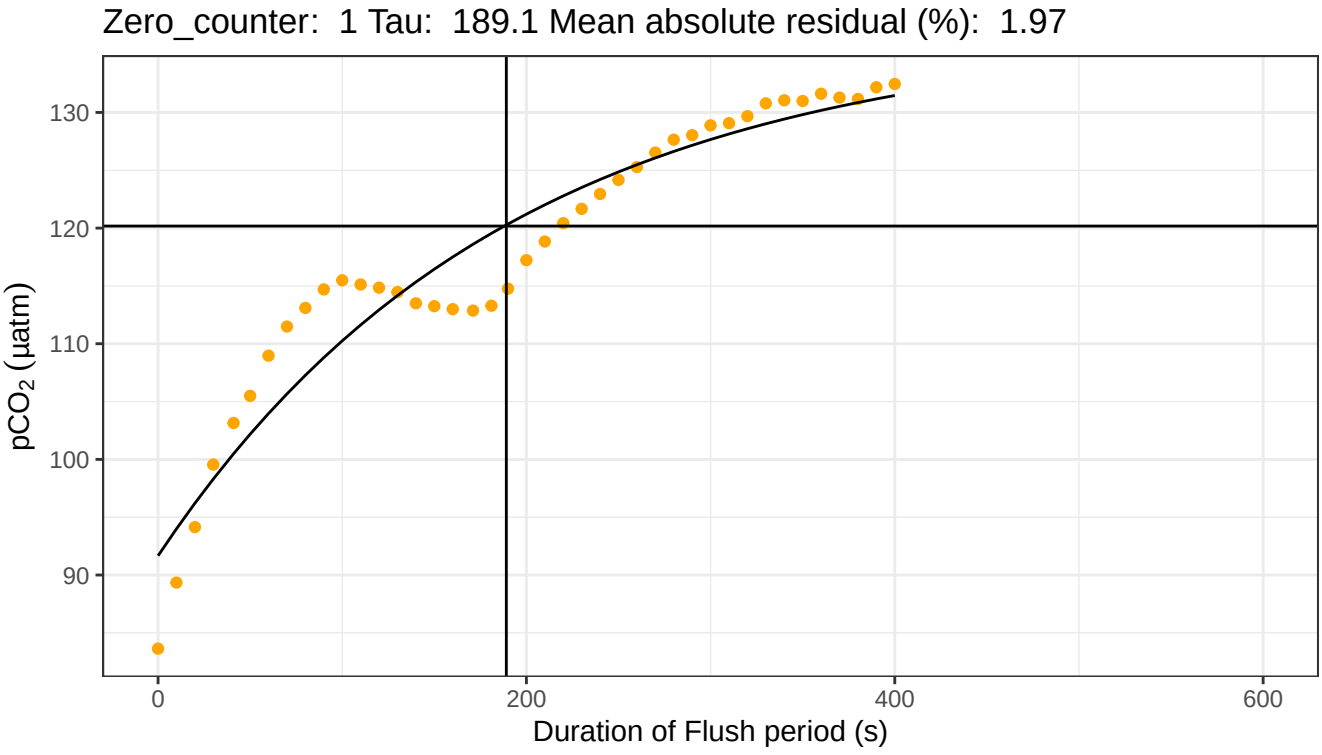

Zero_counter: 1 Tau: 40.6 Mean absolute residual (%): 0.98
110
100
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

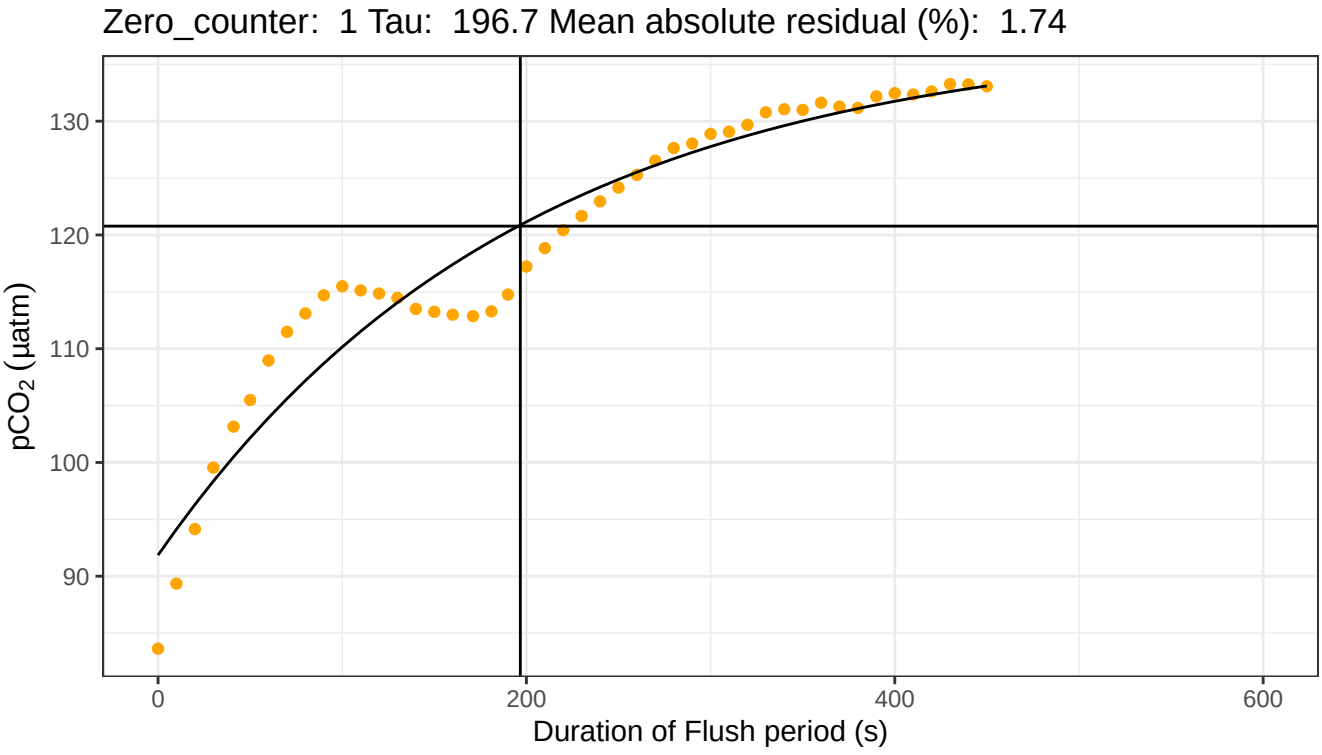

Zero_counter: 1 Tau: 37.4 Mean absolute residual (%): 1.16
110
100
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

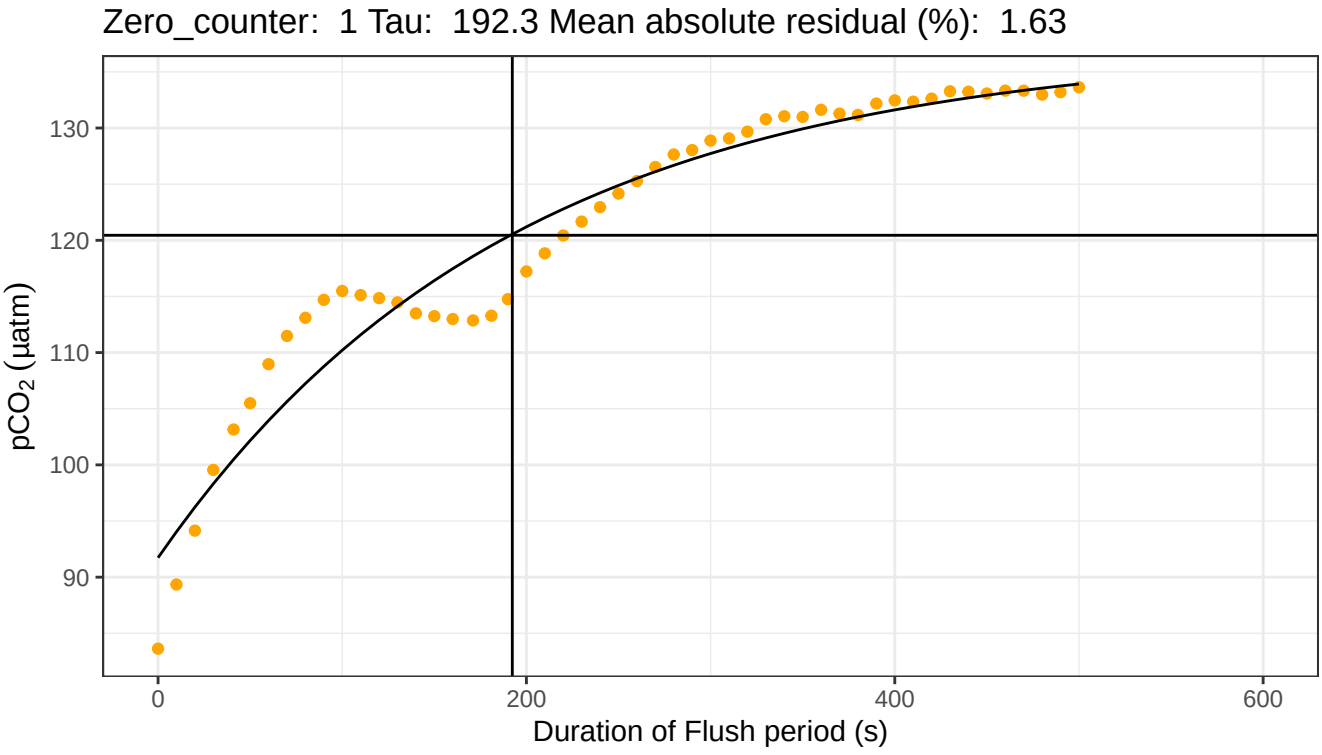

Zero_counter: 1 Tau: 50.3 Mean absolute residual (%): 1.71
120
110
100
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

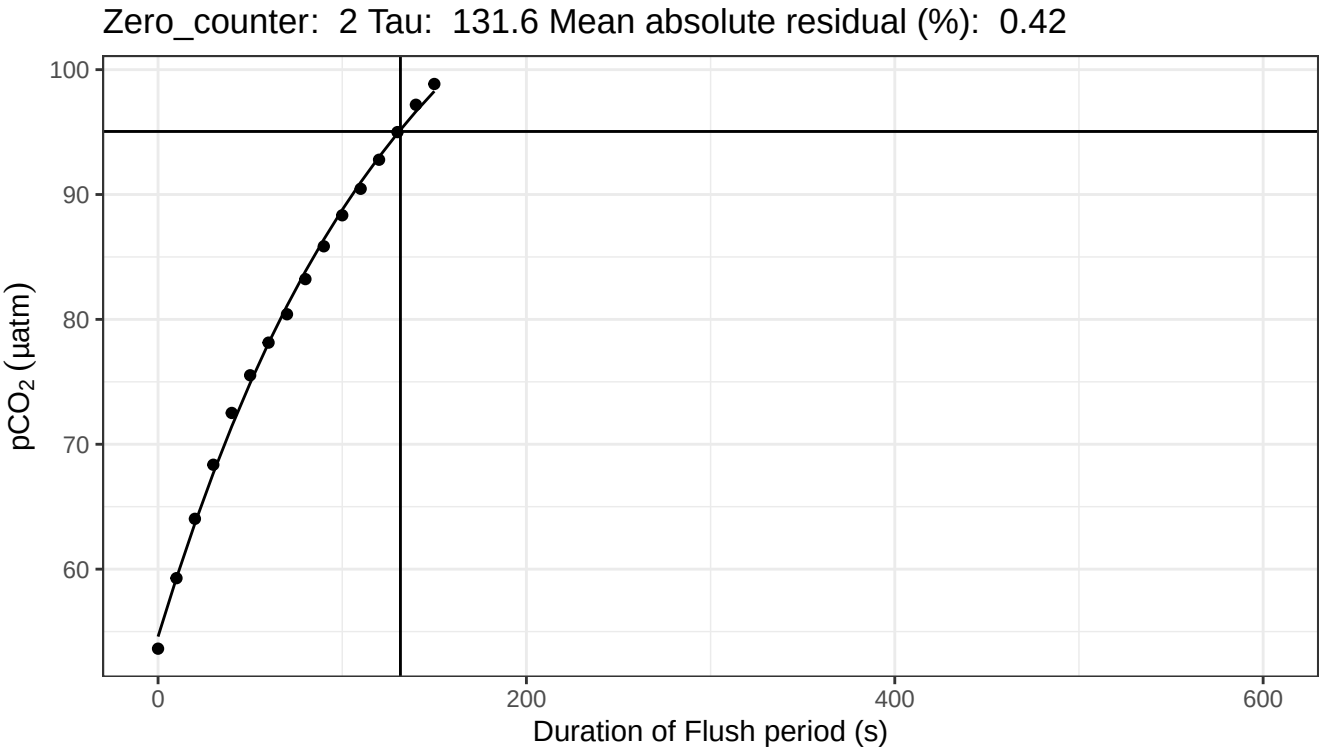

Zero_counter: 1 Tau: 93.1 Mean absolute residual (%): 2.45
130
120
110
100
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

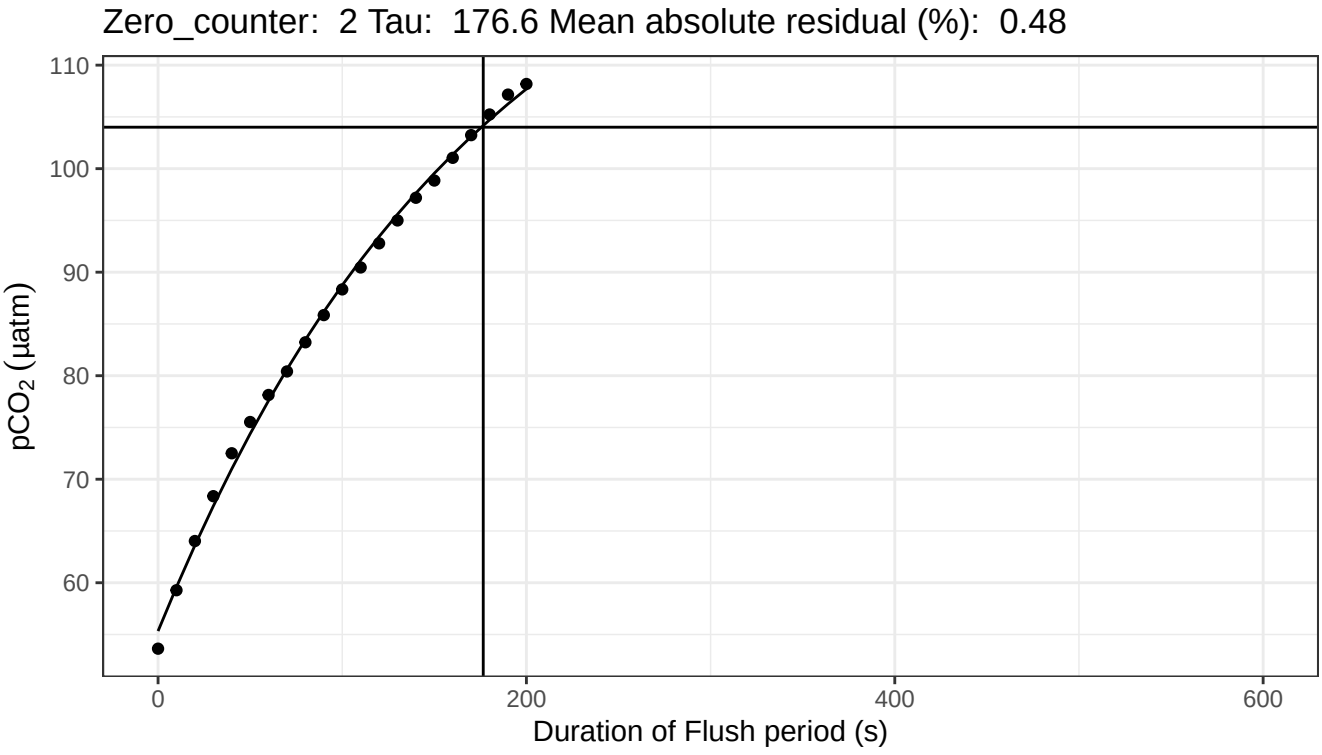

Zero_counter: 1 Tau: 159.6 Mean absolute residual (%): 2.28
130
120
110
100
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

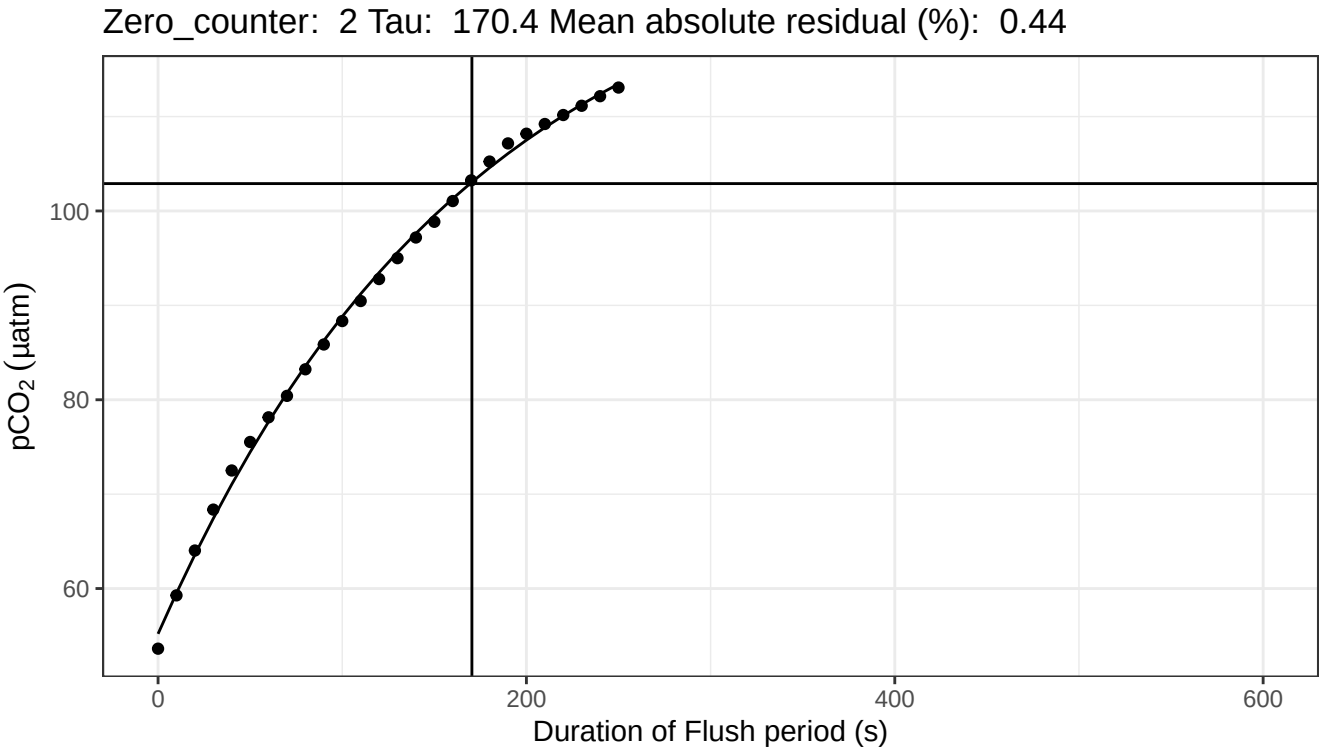

Zero_counter: 1 Tau: 189.1 Mean absolute residual (%): 1.97
130
120
110
100
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

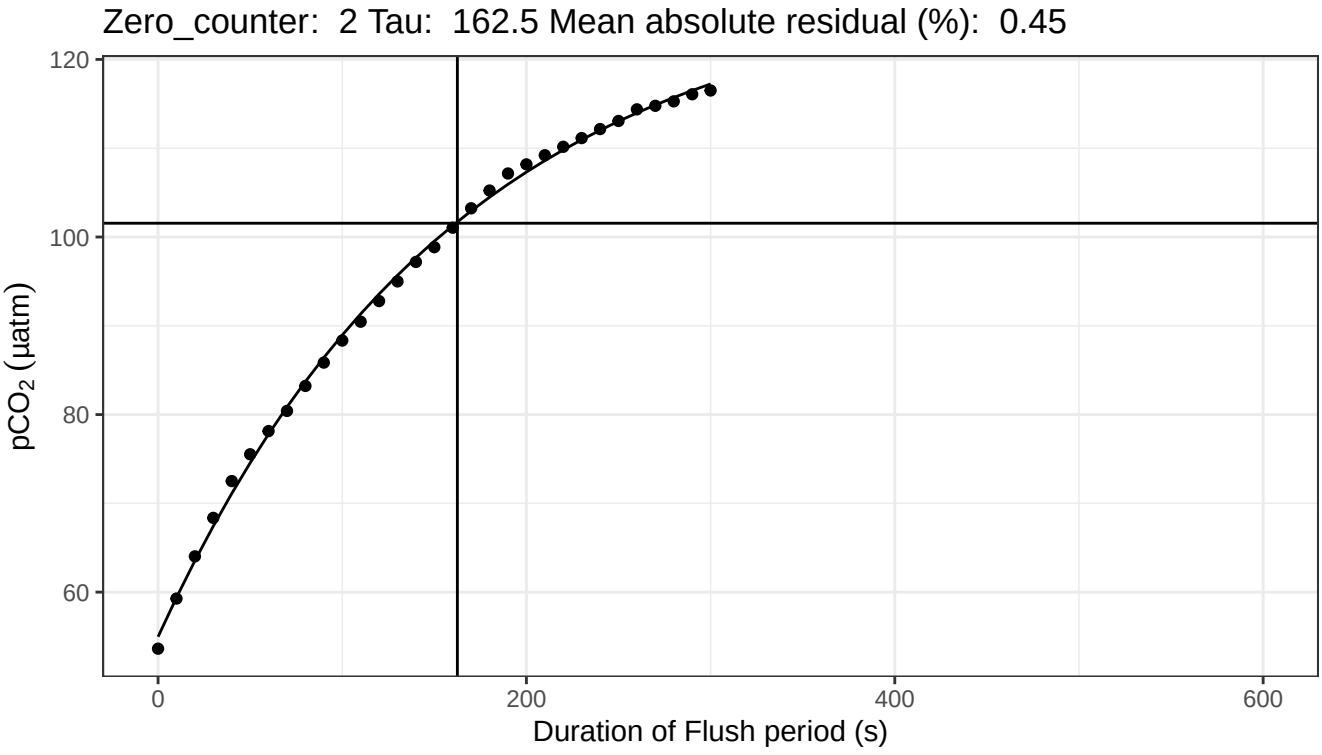

Zero_counter: 1 Tau: 196.7 Mean absolute residual (%): 1.74
130
120
110
100
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

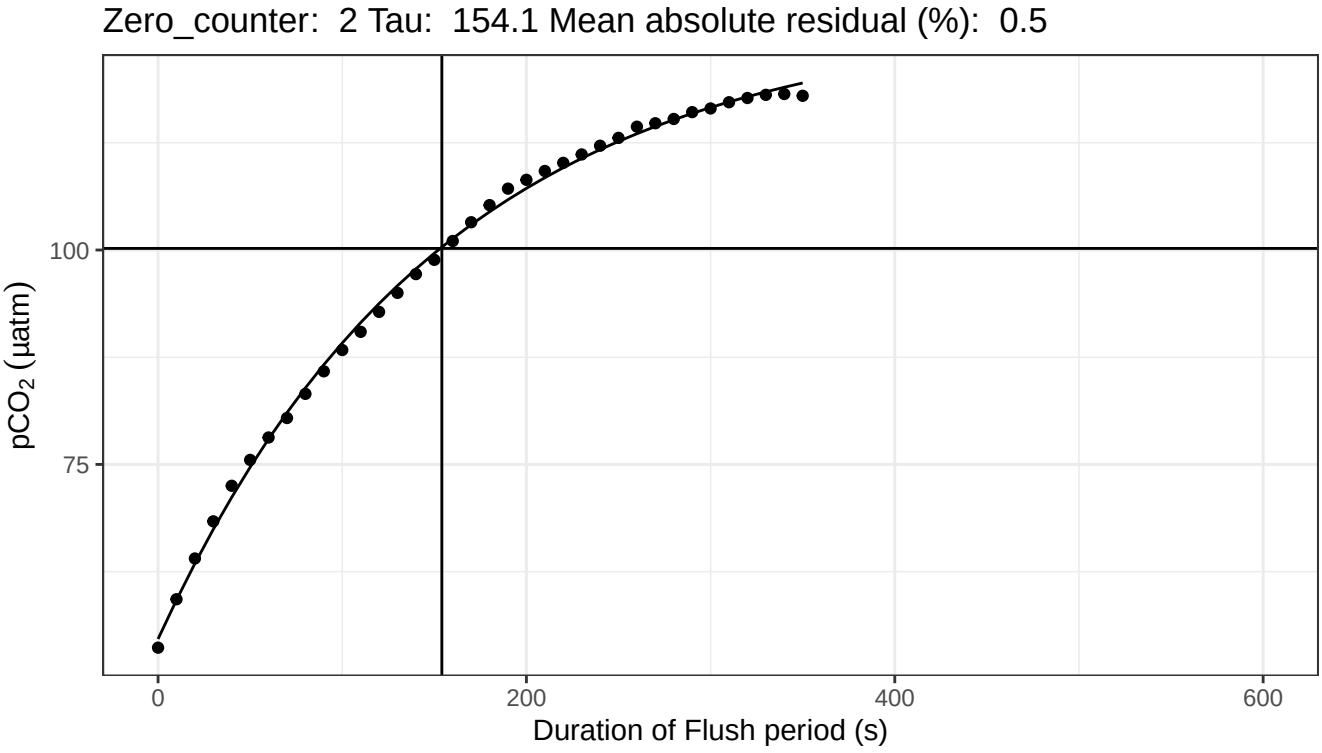

Zero_counter: 1 Tau: 192.3 Mean absolute residual (%): 1.63
130
120
110
100
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

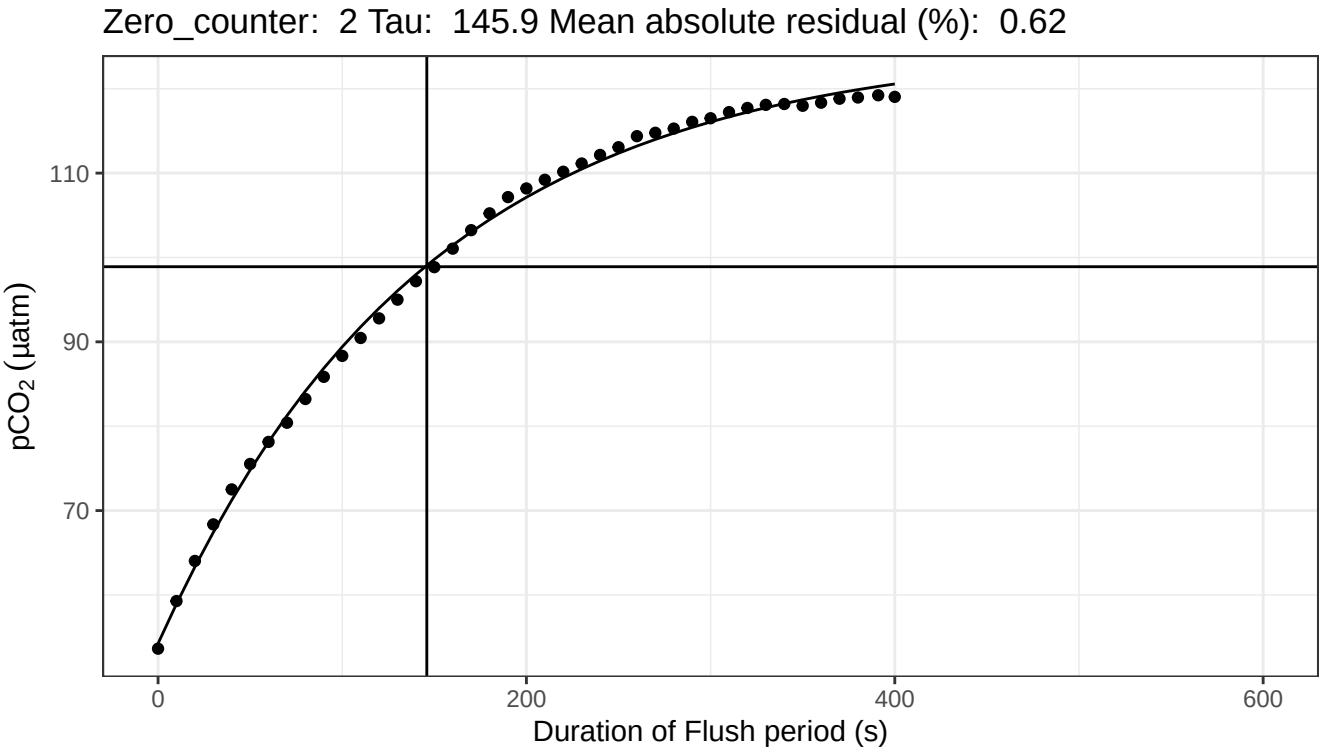

Zero_counter: 2 Tau: 131.6 Mean absolute residual (%): 0.42
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

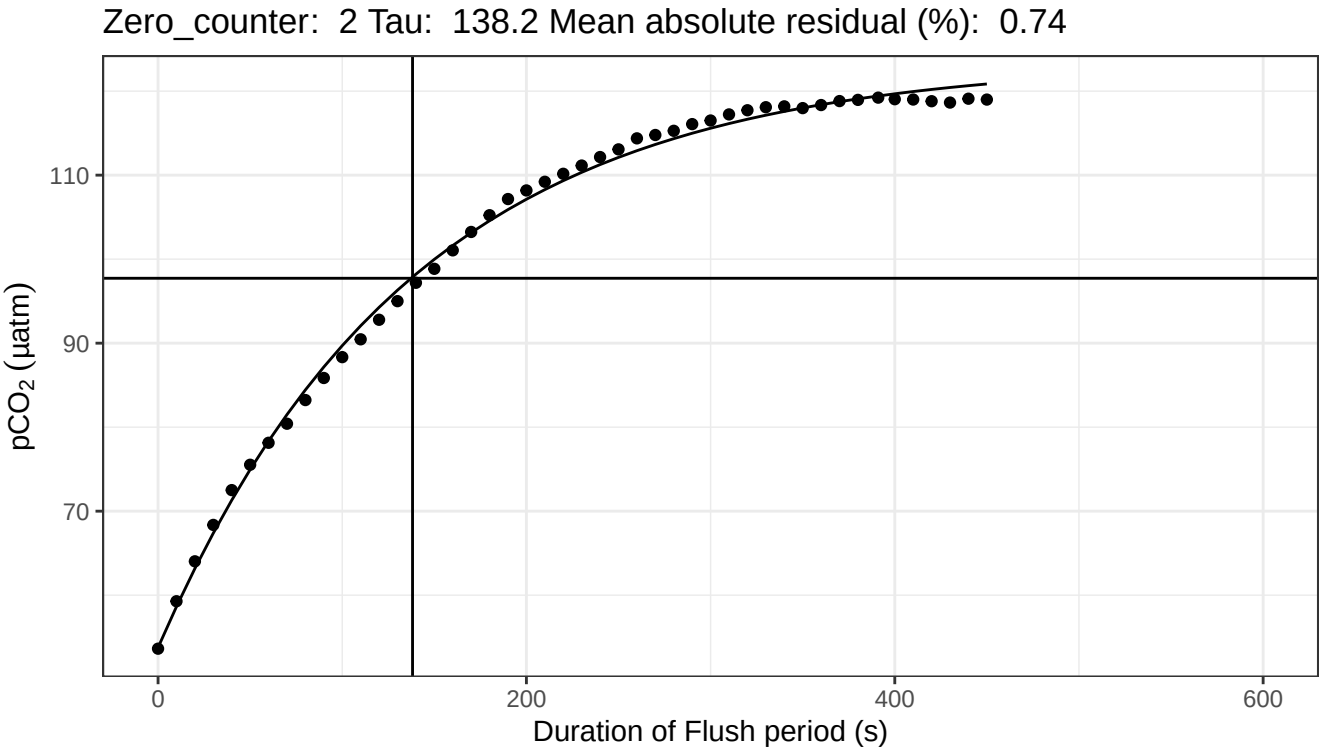

Zero_counter: 2 Tau: 176.6 Mean absolute residual (%): 0.48
110
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

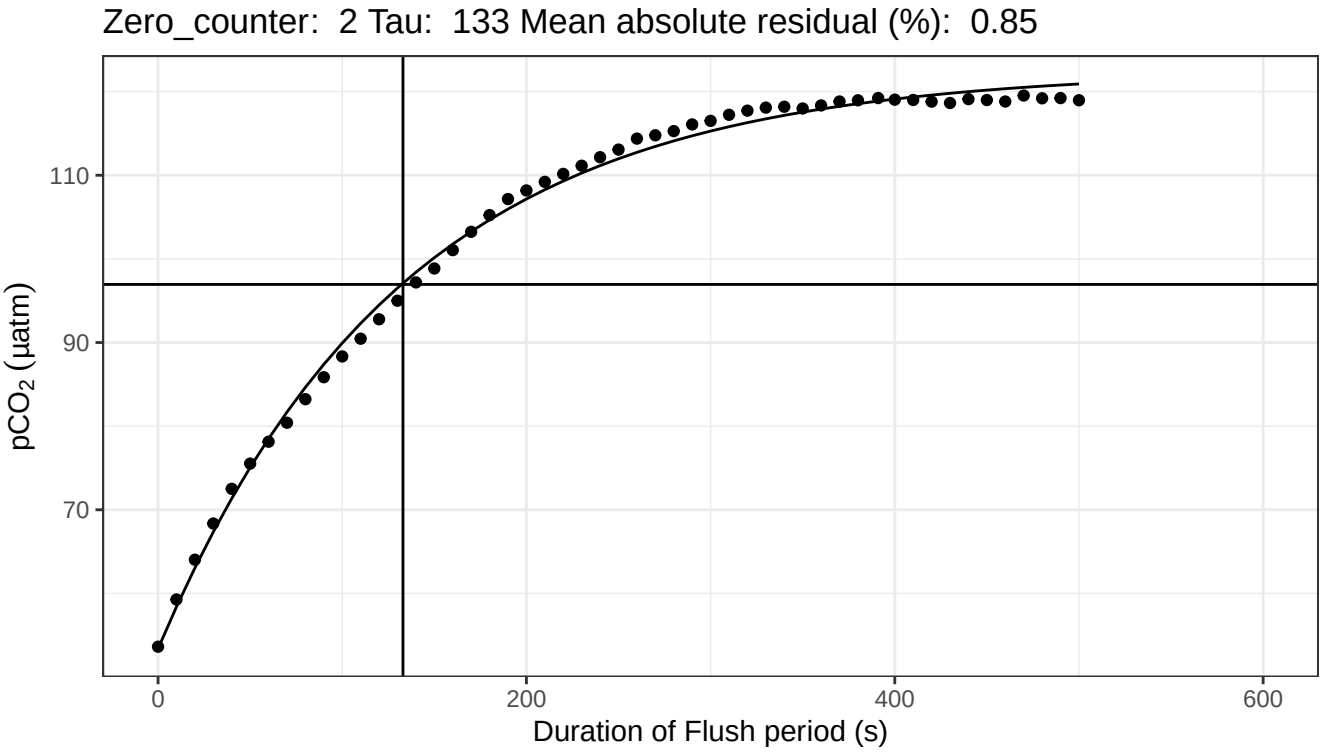

Zero_counter: 2 Tau: 170.4 Mean absolute residual (%): 0.44
pCO2 (µatm)
100
80
60
0
200
400
600
Duration of Flush period (s)


Zero_counter: 2 Tau: 162.5 Mean absolute residual (%): 0.45
120
100
80
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

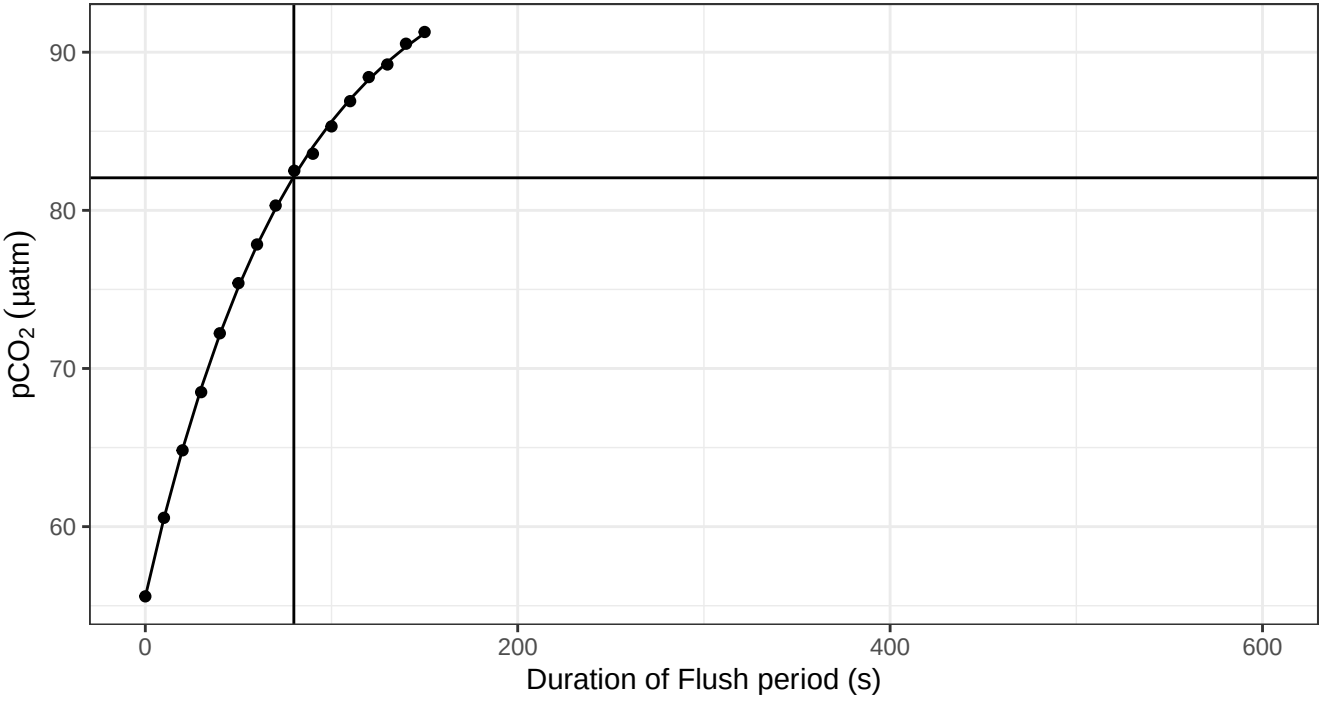

Zero_counter: 2 Tau: 154.1 Mean absolute residual (%): 0.5
100
75
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 2 Tau: 145.9 Mean absolute residual (%): 0.62
110
90
70
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

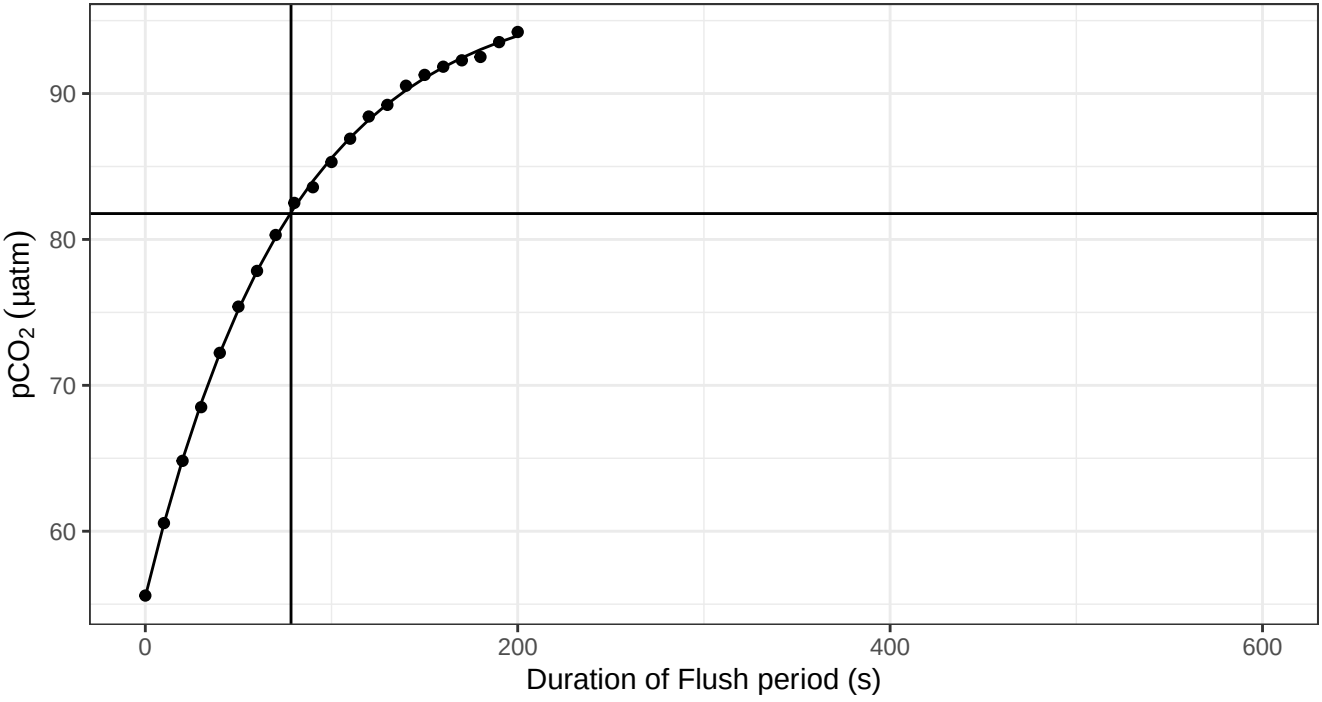

Zero_counter: 2 Tau: 138.2 Mean absolute residual (%): 0.74
110
90
70
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 2 Tau: 133 Mean absolute residual (%): 0.85
110
90
70
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

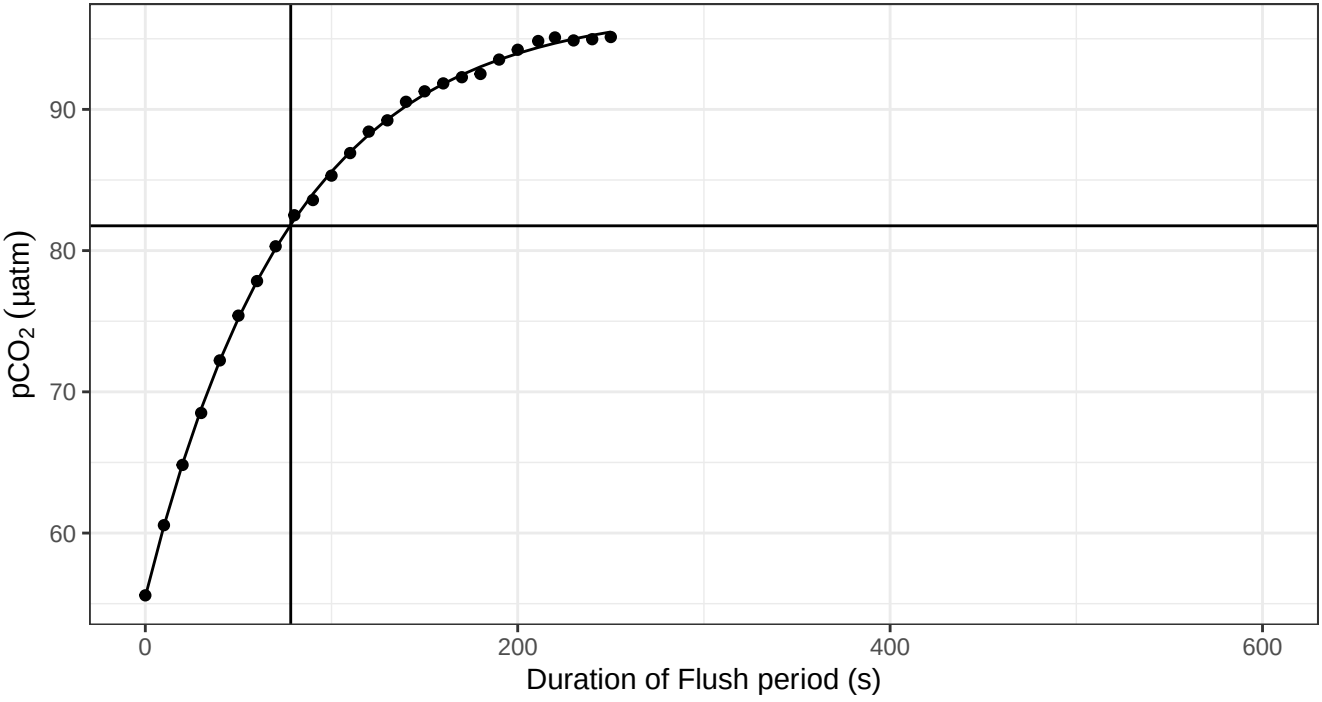
Zero_counter: 3 Tau: 79.8 Mean absolute residual (%): 0.17

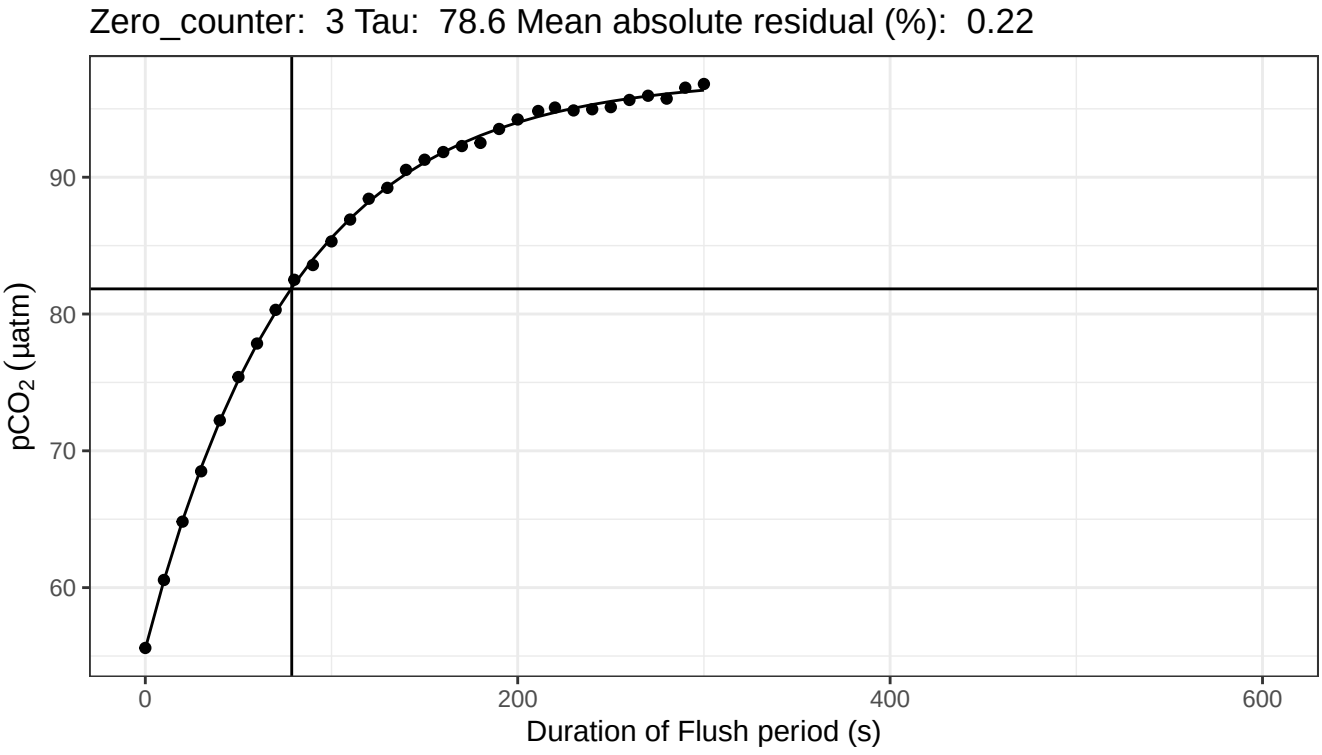


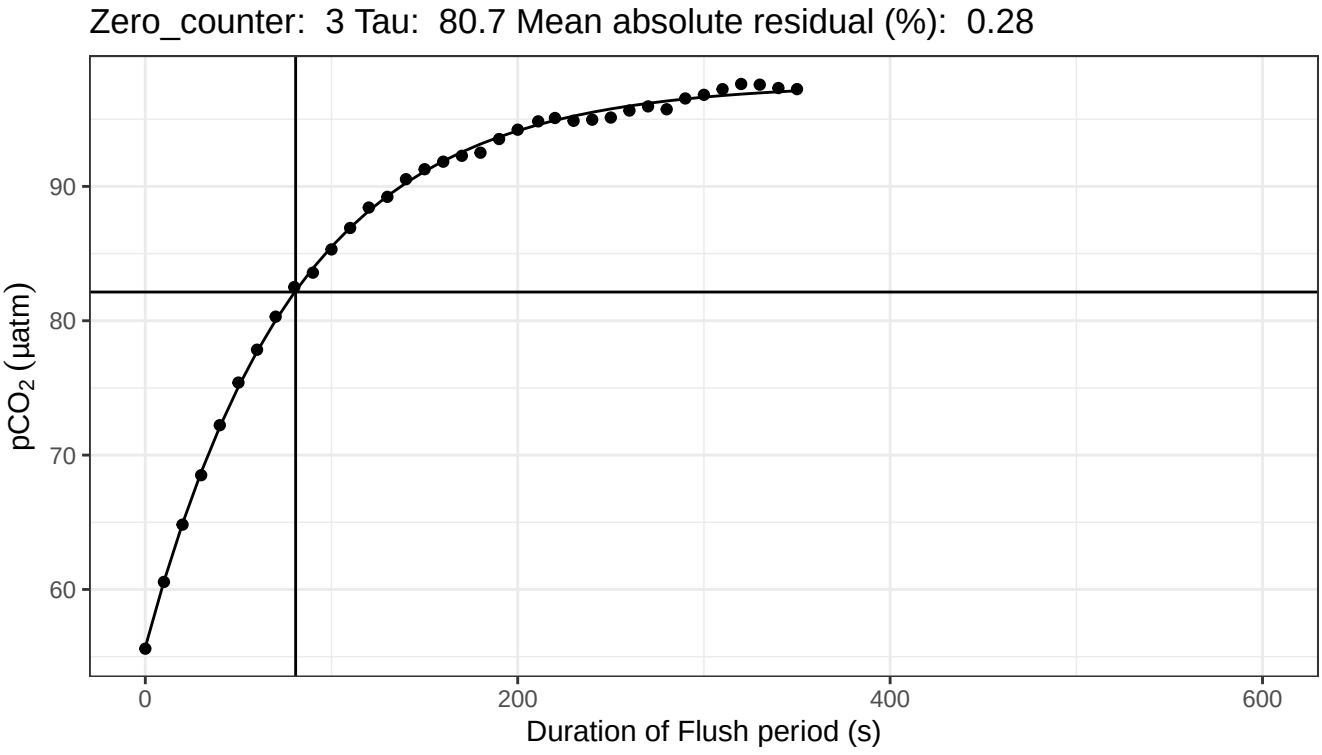
Zero_counter: 3 Tau: 78.3 Mean absolute residual (%): 0.18



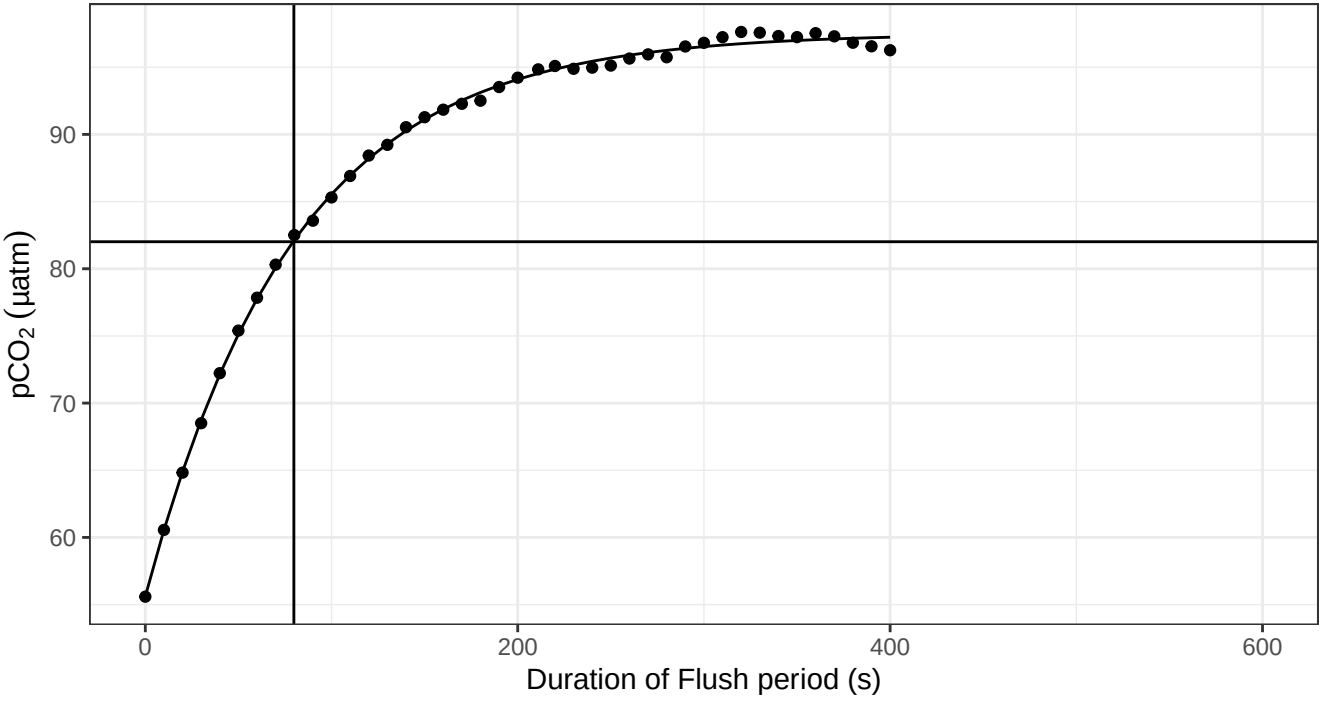
Zero_counter: 3 Tau: 78.1 Mean absolute residual (%): 0.21

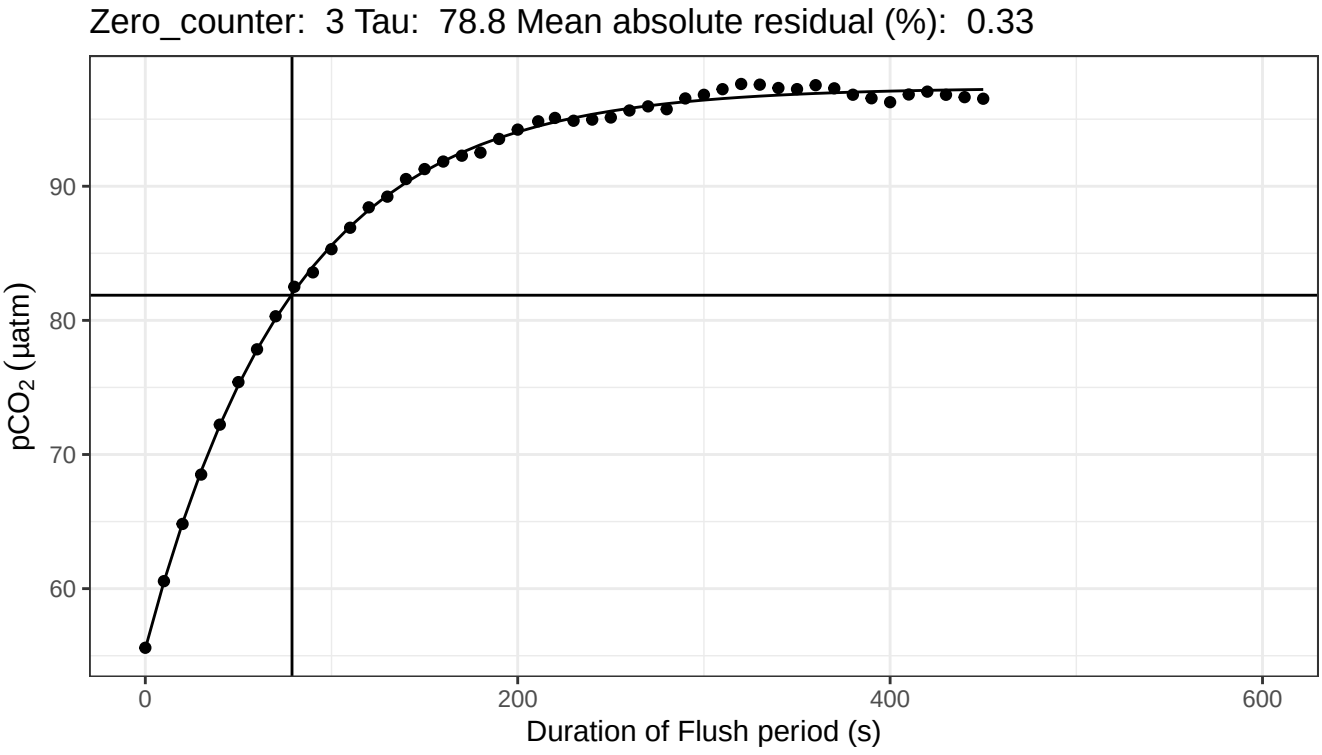


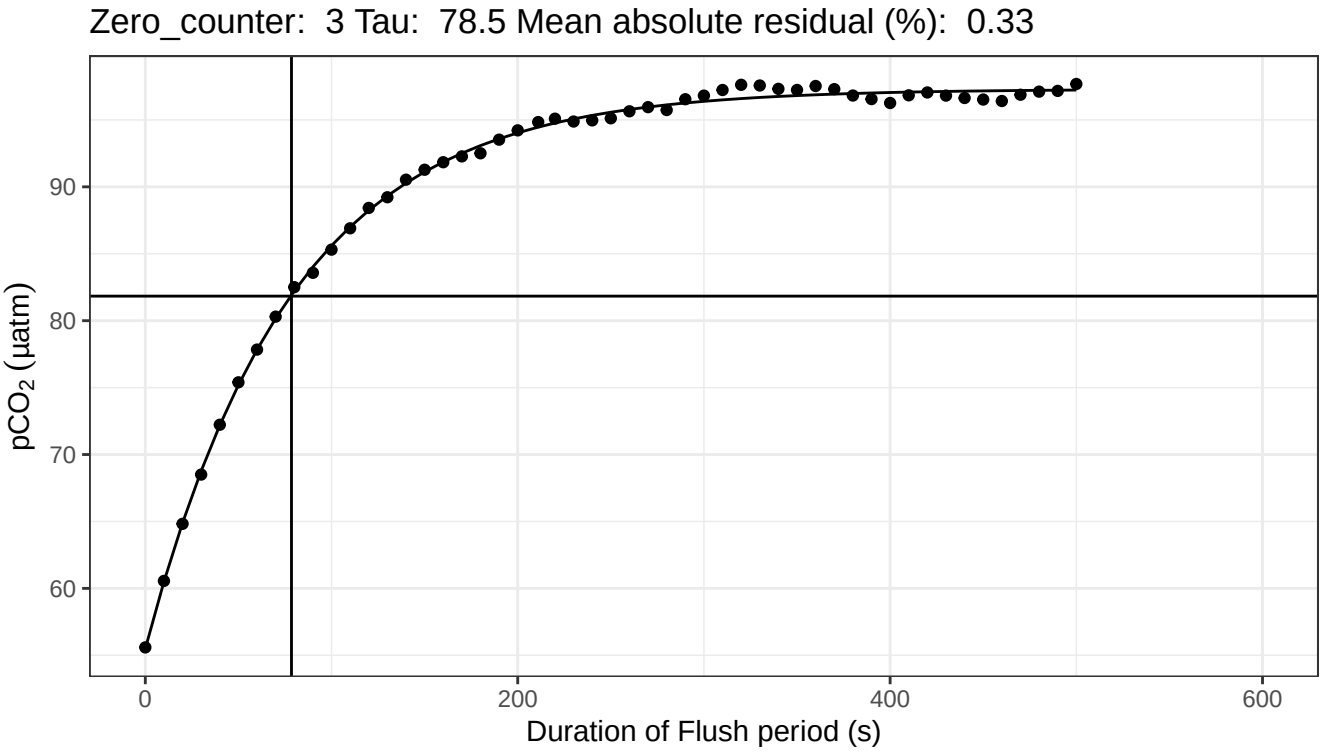

Zero_counter: 3 Tau: 78.6 Mean absolute residual (%): 0.22
pCO2 (µatm)
90
80
70
60
0
200
400
600
Duration of Flush period (s)


Zero_counter: 3 Tau: 80.7 Mean absolute residual (%): 0.28
pCO2 (µatm)
90
80
70
60
0
200
400
600
Duration of Flush period (s)

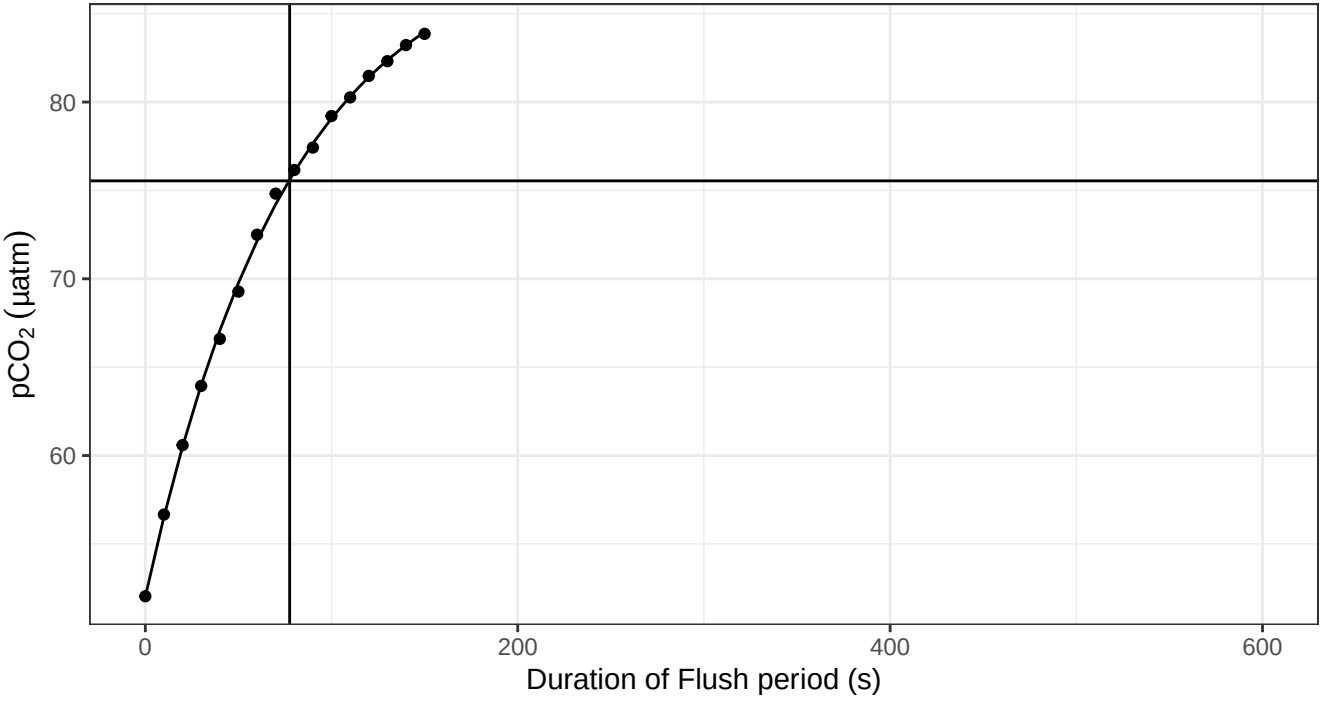
Zero_counter: 3 Tau: 79.8 Mean absolute residual (%): 0.31



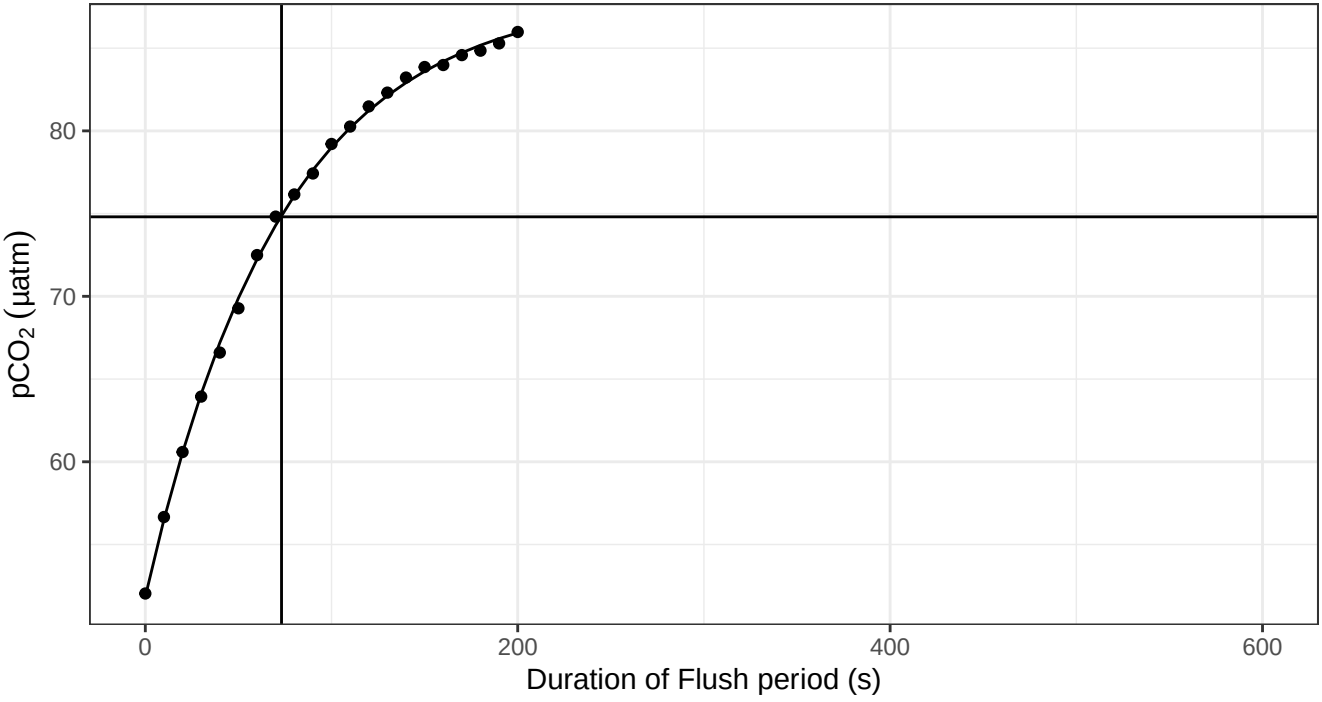

Zero_counter: 3 Tau: 78.8 Mean absolute residual (%): 0.33
pCO2 (µatm)
90
80
70
60
0
200
400
600
Duration of Flush period (s)


Zero_counter: 3 Tau: 78.5 Mean absolute residual (%): 0.33
pCO2 (µatm)
90
80
70
60
0
200
400
600
Duration of Flush period (s)

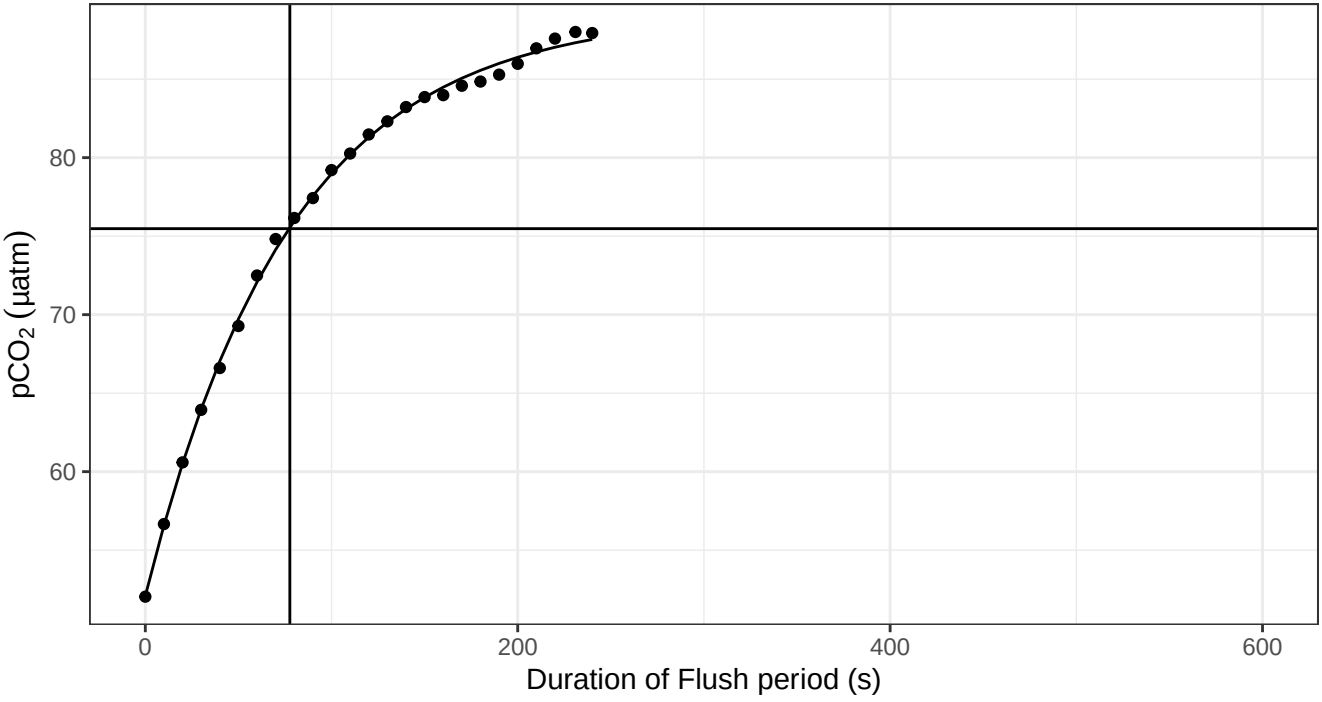
Zero_counter: 4 Tau: 77.5 Mean absolute residual (%): 0.21

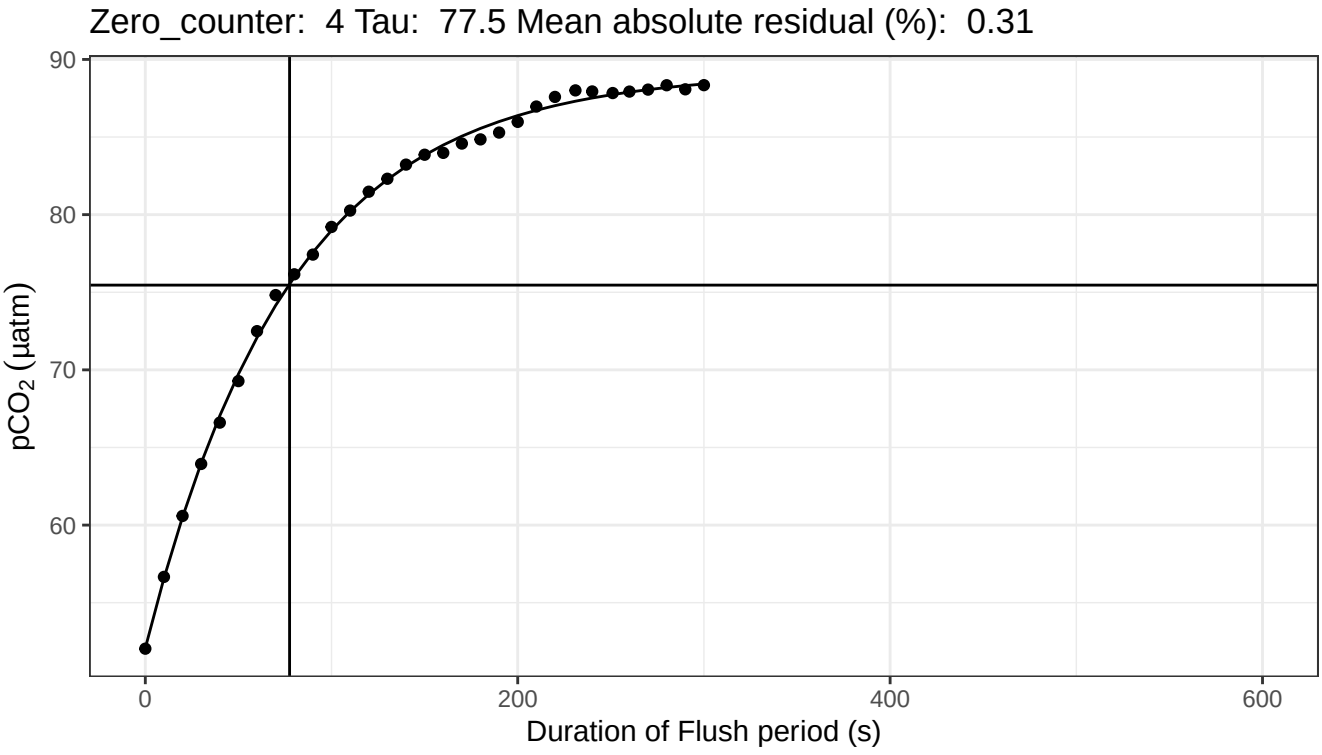


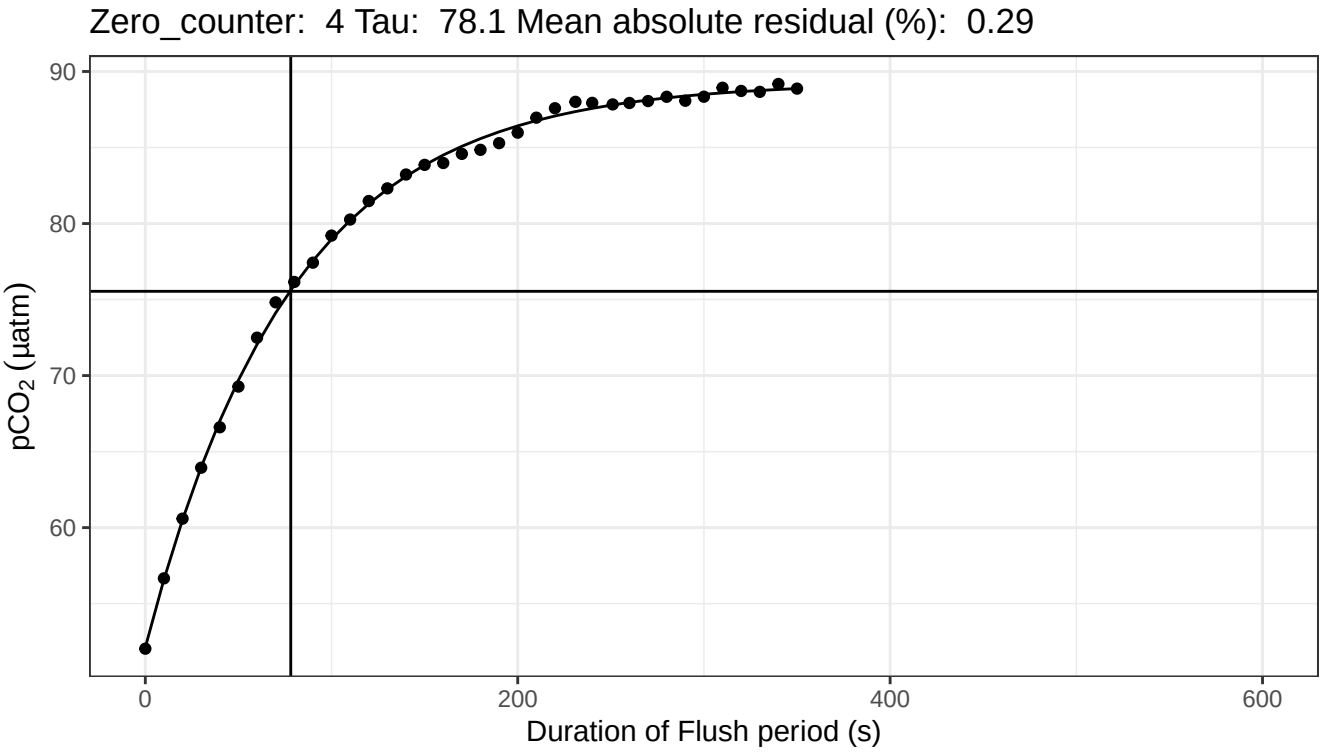
Zero_counter: 4 Tau: 73.1 Mean absolute residual (%): 0.28



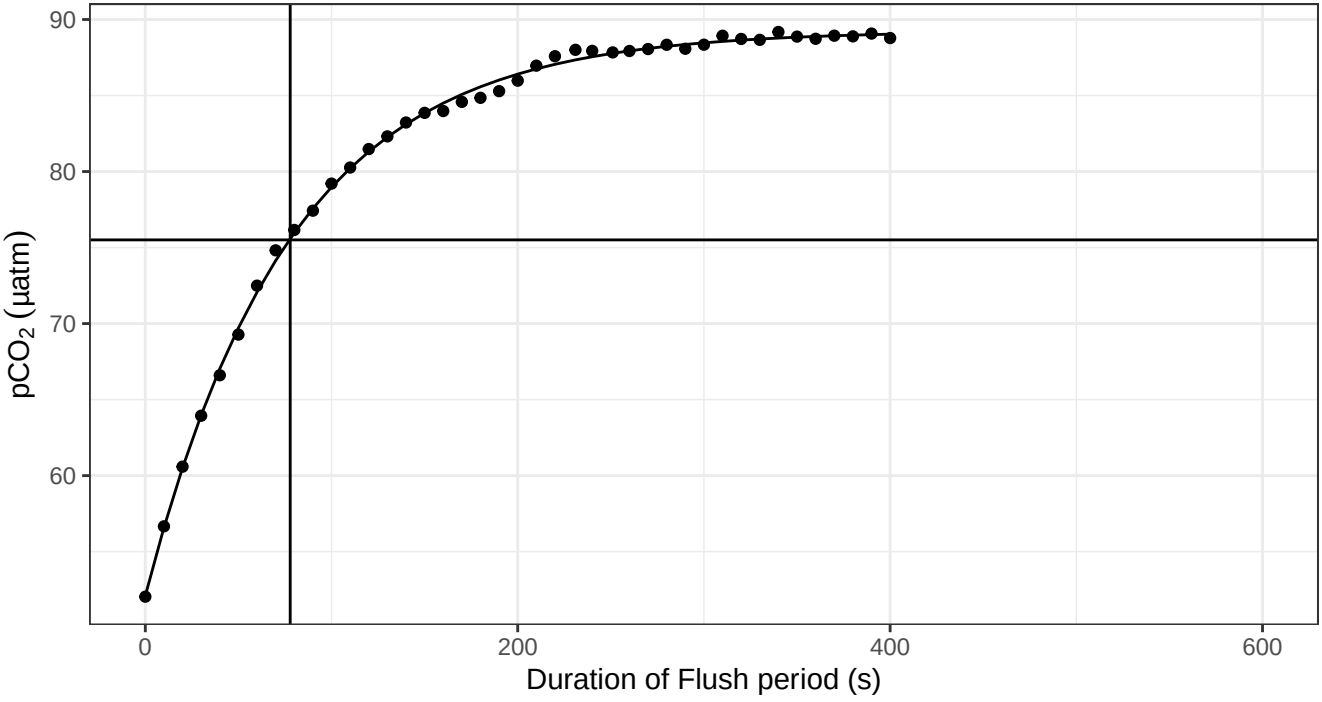
Zero_counter: 4 Tau: 77.6 Mean absolute residual (%): 0.35

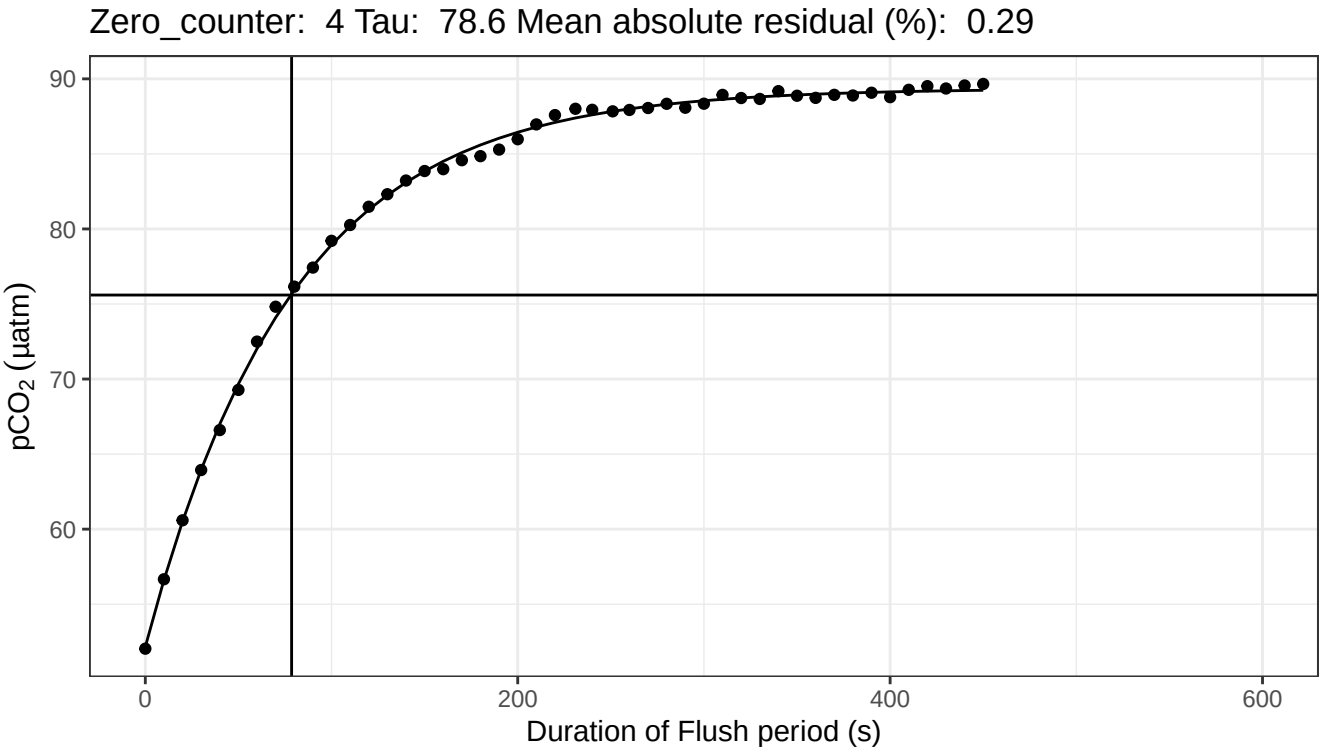



Zero_counter: 4 Tau: 77.5 Mean absolute residual (%): 0.31
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

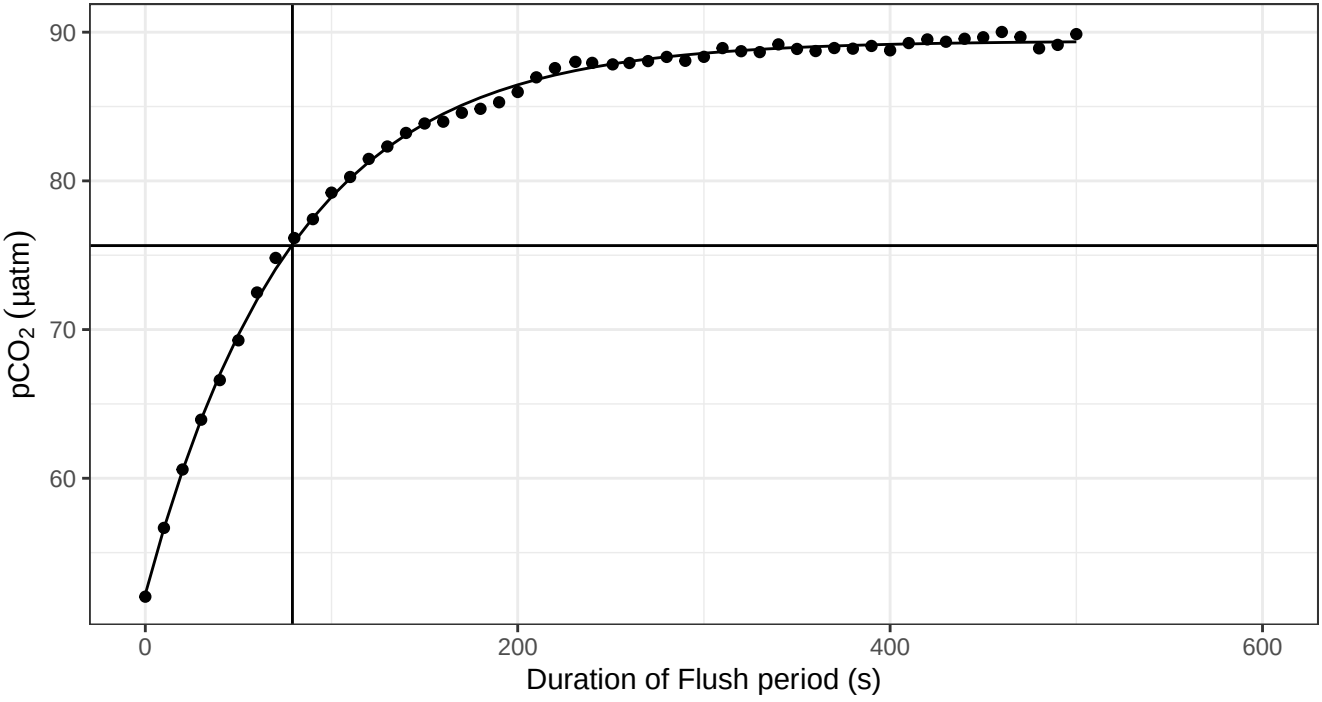

Zero_counter: 4 Tau: 78.1 Mean absolute residual (%): 0.29
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 4 Tau: 77.8 Mean absolute residual (%): 0.27

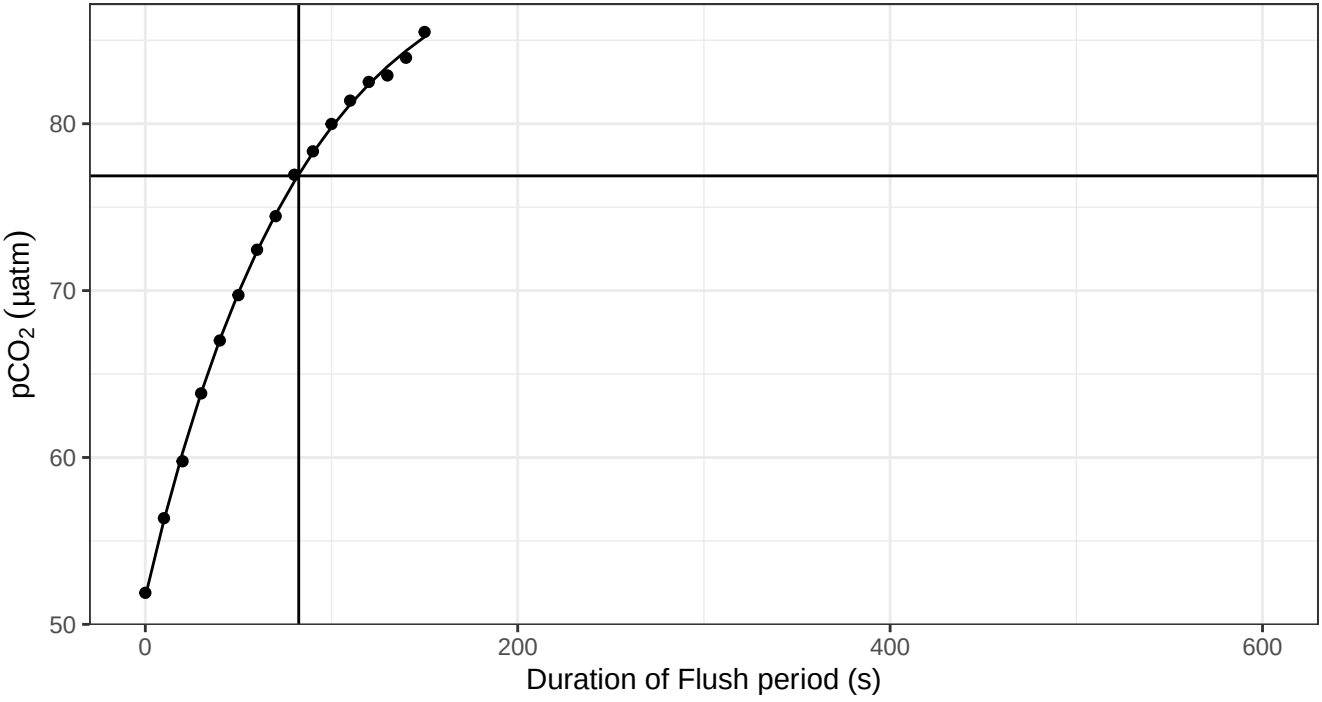



Zero_counter: 4 Tau: 78.6 Mean absolute residual (%): 0.29
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

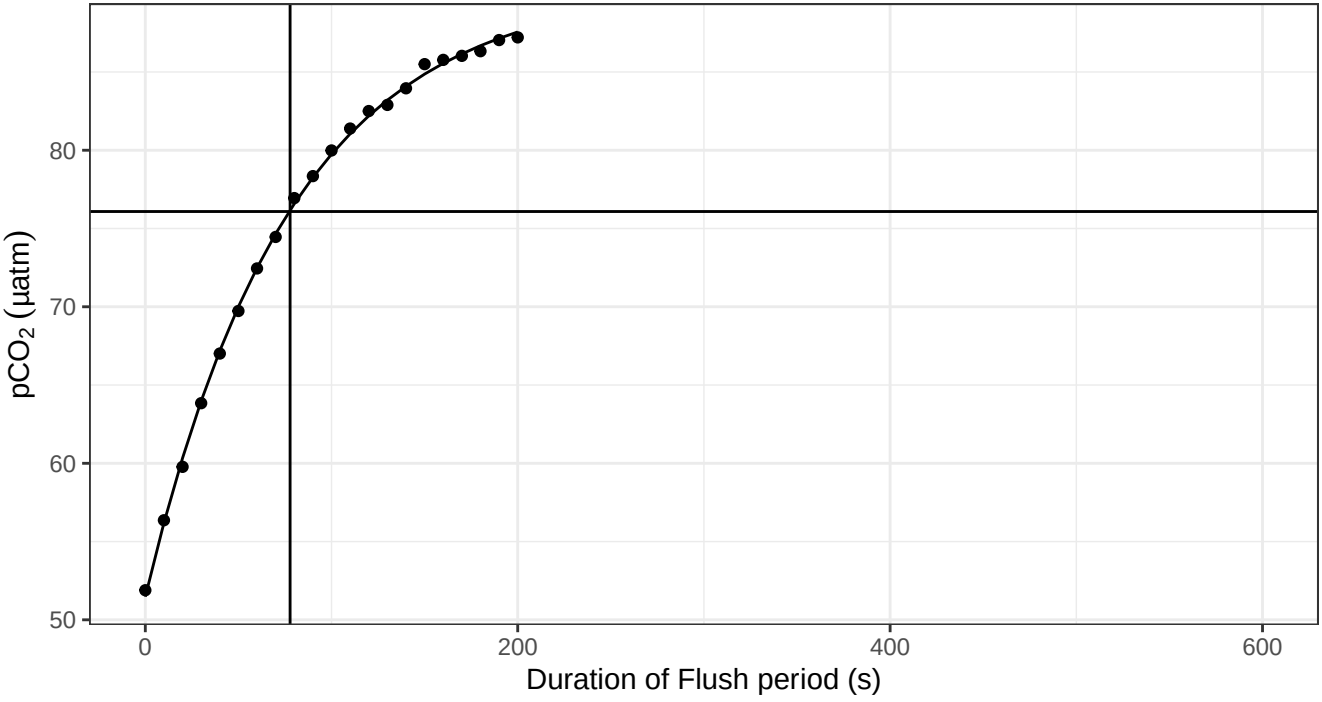
Zero_counter: 4 Tau: 79 Mean absolute residual (%): 0.31



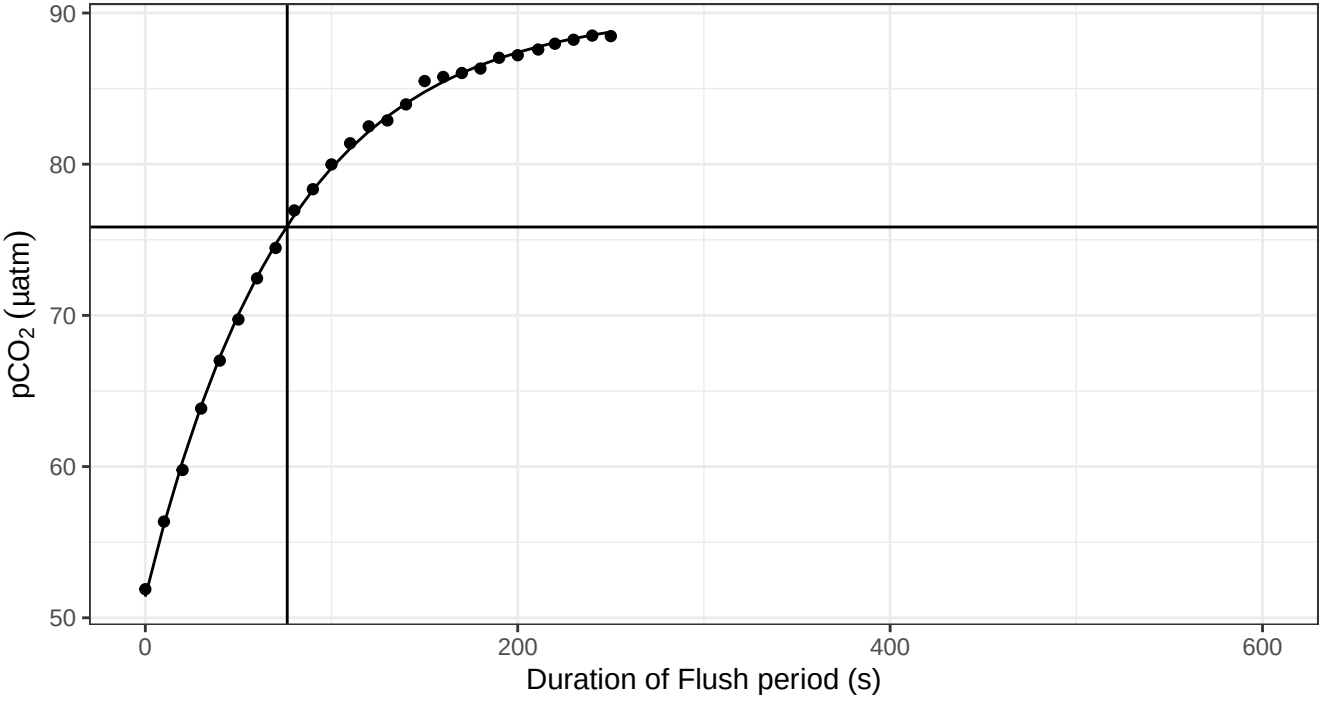
Zero_counter: 5 Tau: 82.4 Mean absolute residual (%): 0.24



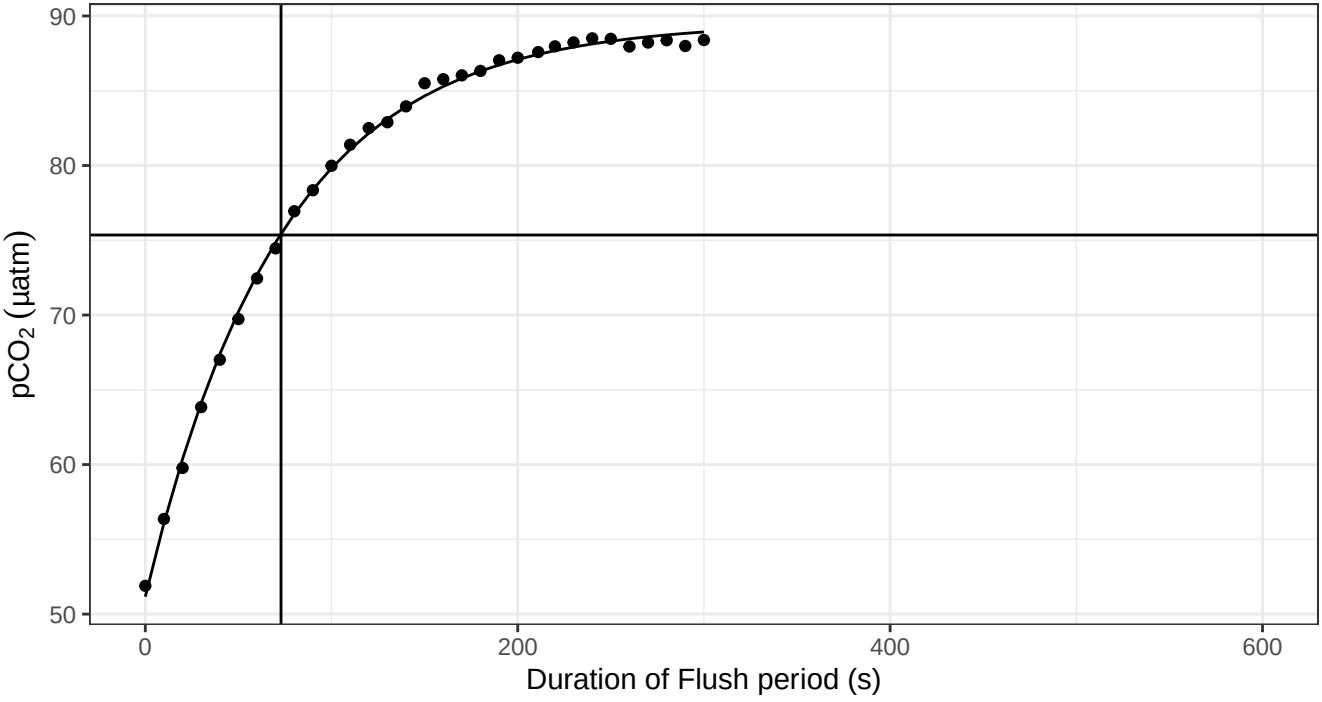
Zero_counter: 5 Tau: 77.7 Mean absolute residual (%): 0.29

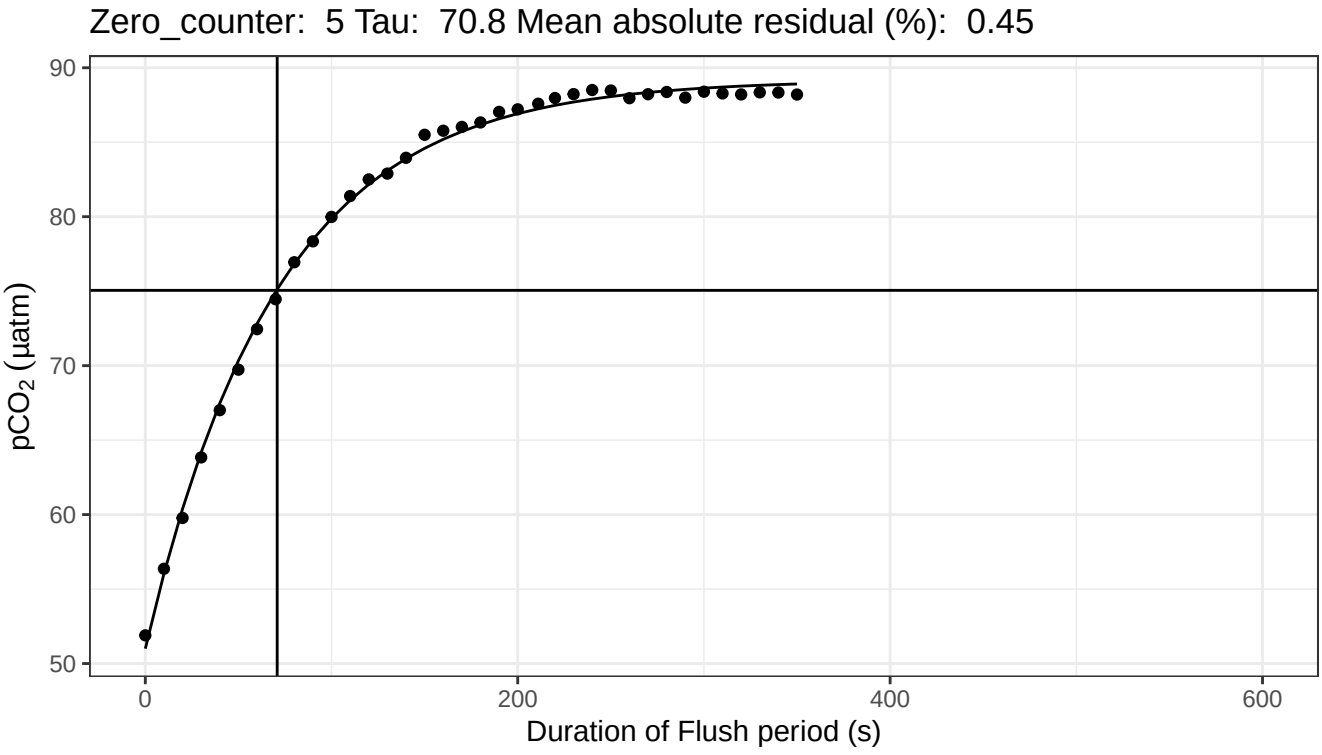


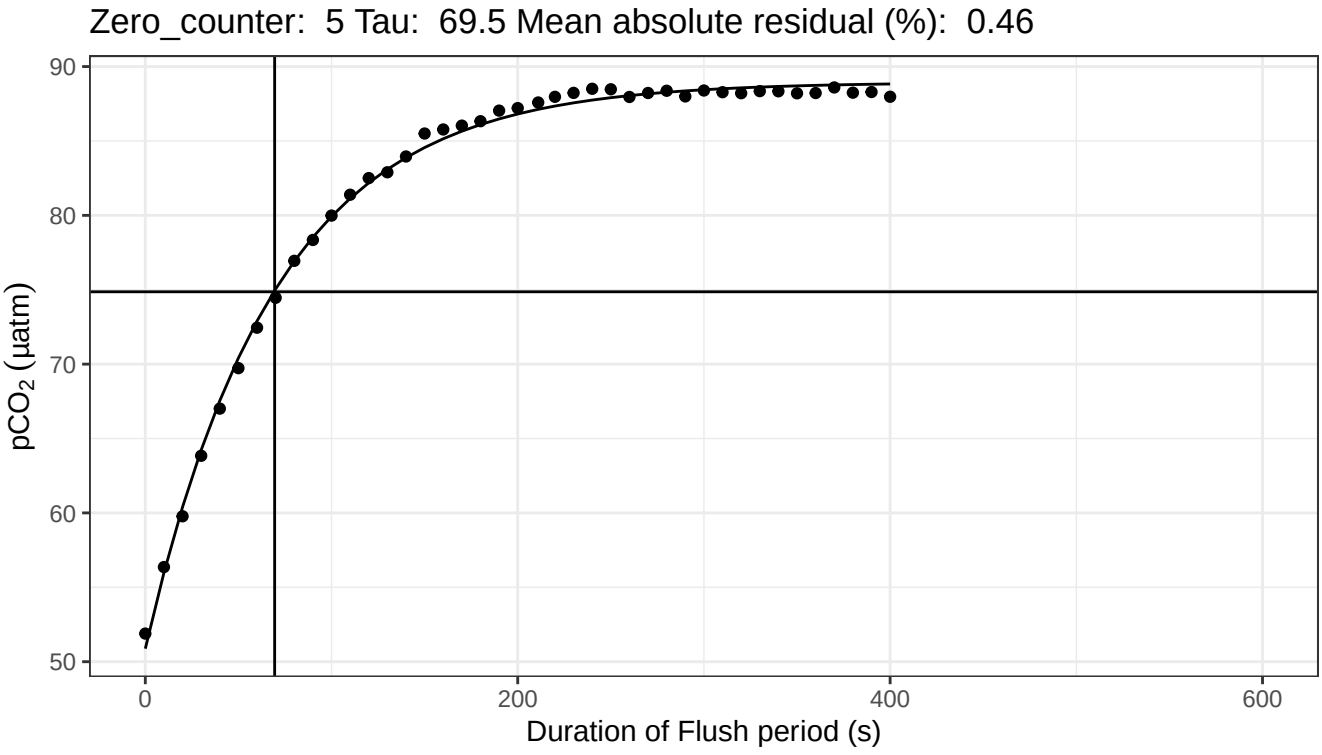
Zero_counter: 5 Tau: 76.2 Mean absolute residual (%): 0.26

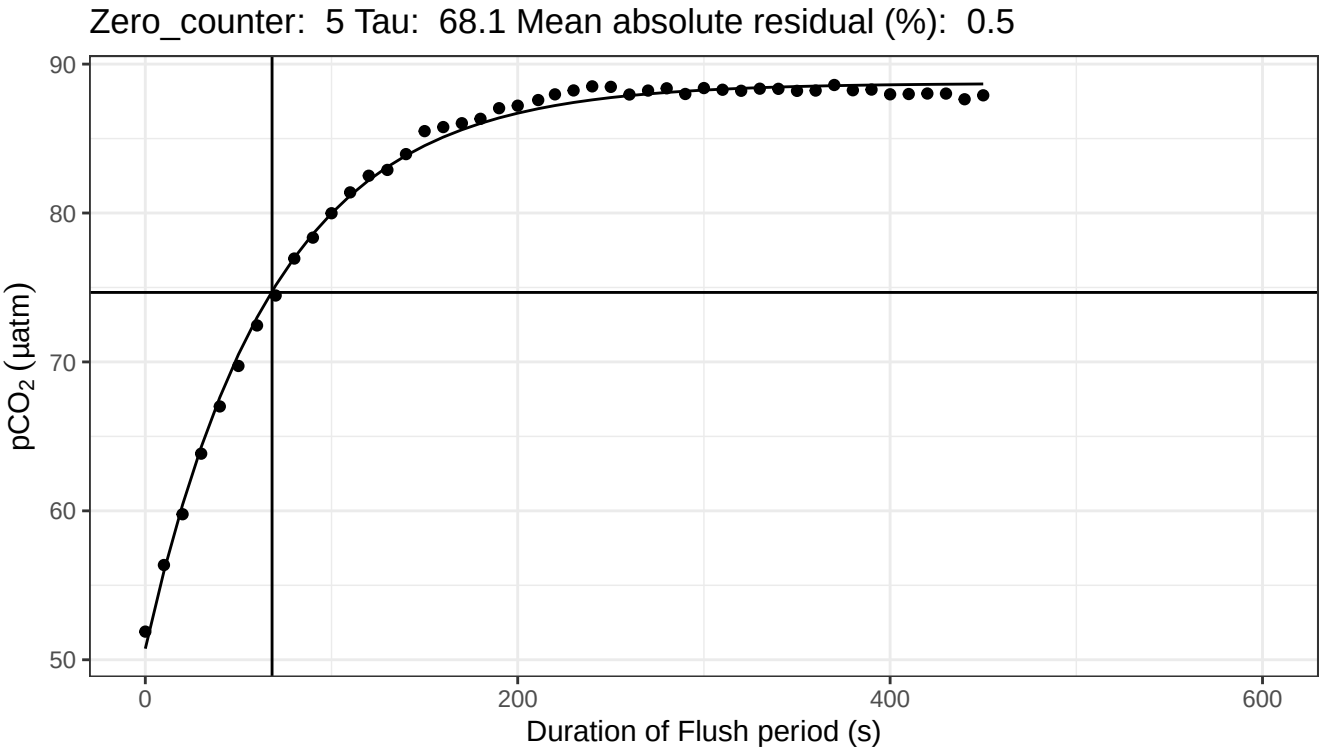


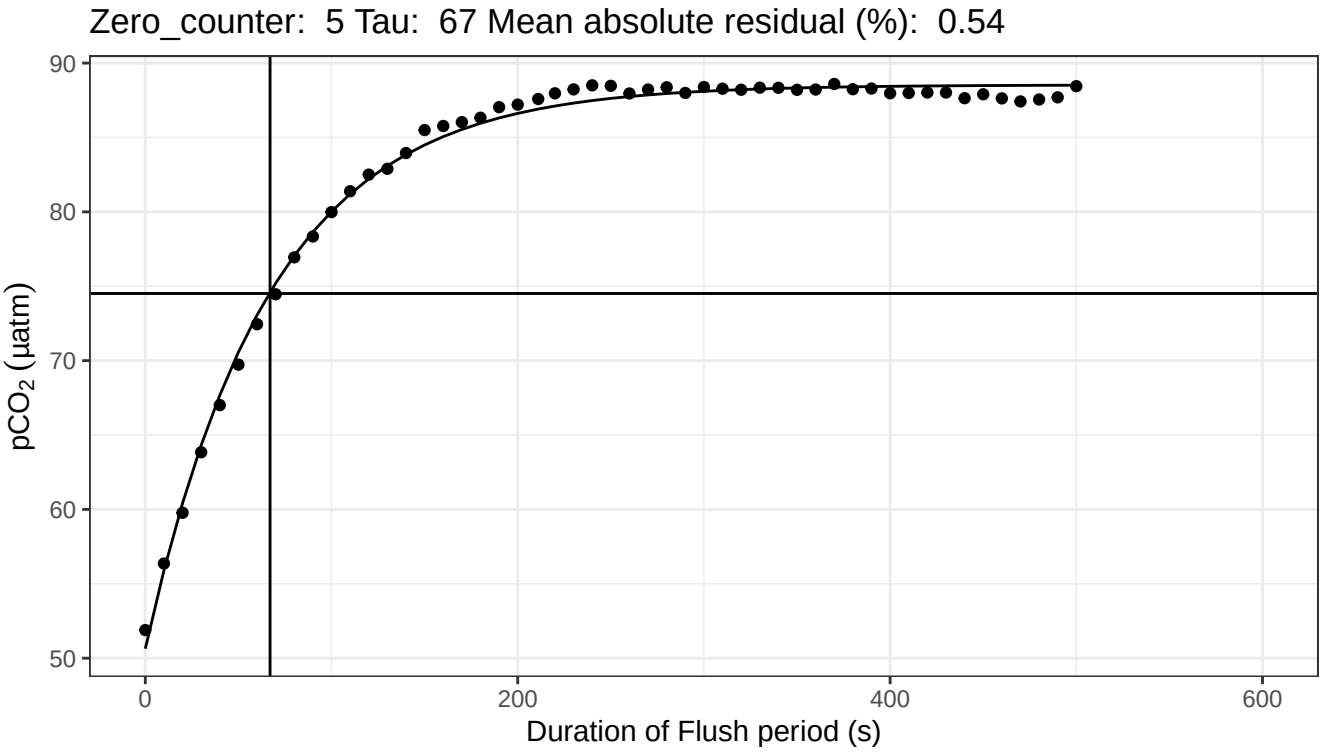
Zero_counter: 5 Tau: 72.9 Mean absolute residual (%): 0.38

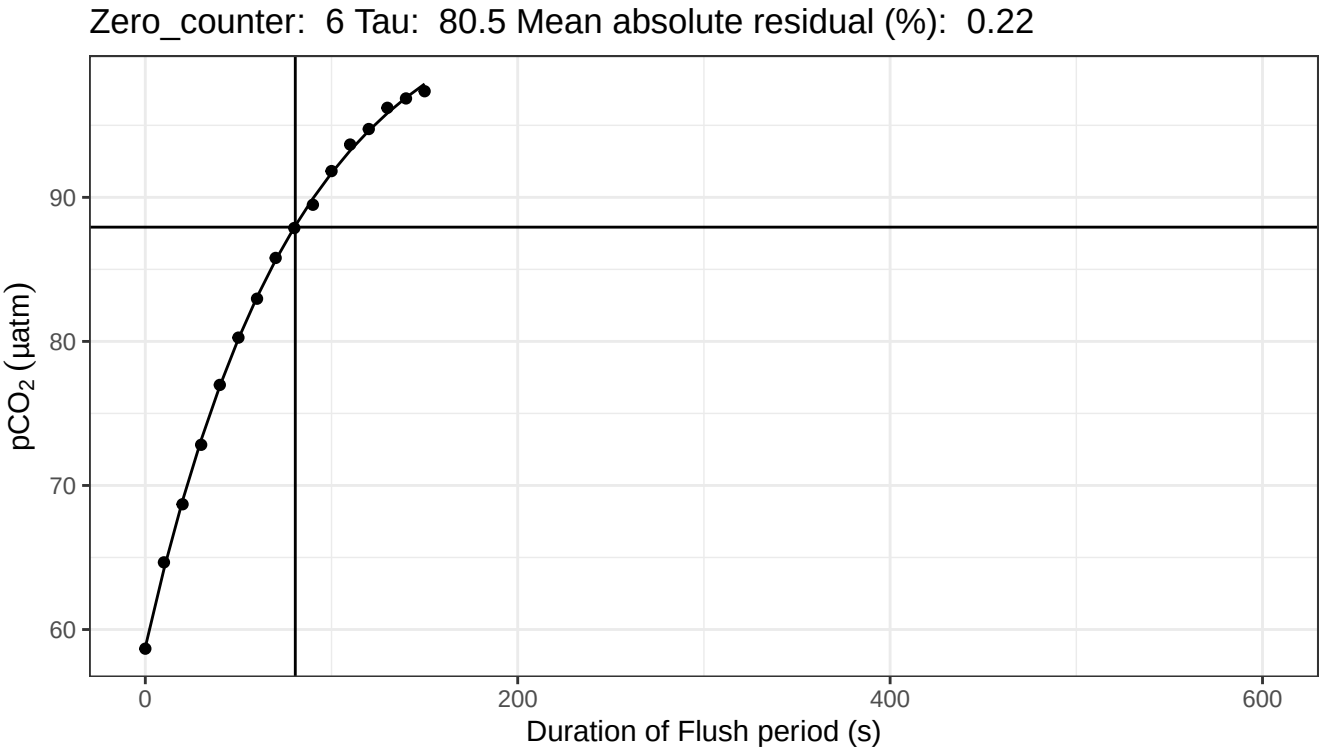


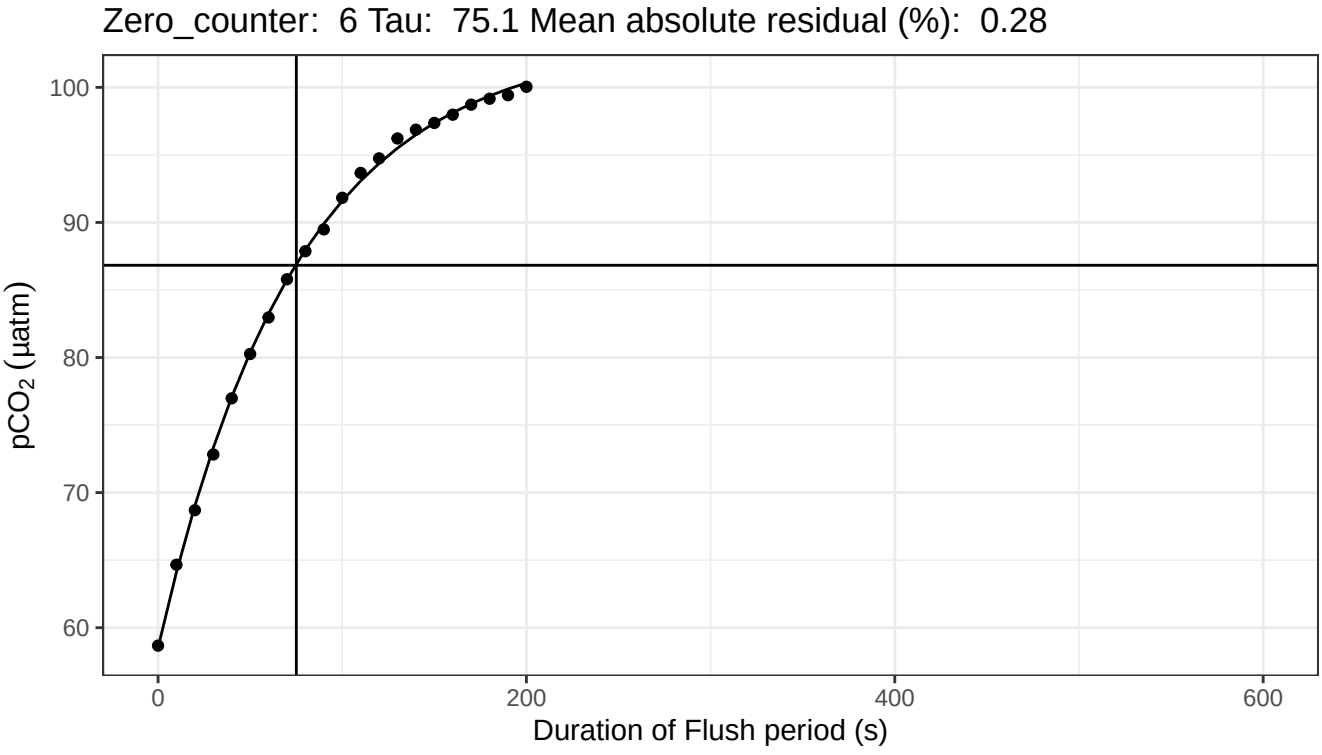

Zero_counter: 5 Tau: 70.8 Mean absolute residual (%): 0.45
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

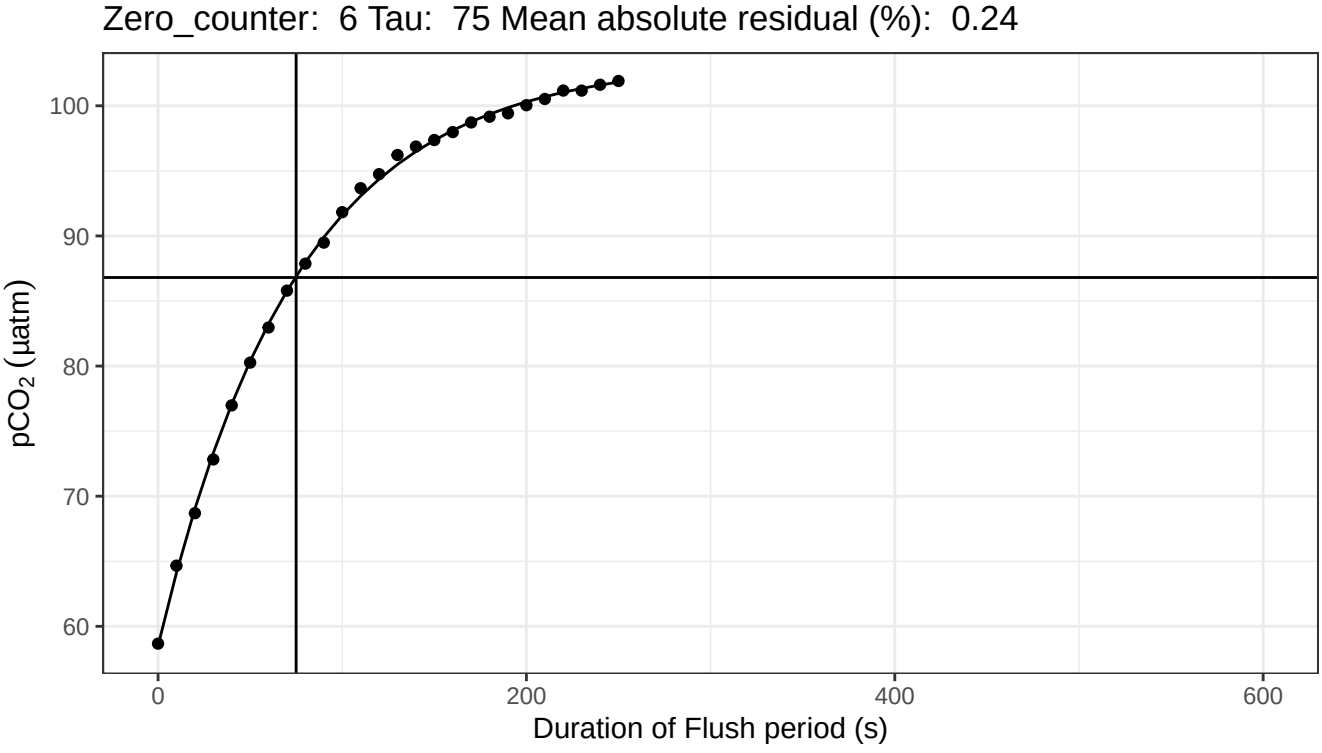

Zero_counter: 5 Tau: 69.5 Mean absolute residual (%): 0.46
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

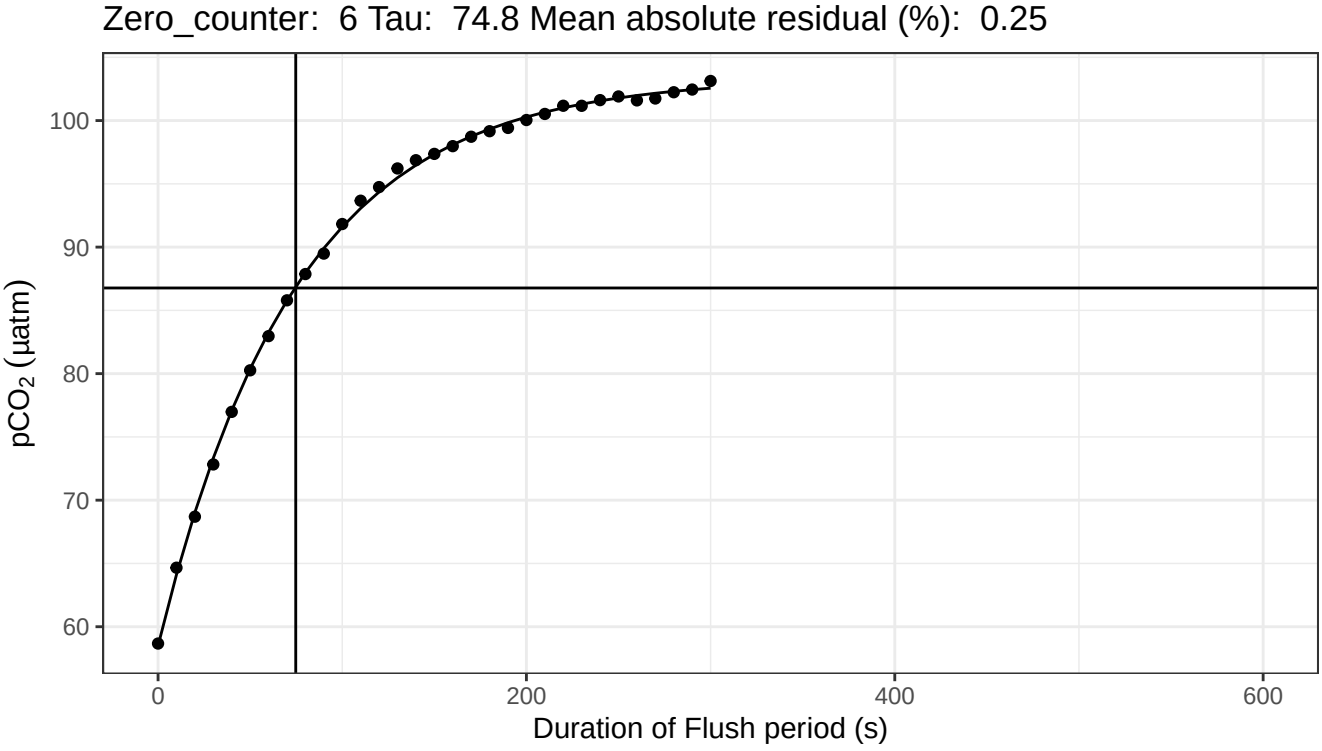

Zero_counter: 5 Tau: 68.1 Mean absolute residual (%): 0.5
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

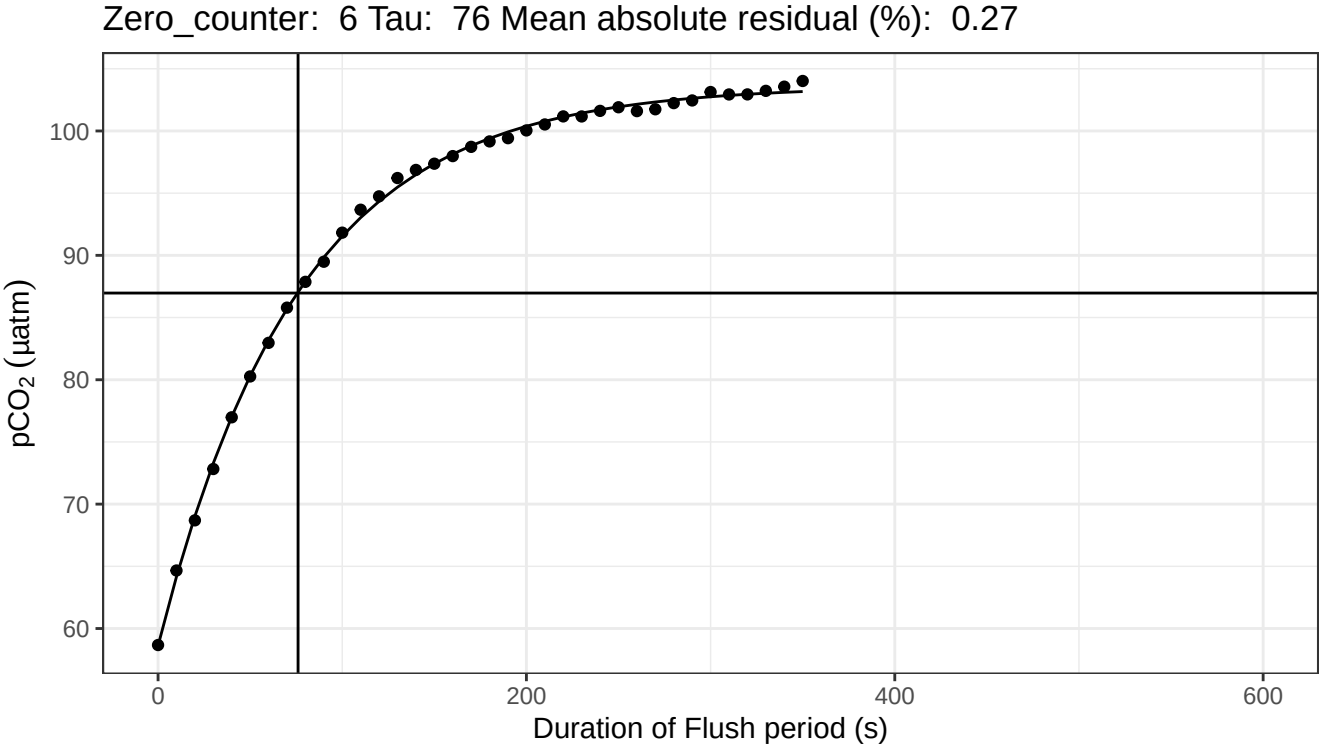

Zero_counter: 5 Tau: 67 Mean absolute residual (%): 0.54
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

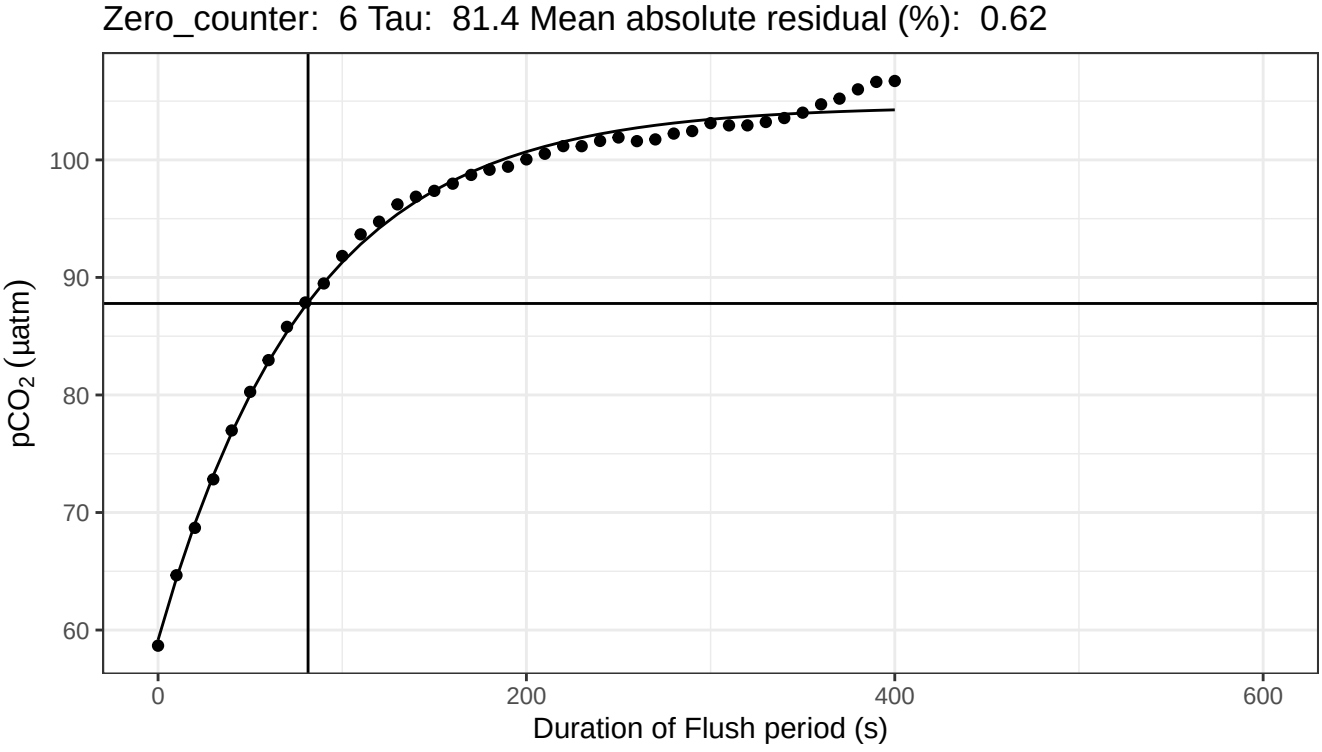

Zero_counter: 6 Tau: 80.5 Mean absolute residual (%): 0.22
pCO2 (µatm)
90
80
70
60
0
200
400
600
Duration of Flush period (s)

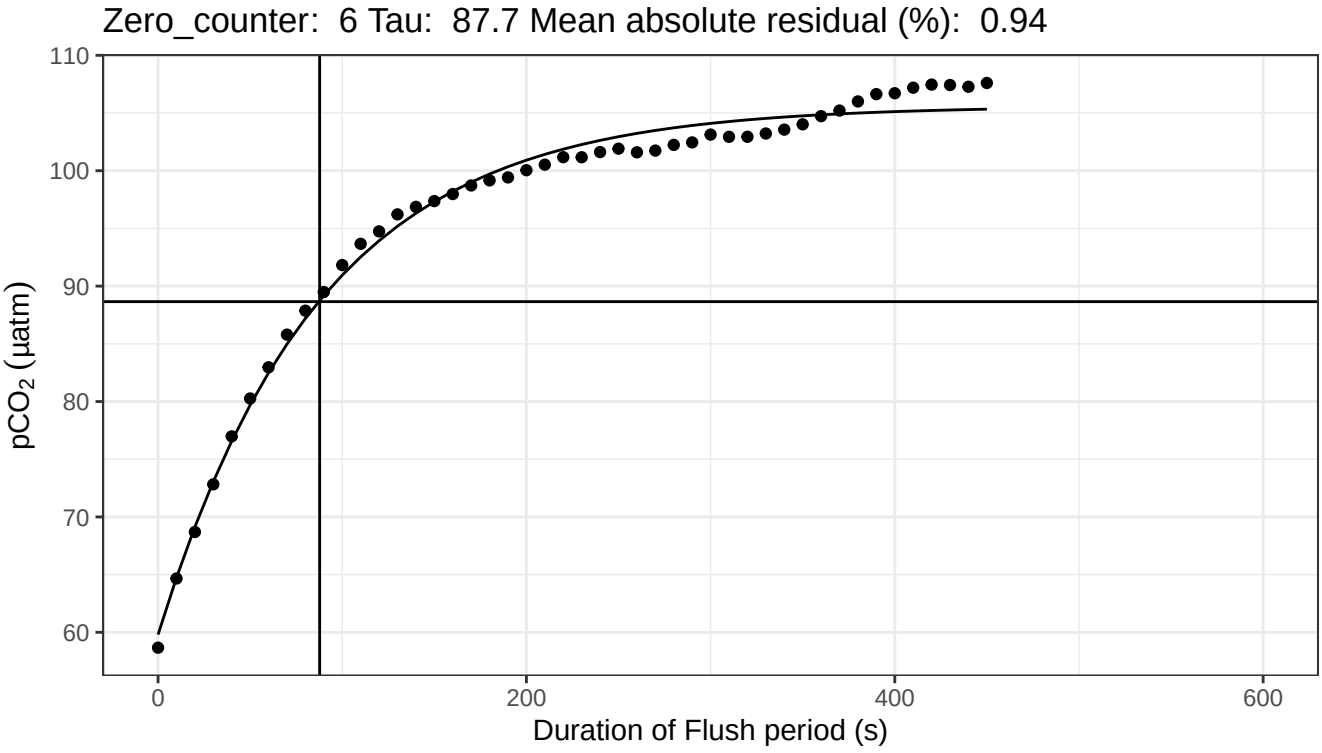

Zero_counter: 6 Tau: 75.1 Mean absolute residual (%): 0.28
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

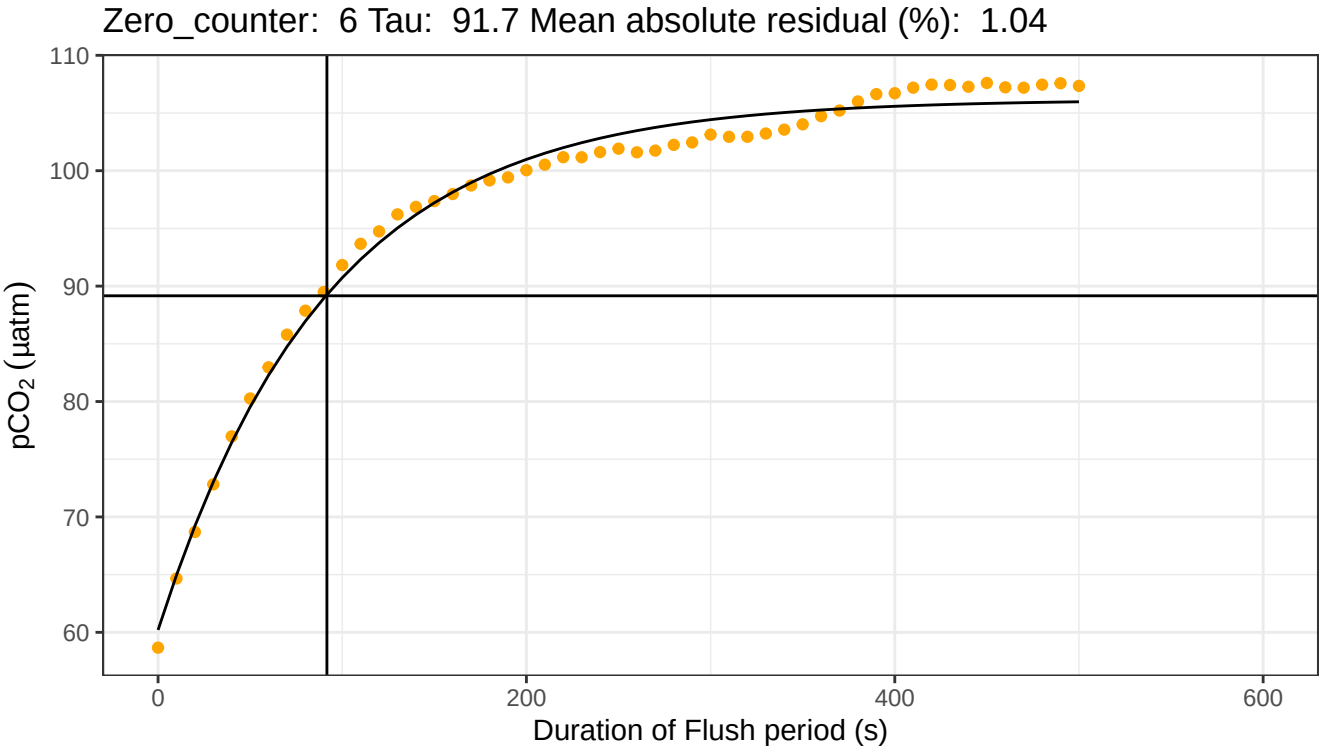

Zero_counter: 6 Tau: 75 Mean absolute residual (%): 0.24
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 6 Tau: 74.8 Mean absolute residual (%): 0.25
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

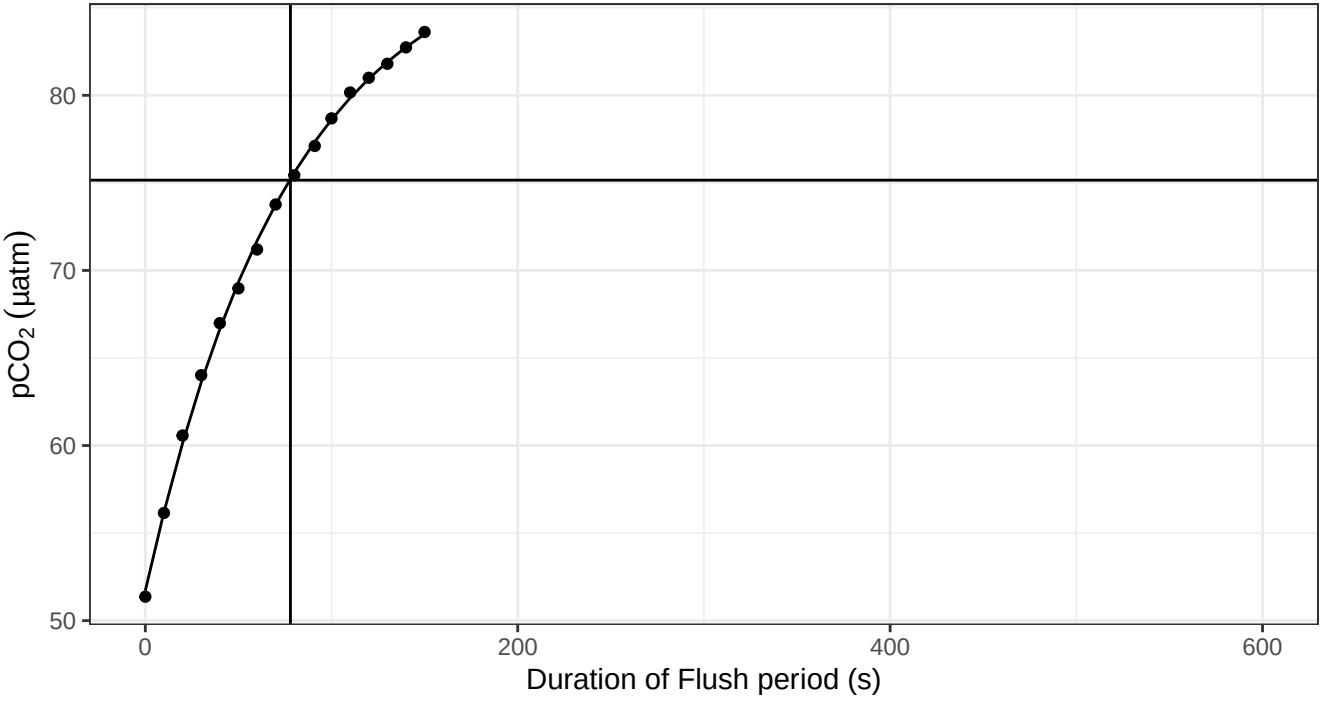

Zero_counter: 6 Tau: 76 Mean absolute residual (%): 0.27
pCO2 (µatm)
100
90
80
70
60
0
200
400
600
Duration of Flush period (s)


Zero_counter: 6 Tau: 81.4 Mean absolute residual (%): 0.62
pCO2 (µatm)
100
90
80
70
60
0
200
400
600
Duration of Flush period (s)

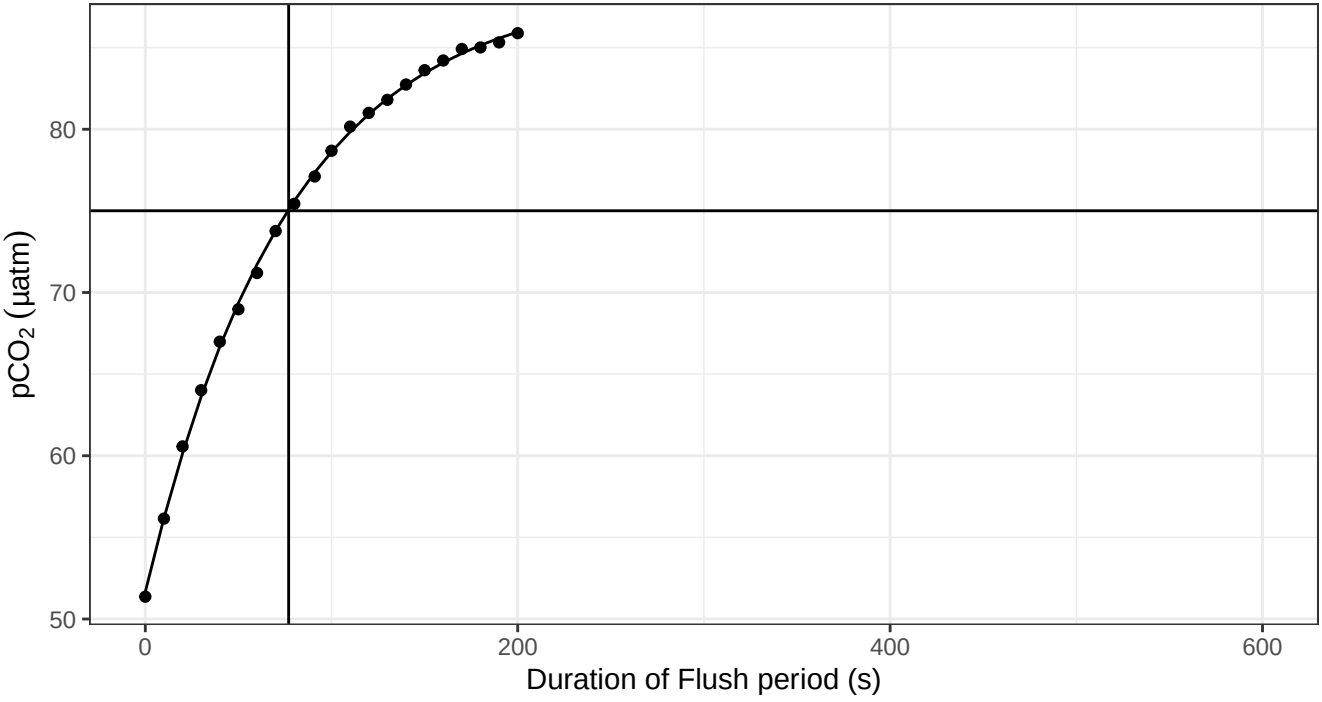

Zero_counter: 6 Tau: 87.7 Mean absolute residual (%): 0.94
110
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 6 Tau: 91.7 Mean absolute residual (%): 1.04
110
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

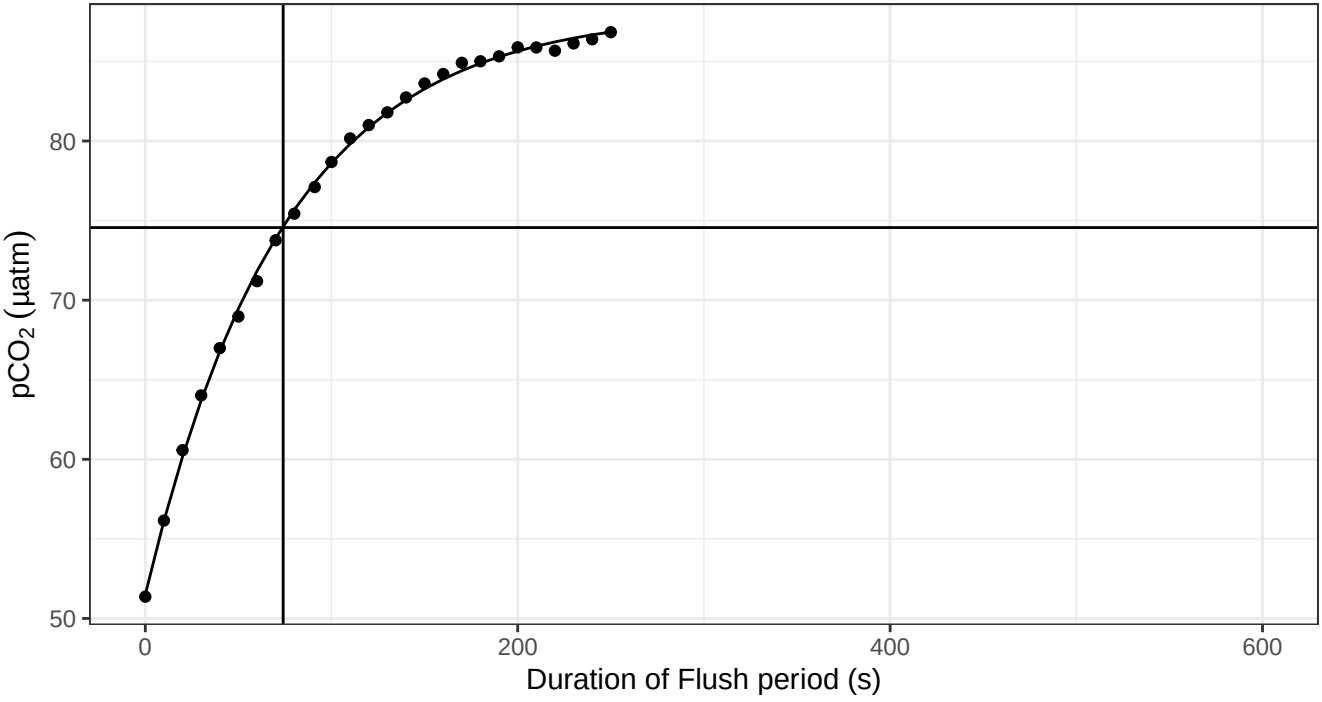
Zero_counter: 7 Tau: 77.9 Mean absolute residual (%): 0.25



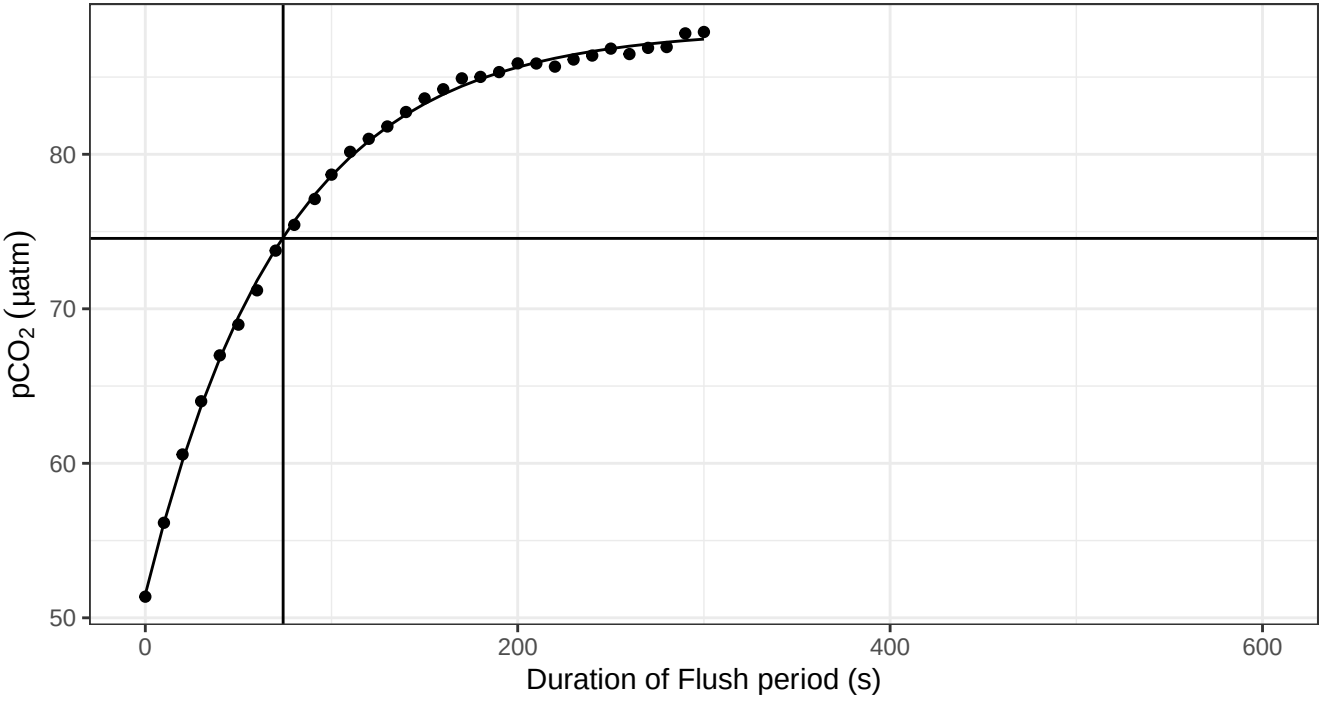
Zero_counter: 7 Tau: 77 Mean absolute residual (%): 0.24



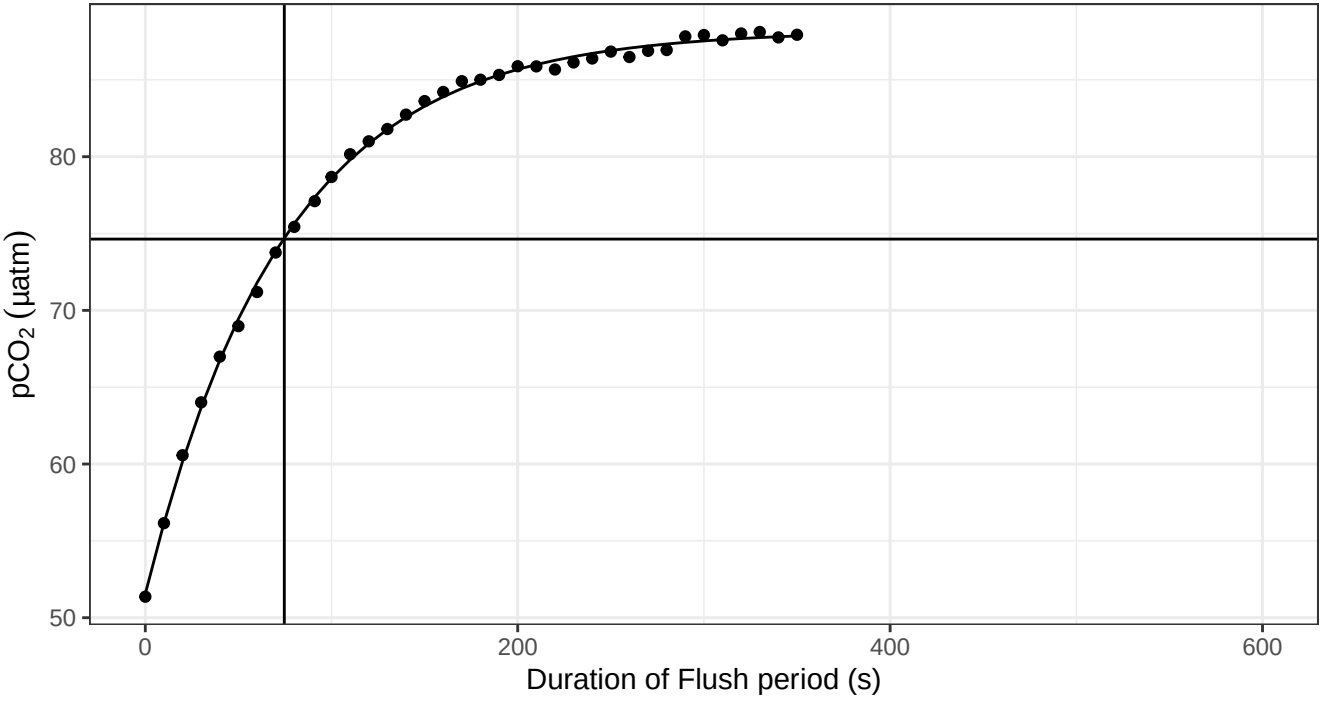
Zero_counter: 7 Tau: 74 Mean absolute residual (%): 0.28

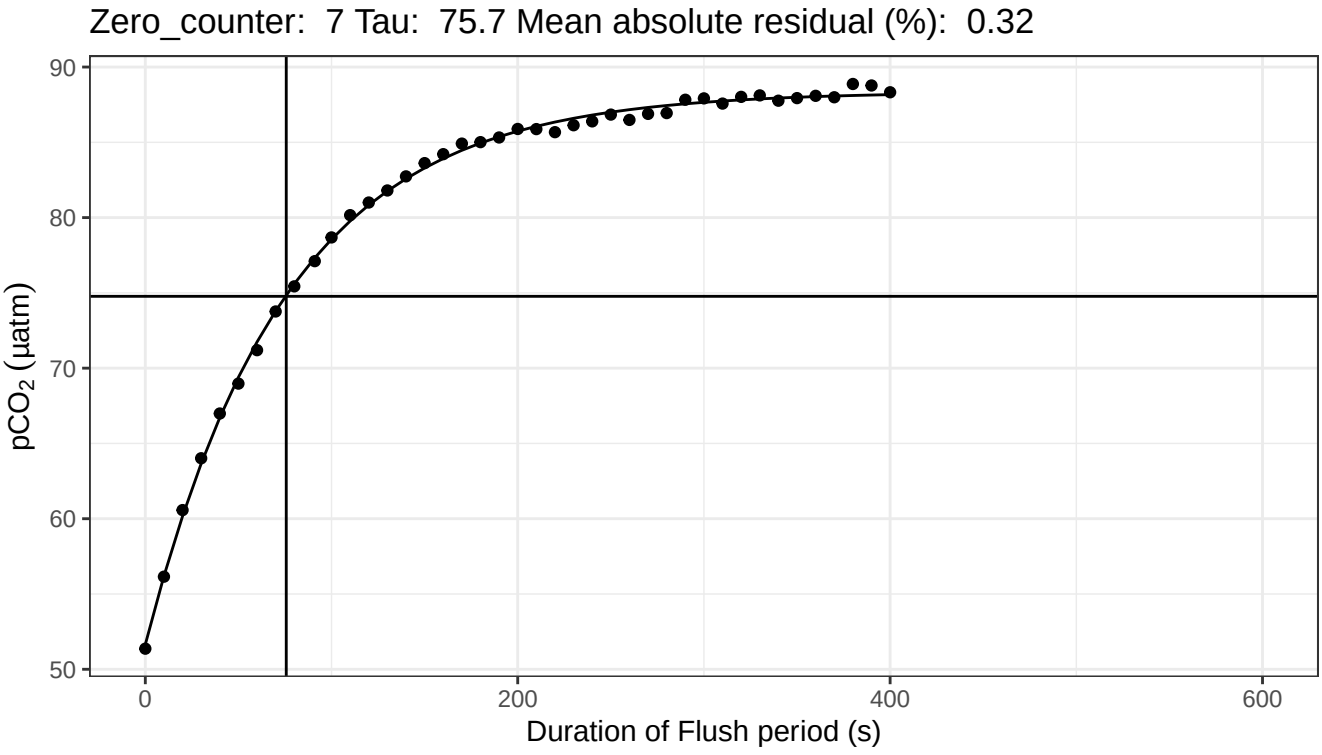


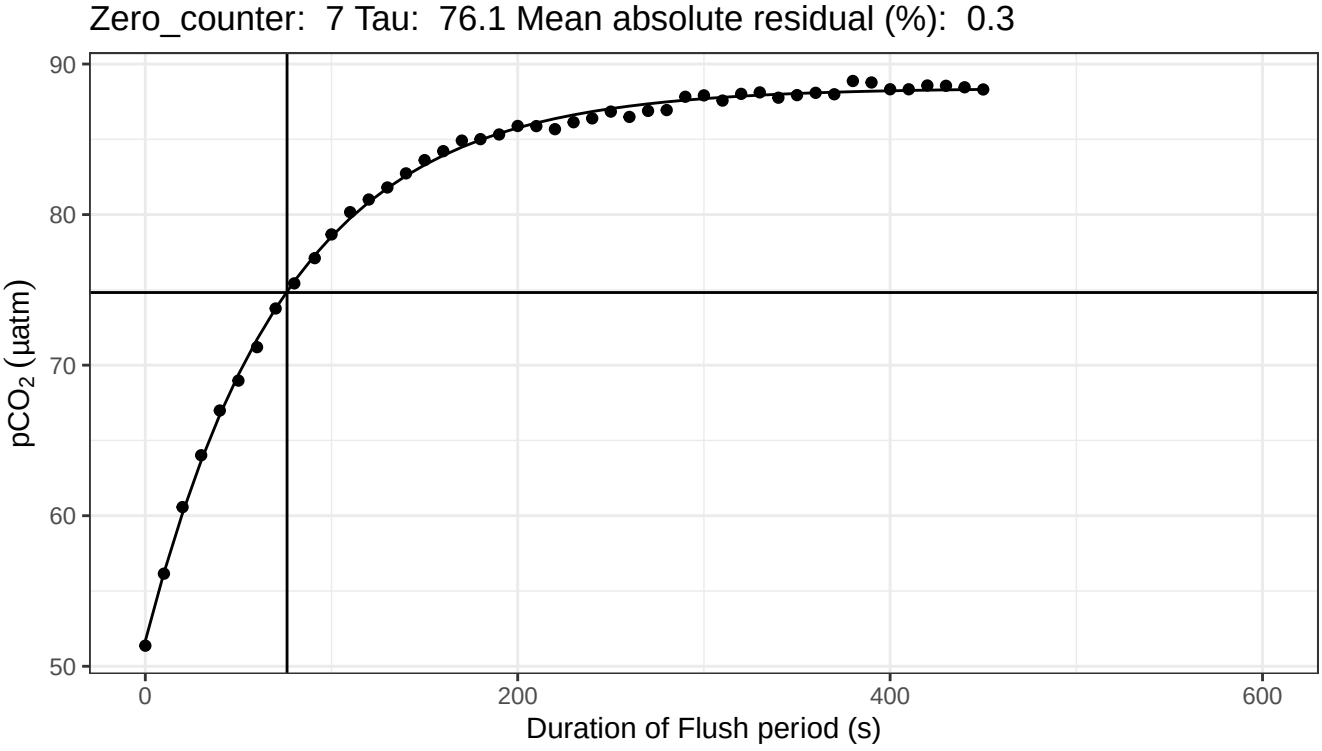
Zero_counter: 7 Tau: 74 Mean absolute residual (%): 0.31

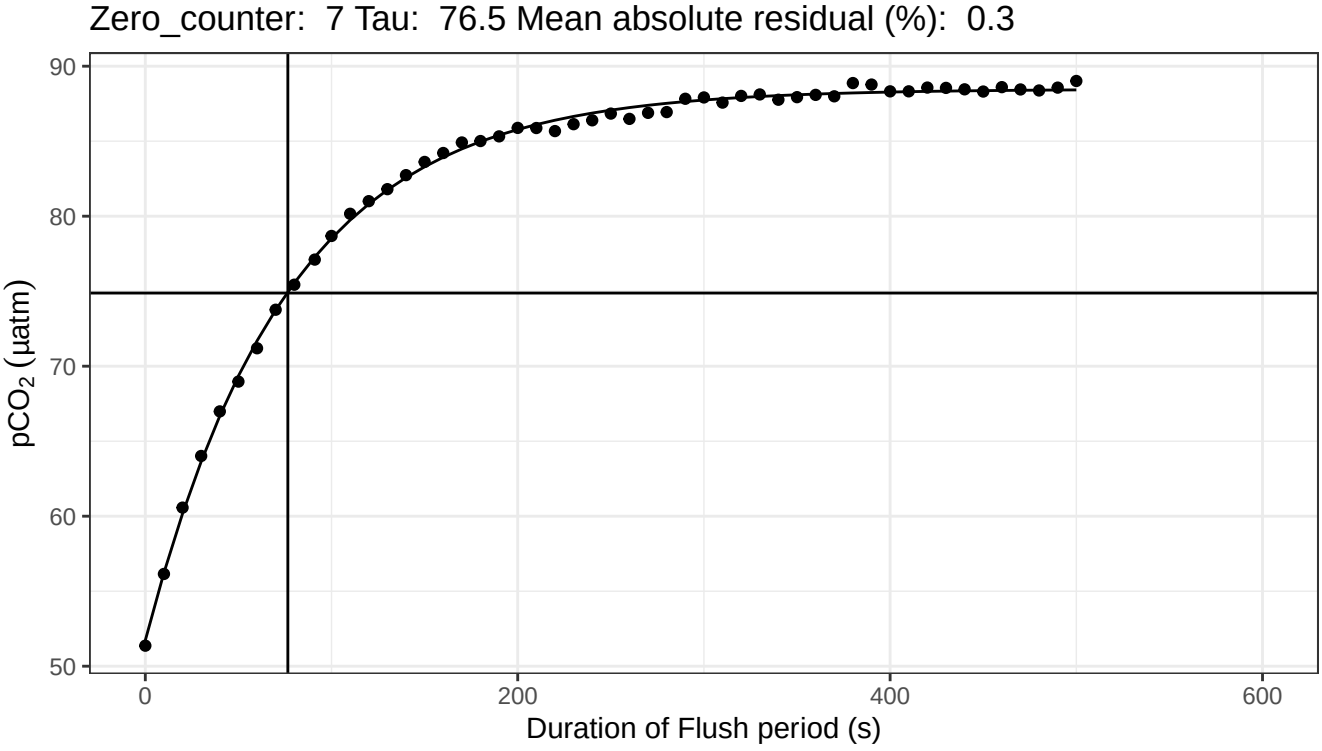


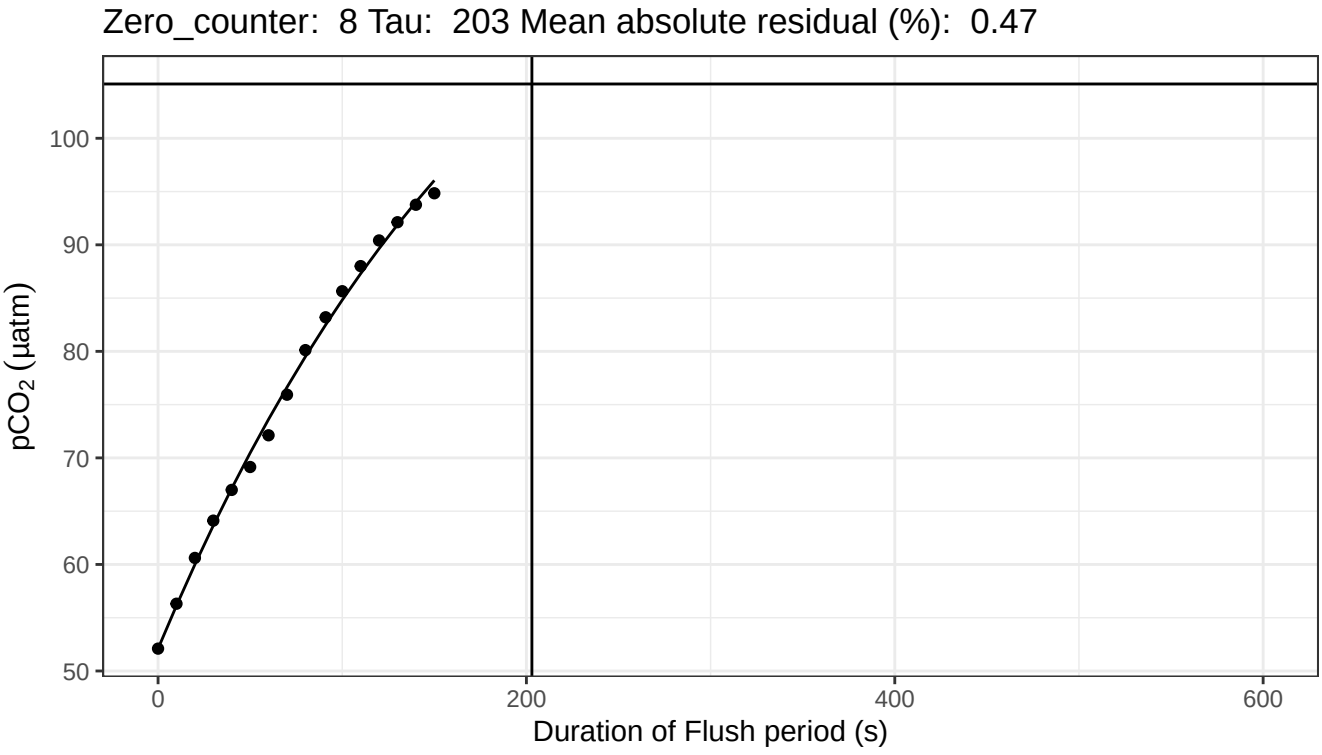
Zero_counter: 7 Tau: 74.6 Mean absolute residual (%): 0.3

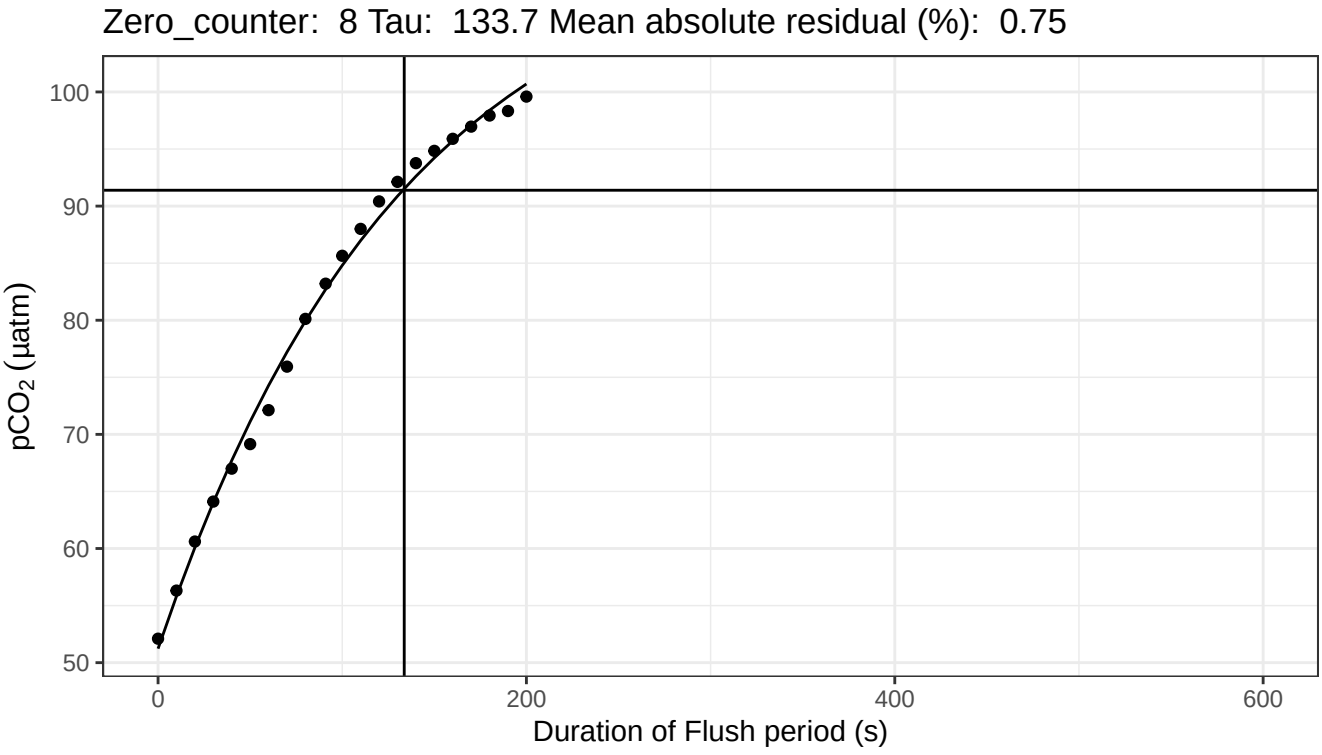


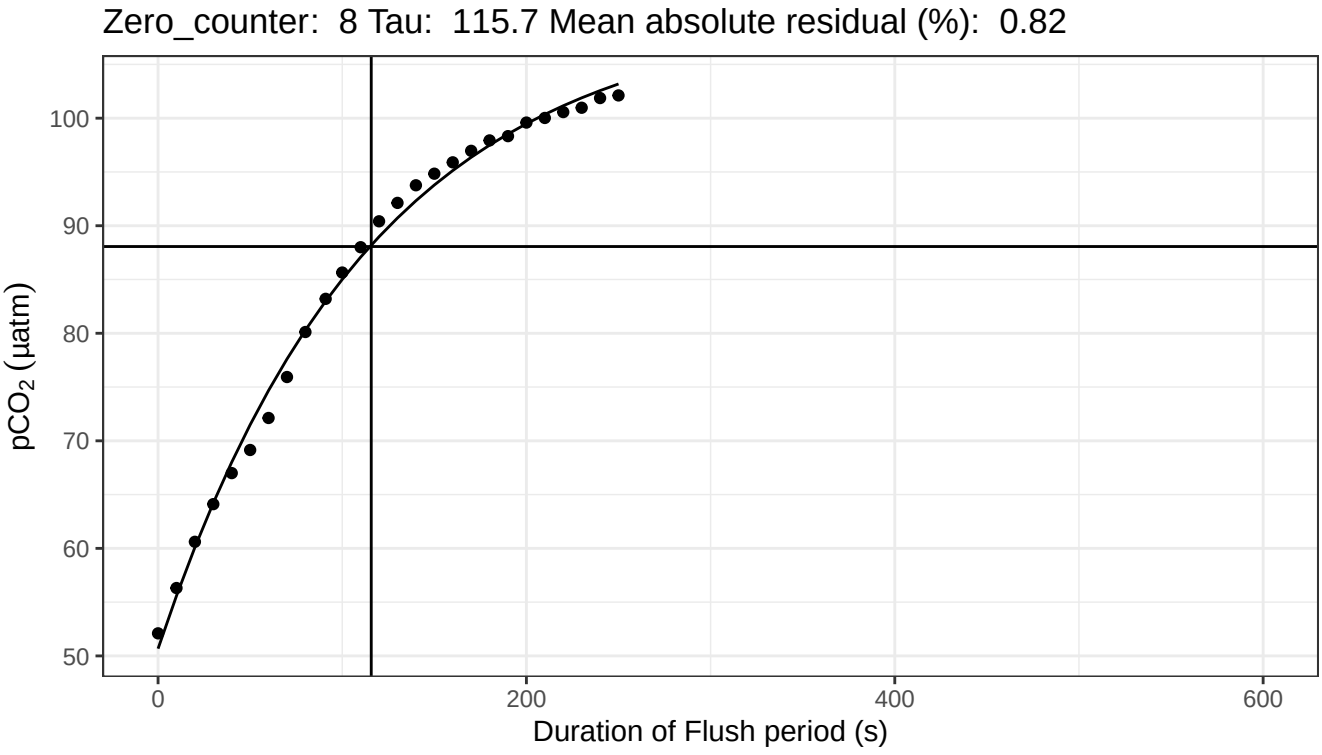

Zero_counter: 7 Tau: 75.7 Mean absolute residual (%): 0.32
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

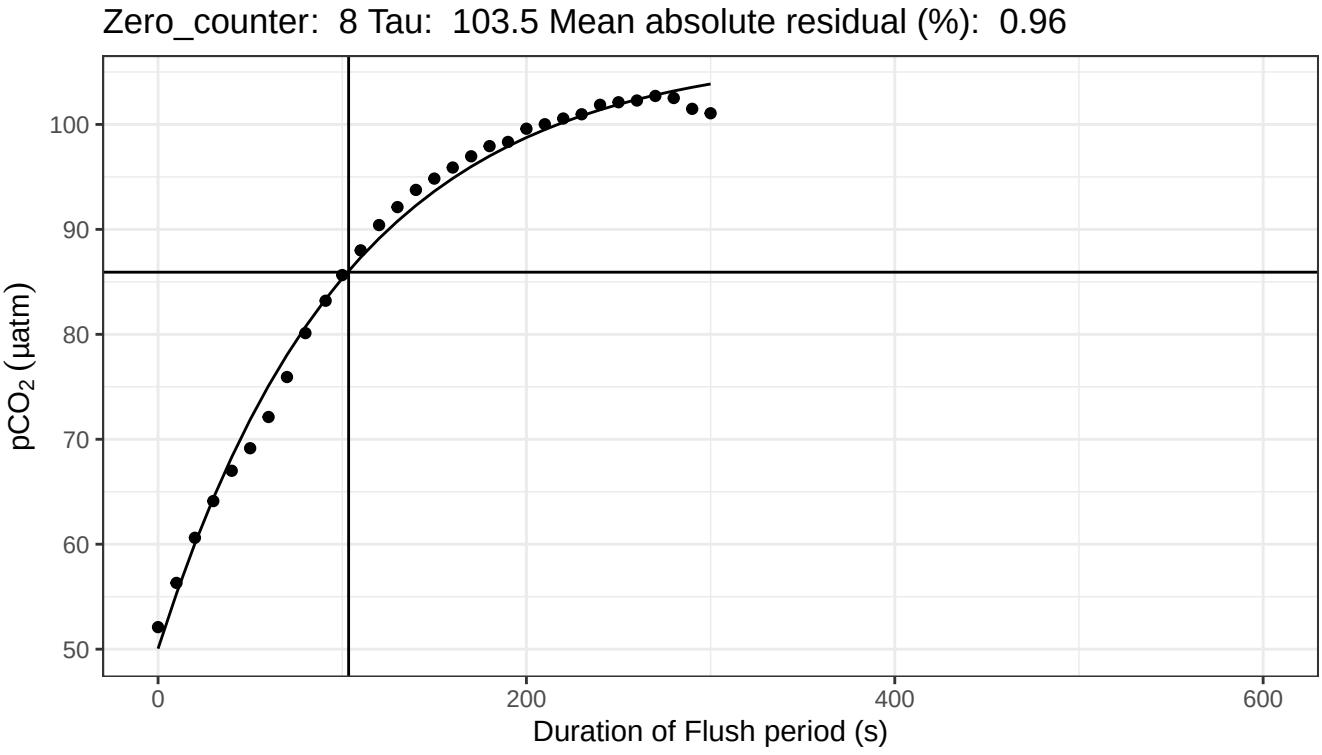

Zero_counter: 7 Tau: 76.1 Mean absolute residual (%): 0.3
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

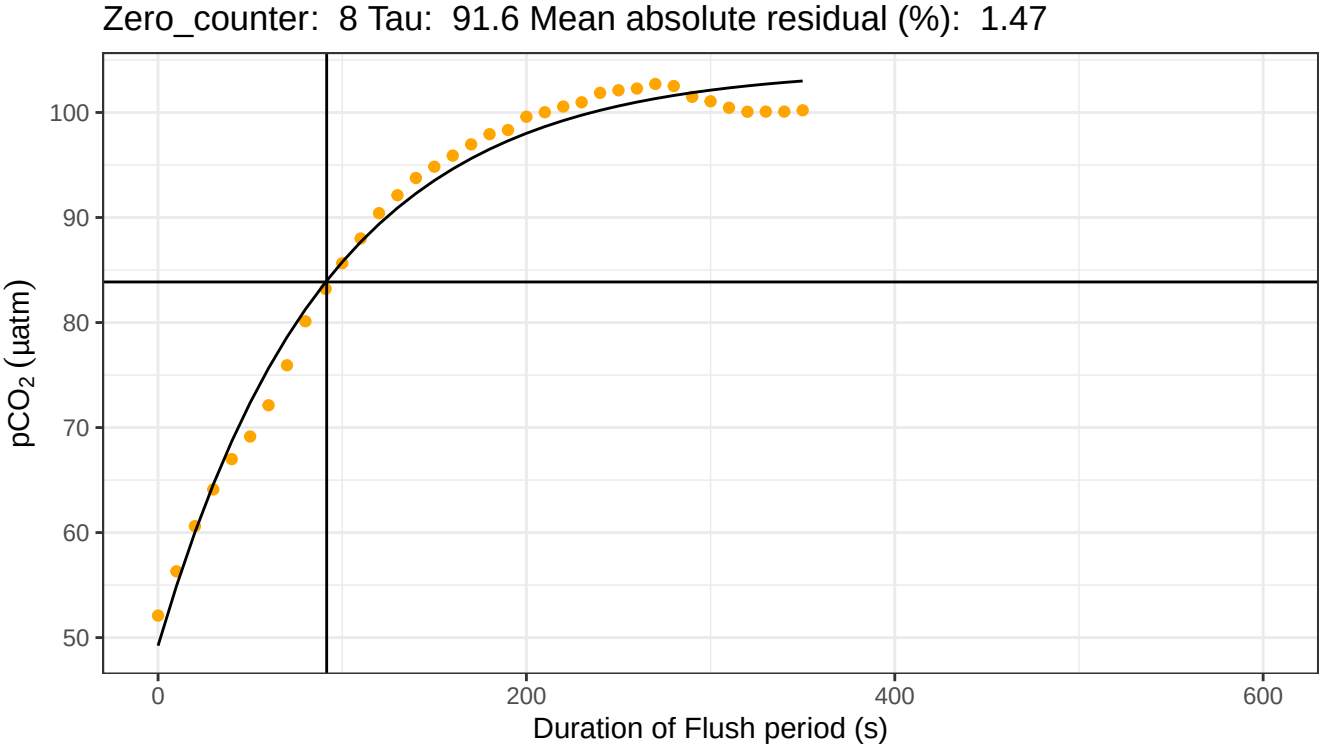

Zero_counter: 7 Tau: 76.5 Mean absolute residual (%): 0.3
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

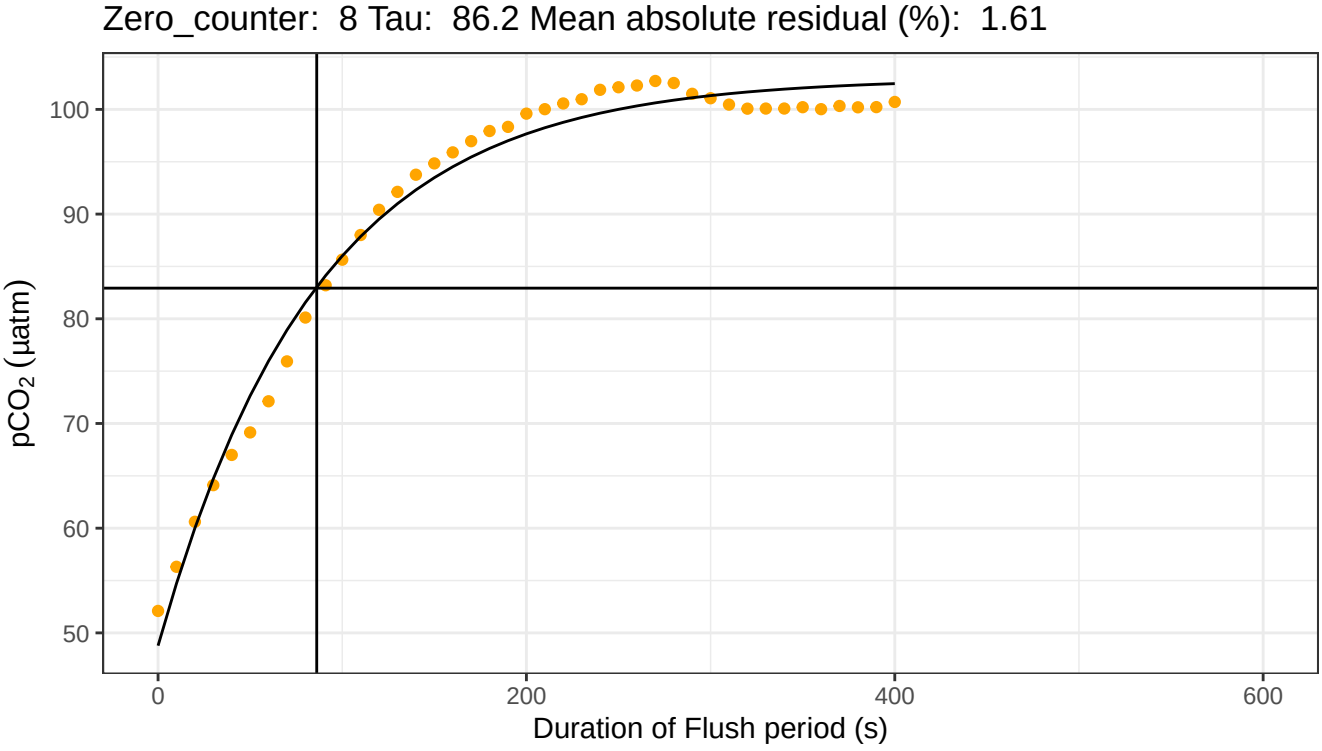

Zero_counter: 8 Tau: 203 Mean absolute residual (%): 0.47
100
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

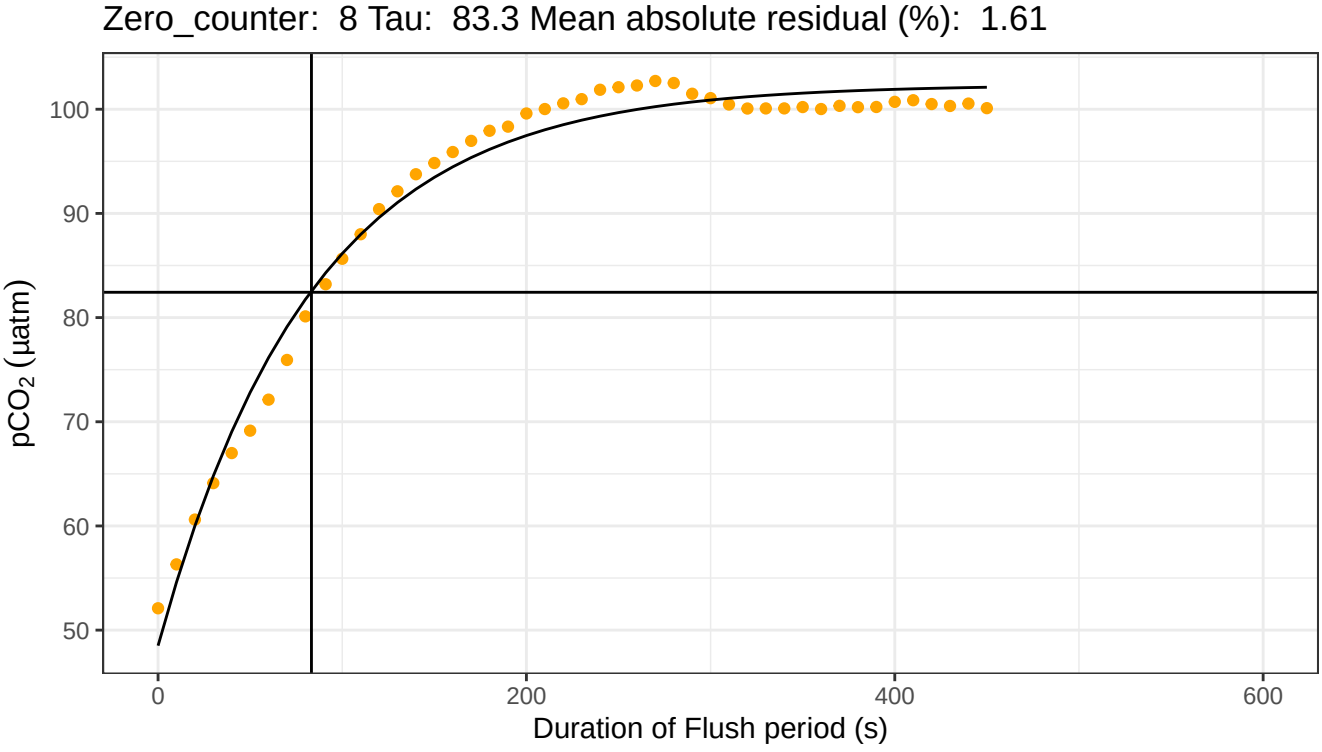

Zero_counter: 8 Tau: 133.7 Mean absolute residual (%): 0.75
100
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

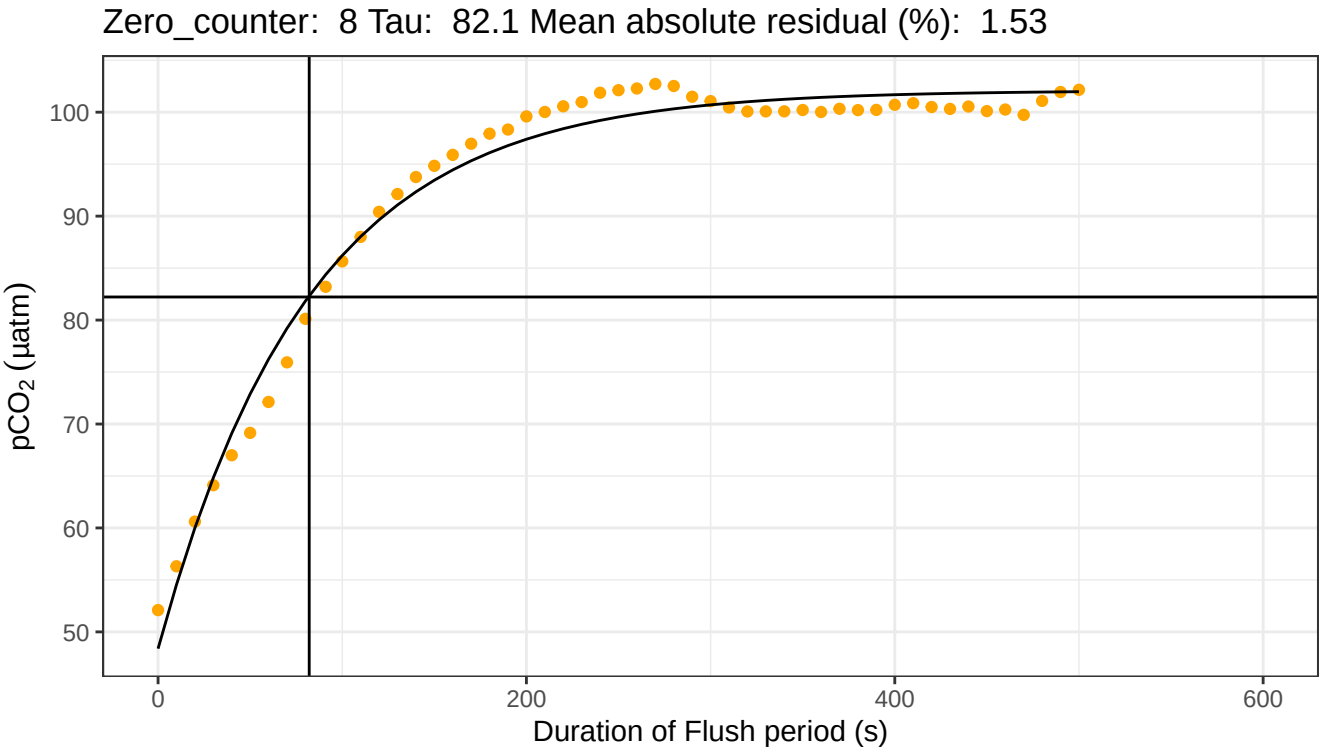

Zero_counter: 8 Tau: 115.7 Mean absolute residual (%): 0.82
100
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

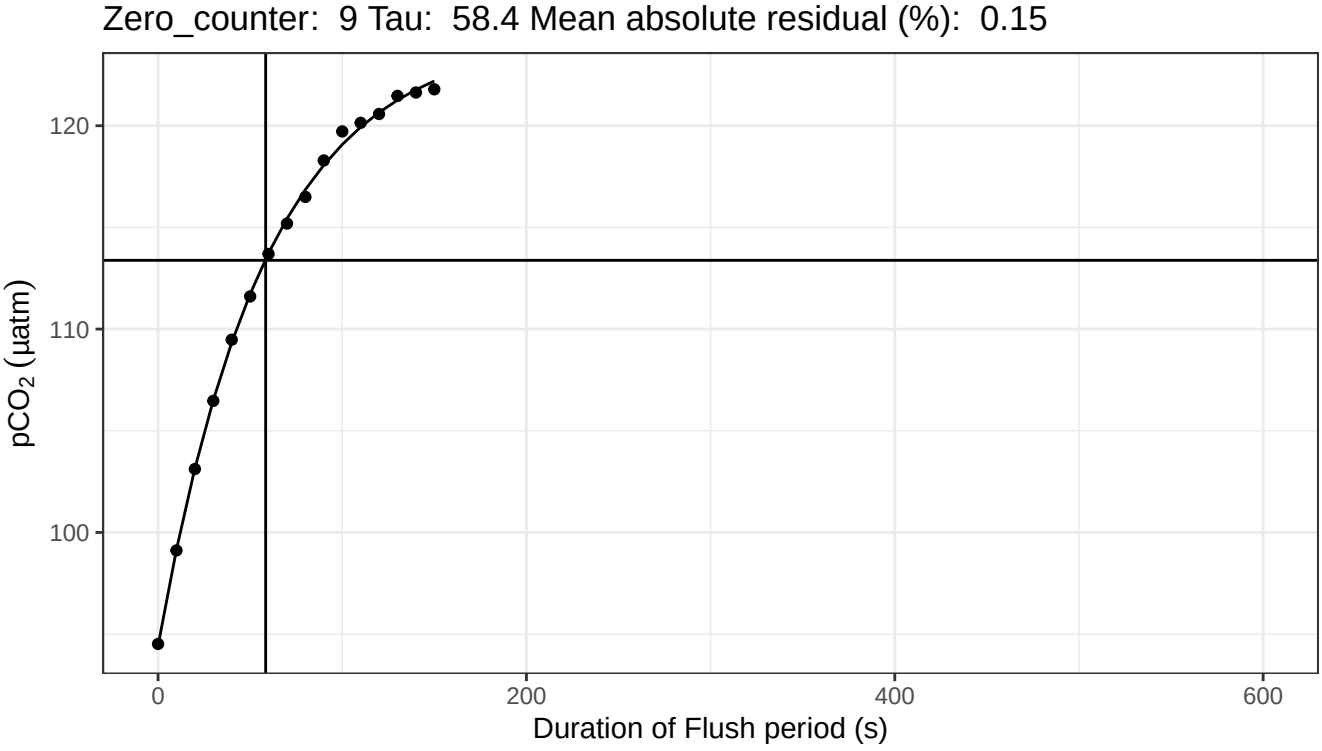

Zero_counter: 8 Tau: 103.5 Mean absolute residual (%): 0.96
100
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

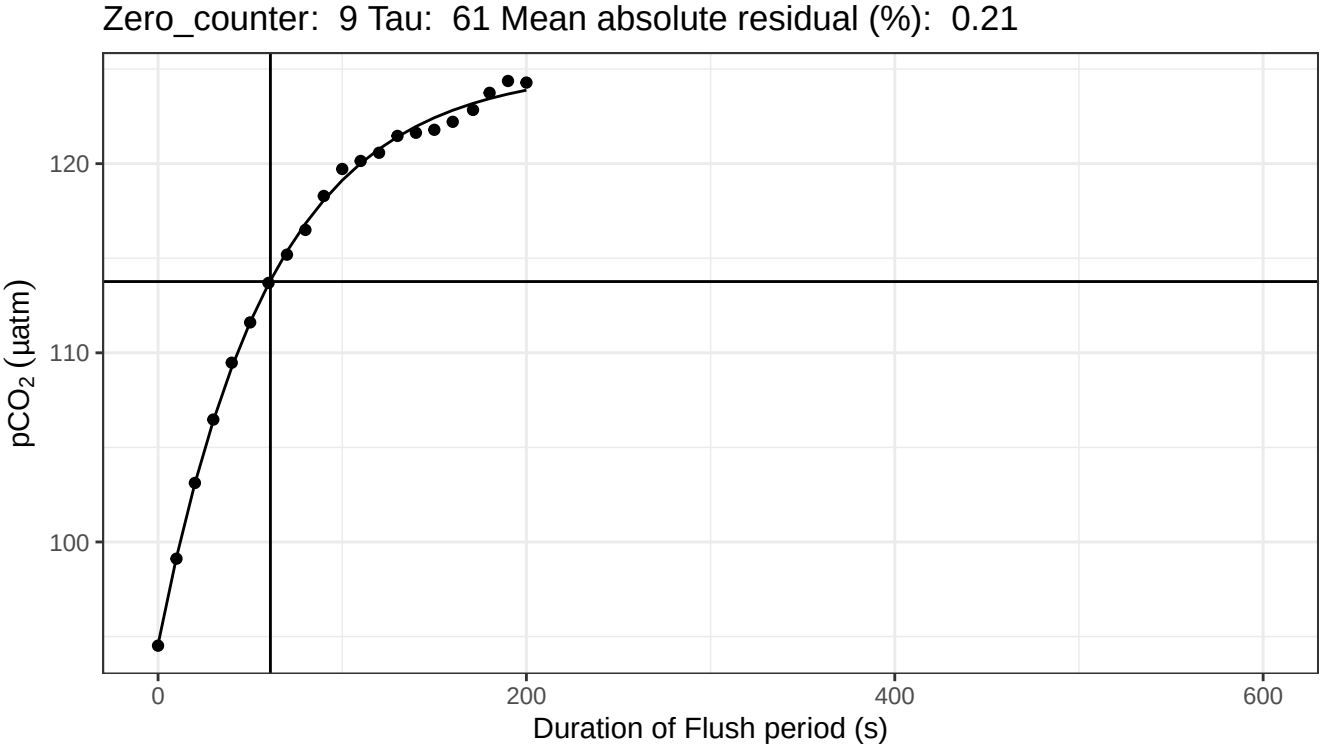

Zero_counter: 8 Tau: 91.6 Mean absolute residual (%): 1.47
100
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

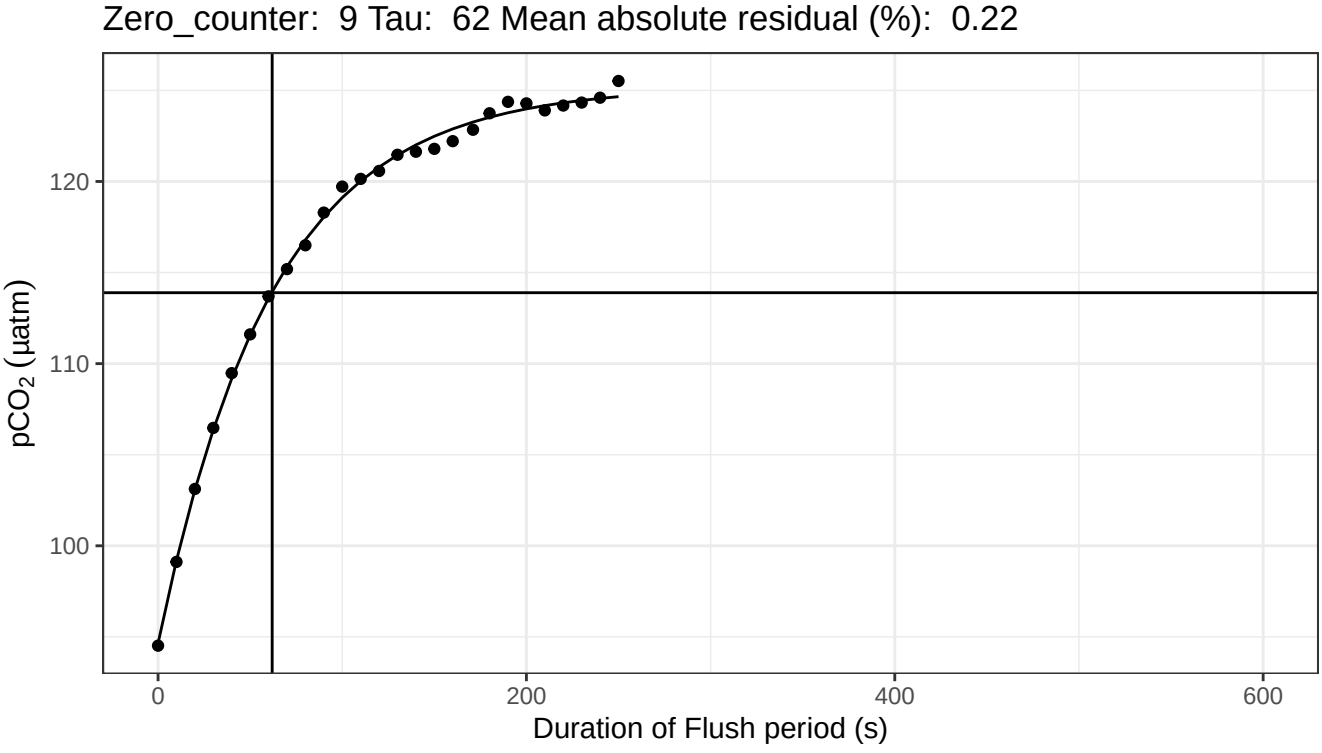

Zero_counter: 8 Tau: 86.2 Mean absolute residual (%): 1.61
100
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

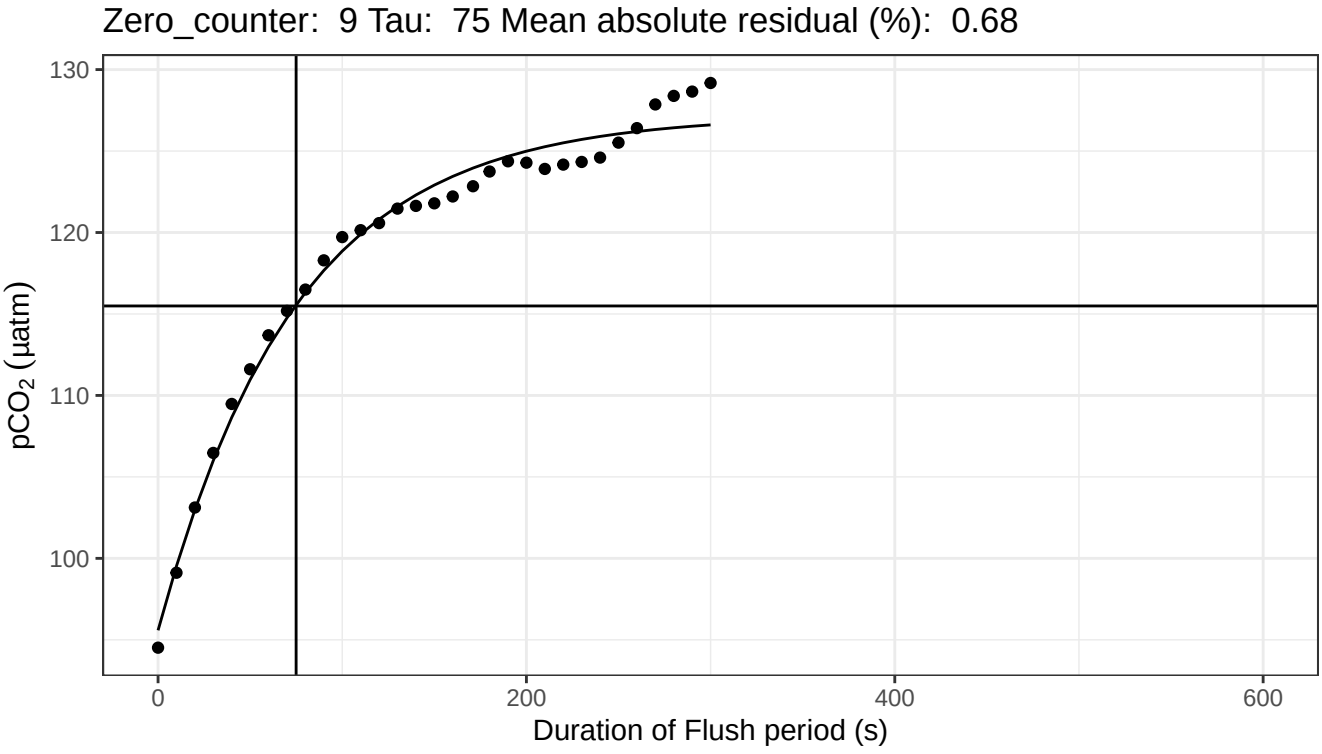

Zero_counter: 8 Tau: 83.3 Mean absolute residual (%): 1.61
pCO2 (µatm)
100
90
80
70
60
50
0
200
400
600
Duration of Flush period (s)

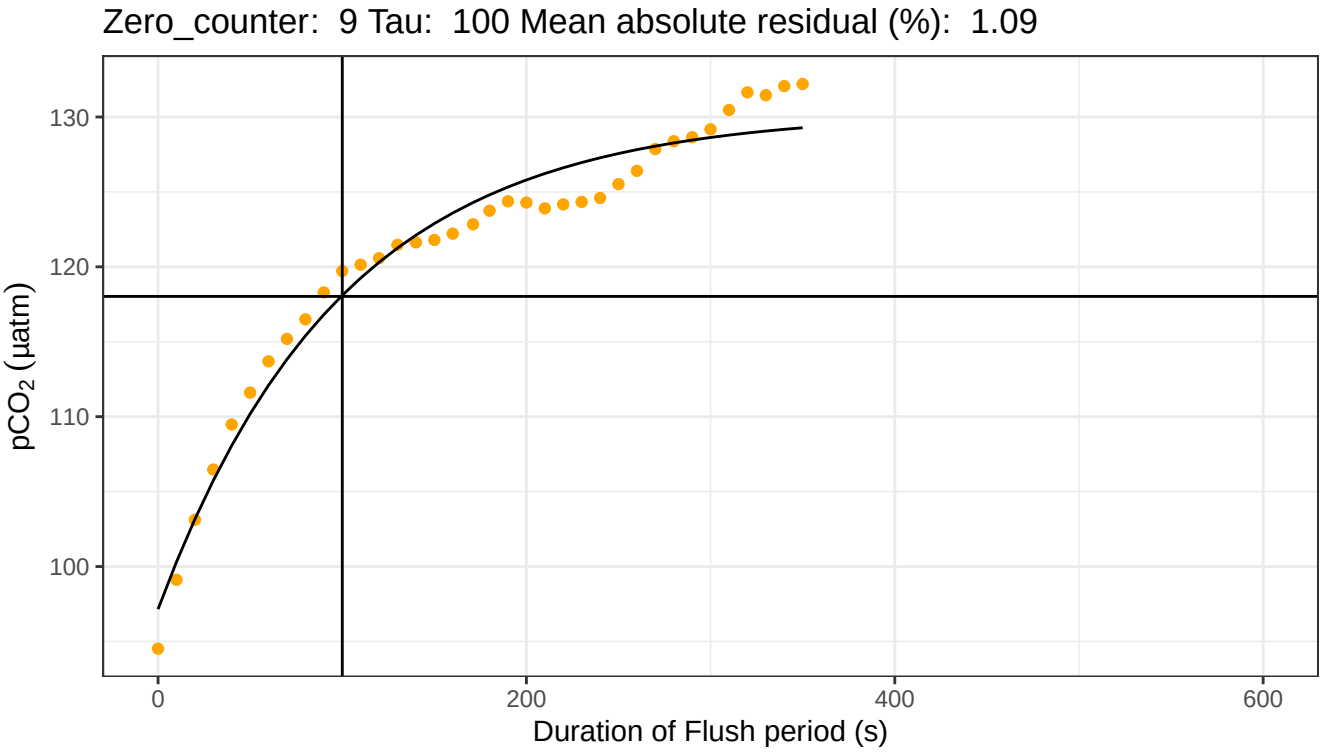

Zero_counter: 8 Tau: 82.1 Mean absolute residual (%): 1.53
pCO2 (µatm)
100
90
80
70
60
50
0
200
400
600
Duration of Flush period (s)

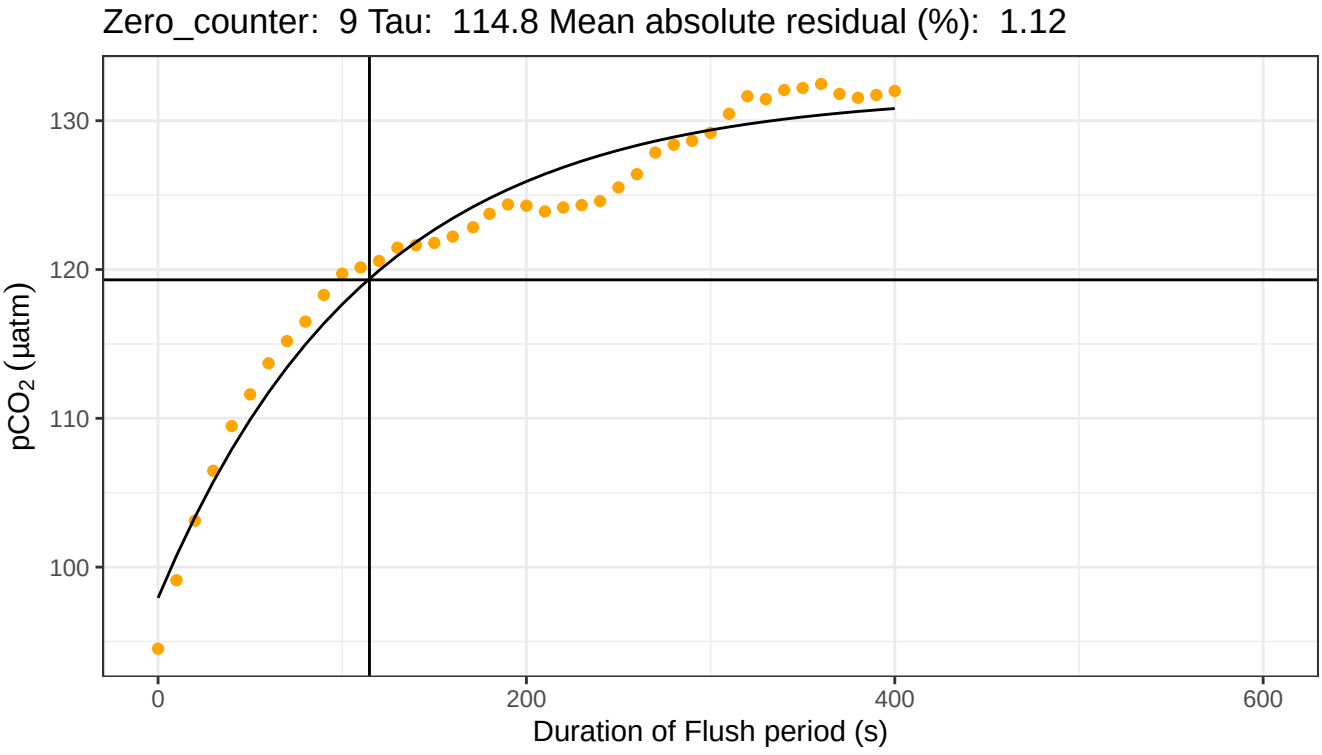

Zero_counter: 9 Tau: 58.4 Mean absolute residual (%): 0.15
120
110
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

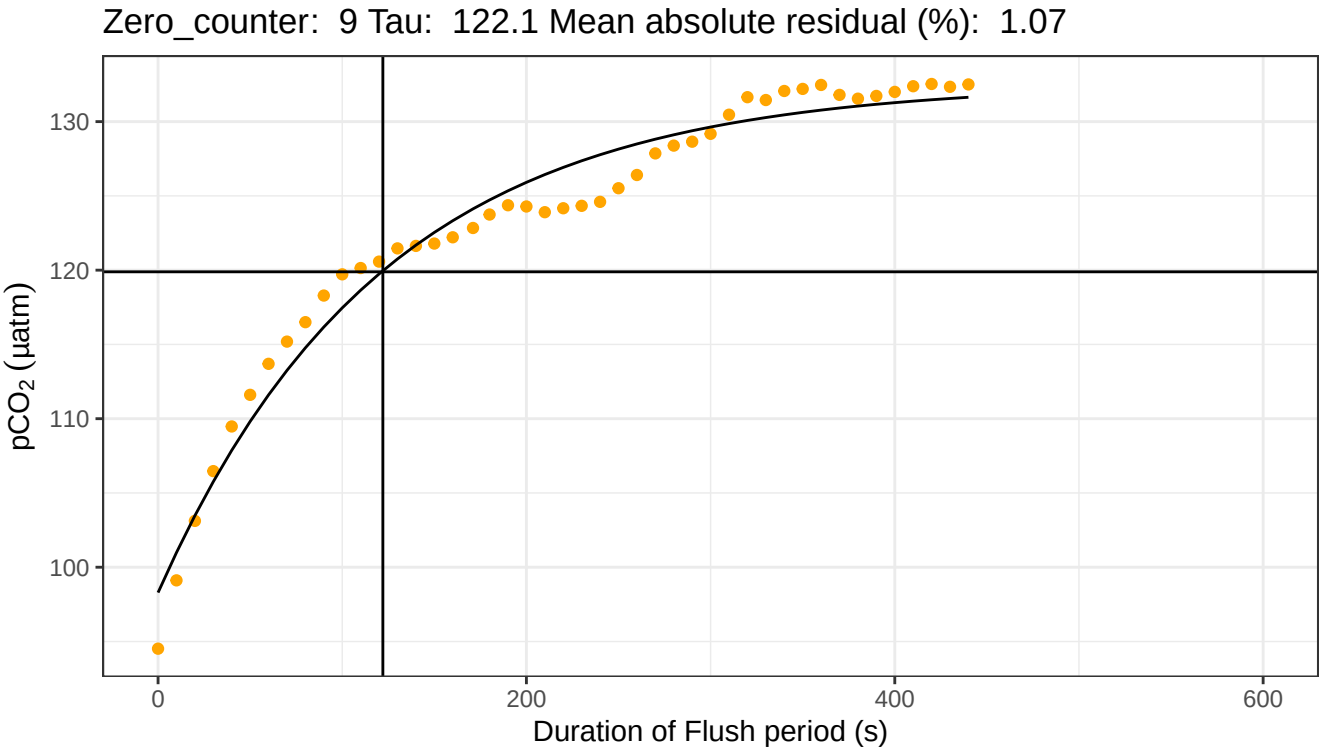

Zero_counter: 9 Tau: 61 Mean absolute residual (%): 0.21
120
110
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

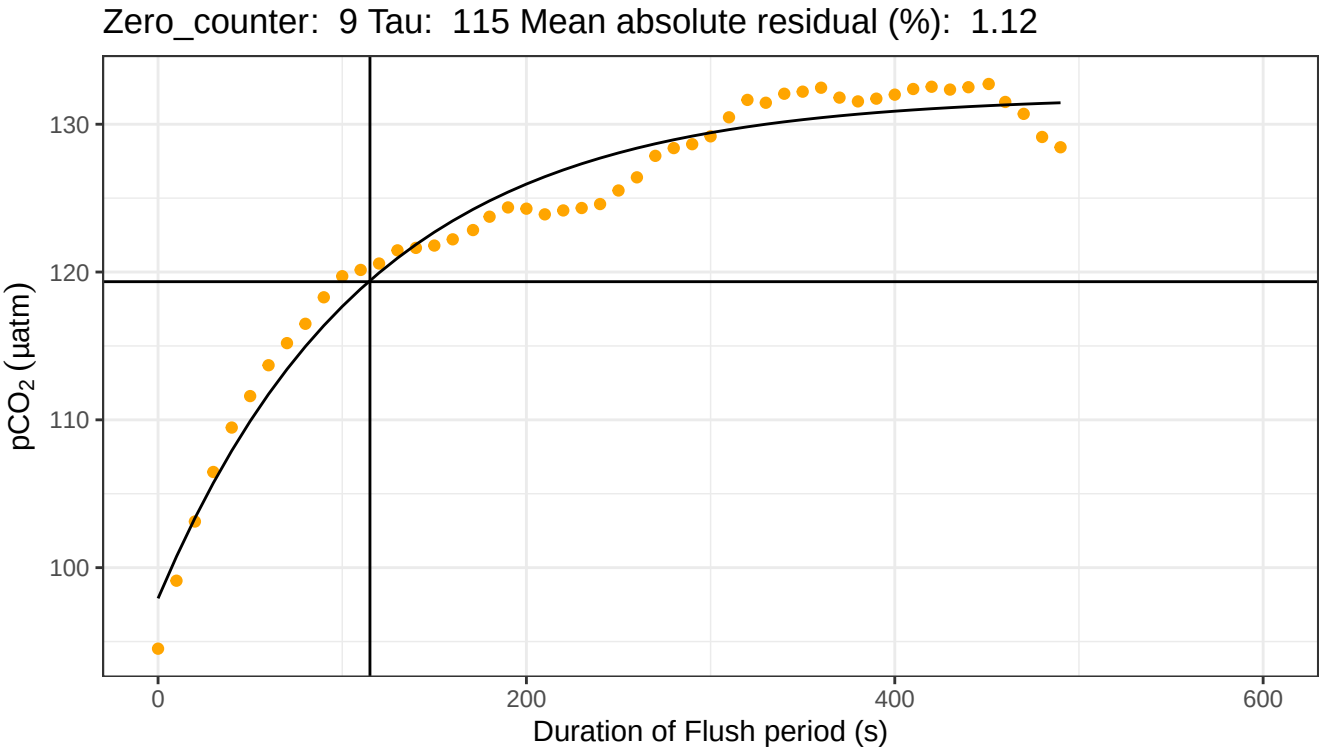

Zero_counter: 9 Tau: 62 Mean absolute residual (%): 0.22
120
110
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 9 Tau: 75 Mean absolute residual (%): 0.68
130
120
110
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

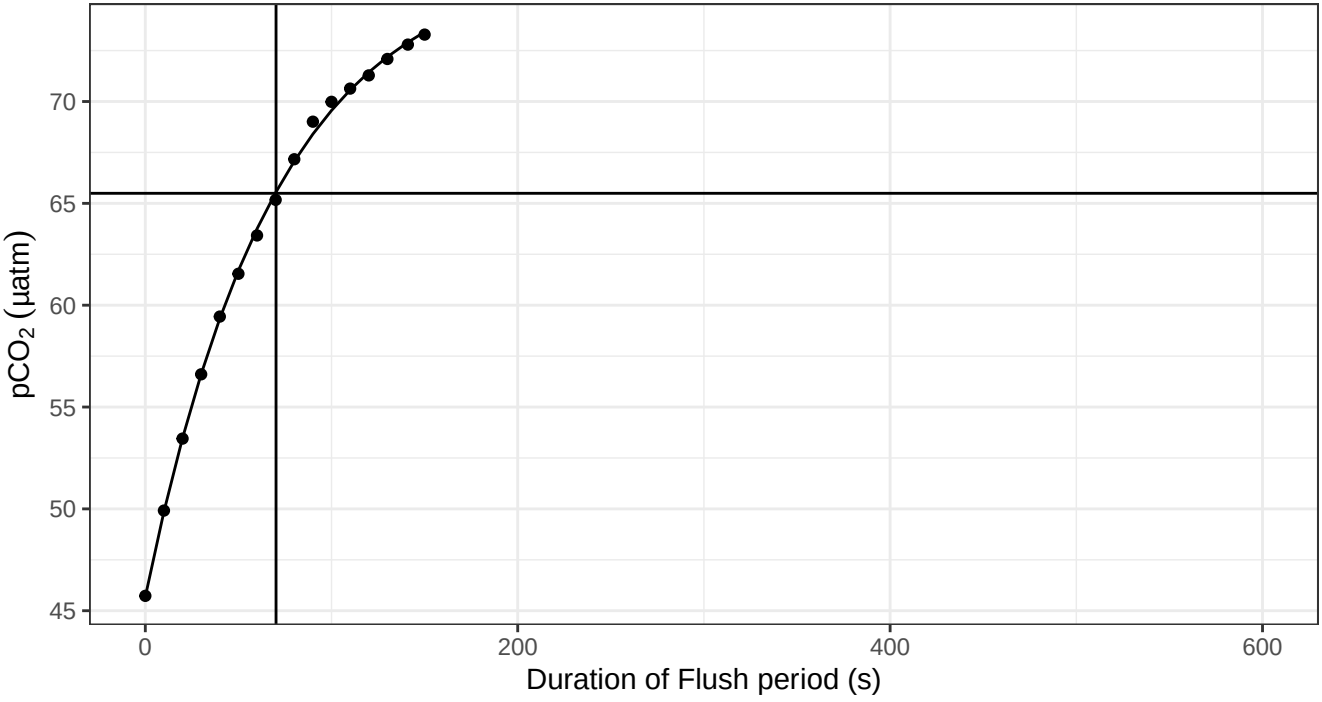

Zero_counter: 9 Tau: 100 Mean absolute residual (%): 1.09
130
120
110
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 9 Tau: 114.8 Mean absolute residual (%): 1.12
130
120
110
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

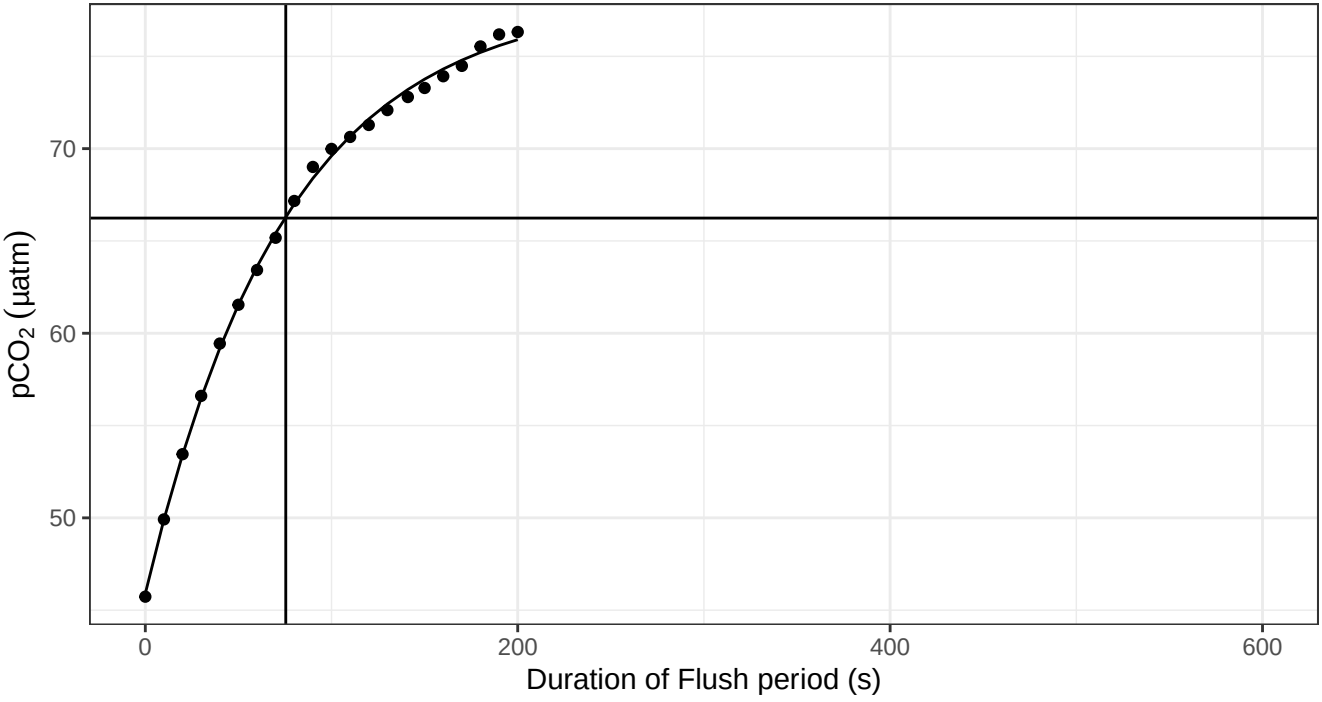

Zero_counter: 9 Tau: 122.1 Mean absolute residual (%): 1.07
130
120
110
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 9 Tau: 115 Mean absolute residual (%): 1.12
130
120
110
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

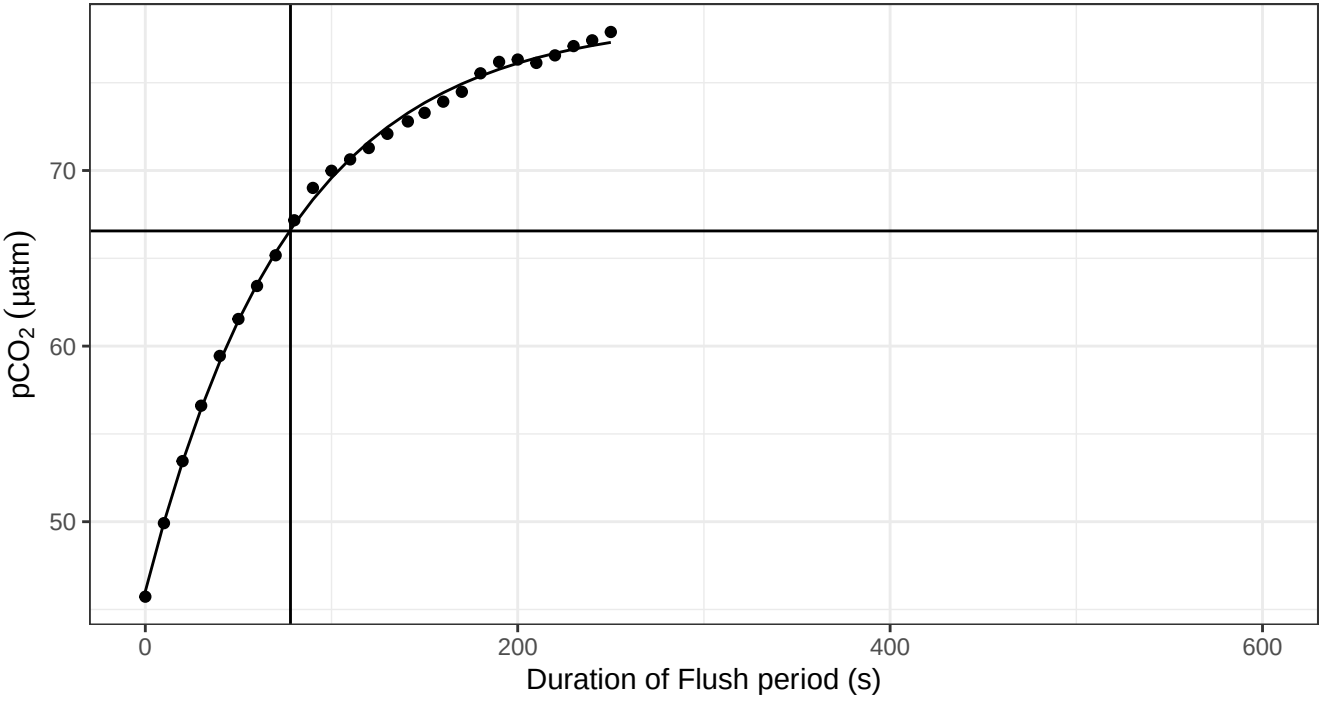
Zero_counter: 10 Tau: 70.2 Mean absolute residual (%): 0.23



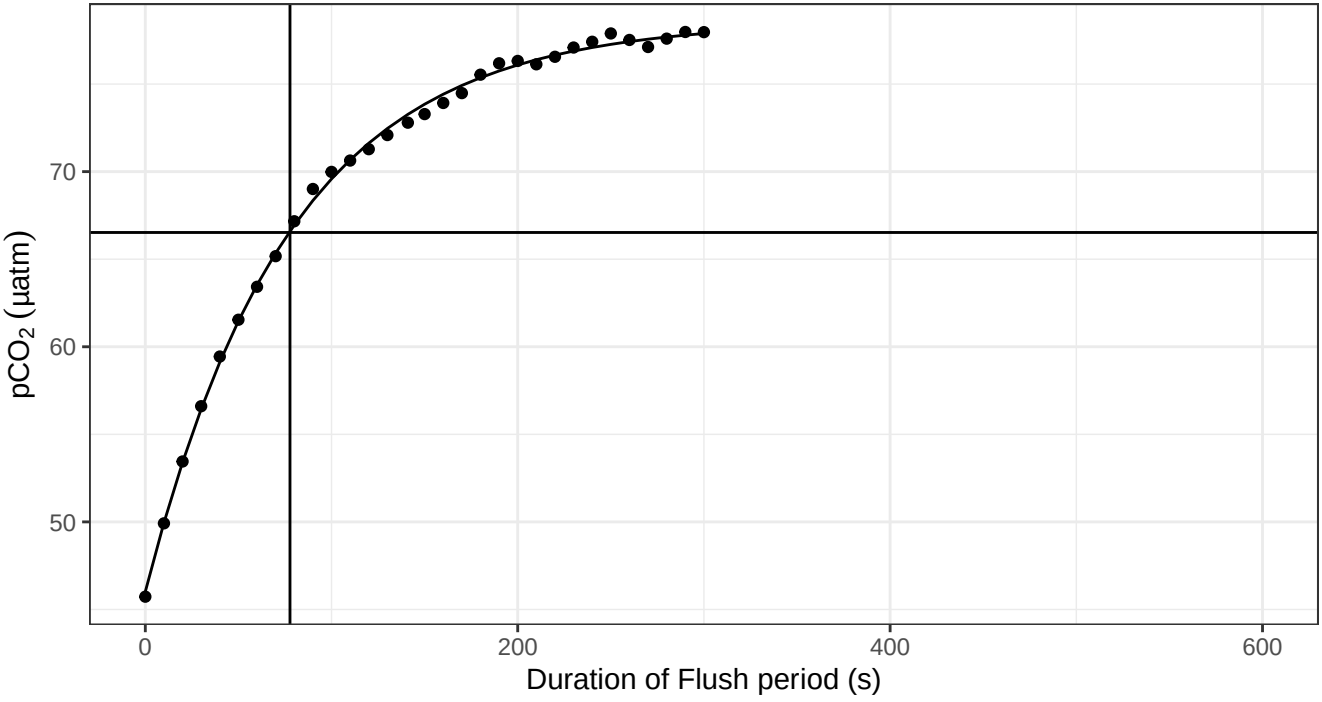
Zero_counter: 10 Tau: 75.4 Mean absolute residual (%): 0.35



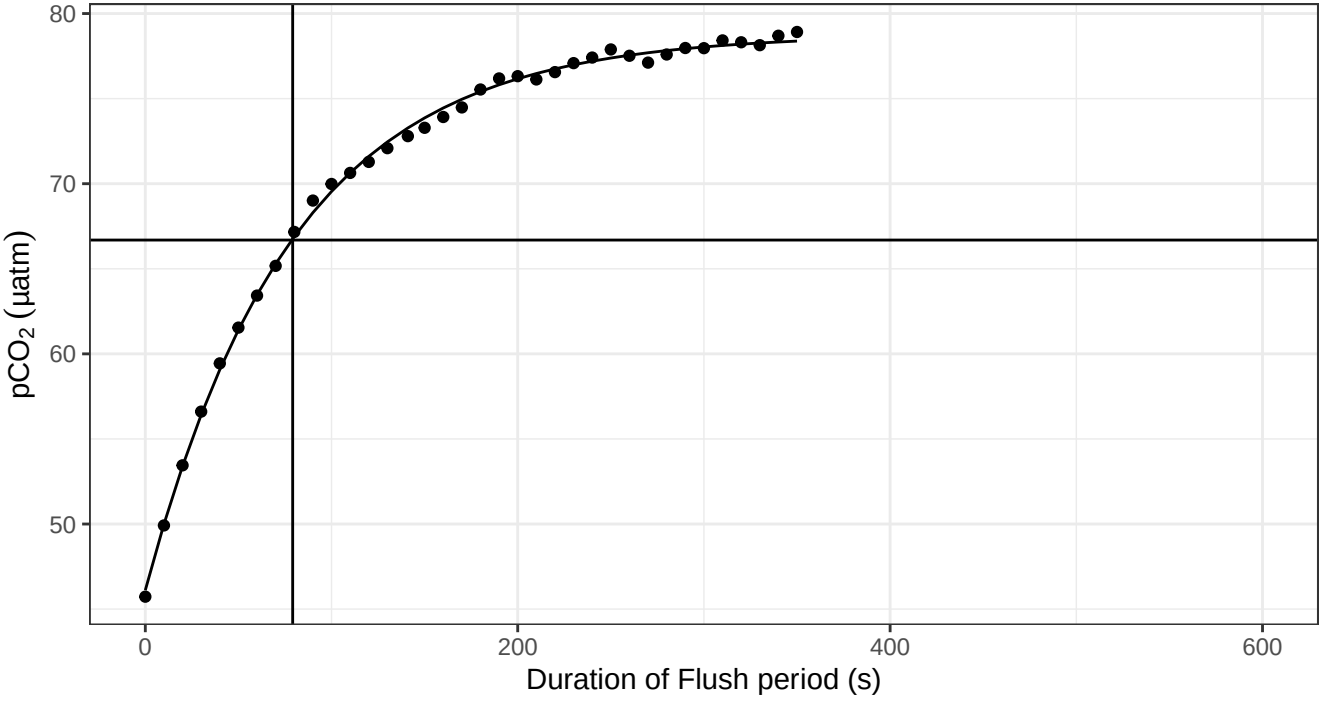
Zero_counter: 10 Tau: 78 Mean absolute residual (%): 0.37

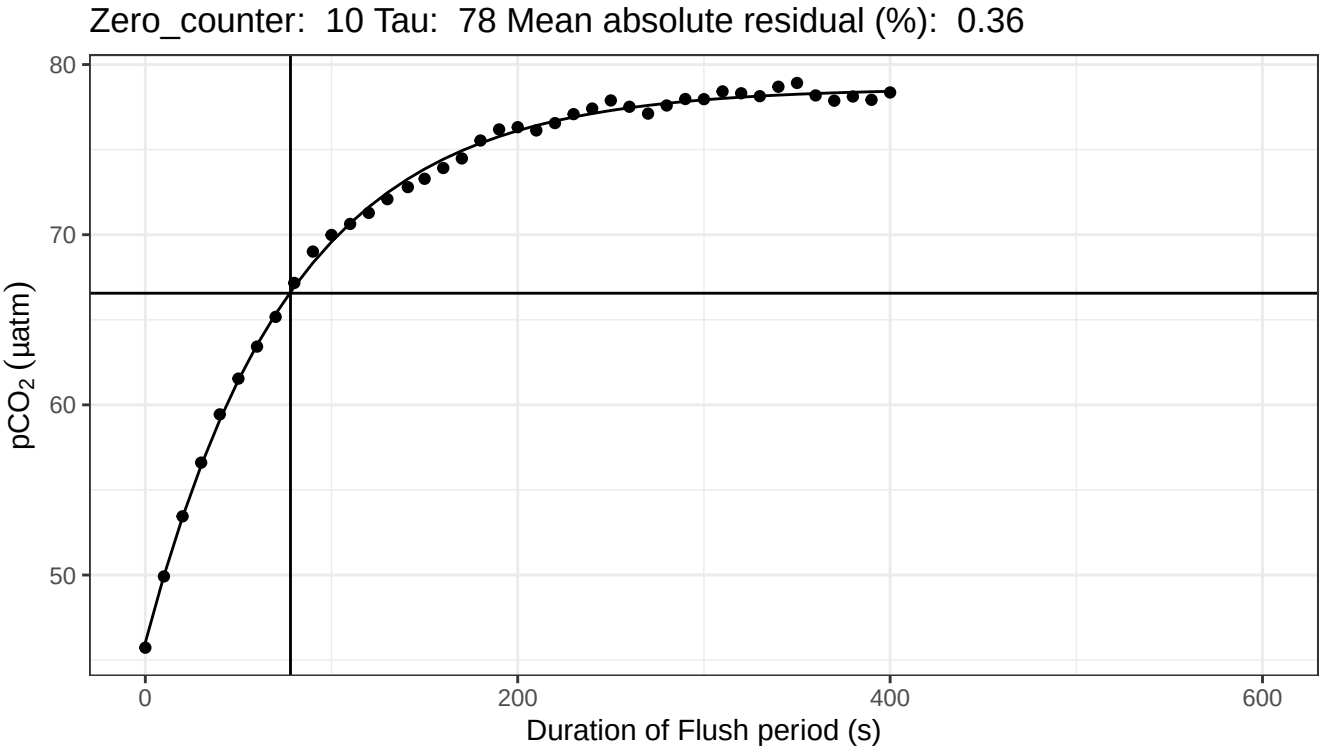


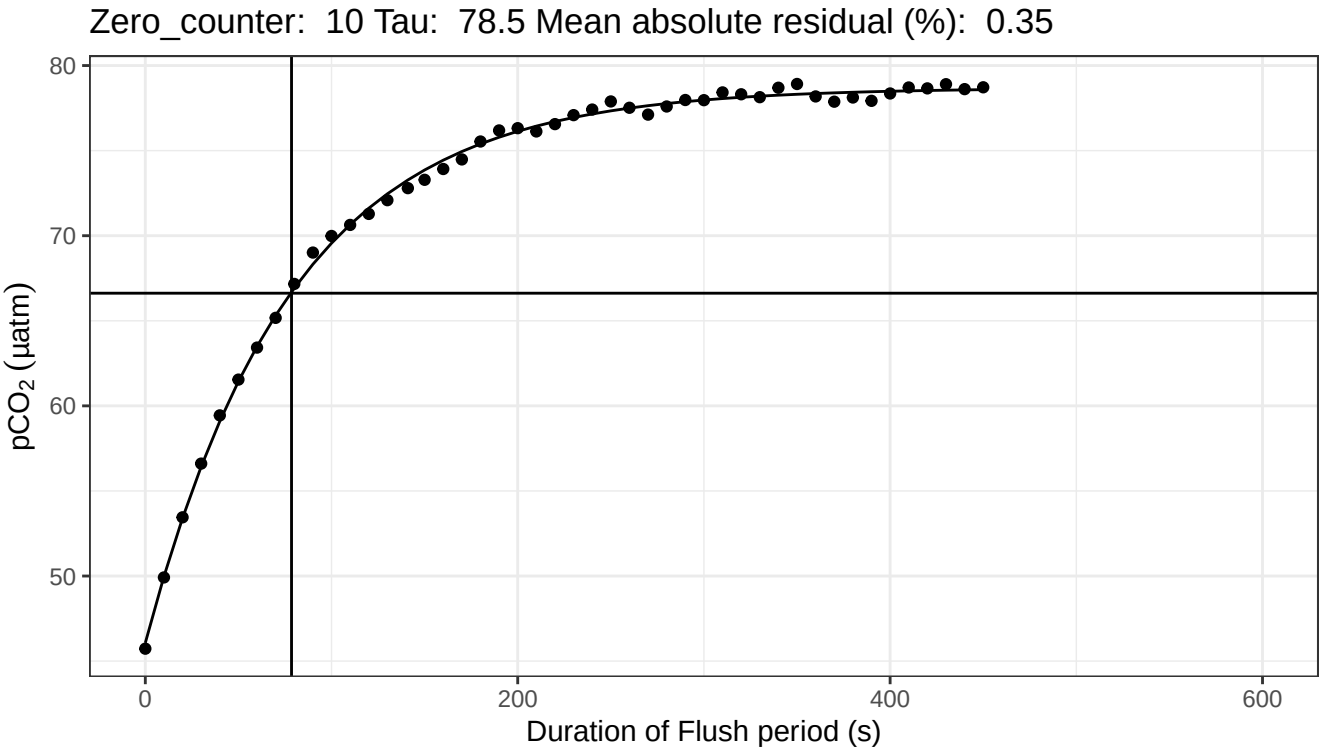
Zero_counter: 10 Tau: 77.7 Mean absolute residual (%): 0.35



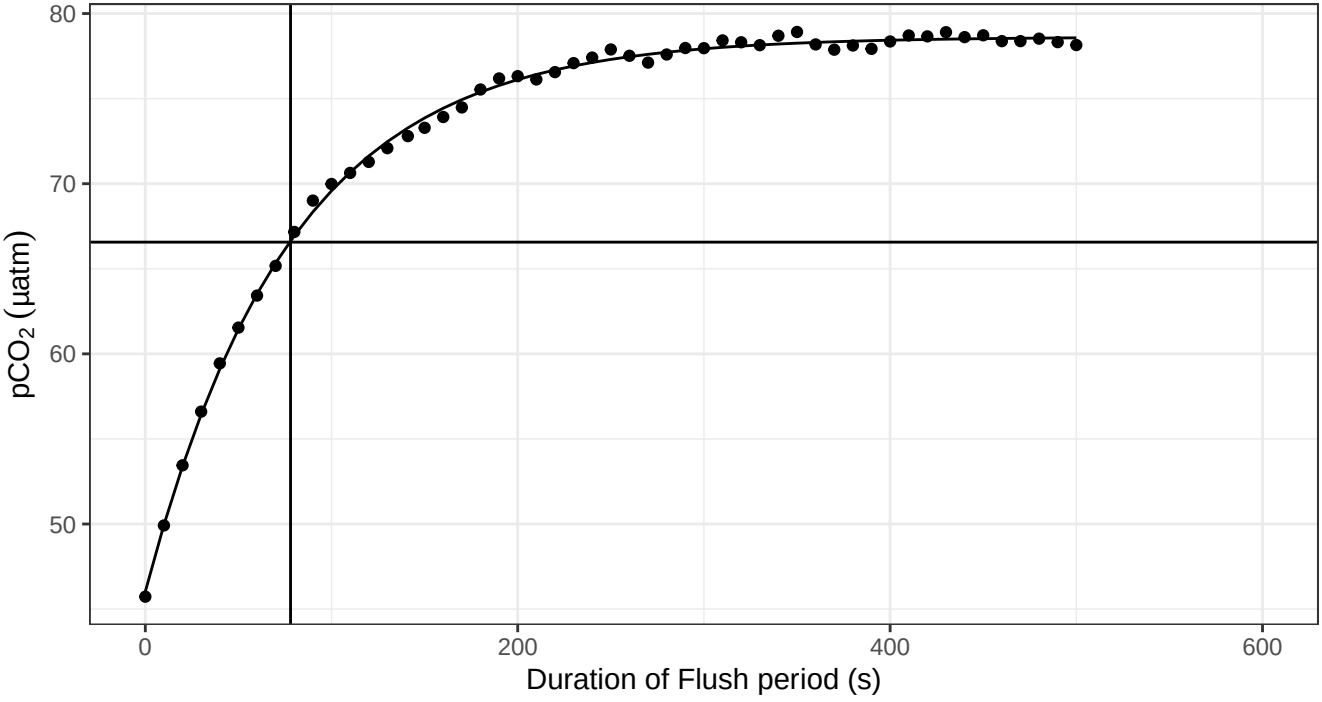
Zero_counter: 10 Tau: 79.1 Mean absolute residual (%): 0.35



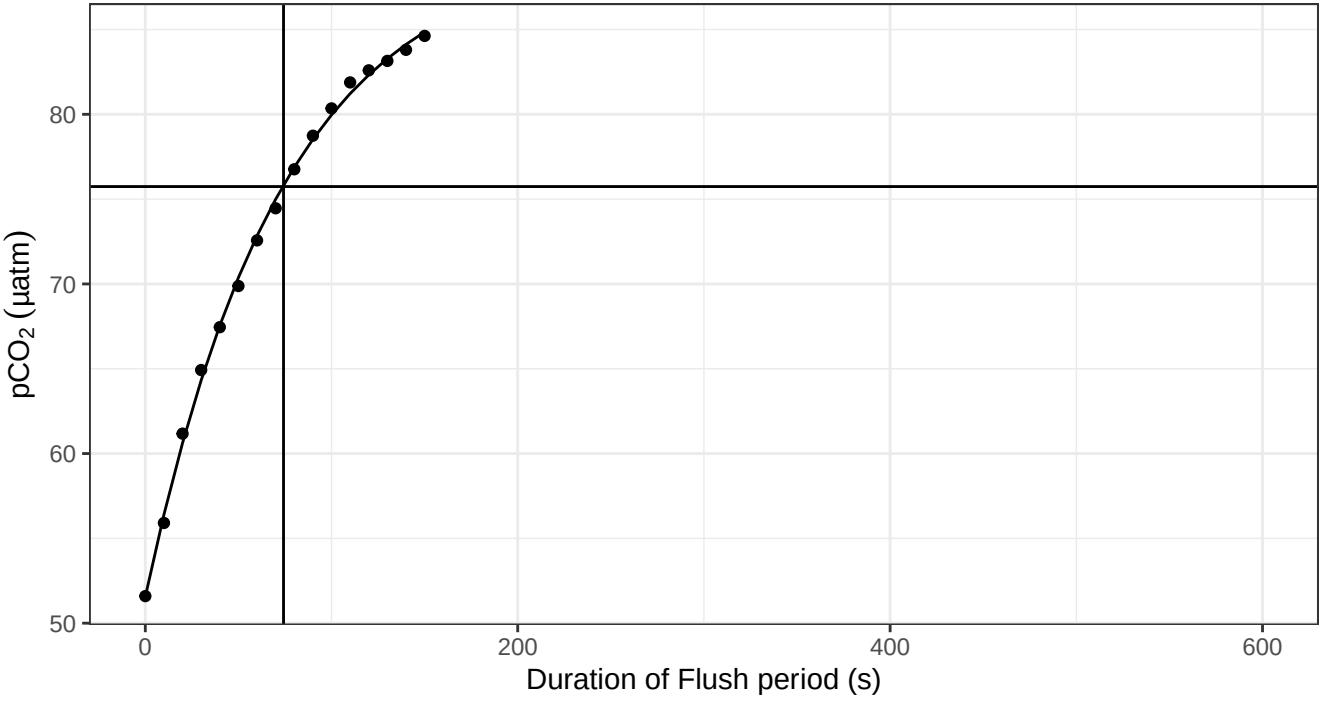

Zero_counter: 10 Tau: 78 Mean absolute residual (%): 0.36
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 10 Tau: 78.5 Mean absolute residual (%): 0.35
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

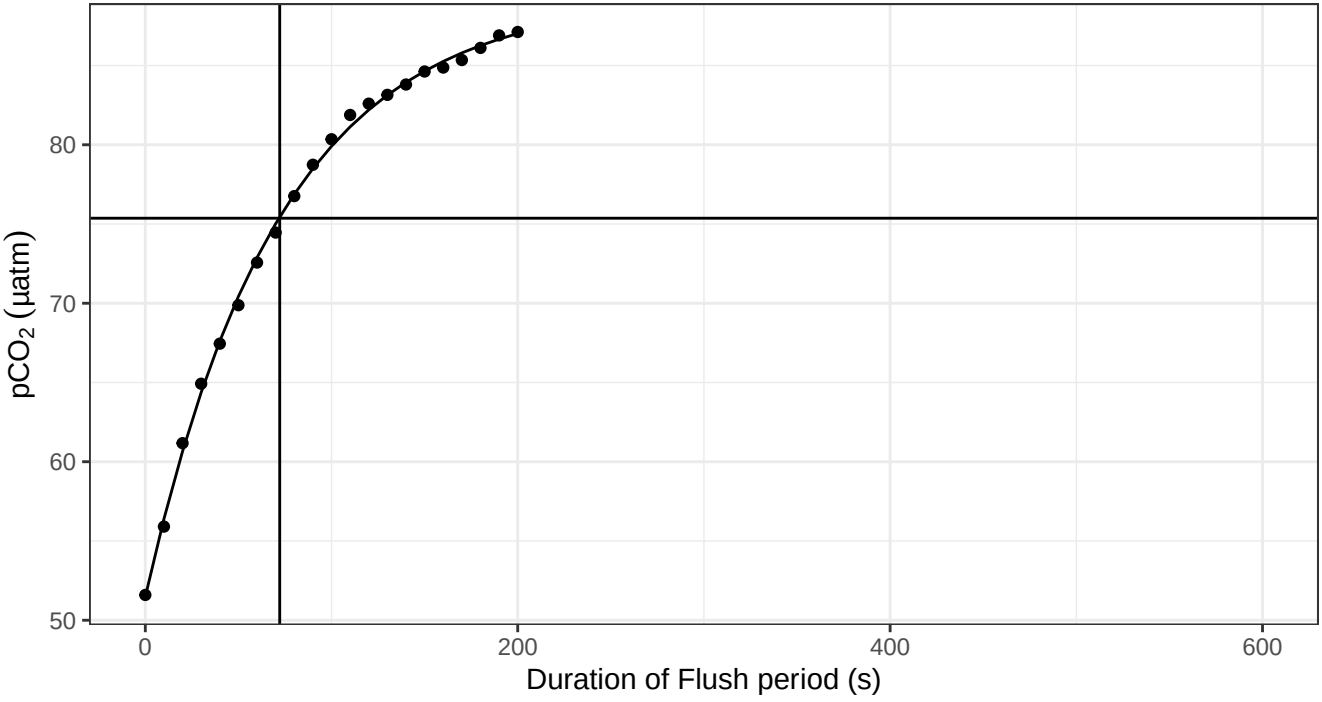
Zero_counter: 10 Tau: 78 Mean absolute residual (%): 0.34

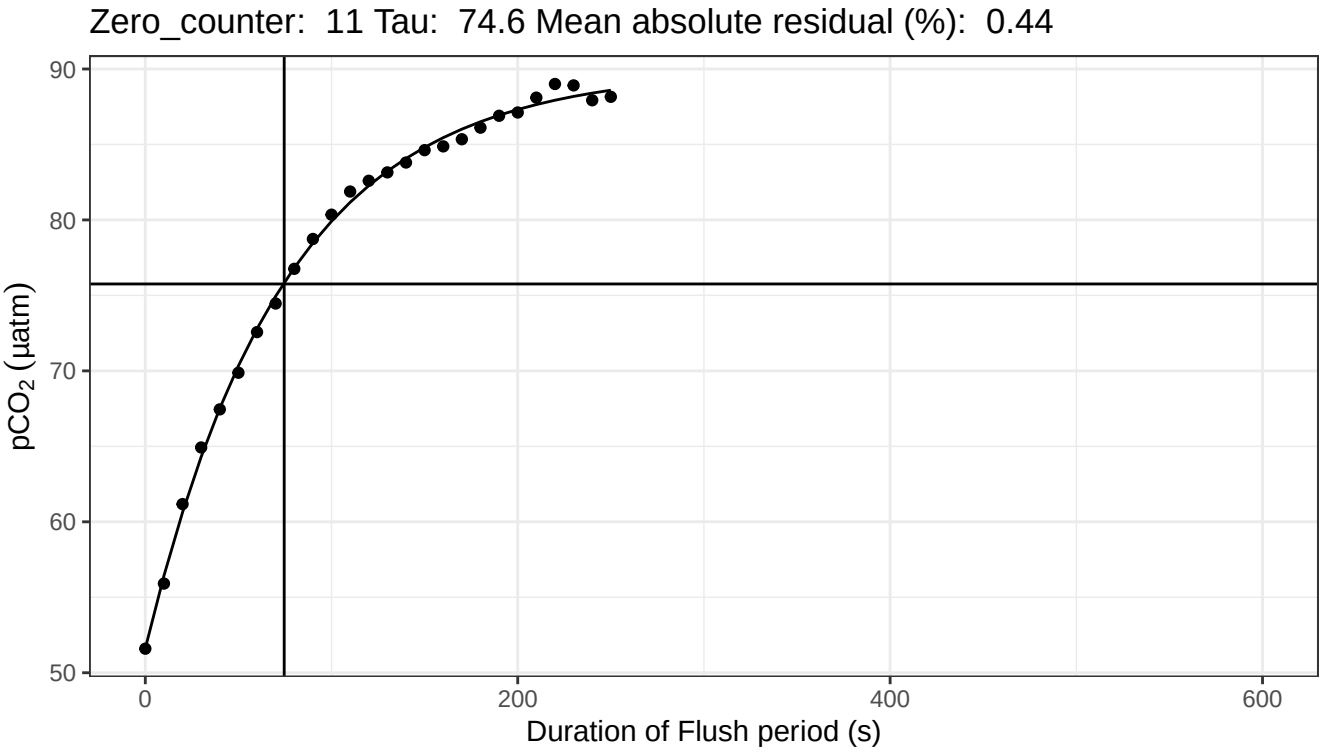


Zero_counter: 11 Tau: 74.2 Mean absolute residual (%): 0.38

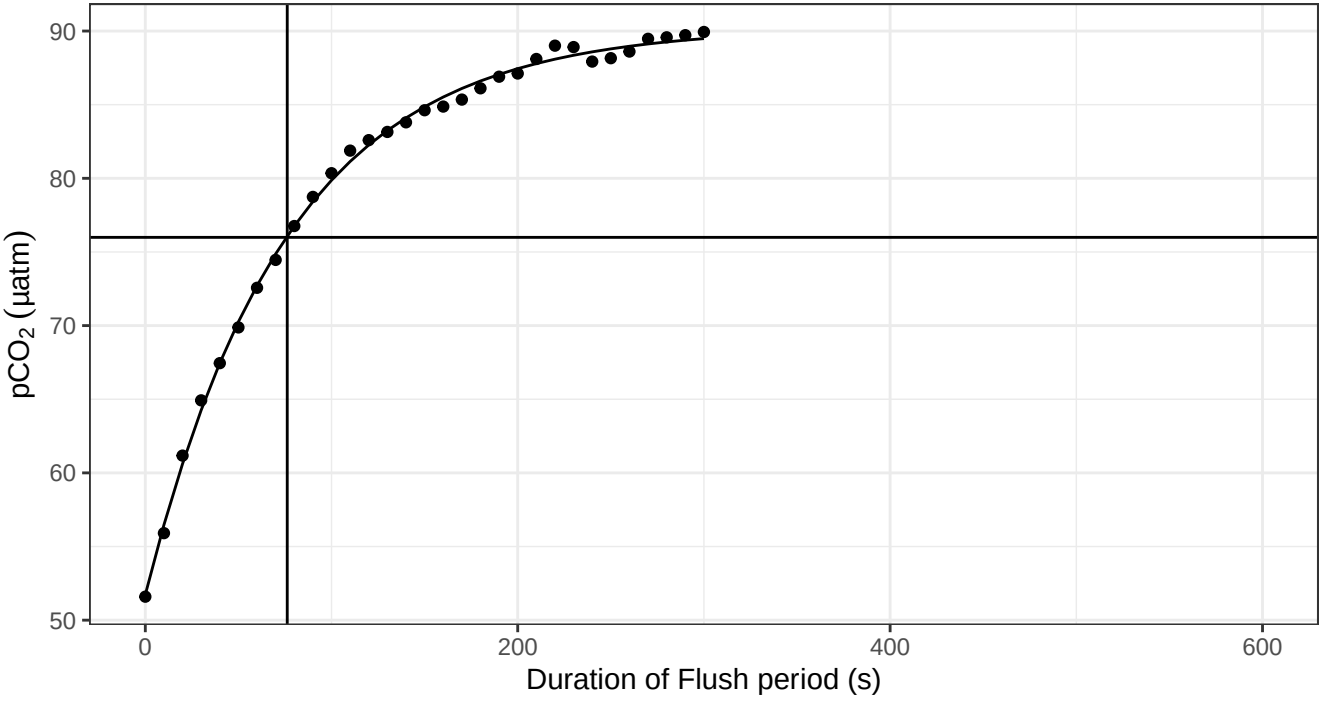


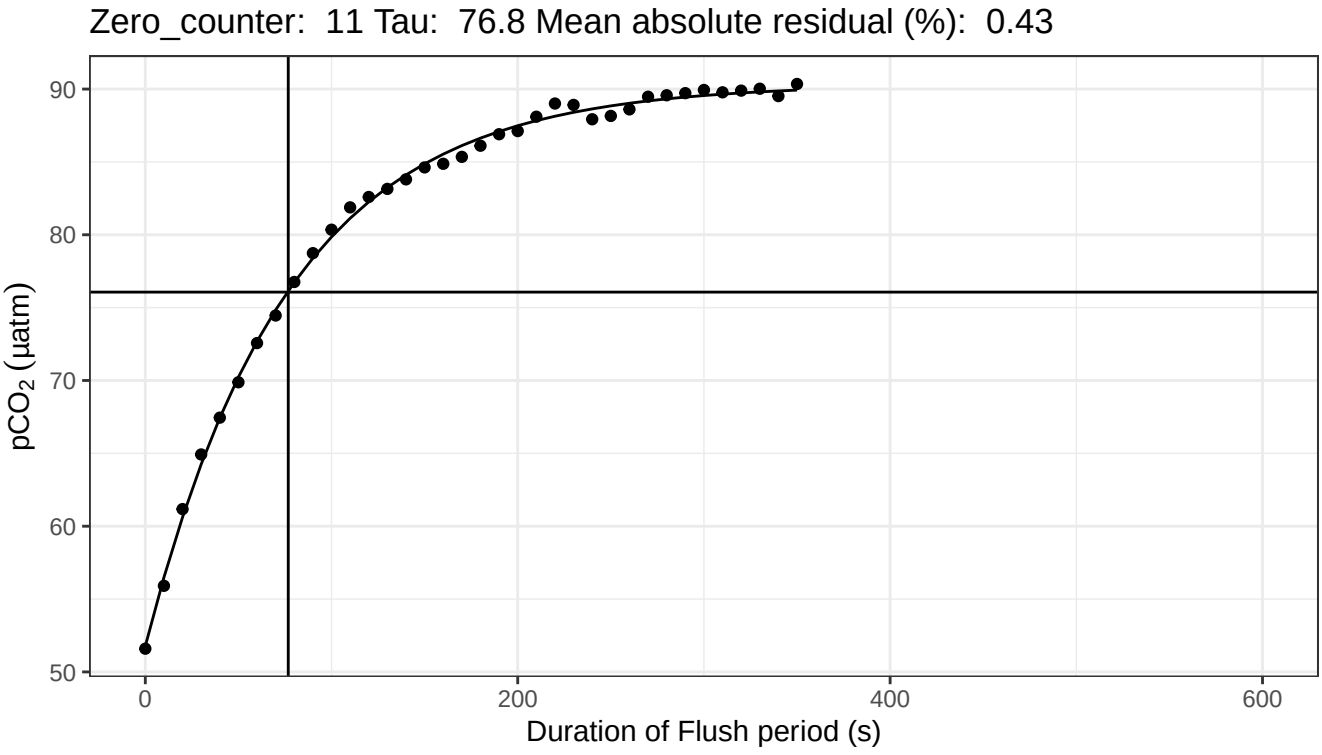
Zero_counter: 11 Tau: 72.2 Mean absolute residual (%): 0.36



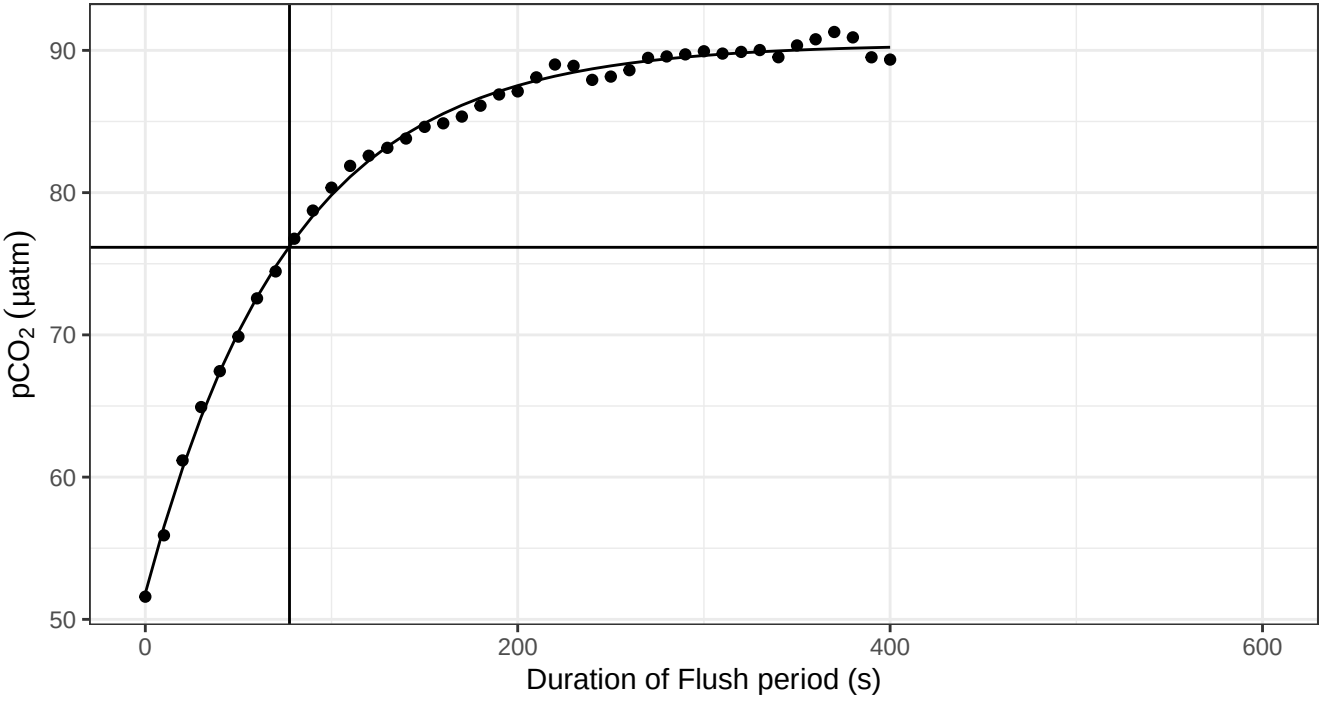

Zero_counter: 11 Tau: 74.6 Mean absolute residual (%): 0.44
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 11 Tau: 76.2 Mean absolute residual (%): 0.45

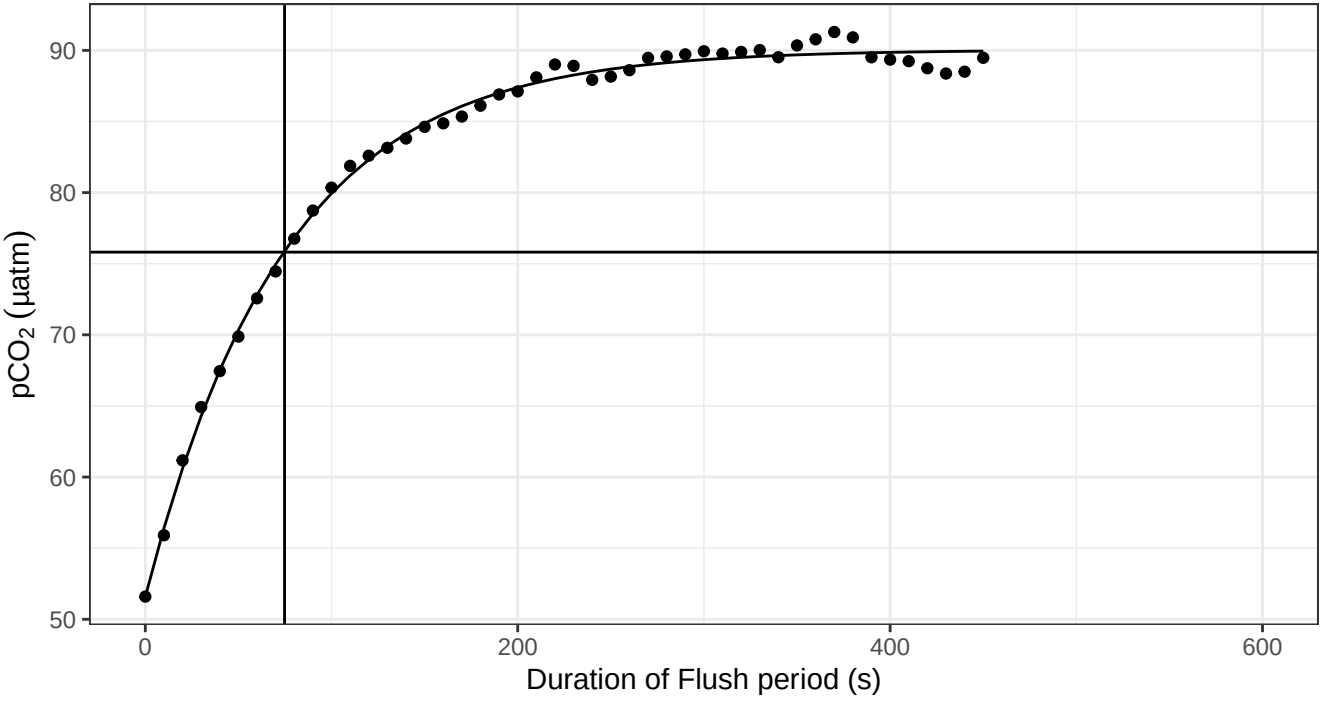


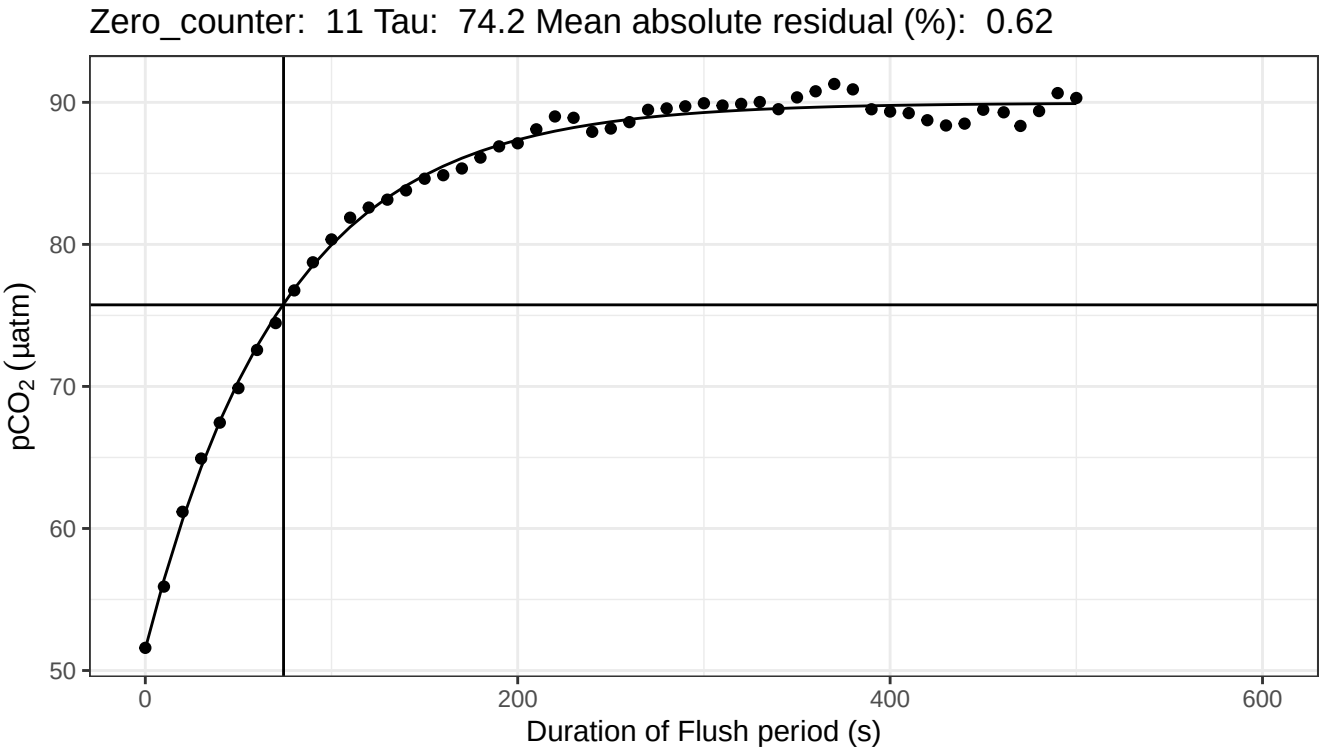

Zero_counter: 11 Tau: 76.8 Mean absolute residual (%): 0.43
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

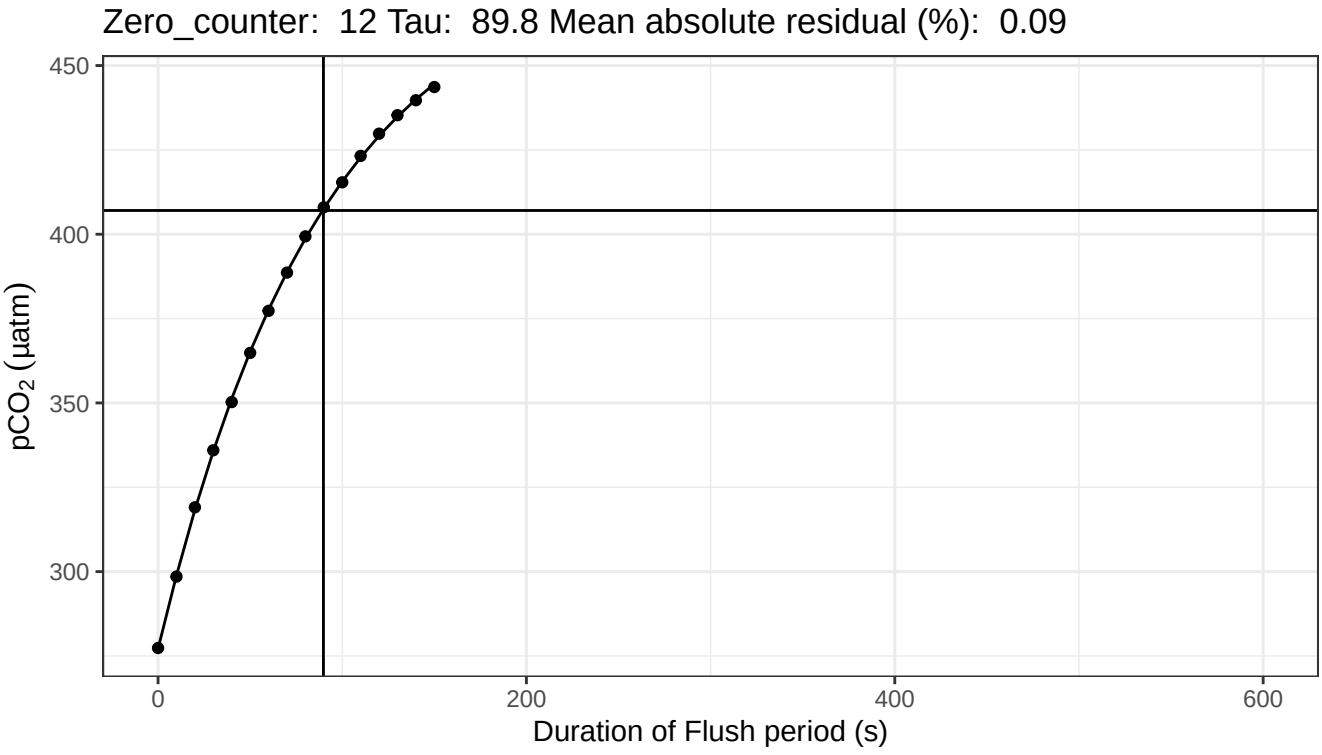
Zero_counter: 11 Tau: 77.4 Mean absolute residual (%): 0.48

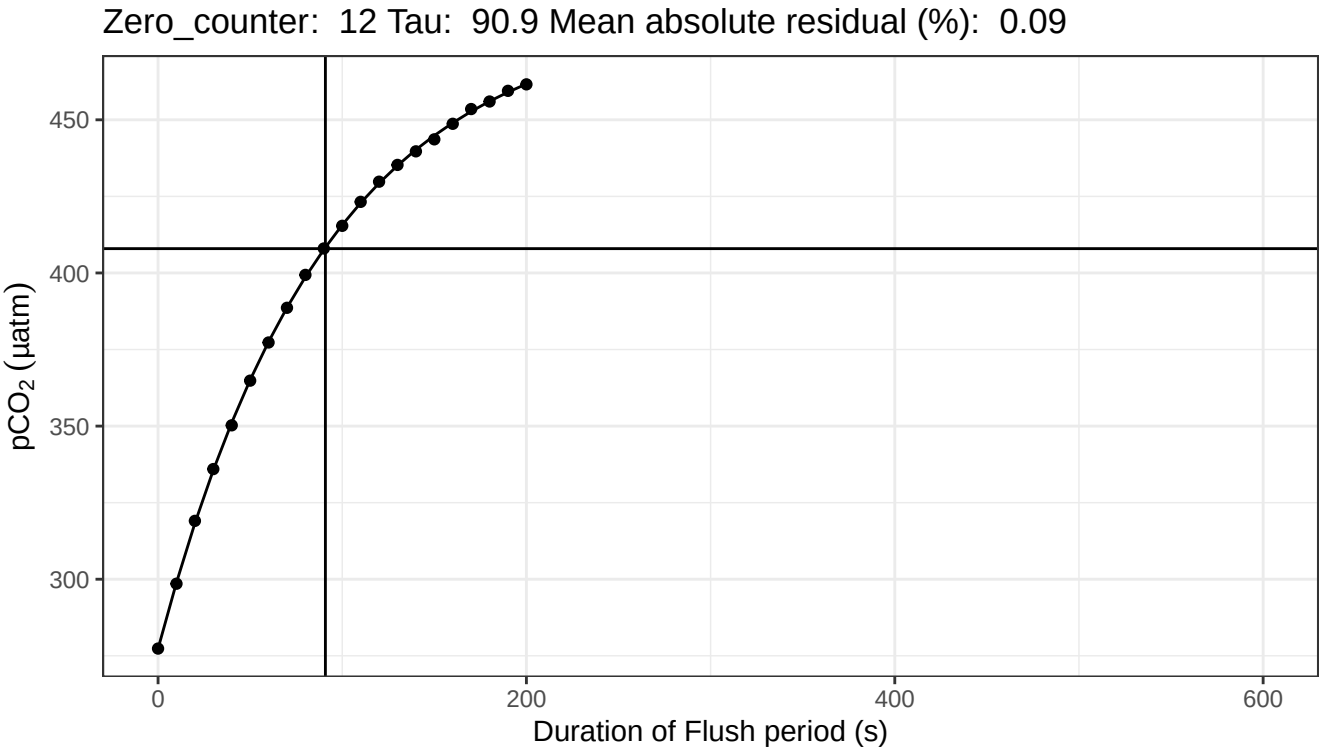


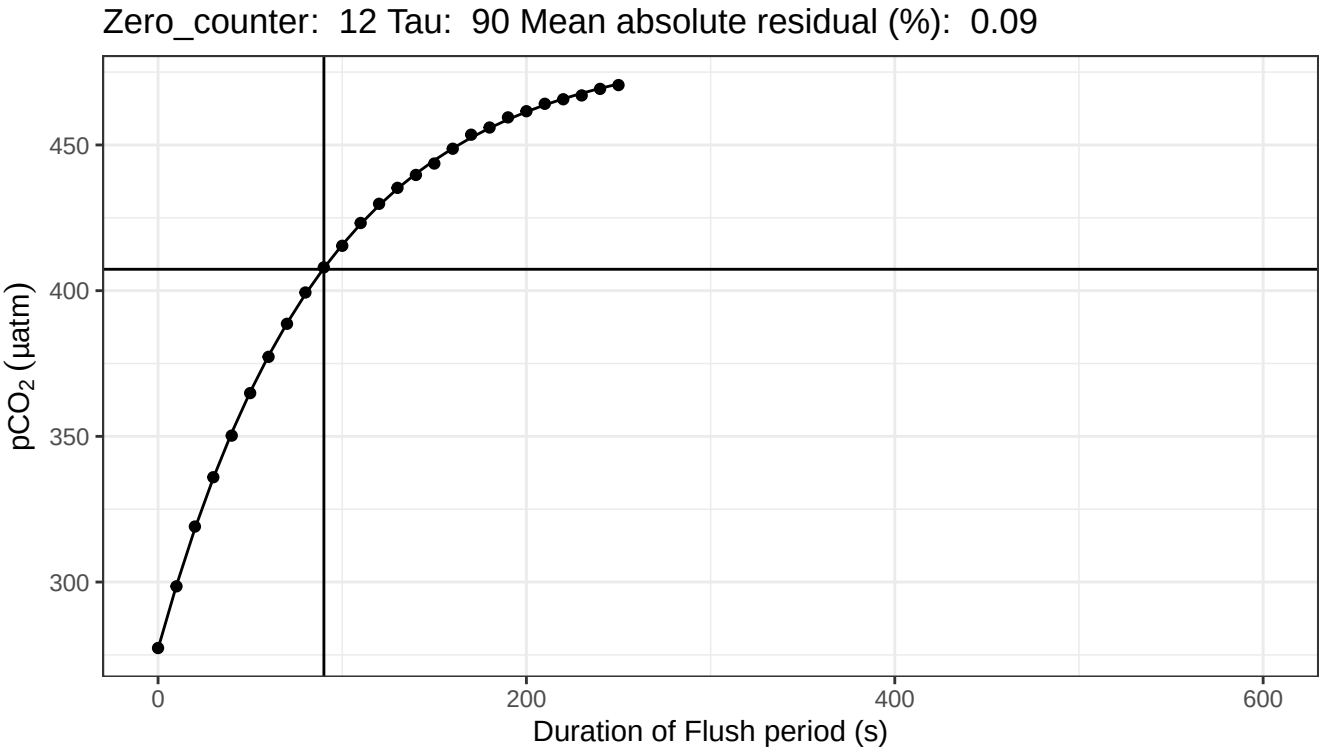
Zero_counter: 11 Tau: 74.8 Mean absolute residual (%): 0.59

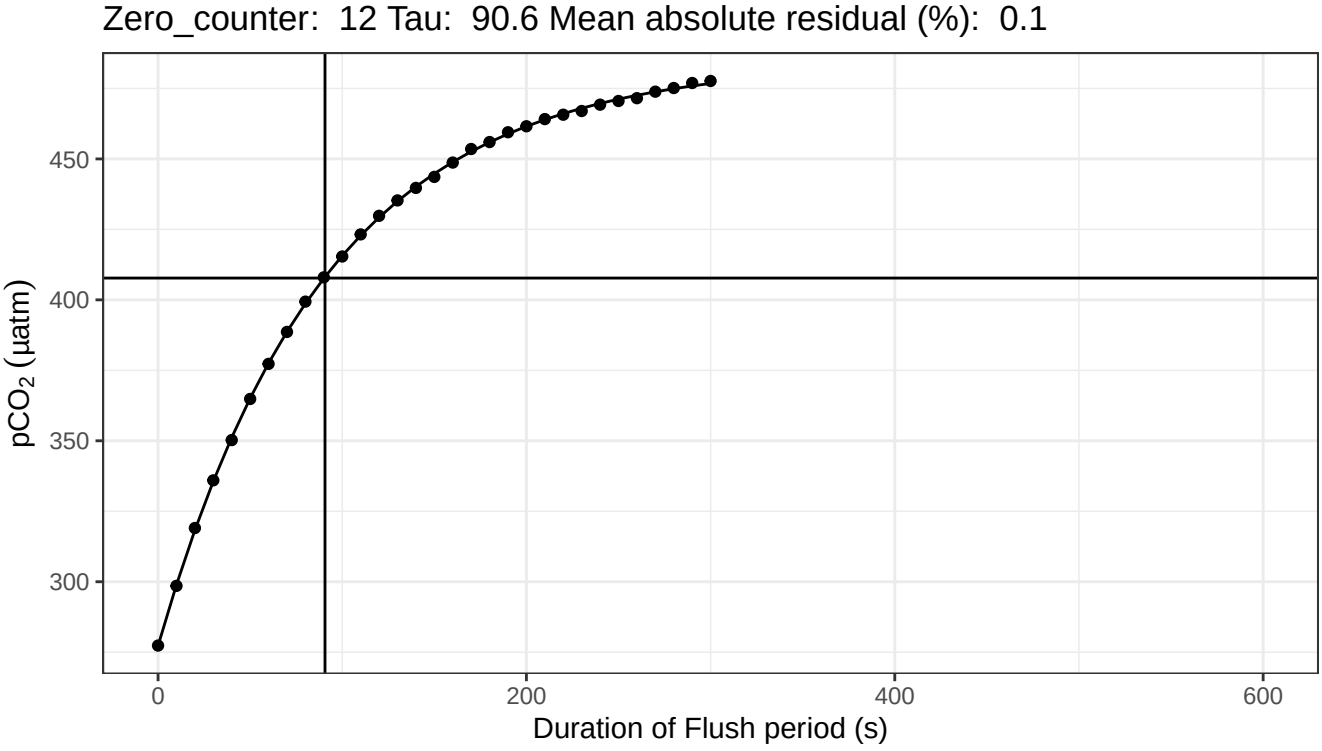


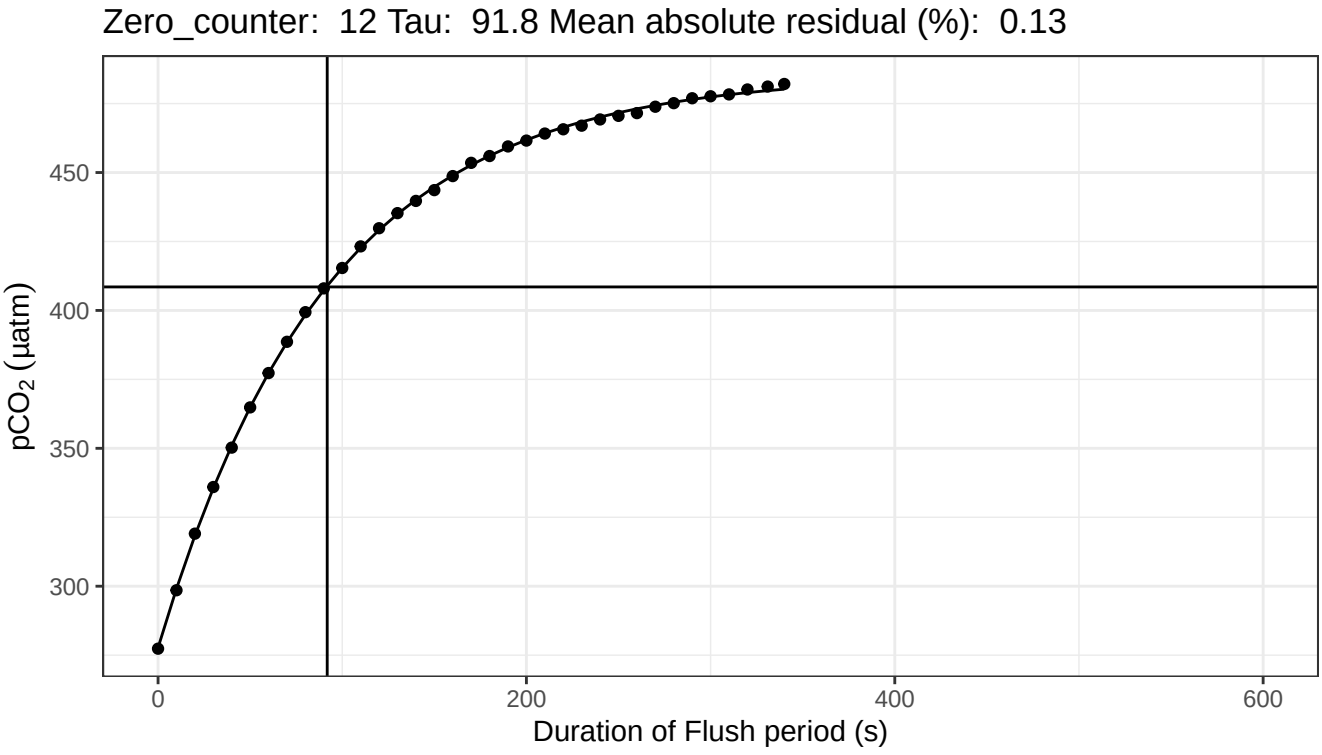

Zero_counter: 11 Tau: 74.2 Mean absolute residual (%): 0.62
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

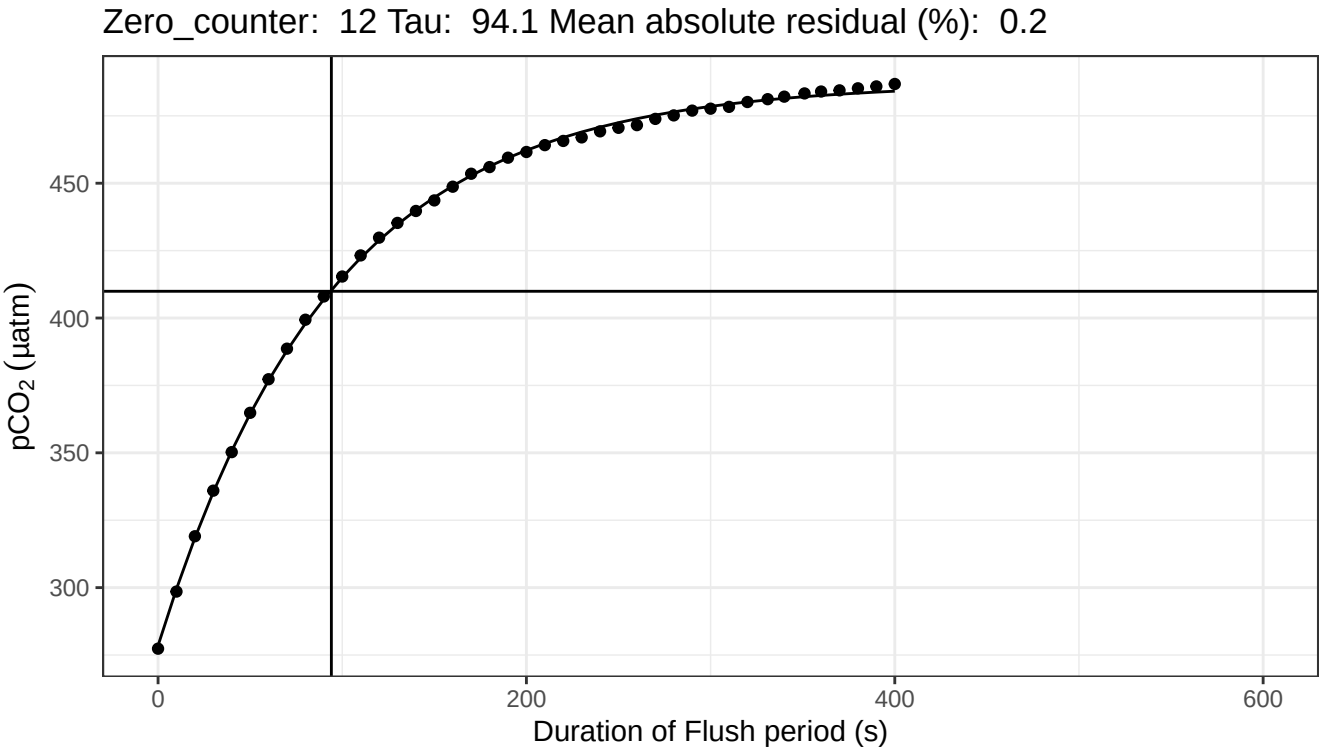

Zero_counter: 12 Tau: 89.8 Mean absolute residual (%): 0.09
450
400
350
300
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

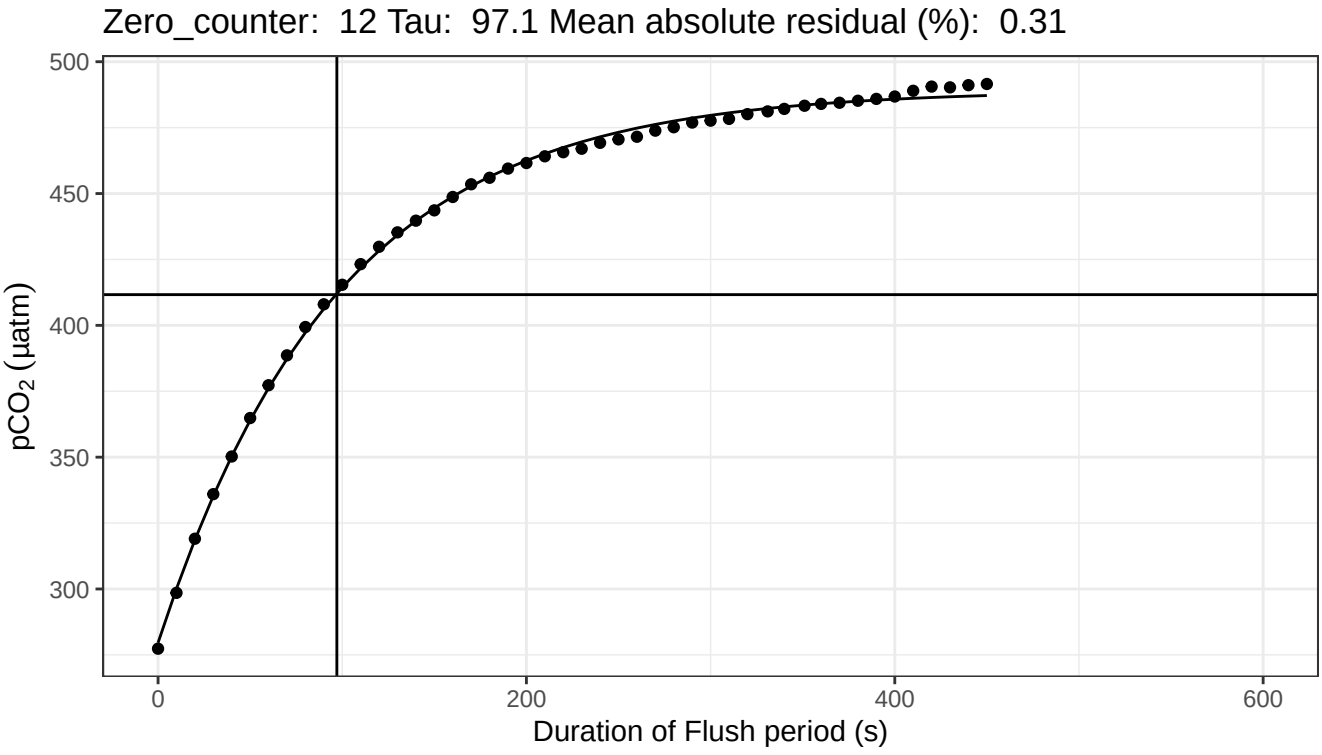

Zero_counter: 12 Tau: 90.9 Mean absolute residual (%): 0.09
450
400
350
300
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

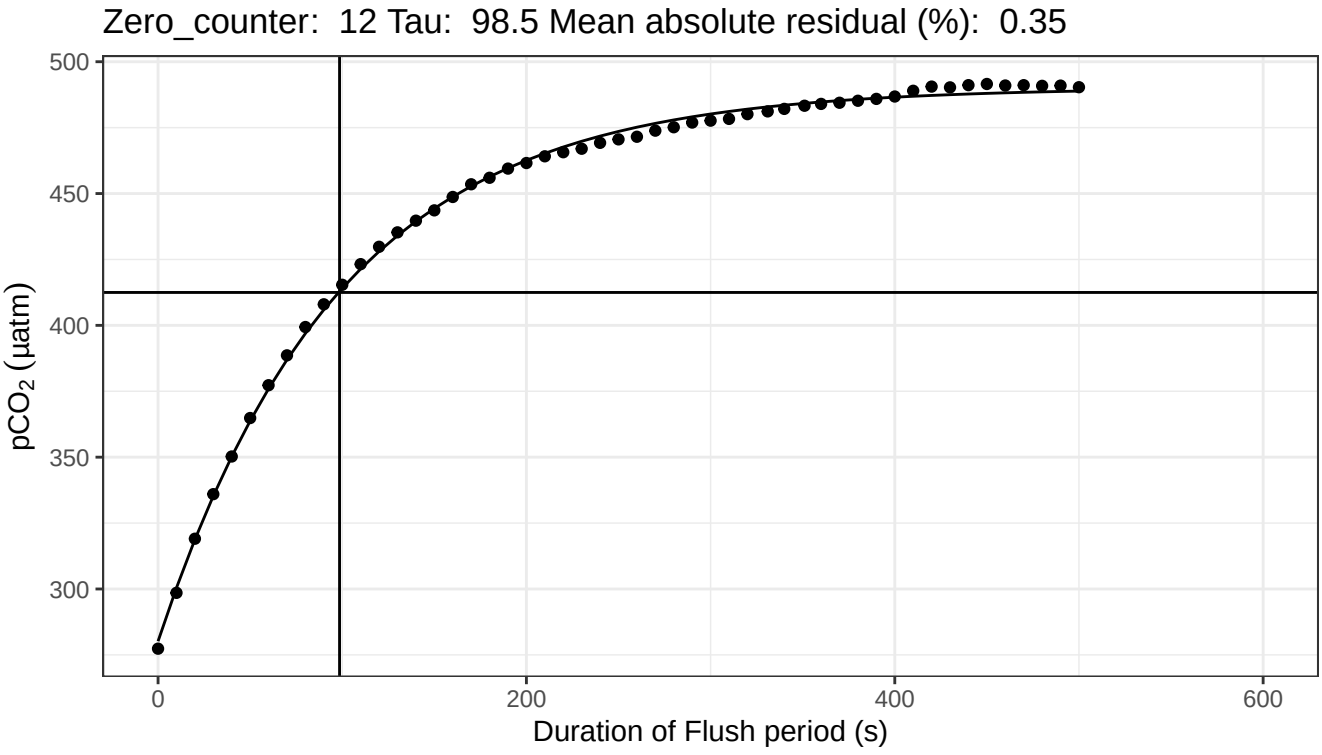

Zero_counter: 12 Tau: 90 Mean absolute residual (%): 0.09
450
400
350
300
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

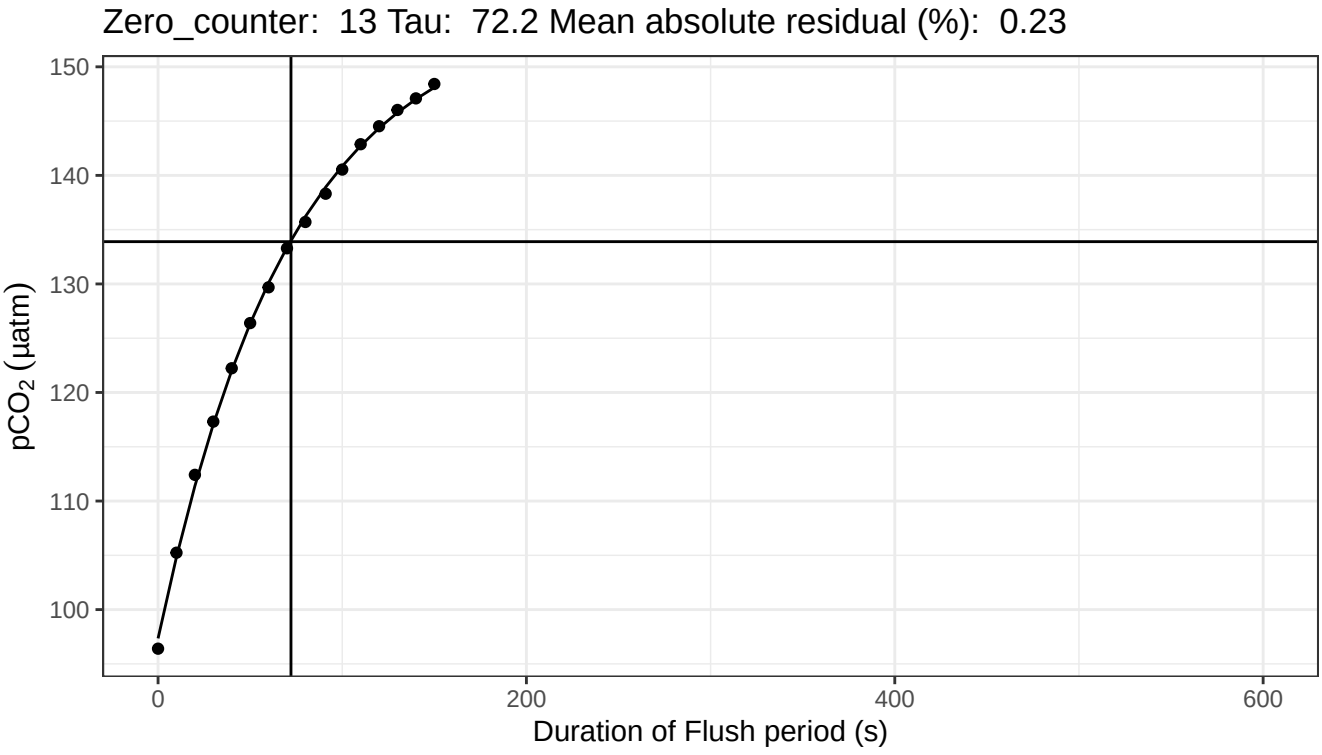

Zero_counter: 12 Tau: 90.6 Mean absolute residual (%): 0.1
450
400
350
300
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

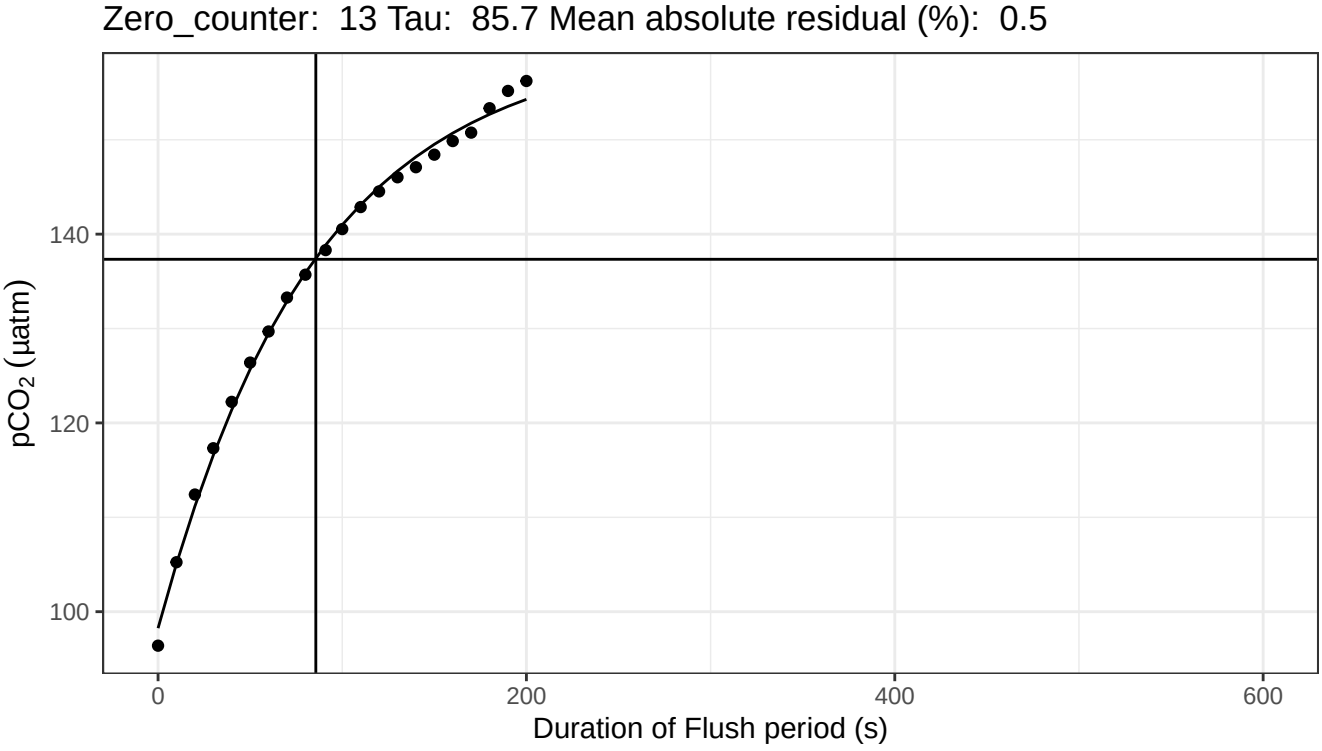

Zero_counter: 12 Tau: 91.8 Mean absolute residual (%): 0.13
450
400
350
300
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

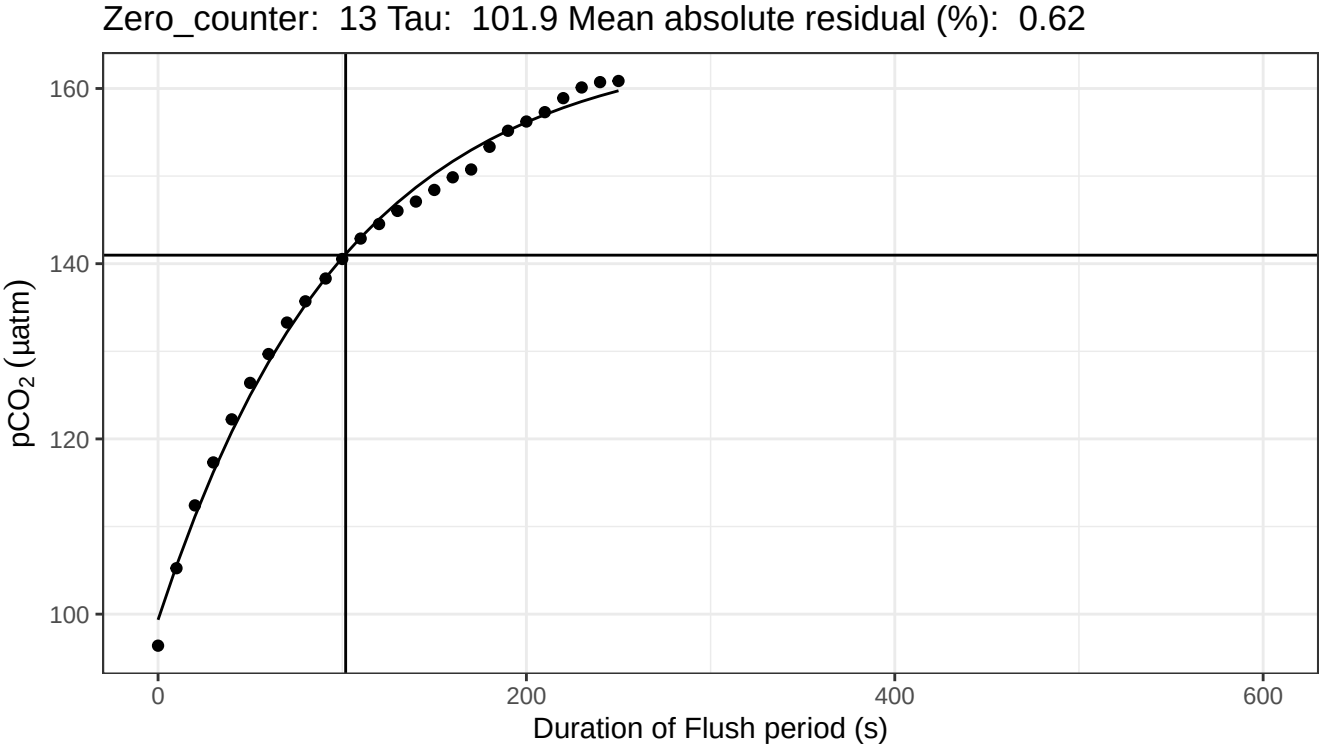

Zero_counter: 12 Tau: 94.1 Mean absolute residual (%): 0.2
450
400
350
300
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

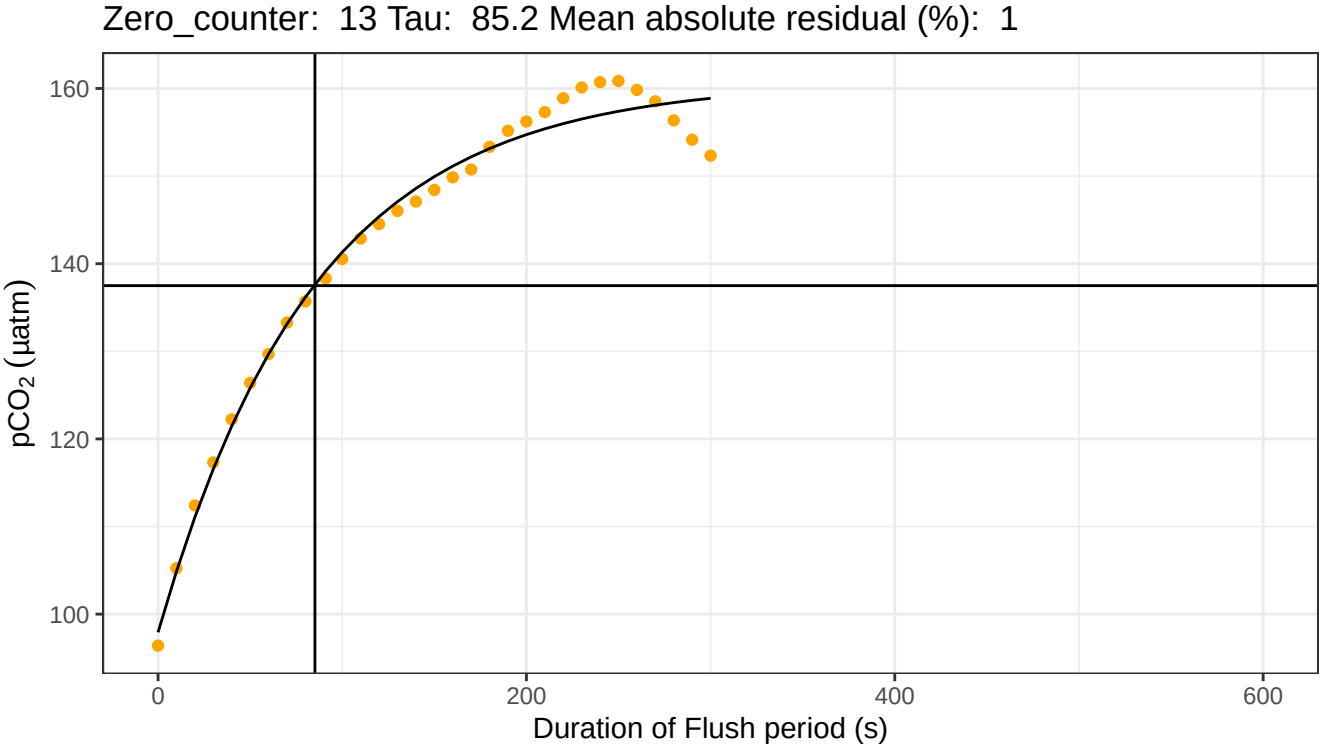

Zero_counter: 12 Tau: 97.1 Mean absolute residual (%): 0.31
500
450
400
350
300
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

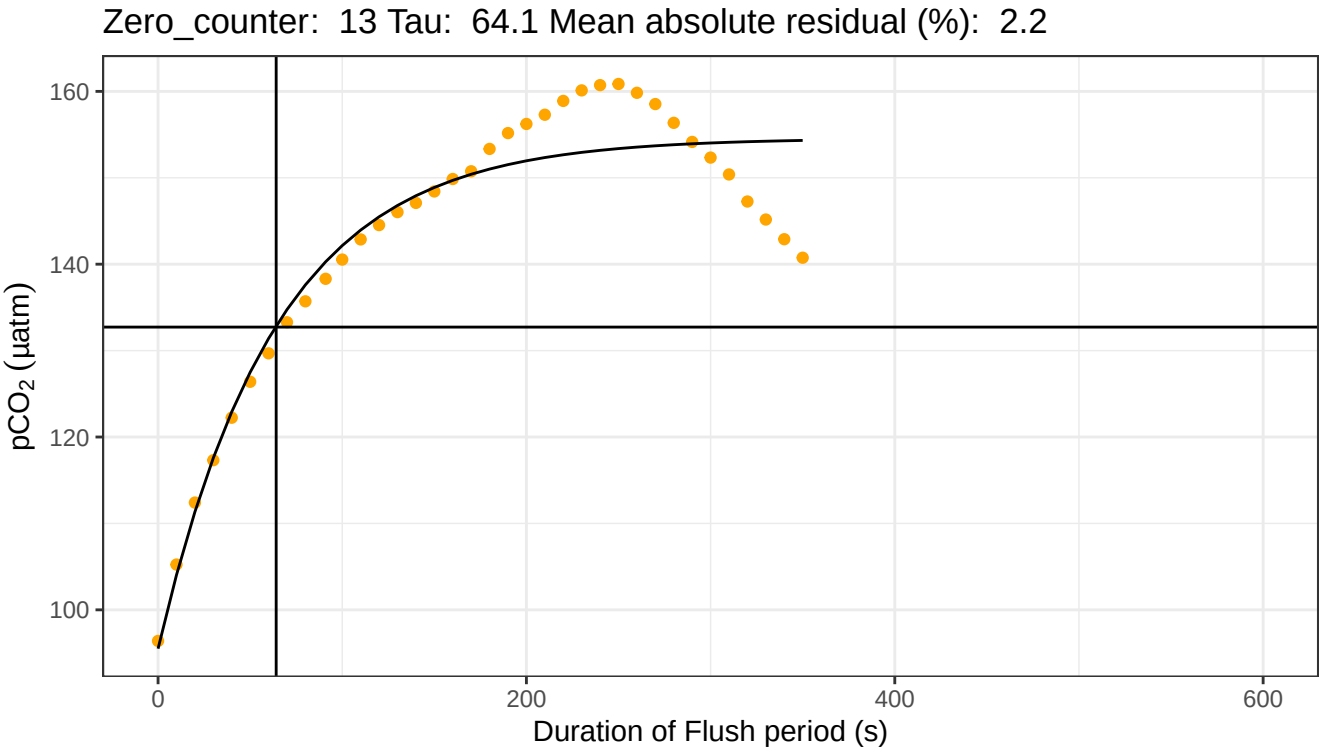

Zero_counter: 12 Tau: 98.5 Mean absolute residual (%): 0.35
500
450
400
350
300
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

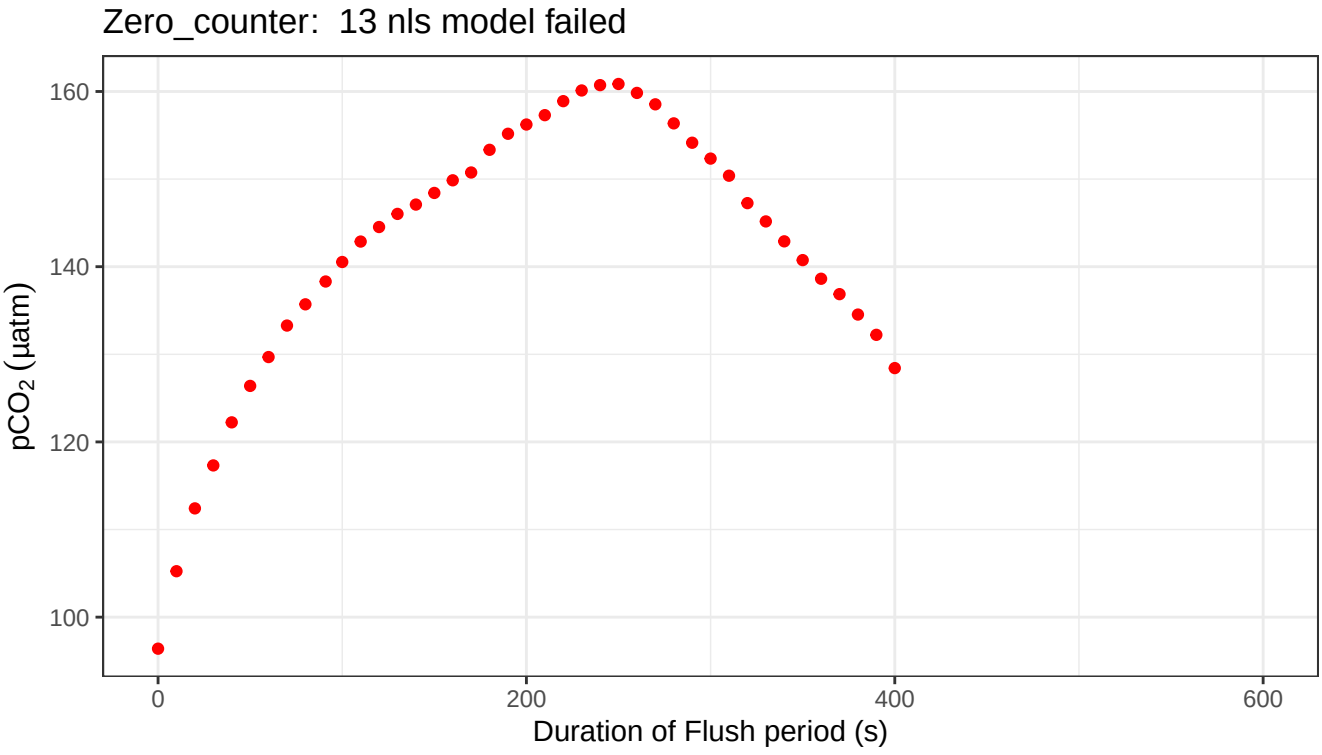

Zero_counter: 13 Tau: 72.2 Mean absolute residual (%): 0.23
150
140
130
120
110
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

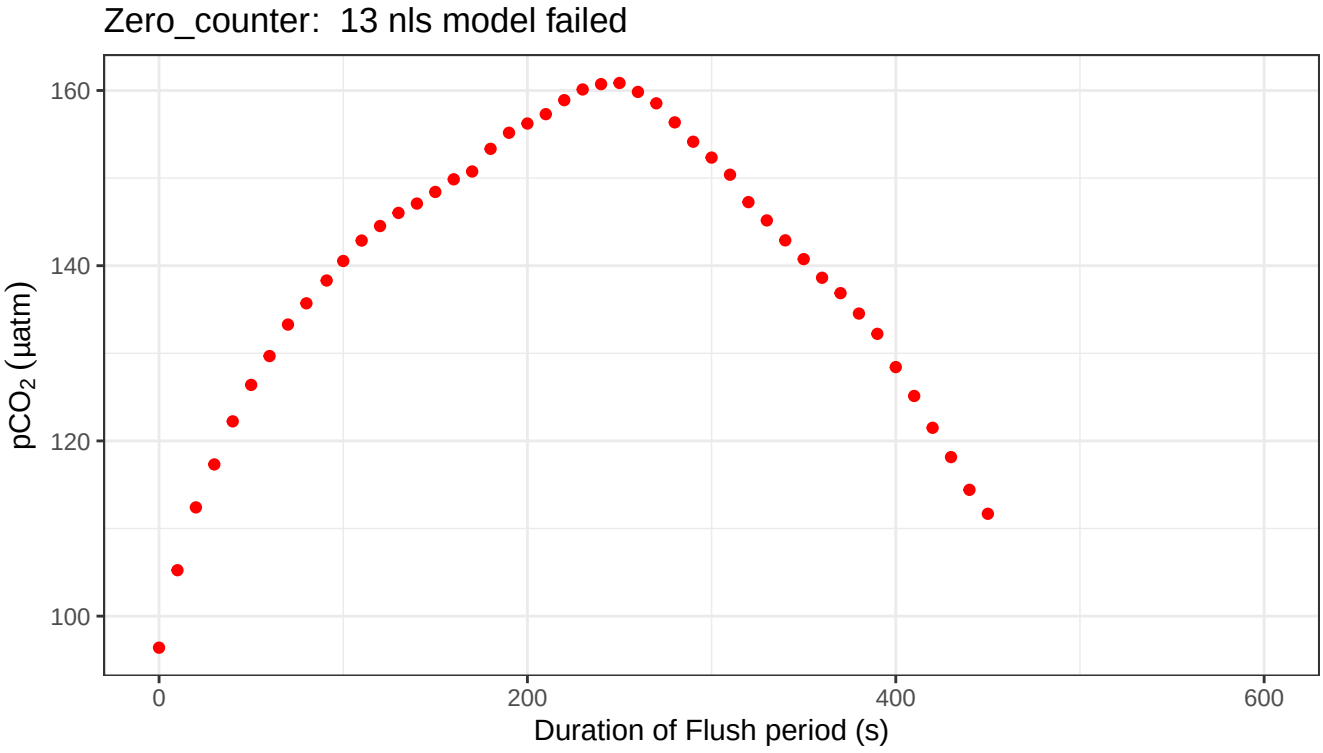

Zero_counter: 13 Tau: 85.7 Mean absolute residual (%): 0.5
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

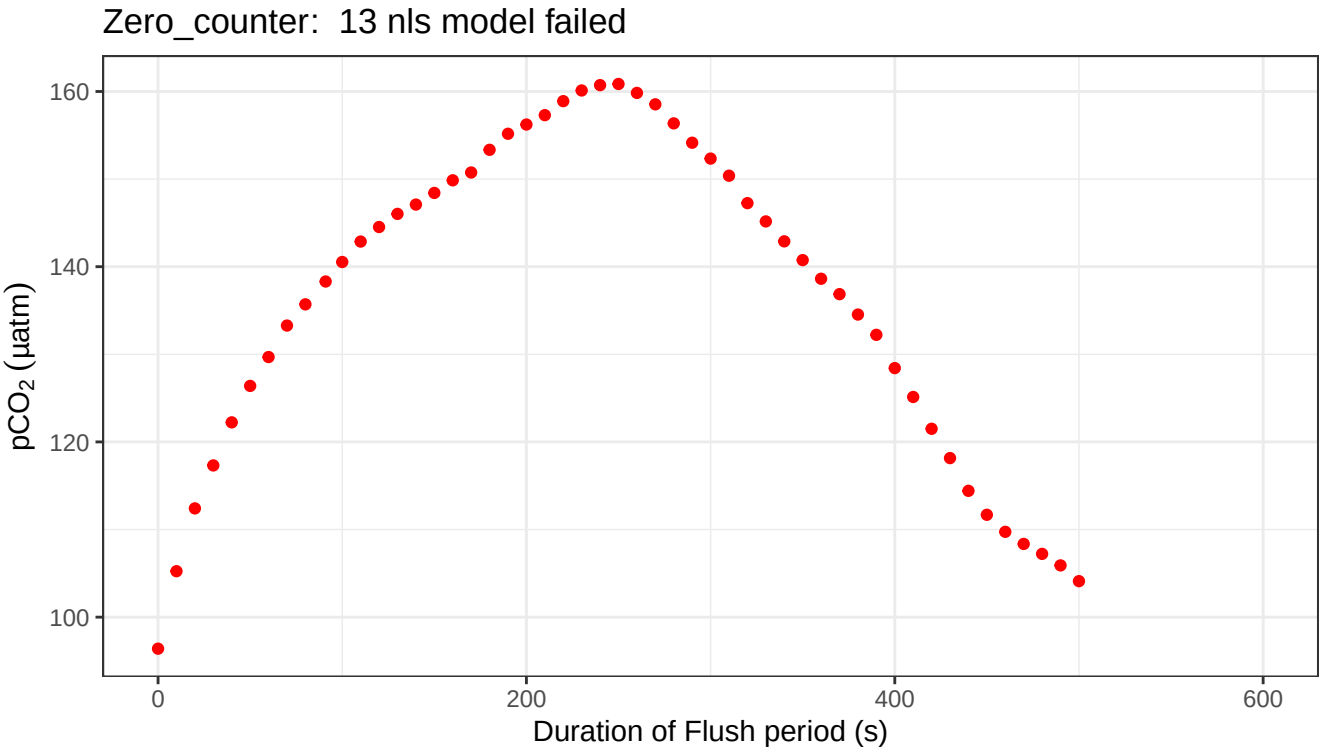

Zero_counter: 13 Tau: 101.9 Mean absolute residual (%): 0.62
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

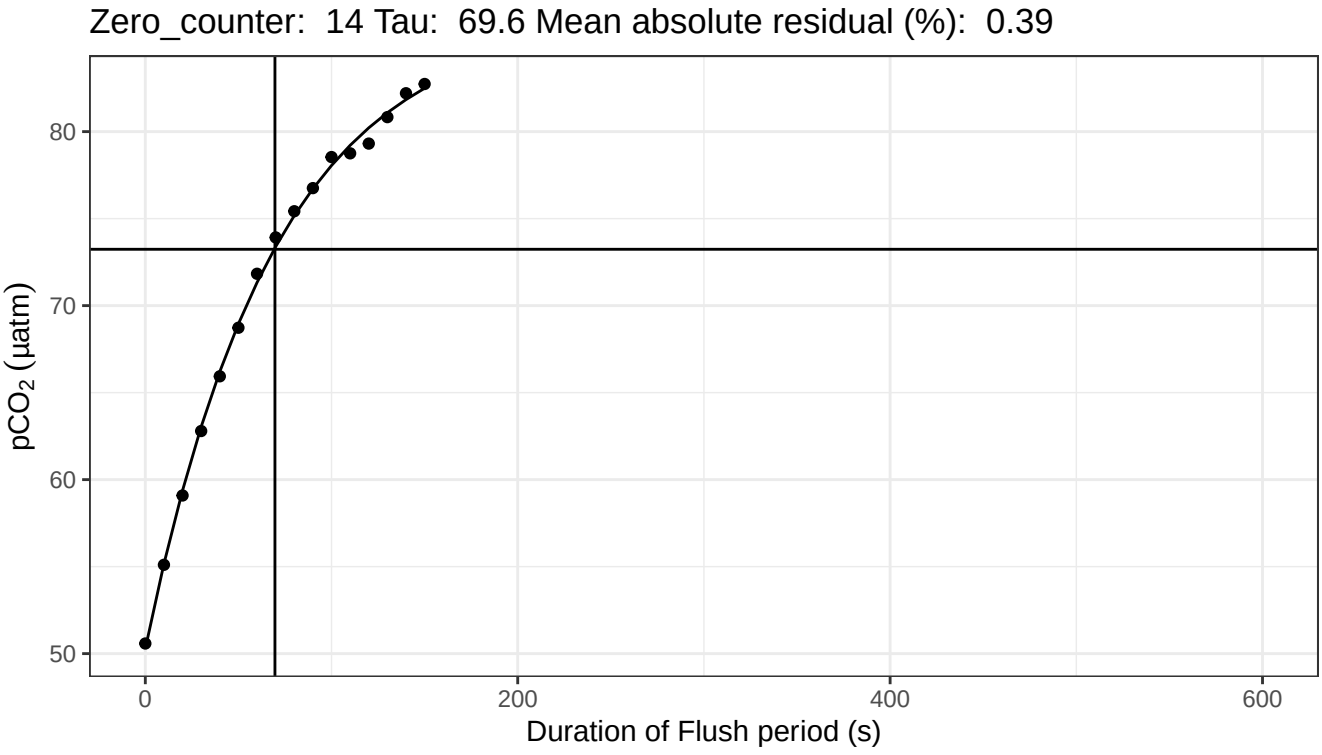

Zero_counter: 13 Tau: 85.2 Mean absolute residual (%): 1
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 13 Tau: 64.1 Mean absolute residual (%): 2.2
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

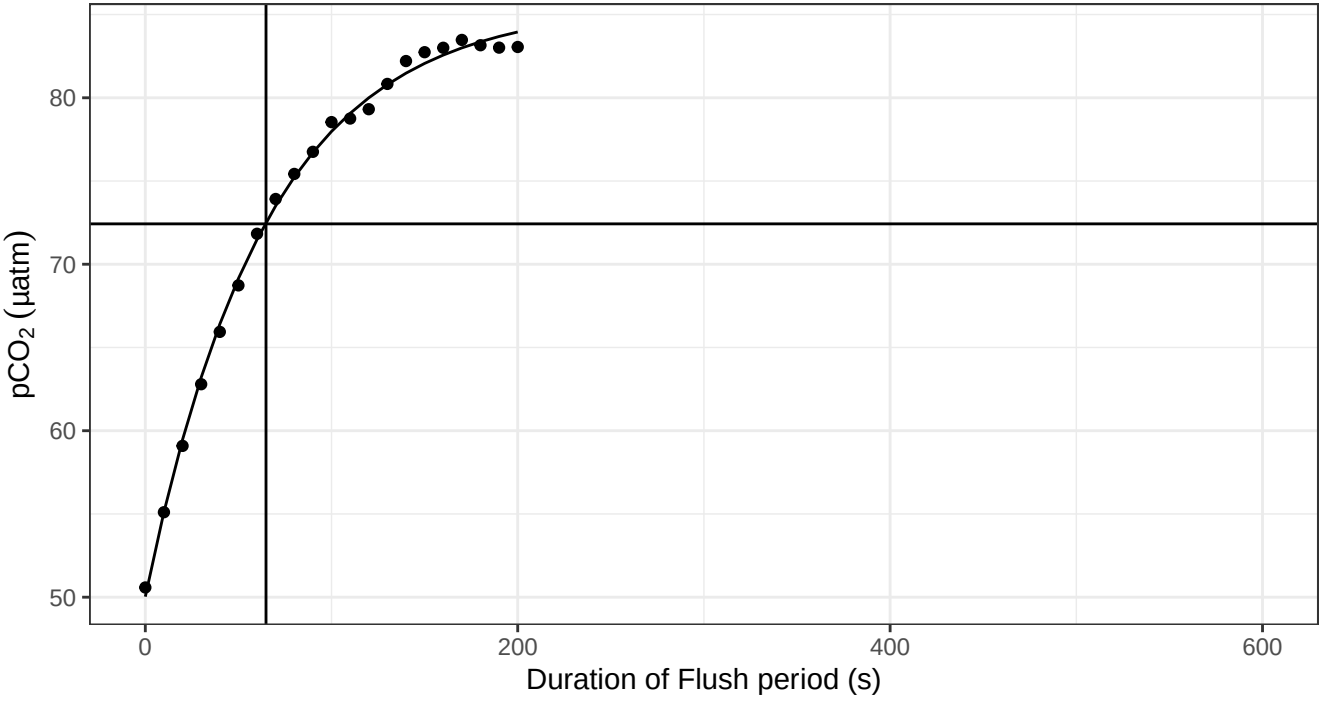

Zero_counter: 13 nls model failed
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 13 nls model failed
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

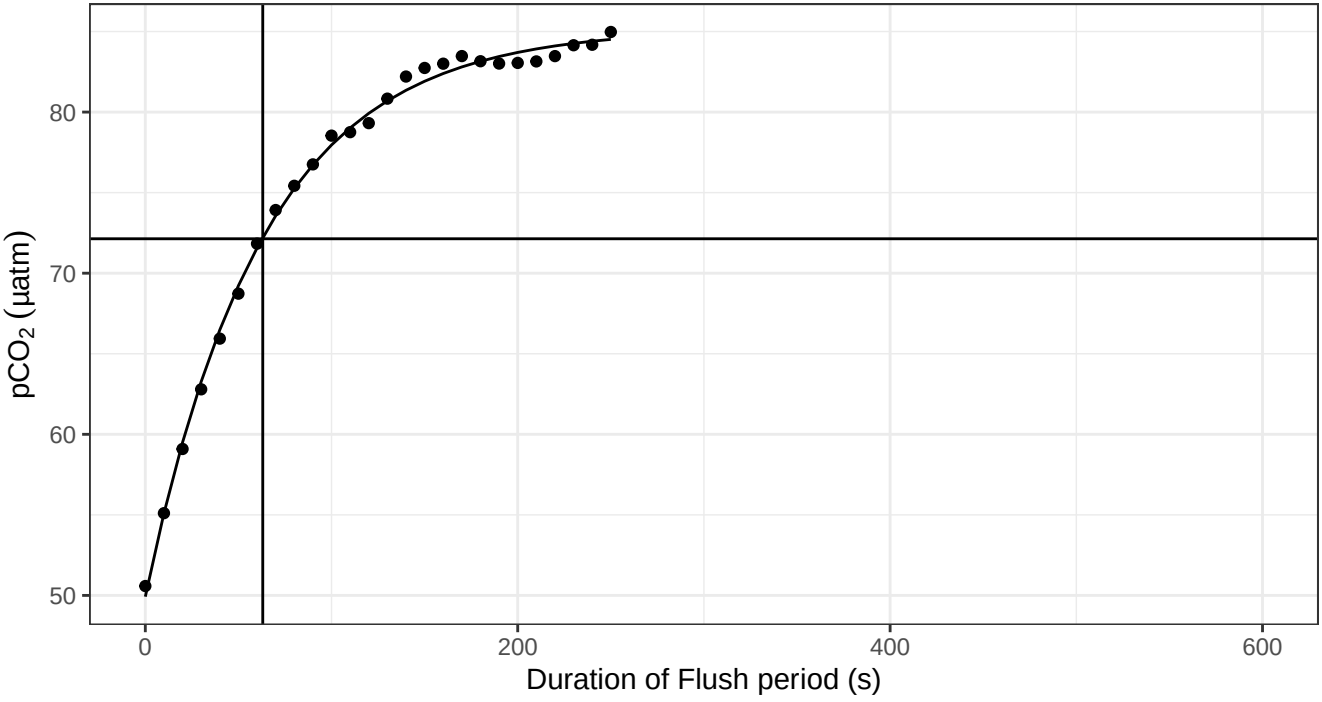

Zero_counter: 13 nls model failed
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 14 Tau: 69.6 Mean absolute residual (%): 0.39
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

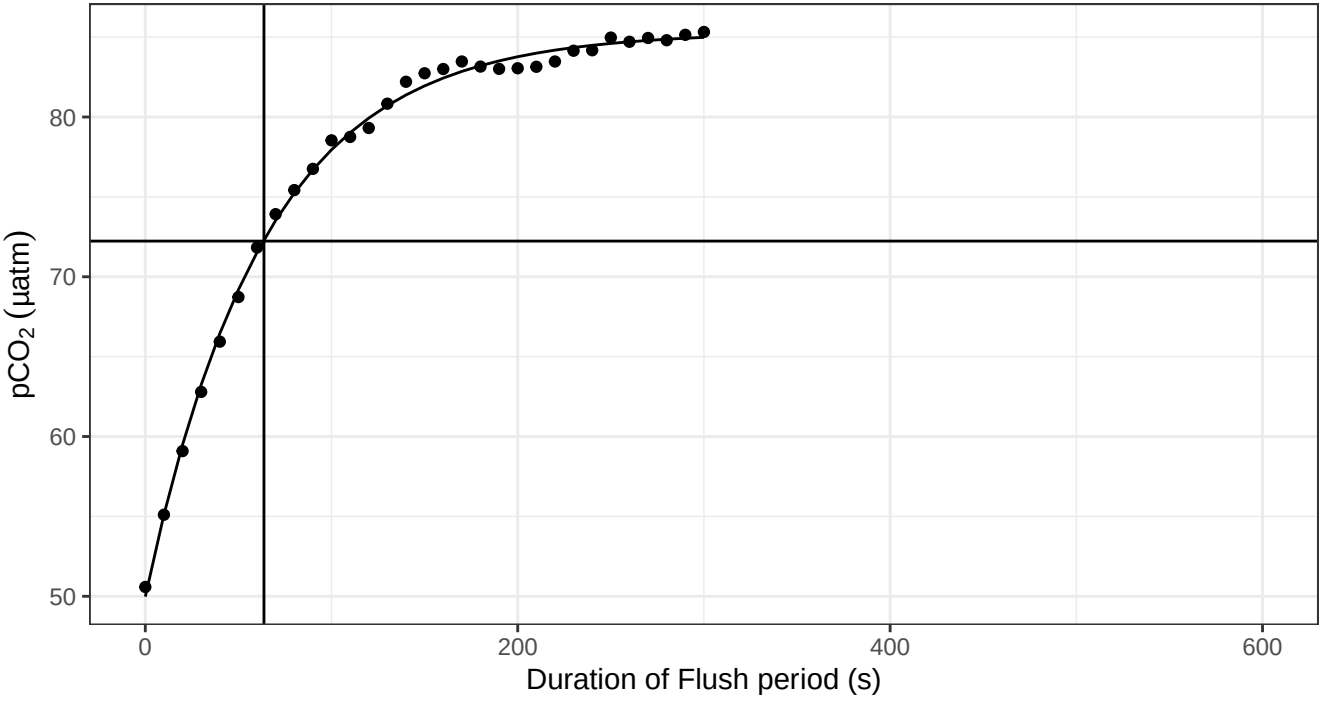
Zero_counter: 14 Tau: 64.8 Mean absolute residual (%): 0.5



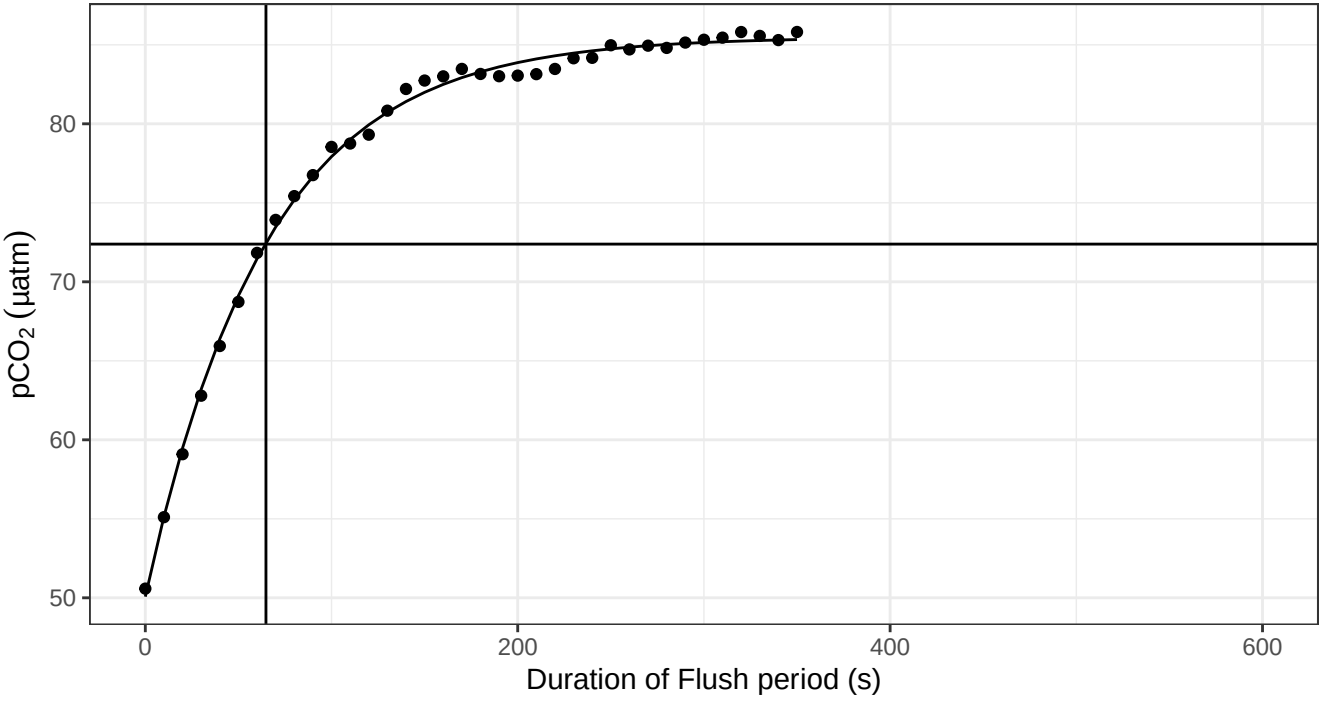
Zero_counter: 14 Tau: 63.1 Mean absolute residual (%): 0.51



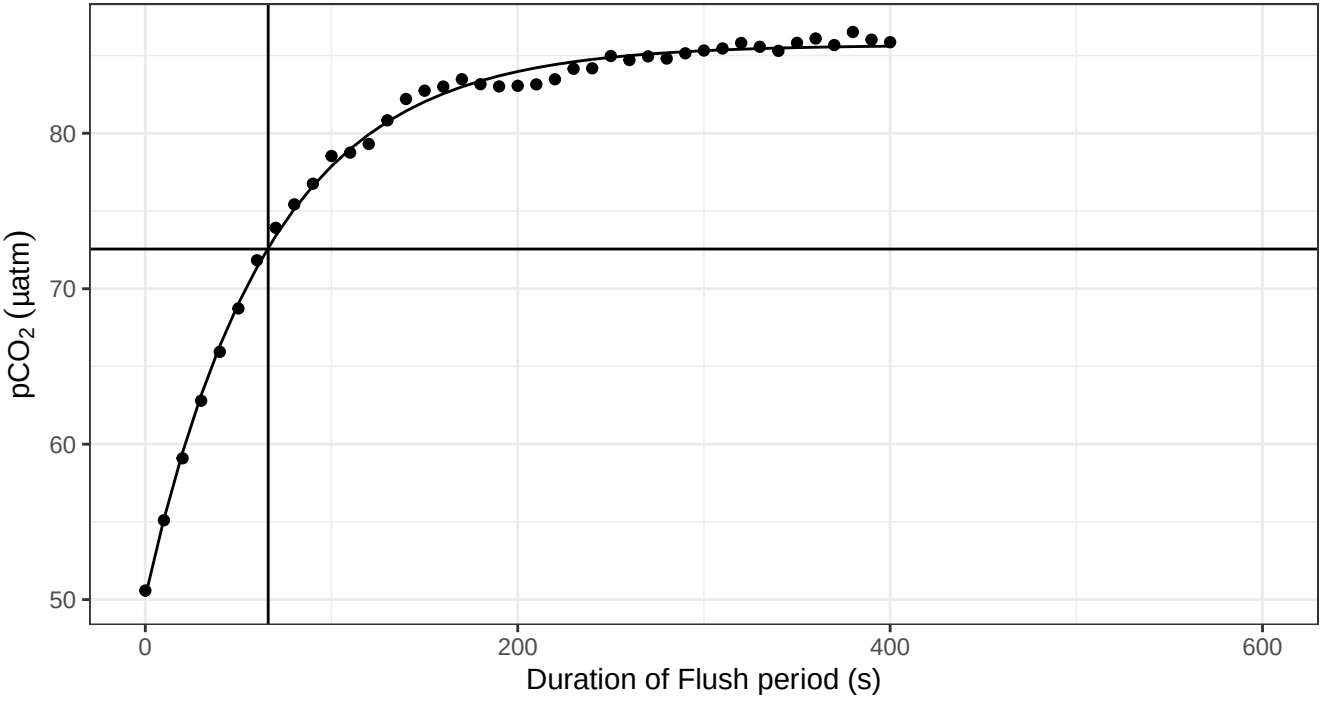
Zero_counter: 14 Tau: 63.7 Mean absolute residual (%): 0.46



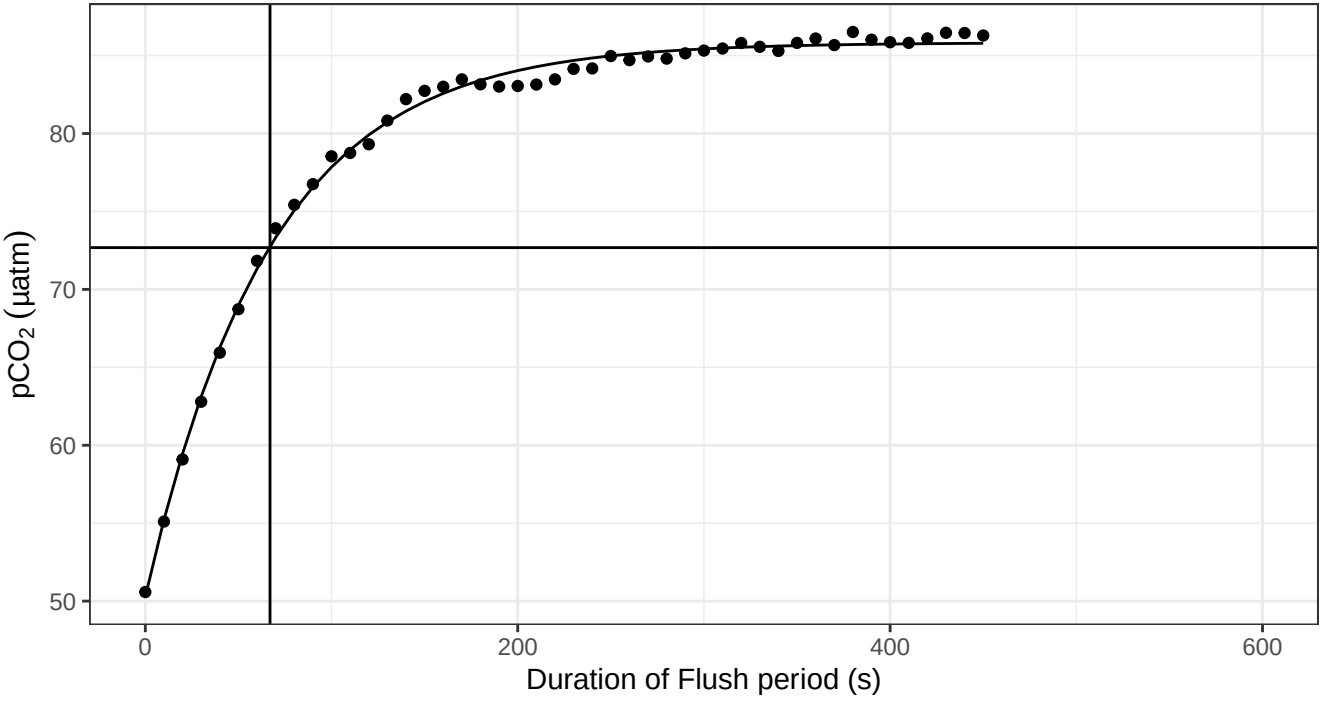
Zero_counter: 14 Tau: 64.8 Mean absolute residual (%): 0.46



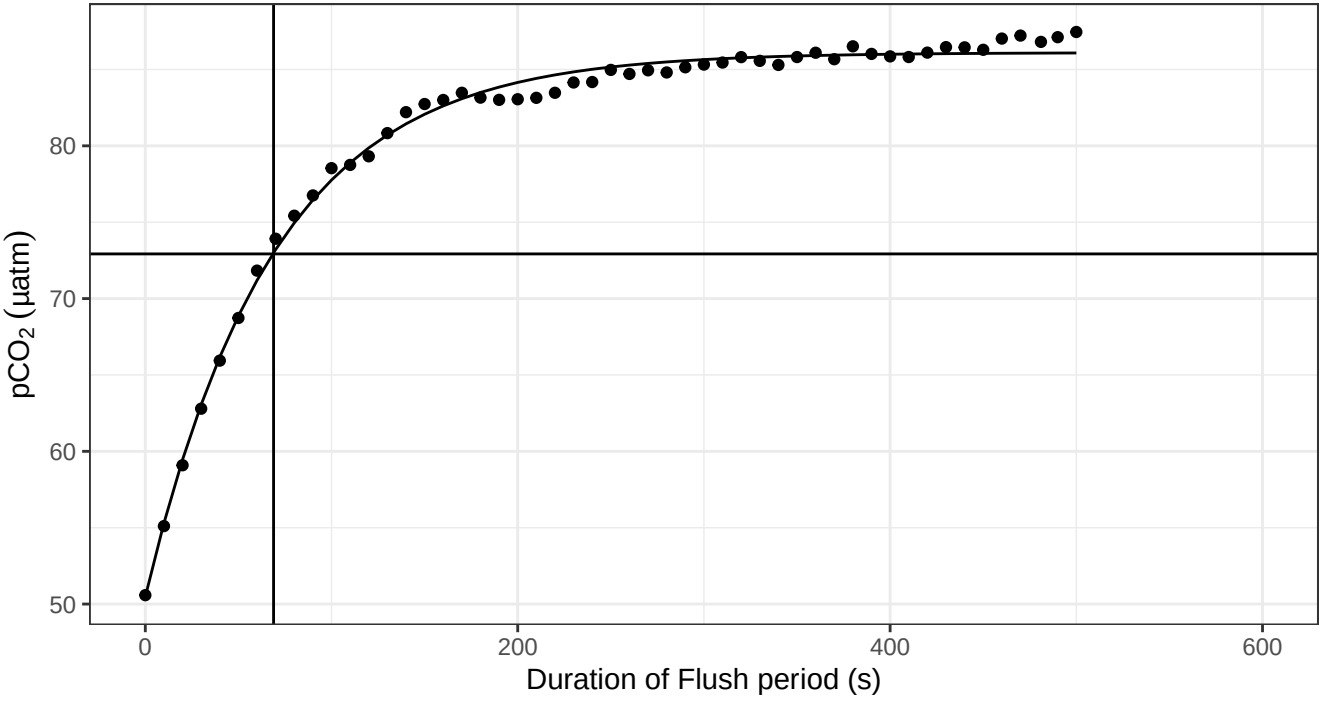
Zero_counter: 14 Tau: 66 Mean absolute residual (%): 0.47



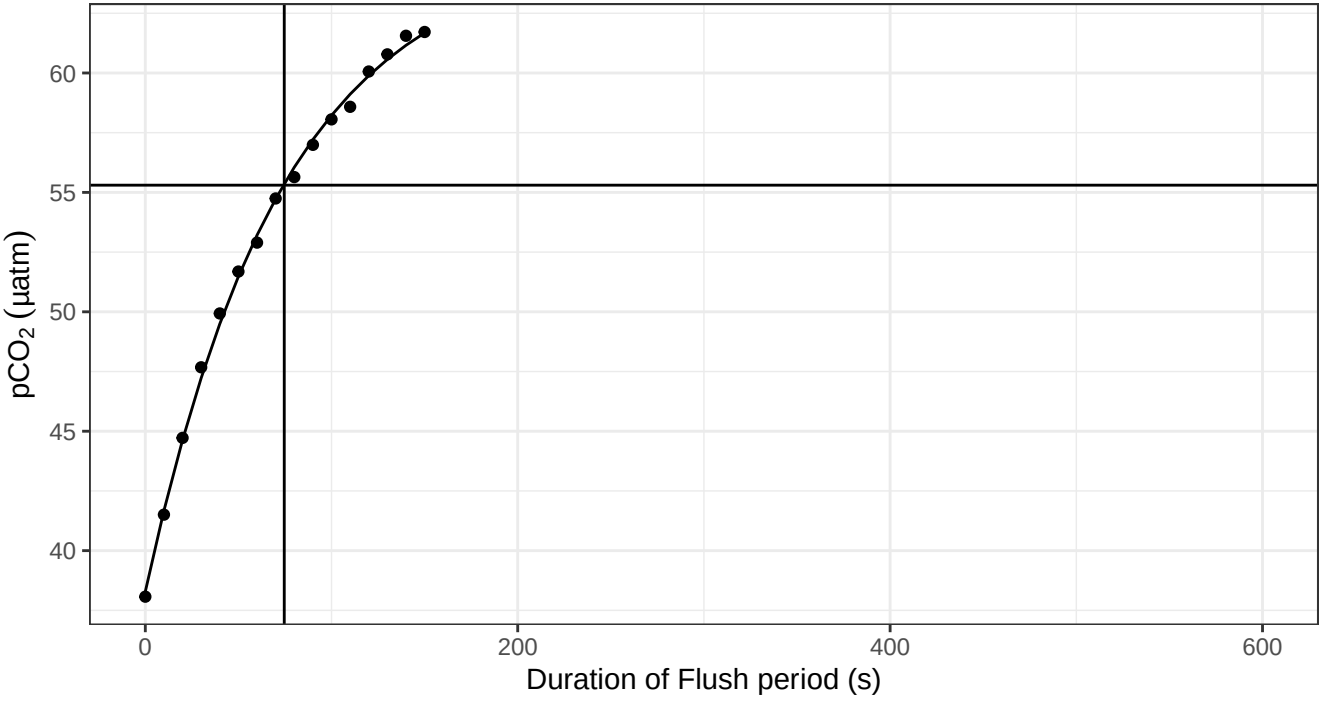
Zero_counter: 14 Tau: 67 Mean absolute residual (%): 0.48



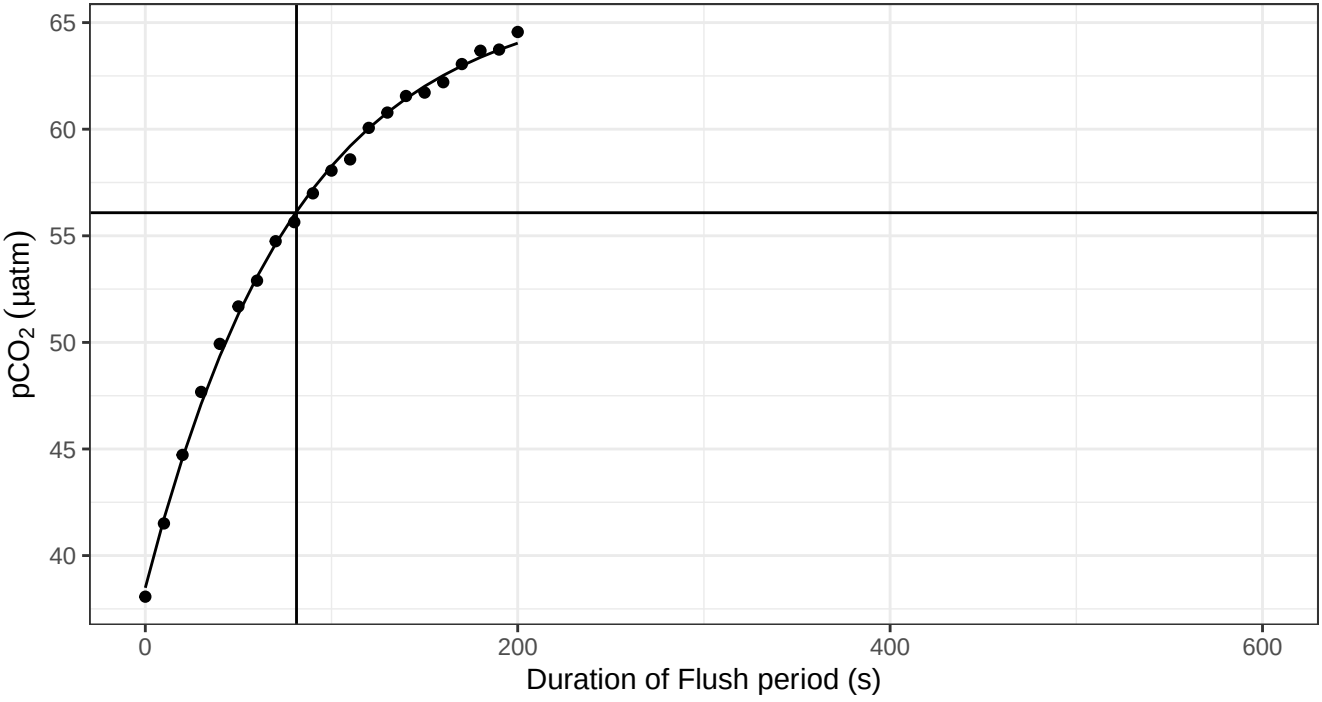
Zero_counter: 14 Tau: 68.9 Mean absolute residual (%): 0.57



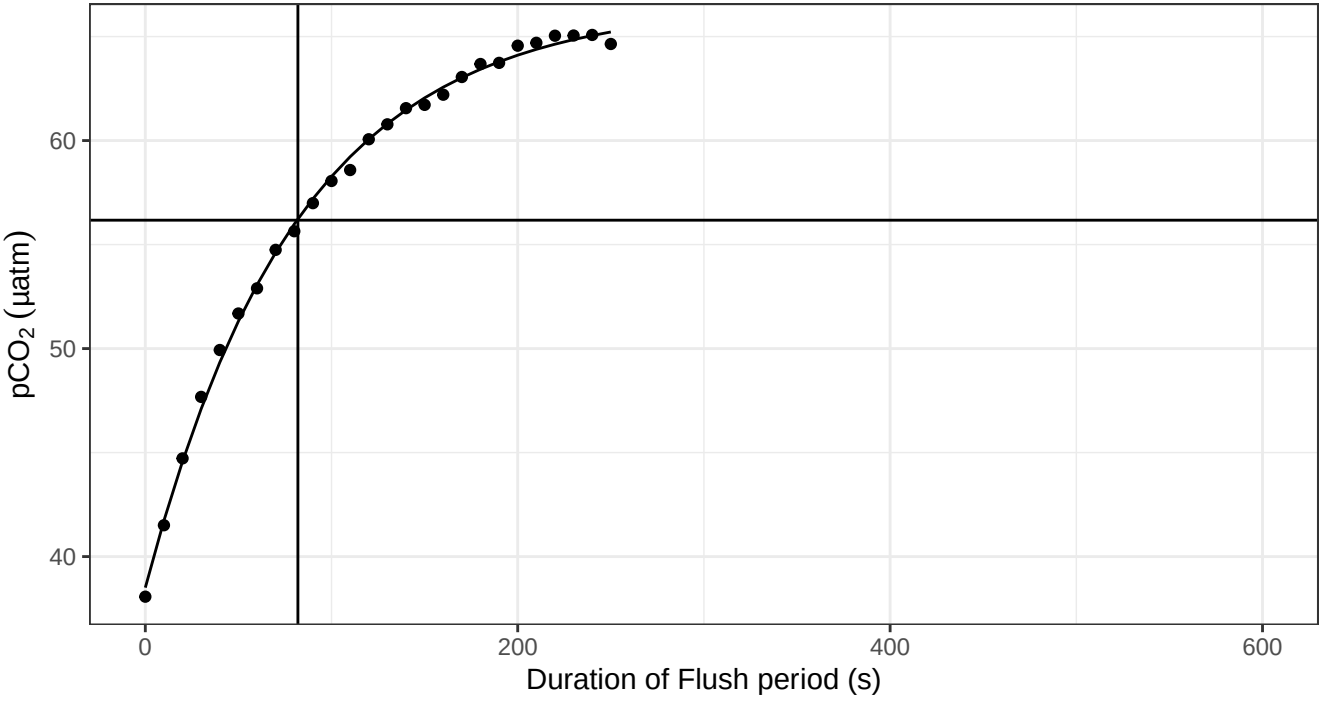
Zero_counter: 15 Tau: 74.6 Mean absolute residual (%): 0.39



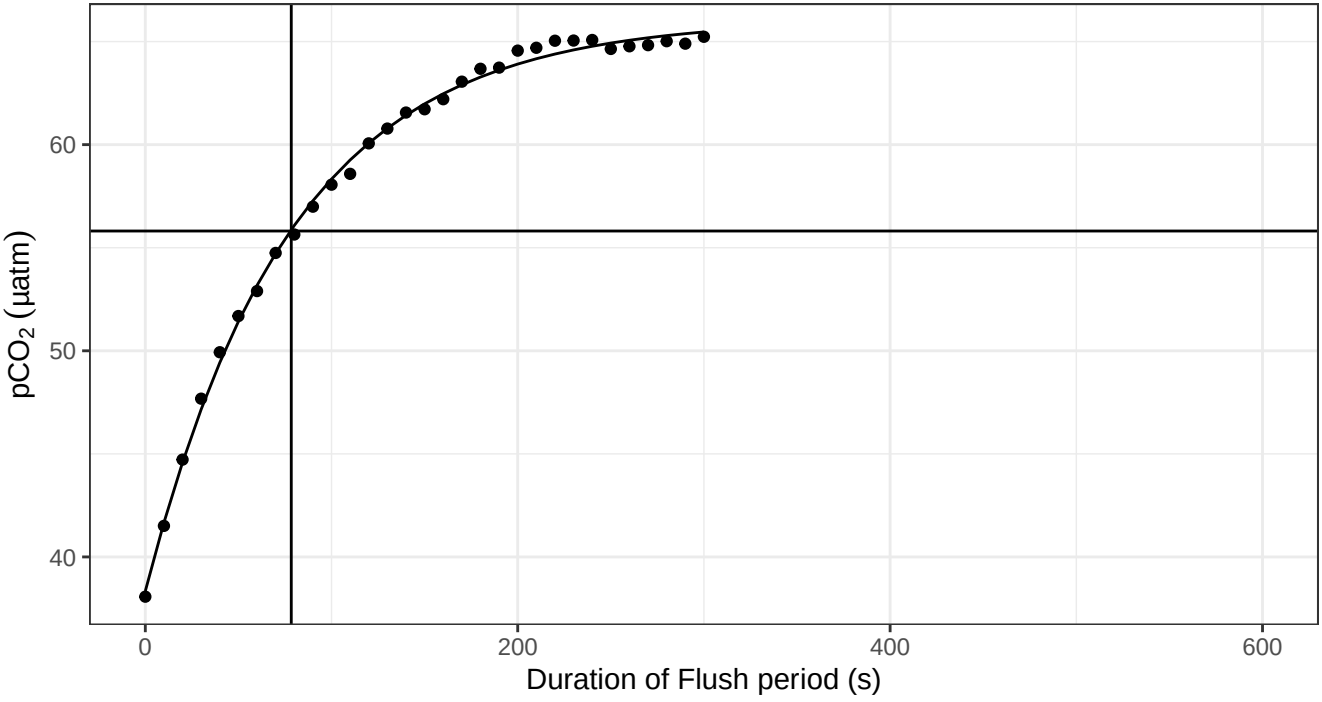
Zero_counter: 15 Tau: 81.2 Mean absolute residual (%): 0.4



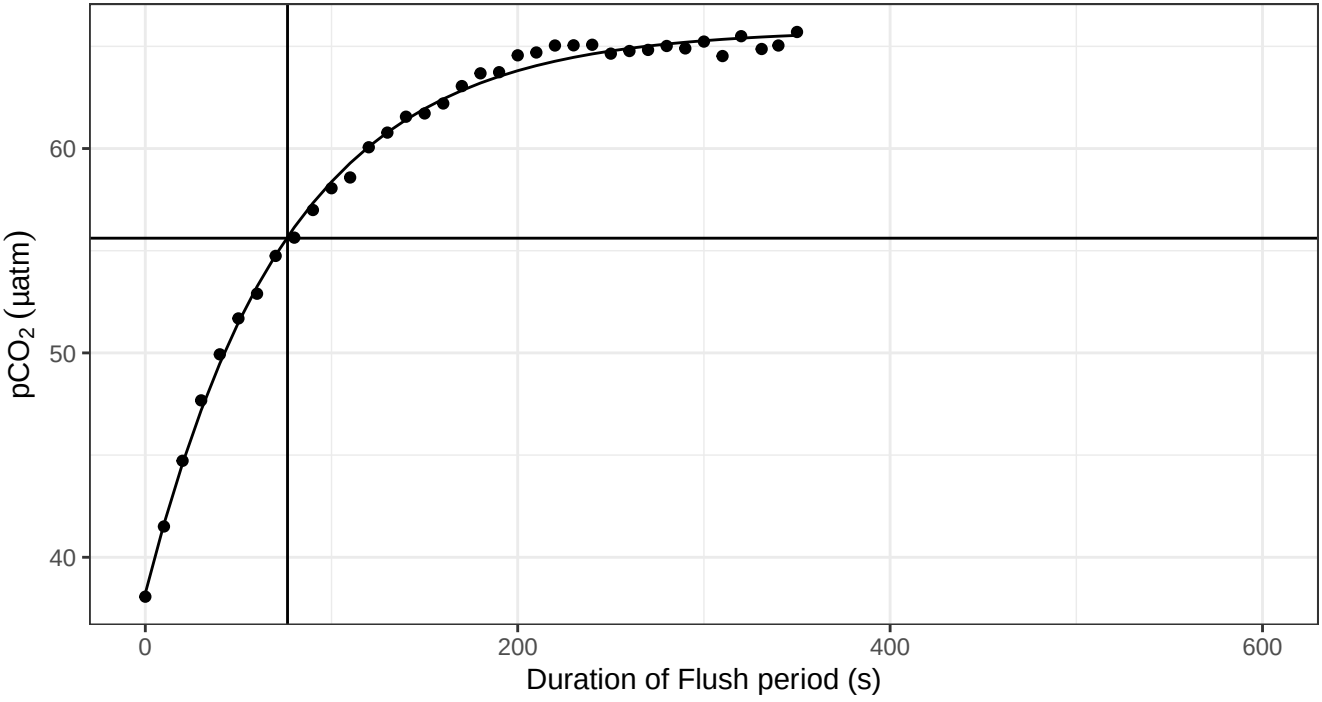
Zero_counter: 15 Tau: 81.9 Mean absolute residual (%): 0.41



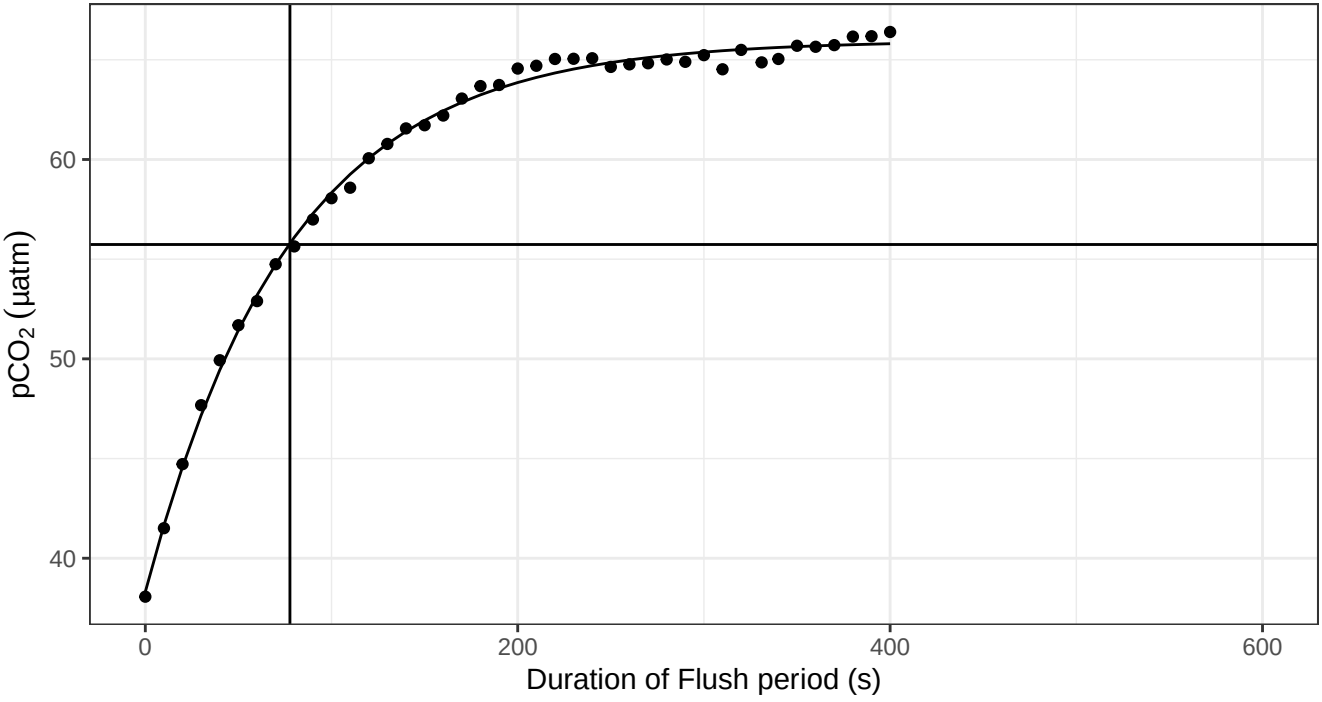
Zero_counter: 15 Tau: 78.4 Mean absolute residual (%): 0.47



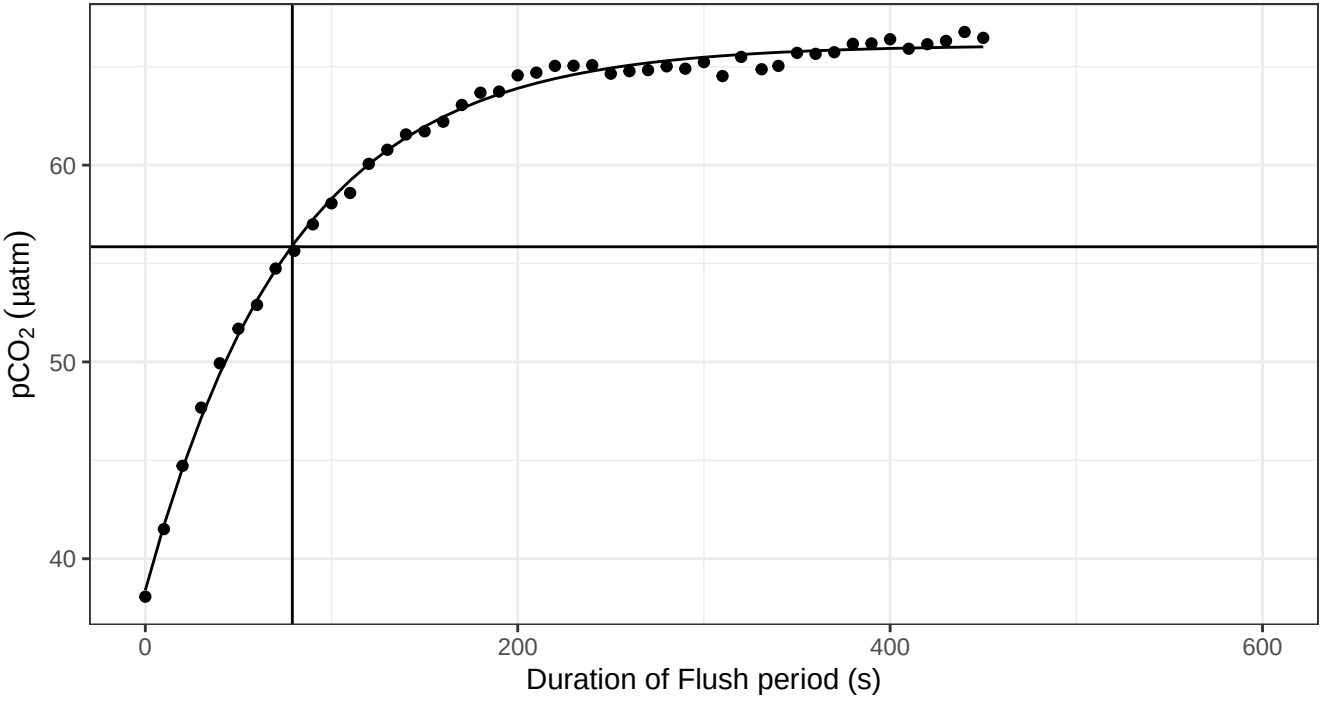
Zero_counter: 15 Tau: 76.4 Mean absolute residual (%): 0.49



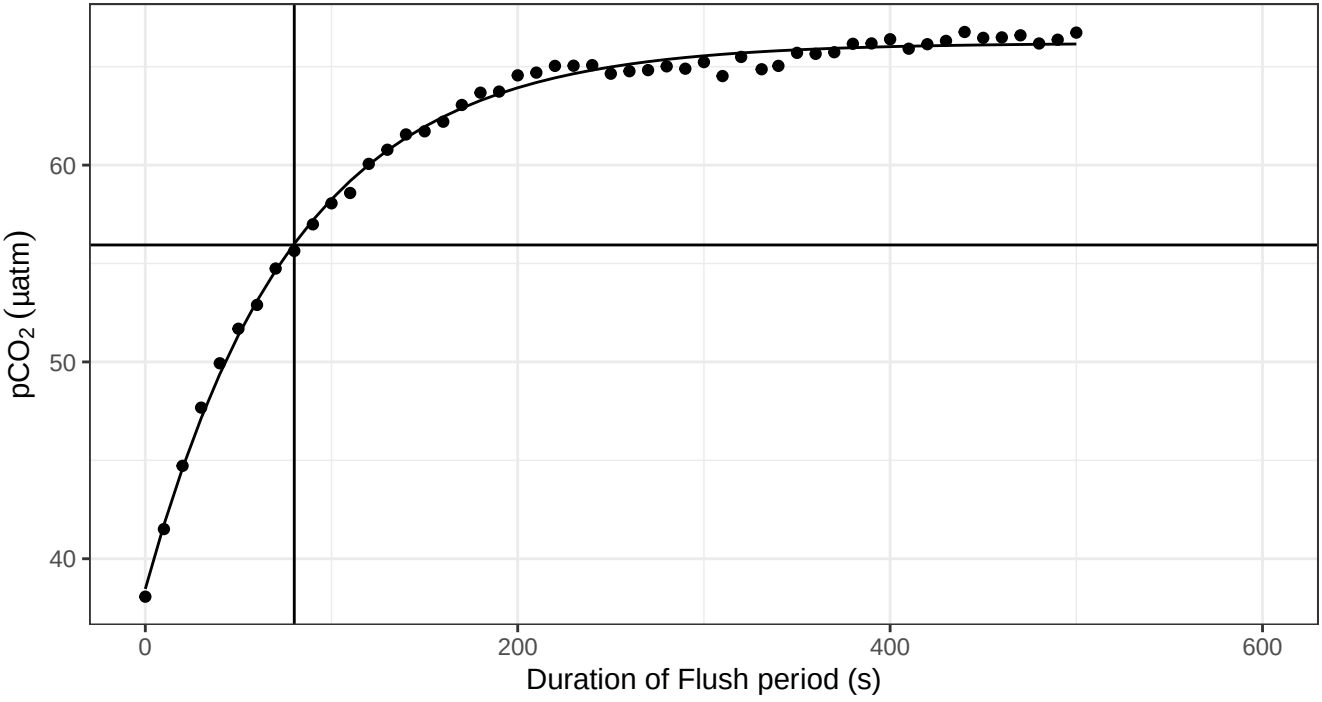
Zero_counter: 15 Tau: 77.7 Mean absolute residual (%): 0.49



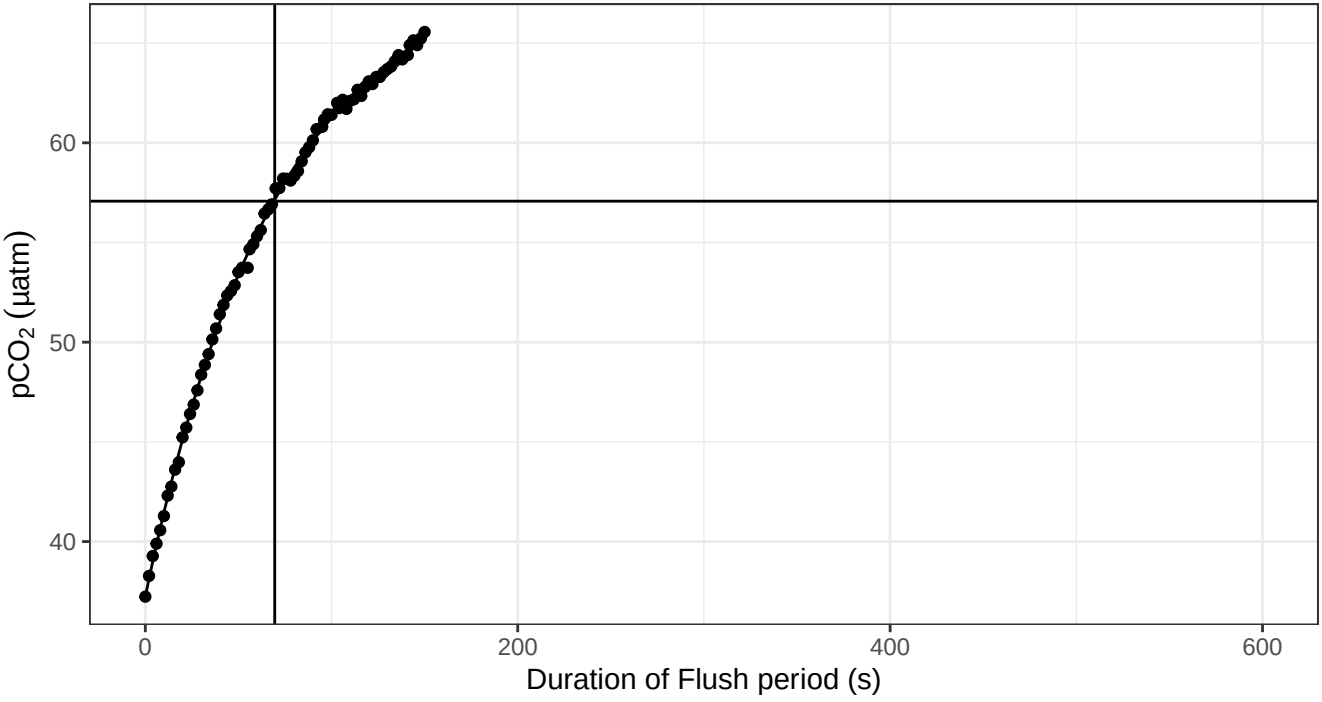
Zero_counter: 15 Tau: 79 Mean absolute residual (%): 0.51



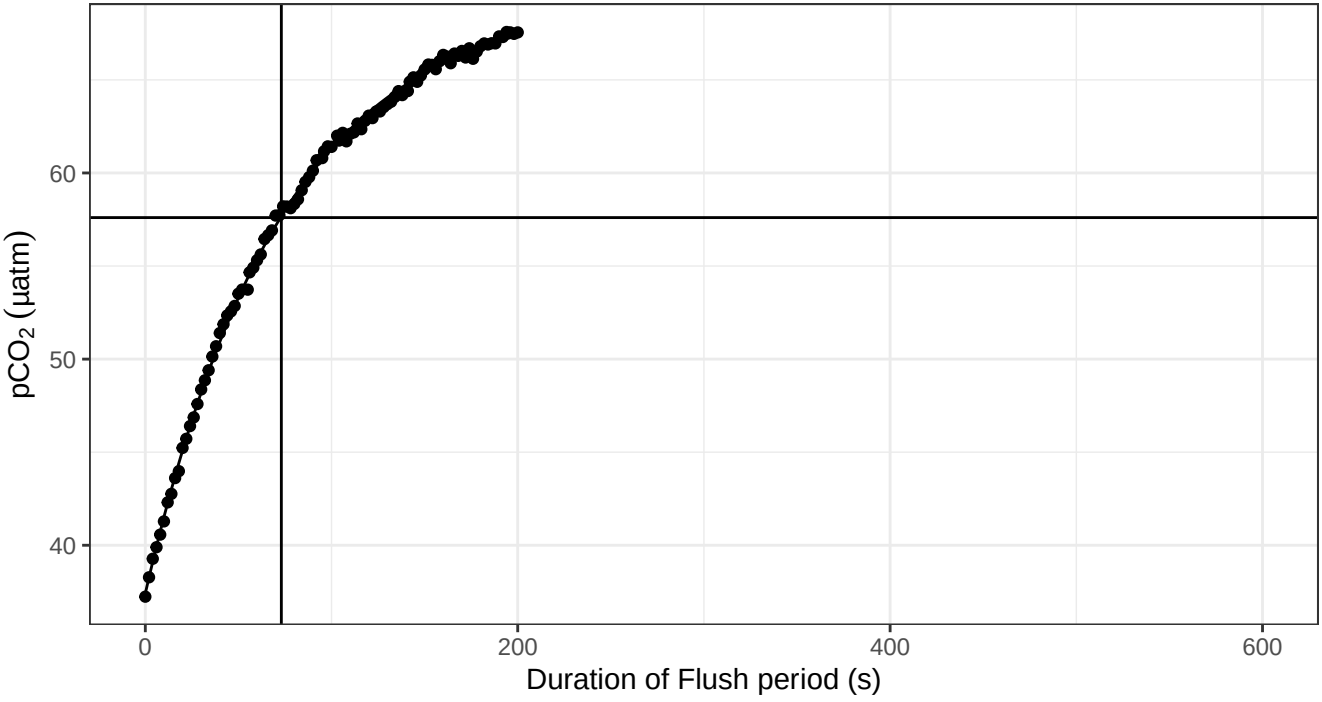
Zero_counter: 15 Tau: 80 Mean absolute residual (%): 0.52

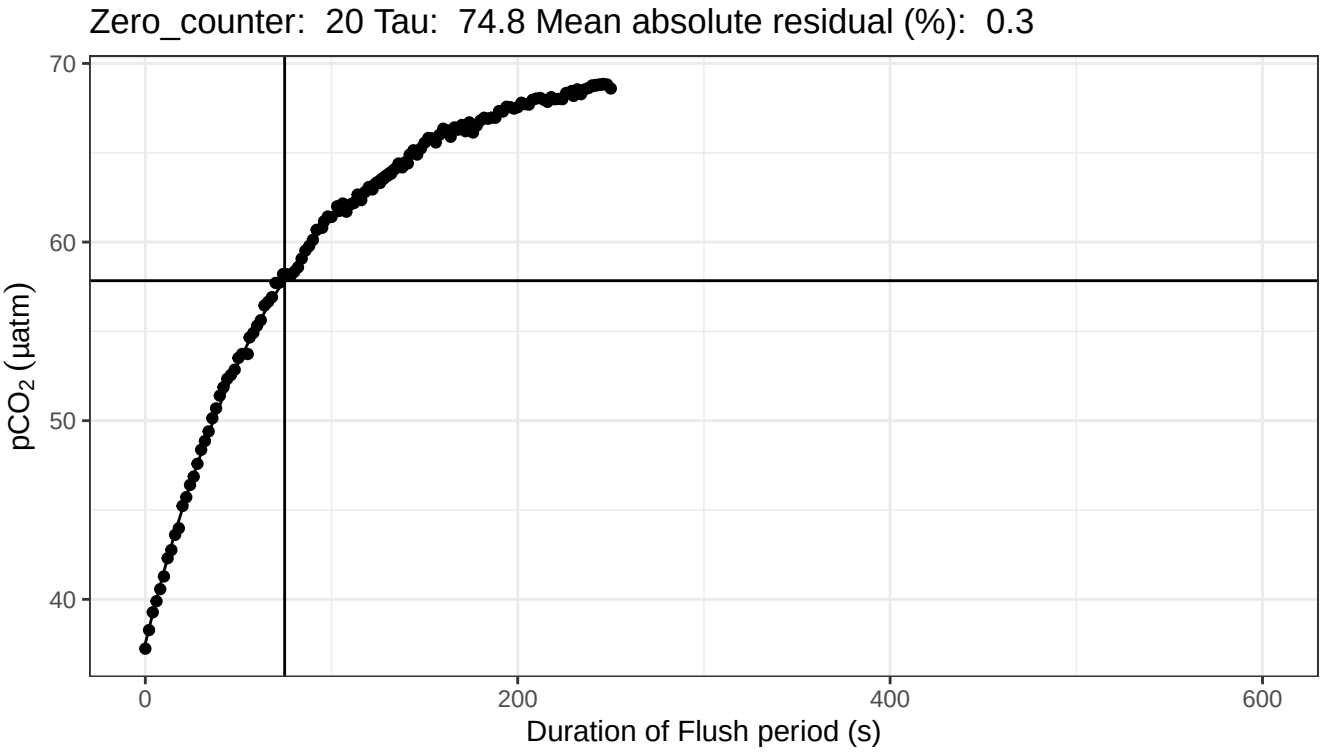


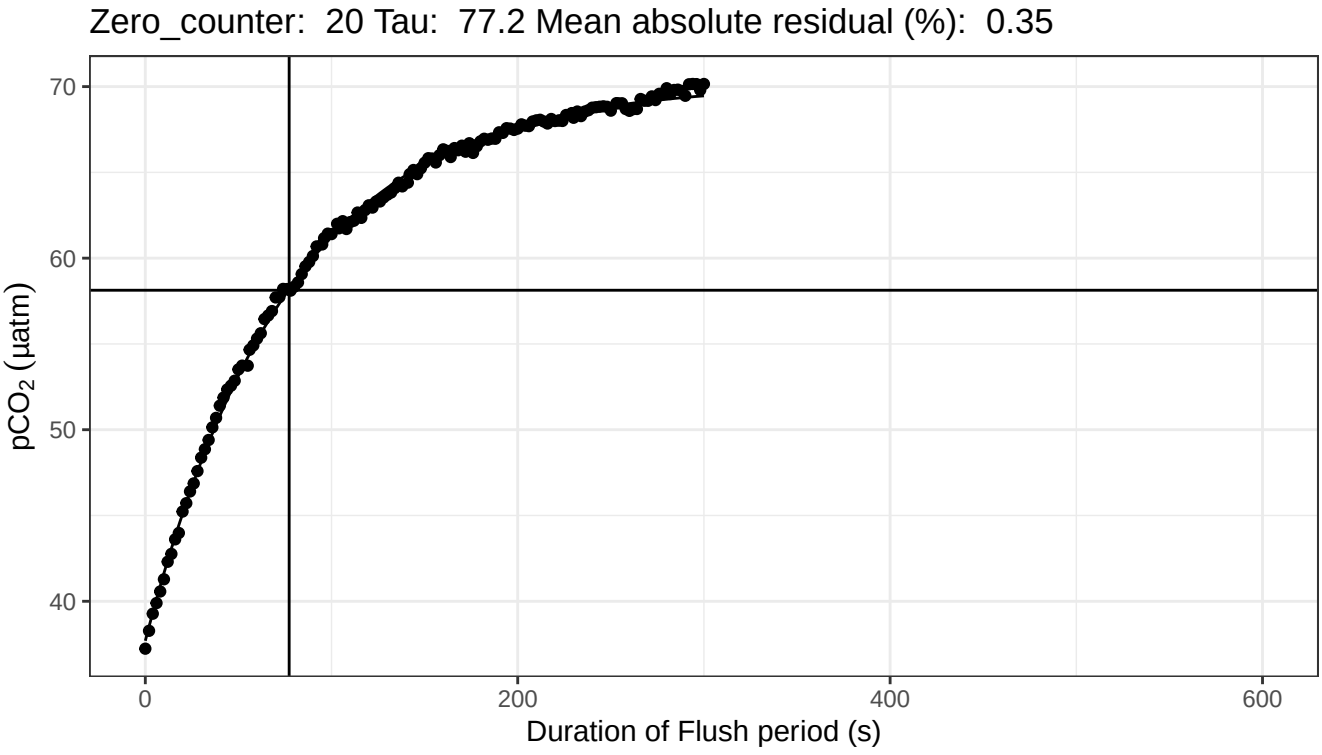
Zero_counter: 20 Tau: 69.5 Mean absolute residual (%): 0.29



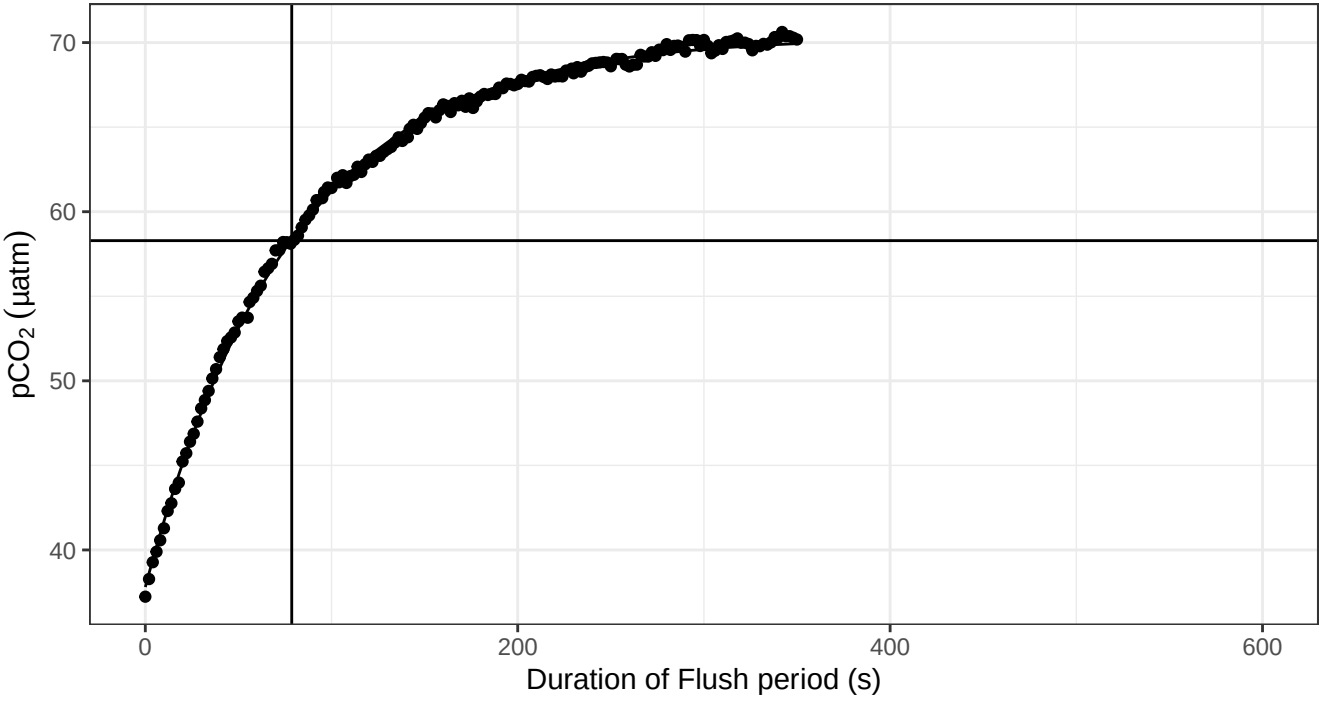
Zero_counter: 20 Tau: 73.1 Mean absolute residual (%): 0.31



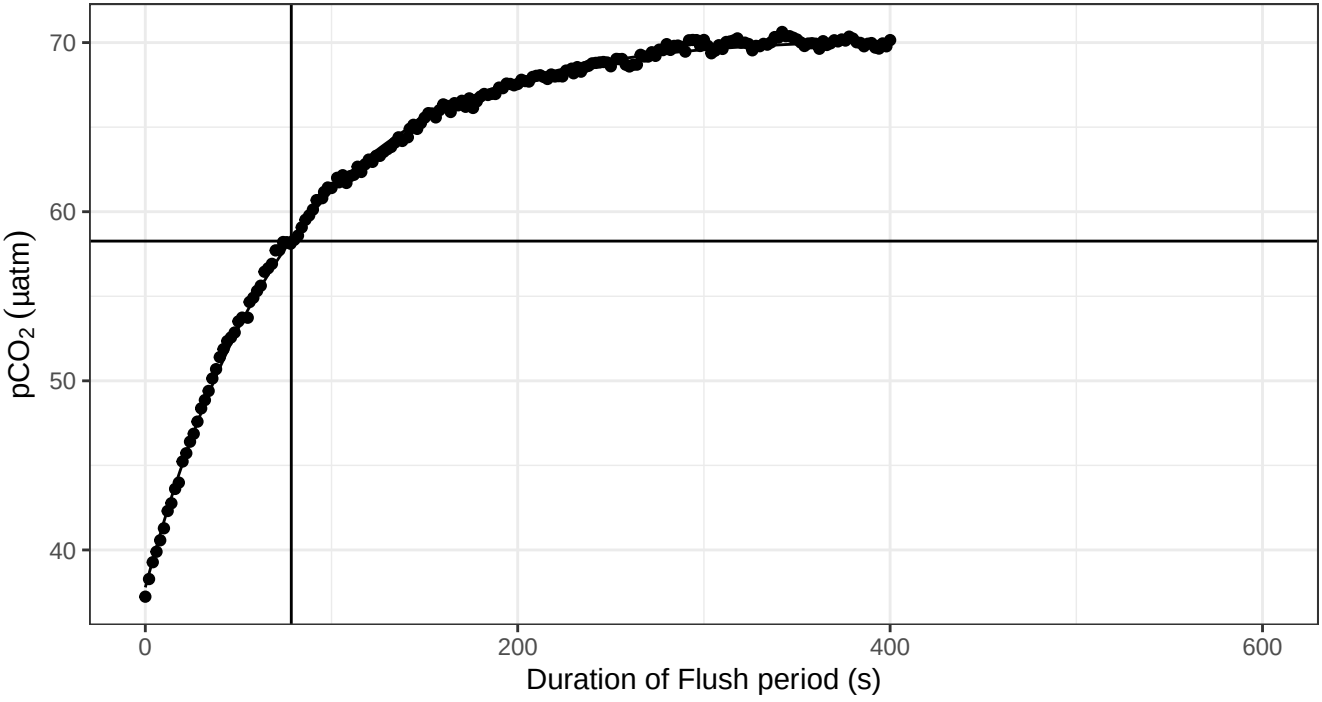

Zero_counter: 20 Tau: 74.8 Mean absolute residual (%): 0.3
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 20 Tau: 77.2 Mean absolute residual (%): 0.35
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

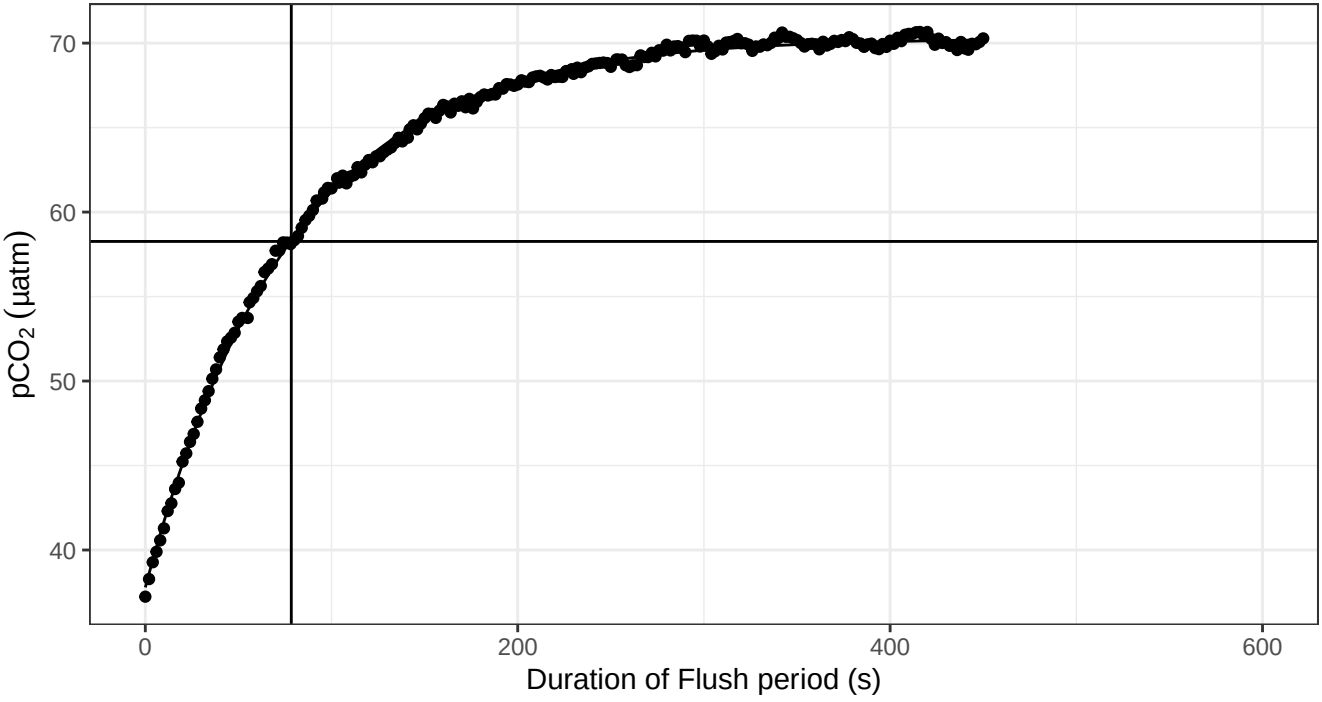
Zero_counter: 20 Tau: 78.6 Mean absolute residual (%): 0.37

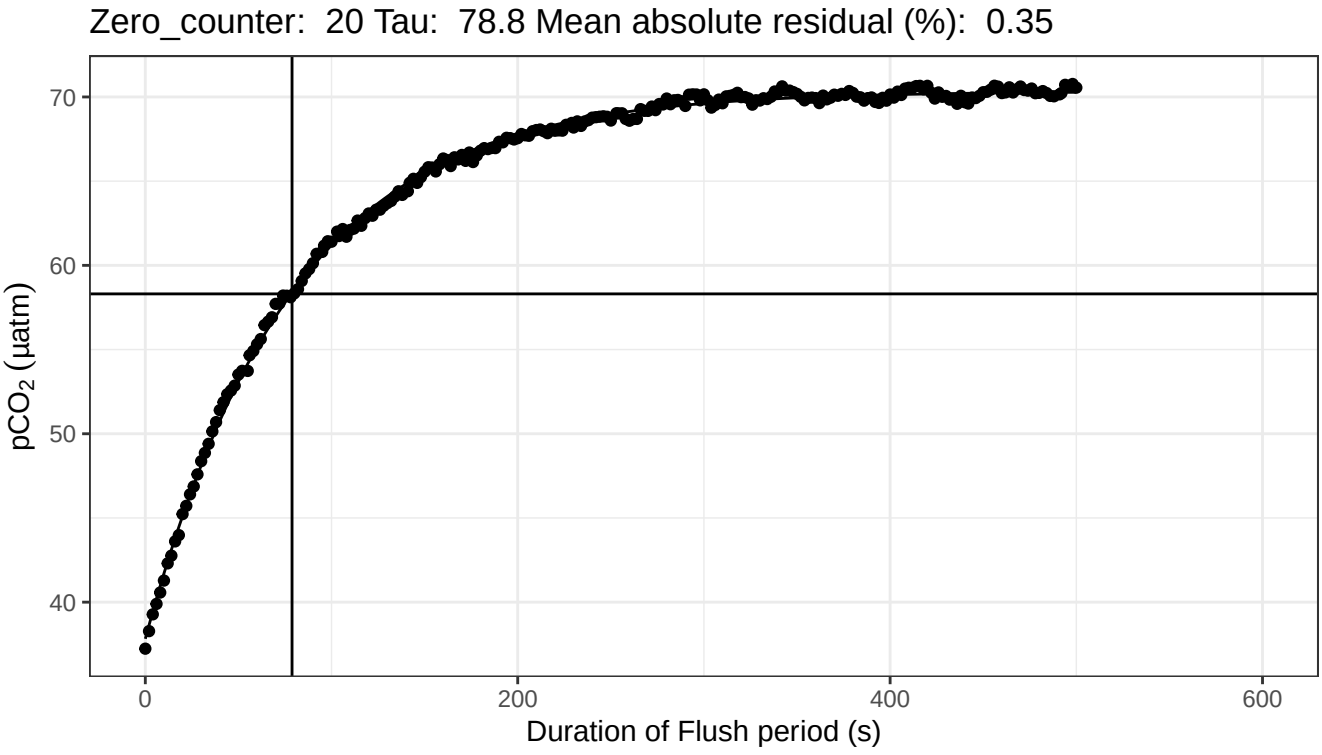


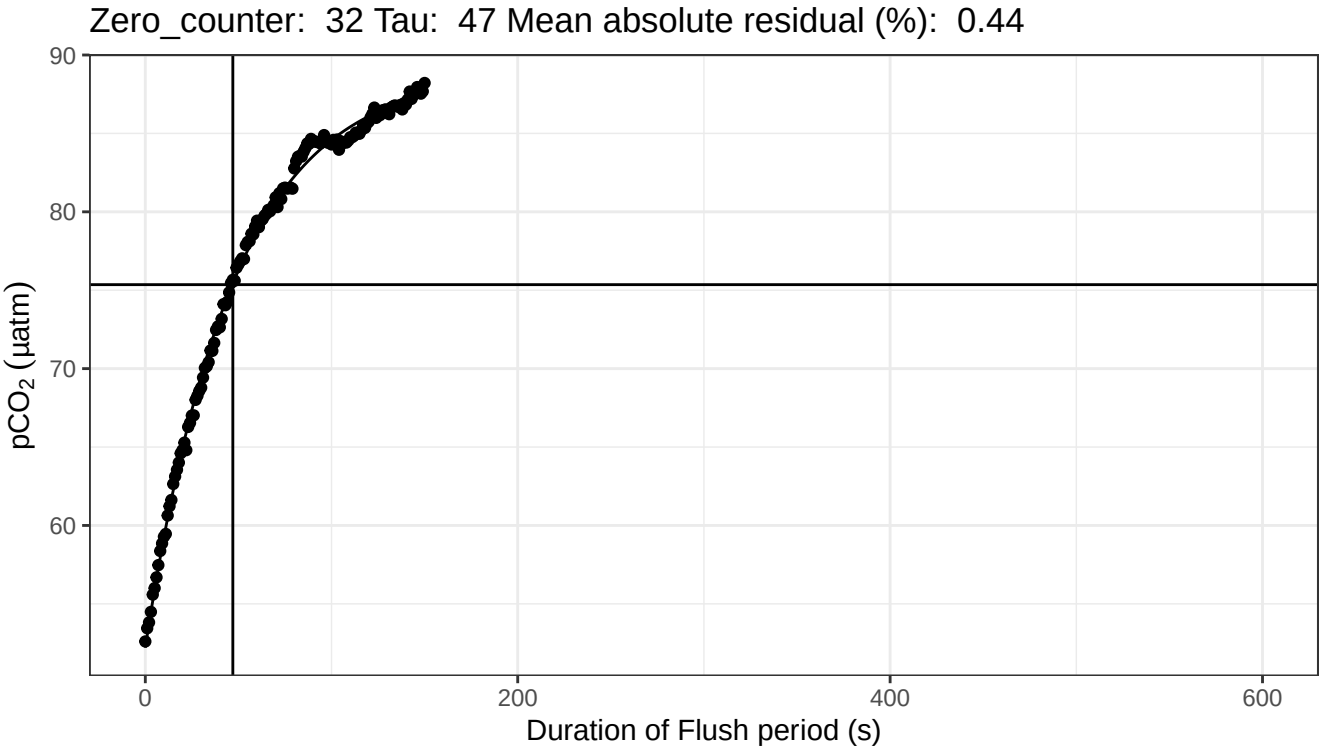
Zero_counter: 20 Tau: 78.4 Mean absolute residual (%): 0.35

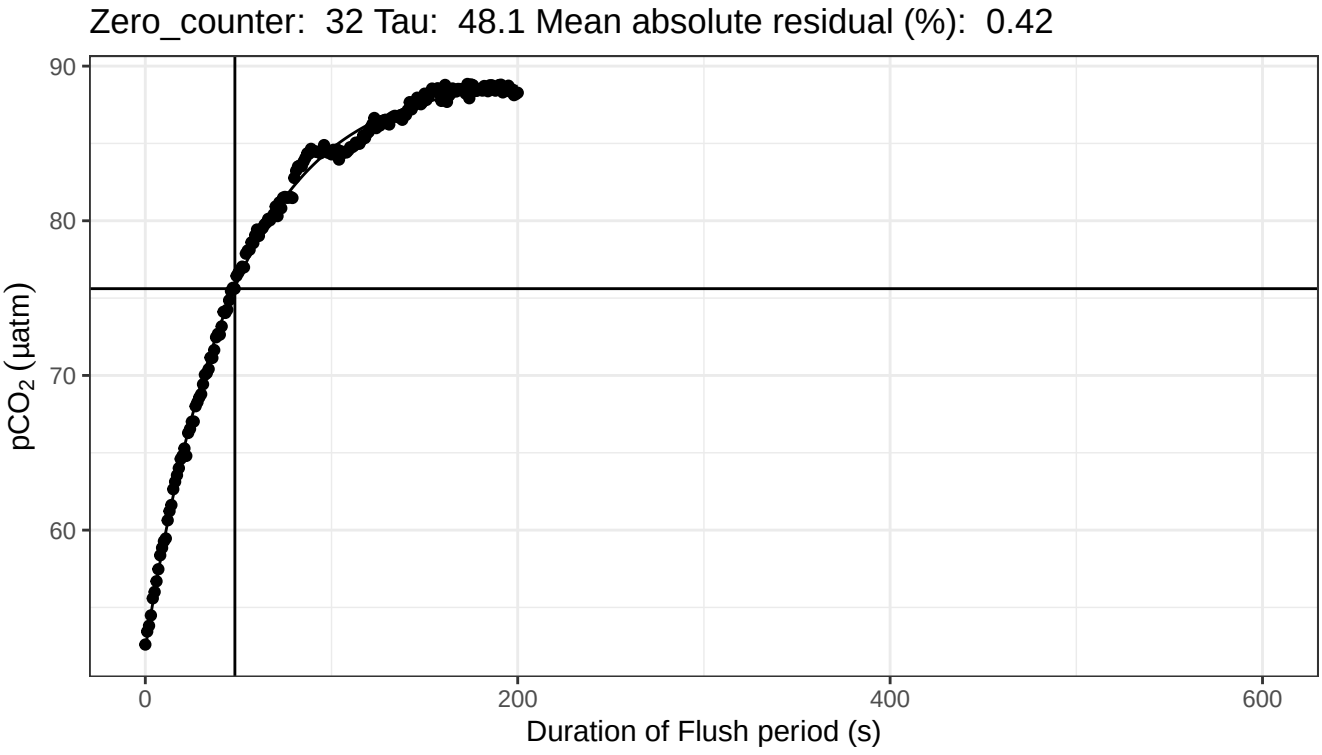


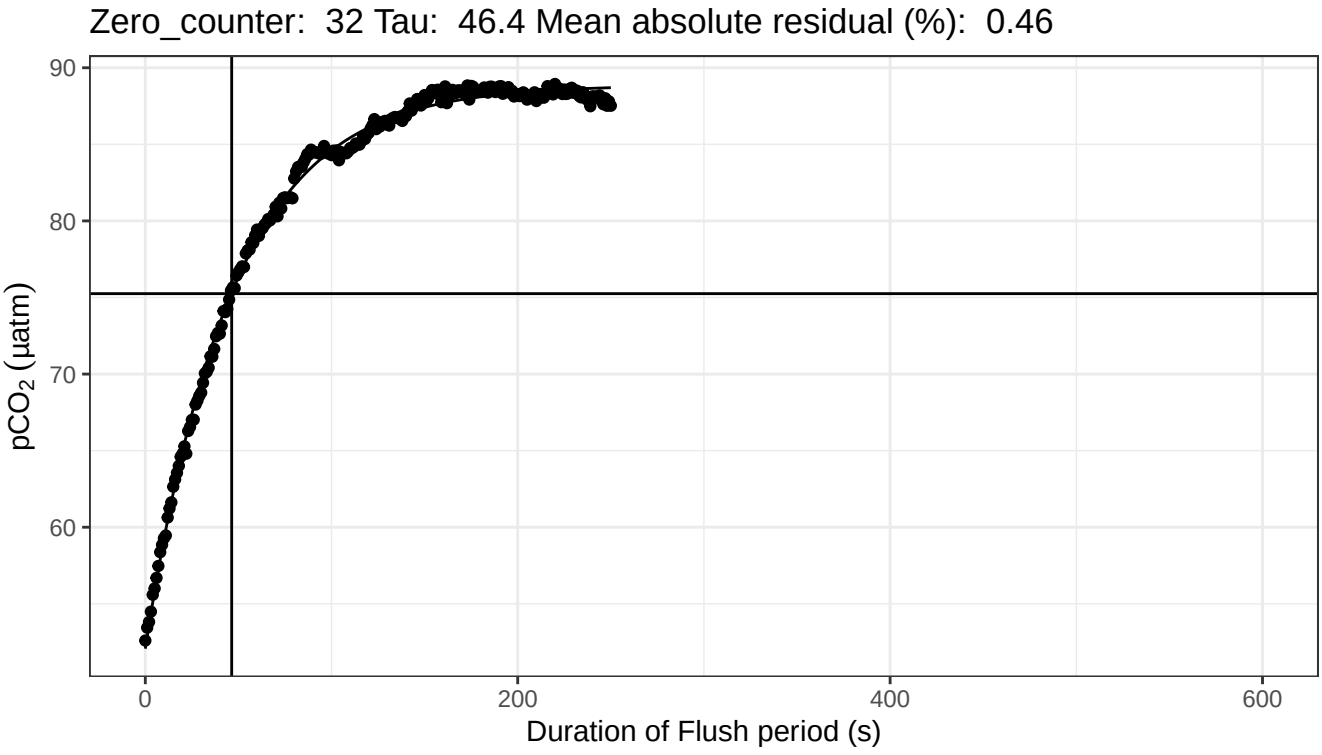
Zero_counter: 20 Tau: 78.4 Mean absolute residual (%): 0.36

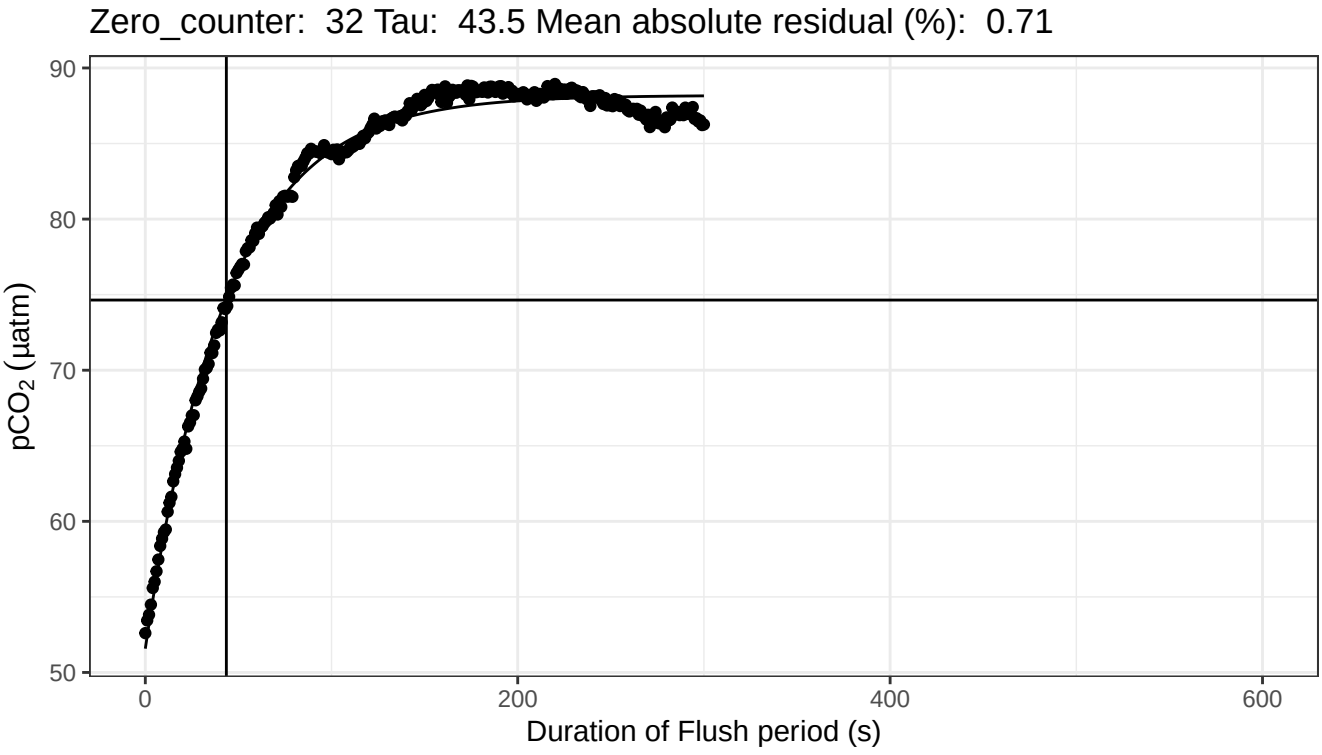


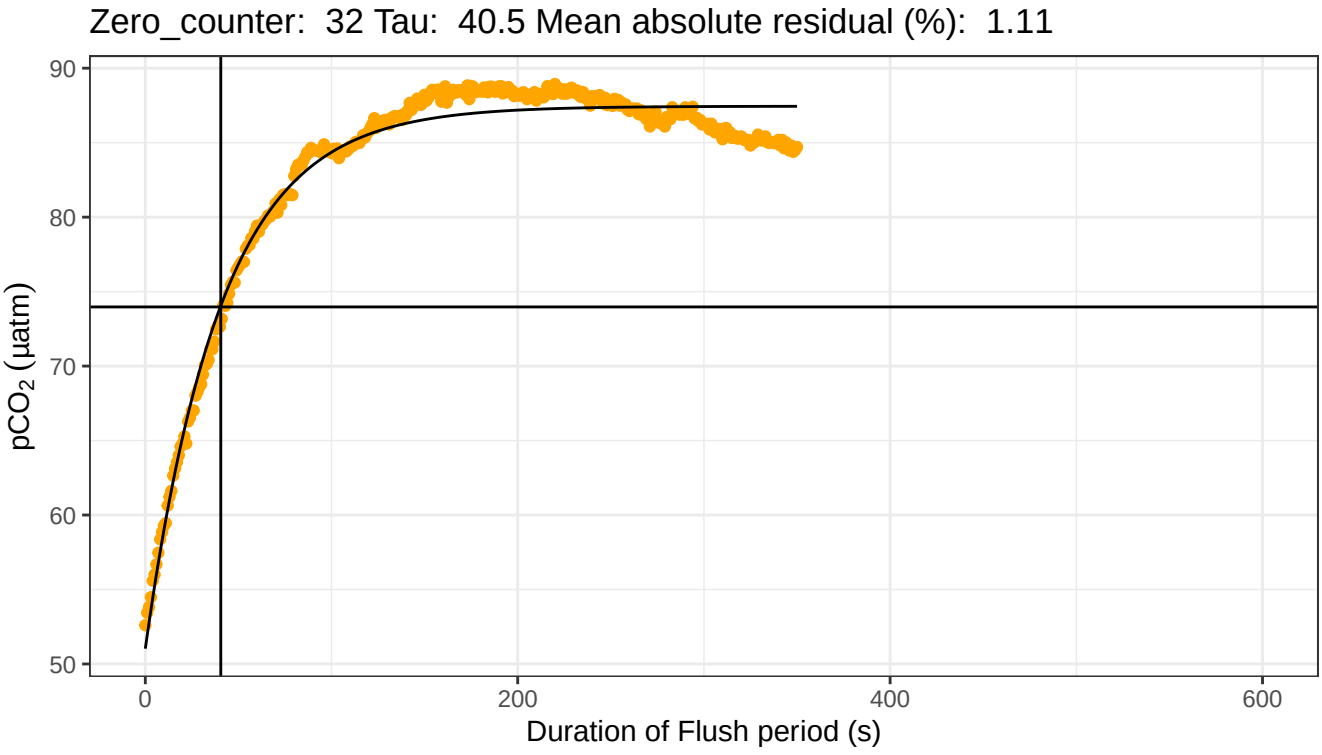

Zero_counter: 20 Tau: 78.8 Mean absolute residual (%): 0.35
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

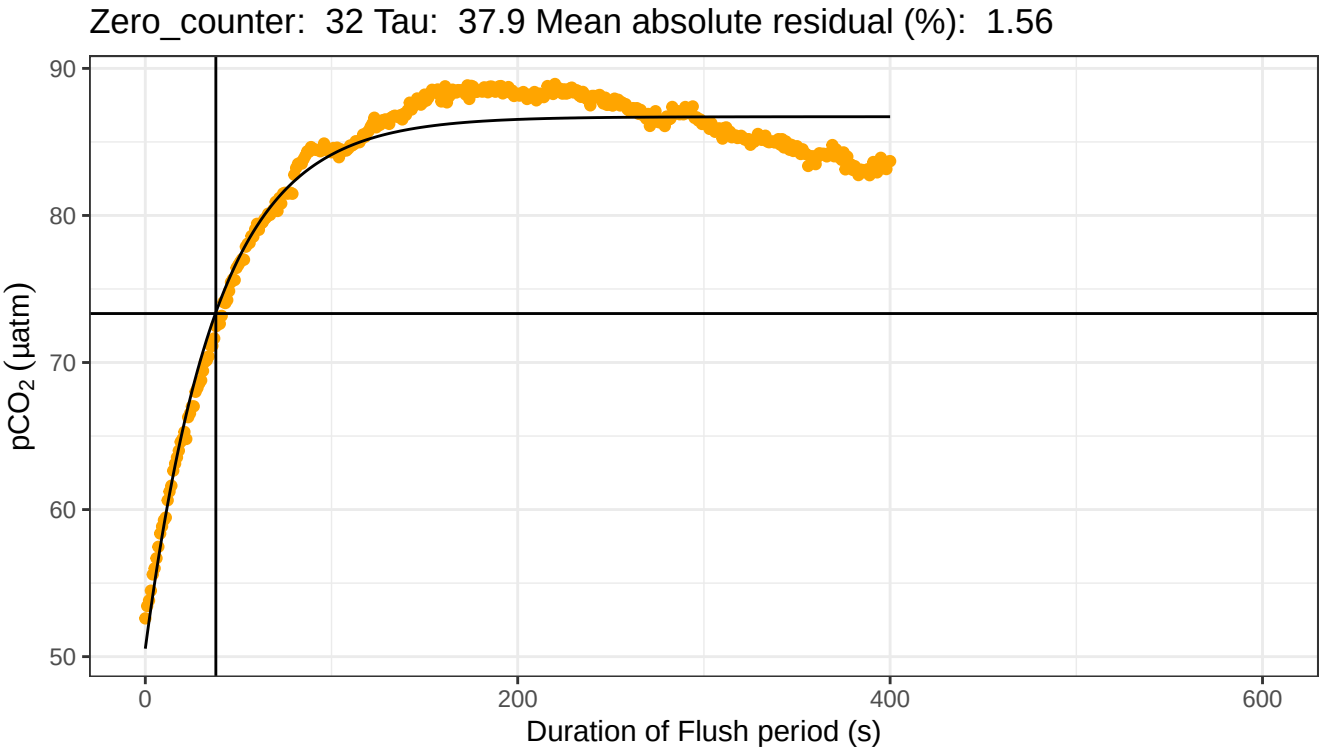

Zero_counter: 32 Tau: 47 Mean absolute residual (%): 0.44
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

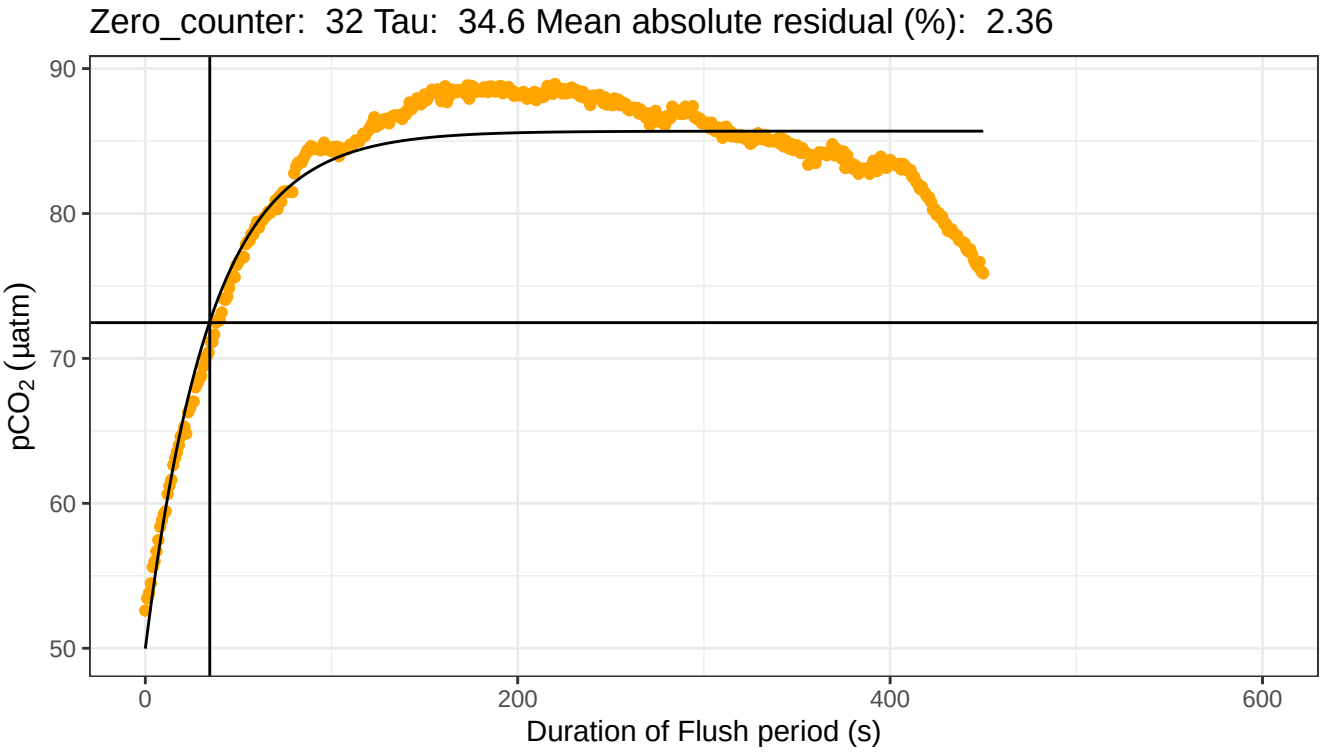

Zero_counter: 32 Tau: 48.1 Mean absolute residual (%): 0.42
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

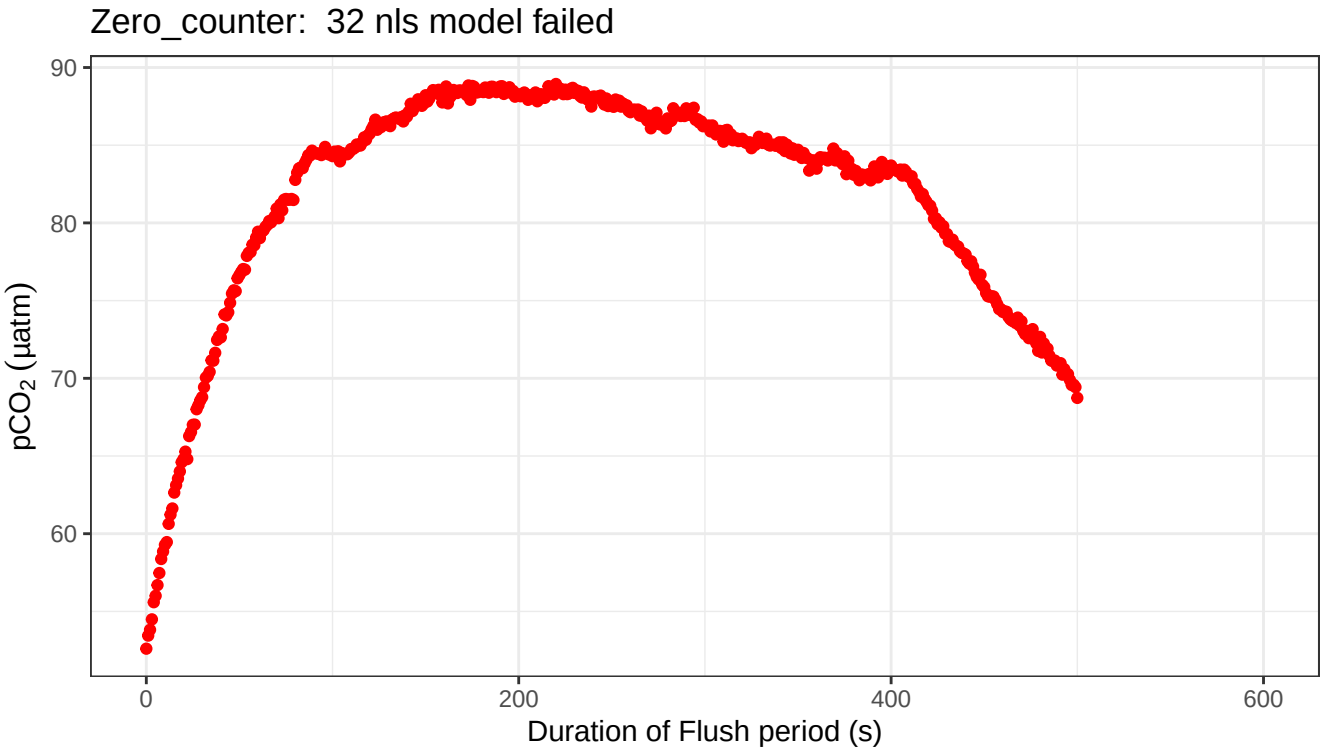

Zero_counter: 32 Tau: 46.4 Mean absolute residual (%): 0.46
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

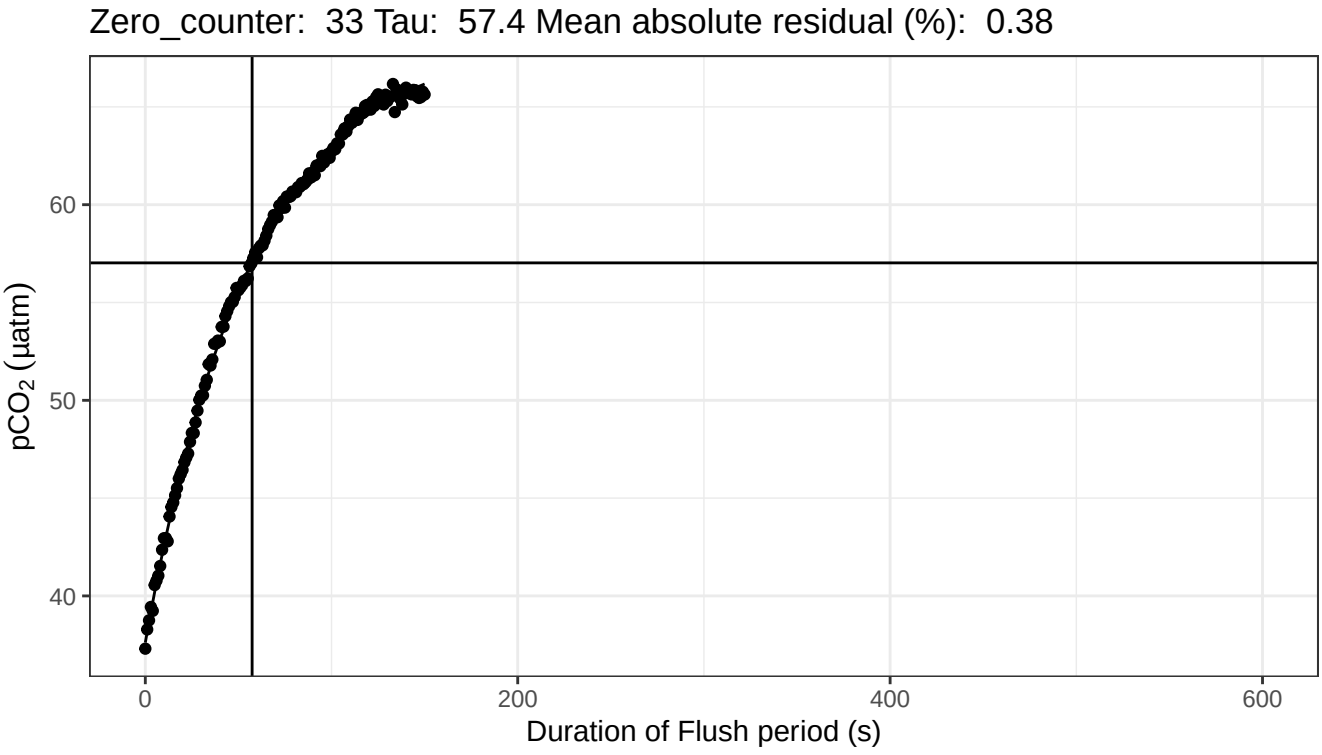

Zero_counter: 32 Tau: 43.5 Mean absolute residual (%): 0.71
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 32 Tau: 40.5 Mean absolute residual (%): 1.11
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

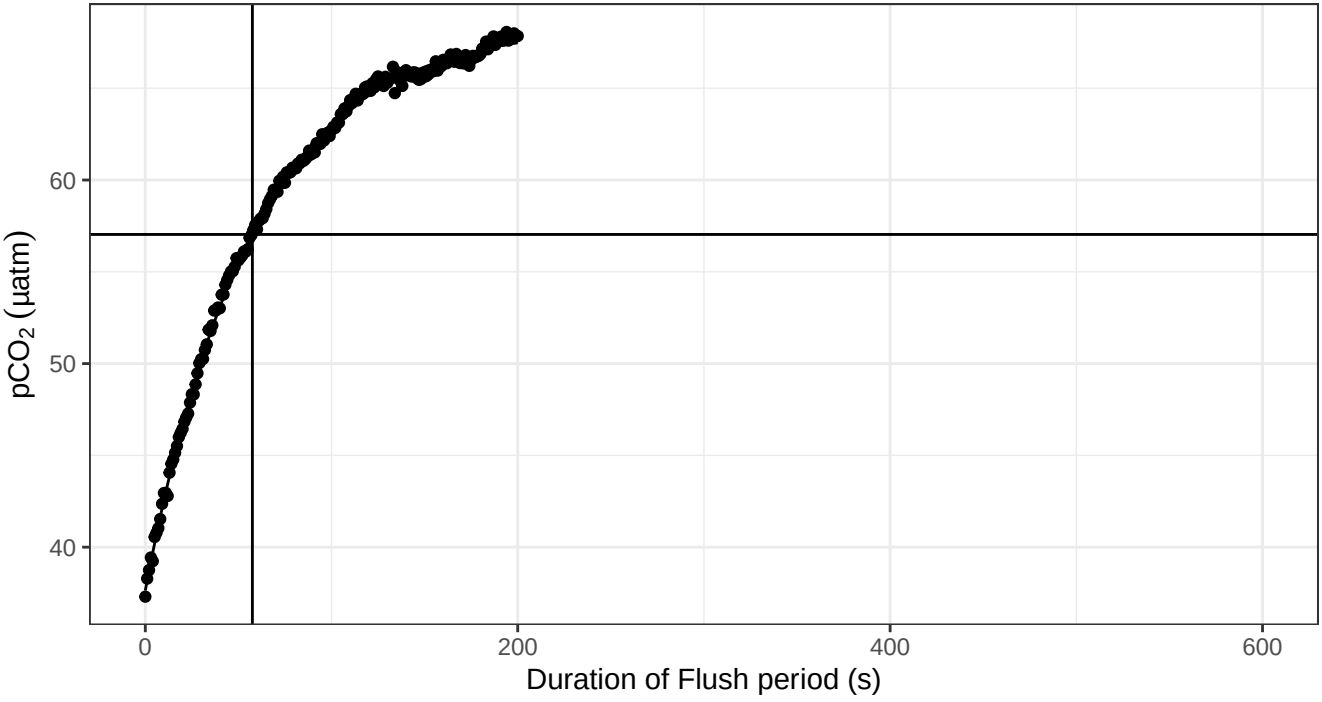

Zero_counter: 32 Tau: 37.9 Mean absolute residual (%): 1.56
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 32 Tau: 34.6 Mean absolute residual (%): 2.36
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

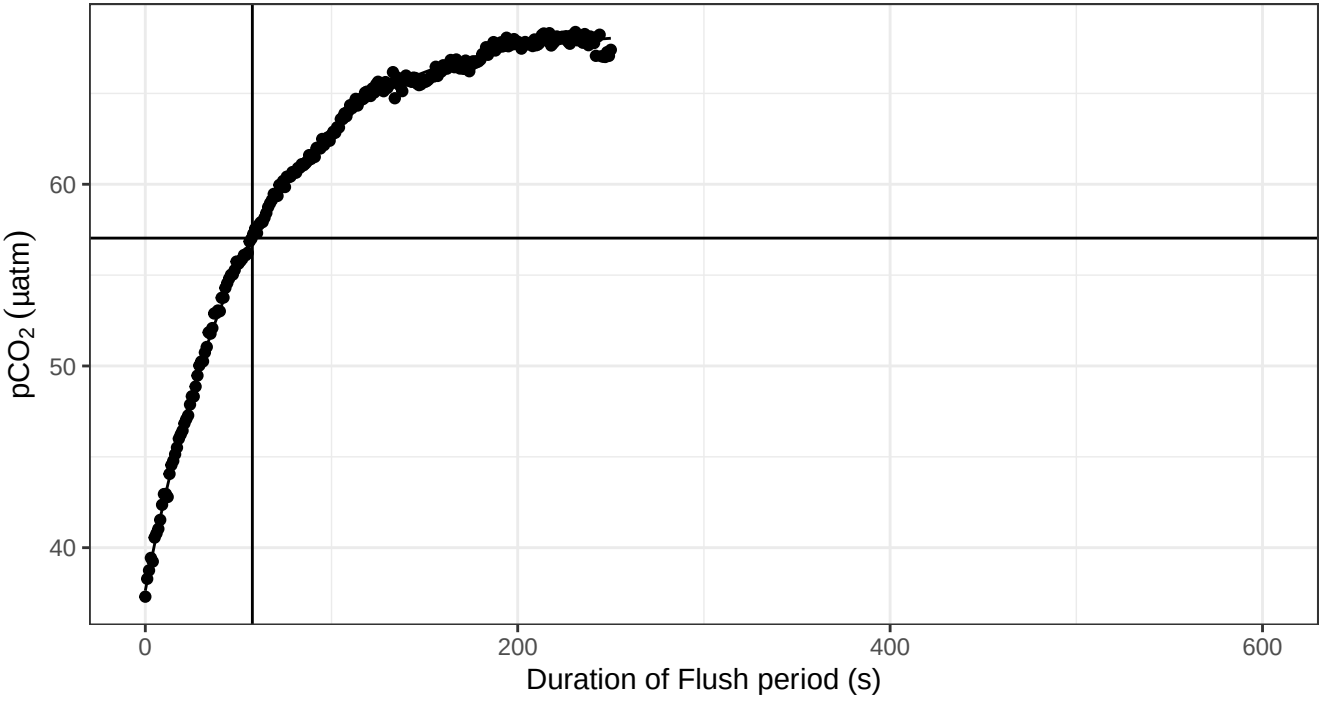

Zero_counter: 32 nls model failed
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 33 Tau: 57.4 Mean absolute residual (%): 0.38
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

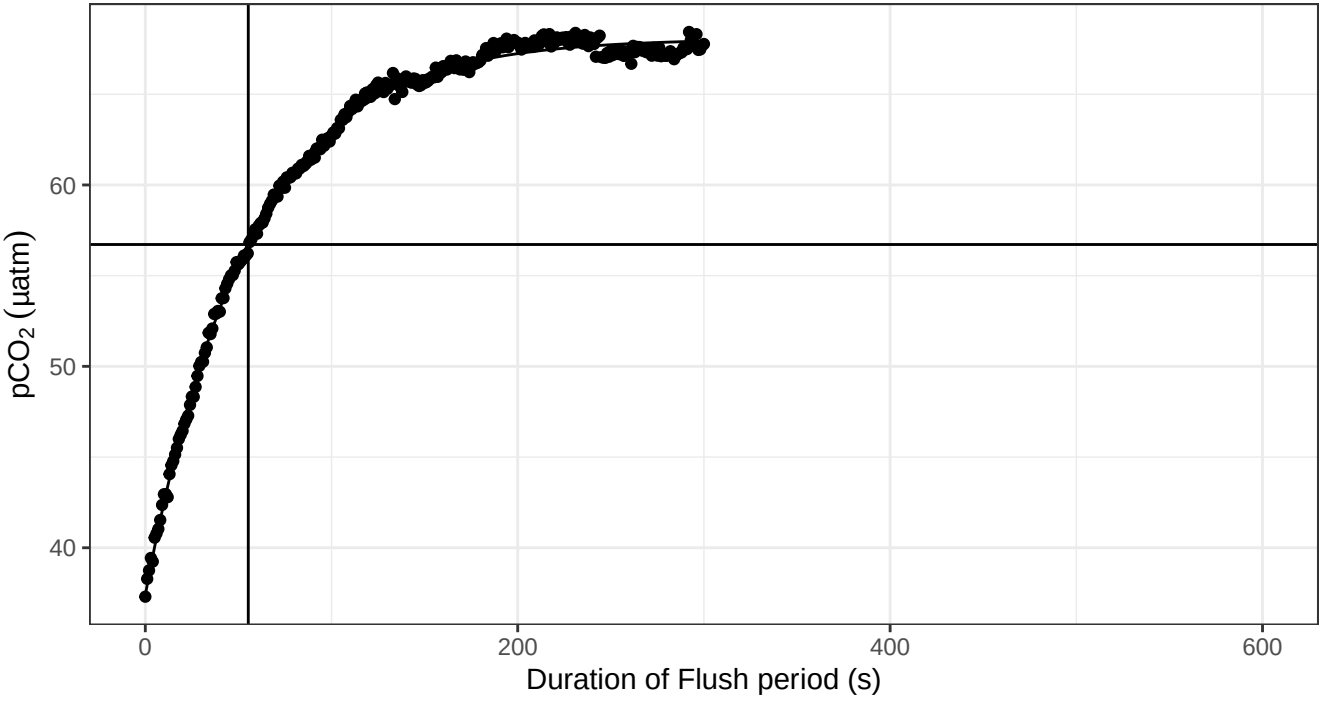
Zero_counter: 33 Tau: 57.5 Mean absolute residual (%): 0.4

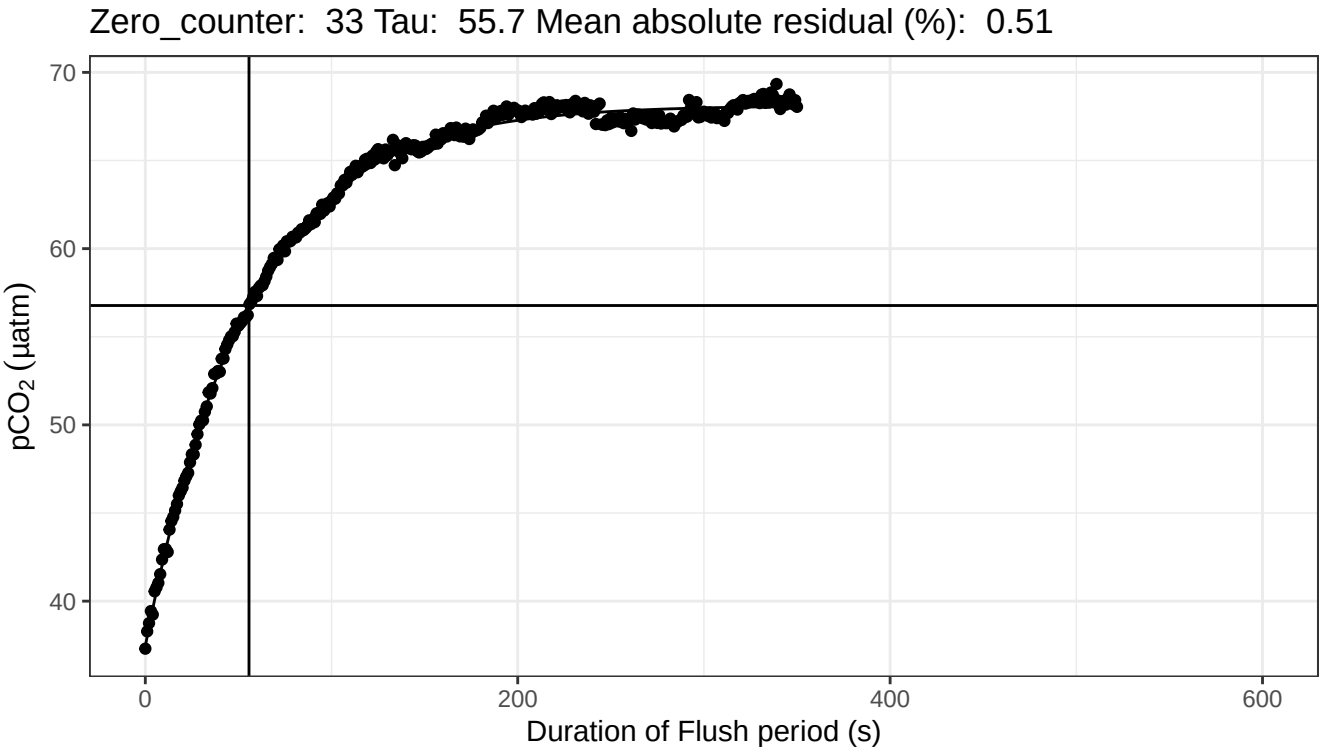


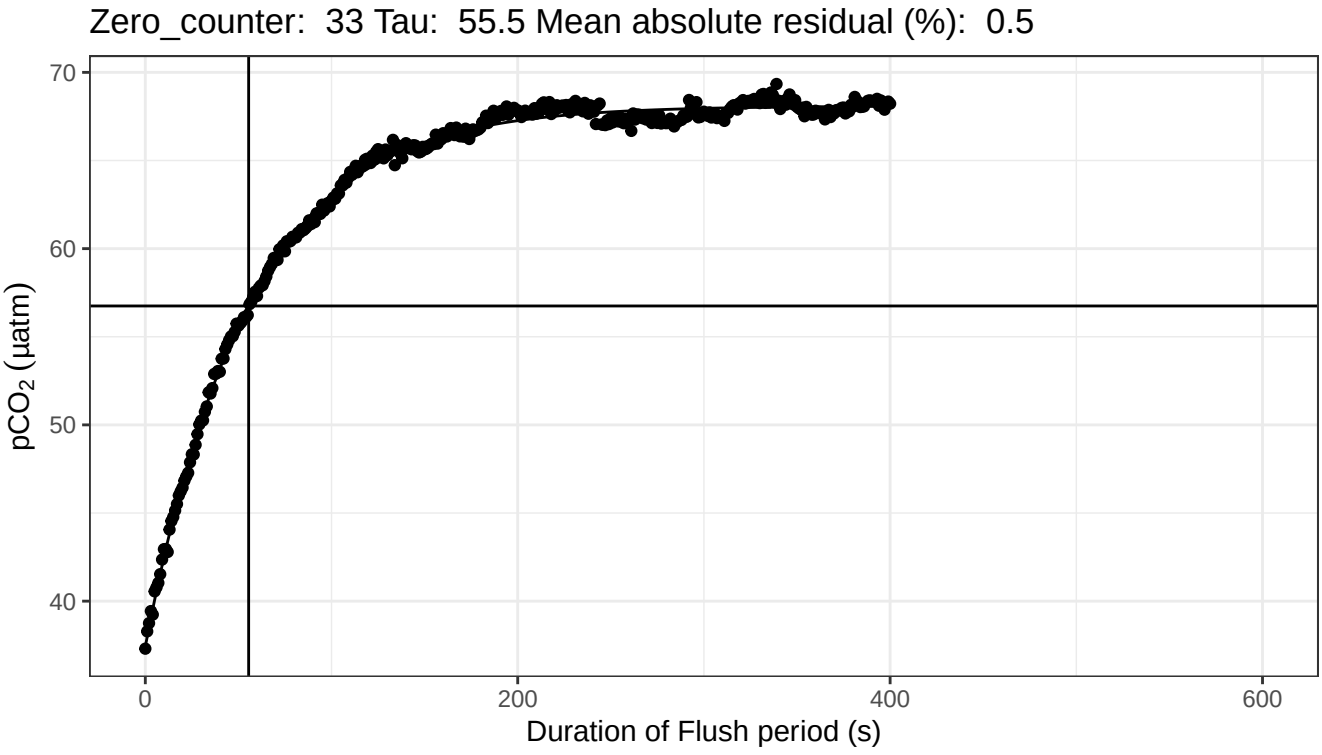
Zero_counter: 33 Tau: 57.5 Mean absolute residual (%): 0.41

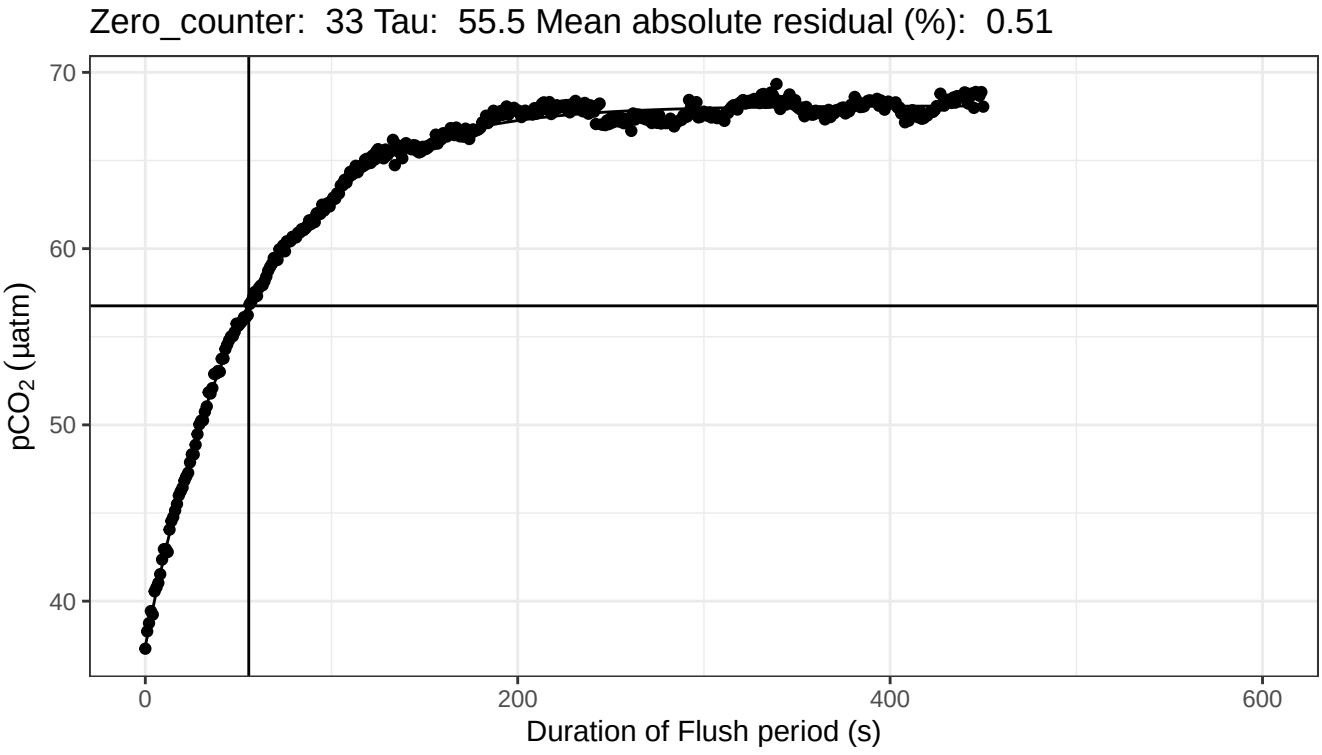


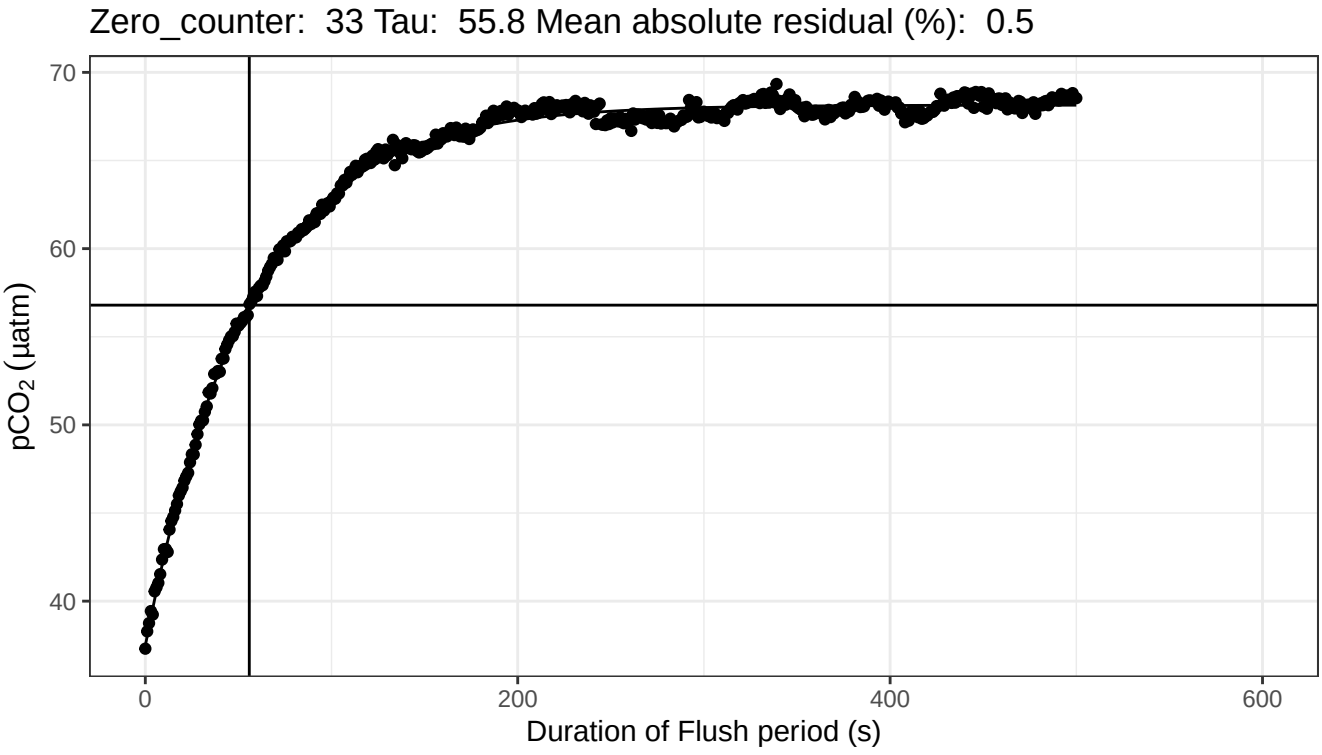
Zero_counter: 33 Tau: 55.3 Mean absolute residual (%): 0.51

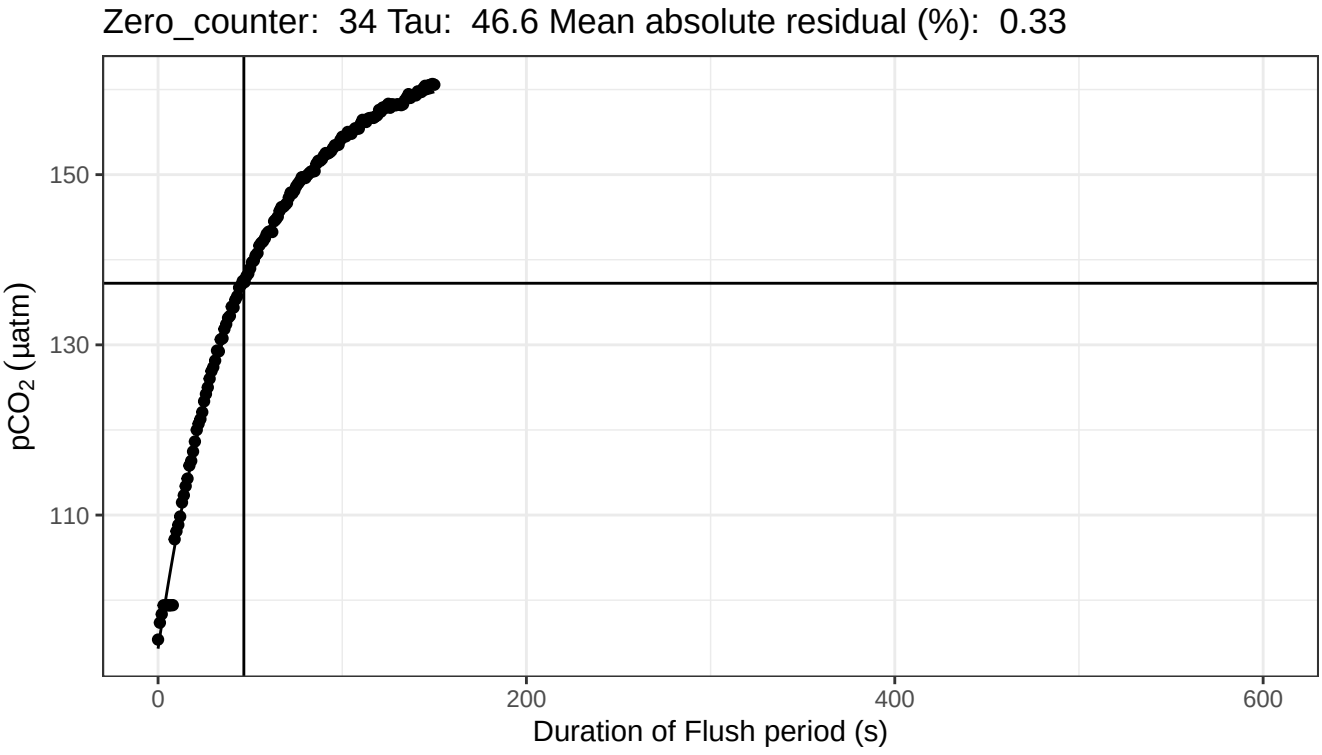


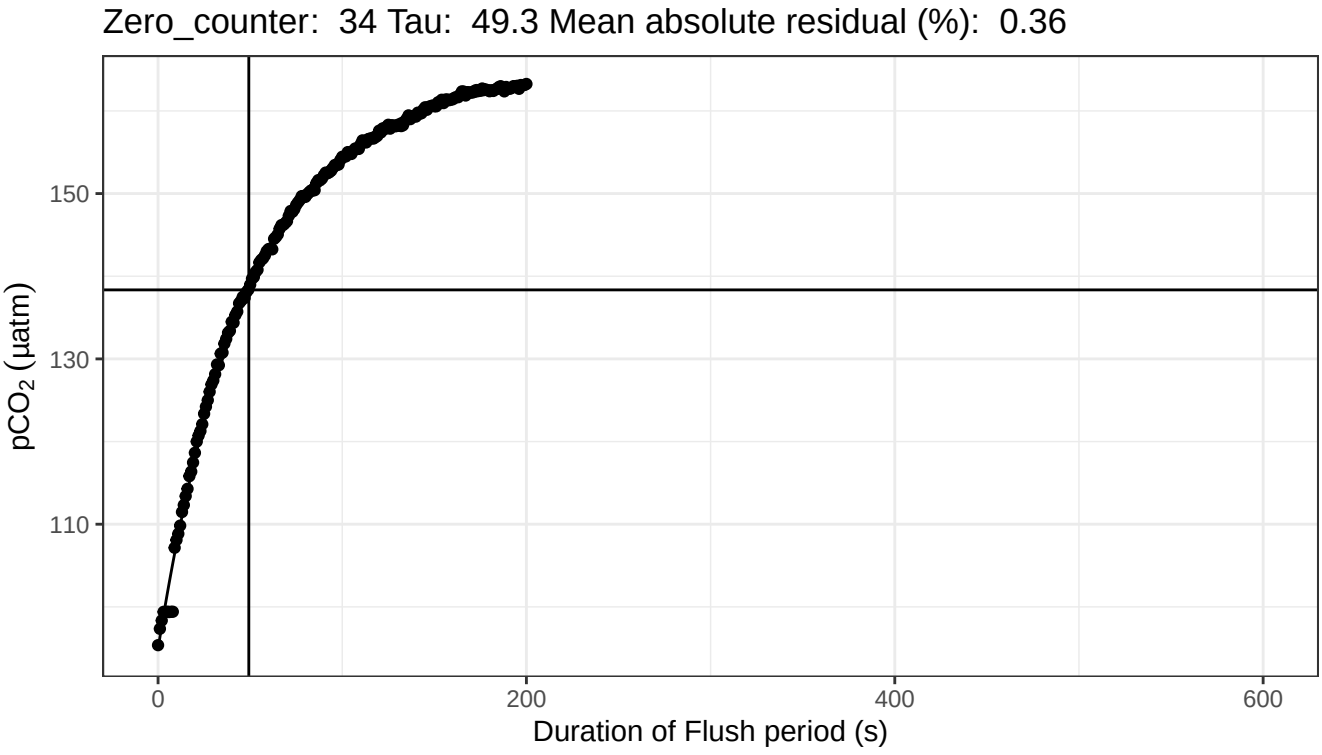

Zero_counter: 33 Tau: 55.7 Mean absolute residual (%): 0.51
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

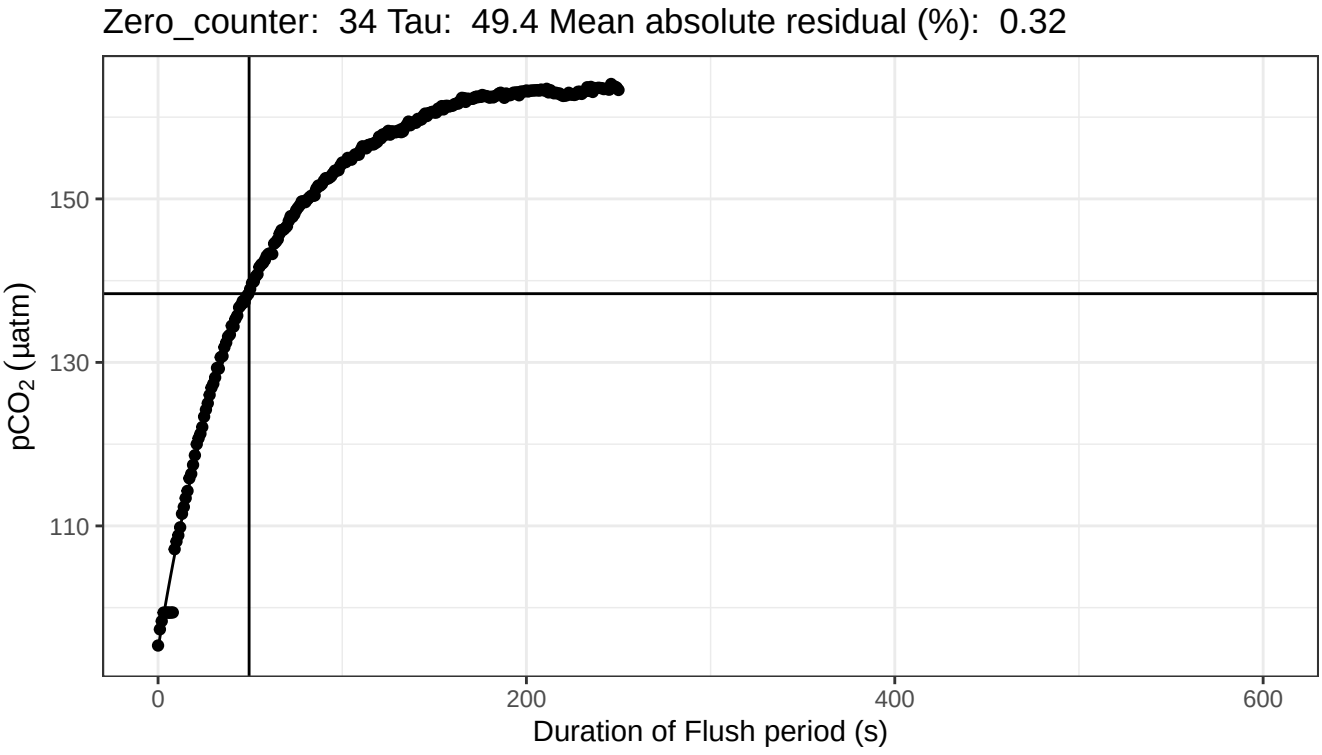

Zero_counter: 33 Tau: 55.5 Mean absolute residual (%): 0.5
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

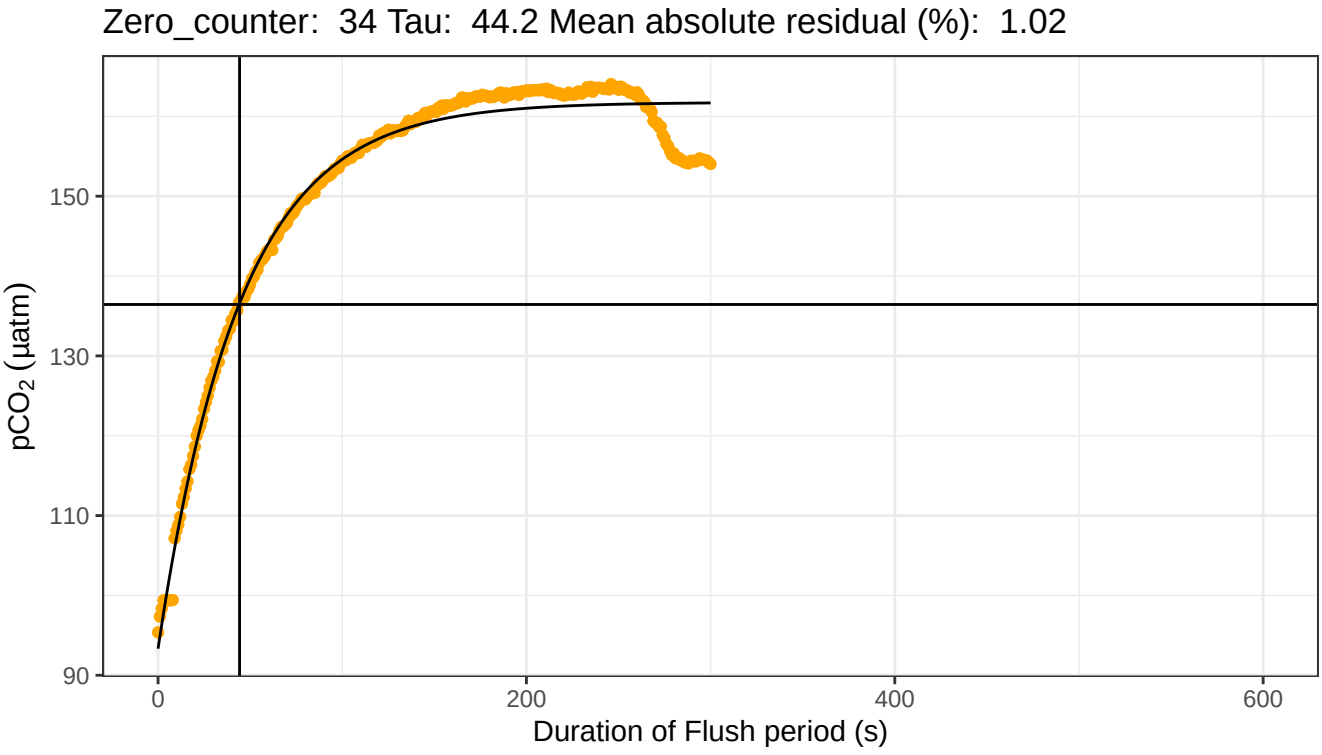

Zero_counter: 33 Tau: 55.5 Mean absolute residual (%): 0.51
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

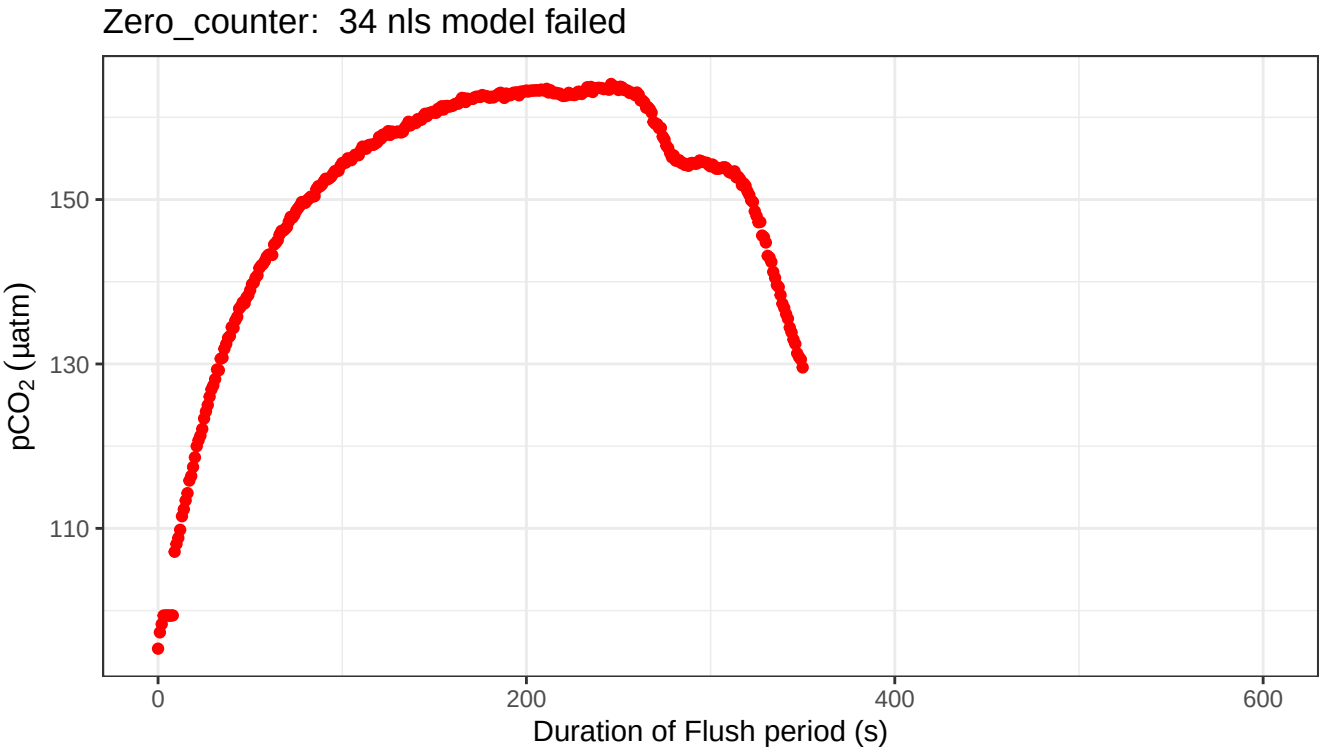

Zero_counter: 33 Tau: 55.8 Mean absolute residual (%): 0.5
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

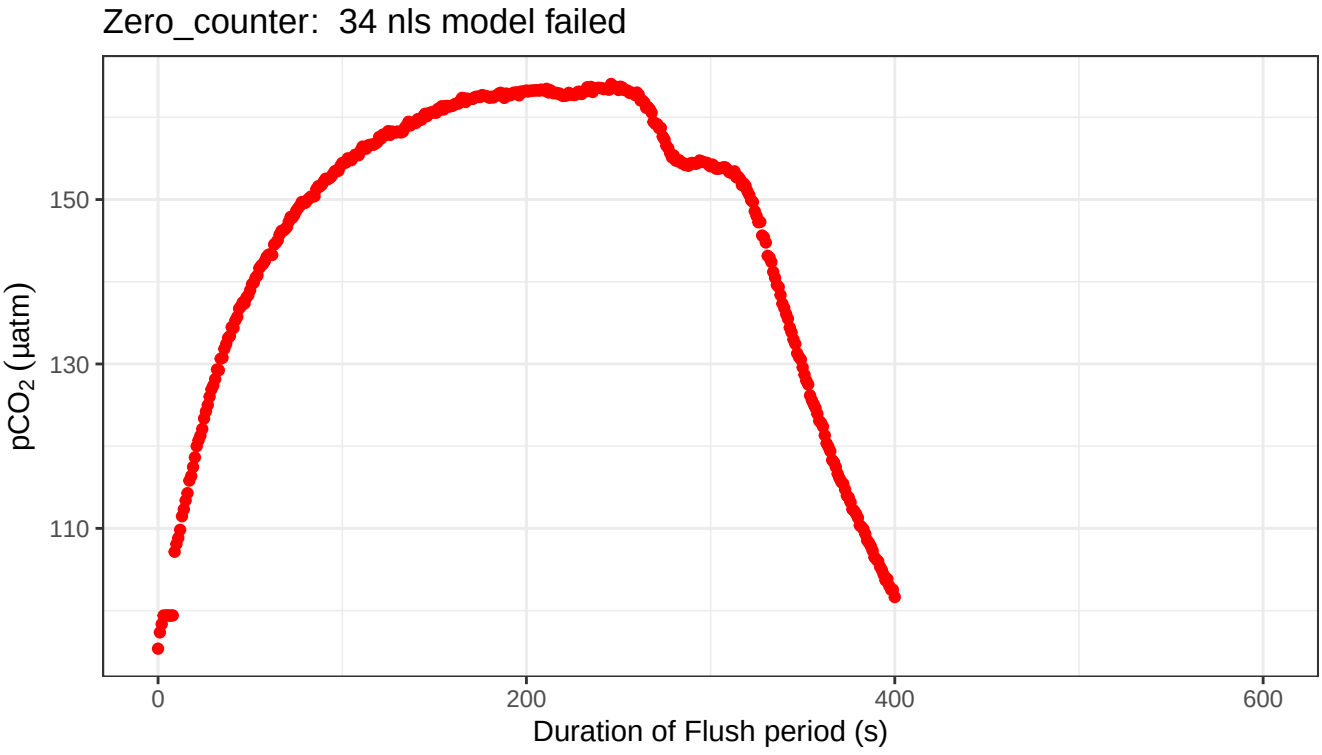

Zero_counter: 34 Tau: 46.6 Mean absolute residual (%): 0.33
150
130
110
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

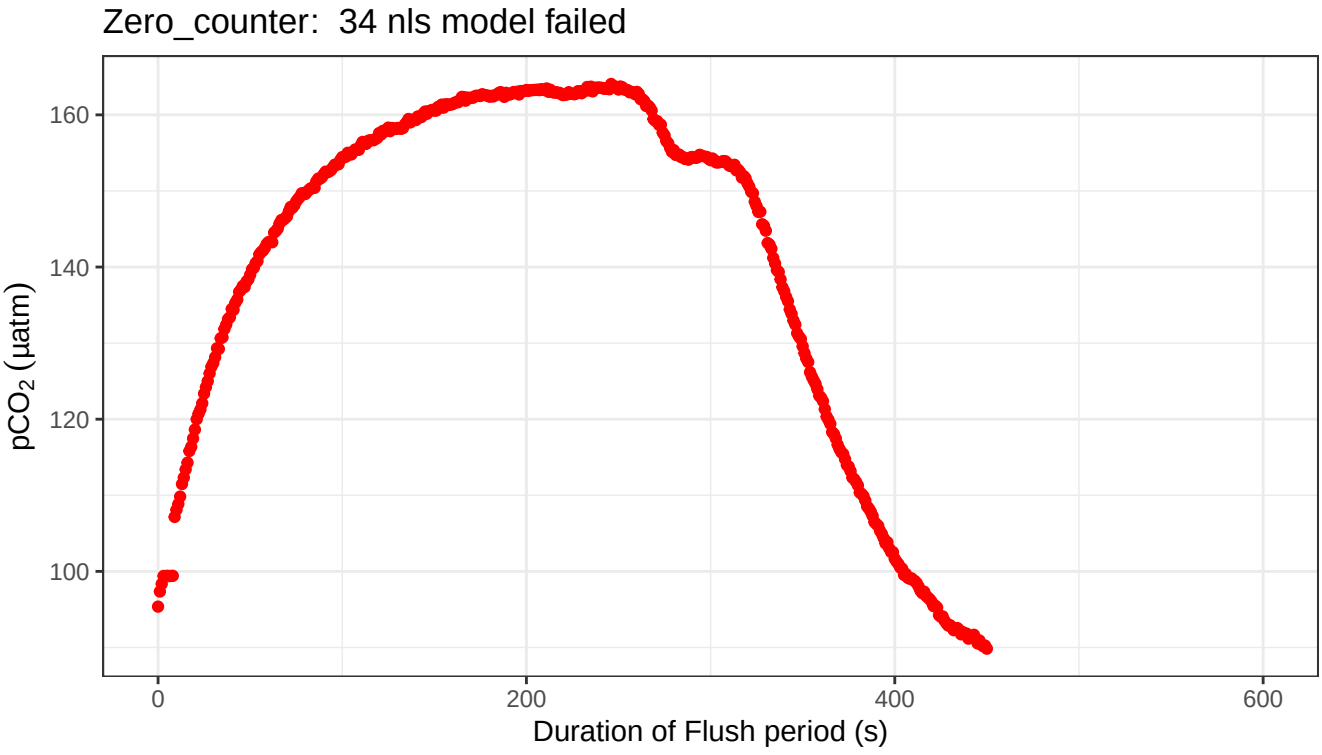

Zero_counter: 34 Tau: 49.3 Mean absolute residual (%): 0.36
150
130
110
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

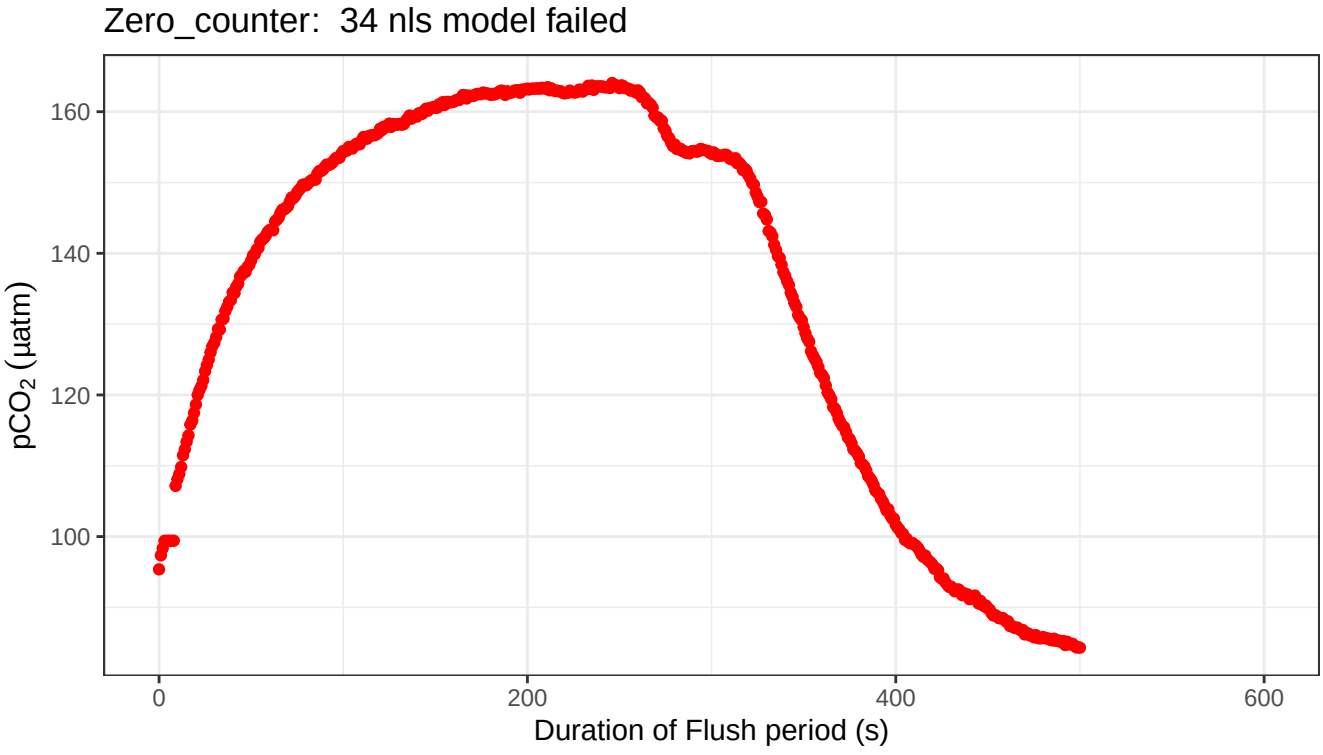

Zero_counter: 34 Tau: 49.4 Mean absolute residual (%): 0.32
150
130
110
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 34 Tau: 44.2 Mean absolute residual (%): 1.02
150
130
110
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

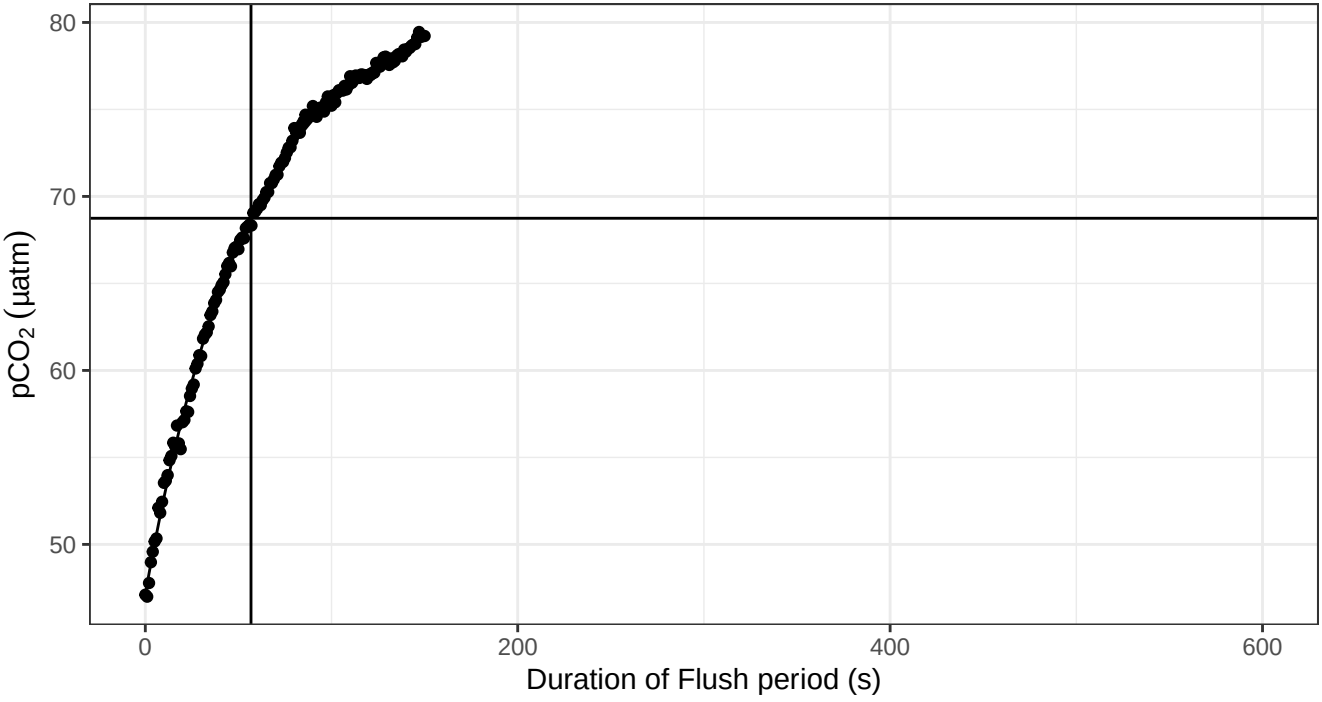

Zero_counter: 34 nls model failed
150
130
110
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 34 nls model failed
150
130
110
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

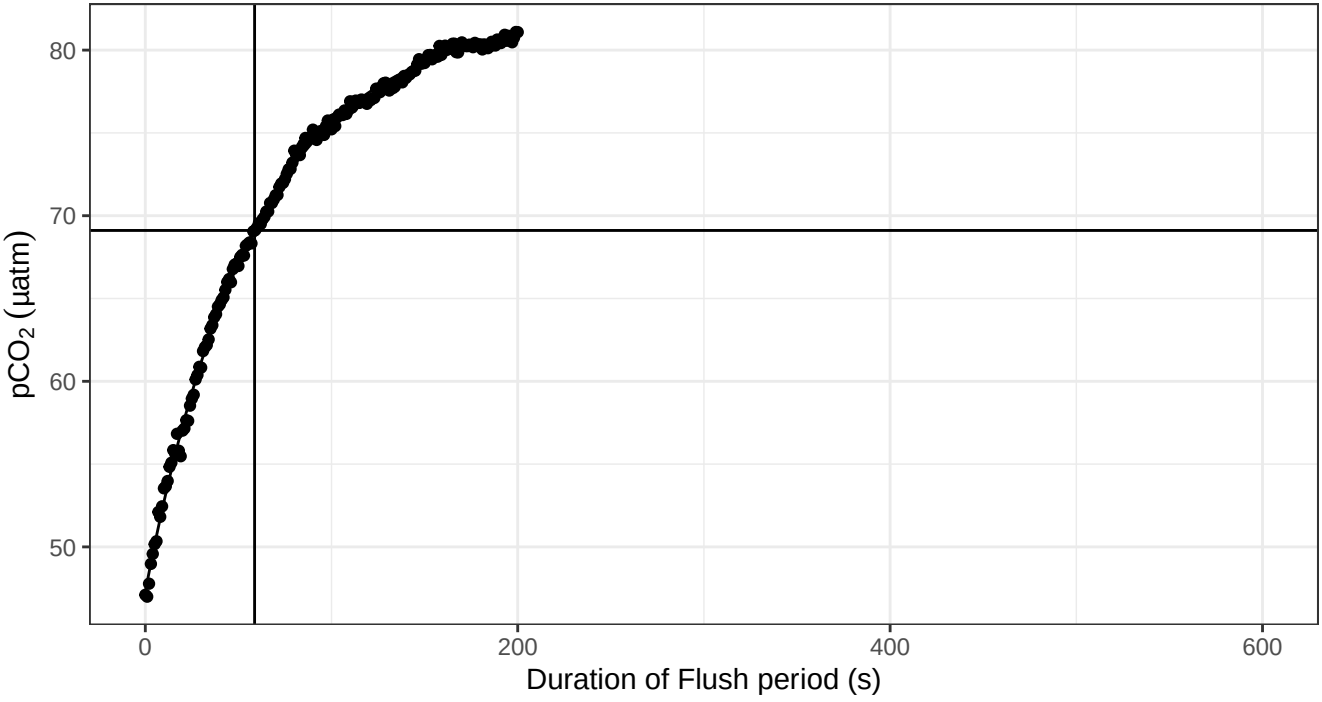

Zero_counter: 34 nls model failed
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

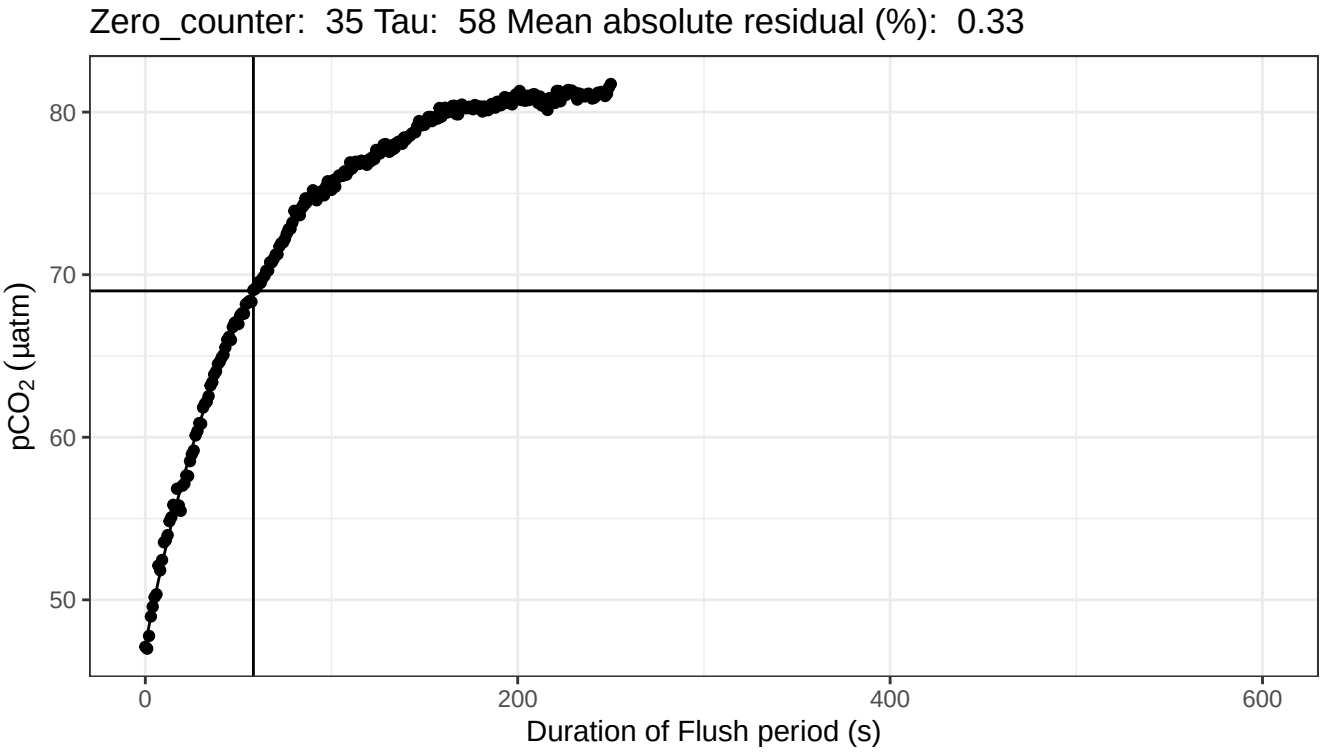

Zero_counter: 34 nls model failed
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 35 Tau: 56.7 Mean absolute residual (%): 0.34

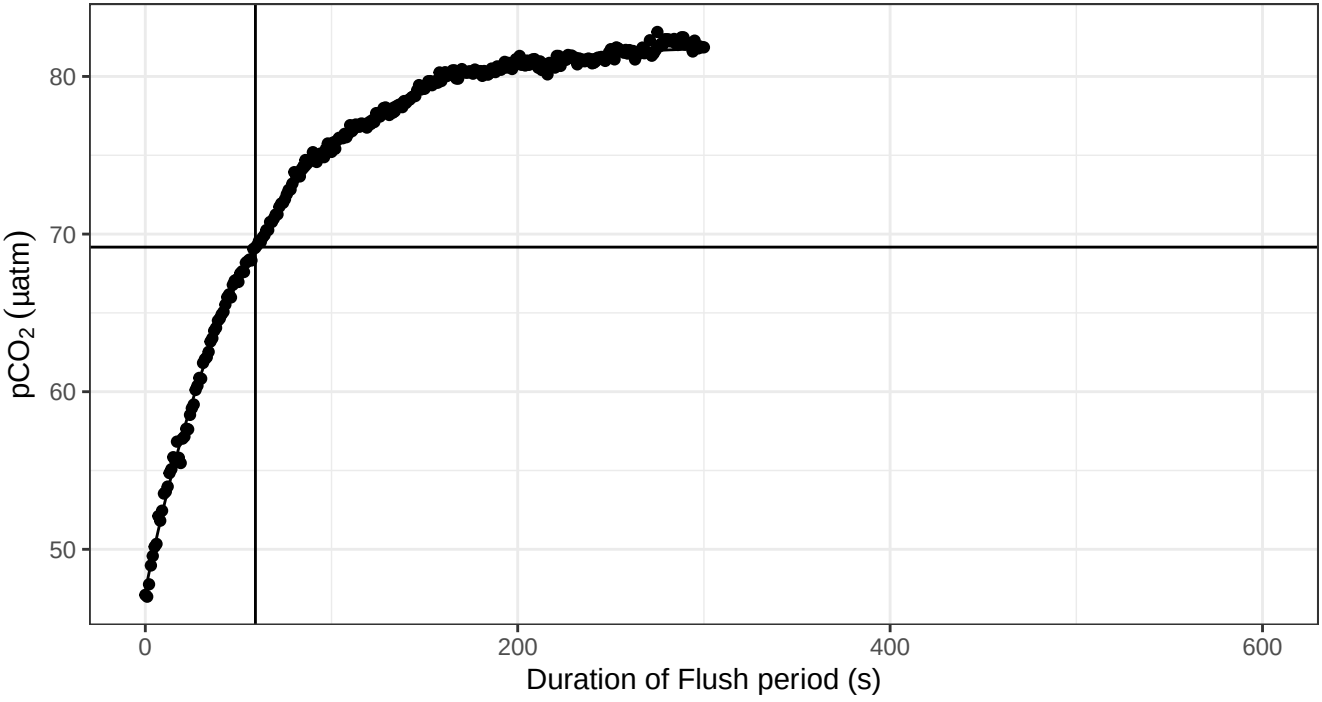


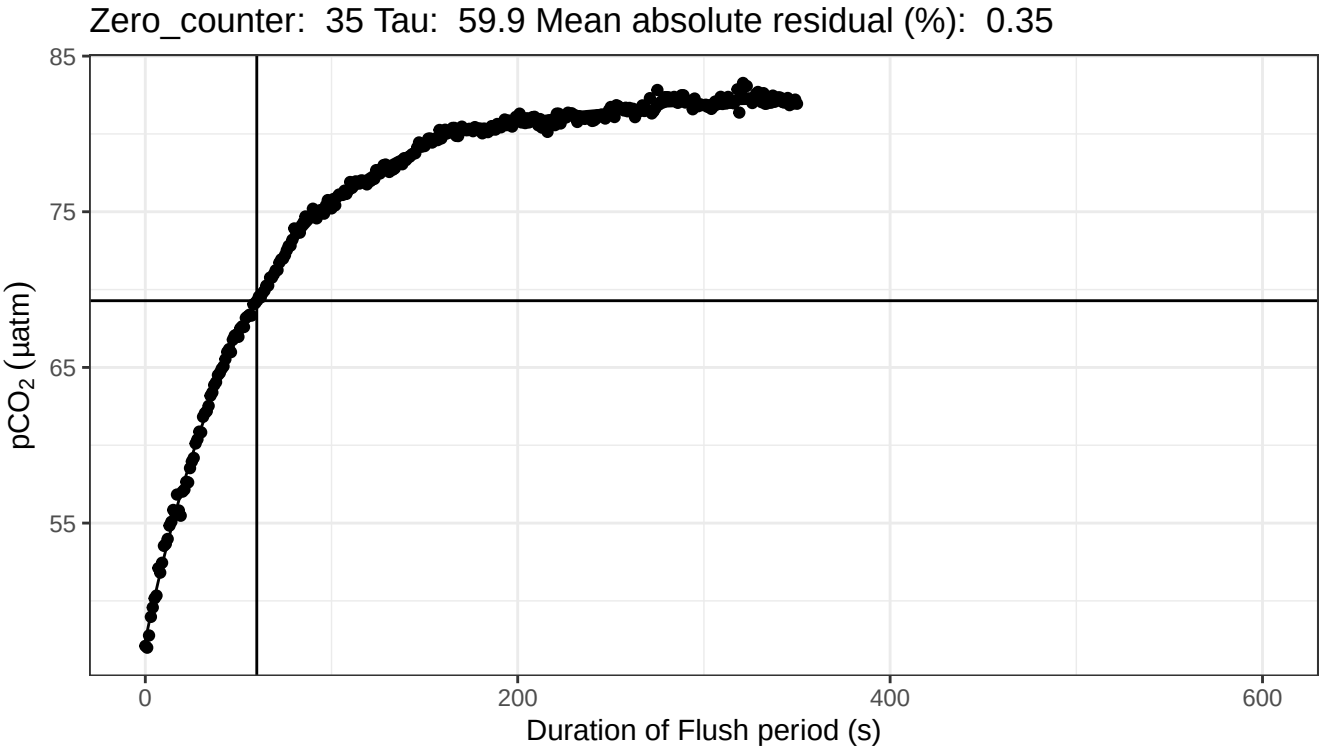
Zero_counter: 35 Tau: 58.7 Mean absolute residual (%): 0.34

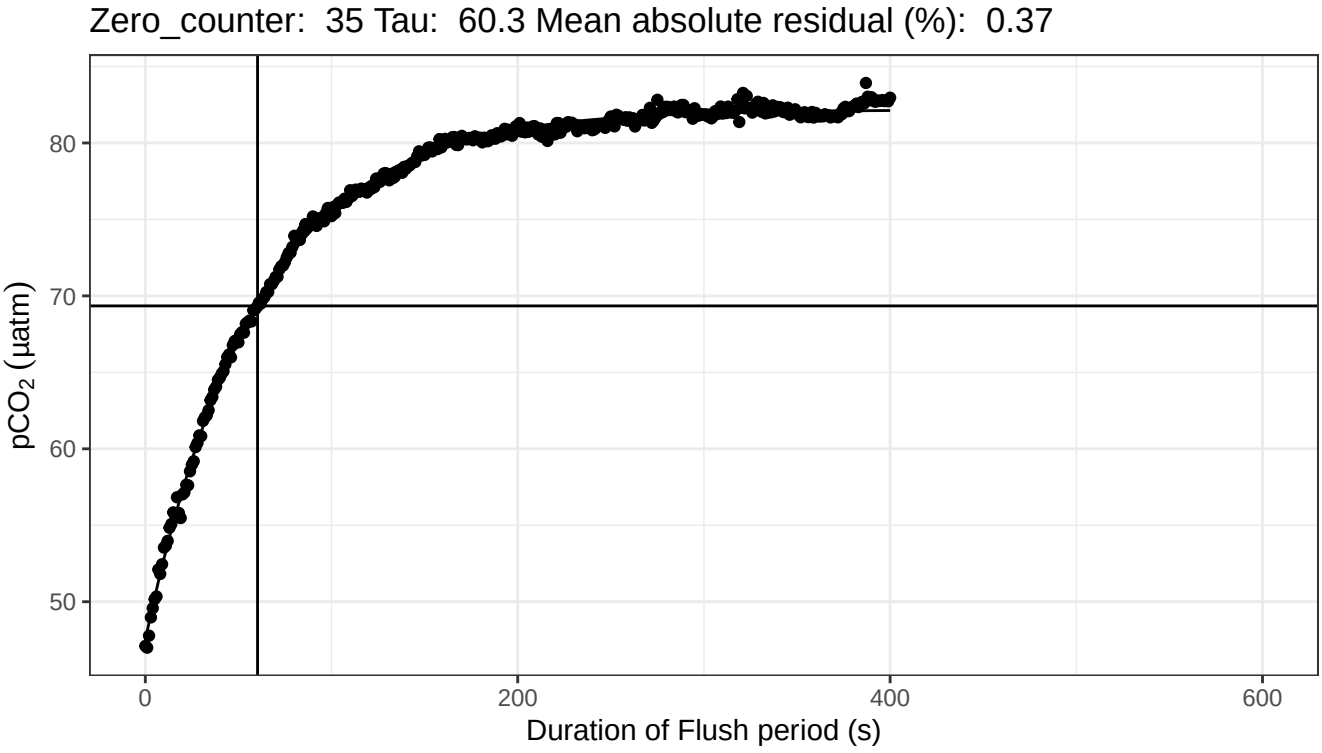


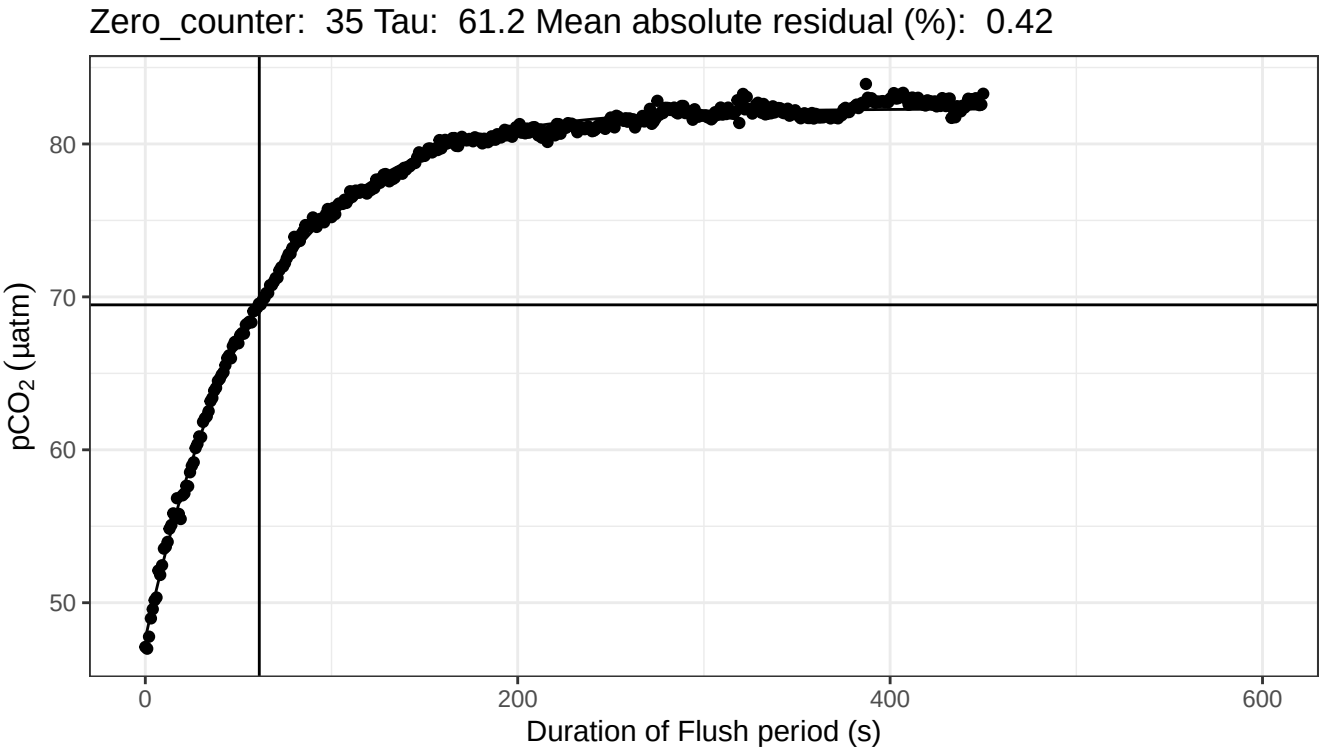

Zero_counter: 35 Tau: 58 Mean absolute residual (%): 0.33
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

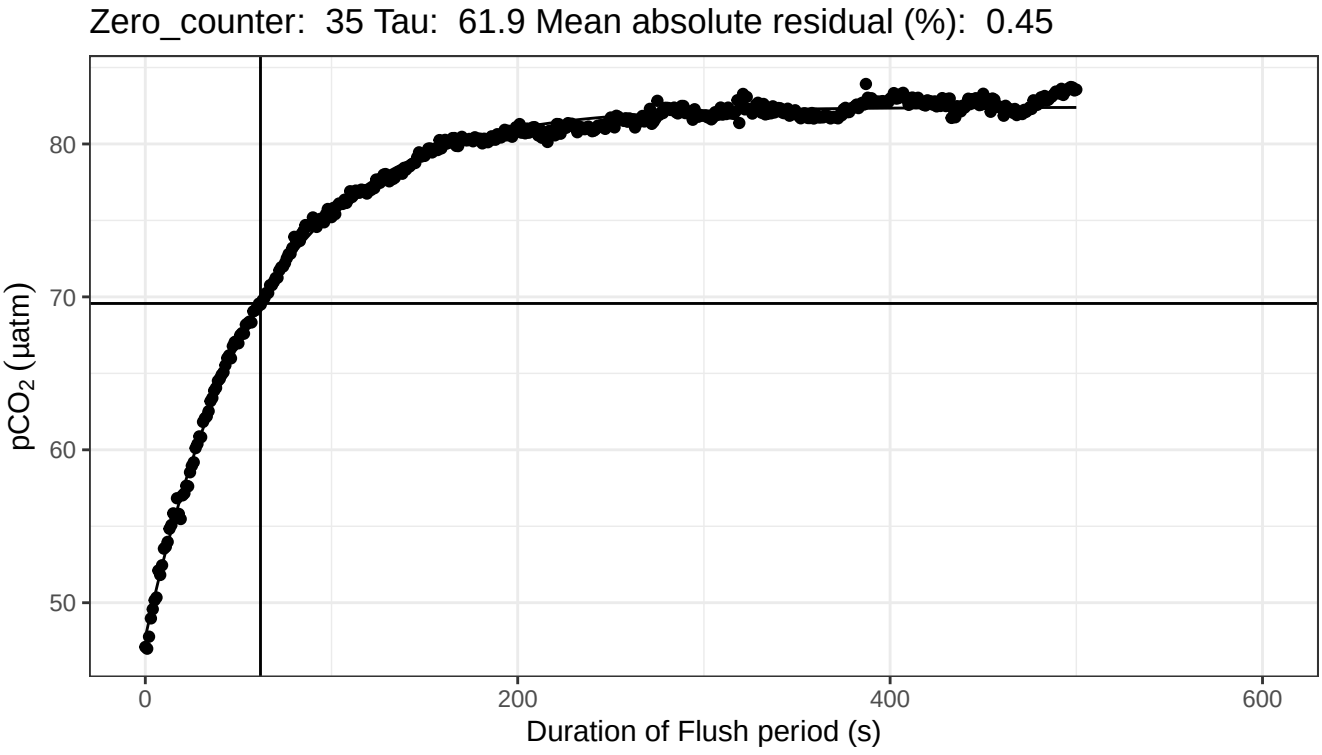
Zero_counter: 35 Tau: 59.1 Mean absolute residual (%): 0.35

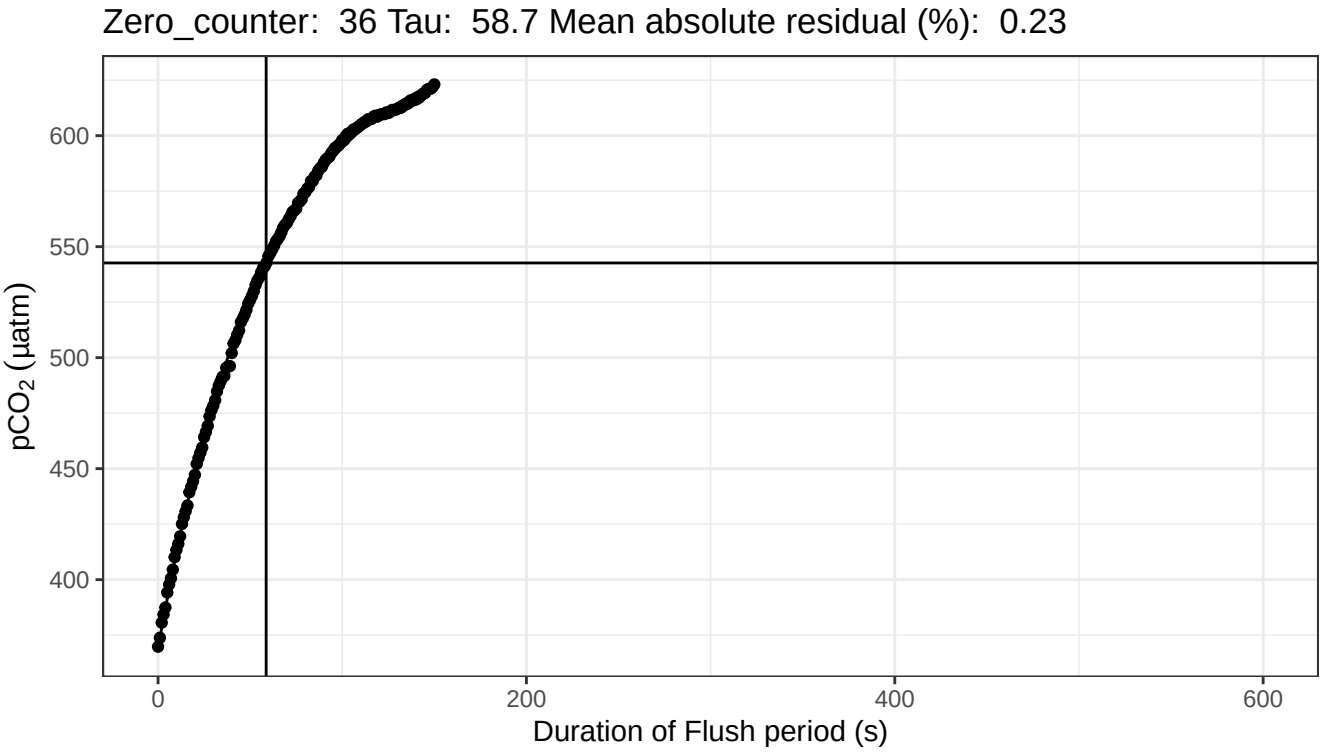


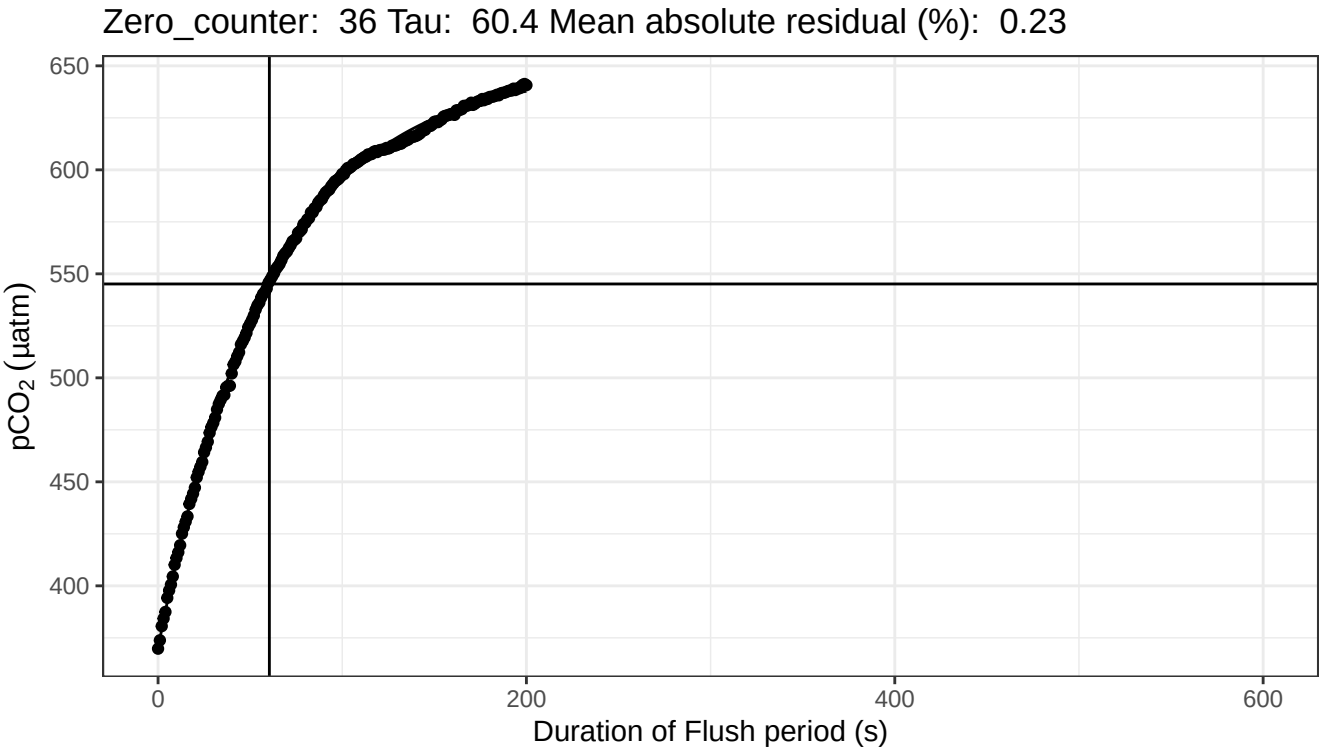

Zero_counter: 35 Tau: 59.9 Mean absolute residual (%): 0.35
85
75
65
55
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

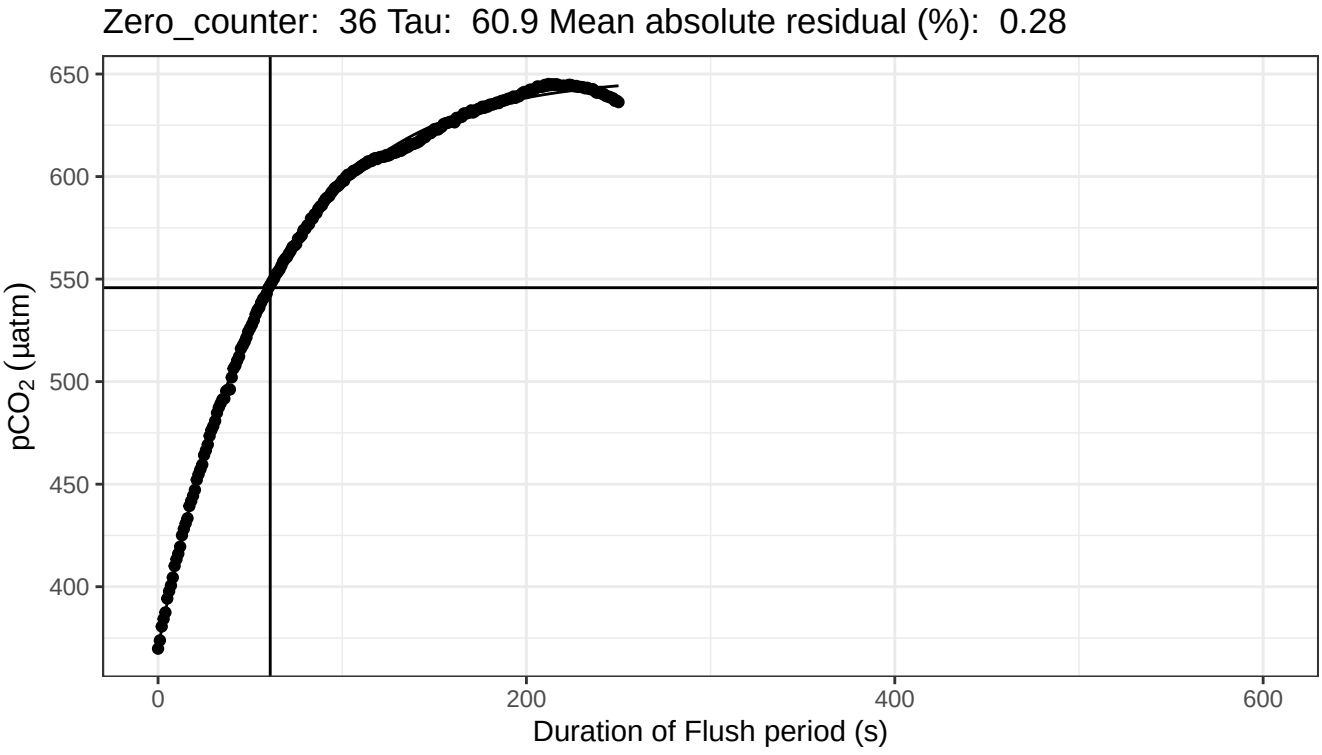

Zero_counter: 35 Tau: 60.3 Mean absolute residual (%): 0.37
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

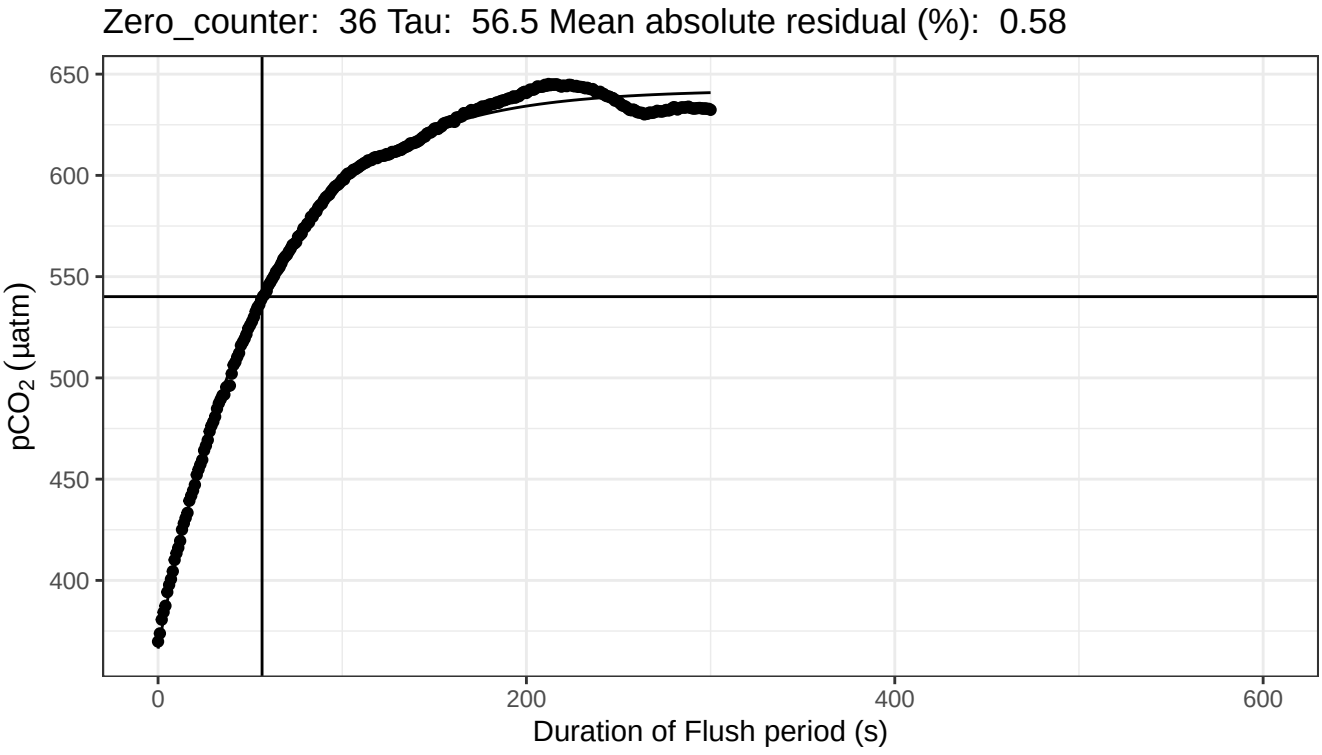

Zero_counter: 35 Tau: 61.2 Mean absolute residual (%): 0.42
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

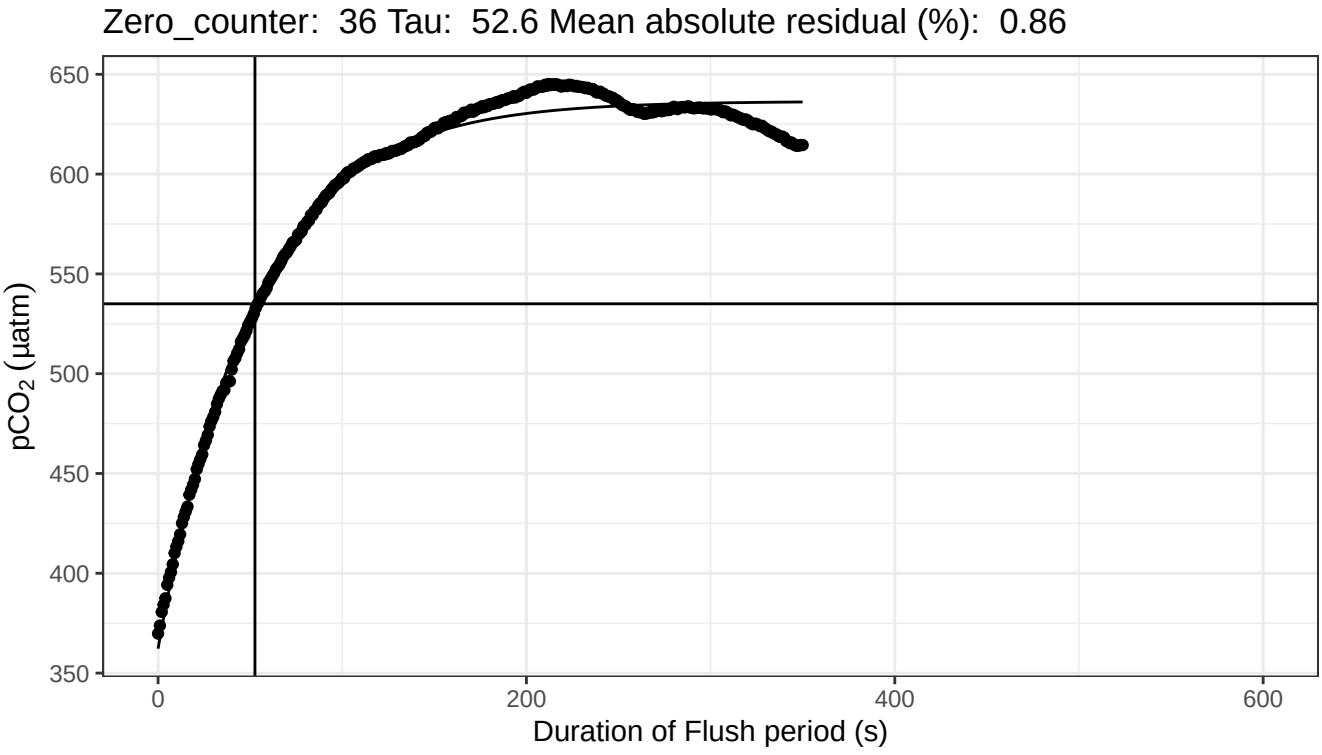

Zero_counter: 35 Tau: 61.9 Mean absolute residual (%): 0.45
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

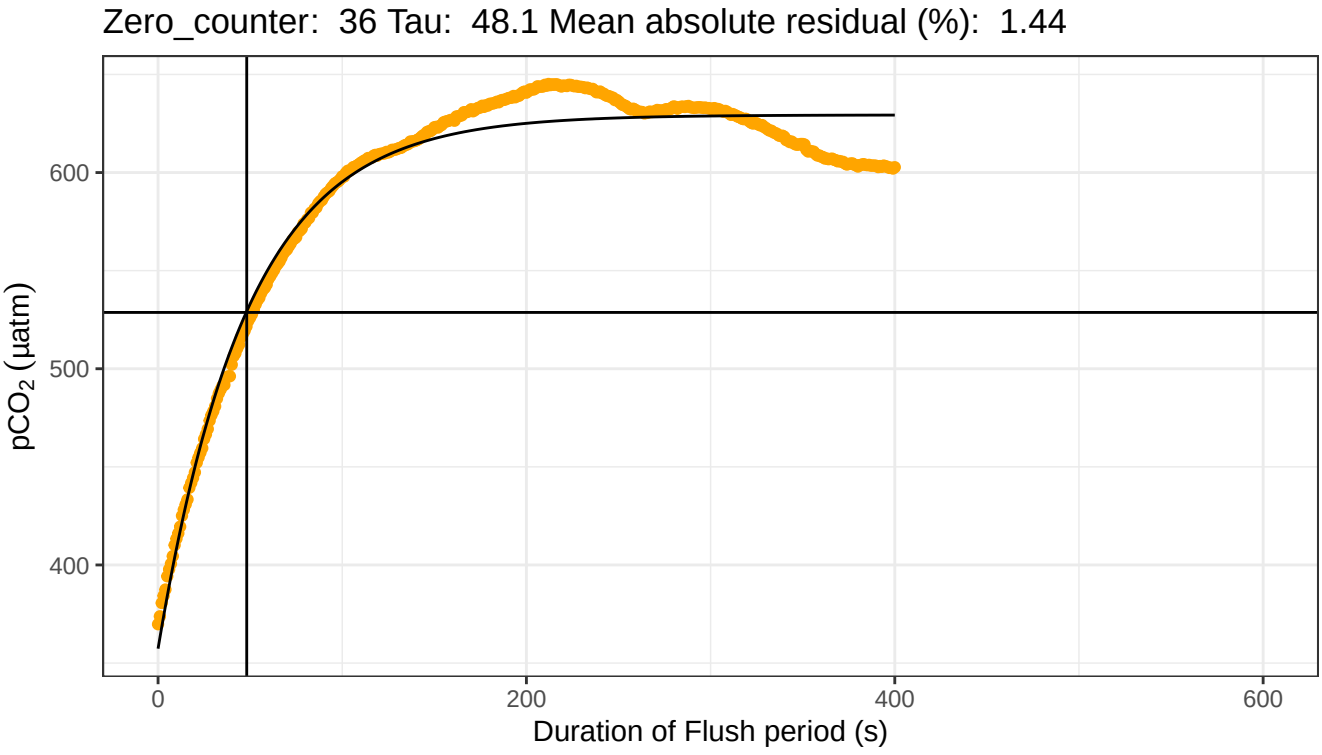

Zero_counter: 36 Tau: 58.7 Mean absolute residual (%): 0.23
600
550
500
450
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

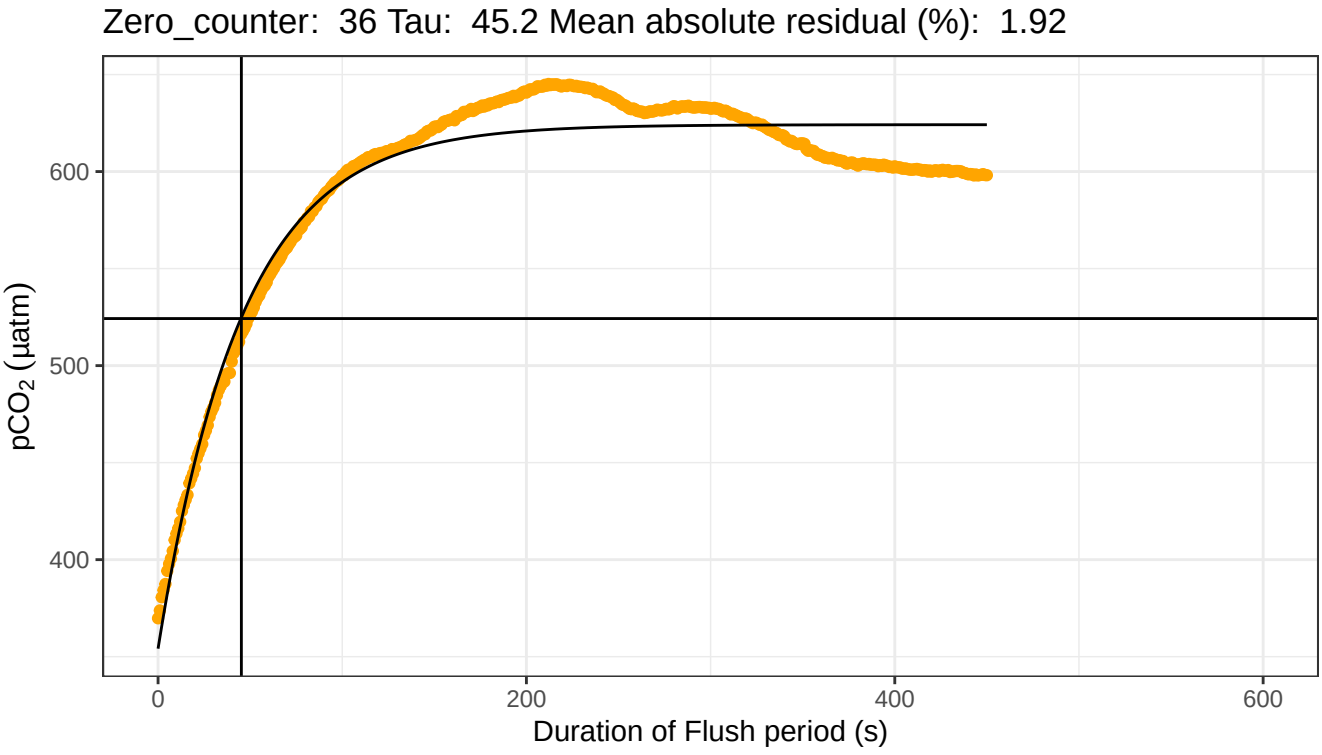

Zero_counter: 36 Tau: 60.4 Mean absolute residual (%): 0.23
650
600
550
500
450
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

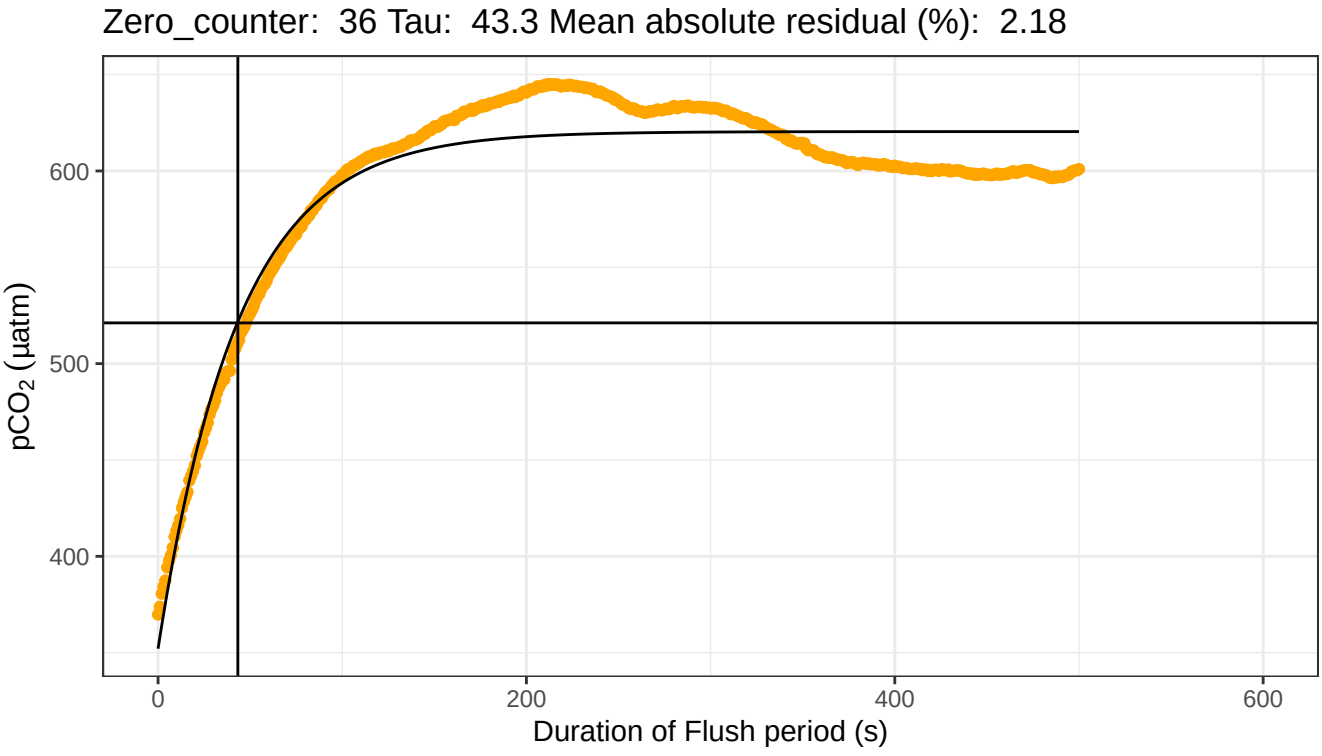

Zero_counter: 36 Tau: 60.9 Mean absolute residual (%): 0.28
650
600
550
500
450
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

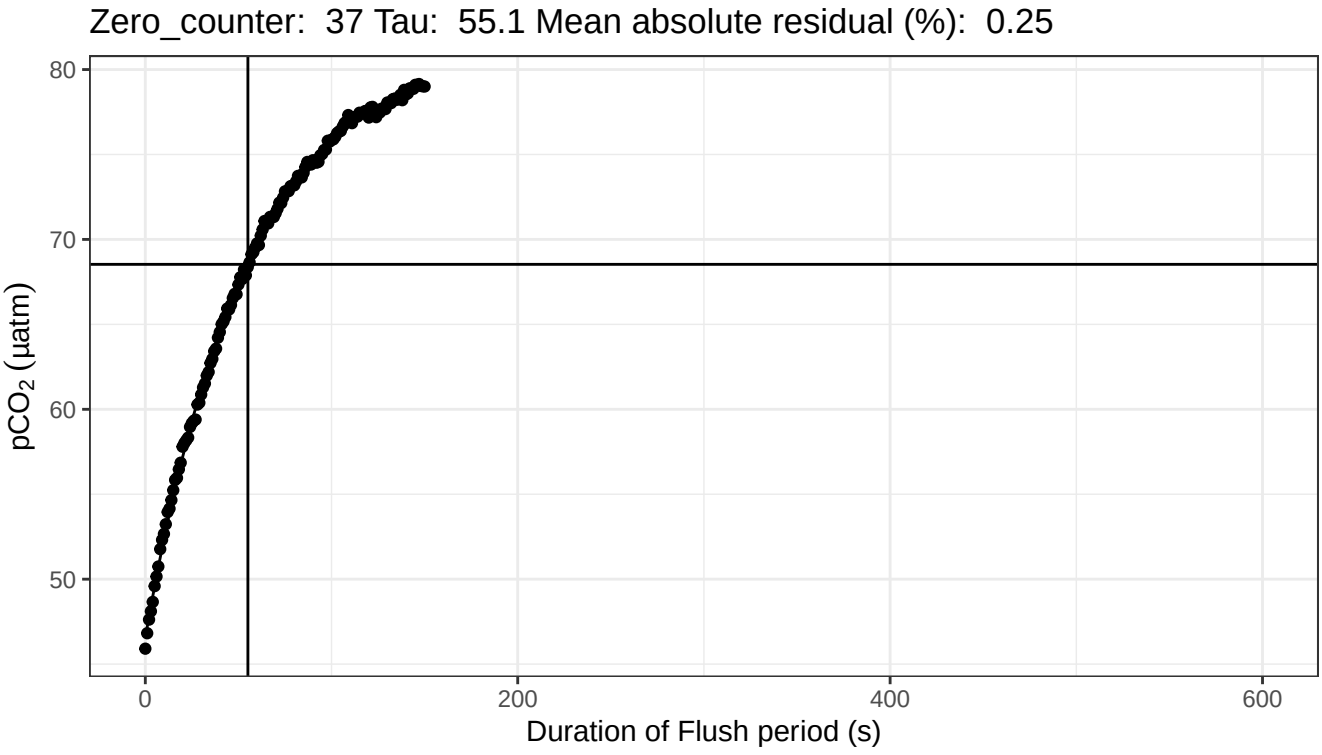

Zero_counter: 36 Tau: 56.5 Mean absolute residual (%): 0.58
650
600
550
500
450
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 36 Tau: 52.6 Mean absolute residual (%): 0.86
650
600
550
500
450
400
350
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

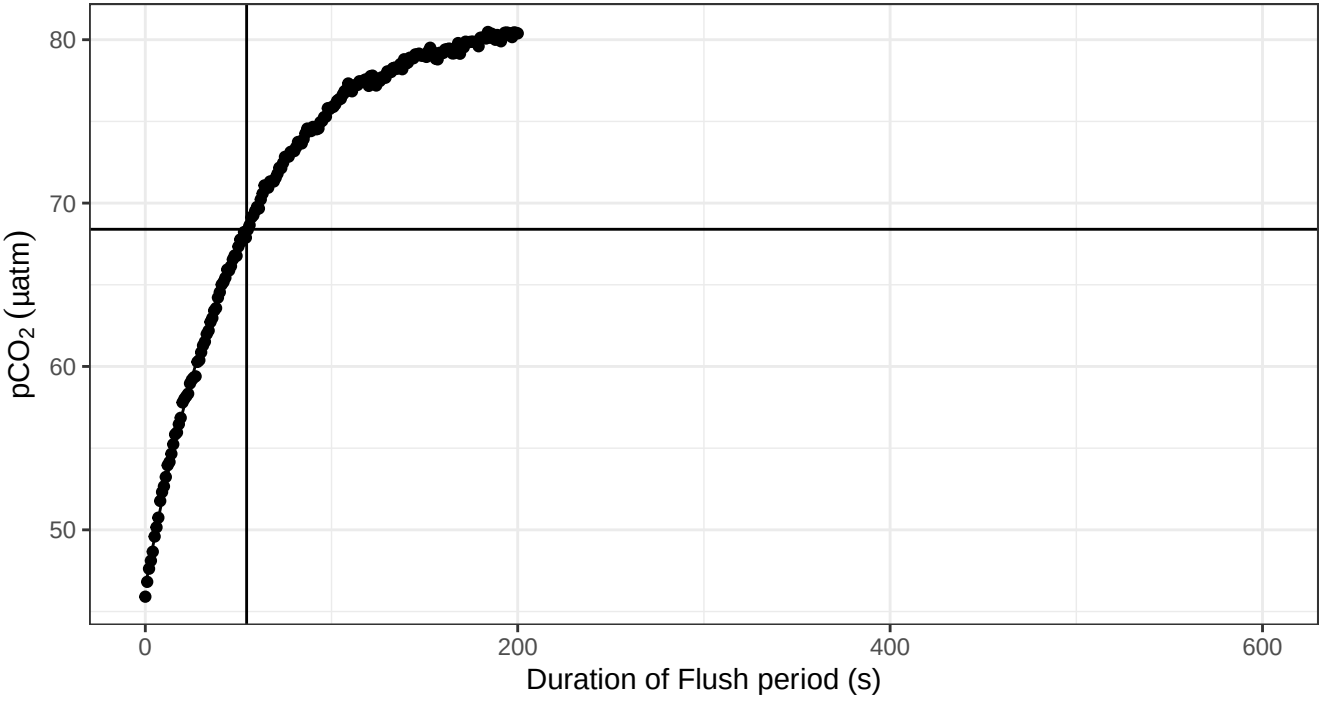

Zero_counter: 36 Tau: 48.1 Mean absolute residual (%): 1.44
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 36 Tau: 45.2 Mean absolute residual (%): 1.92
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

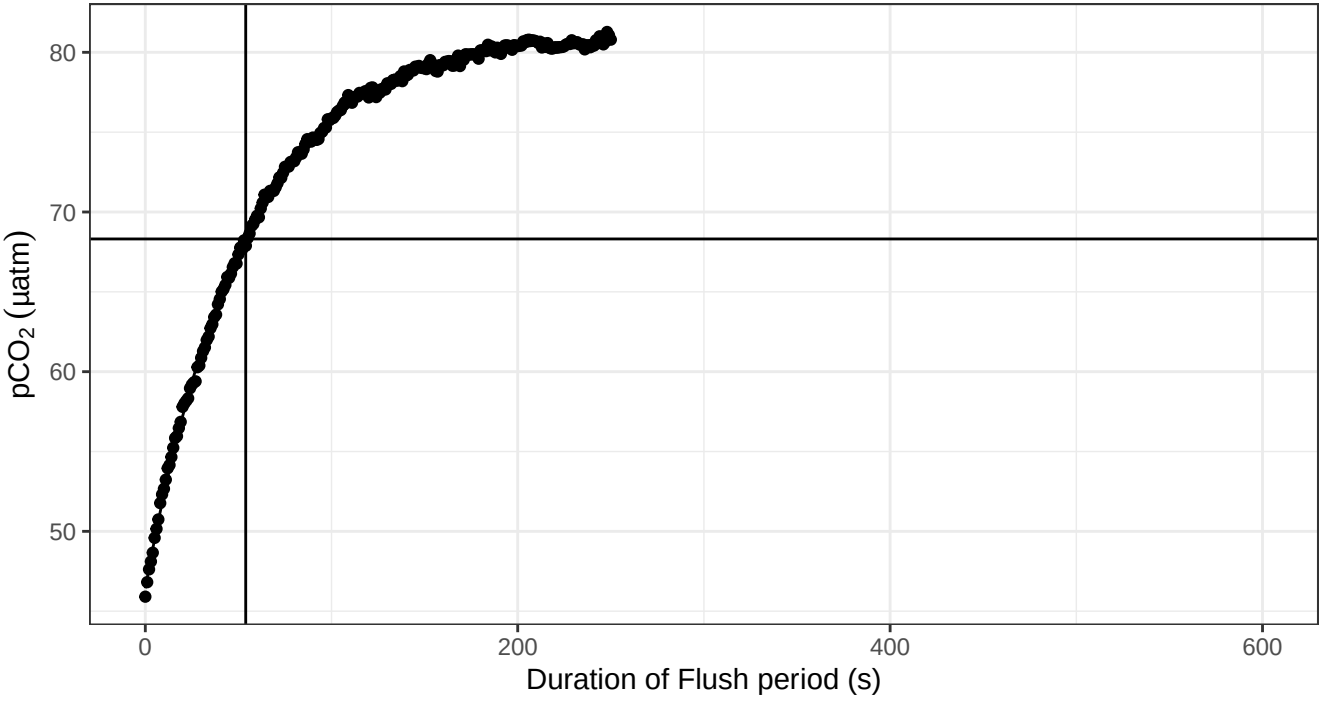

Zero_counter: 36 Tau: 43.3 Mean absolute residual (%): 2.18
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 37 Tau: 55.1 Mean absolute residual (%): 0.25
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

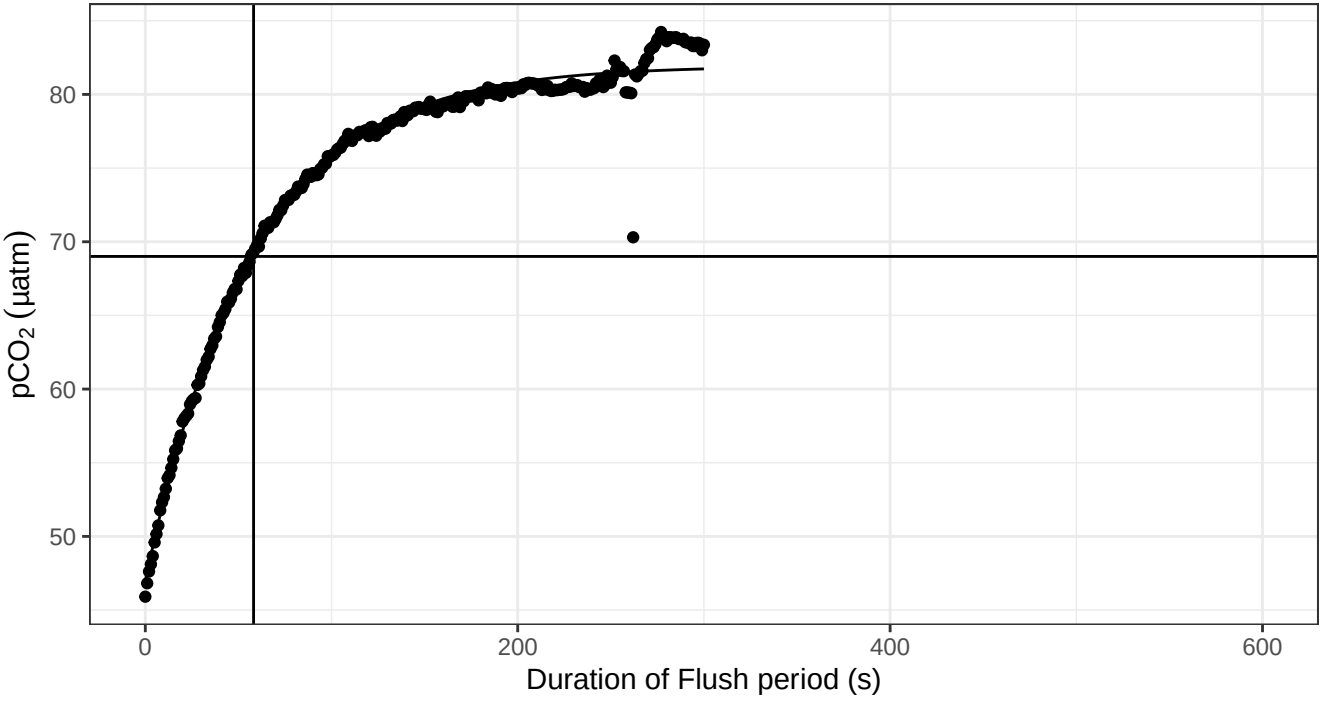
Zero_counter: 37 Tau: 54.4 Mean absolute residual (%): 0.24

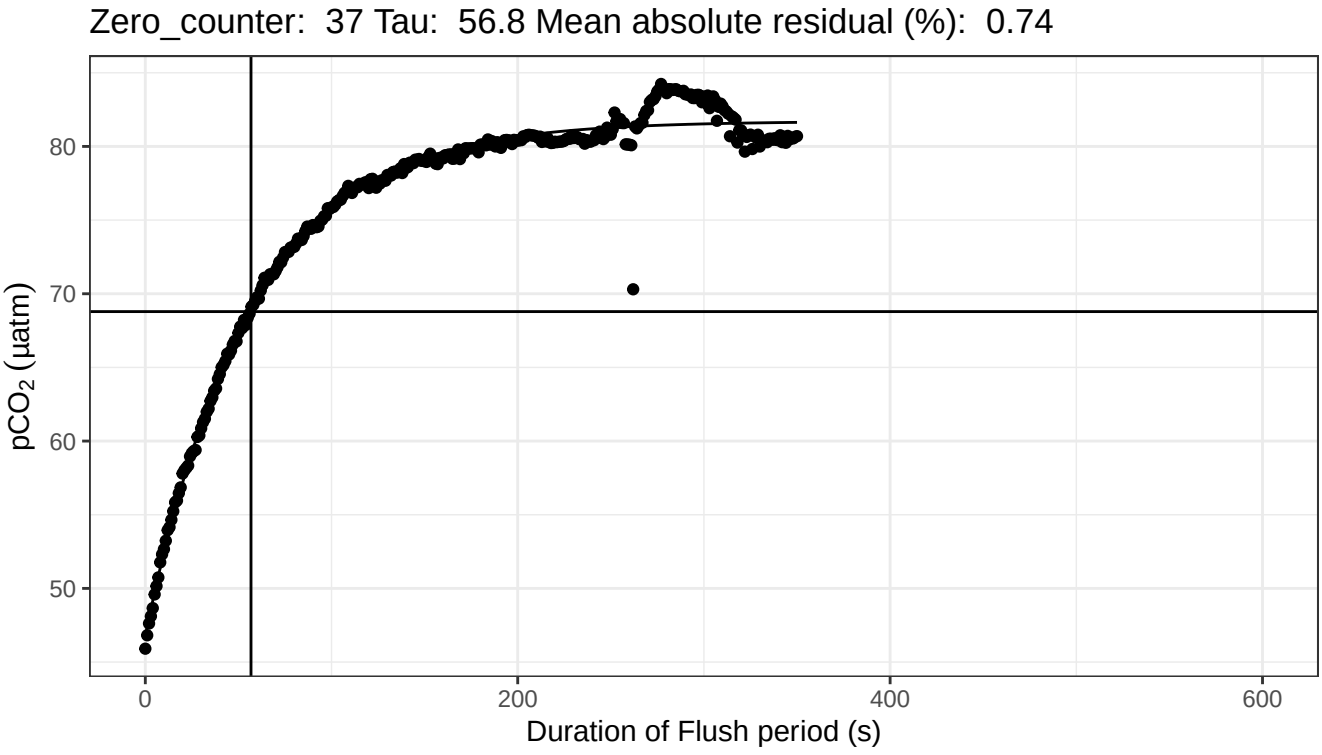


Zero_counter: 37 Tau: 53.9 Mean absolute residual (%): 0.26

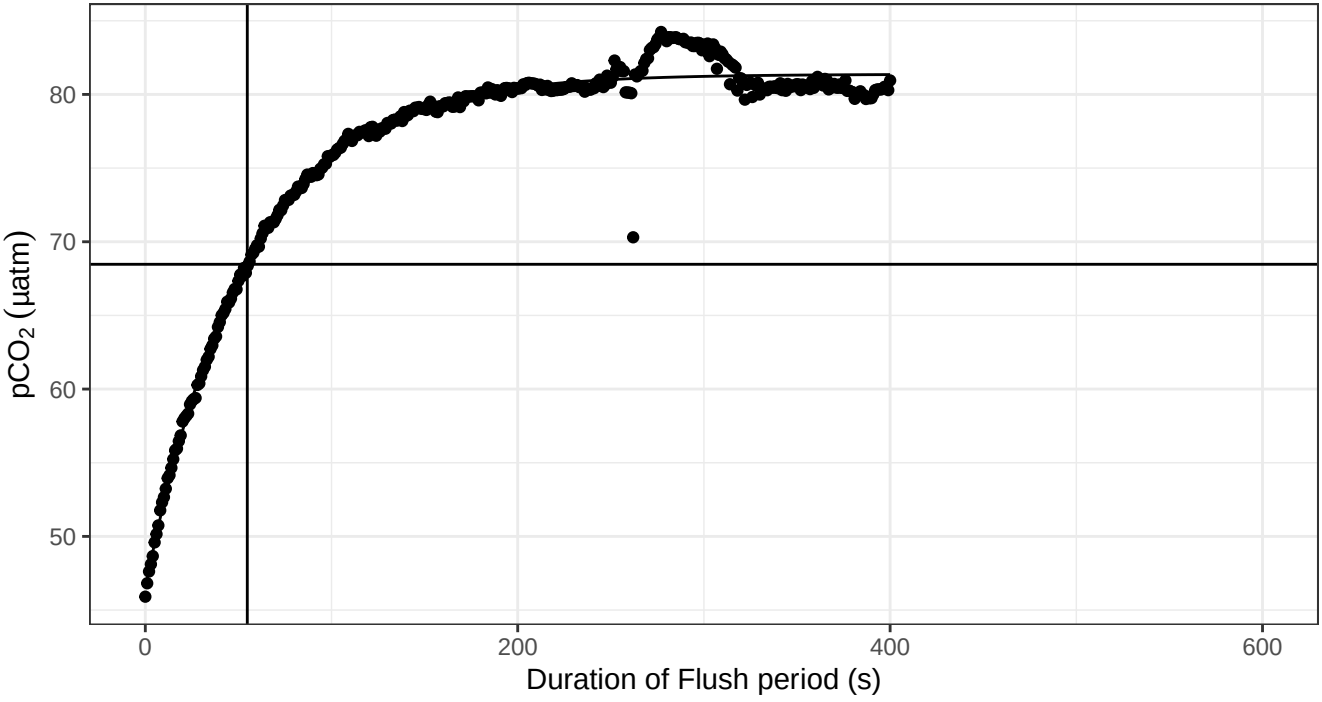


Zero_counter: 37 Tau: 58.1 Mean absolute residual (%): 0.68

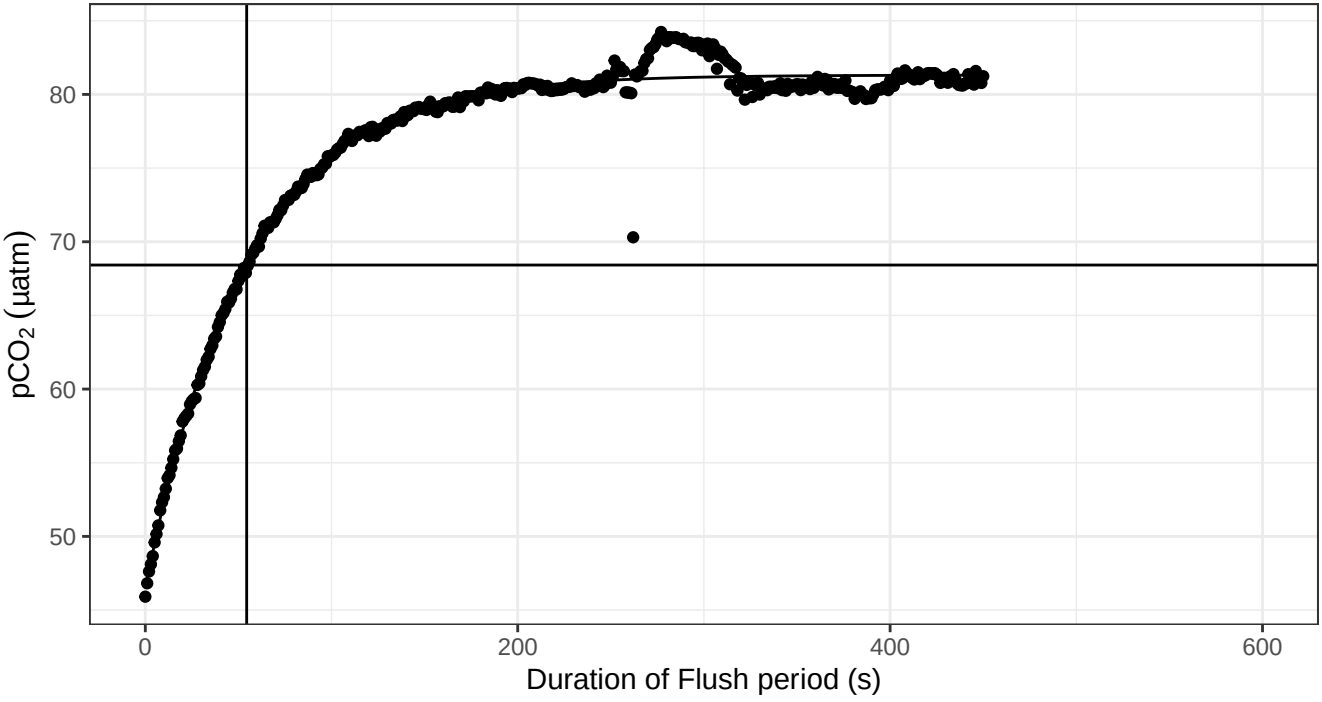


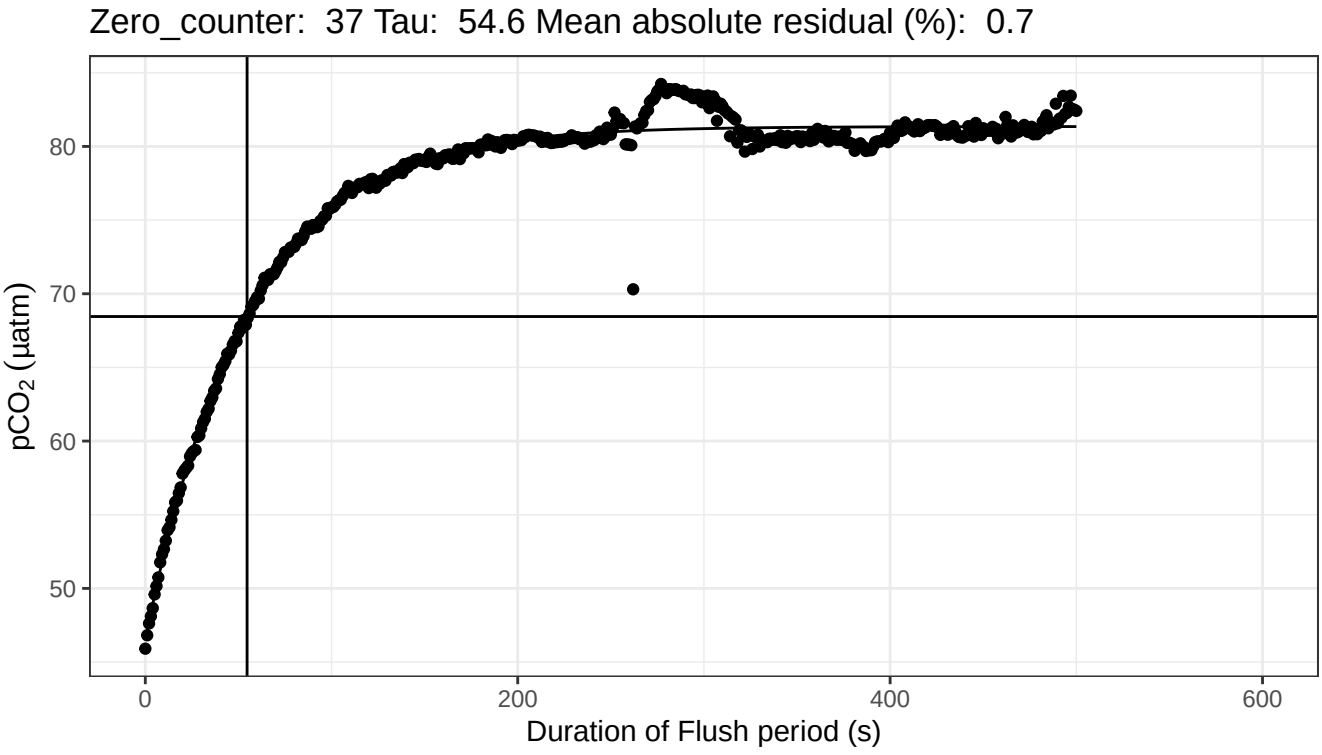

Zero_counter: 37 Tau: 56.8 Mean absolute residual (%): 0.74
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

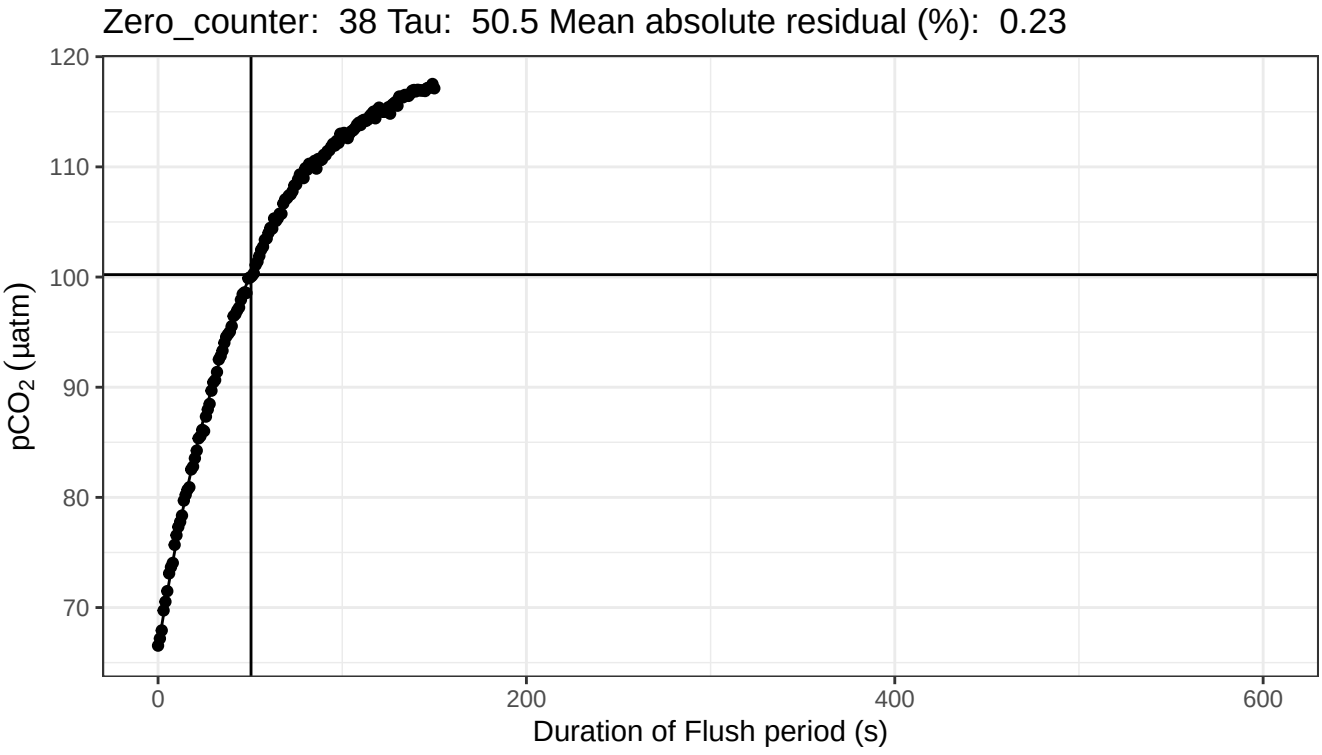
Zero_counter: 37 Tau: 54.8 Mean absolute residual (%): 0.76

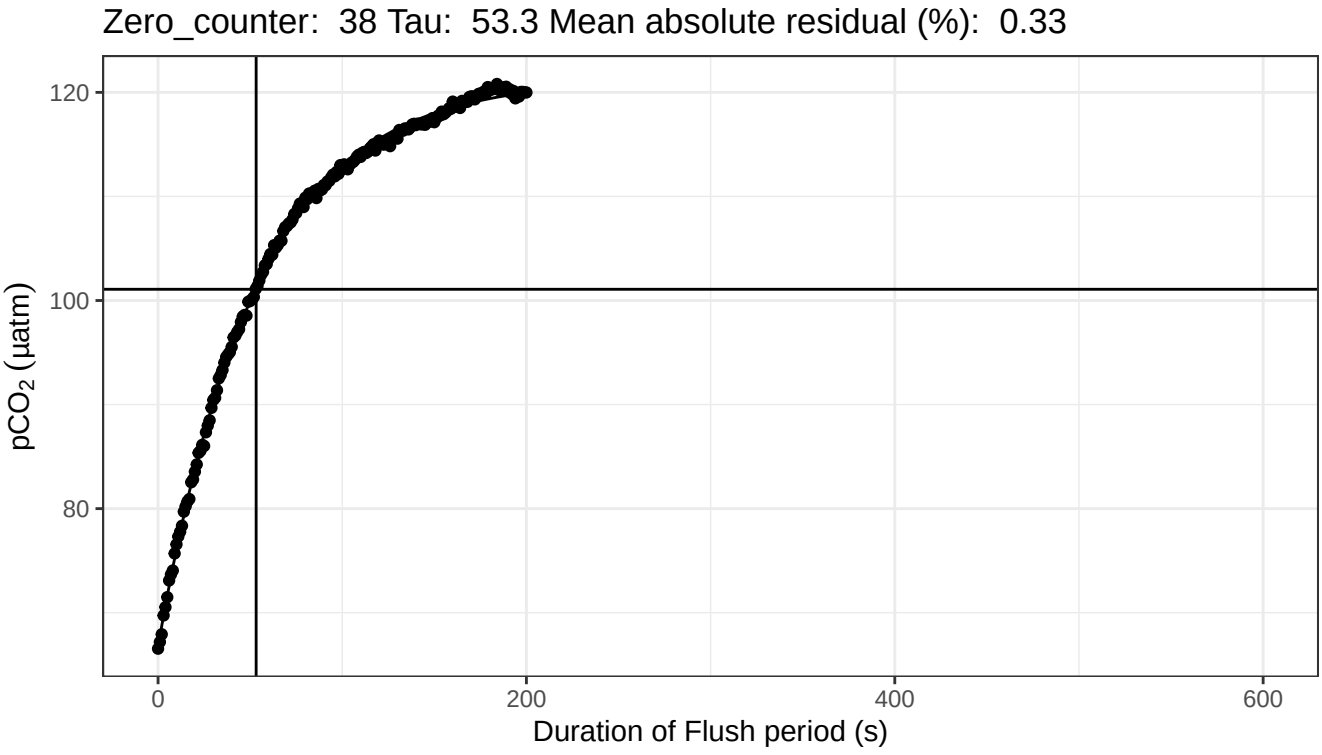


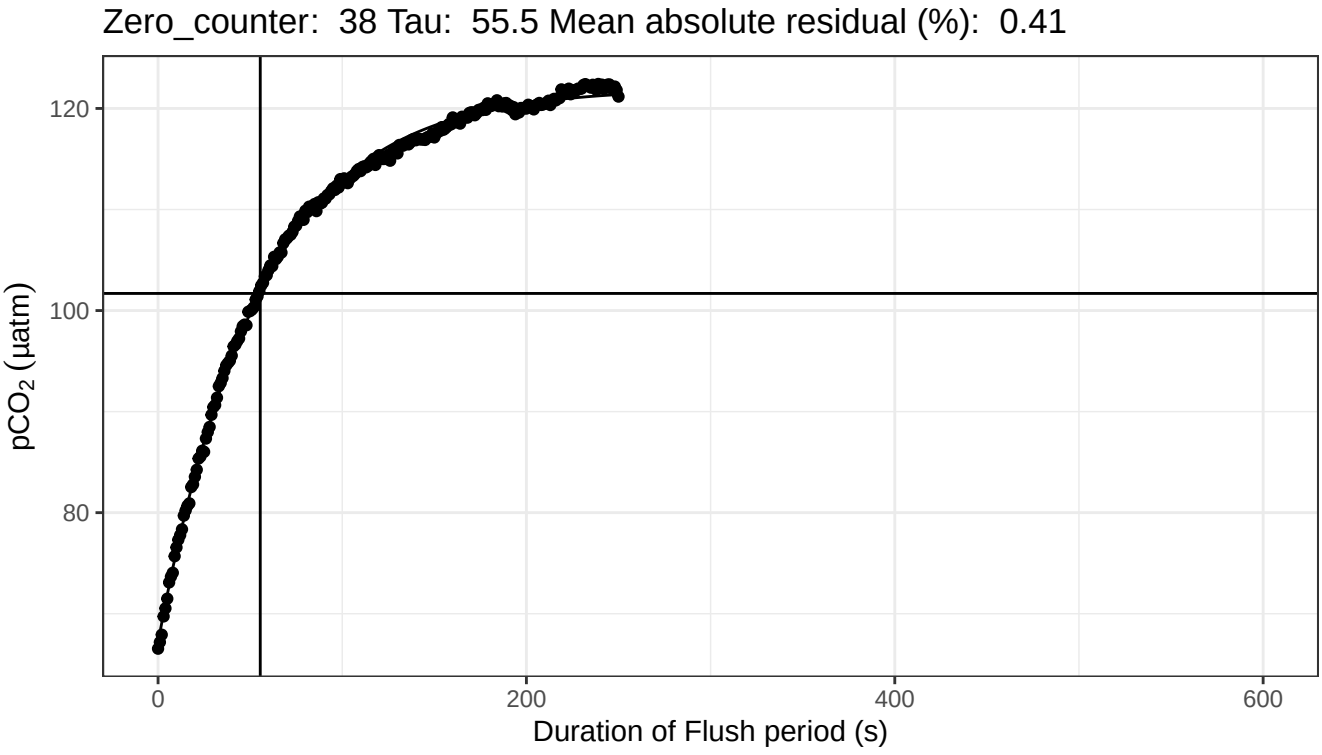
Zero_counter: 37 Tau: 54.4 Mean absolute residual (%): 0.7

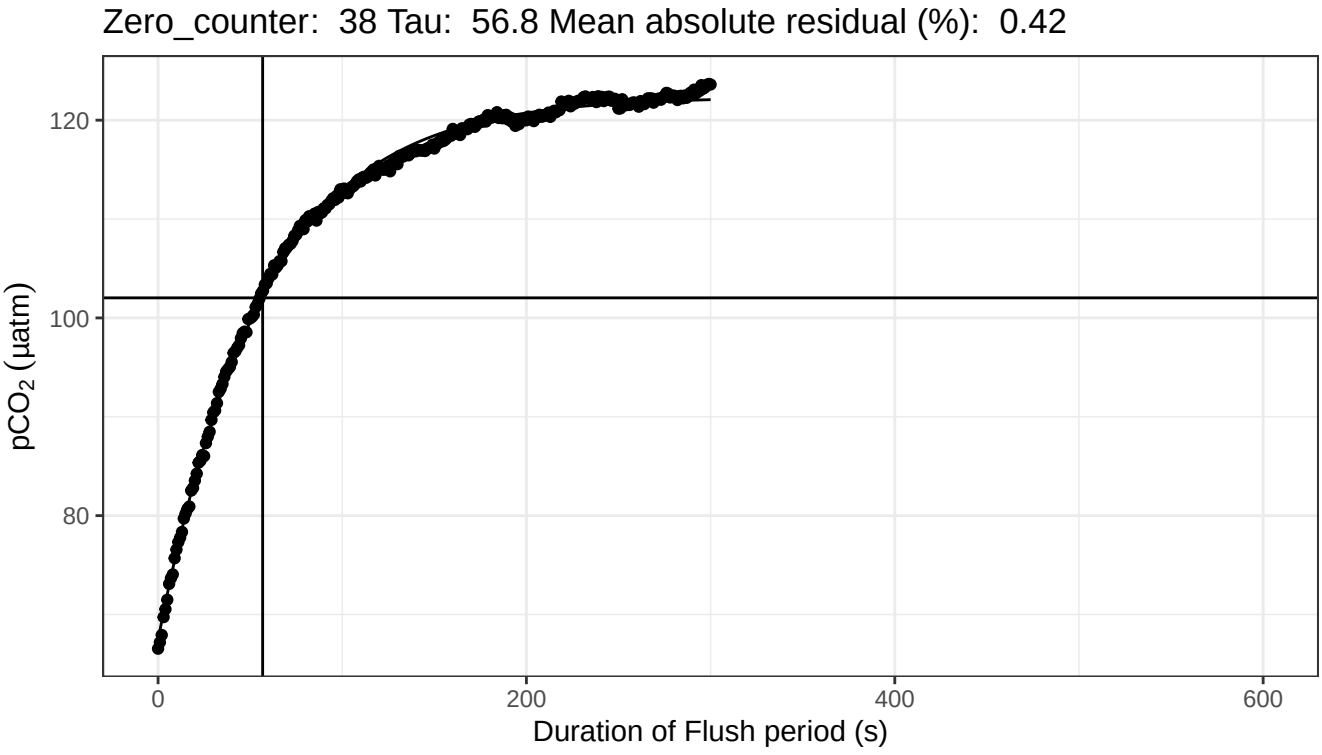


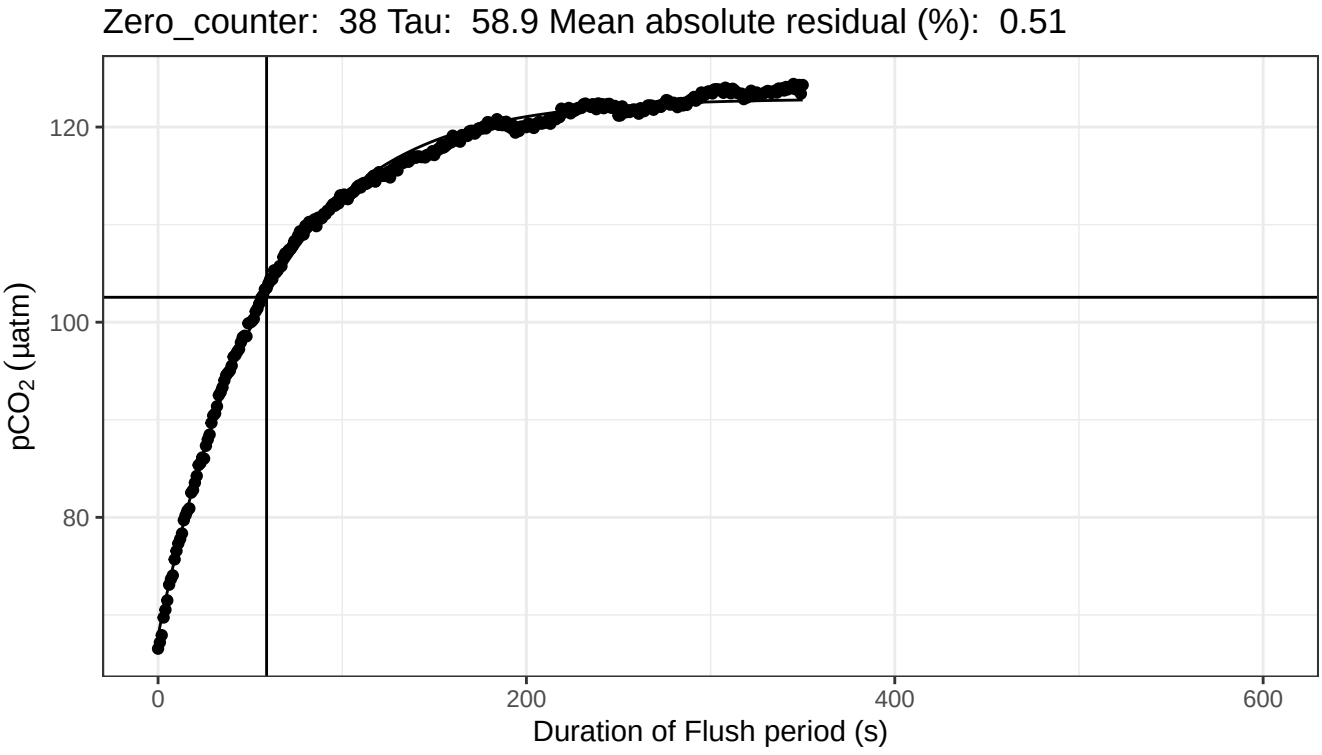

Zero_counter: 37 Tau: 54.6 Mean absolute residual (%): 0.7
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

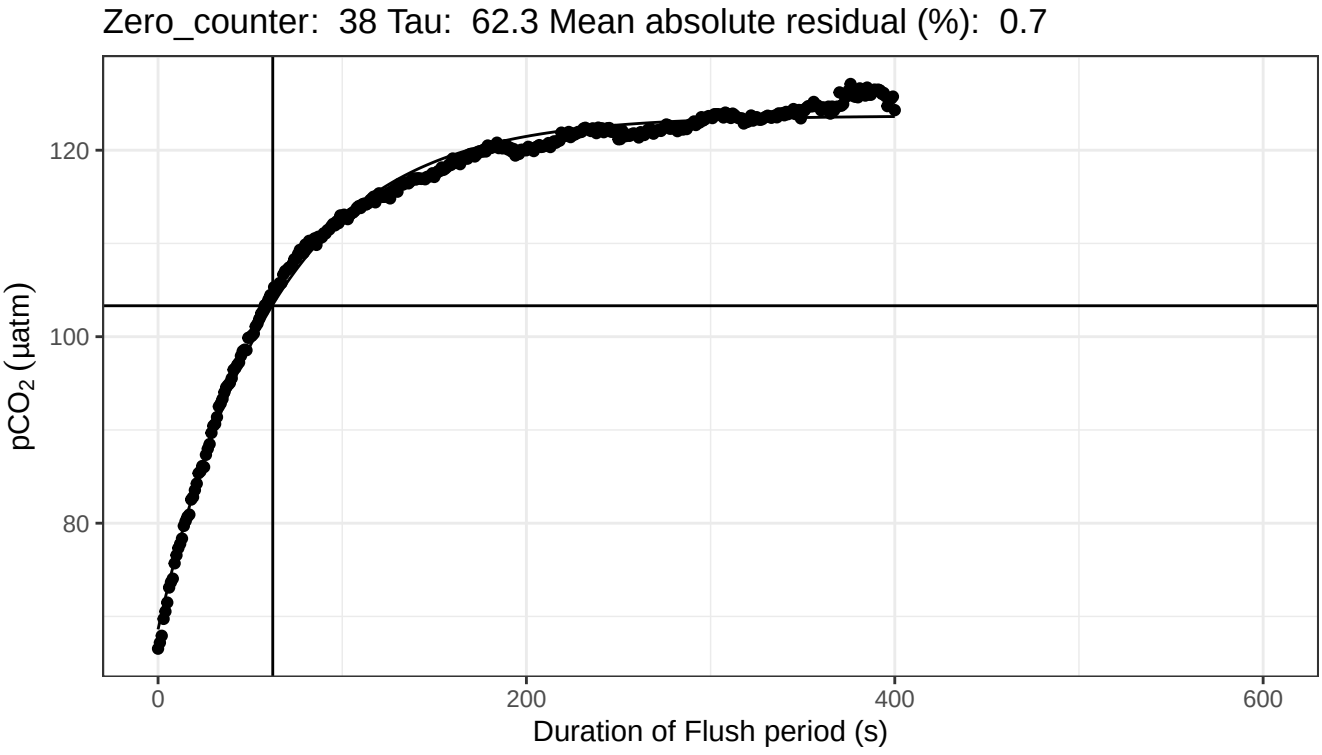

Zero_counter: 38 Tau: 50.5 Mean absolute residual (%): 0.23
120
110
100
90
80
70
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

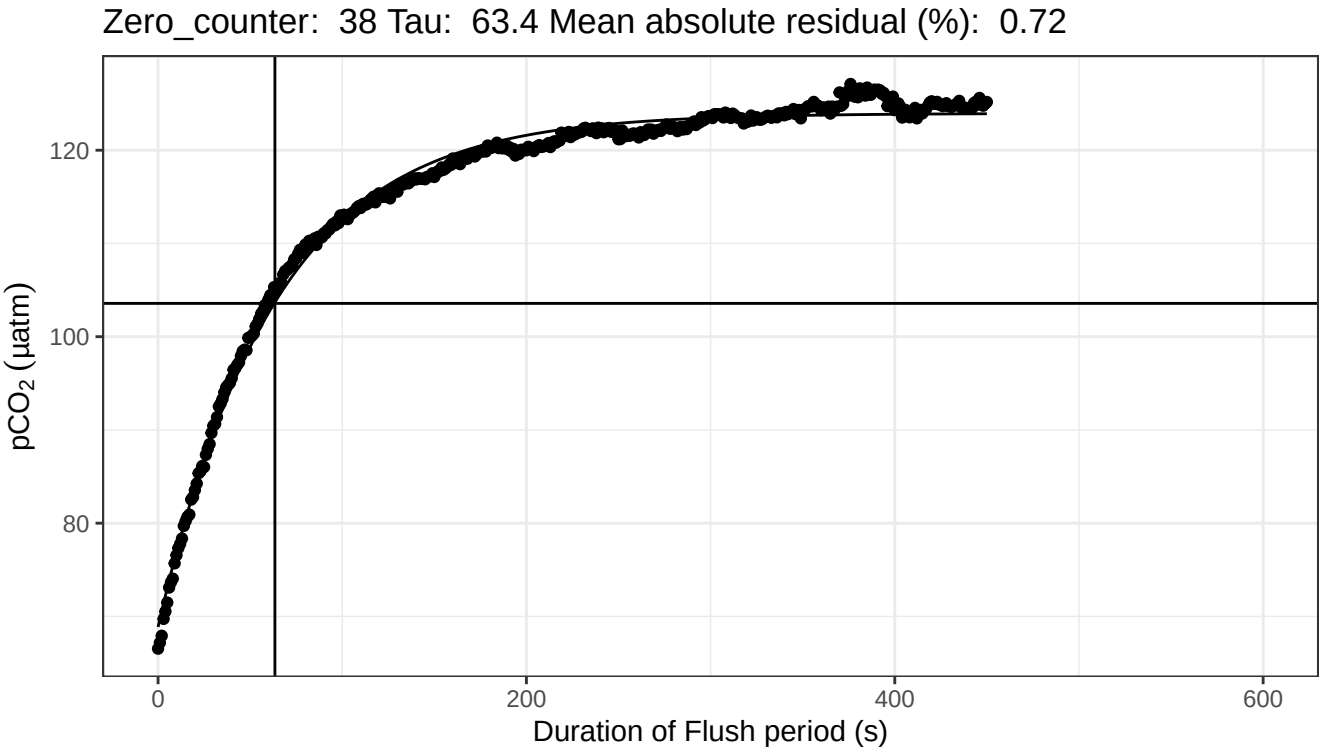

Zero_counter: 38 Tau: 53.3 Mean absolute residual (%): 0.33
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

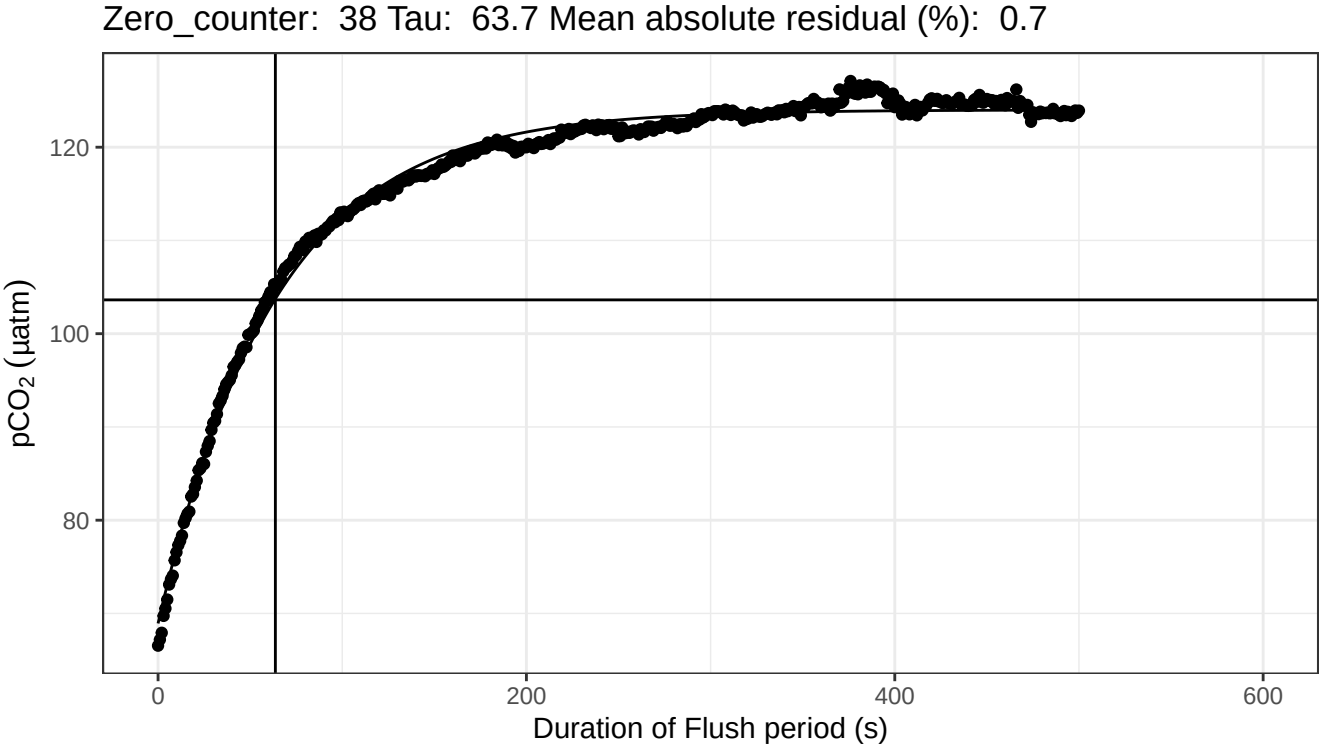

Zero_counter: 38 Tau: 55.5 Mean absolute residual (%): 0.41
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 38 Tau: 56.8 Mean absolute residual (%): 0.42
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

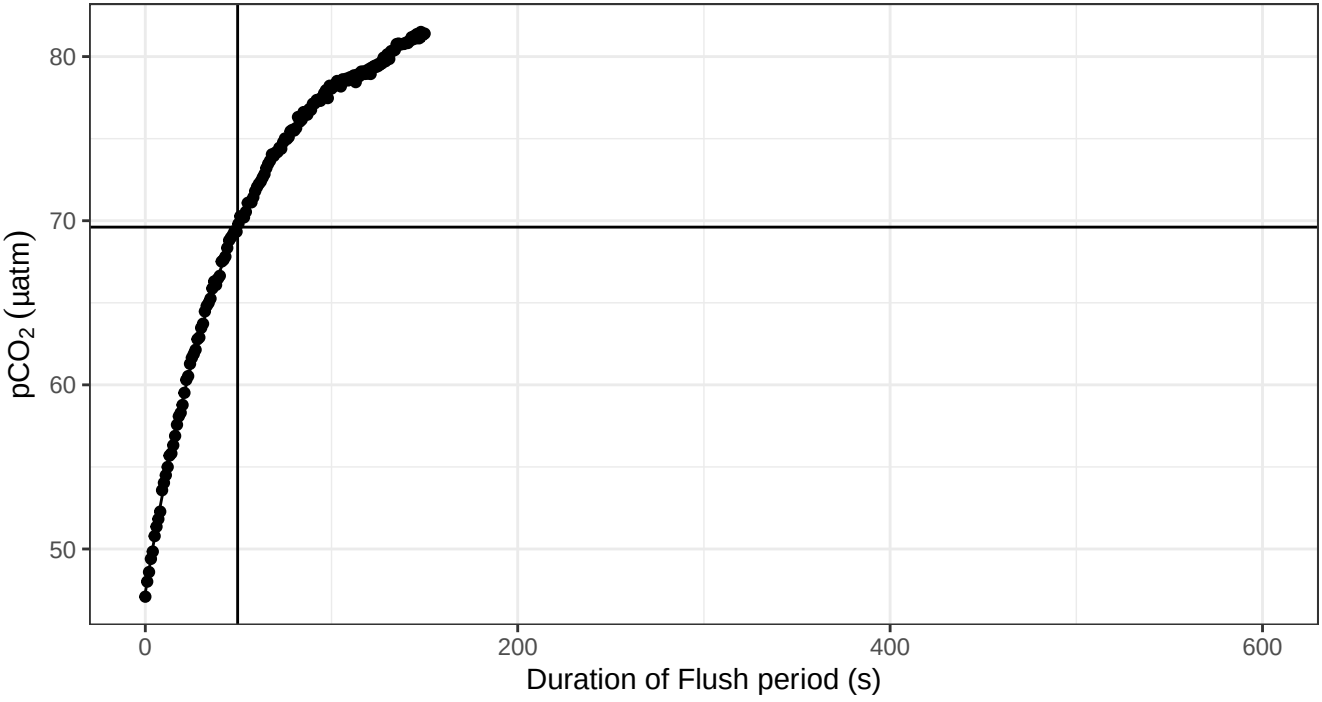

Zero_counter: 38 Tau: 58.9 Mean absolute residual (%): 0.51
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

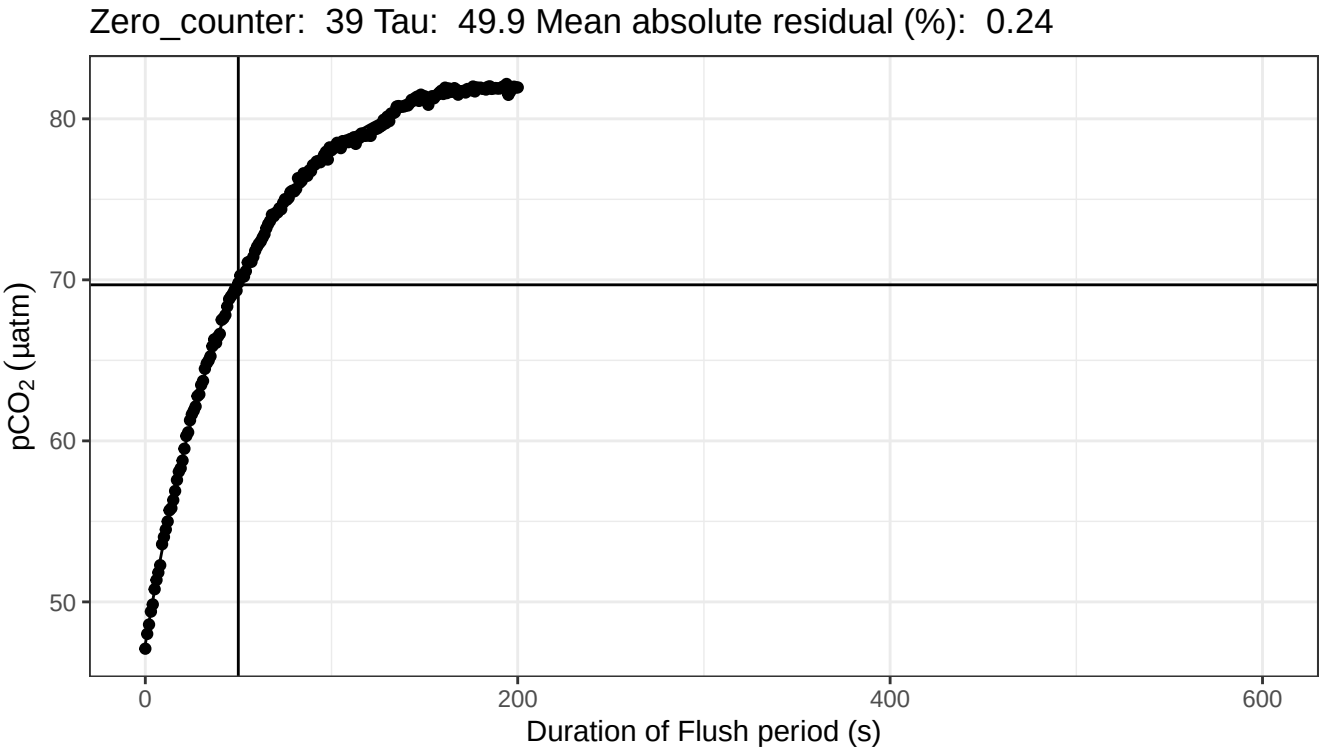

Zero_counter: 38 Tau: 62.3 Mean absolute residual (%): 0.7
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 38 Tau: 63.4 Mean absolute residual (%): 0.72
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

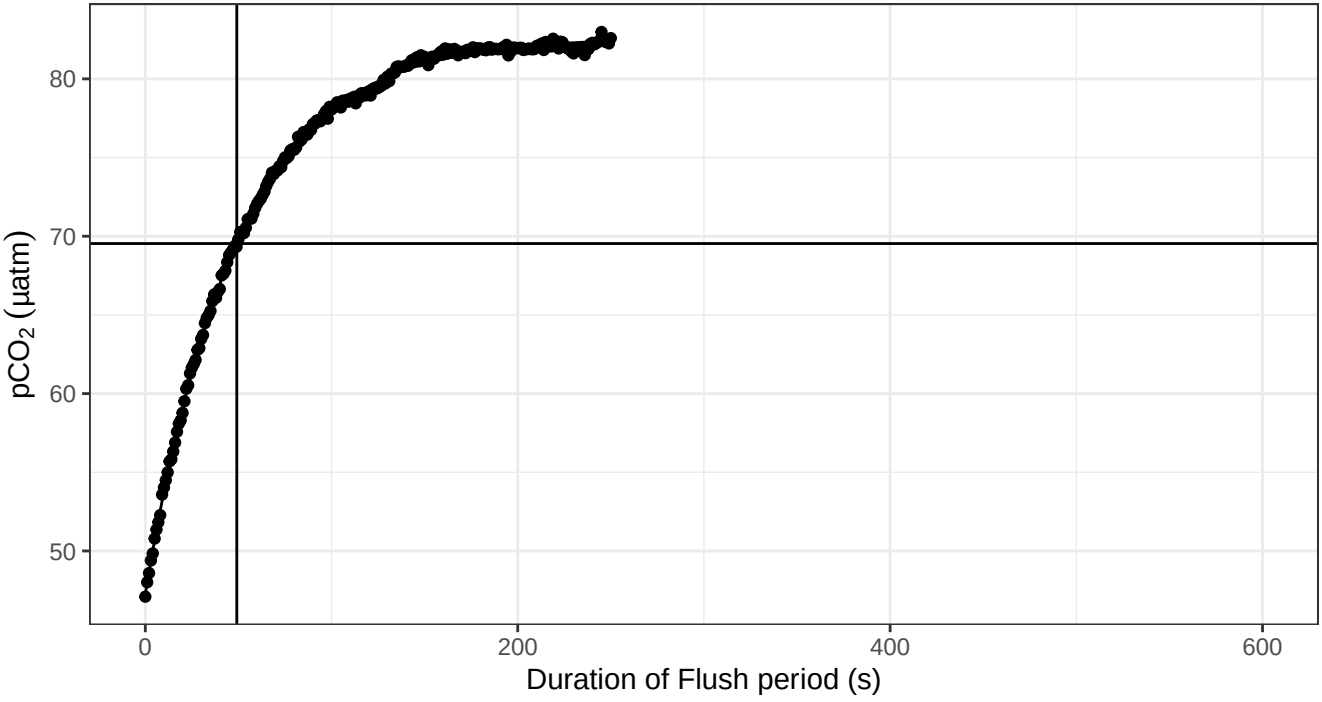

Zero_counter: 38 Tau: 63.7 Mean absolute residual (%): 0.7
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 39 Tau: 49.6 Mean absolute residual (%): 0.25

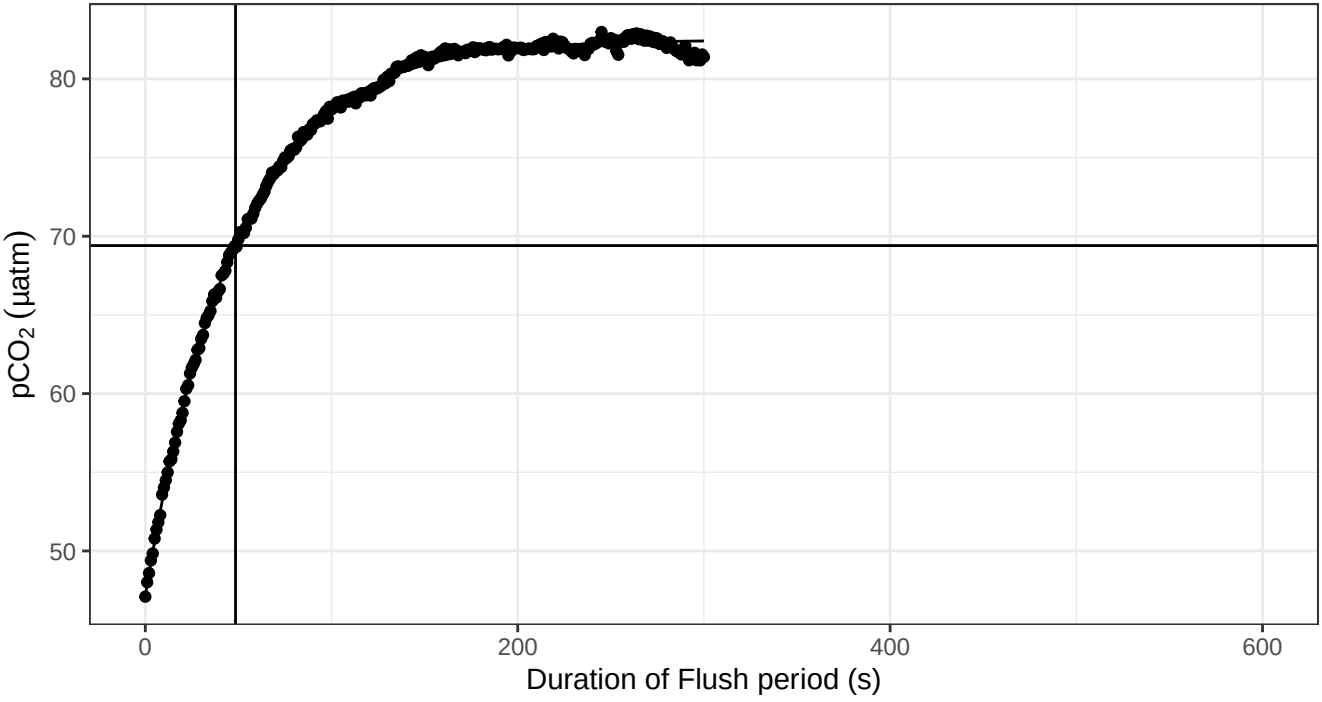



Zero_counter: 39 Tau: 49.9 Mean absolute residual (%): 0.24
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

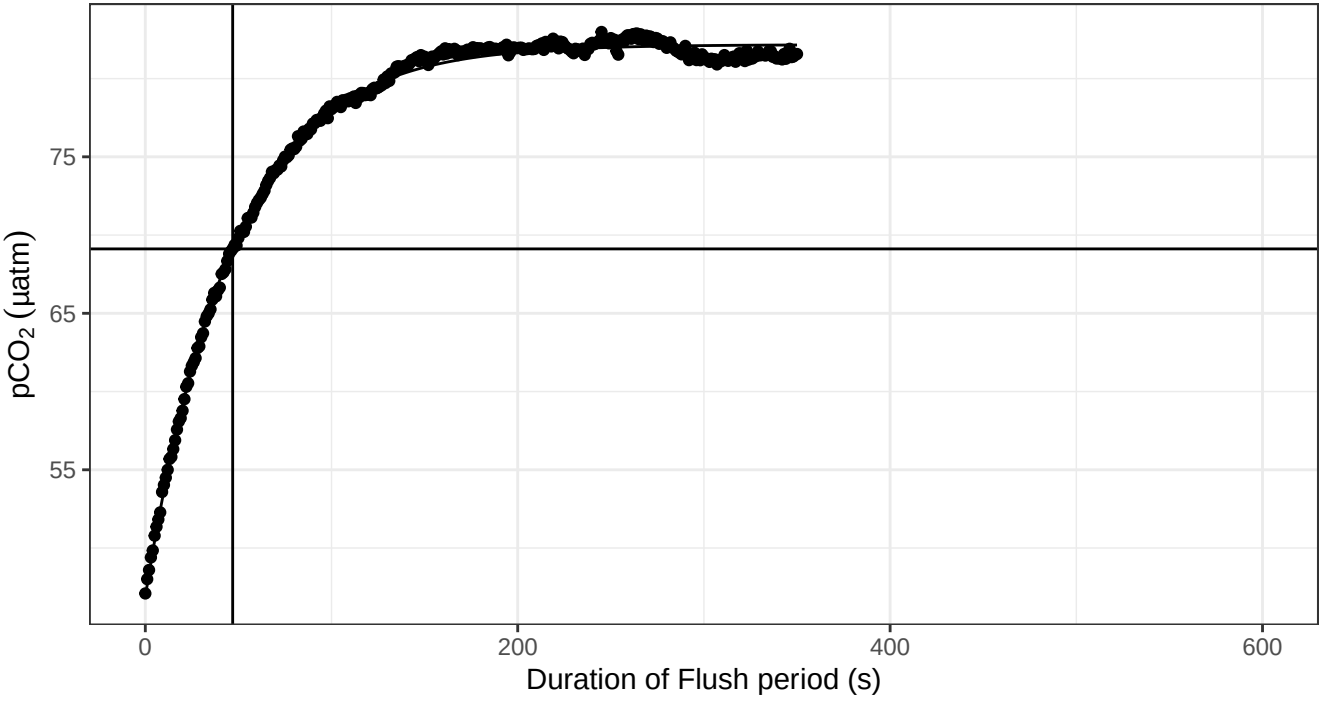
Zero_counter: 39 Tau: 49.1 Mean absolute residual (%): 0.26

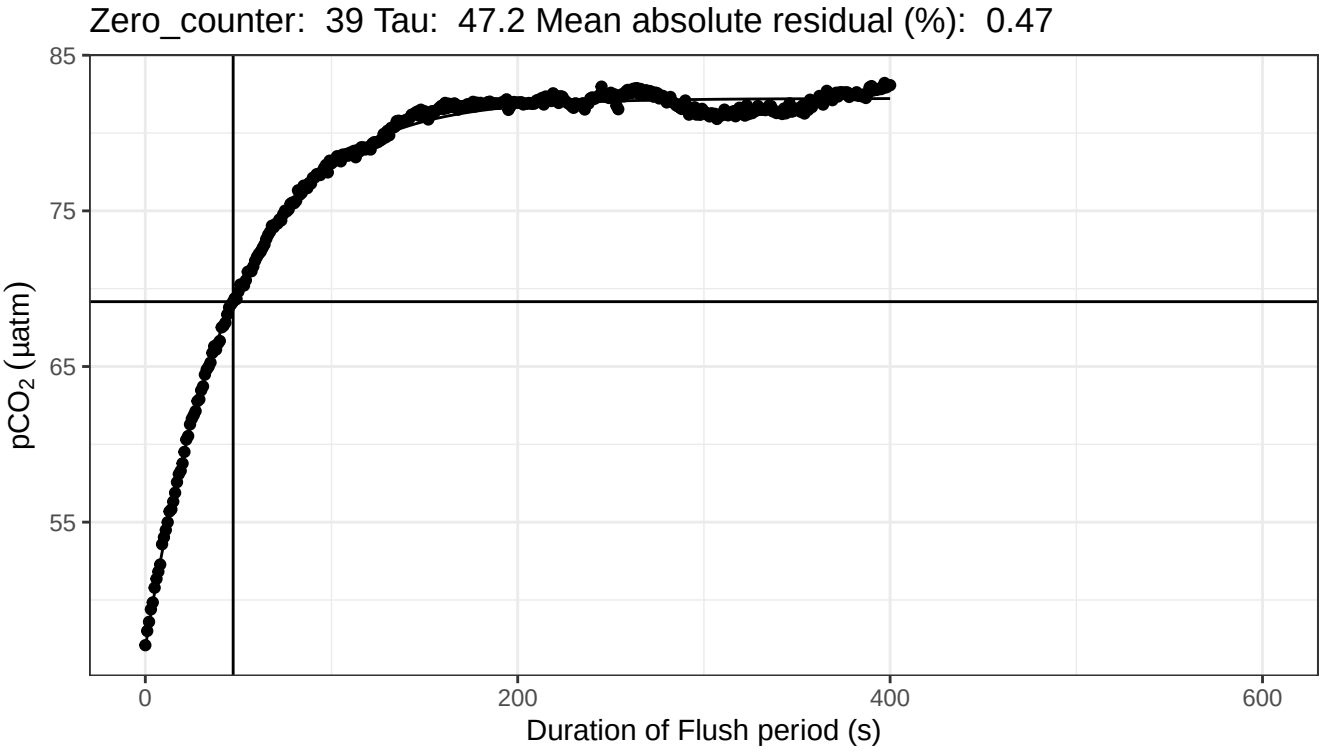


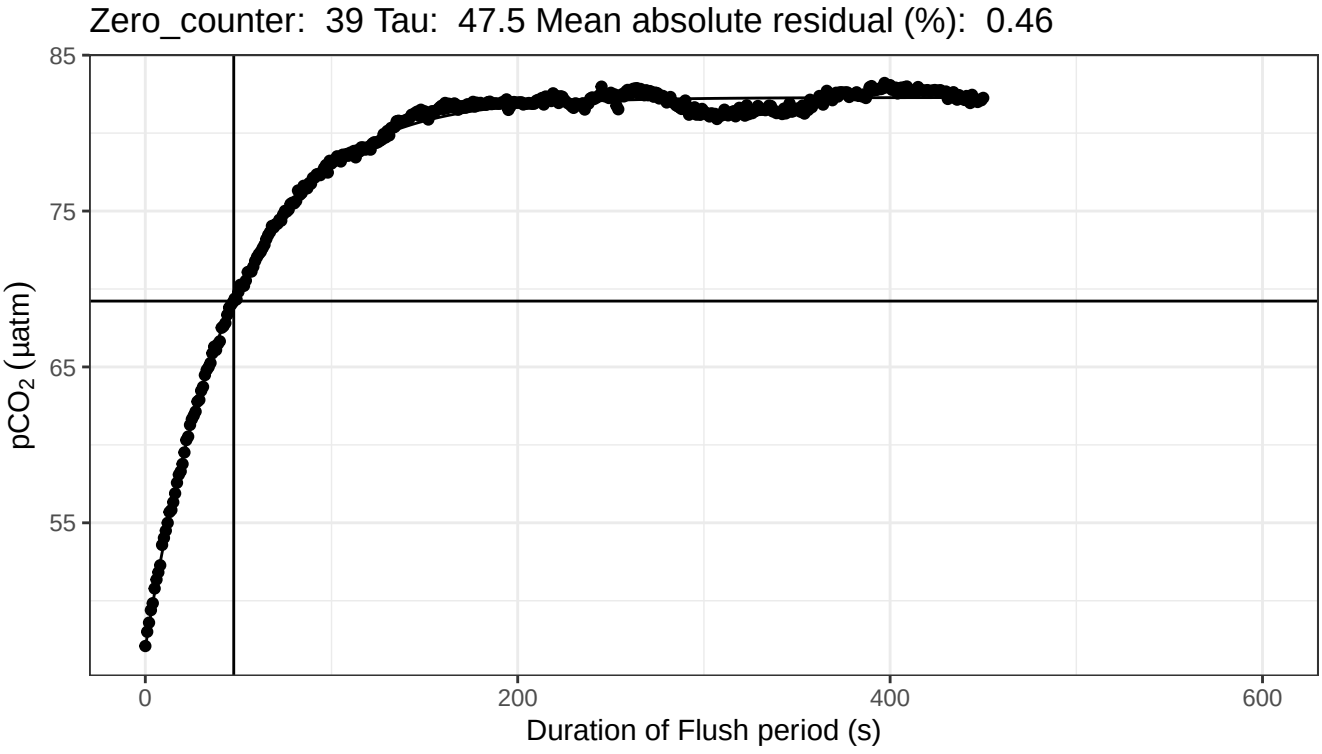
Zero_counter: 39 Tau: 48.4 Mean absolute residual (%): 0.32

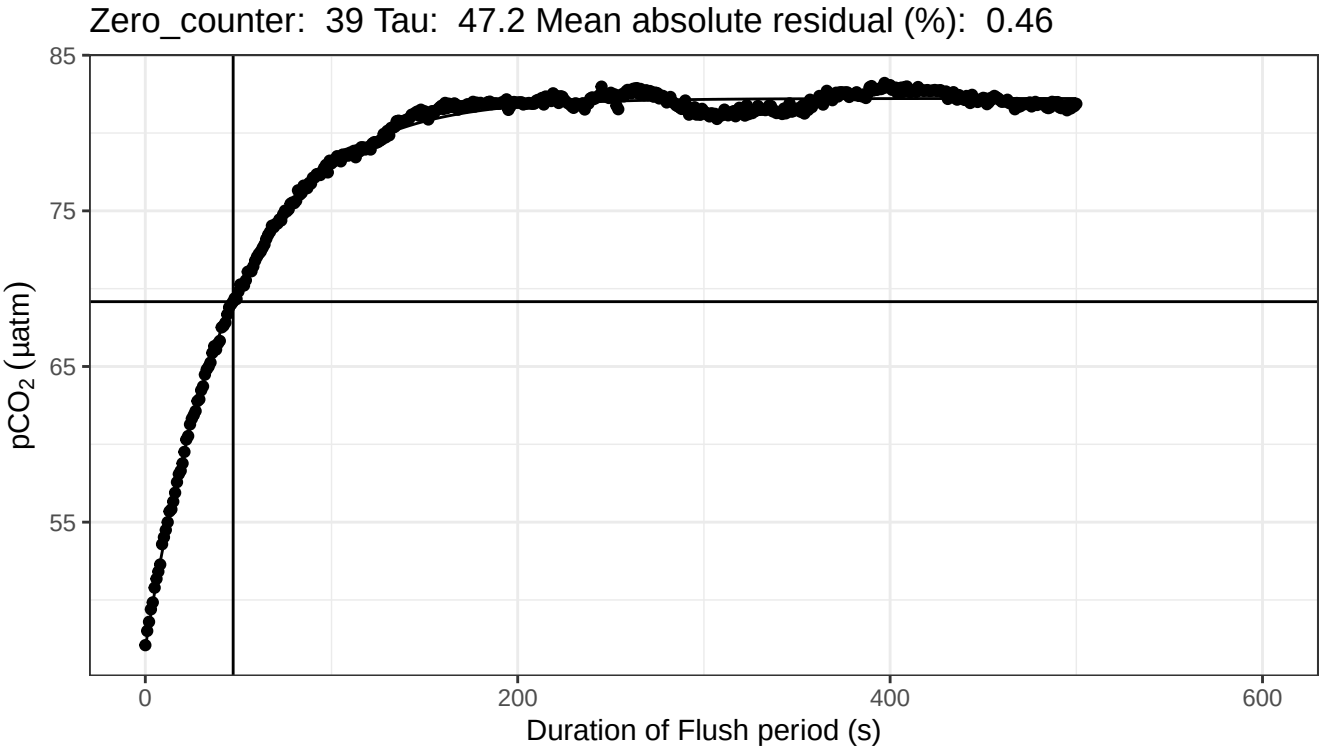


Zero_counter: 39 Tau: 46.9 Mean absolute residual (%): 0.47

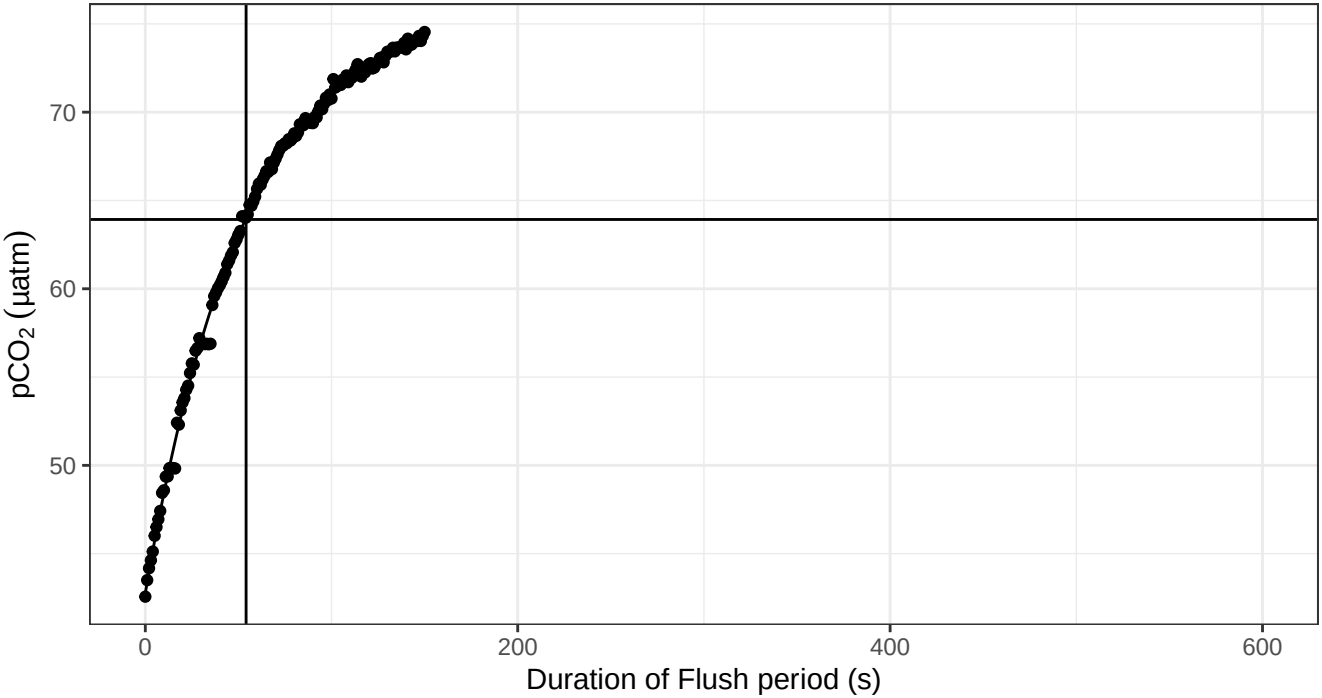


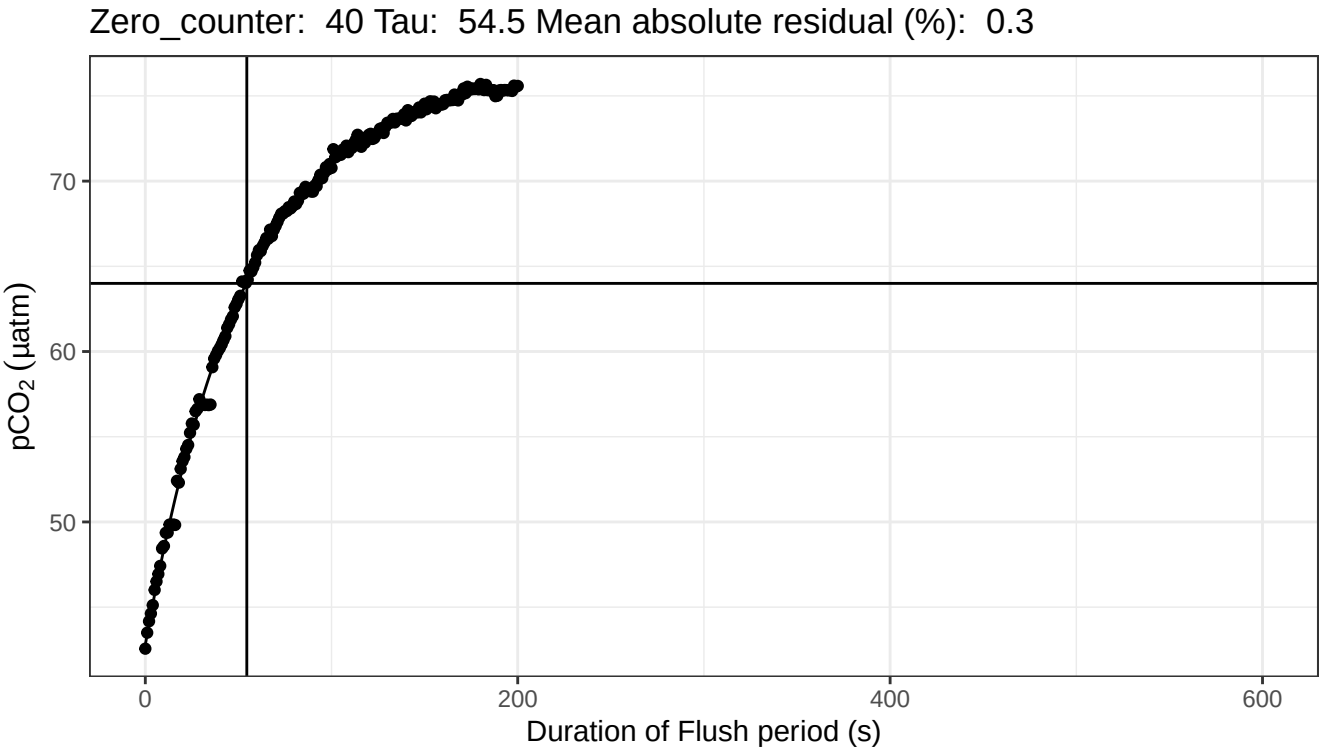

Zero_counter: 39 Tau: 47.2 Mean absolute residual (%): 0.47
85
75
65
55
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

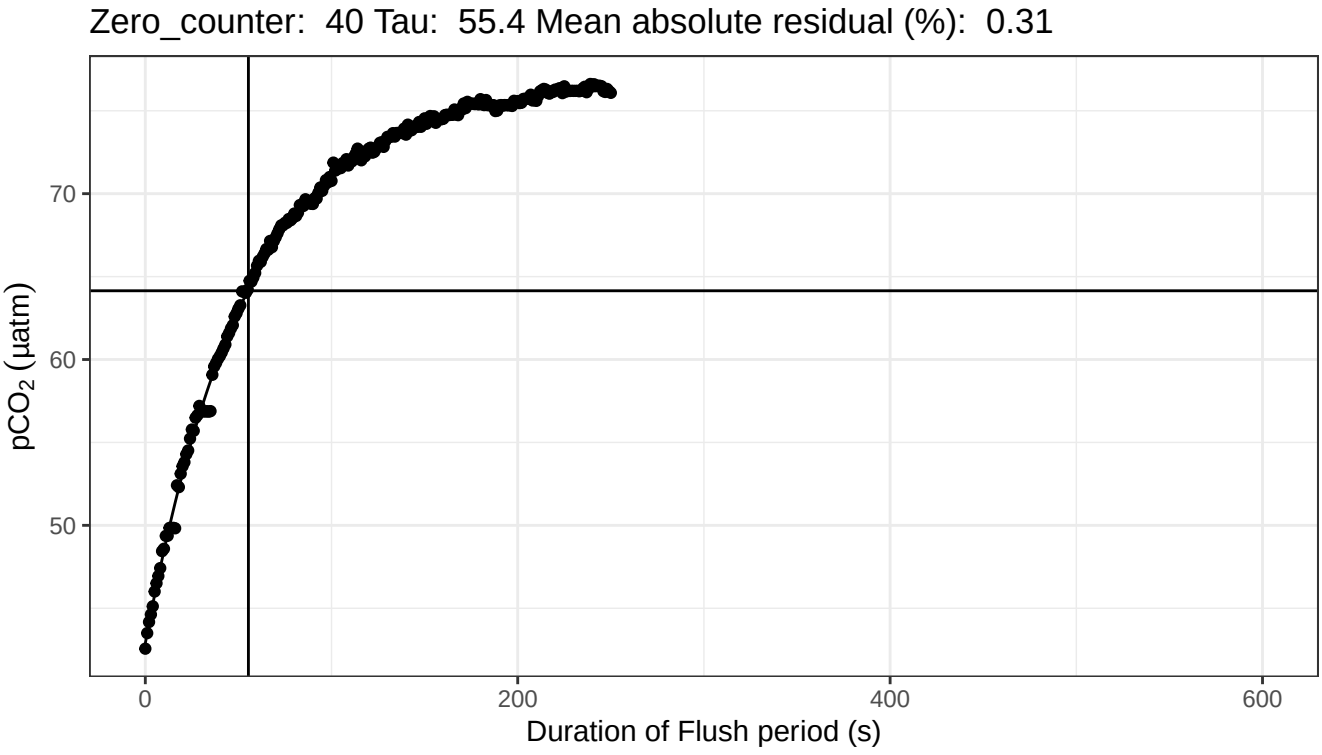

Zero_counter: 39 Tau: 47.5 Mean absolute residual (%): 0.46
85
75
65
55
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

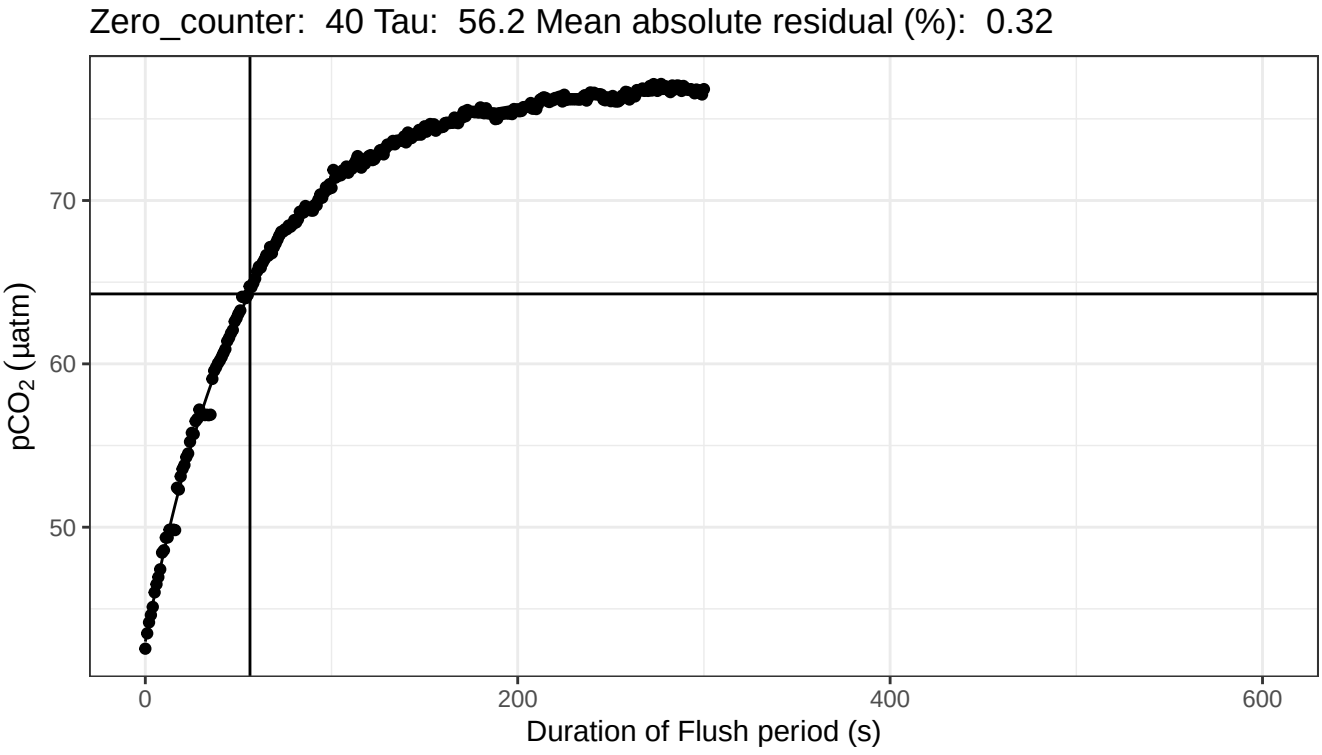

Zero_counter: 39 Tau: 47.2 Mean absolute residual (%): 0.46
85
75
65
55
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

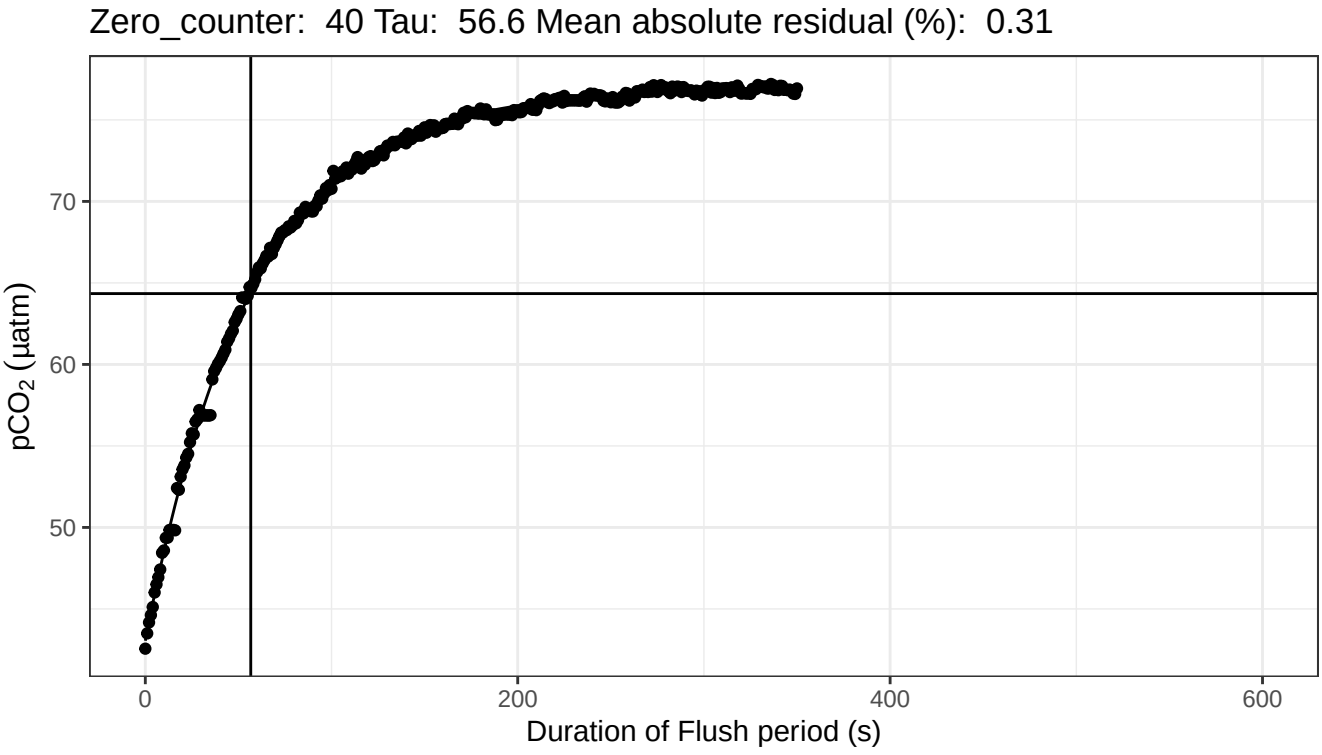
Zero_counter: 40 Tau: 54.1 Mean absolute residual (%): 0.33

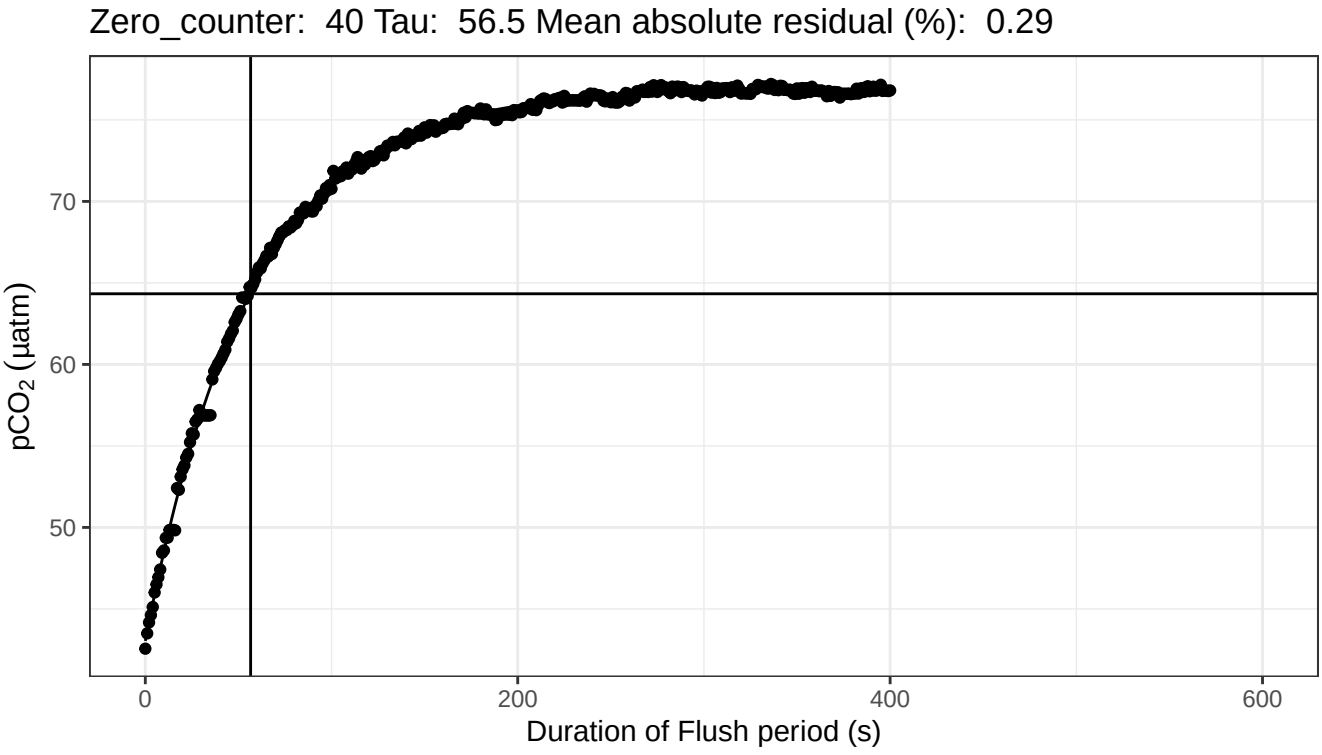


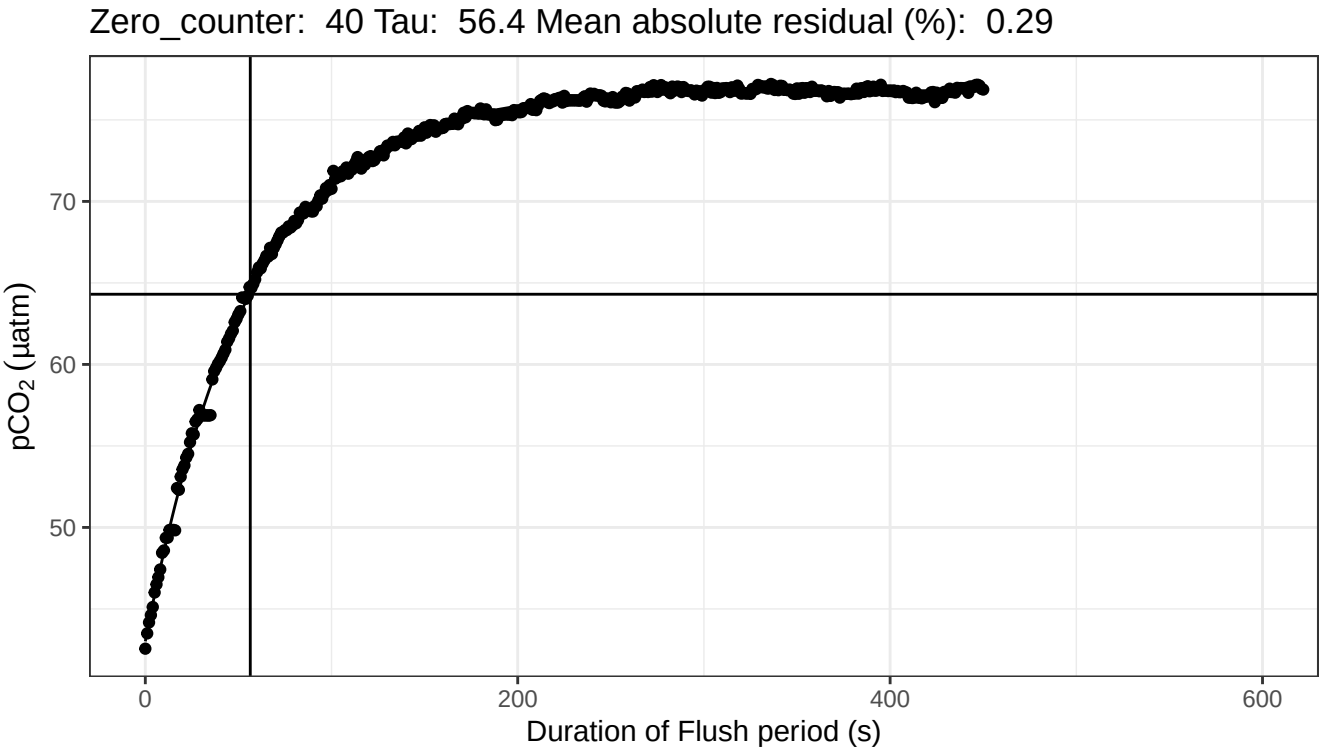

Zero_counter: 40 Tau: 54.5 Mean absolute residual (%): 0.3
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

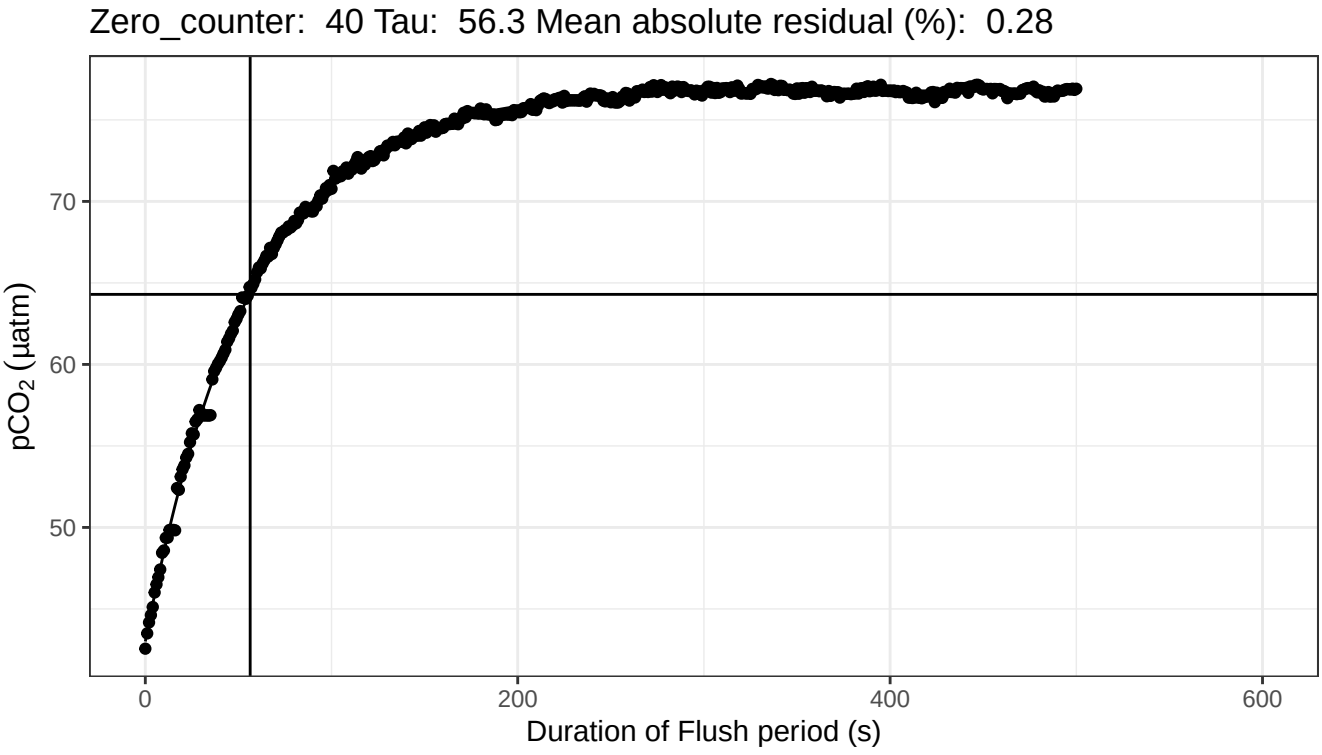

Zero_counter: 40 Tau: 55.4 Mean absolute residual (%): 0.31
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

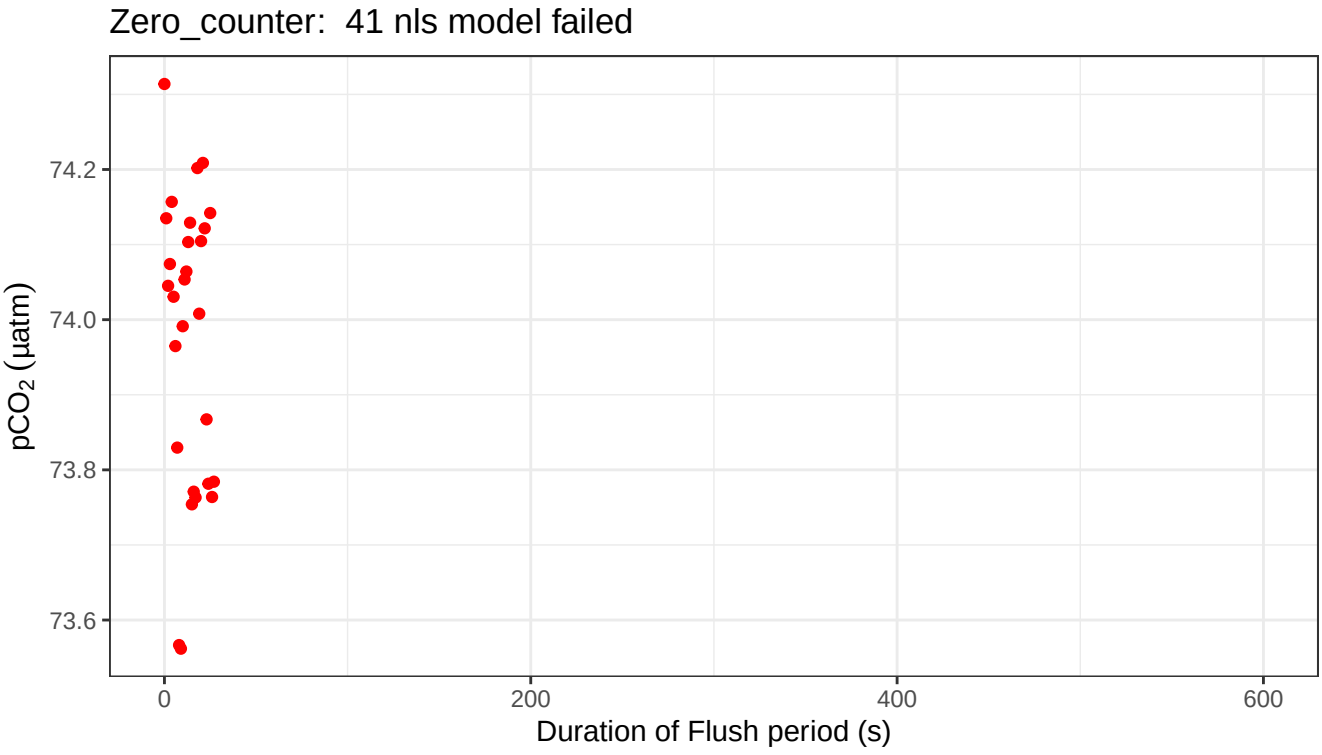

Zero_counter: 40 Tau: 56.2 Mean absolute residual (%): 0.32
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

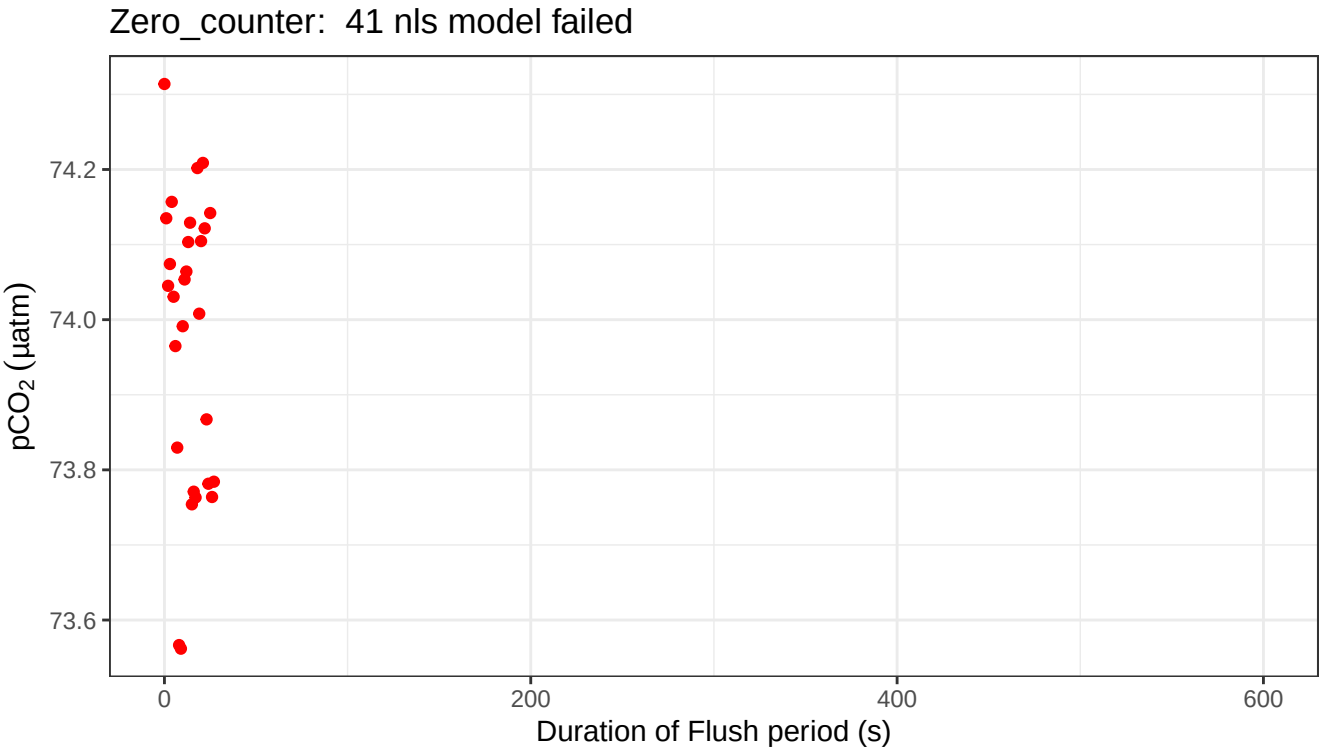

Zero_counter: 40 Tau: 56.6 Mean absolute residual (%): 0.31
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

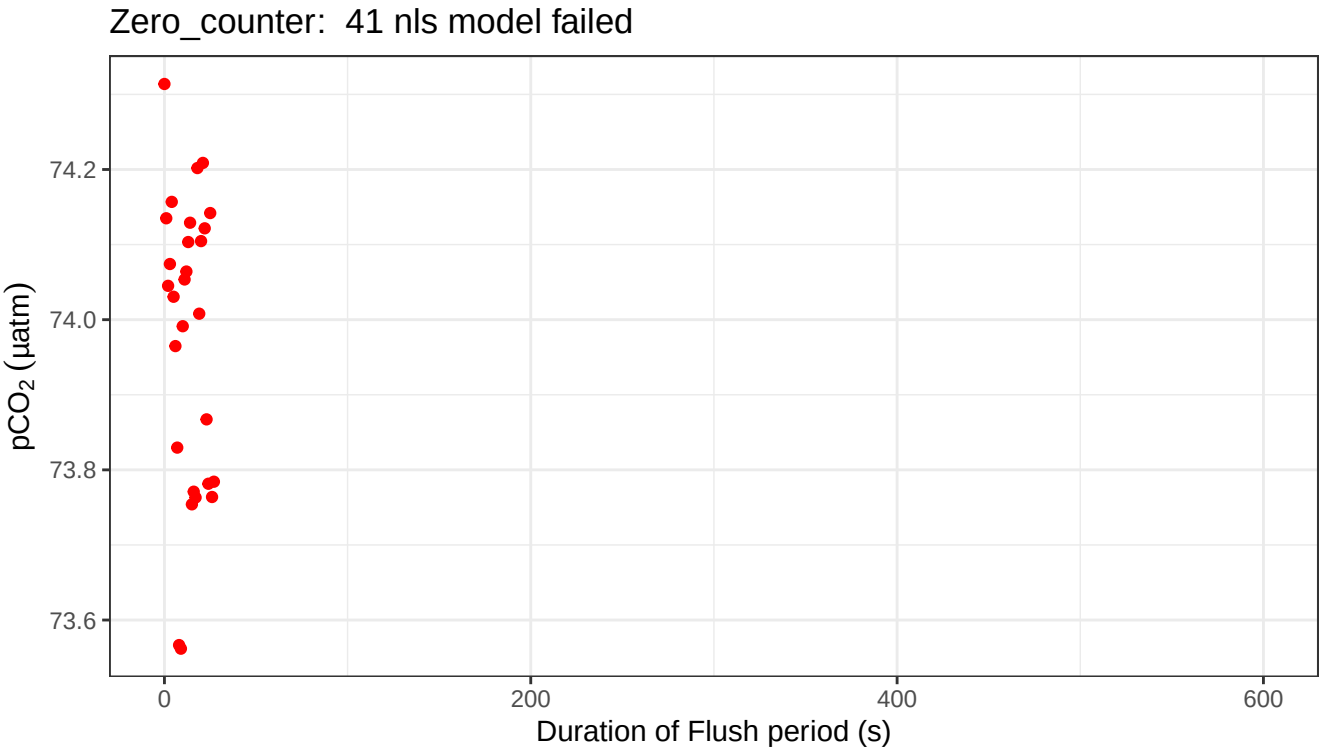

Zero_counter: 40 Tau: 56.5 Mean absolute residual (%): 0.29
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

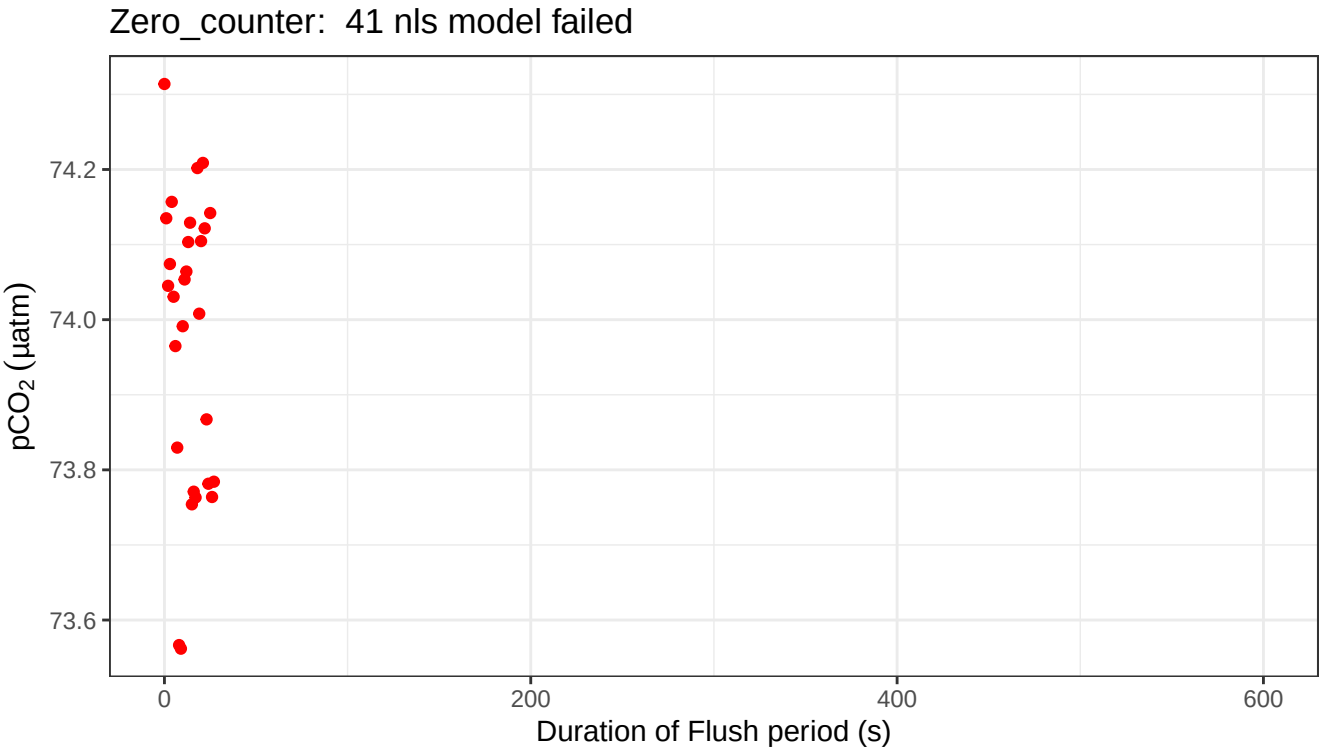

Zero_counter: 40 Tau: 56.4 Mean absolute residual (%): 0.29
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

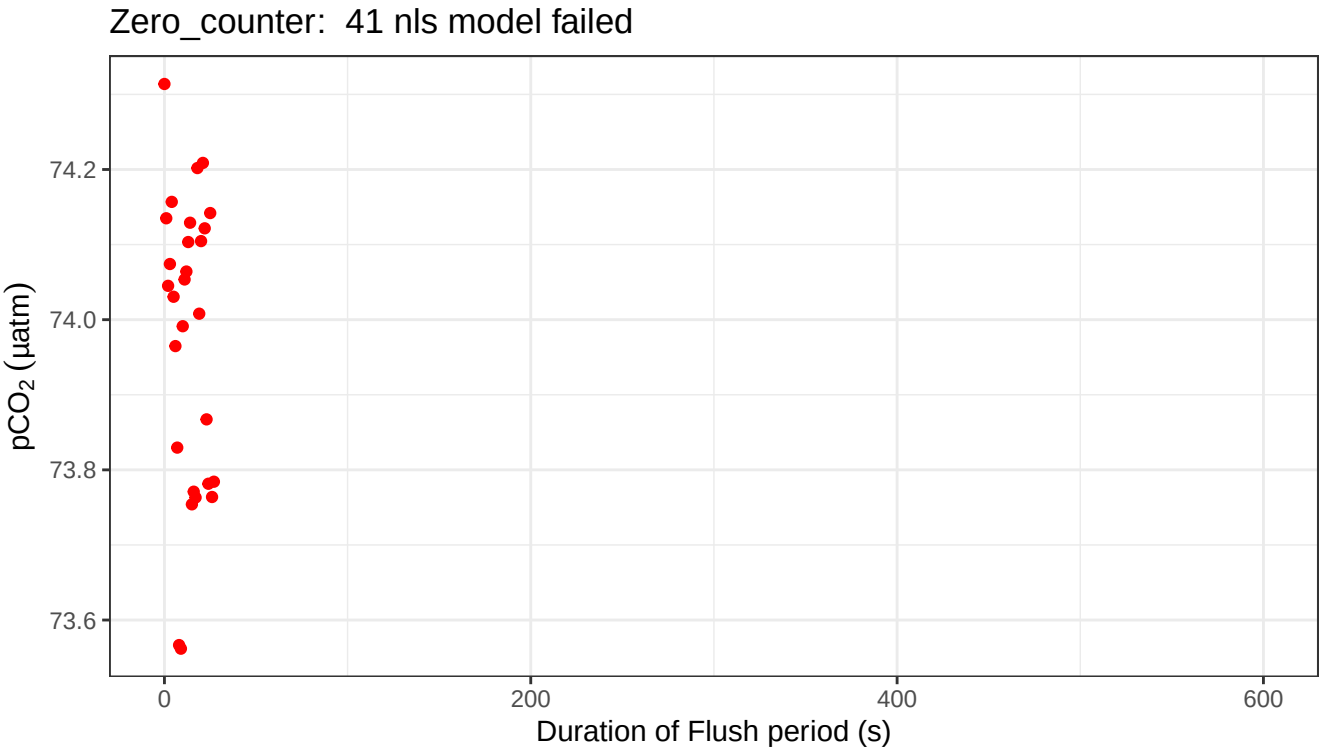

Zero_counter: 40 Tau: 56.3 Mean absolute residual (%): 0.28
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

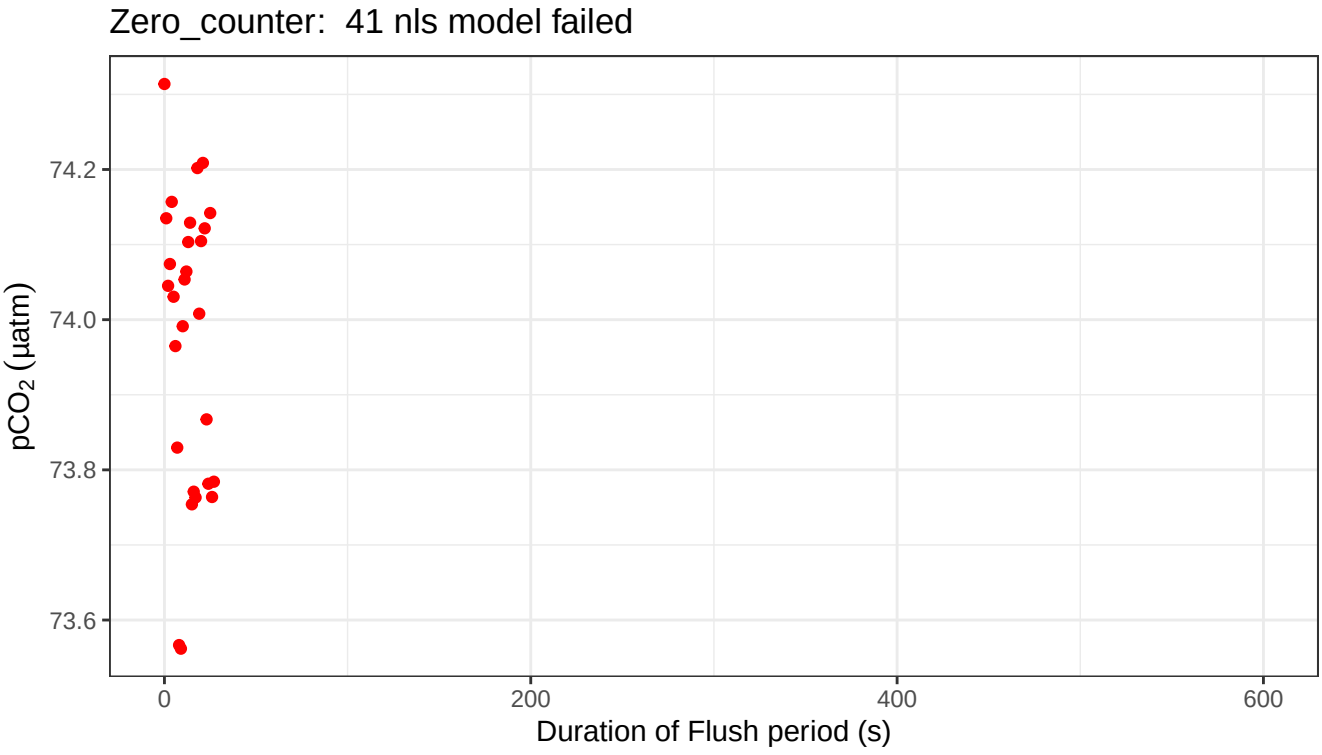

Zero_counter: 41 nls model failed
74.2
74.0
73.8
73.6
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

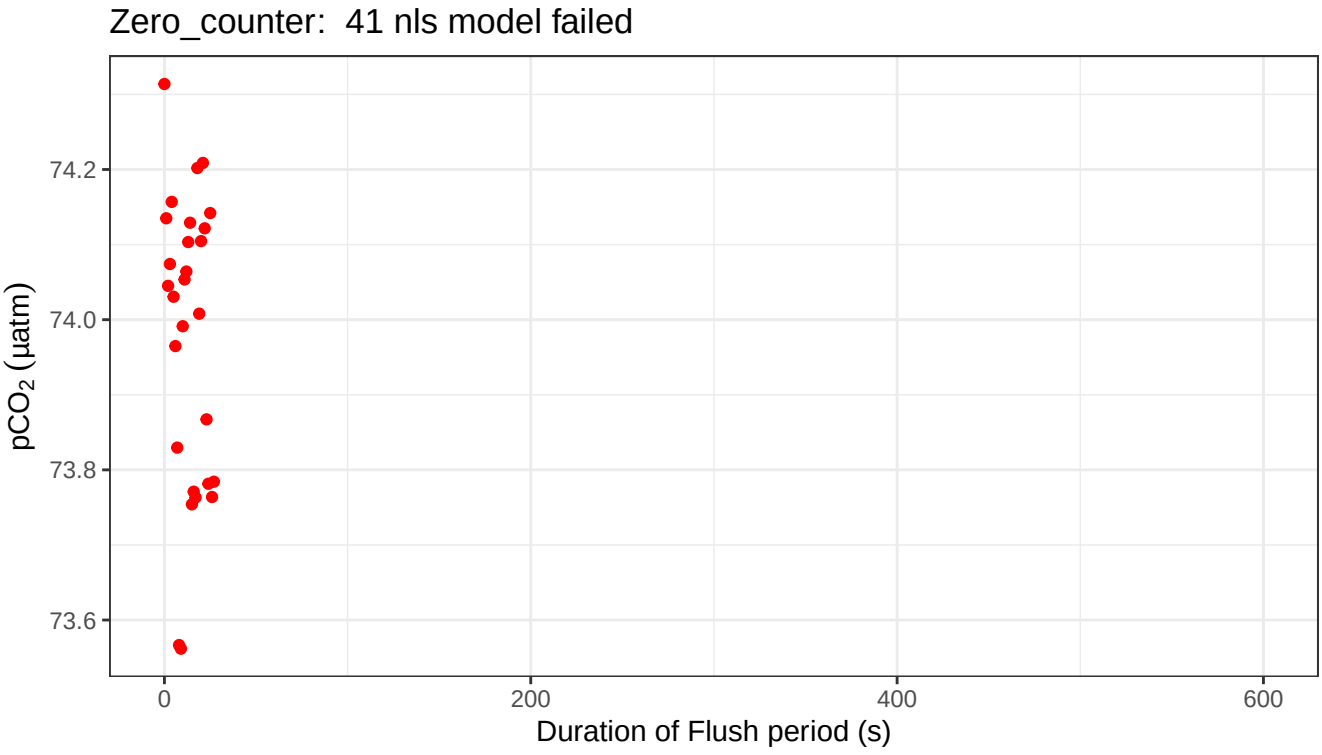

Zero_counter: 41 nls model failed
74.2
74.0
73.8
73.6
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

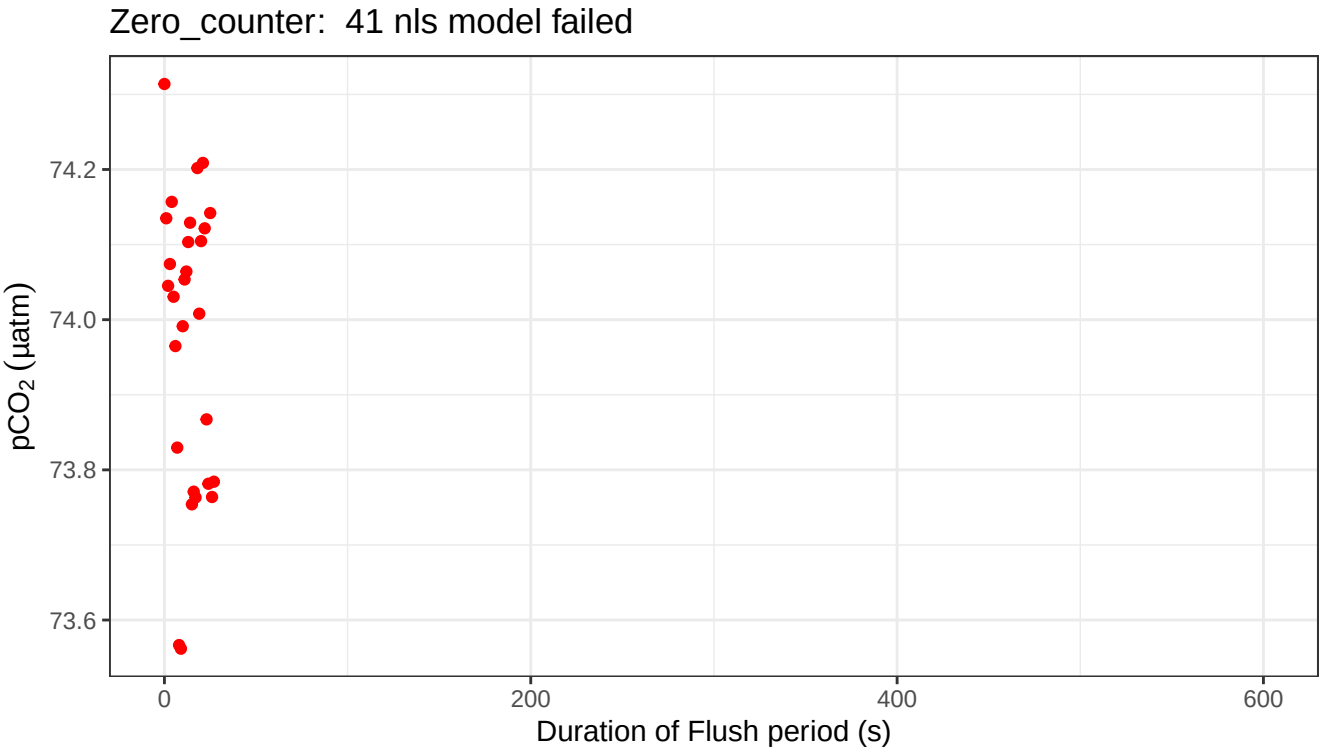

Zero_counter: 41 nls model failed
74.2
74.0
73.8
73.6
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

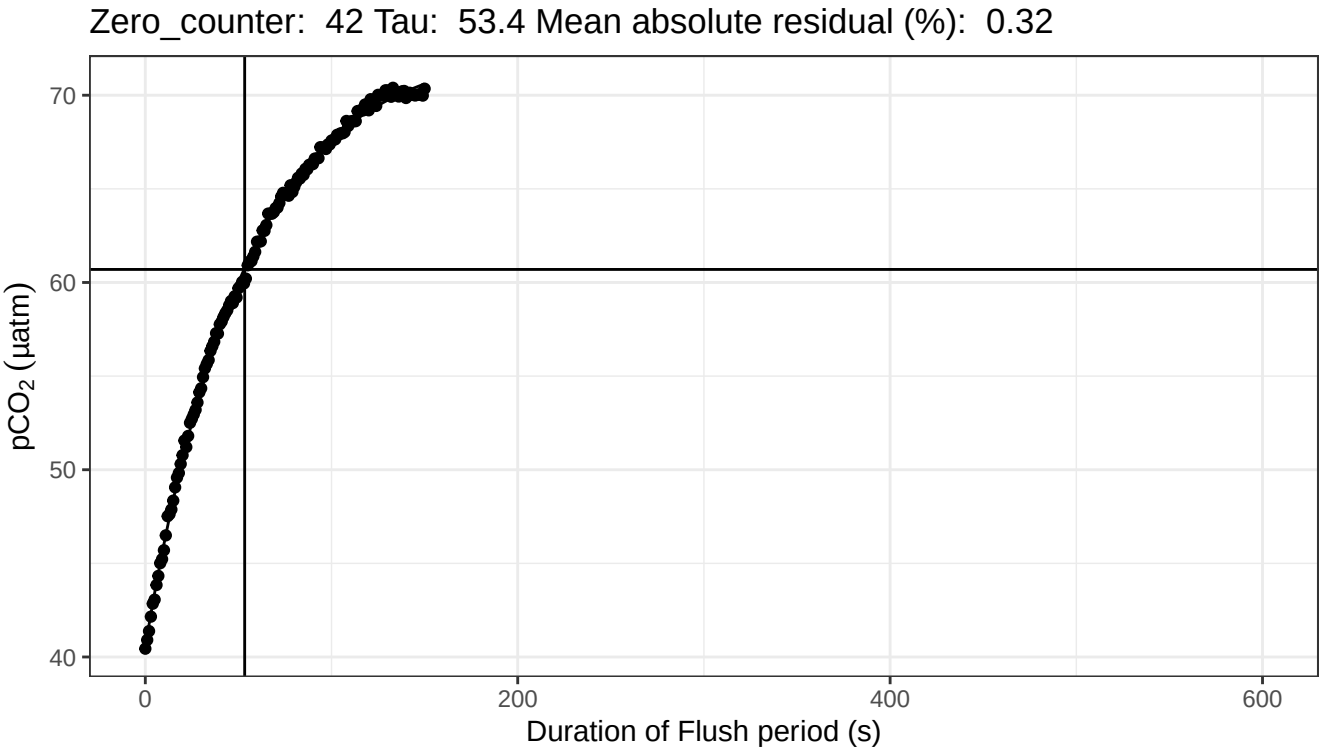

Zero_counter: 41 nls model failed
74.2
74.0
73.8
73.6
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 41 nls model failed
74.2
74.0
73.8
73.6
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

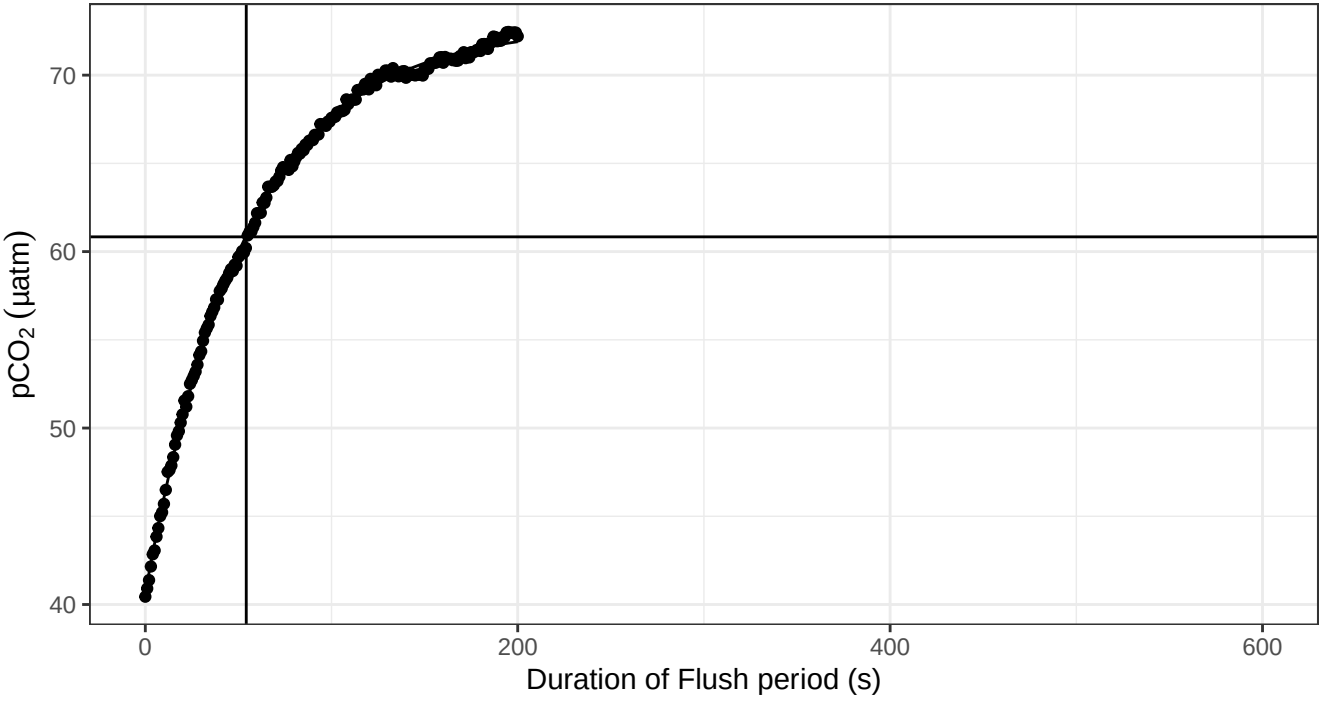

Zero_counter: 41 nls model failed
74.2
74.0
73.8
73.6
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

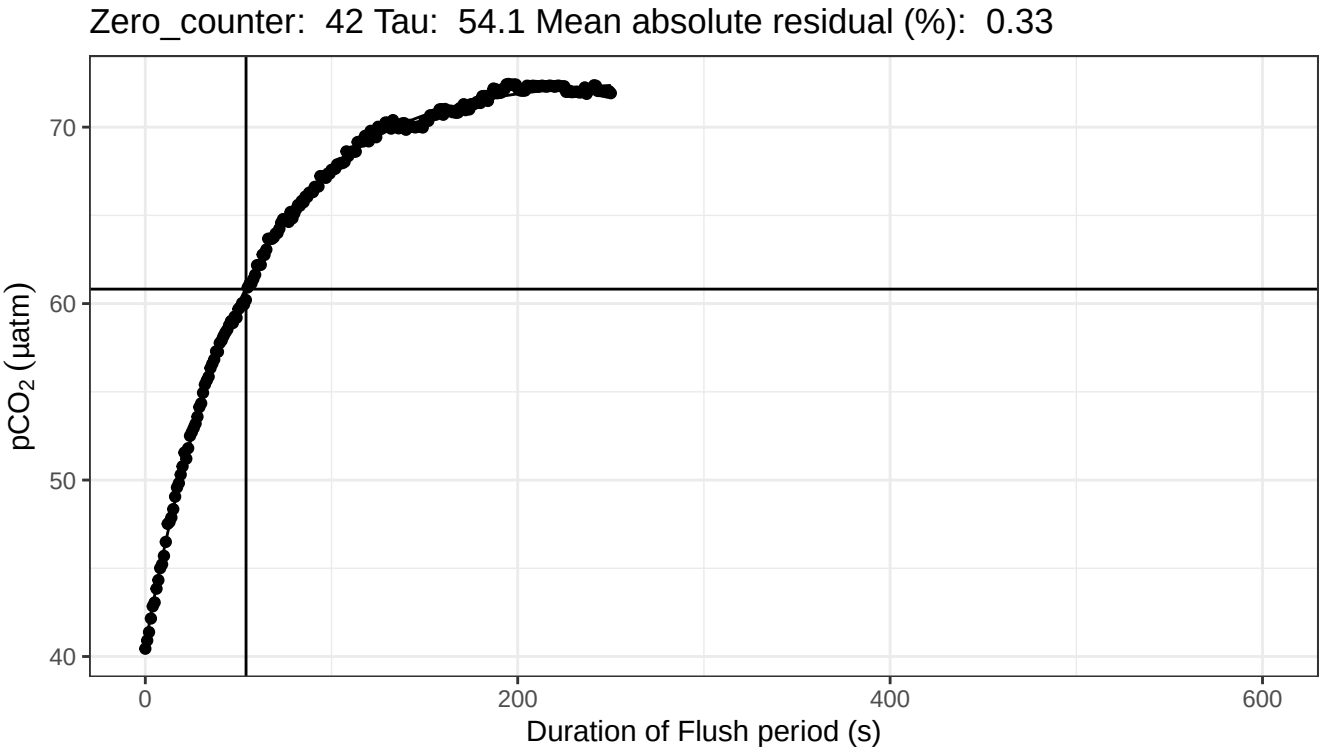

Zero_counter: 41 nls model failed
74.2
74.0
73.8
73.6
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

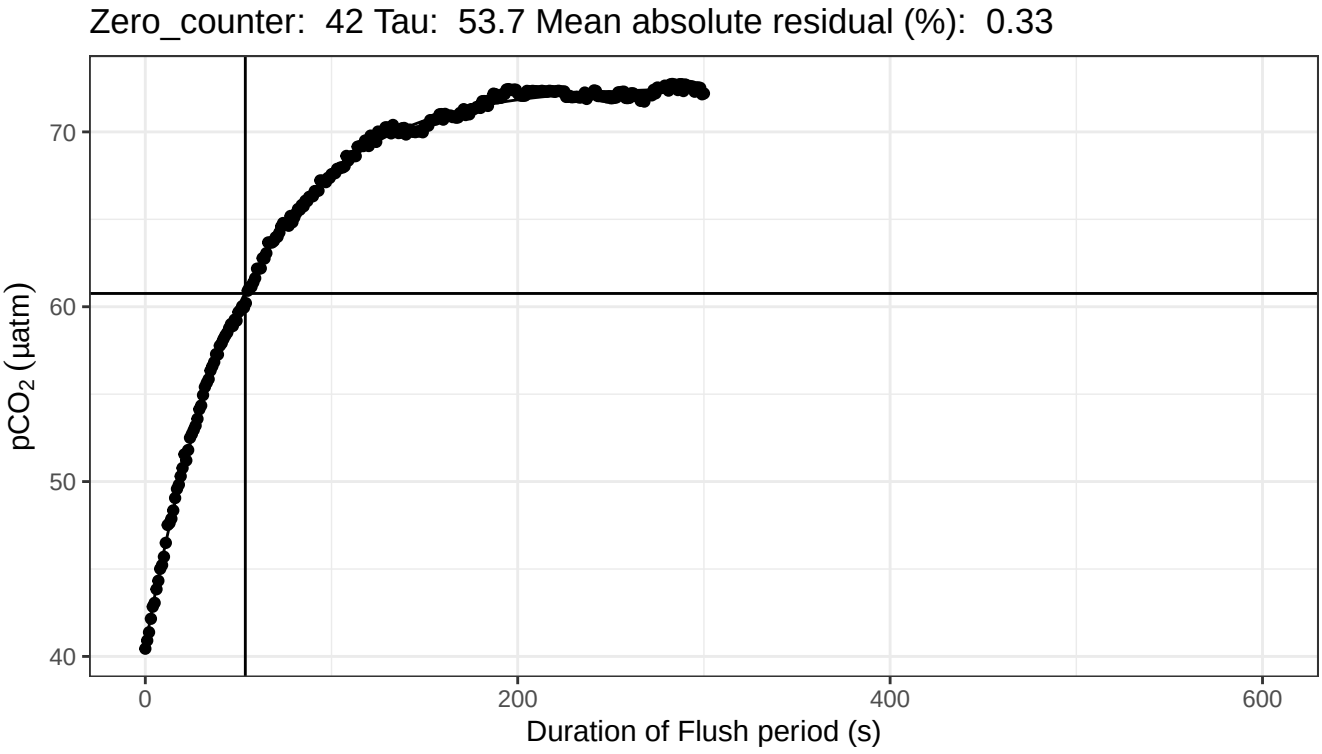

Zero_counter: 41 nls model failed
74.2
74.0
73.8
73.6
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 42 Tau: 53.4 Mean absolute residual (%): 0.32
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

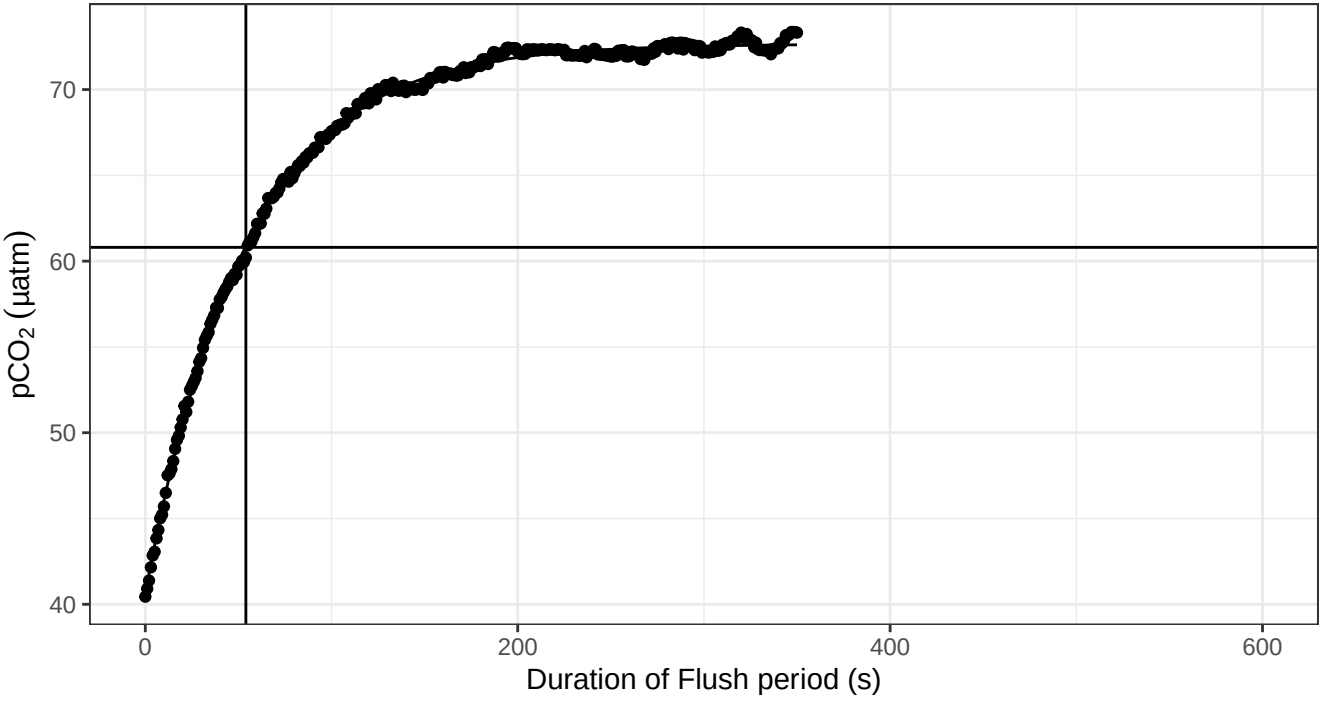
Zero_counter: 42 Tau: 54.2 Mean absolute residual (%): 0.33

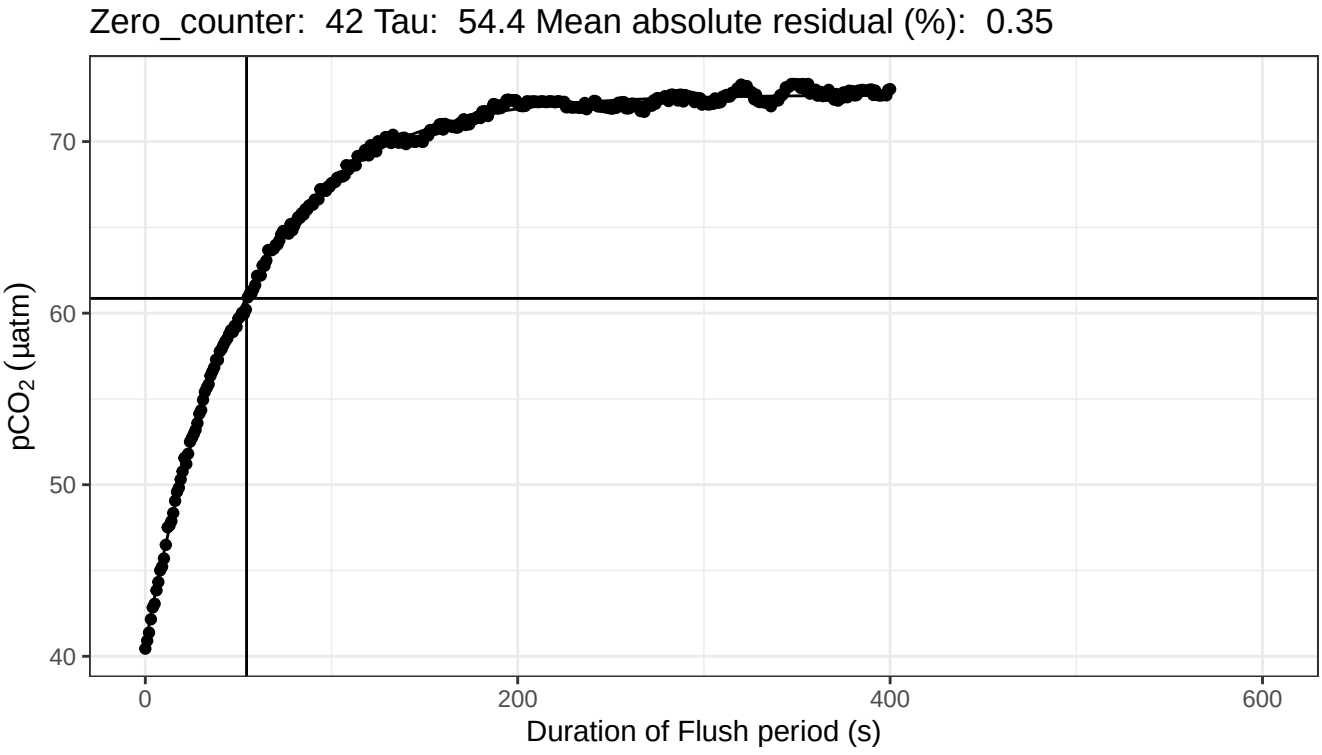


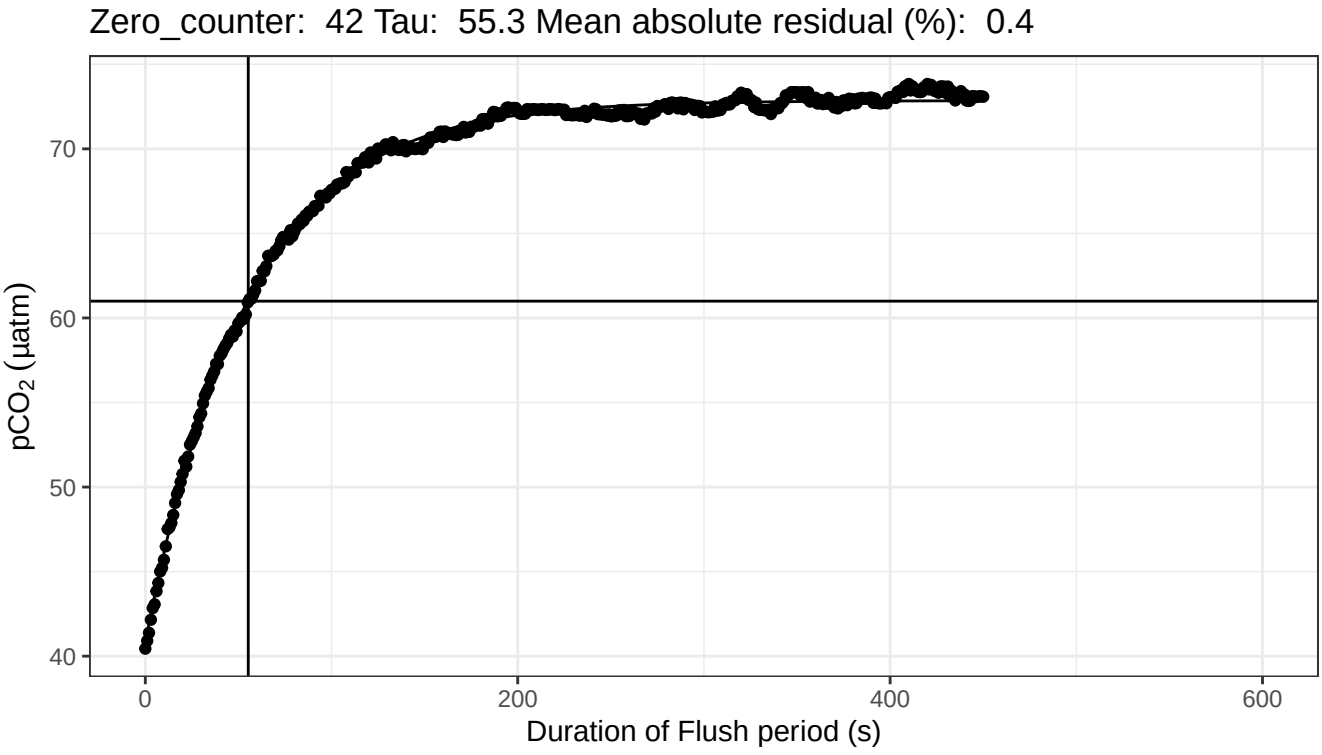

Zero_counter: 42 Tau: 54.1 Mean absolute residual (%): 0.33
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

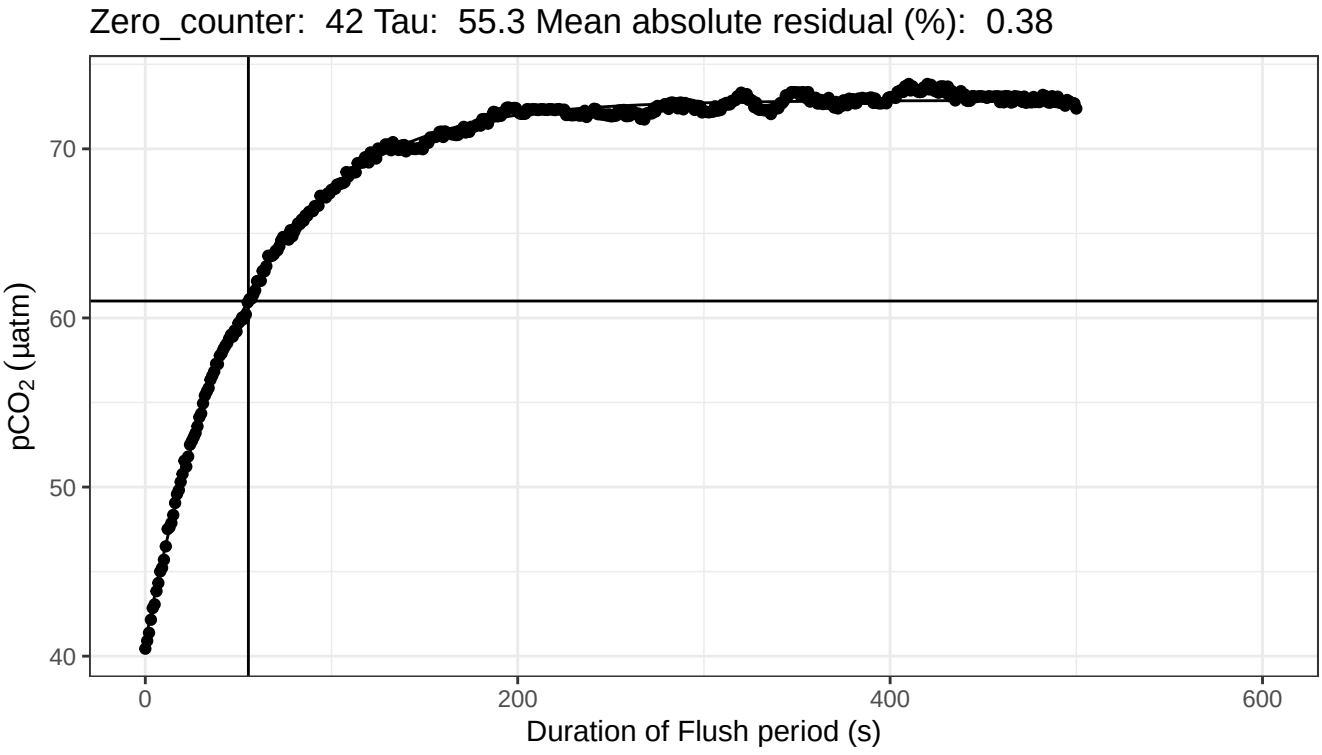

Zero_counter: 42 Tau: 53.7 Mean absolute residual (%): 0.33
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 42 Tau: 54 Mean absolute residual (%): 0.35

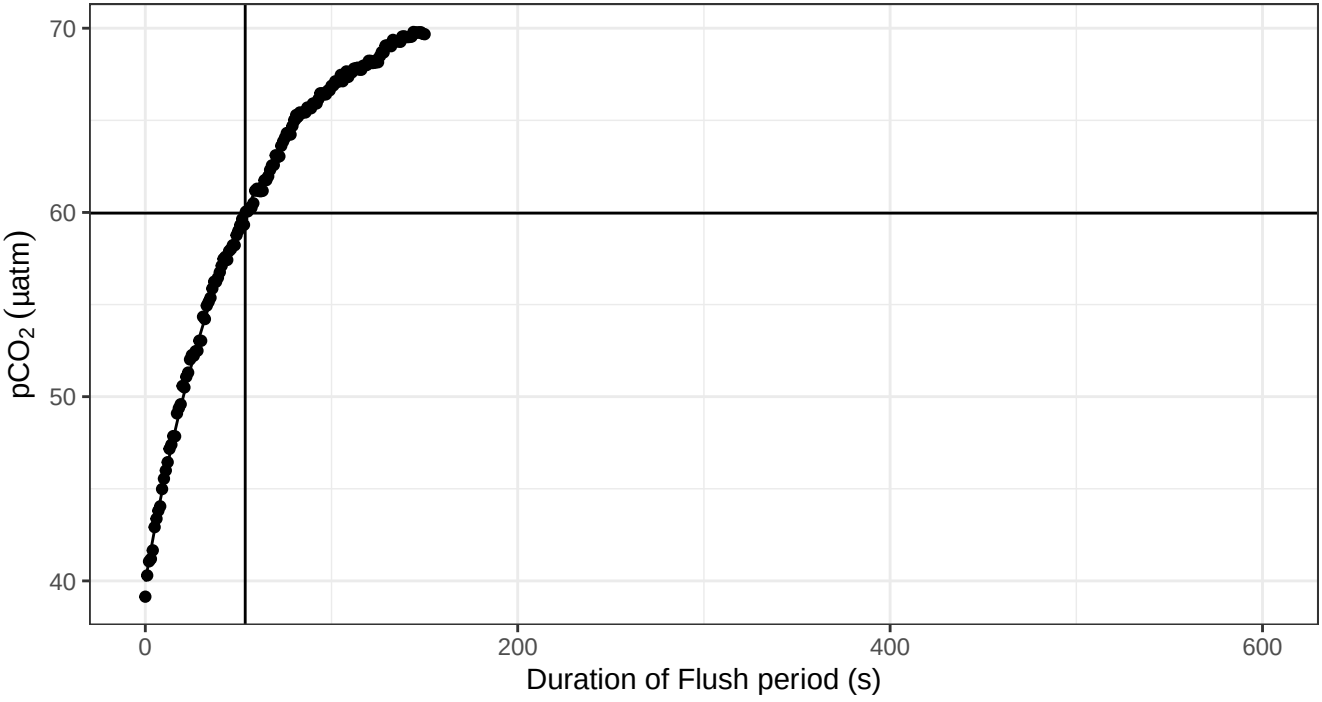


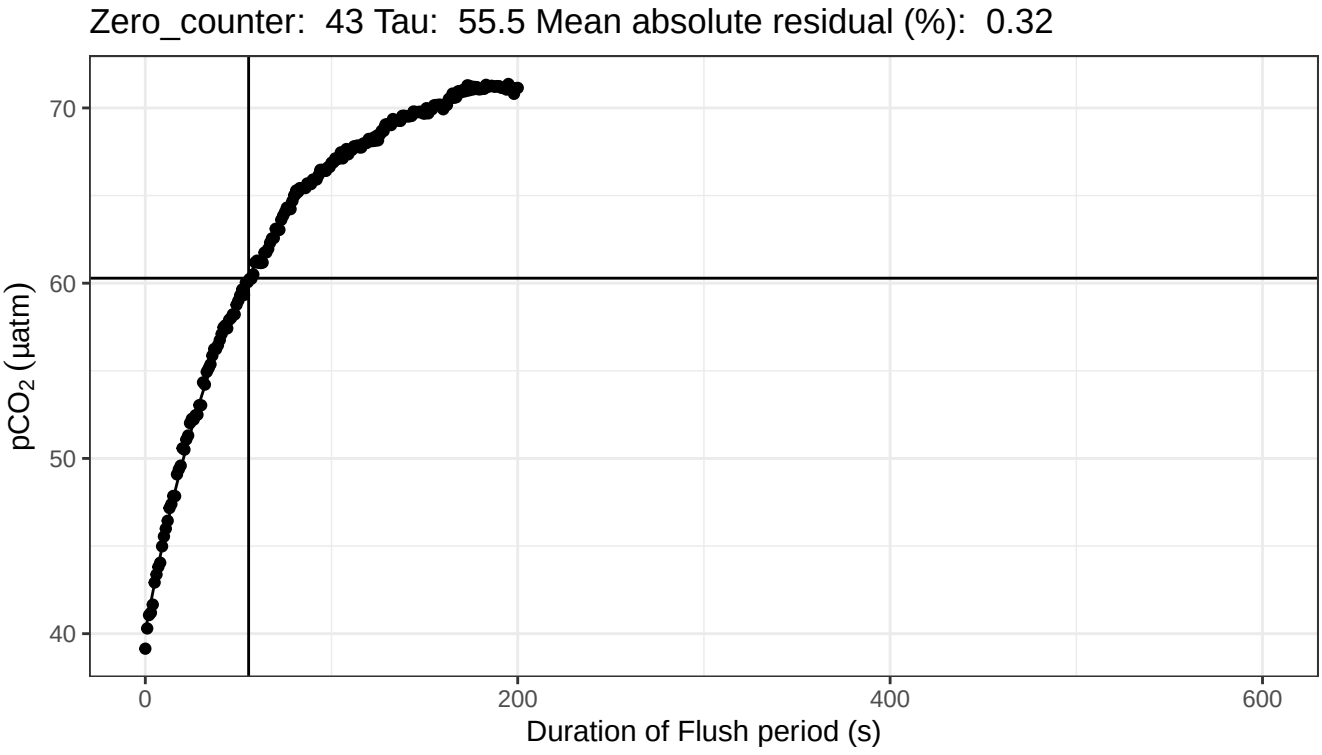

Zero_counter: 42 Tau: 54.4 Mean absolute residual (%): 0.35
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

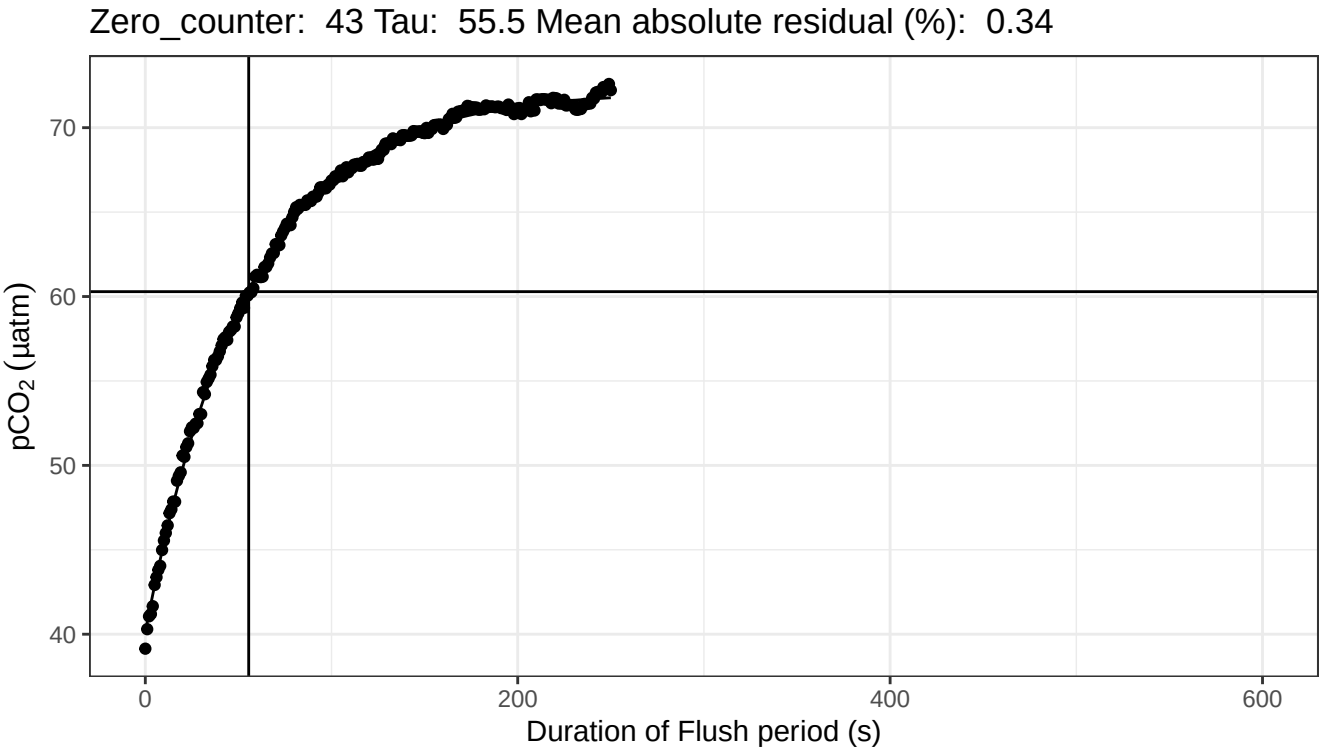

Zero_counter: 42 Tau: 55.3 Mean absolute residual (%): 0.4
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

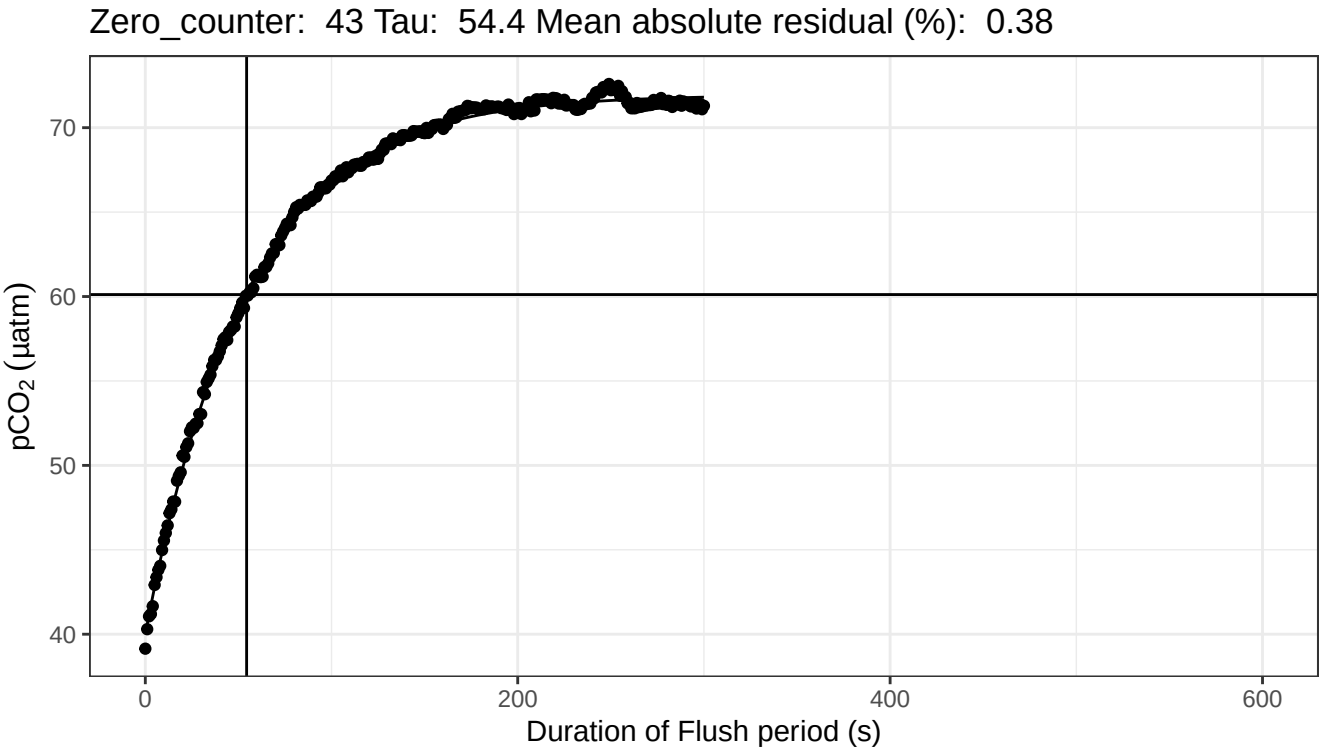

Zero_counter: 42 Tau: 55.3 Mean absolute residual (%): 0.38
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

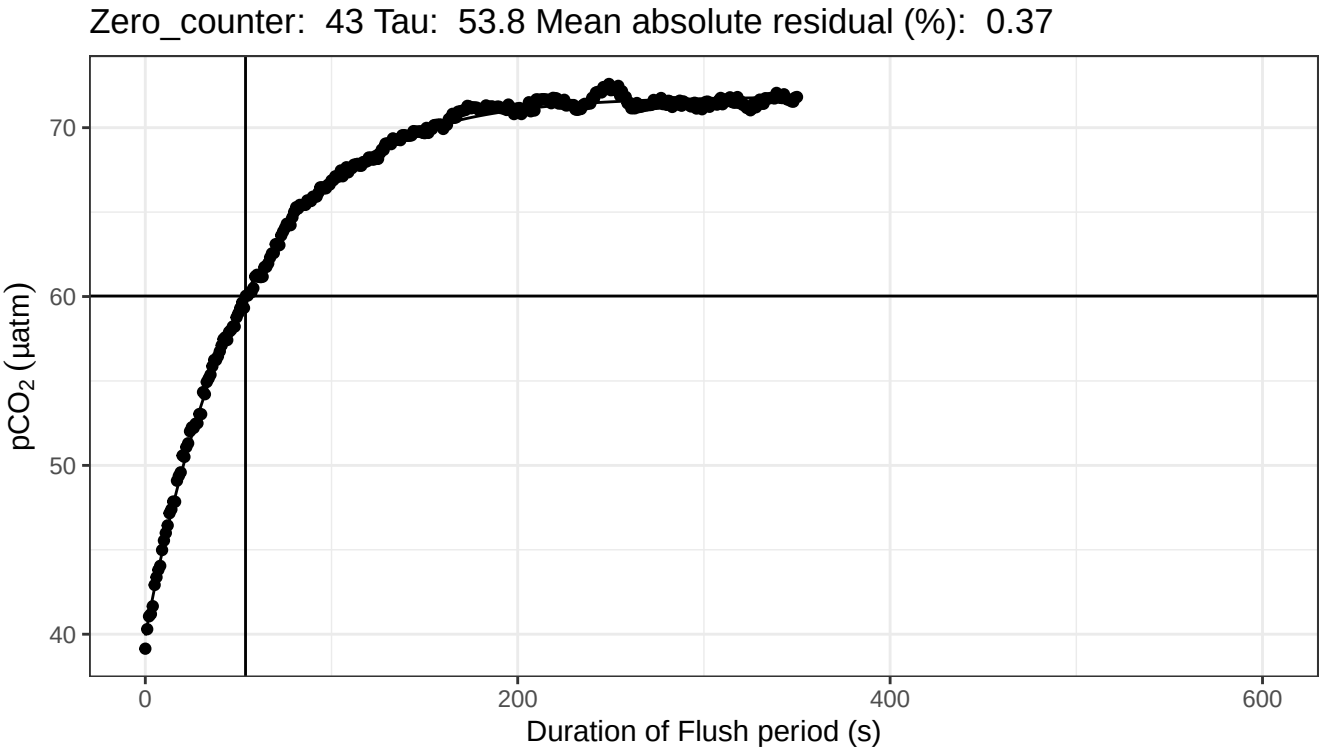
Zero_counter: 43 Tau: 53.7 Mean absolute residual (%): 0.31

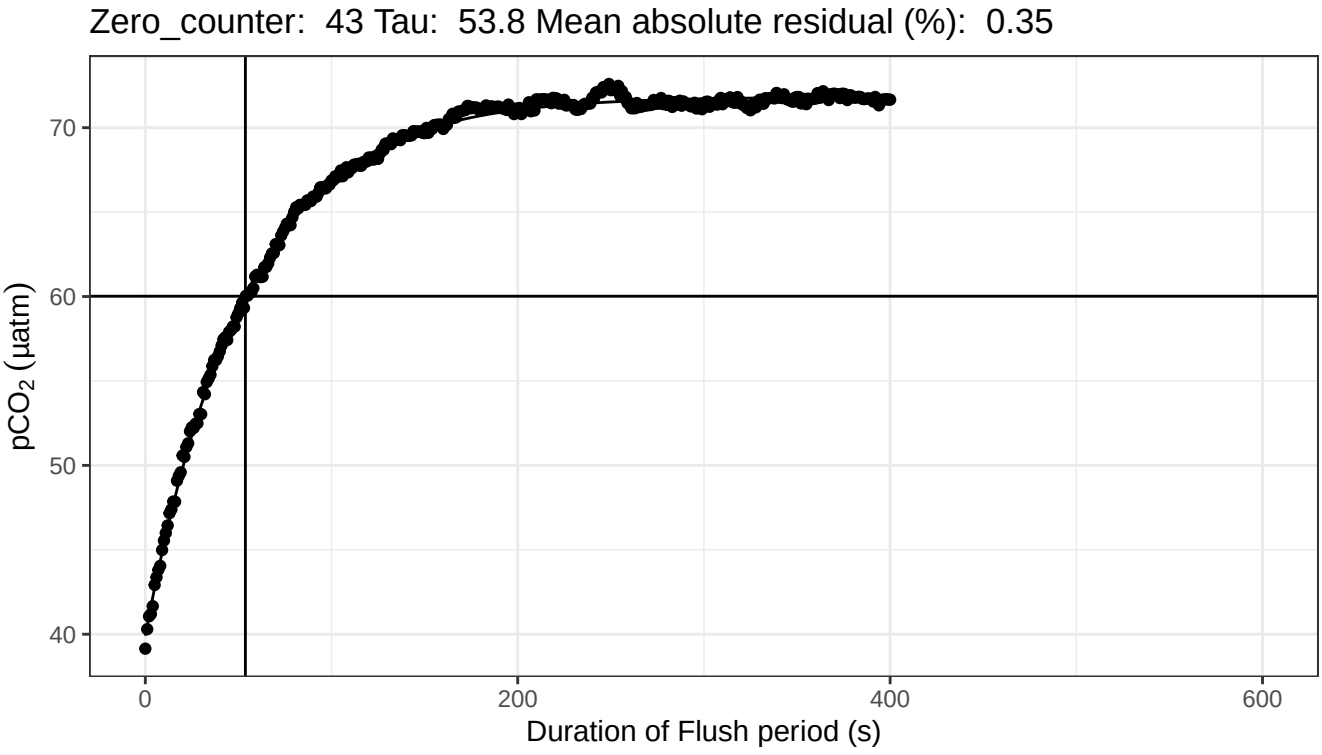


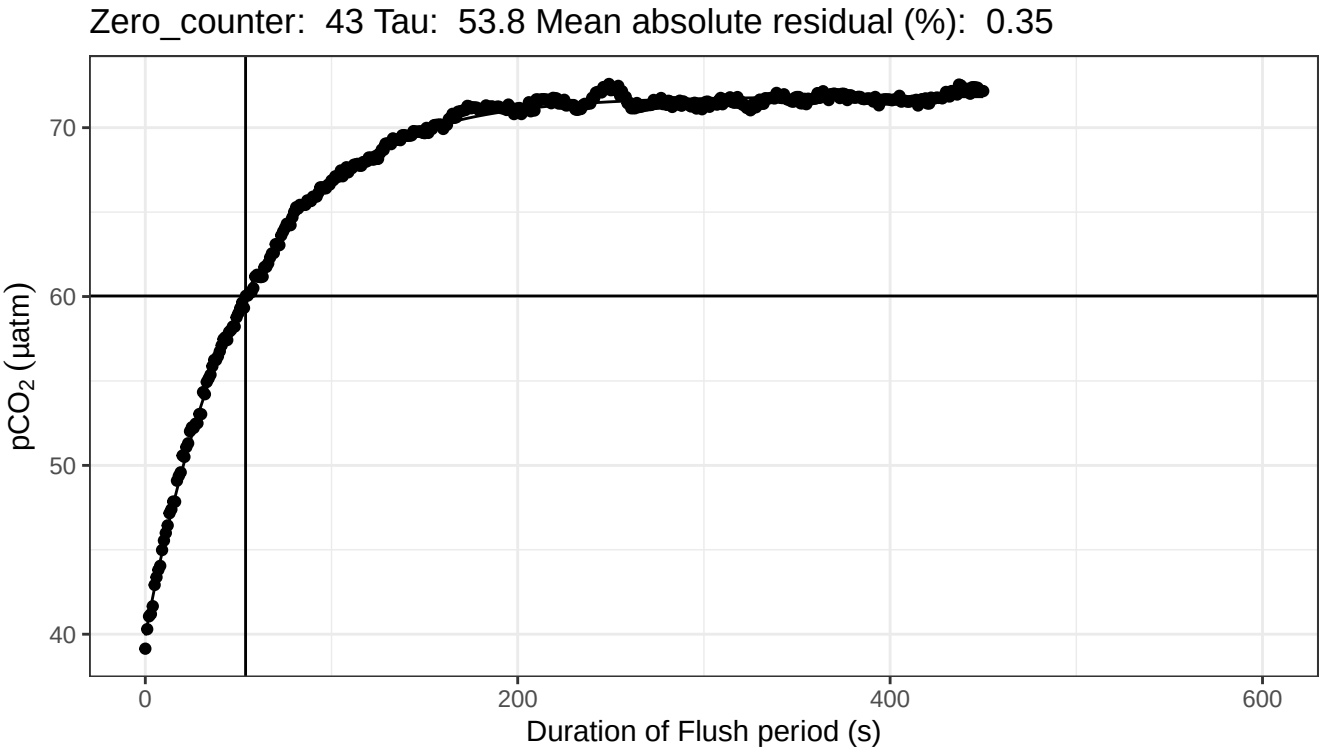

Zero_counter: 43 Tau: 55.5 Mean absolute residual (%): 0.32
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

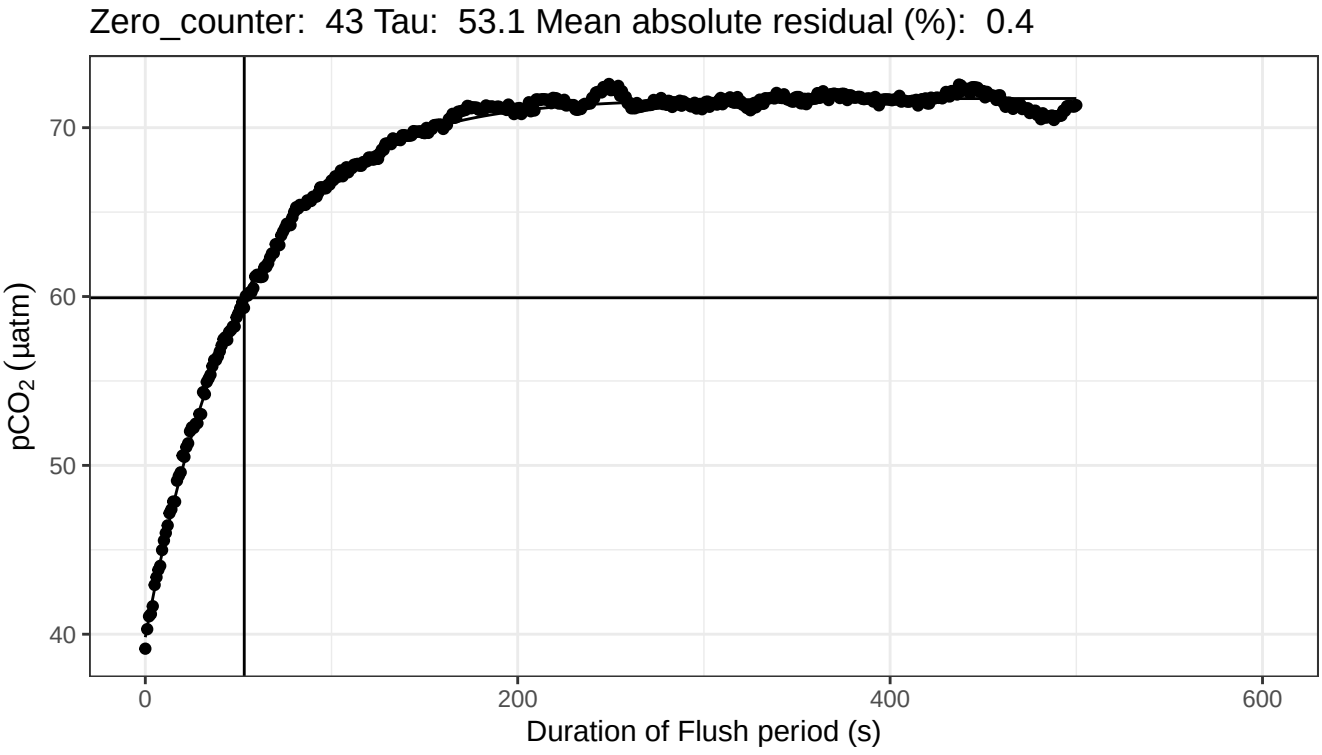

Zero_counter: 43 Tau: 55.5 Mean absolute residual (%): 0.34
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

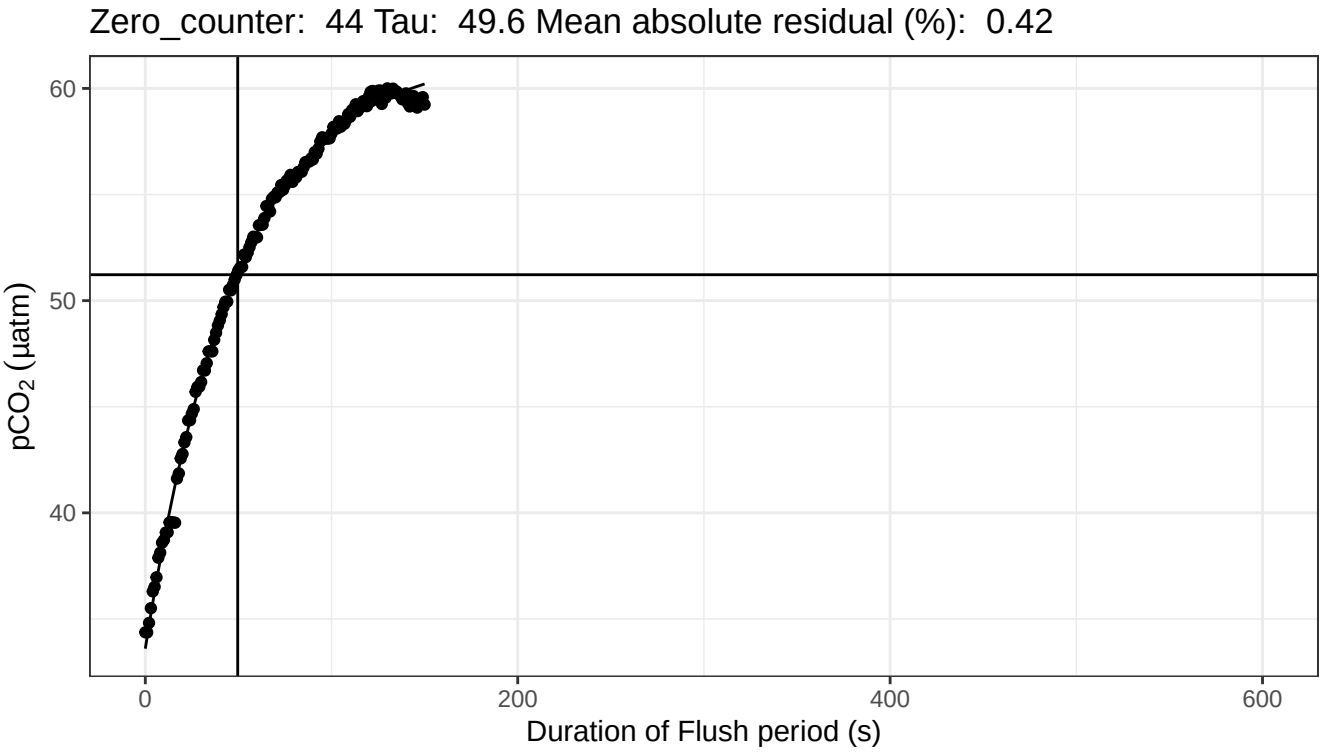

Zero_counter: 43 Tau: 54.4 Mean absolute residual (%): 0.38
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

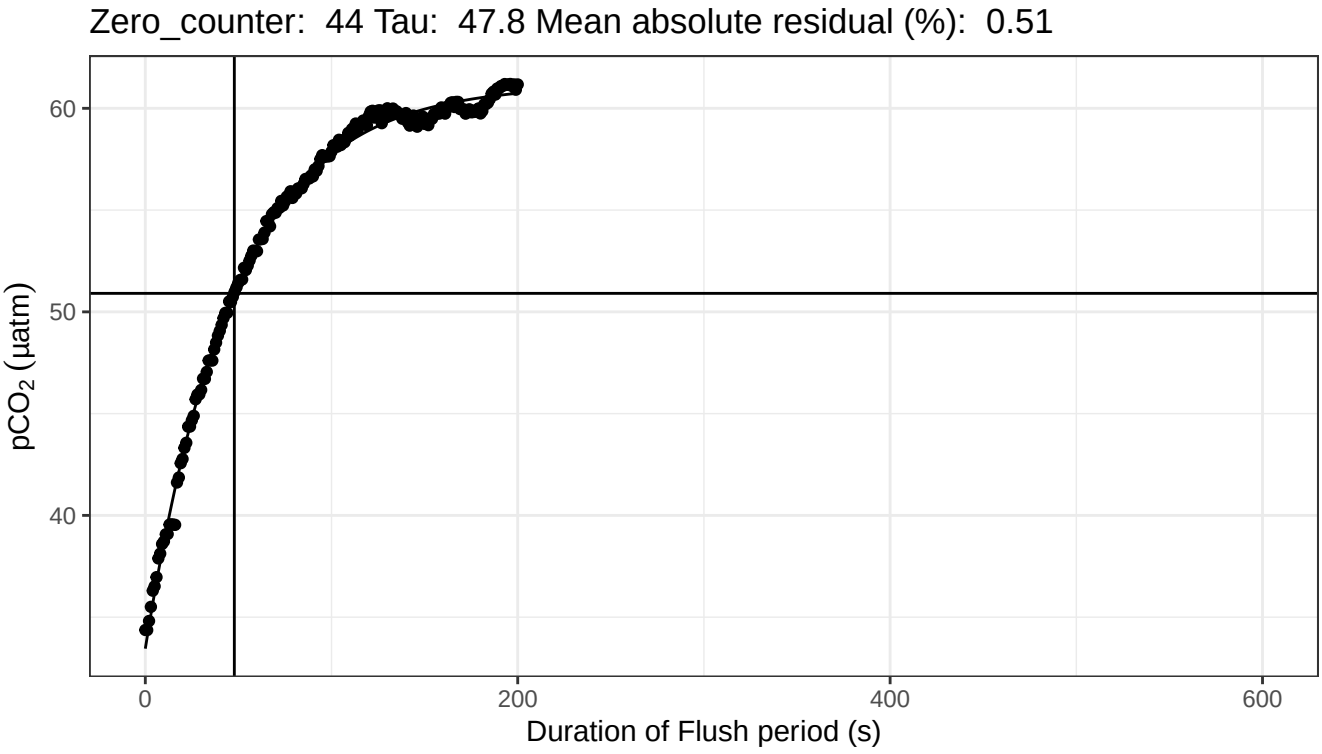

Zero_counter: 43 Tau: 53.8 Mean absolute residual (%): 0.37
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 43 Tau: 53.8 Mean absolute residual (%): 0.35
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

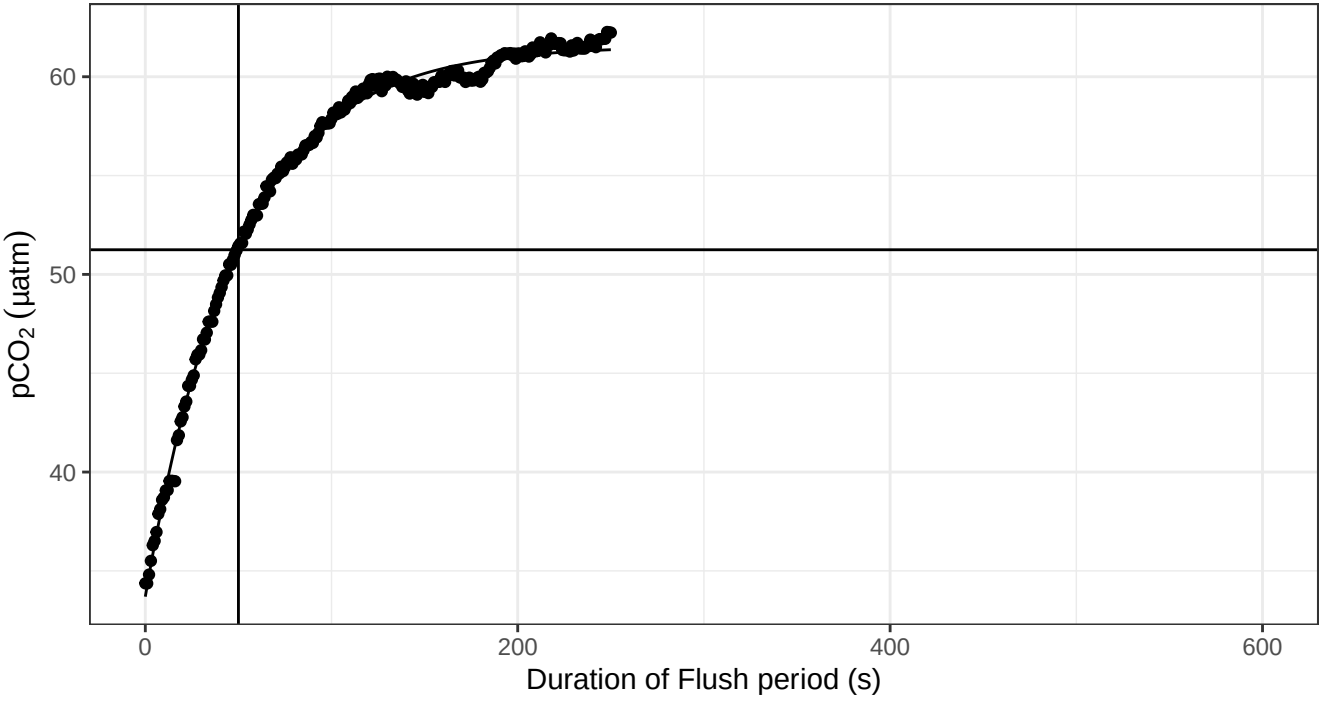

Zero_counter: 43 Tau: 53.8 Mean absolute residual (%): 0.35
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 43 Tau: 53.1 Mean absolute residual (%): 0.4
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

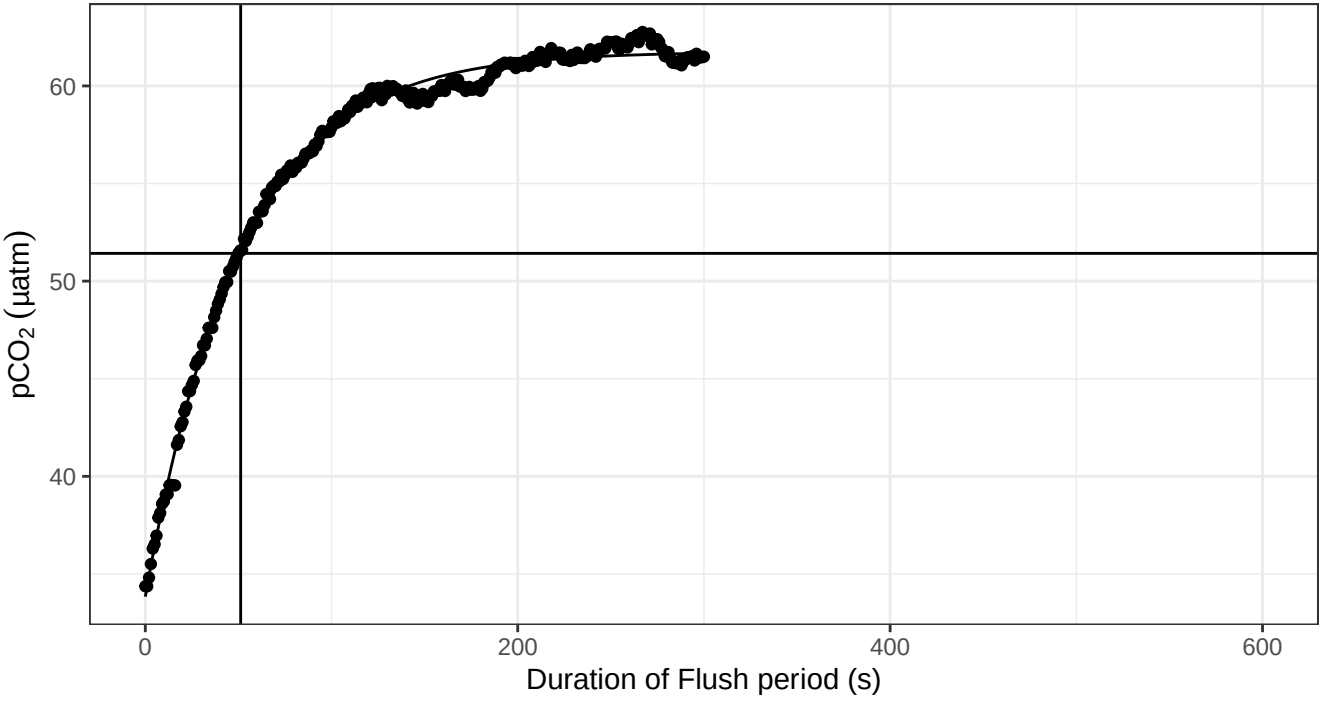

Zero_counter: 44 Tau: 49.6 Mean absolute residual (%): 0.42
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 44 Tau: 47.8 Mean absolute residual (%): 0.51
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

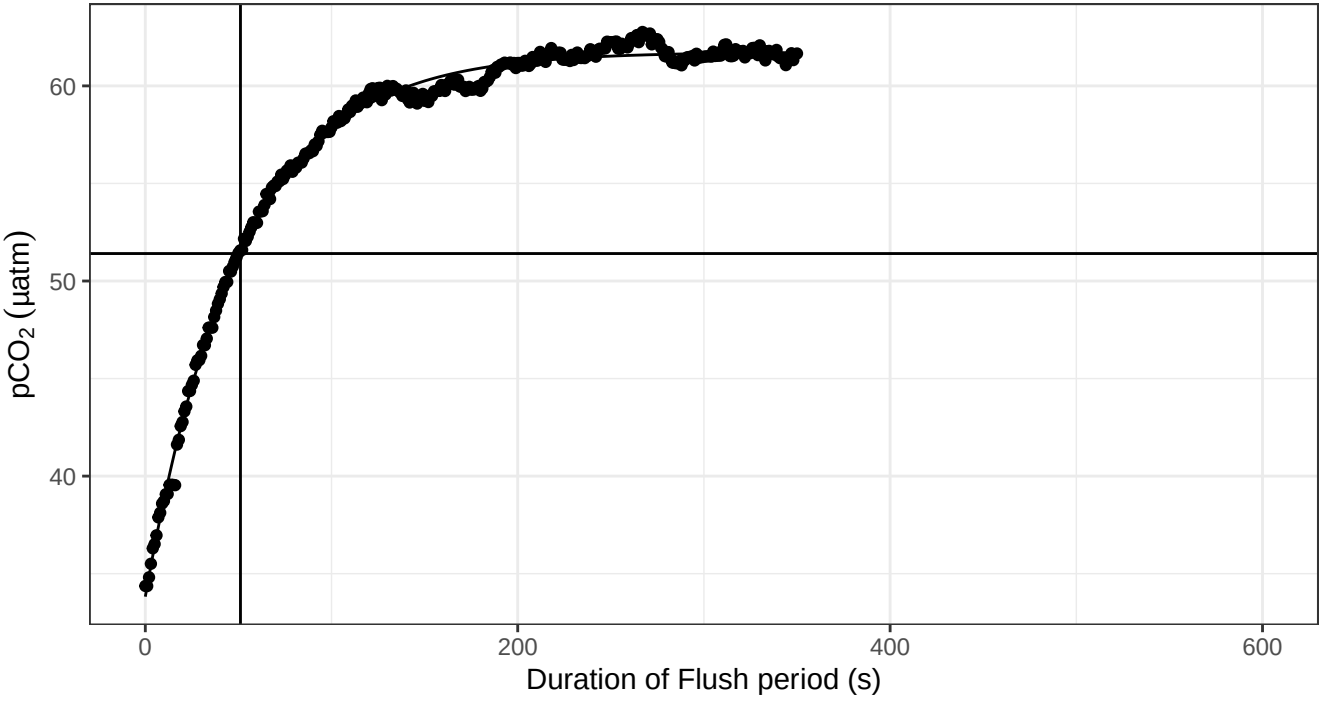
Zero_counter: 44 Tau: 50 Mean absolute residual (%): 0.53



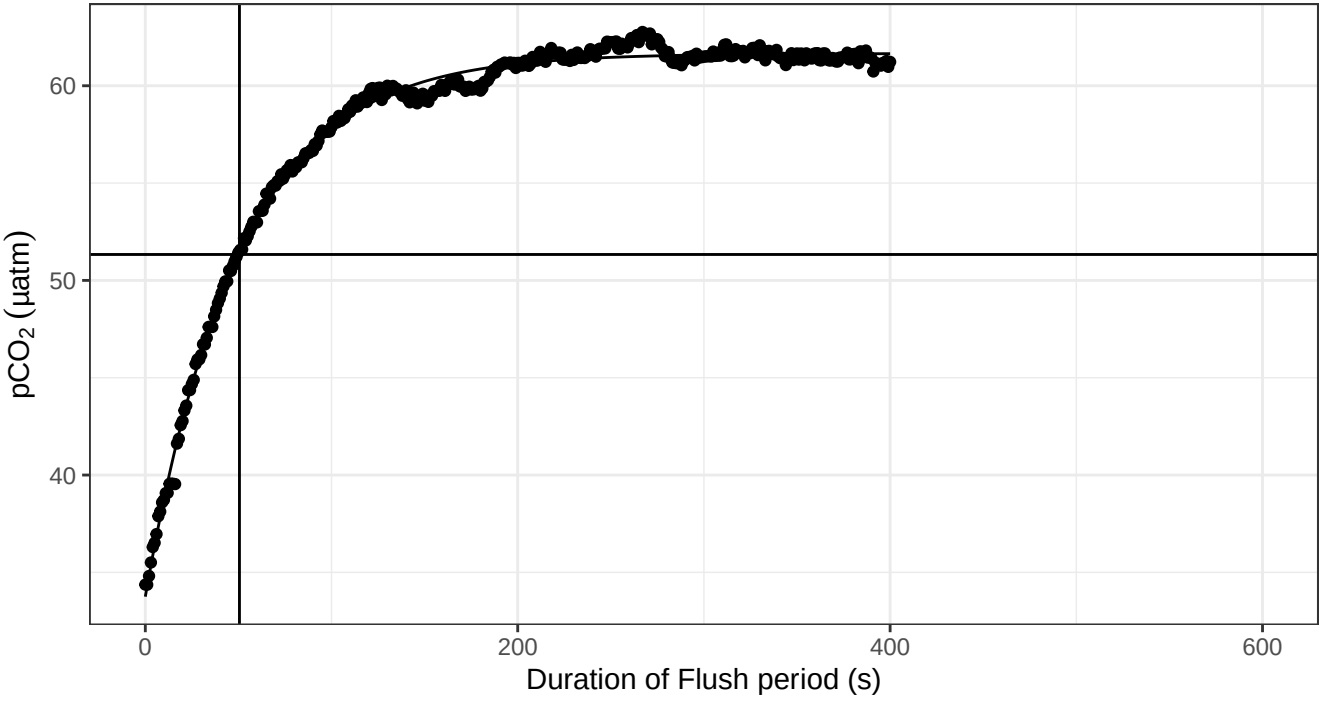
Zero_counter: 44 Tau: 51.2 Mean absolute residual (%): 0.57

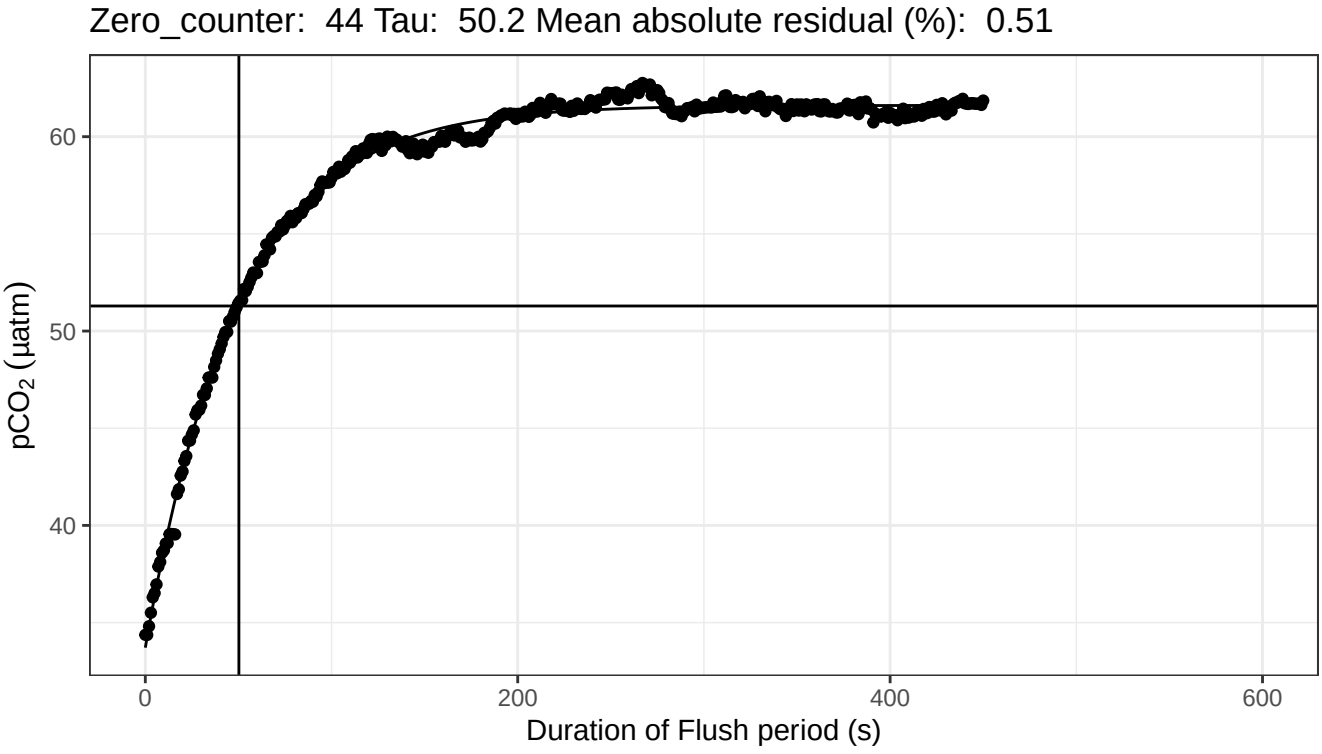


Zero_counter: 44 Tau: 51.1 Mean absolute residual (%): 0.53

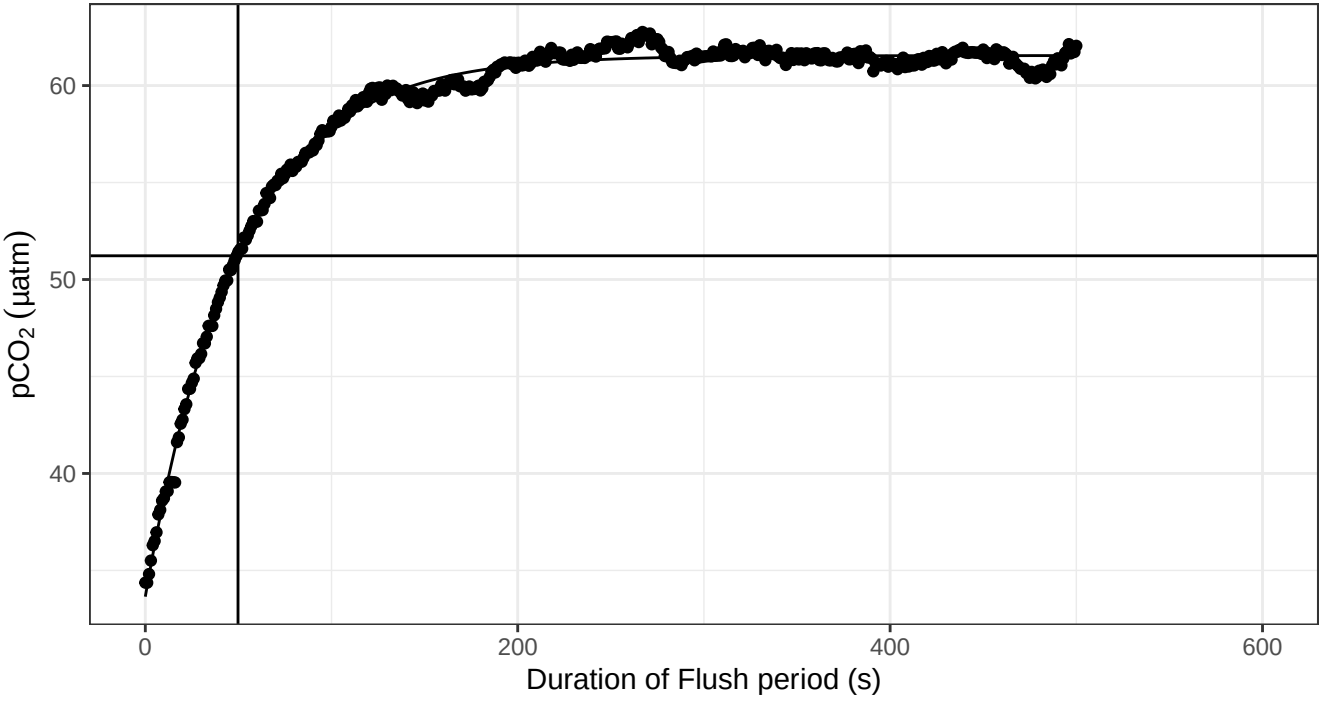


Zero_counter: 44 Tau: 50.6 Mean absolute residual (%): 0.52

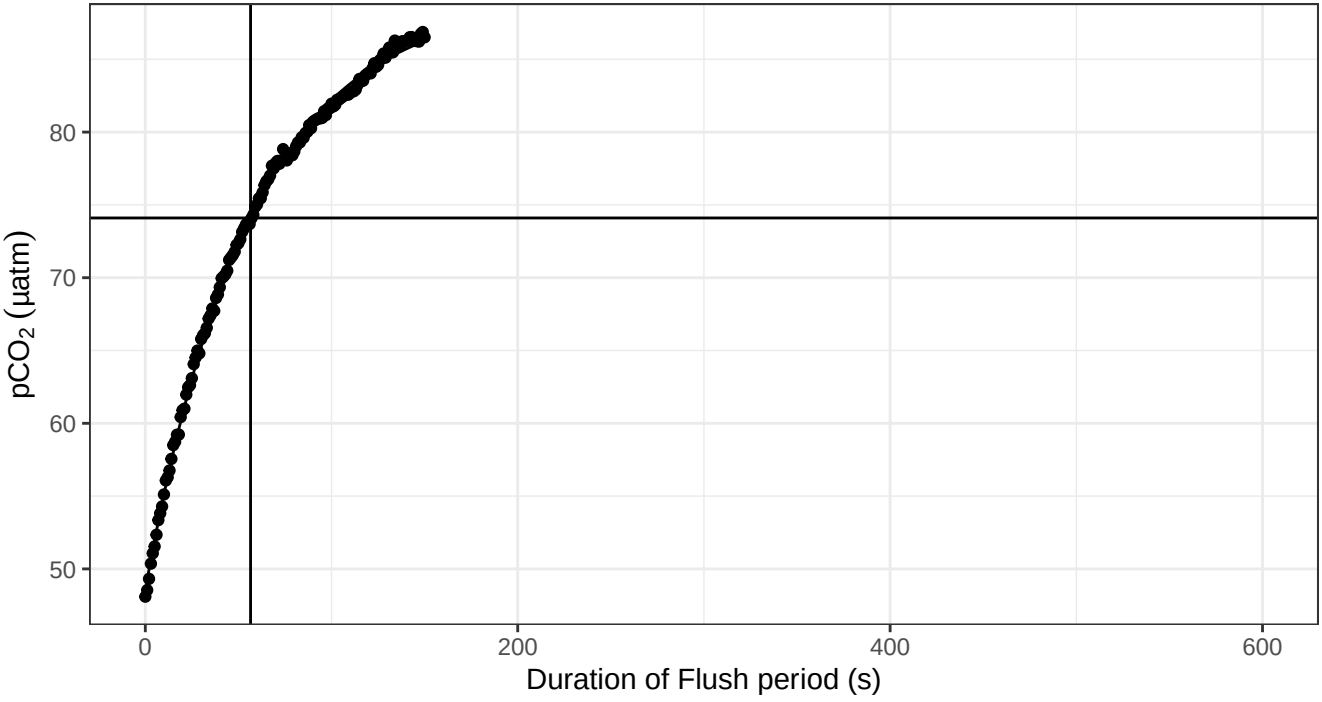


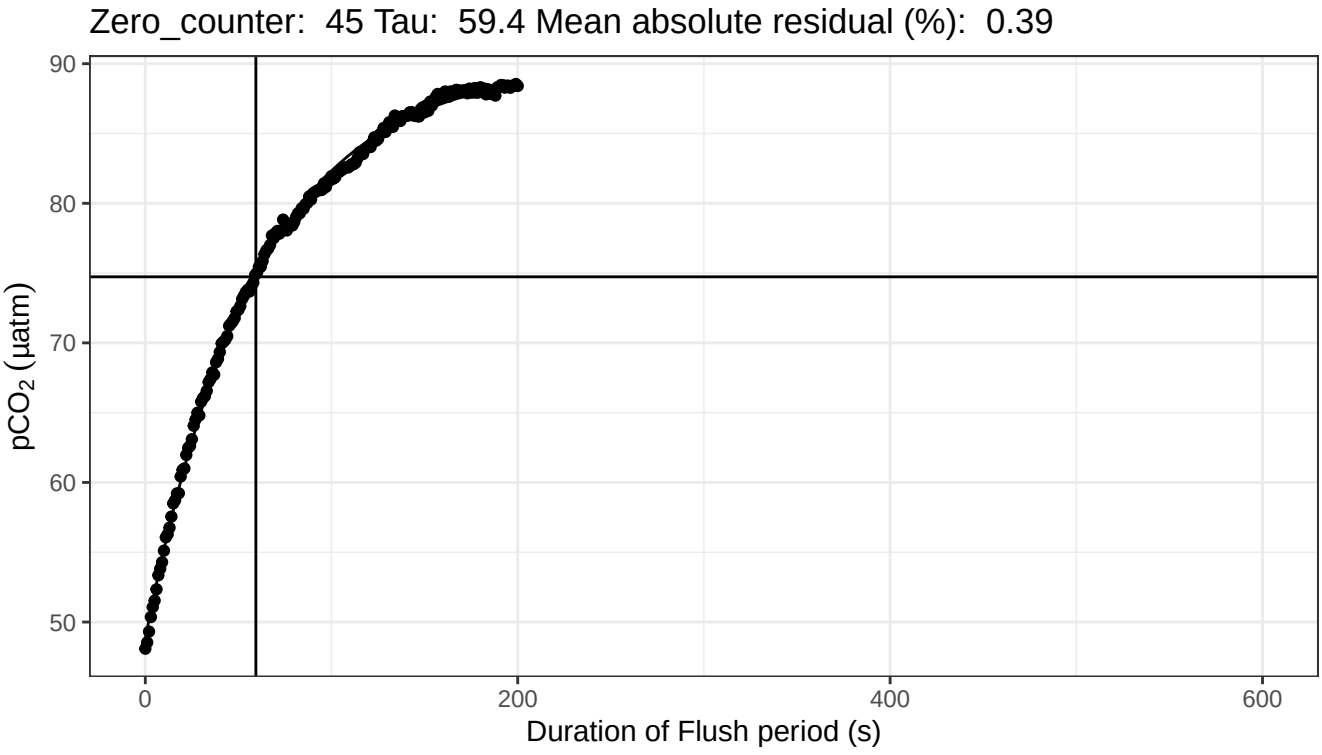

Zero_counter: 44 Tau: 50.2 Mean absolute residual (%): 0.51
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 44 Tau: 49.8 Mean absolute residual (%): 0.54

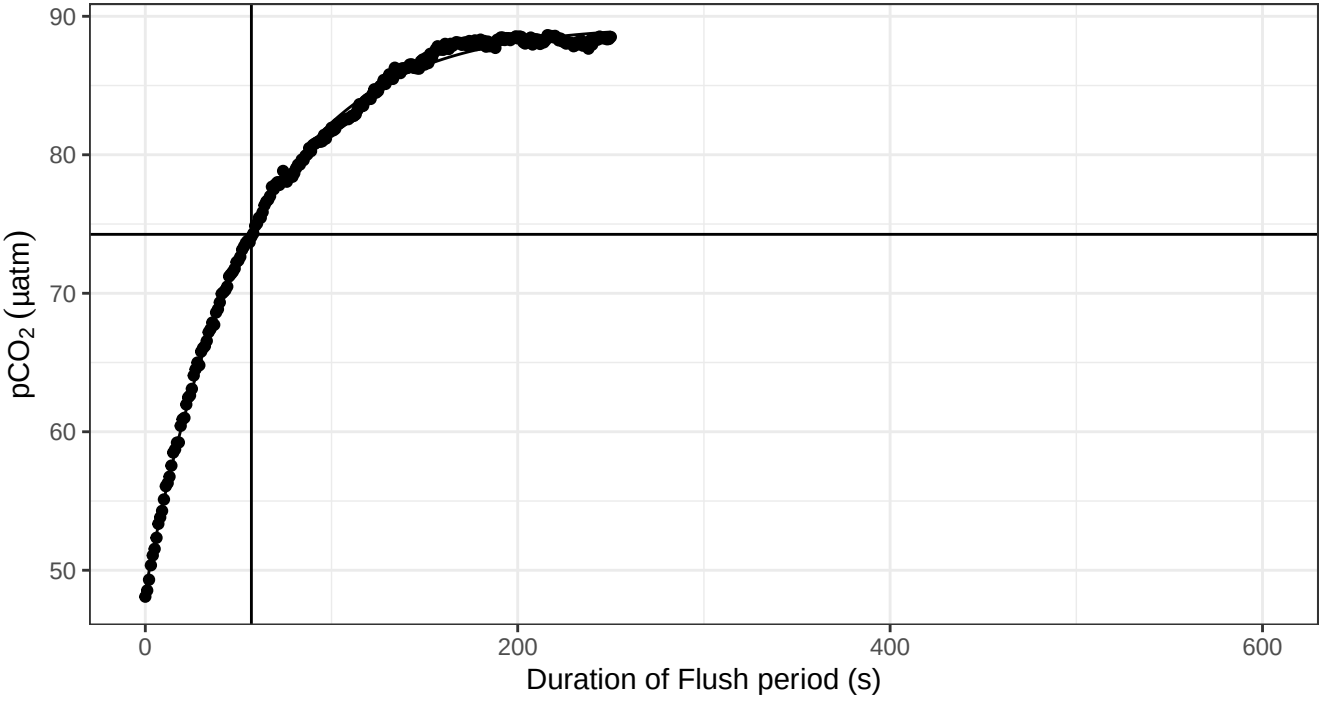


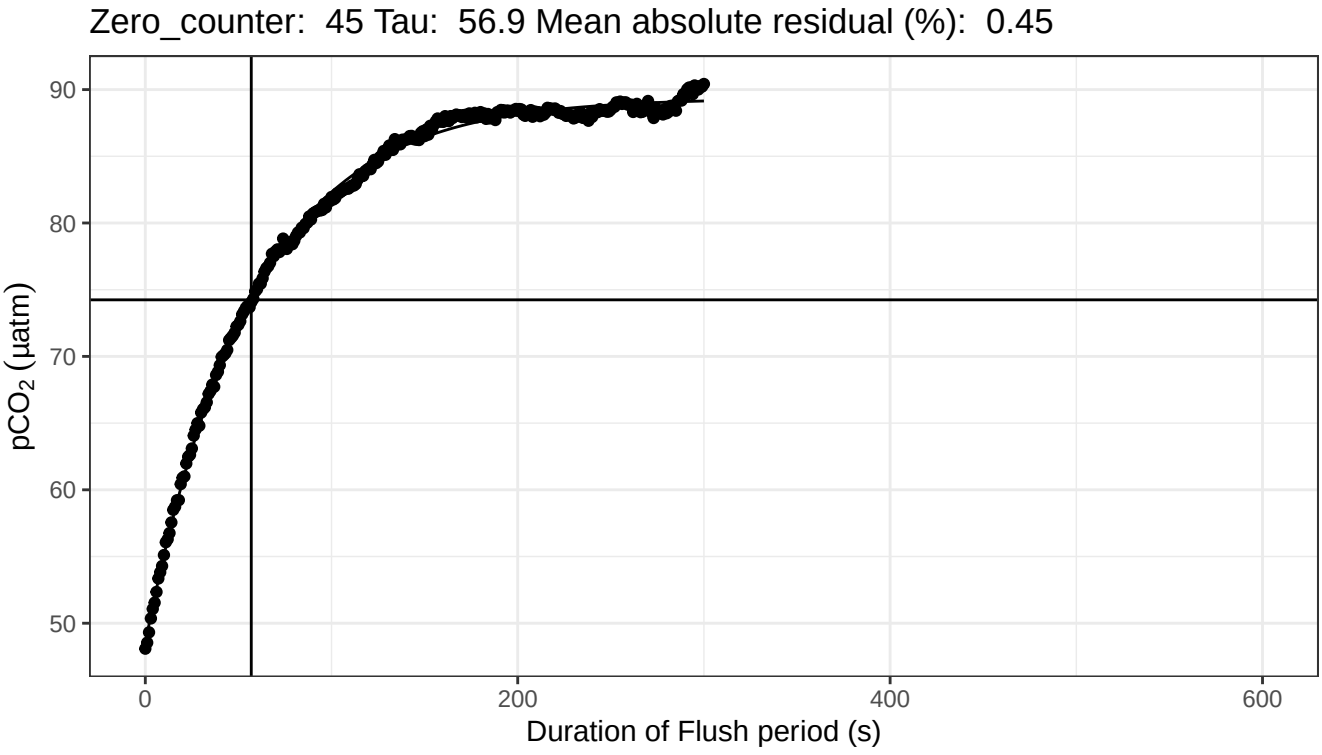
Zero_counter: 45 Tau: 56.5 Mean absolute residual (%): 0.37

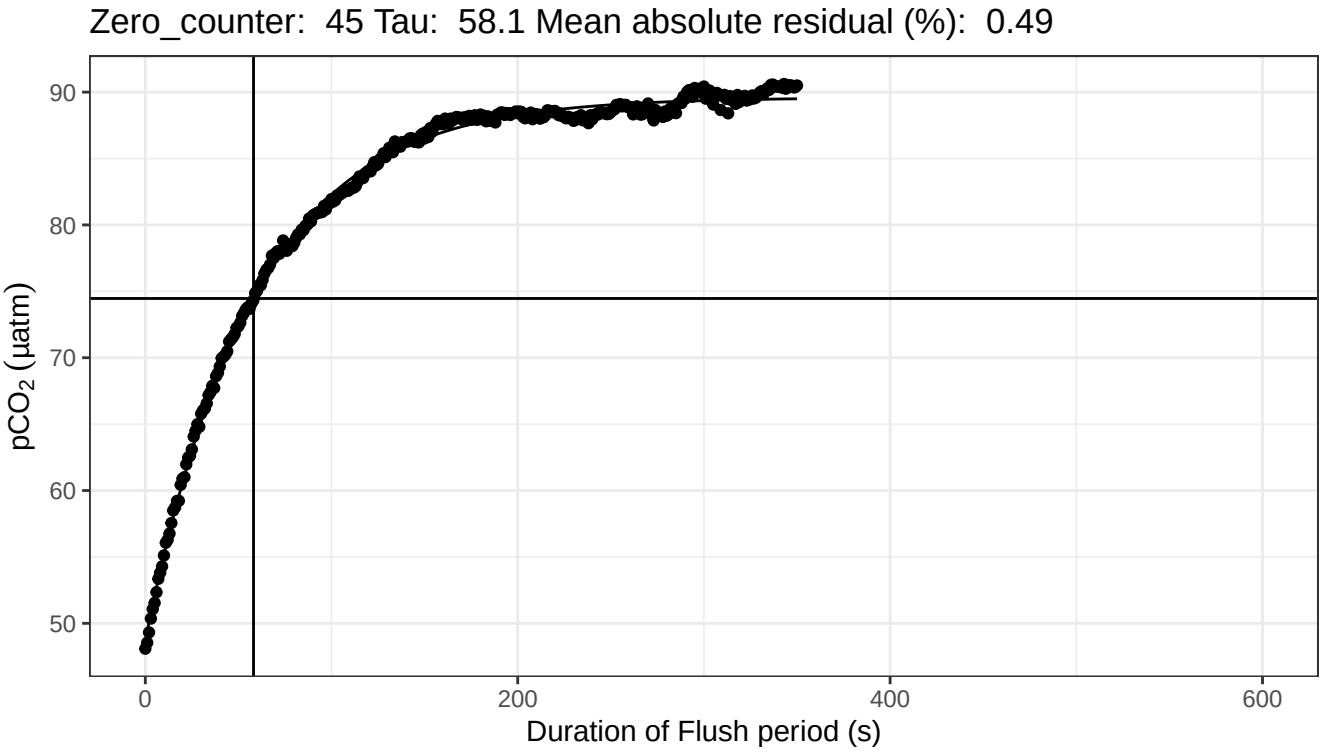


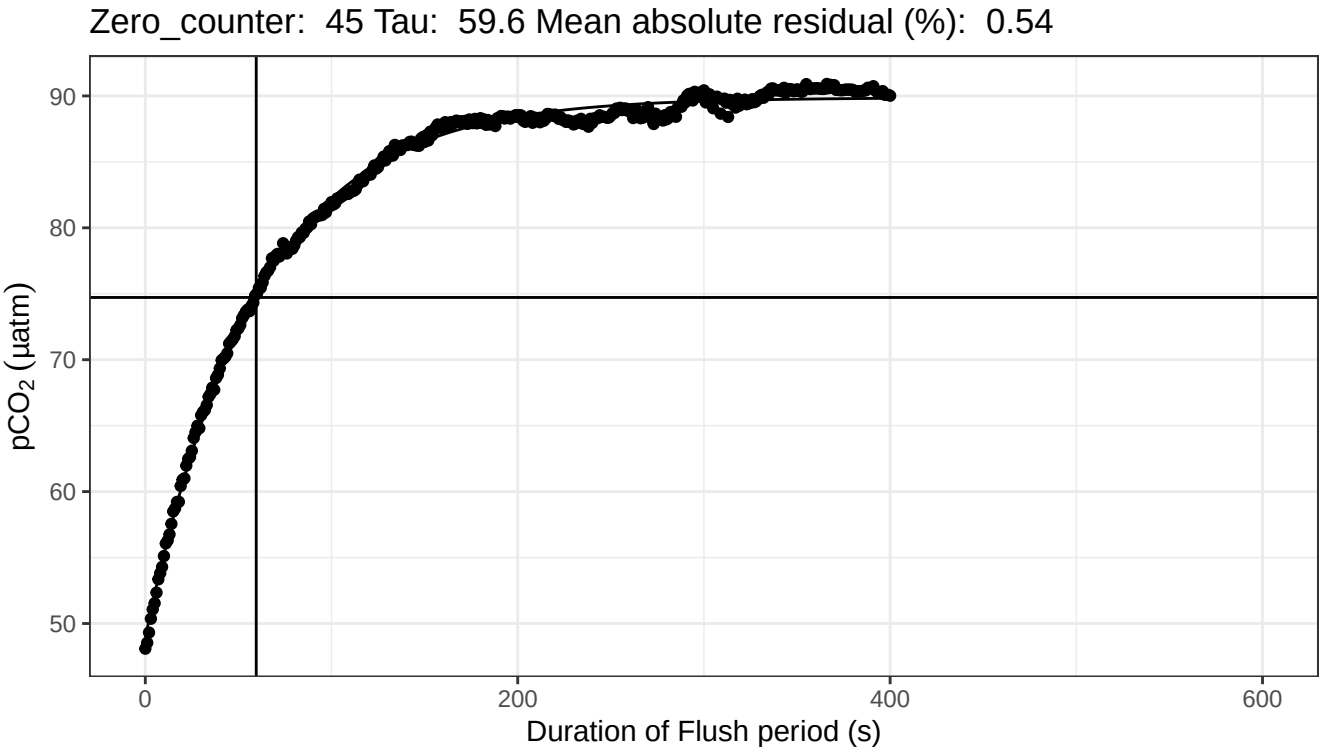

Zero_counter: 45 Tau: 59.4 Mean absolute residual (%): 0.39
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

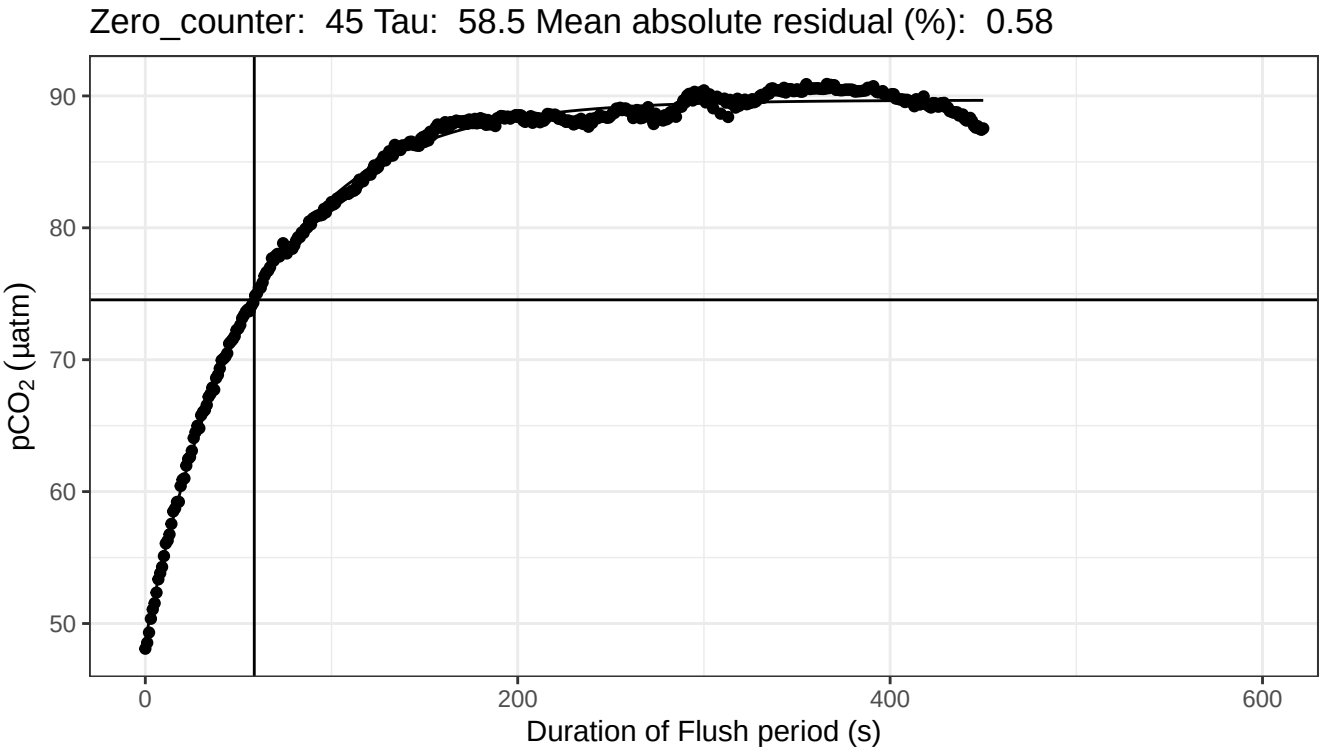
Zero_counter: 45 Tau: 57 Mean absolute residual (%): 0.43

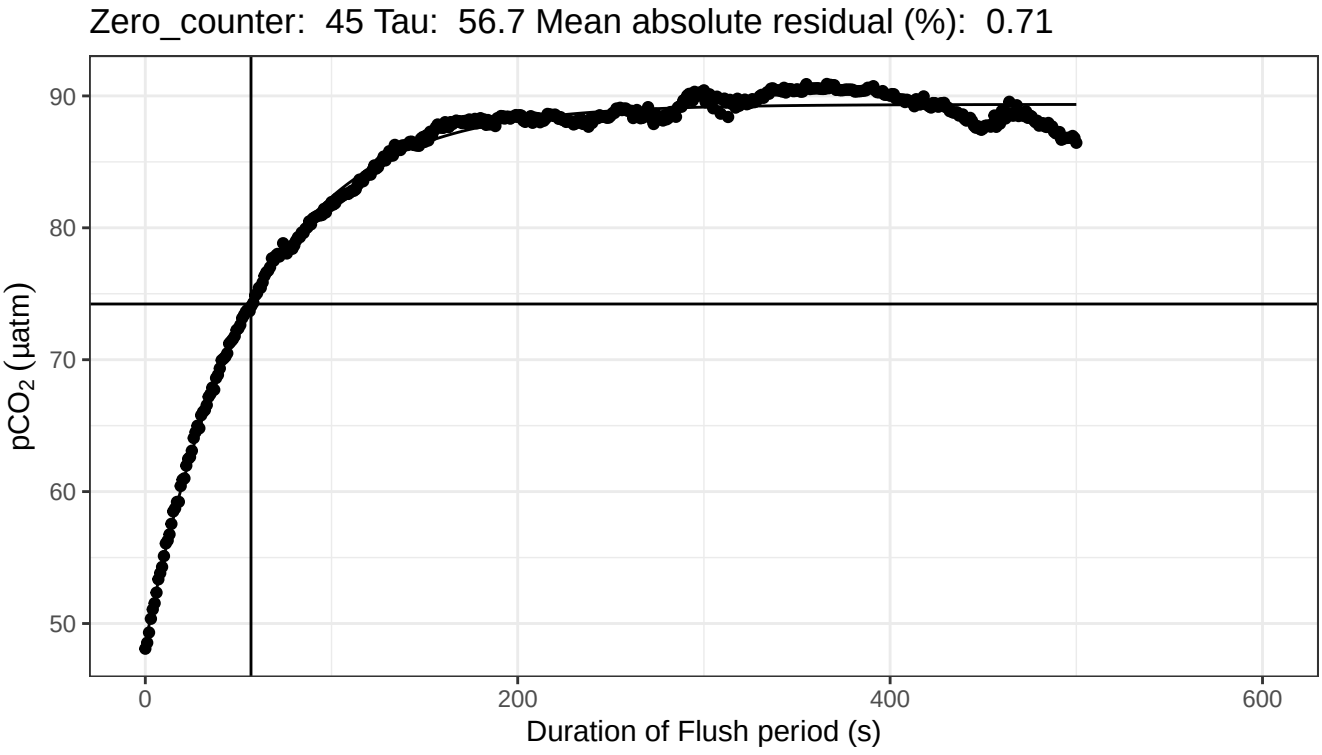



Zero_counter: 45 Tau: 56.9 Mean absolute residual (%): 0.45
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

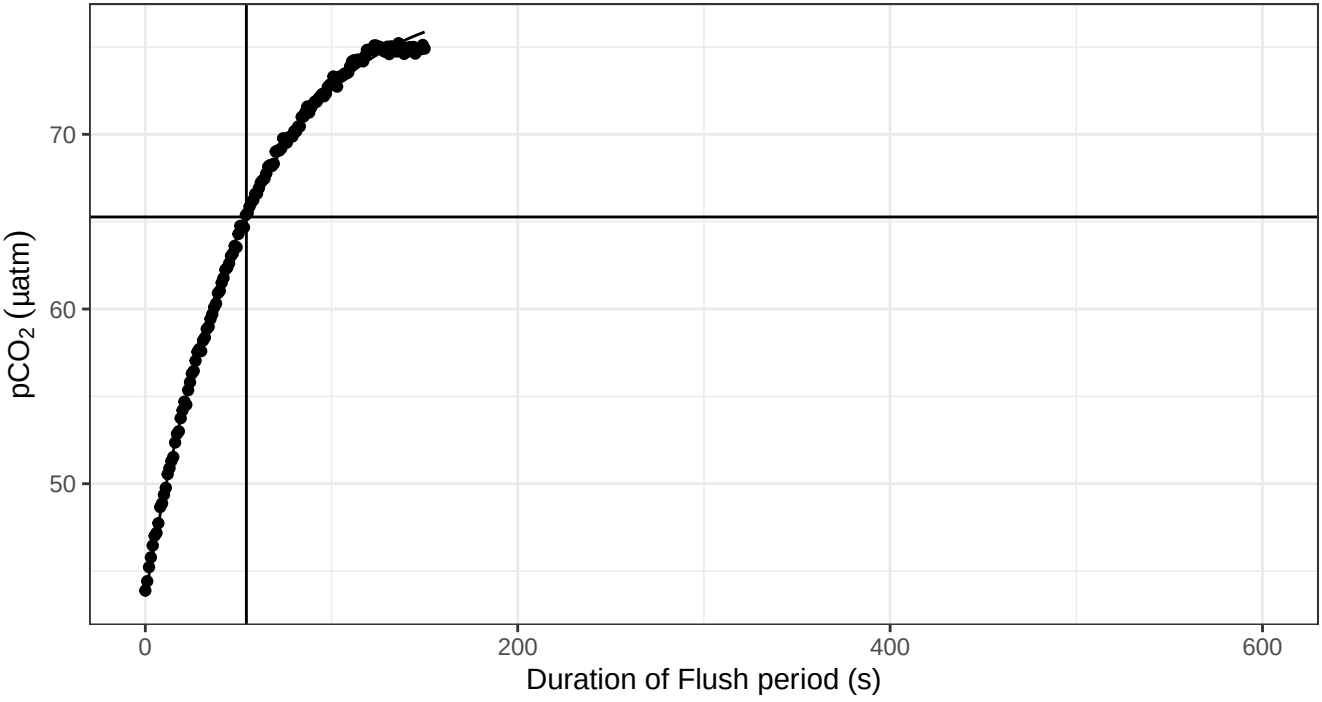

Zero_counter: 45 Tau: 58.1 Mean absolute residual (%): 0.49
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

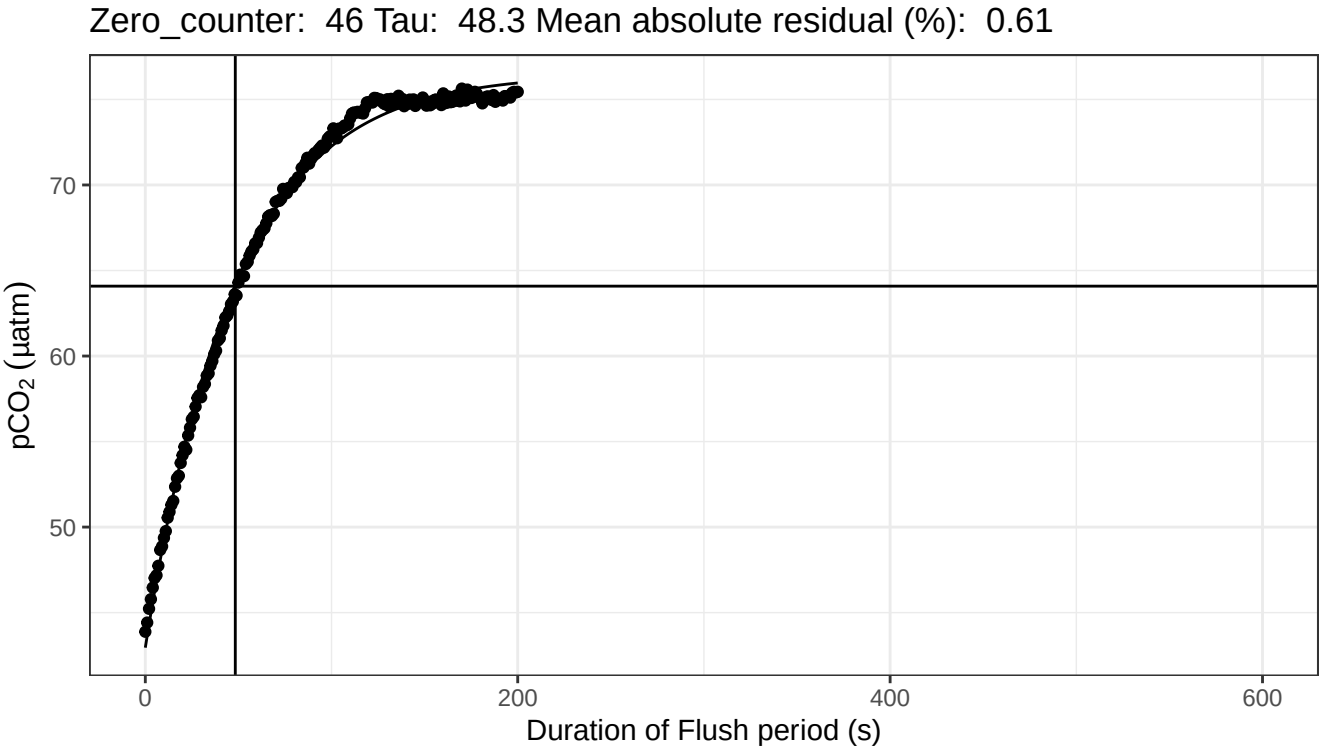

Zero_counter: 45 Tau: 59.6 Mean absolute residual (%): 0.54
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 45 Tau: 58.5 Mean absolute residual (%): 0.58
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

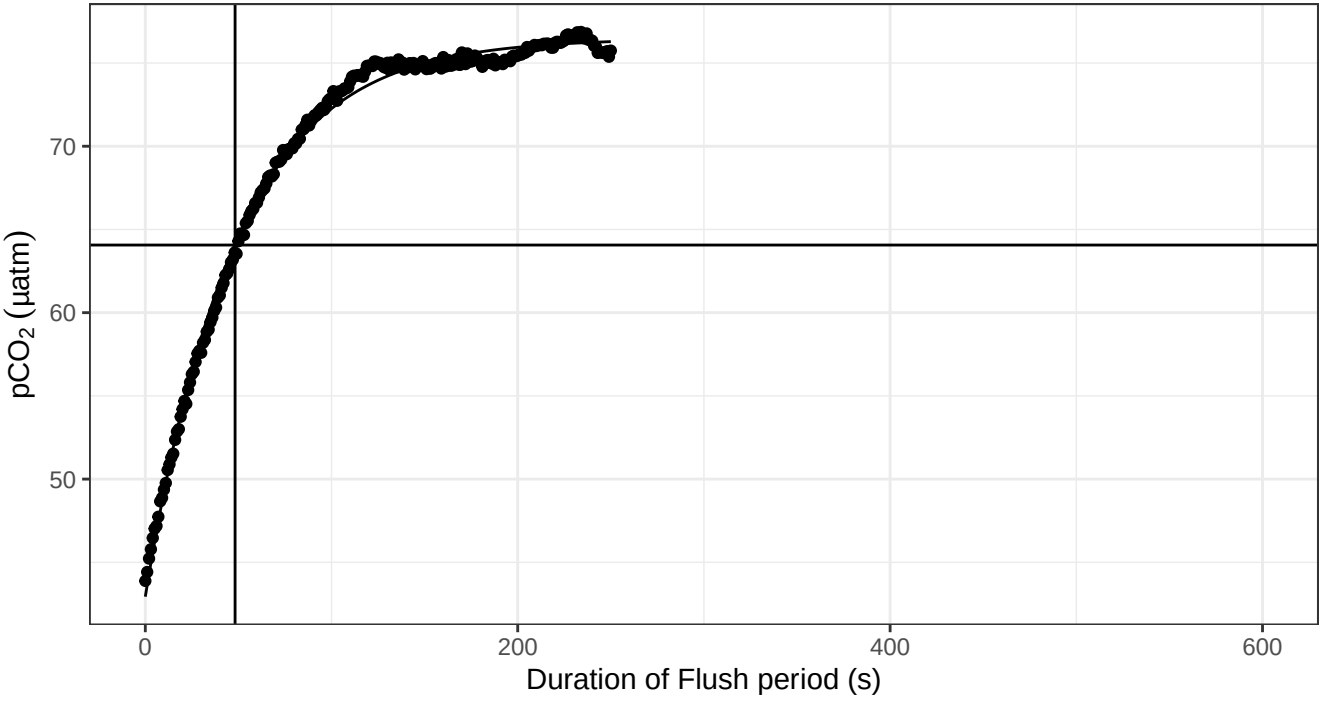

Zero_counter: 45 Tau: 56.7 Mean absolute residual (%): 0.71
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

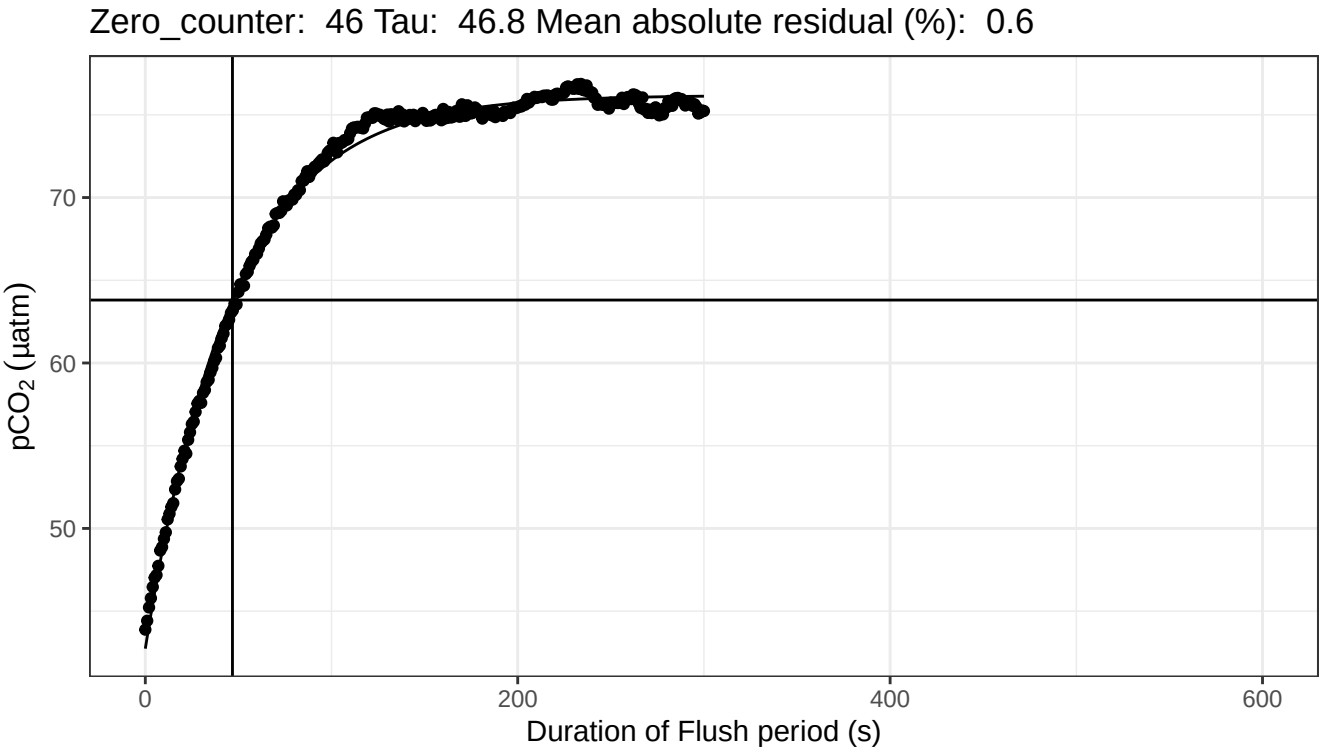
Zero_counter: 46 Tau: 54.3 Mean absolute residual (%): 0.38



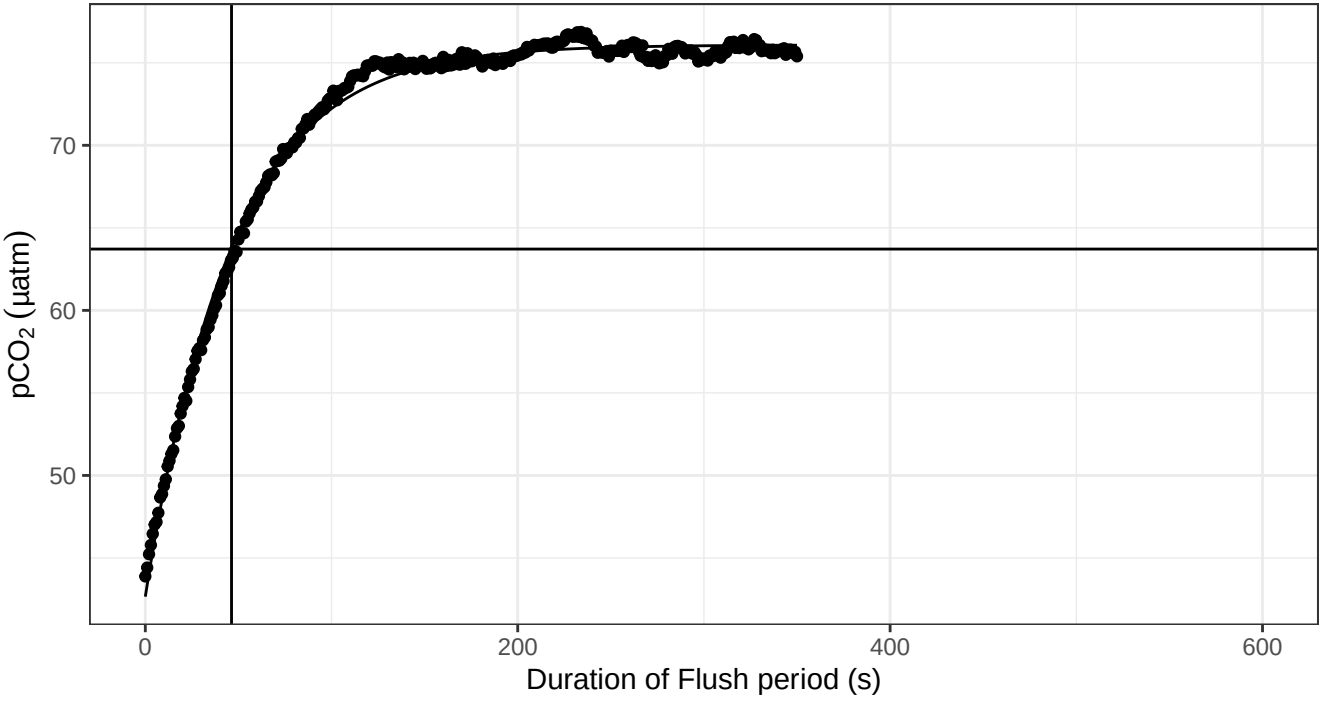

Zero_counter: 46 Tau: 48.3 Mean absolute residual (%): 0.61
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

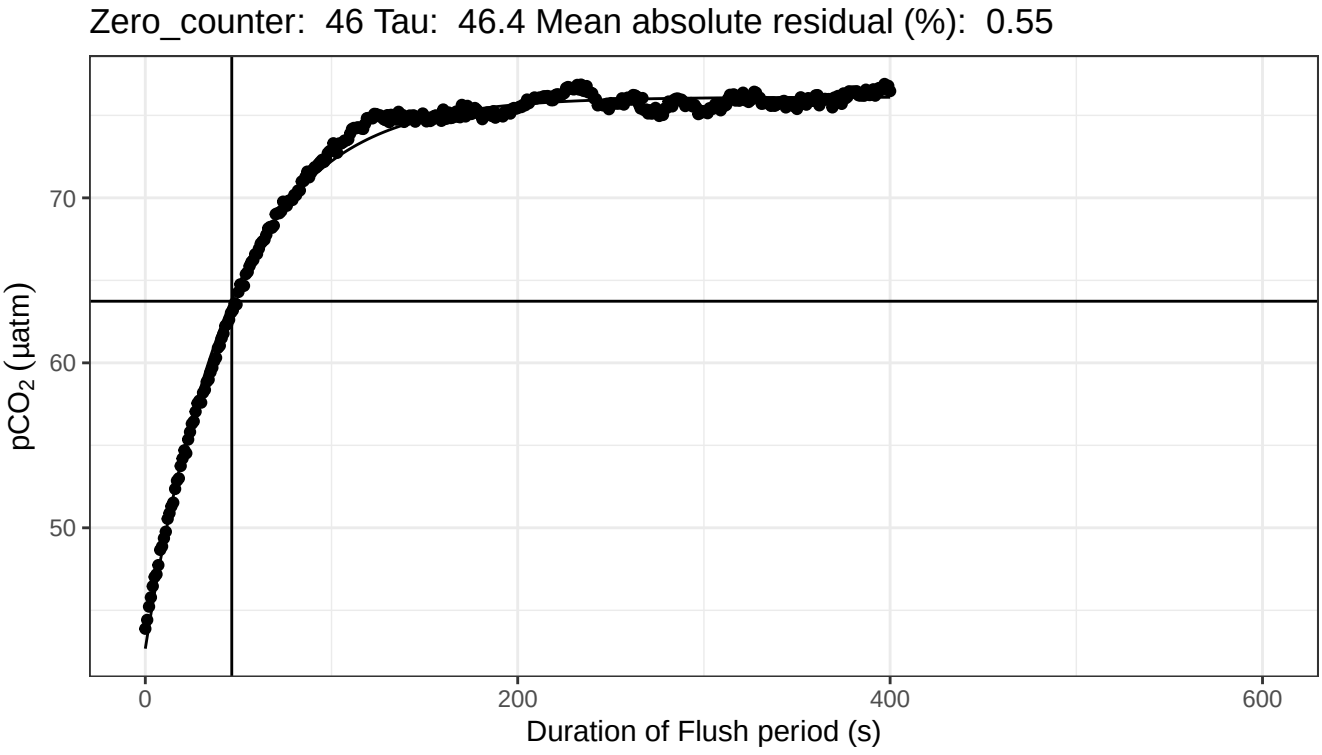
Zero_counter: 46 Tau: 48.2 Mean absolute residual (%): 0.57



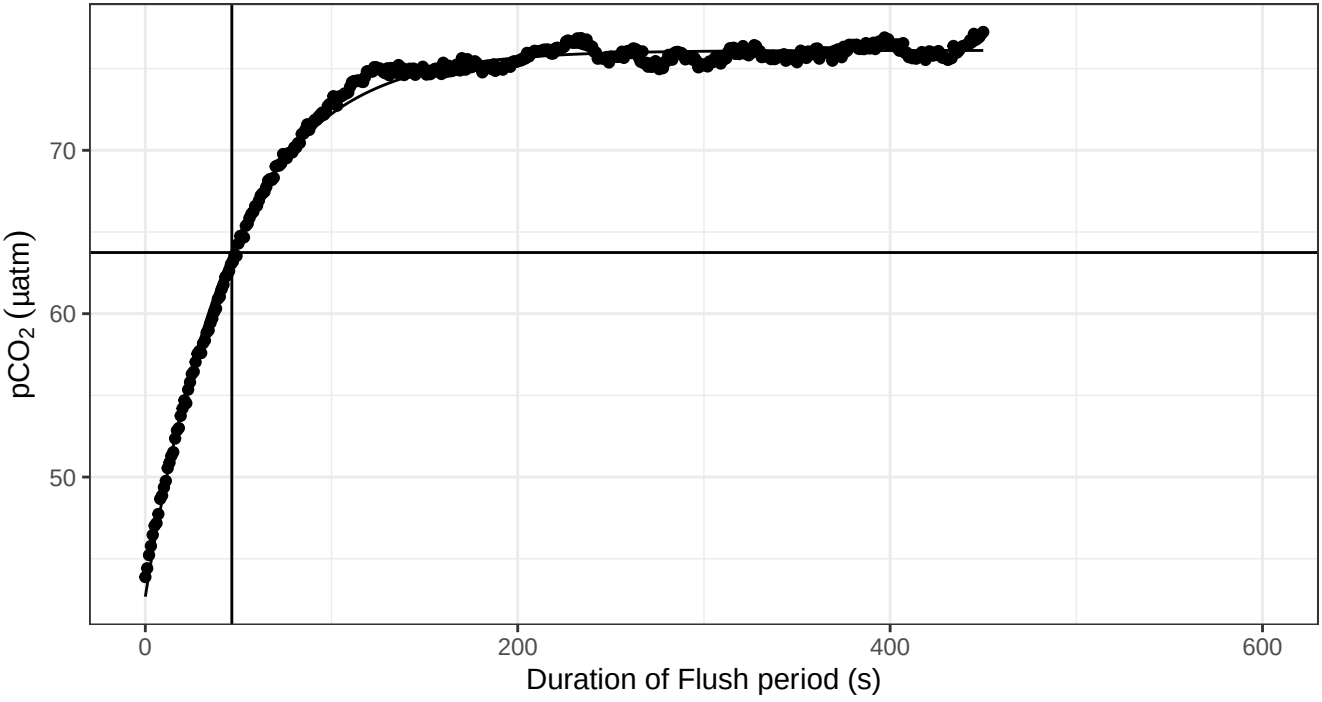

Zero_counter: 46 Tau: 46.8 Mean absolute residual (%): 0.6
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

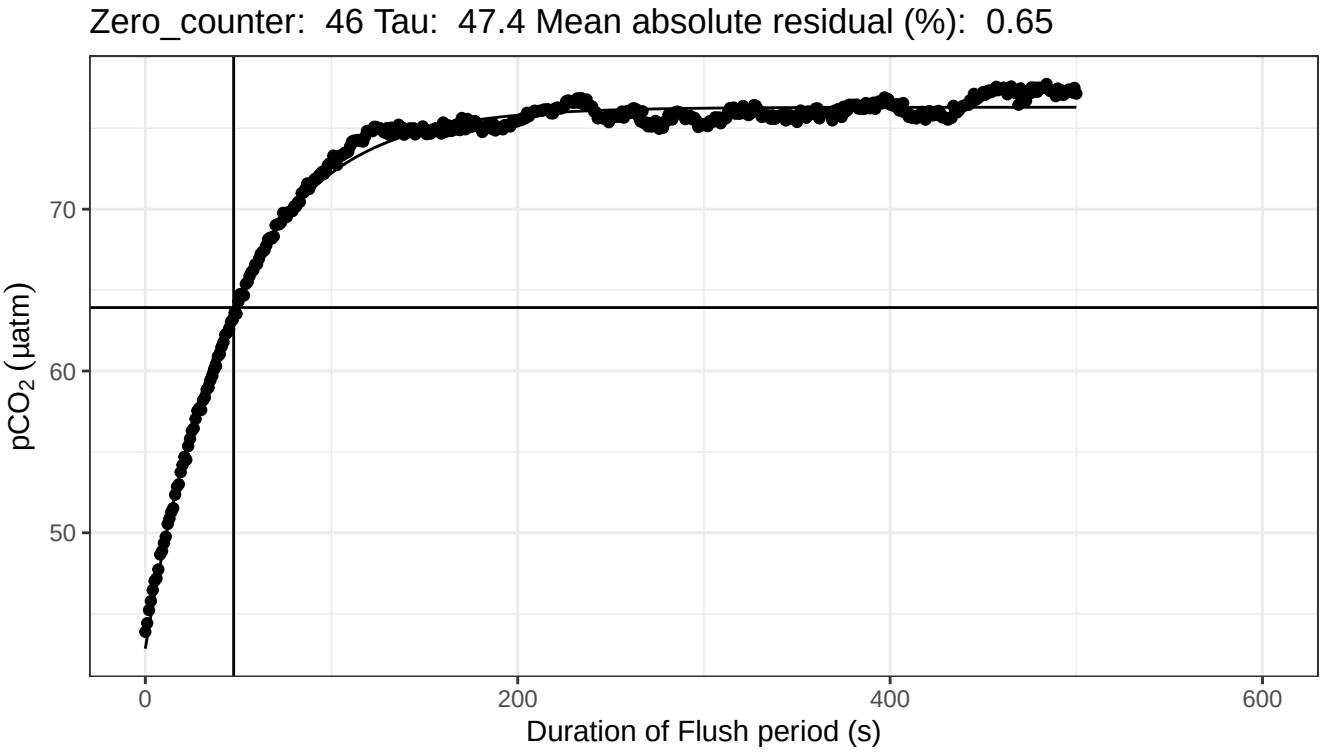
Zero_counter: 46 Tau: 46.3 Mean absolute residual (%): 0.58



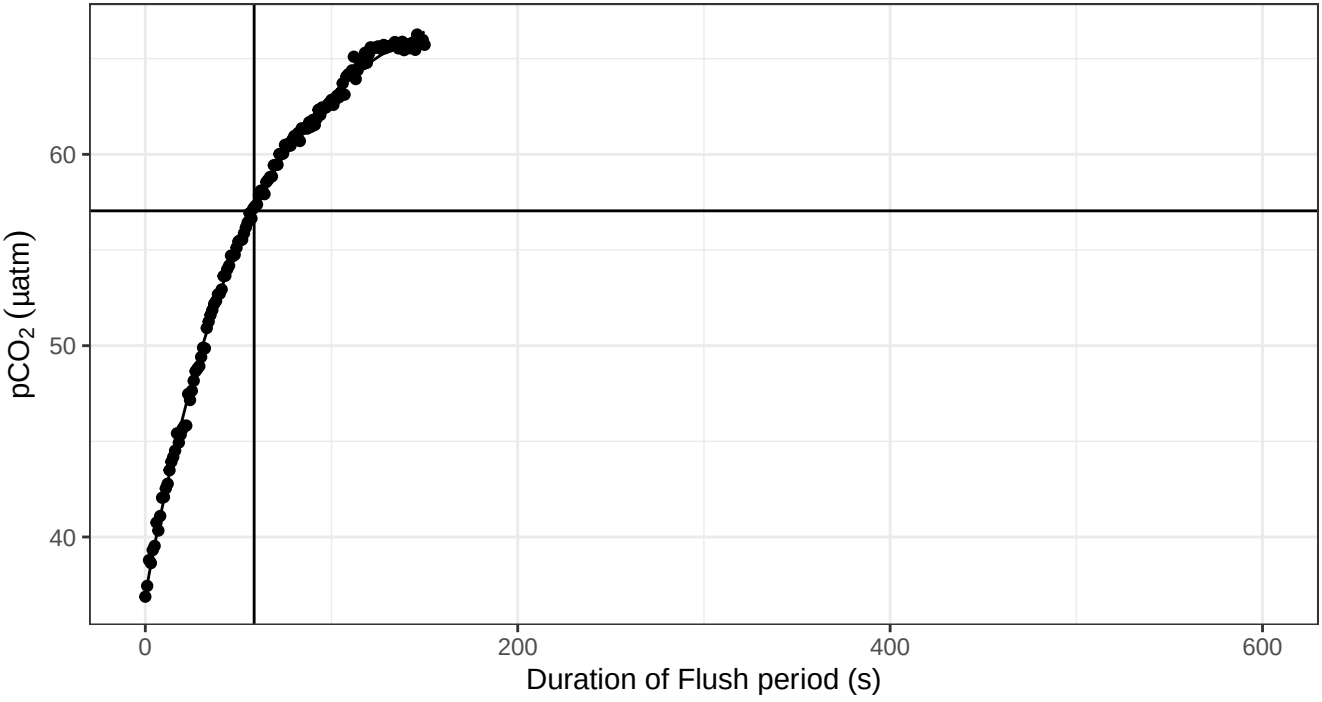

Zero_counter: 46 Tau: 46.4 Mean absolute residual (%): 0.55
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 46 Tau: 46.5 Mean absolute residual (%): 0.54

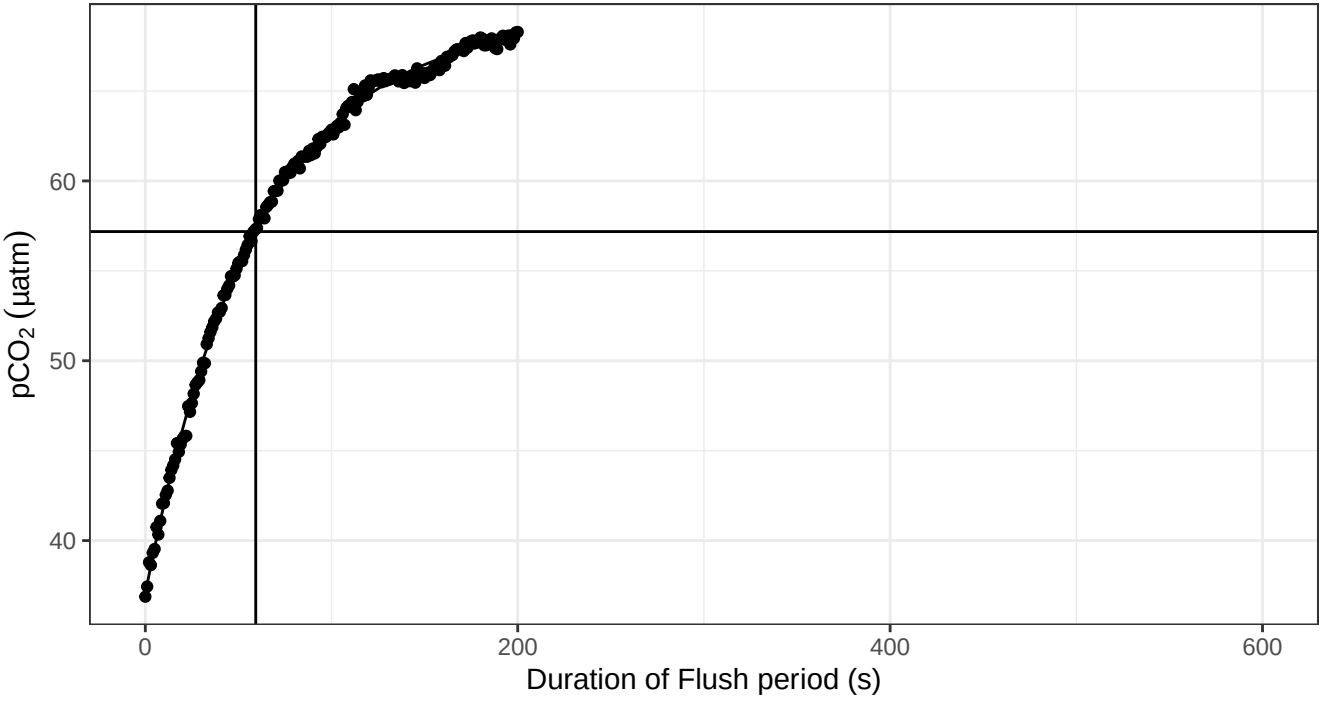


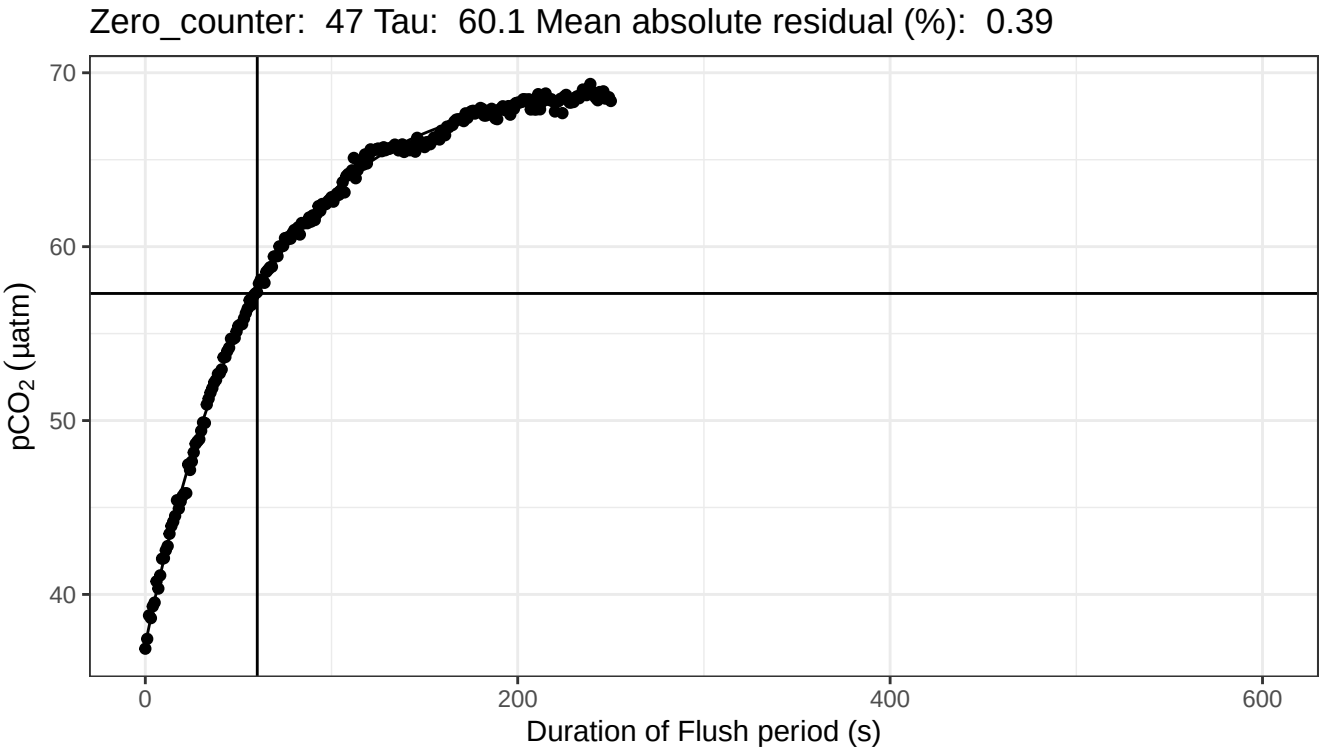

Zero_counter: 46 Tau: 47.4 Mean absolute residual (%): 0.65
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

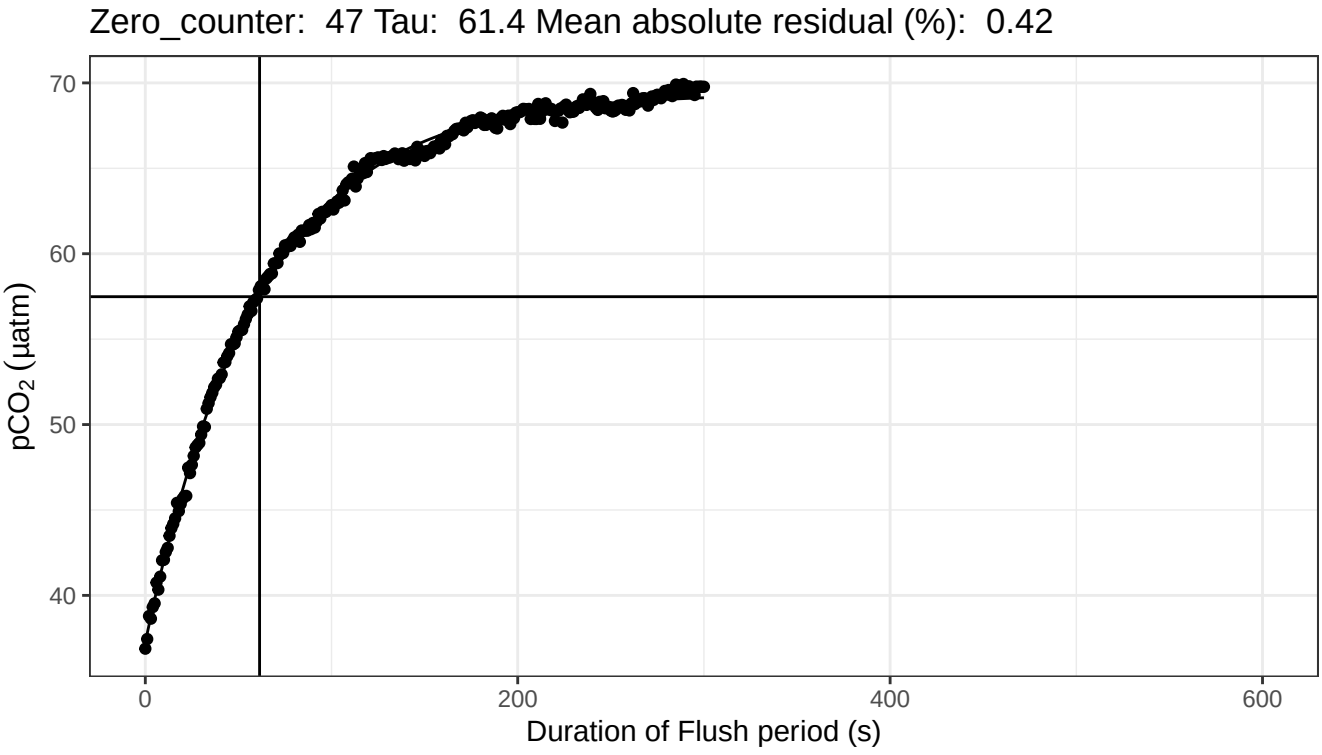
Zero_counter: 47 Tau: 58.4 Mean absolute residual (%): 0.41



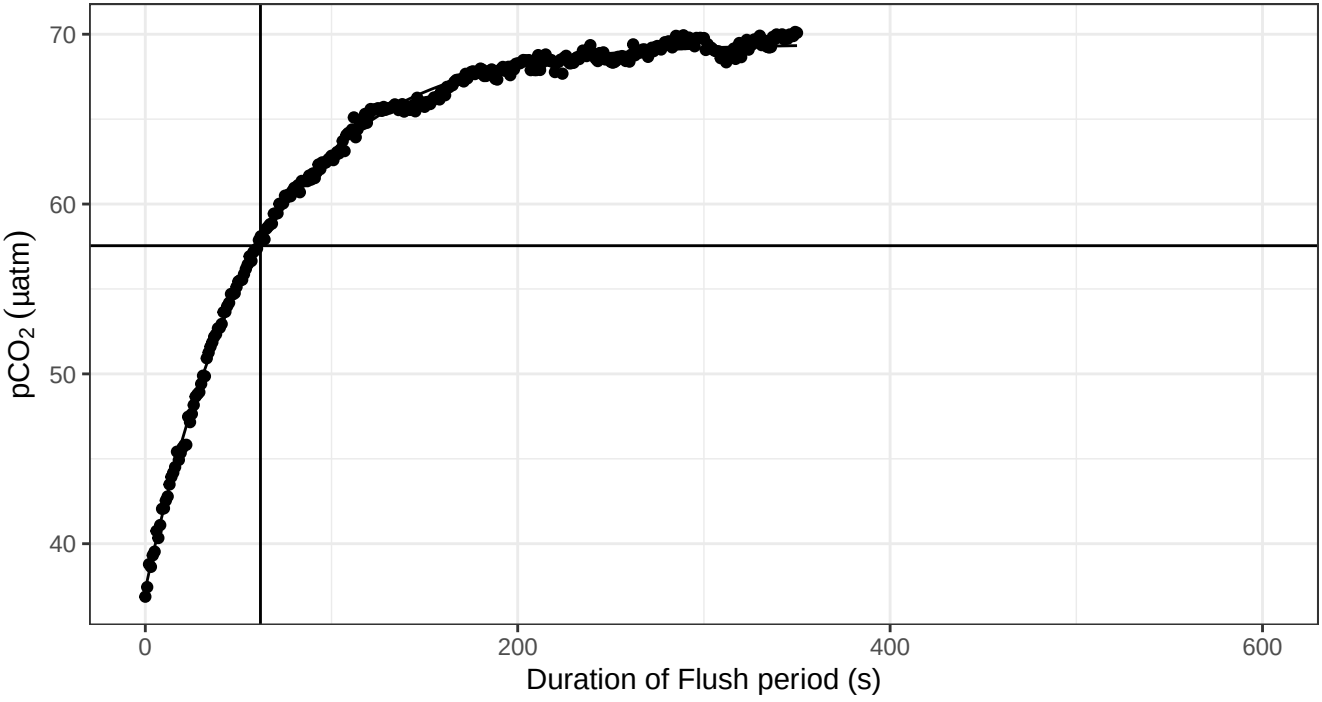
Zero_counter: 47 Tau: 59.3 Mean absolute residual (%): 0.4

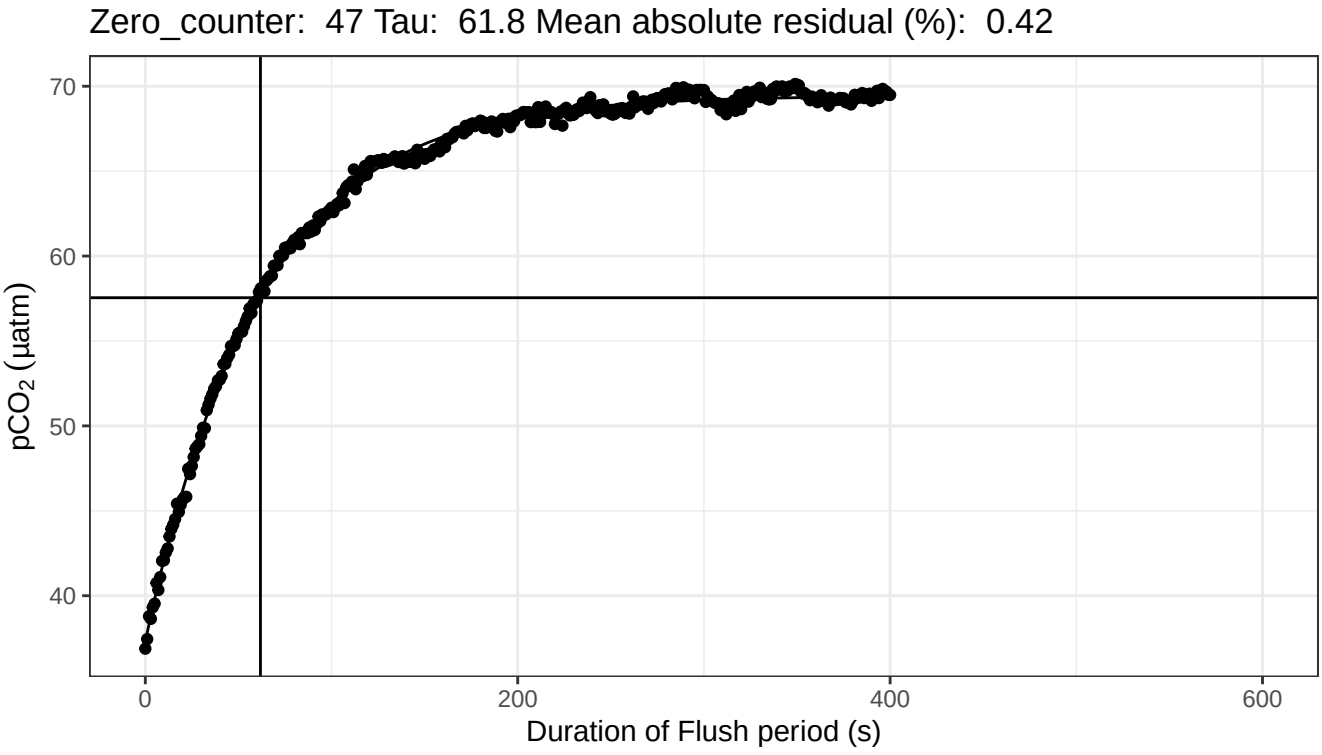



Zero_counter: 47 Tau: 60.1 Mean absolute residual (%): 0.39
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

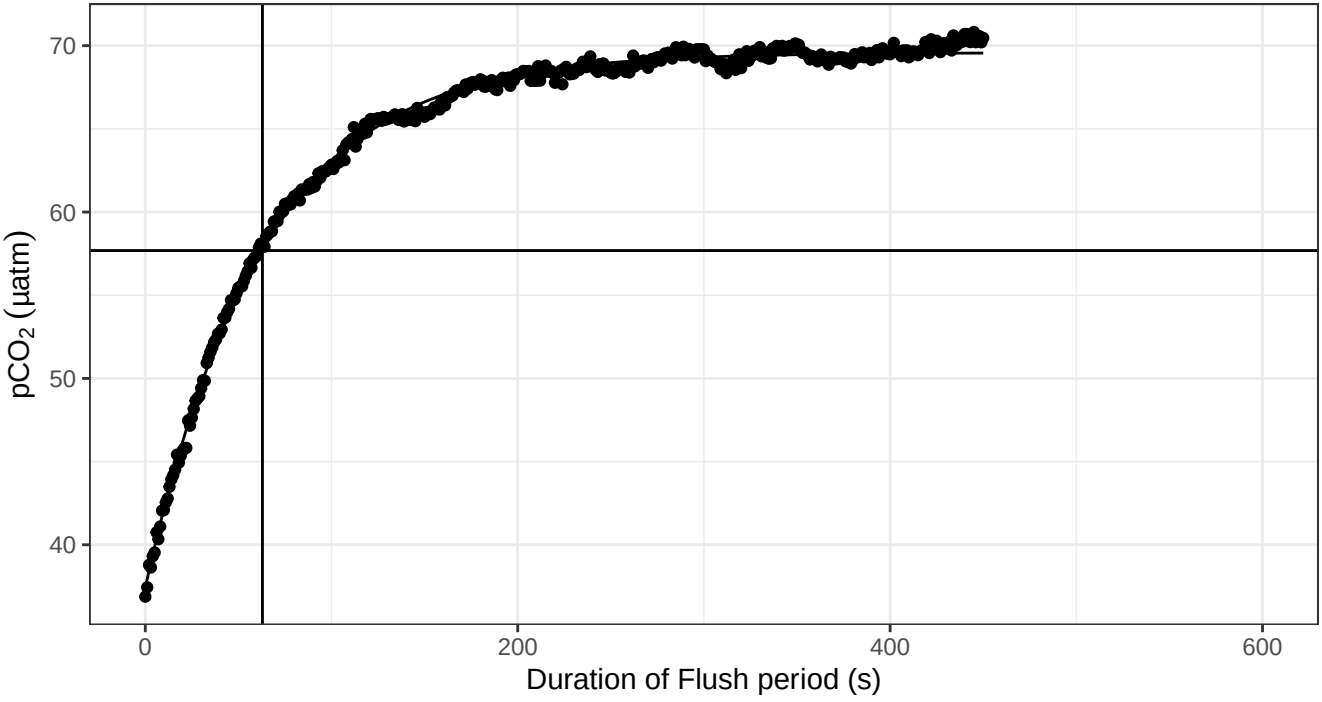

Zero_counter: 47 Tau: 61.4 Mean absolute residual (%): 0.42
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

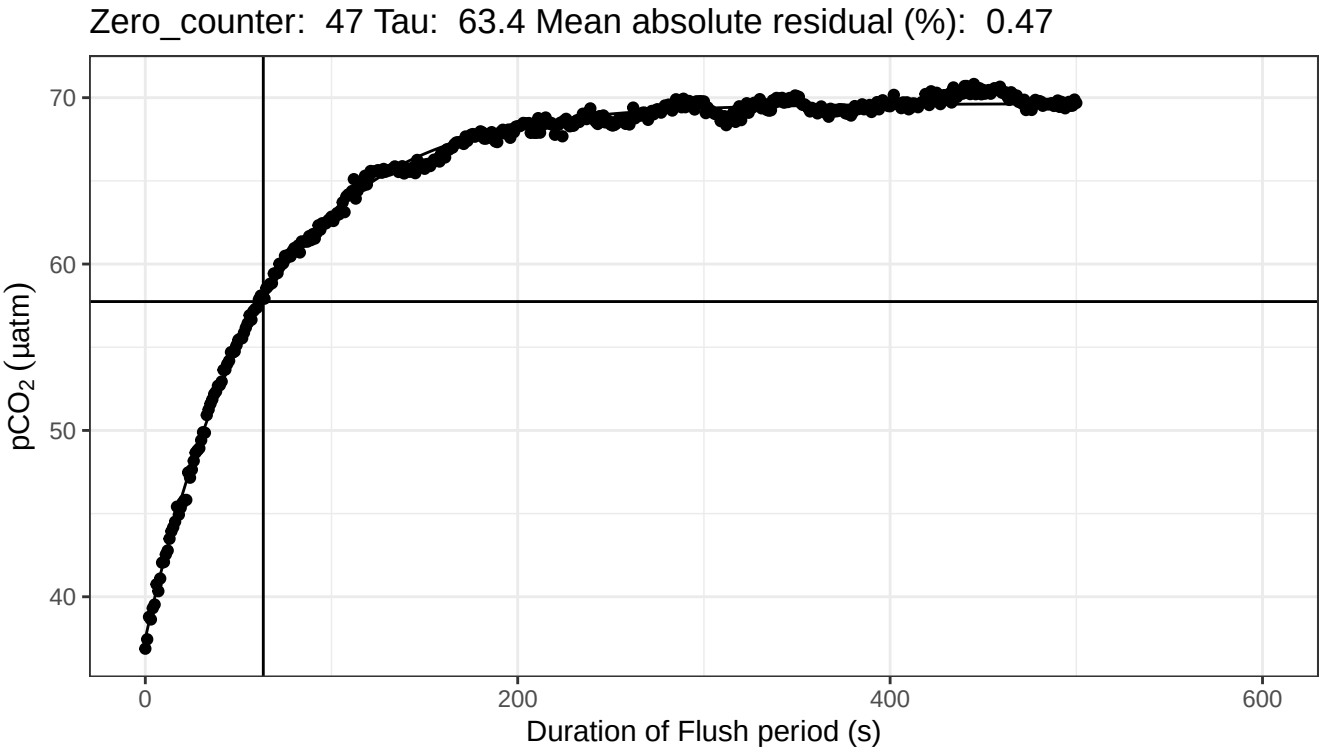
Zero_counter: 47 Tau: 61.8 Mean absolute residual (%): 0.44



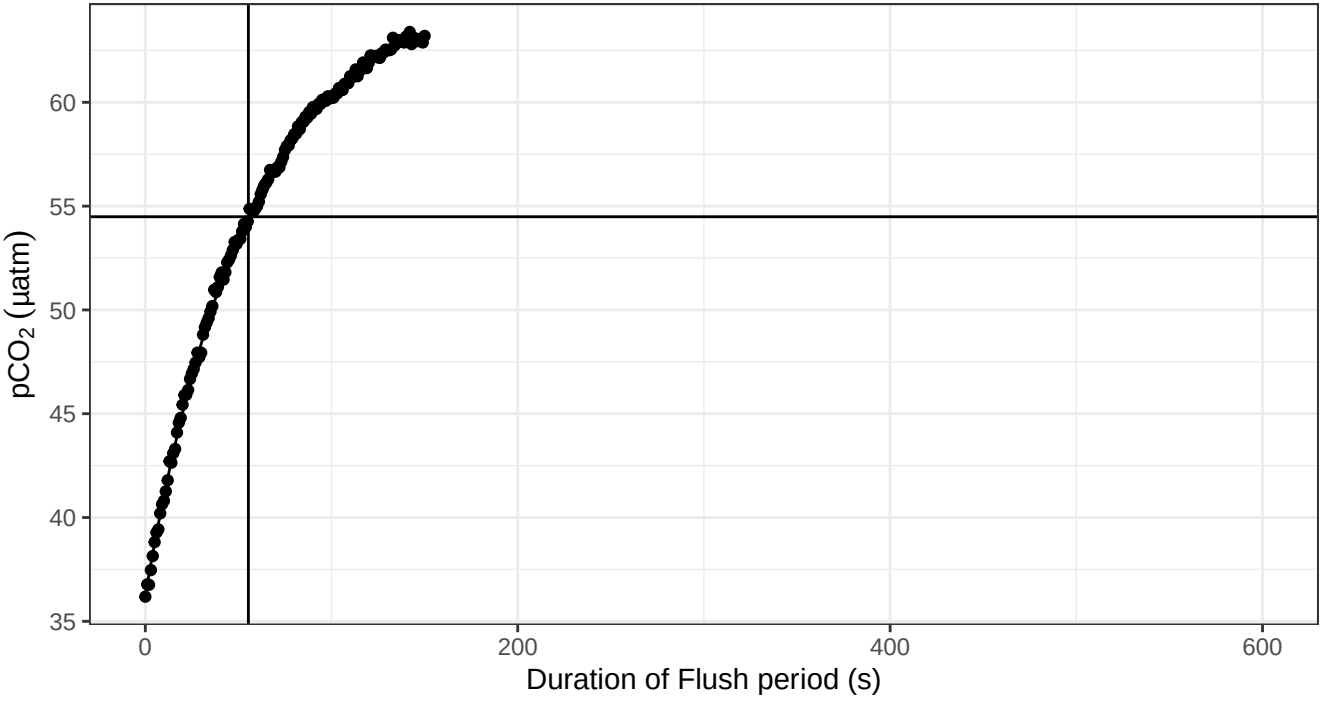

Zero_counter: 47 Tau: 61.8 Mean absolute residual (%): 0.42
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

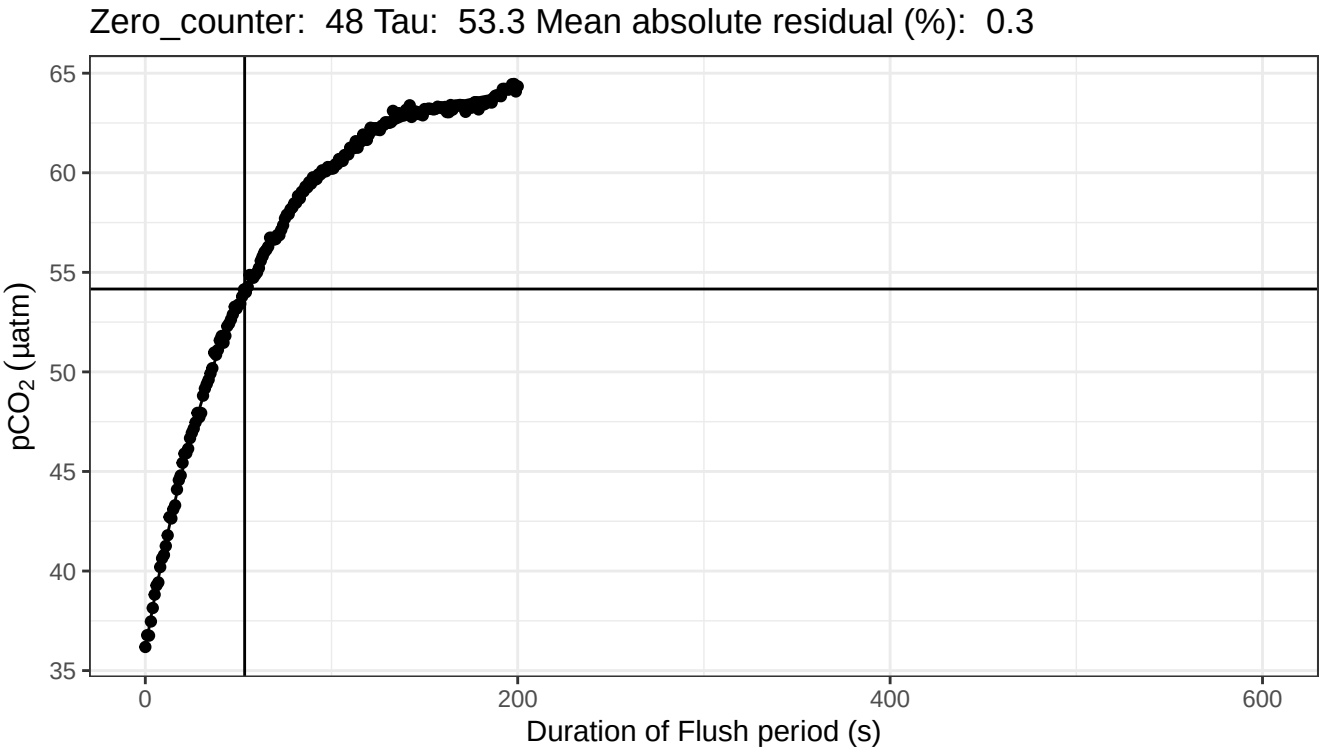
Zero_counter: 47 Tau: 62.9 Mean absolute residual (%): 0.47



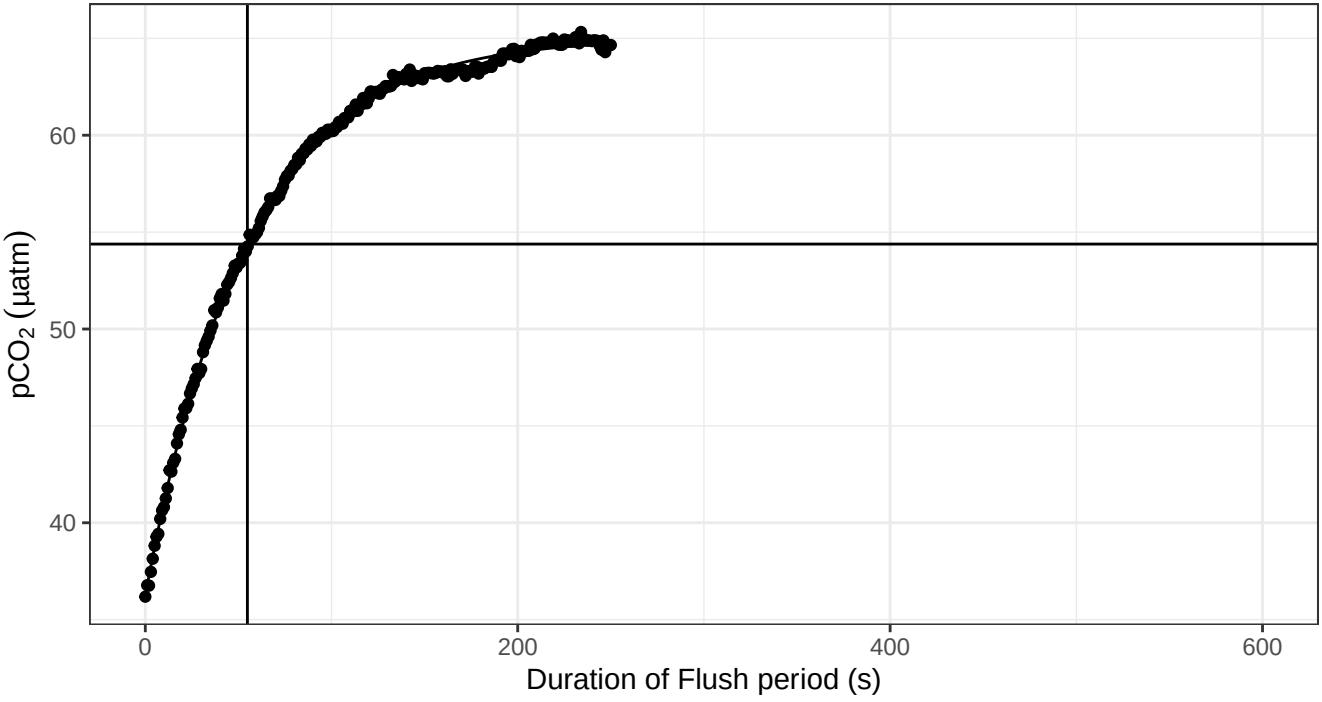

Zero_counter: 47 Tau: 63.4 Mean absolute residual (%): 0.47
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 48 Tau: 55.4 Mean absolute residual (%): 0.26

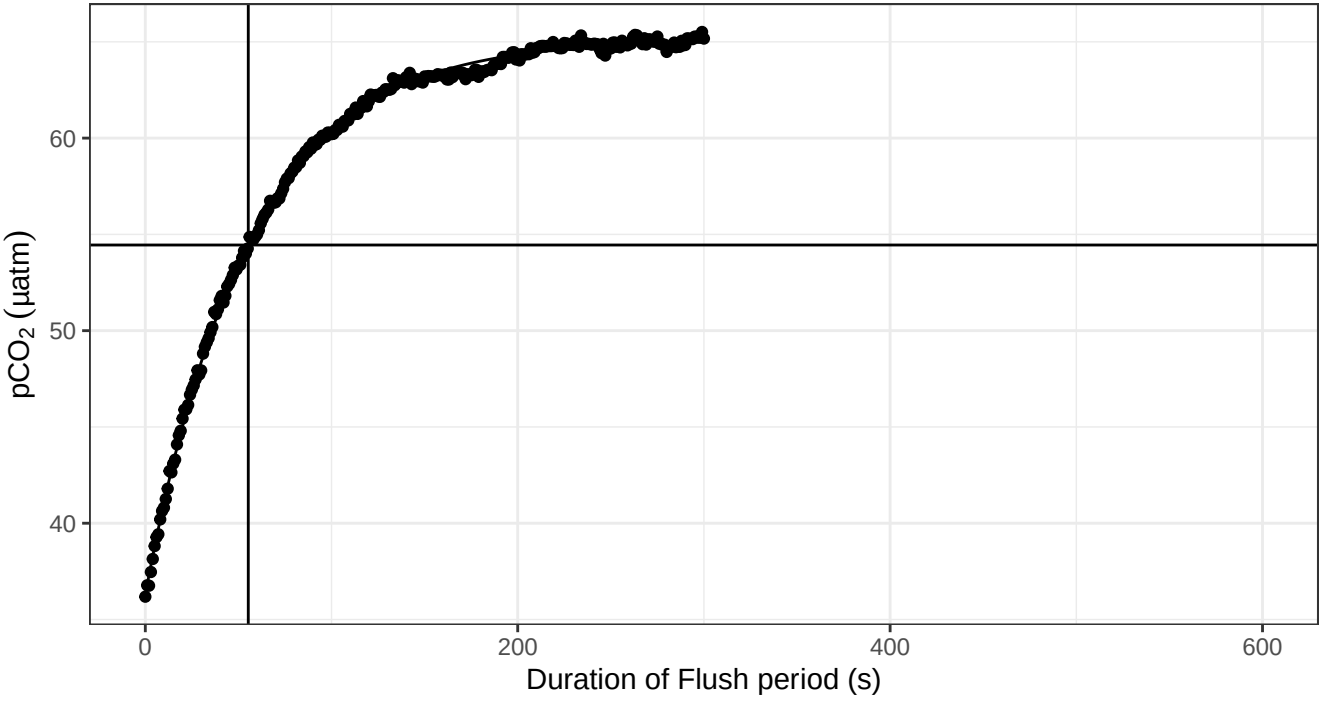



Zero_counter: 48 Tau: 53.3 Mean absolute residual (%): 0.3
65
60
55
50
45
40
35
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

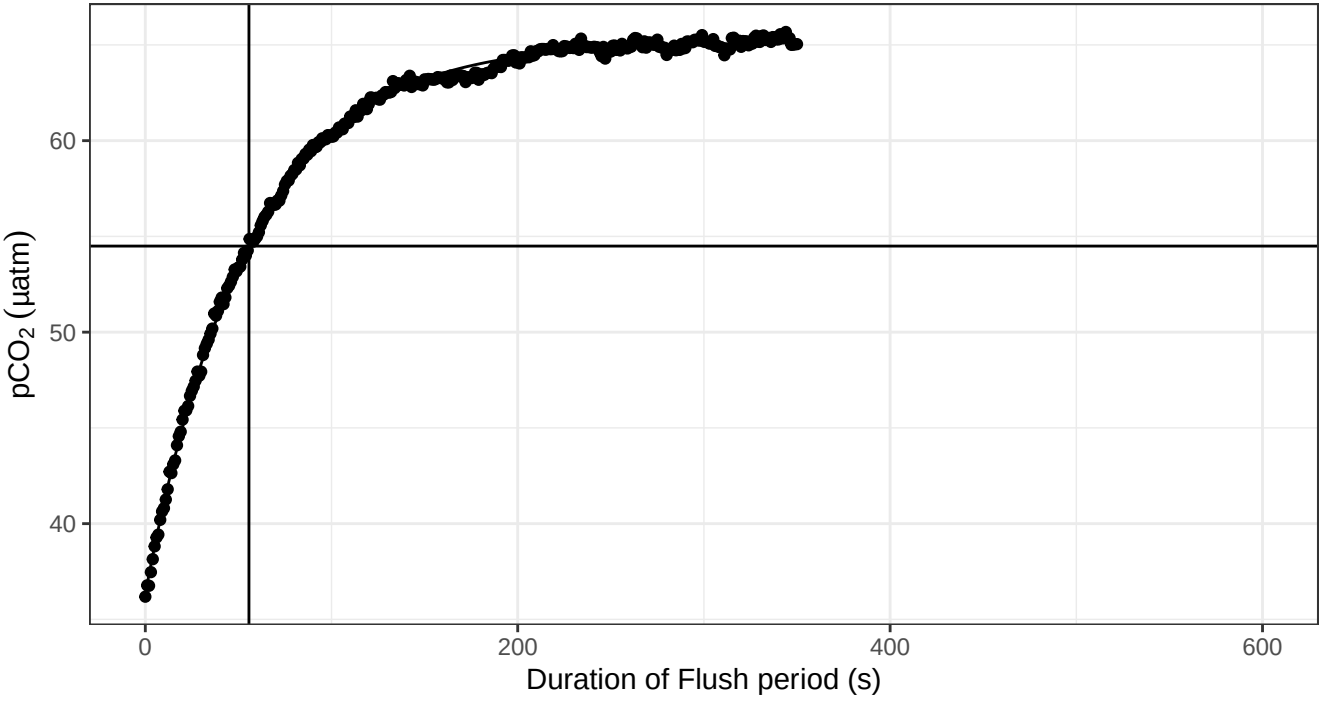
Zero_counter: 48 Tau: 54.8 Mean absolute residual (%): 0.32



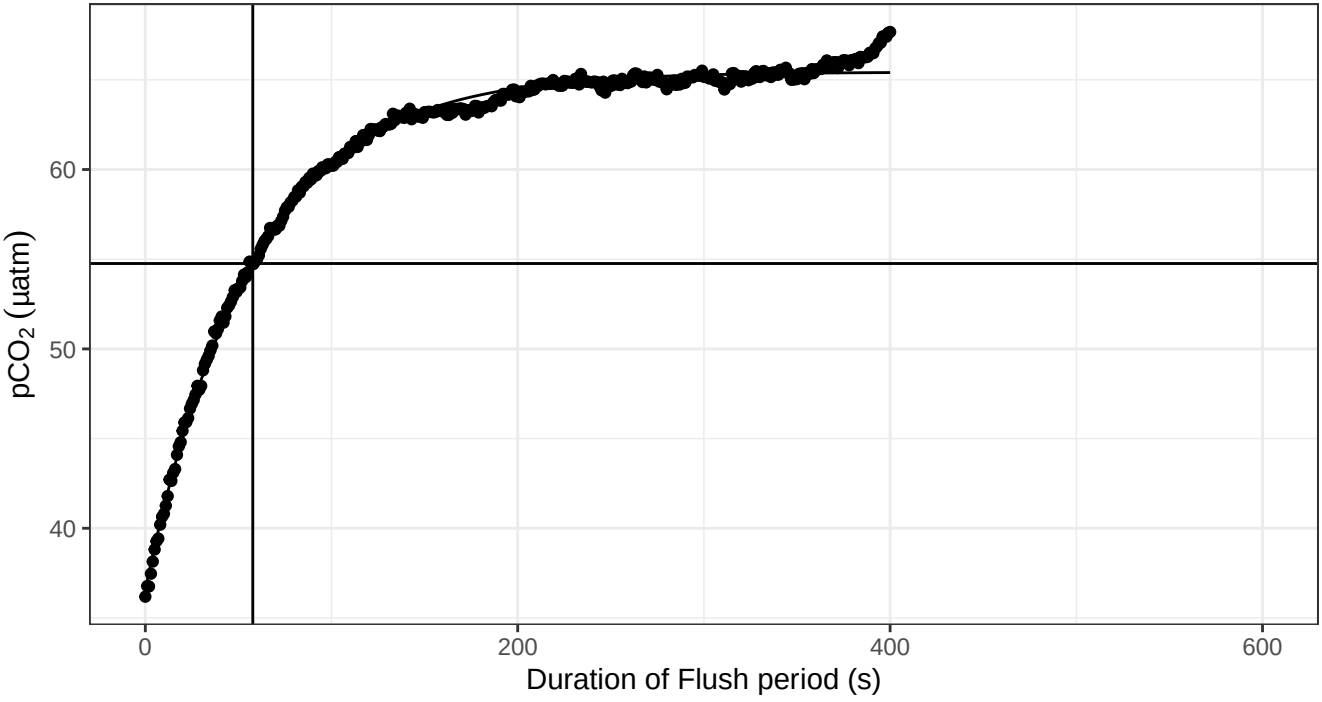
Zero_counter: 48 Tau: 55.3 Mean absolute residual (%): 0.32



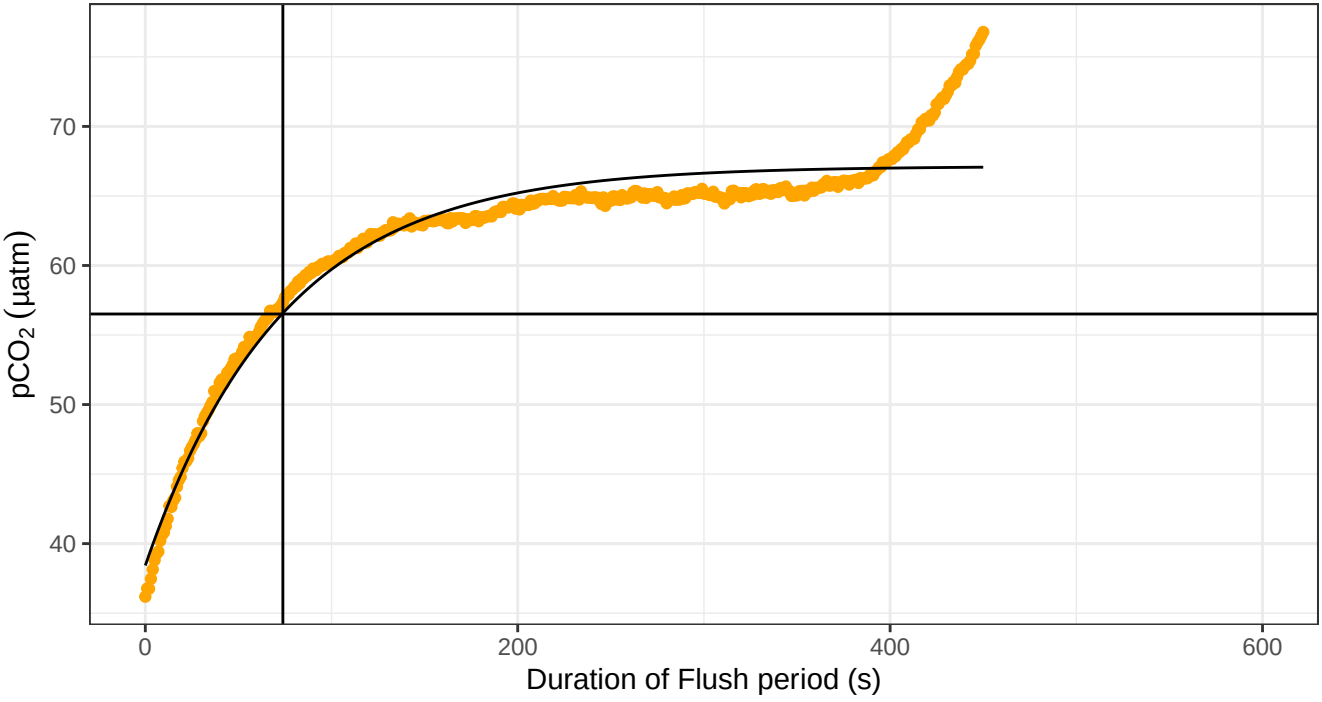
Zero_counter: 48 Tau: 55.6 Mean absolute residual (%): 0.32

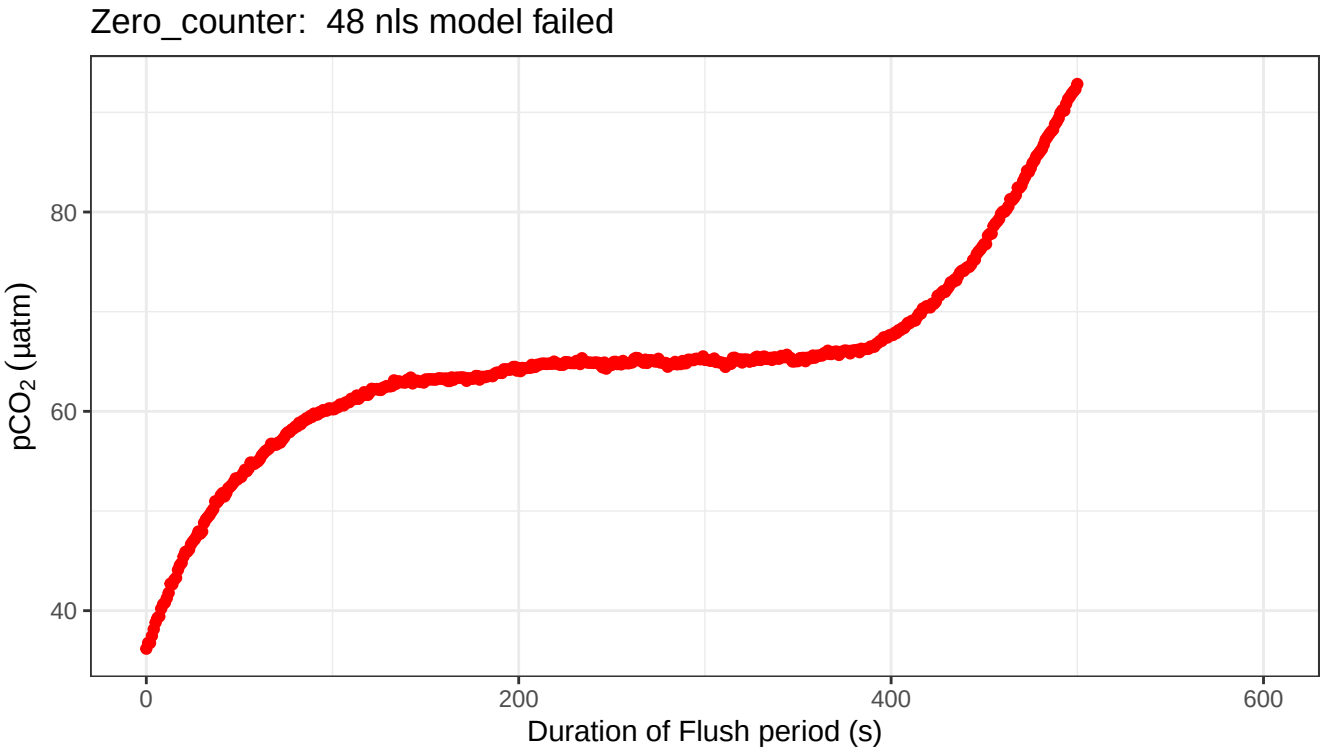


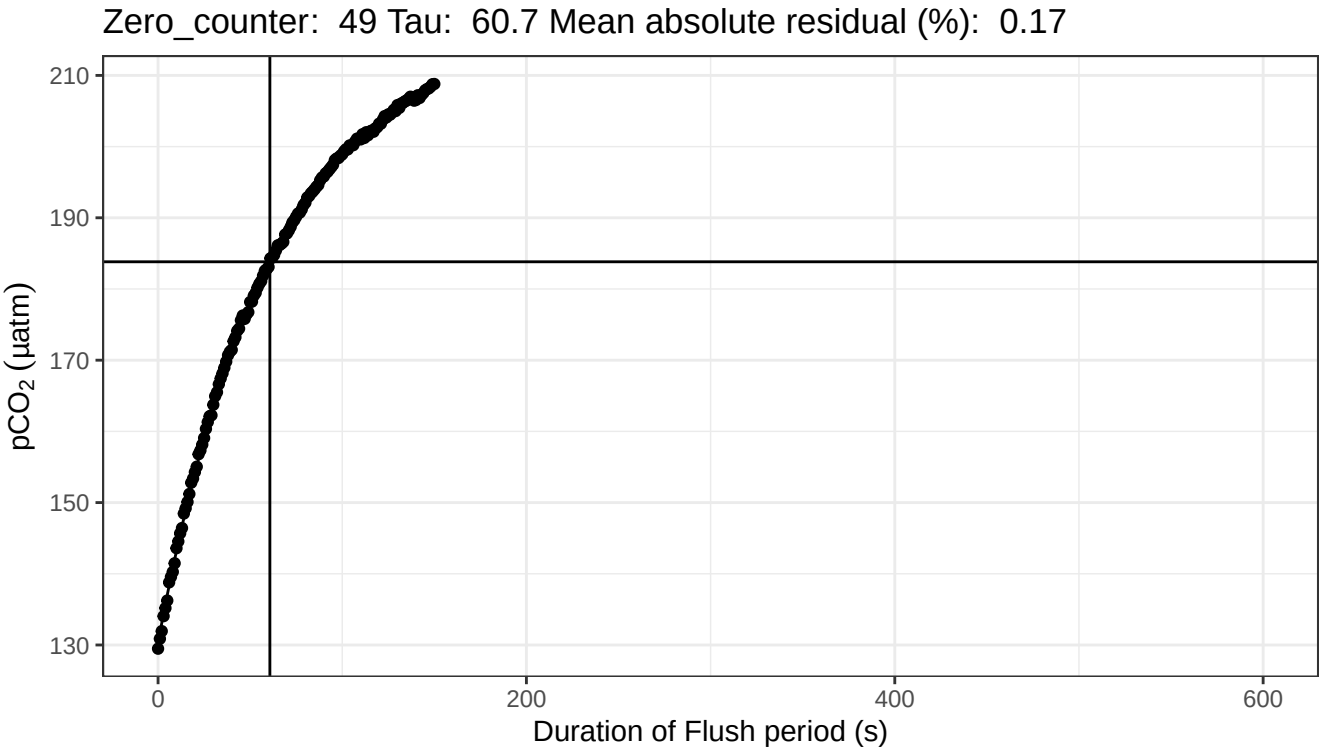
Zero_counter: 48 Tau: 57.7 Mean absolute residual (%): 0.46

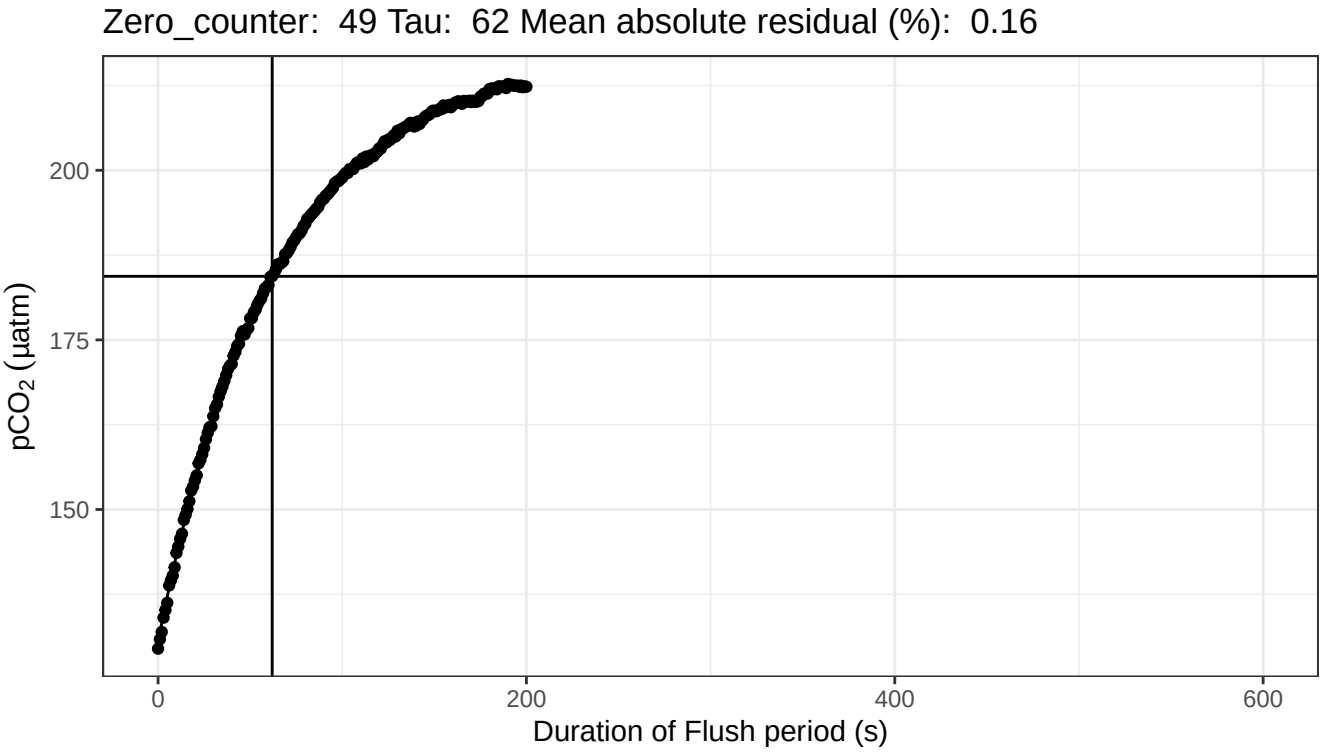


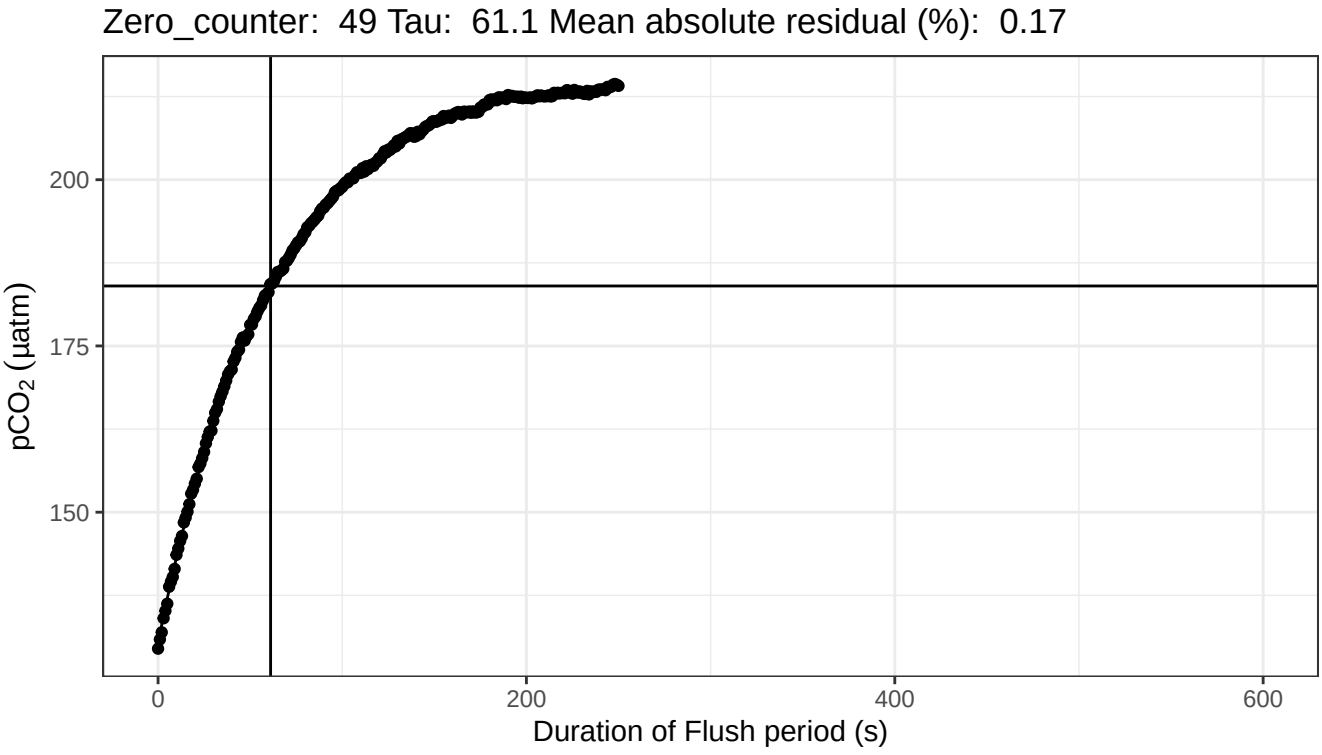
Zero_counter: 48 Tau: 73.9 Mean absolute residual (%): 2.09

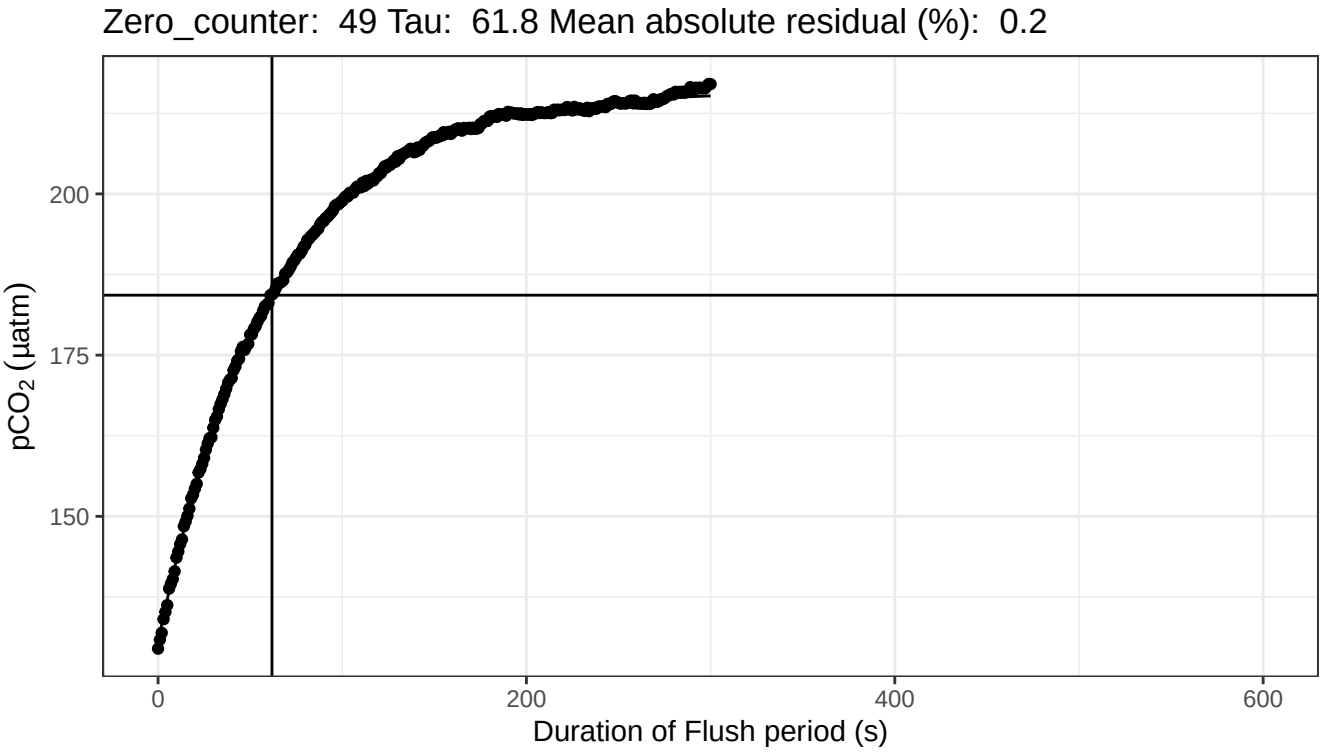


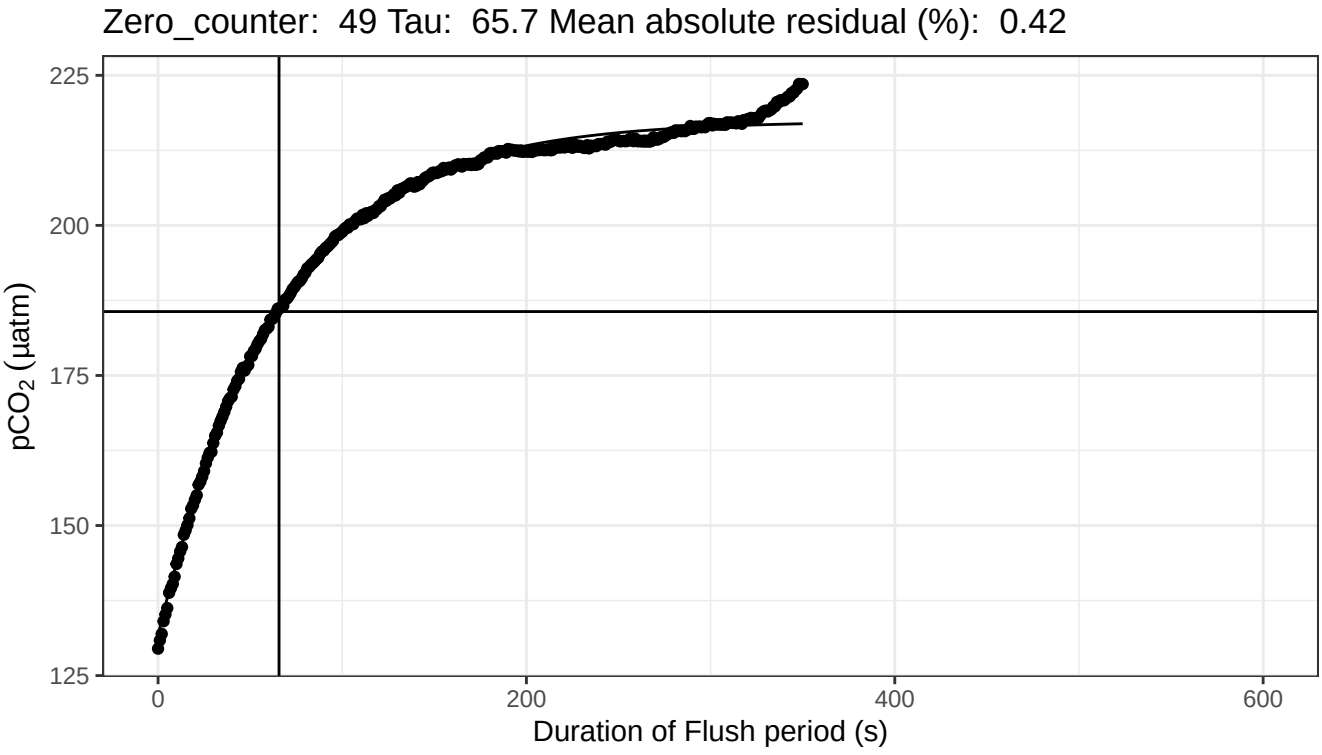

Zero_counter: 48 nls model failed
80
60
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

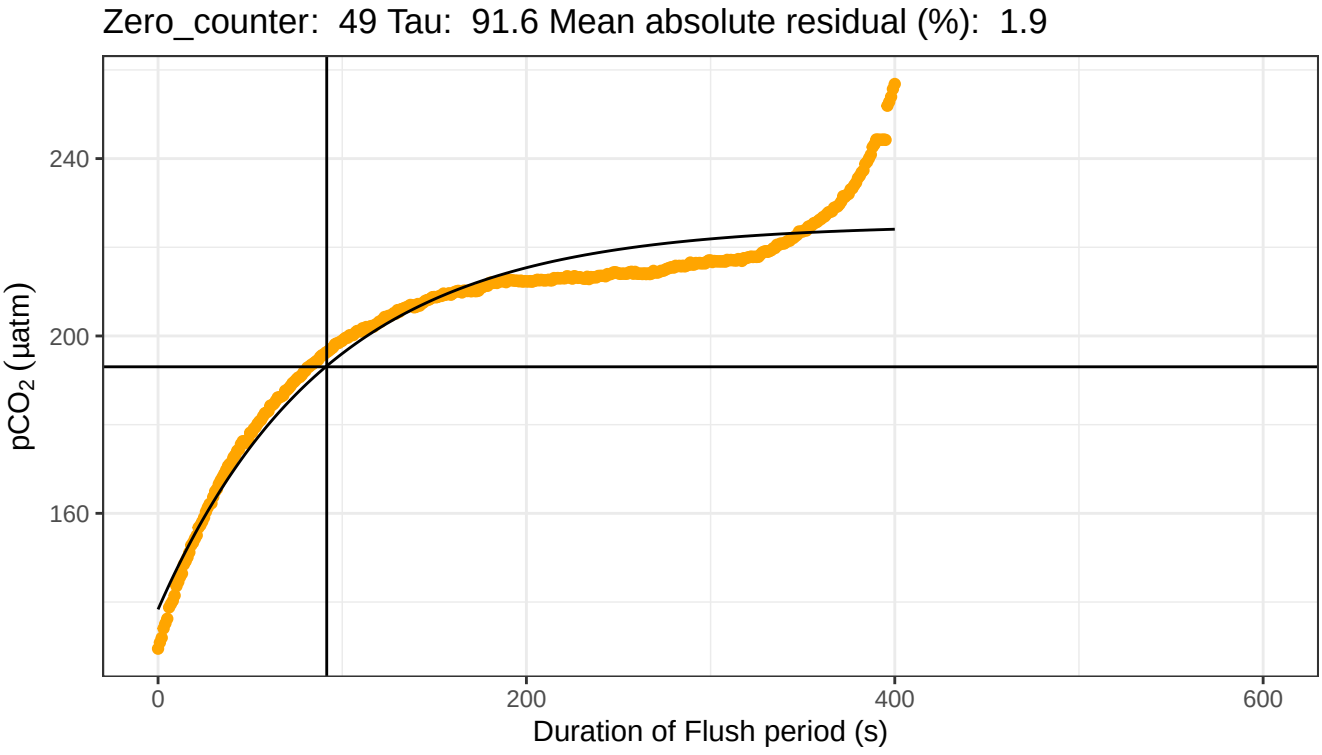

Zero_counter: 49 Tau: 60.7 Mean absolute residual (%): 0.17
210
190
170
150
130
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

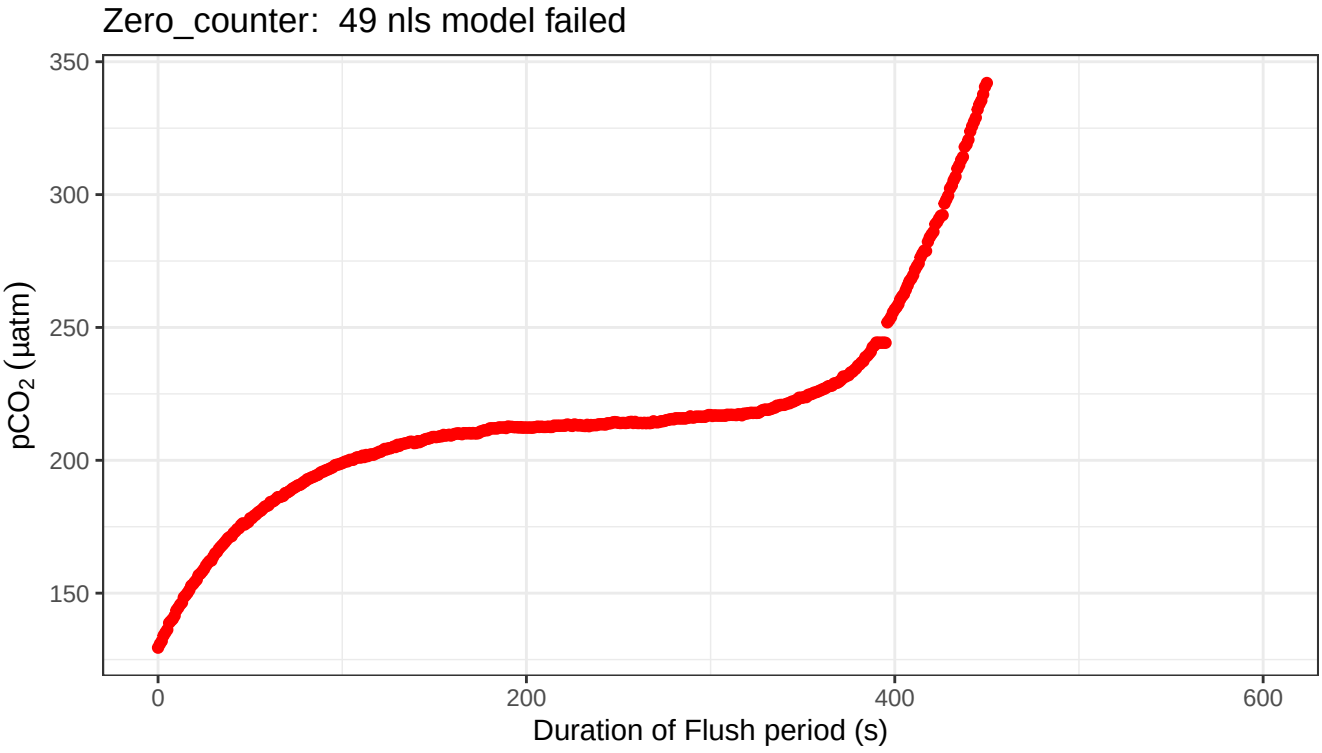

Zero_counter: 49 Tau: 62 Mean absolute residual (%): 0.16
200
175
150
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

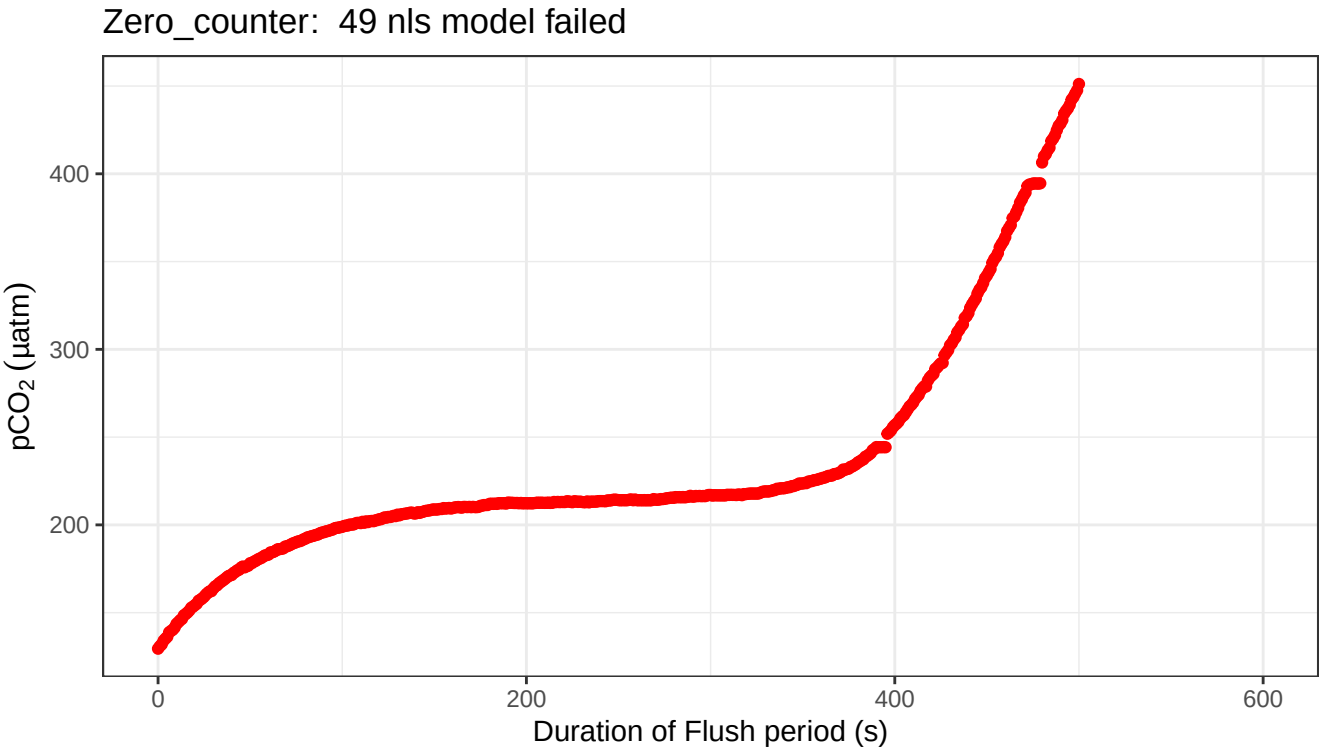

Zero_counter: 49 Tau: 61.1 Mean absolute residual (%): 0.17
200
175
150
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

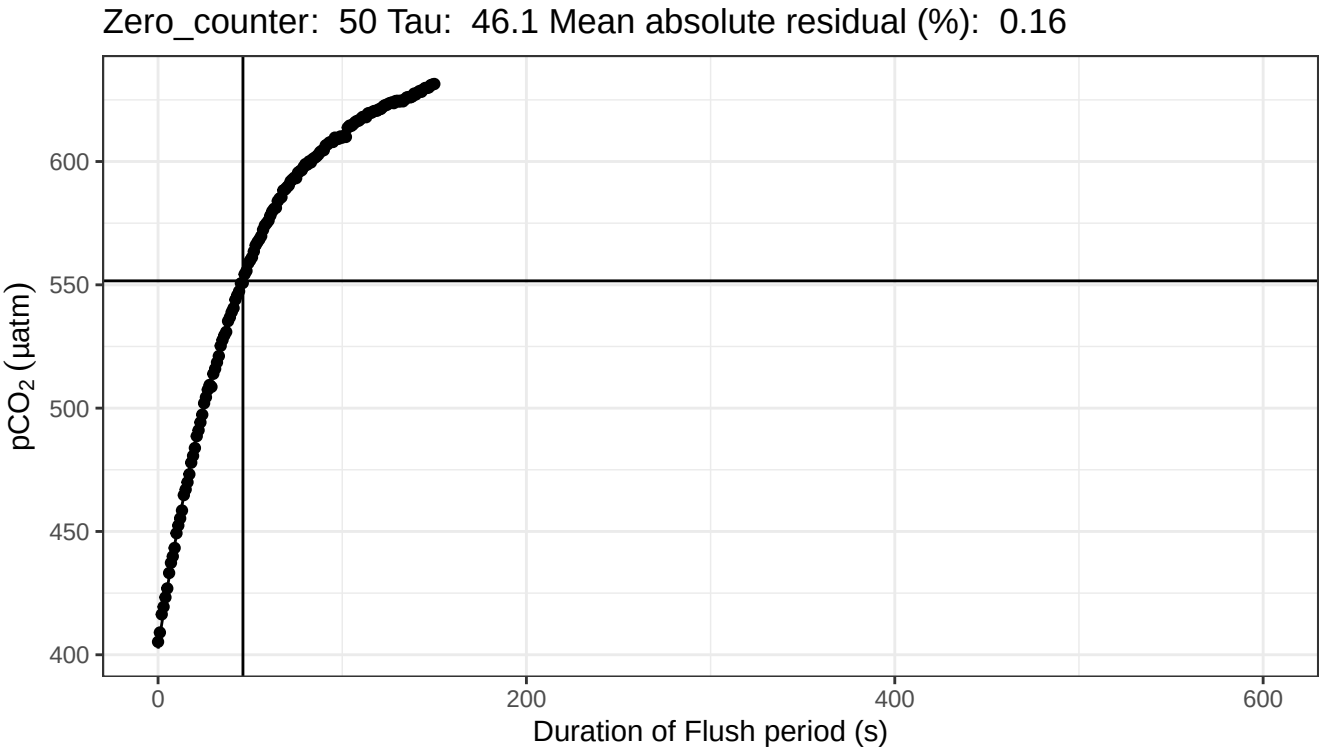

Zero_counter: 49 Tau: 61.8 Mean absolute residual (%): 0.2
pCO2 (µatm)
200
175
150
0
200
400
600
Duration of Flush period (s)

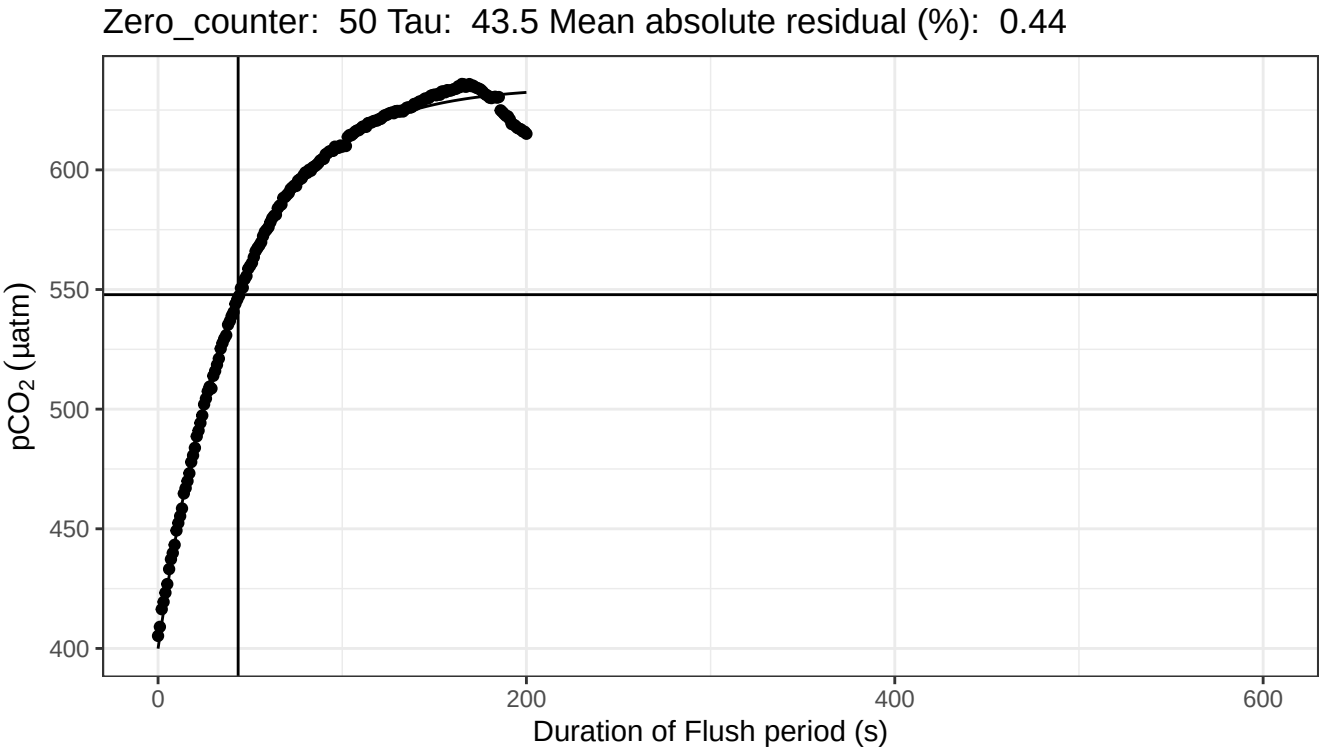

Zero_counter: 49 Tau: 65.7 Mean absolute residual (%): 0.42
225
200
175
150
125
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

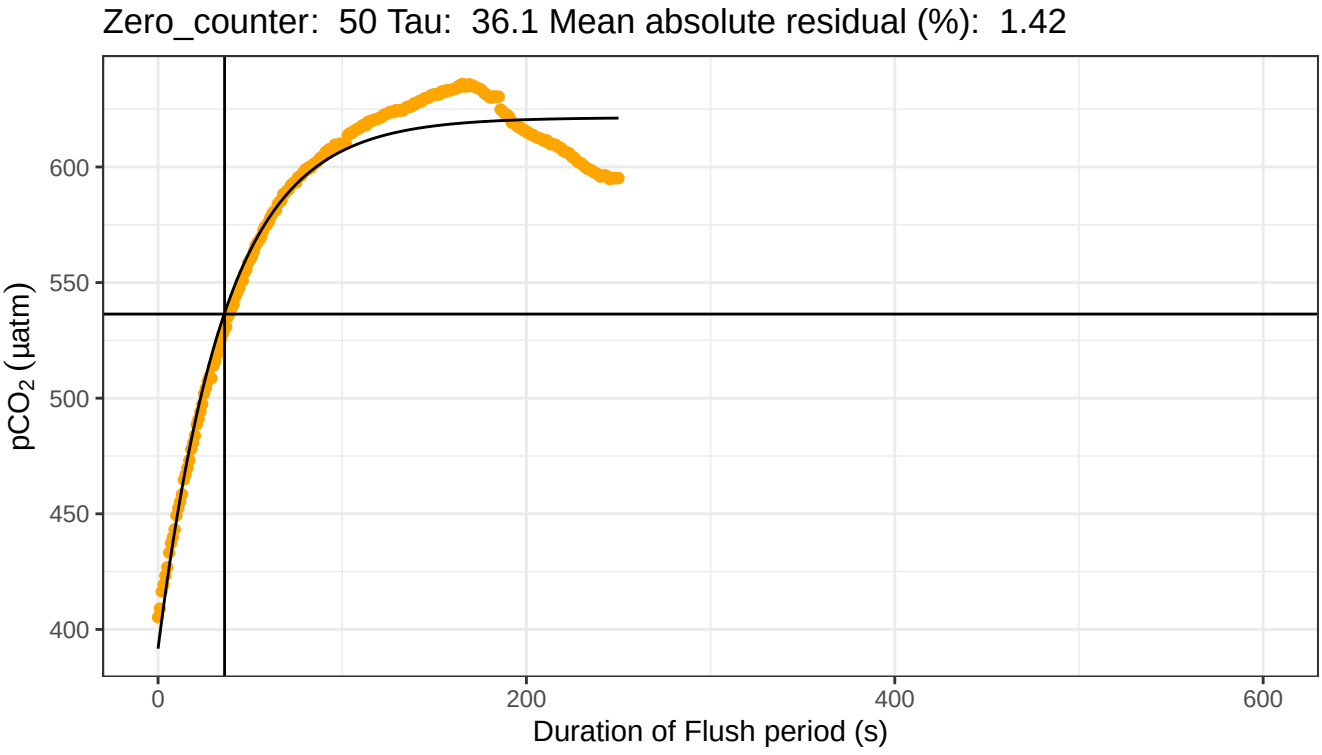

Zero_counter: 49 Tau: 91.6 Mean absolute residual (%): 1.9
240
200
160
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

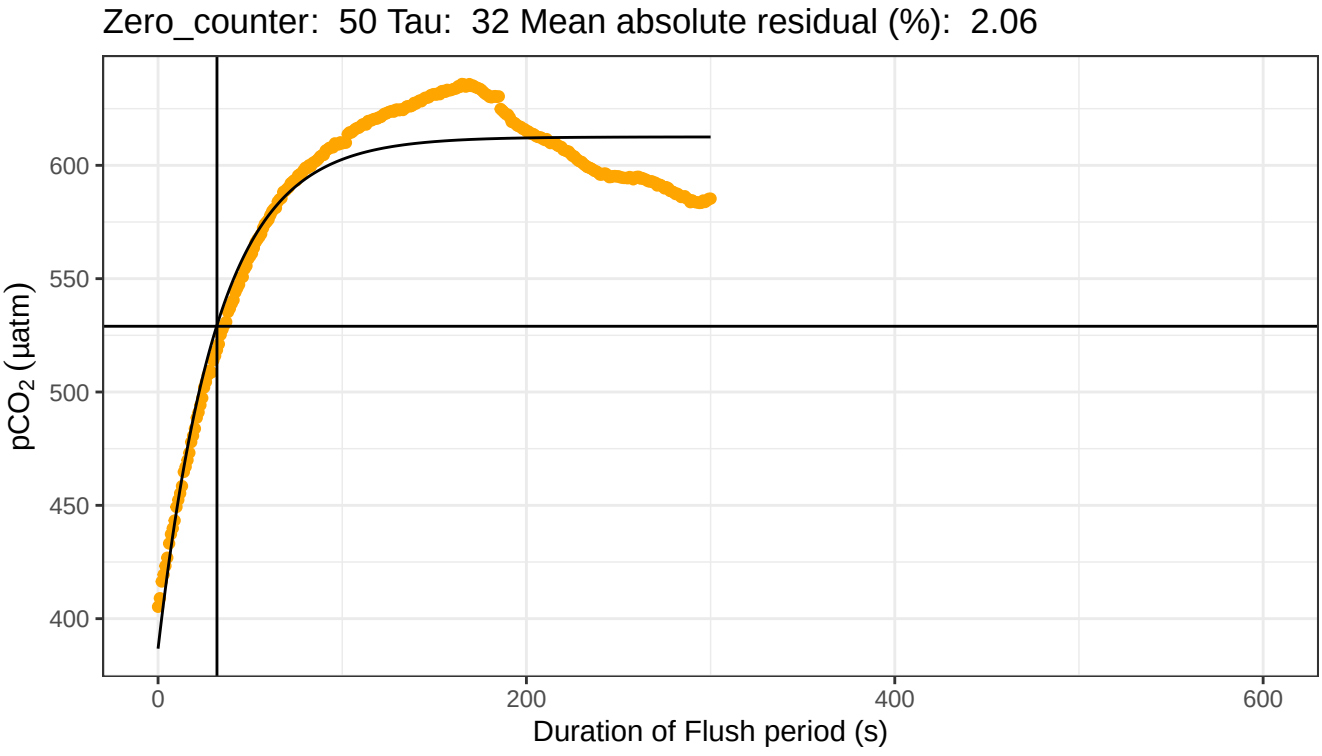

Zero_counter: 49 nls model failed
350
300
250
200
150
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

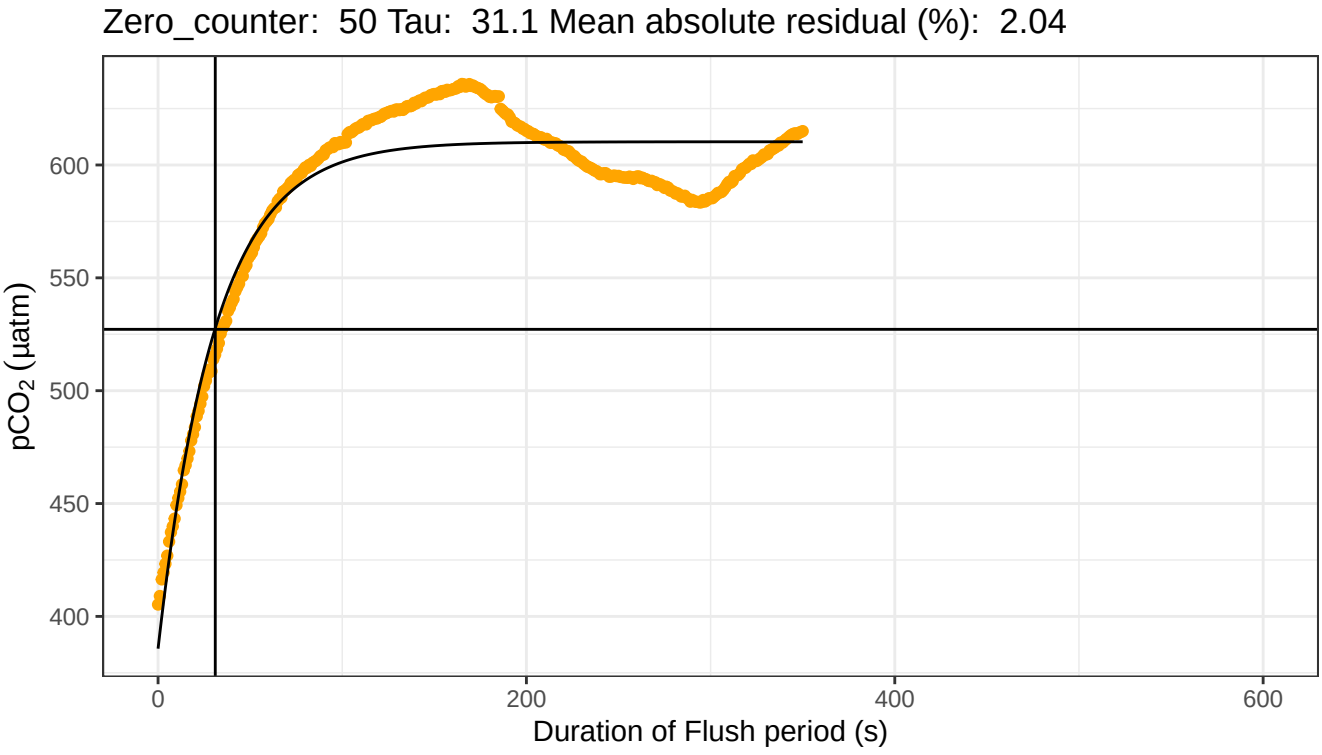

Zero_counter: 49 nls model failed
400
300
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

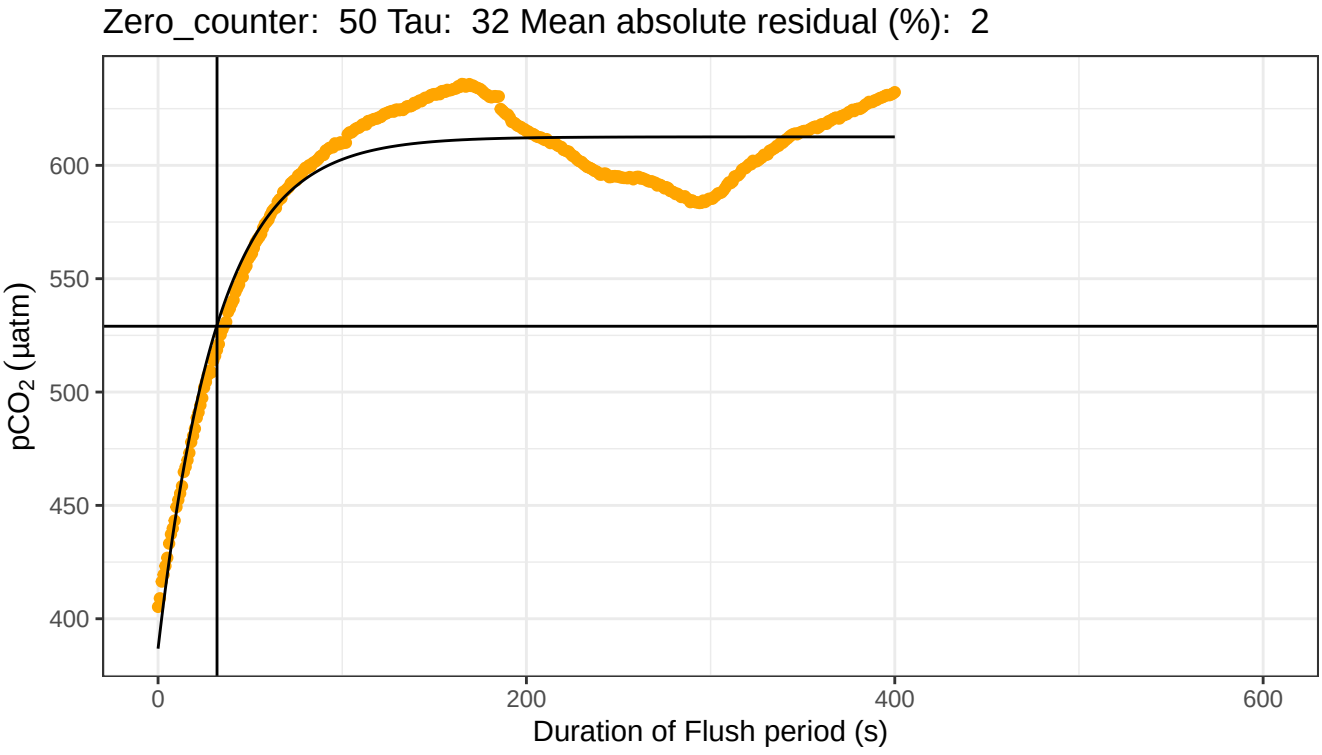

Zero_counter: 50 Tau: 46.1 Mean absolute residual (%): 0.16
pCO2 (µatm)
600
550
500
450
400
0
200
400
600
Duration of Flush period (s)

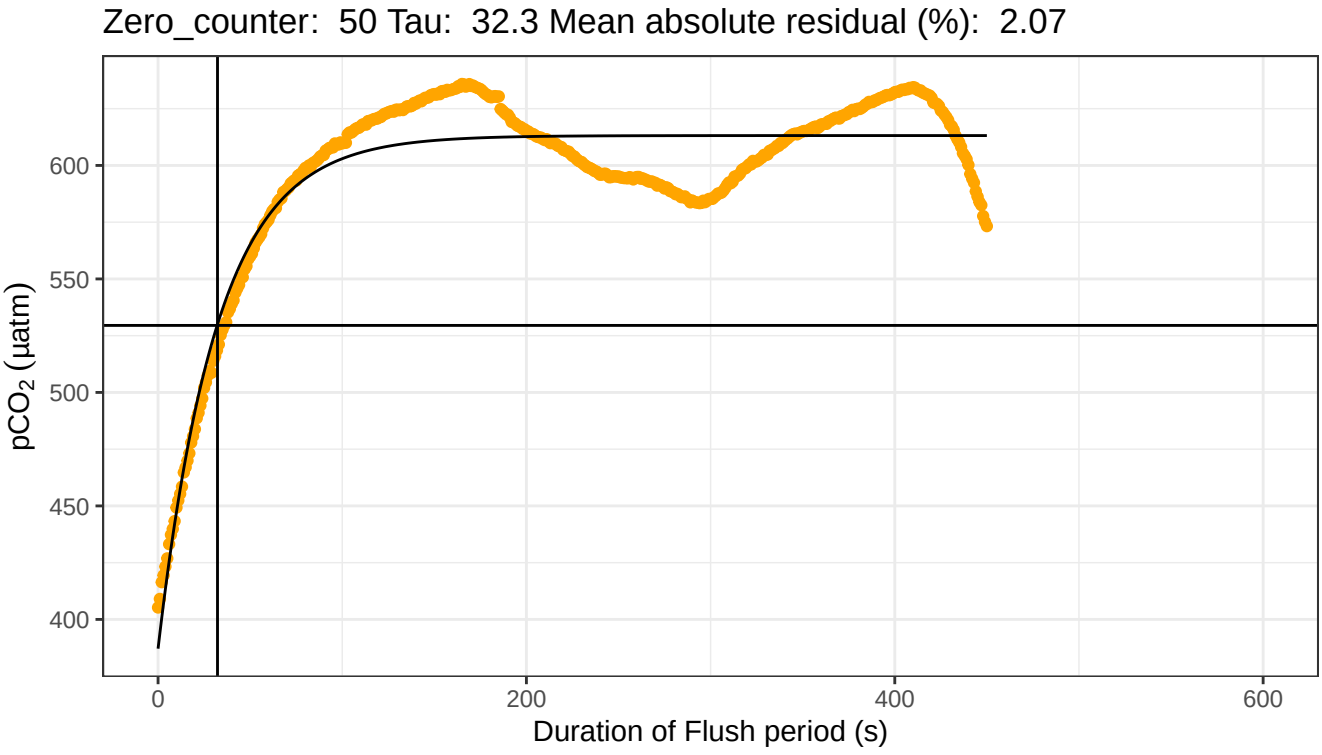

Zero_counter: 50 Tau: 43.5 Mean absolute residual (%): 0.44
600
550
500
450
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

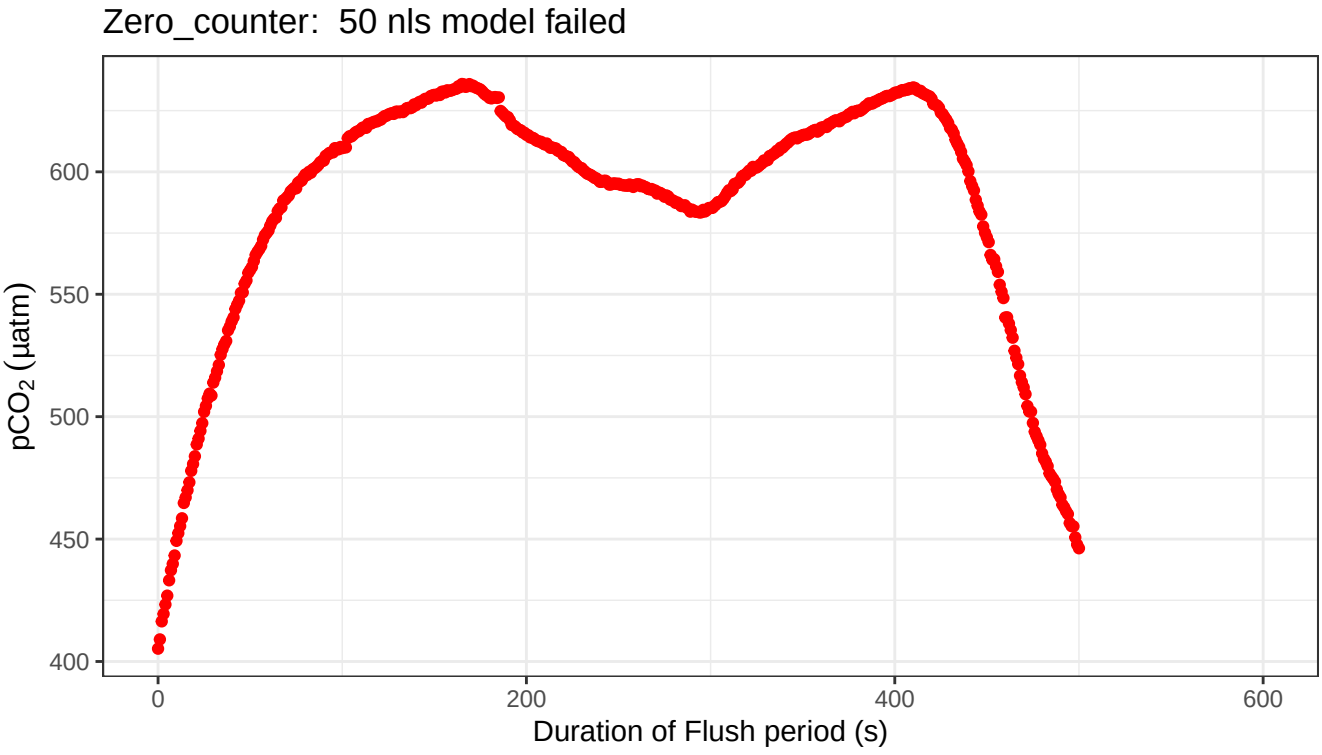

Zero_counter: 50 Tau: 36.1 Mean absolute residual (%): 1.42
600
550
500
450
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

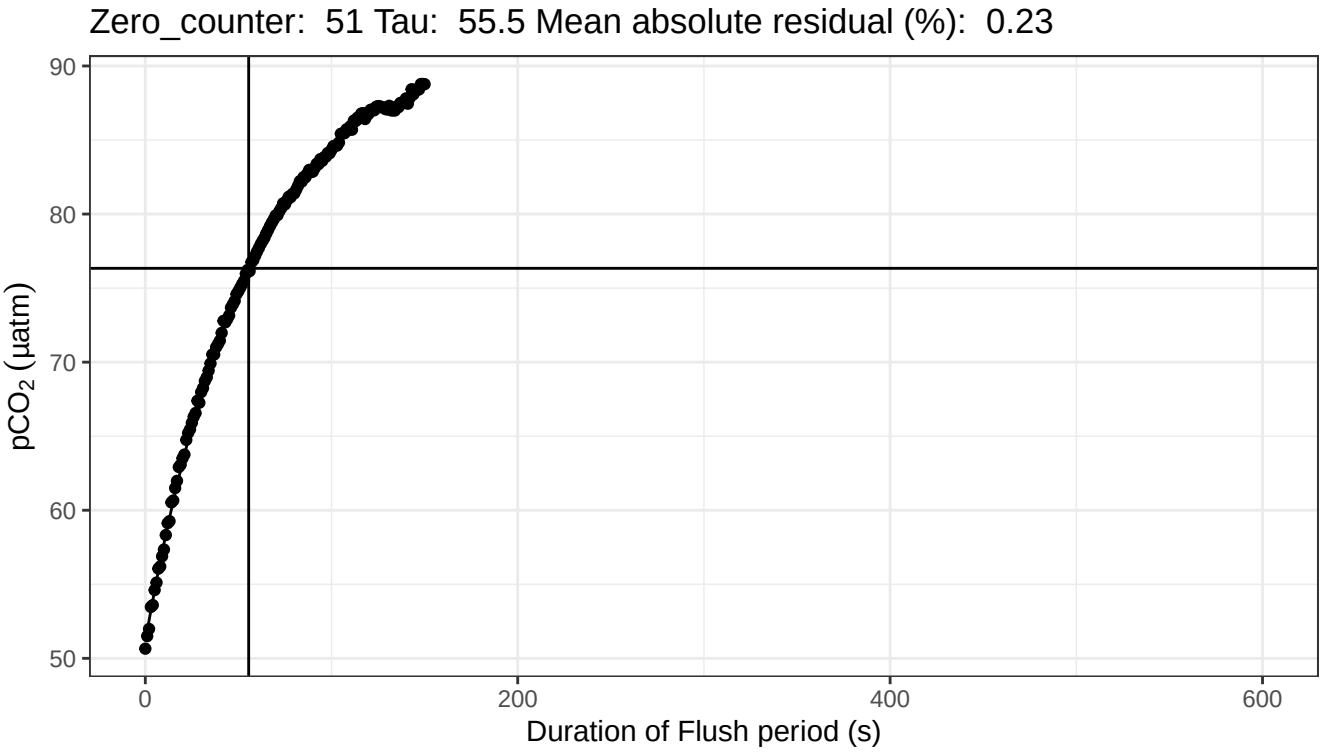

Zero_counter: 50 Tau: 32 Mean absolute residual (%): 2.06
600
550
500
450
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

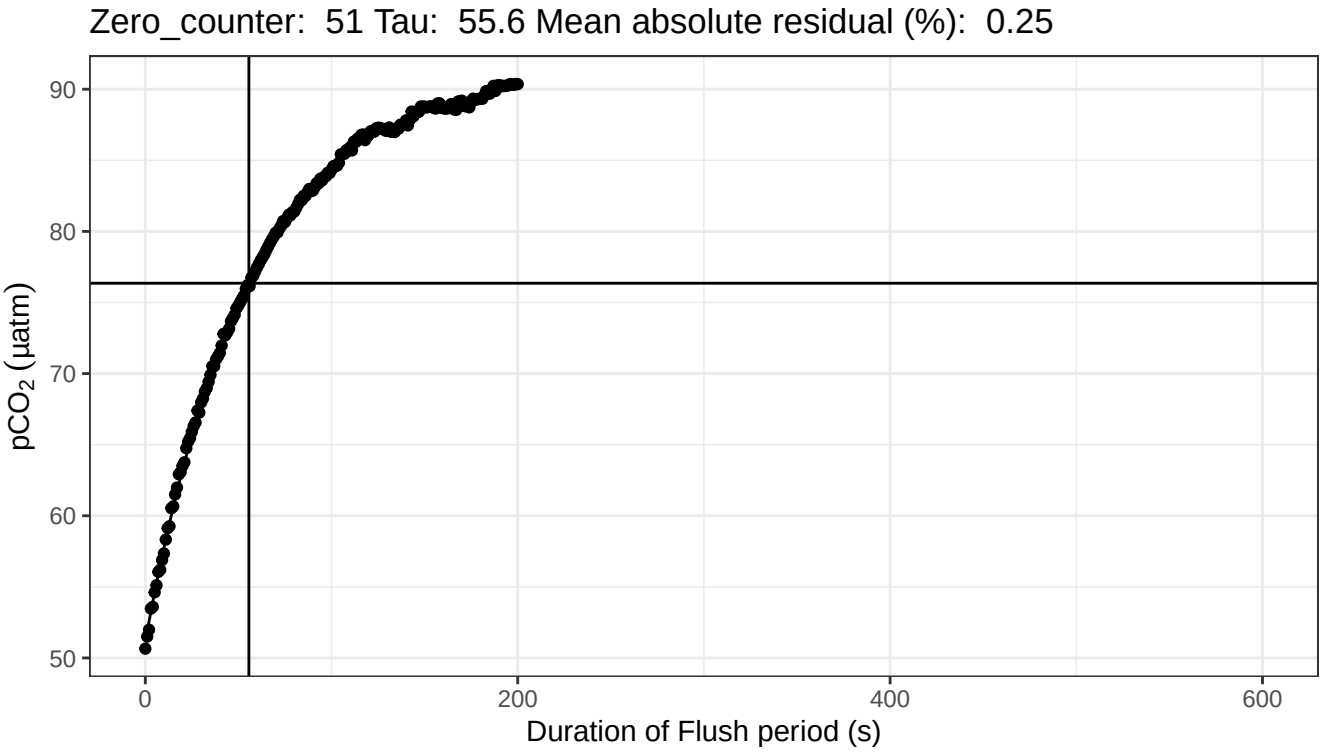

Zero_counter: 50 Tau: 31.1 Mean absolute residual (%): 2.04
pCO2 (µatm)
600
550
500
450
400
0
200
400
600
Duration of Flush period (s)

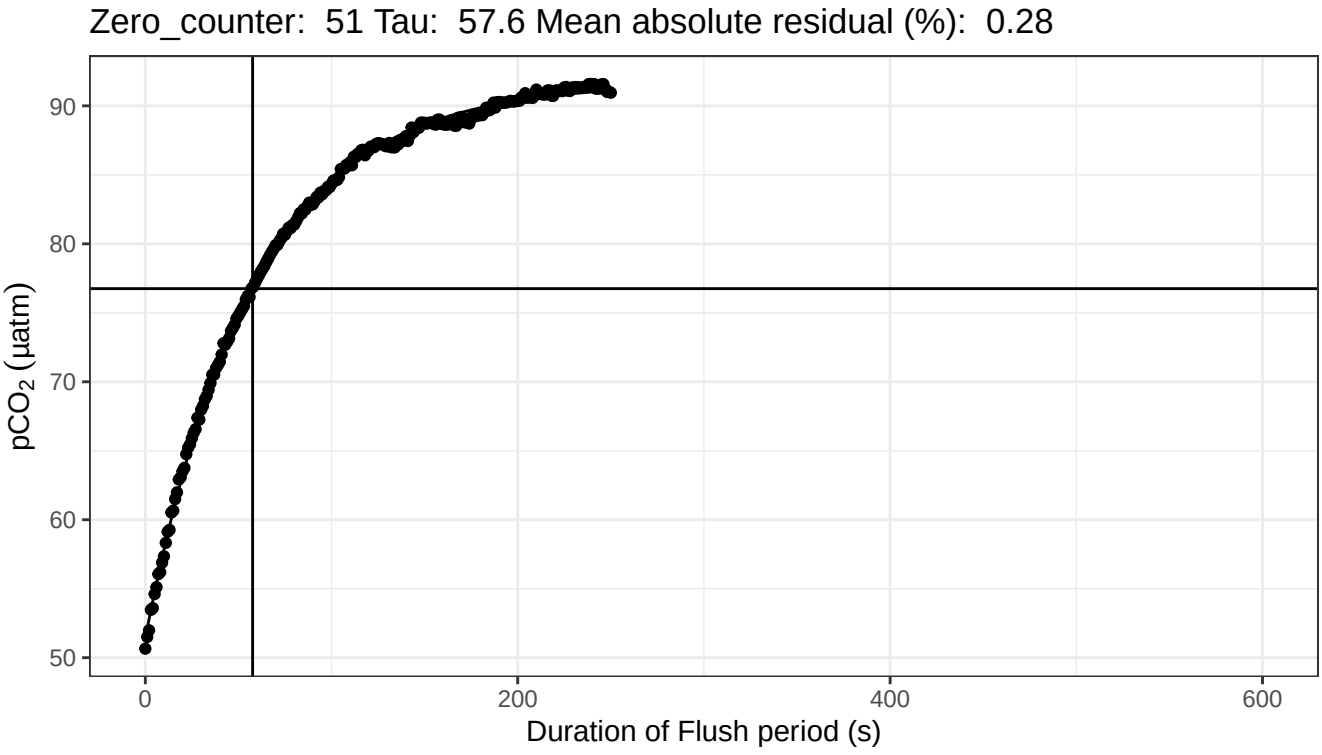

Zero_counter: 50 Tau: 32 Mean absolute residual (%): 2
600
550
500
450
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

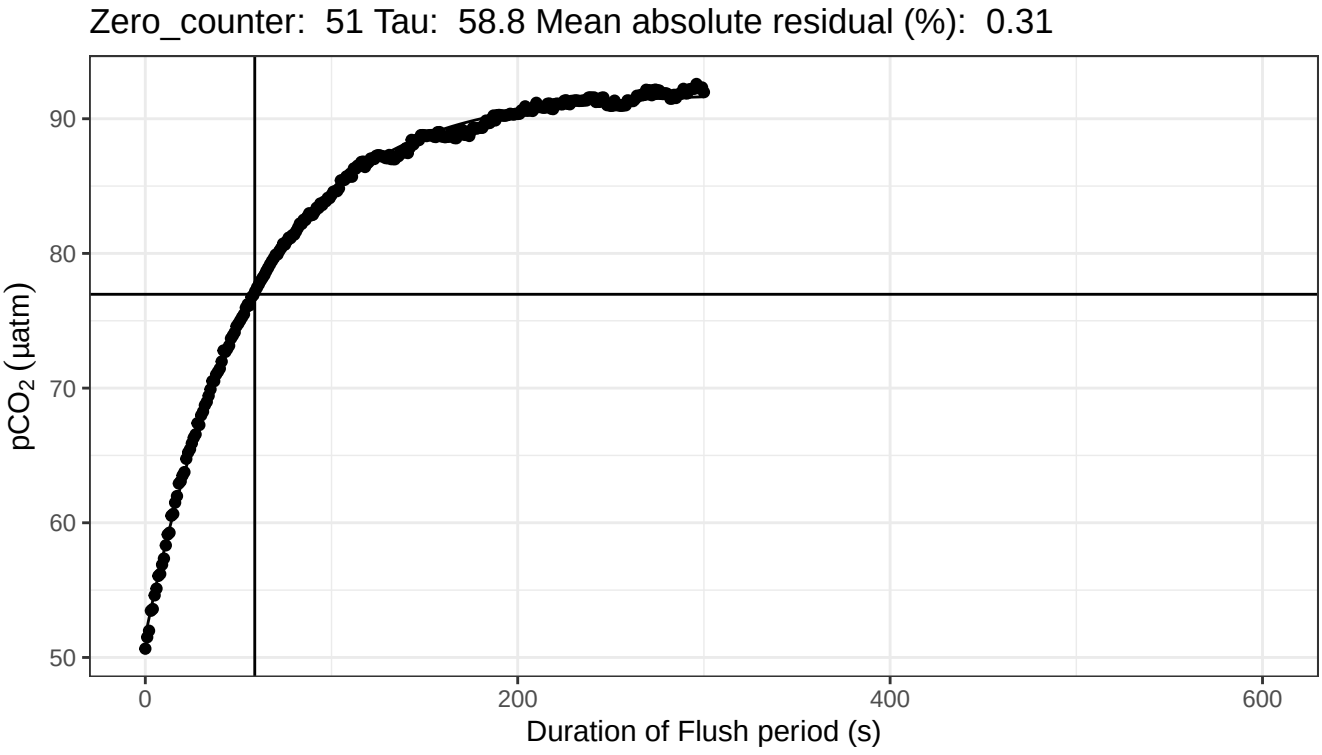

Zero_counter: 50 Tau: 32.3 Mean absolute residual (%): 2.07
600
550
500
450
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

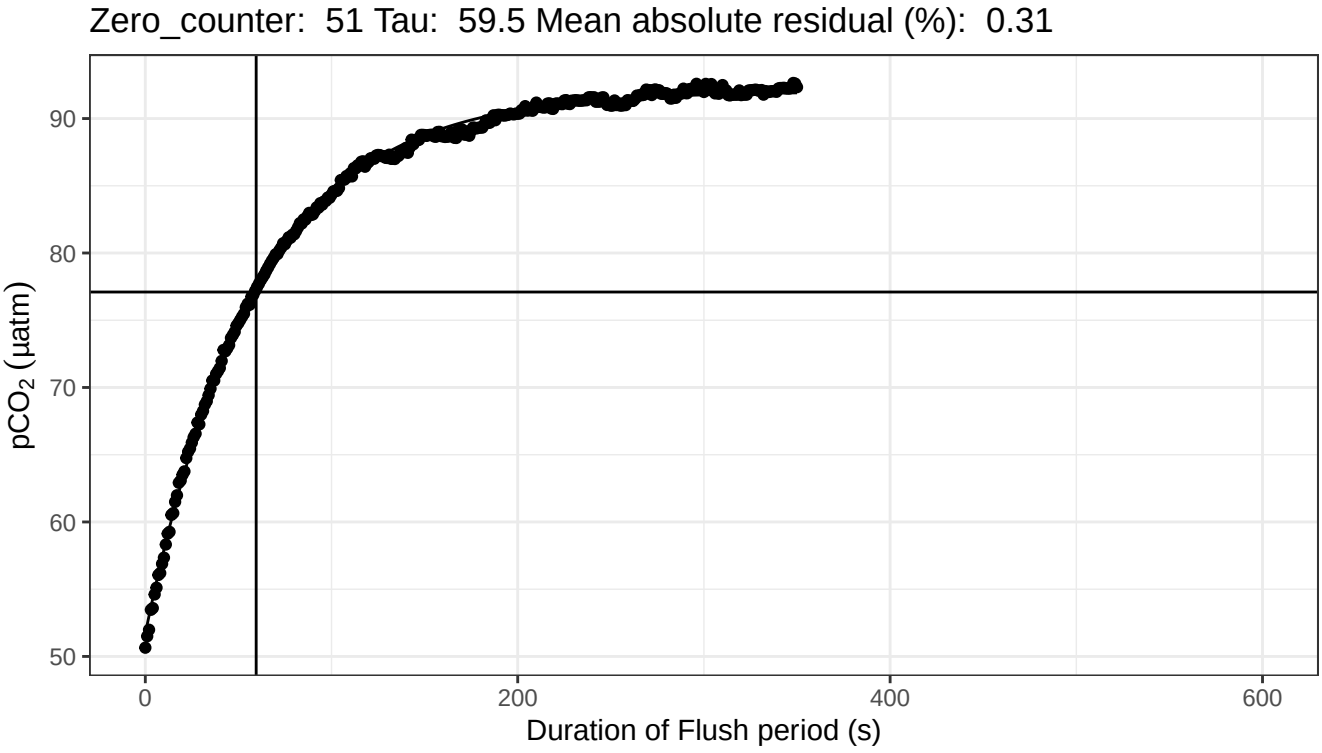

Zero_counter: 50 nls model failed
pCO2 (µatm)
600
550
500
450
400
0
200
400
600
Duration of Flush period (s)


Zero_counter: 51 Tau: 55.5 Mean absolute residual (%): 0.23
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

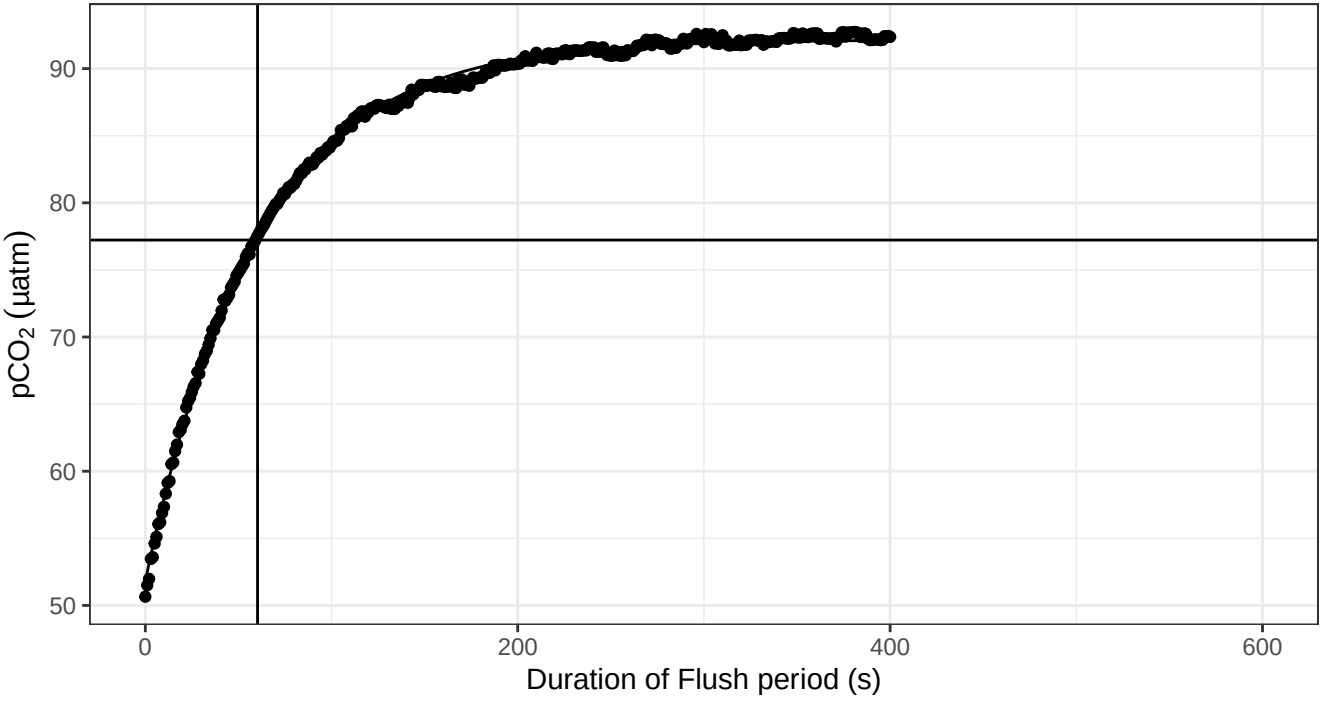

Zero_counter: 51 Tau: 55.6 Mean absolute residual (%): 0.25
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

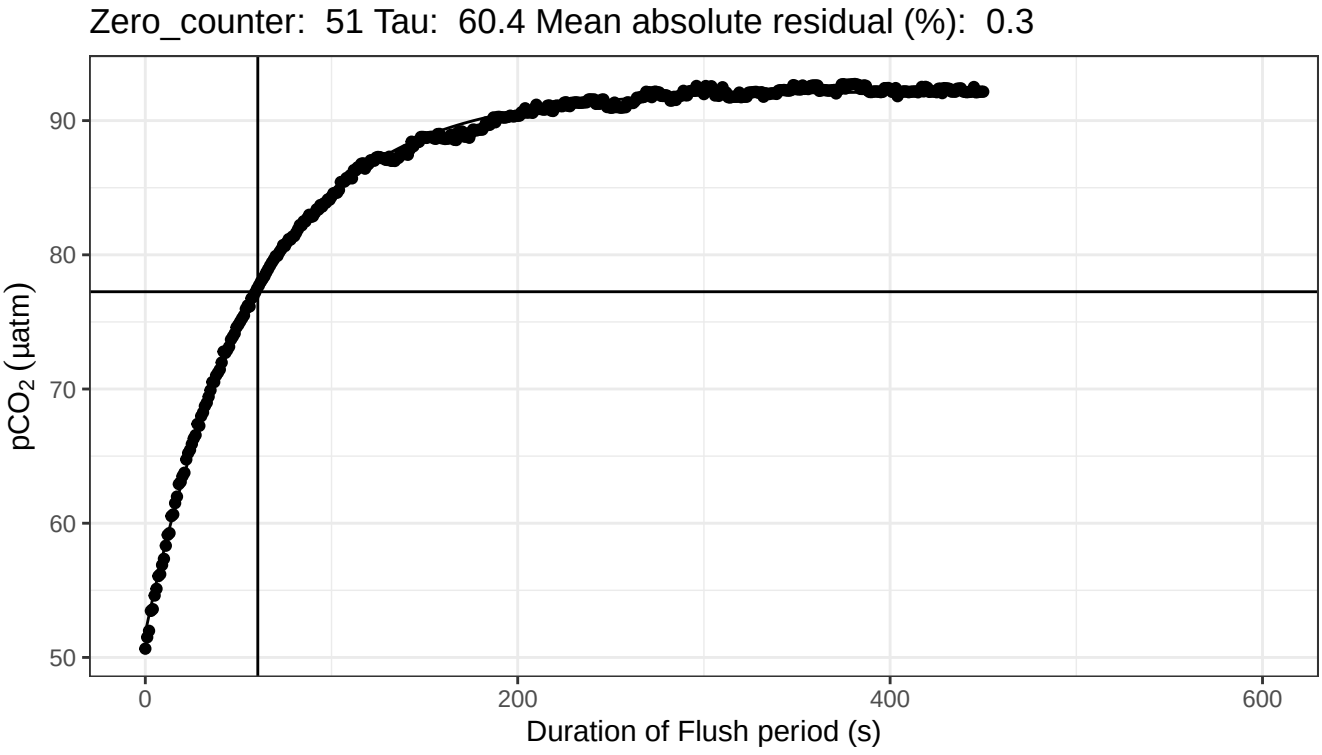

Zero_counter: 51 Tau: 57.6 Mean absolute residual (%): 0.28
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

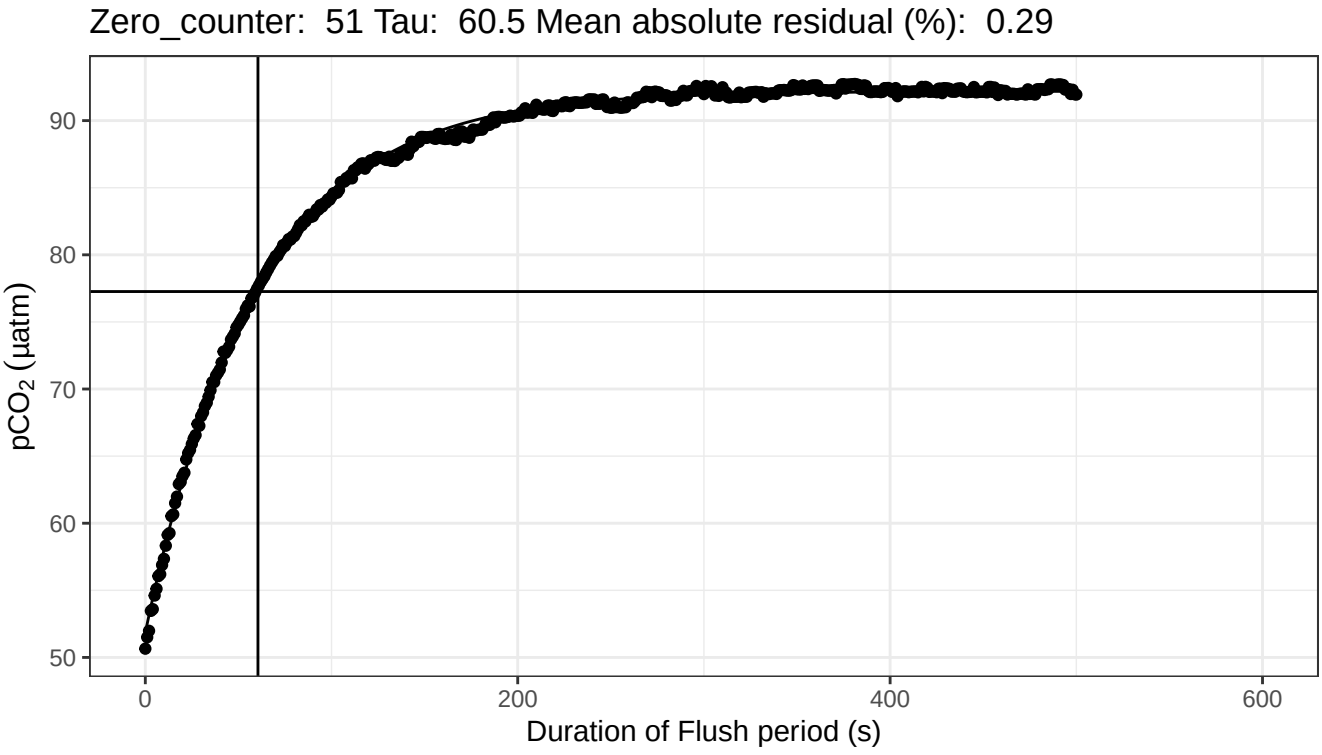

Zero_counter: 51 Tau: 58.8 Mean absolute residual (%): 0.31
pCO2 (µatm)
90
80
70
60
50
0
200
400
600
Duration of Flush period (s)

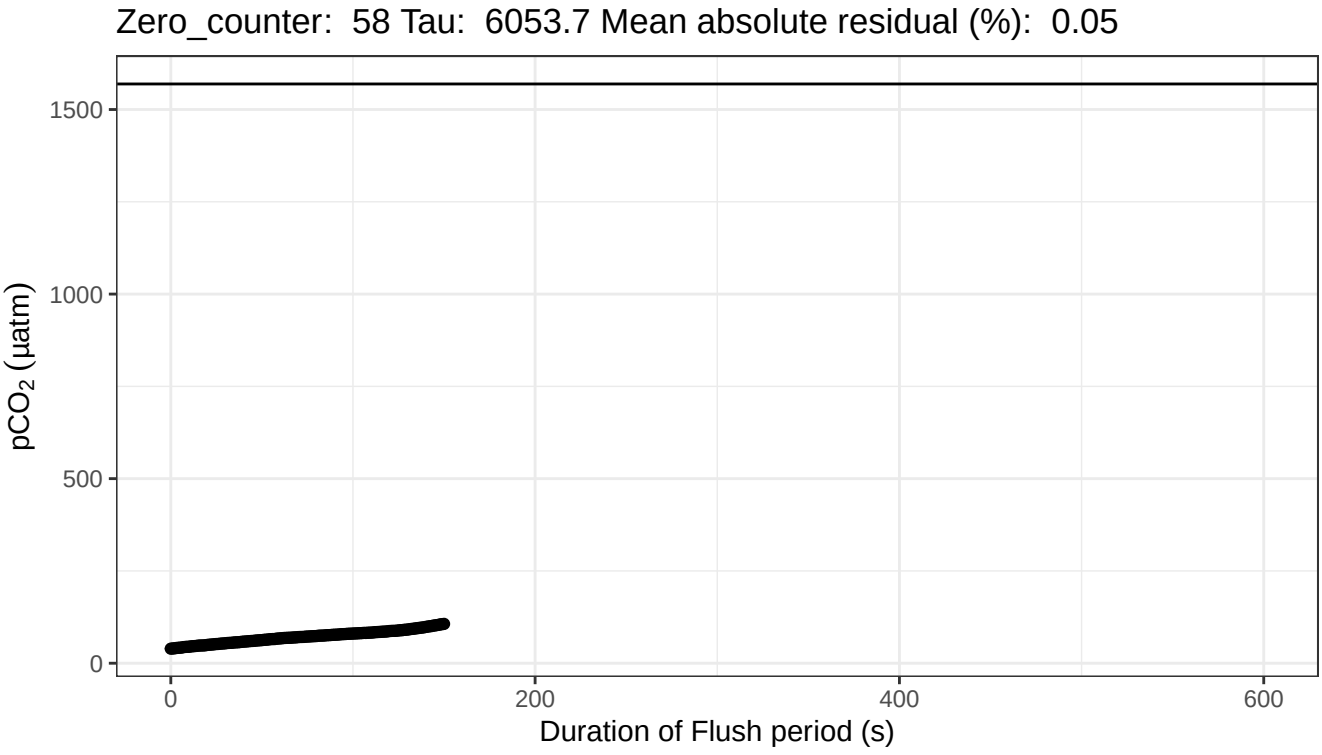

Zero_counter: 51 Tau: 59.5 Mean absolute residual (%): 0.31
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

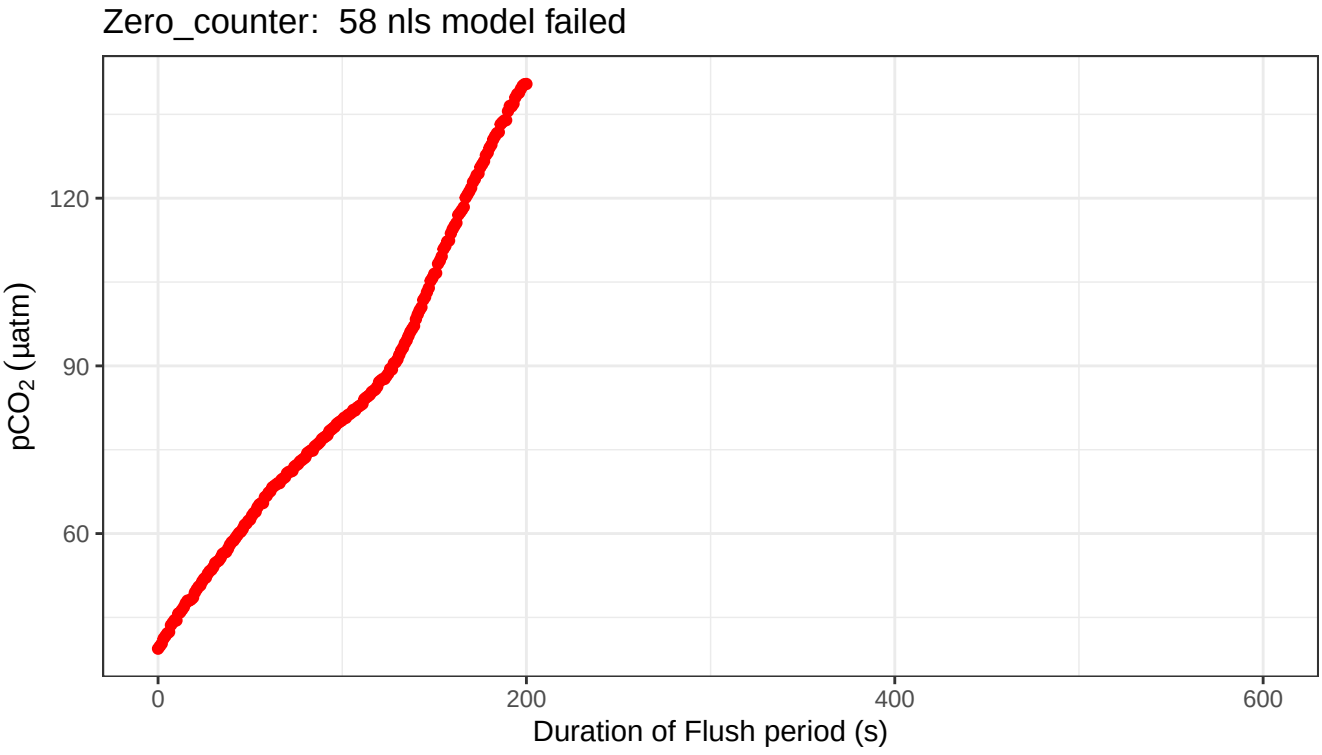
Zero_counter: 51 Tau: 60.3 Mean absolute residual (%): 0.32

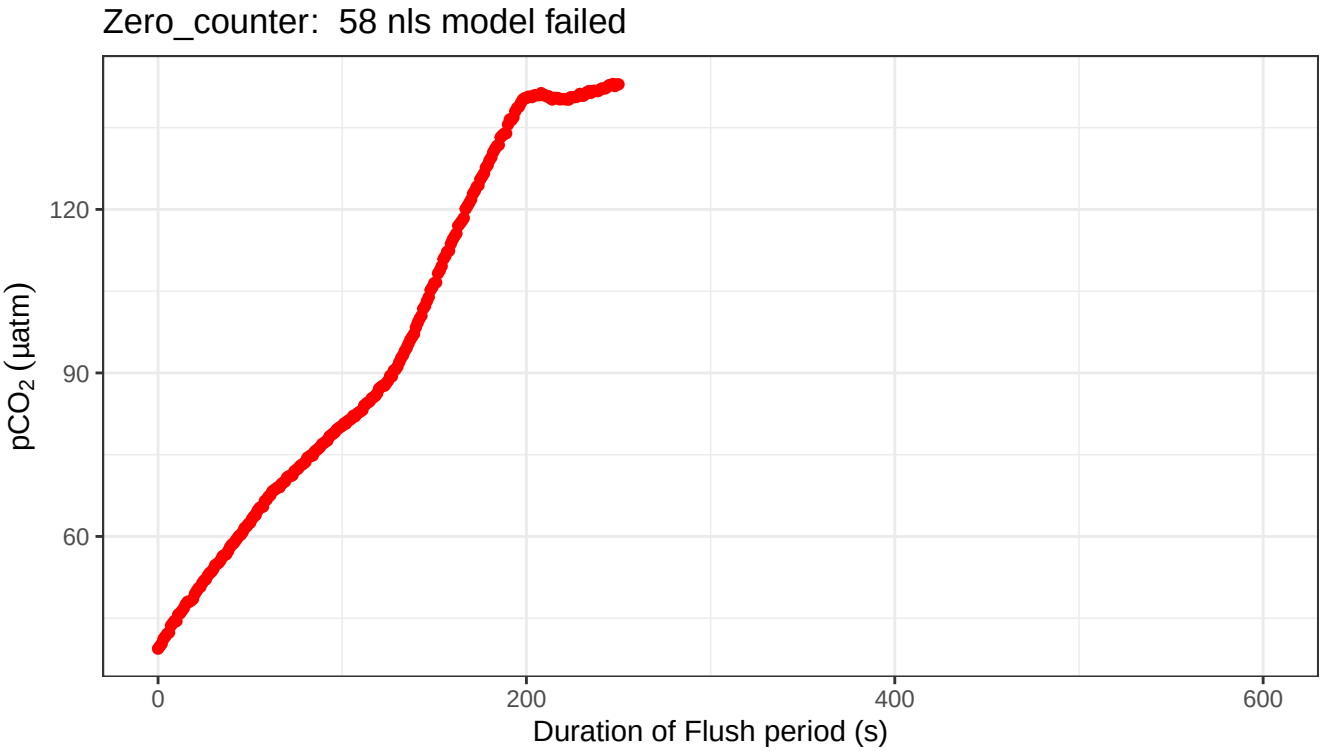


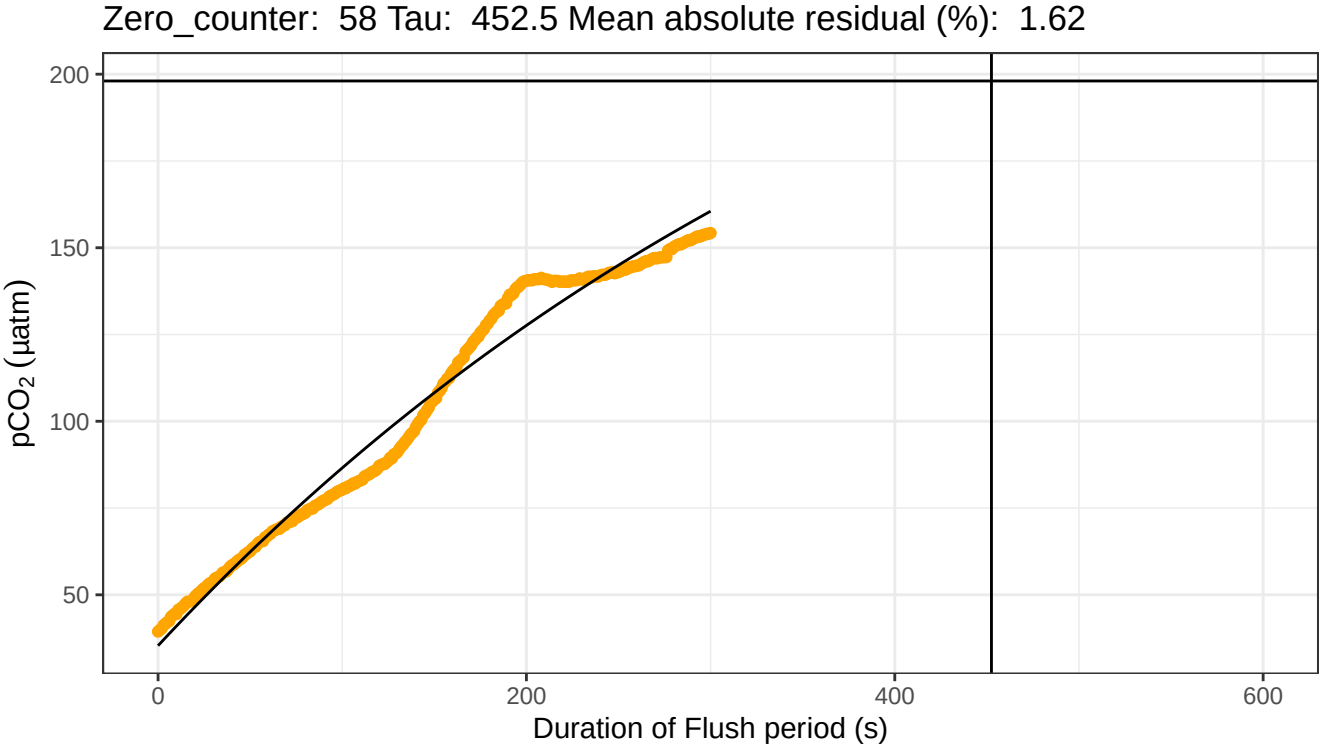

Zero_counter: 51 Tau: 60.4 Mean absolute residual (%): 0.3
pCO2 (µatm)
90
80
70
60
50
0
200
400
600
Duration of Flush period (s)

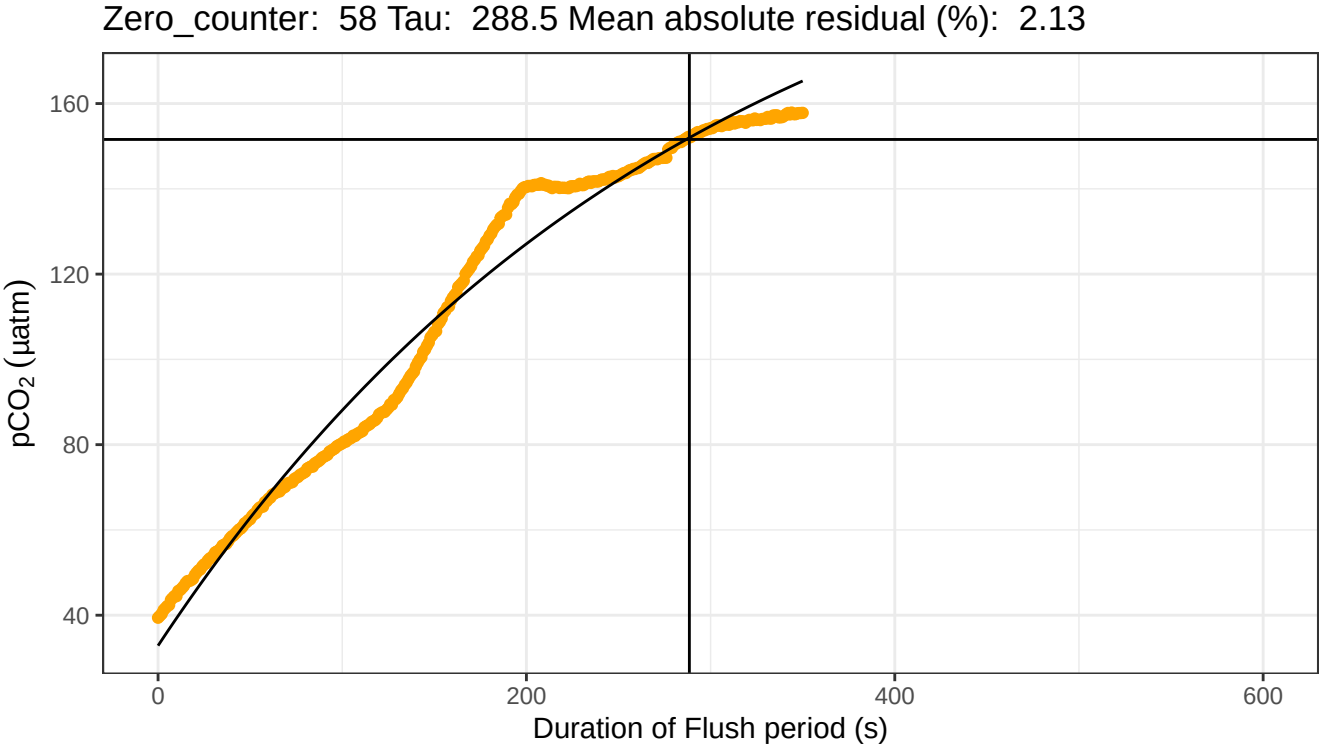

Zero_counter: 51 Tau: 60.5 Mean absolute residual (%): 0.29
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

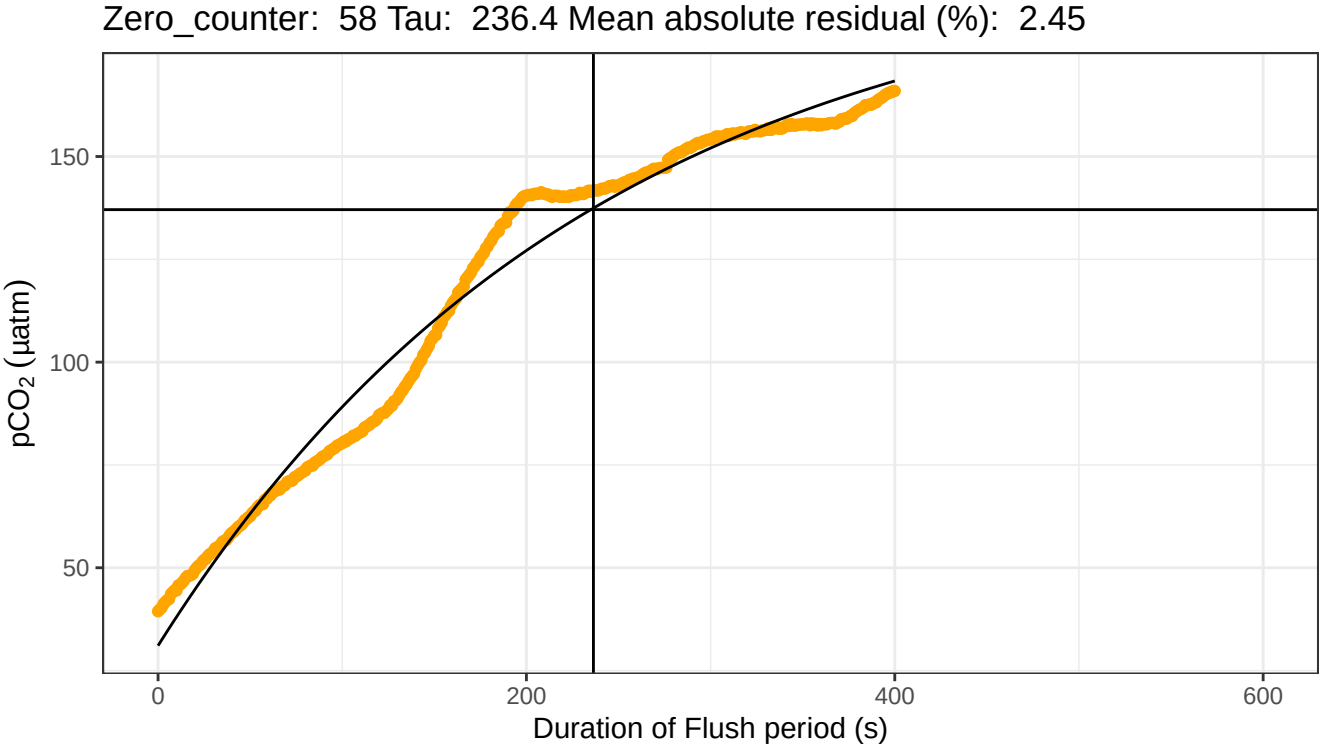

Zero_counter: 58 Tau: 6053.7 Mean absolute residual (%): 0.05
1500
1000
500
0
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

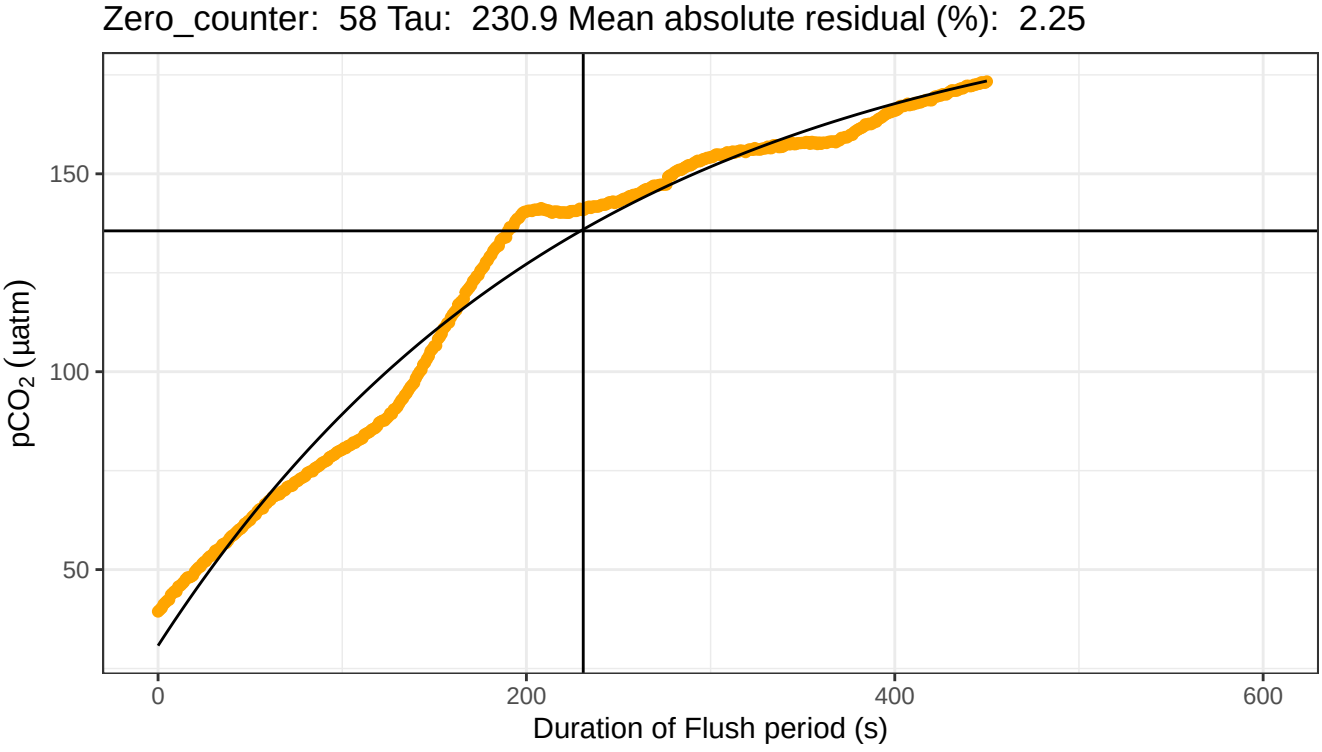

Zero_counter: 58 nls model failed
120
90
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

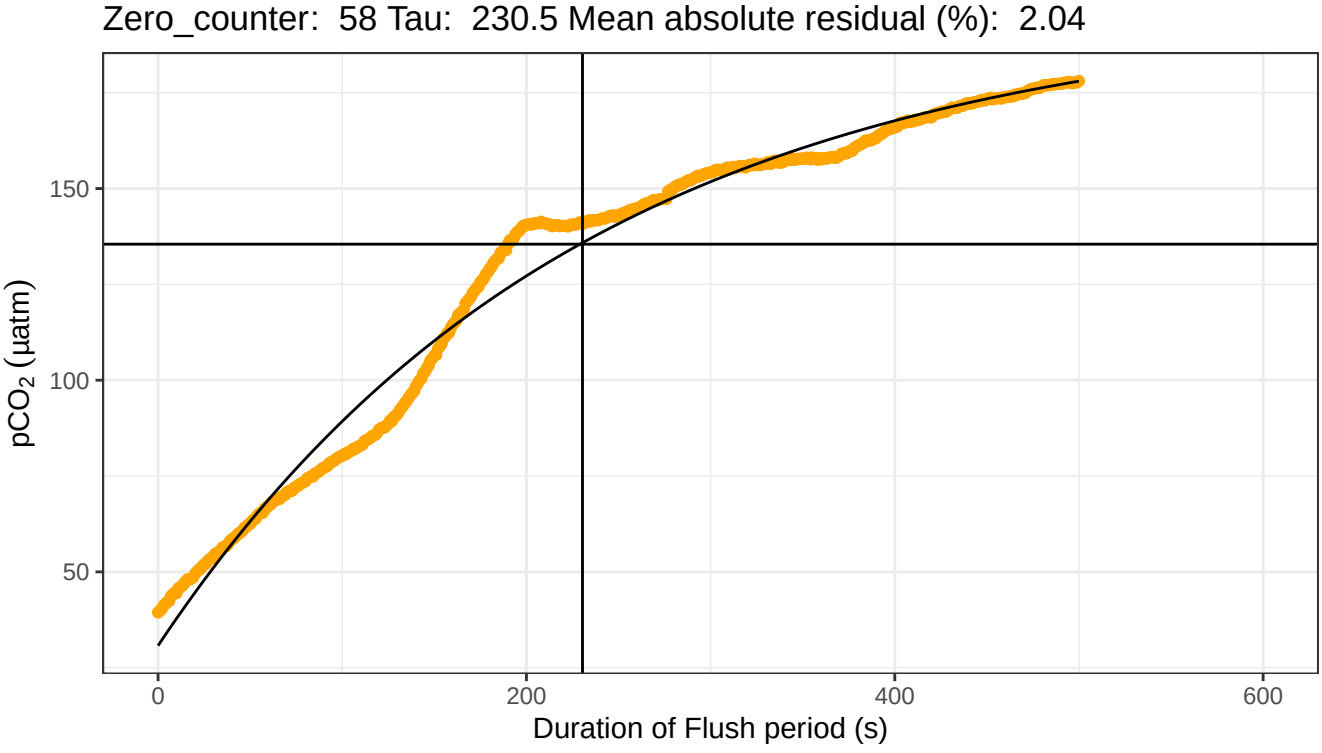

Zero_counter: 58 nls model failed
120
90
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 58 Tau: 452.5 Mean absolute residual (%): 1.62
200
150
100
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

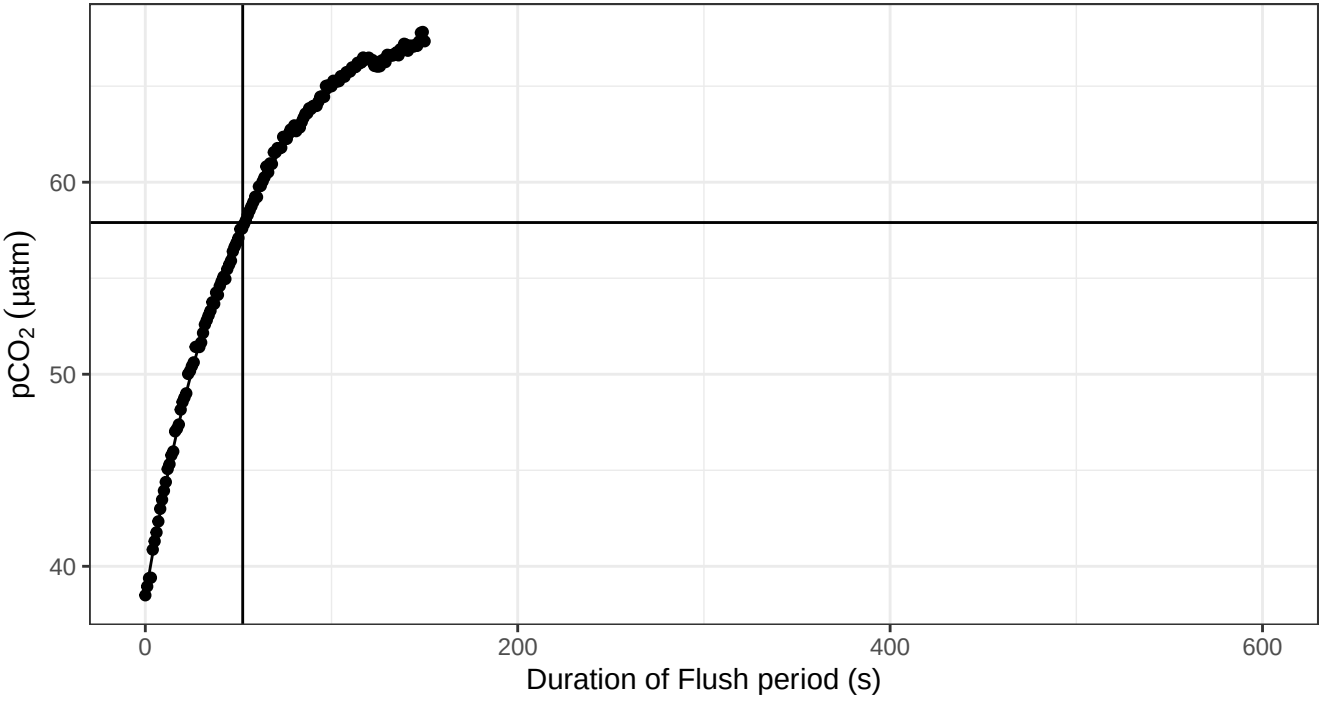

Zero_counter: 58 Tau: 288.5 Mean absolute residual (%): 2.13
160
120
80
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

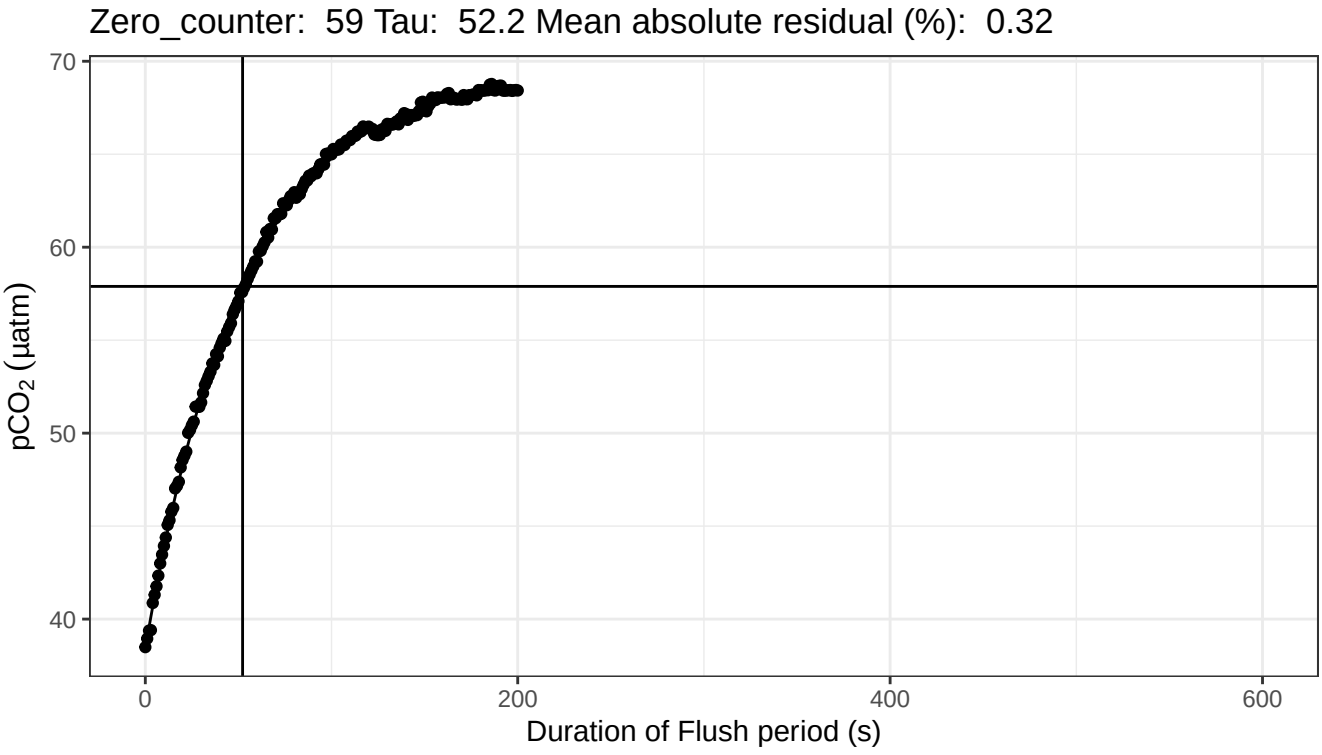

Zero_counter: 58 Tau: 236.4 Mean absolute residual (%): 2.45
150
100
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

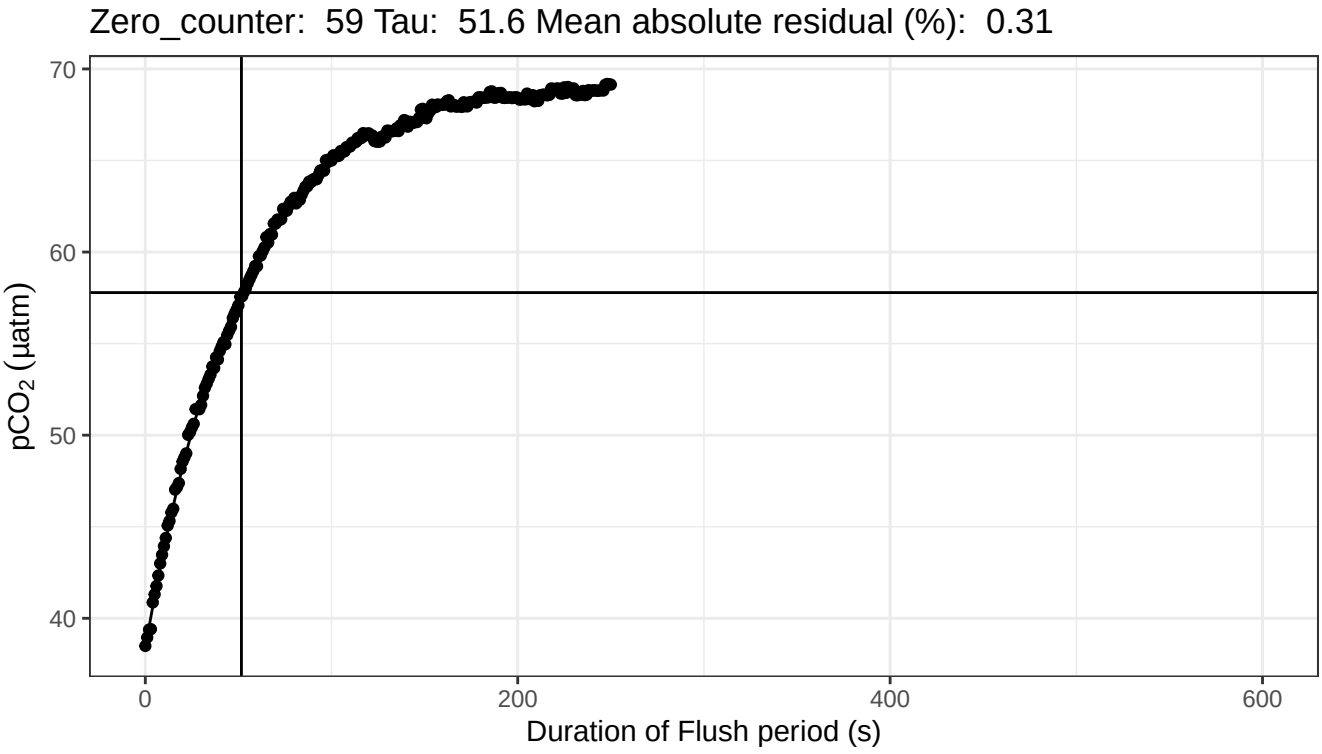

Zero_counter: 58 Tau: 230.9 Mean absolute residual (%): 2.25
150
100
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

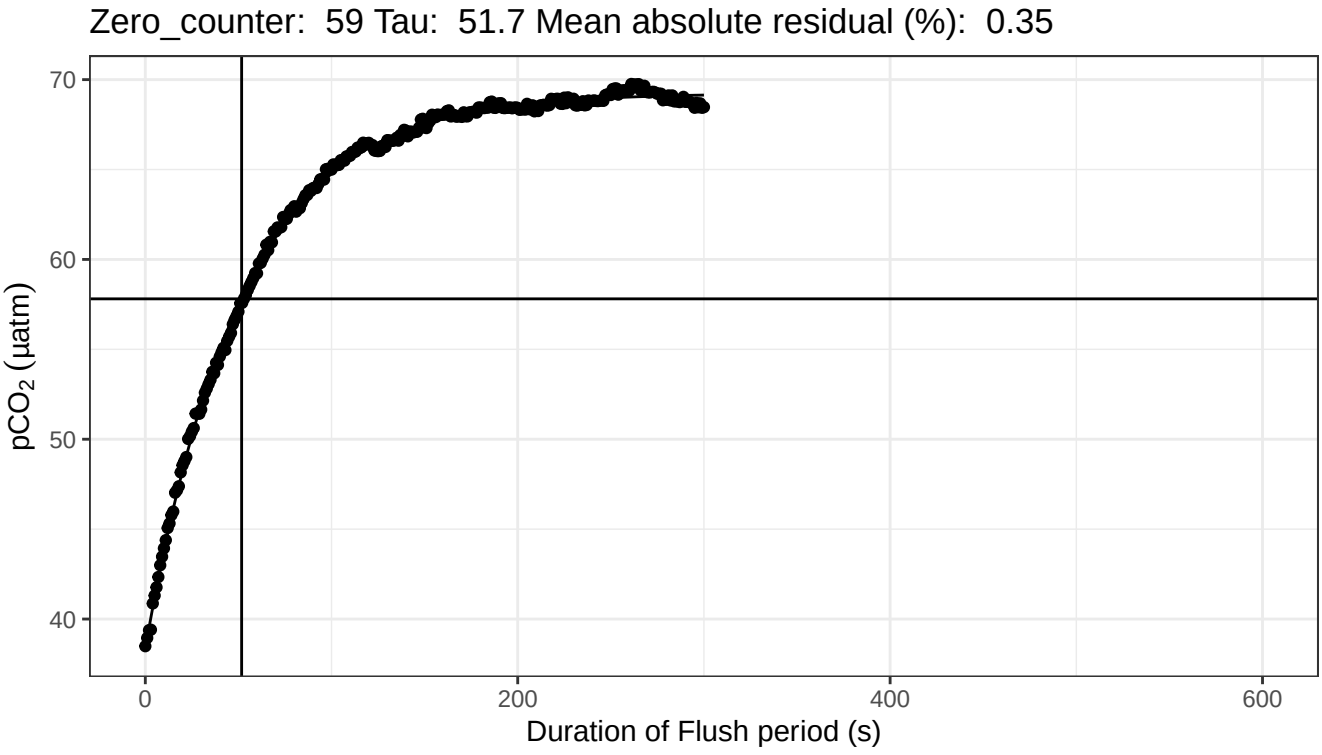

Zero_counter: 58 Tau: 230.5 Mean absolute residual (%): 2.04
150
100
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 59 Tau: 52.3 Mean absolute residual (%): 0.36

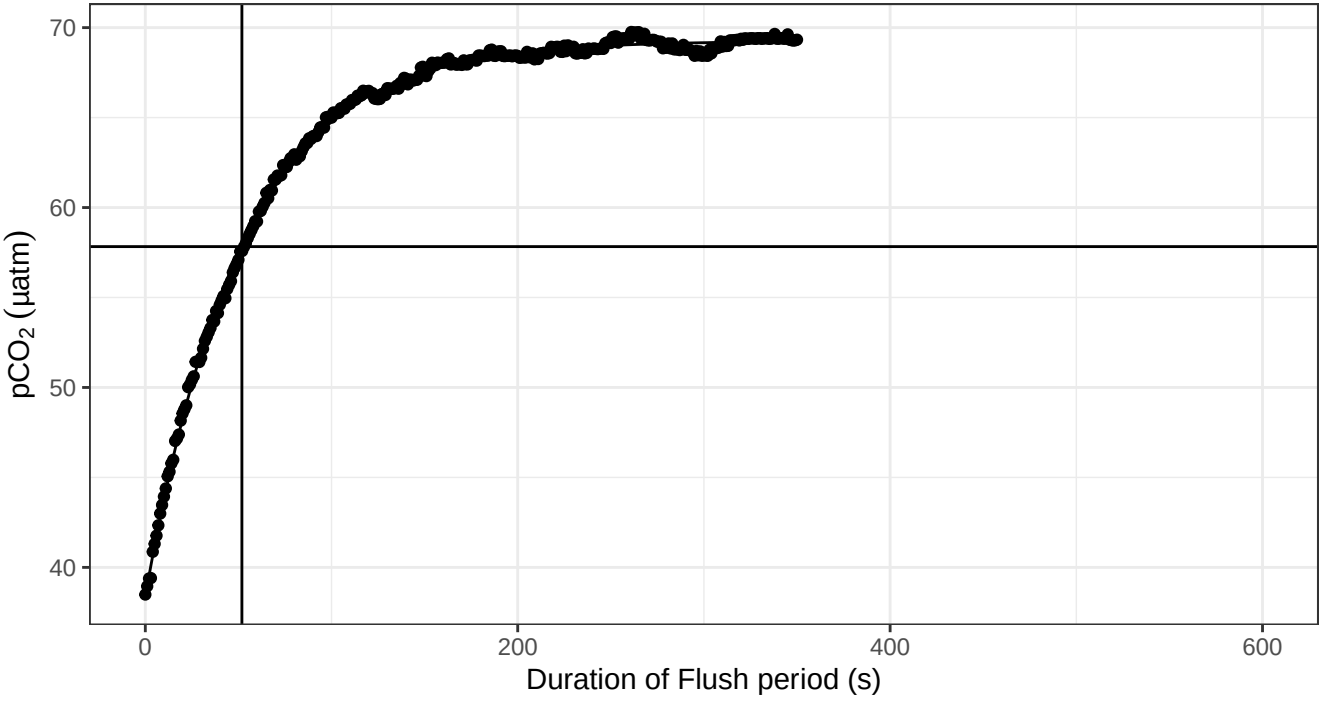



Zero_counter: 59 Tau: 52.2 Mean absolute residual (%): 0.32
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

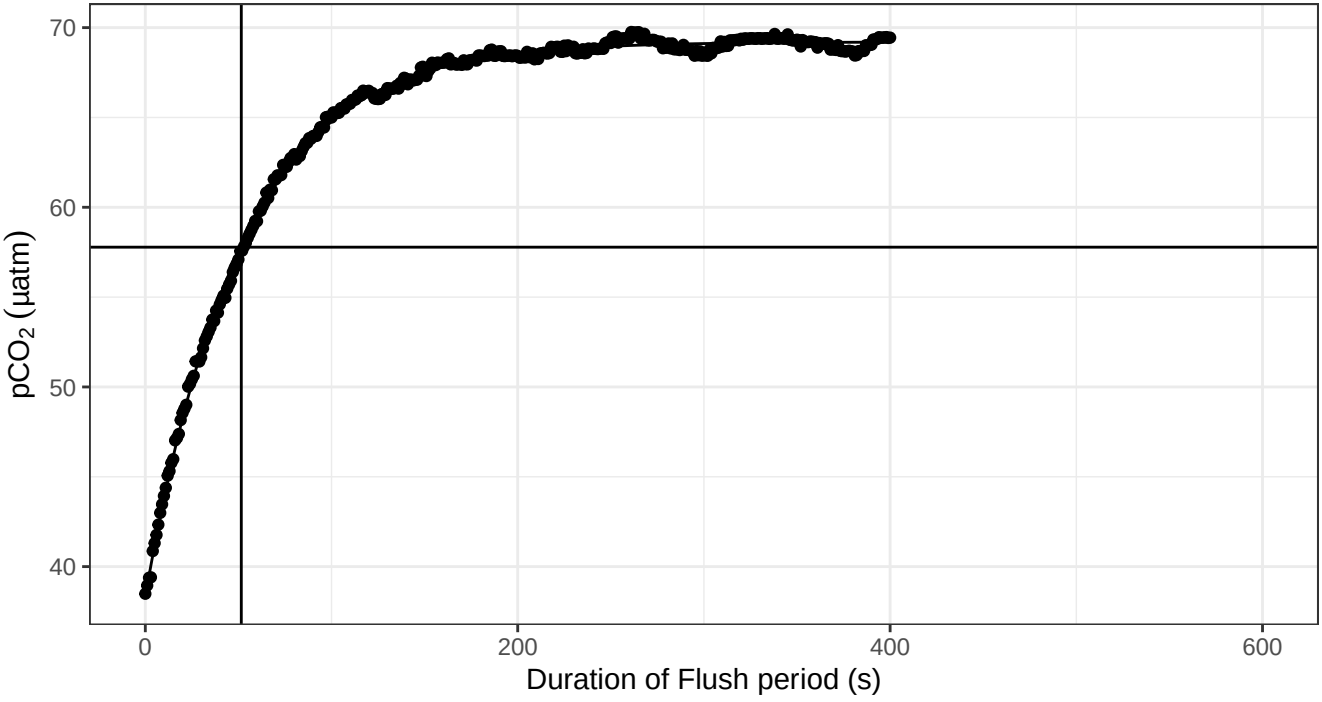

Zero_counter: 59 Tau: 51.6 Mean absolute residual (%): 0.31
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

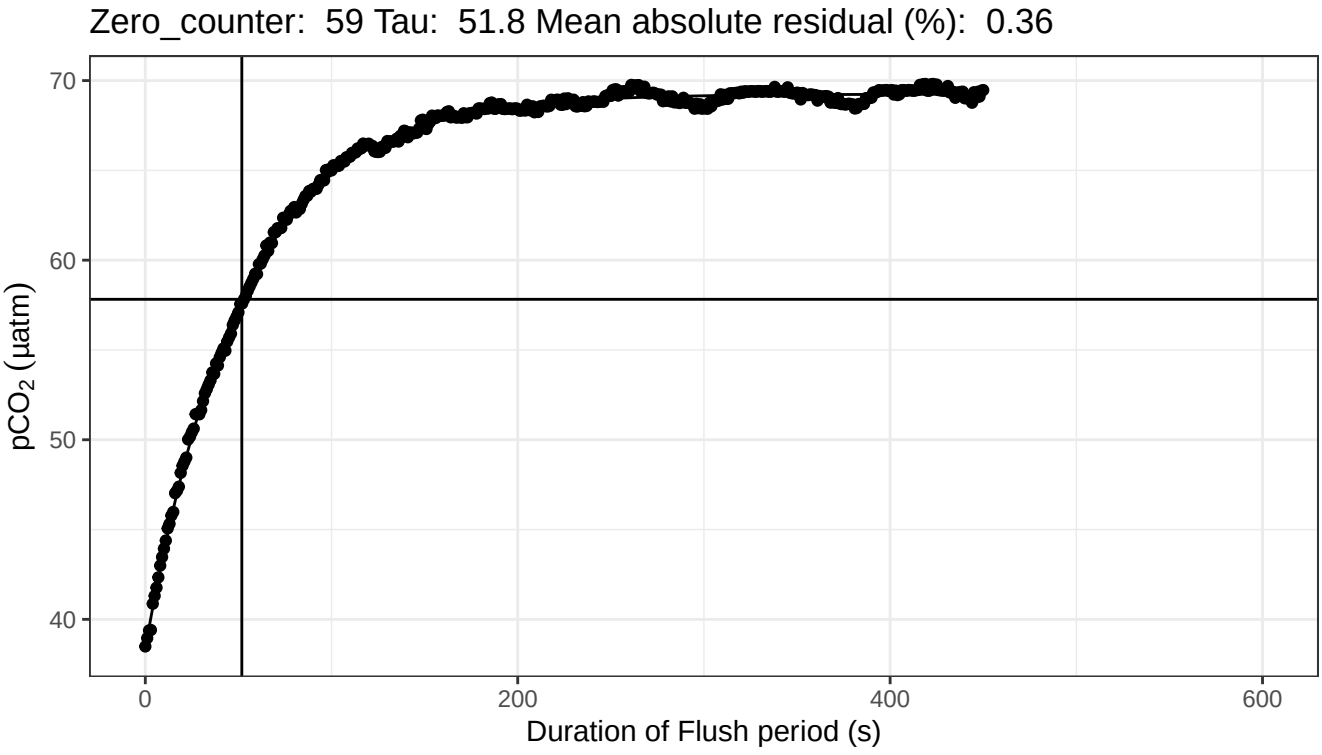

Zero_counter: 59 Tau: 51.7 Mean absolute residual (%): 0.35
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

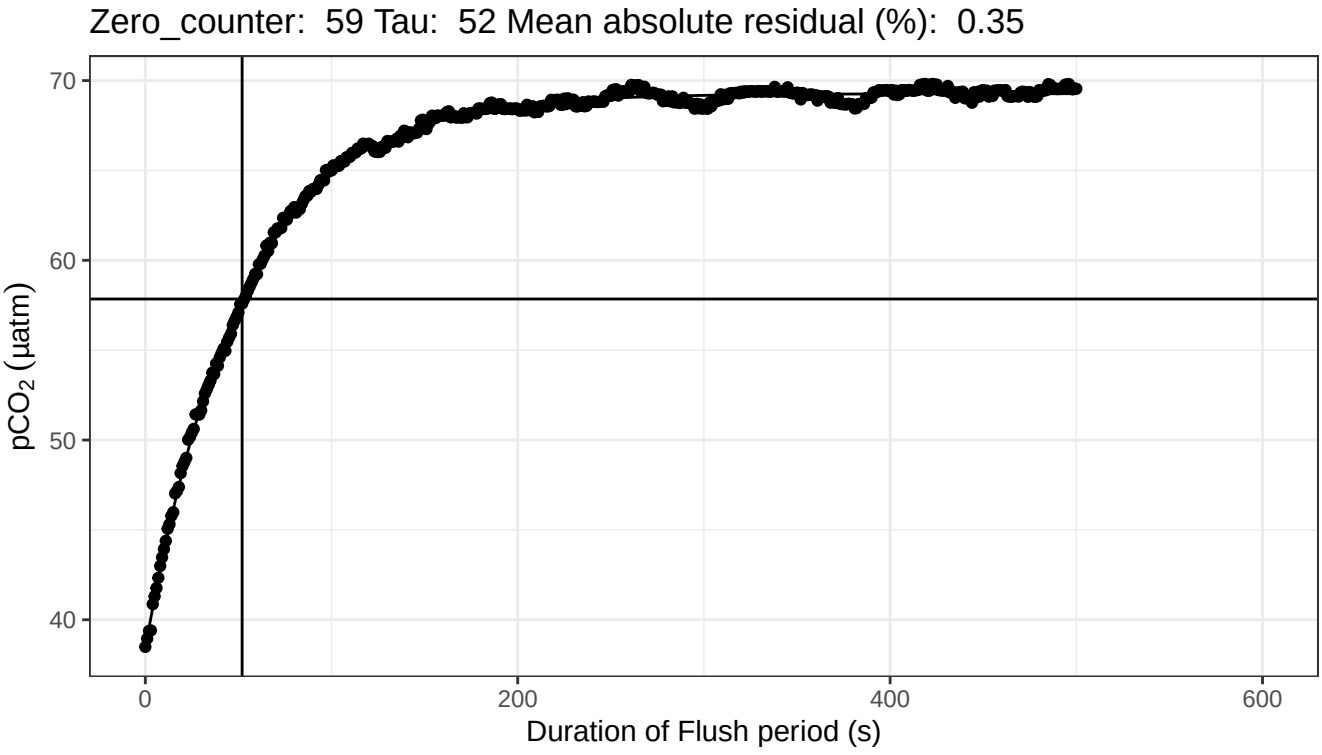
Zero_counter: 59 Tau: 51.9 Mean absolute residual (%): 0.35



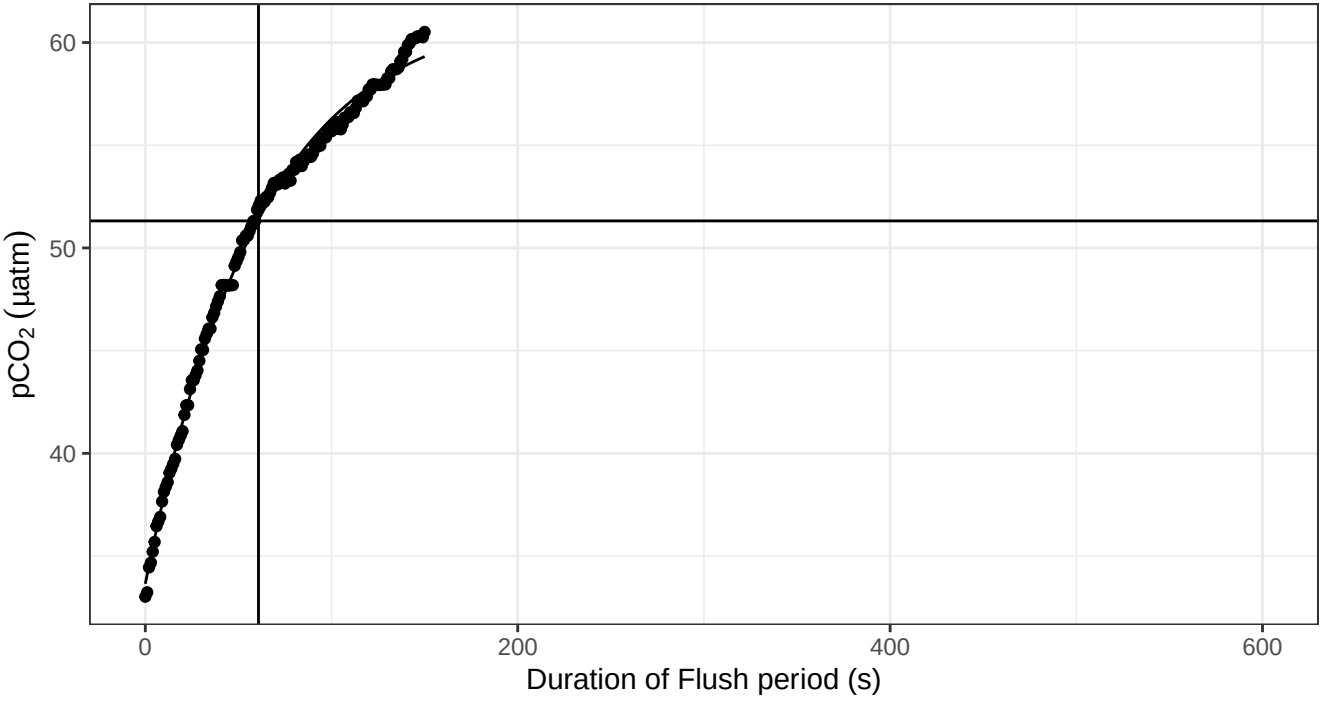
Zero_counter: 59 Tau: 51.5 Mean absolute residual (%): 0.36

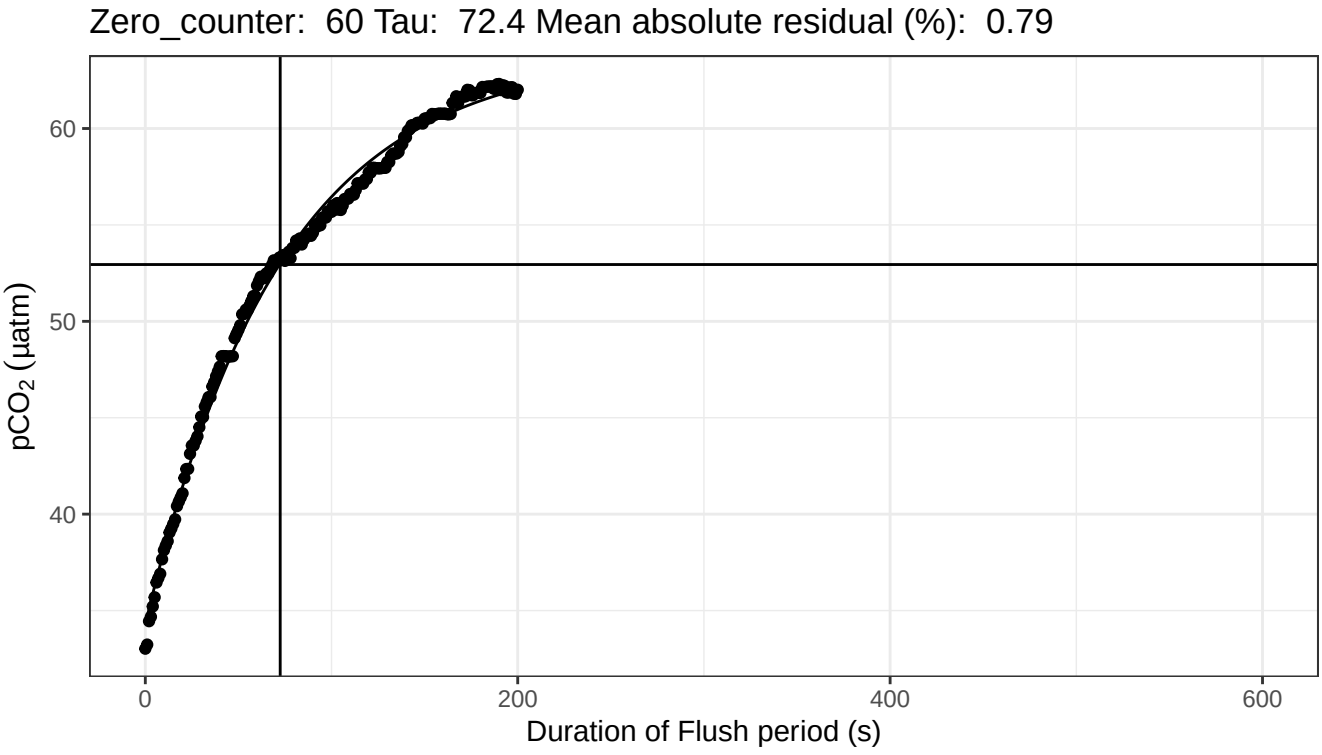



Zero_counter: 59 Tau: 51.8 Mean absolute residual (%): 0.36
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

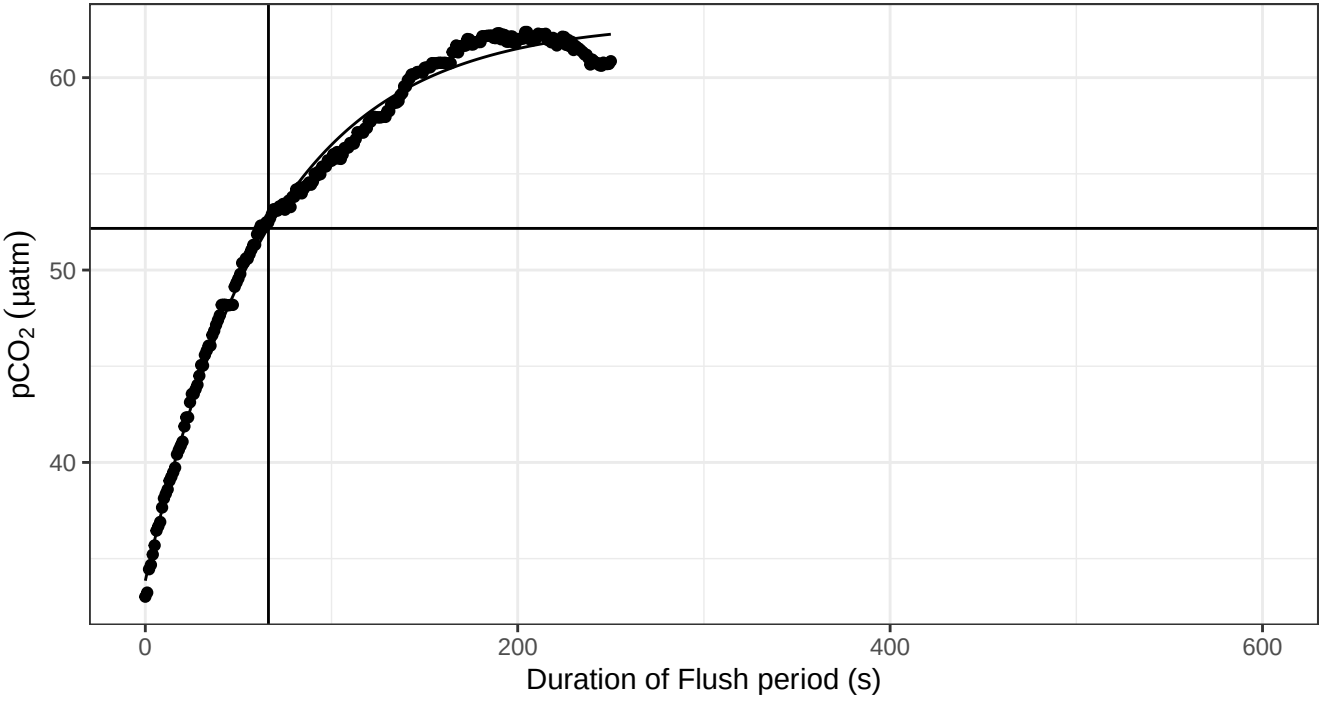

Zero_counter: 59 Tau: 52 Mean absolute residual (%): 0.35
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

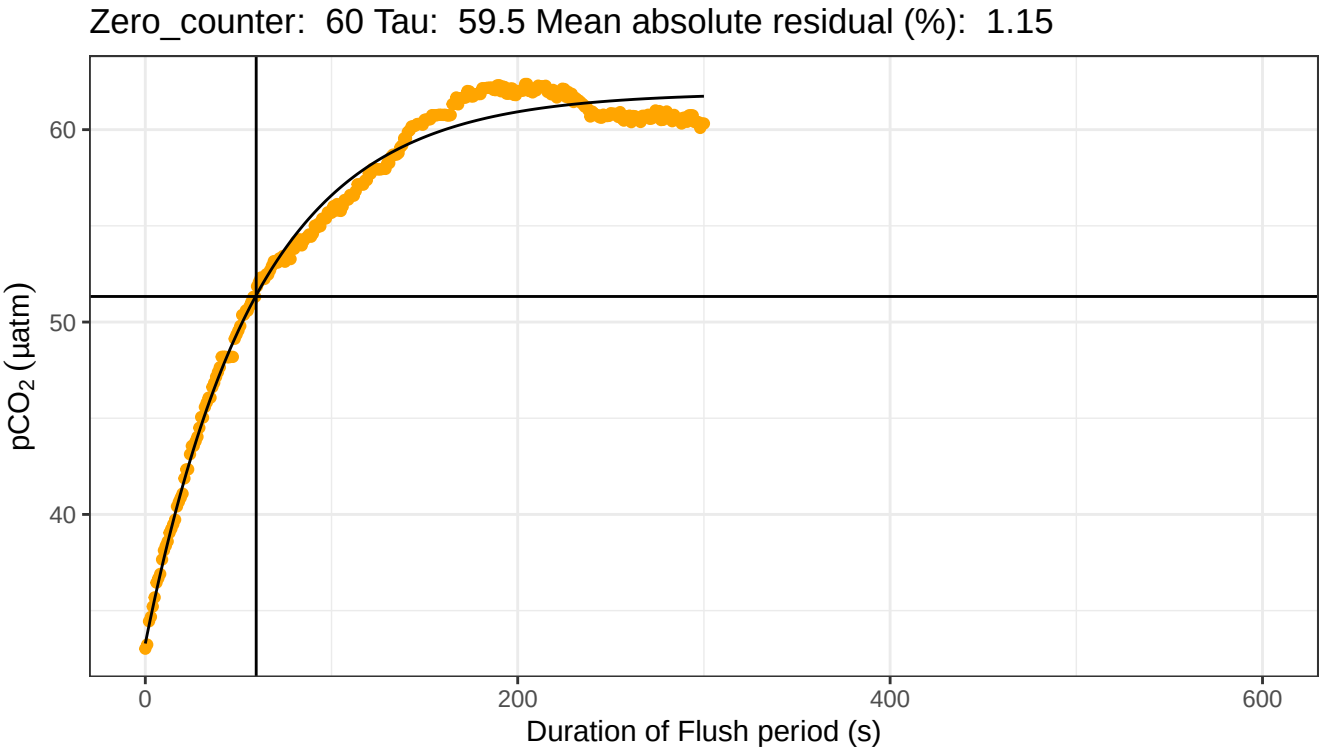
Zero_counter: 60 Tau: 60.8 Mean absolute residual (%): 0.66

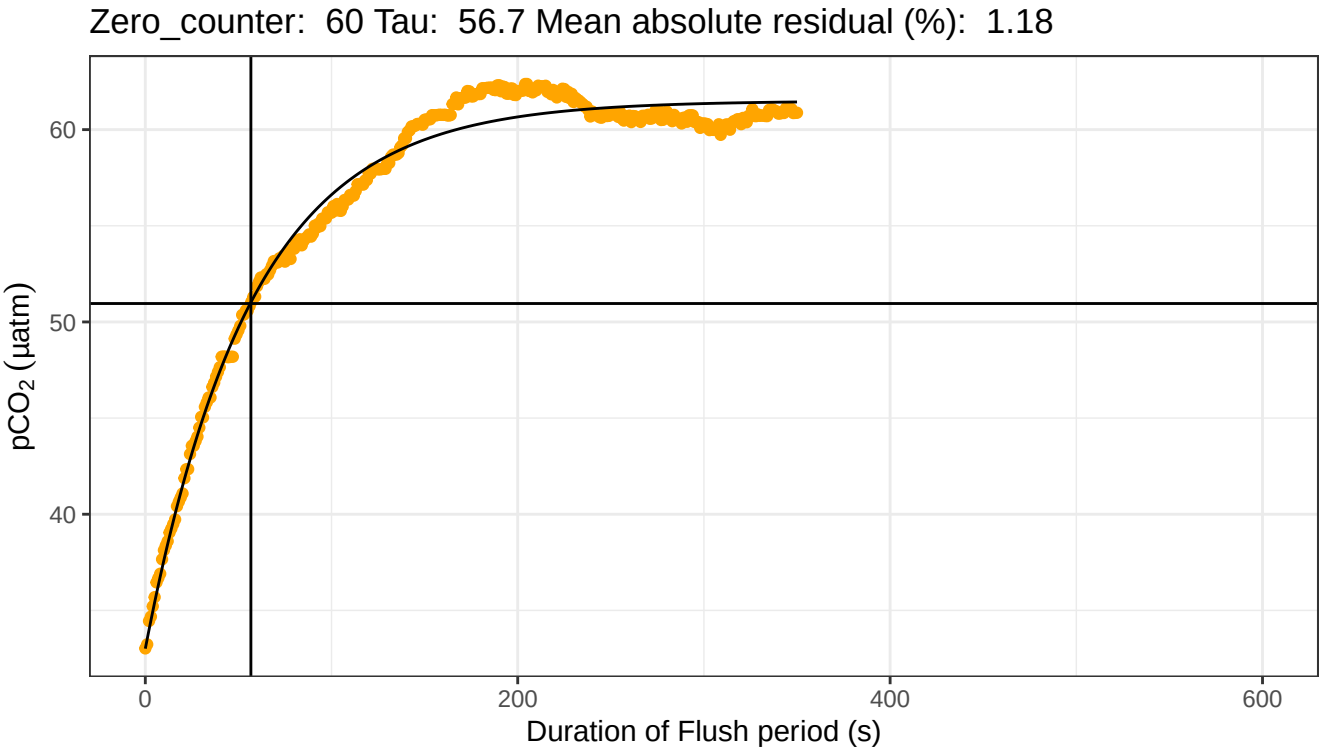


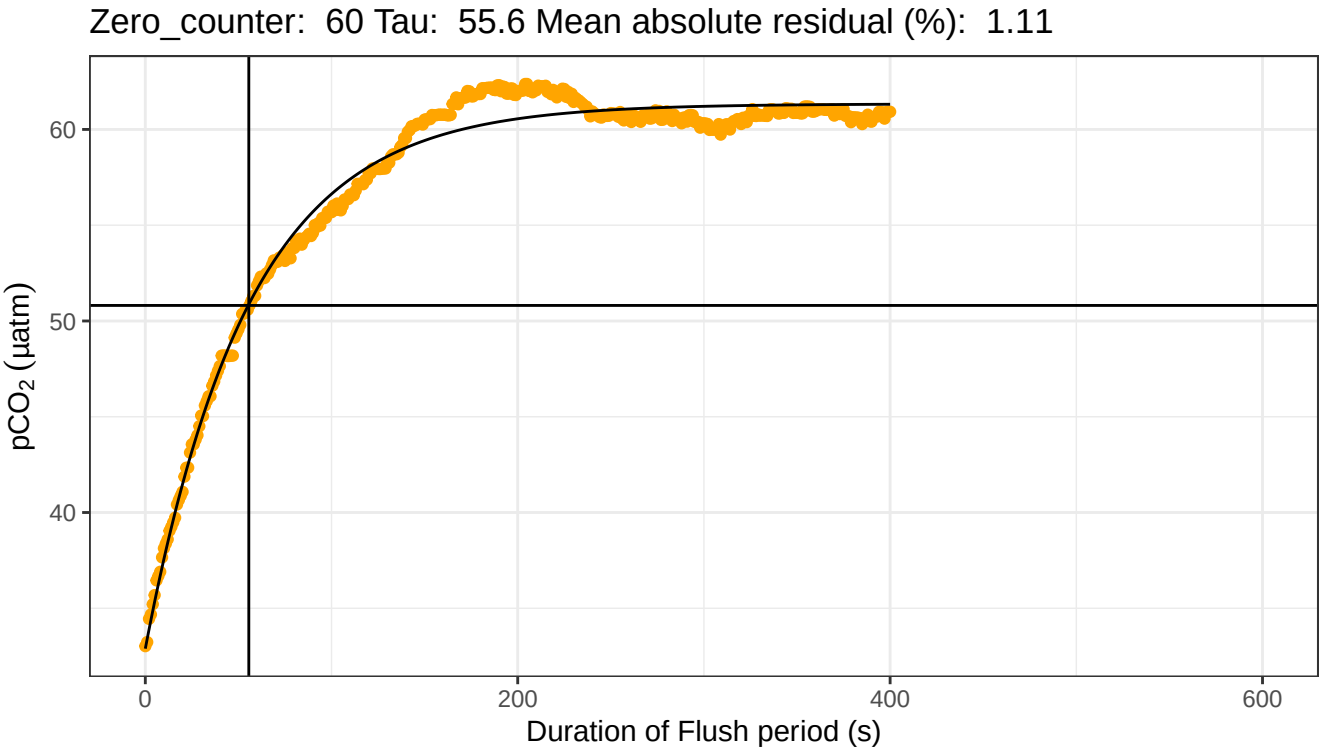

Zero_counter: 60 Tau: 72.4 Mean absolute residual (%): 0.79
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

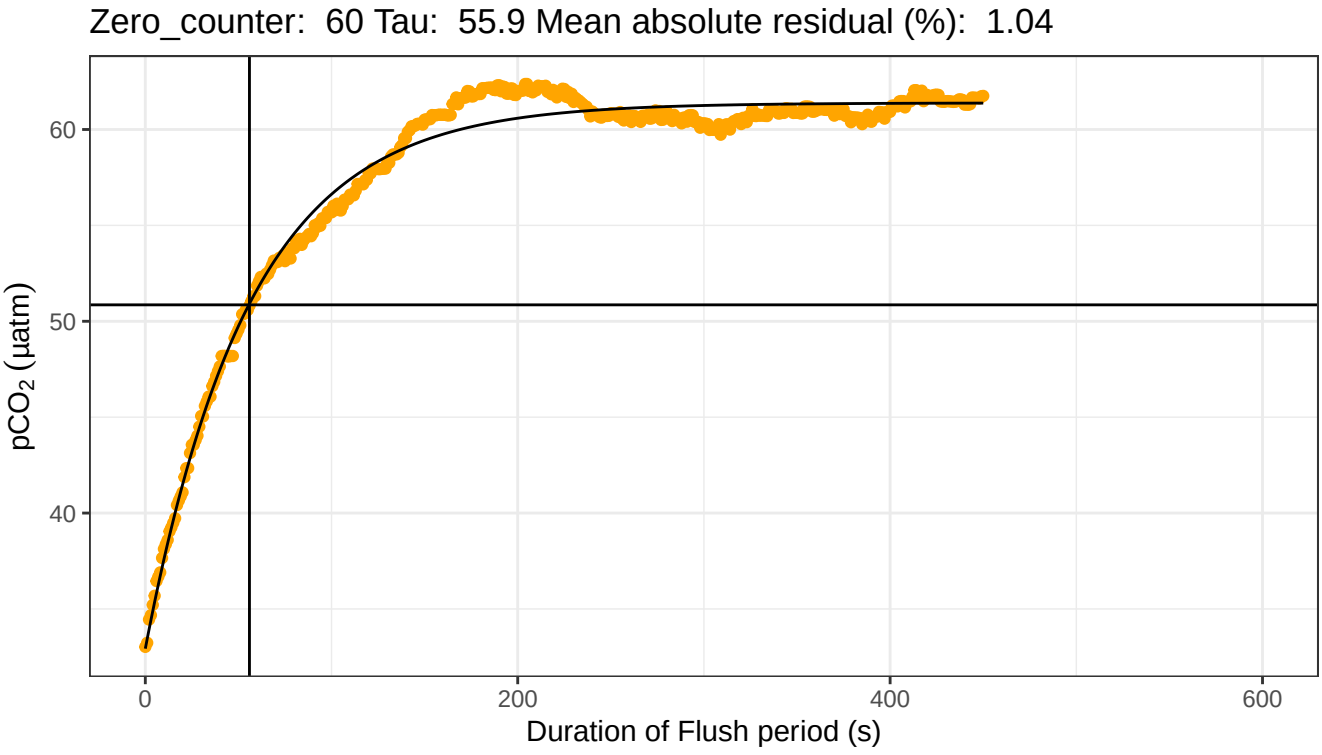
Zero_counter: 60 Tau: 66.1 Mean absolute residual (%): 0.91

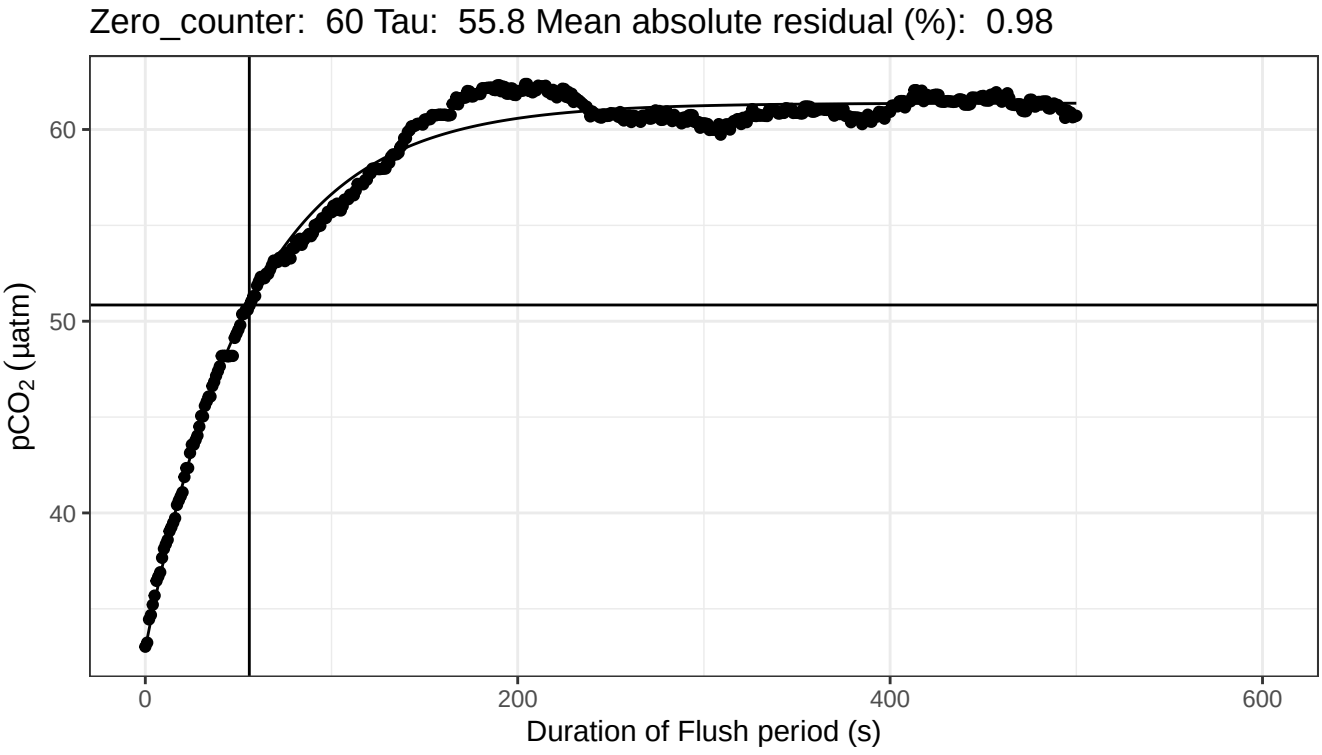



Zero_counter: 60 Tau: 59.5 Mean absolute residual (%): 1.15
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

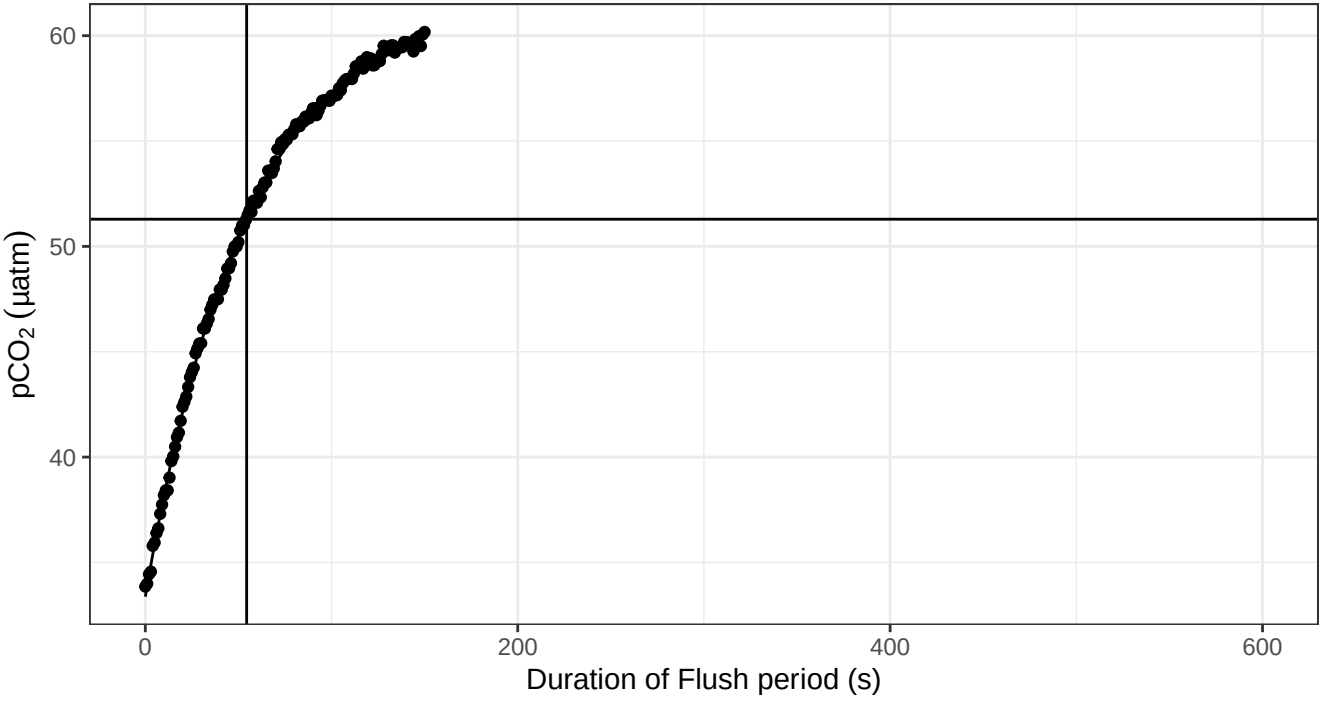

Zero_counter: 60 Tau: 56.7 Mean absolute residual (%): 1.18
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 60 Tau: 55.6 Mean absolute residual (%): 1.11
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

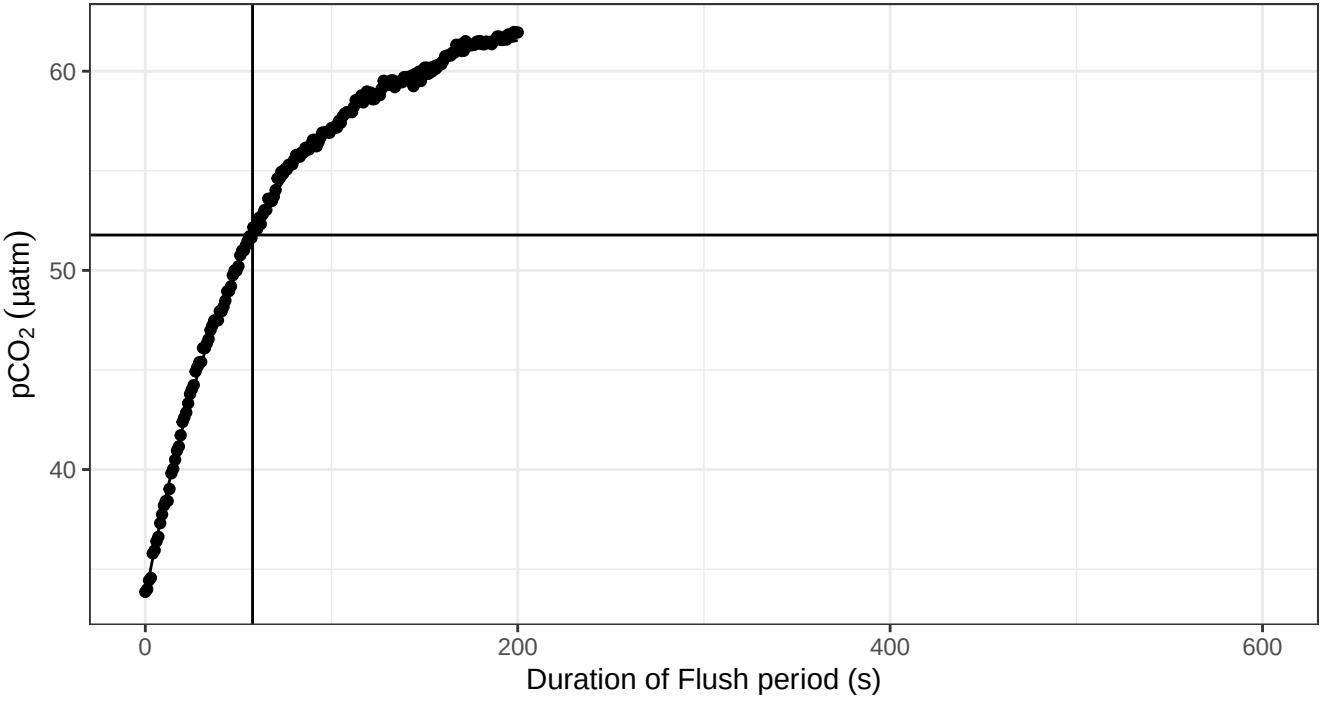

Zero_counter: 60 Tau: 55.9 Mean absolute residual (%): 1.04
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

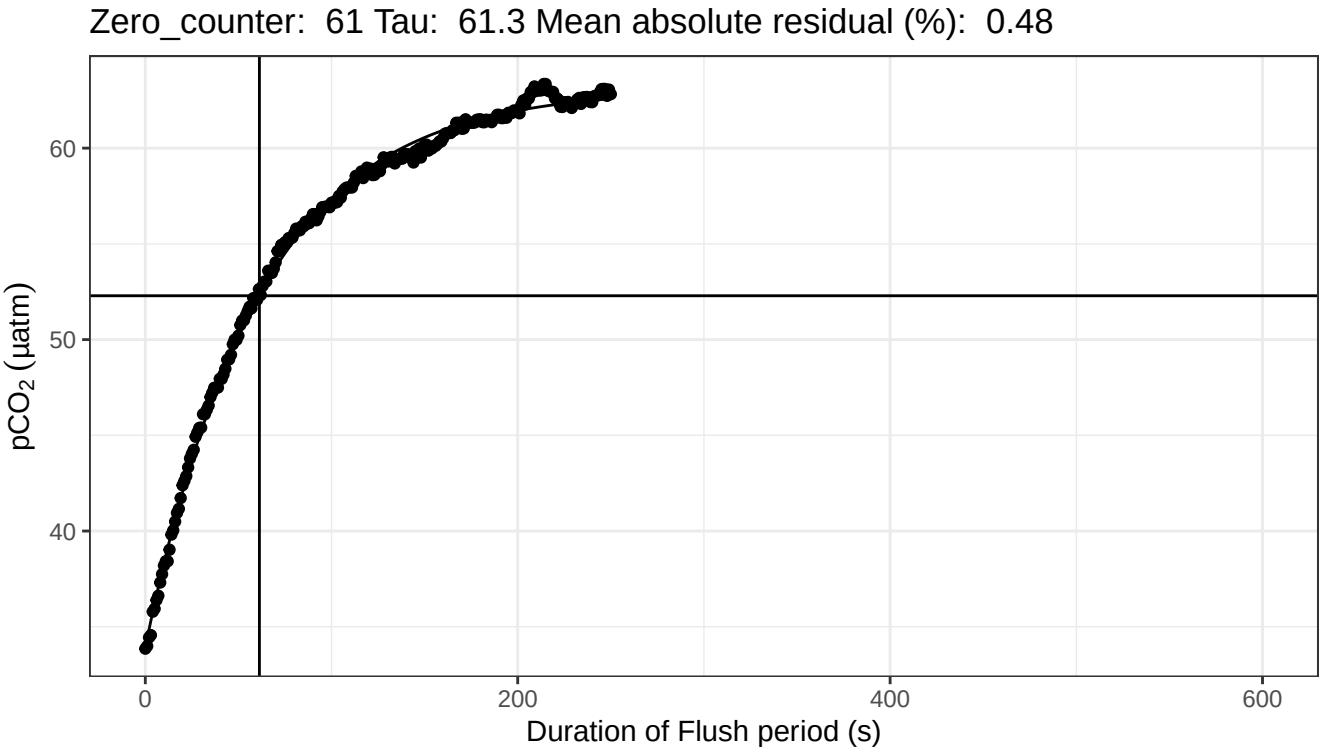

Zero_counter: 60 Tau: 55.8 Mean absolute residual (%): 0.98
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 61 Tau: 54.4 Mean absolute residual (%): 0.3

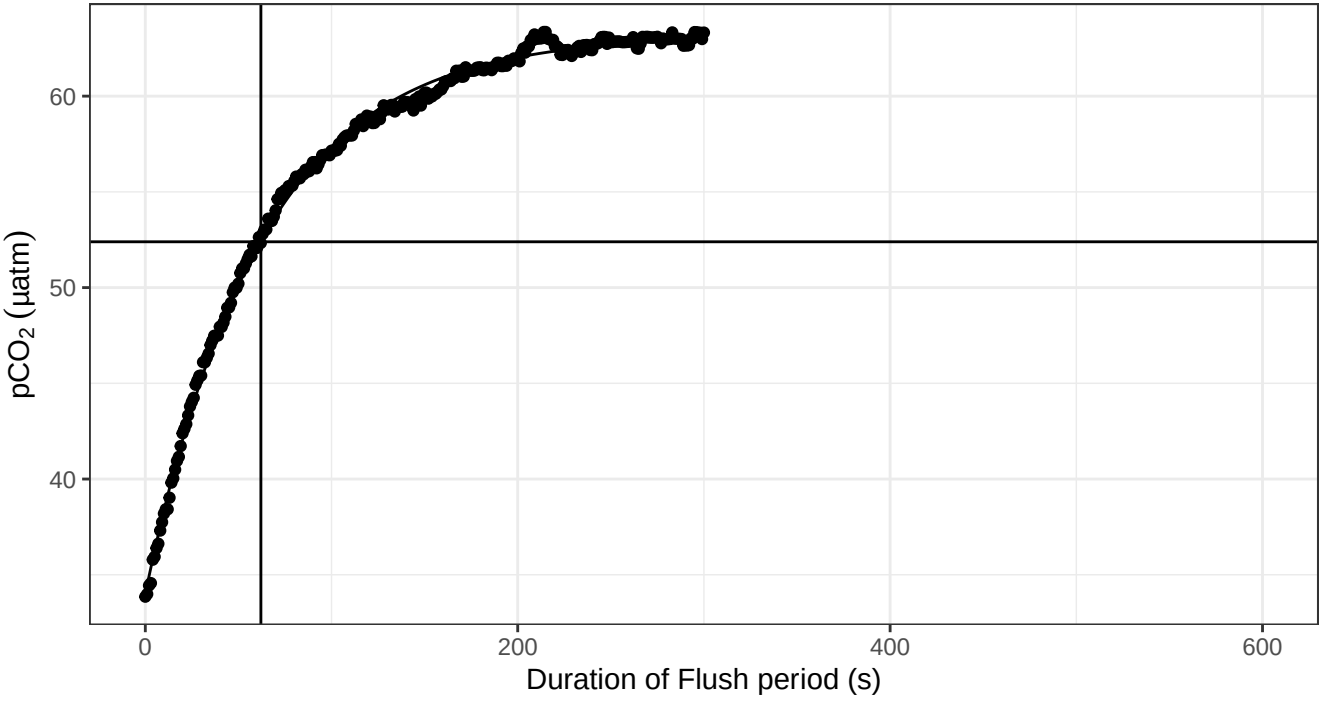


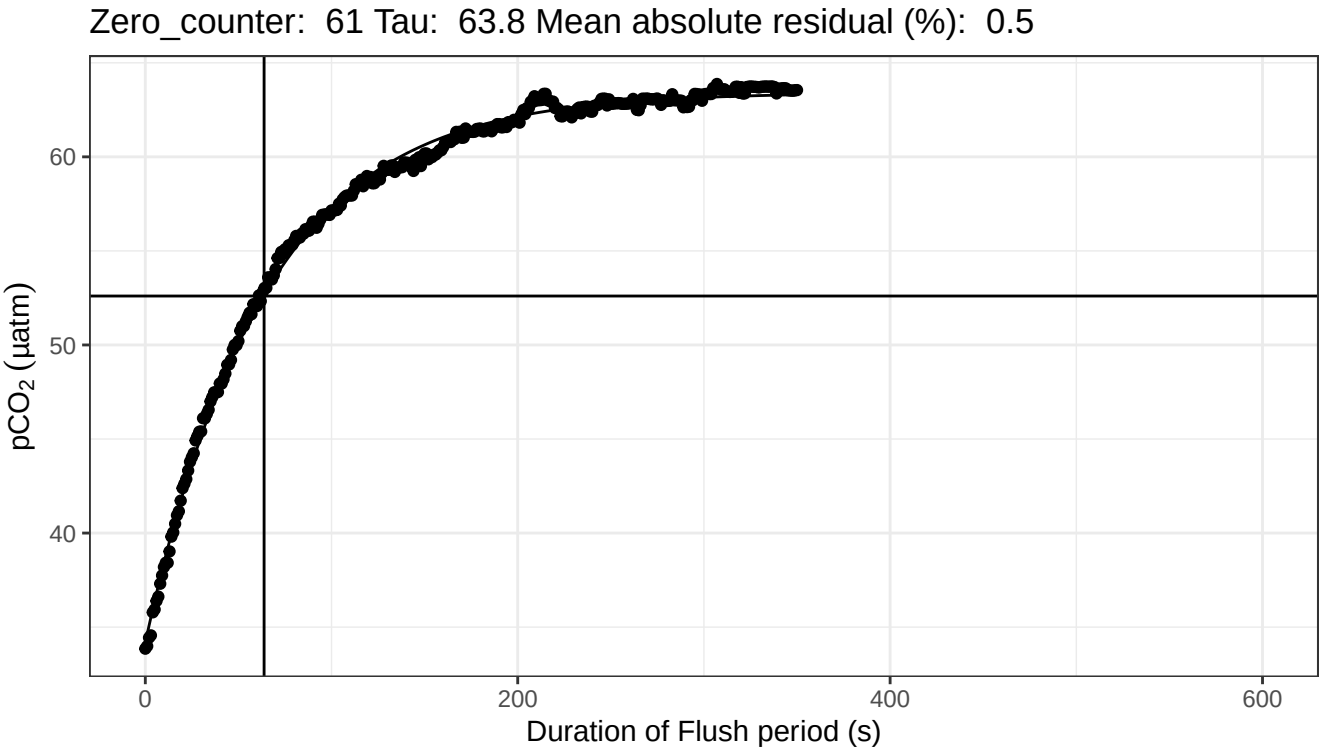
Zero_counter: 61 Tau: 57.6 Mean absolute residual (%): 0.37

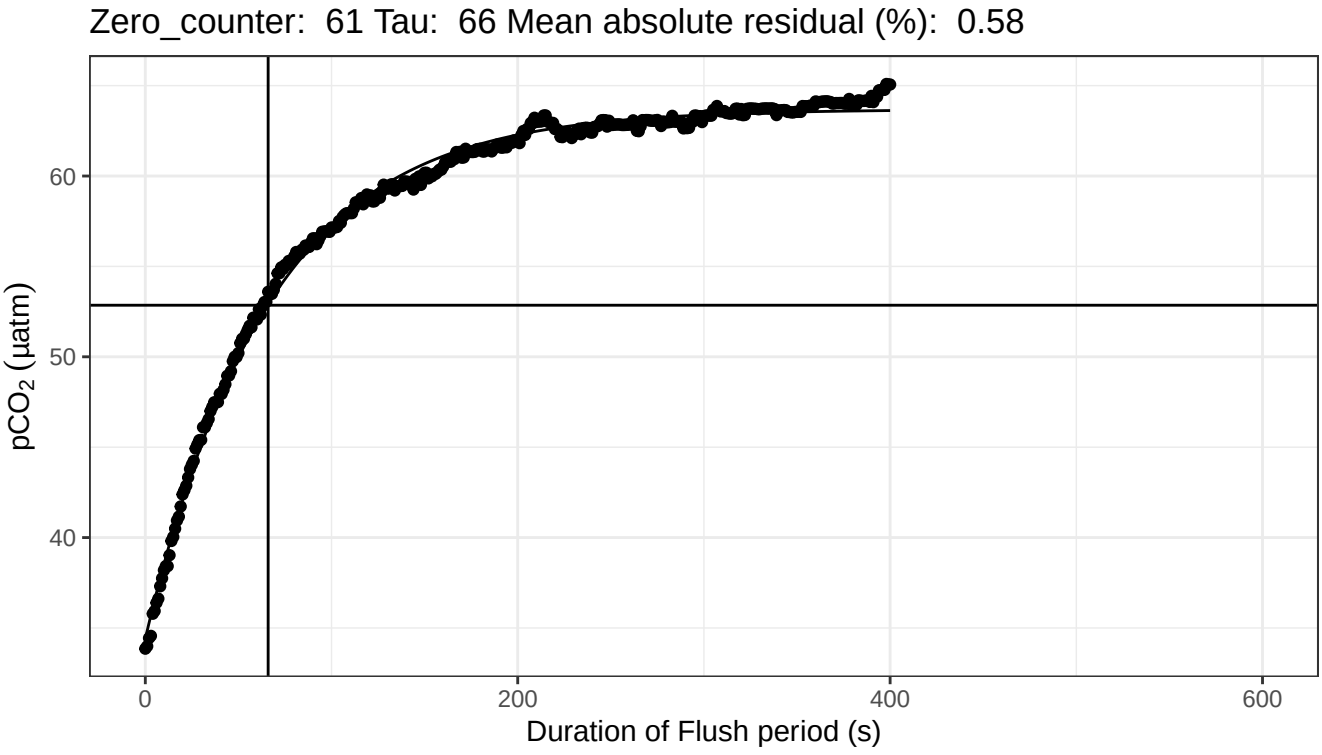


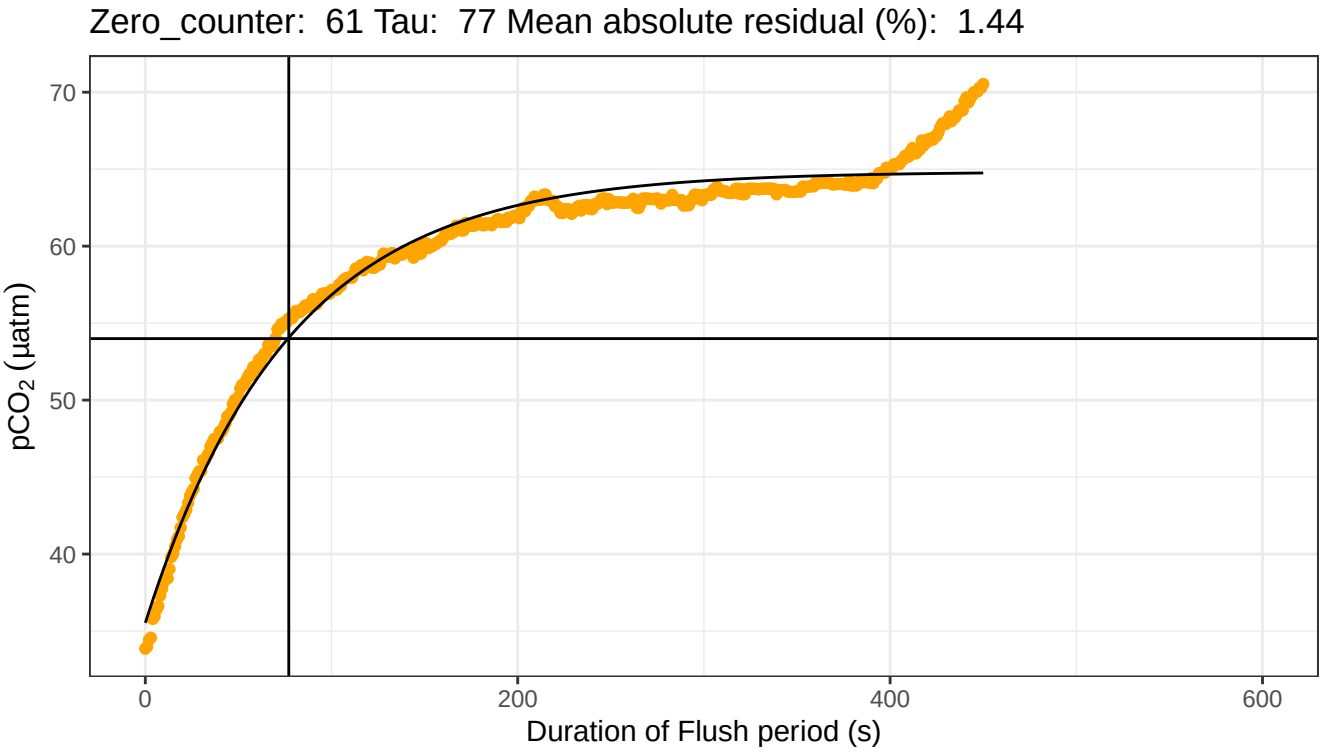

Zero_counter: 61 Tau: 61.3 Mean absolute residual (%): 0.48
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

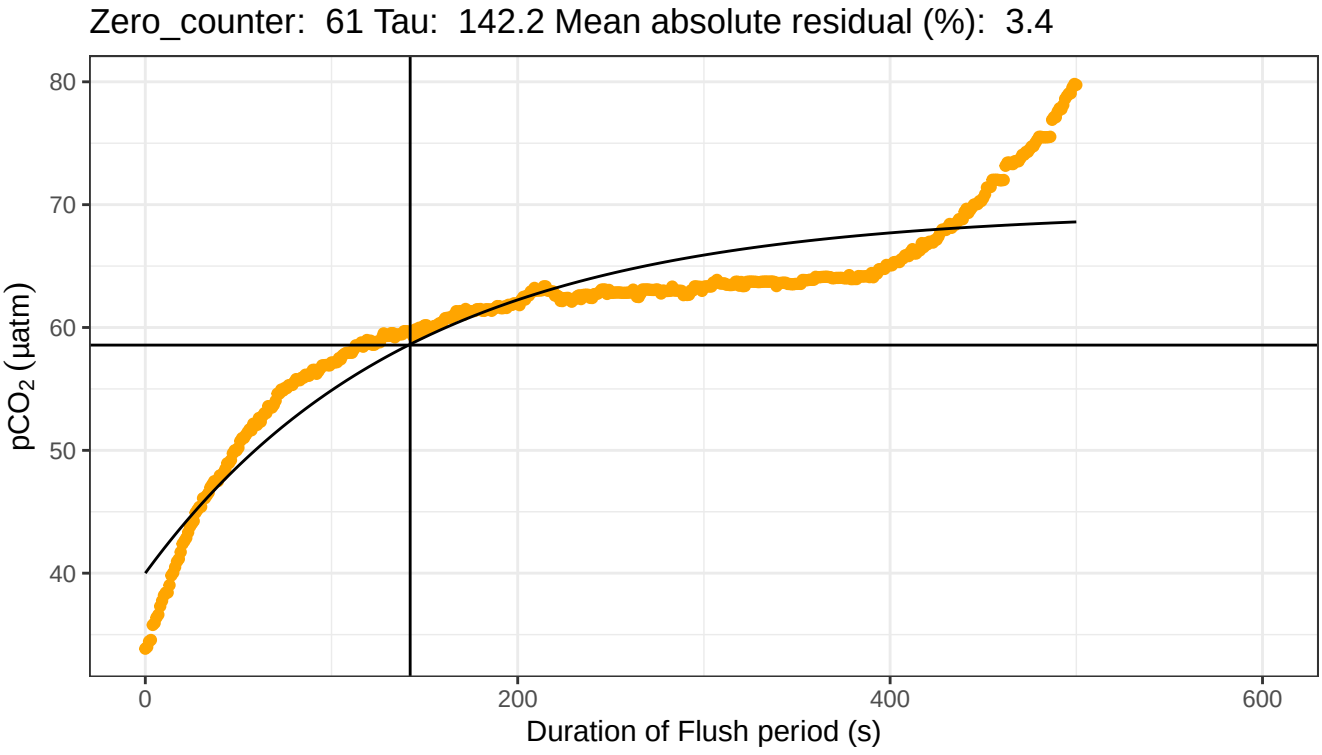
Zero_counter: 61 Tau: 62.1 Mean absolute residual (%): 0.47

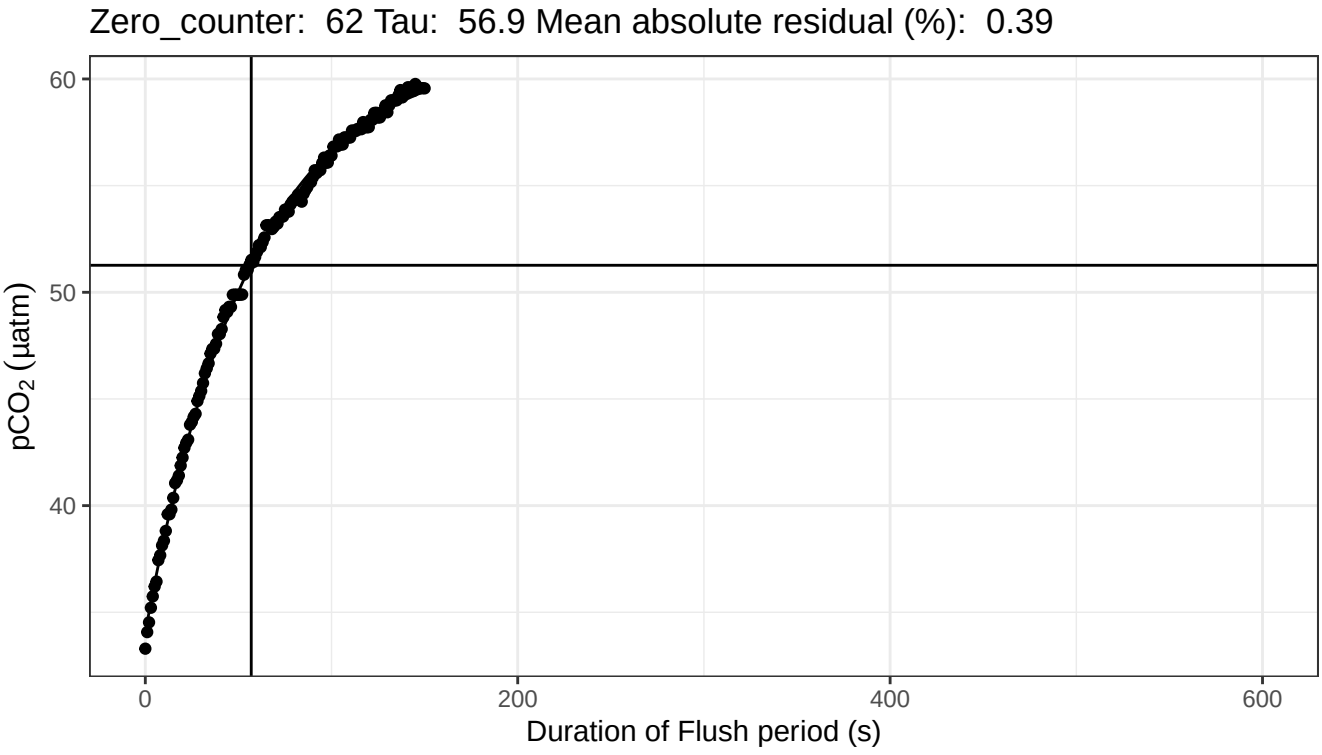



Zero_counter: 61 Tau: 63.8 Mean absolute residual (%): 0.5
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

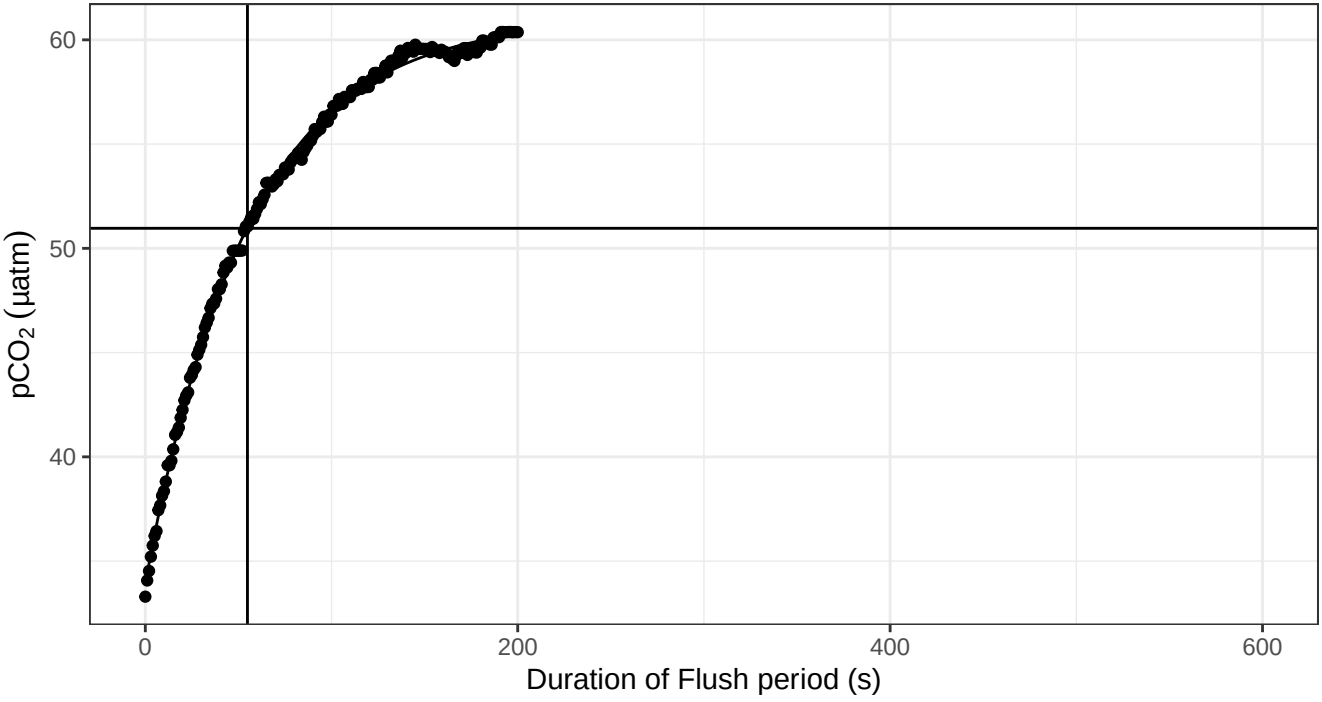

Zero_counter: 61 Tau: 66 Mean absolute residual (%): 0.58
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 61 Tau: 77 Mean absolute residual (%): 1.44
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

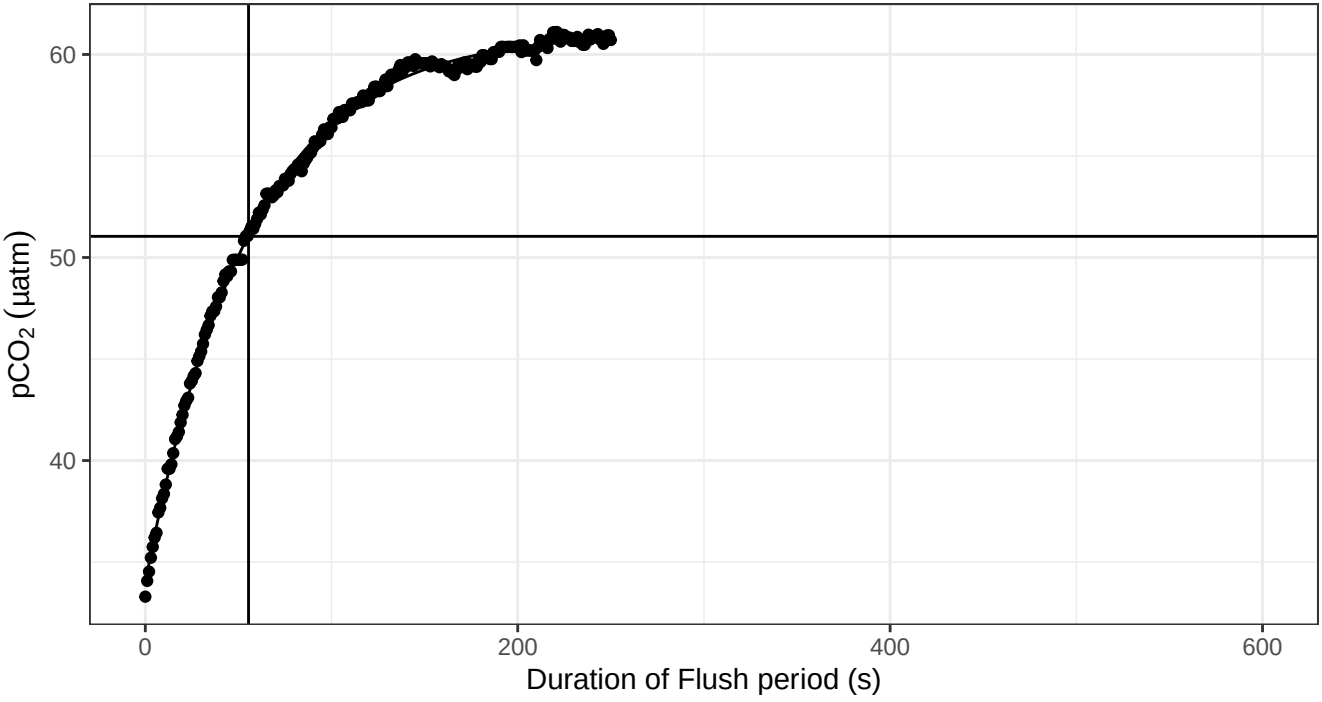

Zero_counter: 61 Tau: 142.2 Mean absolute residual (%): 3.4
80
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

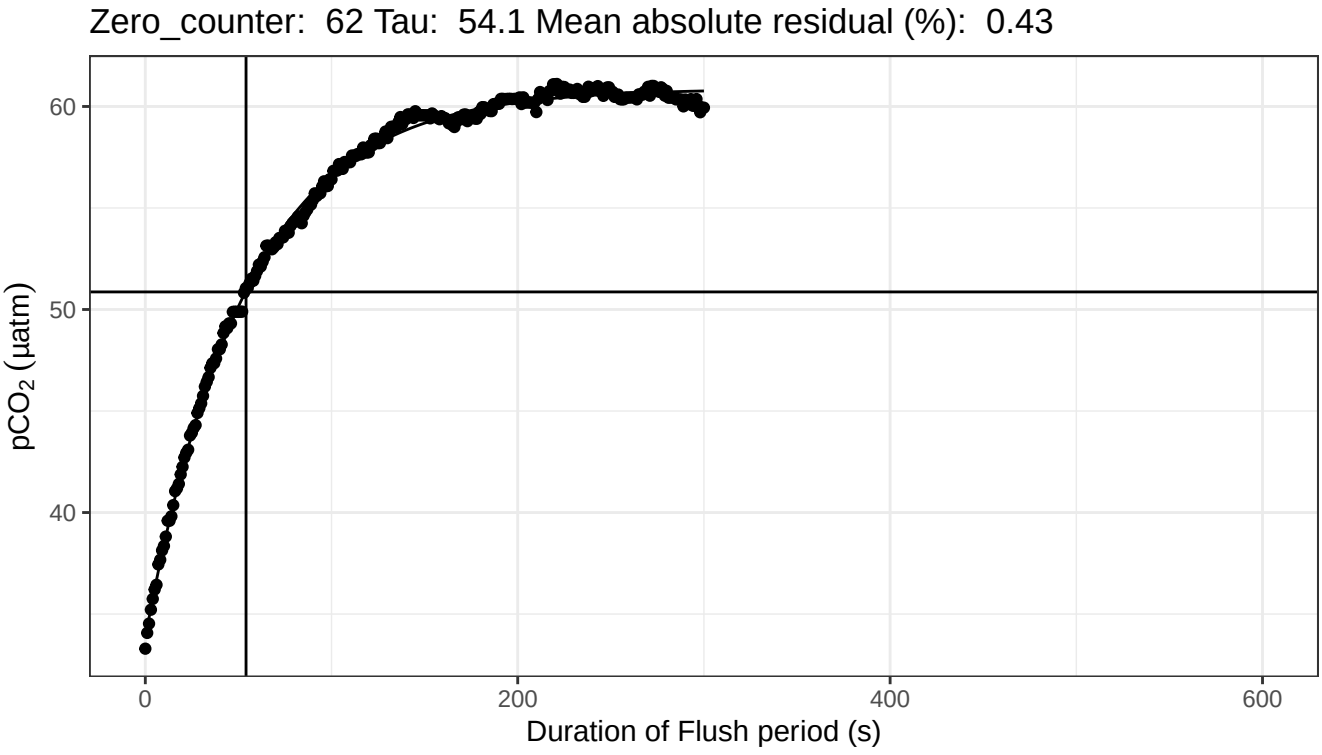

Zero_counter: 62 Tau: 56.9 Mean absolute residual (%): 0.39
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 62 Tau: 54.8 Mean absolute residual (%): 0.4

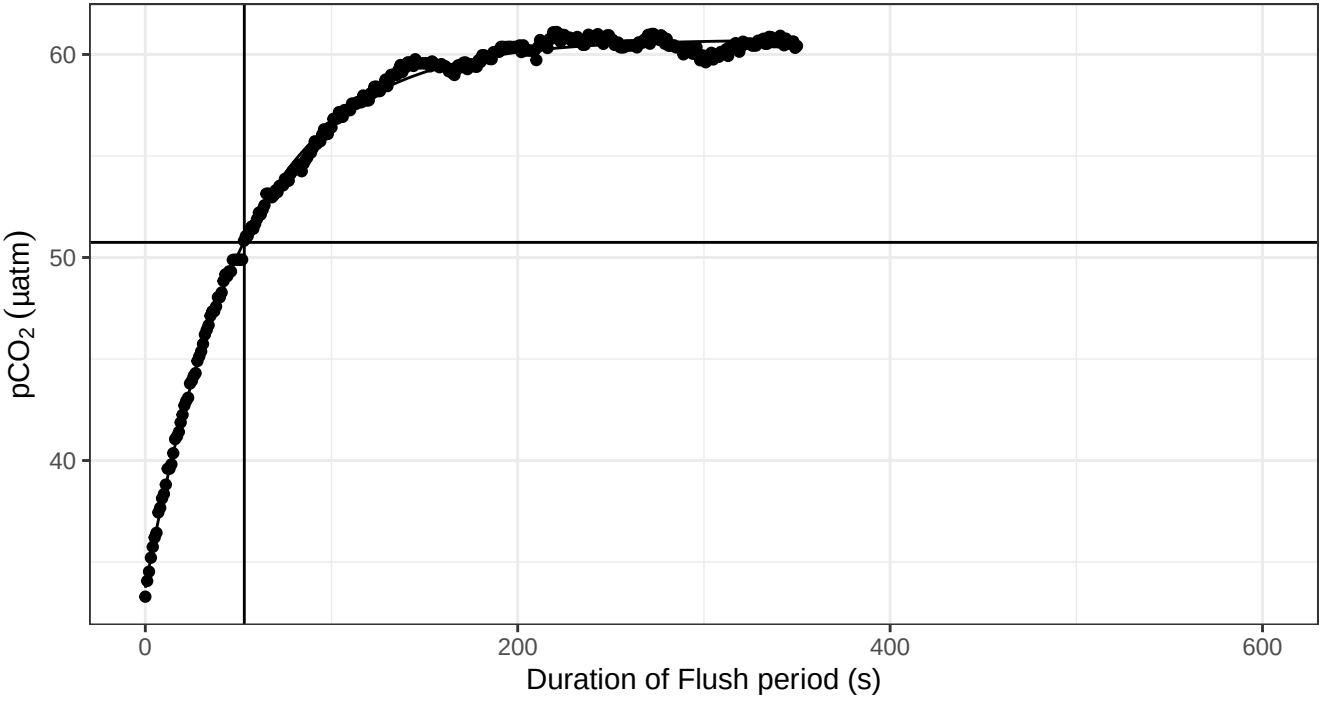


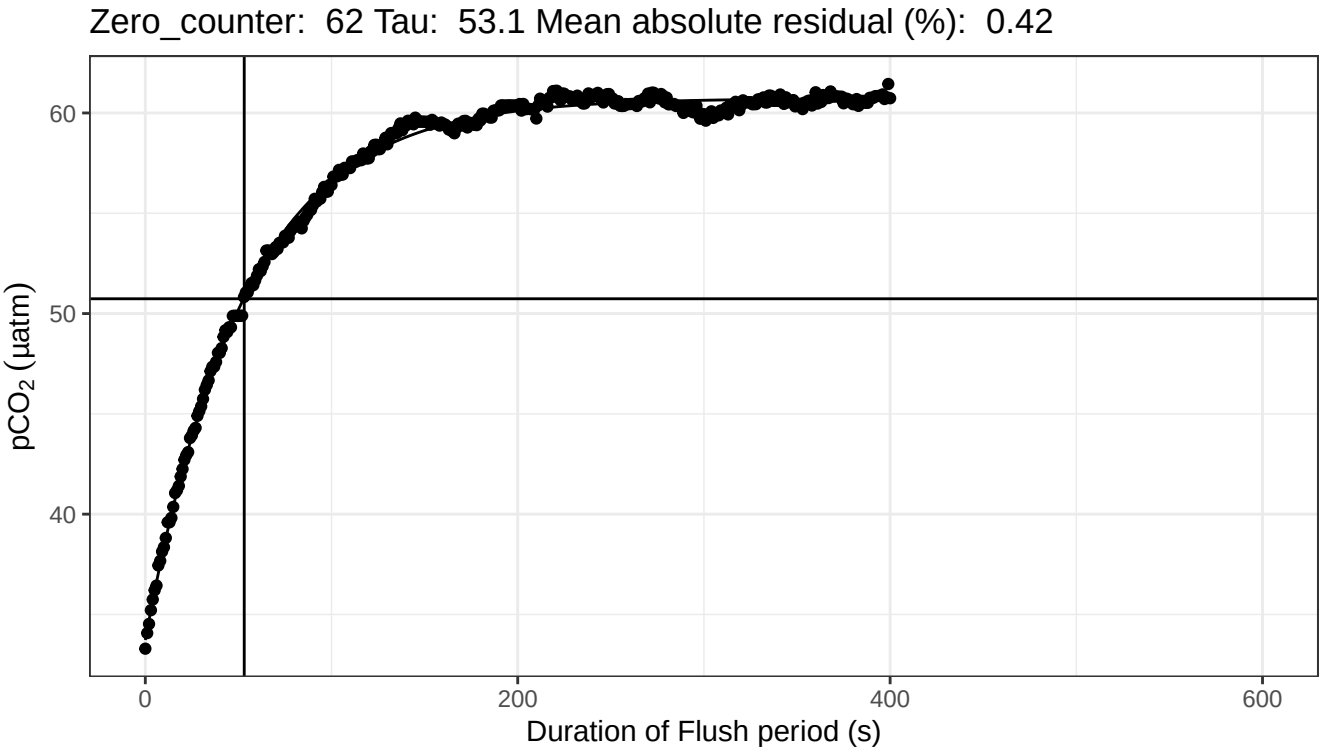
Zero_counter: 62 Tau: 55.4 Mean absolute residual (%): 0.38

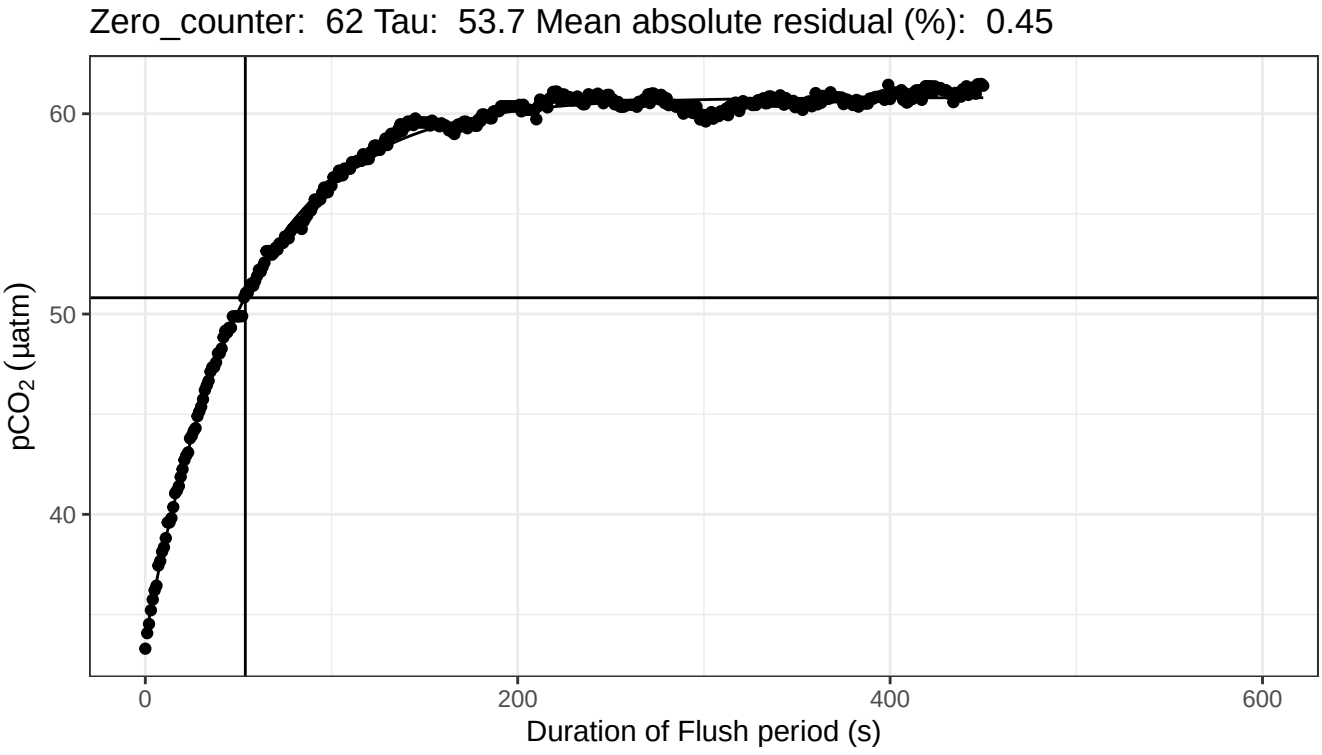


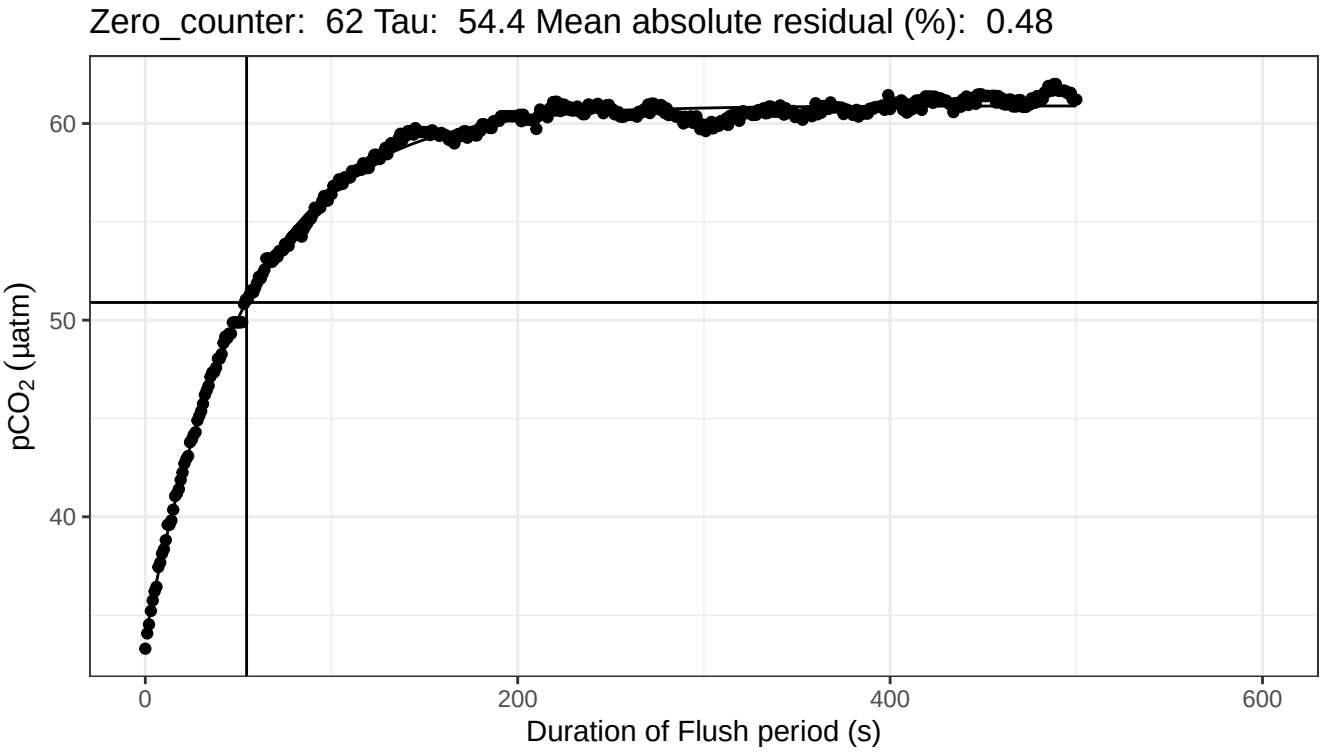

Zero_counter: 62 Tau: 54.1 Mean absolute residual (%): 0.43
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 62 Tau: 53.2 Mean absolute residual (%): 0.45

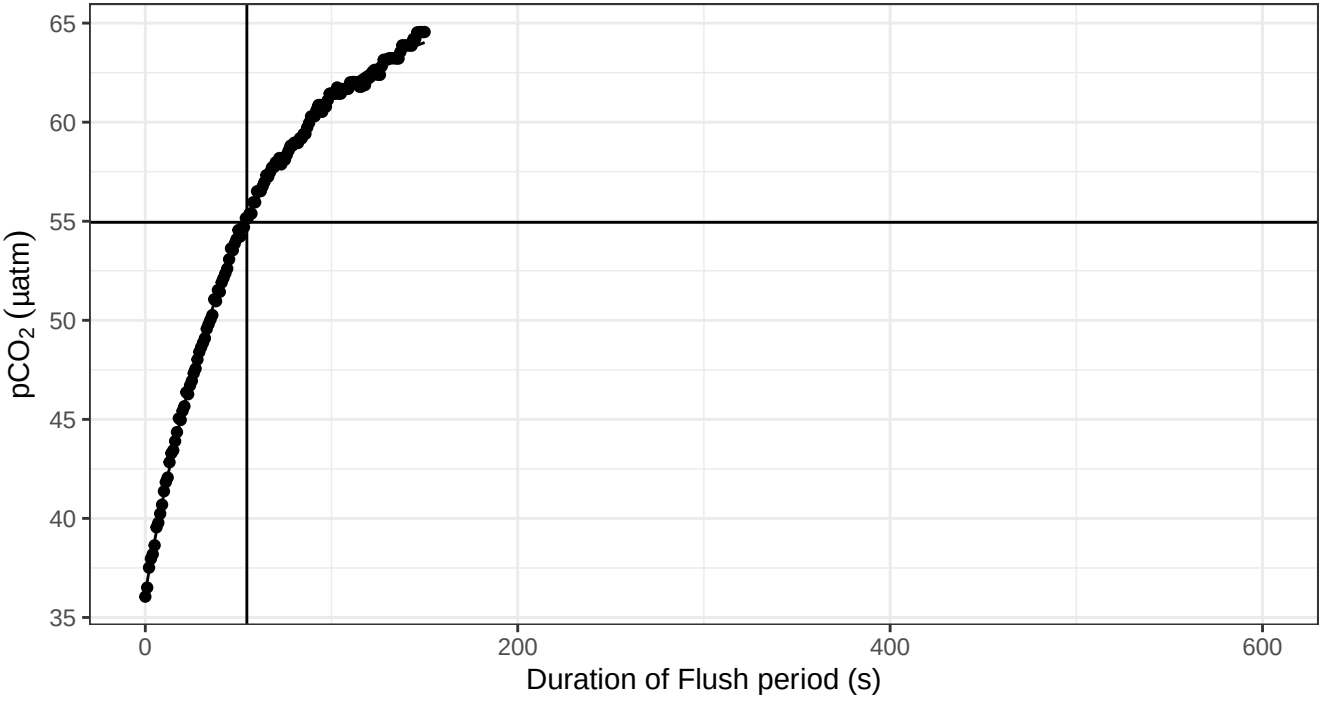



Zero_counter: 62 Tau: 53.1 Mean absolute residual (%): 0.42
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

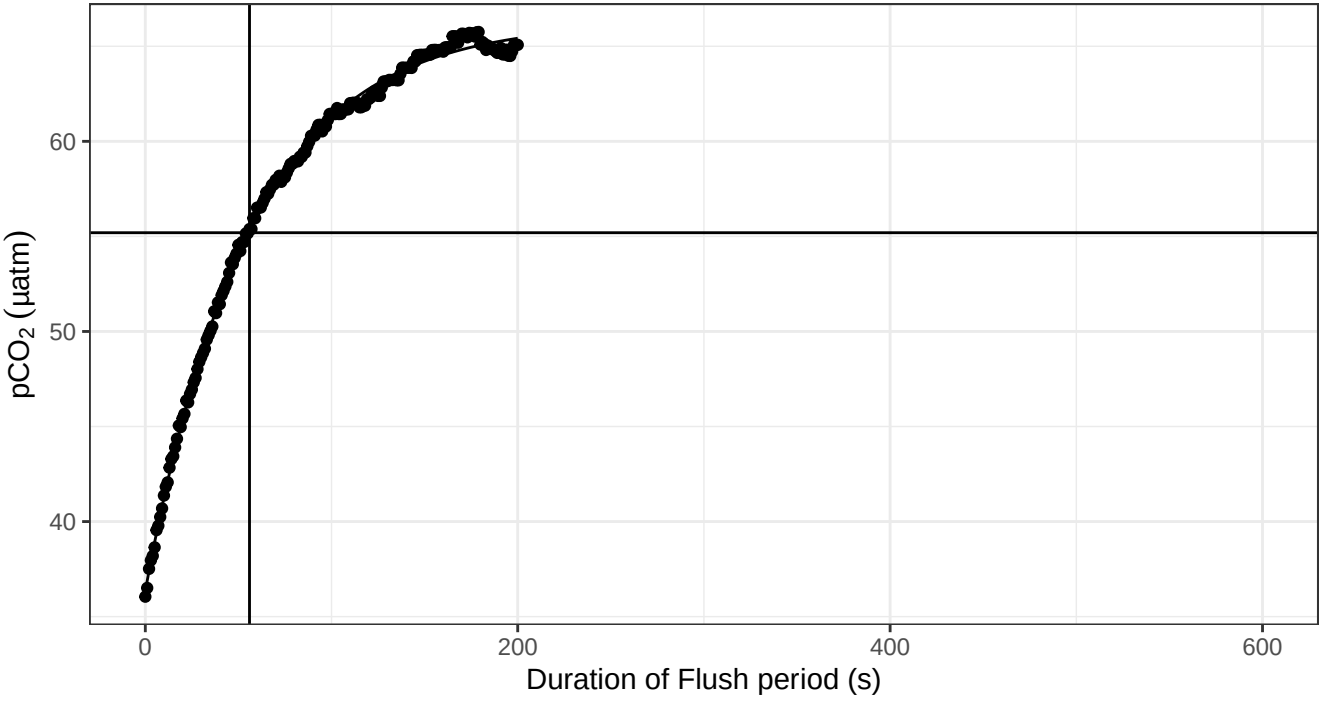

Zero_counter: 62 Tau: 53.7 Mean absolute residual (%): 0.45
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 62 Tau: 54.4 Mean absolute residual (%): 0.48
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

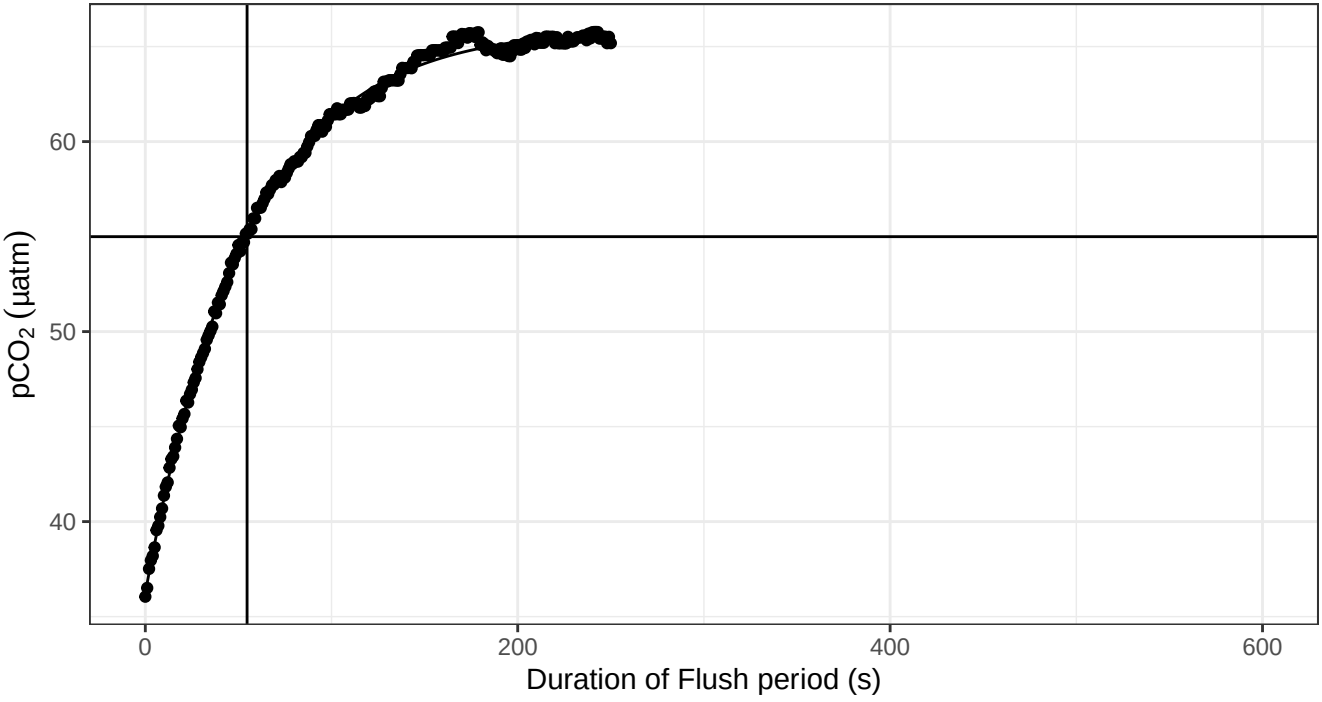
Zero_counter: 63 Tau: 54.5 Mean absolute residual (%): 0.32



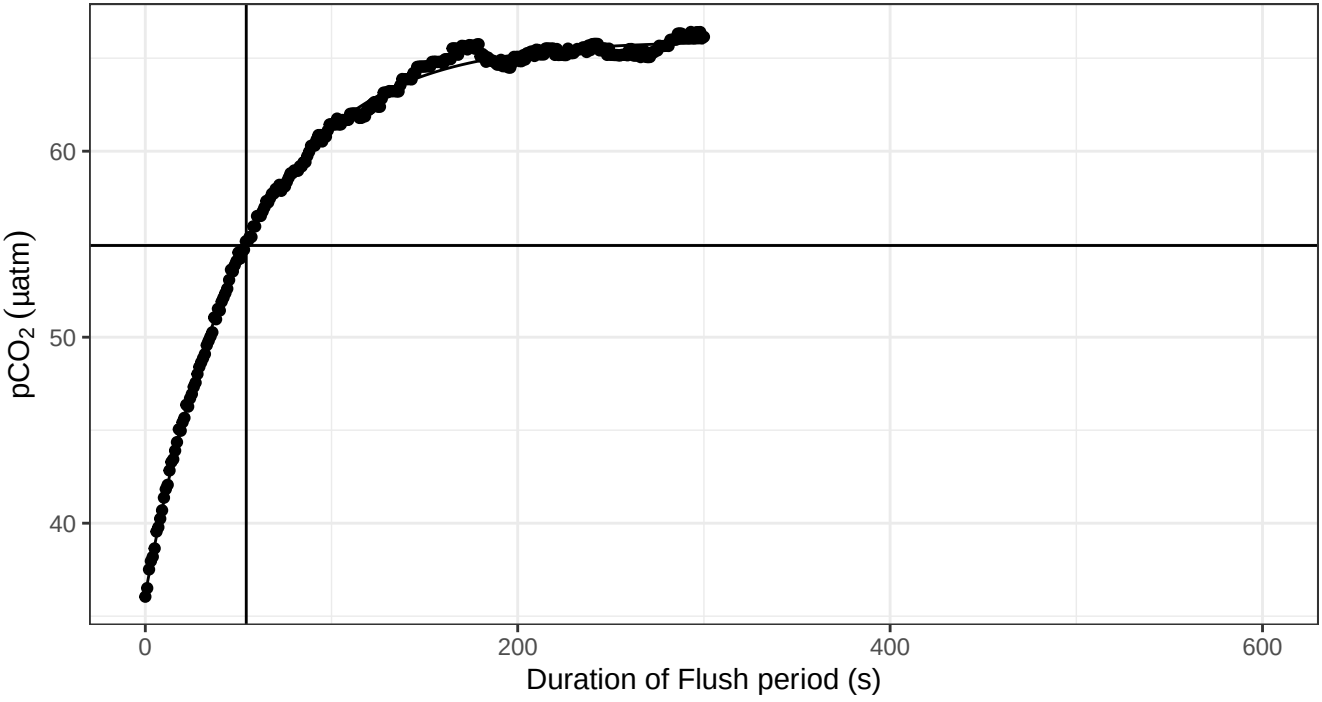
Zero_counter: 63 Tau: 56 Mean absolute residual (%): 0.43



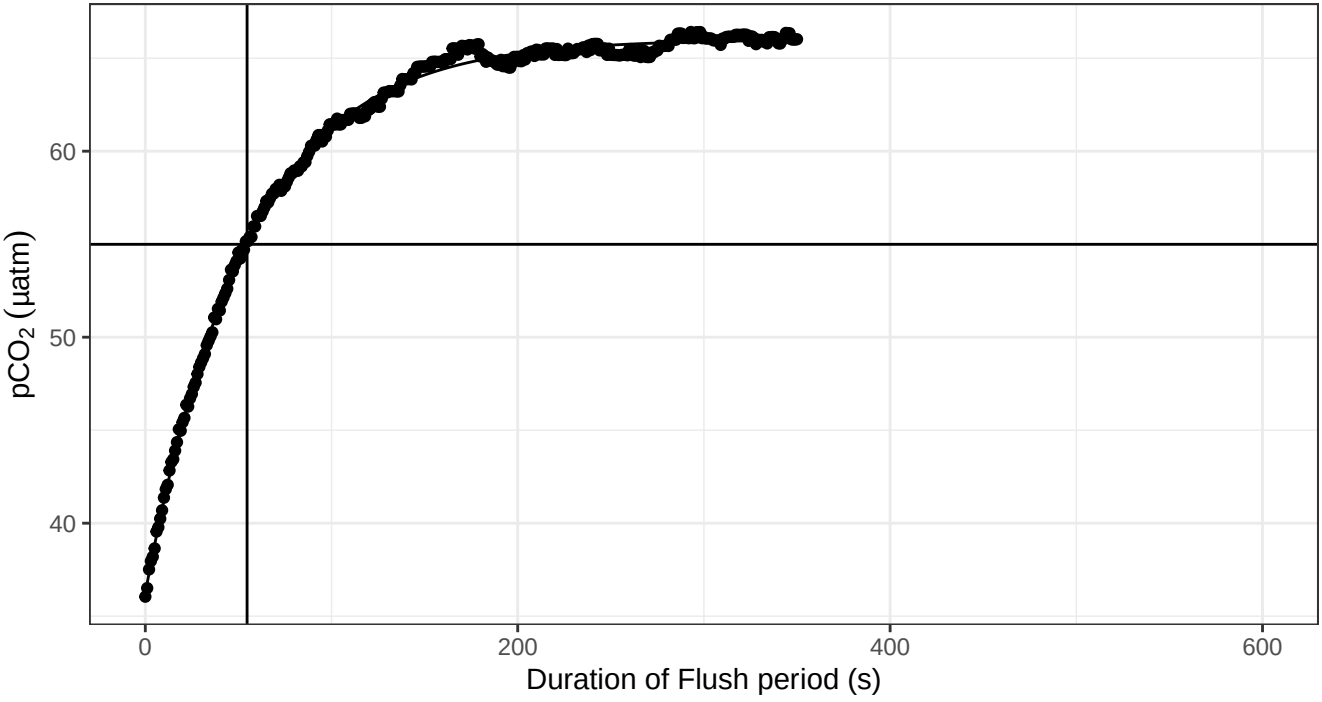
Zero_counter: 63 Tau: 54.7 Mean absolute residual (%): 0.41



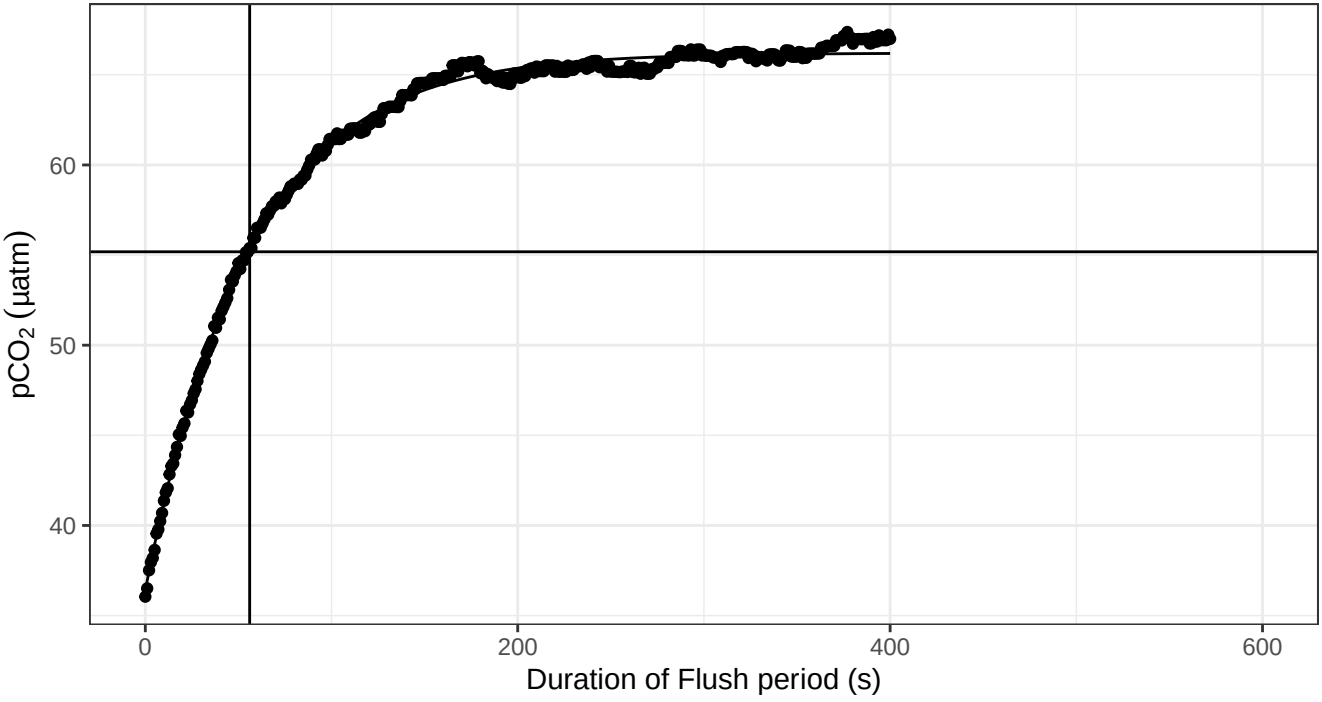
Zero_counter: 63 Tau: 54.2 Mean absolute residual (%): 0.44

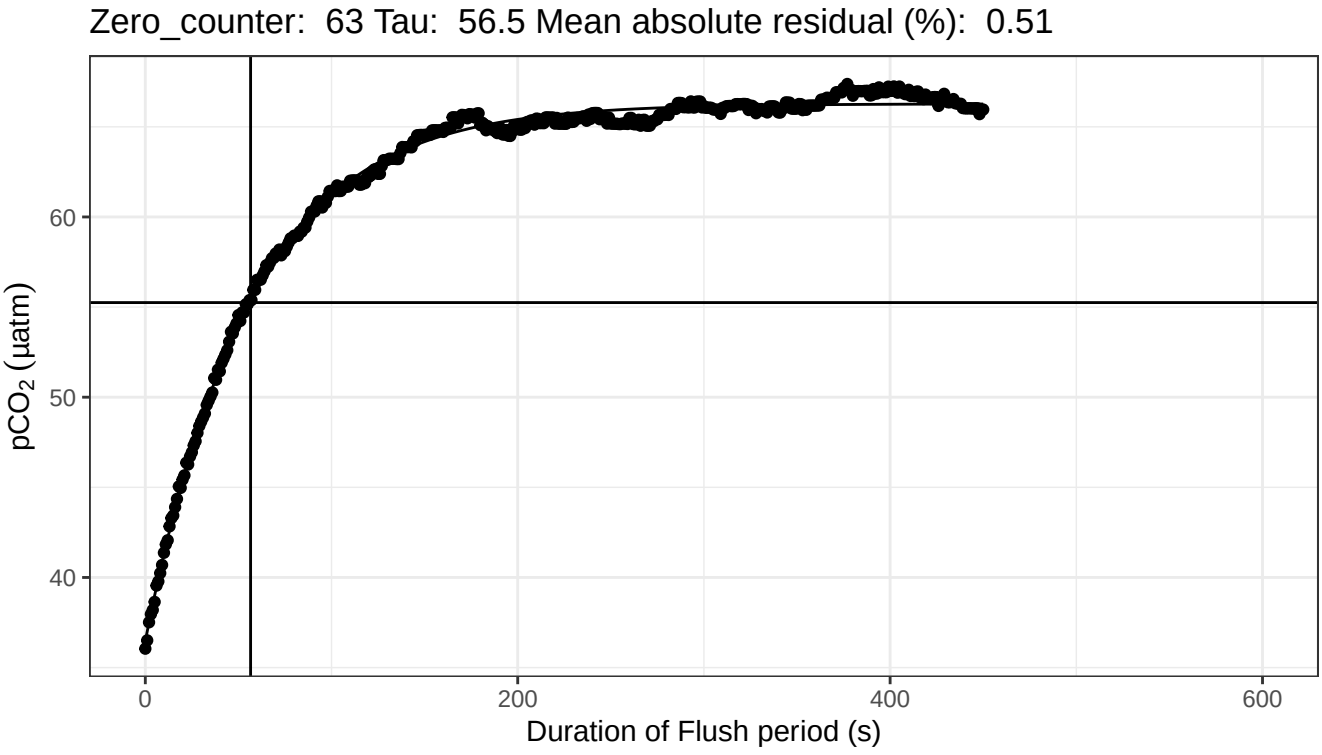


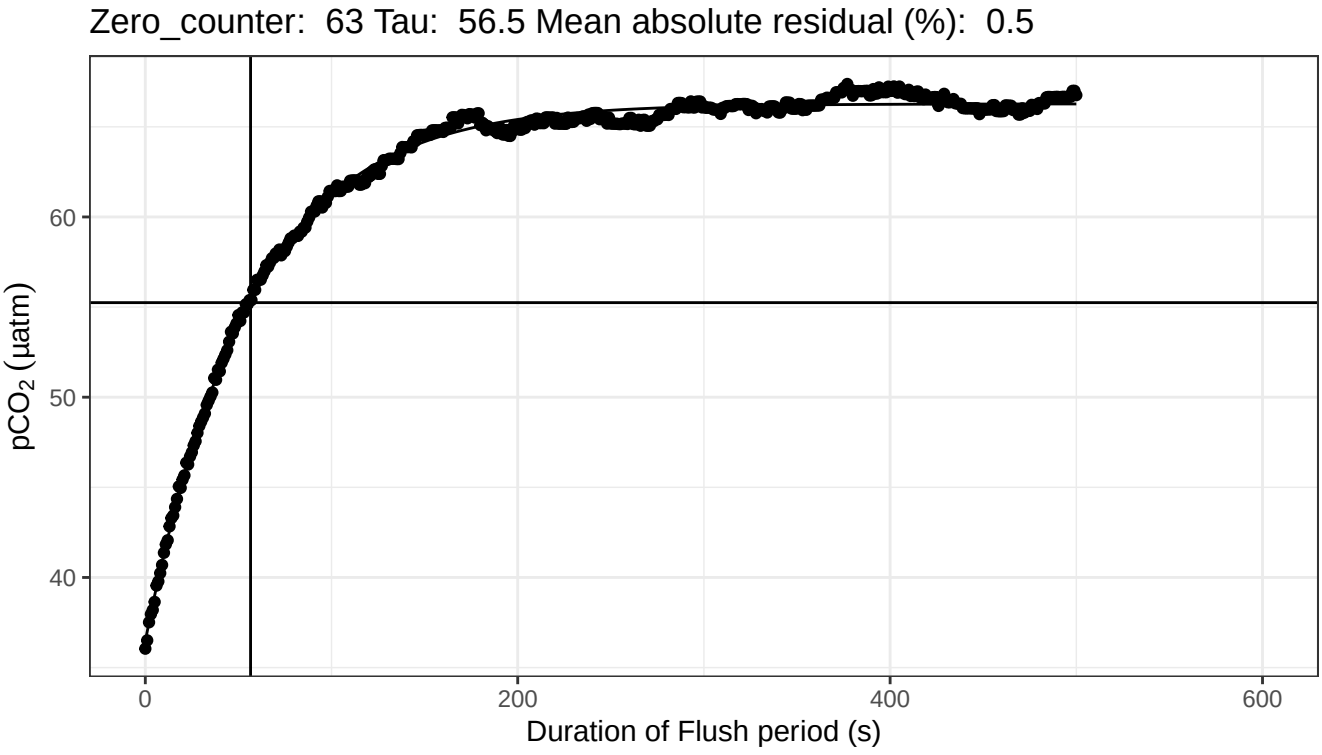
Zero_counter: 63 Tau: 54.7 Mean absolute residual (%): 0.42

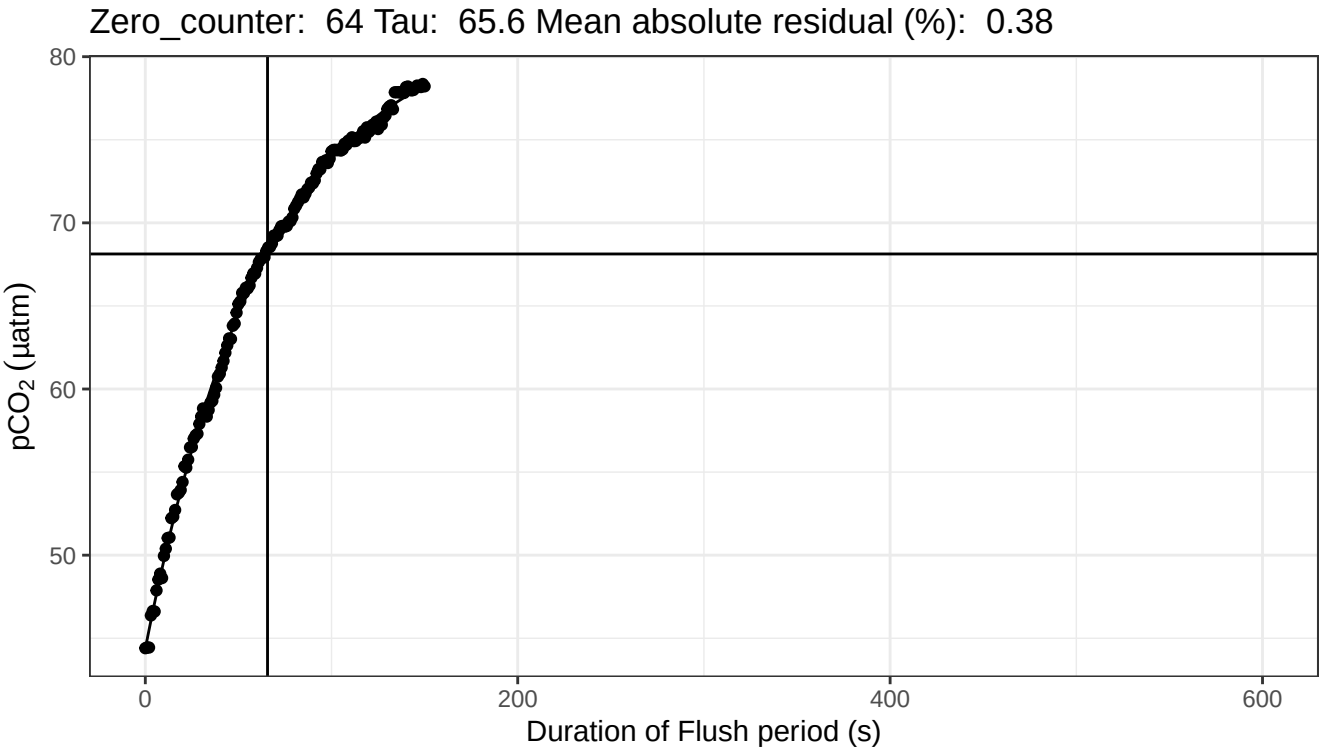


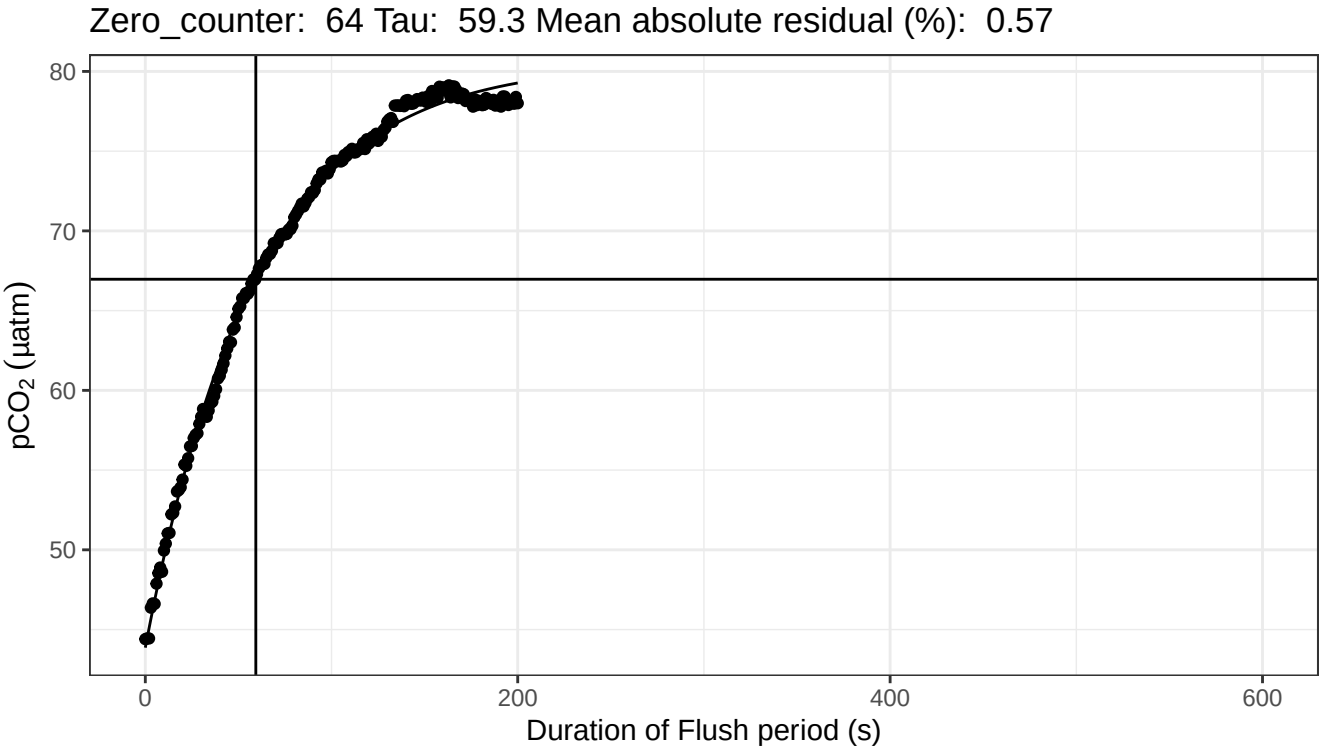
Zero_counter: 63 Tau: 56 Mean absolute residual (%): 0.49

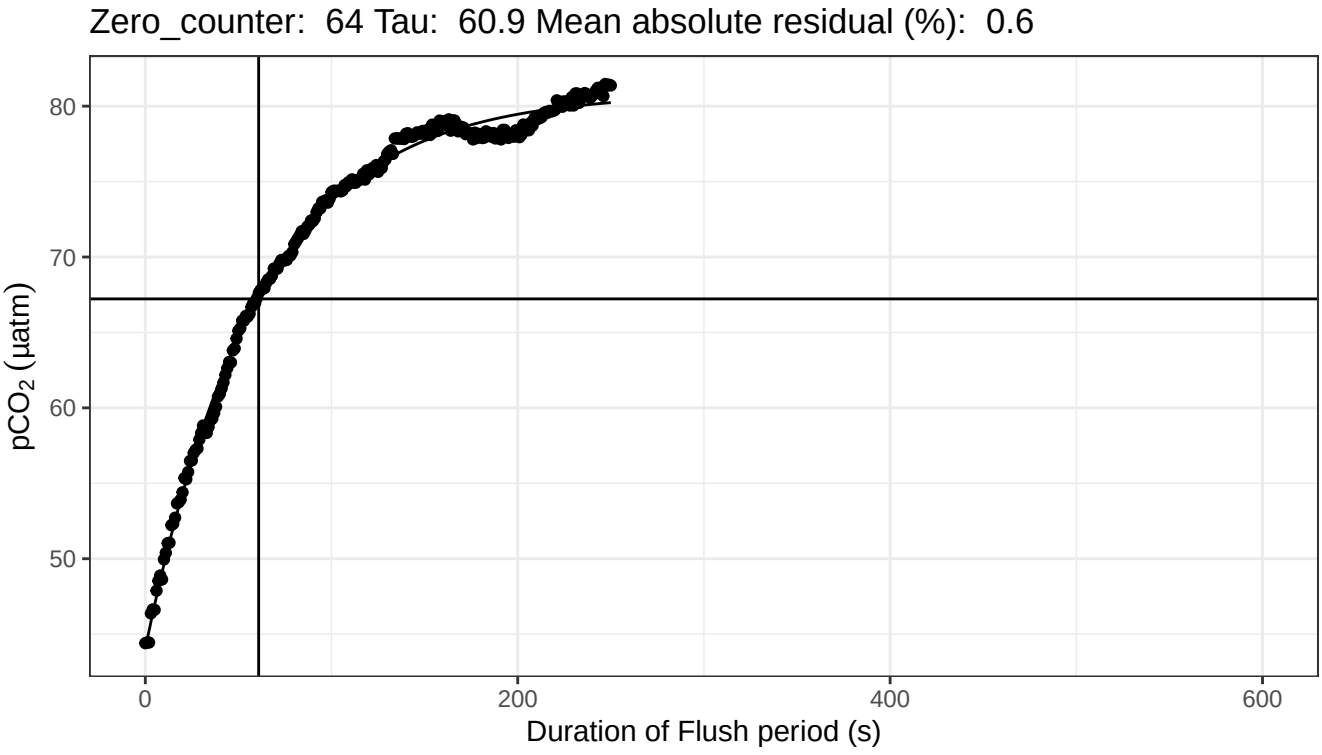



Zero_counter: 63 Tau: 56.5 Mean absolute residual (%): 0.51
pCO2 (µatm)
60
50
40
0
200
400
600
Duration of Flush period (s)

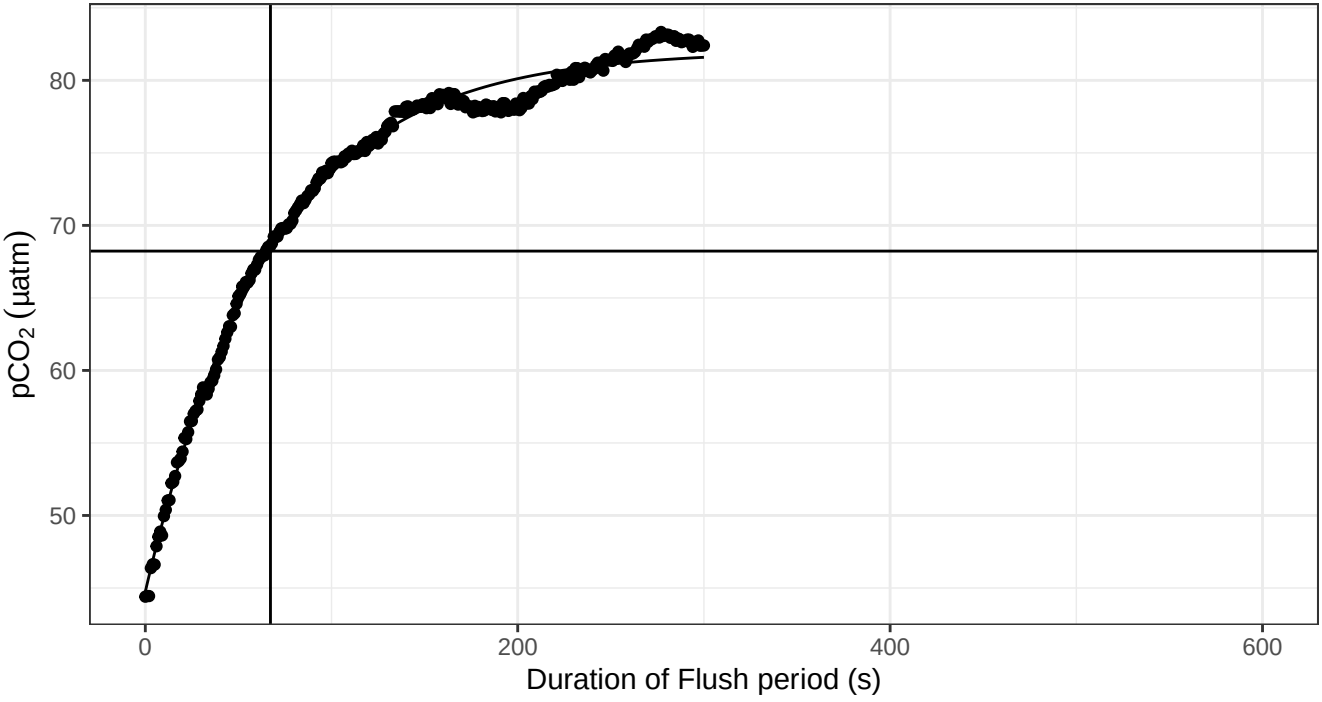

Zero_counter: 63 Tau: 56.5 Mean absolute residual (%): 0.5
pCO2 (µatm)
60
50
40
0
200
400
600
Duration of Flush period (s)


Zero_counter: 64 Tau: 65.6 Mean absolute residual (%): 0.38
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

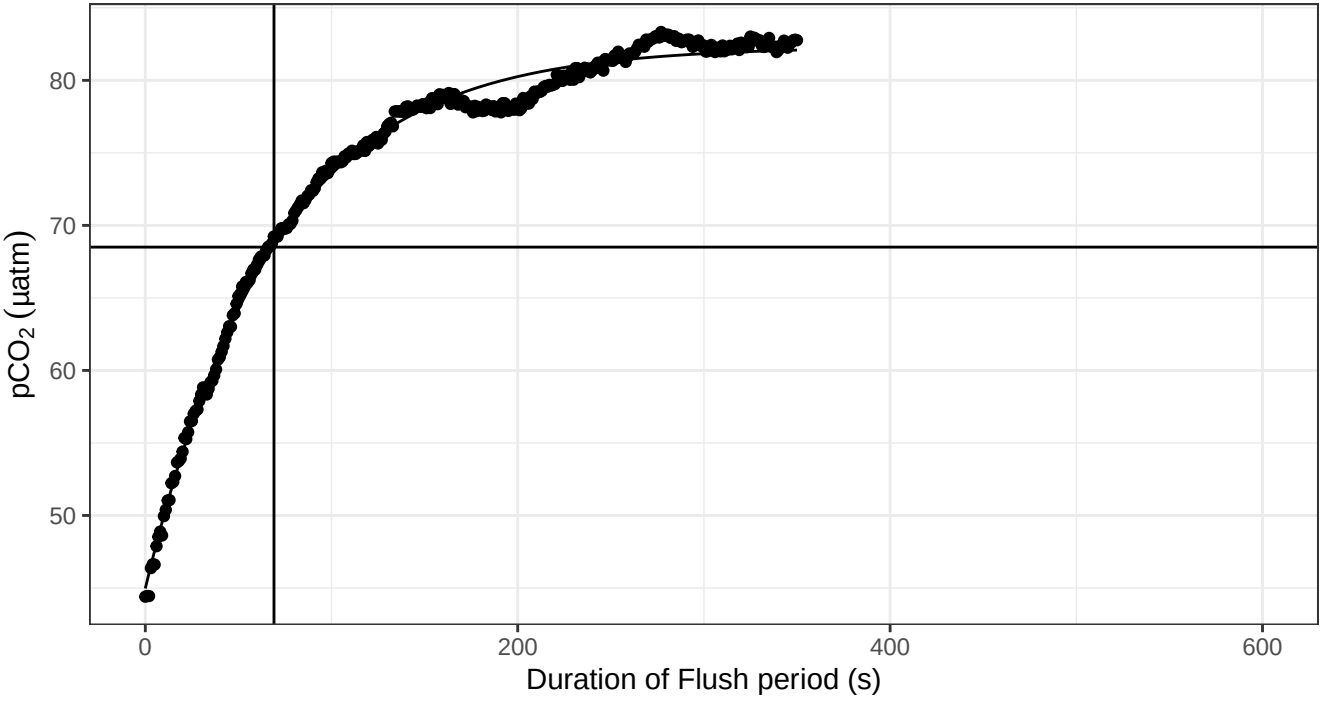

Zero_counter: 64 Tau: 59.3 Mean absolute residual (%): 0.57
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 64 Tau: 60.9 Mean absolute residual (%): 0.6
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

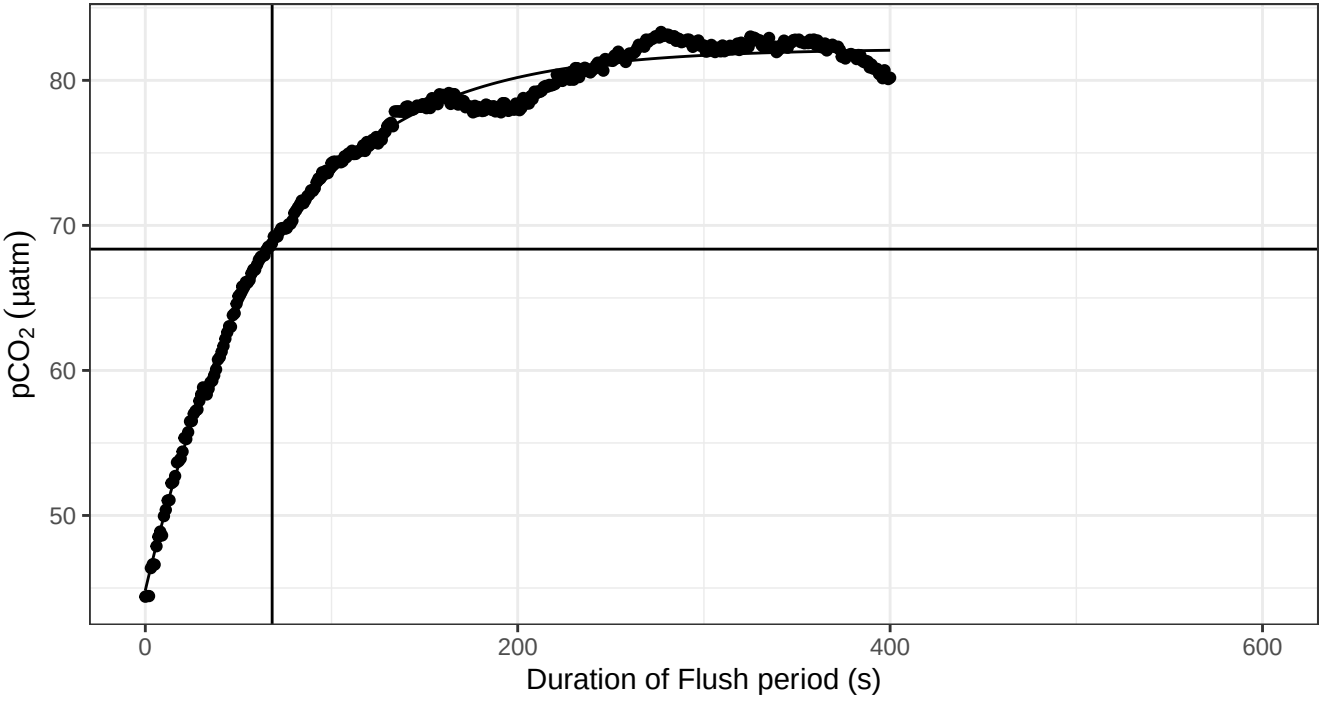
Zero_counter: 64 Tau: 67.2 Mean absolute residual (%): 0.8

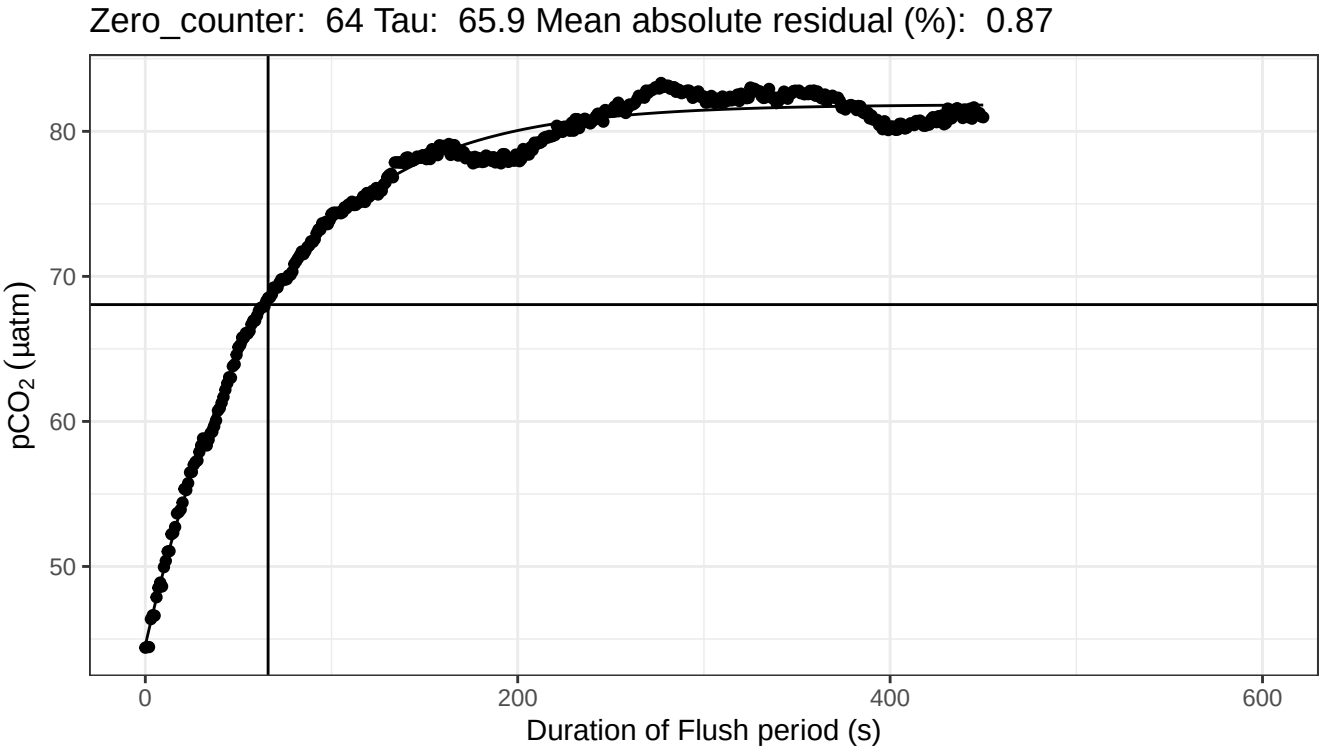


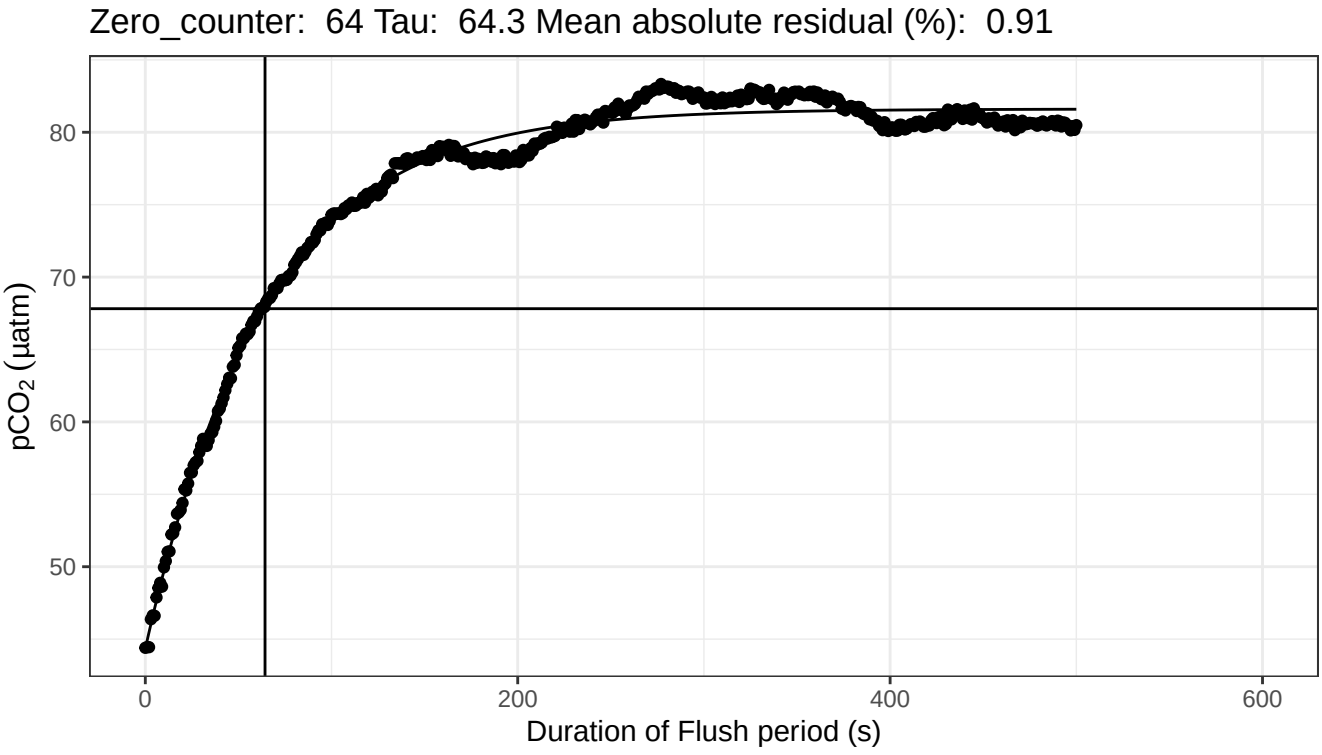
Zero_counter: 64 Tau: 69.1 Mean absolute residual (%): 0.77

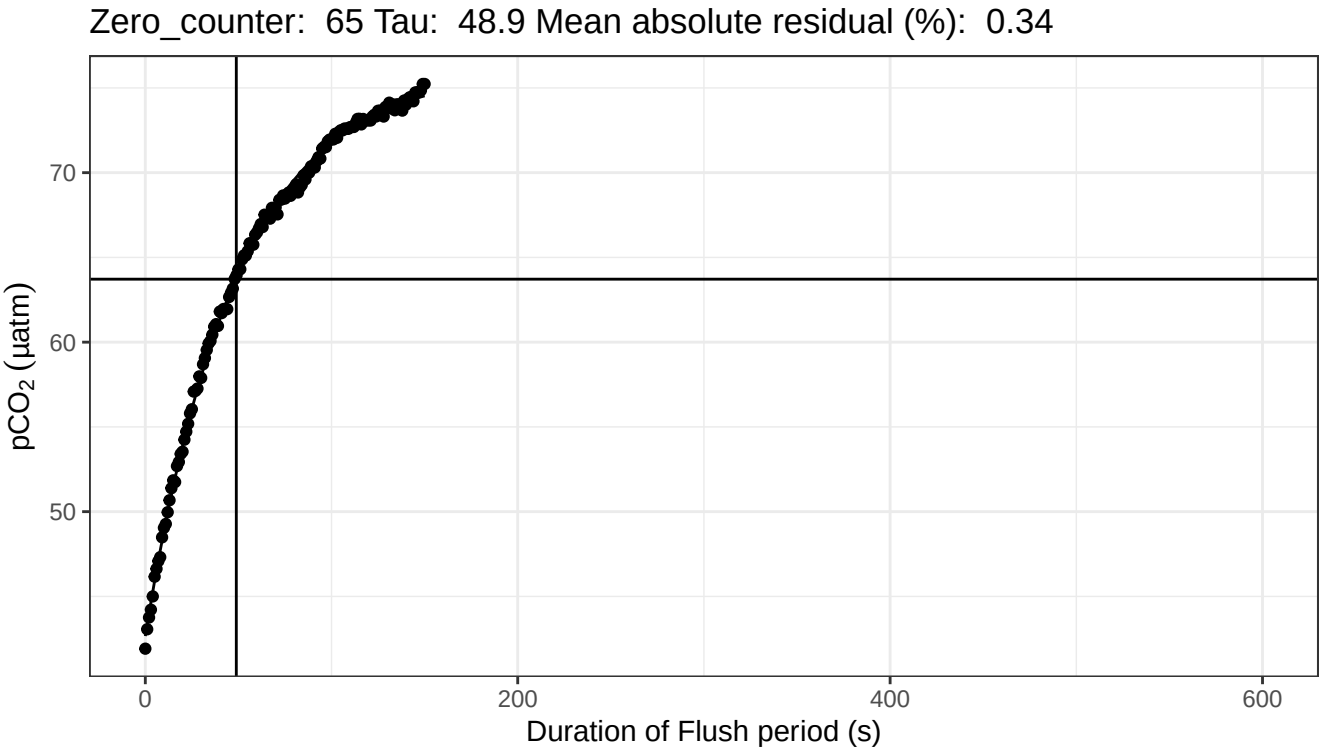


Zero_counter: 64 Tau: 68.1 Mean absolute residual (%): 0.79

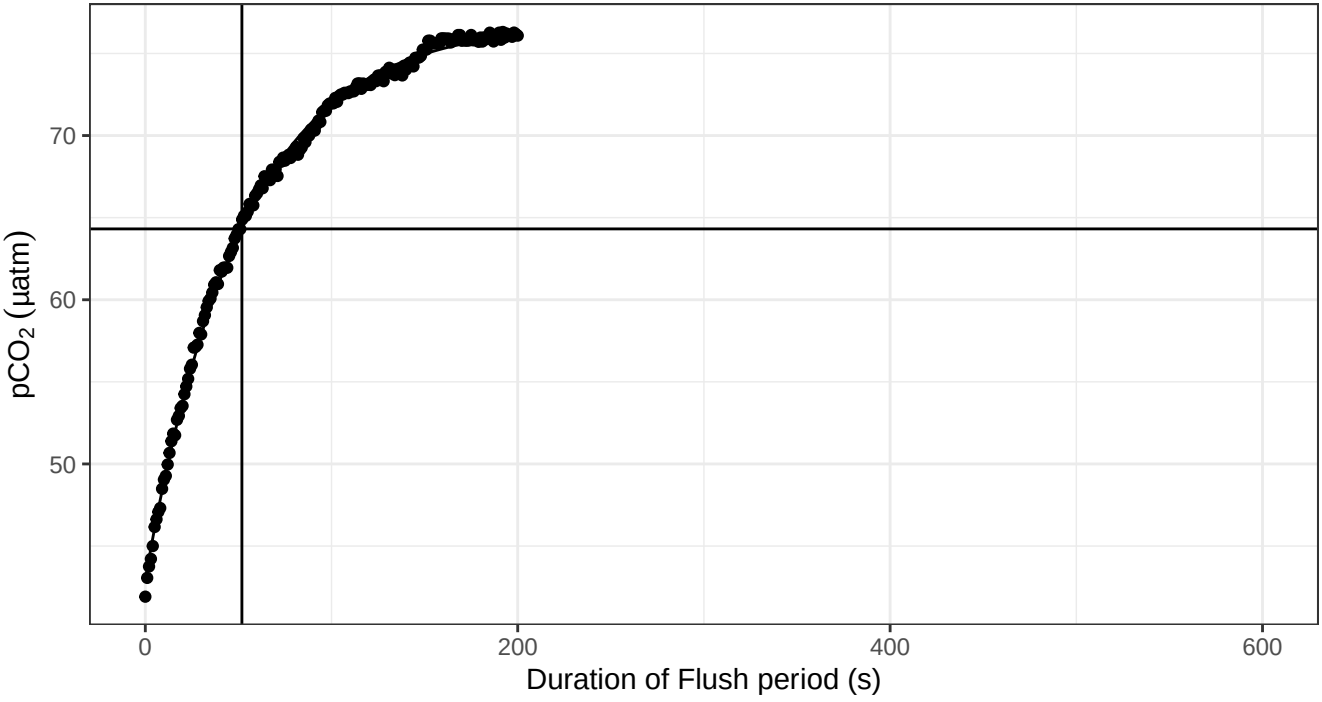


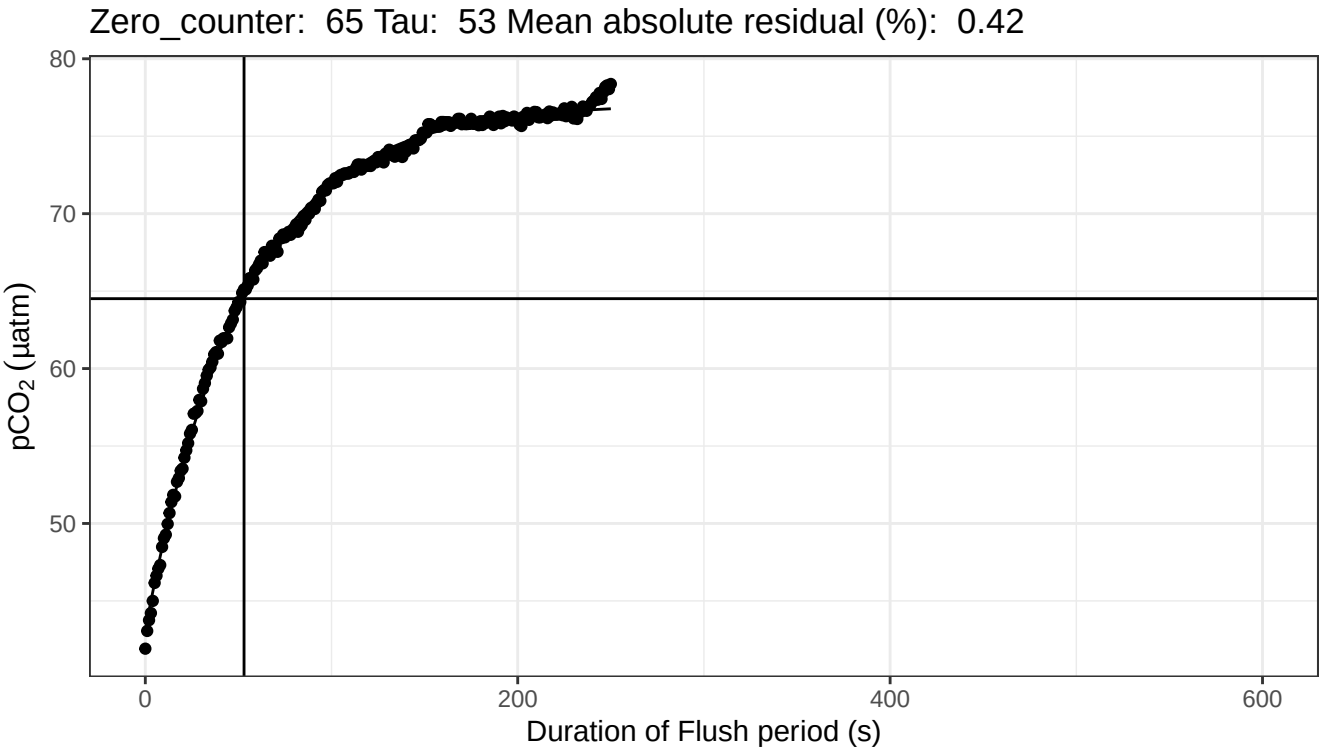

Zero_counter: 64 Tau: 65.9 Mean absolute residual (%): 0.87
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 64 Tau: 64.3 Mean absolute residual (%): 0.91
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

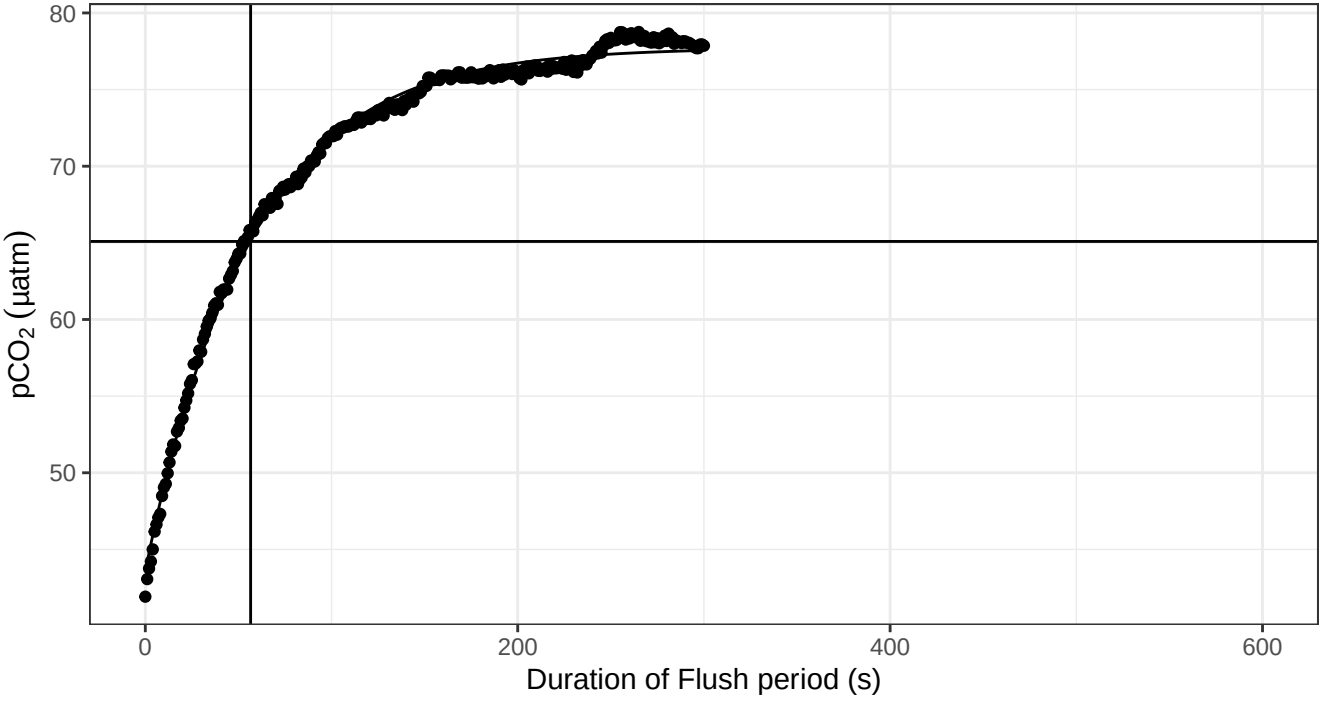

Zero_counter: 65 Tau: 48.9 Mean absolute residual (%): 0.34
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

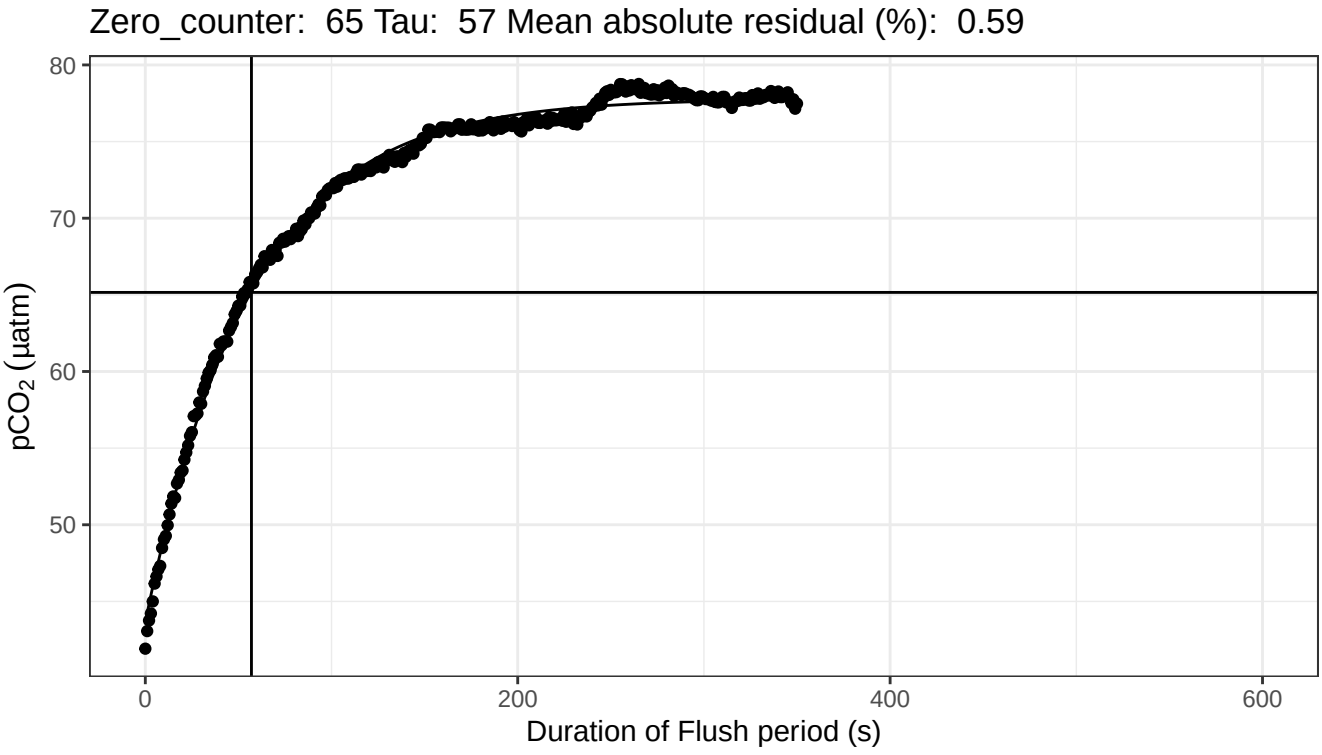
Zero_counter: 65 Tau: 51.9 Mean absolute residual (%): 0.39

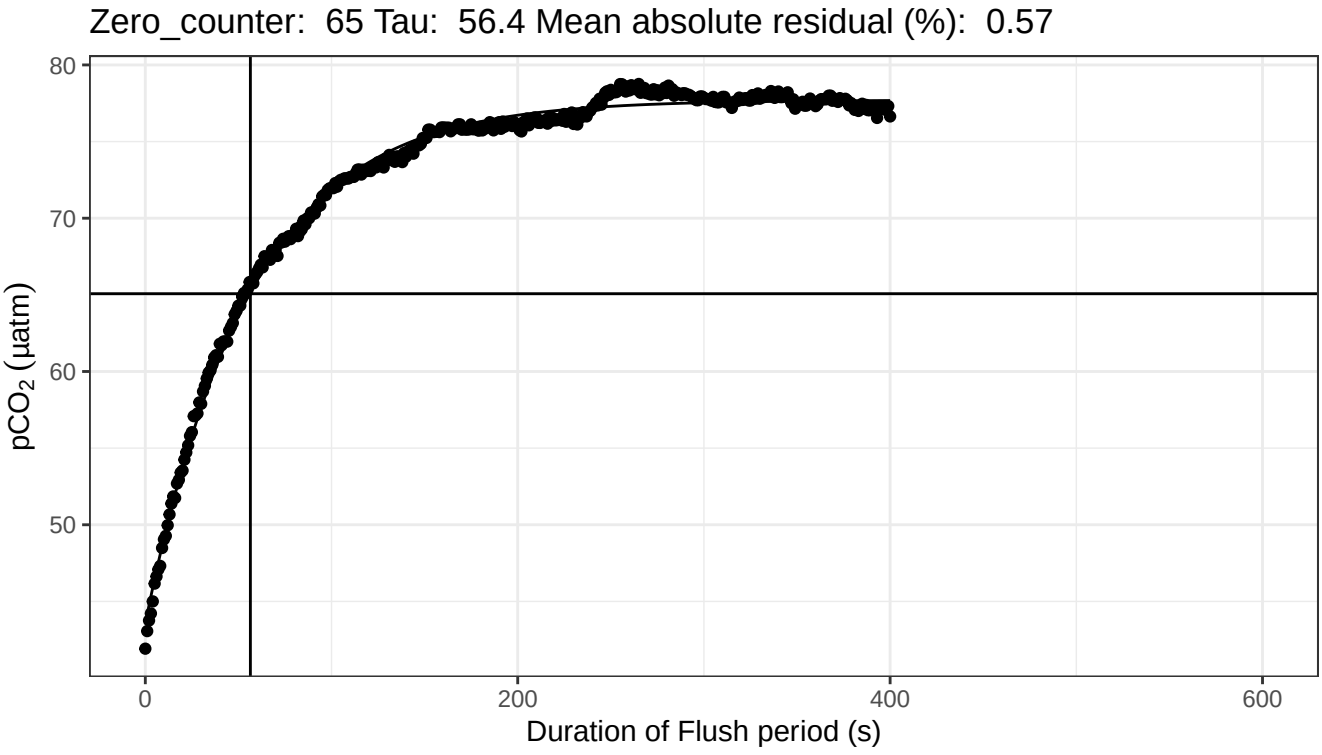


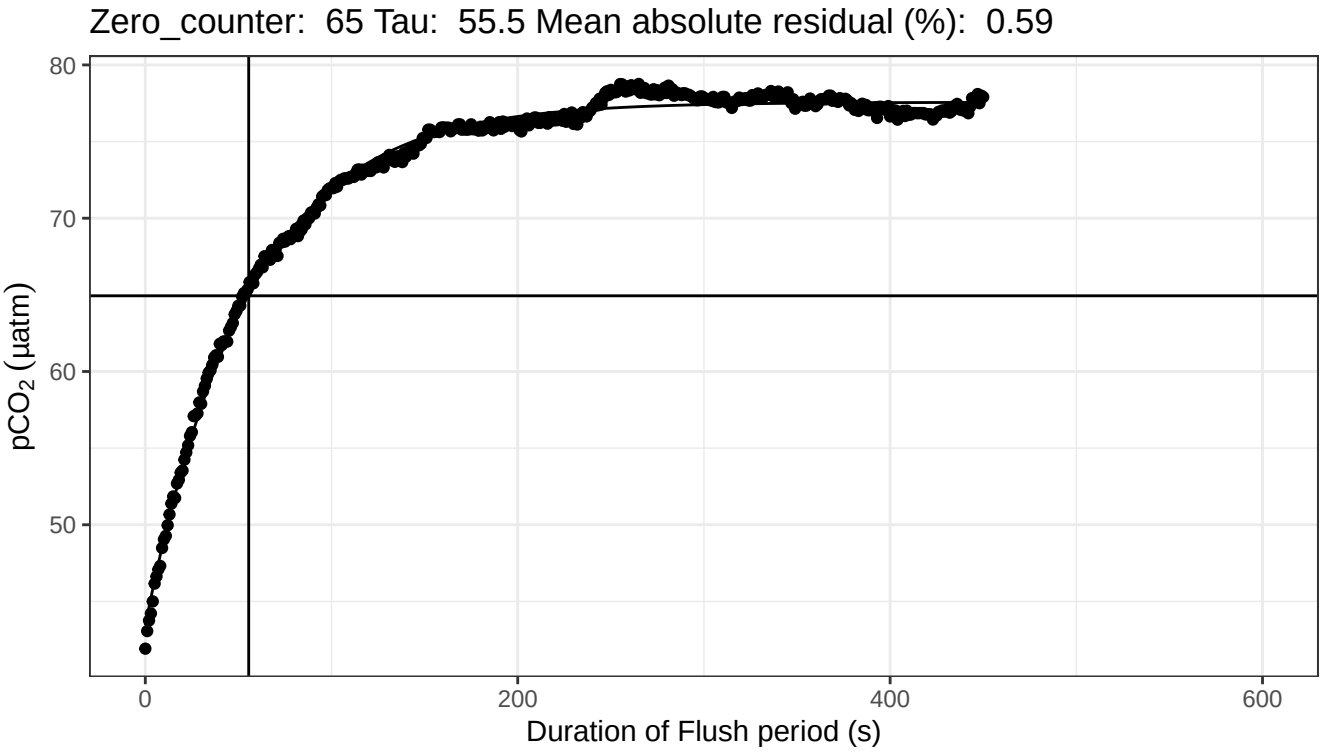

Zero_counter: 65 Tau: 53 Mean absolute residual (%): 0.42
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

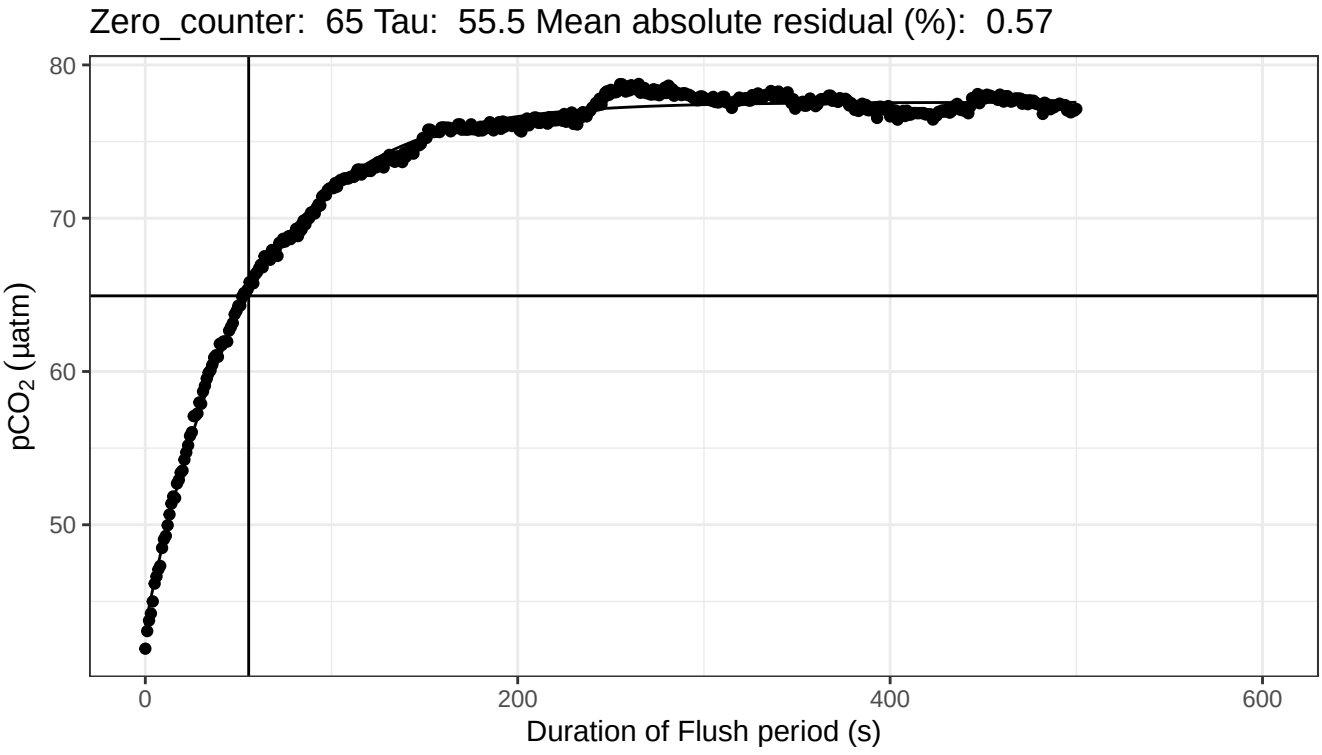
Zero_counter: 65 Tau: 56.6 Mean absolute residual (%): 0.63



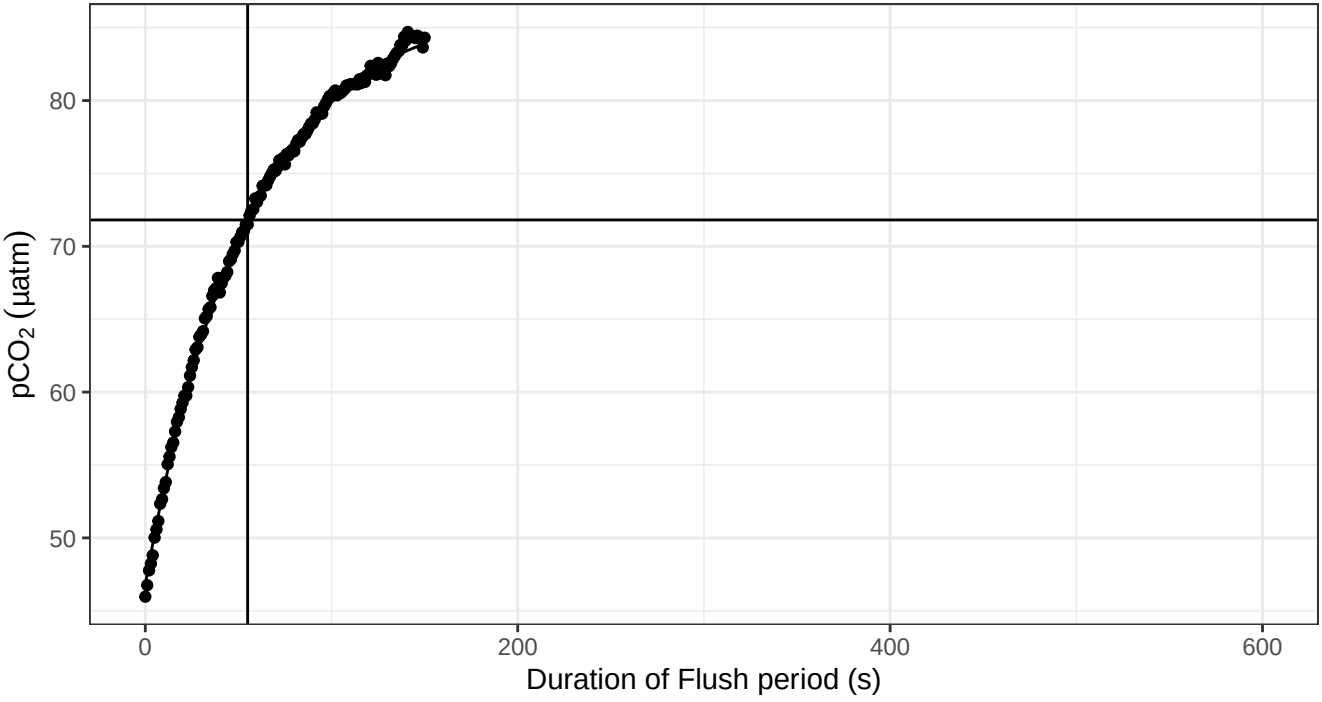

Zero_counter: 65 Tau: 57 Mean absolute residual (%): 0.59
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 65 Tau: 56.4 Mean absolute residual (%): 0.57
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

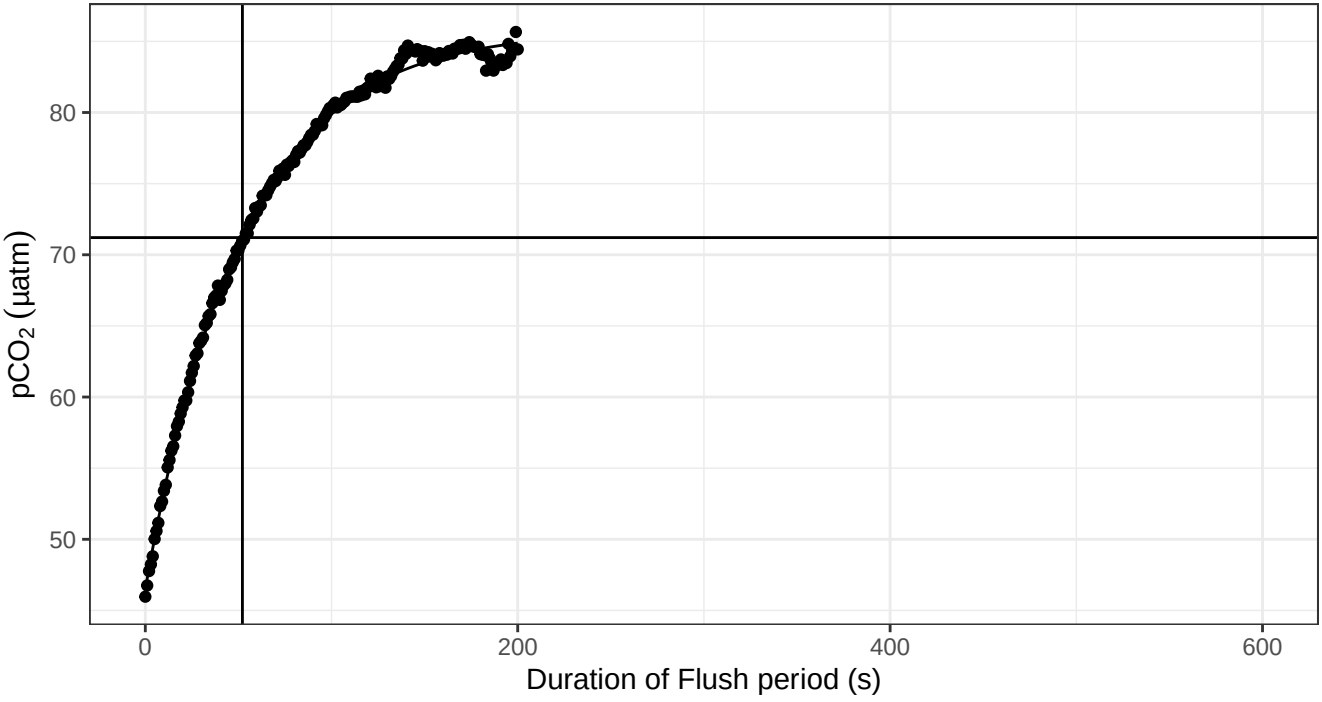

Zero_counter: 65 Tau: 55.5 Mean absolute residual (%): 0.59
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 65 Tau: 55.5 Mean absolute residual (%): 0.57
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

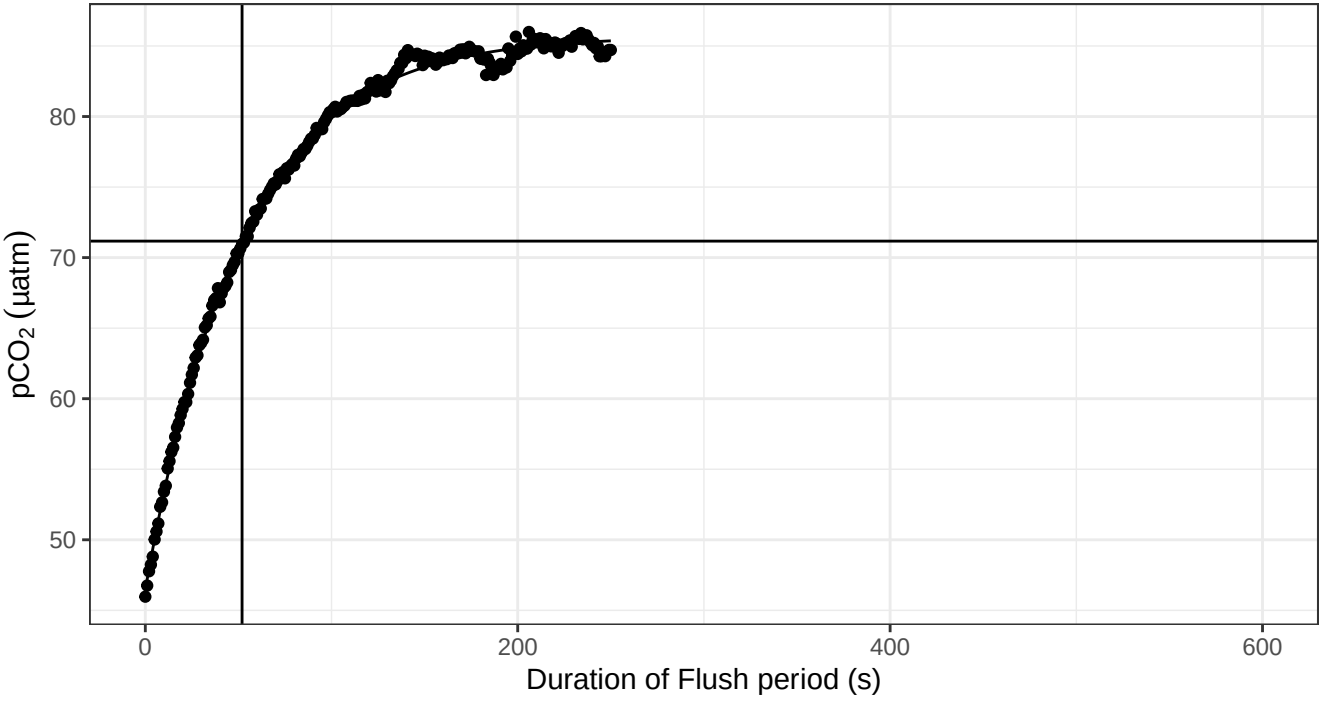
Zero_counter: 66 Tau: 54.9 Mean absolute residual (%): 0.4



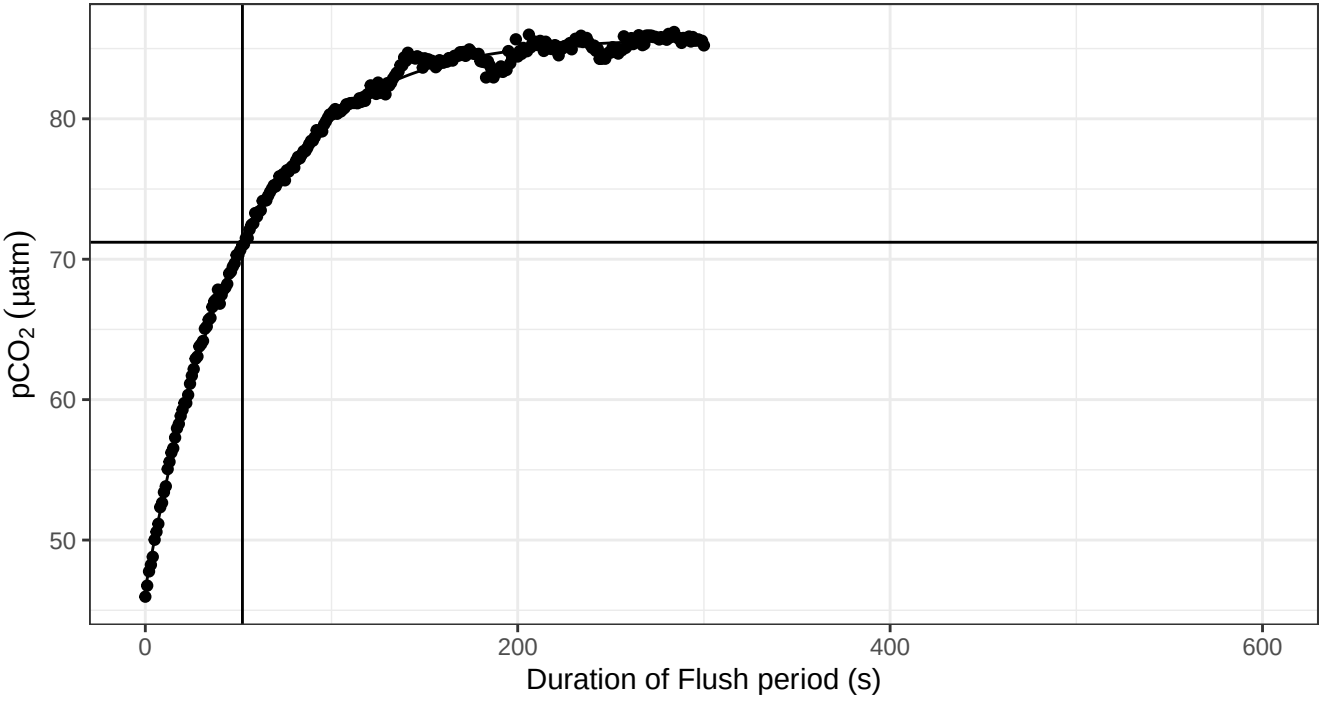
Zero_counter: 66 Tau: 52.1 Mean absolute residual (%): 0.48



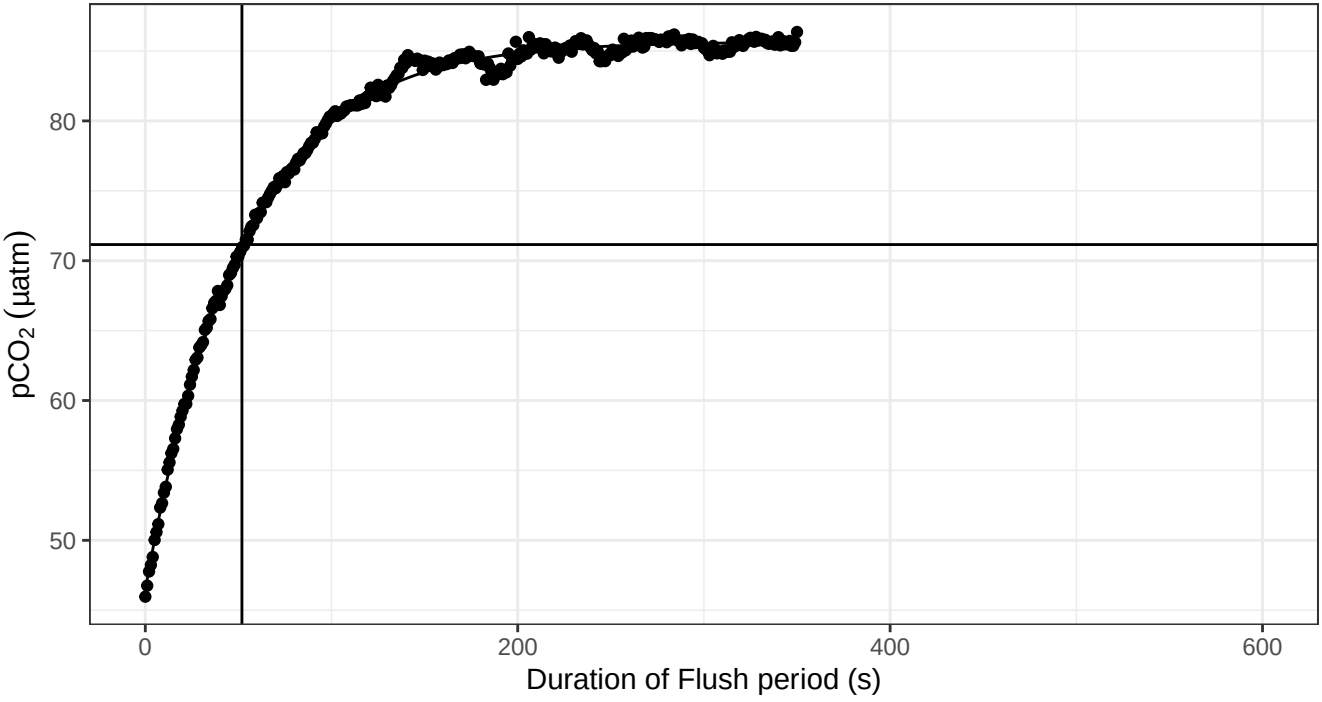
Zero_counter: 66 Tau: 52 Mean absolute residual (%): 0.47

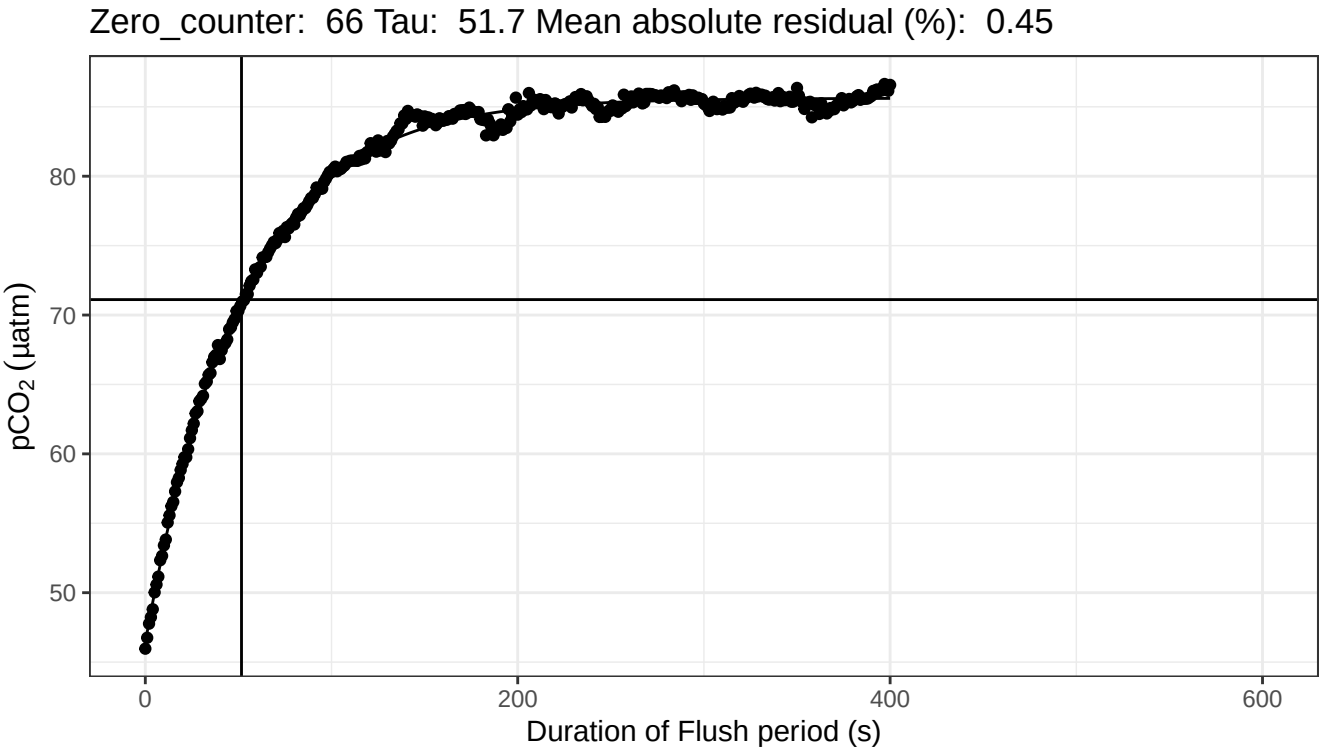


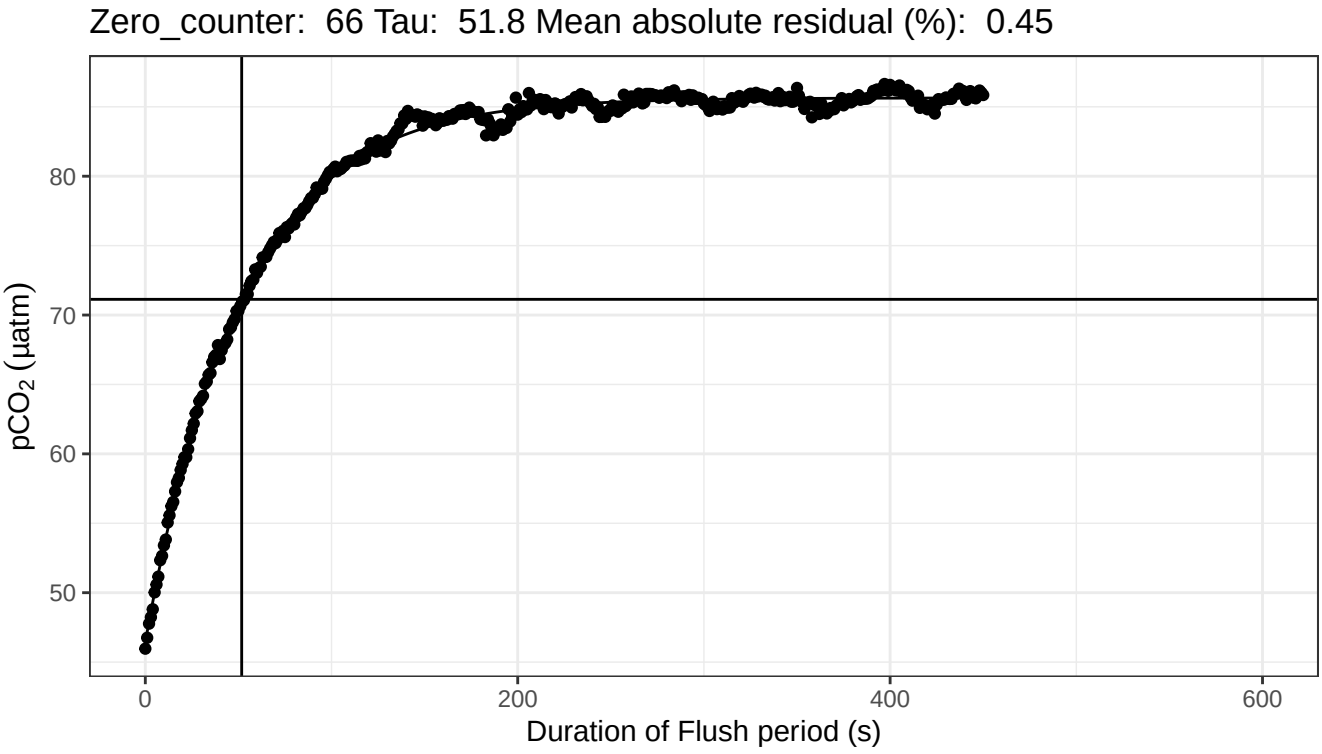
Zero_counter: 66 Tau: 52.2 Mean absolute residual (%): 0.44



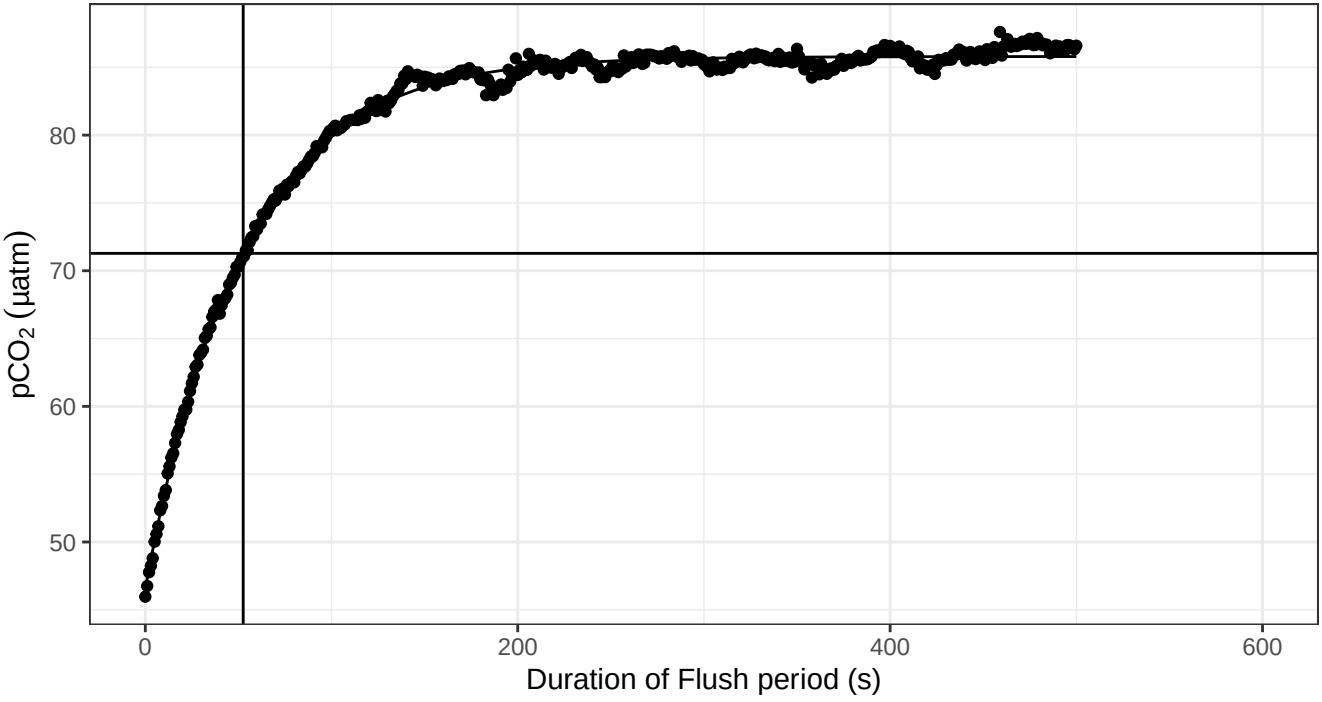
Zero_counter: 66 Tau: 51.9 Mean absolute residual (%): 0.43

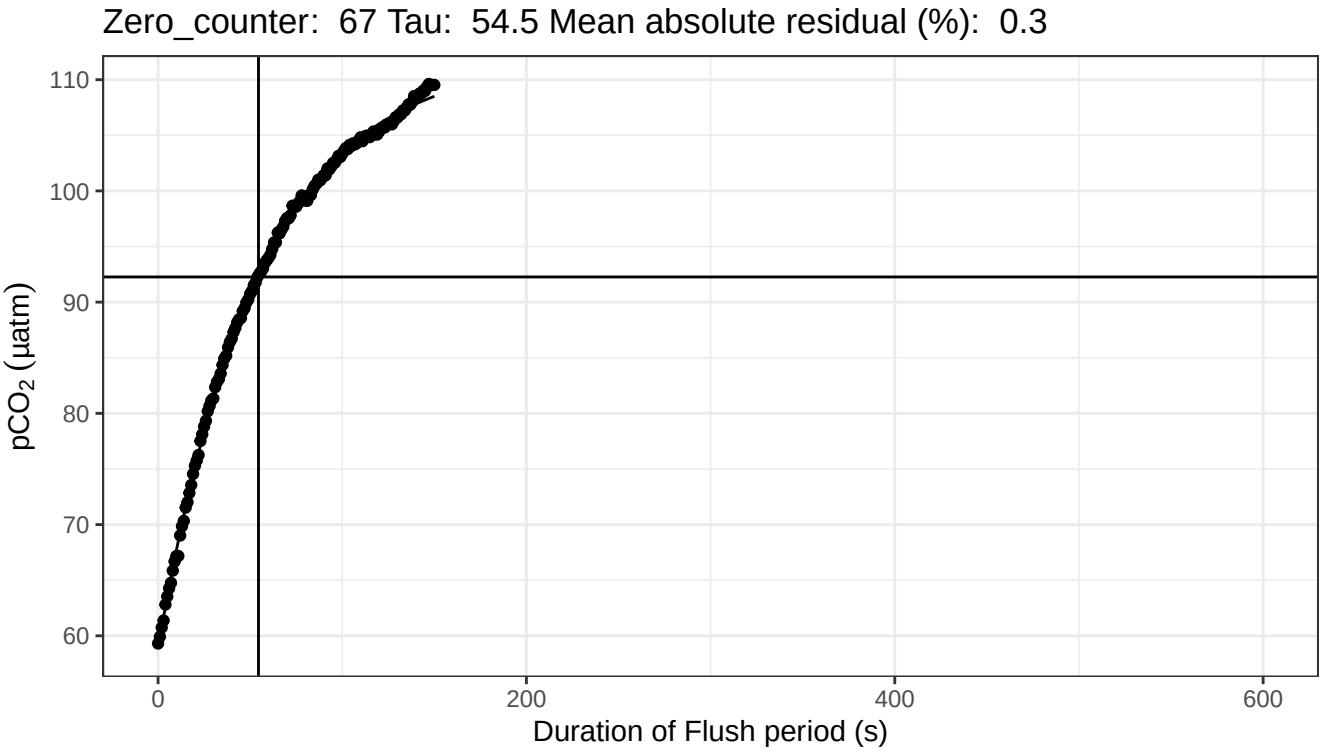


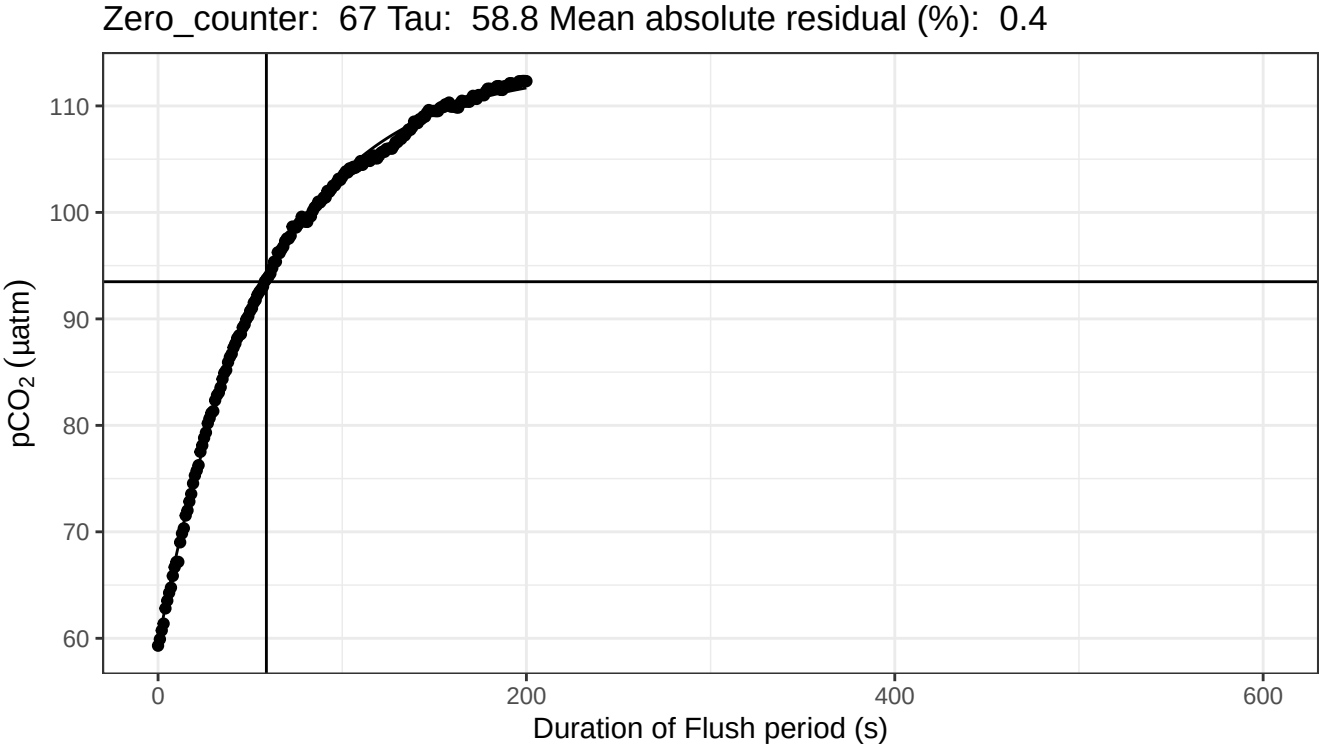

Zero_counter: 66 Tau: 51.7 Mean absolute residual (%): 0.45
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

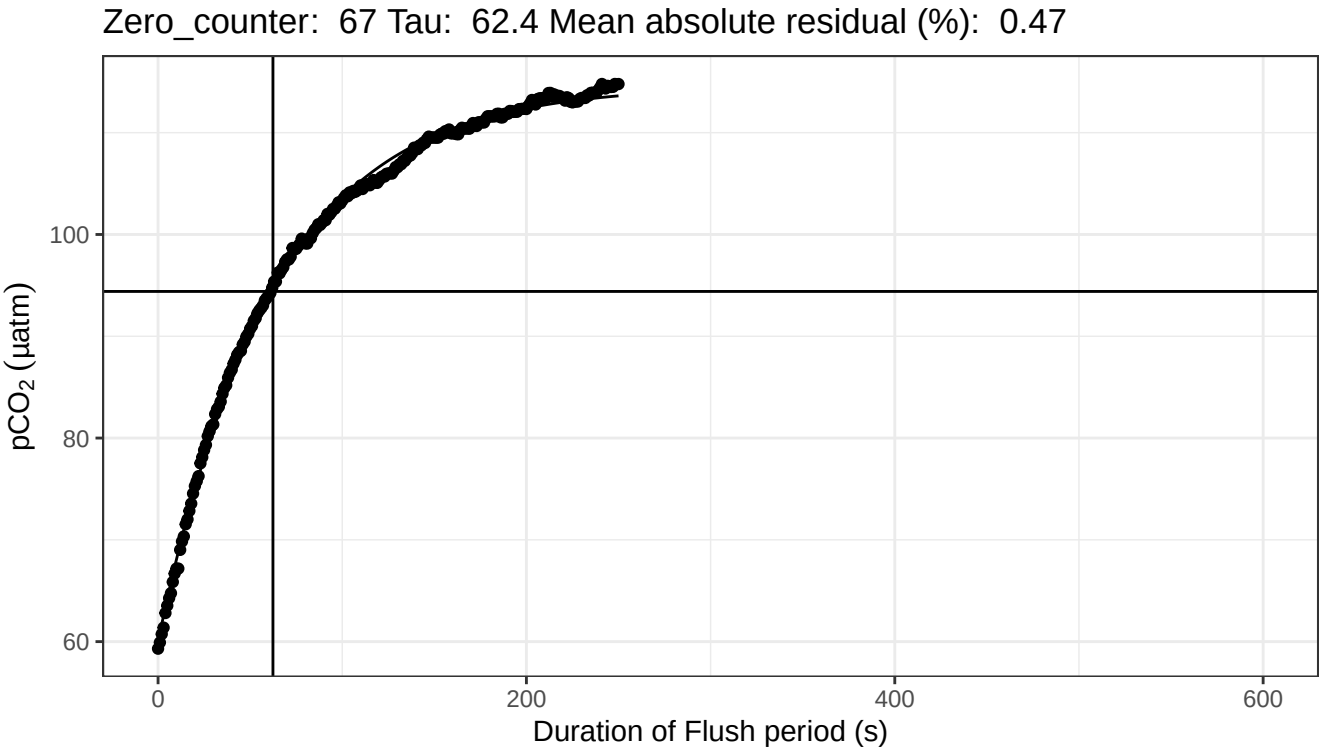

Zero_counter: 66 Tau: 51.8 Mean absolute residual (%): 0.45
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

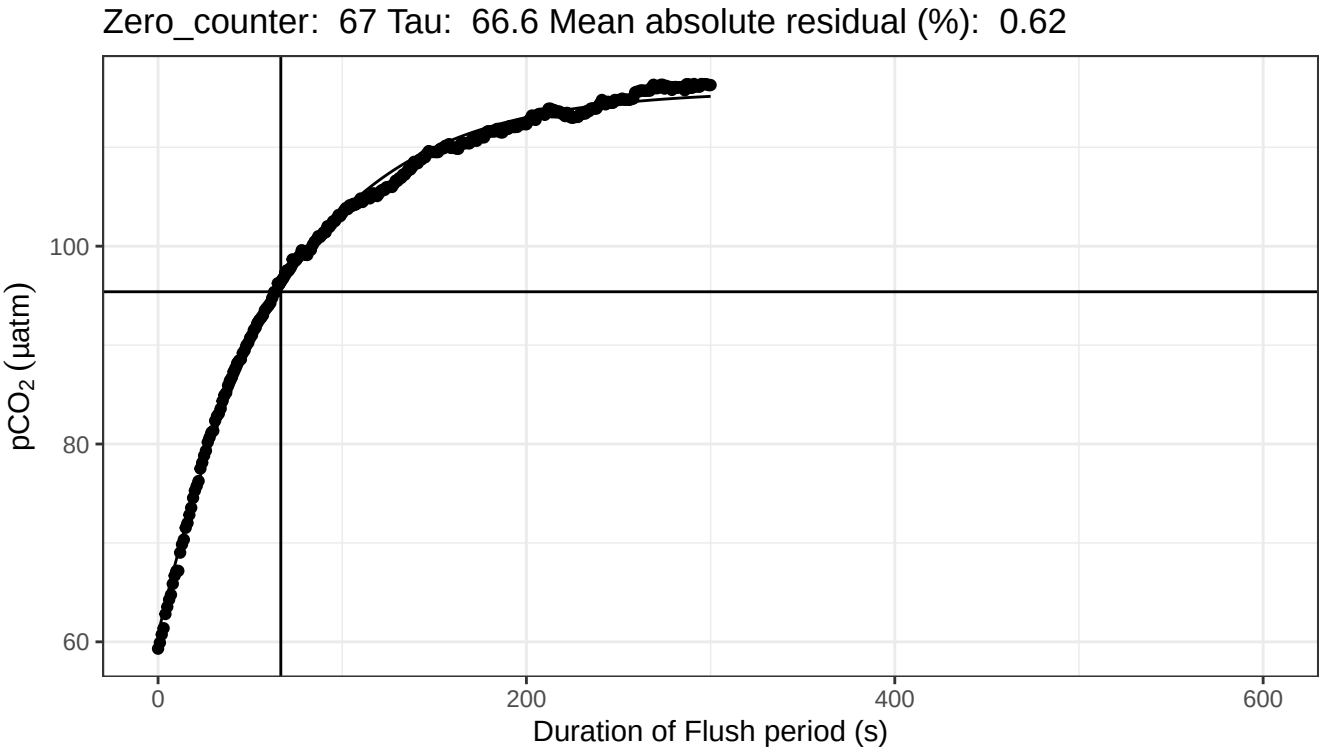
Zero_counter: 66 Tau: 52.6 Mean absolute residual (%): 0.49

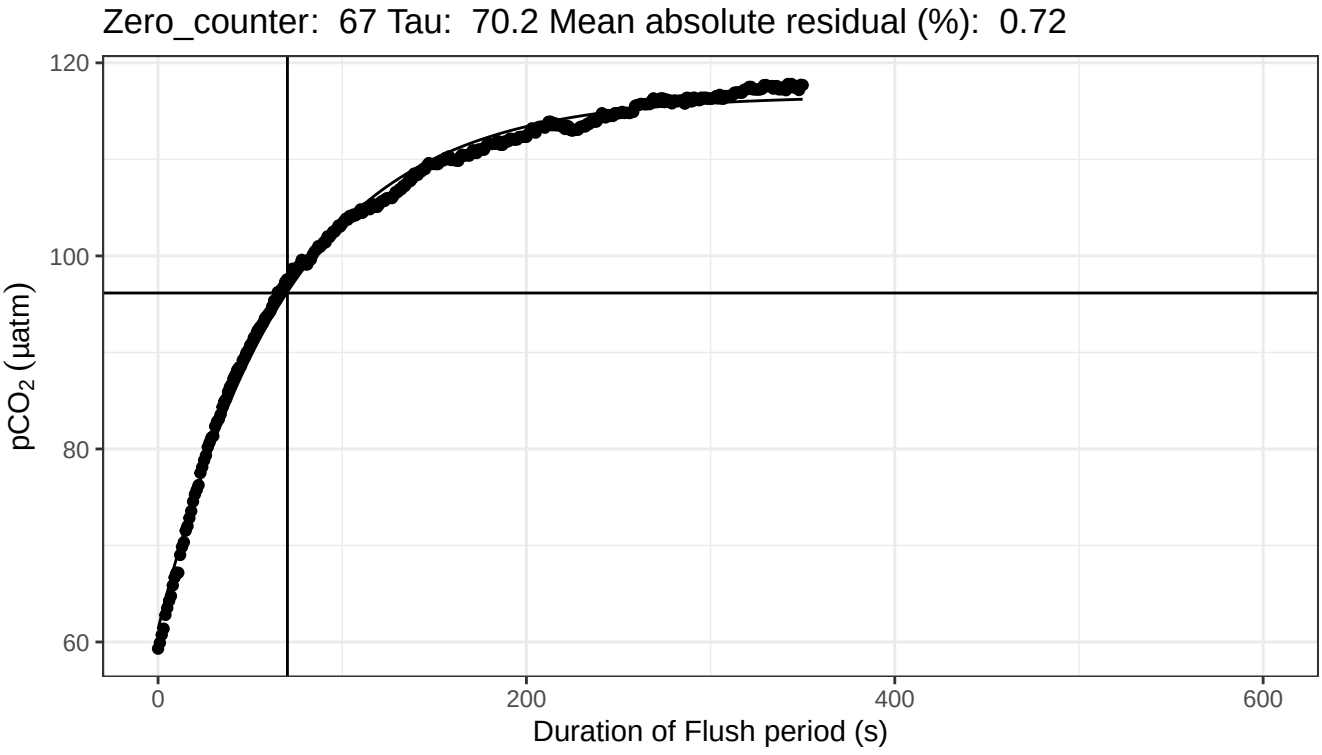


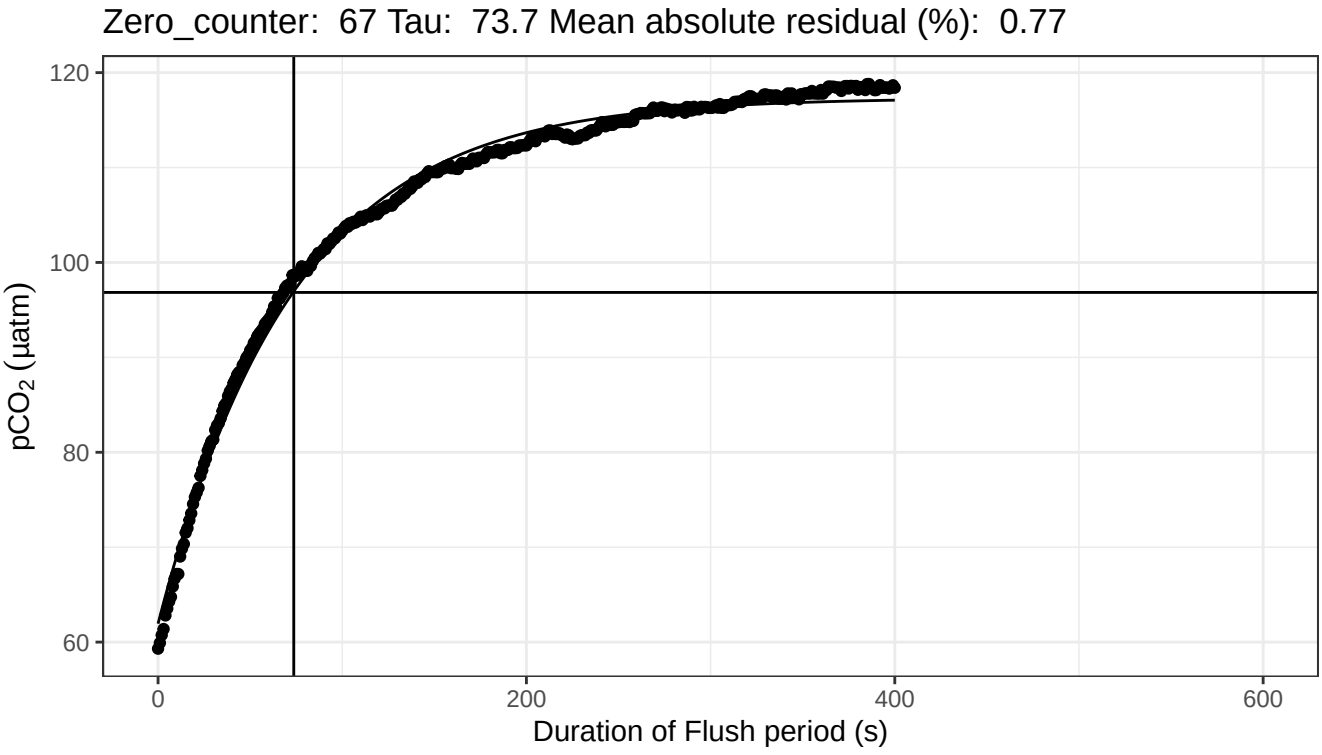

Zero_counter: 67 Tau: 54.5 Mean absolute residual (%): 0.3
110
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

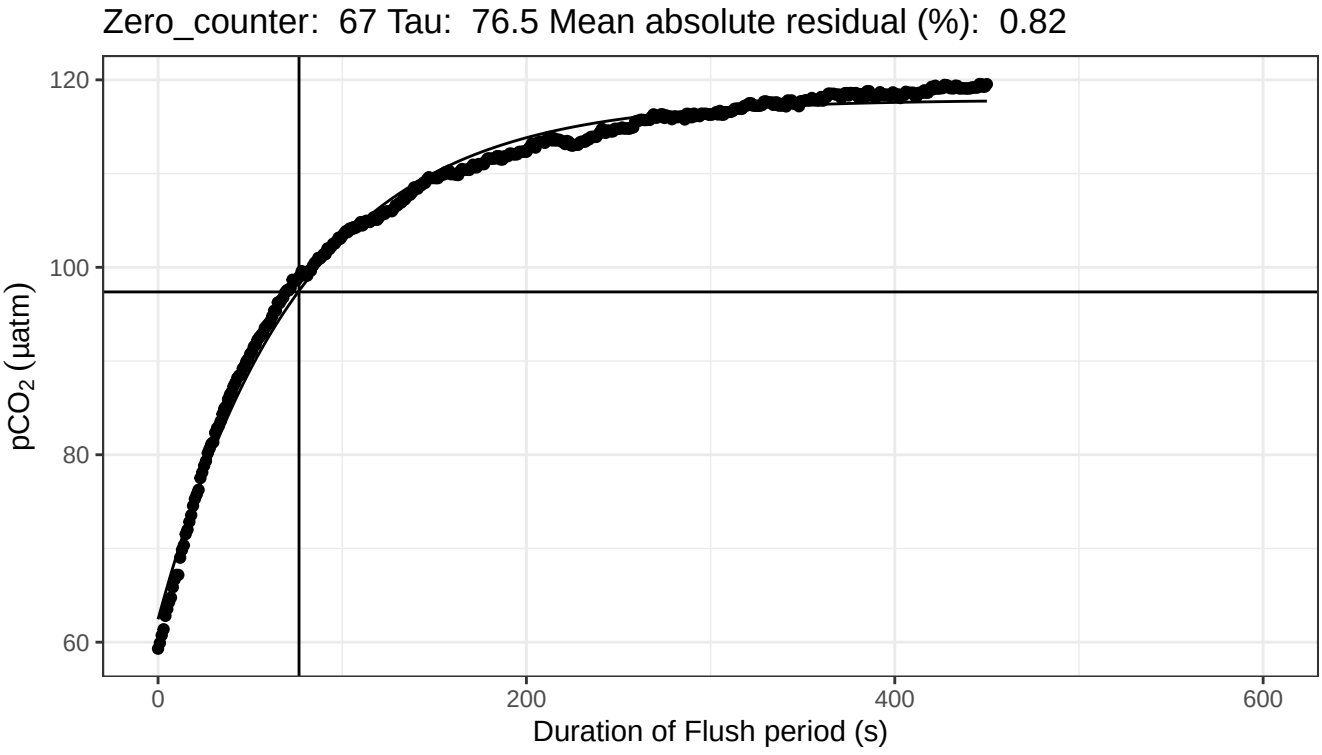

Zero_counter: 67 Tau: 58.8 Mean absolute residual (%): 0.4
110
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

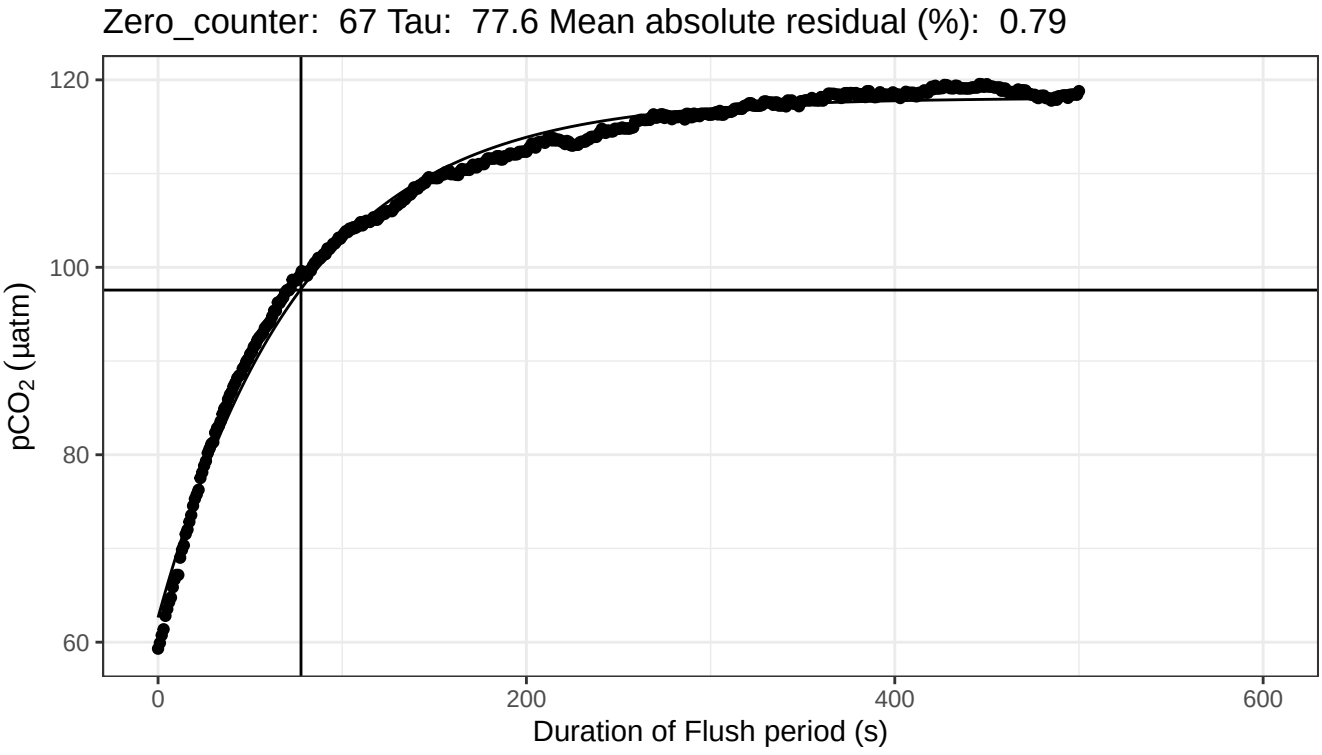

Zero_counter: 67 Tau: 62.4 Mean absolute residual (%): 0.47
pCO2 (µatm)
100
80
60
0
200
400
600
Duration of Flush period (s)

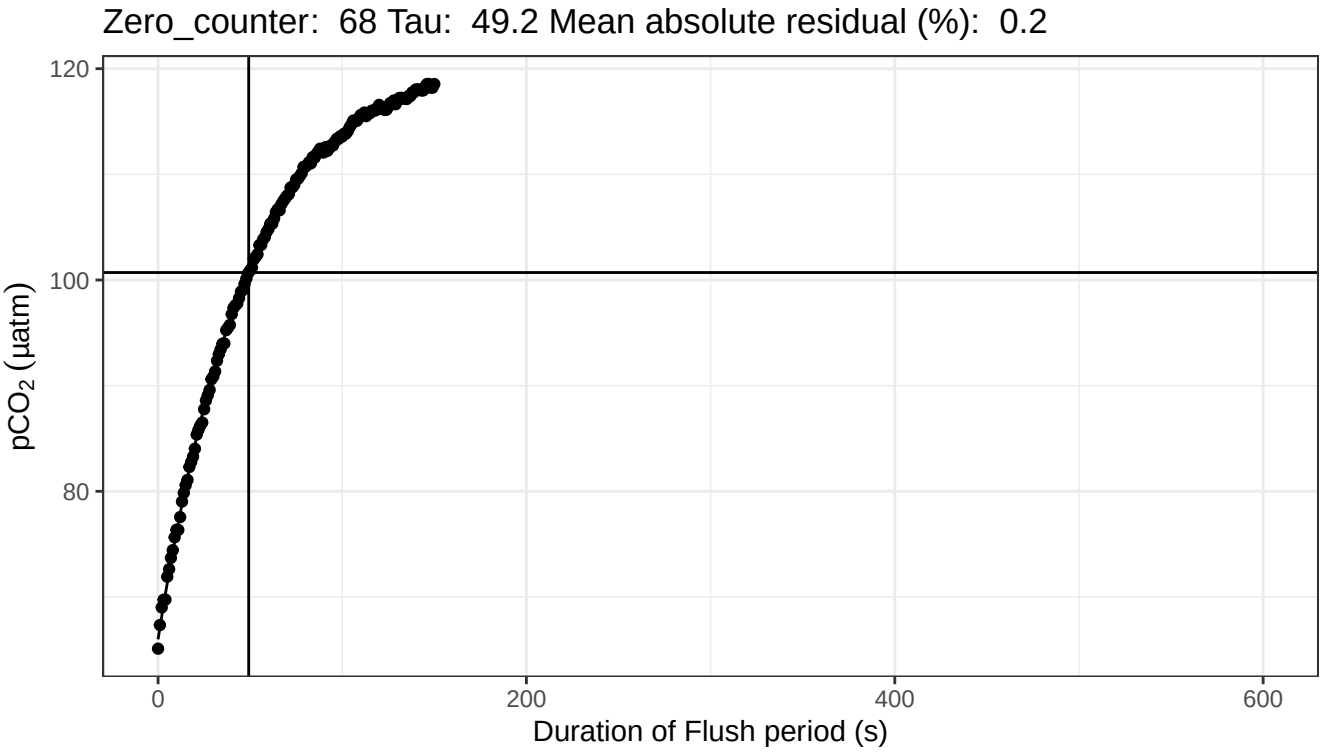

Zero_counter: 67 Tau: 66.6 Mean absolute residual (%): 0.62
pCO2 (µatm)
100
80
60
0
200
400
600
Duration of Flush period (s)

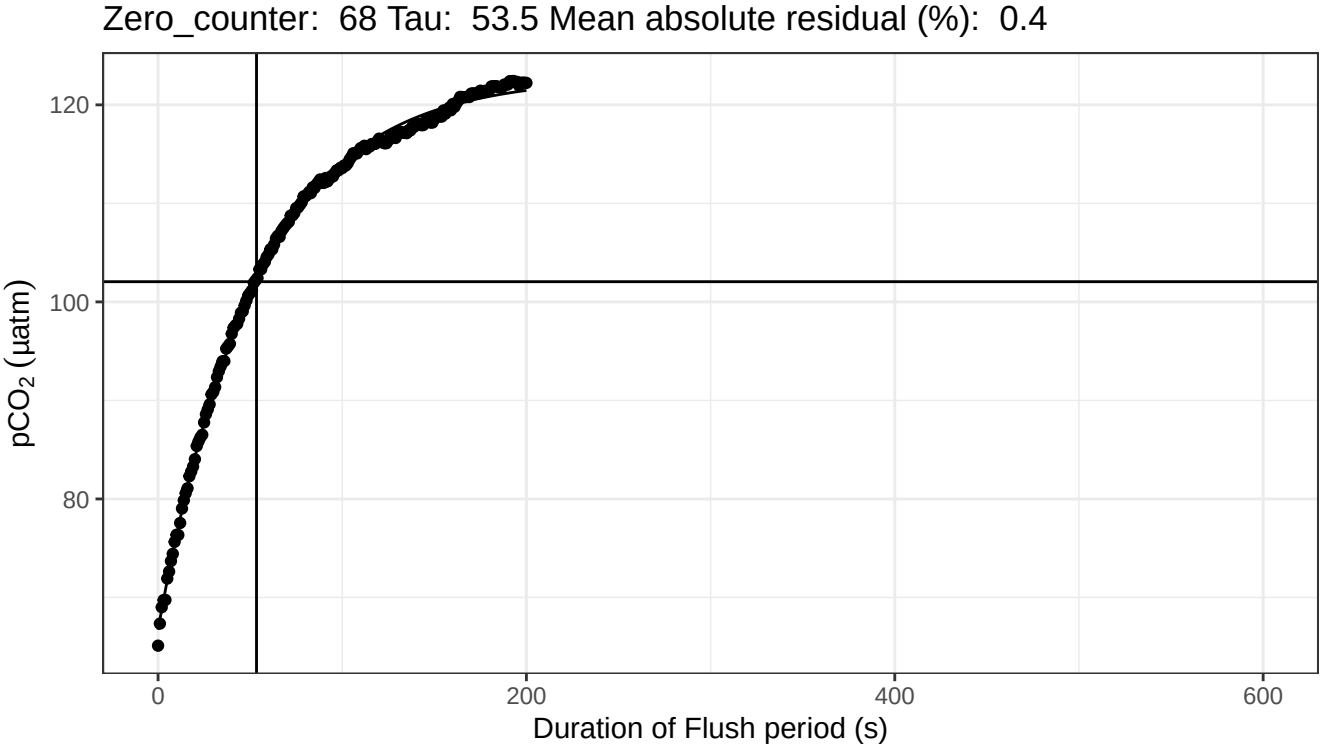

Zero_counter: 67 Tau: 70.2 Mean absolute residual (%): 0.72
120
100
80
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

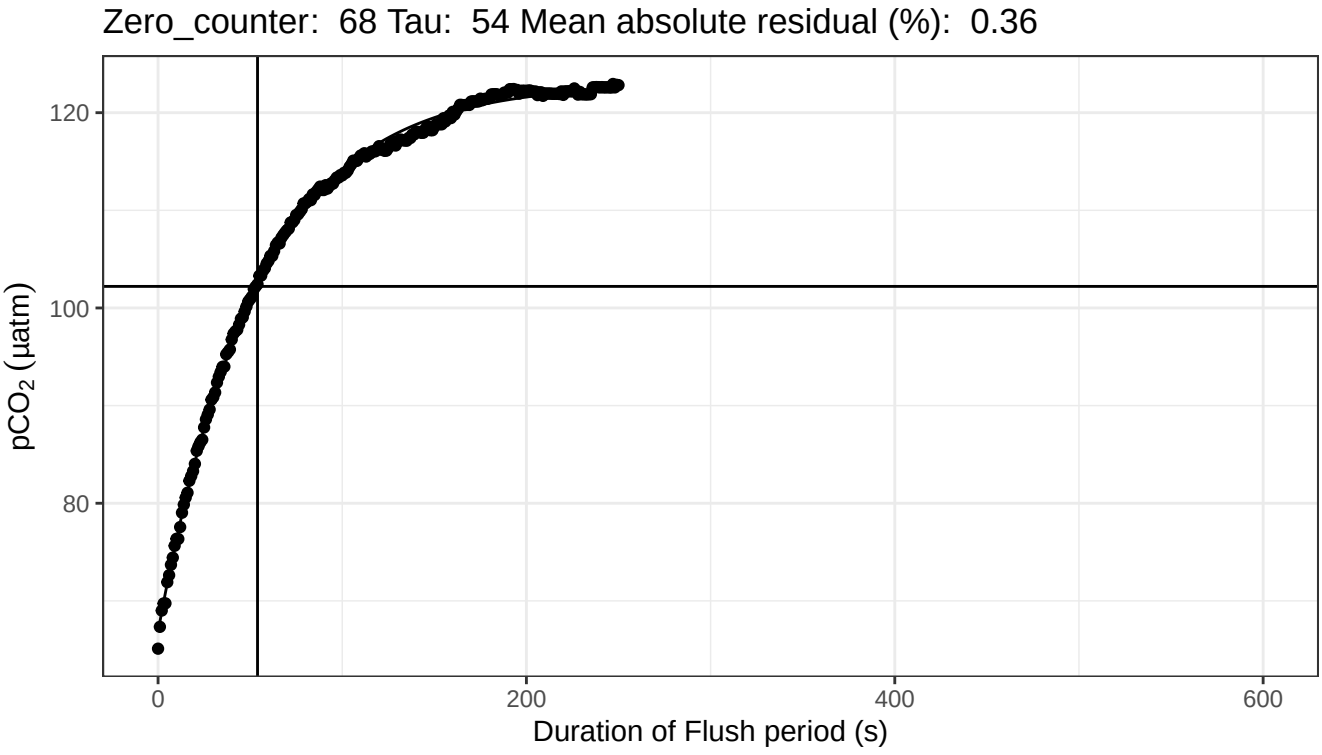

Zero_counter: 67 Tau: 73.7 Mean absolute residual (%): 0.77
120
100
80
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

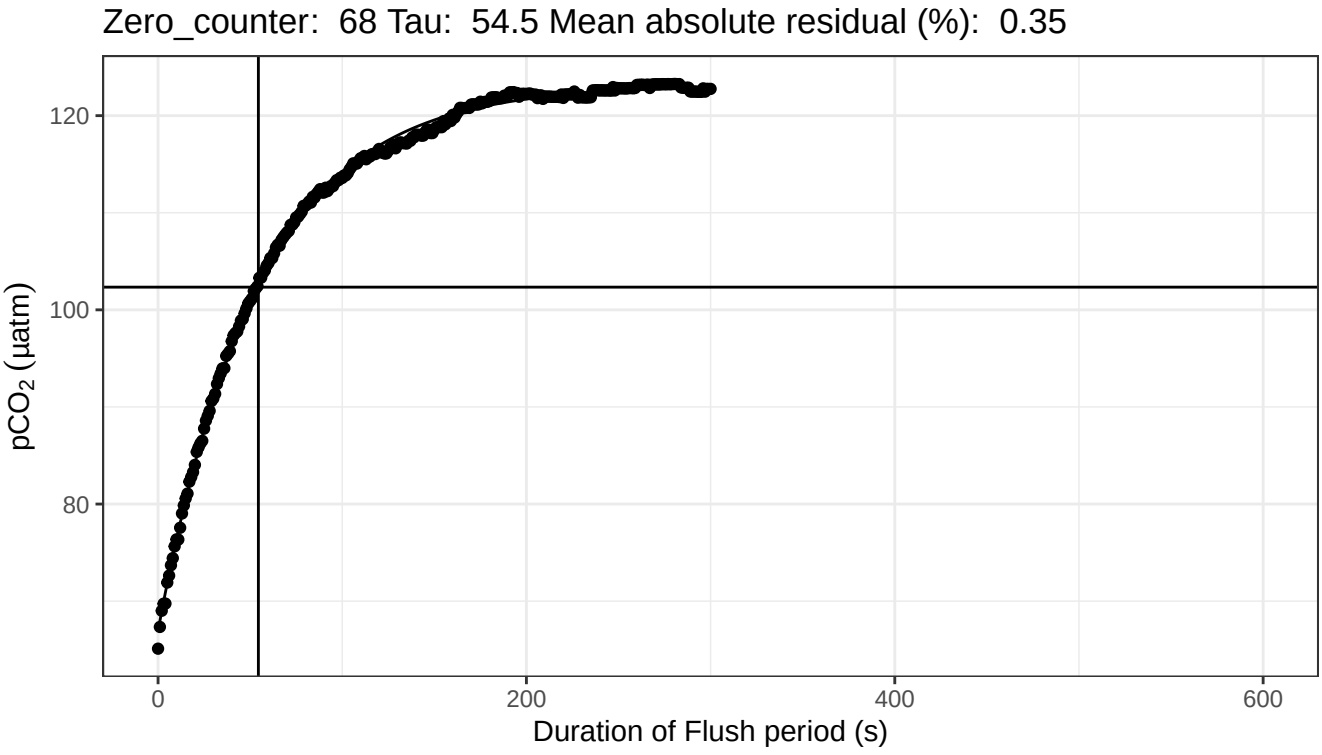

Zero_counter: 67 Tau: 76.5 Mean absolute residual (%): 0.82
120
100
80
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

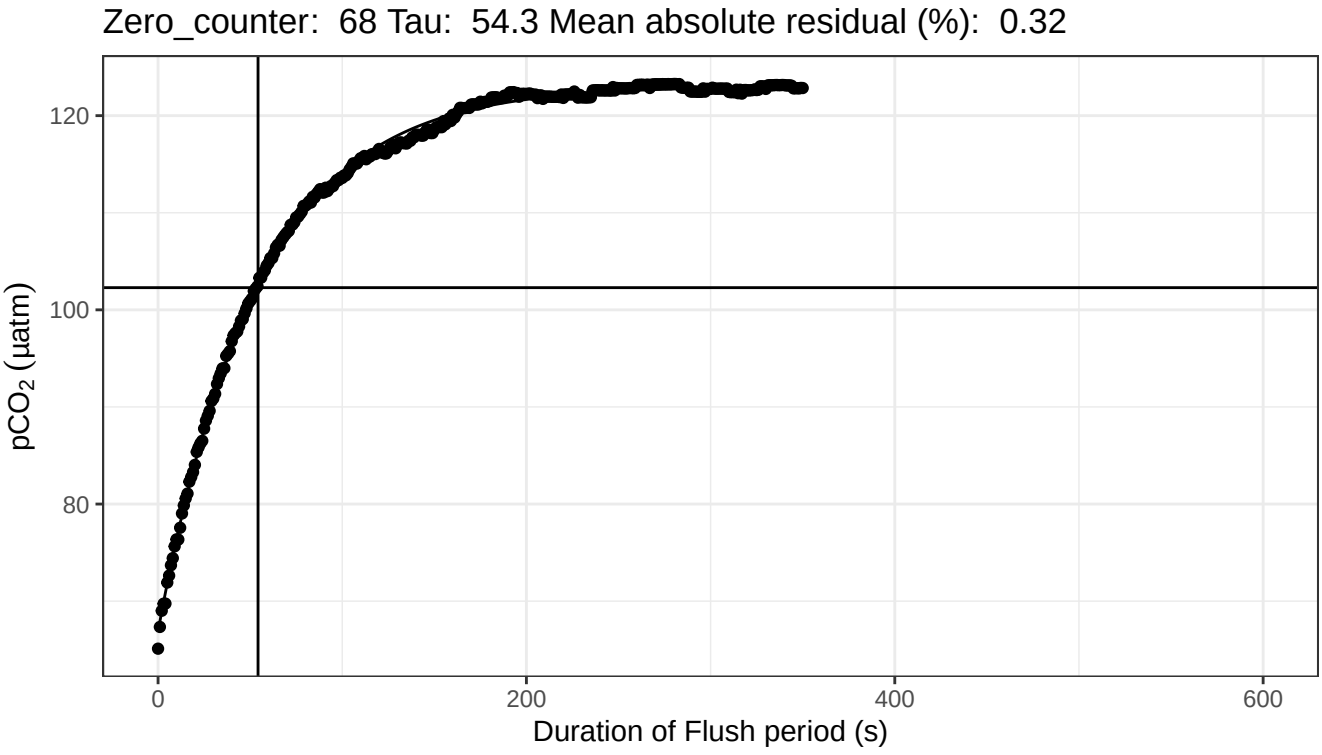

Zero_counter: 67 Tau: 77.6 Mean absolute residual (%): 0.79
120
100
80
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

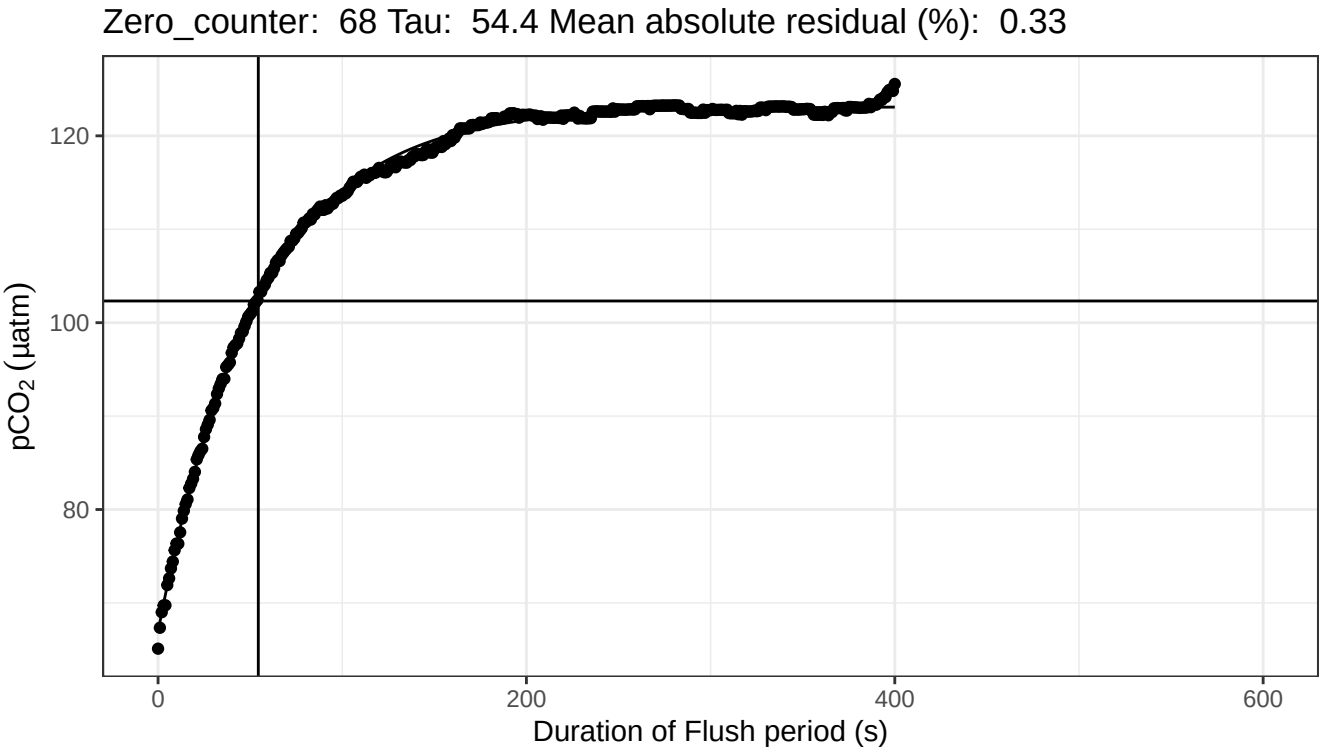

Zero_counter: 68 Tau: 49.2 Mean absolute residual (%): 0.2
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

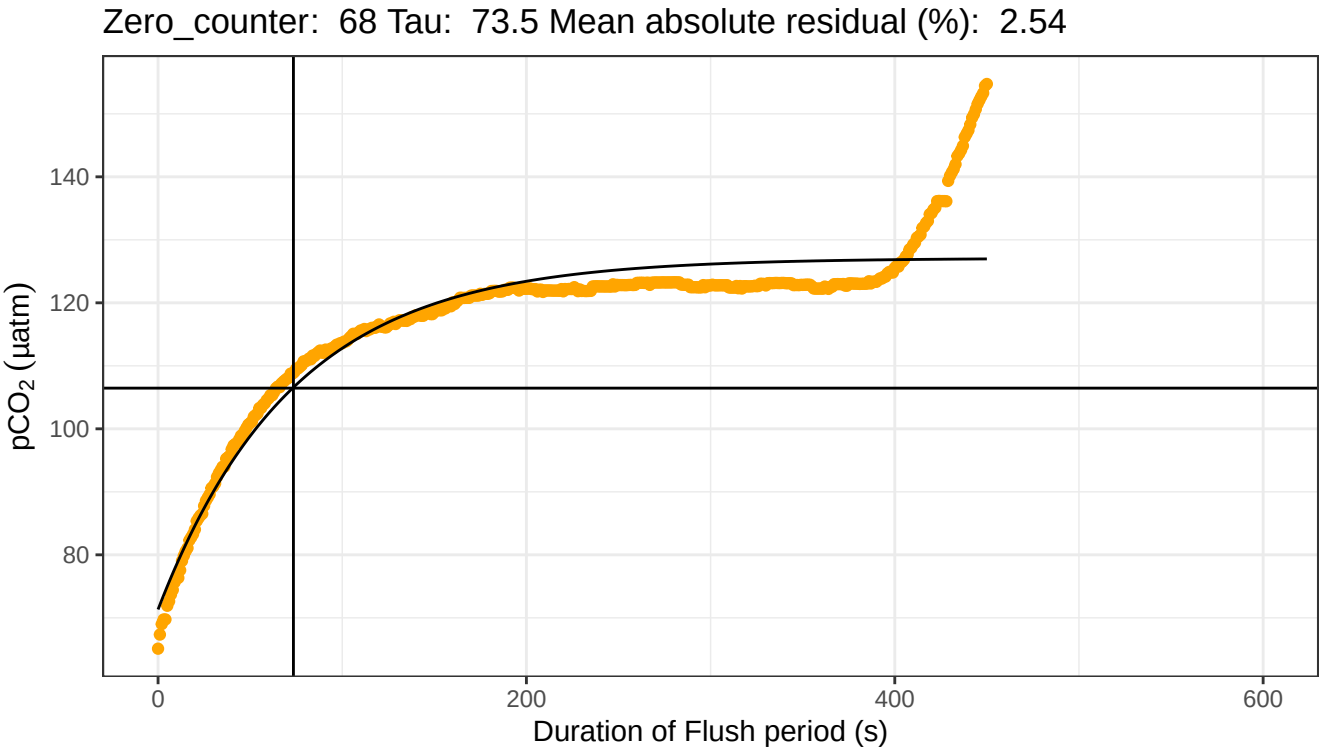

Zero_counter: 68 Tau: 53.5 Mean absolute residual (%): 0.4
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

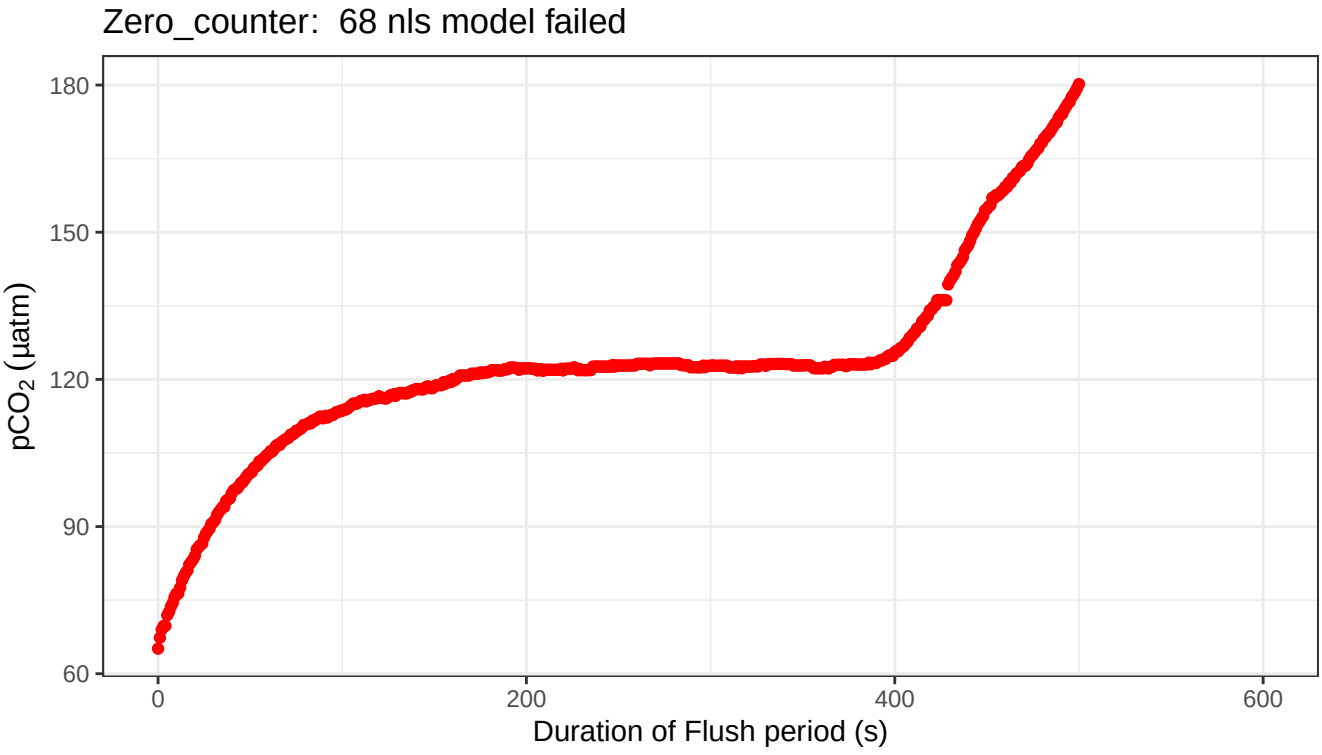

Zero_counter: 68 Tau: 54 Mean absolute residual (%): 0.36
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

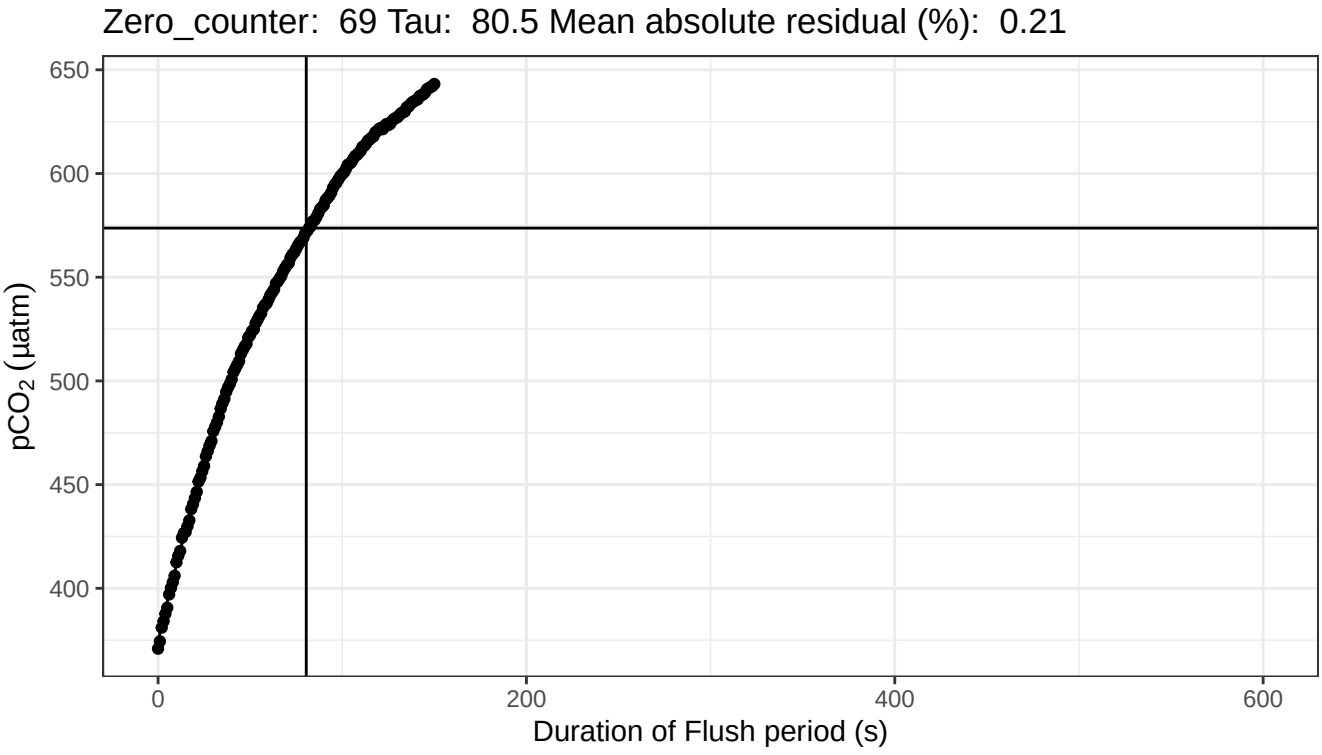

Zero_counter: 68 Tau: 54.5 Mean absolute residual (%): 0.35
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

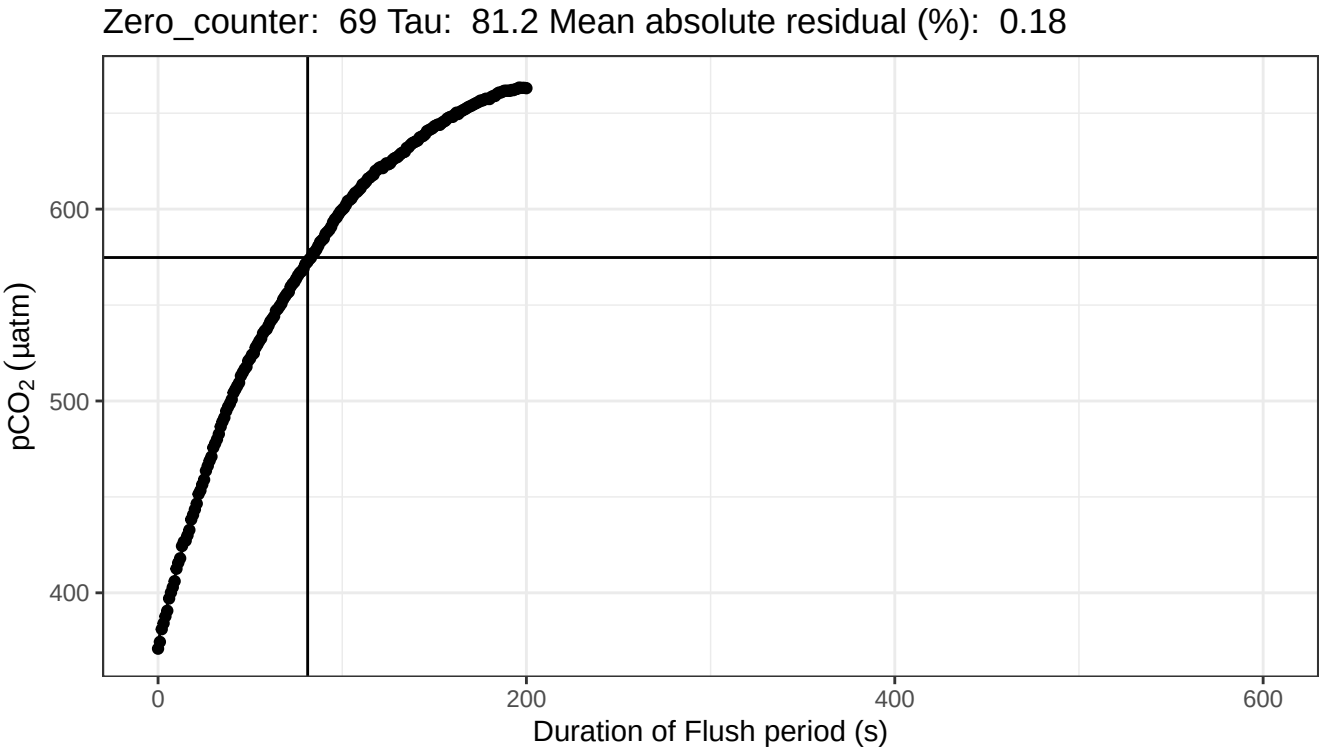

Zero_counter: 68 Tau: 54.3 Mean absolute residual (%): 0.32
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

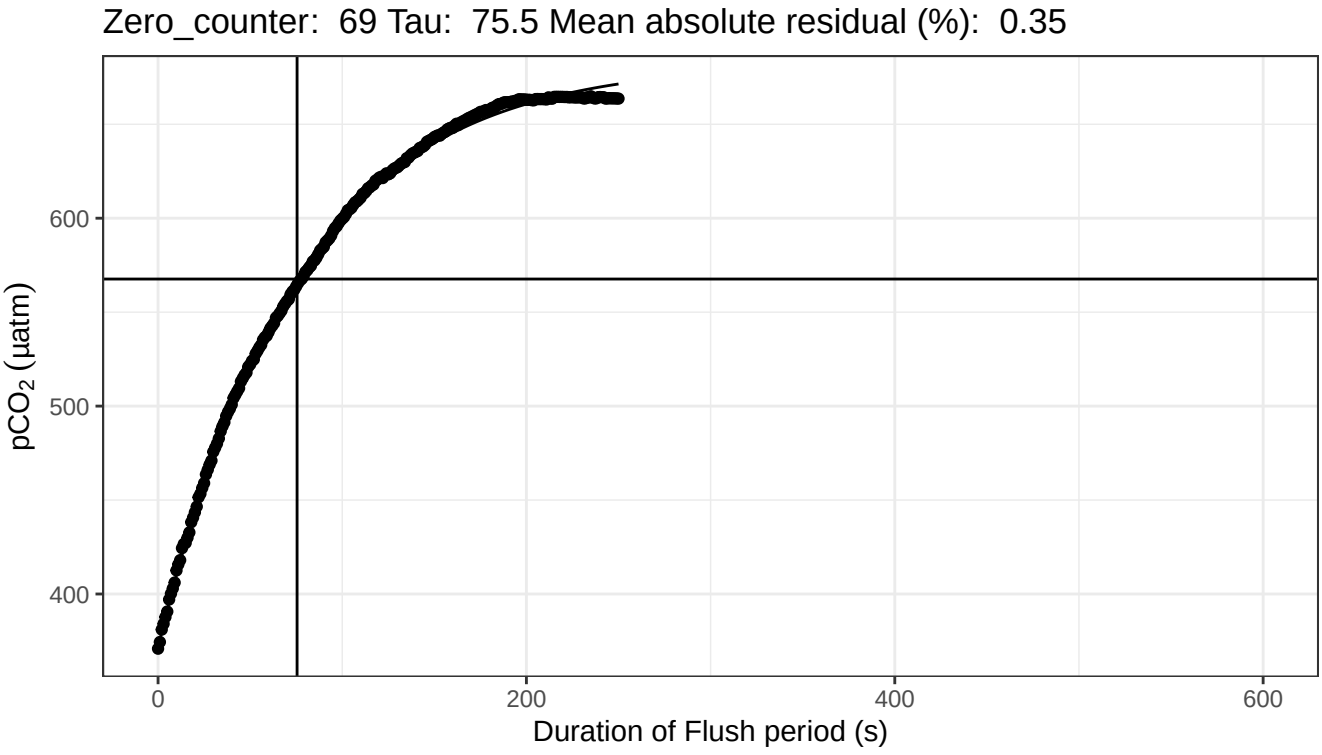

Zero_counter: 68 Tau: 54.4 Mean absolute residual (%): 0.33
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

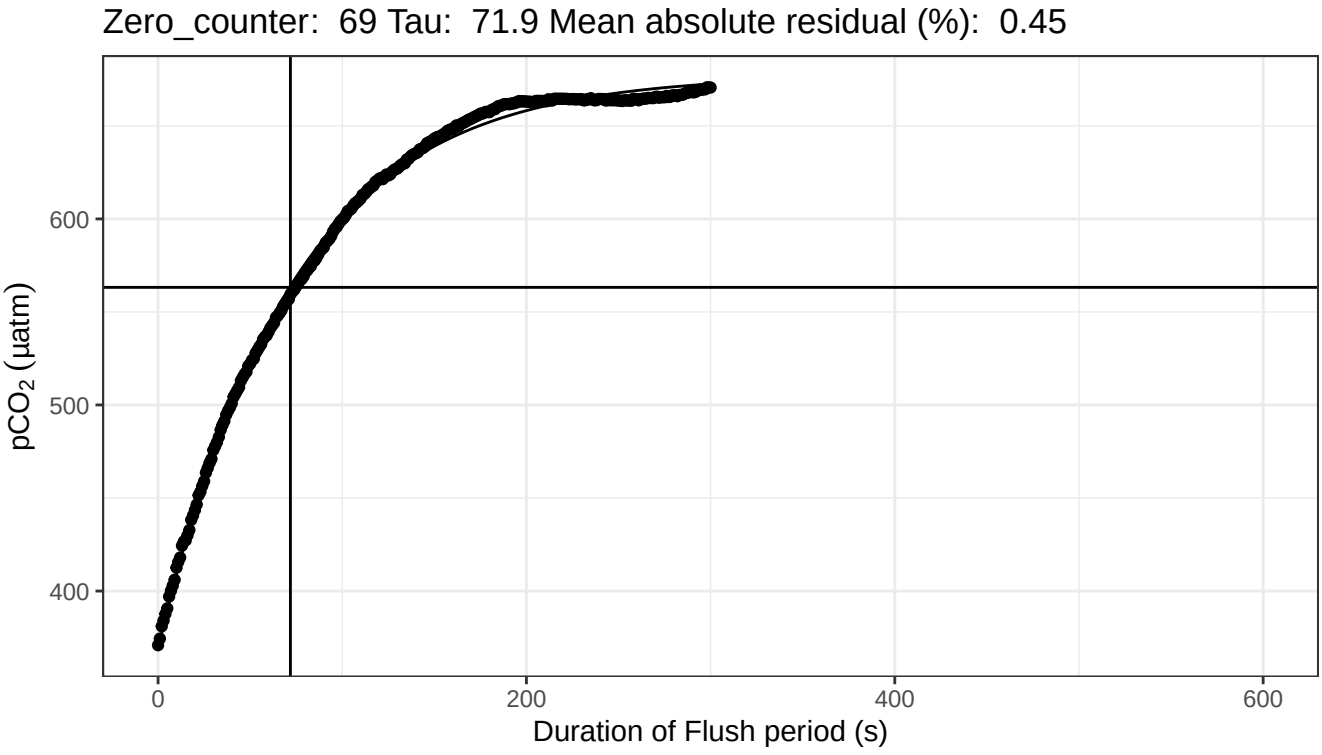

Zero_counter: 68 Tau: 73.5 Mean absolute residual (%): 2.54
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

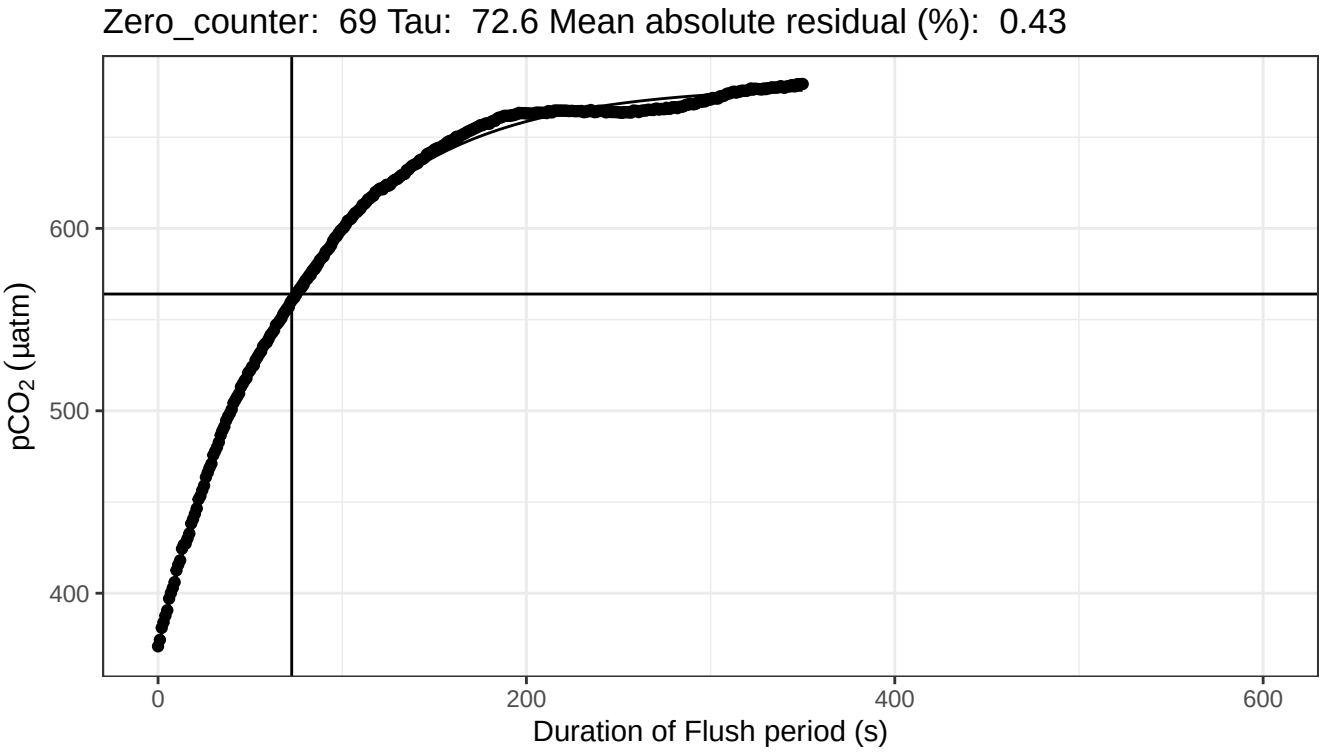

Zero_counter: 68 nls model failed
180
150
120
90
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

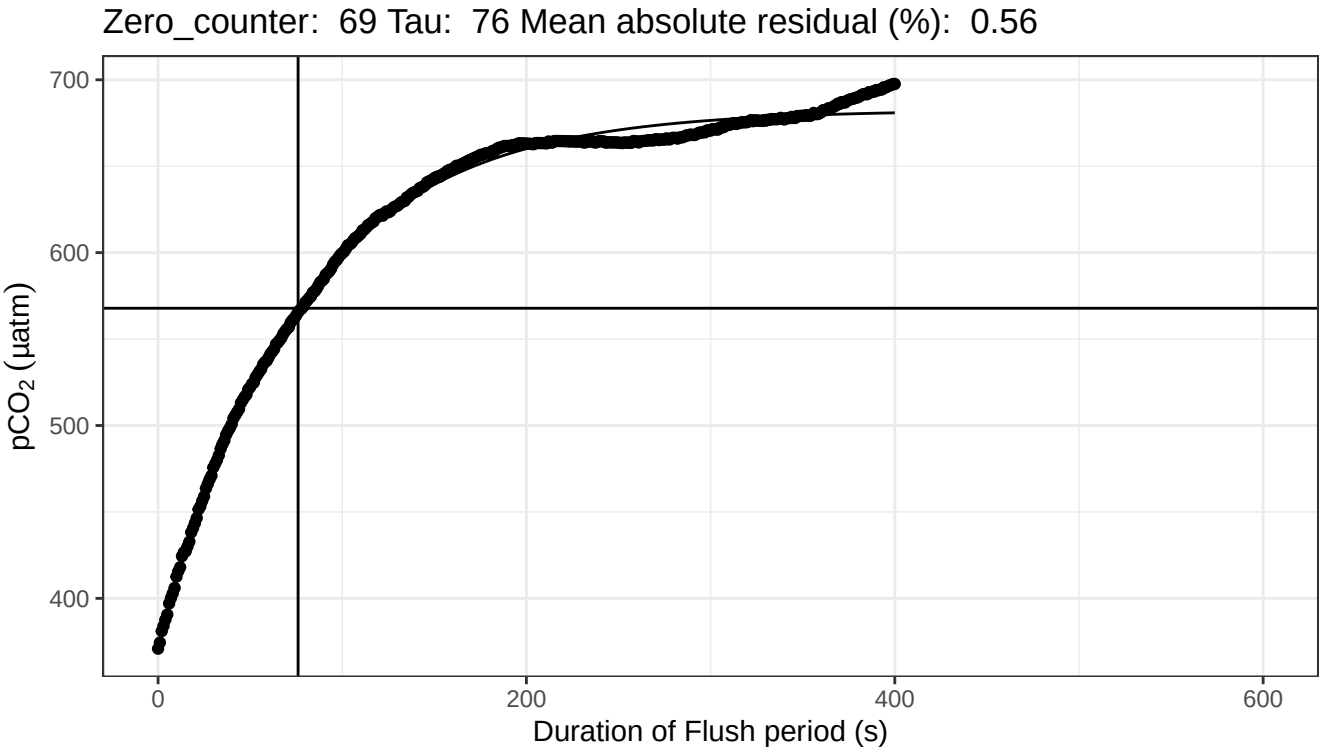

Zero_counter: 69 Tau: 80.5 Mean absolute residual (%): 0.21
650
600
550
500
450
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

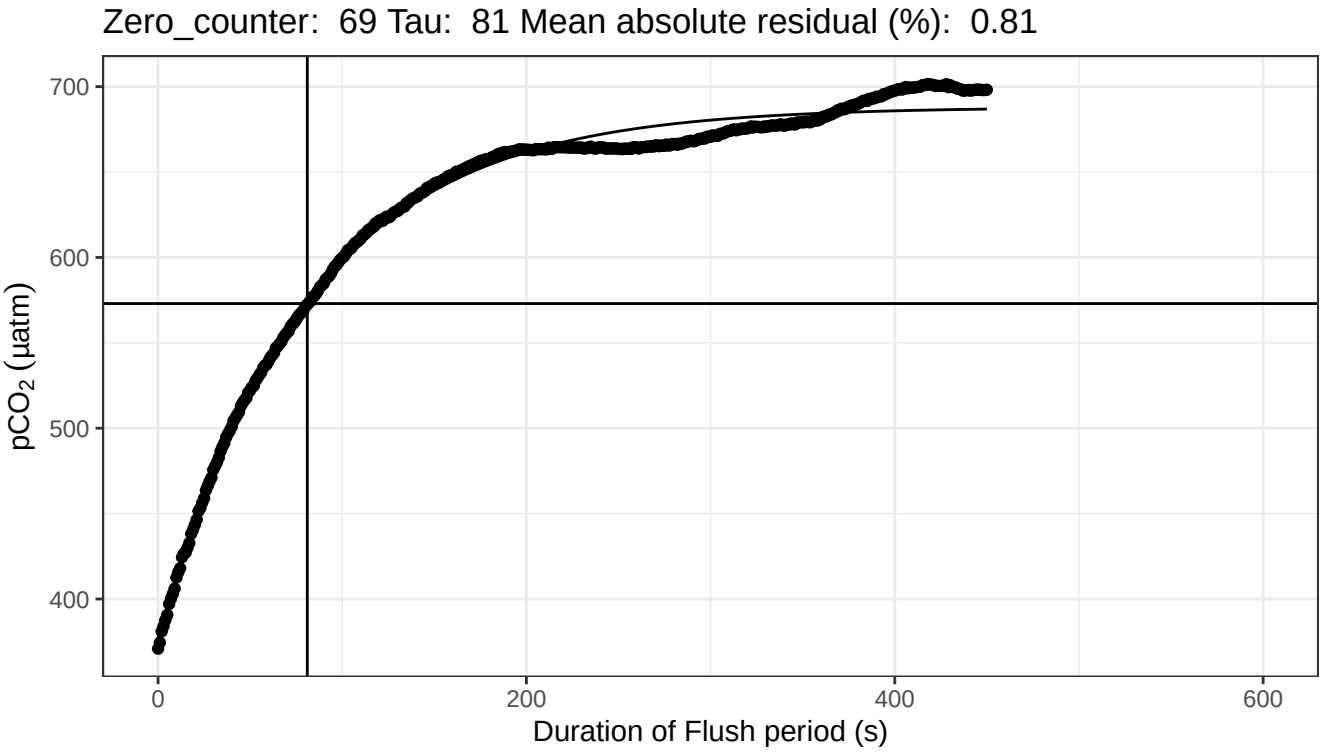

Zero_counter: 69 Tau: 81.2 Mean absolute residual (%): 0.18
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

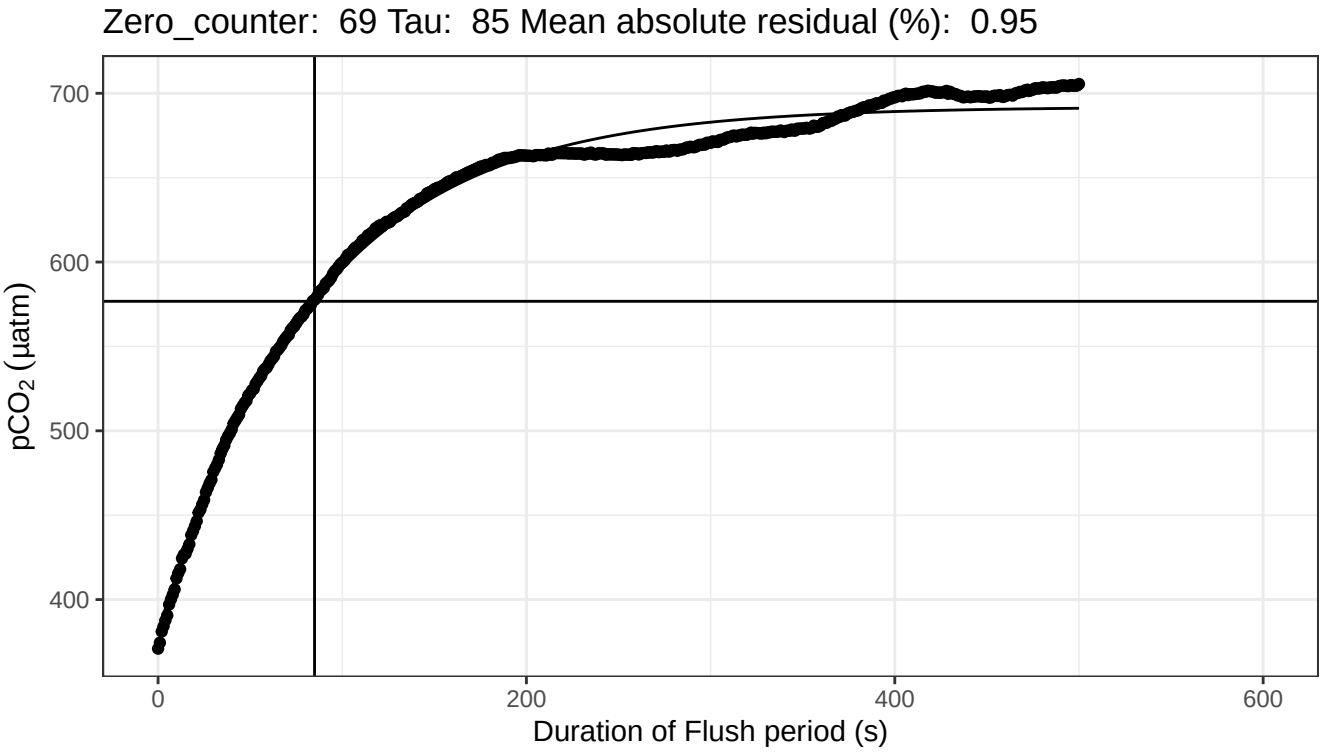

Zero_counter: 69 Tau: 75.5 Mean absolute residual (%): 0.35
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

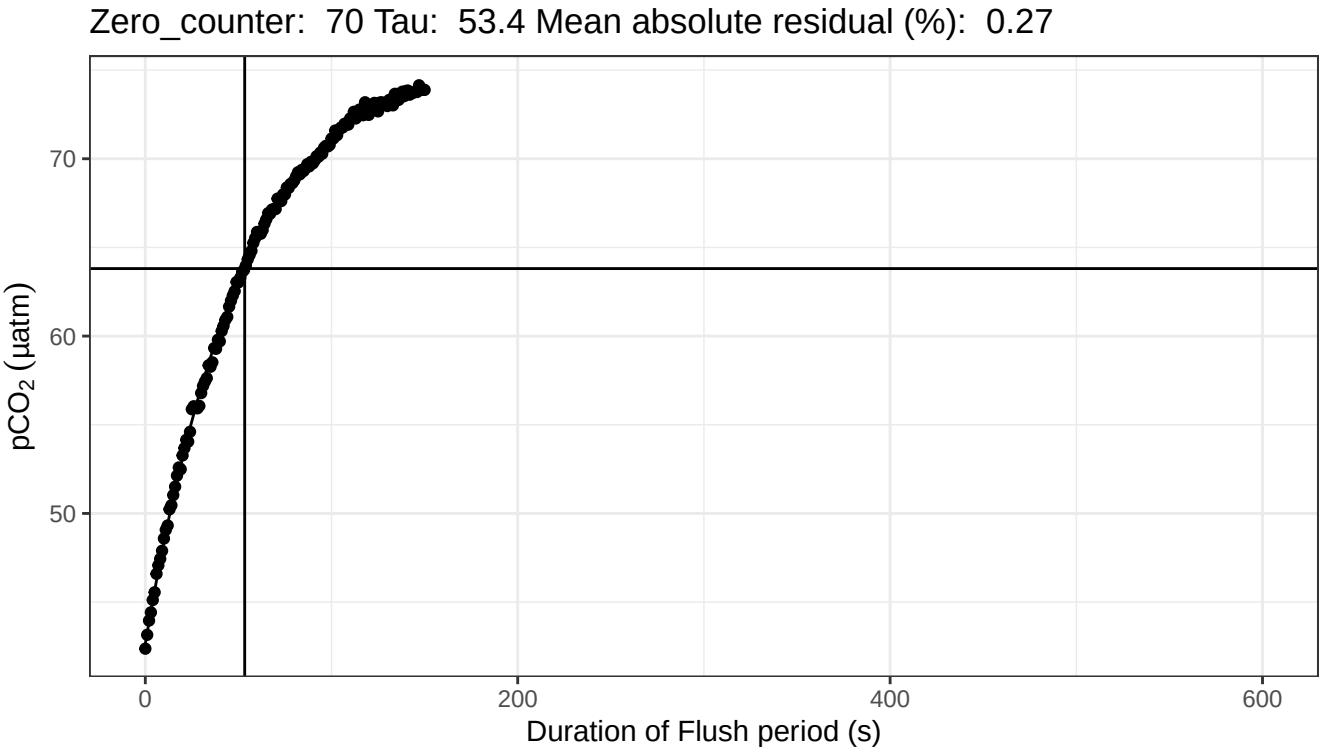

Zero_counter: 69 Tau: 71.9 Mean absolute residual (%): 0.45
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

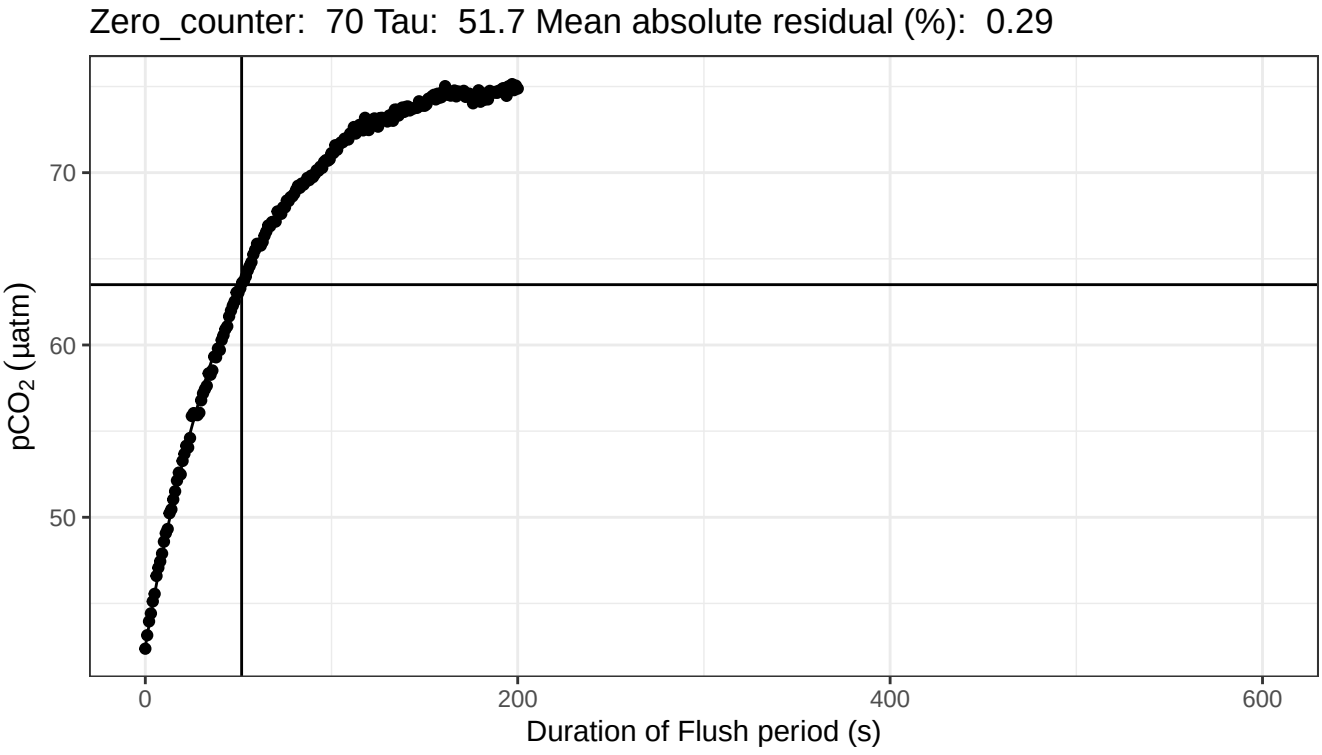

Zero_counter: 69 Tau: 72.6 Mean absolute residual (%): 0.43
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 69 Tau: 76 Mean absolute residual (%): 0.56
700
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

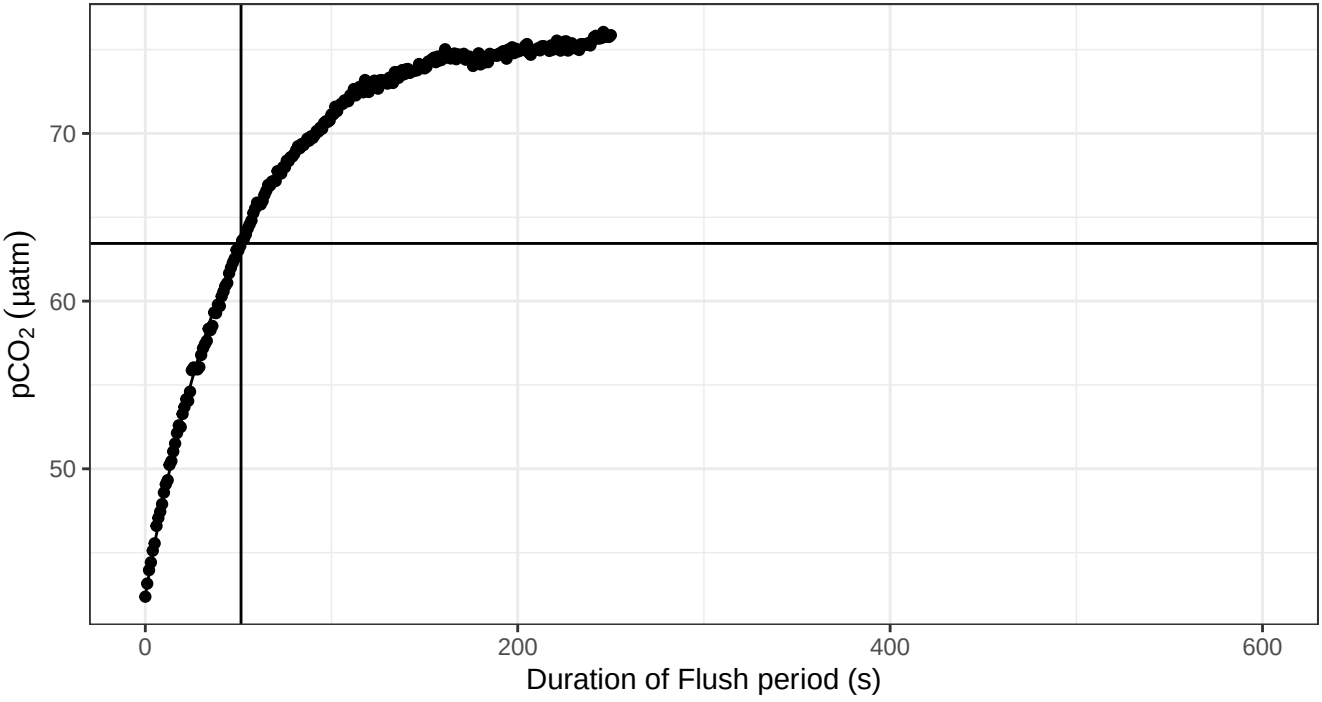

Zero_counter: 69 Tau: 81 Mean absolute residual (%): 0.81
700
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 69 Tau: 85 Mean absolute residual (%): 0.95
700
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

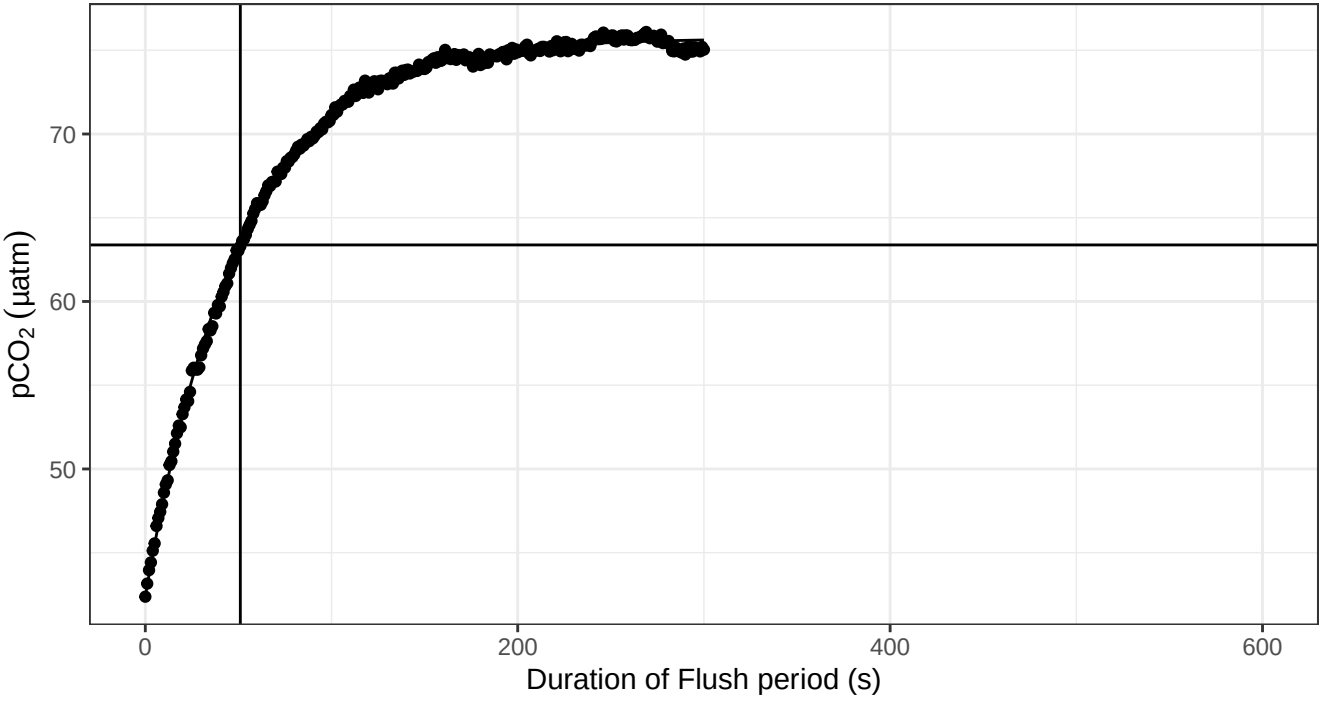

Zero_counter: 70 Tau: 53.4 Mean absolute residual (%): 0.27
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

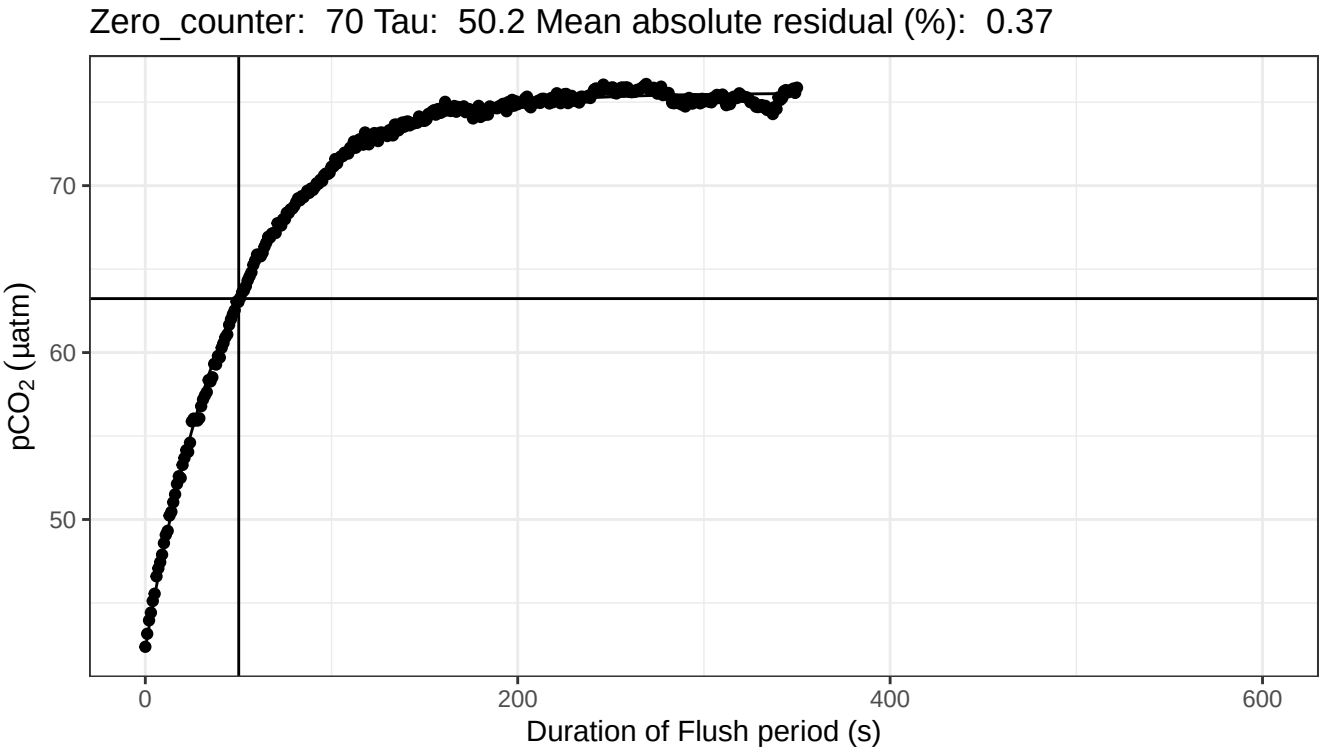

Zero_counter: 70 Tau: 51.7 Mean absolute residual (%): 0.29
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

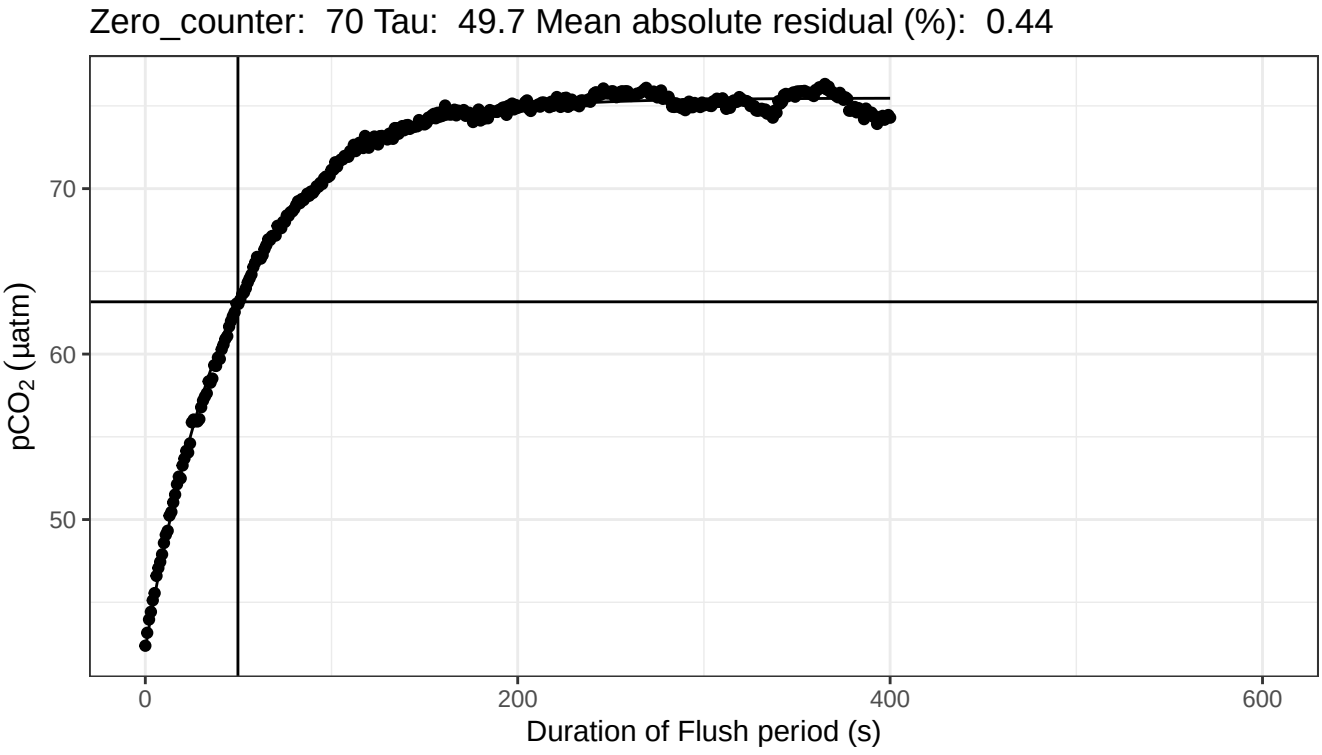
Zero_counter: 70 Tau: 51.4 Mean absolute residual (%): 0.29



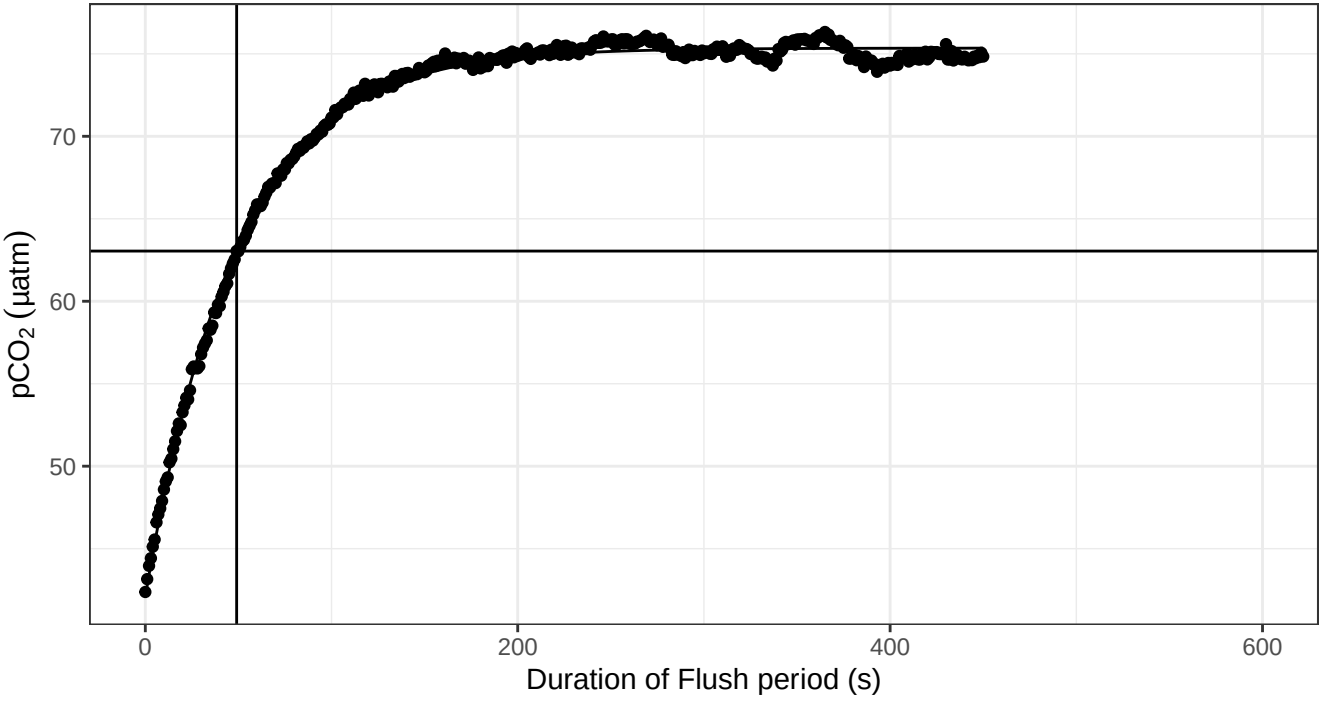
Zero_counter: 70 Tau: 51 Mean absolute residual (%): 0.32



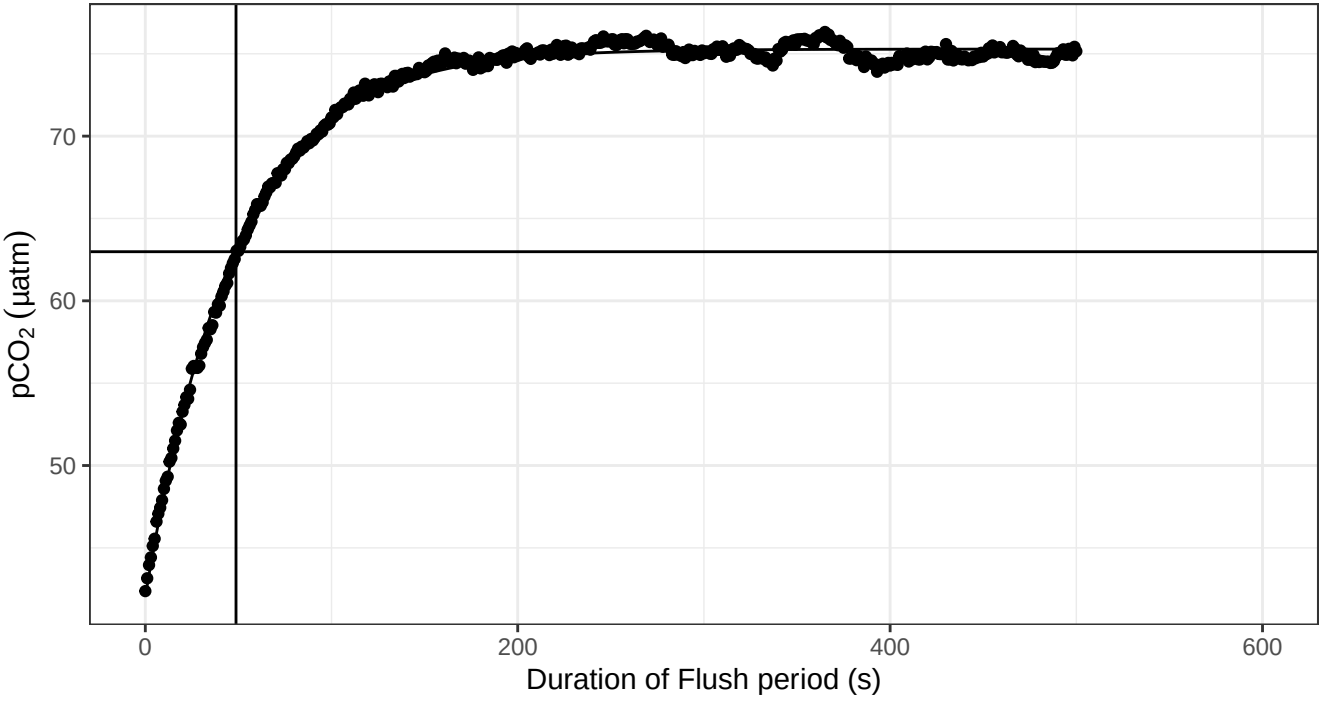

Zero_counter: 70 Tau: 50.2 Mean absolute residual (%): 0.37
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

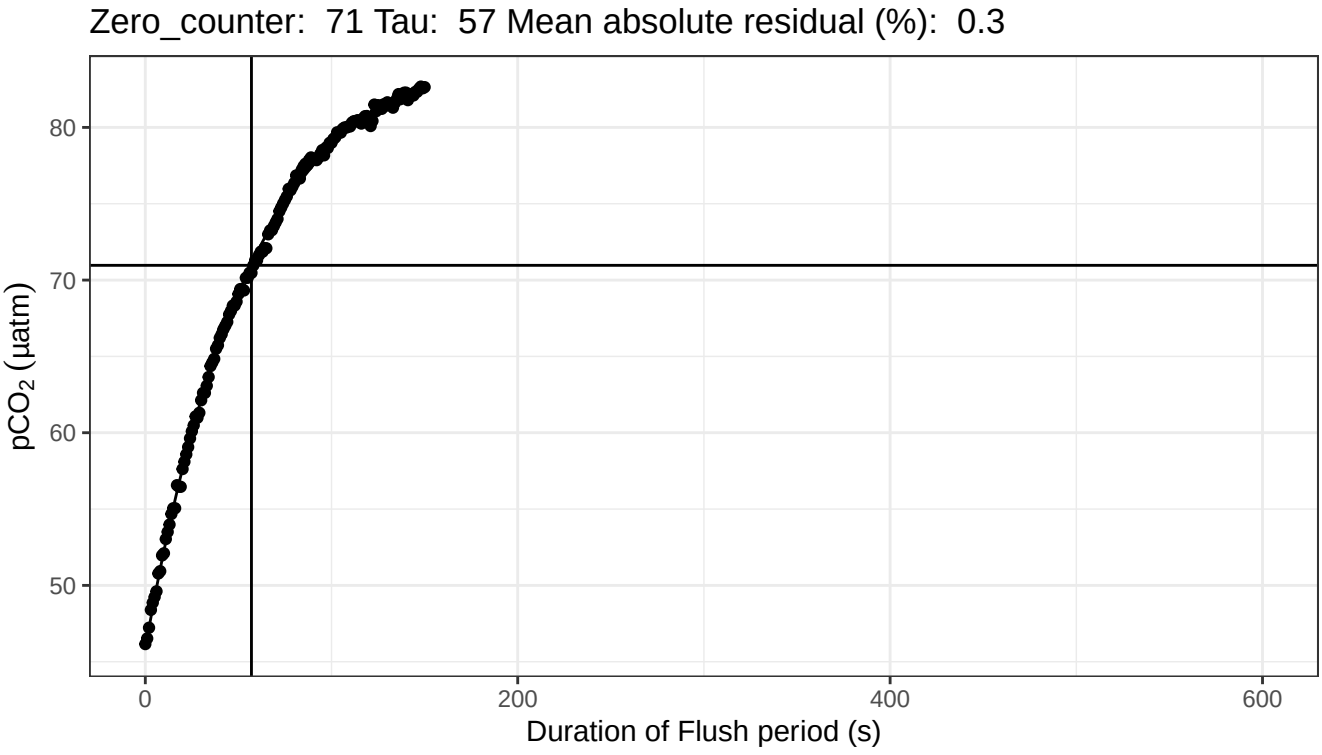

Zero_counter: 70 Tau: 49.7 Mean absolute residual (%): 0.44
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

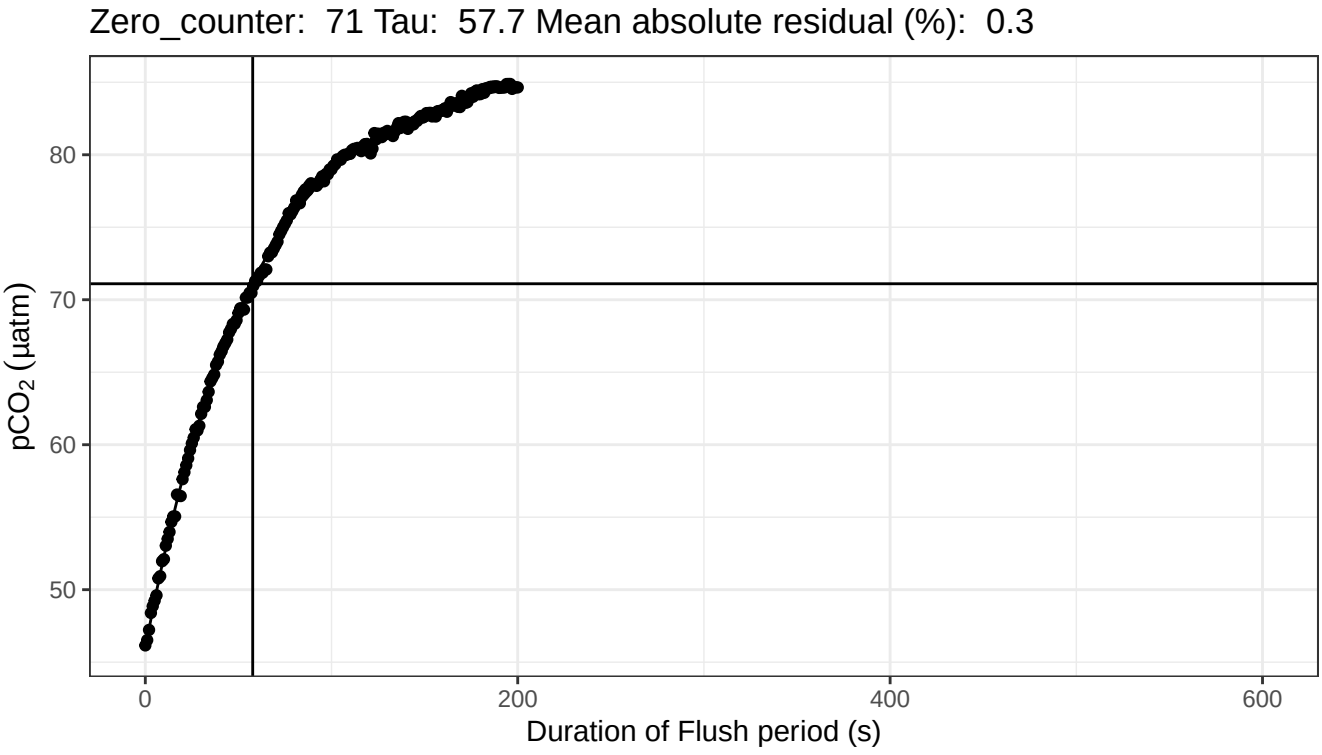
Zero_counter: 70 Tau: 49 Mean absolute residual (%): 0.49



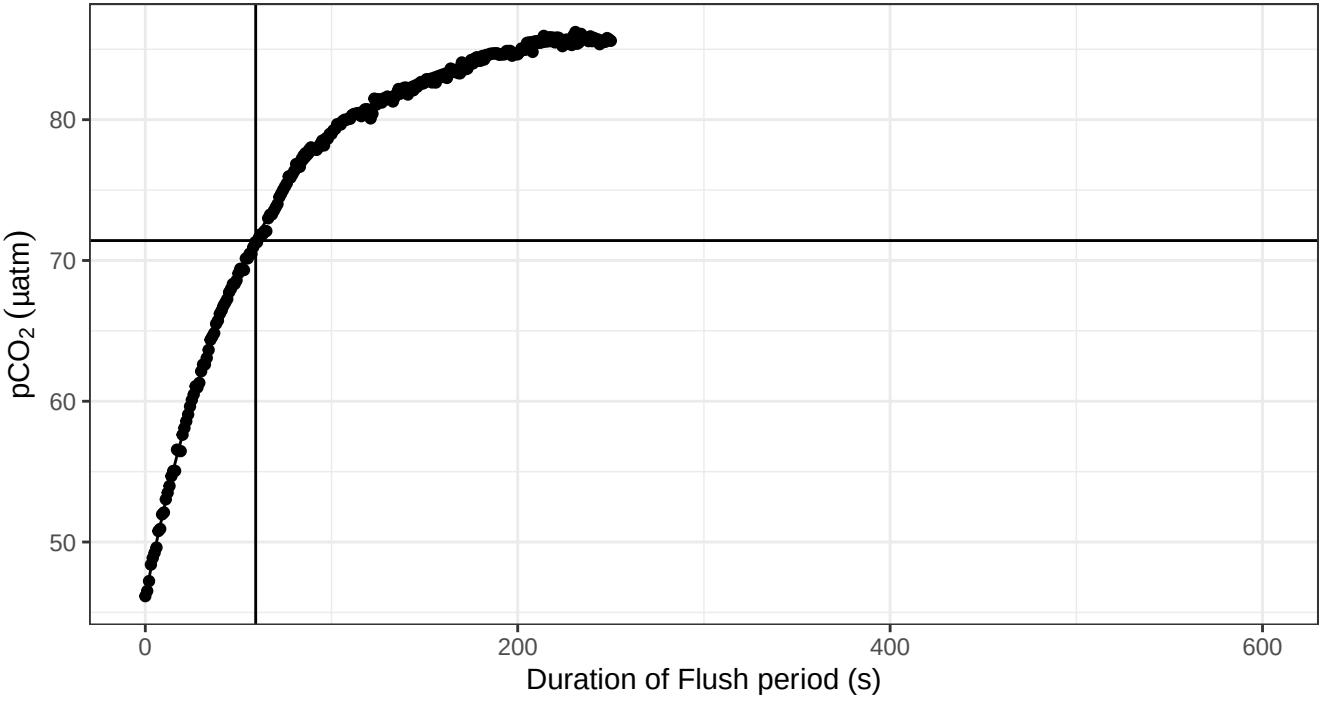
Zero_counter: 70 Tau: 48.7 Mean absolute residual (%): 0.49

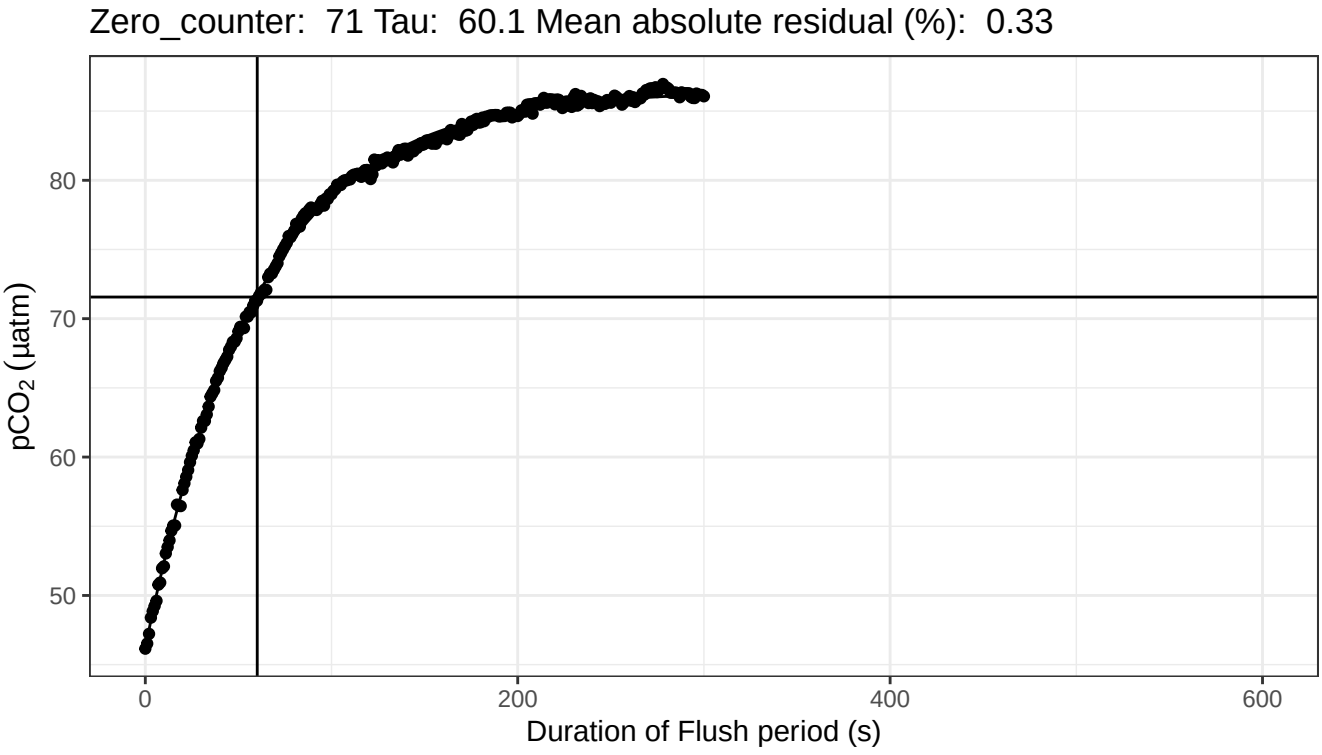



Zero_counter: 71 Tau: 57 Mean absolute residual (%): 0.3
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

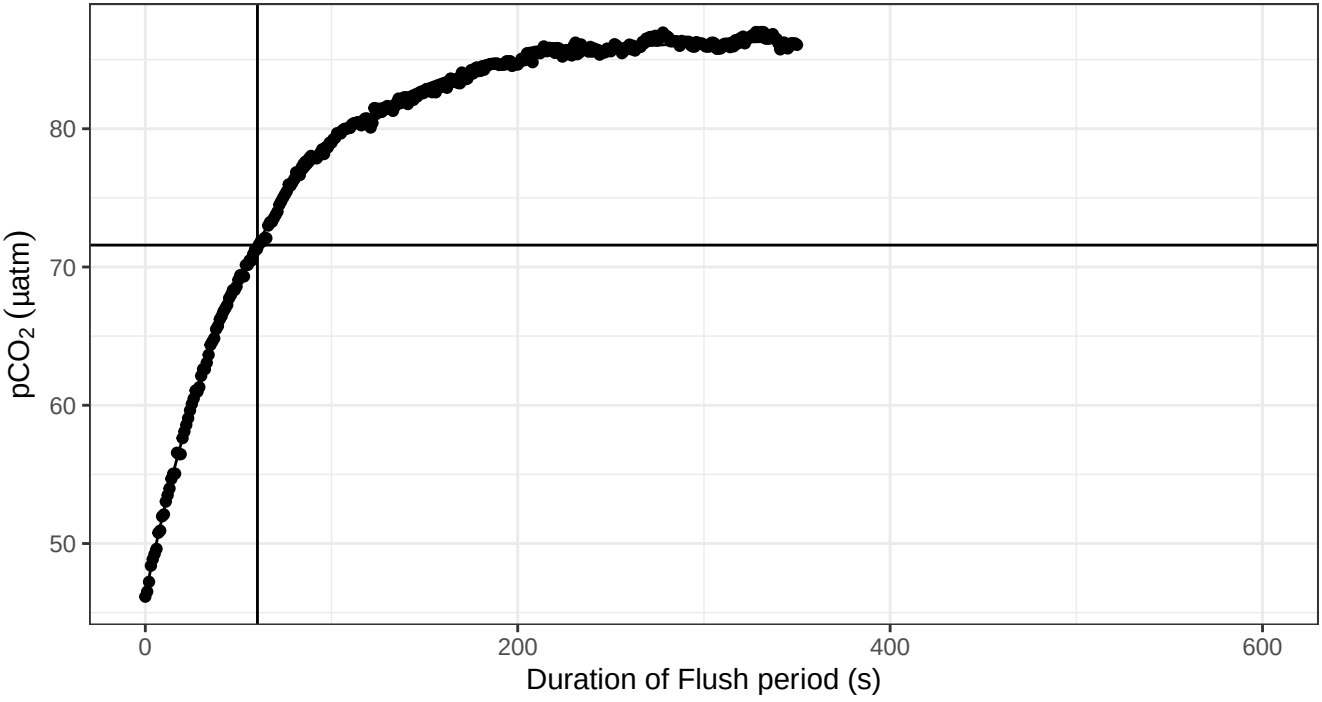

Zero_counter: 71 Tau: 57.7 Mean absolute residual (%): 0.3
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

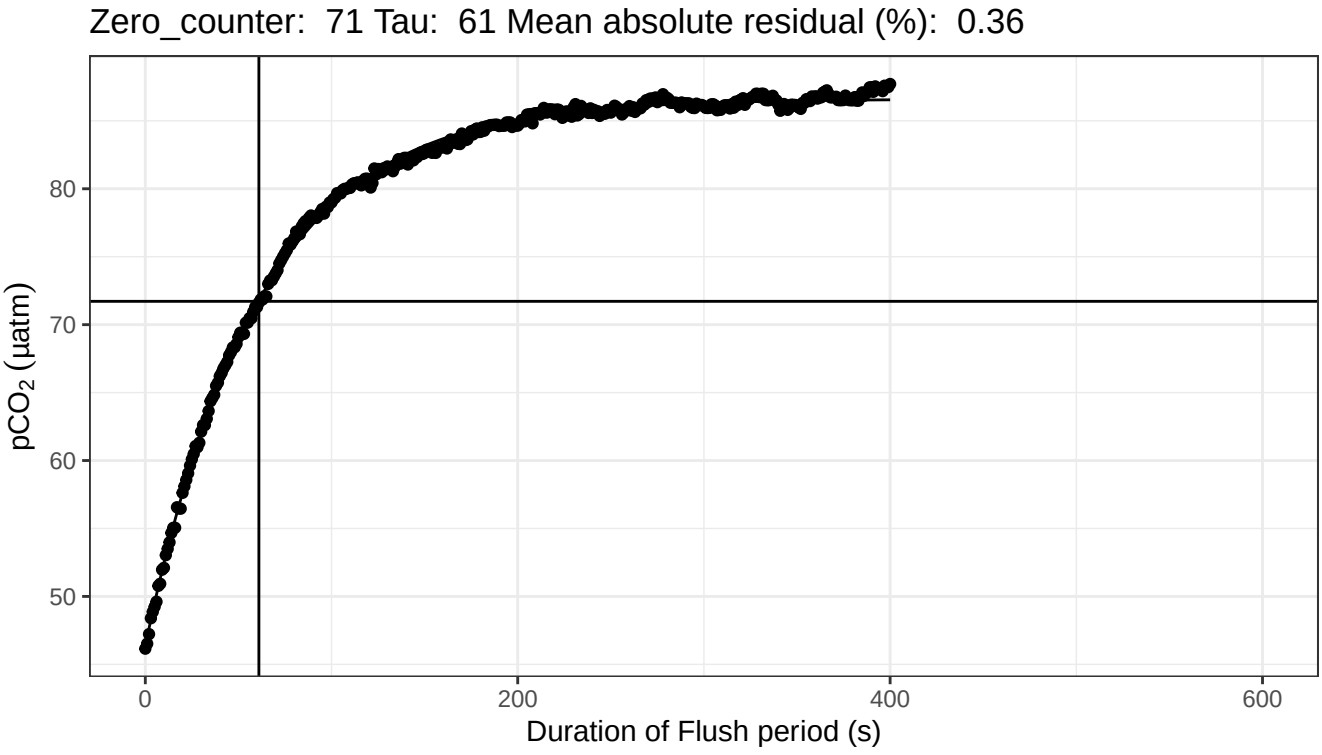
Zero_counter: 71 Tau: 59.3 Mean absolute residual (%): 0.33

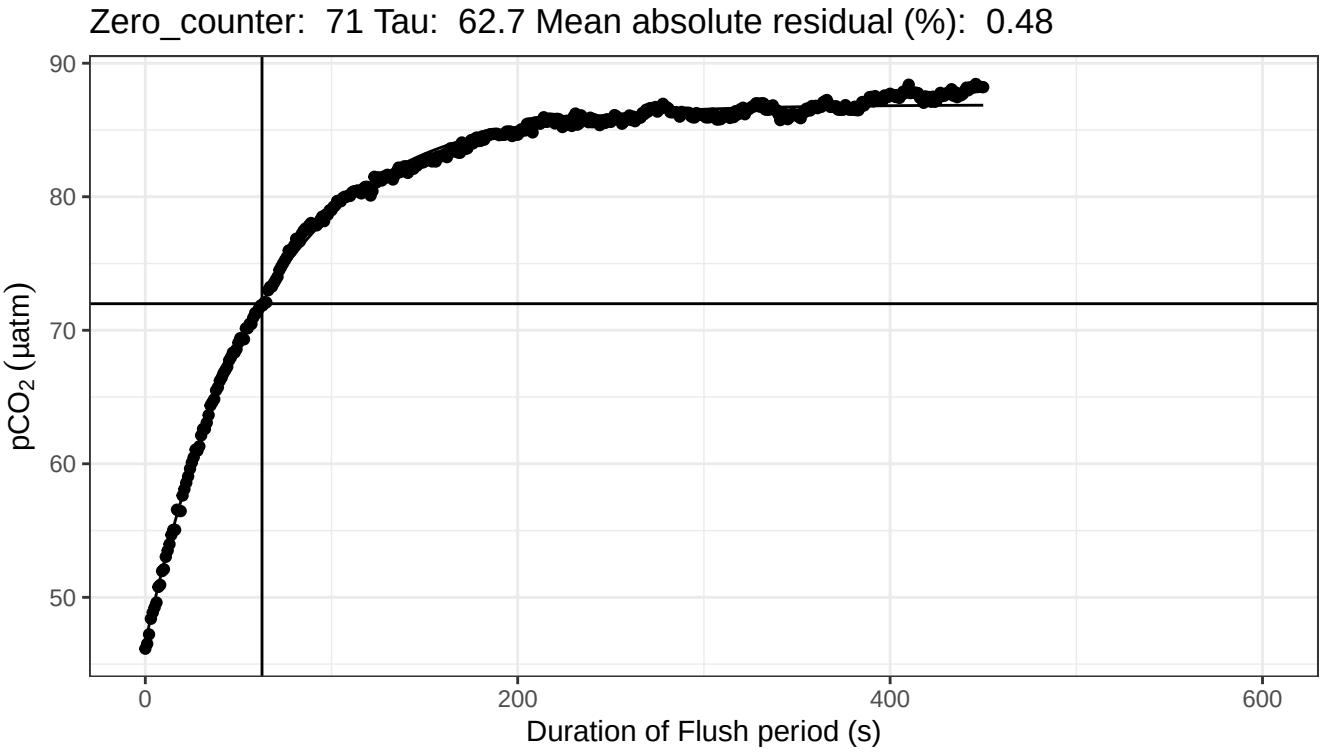



Zero_counter: 71 Tau: 60.1 Mean absolute residual (%): 0.33
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

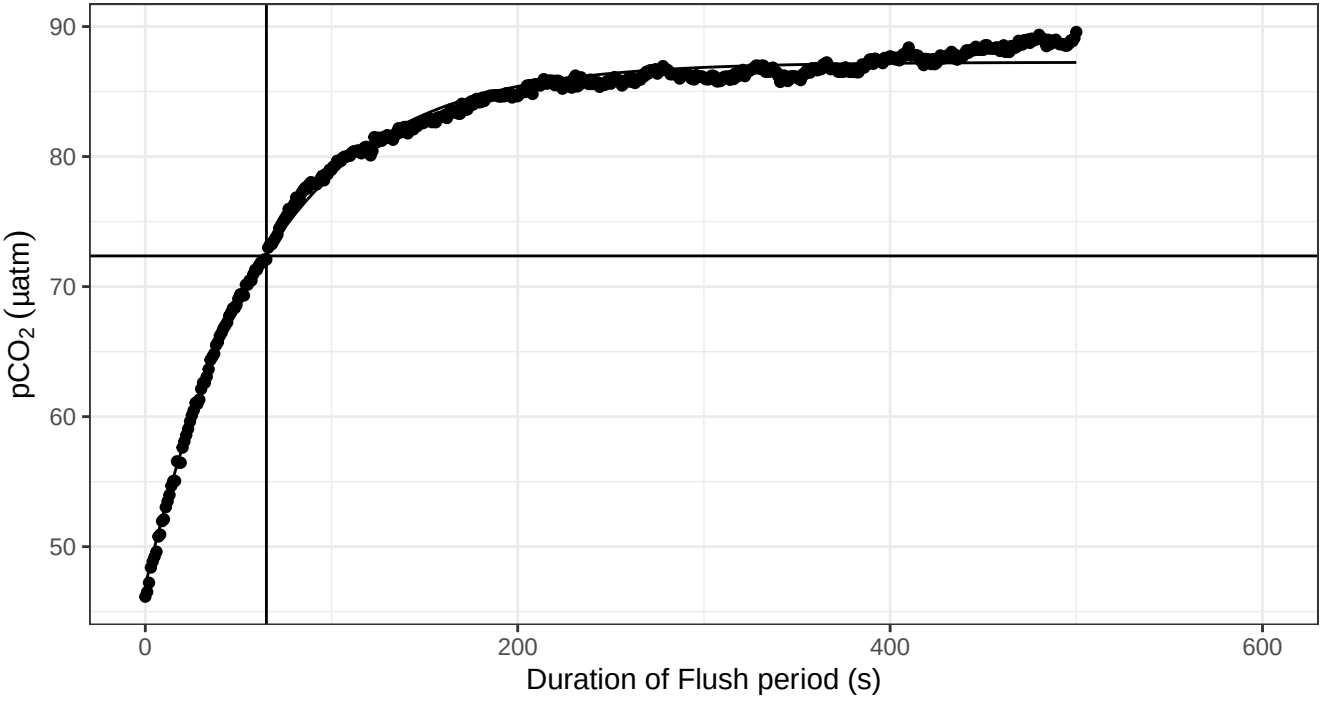
Zero_counter: 71 Tau: 60.2 Mean absolute residual (%): 0.33

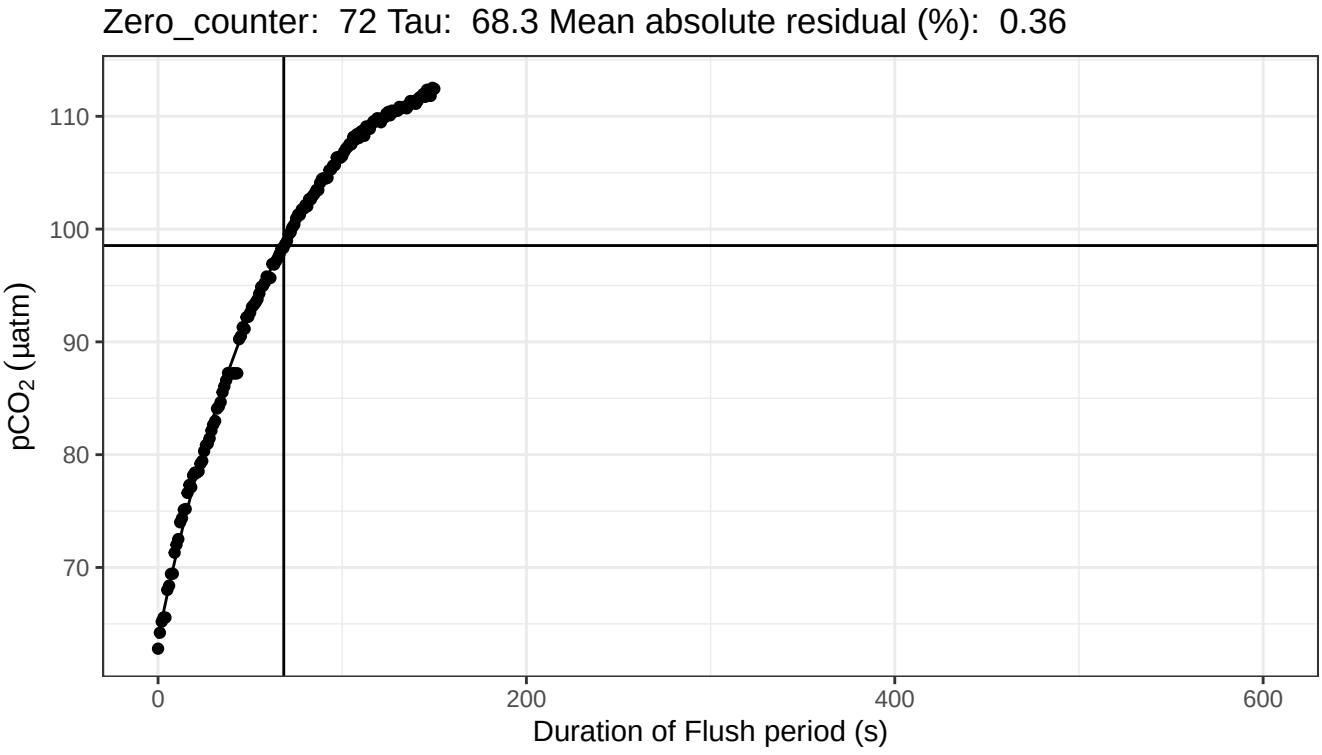


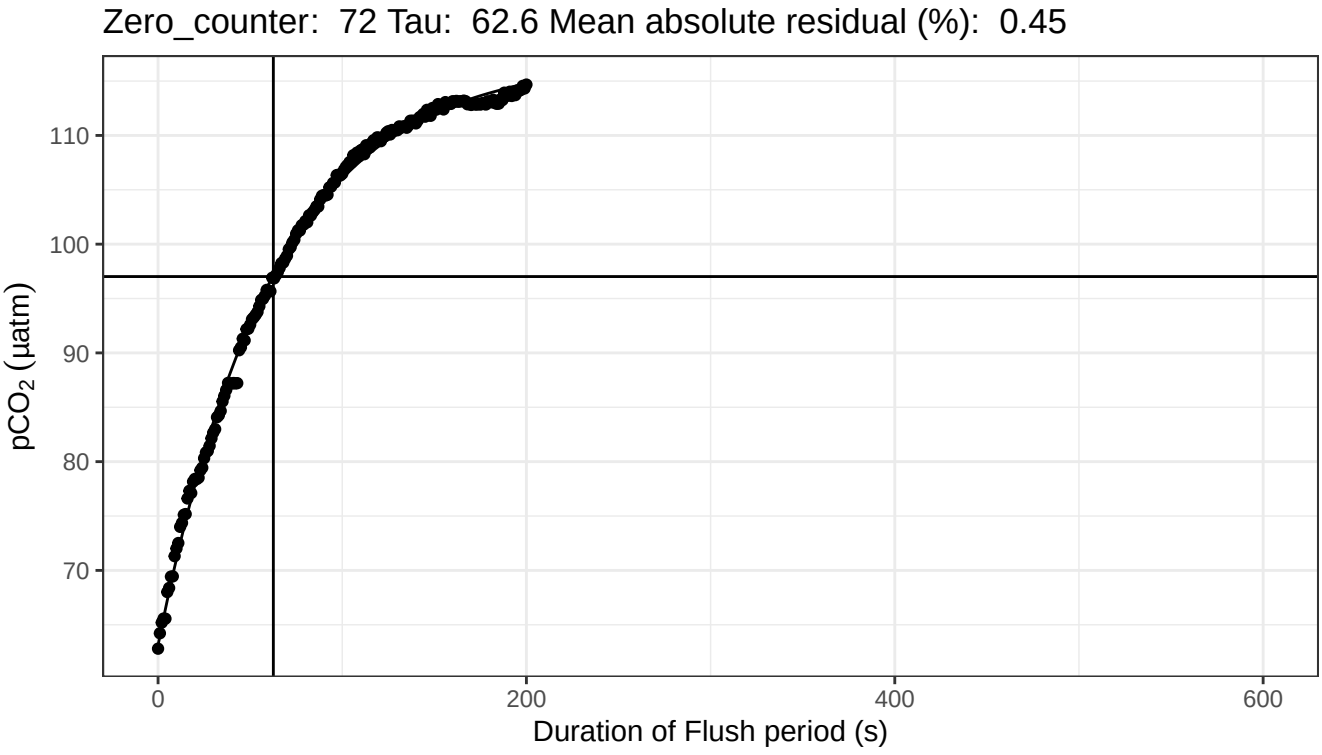

Zero_counter: 71 Tau: 61 Mean absolute residual (%): 0.36
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

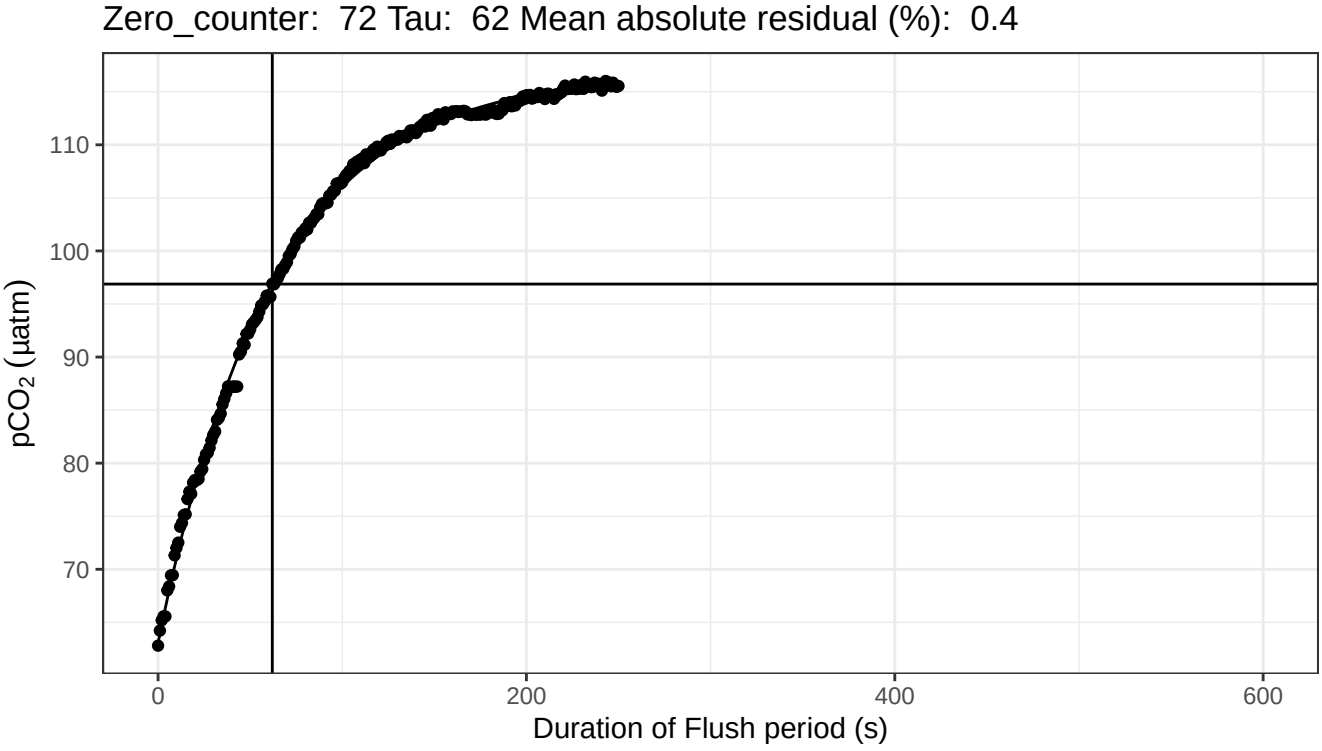

Zero_counter: 71 Tau: 62.7 Mean absolute residual (%): 0.48
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

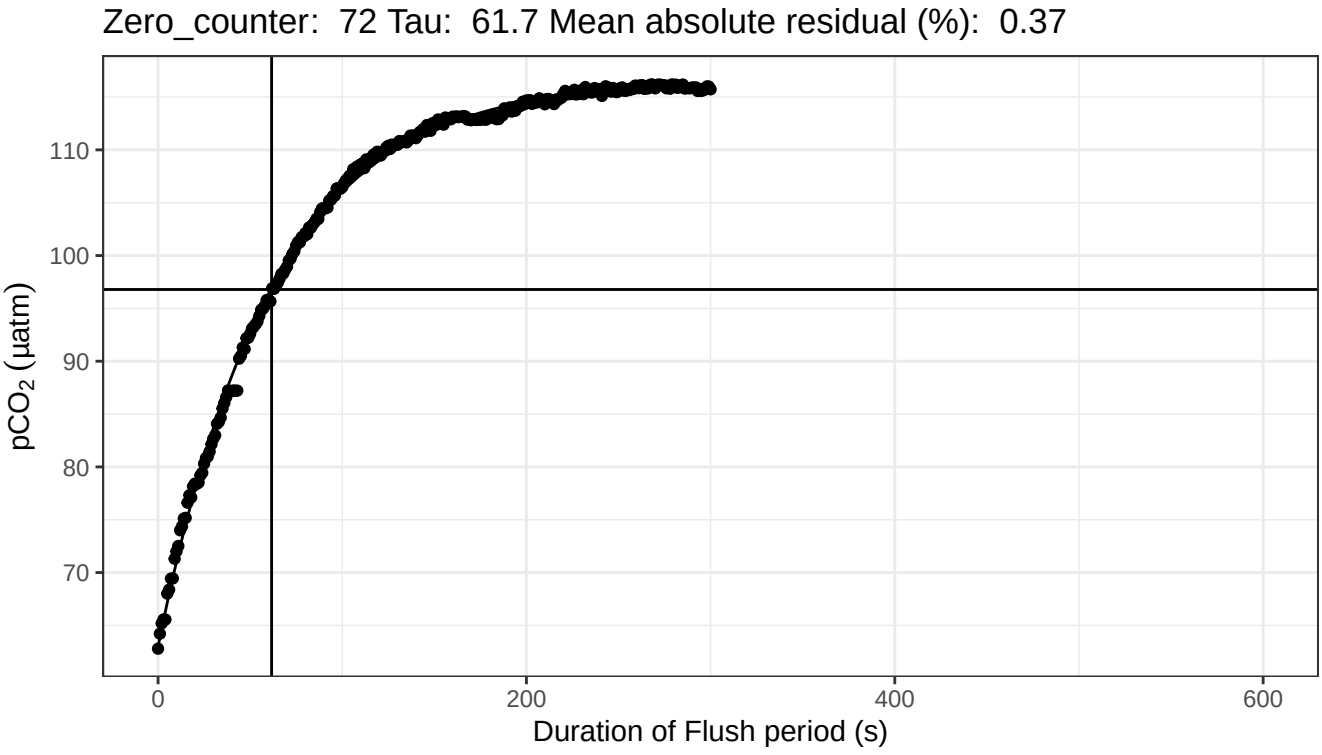
Zero_counter: 71 Tau: 65 Mean absolute residual (%): 0.67

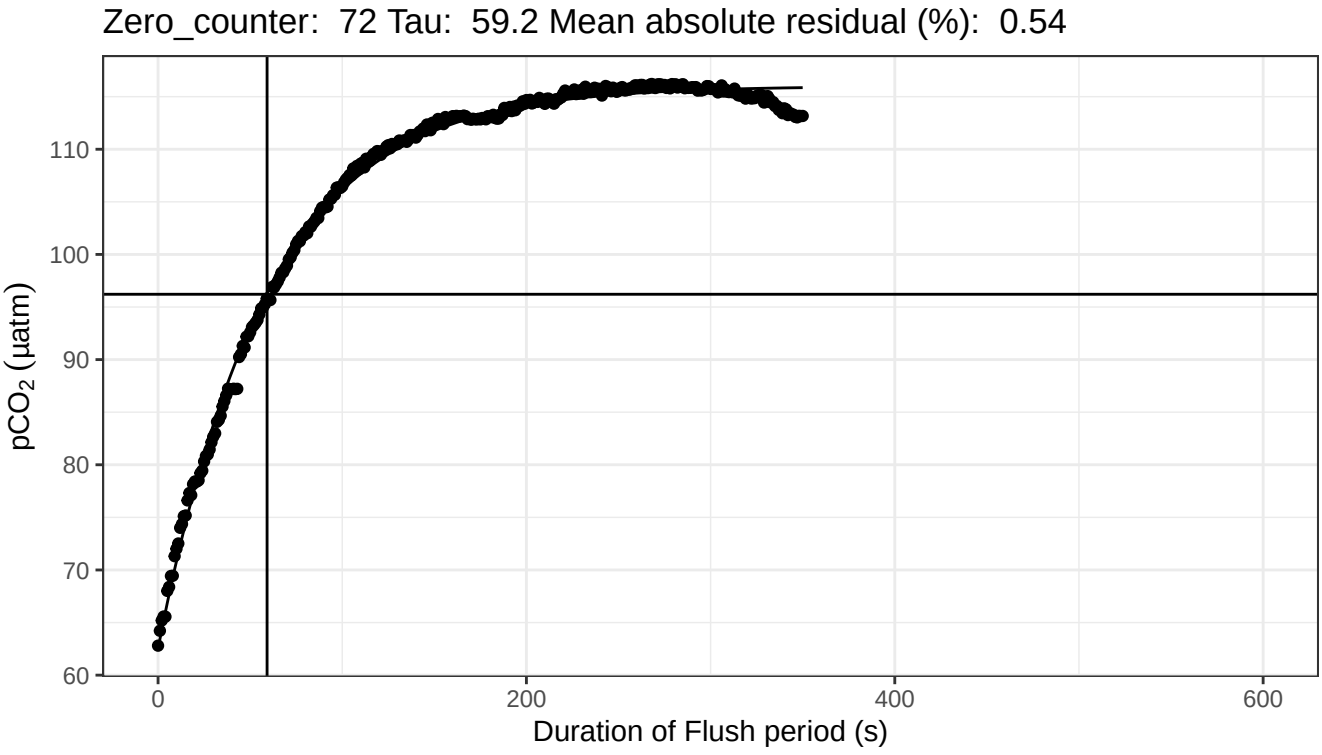


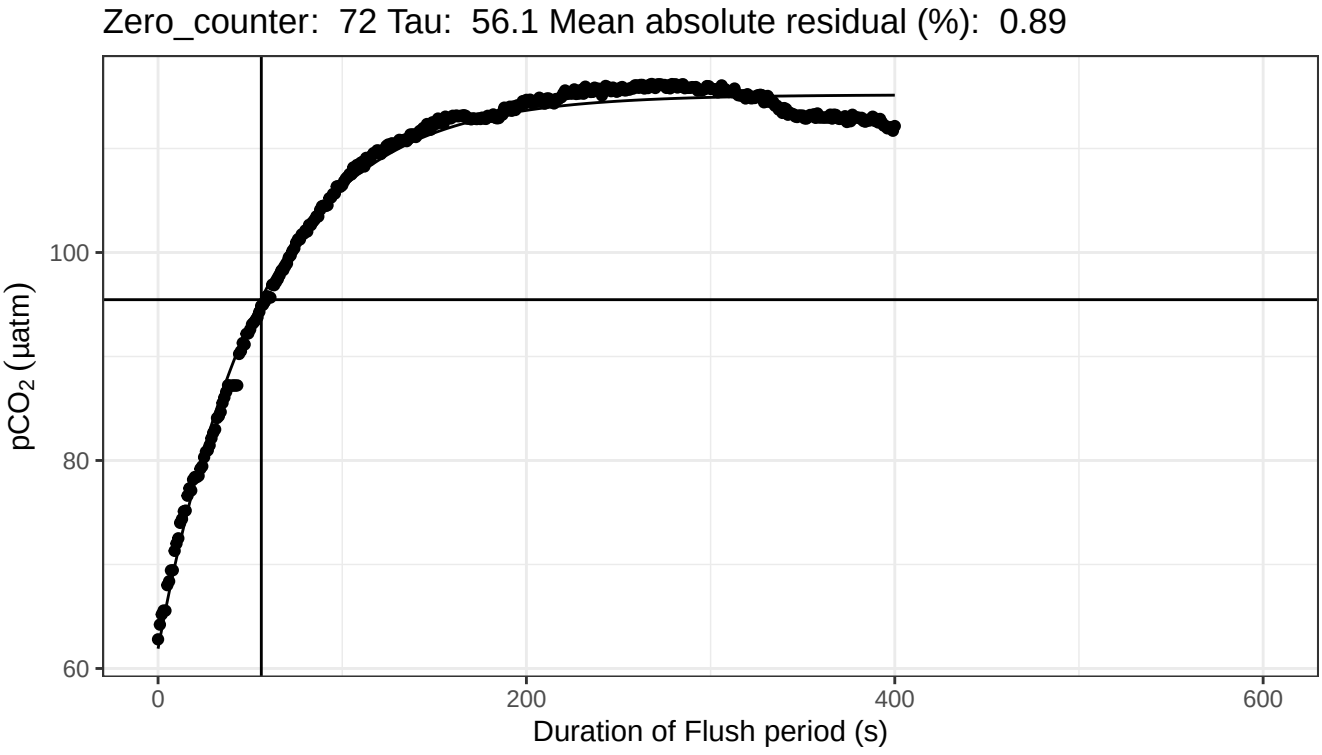

Zero_counter: 72 Tau: 68.3 Mean absolute residual (%): 0.36
110
100
90
80
70
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

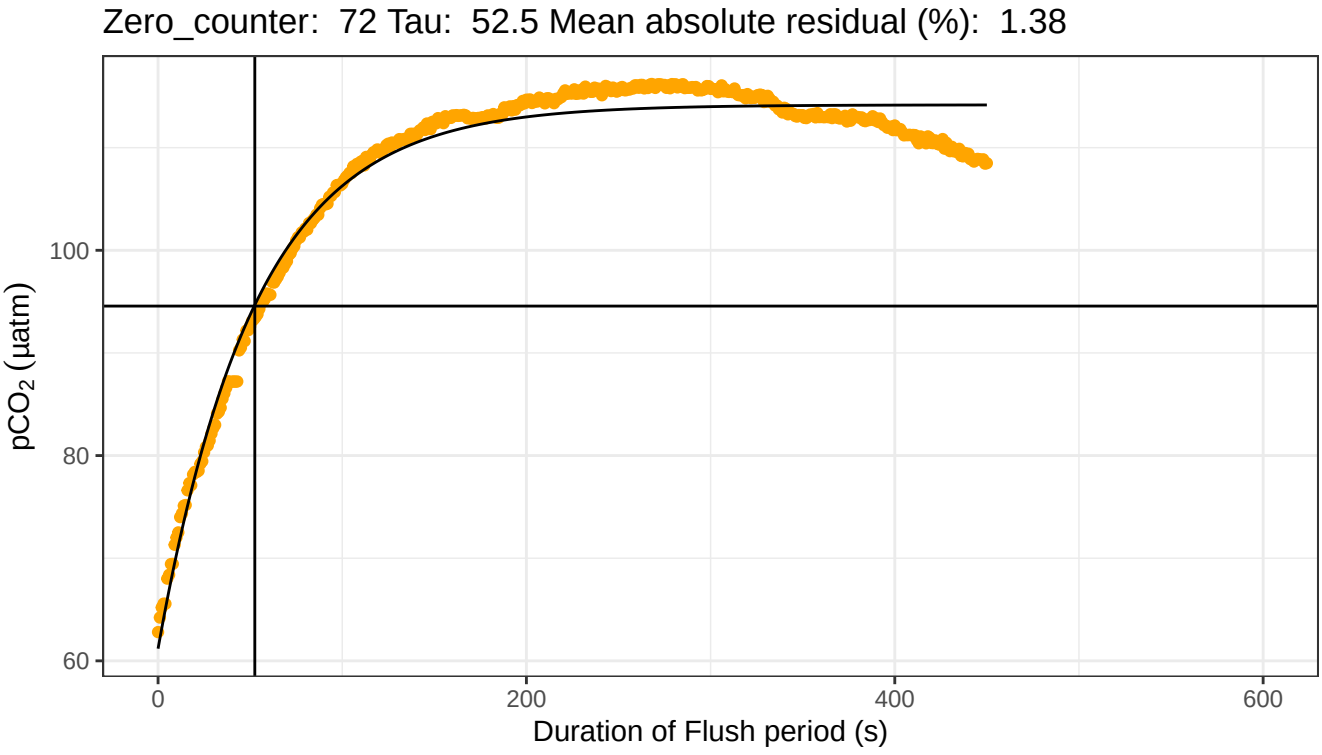

Zero_counter: 72 Tau: 62.6 Mean absolute residual (%): 0.45
110
100
90
80
70
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

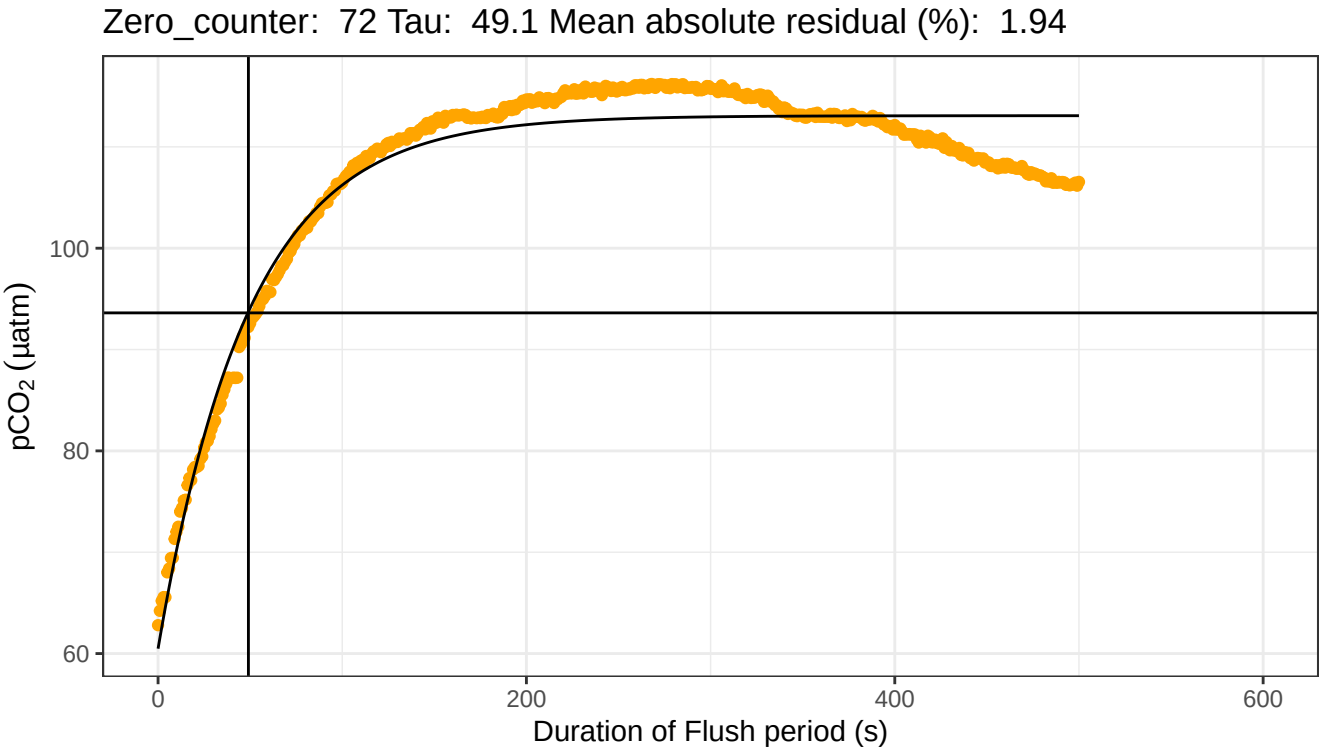

Zero_counter: 72 Tau: 62 Mean absolute residual (%): 0.4
110
100
90
80
70
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 72 Tau: 61.7 Mean absolute residual (%): 0.37
110
100
90
80
70
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

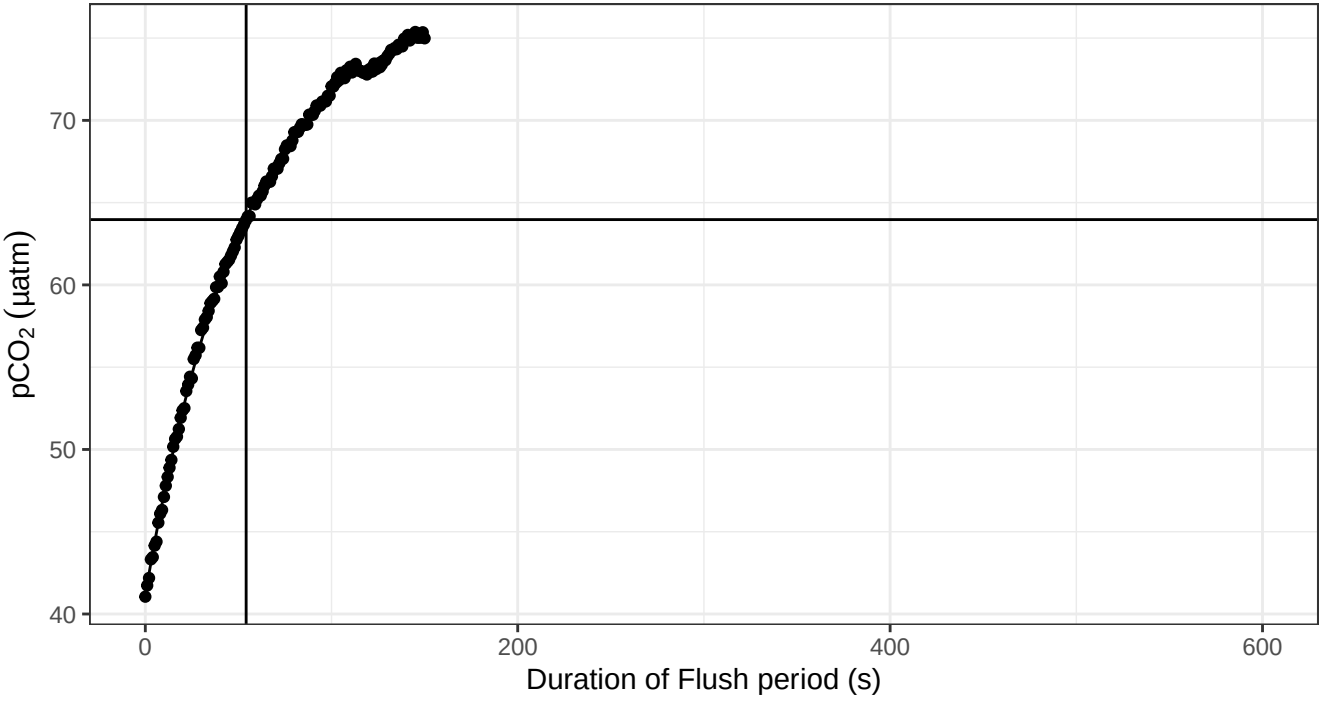

Zero_counter: 72 Tau: 59.2 Mean absolute residual (%): 0.54
pCO2 (µatm)
110
100
90
80
70
60
0
200
400
600
Duration of Flush period (s)


Zero_counter: 72 Tau: 56.1 Mean absolute residual (%): 0.89
pCO2 (µatm)
100
80
60
0
200
400
600
Duration of Flush period (s)

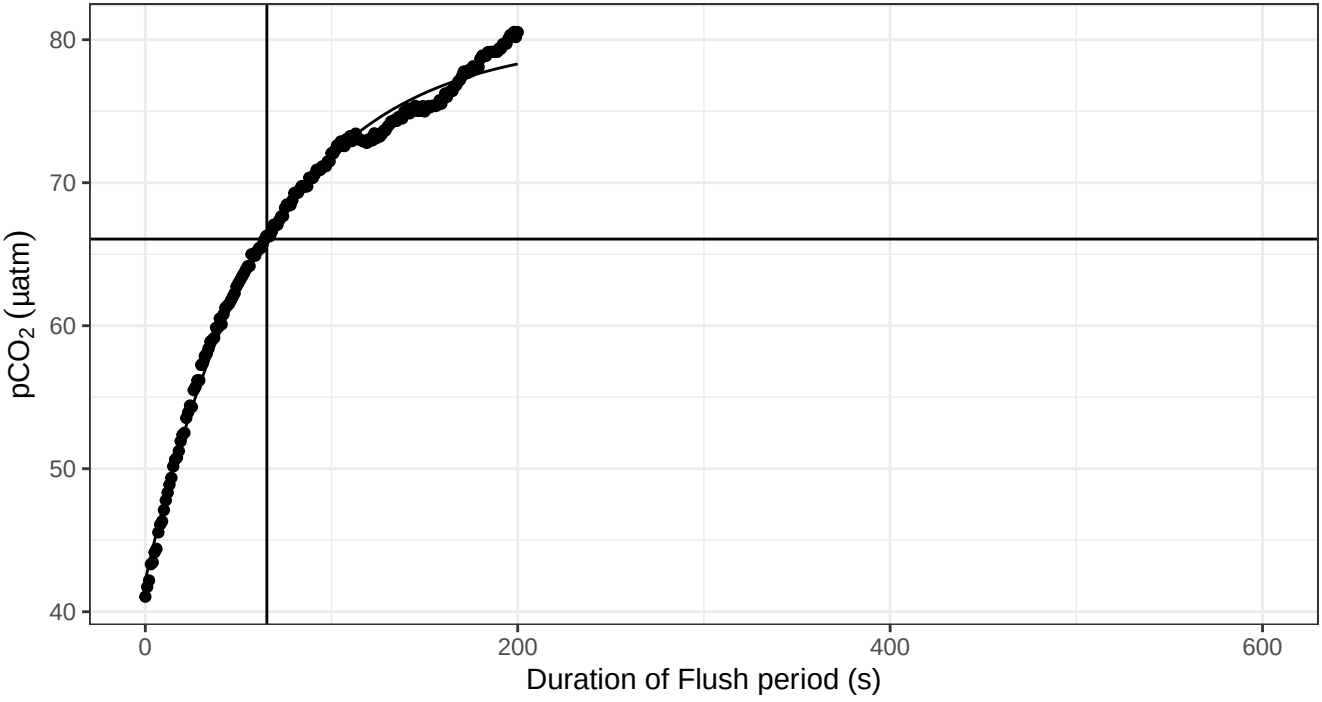

Zero_counter: 72 Tau: 52.5 Mean absolute residual (%): 1.38
pCO2 (µatm)
100
80
60
0
200
400
600
Duration of Flush period (s)


Zero_counter: 72 Tau: 49.1 Mean absolute residual (%): 1.94
pCO2 (µatm)
100
80
60
0
200
400
600
Duration of Flush period (s)

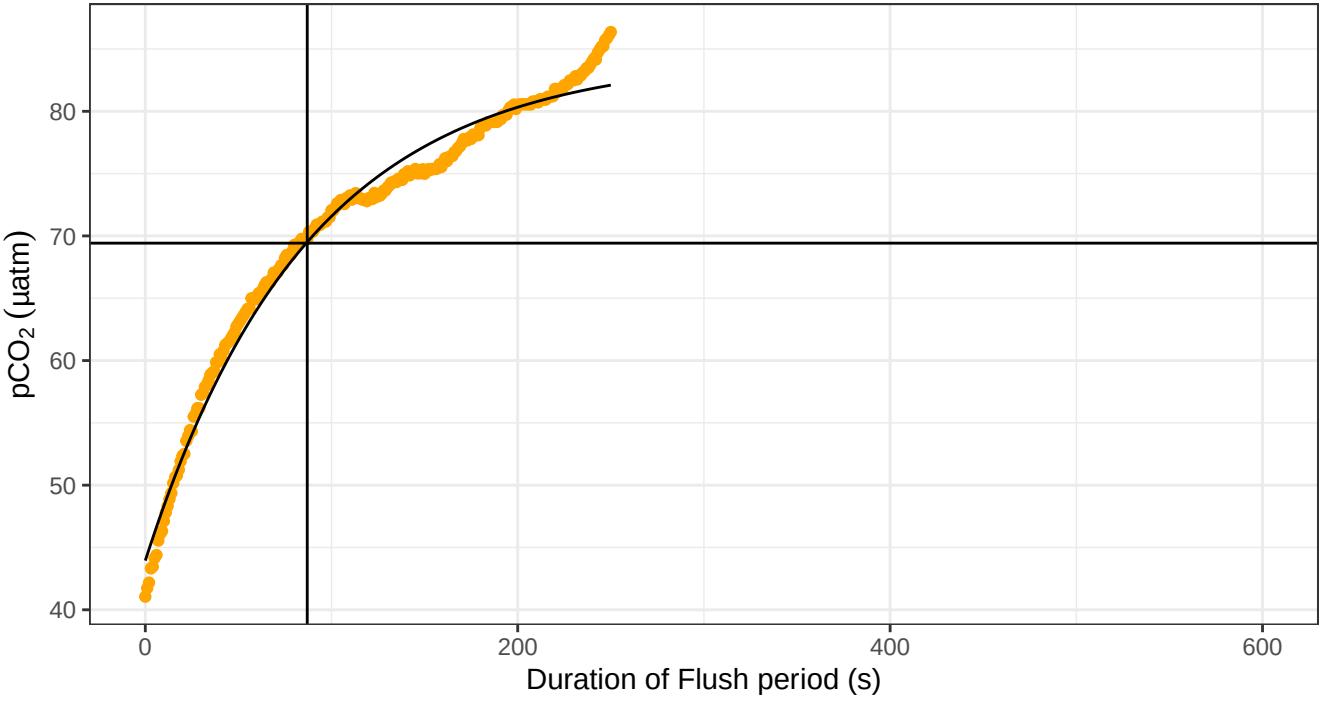
Zero_counter: 73 Tau: 54.1 Mean absolute residual (%): 0.32

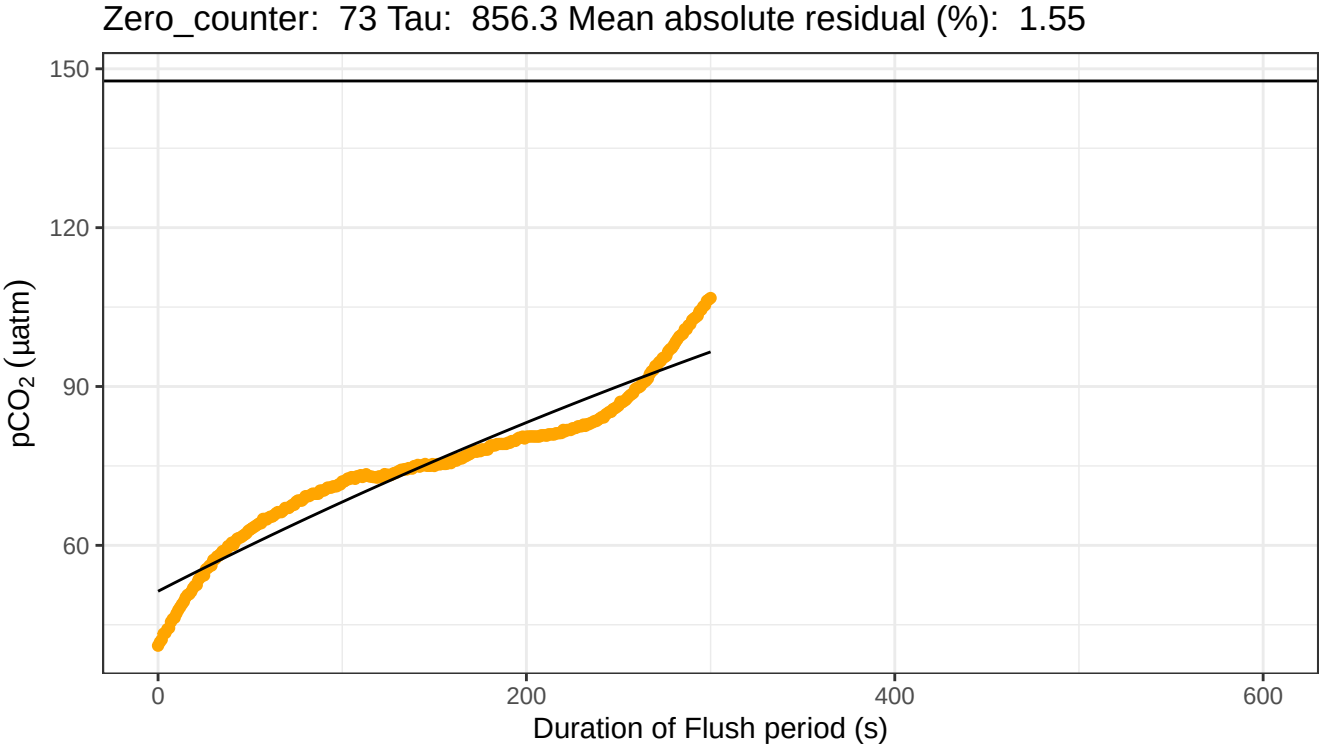


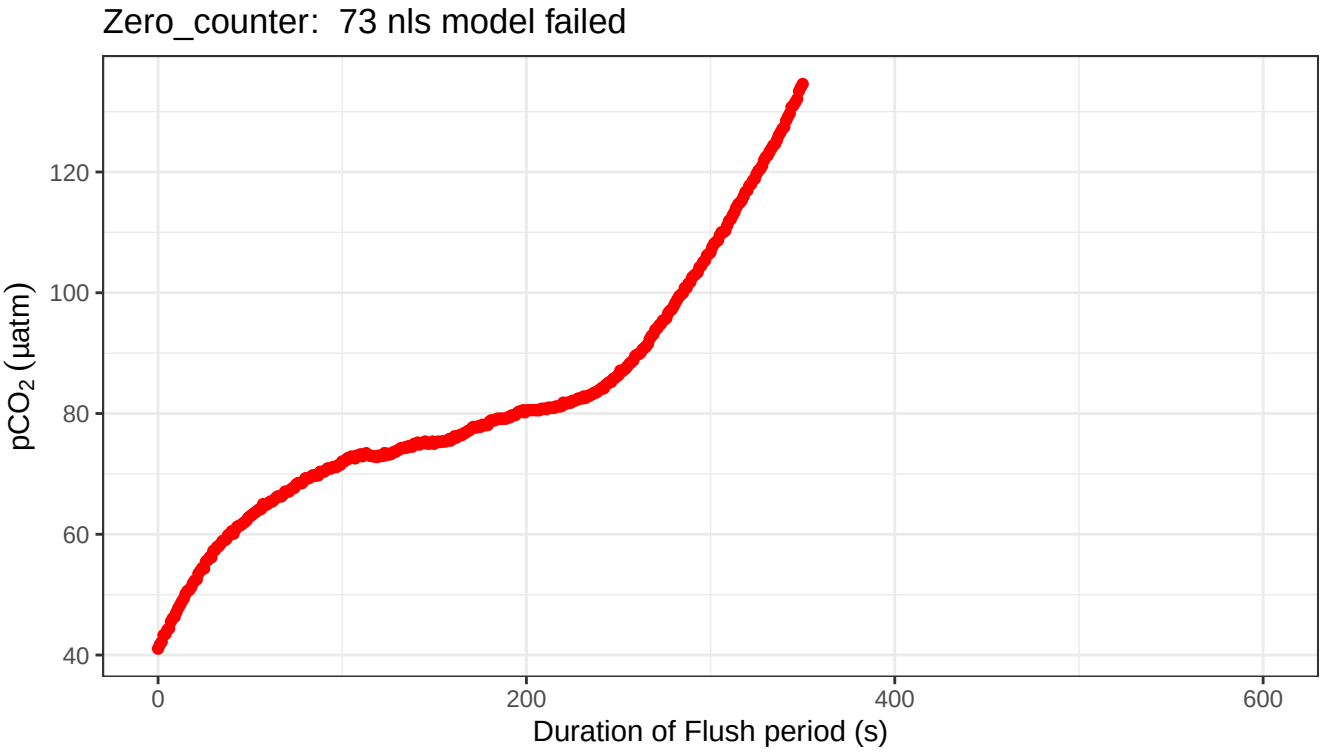
Zero_counter: 73 Tau: 65.3 Mean absolute residual (%): 0.79

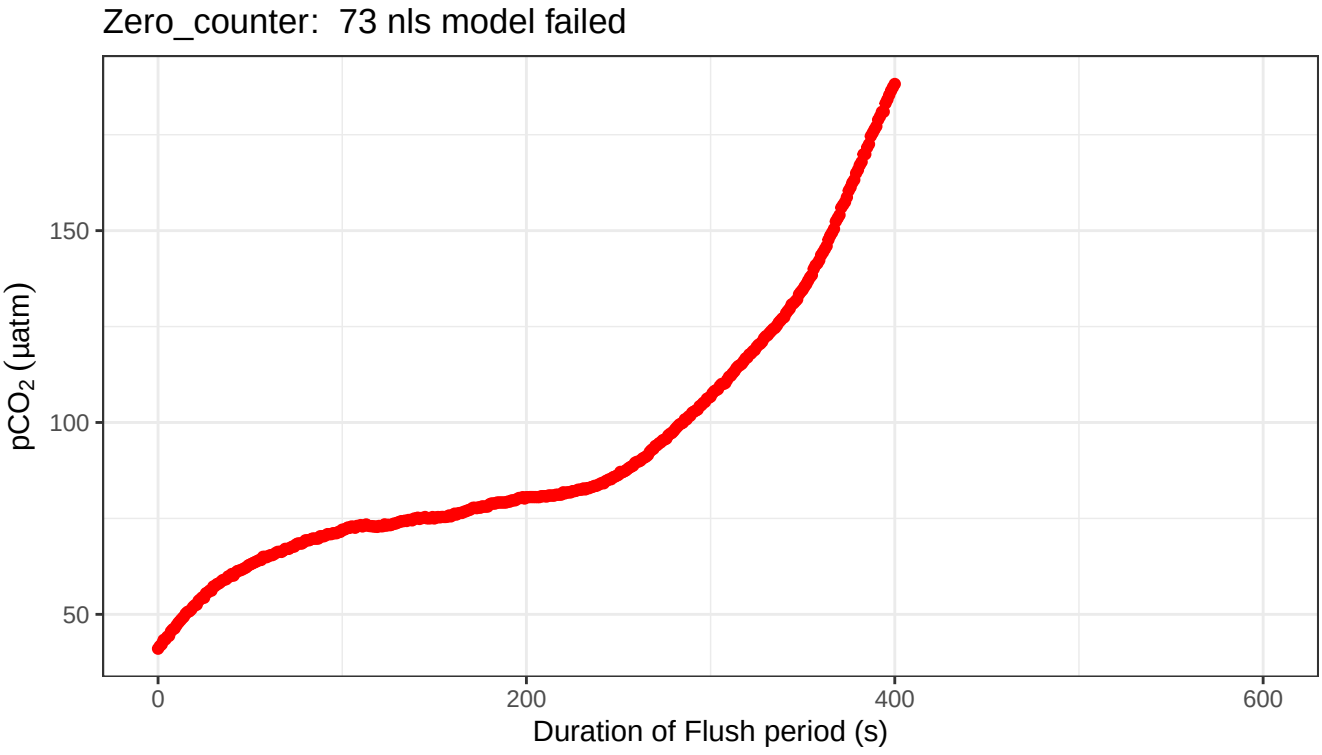


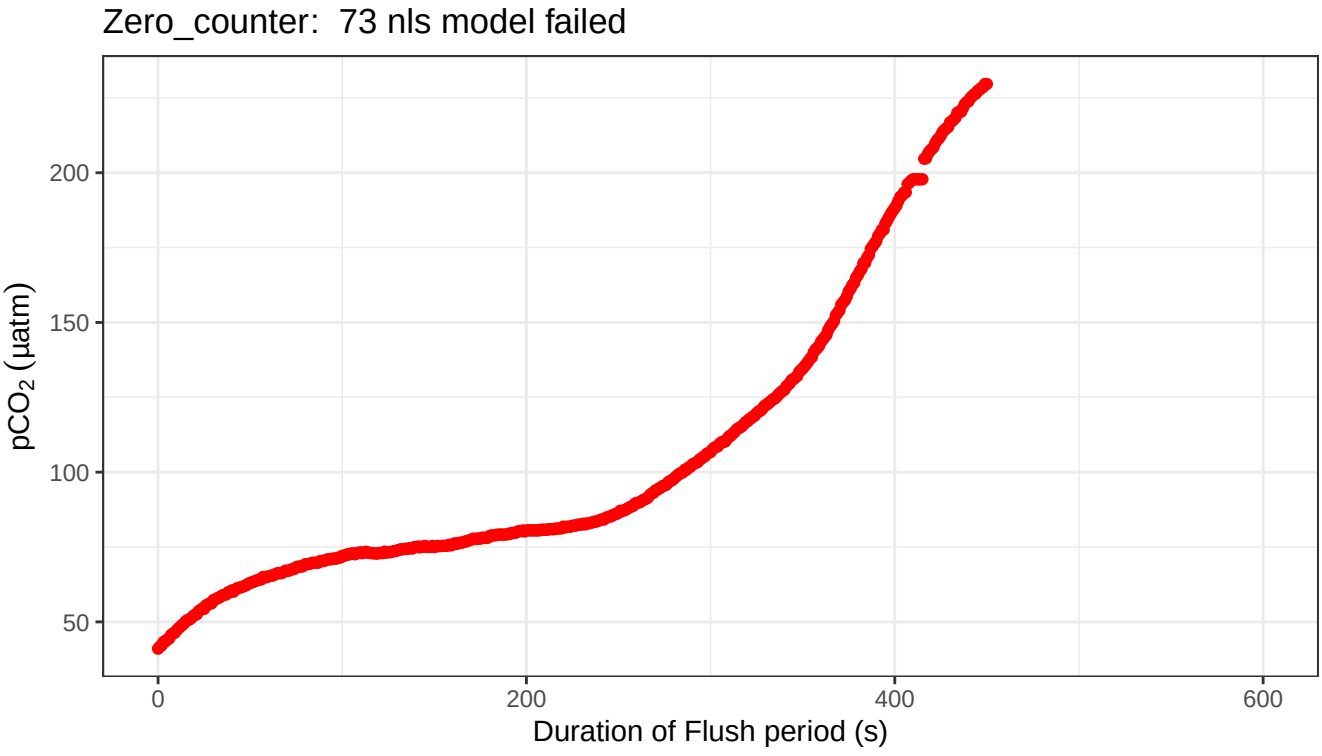
Zero_counter: 73 Tau: 87 Mean absolute residual (%): 1.26

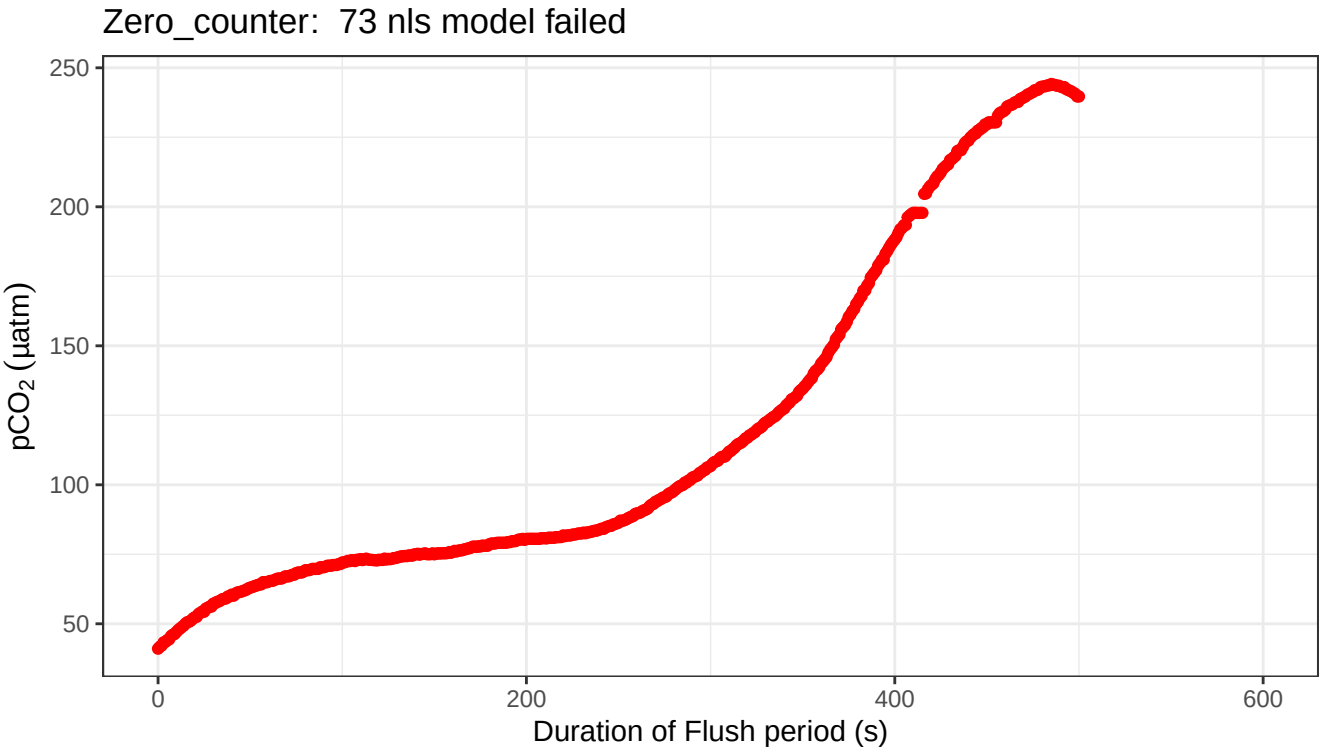


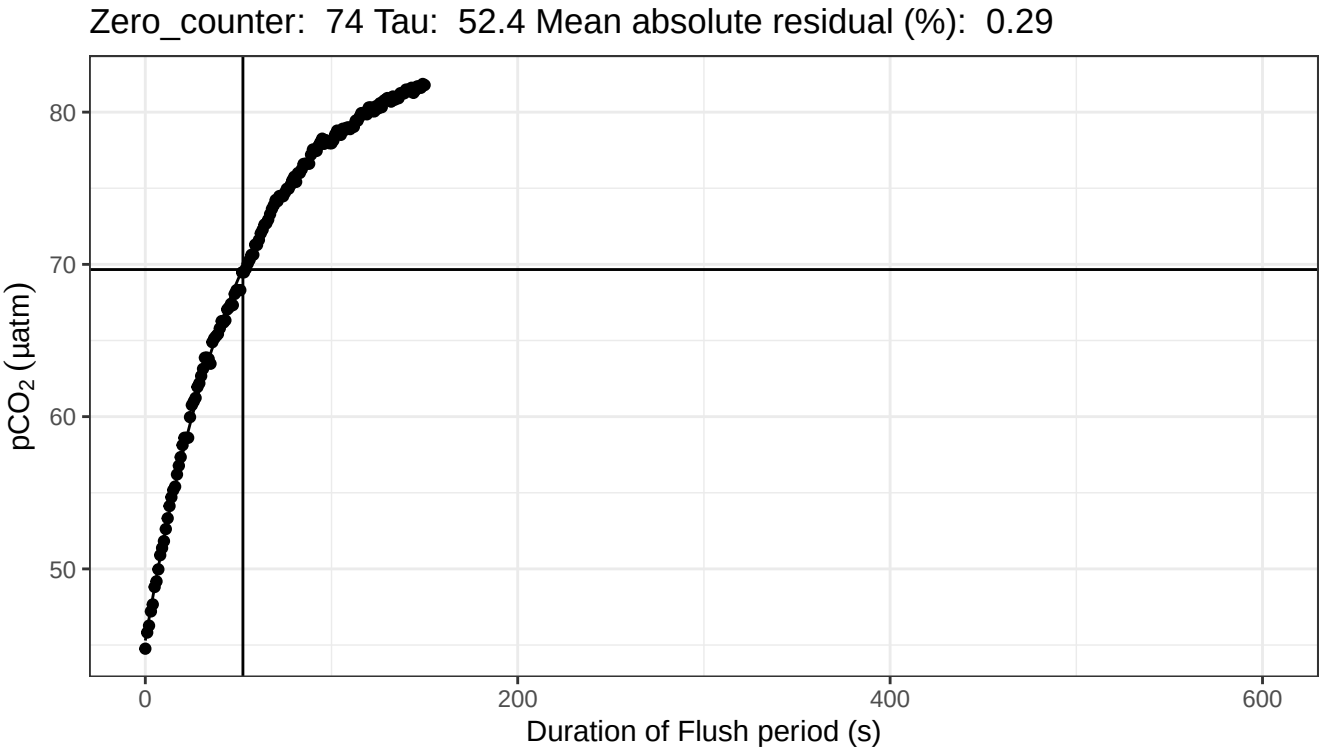

Zero_counter: 73 Tau: 856.3 Mean absolute residual (%): 1.55
150
120
90
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 73 nls model failed
pCO2 (µatm)
120
100
80
60
40
0
200
400
600
Duration of Flush period (s)

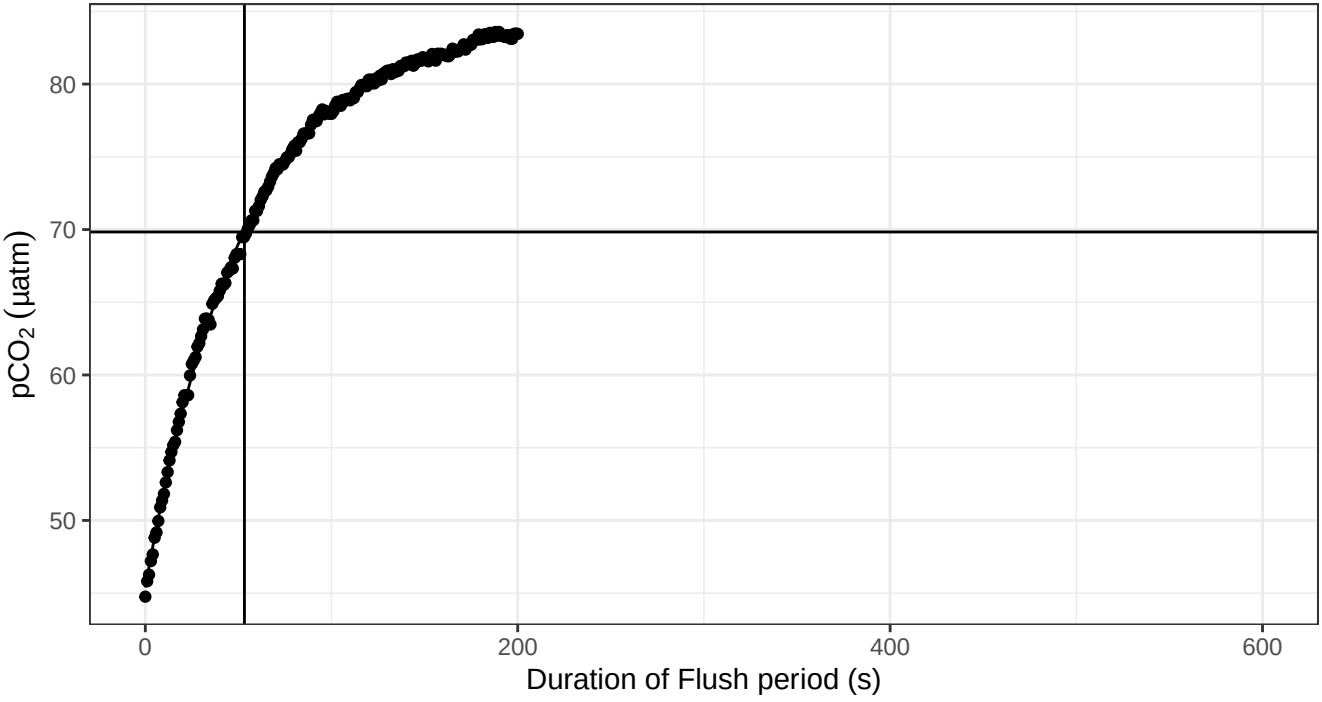

Zero_counter: 73 nls model failed
150
100
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 73 nls model failed
pCO2 (µatm)
200
150
100
50
0
200
400
600
Duration of Flush period (s)

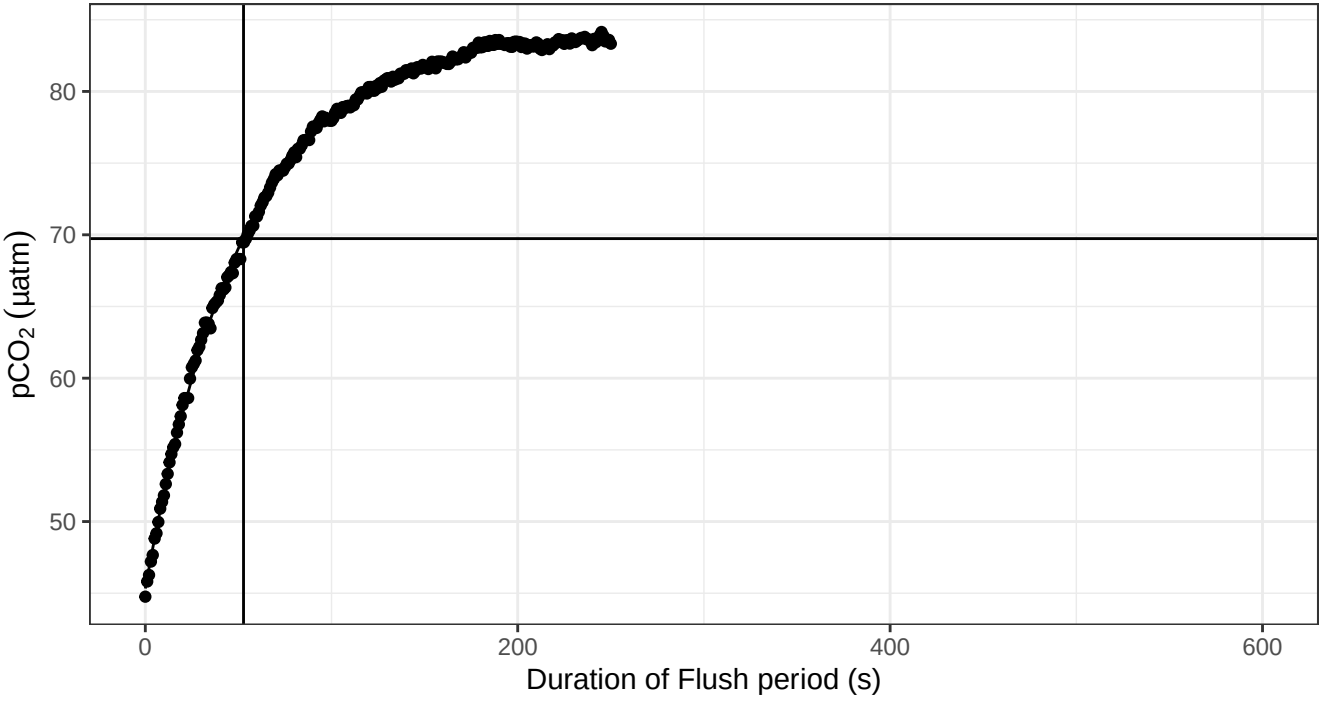

Zero_counter: 73 nls model failed
250
200
150
100
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 74 Tau: 52.4 Mean absolute residual (%): 0.29
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

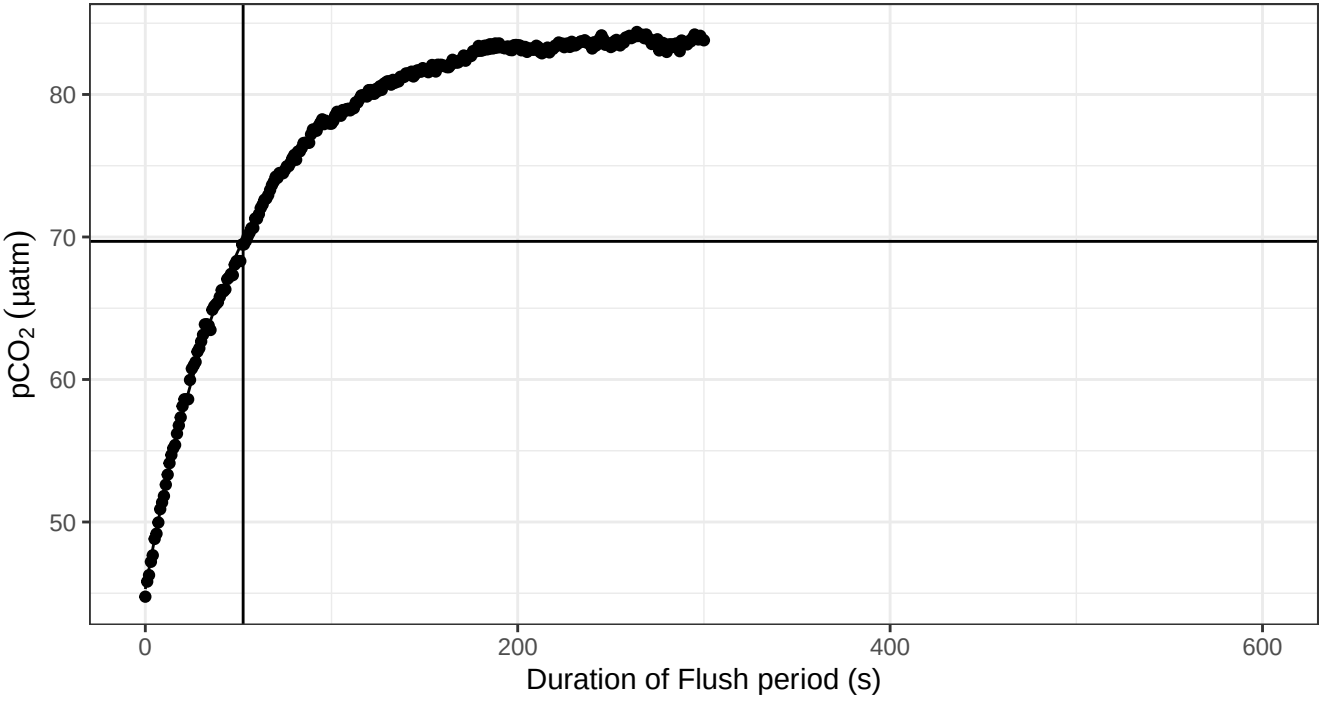
Zero_counter: 74 Tau: 53.2 Mean absolute residual (%): 0.29



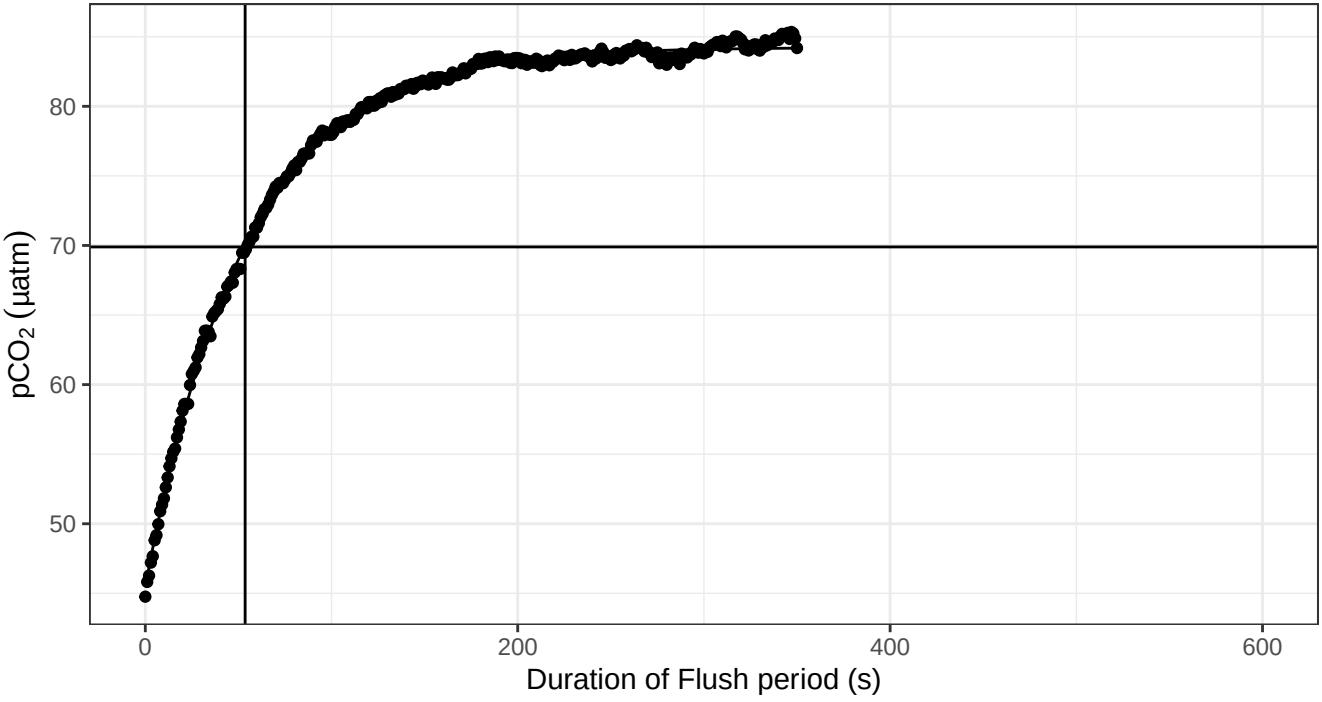
Zero_counter: 74 Tau: 52.7 Mean absolute residual (%): 0.28



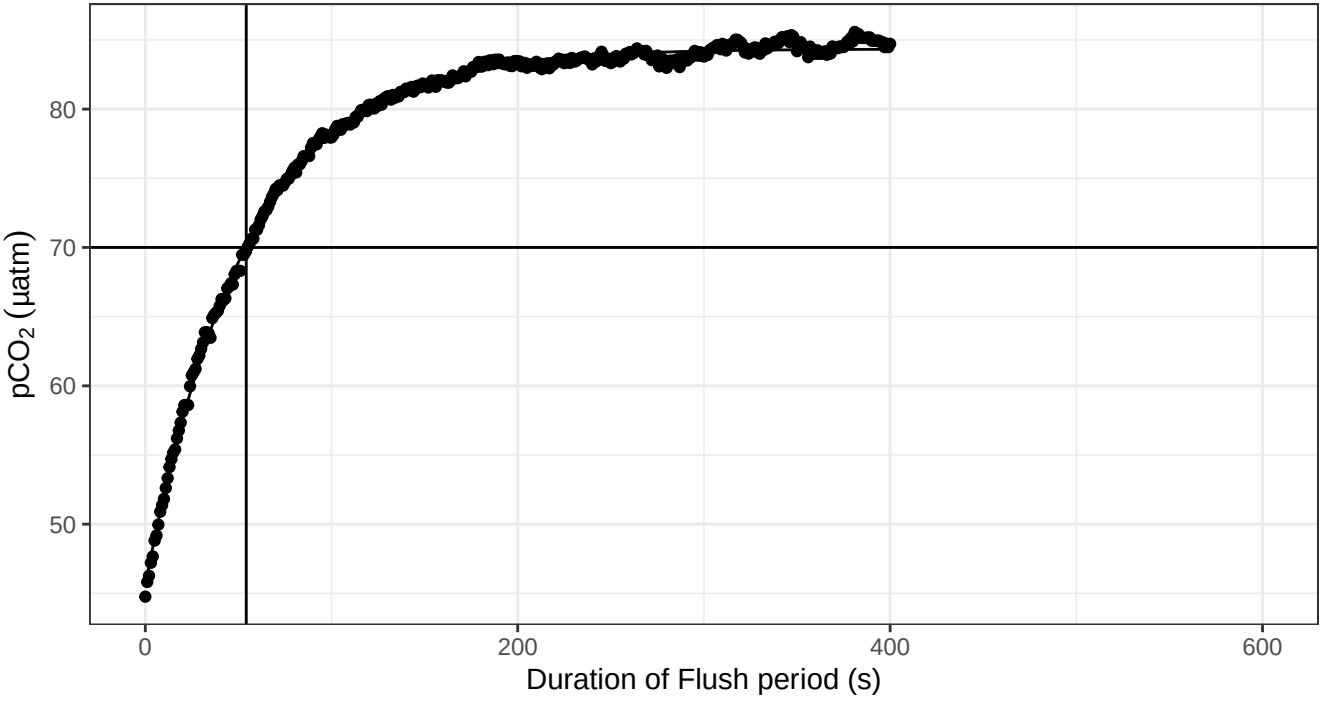
Zero_counter: 74 Tau: 52.5 Mean absolute residual (%): 0.29



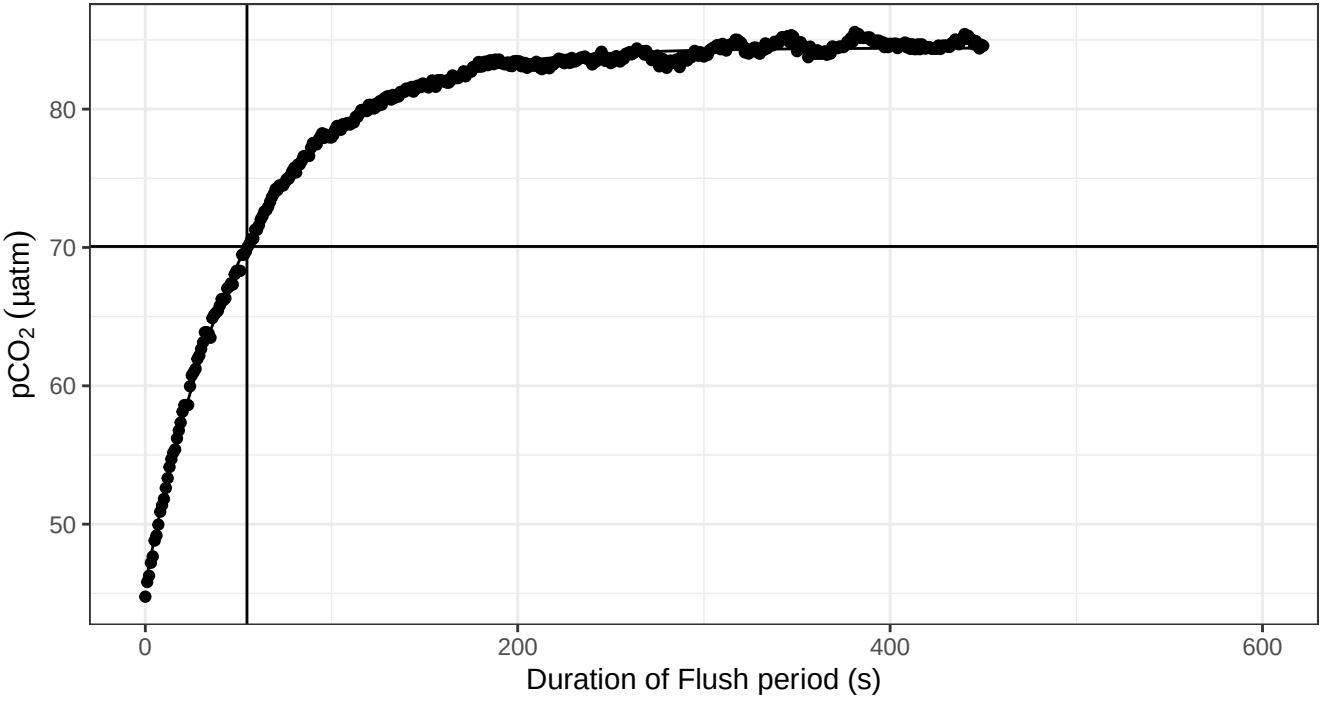
Zero_counter: 74 Tau: 53.6 Mean absolute residual (%): 0.35

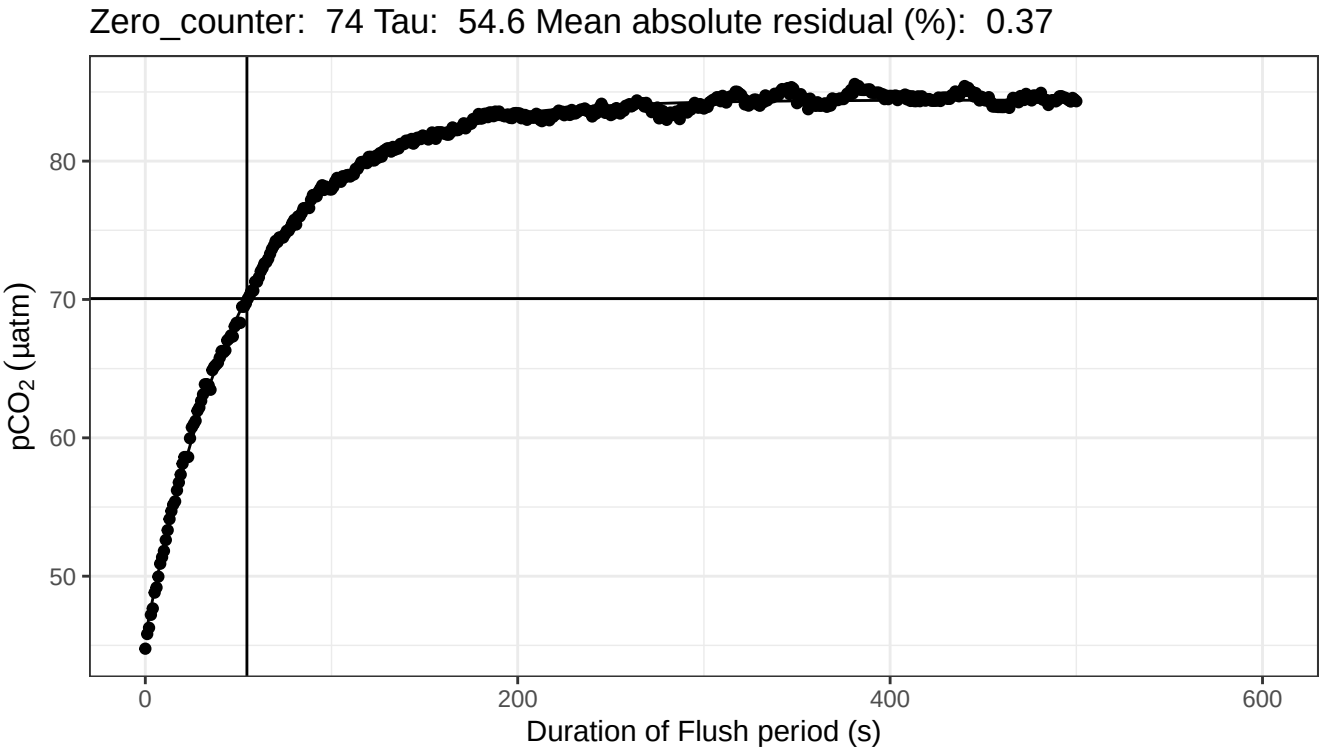


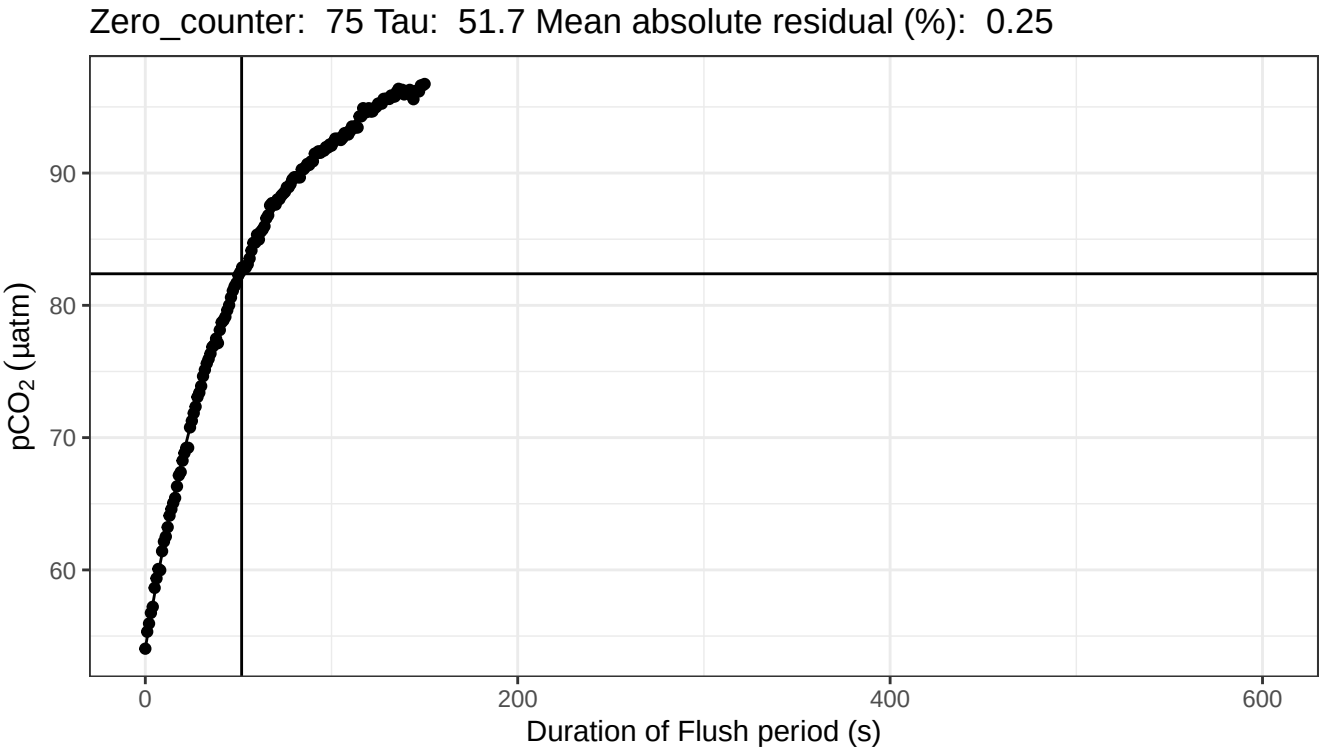
Zero_counter: 74 Tau: 54.2 Mean absolute residual (%): 0.38

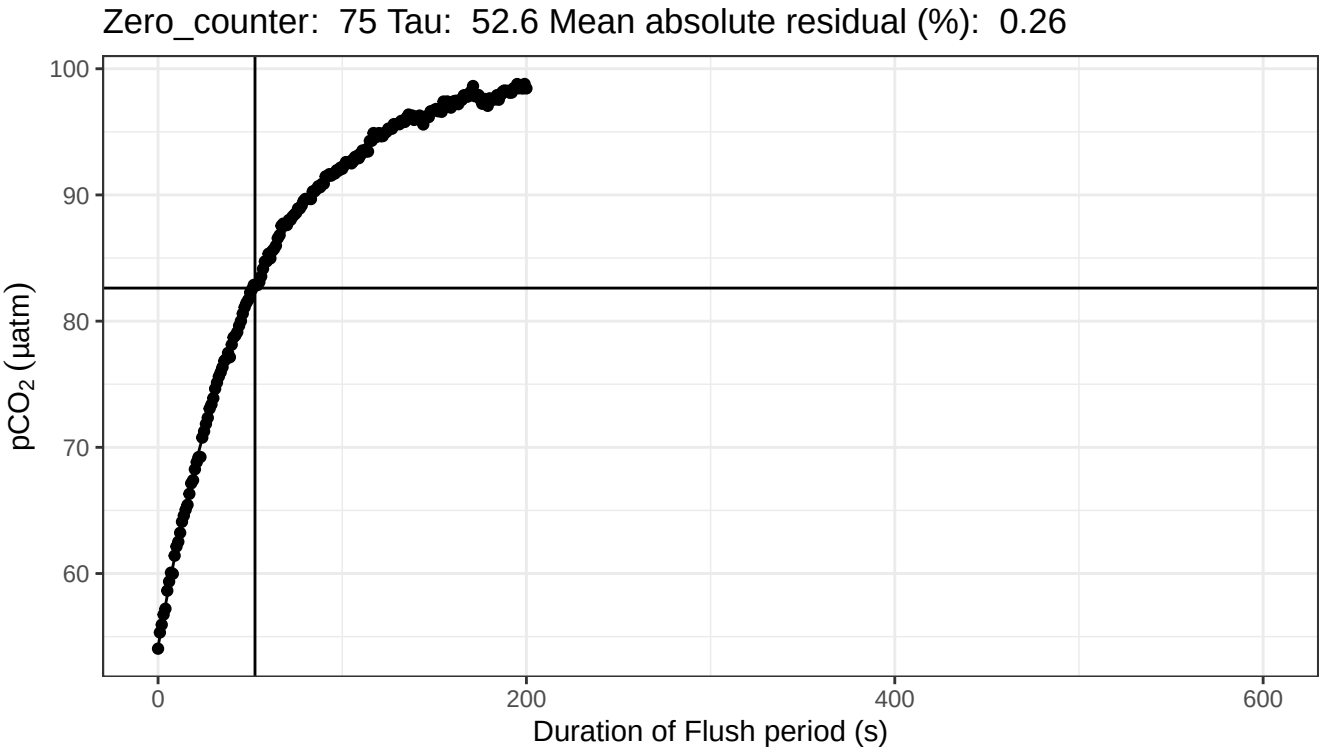


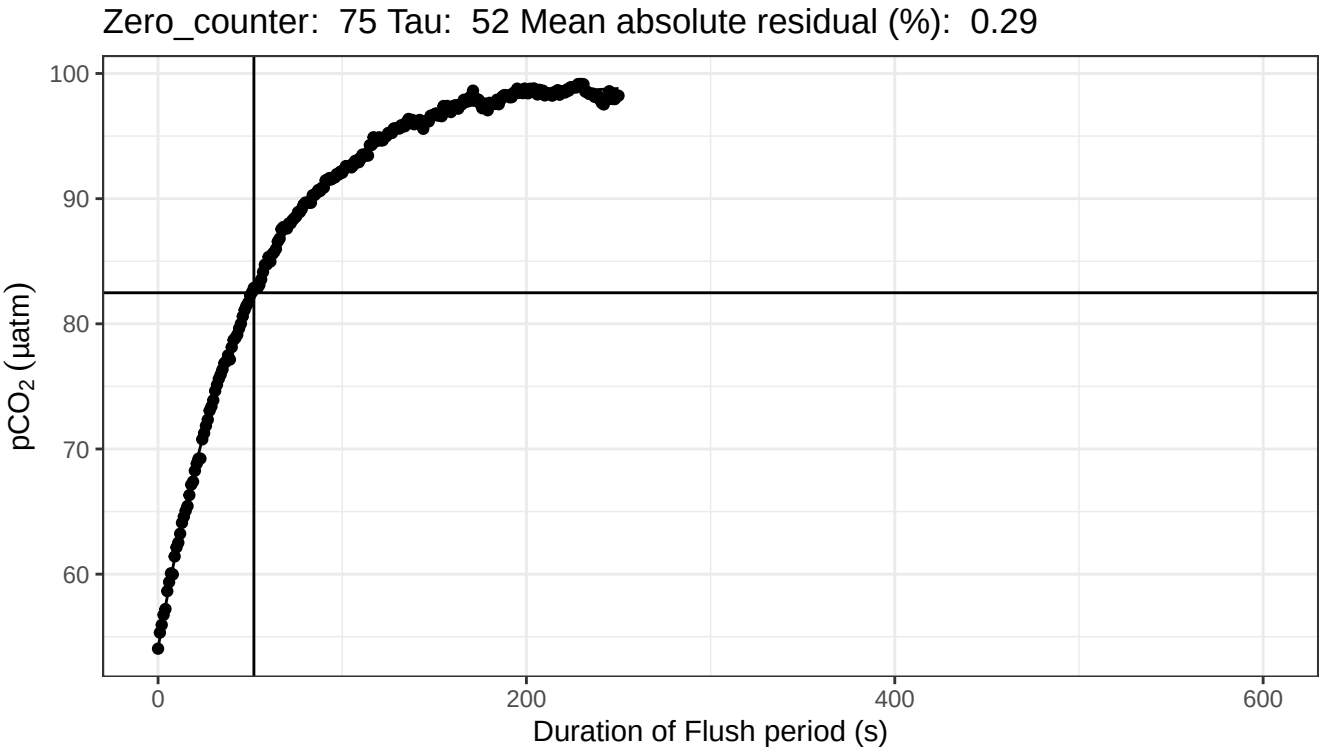
Zero_counter: 74 Tau: 54.6 Mean absolute residual (%): 0.38

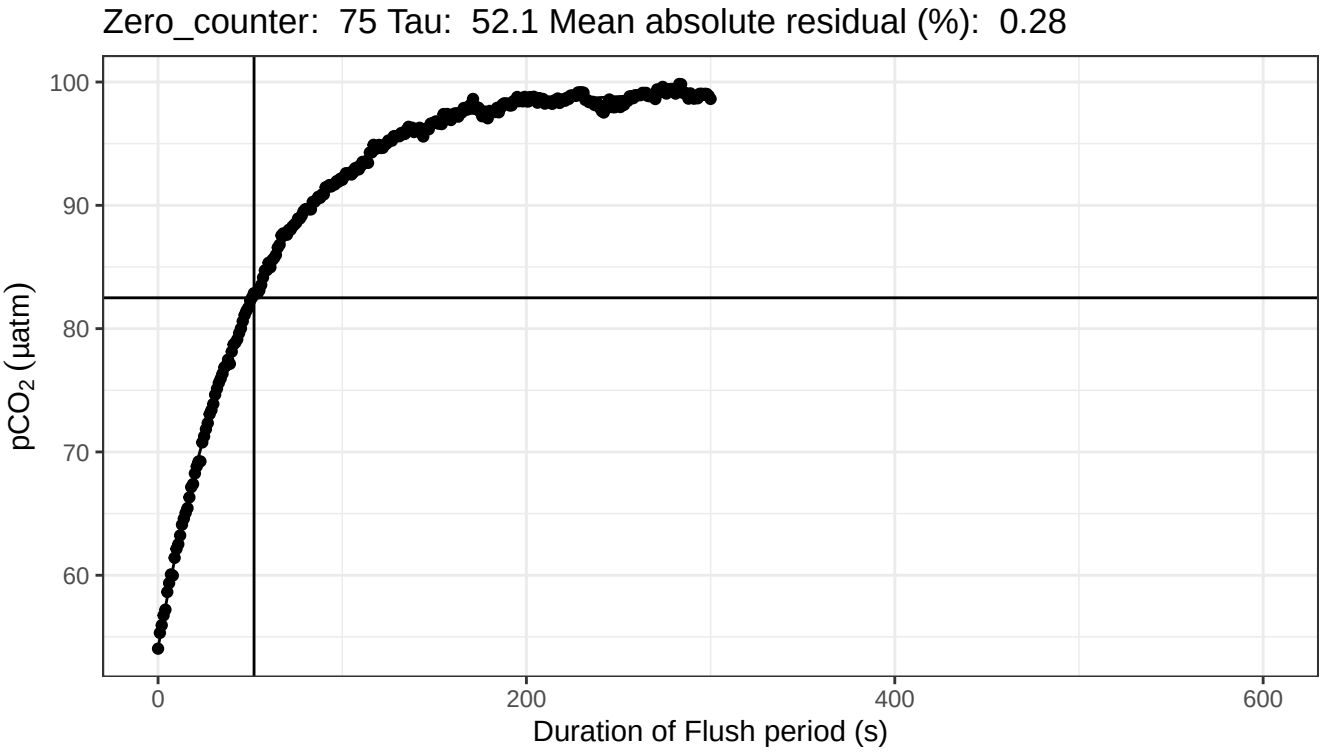


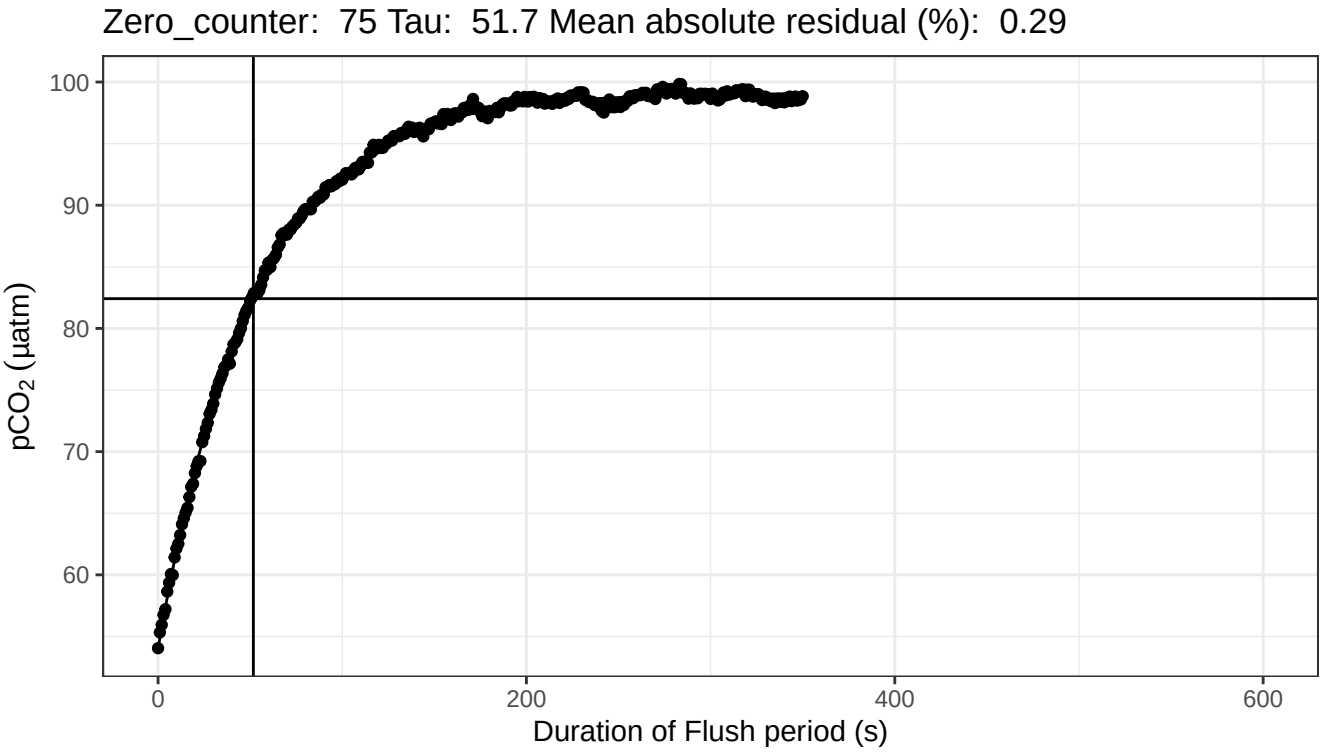

Zero_counter: 74 Tau: 54.6 Mean absolute residual (%): 0.37
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

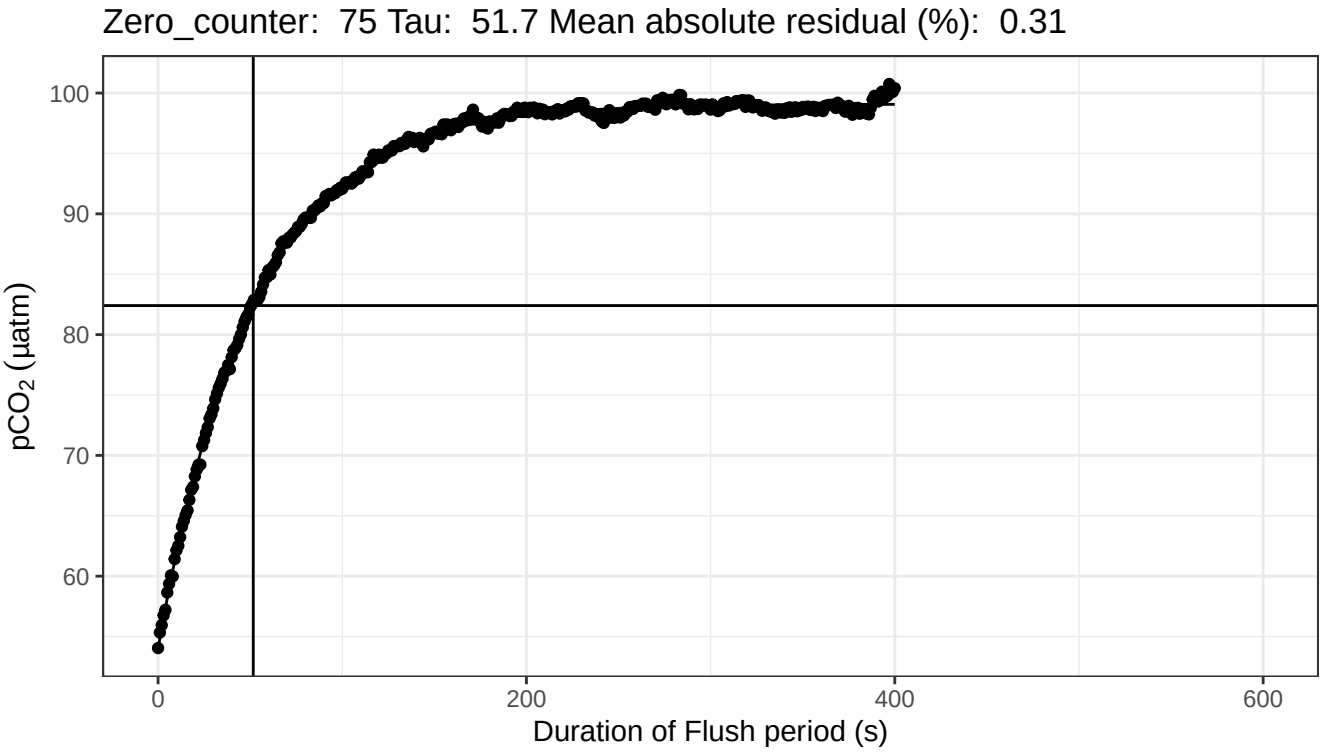

Zero_counter: 75 Tau: 51.7 Mean absolute residual (%): 0.25
pCO2 (µatm)
90
80
70
60
0
200
400
600
Duration of Flush period (s)

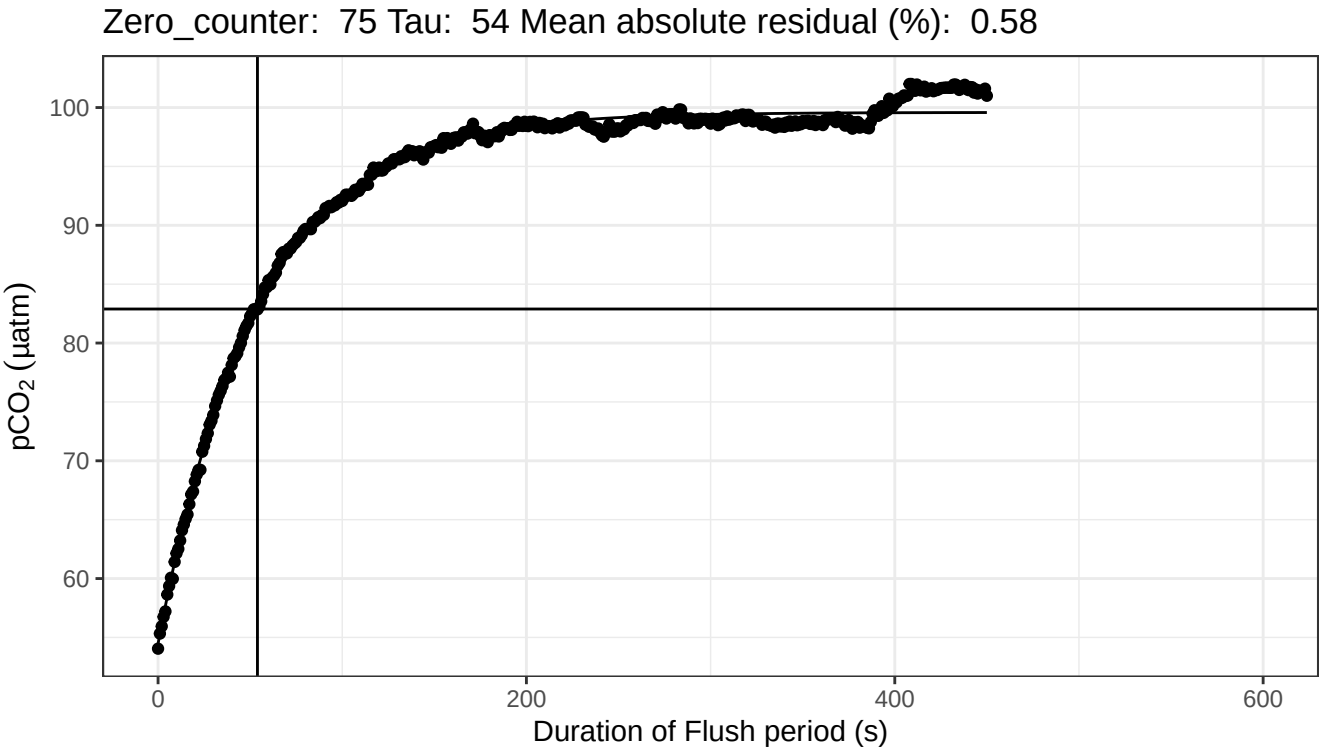

Zero_counter: 75 Tau: 52.6 Mean absolute residual (%): 0.26
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

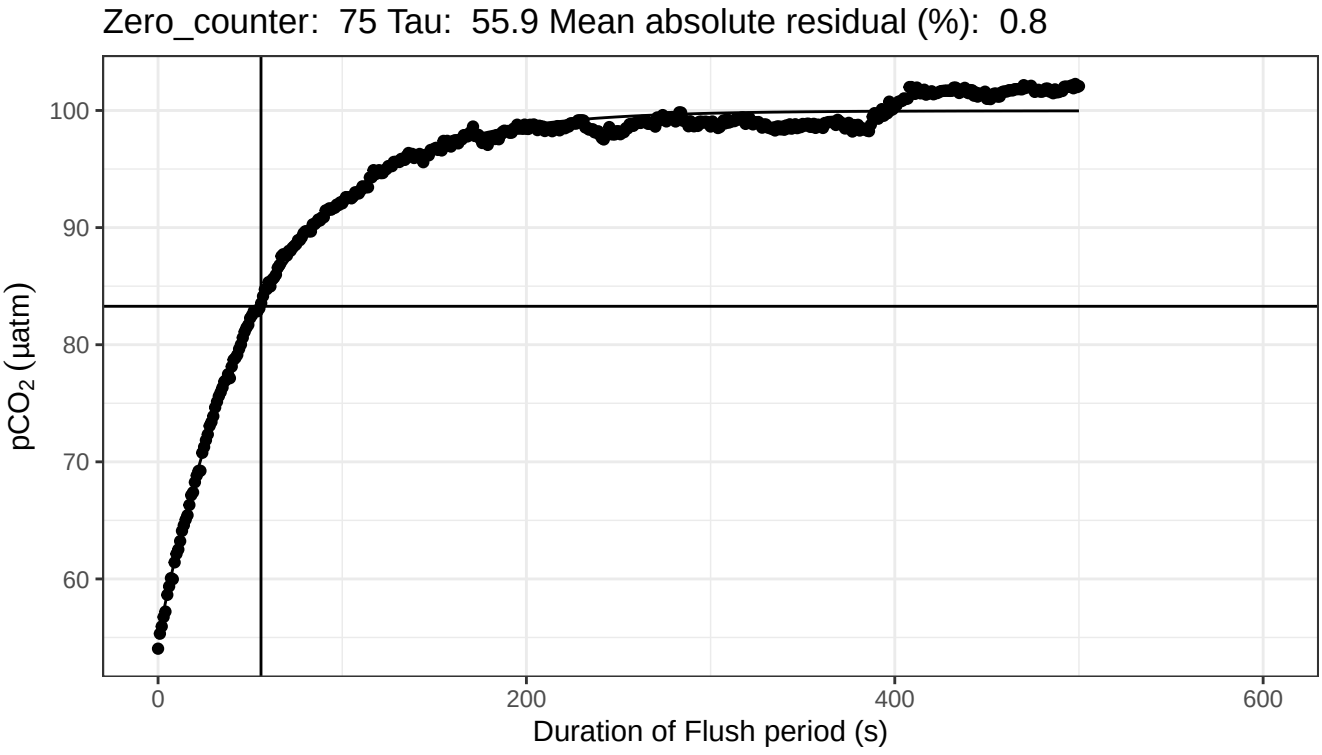

Zero_counter: 75 Tau: 52 Mean absolute residual (%): 0.29
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

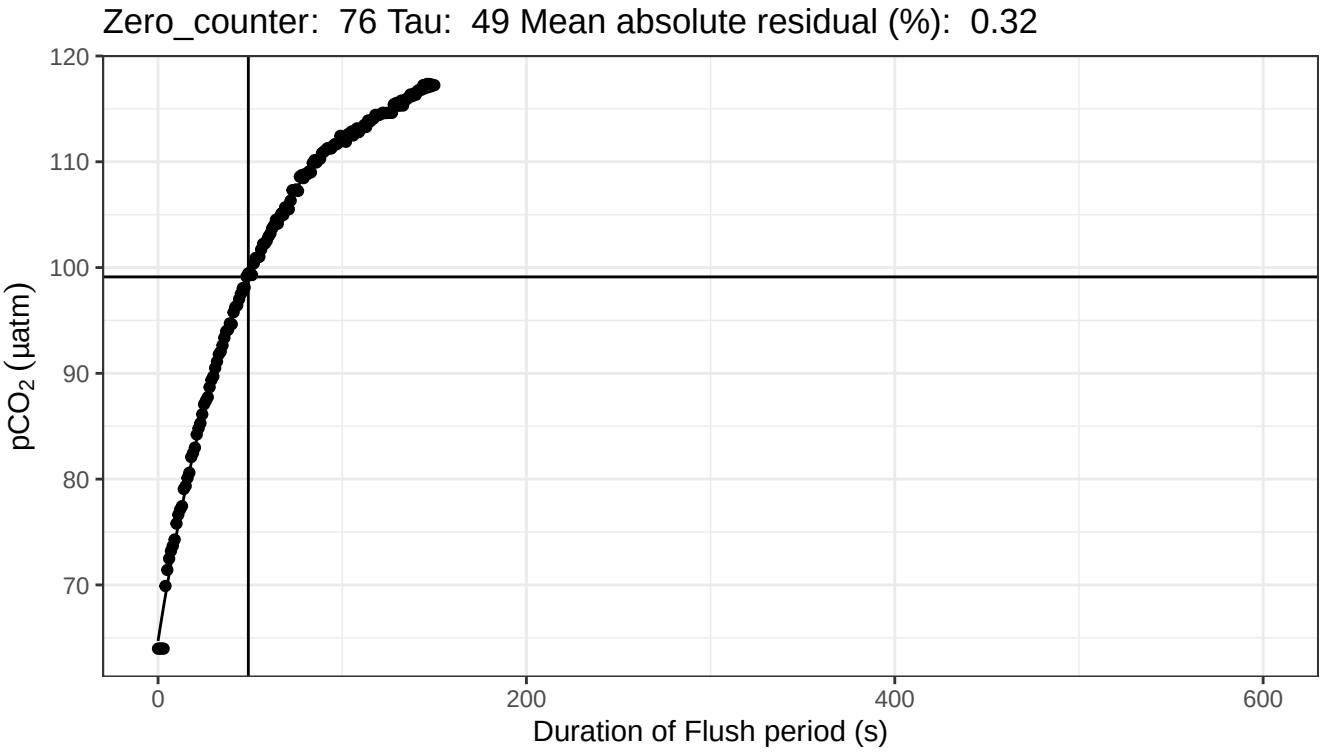

Zero_counter: 75 Tau: 52.1 Mean absolute residual (%): 0.28
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

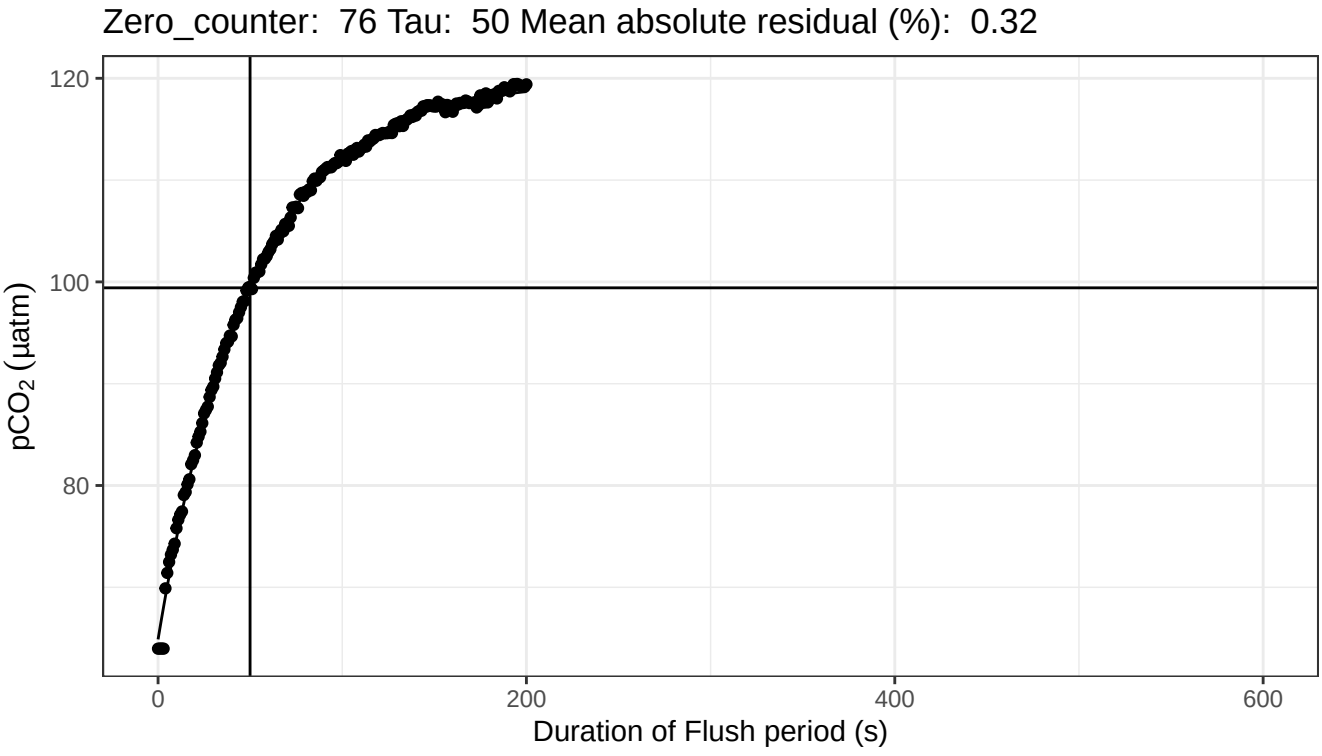

Zero_counter: 75 Tau: 51.7 Mean absolute residual (%): 0.29
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

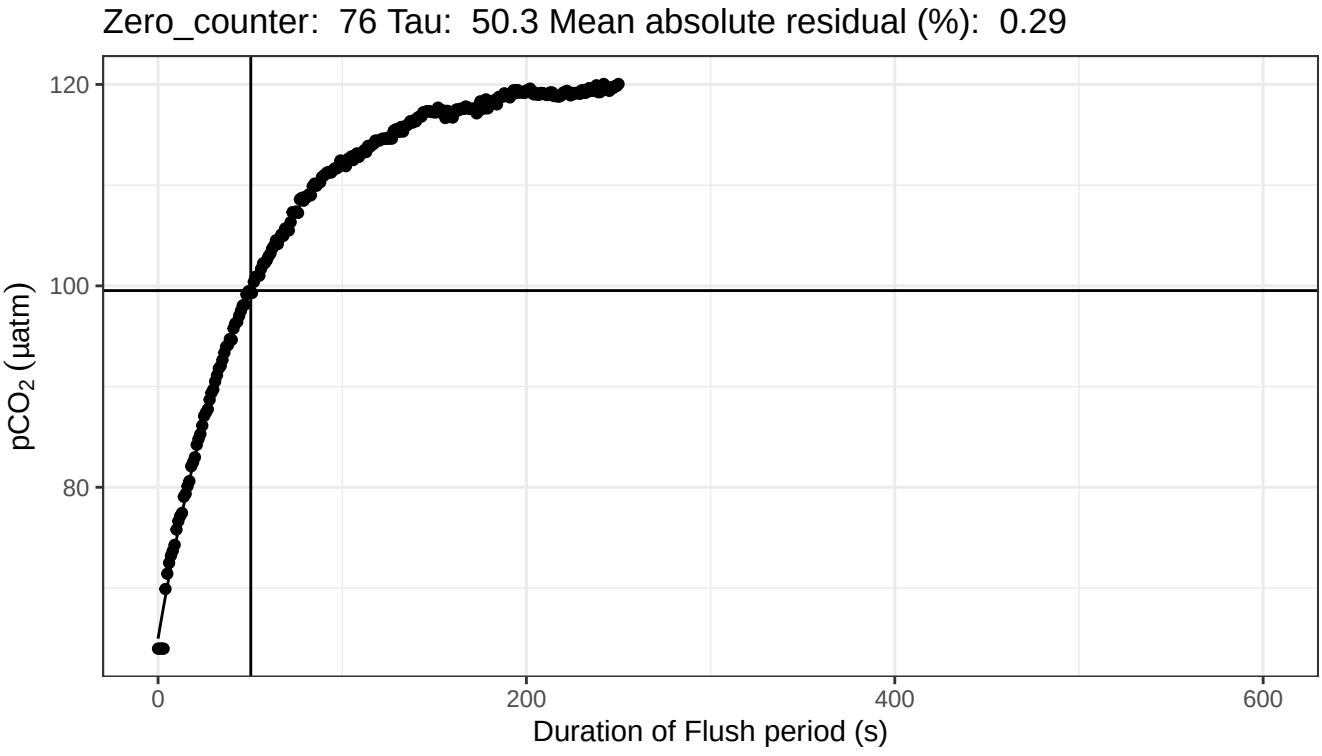

Zero_counter: 75 Tau: 51.7 Mean absolute residual (%): 0.31
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

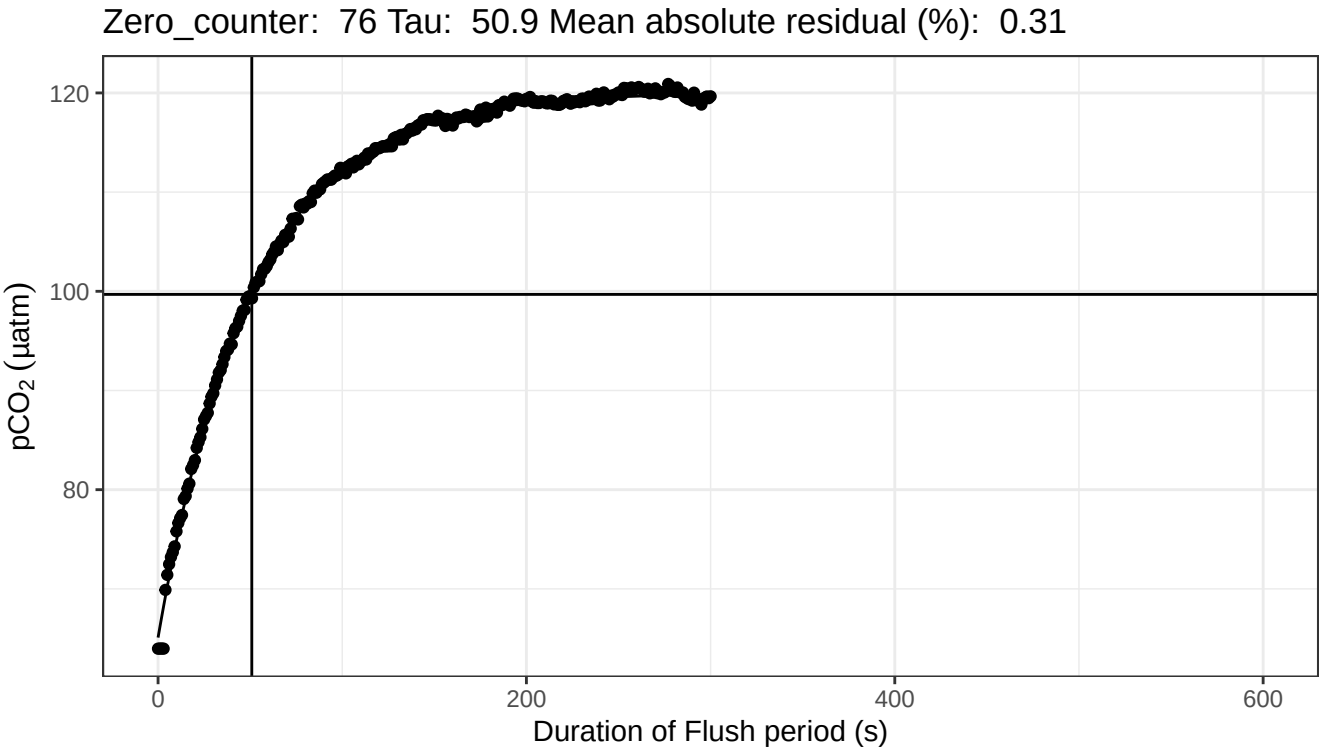

Zero_counter: 75 Tau: 54 Mean absolute residual (%): 0.58
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

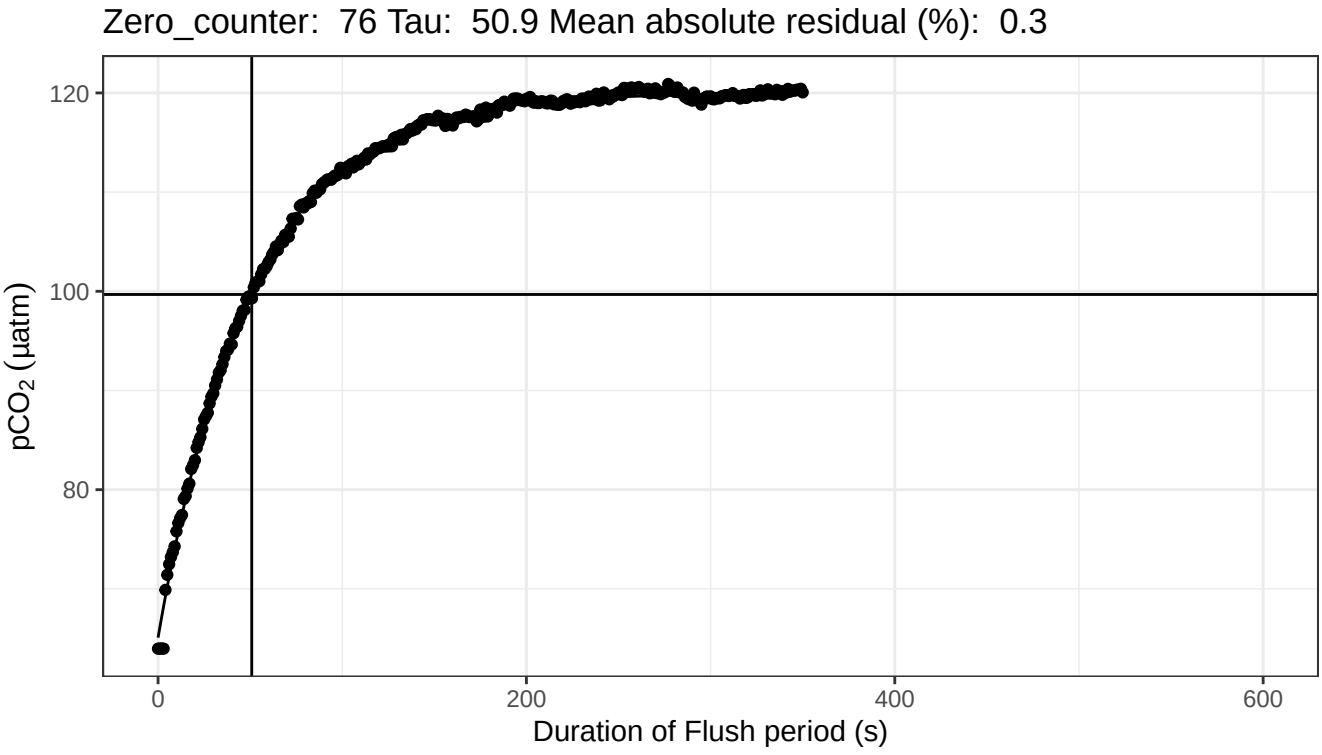

Zero_counter: 75 Tau: 55.9 Mean absolute residual (%): 0.8
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

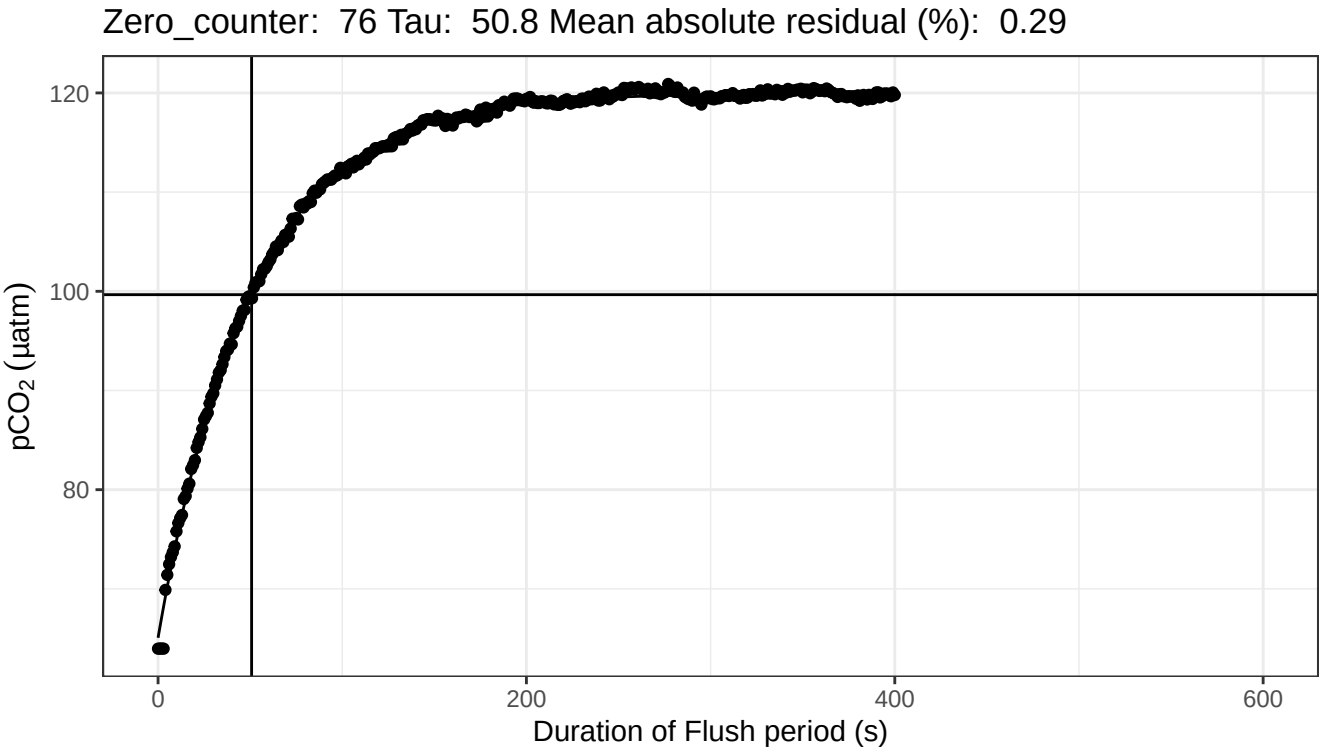

Zero_counter: 76 Tau: 49 Mean absolute residual (%): 0.32
120
110
100
90
80
70
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

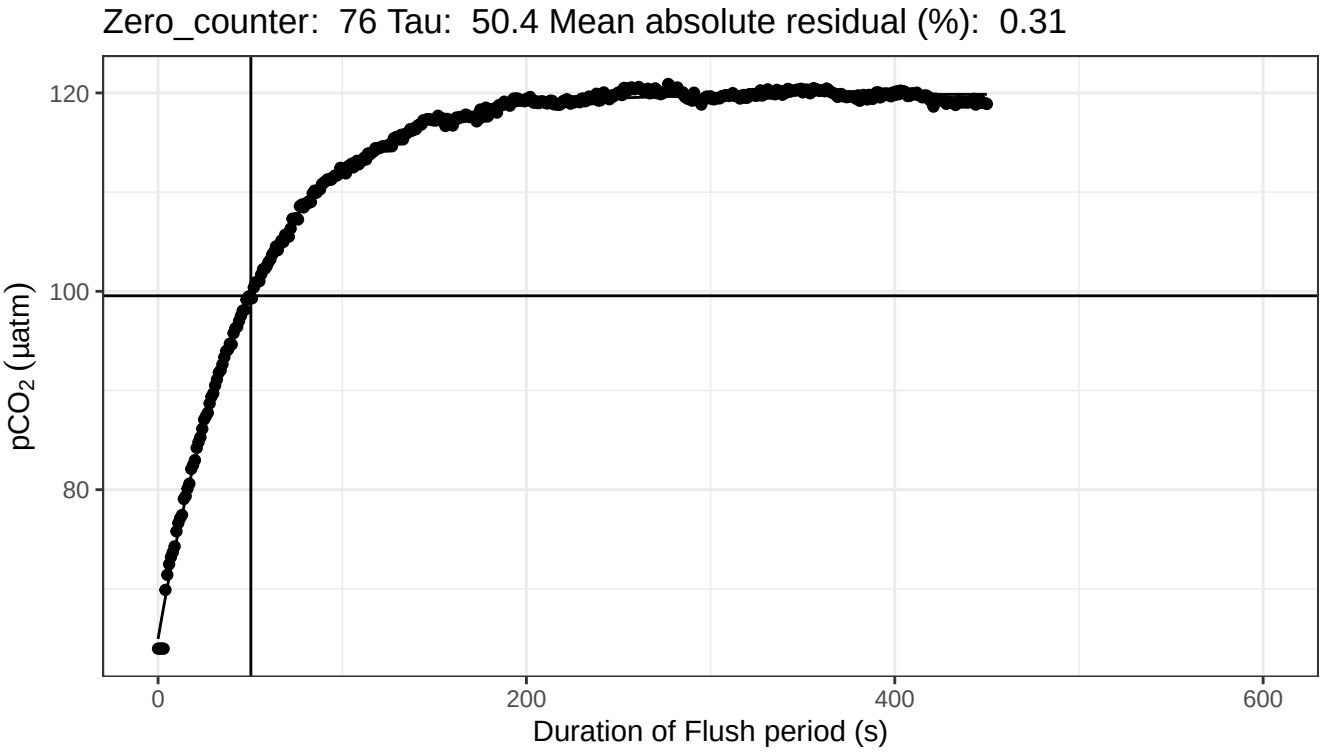

Zero_counter: 76 Tau: 50 Mean absolute residual (%): 0.32
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

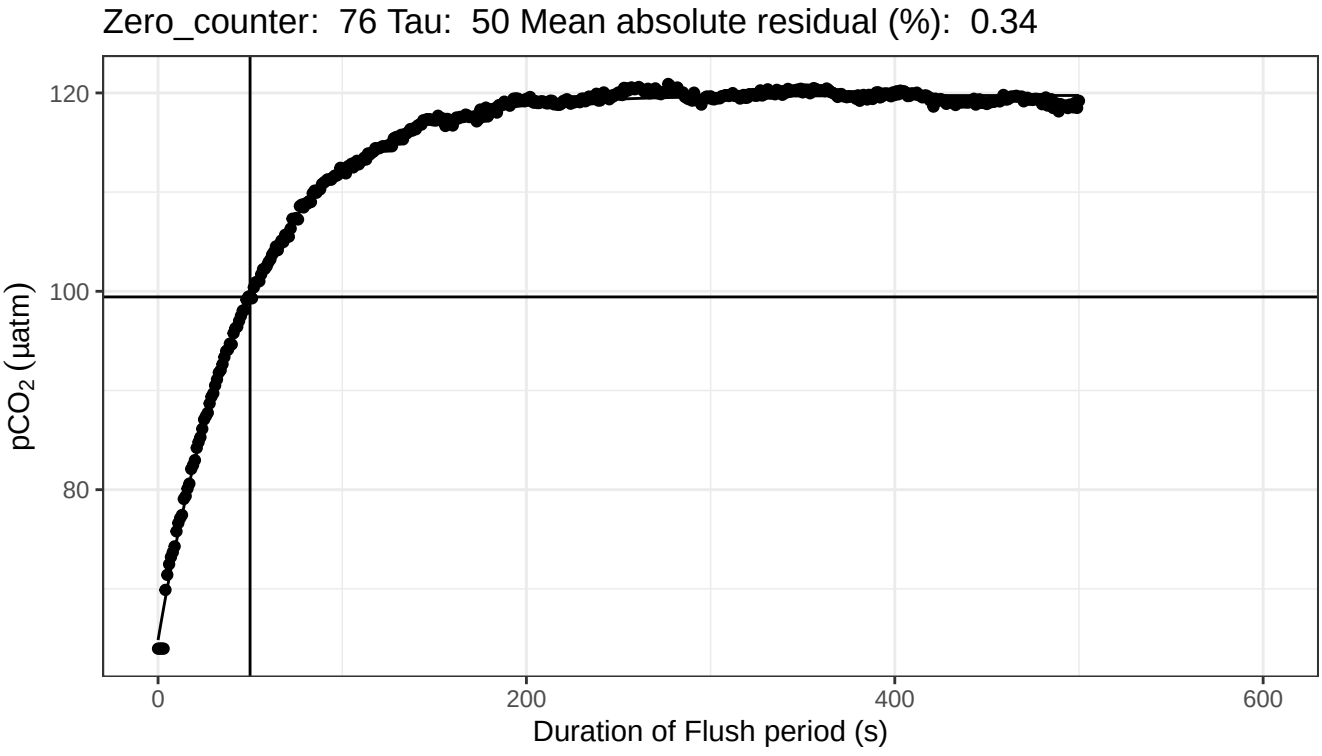

Zero_counter: 76 Tau: 50.3 Mean absolute residual (%): 0.29
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 76 Tau: 50.9 Mean absolute residual (%): 0.31
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

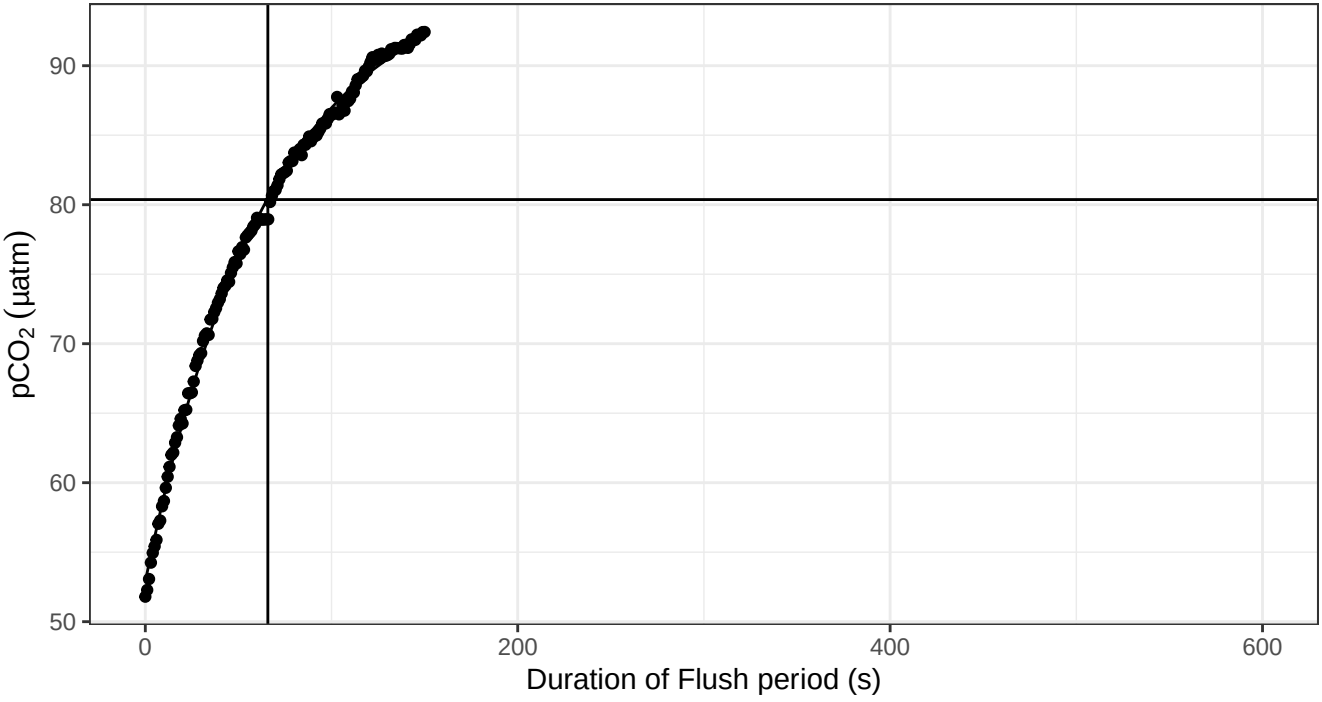

Zero_counter: 76 Tau: 50.9 Mean absolute residual (%): 0.3
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 76 Tau: 50.8 Mean absolute residual (%): 0.29
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

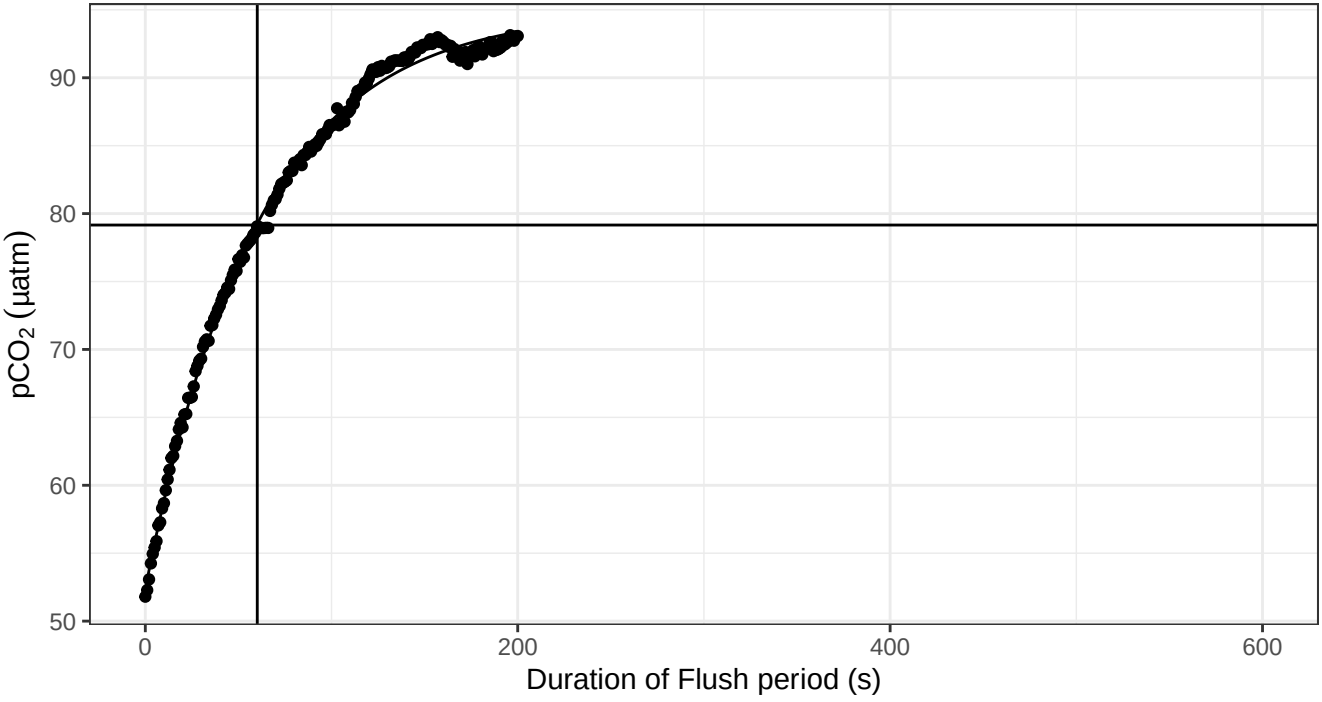

Zero_counter: 76 Tau: 50.4 Mean absolute residual (%): 0.31
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

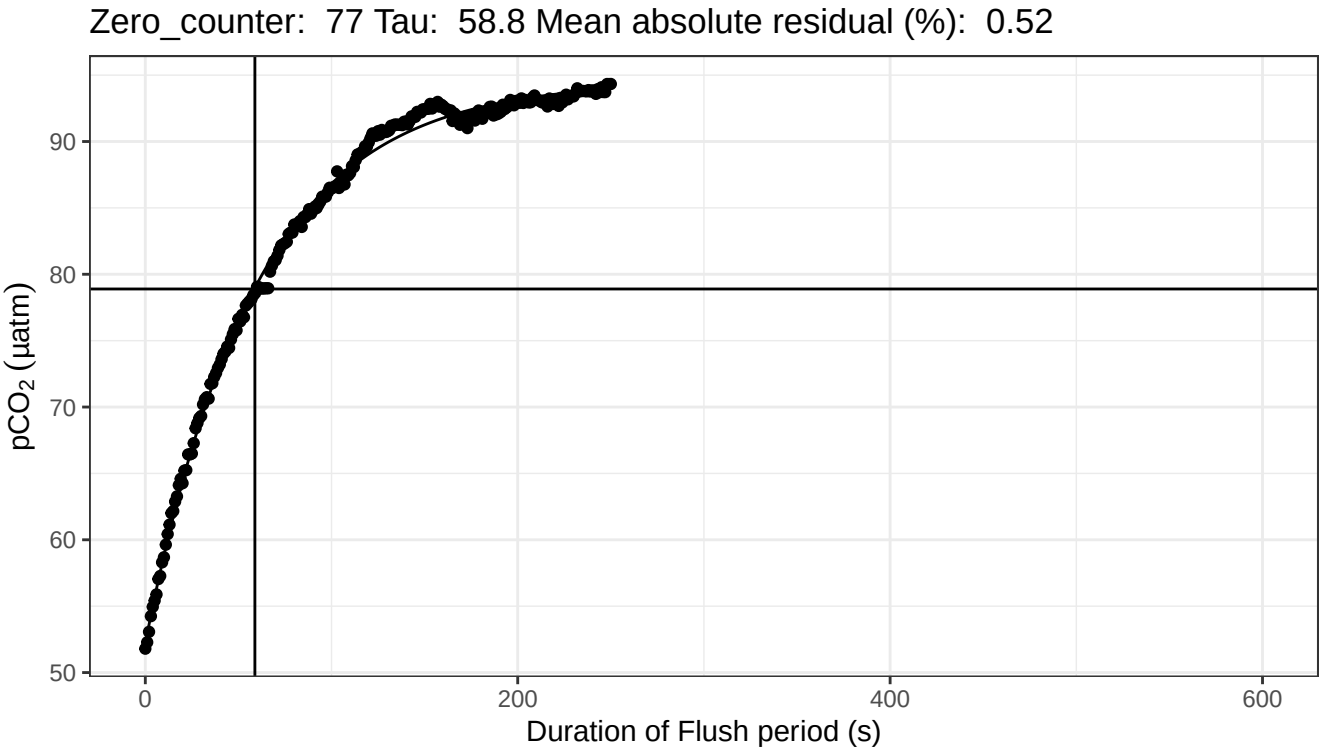

Zero_counter: 76 Tau: 50 Mean absolute residual (%): 0.34
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

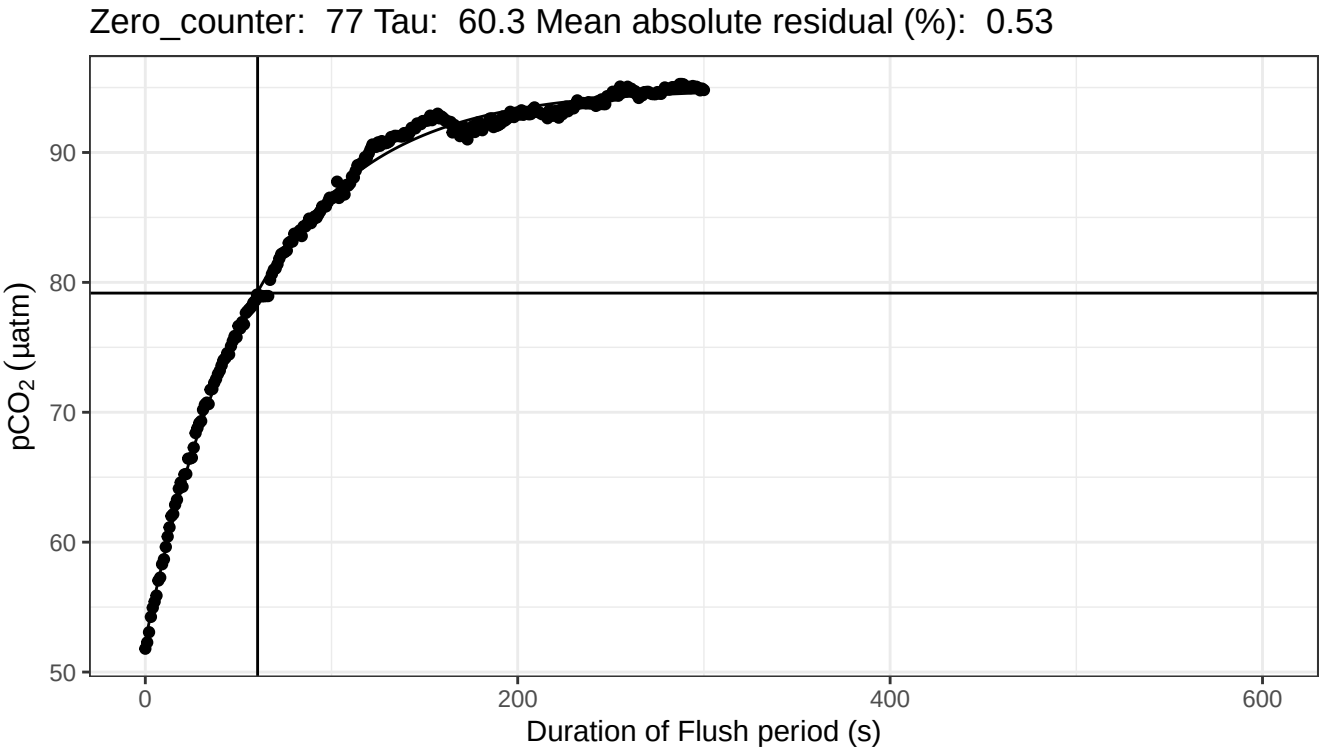
Zero_counter: 77 Tau: 65.8 Mean absolute residual (%): 0.46

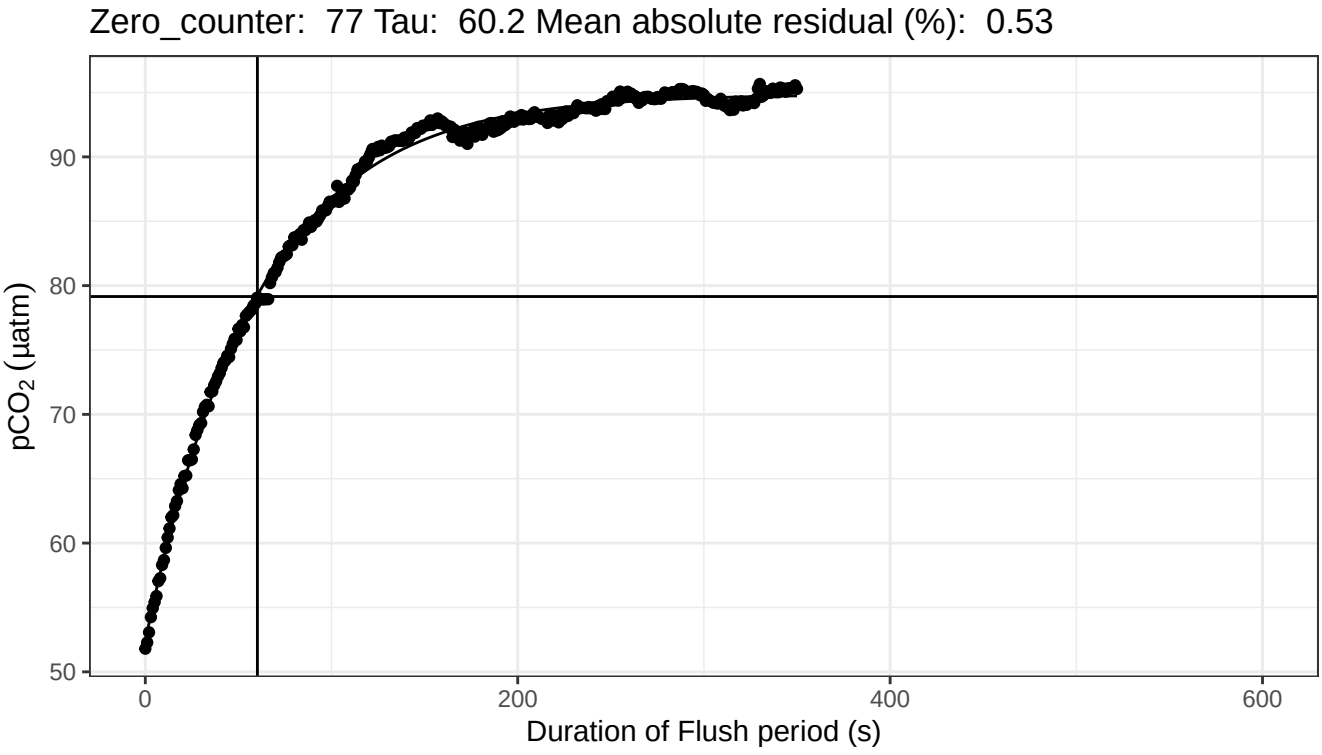


Zero_counter: 77 Tau: 60.1 Mean absolute residual (%): 0.59

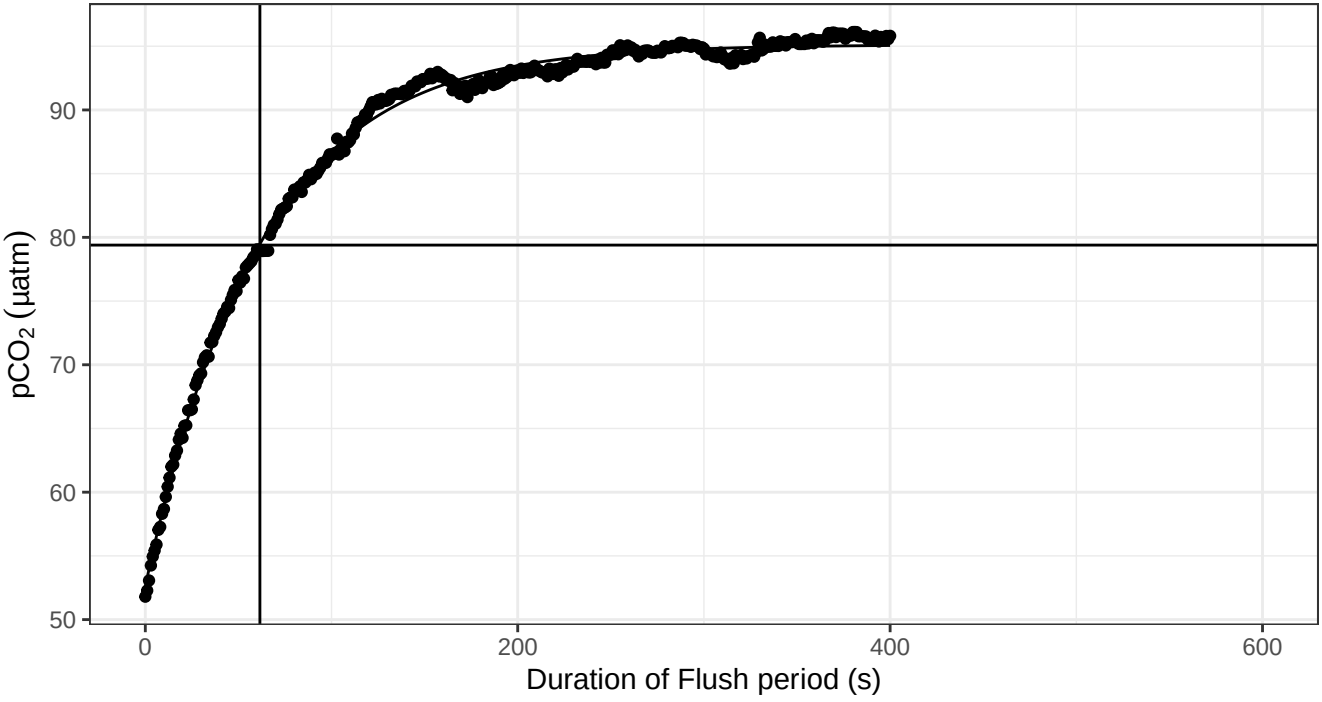


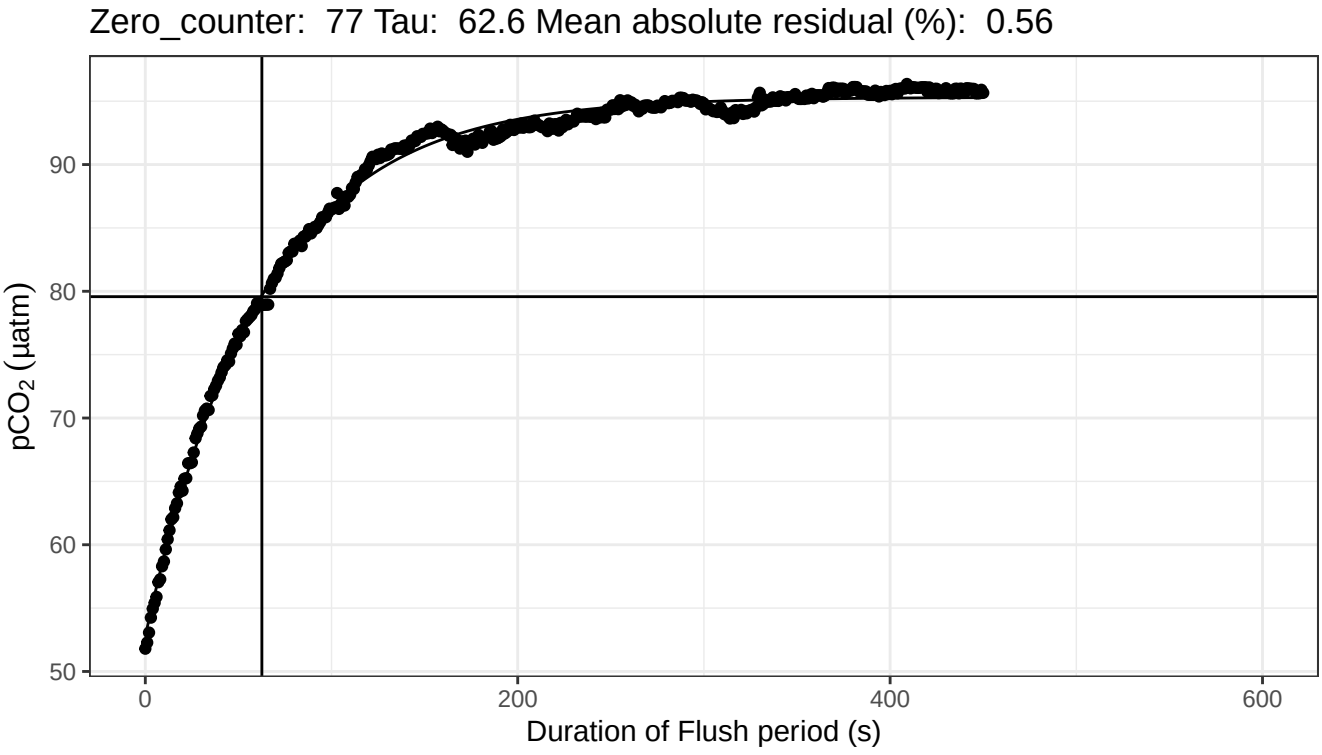

Zero_counter: 77 Tau: 58.8 Mean absolute residual (%): 0.52
pCO2 (µatm)
90
80
70
60
50
0
200
400
600
Duration of Flush period (s)

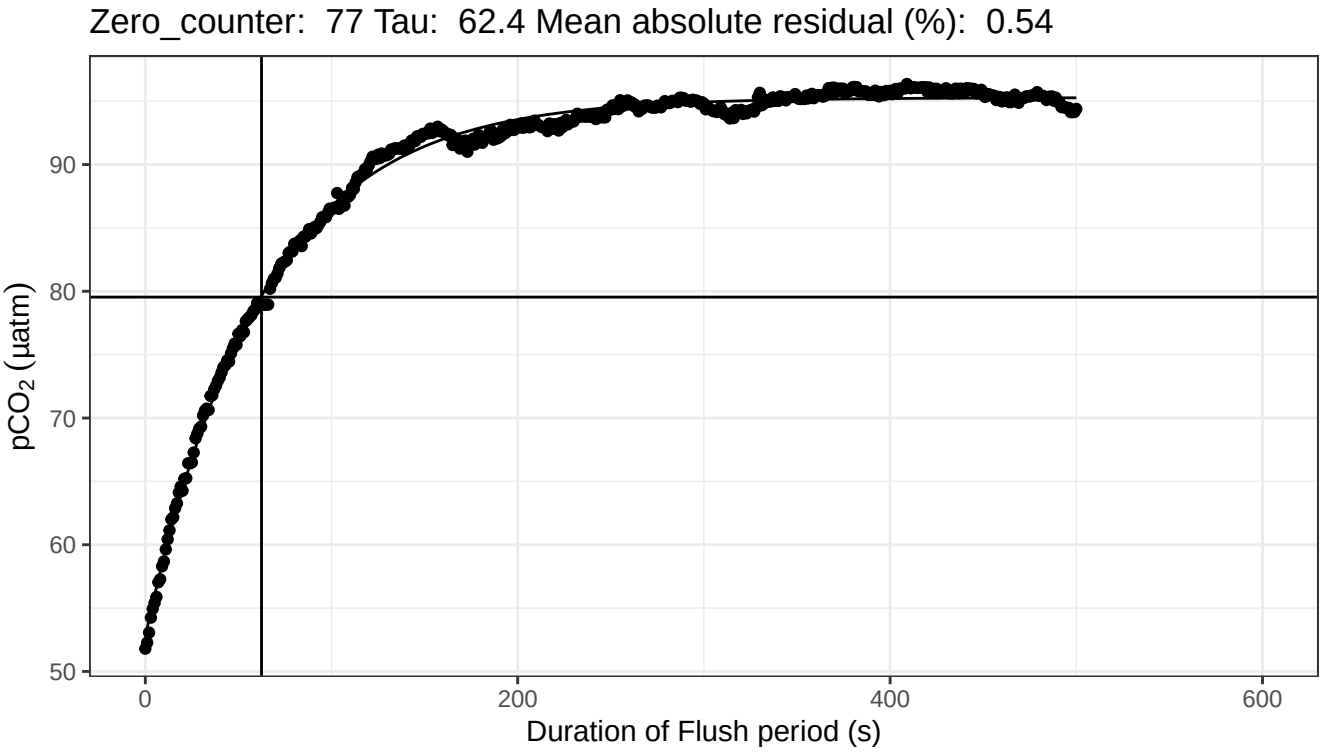

Zero_counter: 77 Tau: 60.3 Mean absolute residual (%): 0.53
pCO2 (µatm)
90
80
70
60
50
0
200
400
600
Duration of Flush period (s)

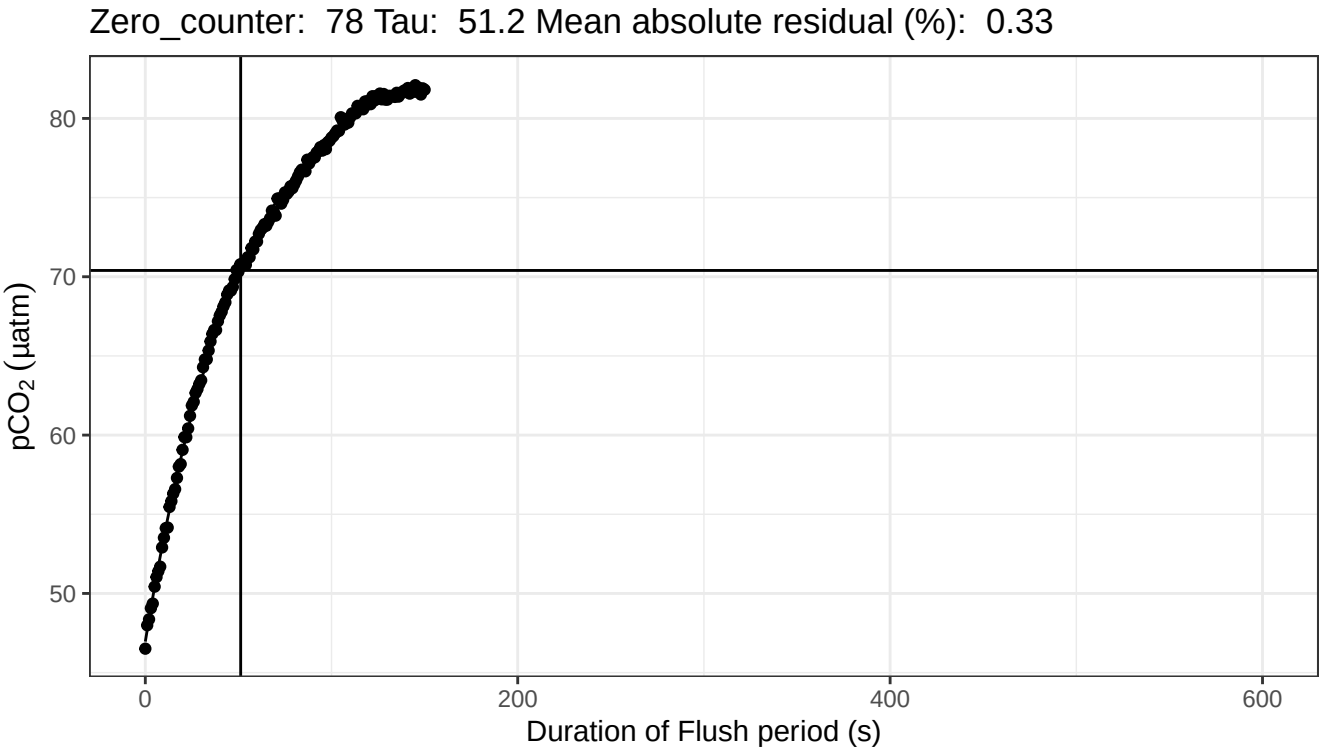

Zero_counter: 77 Tau: 60.2 Mean absolute residual (%): 0.53
pCO2 (µatm)
90
80
70
60
50
0
200
400
600
Duration of Flush period (s)

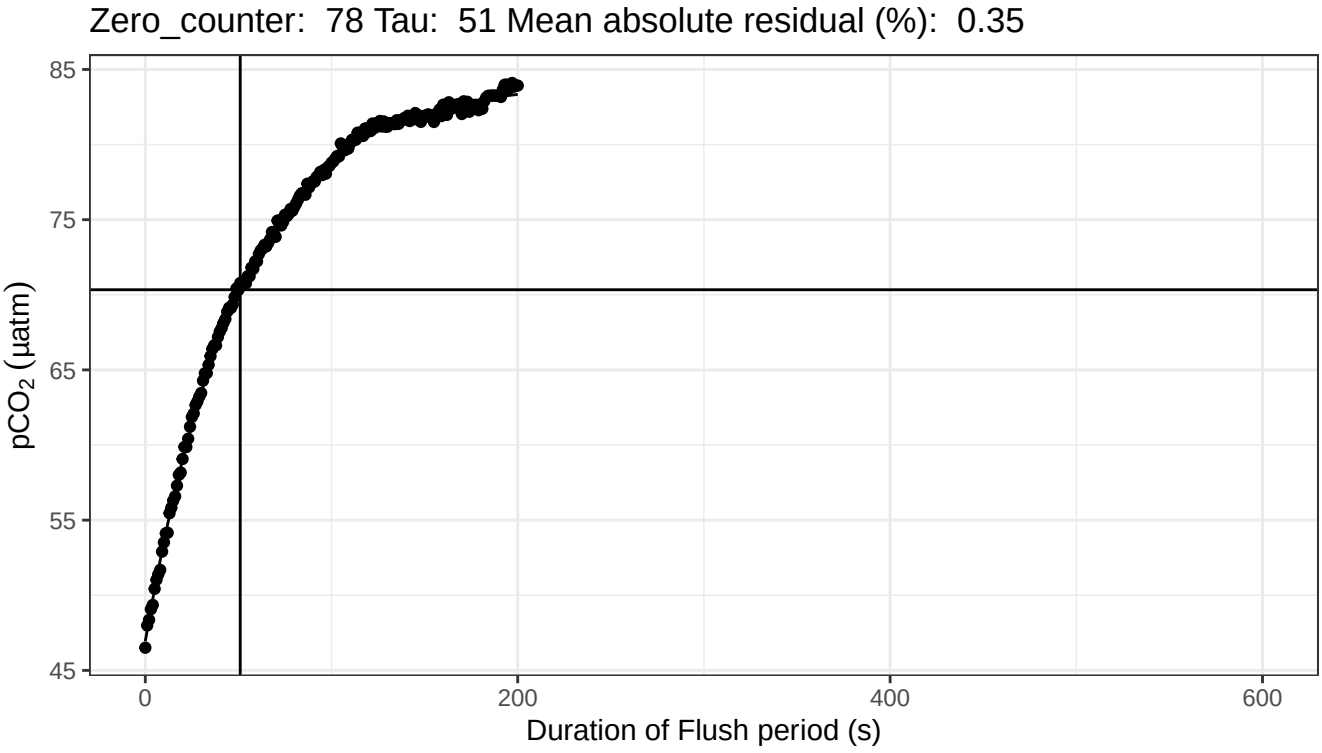
Zero_counter: 77 Tau: 61.5 Mean absolute residual (%): 0.55



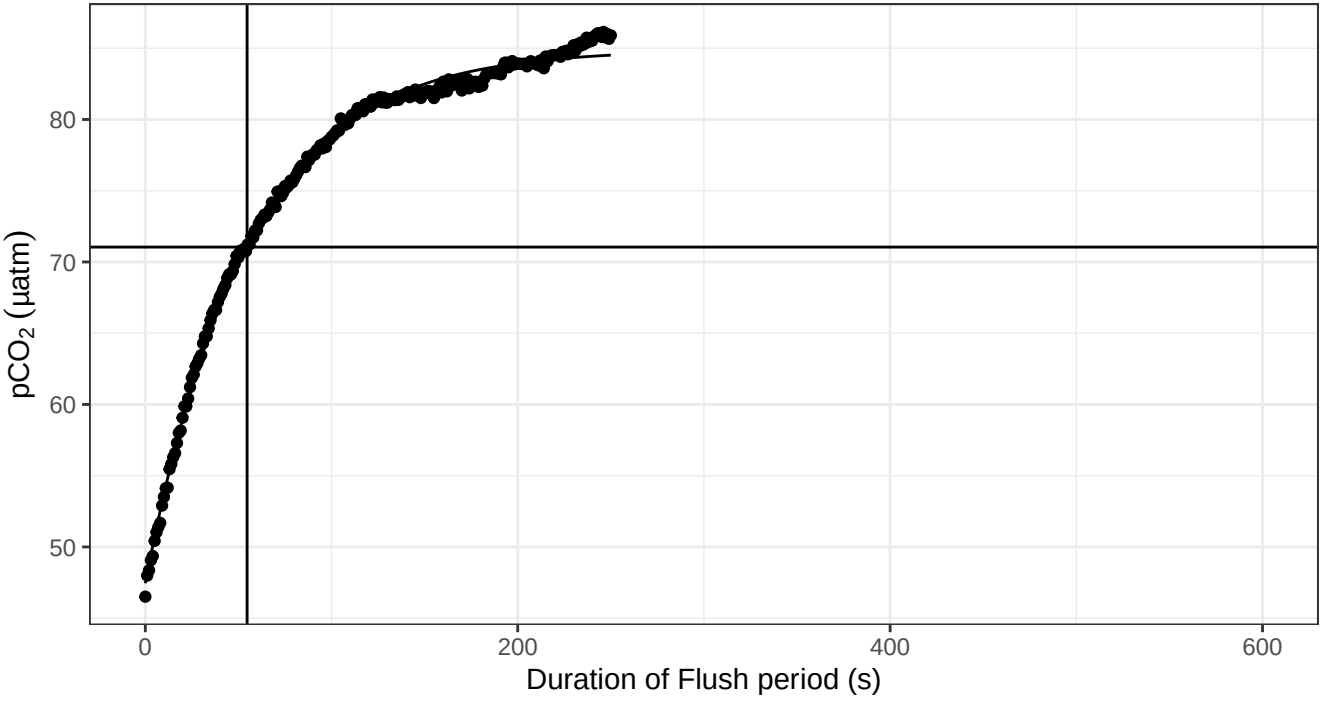

Zero_counter: 77 Tau: 62.6 Mean absolute residual (%): 0.56
pCO2 (µatm)
90
80
70
60
50
0
200
400
600
Duration of Flush period (s)


Zero_counter: 77 Tau: 62.4 Mean absolute residual (%): 0.54
pCO2 (µatm)
90
80
70
60
50
0
200
400
600
Duration of Flush period (s)

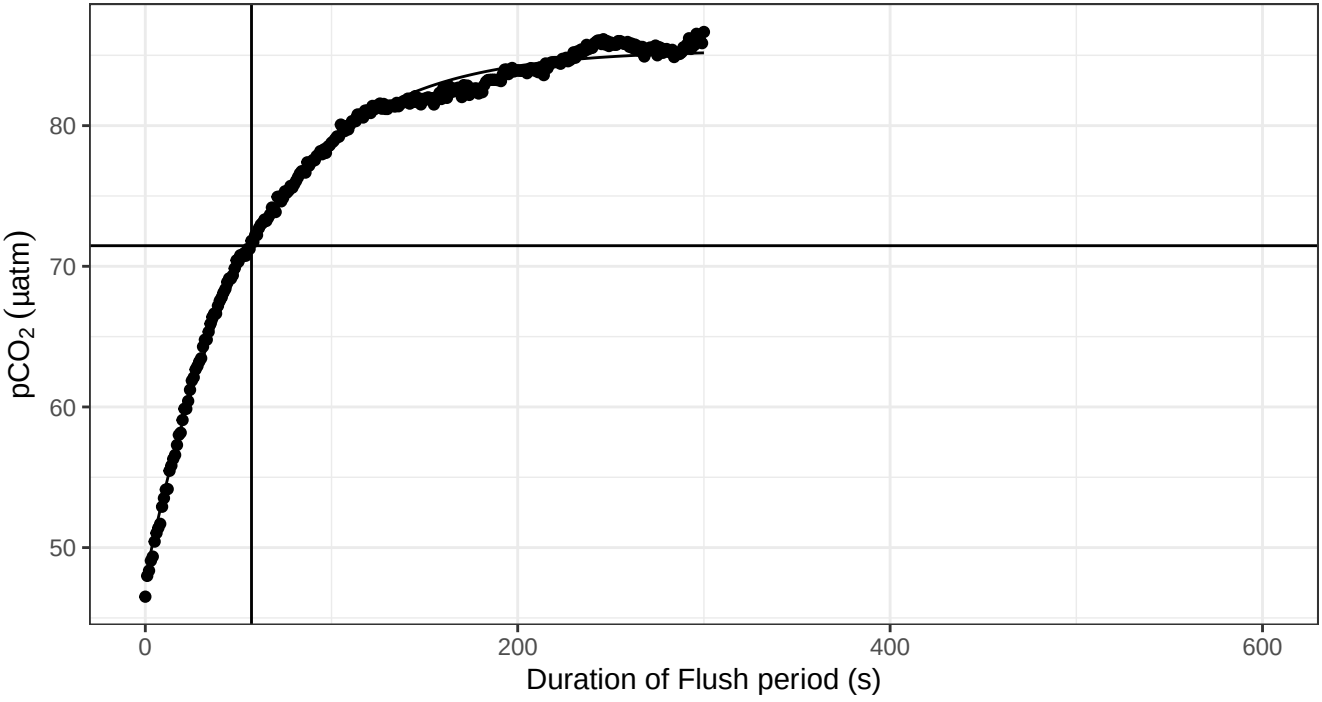

Zero_counter: 78 Tau: 51.2 Mean absolute residual (%): 0.33
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

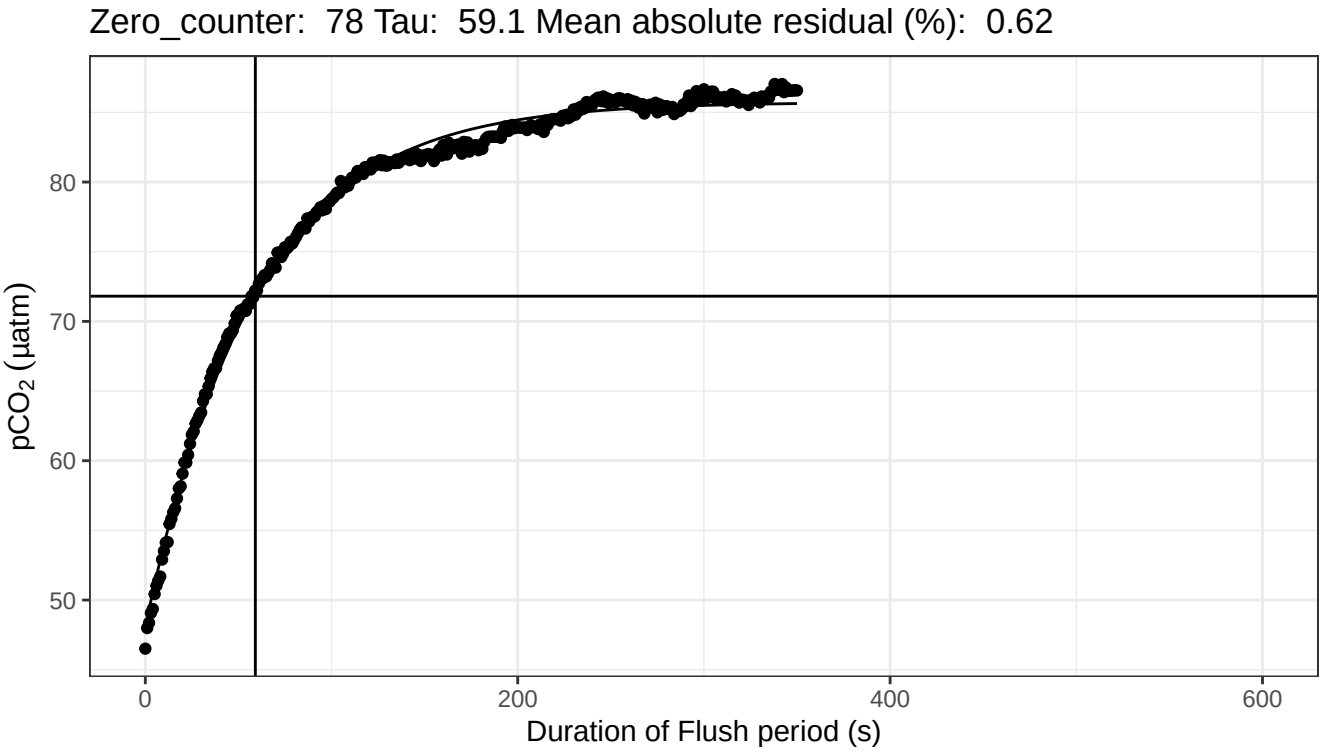

Zero_counter: 78 Tau: 51 Mean absolute residual (%): 0.35
85
75
65
55
45
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

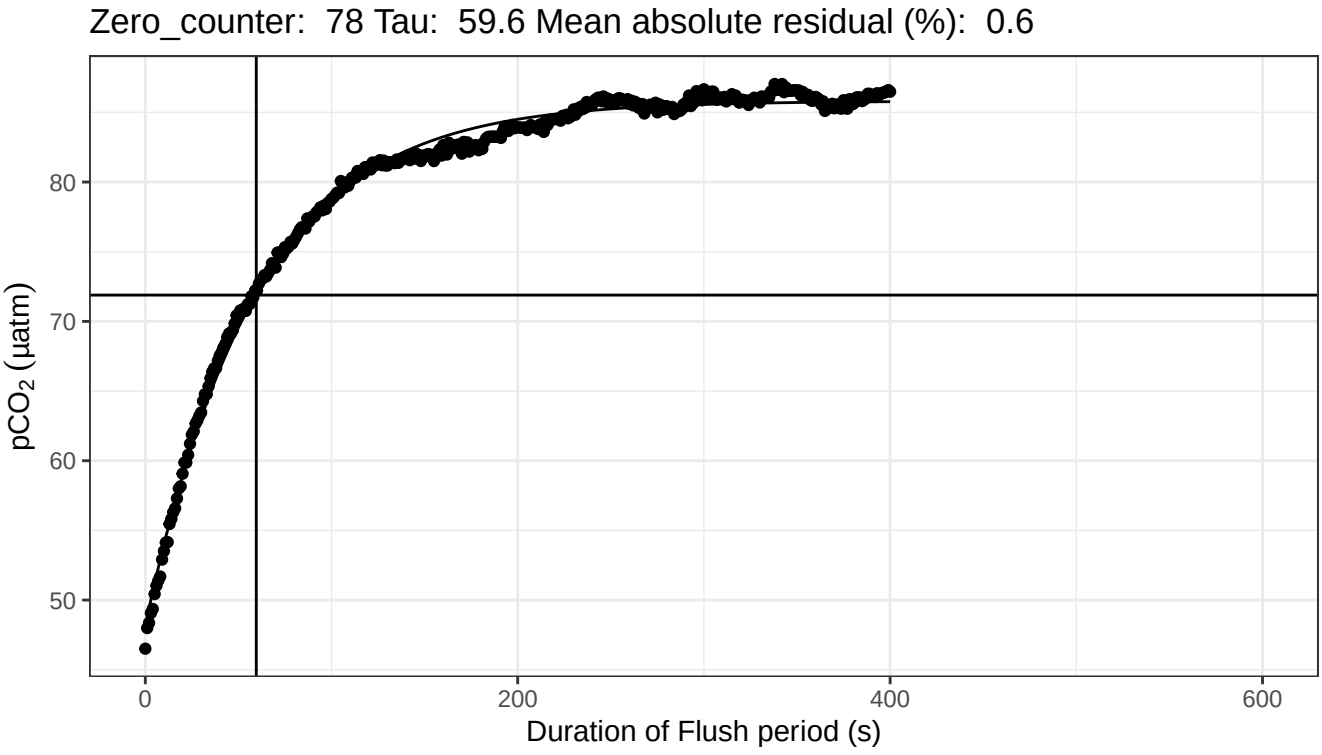
Zero_counter: 78 Tau: 54.7 Mean absolute residual (%): 0.51



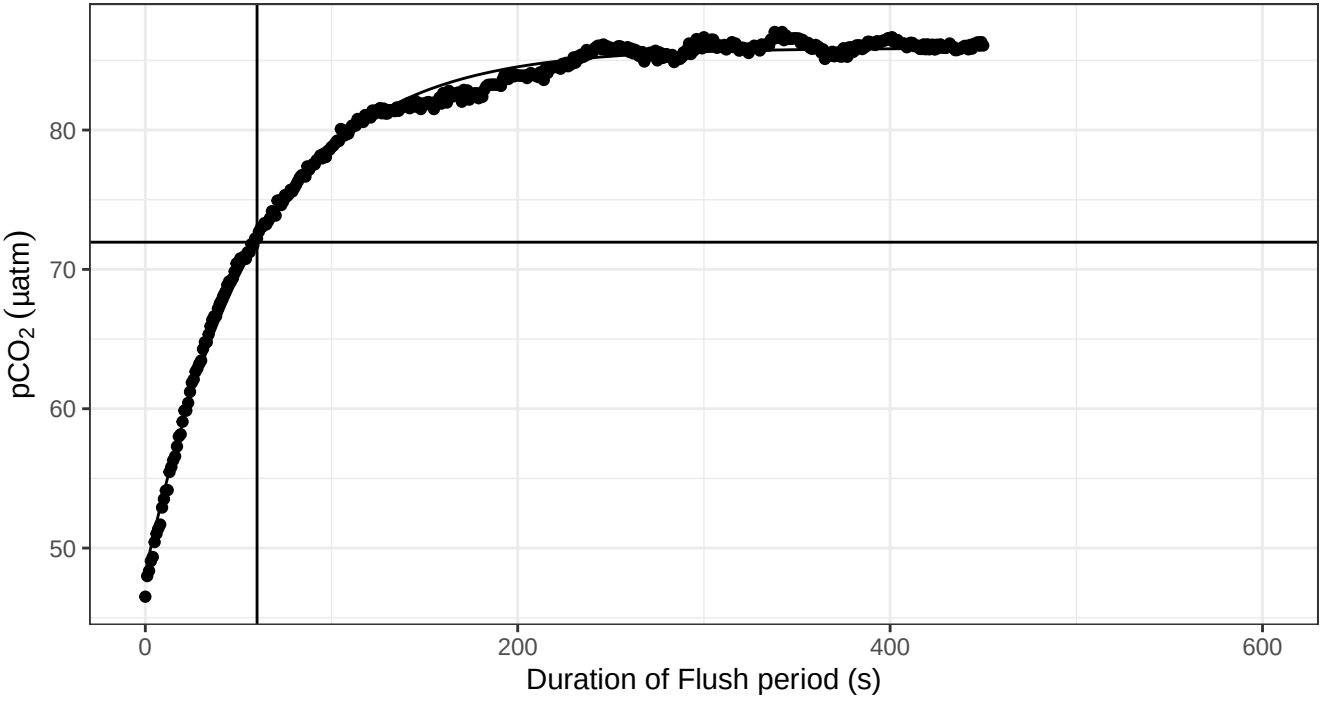
Zero_counter: 78 Tau: 57 Mean absolute residual (%): 0.58

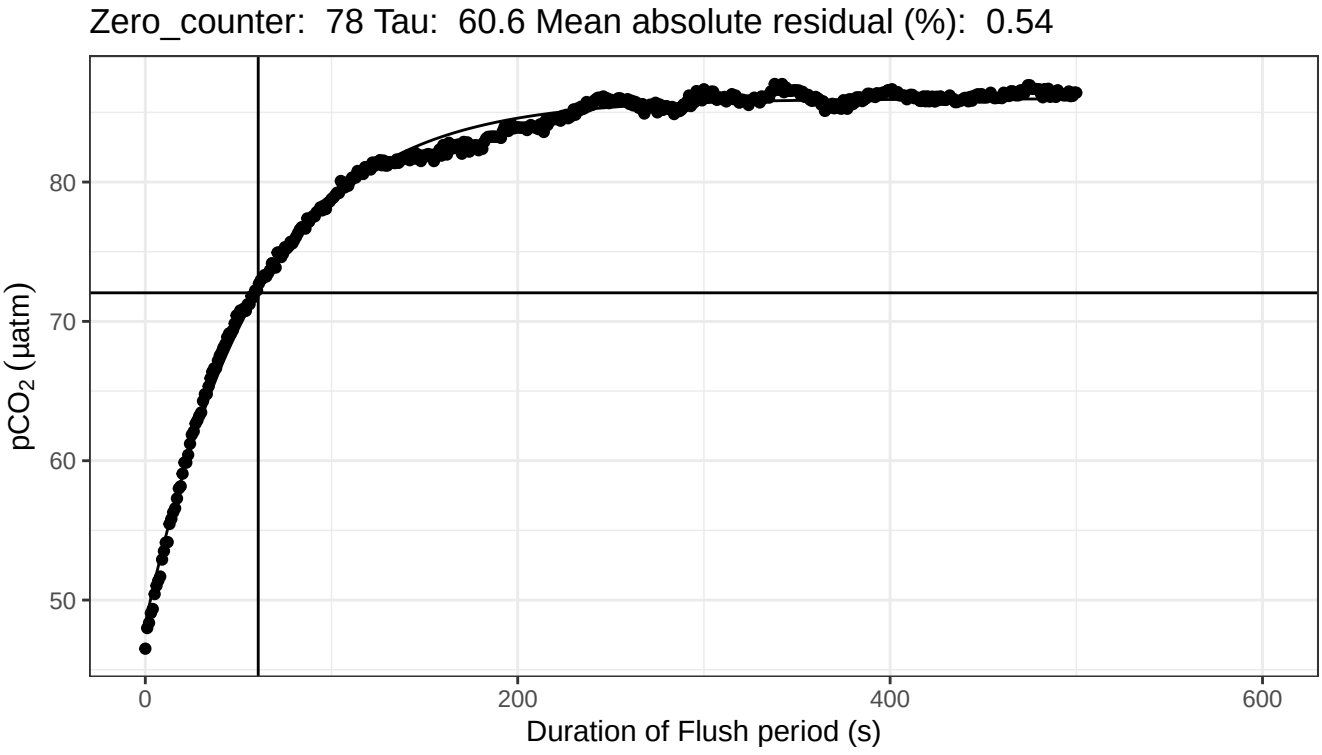


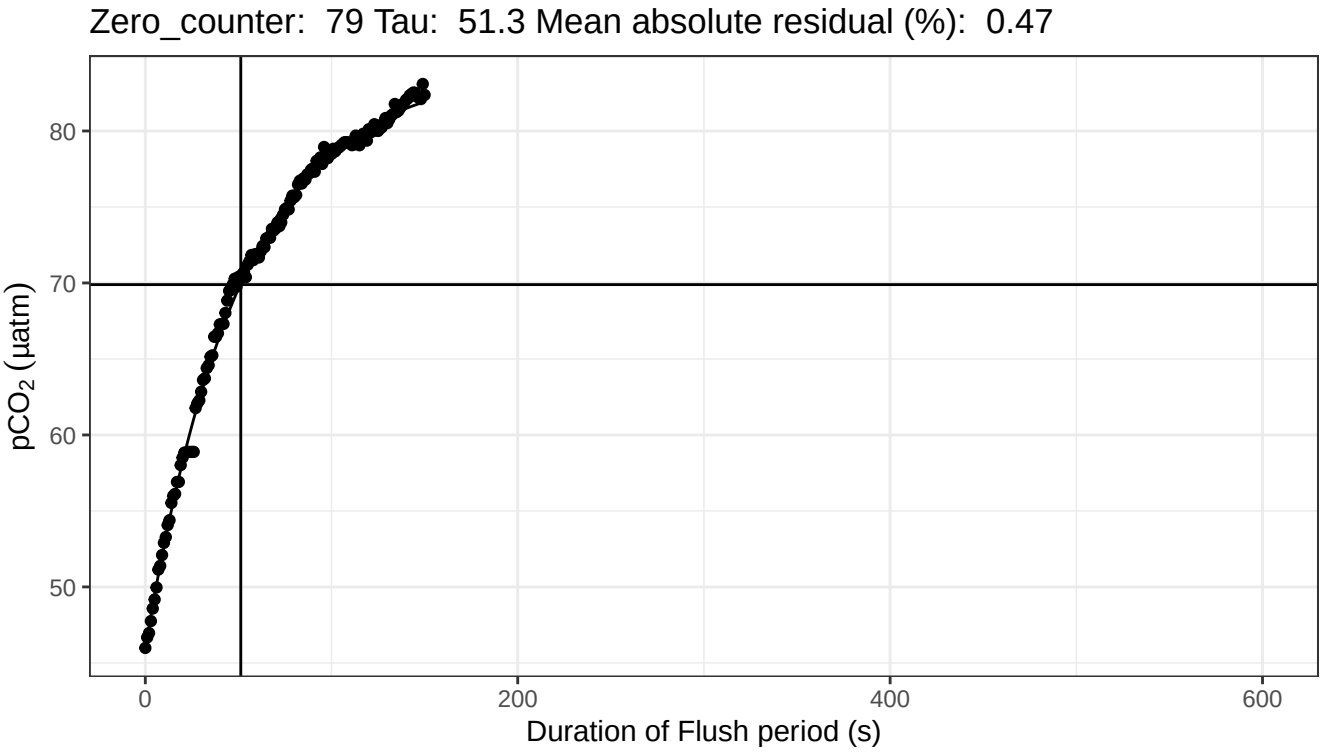

Zero_counter: 78 Tau: 59.1 Mean absolute residual (%): 0.62
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 78 Tau: 59.6 Mean absolute residual (%): 0.6
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

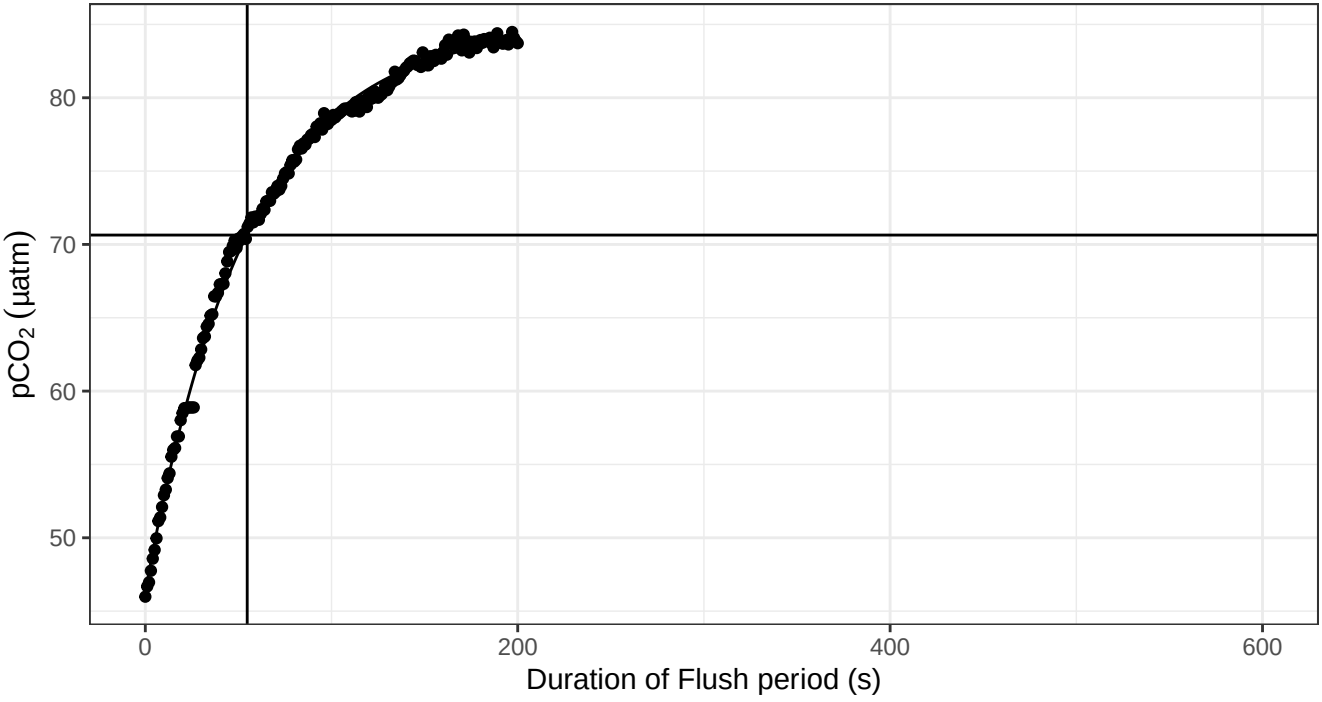
Zero_counter: 78 Tau: 60 Mean absolute residual (%): 0.56



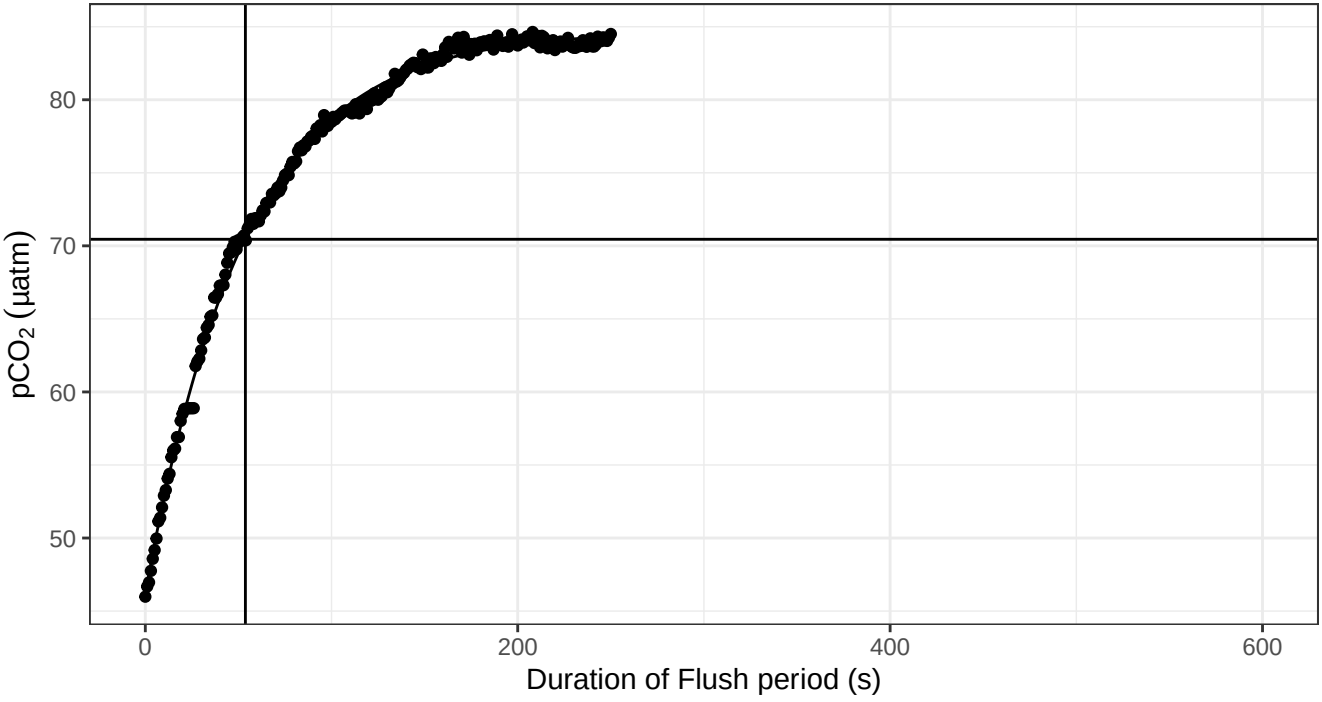

Zero_counter: 78 Tau: 60.6 Mean absolute residual (%): 0.54
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 79 Tau: 51.3 Mean absolute residual (%): 0.47
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

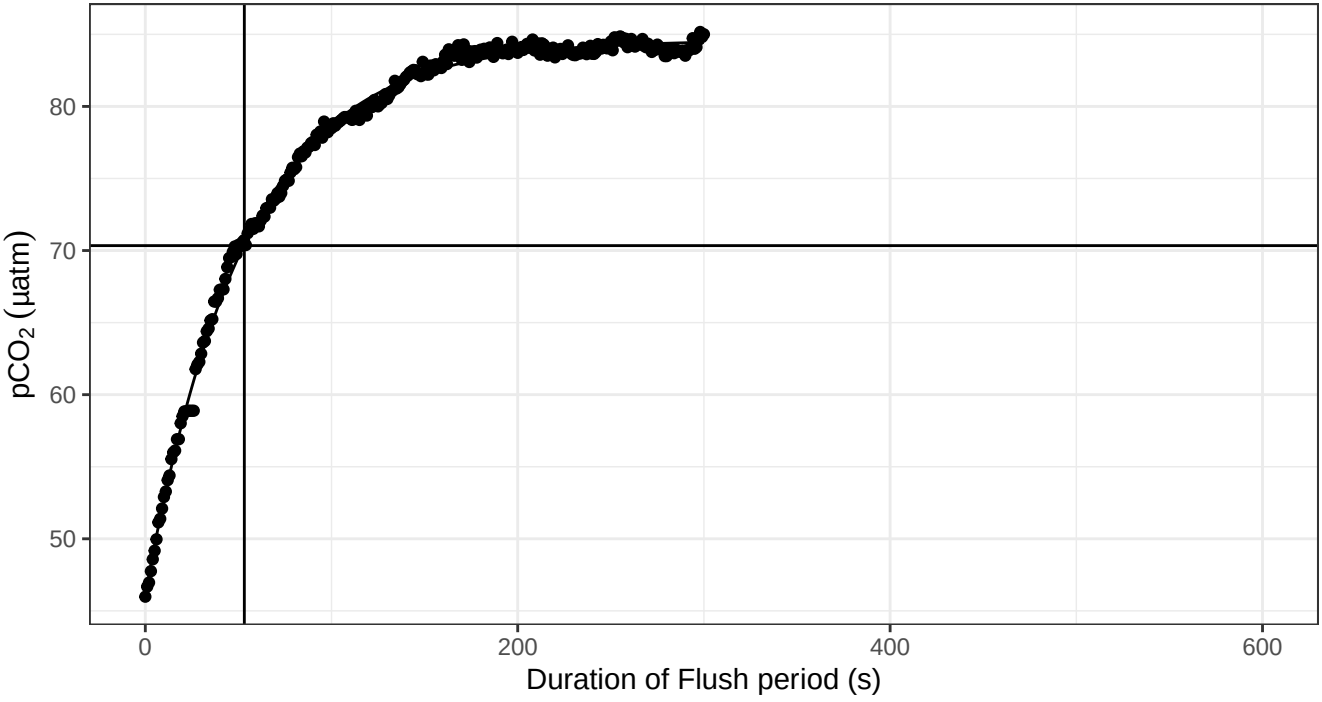
Zero_counter: 79 Tau: 54.7 Mean absolute residual (%): 0.51



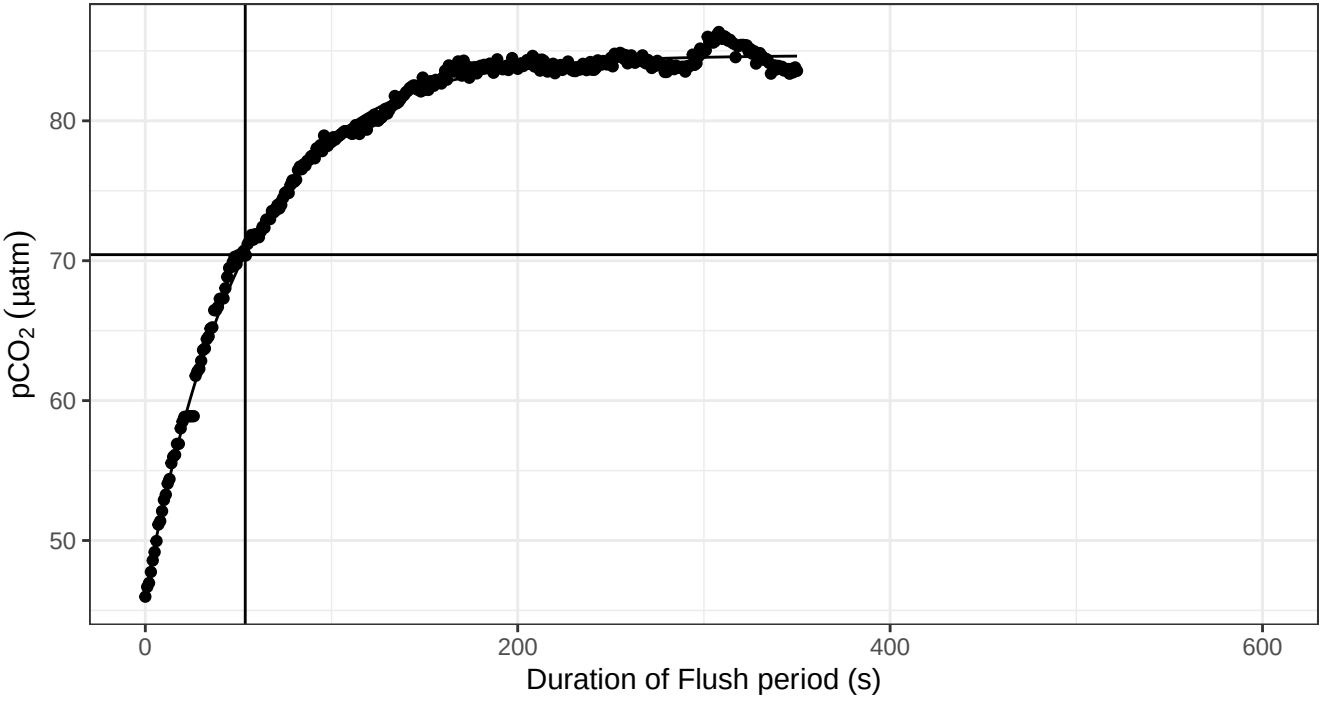
Zero_counter: 79 Tau: 53.7 Mean absolute residual (%): 0.49



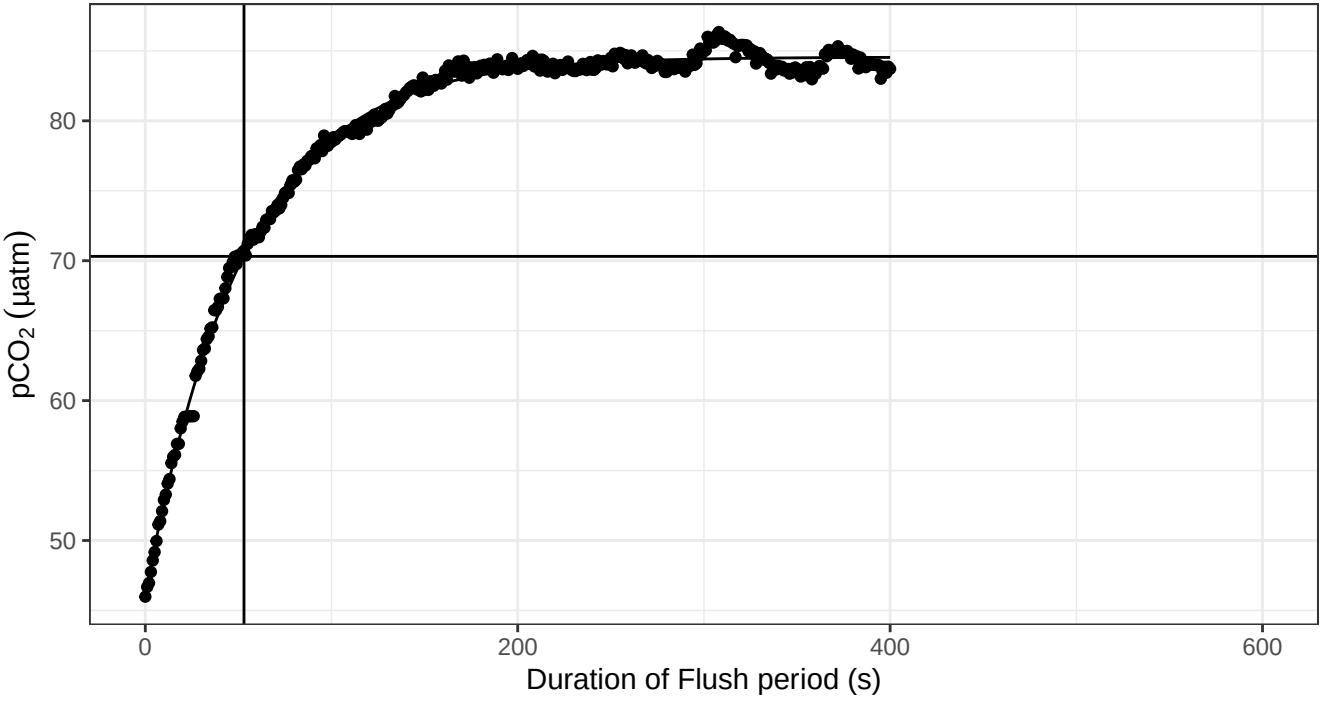
Zero_counter: 79 Tau: 53.2 Mean absolute residual (%): 0.49

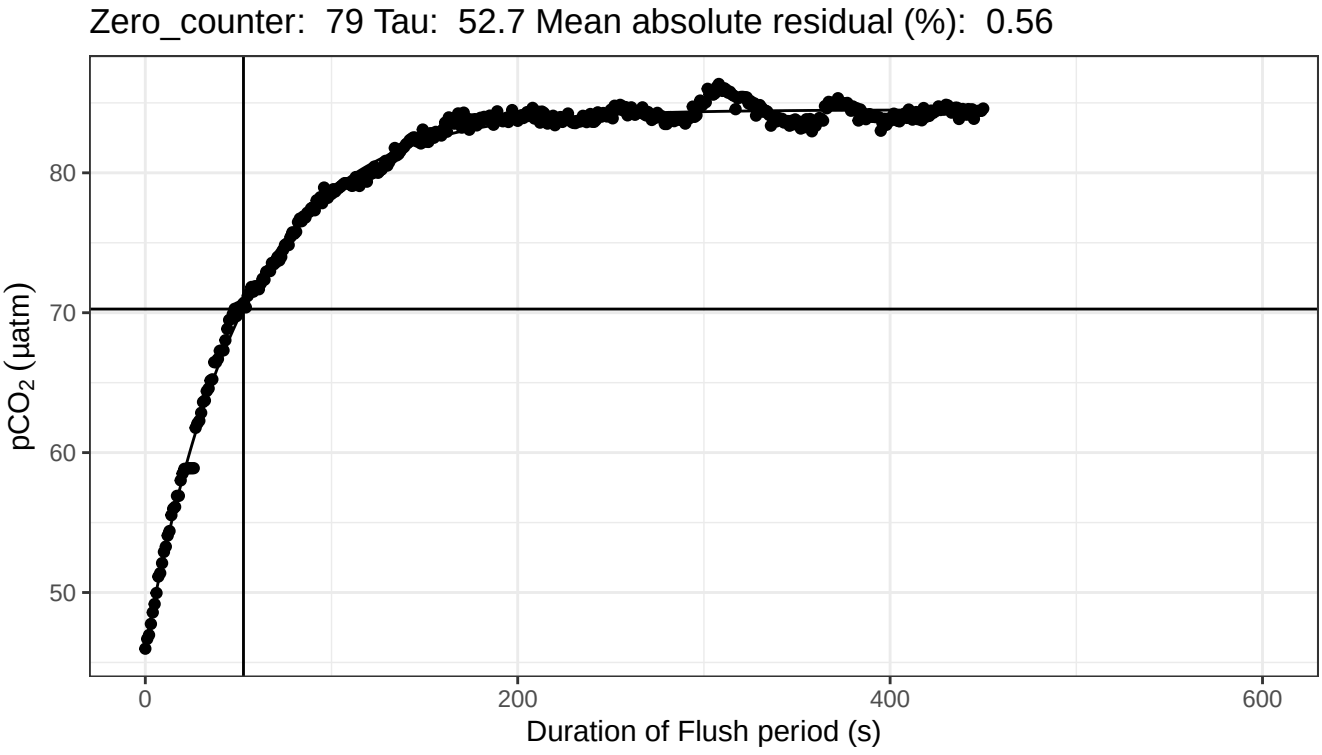


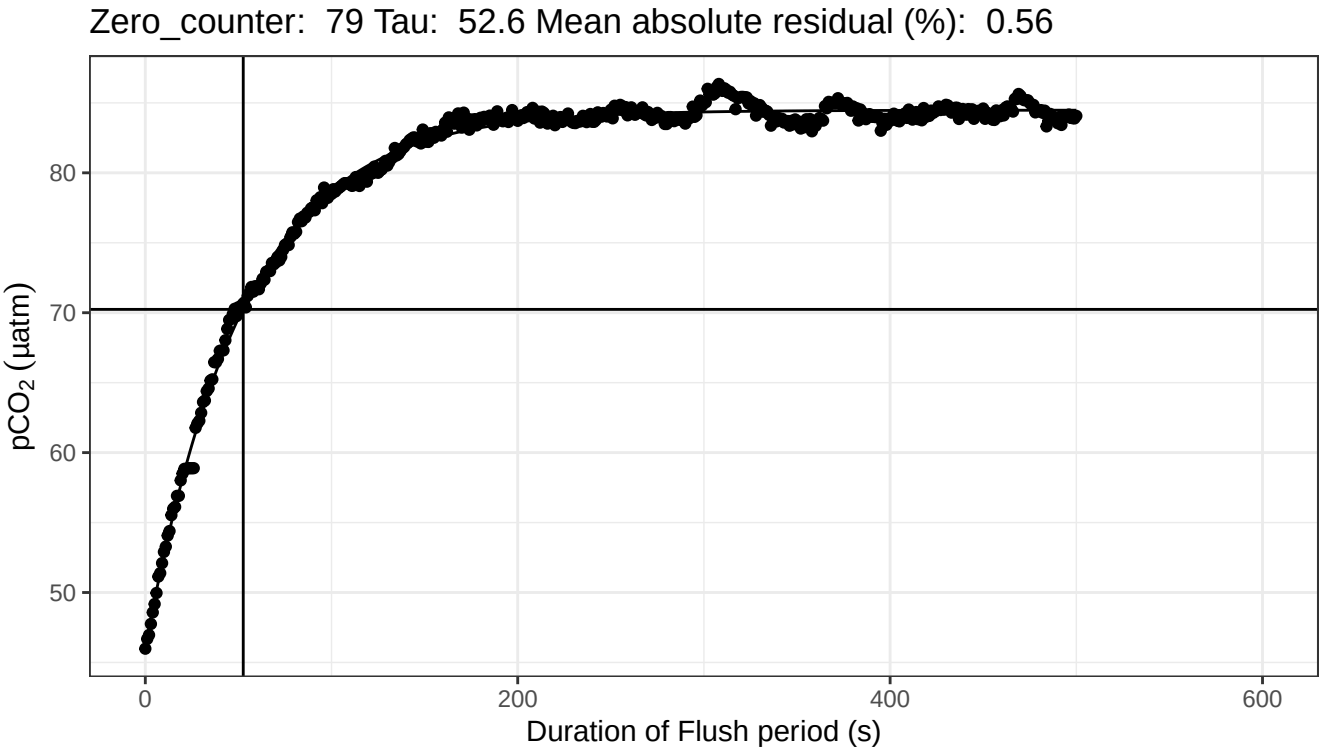
Zero_counter: 79 Tau: 53.7 Mean absolute residual (%): 0.56



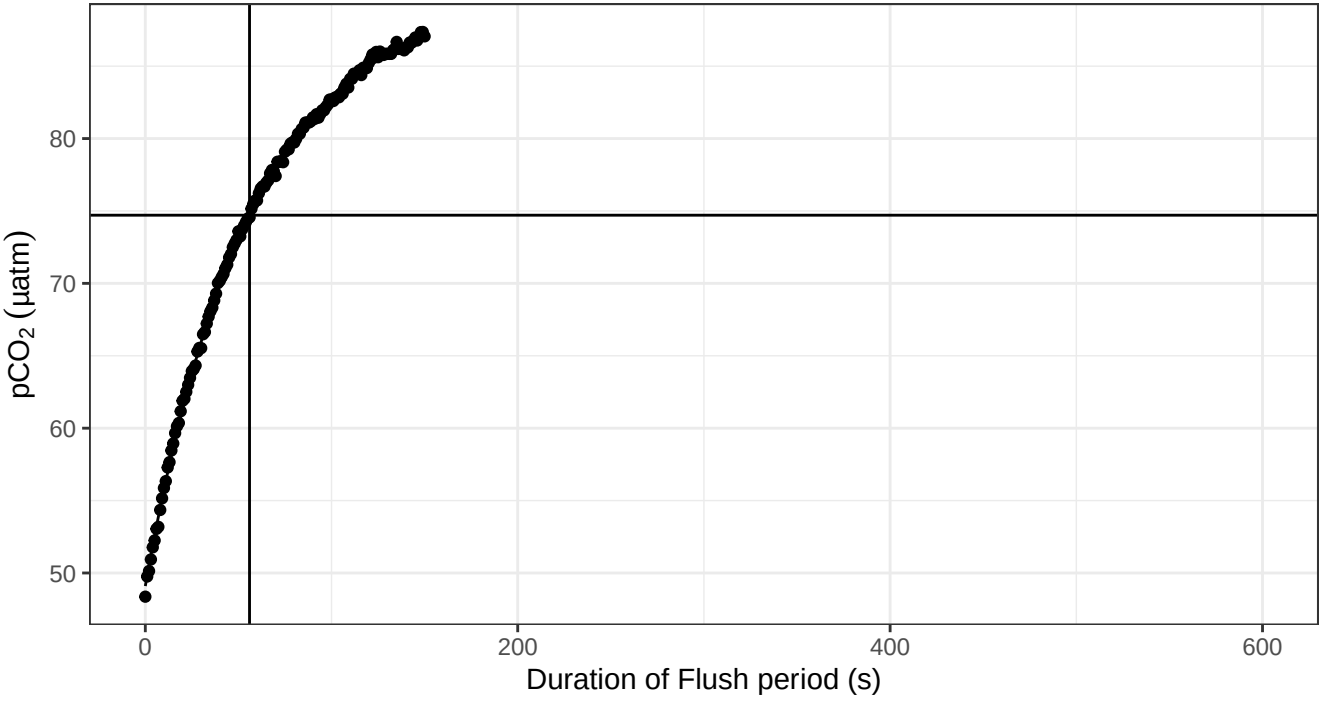
Zero_counter: 79 Tau: 53 Mean absolute residual (%): 0.59

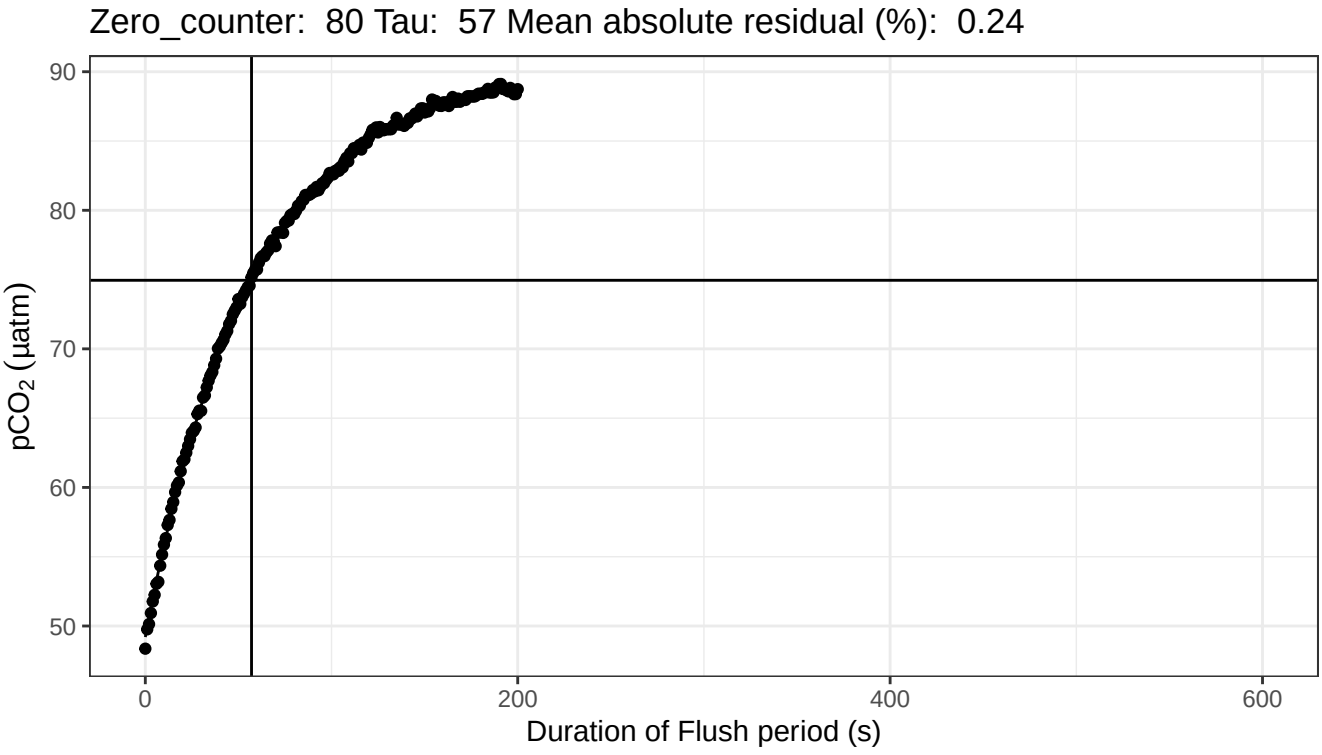



Zero_counter: 79 Tau: 52.7 Mean absolute residual (%): 0.56
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

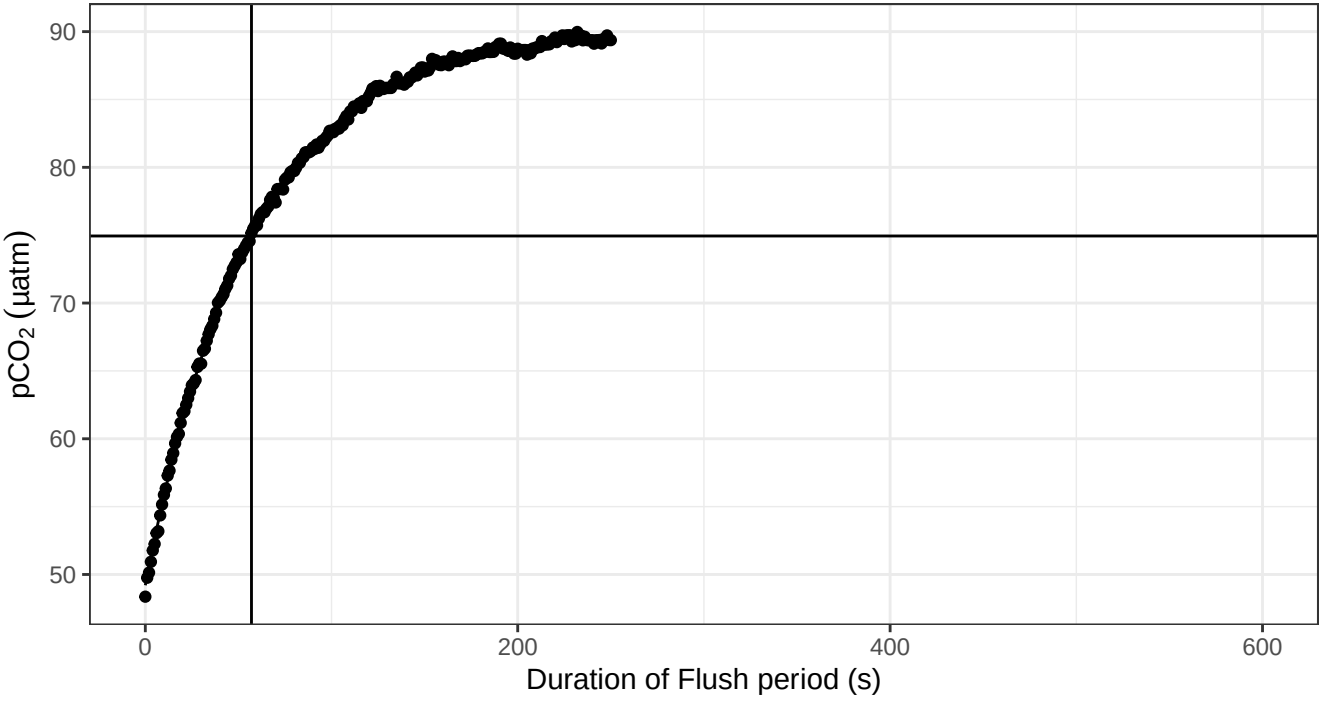

Zero_counter: 79 Tau: 52.6 Mean absolute residual (%): 0.56
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

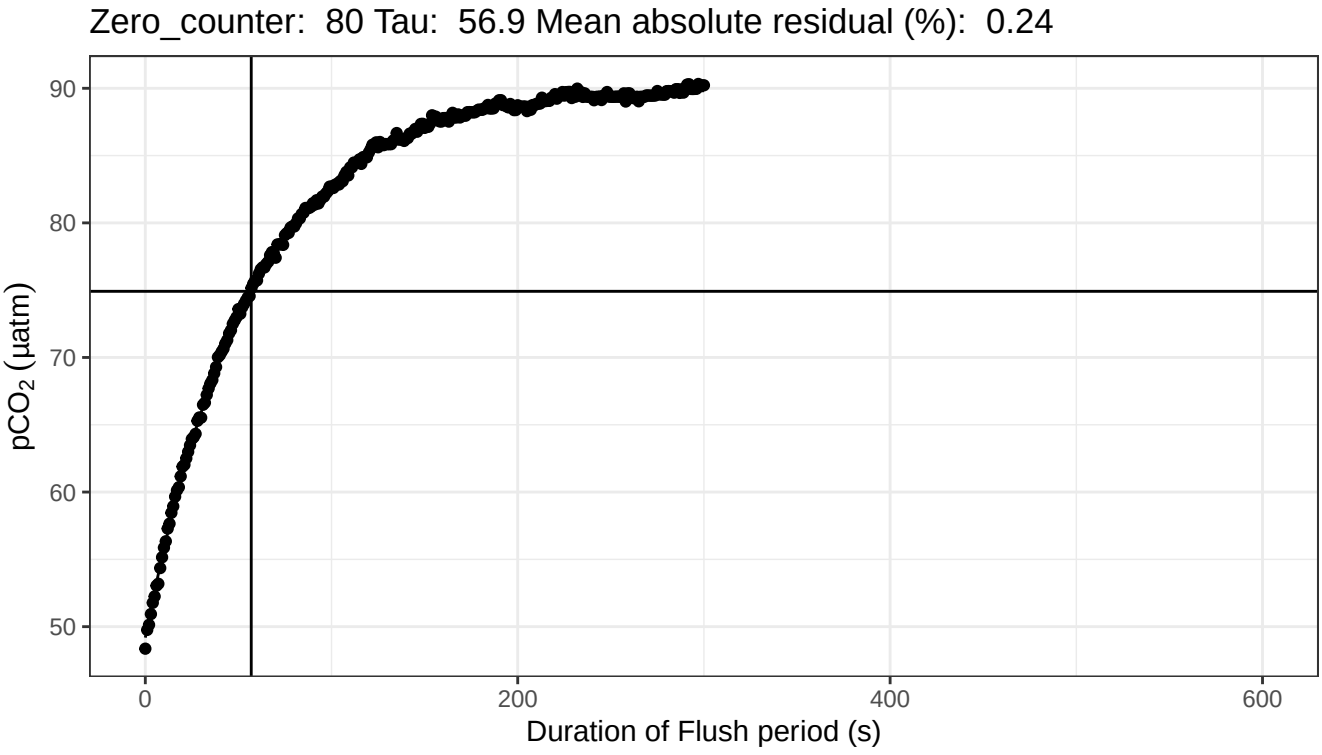
Zero_counter: 80 Tau: 56 Mean absolute residual (%): 0.25

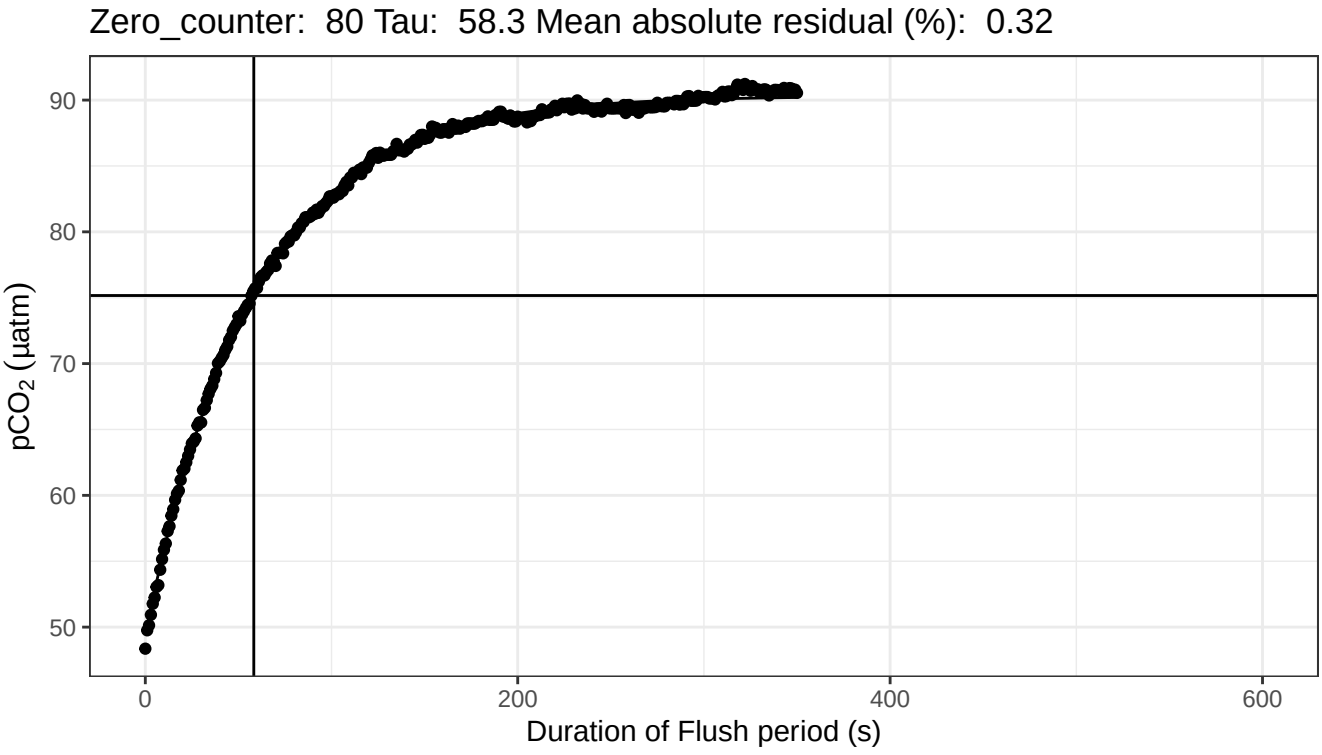


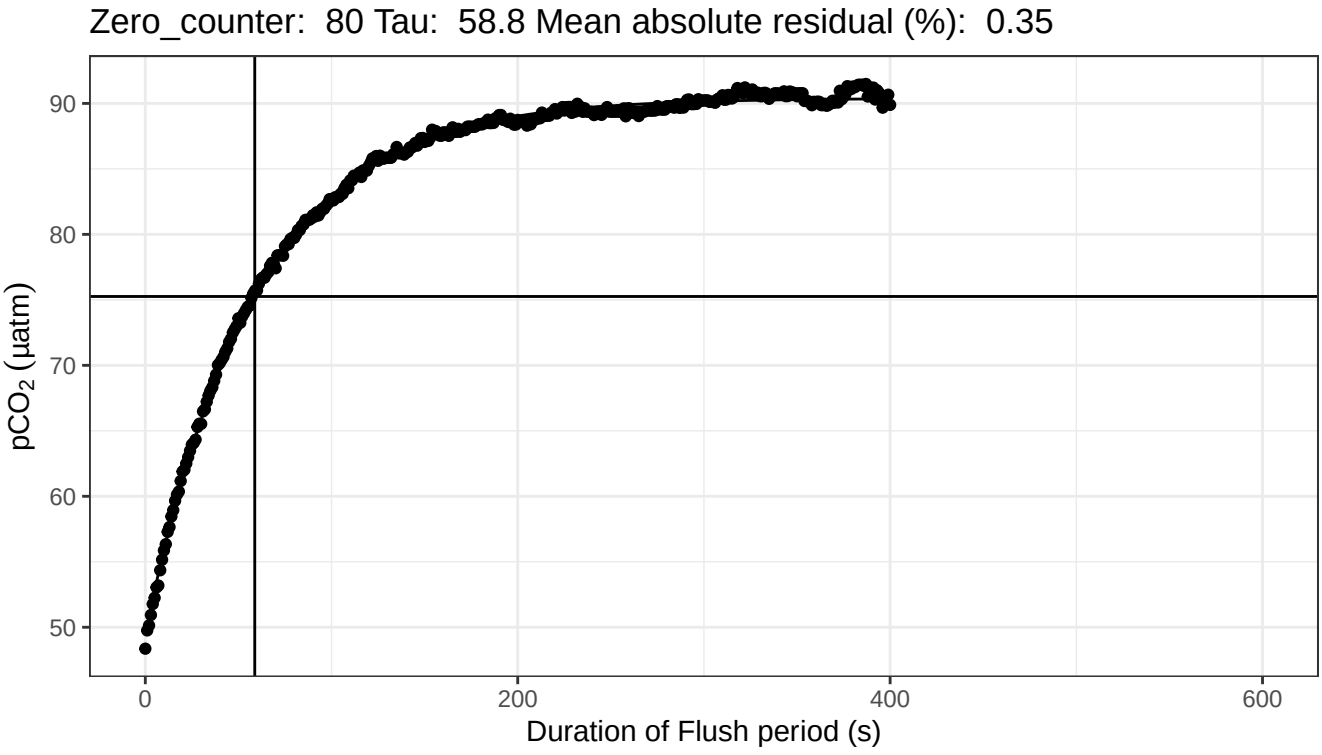

Zero_counter: 80 Tau: 57 Mean absolute residual (%): 0.24
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

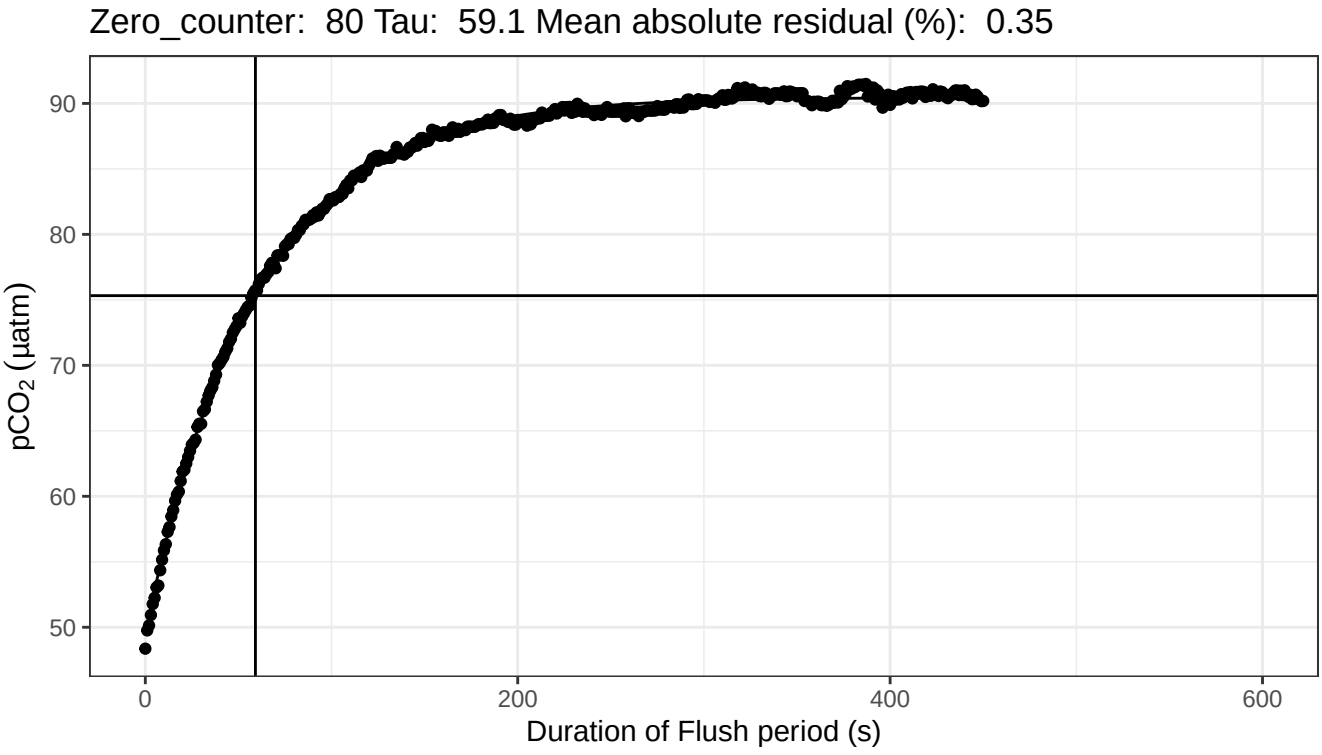
Zero_counter: 80 Tau: 57 Mean absolute residual (%): 0.24

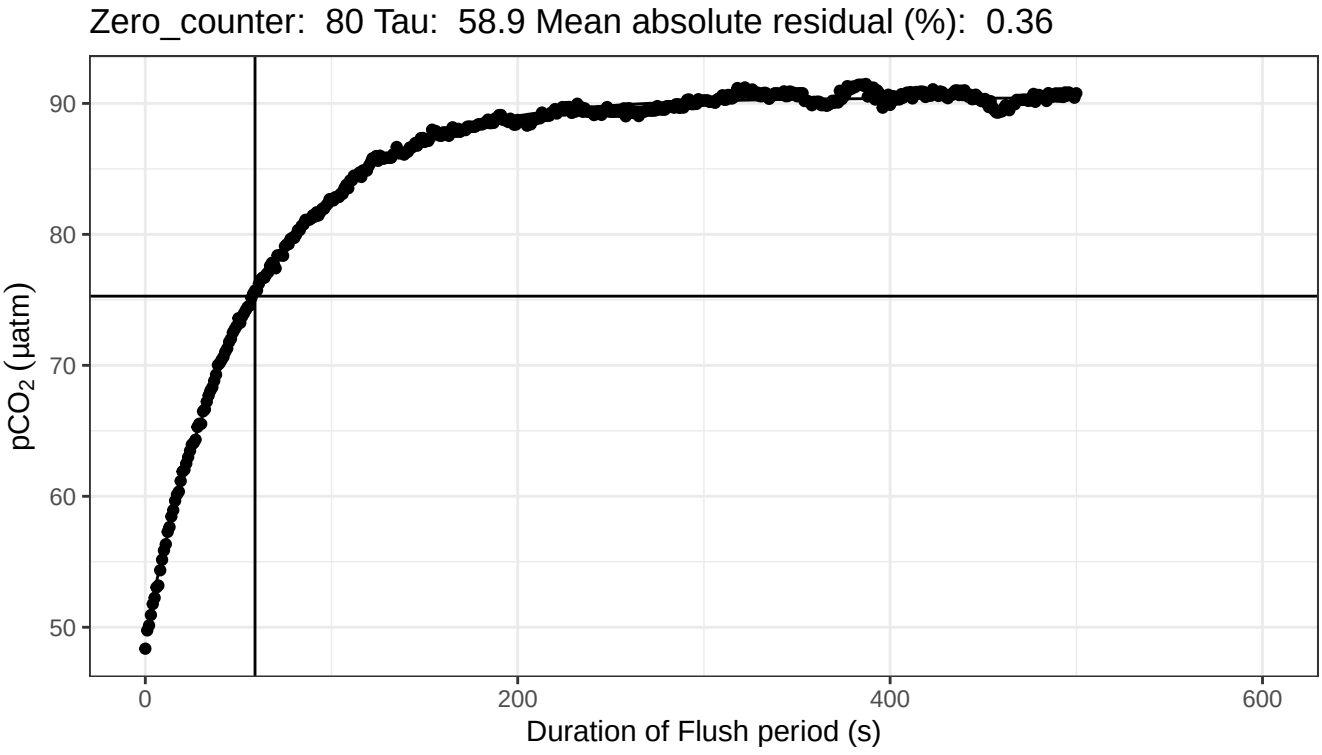



Zero_counter: 80 Tau: 56.9 Mean absolute residual (%): 0.24
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

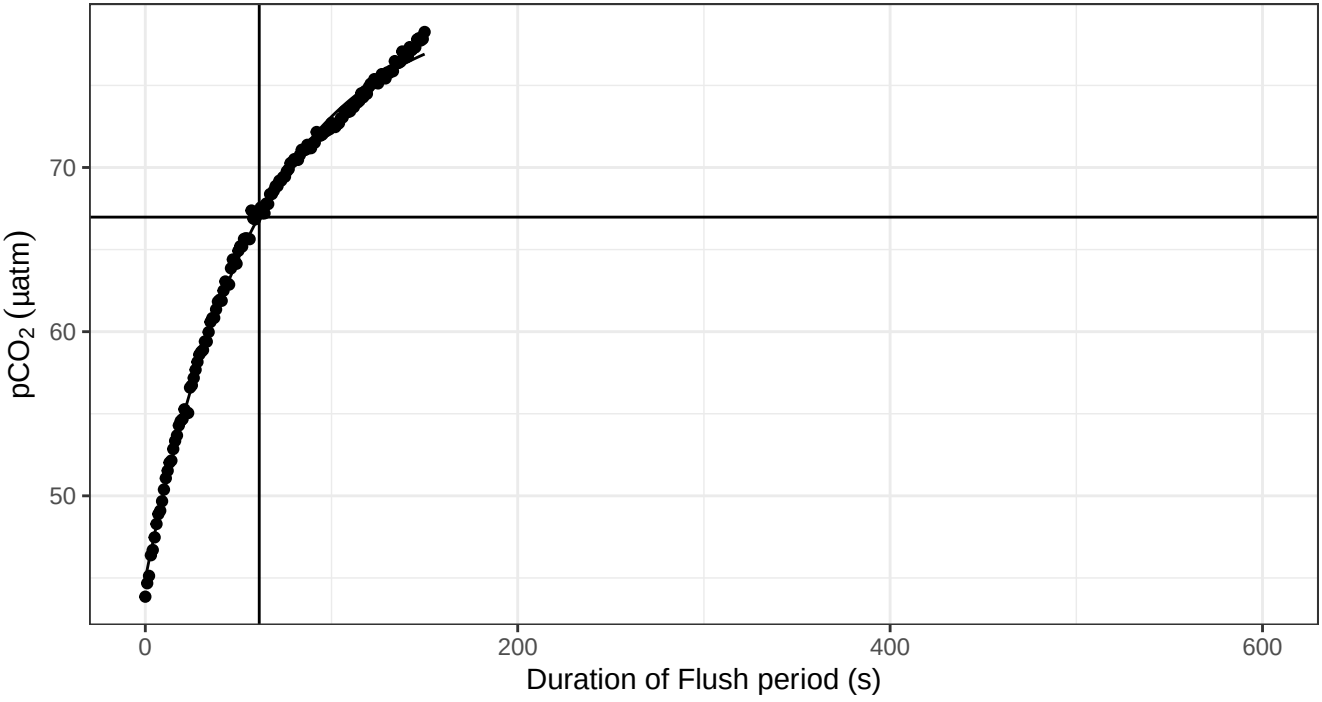

Zero_counter: 80 Tau: 58.3 Mean absolute residual (%): 0.32
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

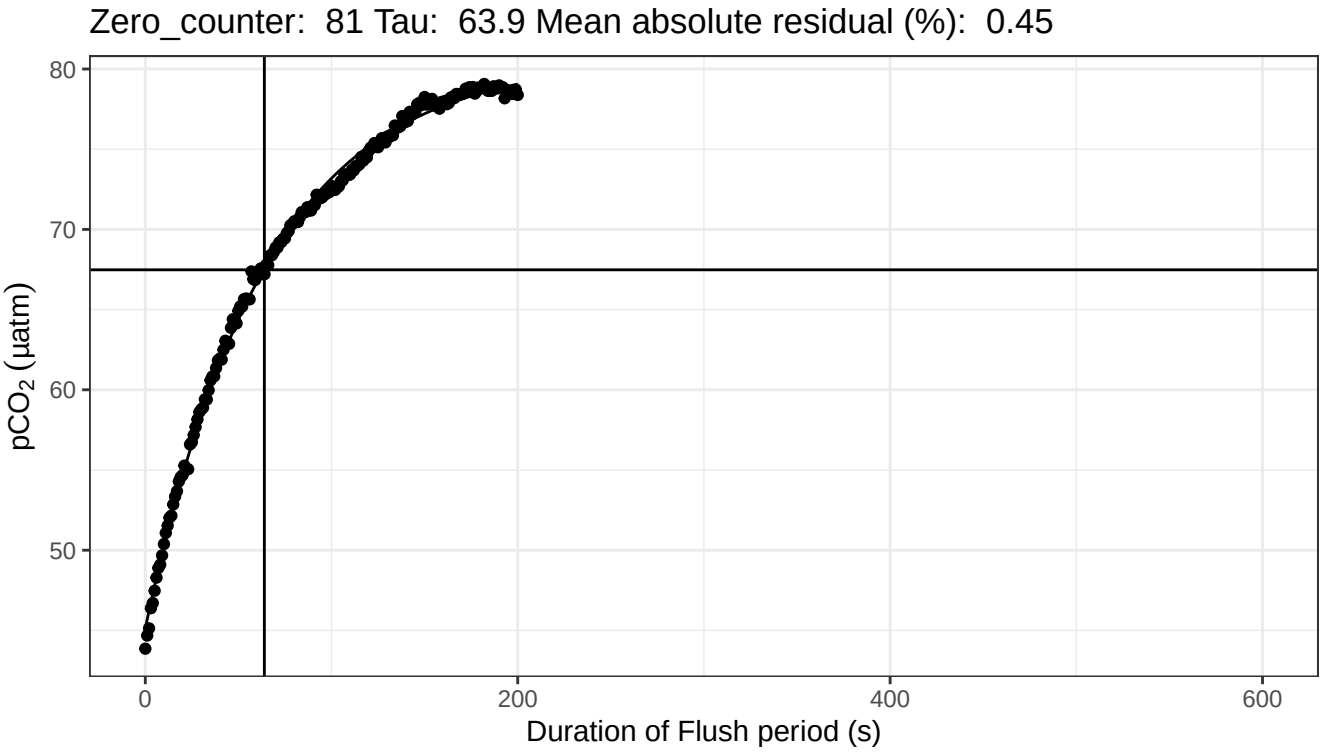

Zero_counter: 80 Tau: 58.8 Mean absolute residual (%): 0.35
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 80 Tau: 59.1 Mean absolute residual (%): 0.35
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

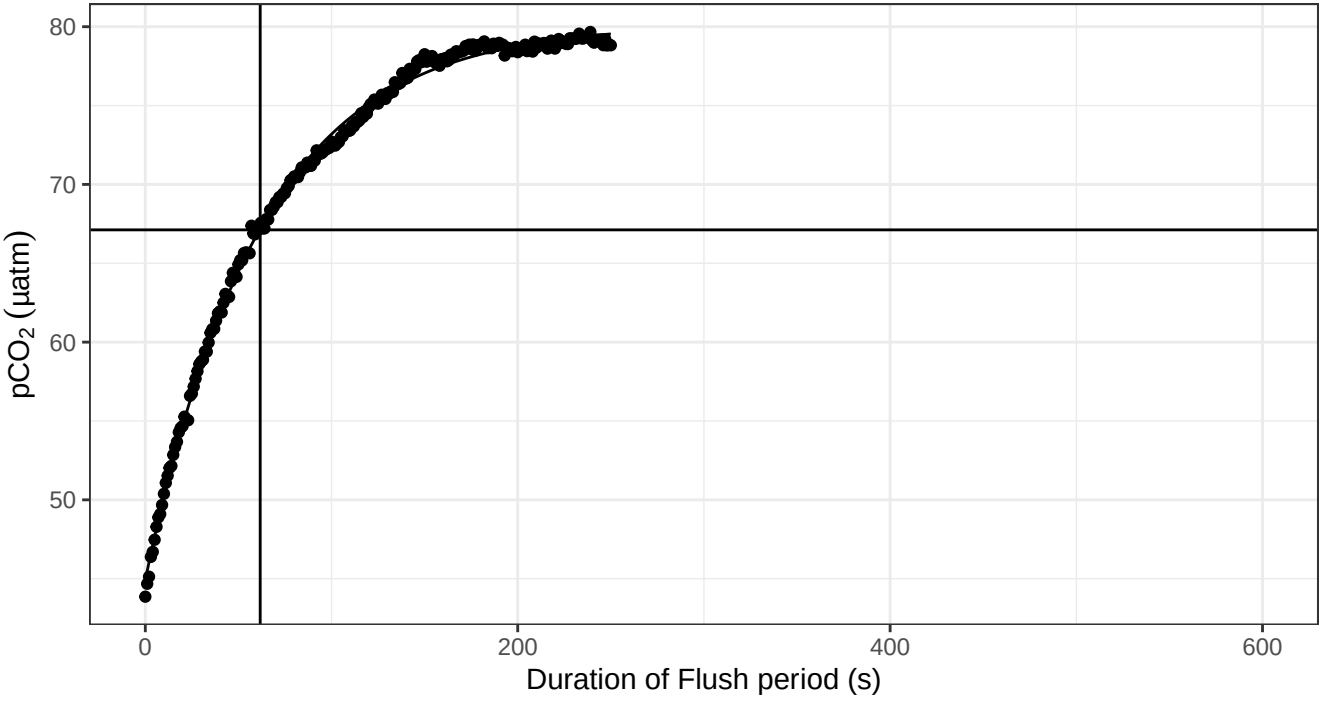

Zero_counter: 80 Tau: 58.9 Mean absolute residual (%): 0.36
90
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 81 Tau: 61.2 Mean absolute residual (%): 0.44

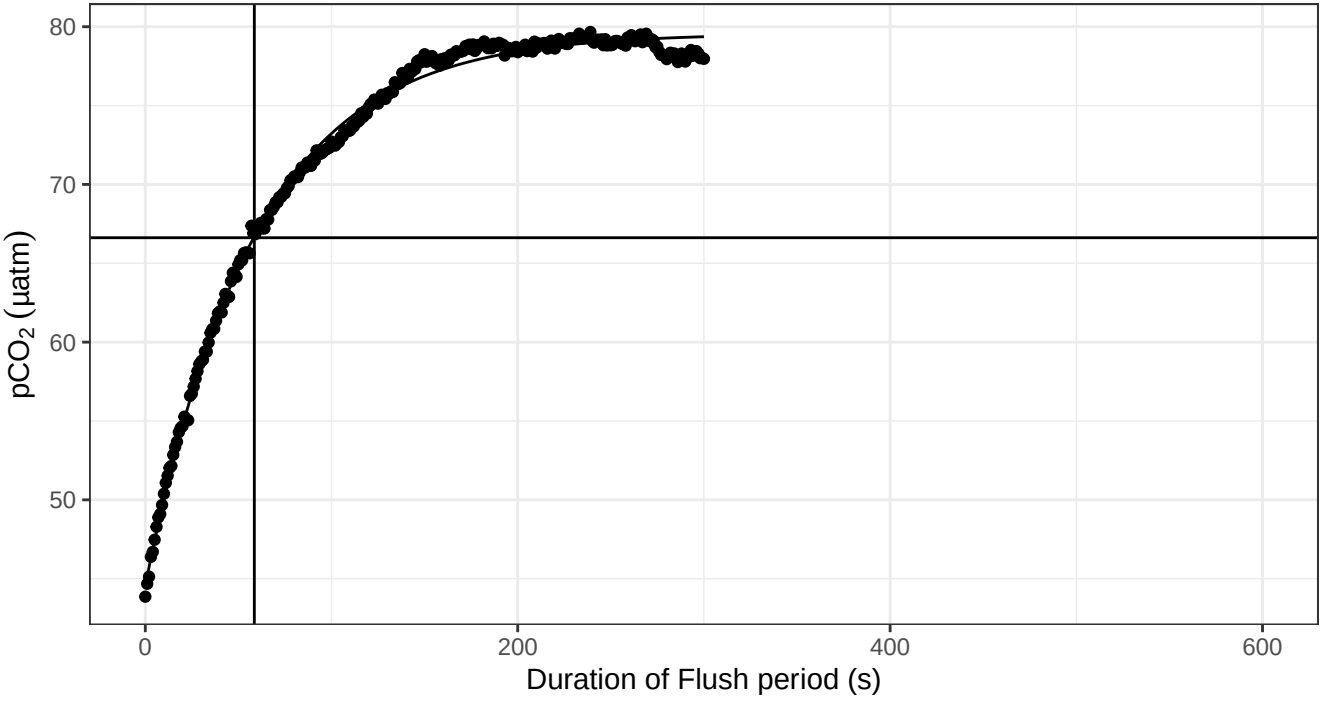



Zero_counter: 81 Tau: 63.9 Mean absolute residual (%): 0.45
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

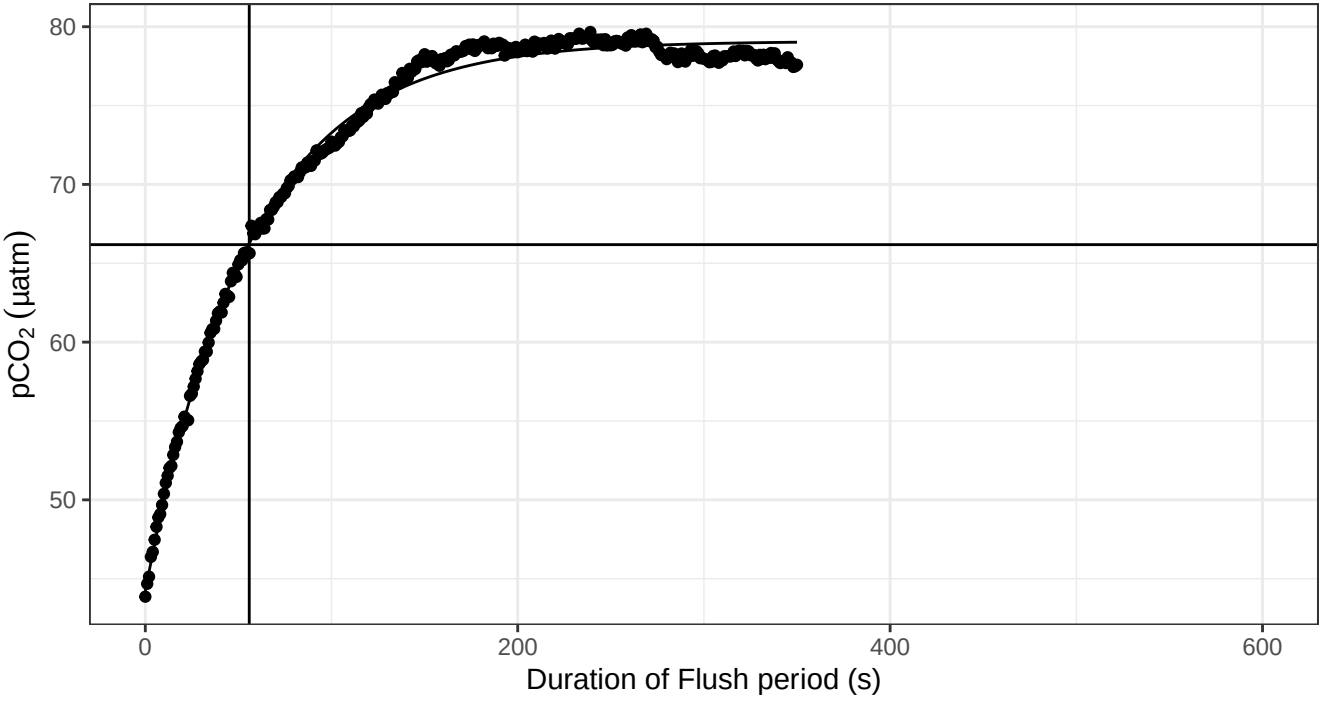
Zero_counter: 81 Tau: 61.7 Mean absolute residual (%): 0.45



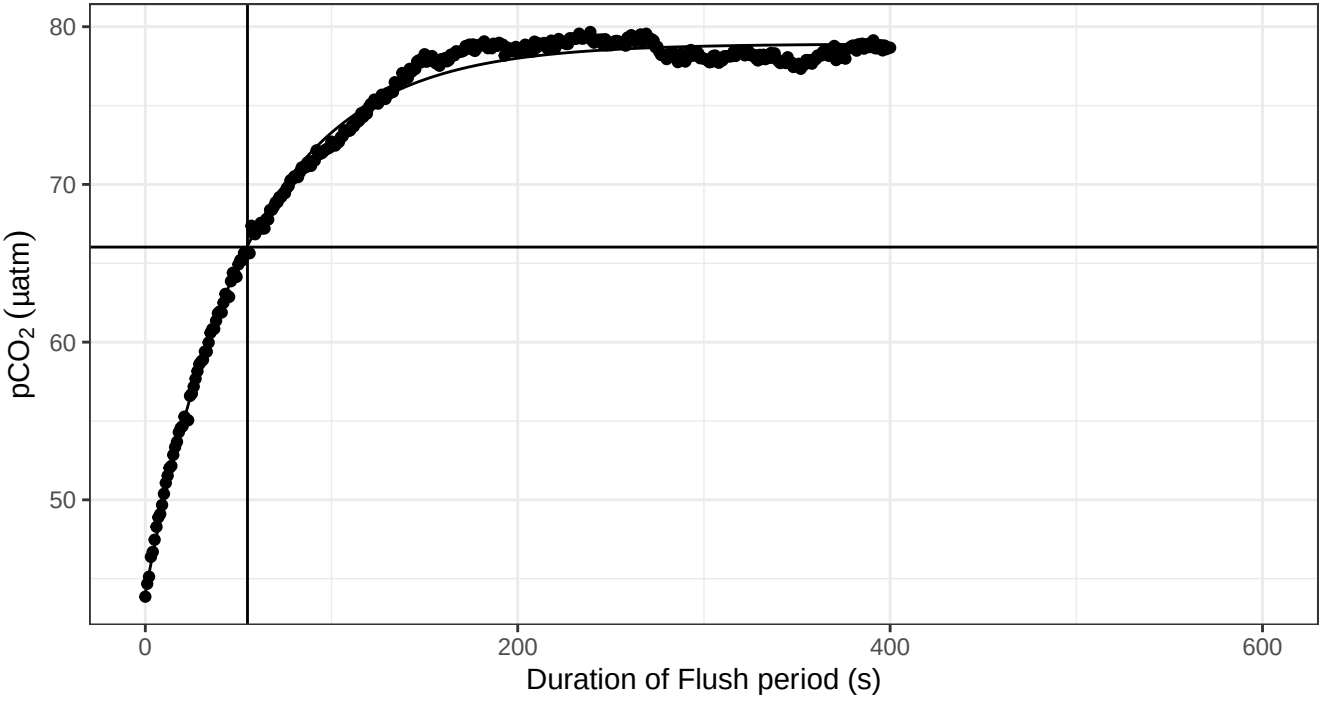
Zero_counter: 81 Tau: 58.5 Mean absolute residual (%): 0.57



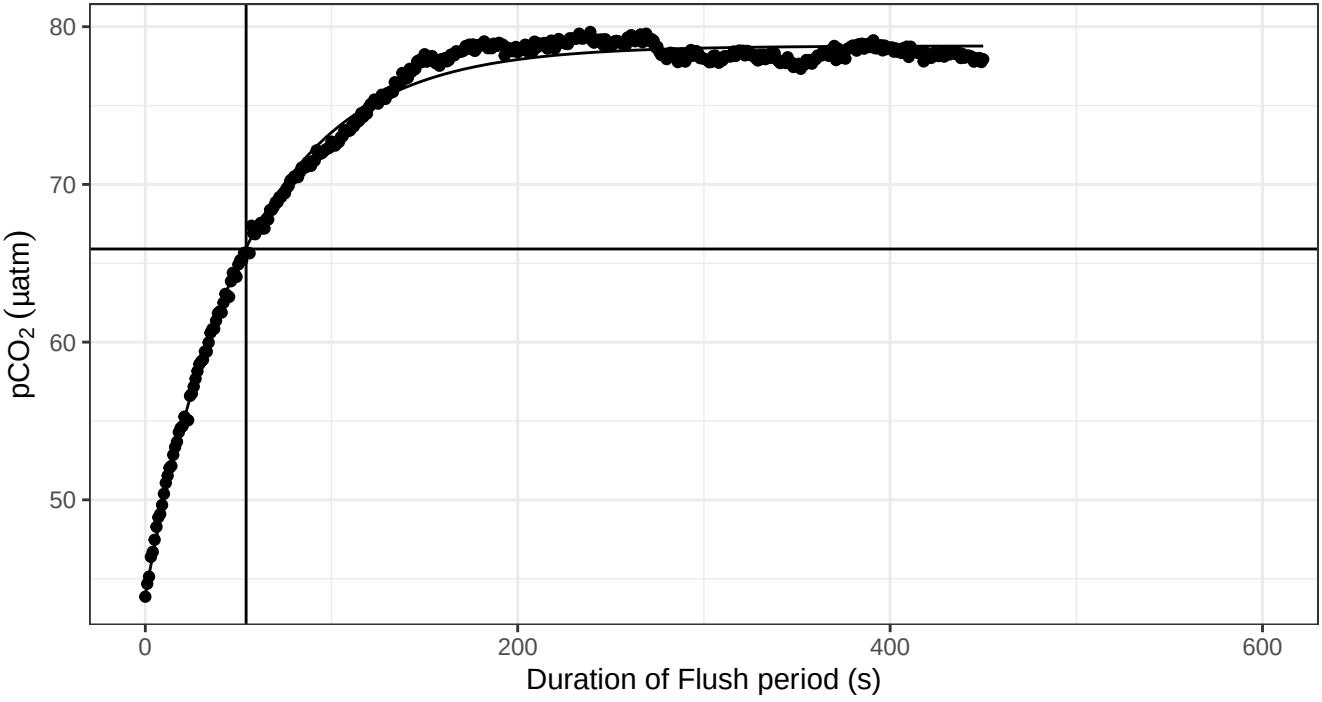
Zero_counter: 81 Tau: 55.8 Mean absolute residual (%): 0.76

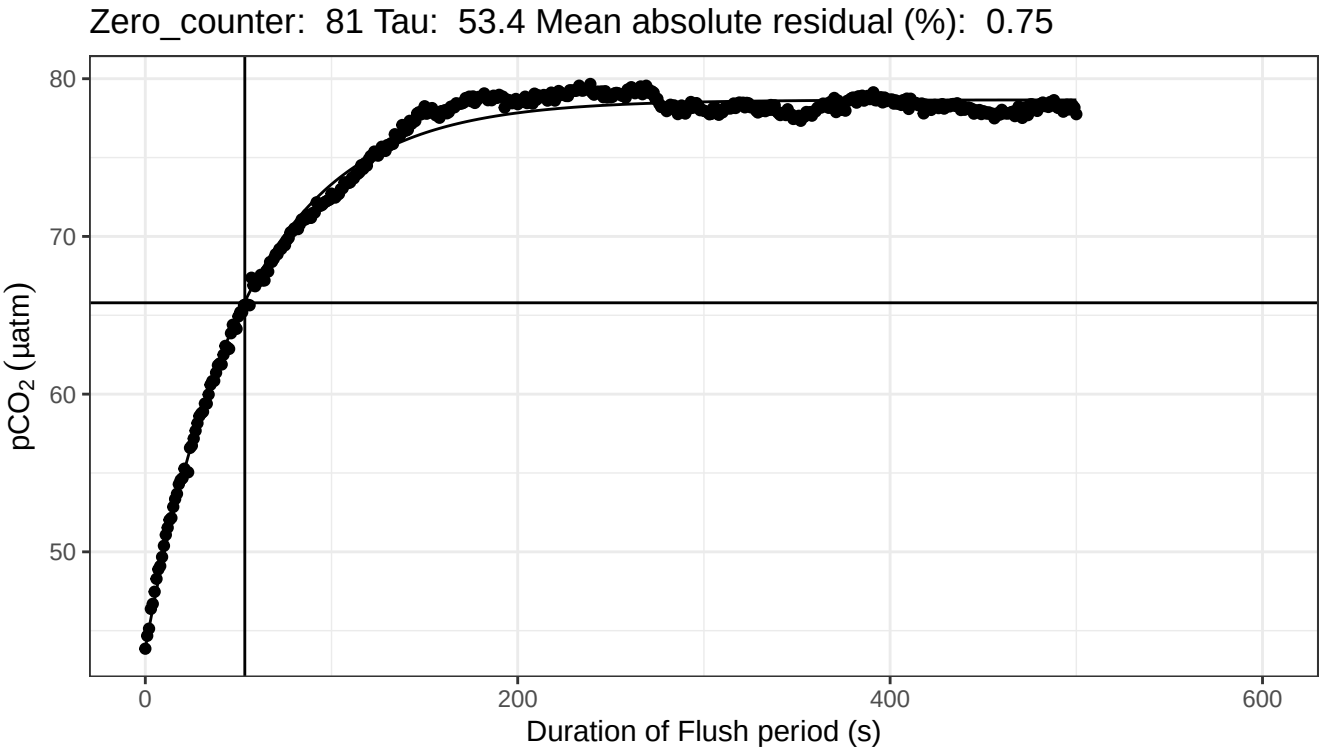


Zero_counter: 81 Tau: 54.9 Mean absolute residual (%): 0.76

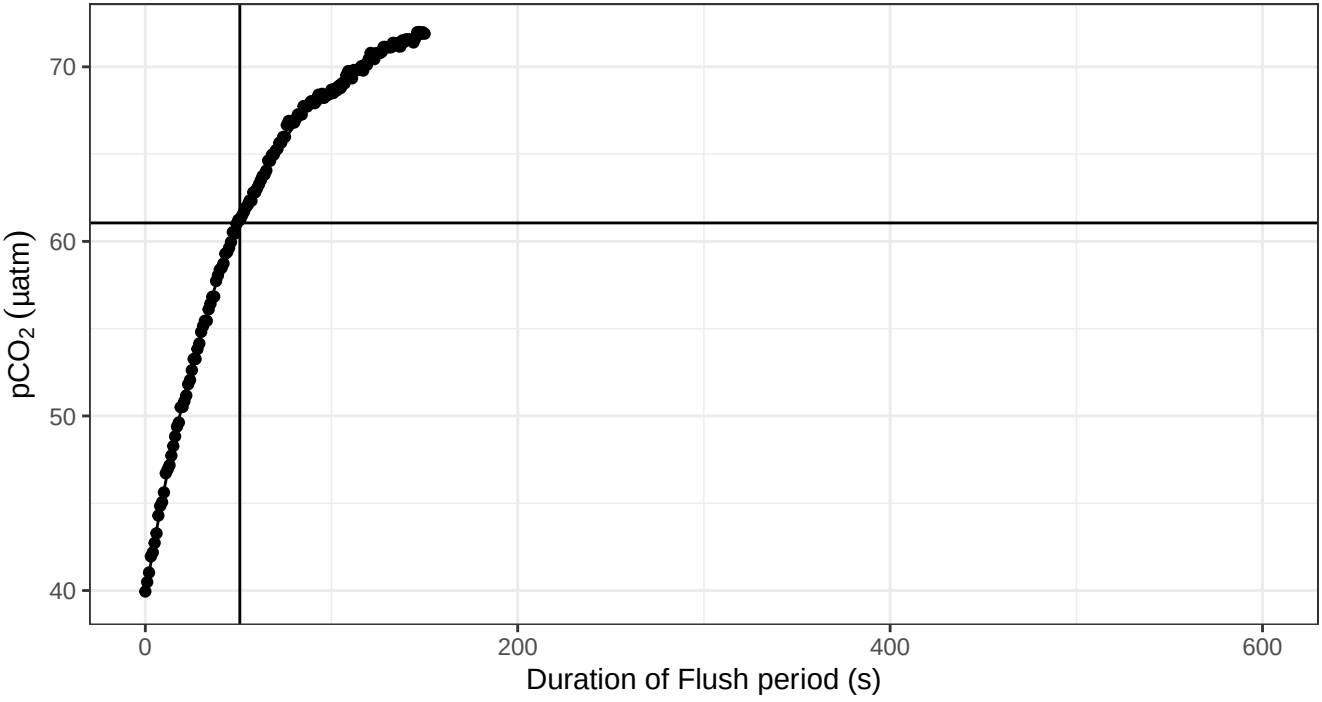


Zero_counter: 81 Tau: 54.1 Mean absolute residual (%): 0.75

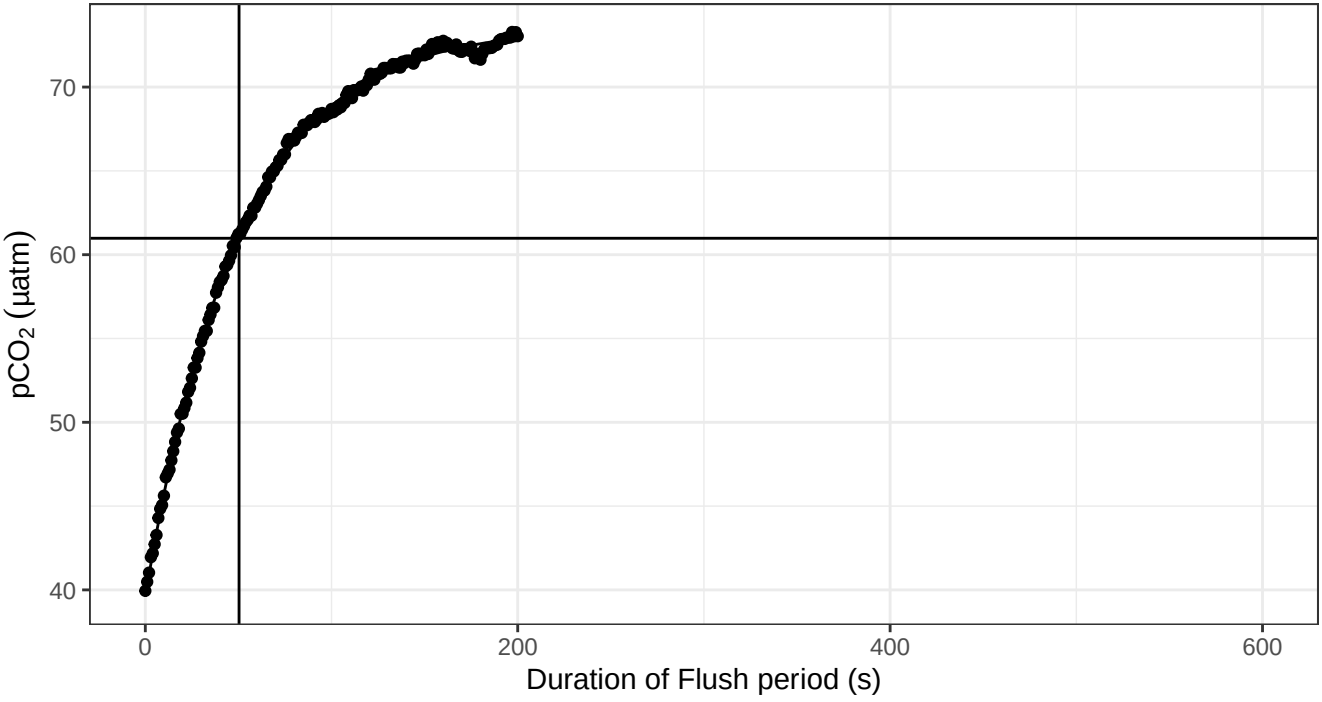


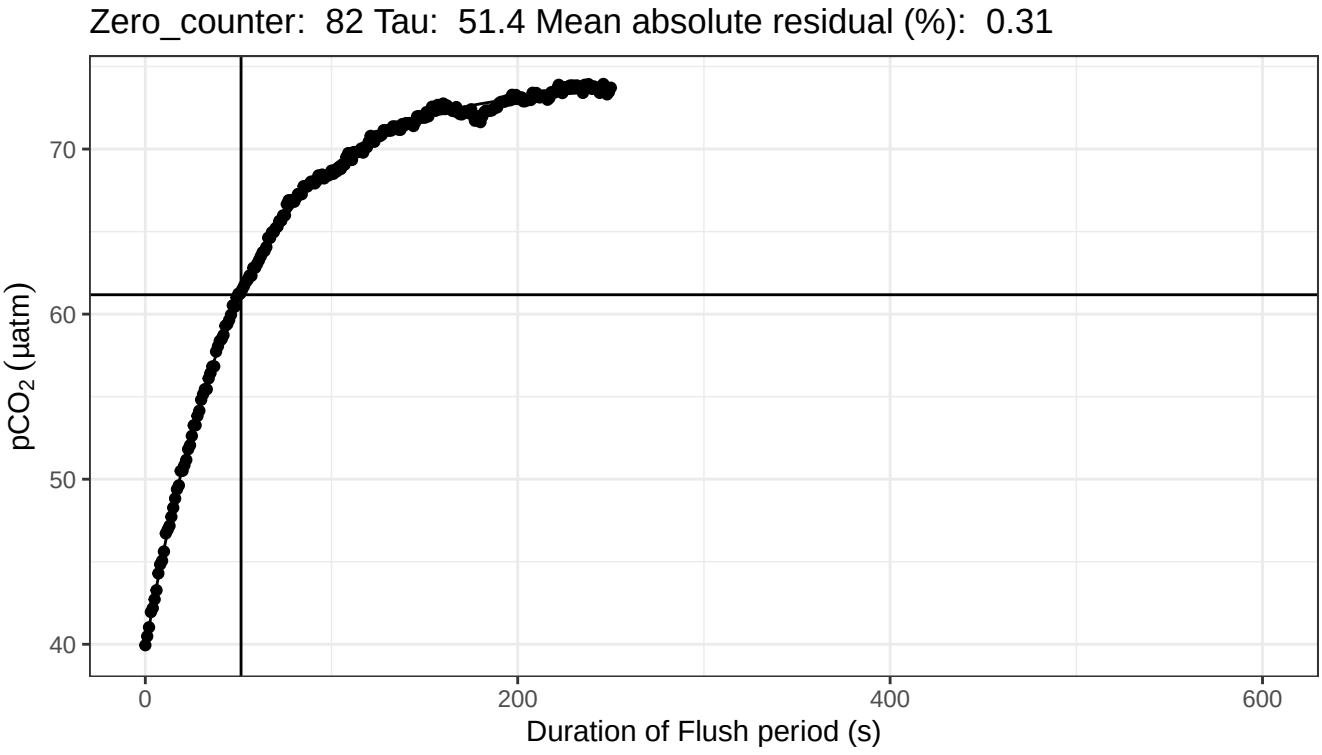

Zero_counter: 81 Tau: 53.4 Mean absolute residual (%): 0.75
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

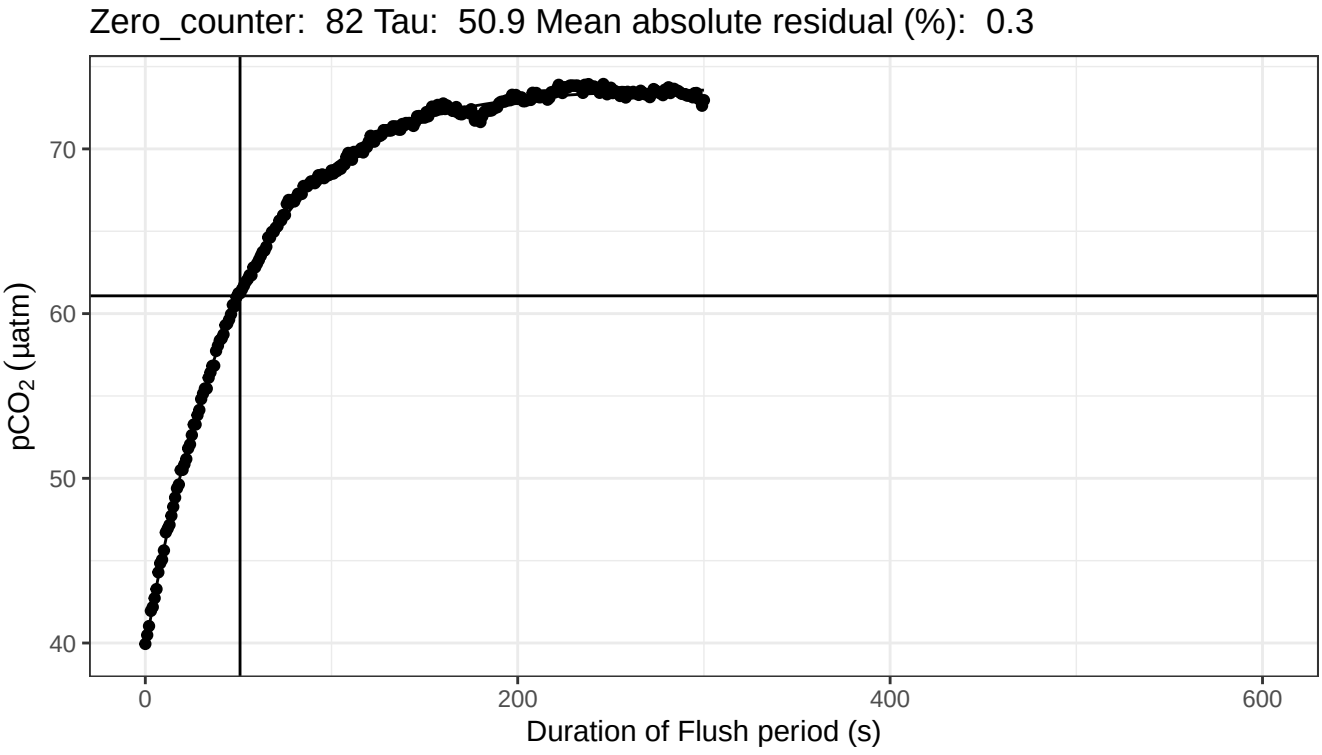
Zero_counter: 82 Tau: 50.7 Mean absolute residual (%): 0.26



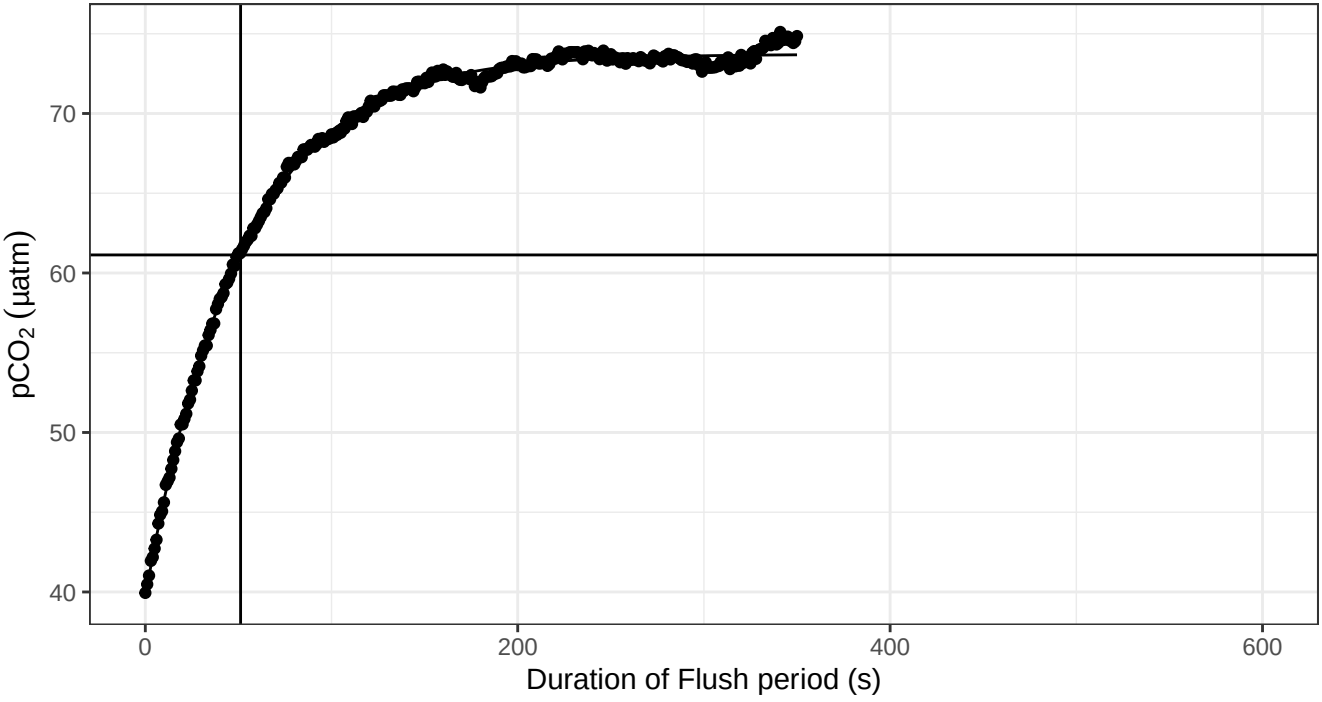
Zero_counter: 82 Tau: 50.3 Mean absolute residual (%): 0.3



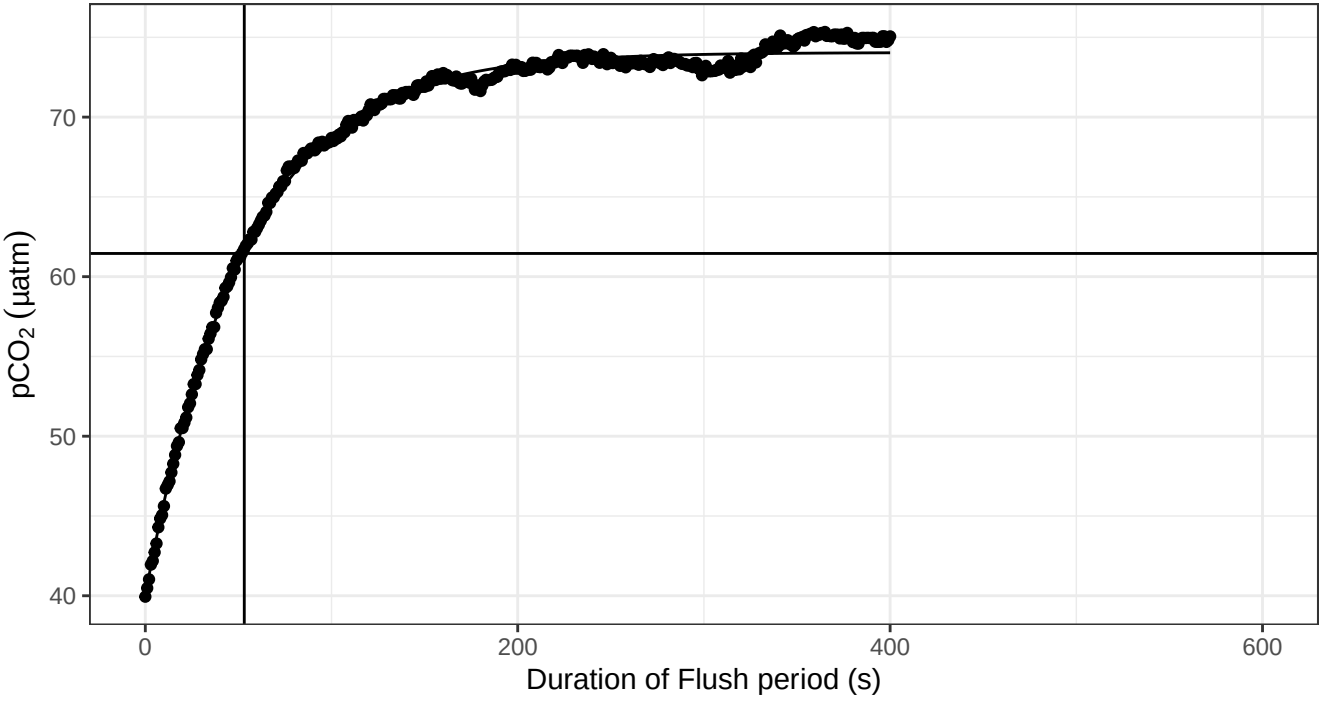

Zero_counter: 82 Tau: 51.4 Mean absolute residual (%): 0.31
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

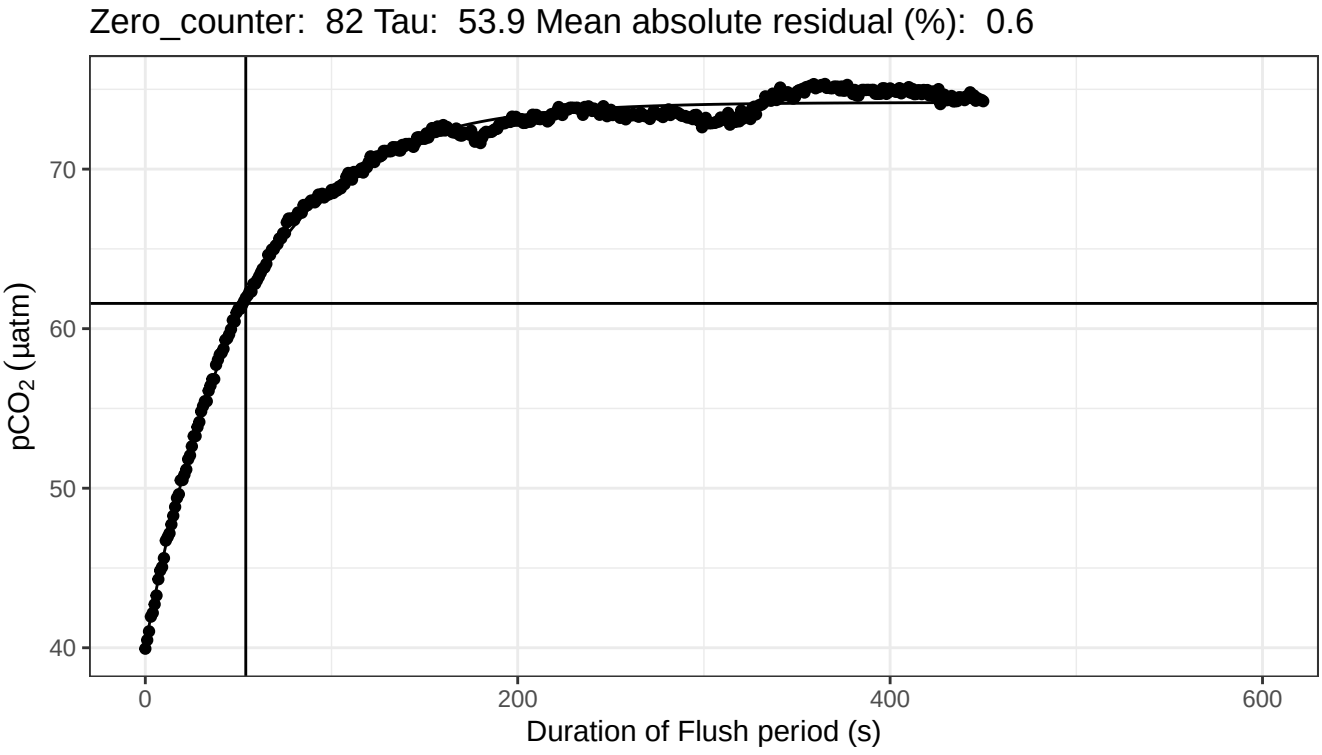

Zero_counter: 82 Tau: 50.9 Mean absolute residual (%): 0.3
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

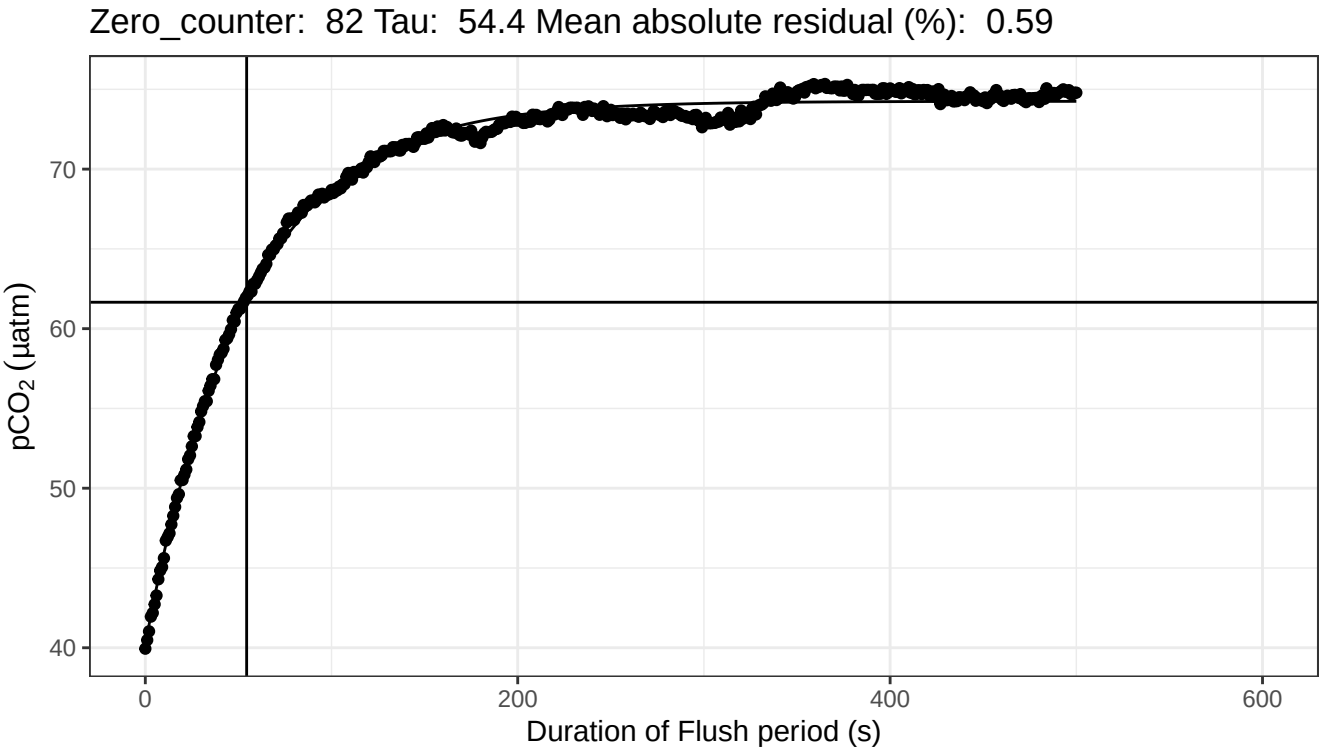
Zero_counter: 82 Tau: 51.2 Mean absolute residual (%): 0.38



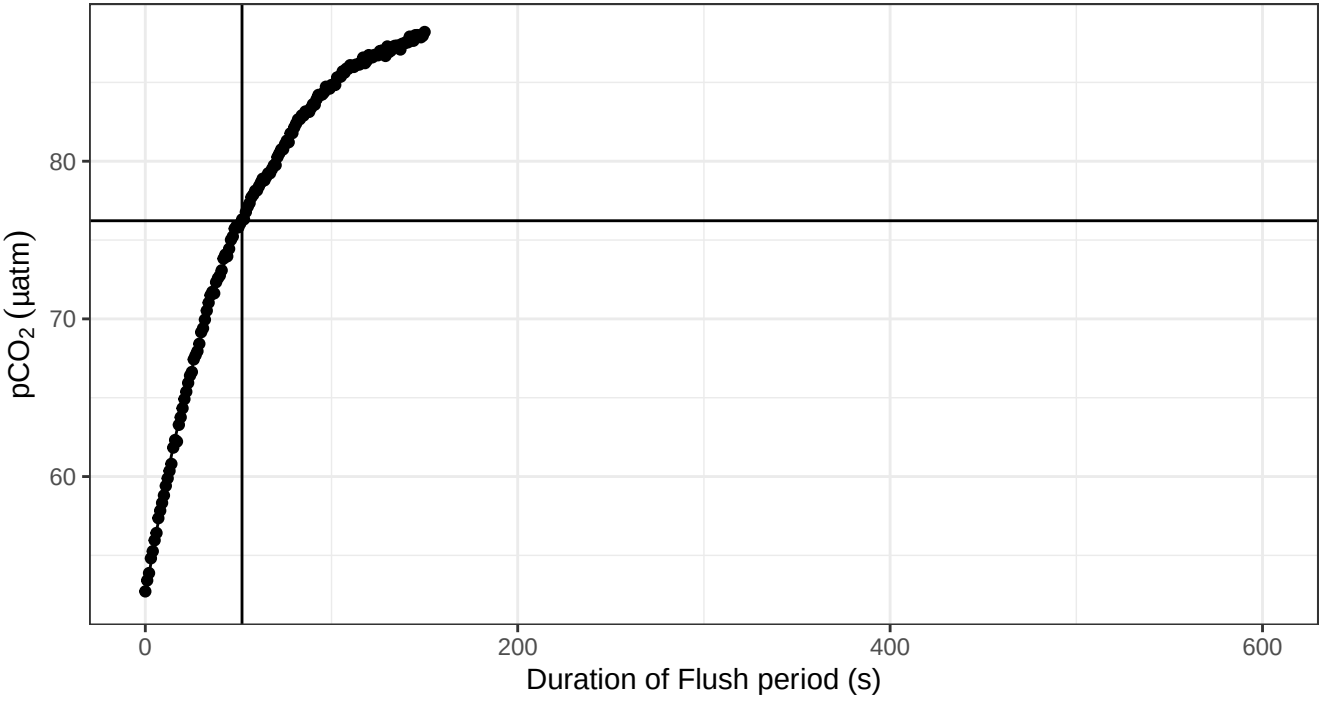
Zero_counter: 82 Tau: 53.1 Mean absolute residual (%): 0.57

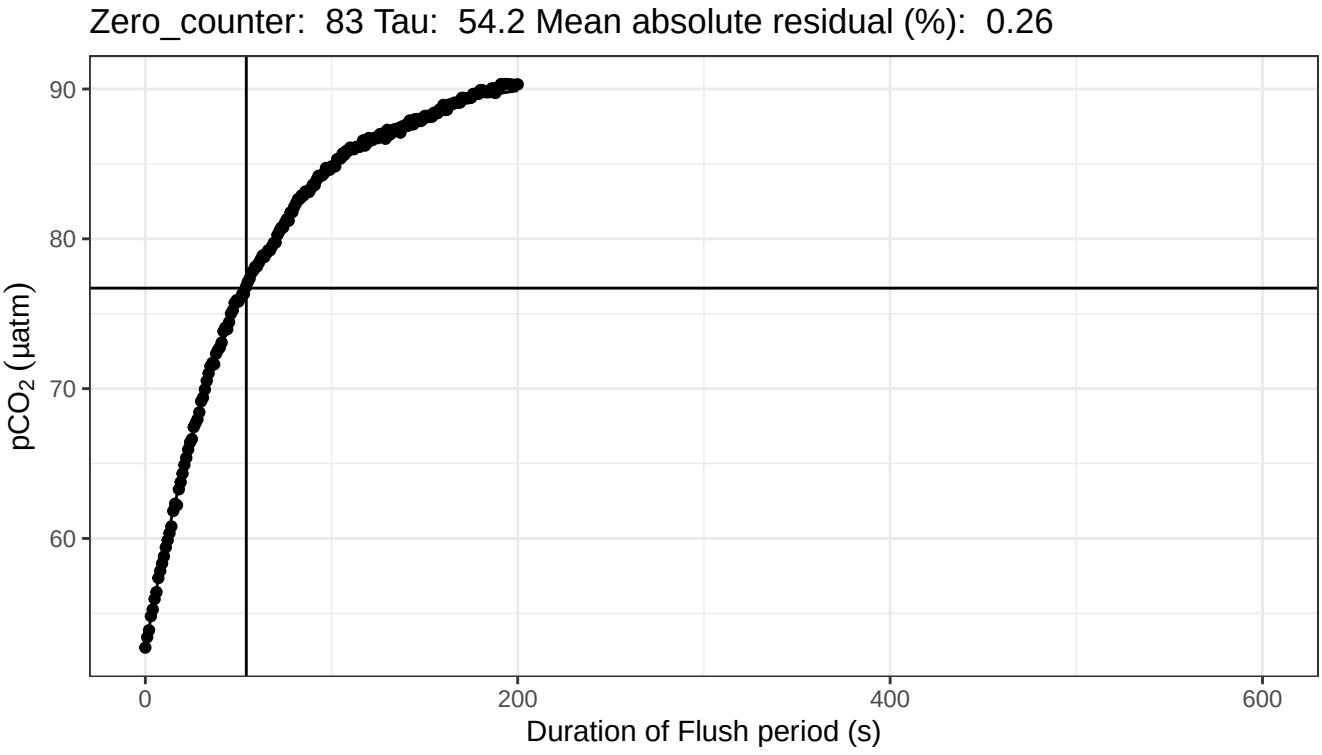


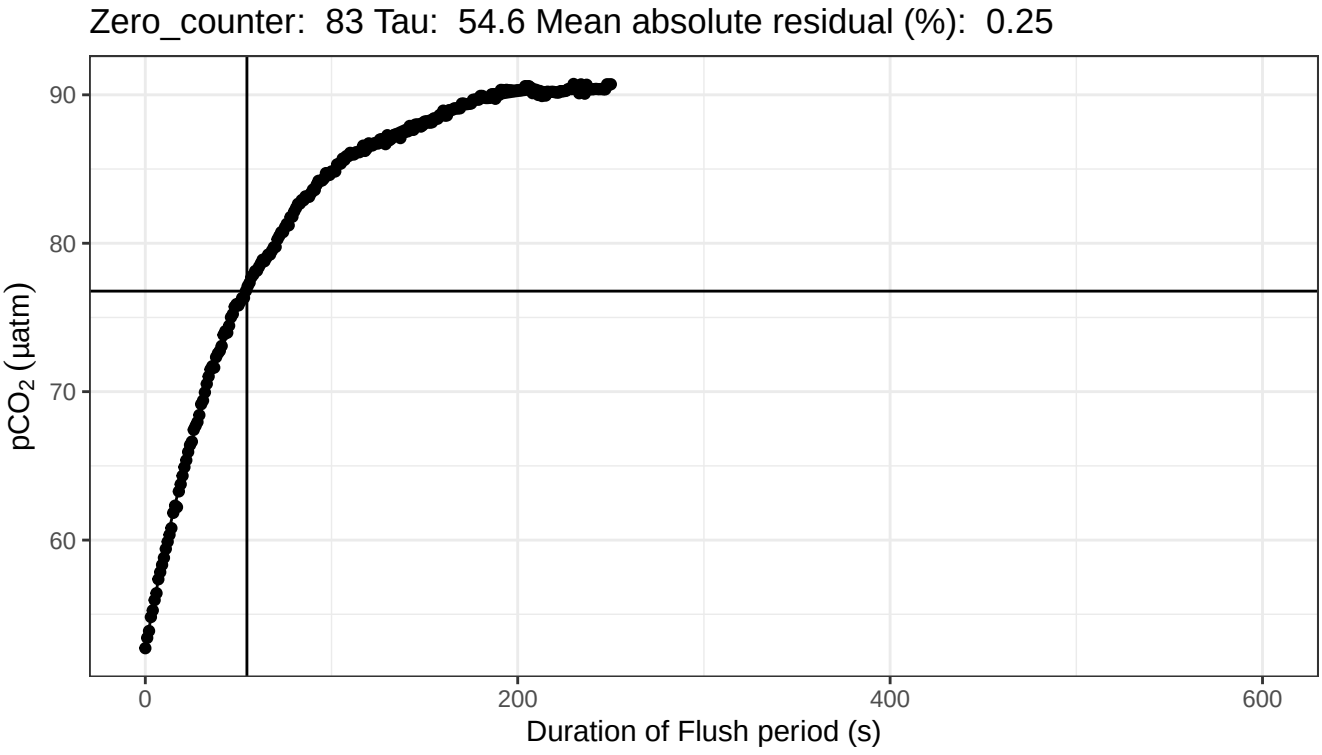

Zero_counter: 82 Tau: 53.9 Mean absolute residual (%): 0.6
pCO2 (µatm)
70
60
50
40
0
200
400
600
Duration of Flush period (s)

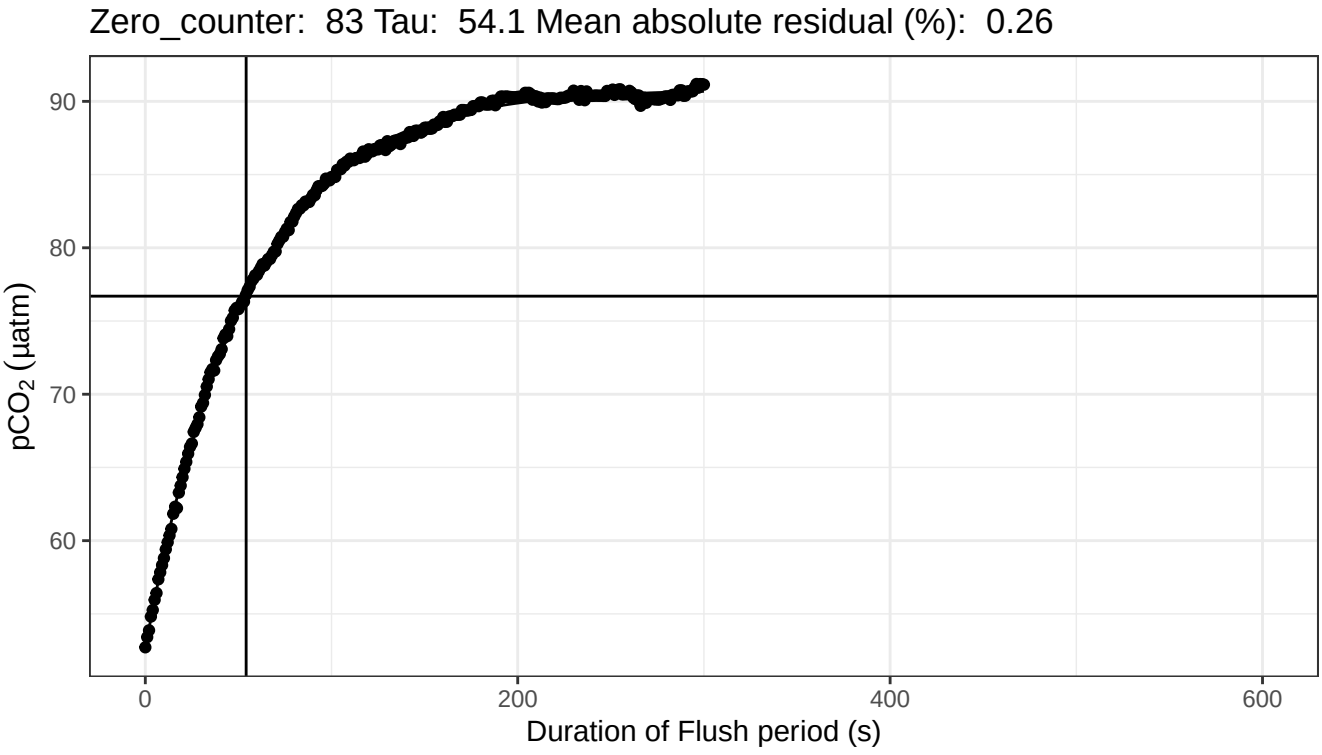

Zero_counter: 82 Tau: 54.4 Mean absolute residual (%): 0.59
70
60
50
40
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

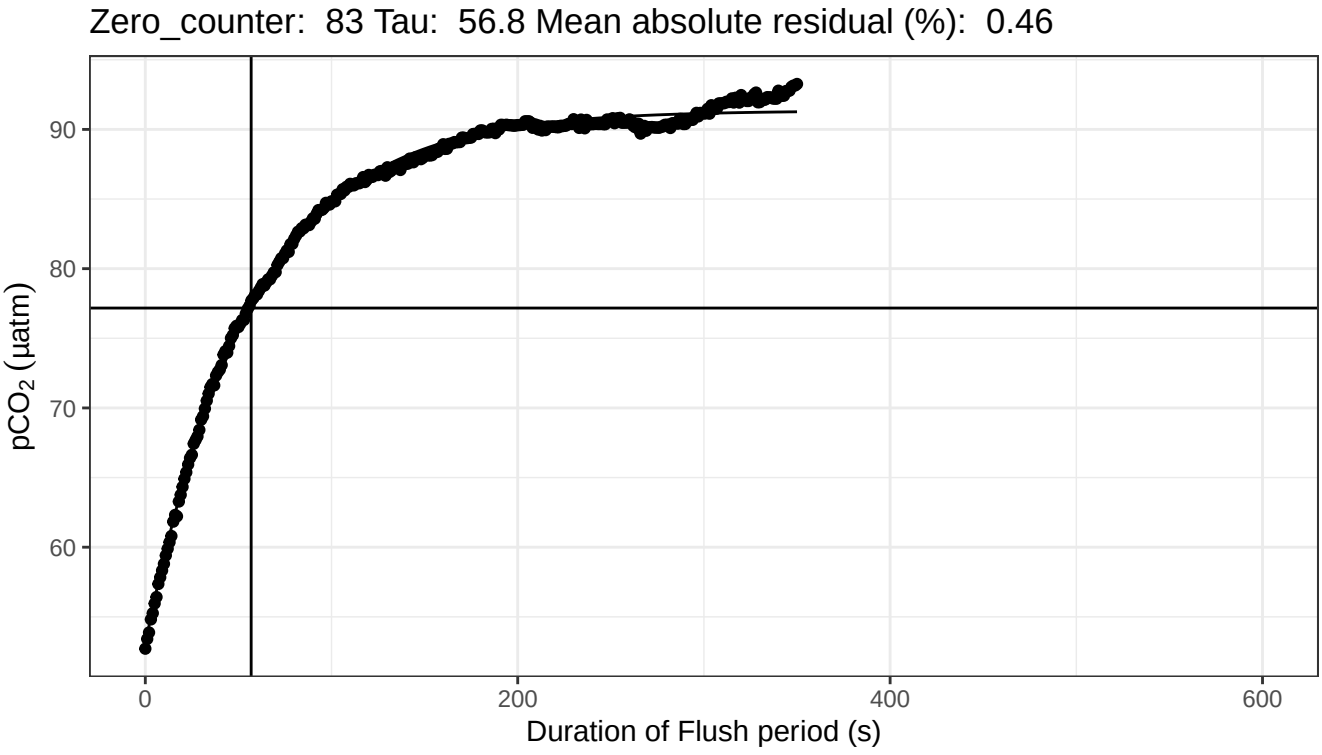
Zero_counter: 83 Tau: 51.9 Mean absolute residual (%): 0.21

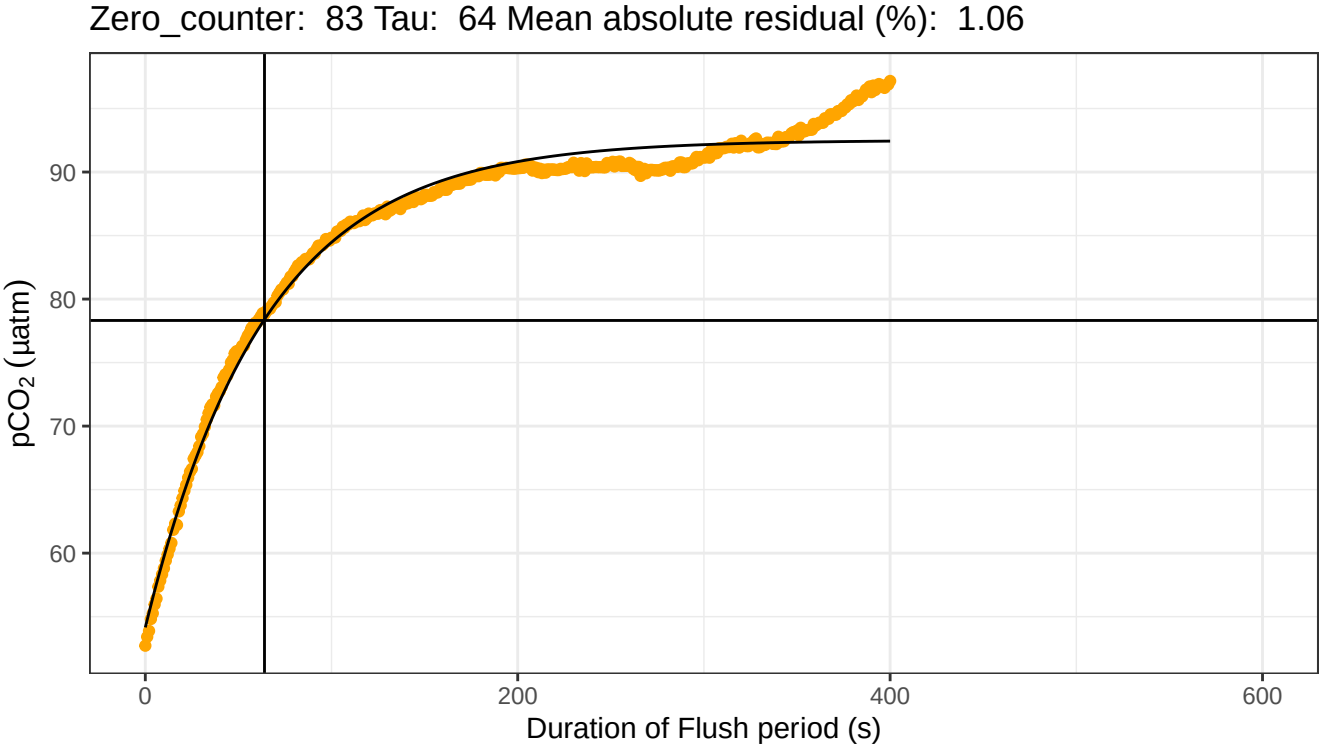


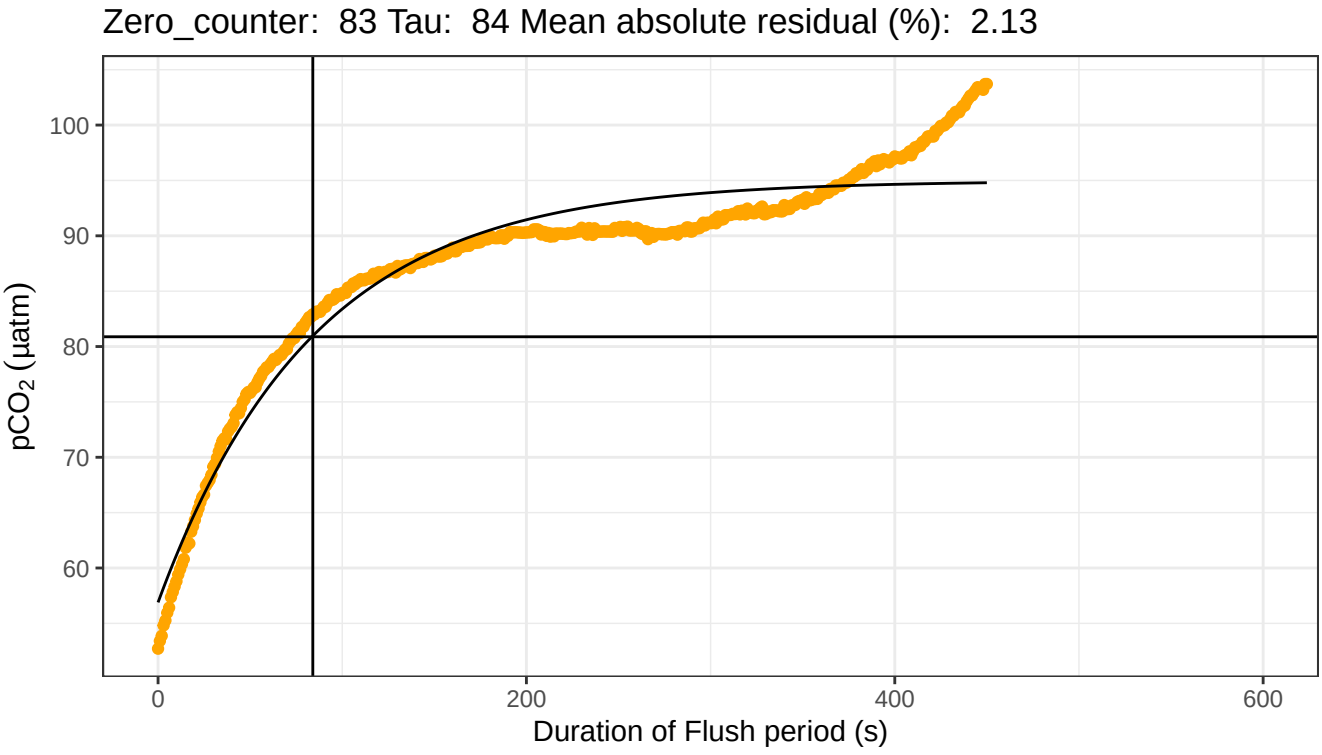

Zero_counter: 83 Tau: 54.2 Mean absolute residual (%): 0.26
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

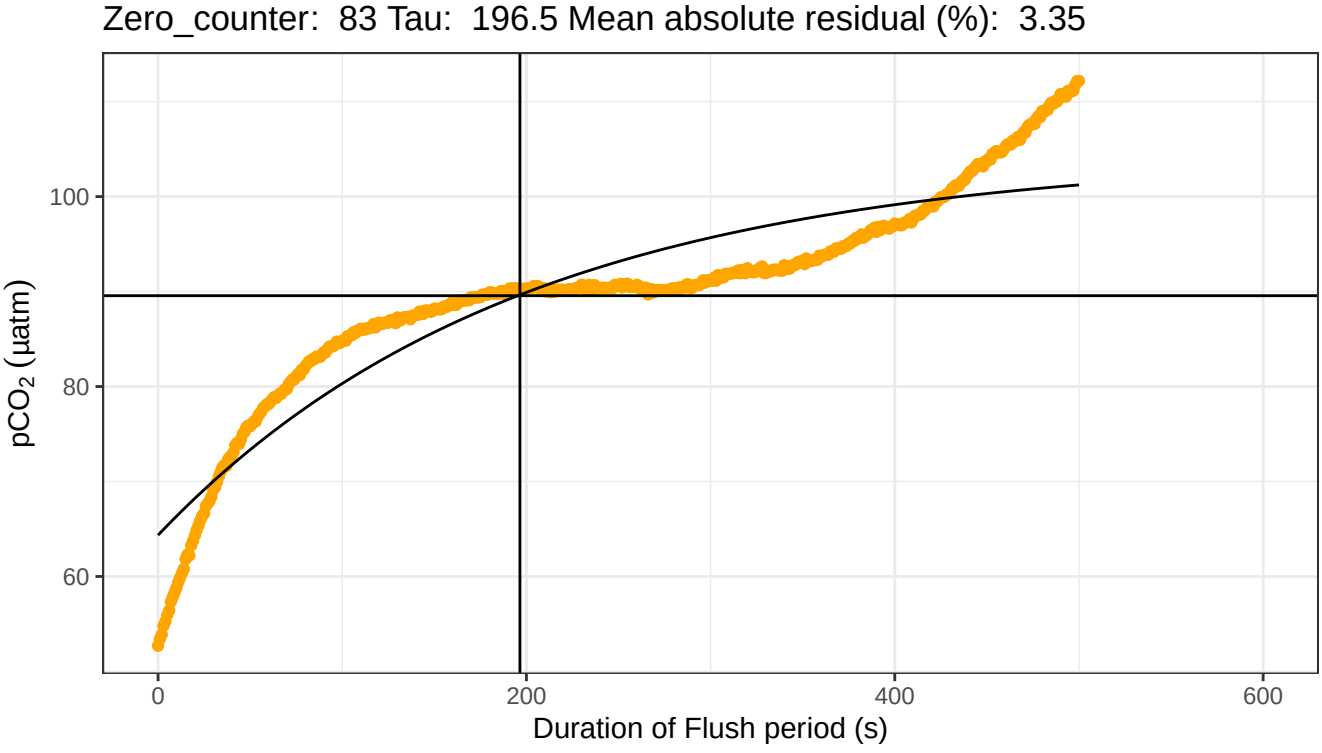

Zero_counter: 83 Tau: 54.6 Mean absolute residual (%): 0.25
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

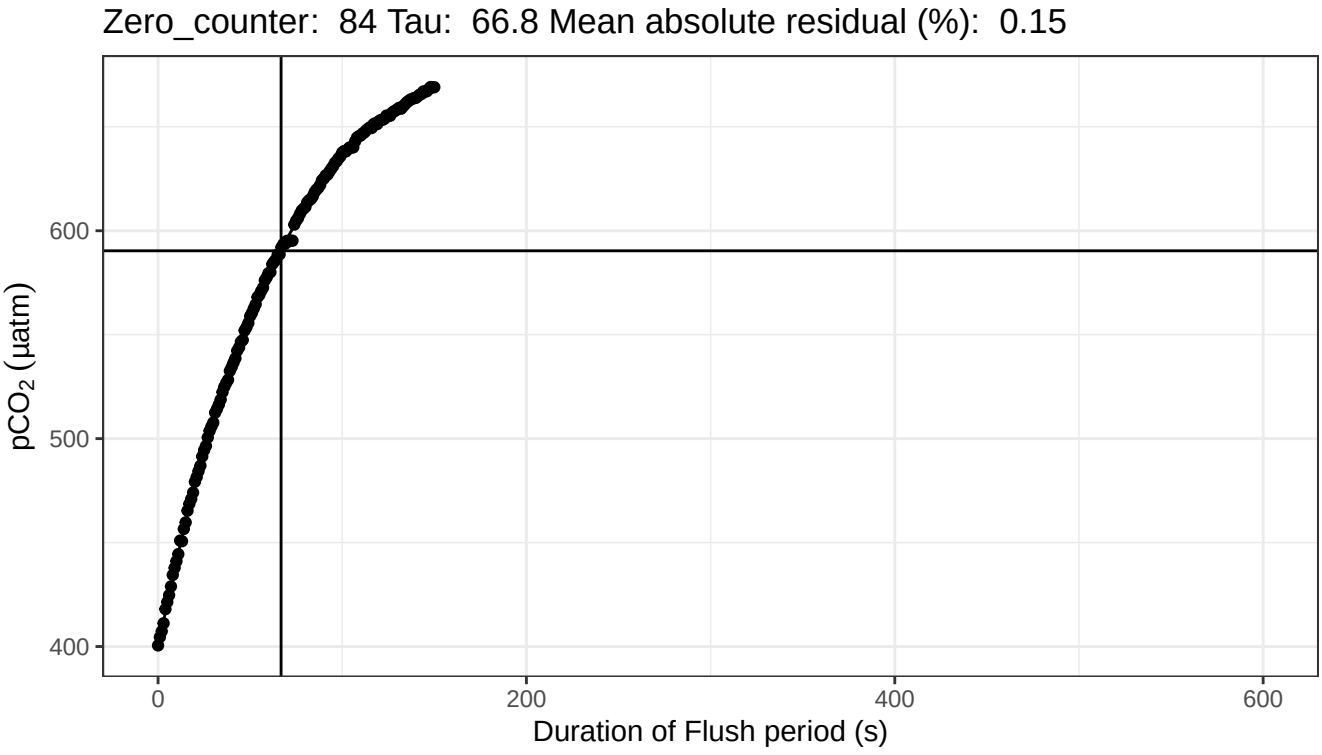

Zero_counter: 83 Tau: 54.1 Mean absolute residual (%): 0.26
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

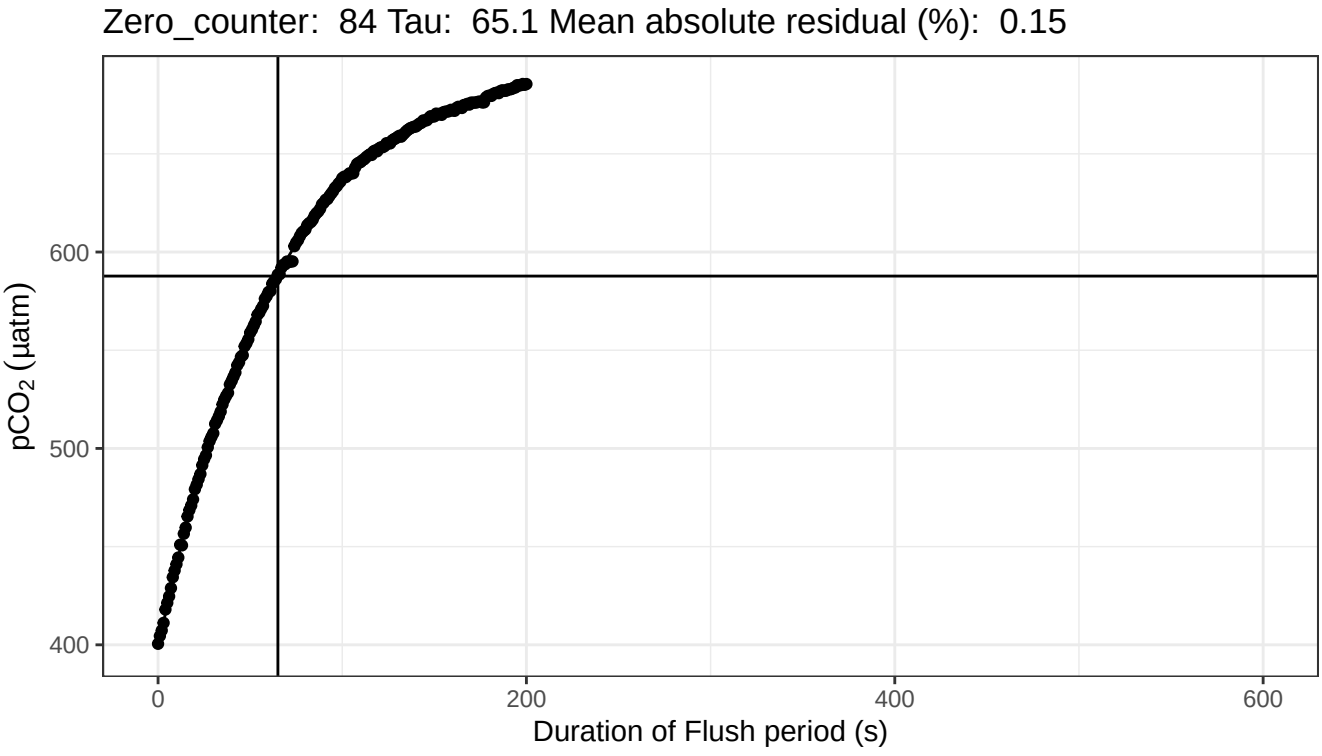

Zero_counter: 83 Tau: 56.8 Mean absolute residual (%): 0.46
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

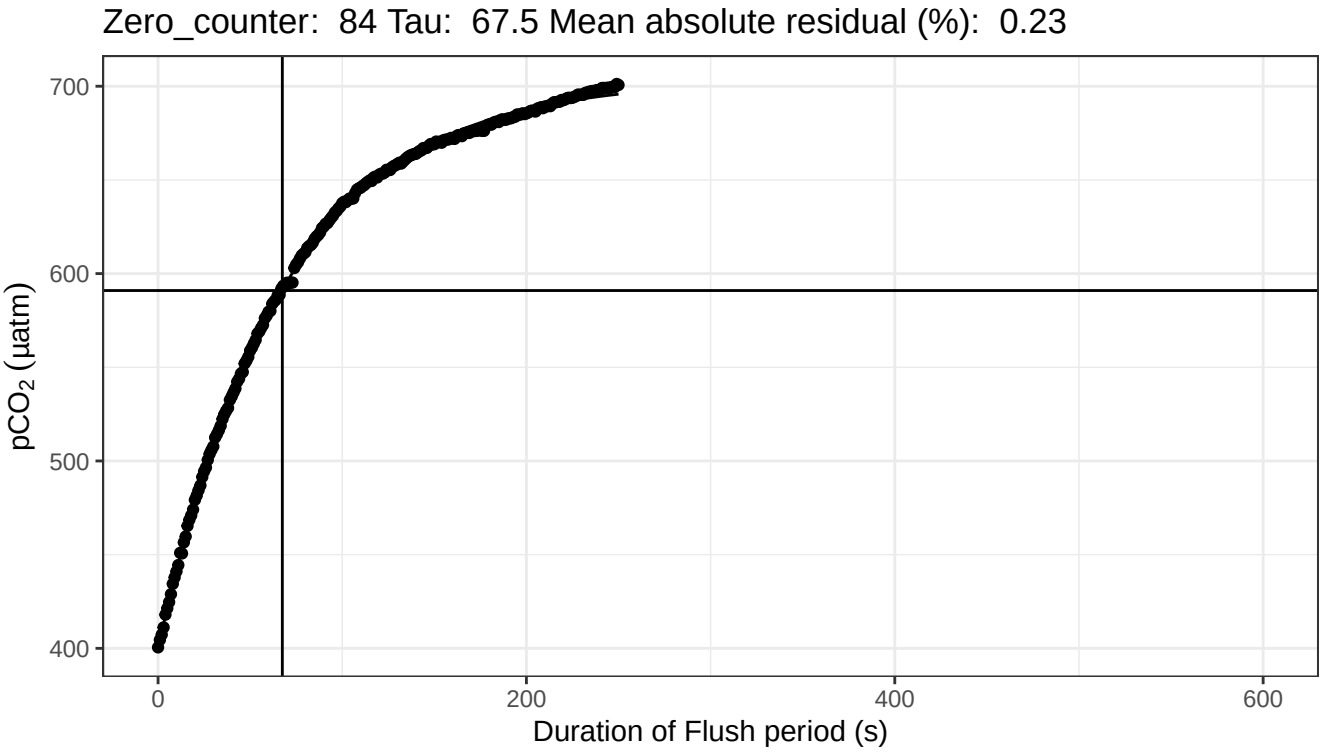

Zero_counter: 83 Tau: 64 Mean absolute residual (%): 1.06
pCO2 (µatm)
90
80
70
60
0
200
400
600
Duration of Flush period (s)

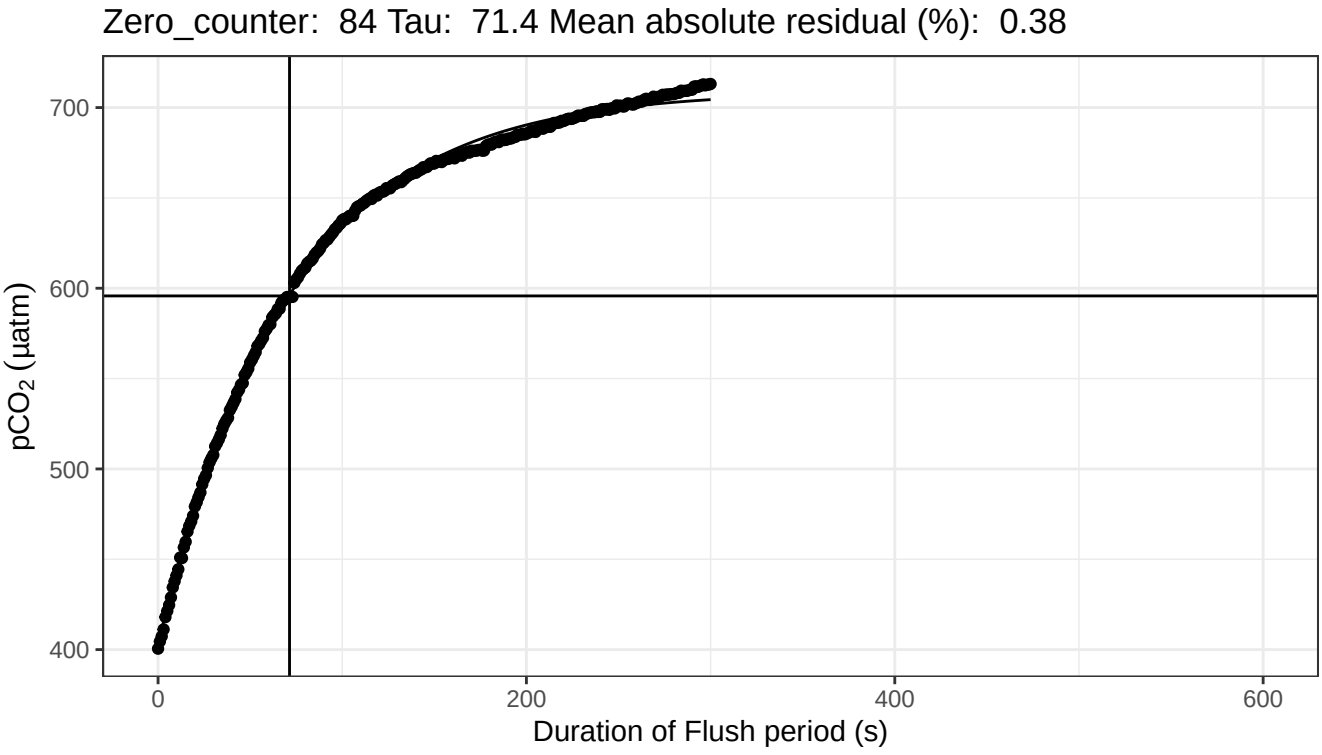

Zero_counter: 83 Tau: 84 Mean absolute residual (%): 2.13
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

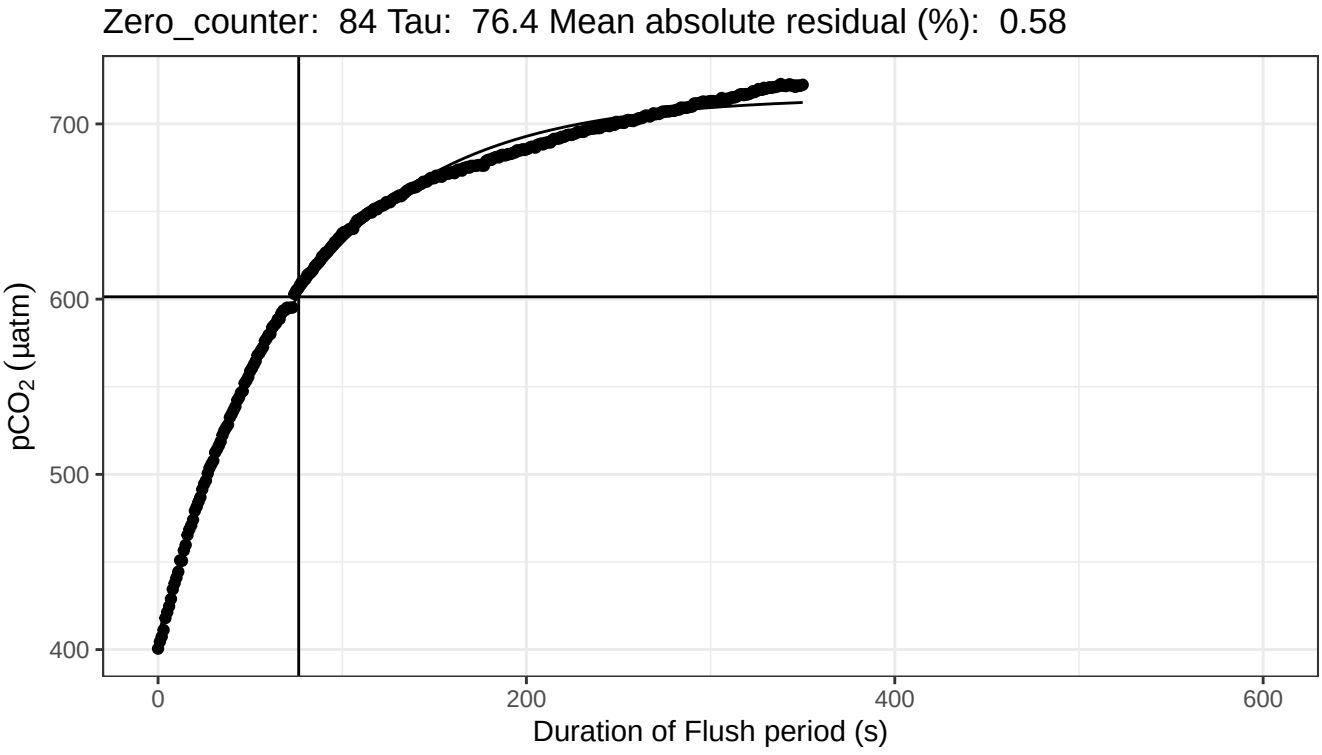

Zero_counter: 83 Tau: 196.5 Mean absolute residual (%): 3.35
100
80
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

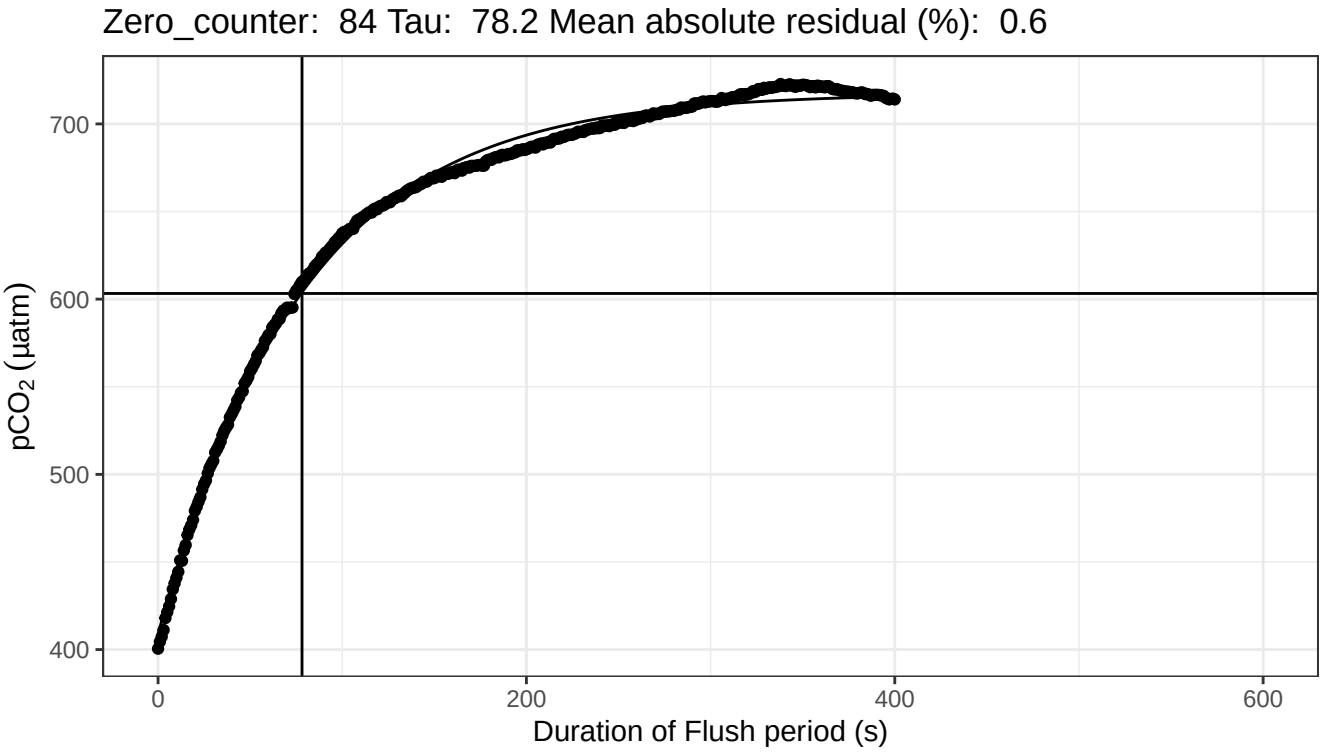

Zero_counter: 84 Tau: 66.8 Mean absolute residual (%): 0.15
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

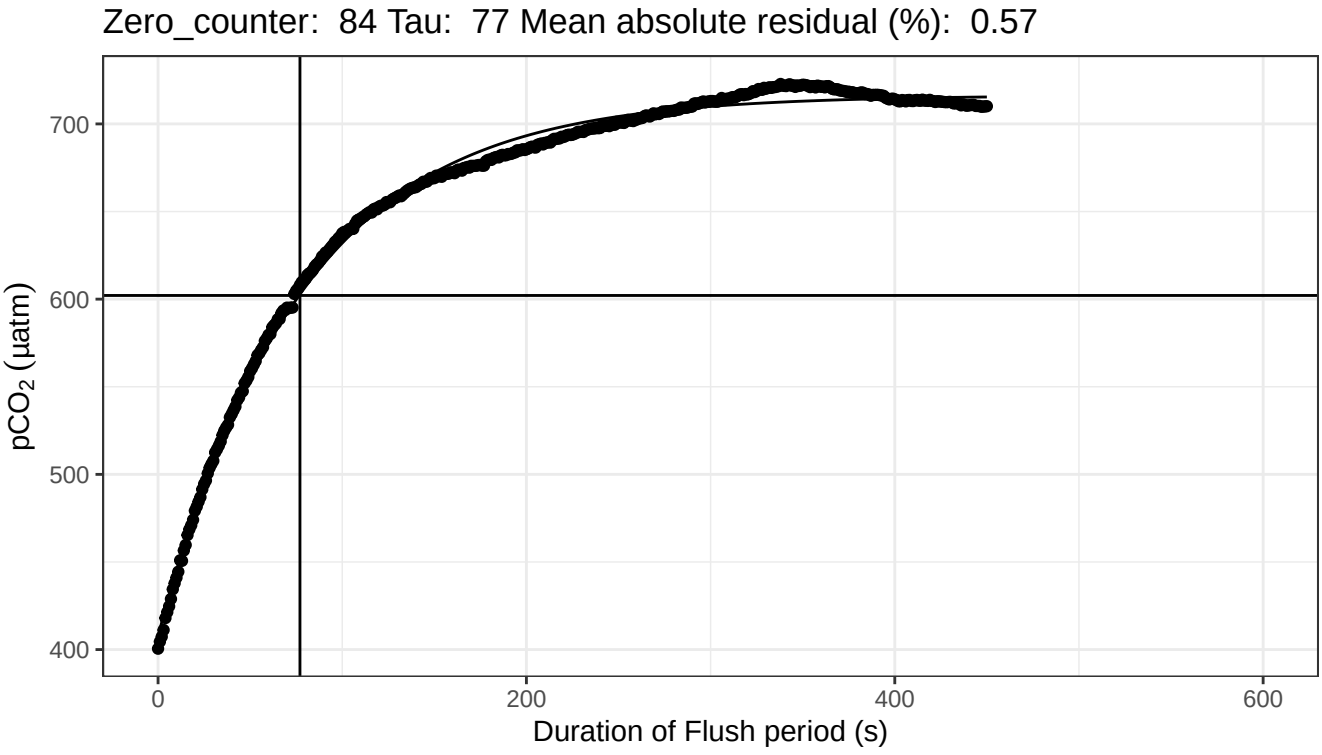

Zero_counter: 84 Tau: 65.1 Mean absolute residual (%): 0.15
pCO2 (µatm)
600
500
400
0
200
400
600
Duration of Flush period (s)

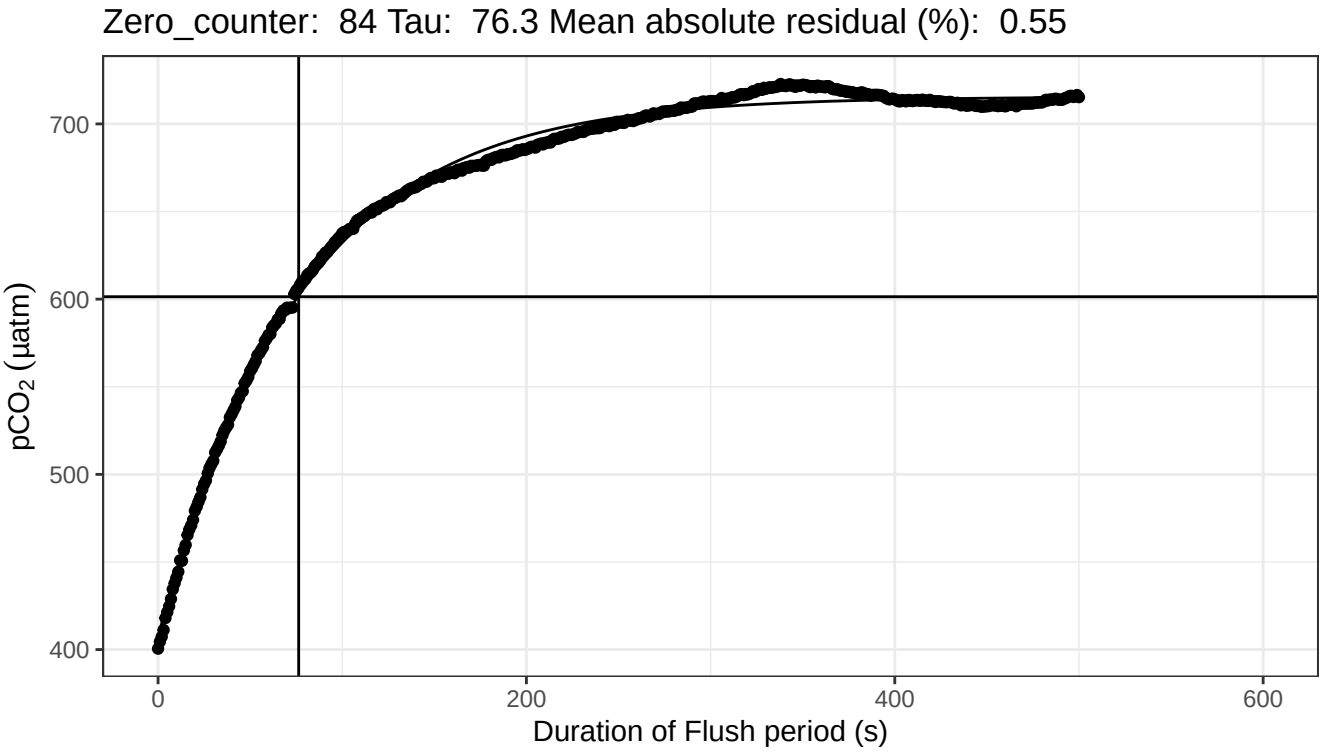

Zero_counter: 84 Tau: 67.5 Mean absolute residual (%): 0.23
700
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 84 Tau: 71.4 Mean absolute residual (%): 0.38
700
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

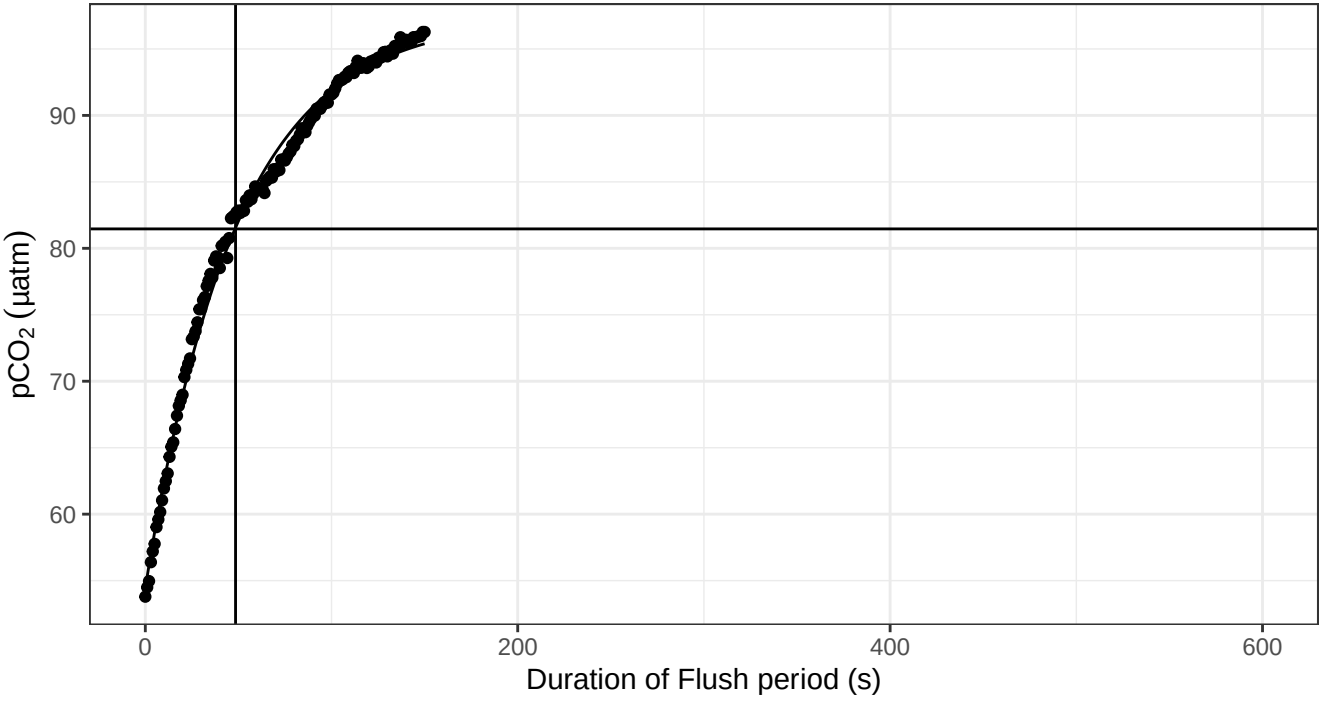

Zero_counter: 84 Tau: 76.4 Mean absolute residual (%): 0.58
700
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

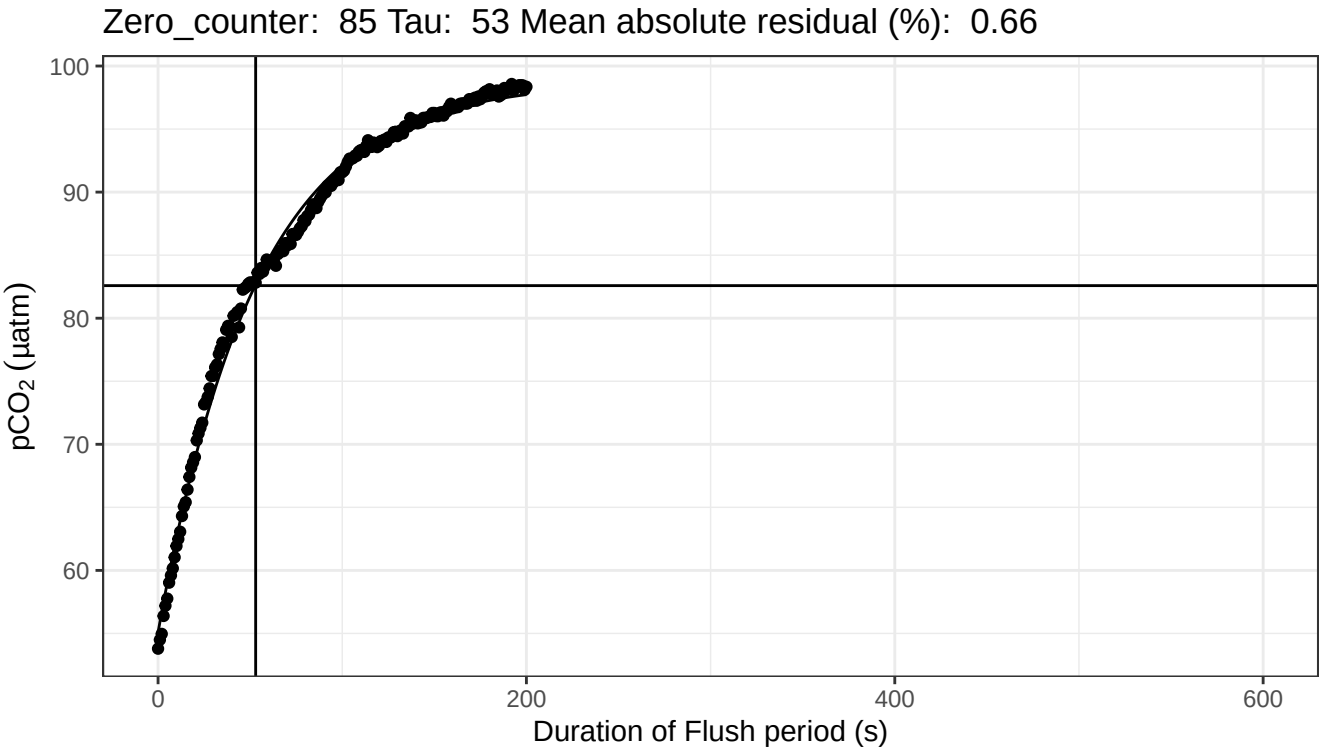

Zero_counter: 84 Tau: 78.2 Mean absolute residual (%): 0.6
700
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

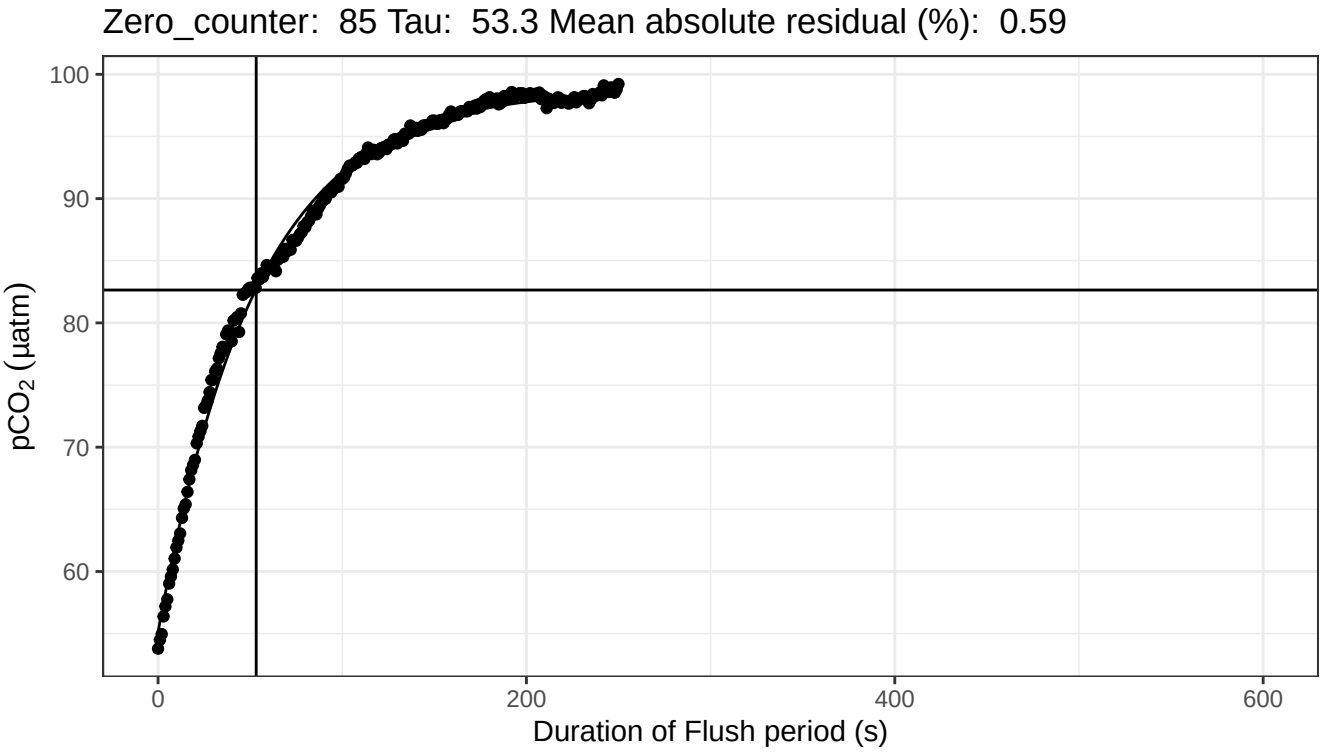

Zero_counter: 84 Tau: 77 Mean absolute residual (%): 0.57
700
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

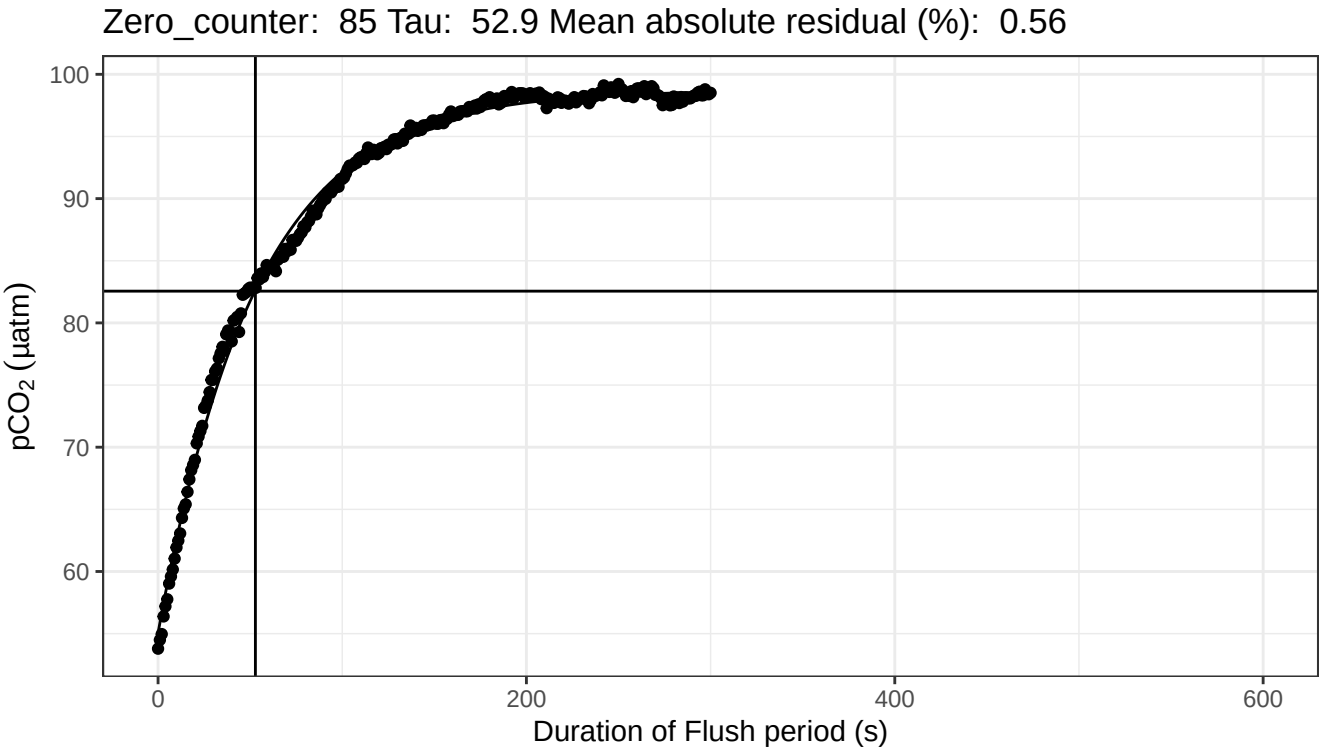

Zero_counter: 84 Tau: 76.3 Mean absolute residual (%): 0.55
700
600
500
400
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

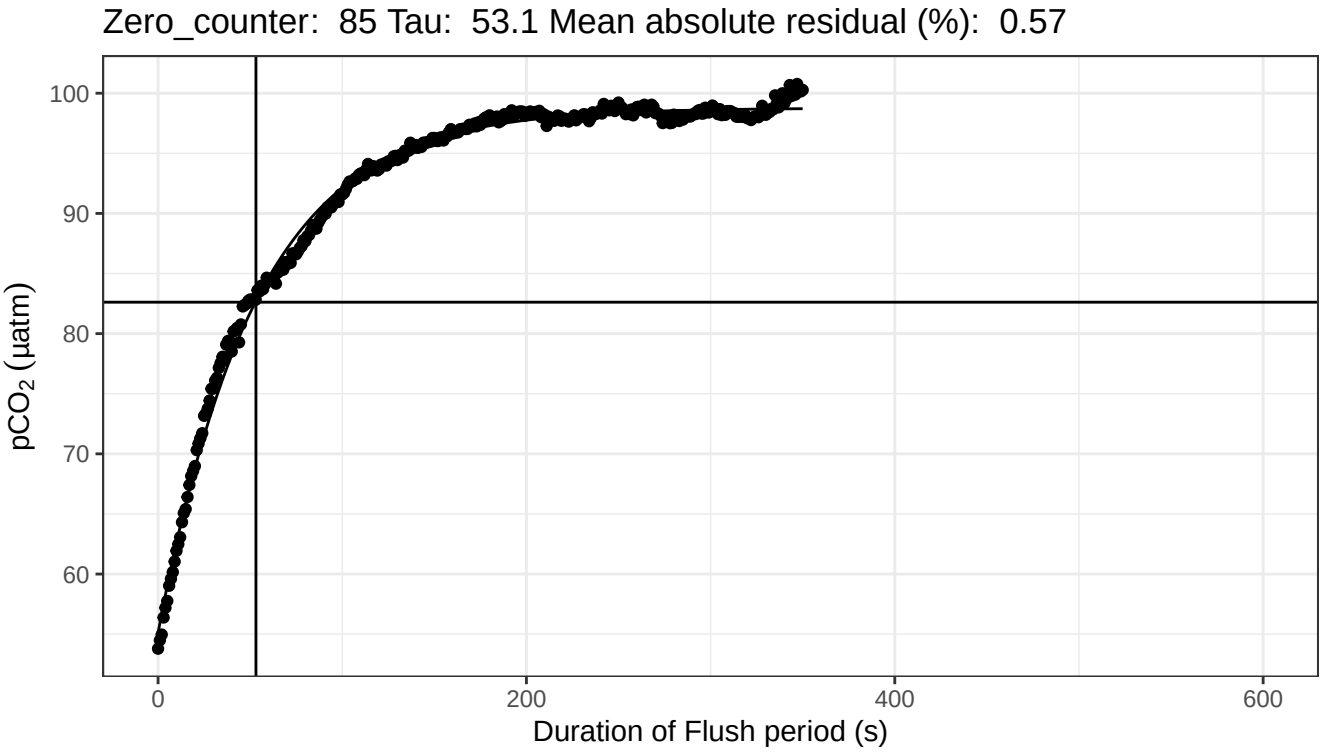
Zero_counter: 85 Tau: 48.5 Mean absolute residual (%): 0.73

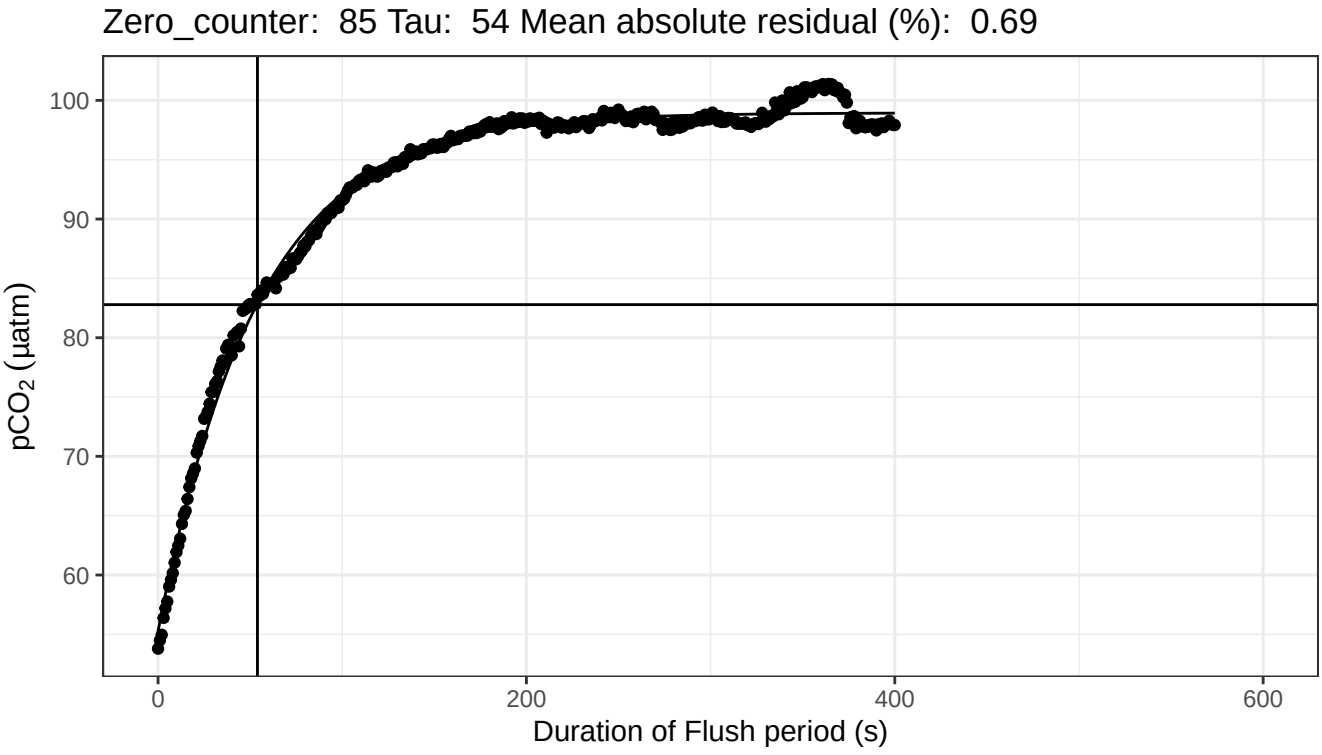


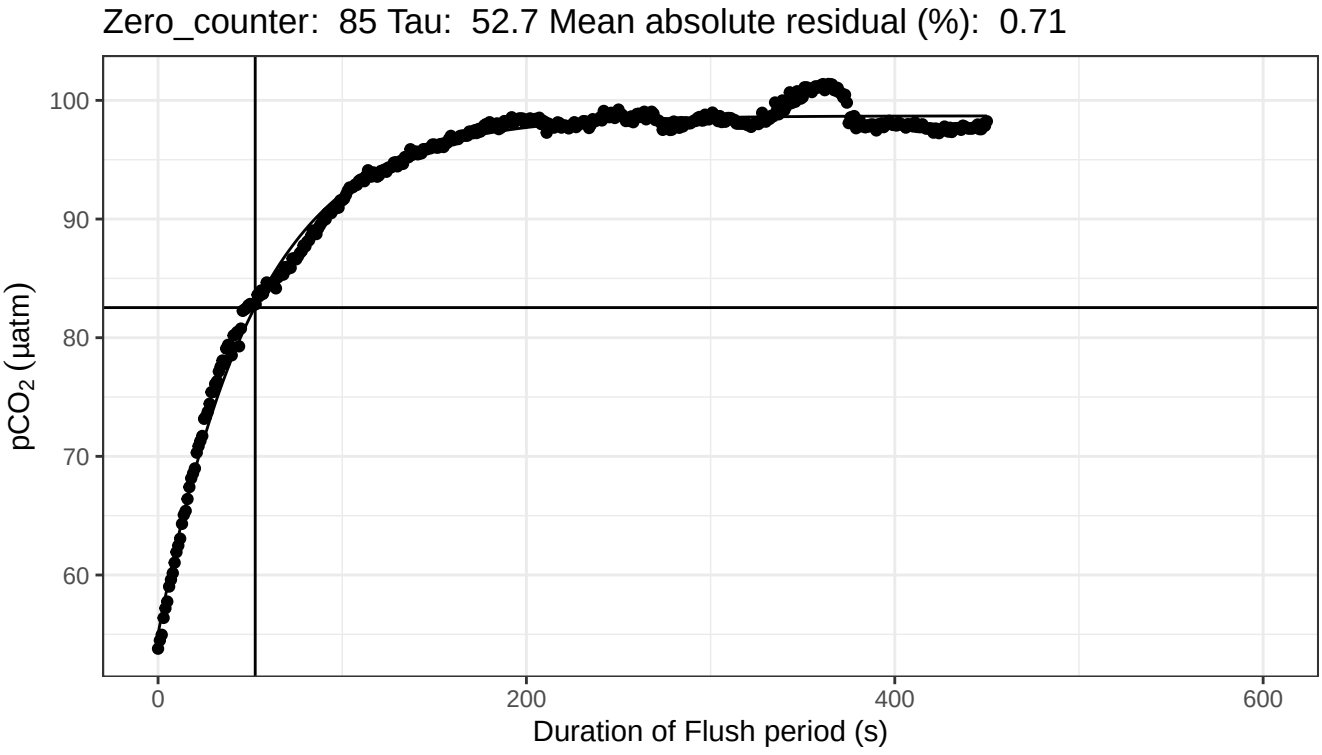

Zero_counter: 85 Tau: 53 Mean absolute residual (%): 0.66
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

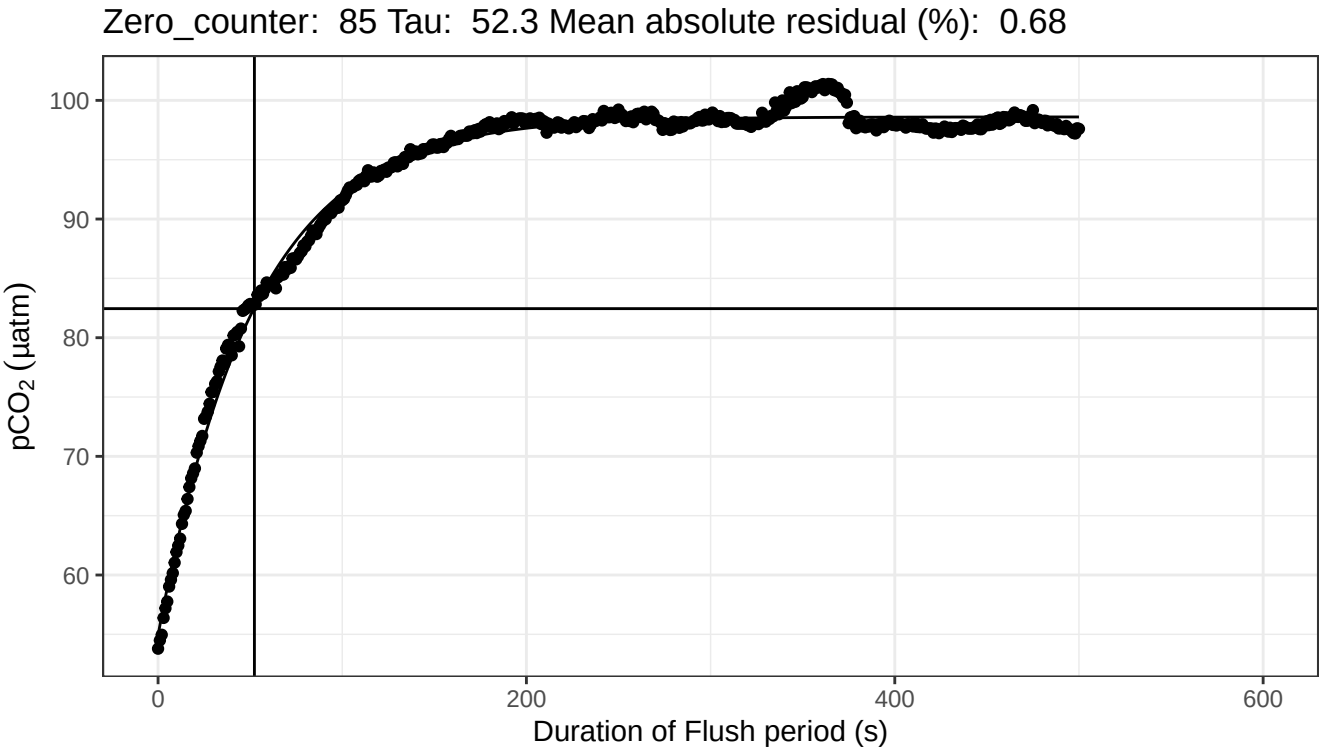

Zero_counter: 85 Tau: 53.3 Mean absolute residual (%): 0.59
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

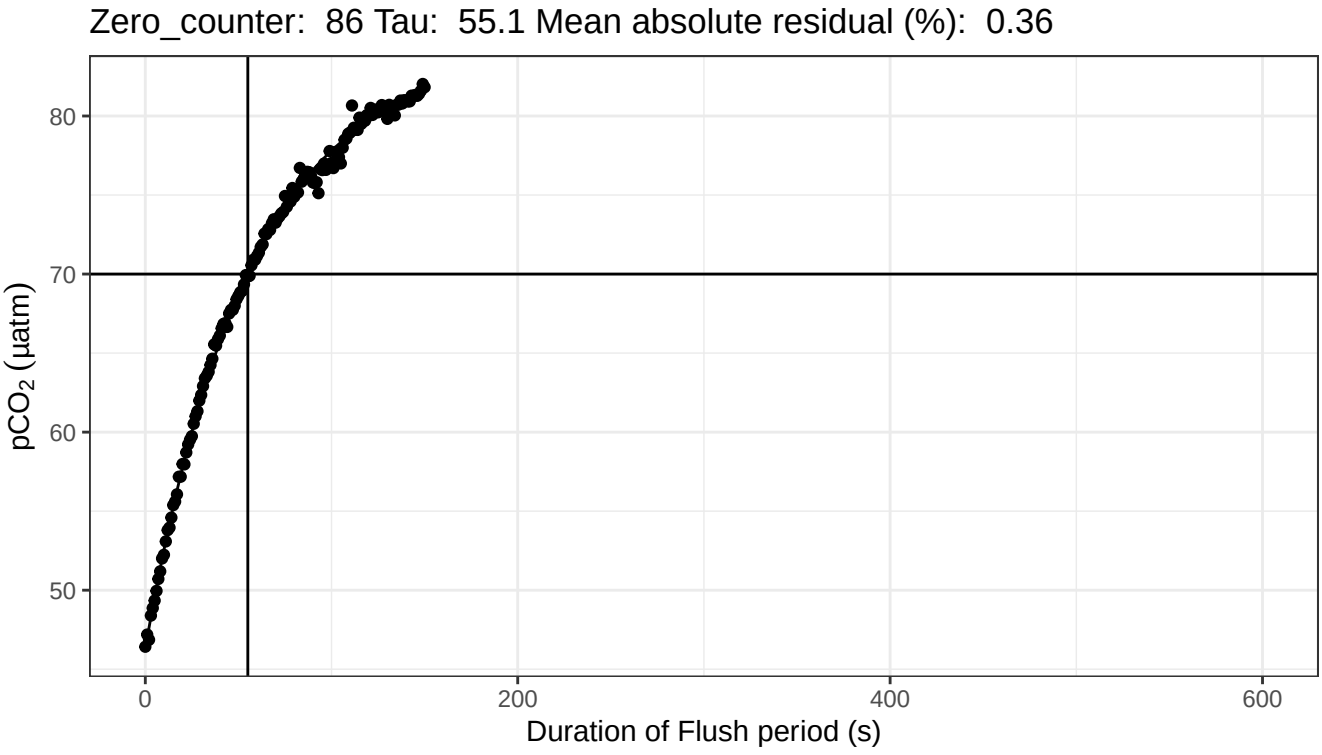

Zero_counter: 85 Tau: 52.9 Mean absolute residual (%): 0.56
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 85 Tau: 53.1 Mean absolute residual (%): 0.57
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

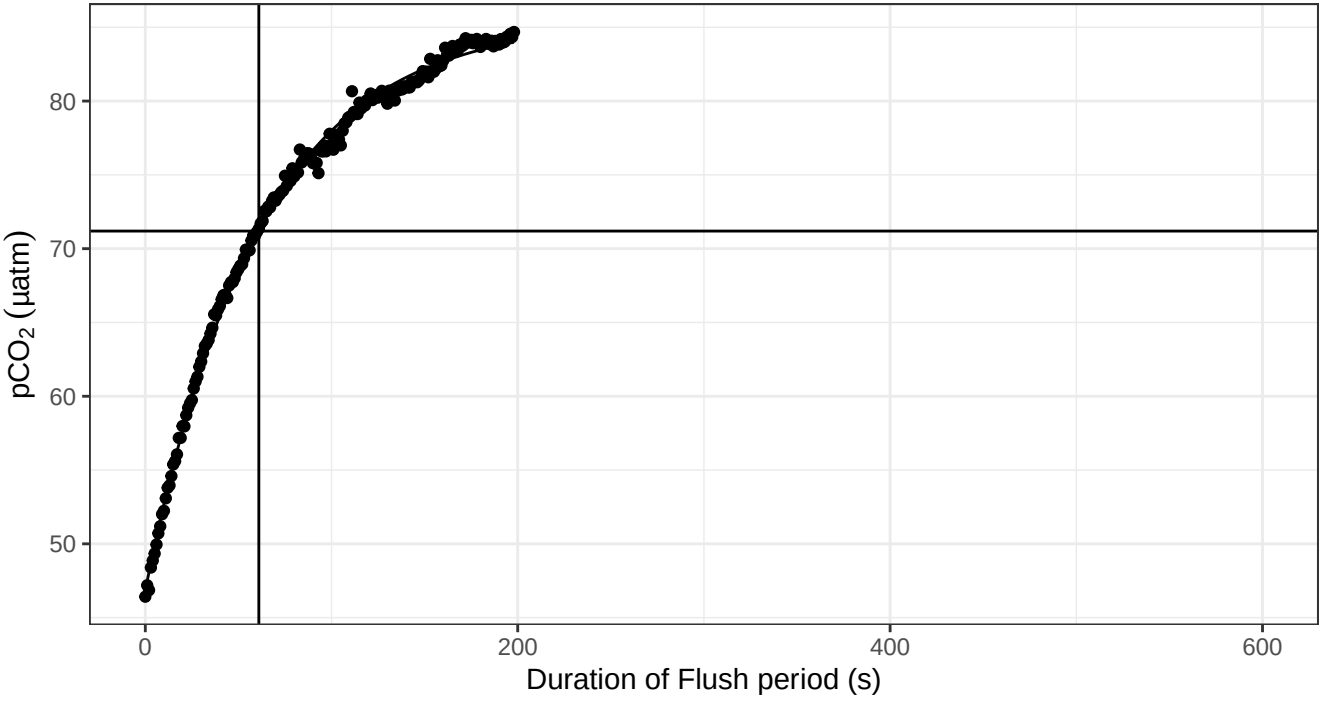

Zero_counter: 85 Tau: 54 Mean absolute residual (%): 0.69
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 85 Tau: 52.7 Mean absolute residual (%): 0.71
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

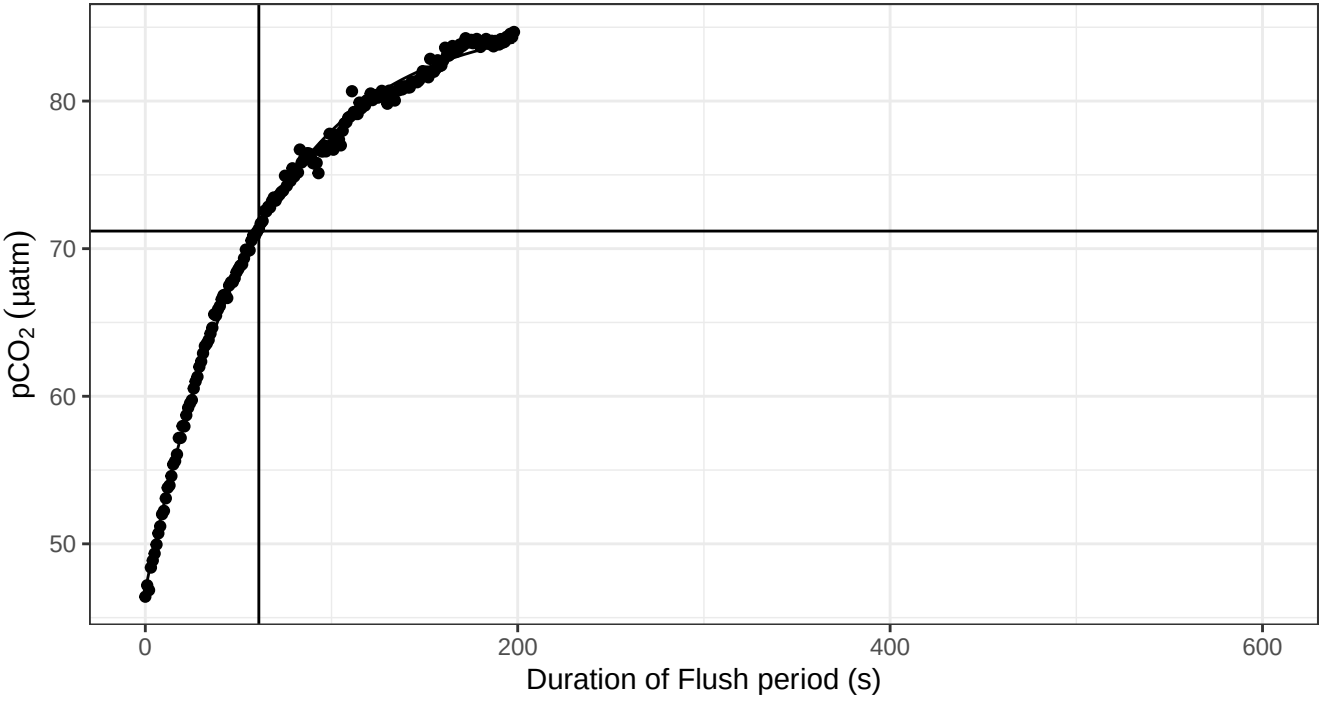

Zero_counter: 85 Tau: 52.3 Mean absolute residual (%): 0.68
100
90
80
70
60
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 86 Tau: 55.1 Mean absolute residual (%): 0.36
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

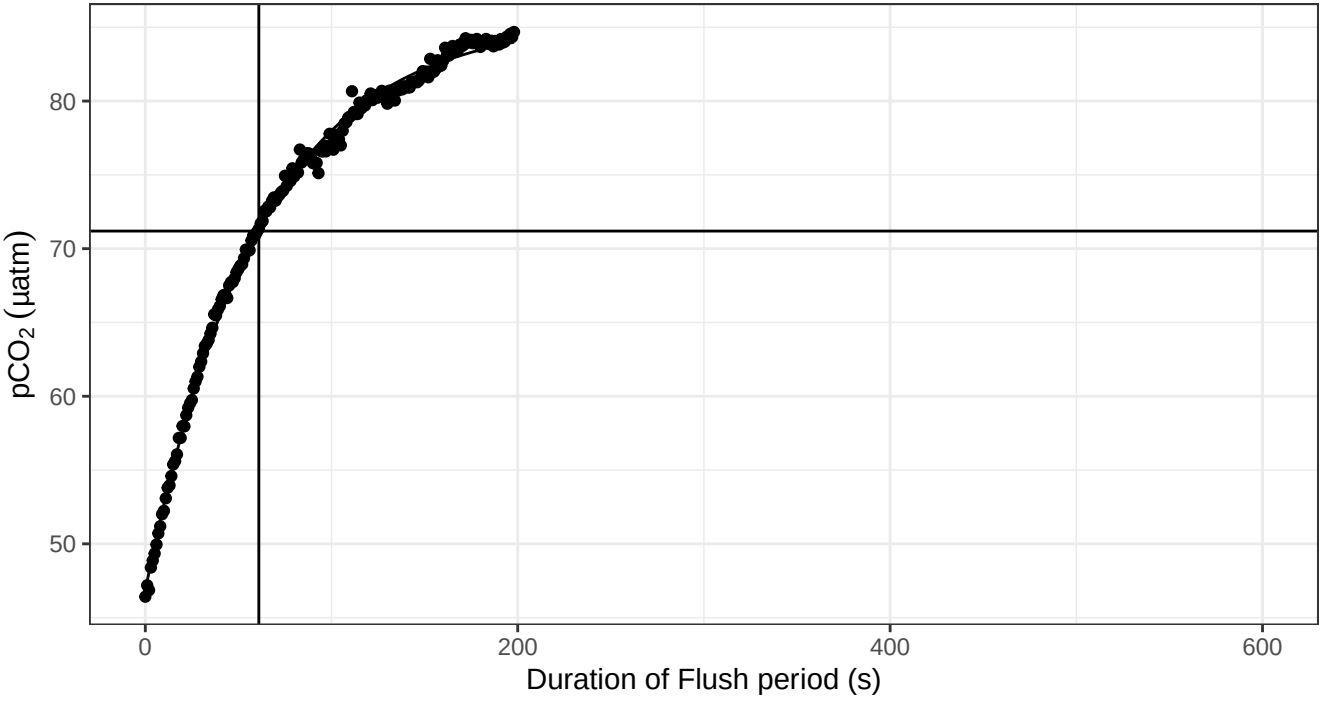
Zero_counter: 86 Tau: 61 Mean absolute residual (%): 0.5

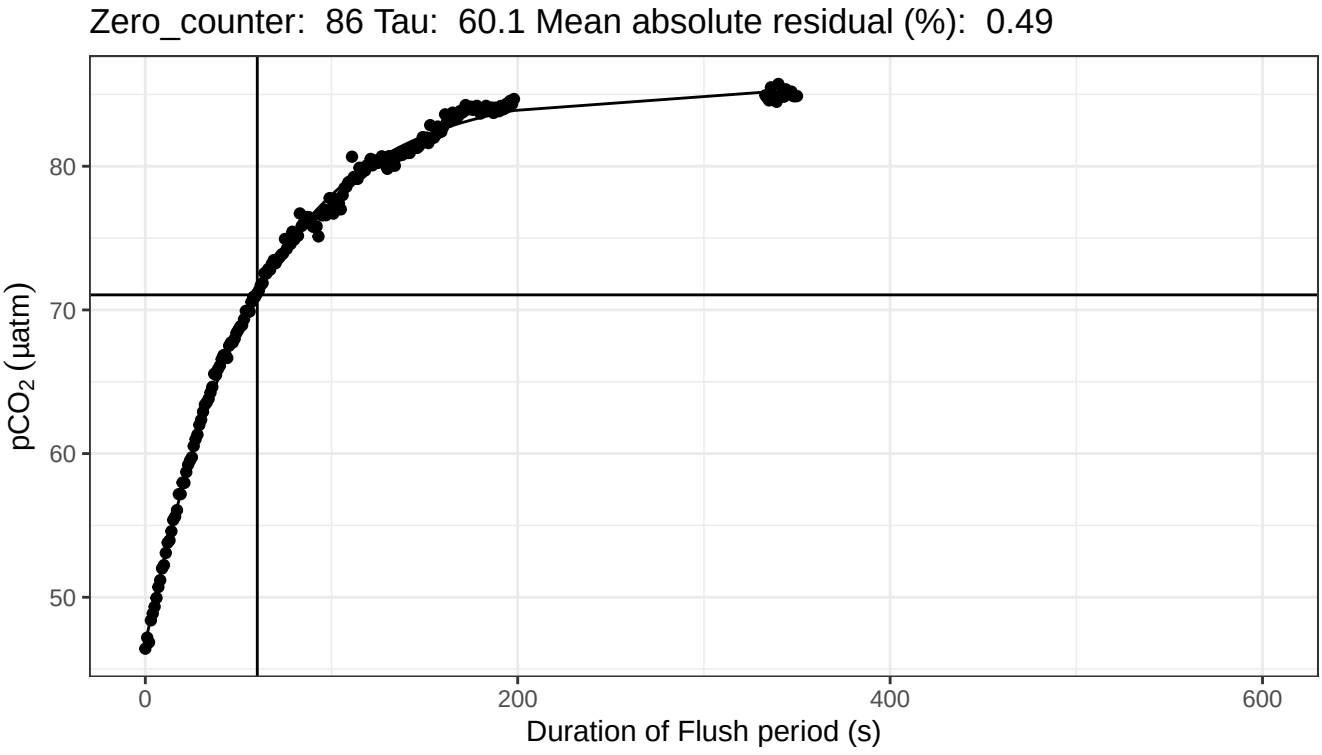


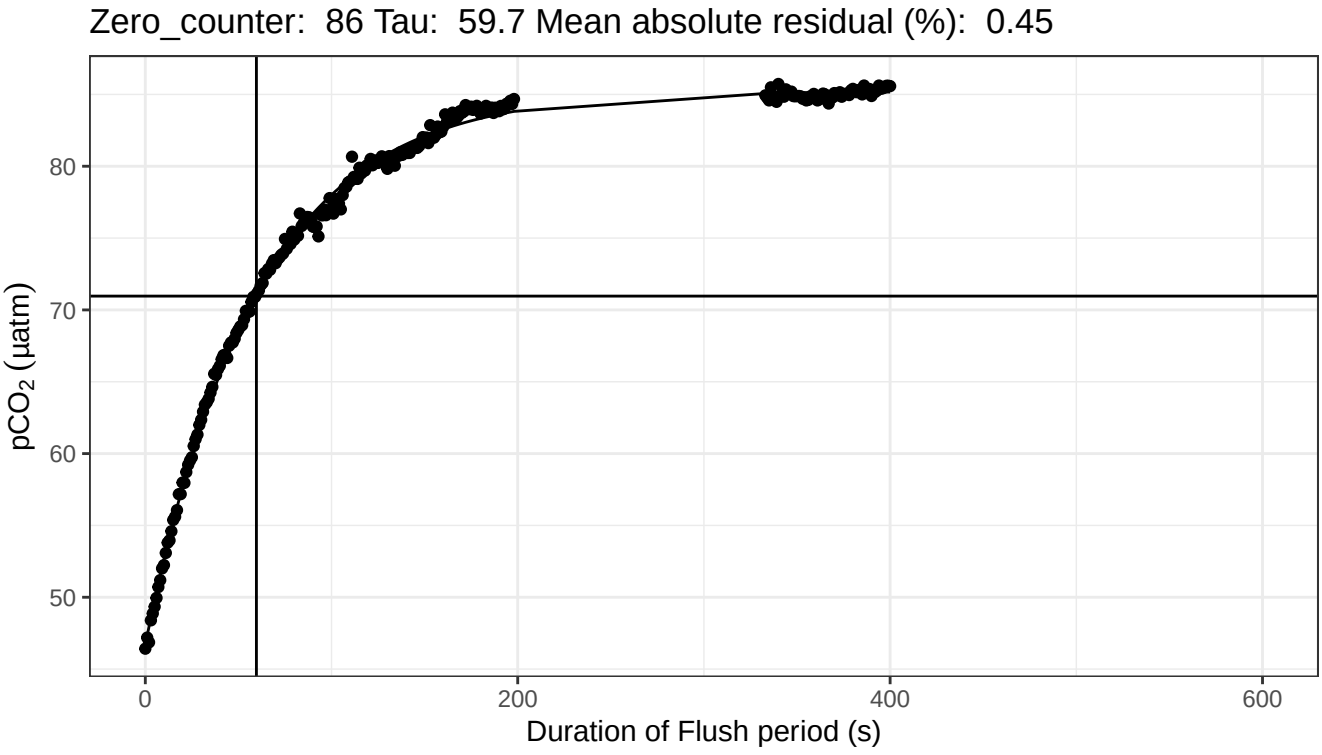
Zero_counter: 86 Tau: 61 Mean absolute residual (%): 0.5

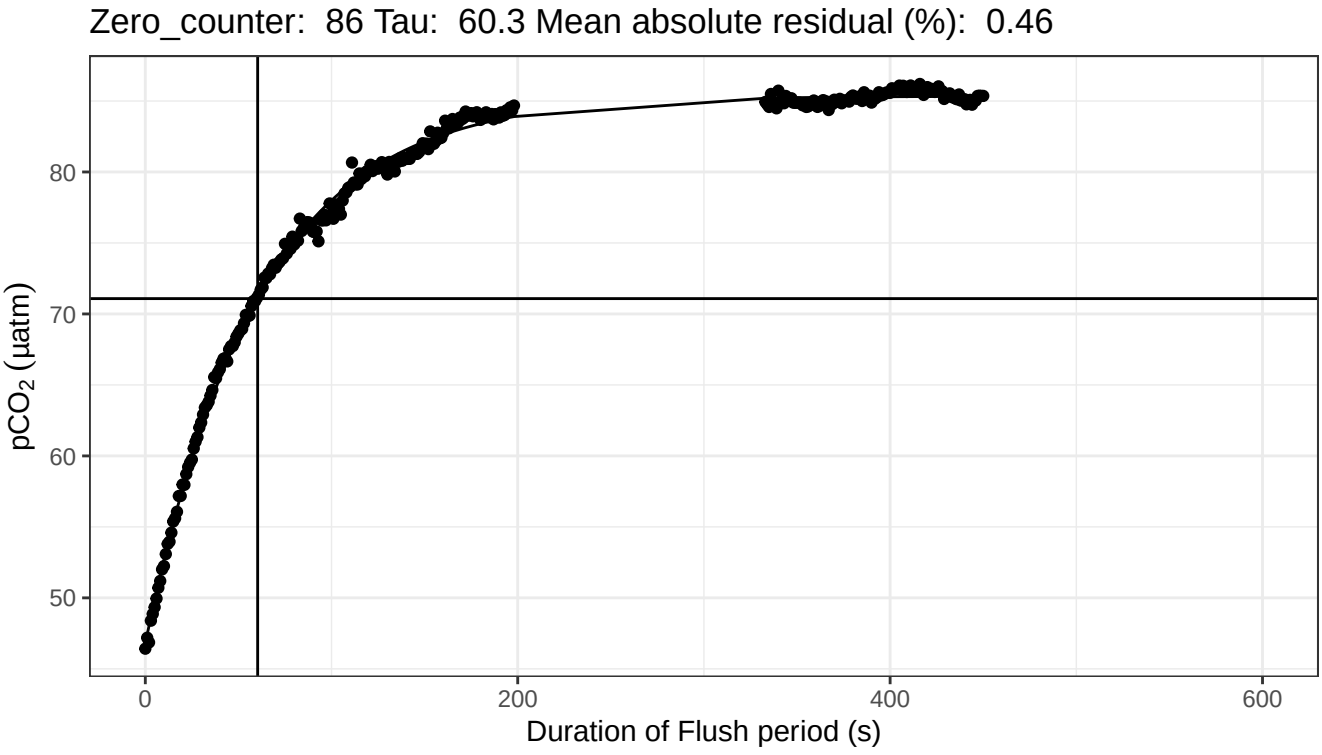


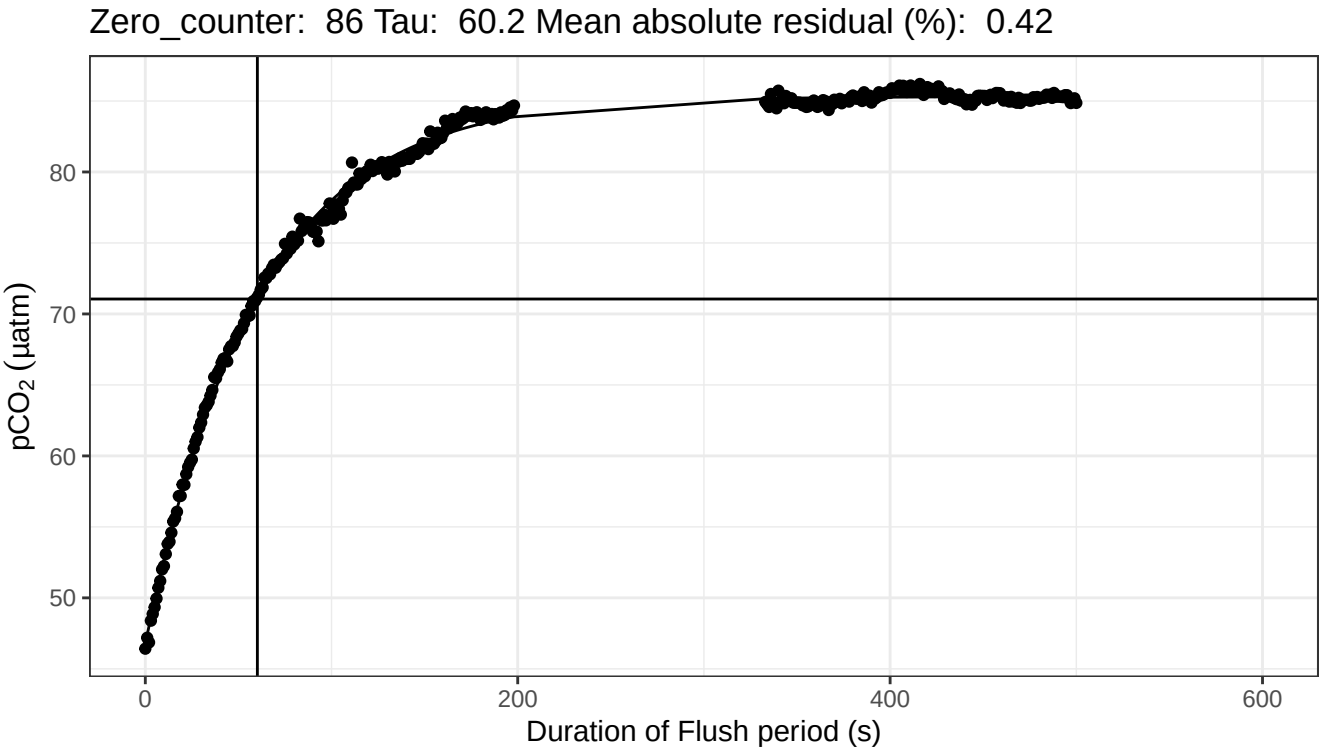
Zero_counter: 86 Tau: 61 Mean absolute residual (%): 0.5



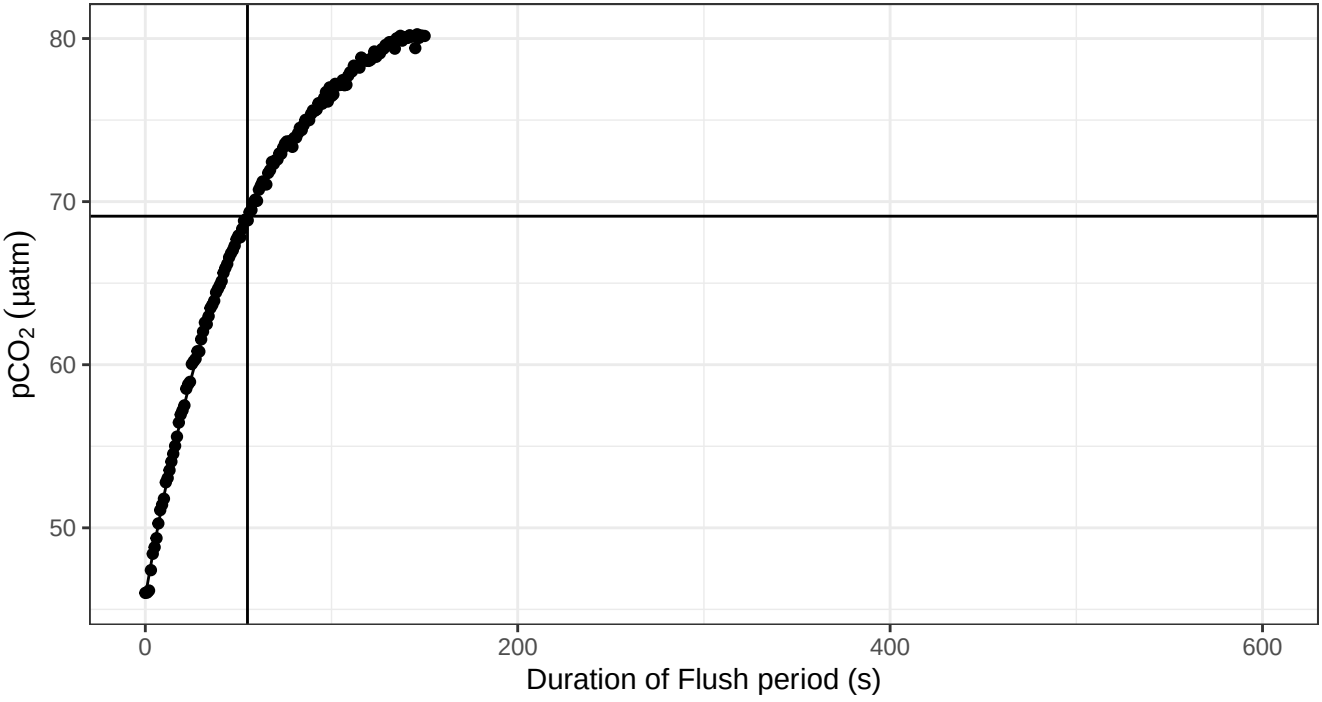

Zero_counter: 86 Tau: 60.1 Mean absolute residual (%): 0.49
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

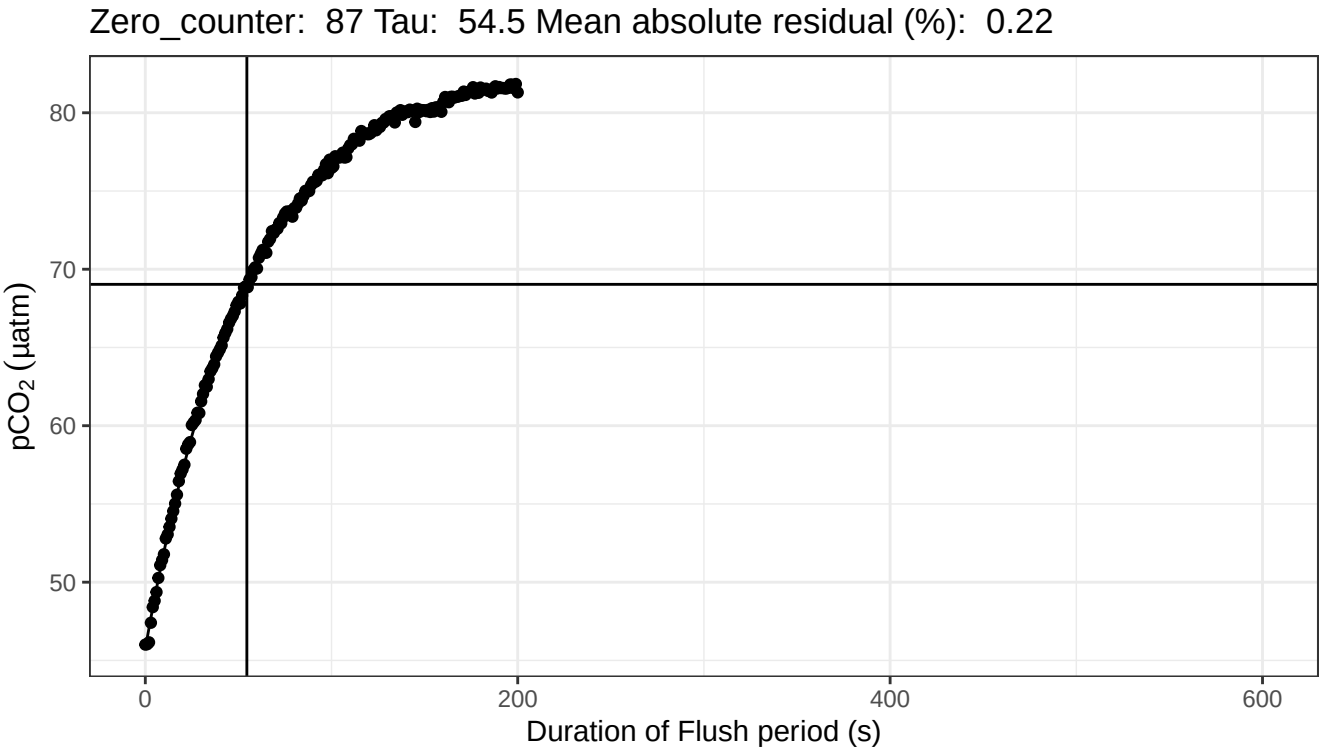

Zero_counter: 86 Tau: 59.7 Mean absolute residual (%): 0.45
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 86 Tau: 60.3 Mean absolute residual (%): 0.46
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

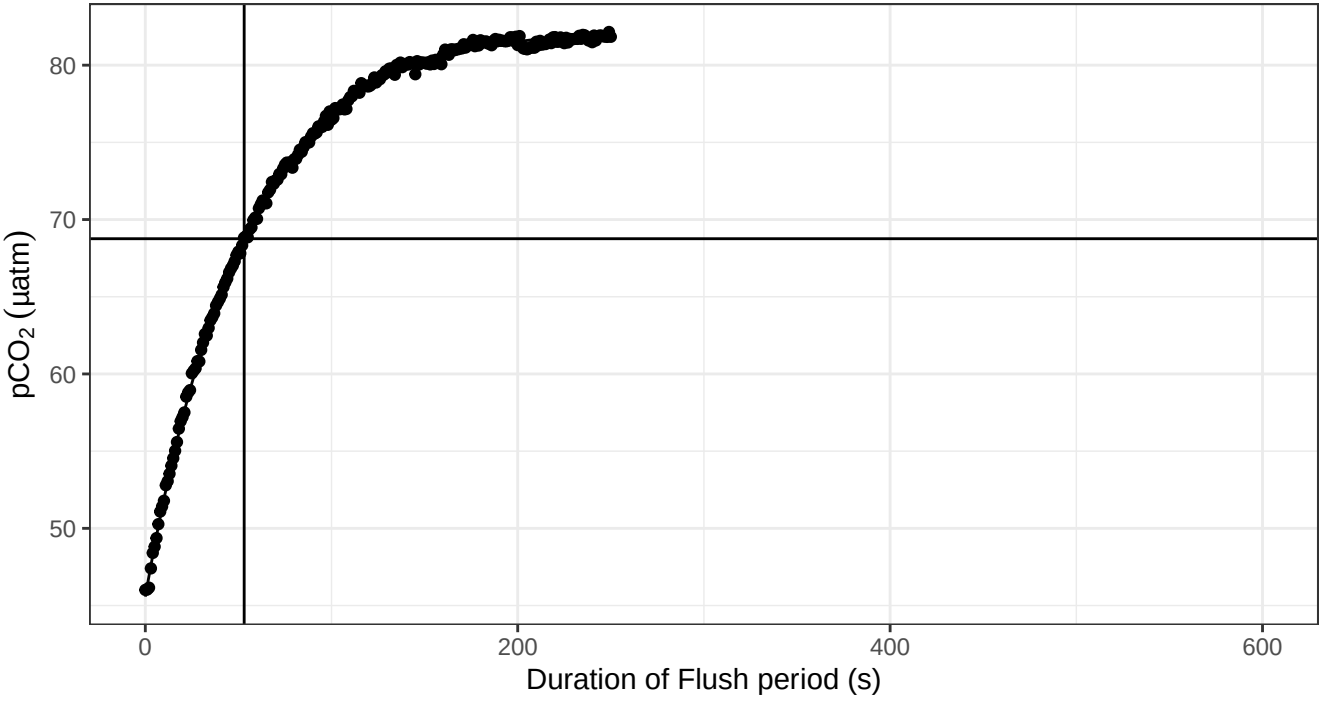

Zero_counter: 86 Tau: 60.2 Mean absolute residual (%): 0.42
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 87 Tau: 54.9 Mean absolute residual (%): 0.23

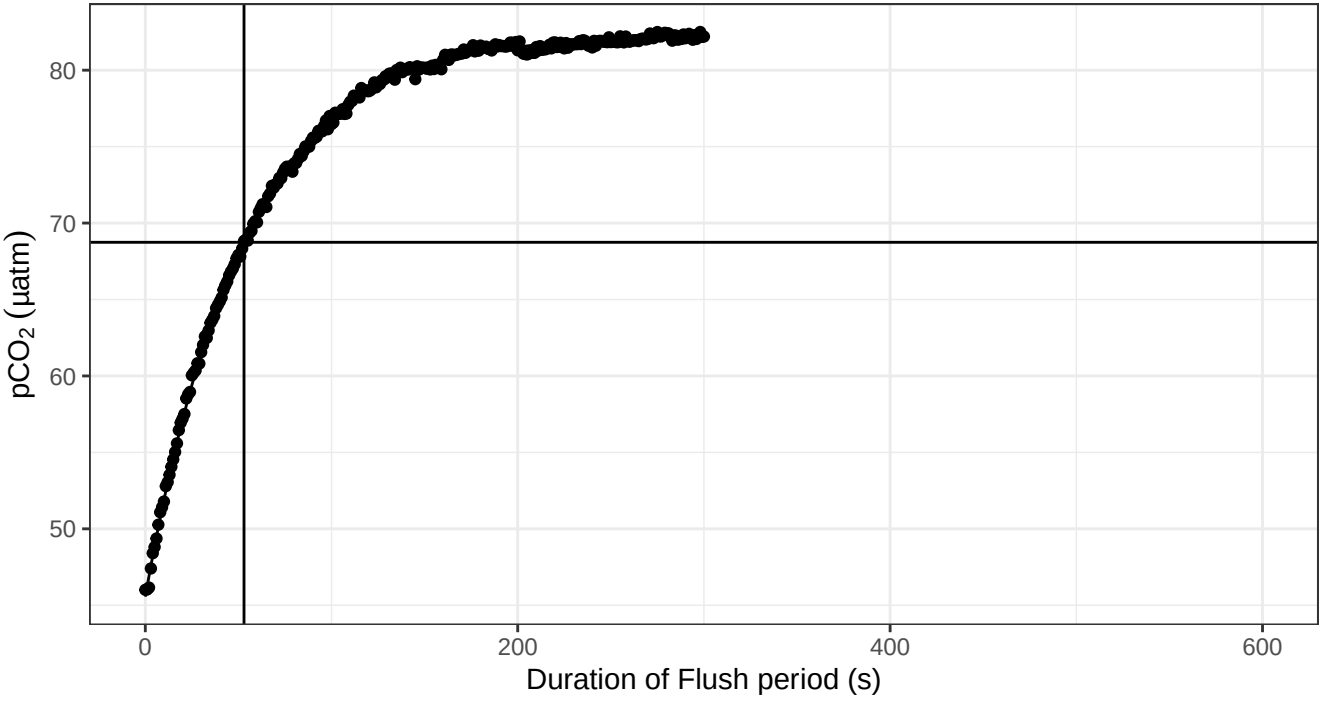


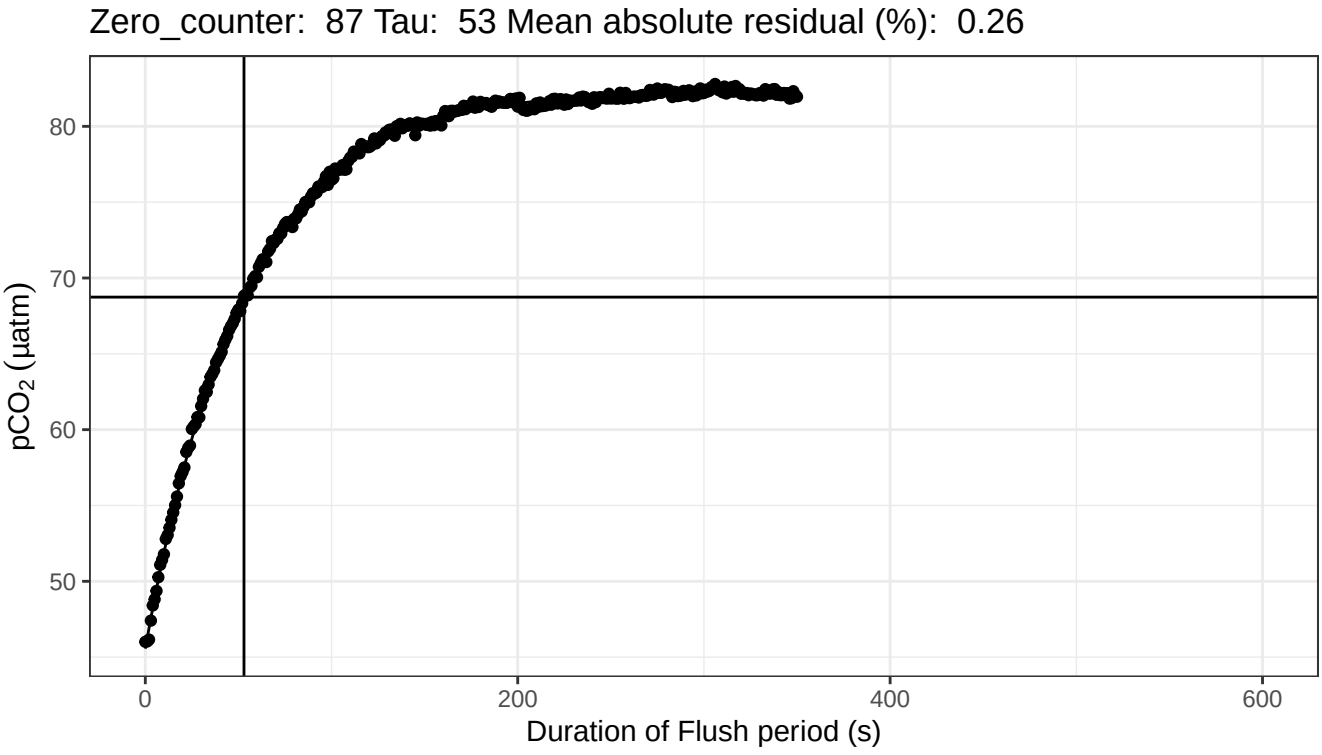

Zero_counter: 87 Tau: 54.5 Mean absolute residual (%): 0.22
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

Zero_counter: 87 Tau: 53.1 Mean absolute residual (%): 0.28

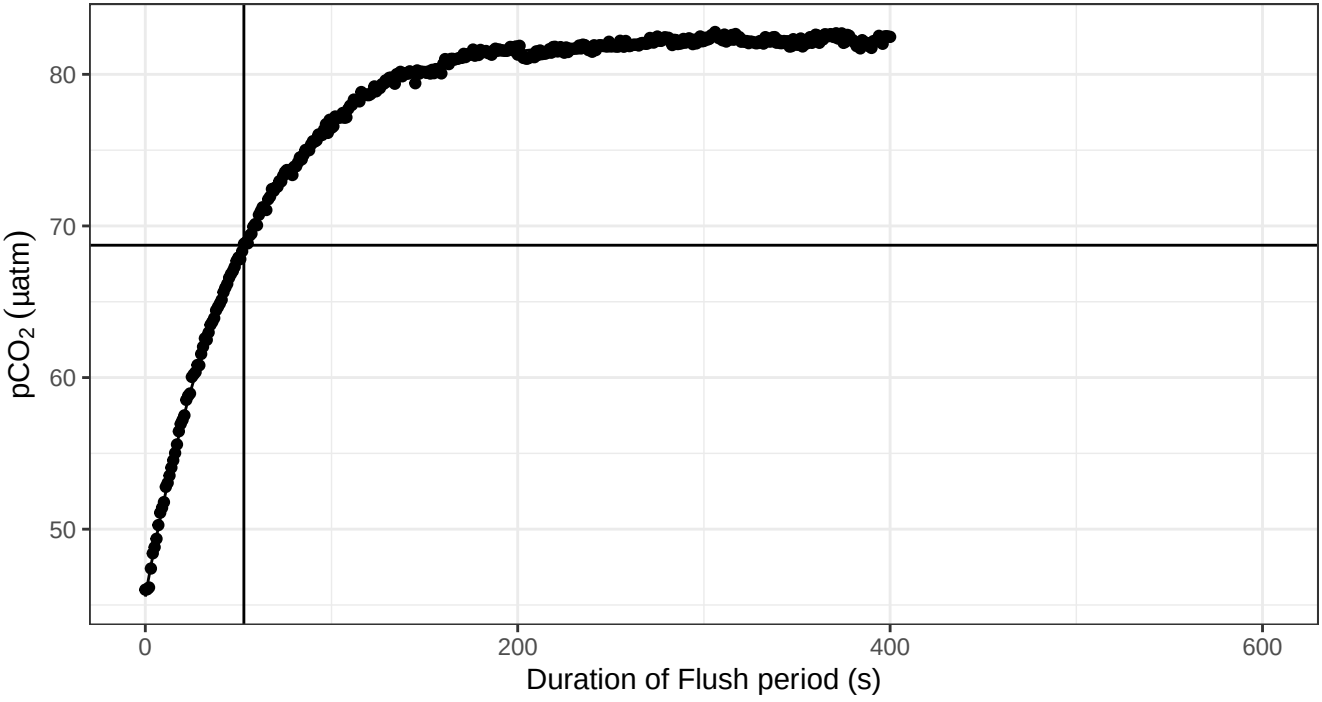


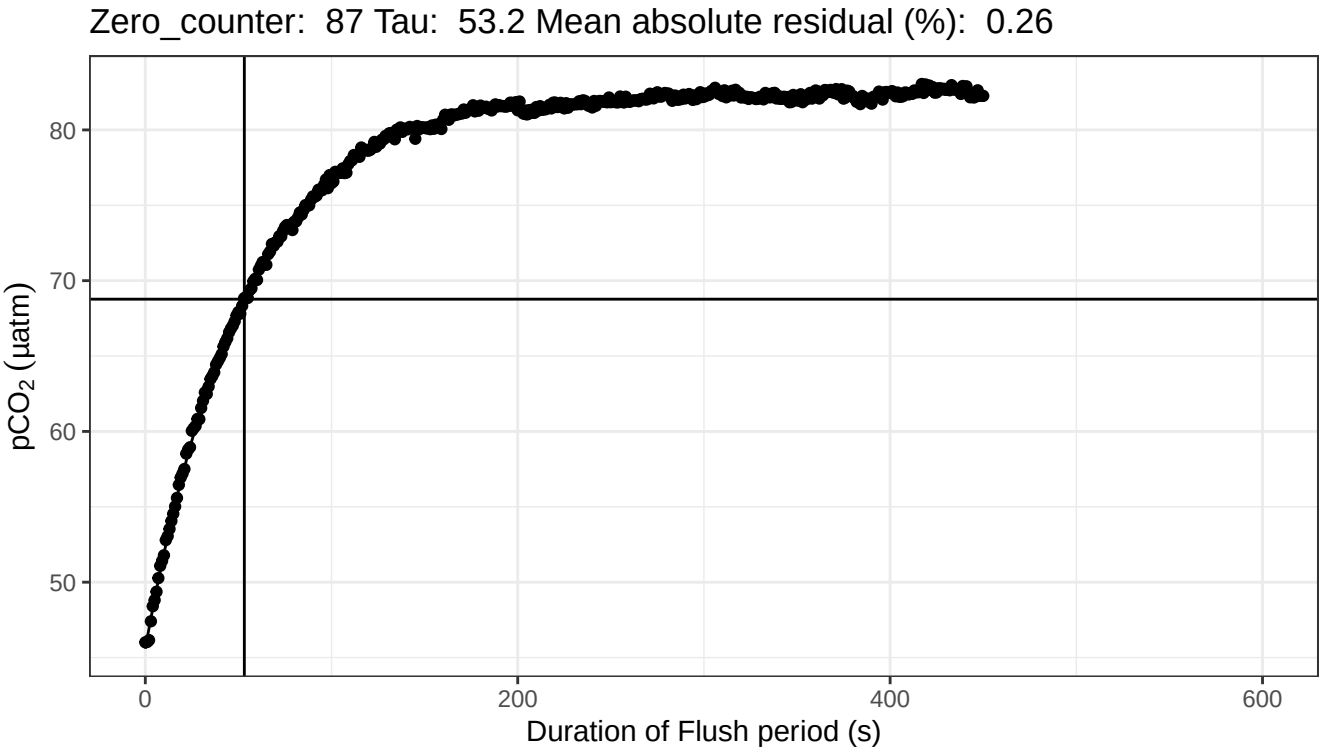
Zero_counter: 87 Tau: 53 Mean absolute residual (%): 0.26

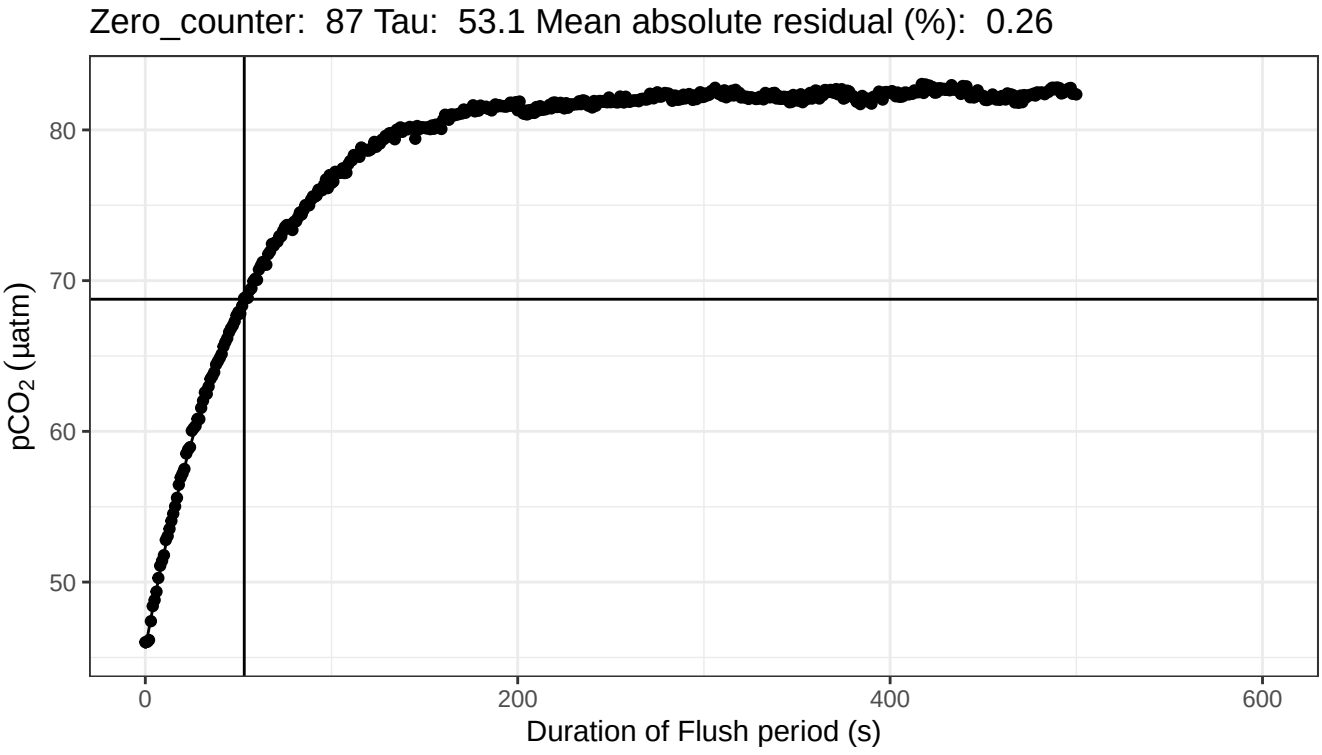


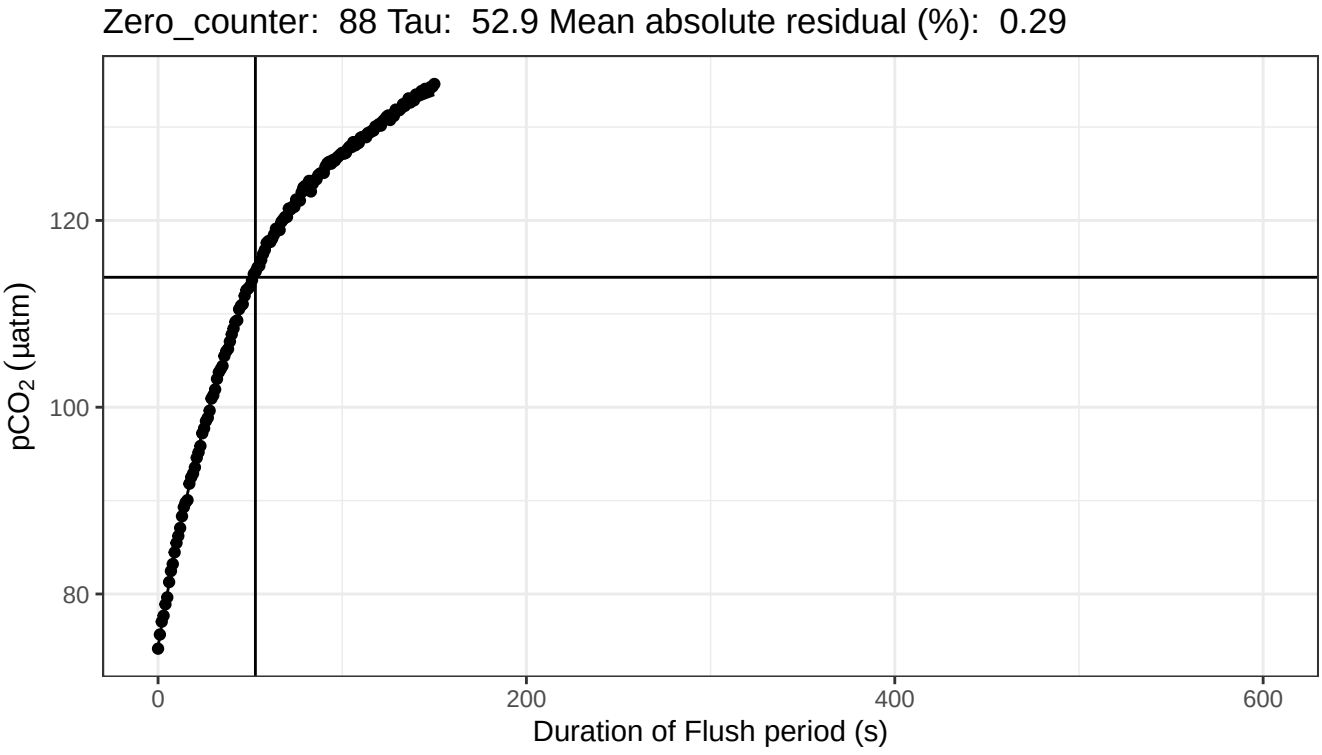

Zero_counter: 87 Tau: 53 Mean absolute residual (%): 0.26
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

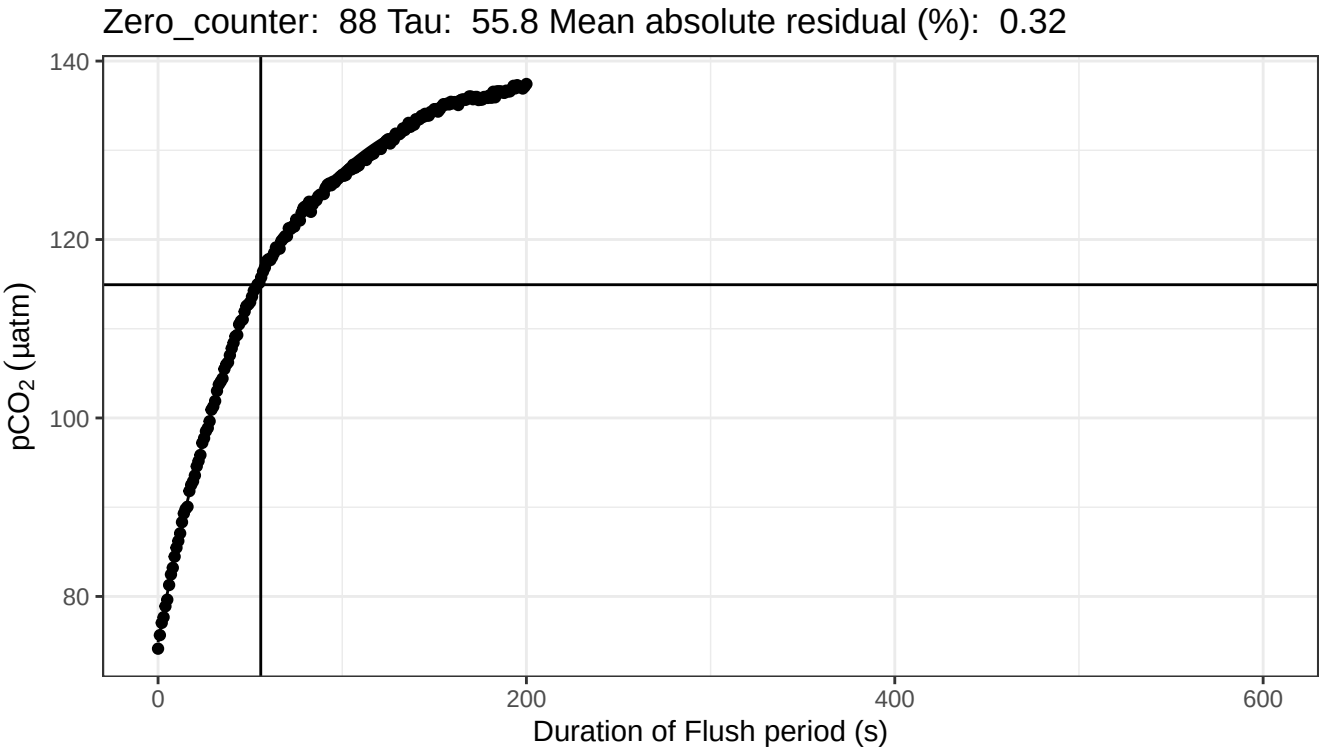
Zero_counter: 87 Tau: 52.9 Mean absolute residual (%): 0.26

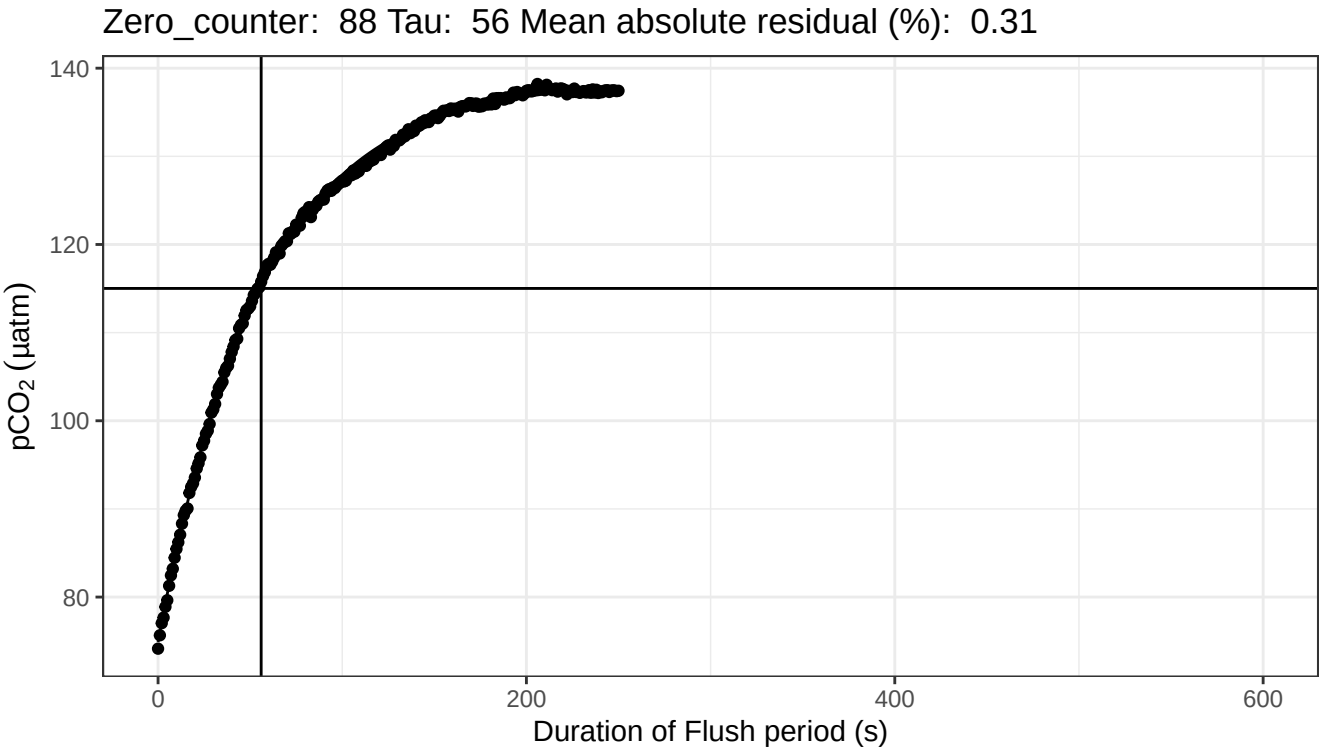


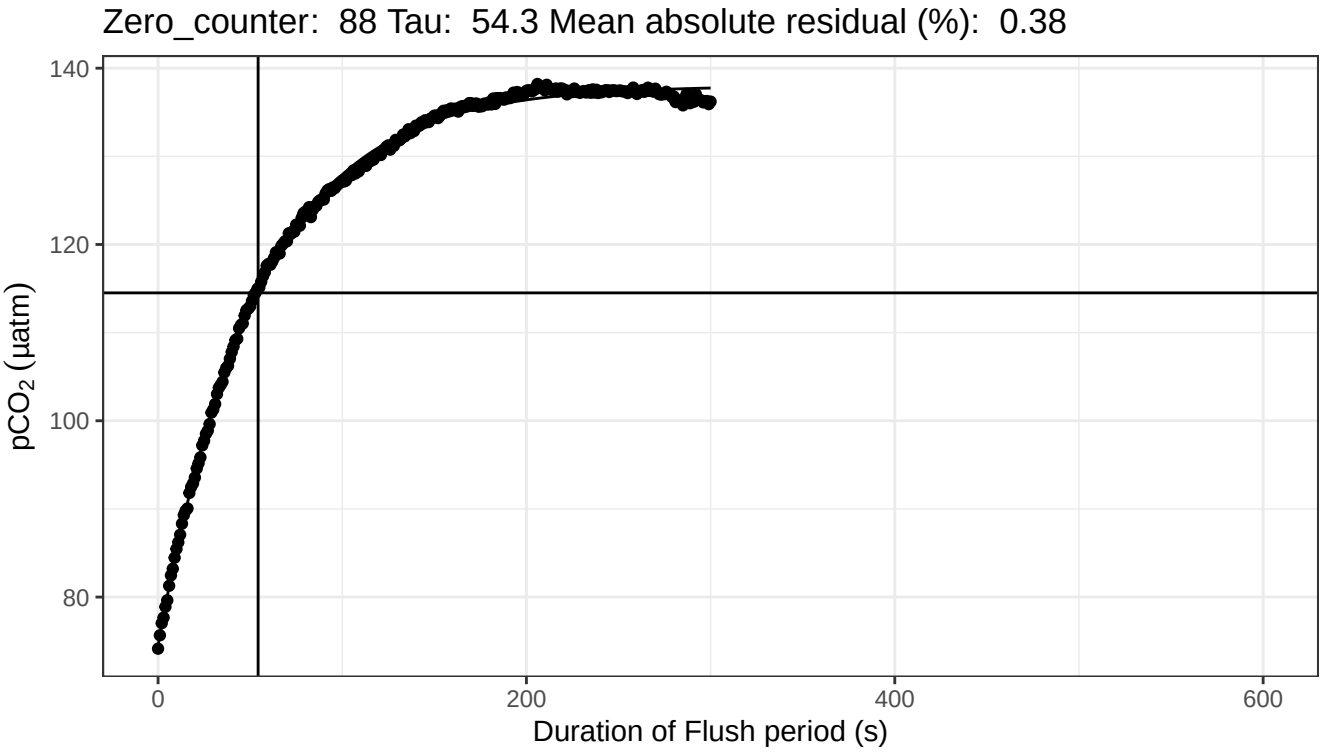

Zero_counter: 87 Tau: 53.2 Mean absolute residual (%): 0.26
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

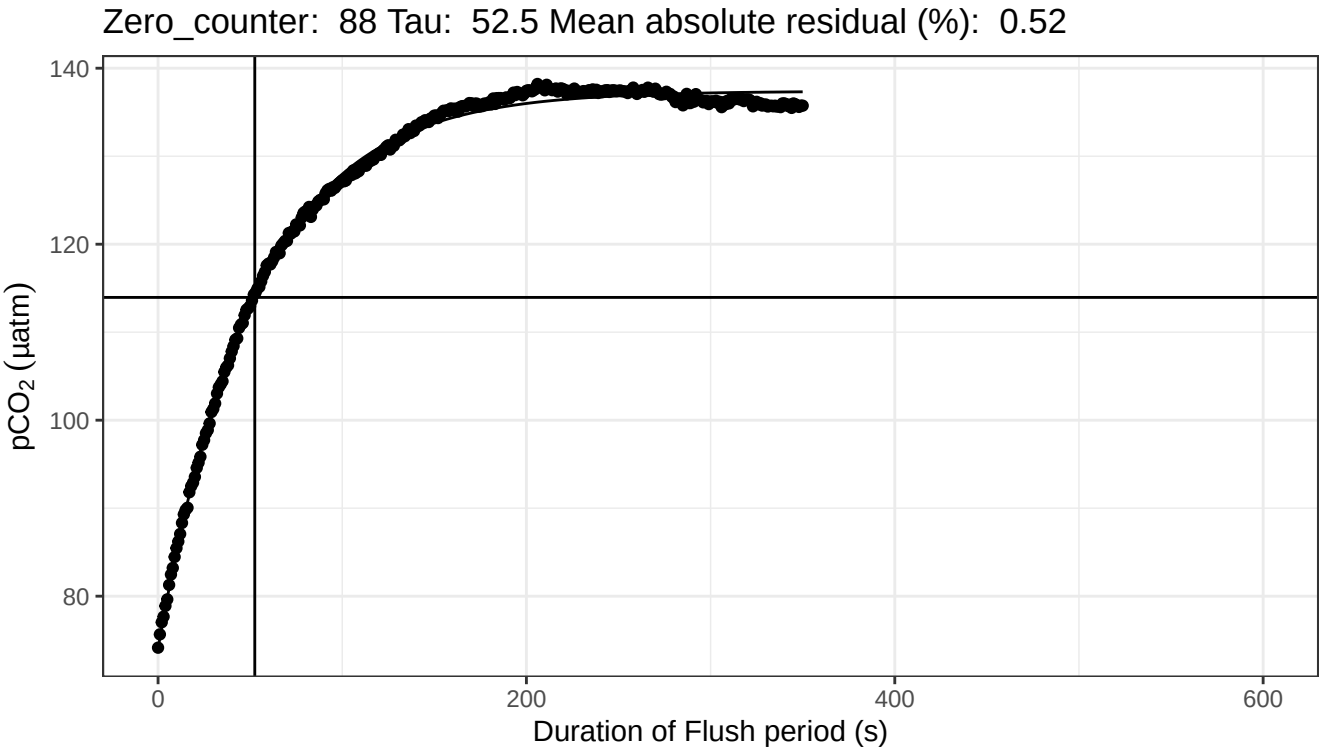

Zero_counter: 87 Tau: 53.1 Mean absolute residual (%): 0.26
80
70
60
50
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

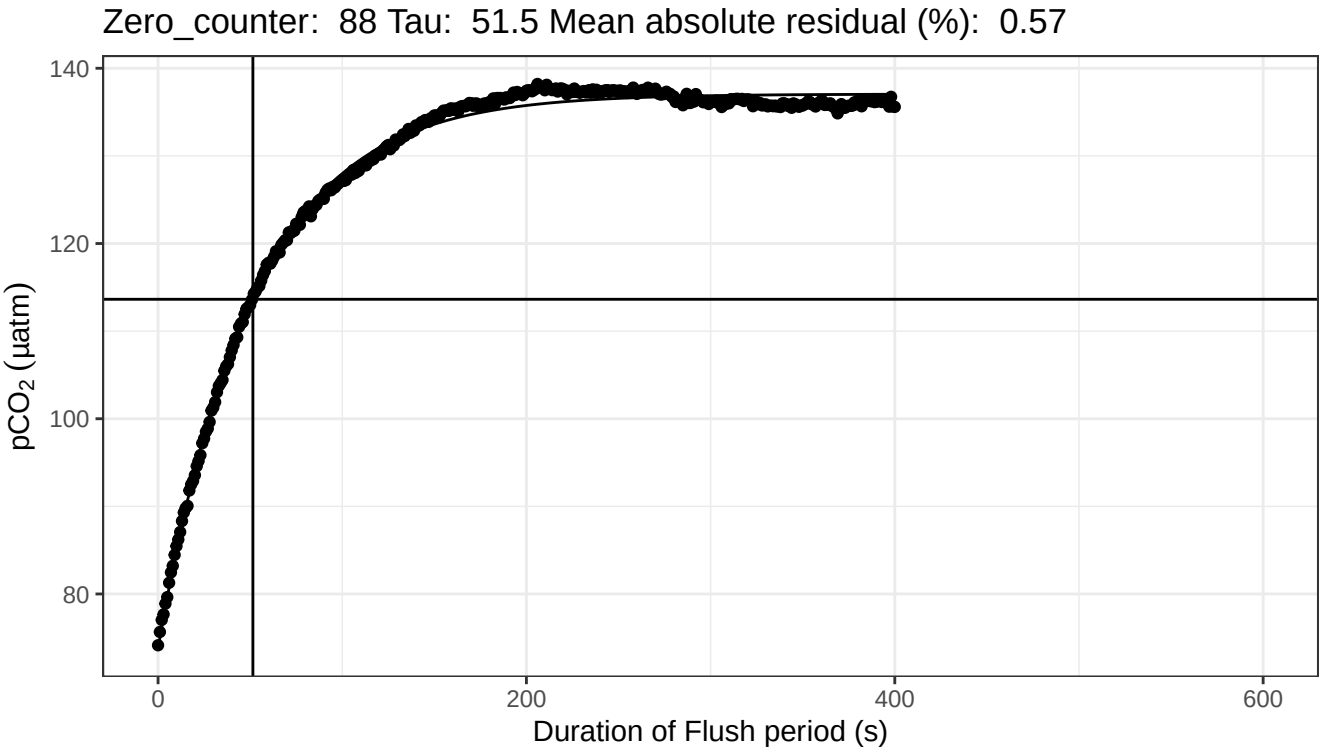

Zero_counter: 88 Tau: 52.9 Mean absolute residual (%): 0.29
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

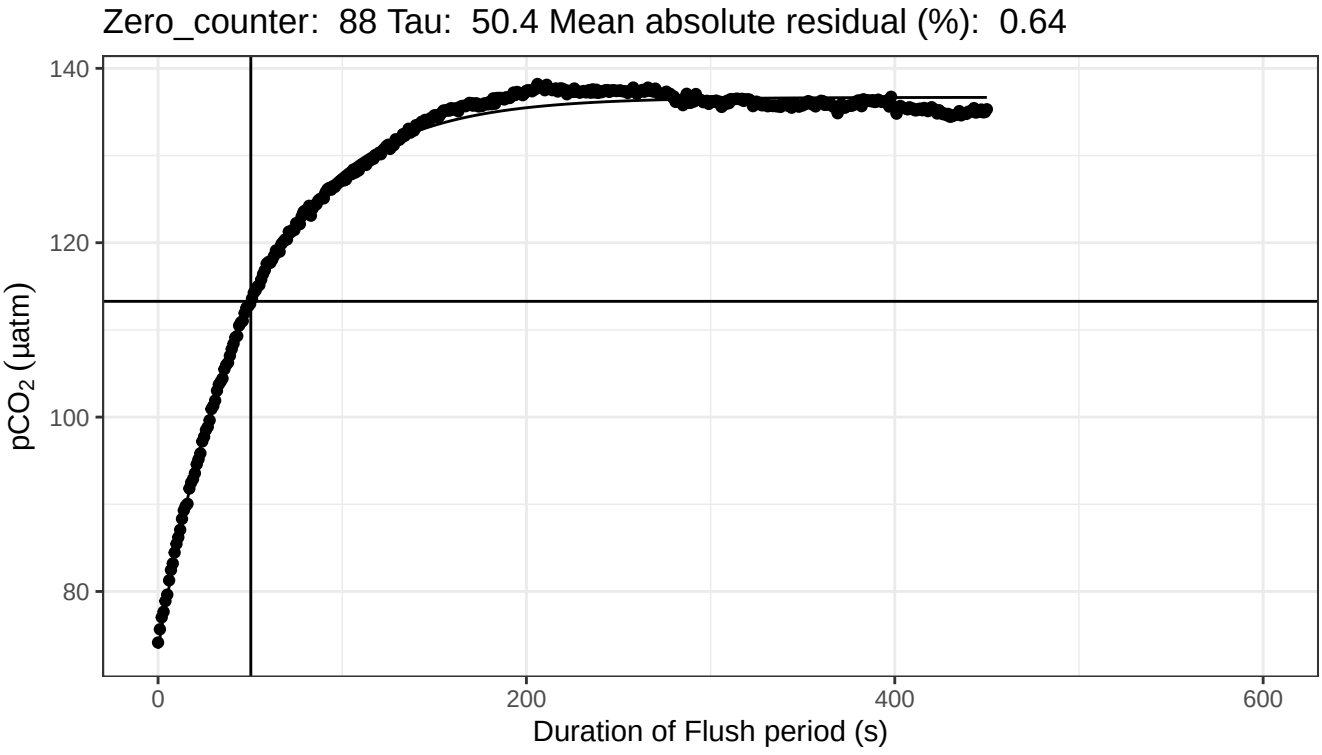

Zero_counter: 88 Tau: 55.8 Mean absolute residual (%): 0.32
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

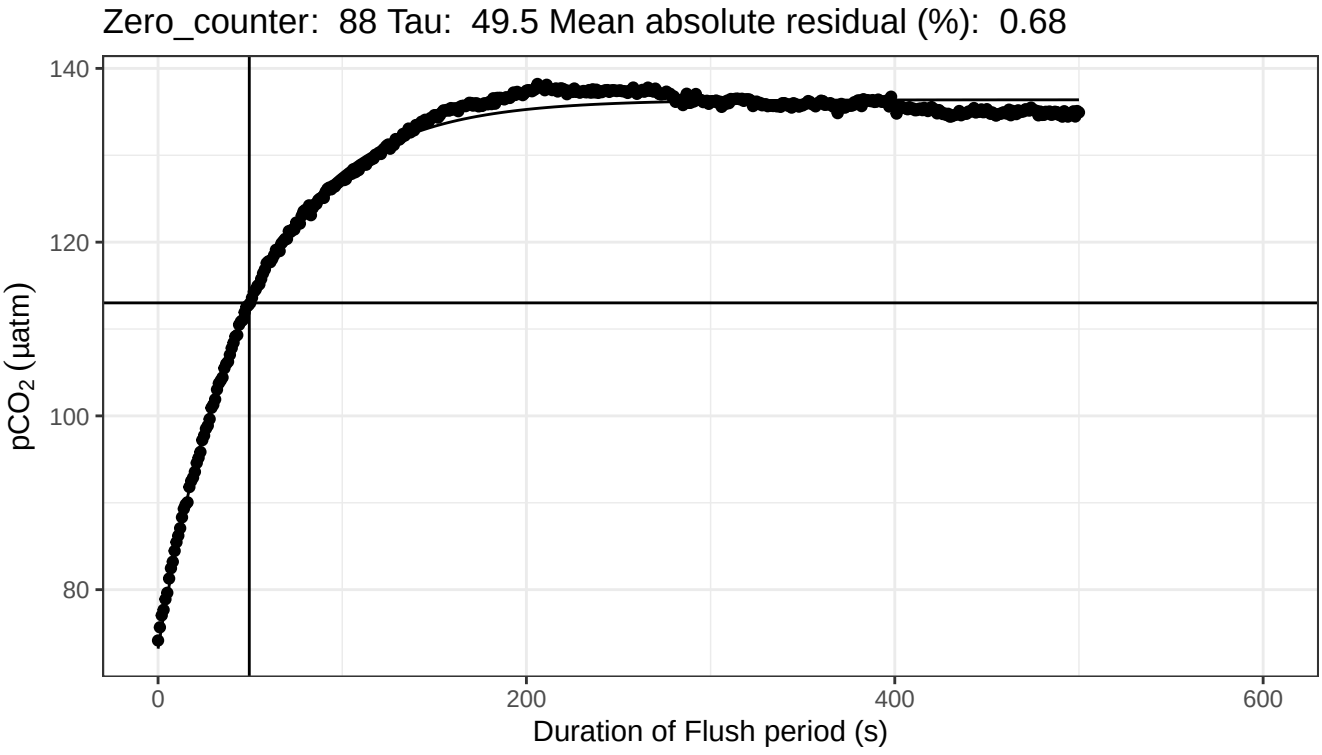

Zero_counter: 88 Tau: 56 Mean absolute residual (%): 0.31
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

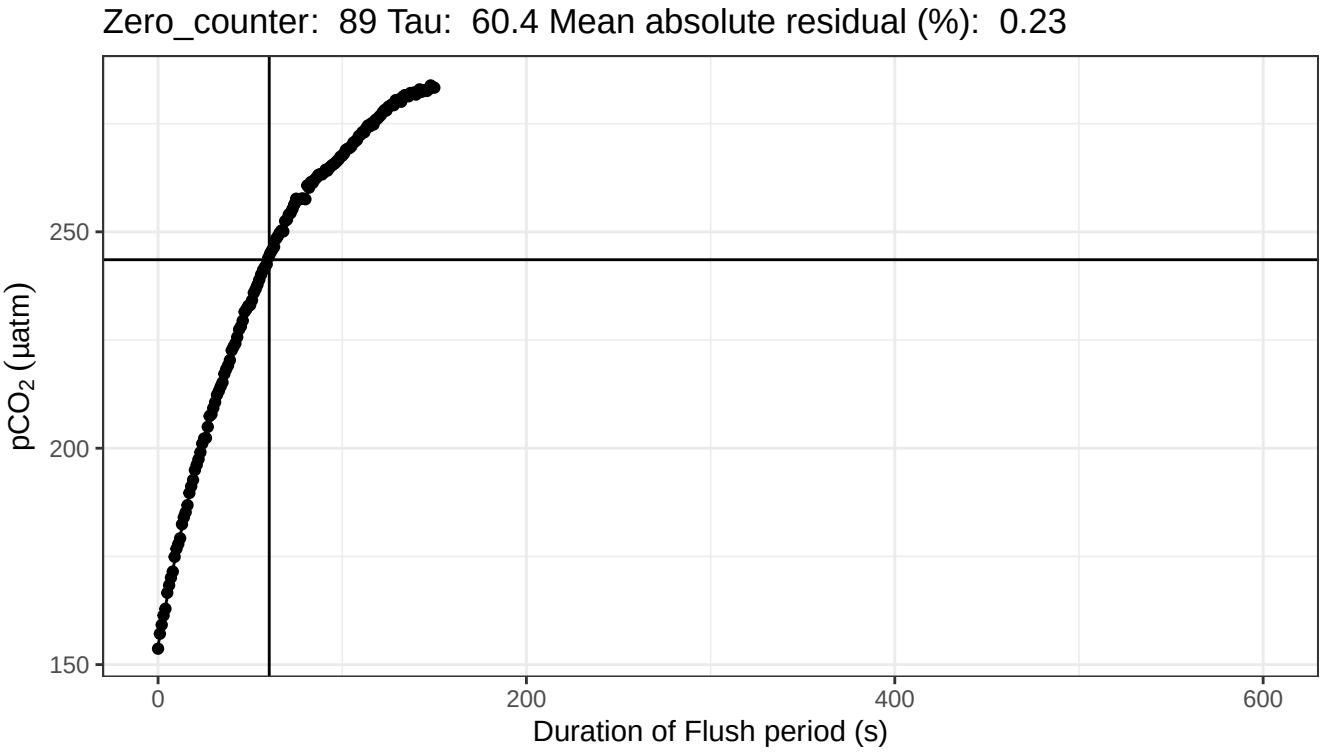

Zero_counter: 88 Tau: 54.3 Mean absolute residual (%): 0.38
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

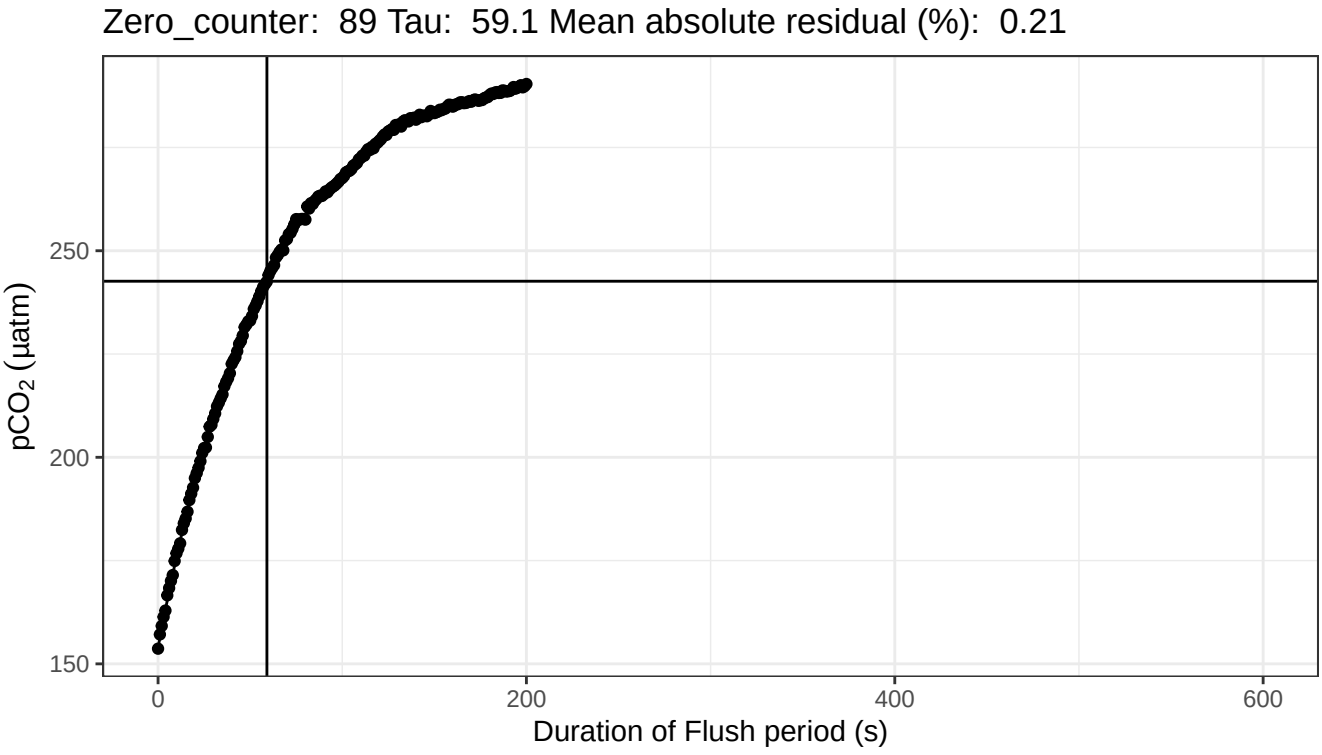

Zero_counter: 88 Tau: 52.5 Mean absolute residual (%): 0.52
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

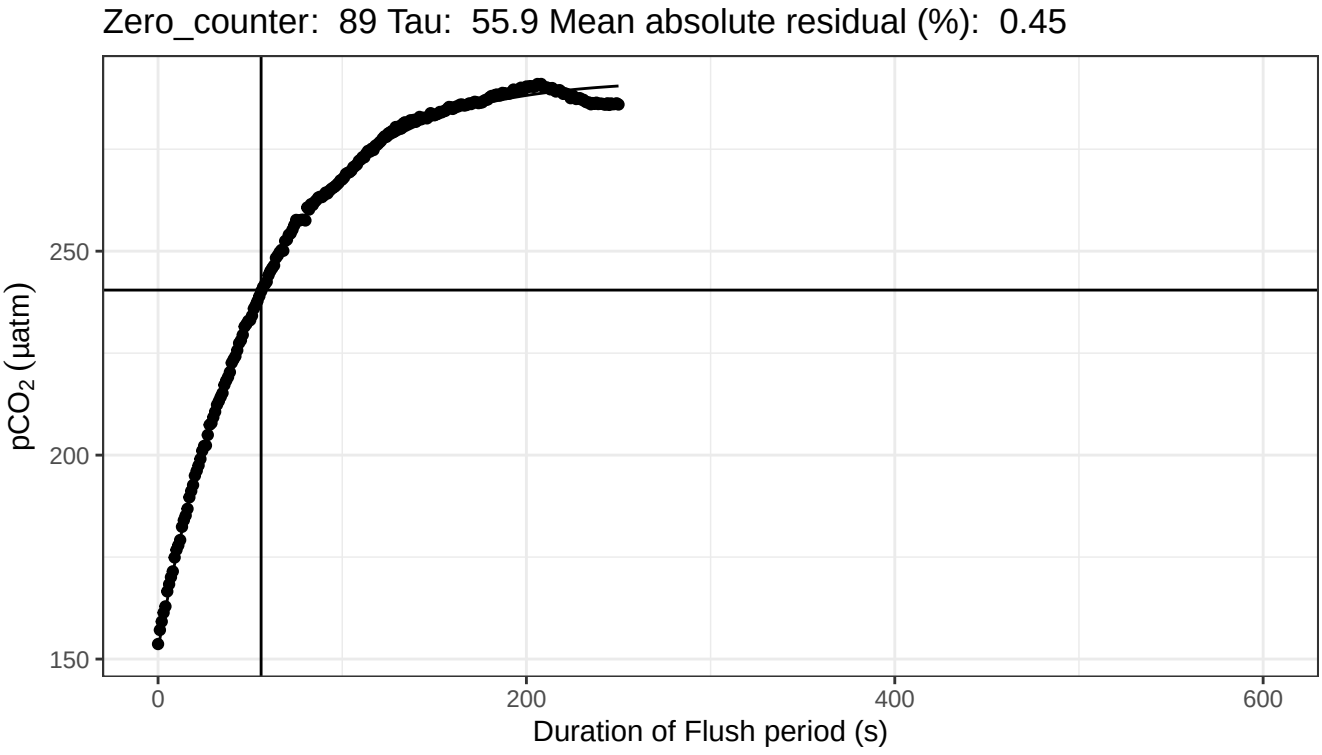

Zero_counter: 88 Tau: 51.5 Mean absolute residual (%): 0.57
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

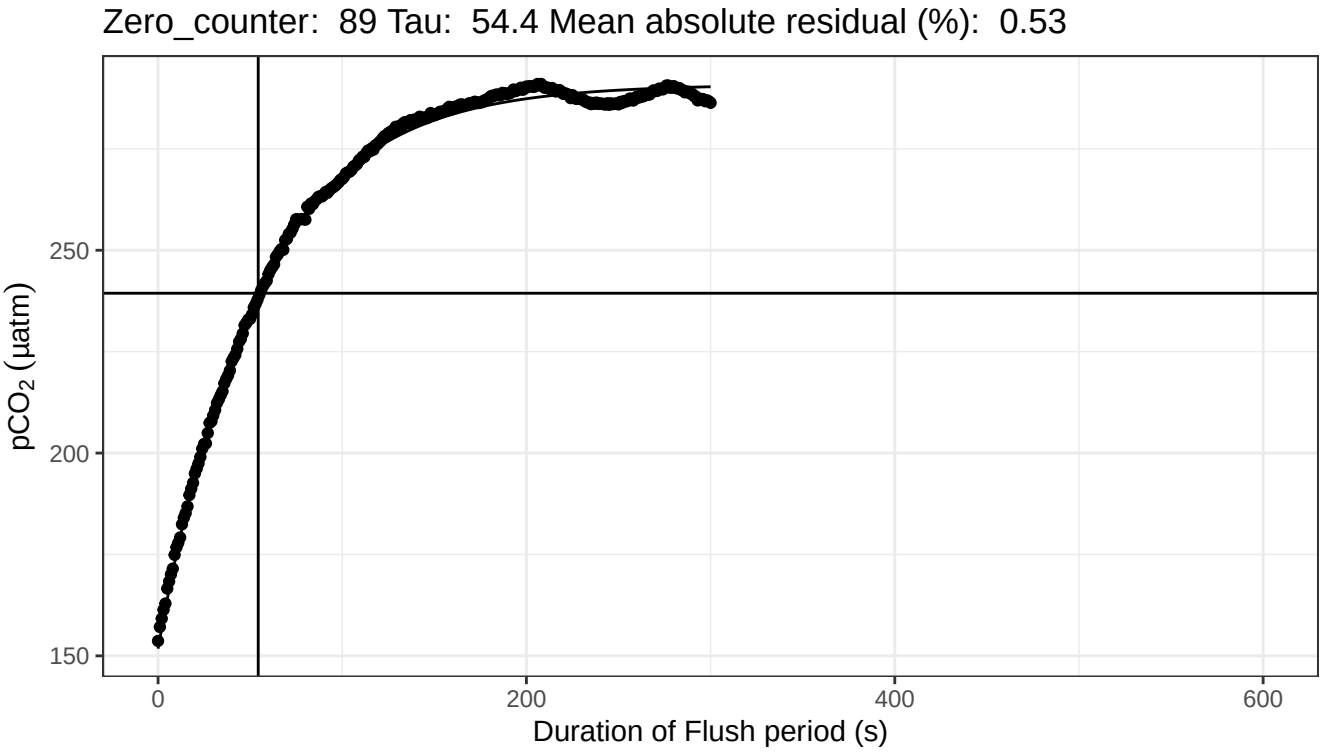

Zero_counter: 88 Tau: 50.4 Mean absolute residual (%): 0.64
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

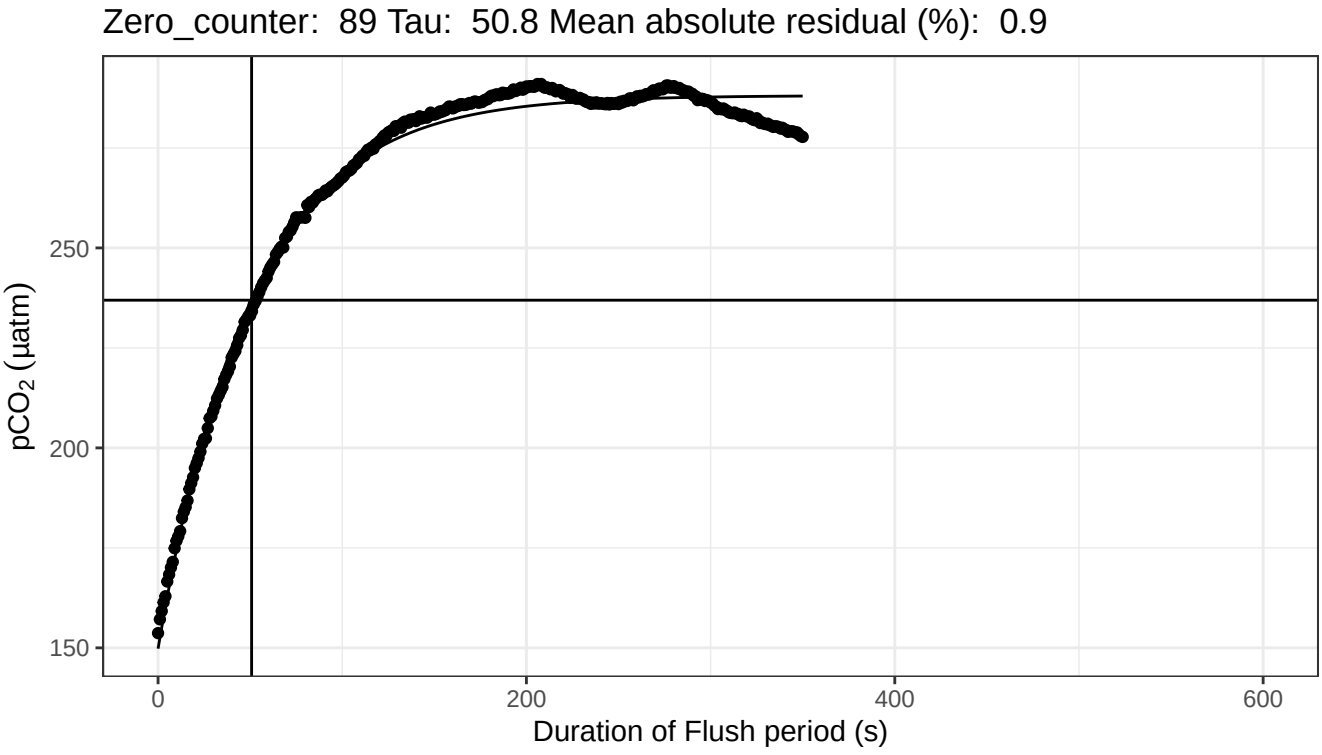

Zero_counter: 88 Tau: 49.5 Mean absolute residual (%): 0.68
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

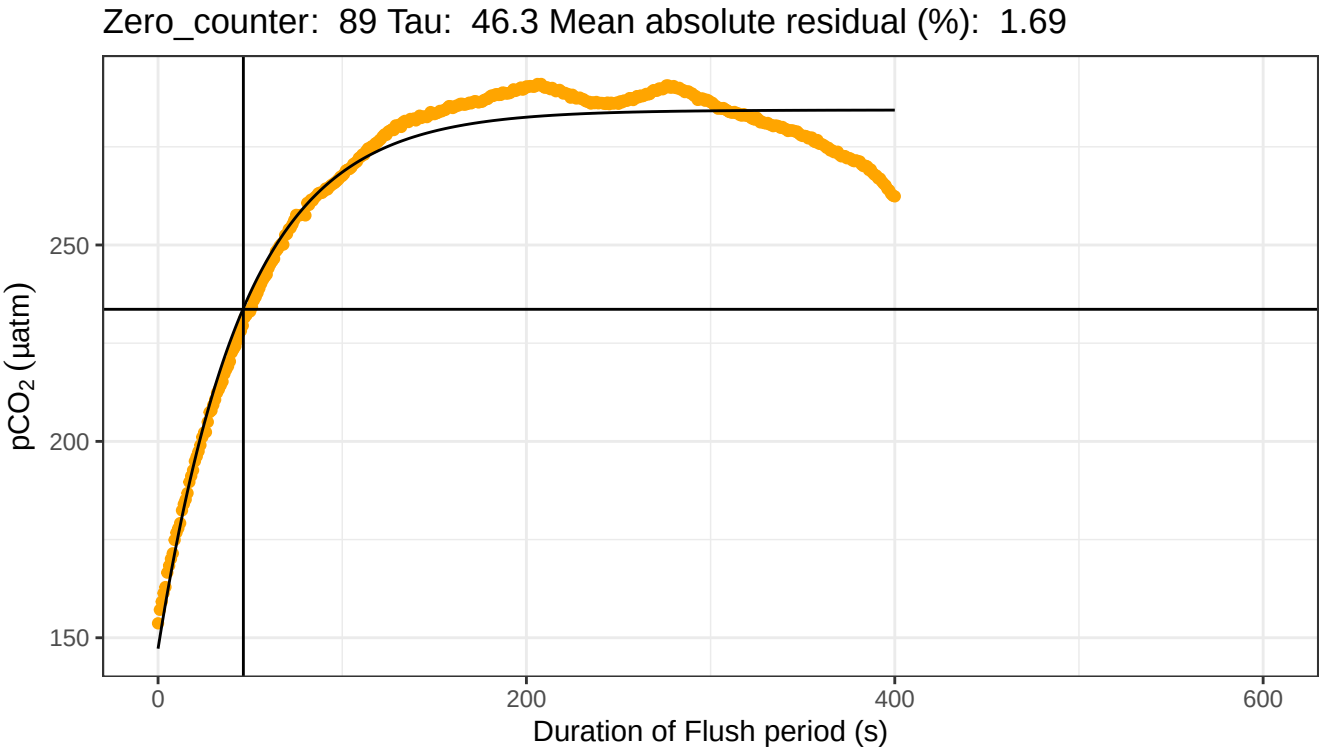

Zero_counter: 89 Tau: 60.4 Mean absolute residual (%): 0.23
pCO2 (µatm)
250
200
150
0
200
400
600
Duration of Flush period (s)

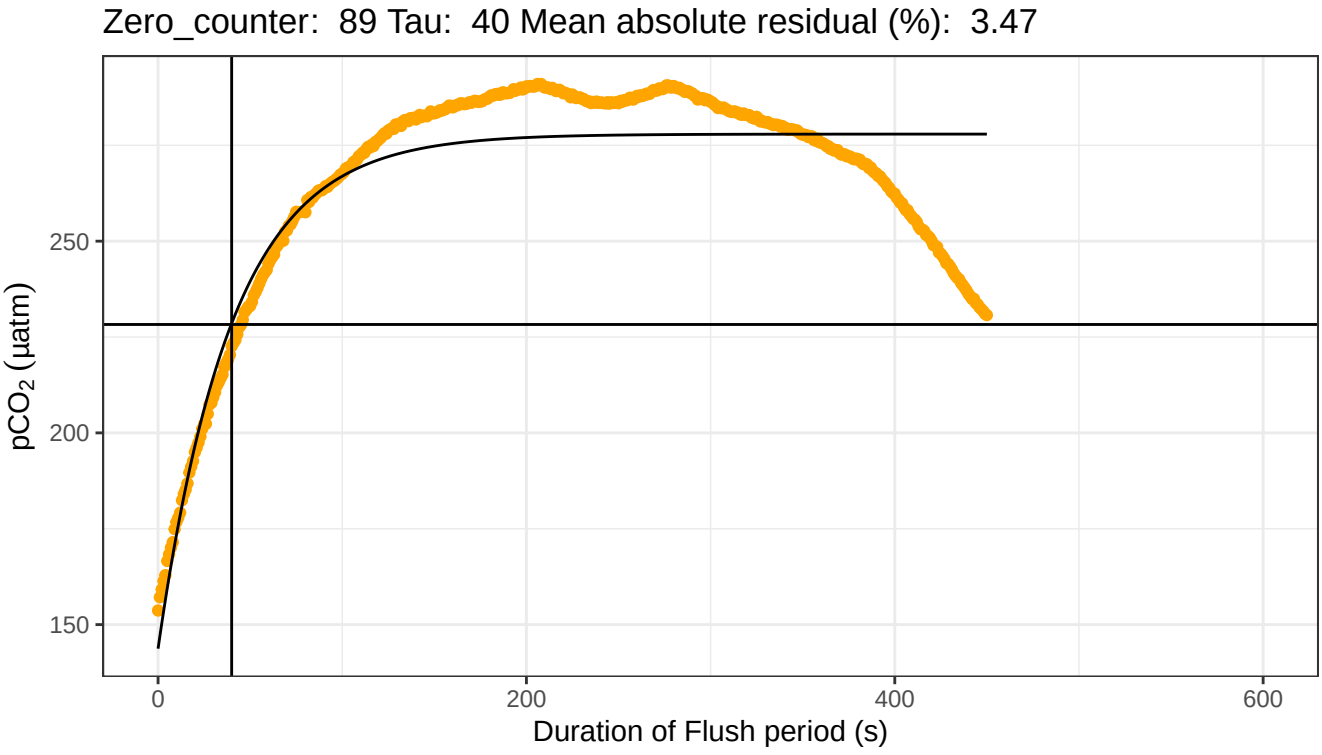

Zero_counter: 89 Tau: 59.1 Mean absolute residual (%): 0.21
pCO2 (µatm)
250
200
150
0
200
400
600
Duration of Flush period (s)

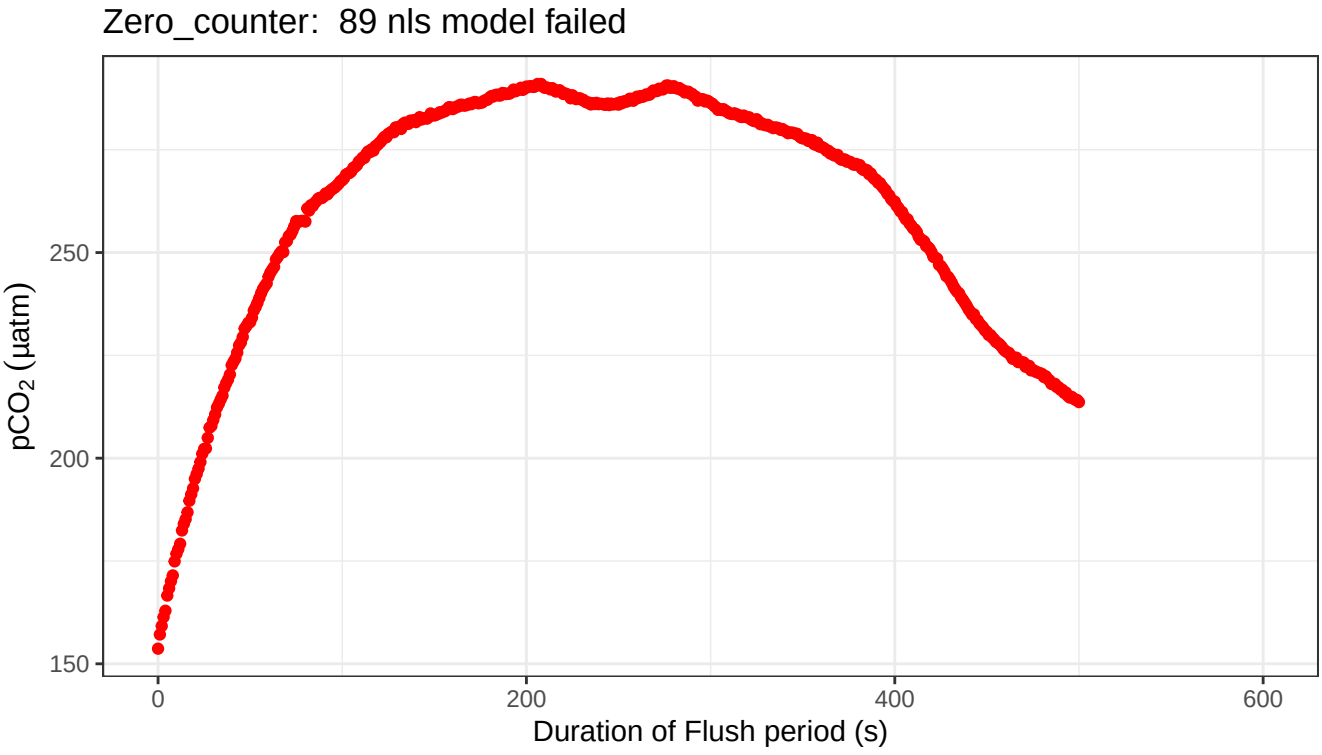

Zero_counter: 89 Tau: 55.9 Mean absolute residual (%): 0.45
pCO2 (µatm)
250
200
150
0
200
400
600
Duration of Flush period (s)

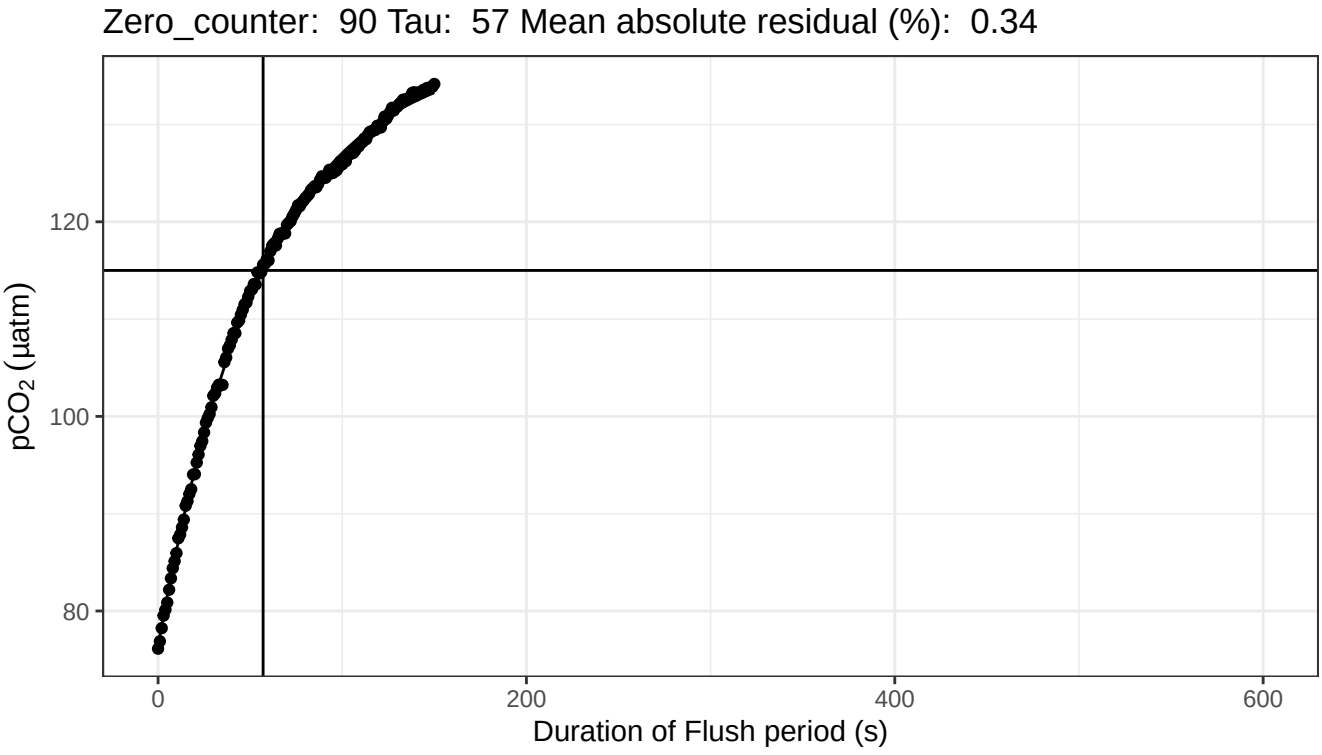

Zero_counter: 89 Tau: 54.4 Mean absolute residual (%): 0.53
pCO2 (µatm)
250
200
150
0
200
400
600
Duration of Flush period (s)

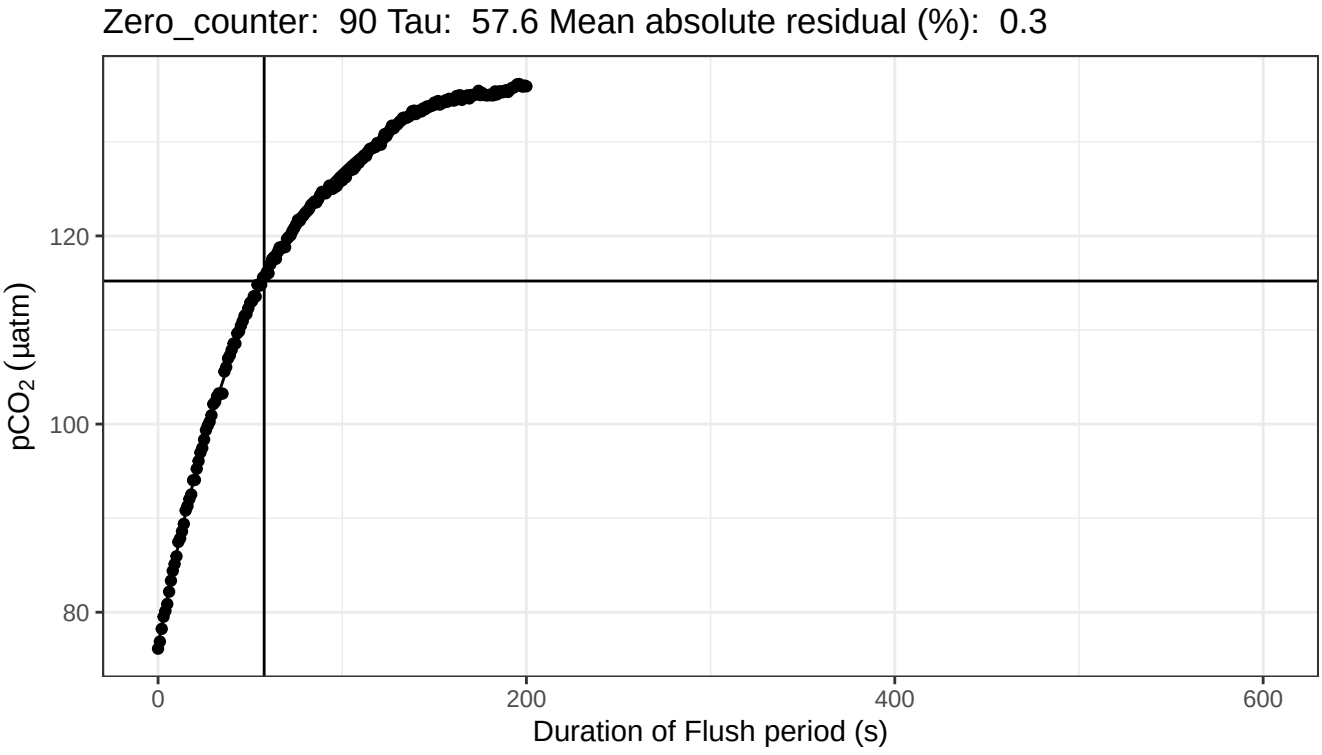

Zero_counter: 89 Tau: 50.8 Mean absolute residual (%): 0.9
pCO2 (µatm)
250
200
150
0
200
400
600
Duration of Flush period (s)

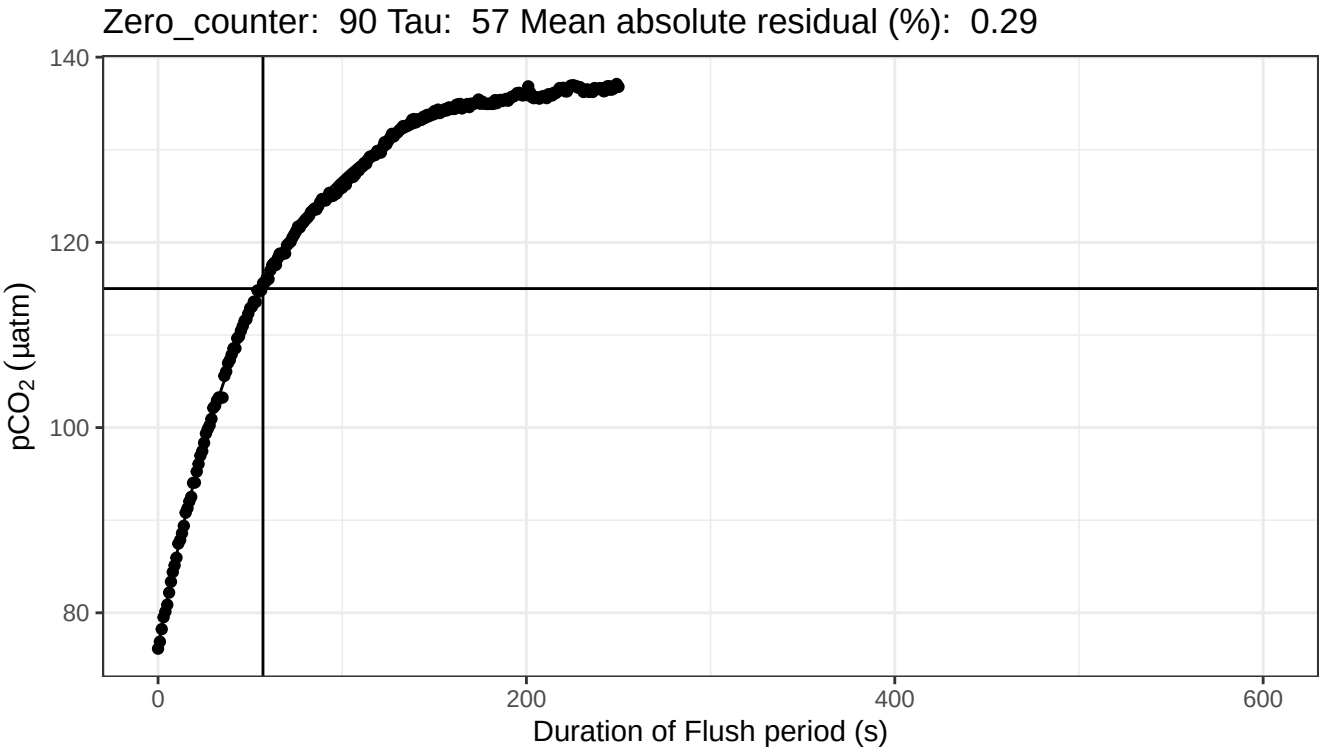

Zero_counter: 89 Tau: 46.3 Mean absolute residual (%): 1.69
pCO2 (µatm)
250
200
150
0
200
400
600
Duration of Flush period (s)

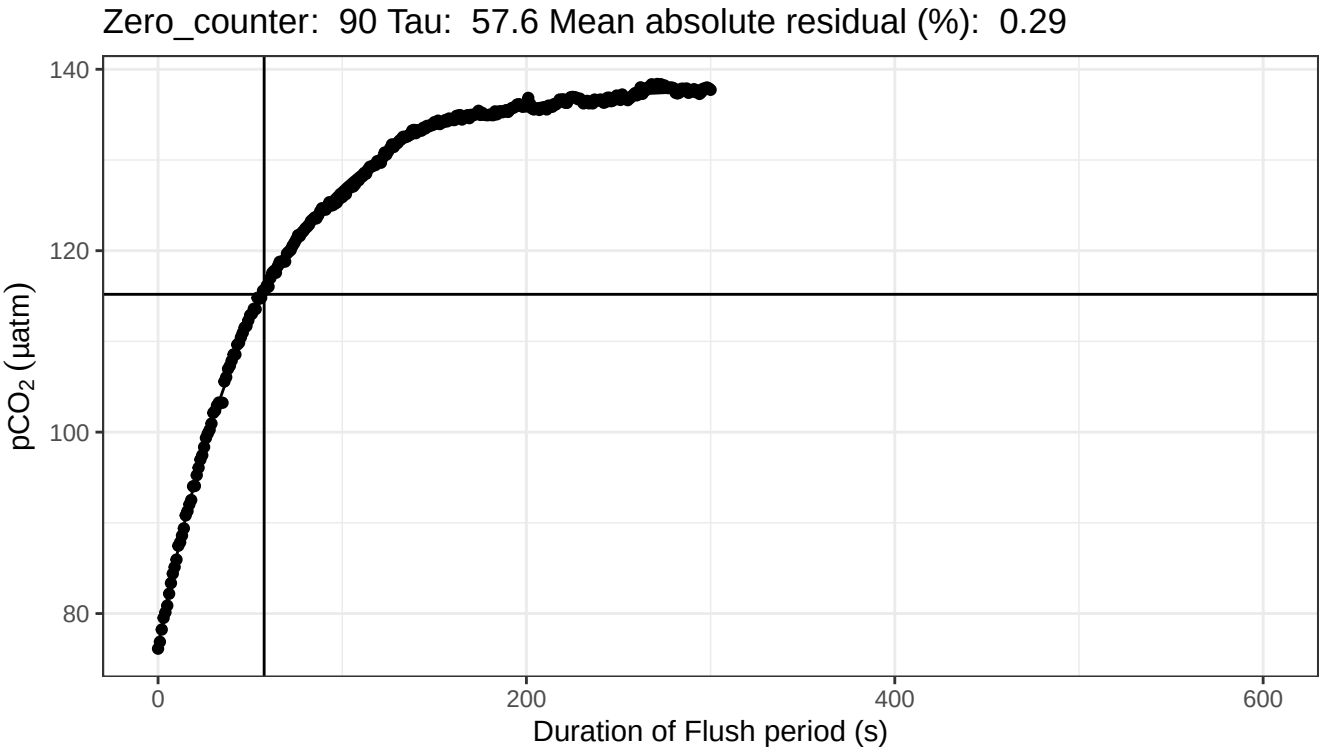

Zero_counter: 89 Tau: 40 Mean absolute residual (%): 3.47
pCO2 (µatm)
250
200
150
0
200
400
600
Duration of Flush period (s)

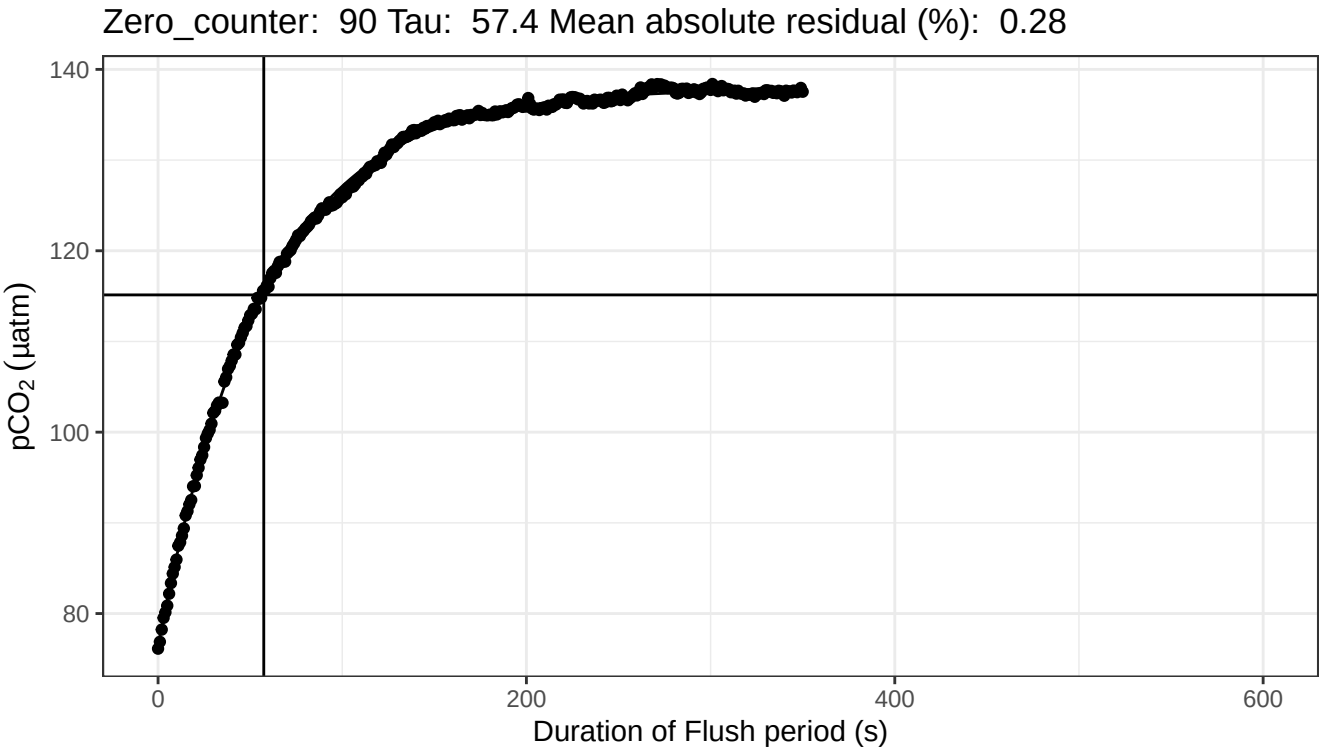

Zero_counter: 89 nls model failed
pCO2 (µatm)
250
200
150
0
200
400
600
Duration of Flush period (s)

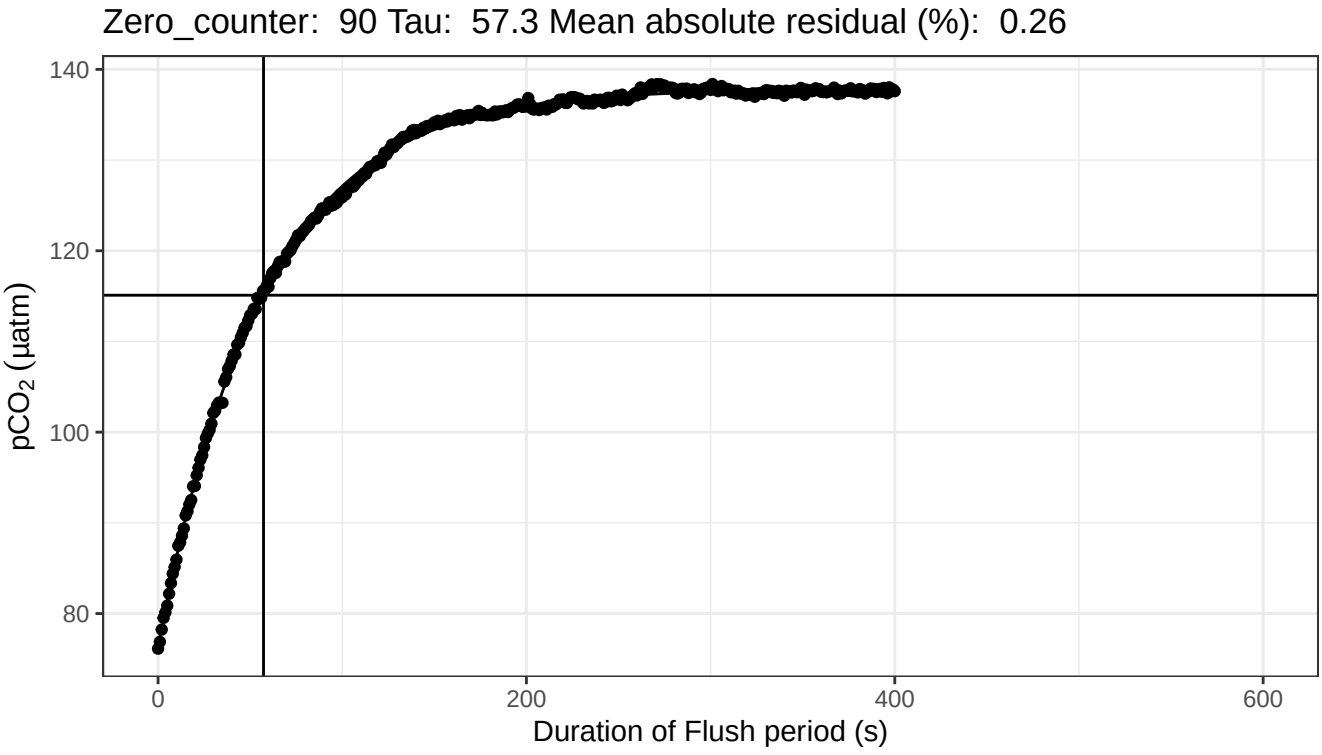

Zero_counter: 90 Tau: 57 Mean absolute residual (%): 0.34
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

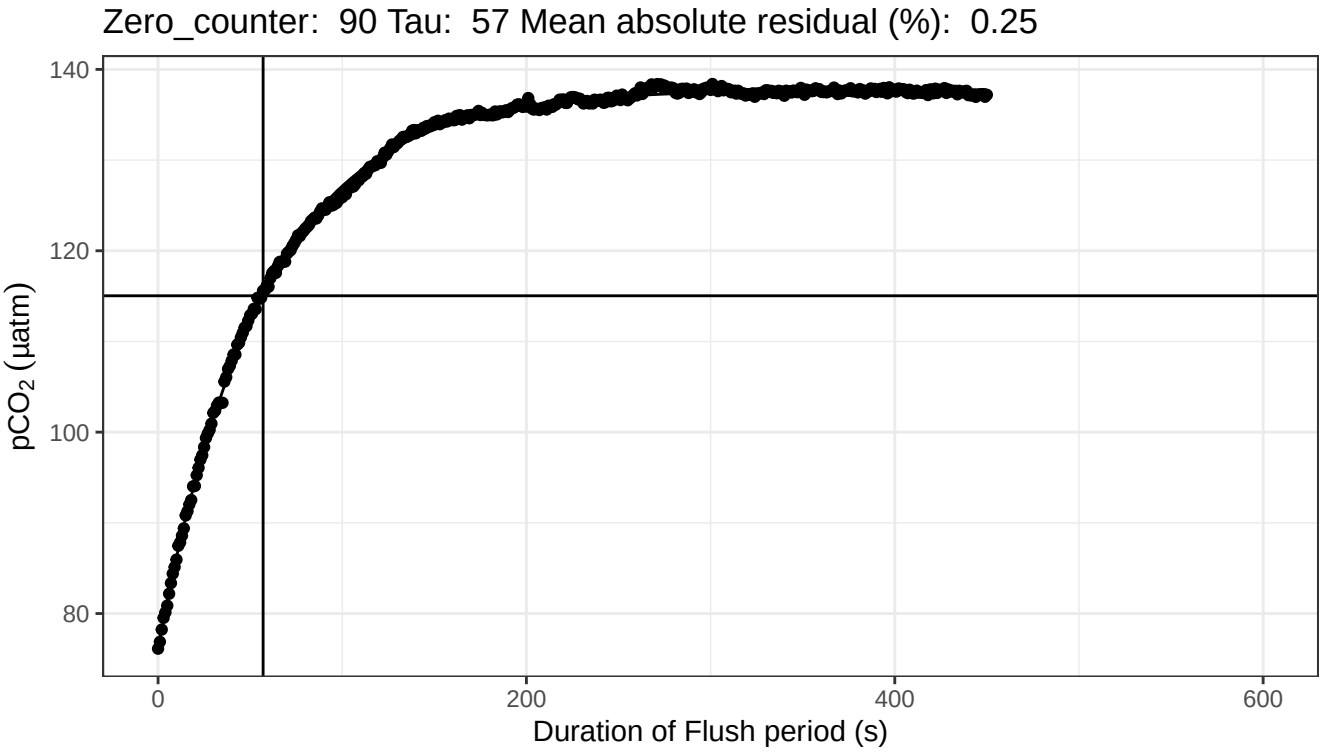

Zero_counter: 90 Tau: 57.6 Mean absolute residual (%): 0.3
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

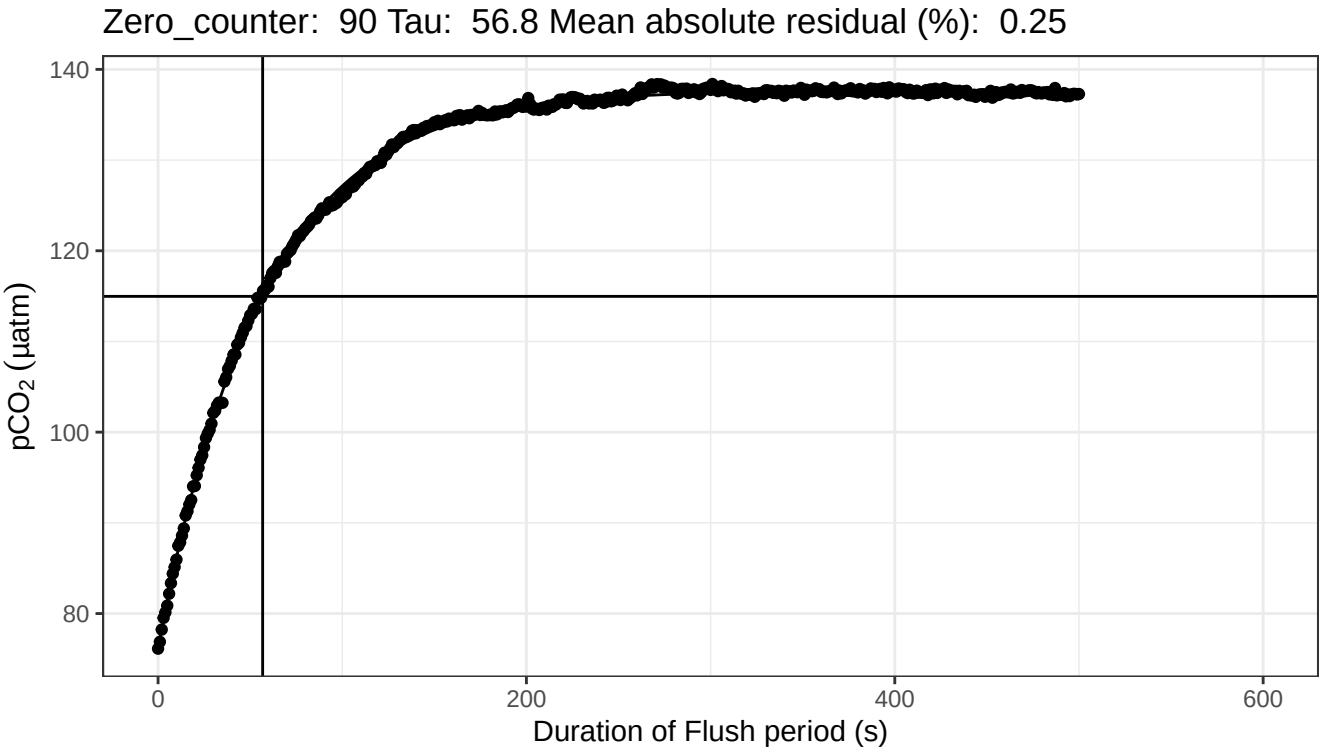

Zero_counter: 90 Tau: 57 Mean absolute residual (%): 0.29
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

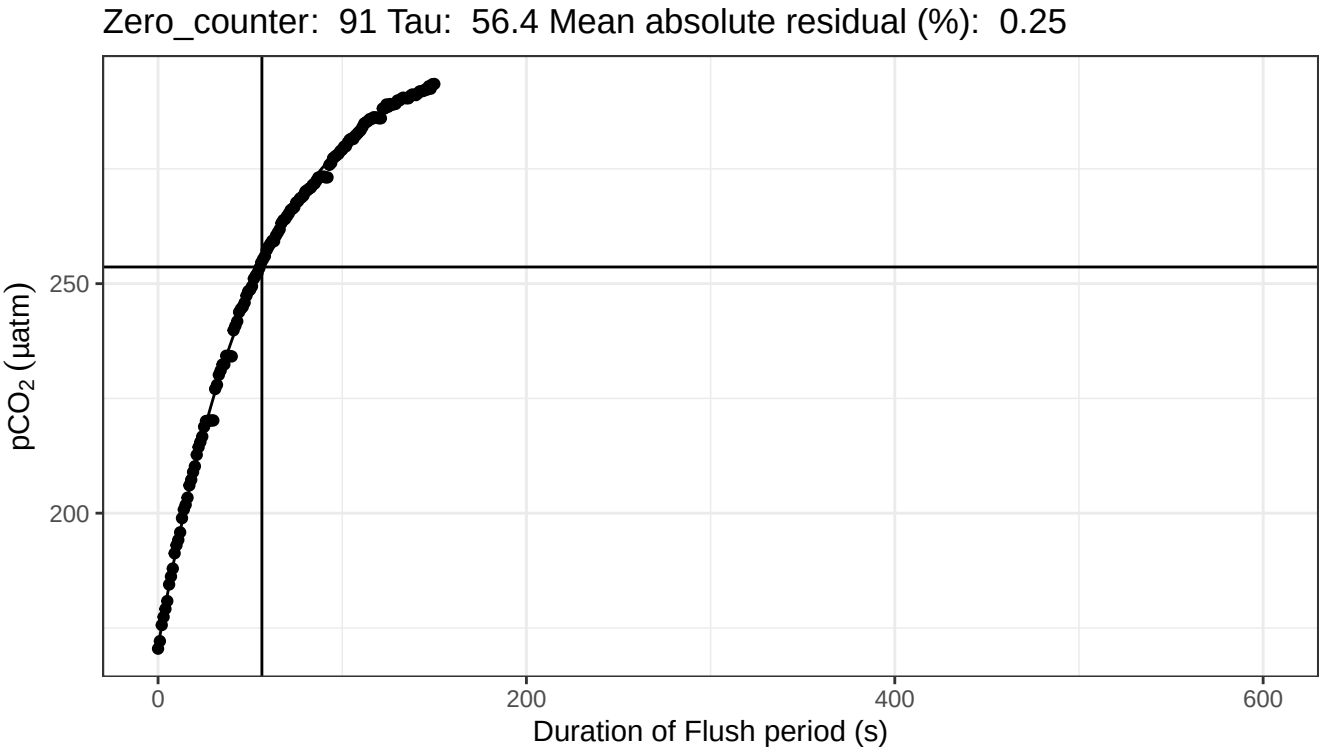

Zero_counter: 90 Tau: 57.6 Mean absolute residual (%): 0.29
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

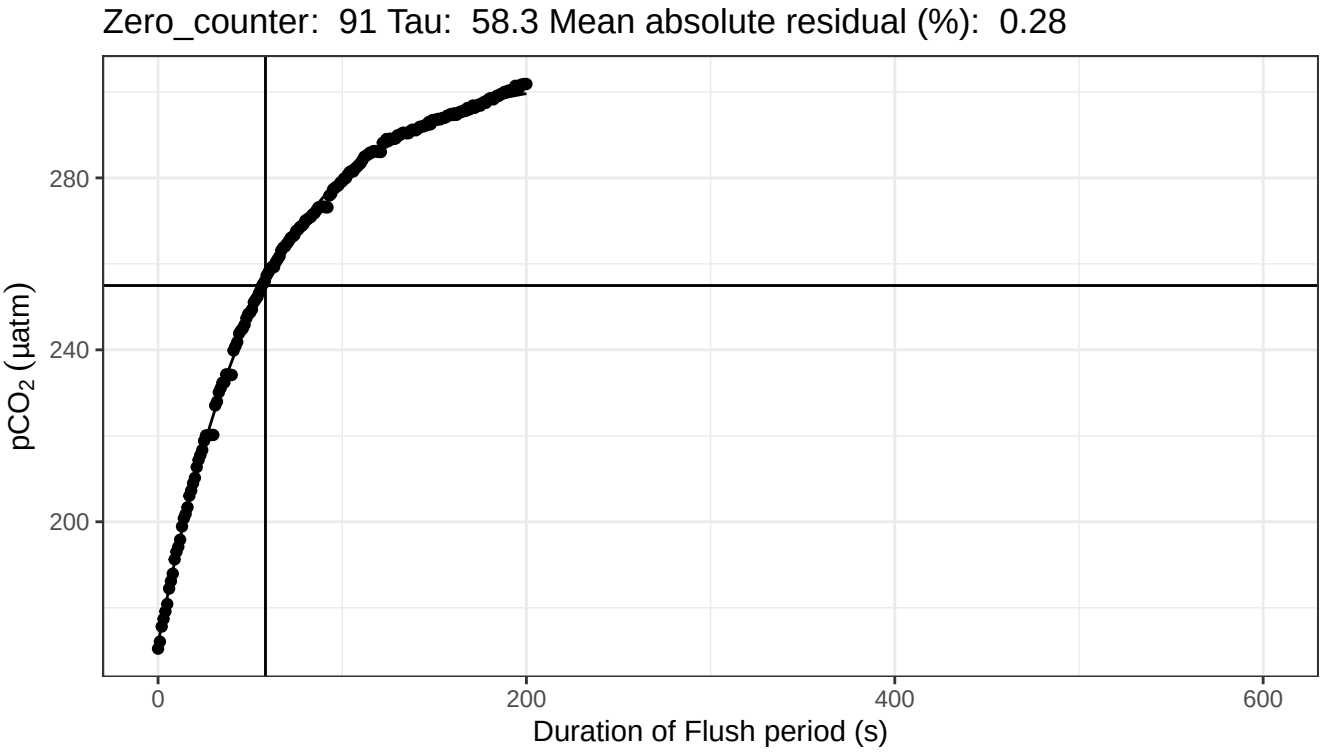

Zero_counter: 90 Tau: 57.4 Mean absolute residual (%): 0.28
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

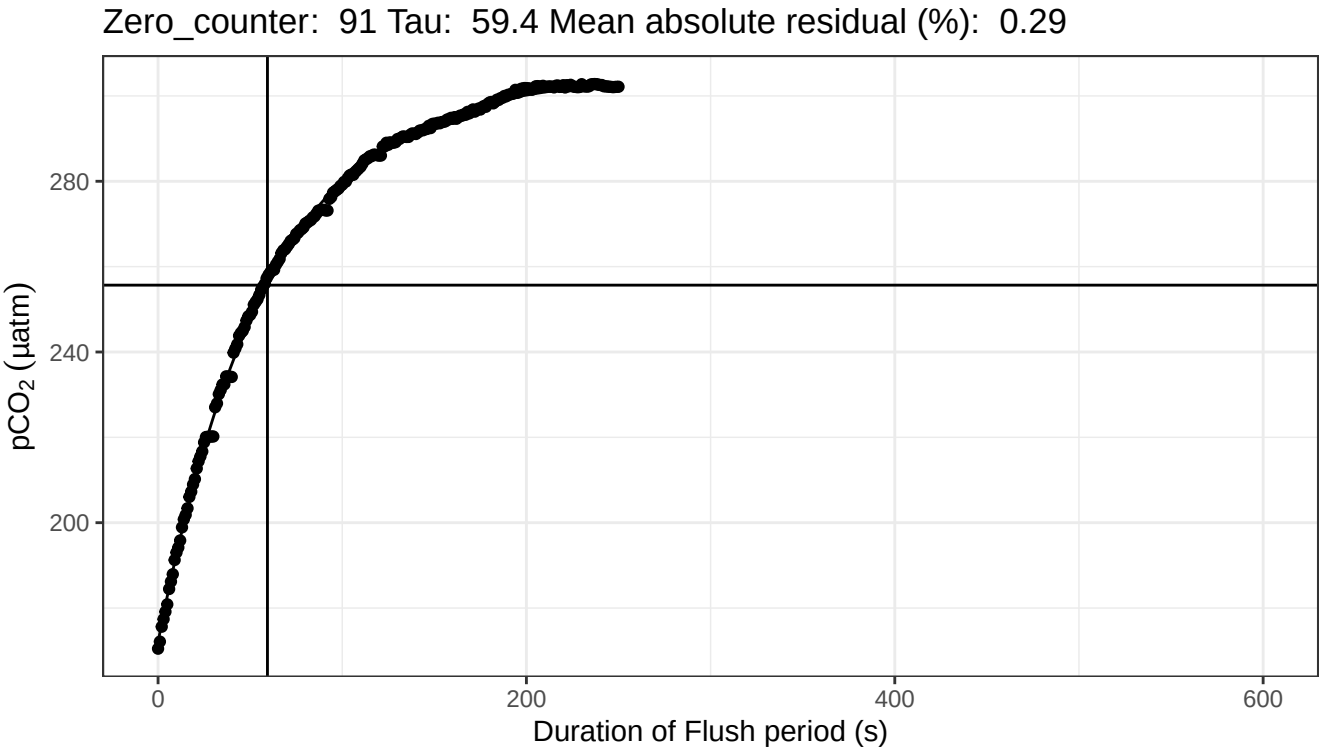

Zero_counter: 90 Tau: 57.3 Mean absolute residual (%): 0.26
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

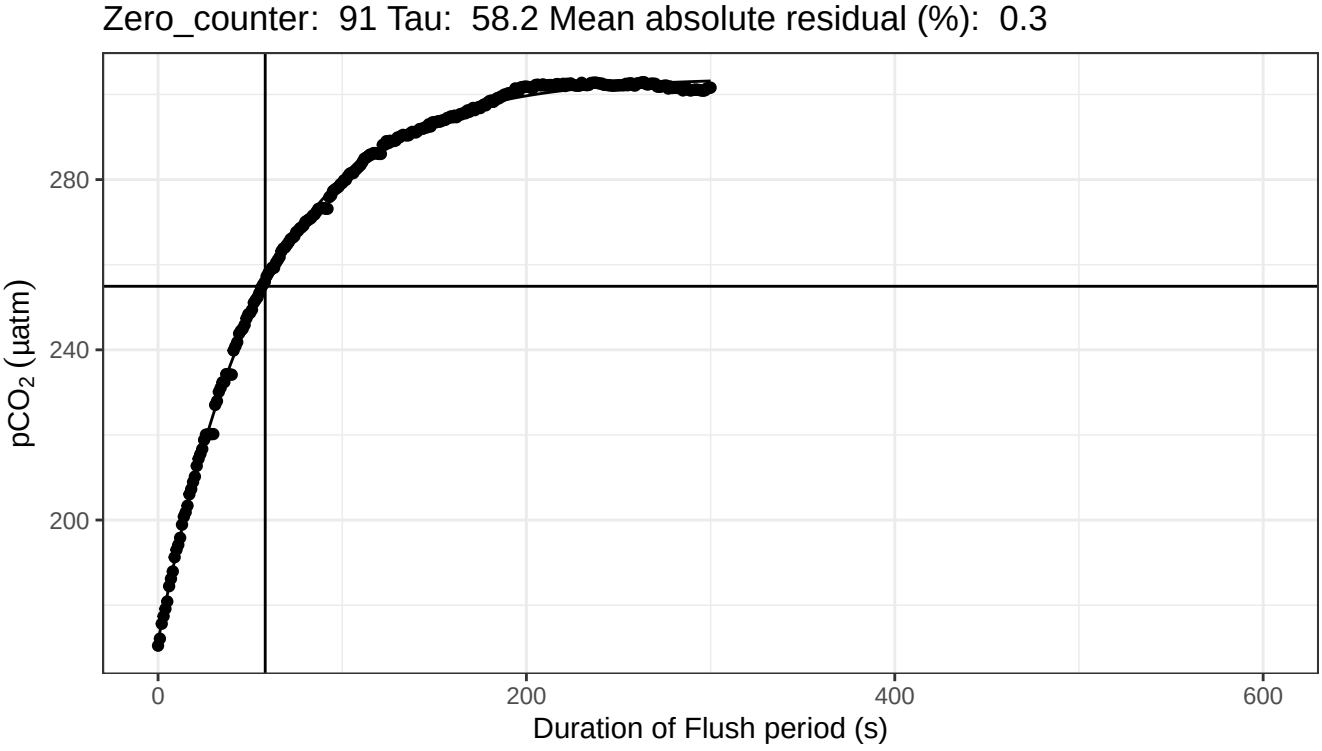

Zero_counter: 90 Tau: 57 Mean absolute residual (%): 0.25
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

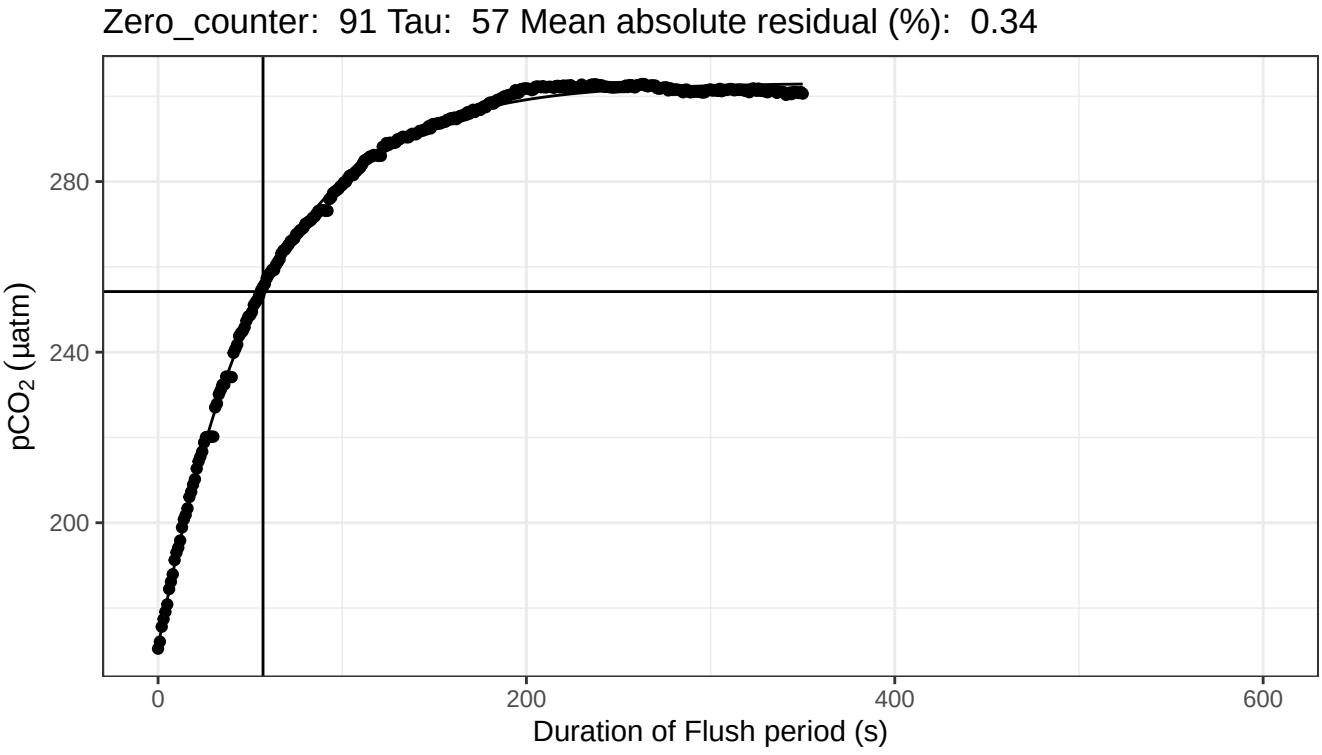

Zero_counter: 90 Tau: 56.8 Mean absolute residual (%): 0.25
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

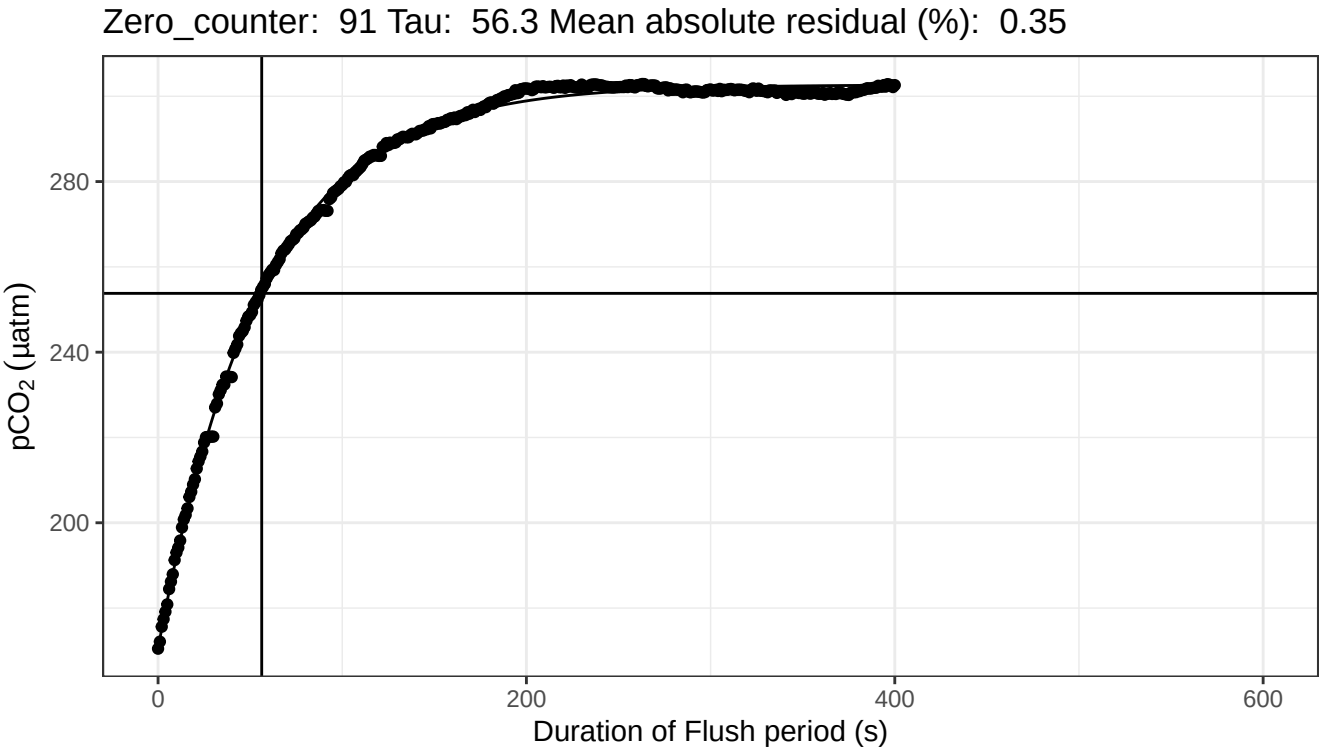

Zero_counter: 91 Tau: 56.4 Mean absolute residual (%): 0.25
pCO2 (µatm)
250
200
0
200
400
600
Duration of Flush period (s)

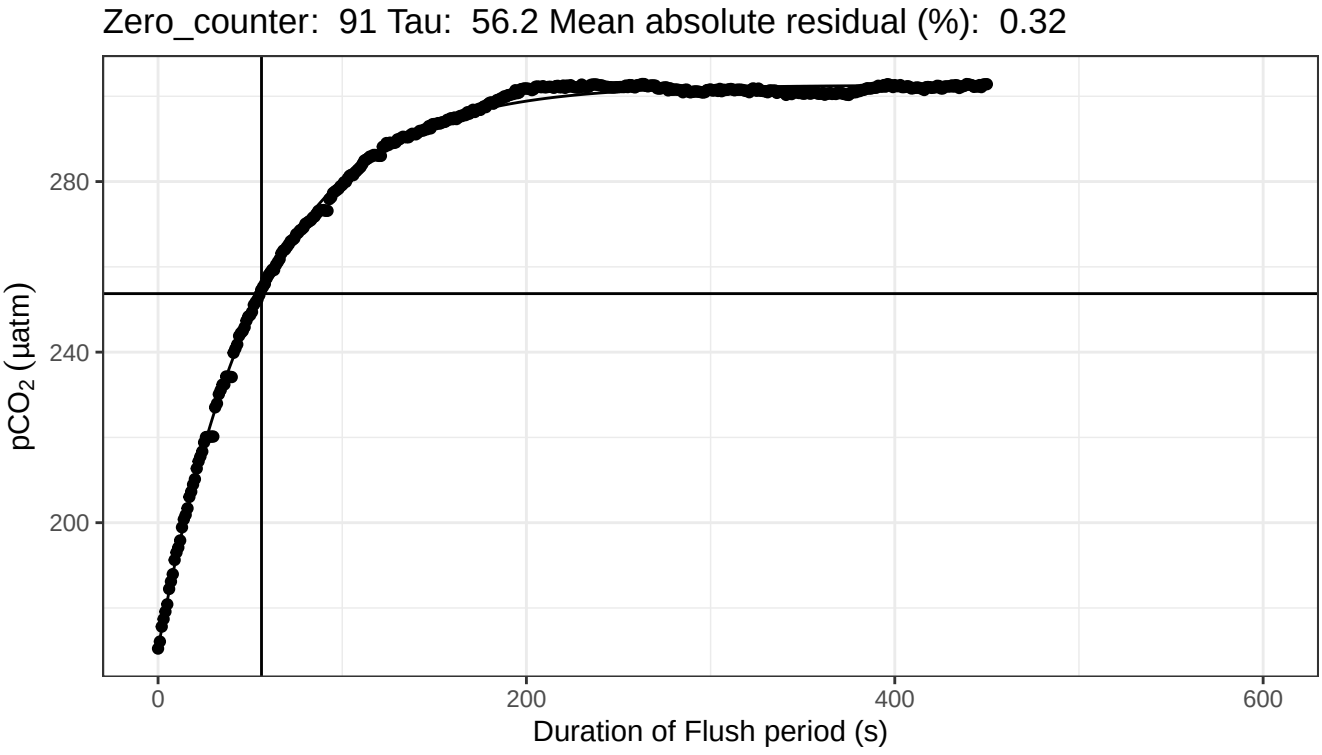

Zero_counter: 91 Tau: 58.3 Mean absolute residual (%): 0.28
280
240
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

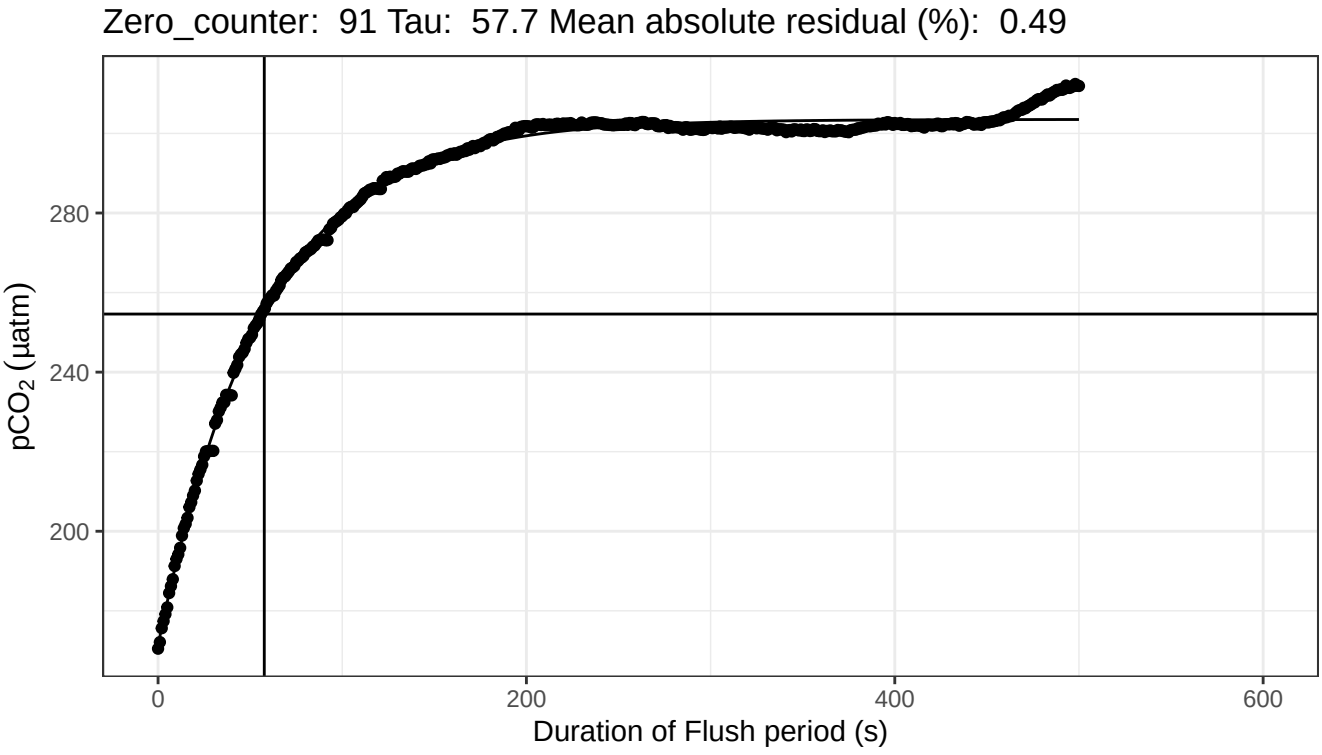

Zero_counter: 91 Tau: 59.4 Mean absolute residual (%): 0.29
280
240
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

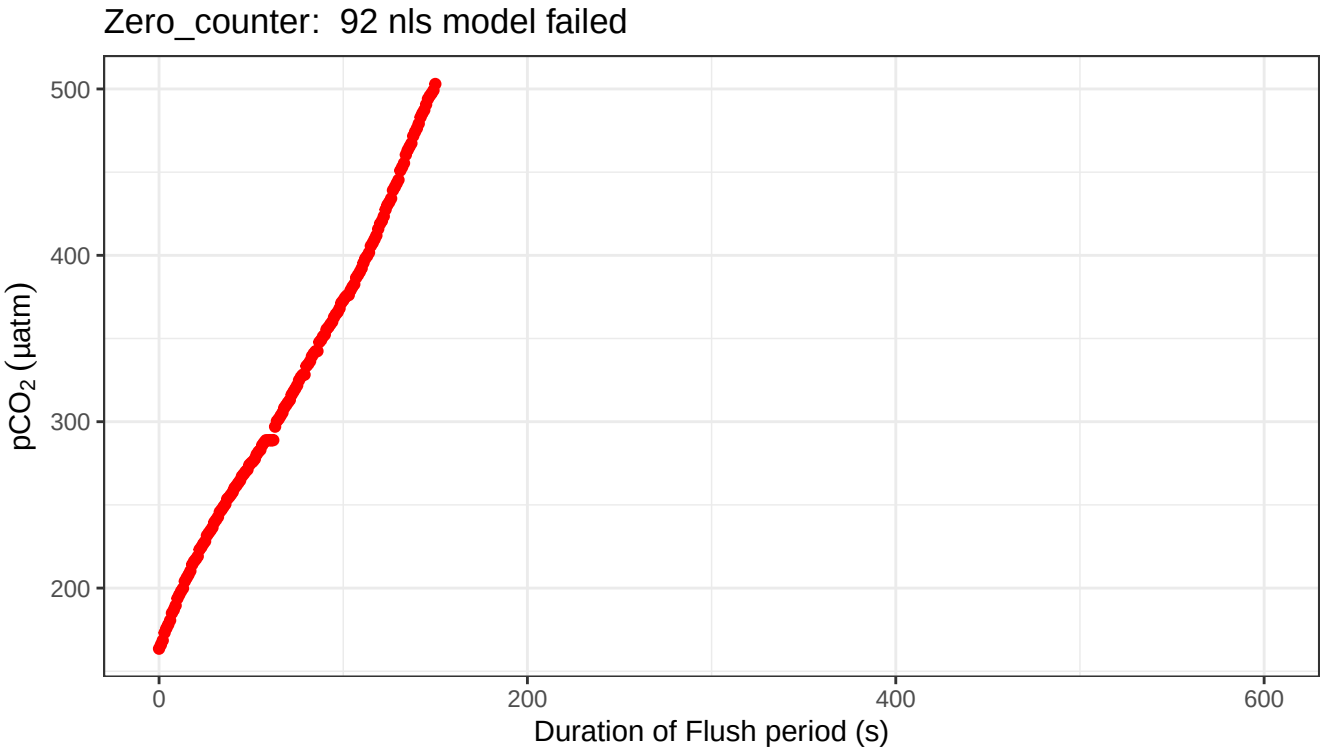

Zero_counter: 91 Tau: 58.2 Mean absolute residual (%): 0.3
280
240
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

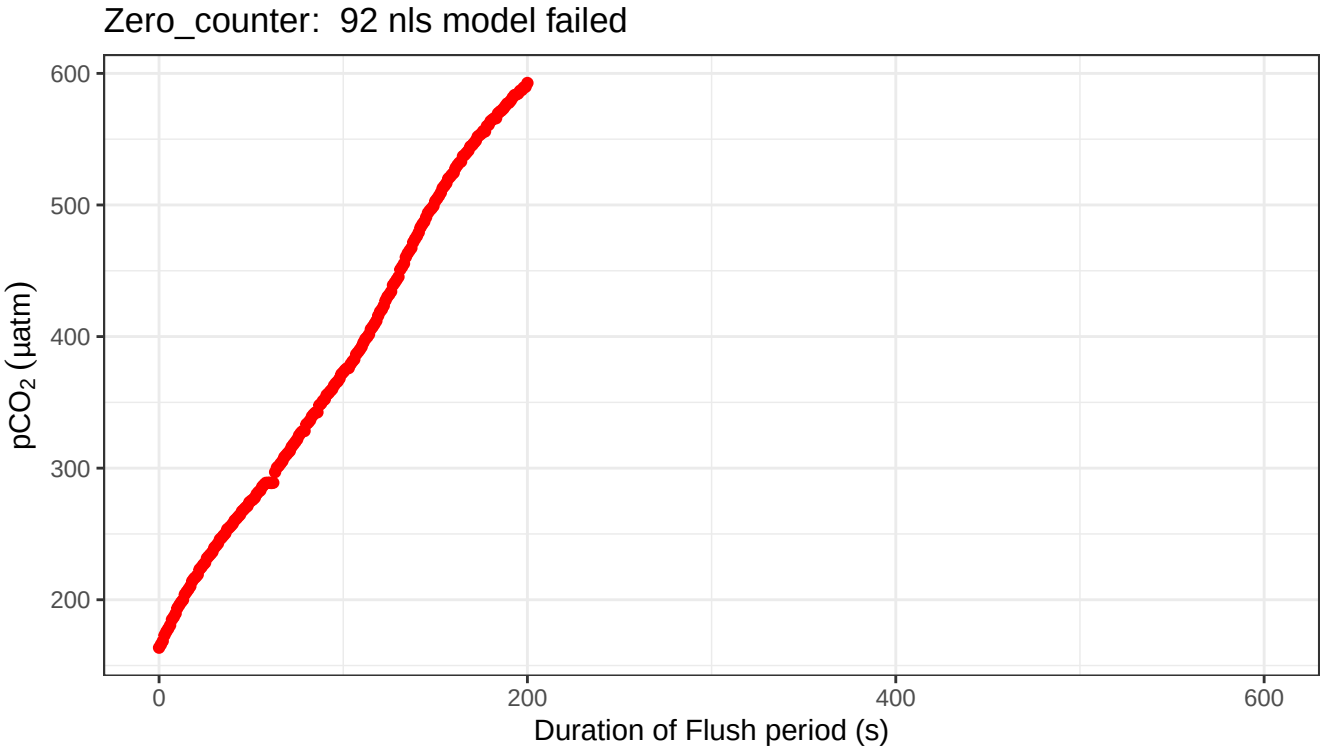

Zero_counter: 91 Tau: 57 Mean absolute residual (%): 0.34
280
240
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

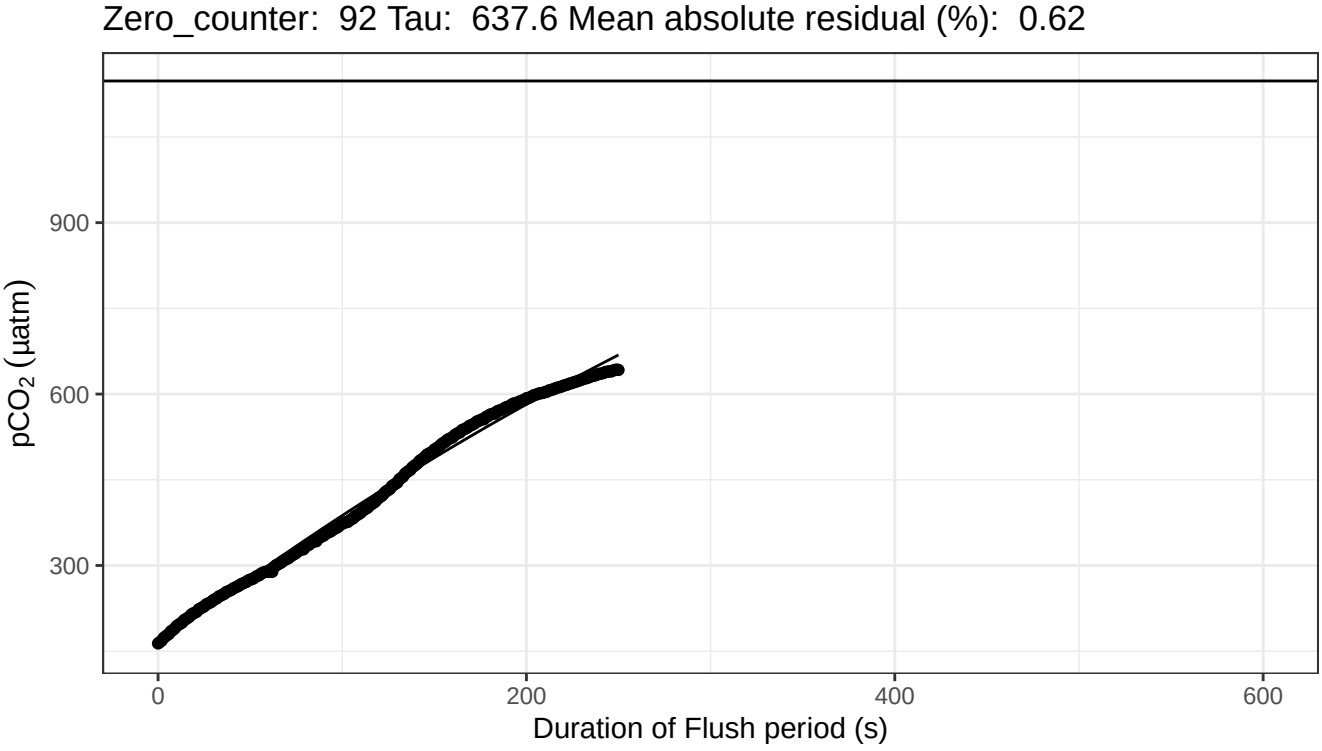

Zero_counter: 91 Tau: 56.3 Mean absolute residual (%): 0.35
280
240
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

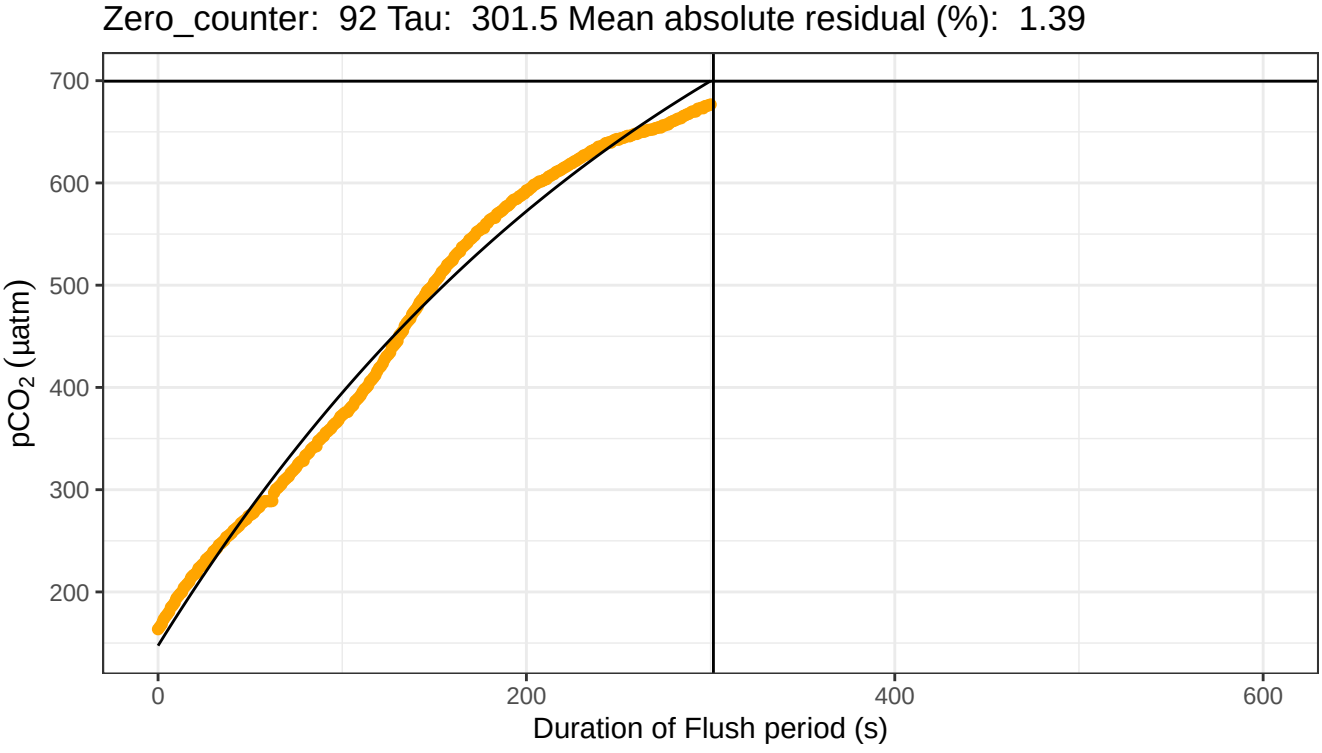

Zero_counter: 91 Tau: 56.2 Mean absolute residual (%): 0.32
280
240
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

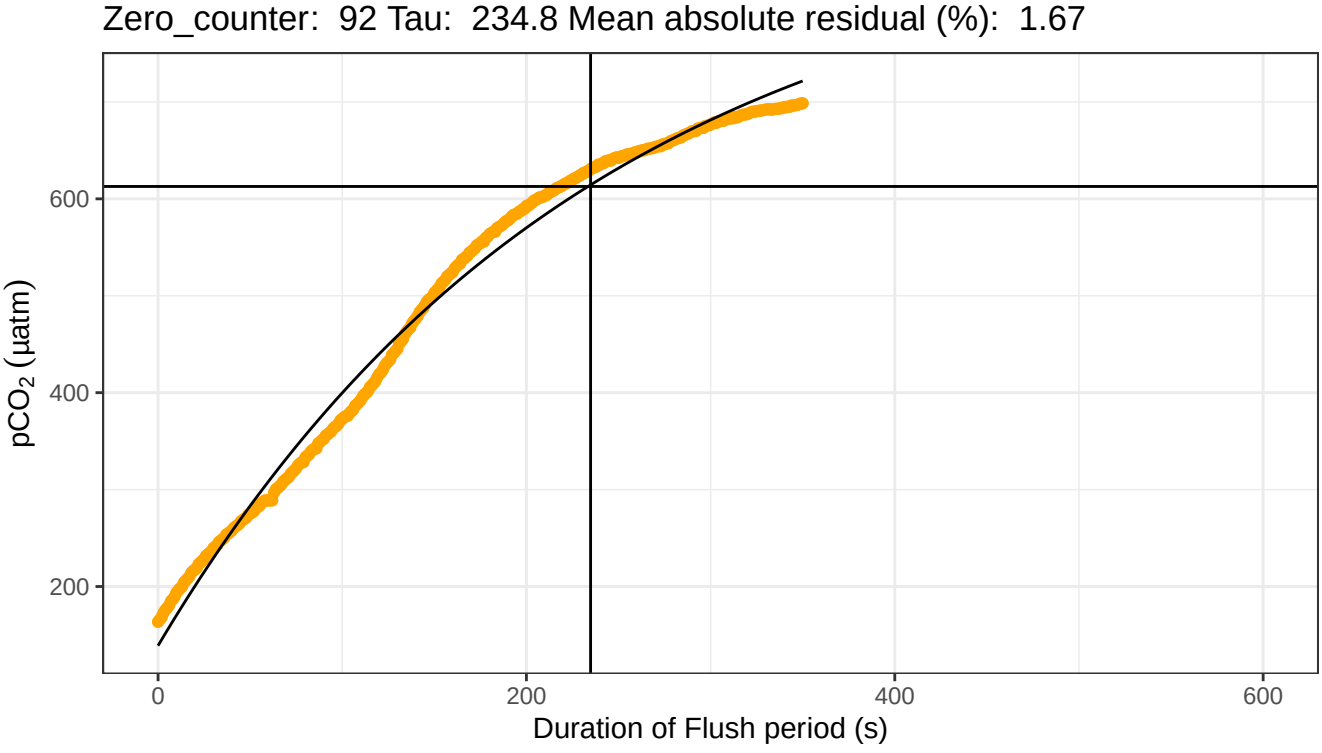

Zero_counter: 91 Tau: 57.7 Mean absolute residual (%): 0.49
280
240
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

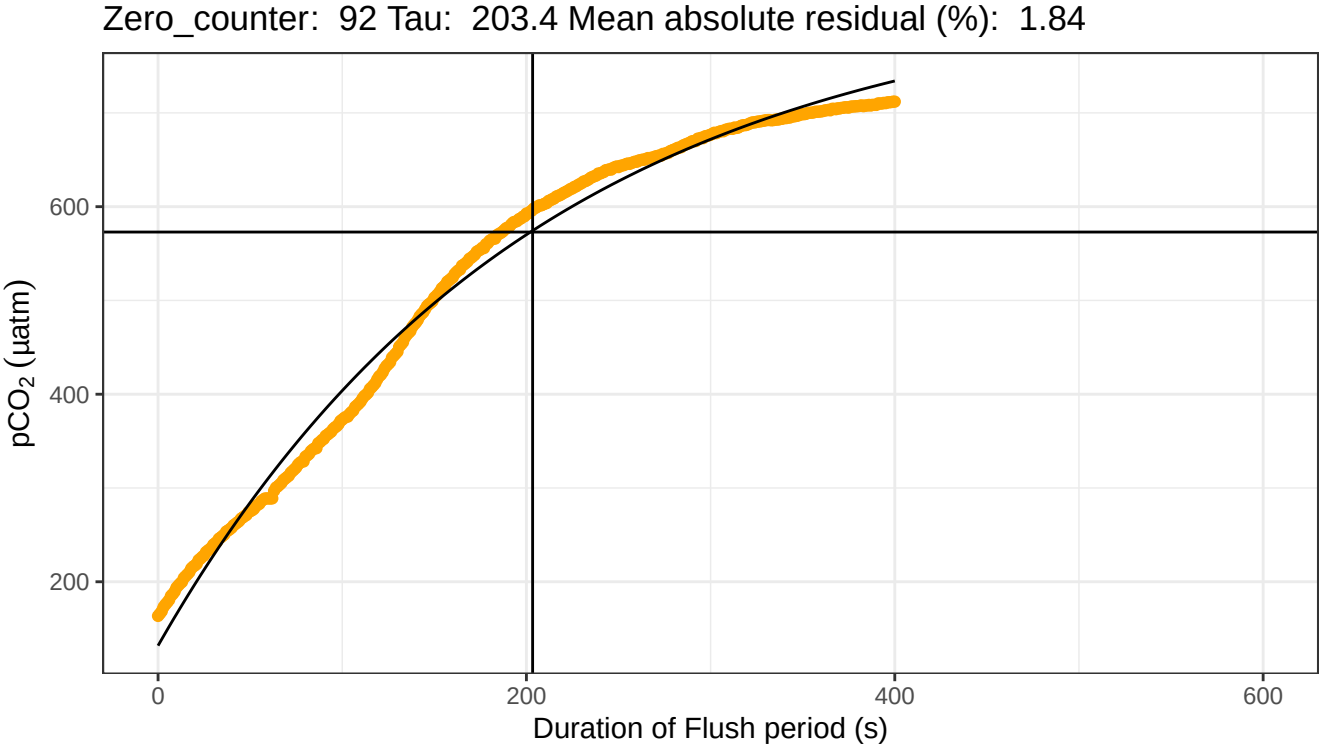

Zero_counter: 92 nls model failed
500
400
300
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

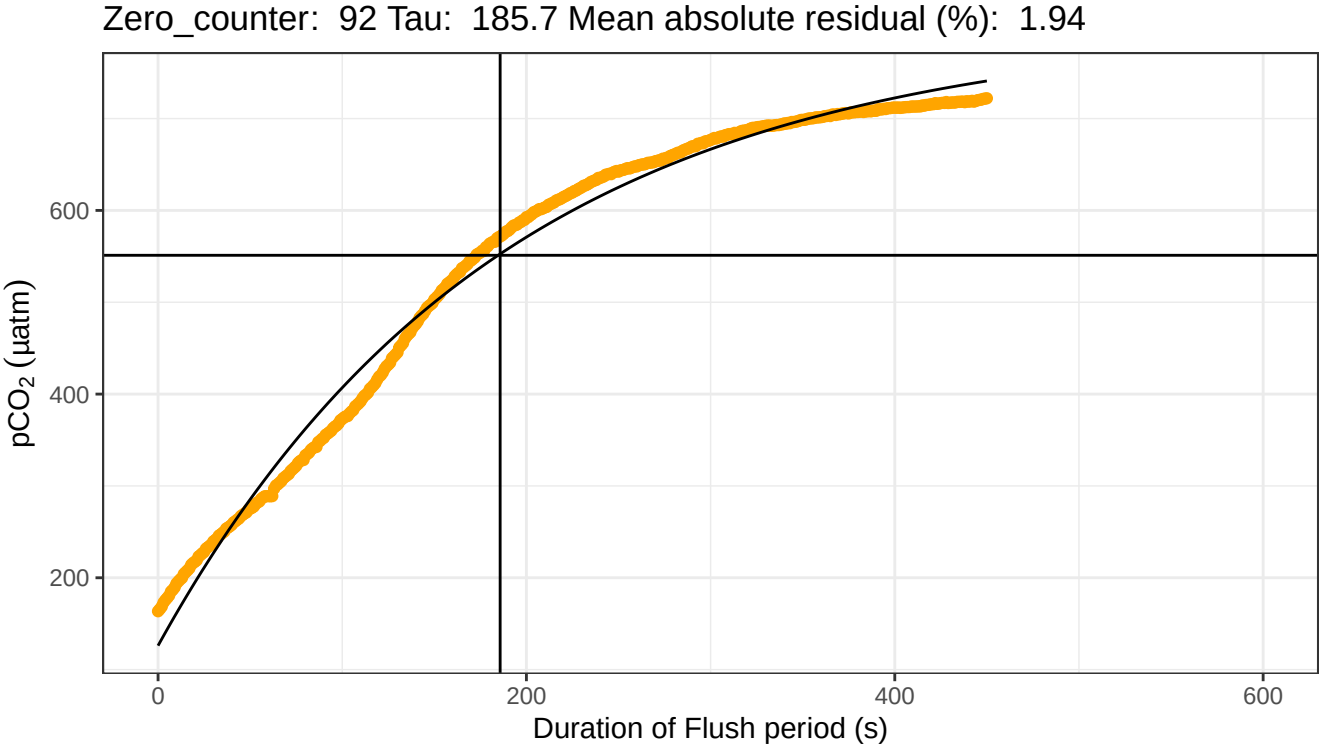

Zero_counter: 92 nls model failed
600
500
400
300
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

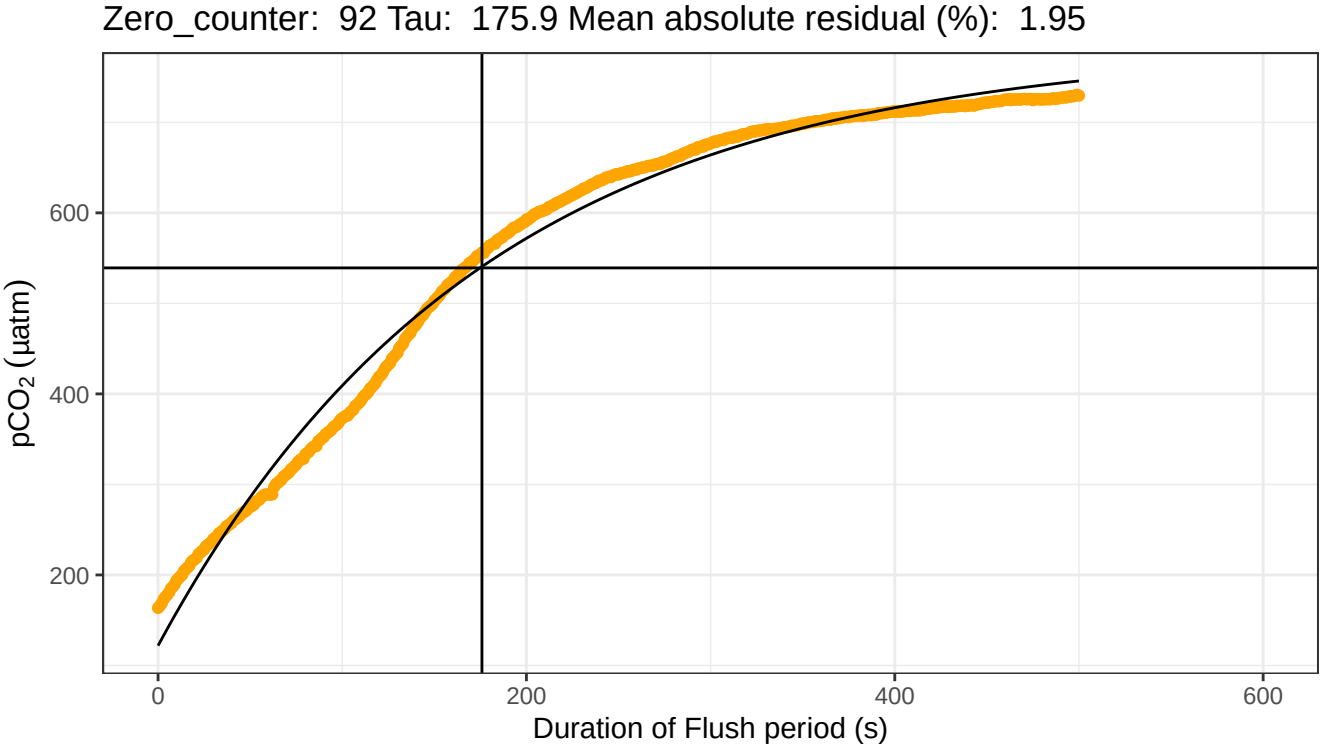

Zero_counter: 92 Tau: 637.6 Mean absolute residual (%): 0.62
900
600
300
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

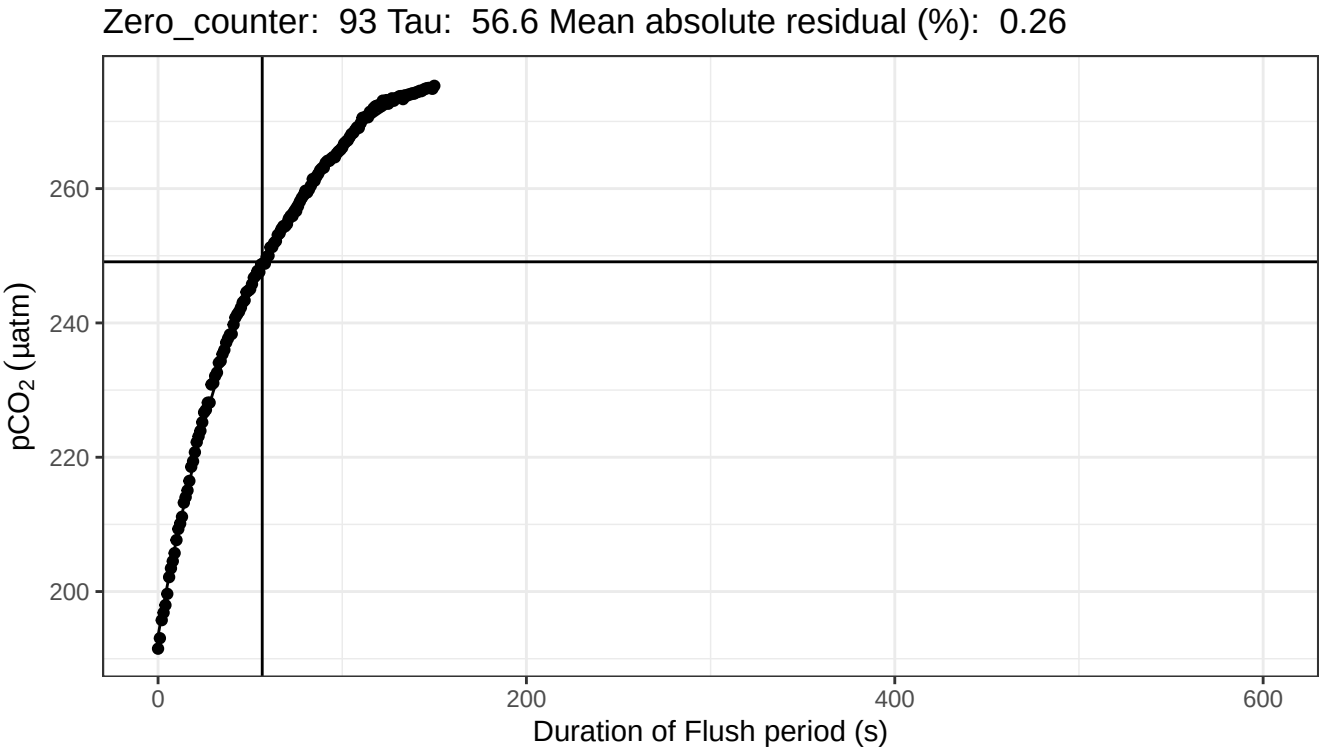

Zero_counter: 92 Tau: 301.5 Mean absolute residual (%): 1.39
700
600
500
400
300
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

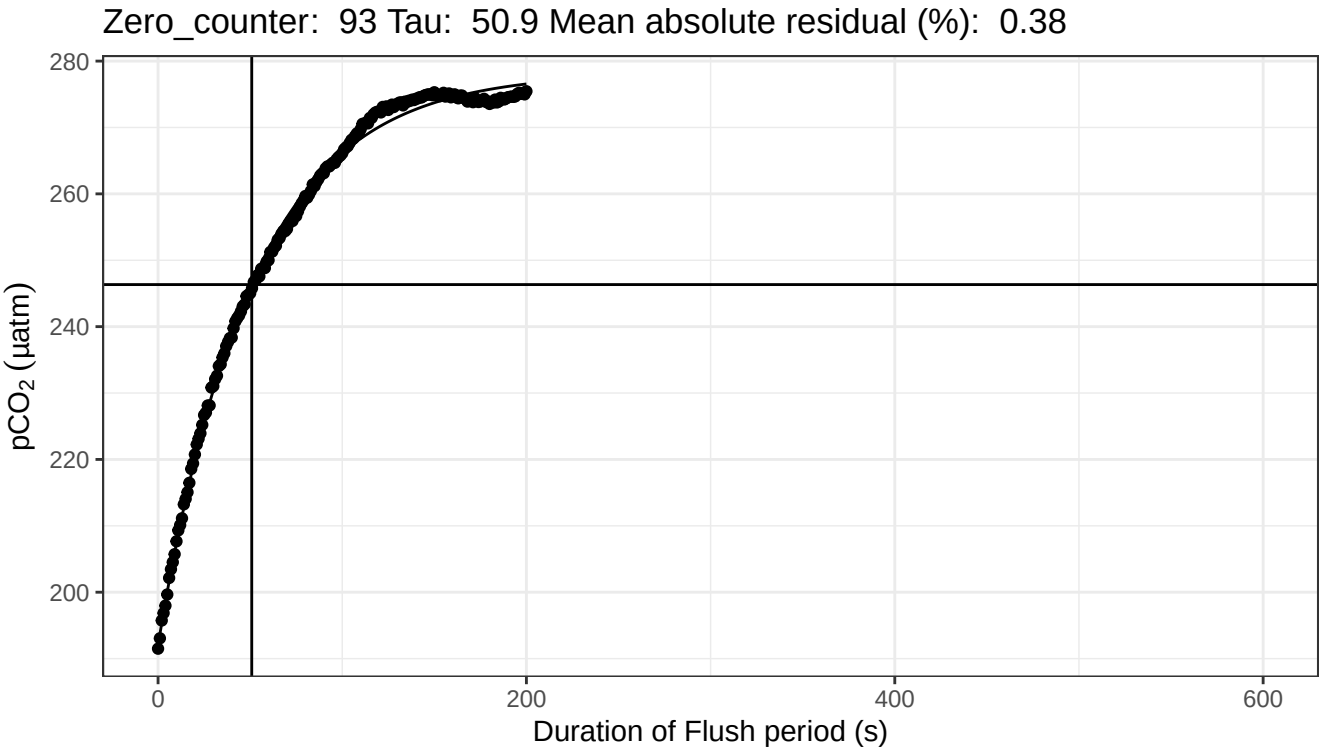

Zero_counter: 92 Tau: 234.8 Mean absolute residual (%): 1.67
600
400
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

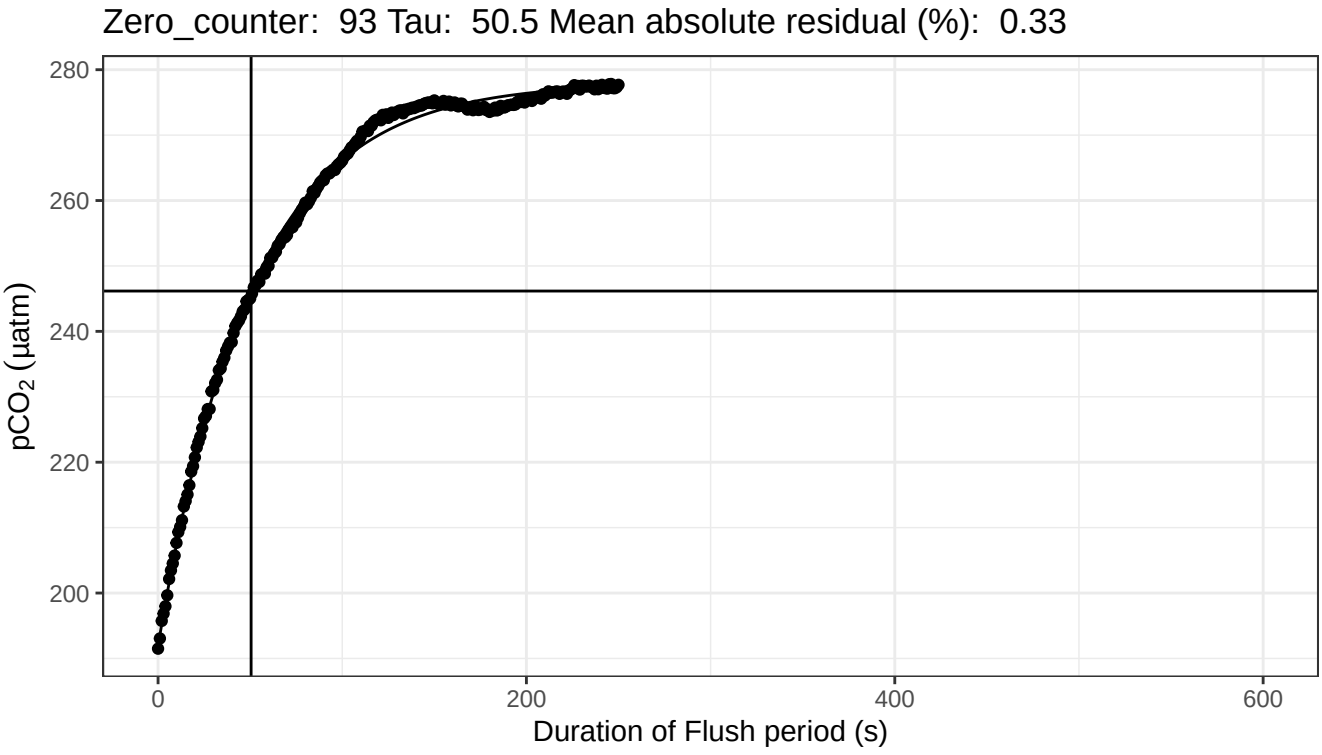

Zero_counter: 92 Tau: 203.4 Mean absolute residual (%): 1.84
600
400
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

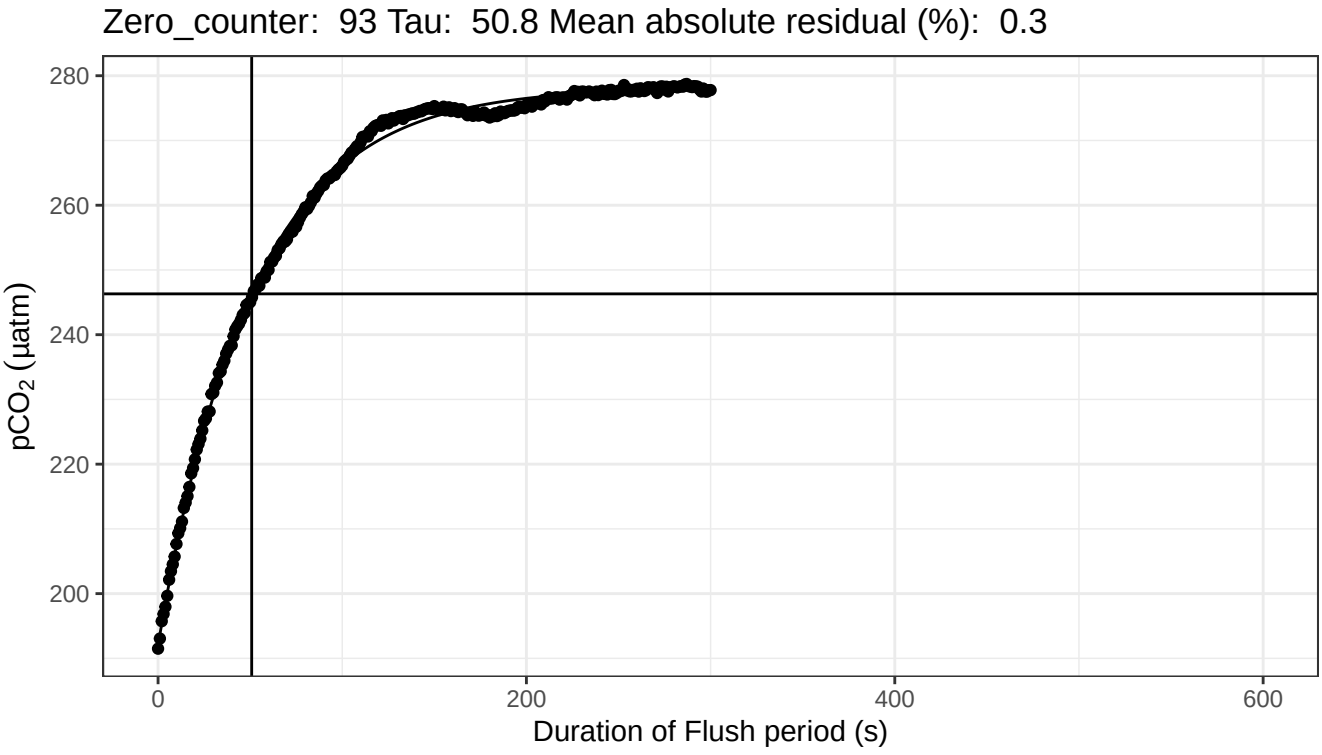

Zero_counter: 92 Tau: 185.7 Mean absolute residual (%): 1.94
600
400
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

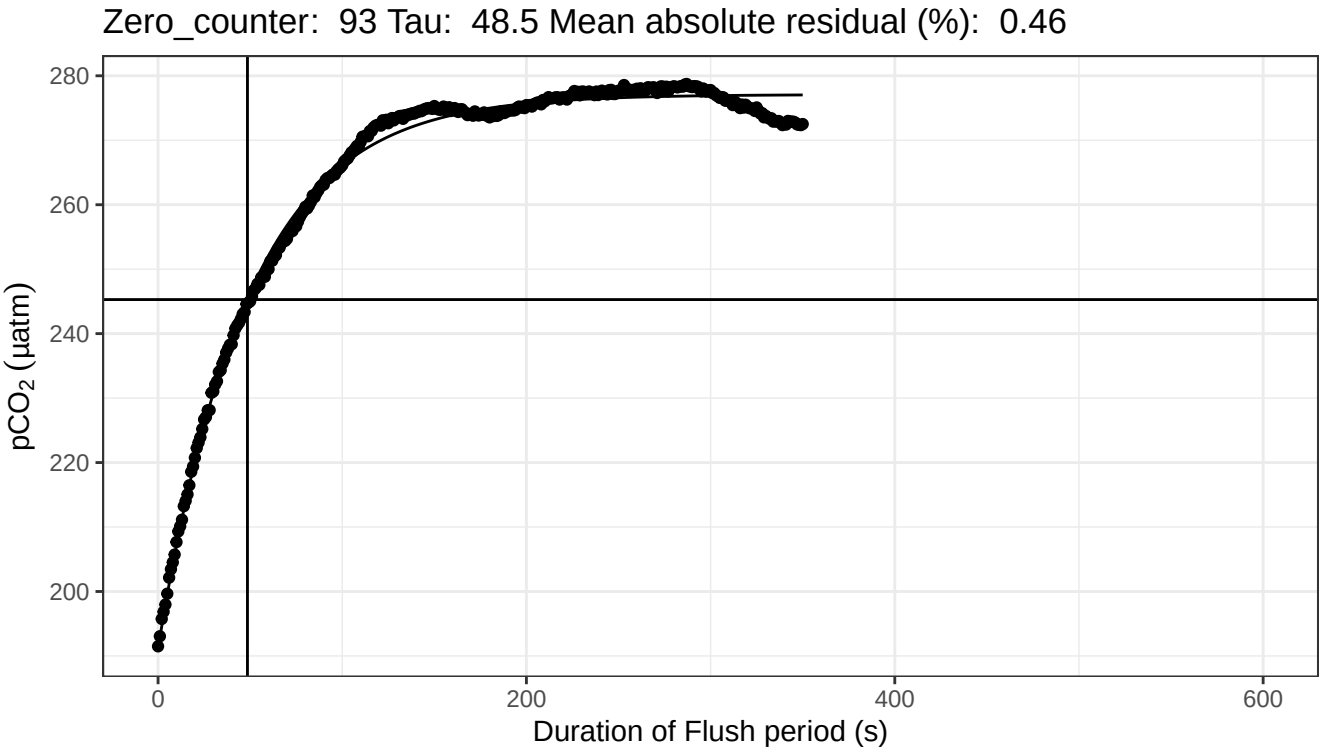

Zero_counter: 92 Tau: 175.9 Mean absolute residual (%): 1.95
600
400
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

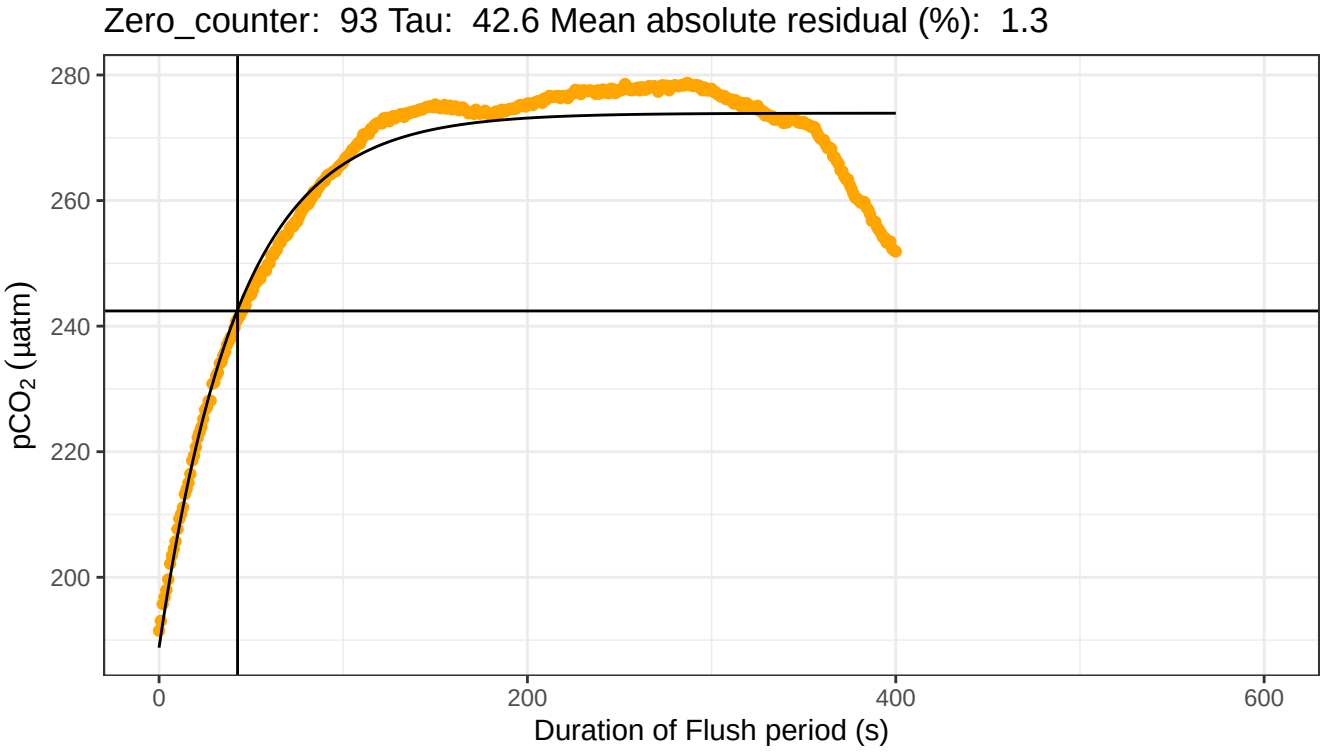

Zero_counter: 93 Tau: 56.6 Mean absolute residual (%): 0.26
pCO2 (µatm)
260
240
220
200
0
200
400
600
Duration of Flush period (s)

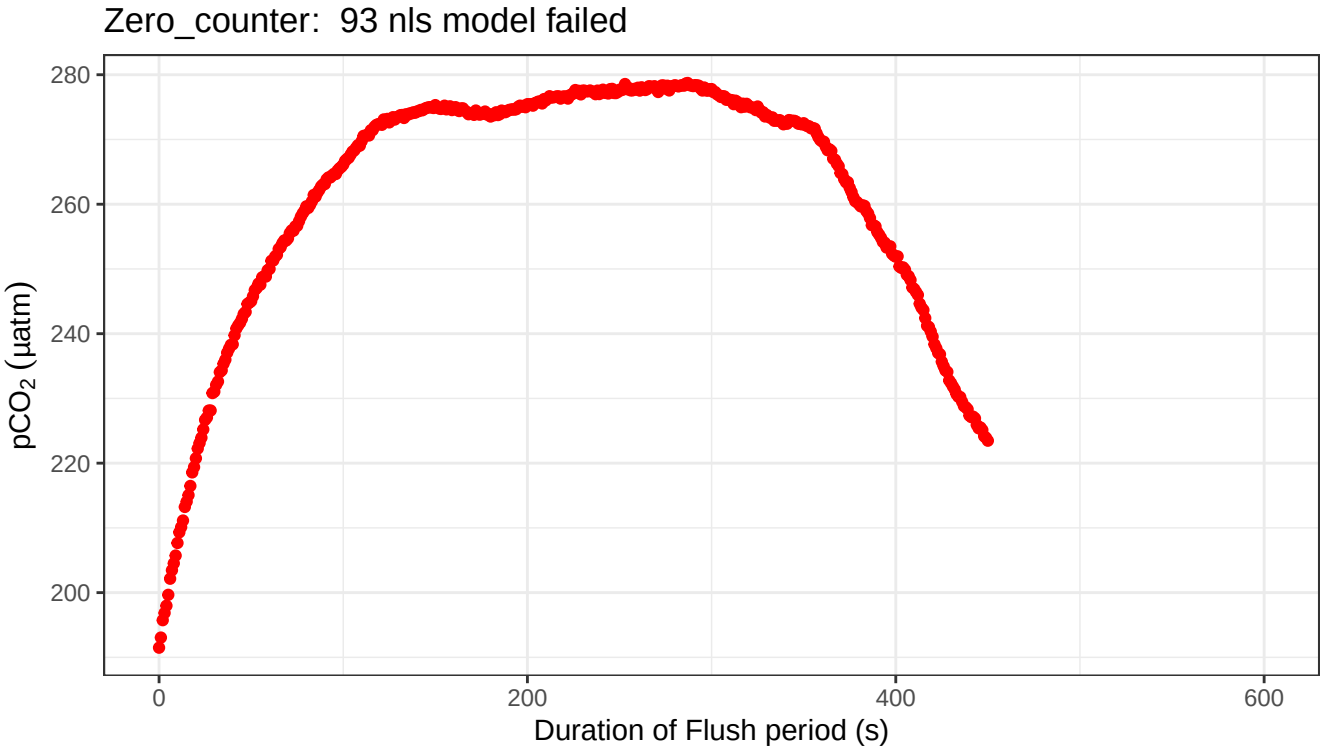

Zero_counter: 93 Tau: 50.9 Mean absolute residual (%): 0.38
280
260
240
220
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

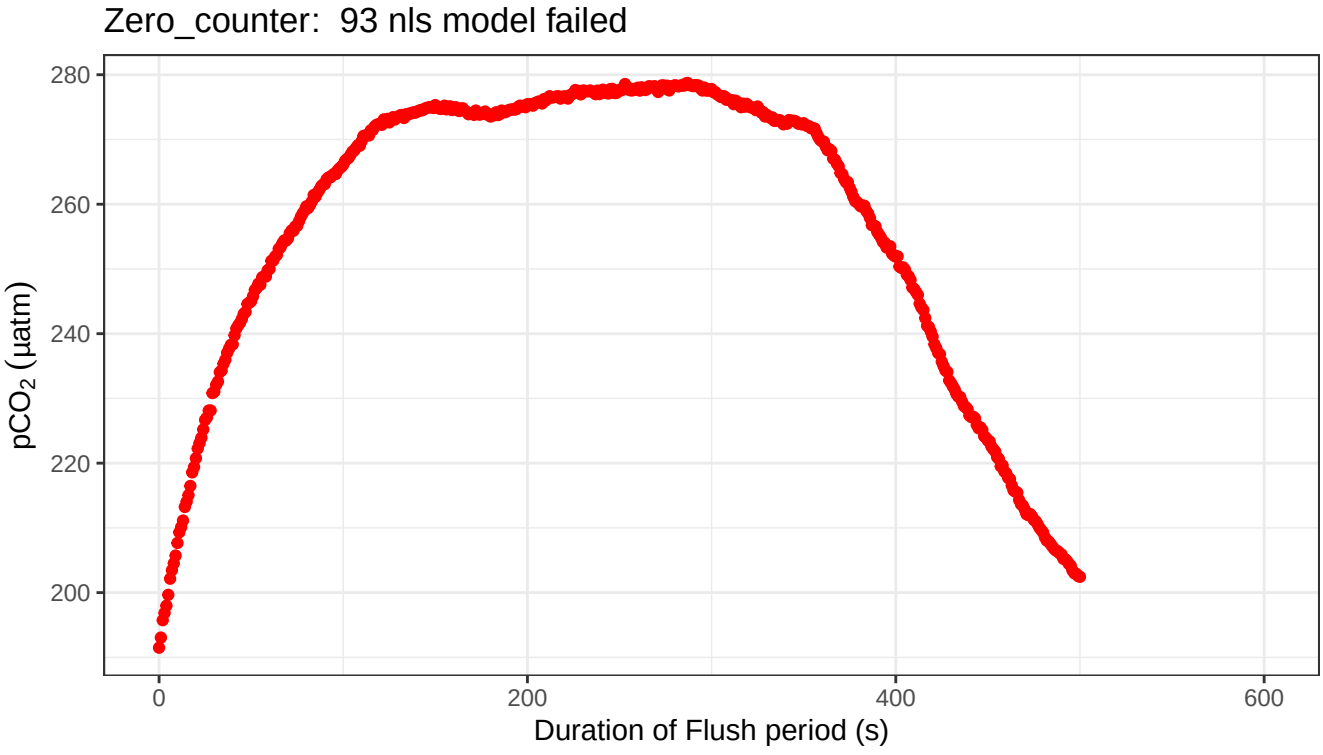

Zero_counter: 93 Tau: 50.5 Mean absolute residual (%): 0.33
280
260
240
220
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

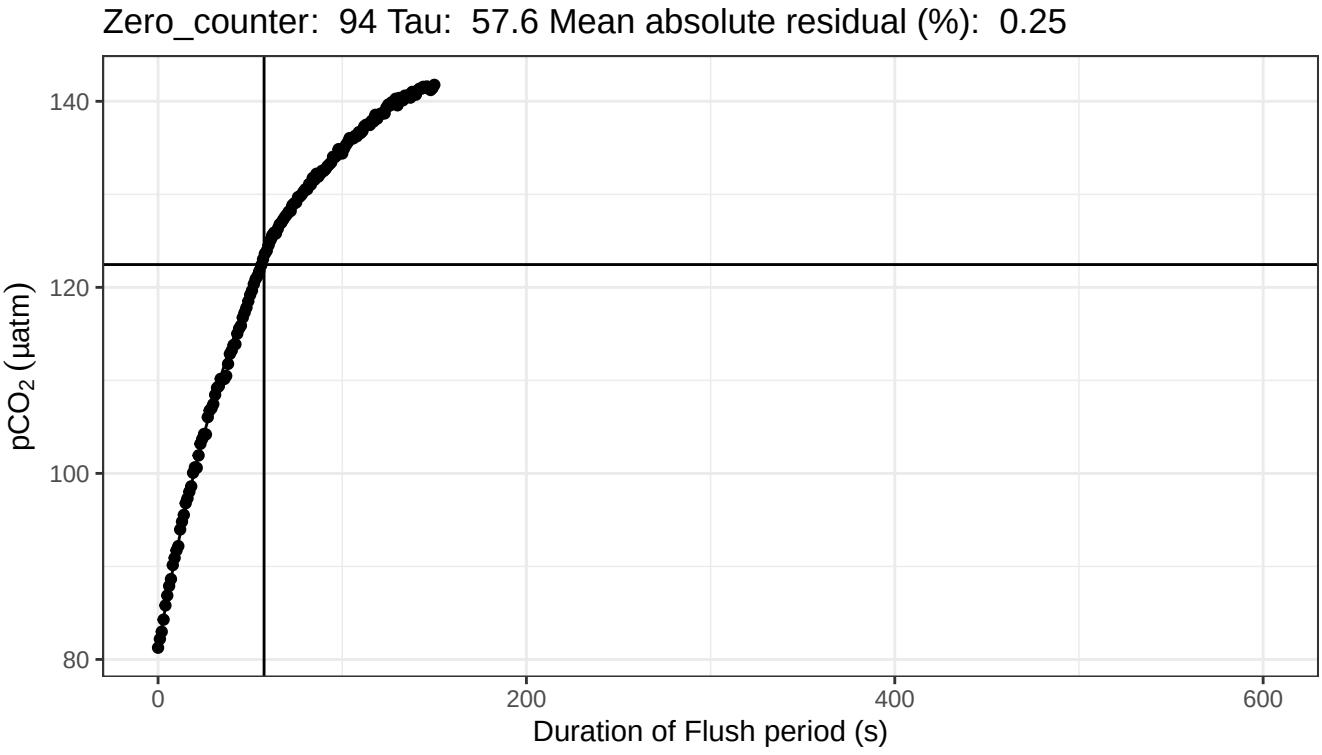

Zero_counter: 93 Tau: 50.8 Mean absolute residual (%): 0.3
280
260
240
220
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

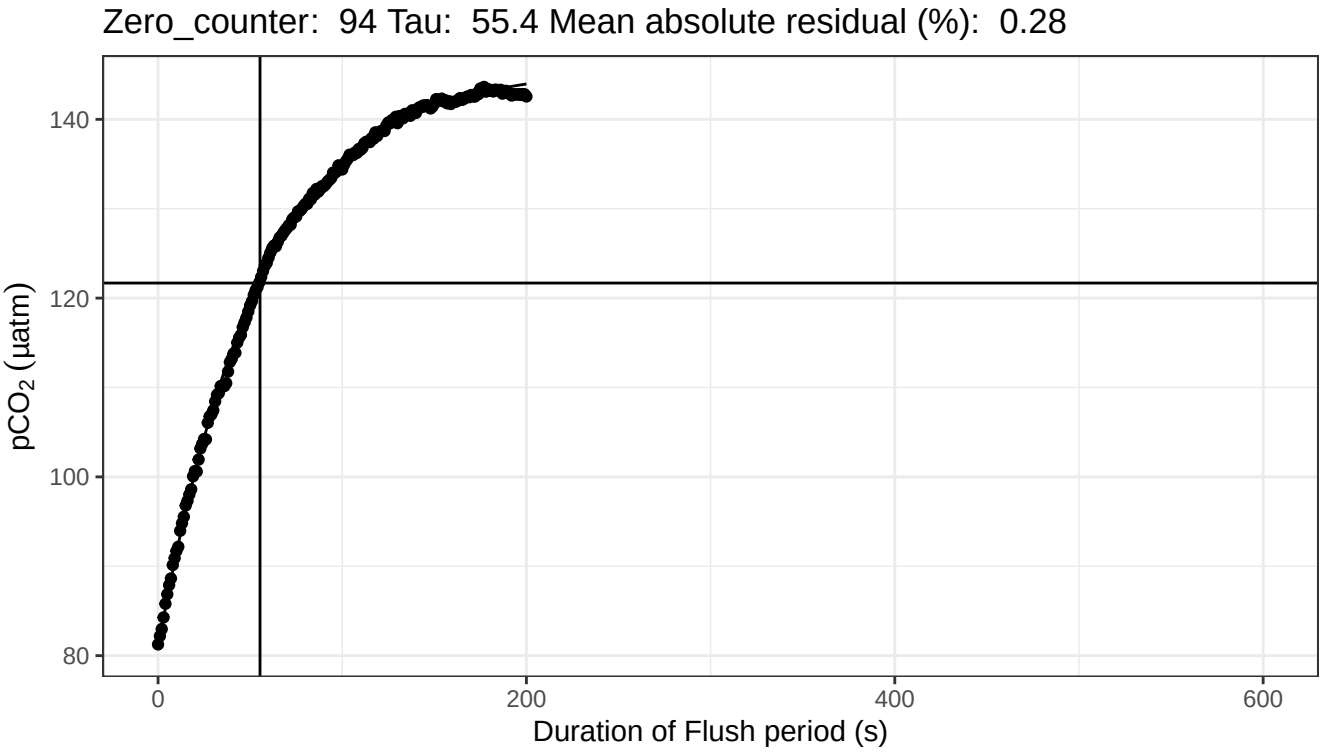

Zero_counter: 93 Tau: 48.5 Mean absolute residual (%): 0.46
280
260
240
220
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

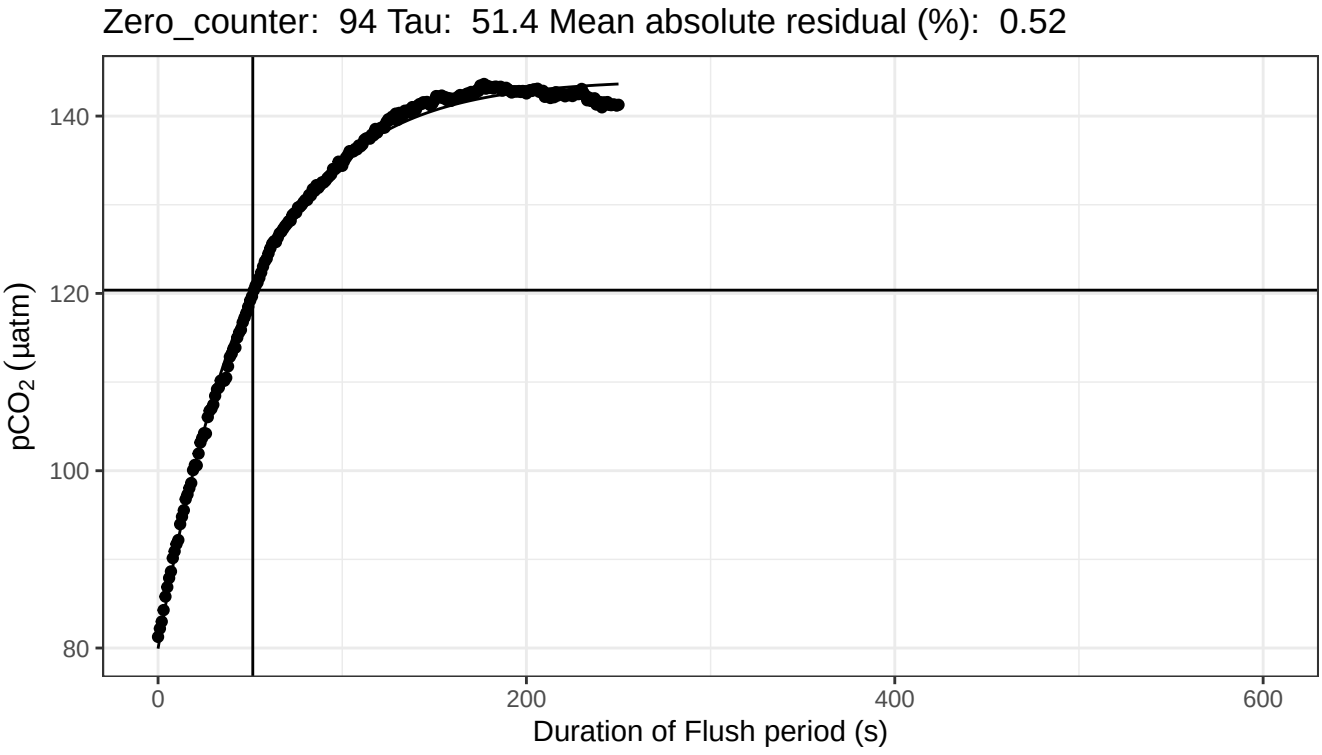

Zero_counter: 93 Tau: 42.6 Mean absolute residual (%): 1.3
280
260
240
220
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

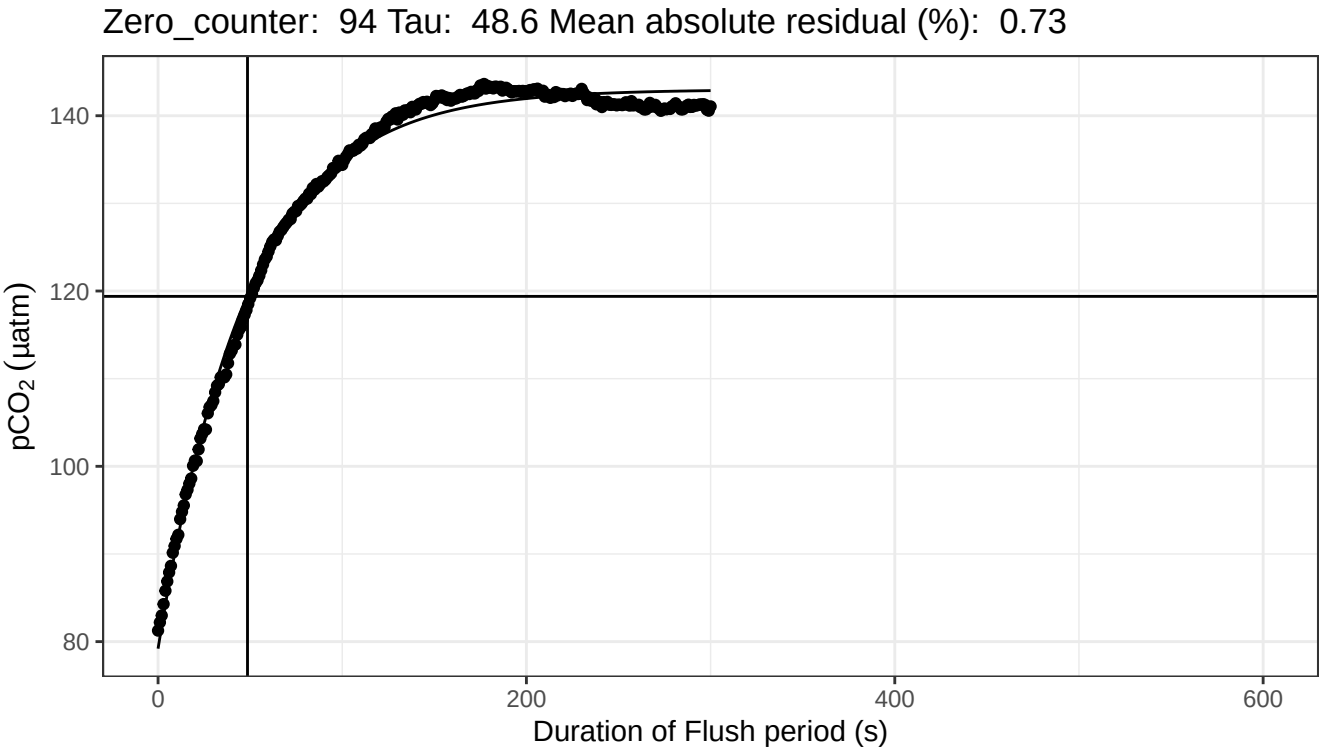

Zero_counter: 93 nls model failed
280
260
240
220
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

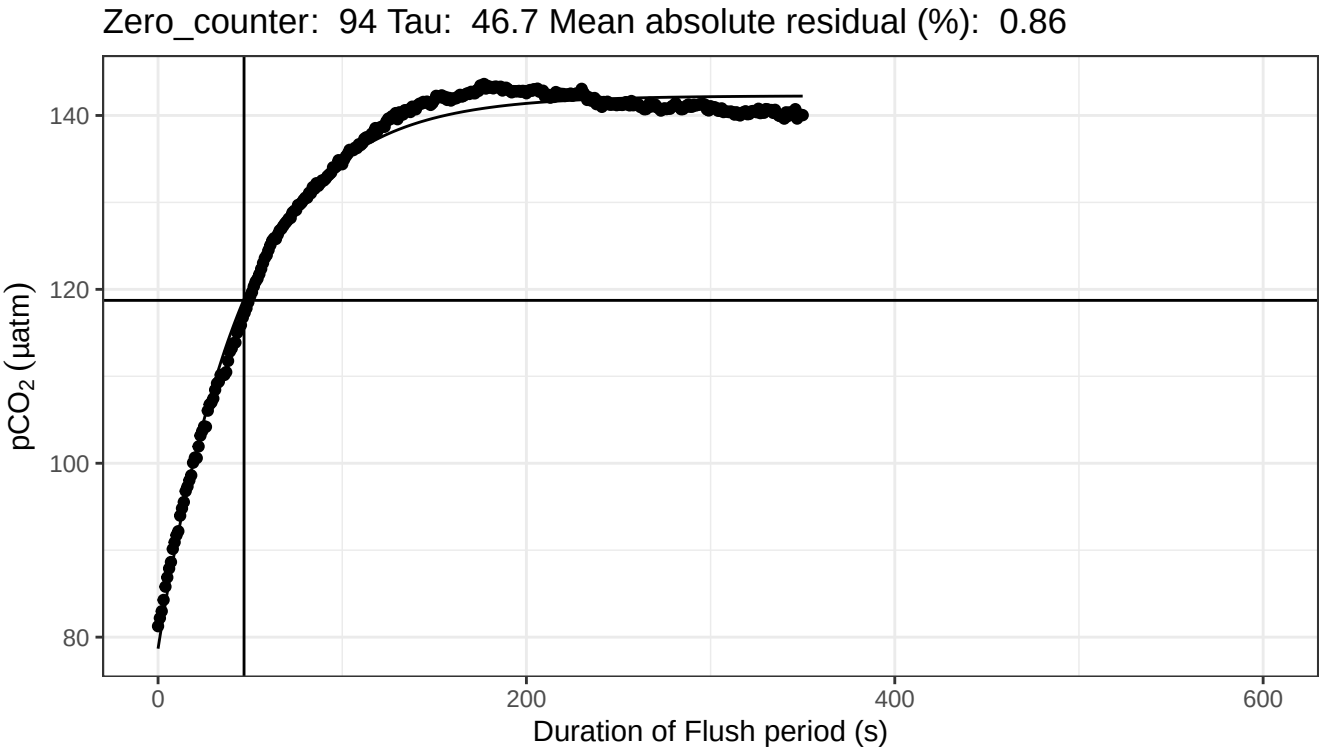

Zero_counter: 93 nls model failed
280
260
240
220
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

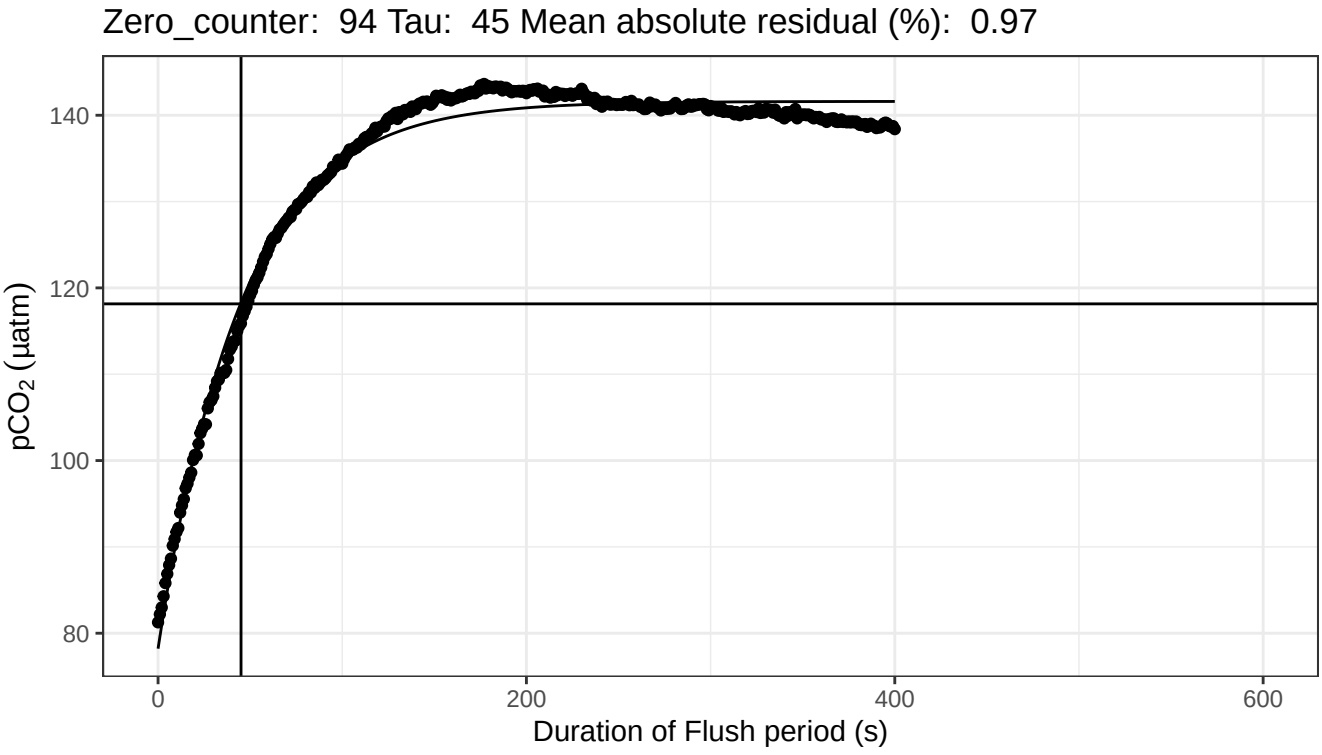

Zero_counter: 94 Tau: 57.6 Mean absolute residual (%): 0.25
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

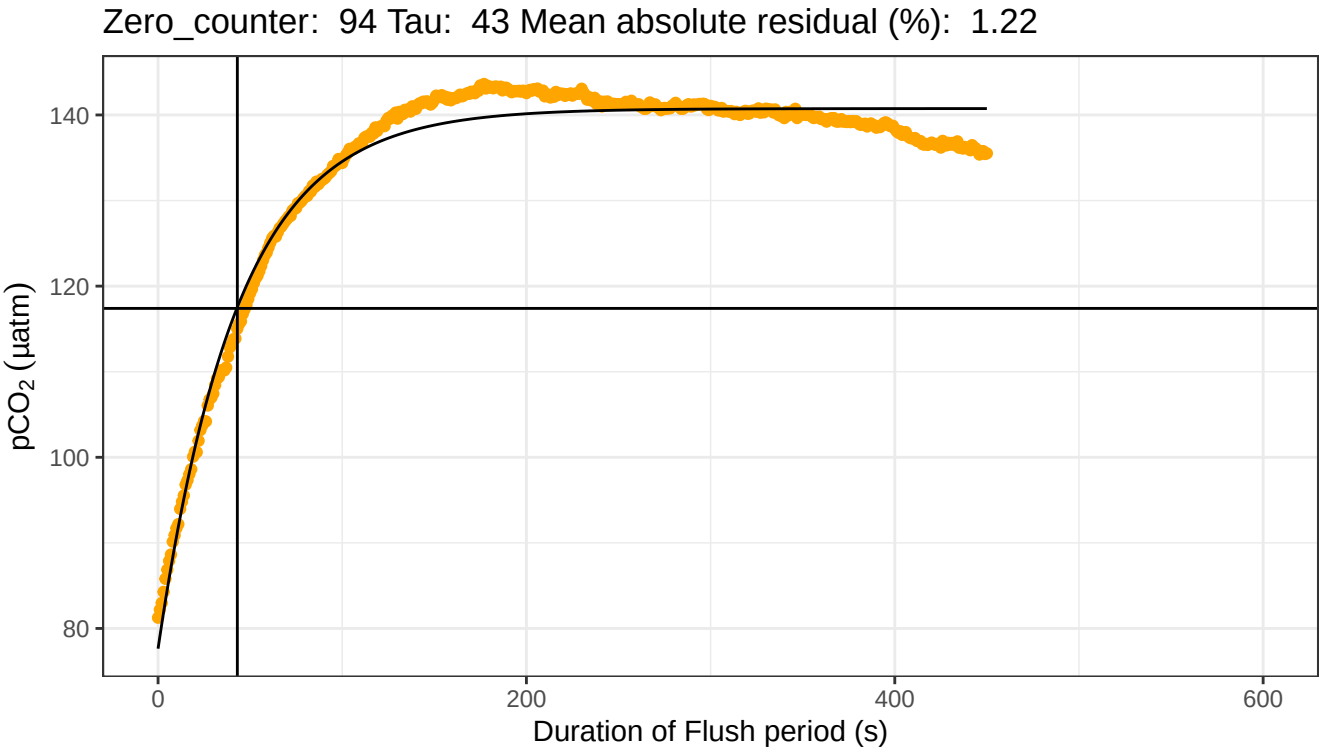

Zero_counter: 94 Tau: 55.4 Mean absolute residual (%): 0.28
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

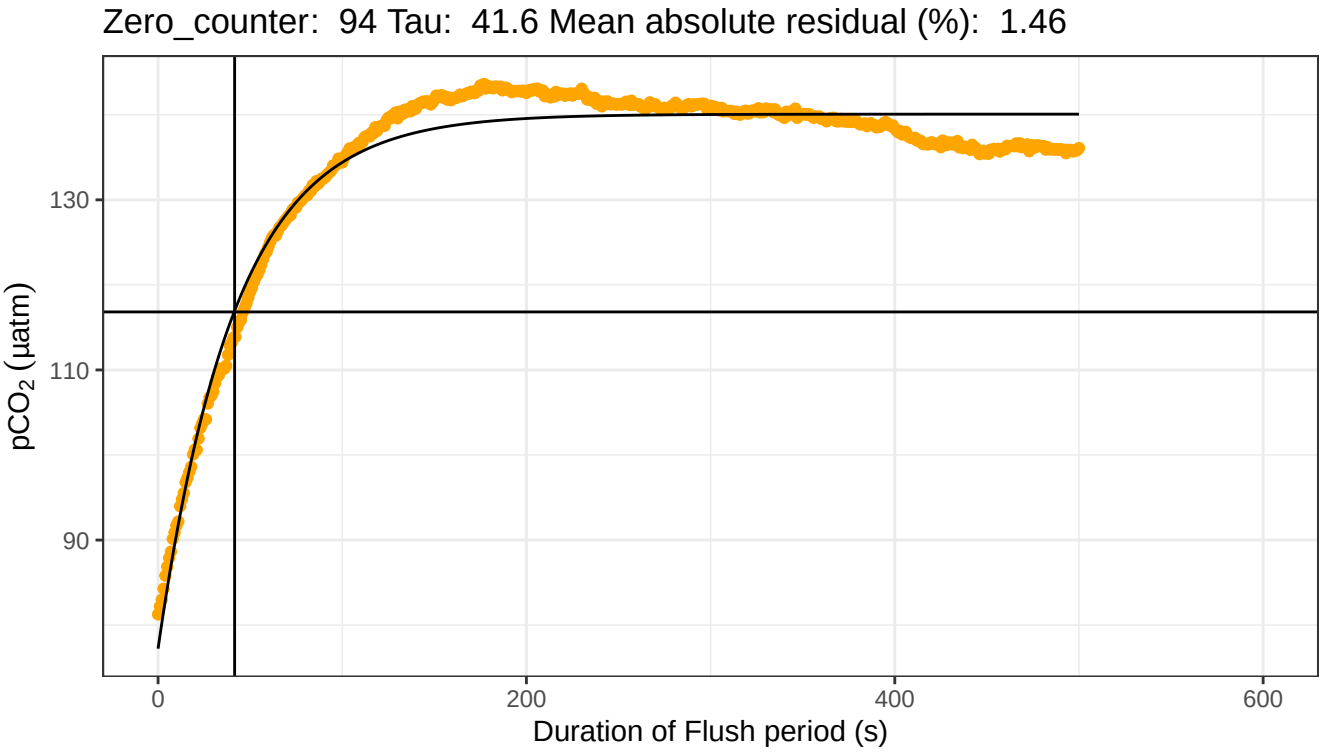

Zero_counter: 94 Tau: 51.4 Mean absolute residual (%): 0.52
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

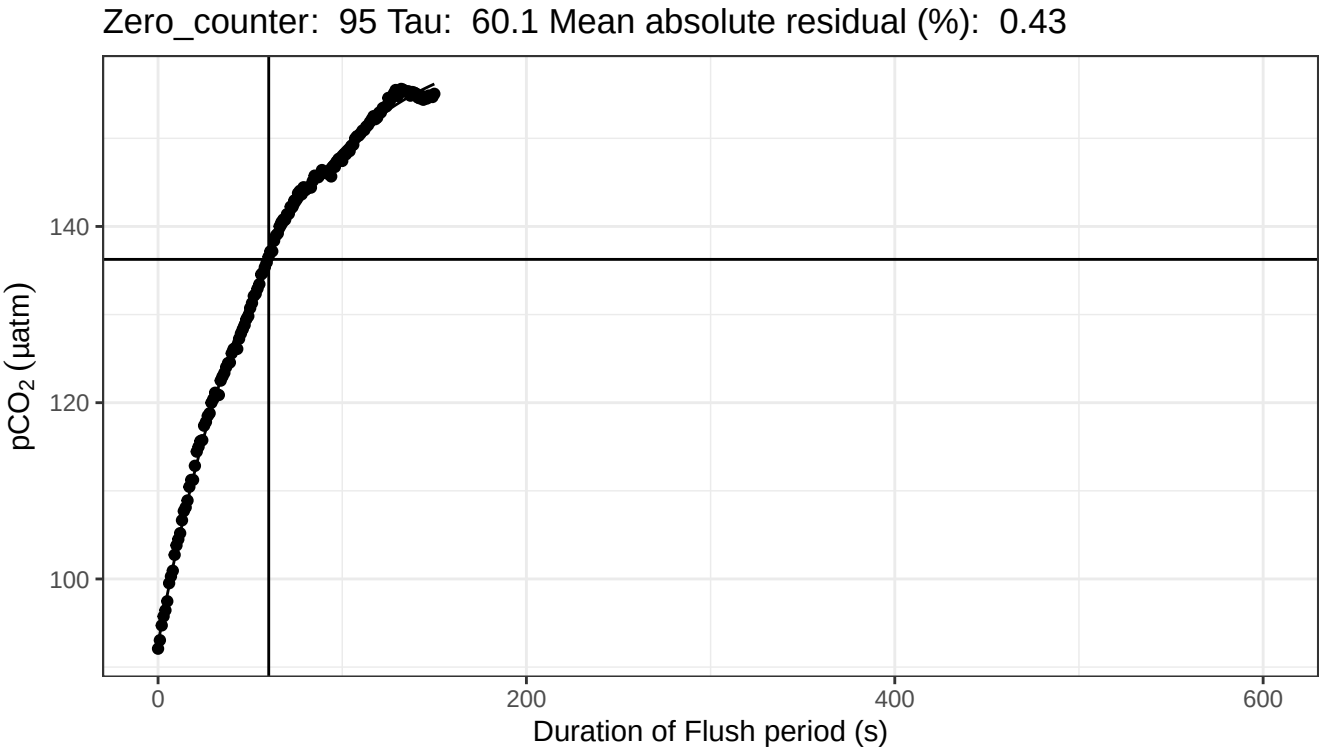

Zero_counter: 94 Tau: 48.6 Mean absolute residual (%): 0.73
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

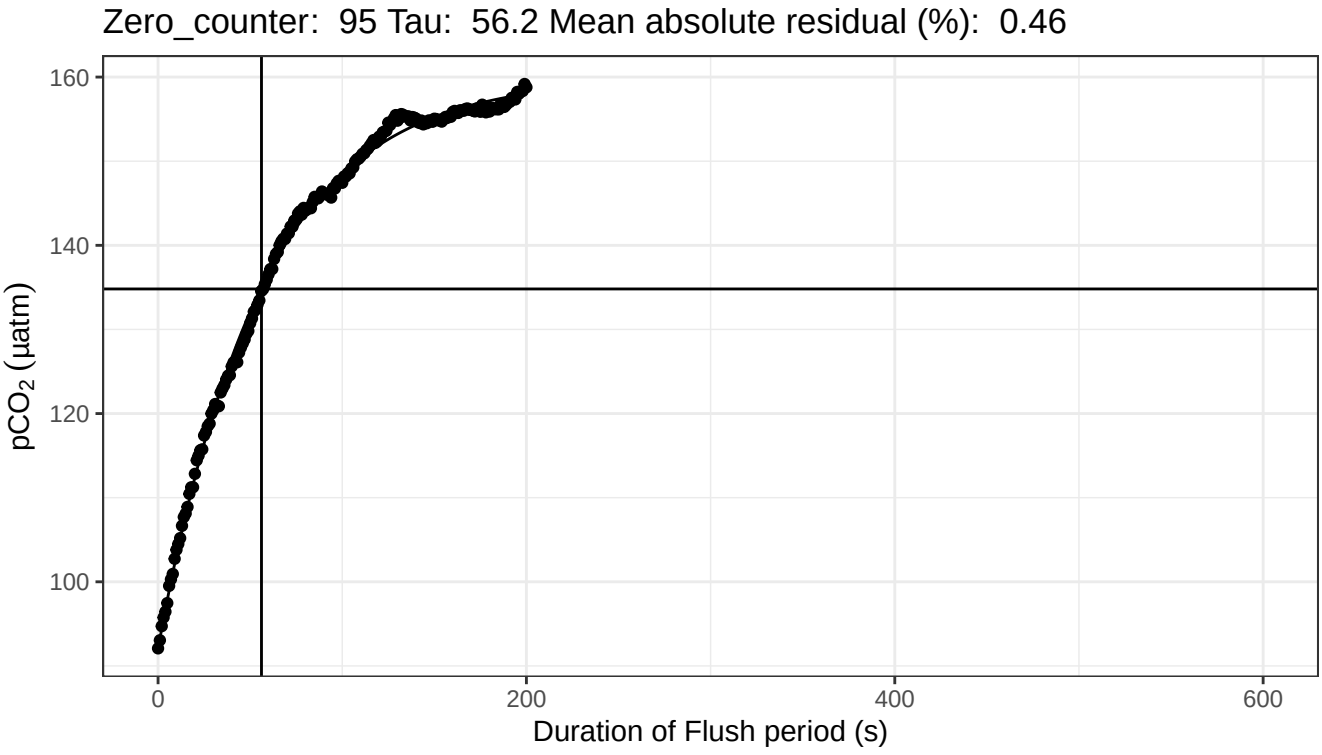

Zero_counter: 94 Tau: 46.7 Mean absolute residual (%): 0.86
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

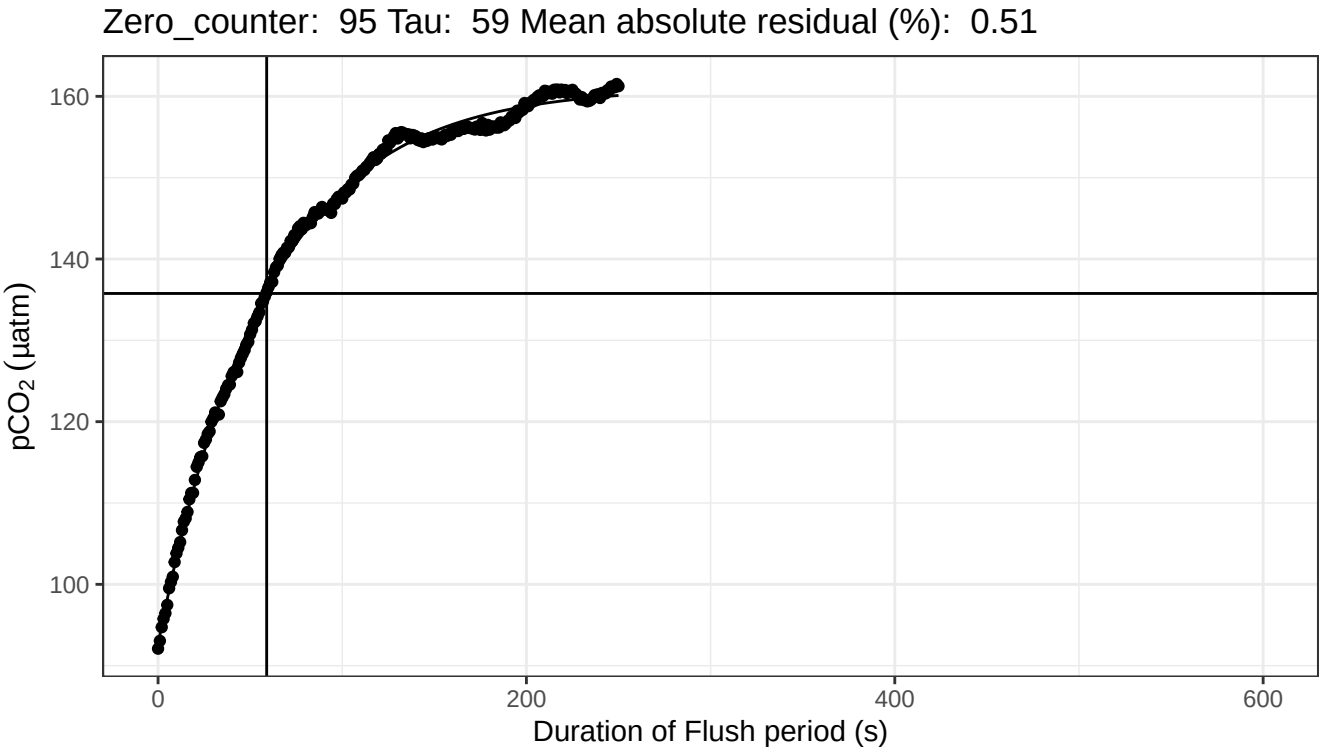

Zero_counter: 94 Tau: 45 Mean absolute residual (%): 0.97
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

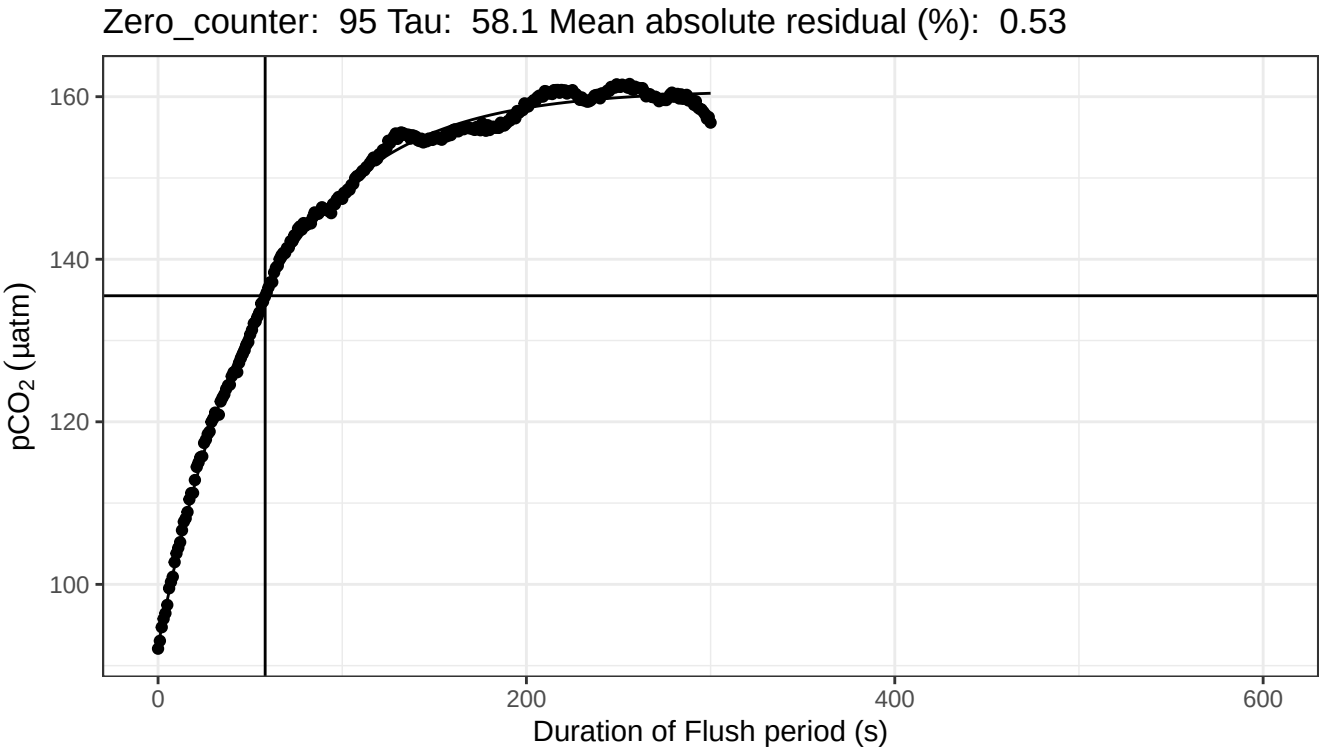

Zero_counter: 94 Tau: 43 Mean absolute residual (%): 1.22
140
120
100
80
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

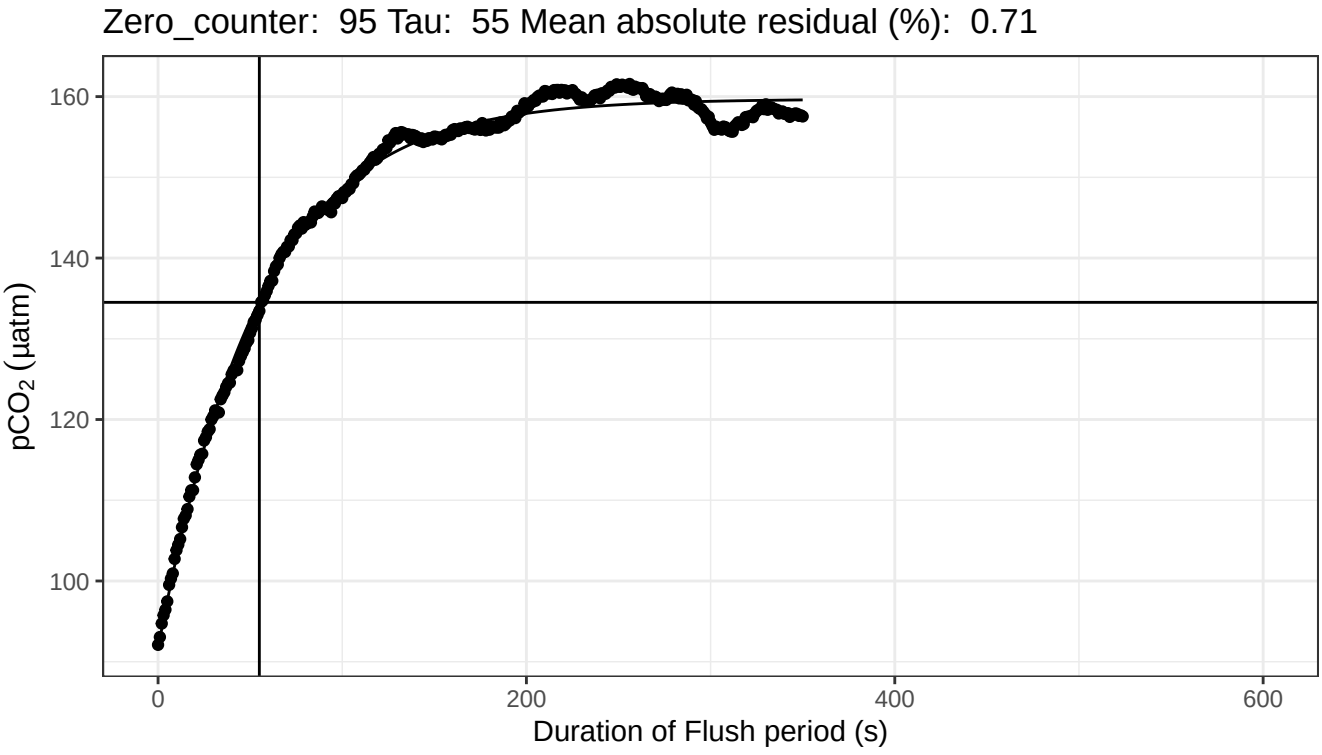

Zero_counter: 94 Tau: 41.6 Mean absolute residual (%): 1.46
130
110
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

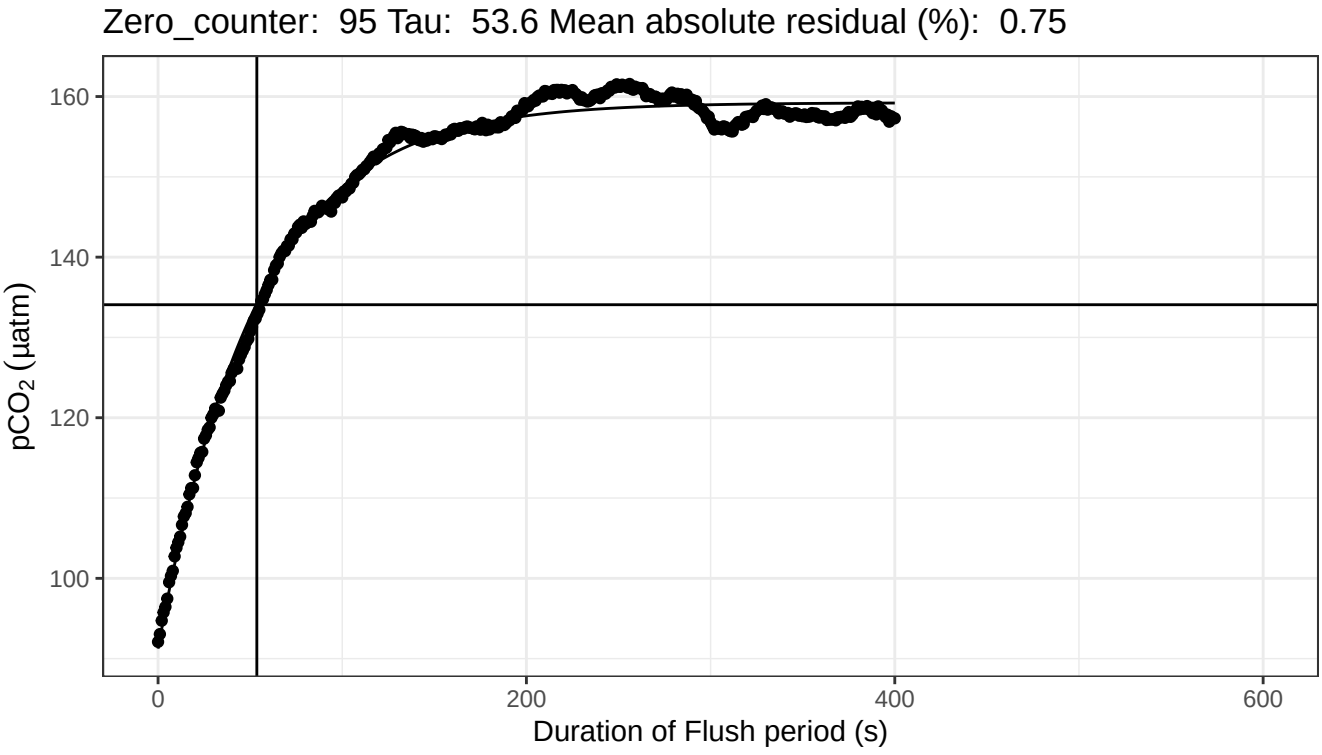

Zero_counter: 95 Tau: 60.1 Mean absolute residual (%): 0.43
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

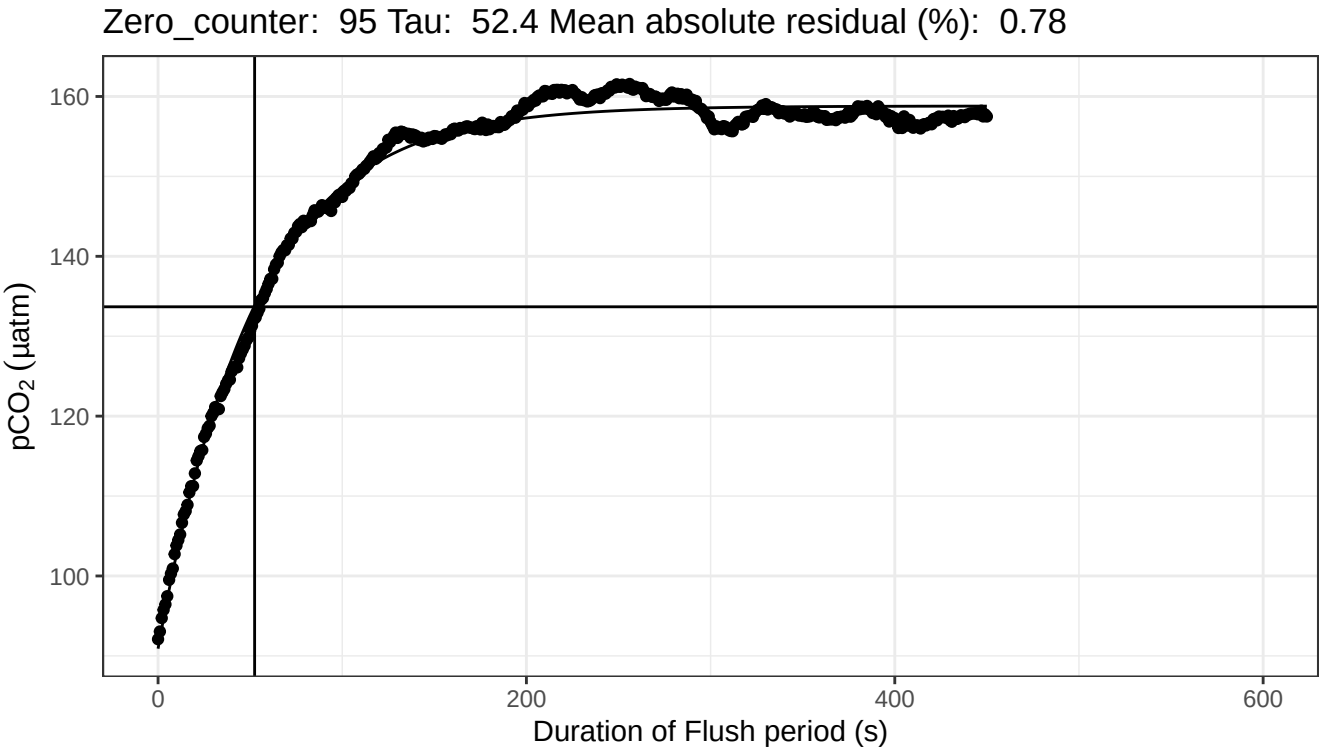

Zero_counter: 95 Tau: 56.2 Mean absolute residual (%): 0.46
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

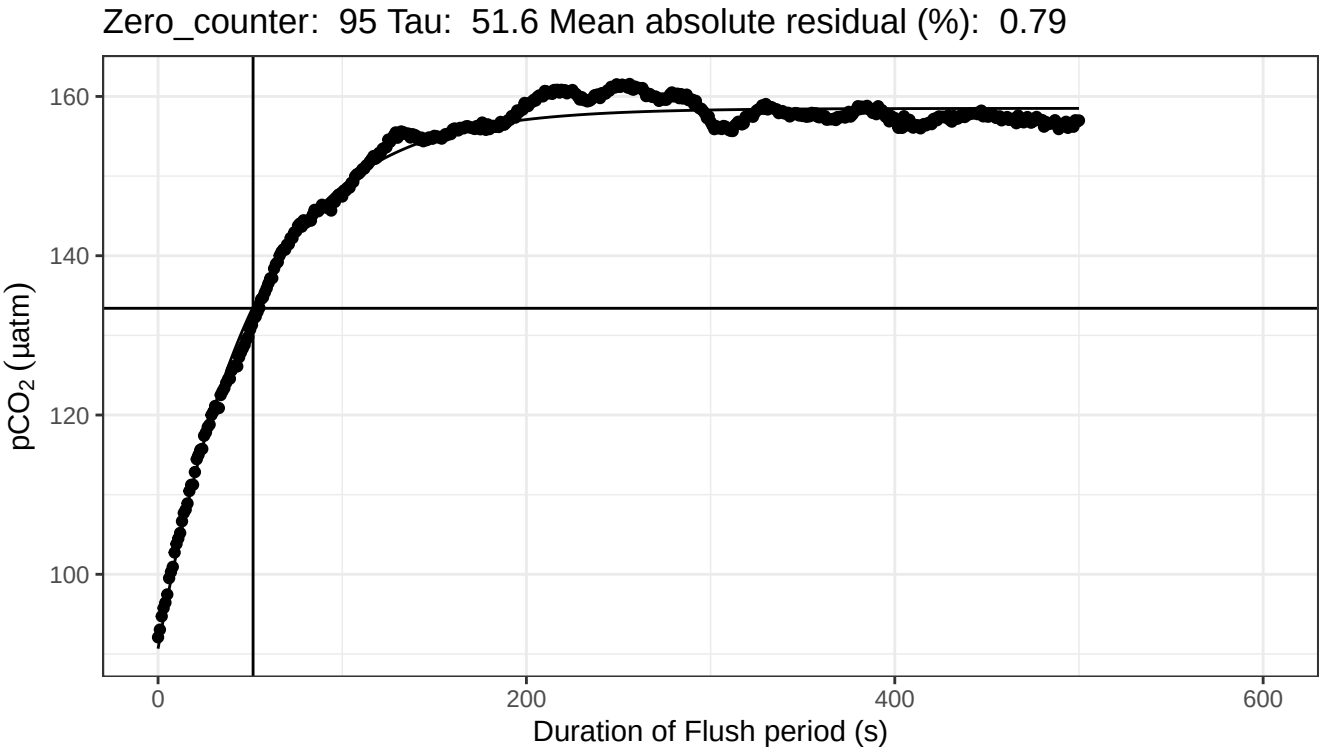

Zero_counter: 95 Tau: 59 Mean absolute residual (%): 0.51
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

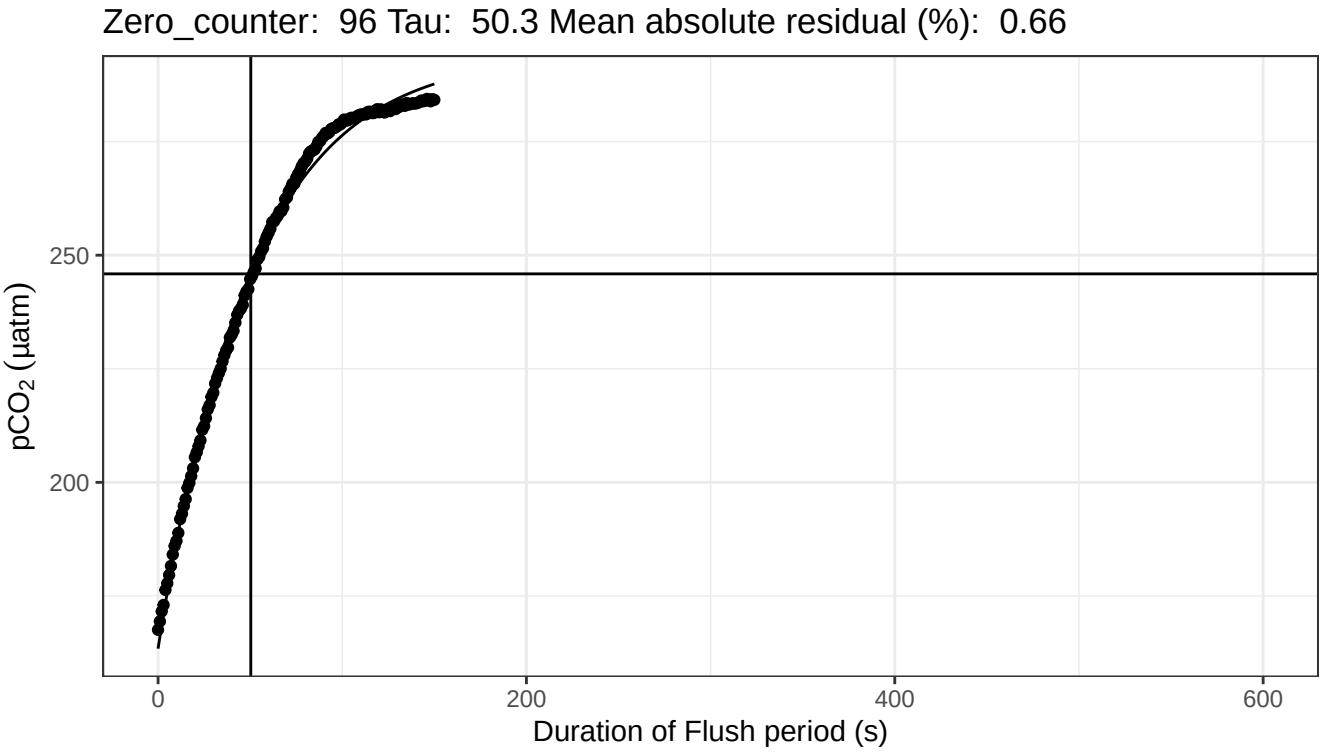

Zero_counter: 95 Tau: 58.1 Mean absolute residual (%): 0.53
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

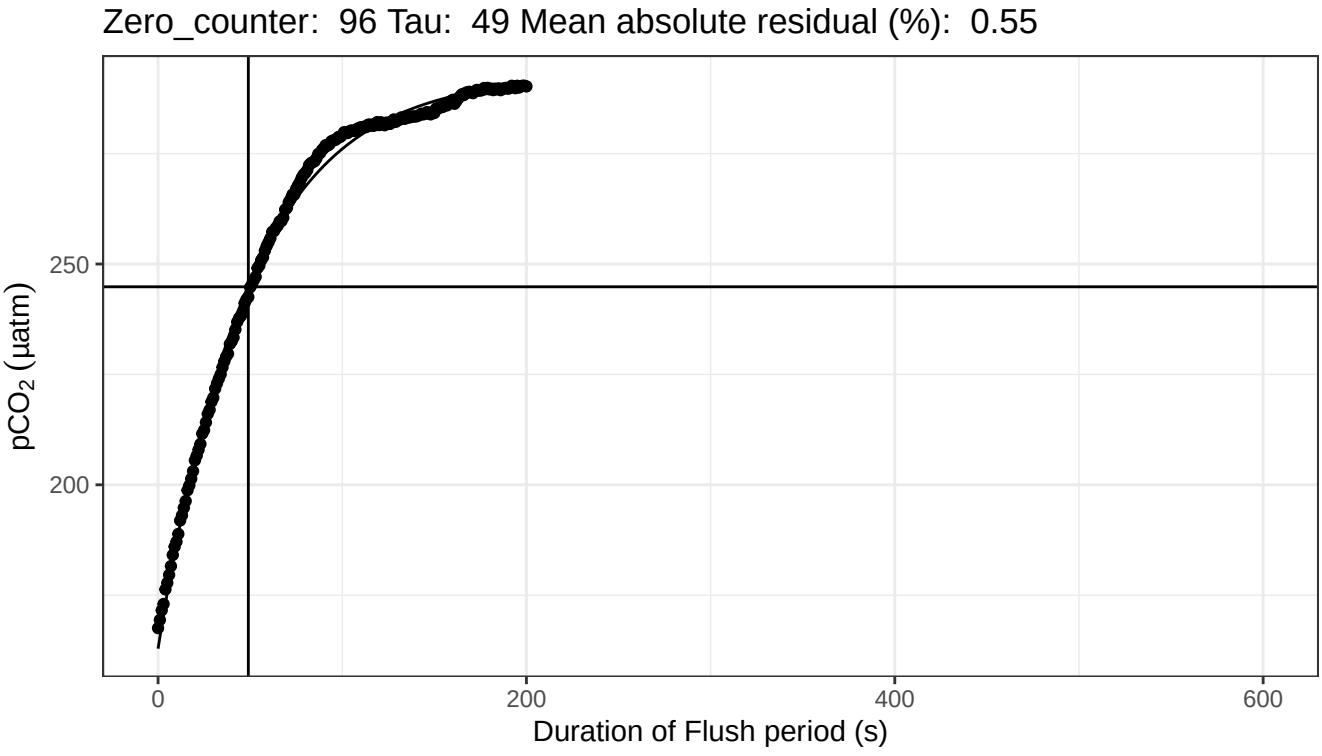

Zero_counter: 95 Tau: 55 Mean absolute residual (%): 0.71
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

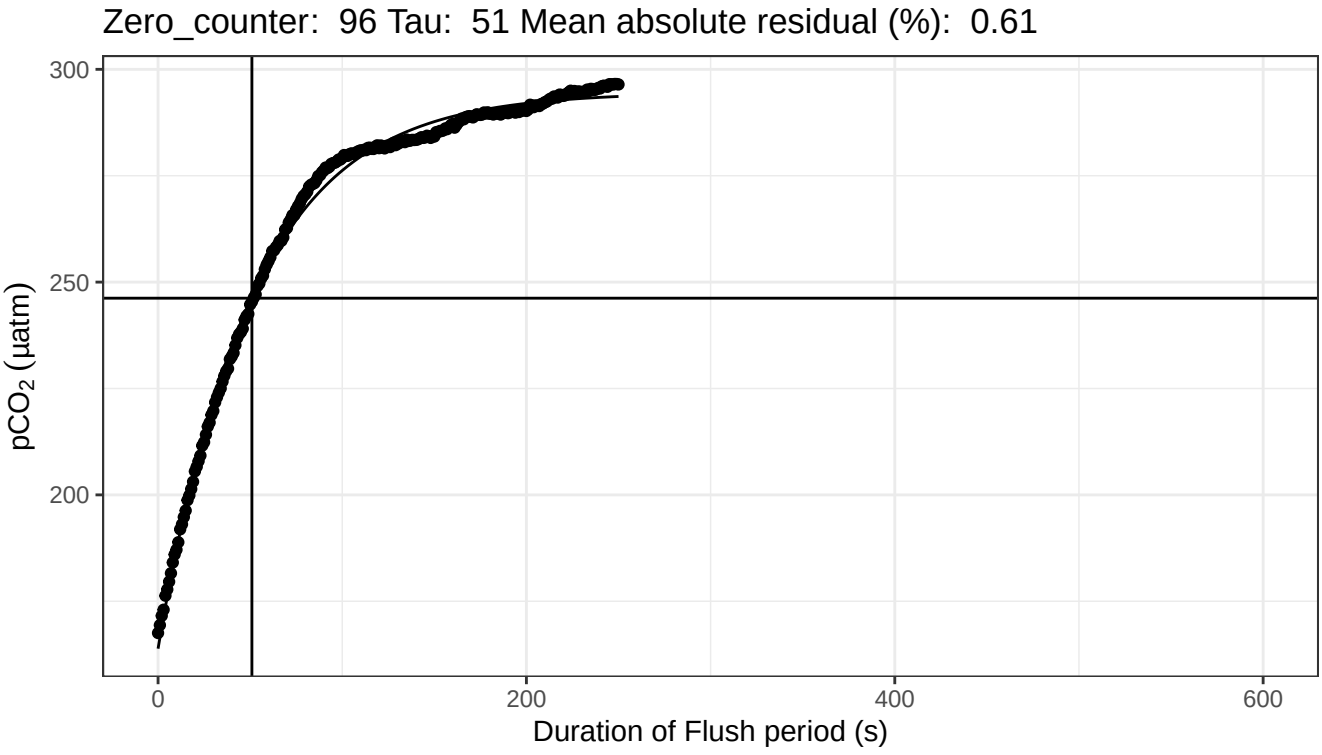

Zero_counter: 95 Tau: 53.6 Mean absolute residual (%): 0.75
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

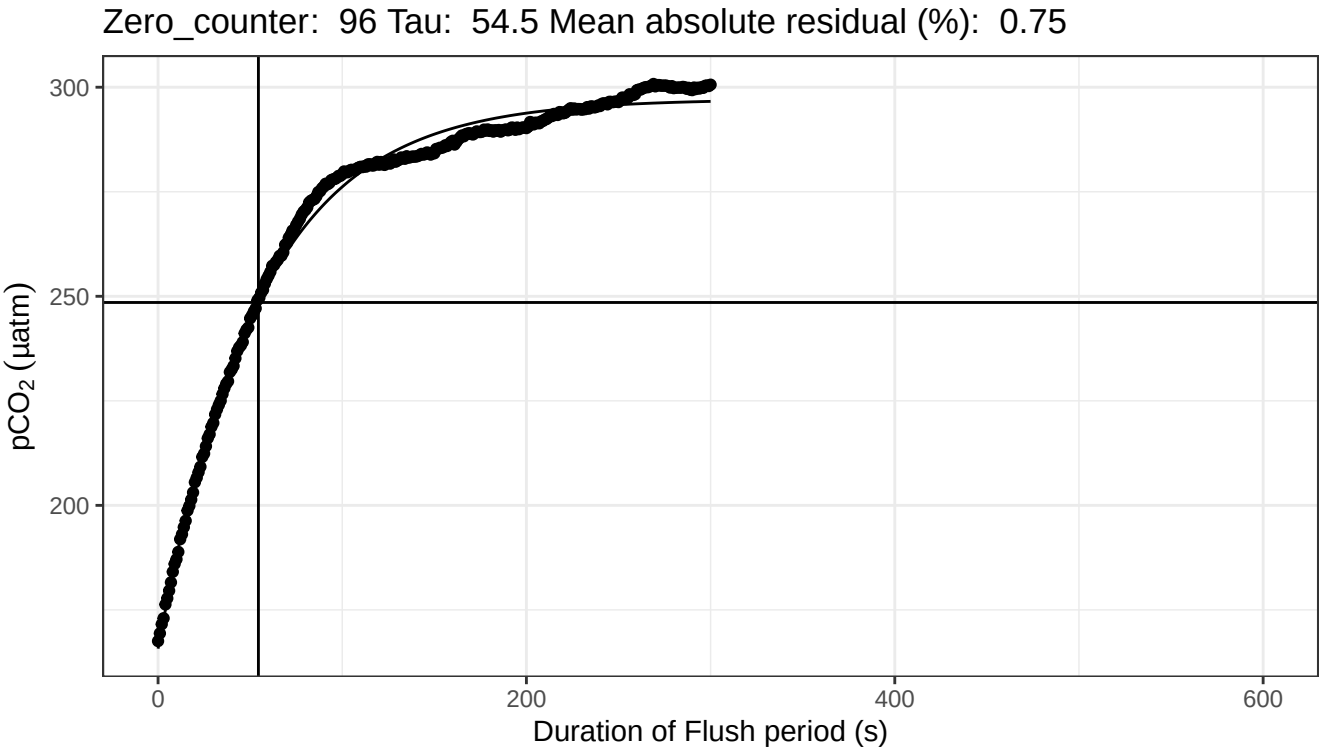

Zero_counter: 95 Tau: 52.4 Mean absolute residual (%): 0.78
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

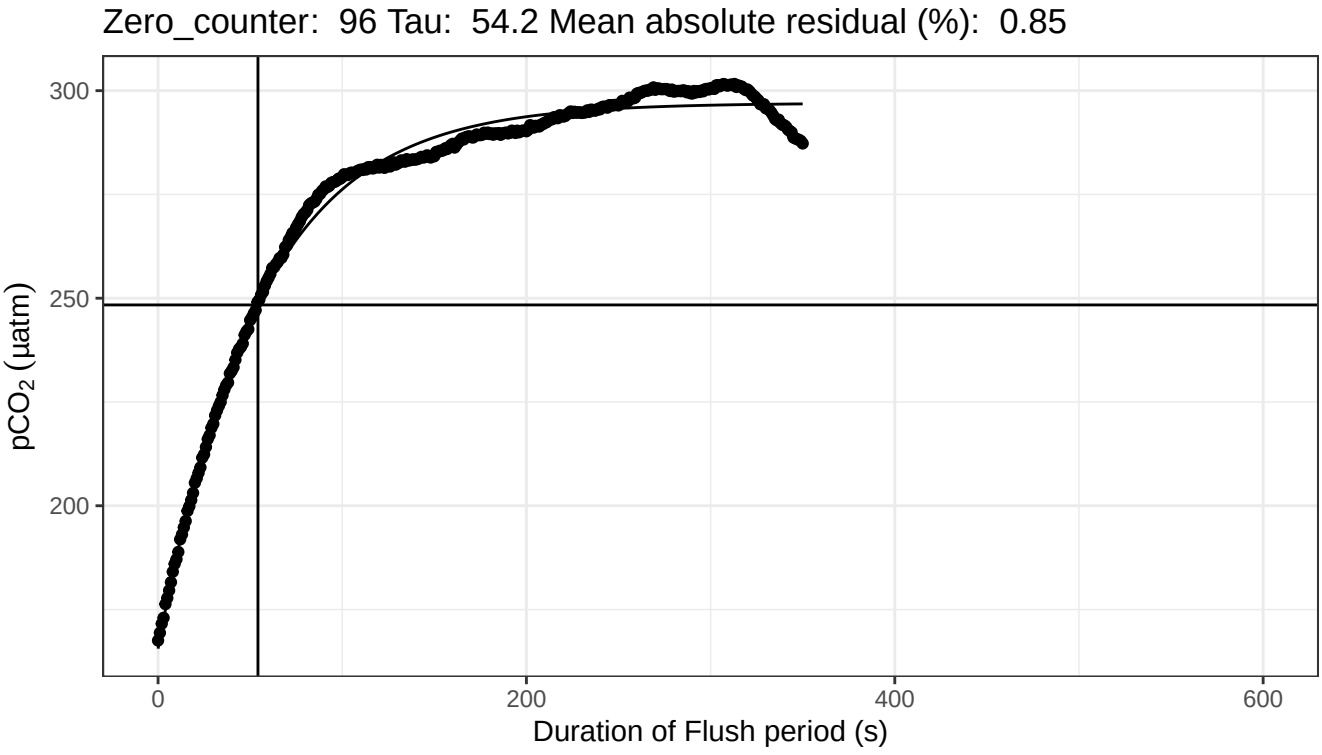

Zero_counter: 95 Tau: 51.6 Mean absolute residual (%): 0.79
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

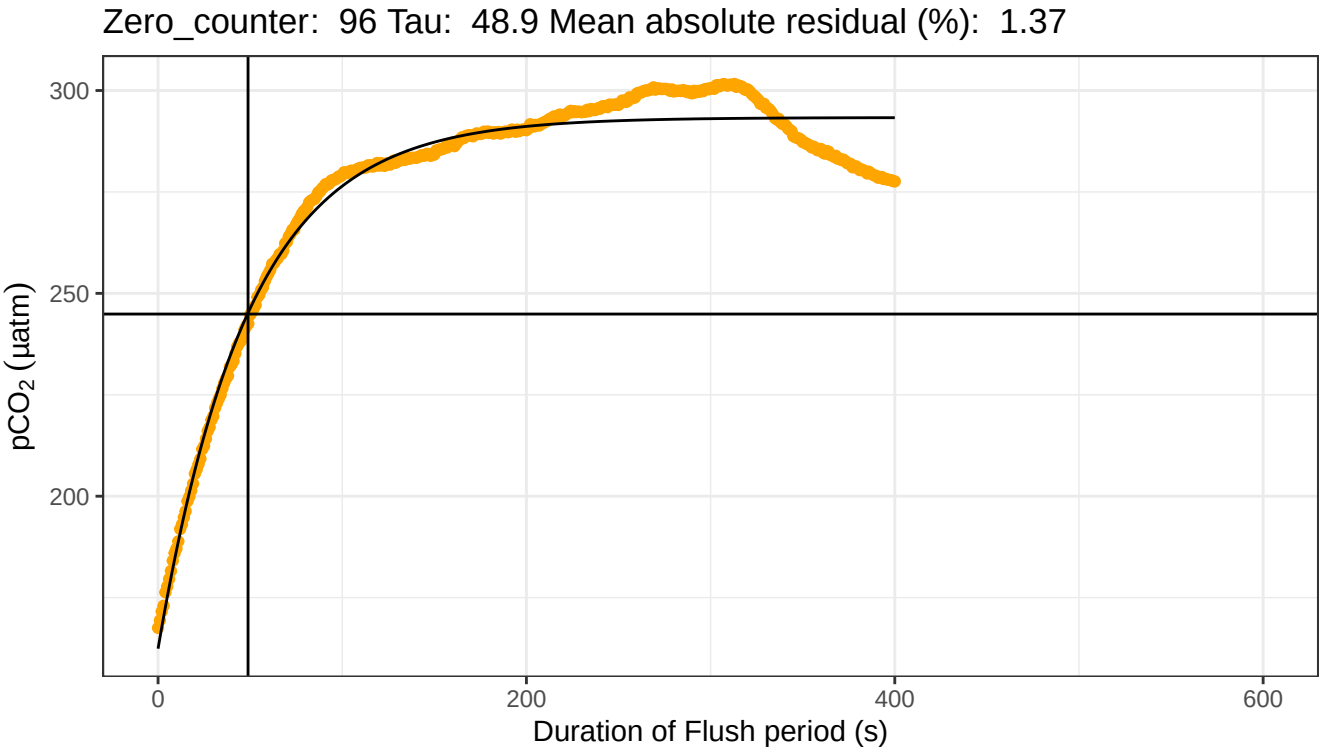

Zero_counter: 96 Tau: 50.3 Mean absolute residual (%): 0.66
250
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

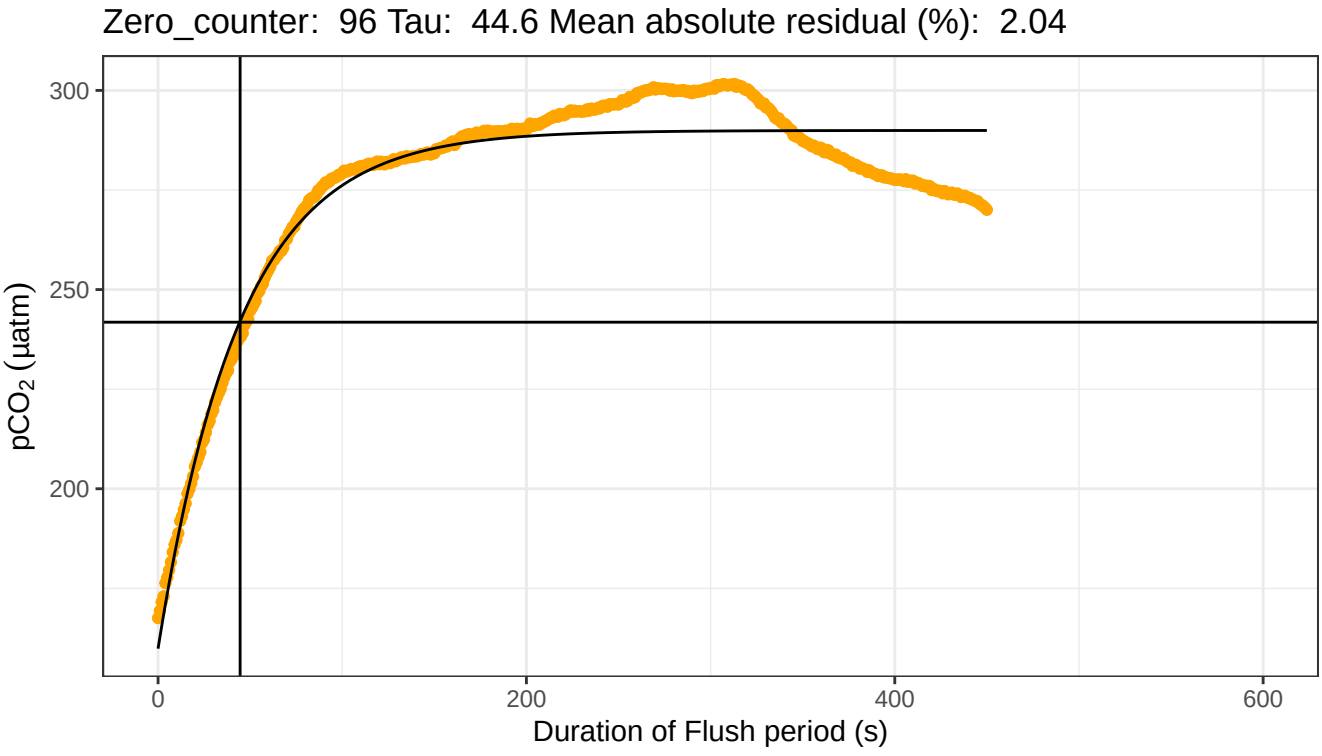

Zero_counter: 96 Tau: 49 Mean absolute residual (%): 0.55
250
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

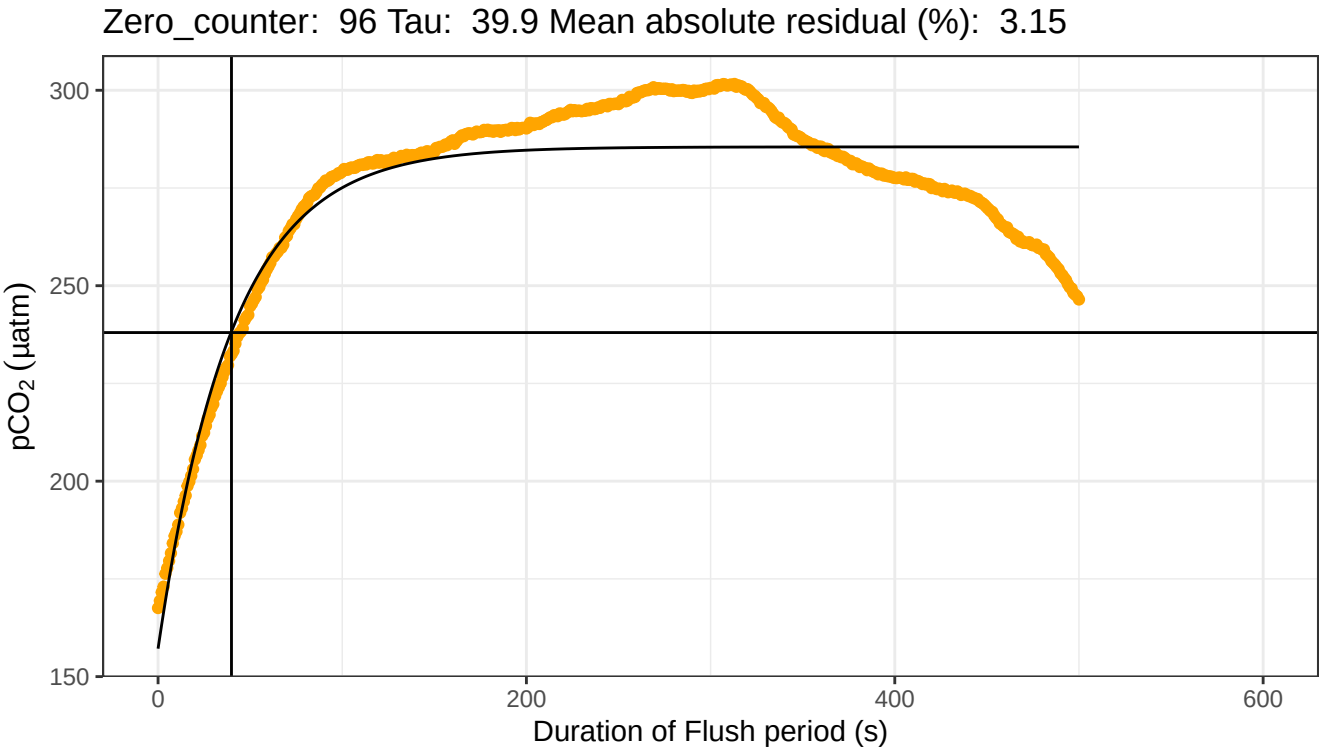

Zero_counter: 96 Tau: 51 Mean absolute residual (%): 0.61
300
250
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

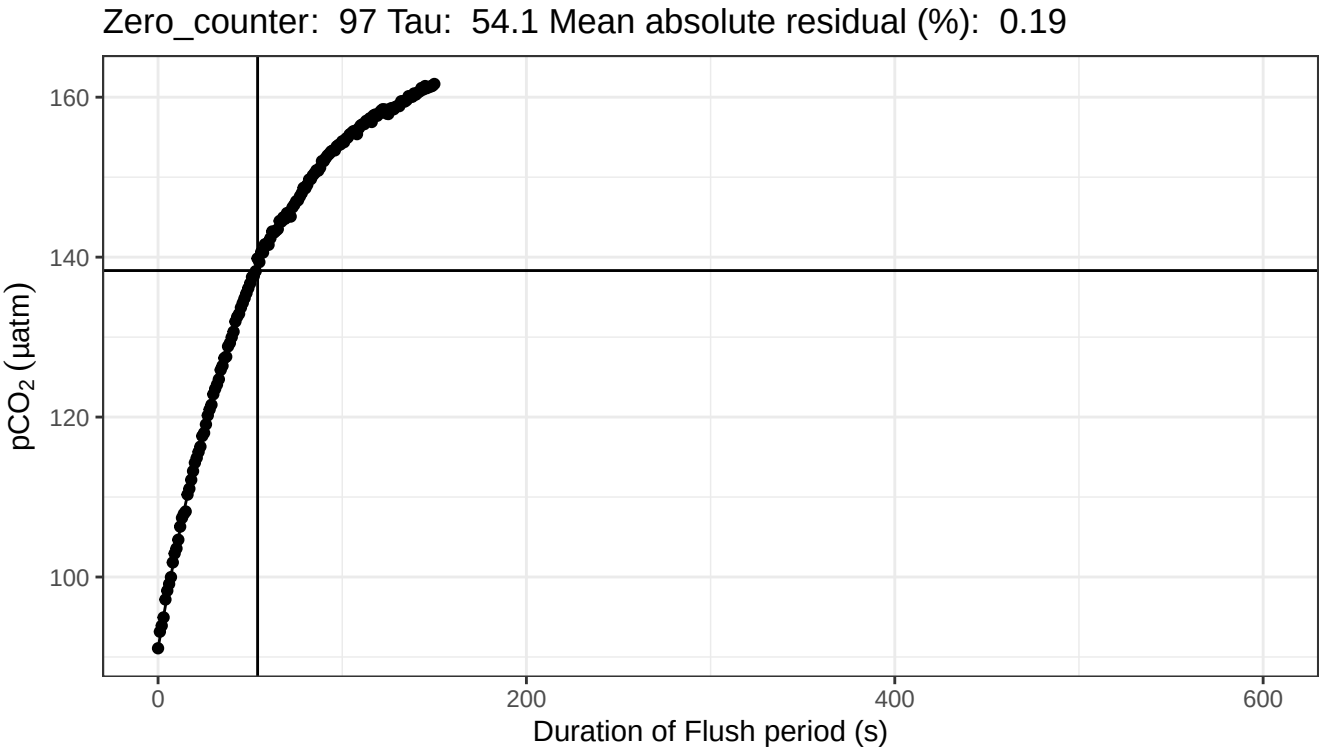

Zero_counter: 96 Tau: 54.5 Mean absolute residual (%): 0.75
300
250
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

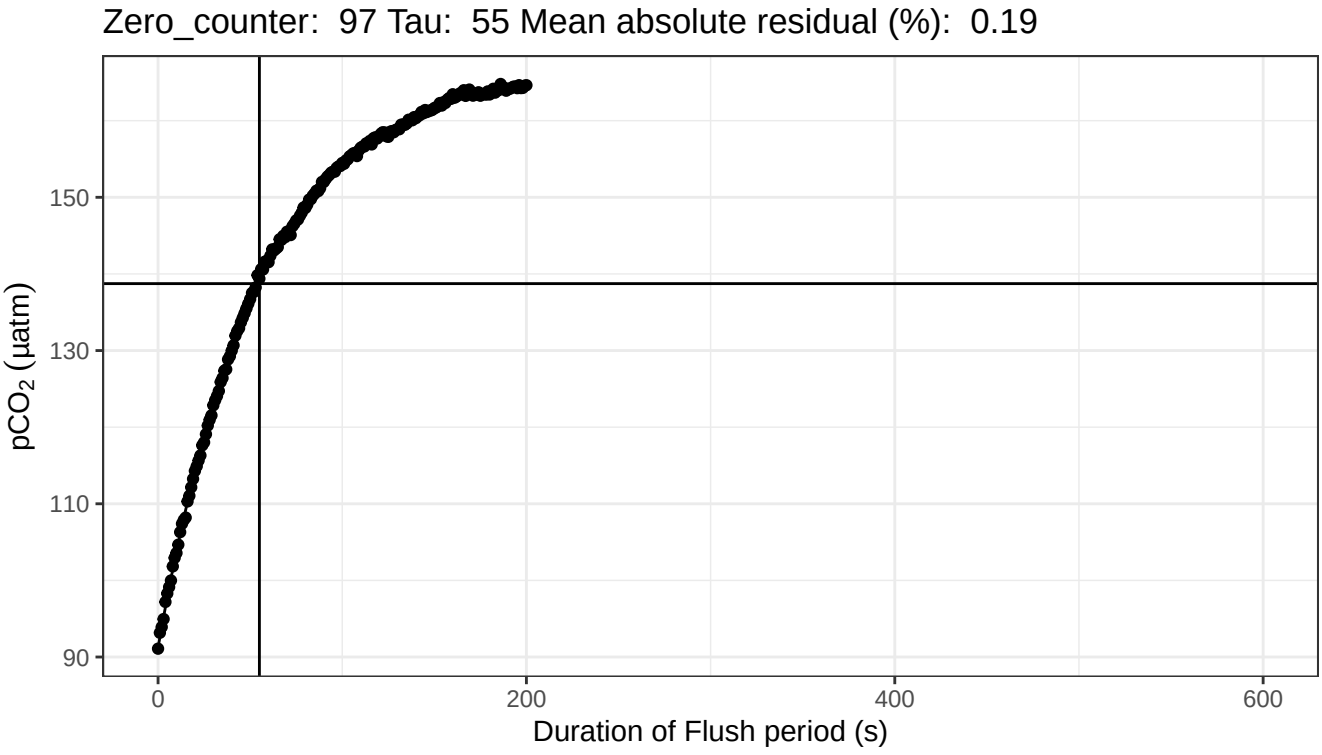

Zero_counter: 96 Tau: 54.2 Mean absolute residual (%): 0.85
300
250
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

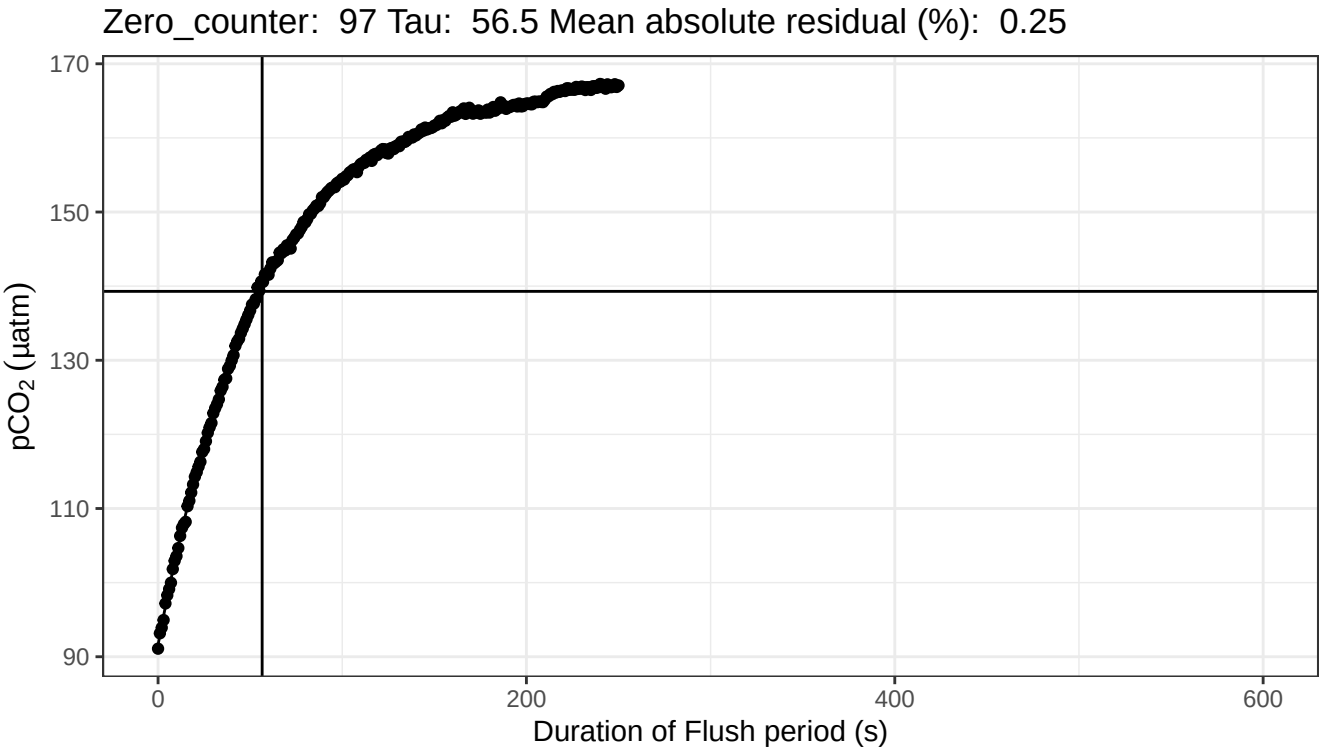

Zero_counter: 96 Tau: 48.9 Mean absolute residual (%): 1.37
300
250
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

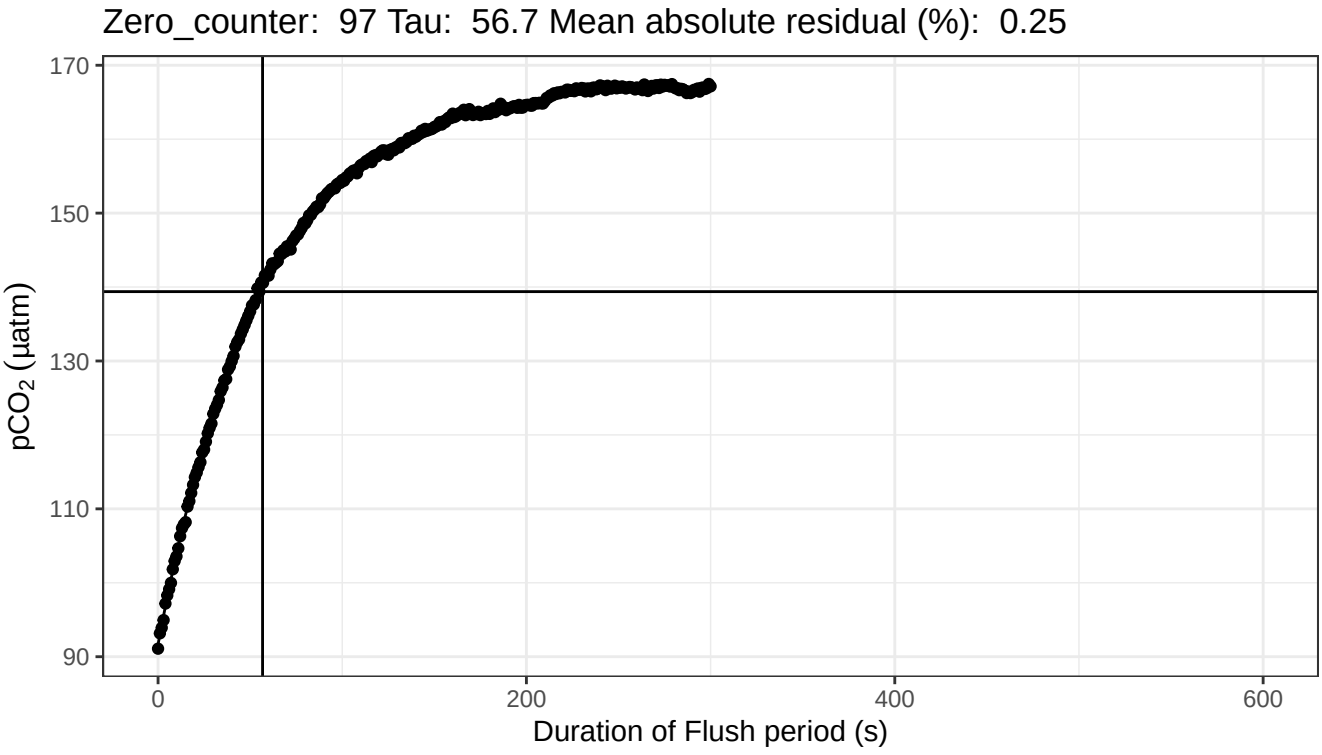

Zero_counter: 96 Tau: 44.6 Mean absolute residual (%): 2.04
300
250
200
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

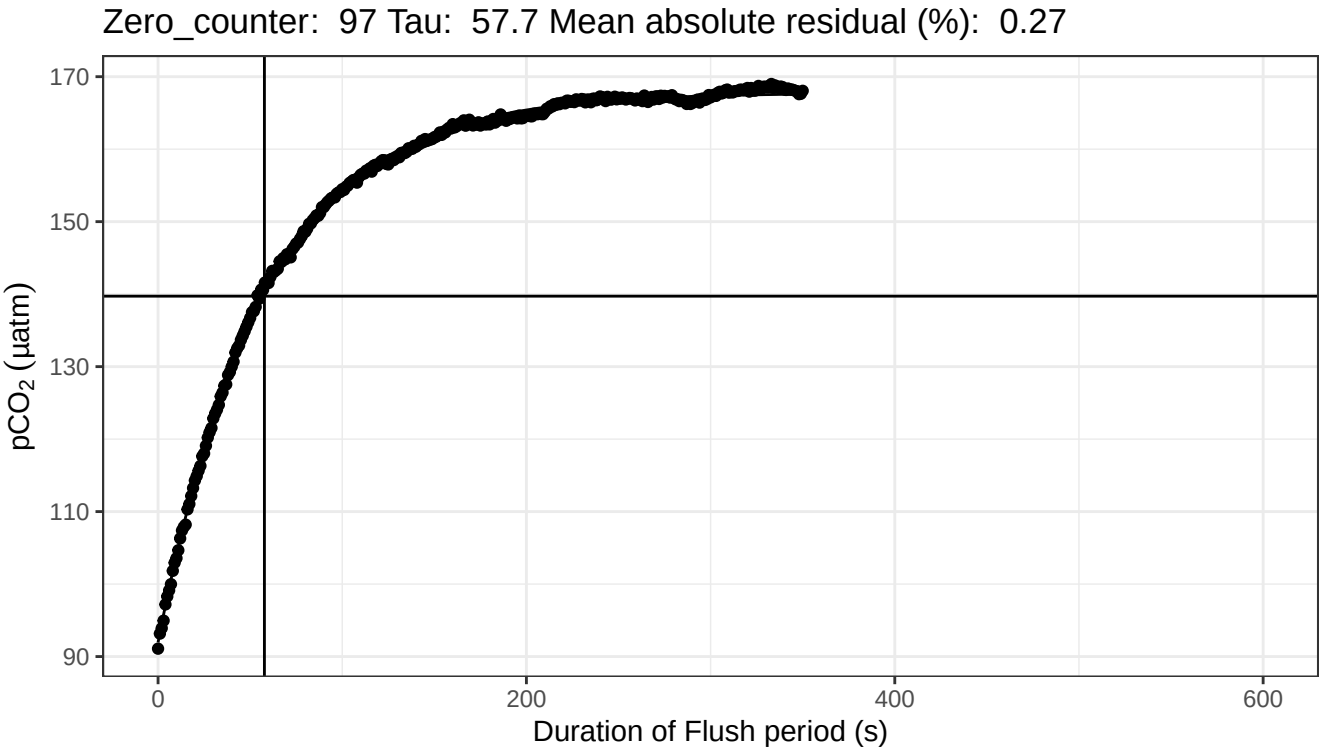

Zero_counter: 96 Tau: 39.9 Mean absolute residual (%): 3.15
300
250
200
150
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

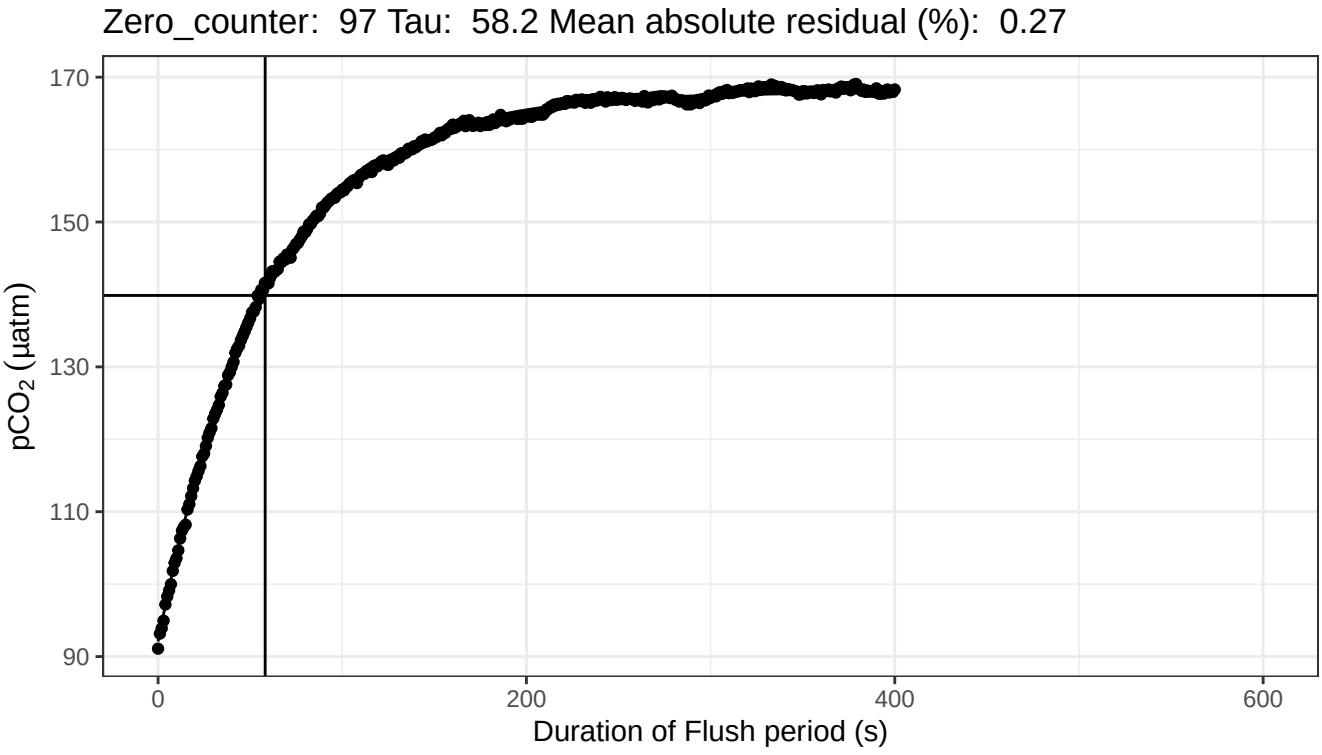

Zero_counter: 97 Tau: 54.1 Mean absolute residual (%): 0.19
160
140
120
100
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

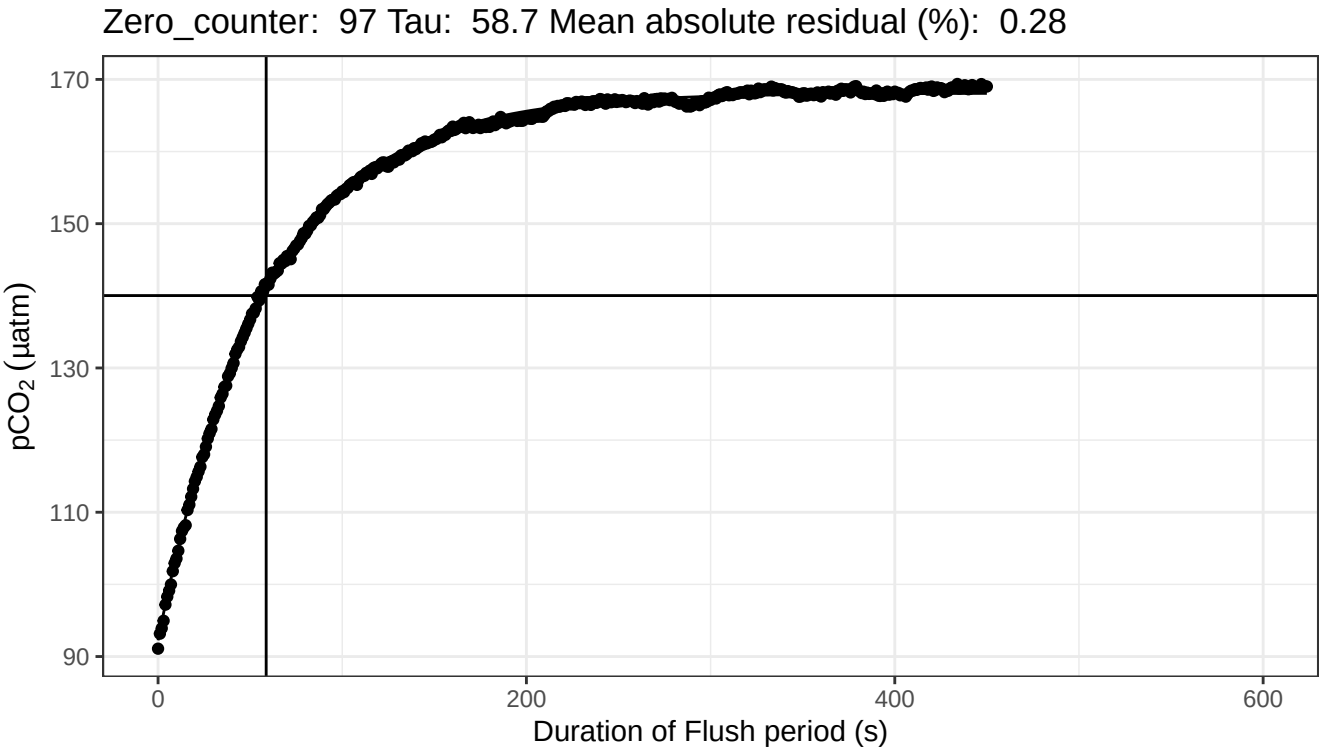

Zero_counter: 97 Tau: 55 Mean absolute residual (%): 0.19
150
130
110
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)

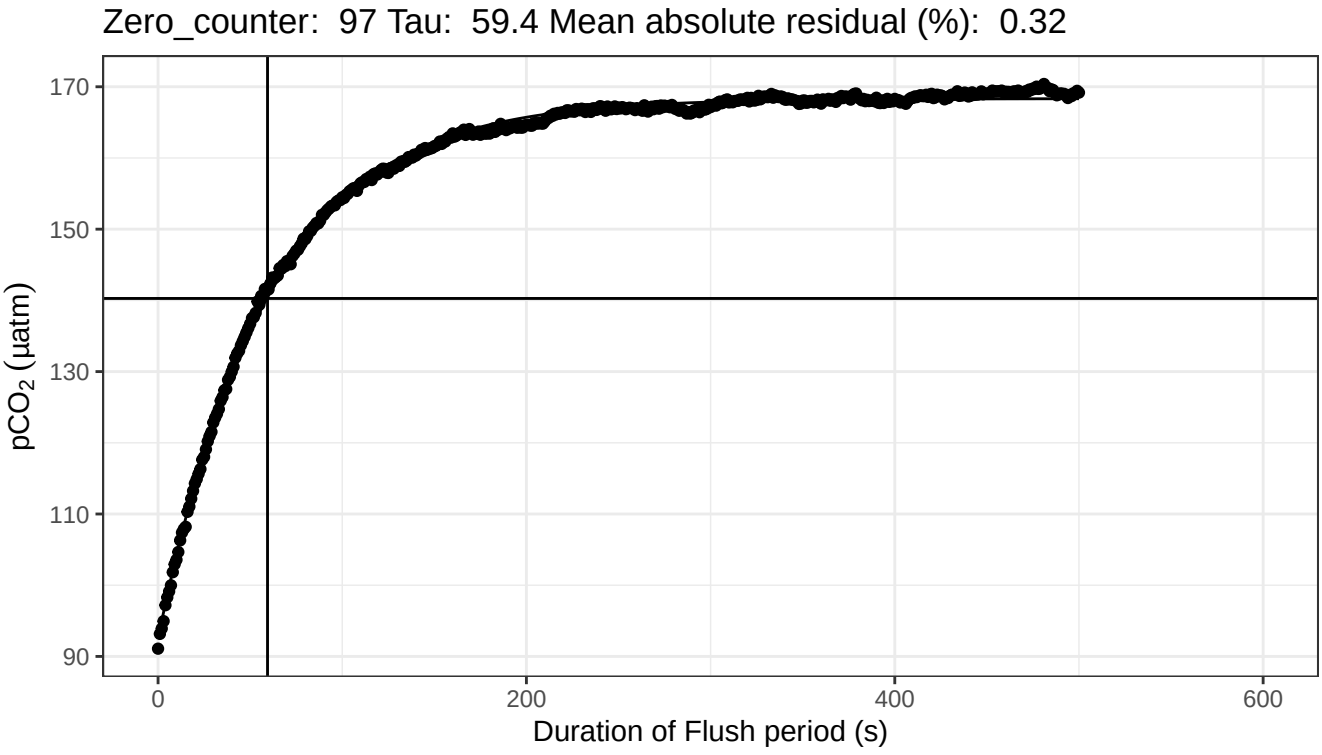

Zero_counter: 97 Tau: 56.5 Mean absolute residual (%): 0.25
170
150
130
110
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 97 Tau: 56.7 Mean absolute residual (%): 0.25
170
150
130
110
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 97 Tau: 57.7 Mean absolute residual (%): 0.27
170
150
130
110
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 97 Tau: 58.2 Mean absolute residual (%): 0.27
170
150
130
110
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 97 Tau: 58.7 Mean absolute residual (%): 0.28
170
150
130
110
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)


Zero_counter: 97 Tau: 59.4 Mean absolute residual (%): 0.32
170
150
130
110
90
pCO2 (µatm)
0
200
400
600
Duration of Flush period (s)