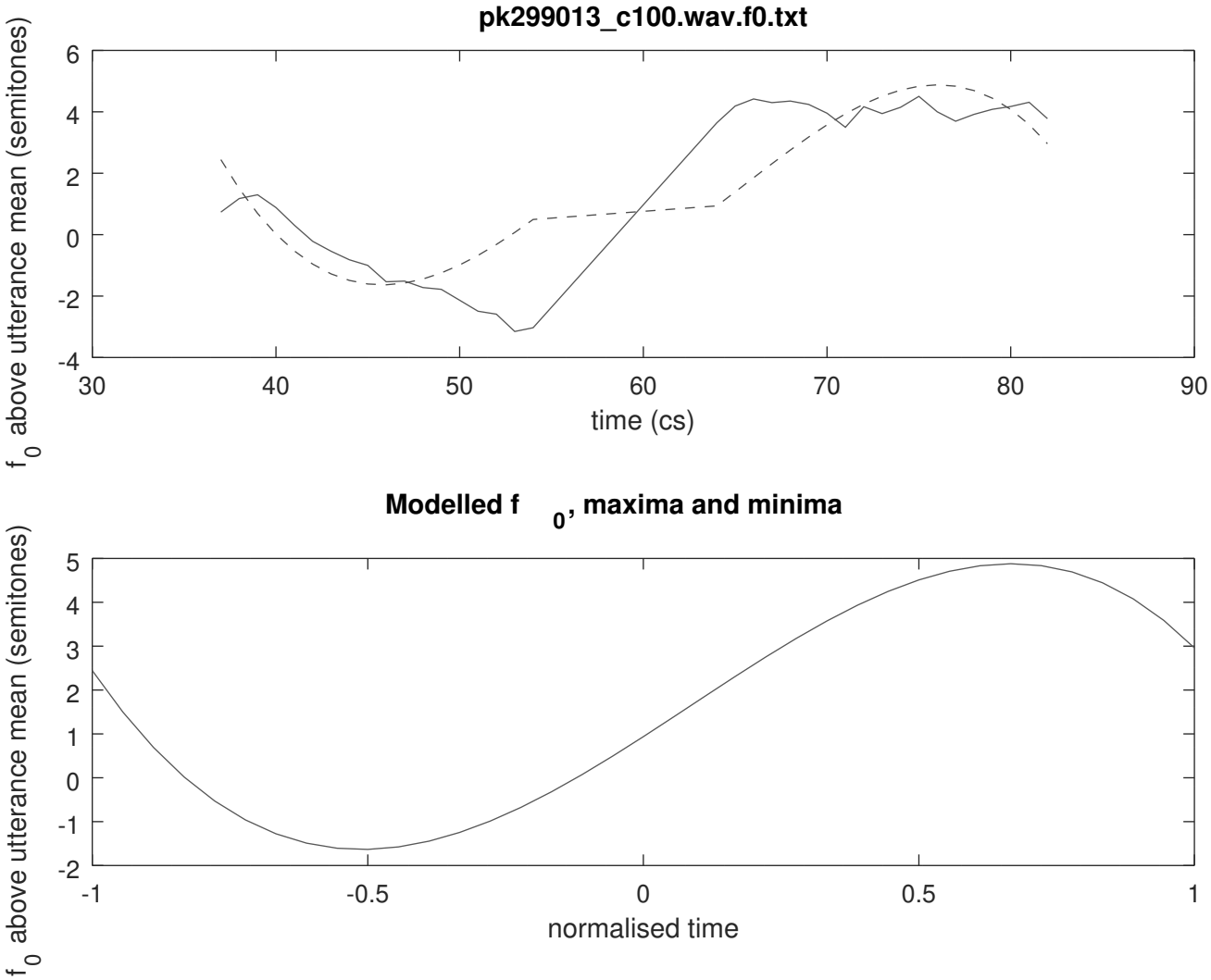
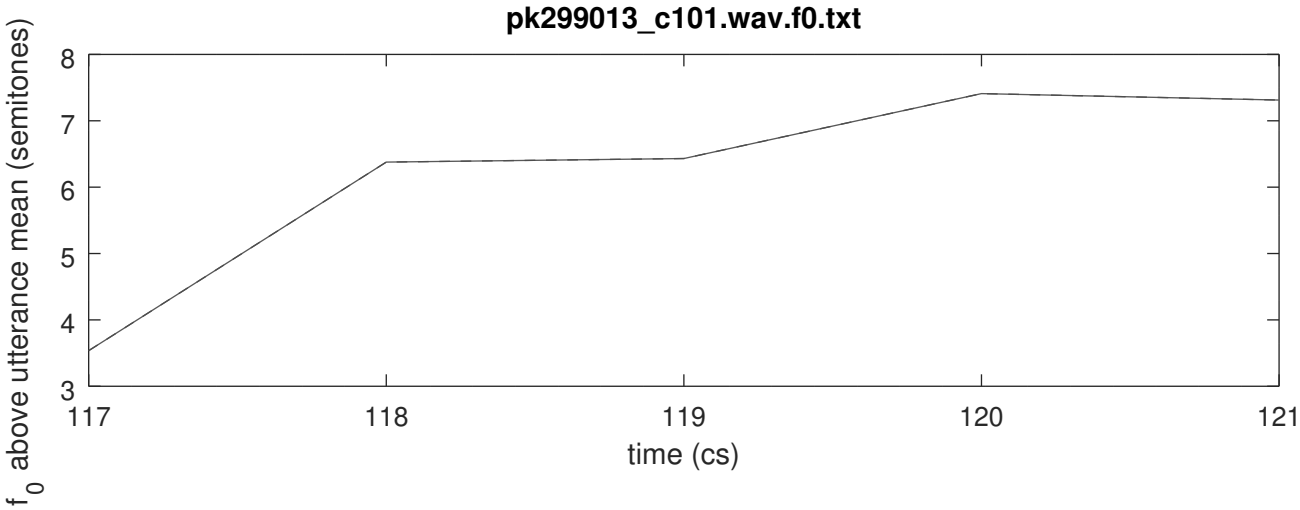
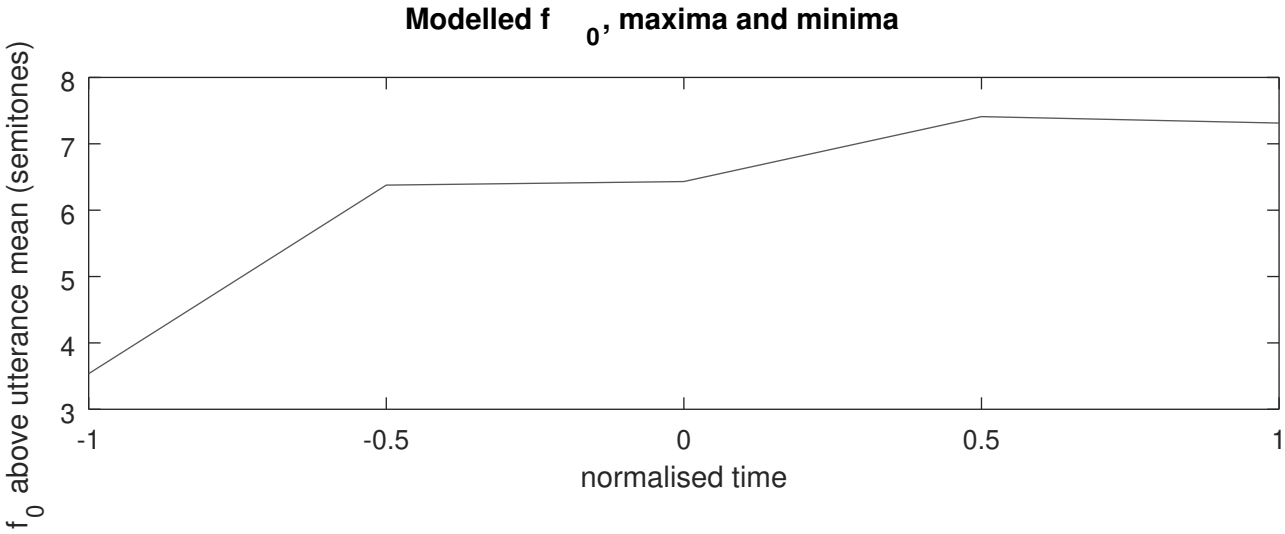
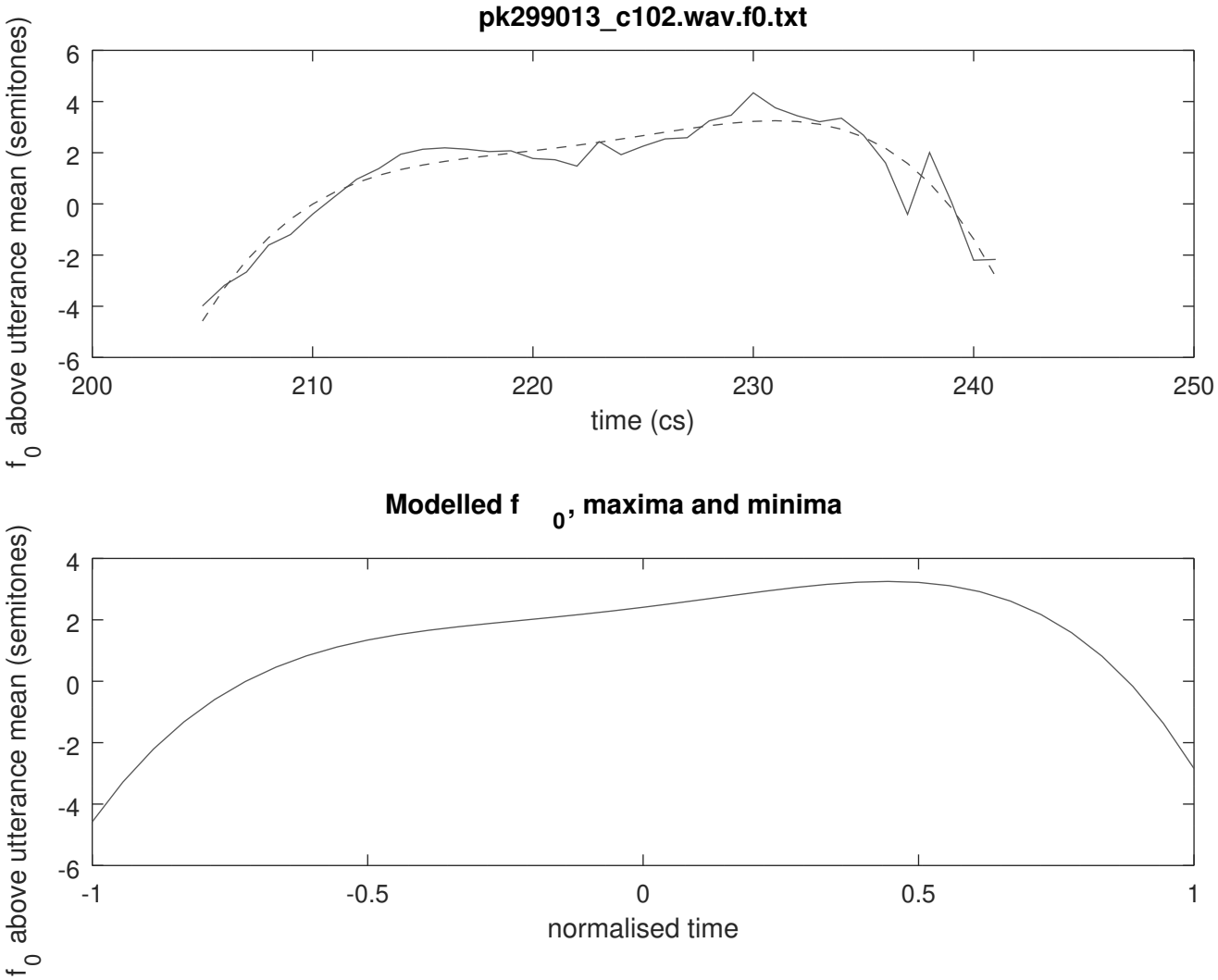
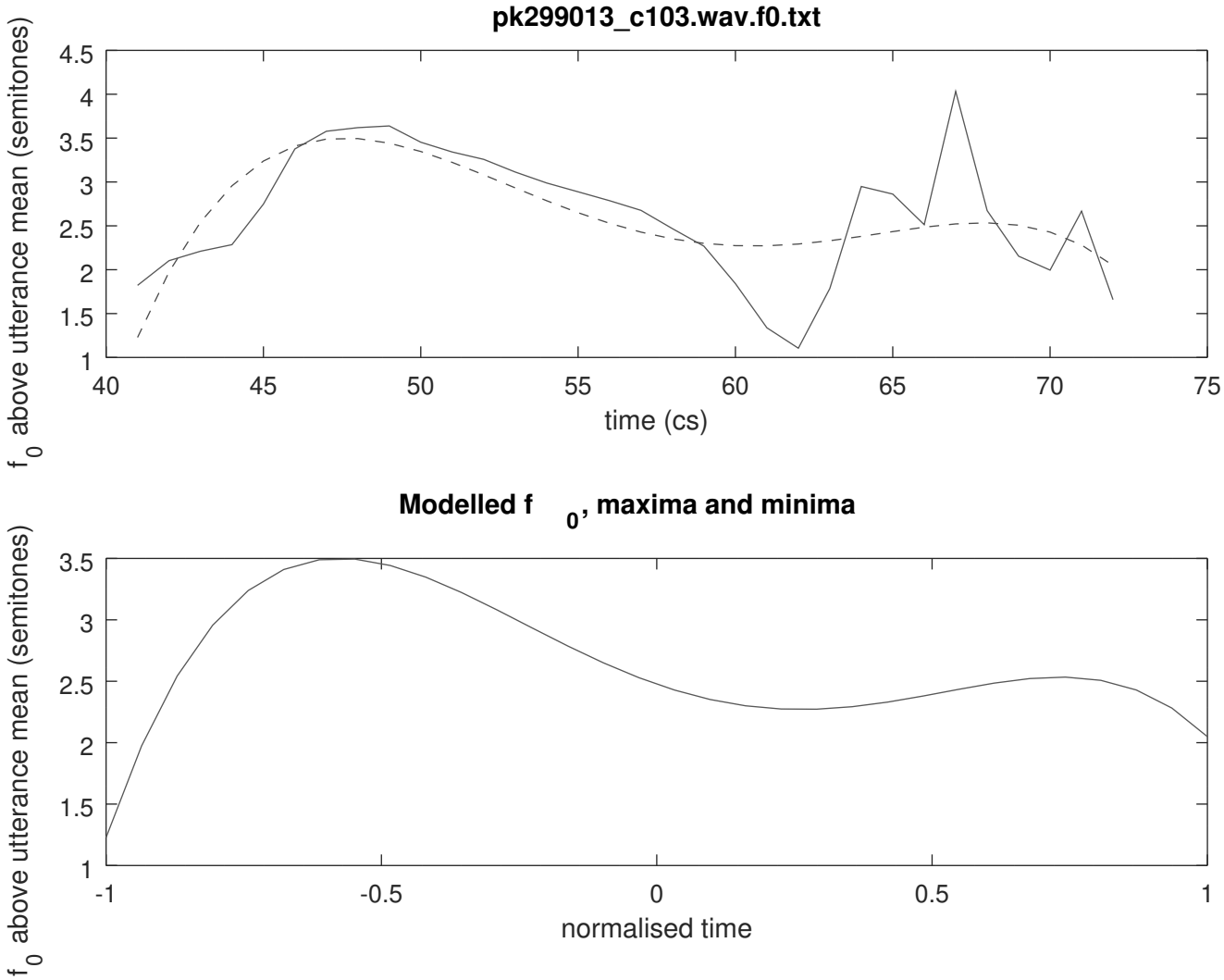
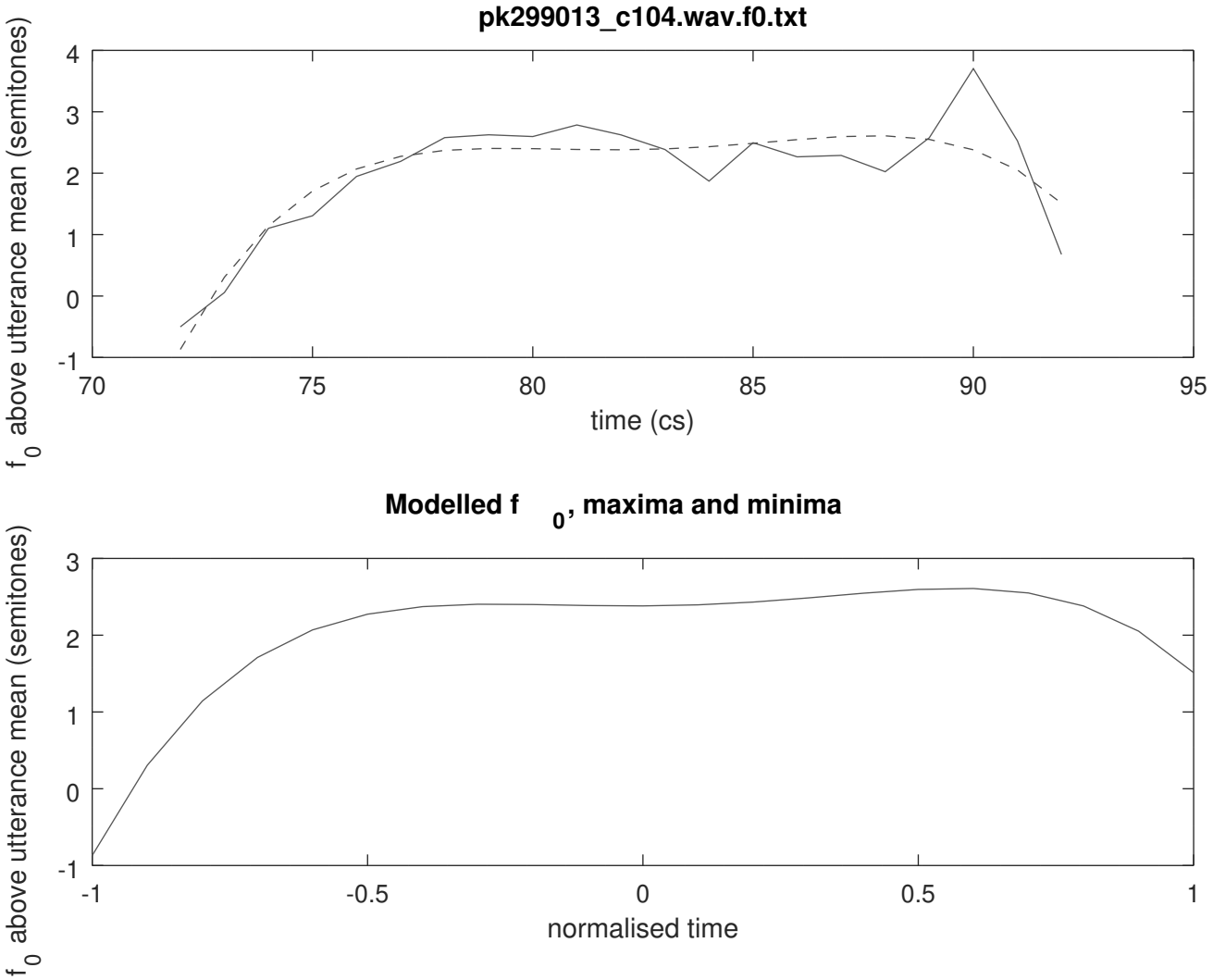

pk299013_c100.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
30
40
50
60
70
80
90
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

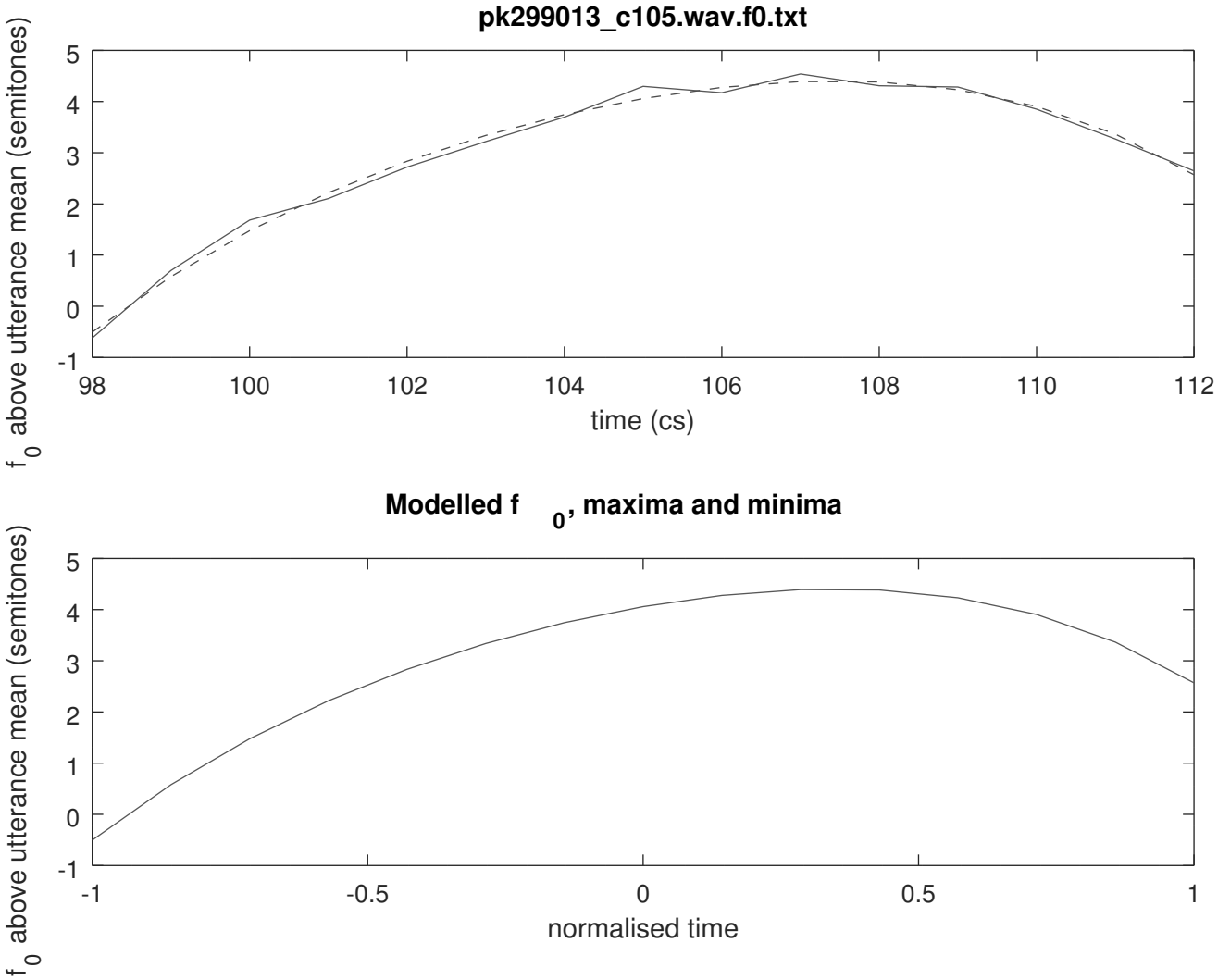

pk299013_c101.wav.f0.txt
f0 above utterance mean (semitones)
8
7
6
5
4
3
117
118
119
120
121
time (cs)

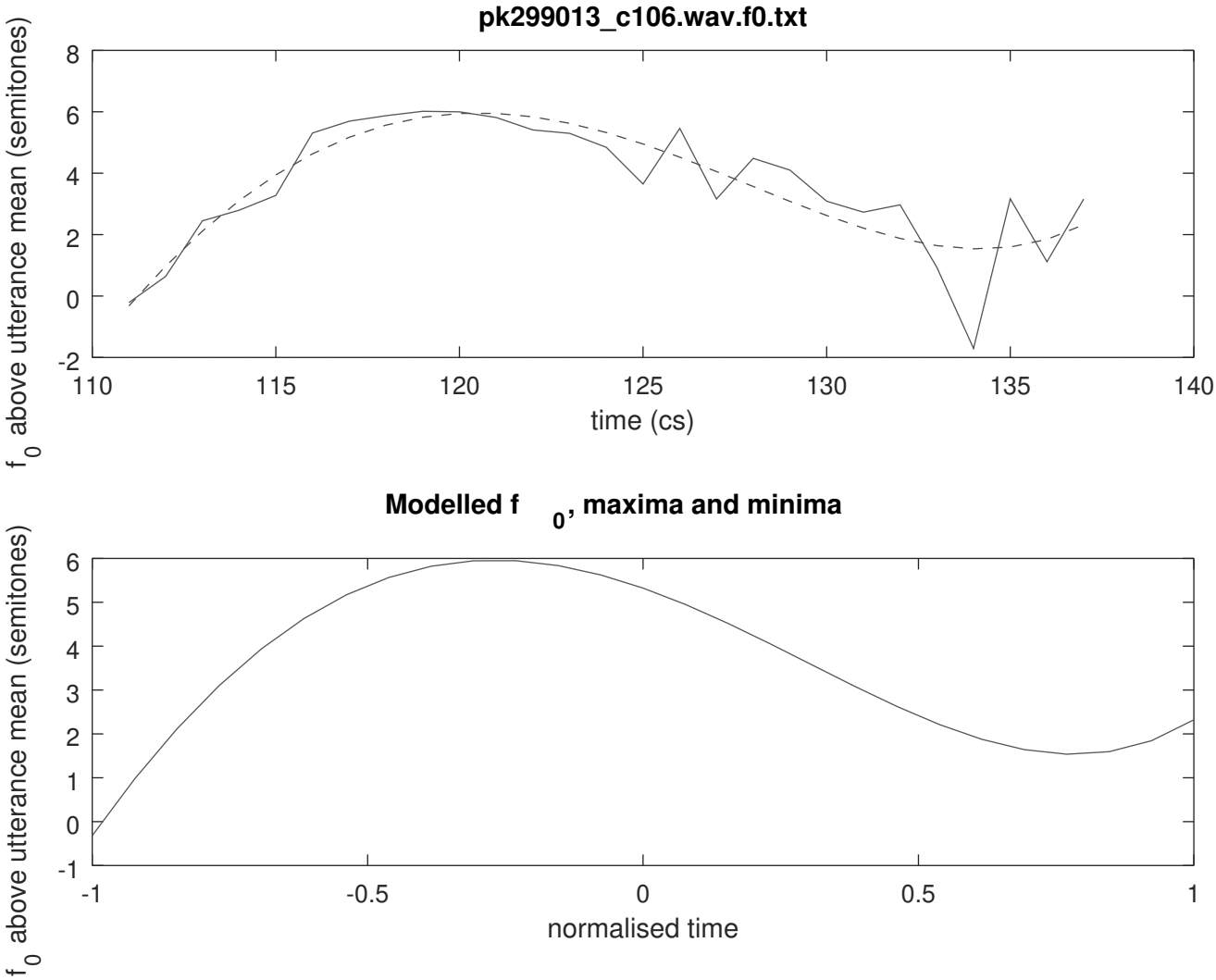

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
7
6
5
4
3
-1
-0.5
0
0.5
1
normalised time

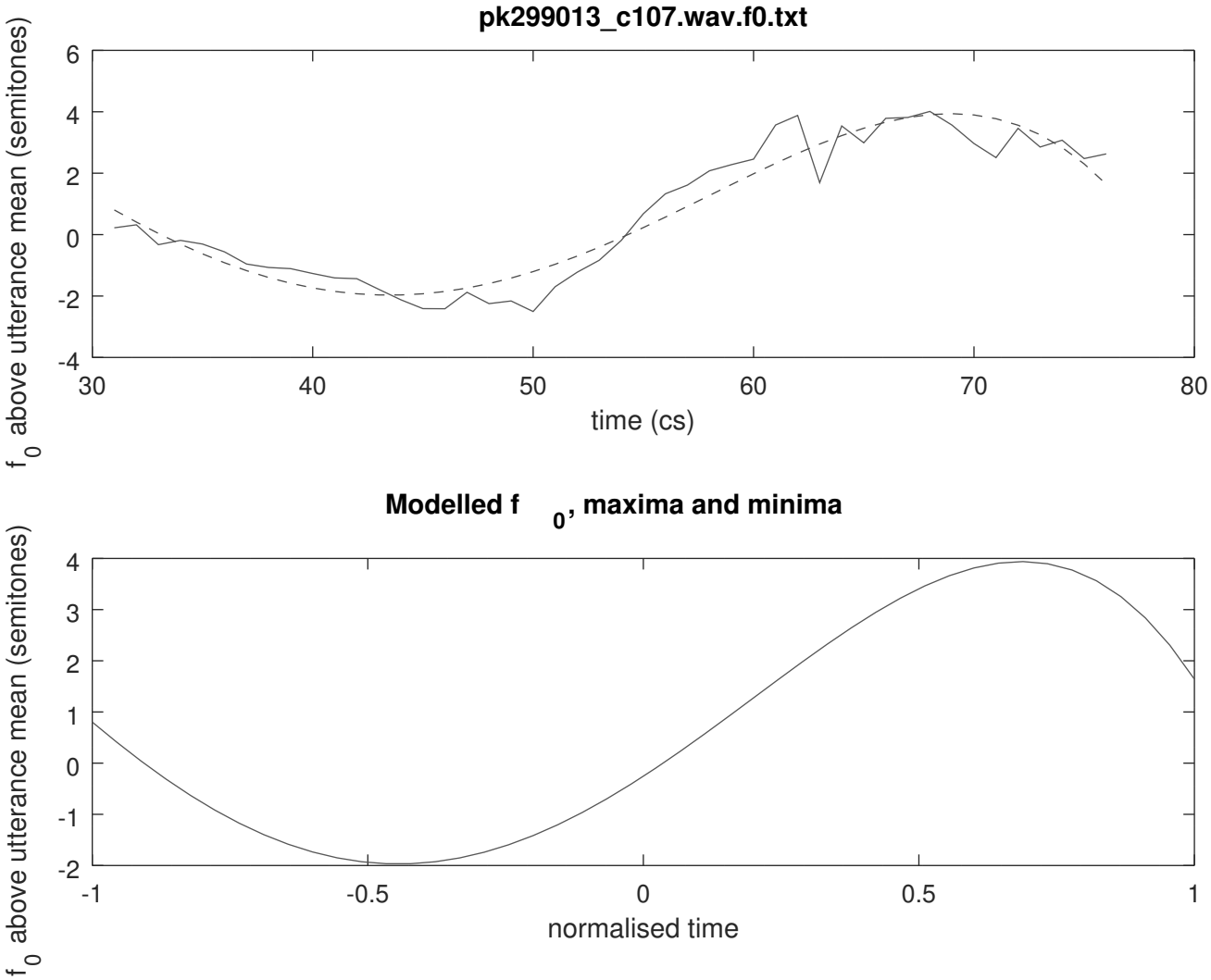

pk299013_c102.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
200
210
220
230
240
250
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

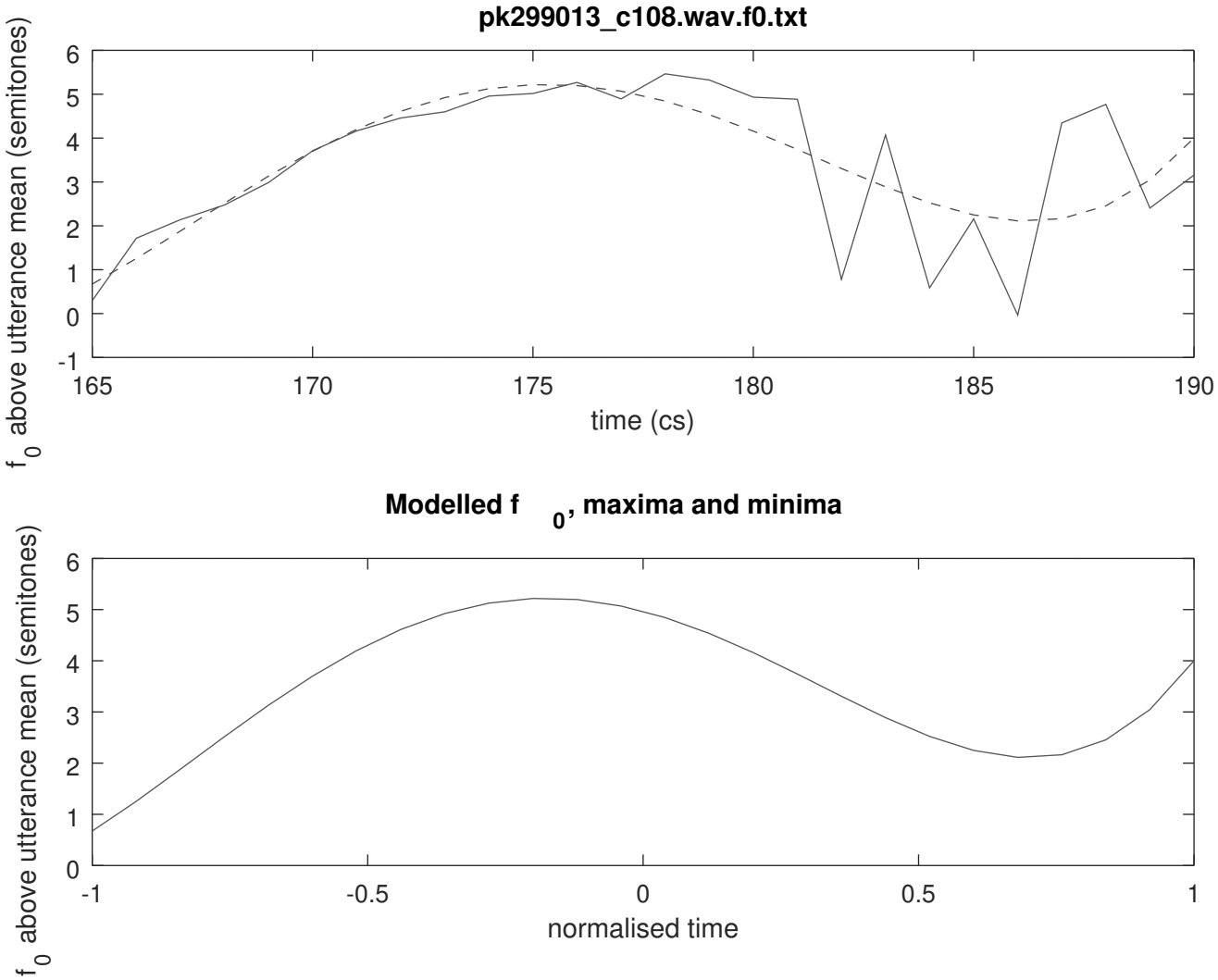

pk299013_c103.wav.f0.txt
f0 above utterance mean (semitones)
4.5
4
3.5
3
2.5
2
1.5
1
40
45
50
55
60
65
70
75
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3.5
3
2.5
2
1.5
1
-1
-0.5
0
0.5
1
normalised time

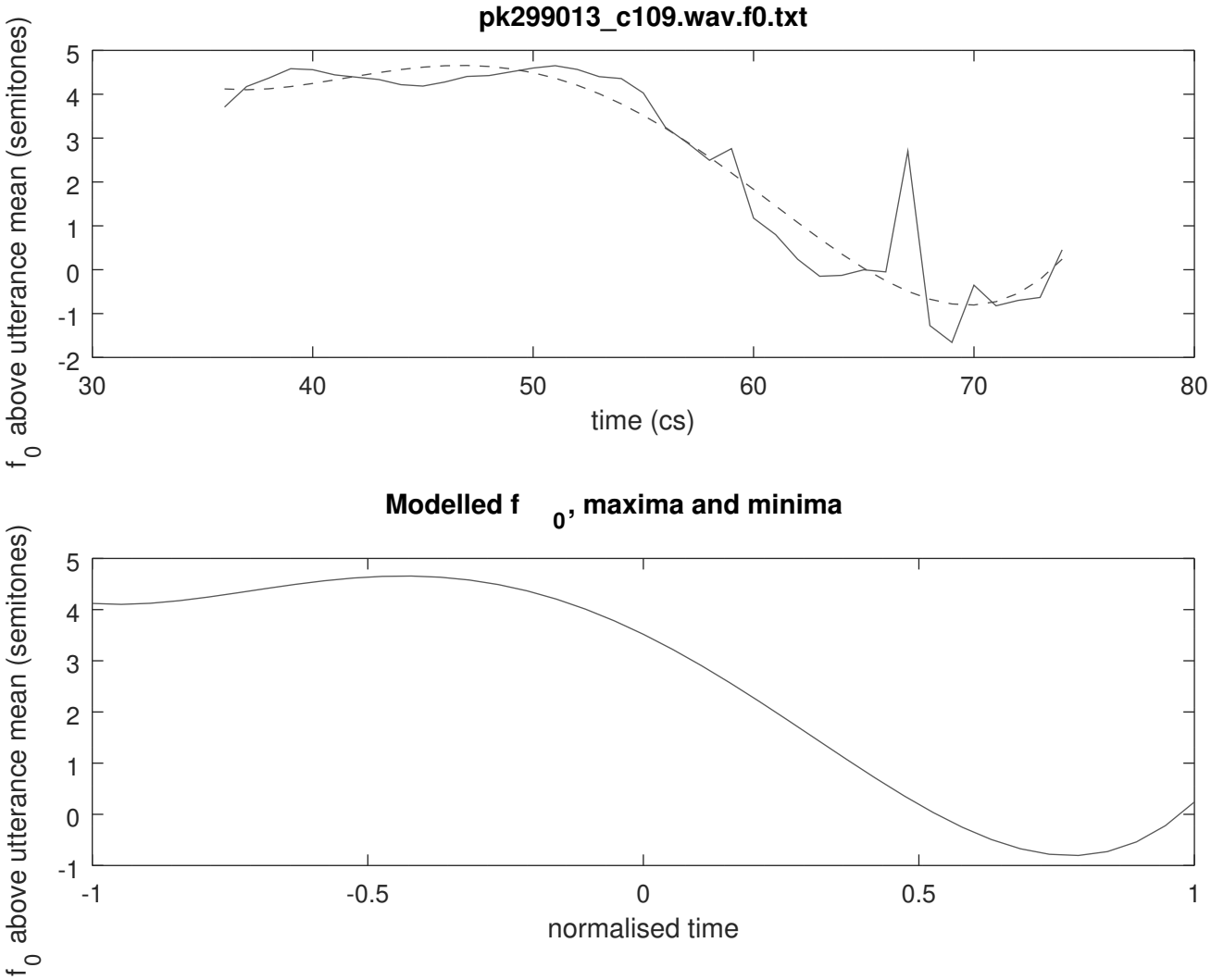

pk299013_c104.wav.f0.txt
f0 above utterance mean (semitones)
4
3
2
1
0
-1
70
75
80
85
90
95
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

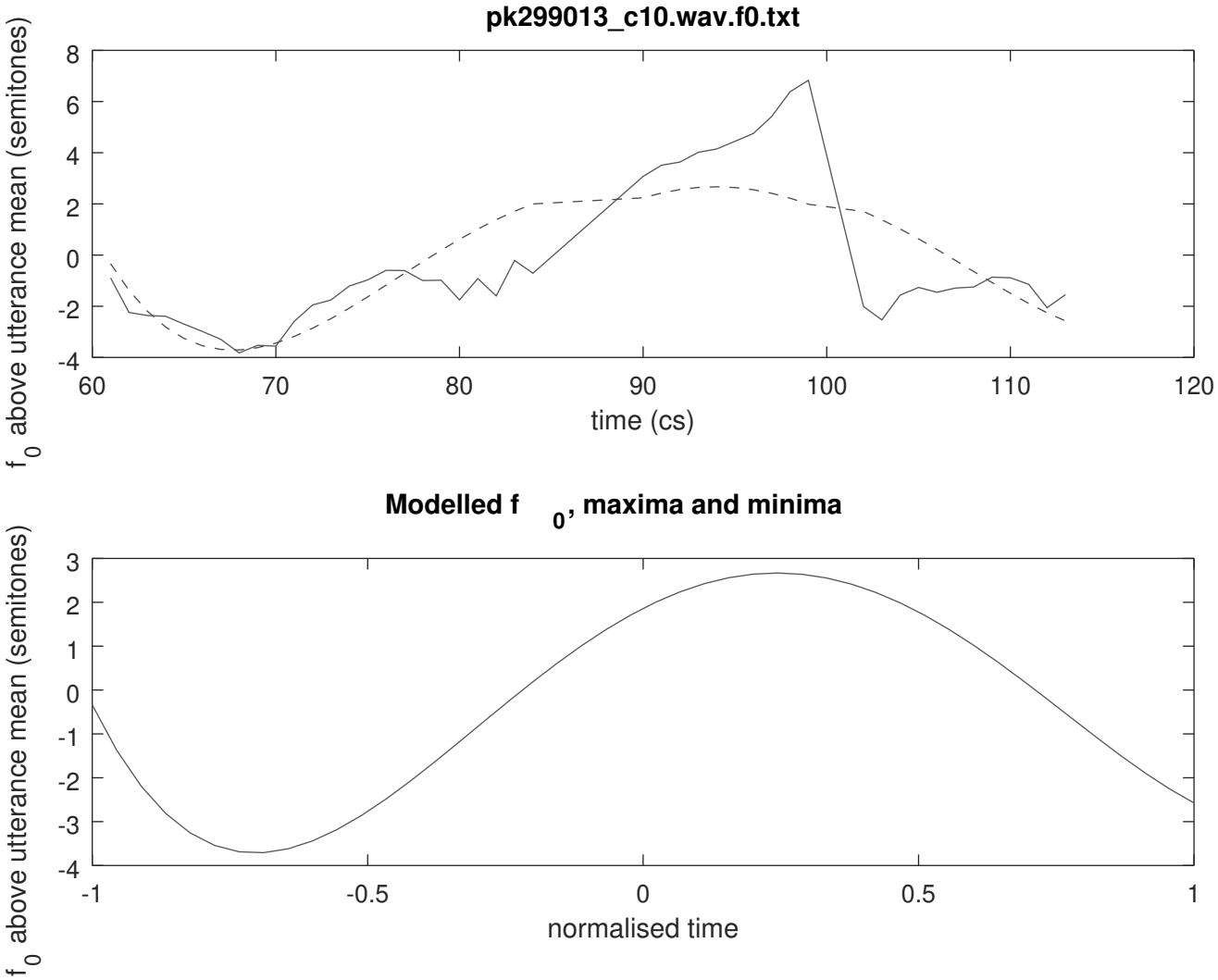

pk299013_c105.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
98
100
102
104
106
108
110
112
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

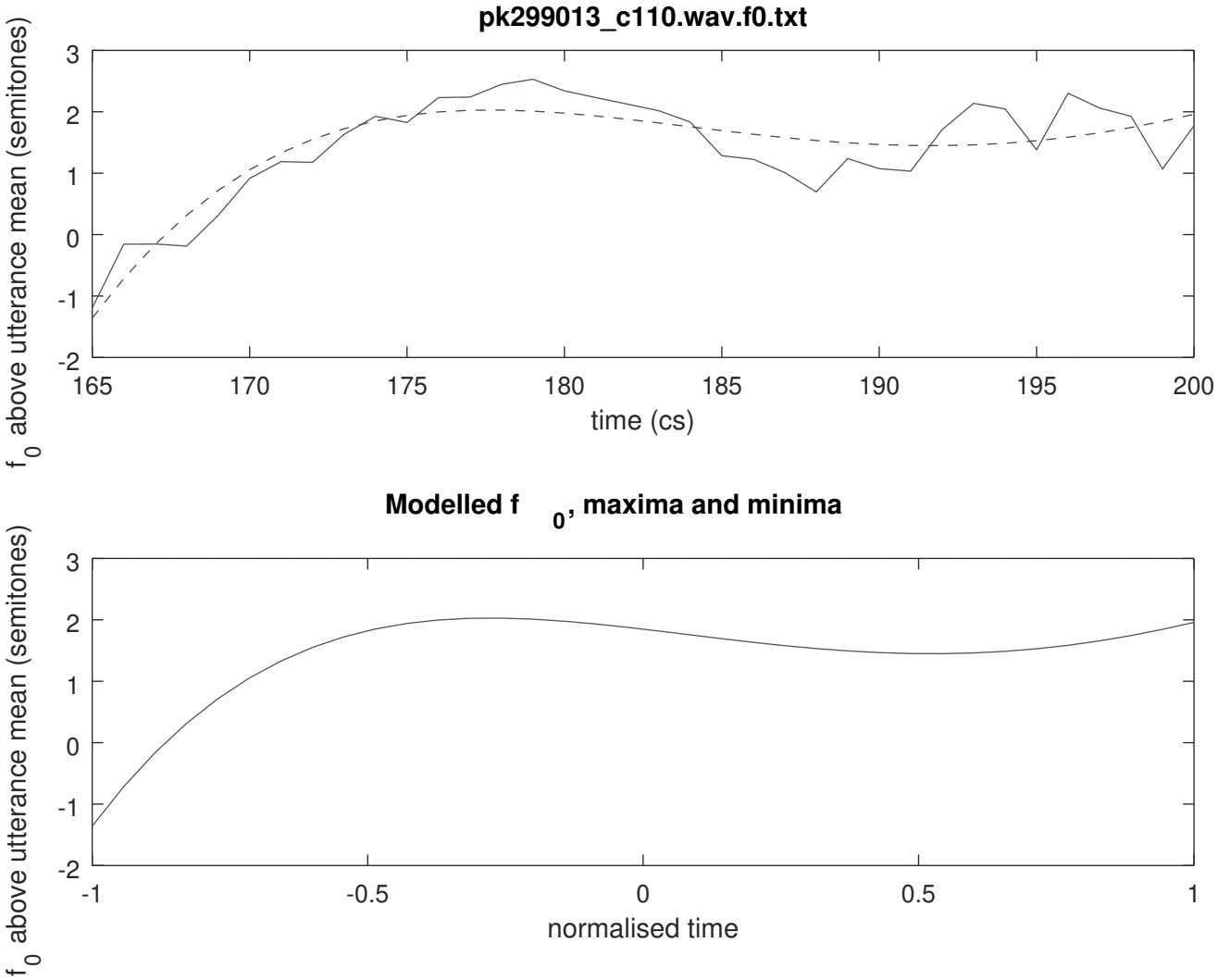

pk299013_c106.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
110
115
120
125
130
135
140
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
5
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

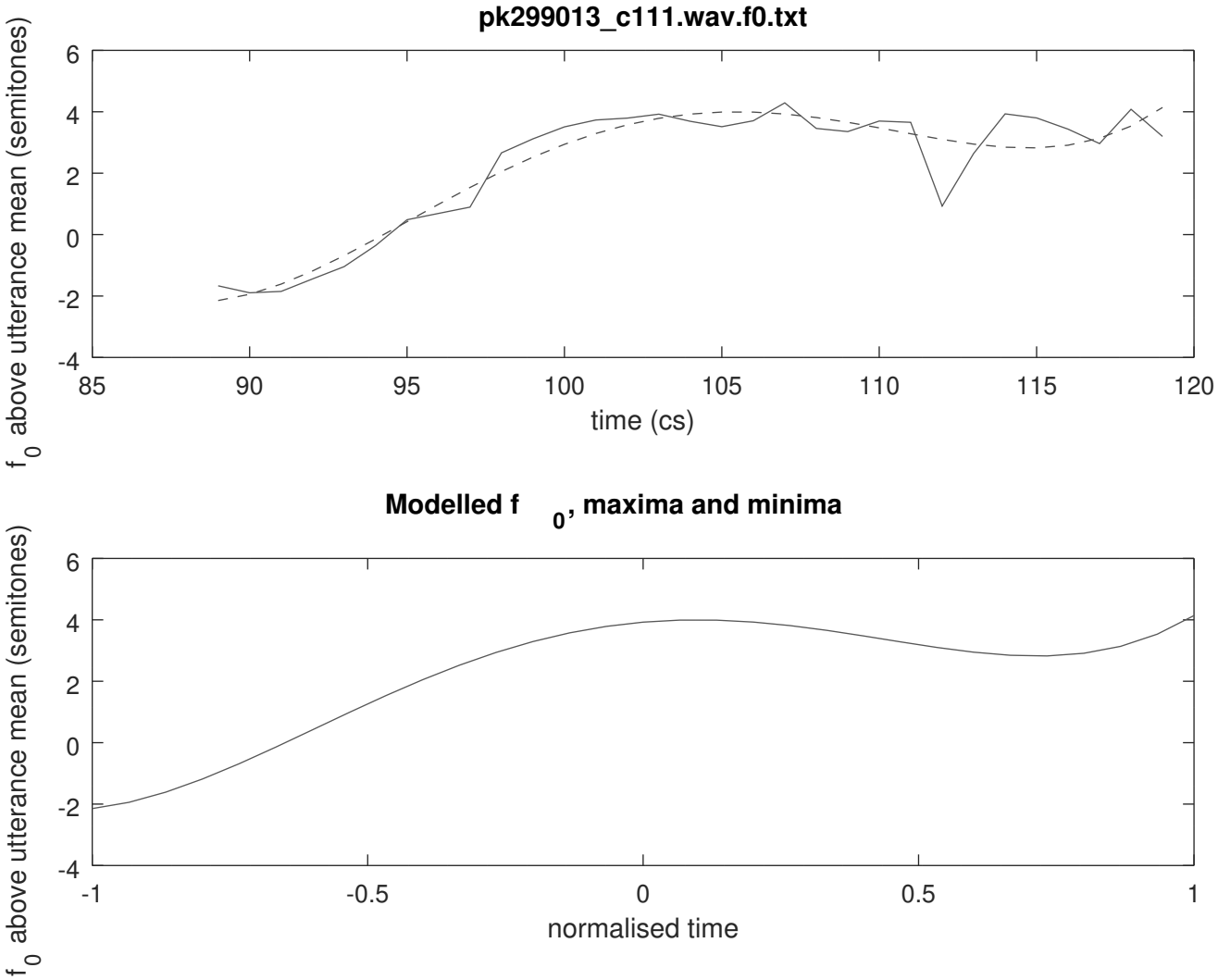

pk299013_c107.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
30
40
50
60
70
80
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

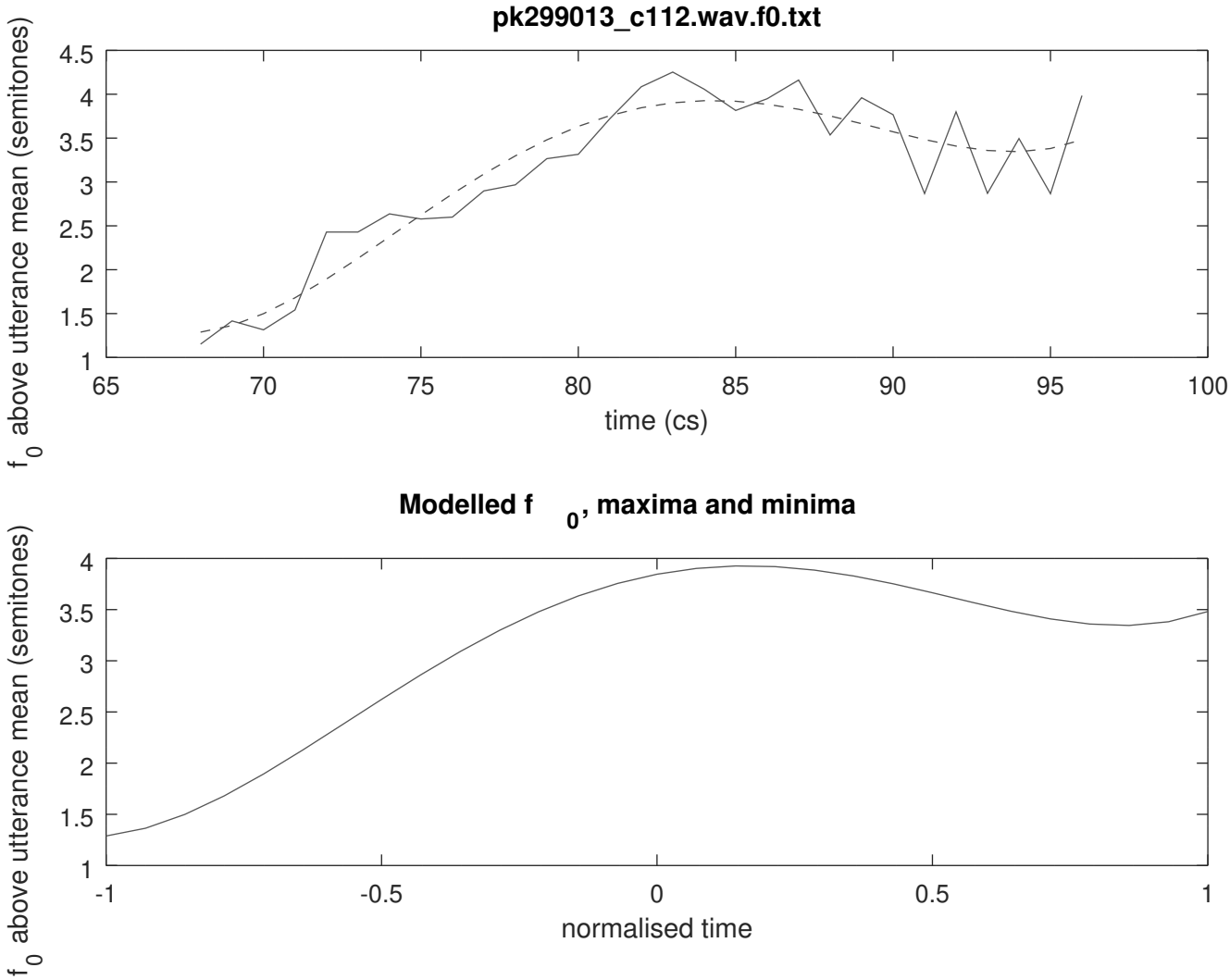

pk299013_c108.wav.f0.txt
f0 above utterance mean (semitones)
6
5
4
3
2
1
0
-1
165
170
175
180
185
190
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
5
4
3
2
1
0
-1
-0.5
0
0.5
1
normalised time

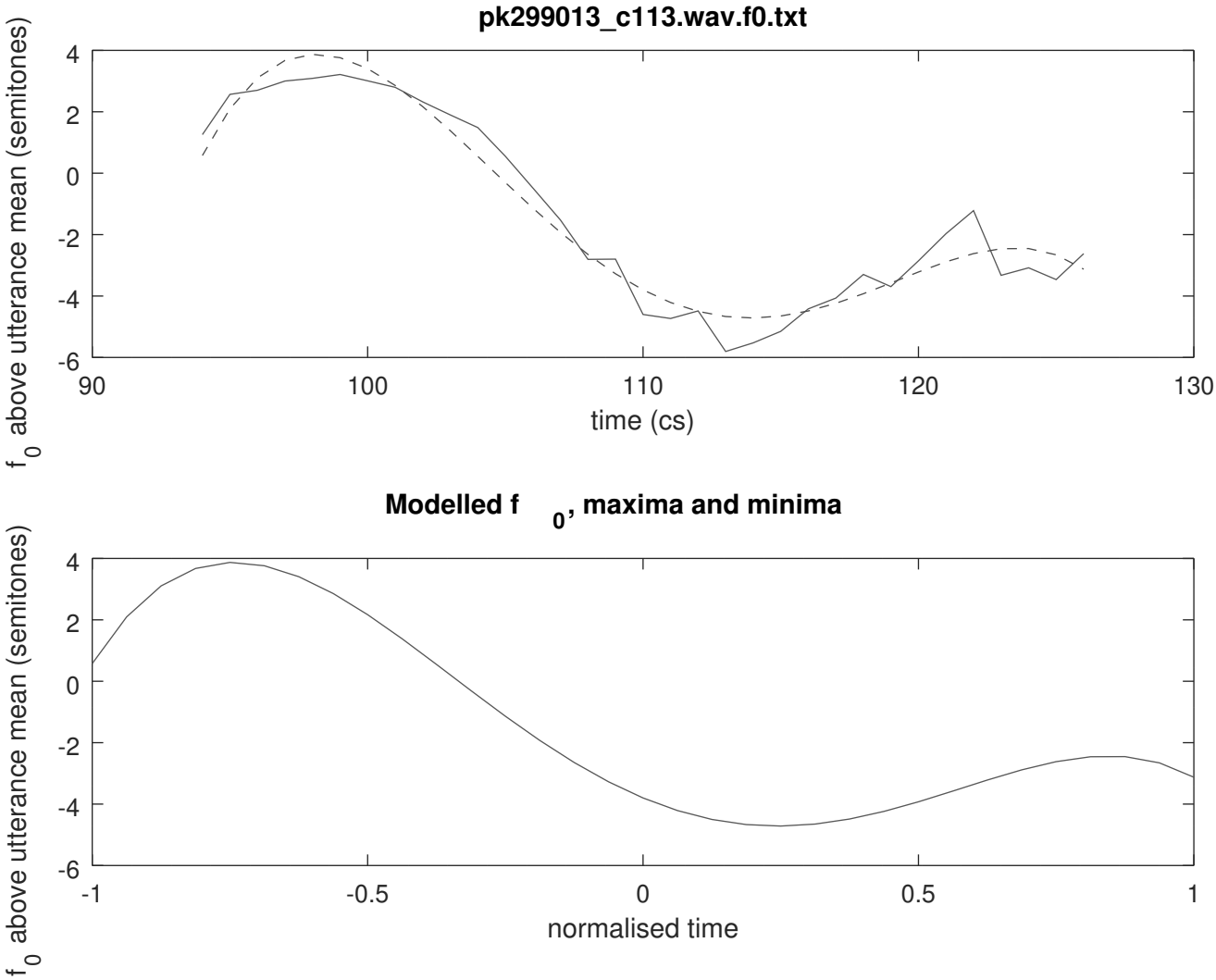

pk299013_c109.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
30
40
50
60
70
80
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

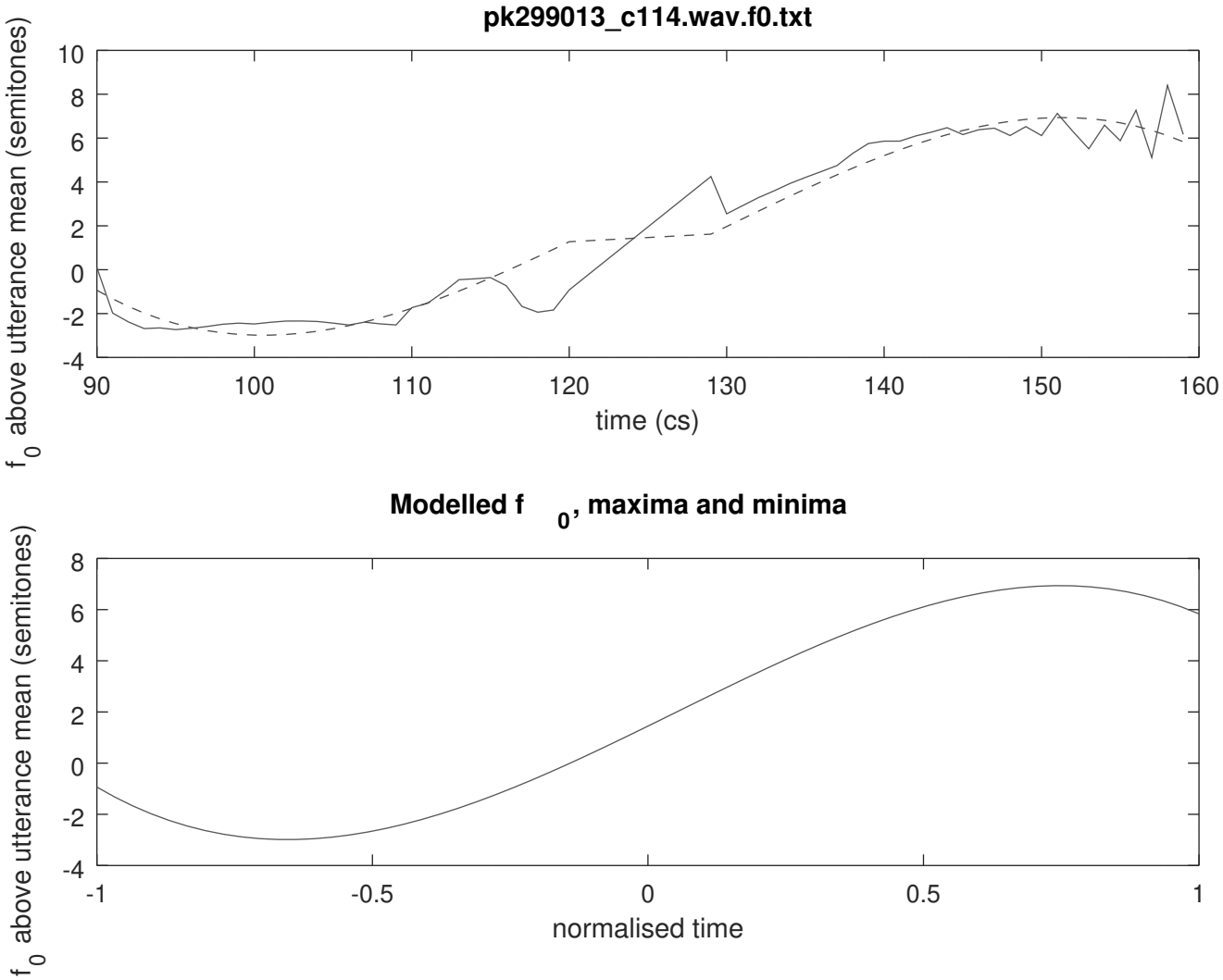

pk299013_c10.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
60
70
80
90
100
110
120
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-3
-4
-1
-0.5
0
0.5
1
normalised time

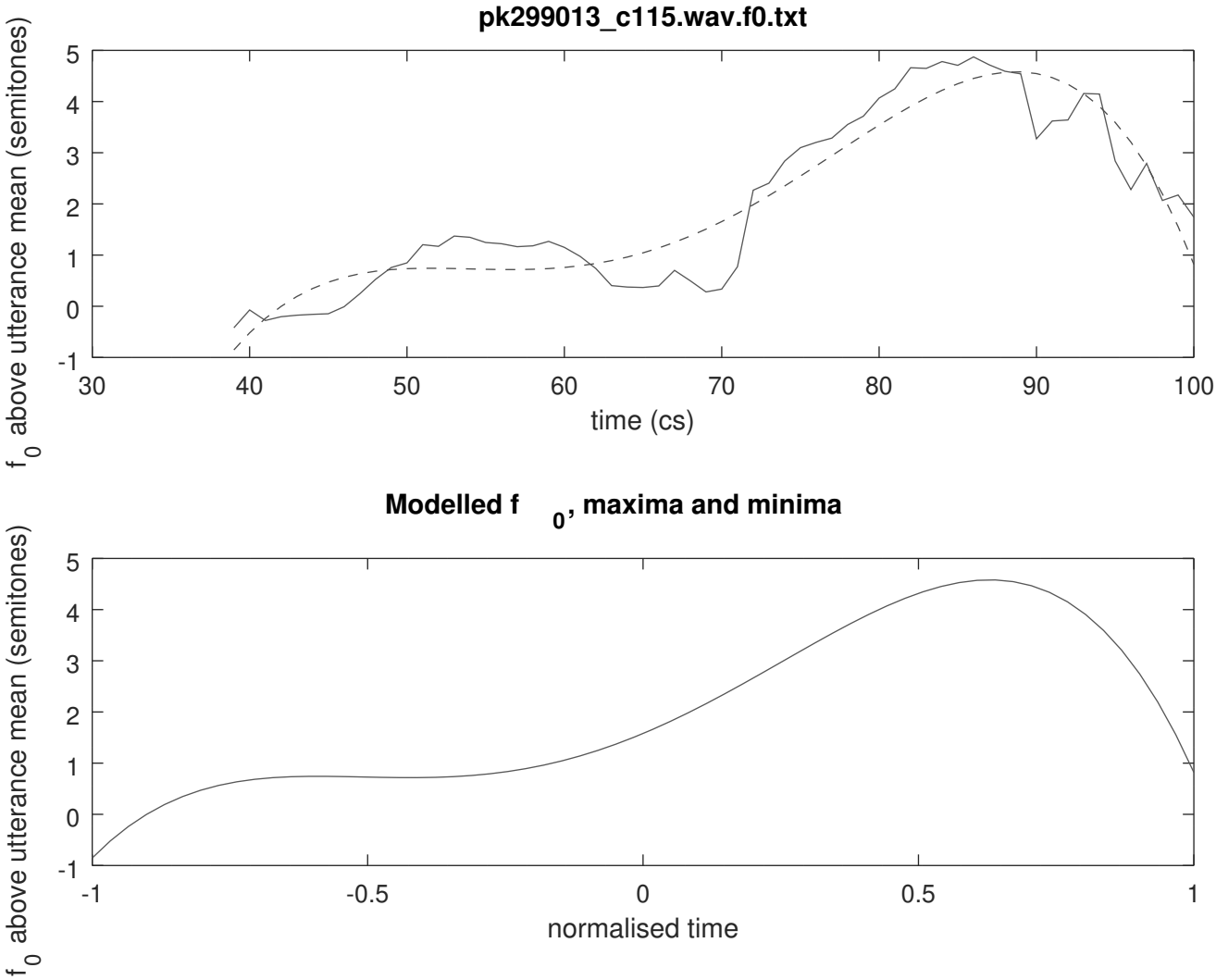

pk299013_c110.wav.f0.txt
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
165
170
175
180
185
190
195
200
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

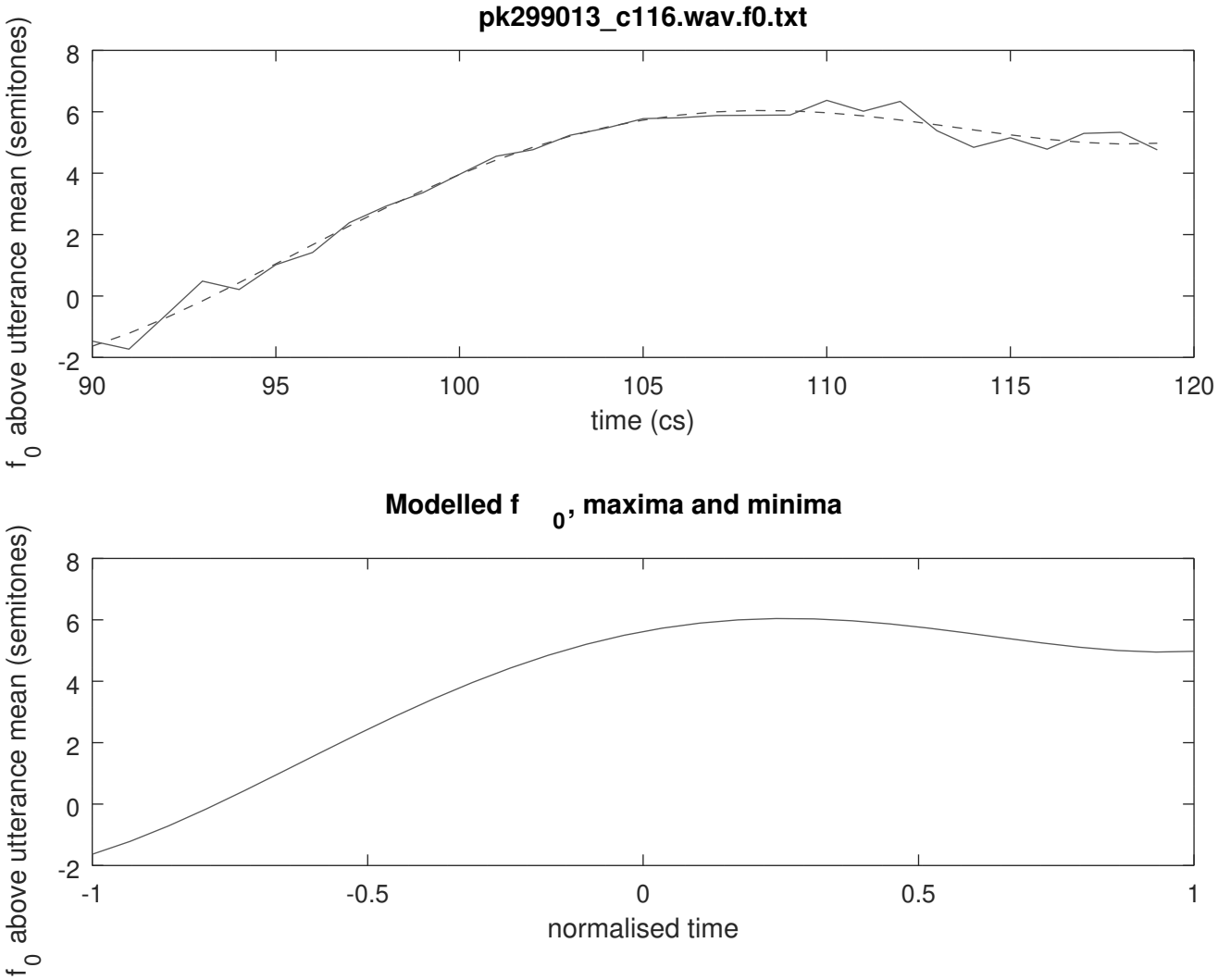

pk299013_c111.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
85
90
95
100
105
110
115
120
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

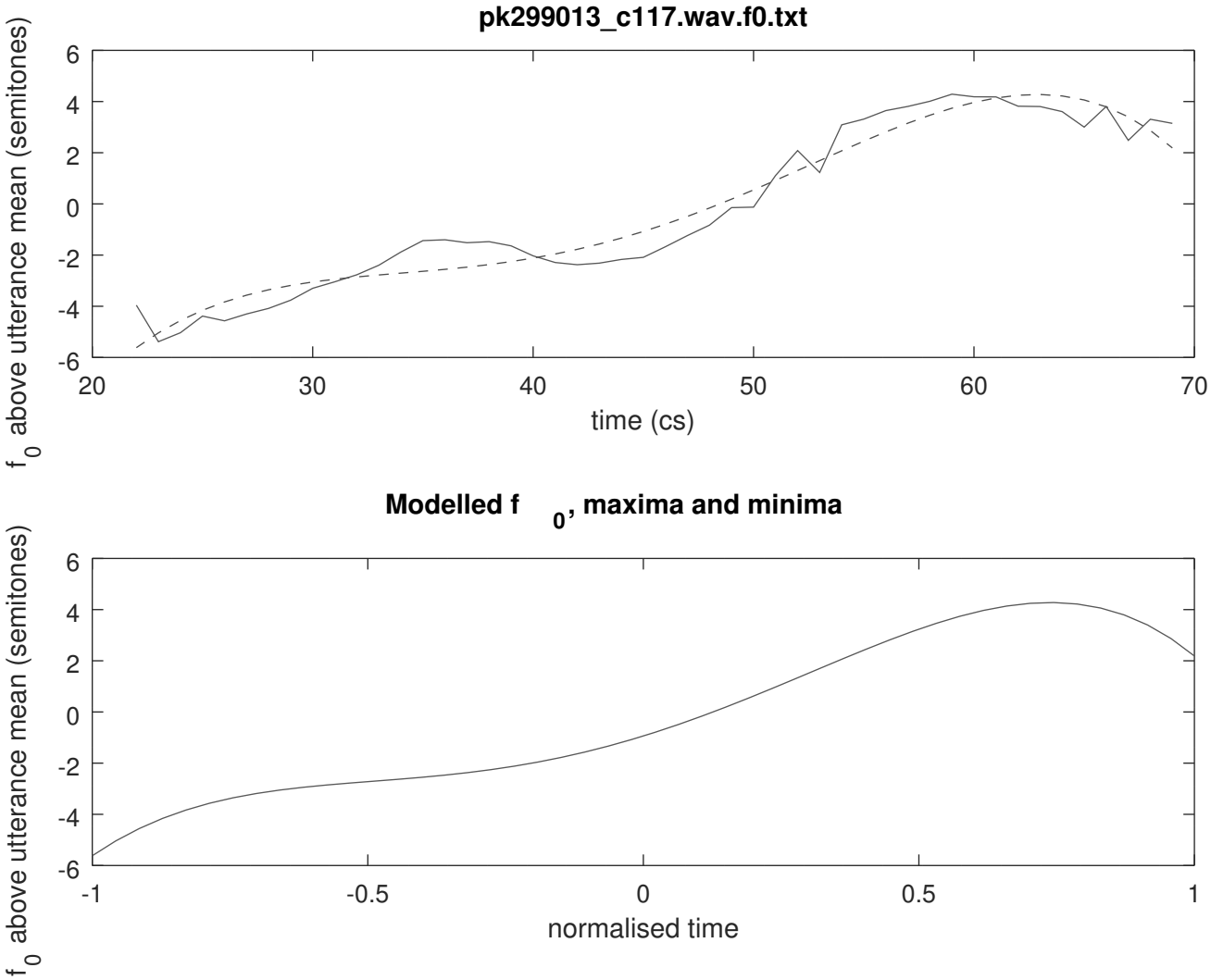

pk299013_c112.wav.f0.txt
f0 above utterance mean (semitones)
4.5
4
3.5
3
2.5
2
1.5
1
65
70
75
80
85
90
95
100
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
3.5
3
2.5
2
1.5
1
-1
-0.5
0
0.5
1
normalised time

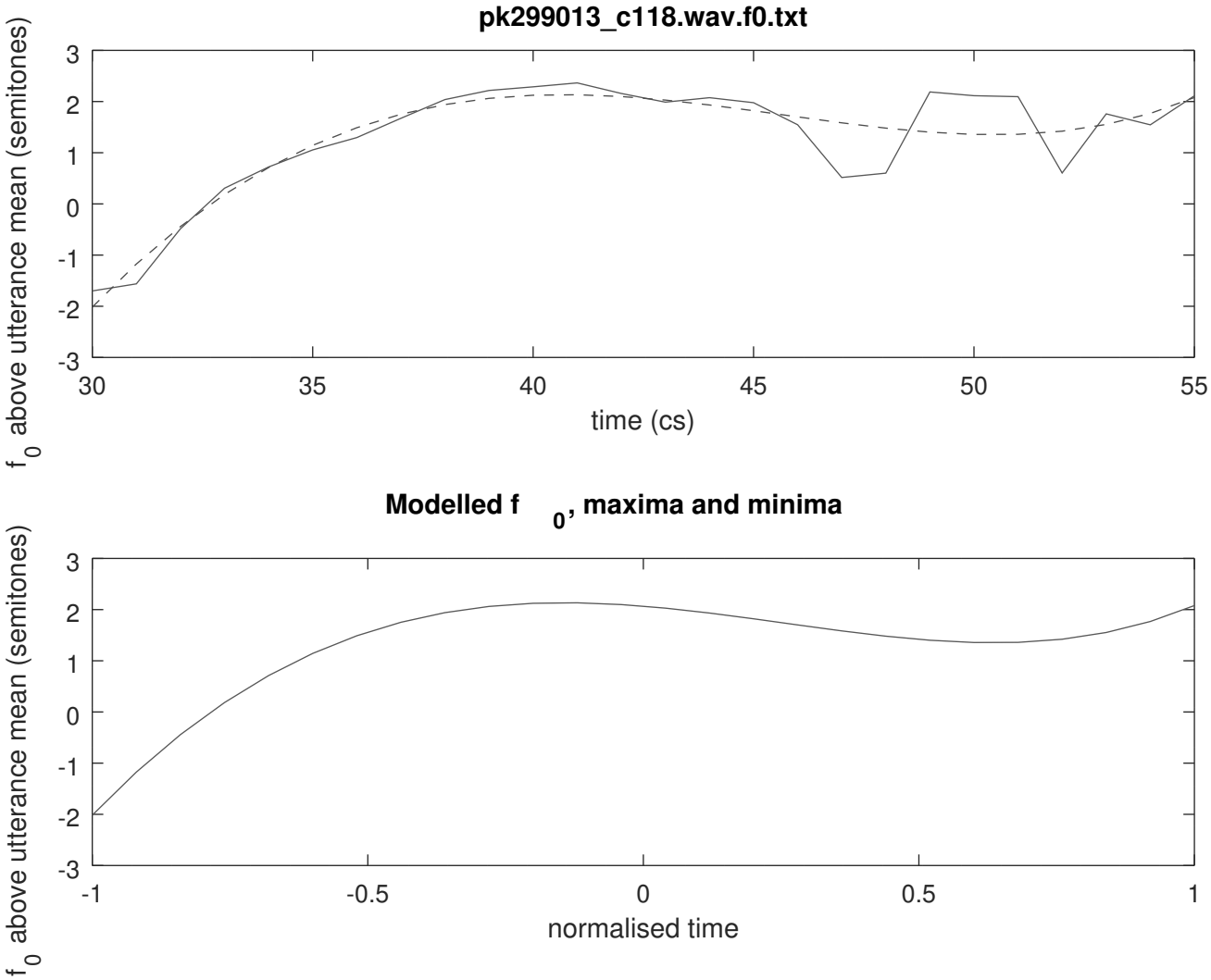

pk299013_c113.wav.f0.txt
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
90
100
110
120
130
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

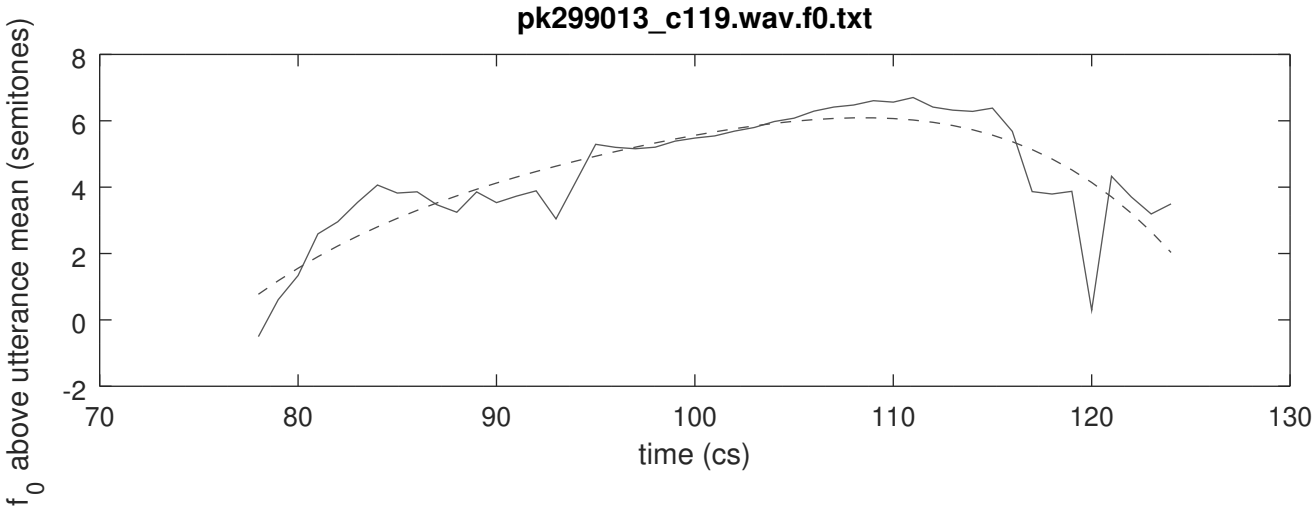

pk299013_c114.wav.f0.txt
f0 above utterance mean (semitones)
10
8
6
4
2
0
-2
-4
90
100
110
120
130
140
150
160
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

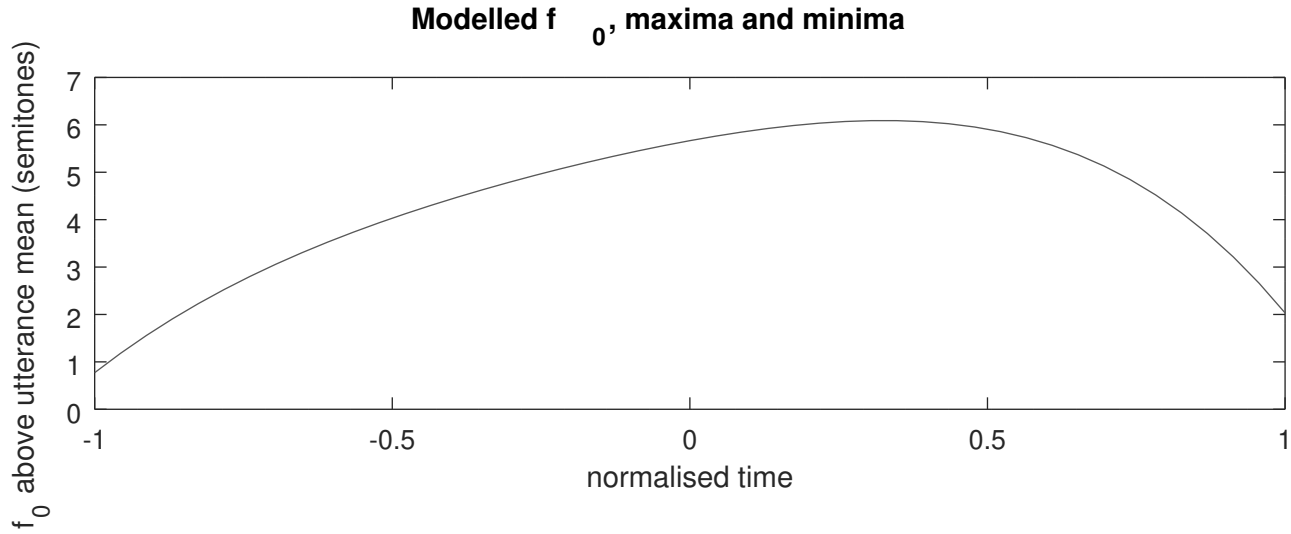

pk299013_c115.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

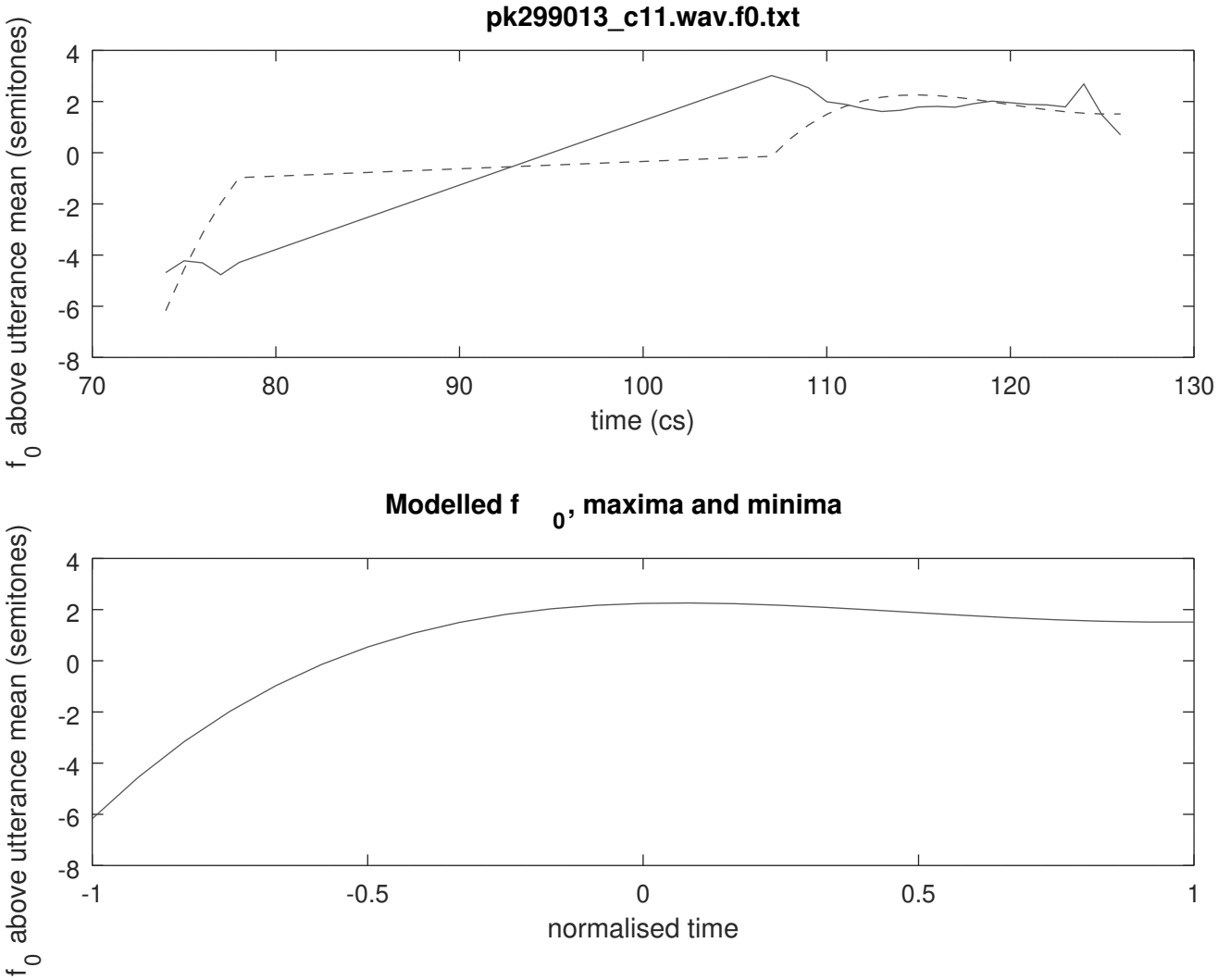

pk299013_c116.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
90
95
100
105
110
115
120
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

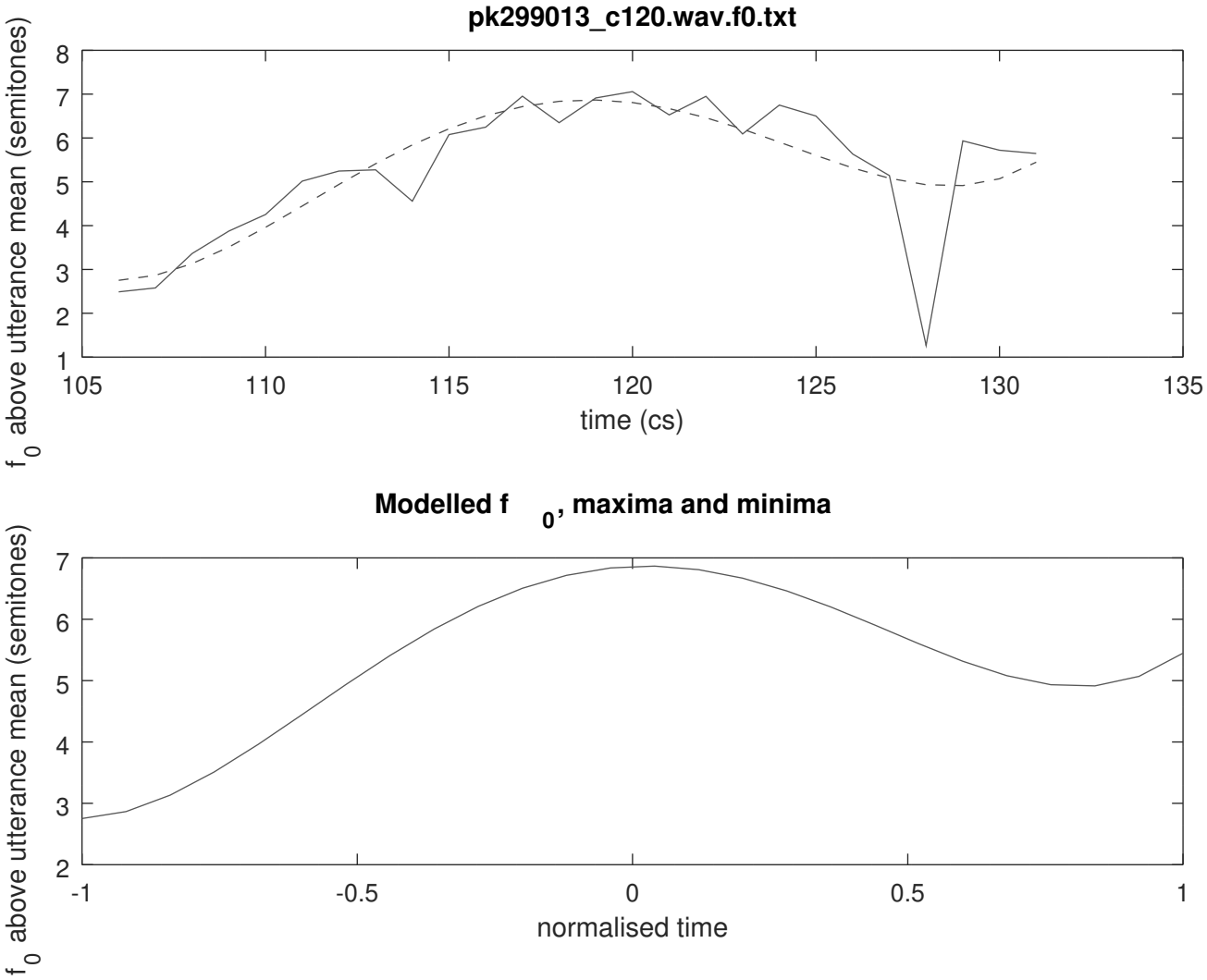

pk299013_c117.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
20
30
40
50
60
70
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

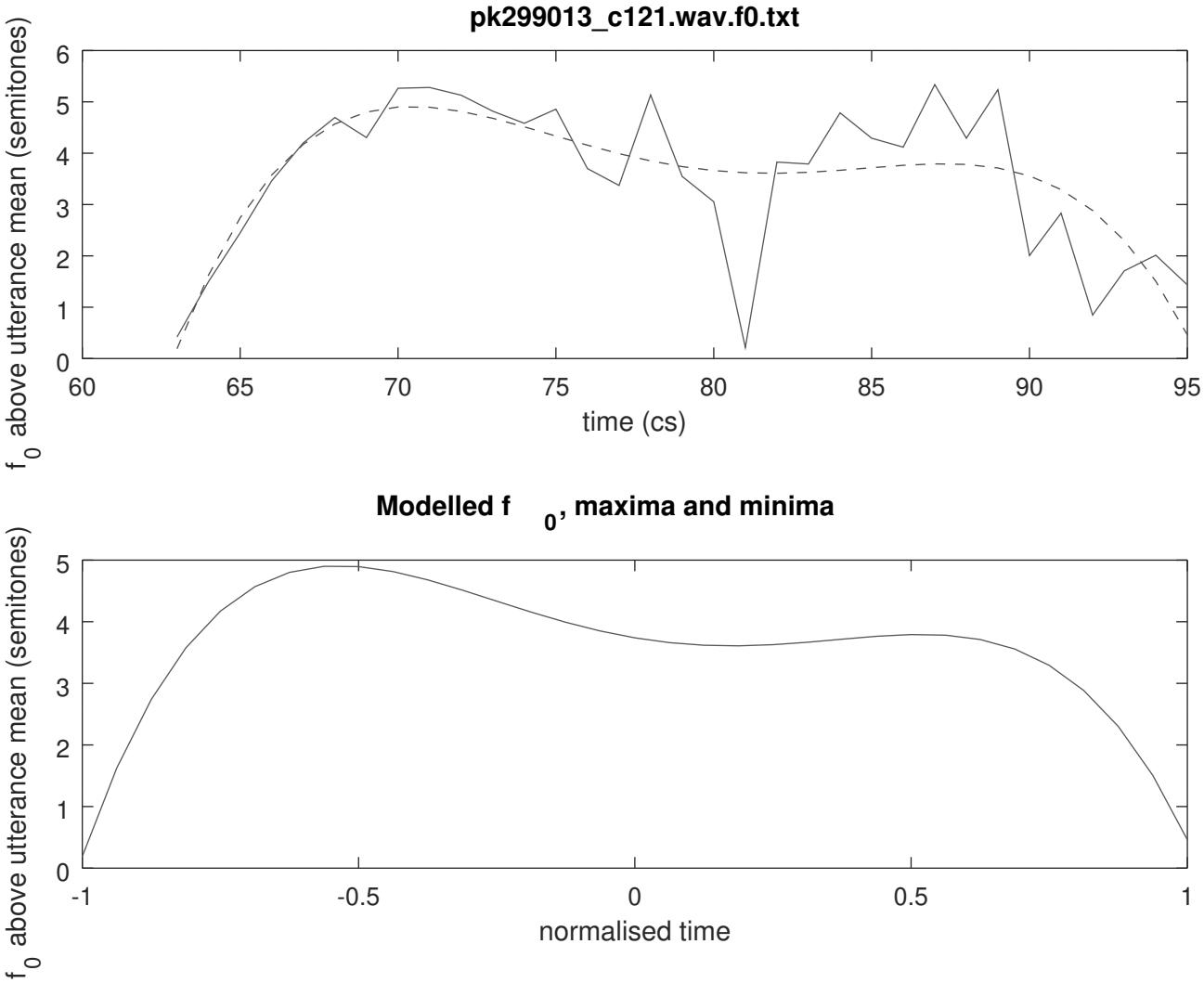

pk299013_c118.wav.f0.txt
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-3
30
35
40
45
50
55
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-3
-1
-0.5
0
0.5
1
normalised time

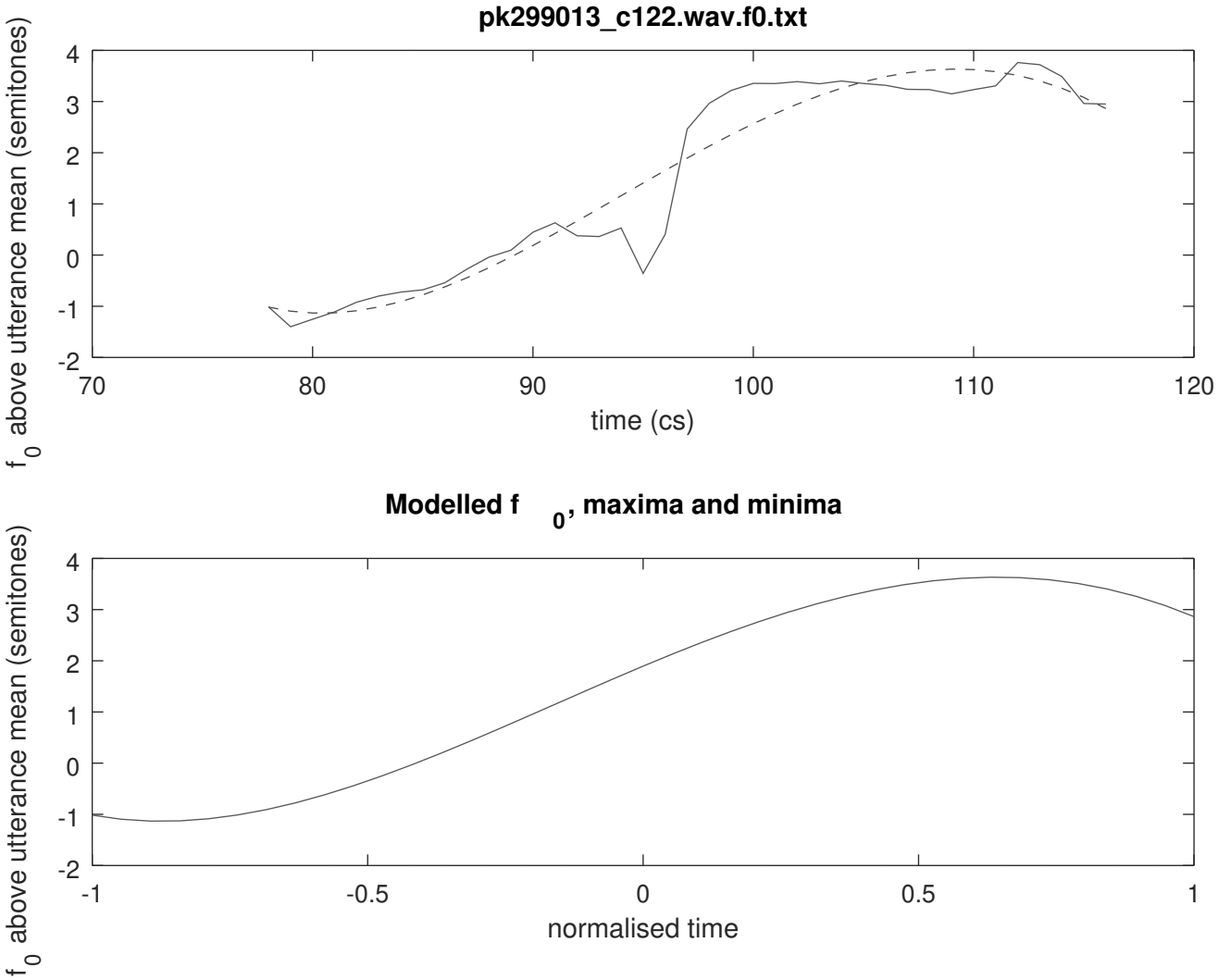

pk299013_c119.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
70
80
90
100
110
120
130
time (cs)

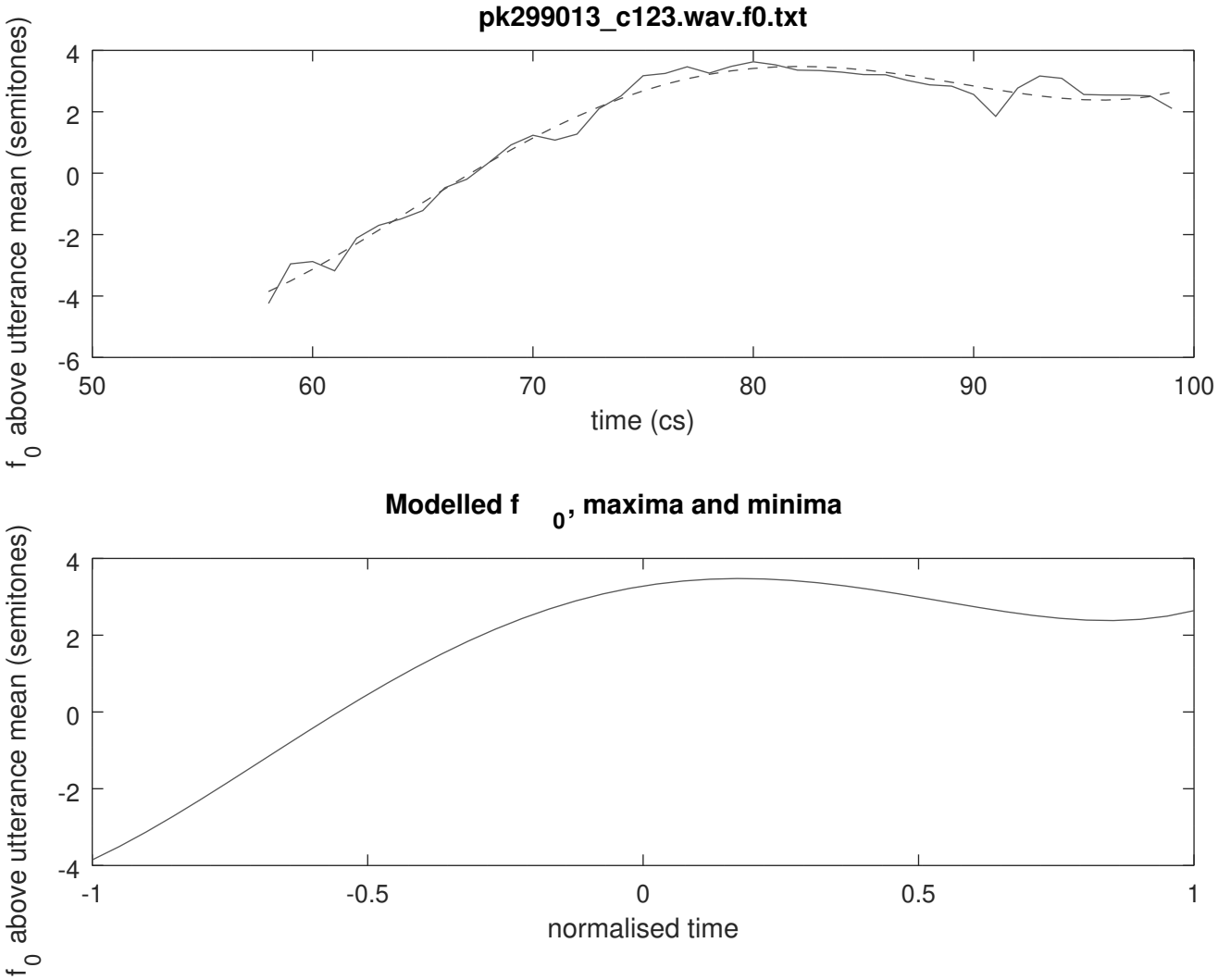

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
7
6
5
4
3
2
1
0
-1
-0.5
0
0.5
1
normalised time

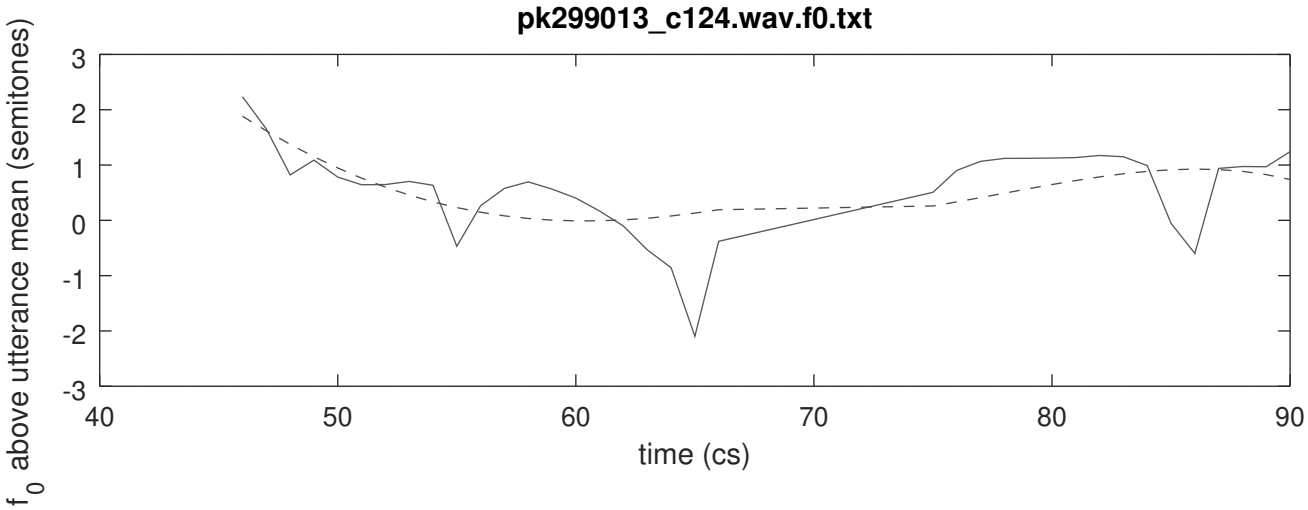

pk299013_c11.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

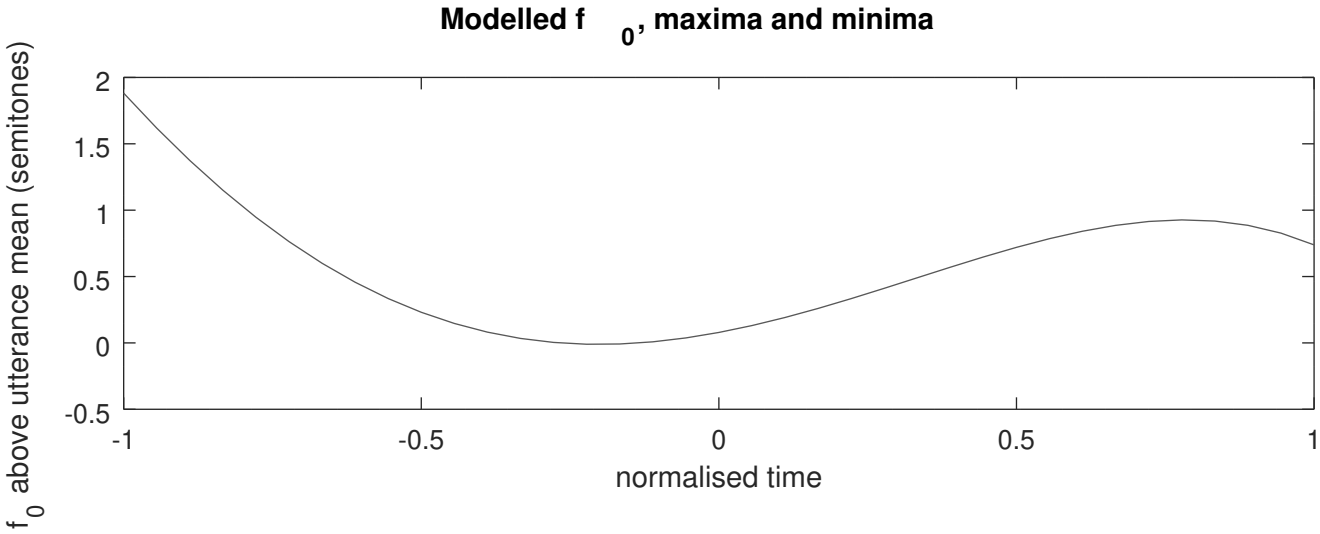

pk299013_c120.wav.f0.txt
f0 above utterance mean (semitones)
8
7
6
5
4
3
2
1
105
110
115
120
125
130
135
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
7
6
5
4
3
2
-1
-0.5
0
0.5
1
normalised time

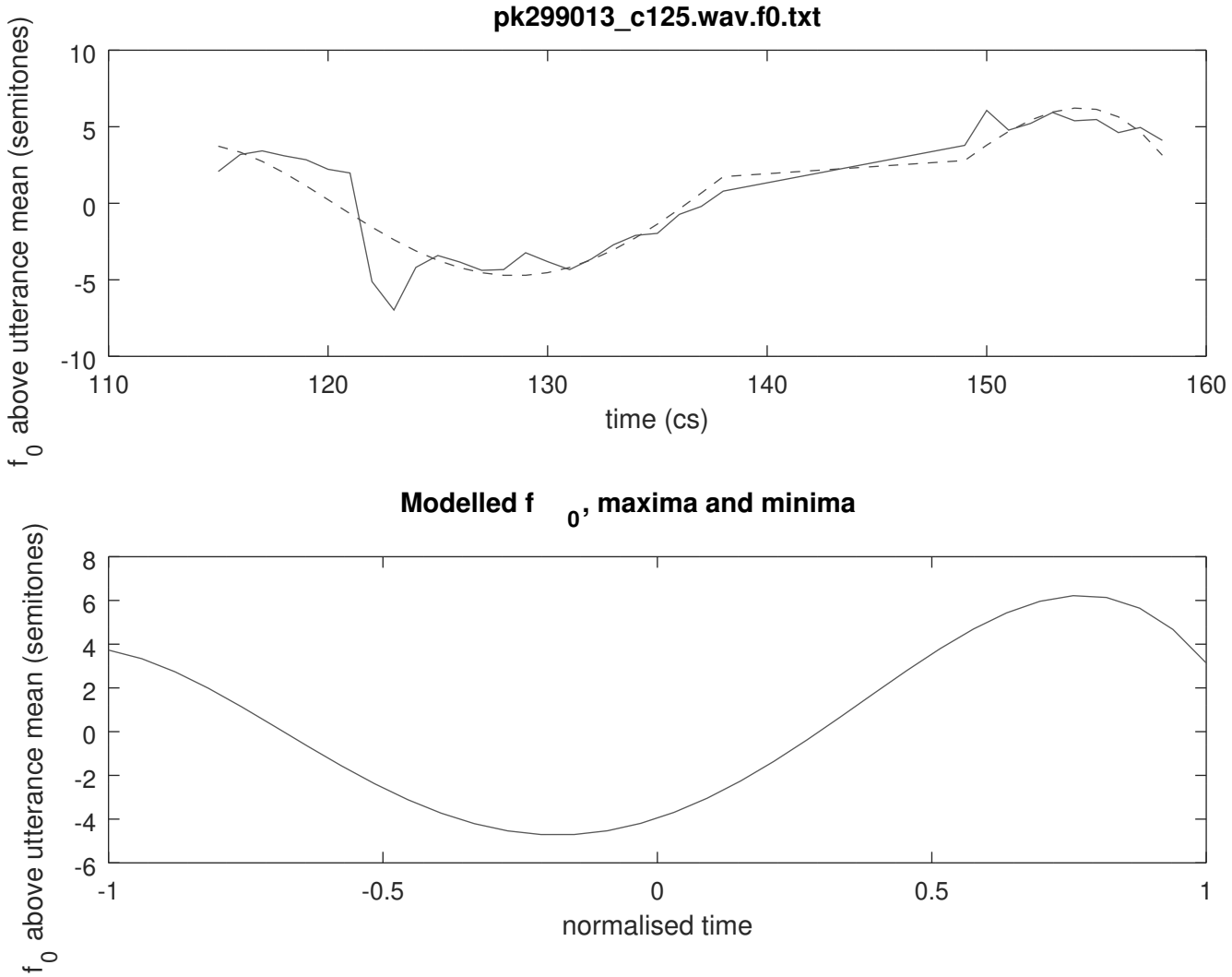

pk299013_c121.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

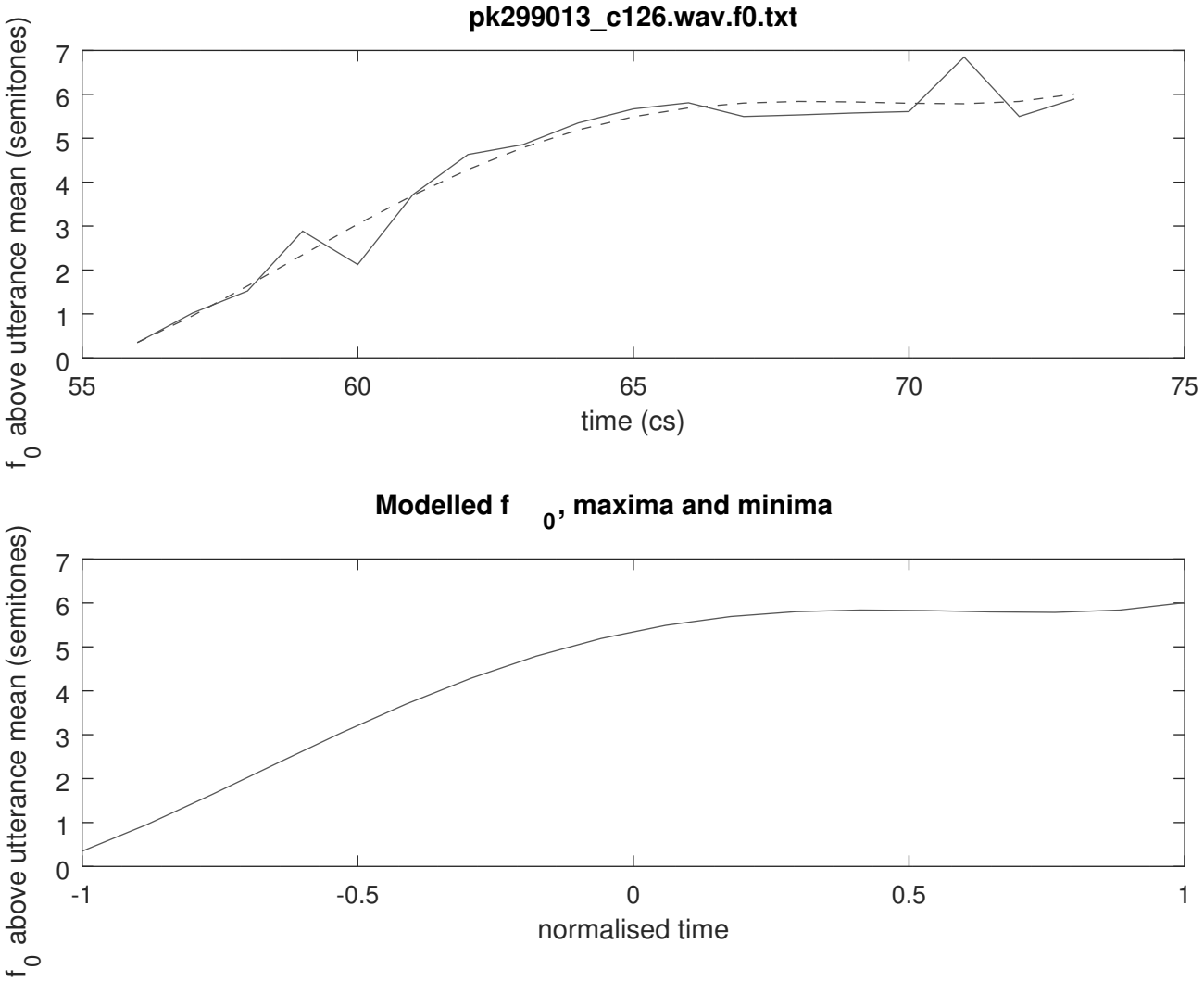

pk299013_c122.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

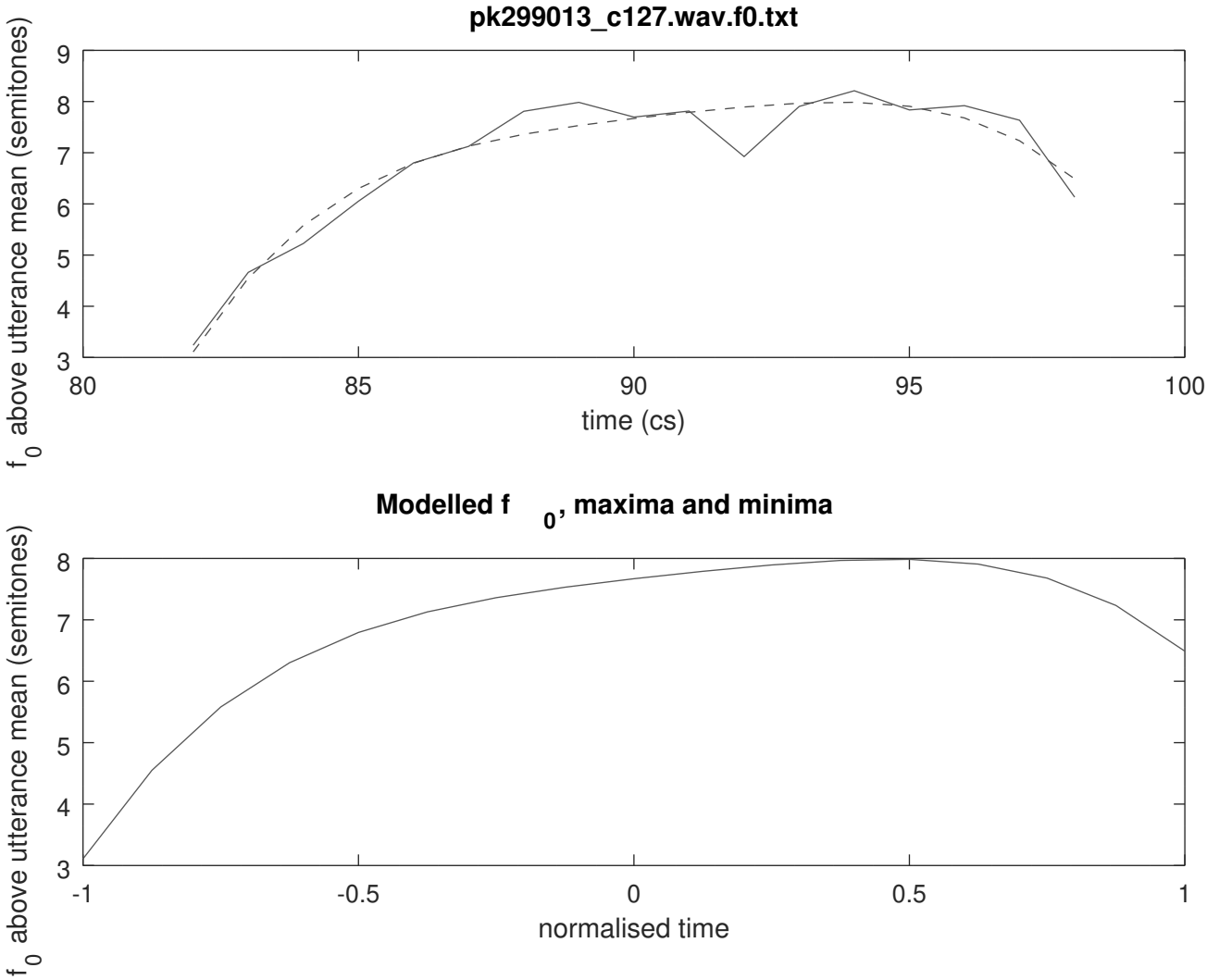

pk299013_c123.wav.f0.txt
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
50
60
70
80
90
100
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

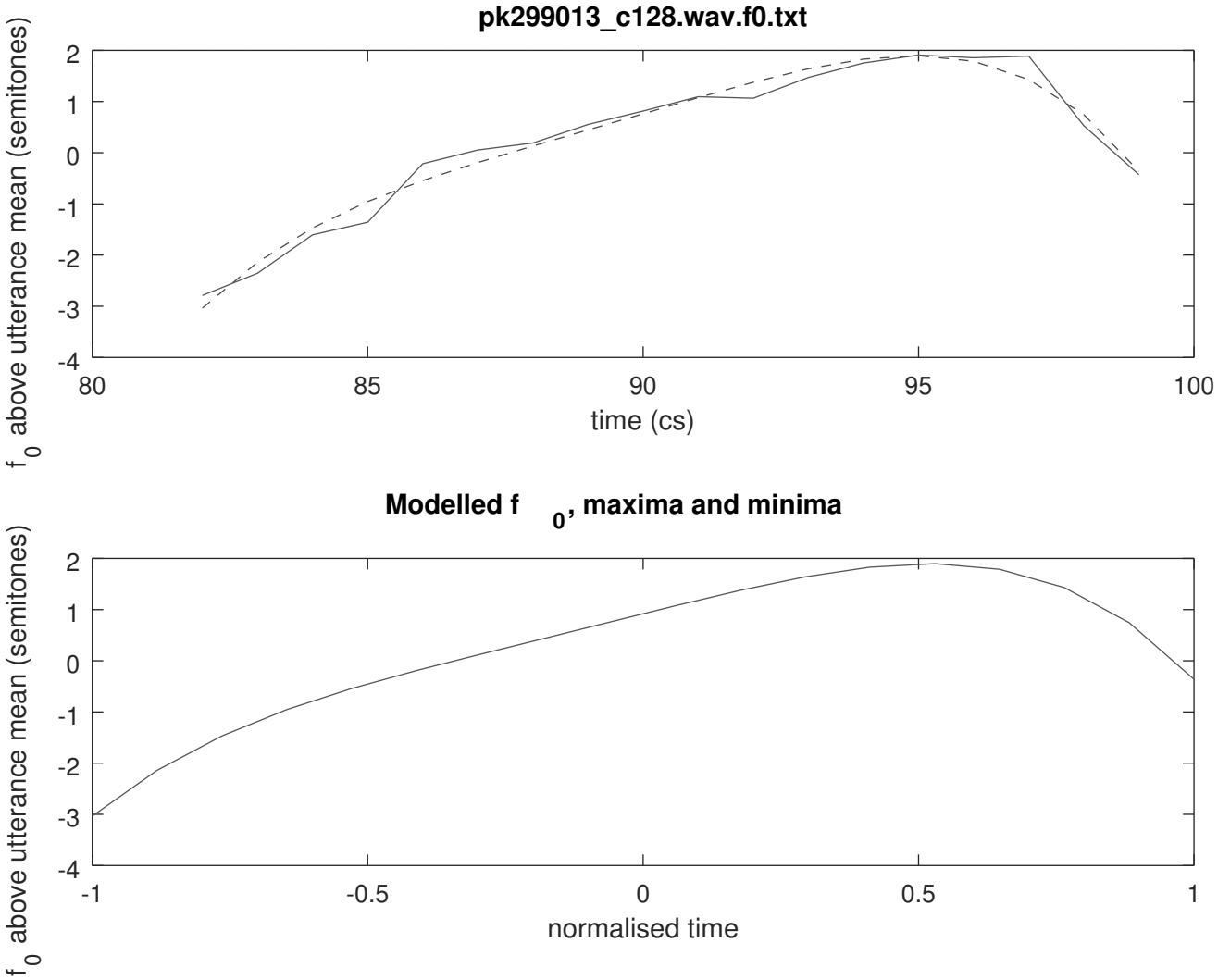

pk299013_c124.wav.f0.txt
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-3
40
50
60
70
80
90
time (cs)

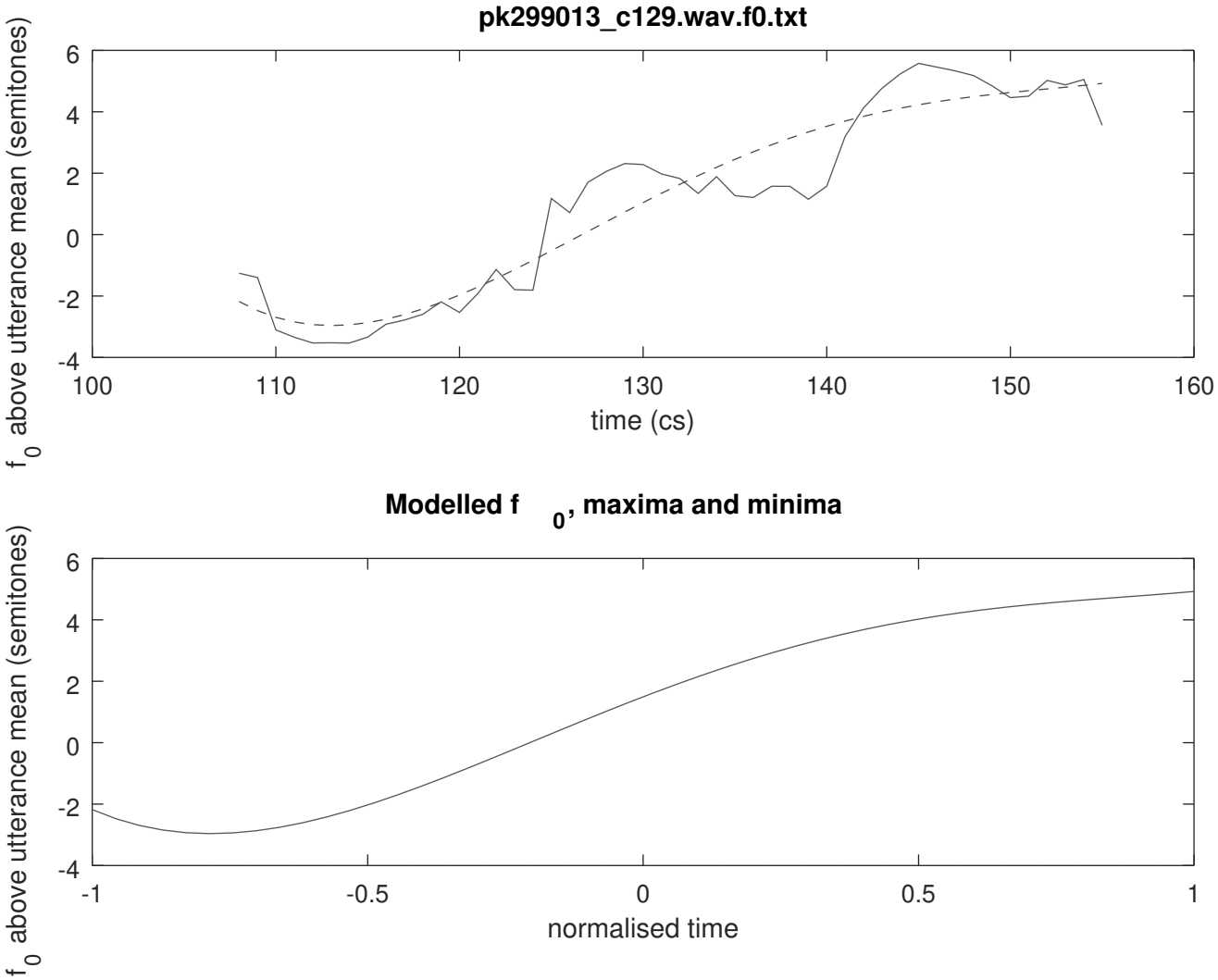

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
2
1.5
1
0.5
0
-0.5
-1
-0.5
0
0.5
1
normalised time

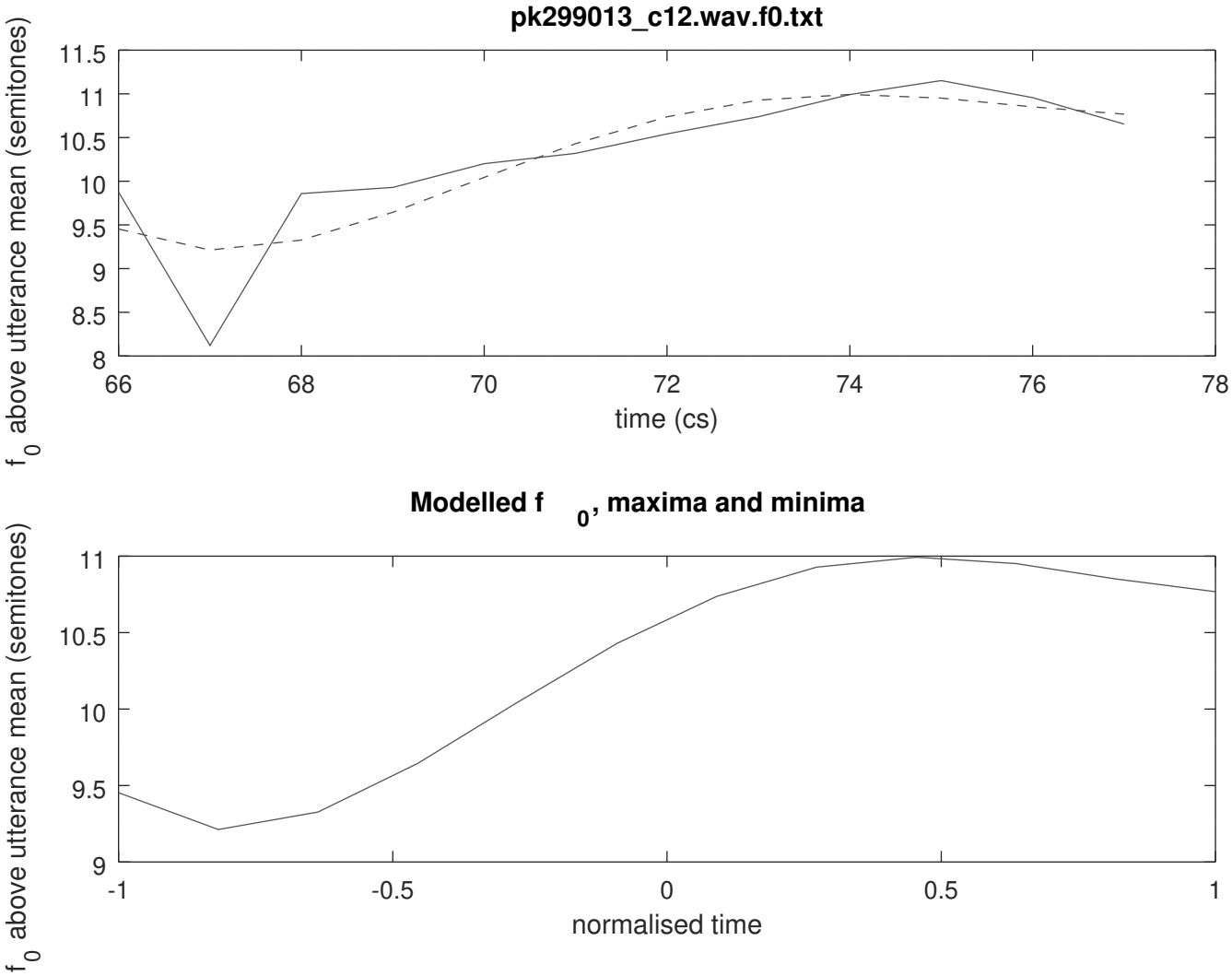

pk299013_c125.wav.f0.txt
f0 above utterance mean (semitones)
10
5
0
-5
-10
110
120
130
140
150
160
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

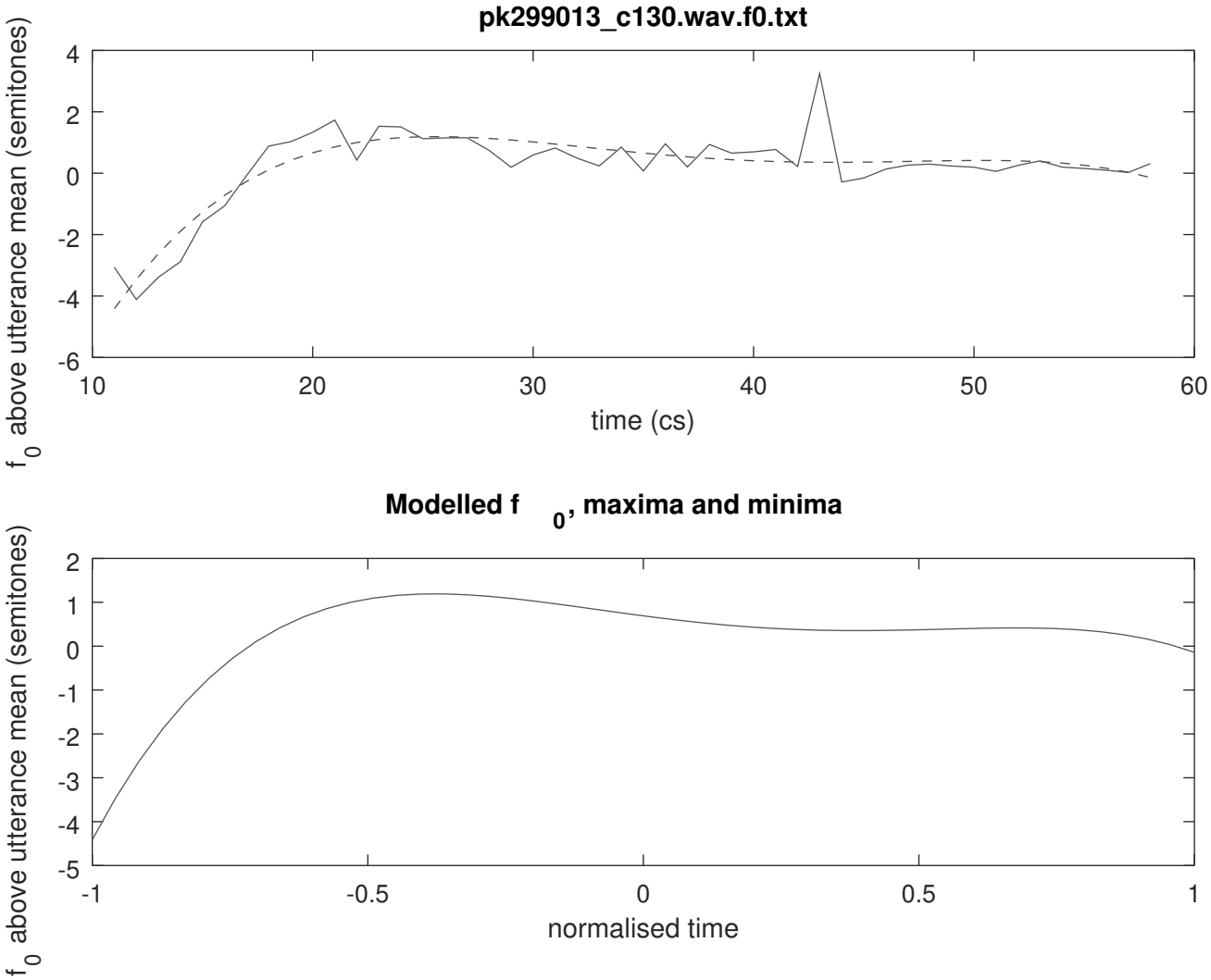

pk299013_c126.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

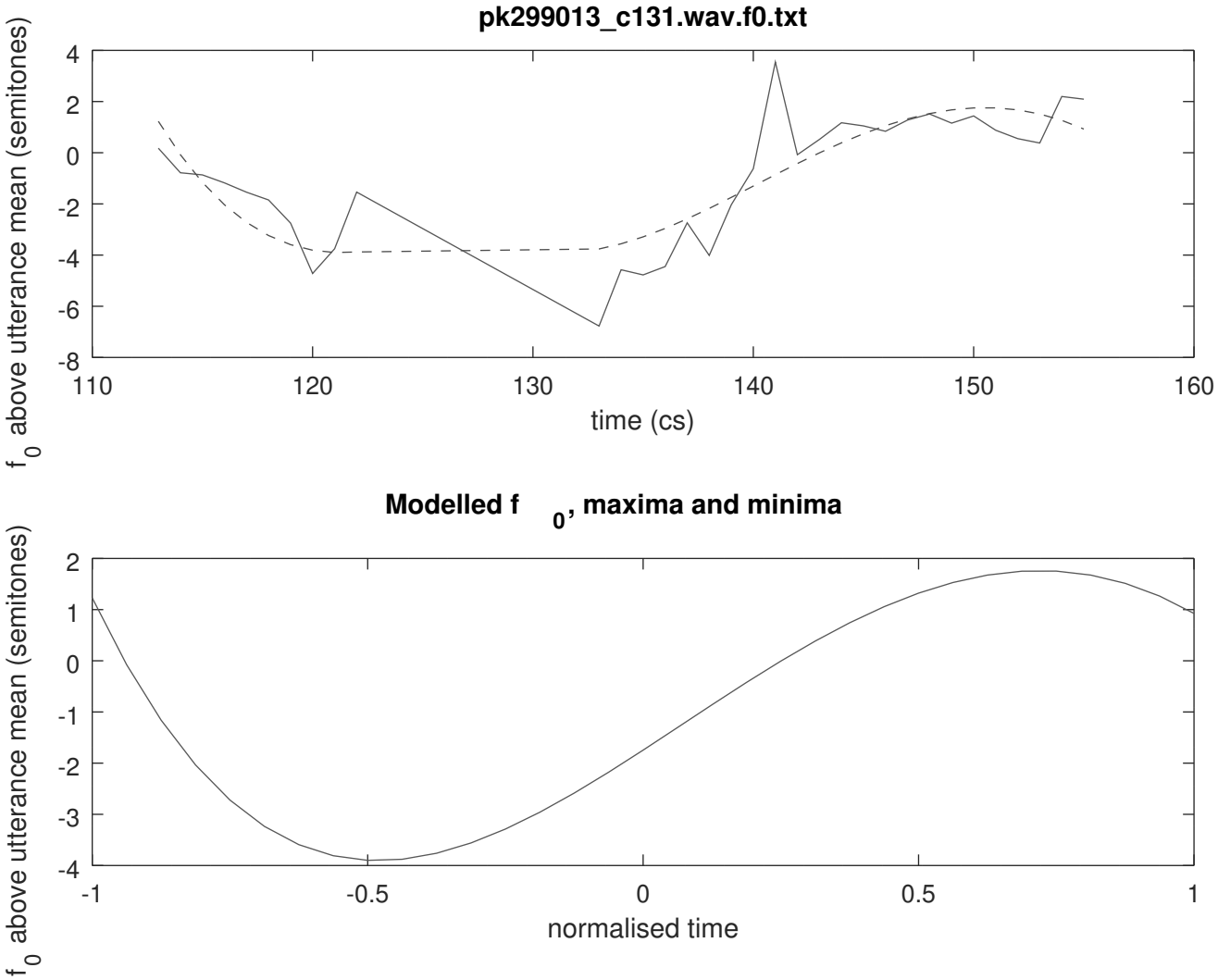

pk299013_c127.wav.f0.txt
f0 above utterance mean (semitones)
9
8
7
6
5
4
3
80
85
90
95
100
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
8
7
6
5
4
3
-1
-0.5
0
0.5
1
normalised time

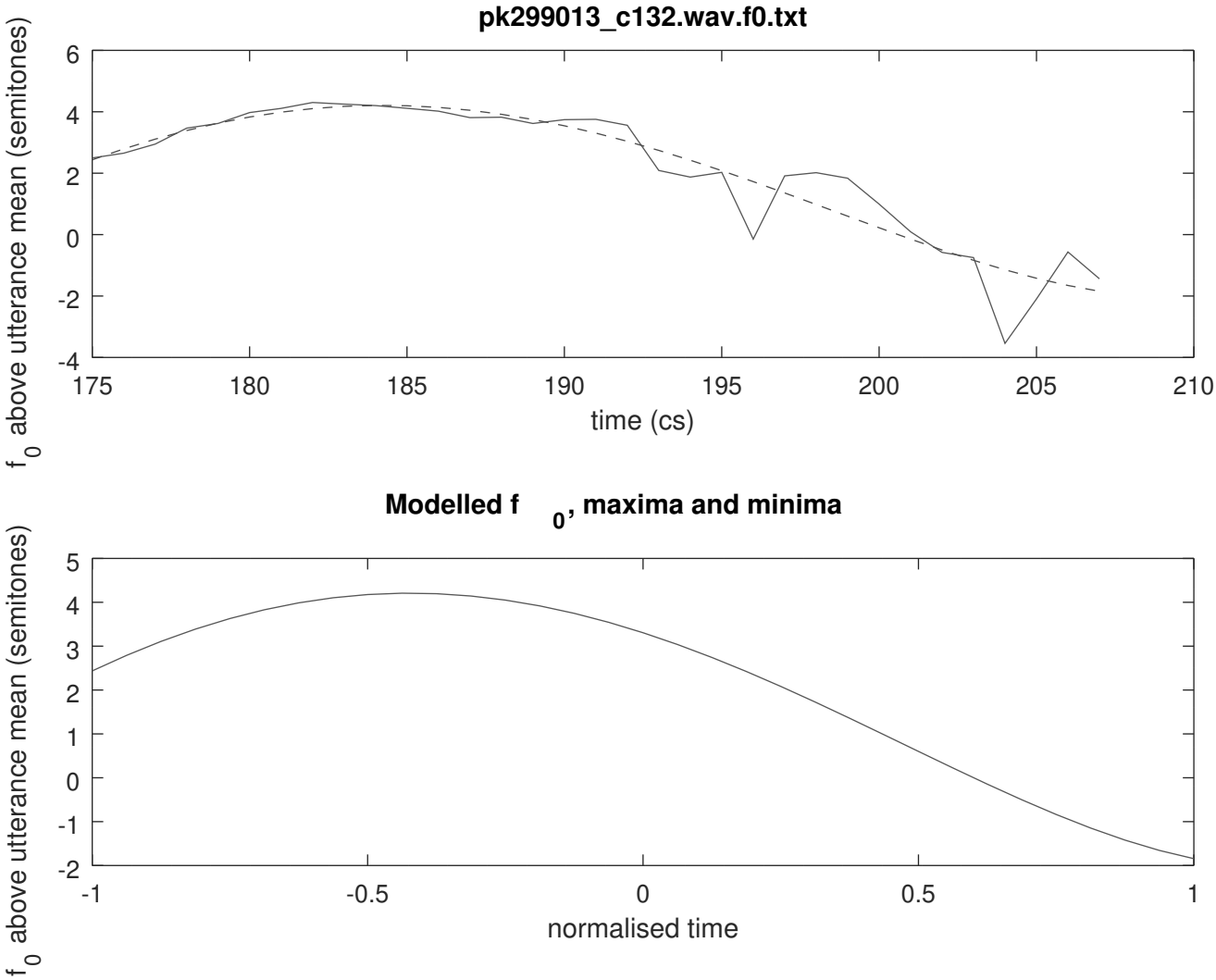

pk299013_c128.wav.f0.txt
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-4
80
85
90
95
100
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-4
-1
-0.5
0
0.5
1
normalised time

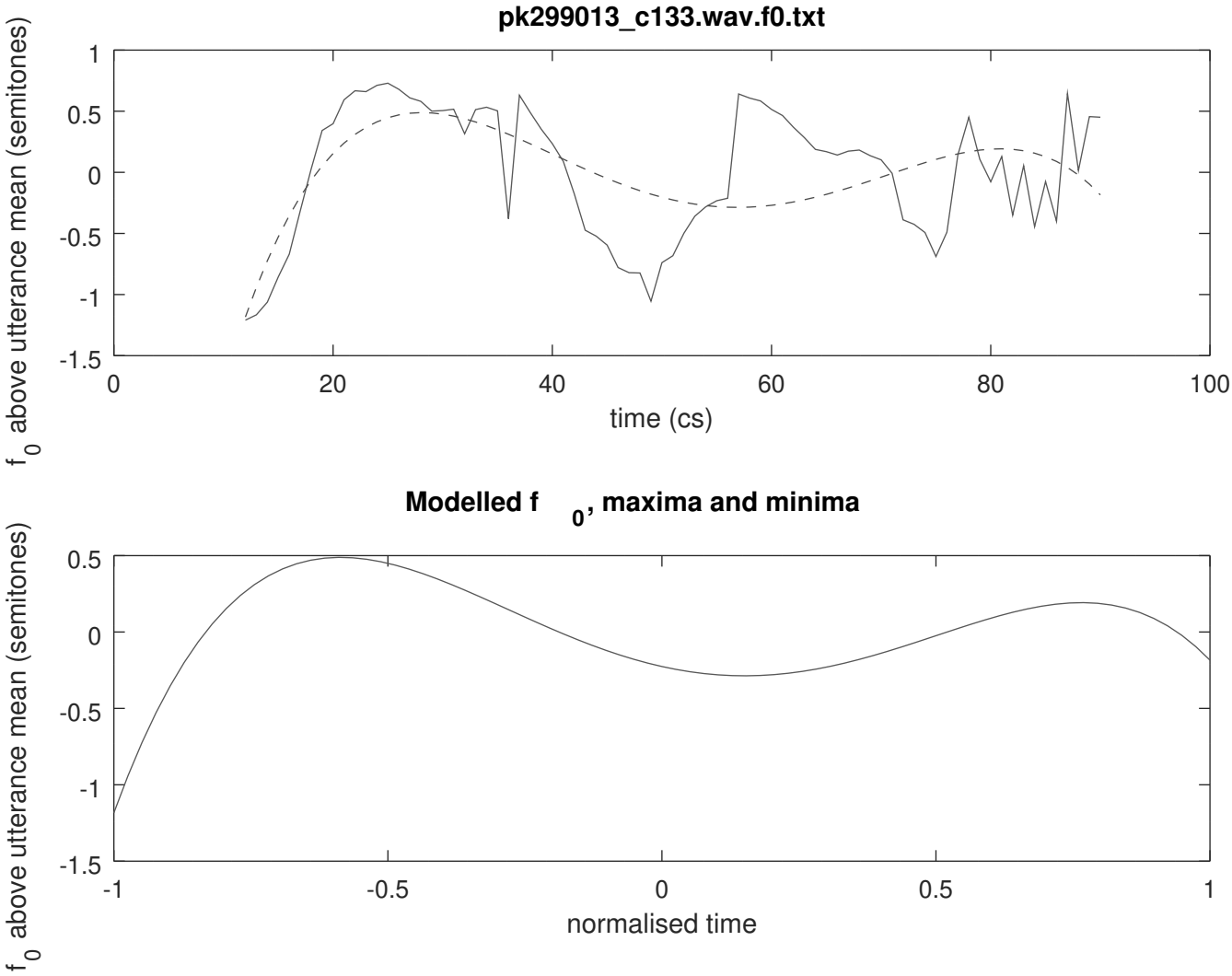

pk299013_c129.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
100
110
120
130
140
150
160
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

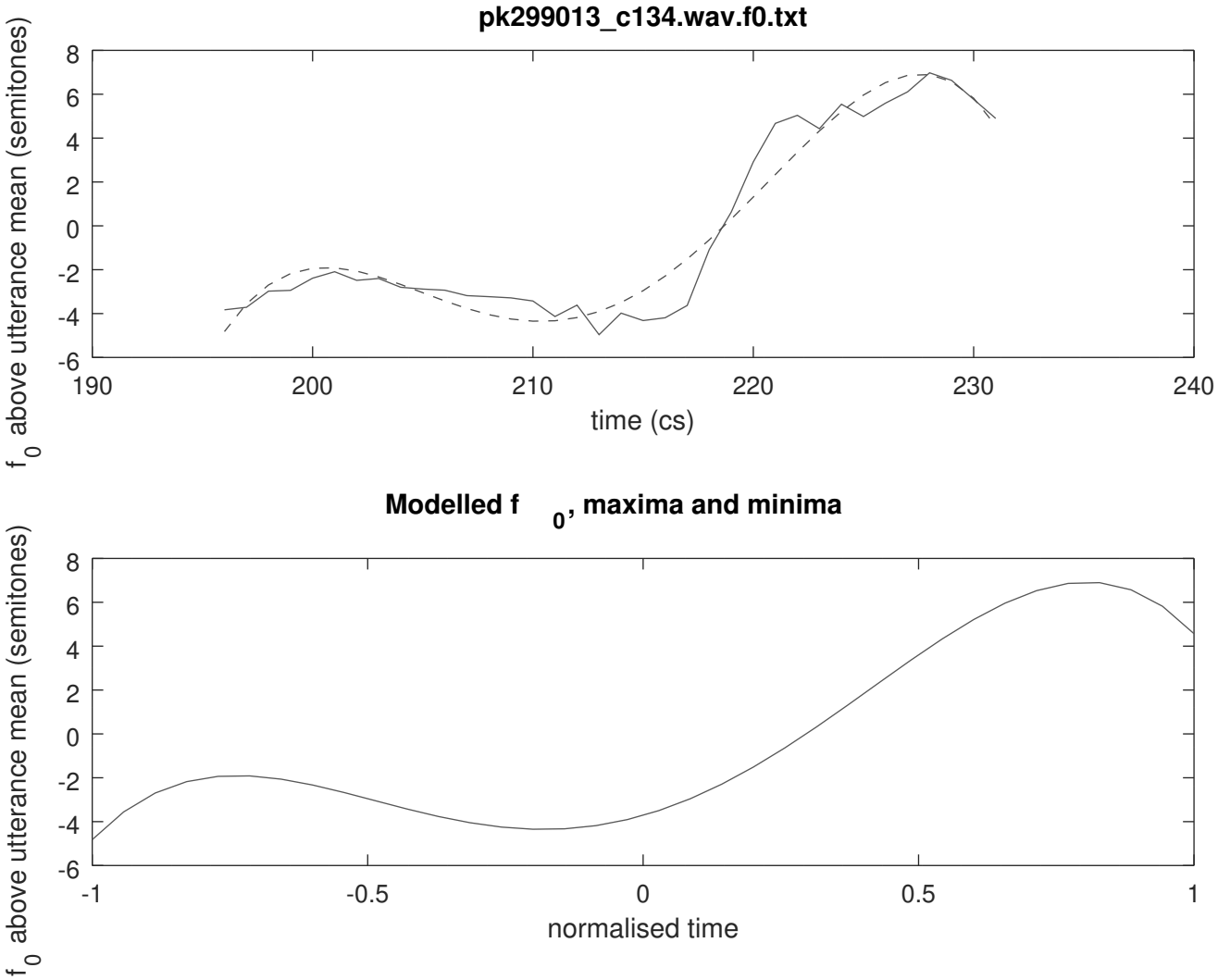

pk299013_c12.wav.f0.txt
f0 above utterance mean (semitones)
11.5
11
10.5
10
9.5
9
8.5
8
66
68
70
72
74
76
78
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
11
10.5
10
9.5
9
-1
-0.5
0
0.5
1
normalised time

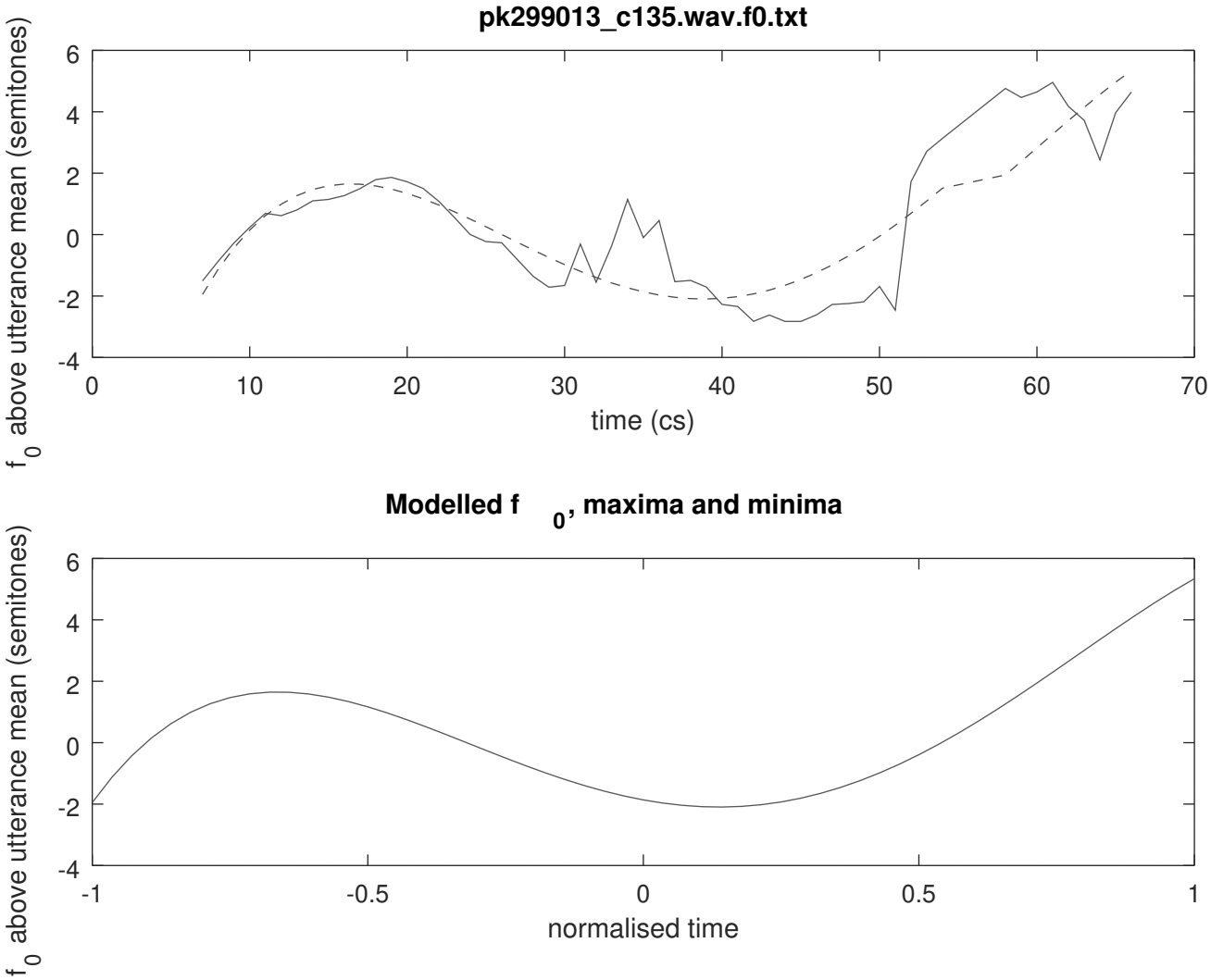

pk299013_c130.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

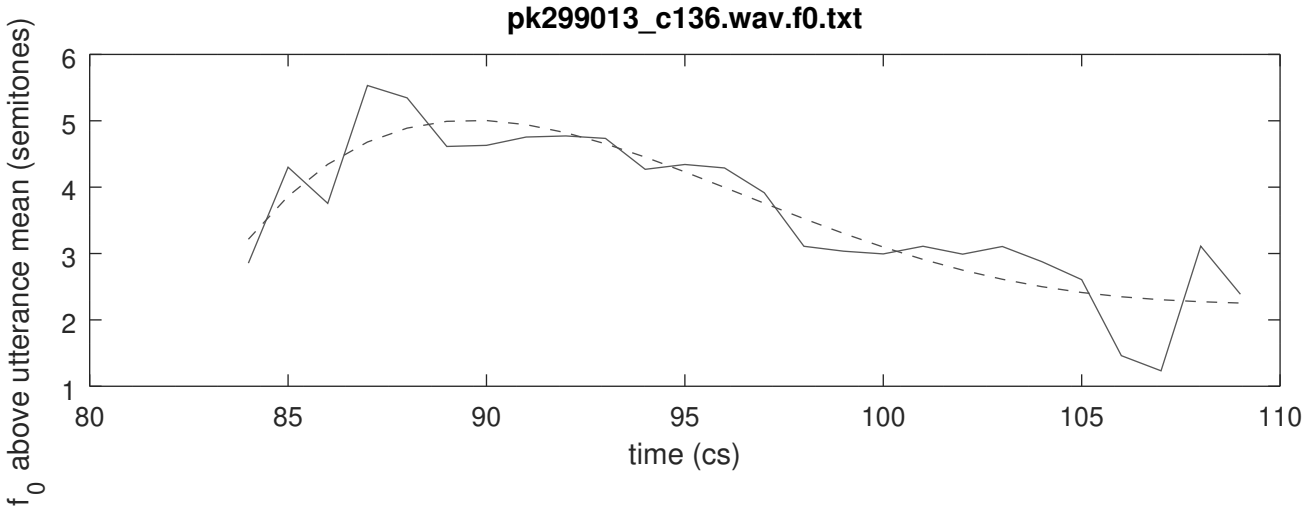

pk299013_c131.wav.f0.txt
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
-8
110
120
130
140
150
160
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-4
-1
-0.5
0
0.5
1
normalised time

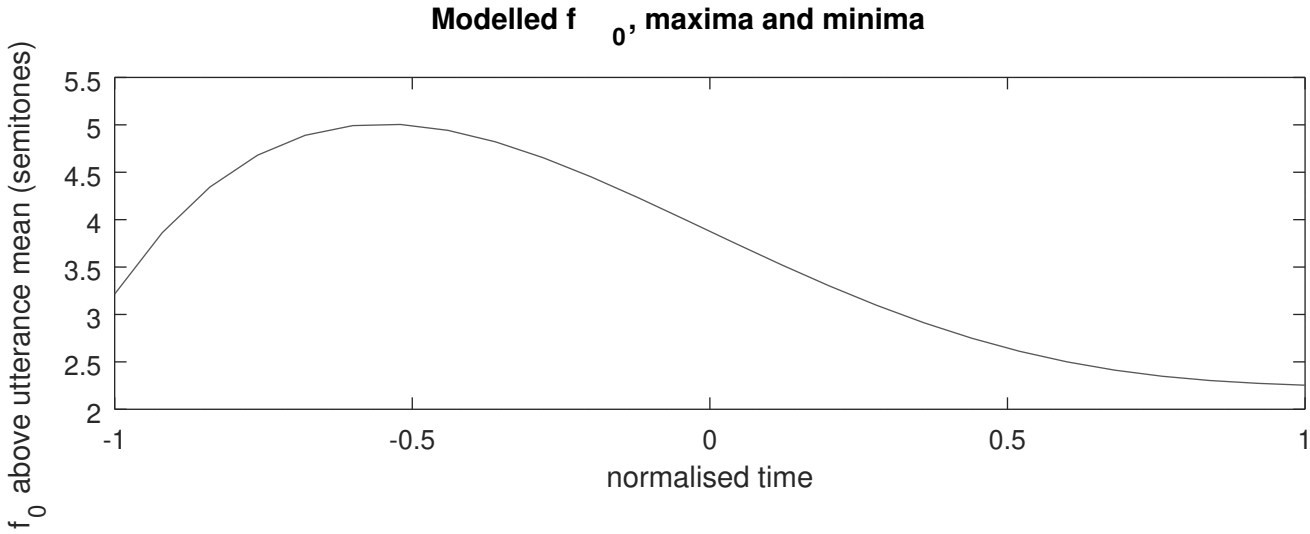

pk299013_c132.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
175
180
185
190
195
200
205
210
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

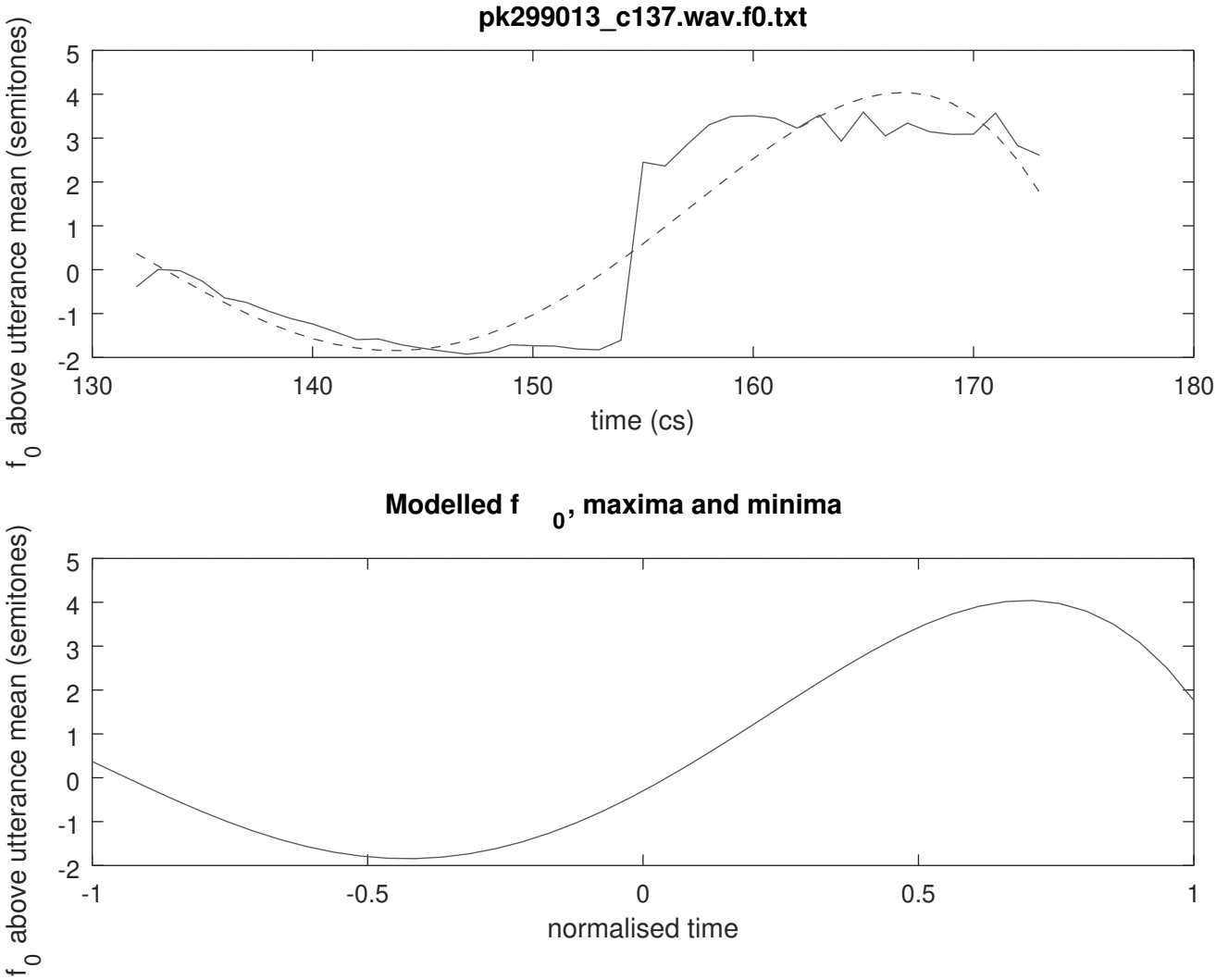

pk299013_c133.wav.f0.txt
f0 above utterance mean (semitones)
1
0.5
0
-0.5
-1
-1.5
0
20
40
60
80
100
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
0.5
0
-0.5
-1
-1.5
-1
-0.5
0
0.5
1
normalised time

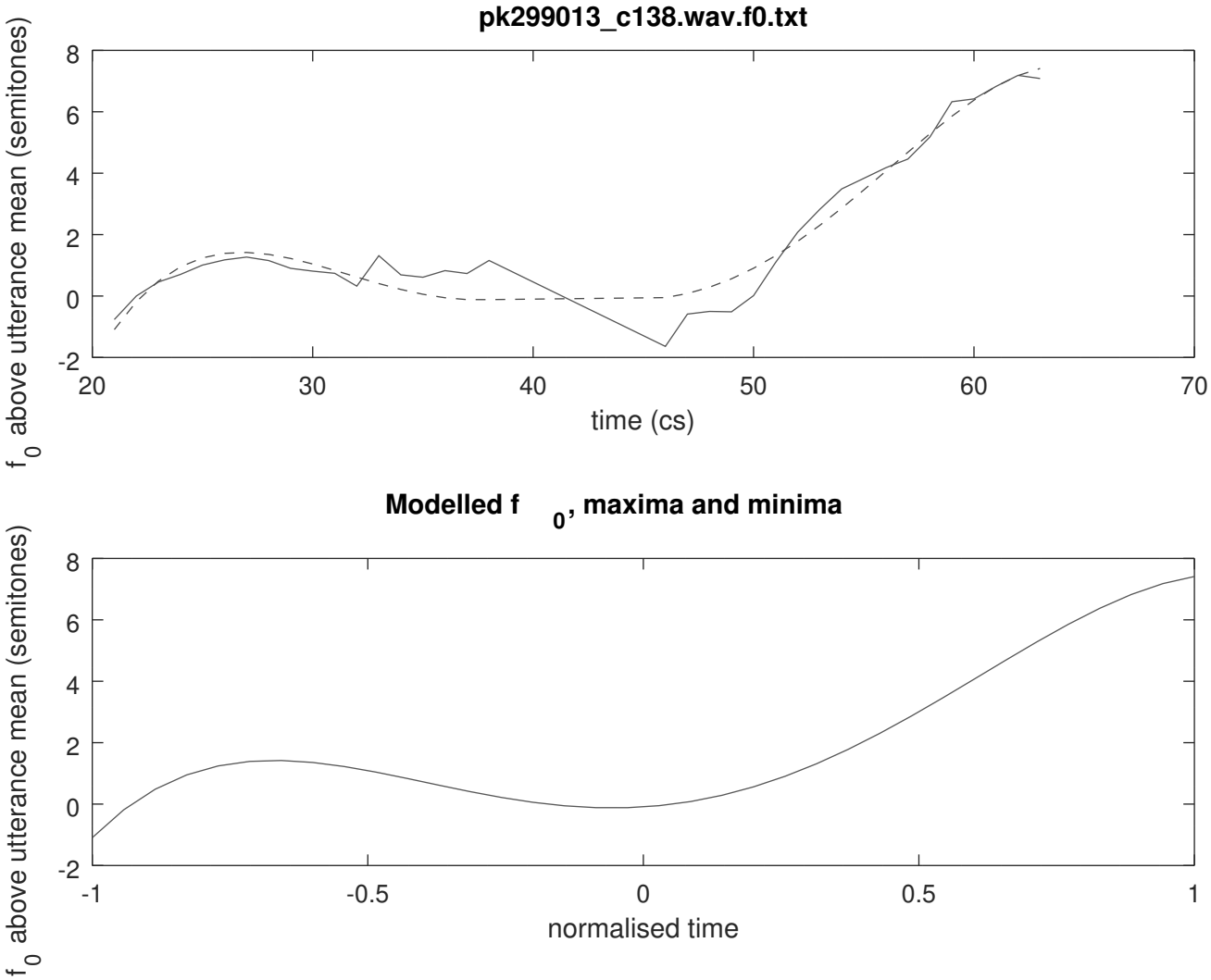

pk299013_c134.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-6
190
200
210
220
230
240
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

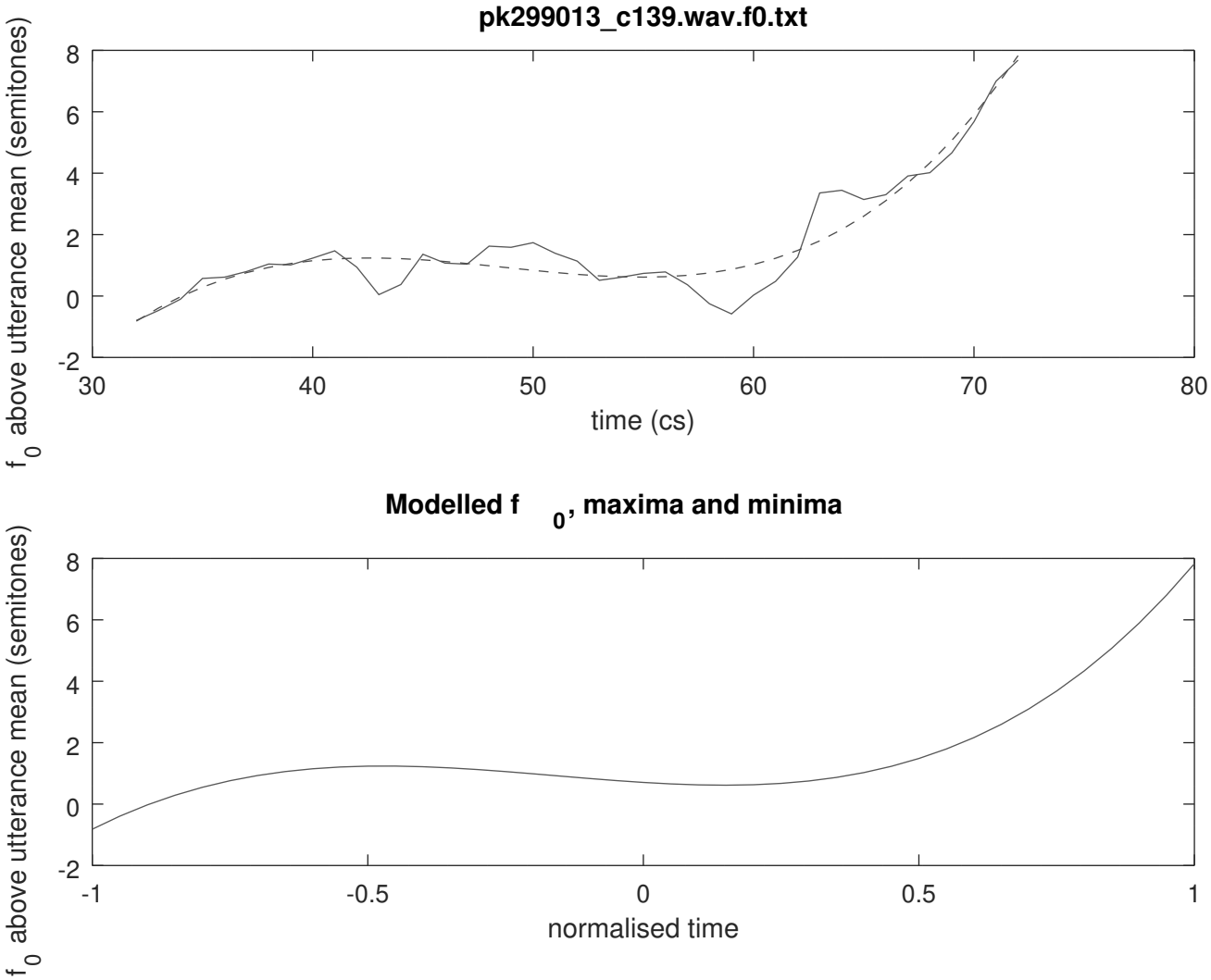

pk299013_c135.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
0
10
20
30
40
50
60
70
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

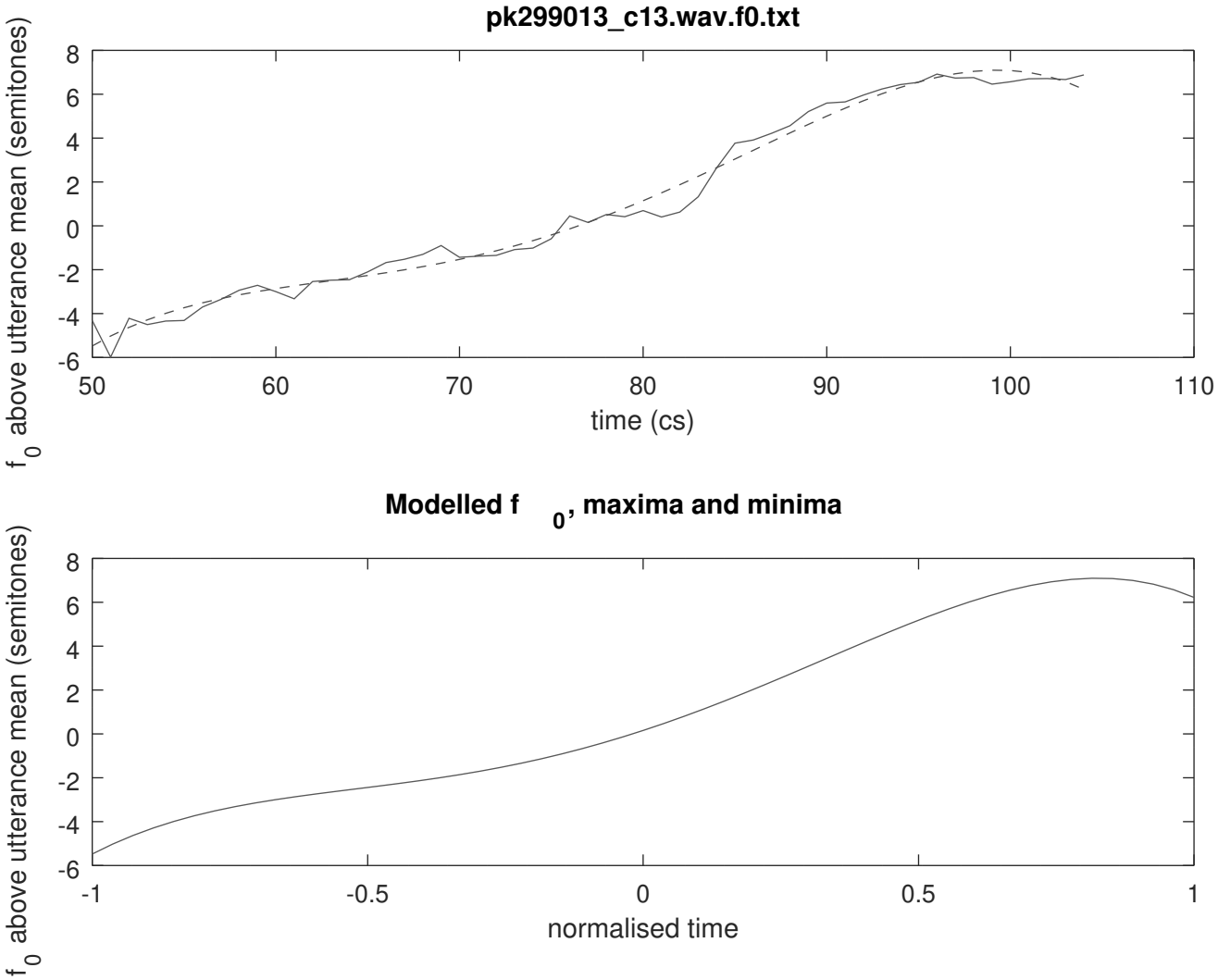

pk299013_c136.wav.f0.txt
f0 above utterance mean (semitones)
6
5
4
3
2
1
80
85
90
95
100
105
110
time (cs)

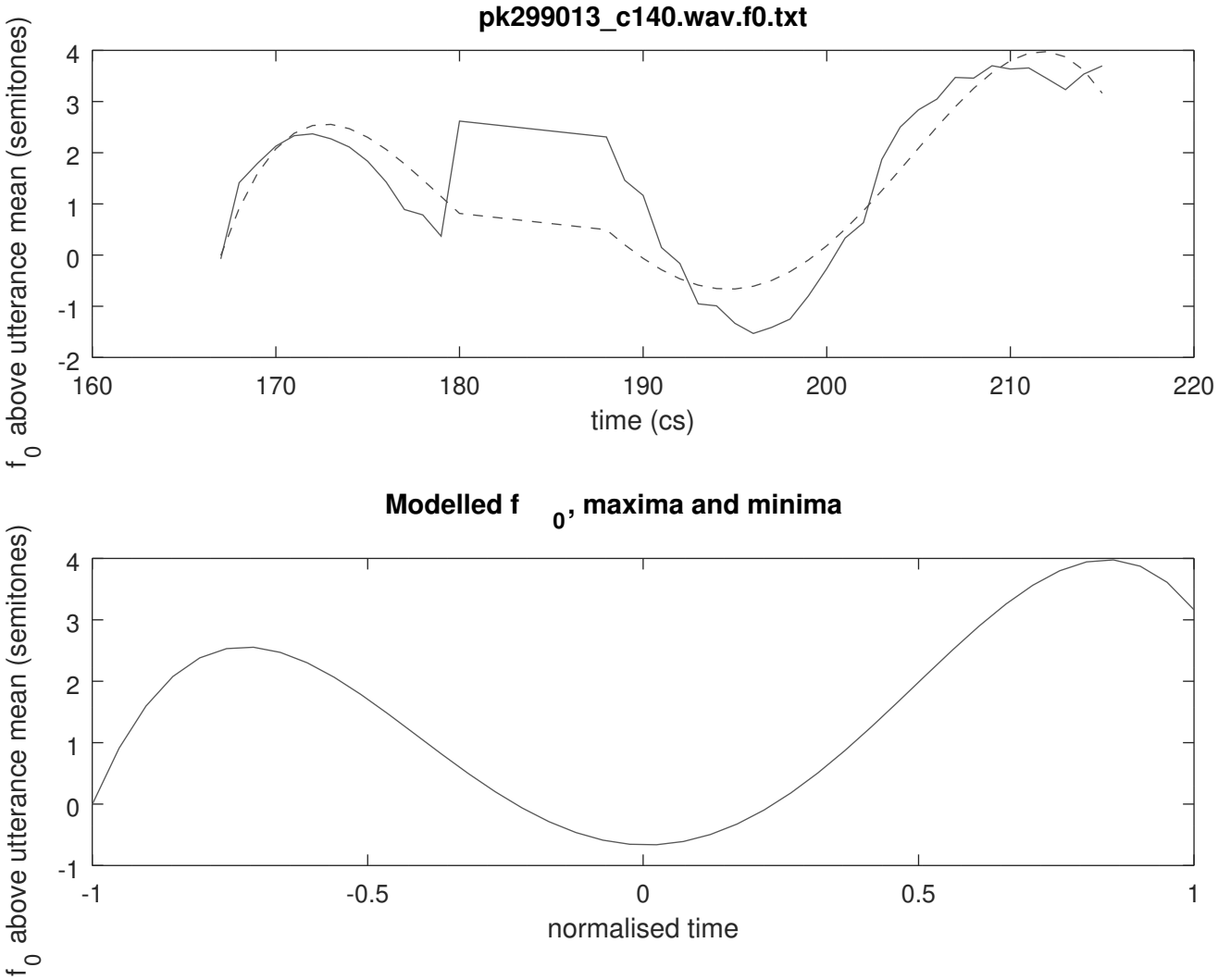

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5.5
5
4.5
4
3.5
3
2.5
2
-1
-0.5
0
0.5
1
normalised time

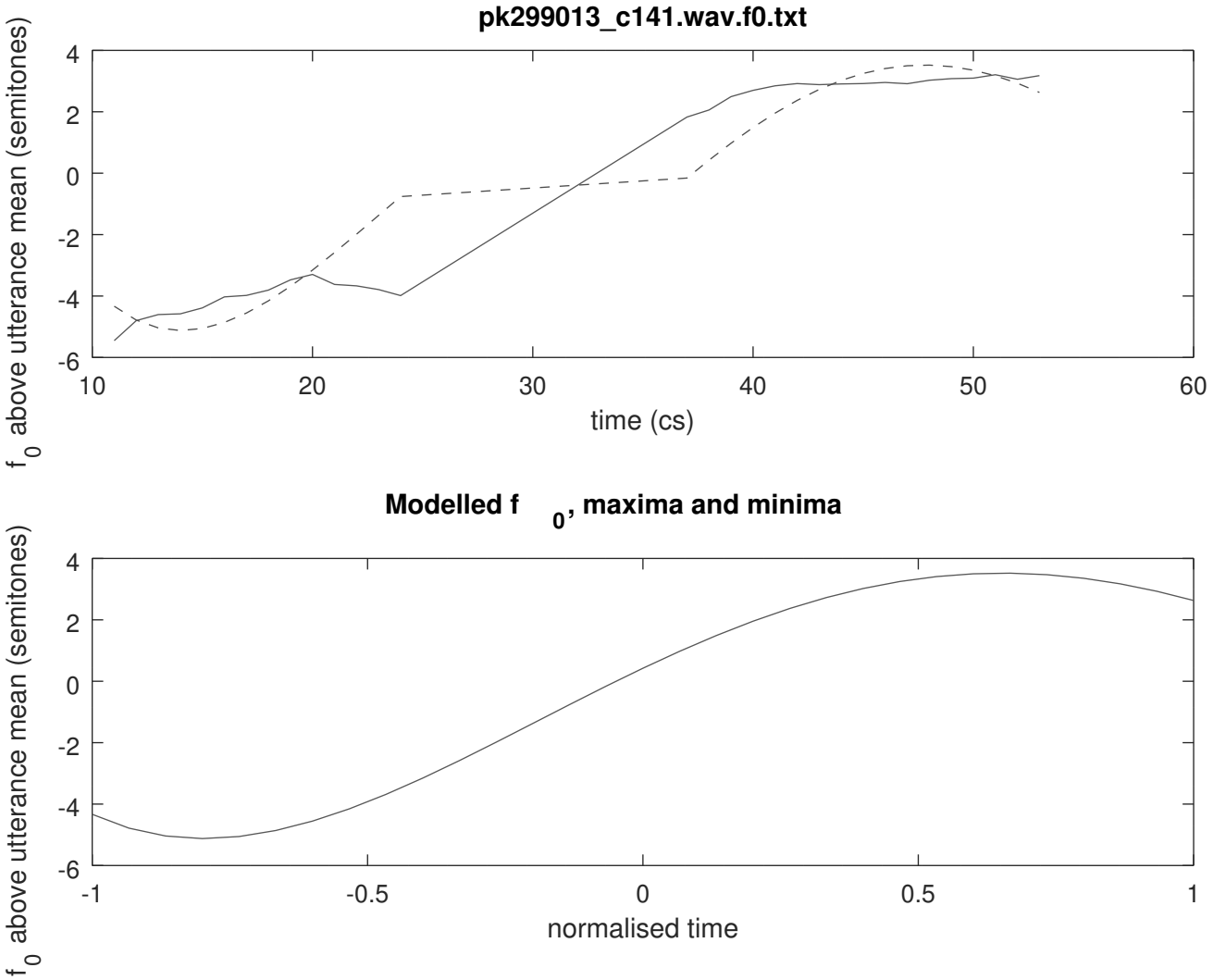

pk299013_c137.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
130
140
150
160
170
180
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

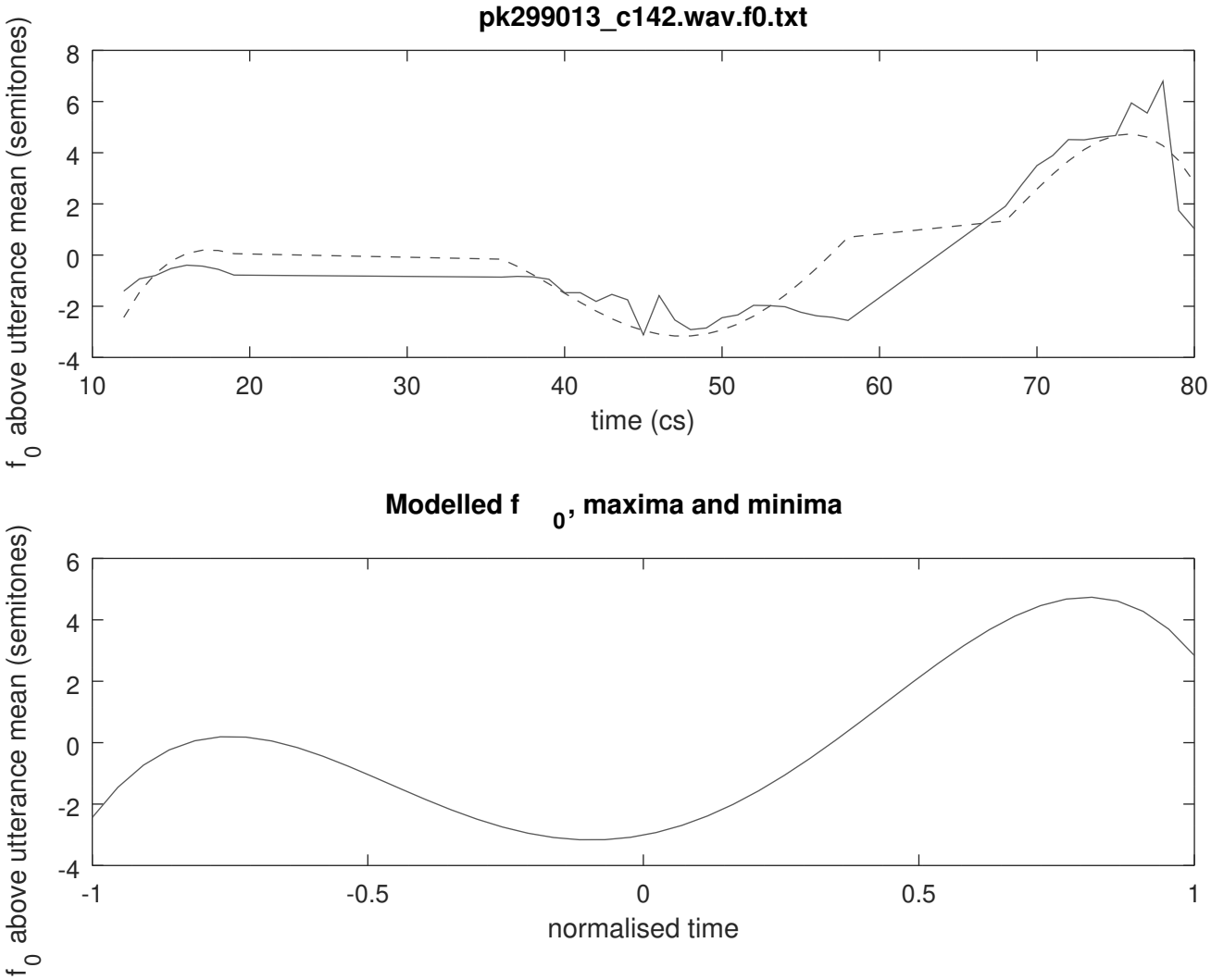

pk299013_c138.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
20
30
40
50
60
70
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

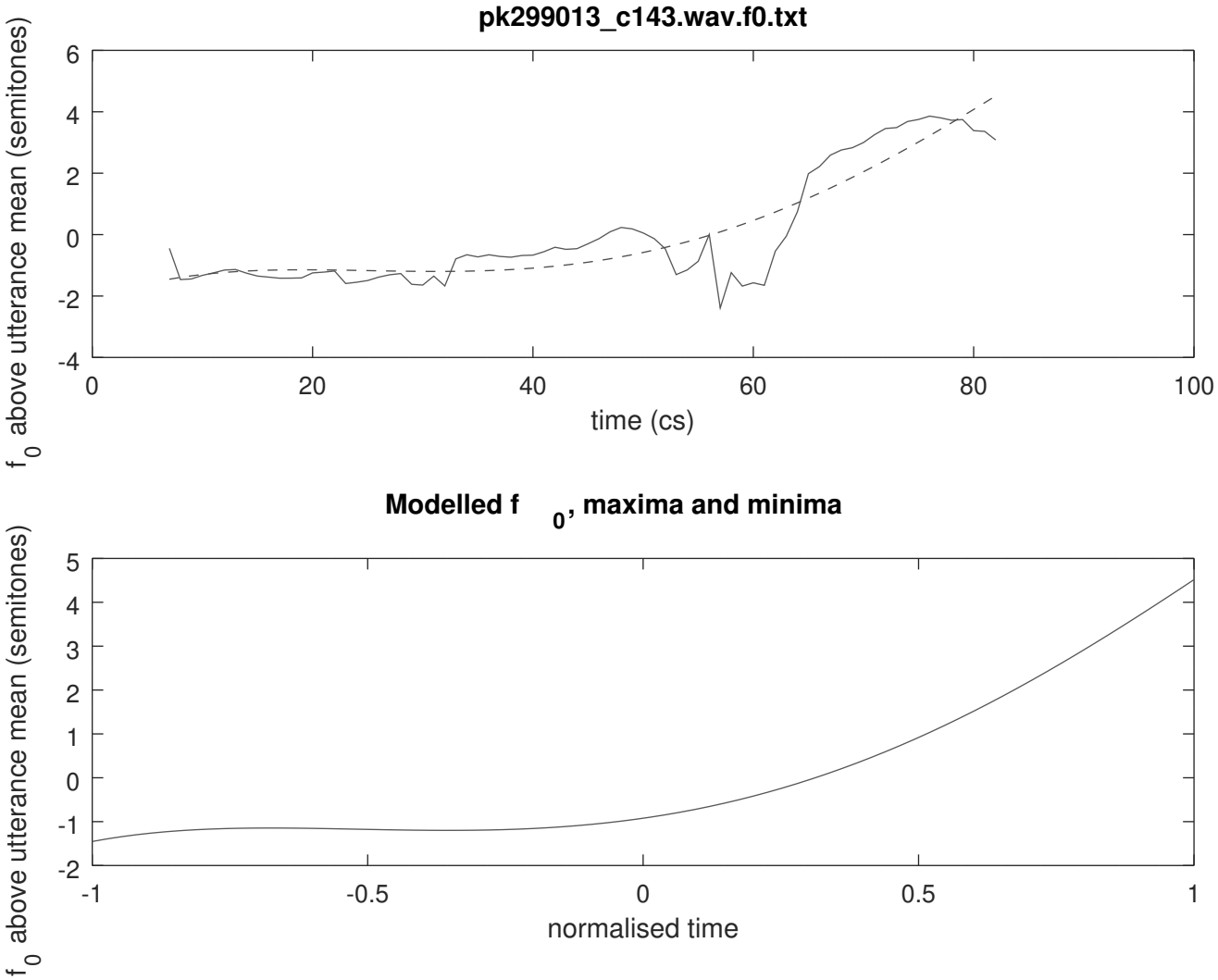

pk299013_c139.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
30
40
50
60
70
80
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

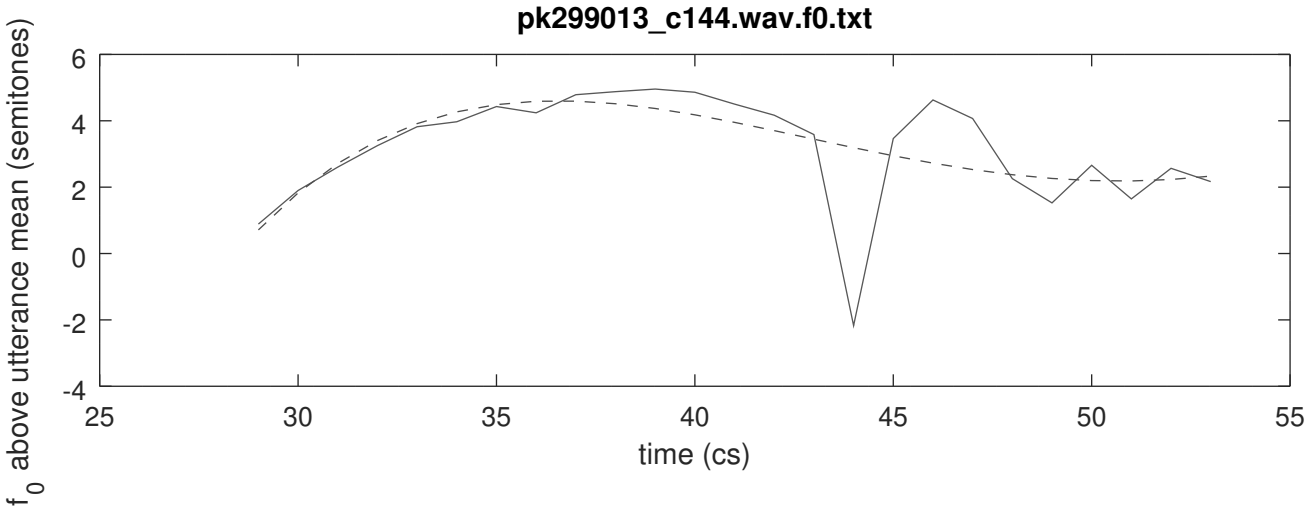

pk299013_c13.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-6
50
60
70
80
90
100
110
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

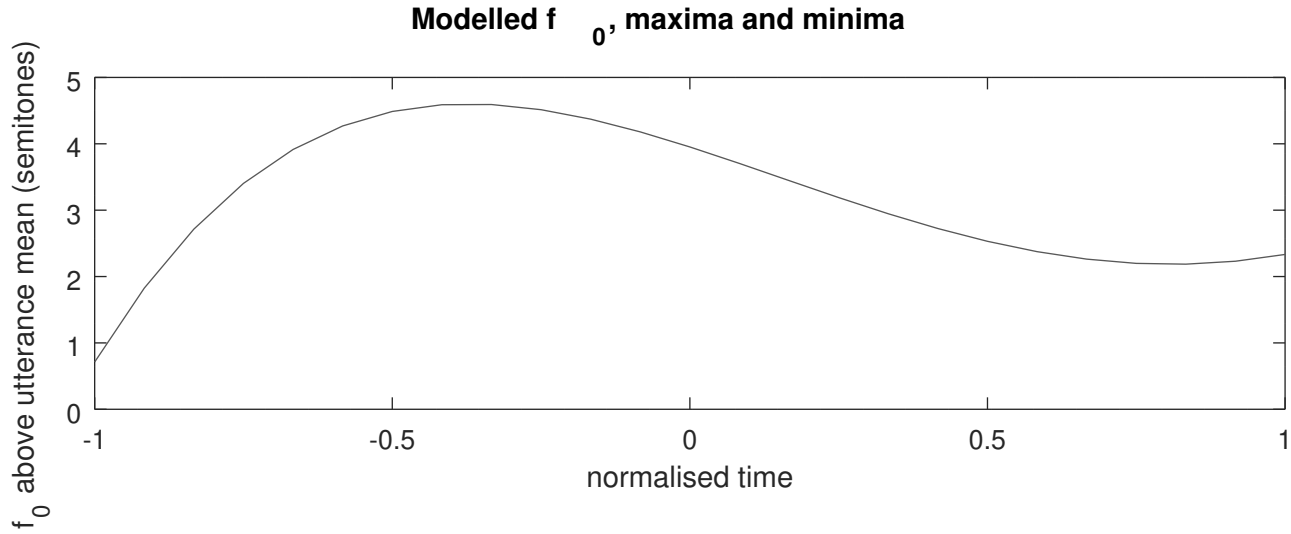

pk299013_c140.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

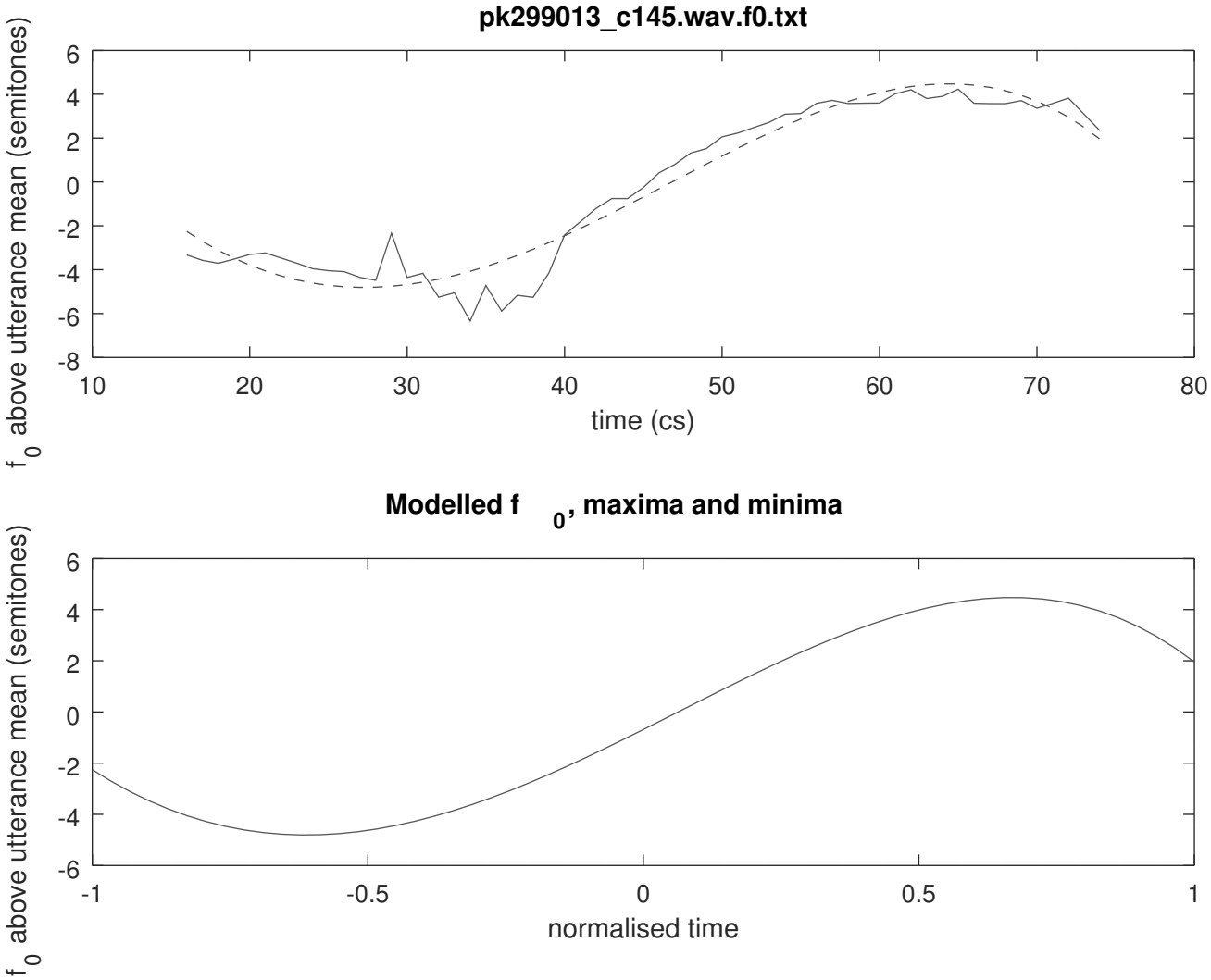

pk299013_c141.wav.f0.txt
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
10
20
30
40
50
60
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

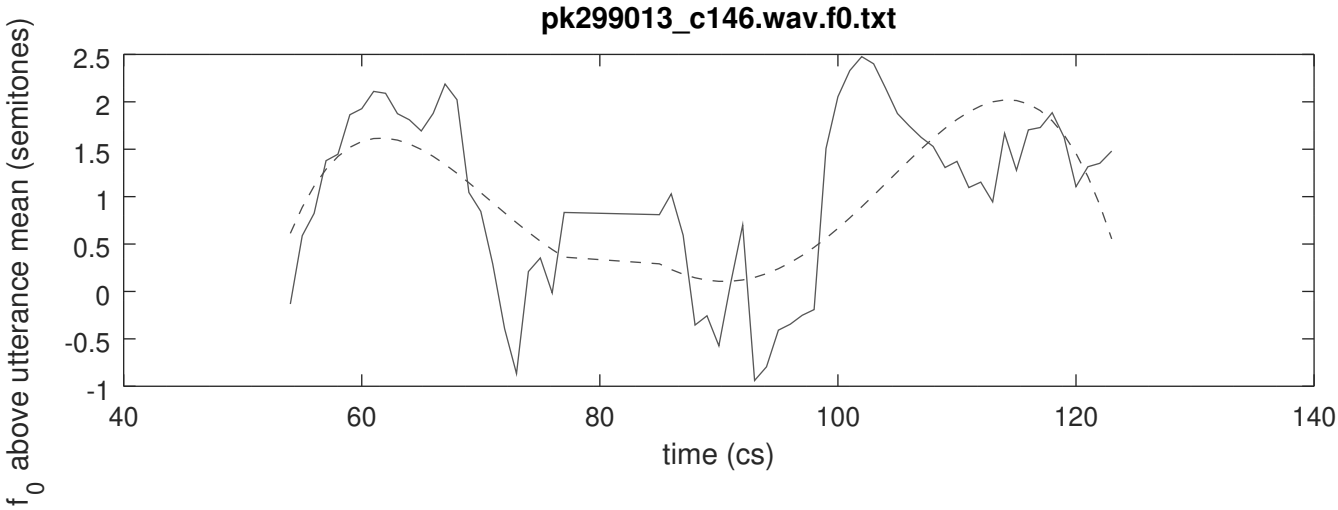

pk299013_c142.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
10
20
30
40
50
60
70
80
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

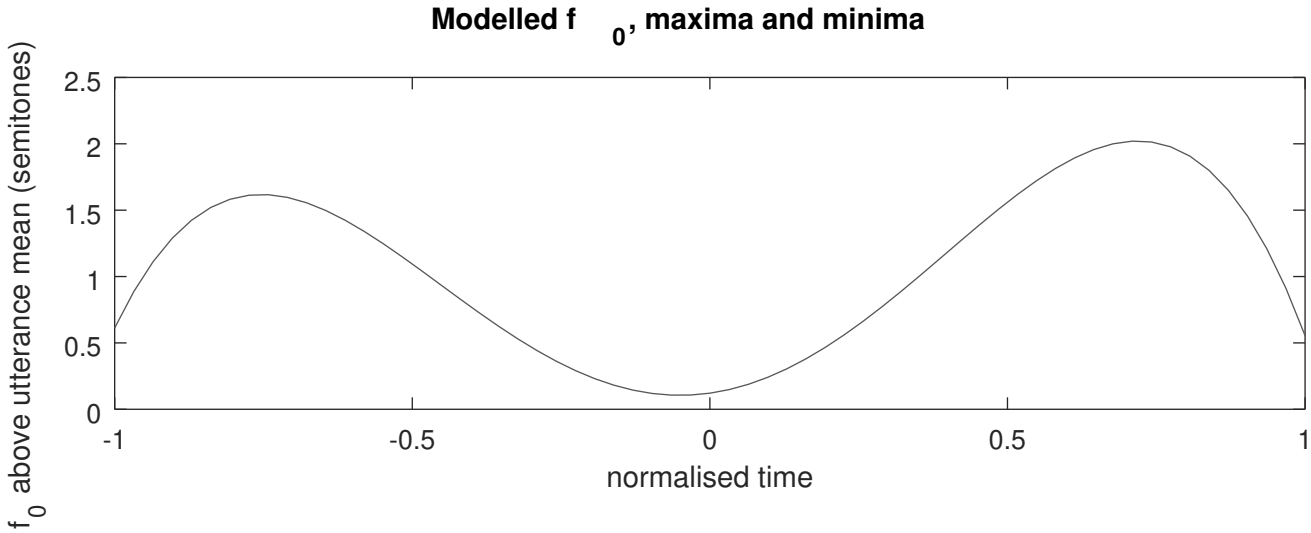

pk299013_c143.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
0
20
40
60
80
100
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

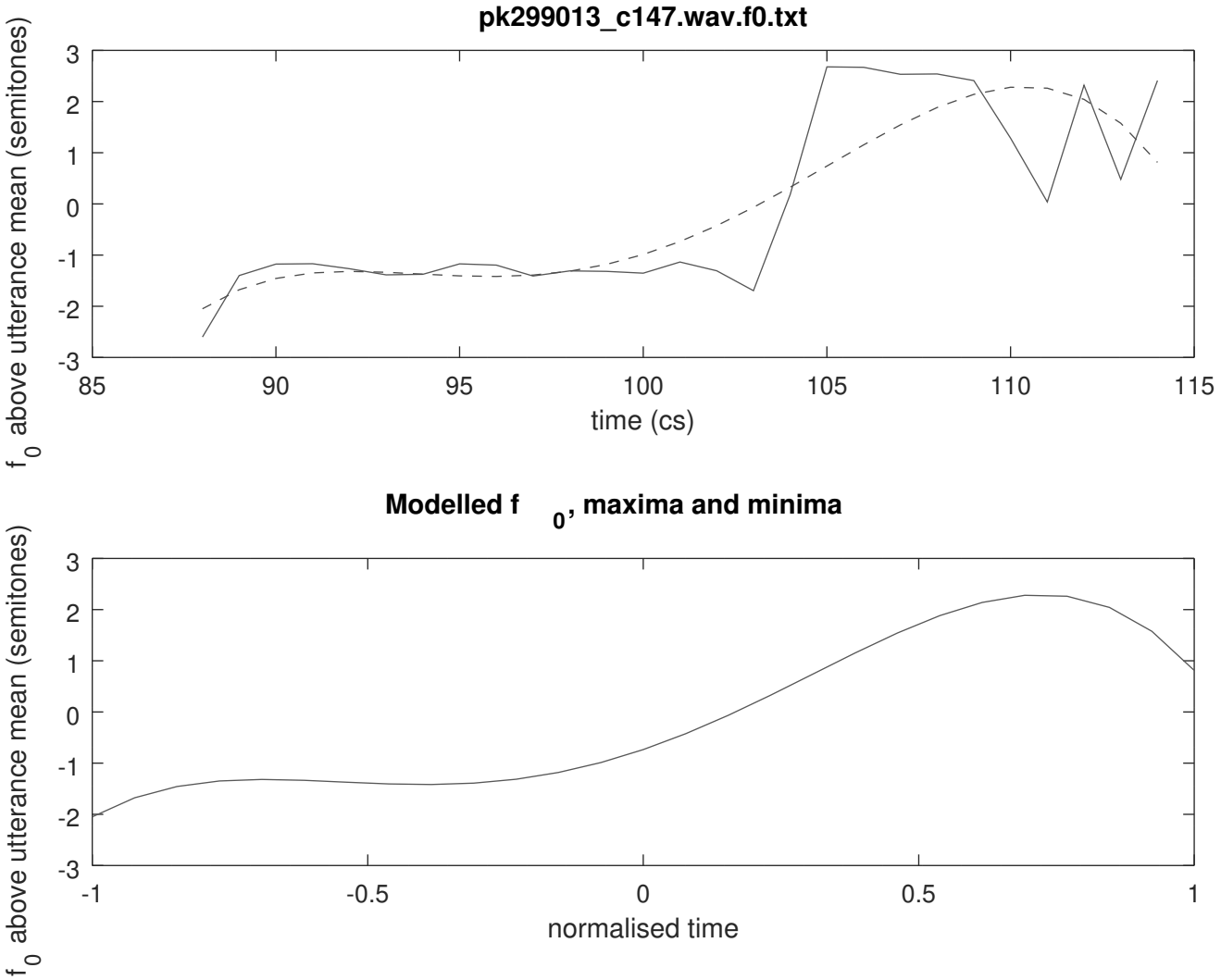

pk299013_c144.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
25
30
35
40
45
50
55
time (cs)

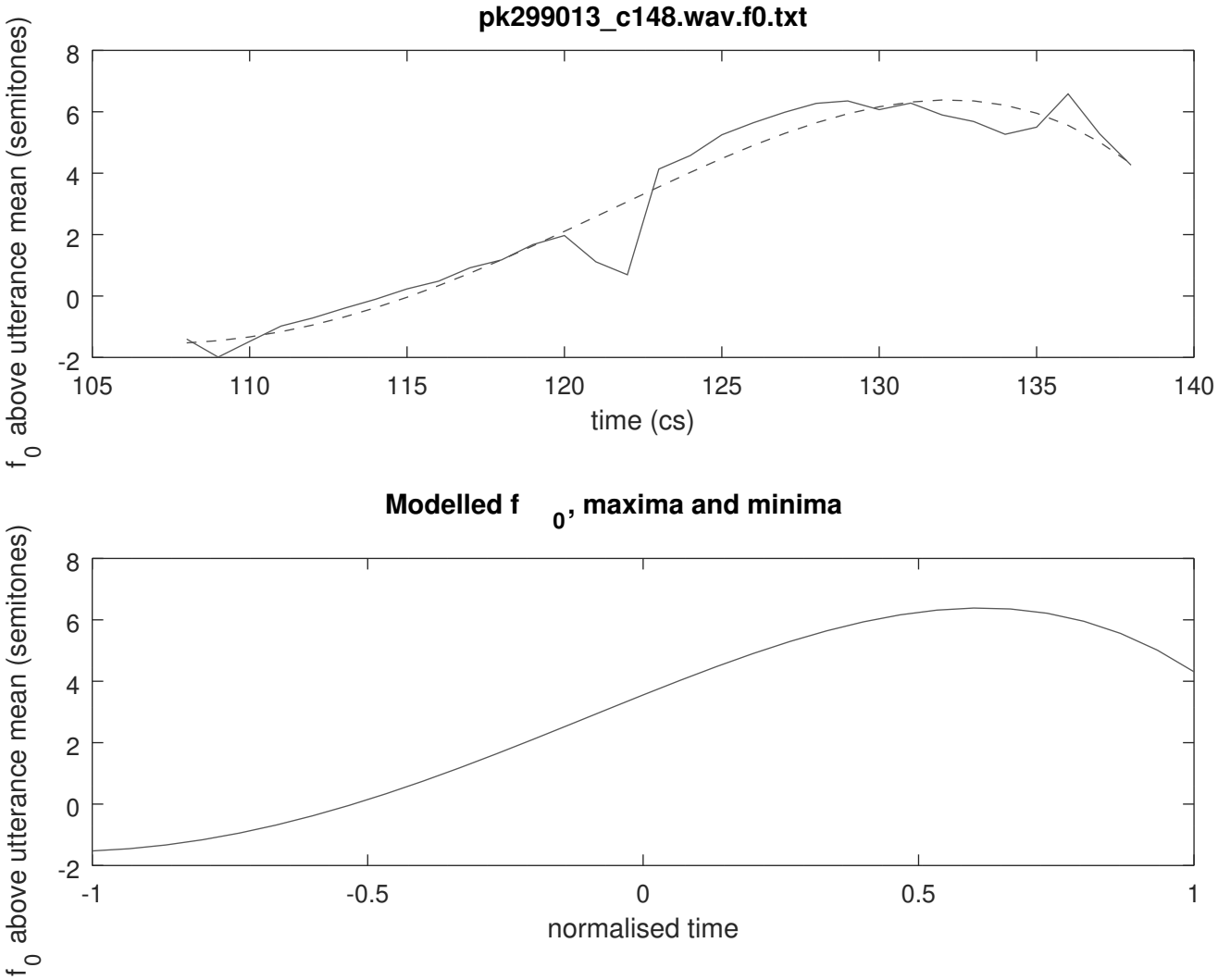

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-0.5
0
0.5
1
normalised time

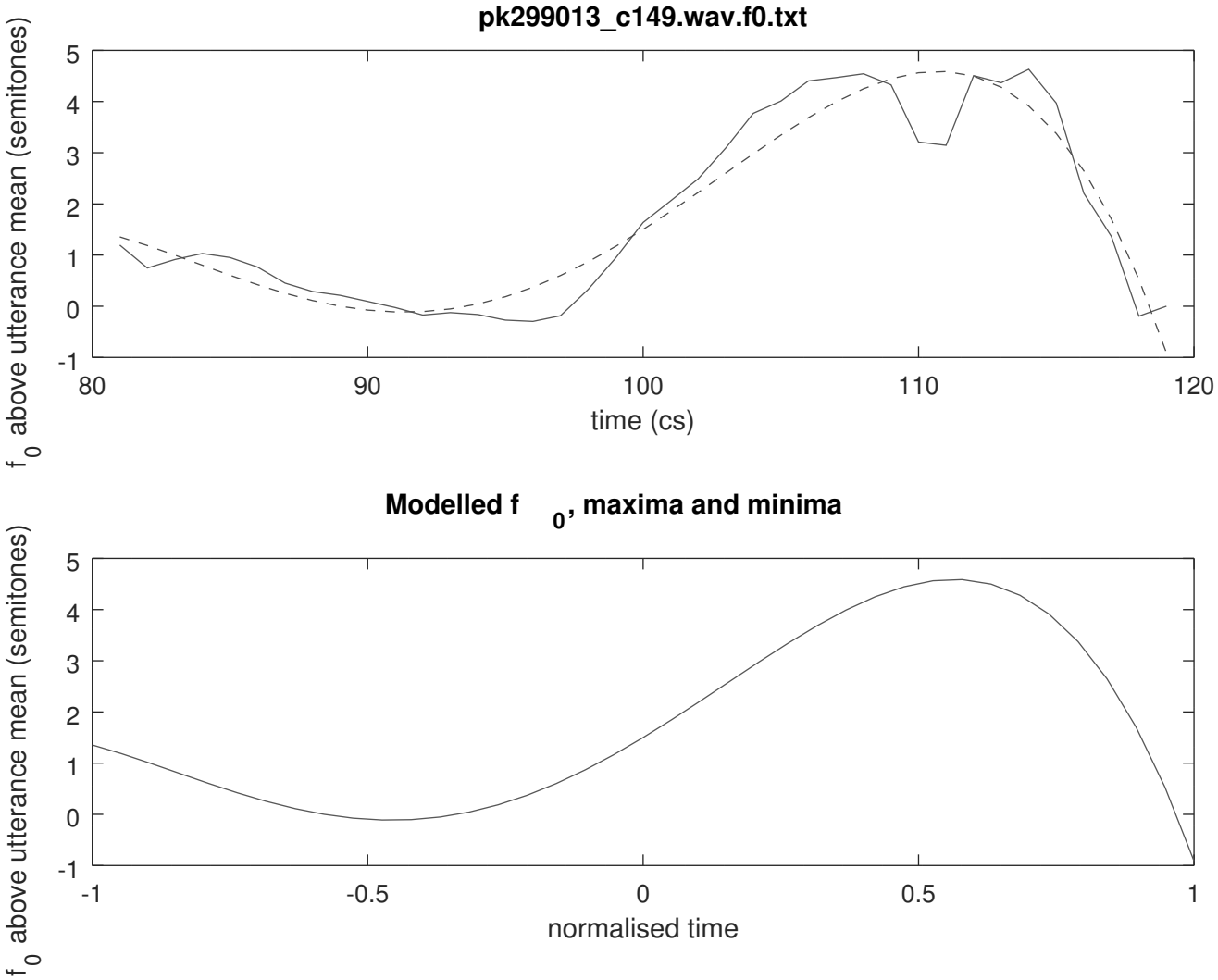

pk299013_c145.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
-8
10
20
30
40
50
60
70
80
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

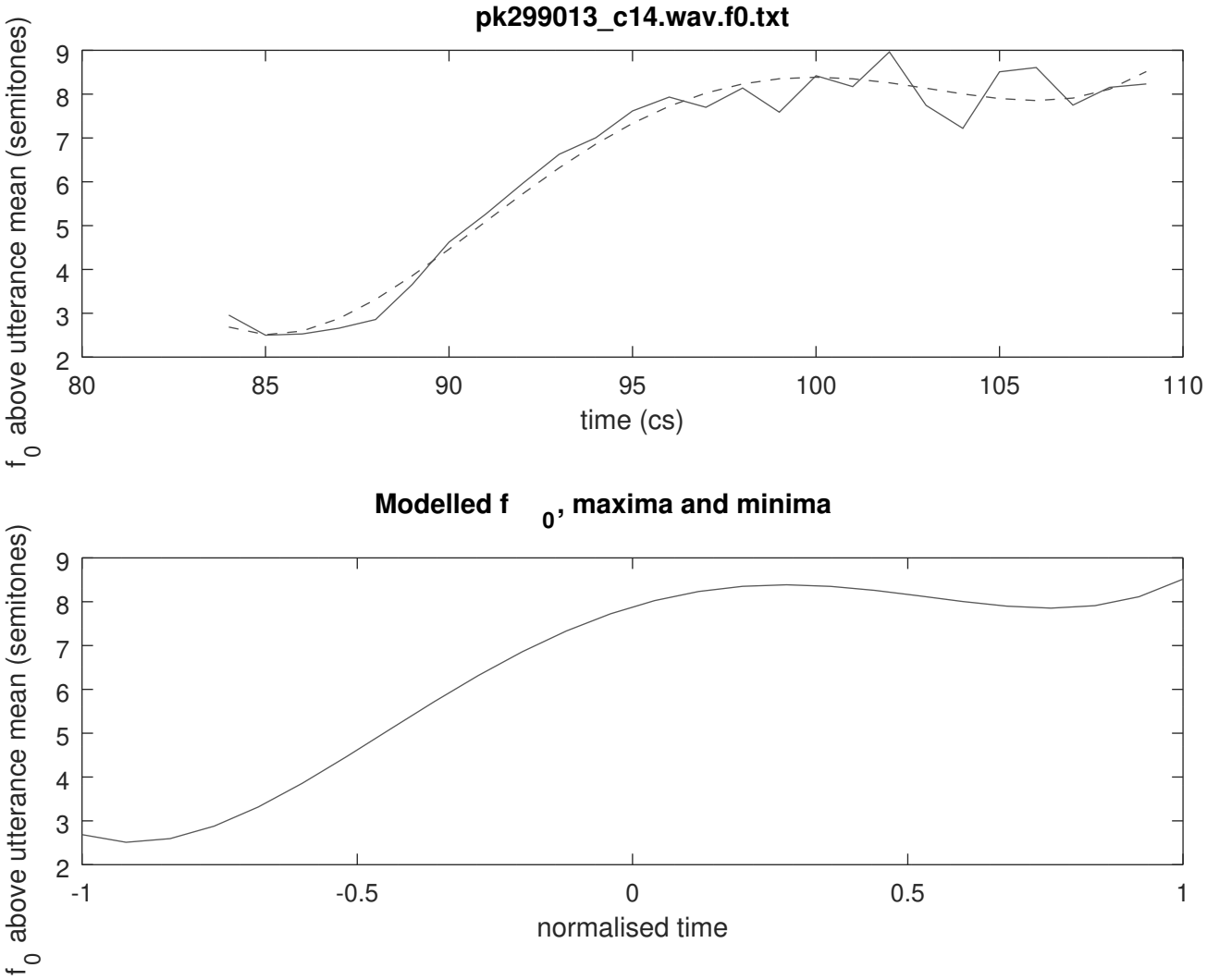

pk299013_c146.wav.f0.txt
f0 above utterance mean (semitones)
2.5
2
1.5
1
0.5
0
-0.5
-1
40
60
80
100
120
140
time (cs)

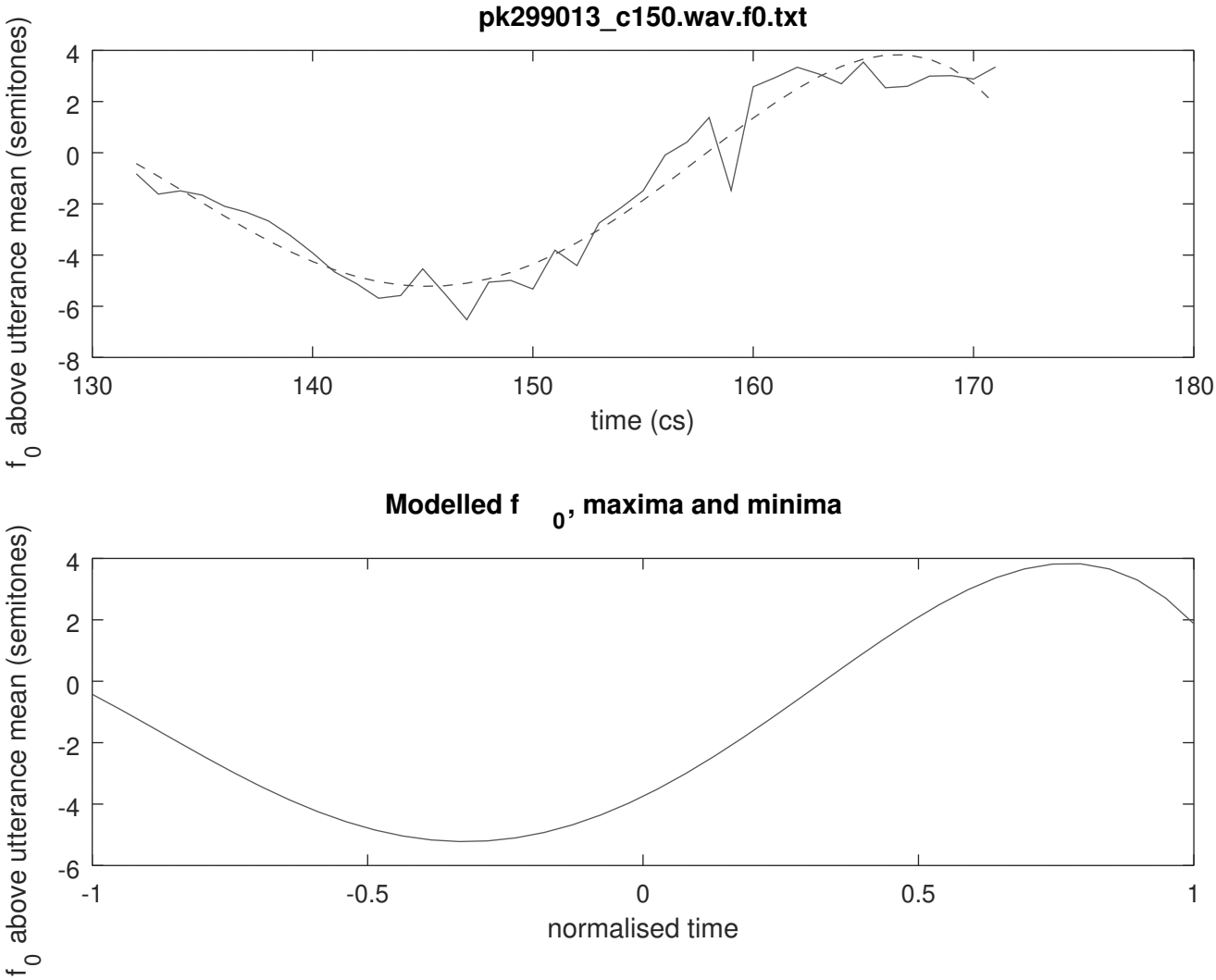

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
2.5
2
1.5
1
0.5
0
-1
-0.5
0
0.5
1
normalised time

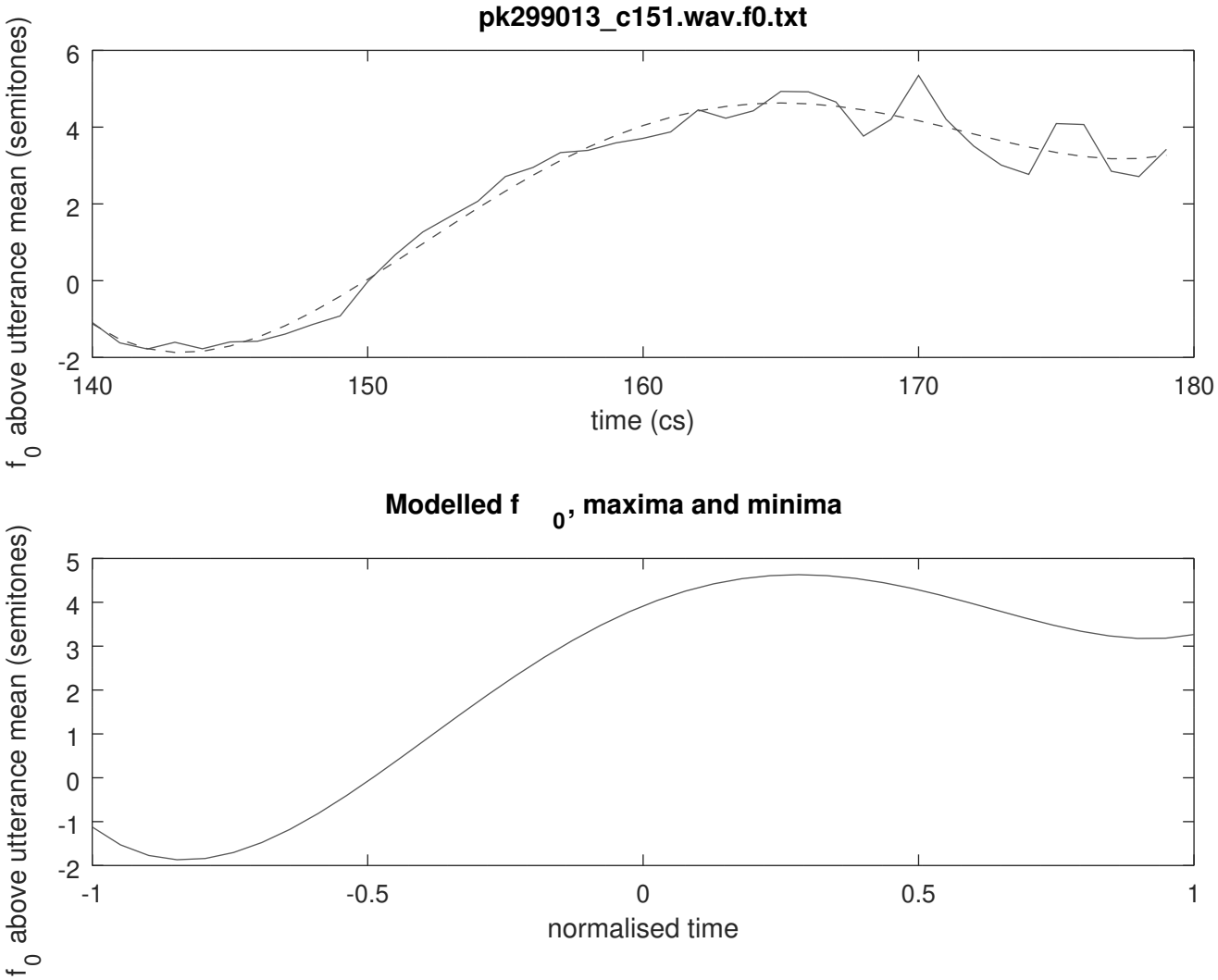

pk299013_c147.wav.f0.txt
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-3
85
90
95
100
105
110
115
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-3
-1
-0.5
0
0.5
1
normalised time

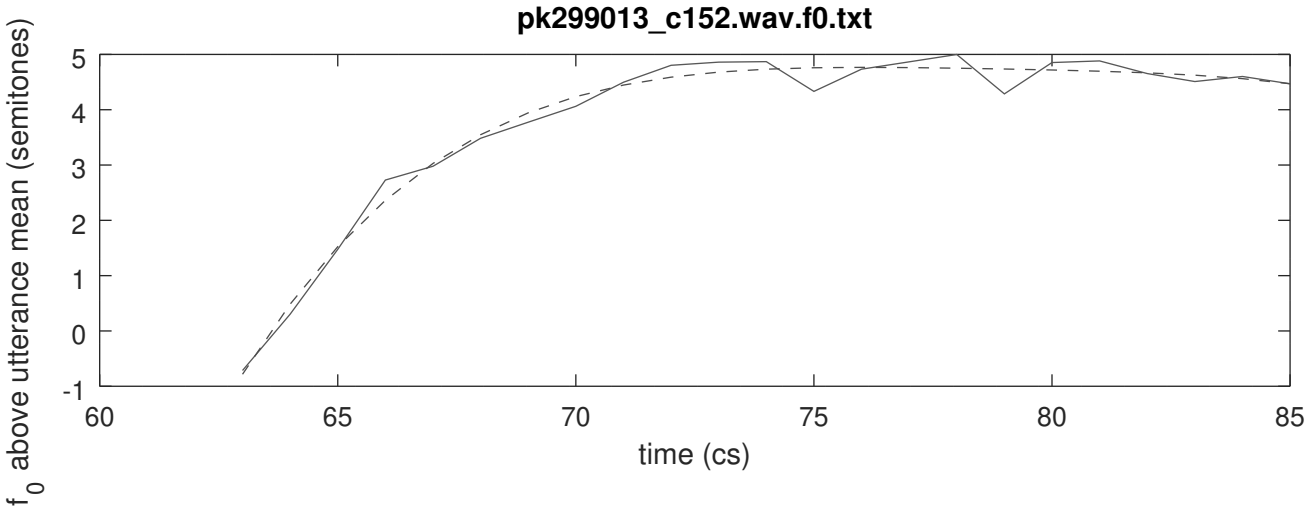

pk299013_c148.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
105
110
115
120
125
130
135
140
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

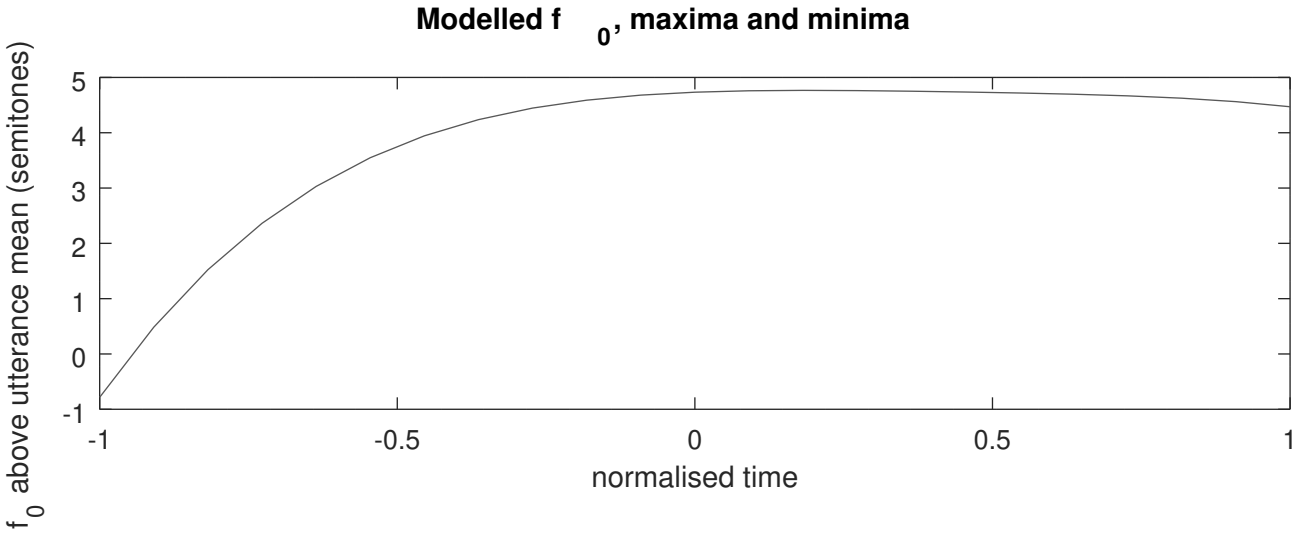

pk299013_c149.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
80
90
100
110
120
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

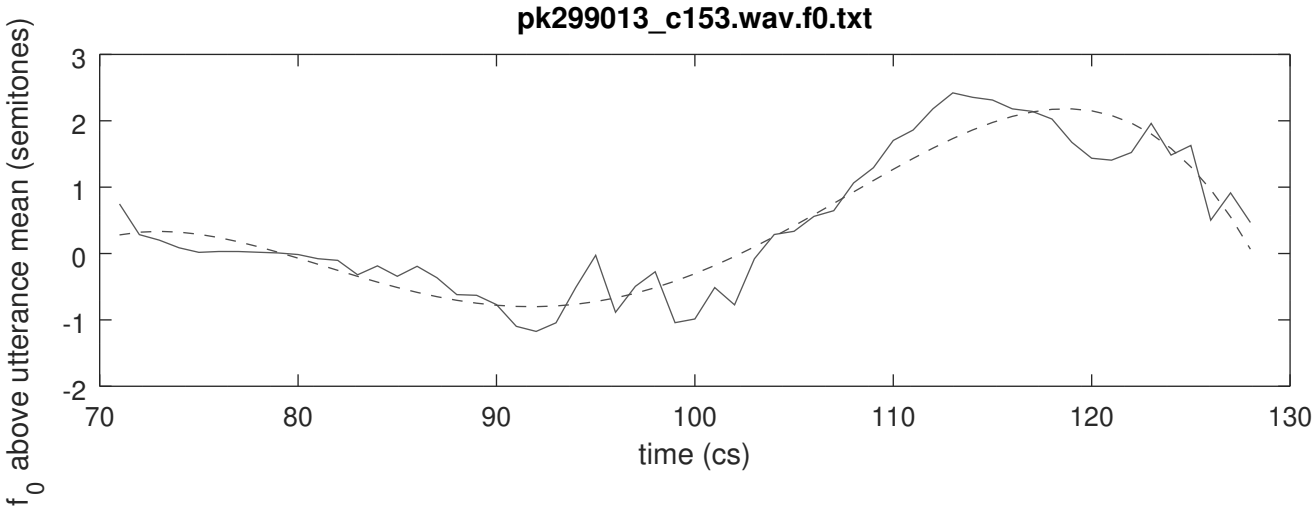

pk299013_c14.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

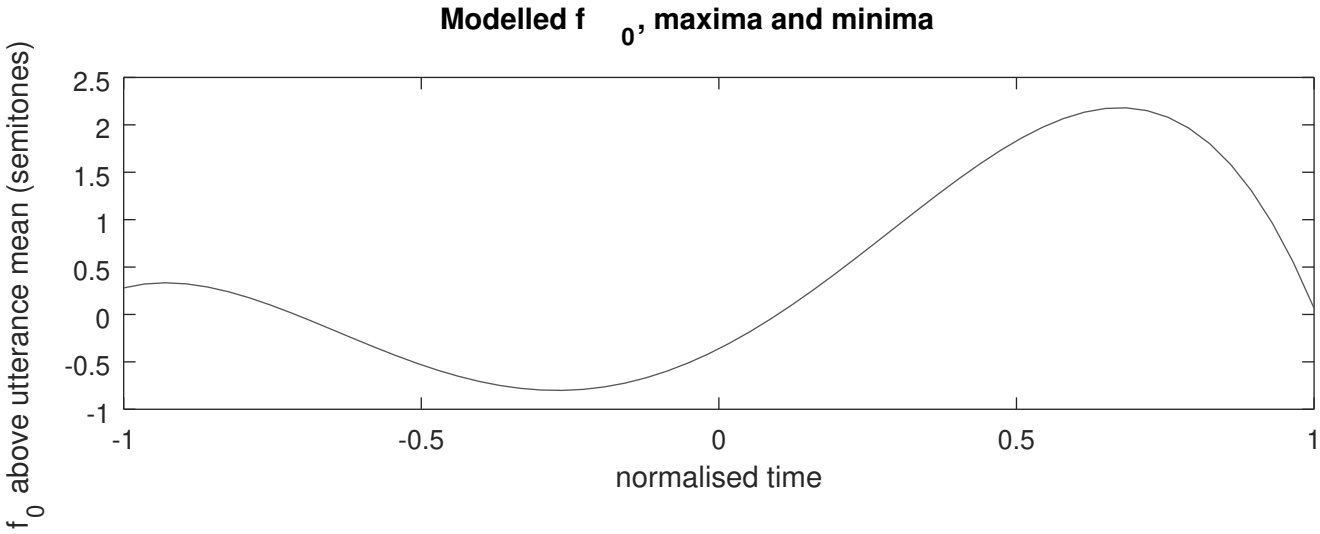

pk299013_c150.wav.f0.txt
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
-8
130
140
150
160
170
180
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

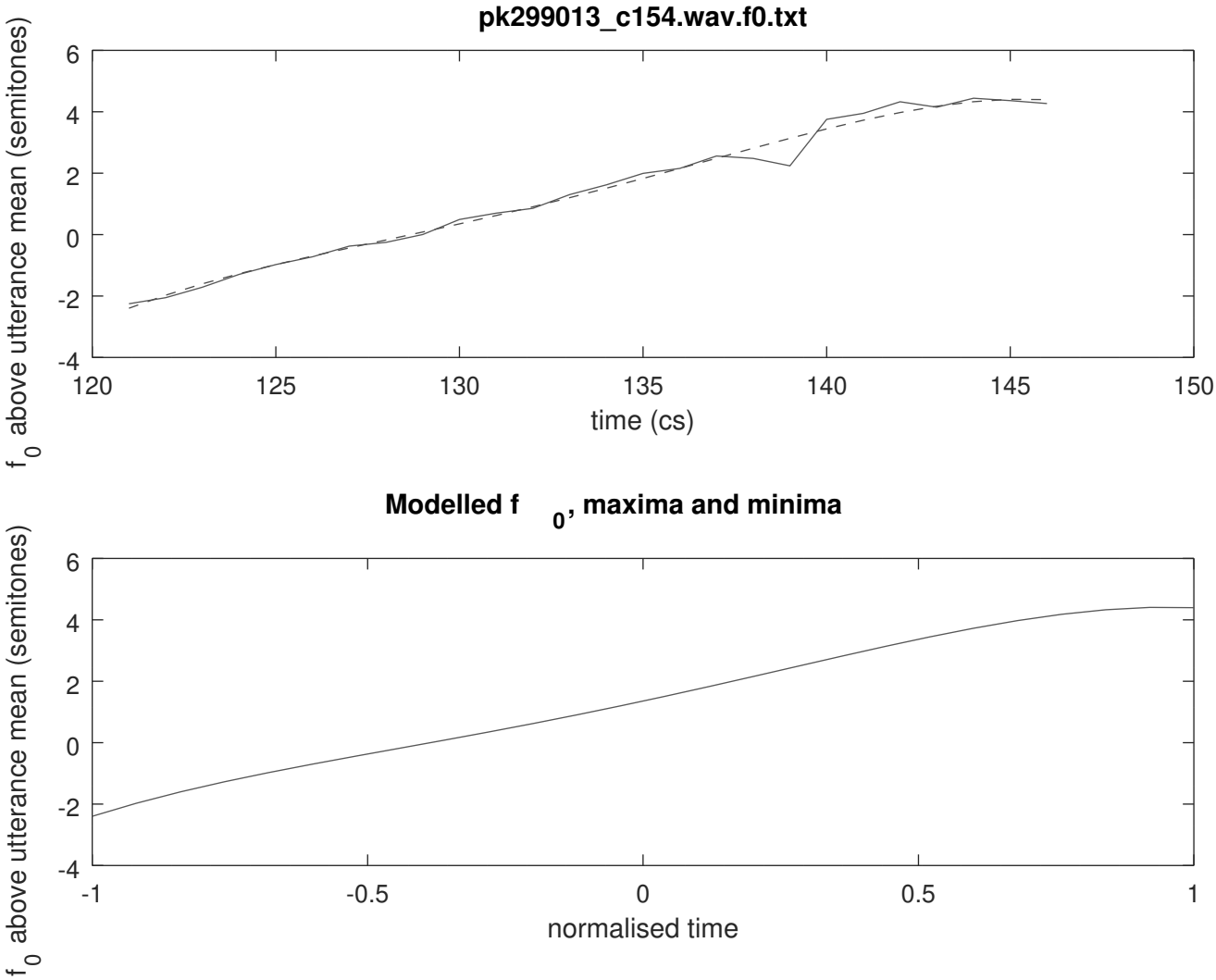

pk299013_c151.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
140
150
160
170
180
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

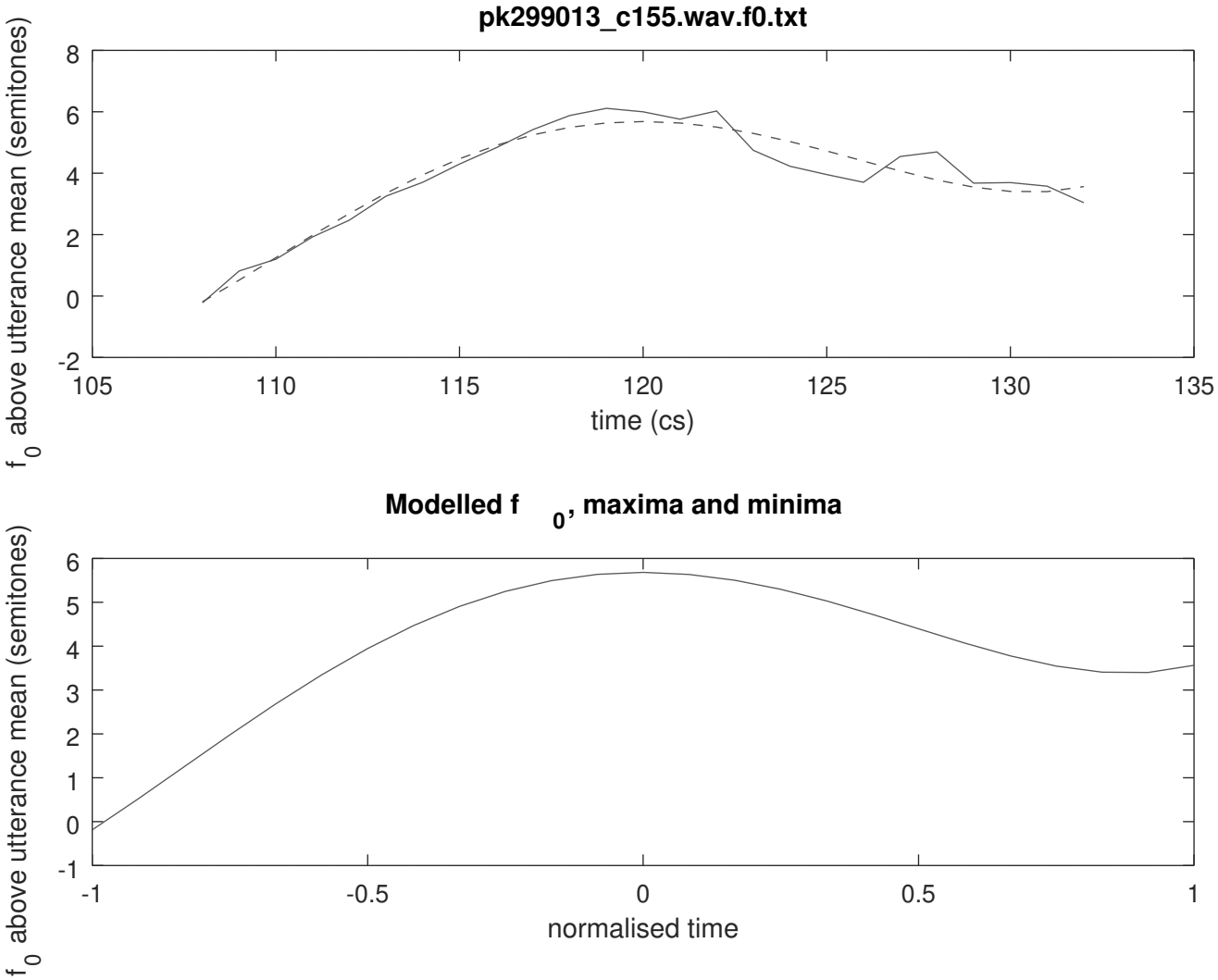

pk299013_c152.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
60
65
70
75
80
85
time (cs)

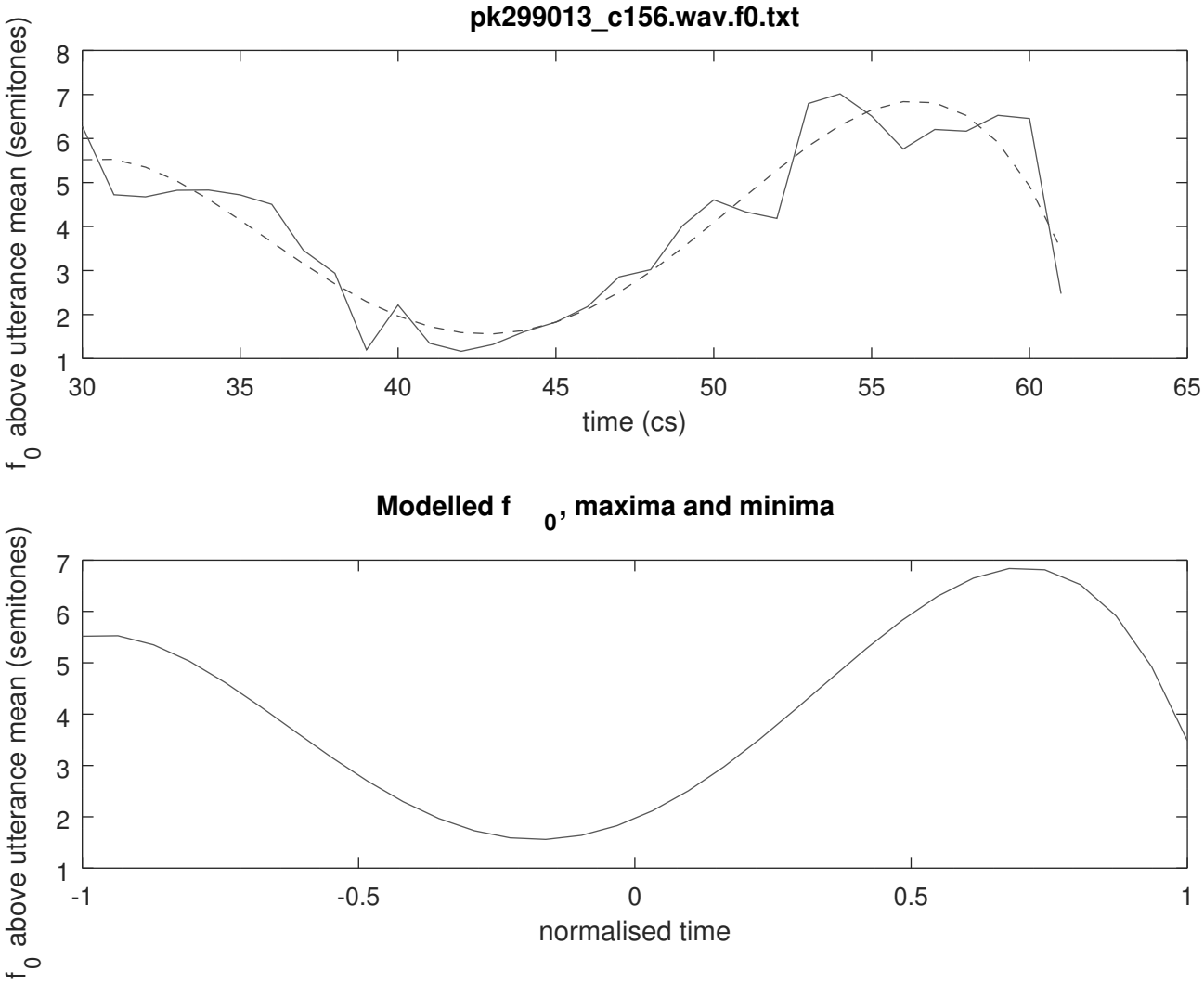

Modelled f0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

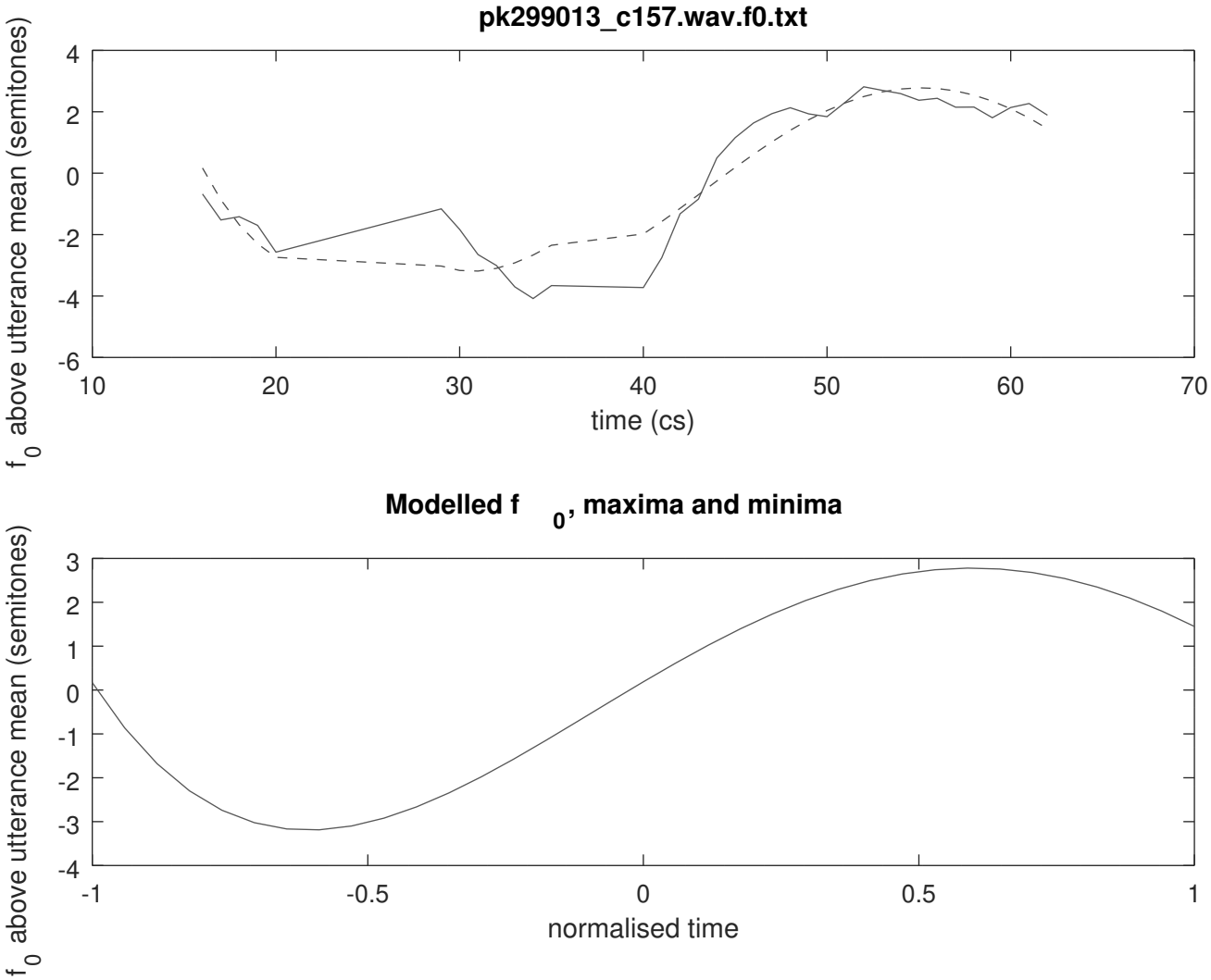

pk299013_c153.wav.f0.txt
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
70
80
90
100
110
120
130
time (cs)

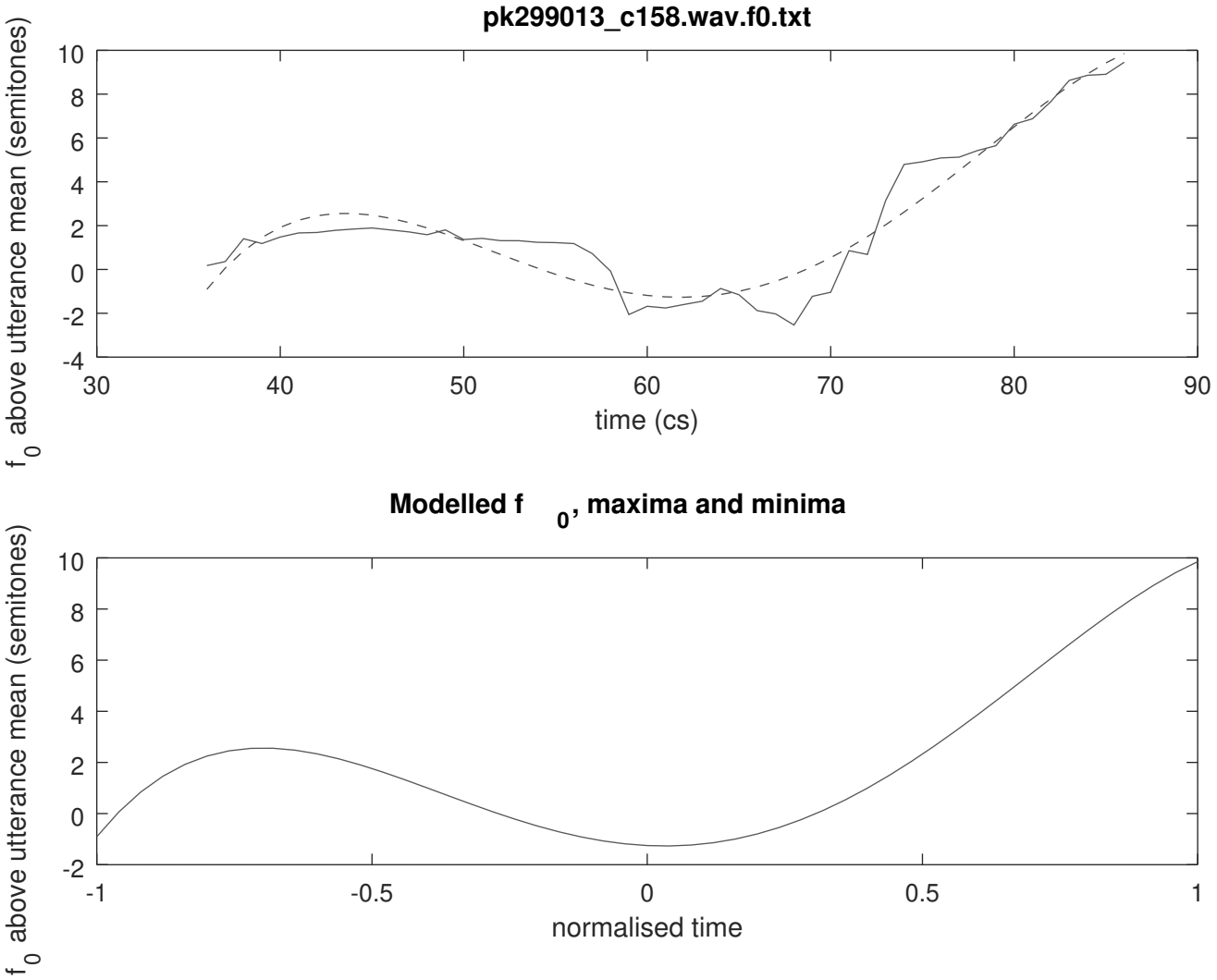

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
2.5
2
1.5
1
0.5
0
-0.5
-1
-1
-0.5
0
0.5
1
normalised time

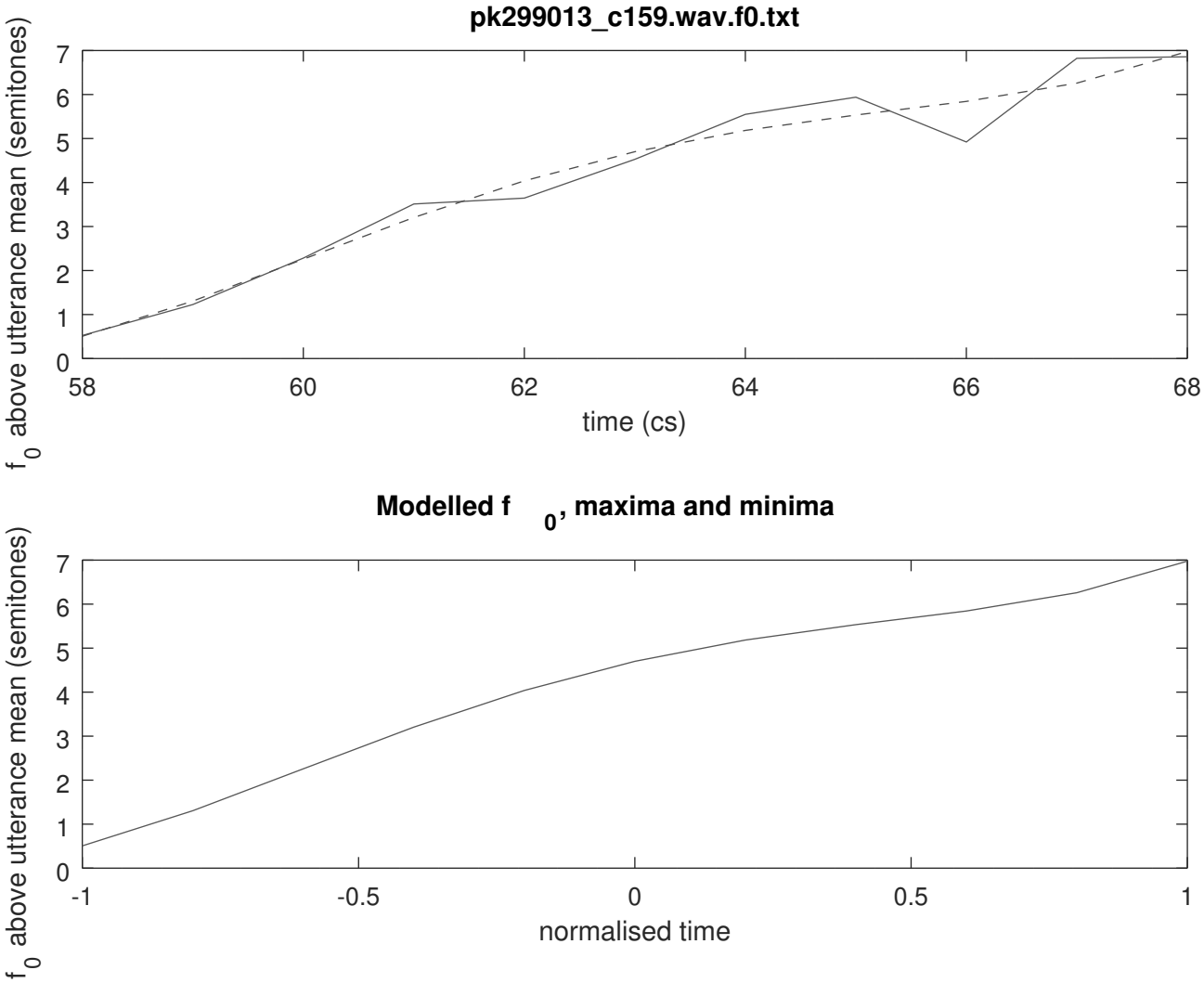

pk299013_c154.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
120
125
130
135
140
145
150
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

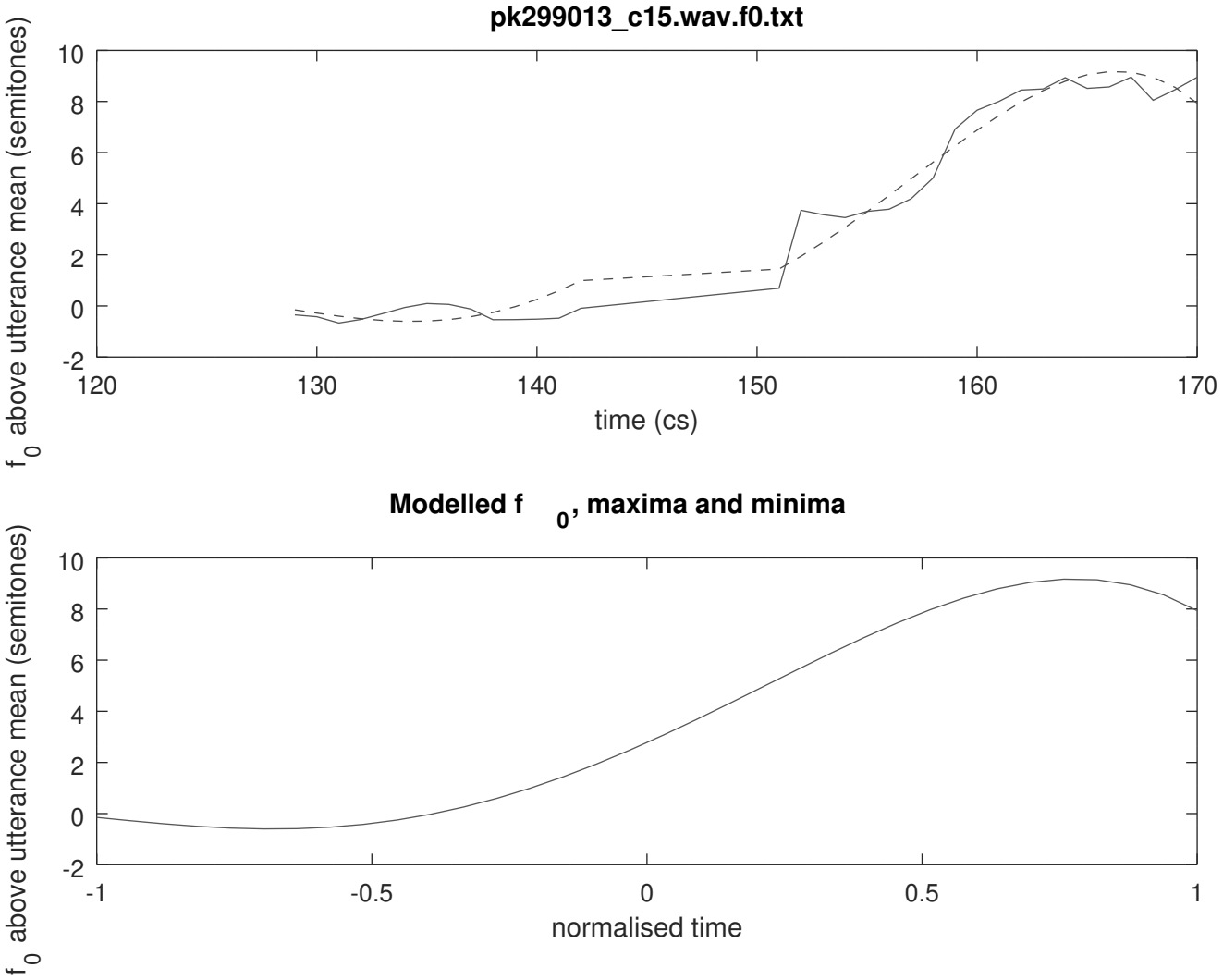

pk299013_c155.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
105
110
115
120
125
130
135
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
5
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

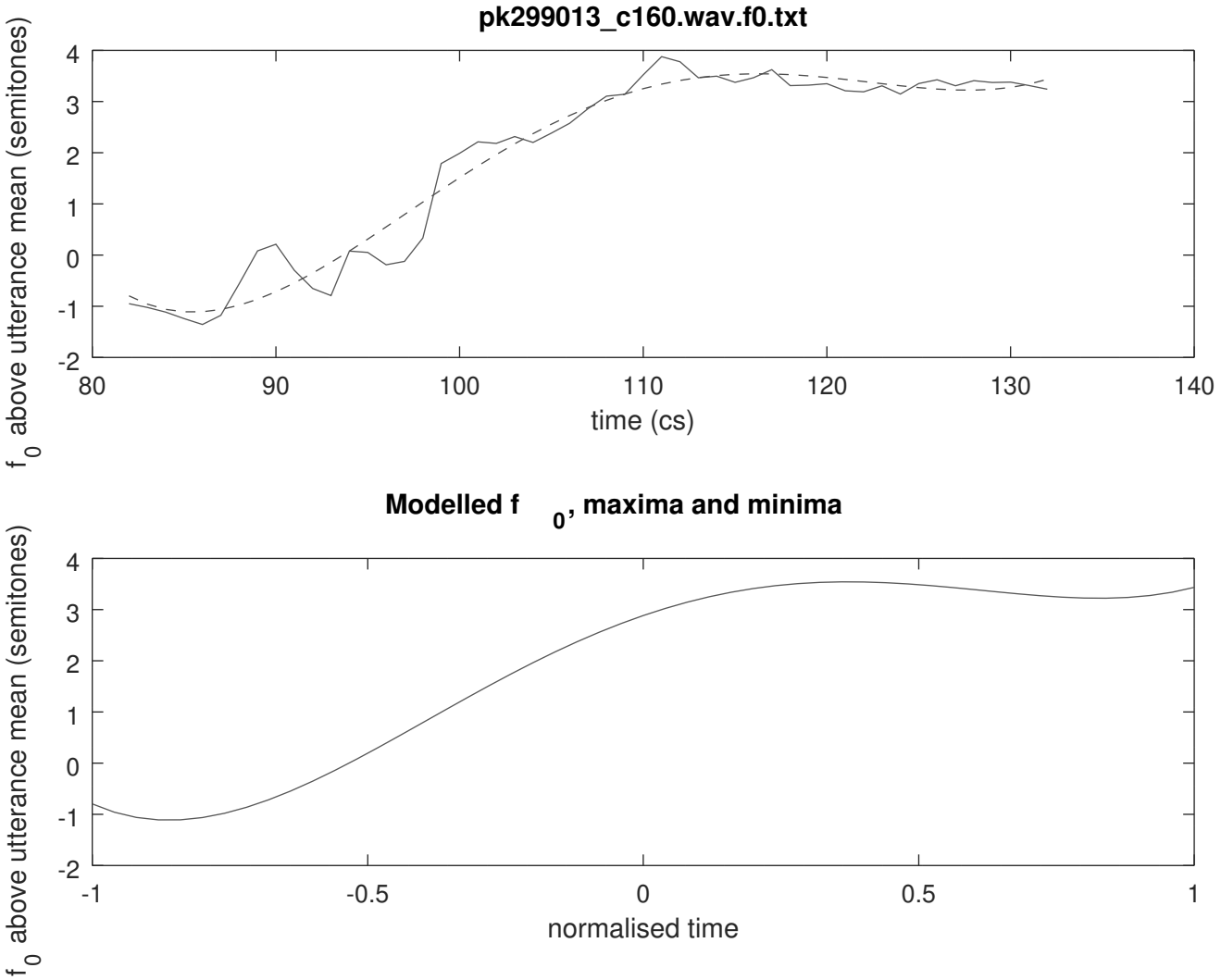

pk299013_c156.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

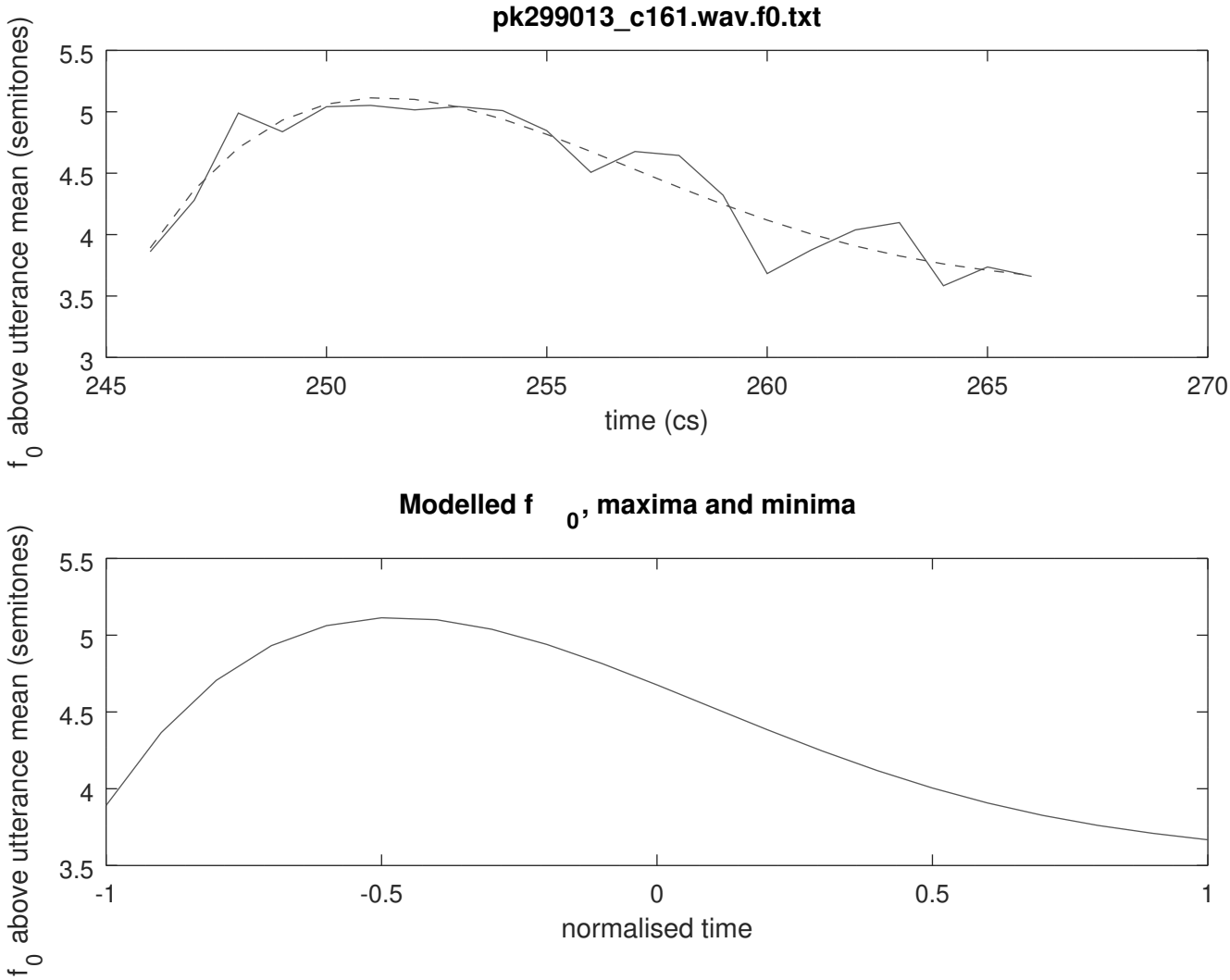

pk299013_c157.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

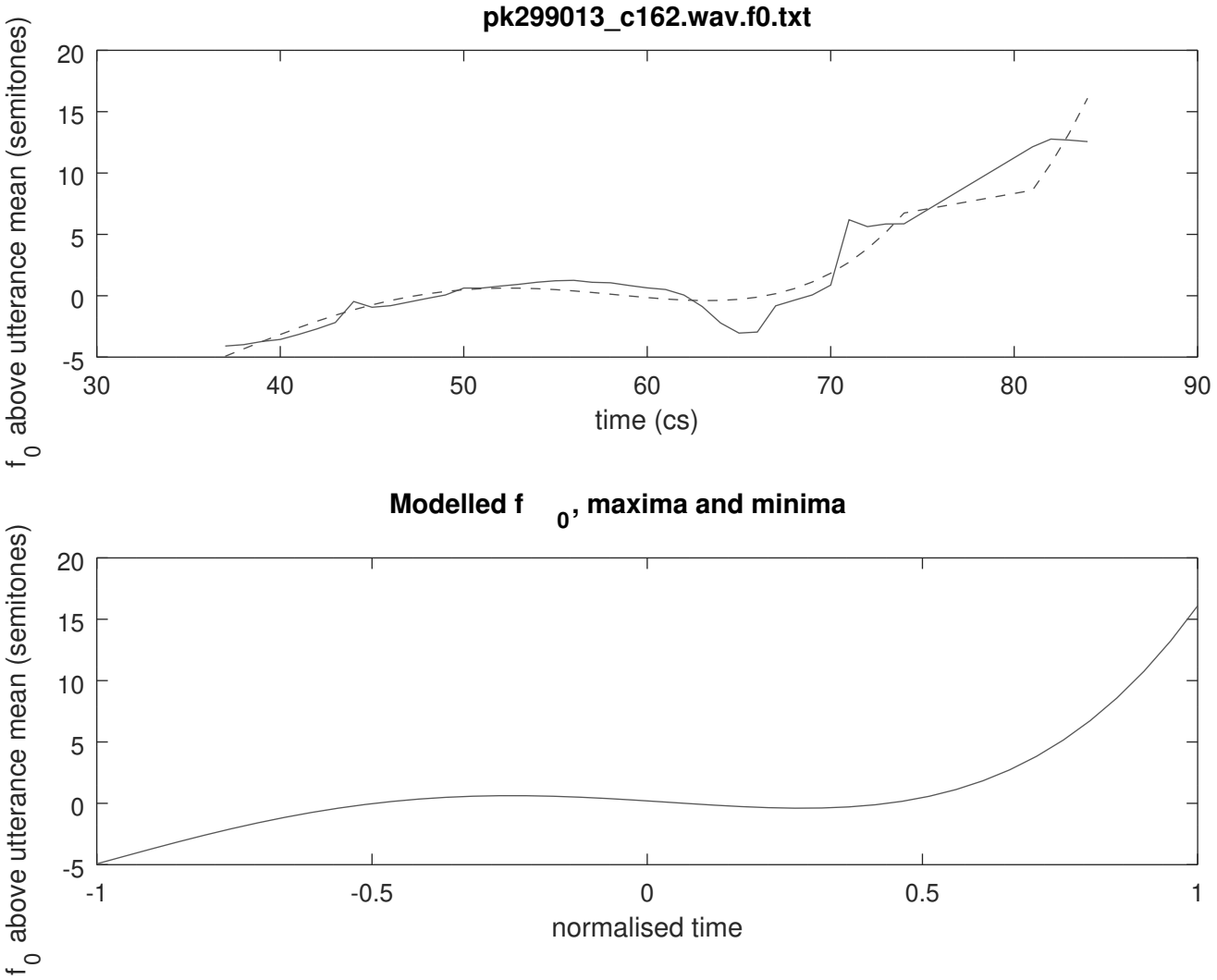

pk299013_c158.wav.f0.txt
f0 above utterance mean (semitones)
10
8
6
4
2
0
-2
-4
30
40
50
60
70
80
90
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
10
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

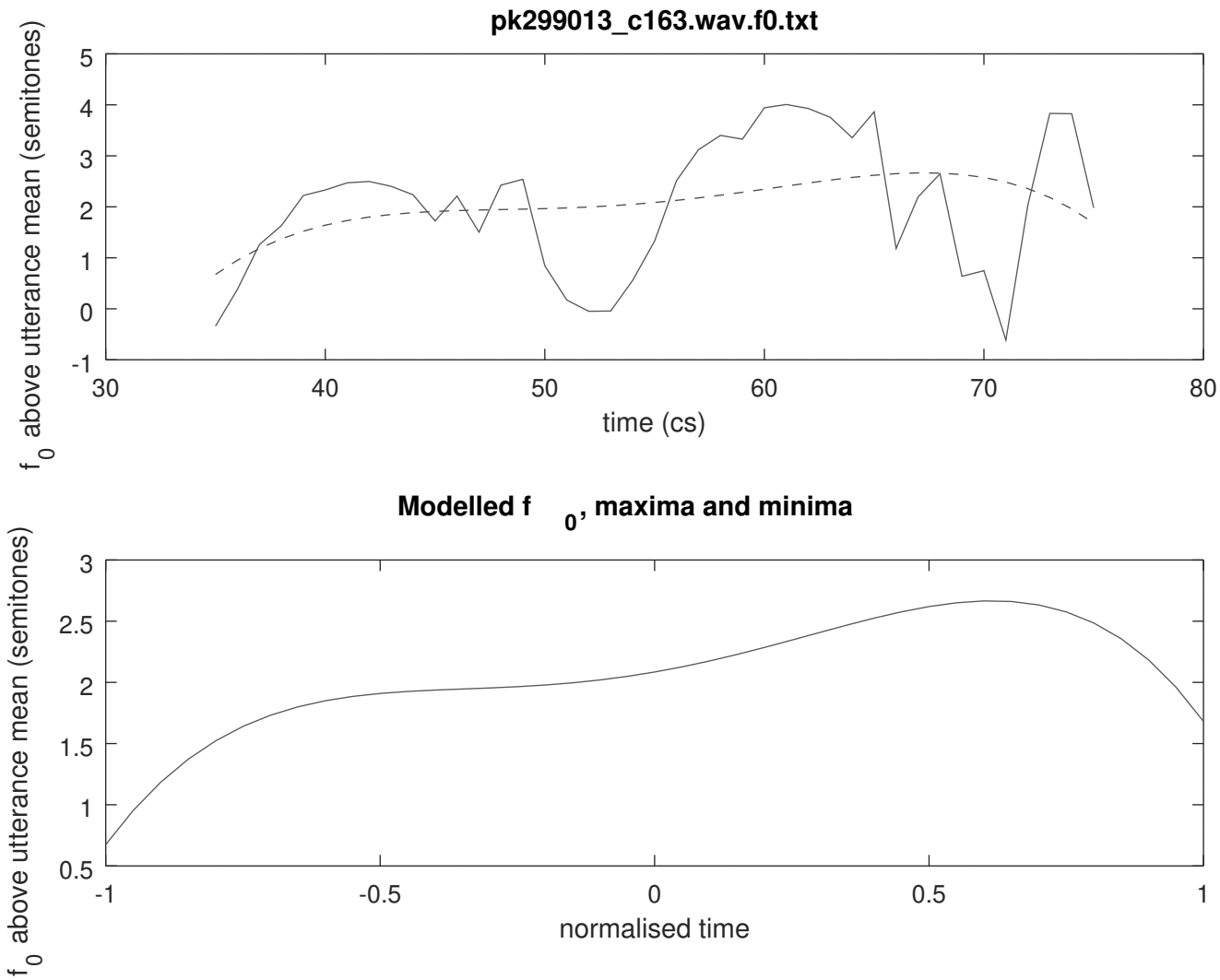

pk299013_c159.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

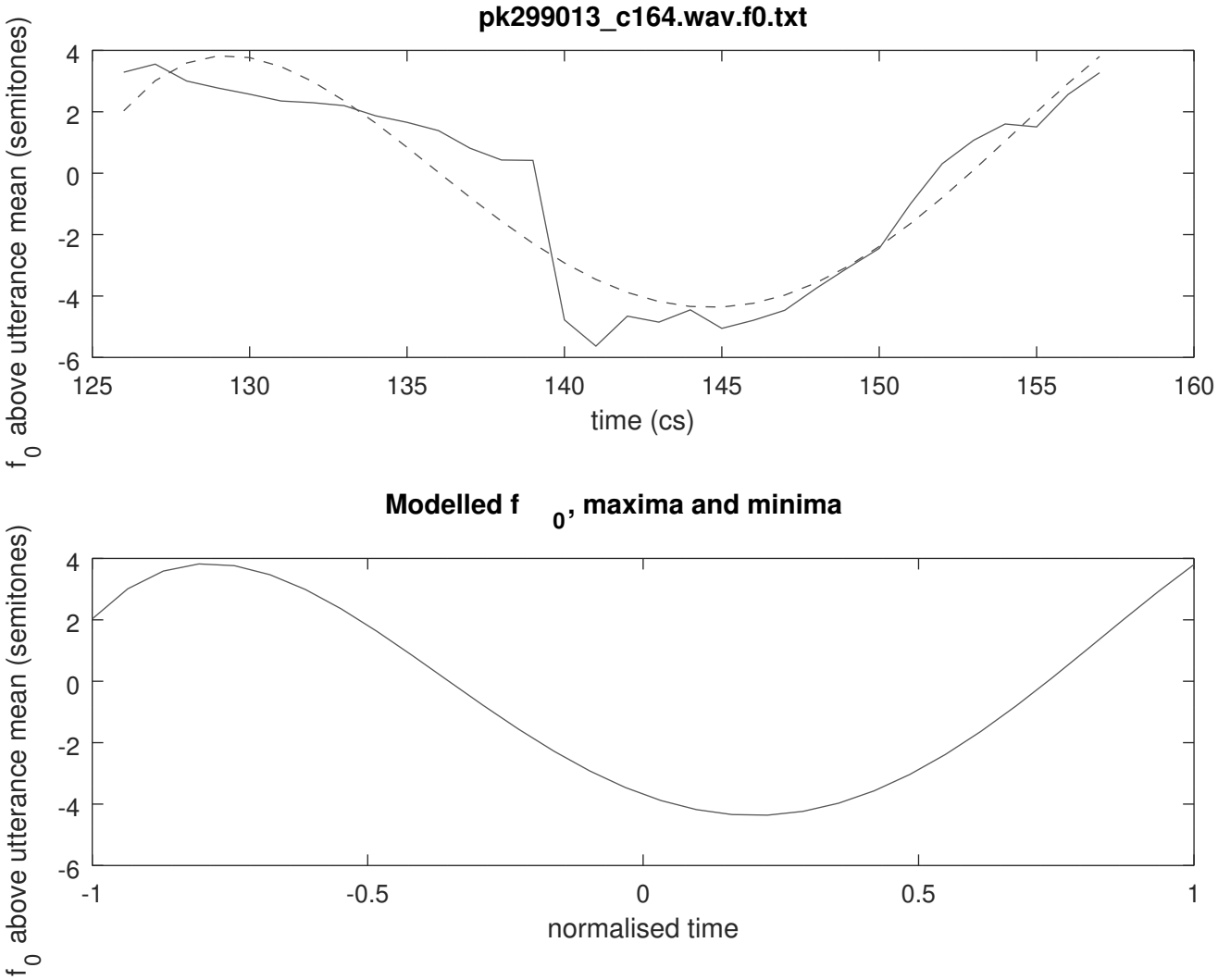

pk299013_c15.wav.f0.txt
f0 above utterance mean (semitones)
10
8
6
4
2
0
-2
120
130
140
150
160
170
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
10
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

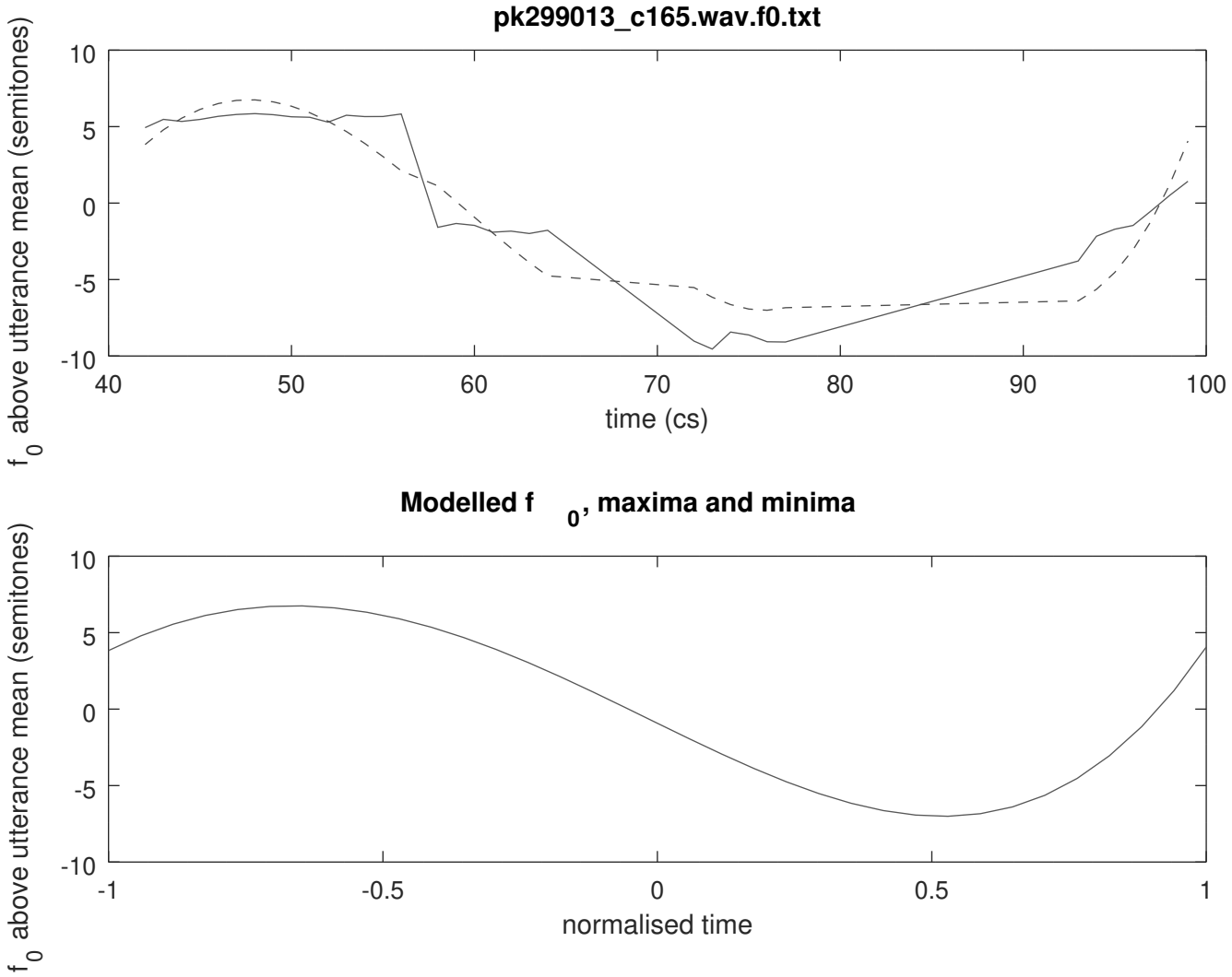

pk299013_c160.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

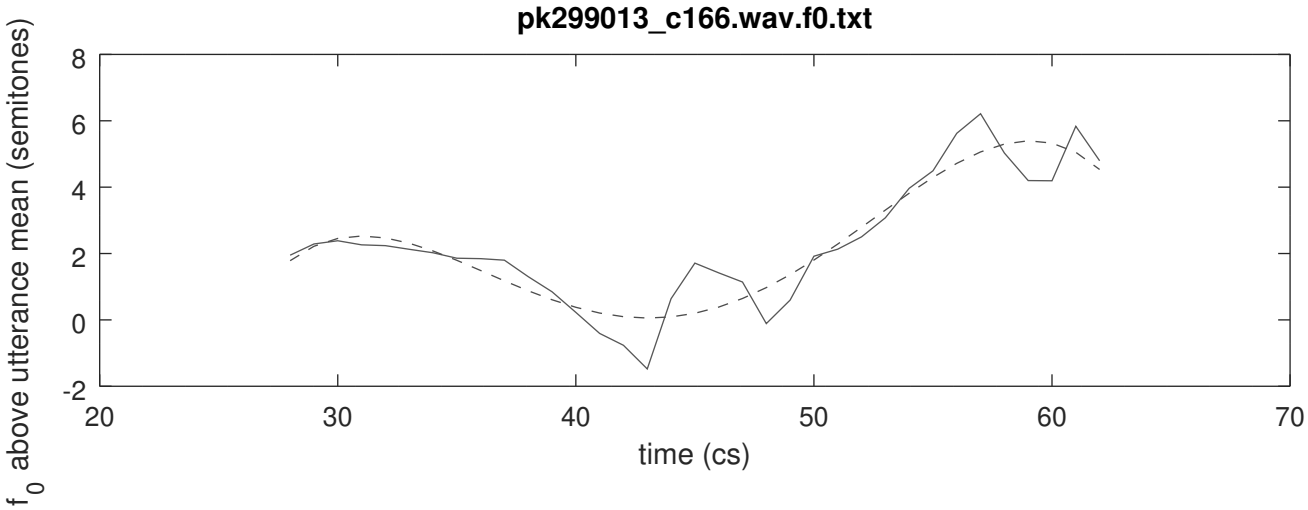

pk299013_c161.wav.f0.txt
f0 above utterance mean (semitones)
5.5
5
4.5
4
3.5
3
245
250
255
260
265
270
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5.5
5
4.5
4
3.5
-1
-0.5
0
0.5
1
normalised time

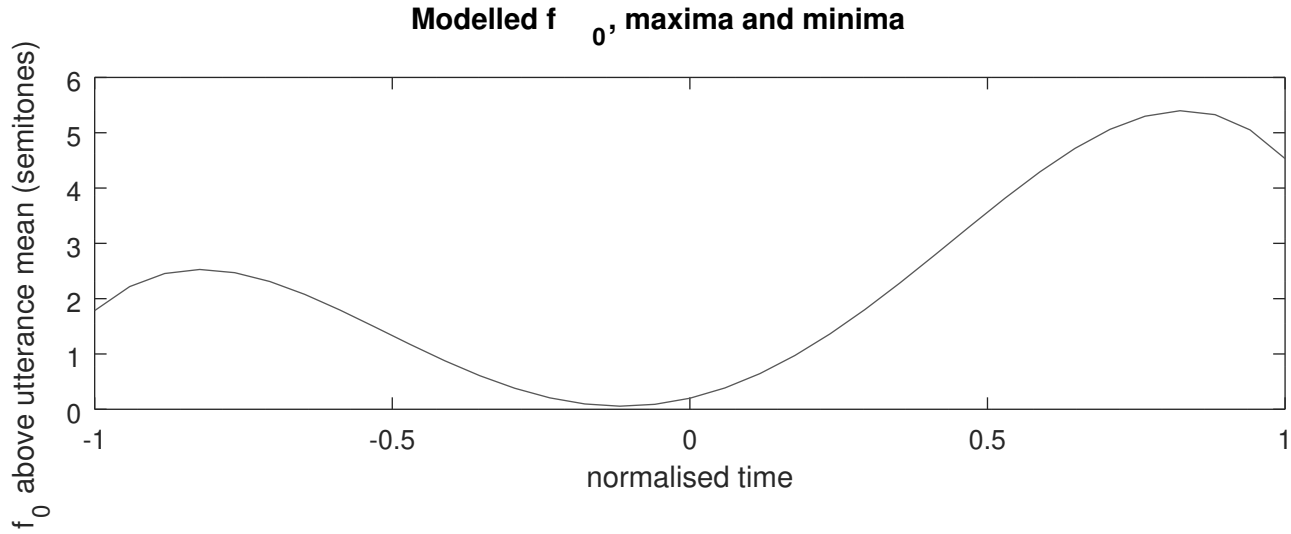

pk299013_c162.wav.f0.txt
f0 above utterance mean (semitones)
20
15
10
5
0
-5
30
40
50
60
70
80
90
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
20
15
10
5
0
-5
-1
-0.5
0
0.5
1
normalised time

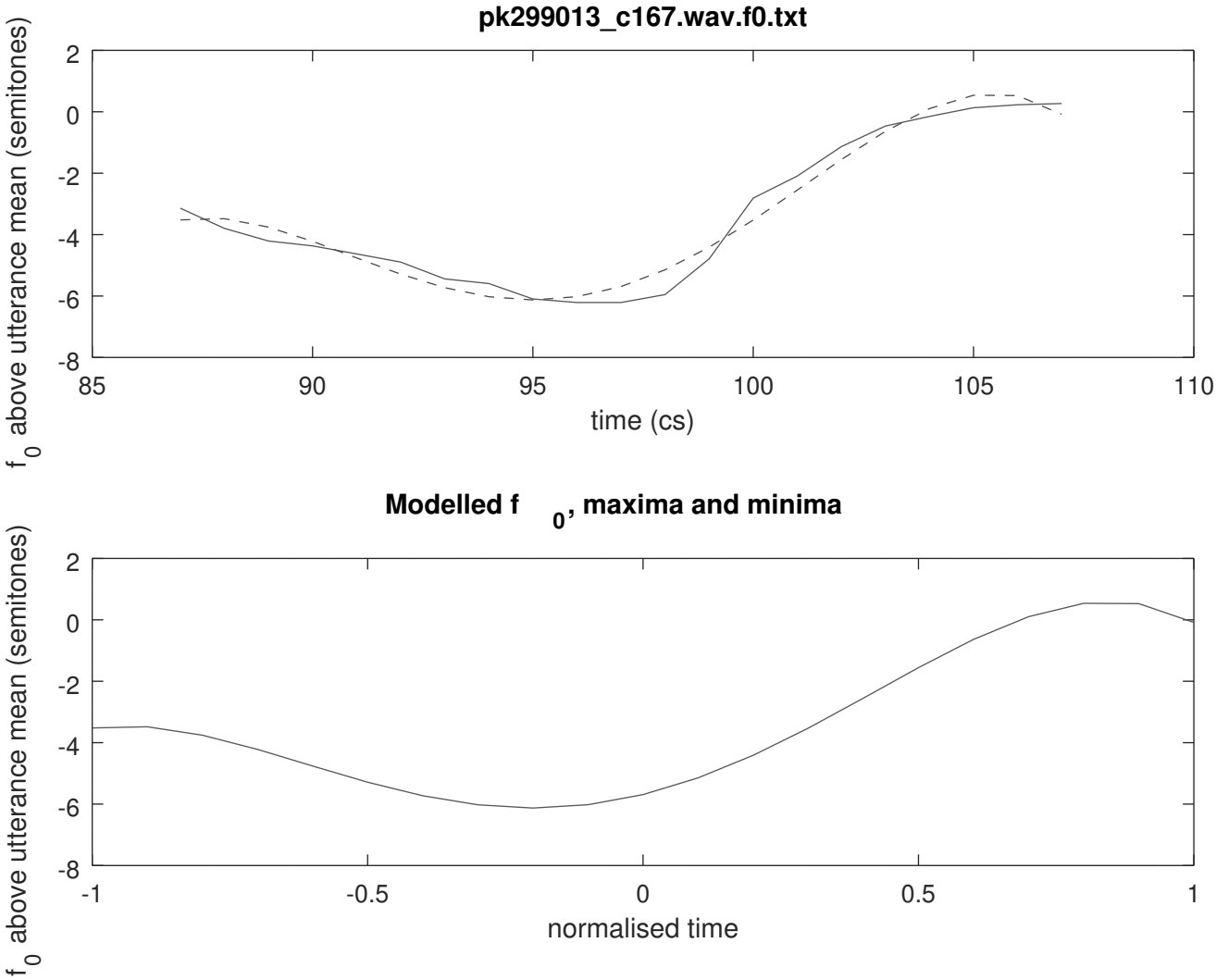

pk299013_c163.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
30
40
50
60
70
80
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3
2.5
2
1.5
1
0.5
-1
-0.5
0
0.5
1
normalised time

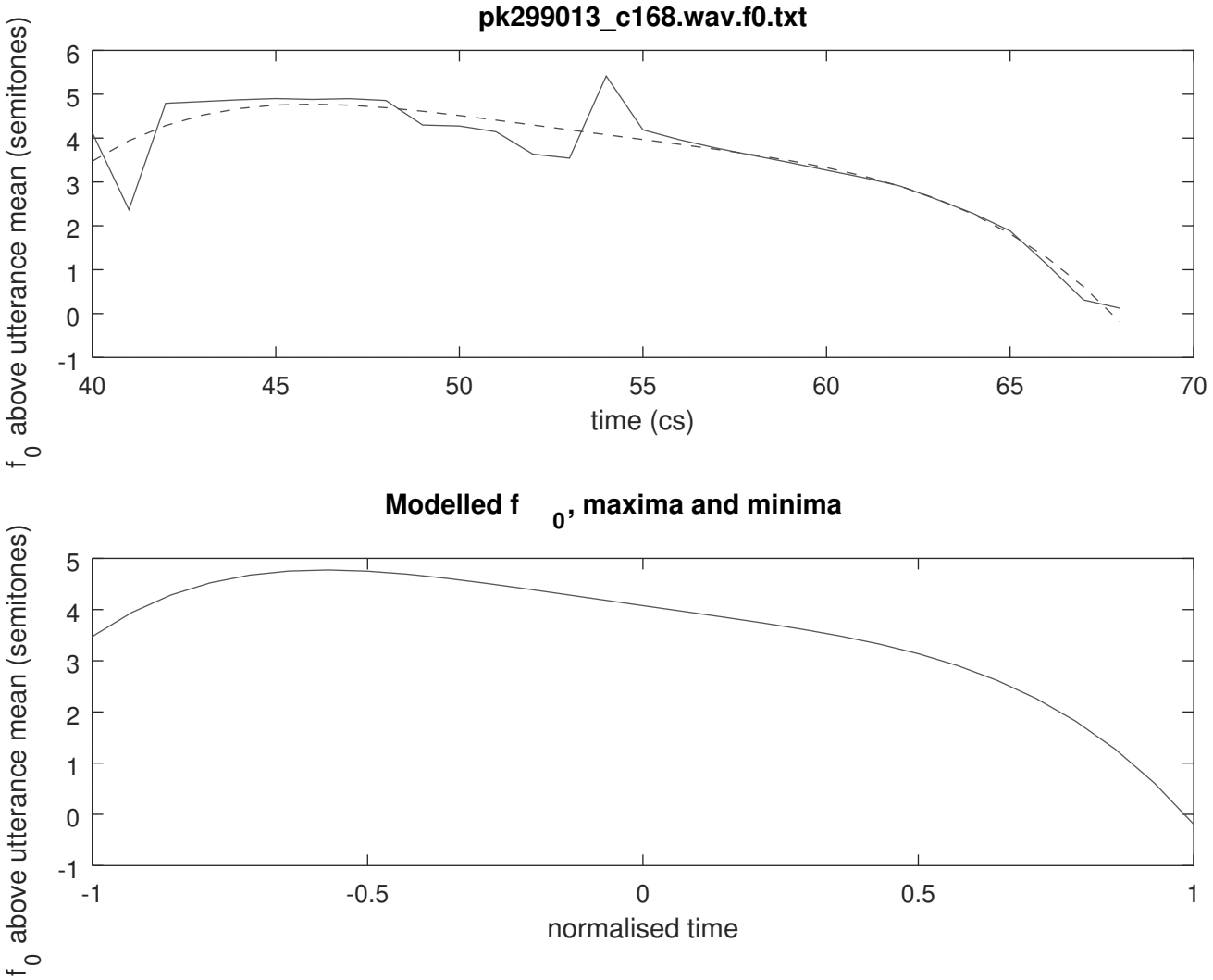

pk299013_c164.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

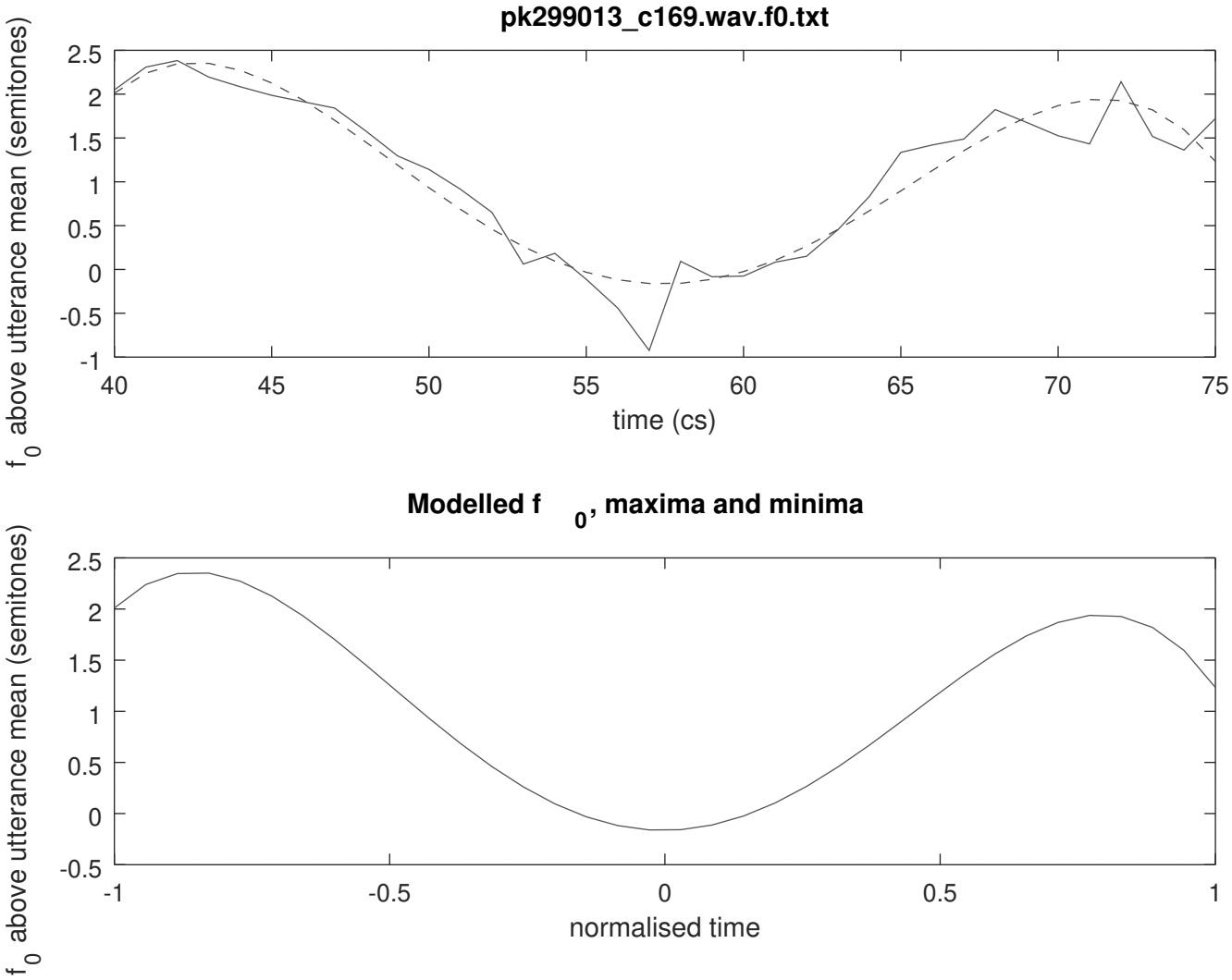

pk299013_c165.wav.f0.txt
f0 above utterance mean (semitones)
10
5
0
-5
-10
40
50
60
70
80
90
100
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
10
5
0
-5
-10
-1
-0.5
0
0.5
1
normalised time

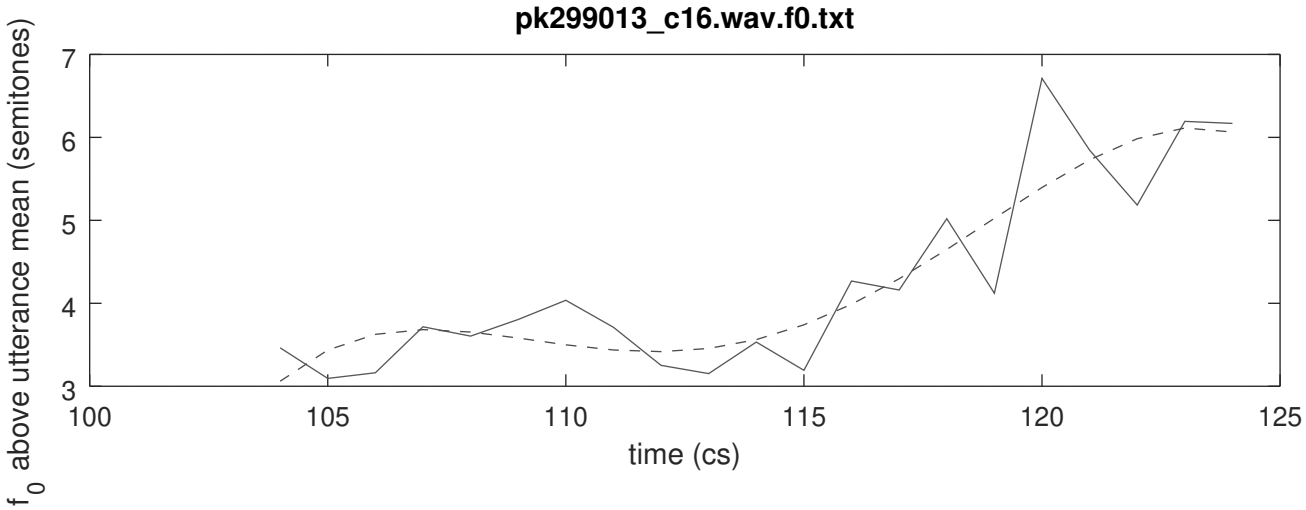

pk299013_c166.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
20
30
40
50
60
70
time (cs)

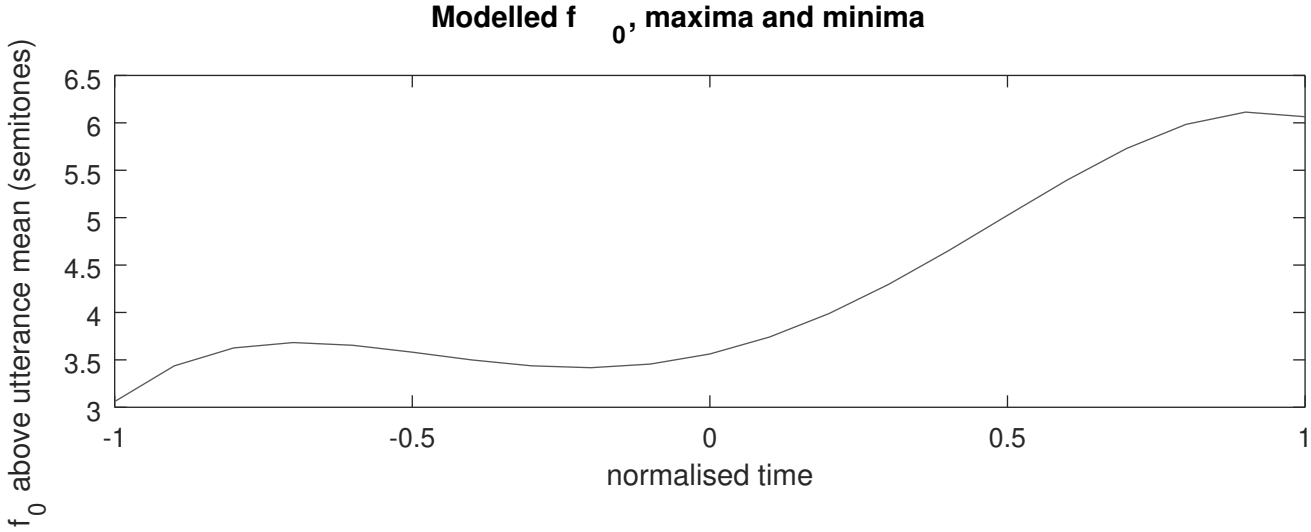

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
5
4
3
2
1
0
-1
-0.5
0
0.5
1
normalised time

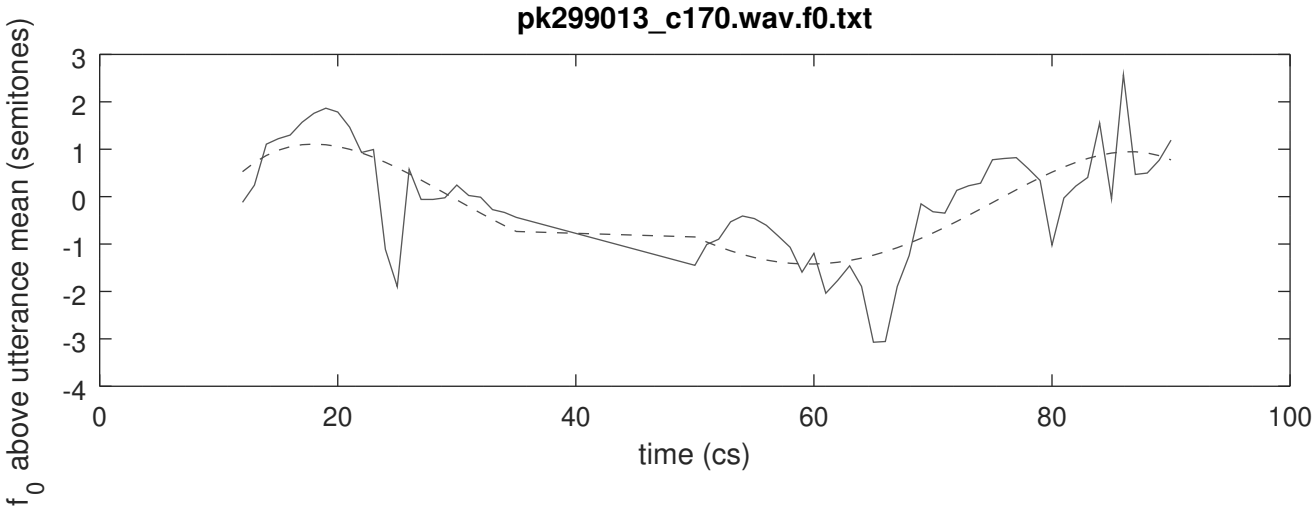

pk299013_c167.wav.f0.txt
f0 above utterance mean (semitones)
2
0
-2
-4
-6
-8
85
90
95
100
105
110
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
2
0
-2
-4
-6
-8
-1
-0.5
0
0.5
1
normalised time

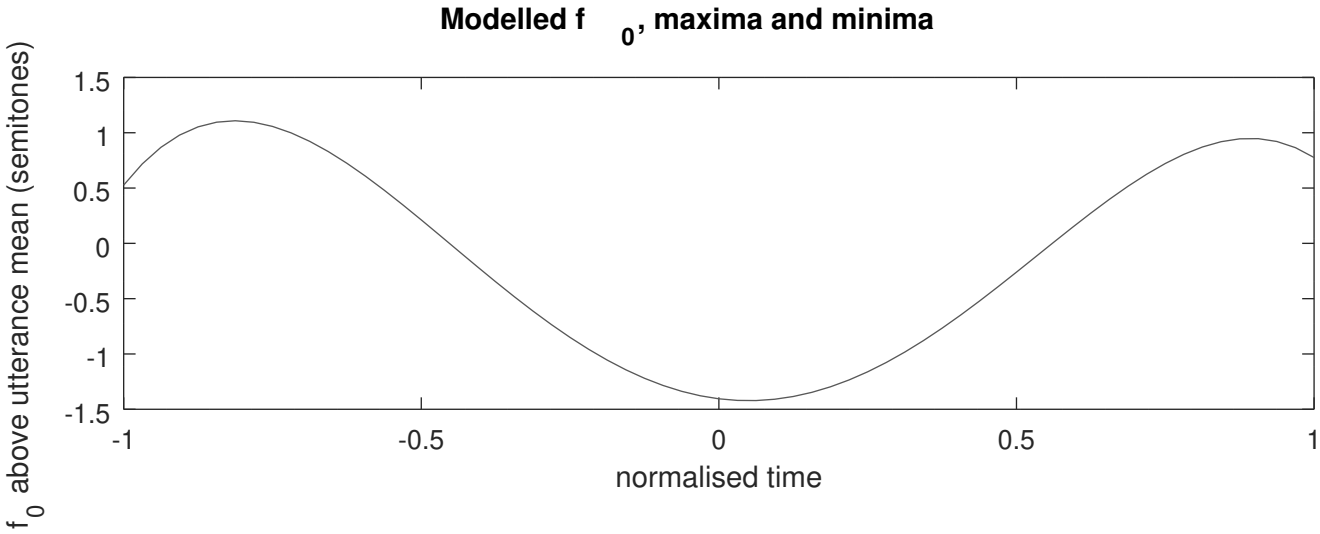

pk299013_c168.wav.f0.txt
f0 above utterance mean (semitones)
6
5
4
3
2
1
0
-1
40
45
50
55
60
65
70
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

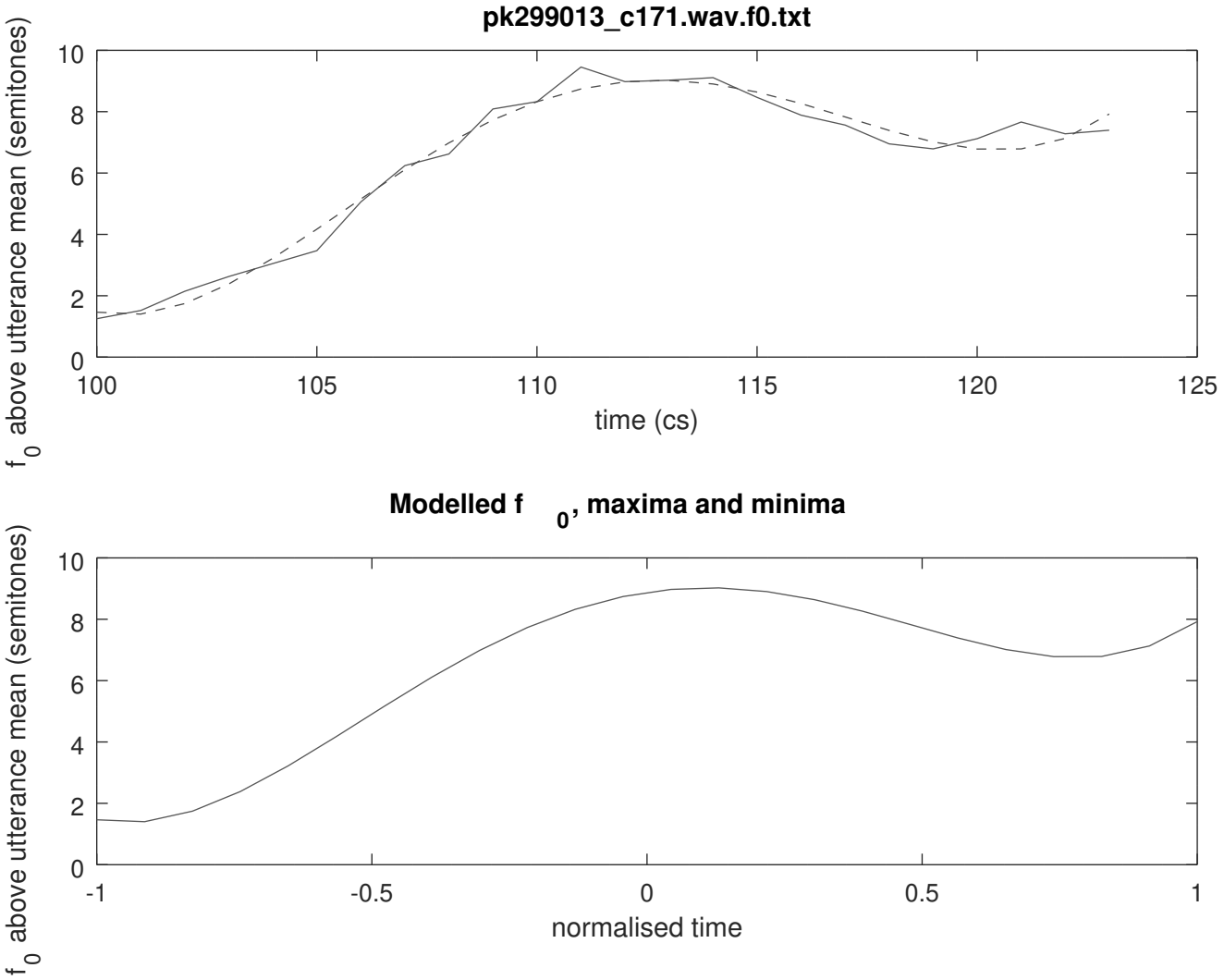

pk299013_c169.wav.f0.txt
f0 above utterance mean (semitones)
2.5
2
1.5
1
0.5
0
-0.5
-1
40
45
50
55
60
65
70
75
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
2.5
2
1.5
1
0.5
0
-0.5
-1
-0.5
0
0.5
1
normalised time

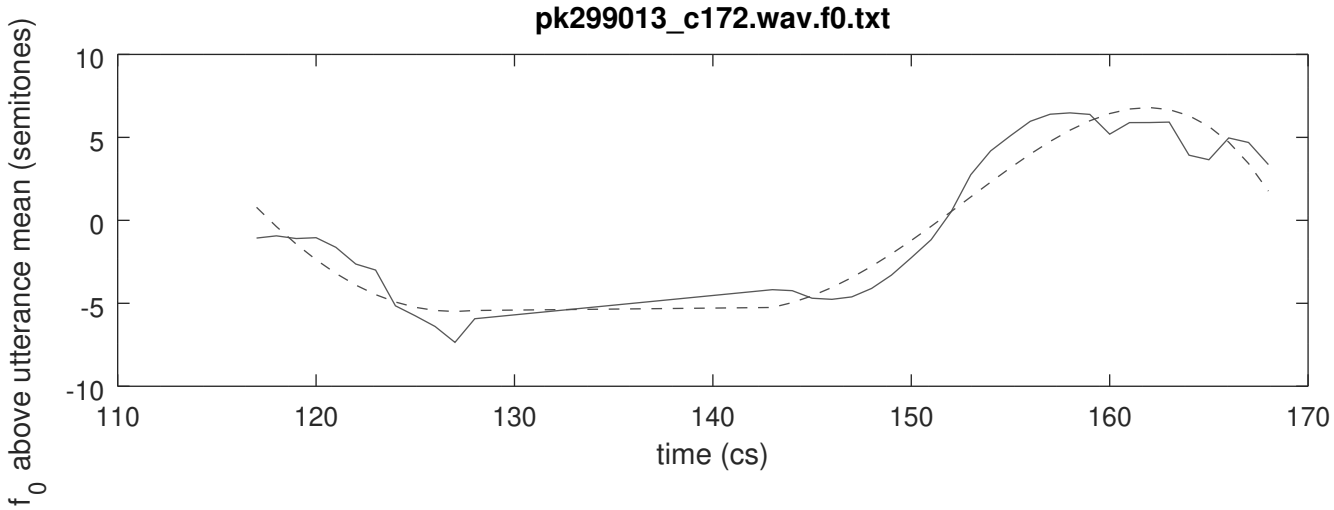

pk299013_c16.wav.f0.txt
f0 above utterance mean (semitones)
7
6
5
4
3
100
105
110
115
120
125
time (cs)

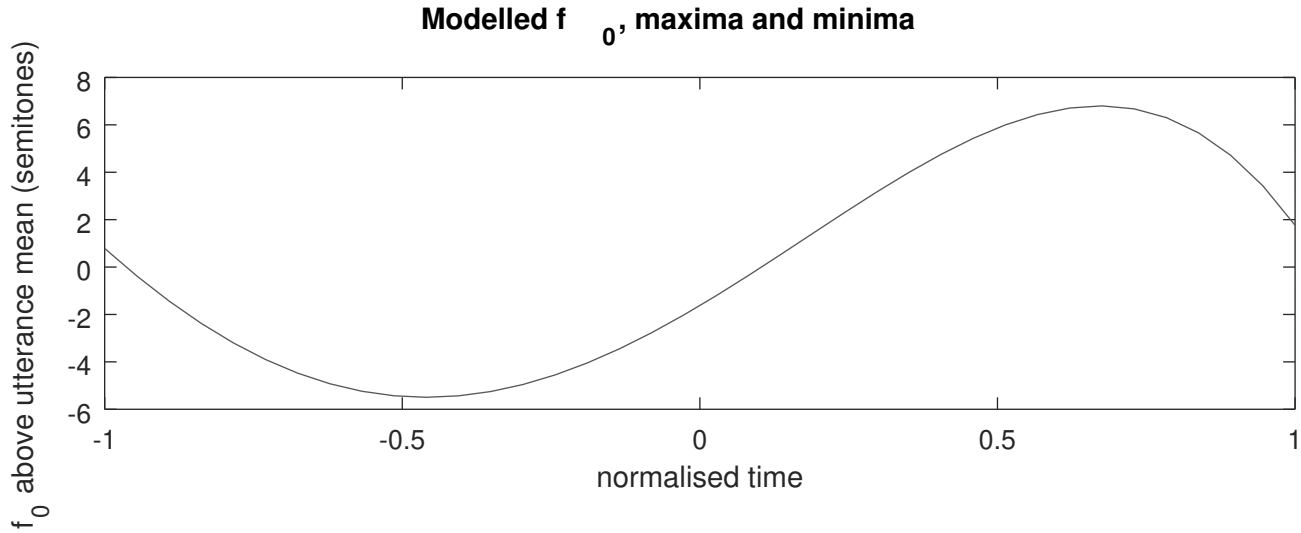

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6.5
6
5.5
5
4.5
4
3.5
3
-1
-0.5
0
0.5
1
normalised time

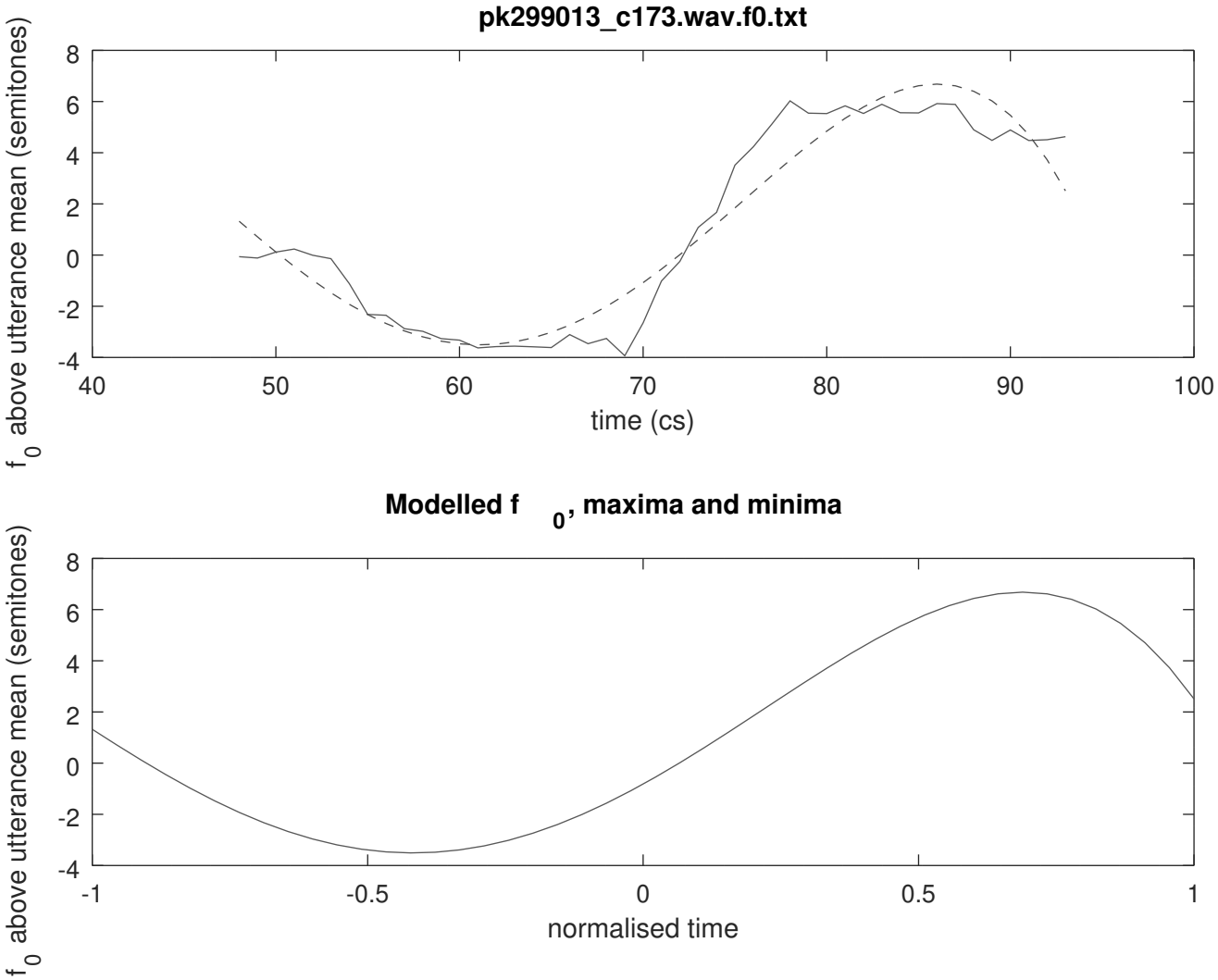

pk299013_c170.wav.f0.txt
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-3
-4
0
20
40
60
80
100
time (cs)

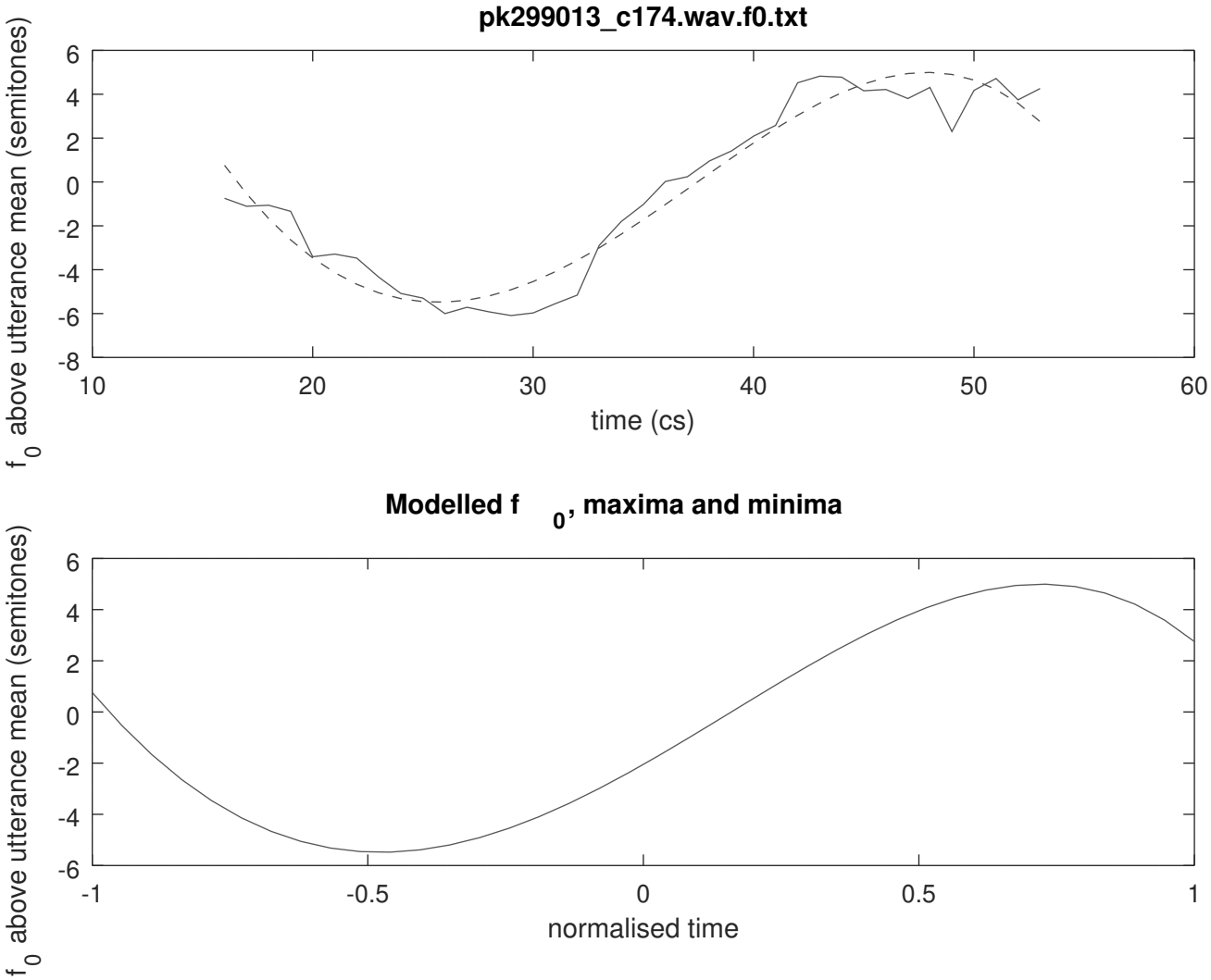

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
1.5
1
0.5
0
-0.5
-1
-1.5
-1
-0.5
0
0.5
1
normalised time

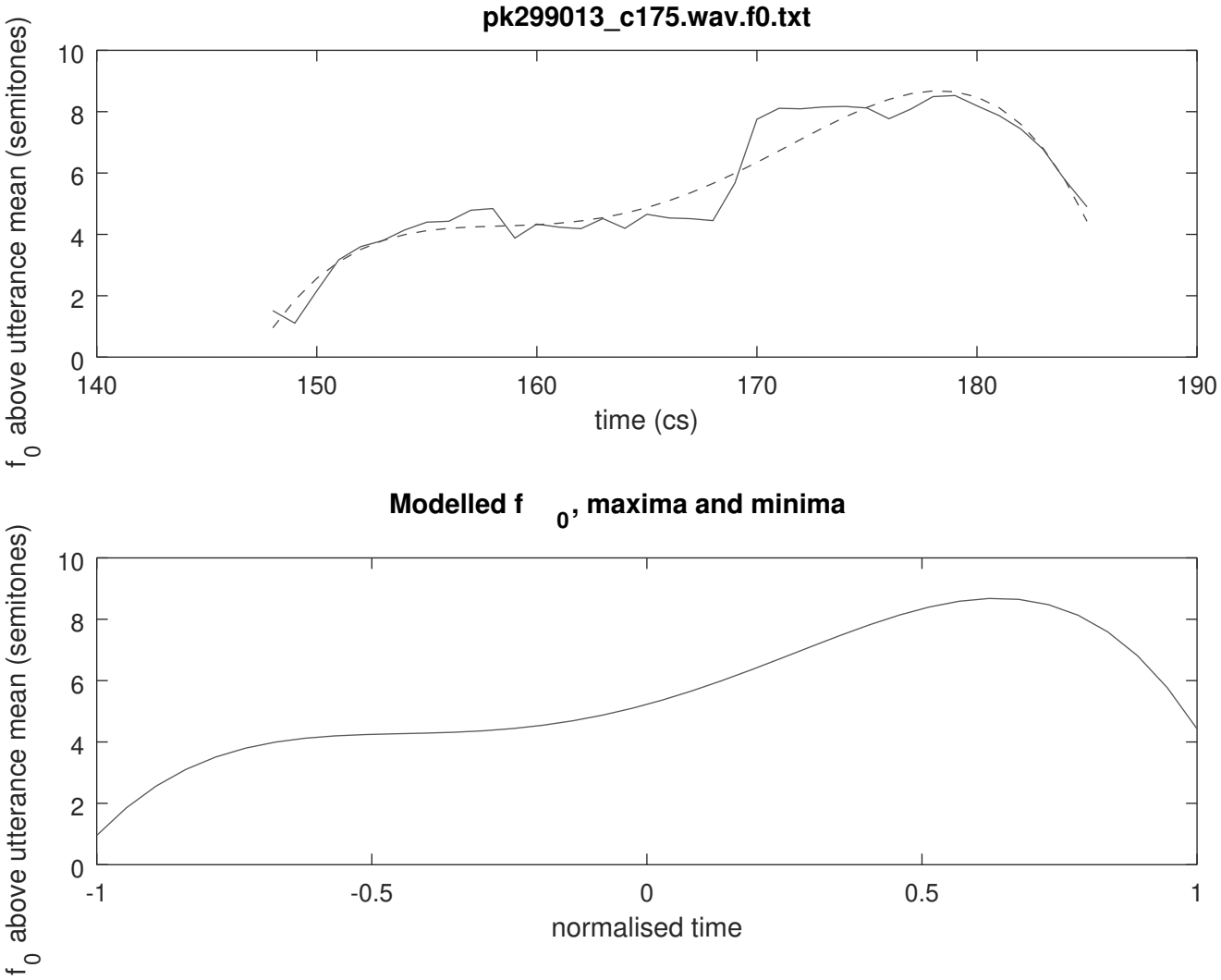

pk299013_c171.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

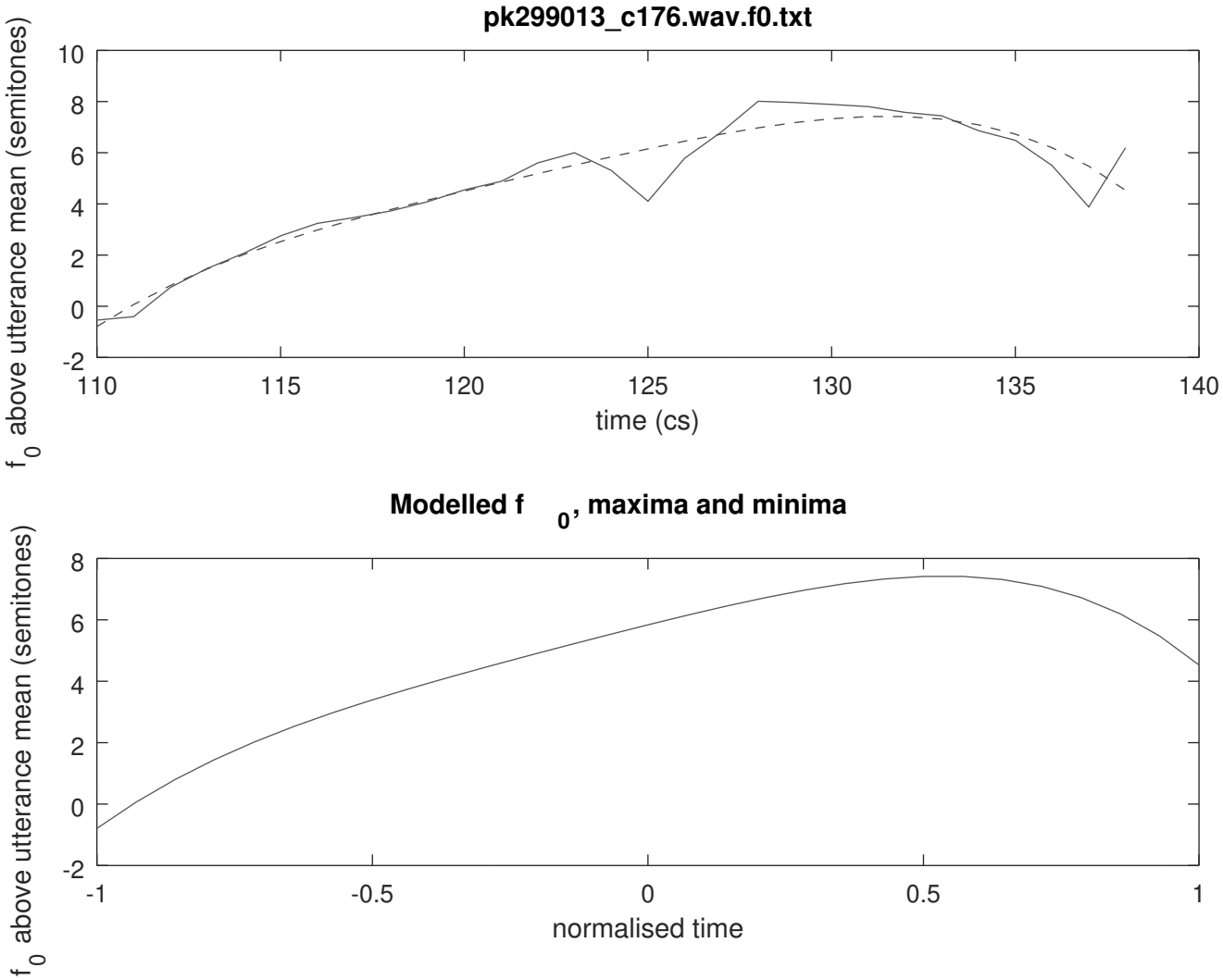

pk299013_c172.wav.f0.txt
f0 above utterance mean (semitones)
10
5
0
-5
-10
110
120
130
140
150
160
170
time (cs)

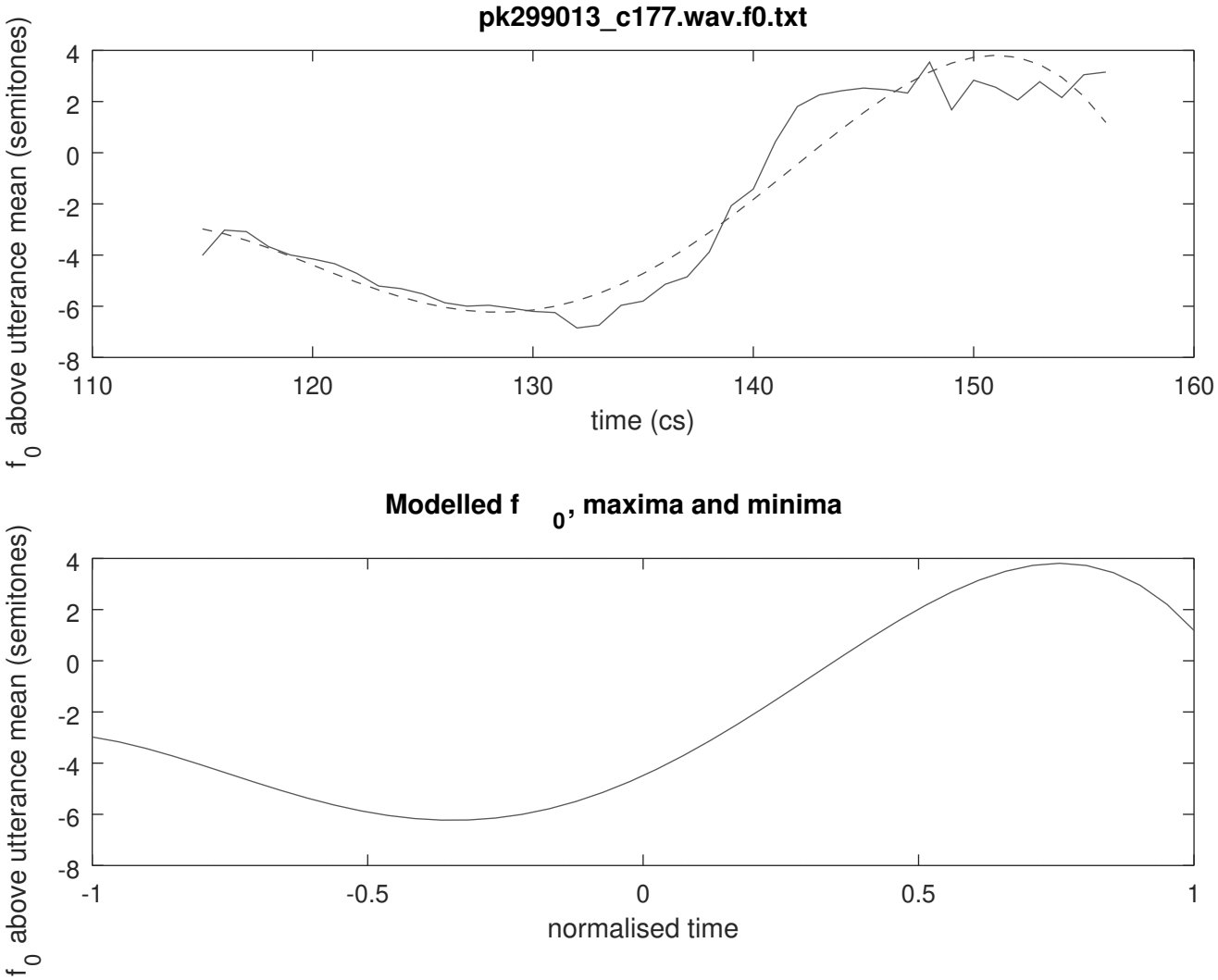

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

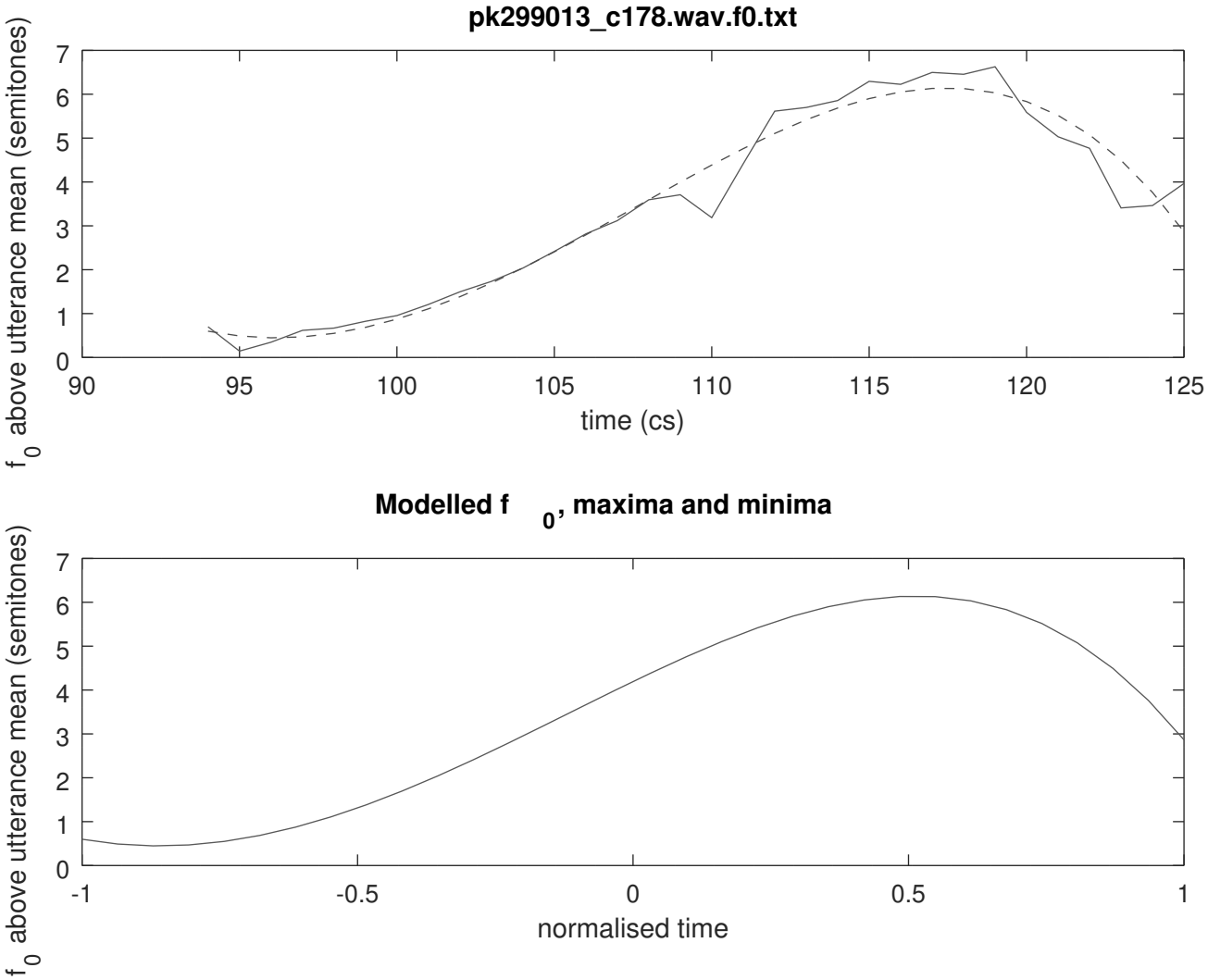

pk299013_c173.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
40
50
60
70
80
90
100
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

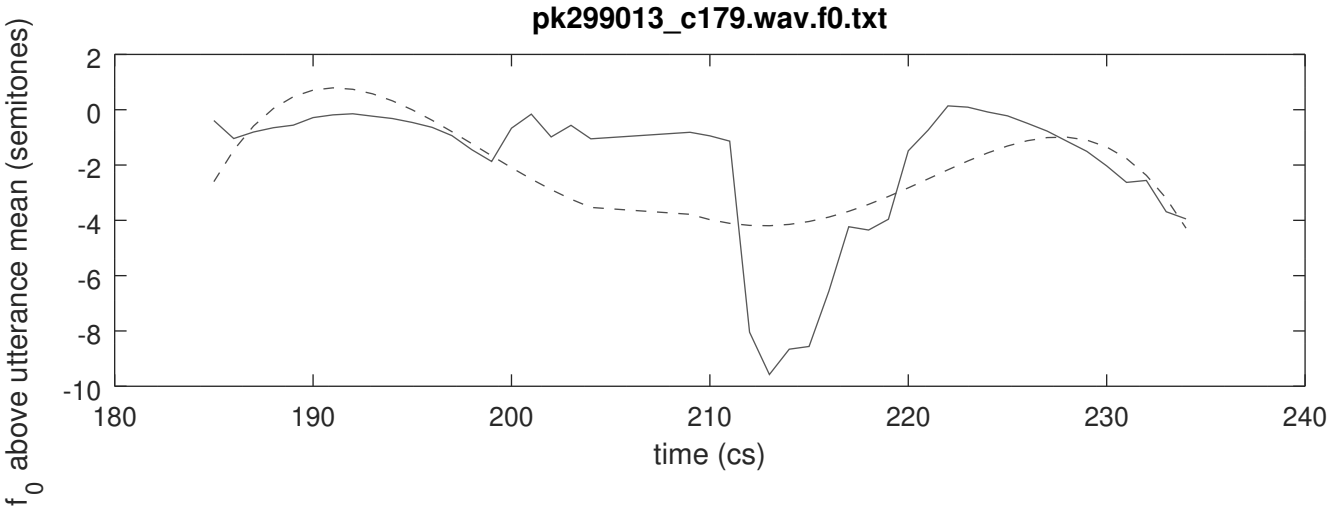

pk299013_c174.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
-8
10
20
30
40
50
60
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

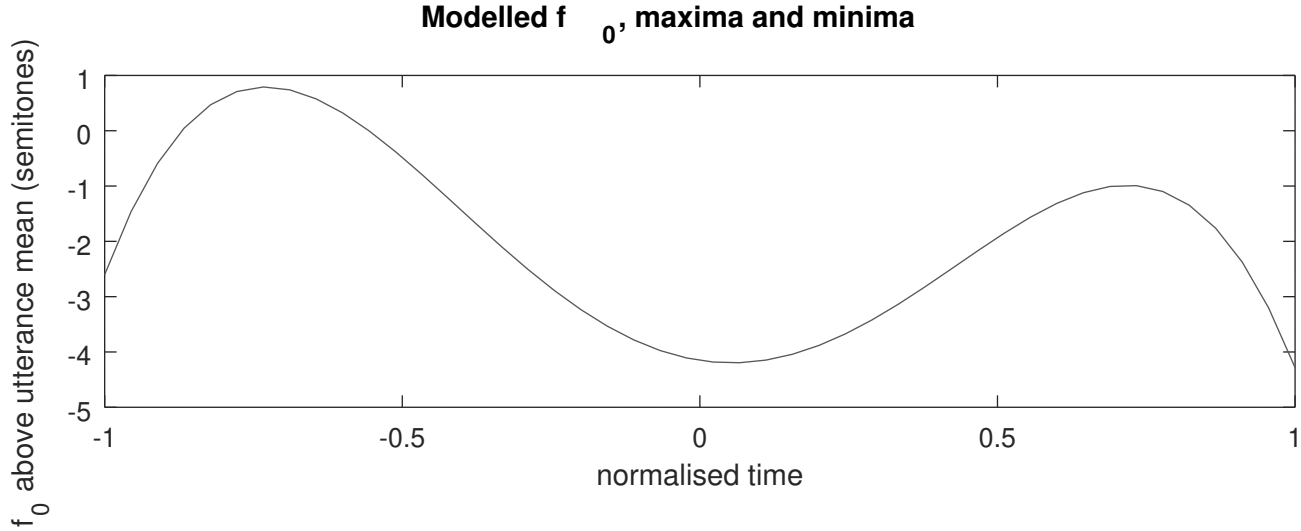

pk299013_c175.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

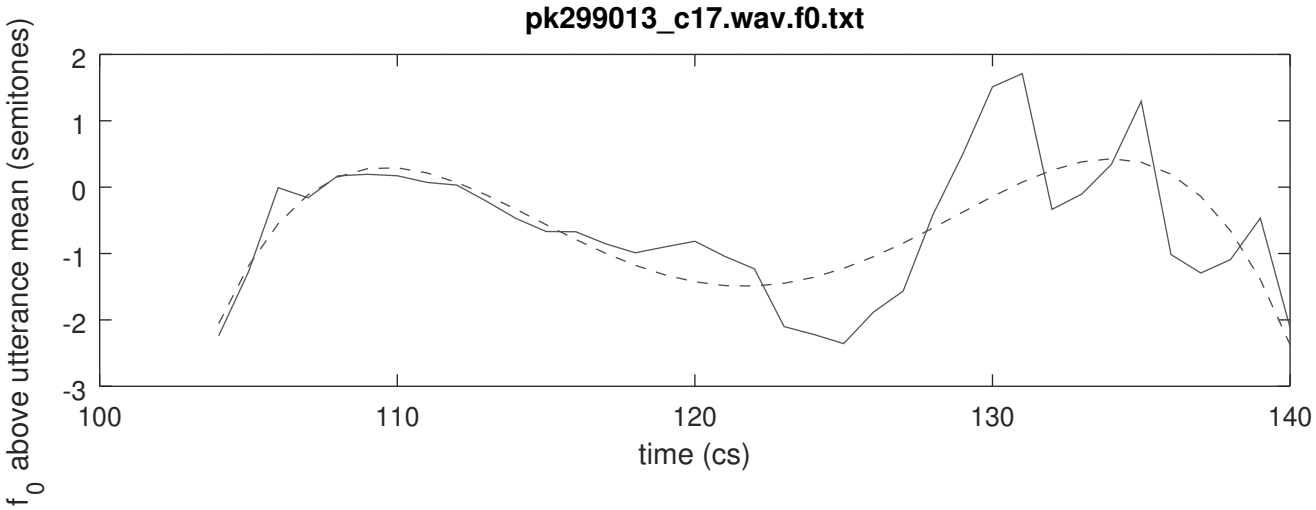

pk299013_c176.wav.f0.txt
f0 above utterance mean (semitones)
10
8
6
4
2
0
-2
110
115
120
125
130
135
140
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

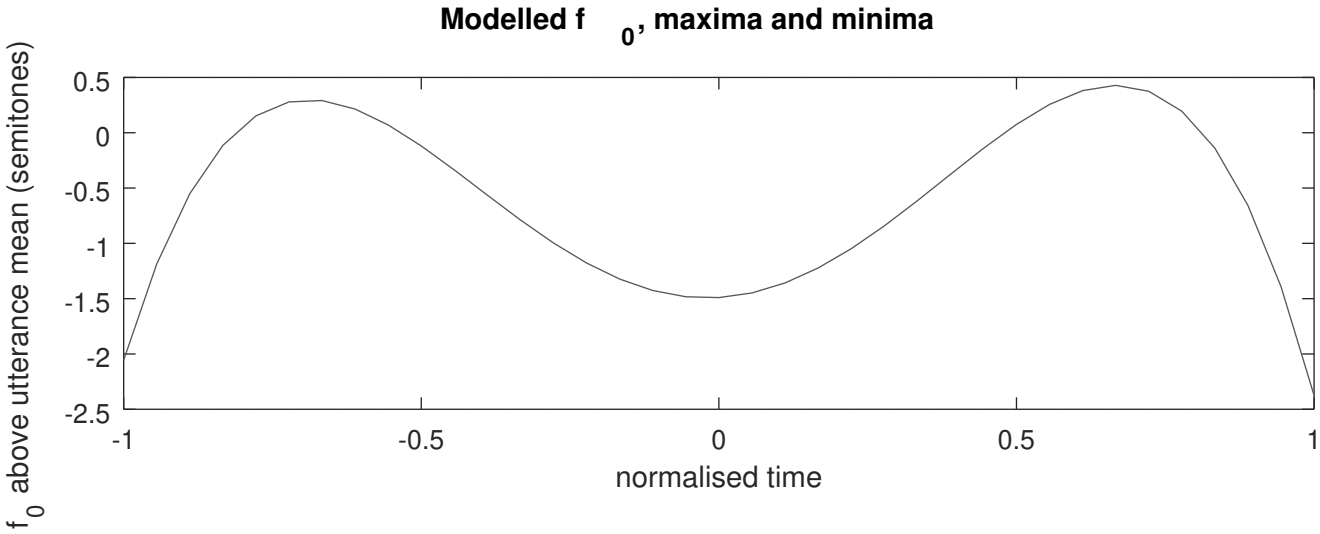

pk299013_c177.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

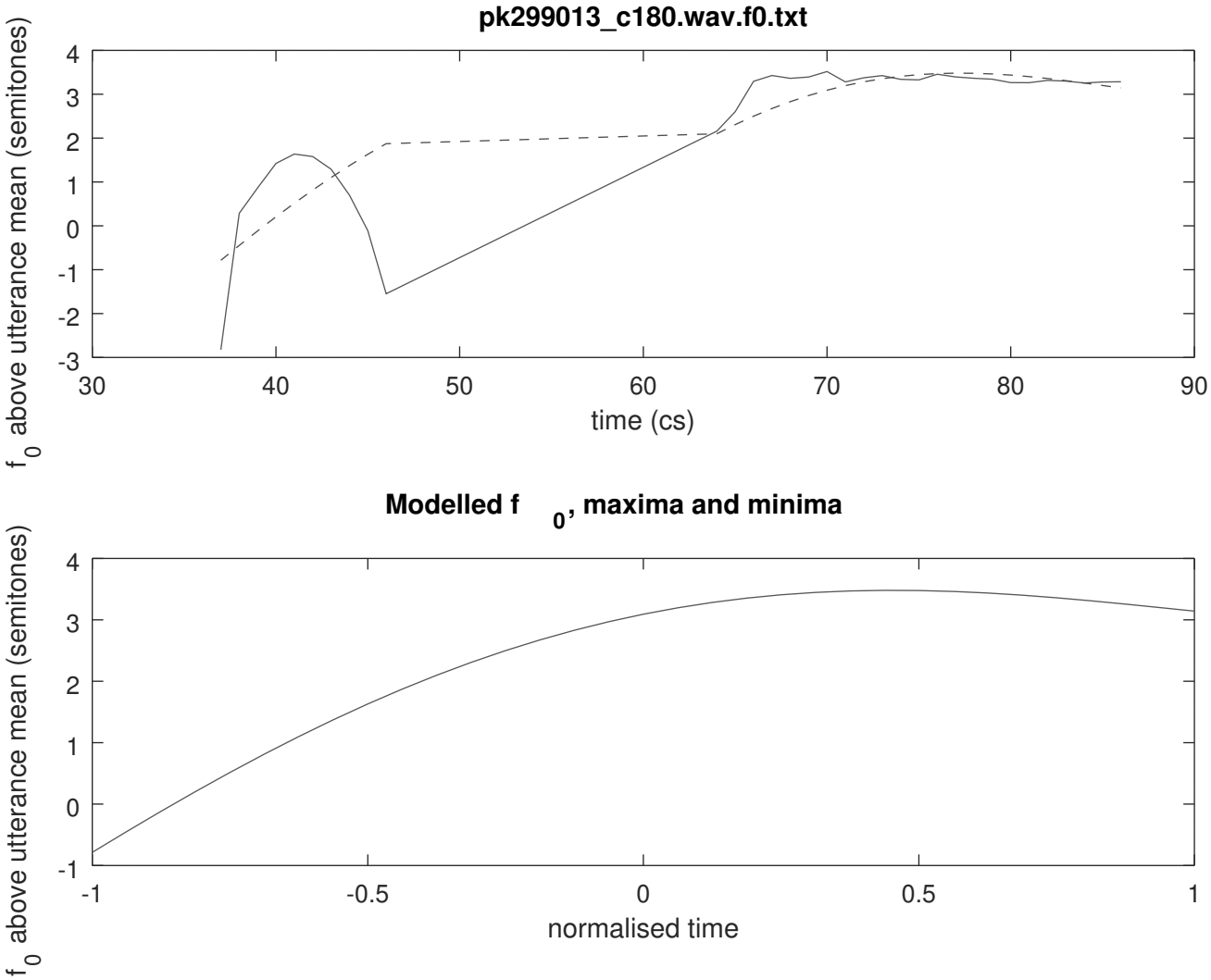

pk299013_c178.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

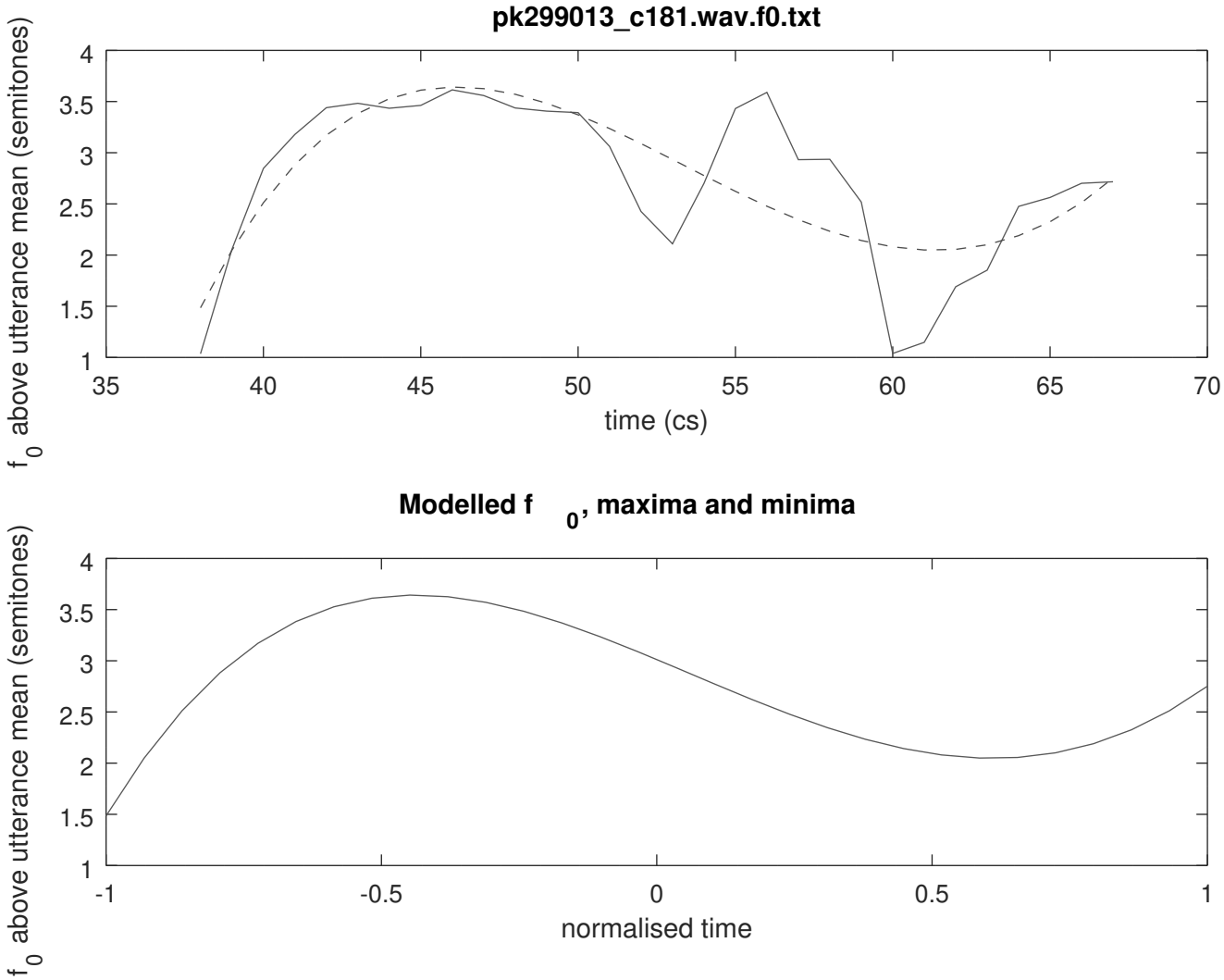

pk299013_c179.wav.f0.txt
f0 above utterance mean (semitones)
2
0
-2
-4
-6
-8
-10
180
190
200
210
220
230
240
time (cs)

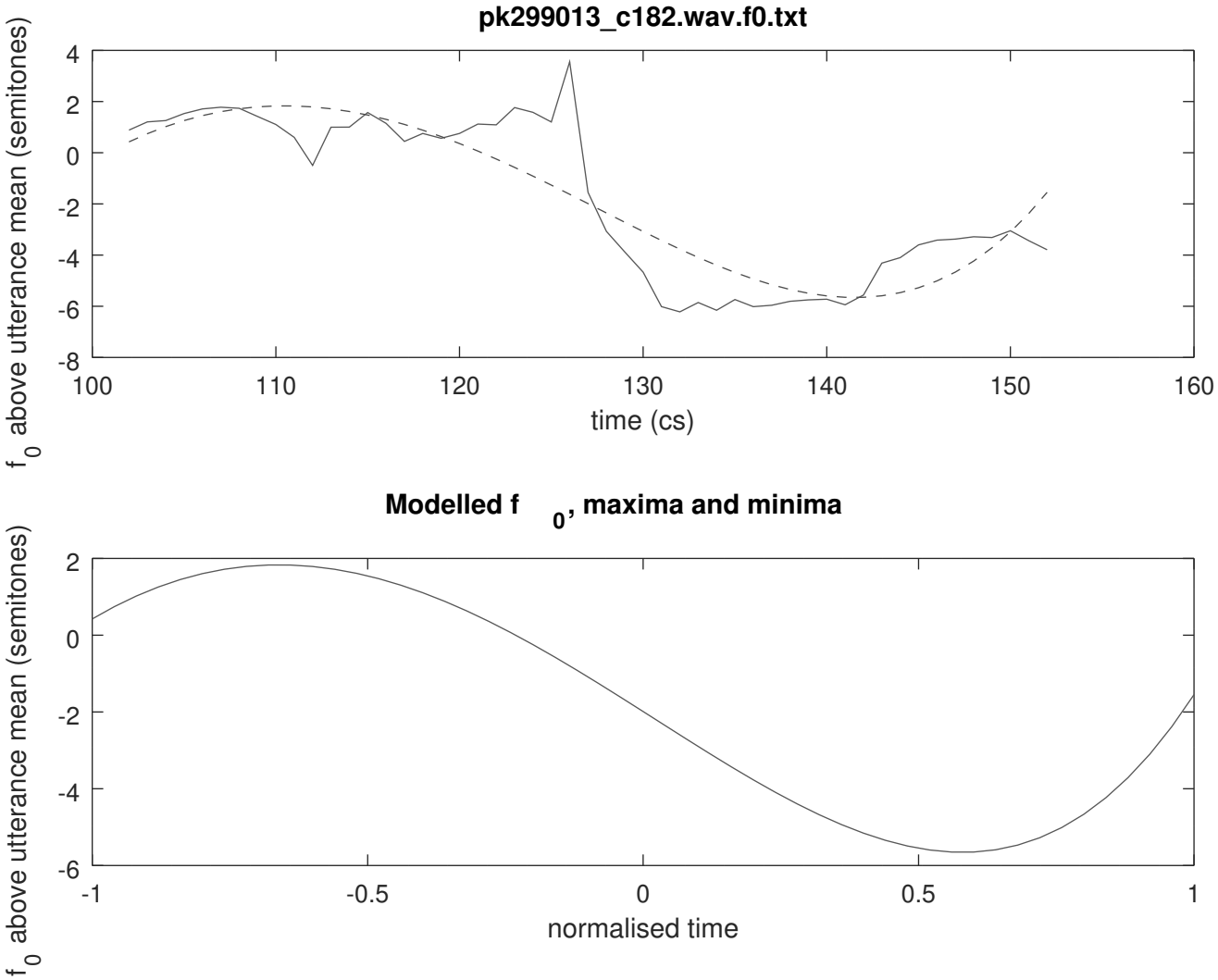

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
1
0
-1
-2
-3
-4
-5
-1
-0.5
0
0.5
1
normalised time

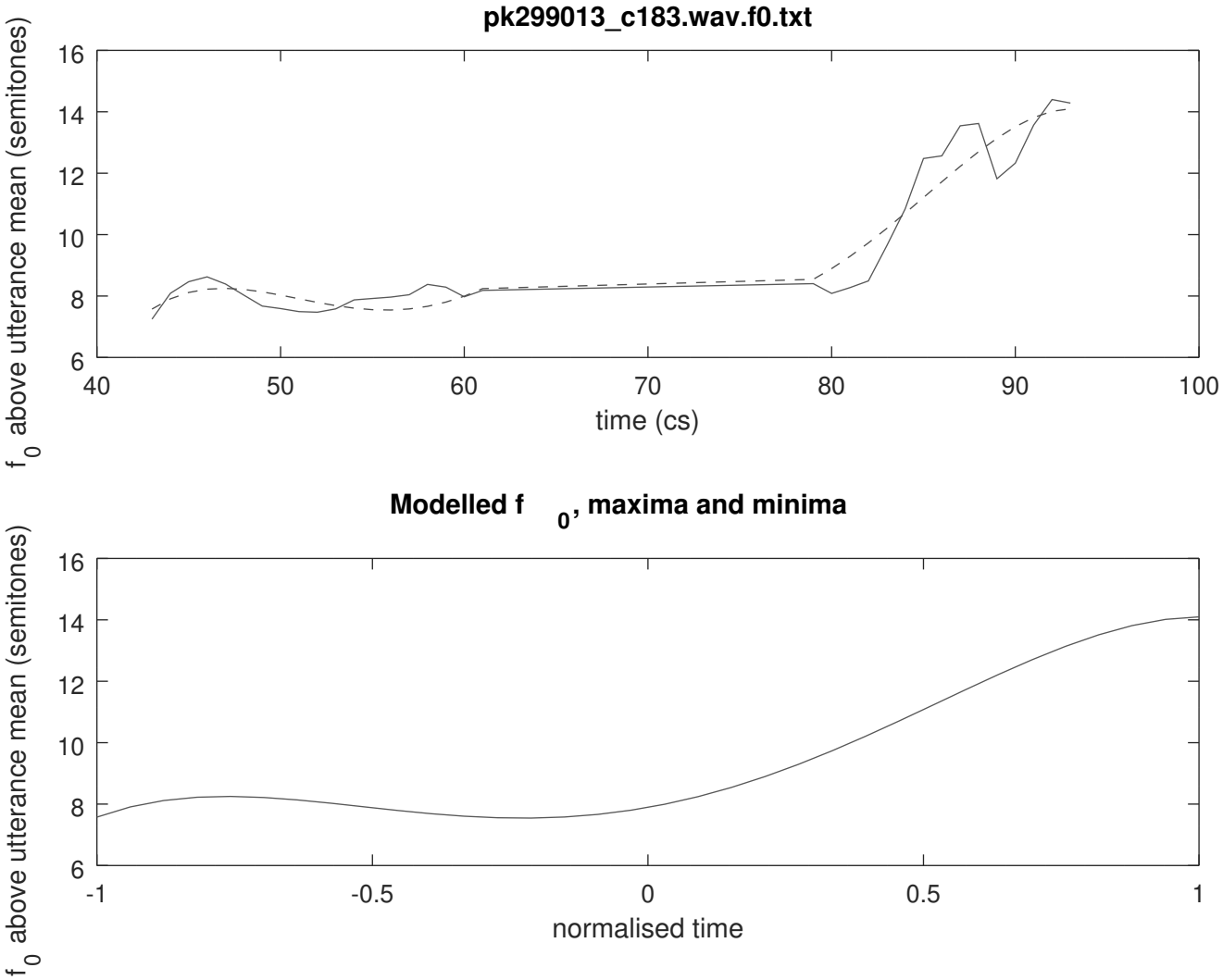

pk299013_c17.wav.f0.txt
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
100
110
120
130
140
time (cs)

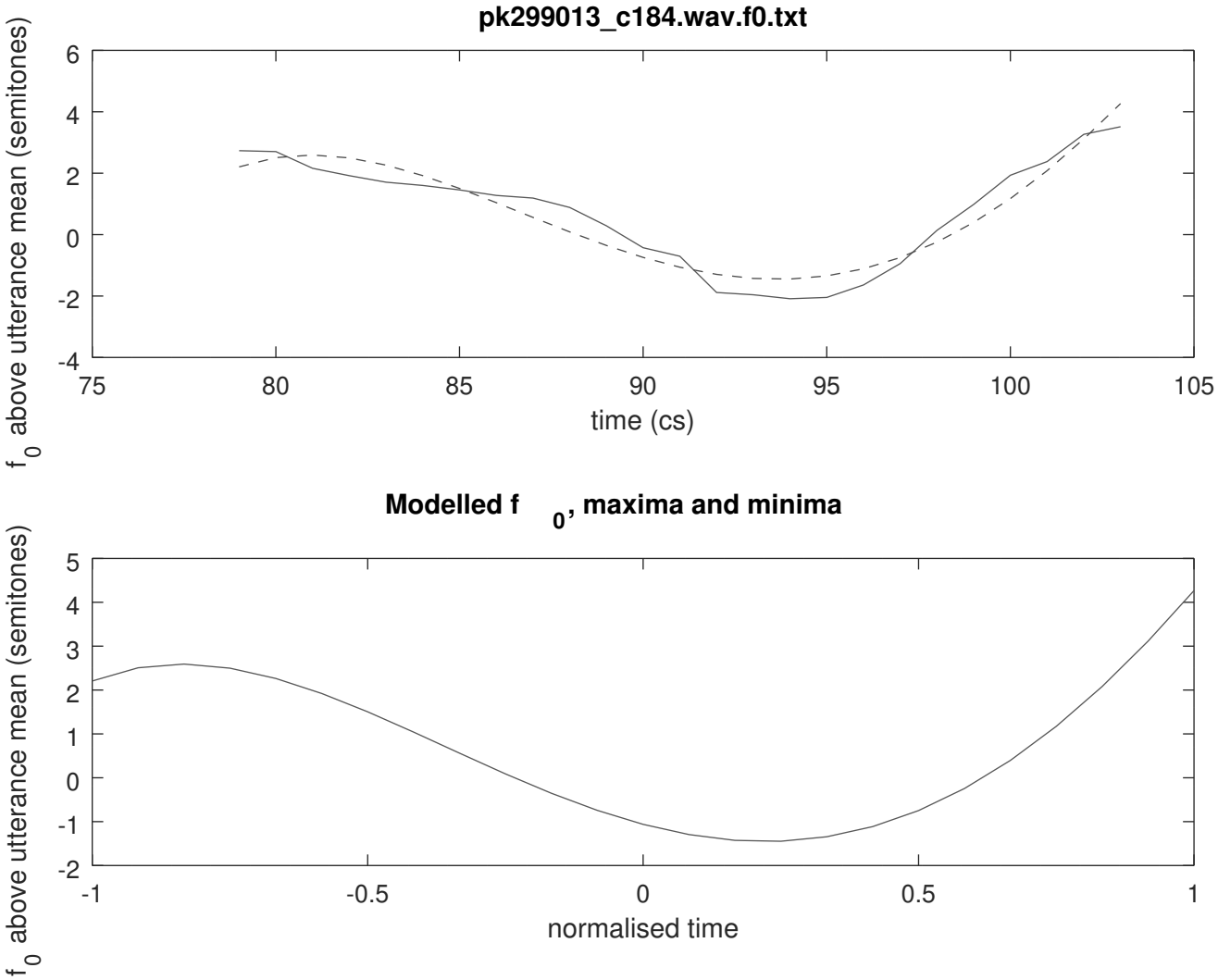

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
0.5
0
-0.5
-1
-1.5
-2
-2.5
-1
-0.5
0
0.5
1
normalised time

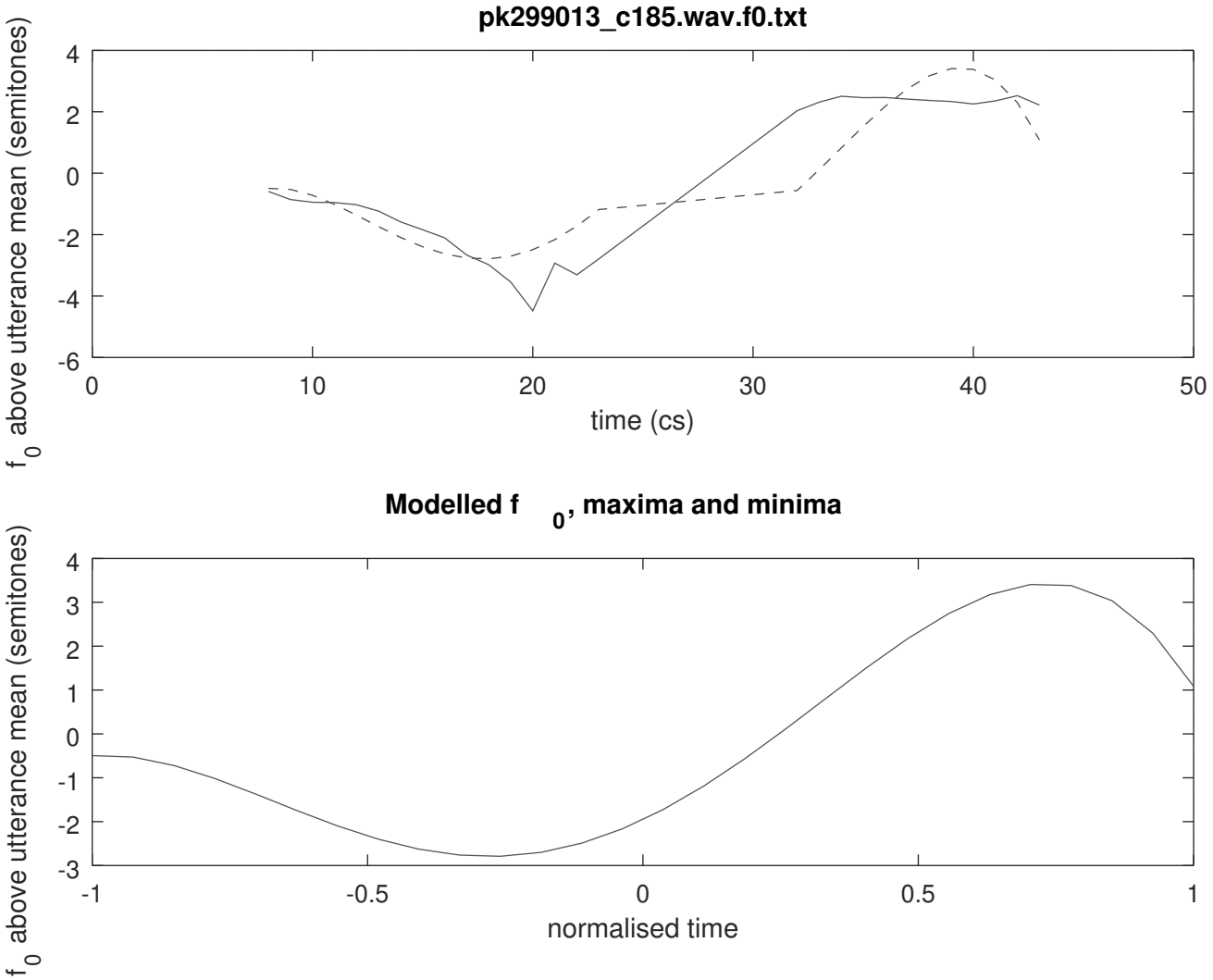

pk299013_c180.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

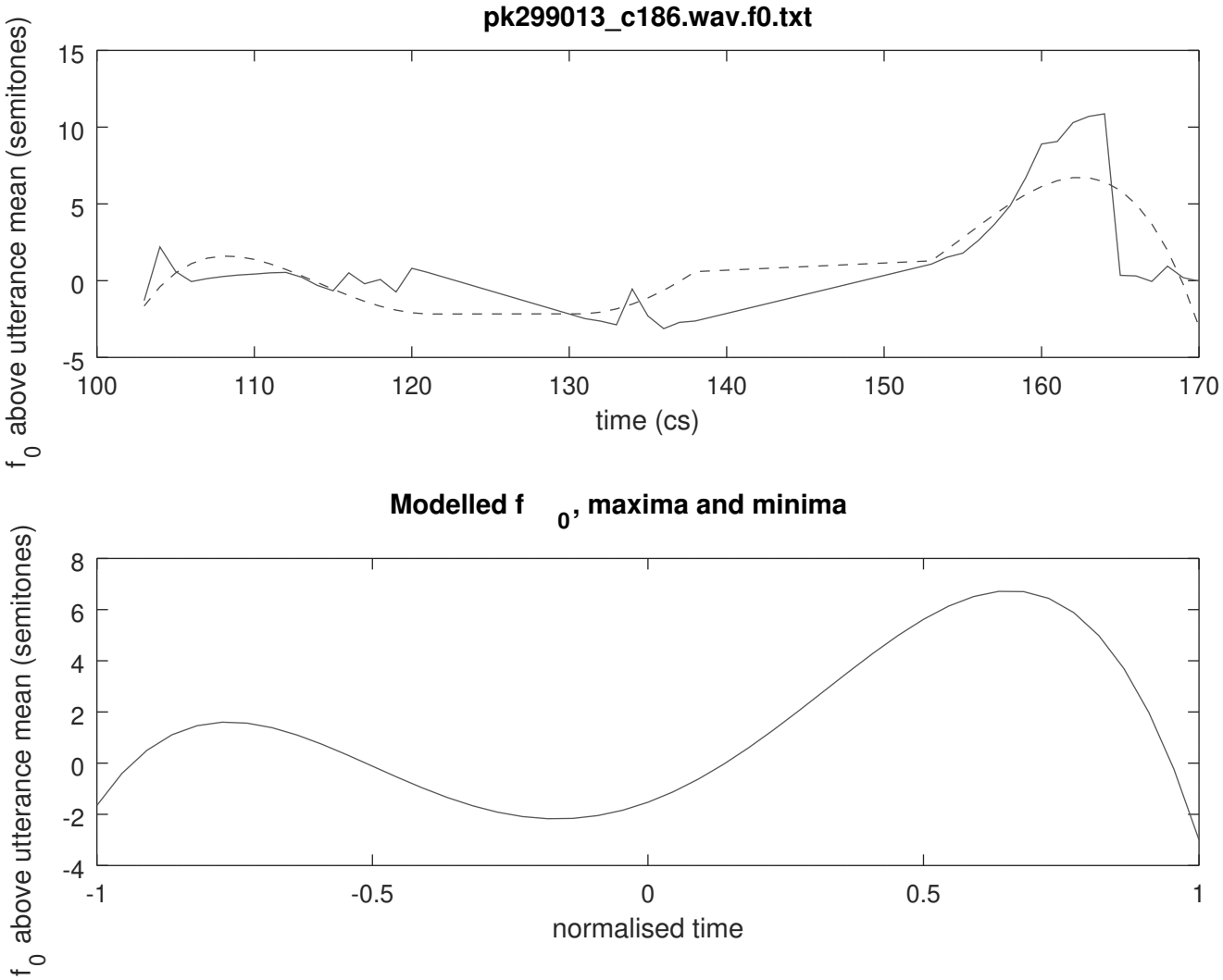

pk299013_c181.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

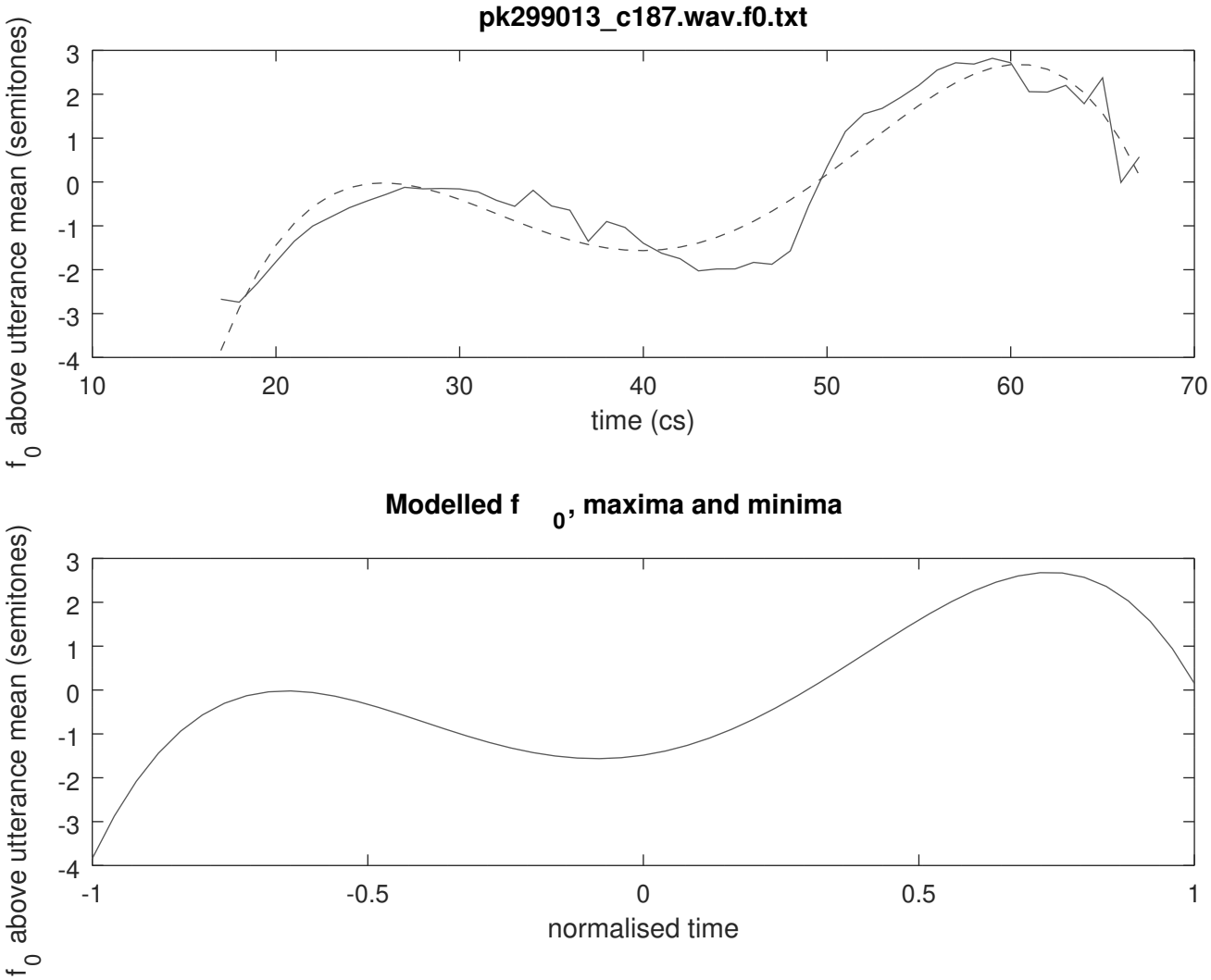

pk299013_c182.wav.f0.txt
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
-8
100
110
120
130
140
150
160
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

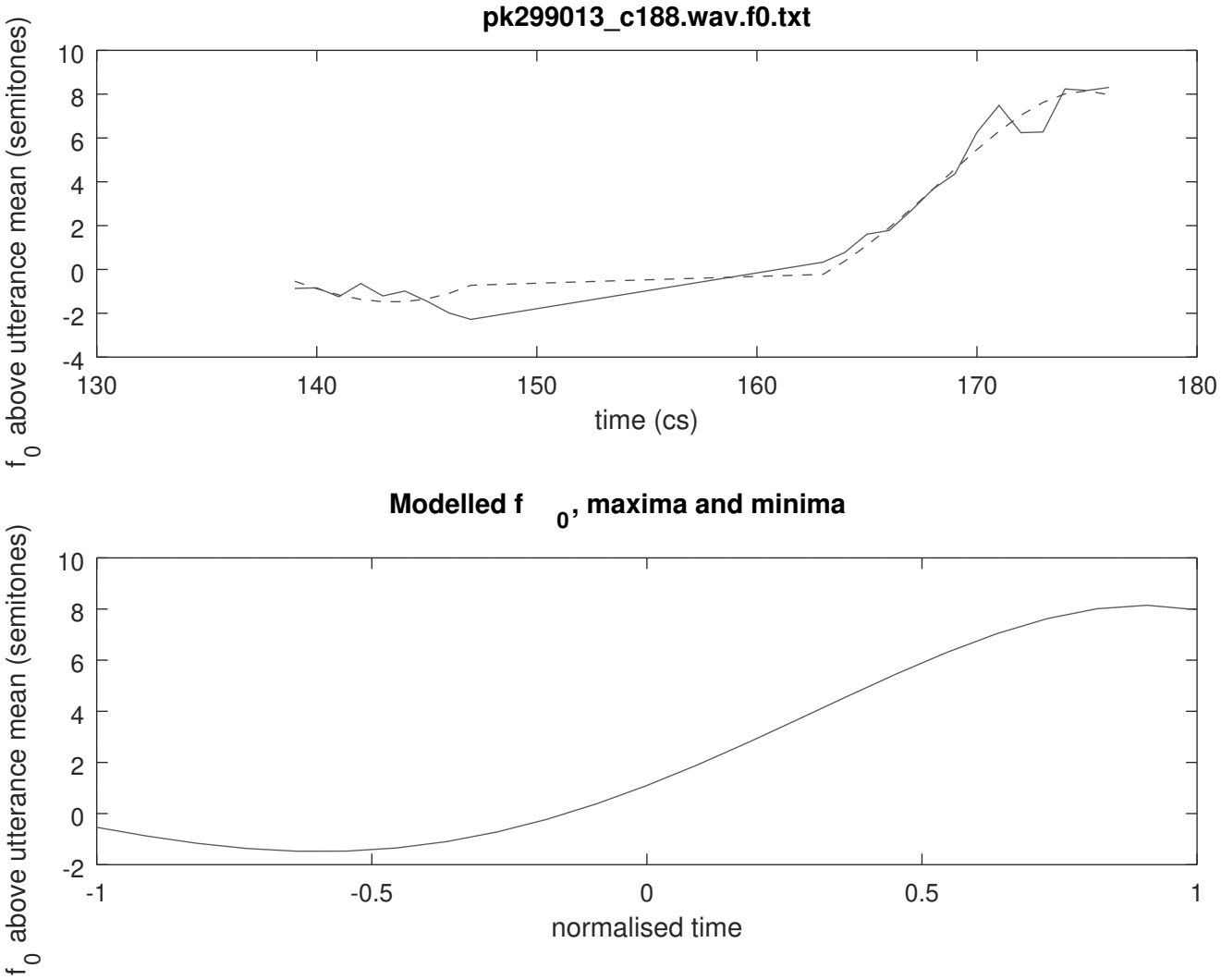

pk299013_c183.wav.f0.txt
f0 above utterance mean (semitones)
16
14
12
10
8
6
40
50
60
70
80
90
100
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
16
14
12
10
8
6
-1
-0.5
0
0.5
1
normalised time

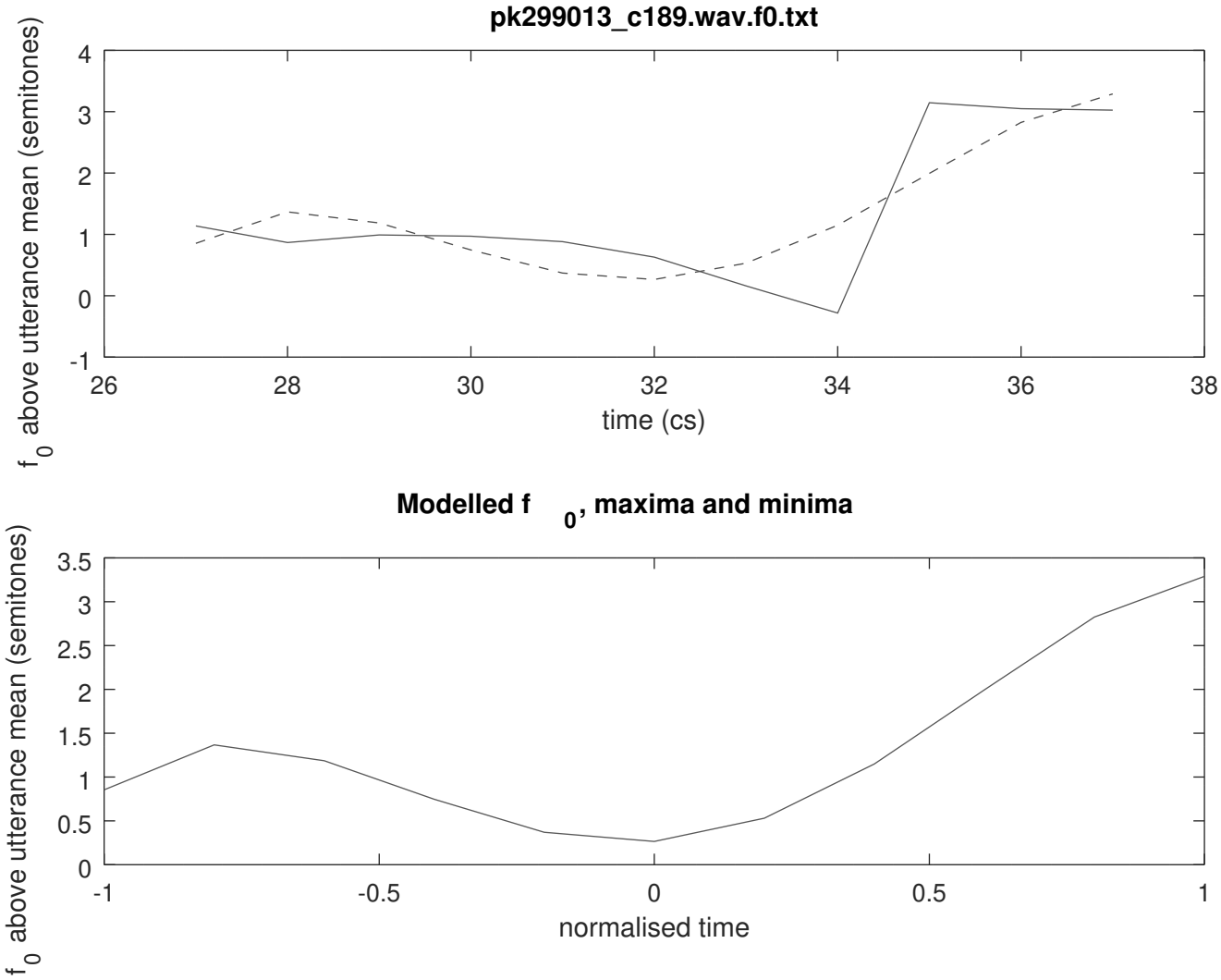

pk299013_c184.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
75
80
85
90
95
100
105
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

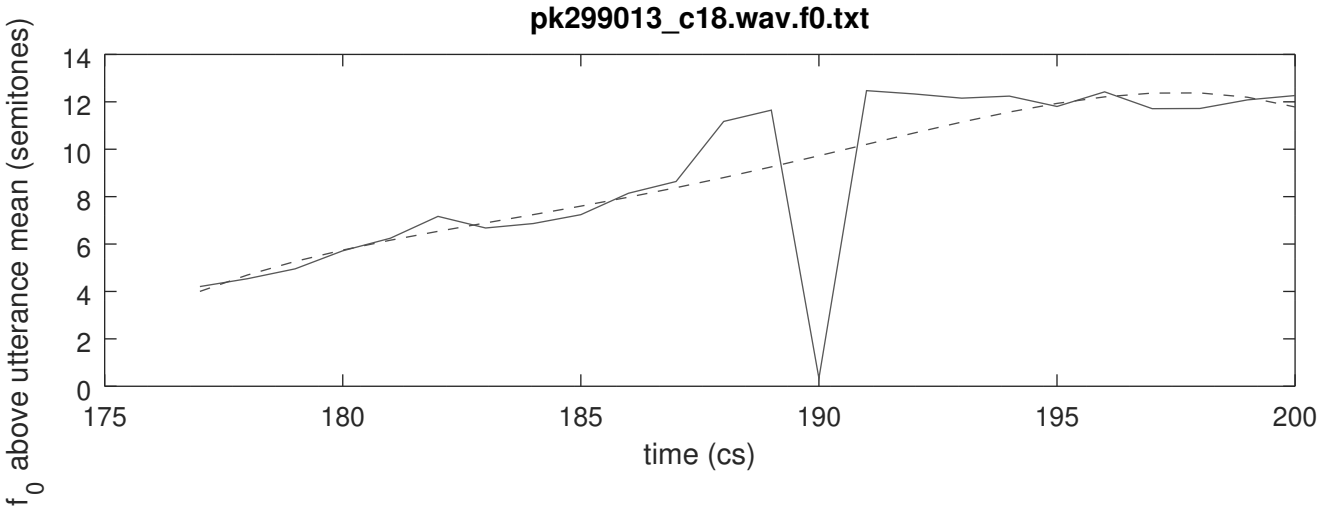

pk299013_c185.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

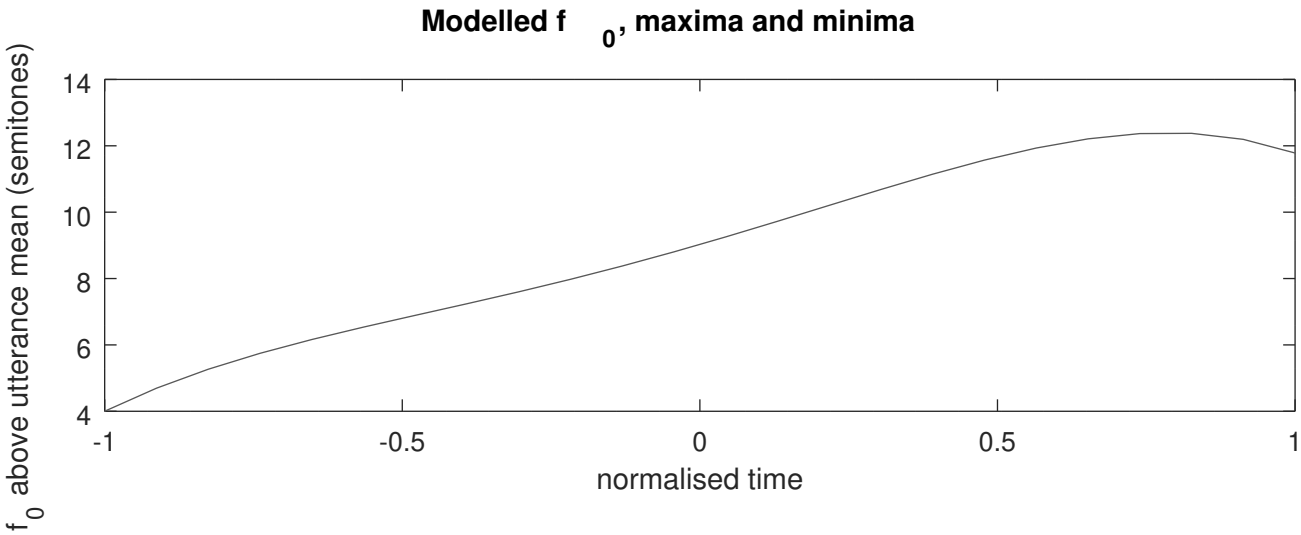

pk299013_c186.wav.f0.txt
f0 above utterance mean (semitones)
15
10
5
0
-5
100
110
120
130
140
150
160
170
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

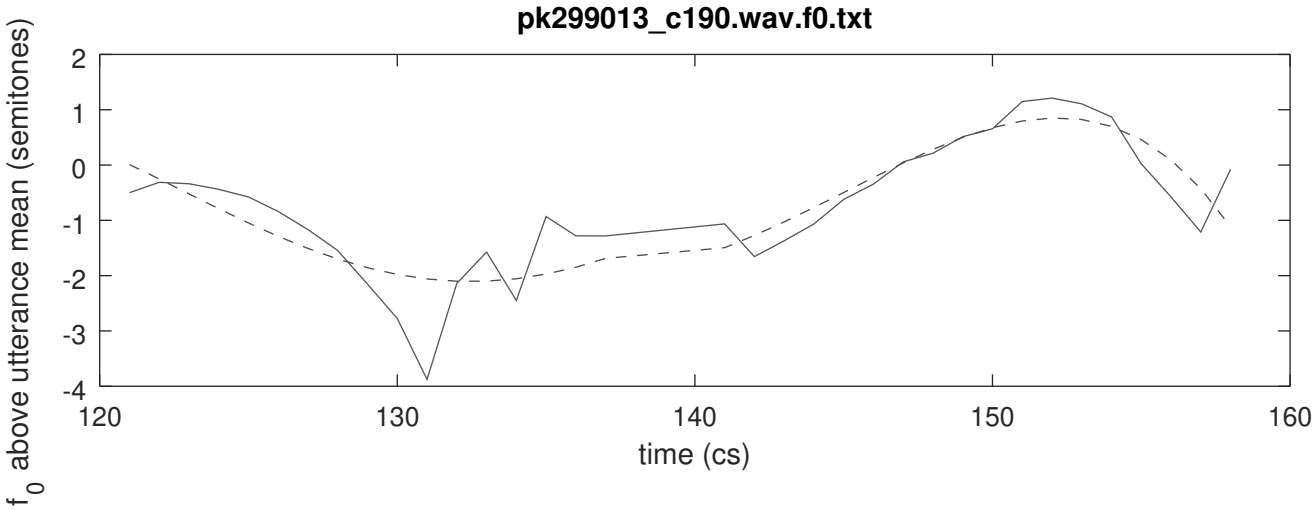

pk299013_c187.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

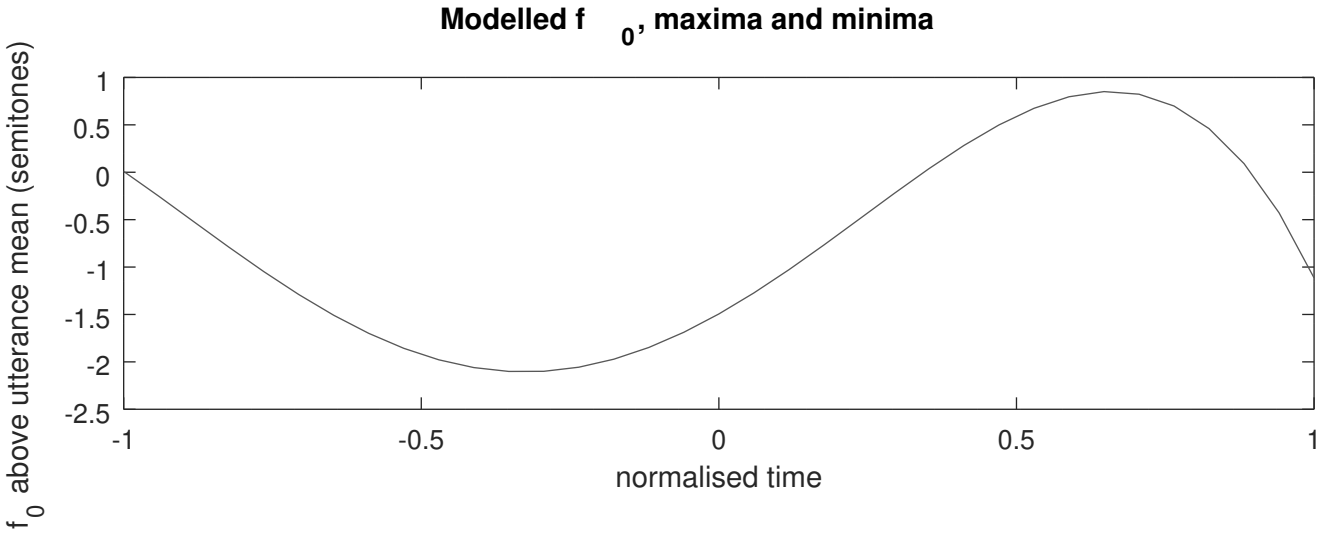

pk299013_c188.wav.f0.txt
f0 above utterance mean (semitones)
10
8
6
4
2
0
-2
-4
130
140
150
160
170
180
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
10
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

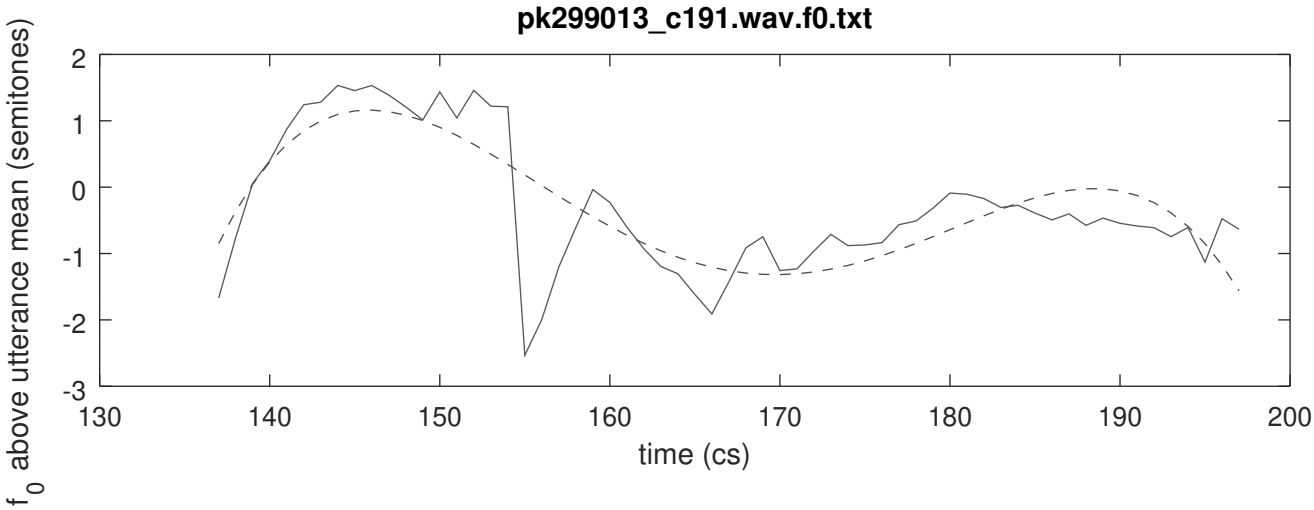

pk299013_c189.wav.f0.txt
f0 above utterance mean (semitones)
4
3
2
1
0
-1
26
28
30
32
34
36
38
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3.5
3
2.5
2
1.5
1
0.5
0
-1
-0.5
0
0.5
1
normalised time

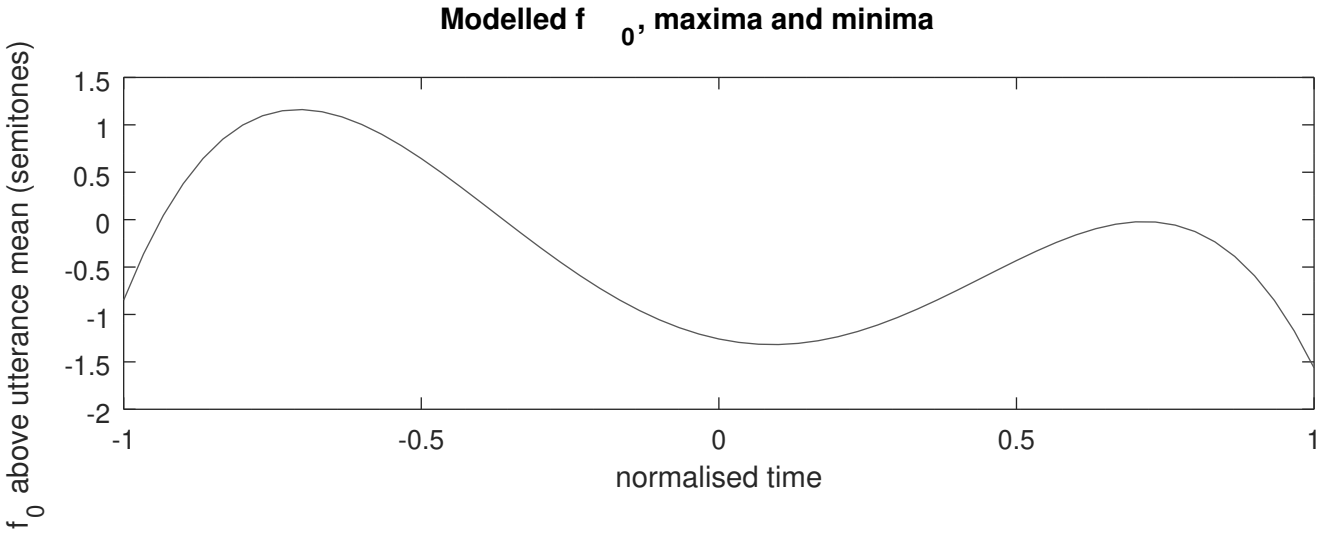

pk299013_c18.wav.f0.txt
f0 above utterance mean (semitones)
14
12
10
8
6
4
2
0
175
180
185
190
195
200
time (cs)

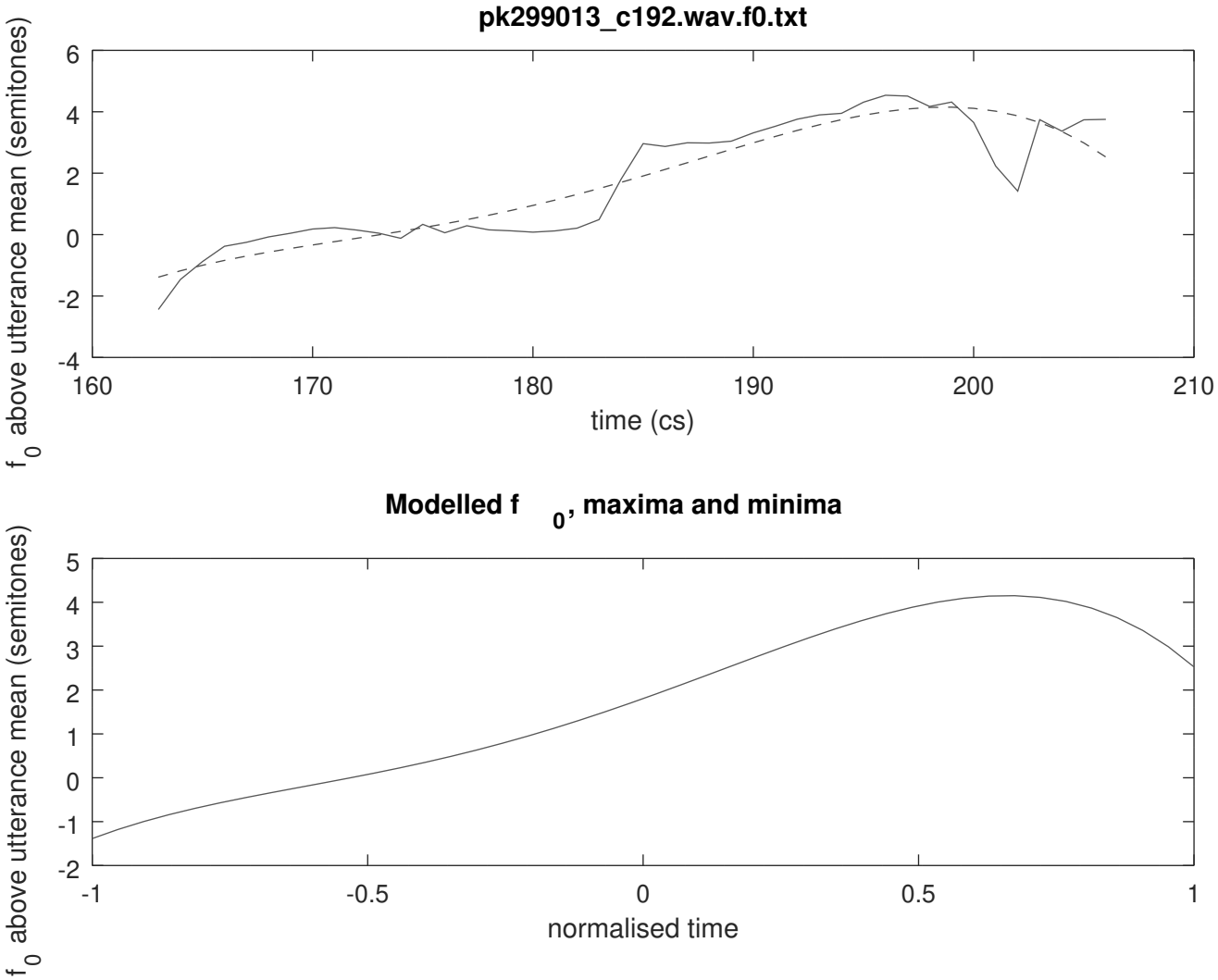

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
14
12
10
8
6
4
-1
-0.5
0
0.5
1
normalised time

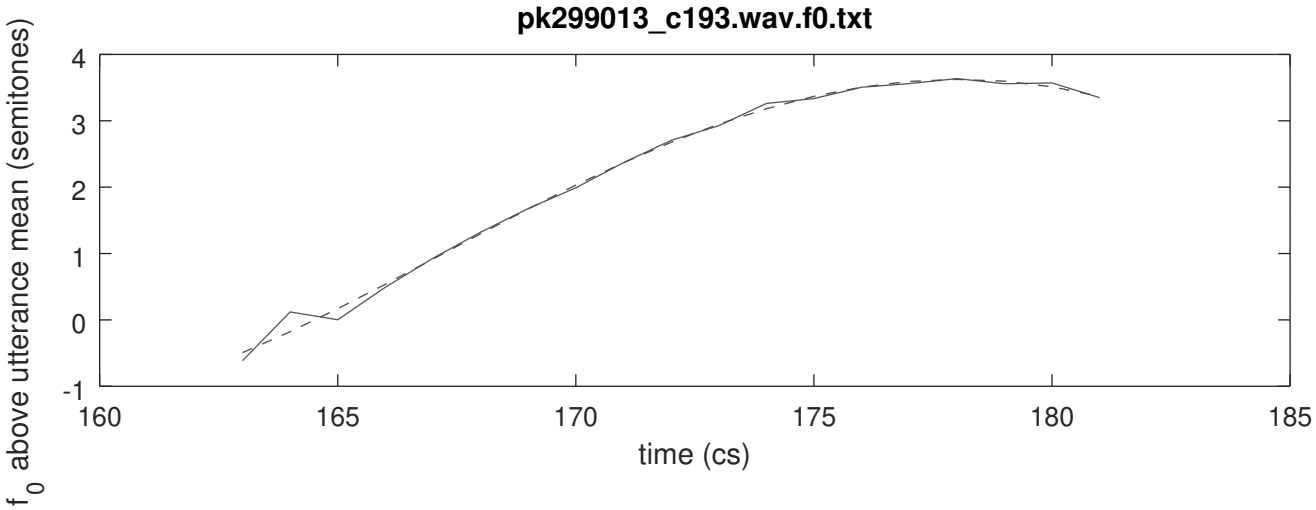

pk299013_c190.wav.f0.txt
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-4
120
130
140
150
160
time (cs)

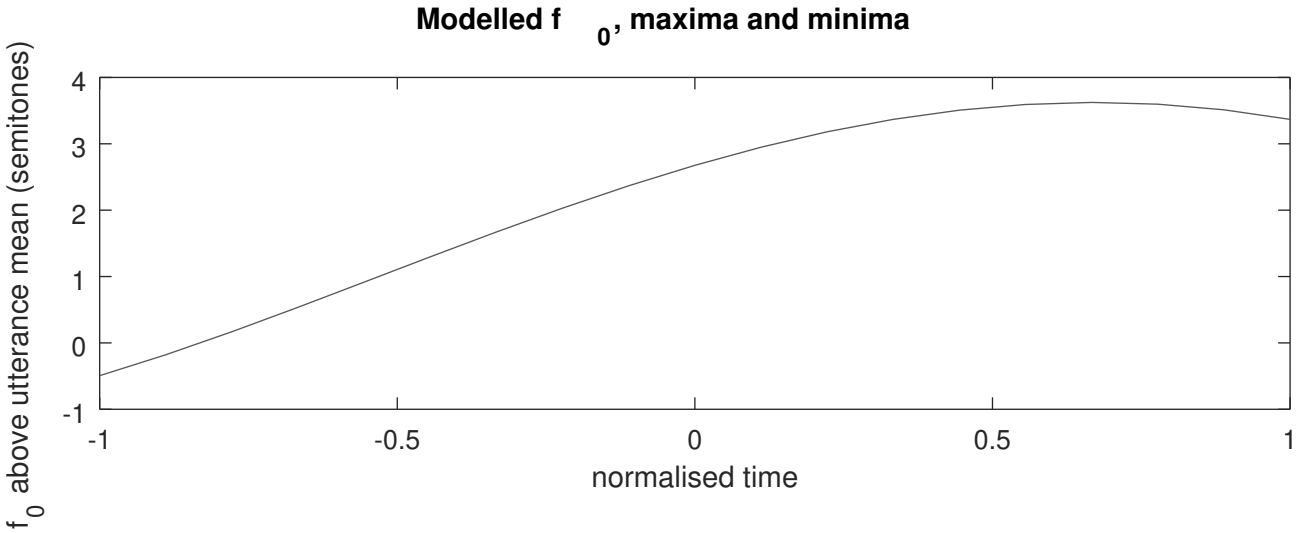

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
1
0.5
0
-0.5
-1
-1.5
-2
-2.5
-1
-0.5
0
0.5
1
normalised time

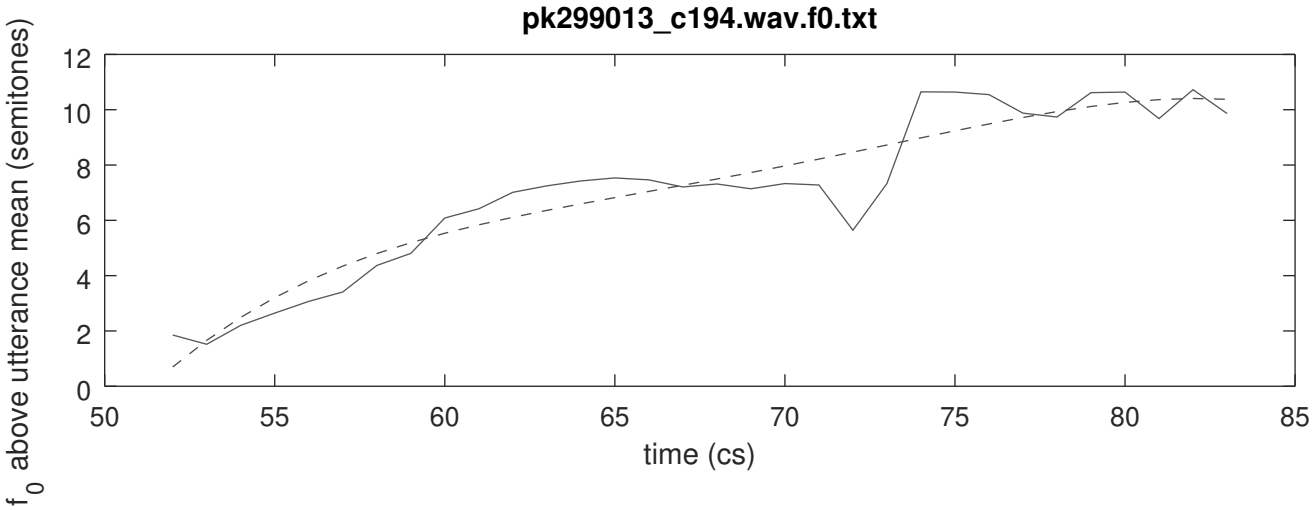

pk299013_c191.wav.f0.txt
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
130
140
150
160
170
180
190
200
time (cs)

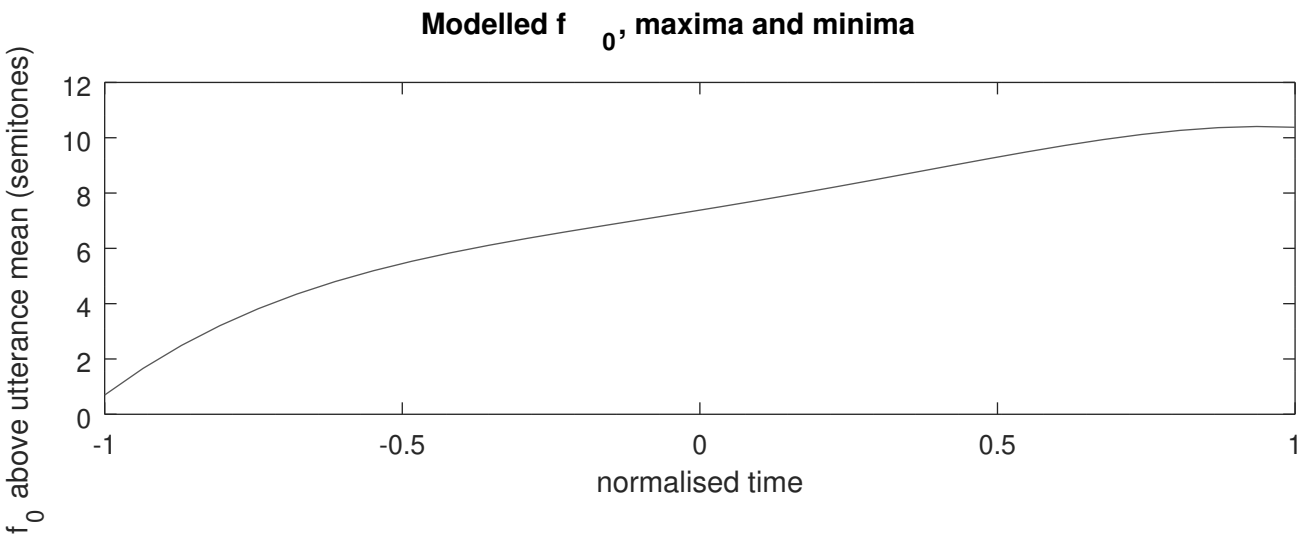

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-1
-0.5
0
0.5
1
normalised time

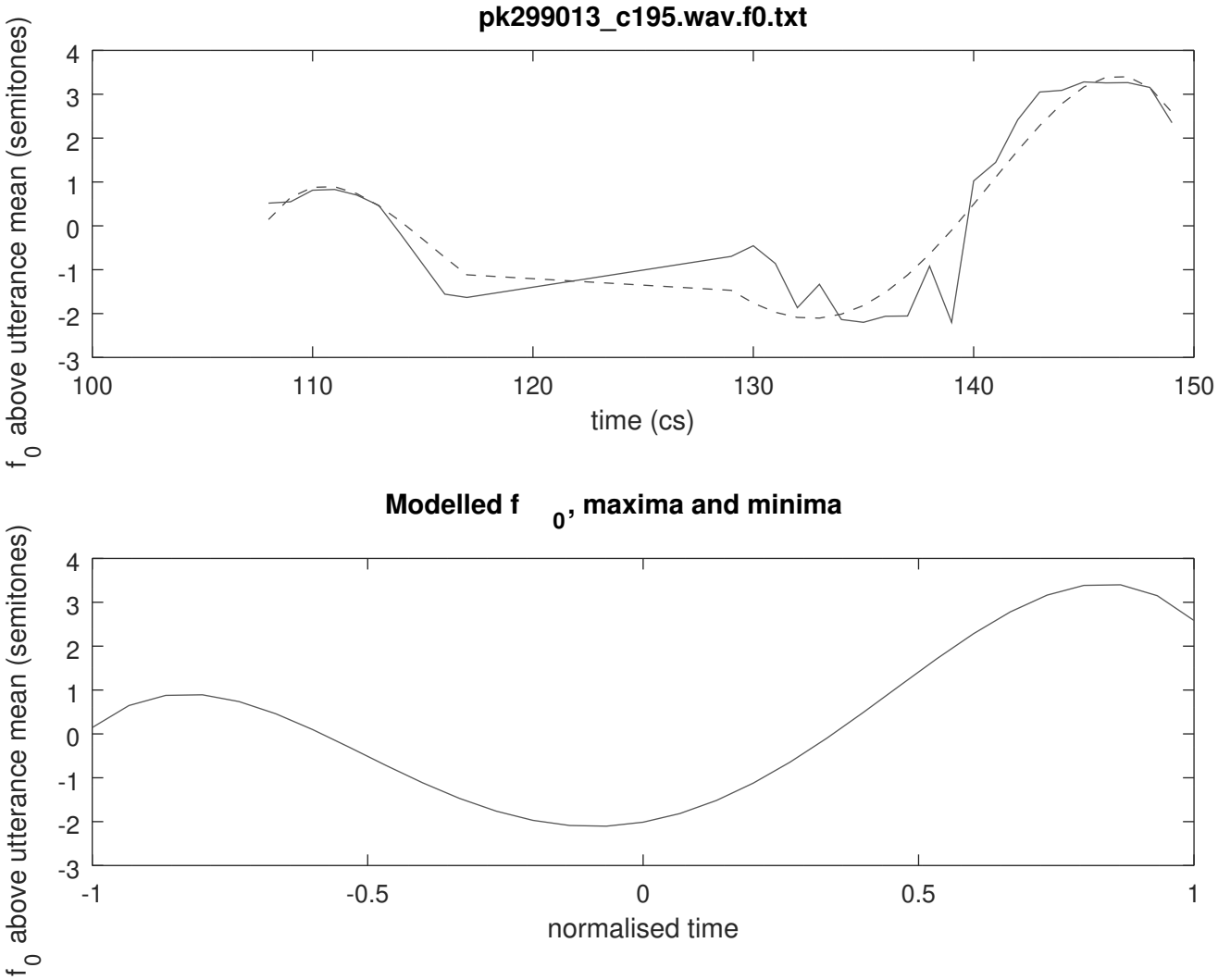

pk299013_c192.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
160
170
180
190
200
210
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

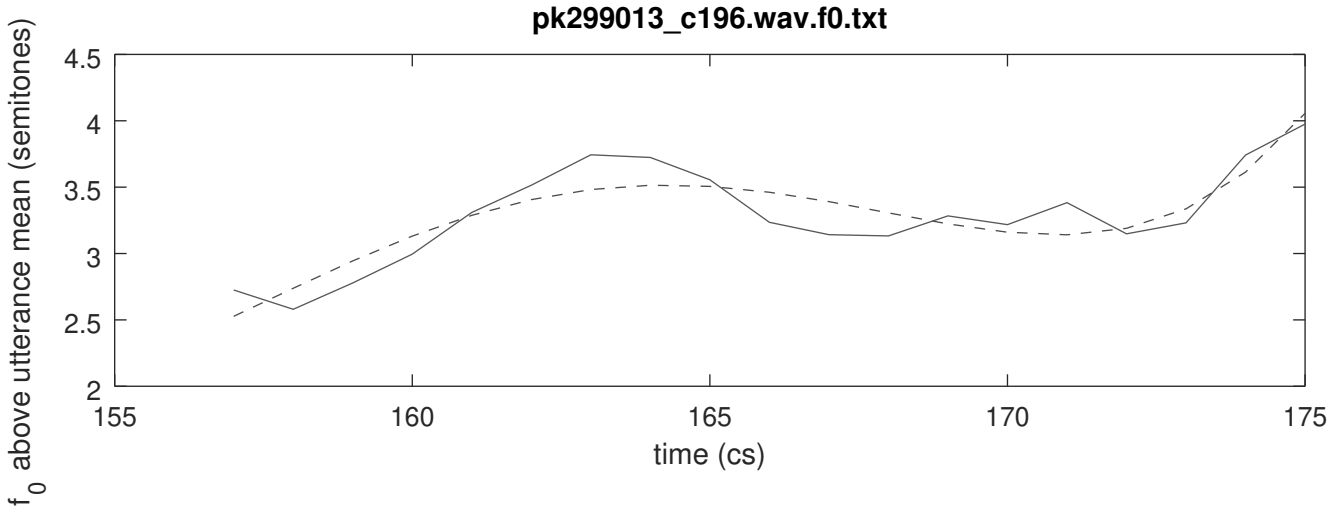

pk299013_c193.wav.f0.txt
f0 above utterance mean (semitones)
4
3
2
1
0
-1
160
165
170
175
180
185
time (cs)

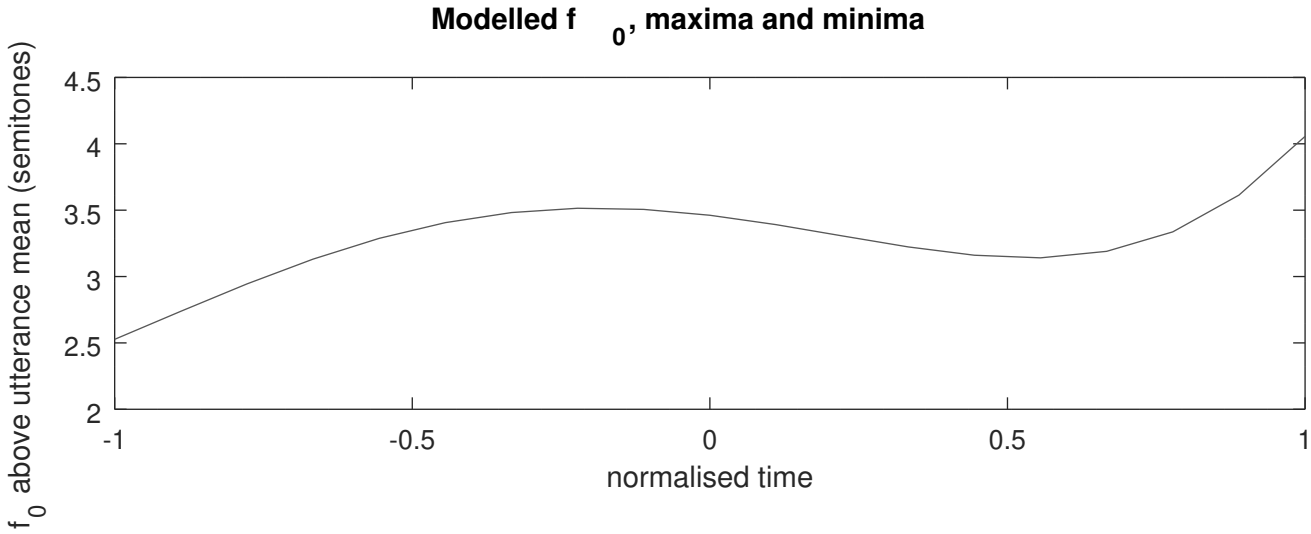

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

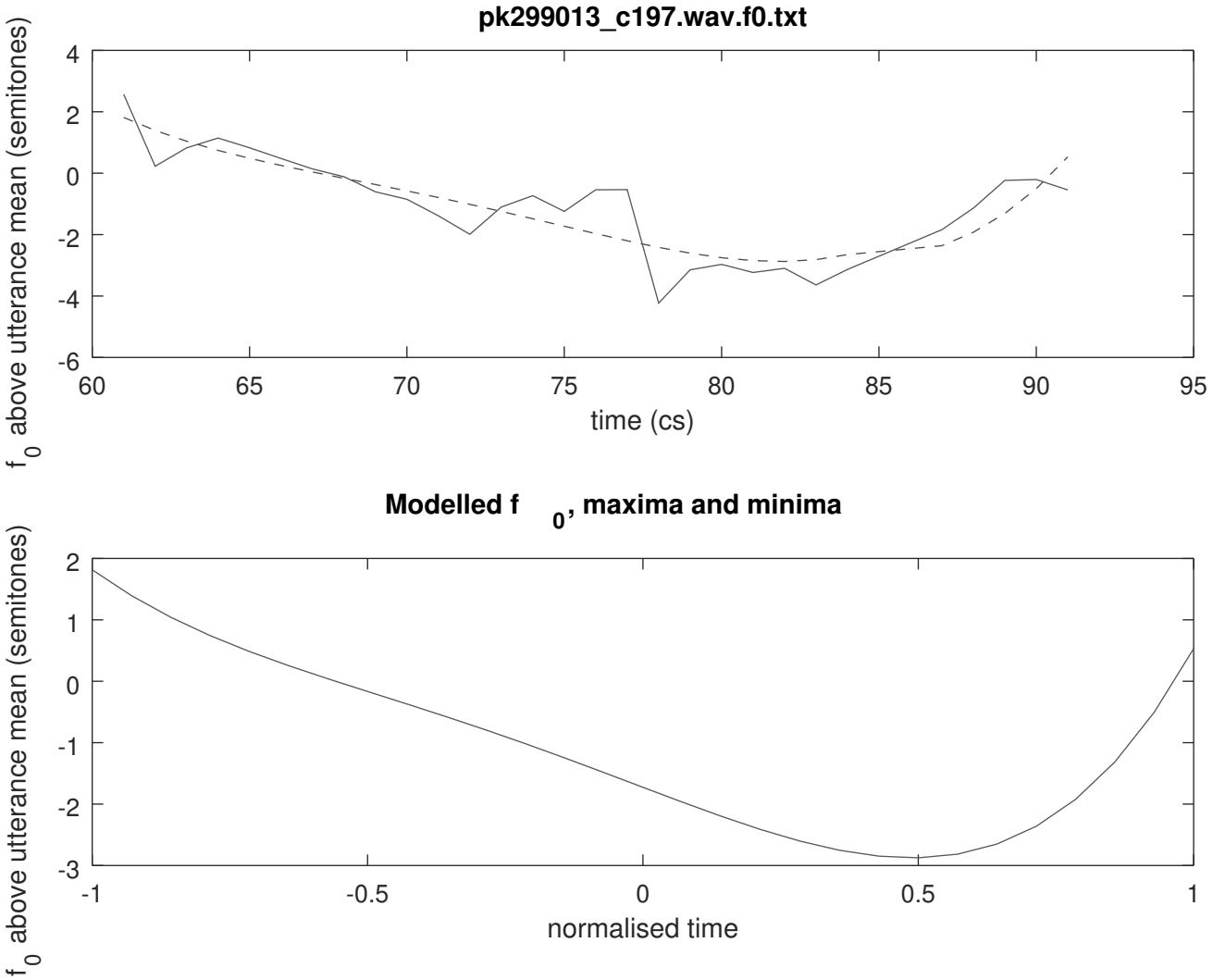

pk299013_c194.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
0
2
4
6
8
10
12
50
55
60
65
70
75
80
85

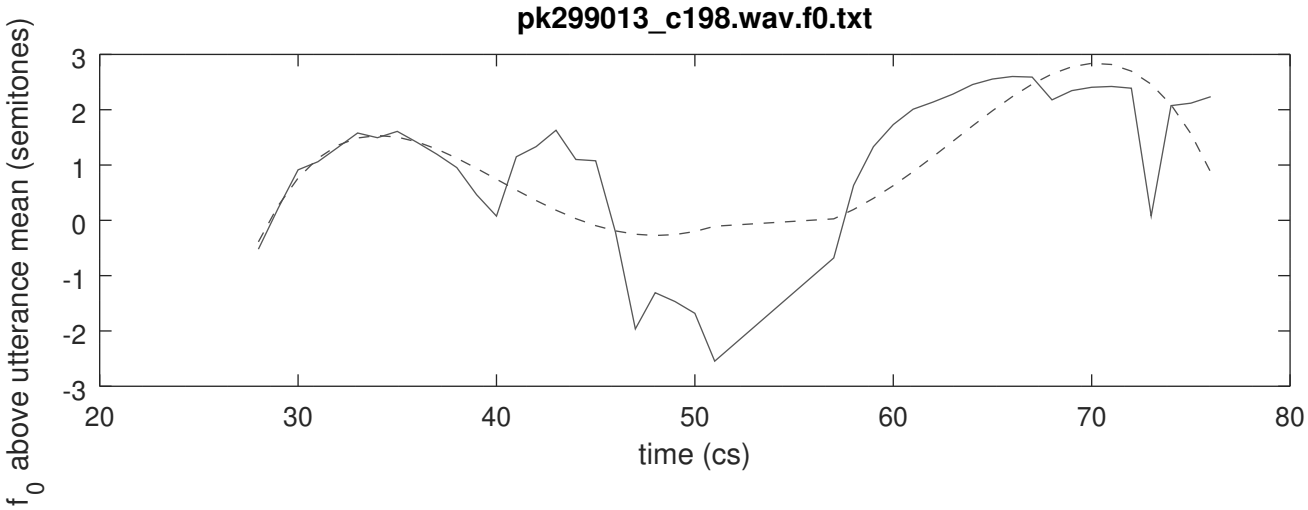

Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time
0
2
4
6
8
10
12
-1
-0.5
0
0.5
1

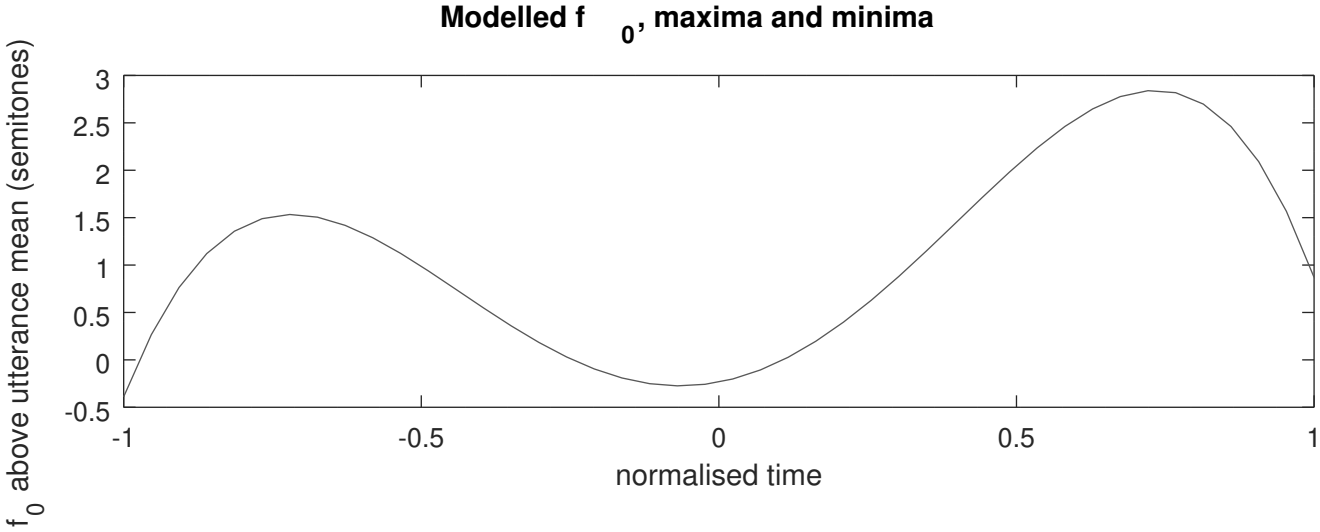

pk299013_c195.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

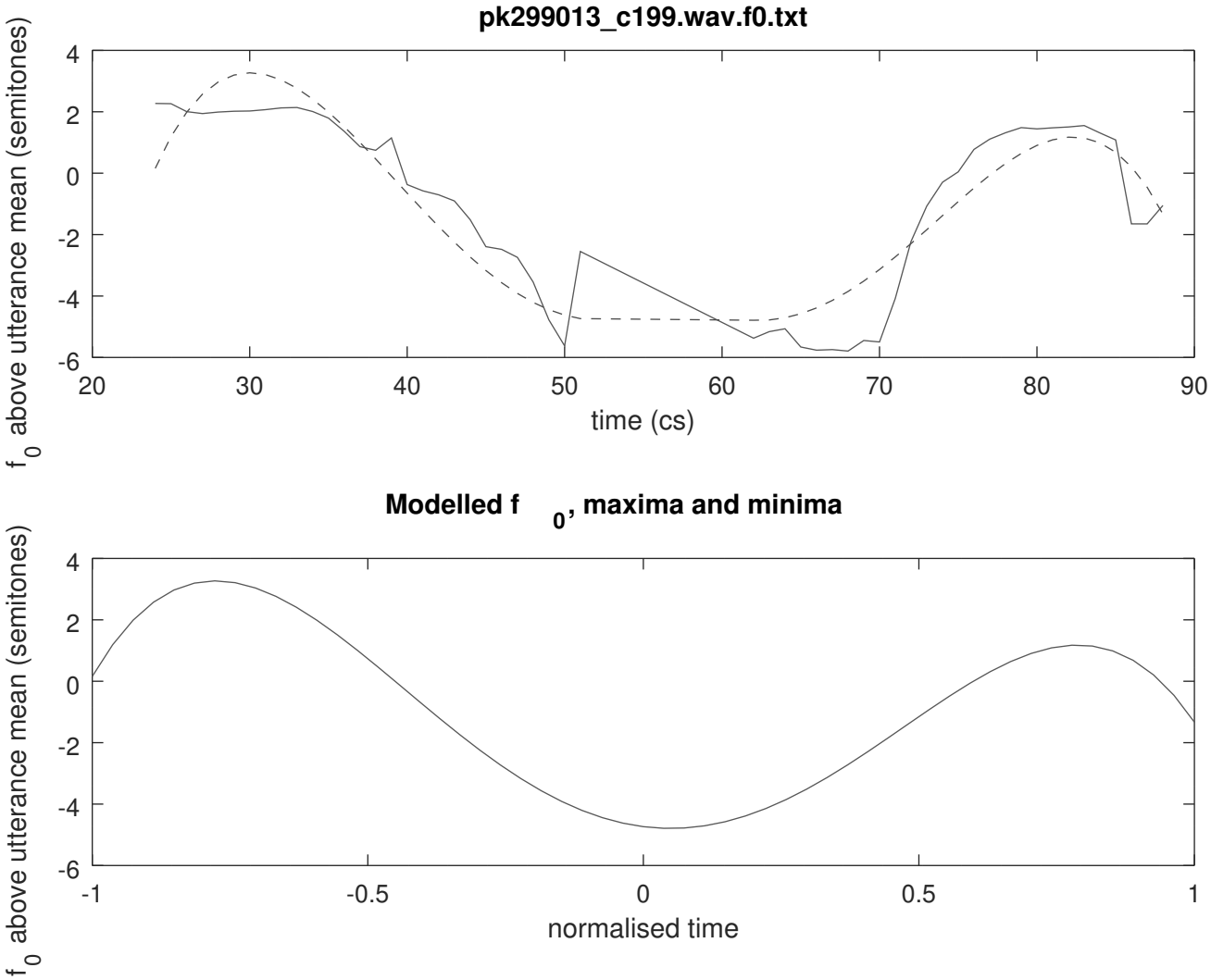

pk299013_c196.wav.f0.txt
4.5
4
3.5
3
2.5
2
155
160
165
170
175
time (cs)
f0 above utterance mean (semitones)

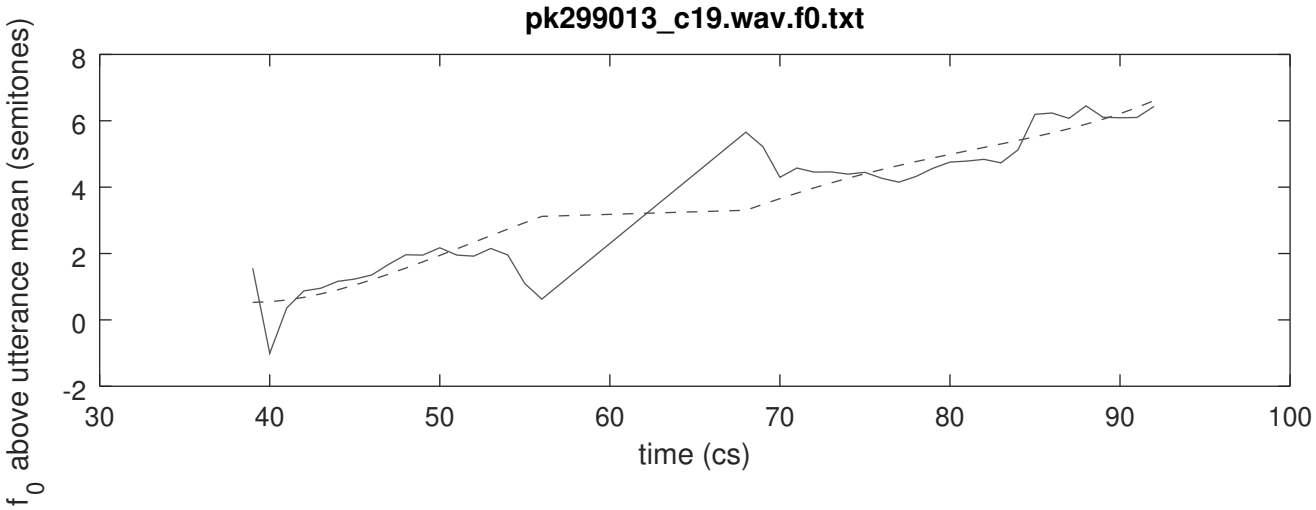

Modelled f0, maxima and minima
4.5
4
3.5
3
2.5
2
-1
-0.5
0
0.5
1
normalised time
f0 above utterance mean (semitones)

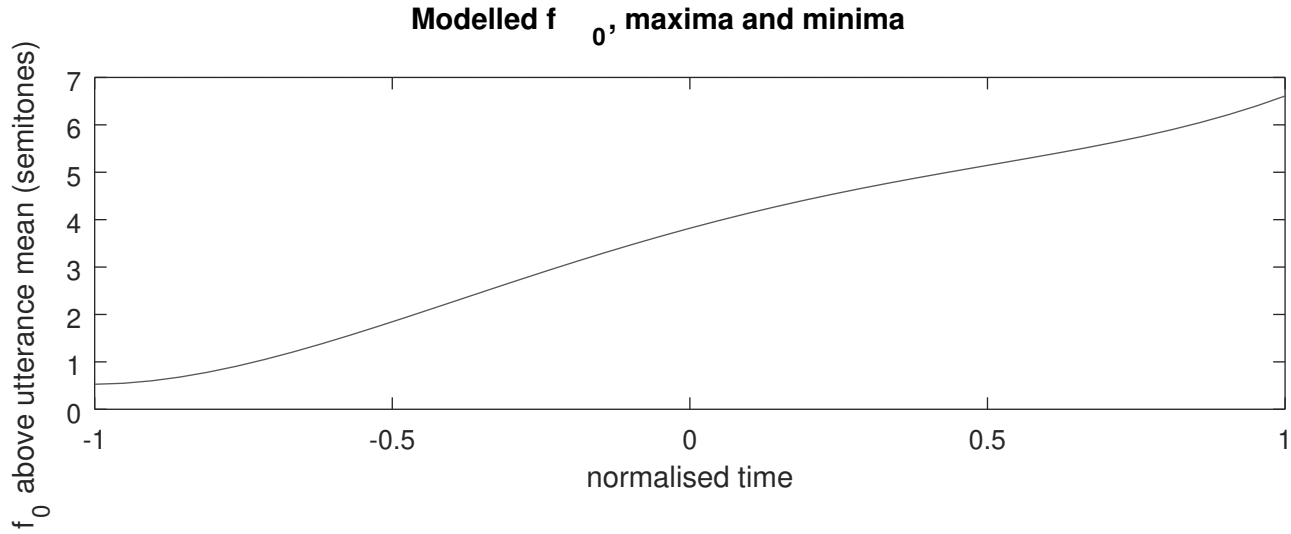

pk299013_c197.wav.f0.txt
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
60
65
70
75
80
85
90
95
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-1
-0.5
0
0.5
1
normalised time

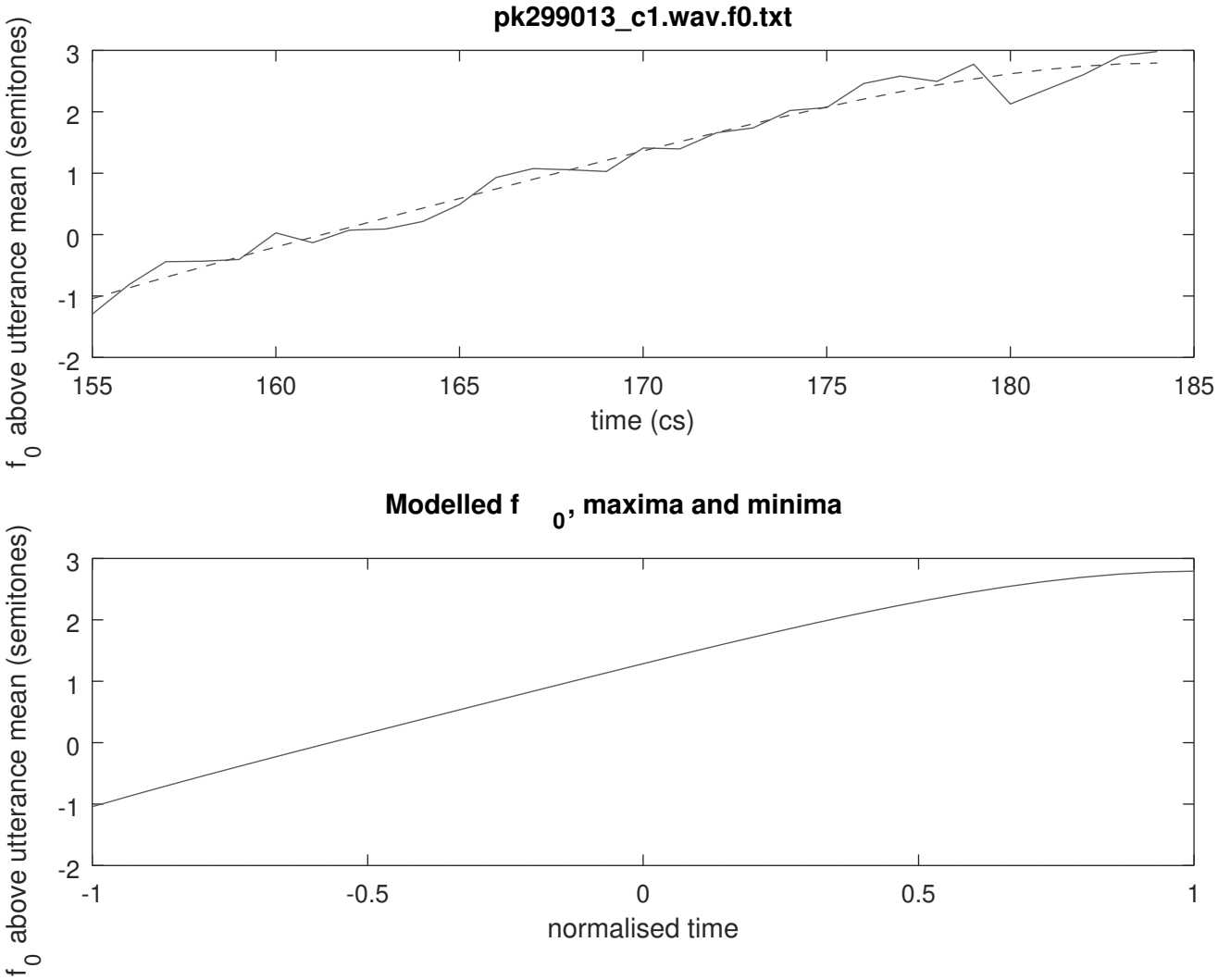

pk299013_c198.wav.f0.txt
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-3
20
30
40
50
60
70
80
time (cs)

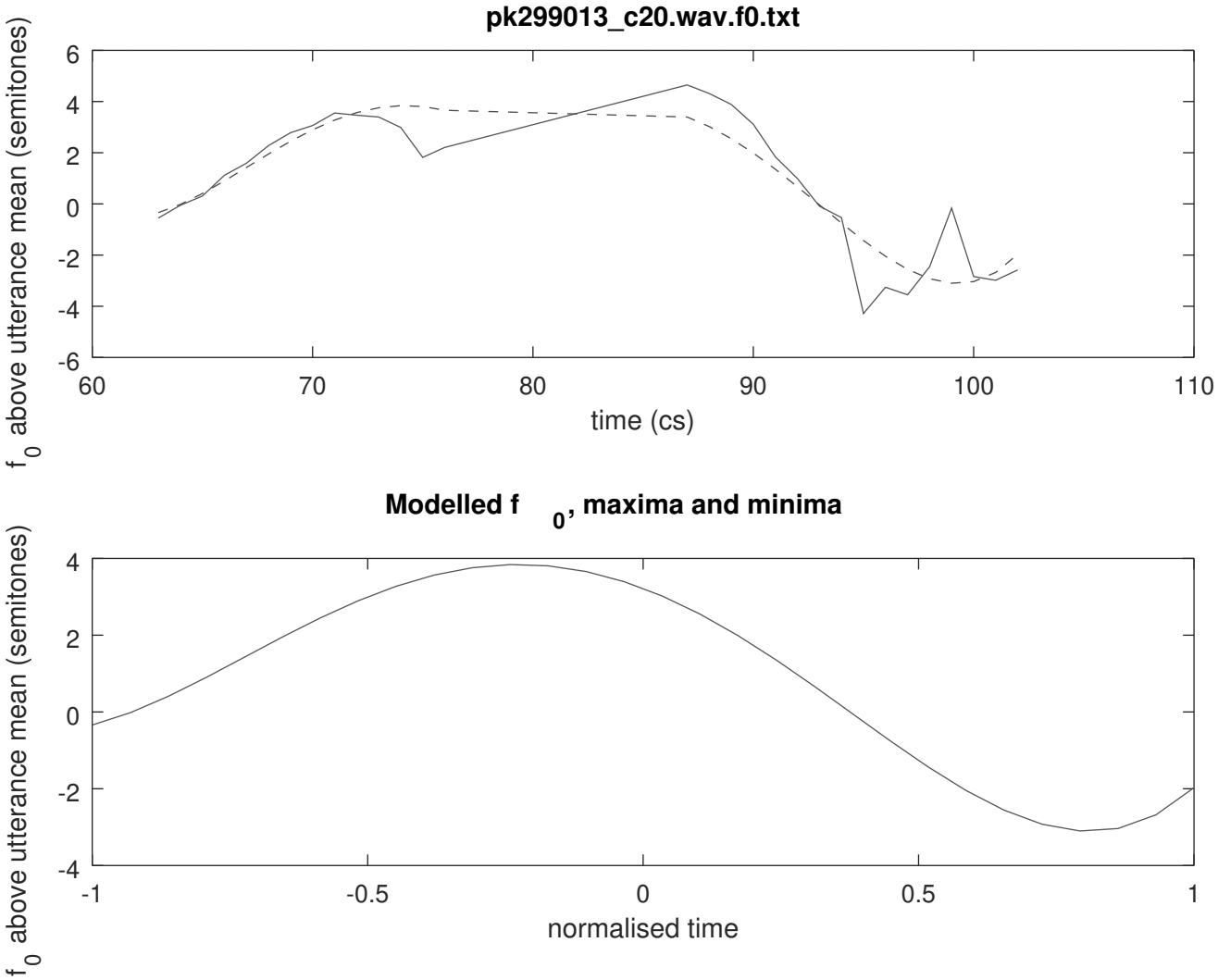

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-0.5
0
0.5
1
normalised time

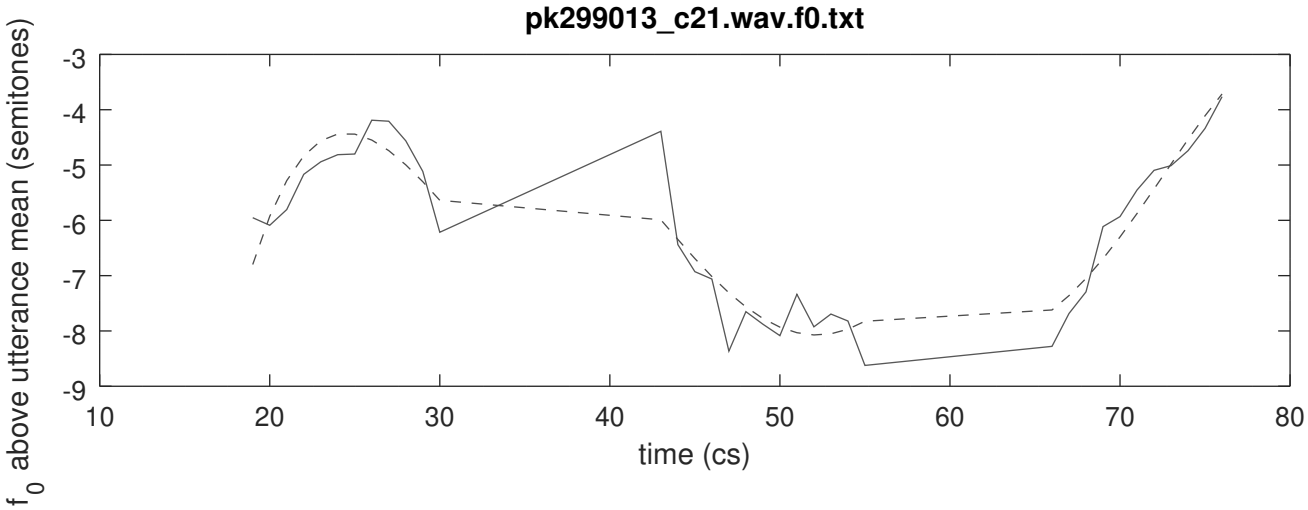

pk299013_c199.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

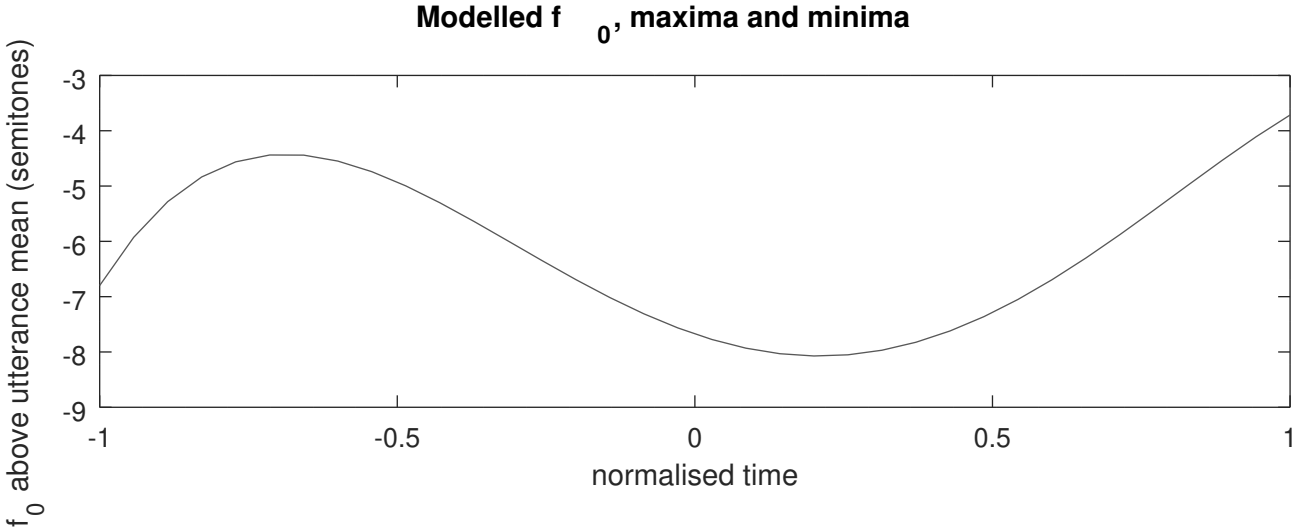

pk299013_c19.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
30
40
50
60
70
80
90
100
time (cs)

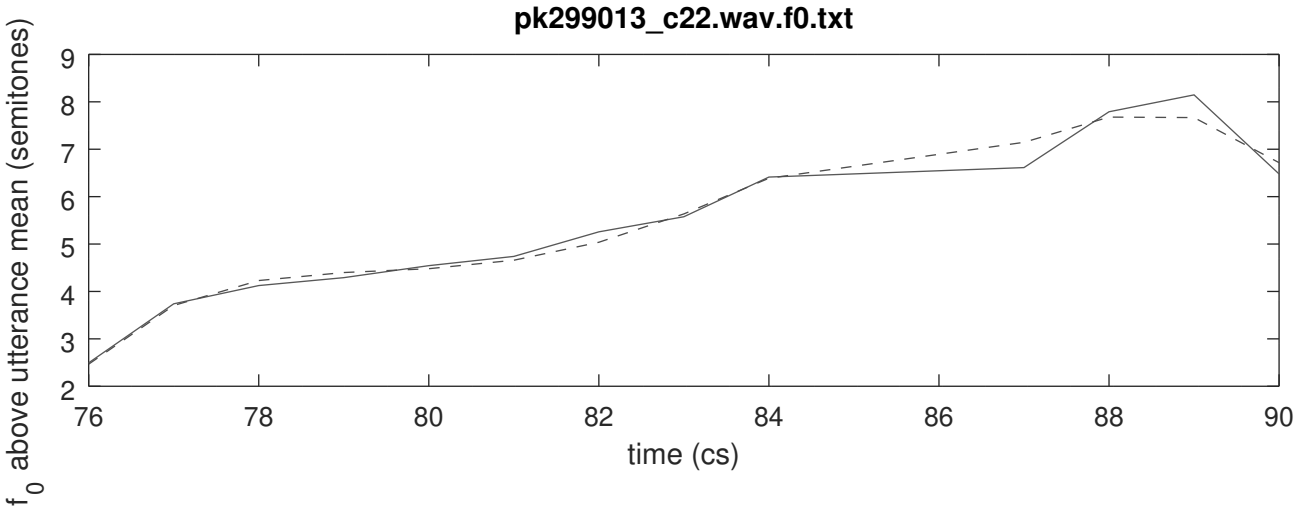

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
7
6
5
4
3
2
1
0
-1
-0.5
0
0.5
1
normalised time

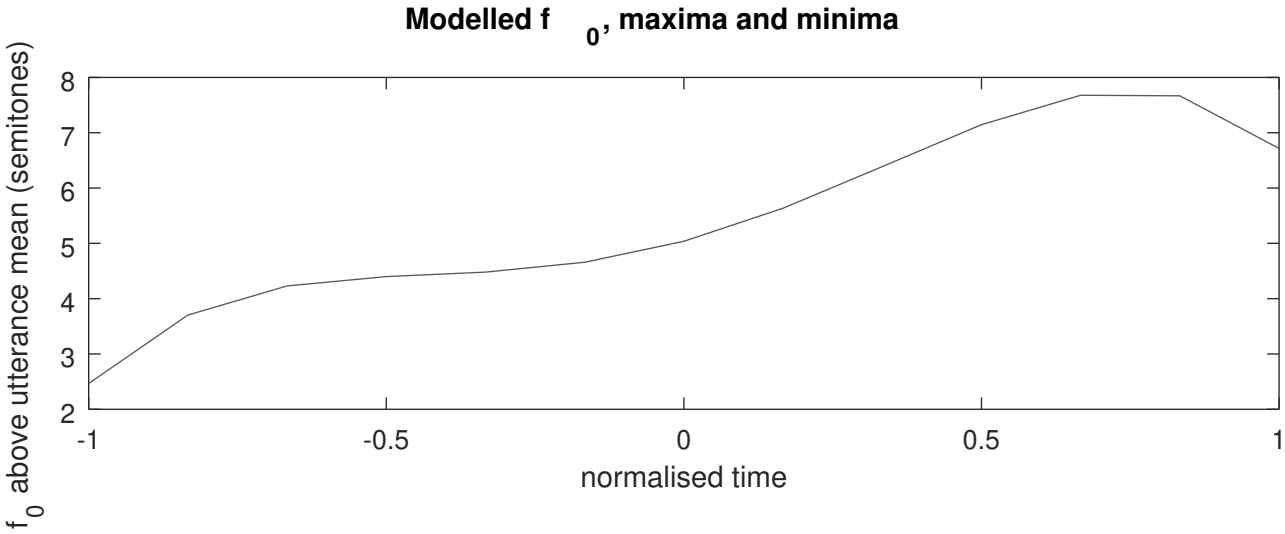

pk299013_c1.wav.f0.txt
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
155
160
165
170
175
180
185
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

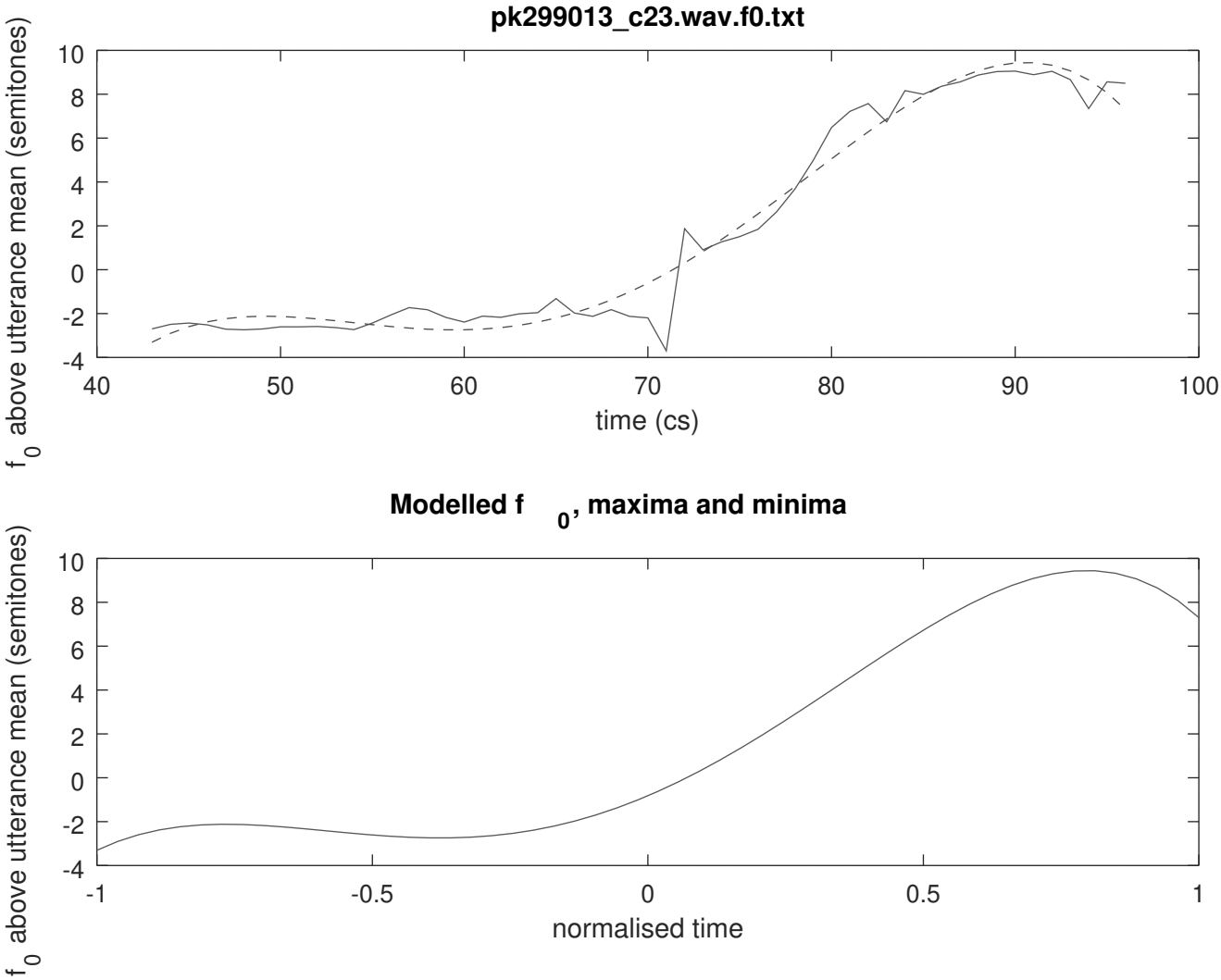

pk299013_c20.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
60
70
80
90
100
110
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

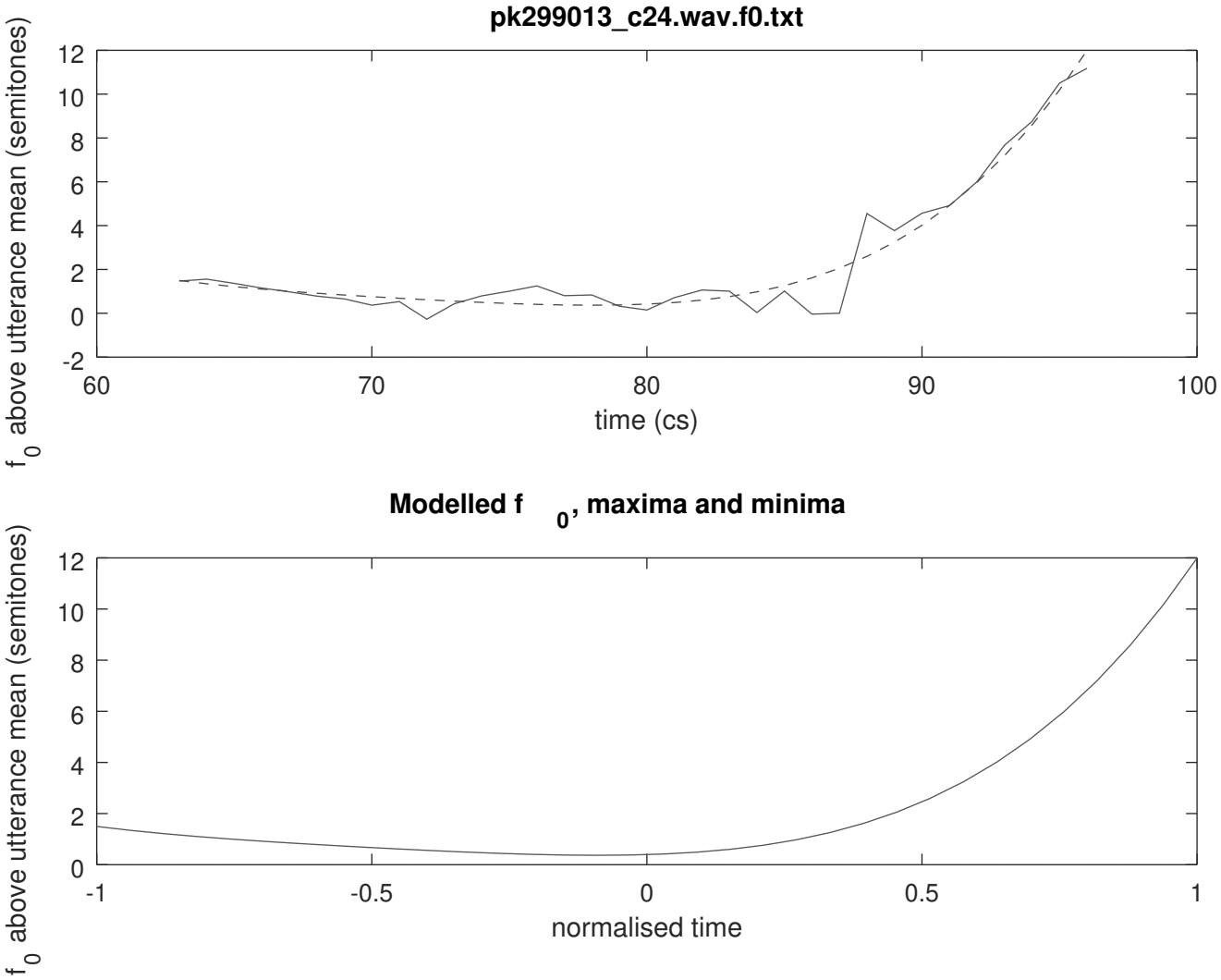

pk299013_c21.wav.f0.txt
f0 above utterance mean (semitones)
-3
-4
-5
-6
-7
-8
-9
10
20
30
40
50
60
70
80
time (cs)

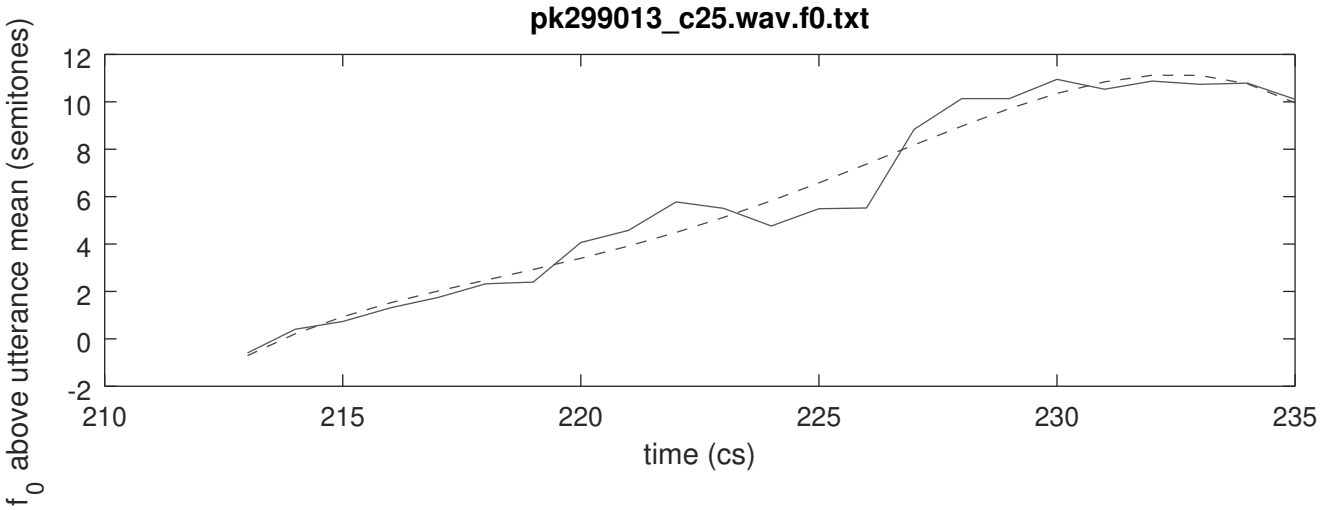

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
-3
-4
-5
-6
-7
-8
-9
-1
-0.5
0
0.5
1
normalised time

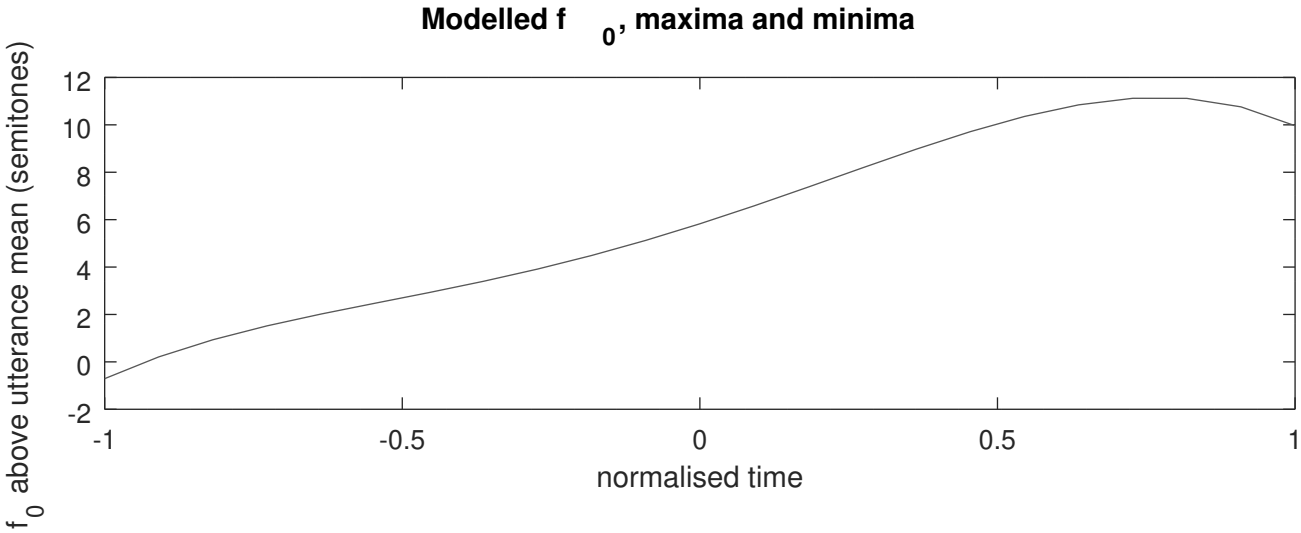

pk299013_c22.wav.f0.txt
f0 above utterance mean (semitones)
9
8
7
6
5
4
3
2
76
78
80
82
84
86
88
90
time (cs)

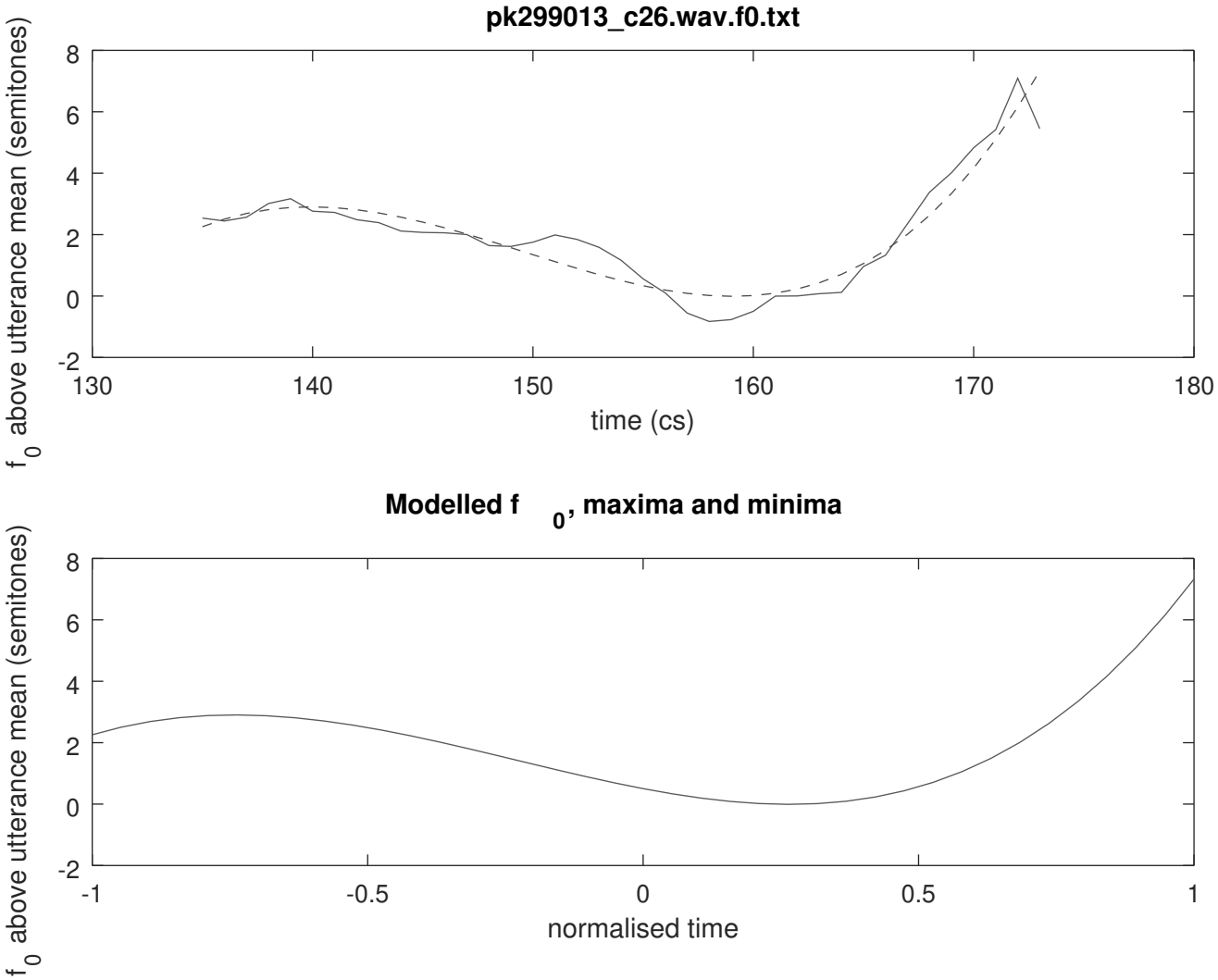

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
7
6
5
4
3
2
-1
-0.5
0
0.5
1
normalised time

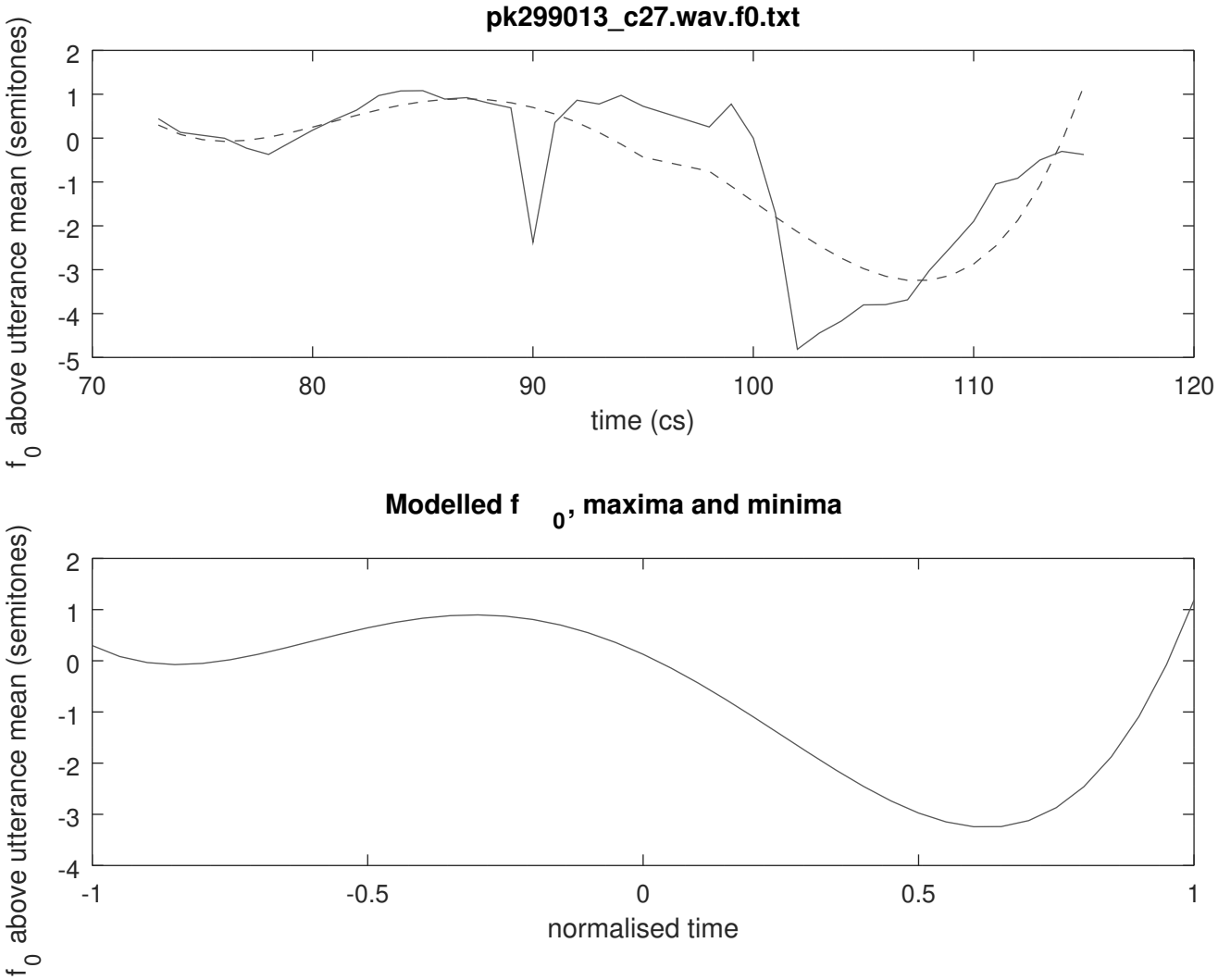

pk299013_c23.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

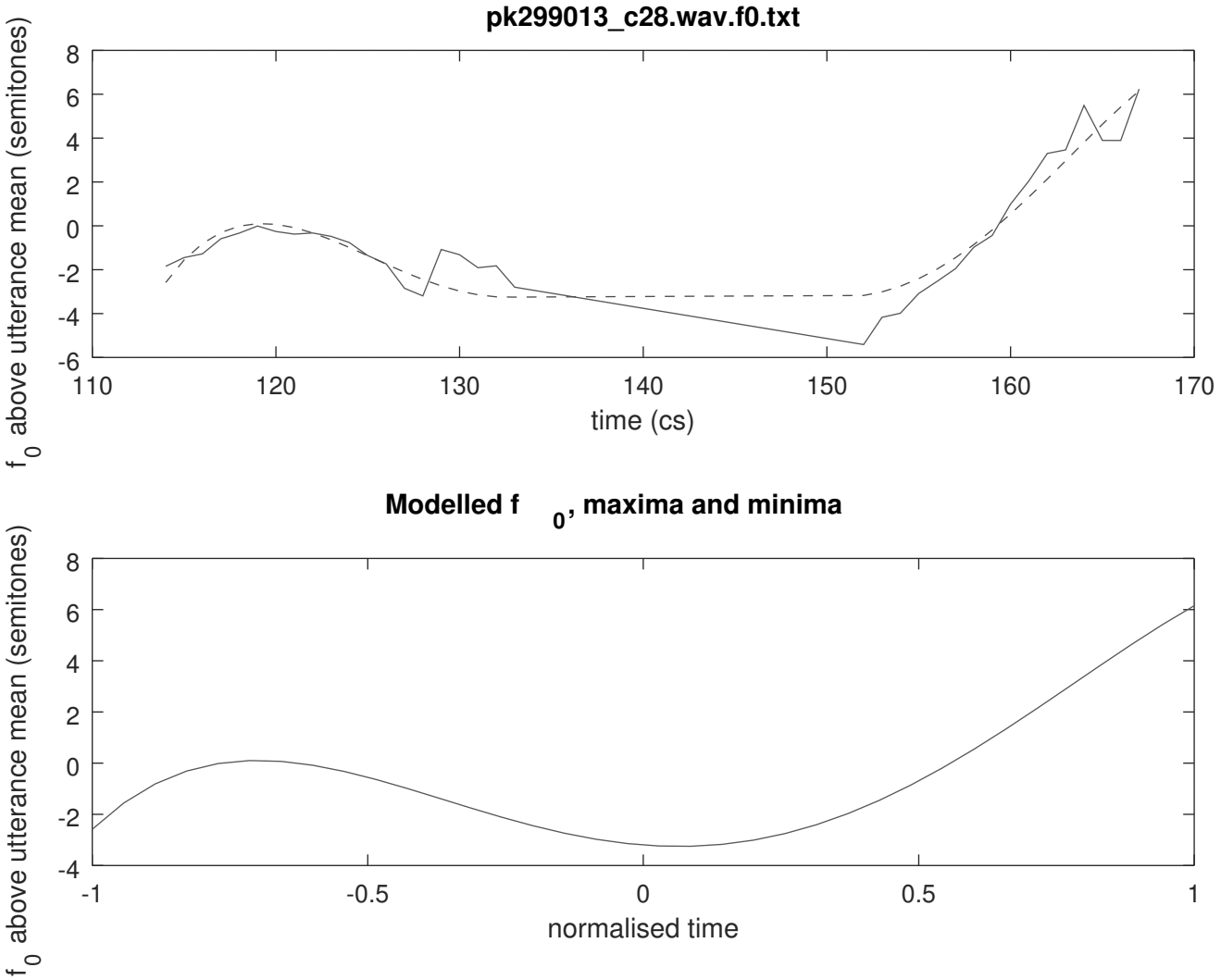

pk299013_c24.wav.f0.txt
f0 above utterance mean (semitones)
12
10
8
6
4
2
0
-2
60
70
80
90
100
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
12
10
8
6
4
2
0
-1
-0.5
0
0.5
1
normalised time

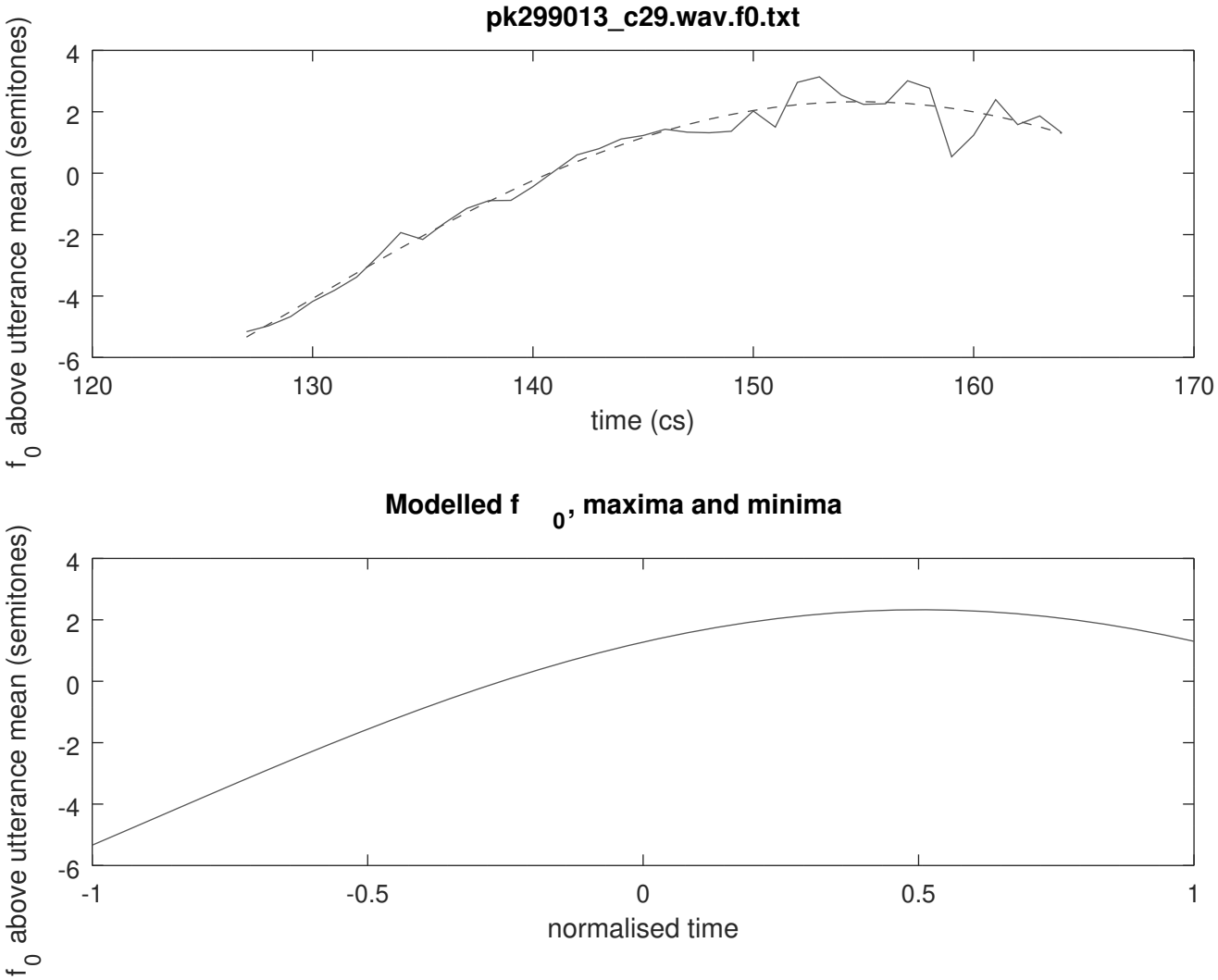

pk299013_c25.wav.f0.txt
f0 above utterance mean (semitones)
12
10
8
6
4
2
0
-2
210
215
220
225
230
235
time (cs)

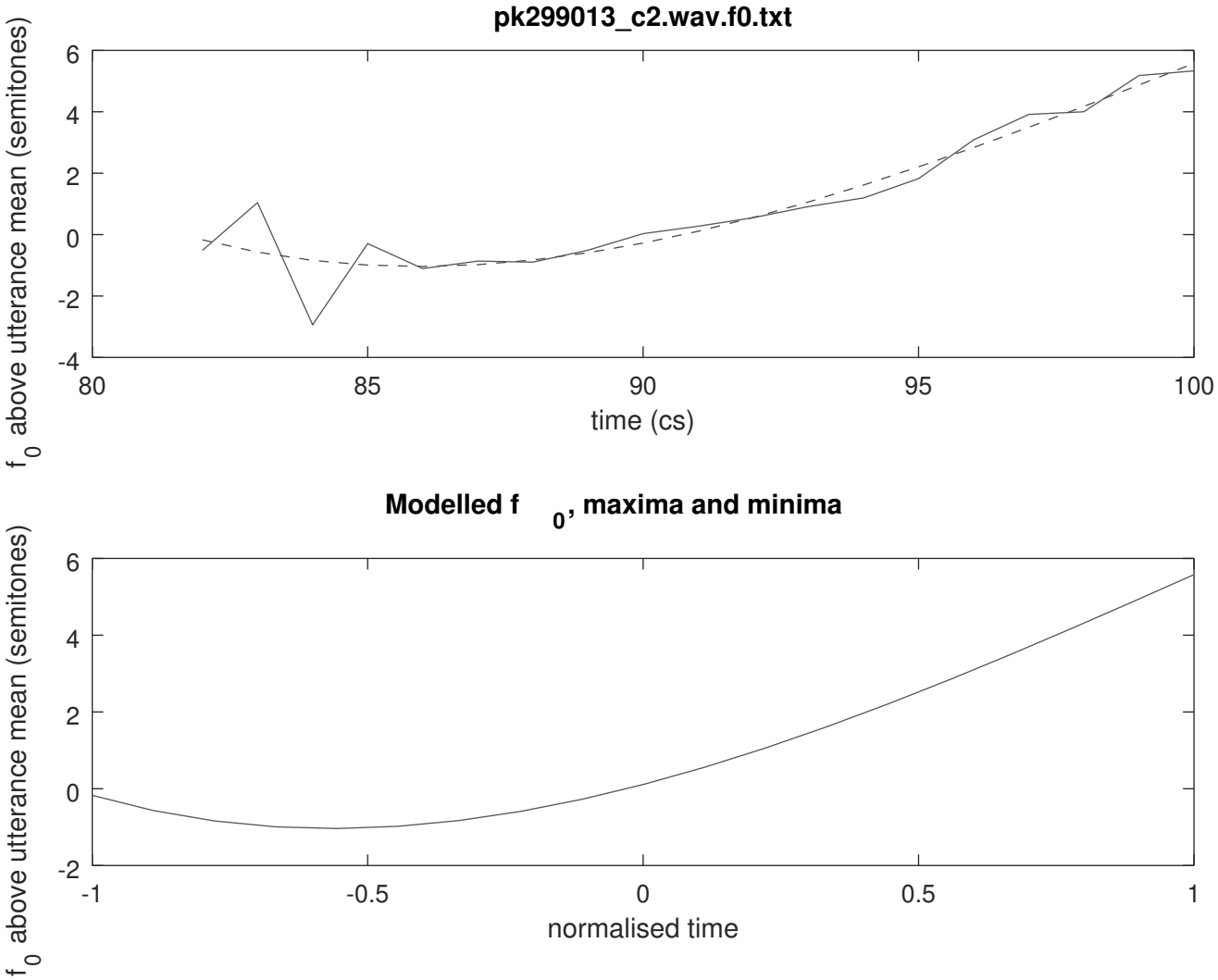

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
12
10
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

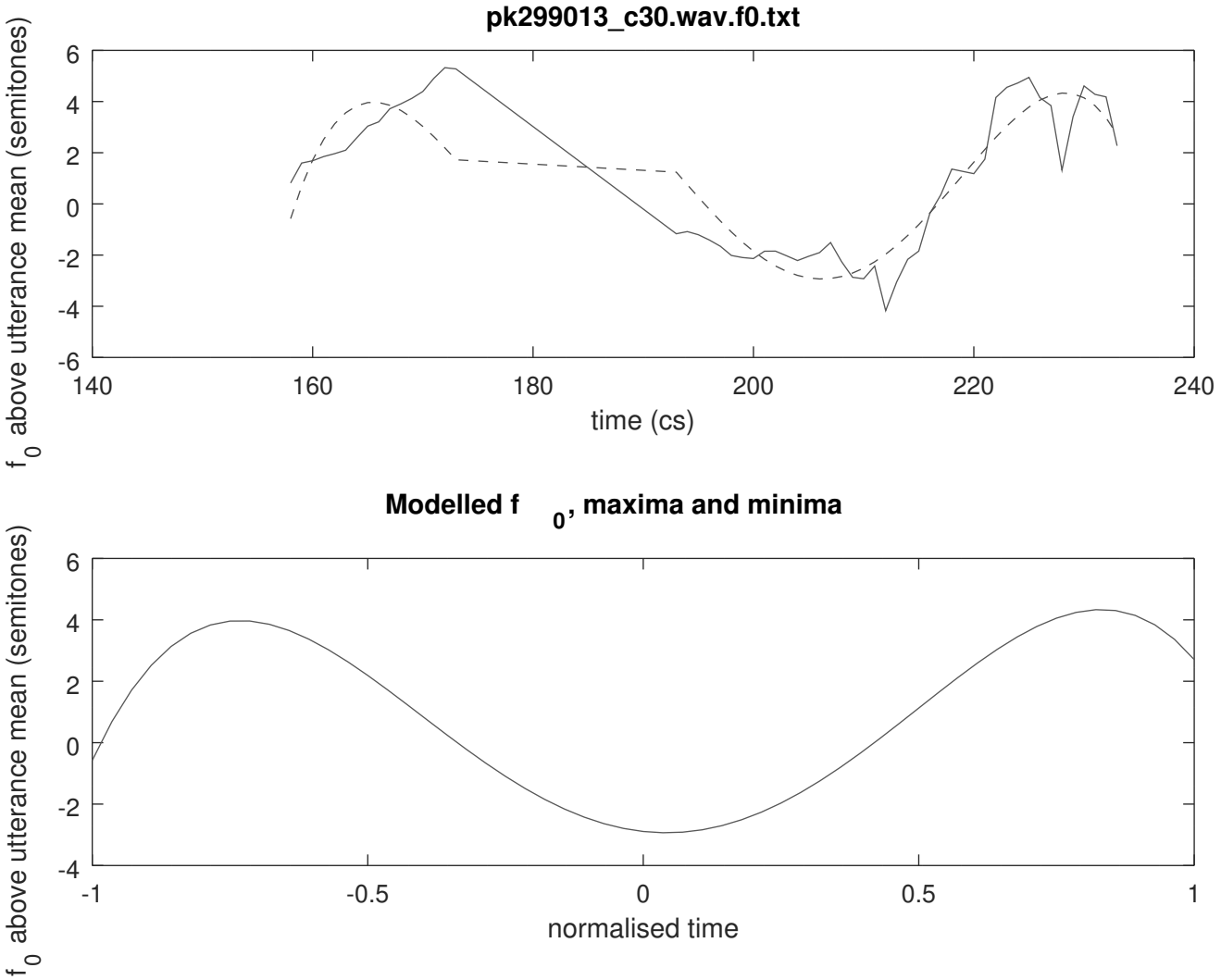

pk299013_c26.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
130
140
150
160
170
180
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

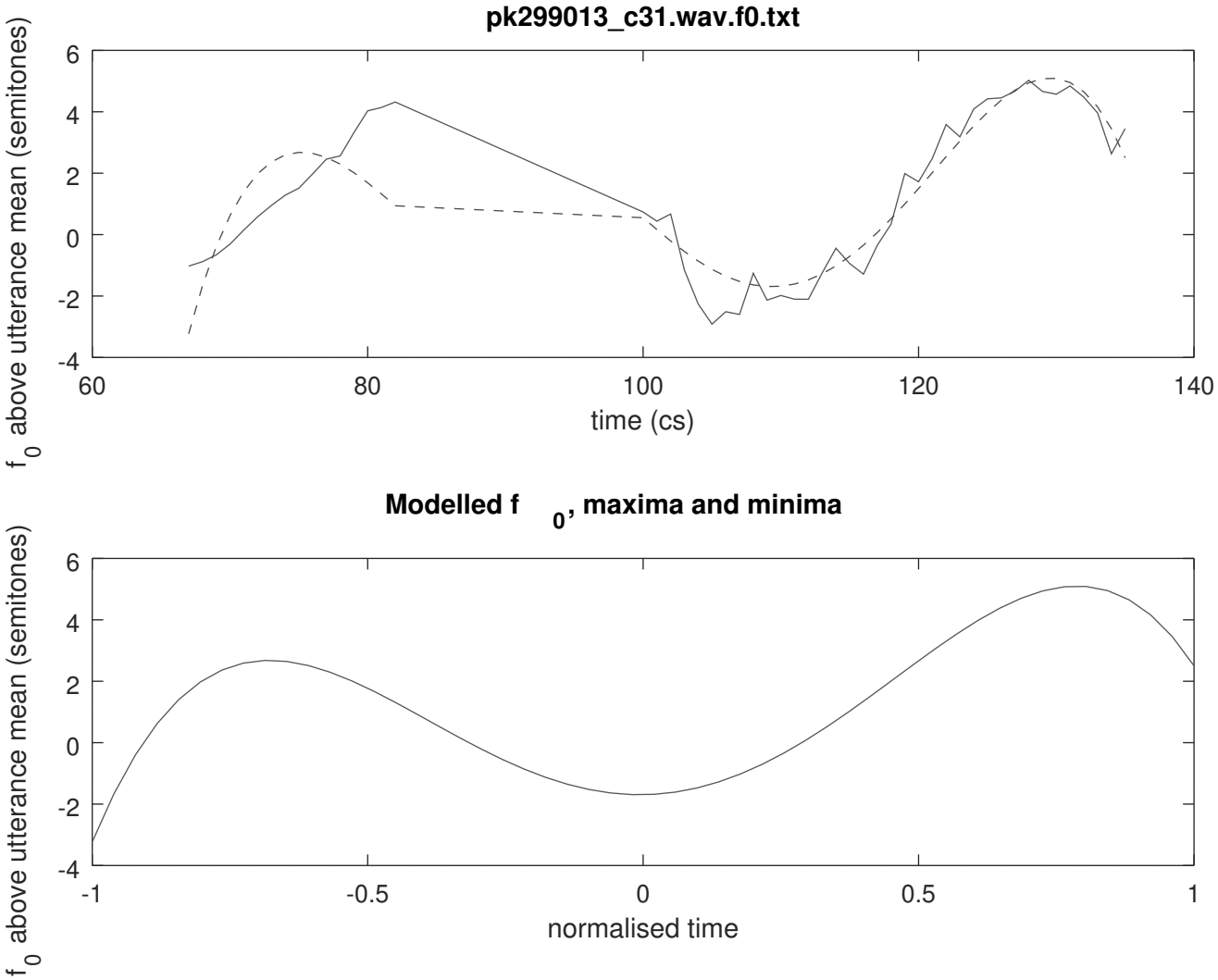

pk299013_c27.wav.f0.txt
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-4
-5
70
80
90
100
110
120
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-4
-1
-0.5
0
0.5
1
normalised time

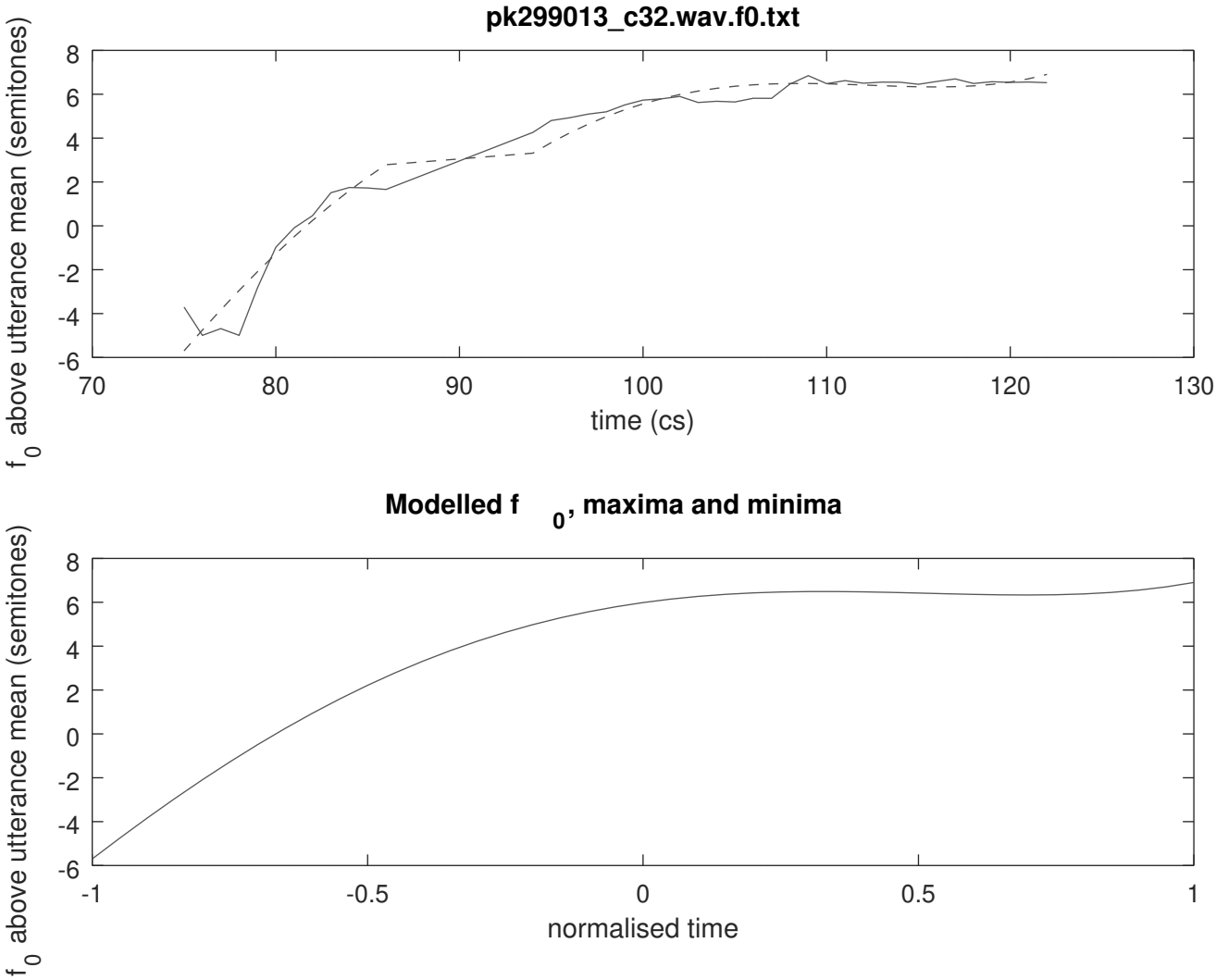

pk299013_c28.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-6
110
120
130
140
150
160
170
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

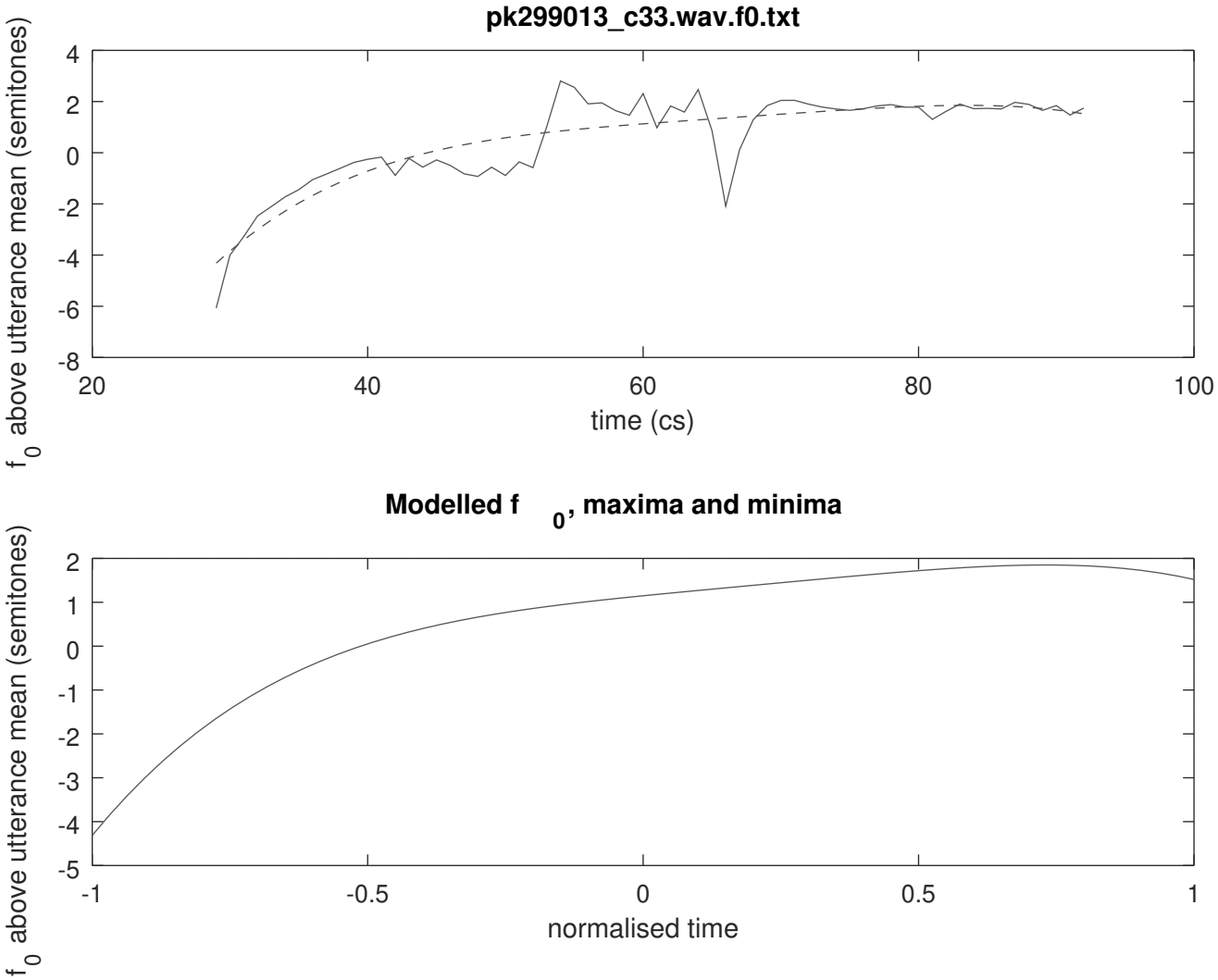

pk299013_c29.wav.f0.txt
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
120
130
140
150
160
170
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

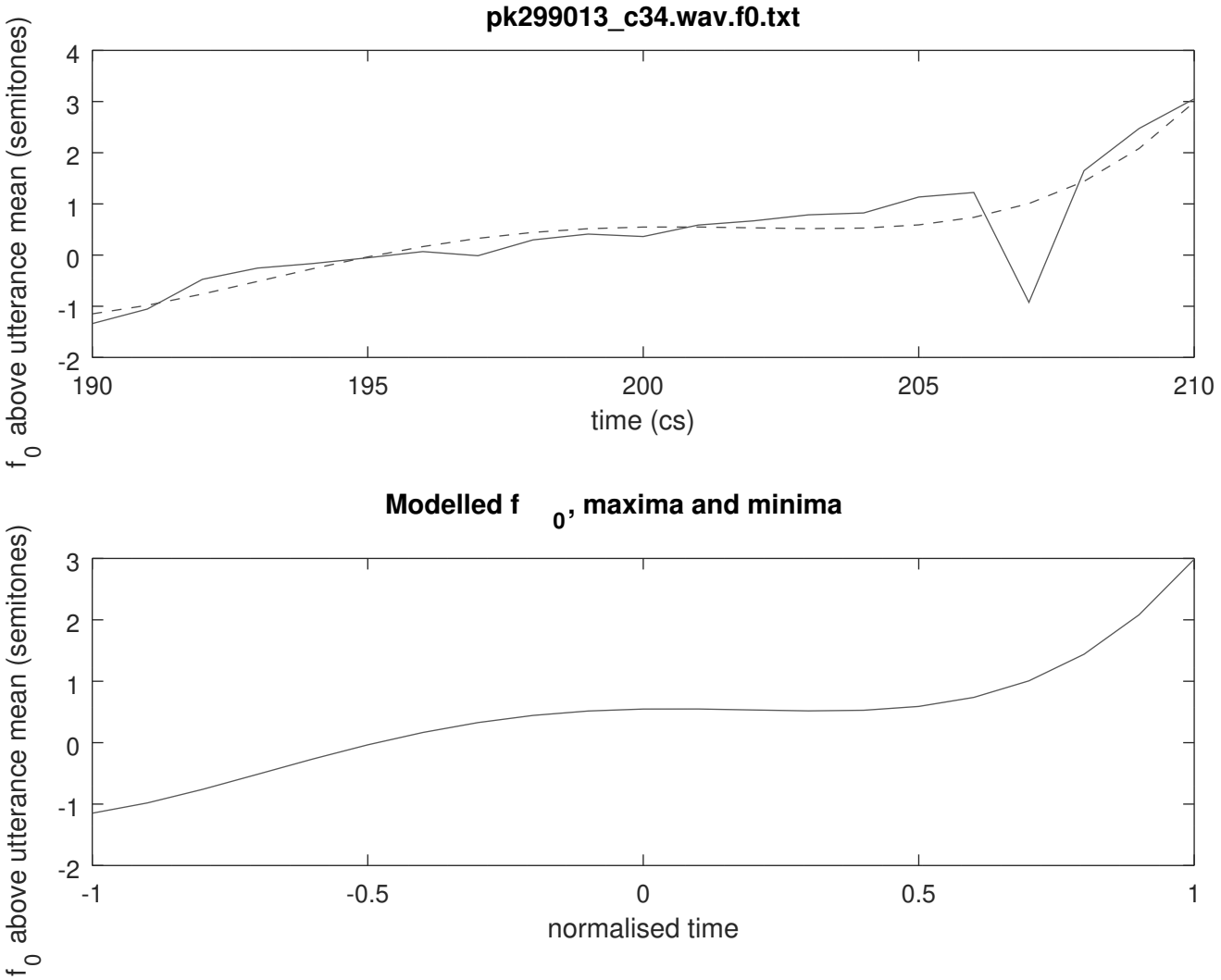

pk299013_c2.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
80
85
90
95
100
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

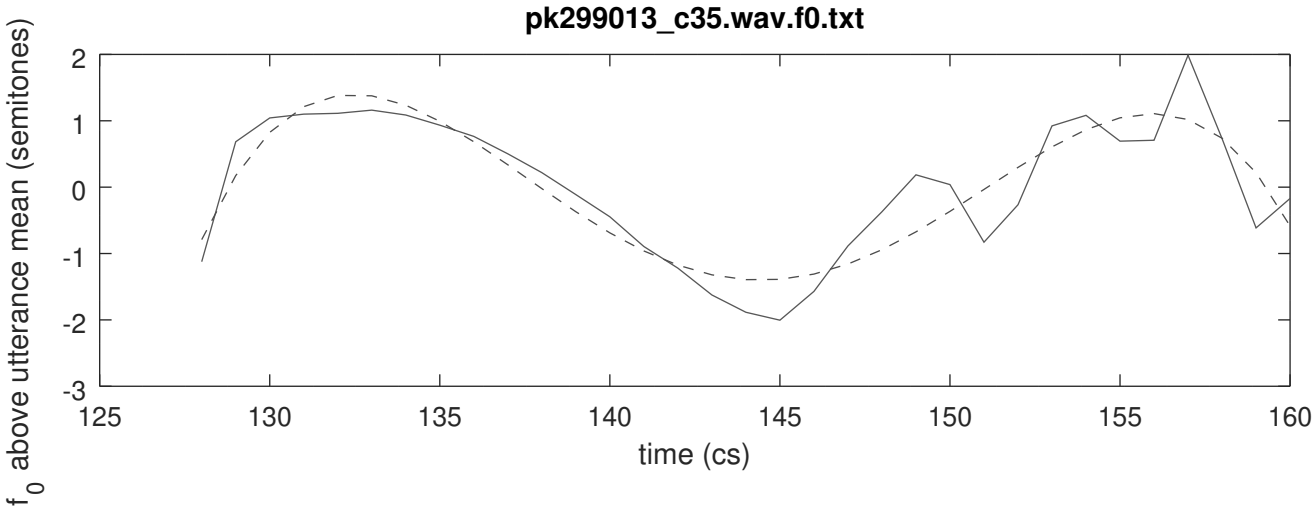

pk299013_c30.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
140
160
180
200
220
240
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

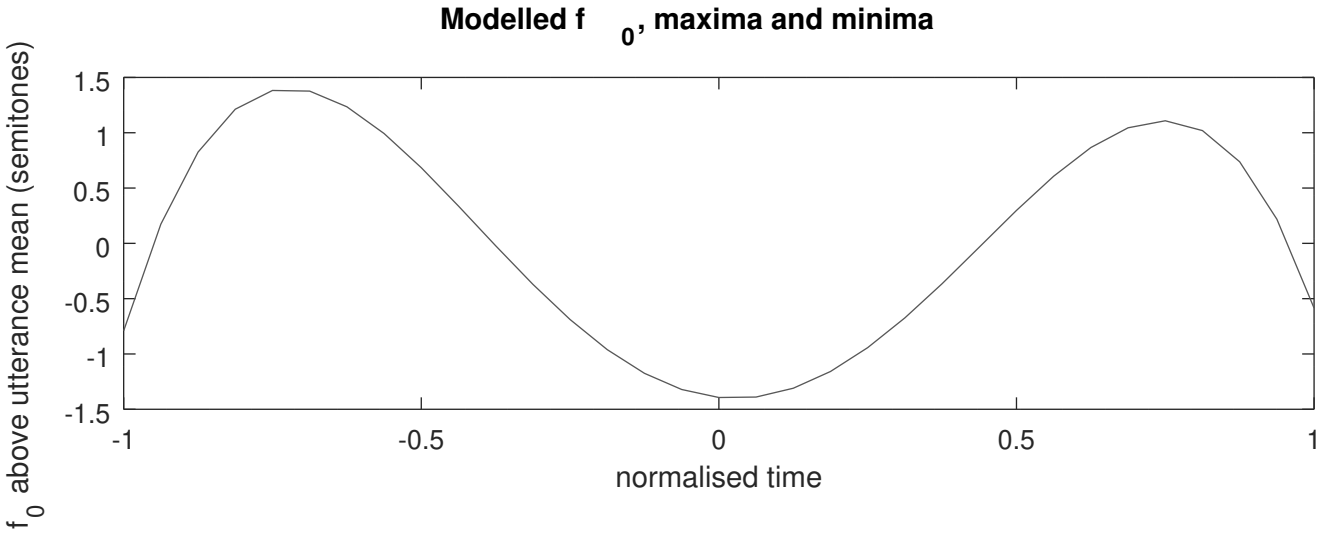

pk299013_c31.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
60
80
100
120
140
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

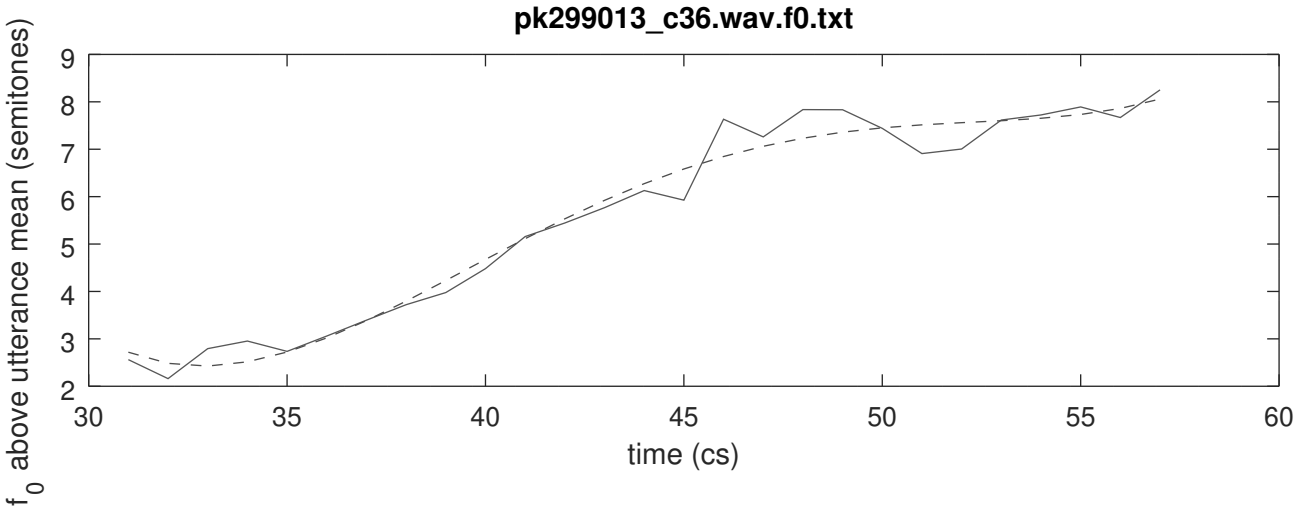

pk299013_c32.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-6
70
80
90
100
110
120
130
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

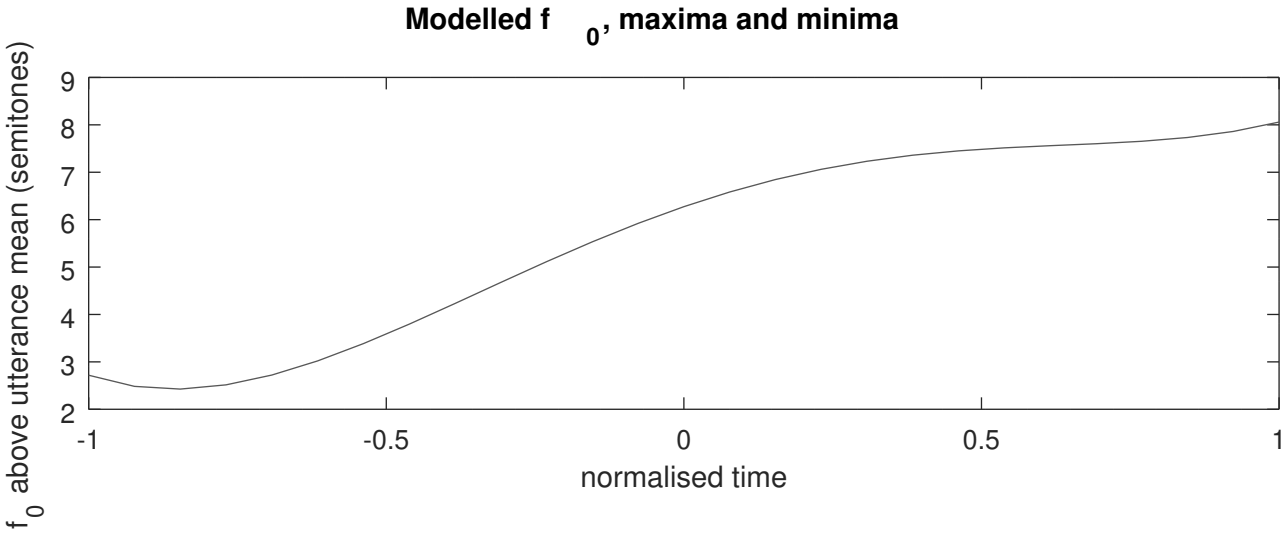

pk299013_c33.wav.f0.txt
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
-8
20
40
60
80
100
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-4
-5
-1
-0.5
0
0.5
1
normalised time

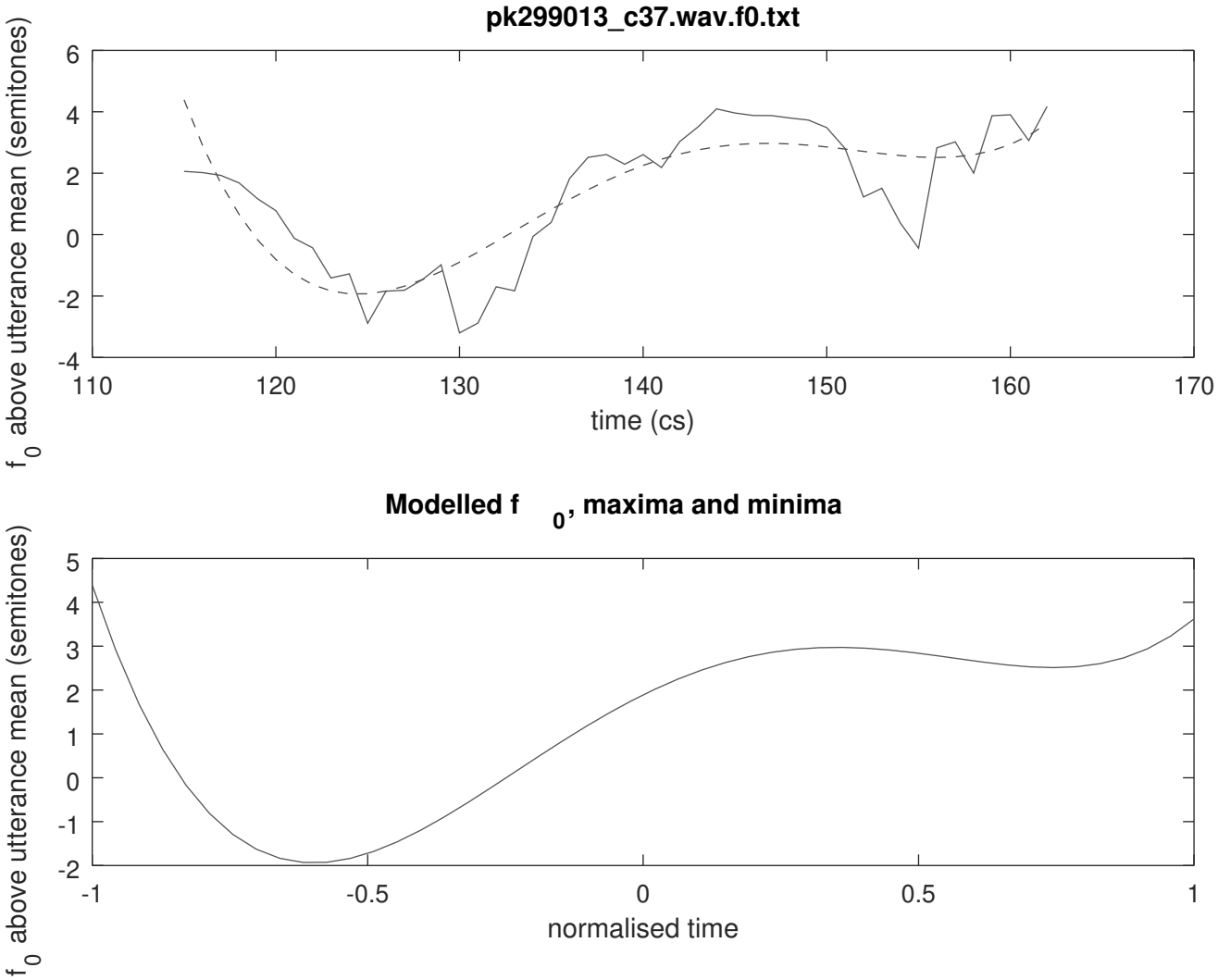

pk299013_c34.wav.f0.txt
f0 above utterance mean (semitones)
4
3
2
1
0
-1
-2
190
195
200
205
210
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

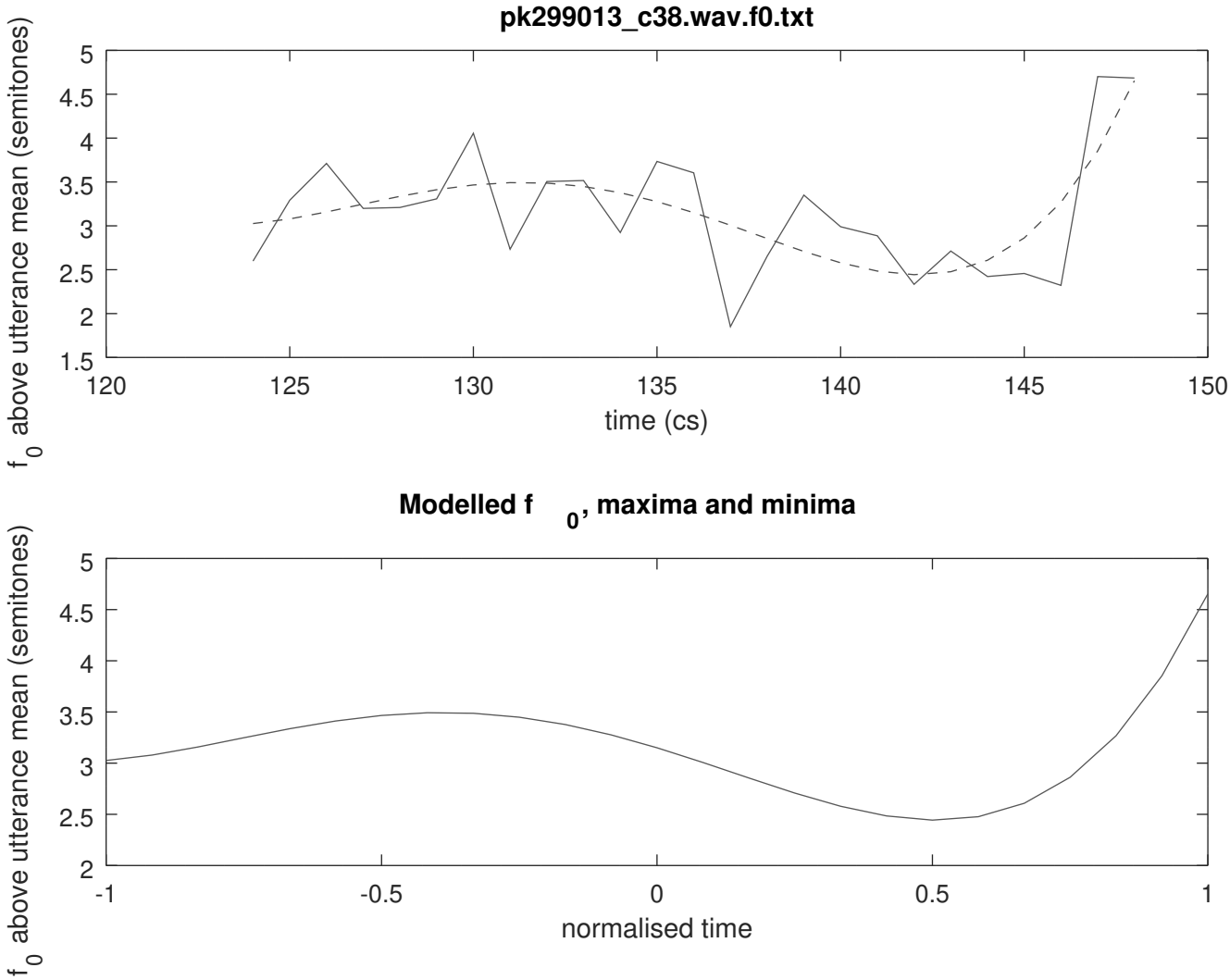

pk299013_c35.wav.f0.txt
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
125
130
135
140
145
150
155
160
time (cs)

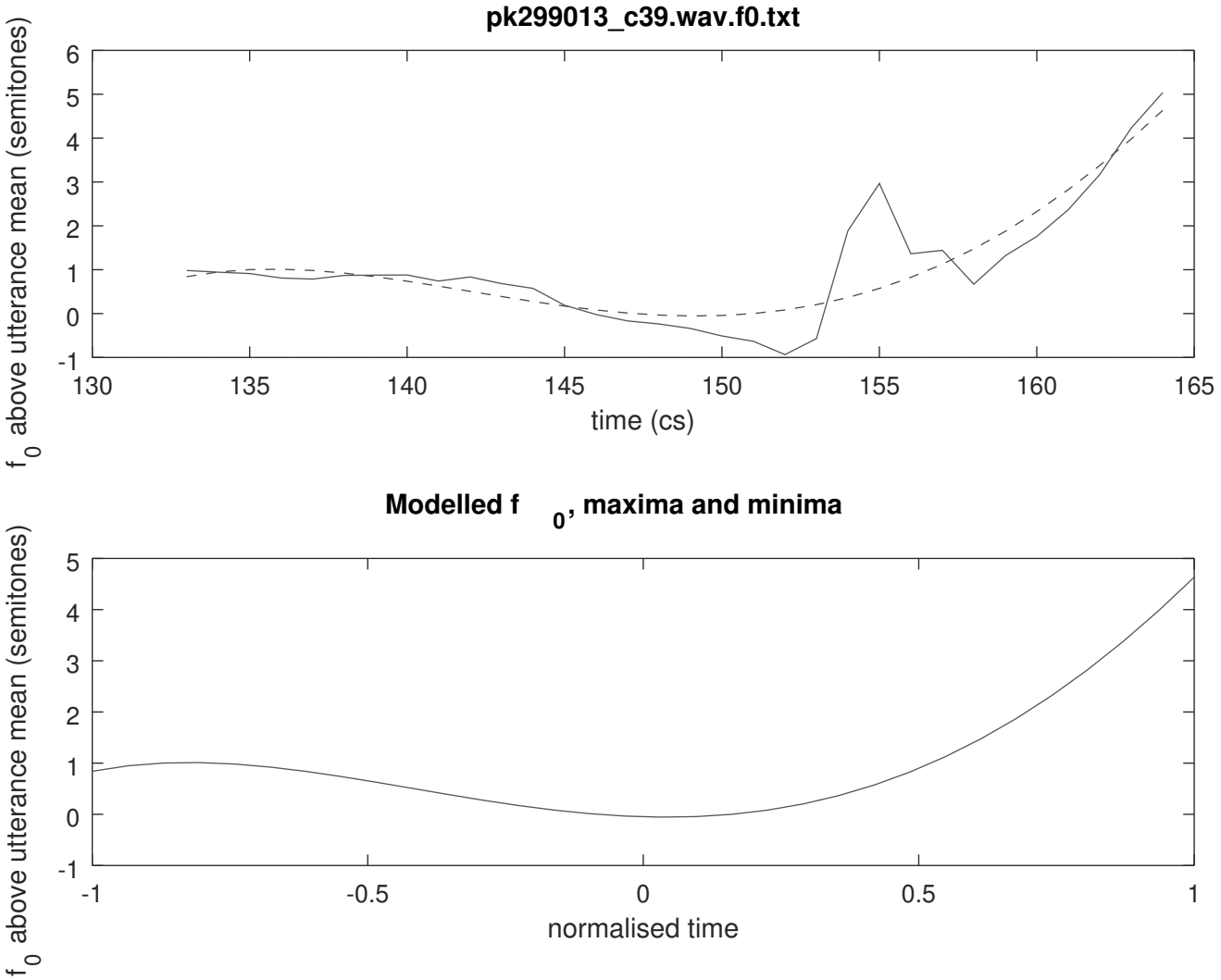

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
1.5
1
0.5
0
-0.5
-1
-1.5
-1
-0.5
0
0.5
1
normalised time

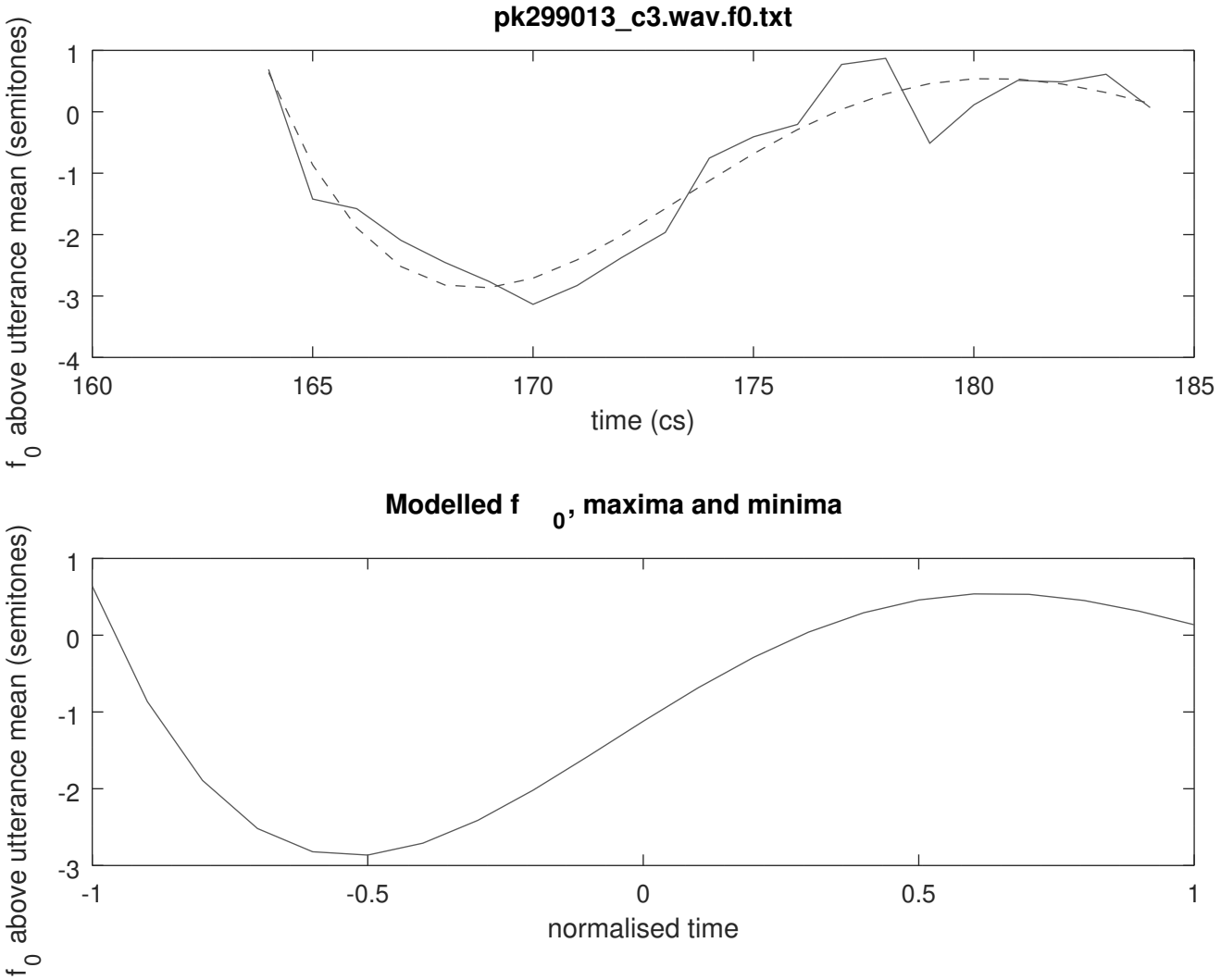

pk299013_c36.wav.f0.txt
f0 above utterance mean (semitones)
9
8
7
6
5
4
3
2
30
35
40
45
50
55
60
time (cs)

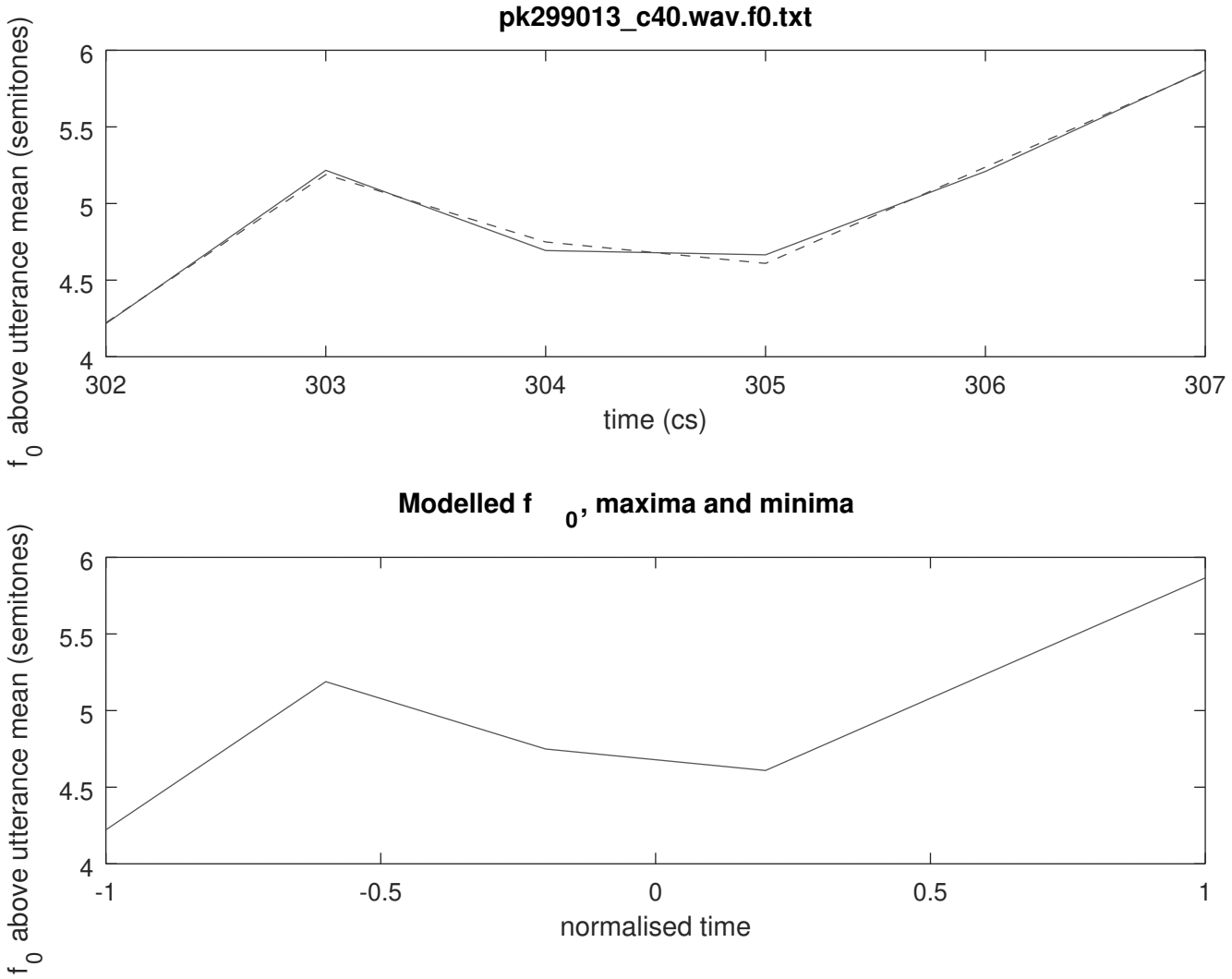

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
9
8
7
6
5
4
3
2
-1
-0.5
0
0.5
1
normalised time

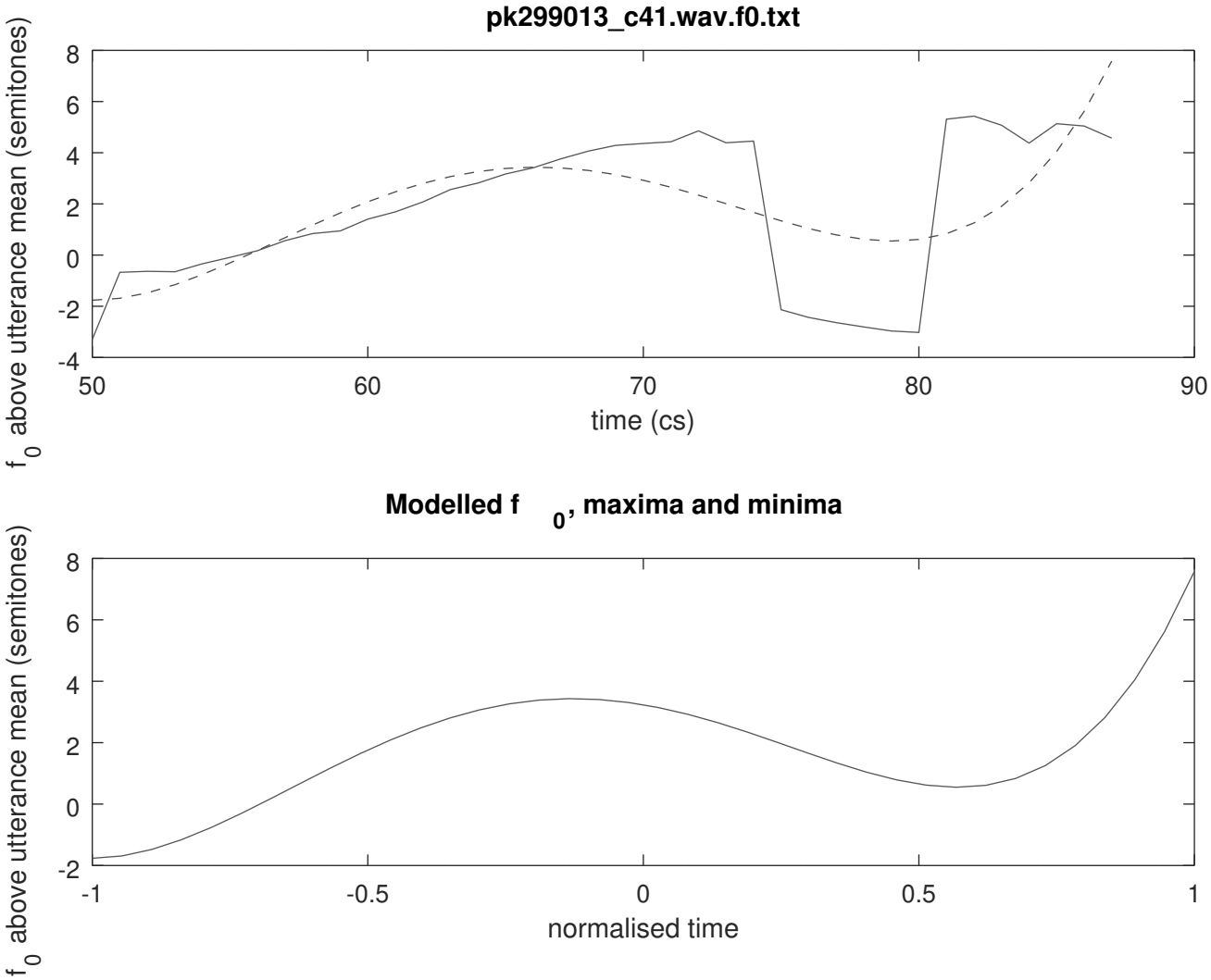

pk299013_c37.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
110
120
130
140
150
160
170
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

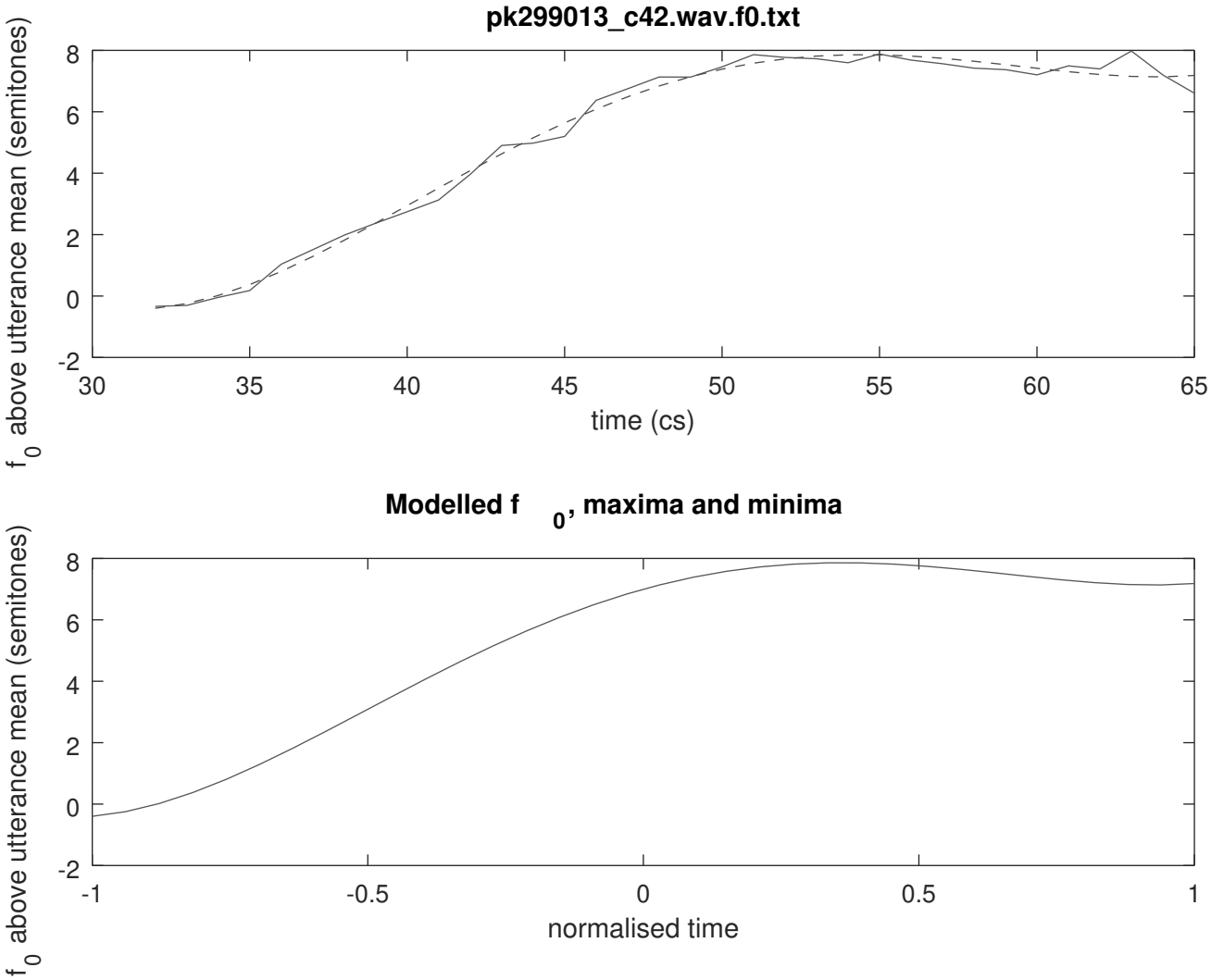

pk299013_c38.wav.f0.txt
f0 above utterance mean (semitones)
5
4.5
4
3.5
3
2.5
2
1.5
120
125
130
135
140
145
150
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4.5
4
3.5
3
2.5
2
-1
-0.5
0
0.5
1
normalised time

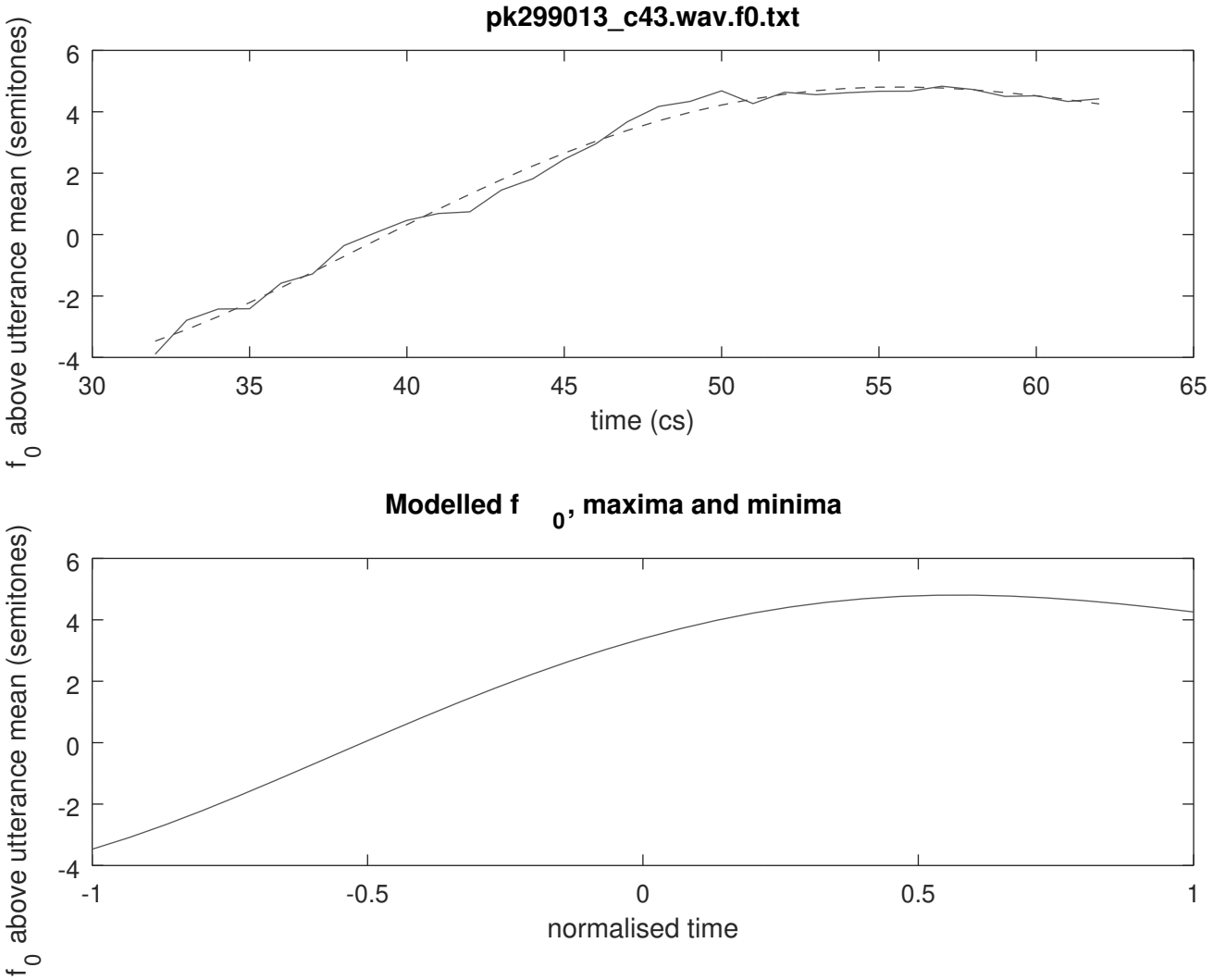

pk299013_c39.wav.f0.txt
f0 above utterance mean (semitones)
6
5
4
3
2
1
0
-1
130
135
140
145
150
155
160
165
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

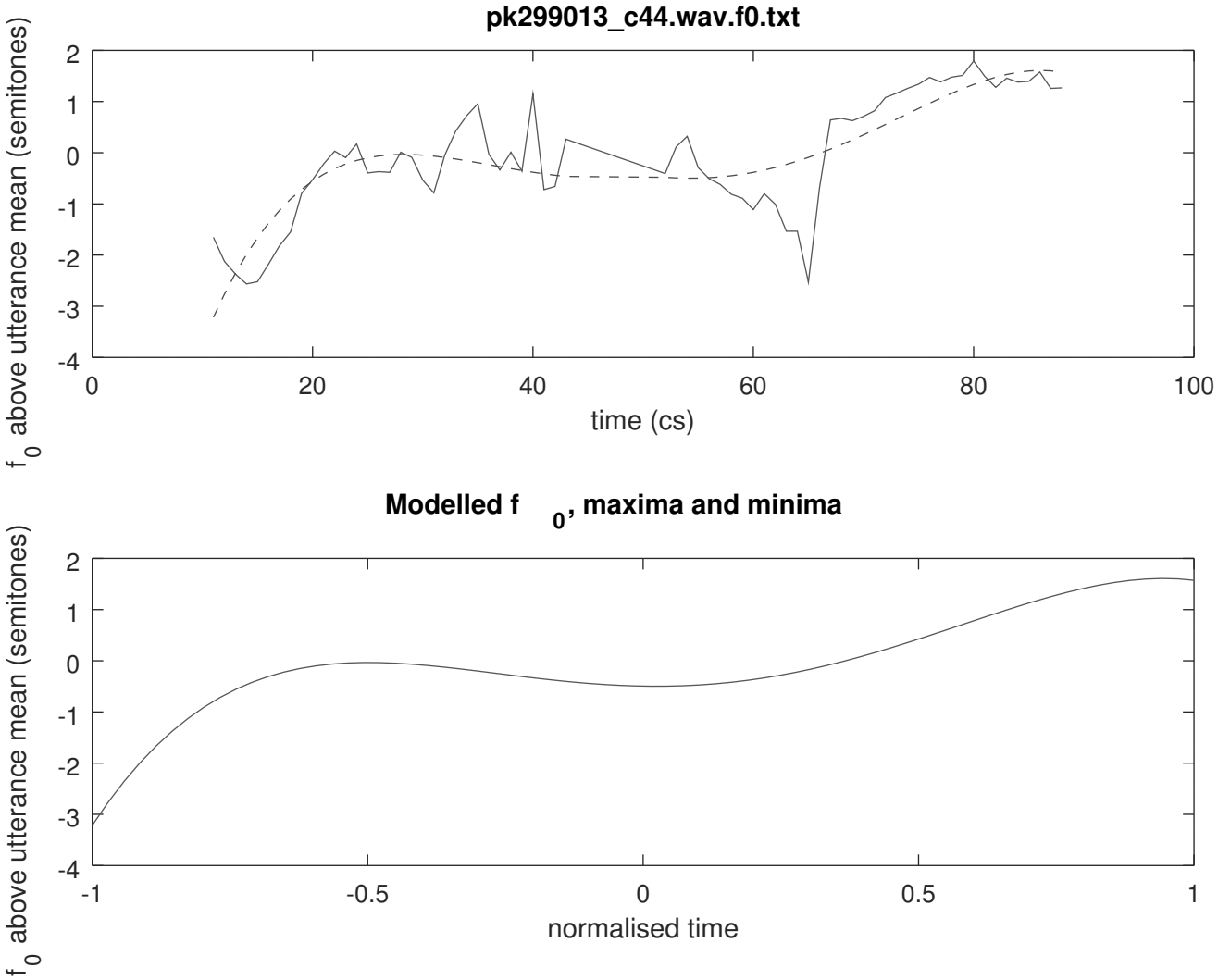

pk299013_c3.wav.f0.txt
f0 above utterance mean (semitones)
1
0
-1
-2
-3
-4
160
165
170
175
180
185
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
1
0
-1
-2
-3
-1
-0.5
0
0.5
1
normalised time

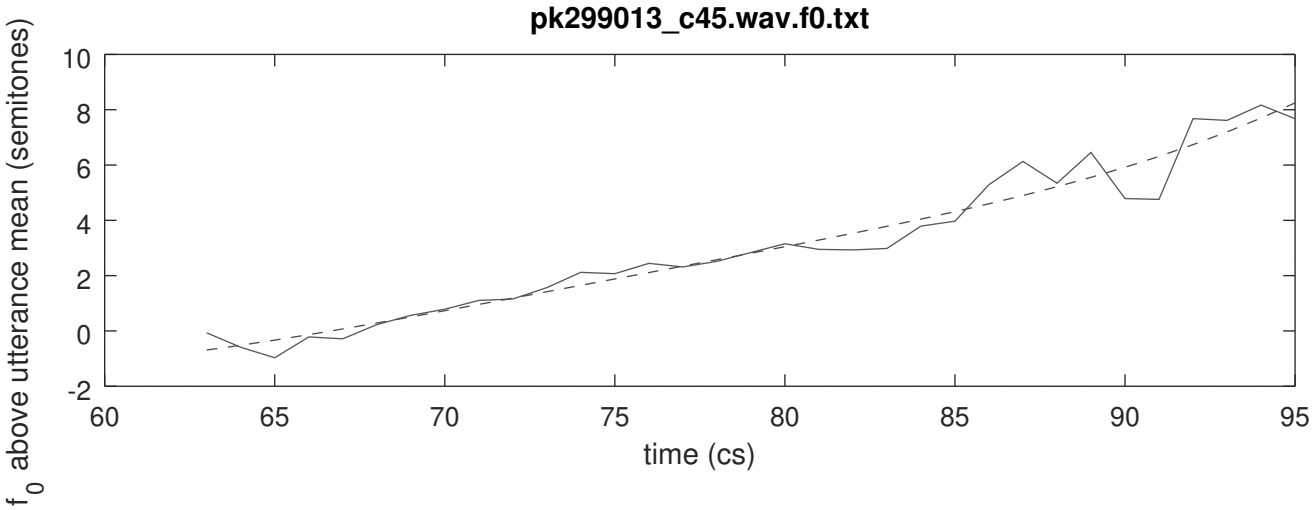

pk299013_c40.wav.f0.txt
f0 above utterance mean (semitones)
6
5.5
5
4.5
4
302
303
304
305
306
307
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
5.5
5
4.5
4
-1
-0.5
0
0.5
1
normalised time

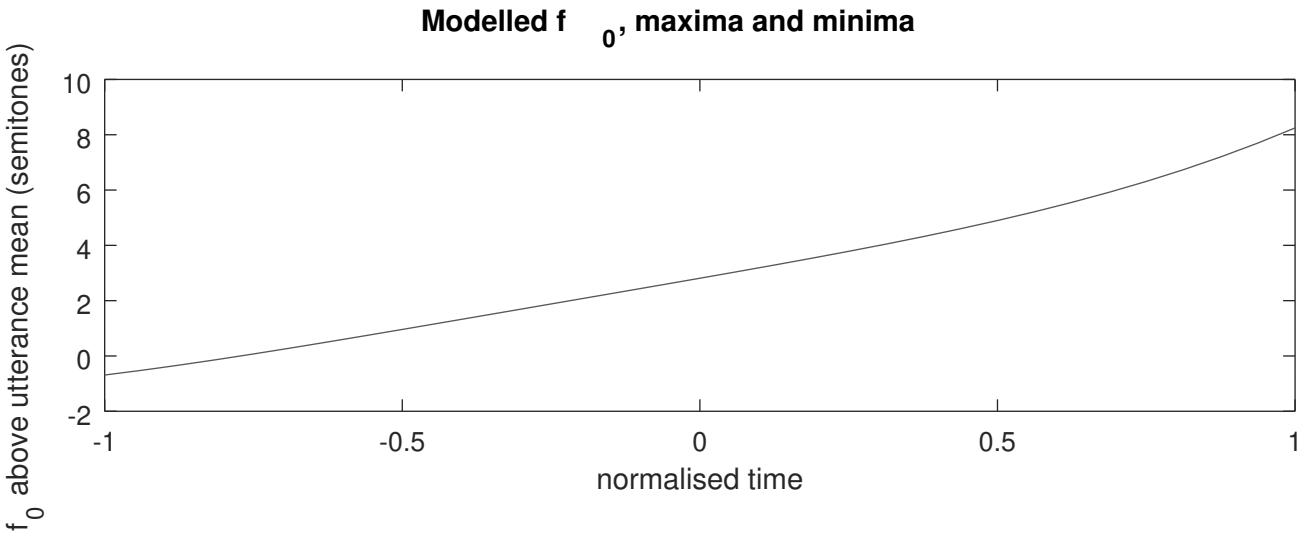

pk299013_c41.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
50
60
70
80
90
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

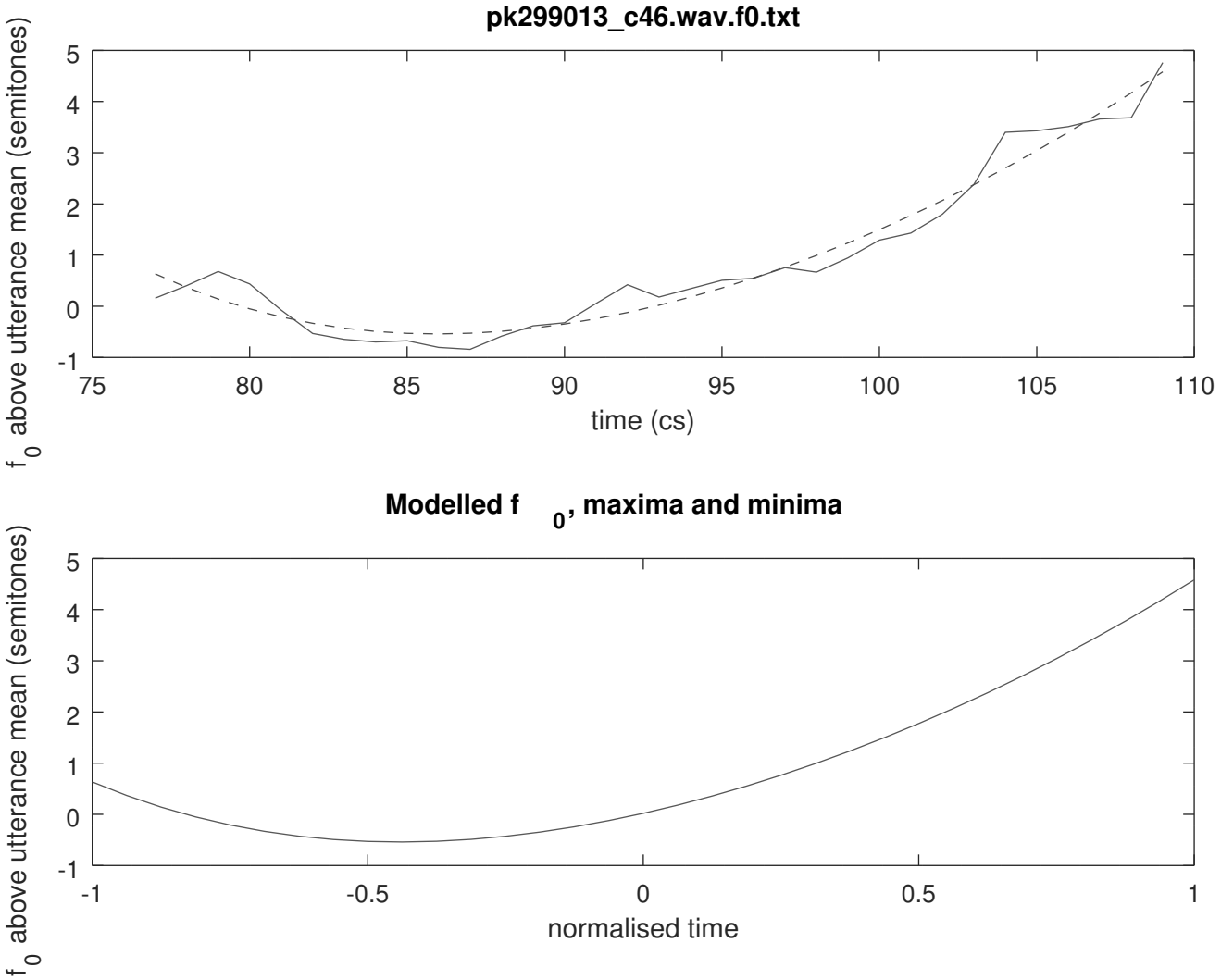

pk299013_c42.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
30
35
40
45
50
55
60
65
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

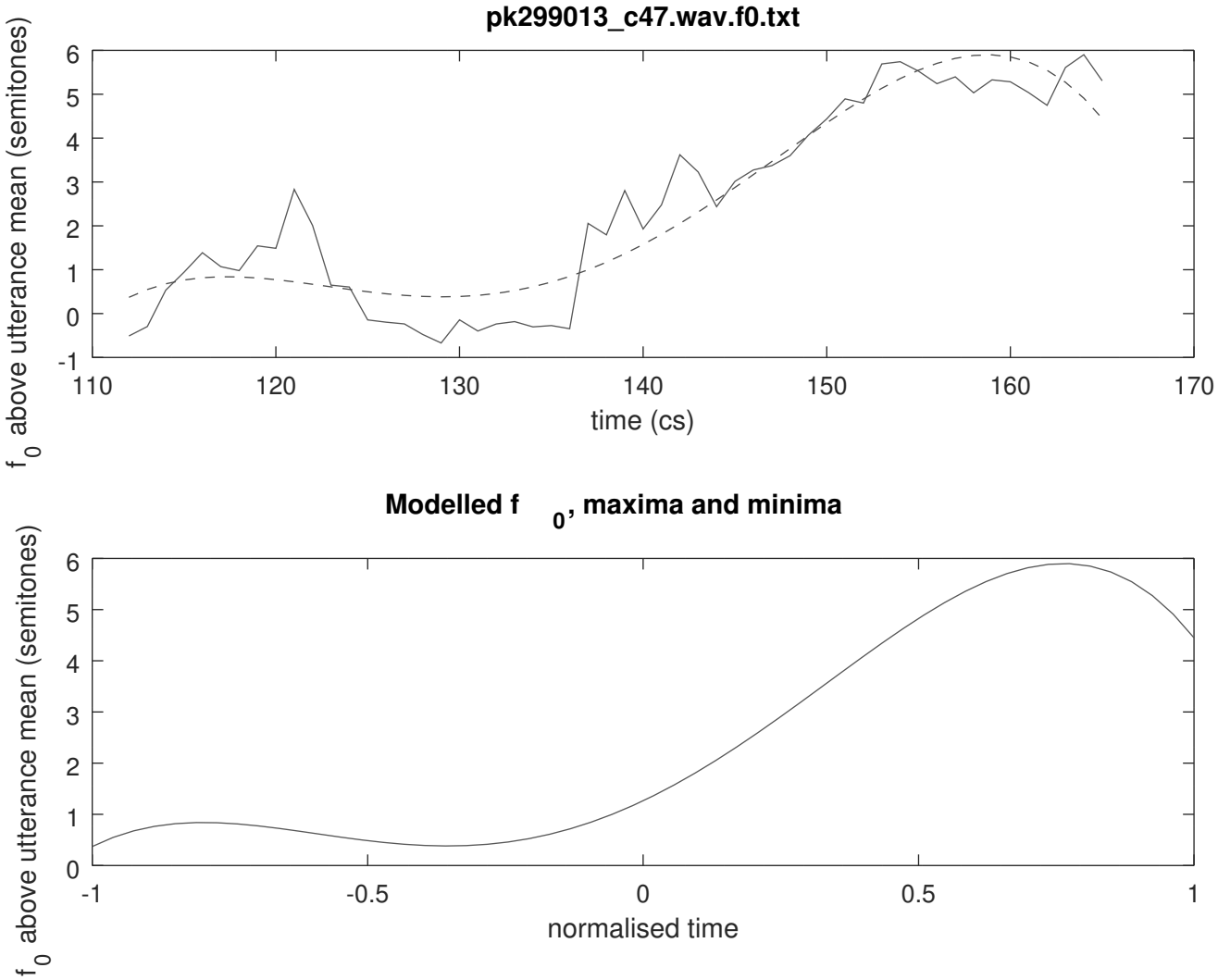

pk299013_c43.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
30
35
40
45
50
55
60
65
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

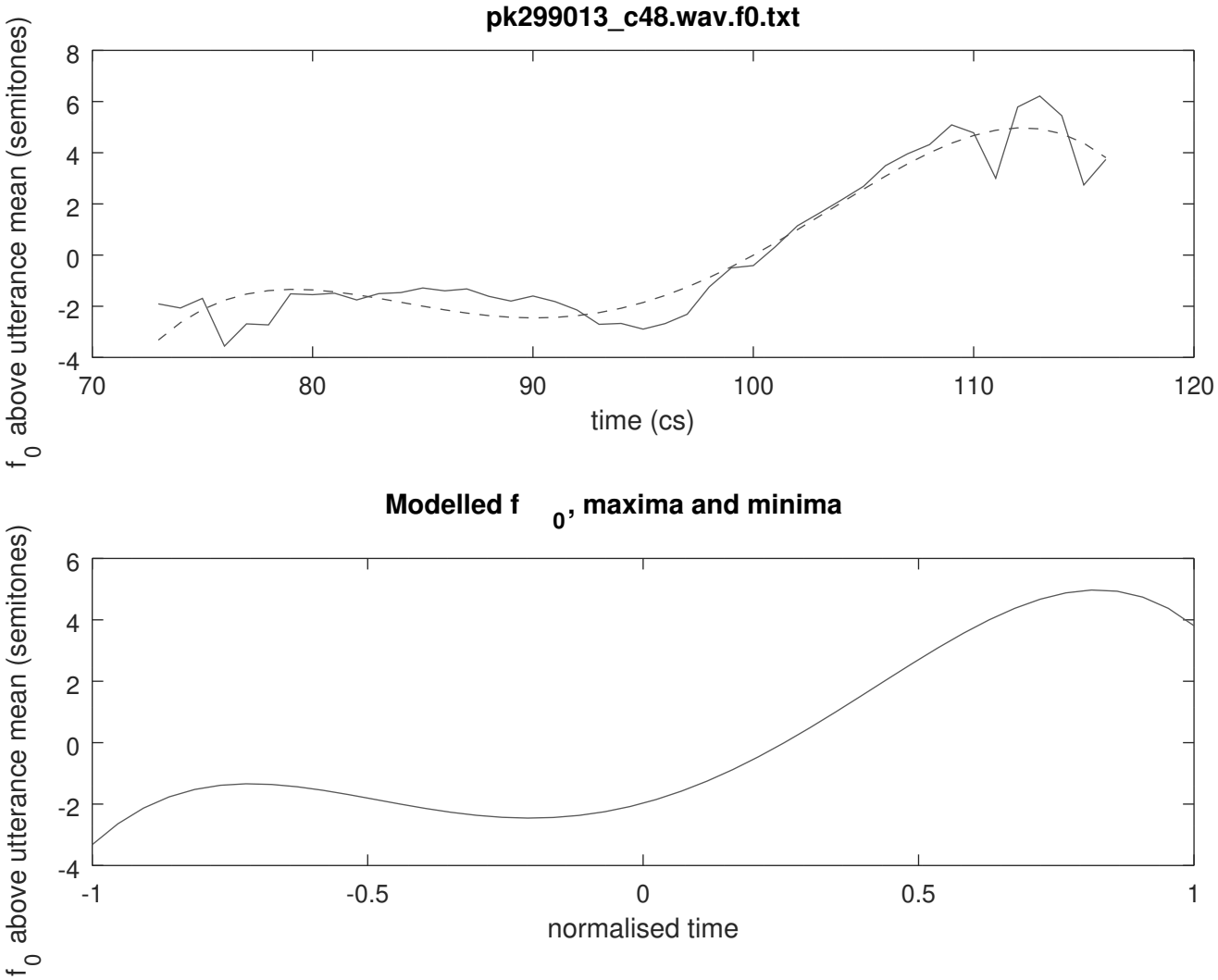

pk299013_c44.wav.f0.txt
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-4
0
20
40
60
80
100
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-4
-1
-0.5
0
0.5
1
normalised time

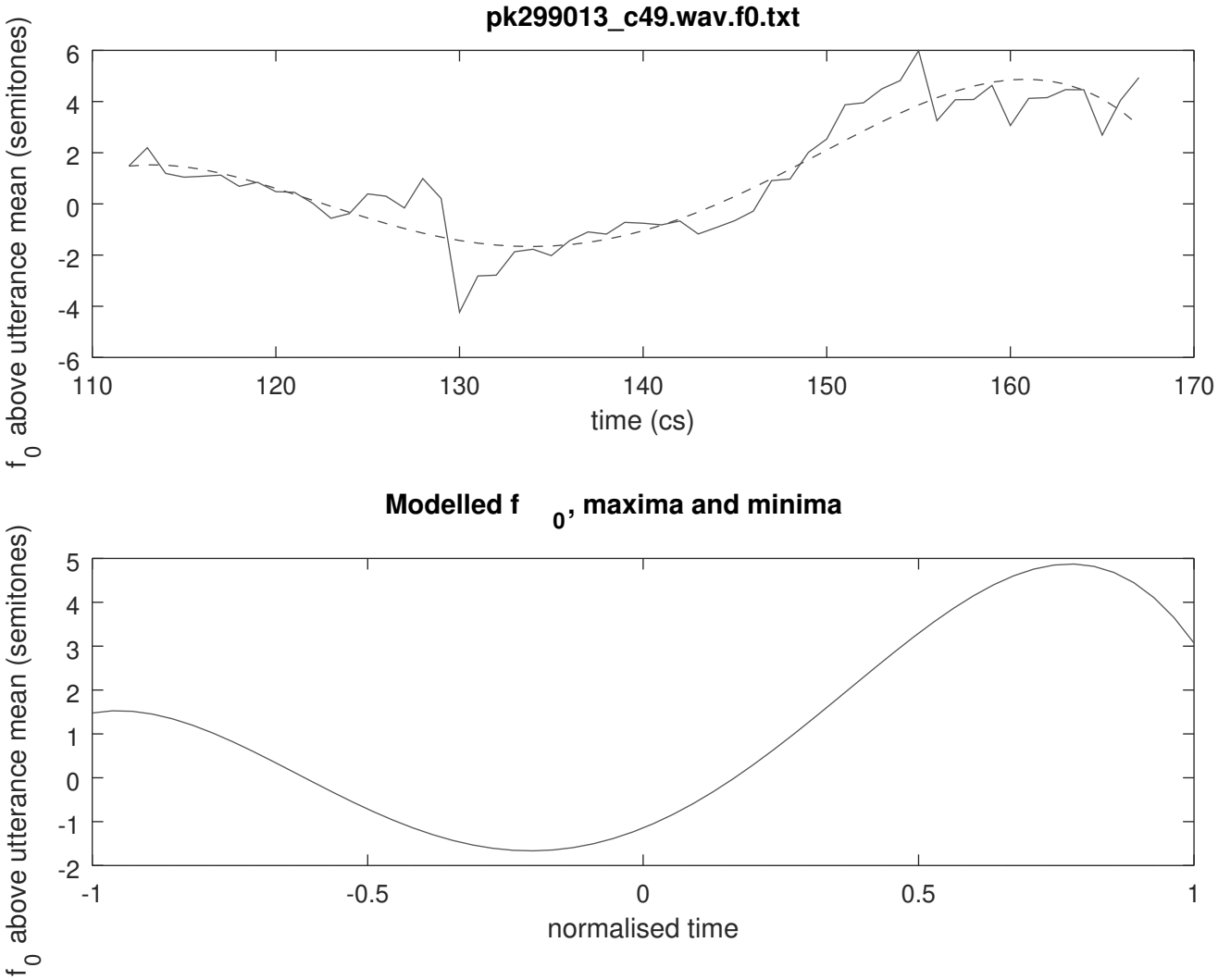

pk299013_c45.wav.f0.txt
f0 above utterance mean (semitones)
10
8
6
4
2
0
-2
60
65
70
75
80
85
90
95
time (cs)

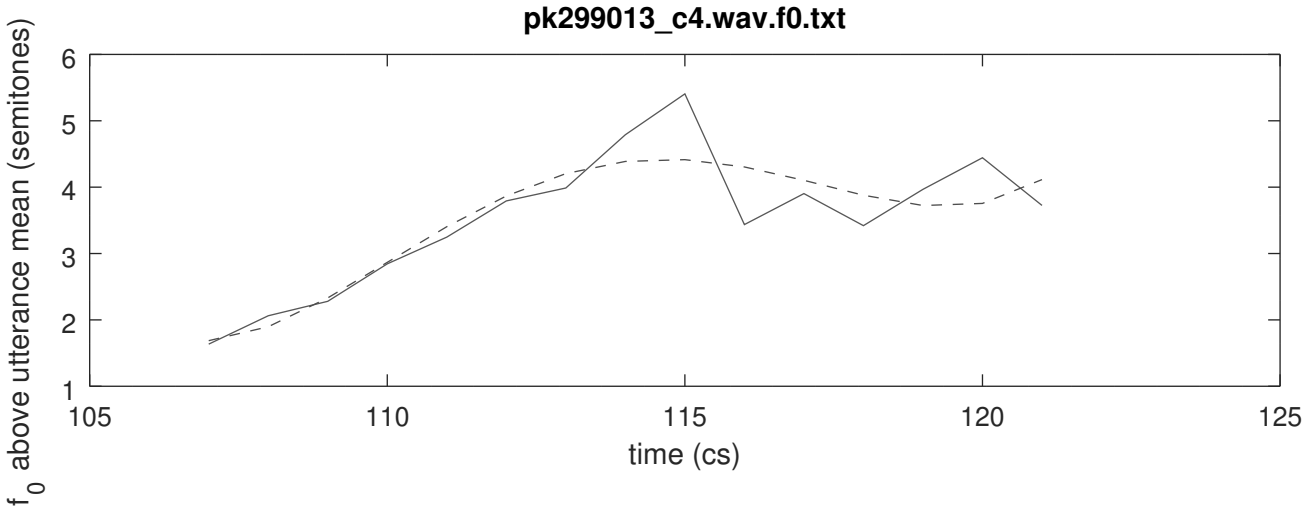

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
10
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

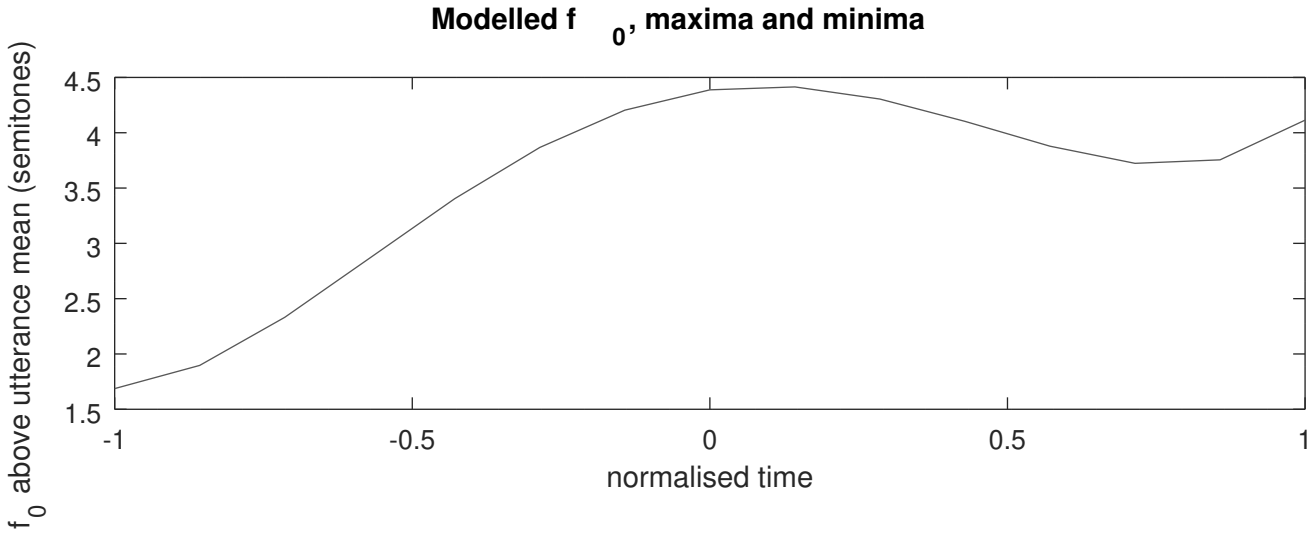

pk299013_c46.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
75
80
85
90
95
100
105
110
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

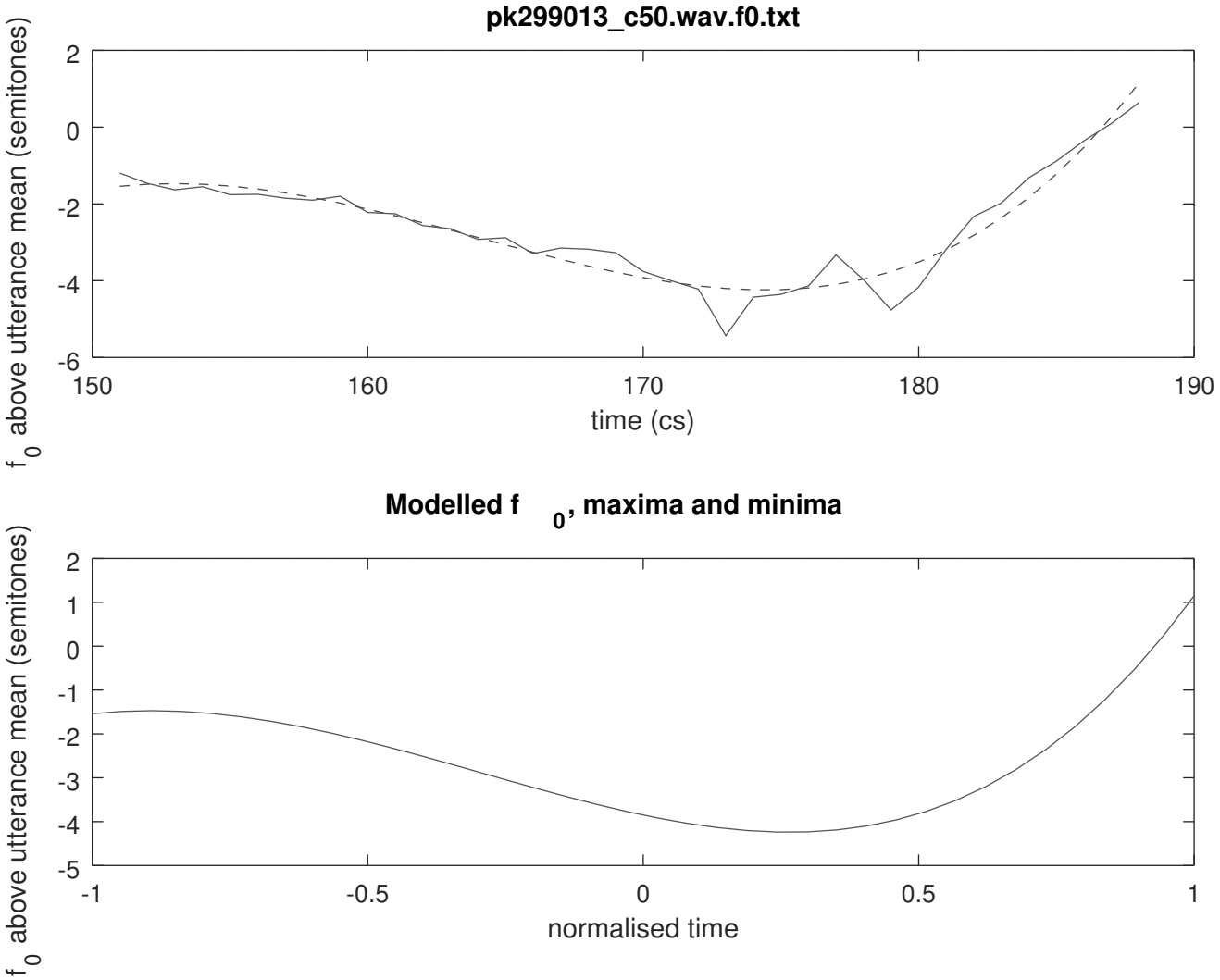

pk299013_c47.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

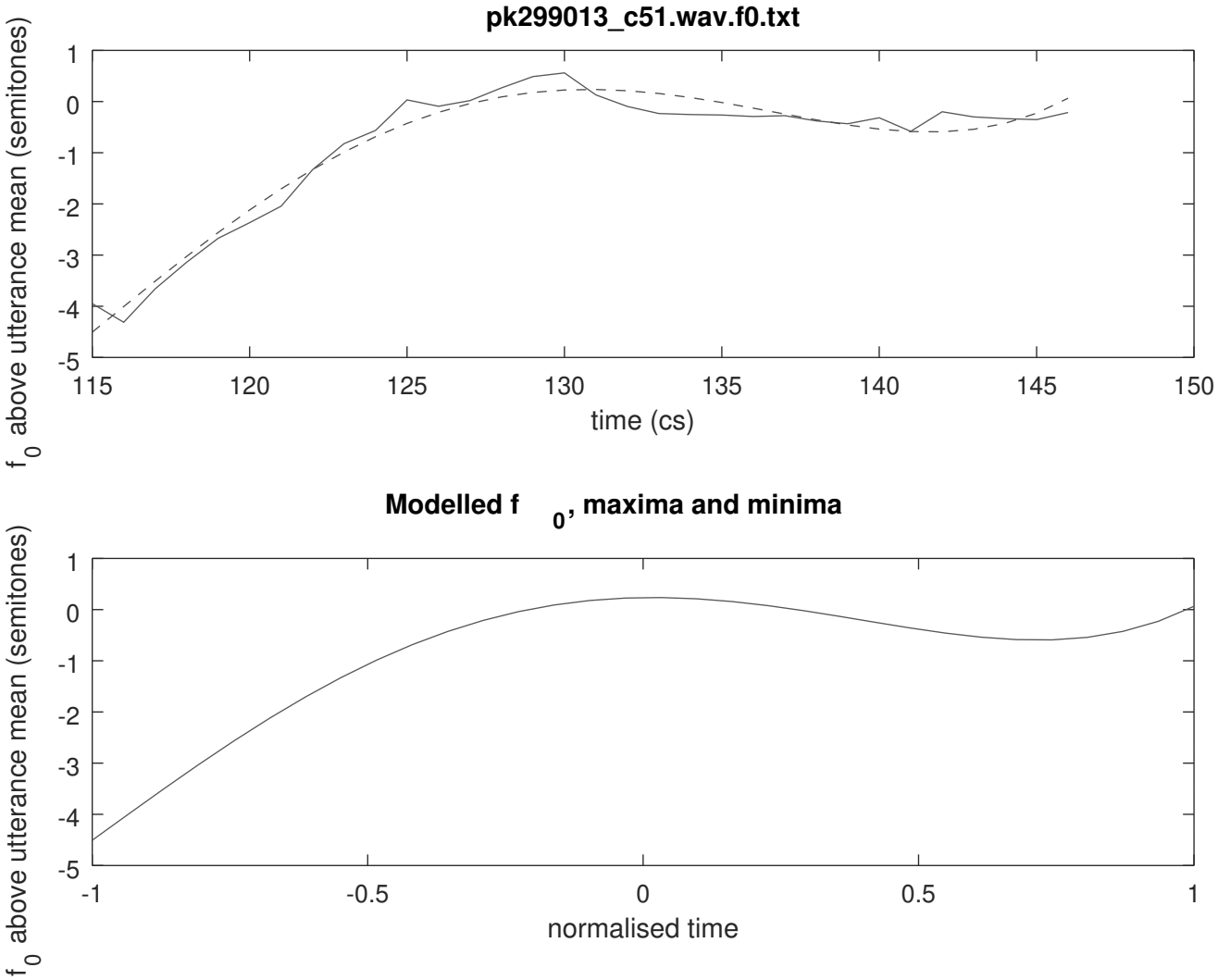

pk299013_c48.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
70
80
90
100
110
120
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

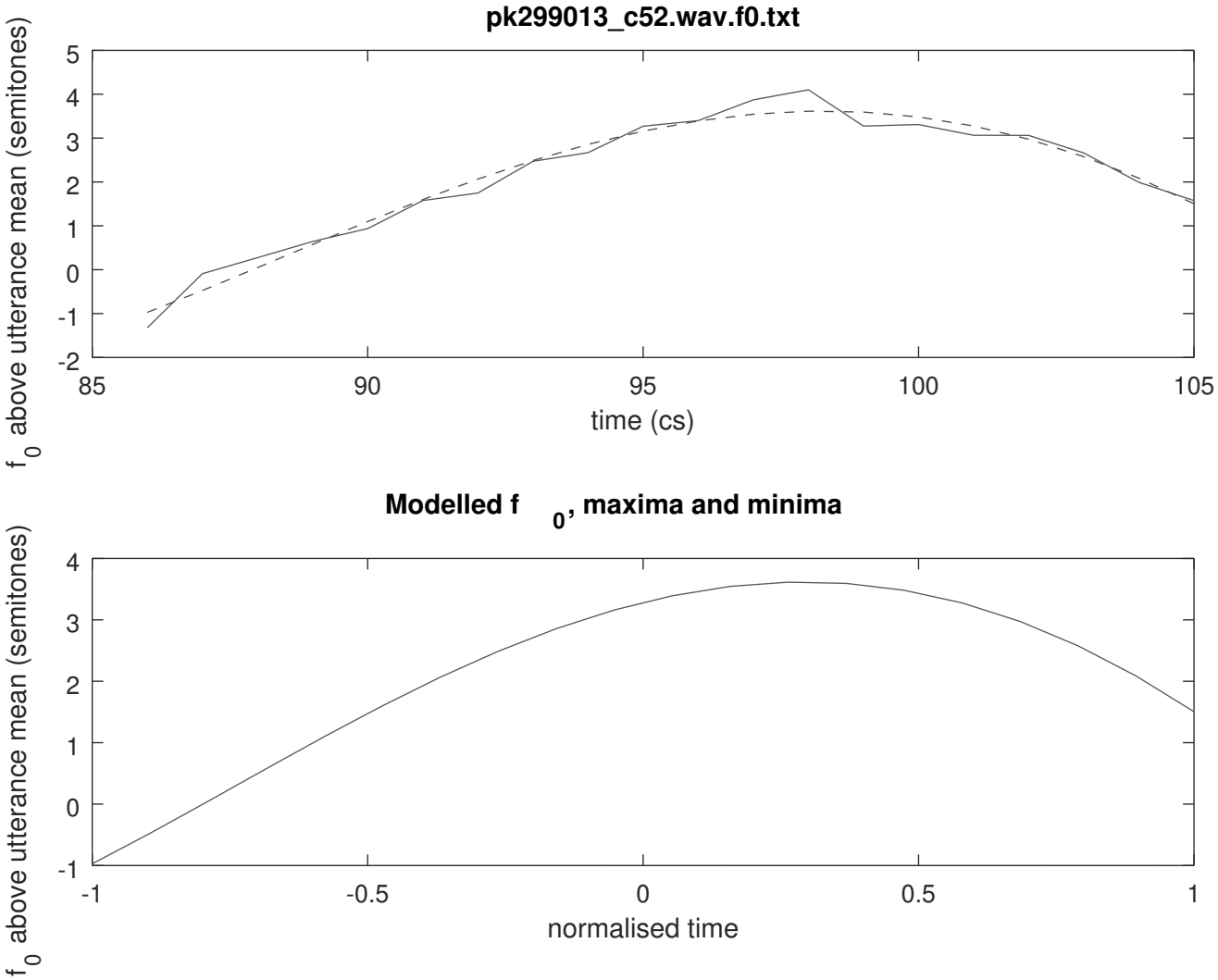

pk299013_c49.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
110
120
130
140
150
160
170
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

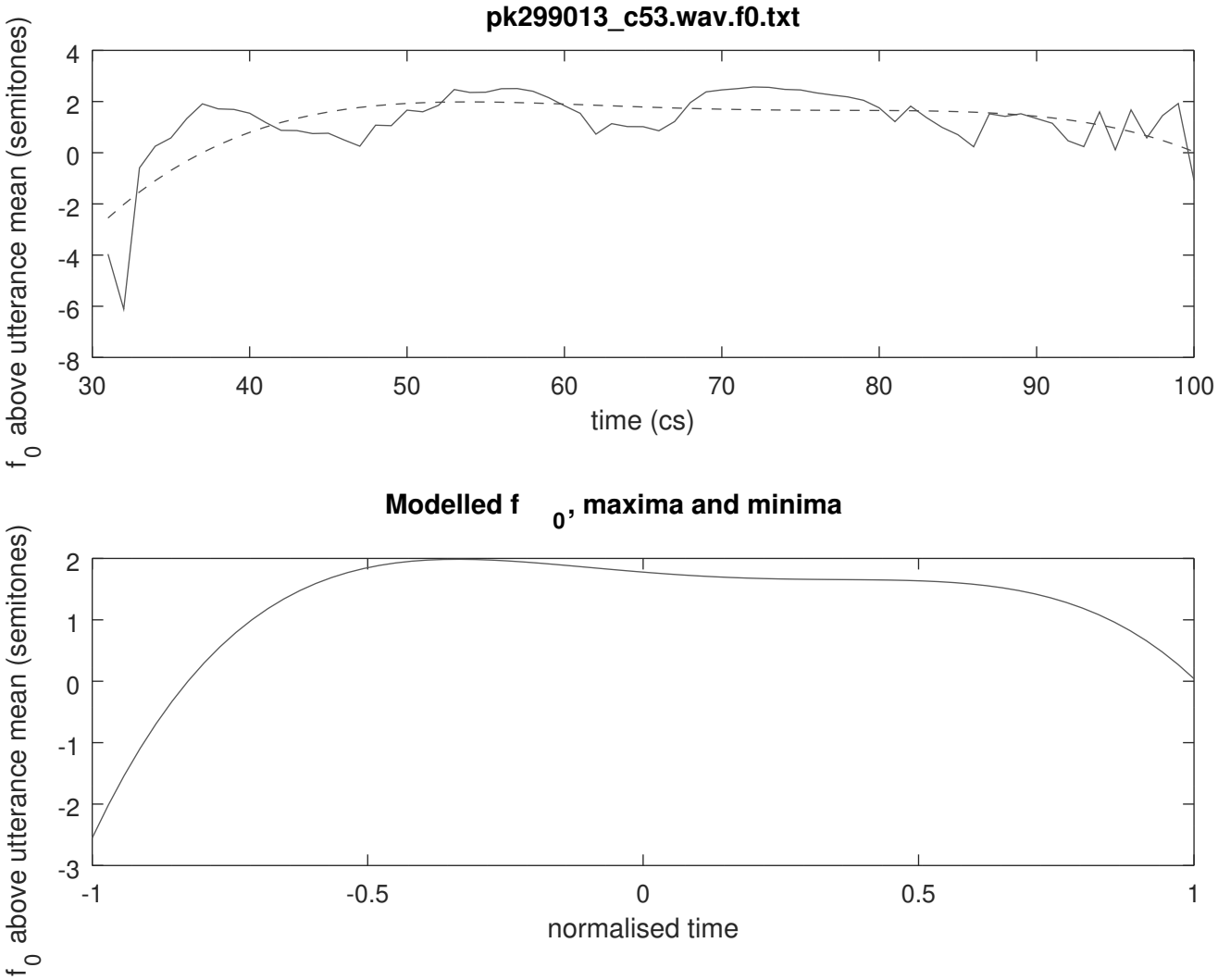

pk299013_c4.wav.f0.txt
f0 above utterance mean (semitones)
6
5
4
3
2
1
105
110
115
120
125
time (cs)

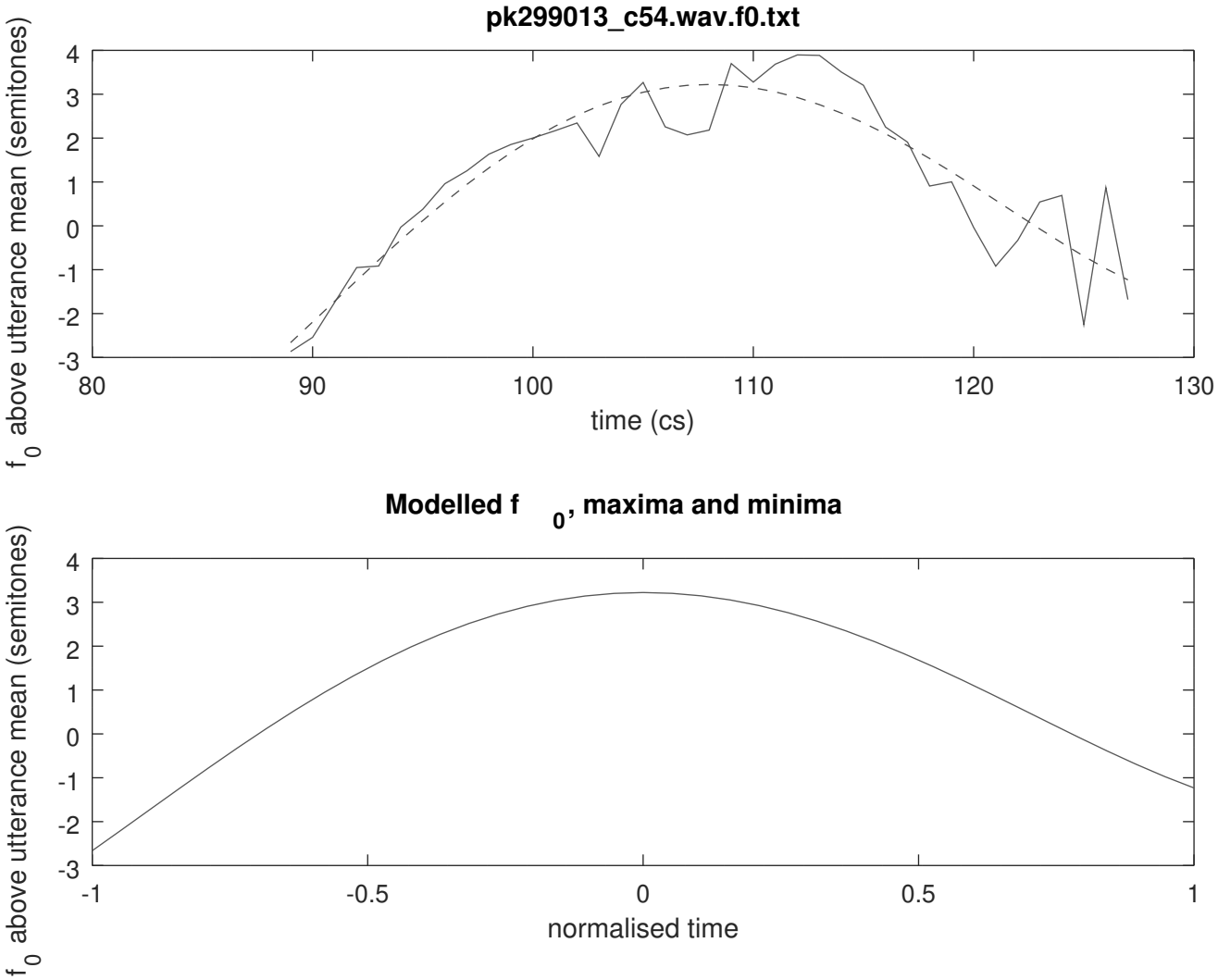

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4.5
4
3.5
3
2.5
2
1.5
-1
-0.5
0
0.5
1
normalised time

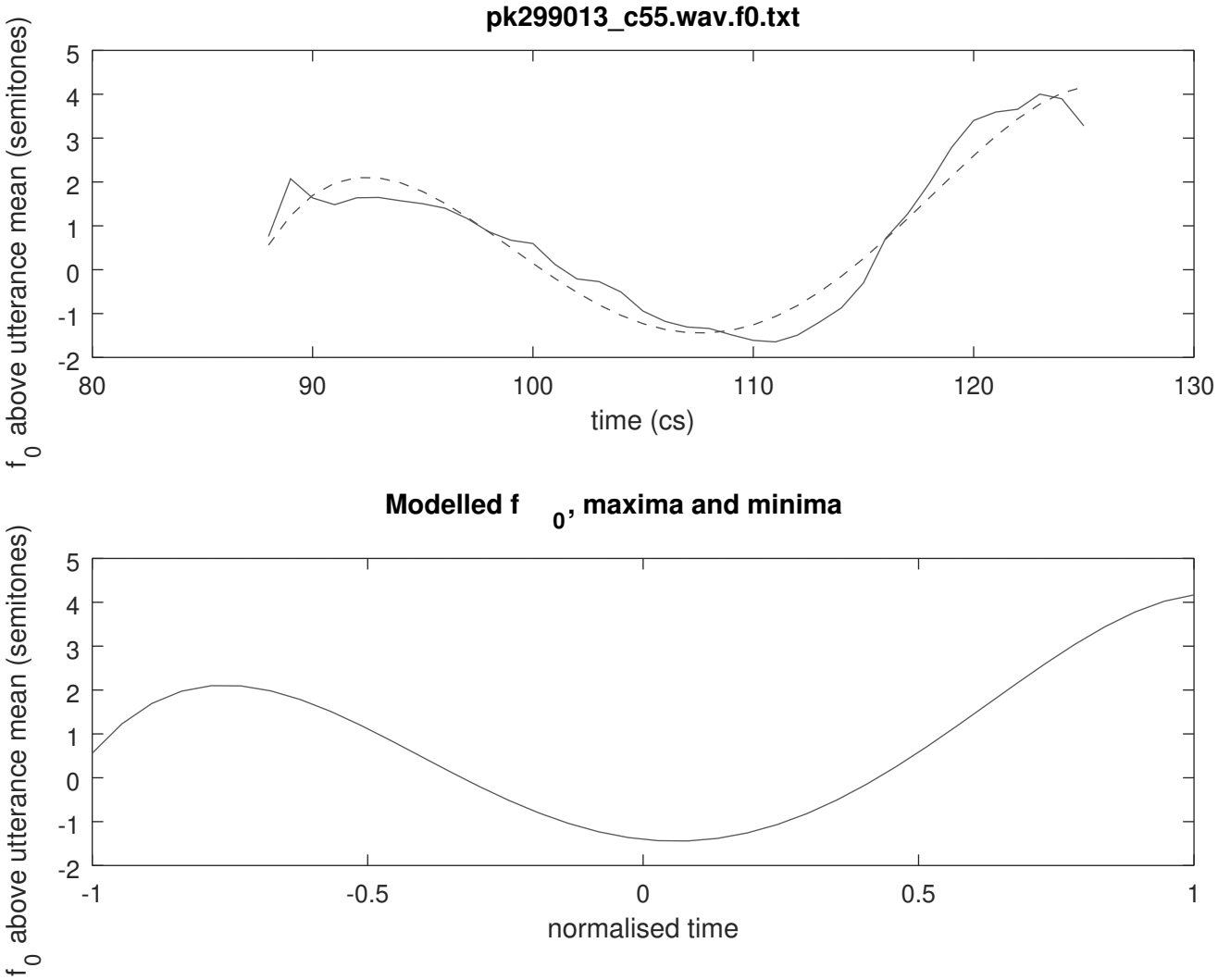

pk299013_c50.wav.f0.txt
f0 above utterance mean (semitones)
2
0
-2
-4
-6
150
160
170
180
190
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-4
-5
-1
-0.5
0
0.5
1
normalised time

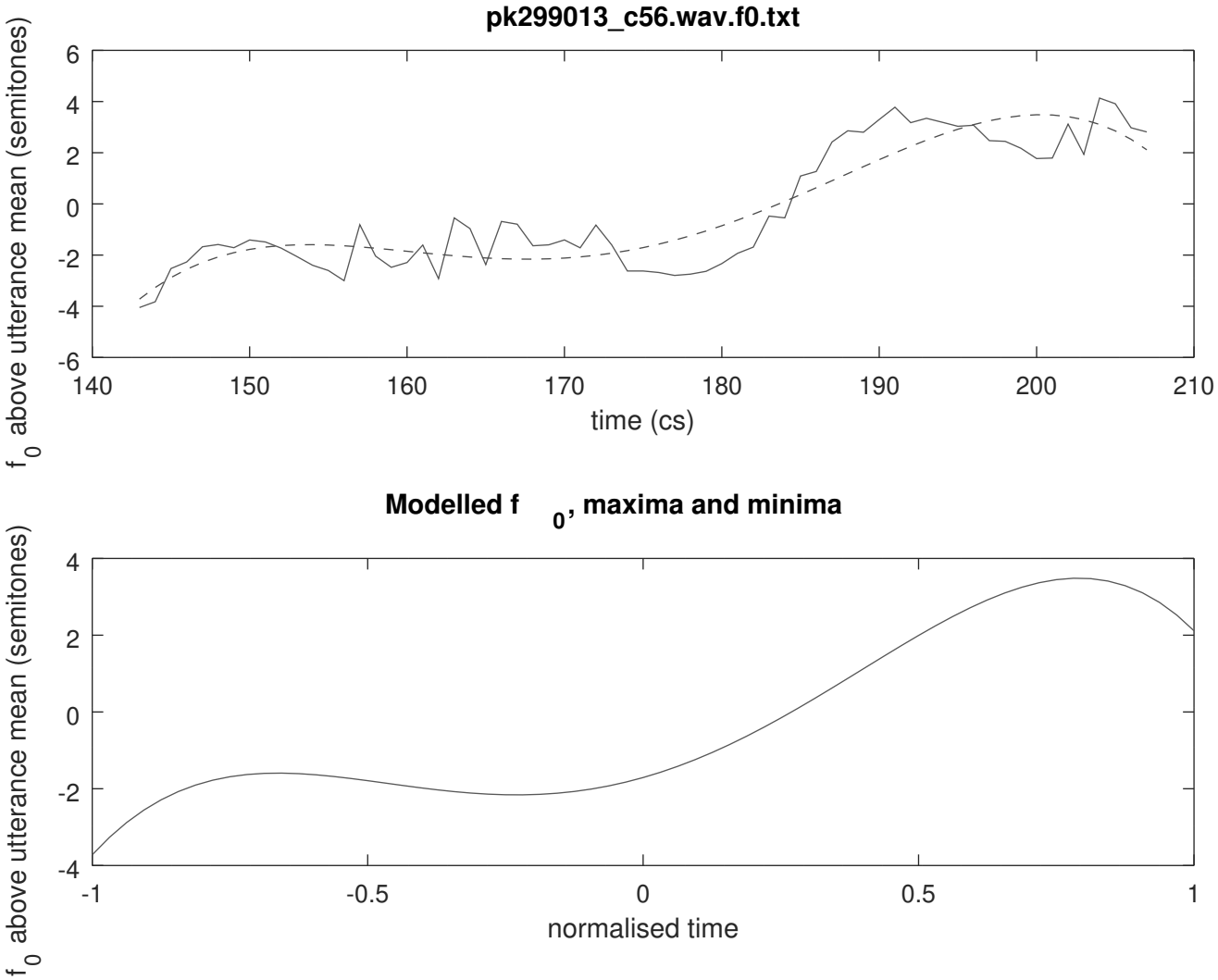

pk299013_c51.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

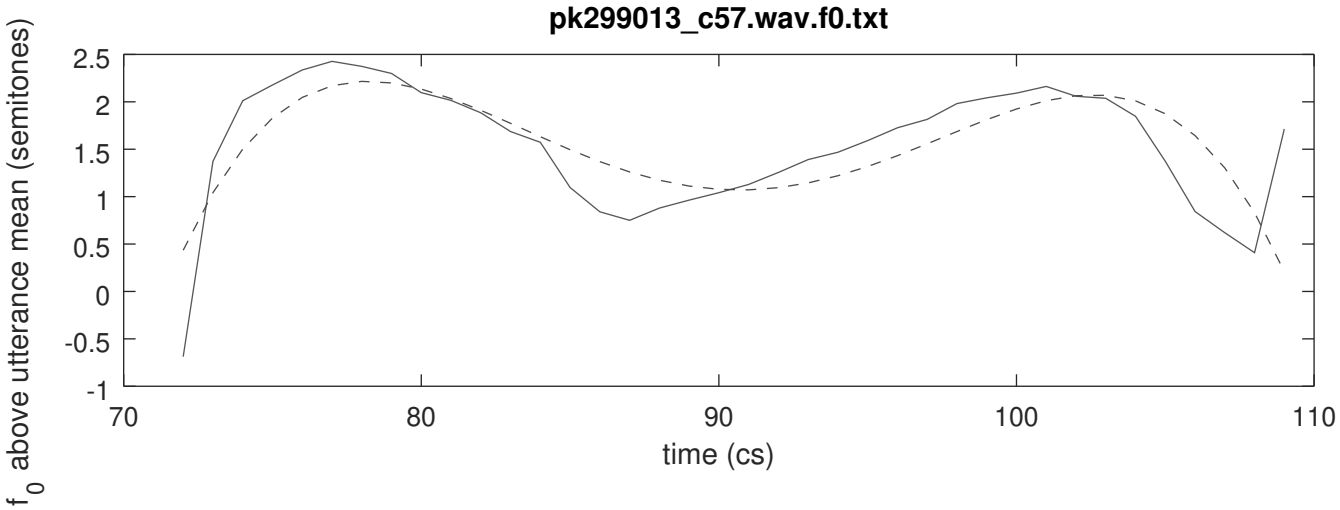

pk299013_c52.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
85
90
95
100
105
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

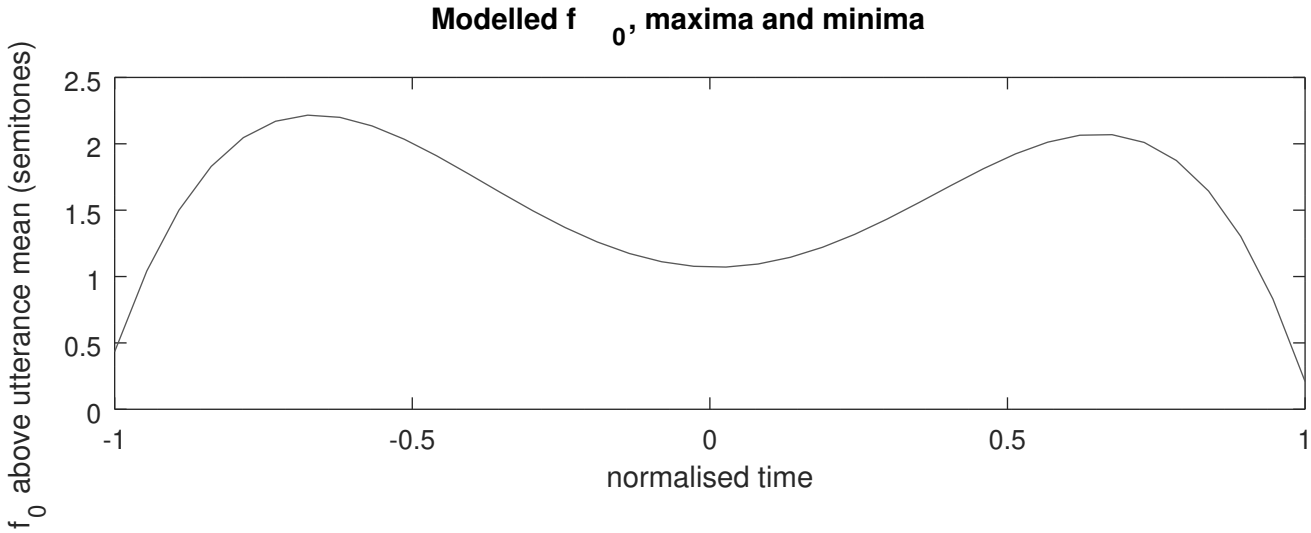

pk299013_c53.wav.f0.txt
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
-8
30
40
50
60
70
80
90
100
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-1
-0.5
0
0.5
1
normalised time

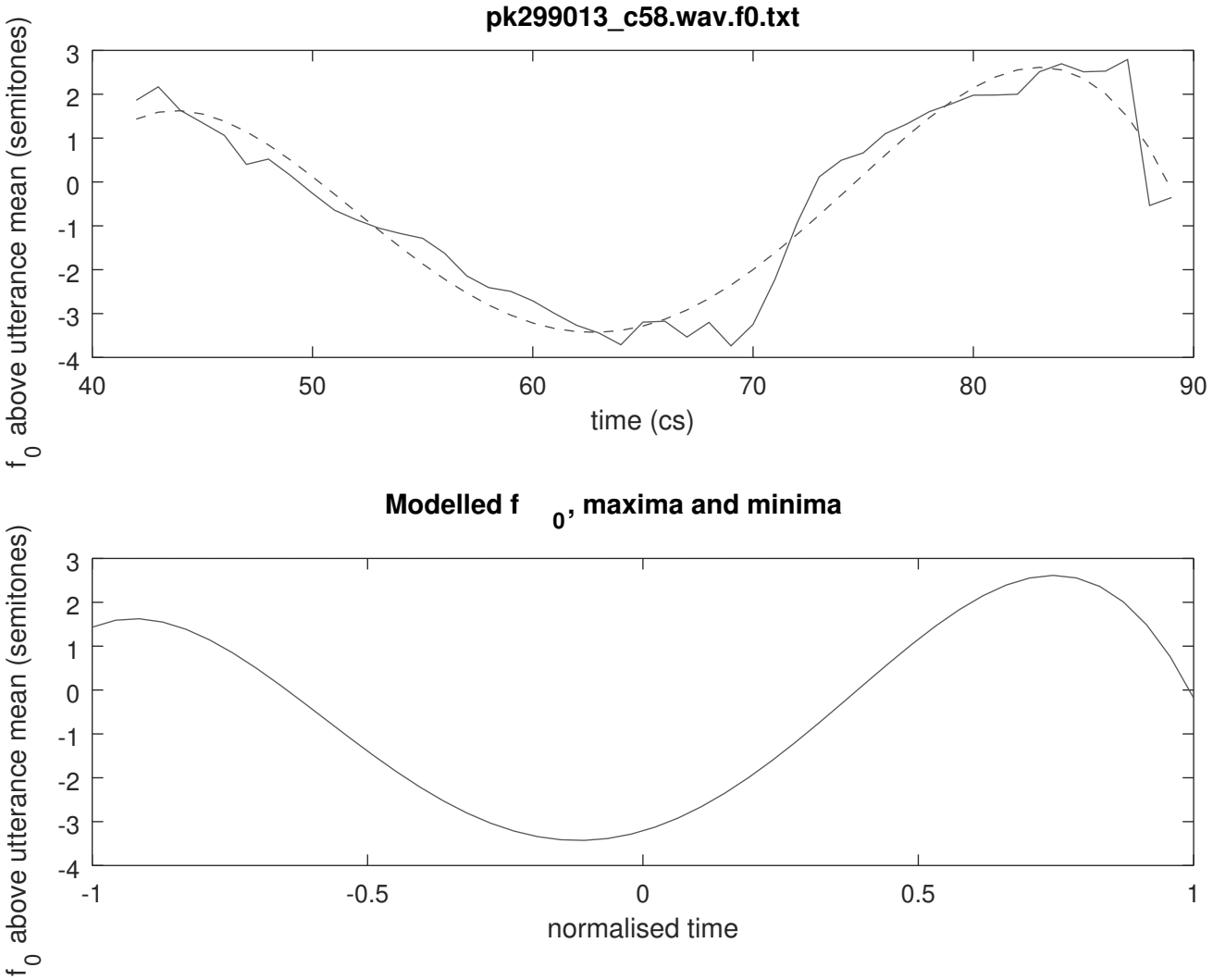

pk299013_c54.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

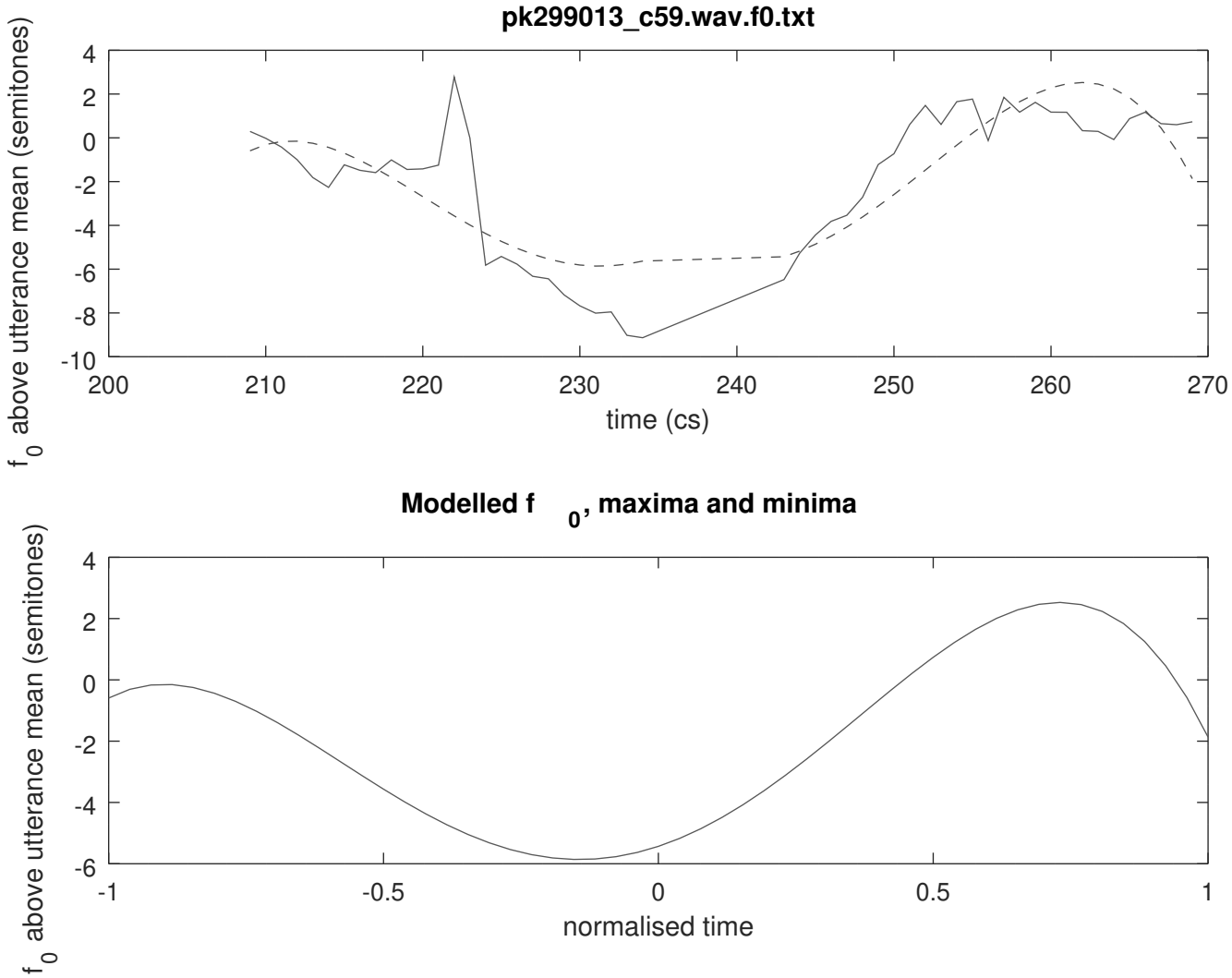

pk299013_c55.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
80
90
100
110
120
130
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

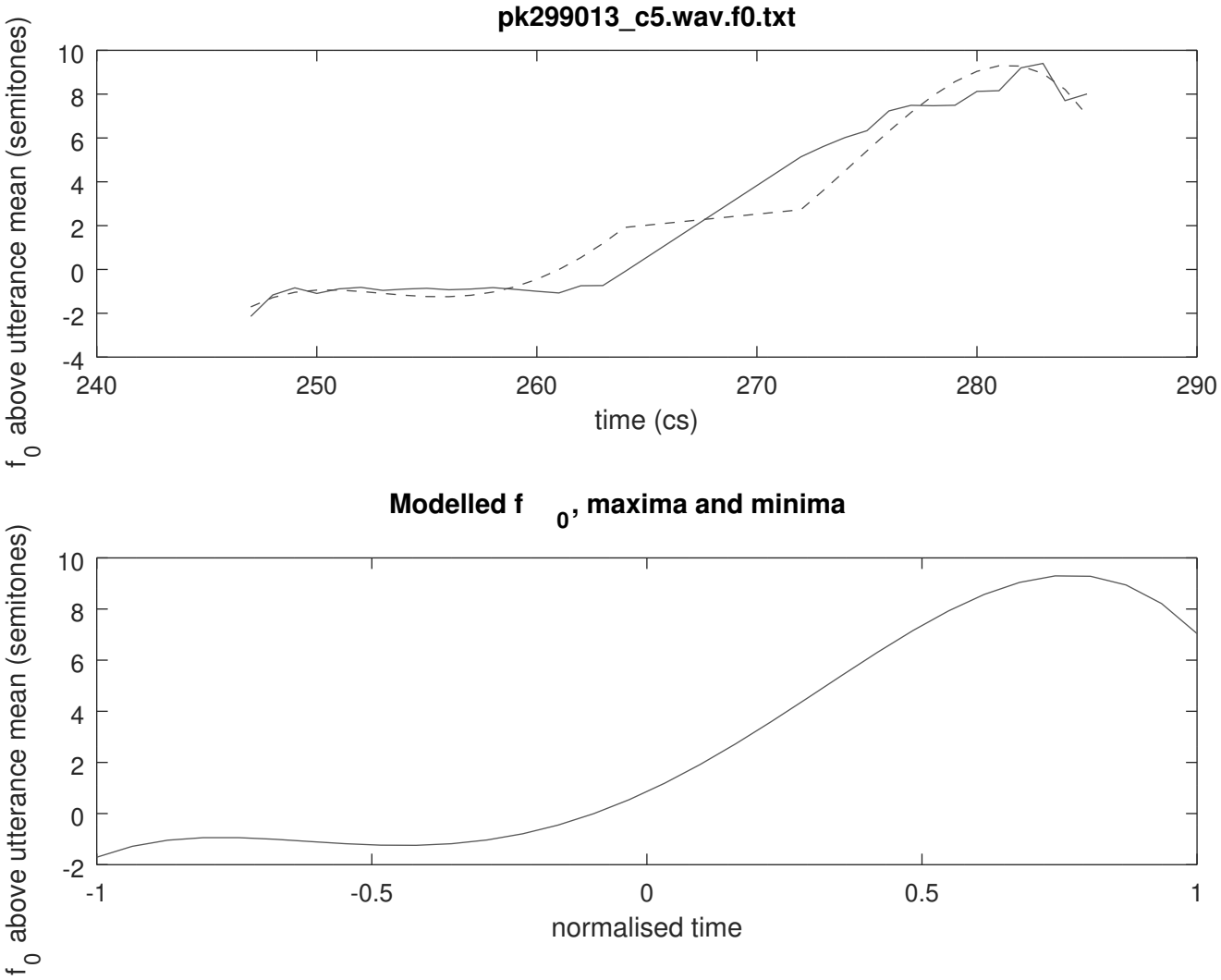

pk299013_c56.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
140
150
160
170
180
190
200
210
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

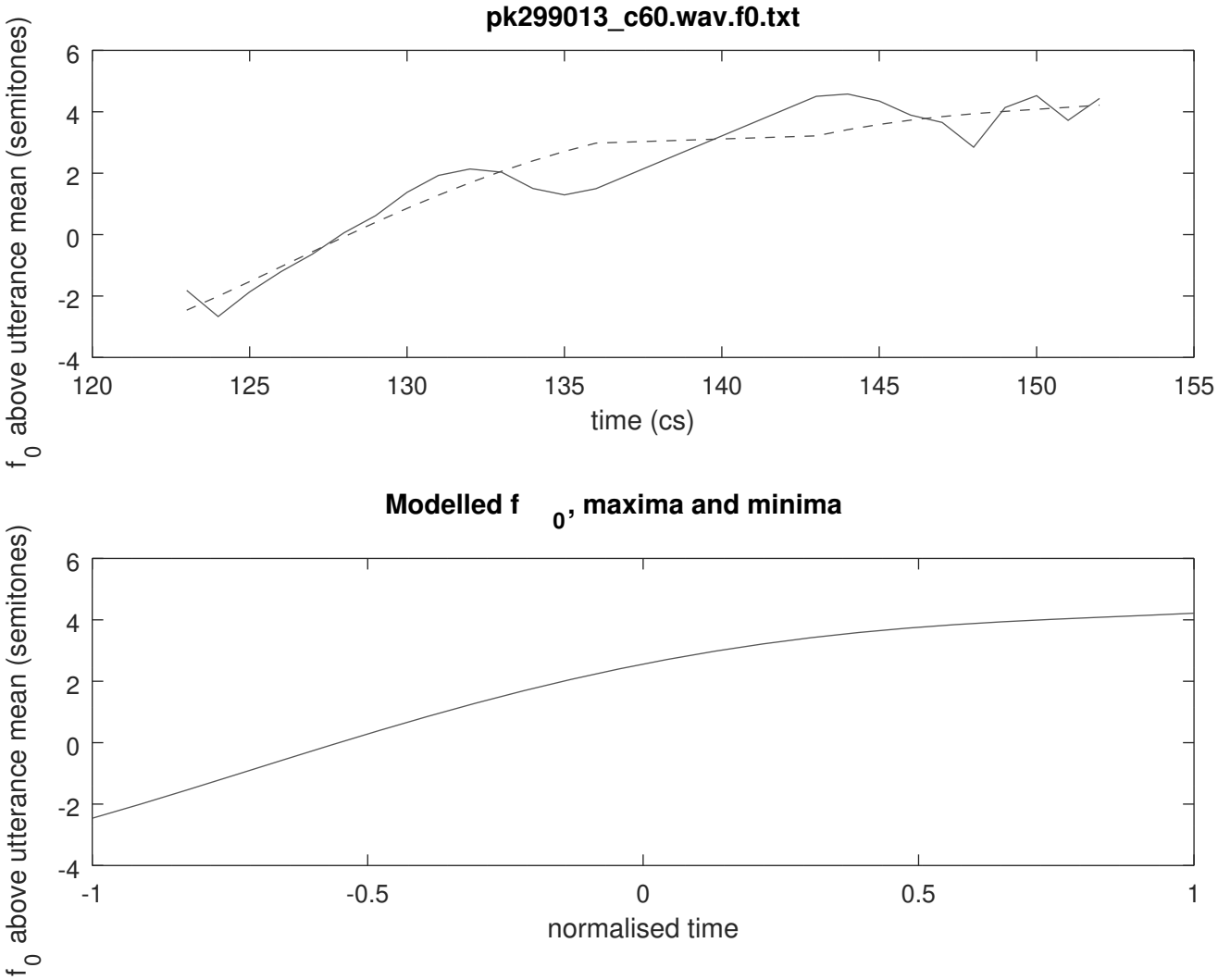

pk299013_c57.wav.f0.txt
f0 above utterance mean (semitones)
2.5
2
1.5
1
0.5
0
-0.5
-1
70
80
90
100
110
time (cs)

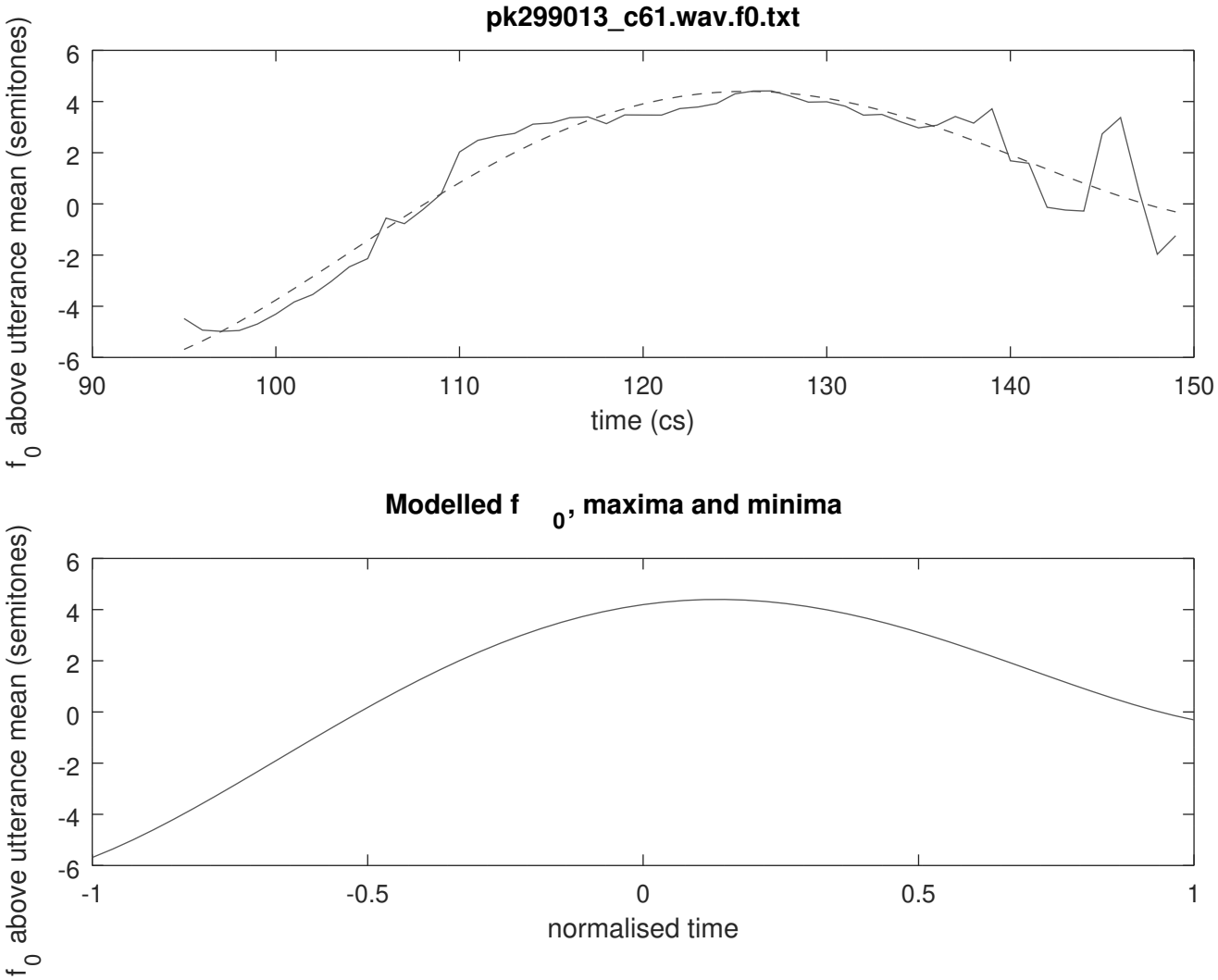

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
2.5
2
1.5
1
0.5
0
-1
-0.5
0
0.5
1
normalised time

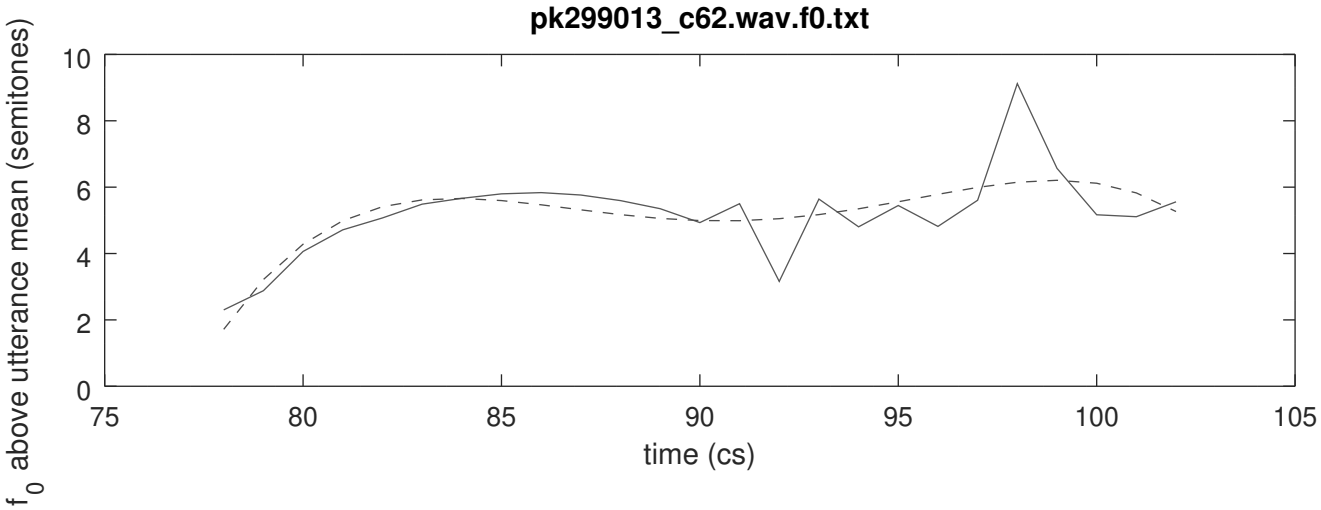

pk299013_c58.wav.f0.txt
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-3
-4
40
50
60
70
80
90
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-3
-4
-1
-0.5
0
0.5
1
normalised time

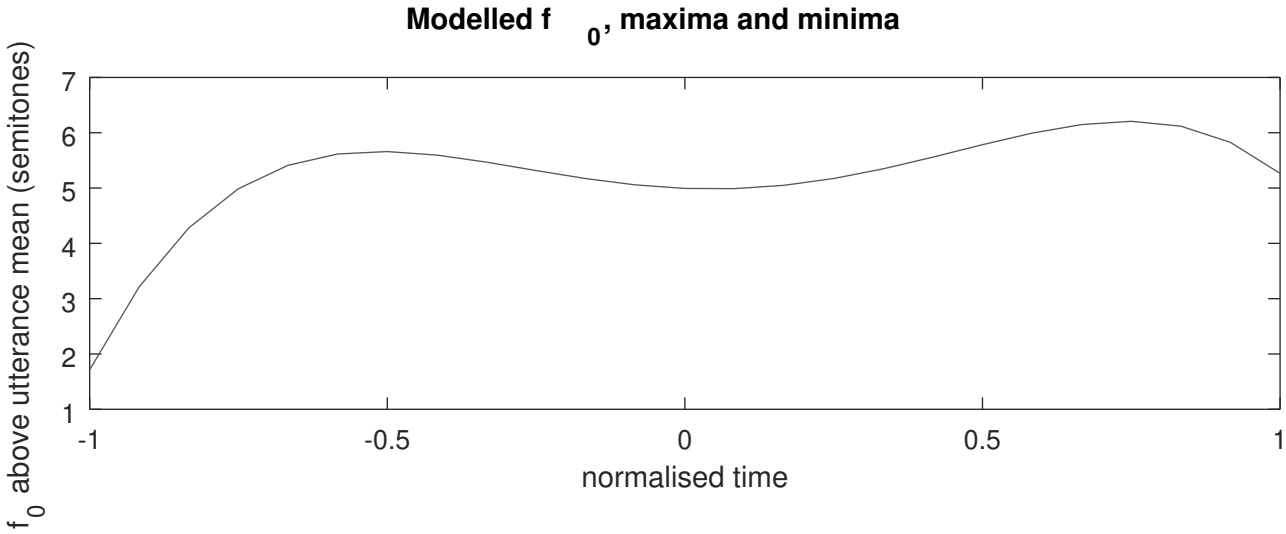

pk299013_c59.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

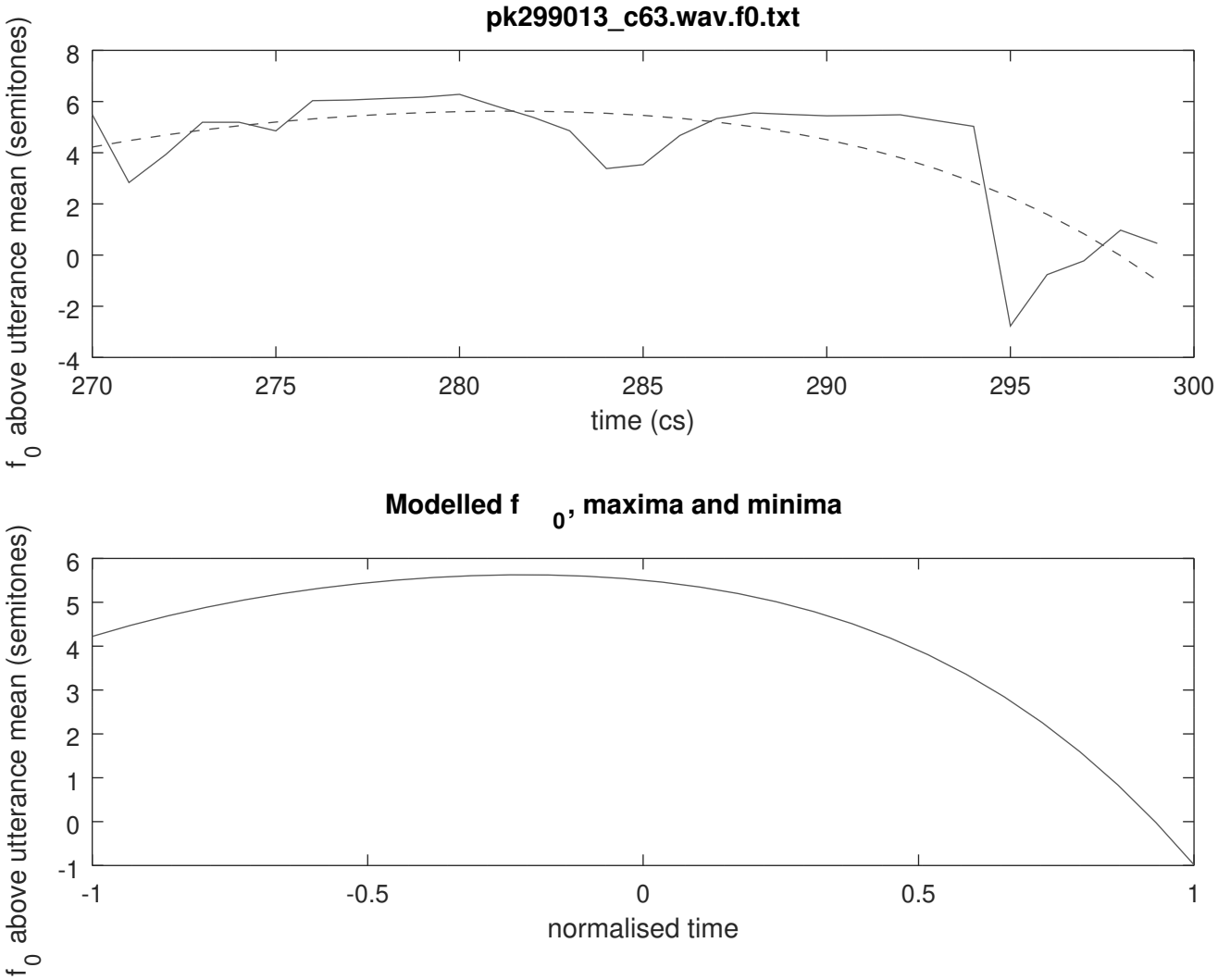

pk299013_c5.wav.f0.txt
f0 above utterance mean (semitones)
10
8
6
4
2
0
-2
-4
240
250
260
270
280
290
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
10
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

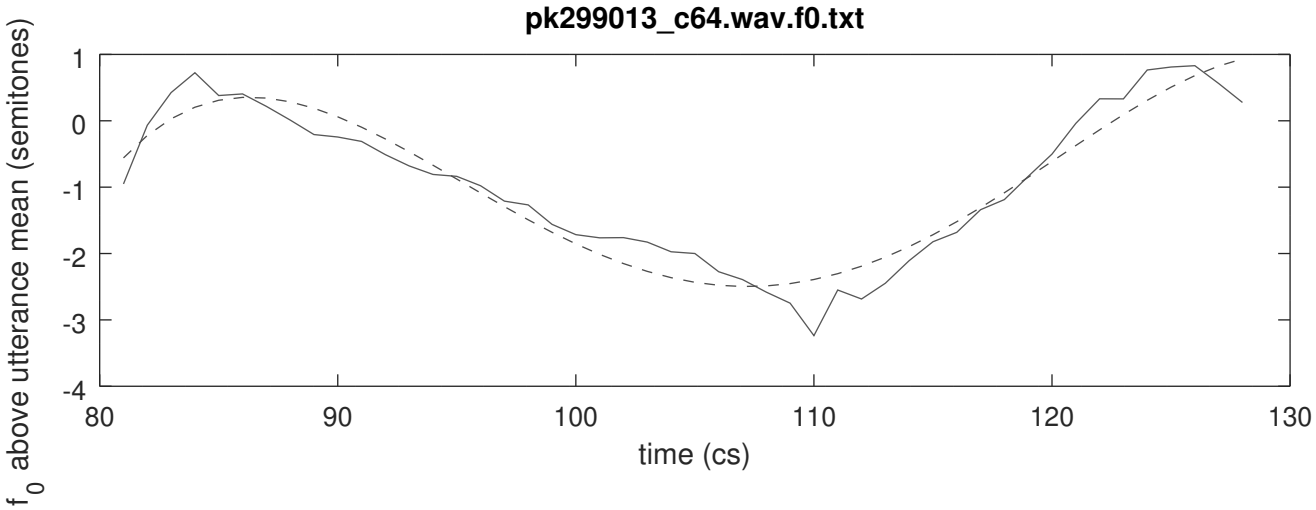

pk299013_c60.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
120
125
130
135
140
145
150
155
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

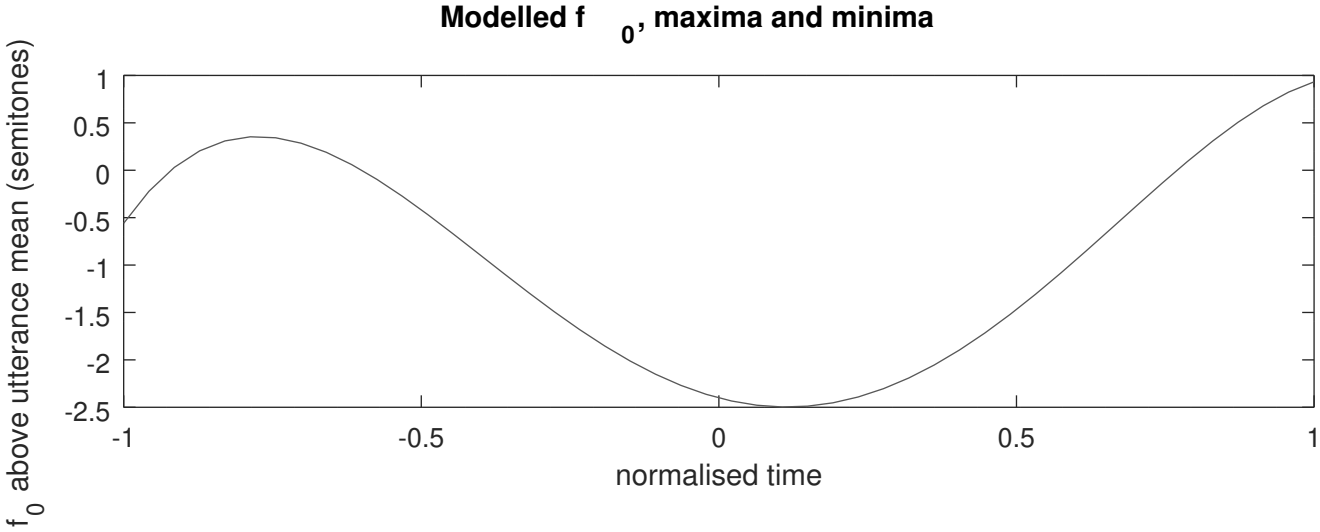

pk299013_c61.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
90
100
110
120
130
140
150
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

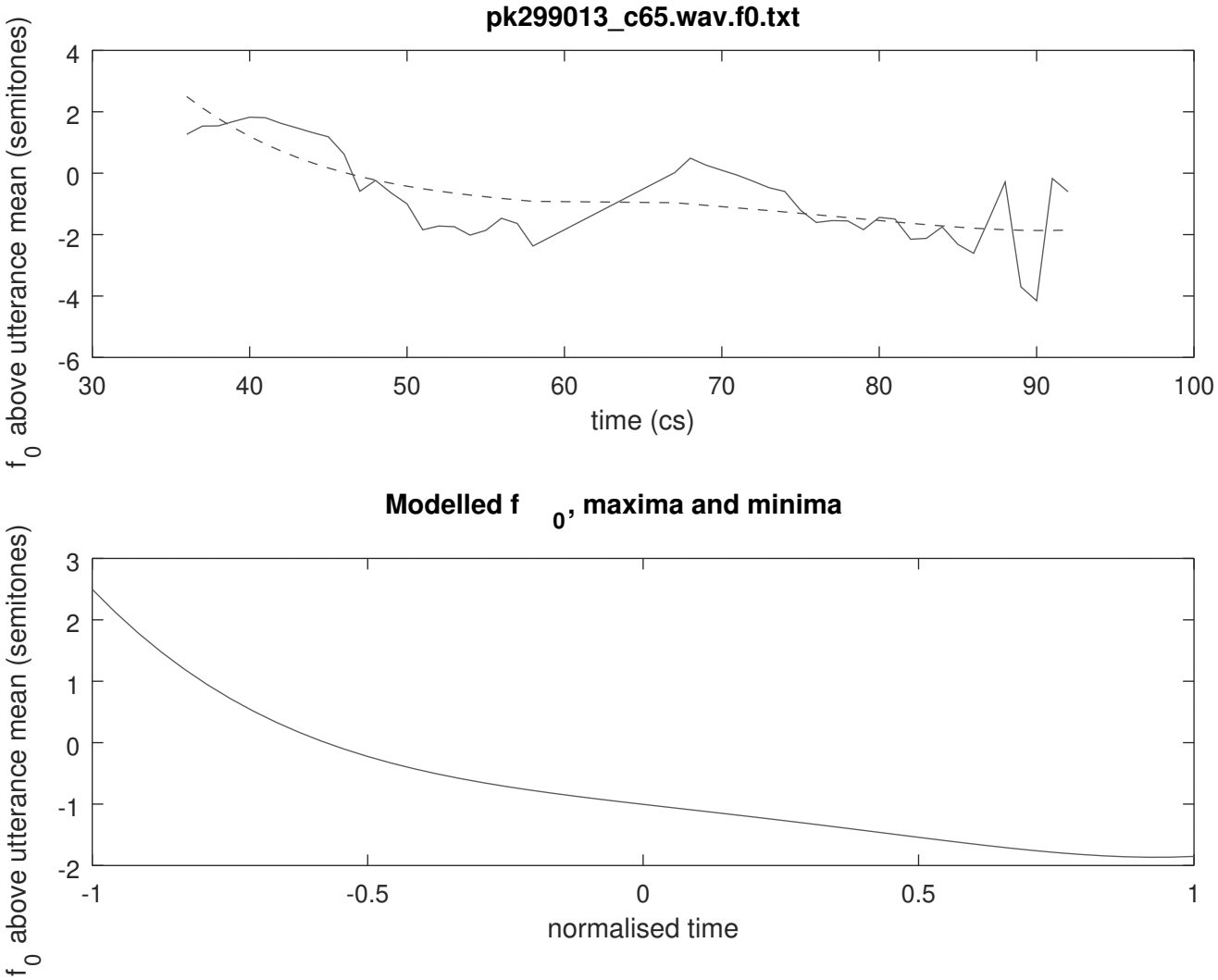

pk299013_c62.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
0
2
4
6
8
10
75
80
85
90
95
100
105

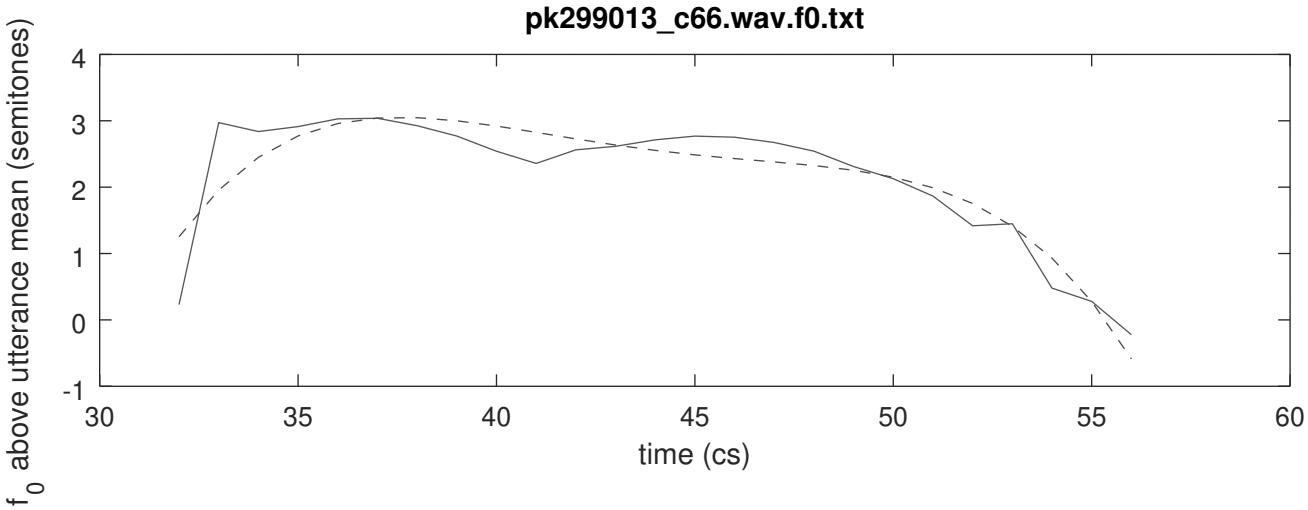

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
normalised time
1
2
3
4
5
6
7
-1
-0.5
0
0.5
1

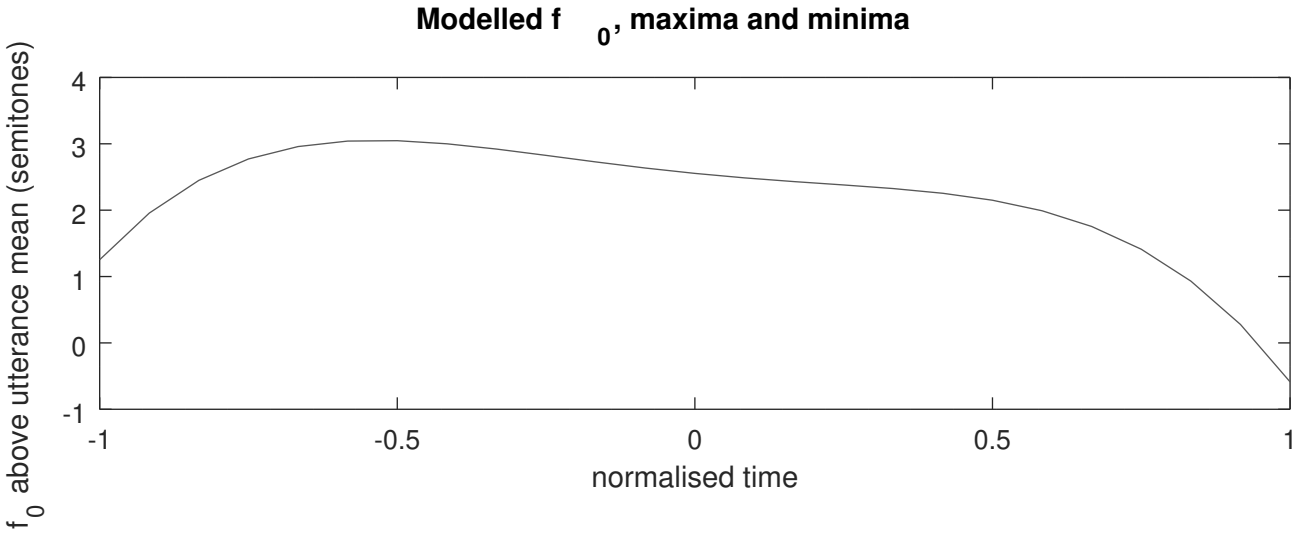

pk299013_c63.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
270
275
280
285
290
295
300
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
5
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

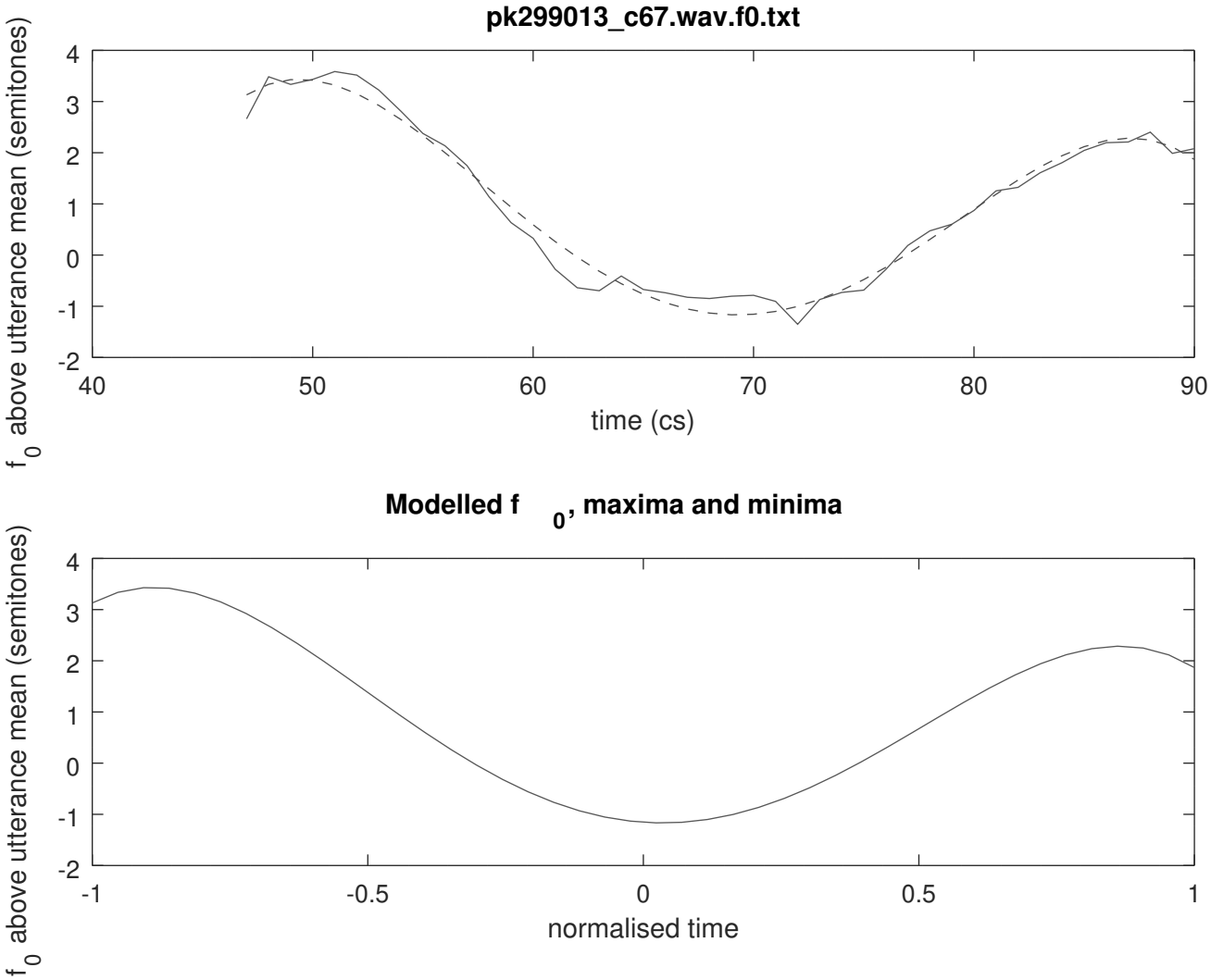

pk299013_c64.wav.f0.txt
f0 above utterance mean (semitones)
1
0
-1
-2
-3
-4
80
90
100
110
120
130
time (cs)

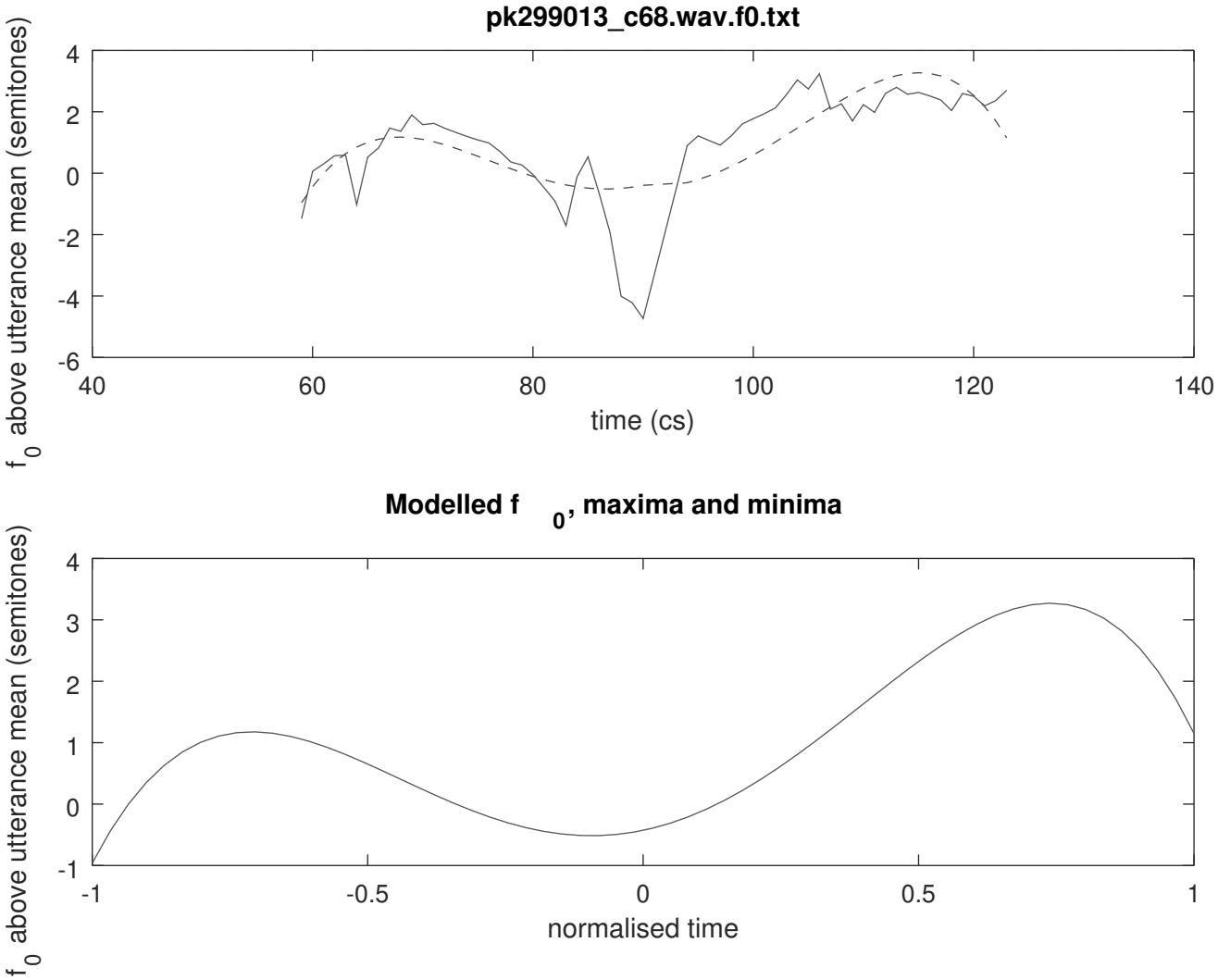

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
1
0.5
0
-0.5
-1
-1.5
-2
-2.5
-1
-0.5
0
0.5
1
normalised time

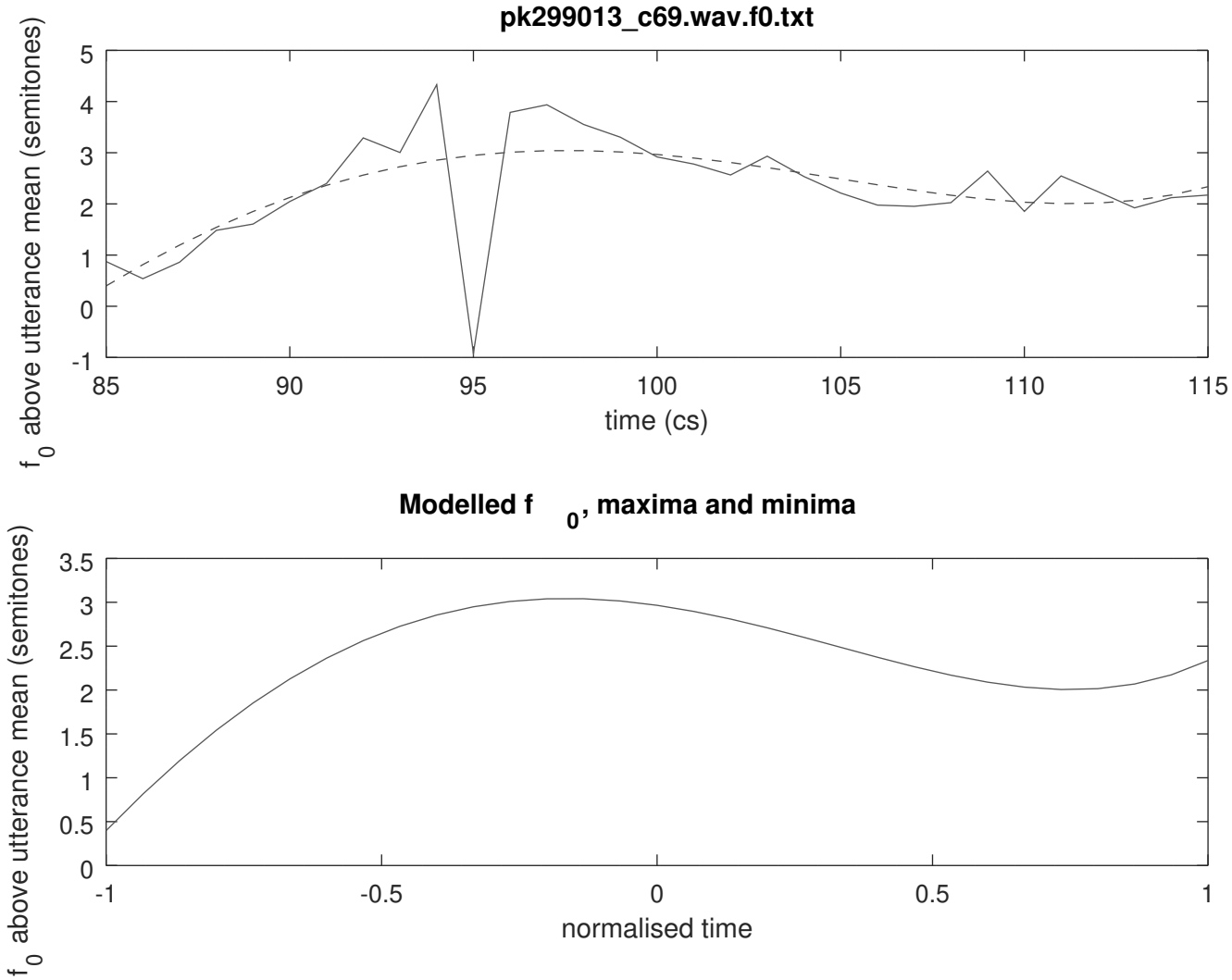

pk299013_c65.wav.f0.txt
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
30
40
50
60
70
80
90
100
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

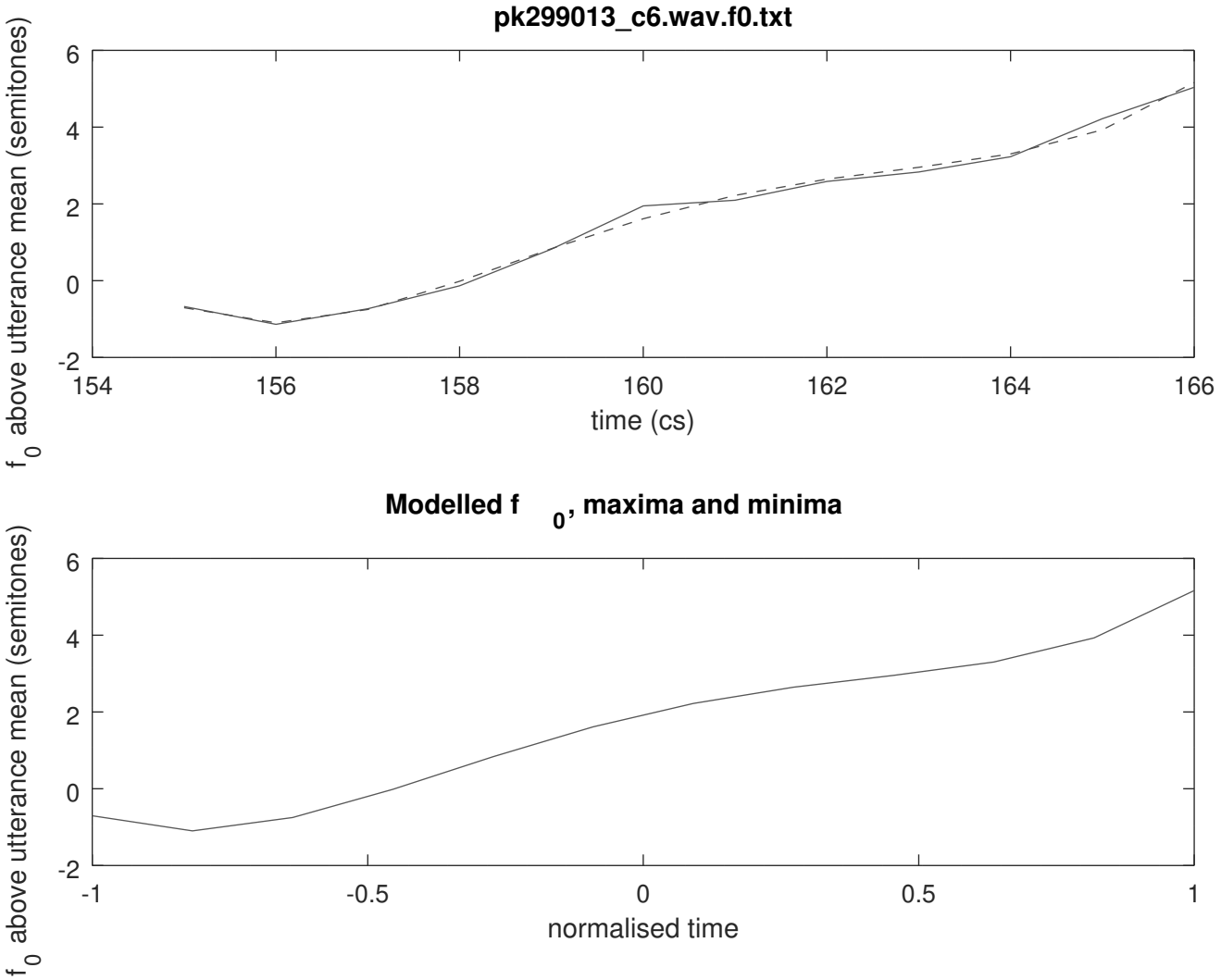

pk299013_c66.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
4
3
2
1
0
-1
30
35
40
45
50
55
60

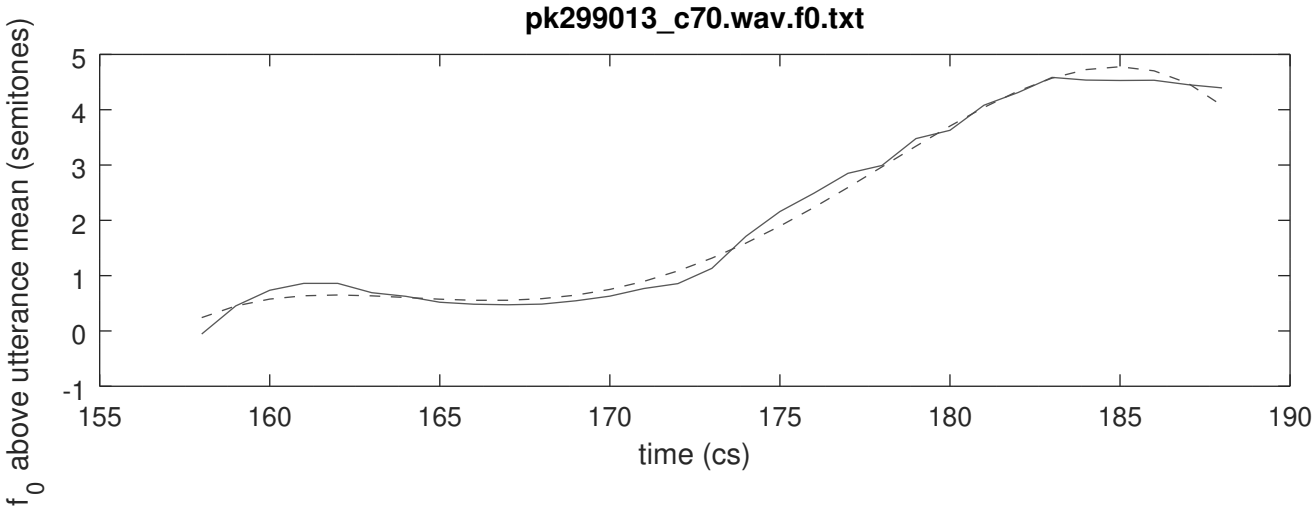

Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time
4
3
2
1
0
-1
-1
-0.5
0
0.5
1

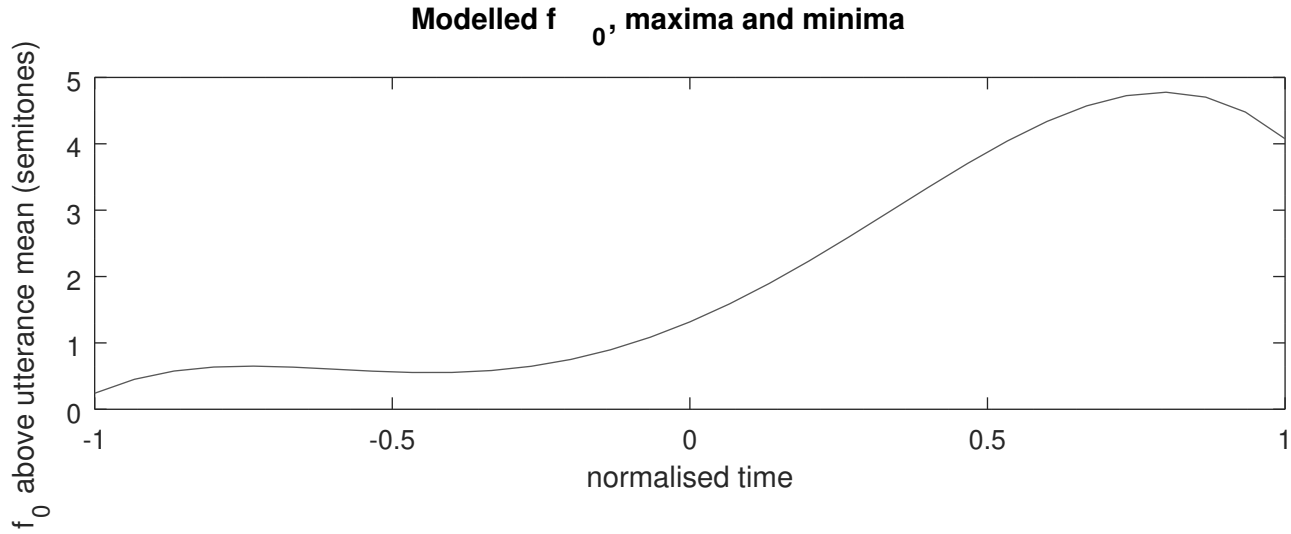

pk299013_c67.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
normalised time

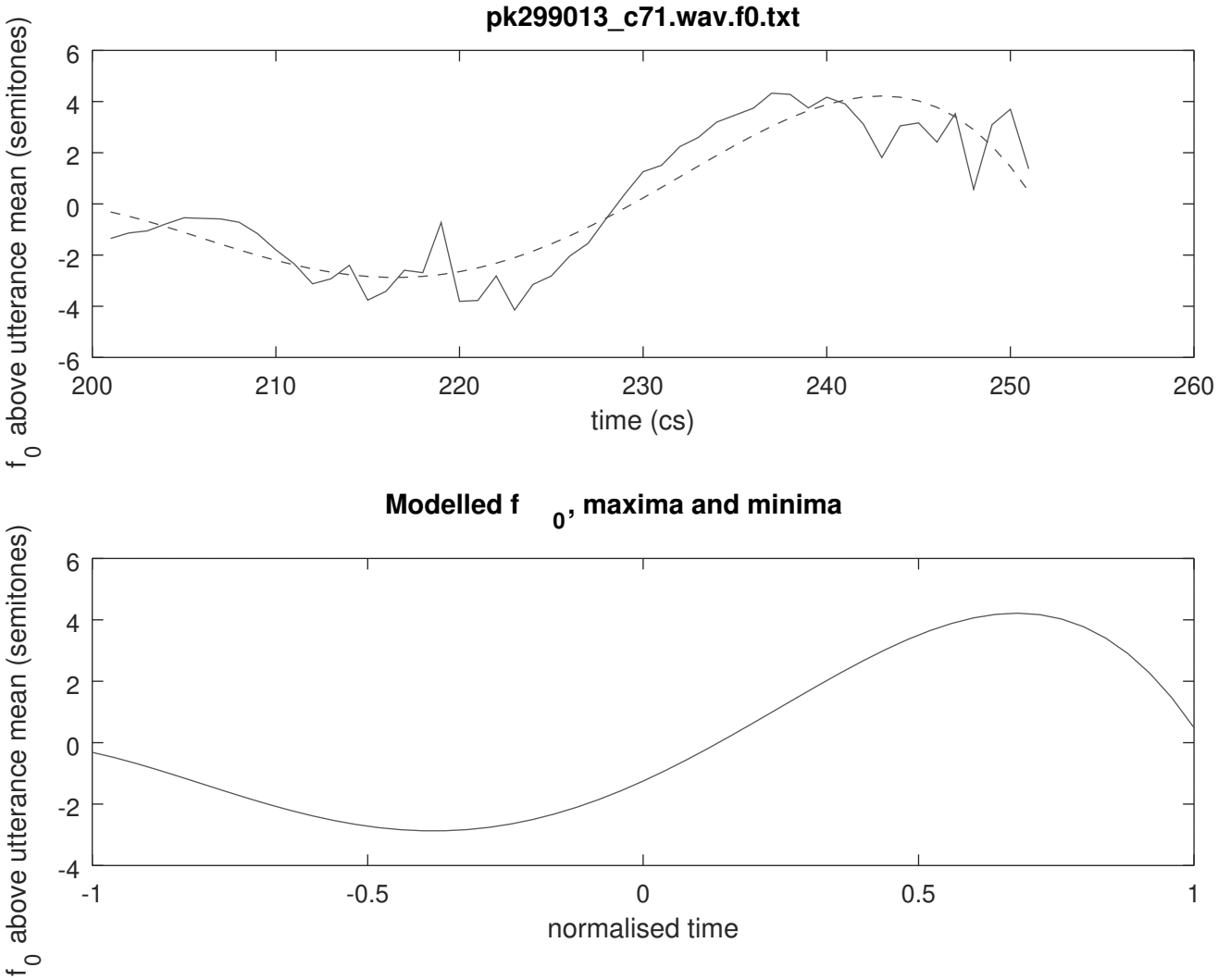

pk299013_c68.wav.f0.txt
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
40
60
80
100
120
140
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

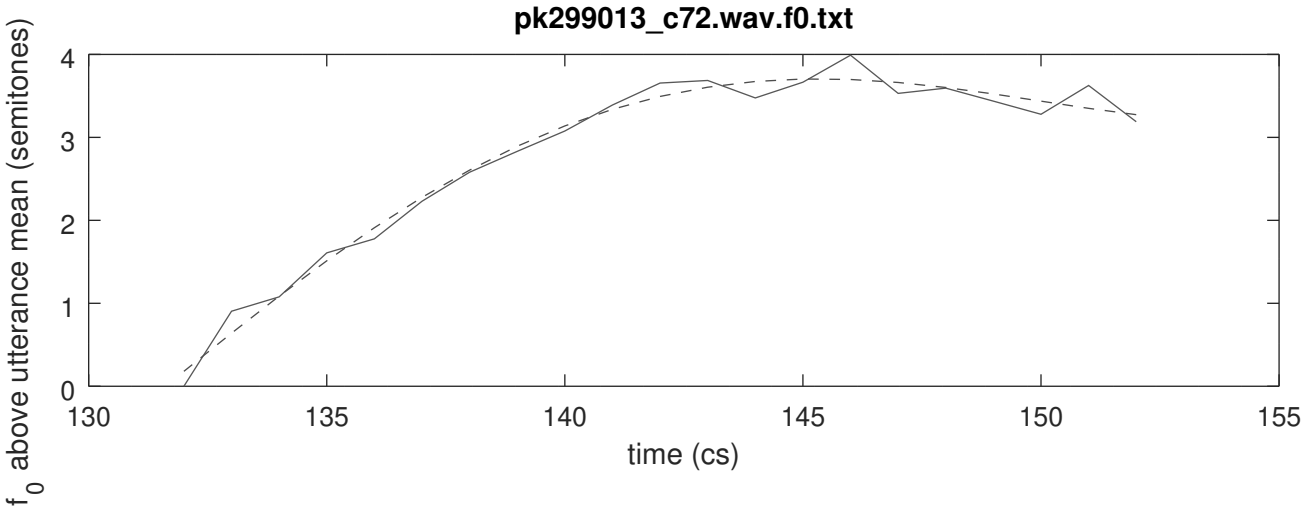

pk299013_c69.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
85
90
95
100
105
110
115
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3.5
3
2.5
2
1.5
1
0.5
0
-1
-0.5
0
0.5
1
normalised time

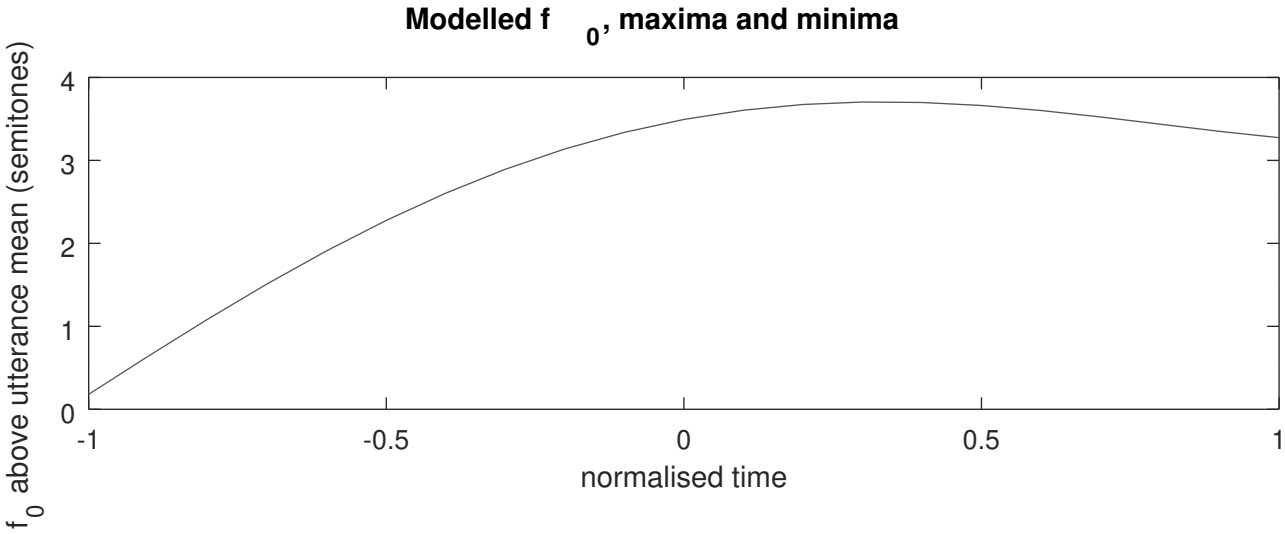

pk299013_c6.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
154
156
158
160
162
164
166
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

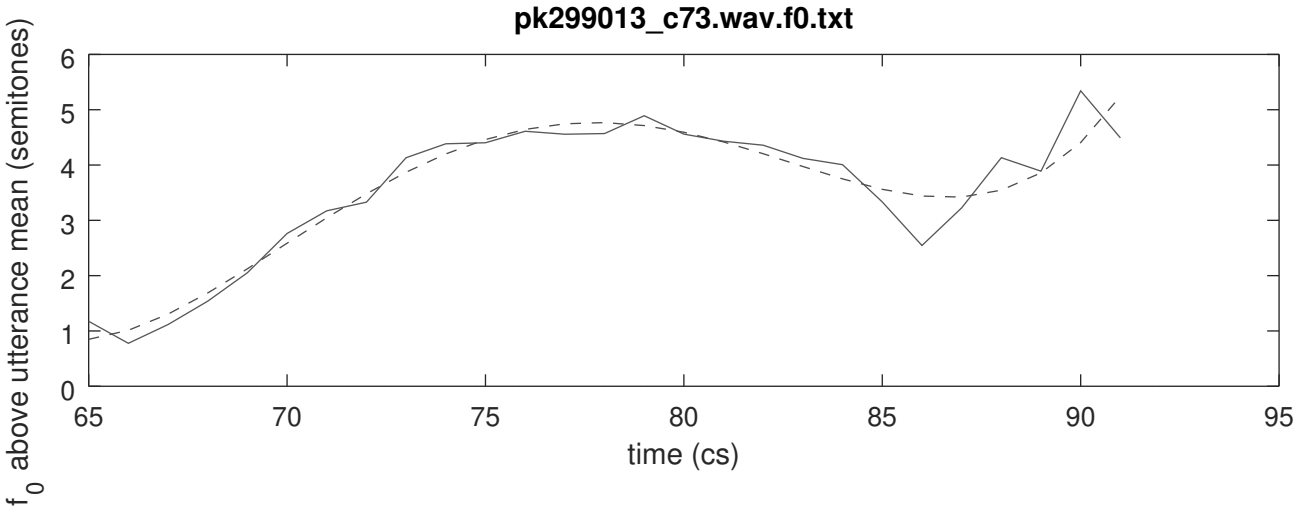

pk299013_c70.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
155
160
165
170
175
180
185
190
time (cs)

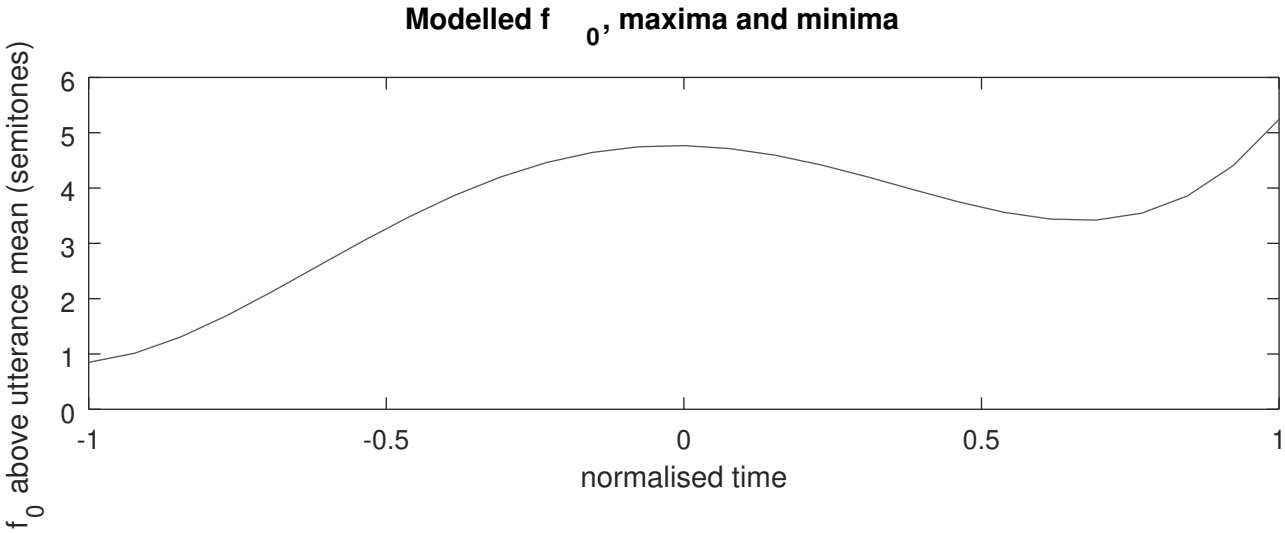

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-0.5
0
0.5
1
normalised time

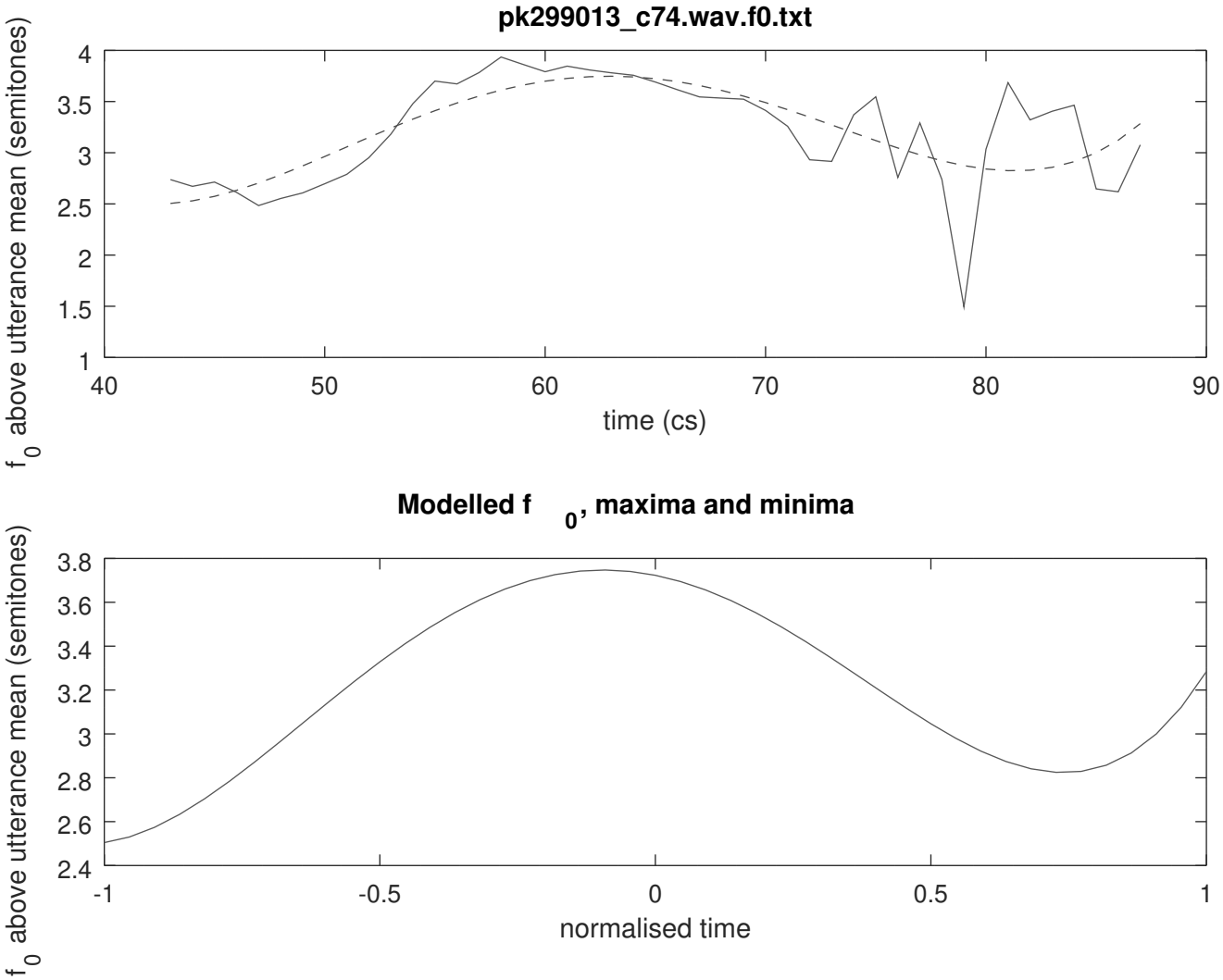

pk299013_c71.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
200
210
220
230
240
250
260
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

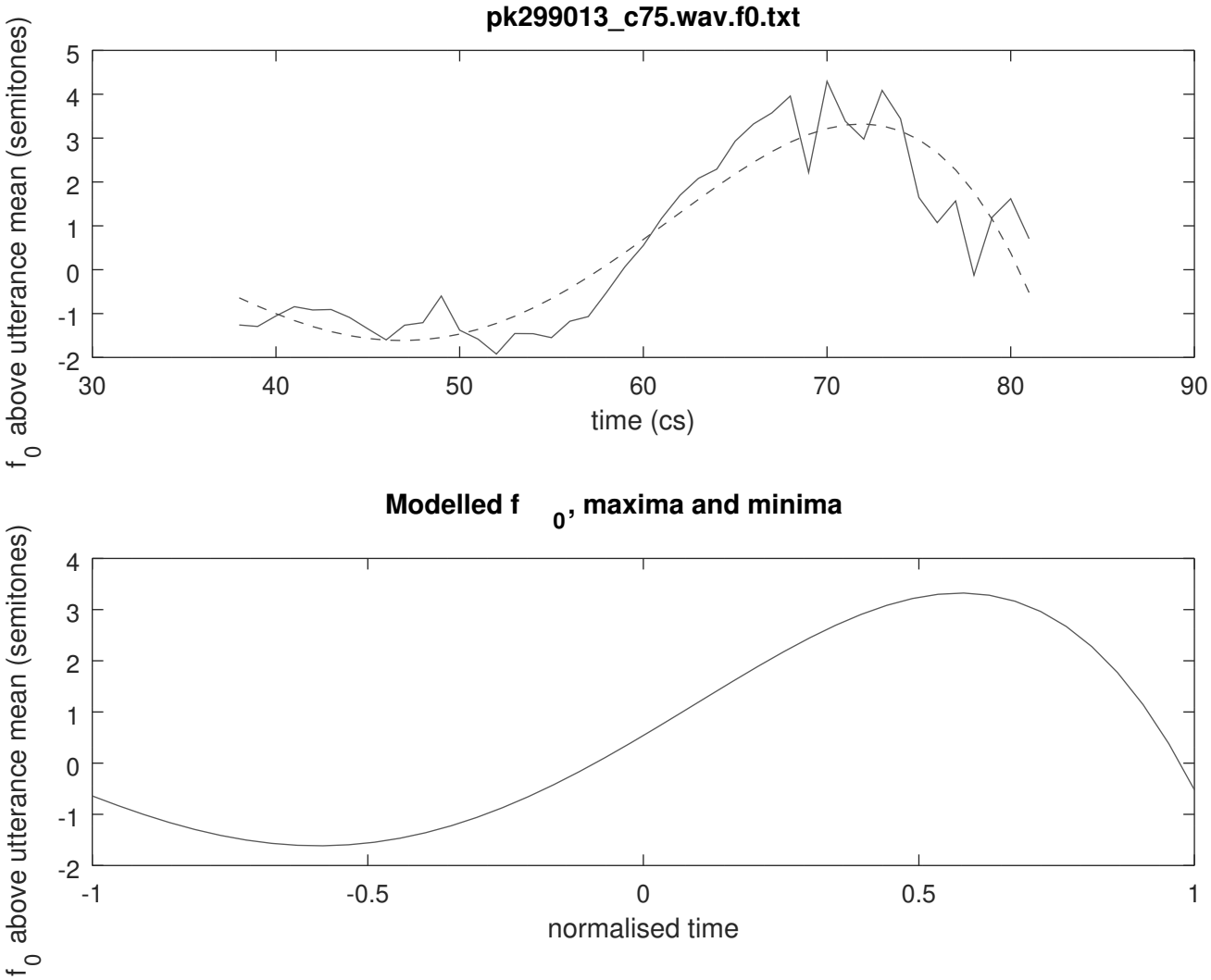

pk299013_c72.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
0
1
2
3
4
130
135
140
145
150
155

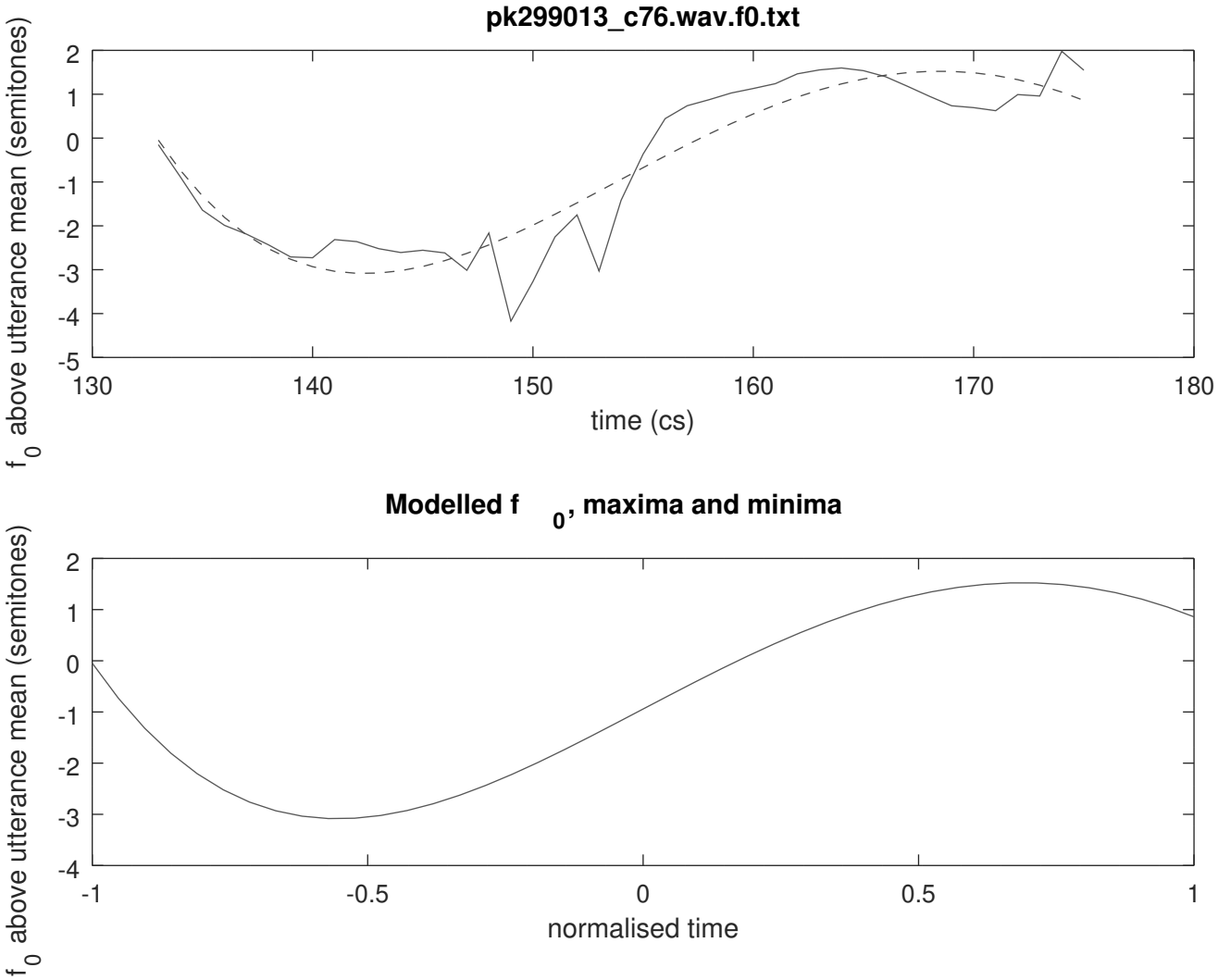

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
normalised time
0
1
2
3
4
-1
-0.5
0
0.5
1

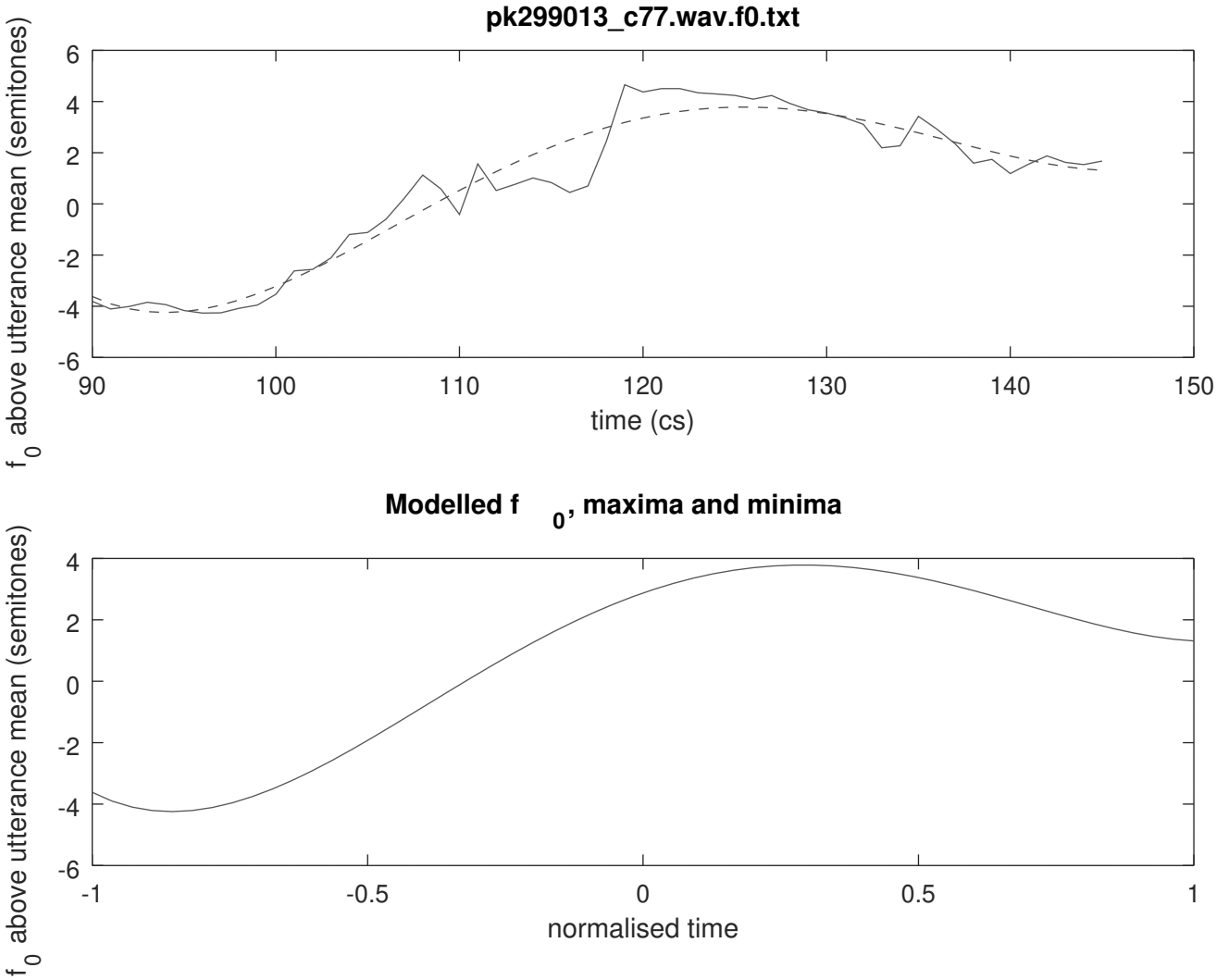

pk299013_c73.wav.f0.txt
f0 above utterance mean (semitones)
0
1
2
3
4
5
6
65
70
75
80
85
90
95
time (cs)

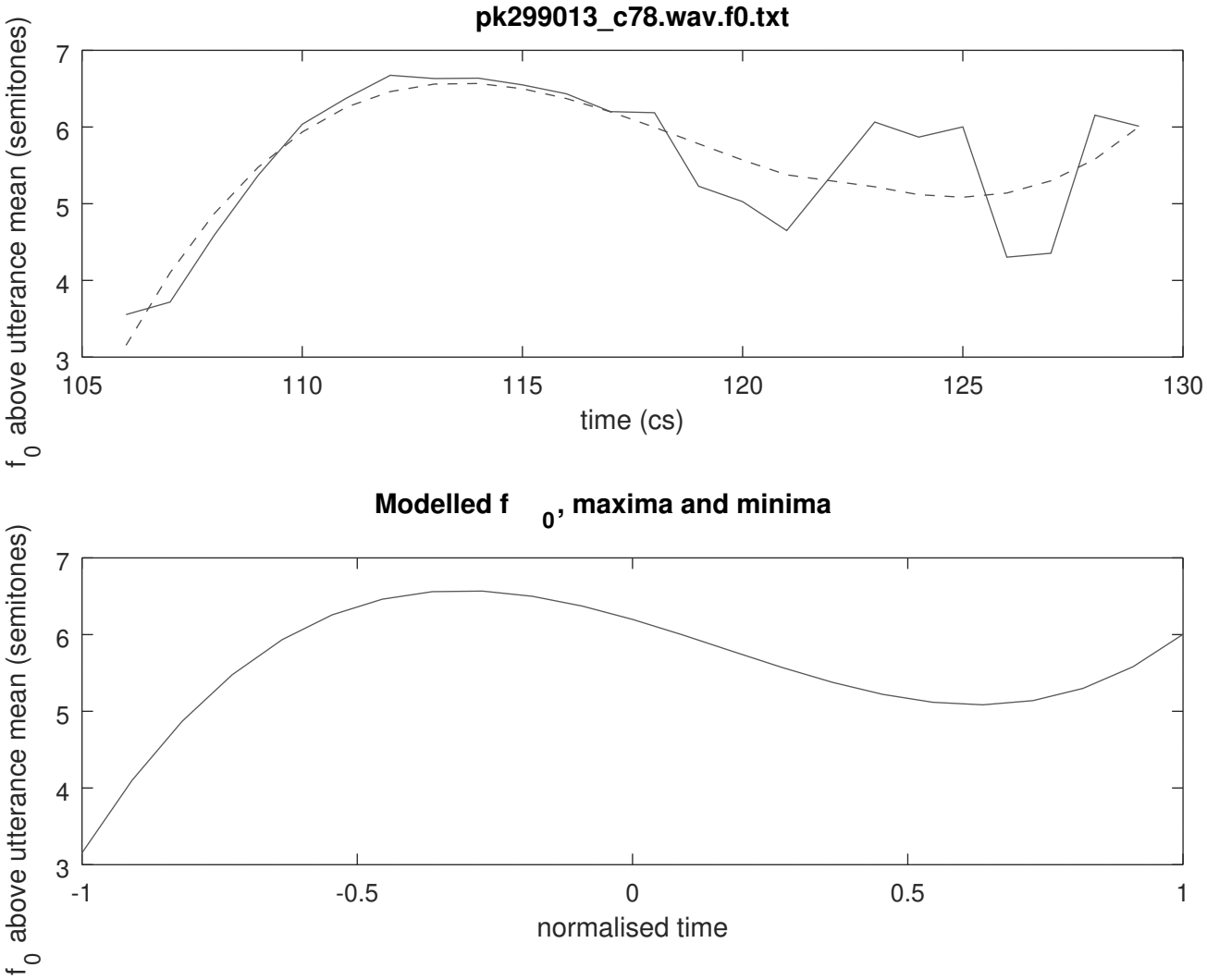

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
0
1
2
3
4
5
6
-1
-0.5
0
0.5
1
normalised time

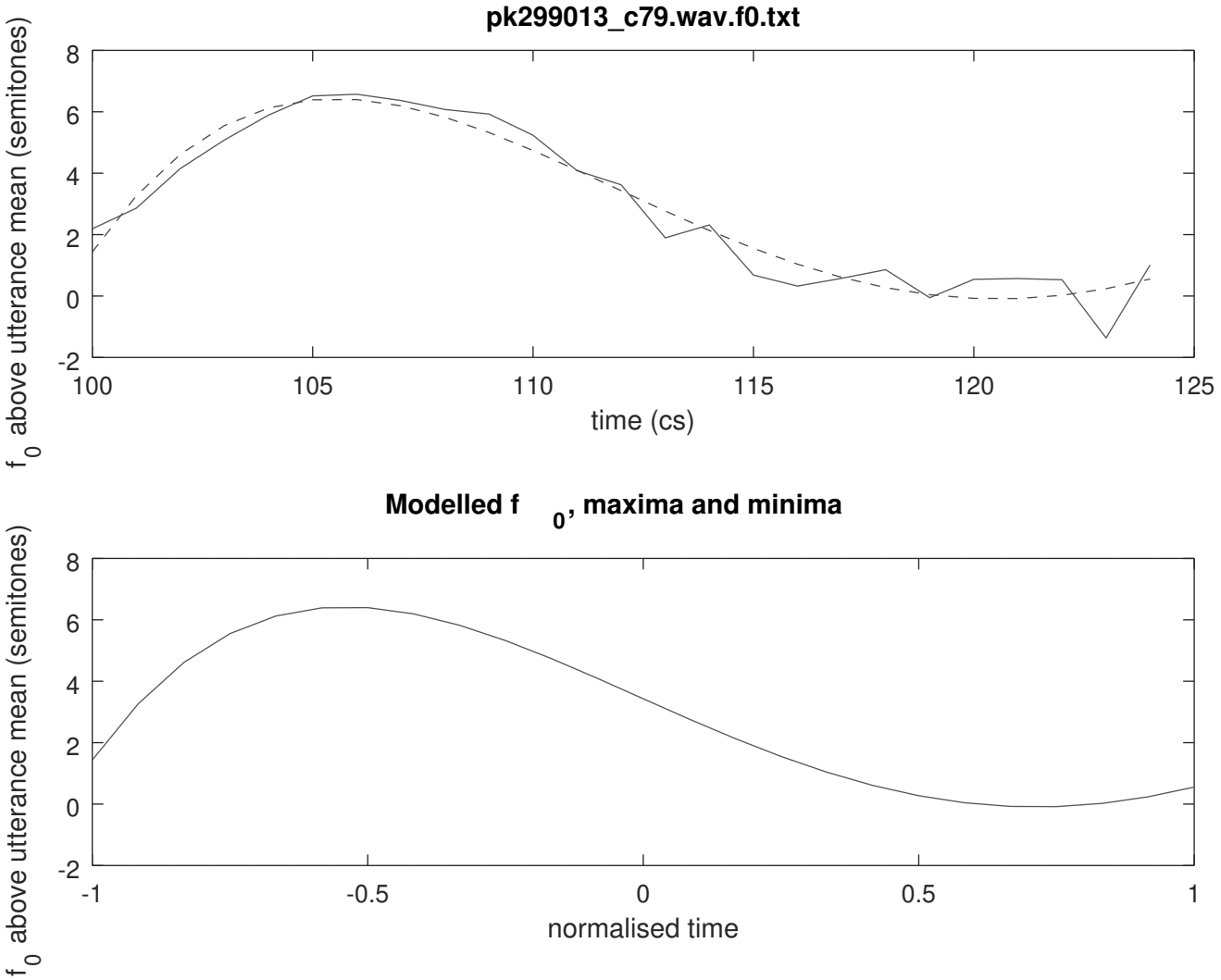

pk299013_c74.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

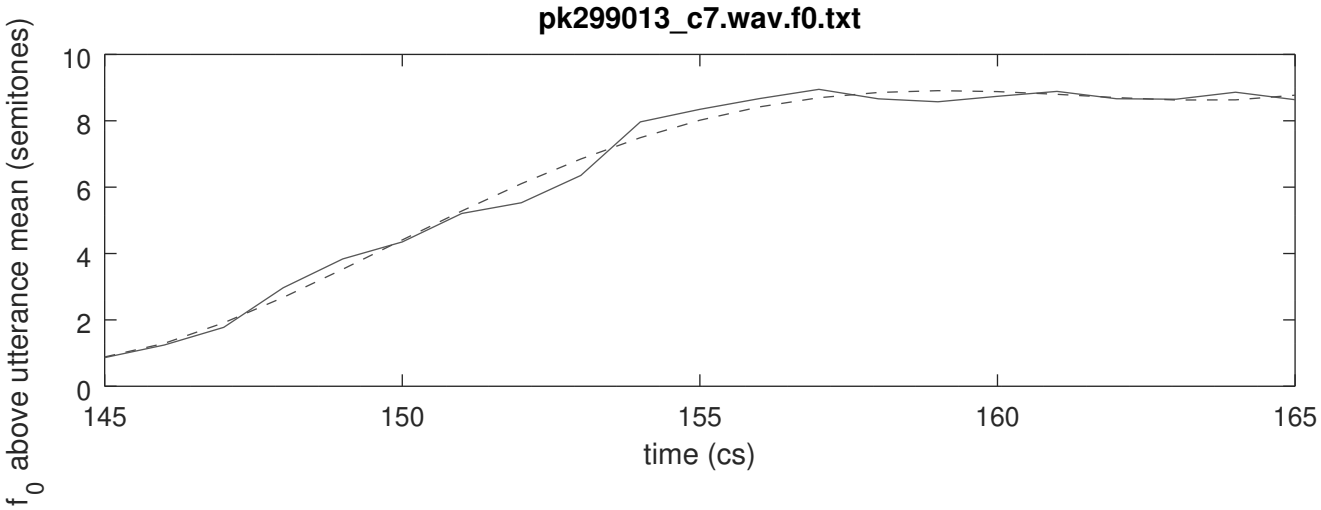

pk299013_c75.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
30
40
50
60
70
80
90
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

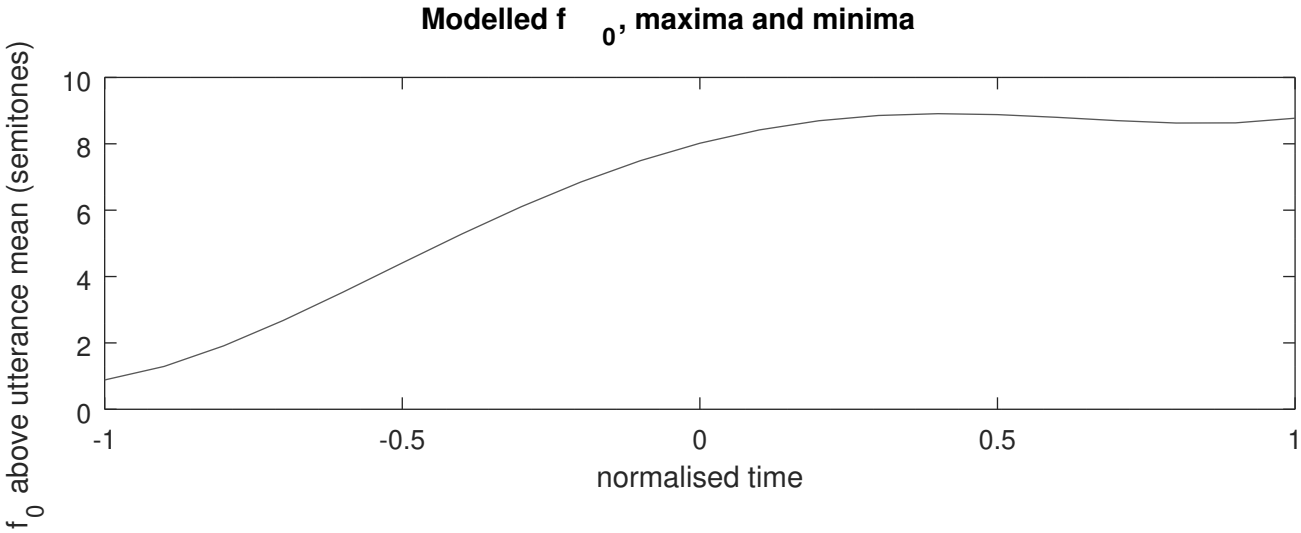

pk299013_c76.wav.f0.txt
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-4
-5
130
140
150
160
170
180
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-4
-1
-0.5
0
0.5
1
normalised time

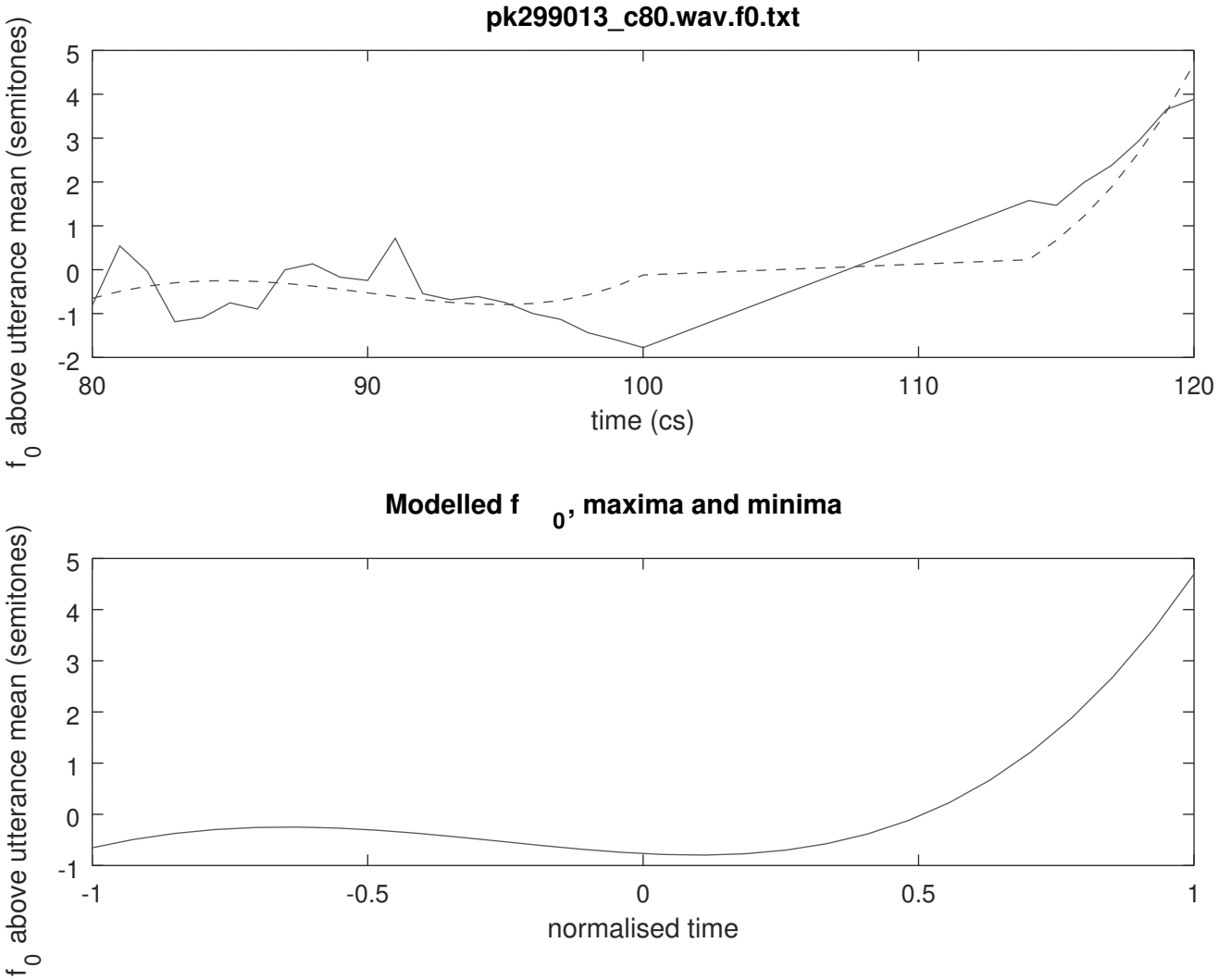

pk299013_c77.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-6
90
100
110
120
130
140
150
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
-1
-0.5
0
0.5
1
normalised time

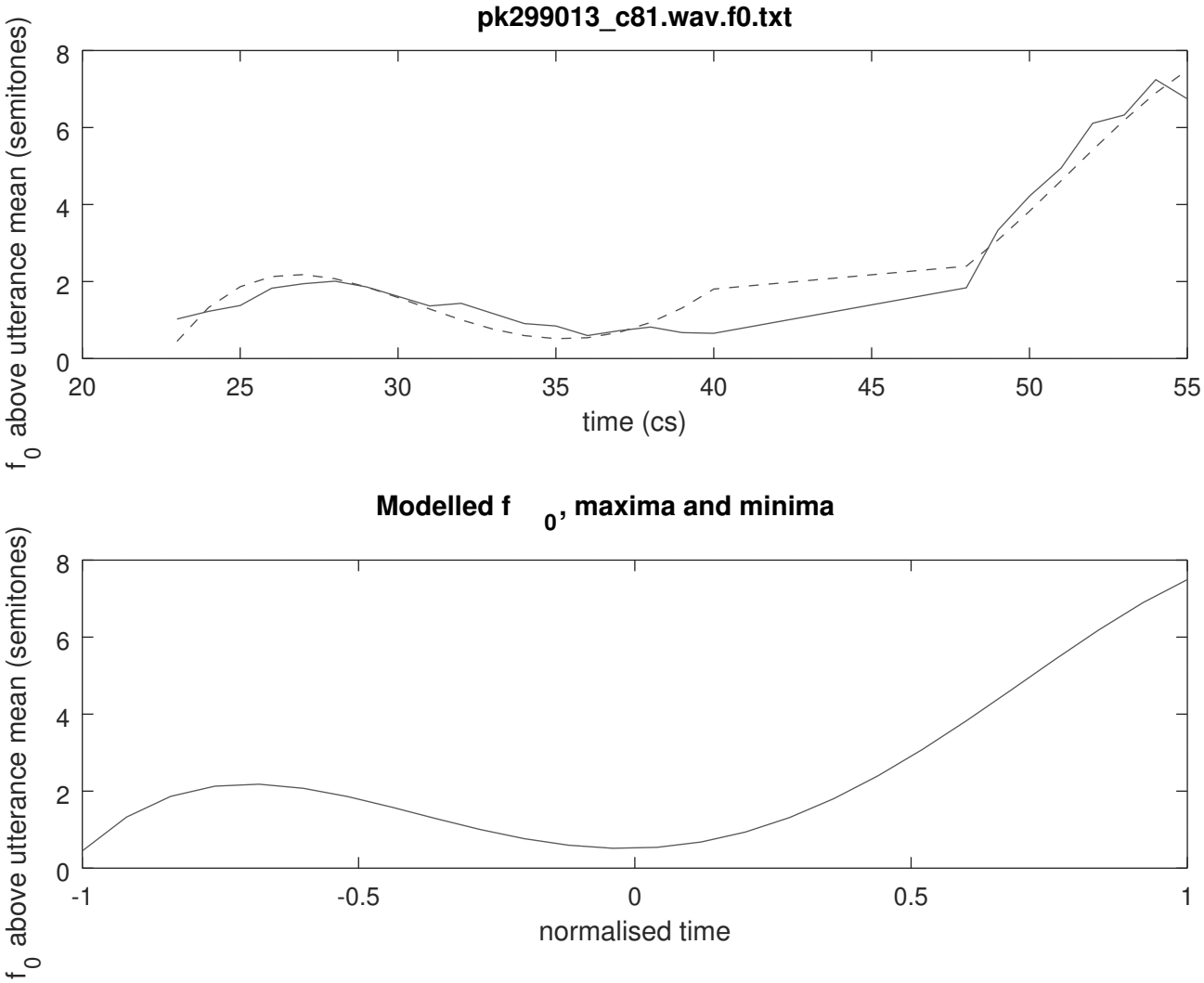

pk299013_c78.wav.f0.txt
f0 above utterance mean (semitones)
7
6
5
4
3
105
110
115
120
125
130
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
7
6
5
4
3
-1
-0.5
0
0.5
1
normalised time

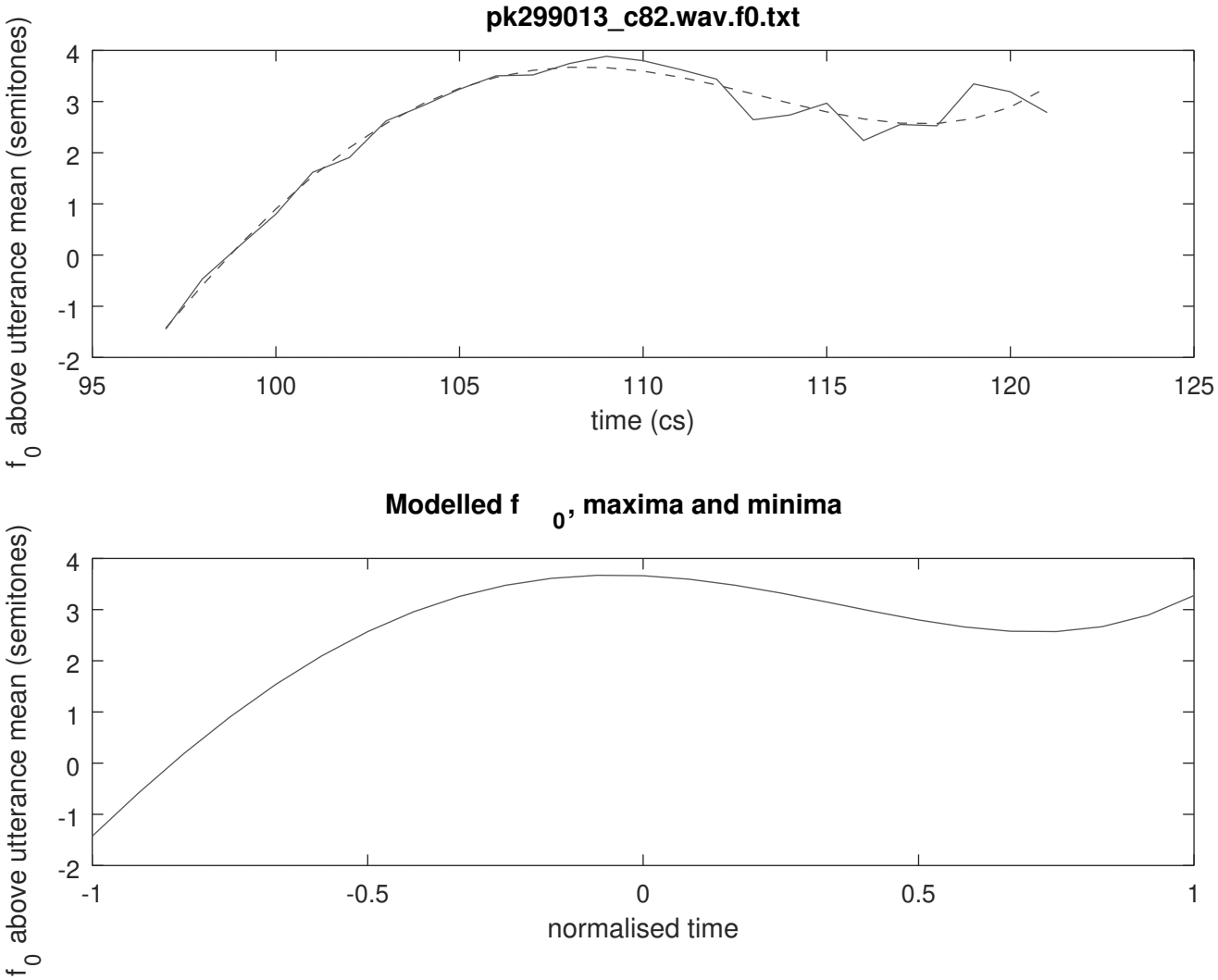

pk299013_c79.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
100
105
110
115
120
125
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

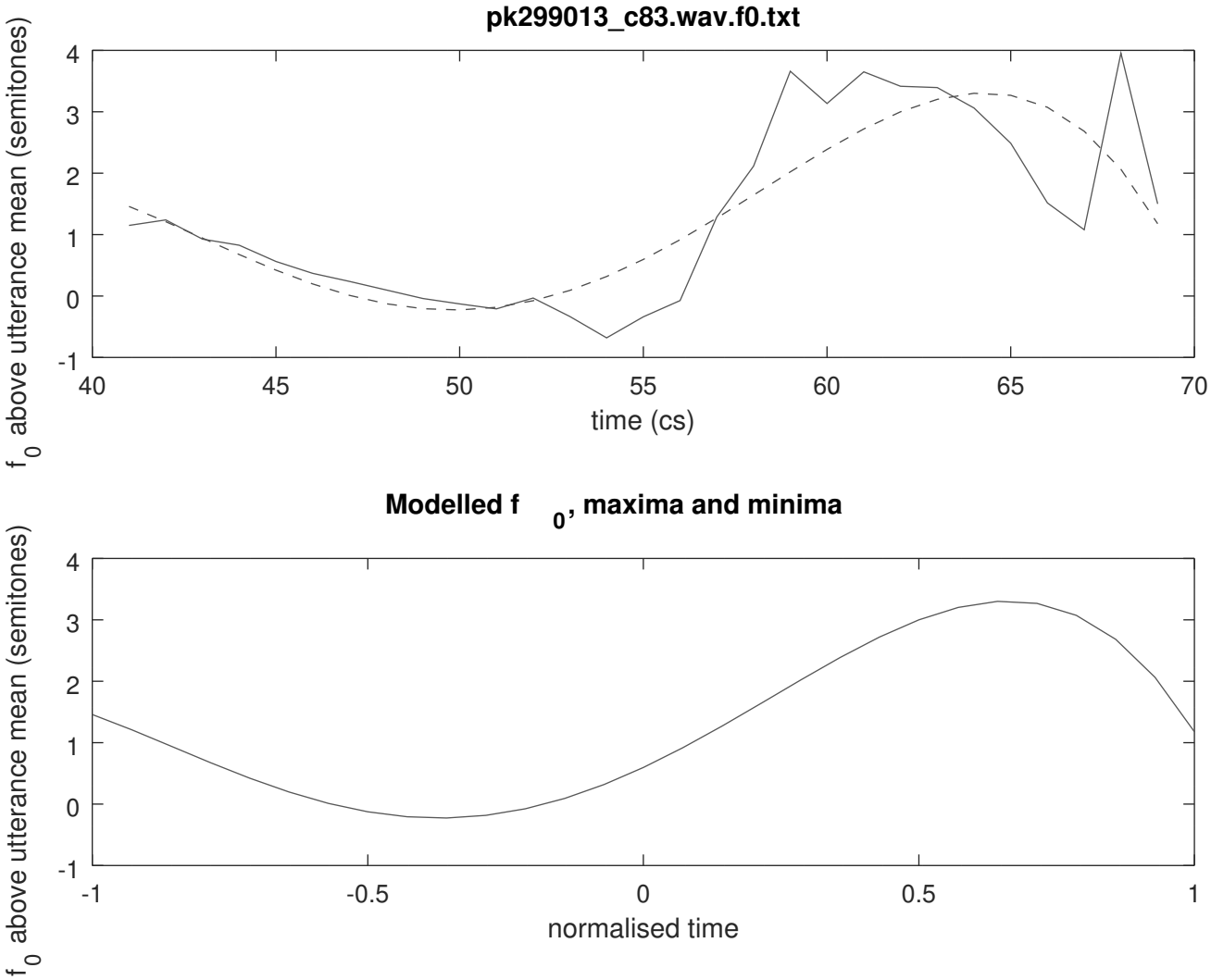

pk299013_c7.wav.f0.txt
f0 above utterance mean (semitones)
10
8
6
4
2
0
145
150
155
160
165
time (cs)

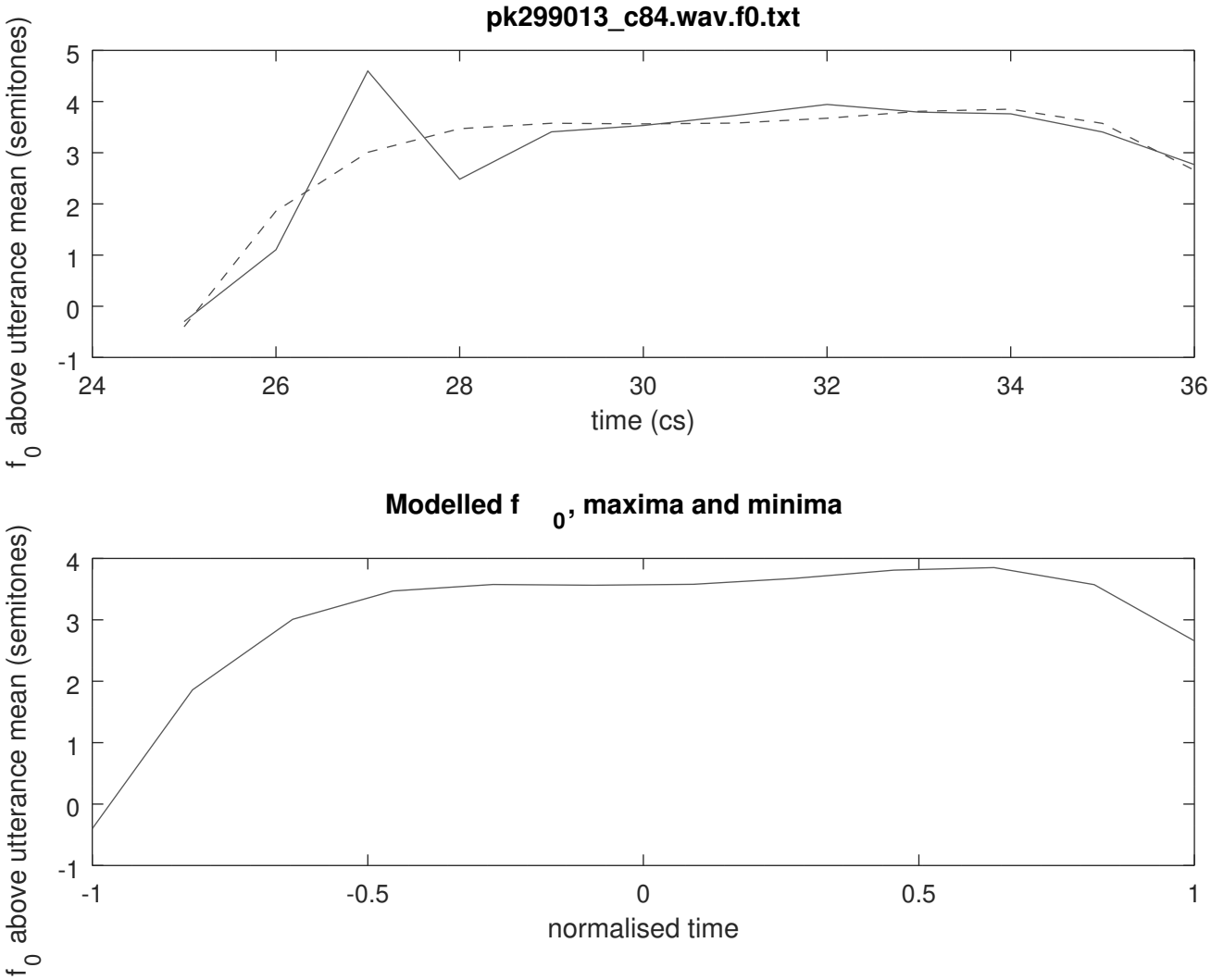

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
10
8
6
4
2
0
-1
-0.5
0
0.5
1
normalised time

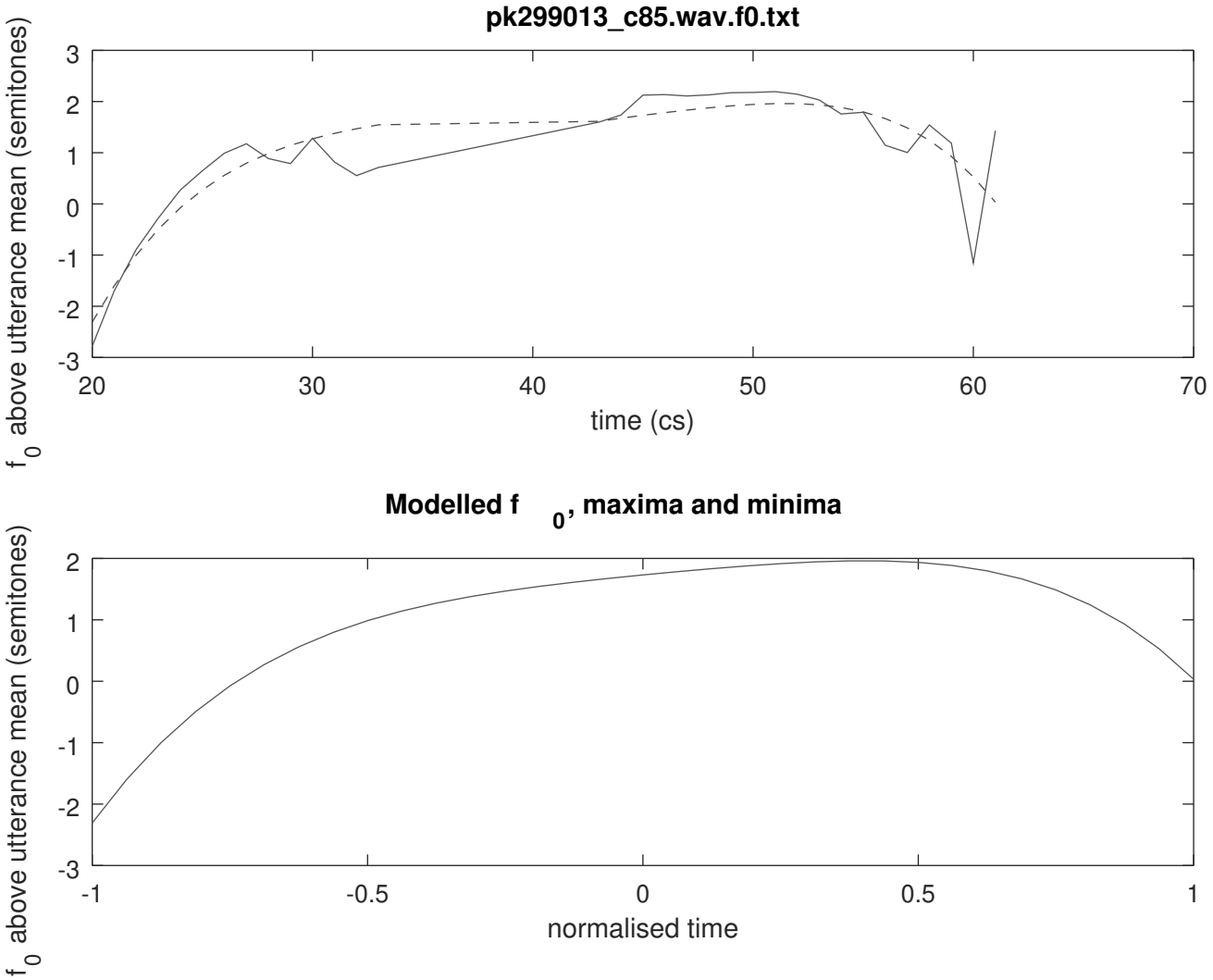

pk299013_c80.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
80
90
100
110
120
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

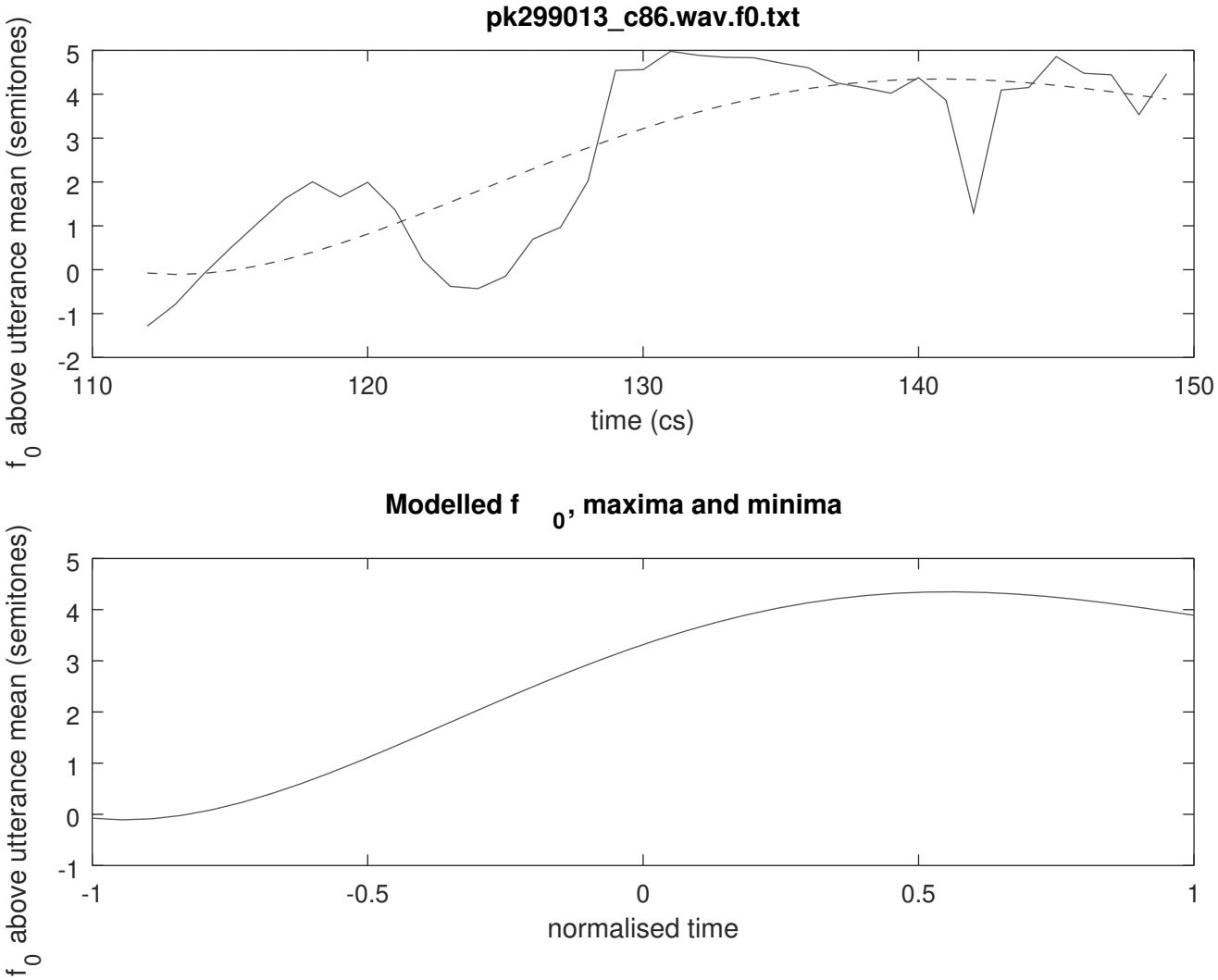

pk299013_c81.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

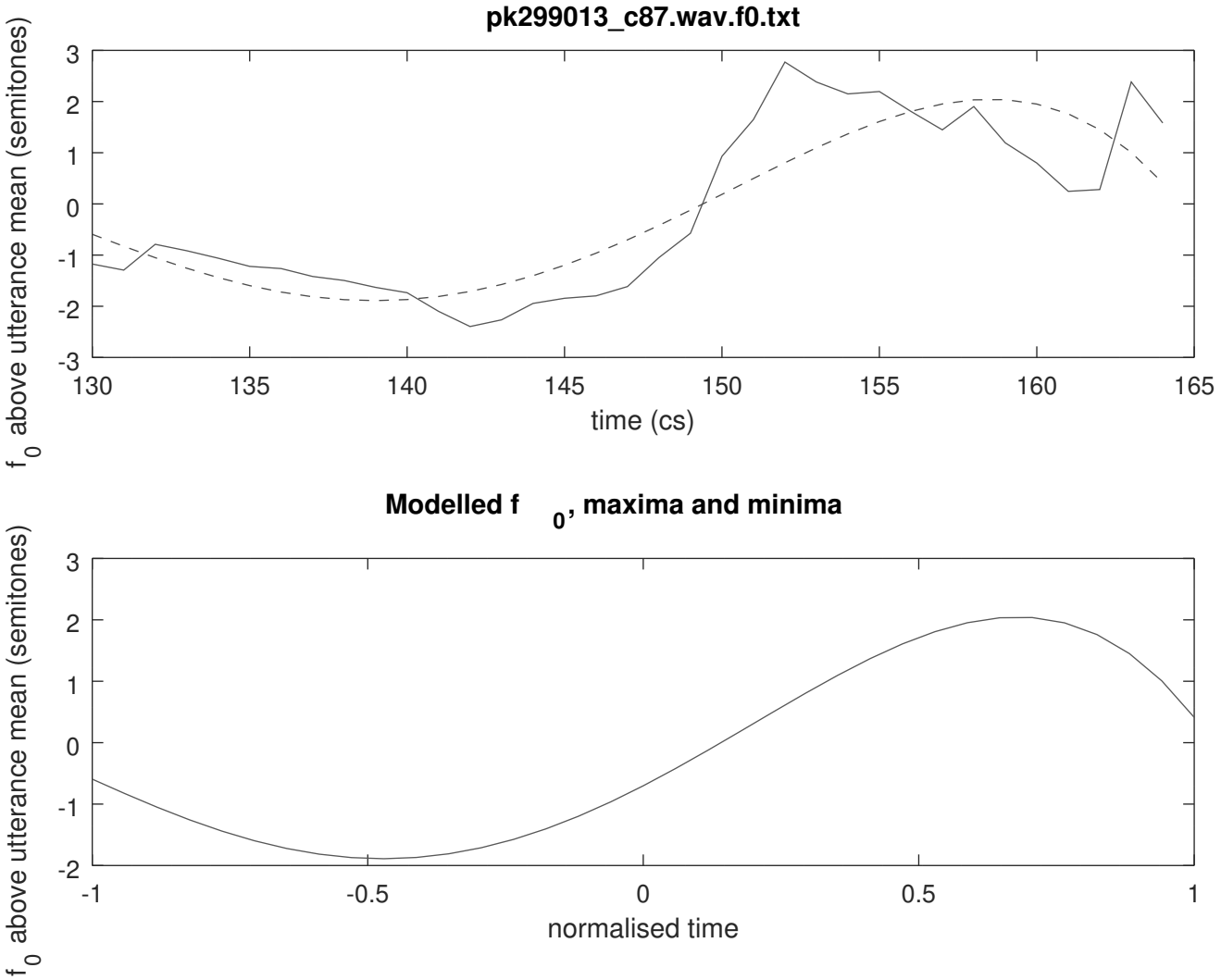

pk299013_c82.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

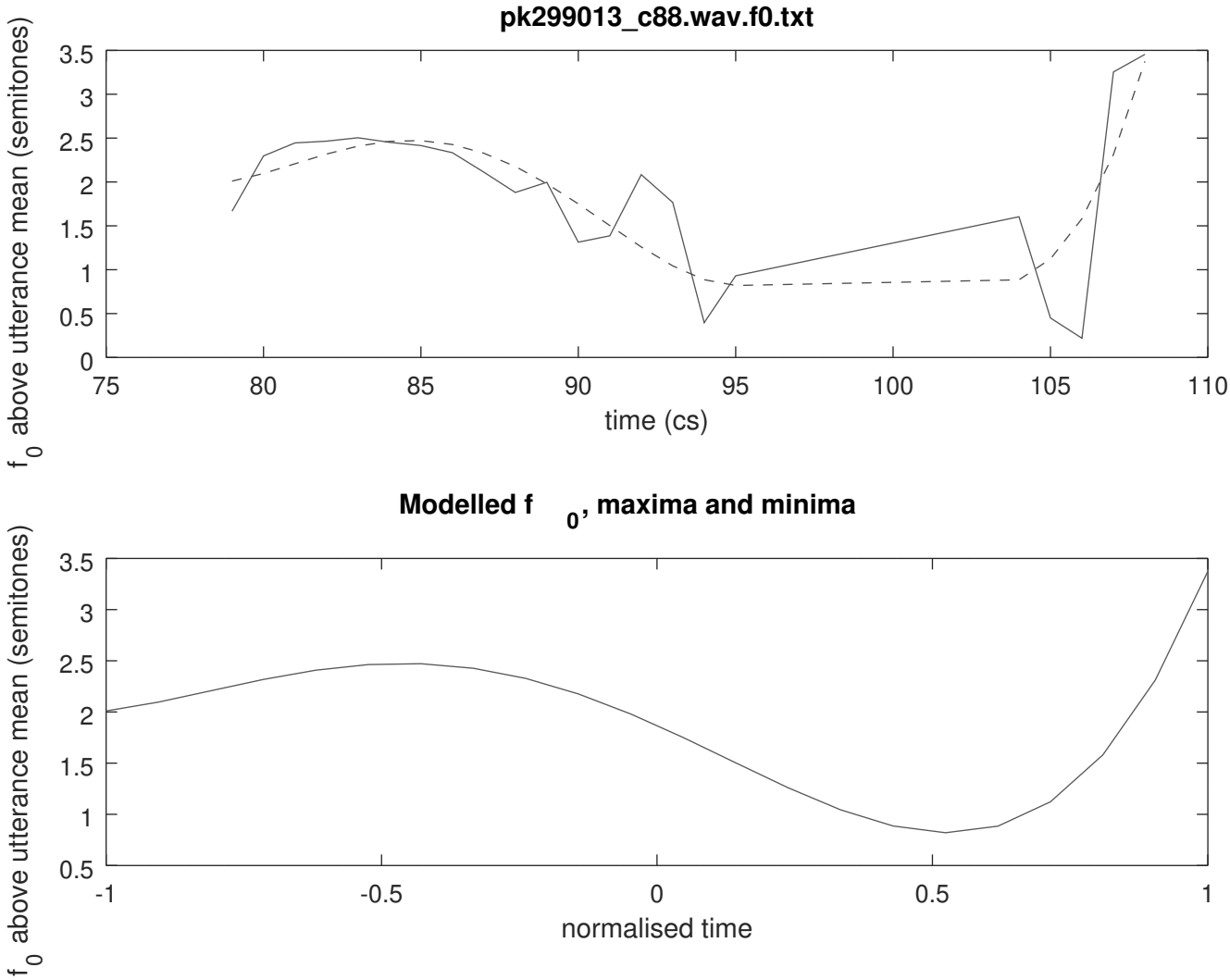

pk299013_c83.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

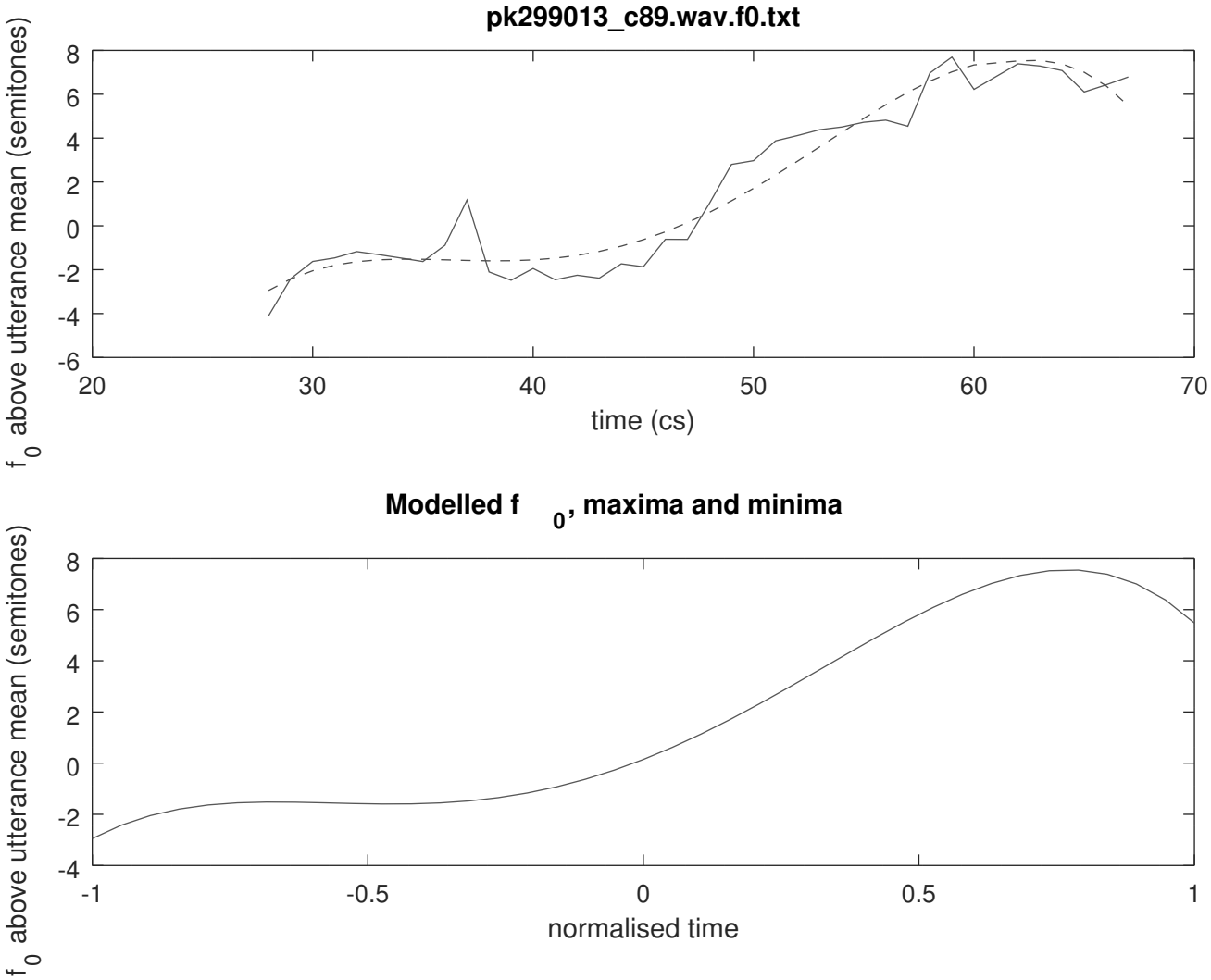

pk299013_c84.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
24
26
28
30
32
34
36
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

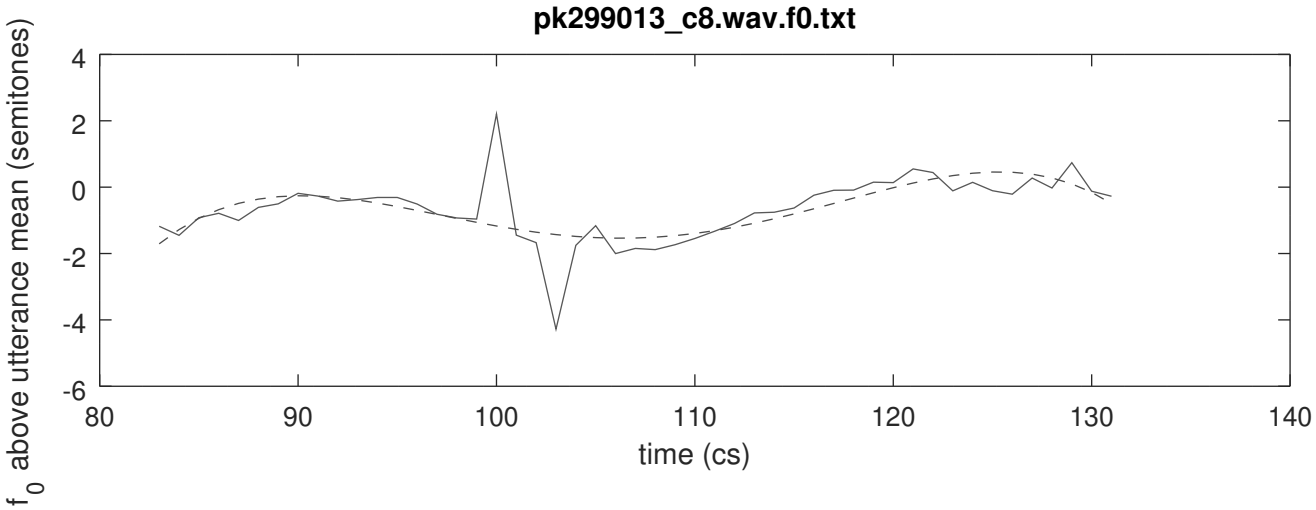

pk299013_c85.wav.f0.txt
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-3
20
30
40
50
60
70
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
2
1
0
-1
-2
-3
-1
-0.5
0
0.5
1
normalised time

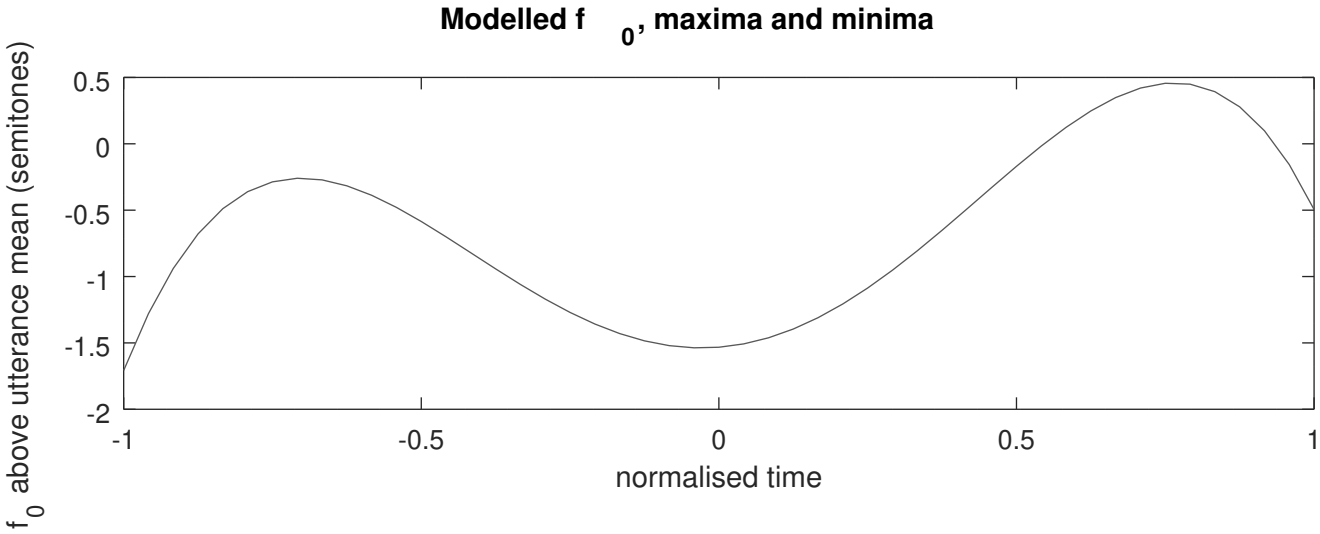

pk299013_c86.wav.f0.txt
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-2
110
120
130
140
150
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
5
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

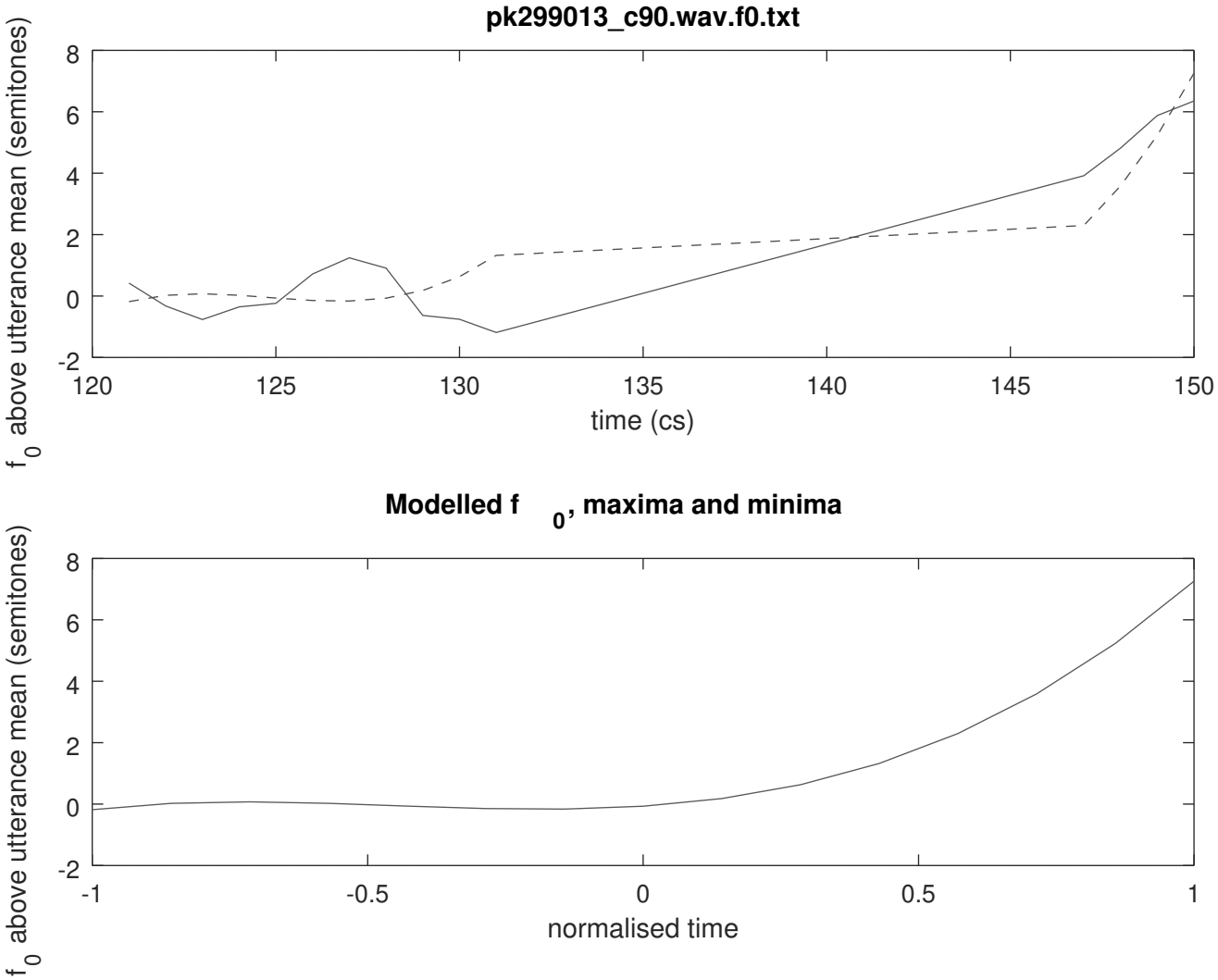

pk299013_c87.wav.f0.txt
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-3
130
135
140
145
150
155
160
165
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3
2
1
0
-1
-2
-1
-0.5
0
0.5
1
normalised time

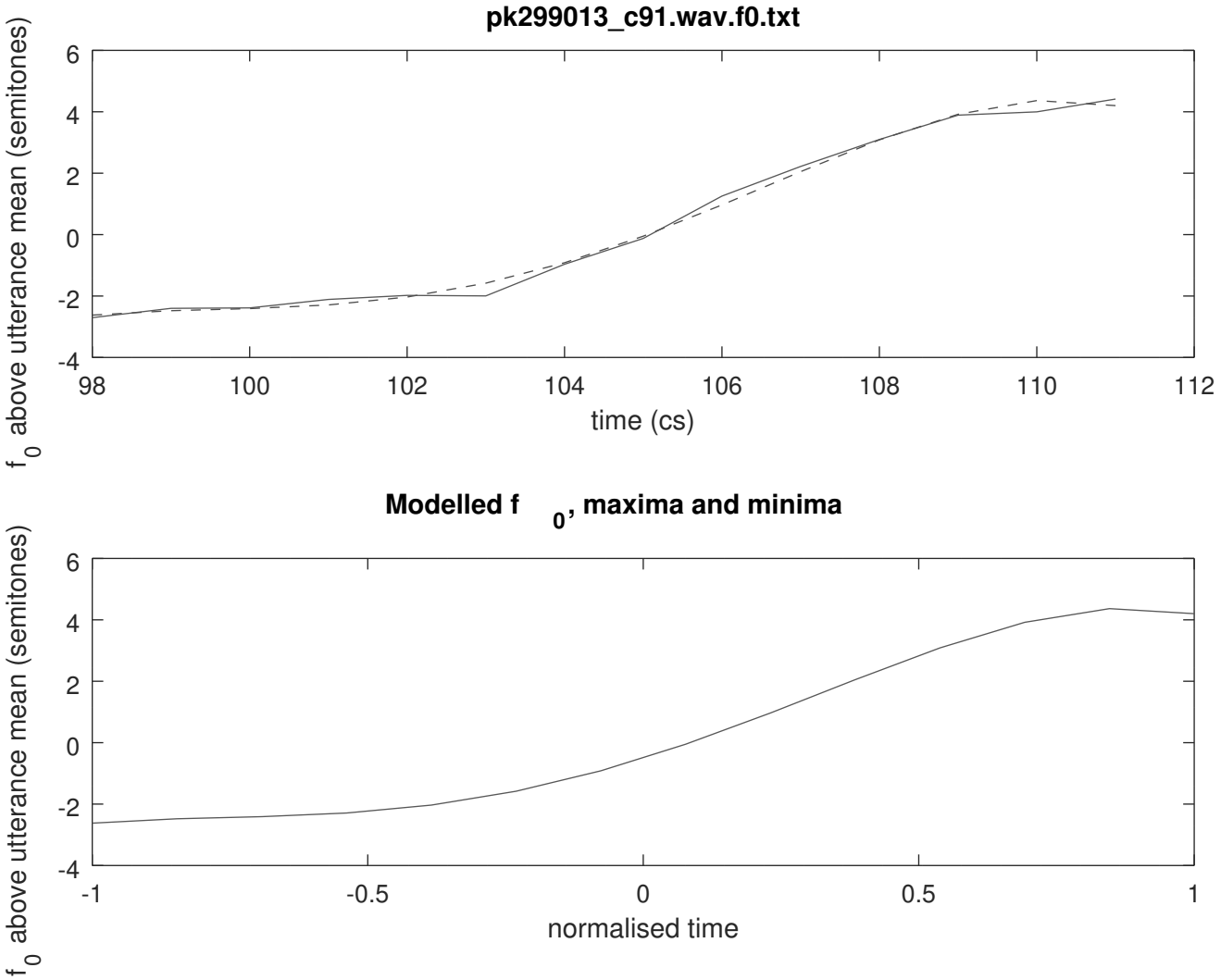

pk299013_c88.wav.f0.txt
f0 above utterance mean (semitones)
3.5
3
2.5
2
1.5
1
0.5
0
75
80
85
90
95
100
105
110
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
3.5
3
2.5
2
1.5
1
0.5
-1
-0.5
0
0.5
1
normalised time

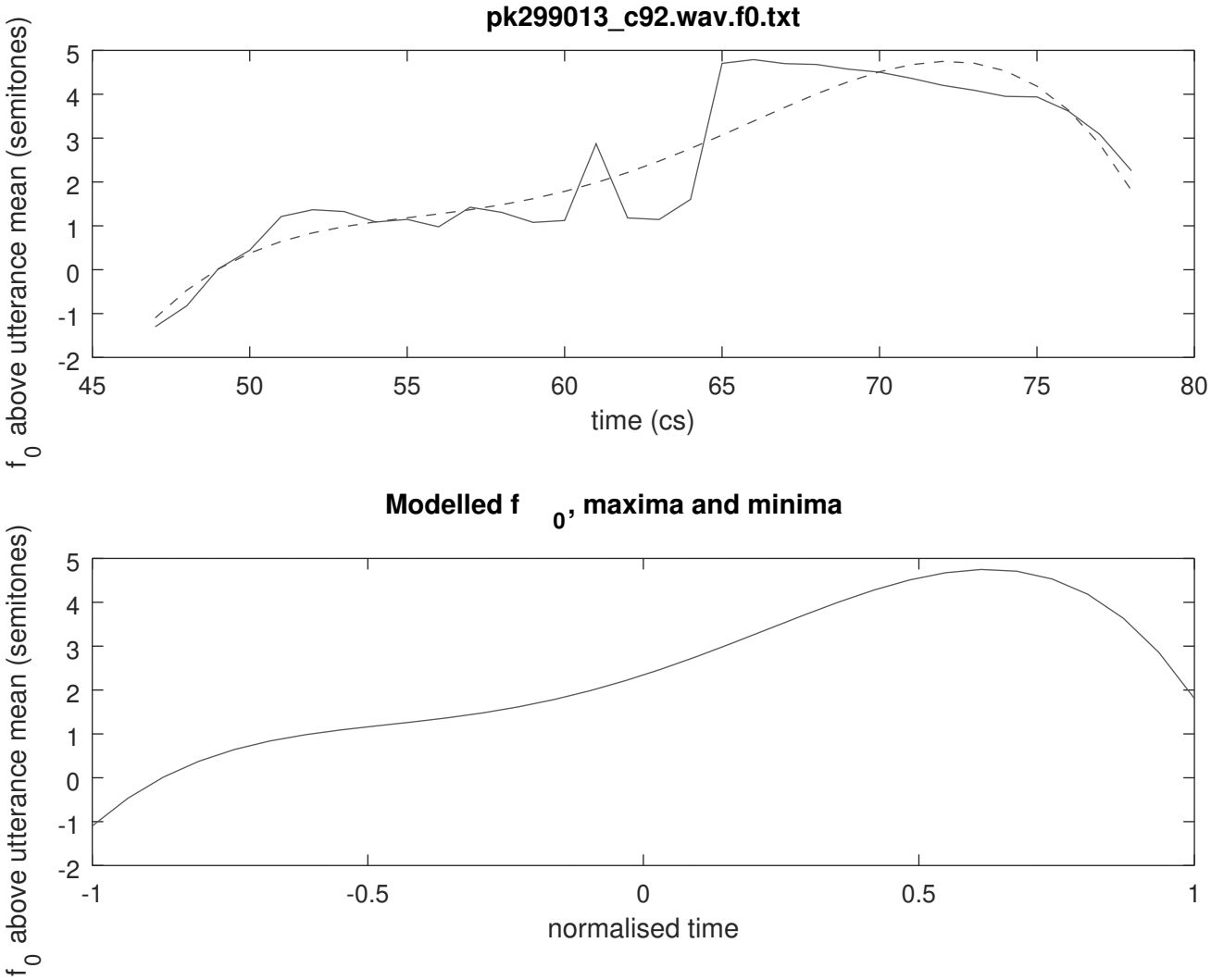

pk299013_c89.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-6
20
30
40
50
60
70
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

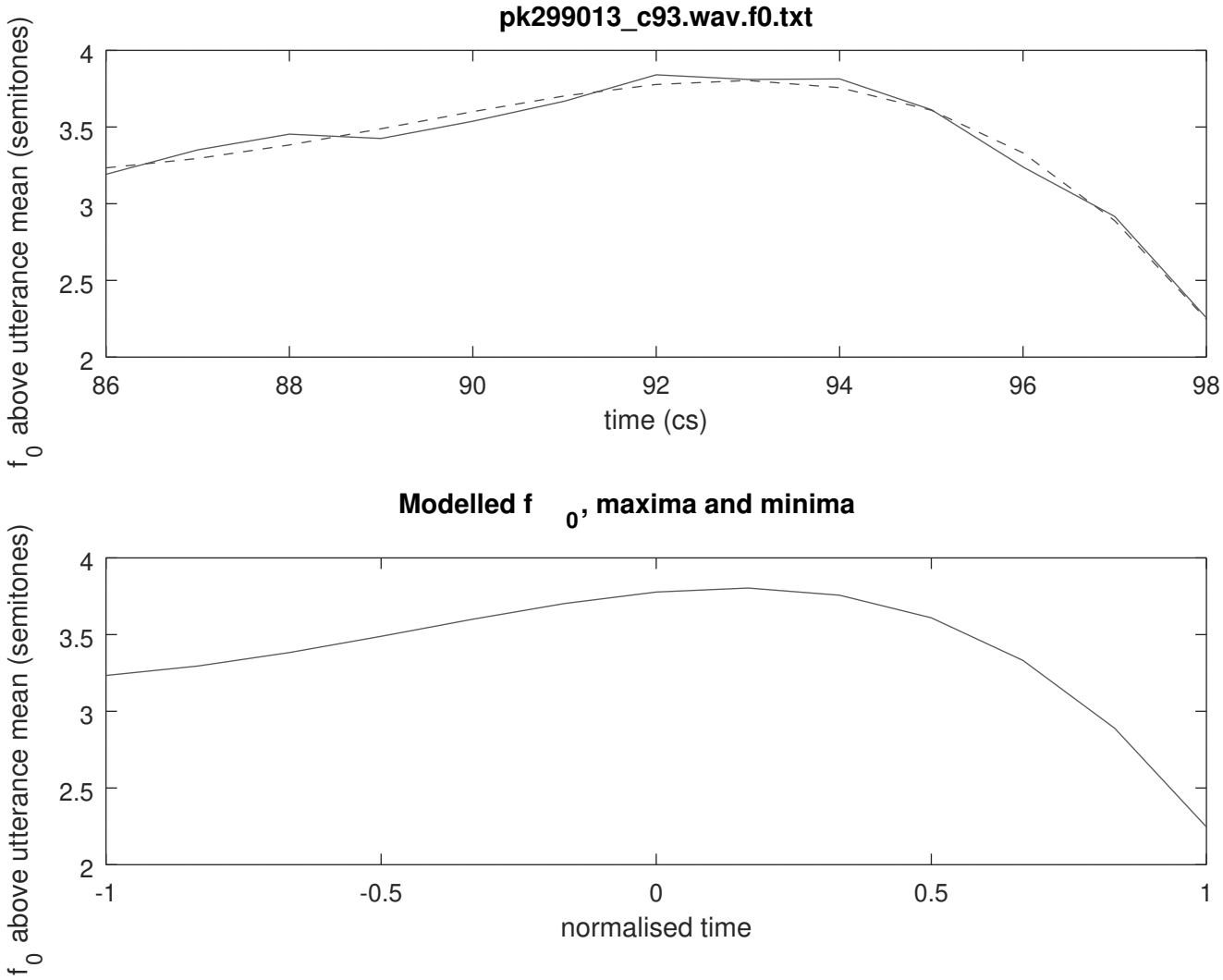

pk299013_c8.wav.f0.txt
f0 above utterance mean (semitones)
4
2
0
-2
-4
-6
80
90
100
110
120
130
140
time (cs)

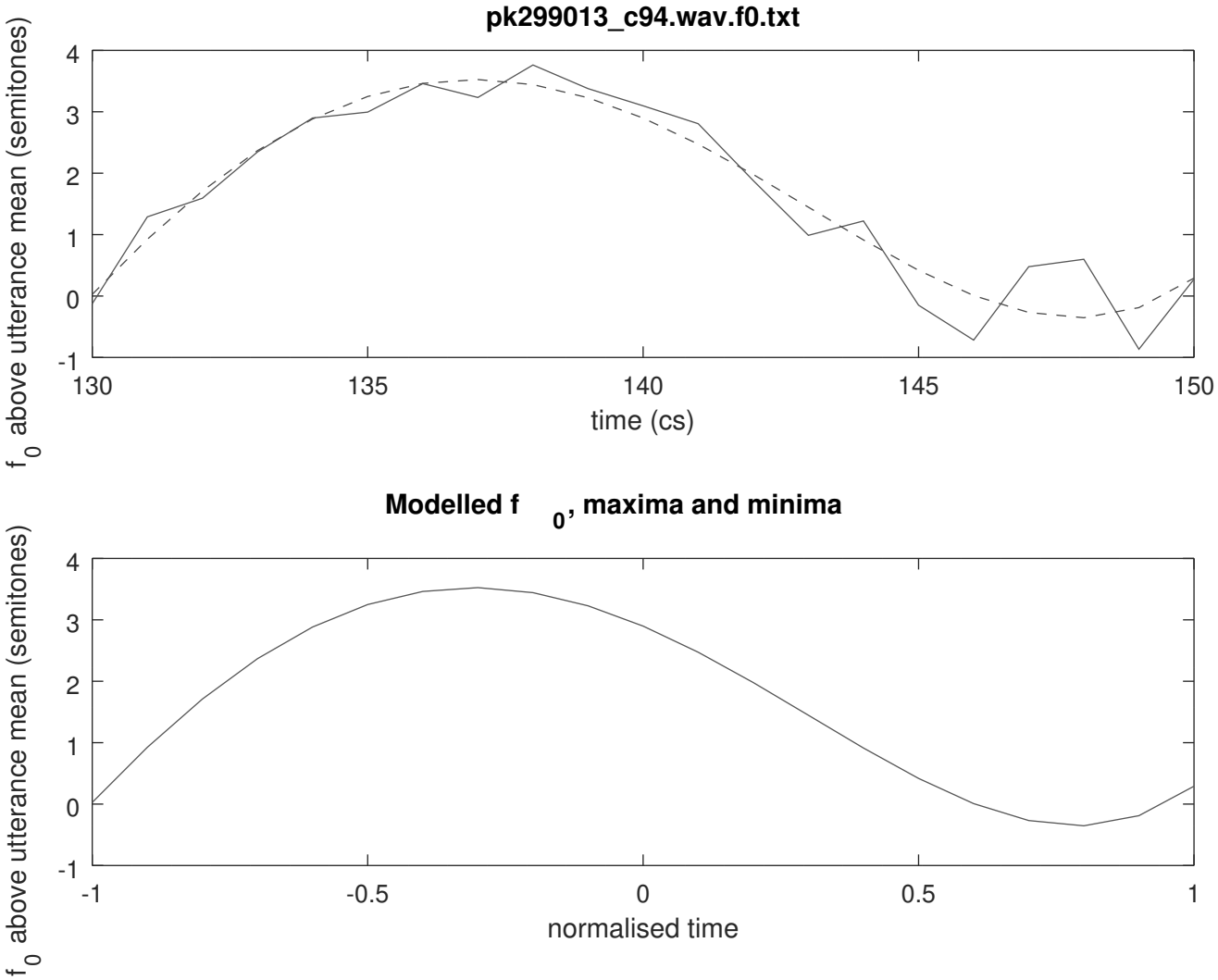

Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
0.5
0
-0.5
-1
-1.5
-2
-1
-0.5
0
0.5
1
normalised time

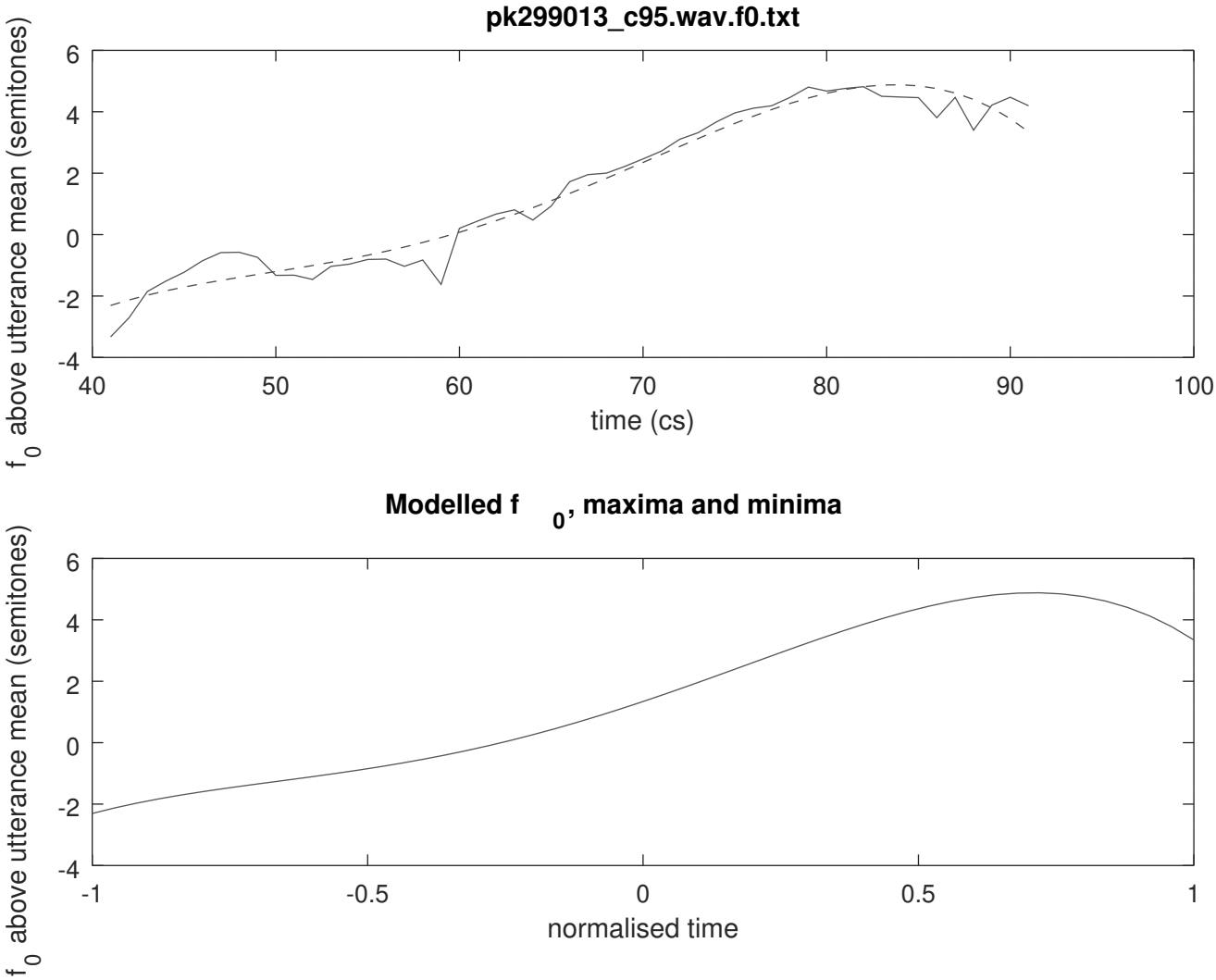

pk299013_c90.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
120
125
130
135
140
145
150
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-1
-0.5
0
0.5
1
normalised time

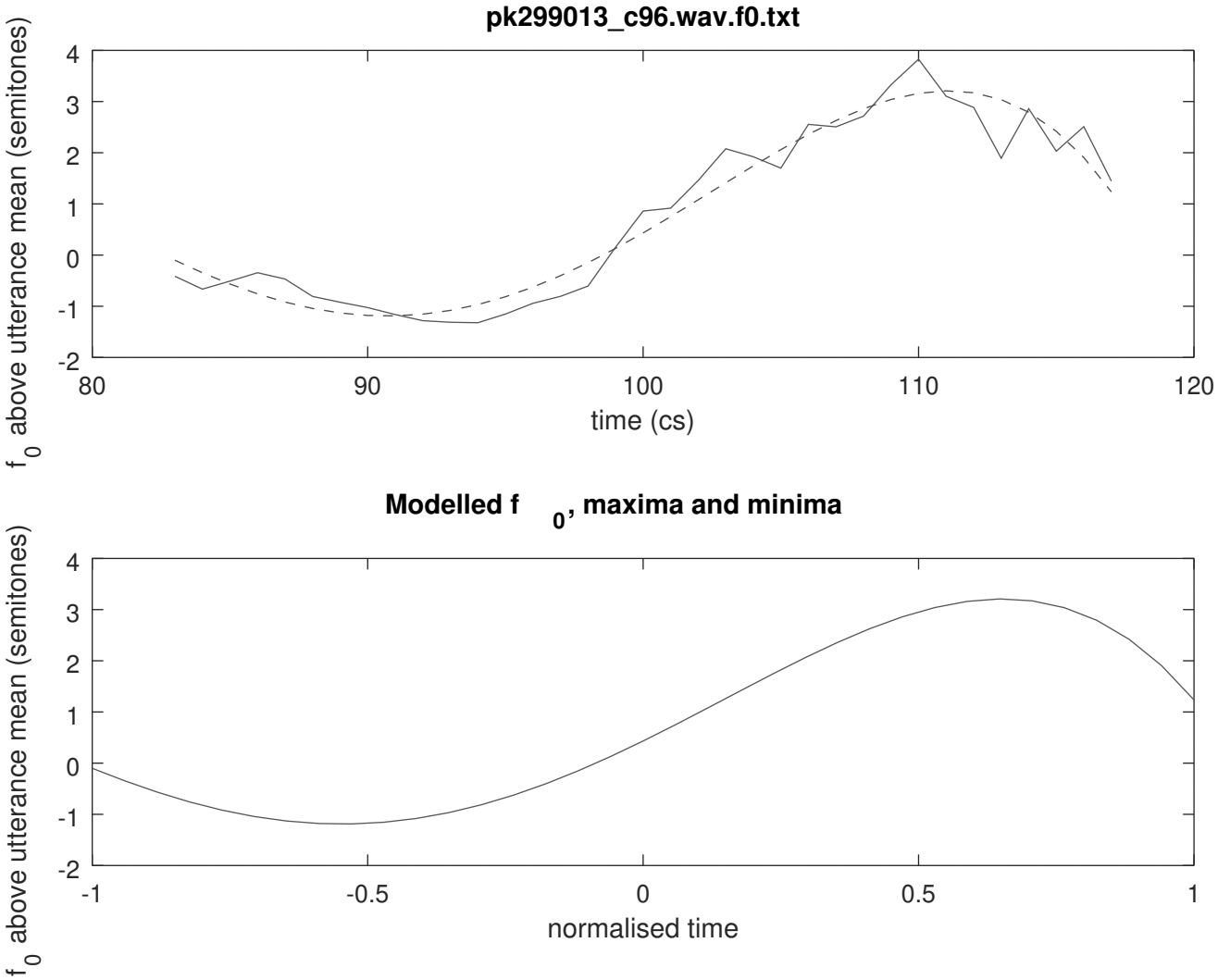

pk299013_c91.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
98
100
102
104
106
108
110
112
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

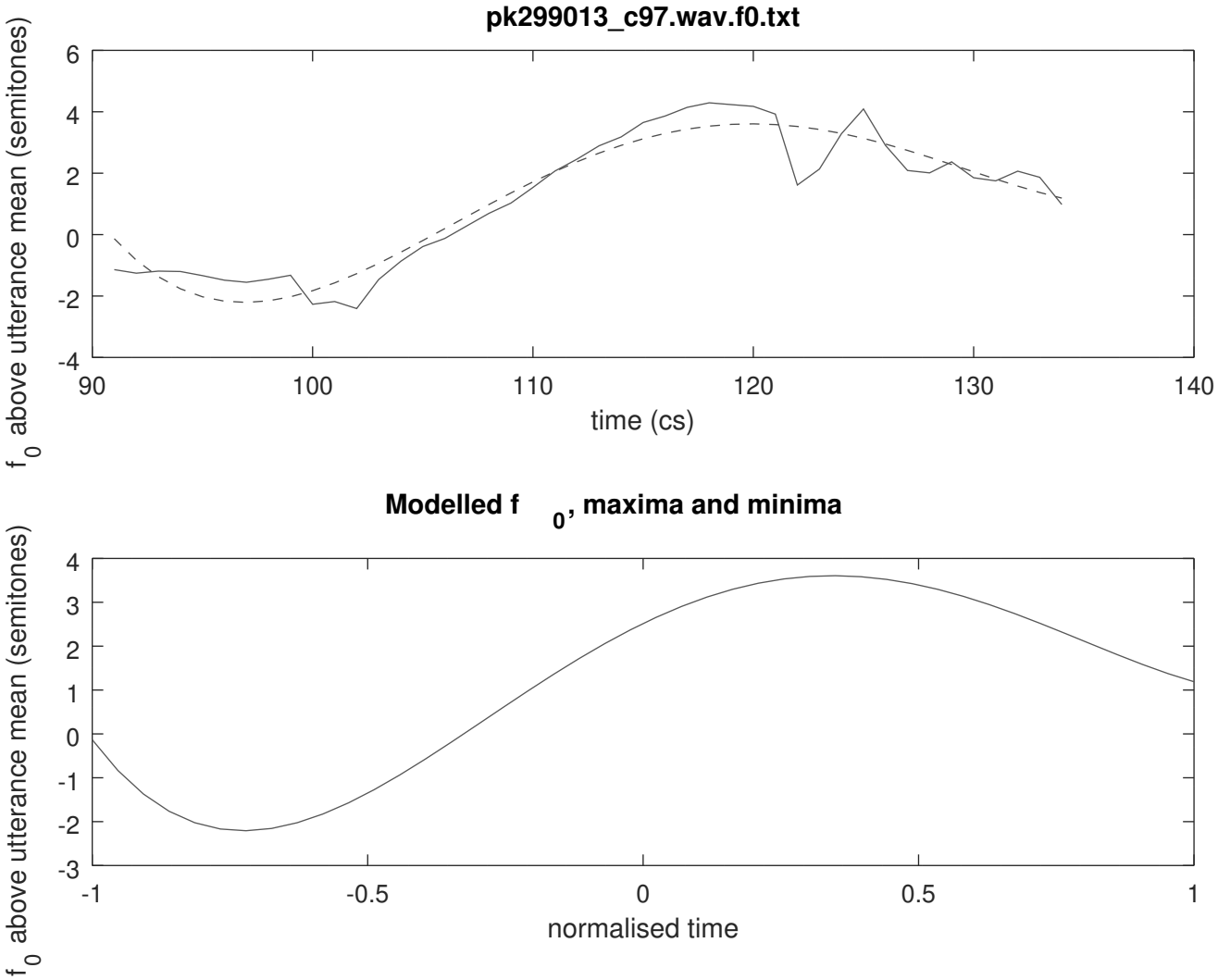

pk299013_c92.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time

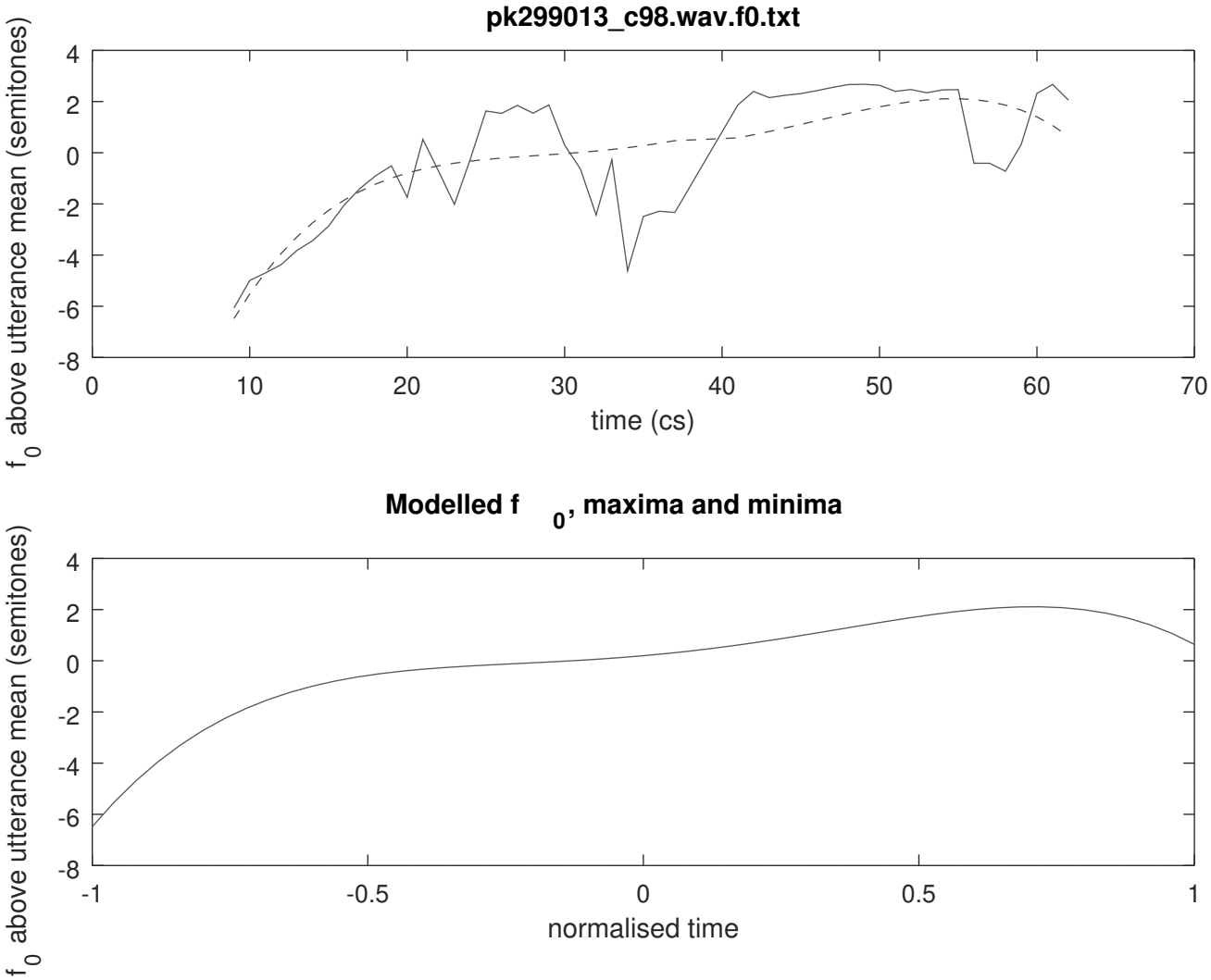

pk299013_c93.wav.f0.txt
f0 above utterance mean (semitones)
4
3.5
3
2.5
2
86
88
90
92
94
96
98
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
3.5
3
2.5
2
-1
-0.5
0
0.5
1
normalised time

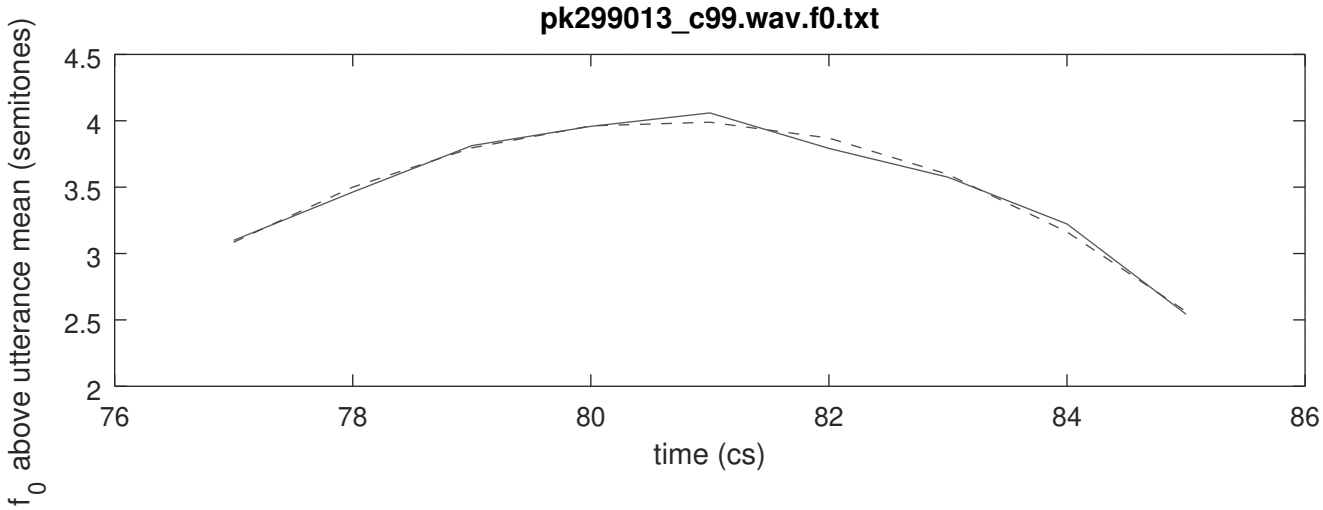

pk299013_c94.wav.f0.txt
f0 above utterance mean (semitones)
4
3
2
1
0
-1
130
135
140
145
150
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
3
2
1
0
-1
-1
-0.5
0
0.5
1
normalised time

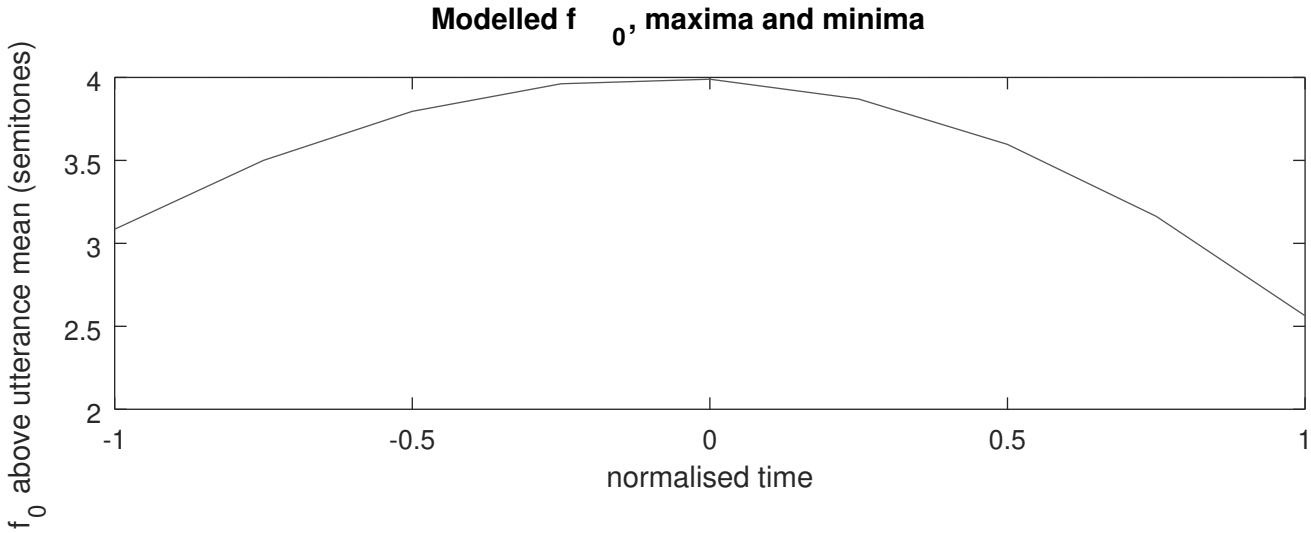

pk299013_c95.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
40
50
60
70
80
90
100
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time

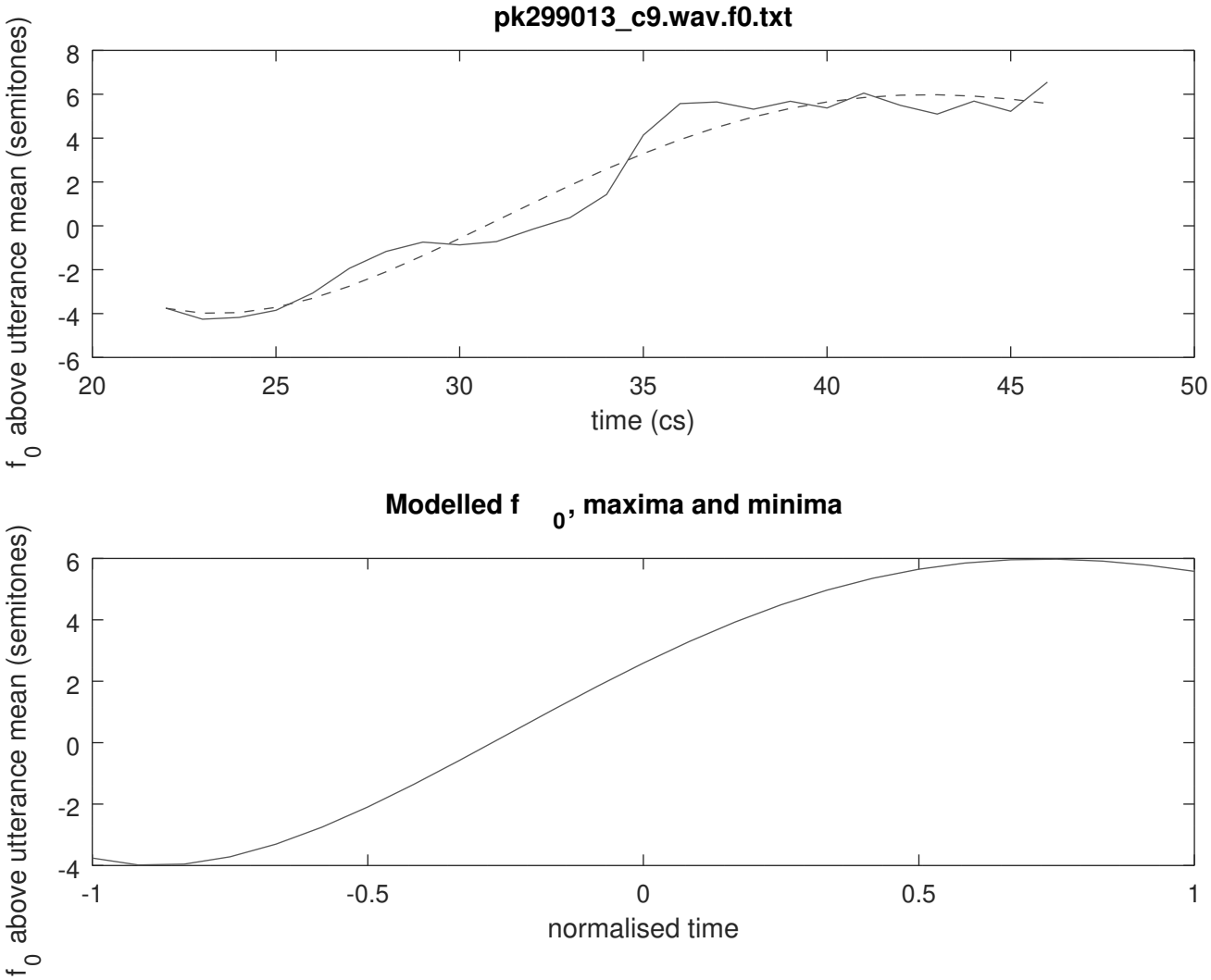

pk299013_c96.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time


pk299013_c97.wav.f0.txt
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
90
100
110
120
130
140
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
4
3
2
1
0
-1
-2
-3
-1
-0.5
0
0.5
1
normalised time


pk299013_c98.wav.f0.txt
f0 above utterance mean (semitones)
time (cs)
Modelled f0, maxima and minima
f0 above utterance mean (semitones)
normalised time


pk299013_c99.wav.f0.txt
4.5
4
3.5
3
2.5
2
76
78
80
82
84
86
time (cs)
f0 above utterance mean (semitones)


Modelled f 0, maxima and minima
4
3.5
3
2.5
2
-1
-0.5
0
0.5
1
normalised time
f0 above utterance mean (semitones)


pk299013_c9.wav.f0.txt
f0 above utterance mean (semitones)
8
6
4
2
0
-2
-4
-6
20
25
30
35
40
45
50
time (cs)
Modelled f 0, maxima and minima
f0 above utterance mean (semitones)
6
4
2
0
-2
-4
-1
-0.5
0
0.5
1
normalised time