Supplementary Materials for :
Crustal structure of the East-African Limpopo Margin, a strike-slip rifted corridor along the continental Mozambique Coastal Plain and North-Natal Valley

Mikael Evain[1], Philippe Schnürle[1], Angélique Leprêtre[1,2], Fanny Verrier[1], Louise Watremez[3], Joseph Offei Thompson[1], Philippe de Clarens[4], Daniel Aslanian[1], and Maryline Moulin[1]

[1]IFREMER, Geosciences Marines, REM/GM/LGS, Centre de Brest, 29280 Plouzané, France
[2]LGO, IUEM, Place Nicolas Copernic, 29280 Plouzané, France
[3]Univ. Lille, CNRS, Univ. Littoral Côte d'Opale, UMR 8187 – LOG – Laboratoire d'Océanologie et de Géosciences, F-59000 Lille, France
[4]TOTAL, R&D, avenue Larribau, 64000 Pau, France

Correspondence: Mikael Evain (mikael.evain@ifremer.fr)

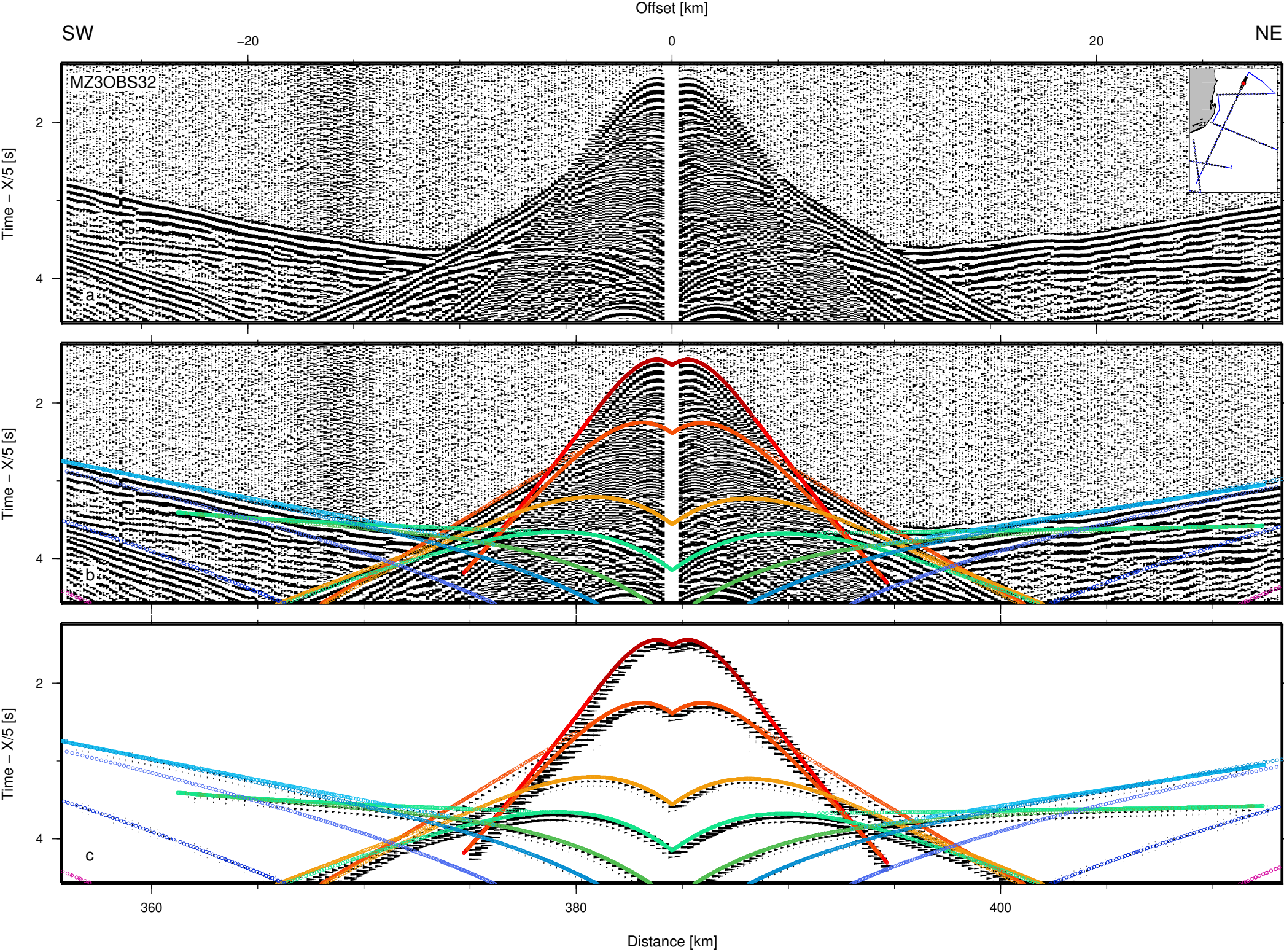
This supplementary Materials includes:

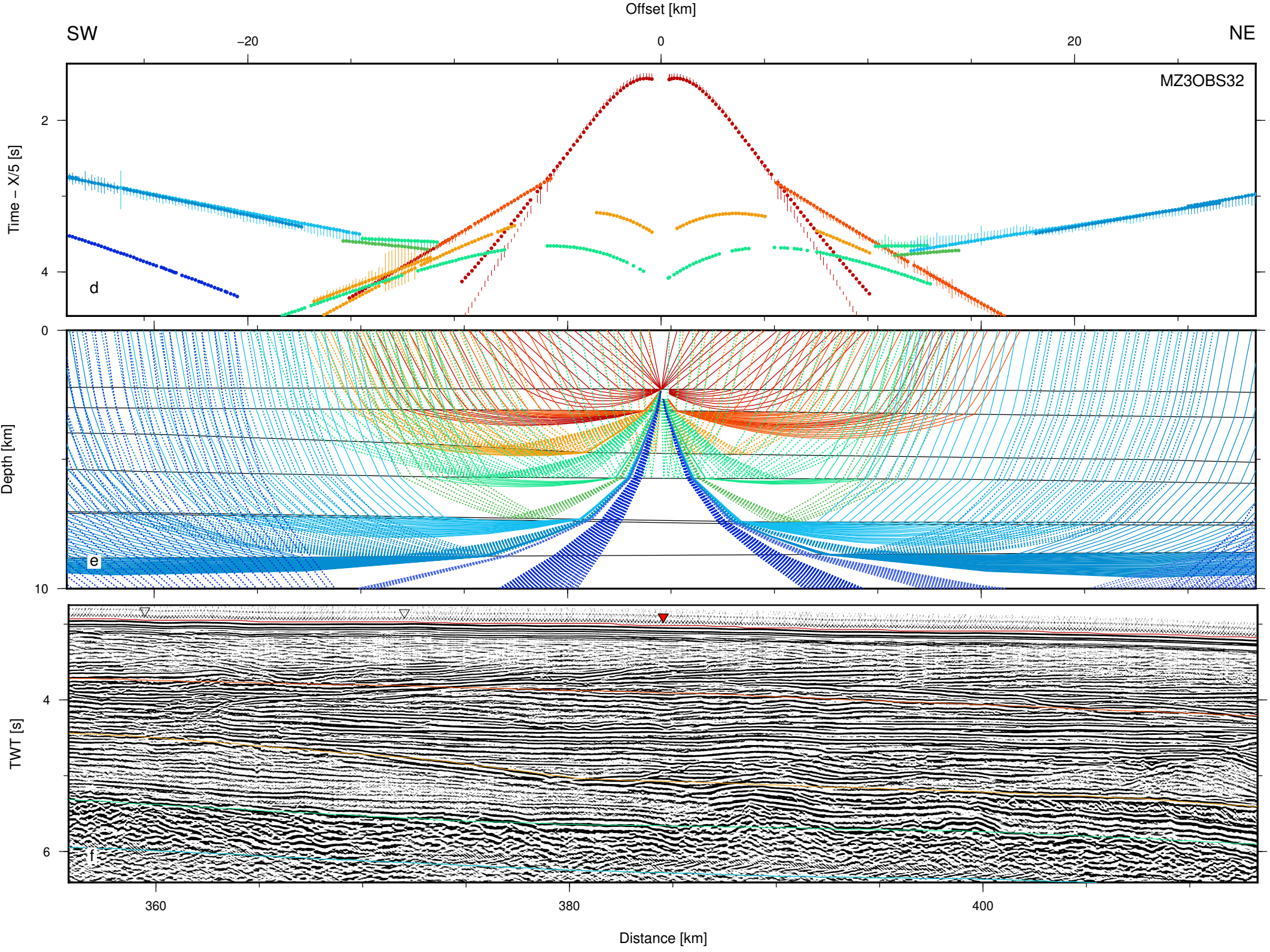
Figure 1: Interpreted sedimentary and volcano-sedimentary seismic phases for all MZ3 OBS.

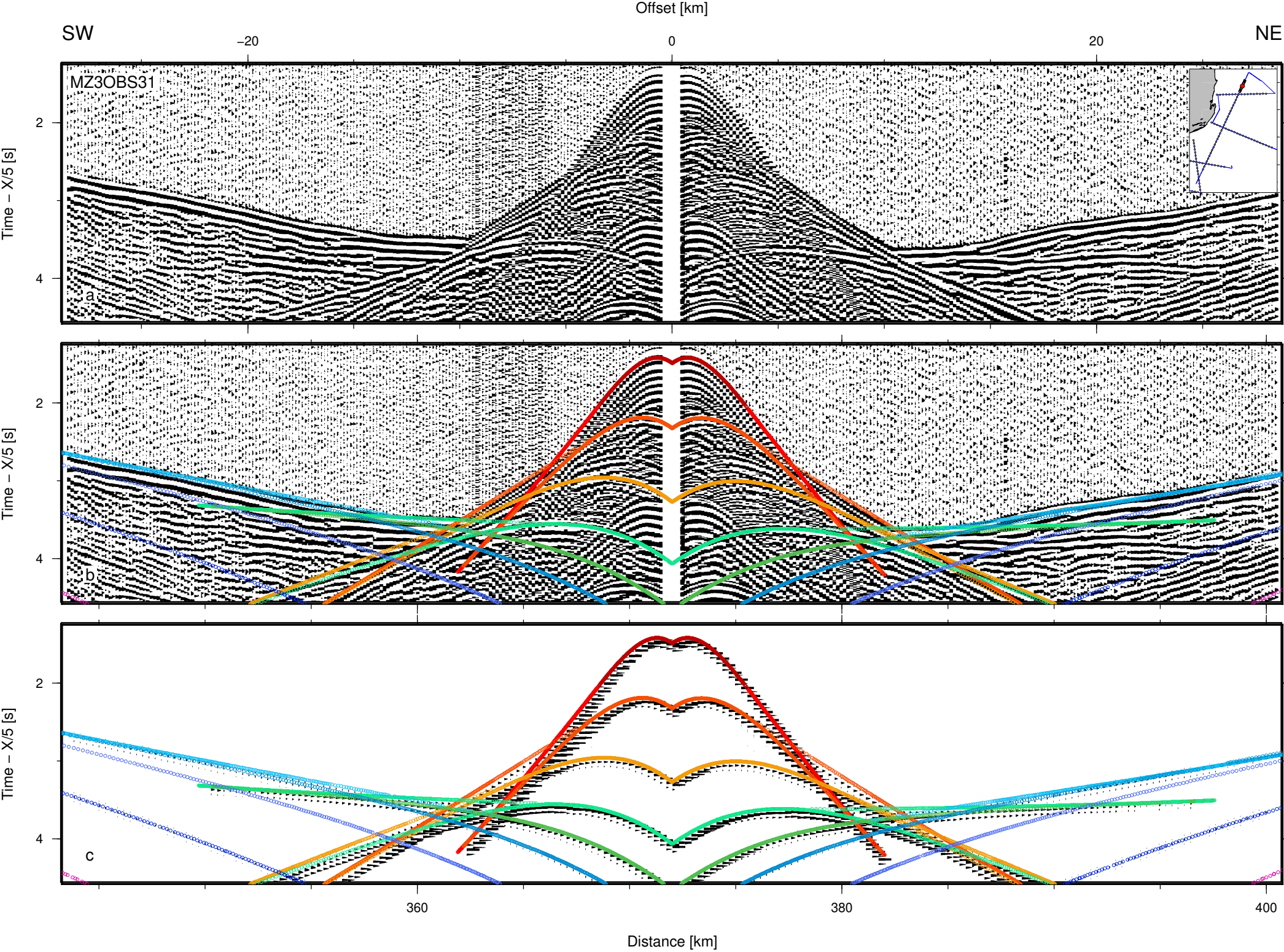
Figure 2: Interpreted crust and mantle seismic phases for all MZ3 OBS.

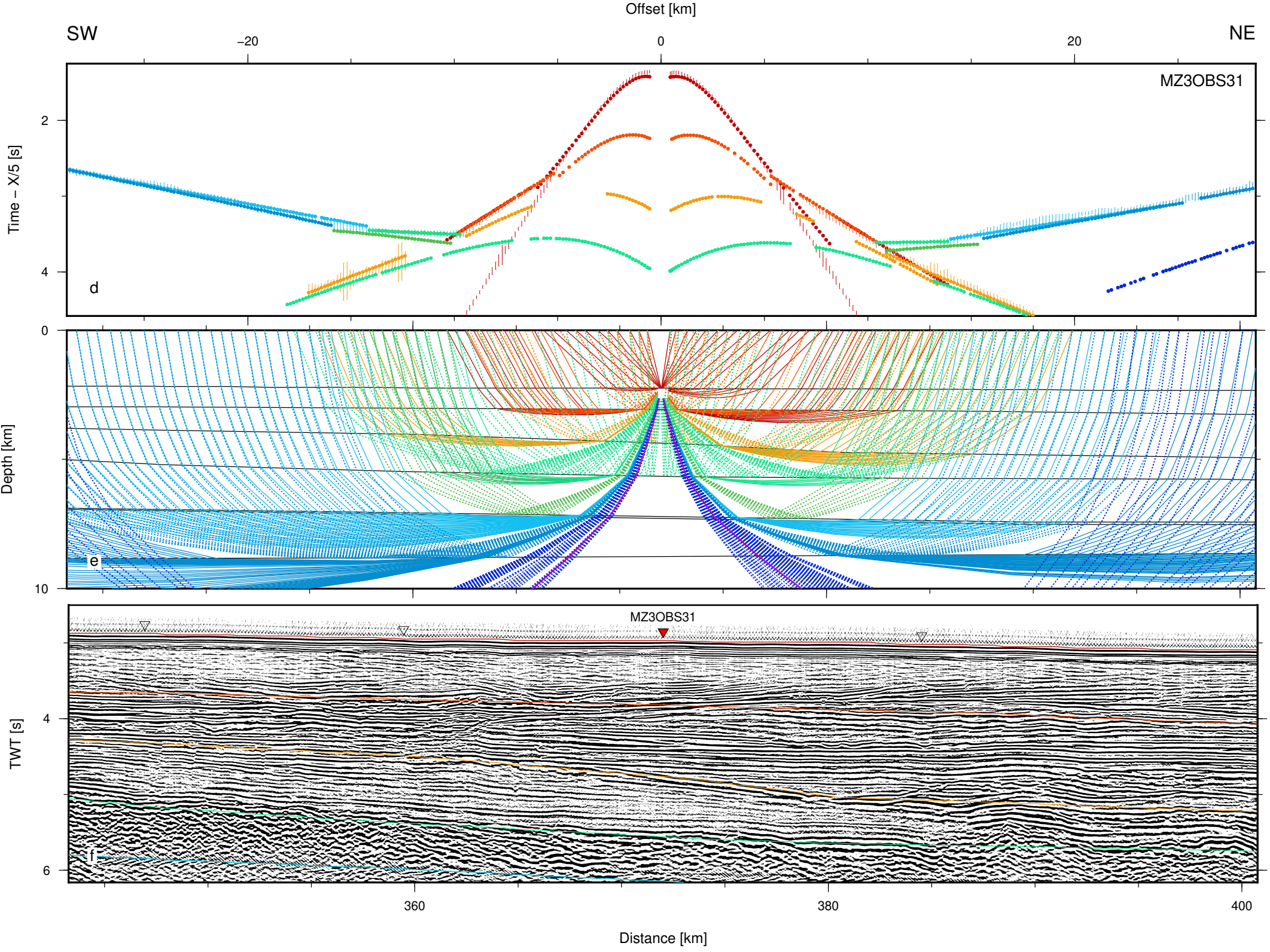
Figure 3: Normalized average model scores distribution every 20km along MZ3. On each panel, a) and c) represent cross-sections of normalized average score distribution at selected depths and velocities respectively as shown in a) with letter correspondence. Black horizontal dashed lines indicate 95% of the maximum normalized average score and are used to estimates uncertainties. This level corresponds to the score of a model capable of tracing 95% of the original number of rays and with an increase of 5% of the original χ^2. b) Average model score distribution of the entire dataset. Thin dashed lines mark fixed parameter bounds. Solid black line indicates tested model. Letters mark locations of the horizontal and vertical cross-sections shown in a) and c).

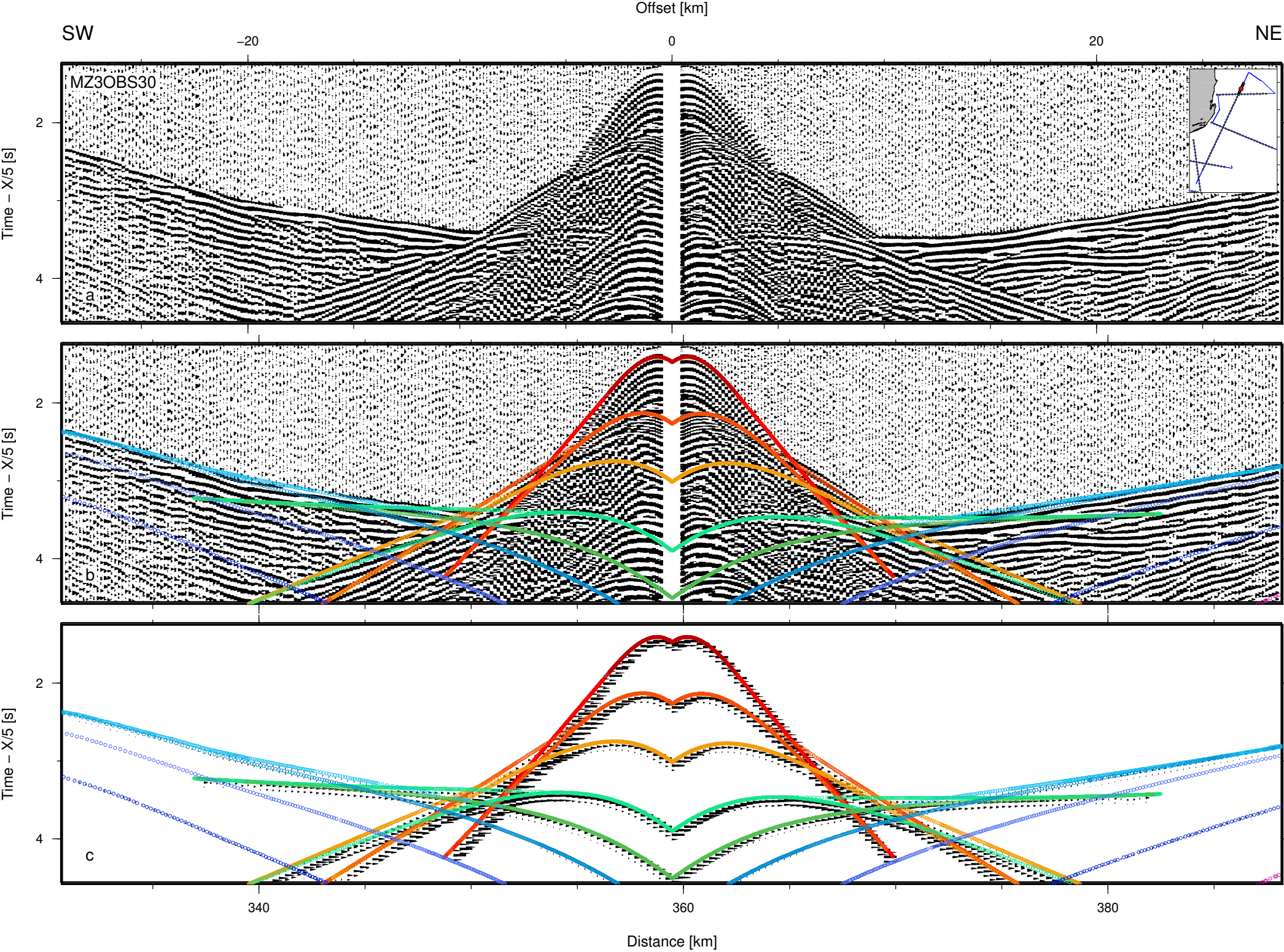
Figure 1. Interpreted sedimentary and volcano-sedimentary seismic phases for all MZ3 OBS. For each instrument 6 panels display a) seismic record; b) seismic record with color-coded predicted arrivals; c) synthetic section with color coded predicted arrivals; d) color coded picked travel-times with uncertainty bars overlain by dotted predicted times; e) color coded seismic rays; f) MCS time migrated section with color-coded model interfaces. On a, b, c, and d, travel-time is reduced by a velocity of 5 km/s.

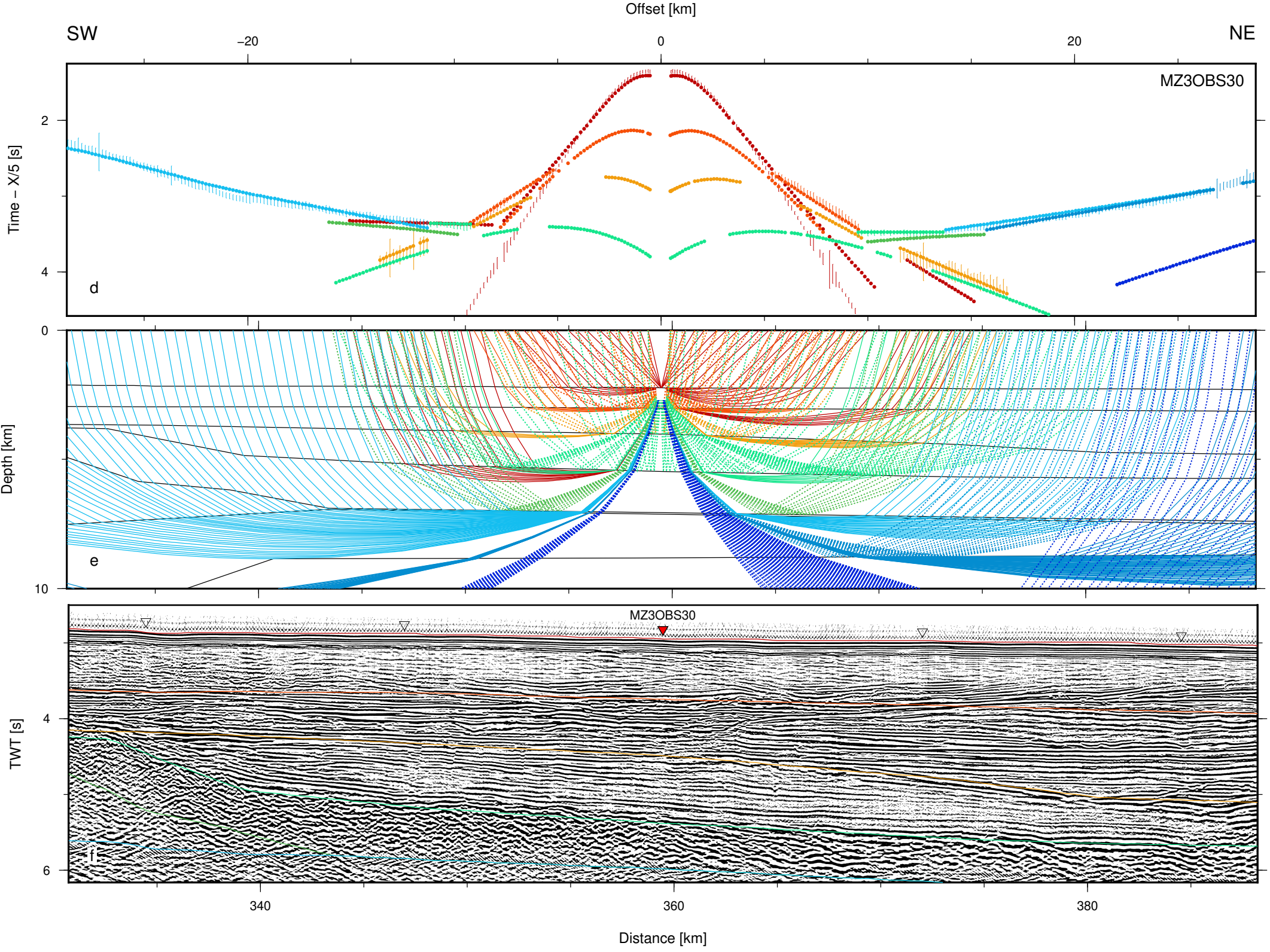

Offset [km]
SW
NE
−20
0
20
MZ3OBS32
a
b
c
Time − X/5 [s]
2
4
360
380
400
Distance [km]

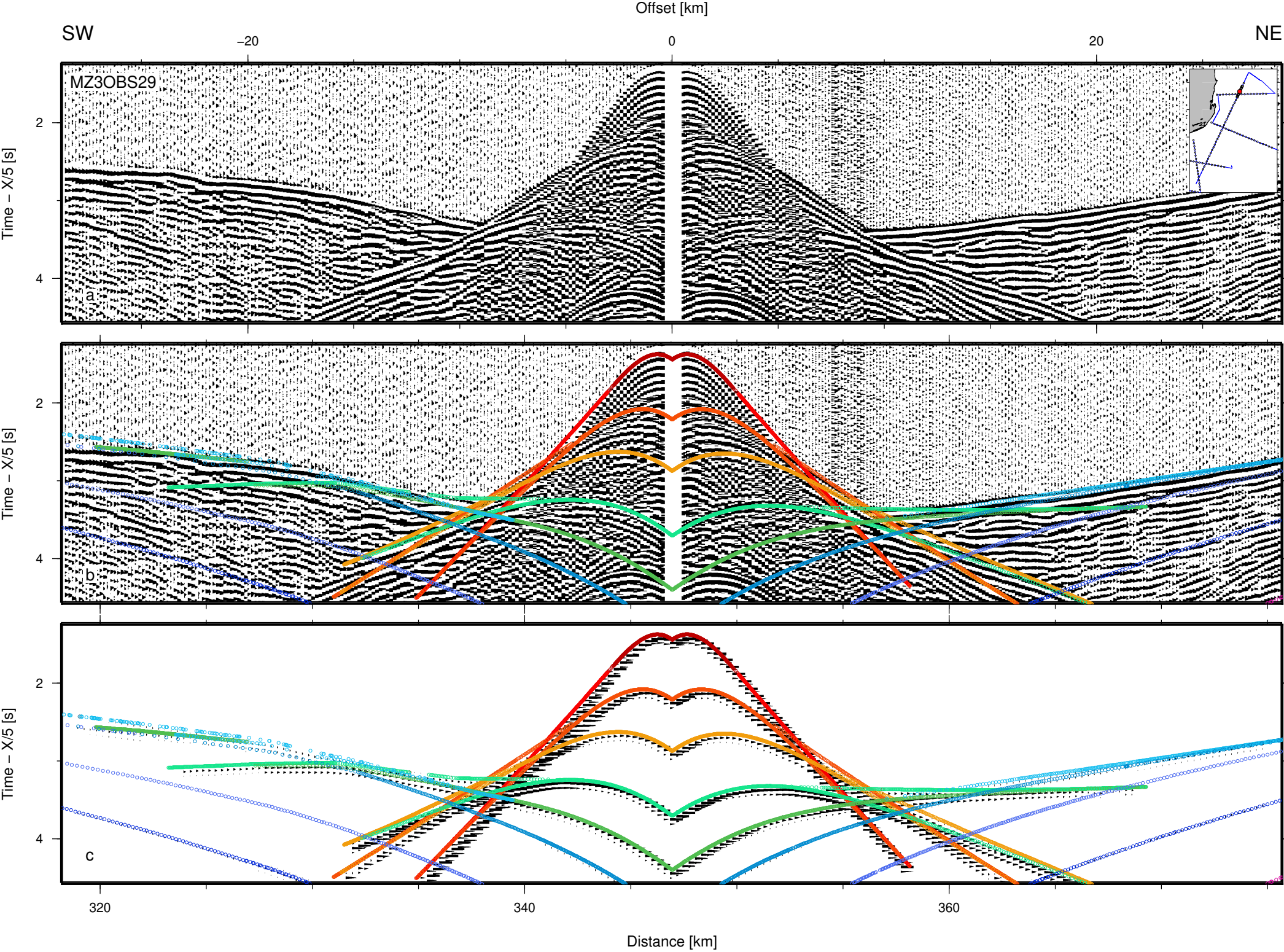

Offset [km]
SW
NE
−20
0
20
MZ3OBS32
Time − X/5 [s]
2
4
d
0
Depth [km]
e
10
TWT [s]
4
6
f
360
380
400
Distance [km]

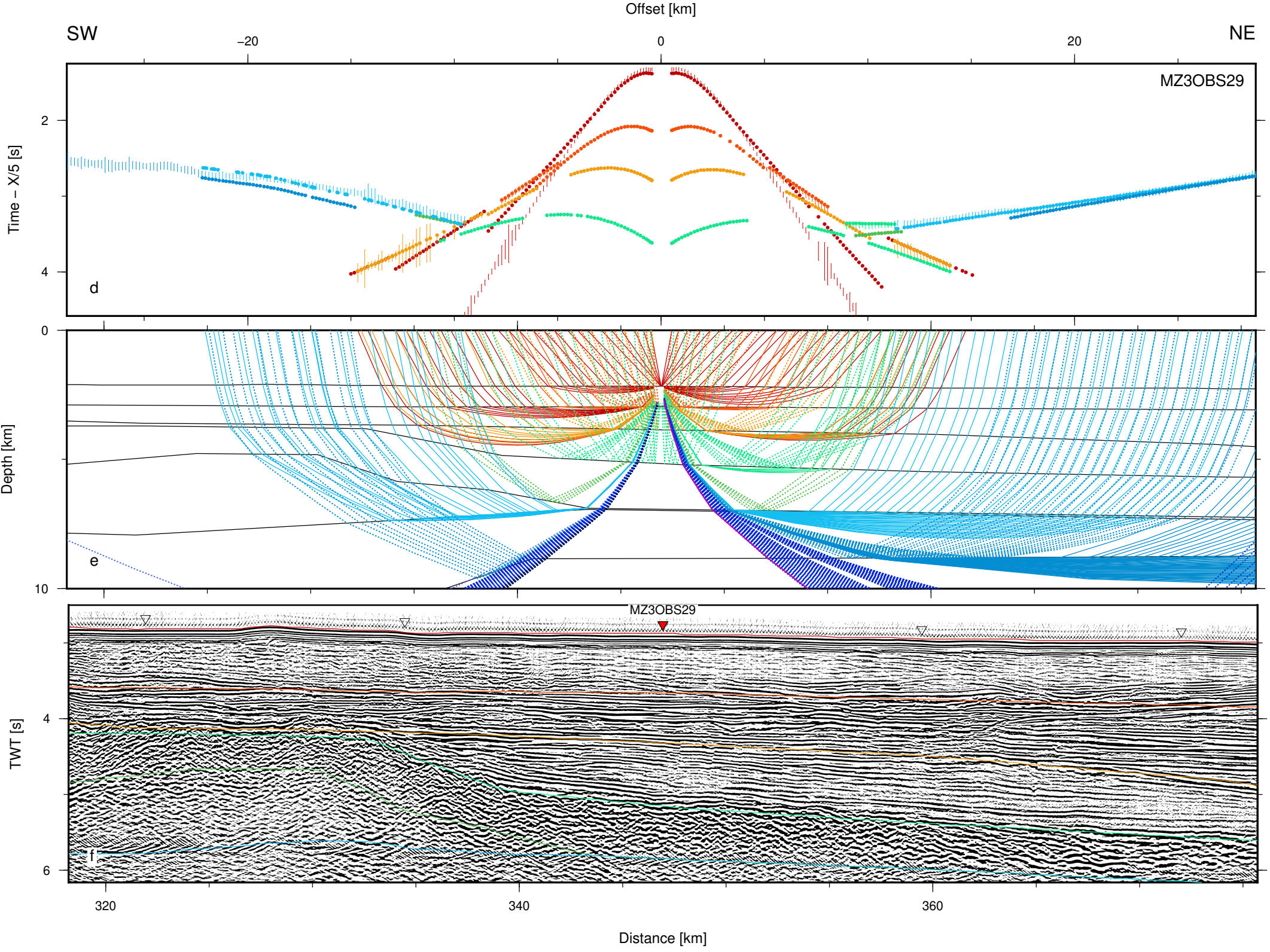

Offset [km]
SW
NE
−20
0
20
MZ3OBS31
a
b
c
Time − X/5 [s]
2
4
360
380
400
Distance [km]

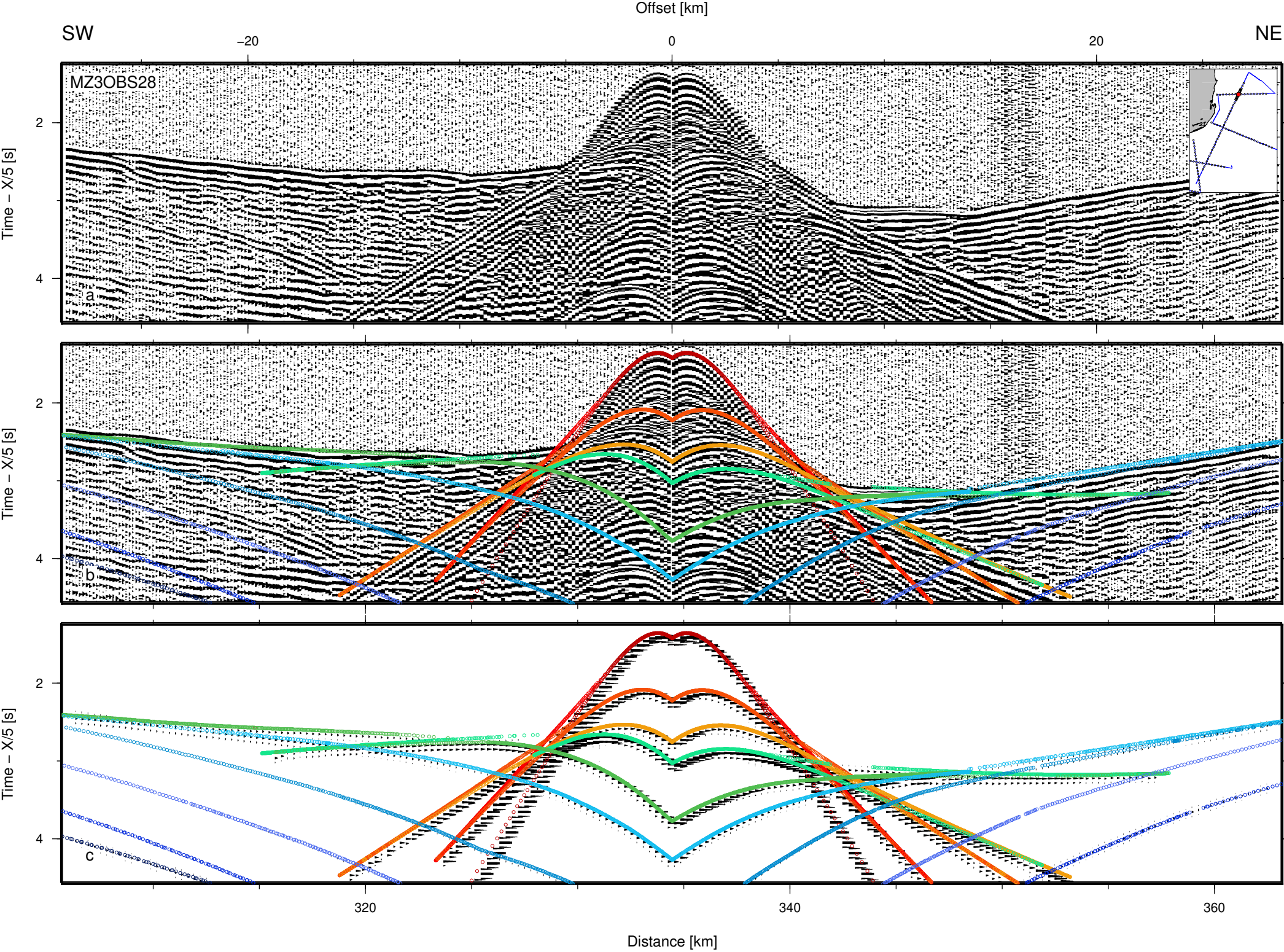

Offset [km]
SW
NE
−20
0
20
MZ3OBS31
Time − X/5 [s]
2
4
d
Depth [km]
0
10
e
MZ3OBS31
TWT [s]
4
6
f
360
380
400
Distance [km]

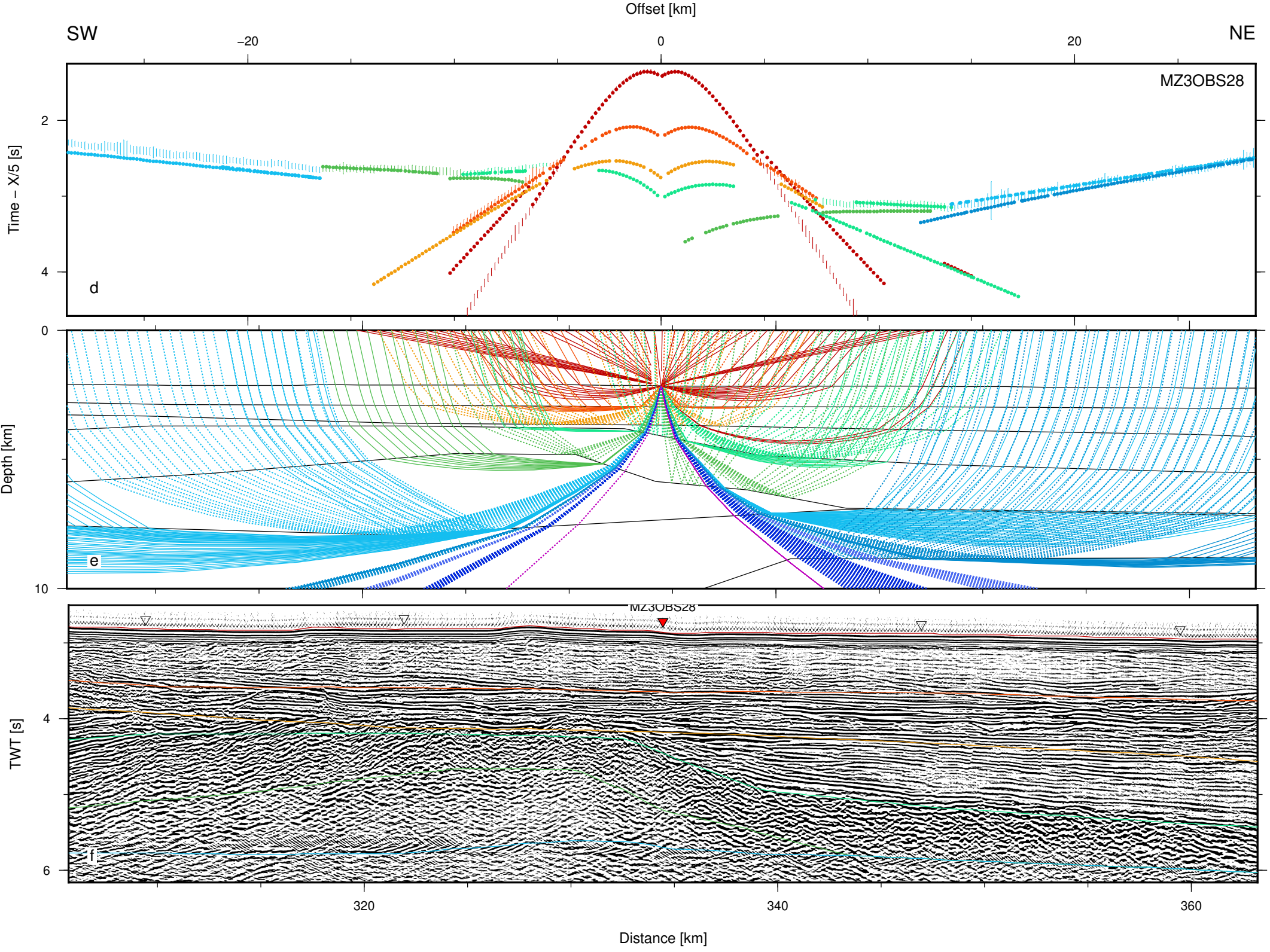

Offset [km]
SW
NE
−20
0
20
MZ3OBS30
a
b
c
Time − X/5 [s]
2
4
340
360
380
Distance [km]

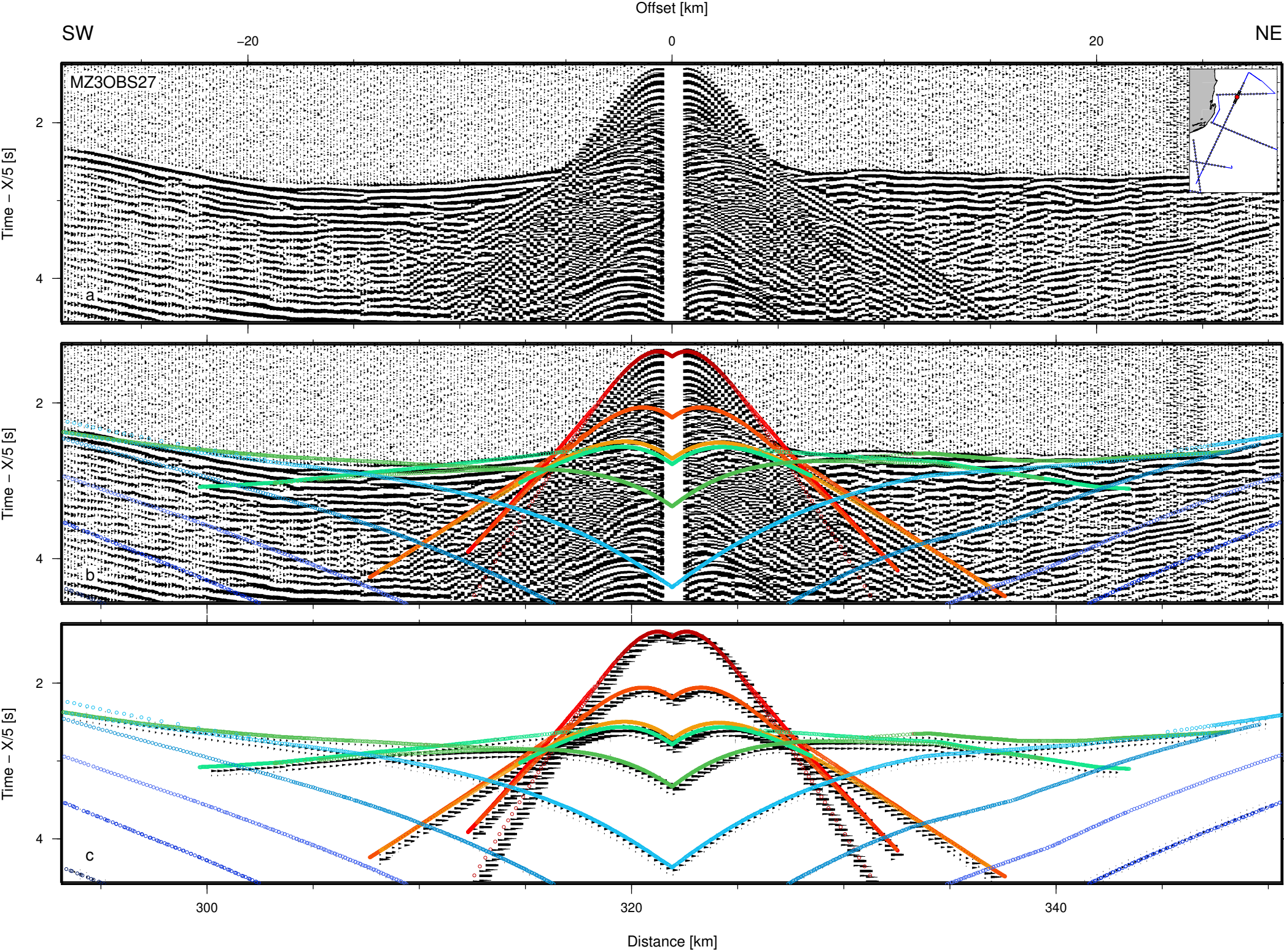

Offset [km]
SW
NE
−20
0
20
MZ3OBS30
Time − X/5 [s]
2
4
d
0
Depth [km]
e
10
MZ3OBS30
TWT [s]
4
6
340
360
380
Distance [km]

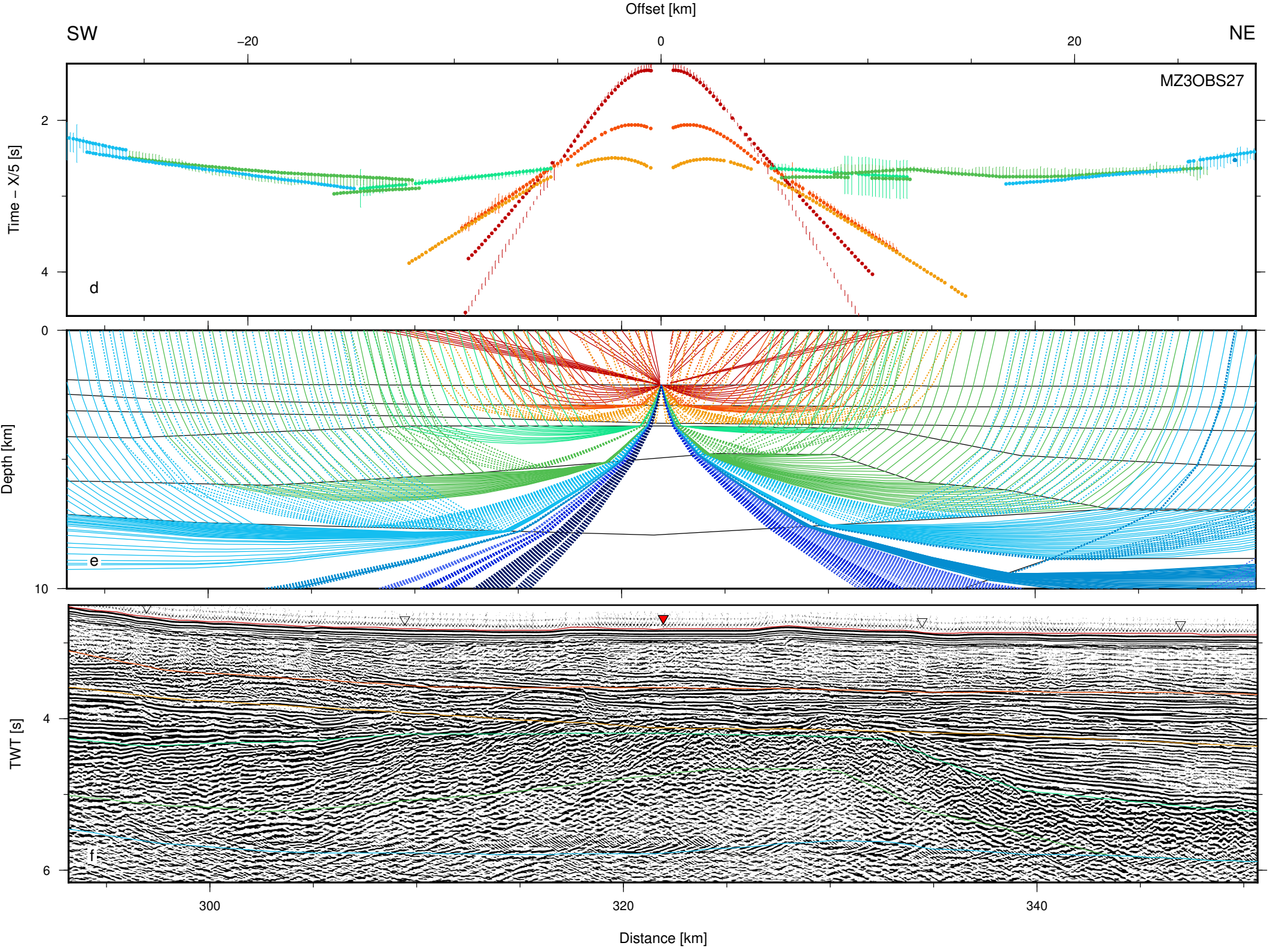

Offset [km]
SW
NE
−20
0
20
MZ3OBS29
a
b
c
Time − X/5 [s]
2
4
320
340
360
Distance [km]

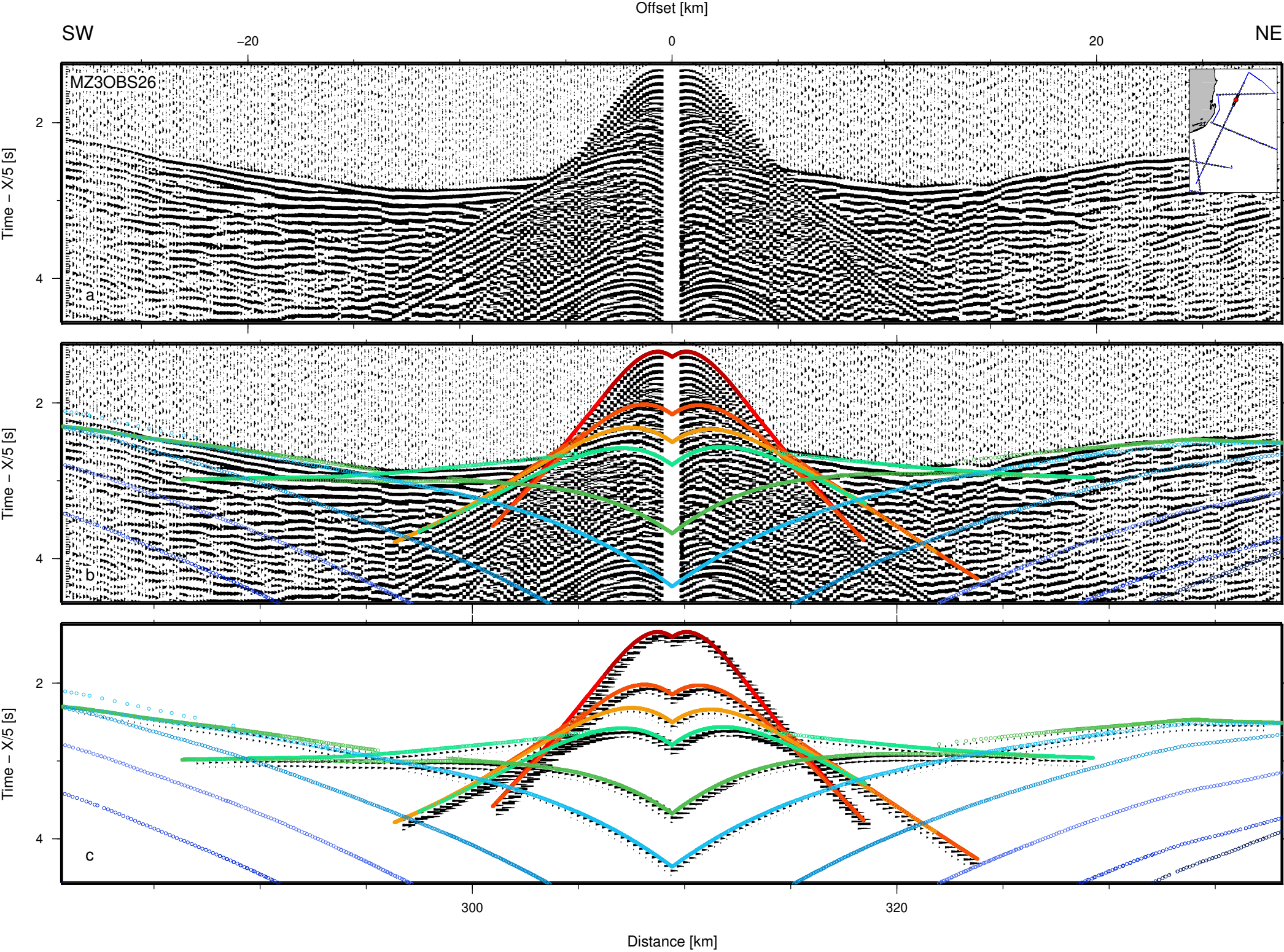

Offset [km]
SW
NE
−20
0
20
MZ3OBS29
Time − X/5 [s]
2
4
d
0
Depth [km]
e
10
MZ3OBS29
TWT [s]
4
6
T
320
340
360
Distance [km]

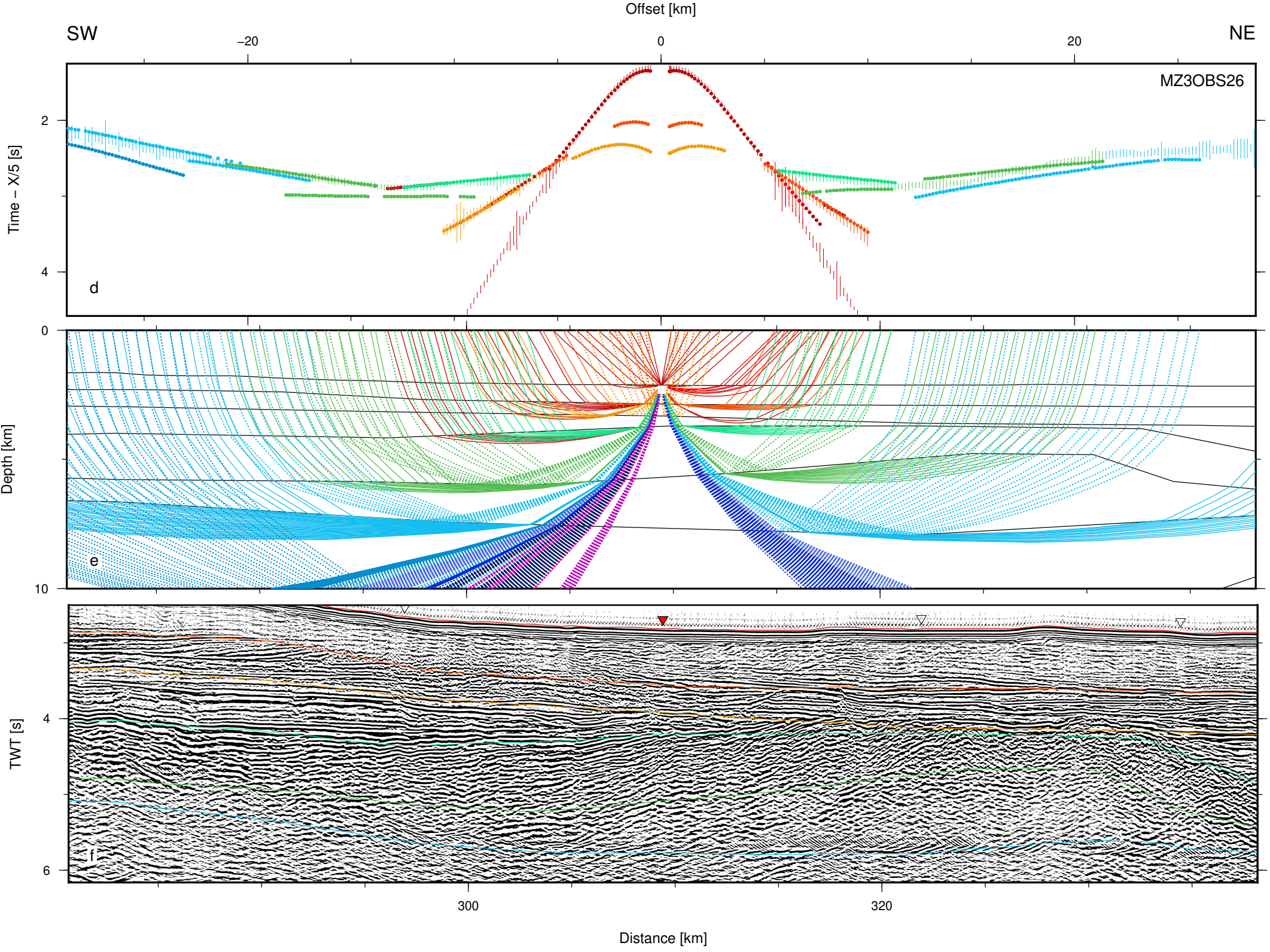

Offset [km]
SW
NE
−20
0
20
MZ3OBS28
a
b
c
Time − X/5 [s]
2
4
320
340
360
Distance [km]

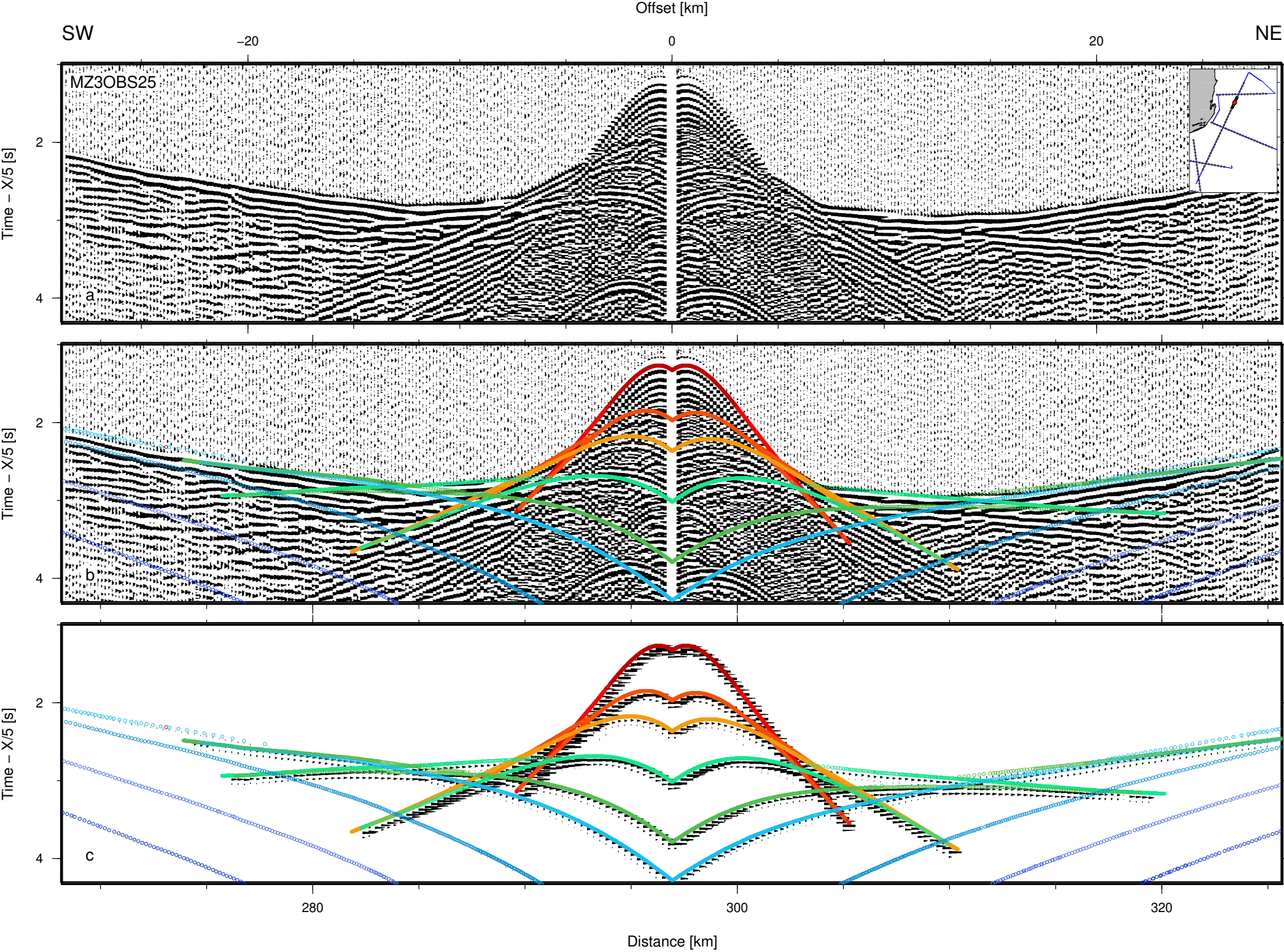

Offset [km]
SW
NE
−20
0
20
MZ3OBS28
Time − X/5 [s]
2
4
d
0
Depth [km]
e
10
MZ3OBS28
TWT [s]
4
f
6
320
340
360
Distance [km]

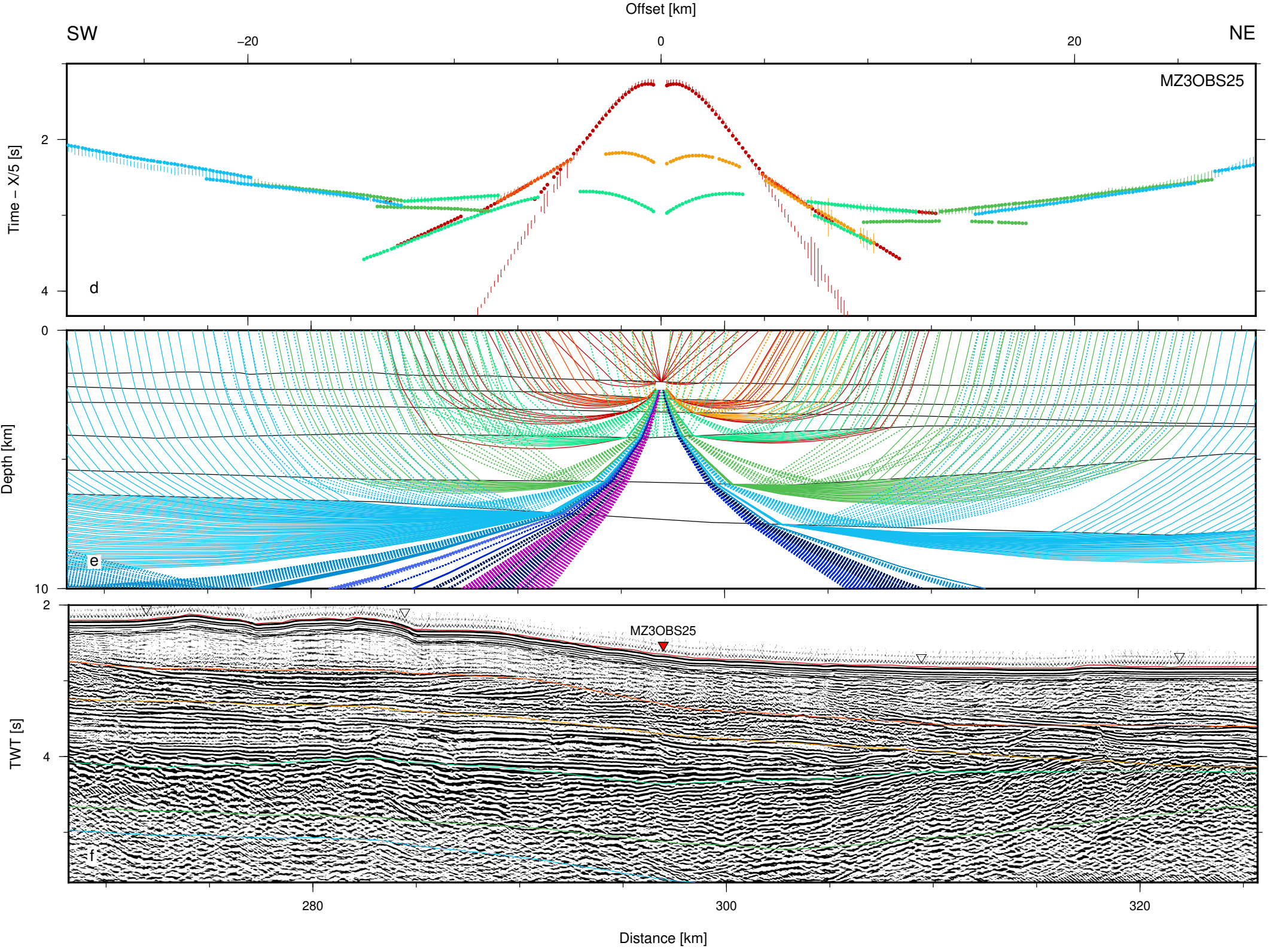

Offset [km]
SW
NE
−20
0
20
MZ3OBS27
a
b
c
Time − X/5 [s]
2
4
300
320
340
Distance [km]

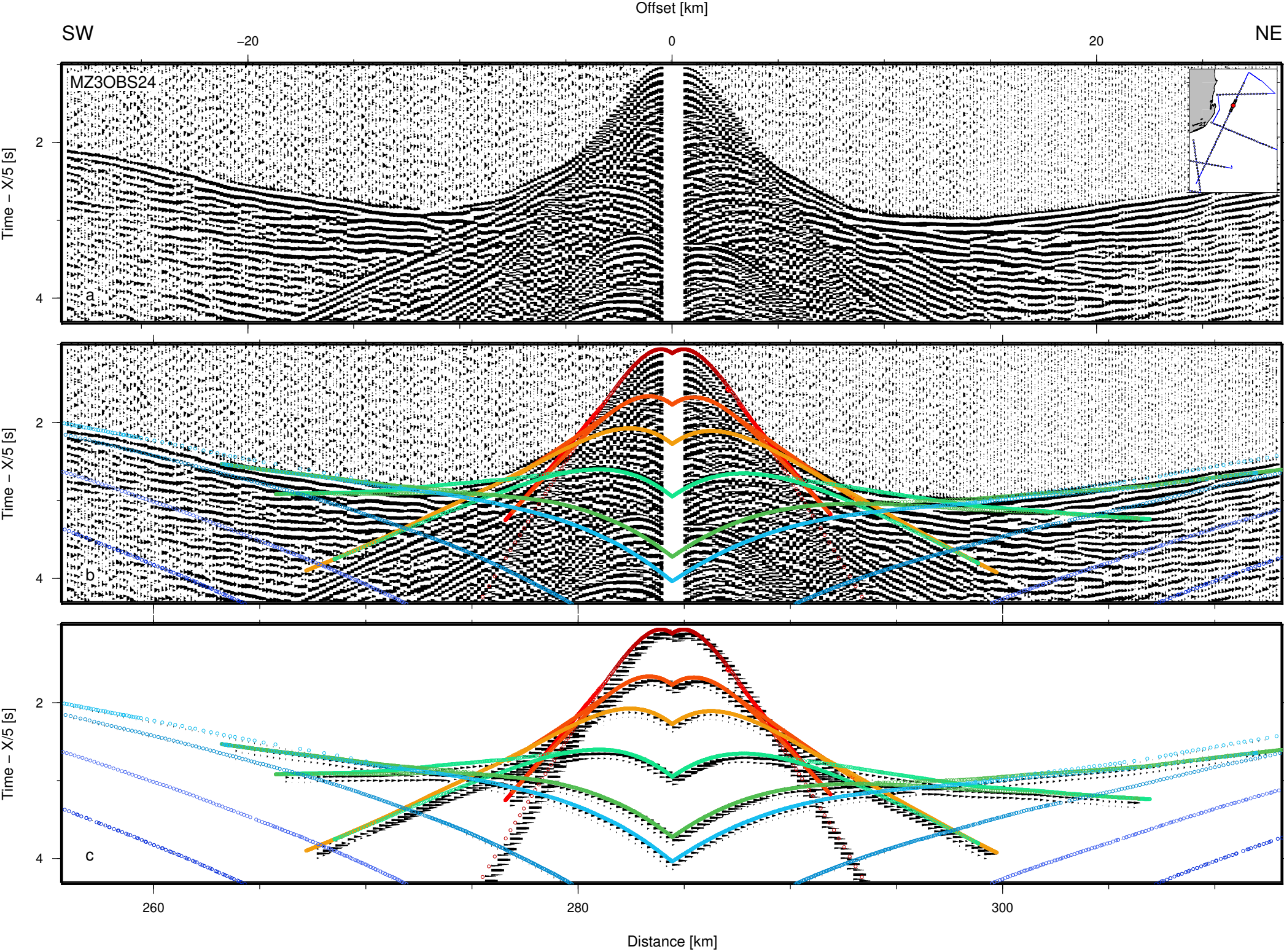

Offset [km]
SW
NE
−20
0
20
MZ3OBS27
Time − X/5 [s]
2
4
d
0
Depth [km]
10
e
TWT [s]
4
6
300
320
340
Distance [km]

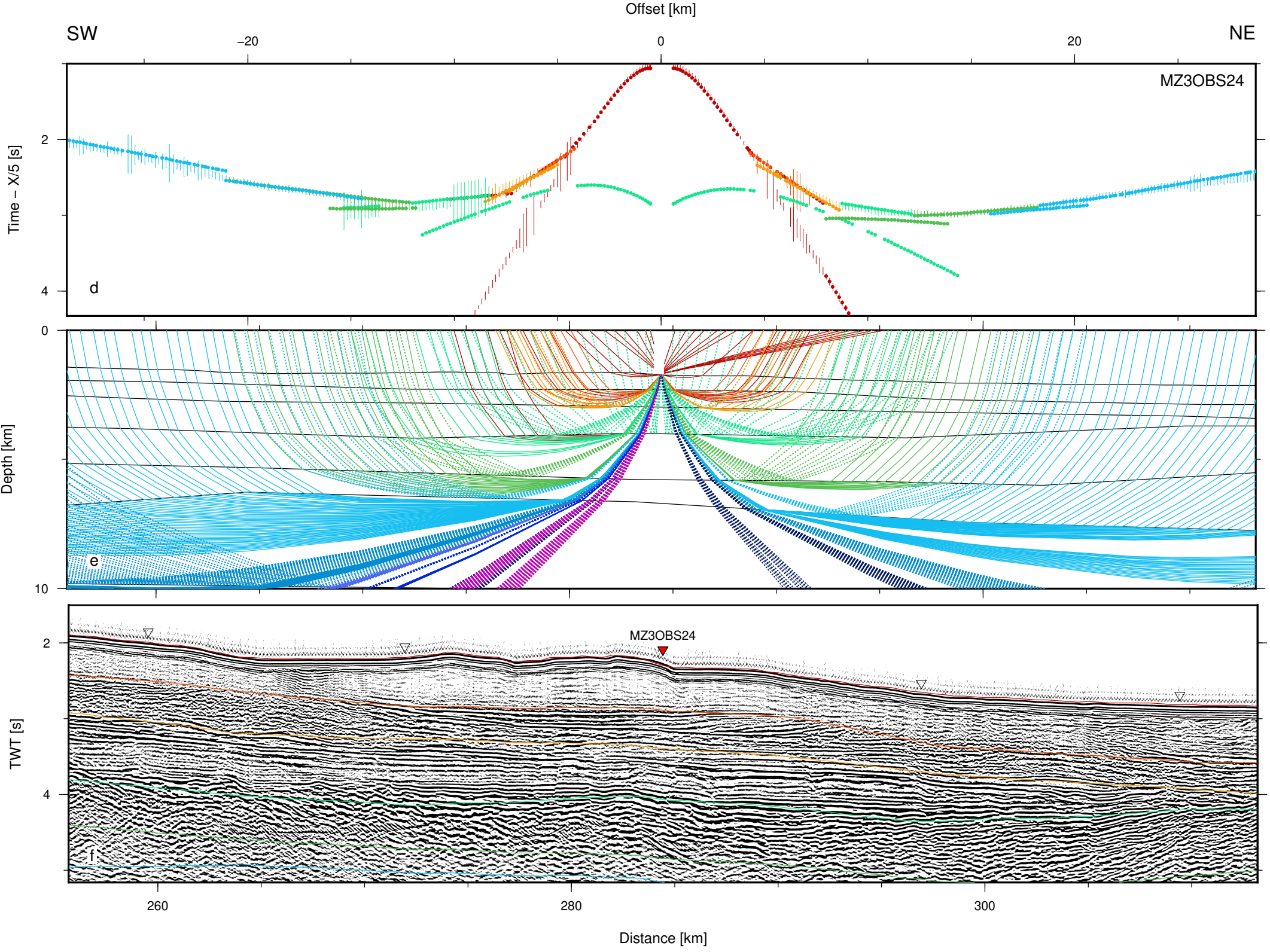

Offset [km]
SW
NE
−20
0
20
MZ3OBS26
a
b
c
Time − X/5 [s]
2
4
300
320
Distance [km]

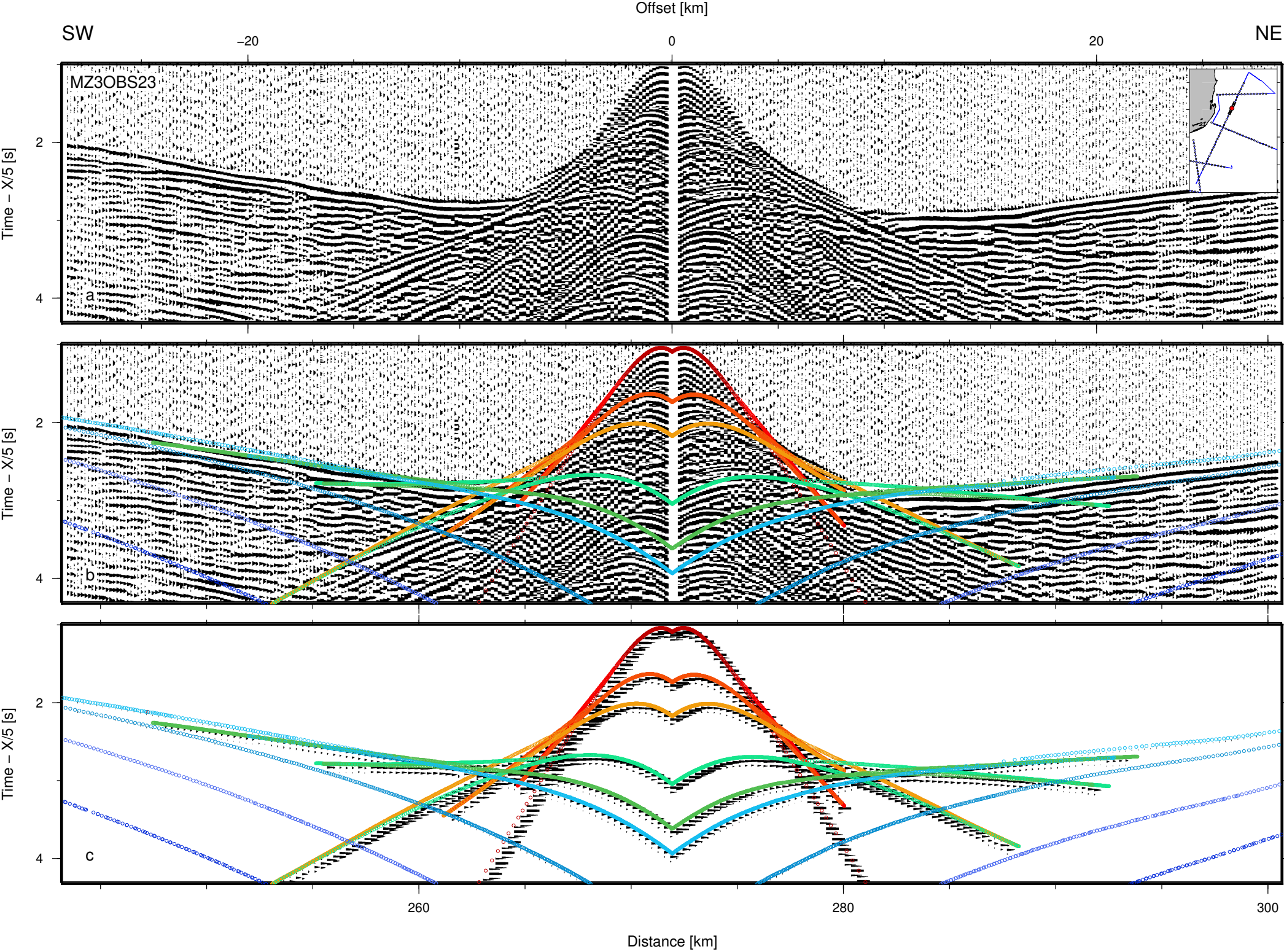

Offset [km]
SW
NE
−20
0
20
MZ3OBS26
Time − X/5 [s]
2
4
d
0
Depth [km]
e
10
TWT [s]
4
6
300
320
Distance [km]

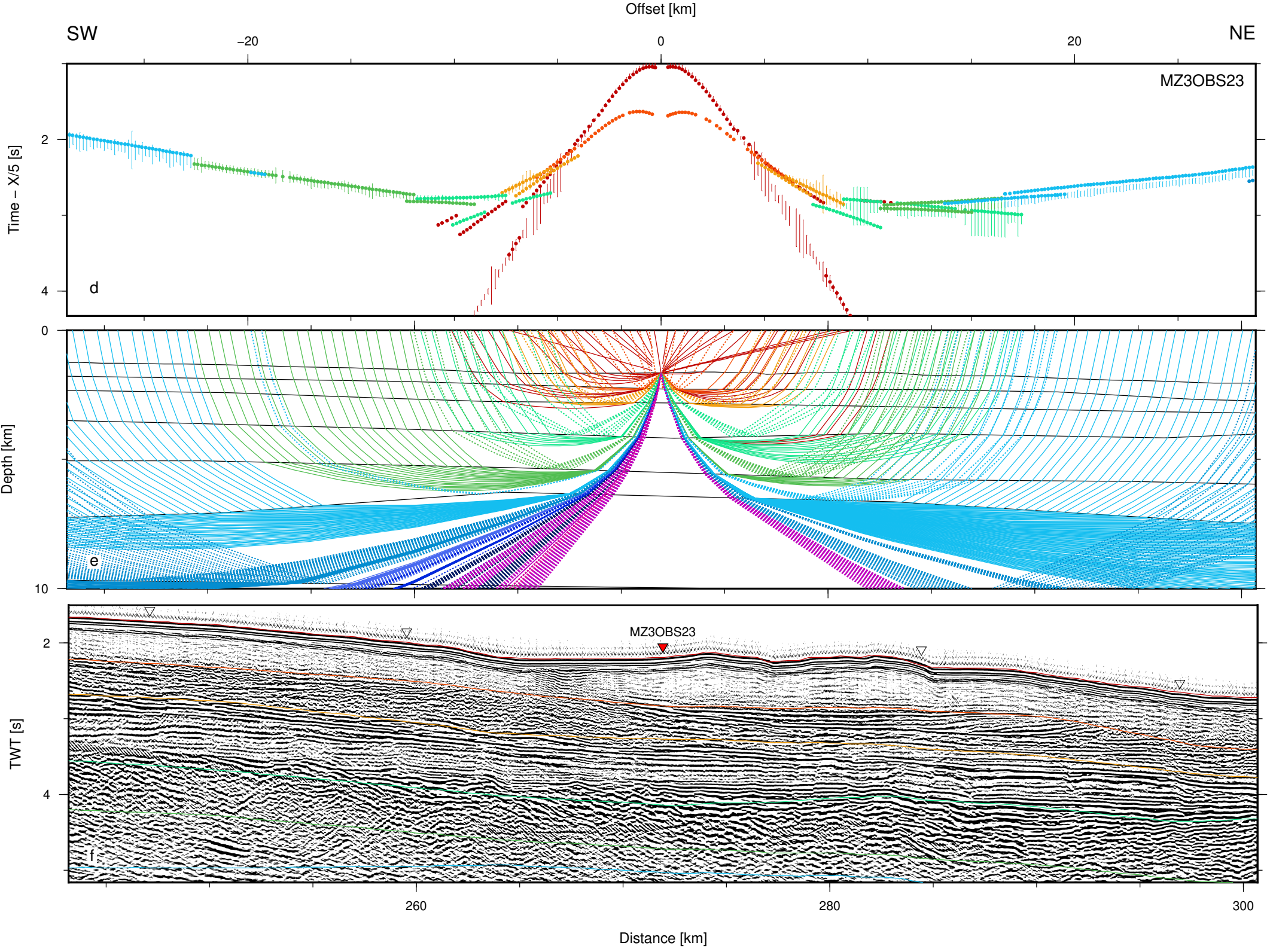

Offset [km]
SW
NE
−20
0
20
MZ3OBS25
a
b
c
Time − X/5 [s]
2
4
280
300
320
Distance [km]

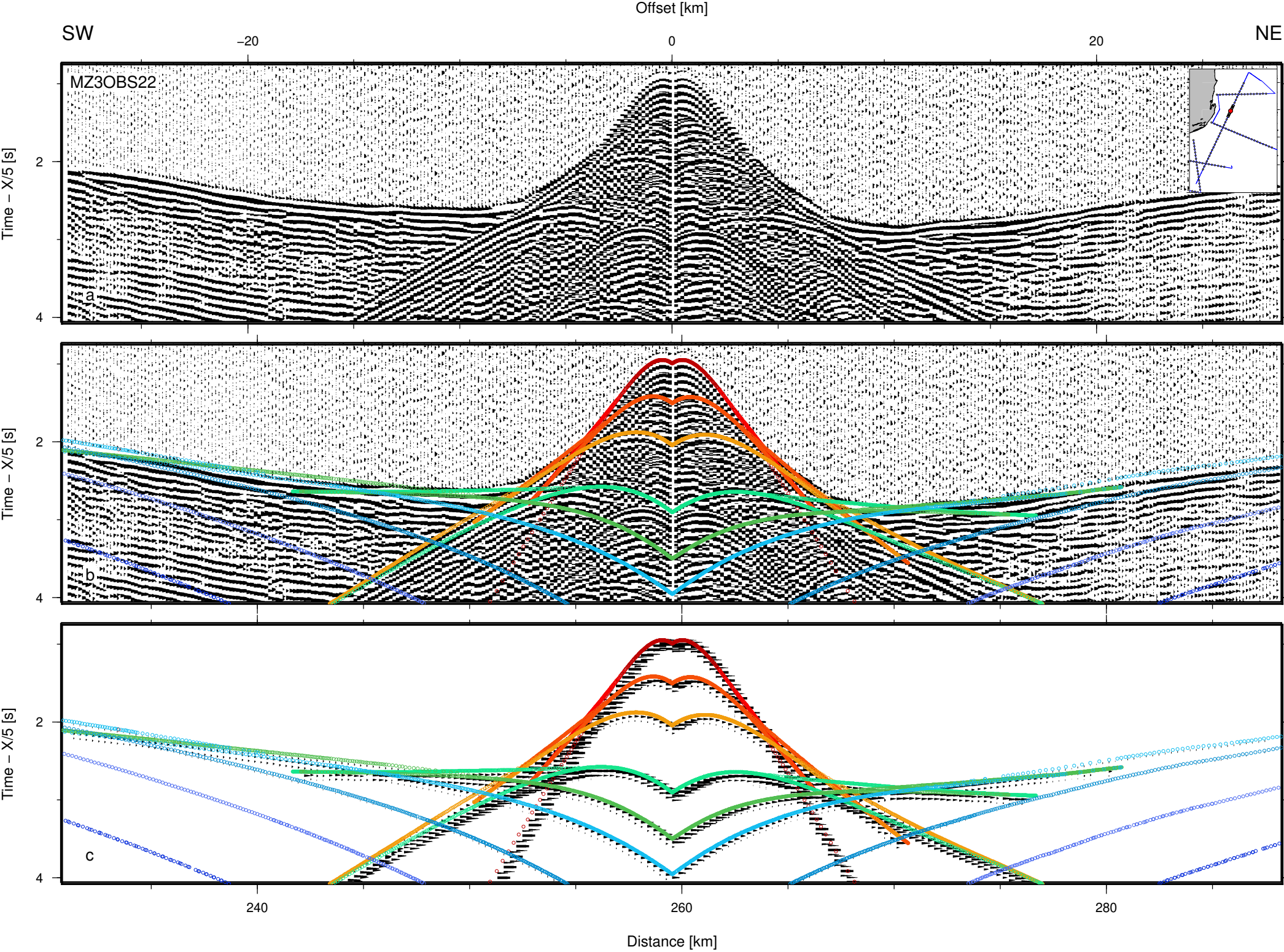

Offset [km]
SW
NE
−20
0
20
MZ3OBS25
Time − X/5 [s]
2
4
d
0
Depth [km]
e
10
2
MZ3OBS25
TWT [s]
4
7
280
300
320
Distance [km]

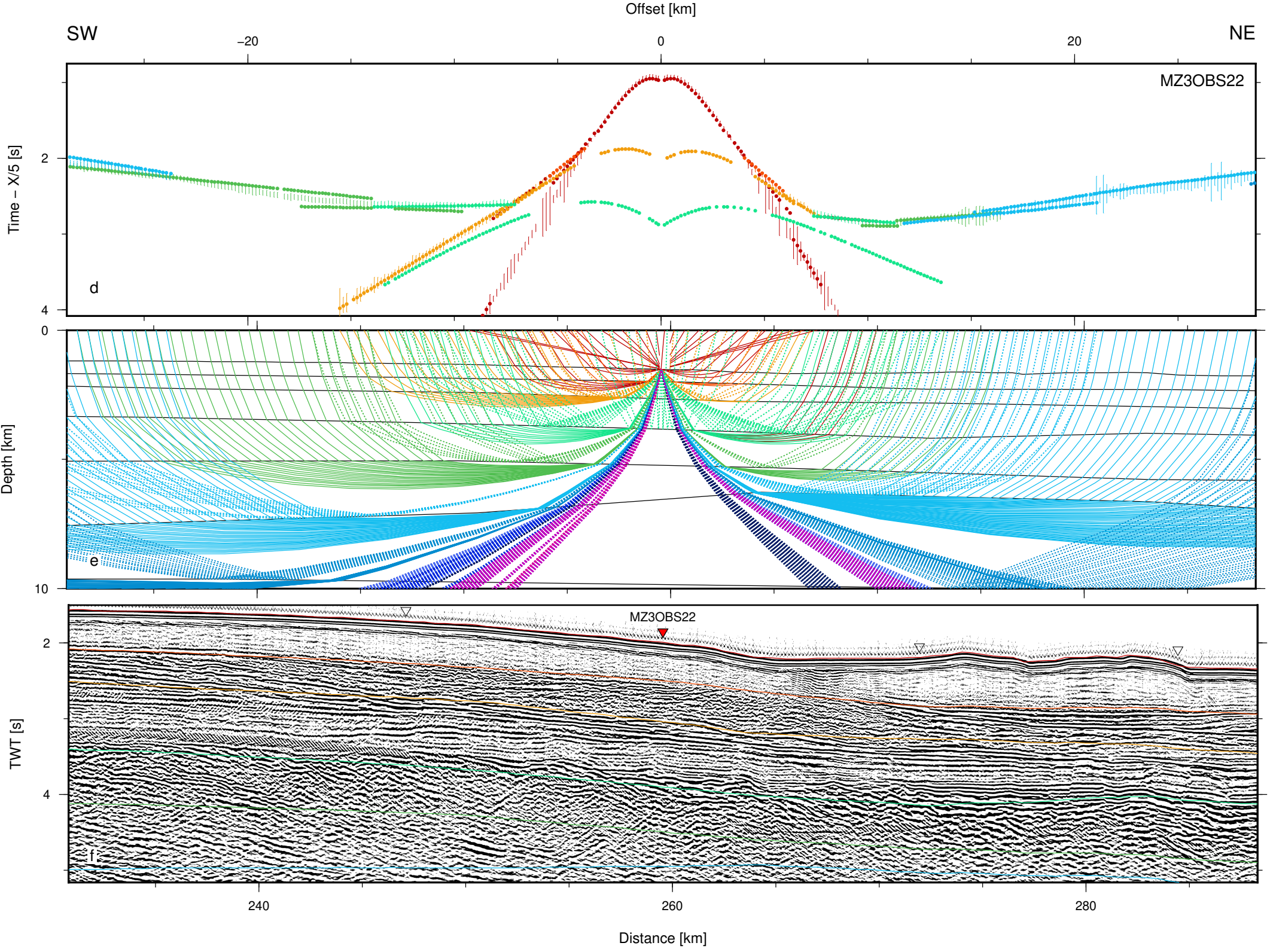

Offset [km]
SW
NE
−20
0
20
MZ3OBS24
a
b
c
Time – X/5 [s]
2
4
260
280
300
Distance [km]

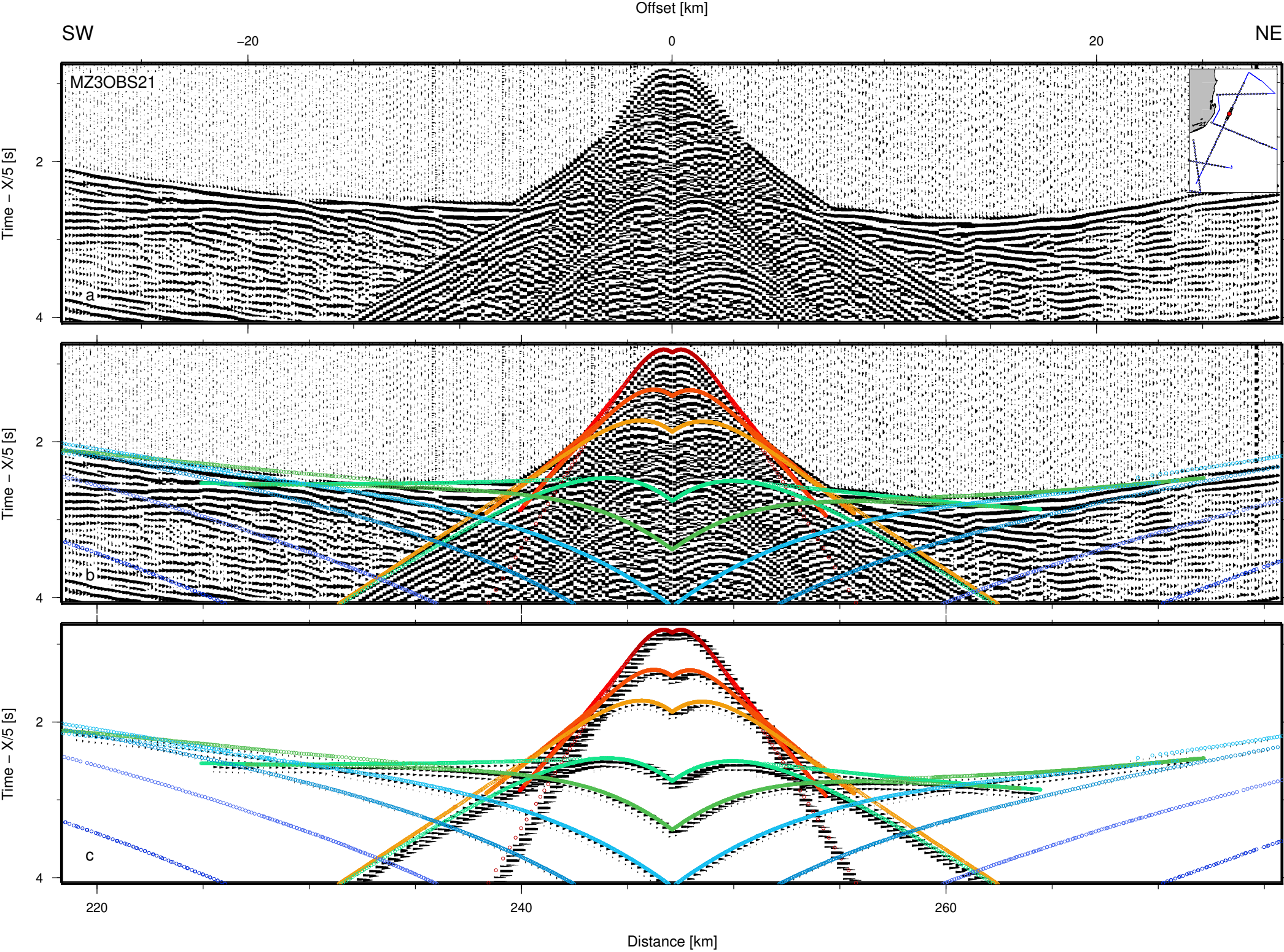

Offset [km]
SW
NE
−20
0
20
MZ3OBS24
Time − X/5 [s]
2
4
d
0
Depth [km]
e
10
MZ3OBS24
2
TWT [s]
4
f
260
280
300
Distance [km]

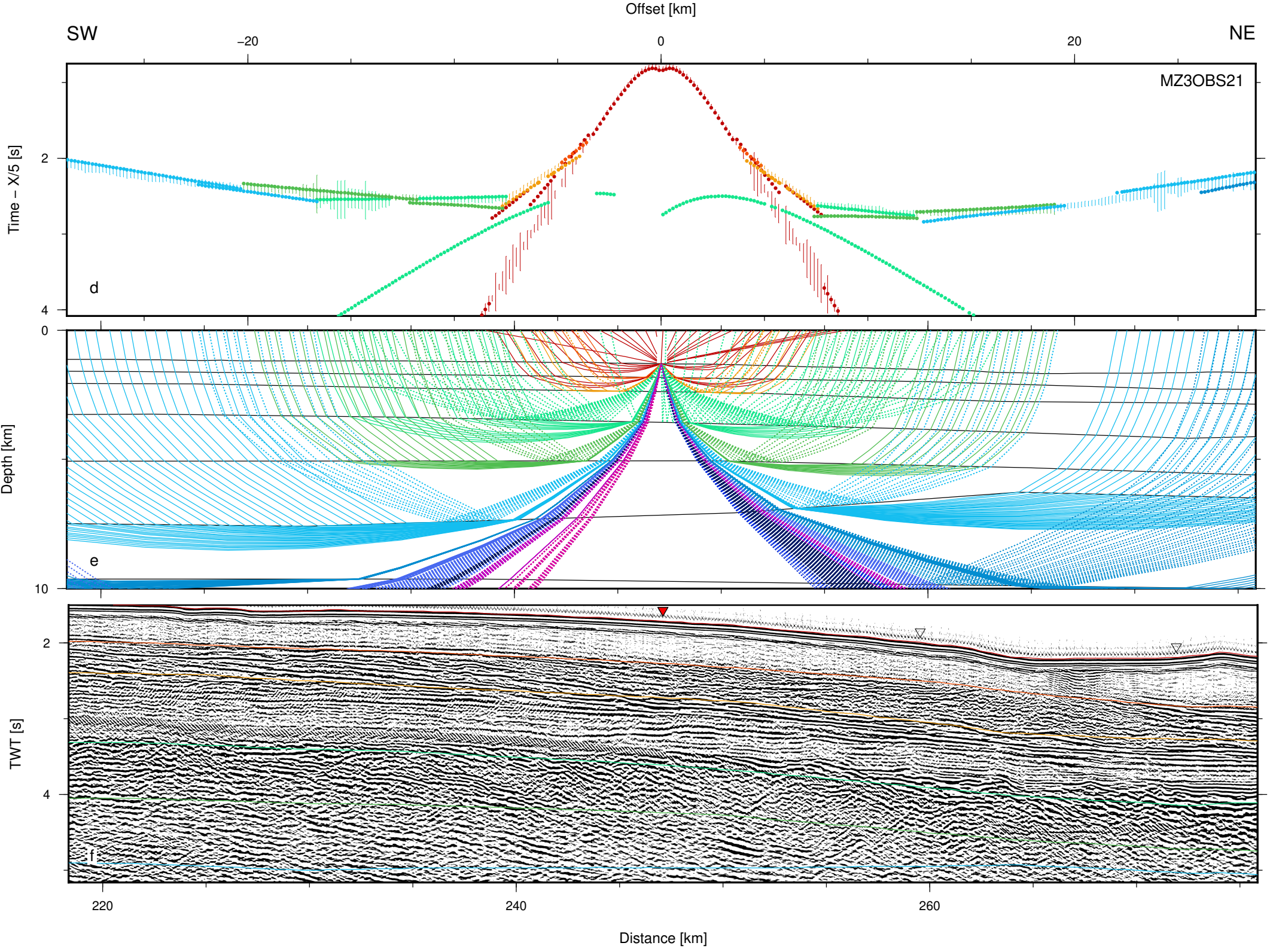

Offset [km]
SW
NE
−20
0
20
MZ3OBS23
a
b
c
Time − X/5 [s]
2
4
260
280
300
Distance [km]

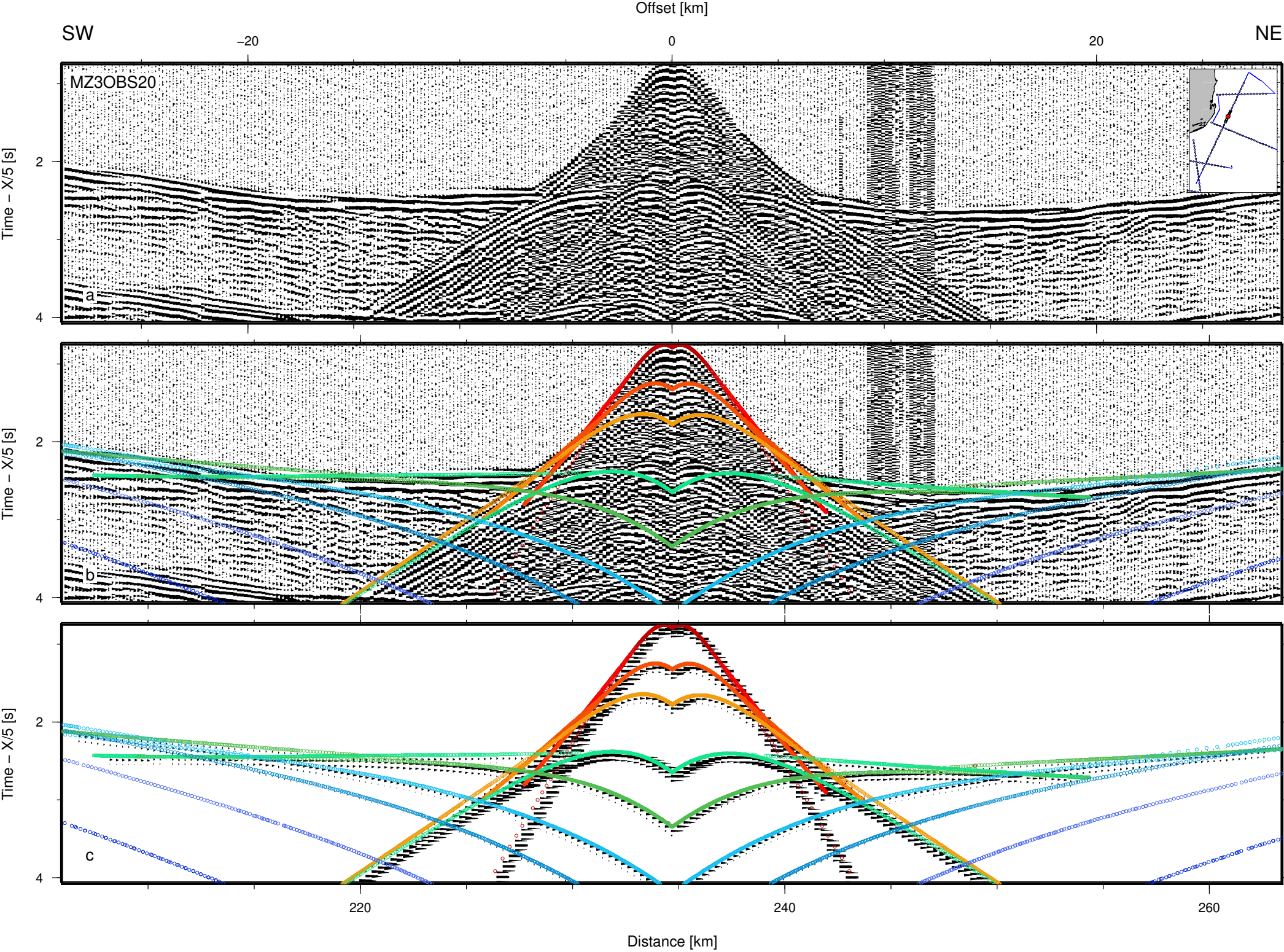

Offset [km]
SW
NE
−20
0
20
MZ3OBS23
Time − X/5 [s]
2
4
d
0
Depth [km]
e
10
MZ3OBS23
TWT [s]
2
4
f
260
280
300
Distance [km]

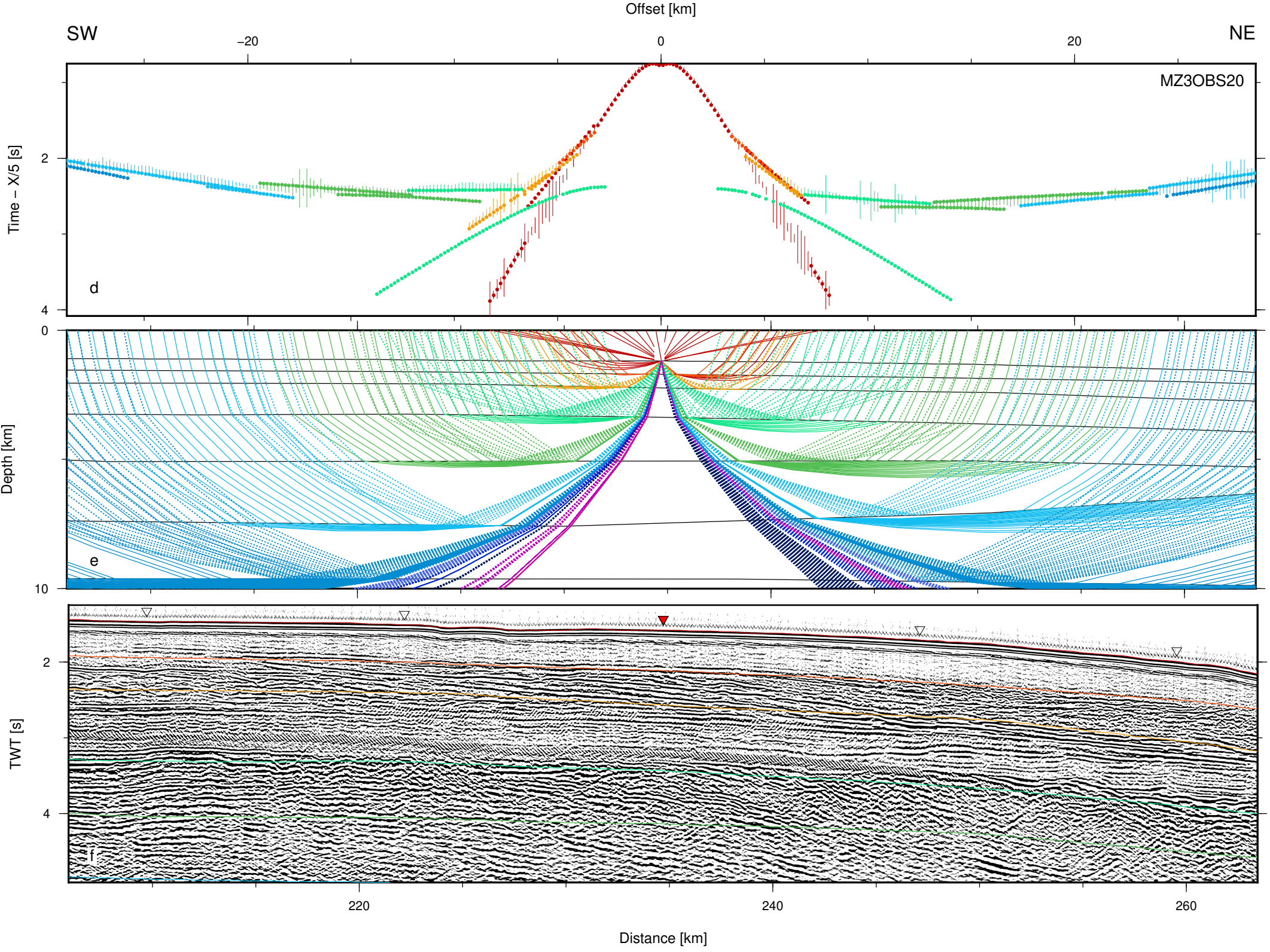

Offset [km]
SW
NE
−20
0
20
MZ3OBS22
a
b
c
Time − X/5 [s]
2
4
240
260
280
Distance [km]

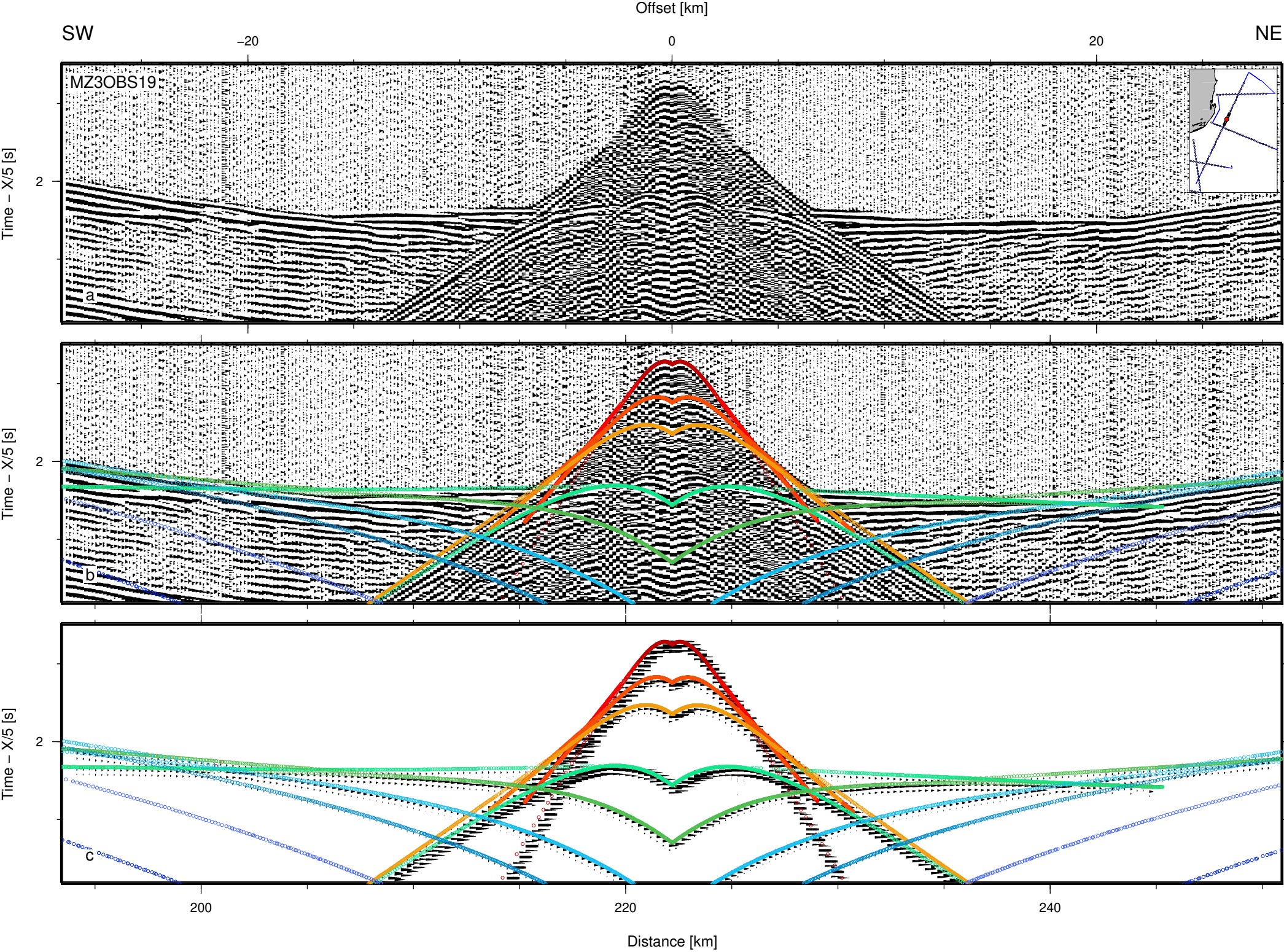

Offset [km]
SW
NE
−20
0
20
MZ3OBS22
Time − X/5 [s]
2
4
d
0
Depth [km]
10
e
MZ3OBS22
TWT [s]
2
4
f
240
260
280
Distance [km]

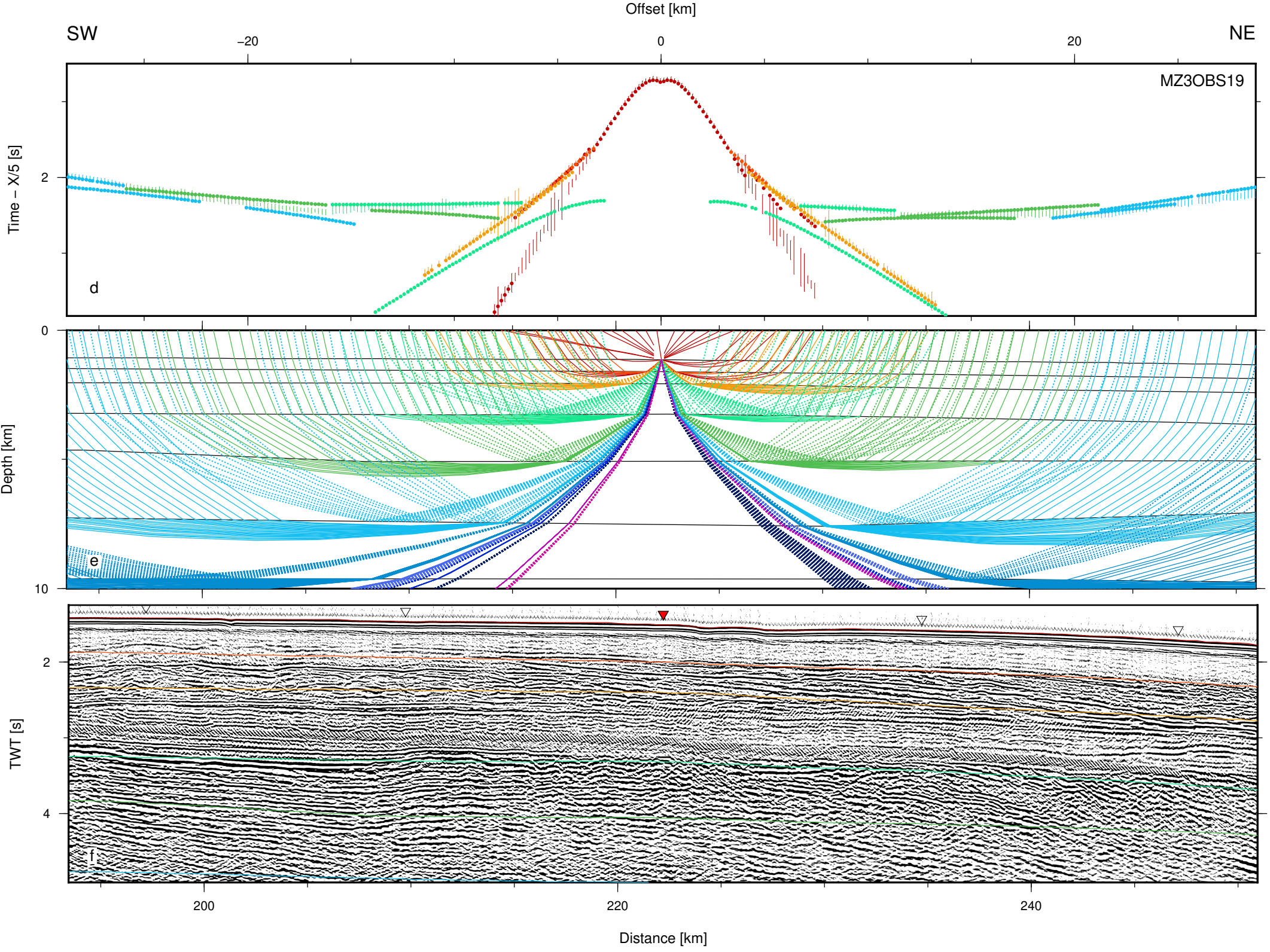

Offset [km]
SW
NE
−20
0
20
MZ3OBS21
a
b
c
Time − X/5 [s]
2
4
220
240
260
Distance [km]

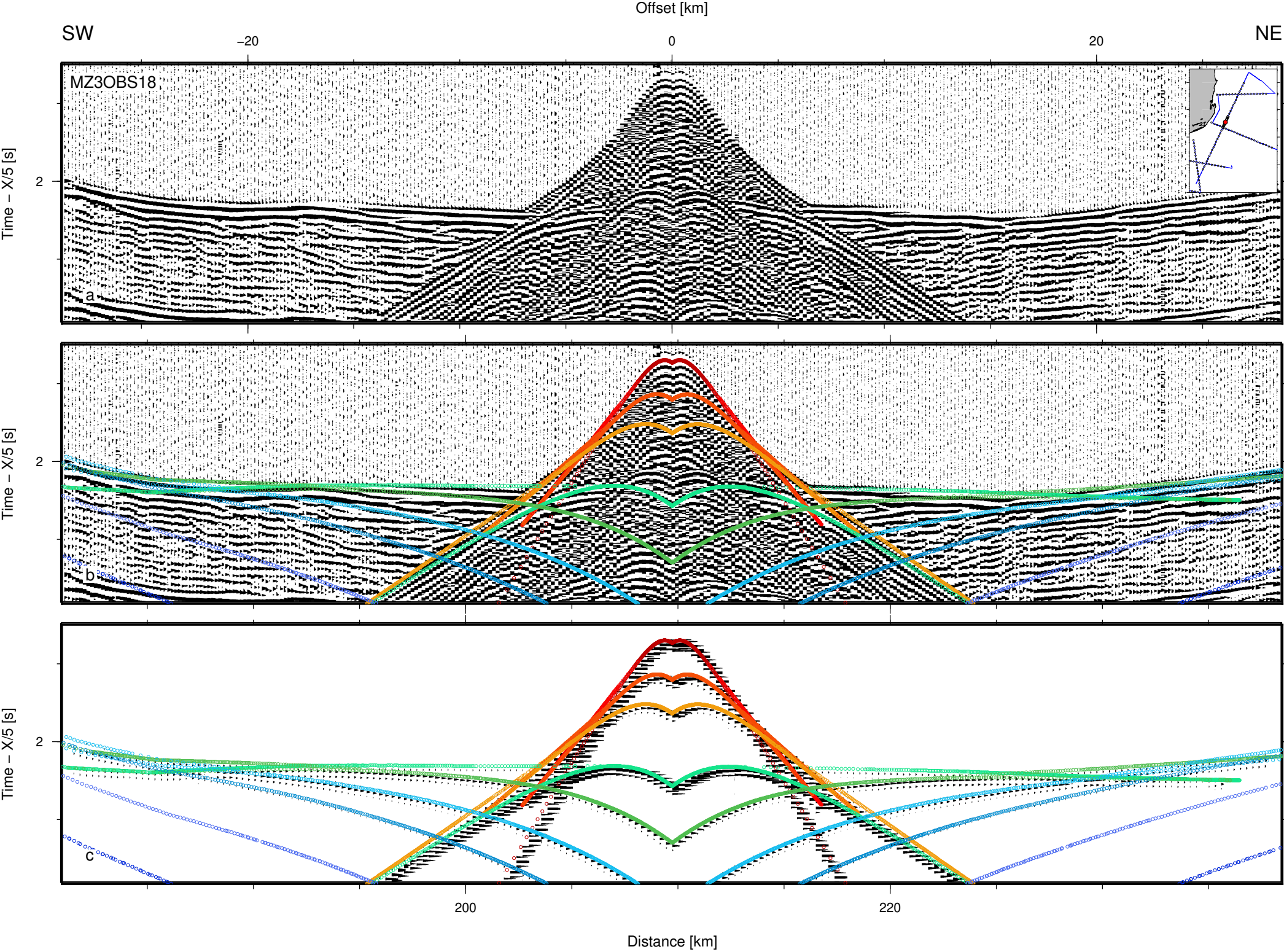

Offset [km]
SW
NE
−20
0
20
MZ3OBS21
Time − X/5 [s]
2
4
d
0
Depth [km]
e
10
2
TWT [s]
4
f
220
240
260
Distance [km]

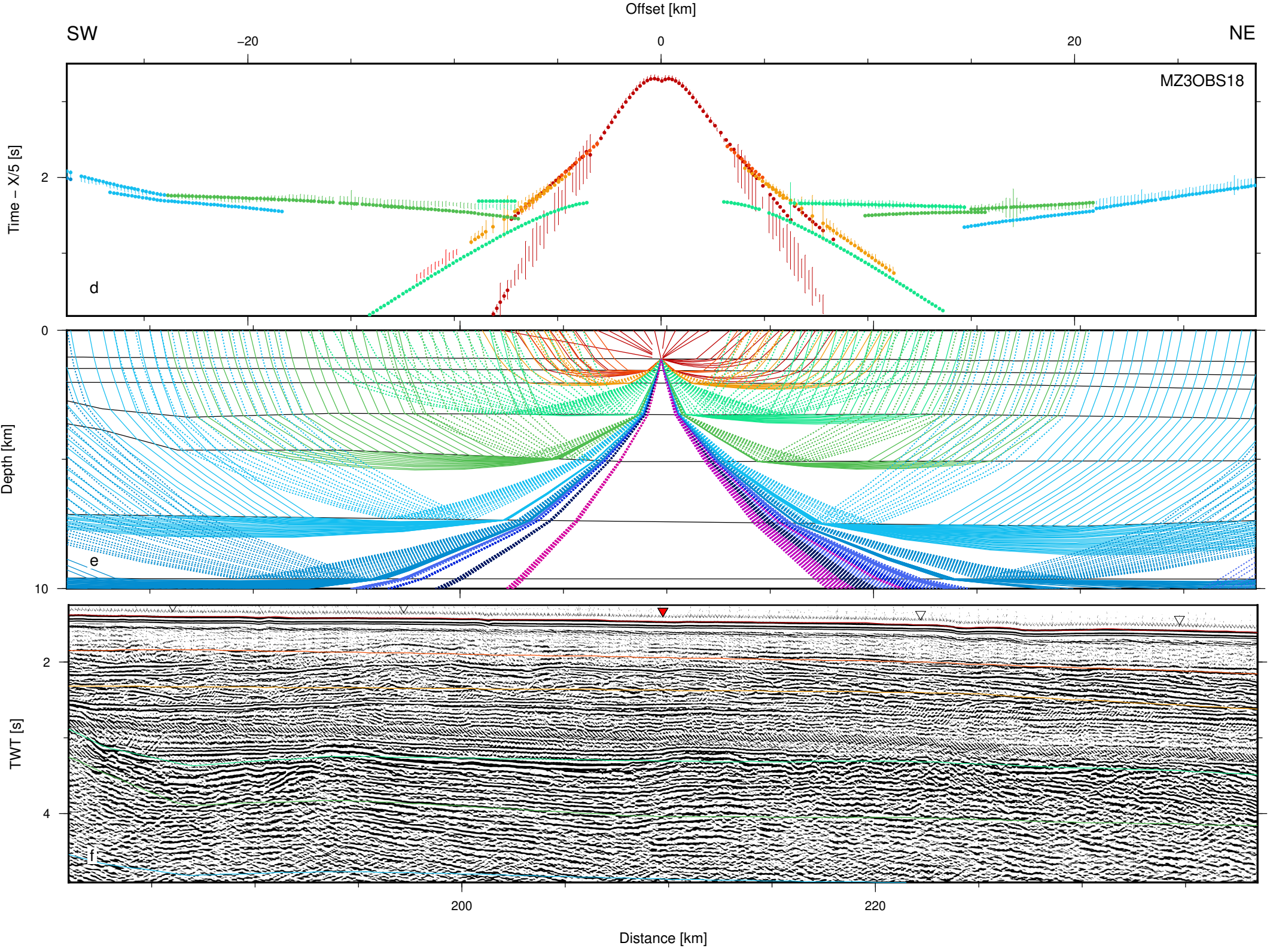

Offset [km]
SW
NE
−20
0
20
MZ3OBS20
a
b
c
Time − X/5 [s]
2
4
220
240
260
Distance [km]

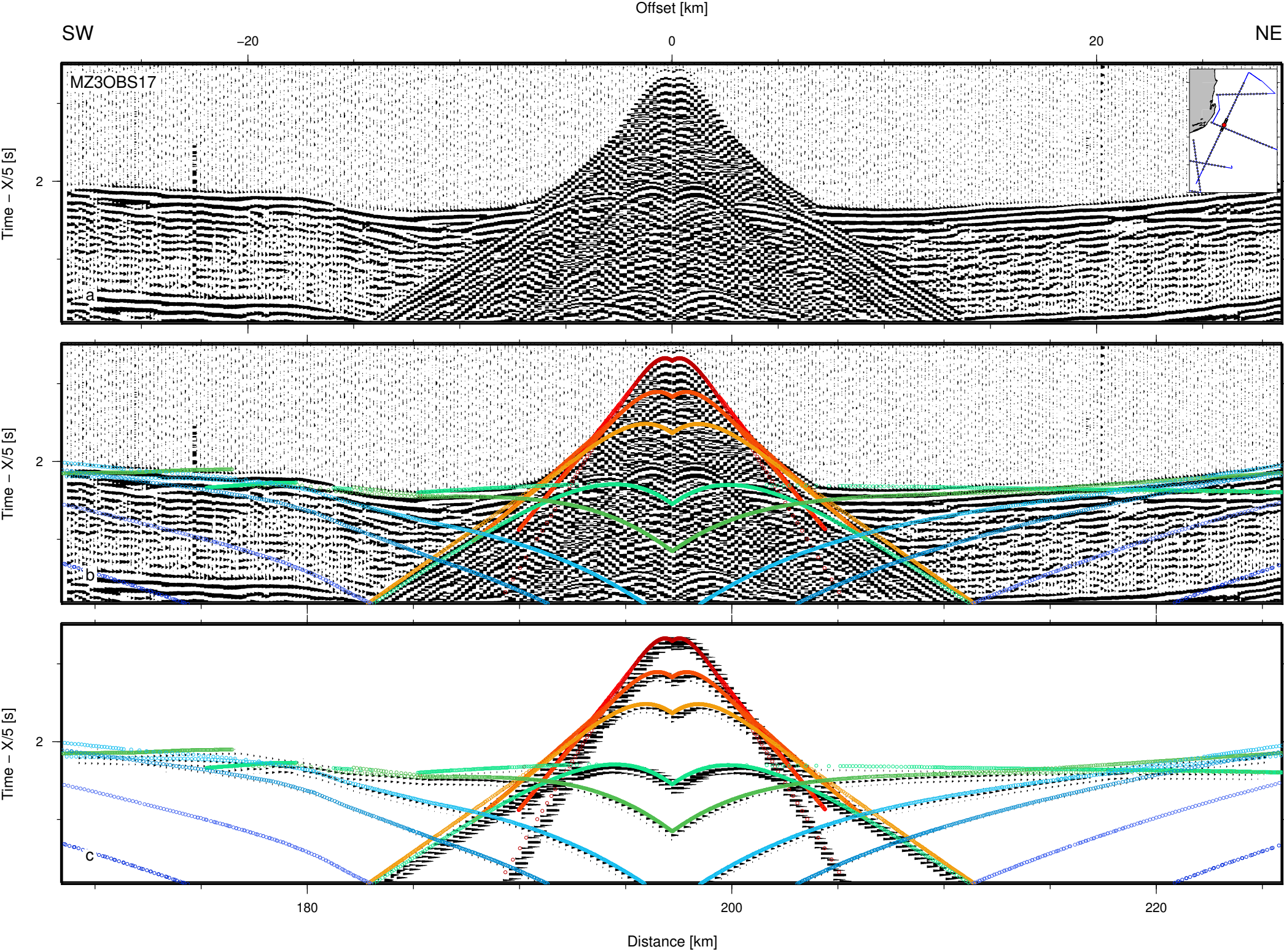

Offset [km]
SW
NE
−20
0
20
MZ3OBS20
Time − X/5 [s]
2
4
d
0
Depth [km]
e
10
TWT [s]
2
4
f
220
240
260
Distance [km]

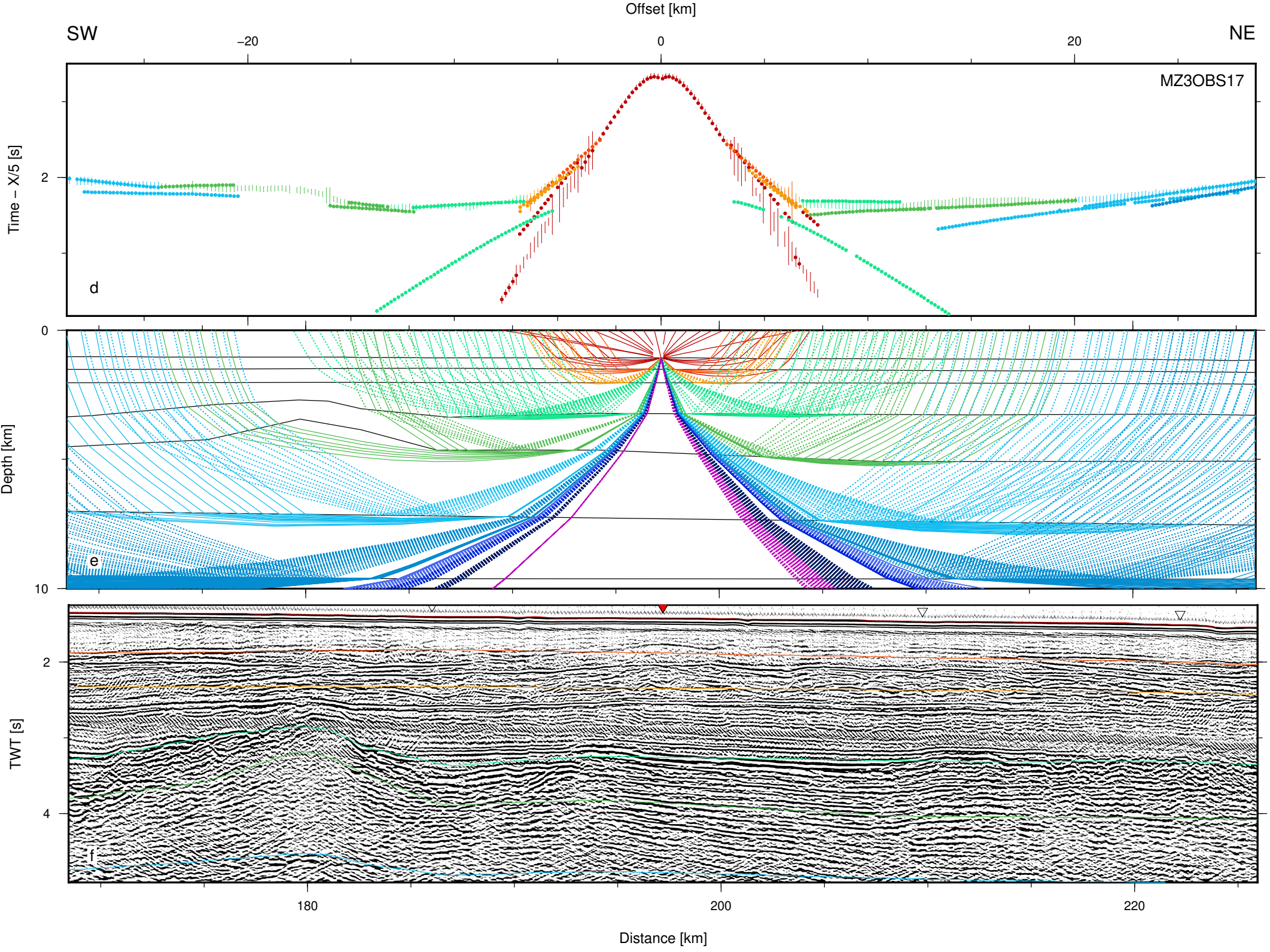

Offset [km]
SW
NE
−20
0
20
MZ3OBS19
a
b
c
Time − X/5 [s]
2
200
220
240
Distance [km]

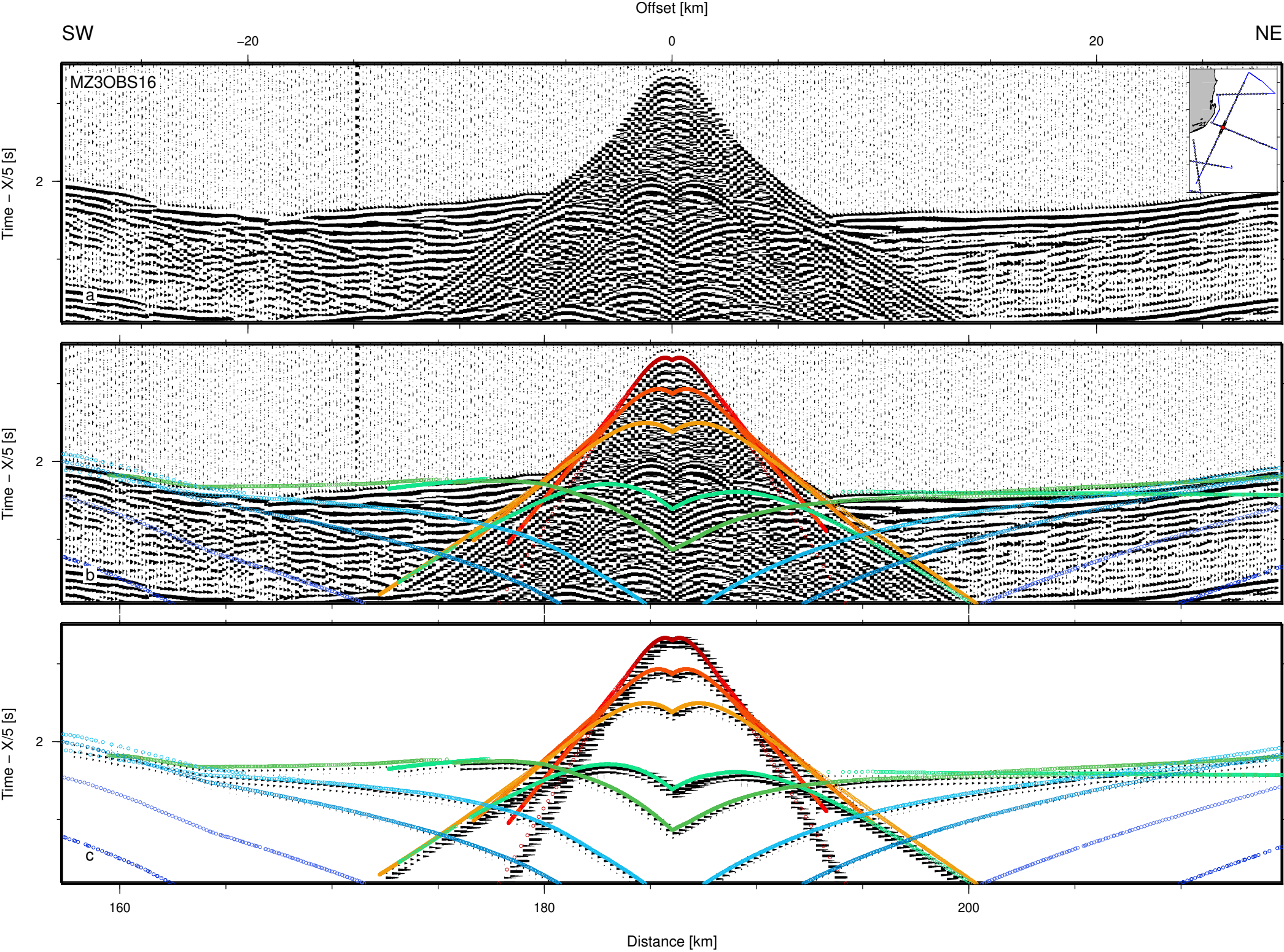

Offset [km]
SW
NE
−20
0
20
MZ3OBS19
Time − X/5 [s]
2
d
0
Depth [km]
e
10
TWT [s]
2
4
f
200
220
240
Distance [km]

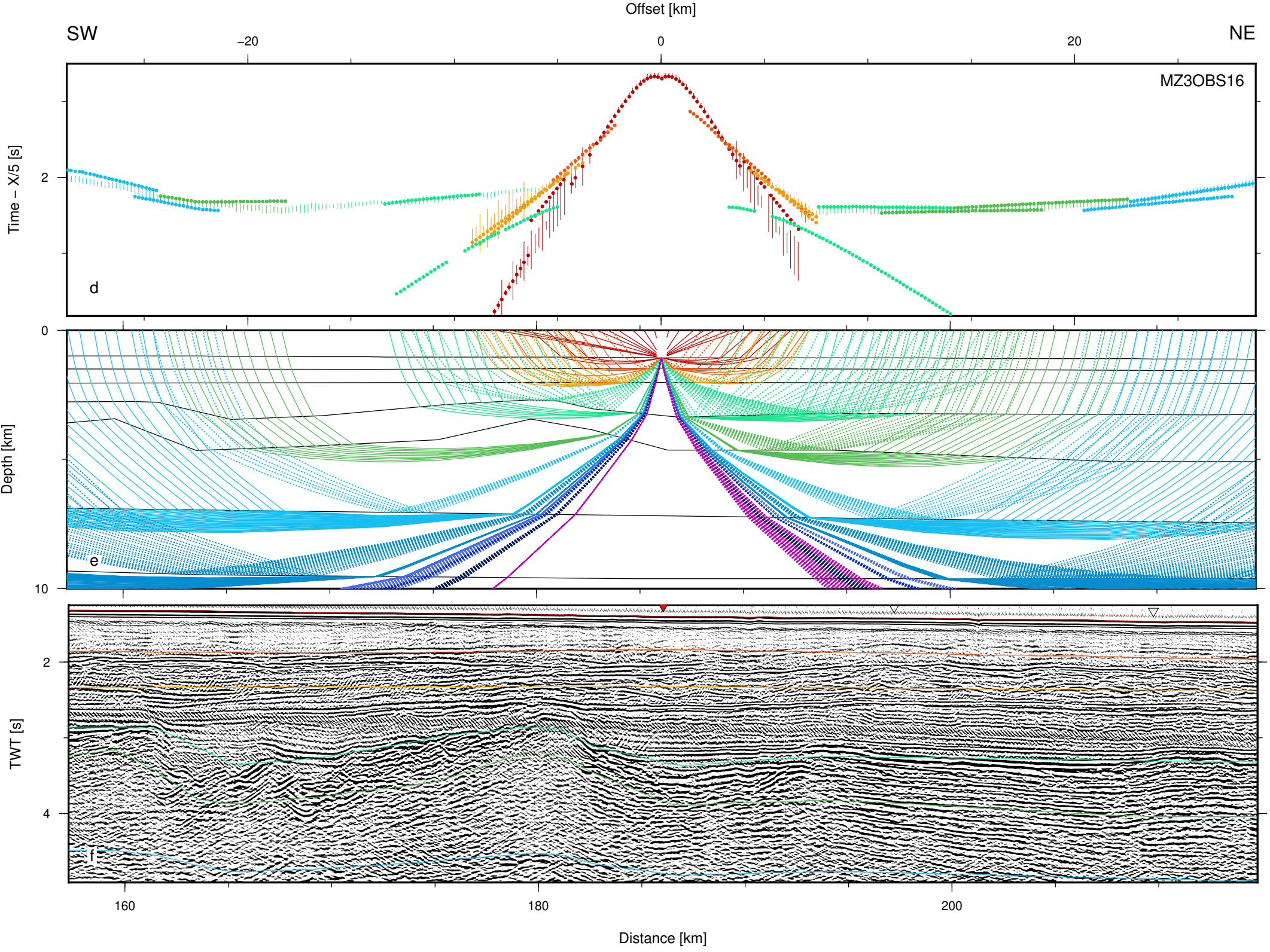

Offset [km]
SW
NE
−20
0
20
MZ3OBS18
a
b
c
Time − X/5 [s]
2
200
220
Distance [km]

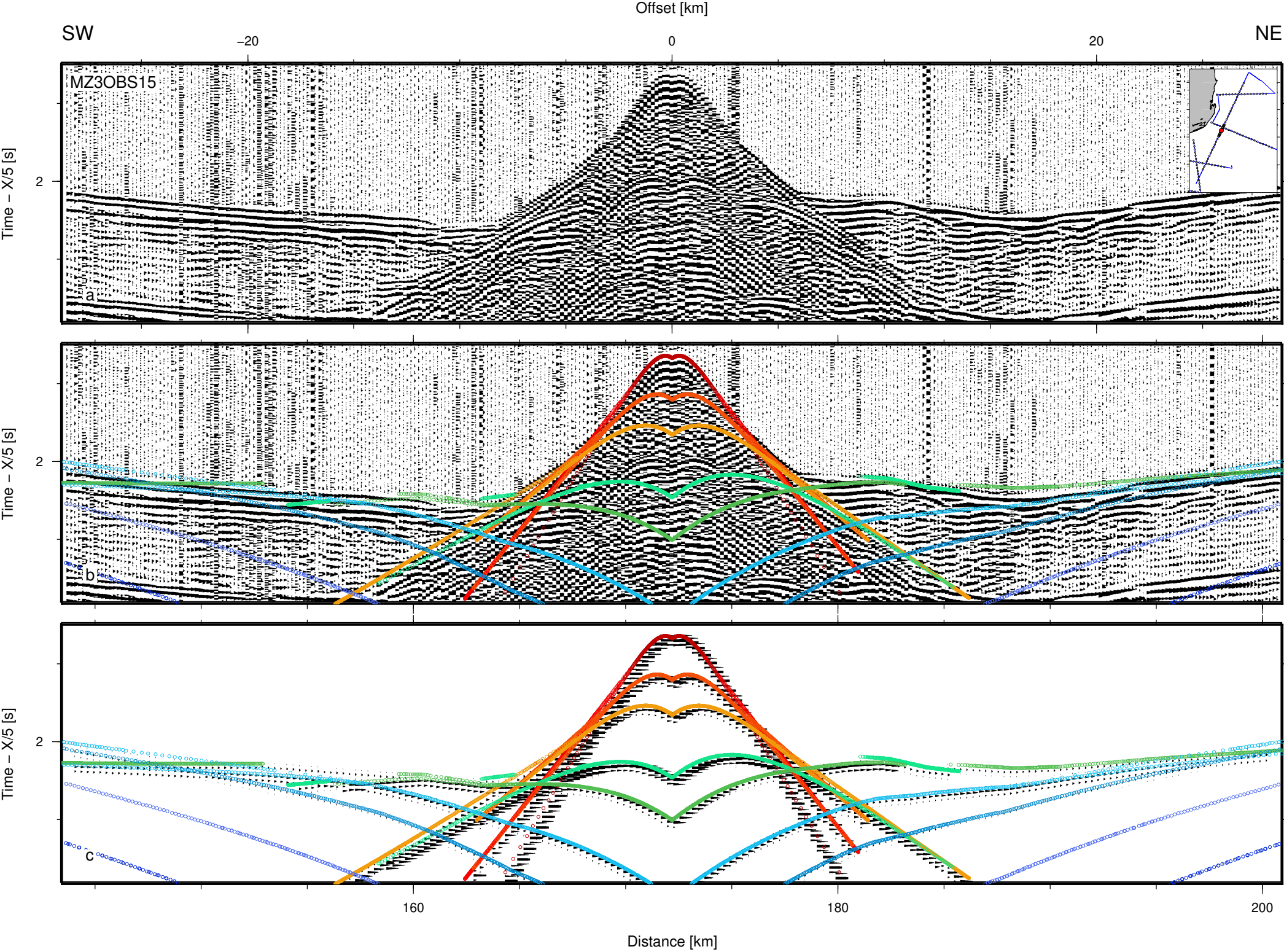

Offset [km]
SW
NE
−20
0
20
MZ3OBS18
Time − X/5 [s]
2
d
0
Depth [km]
e
10
TWT [s]
2
4
f
200
220
Distance [km]

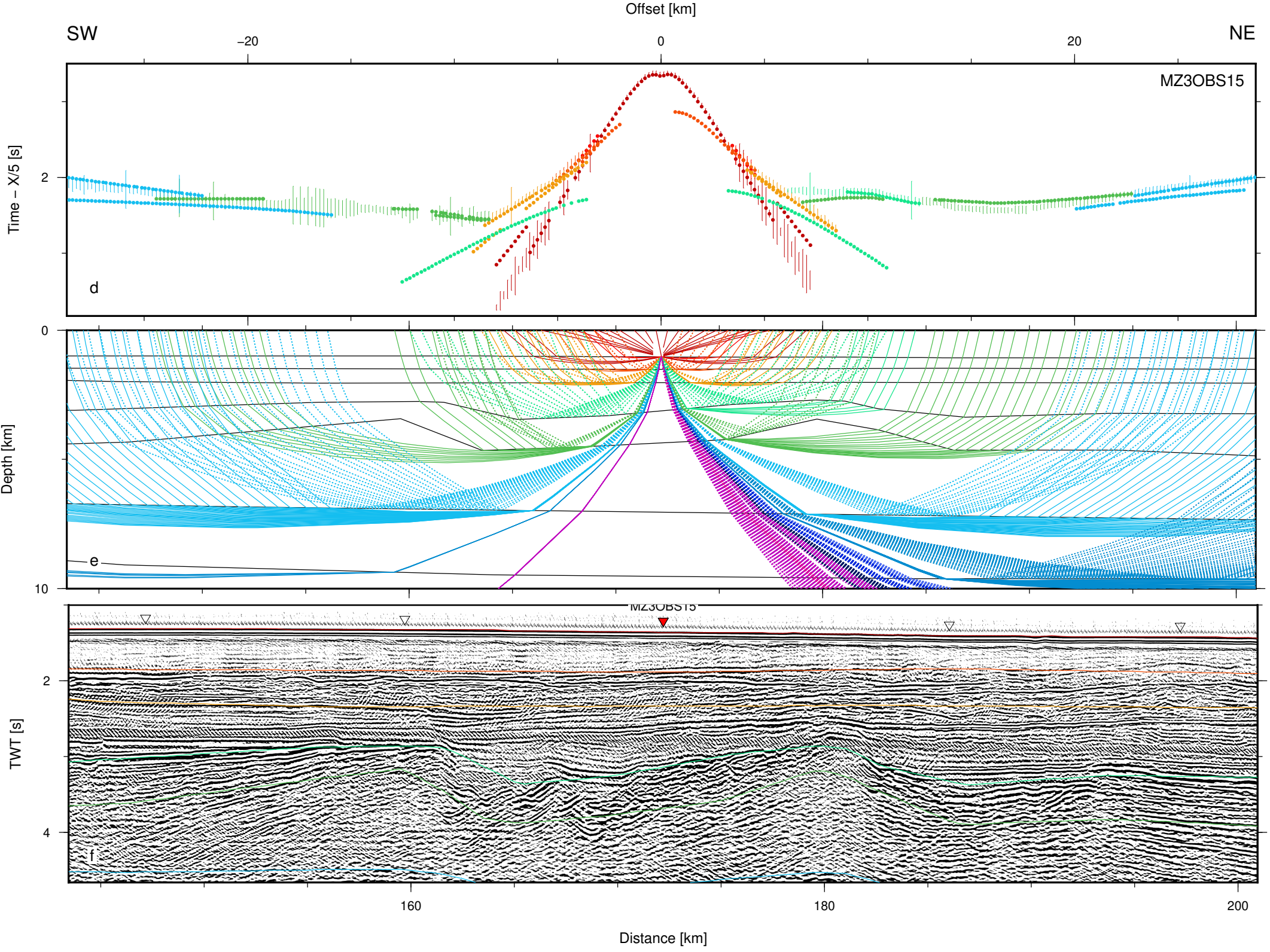

Offset [km]
SW
NE
−20
0
20
MZ3OBS17
a
b
c
Time − X/5 [s]
2
180
200
220
Distance [km]

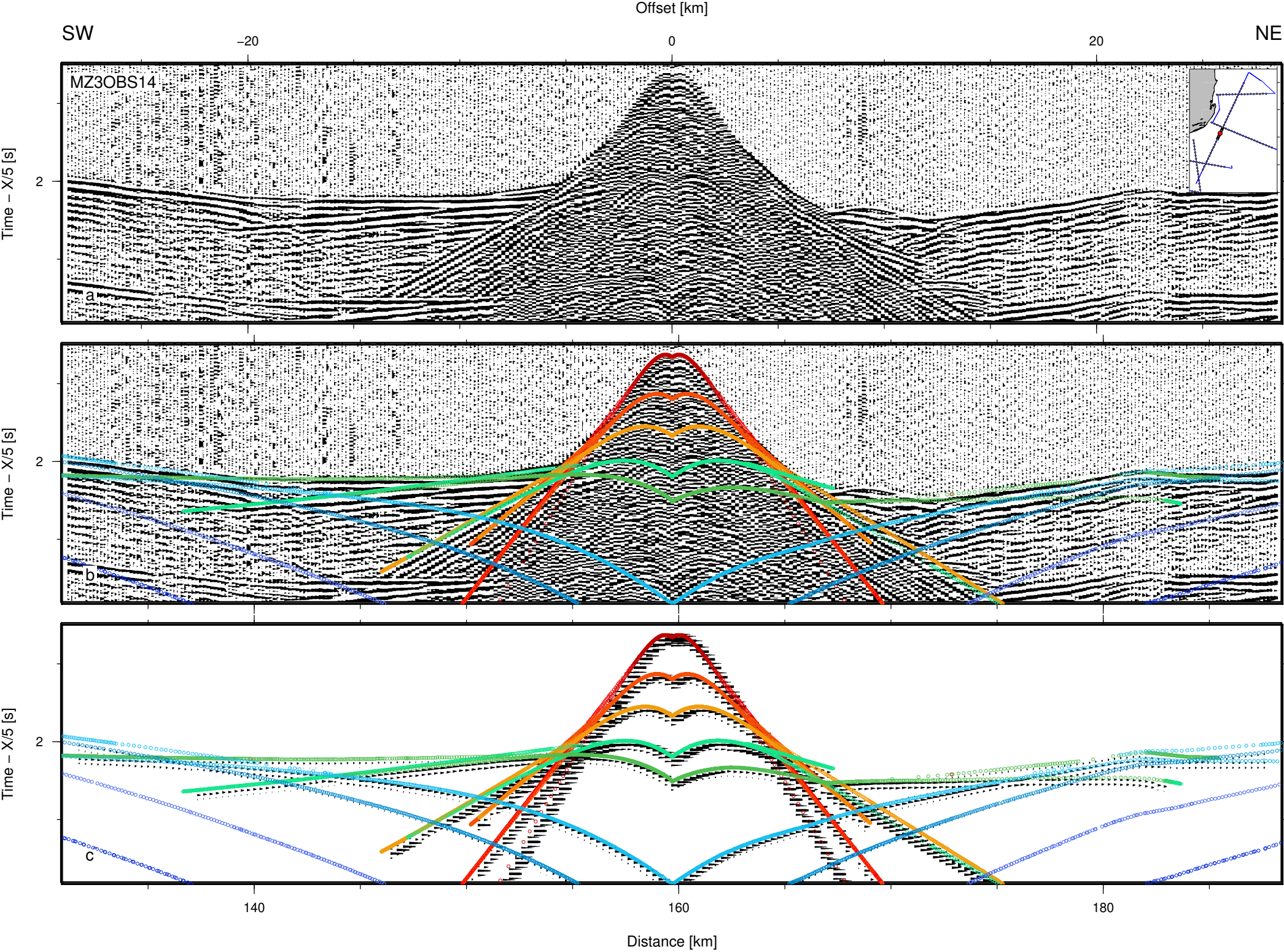

Offset [km]
SW
NE
−20
0
20
MZ3OBS17
Time − X/5 [s]
2
d
0
Depth [km]
e
10
TWT [s]
2
4
f
180
200
220
Distance [km]

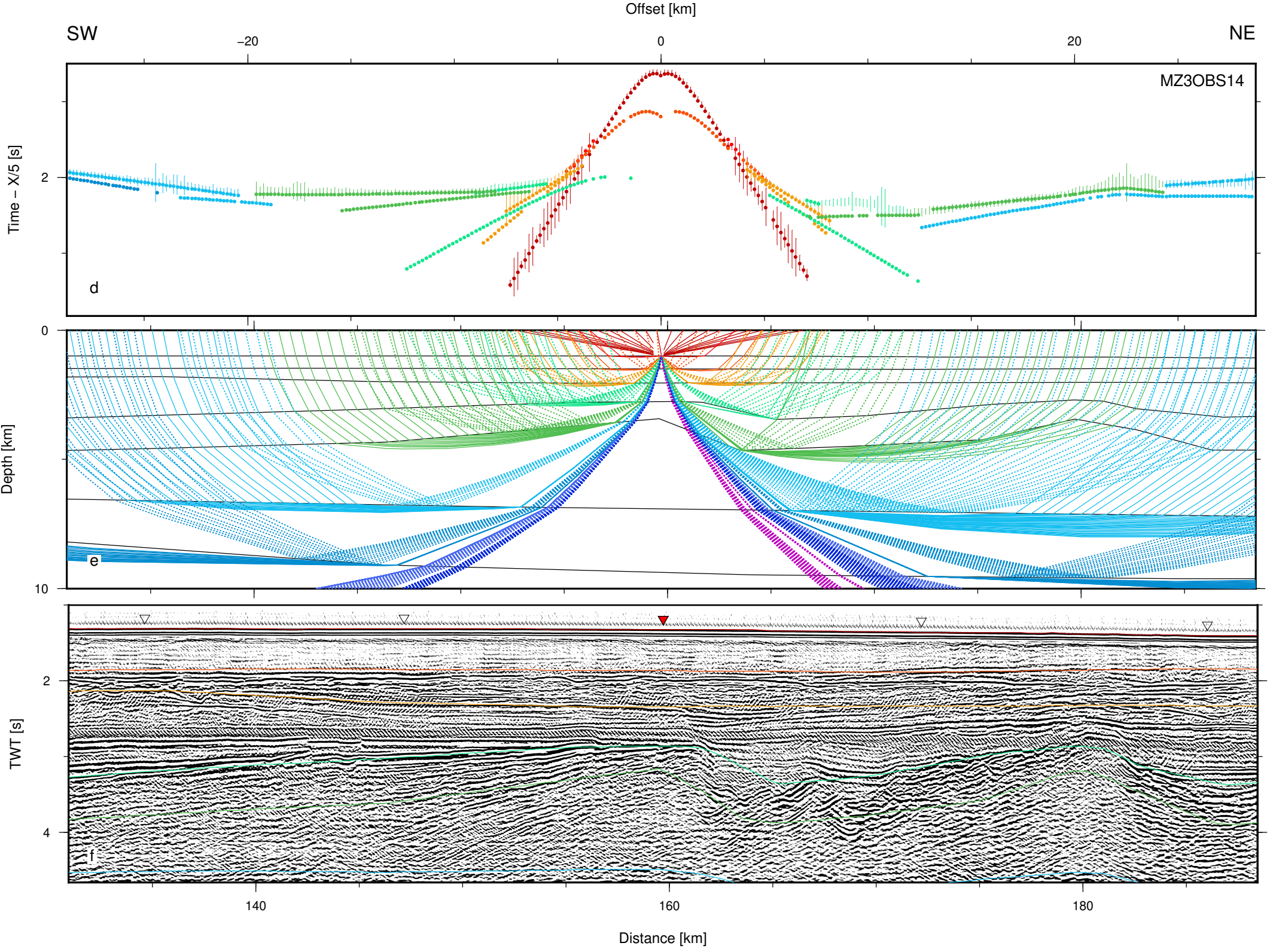

Offset [km]
SW
NE
−20
0
20
MZ3OBS16
a
b
c
Time − X/5 [s]
2
160
180
200
Distance [km]

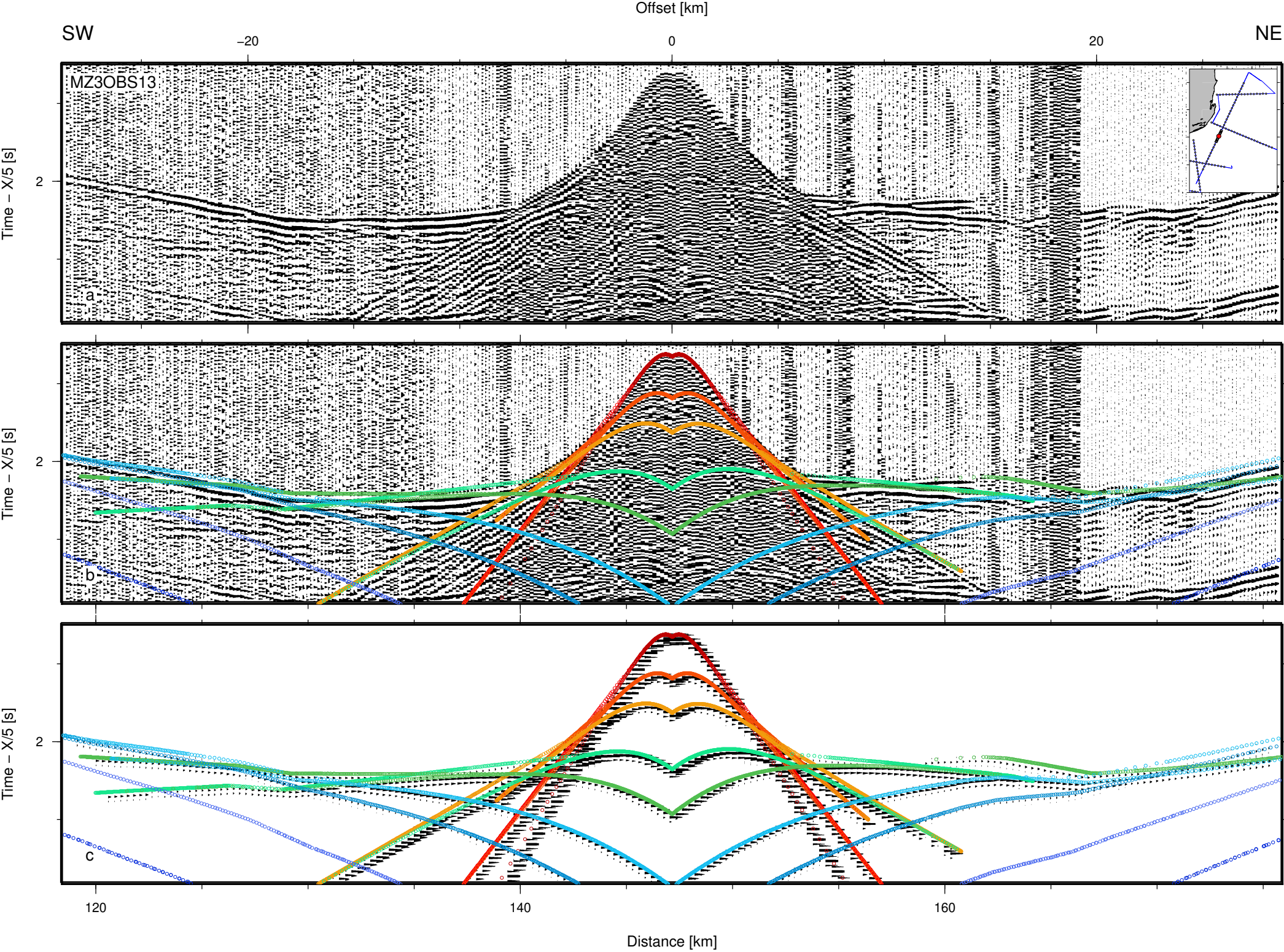

Offset [km]
SW
NE
−20
0
20
MZ3OBS16
Time − X/5 [s]
2
d
0
Depth [km]
e
10
TWT [s]
2
4
f
160
180
200
Distance [km]

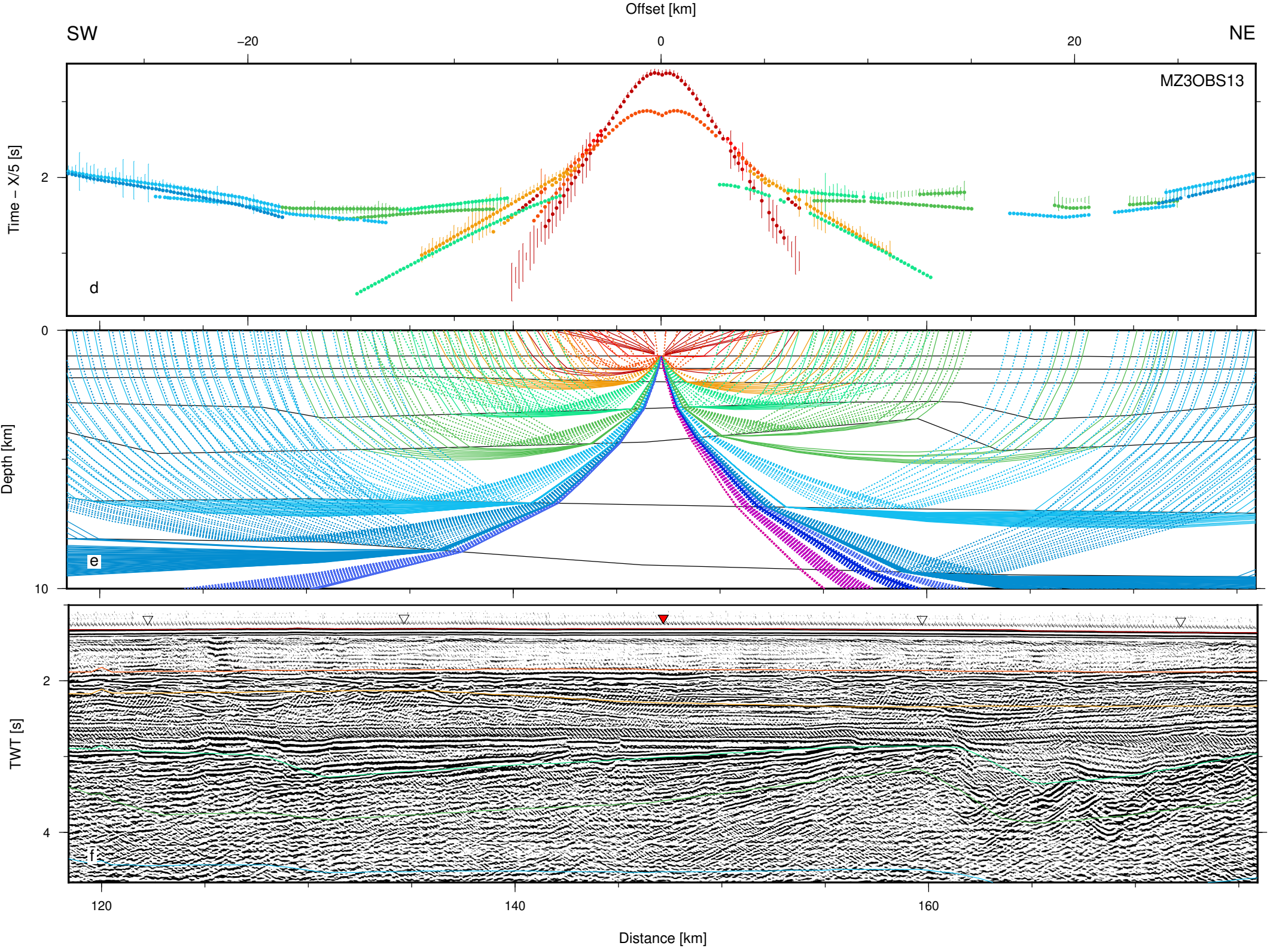

Offset [km]
SW
NE
−20
0
20
MZ3OBS15
a
b
c
Time – X/5 [s]
2
160
180
200
Distance [km]

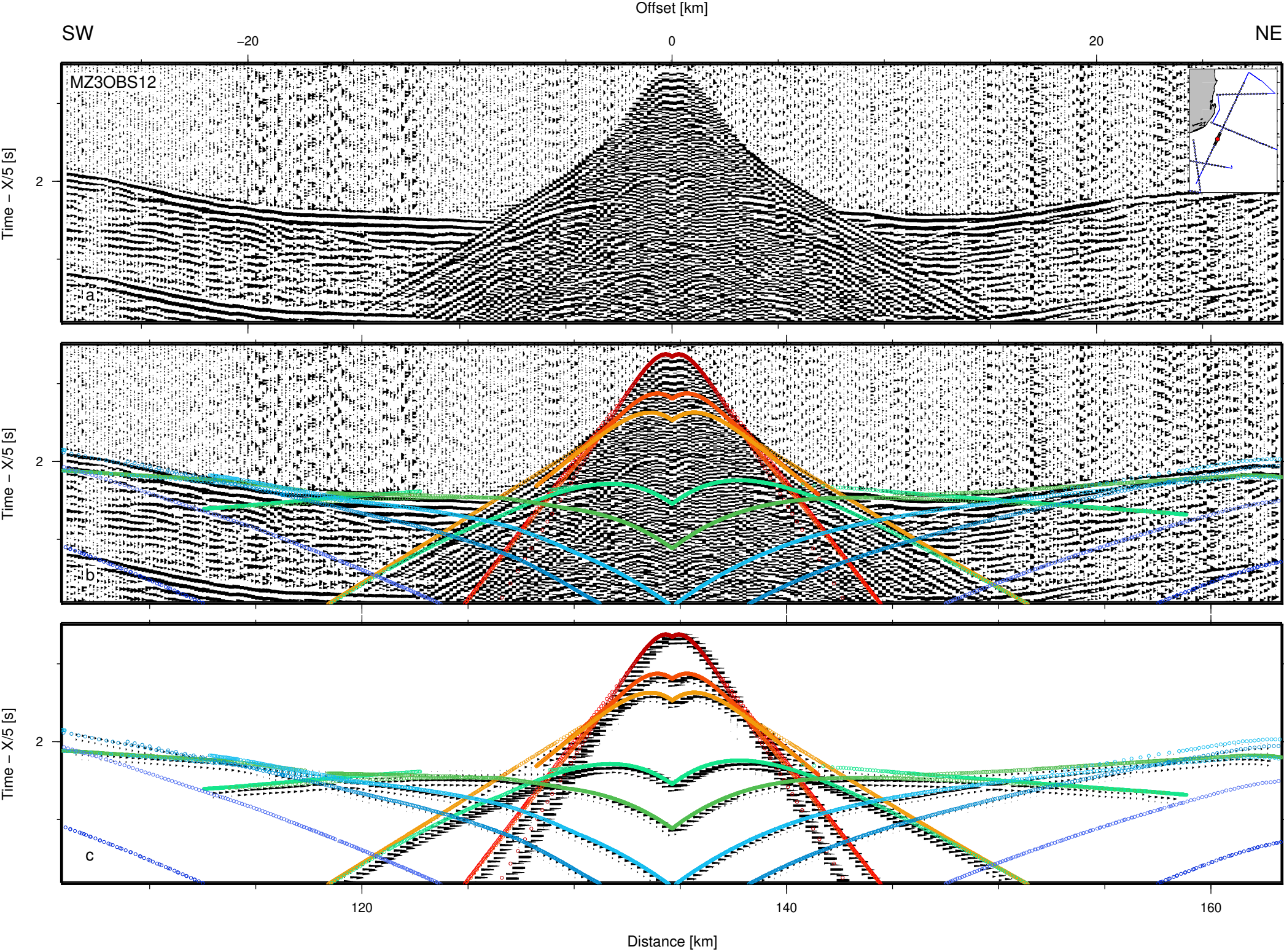

Offset [km]
SW
NE
−20
0
20
MZ3OBS15
Time − X/5 [s]
2
d
0
Depth [km]
e
10
MZ3OBS15
TWT [s]
2
4
f
160
180
200
Distance [km]

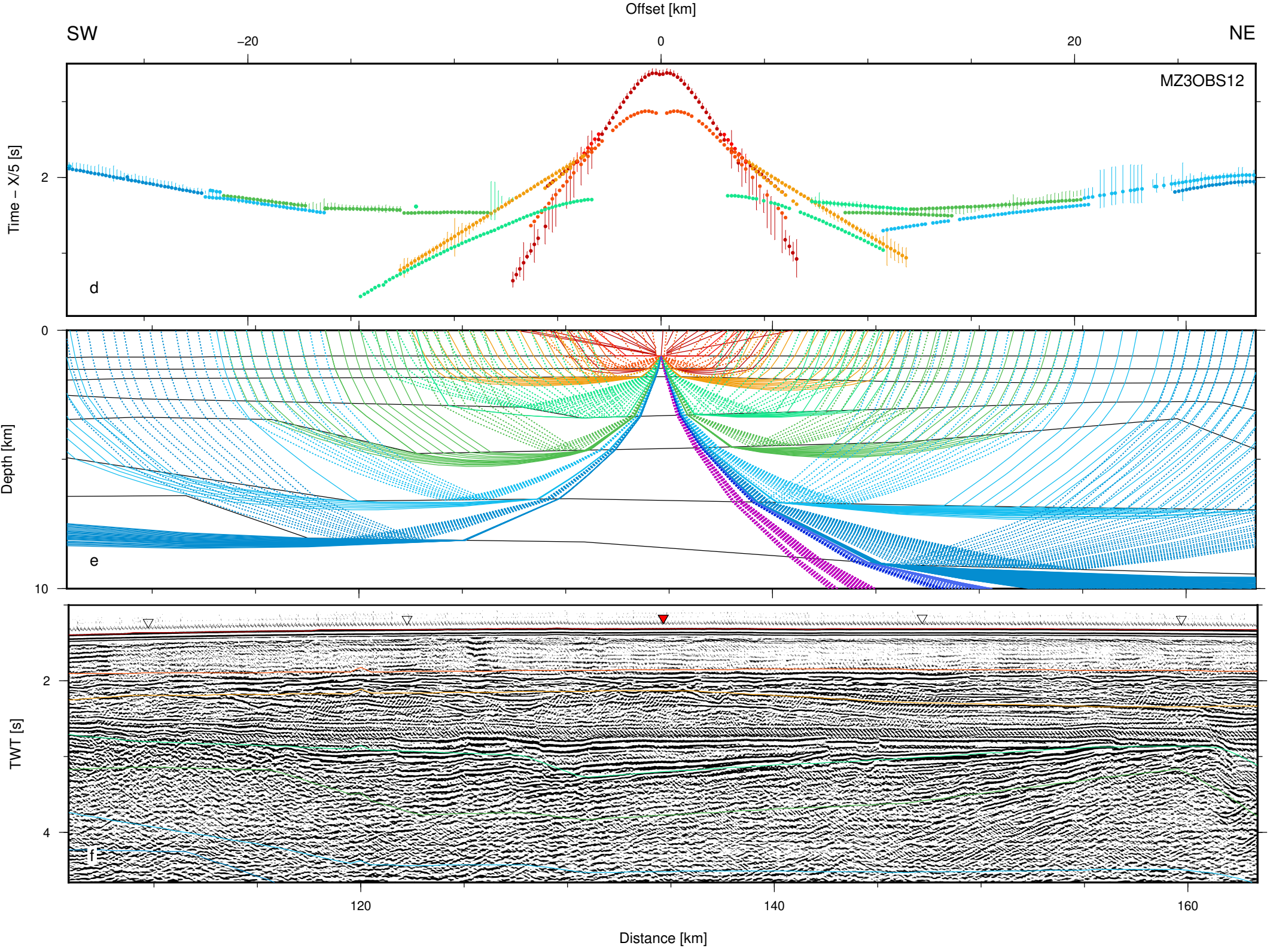

Offset [km]
SW
NE
−20
0
20
MZ3OBS14
a
b
c
Time − X/5 [s]
2
140
160
180
Distance [km]

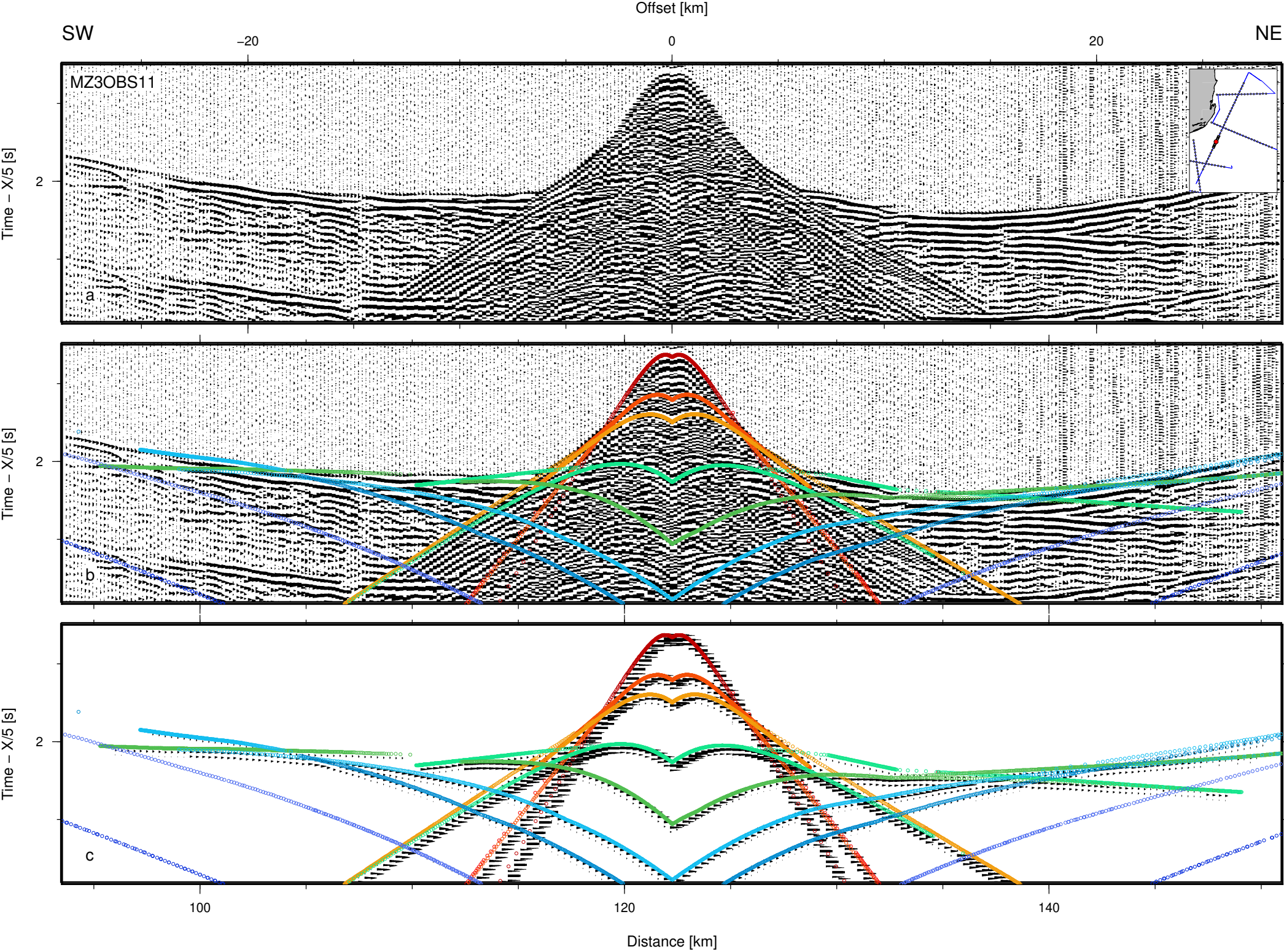

Offset [km]
SW
NE
−20
0
20
MZ3OBS14
Time − X/5 [s]
2
d
0
Depth [km]
e
10
TWT [s]
2
4
f
140
160
180
Distance [km]

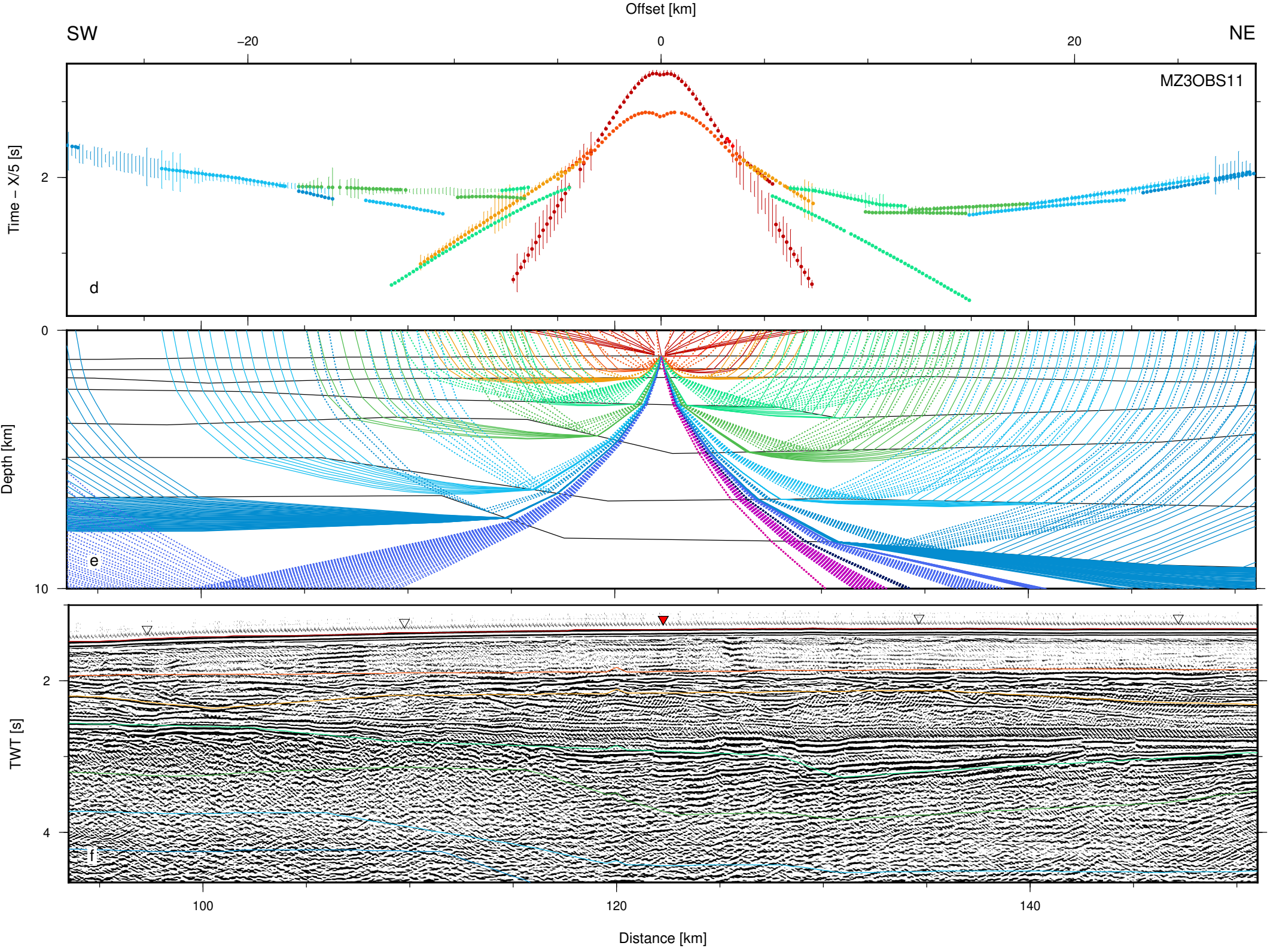

Offset [km]
SW
NE
−20
0
20
MZ3OBS13
a
b
c
Time − X/5 [s]
2
120
140
160
Distance [km]

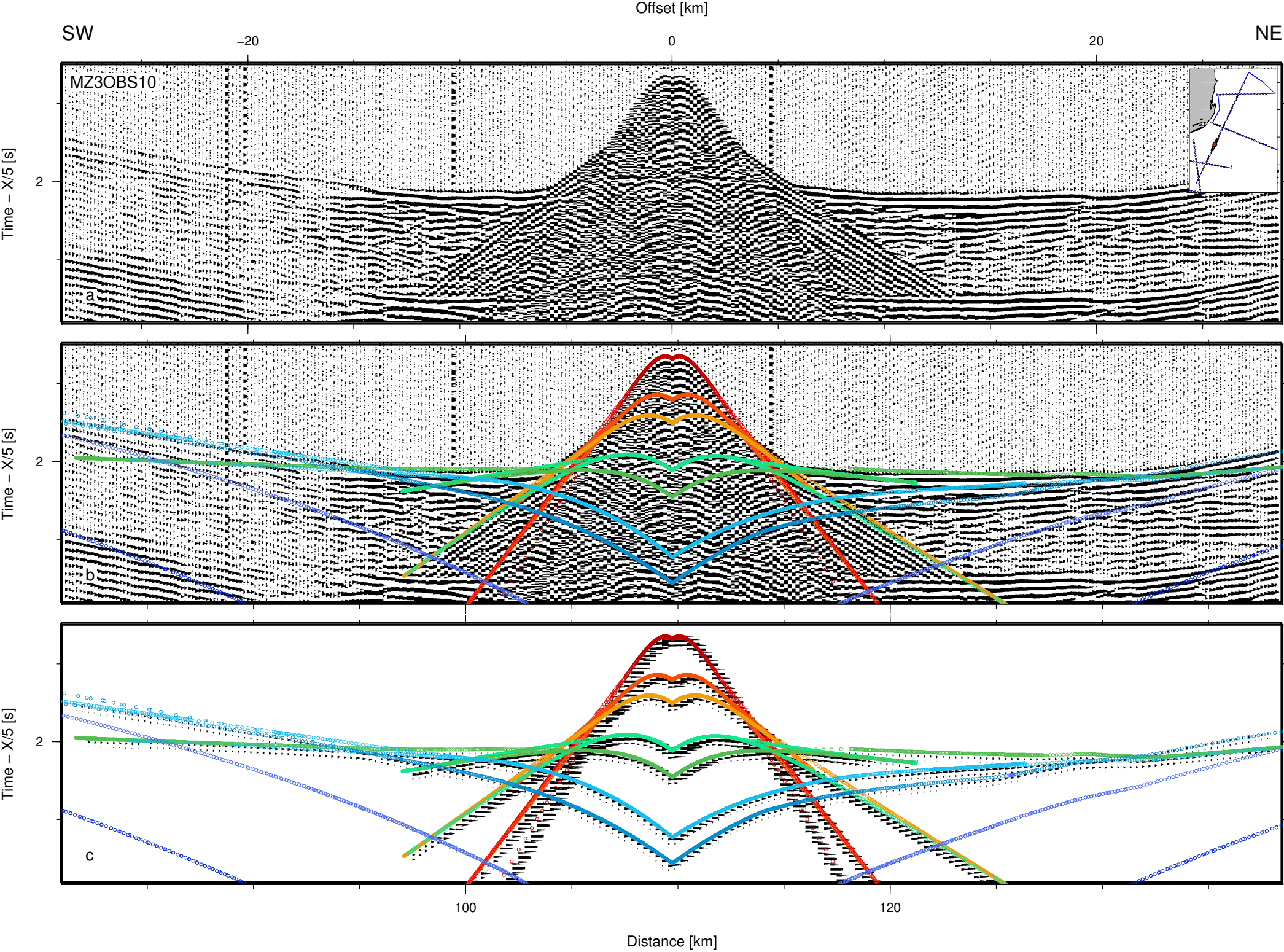

Offset [km]
SW
NE
−20
0
20
MZ3OBS13
Time − X/5 [s]
2
d
0
Depth [km]
e
10
TWT [s]
2
4
f
120
140
160
Distance [km]

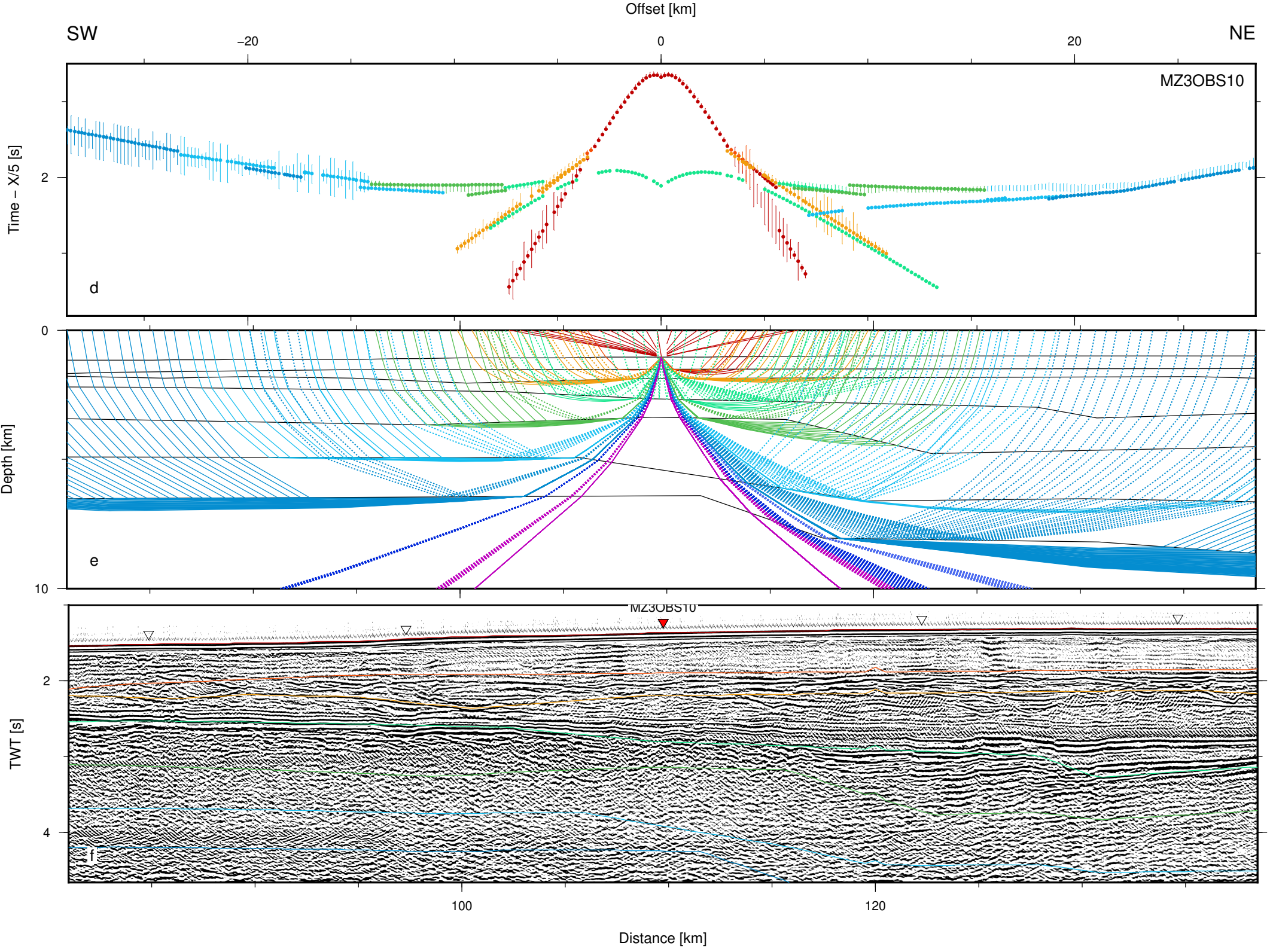

Offset [km]
SW
NE
−20
0
20
MZ3OBS12
a
b
c
Time – X/5 [s]
2
120
140
160
Distance [km]

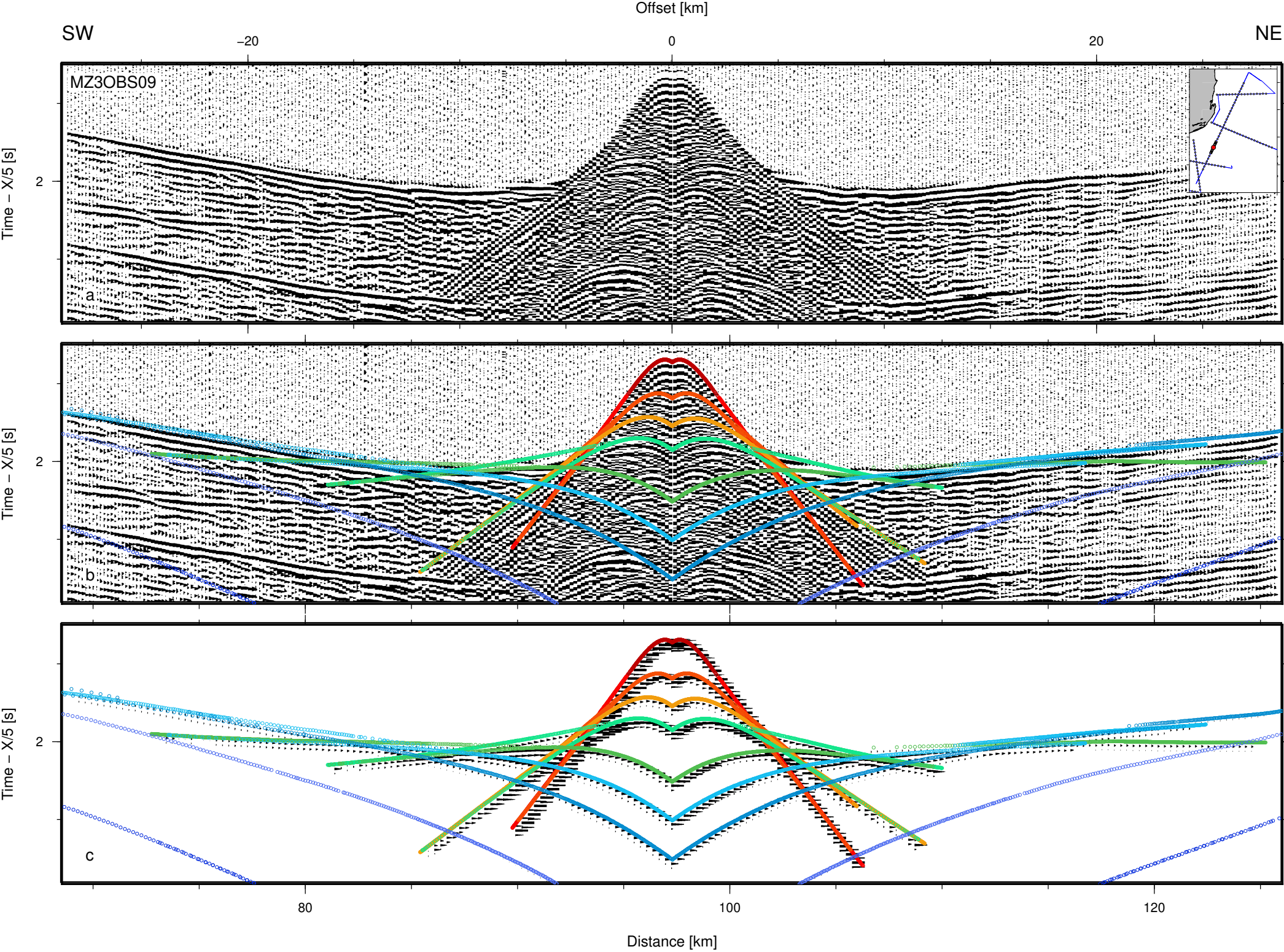

Offset [km]
SW
NE
−20
0
20
MZ3OBS12
Time − X/5 [s]
2
d
0
Depth [km]
e
10
TWT [s]
2
4
f
120
140
160
Distance [km]

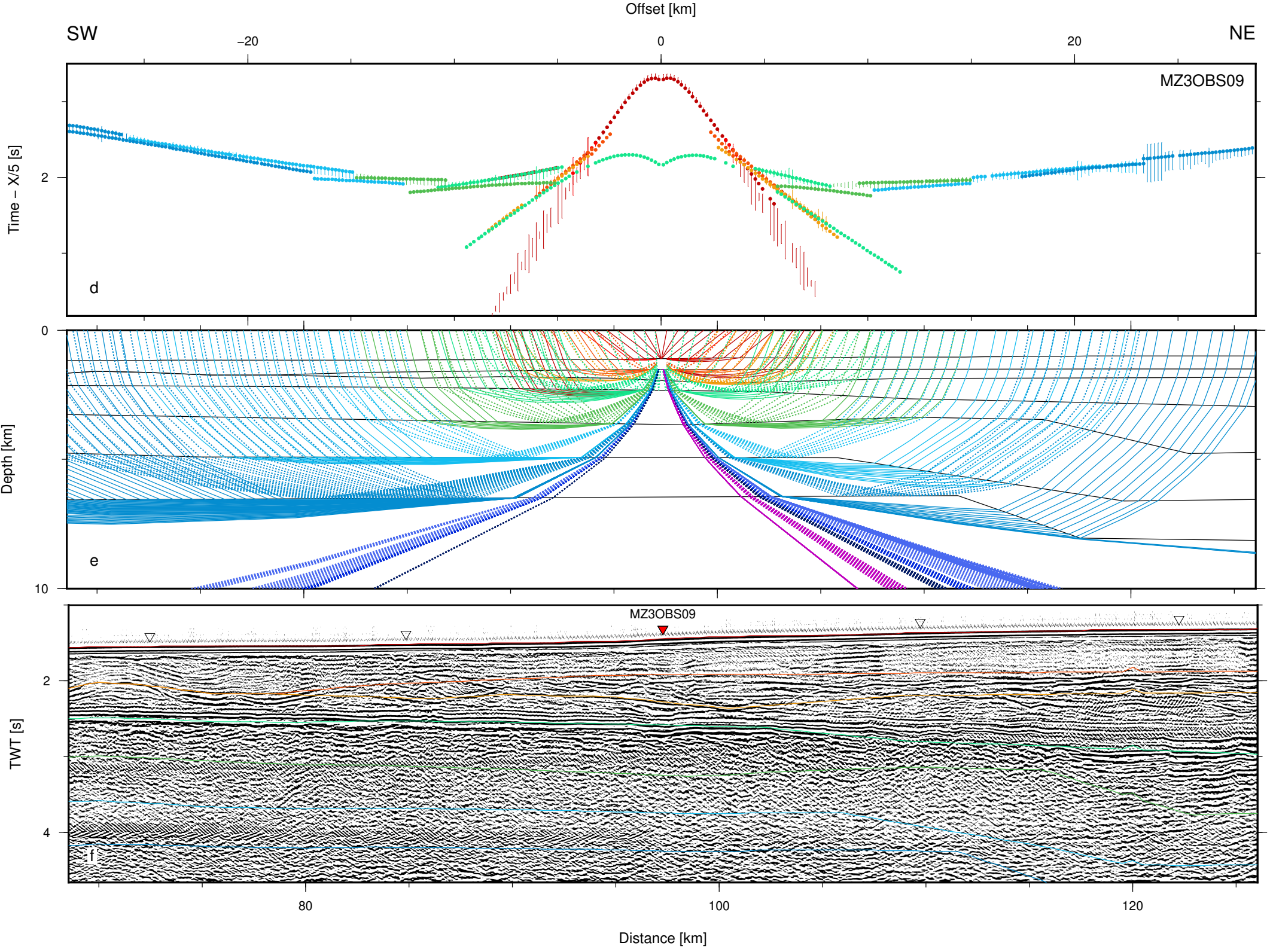

Offset [km]
SW
NE
−20
0
20
MZ3OBS11
a
b
c
Time − X/5 [s]
2
100
120
140
Distance [km]

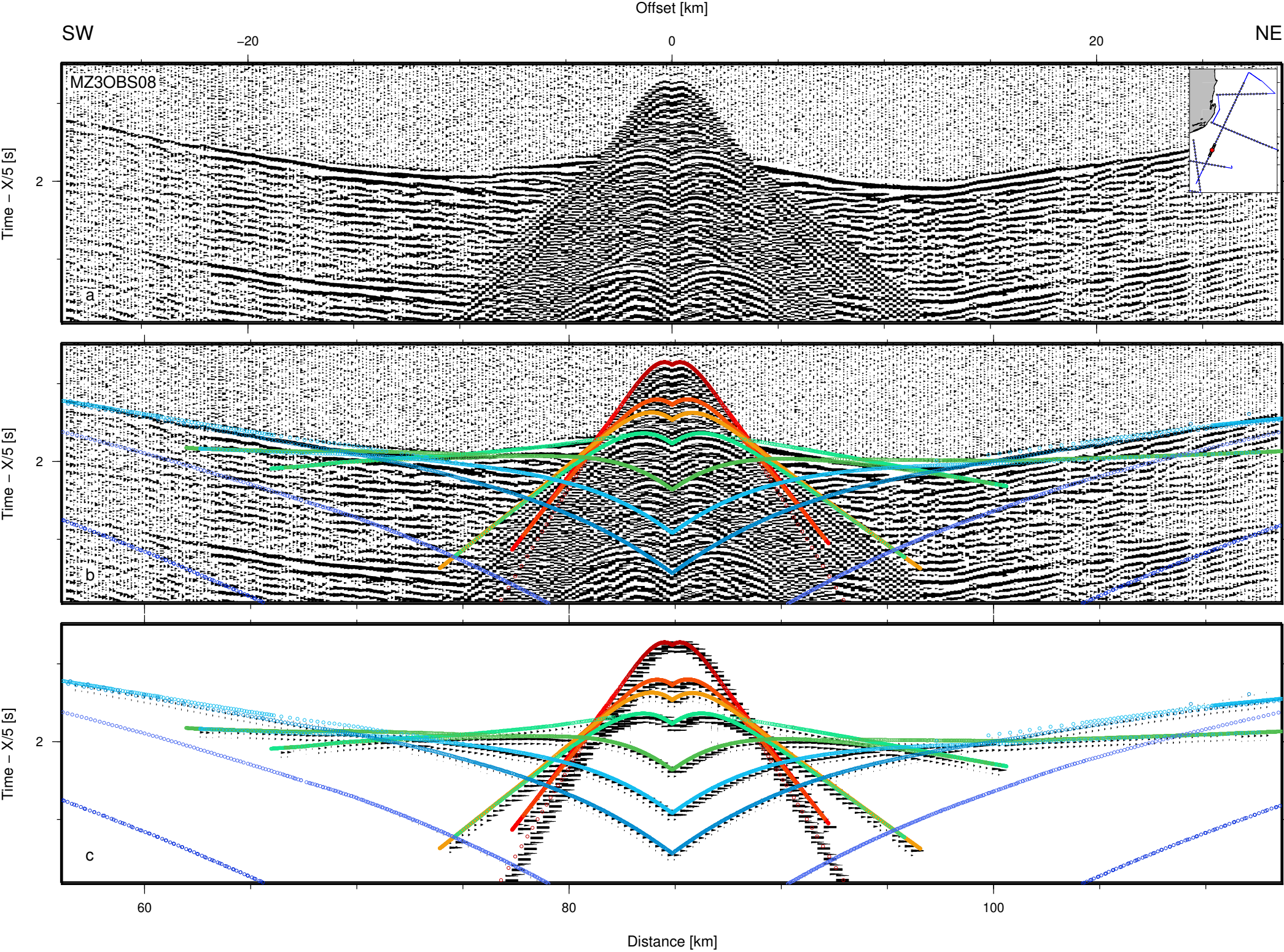

Offset [km]
SW
NE
−20
0
20
MZ3OBS11
Time − X/5 [s]
2
d
0
Depth [km]
e
10
TWT [s]
2
4
f
100
120
140
Distance [km]

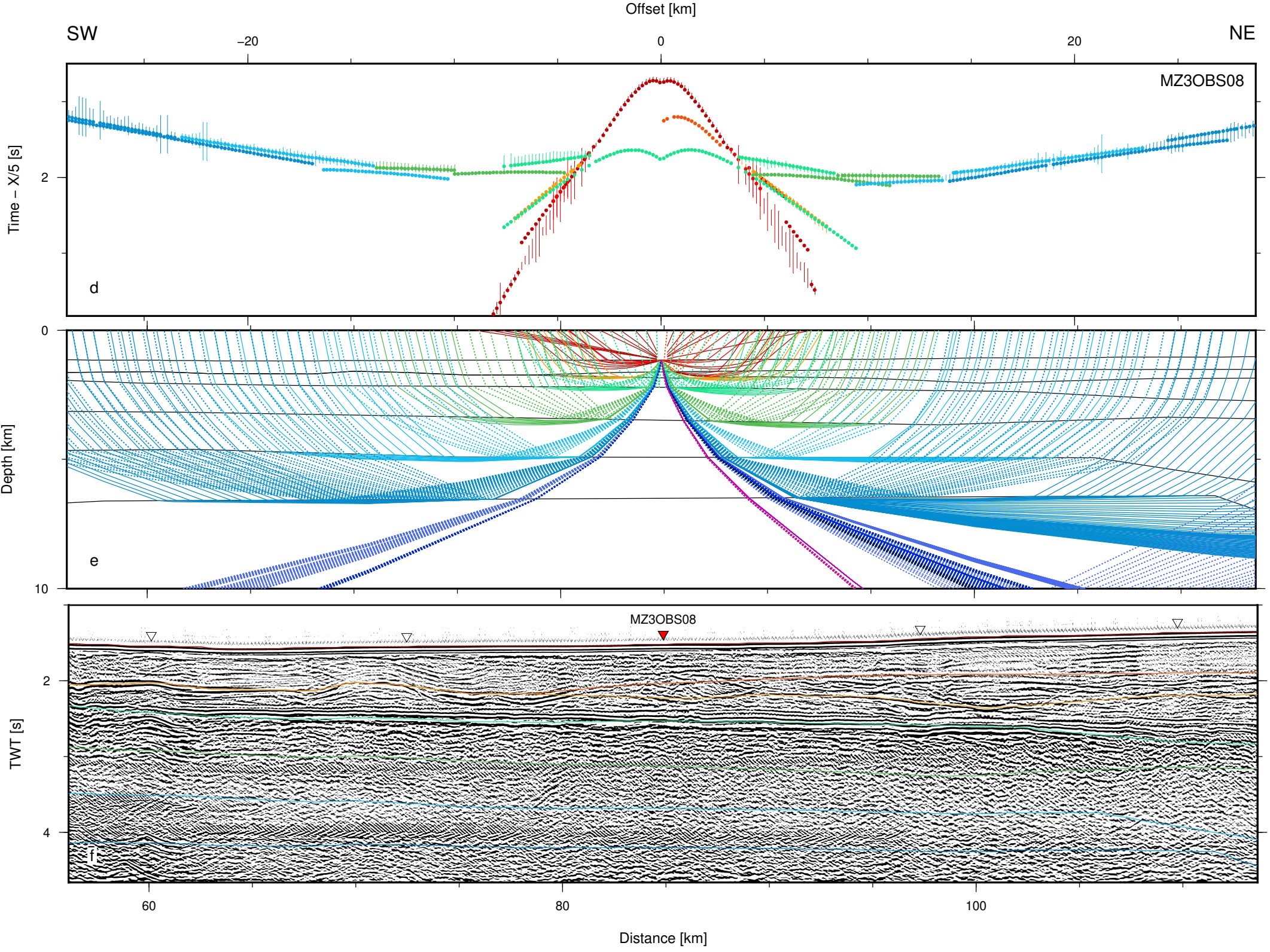

Offset [km]
SW
NE
−20
0
20
MZ3OBS10
a
b
c
Time − X/5 [s]
2
100
120
Distance [km]

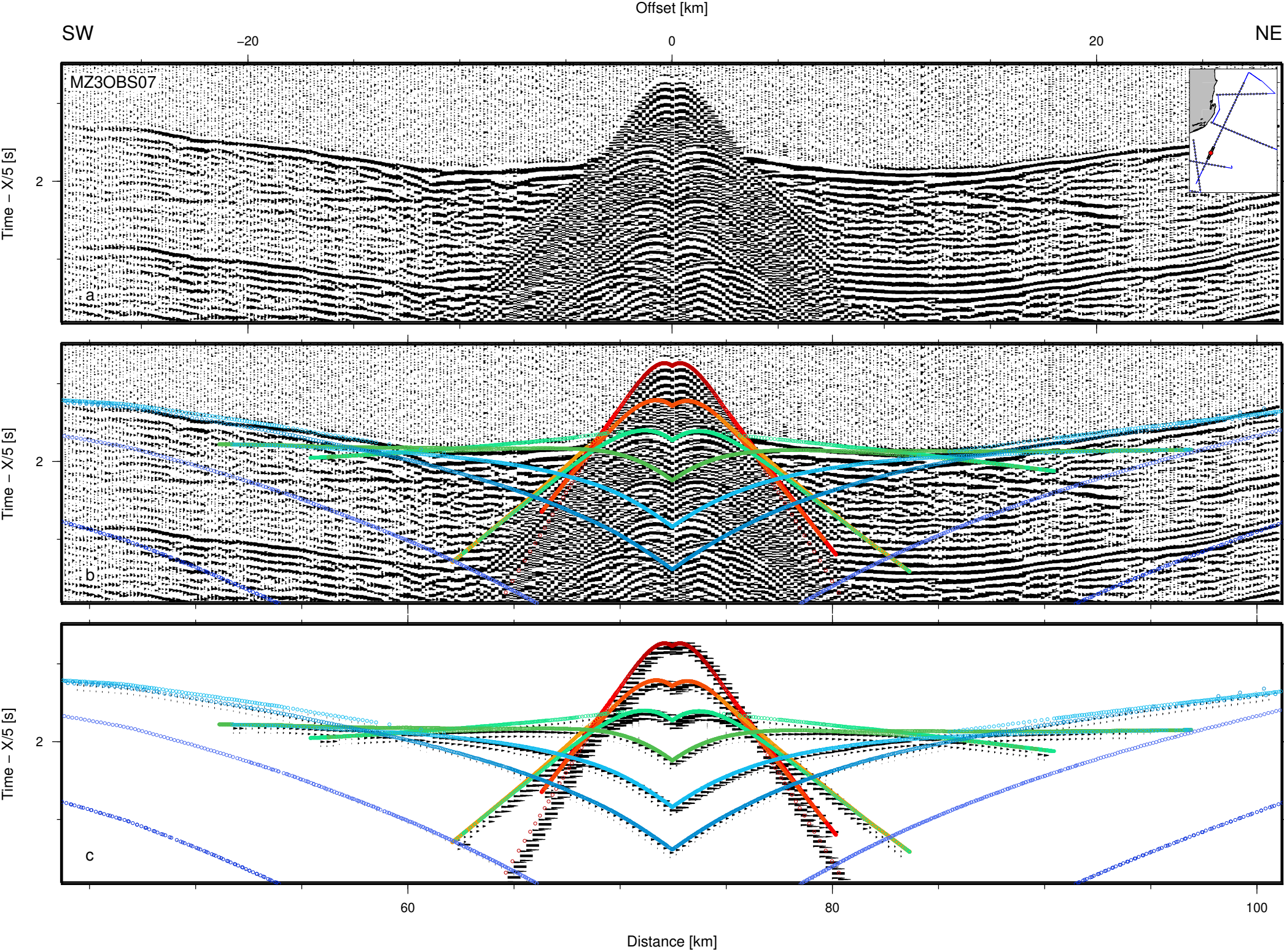

Offset [km]
SW
NE
−20
0
20
MZ3OBS10
Time − X/5 [s]
2
d
0
Depth [km]
e
10
MZ3OBS10
TWT [s]
2
4
f
100
120
Distance [km]

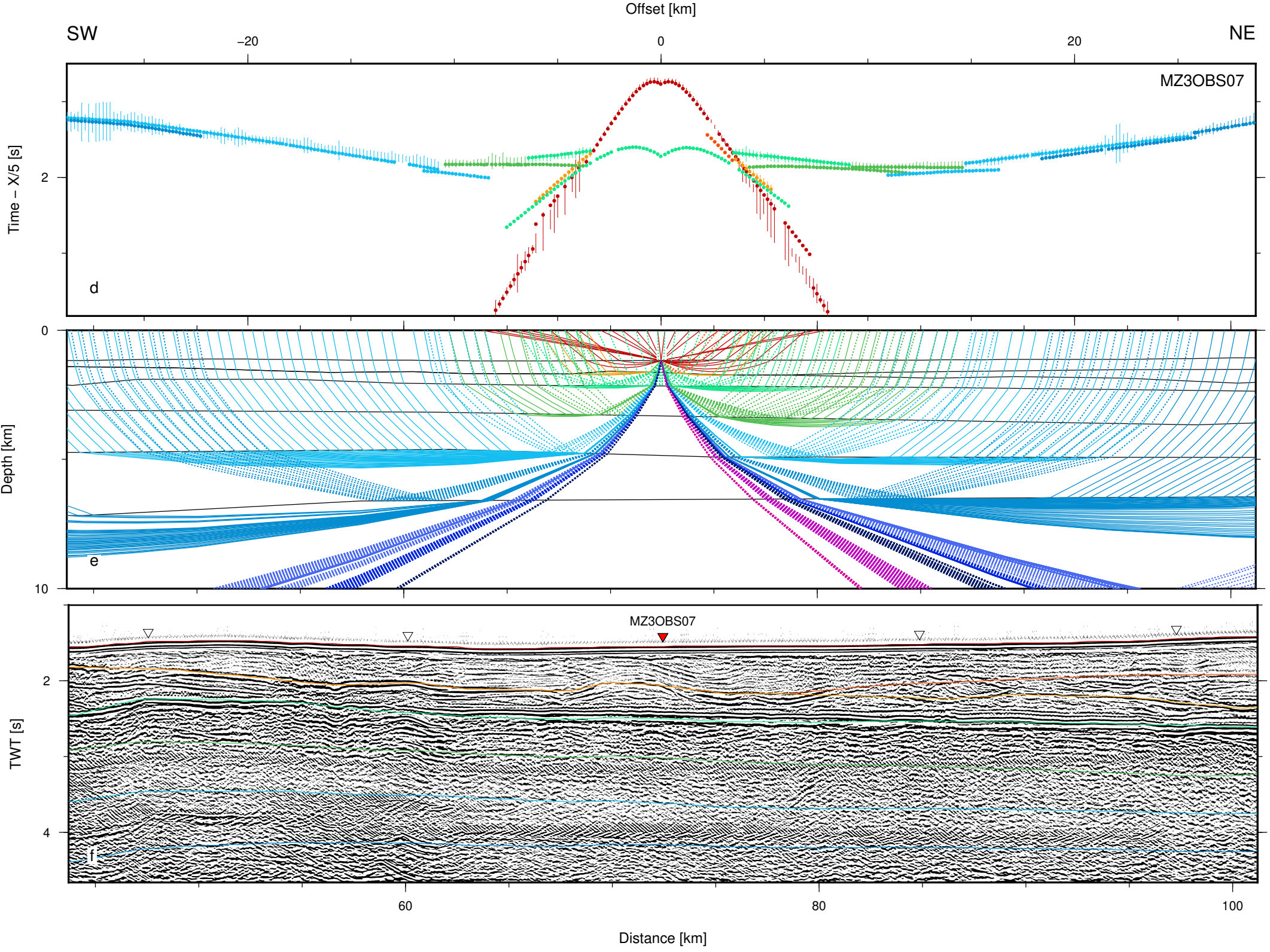

Offset [km]
SW
NE
−20
0
20
MZ3OBS09
a
b
c
Time – X/5 [s]
2
80
100
120
Distance [km]

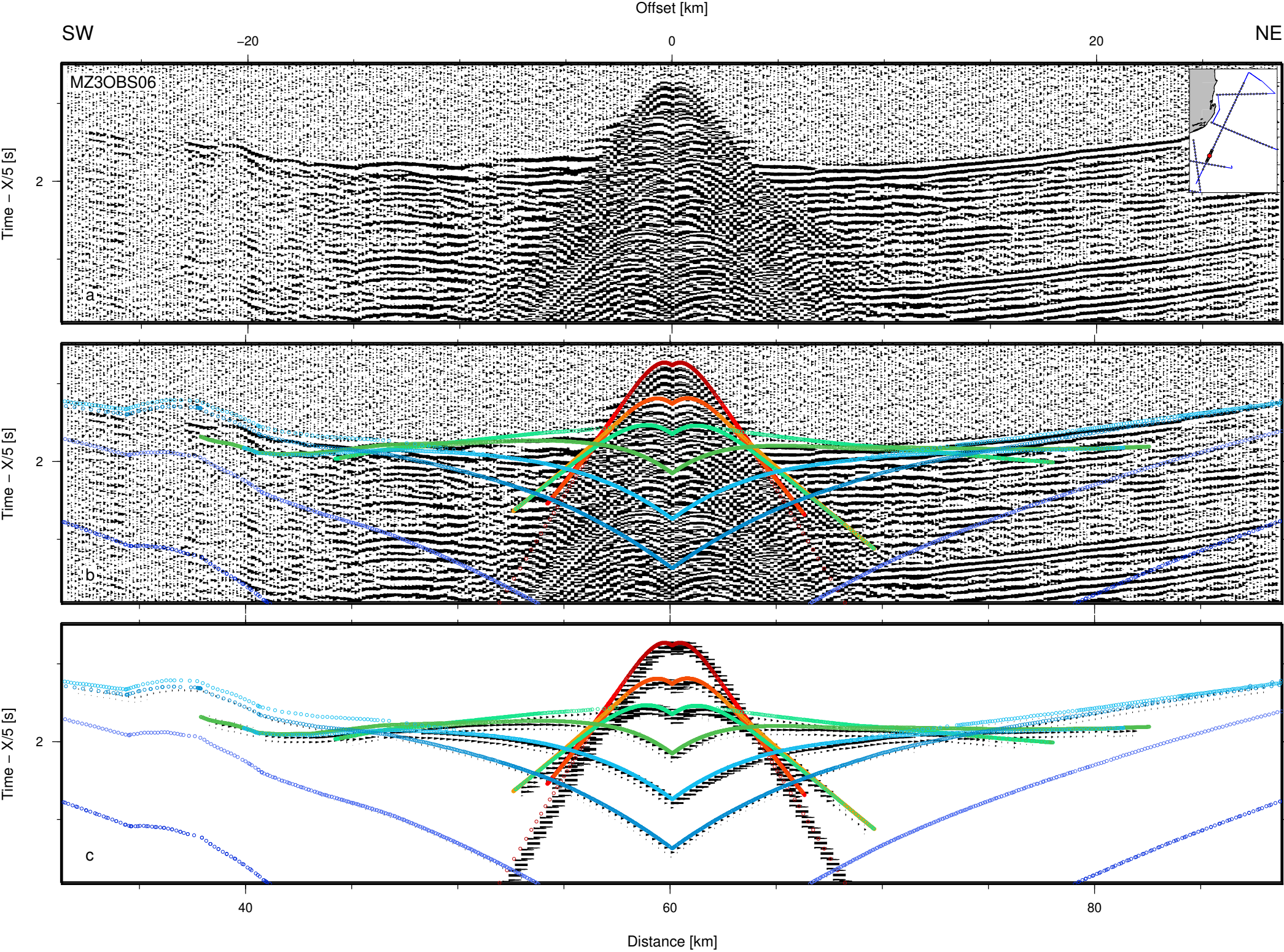

Offset [km]
SW
NE
−20
0
20
MZ3OBS09
Time − X/5 [s]
2
d
0
Depth [km]
e
10
MZ3OBS09
TWT [s]
2
4
f
80
100
120
Distance [km]

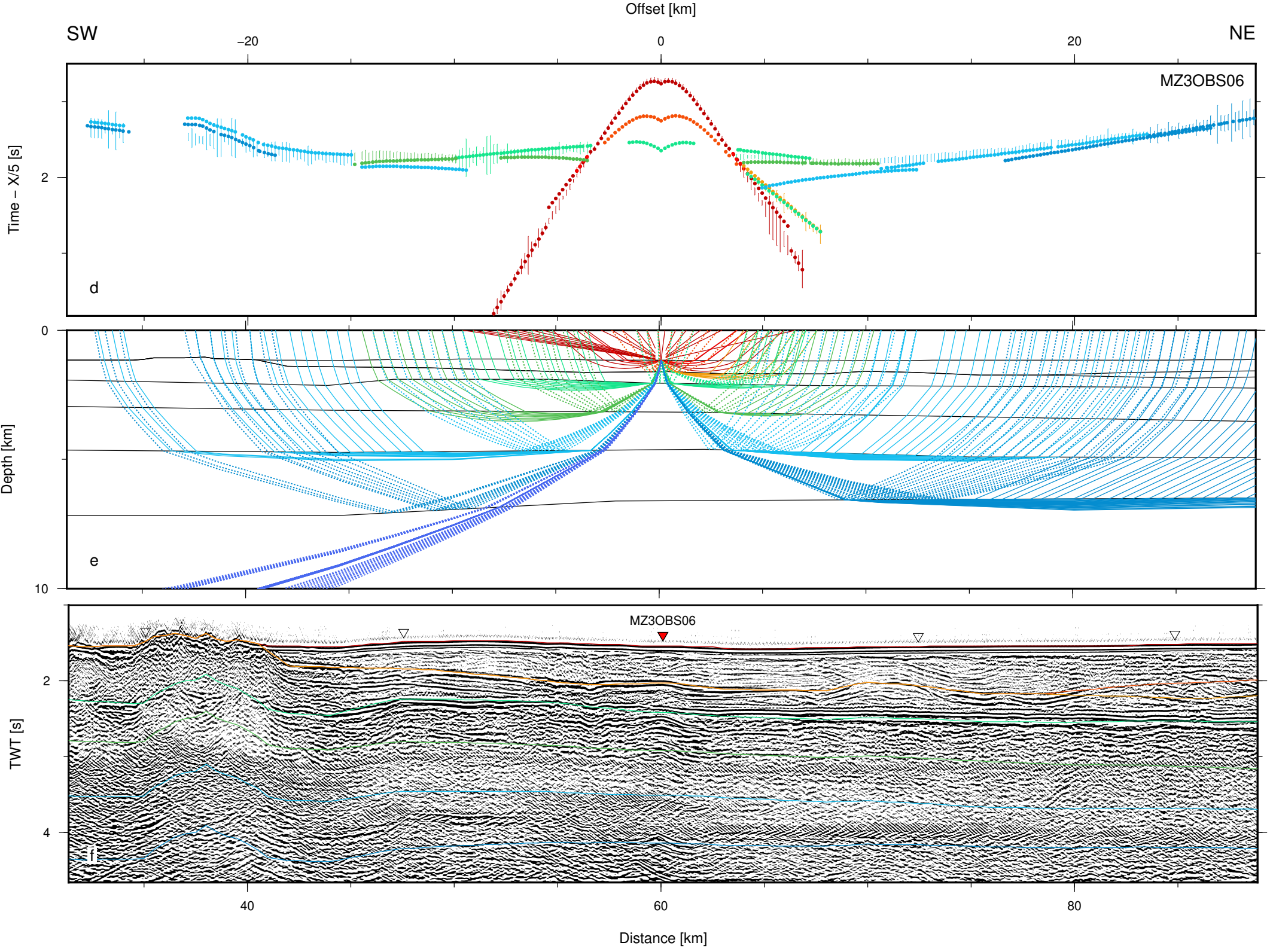

Offset [km]
SW
NE
−20
0
20
MZ3OBS08
a
b
c
Time – X/5 [s]
2
60
80
100
Distance [km]

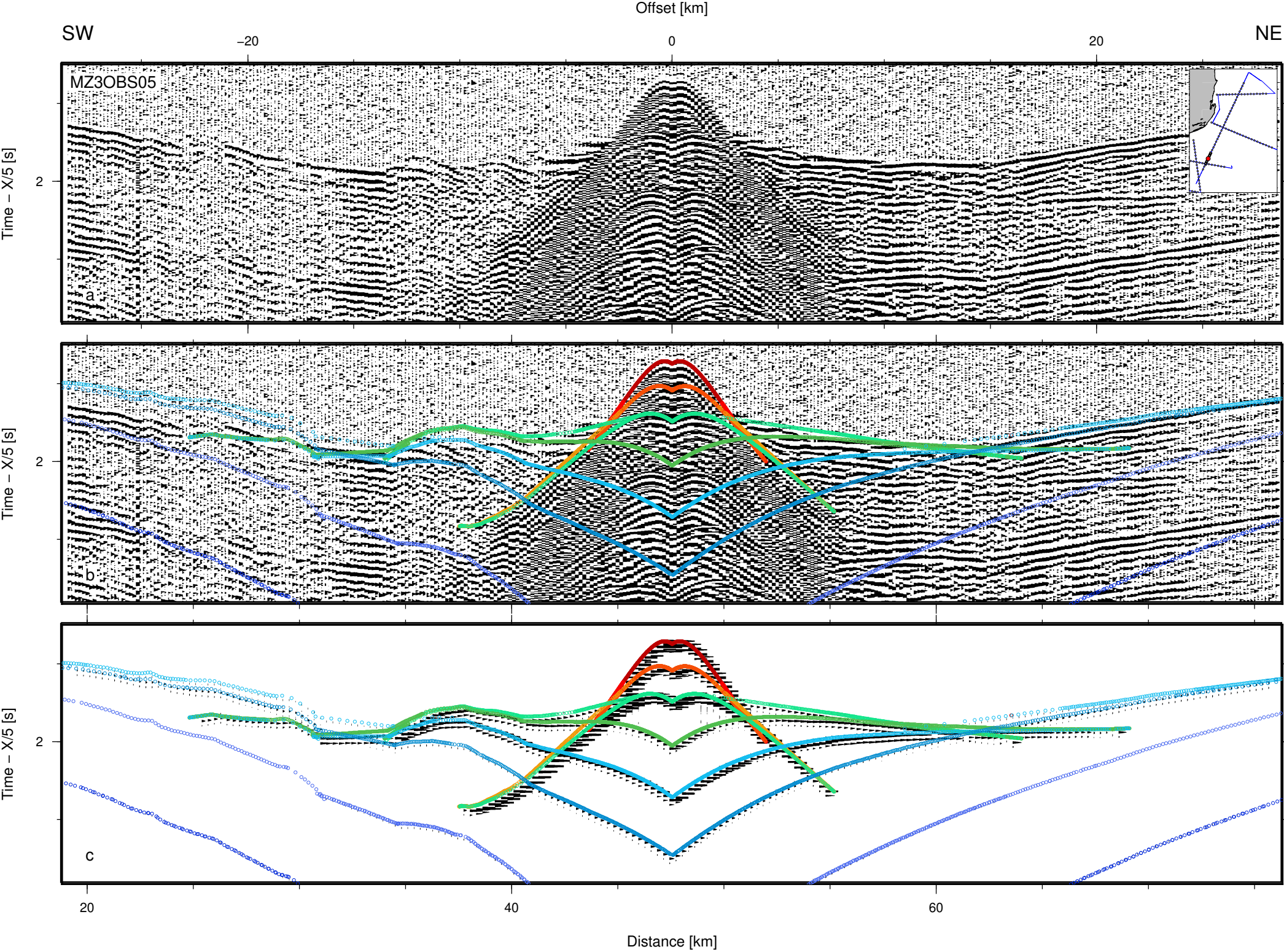

Offset [km]
SW
NE
−20
0
20
MZ3OBS08
Time − X/5 [s]
2
d
0
Depth [km]
e
10
MZ3OBS08
TWT [s]
2
4
60
80
100
Distance [km]

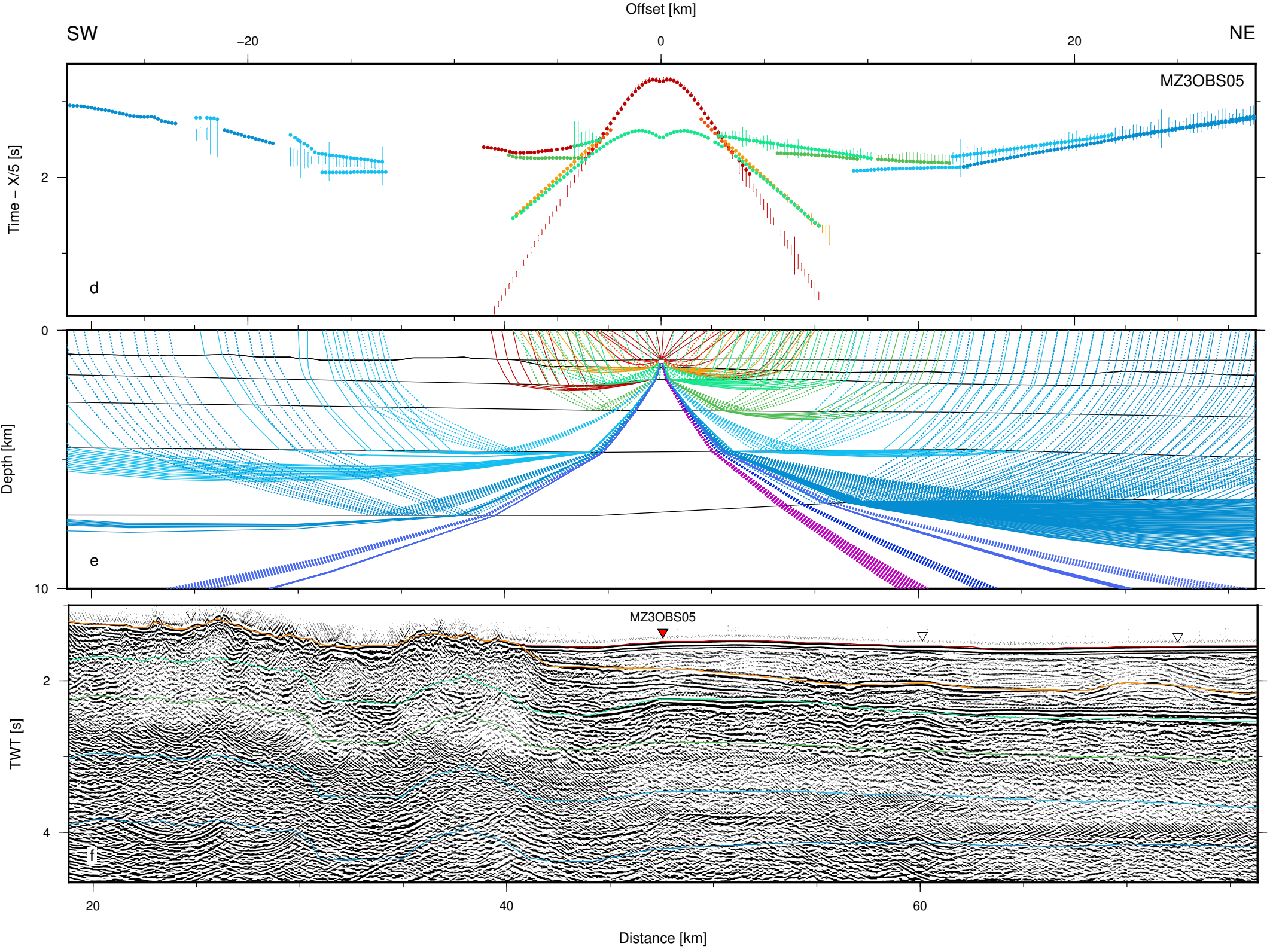

Offset [km]
SW
NE
−20
0
20
MZ3OBS07
a
b
c
Time – X/5 [s]
2
60
80
100
Distance [km]

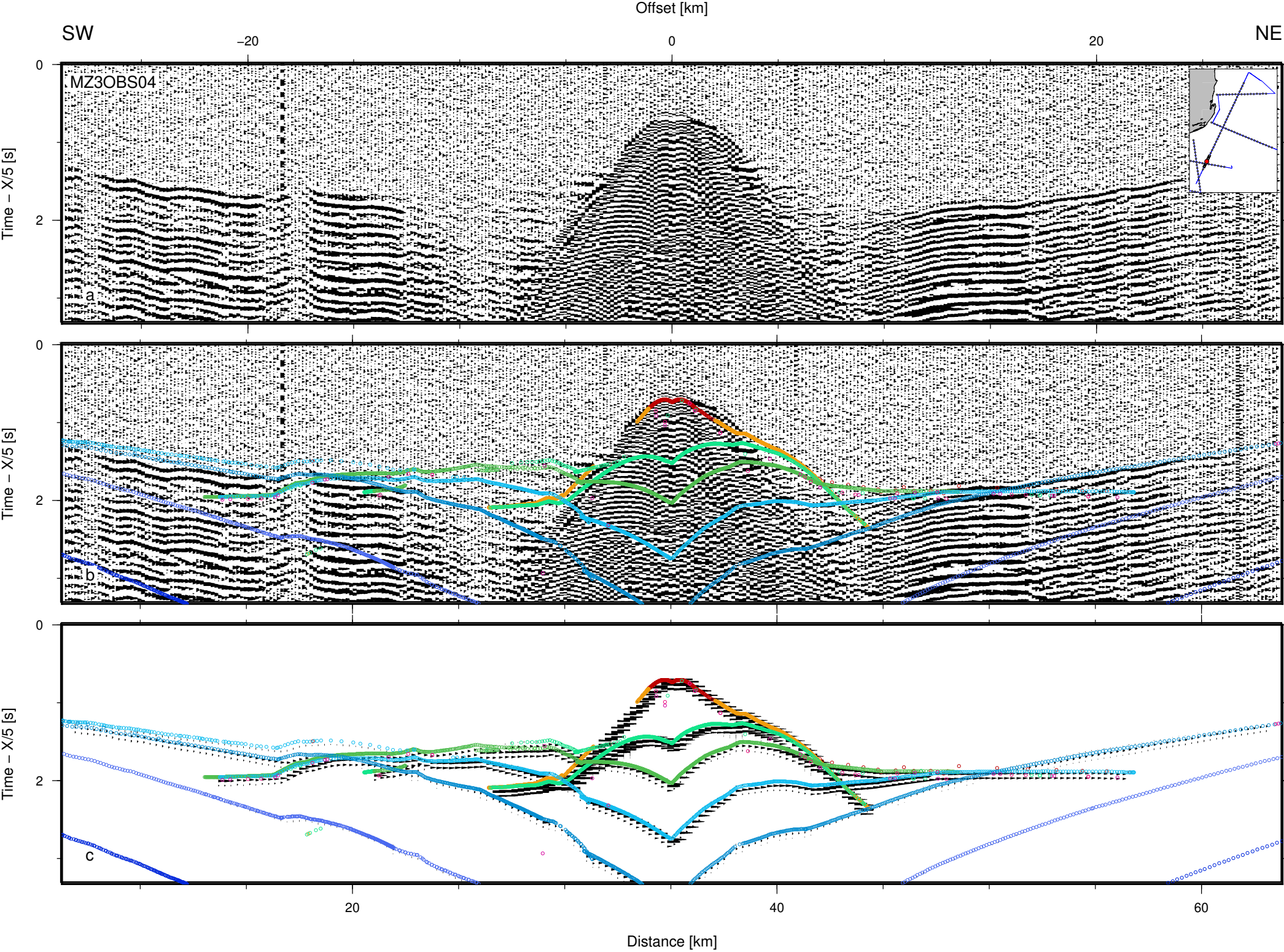

Offset [km]
SW
NE
−20
0
20
MZ3OBS07
Time − X/5 [s]
2
d
0
Depth [km]
e
10
MZ3OBS07
TWT [s]
2
4
f
60
80
100
Distance [km]

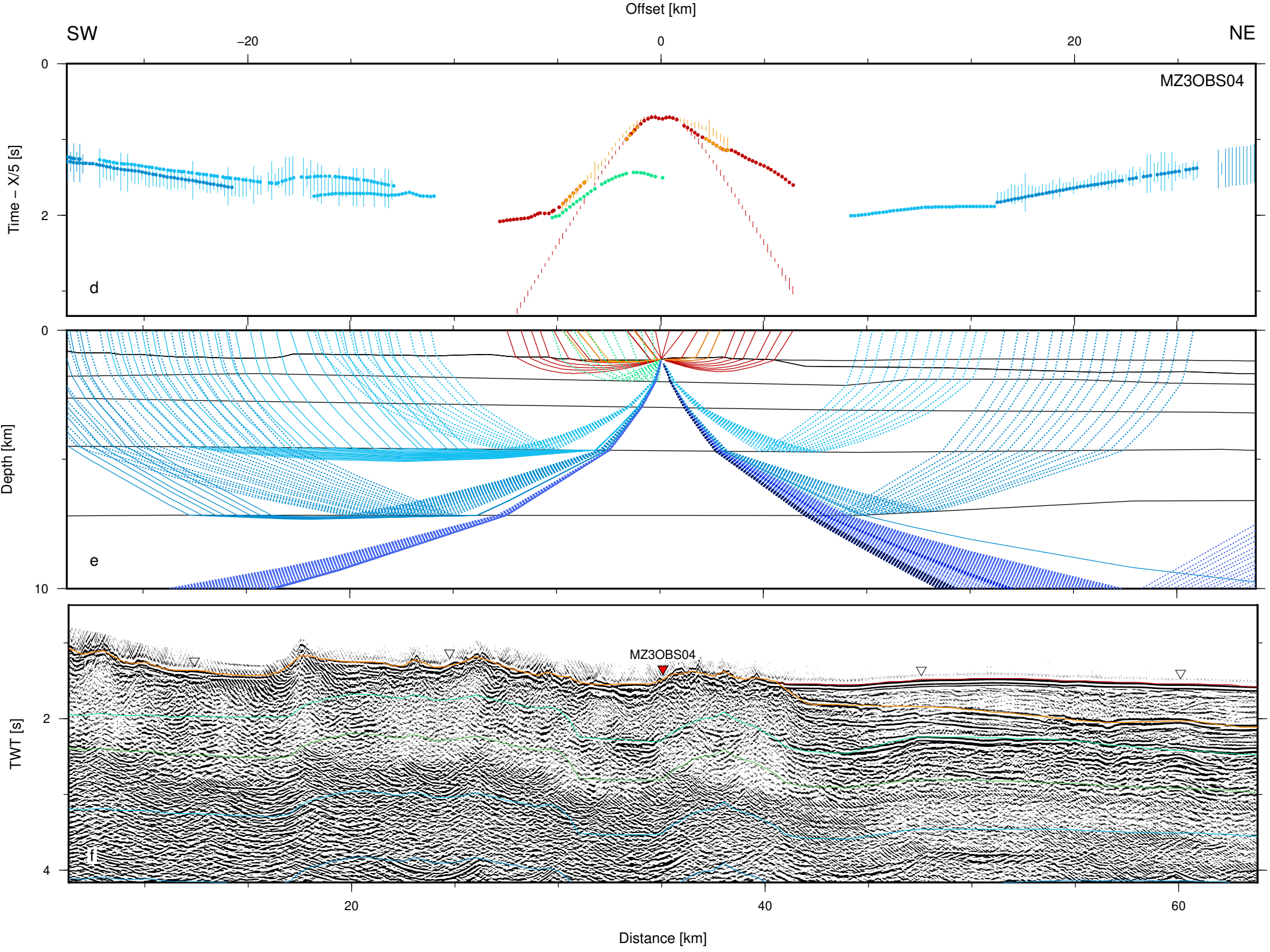

Offset [km]
SW
NE
−20
0
20
MZ3OBS06
a
b
c
Time – X/5 [s]
2
40
60
80
Distance [km]

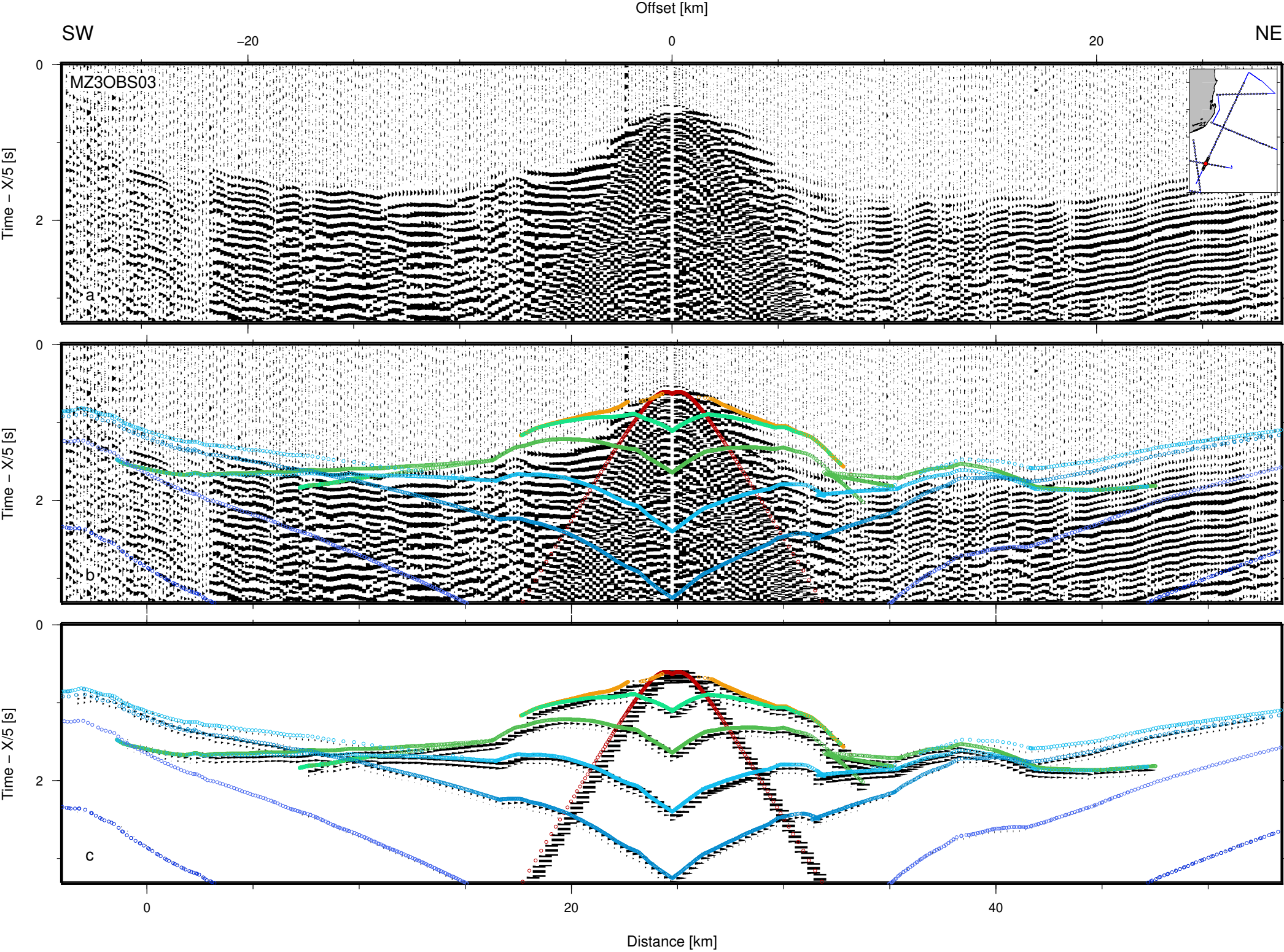

Offset [km]
SW
NE
−20
0
20
MZ3OBS06
Time − X/5 [s]
2
d
0
Depth [km]
e
10
MZ3OBS06
TWT [s]
2
4
40
60
80
Distance [km]

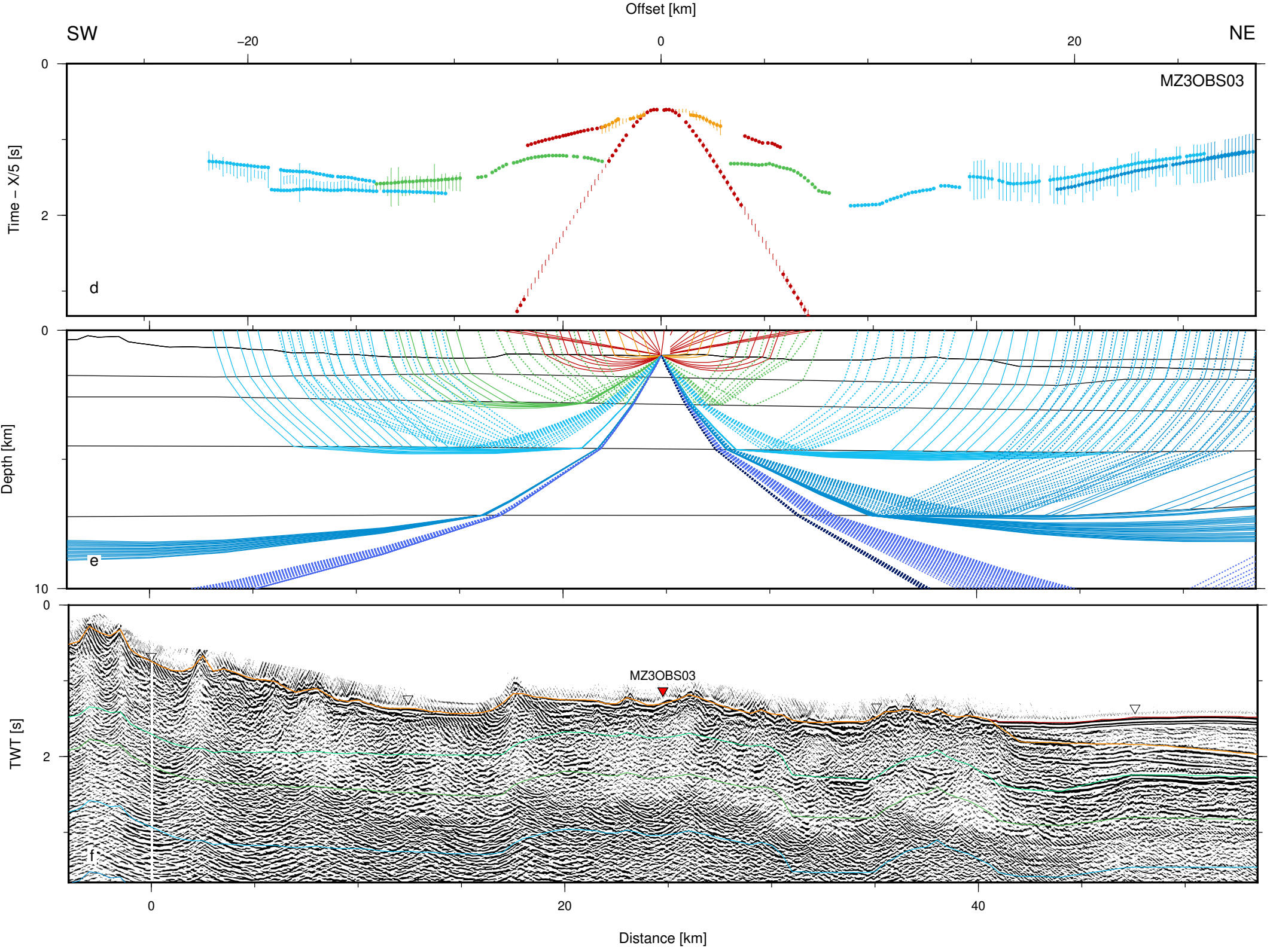

Offset [km]
SW
NE
−20
0
20
MZ3OBS05
a
b
c
Time – X/5 [s]
2
20
40
60
Distance [km]

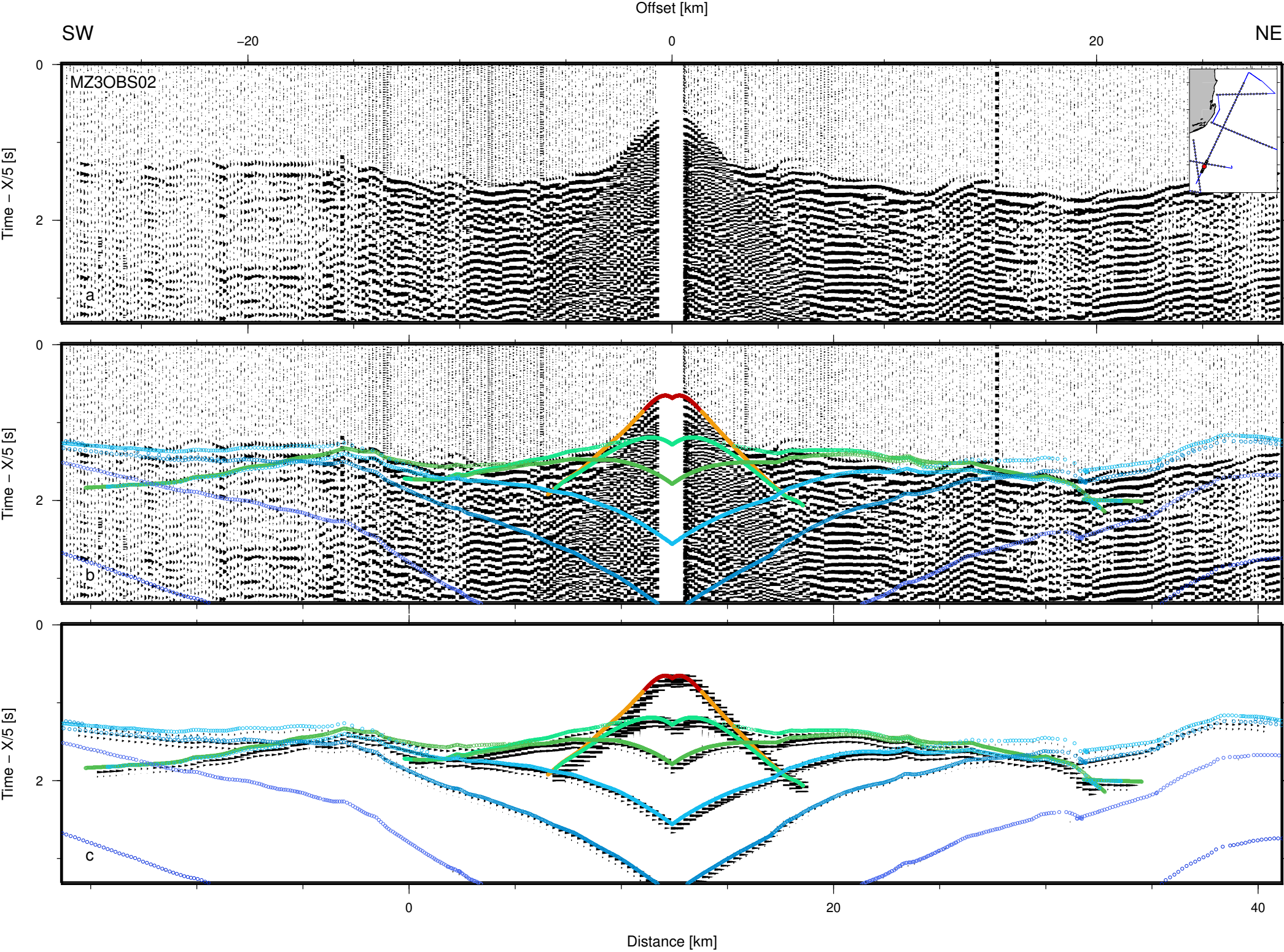

Offset [km]
SW
NE
−20
0
20
MZ3OBS05
Time − X/5 [s]
2
d
0
Depth [km]
e
10
MZ3OBS05
TWT [s]
2
4
20
40
60
Distance [km]

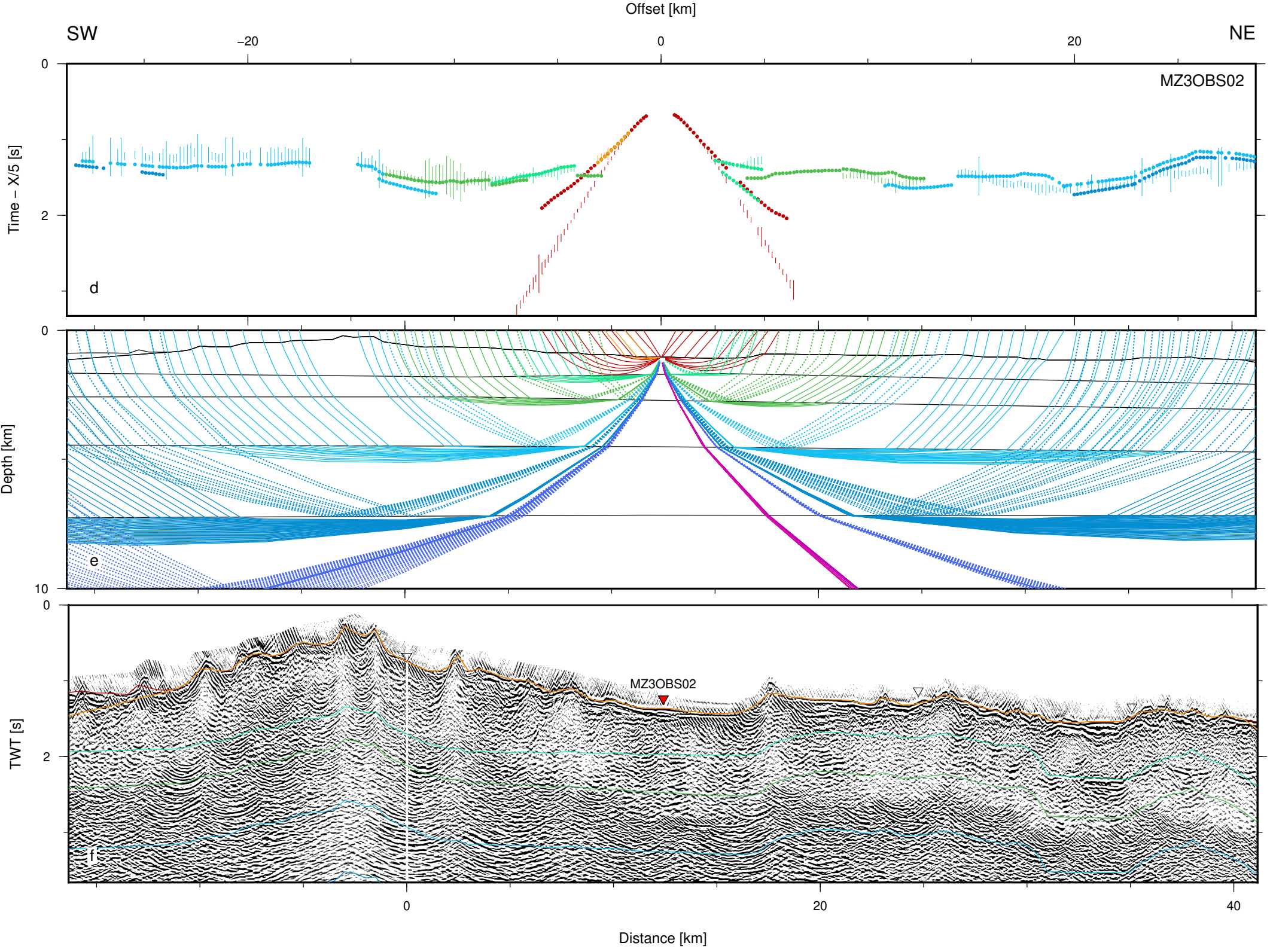

Offset [km]
SW
NE
−20
0
20
MZ3OBS04
a
b
c
Time − X/5 [s]
0
2
20
40
60
Distance [km]

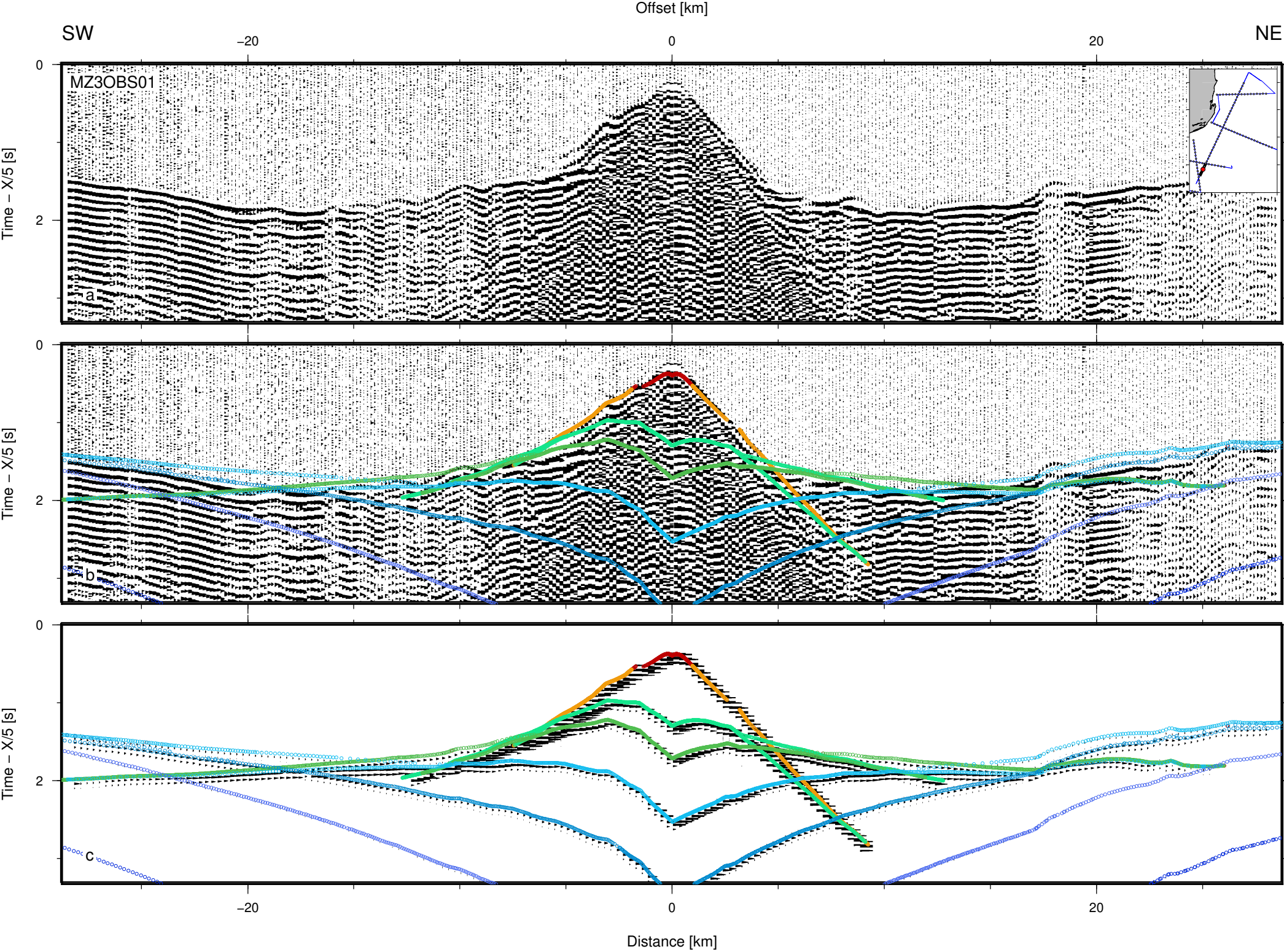

Offset [km]
SW
NE
−20
0
20
MZ3OBS04
Time − X/5 [s]
d
Depth [km]
e
MZ3OBS04
TWT [s]
f
Distance [km]
40
60


Offset [km]
SW
NE
−20
0
20
MZ3OBS03
a
b
c
Time – X/5 [s]
0
2
0
20
40
Distance [km]


Offset [km]
SW
NE
−20
0
20
MZ3OBS03
d
Time − X/5 [s]
0
2
Depth [km]
e
10
TWT [s]
f
MZ3OBS03
0
20
40
Distance [km]


Offset [km]
SW
NE
−20
0
20
MZ3OBS02
a
b
c
Time – X/5 [s]
0
2
0
20
40
Distance [km]


Offset [km]
SW
NE
−20
0
20
MZ3OBS02
Time − X/5 [s]
d
Depth [km]
e
TWT [s]
MZ3OBS02
f
Distance [km]
40


Offset [km]
SW
NE
−20
0
20
MZ3OBS01
a
b
c
Time − X/5 [s]
0
2
Distance [km]

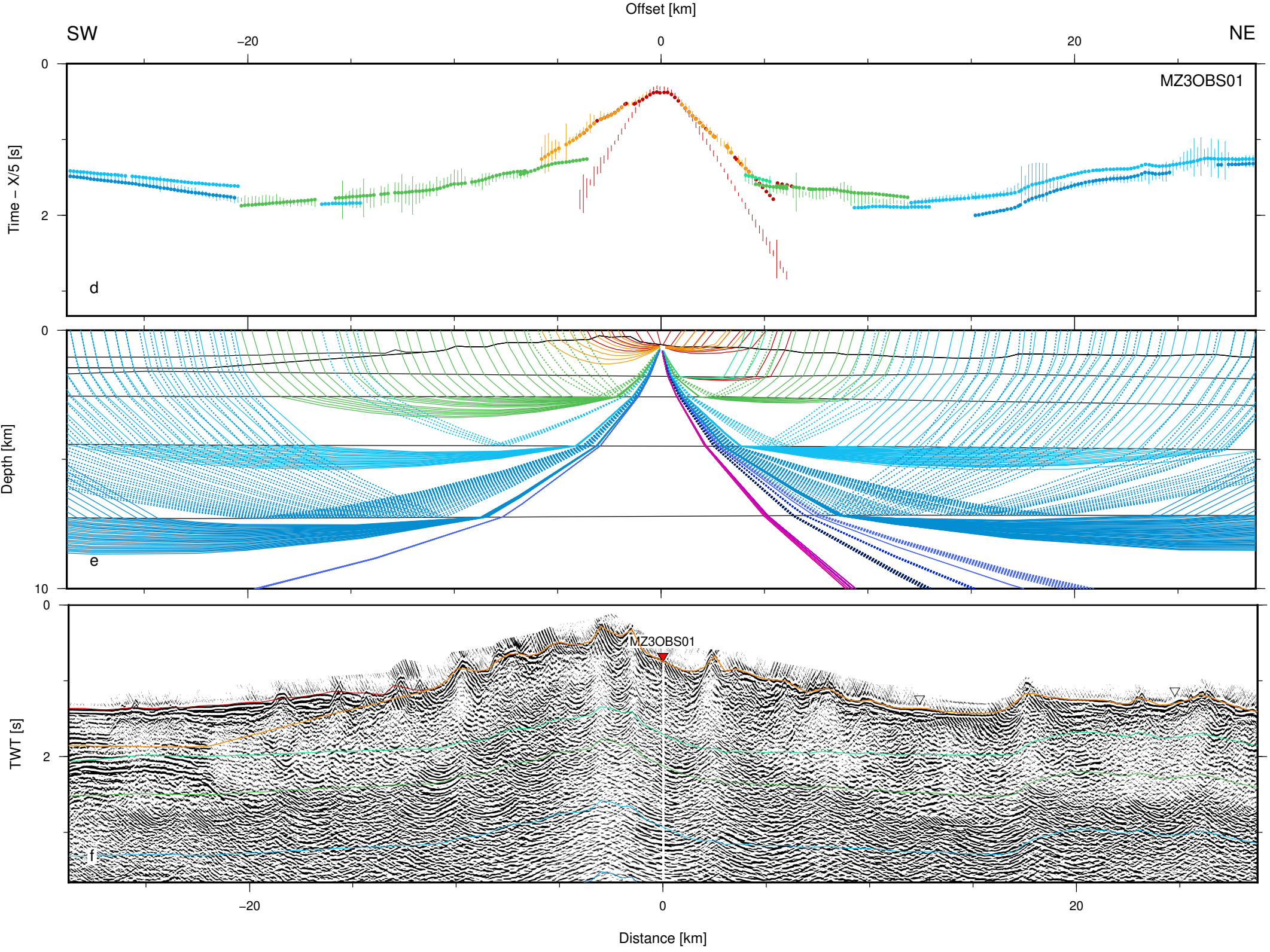
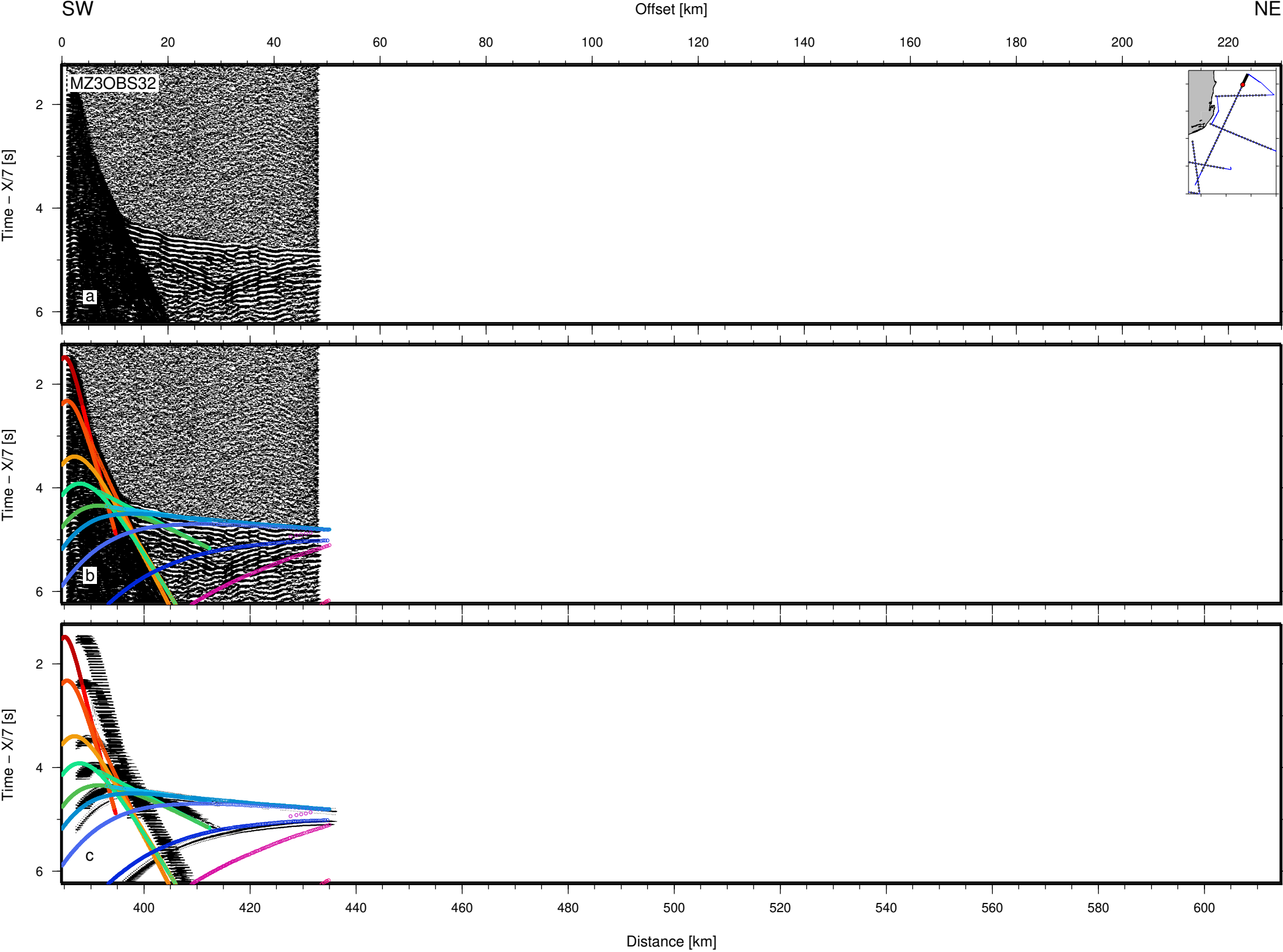
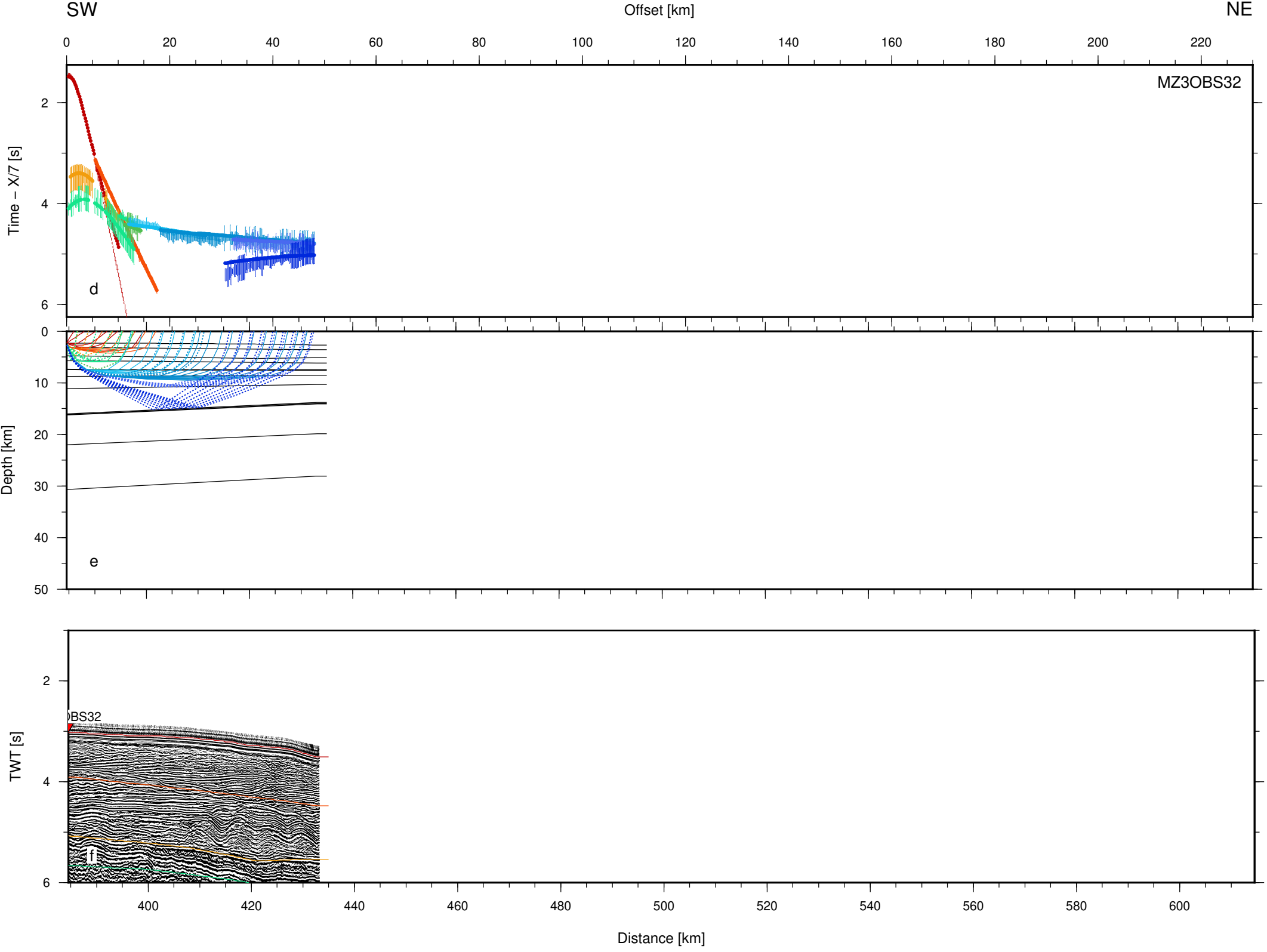
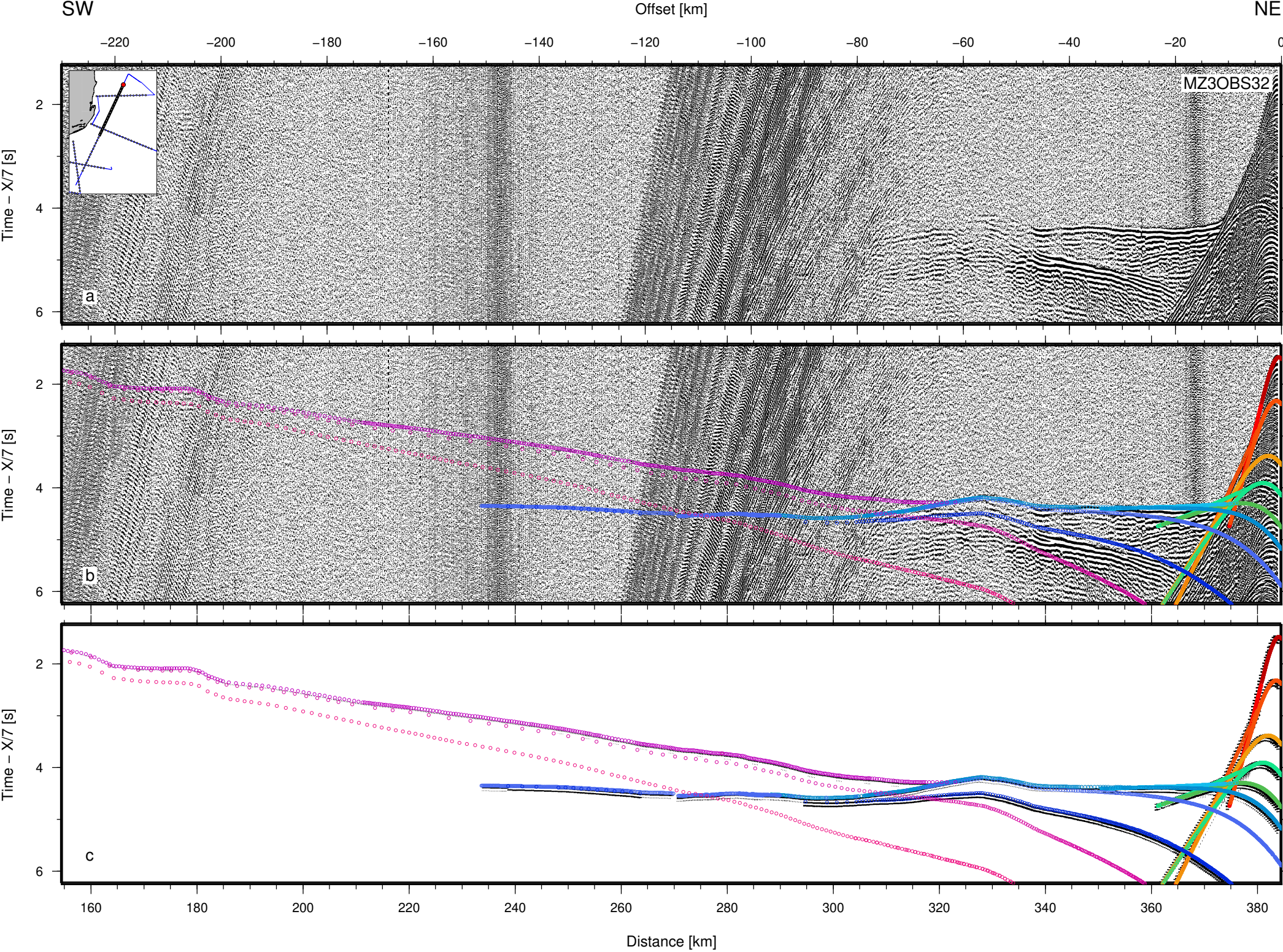
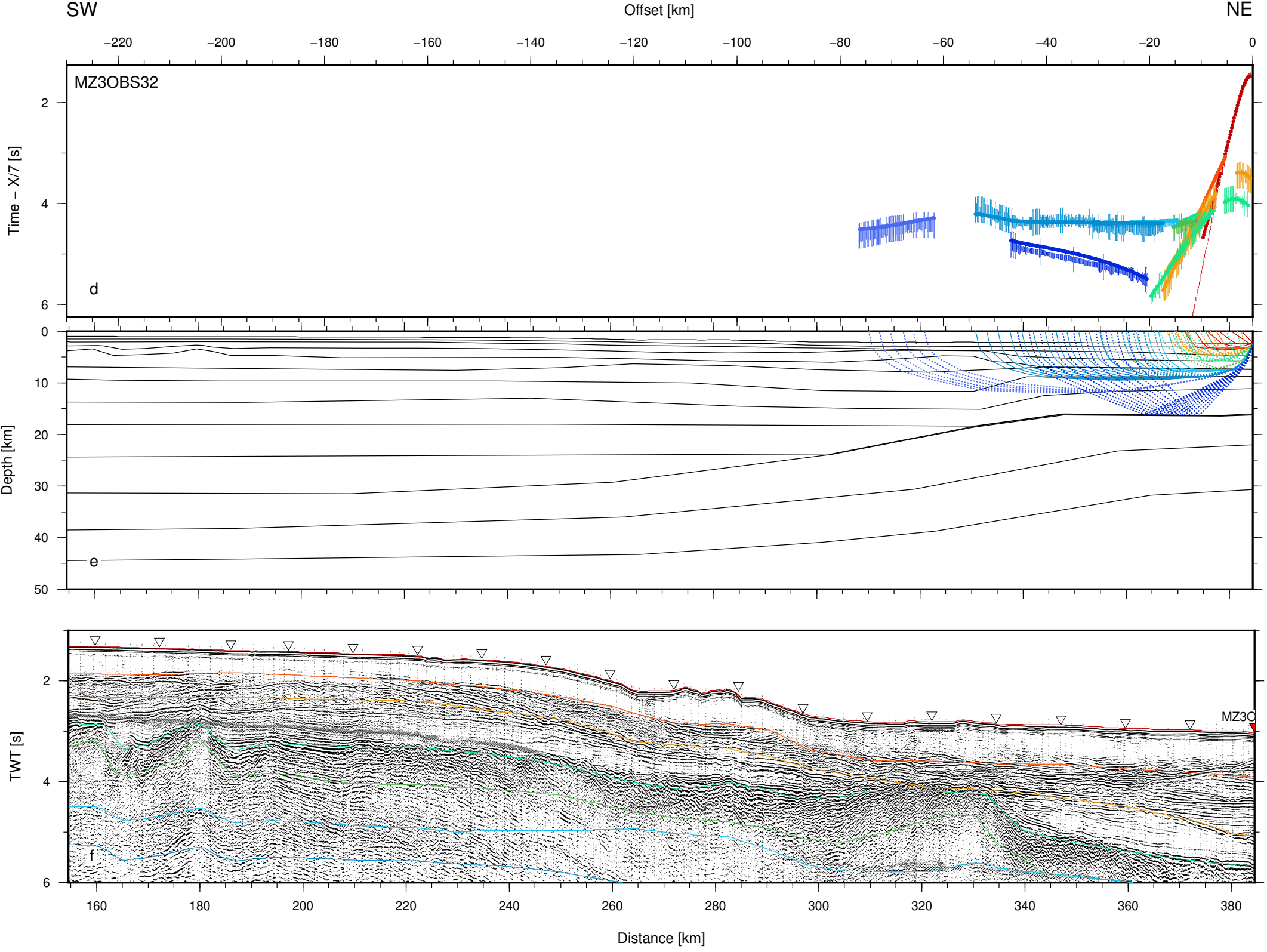

Offset [km]
SW
NE
−20
0
20
MZ3OBS01
Time − X/5 [s]
d
Depth [km]
e
TWT [s]
f
Distance [km]

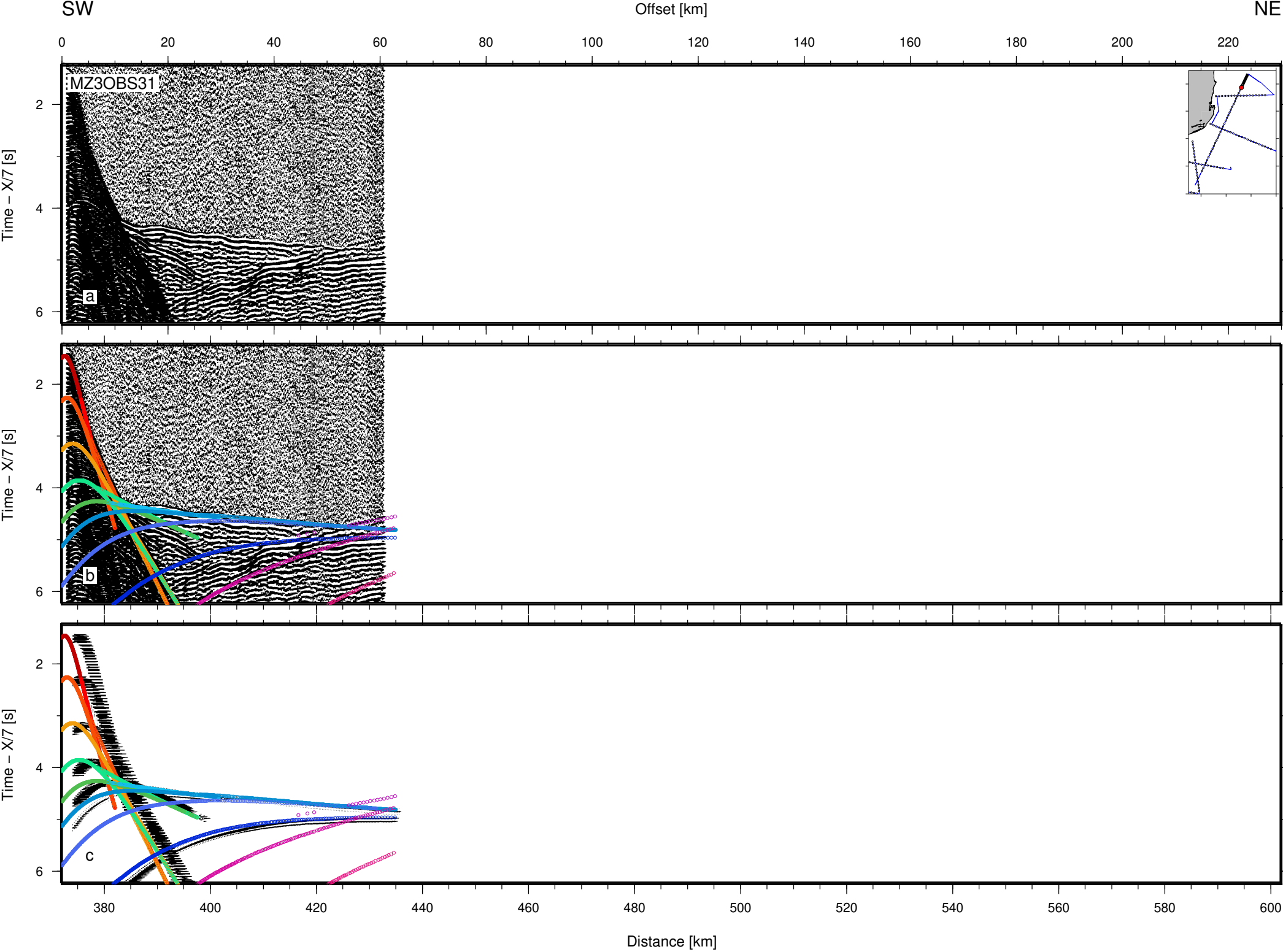
Figure 2. Interpreted crust and mantle seismic phases for all MZ3 OBS. Left panels represent negative offsets (toward the SW) and right panels positive offsets (toward the NE). On each side 6 panels display a) Seismic record; b) Seismic record with color-coded predicted arrivals; c) Synthetic section with color coded predicted arrivals; d) Color coded picked travel-times with uncertainty bars overlain by dotted predicted times; e) Color coded seismic rays; f) MCS time migrated section with color-coded model interfaces. On a, b, c, and d, travel-time is reduced by a velocity of 7 km/s.

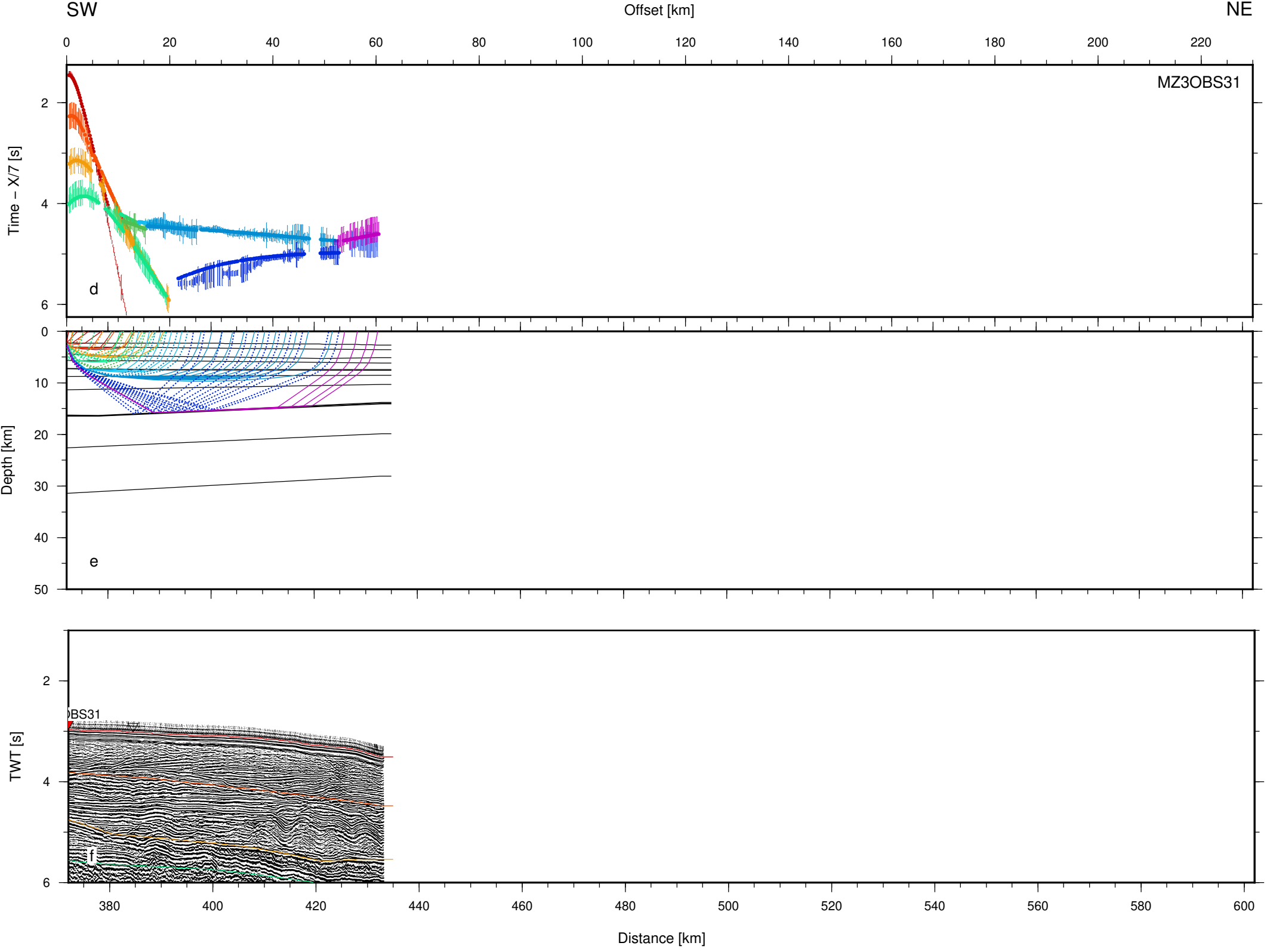

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS32
a
b
c
Time – X/7 [s]
2
4
6
400
420
440
460
480
500
520
540
560
580
600
Distance [km]

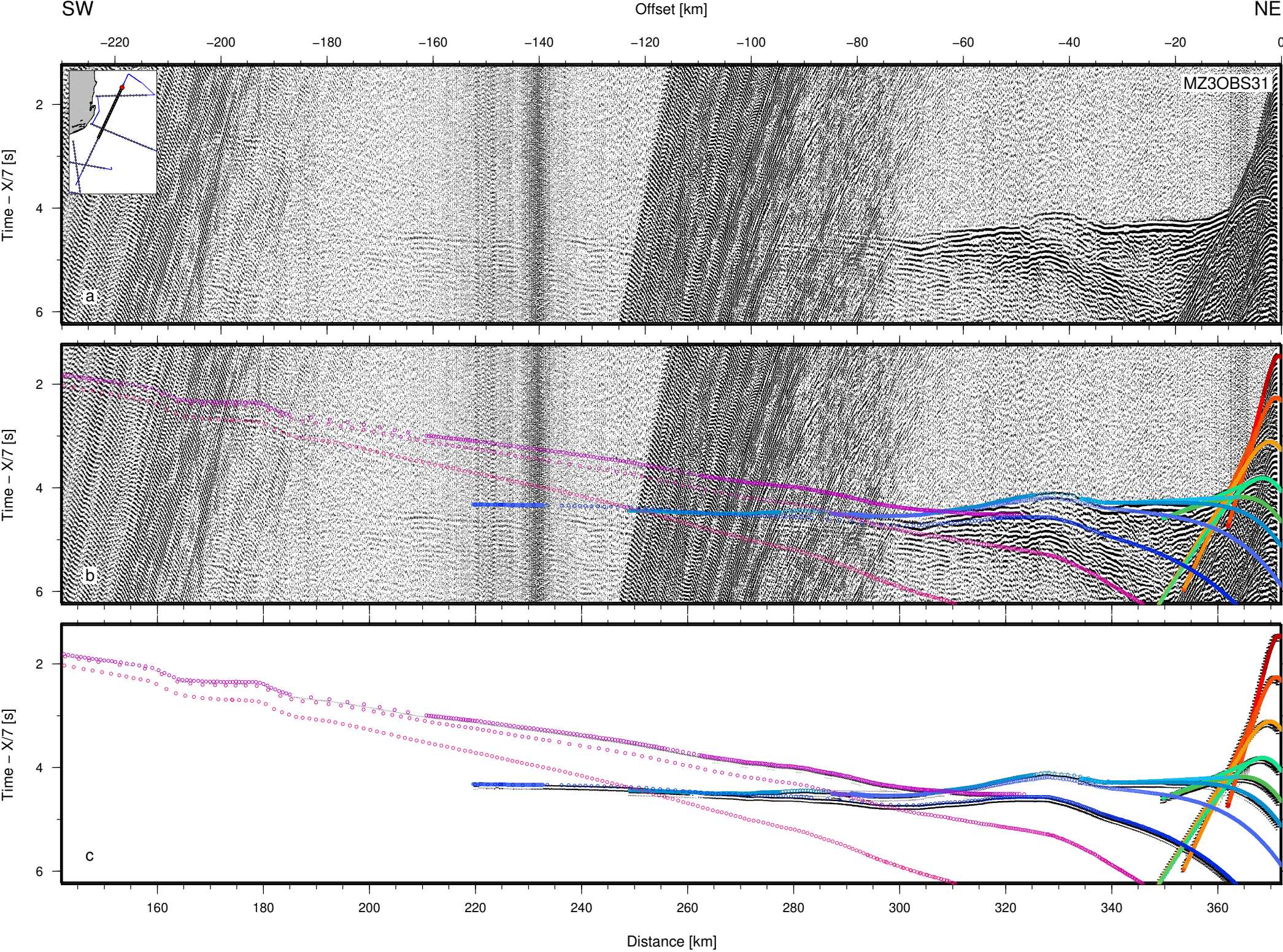

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS32
Time – X/7 [s]
2
4
6
d
0
10
20
30
40
50
Depth [km]
e
2
4
6
TWT [s]
BS32
f
400
420
440
460
480
500
520
540
560
580
600
Distance [km]

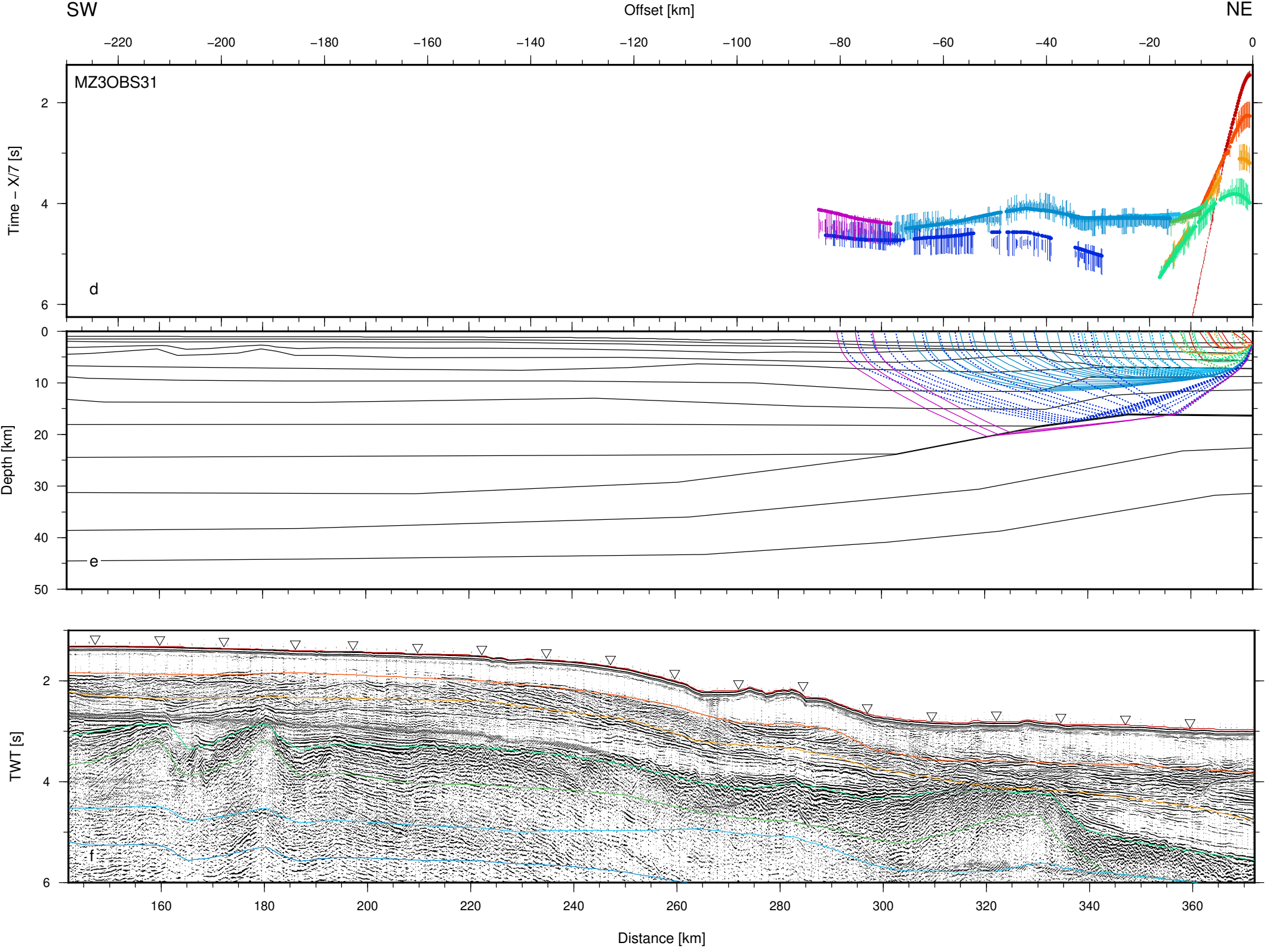

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS32
a
b
c
Time – X/7 [s]
2
4
6
160
180
200
220
240
260
280
300
320
340
360
380
Distance [km]

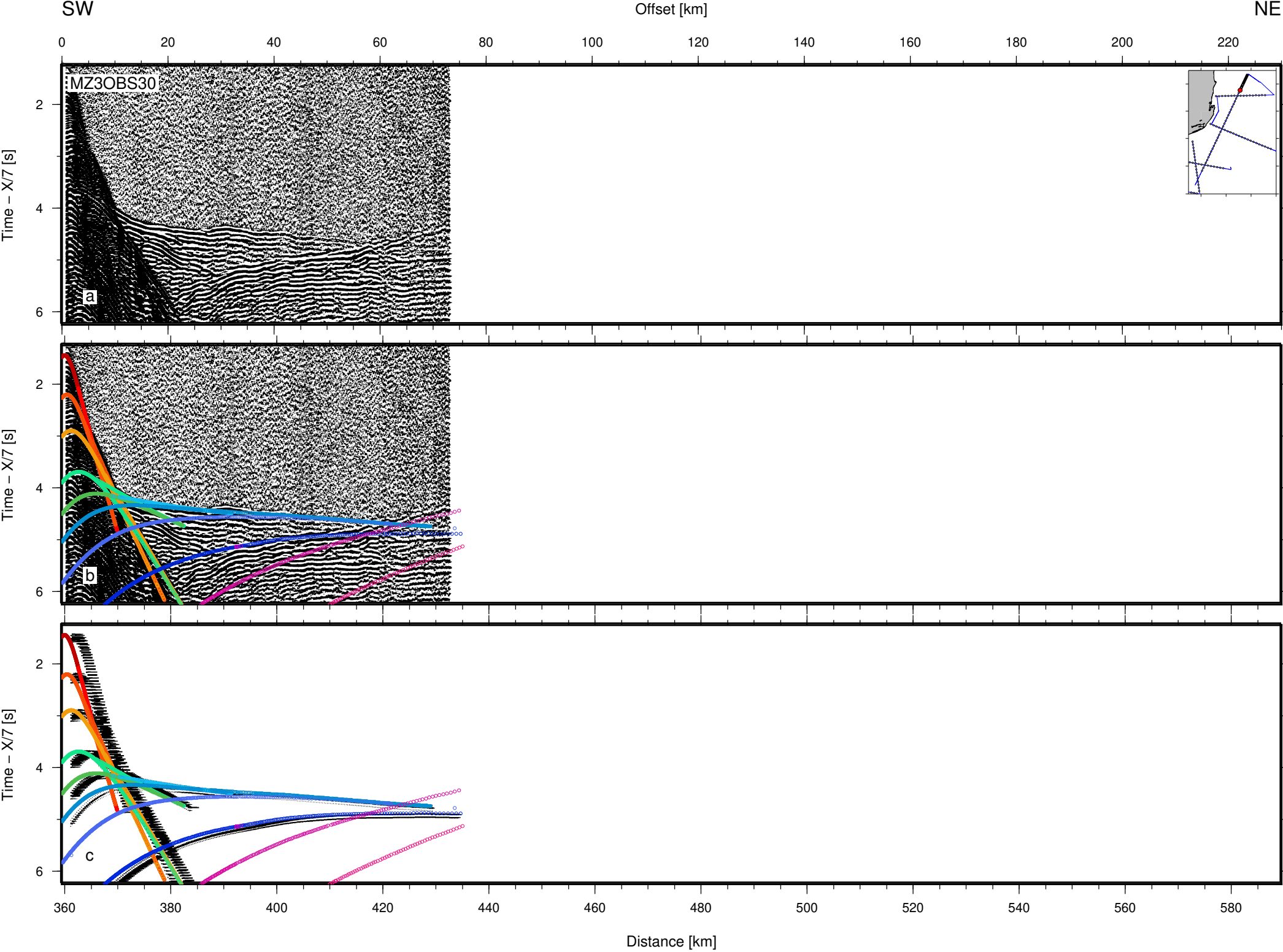

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS32
Time − X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
MZ3O
160
180
200
220
240
260
280
300
320
340
360
380
Distance [km]

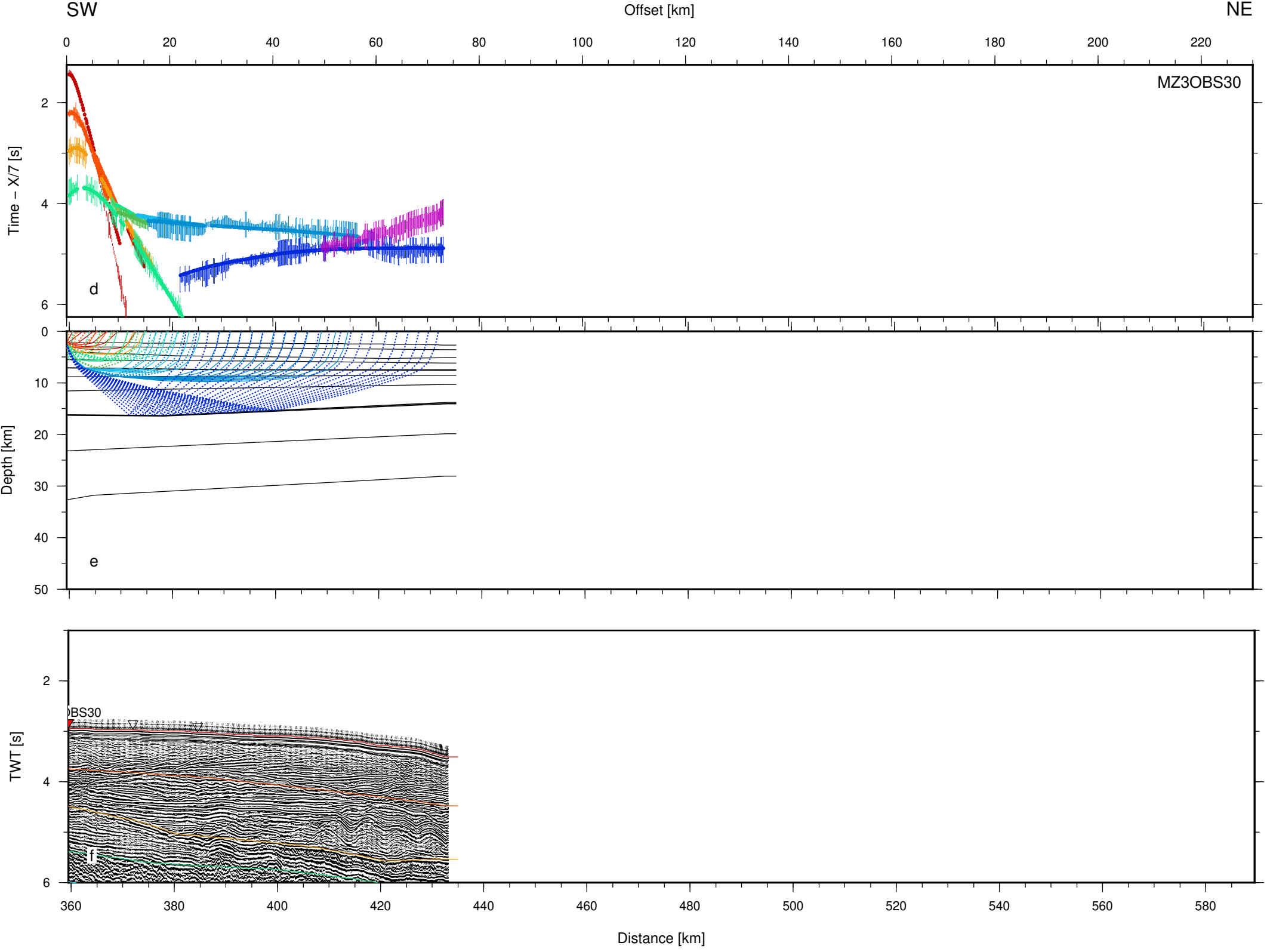

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS31
a
b
c
Time – X/7 [s]
2
4
6
380
400
420
440
460
480
500
520
540
560
580
600
Distance [km]

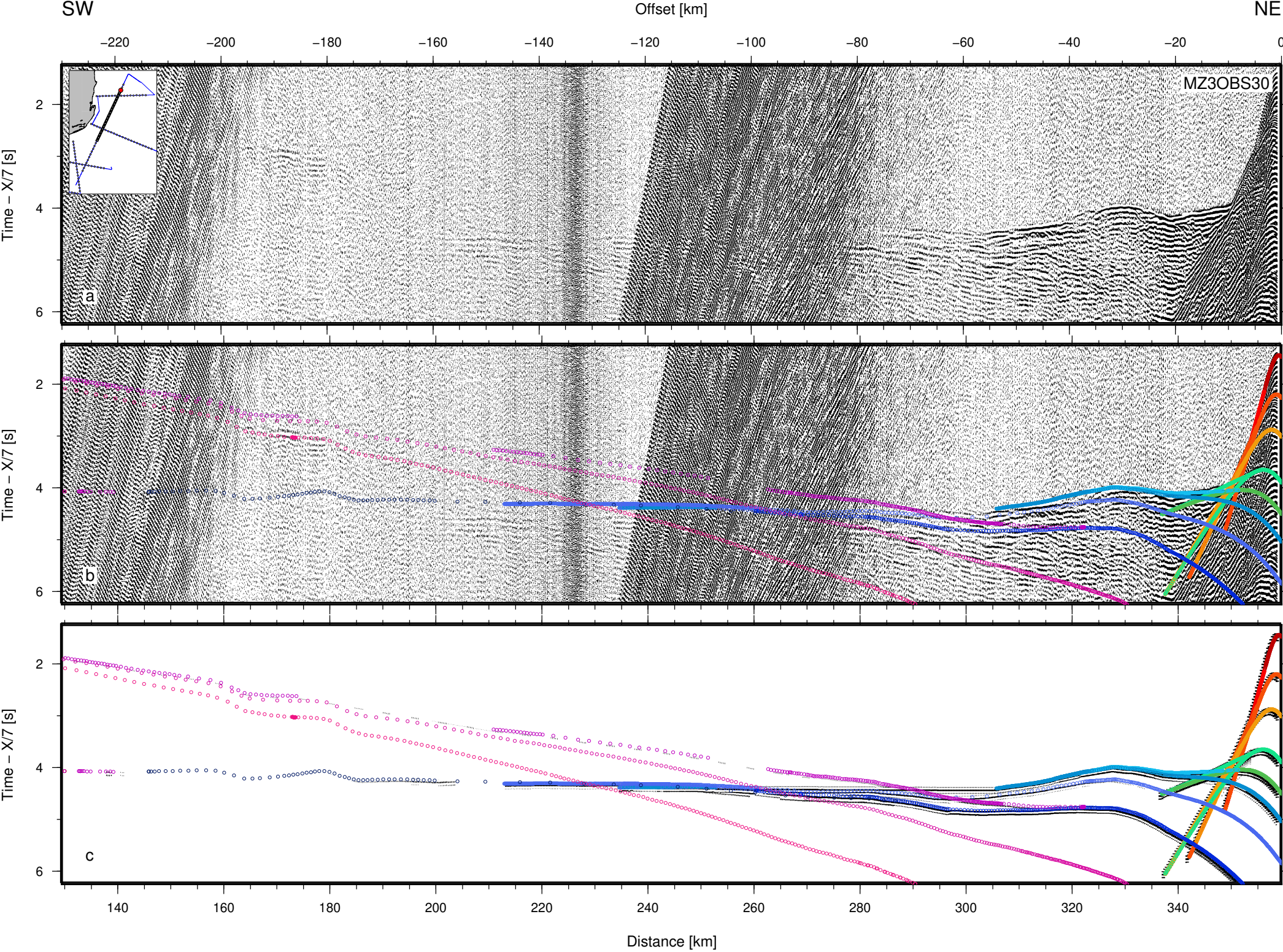

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS31
Time – X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
BS31
f
380
400
420
440
460
480
500
520
540
560
580
600
Distance [km]

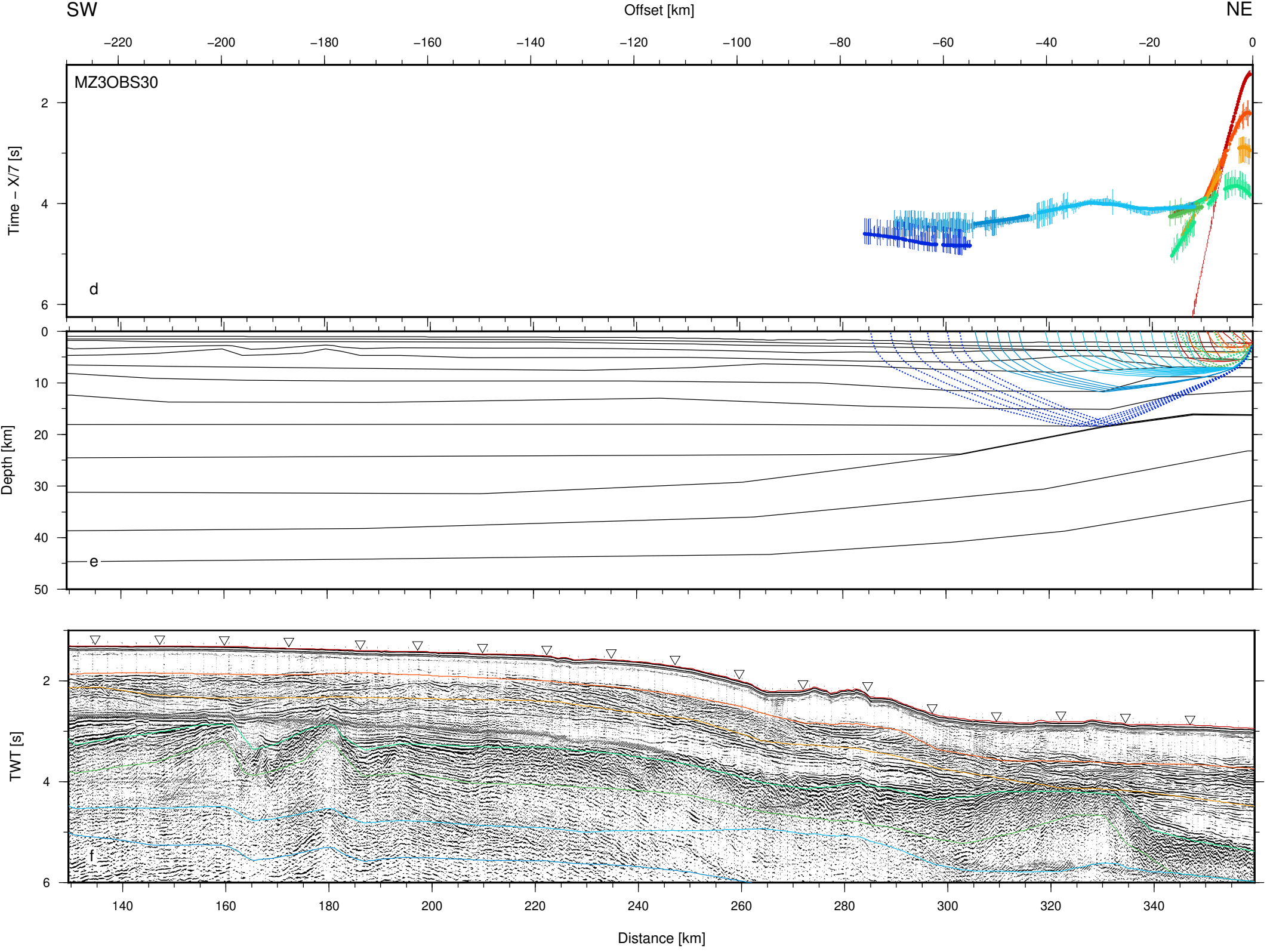

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS31
a
b
c
Time − X/7 [s]
2
4
6
160
180
200
220
240
260
280
300
320
340
360
Distance [km]

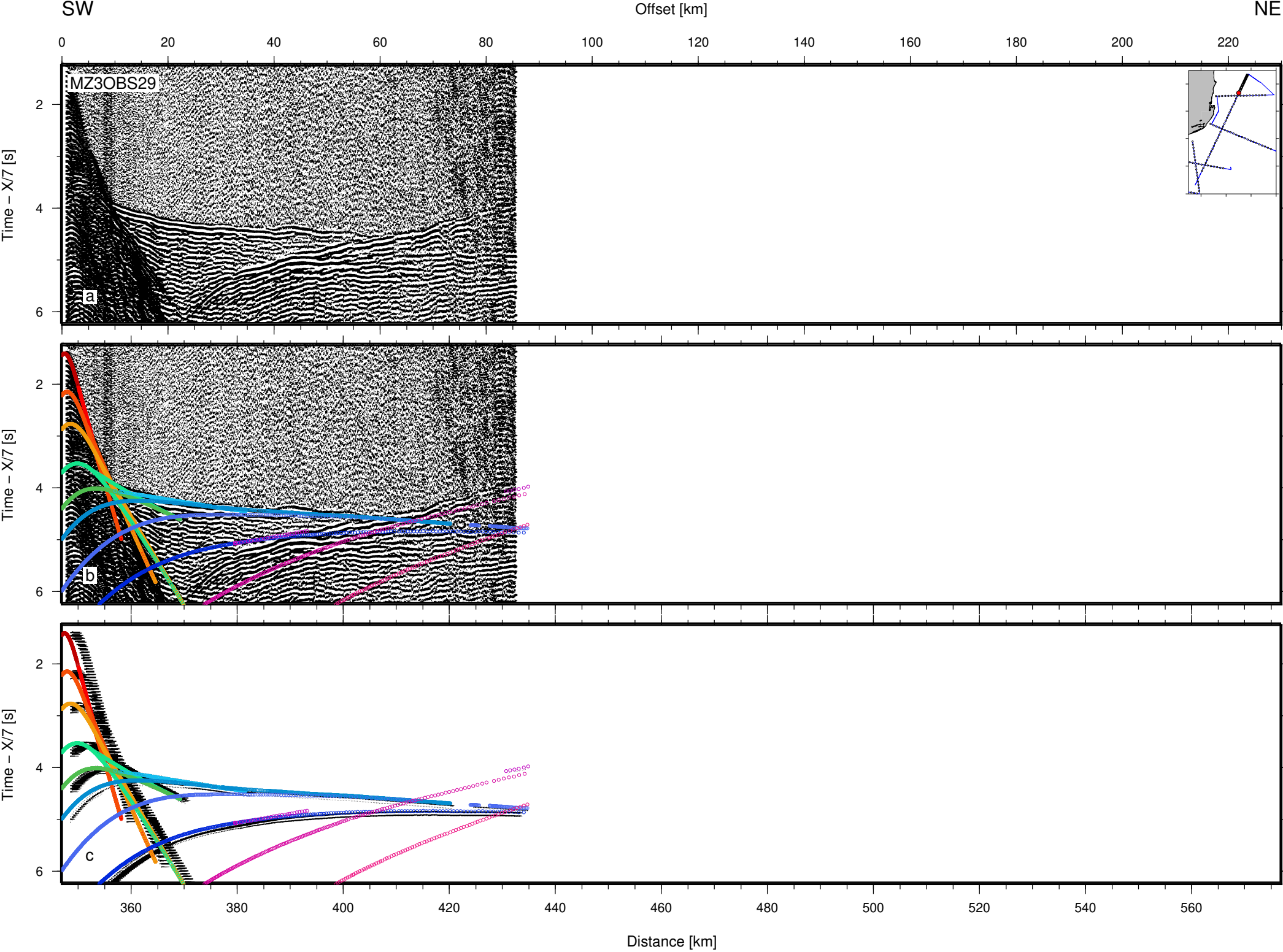

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS31
d
Time − X/7 [s]
2
4
6
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
160
180
200
220
240
260
280
300
320
340
360
Distance [km]

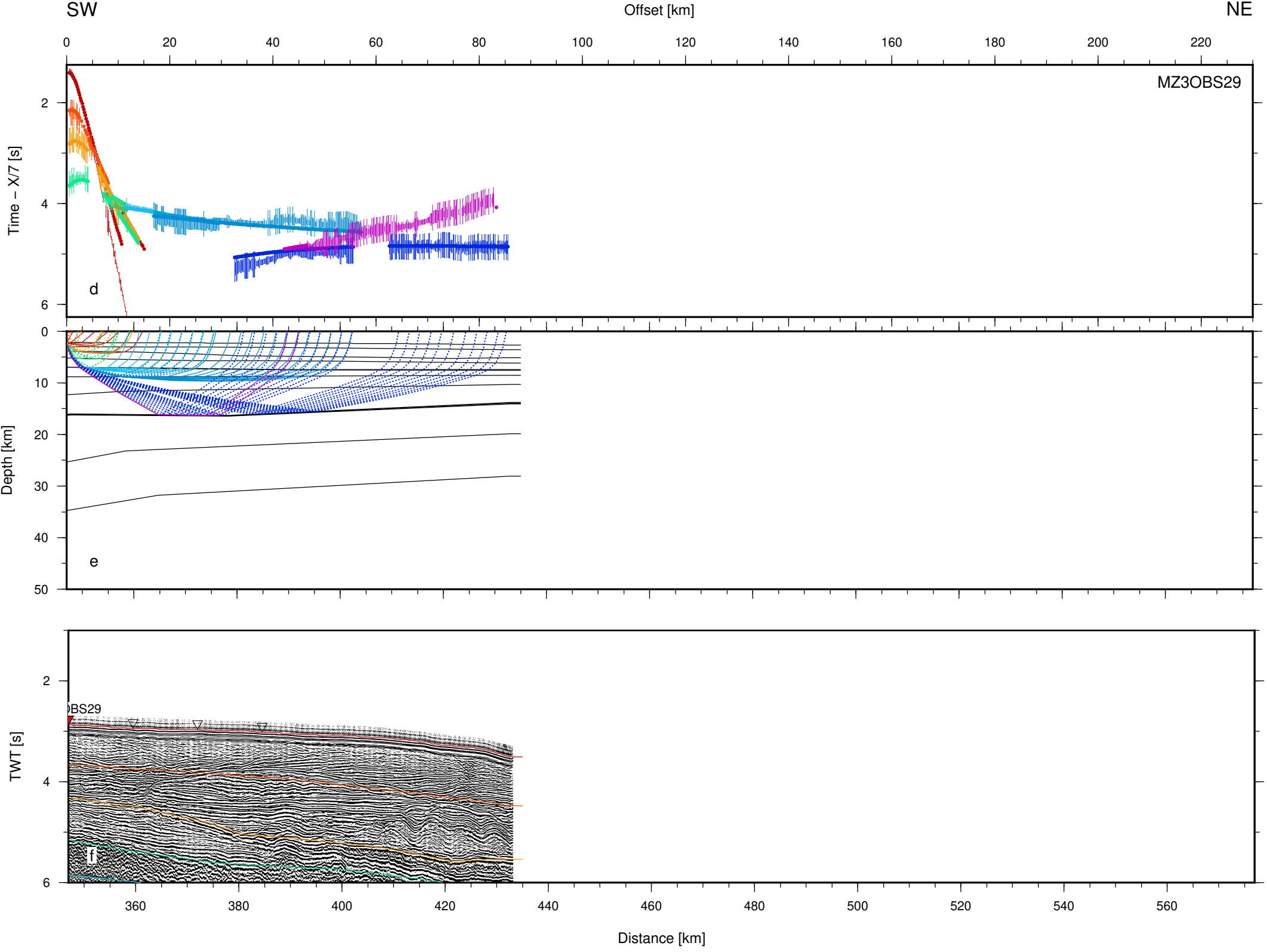

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS30
a
b
c
Time – X/7 [s]
2
4
6
360
380
400
420
440
460
480
500
520
540
560
580
Distance [km]

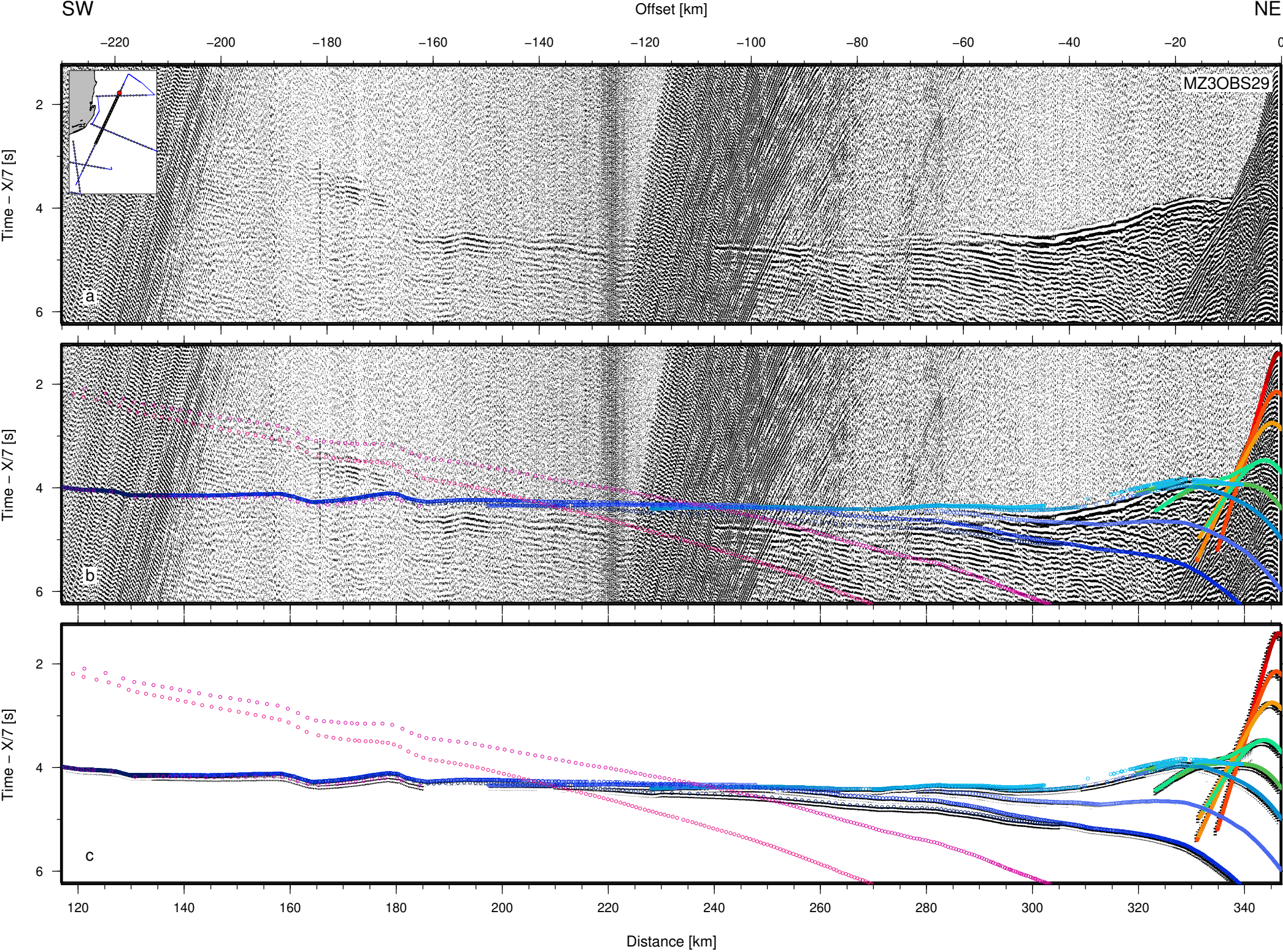

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS30
Time – X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
BS30
f
360
380
400
420
440
460
480
500
520
540
560
580
Distance [km]

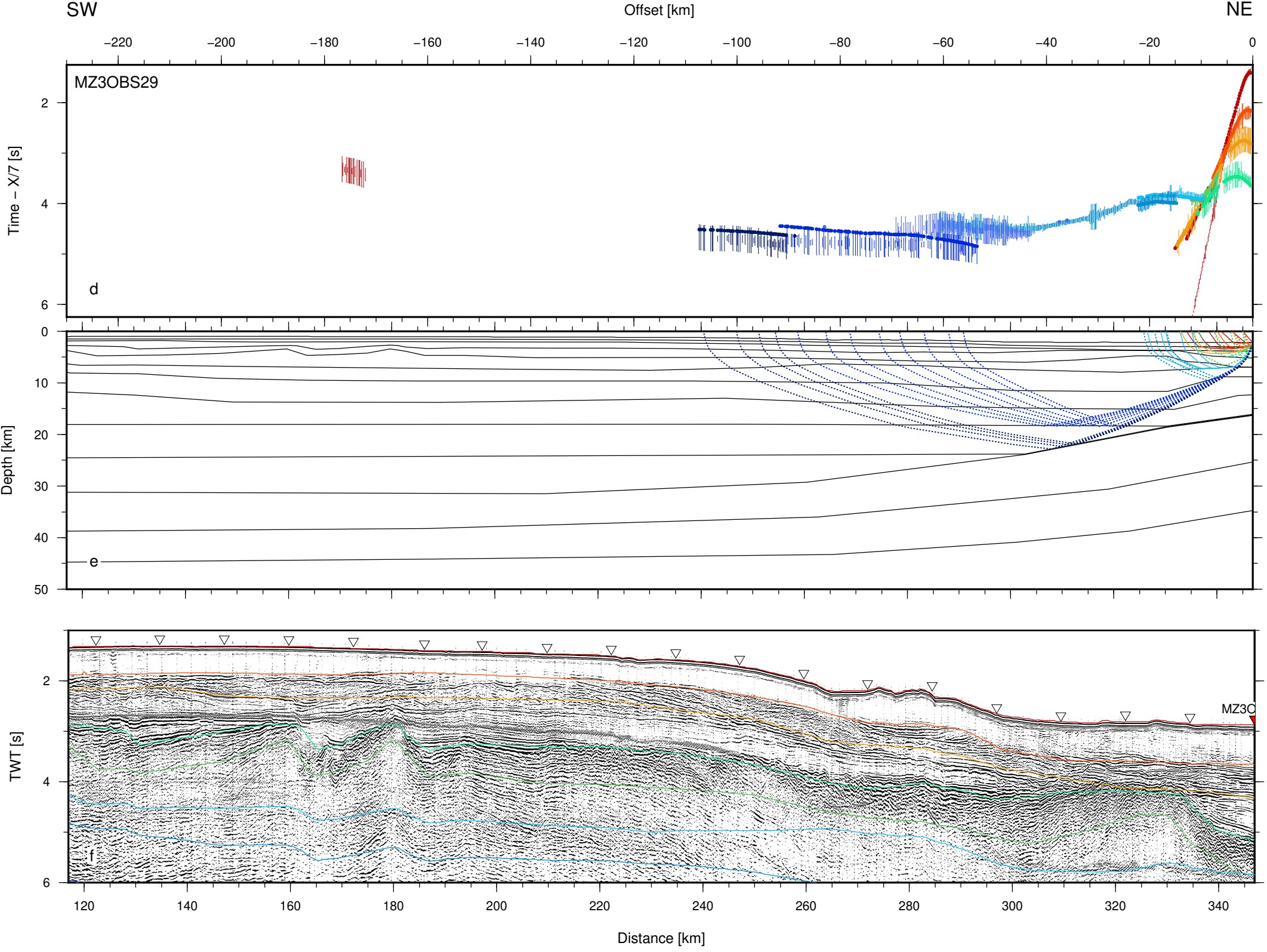

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS30
a
b
c
Time − X/7 [s]
2
4
6
140
160
180
200
220
240
260
280
300
320
340
Distance [km]

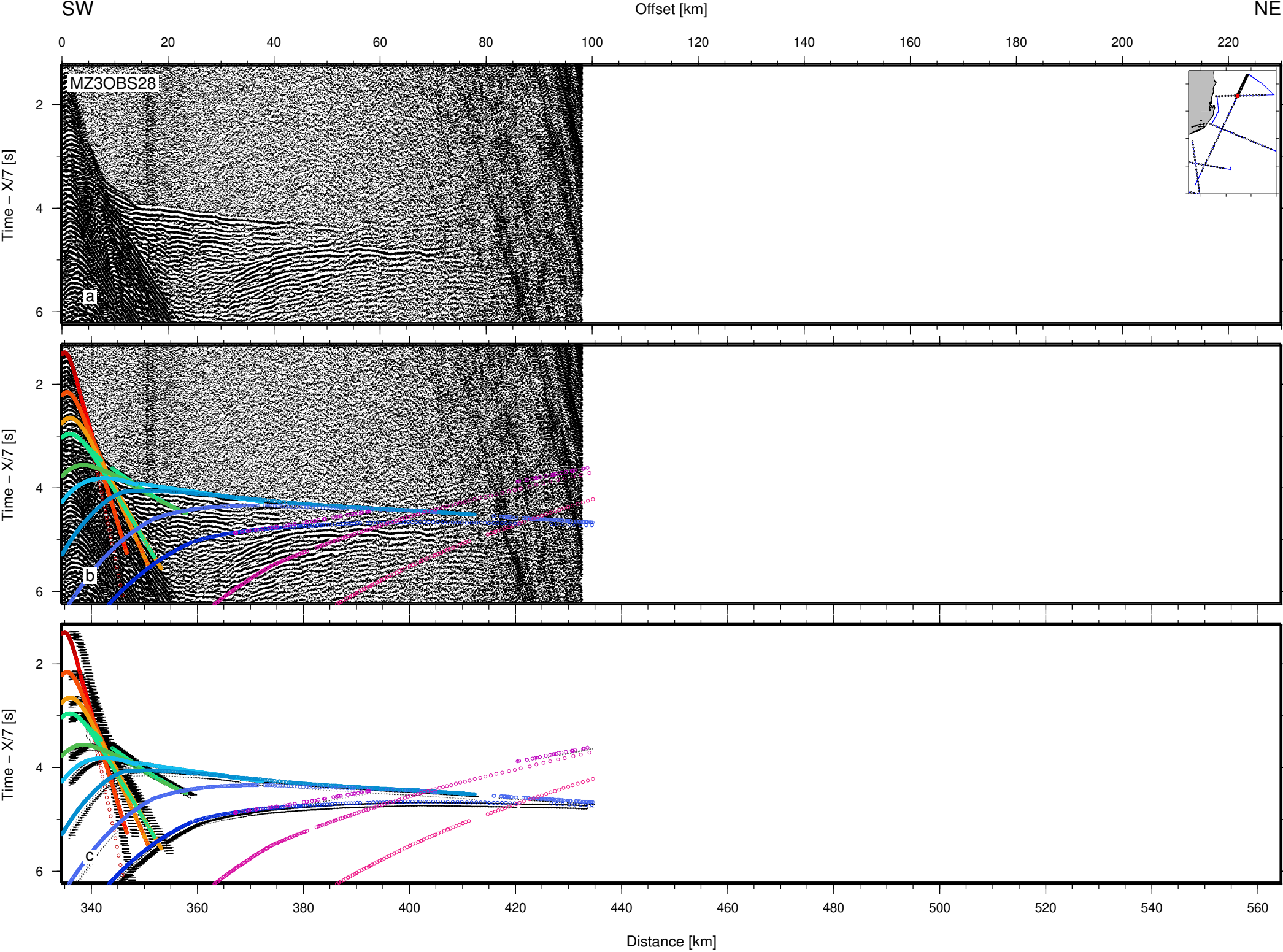

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS30
Time − X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
140
160
180
200
220
240
260
280
300
320
340
Distance [km]

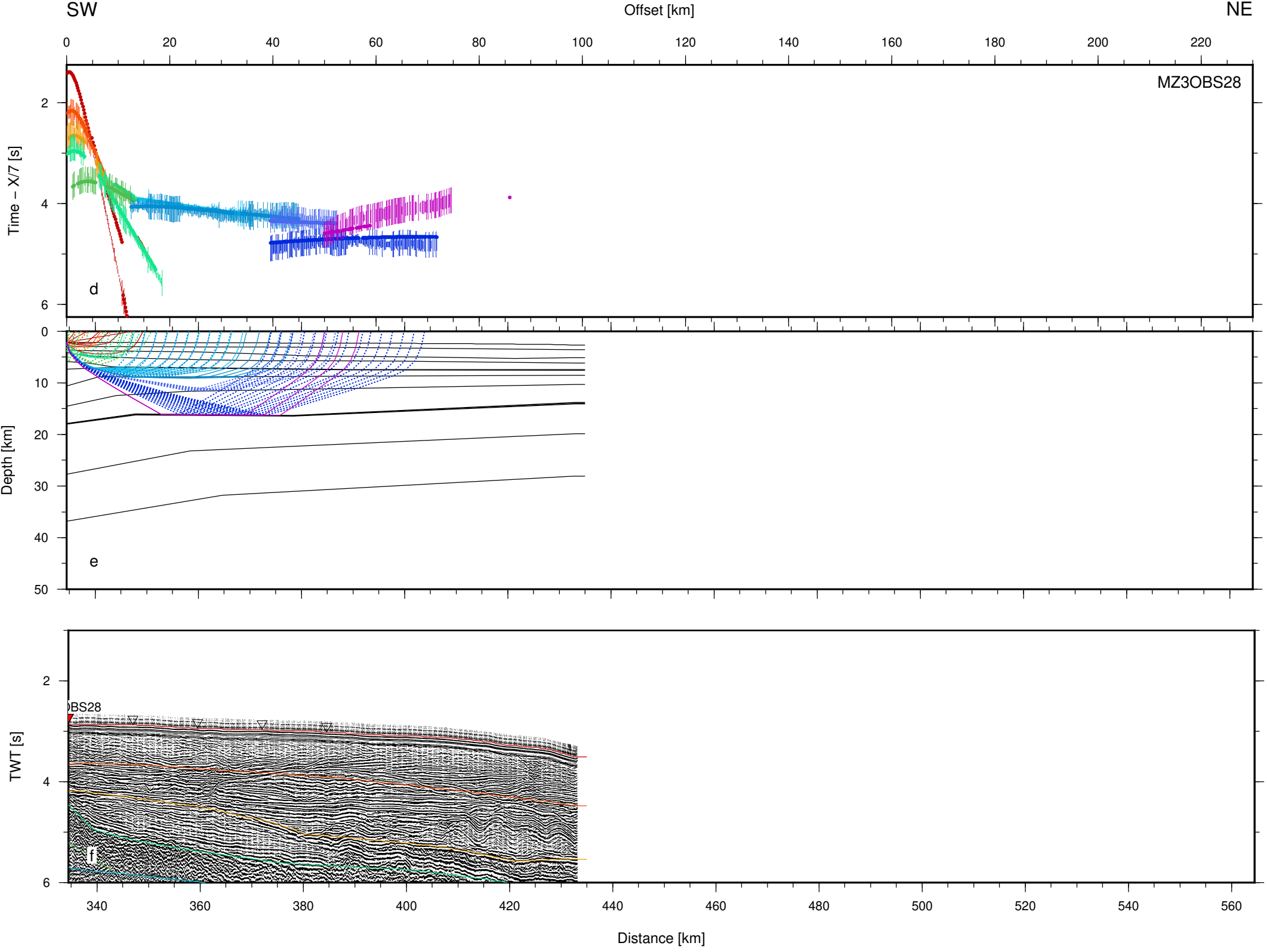

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS29
a
b
c
Time – X/7 [s]
2
4
6
360
380
400
420
440
460
480
500
520
540
560
Distance [km]

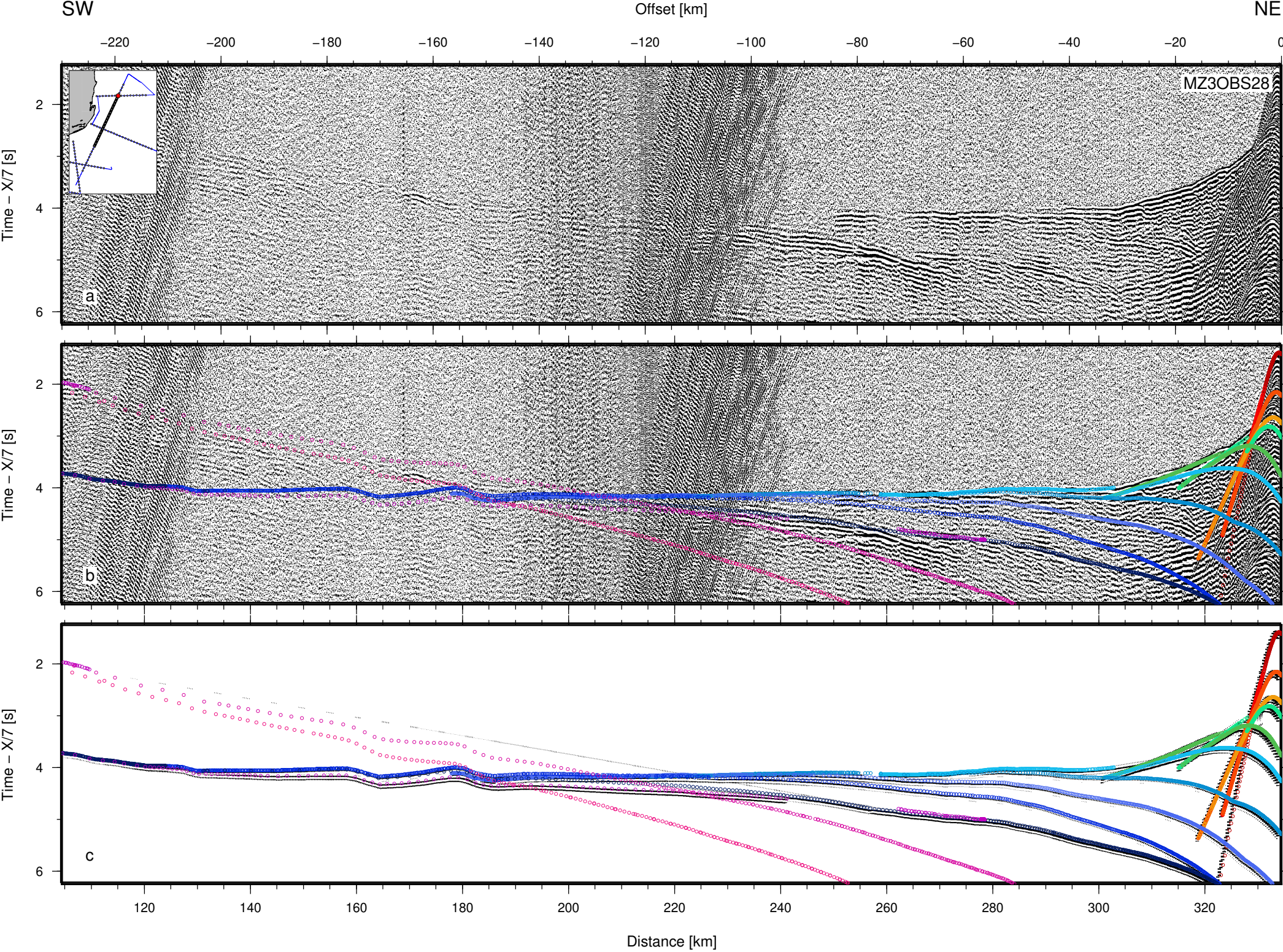

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS29
Time – X/7 [s]
2
4
6
d
0
10
20
30
40
50
Depth [km]
e
TWT [s]
2
4
6
BS29
f
360
380
400
420
440
460
480
500
520
540
560
Distance [km]

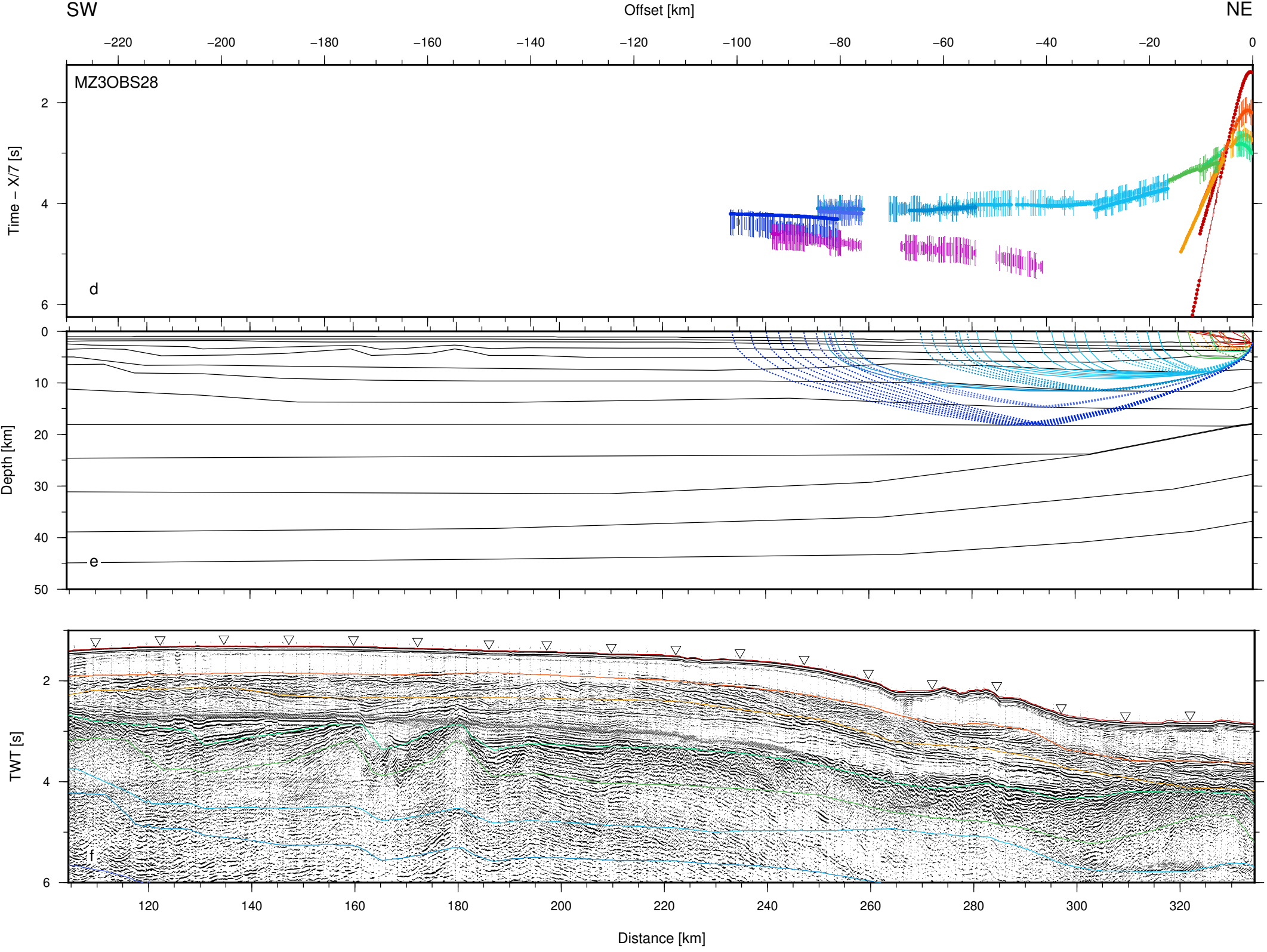

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS29
a
b
c
Time − X/7 [s]
2
4
6
120
140
160
180
200
220
240
260
280
300
320
340
Distance [km]

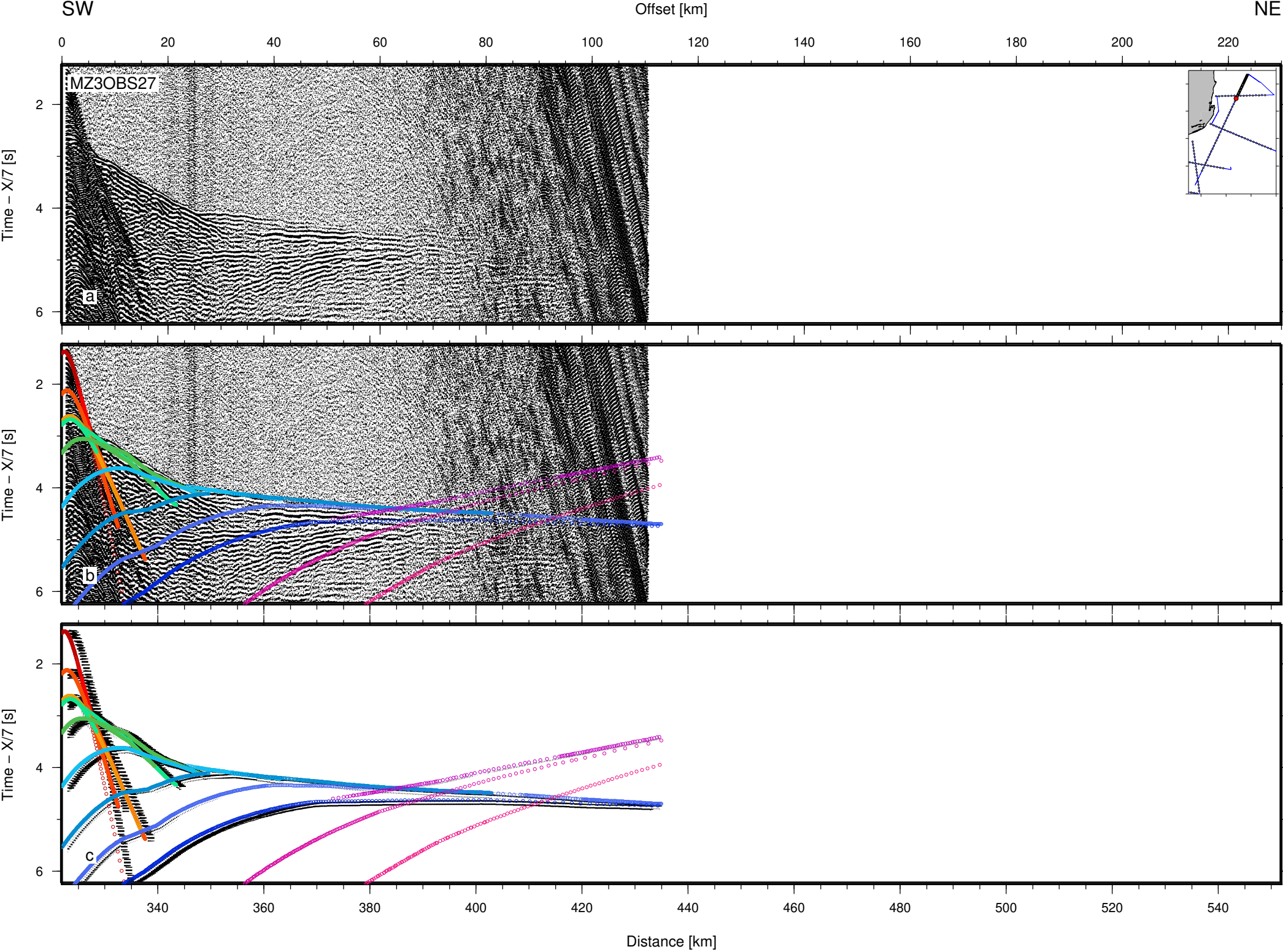

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS29
Time − X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
MZ3O
120
140
160
180
200
220
240
260
280
300
320
340
Distance [km]

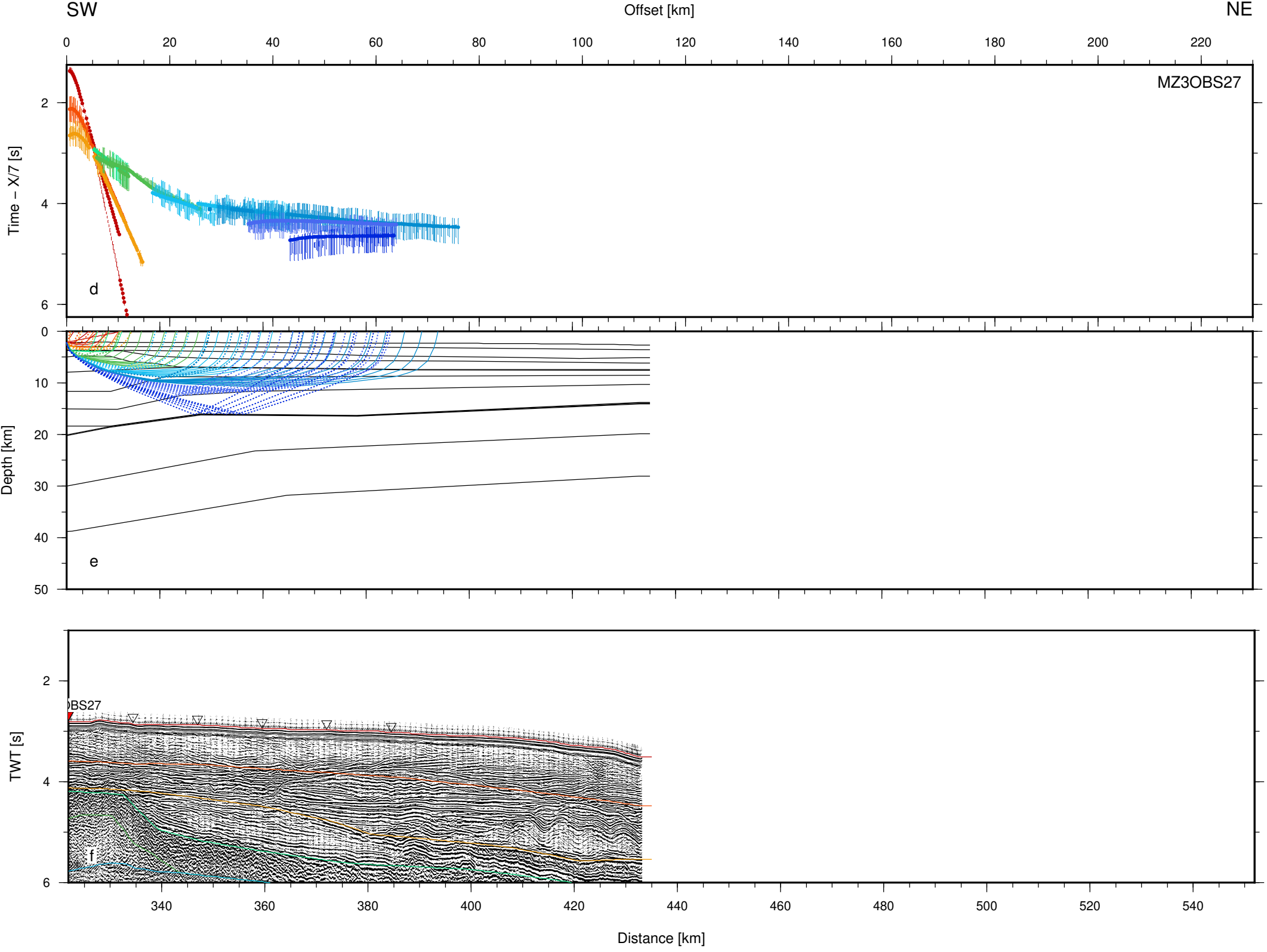

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS28
a
b
c
Time – X/7 [s]
2
4
6
340
360
380
400
420
440
460
480
500
520
540
560
Distance [km]

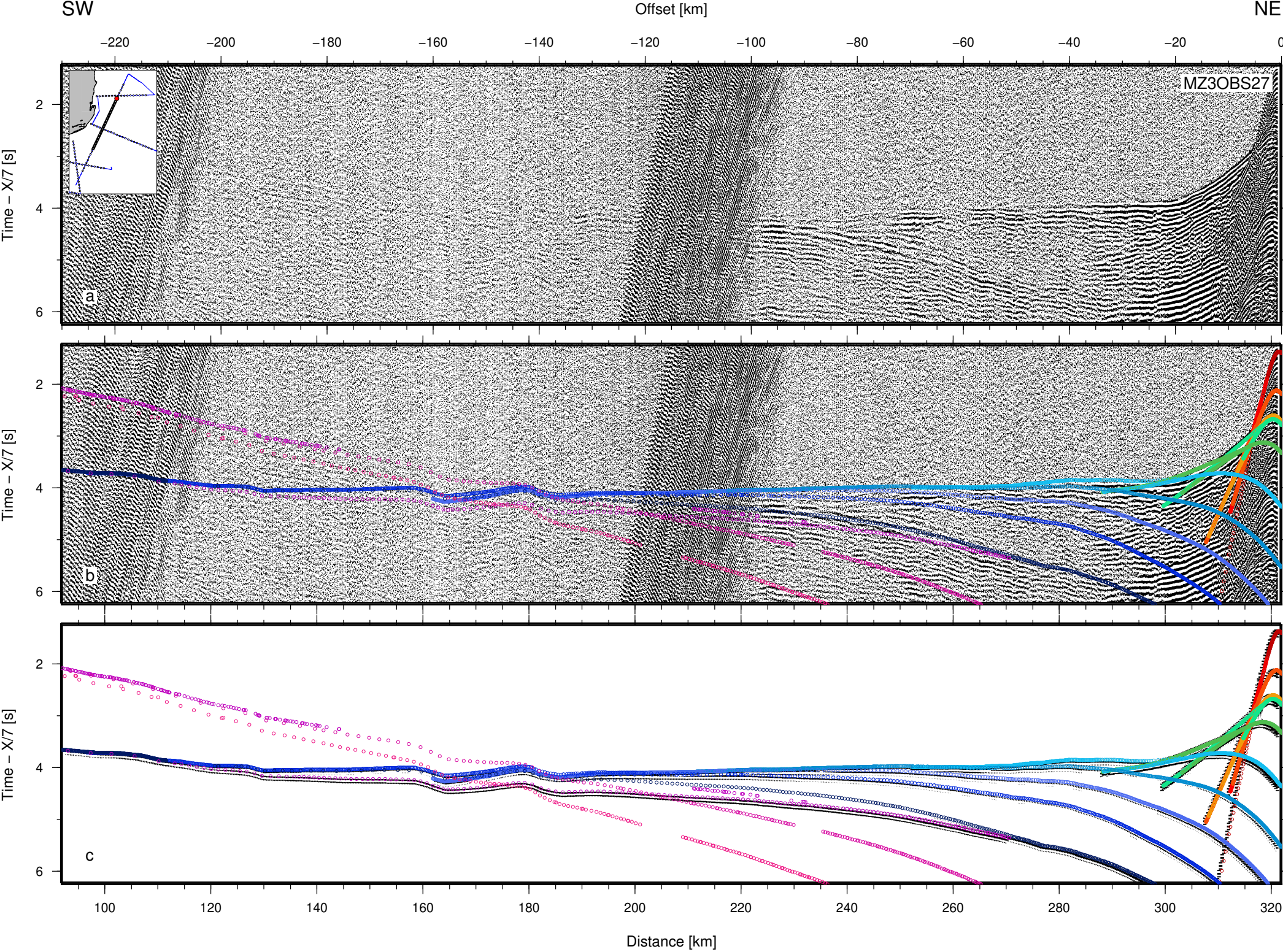

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS28
Time – X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
BS28
f
340
360
380
400
420
440
460
480
500
520
540
560
Distance [km]

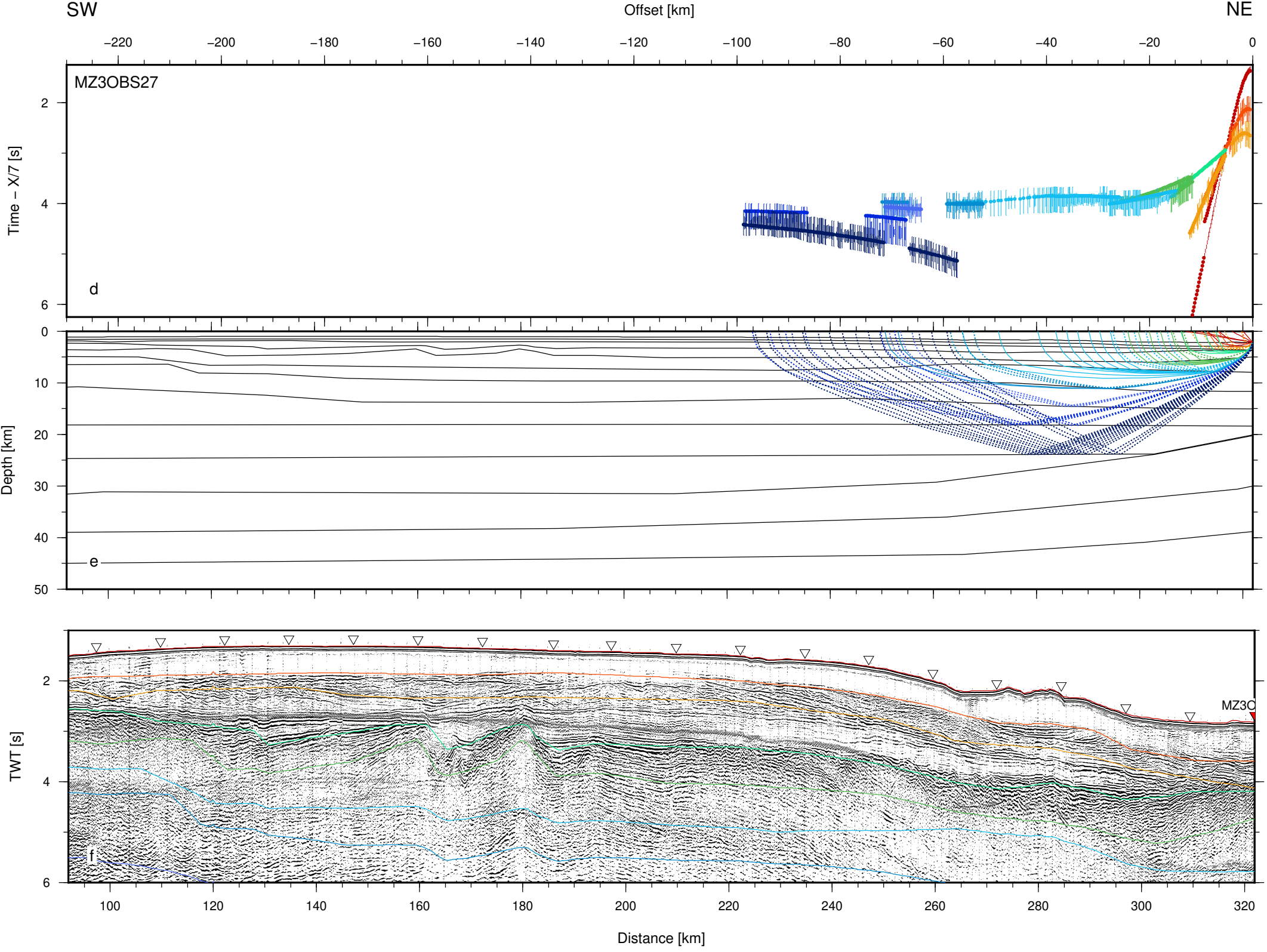

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS28
a
b
c
Time − X/7 [s]
2
4
6
120
140
160
180
200
220
240
260
280
300
320
Distance [km]

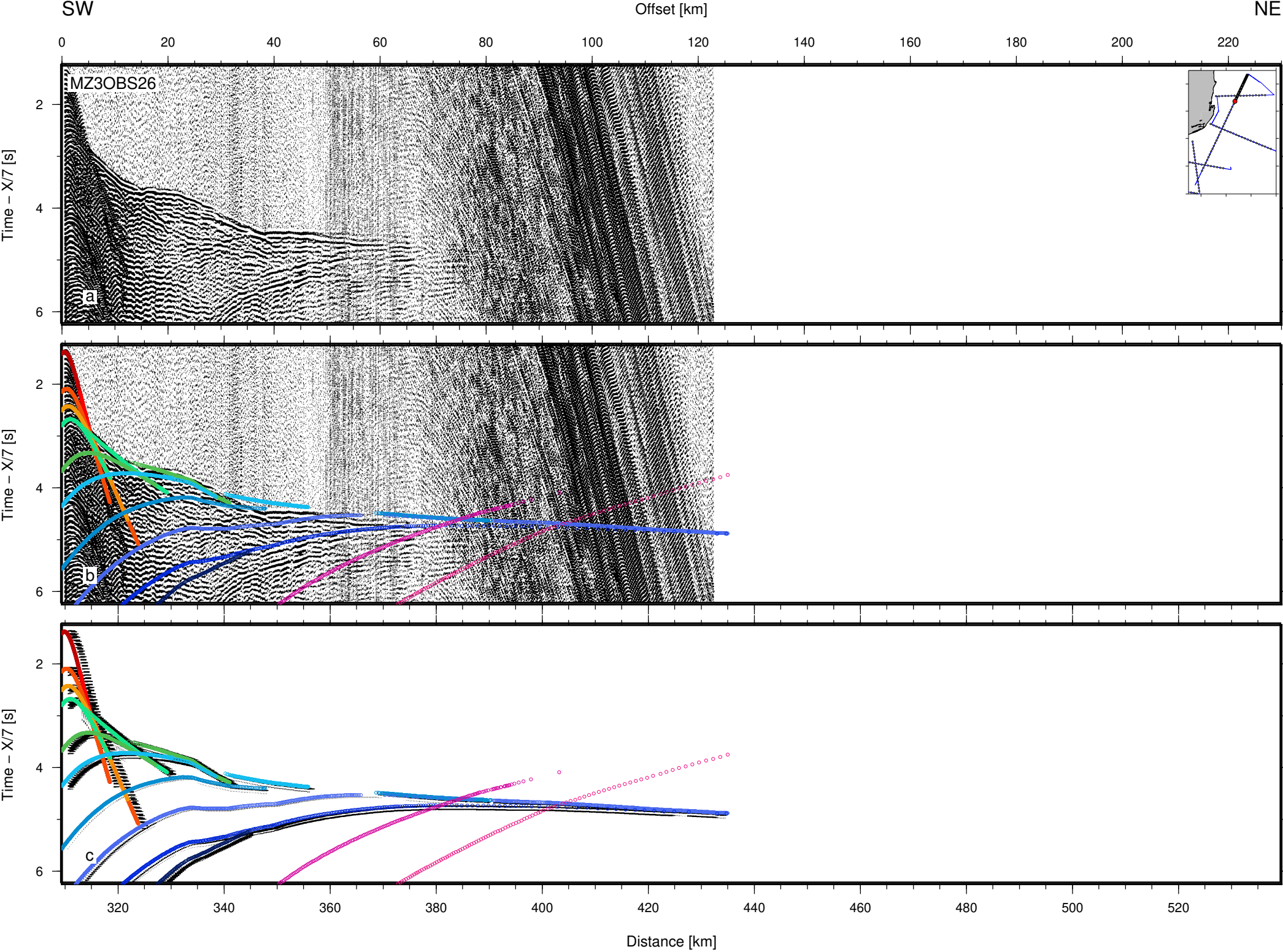

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS28
Time − X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
120
140
160
180
200
220
240
260
280
300
320
Distance [km]

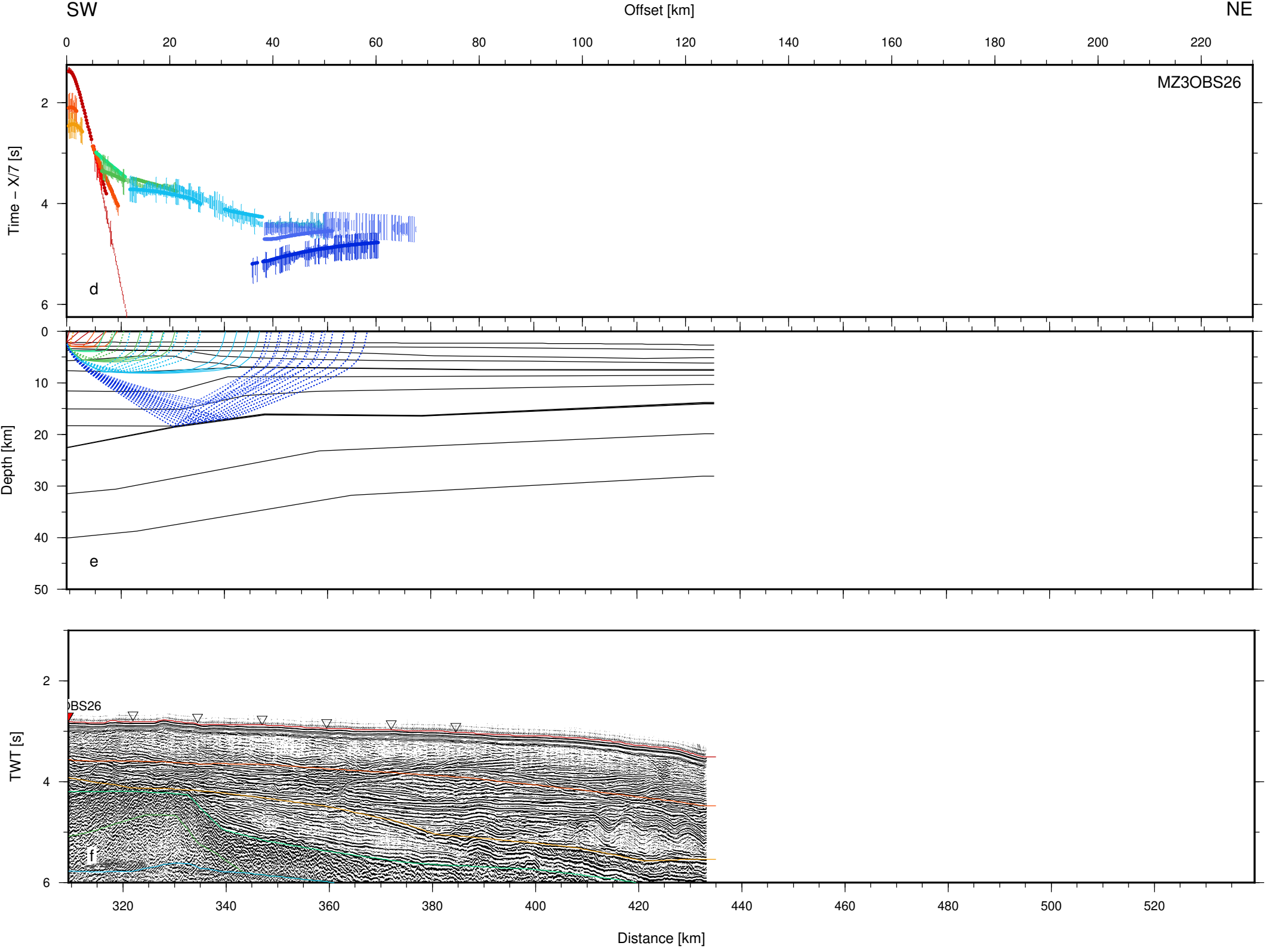

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS27
a
b
c
Time – X/7 [s]
2
4
6
340
360
380
400
420
440
460
480
500
520
540
Distance [km]

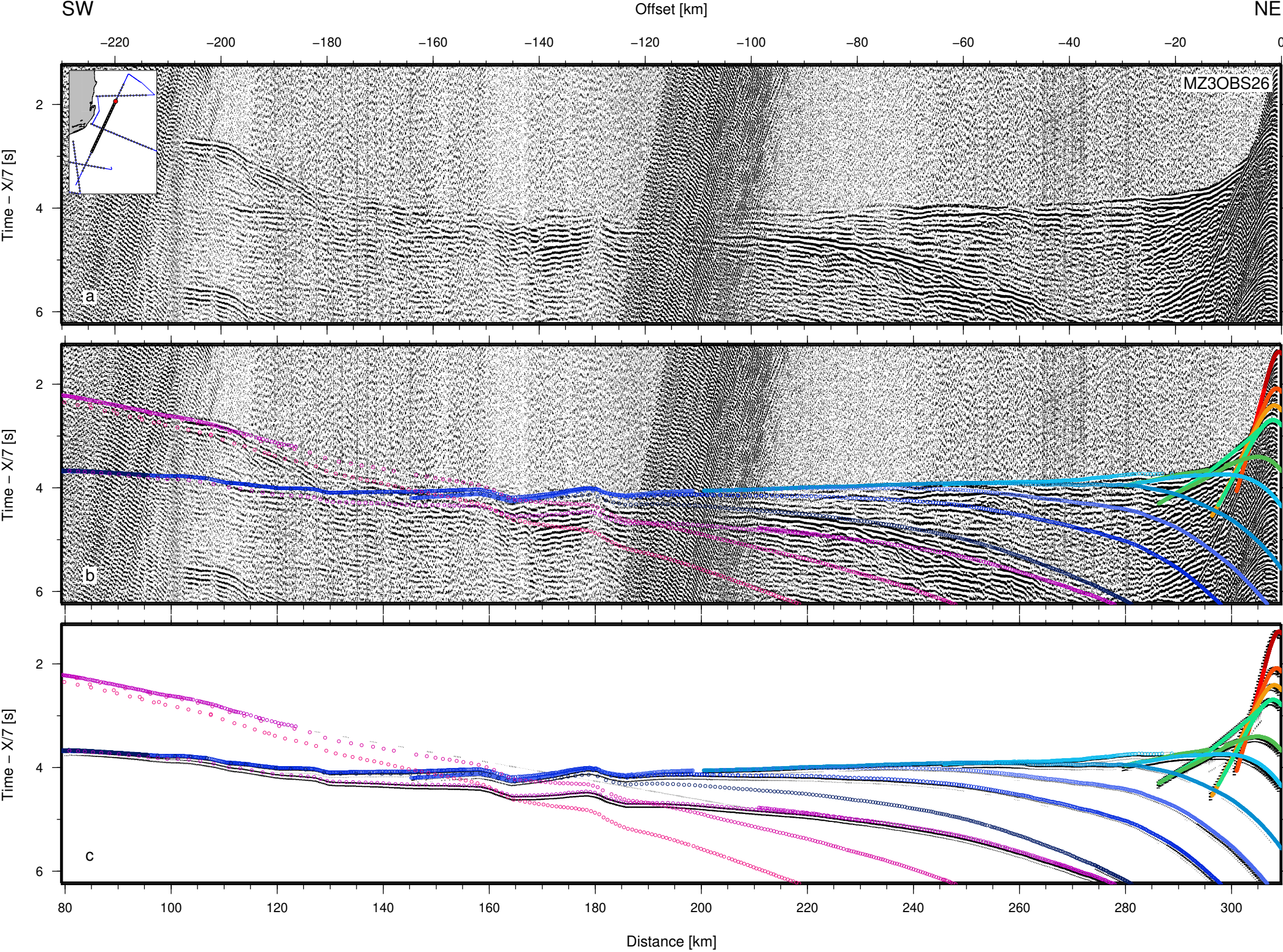

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS27
Time – X/7 [s]
2
4
6
d
0
10
20
30
40
50
Depth [km]
e
BS27
TWT [s]
2
4
6
f
340
360
380
400
420
440
460
480
500
520
540
Distance [km]

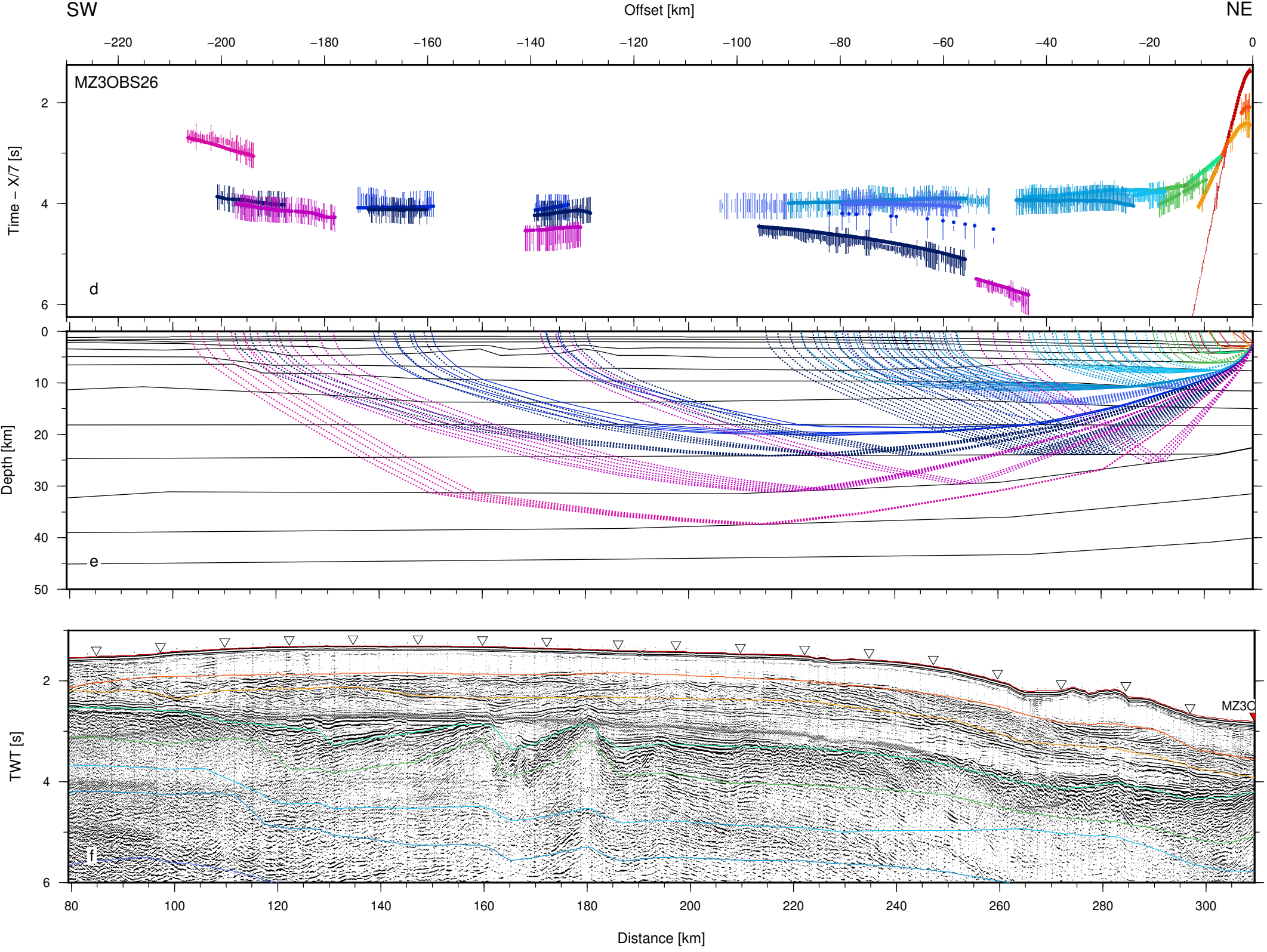

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS27
a
b
c
Time − X/7 [s]
2
4
6
100
120
140
160
180
200
220
240
260
280
300
320
Distance [km]

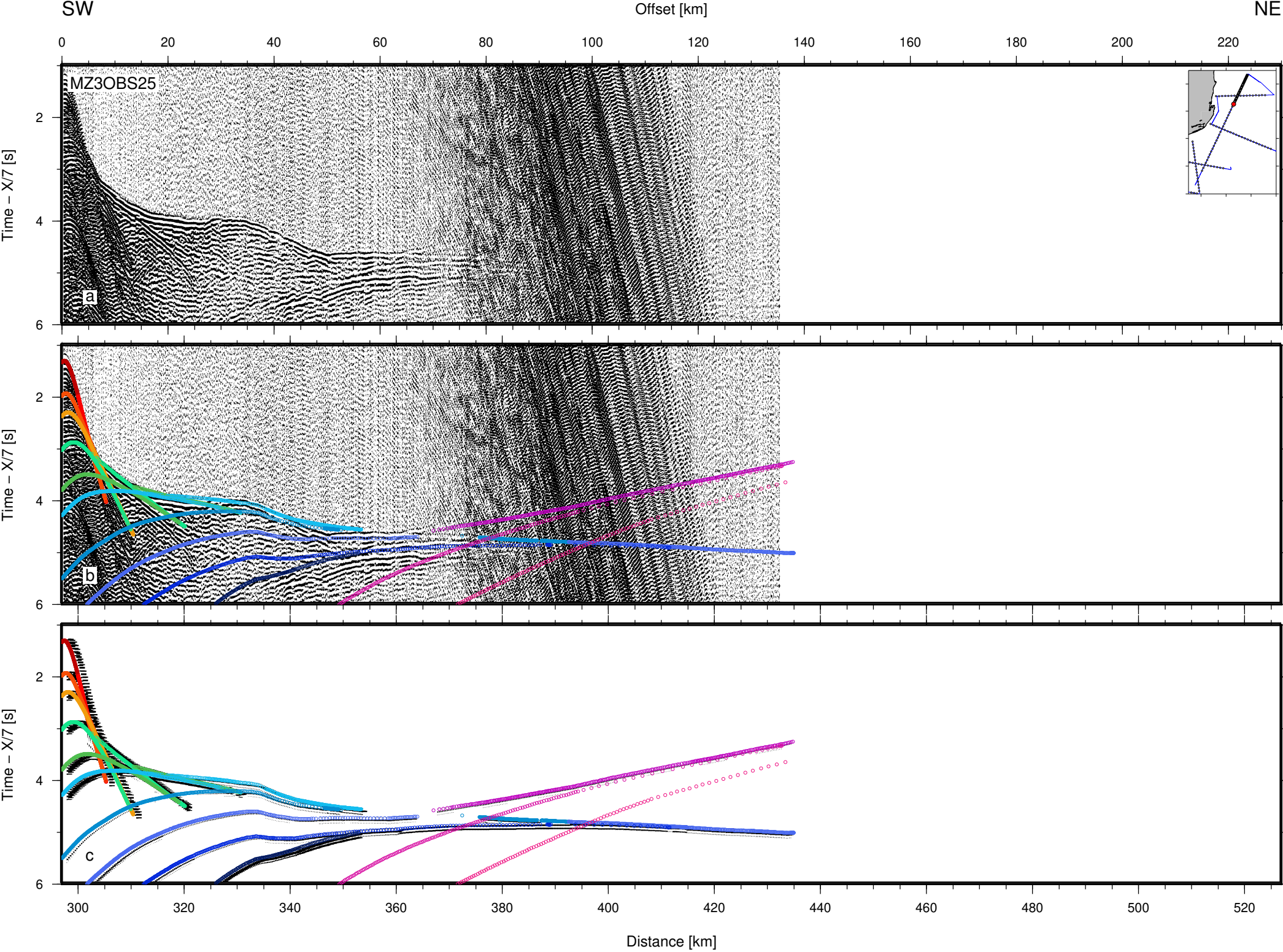

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS27
Time − X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
MZ3O
100
120
140
160
180
200
220
240
260
280
300
320
Distance [km]

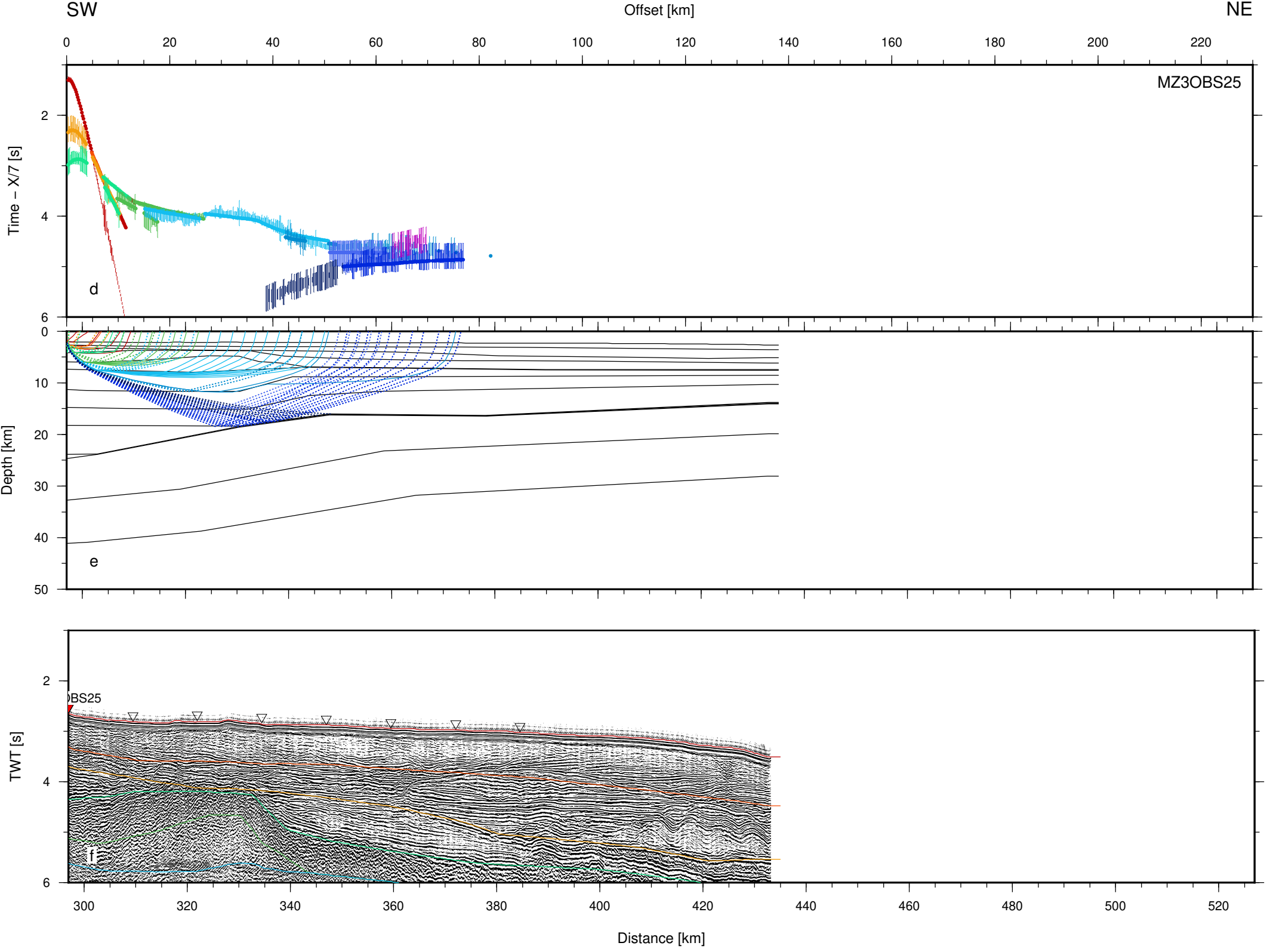

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS26
a
b
c
Time – X/7 [s]
2
4
6
320
340
360
380
400
420
440
460
480
500
520
Distance [km]

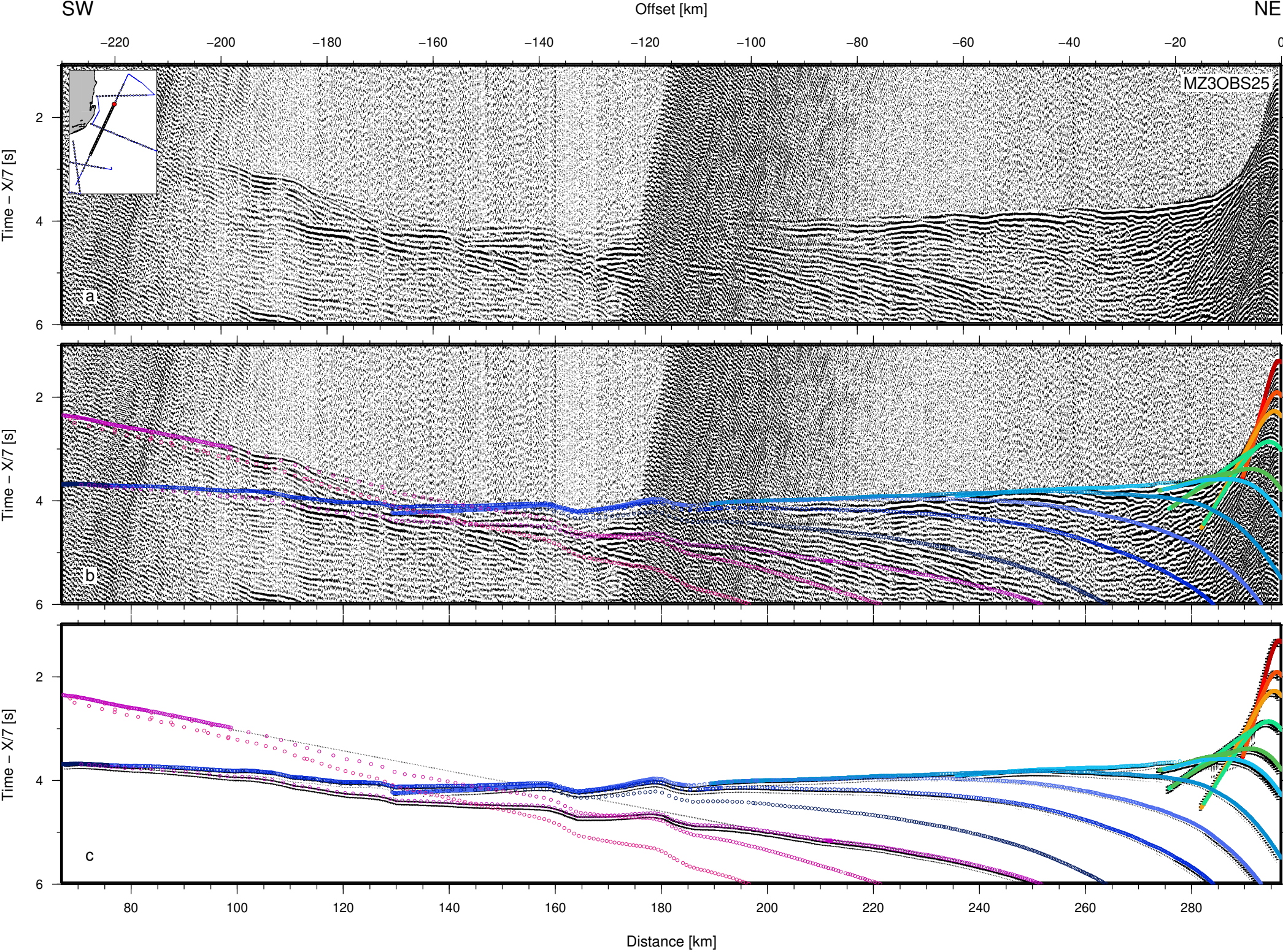

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS26
Time – X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
BS26
f
320
340
360
380
400
420
440
460
480
500
520
Distance [km]

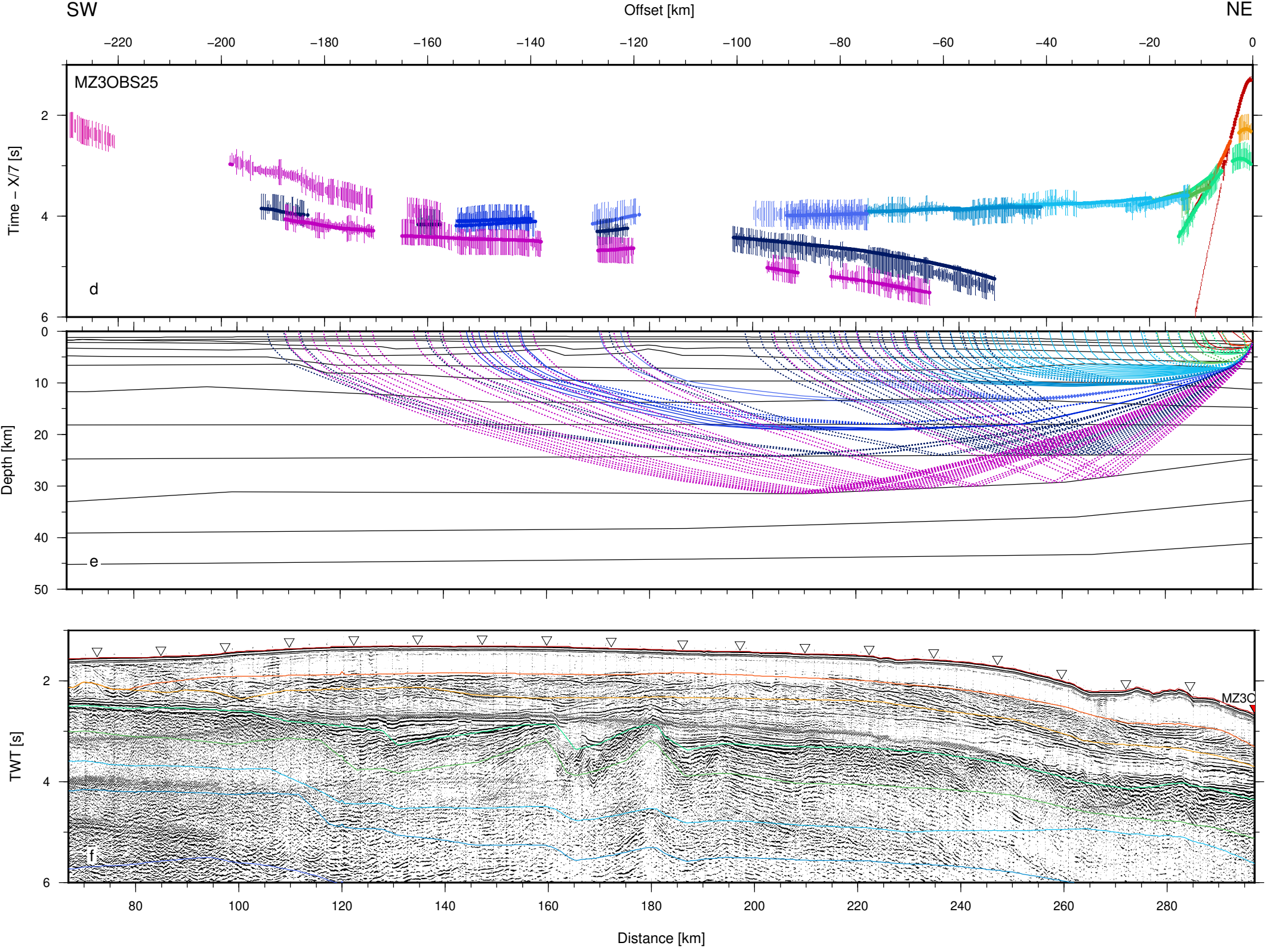

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS26
a
b
c
Time − X/7 [s]
2
4
6
80
100
120
140
160
180
200
220
240
260
280
300
Distance [km]

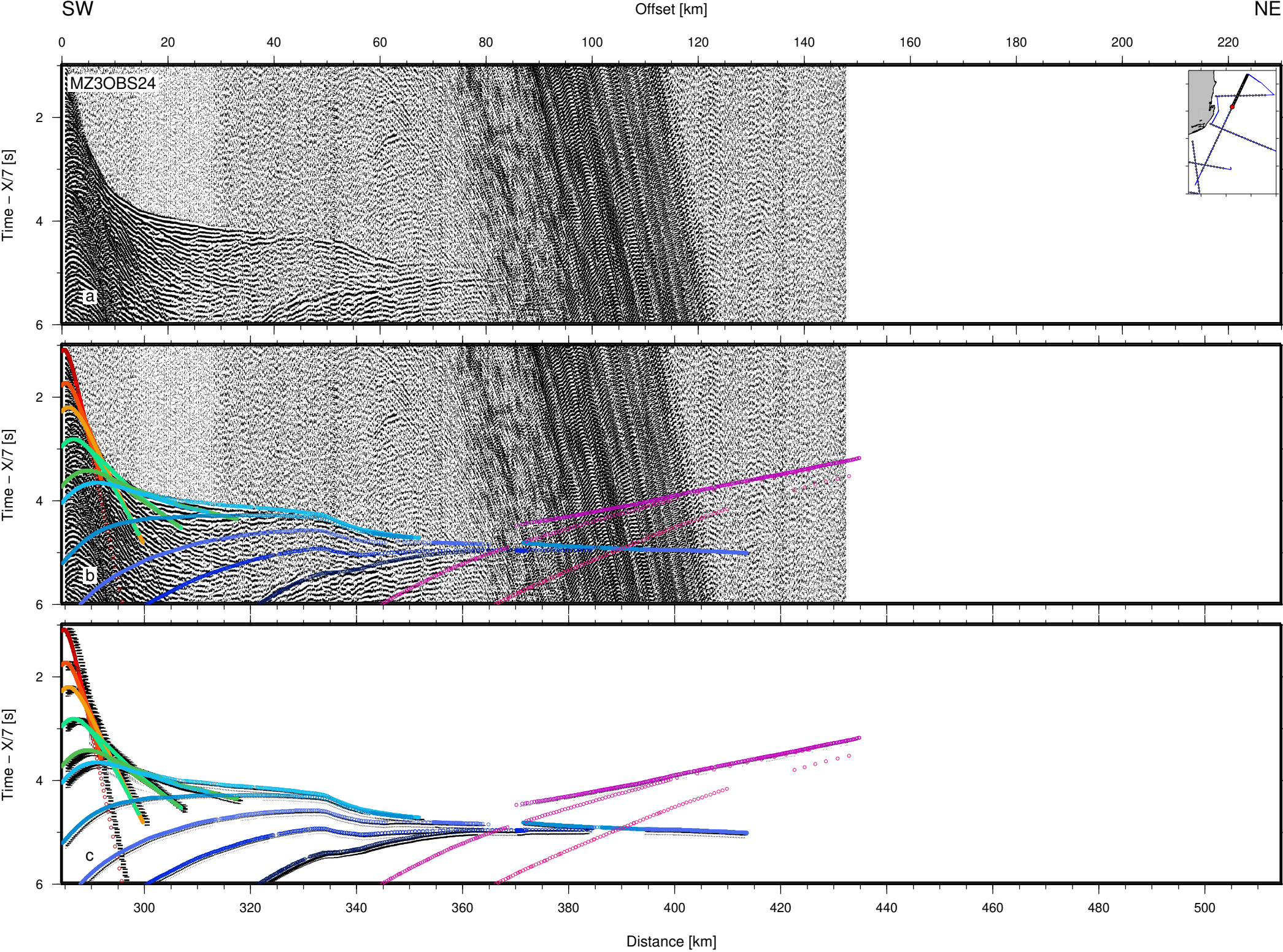

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS26
Time − X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
MZ3O
80
100
120
140
160
180
200
220
240
260
280
300
Distance [km]

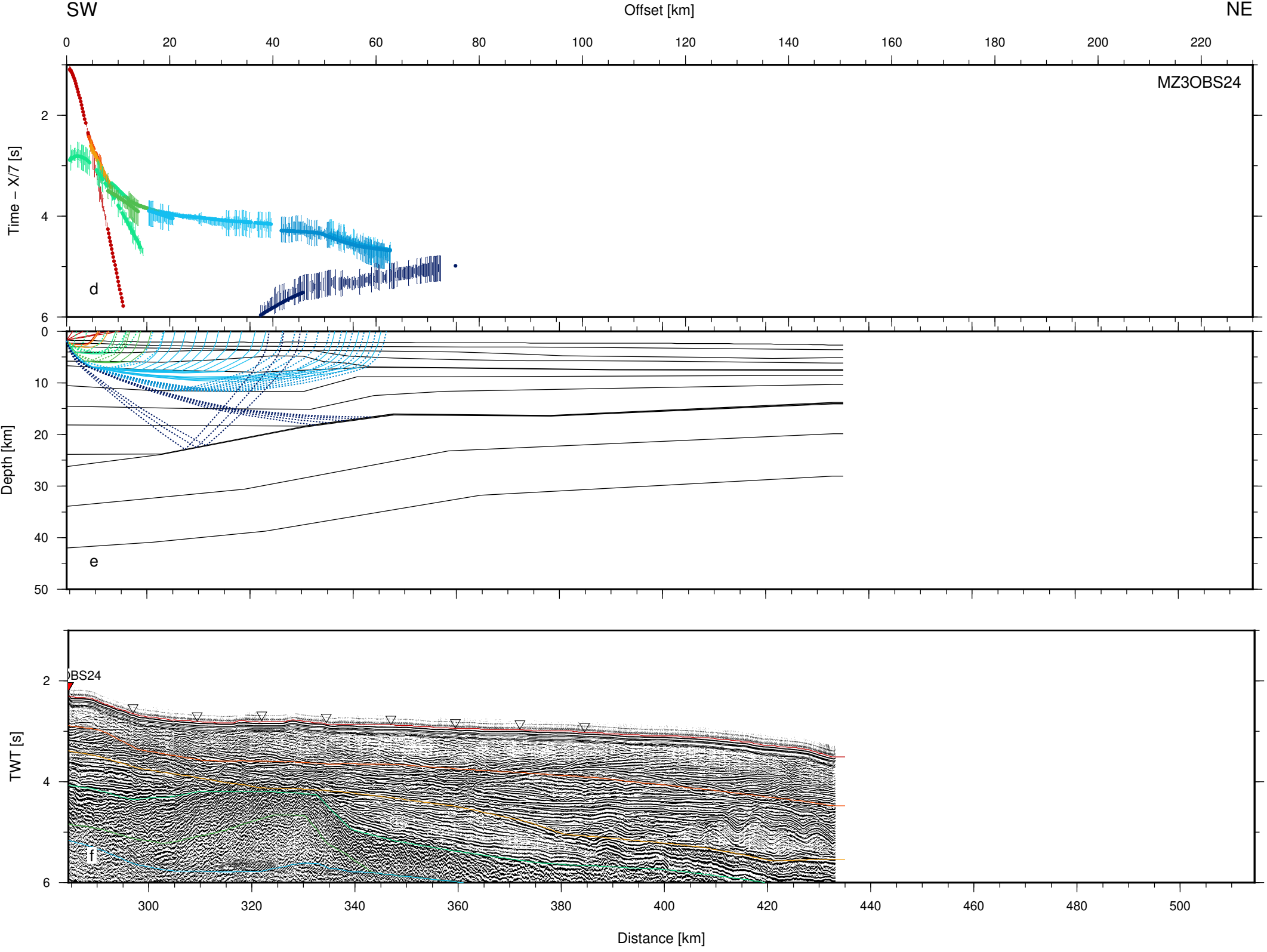

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS25
a
b
c
Time – X/7 [s]
2
4
6
300
320
340
360
380
400
420
440
460
480
500
520
Distance [km]

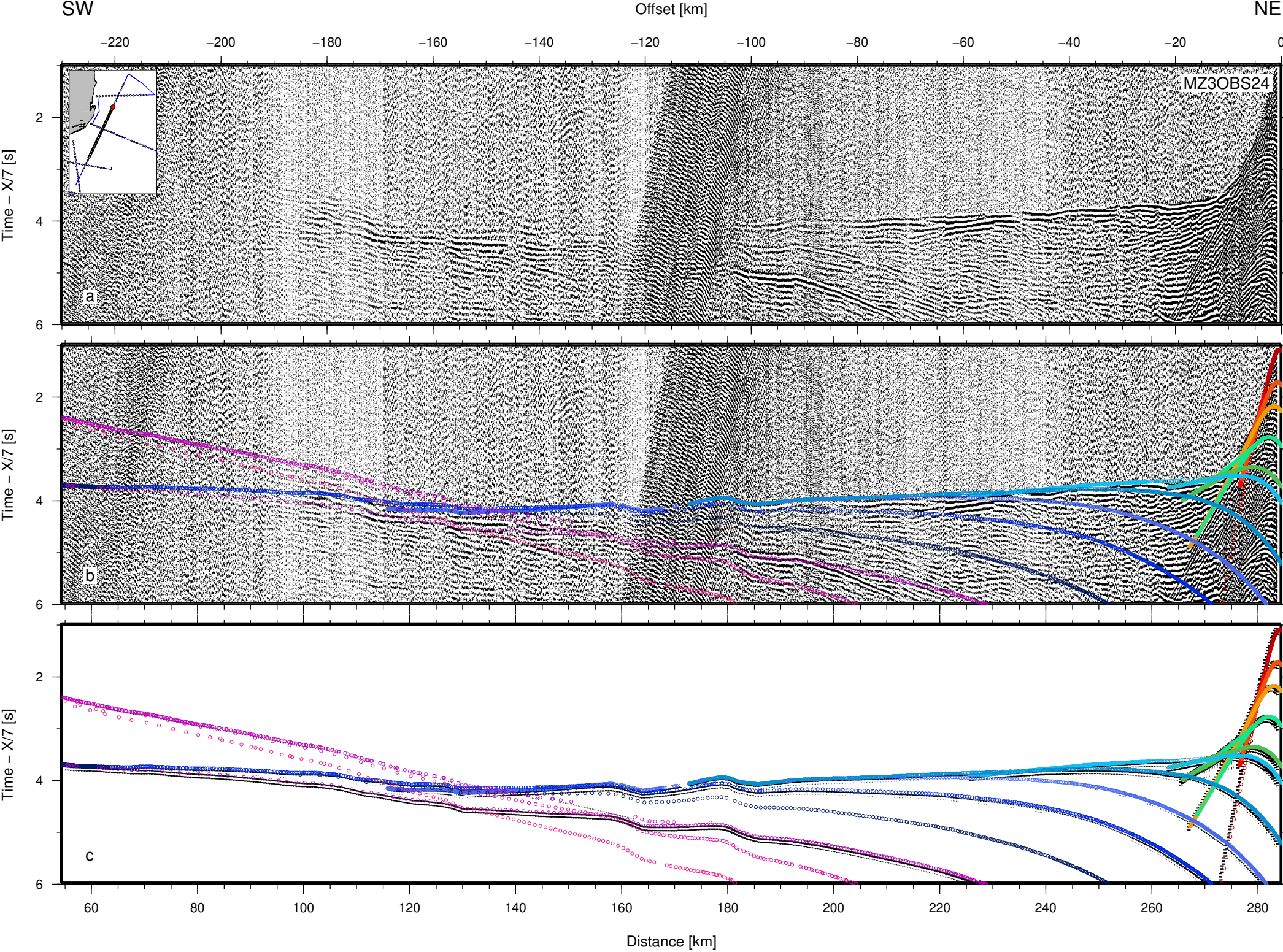

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS25
Time – X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
BS25
f
300
320
340
360
380
400
420
440
460
480
500
520
Distance [km]

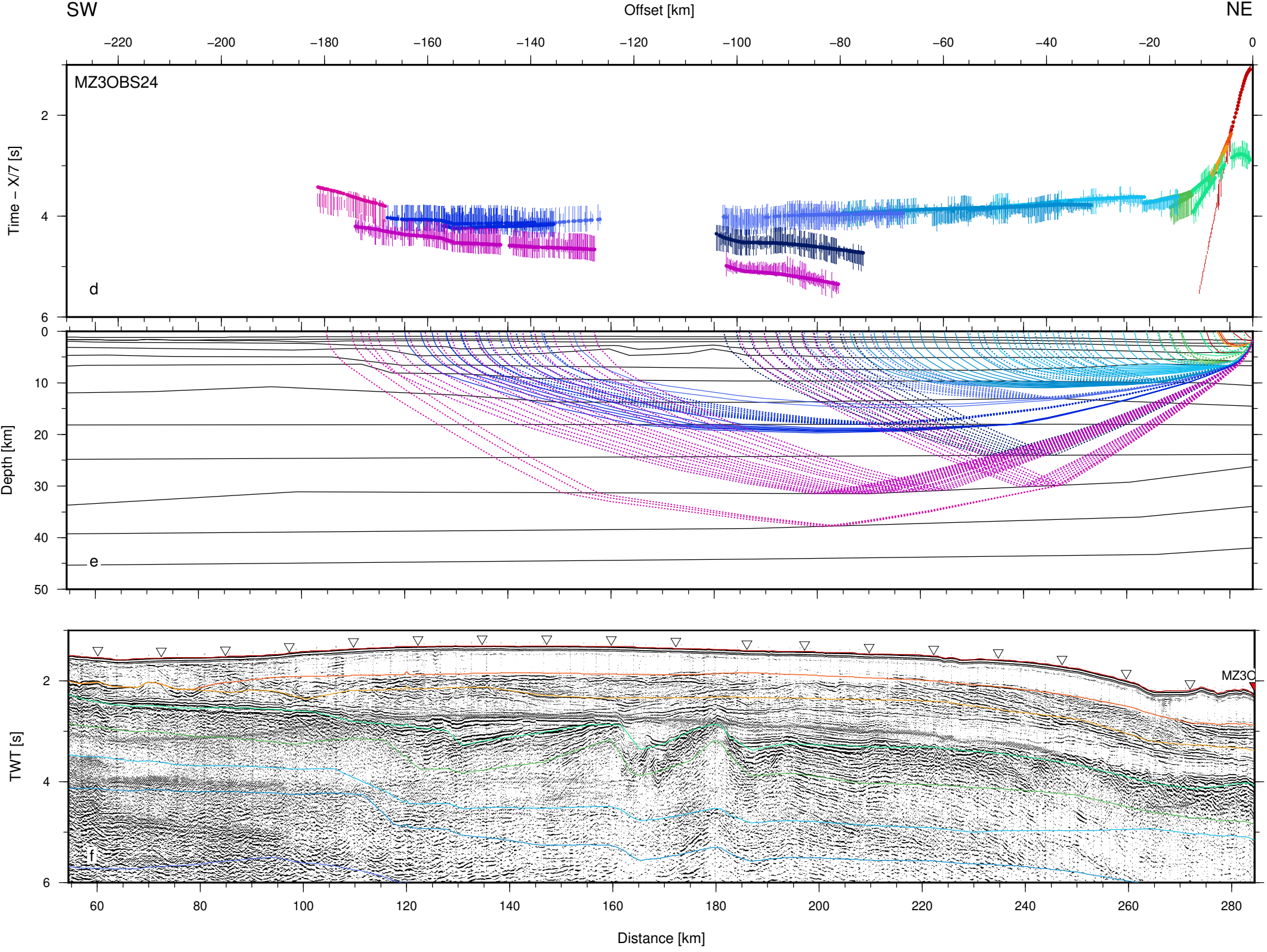

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS25
a
b
c
Time – X/7 [s]
2
4
6
80
100
120
140
160
180
200
220
240
260
280
Distance [km]

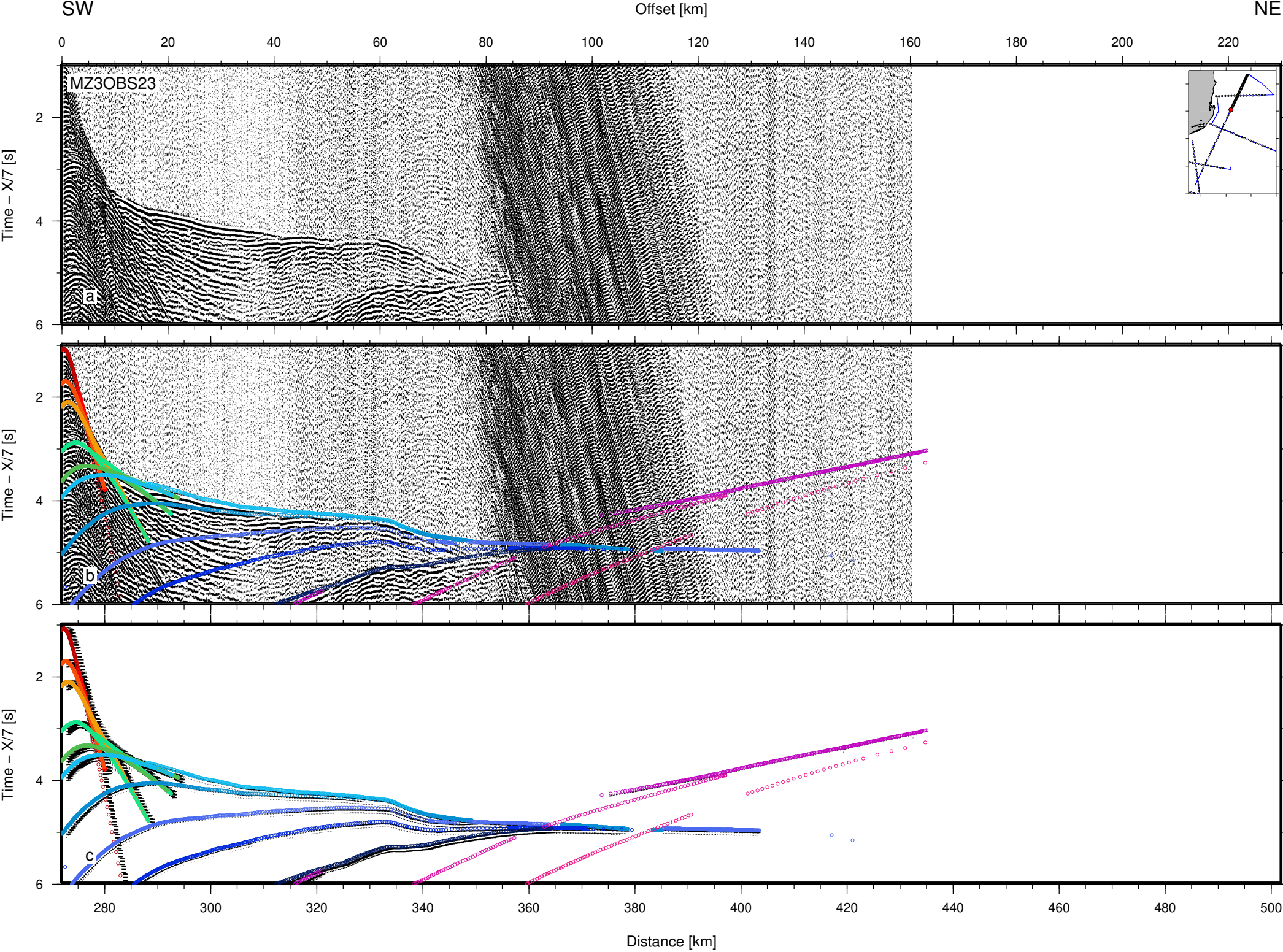

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS25
Time − X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
MZ3O
f
80
100
120
140
160
180
200
220
240
260
280
Distance [km]

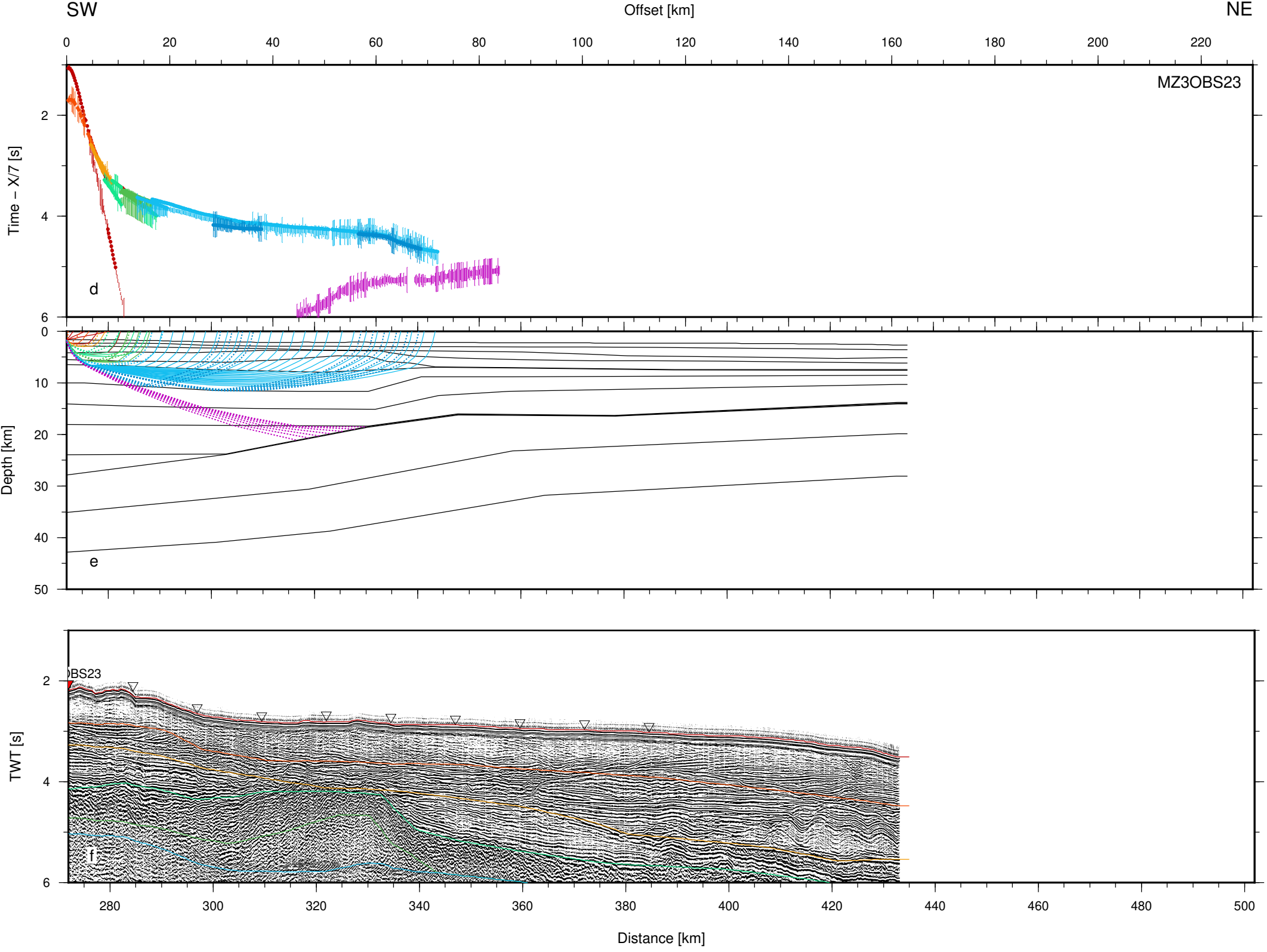

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS24
a
b
c
Time – X/7 [s]
2
4
6
300
320
340
360
380
400
420
440
460
480
500
Distance [km]

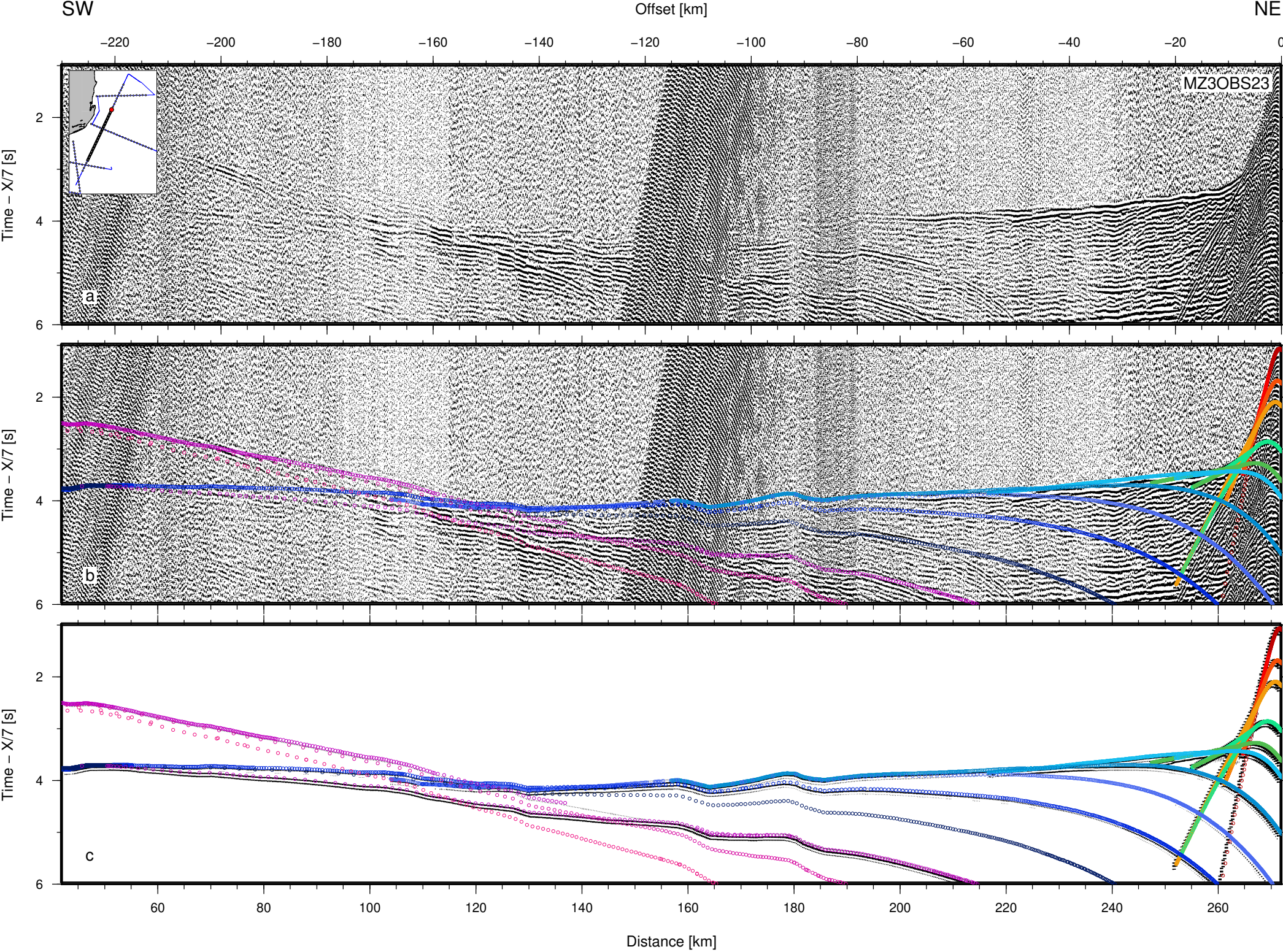

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS24
Time – X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
BS24
f
300
320
340
360
380
400
420
440
460
480
500
Distance [km]

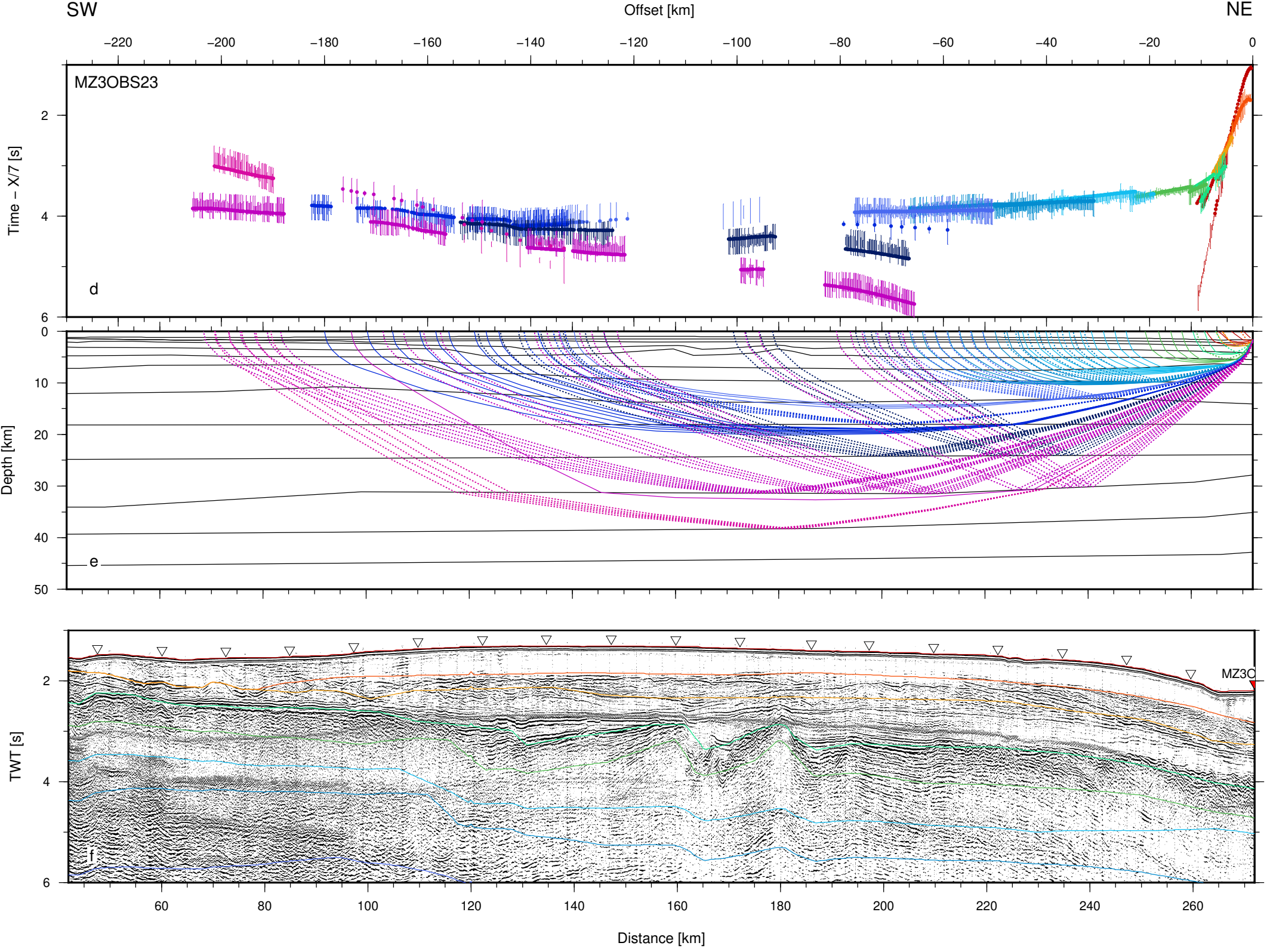

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS24
a
b
c
Time – X/7 [s]
2
4
6
60
80
100
120
140
160
180
200
220
240
260
280
Distance [km]

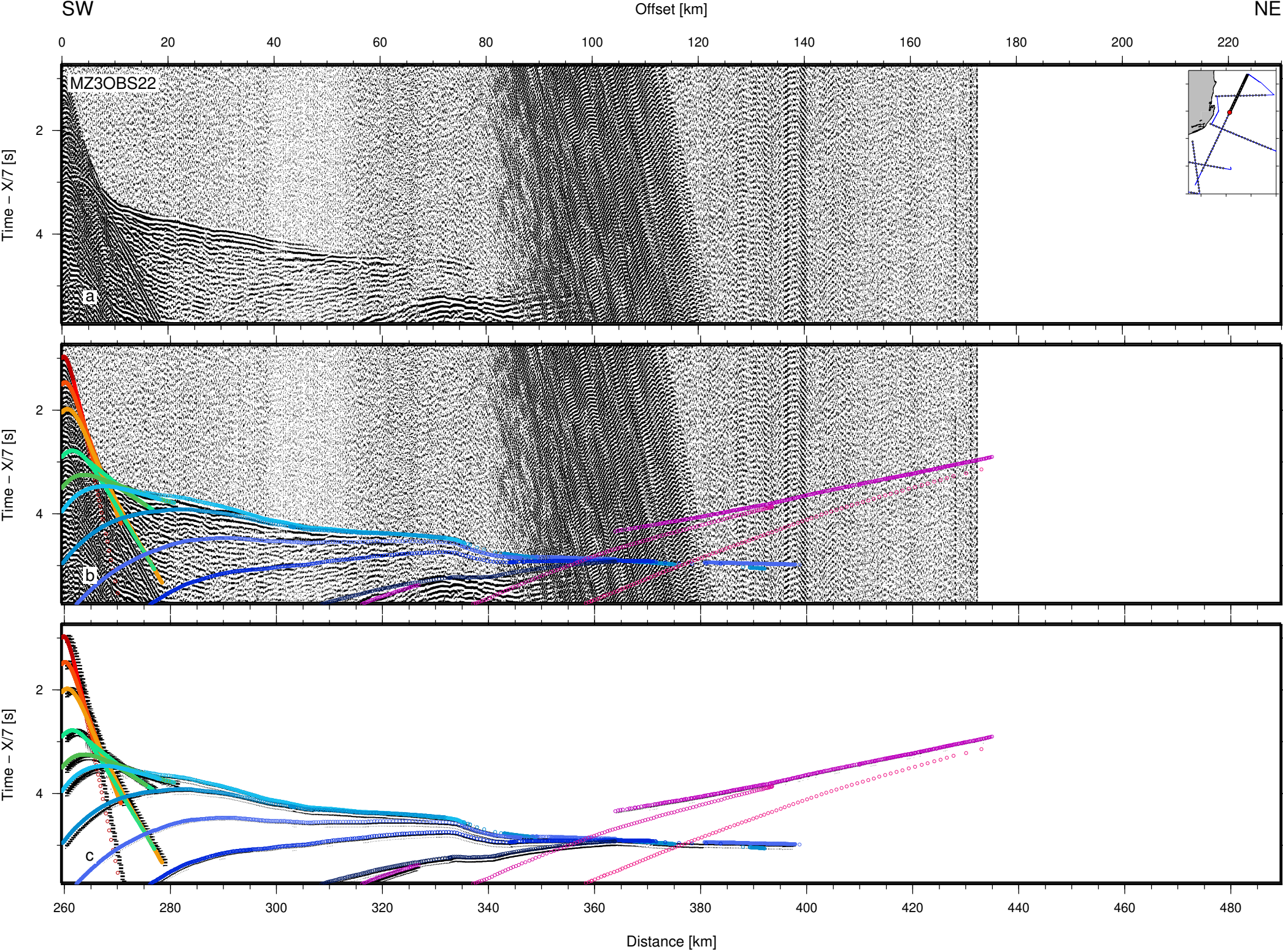

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS24
Time − X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
MZ3O
f
60
80
100
120
140
160
180
200
220
240
260
280
Distance [km]

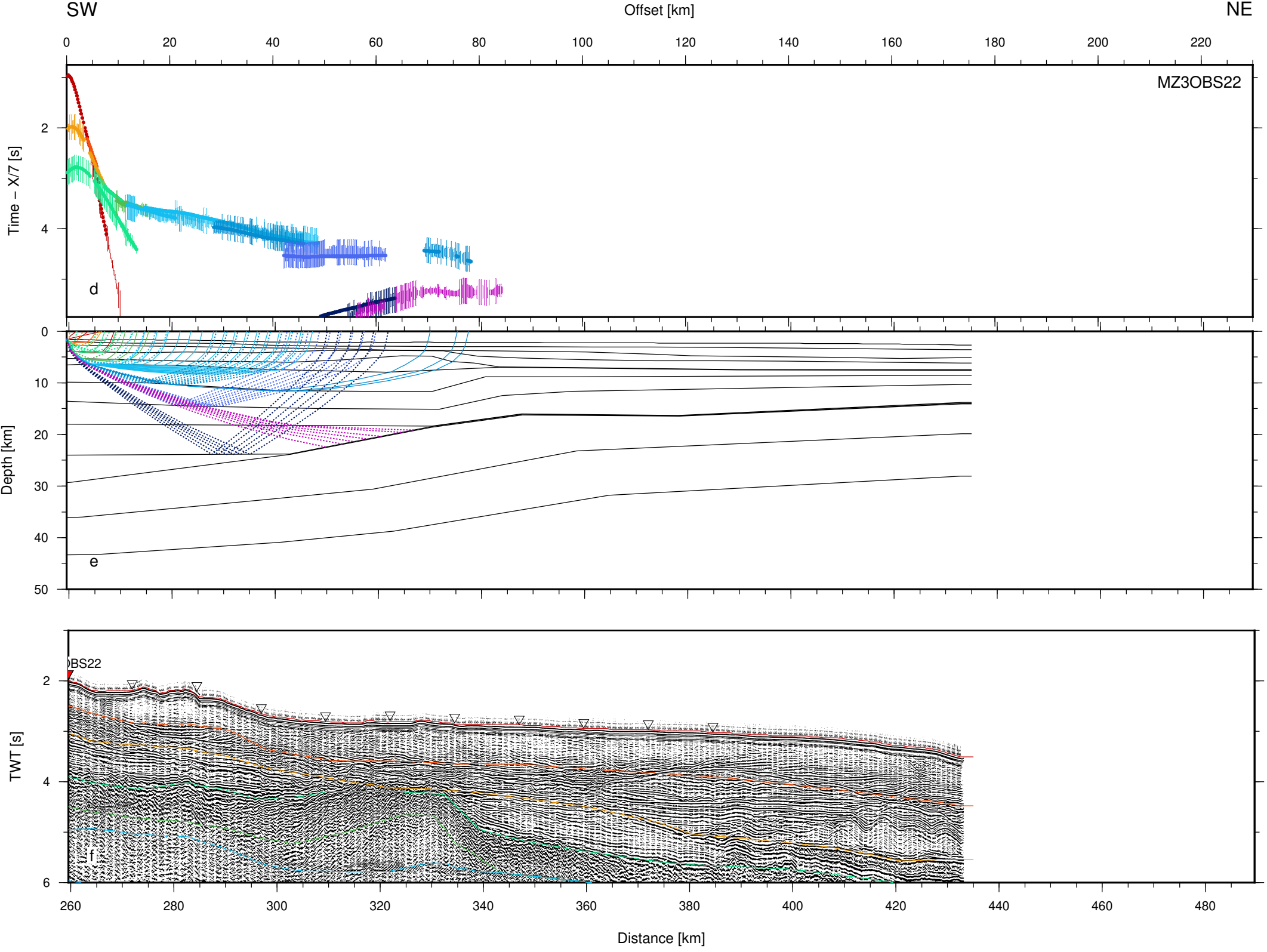

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS23
a
b
c
Time – X/7 [s]
2
4
6
280
300
320
340
360
380
400
420
440
460
480
500
Distance [km]

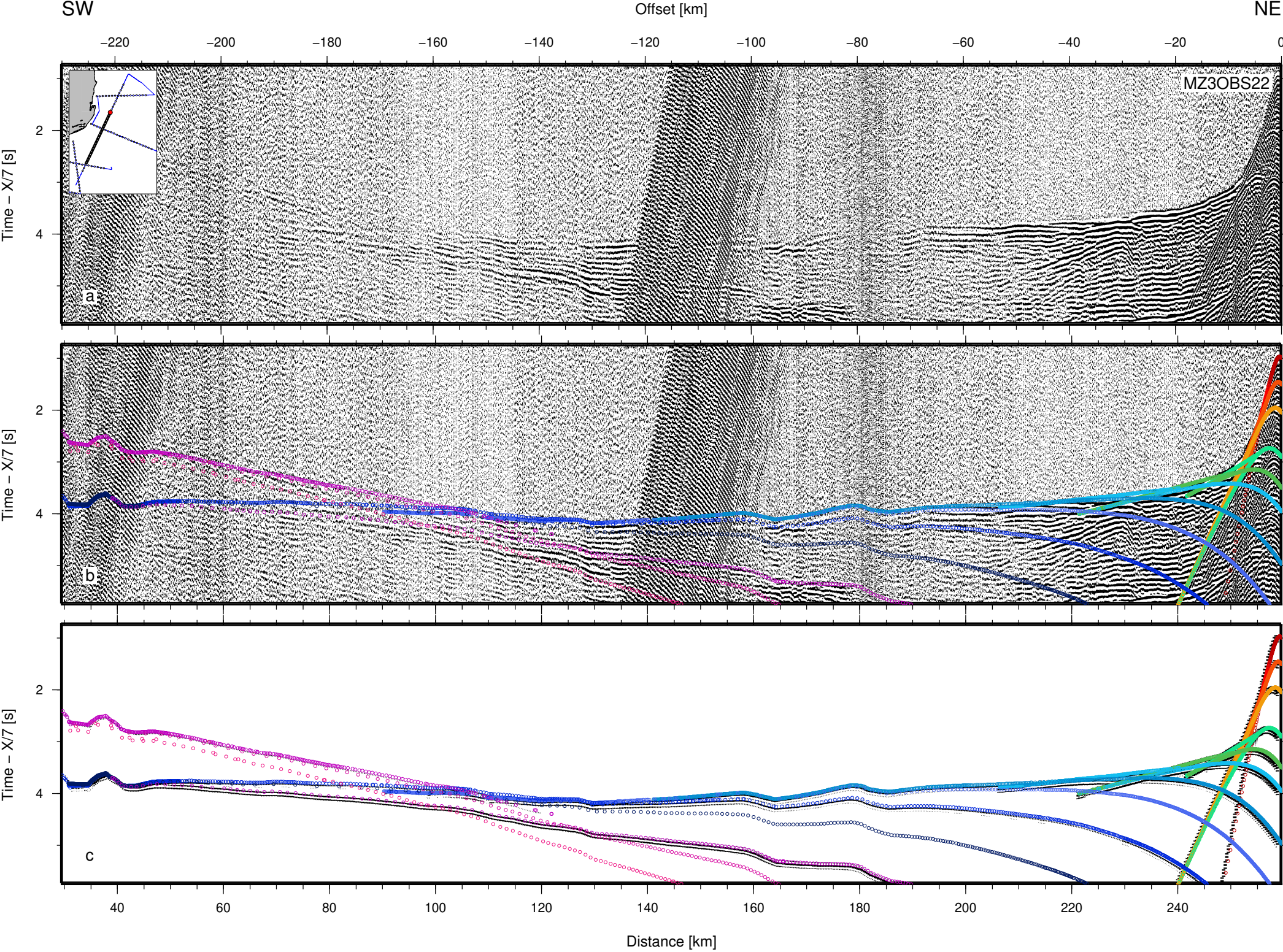

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS23
Time – X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
BS23
f
280
300
320
340
360
380
400
420
440
460
480
500
Distance [km]

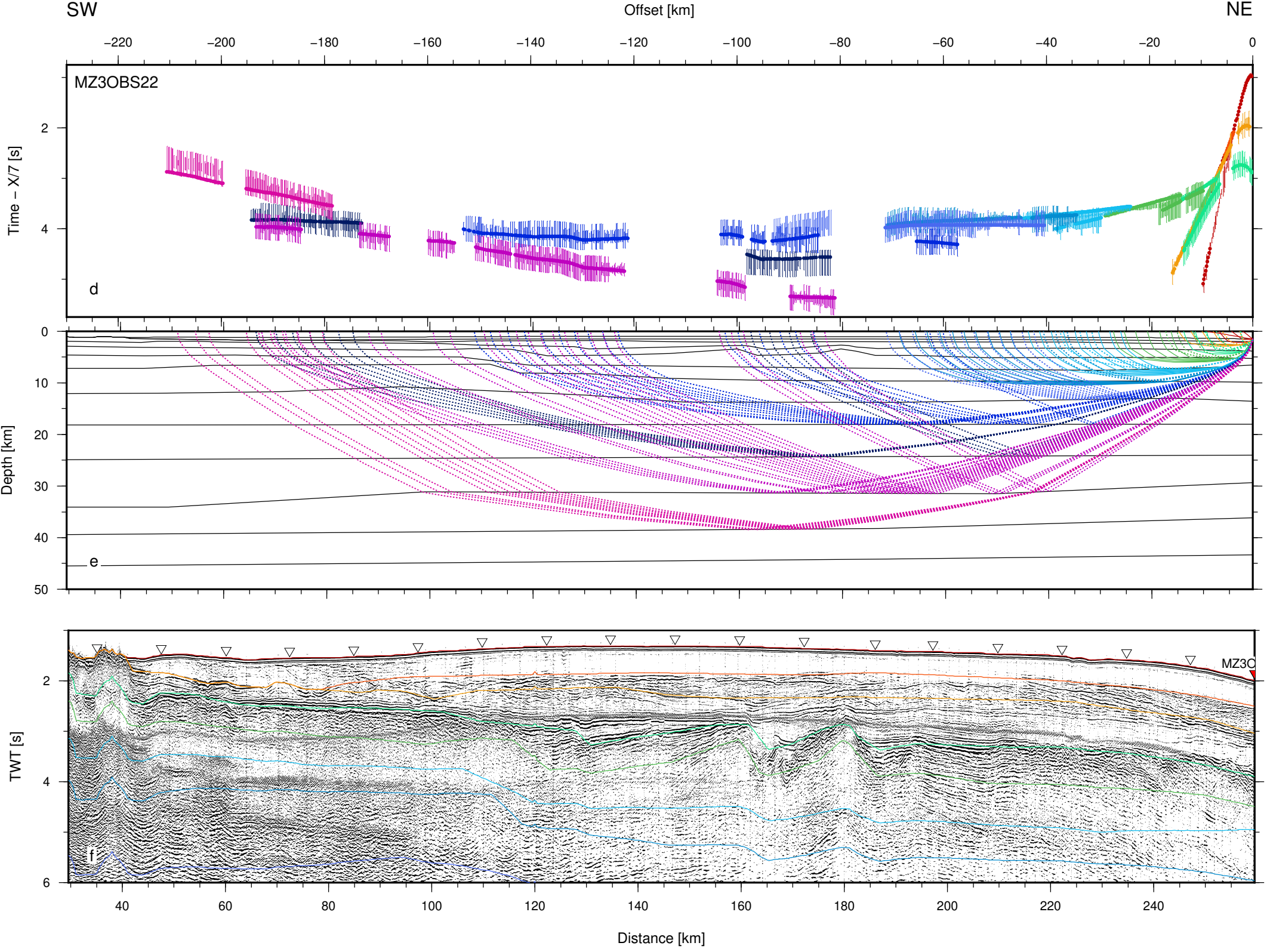

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS23
a
b
c
Time − X/7 [s]
2
4
6
60
80
100
120
140
160
180
200
220
240
260
Distance [km]

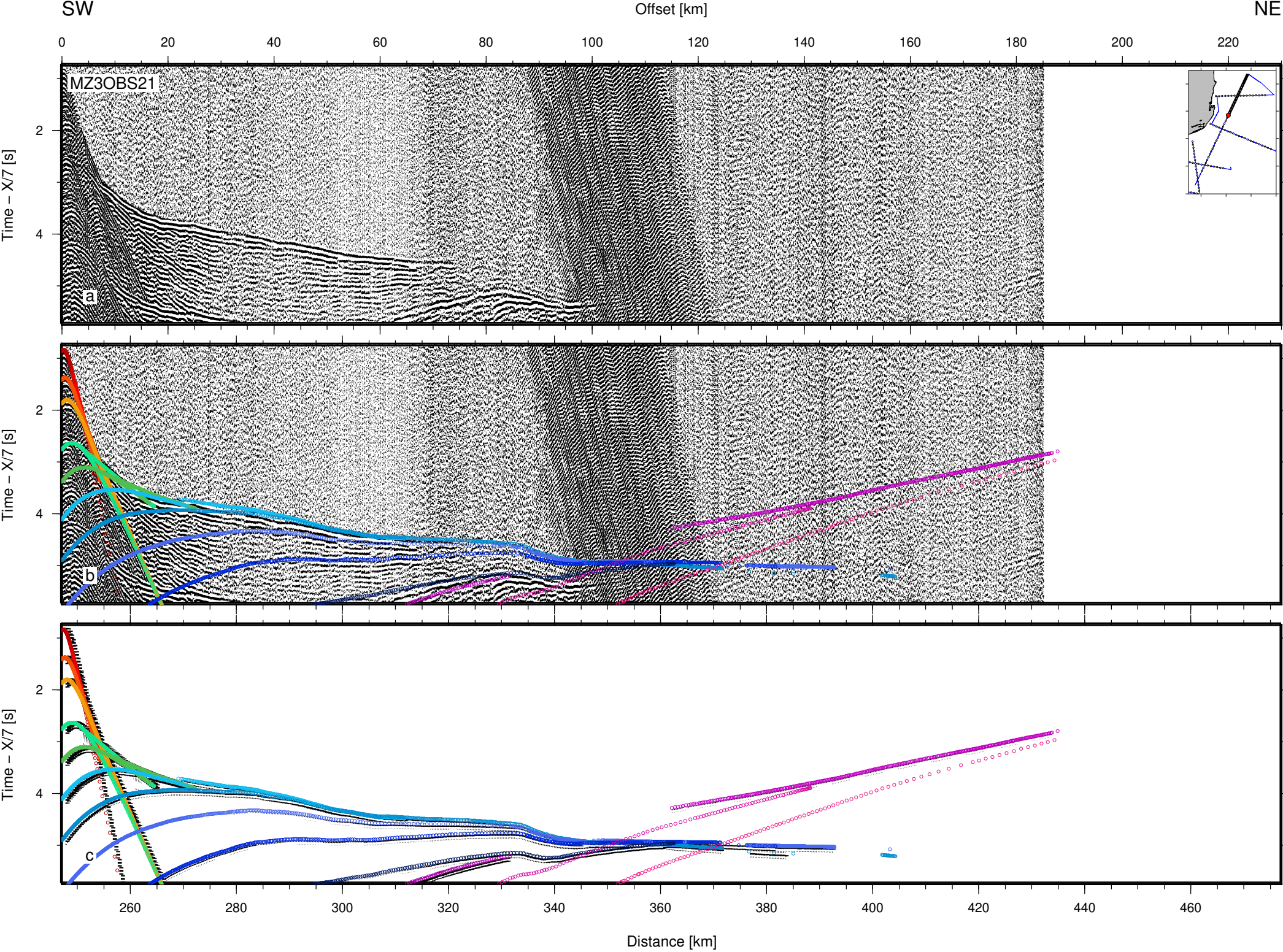

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS23
Time − X/7 [s]
2
4
6
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
MZ3O
f
60
80
100
120
140
160
180
200
220
240
260
Distance [km]

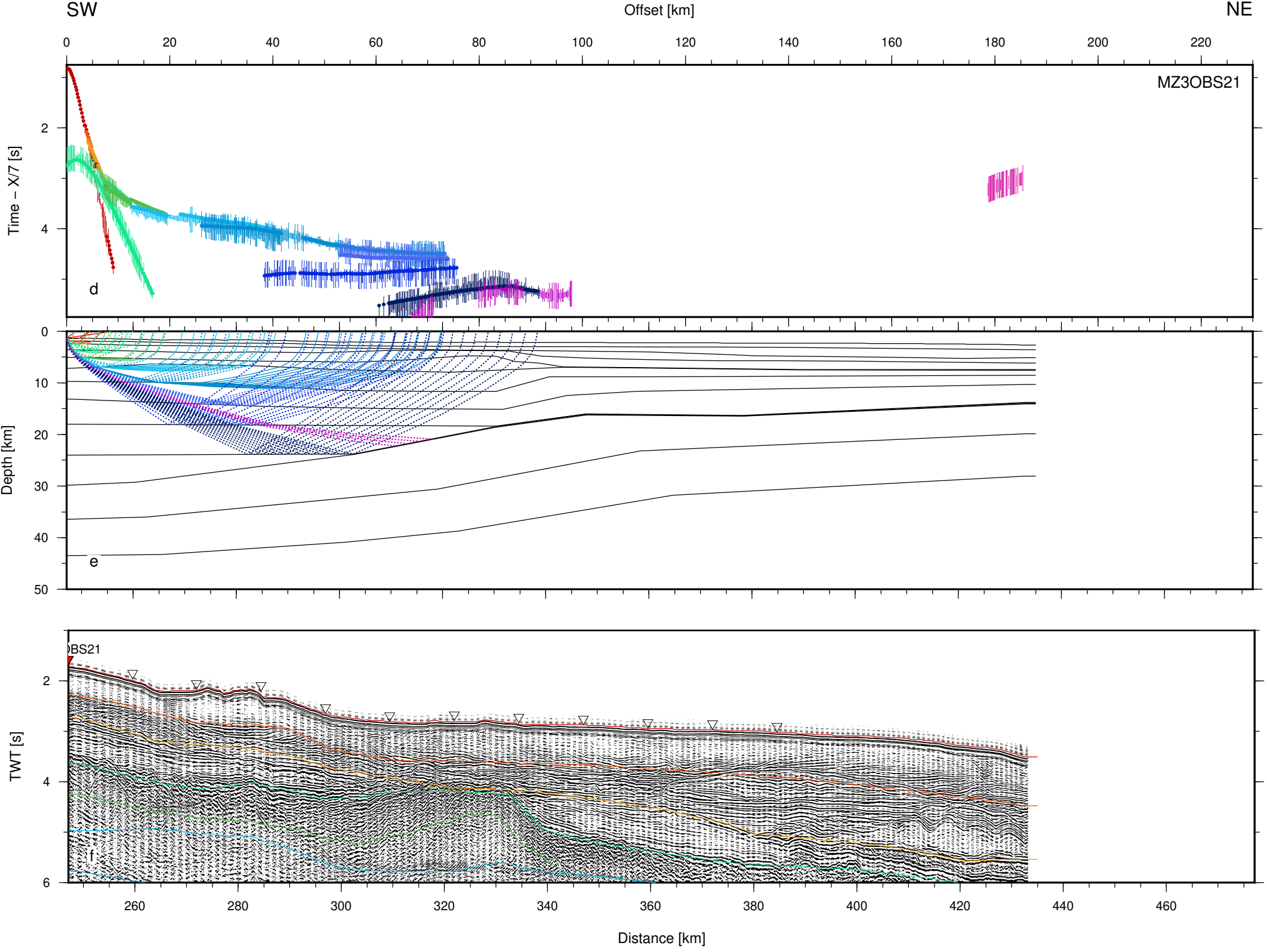

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS22
a
b
c
Time – X/7 [s]
2
4
260
280
300
320
340
360
380
400
420
440
460
480
Distance [km]

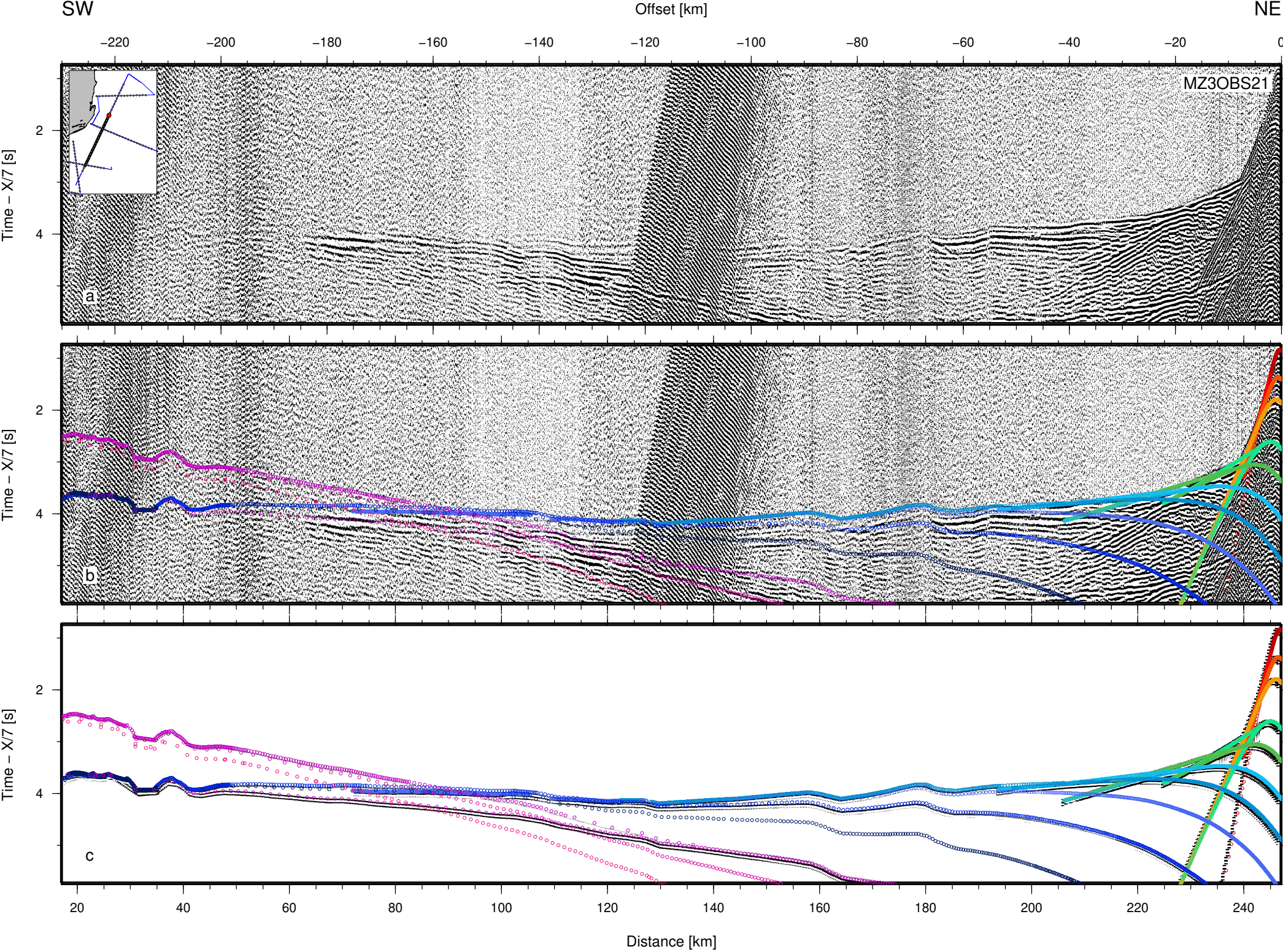

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS22
Time – X/7 [s]
2
4
d
Depth [km]
0
10
20
30
40
50
e
BS22
TWT [s]
2
4
6
260
280
300
320
340
360
380
400
420
440
460
480
Distance [km]

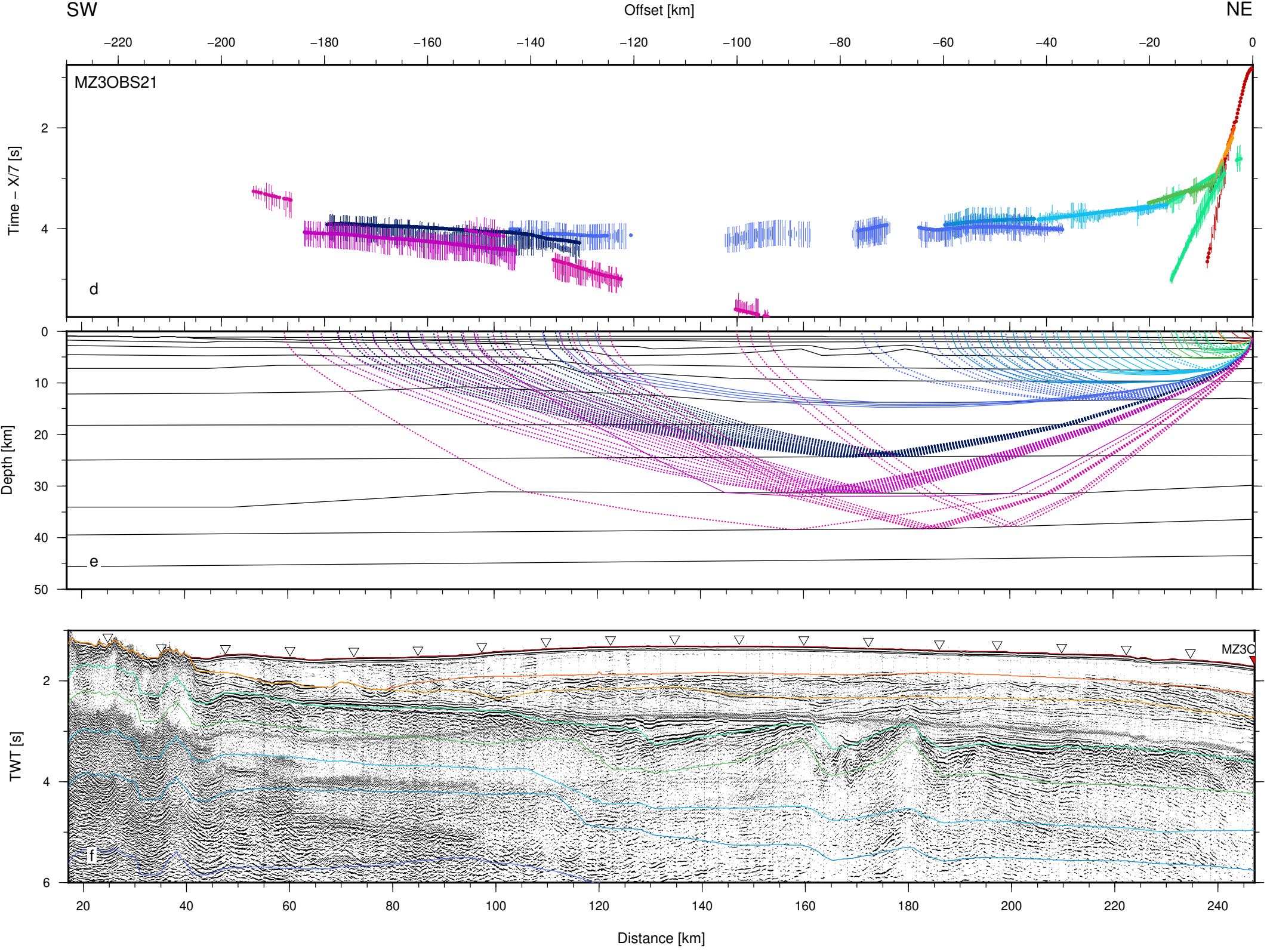

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS22
a
b
c
Time – X/7 [s]
2
4
40
60
80
100
120
140
160
180
200
220
240
Distance [km]

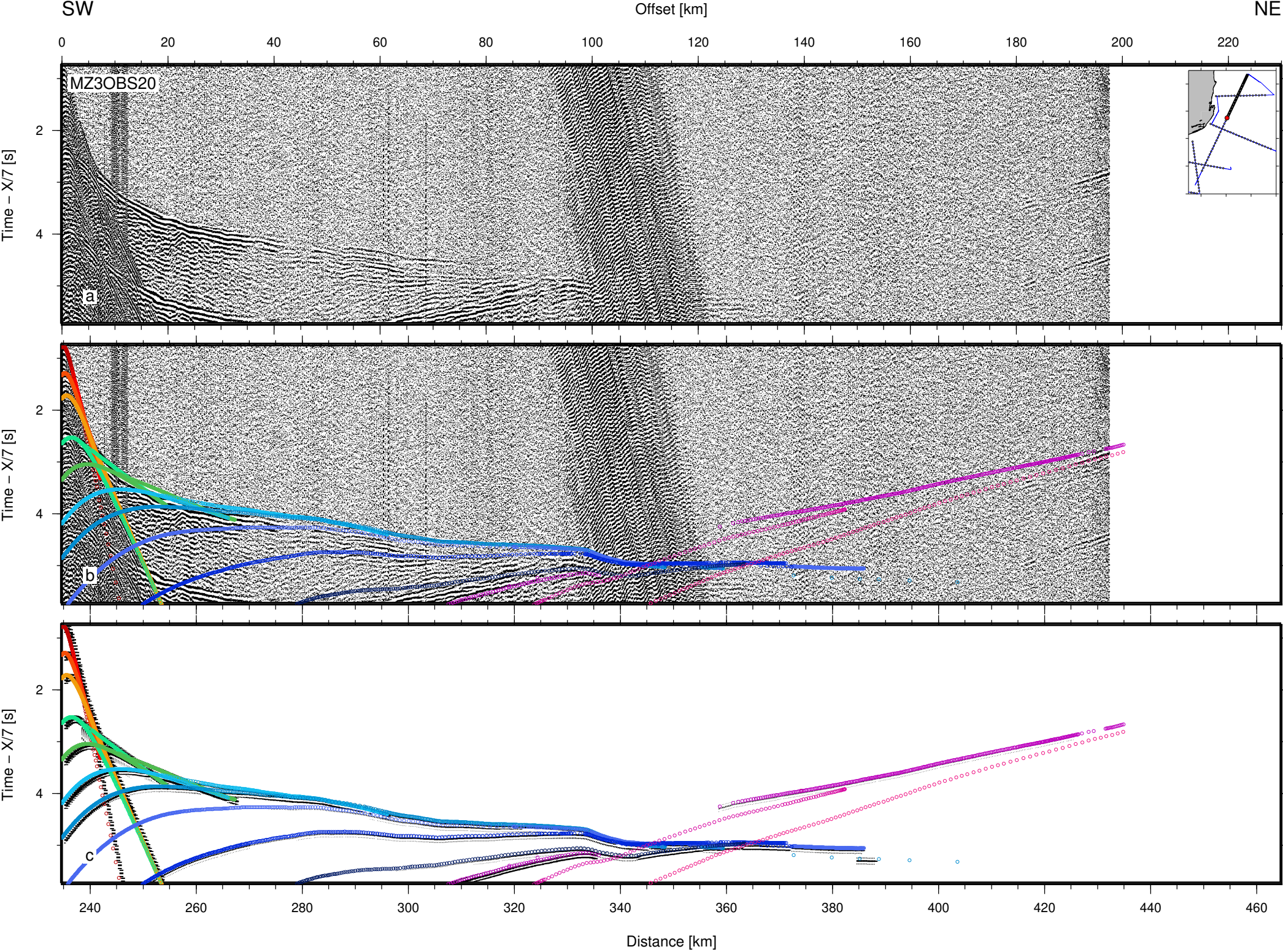

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS22
Time − X/7 [s]
2
4
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
MZ3O
40
60
80
100
120
140
160
180
200
220
240
Distance [km]

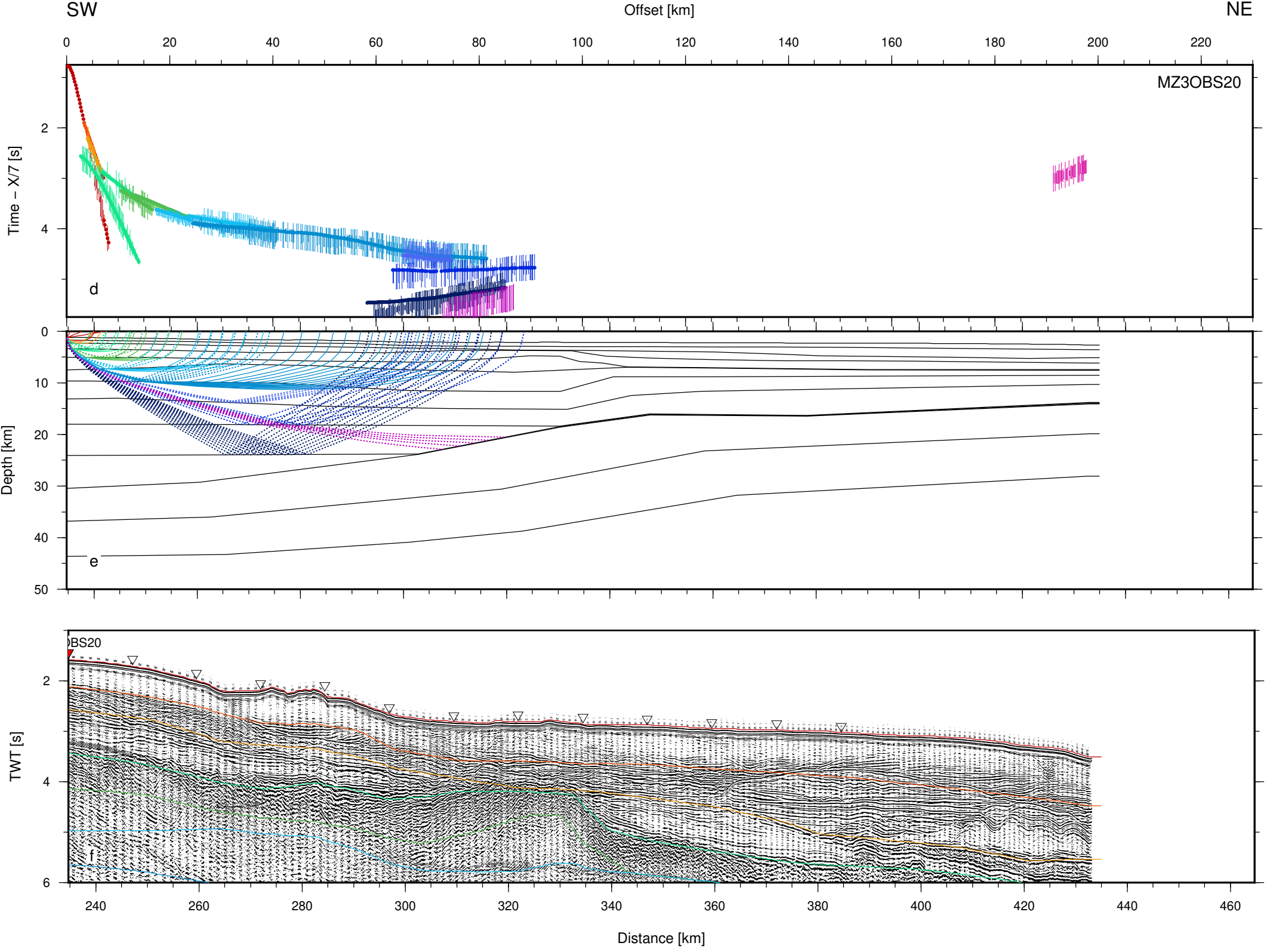

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS21
a
b
c
Time – X/7 [s]
2
4
260
280
300
320
340
360
380
400
420
440
460
Distance [km]

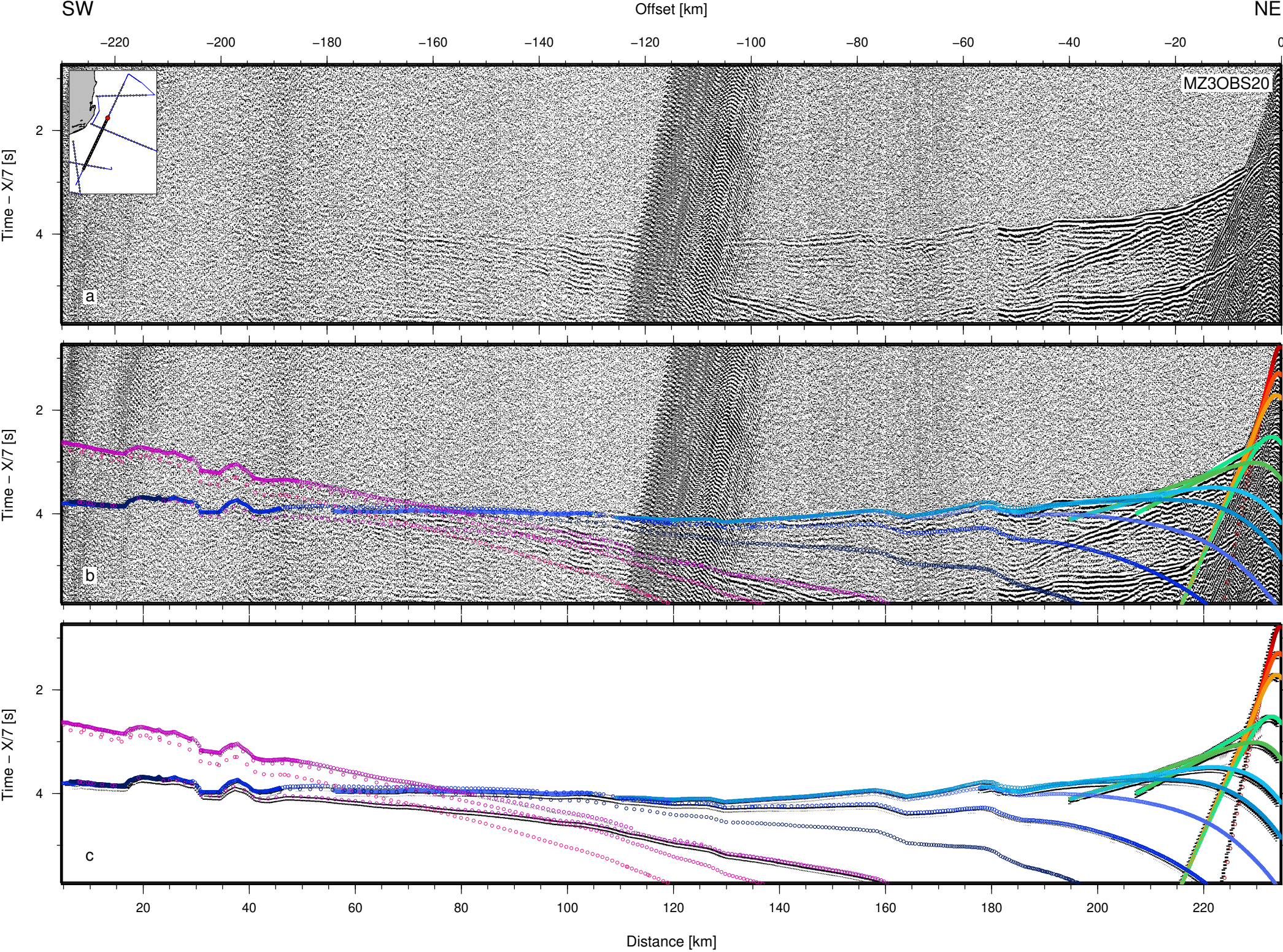

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS21
Time – X/7 [s]
2
4
d
Depth [km]
0
10
20
30
40
50
e
BS21
TWT [s]
2
4
6
f
260
280
300
320
340
360
380
400
420
440
460
Distance [km]

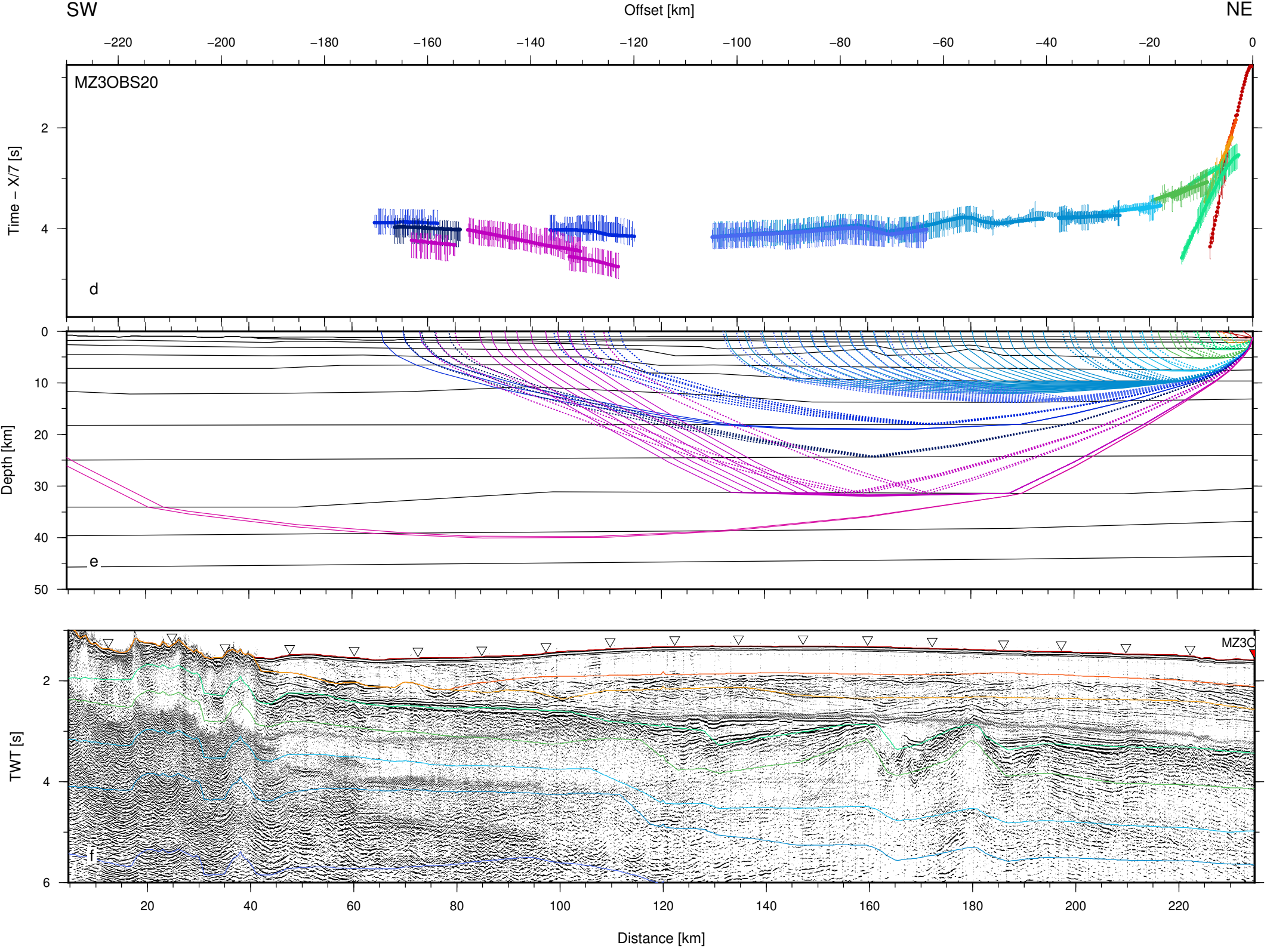

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS21
Time – X/7 [s]
2
4
a
b
c
20
40
60
80
100
120
140
160
180
200
220
240
Distance [km]

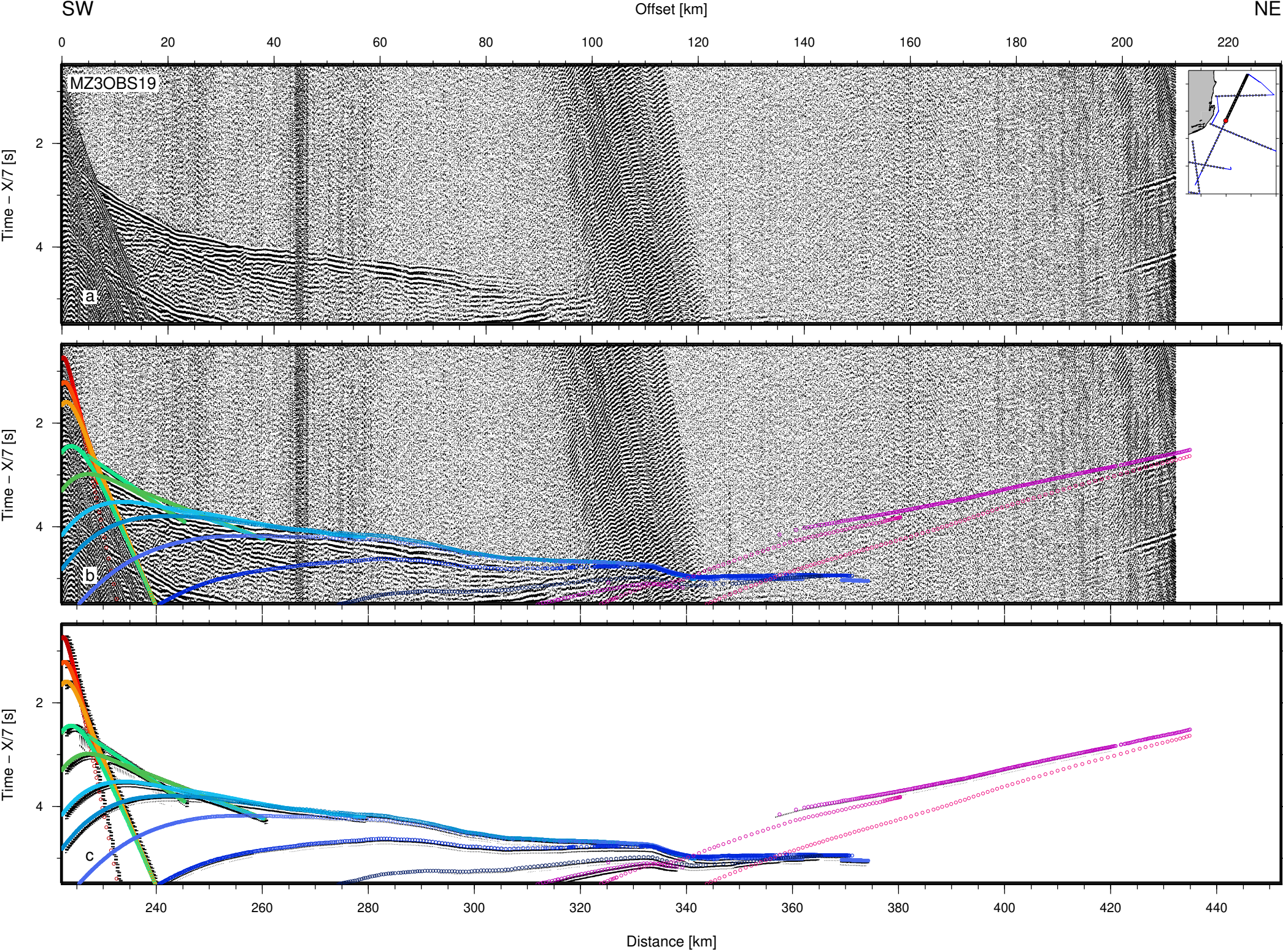

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS21
Time − X/7 [s]
2
4
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
MZ3O
20
40
60
80
100
120
140
160
180
200
220
240
Distance [km]

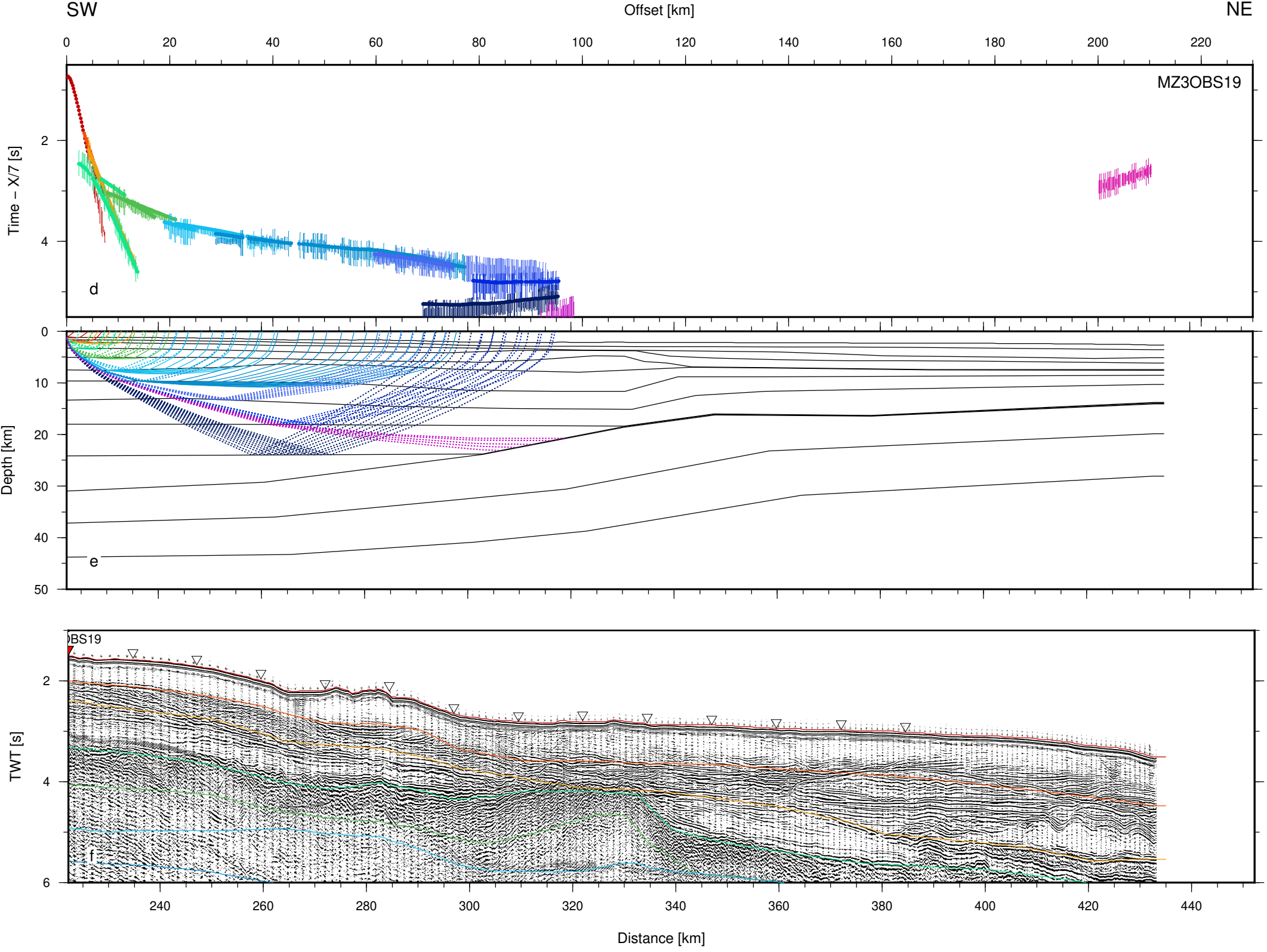

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS20
a
b
c
Time – X/7 [s]
2
4
240
260
280
300
320
340
360
380
400
420
440
460
Distance [km]

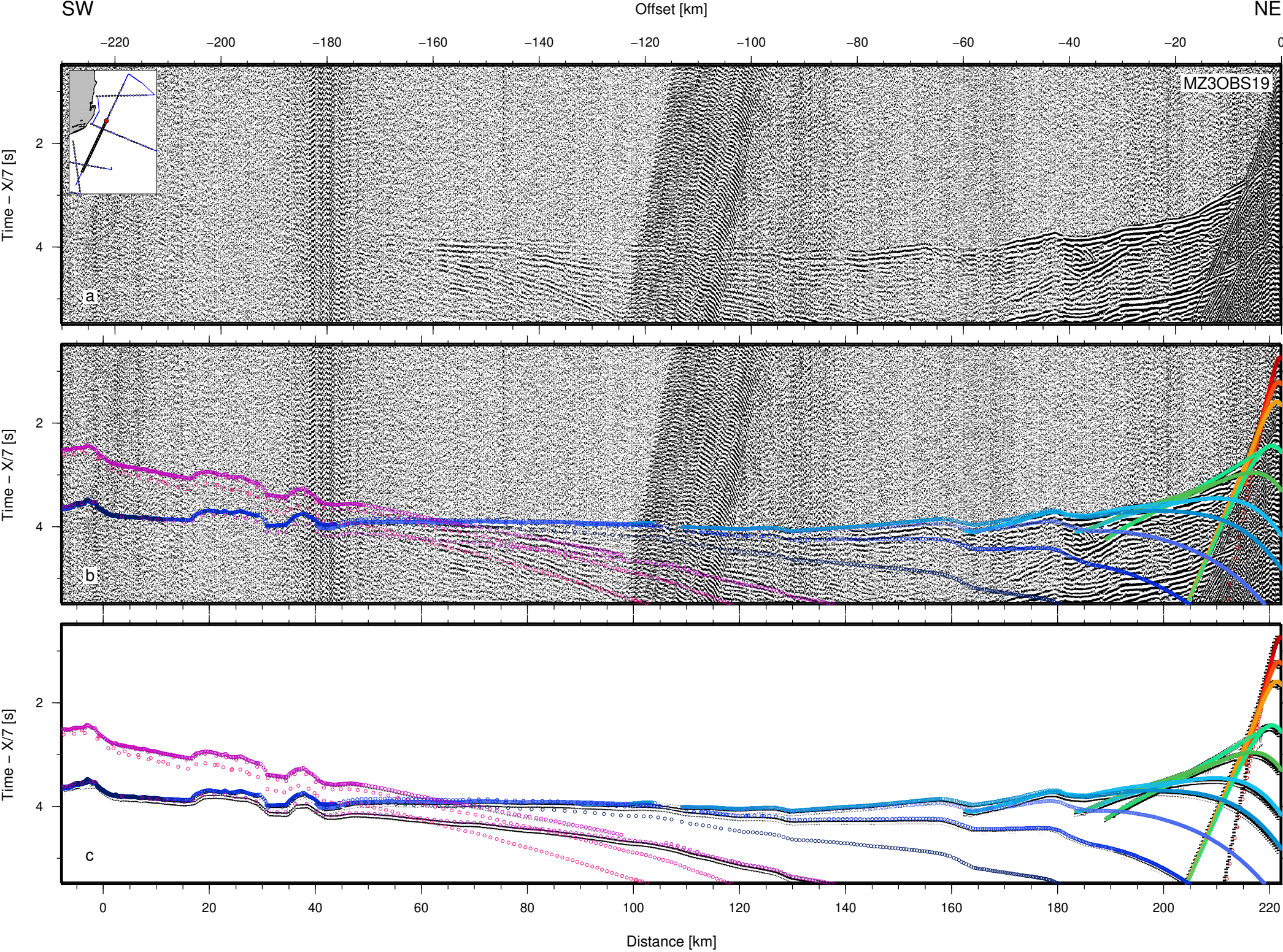

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS20
Time – X/7 [s]
2
4
d
Depth [km]
0
10
20
30
40
50
e
BS20
TWT [s]
2
4
6
f
240
260
280
300
320
340
360
380
400
420
440
460
Distance [km]

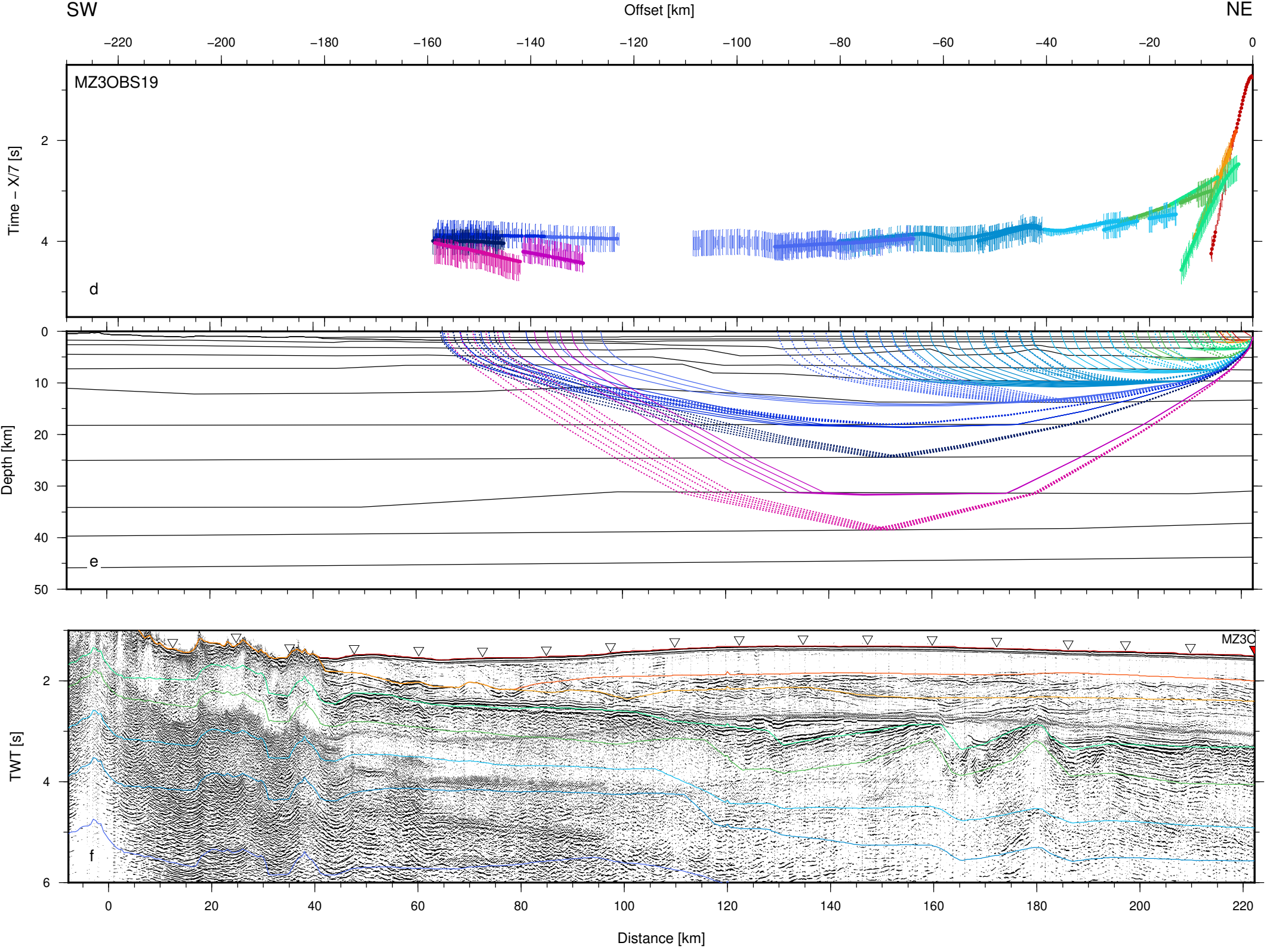

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS20
a
b
c
Time – X/7 [s]
2
4
20
40
60
80
100
120
140
160
180
200
220
Distance [km]

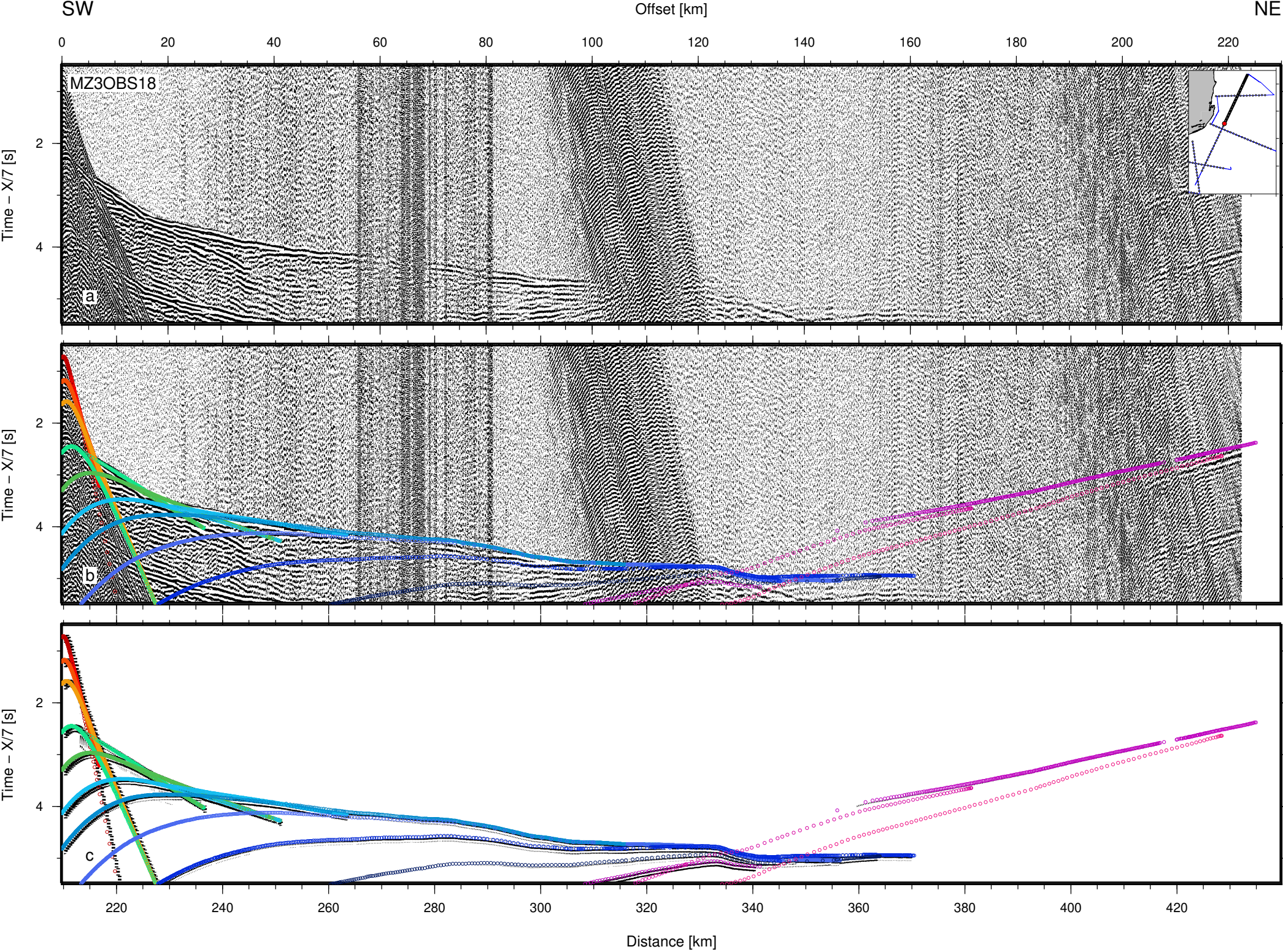

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS20
Time − X/7 [s]
2
4
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
MZ3O
20
40
60
80
100
120
140
160
180
200
220
Distance [km]

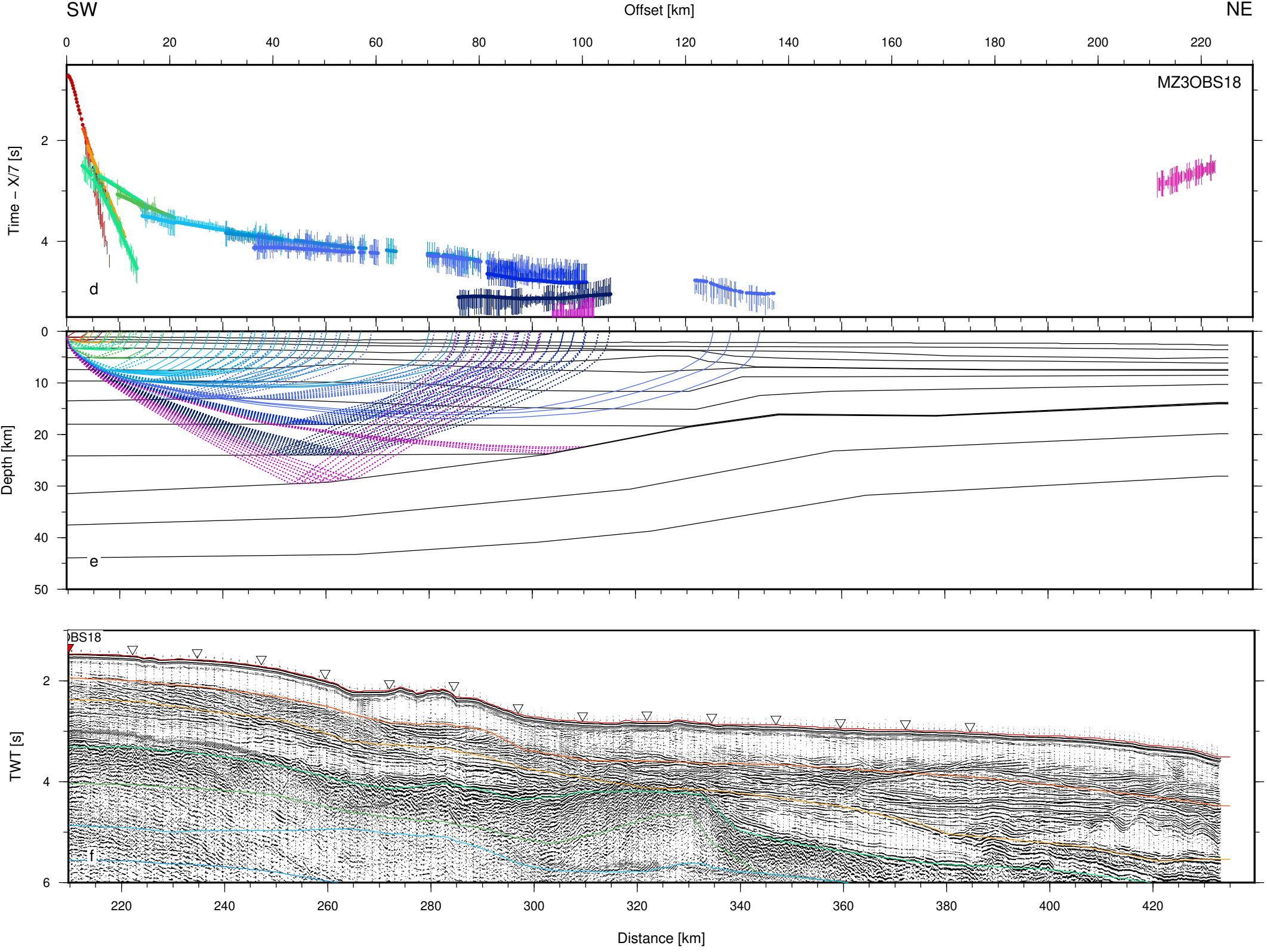

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS19
a
b
c
Time – X/7 [s]
2
4
240
260
280
300
320
340
360
380
400
420
440
Distance [km]

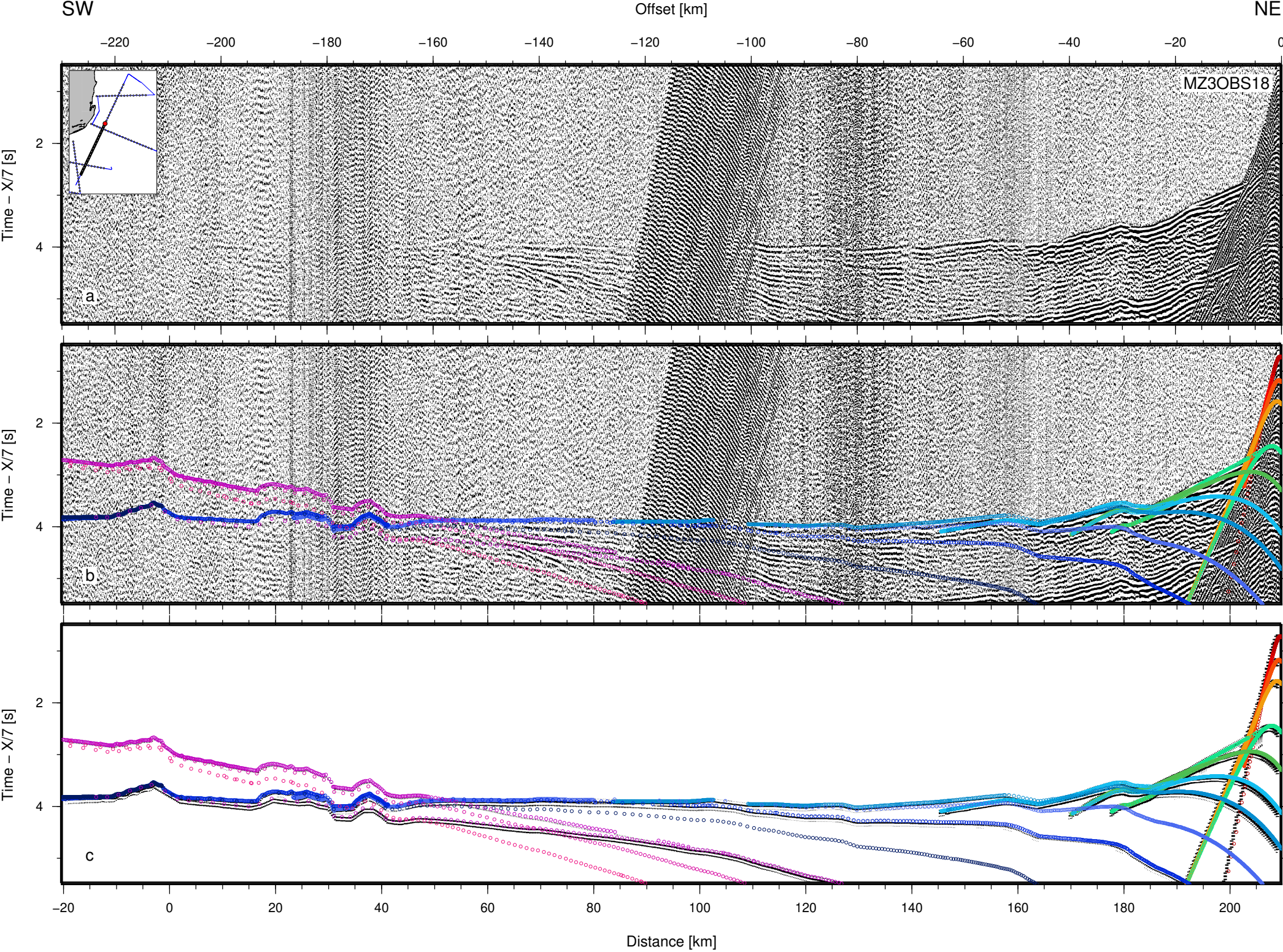

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS19
Time – X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
BS19
TWT [s]
2
4
6
f
240
260
280
300
320
340
360
380
400
420
440
Distance [km]

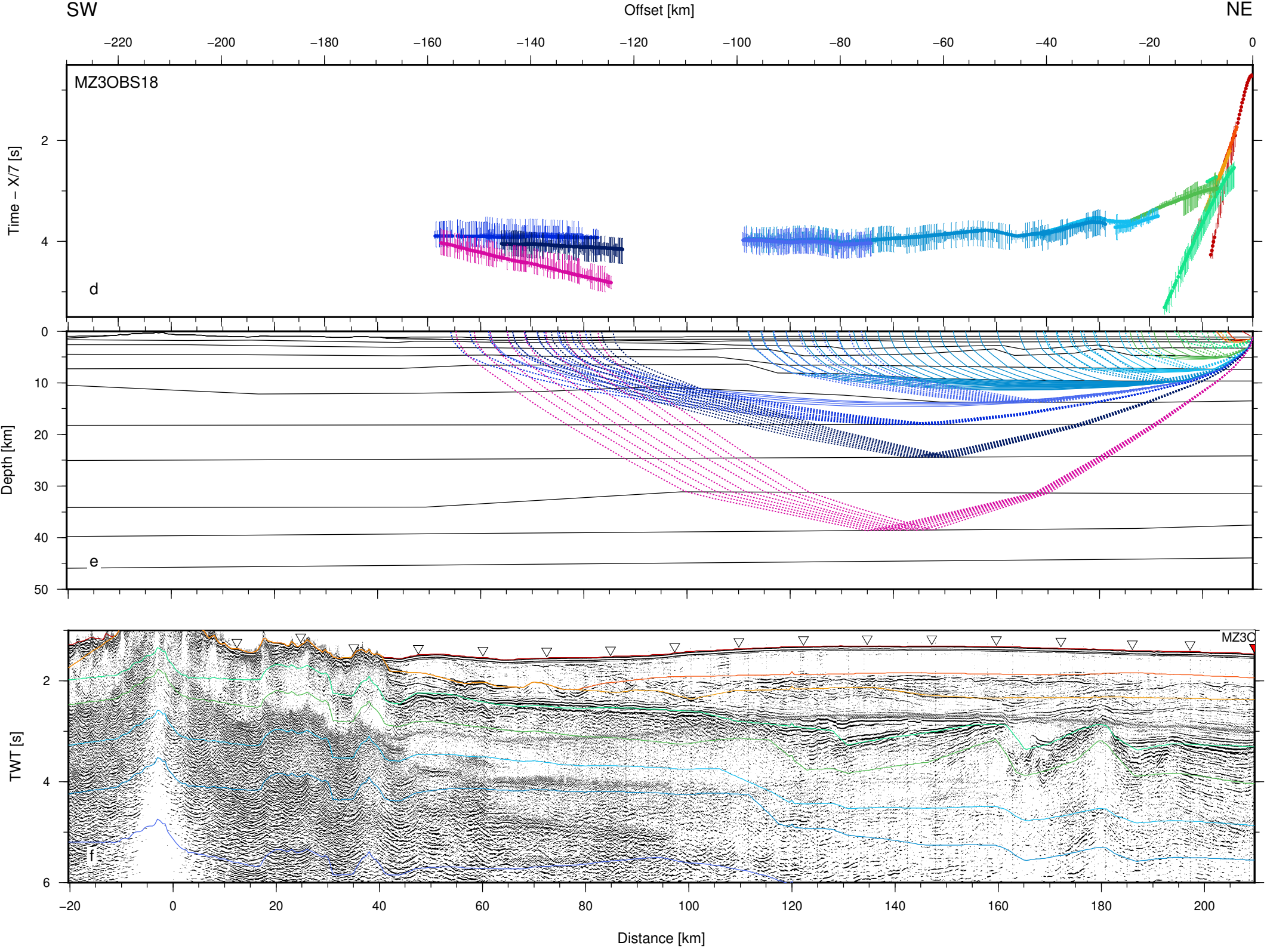

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS19
Time − X/7 [s]
2
4
a
b
c
0
20
40
60
80
100
120
140
160
180
200
220
Distance [km]

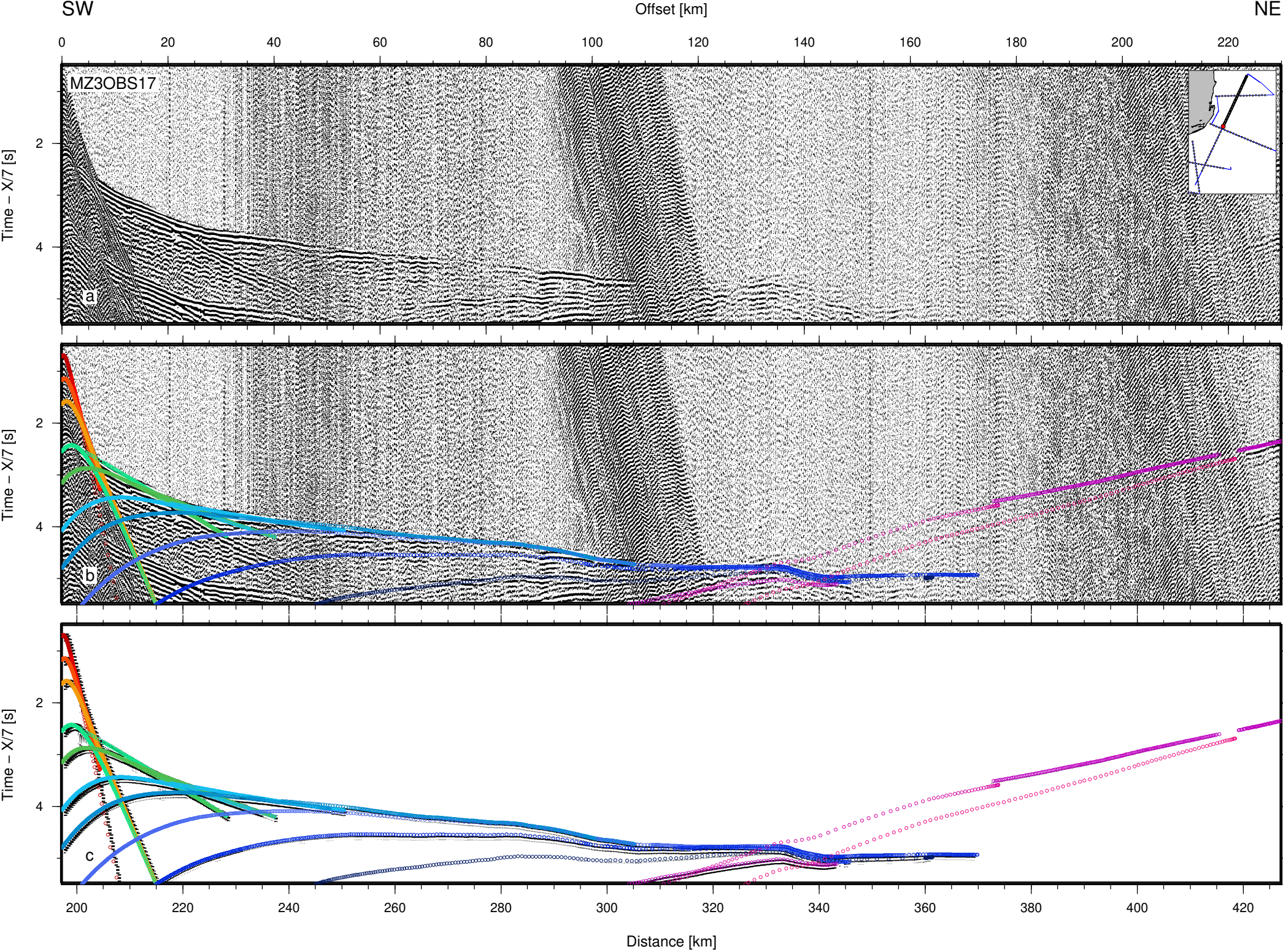

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS19
Time − X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
MZ3O
TWT [s]
2
4
6
f
0
20
40
60
80
100
120
140
160
180
200
220
Distance [km]

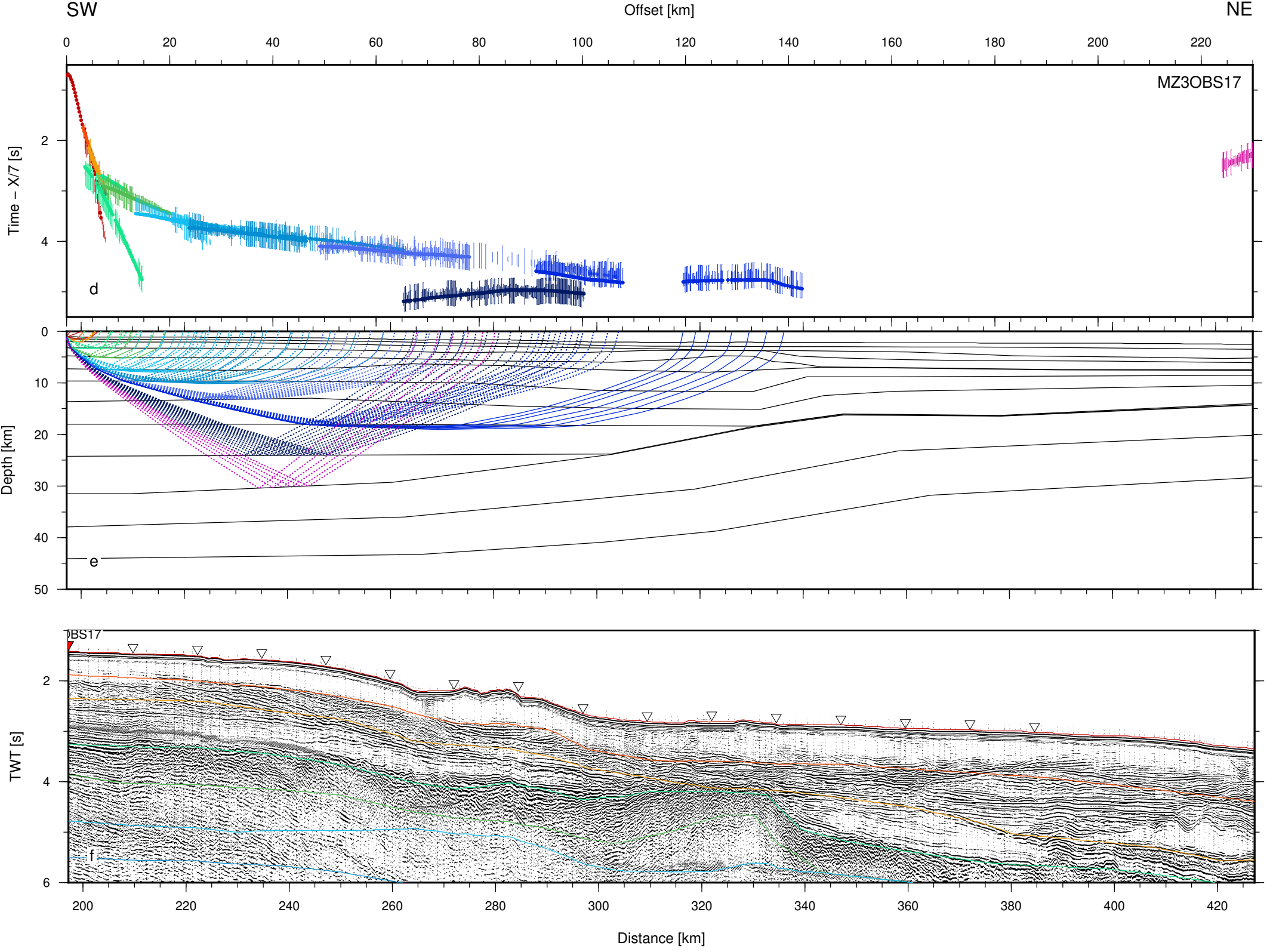

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS18
a
b
c
Time – X/7 [s]
2
4
220
240
260
280
300
320
340
360
380
400
420
Distance [km]

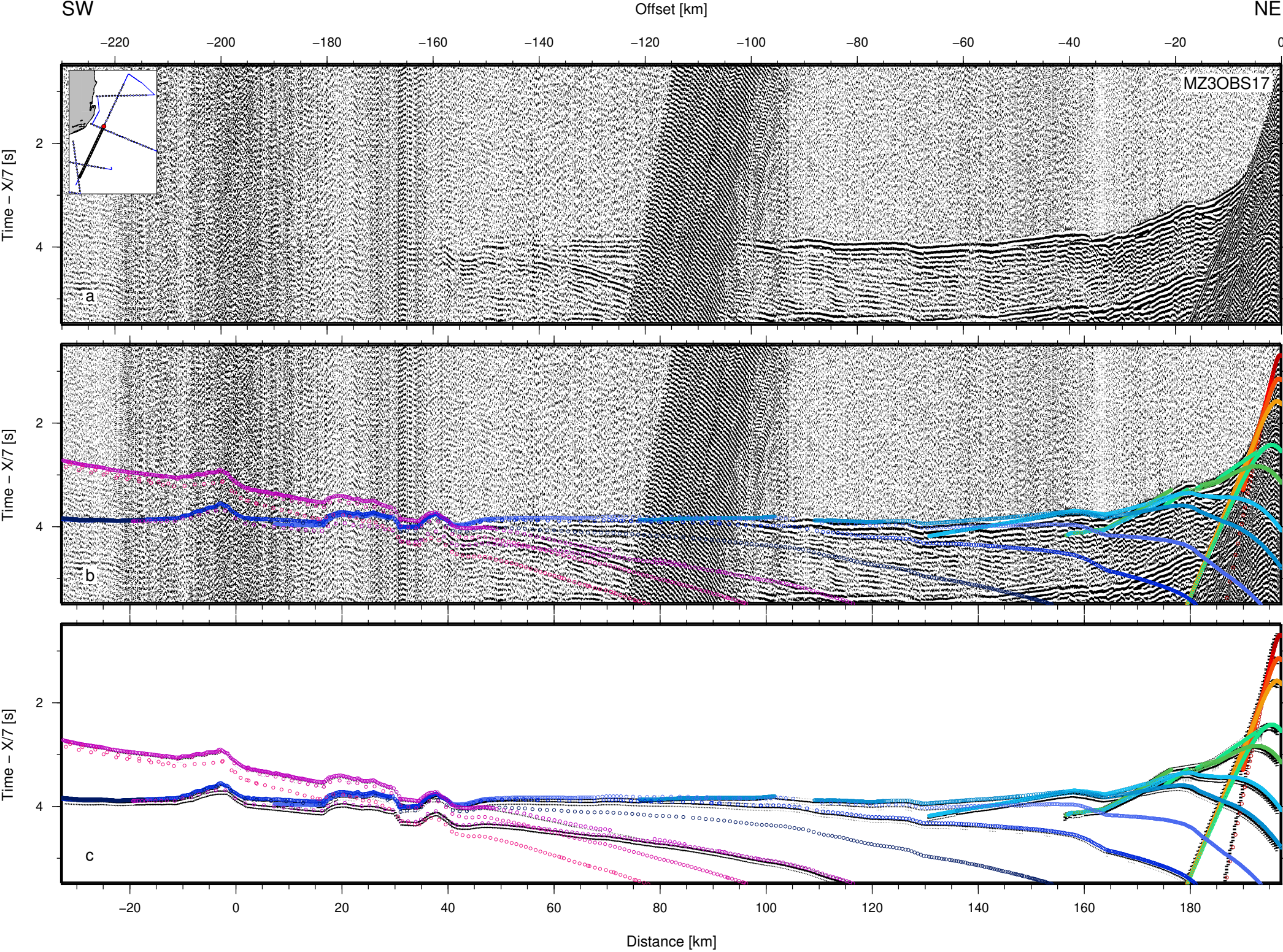

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS18
Time – X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
BS18
TWT [s]
2
4
6
f
220
240
260
280
300
320
340
360
380
400
420
Distance [km]

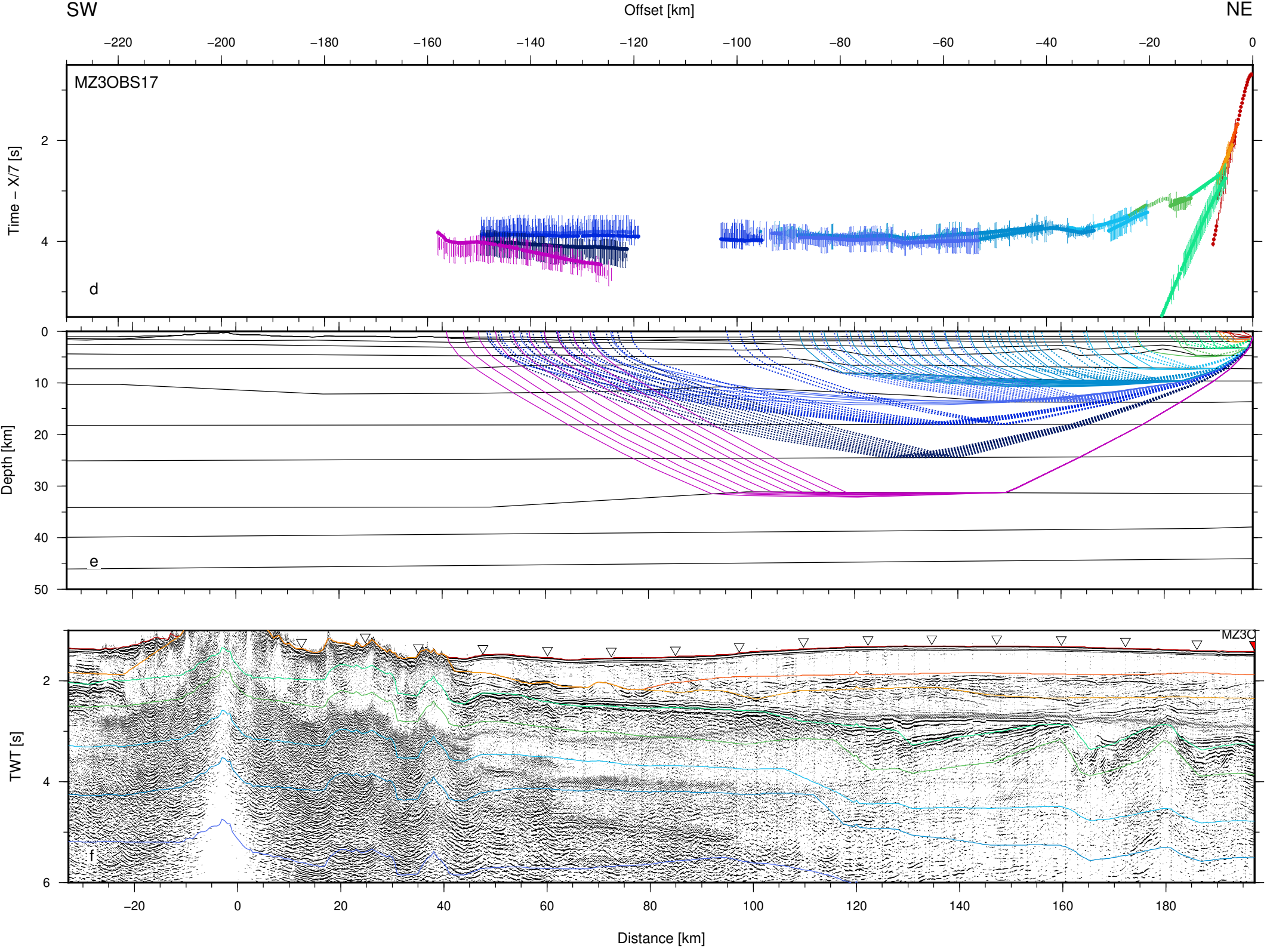

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS18
a
b
c
Time − X/7 [s]
2
4
−20
0
20
40
60
80
100
120
140
160
180
200
Distance [km]

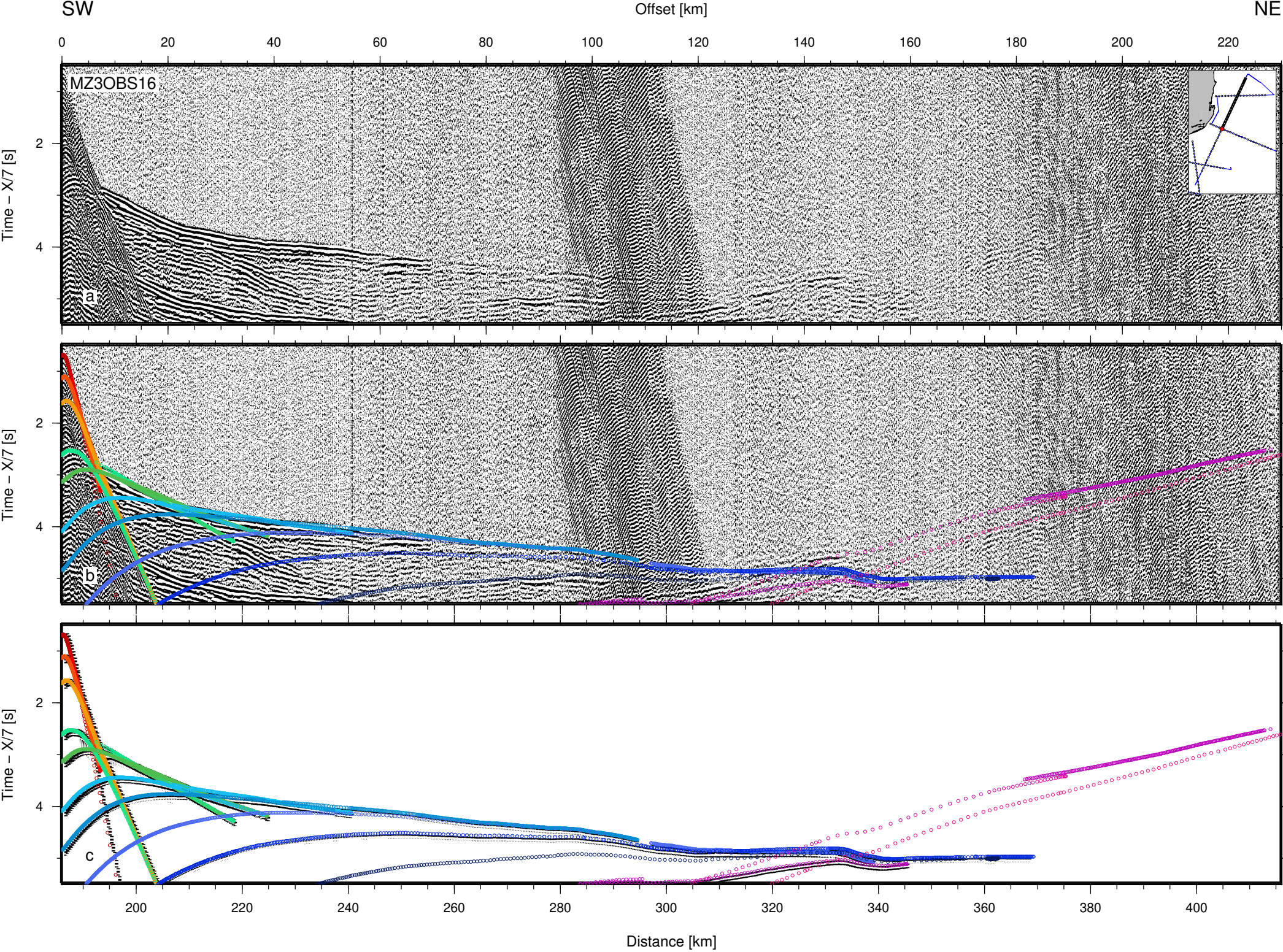

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS18
d
Time − X/7 [s]
2
4
0
10
20
30
40
50
Depth [km]
e
MZ3C
TWT [s]
2
4
6
−20
0
20
40
60
80
100
120
140
160
180
200
Distance [km]

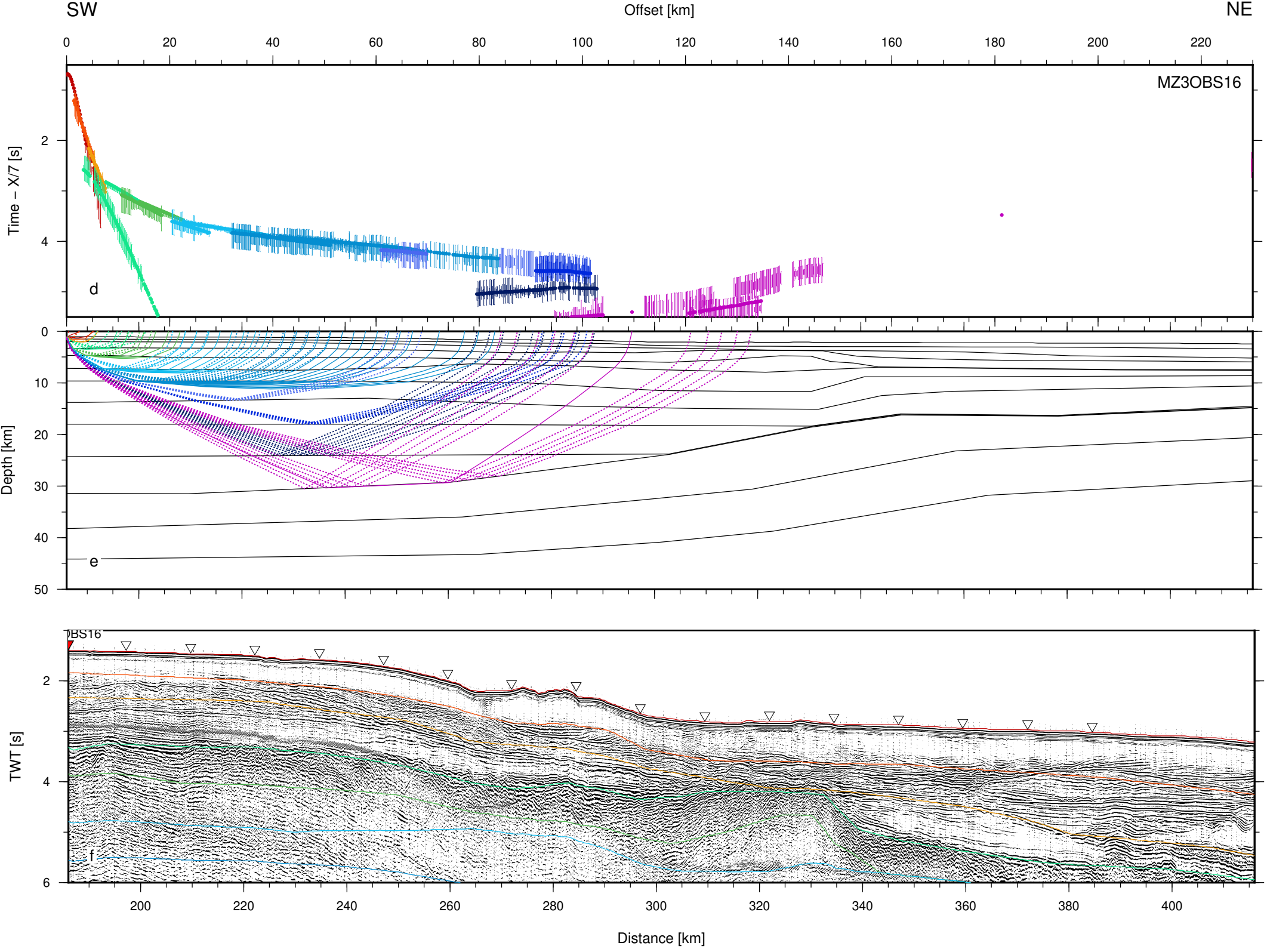

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS17
a
b
c
Time – X/7 [s]
2
4
200
220
240
260
280
300
320
340
360
380
400
420
Distance [km]

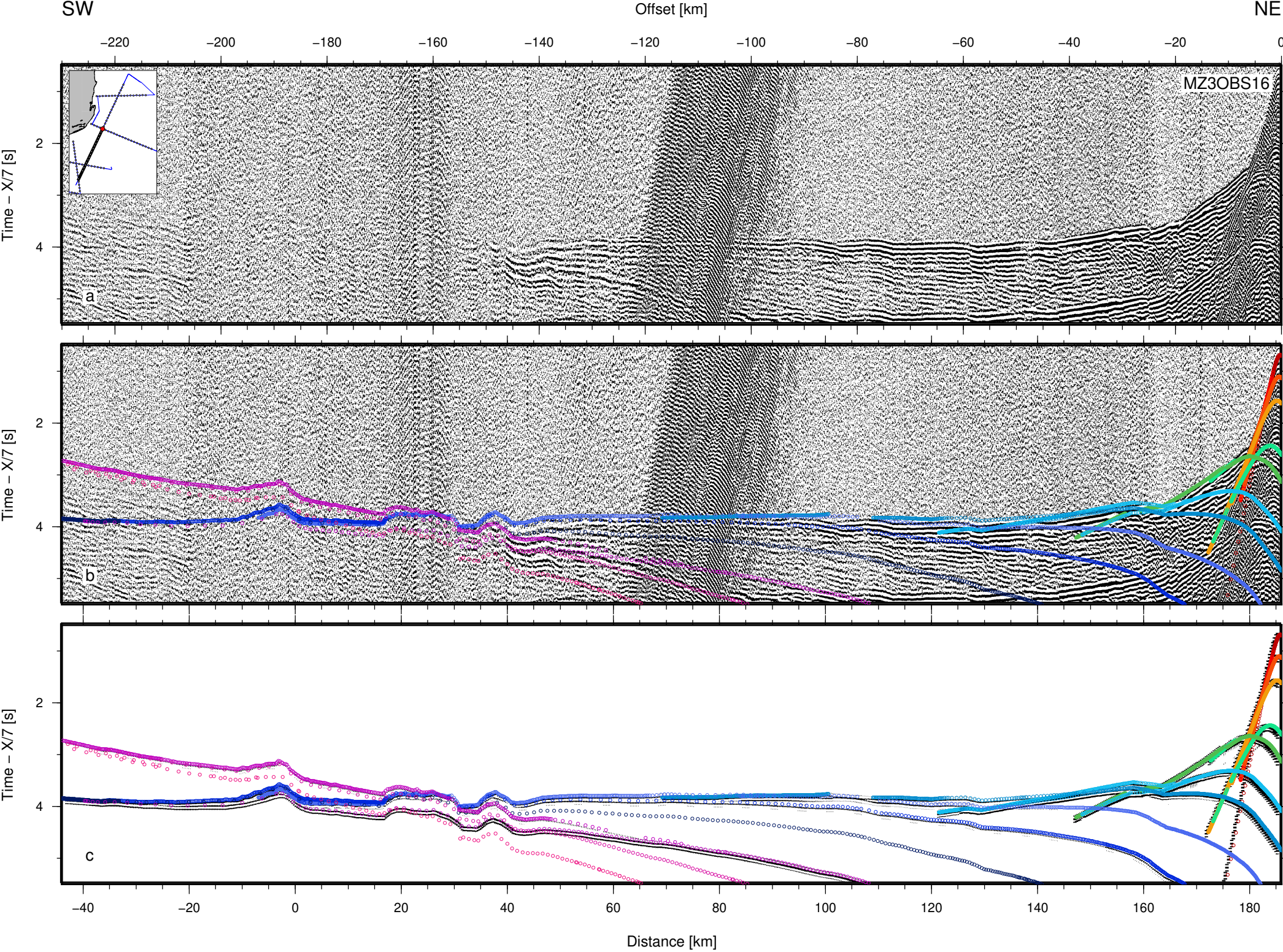

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS17
Time – X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
OBS17
TWT [s]
2
4
6
f
200
220
240
260
280
300
320
340
360
380
400
420
Distance [km]

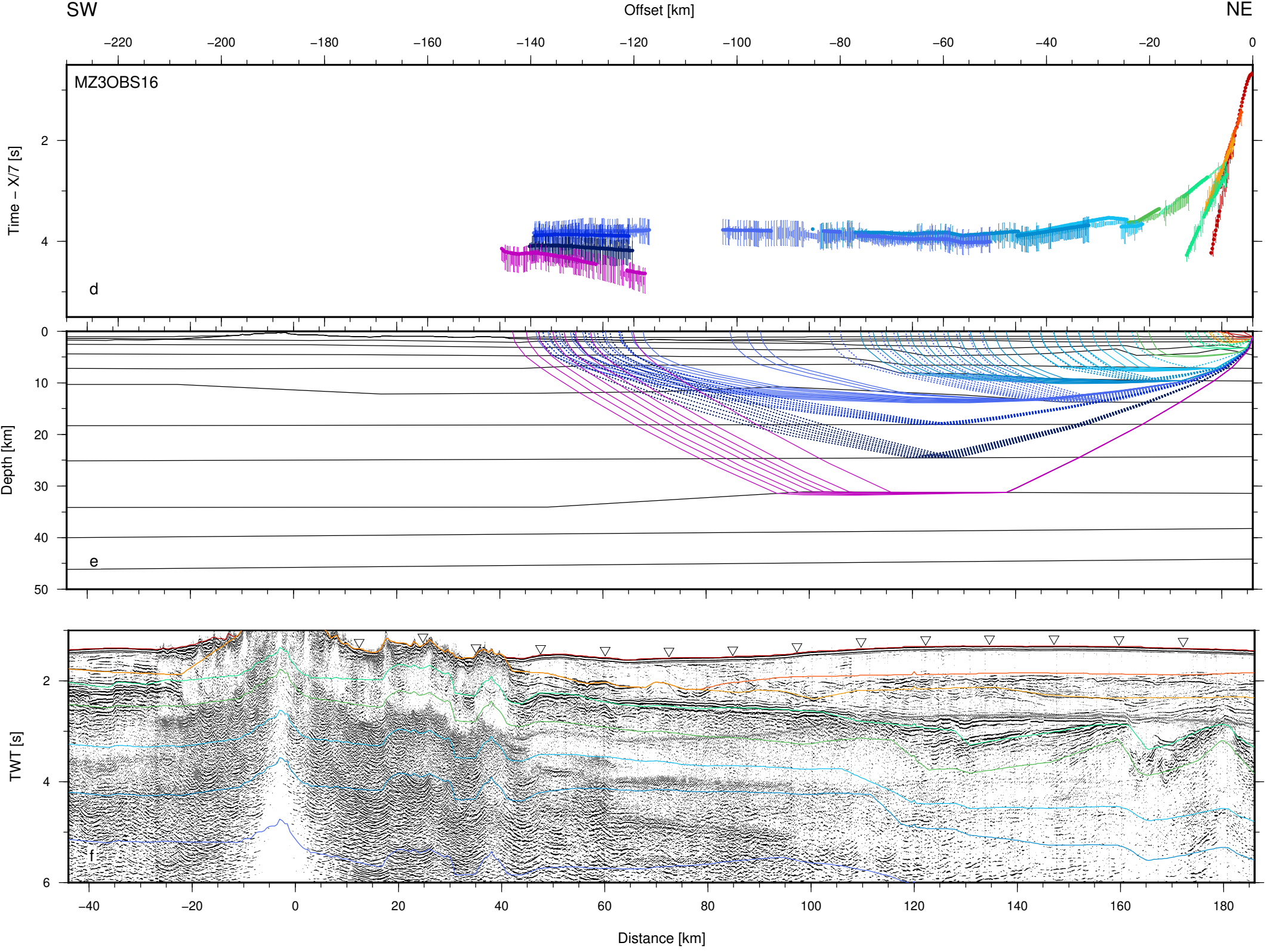

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS17
a
b
c
Time − X/7 [s]
2
4
−20
0
20
40
60
80
100
120
140
160
180
Distance [km]

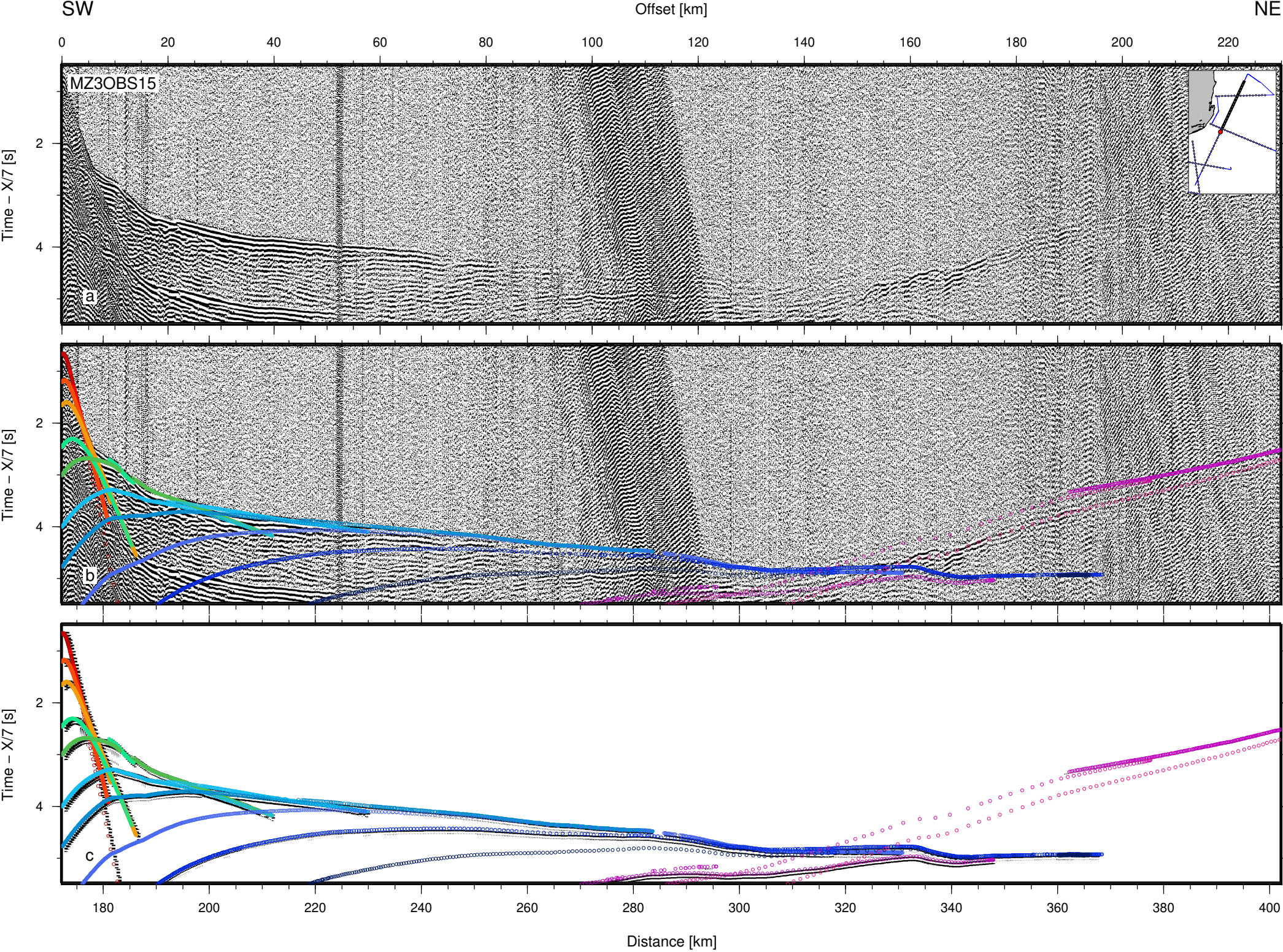

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS17
Time − X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
MZ3O
TWT [s]
2
4
6
f
−20
0
20
40
60
80
100
120
140
160
180
Distance [km]

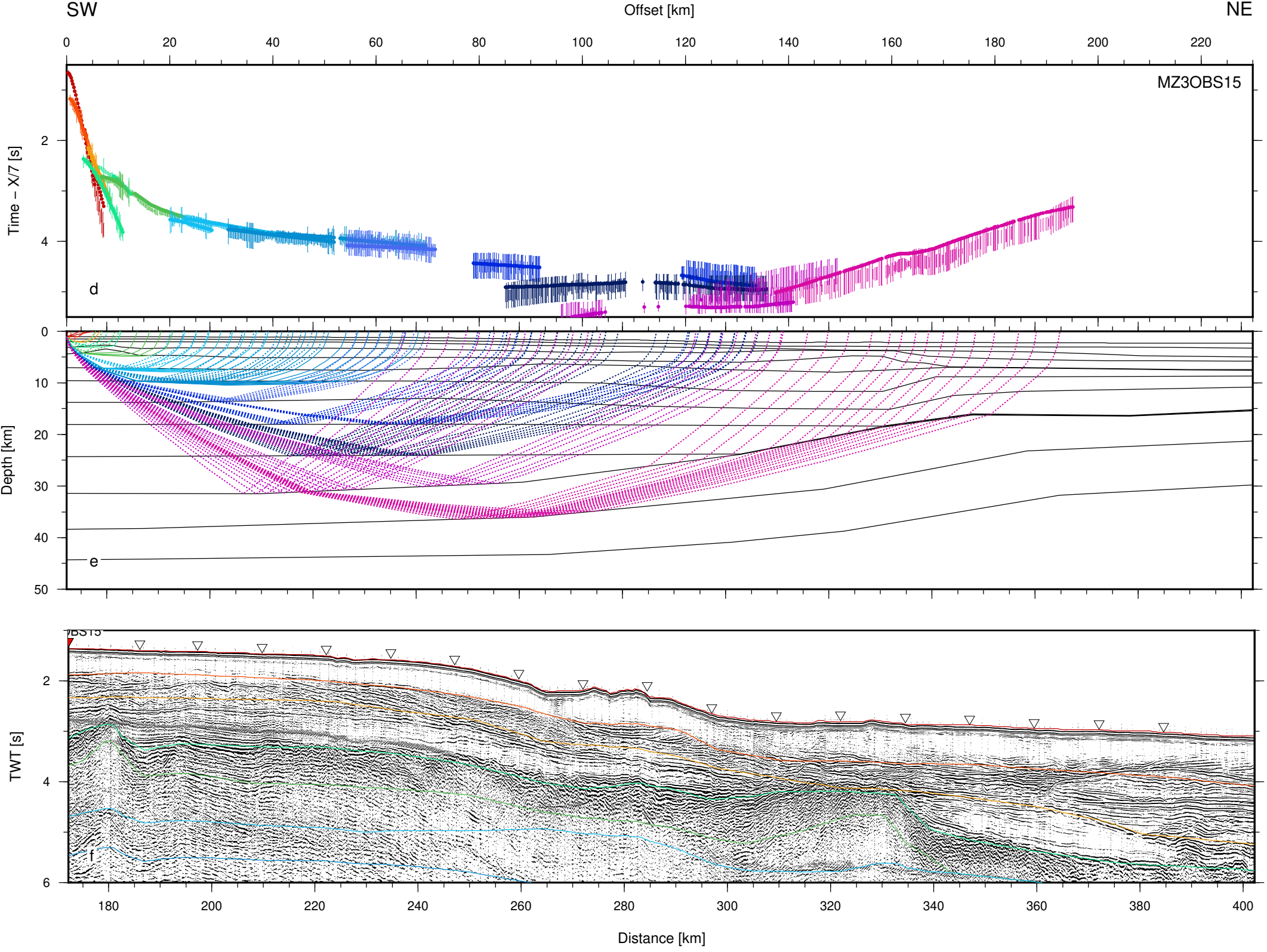

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS16
a
b
c
Time – X/7 [s]
2
4
200
220
240
260
280
300
320
340
360
380
400
Distance [km]

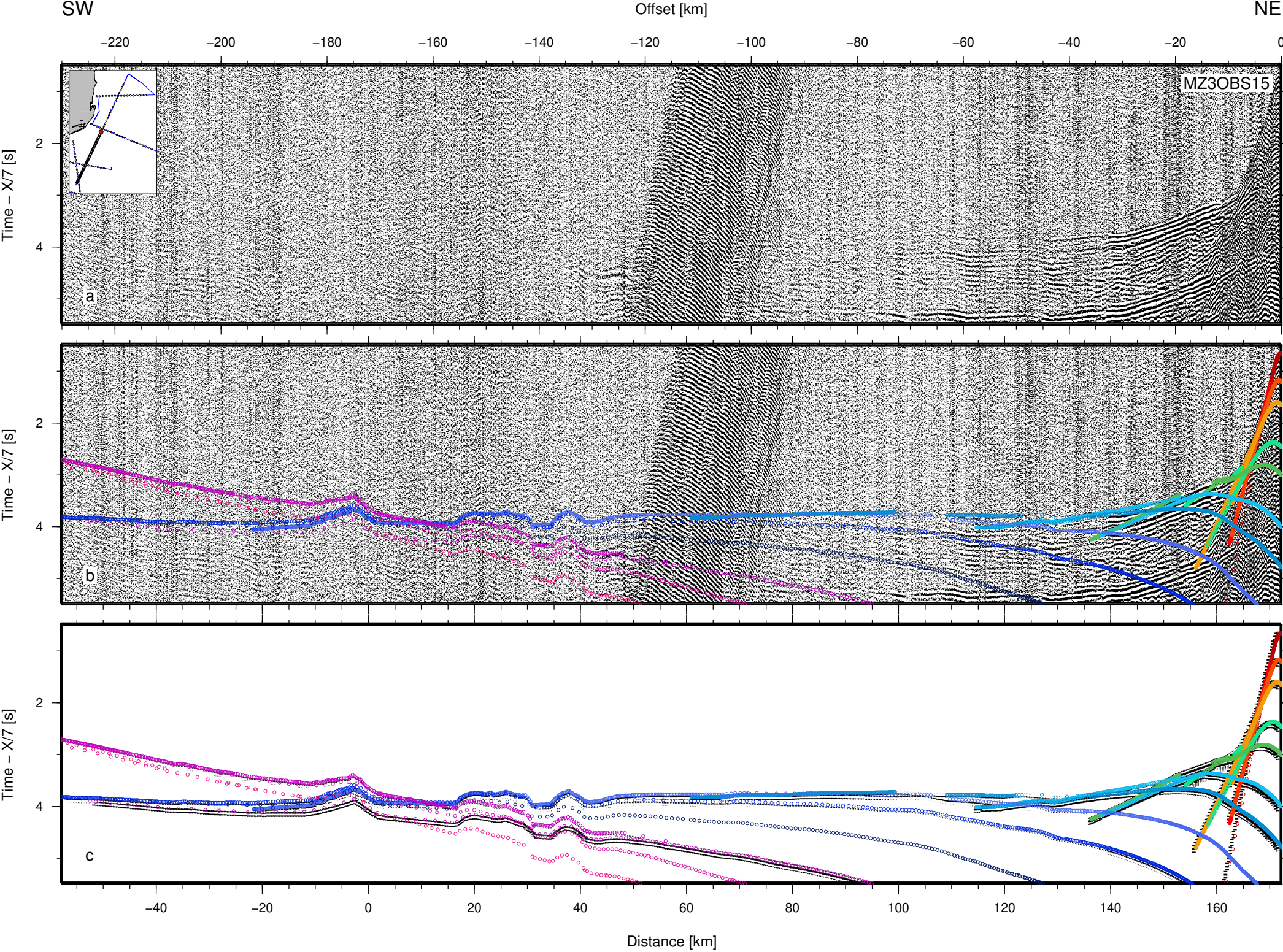

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS16
Time – X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
BS16
TWT [s]
2
4
6
f
200
220
240
260
280
300
320
340
360
380
400
Distance [km]

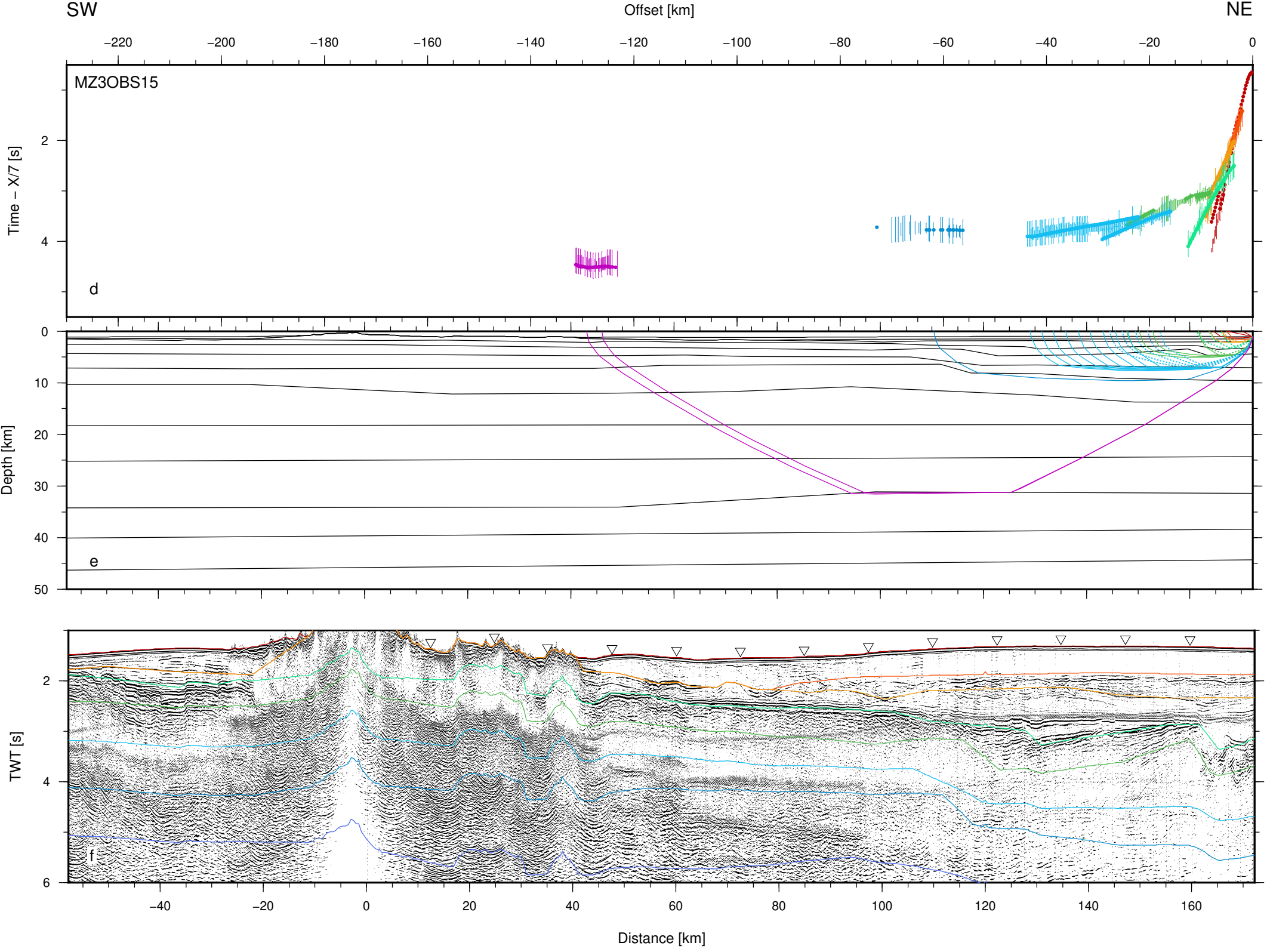

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS16
Time − X/7 [s]
2
4
a
b
c
−40
−20
0
20
40
60
80
100
120
140
160
180
Distance [km]

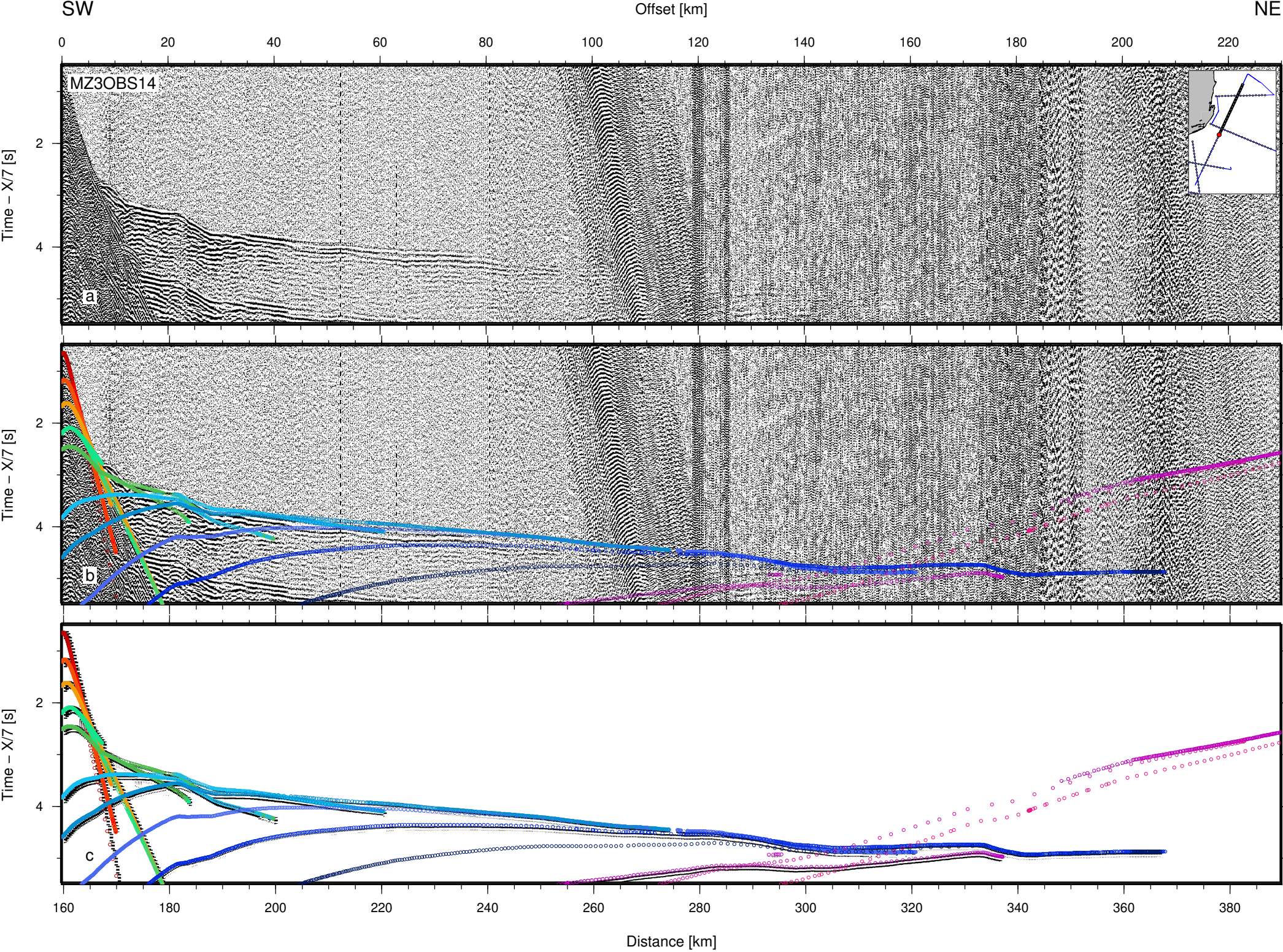

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS16
Time − X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
TWT [s]
2
4
6
f
−40
−20
0
20
40
60
80
100
120
140
160
180
Distance [km]

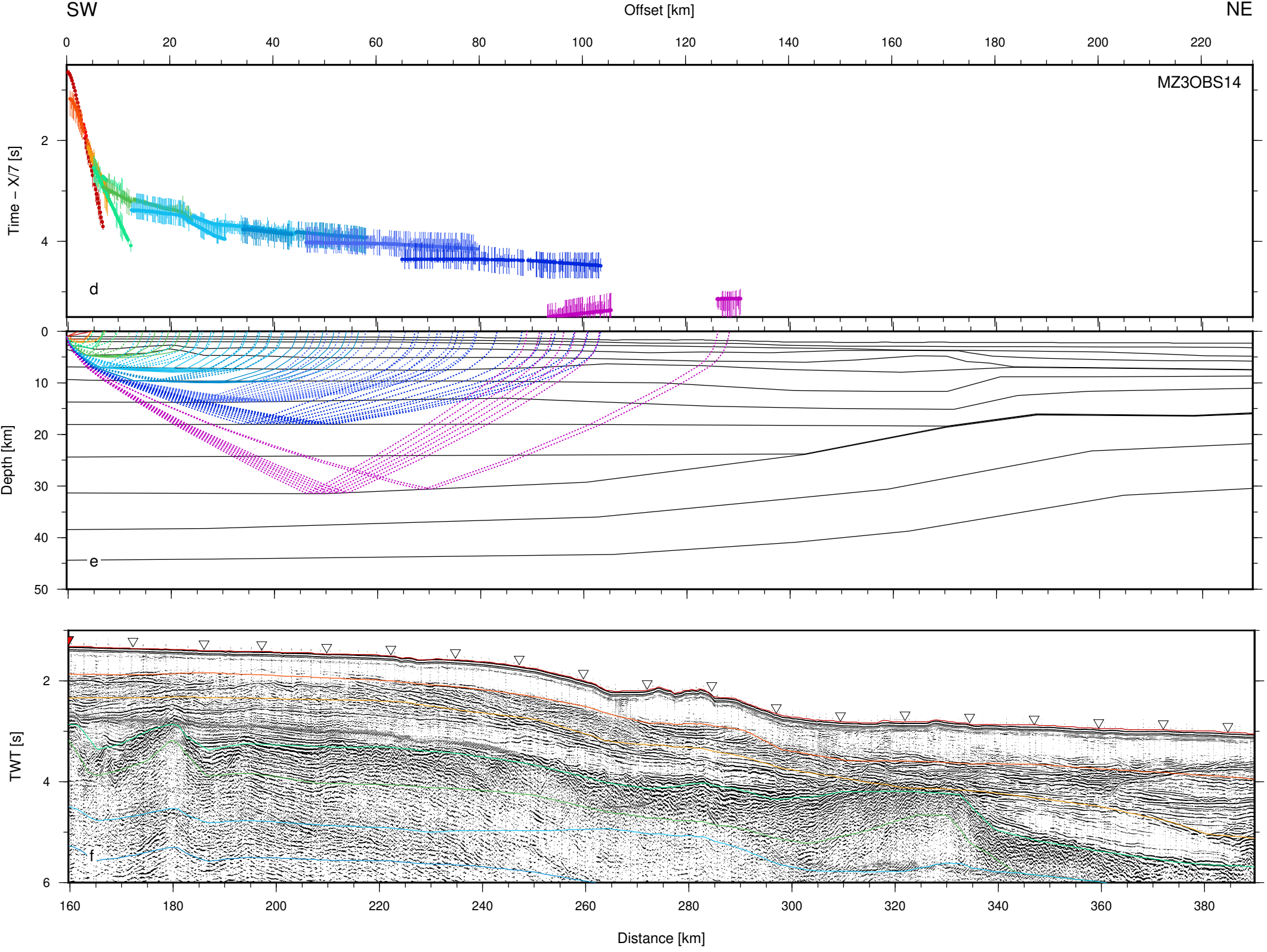

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS15
a
b
c
Time – X/7 [s]
2
4
180
200
220
240
260
280
300
320
340
360
380
400
Distance [km]

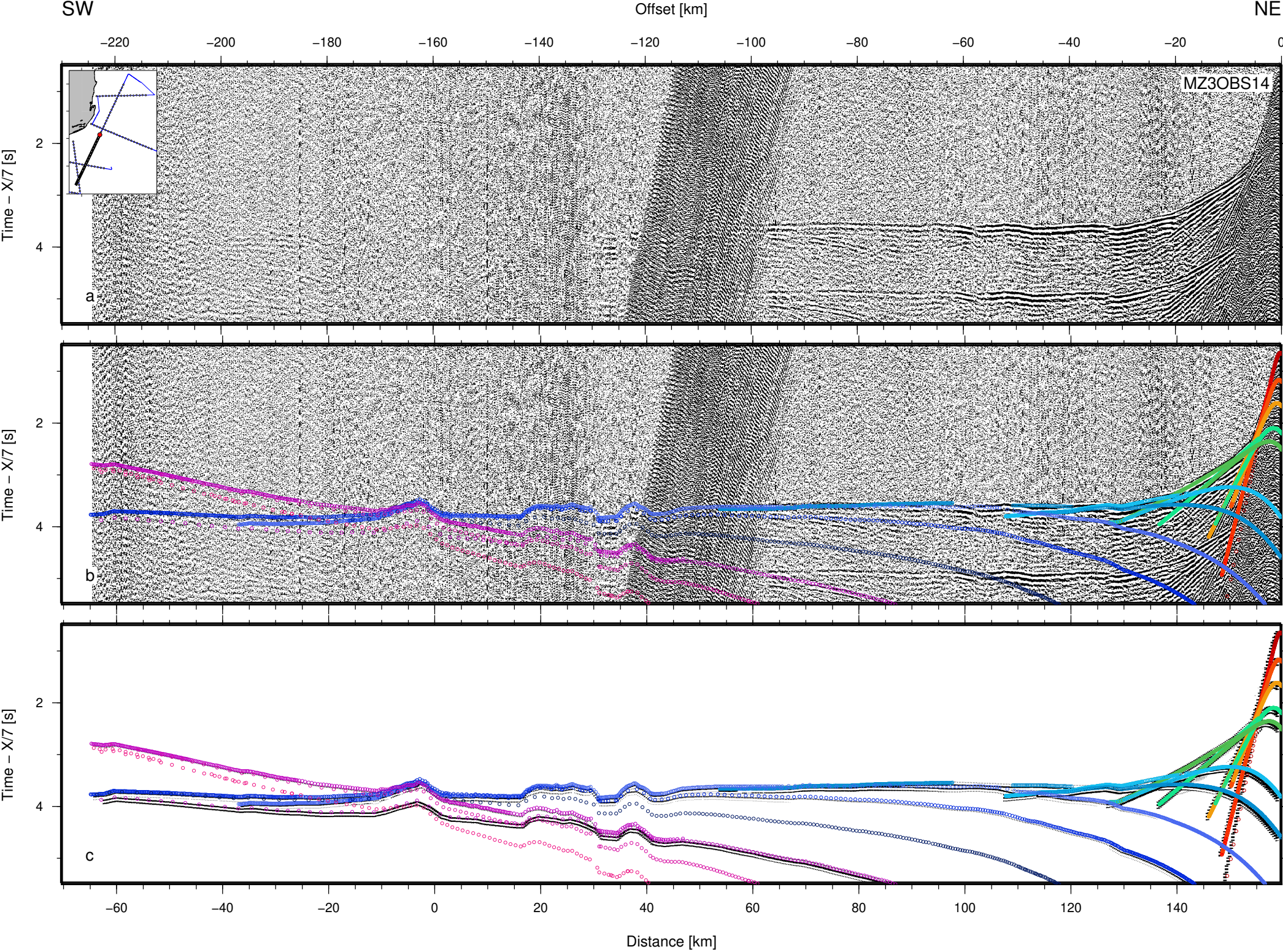

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS15
Time – X/7 [s]
2
4
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
180
200
220
240
260
280
300
320
340
360
380
400
Distance [km]

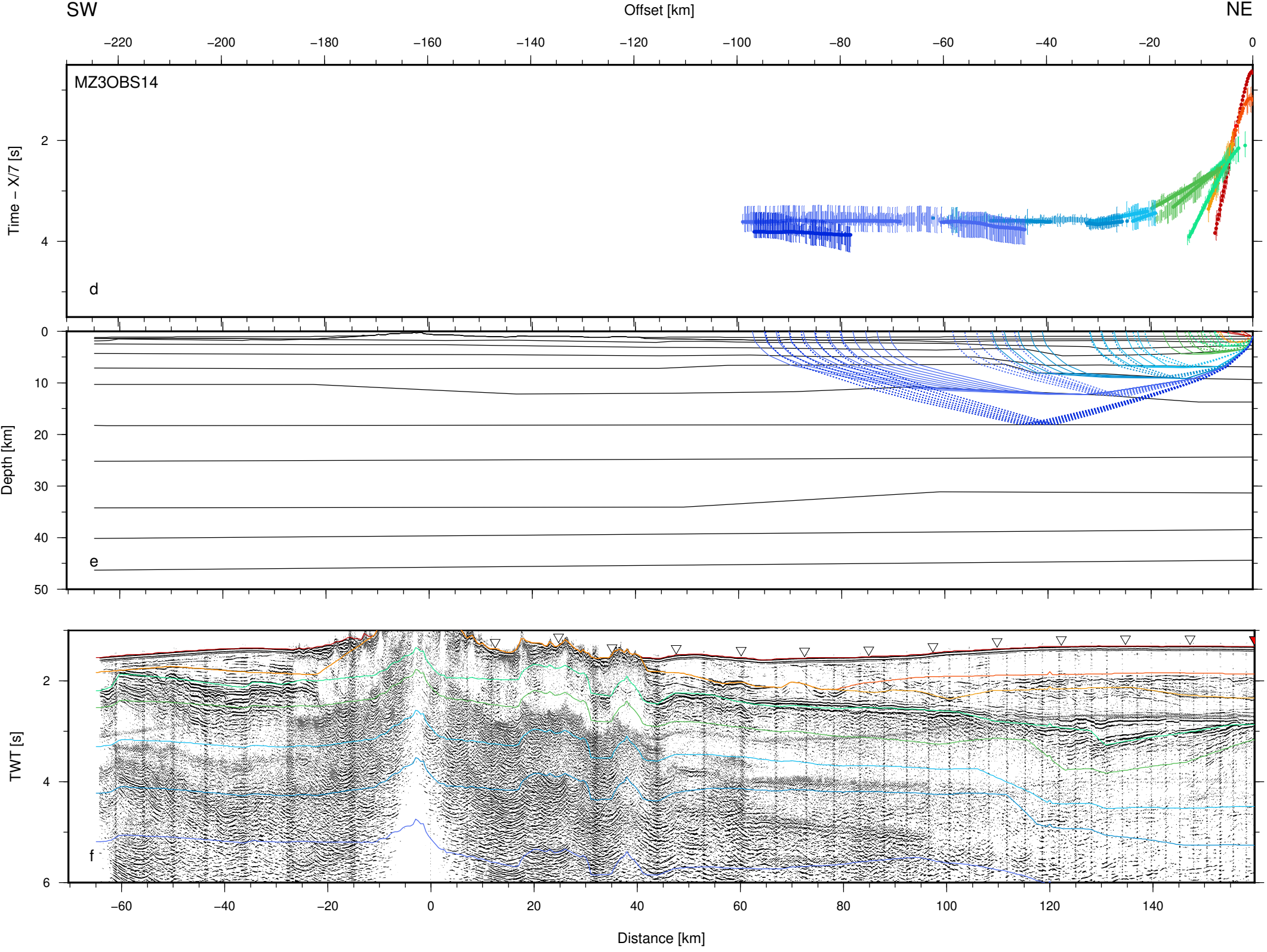

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS15
Time − X/7 [s]
2
4
a
b
c
−40
−20
0
20
40
60
80
100
120
140
160
Distance [km]

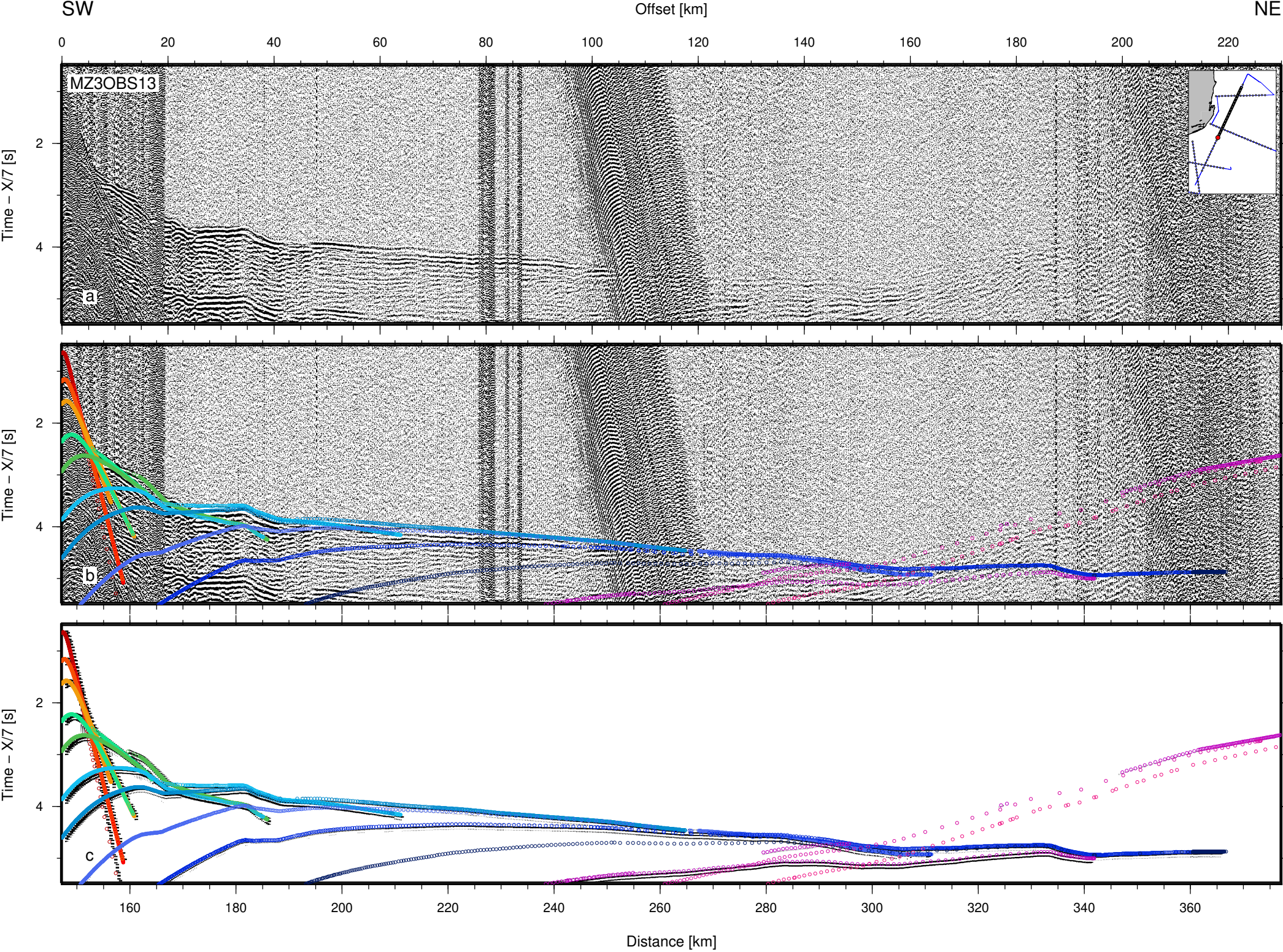

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS15
Time − X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
TWT [s]
2
4
6
f
−40
−20
0
20
40
60
80
100
120
140
160
Distance [km]

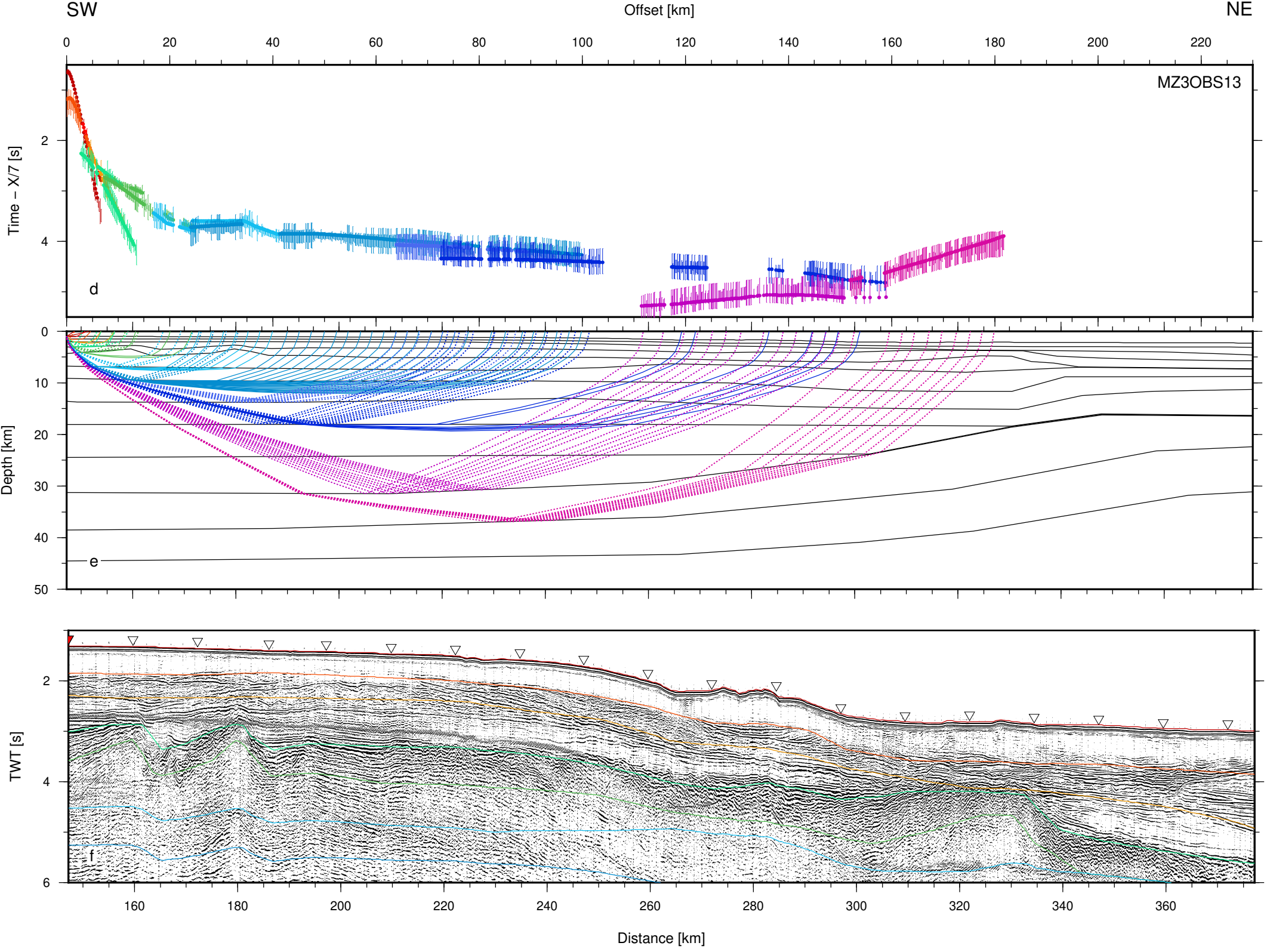

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS14
a
b
c
Time – X/7 [s]
2
4
160
180
200
220
240
260
280
300
320
340
360
380
Distance [km]

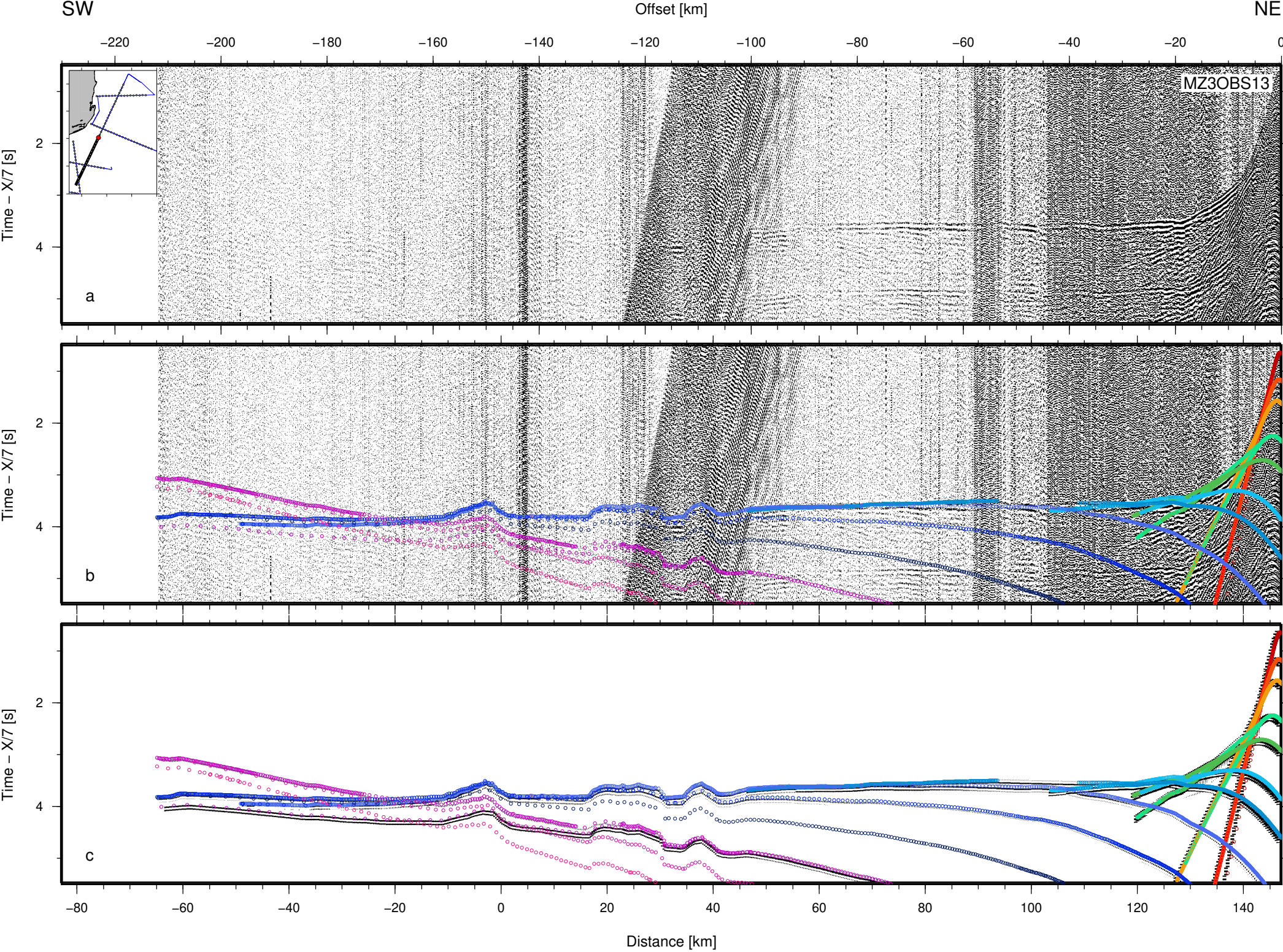

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS14
Time – X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
TWT [s]
2
4
6
f
160
180
200
220
240
260
280
300
320
340
360
380
Distance [km]

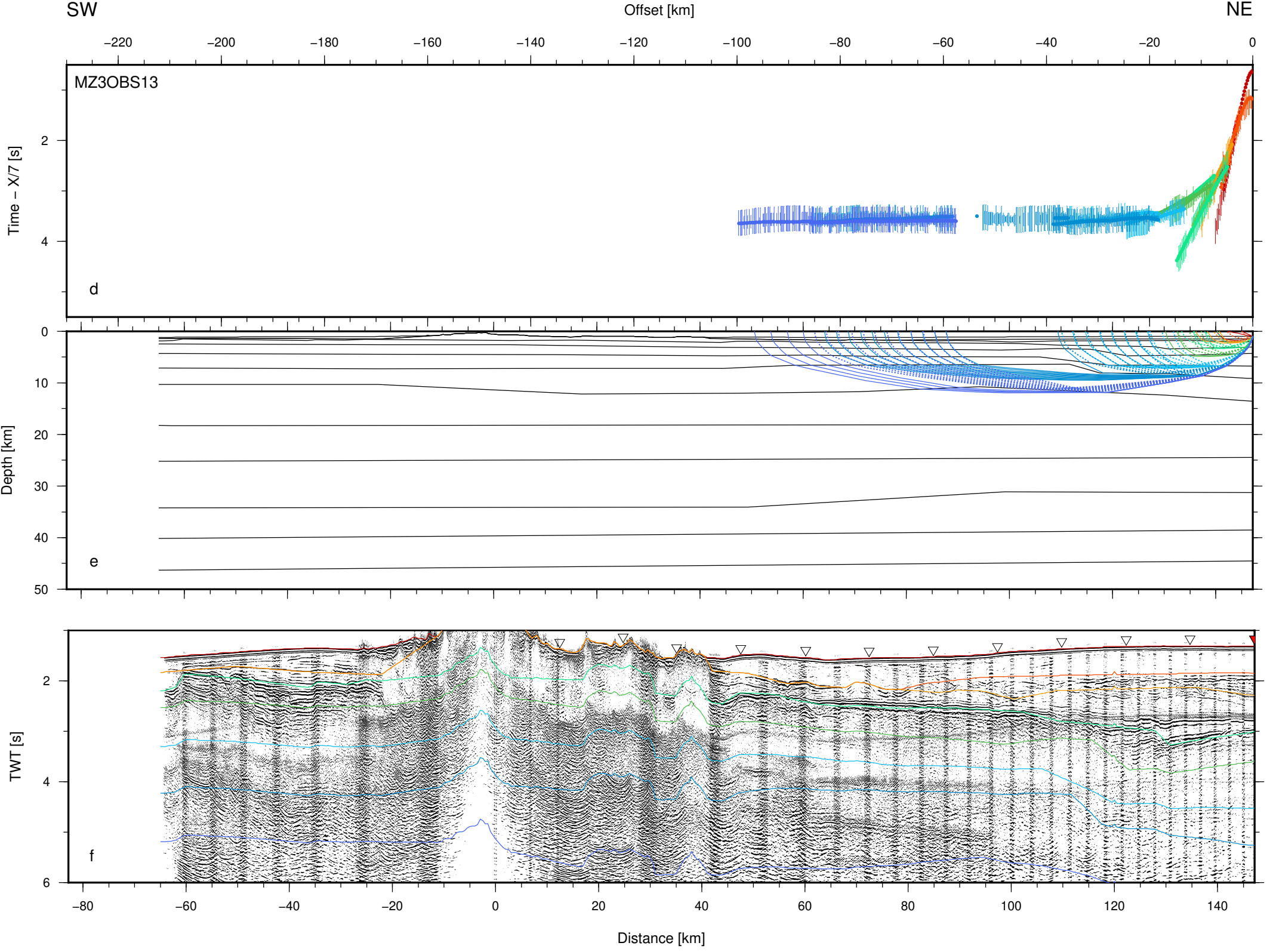

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS14
Time − X/7 [s]
2
4
a
b
c
−60
−40
−20
0
20
40
60
80
100
120
140
Distance [km]

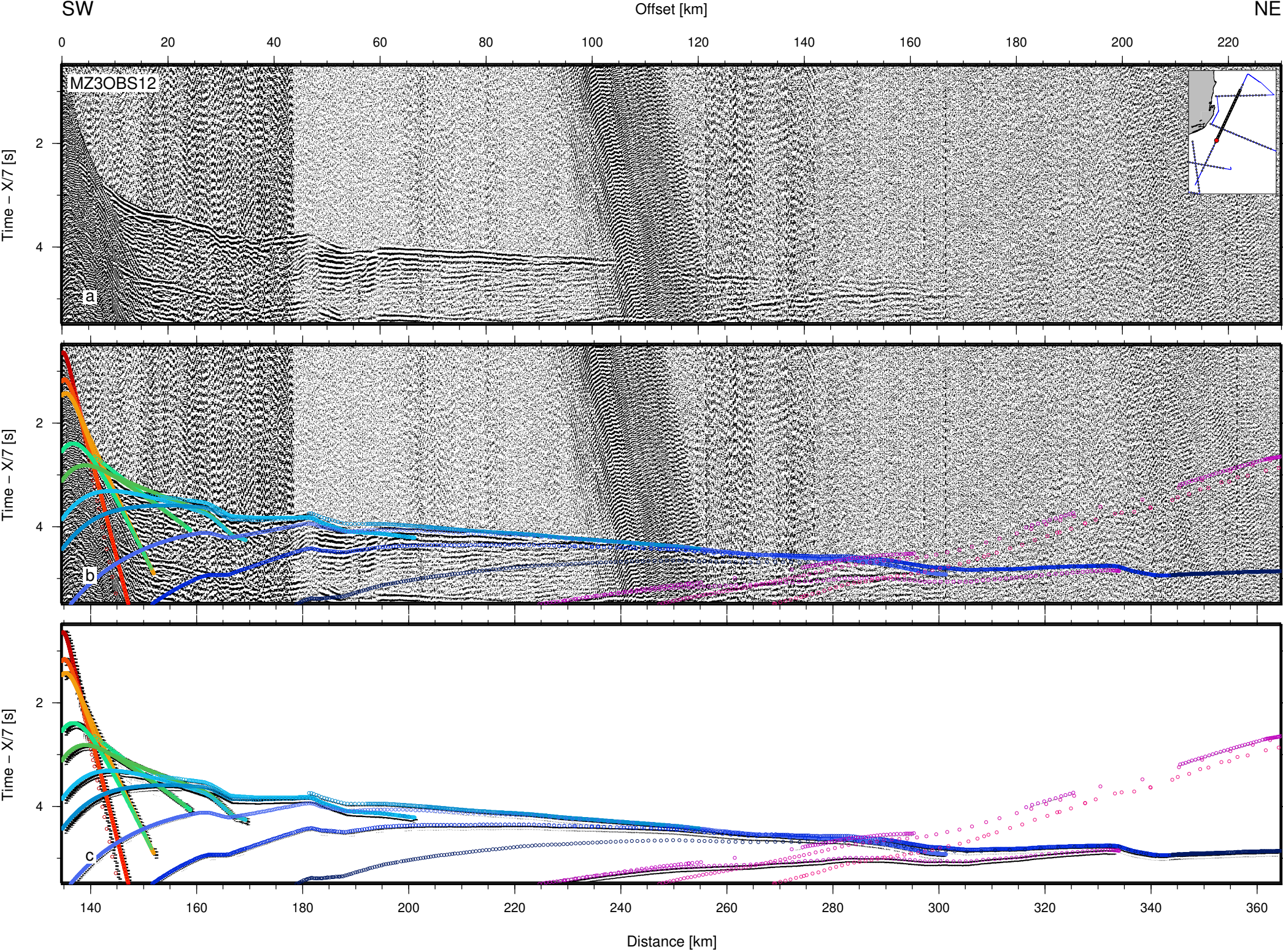

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS14
Time − X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
TWT [s]
2
4
6
f
−60
−40
−20
0
20
40
60
80
100
120
140
Distance [km]

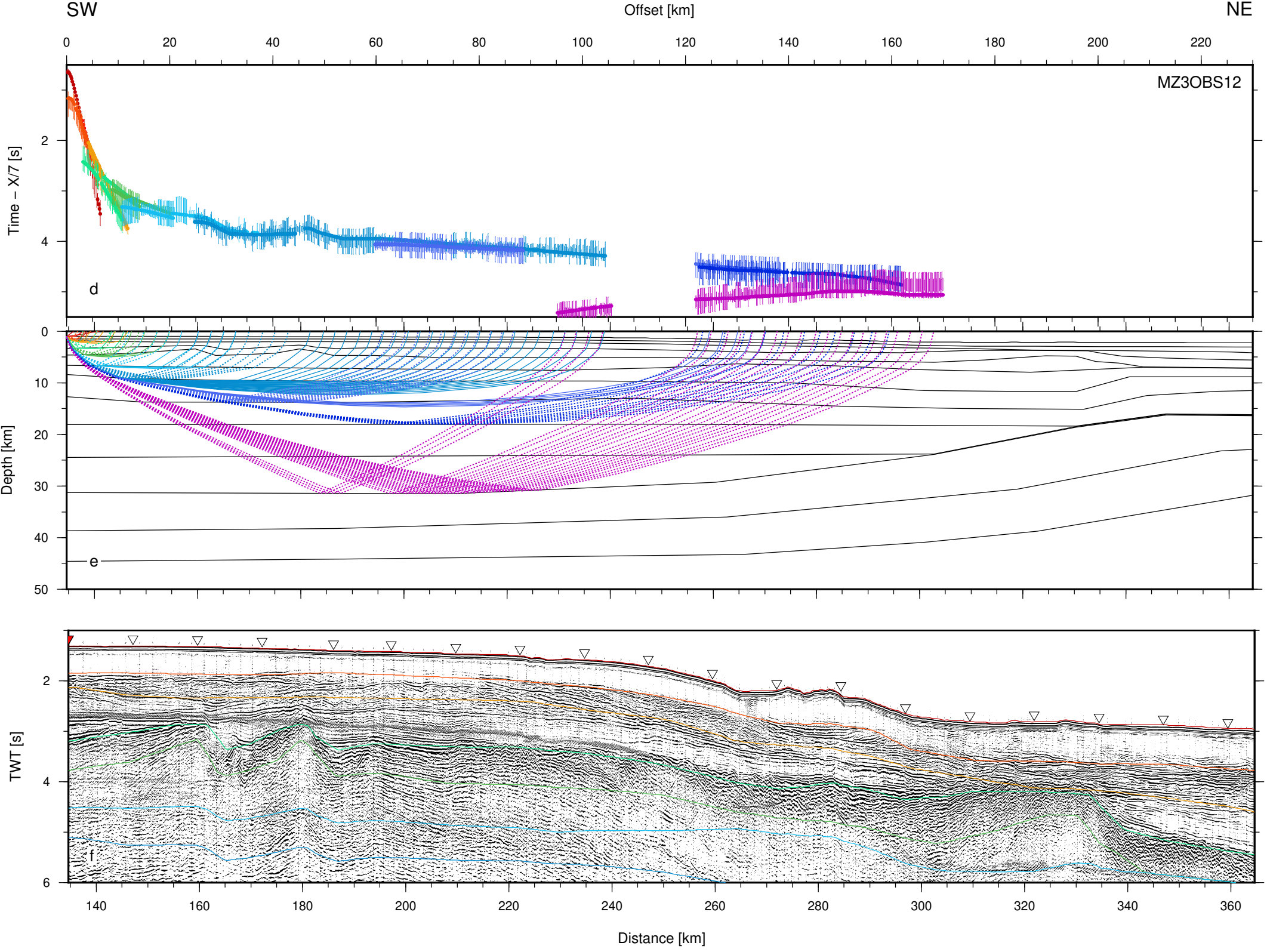

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS13
a
b
c
Time – X/7 [s]
2
4
160
180
200
220
240
260
280
300
320
340
360
Distance [km]

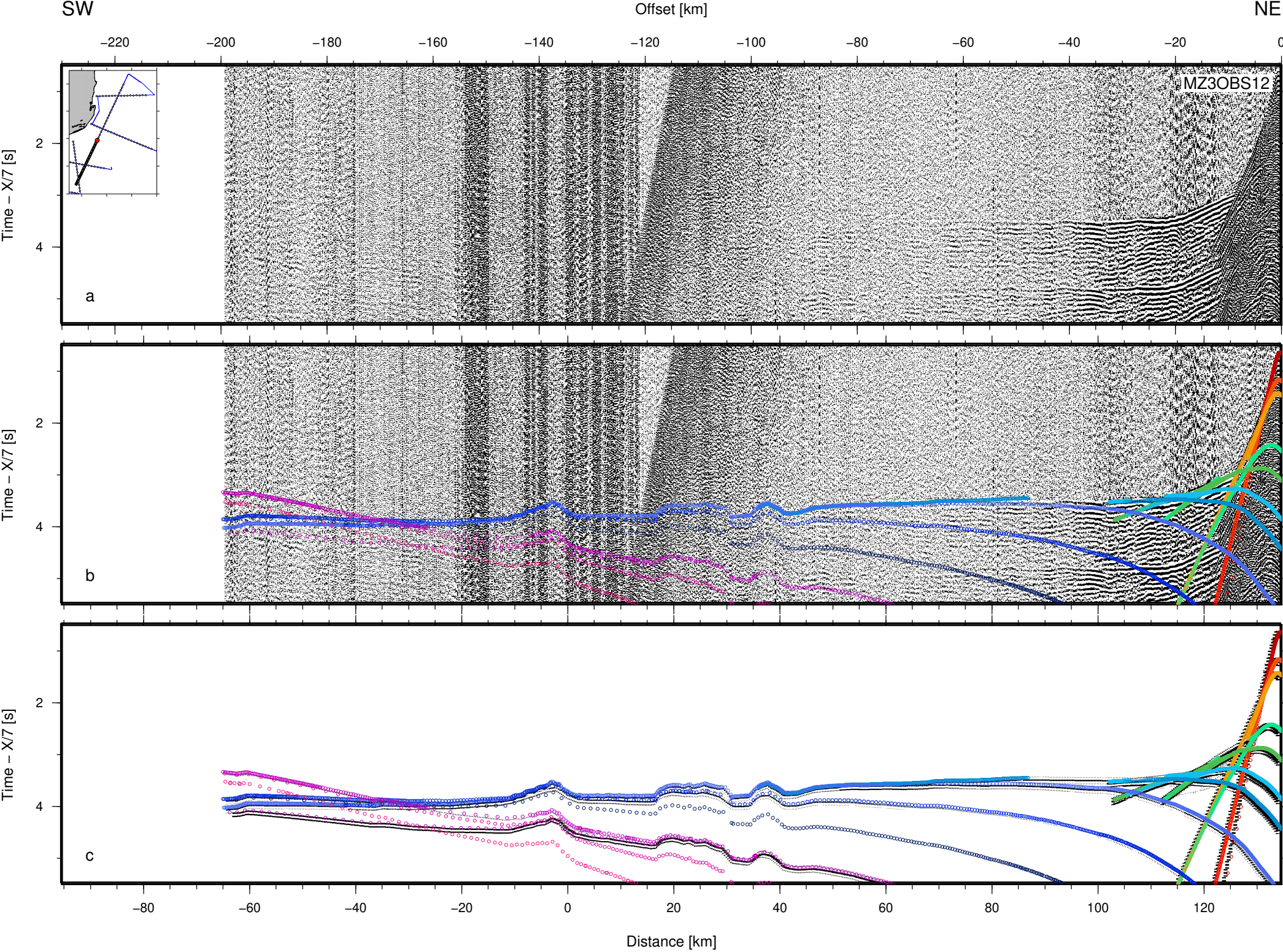

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS13
Time – X/7 [s]
2
4
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
160
180
200
220
240
260
280
300
320
340
360
Distance [km]

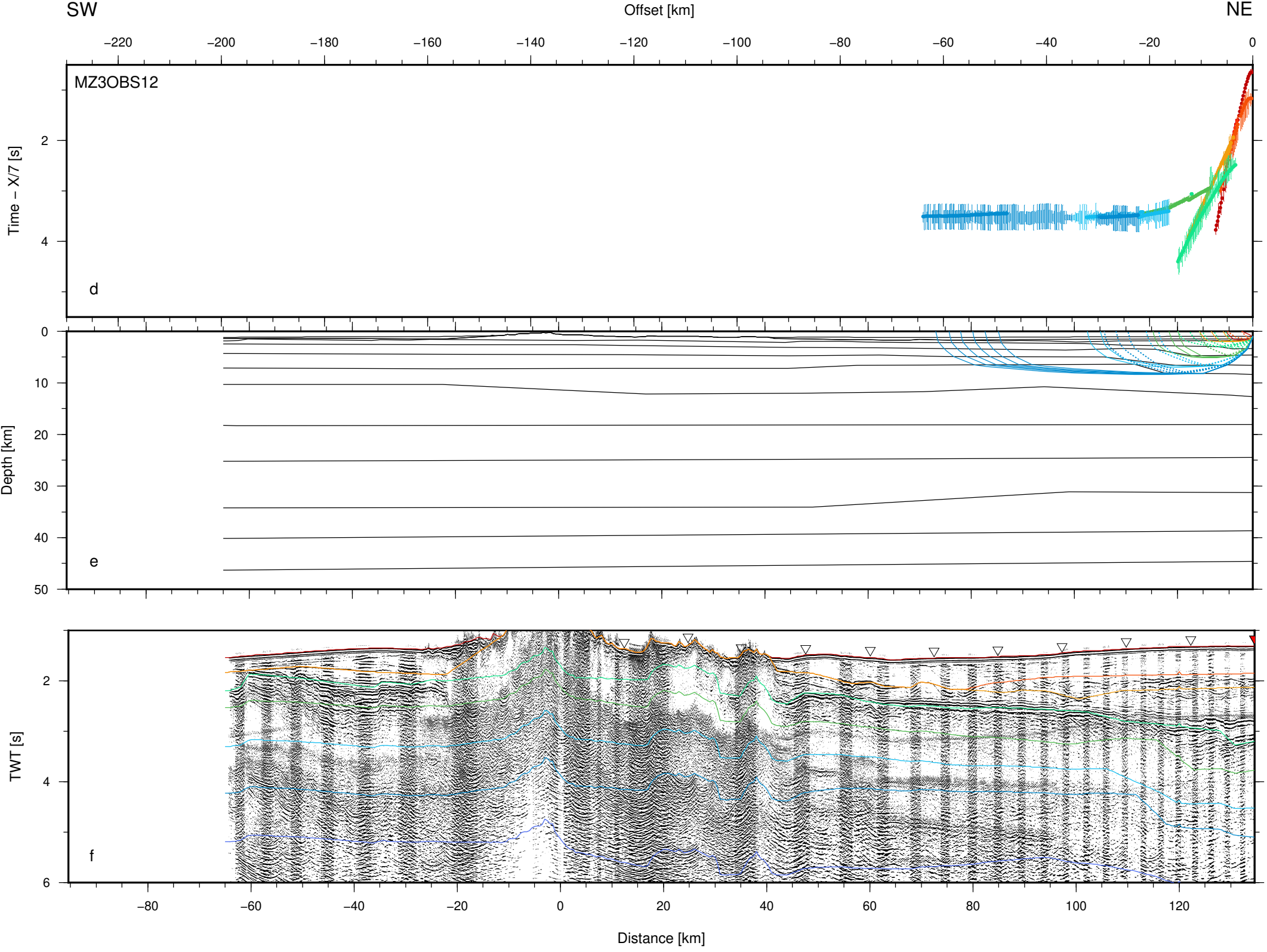

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS13
Time − X/7 [s]
2
4
a
b
c
−80
−60
−40
−20
0
20
40
60
80
100
120
140
Distance [km]

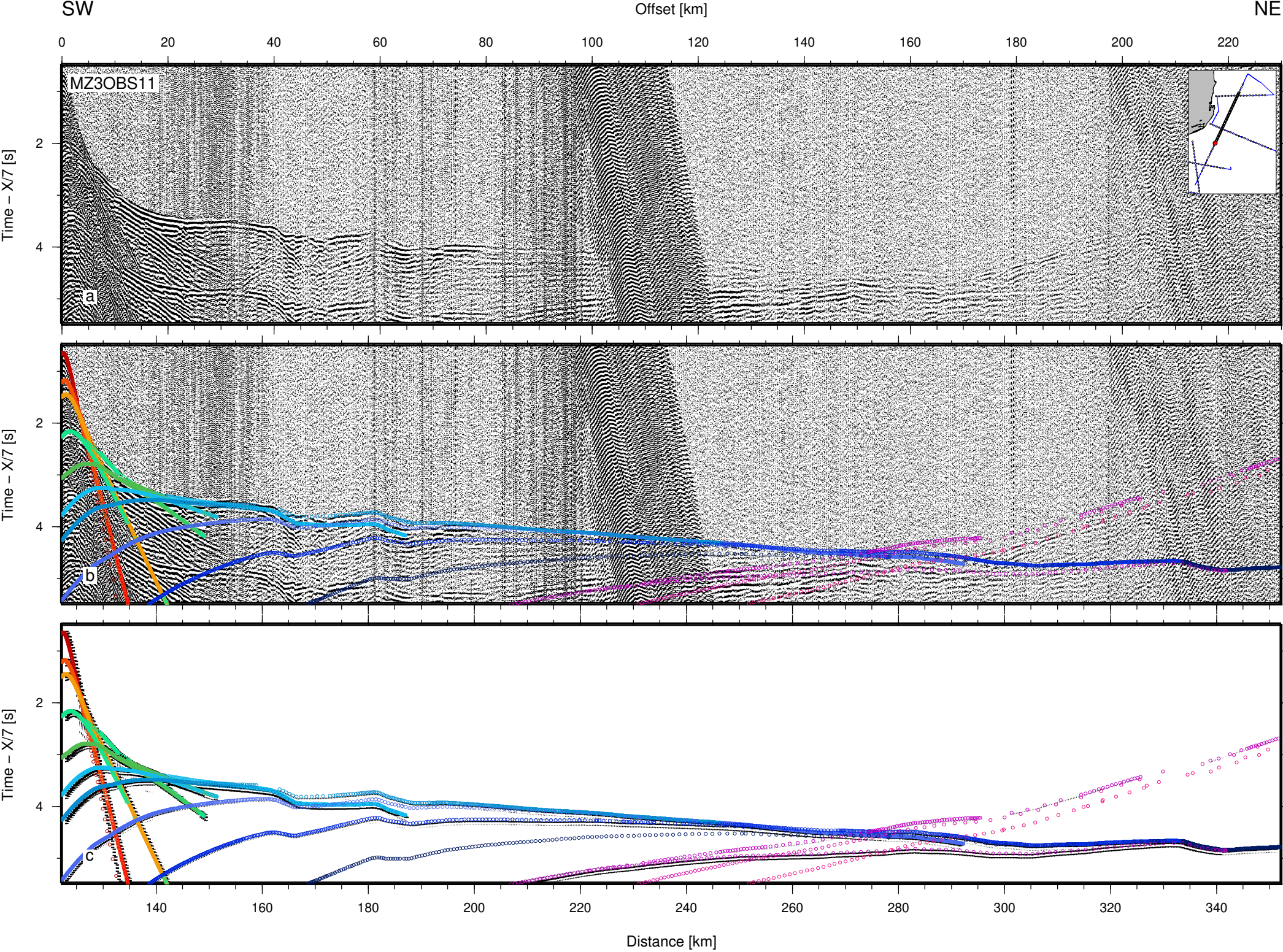

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS13
Time − X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
TWT [s]
2
4
6
f
−80
−60
−40
−20
0
20
40
60
80
100
120
140
Distance [km]

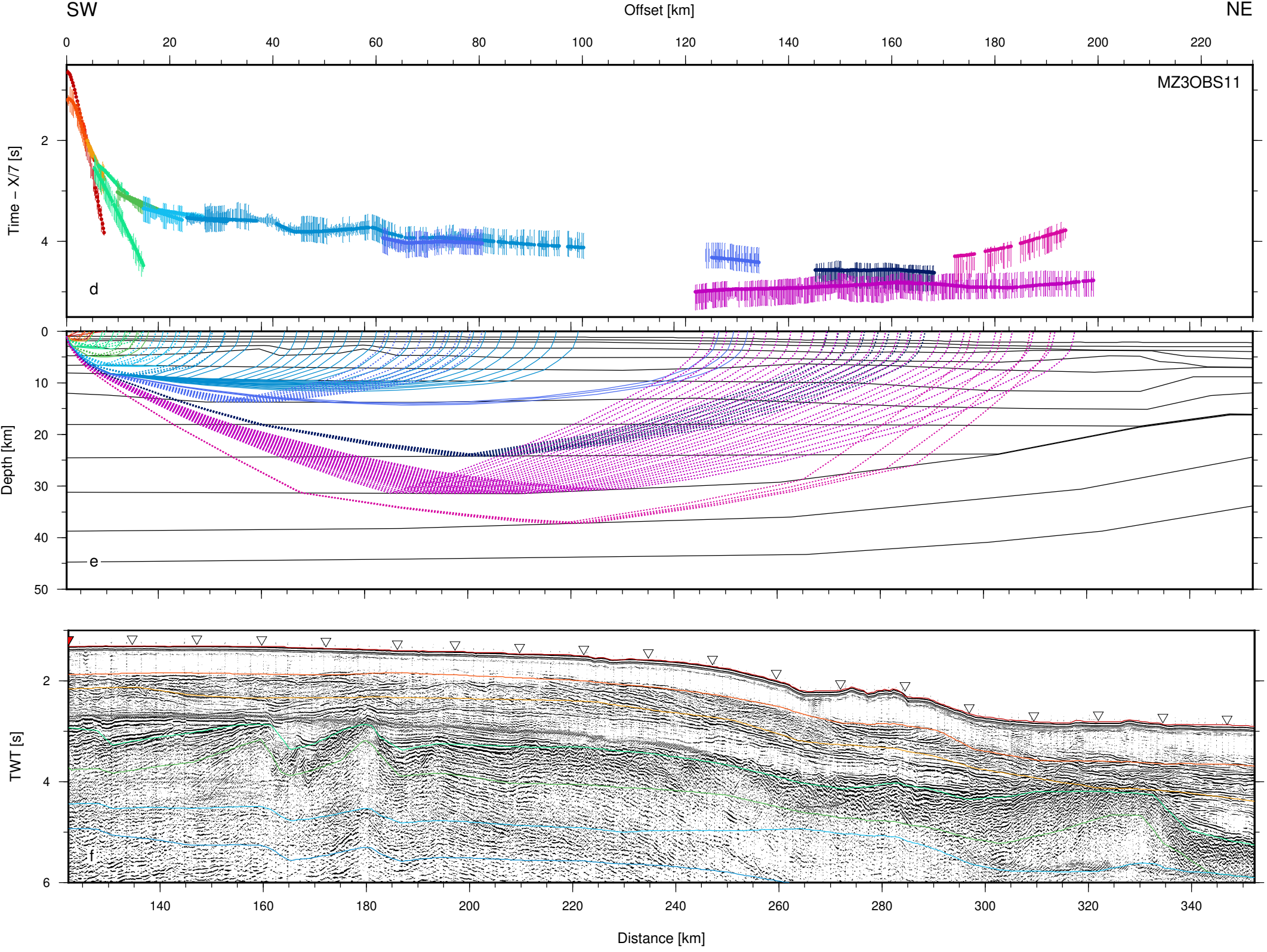

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS12
a
b
c
Time – X/7 [s]
2
4
140
160
180
200
220
240
260
280
300
320
340
360
Distance [km]

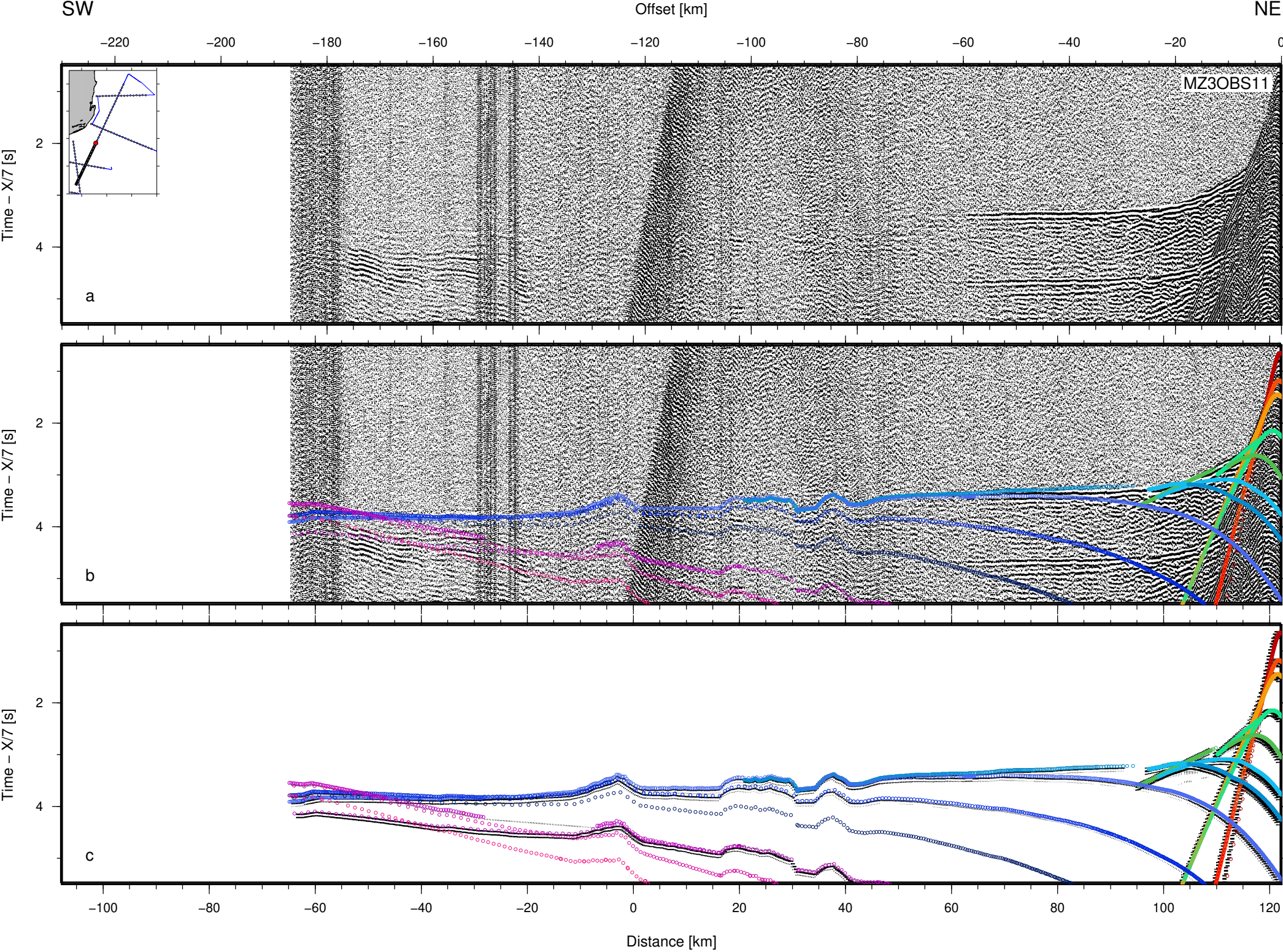

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS12
Time – X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
2
4
6
TWT [s]
f
140
160
180
200
220
240
260
280
300
320
340
360
Distance [km]

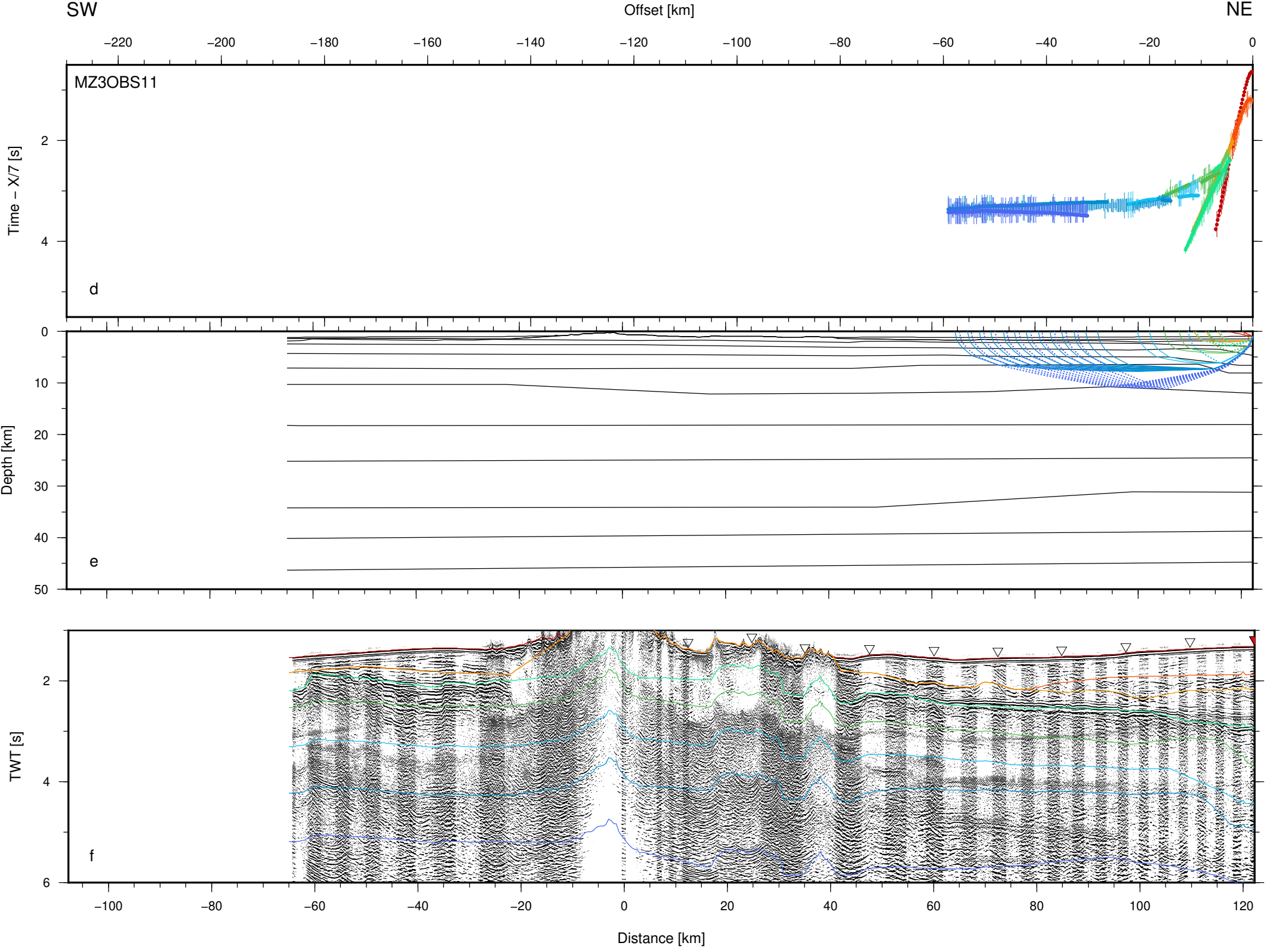

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS12
Time − X/7 [s]
2
4
a
b
c
−80
−60
−40
−20
0
20
40
60
80
100
120
Distance [km]

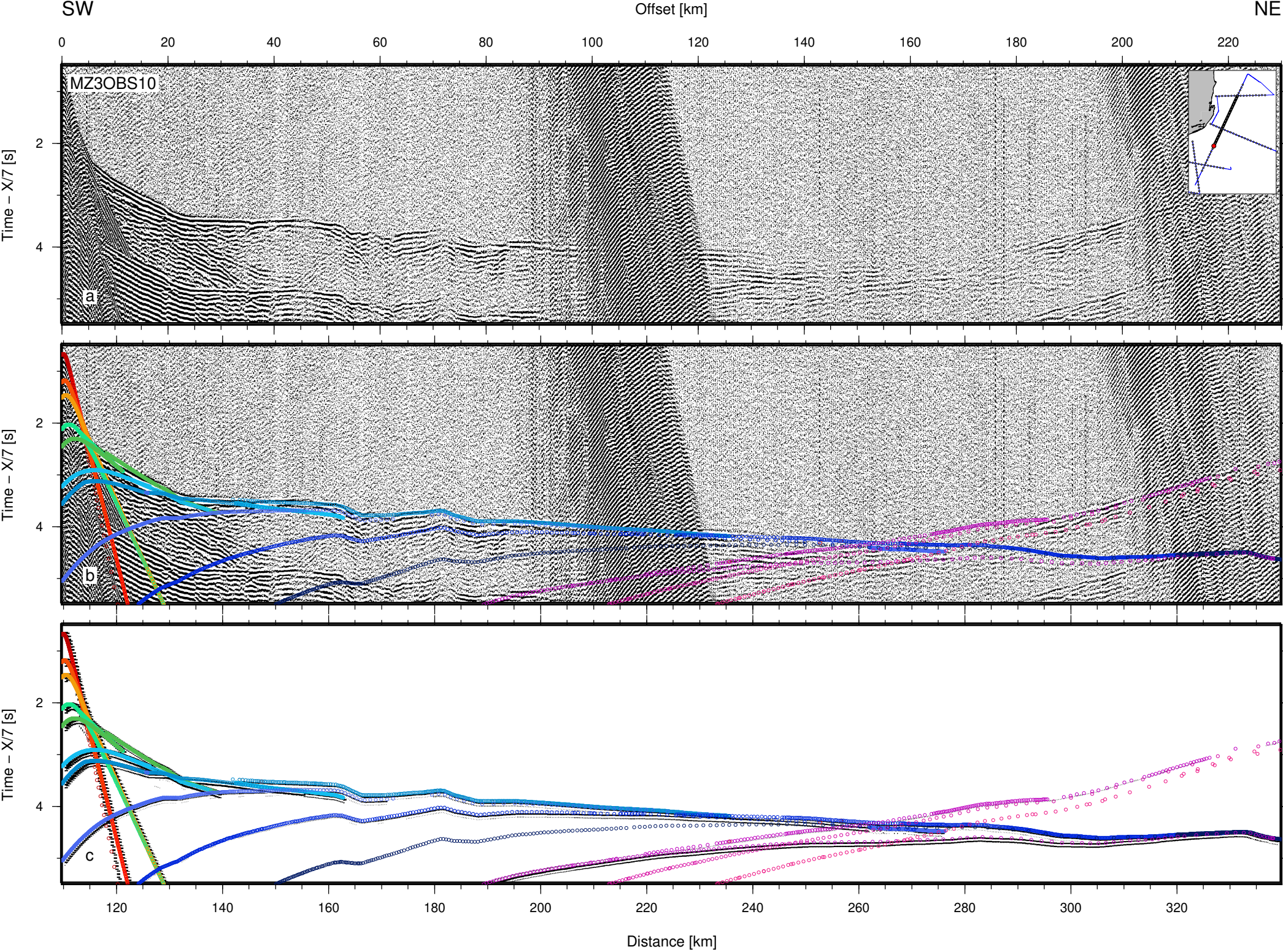

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS12
Time − X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
TWT [s]
2
4
6
f
−80
−60
−40
−20
0
20
40
60
80
100
120
Distance [km]

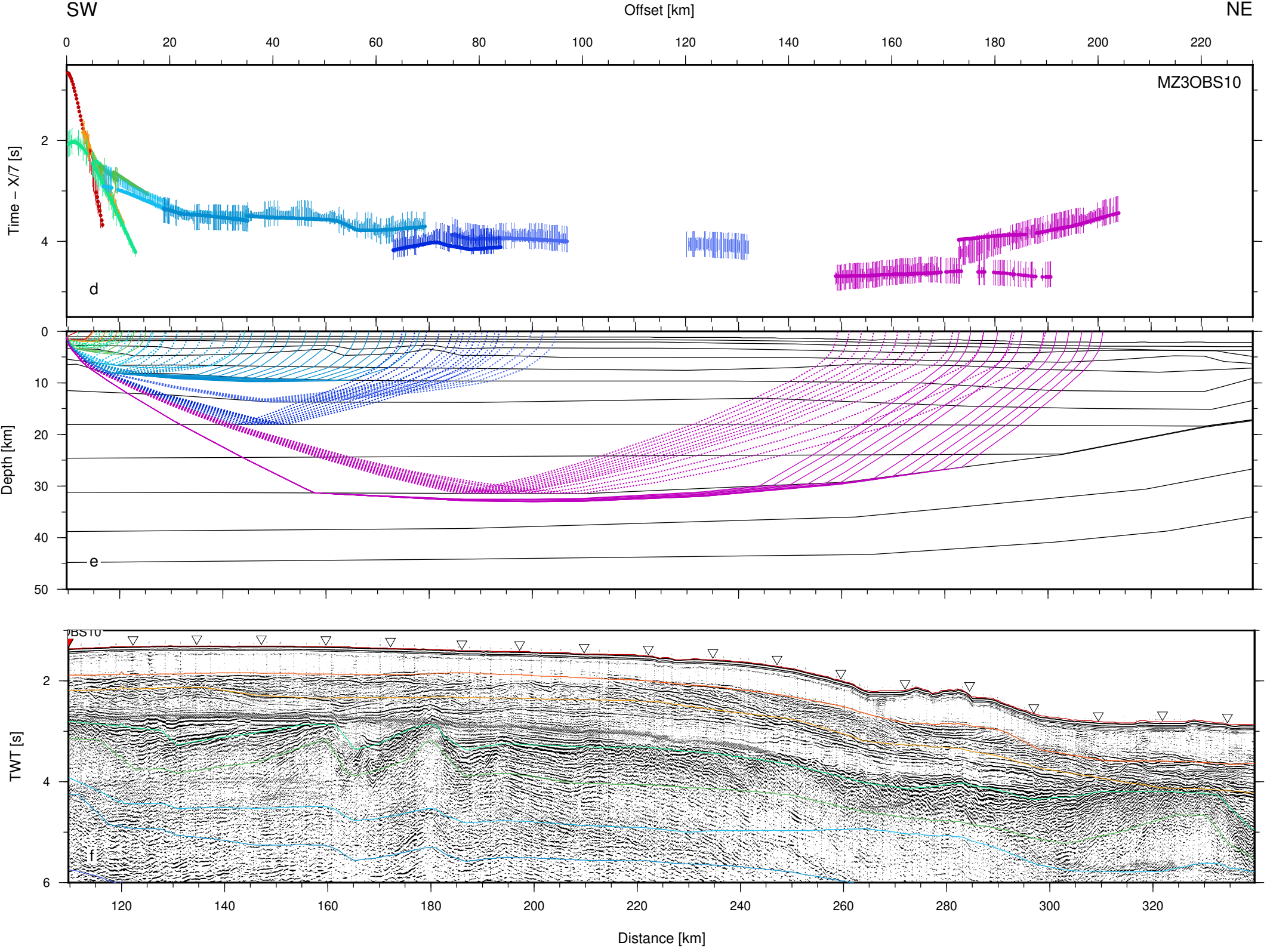

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS11
a
b
c
Time – X/7 [s]
2
4
140
160
180
200
220
240
260
280
300
320
340
Distance [km]

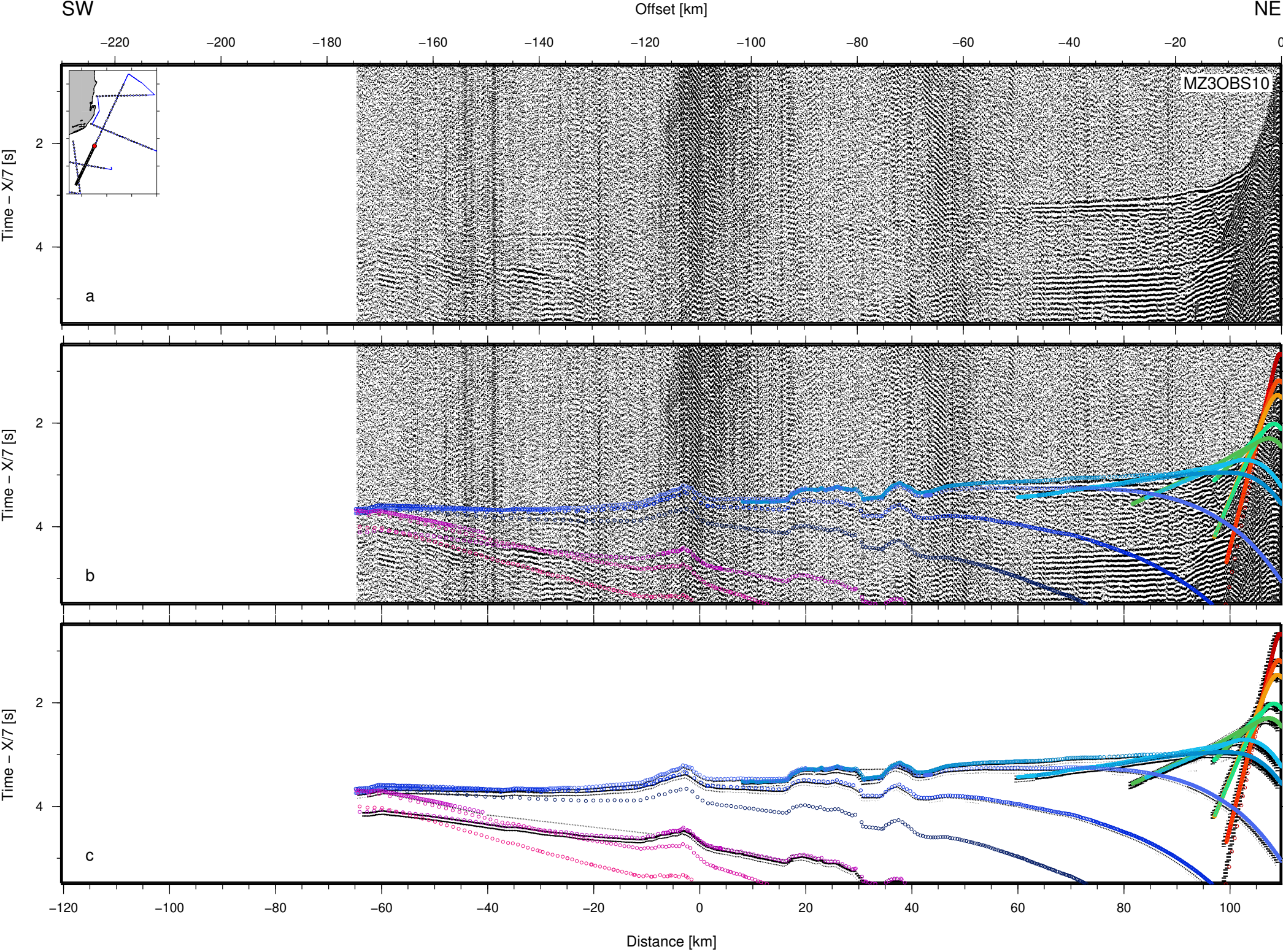

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS11
Time – X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
2
4
6
TWT [s]
f
140
160
180
200
220
240
260
280
300
320
340
Distance [km]

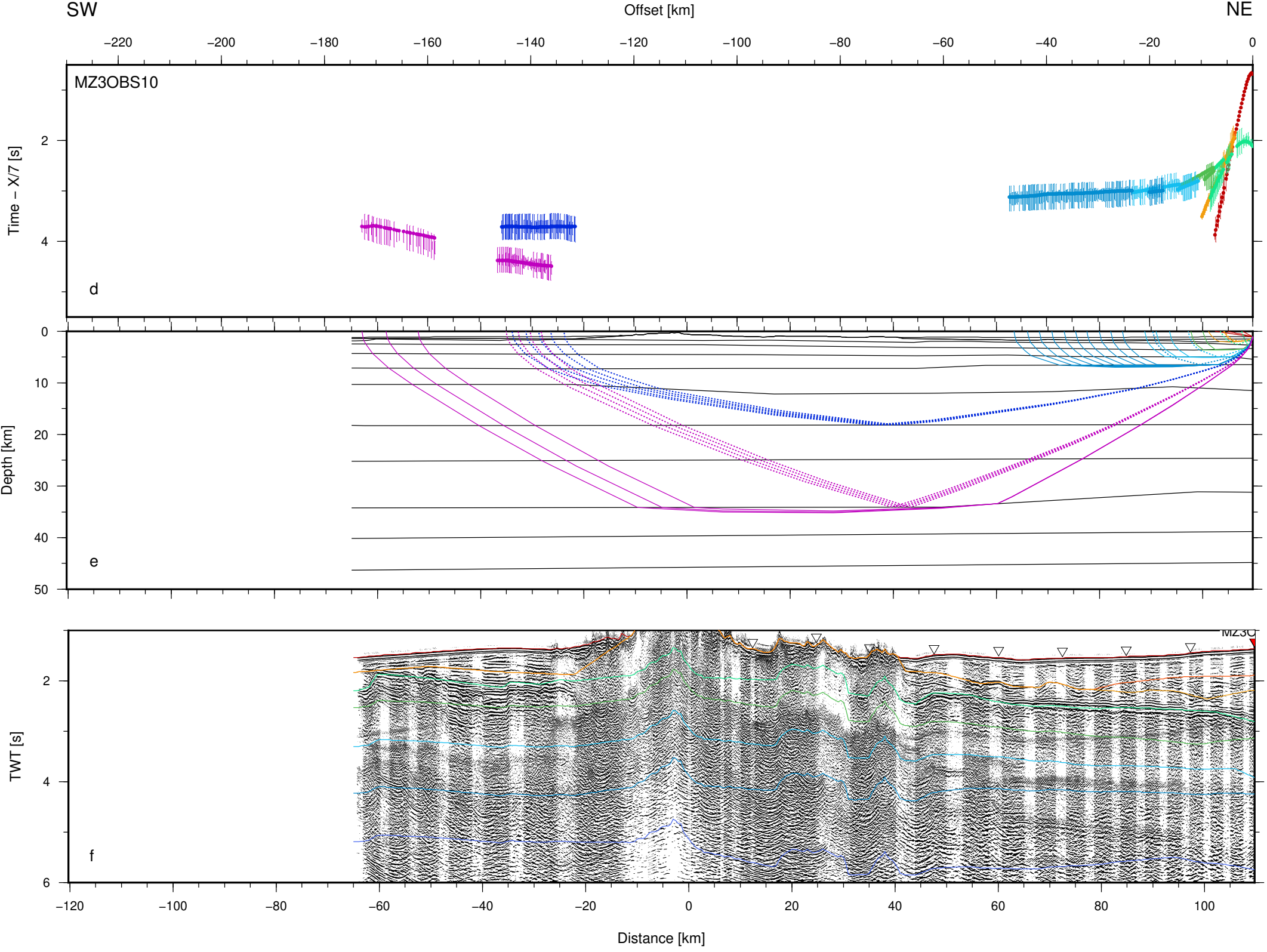

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS11
Time − X/7 [s]
2
4
a
b
c
−100
−80
−60
−40
−20
0
20
40
60
80
100
120
Distance [km]

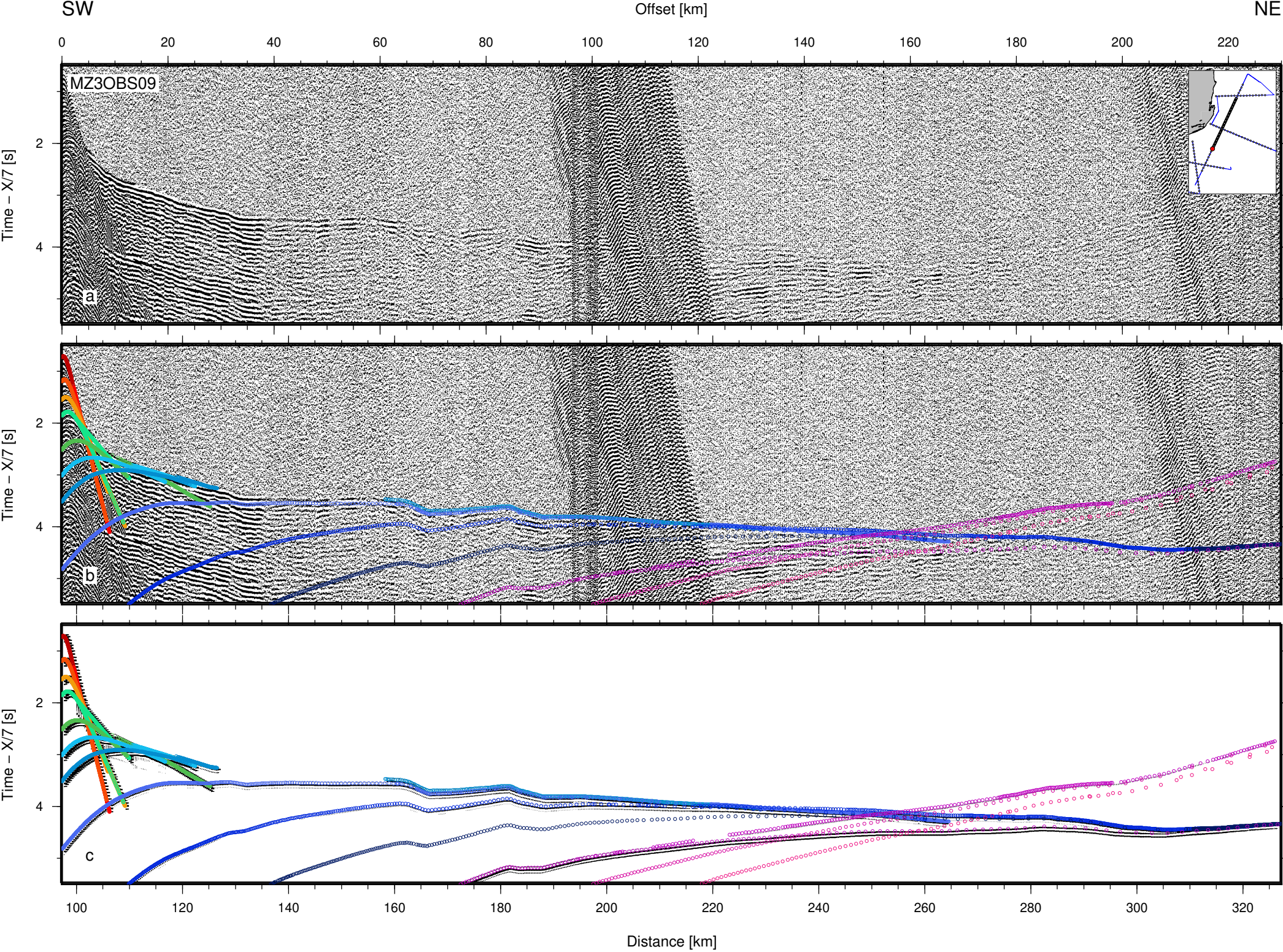

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS11
Time − X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
TWT [s]
2
4
6
f
−100
−80
−60
−40
−20
0
20
40
60
80
100
120
Distance [km]

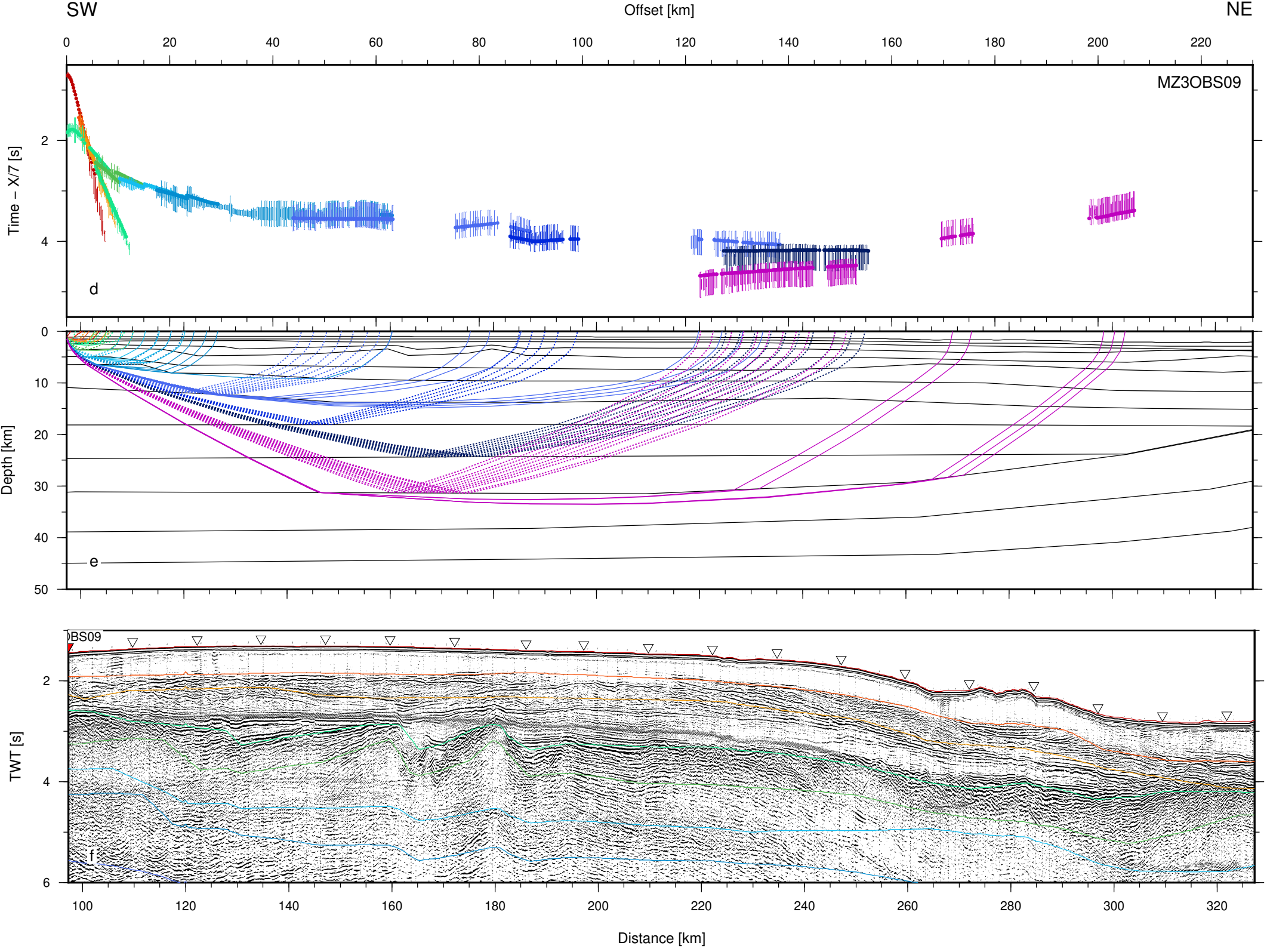

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS10
Time – X/7 [s]
2
4
a
b
c
120
140
160
180
200
220
240
260
280
300
320
Distance [km]

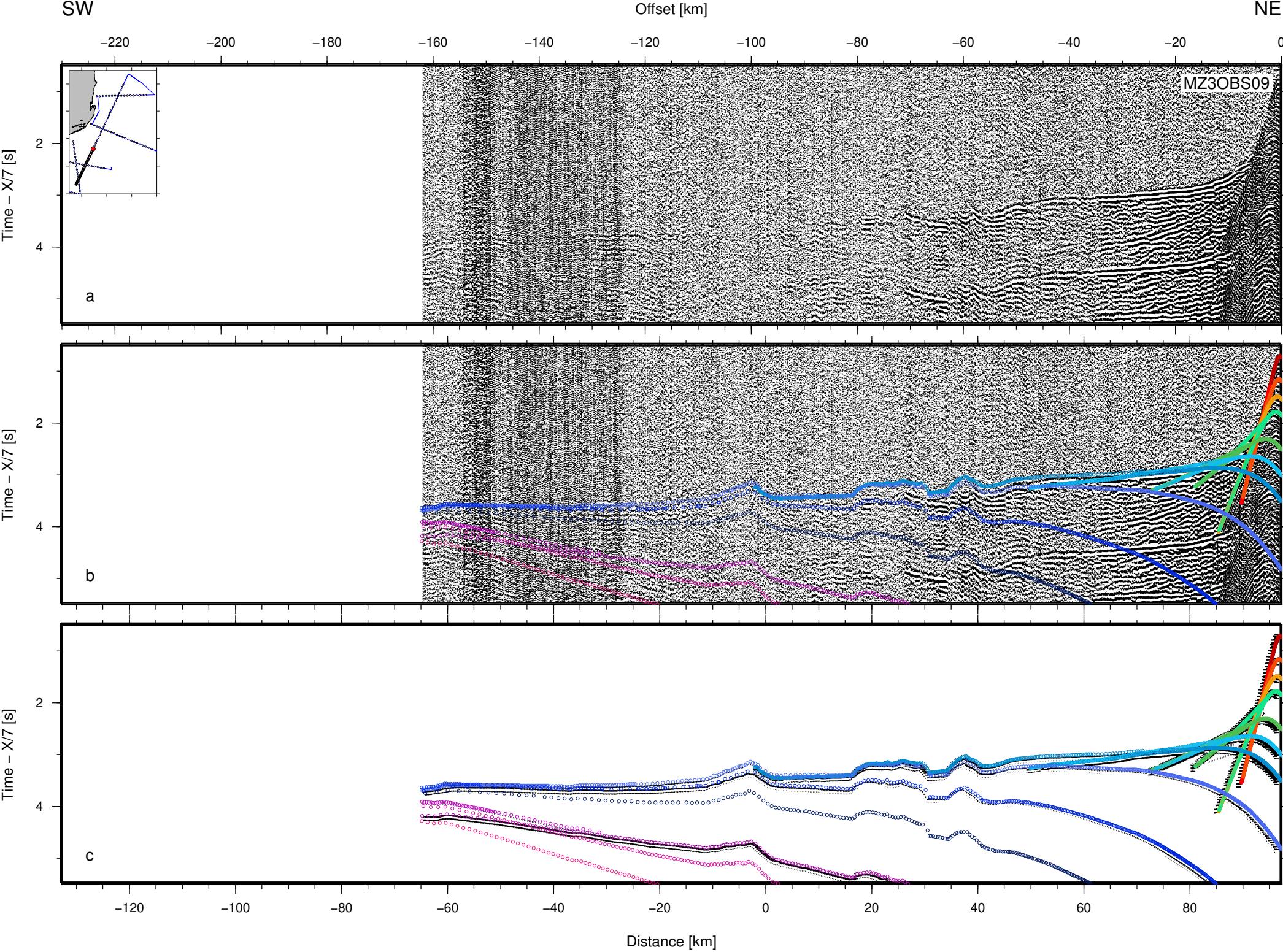

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS10
Time – X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
OBS10
2
4
6
TWT [s]
f
120
140
160
180
200
220
240
260
280
300
320
Distance [km]

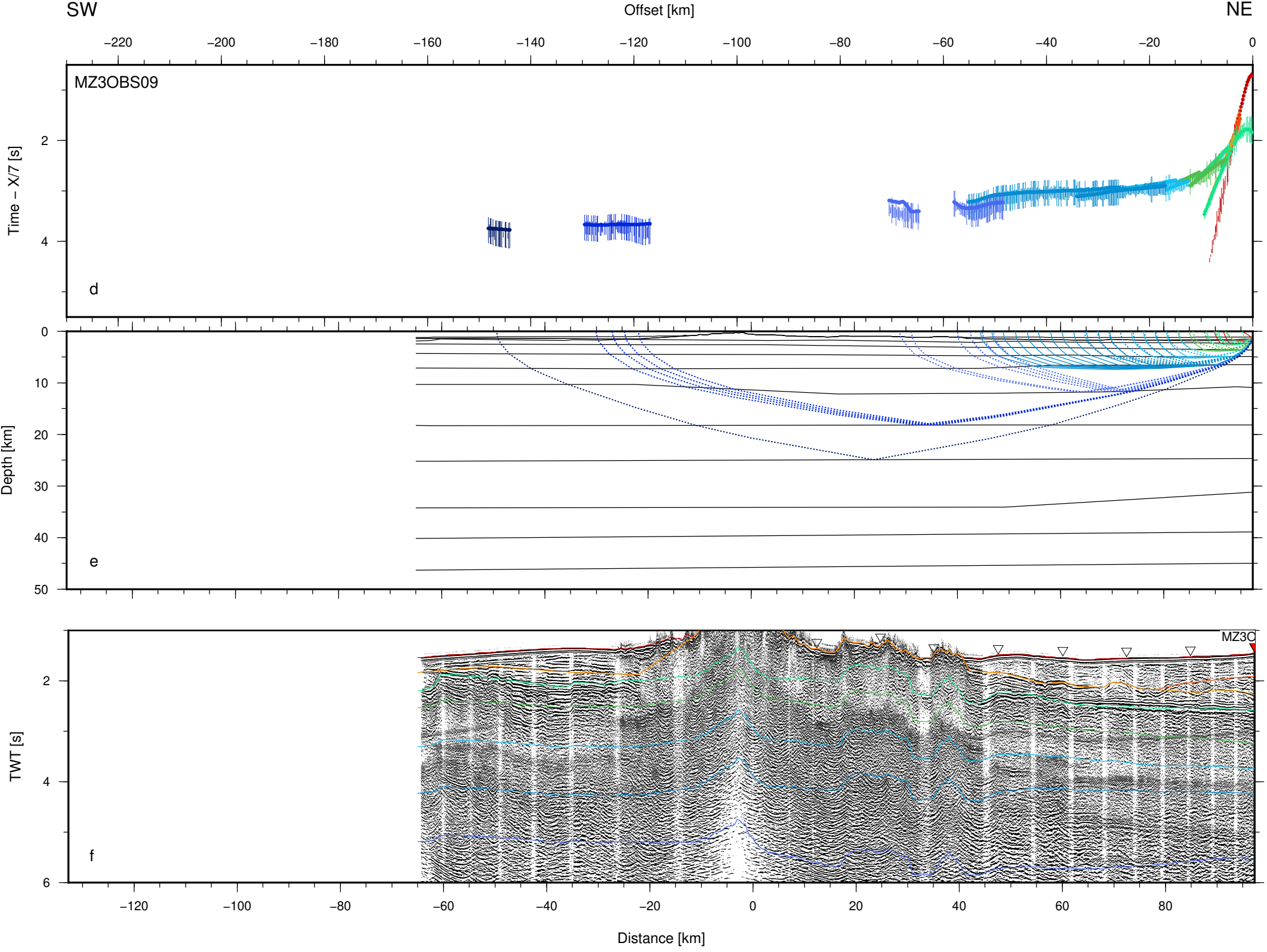

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS10
Time – X/7 [s]
2
4
a
b
c
−120
−100
−80
−60
−40
−20
0
20
40
60
80
100
Distance [km]

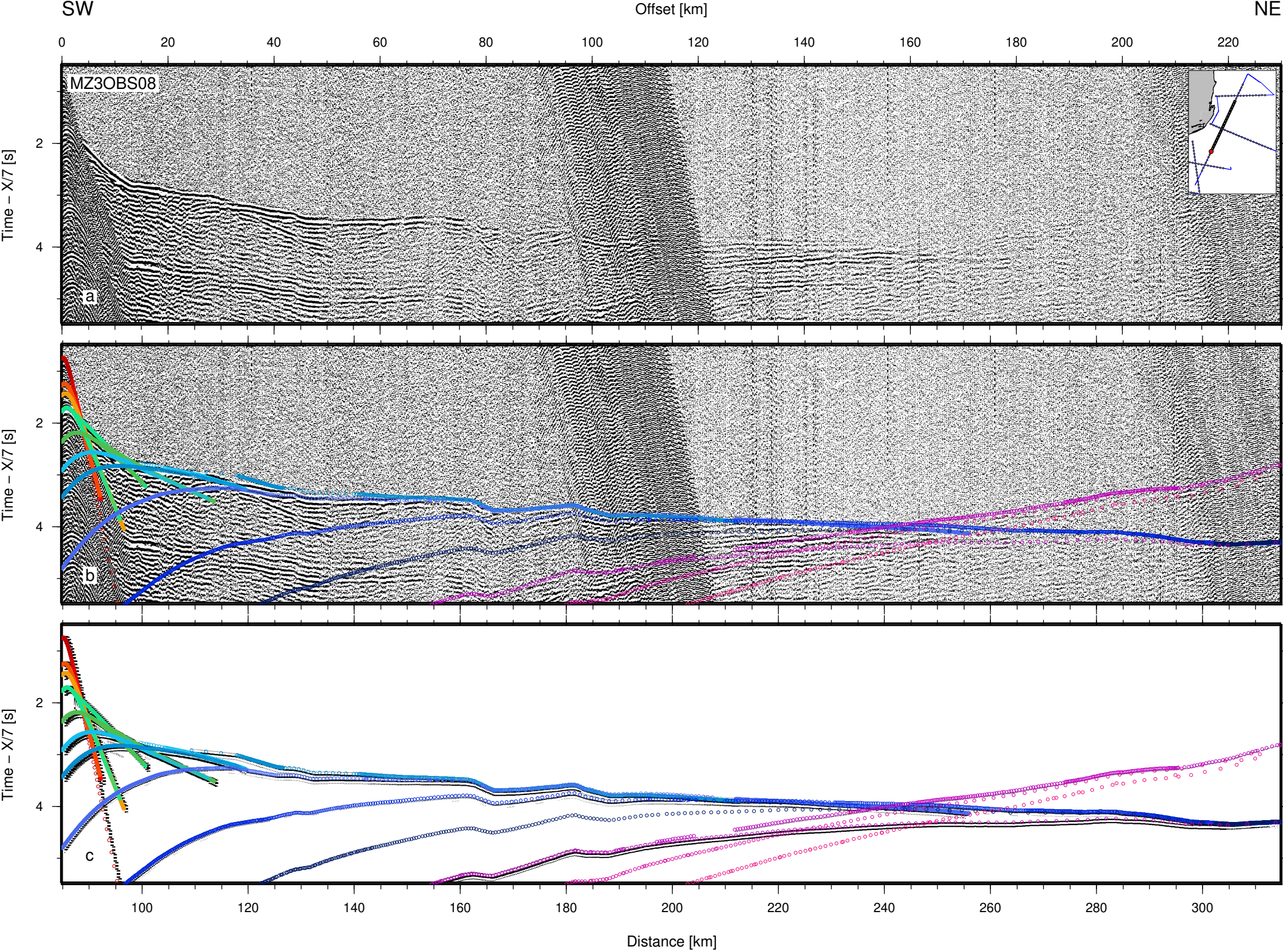

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS10
Time − X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
TWT [s]
2
4
6
f
−120
−100
−80
−60
−40
−20
0
20
40
60
80
100
Distance [km]

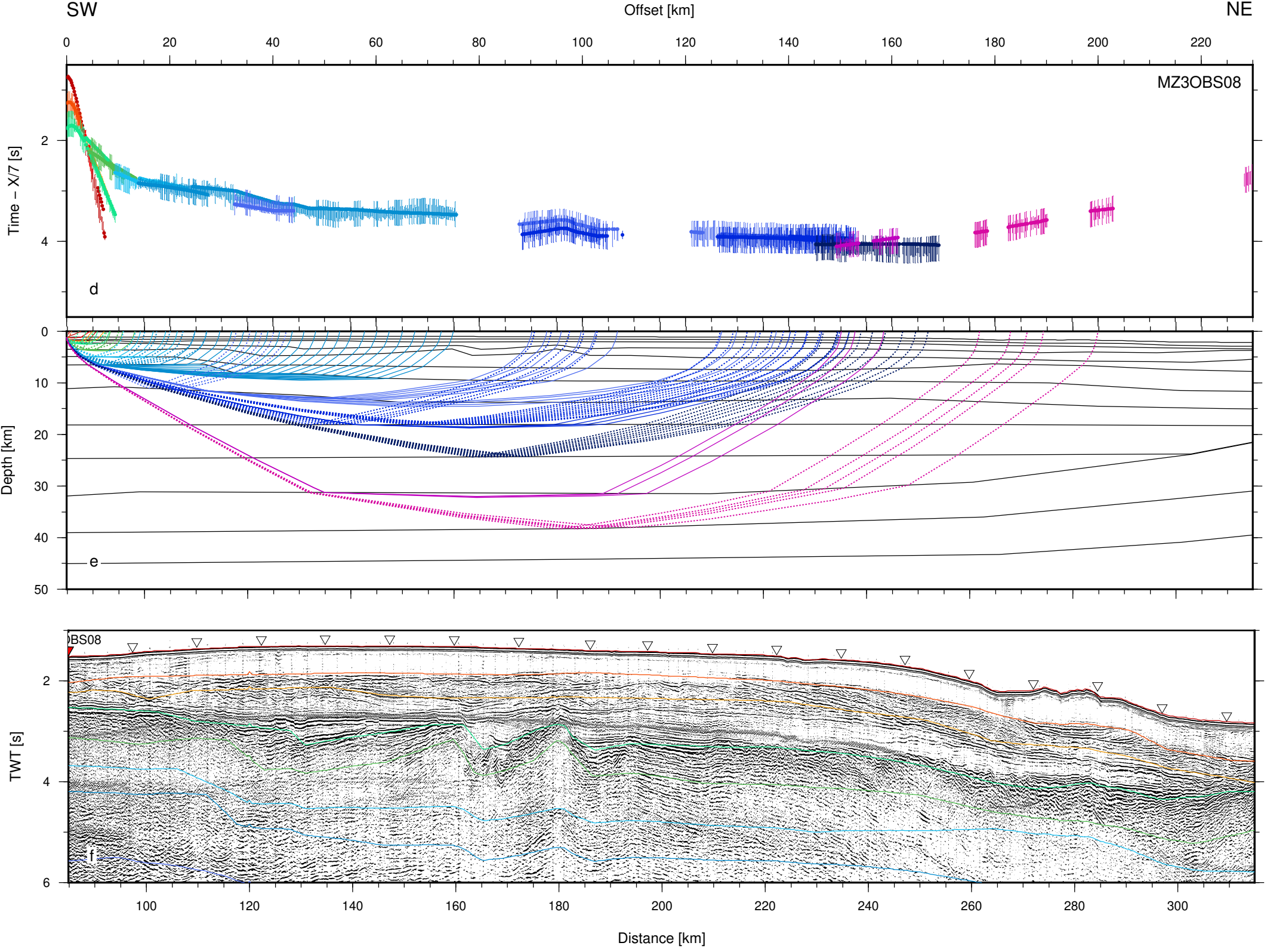

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS09
a
b
c
Time – X/7 [s]
2
4
100
120
140
160
180
200
220
240
260
280
300
320
Distance [km]

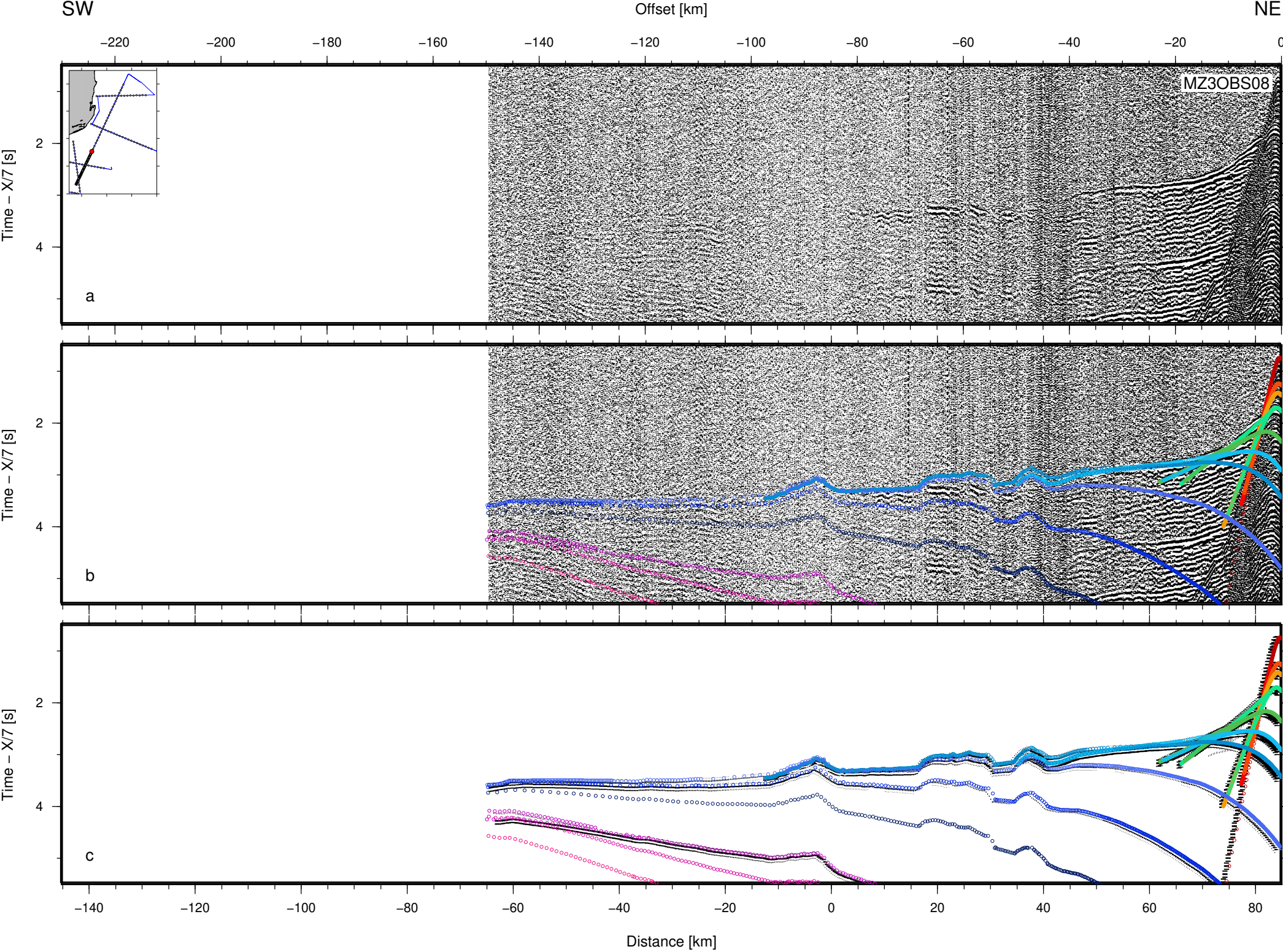

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS09
Time – X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
BS09
TWT [s]
2
4
6
f
100
120
140
160
180
200
220
240
260
280
300
320
Distance [km]

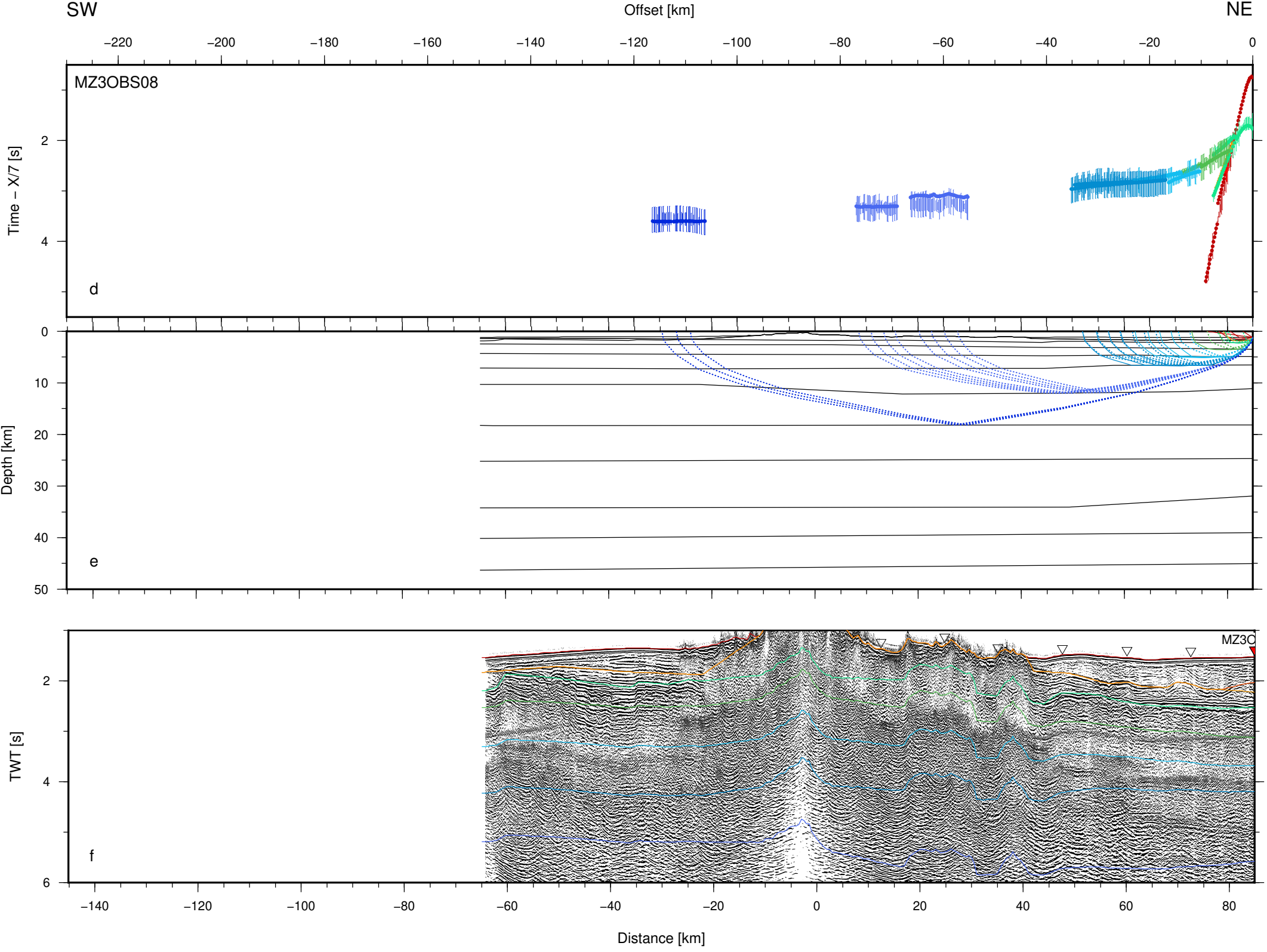

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS09
Time − X/7 [s]
2
4
a
b
c
−120
−100
−80
−60
−40
−20
0
20
40
60
80
Distance [km]

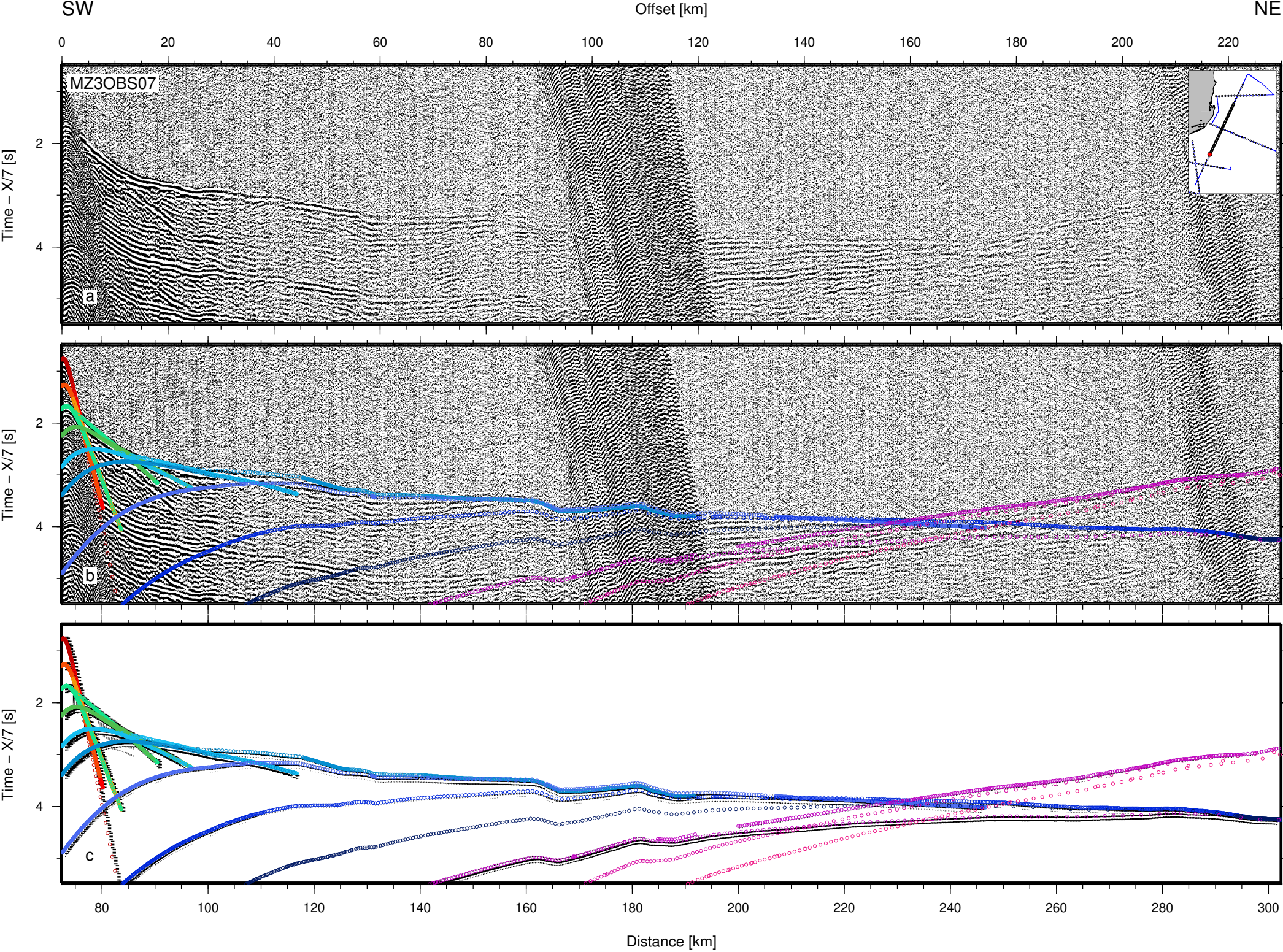

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS09
Time − X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
MZ3O
TWT [s]
2
4
6
f
−120
−100
−80
−60
−40
−20
0
20
40
60
80
Distance [km]

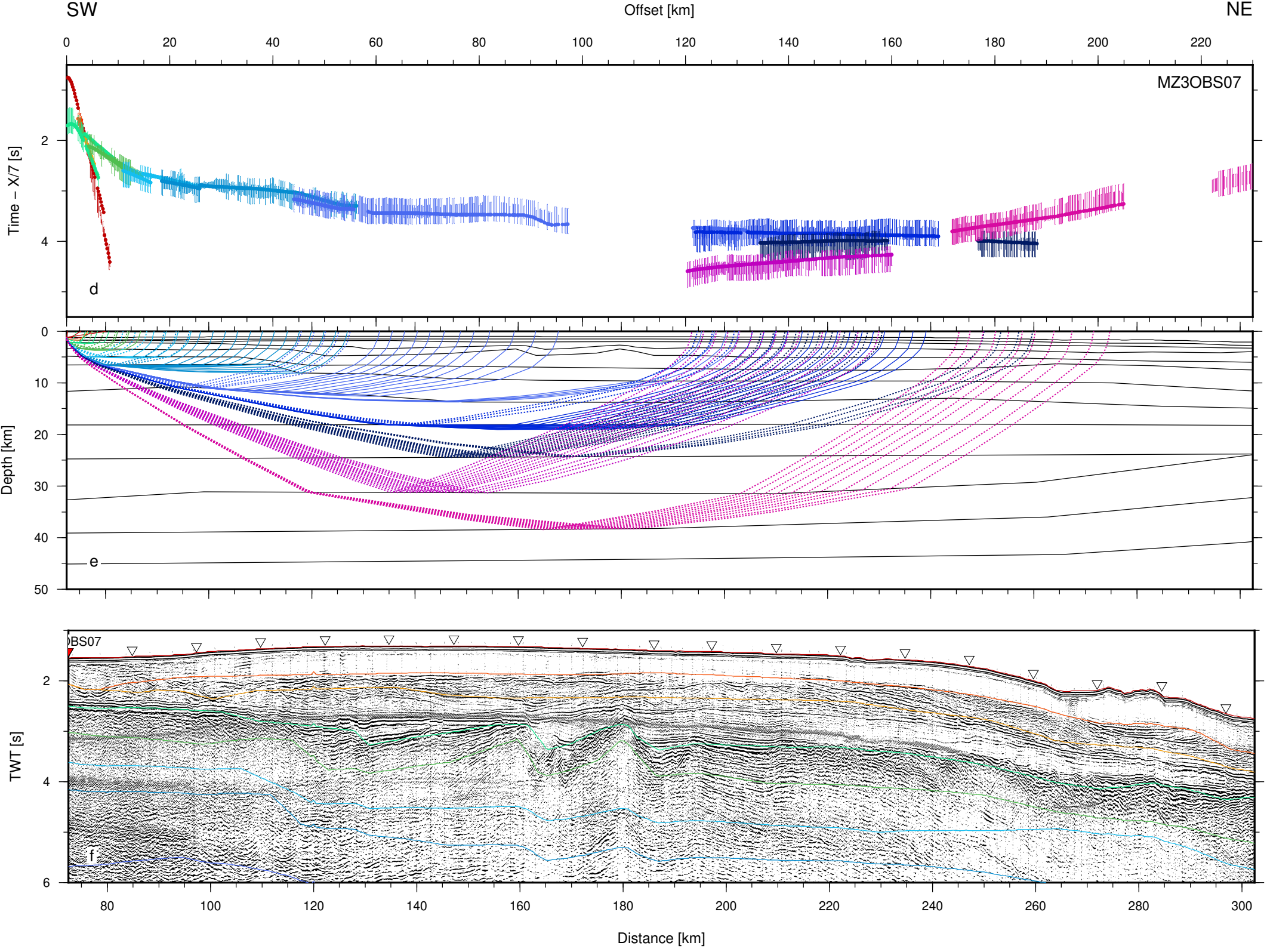

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS08
a
b
c
Time – X/7 [s]
2
4
100
120
140
160
180
200
220
240
260
280
300
Distance [km]

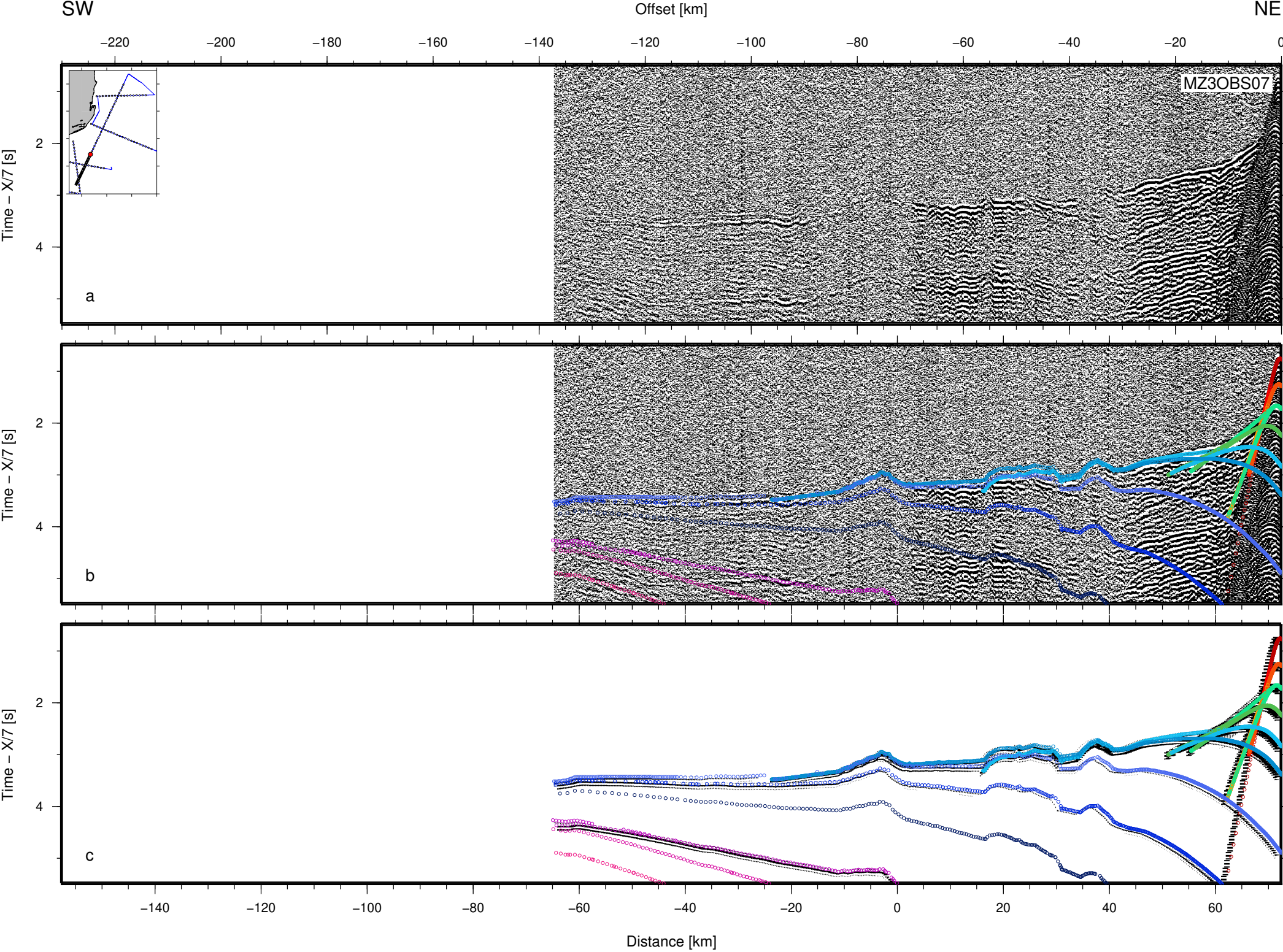

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS08
Time – X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
BS08
TWT [s]
2
4
6
f
100
120
140
160
180
200
220
240
260
280
300
Distance [km]

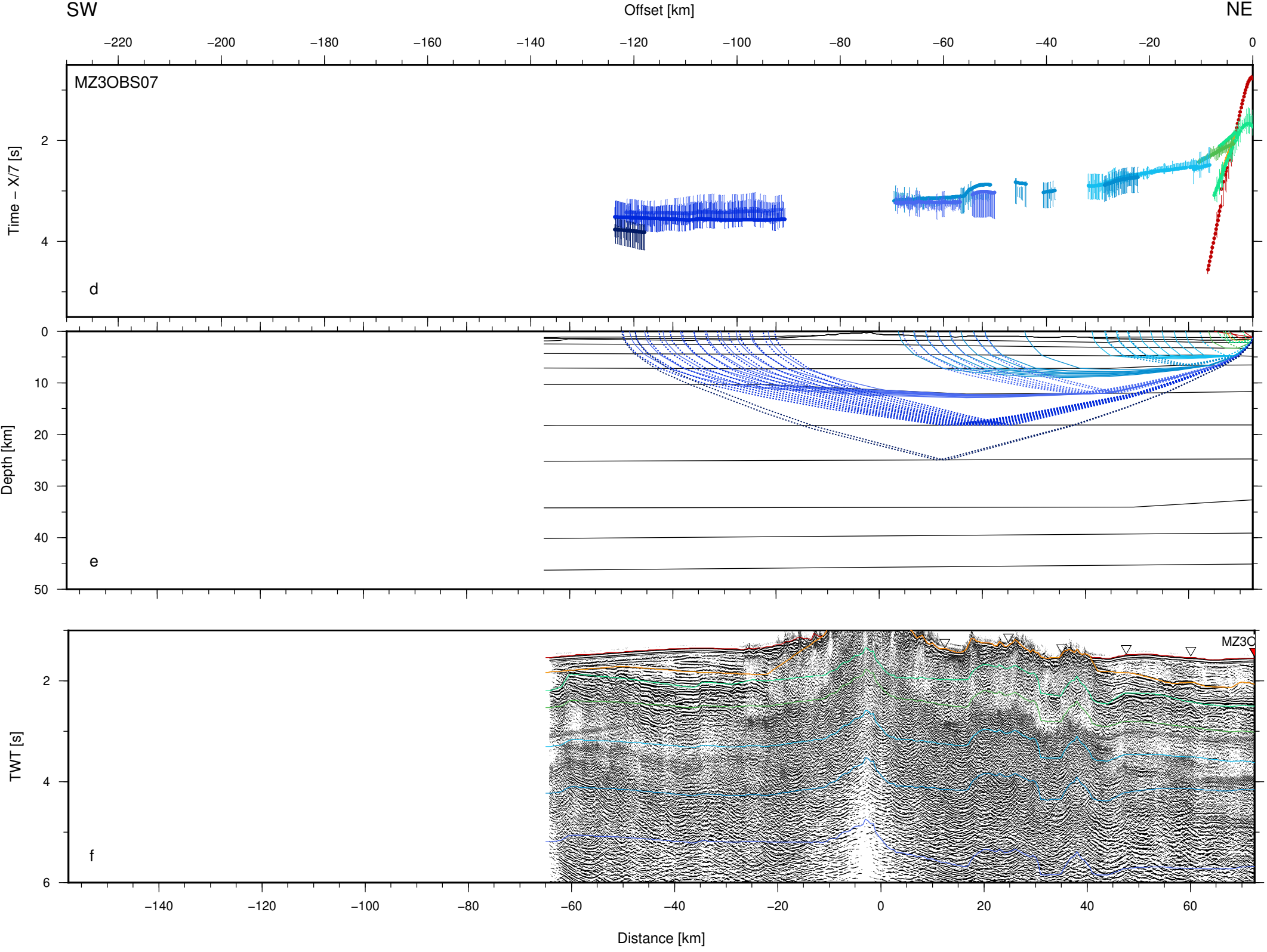

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS08
Time − X/7 [s]
2
4
a
b
c
−140
−120
−100
−80
−60
−40
−20
0
20
40
60
80
Distance [km]

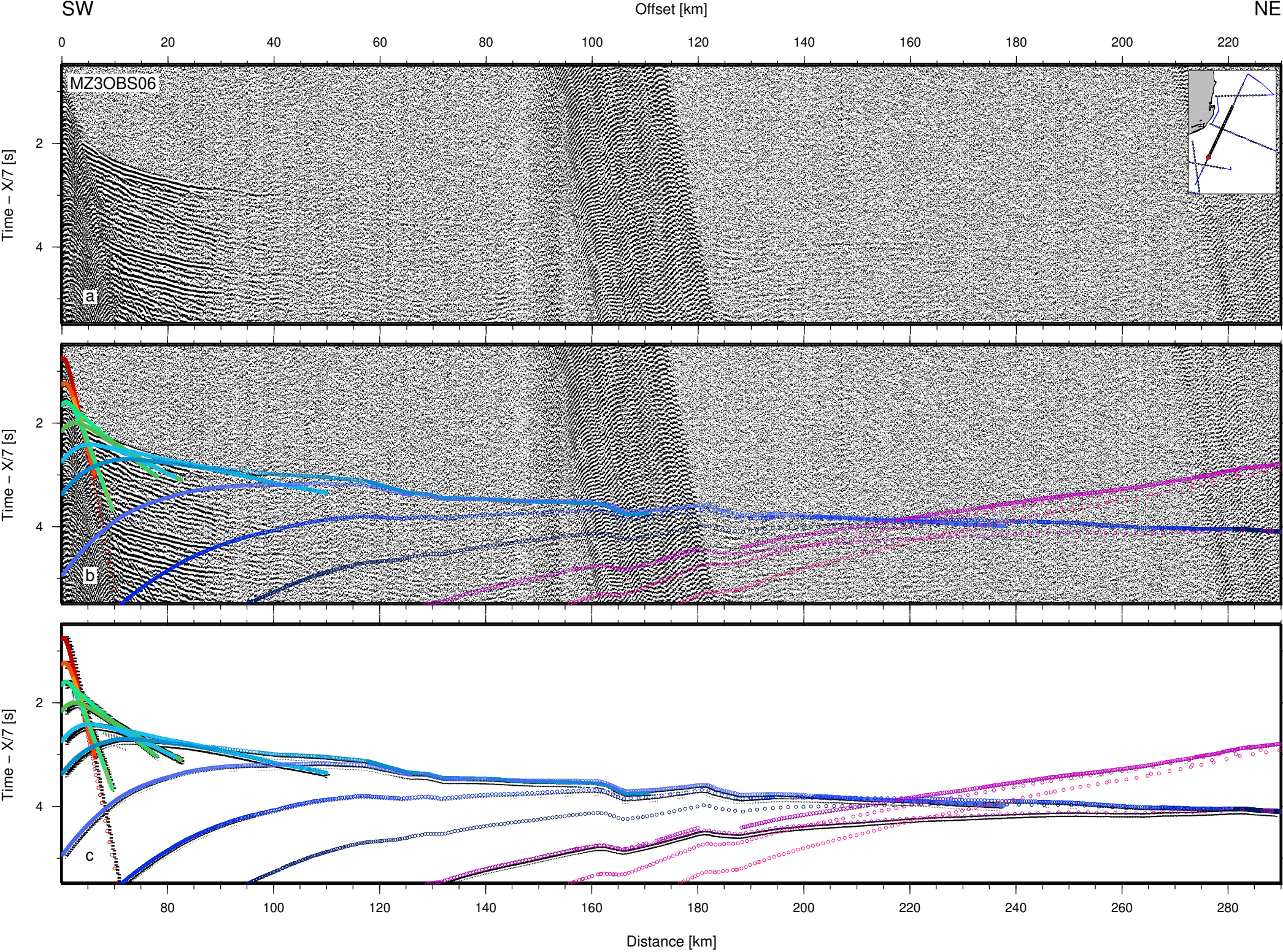

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS08
Time − X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
MZ3O
TWT [s]
2
4
6
f
−140
−120
−100
−80
−60
−40
−20
0
20
40
60
80
Distance [km]

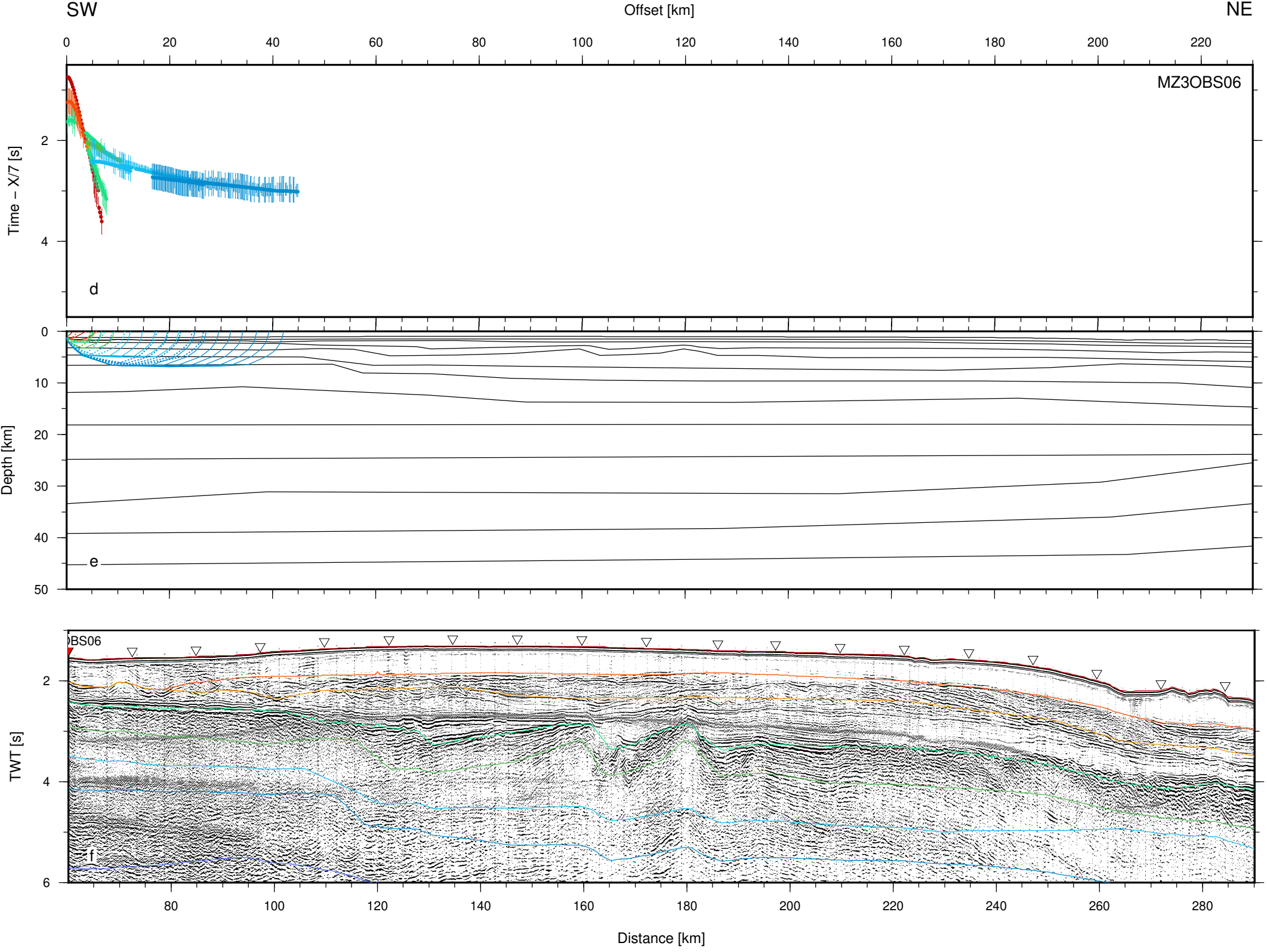

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS07
a
b
c
Time – X/7 [s]
2
4
80
100
120
140
160
180
200
220
240
260
280
300
Distance [km]

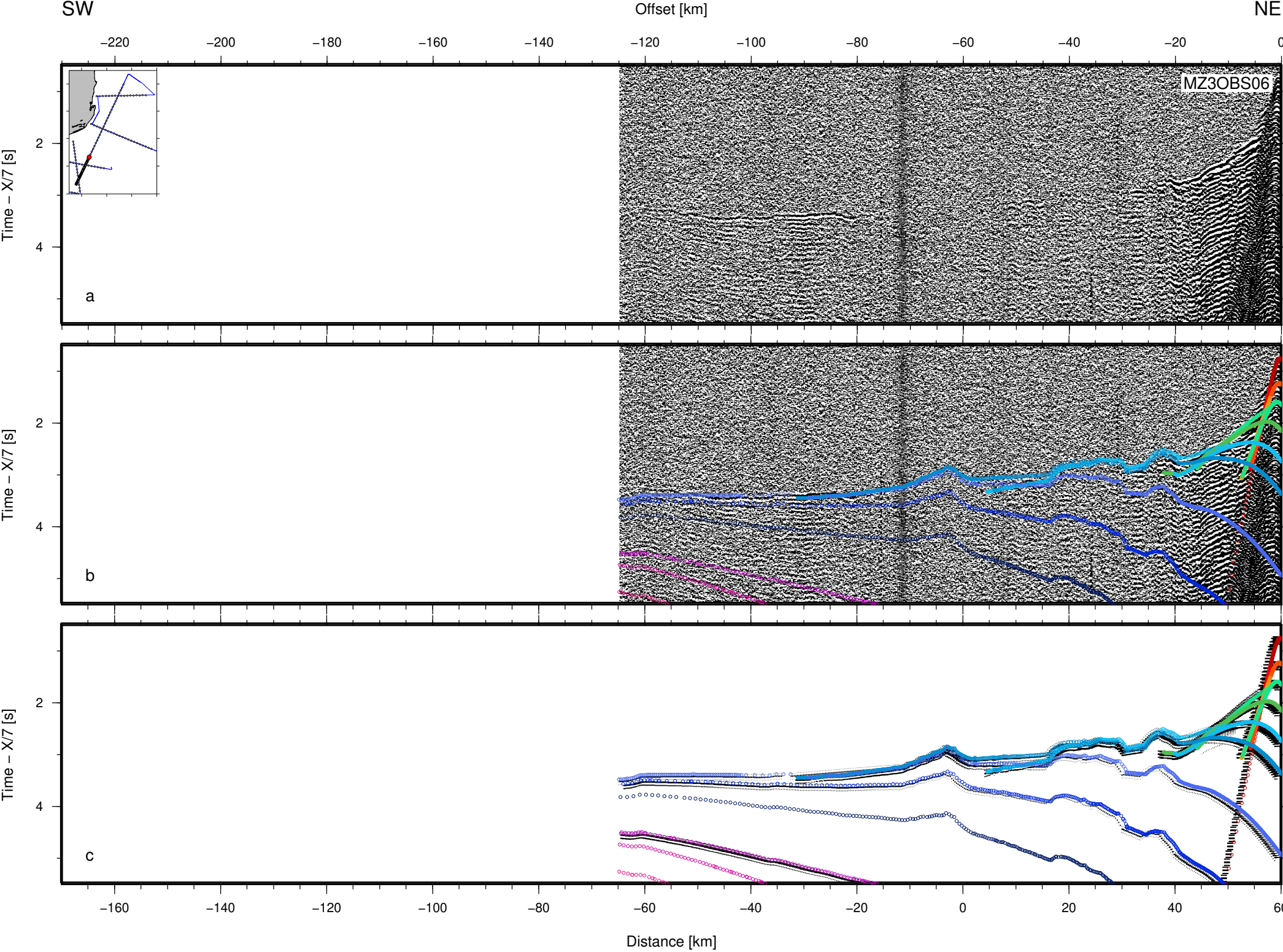

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS07
Time – X/7 [s]
2
4
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
80
100
120
140
160
180
200
220
240
260
280
300
Distance [km]

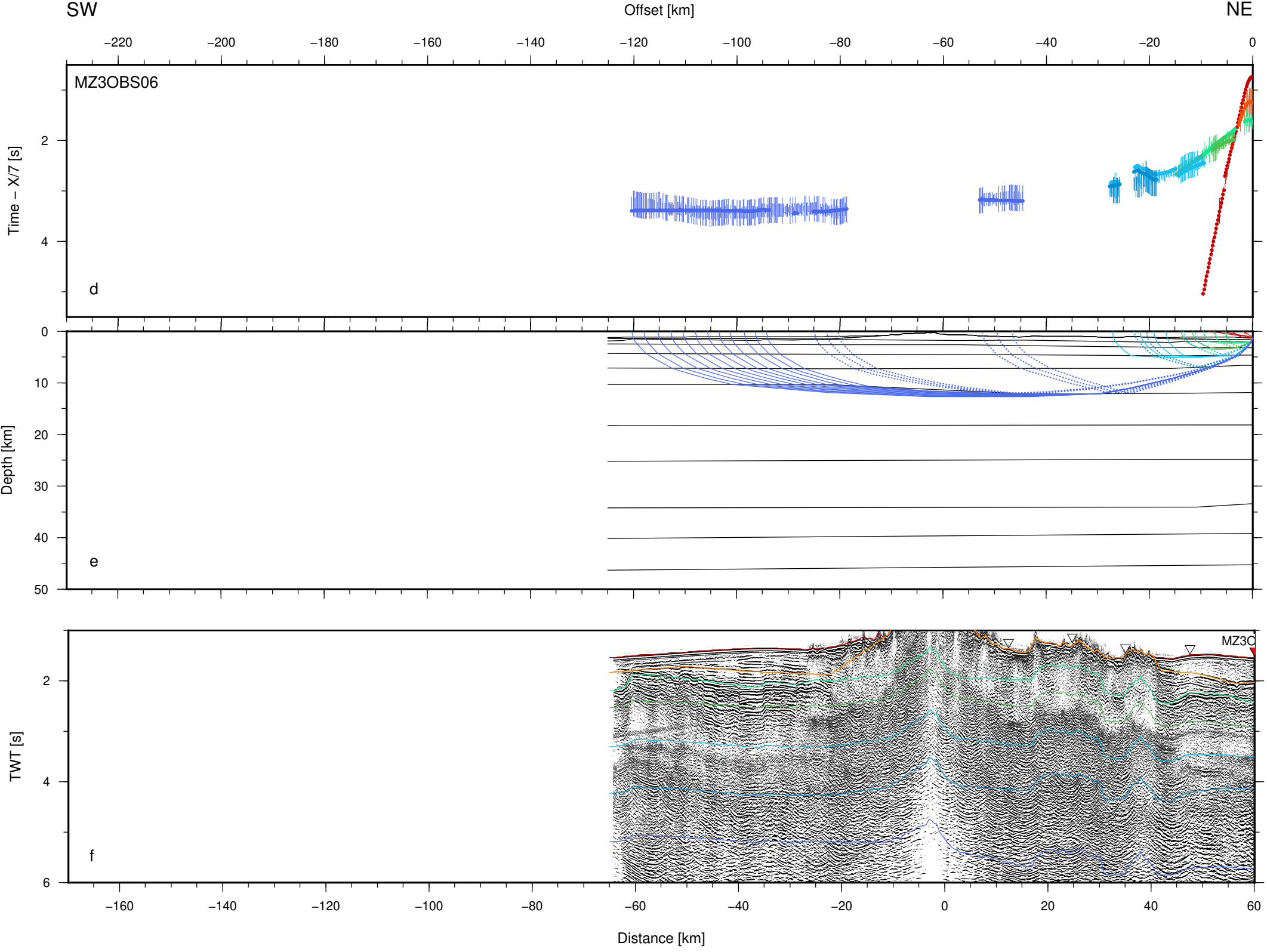

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS07
Time − X/7 [s]
2
4
a
b
c
−140
−120
−100
−80
−60
−40
−20
0
20
40
60
Distance [km]

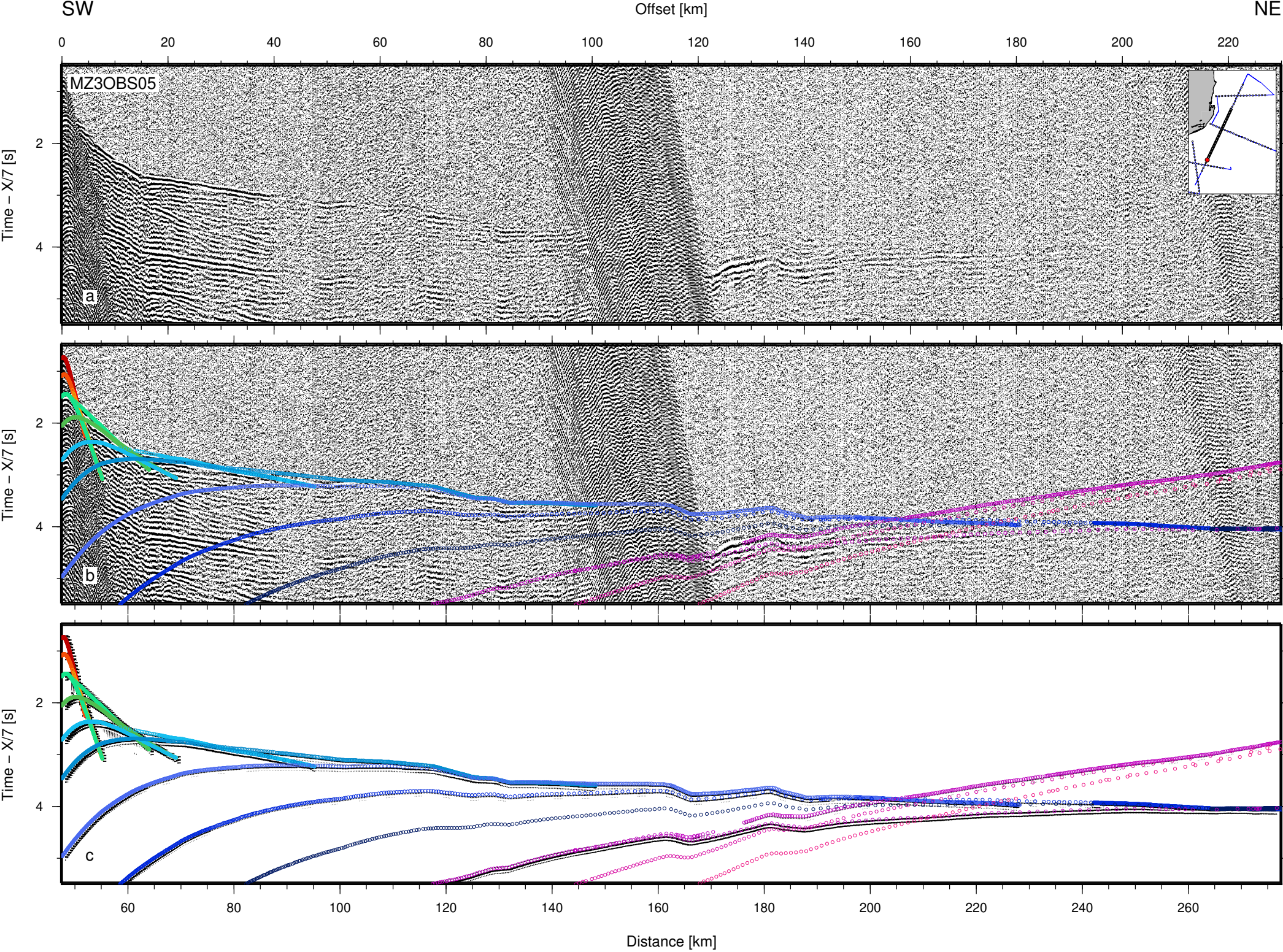

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS07
Time − X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
MZ3O
TWT [s]
2
4
6
f
−140
−120
−100
−80
−60
−40
−20
0
20
40
60
Distance [km]

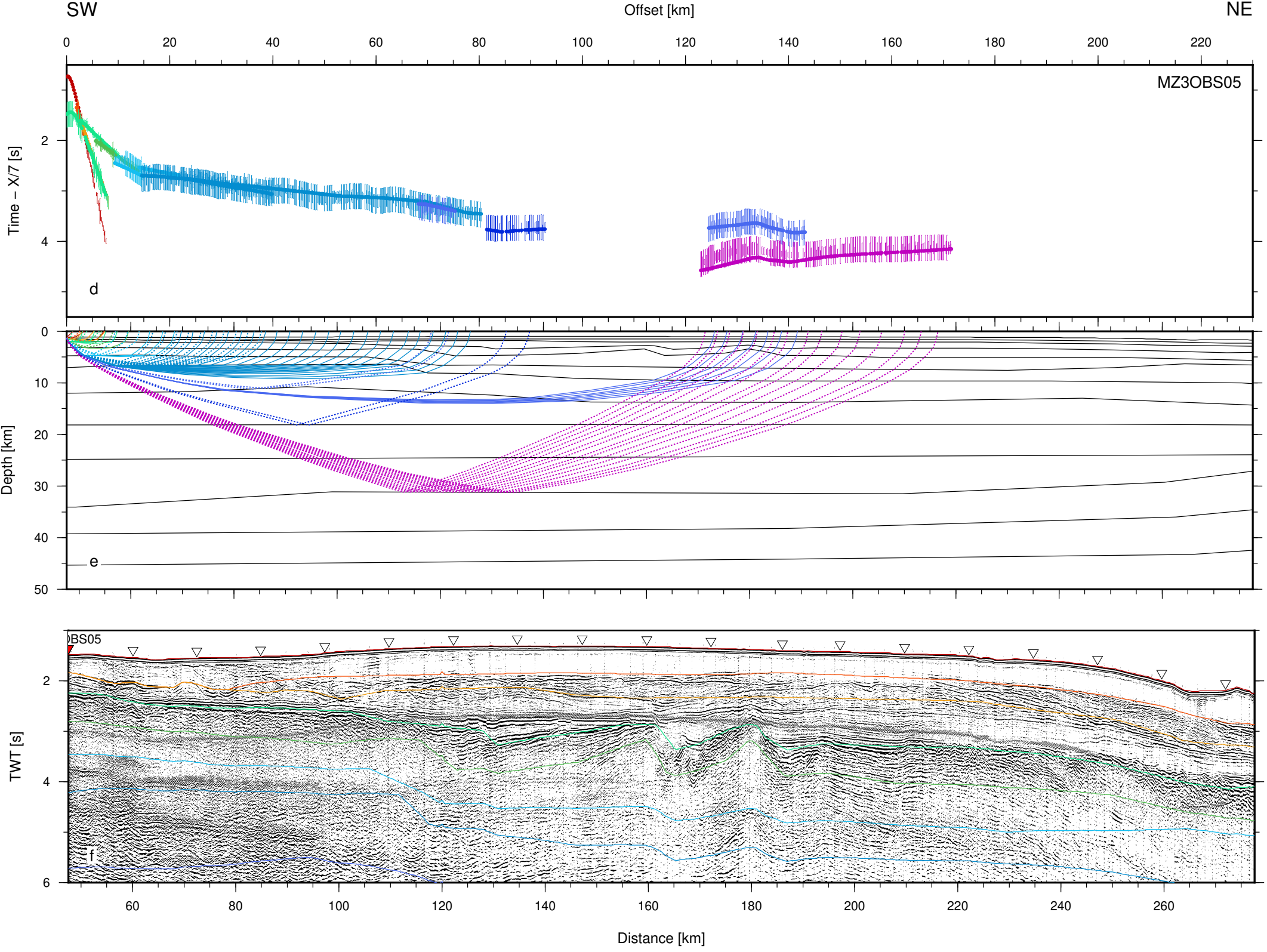

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS06
a
b
c
Time – X/7 [s]
2
4
80
100
120
140
160
180
200
220
240
260
280
Distance [km]

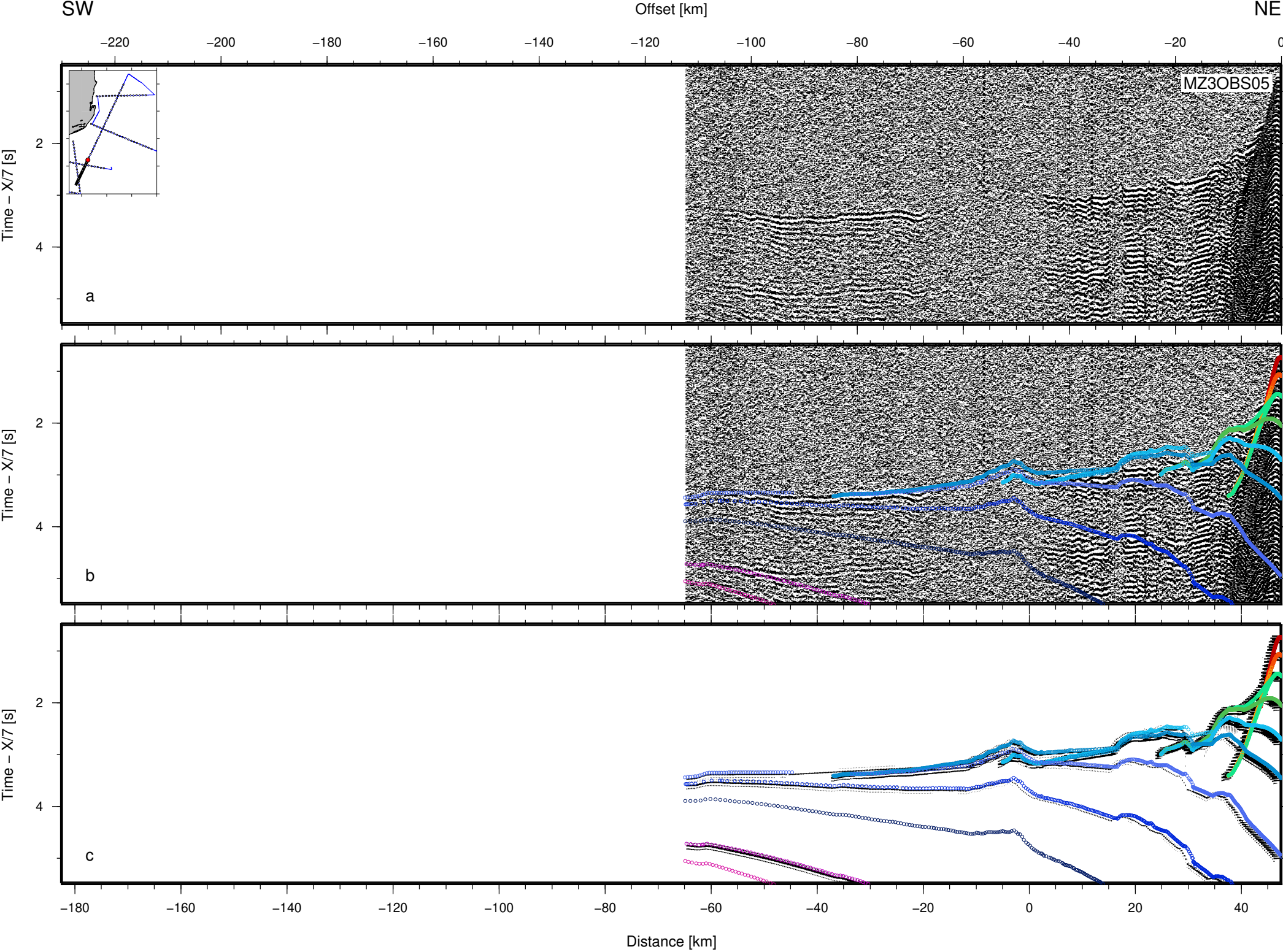

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS06
Time – X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
BS06
TWT [s]
2
4
6
f
80
100
120
140
160
180
200
220
240
260
280
Distance [km]

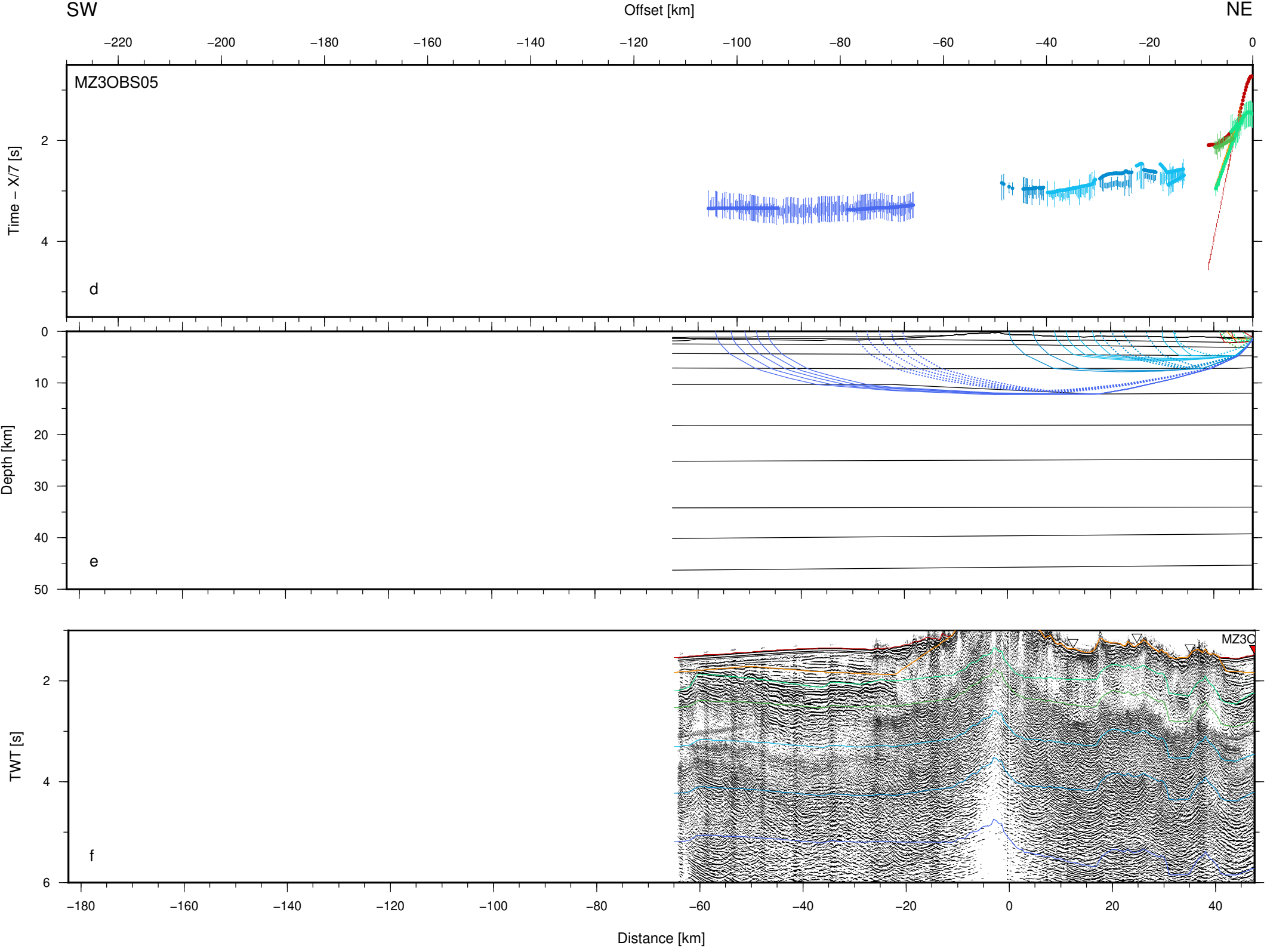

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS06
Time – X/7 [s]
2
4
a
b
c
−160
−140
−120
−100
−80
−60
−40
−20
0
20
40
60
Distance [km]

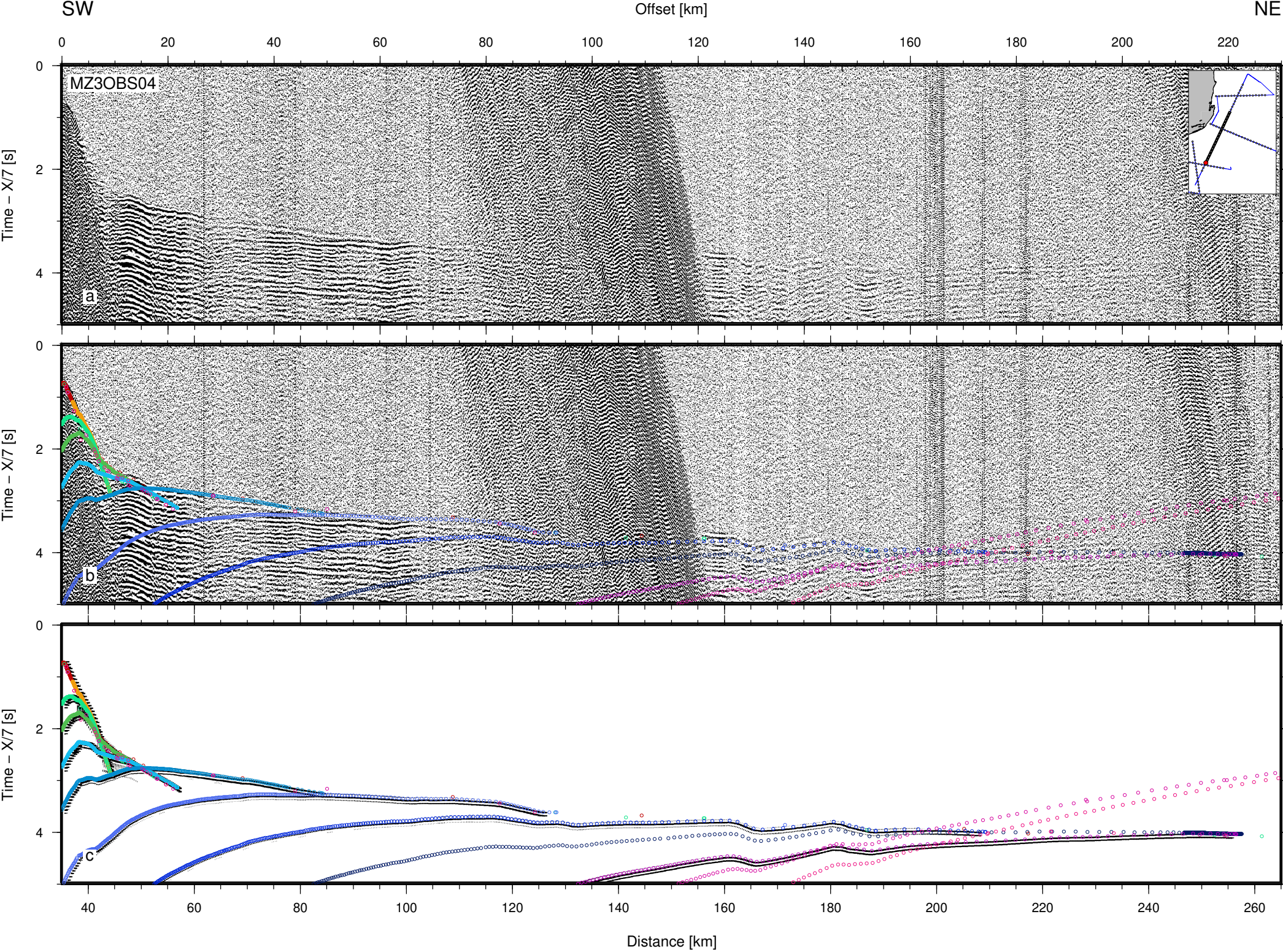

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS06
Time − X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
MZ3O
TWT [s]
2
4
6
f
−160
−140
−120
−100
−80
−60
−40
−20
0
20
40
60
Distance [km]

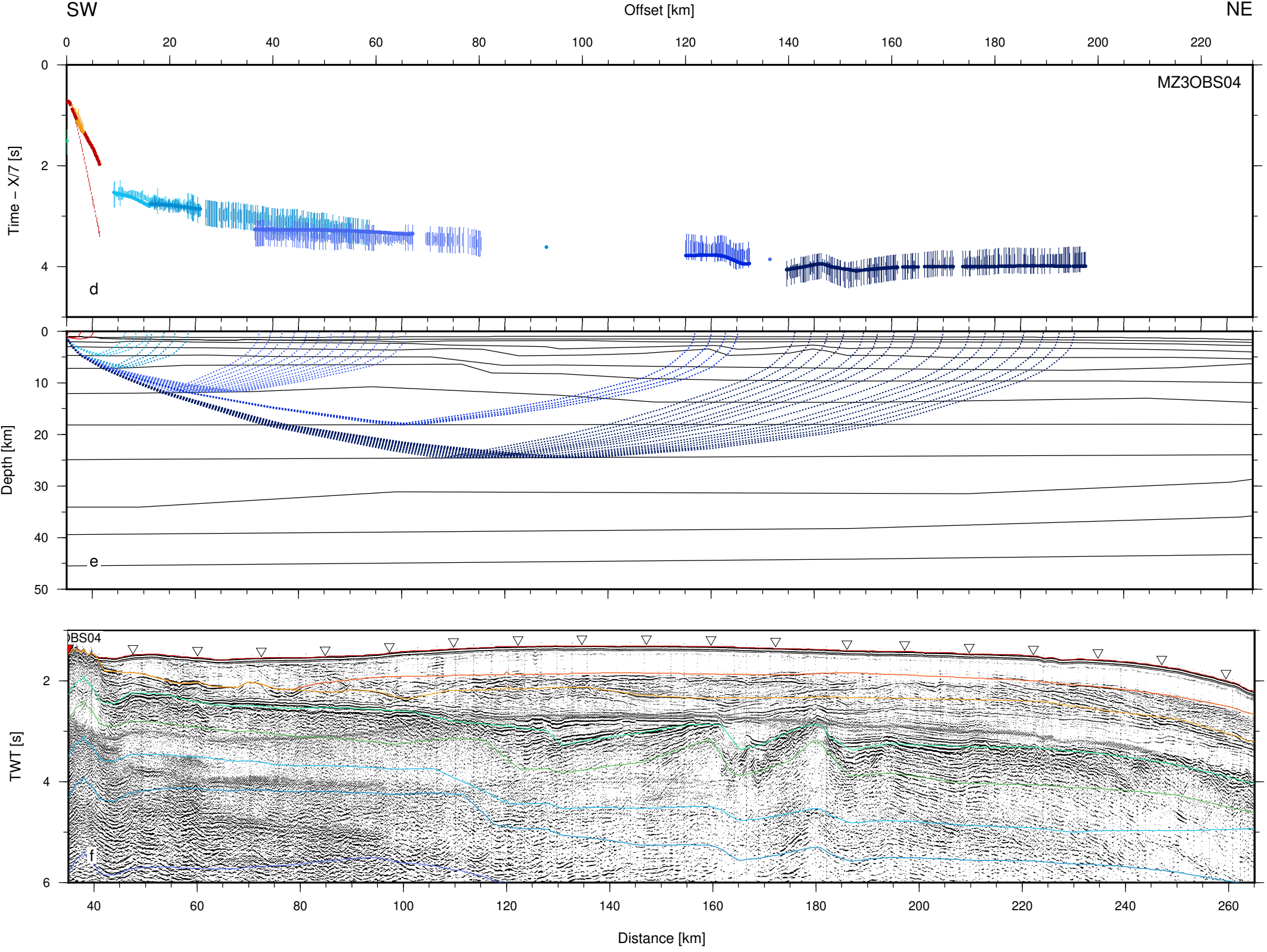

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS05
a
b
c
Time – X/7 [s]
2
4
60
80
100
120
140
160
180
200
220
240
260
Distance [km]

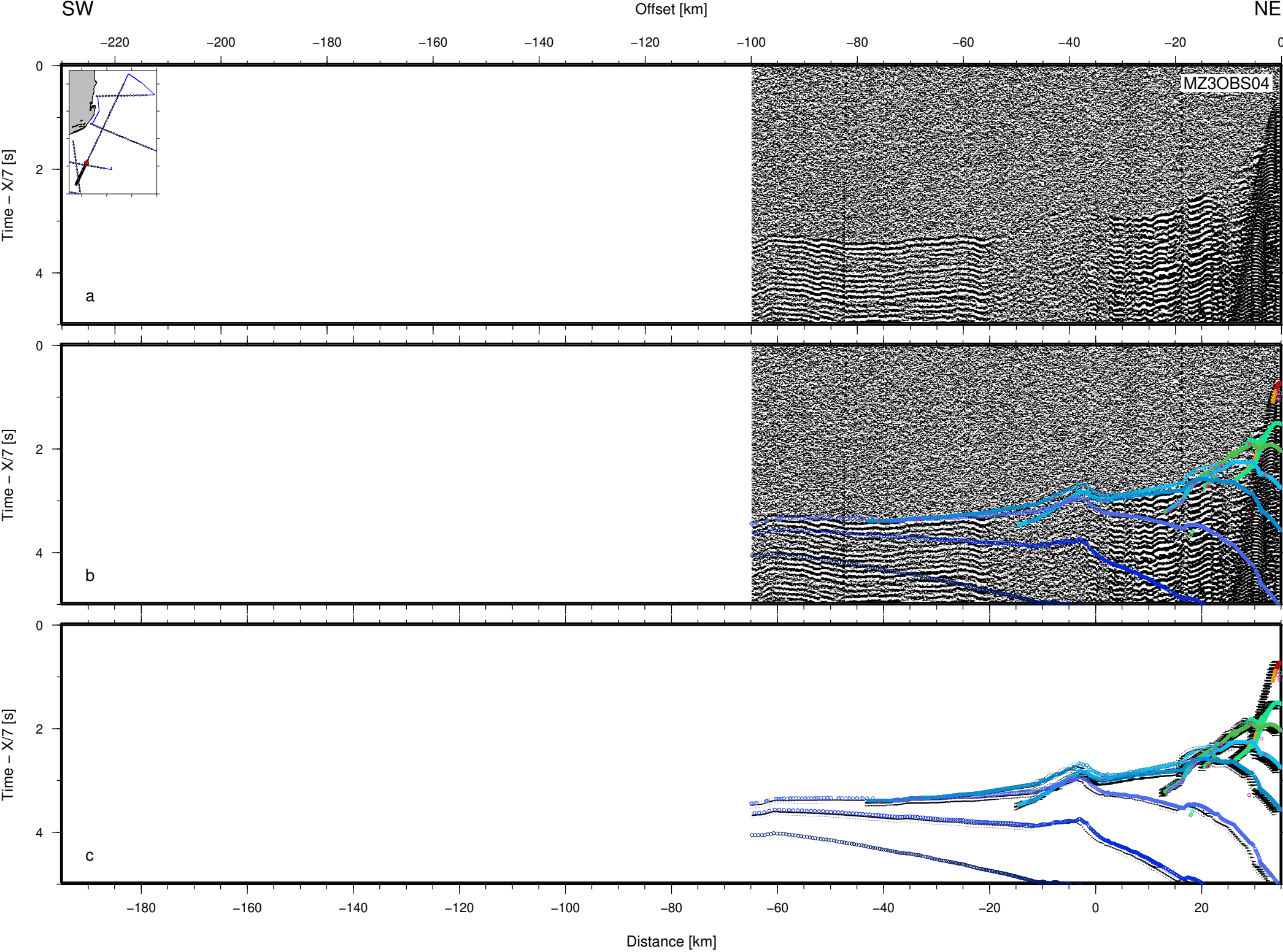

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS05
Time – X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
BS05
TWT [s]
2
4
6
f
60
80
100
120
140
160
180
200
220
240
260
Distance [km]

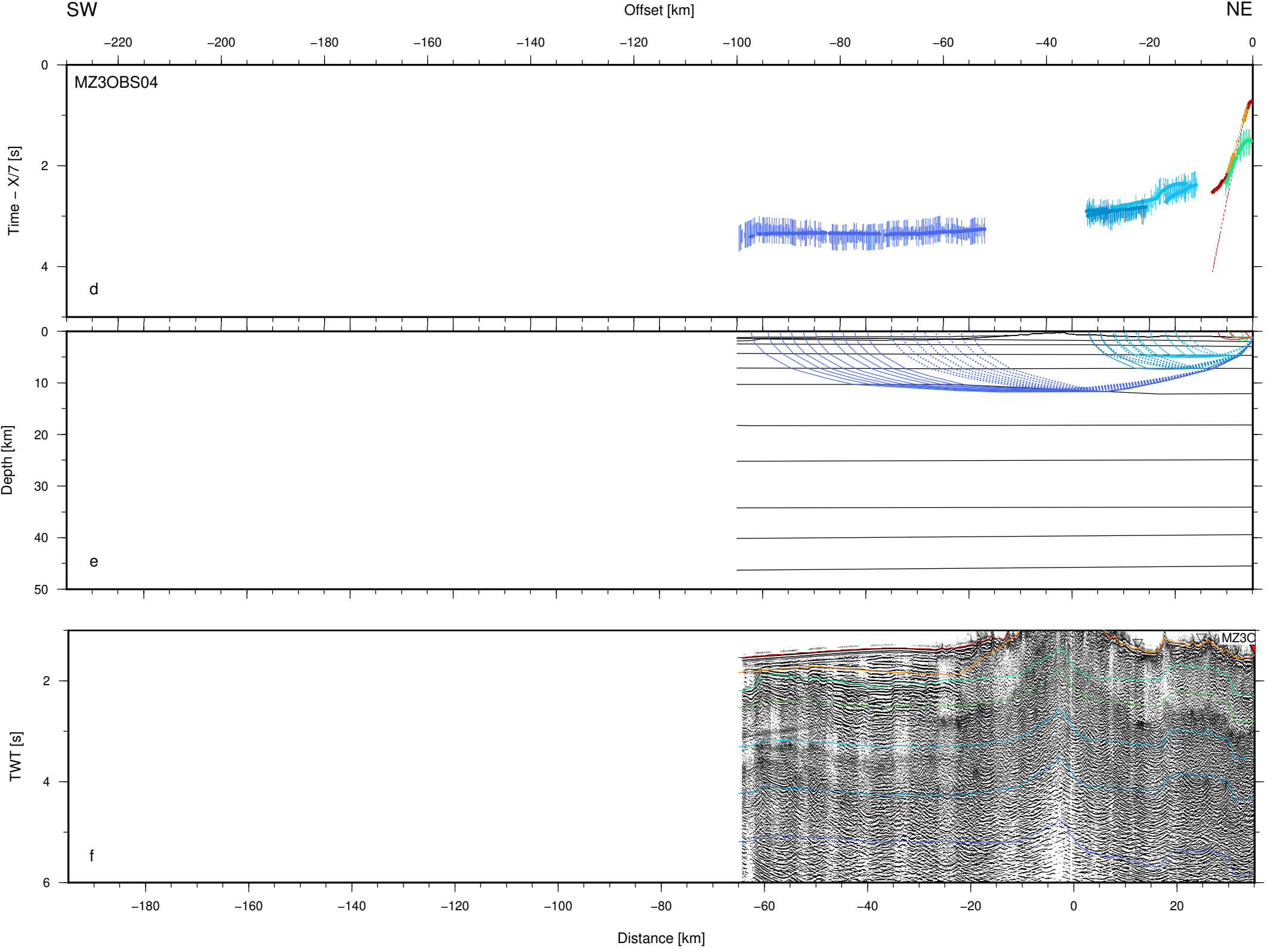

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS05
Time − X/7 [s]
2
4
a
b
c
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
20
40
Distance [km]

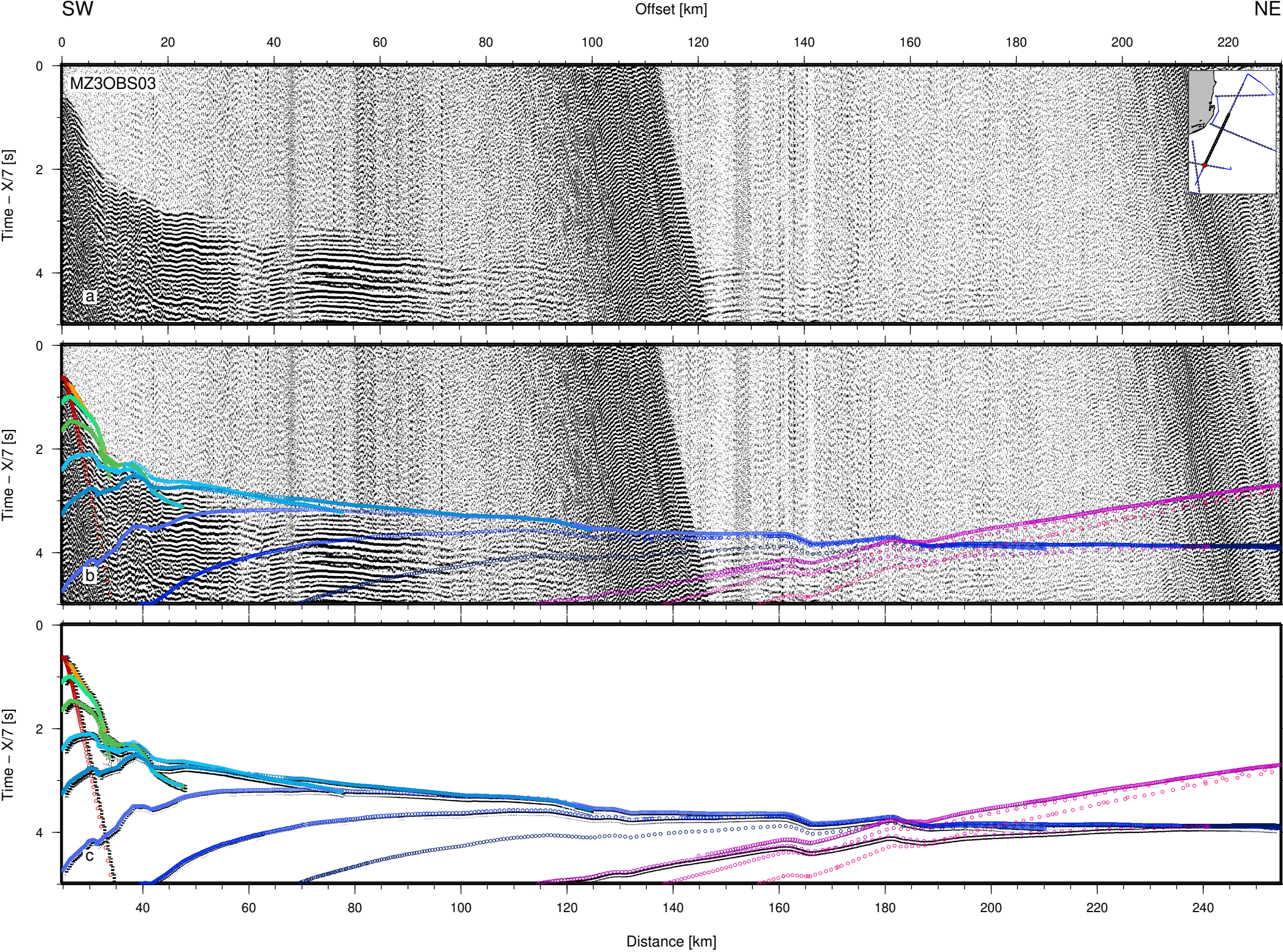

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS05
Time − X/7 [s]
2
4
d
0
10
20
30
40
50
Depth [km]
e
MZ3O
TWT [s]
2
4
6
f
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
20
40
Distance [km]

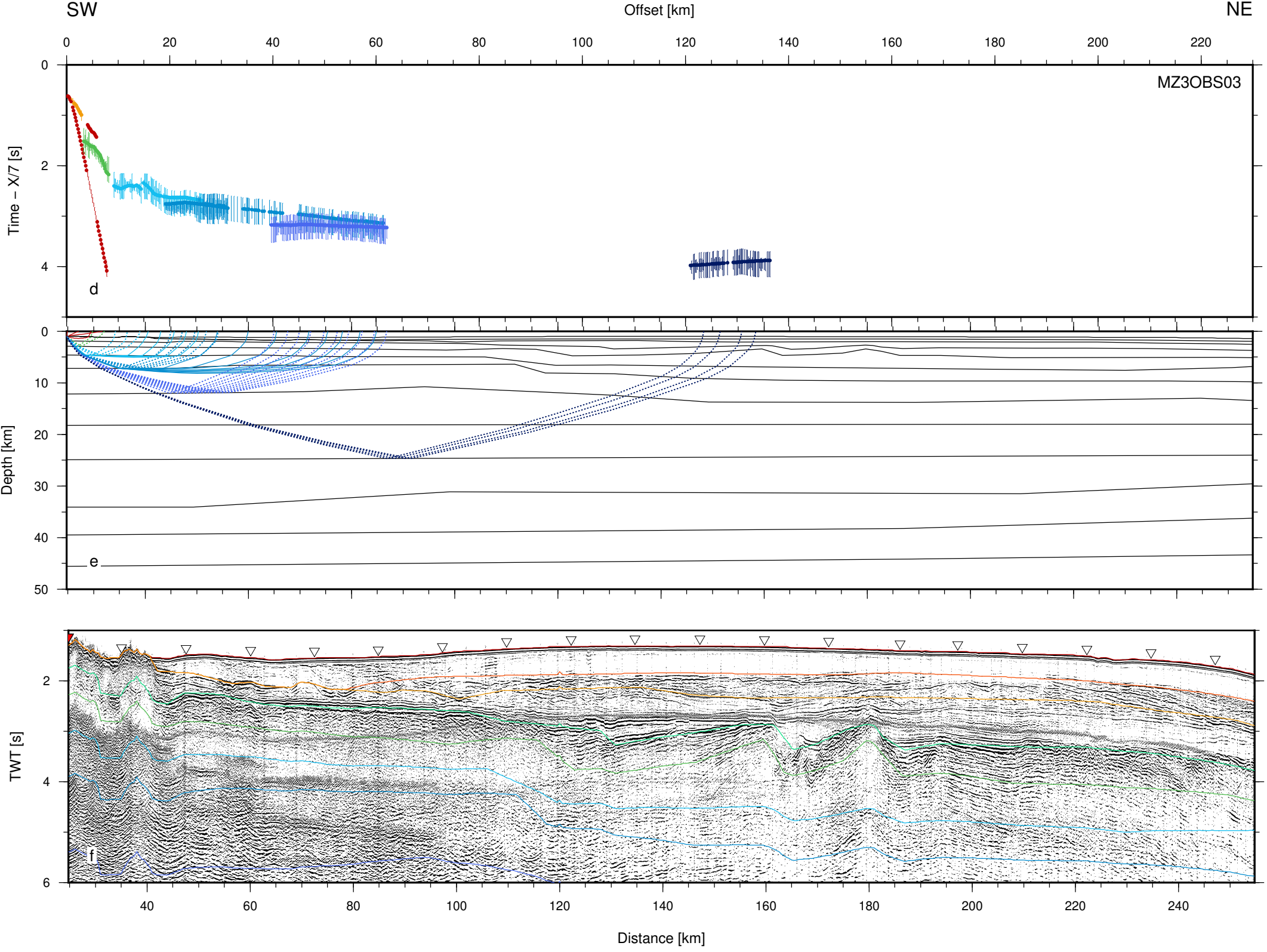

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS04
a
b
c
Time – X/7 [s]
0
2
4
40
60
80
100
120
140
160
180
200
220
240
260
Distance [km]

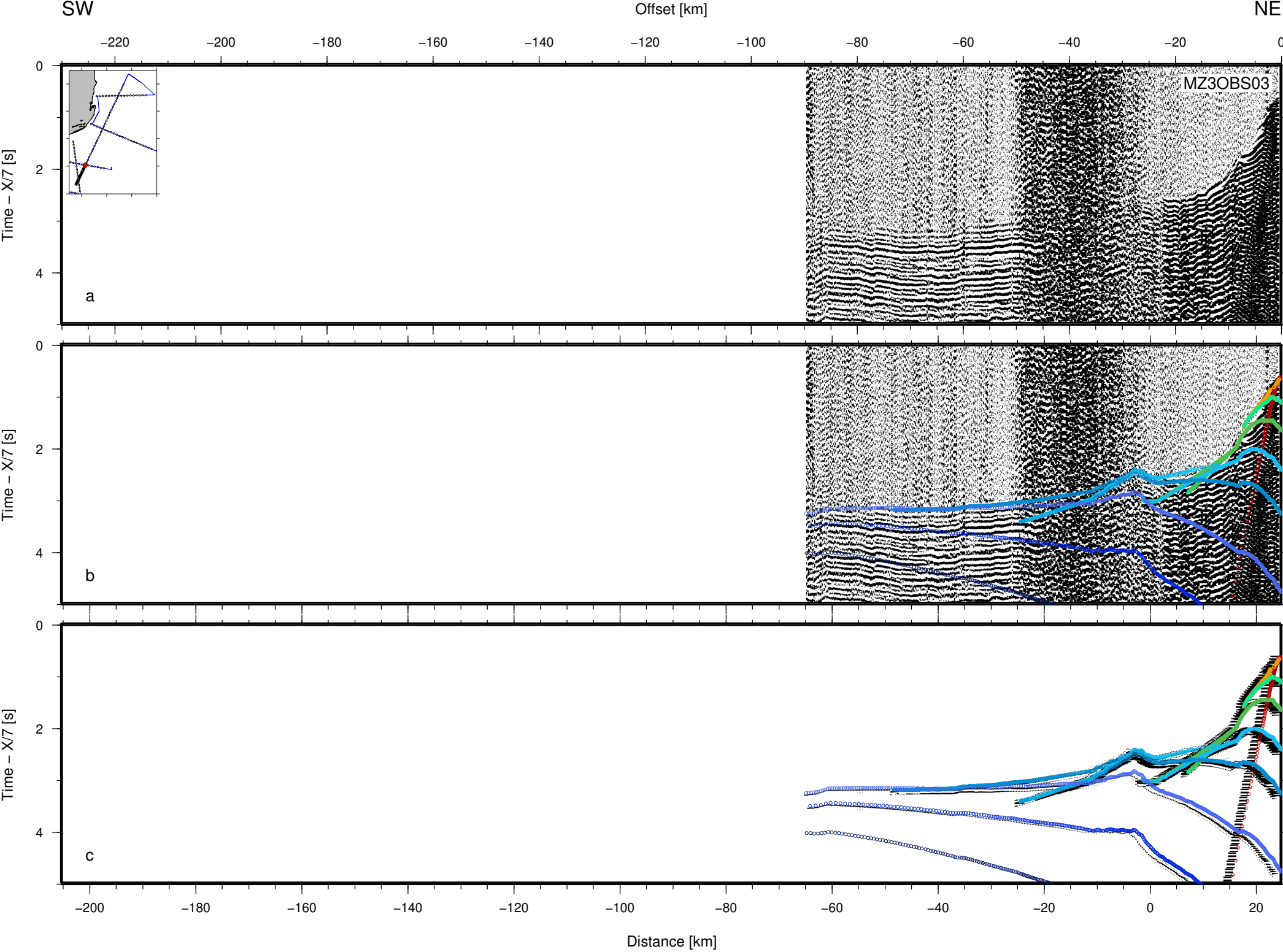

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS04
Time – X/7 [s]
0
2
4
d
Depth [km]
0
10
20
30
40
50
e
BS04
TWT [s]
2
4
6
f
40
60
80
100
120
140
160
180
200
220
240
260
Distance [km]

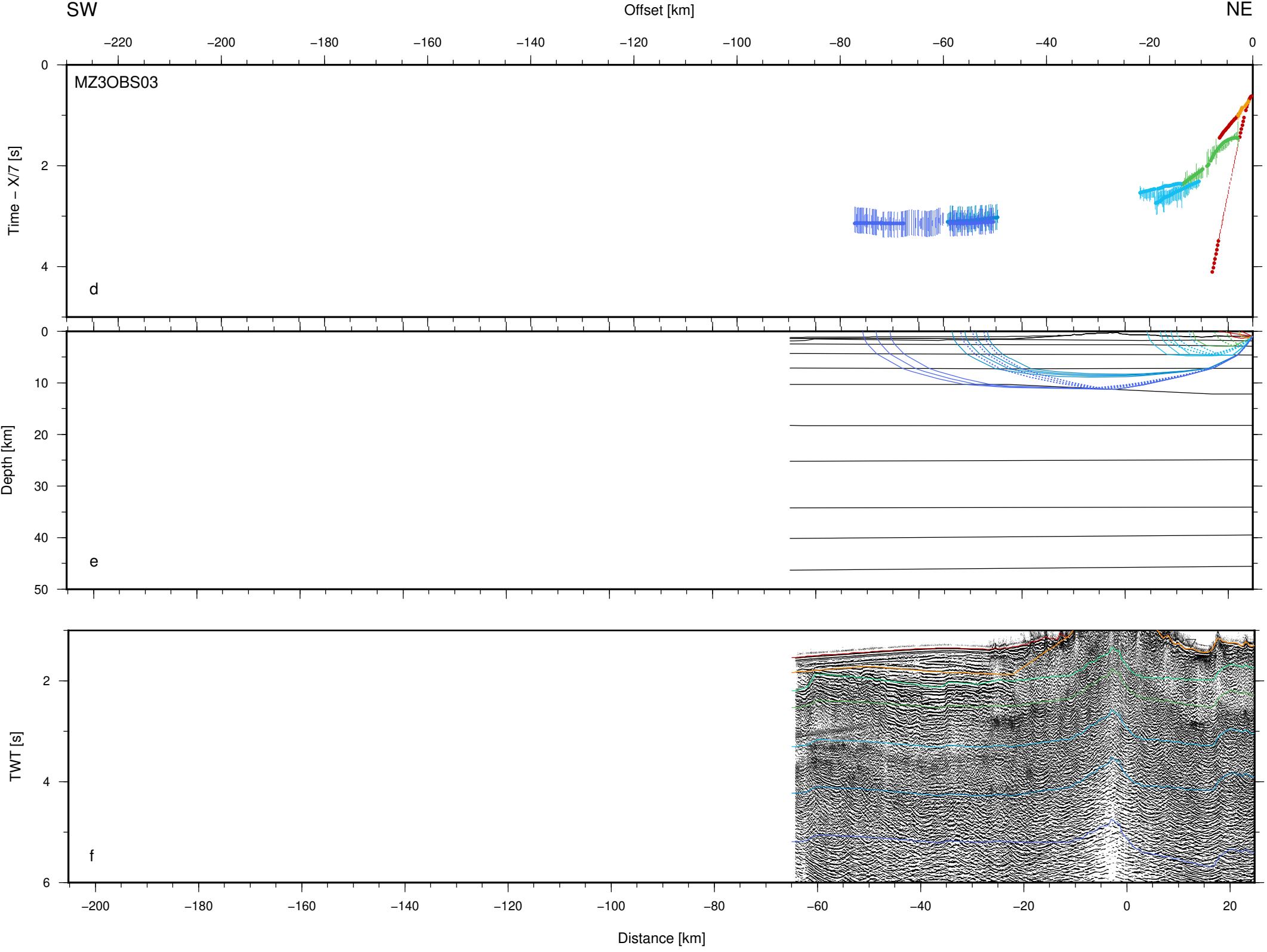

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS04
Time − X/7 [s]
0
2
4
a
b
c
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
20
Distance [km]

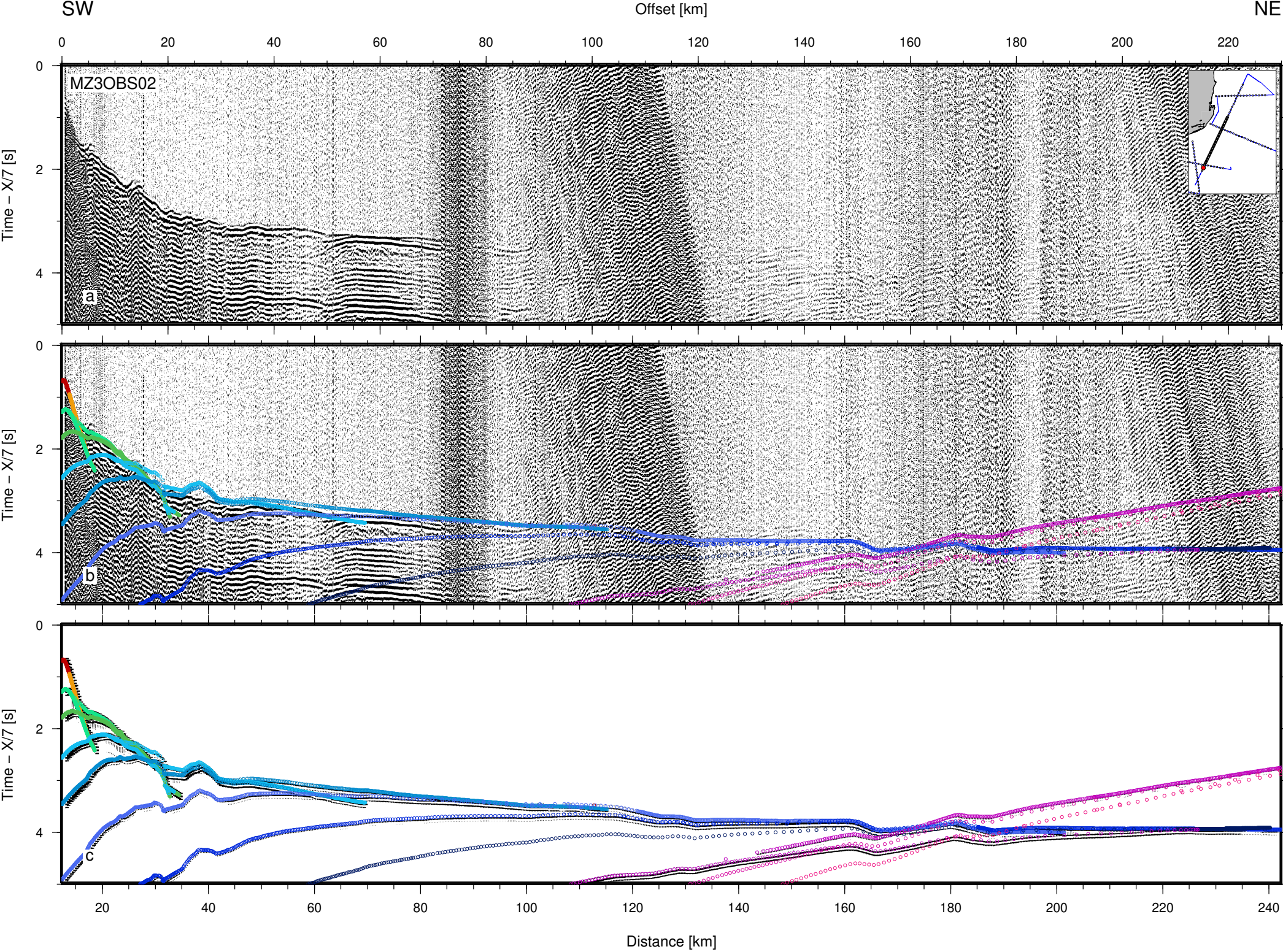

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS04
Time − X/7 [s]
d
Depth [km]
e
TWT [s]
f
MZ3C
Distance [km]

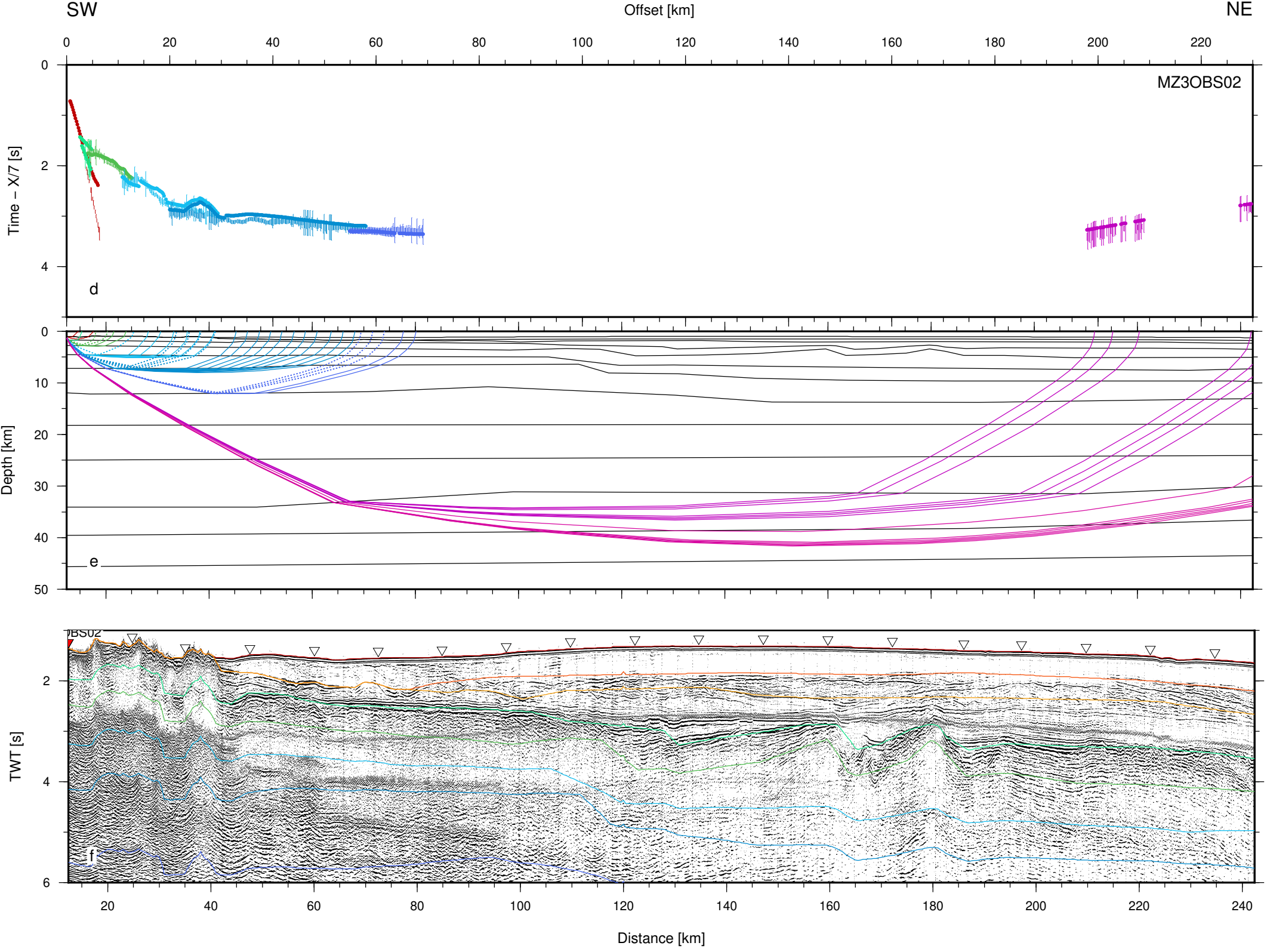

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS03
a
b
c
Time – X/7 [s]
0
2
4
240
Distance [km]

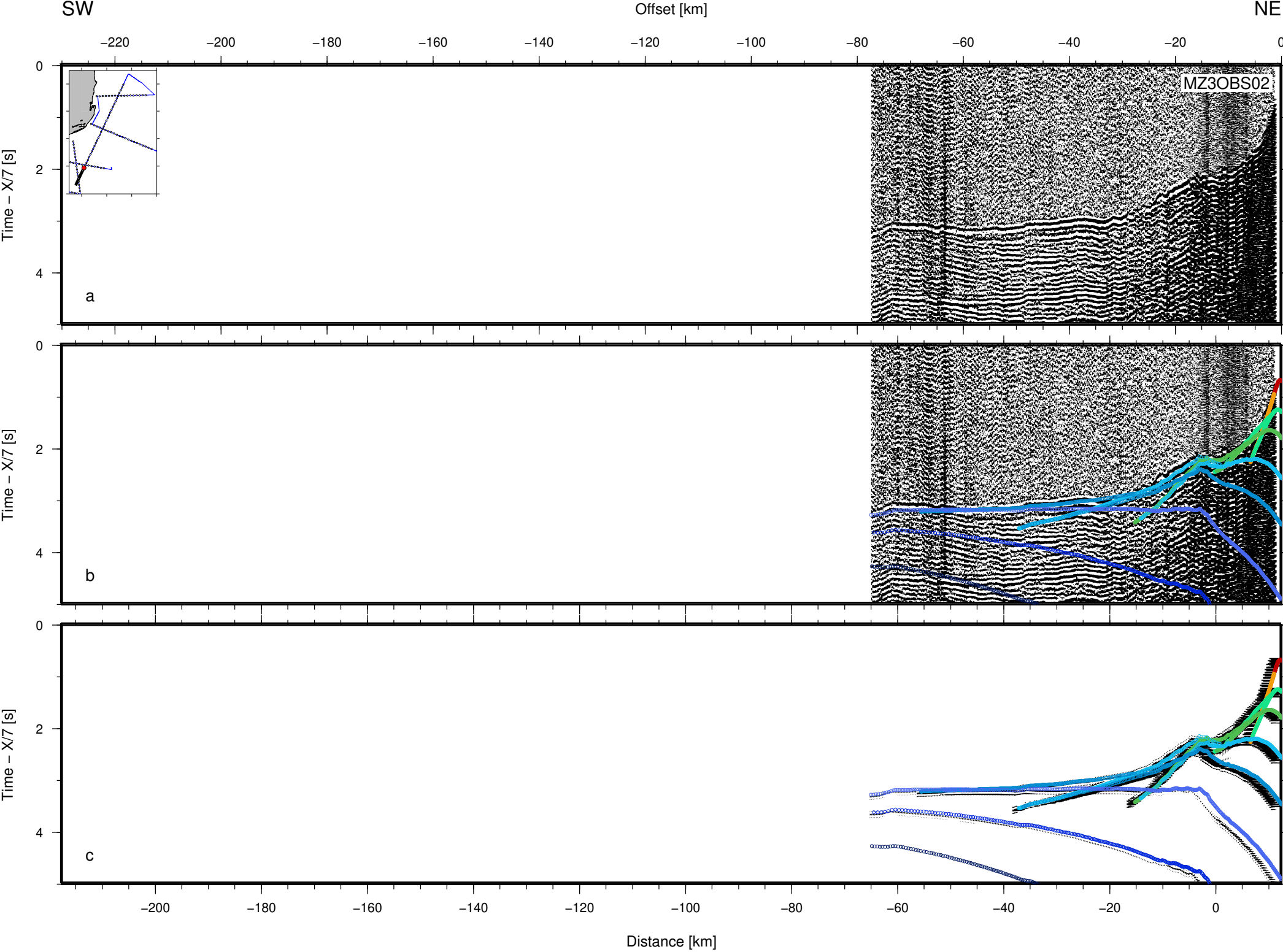

SW
Offset [km]
NE
MZ3OBS03
Time – X/7 [s]
d
Depth [km]
e
TWT [s]
f
Distance [km]

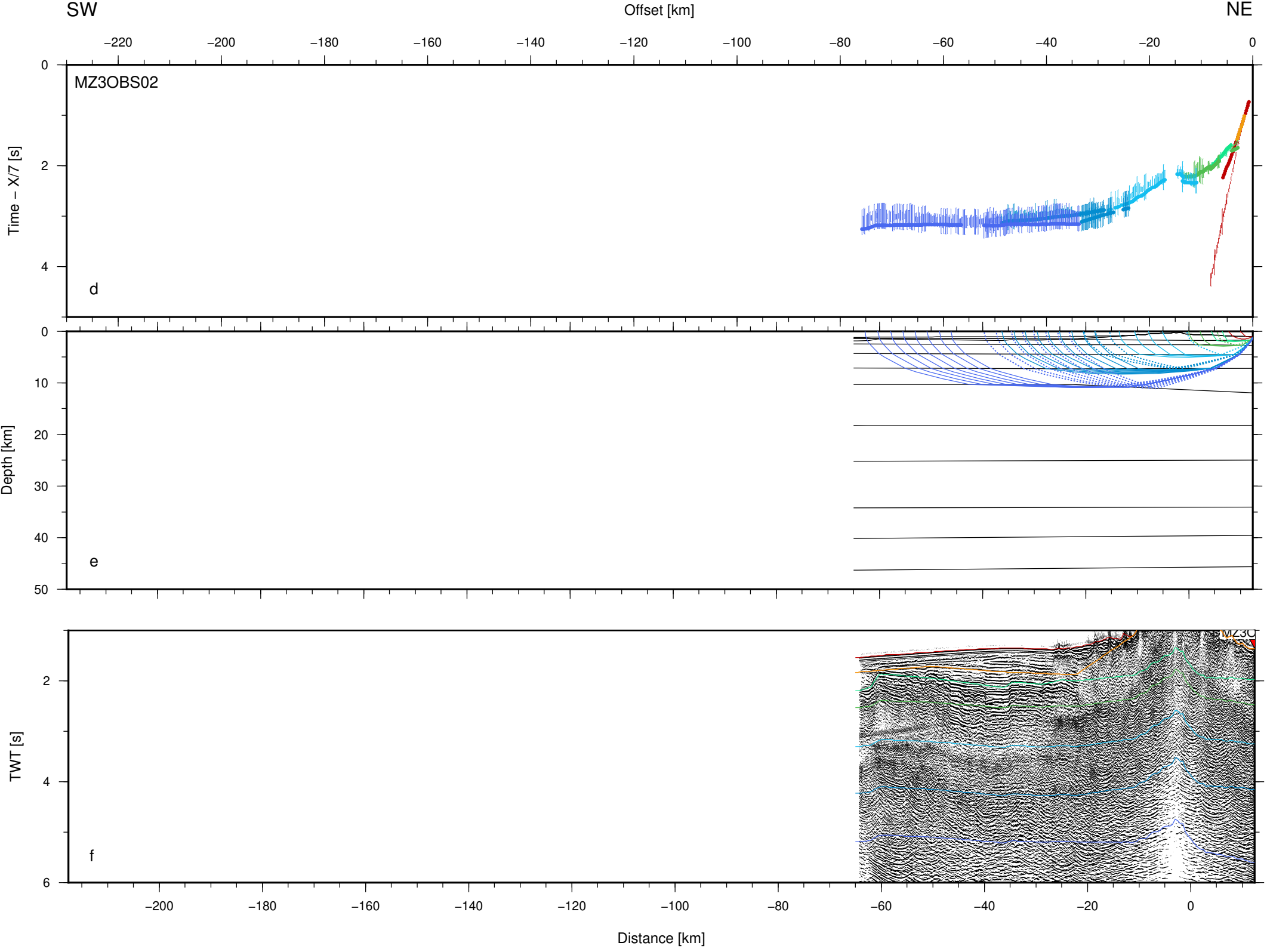

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS03
Time − X/7 [s]
0
2
4
a
b
c
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
20
Distance [km]

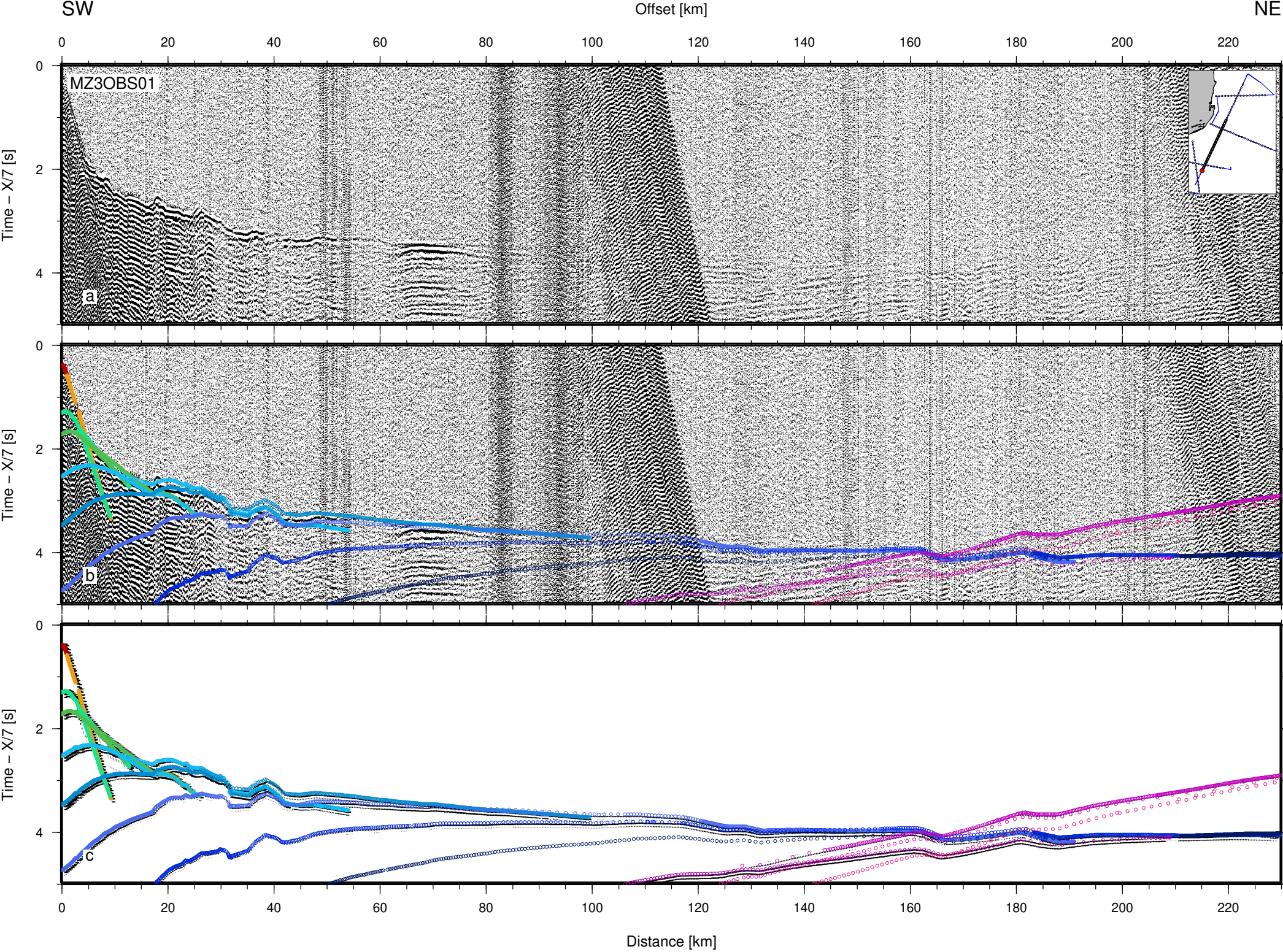

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS03
Time − X/7 [s]
0
2
4
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
20
Distance [km]

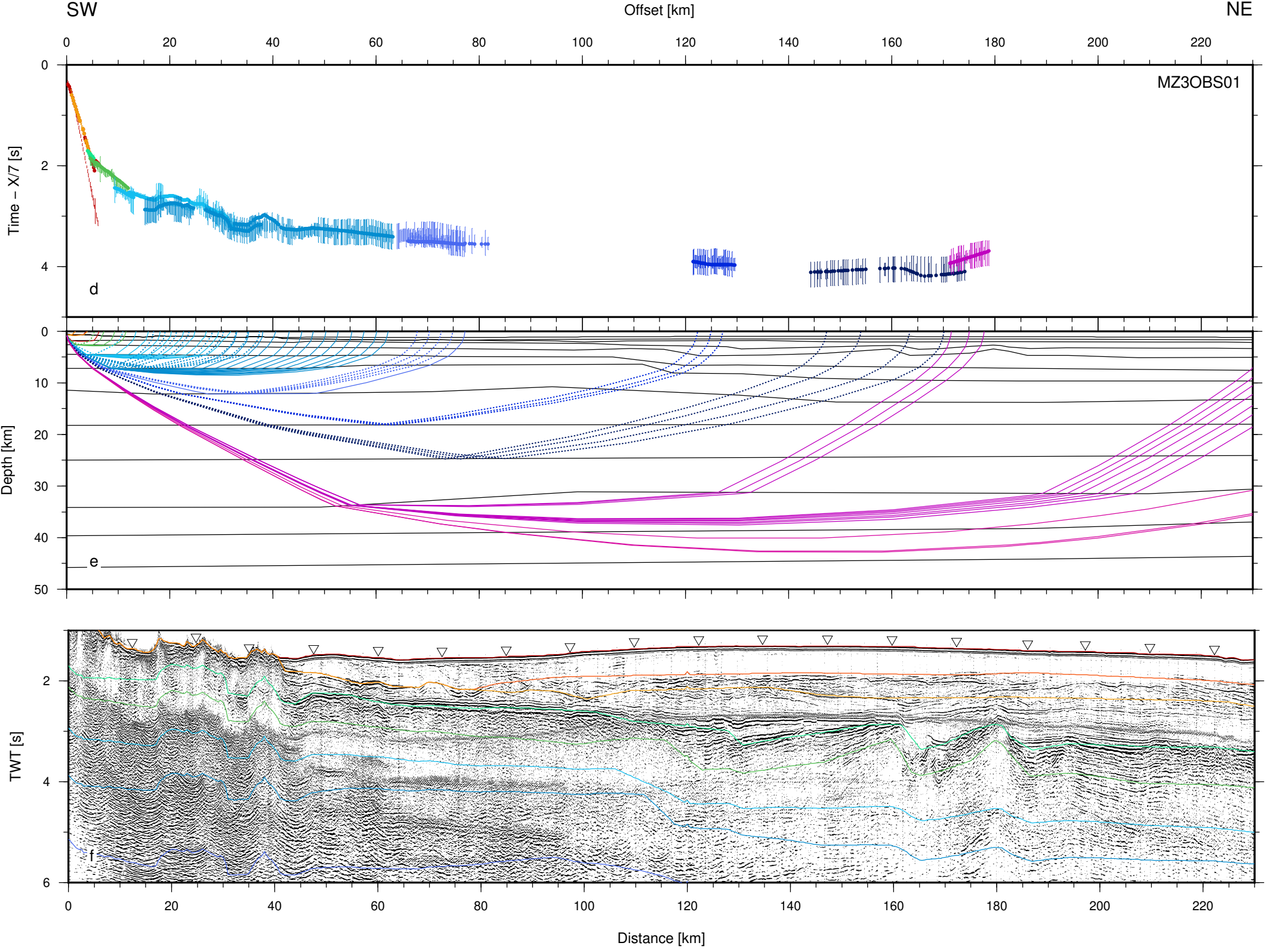

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS02
a
b
c
Time – X/7 [s]
0
2
4
Distance [km]
240

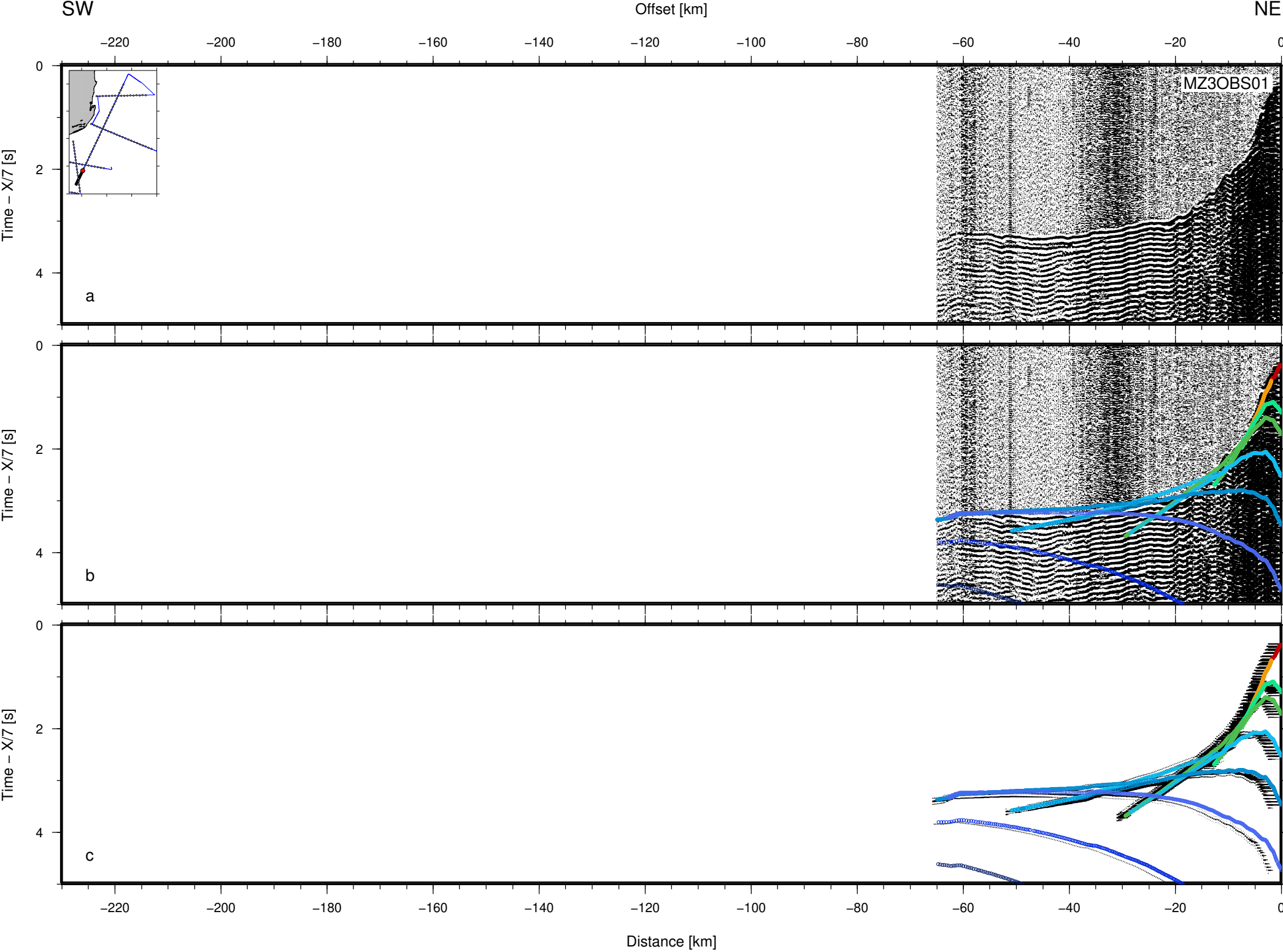

SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS02
Time – X/7 [s]
0
2
4
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
20
40
60
80
100
120
140
160
180
200
220
240
Distance [km]


SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS02
Time − X/7 [s]
0
2
4
a
b
c
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
Distance [km]


SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS02
Time − X/7 [s]
d
Depth [km]
e
TWT [s]
f
Distance [km]


SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS01
a
b
c
Time – X/7 [s]
0
2
4
Distance [km]


SW
Offset [km]
NE
0
20
40
60
80
100
120
140
160
180
200
220
MZ3OBS01
Time – X/7 [s]
0
2
4
d
Depth [km]
0
10
20
30
40
50
e
TWT [s]
2
4
6
f
Distance [km]


SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS01
Time – X/7 [s]
2
4
a
b
c
Distance [km]

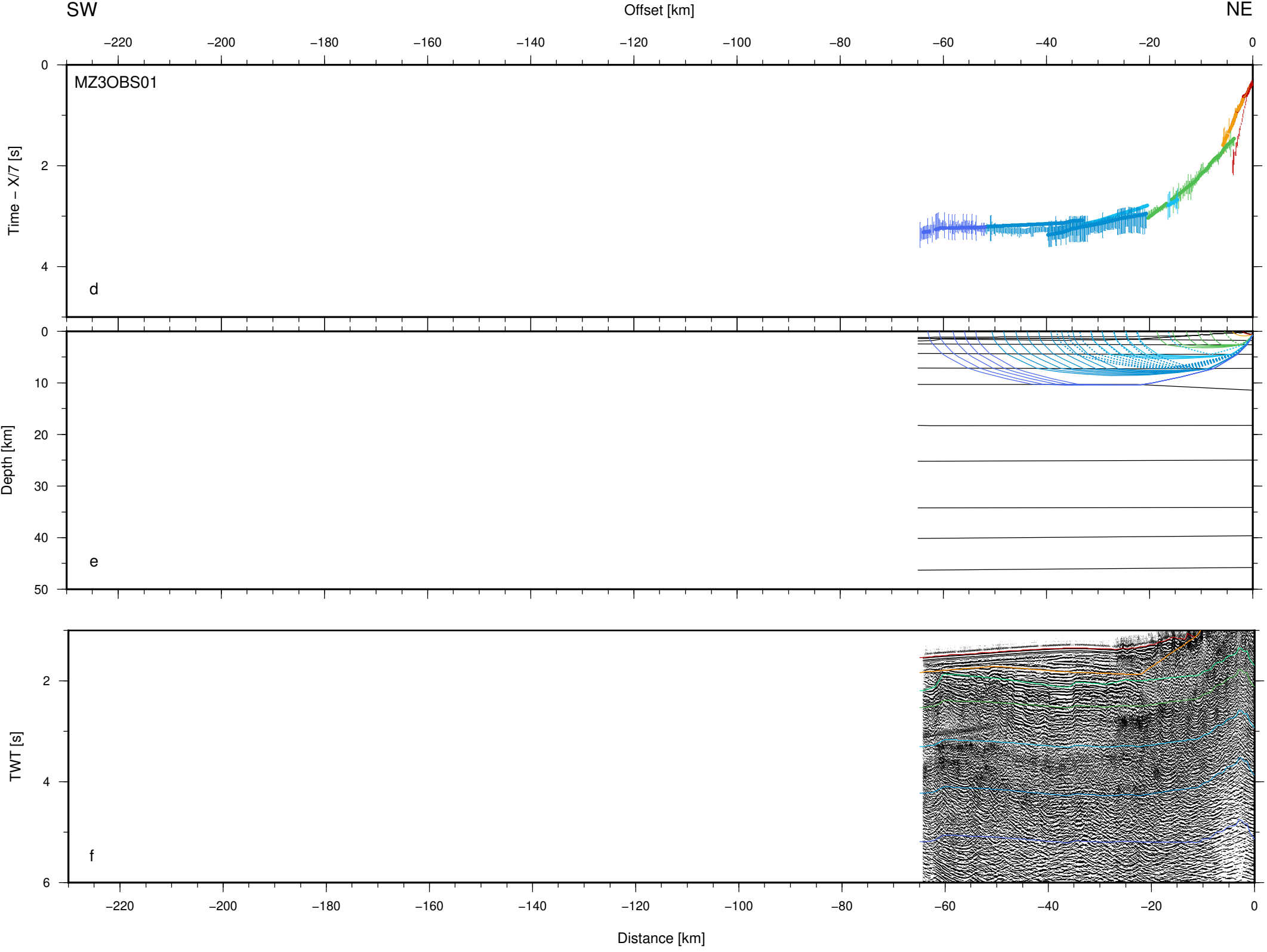
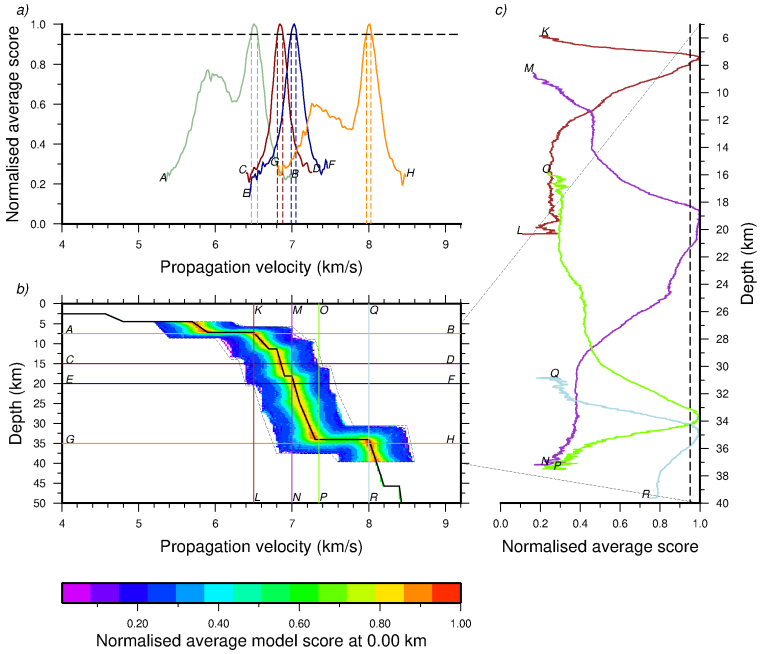
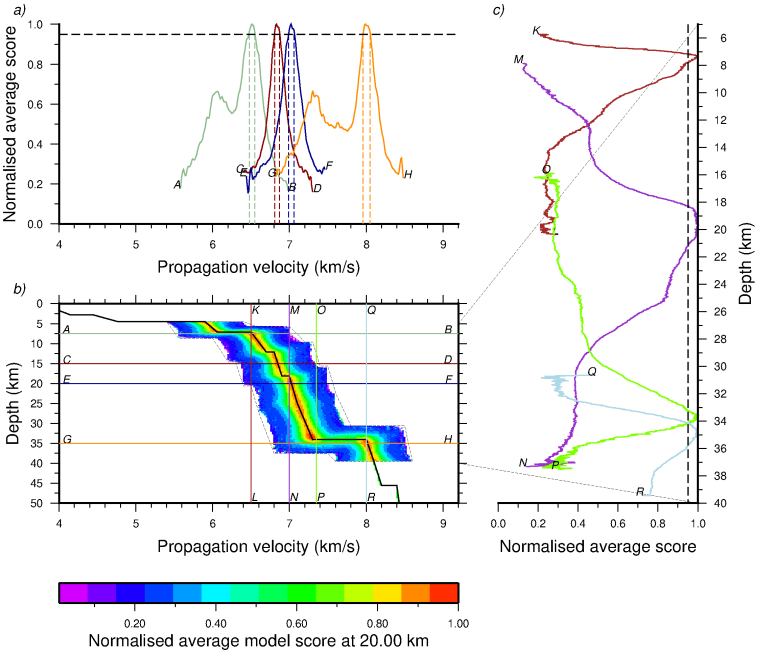
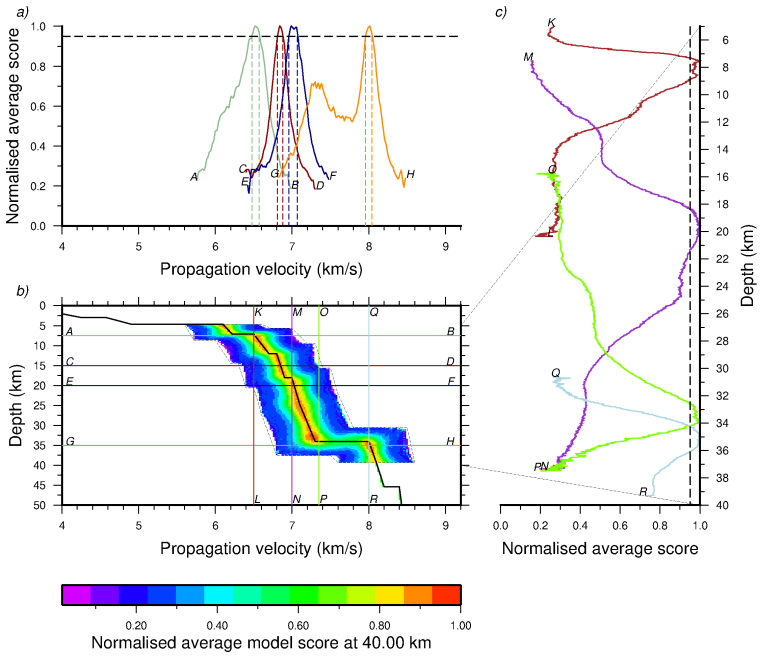
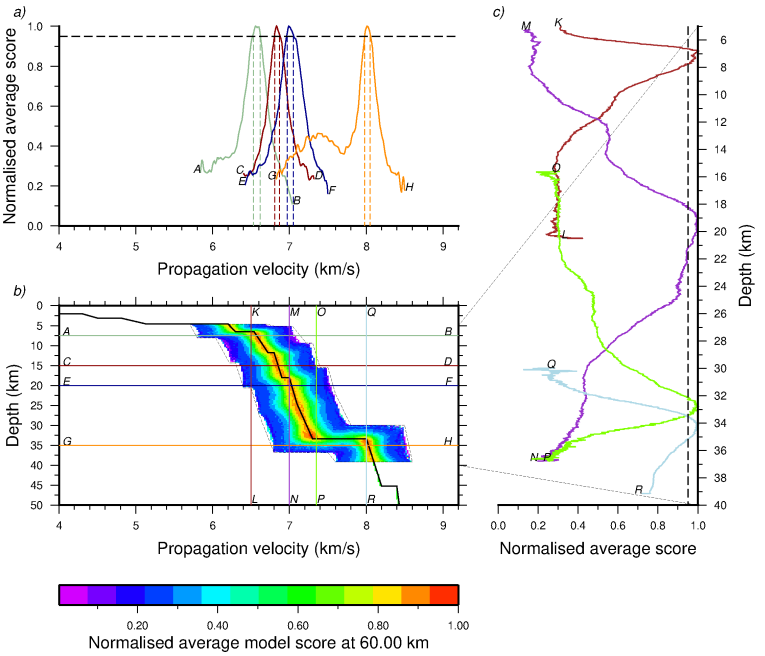

SW
Offset [km]
NE
−220
−200
−180
−160
−140
−120
−100
−80
−60
−40
−20
0
MZ3OBS01
Time − X/7 [s]
d
Depth [km]
e
TWT [s]
f
Distance [km]

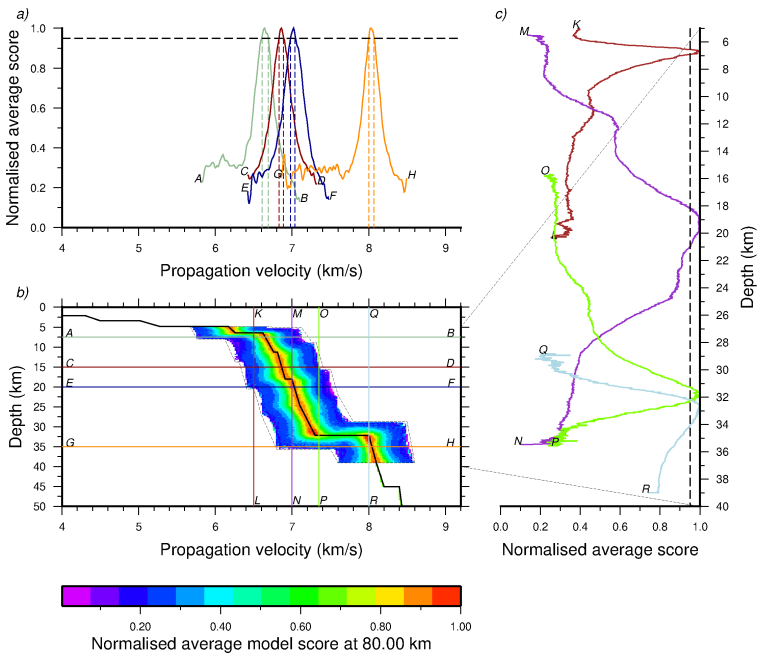
Figure 3. Normalized average model scores distribution every 20km along MZ3. On each panel, a) and c) represent cross-sections of normalized average score distribution at selected depths and velocities respectively as shown in a) with letter correspondence. Black horizontal dashed lines indicate 95% of the maximum normalized average score and are used to estimates uncertainties. This level corresponds to the score of a model capable of tracing 95% of the original number of rays and with an increase of 5% of the original χ^2. b) Average model score distribution of the entire dataset. Thin dashed lines mark fixed parameter bounds. Solid black line indicates tested model. Letters mark locations of the horizontal and vertical cross-sections shown in a) and c).

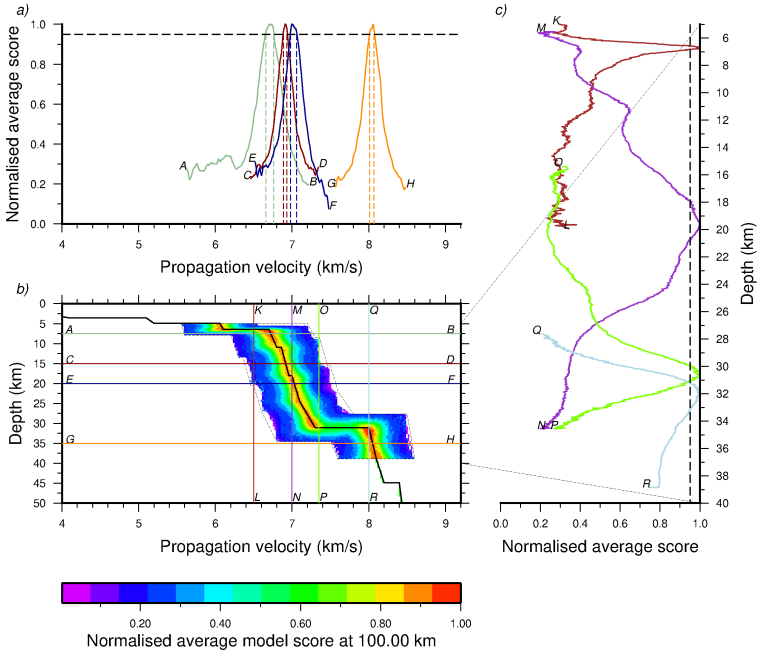

a)
b)
c)
Normalised average score
Propagation velocity (km/s)
Depth (km)
Normalised average score
Normalised average model score at 0.00 km

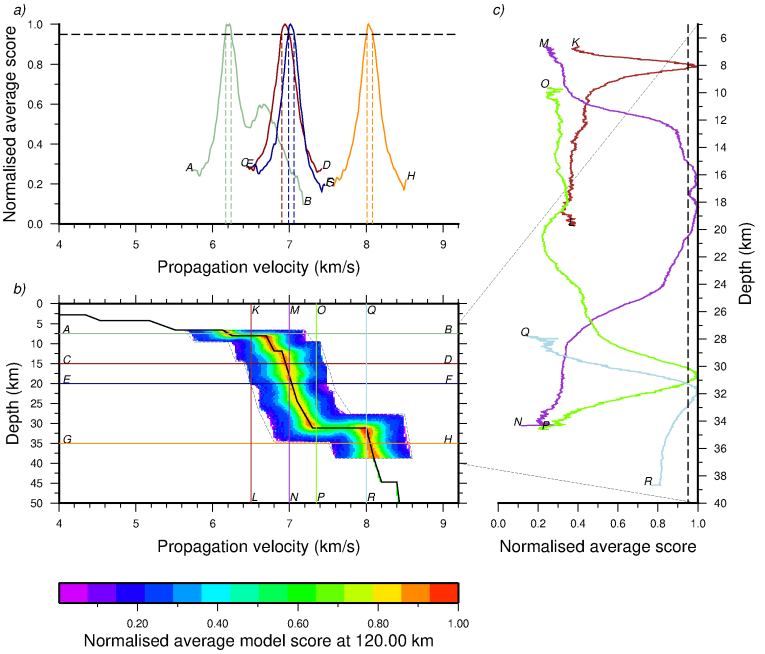

a)
b)
c)
Normalised average score
Propagation velocity (km/s)
Depth (km)
Normalised average score
Normalised average model score at 20.00 km

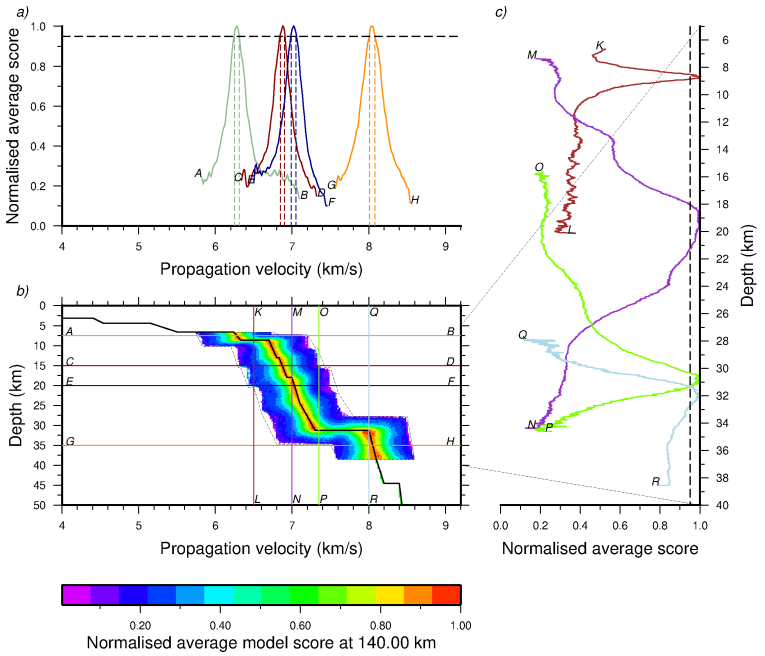

a)
b)
c)
Normalised average score
Propagation velocity (km/s)
Depth (km)
Normalised average score
Normalised average model score at 40.00 km

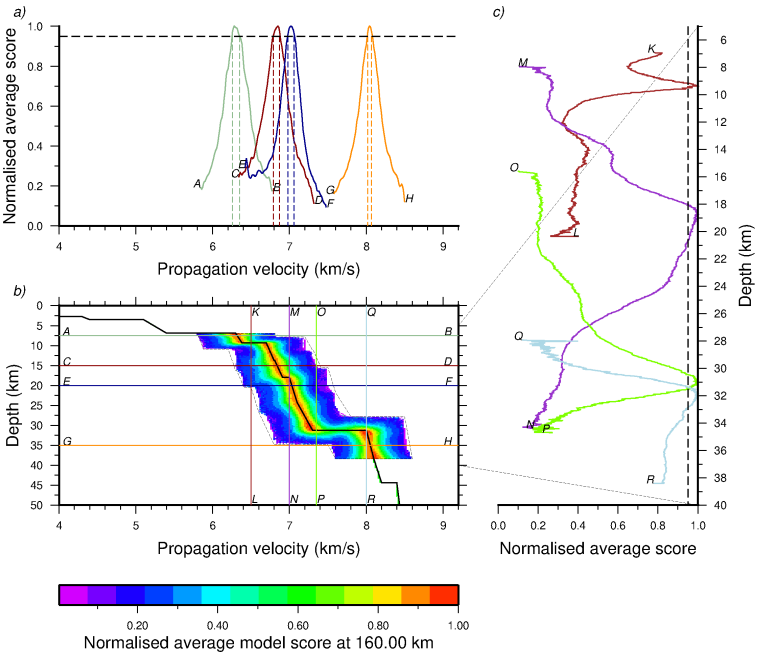

a)
b)
c)
Normalised average score
Propagation velocity (km/s)
Depth (km)
Normalised average score
Normalised average model score at 60.00 km

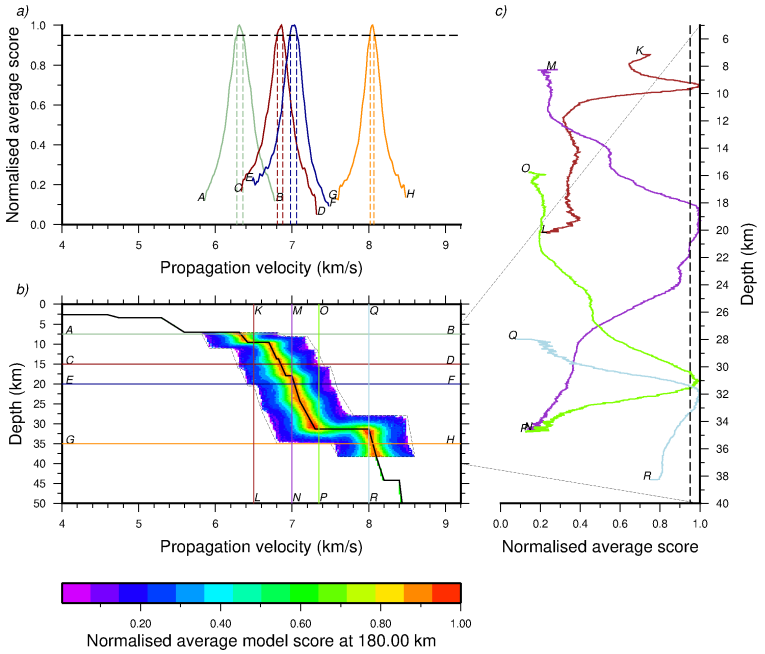

a)
b)
c)
Normalised average score
Propagation velocity (km/s)
Depth (km)
Normalised average score
Normalised average model score at 80.00 km

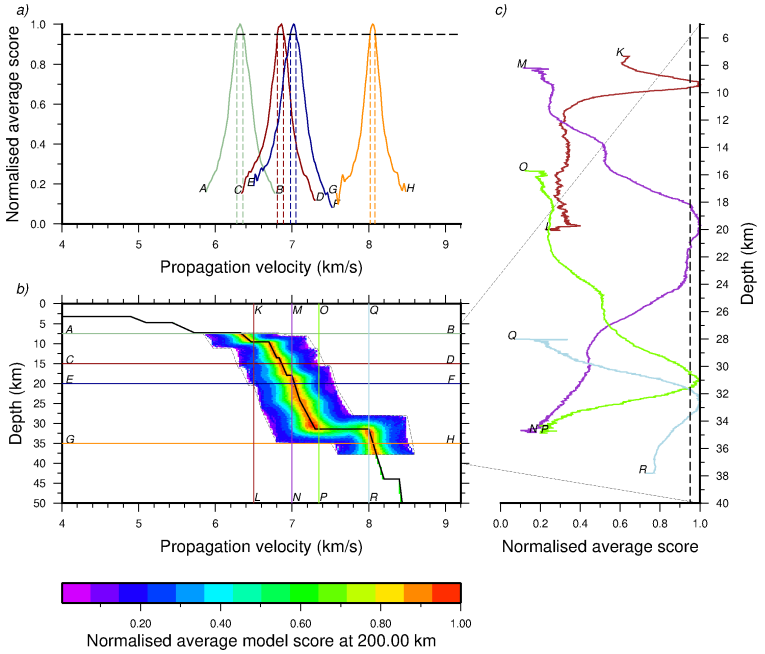

a)
b)
c)
Normalised average score
Propagation velocity (km/s)
Depth (km)
Normalised average score
Normalised average model score at 100.00 km

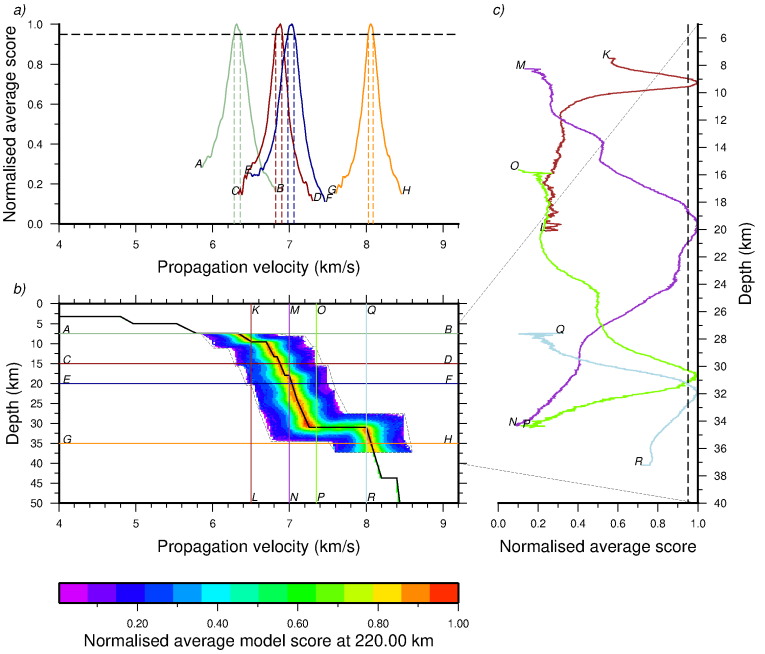

a)
b)
c)
Normalised average score
Propagation velocity (km/s)
Depth (km)
Normalised average score
Normalised average model score at 120.00 km

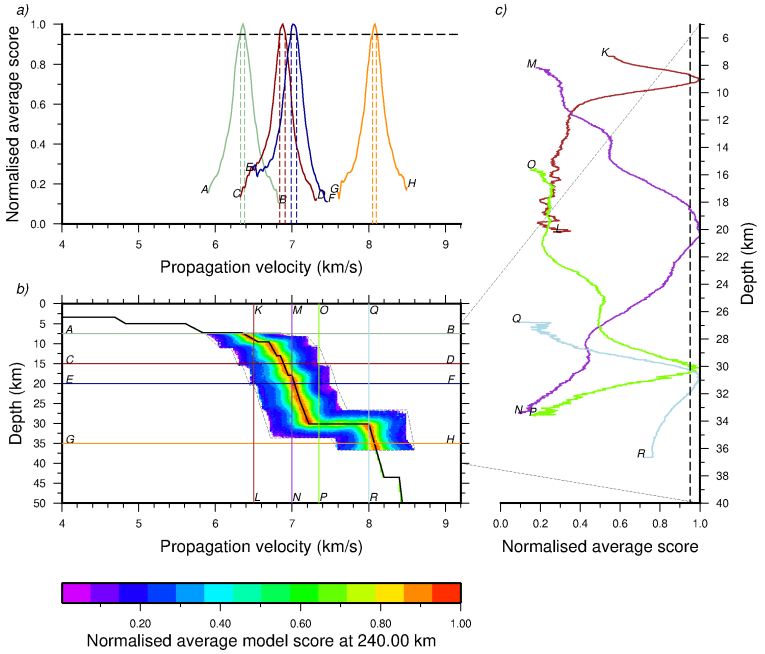

a)
b)
c)
Normalised average score
Propagation velocity (km/s)
Depth (km)
Normalised average score
Normalised average model score at 140.00 km

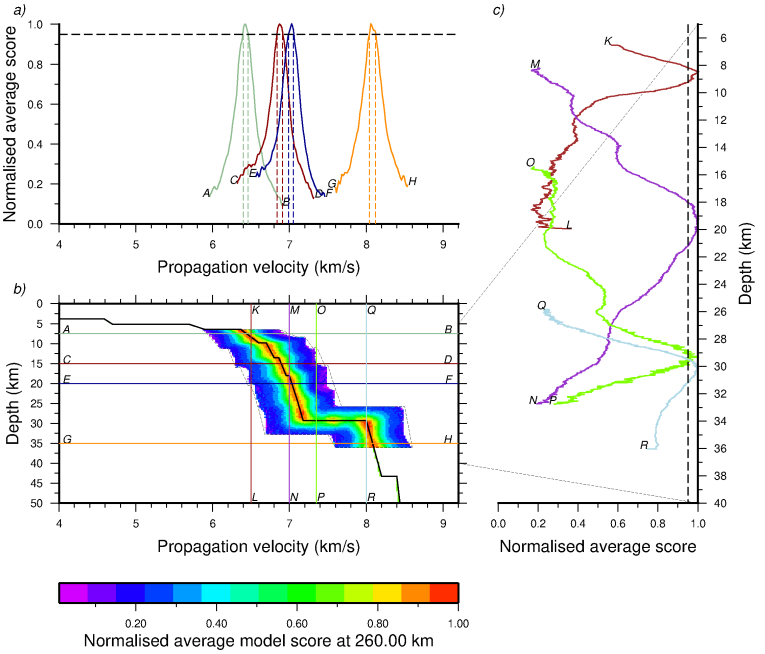

a)
b)
c)
Normalised average score
Propagation velocity (km/s)
Depth (km)
Normalised average score
Normalised average model score at 160.00 km

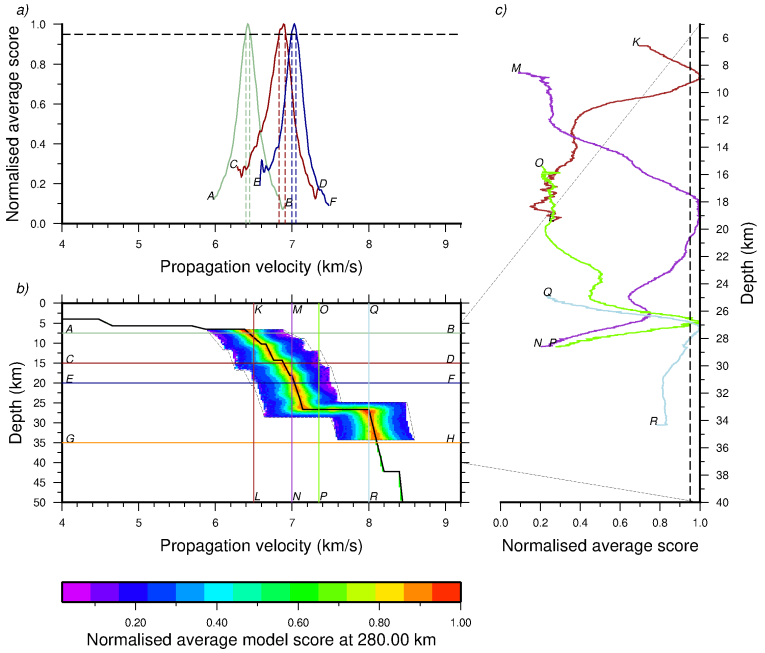

a)
b)
c)
Normalised average score
Propagation velocity (km/s)
Depth (km)
Normalised average score
Normalised average model score at 180.00 km

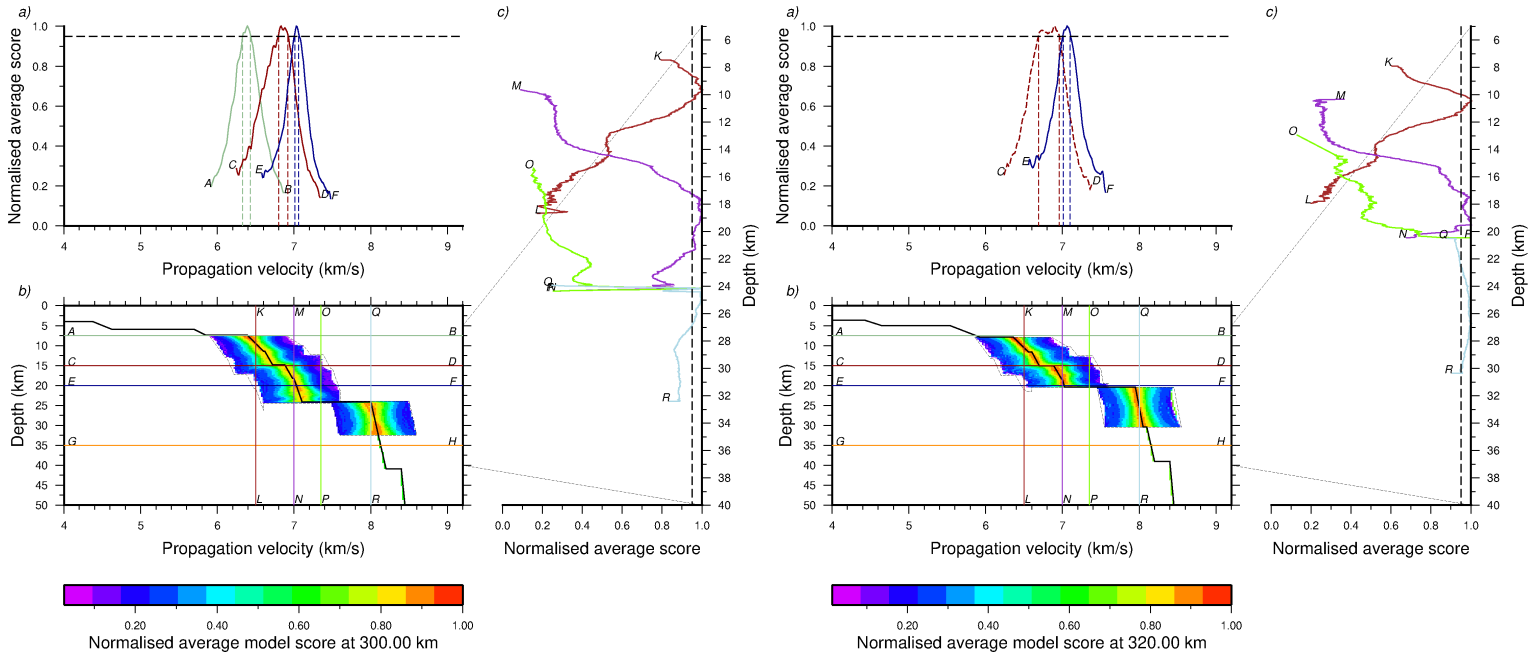

a)
Normalised average score
Propagation velocity (km/s)
b)
Depth (km)
Propagation velocity (km/s)
c)
Depth (km)
Normalised average score
0.20 0.40 0.60 0.80 1.00
Normalised average model score at 200.00 km


a)
Normalised average score
Propagation velocity (km/s)
b)
Depth (km)
Propagation velocity (km/s)
c)
Depth (km)
Normalised average score
0.20 0.40 0.60 0.80 1.00
Normalised average model score at 220.00 km

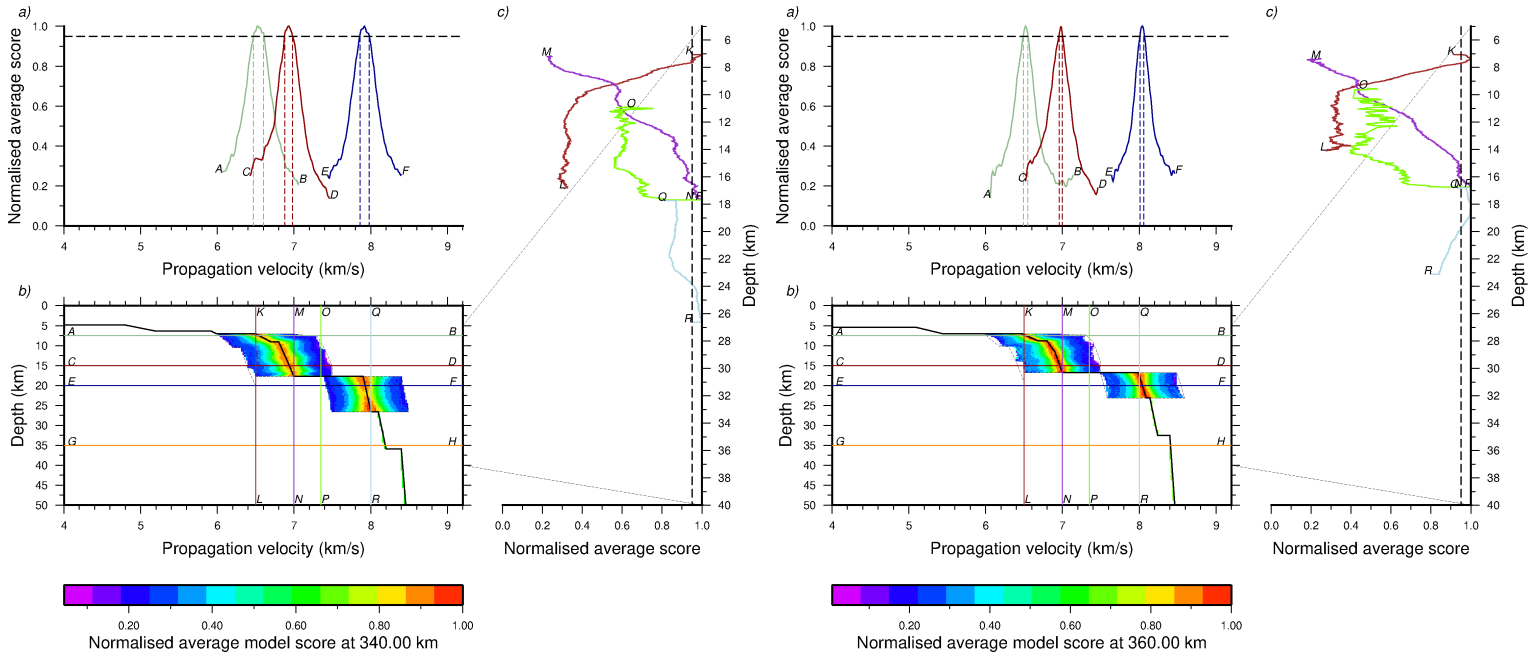

a)
Normalised average score
Propagation velocity (km/s)
b)
Depth (km)
Propagation velocity (km/s)
c)
Depth (km)
Normalised average score
0.20 0.40 0.60 0.80 1.00
Normalised average model score at 240.00 km


a)
Normalised average score
Propagation velocity (km/s)
b)
Depth (km)
Propagation velocity (km/s)
c)
Depth (km)
Normalised average score
0.20 0.40 0.60 0.80 1.00
Normalised average model score at 260.00 km

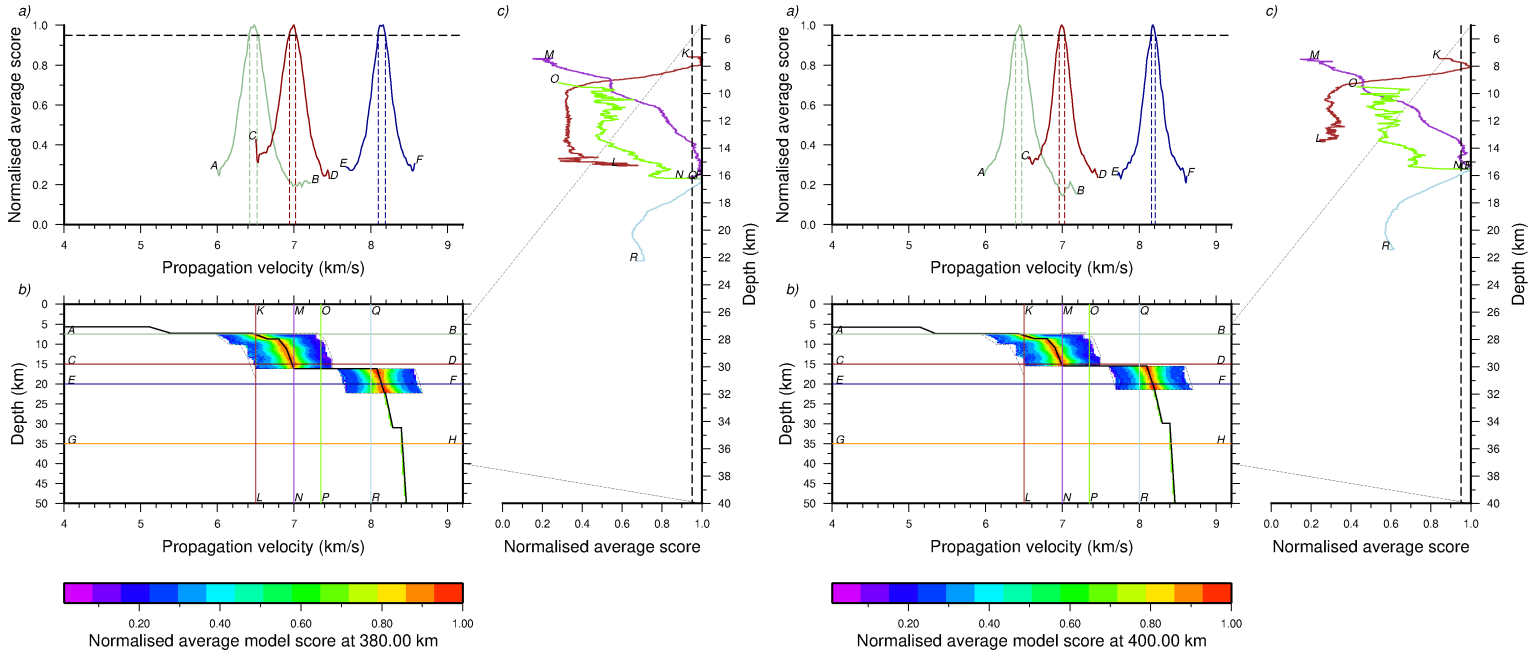

a)
Normalised average score
Propagation velocity (km/s)
b)
Depth (km)
Propagation velocity (km/s)
c)
Depth (km)
Normalised average score
0.20 0.40 0.60 0.80 1.00
Normalised average model score at 280.00 km


a)
Normalised average score
Propagation velocity (km/s)
b)
Depth (km)
Propagation velocity (km/s)
c)
Depth (km)
Normalised average score
Normalised average model score at 300.00 km

a)
Normalised average score
Propagation velocity (km/s)
b)
Depth (km)
Propagation velocity (km/s)
c)
Depth (km)
Normalised average score
Normalised average model score at 320.00 km


a)
Normalised average score
Propagation velocity (km/s)
b)
Depth (km)
Propagation velocity (km/s)
c)
Depth (km)
Normalised average score
Normalised average model score at 340.00 km

a)
Normalised average score
Propagation velocity (km/s)
b)
Depth (km)
Propagation velocity (km/s)
c)
Depth (km)
Normalised average score
Normalised average model score at 360.00 km


a)
Normalised average score
Propagation velocity (km/s)
b)
Depth (km)
Propagation velocity (km/s)
c)
Depth (km)
Normalised average score
Normalised average model score at 380.00 km

a)
Normalised average score
Propagation velocity (km/s)
b)
Depth (km)
Propagation velocity (km/s)
c)
Depth (km)
Normalised average score
Normalised average model score at 400.00 km