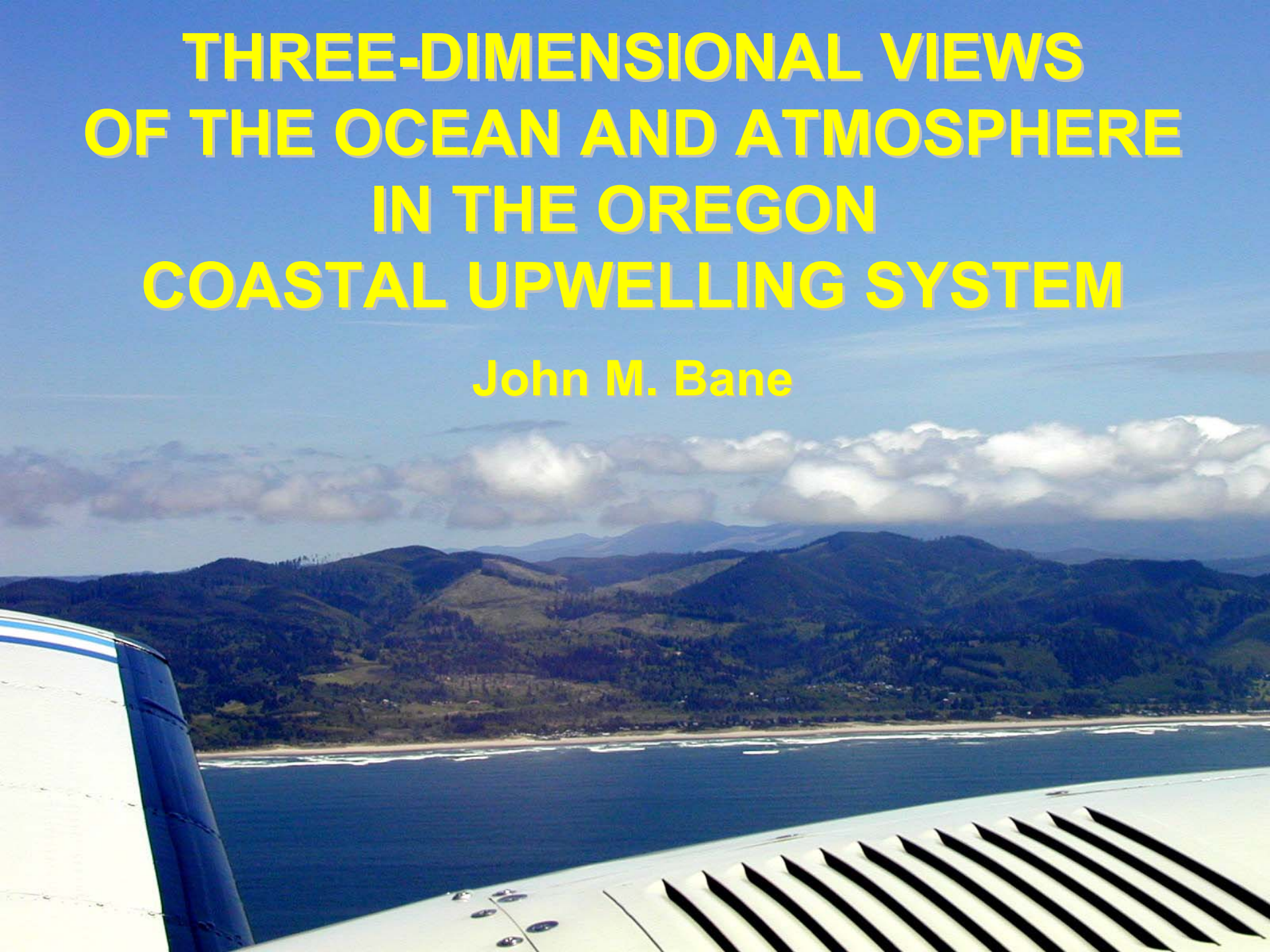
THREE-DIMENSIONAL VIEWS OF THE OCEAN AND ATMOSPHERE IN THE OREGON COASTAL UPWELLING SYSTEM

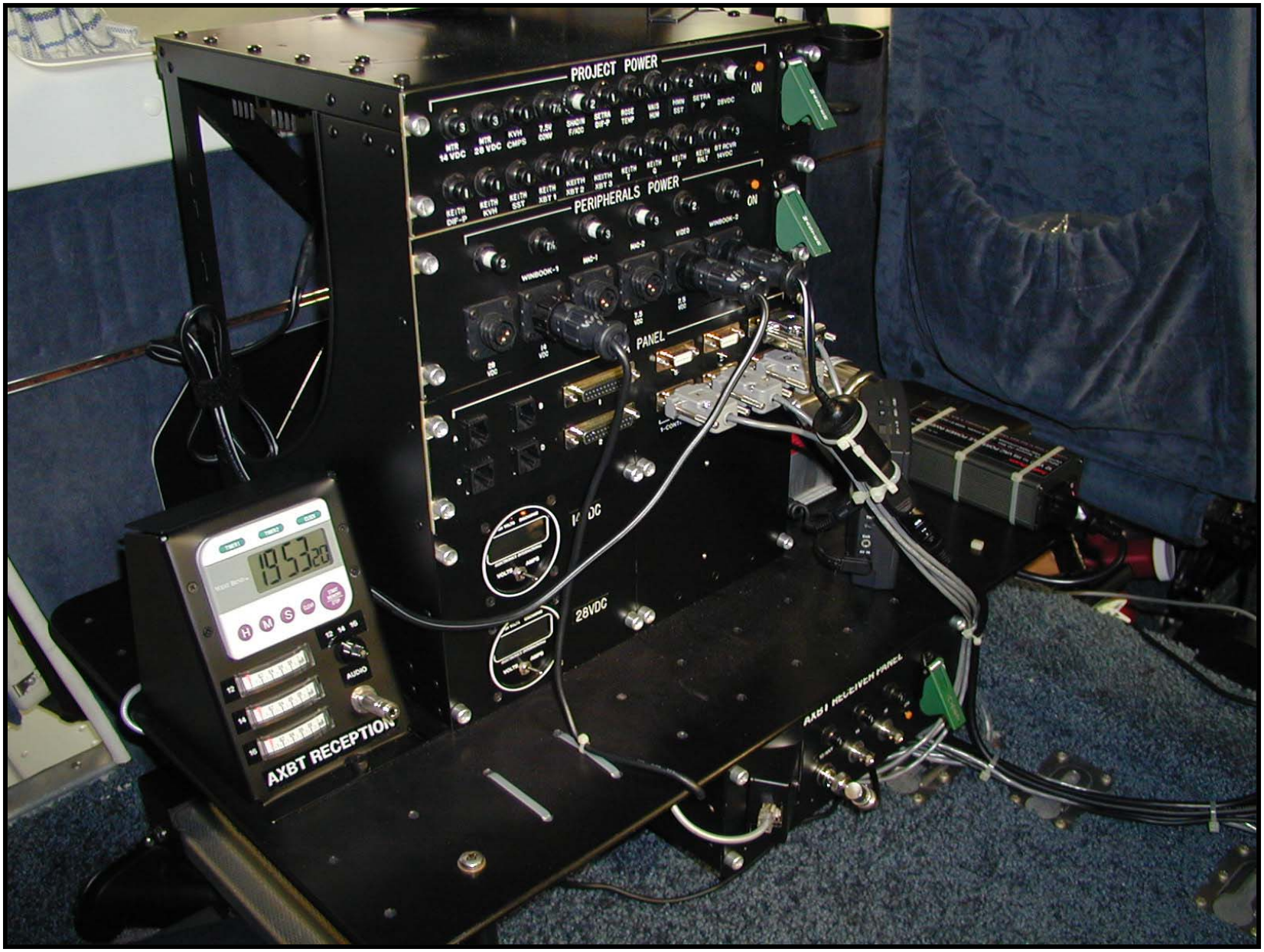
John M. Bane



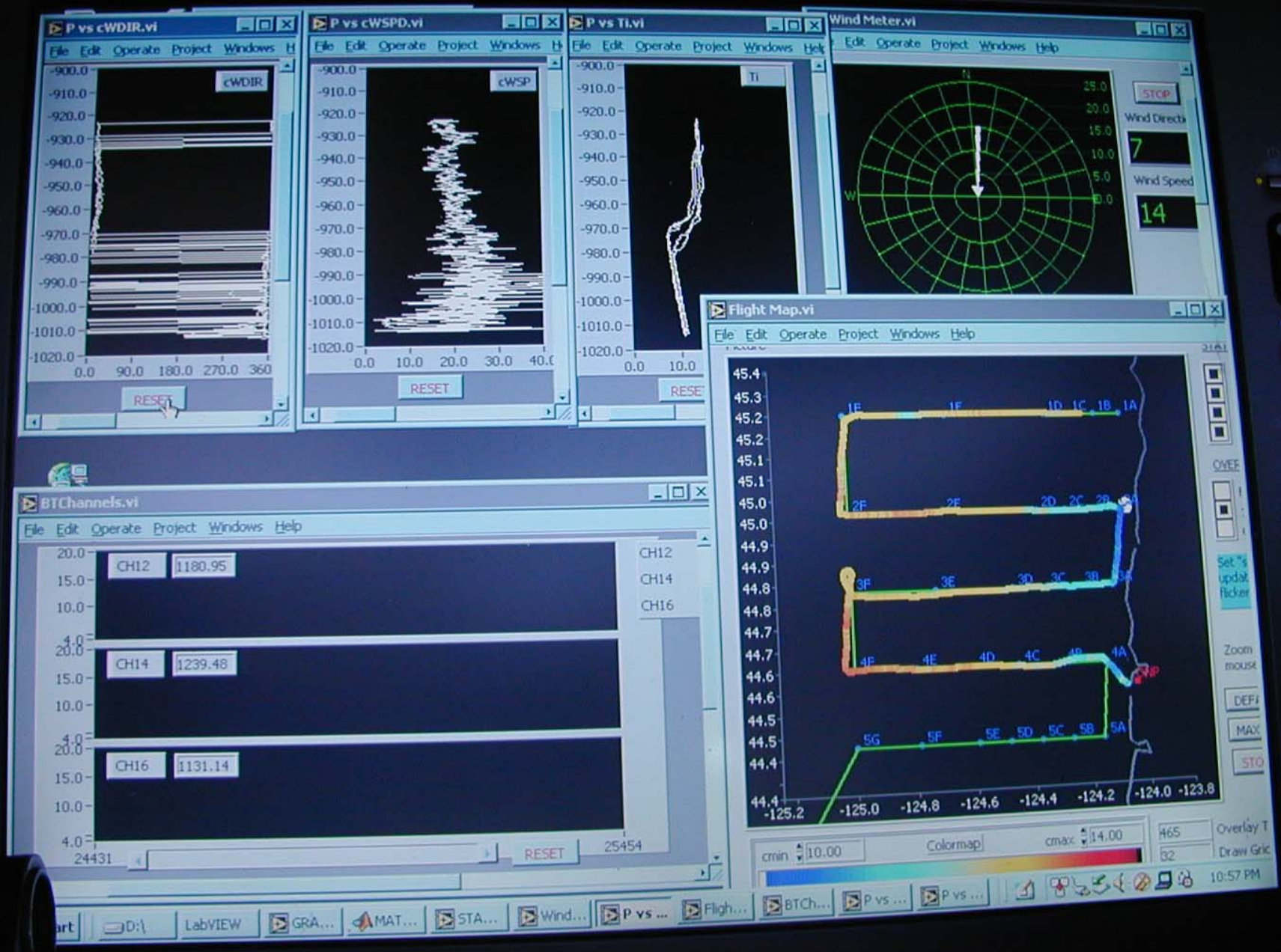
Piper Seneca III operated by the University of North Carolina

OCEAN	ATMOSPHERE
SST	Wind (u, v)
T(z)	Temperature
Color	Humidity
	Pressure

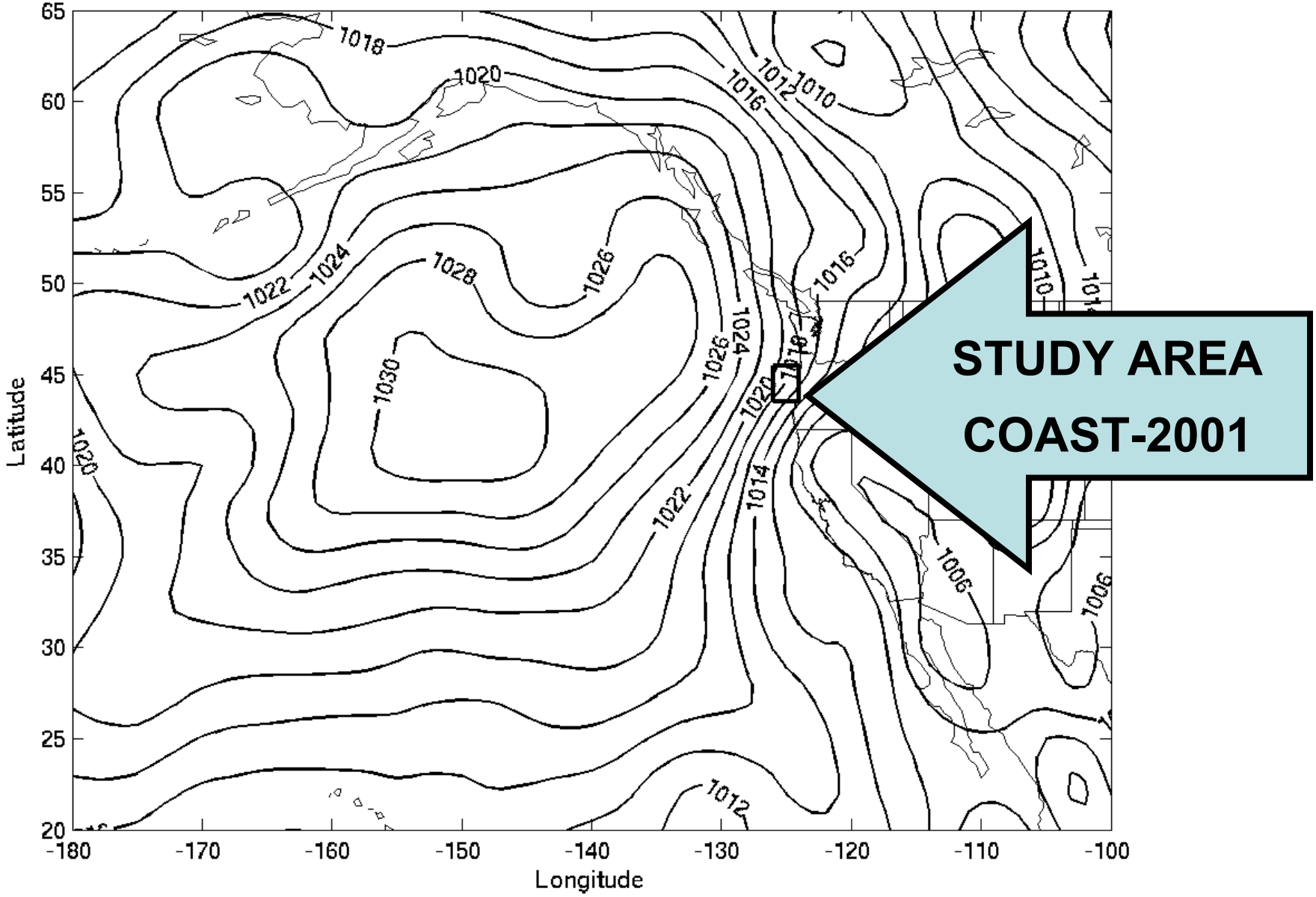
Power Distribution and Signal Reception Console

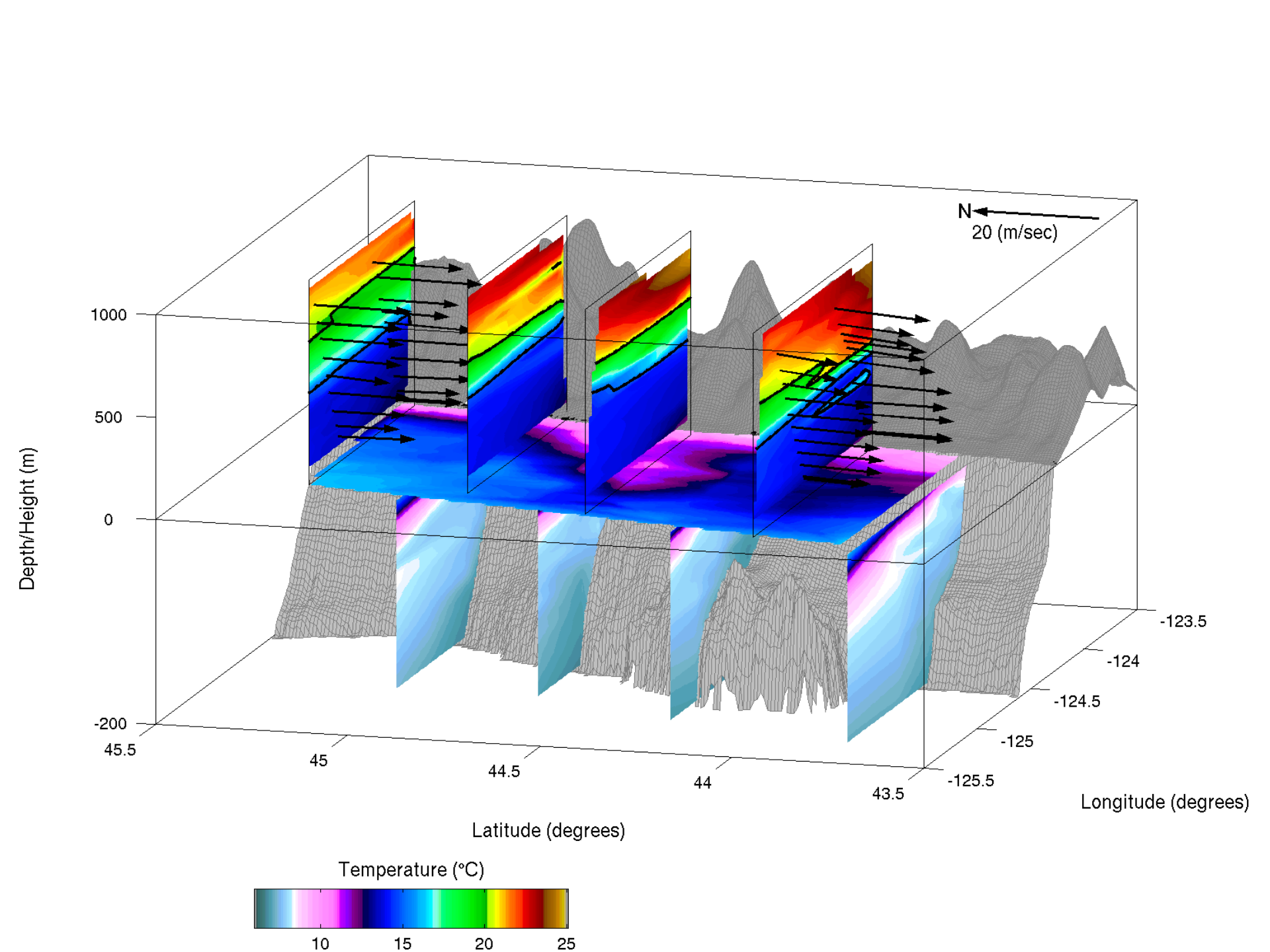


In-Flight Data Display



SURFACE ATMOSPHERIC PRESSURE AT 1700 PDT ON JULY 24, 2001

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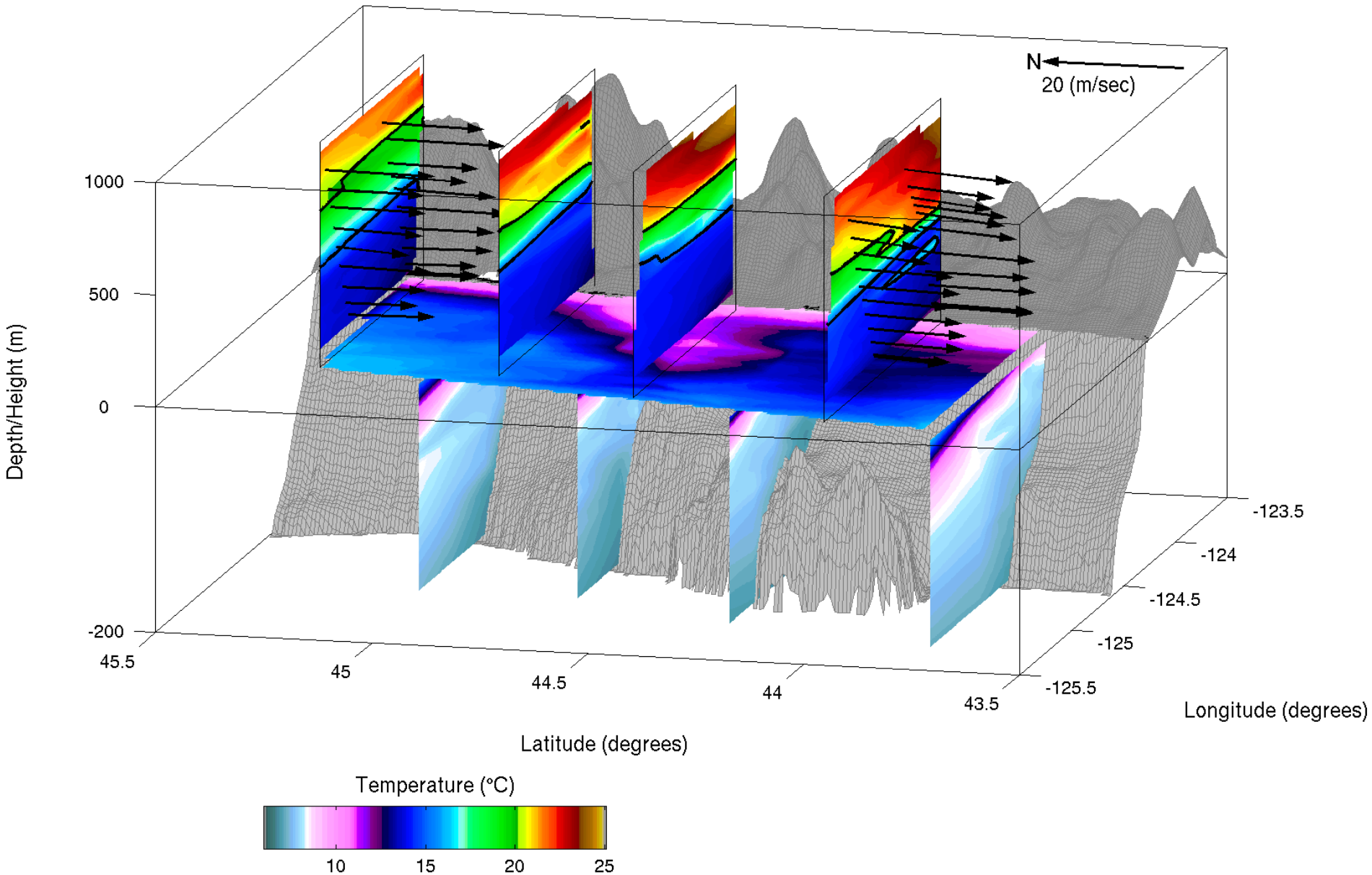
20 (m/sec)
1000
500
0
-200
Depth/Height (m)
45.5
45
44.5
44
43.5
Latitude (degrees)
-123.5
-124
-124.5
-125
-125.5
Longitude (degrees)
Temperature (°C)
10
15
20
25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Depth/Height (m)
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44.5
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43.5
Latitude (degrees)
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-125
-125.5
Longitude (degrees)
Temperature (°C)
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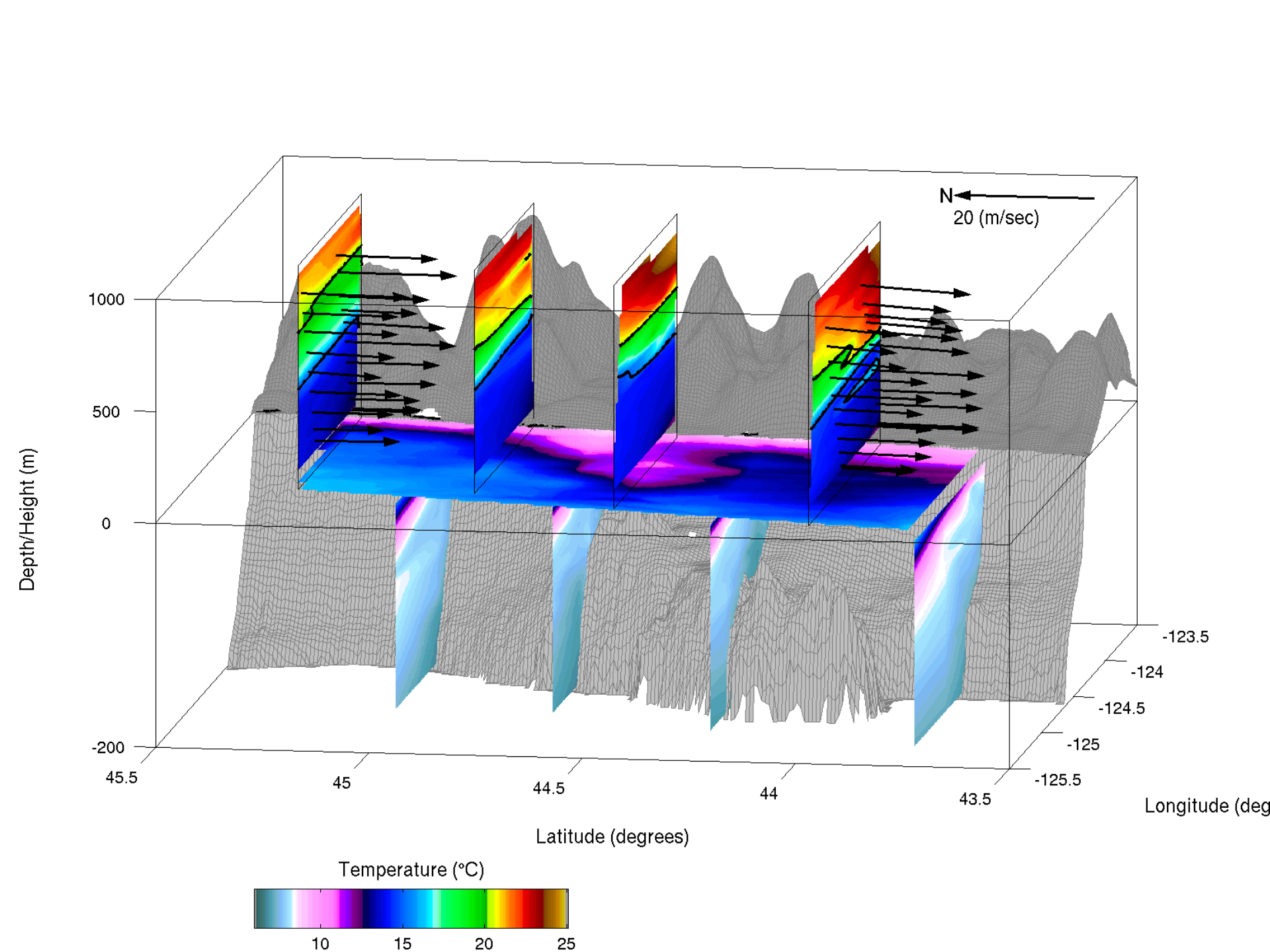
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Depth/Height (m)
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45
44.5
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43.5
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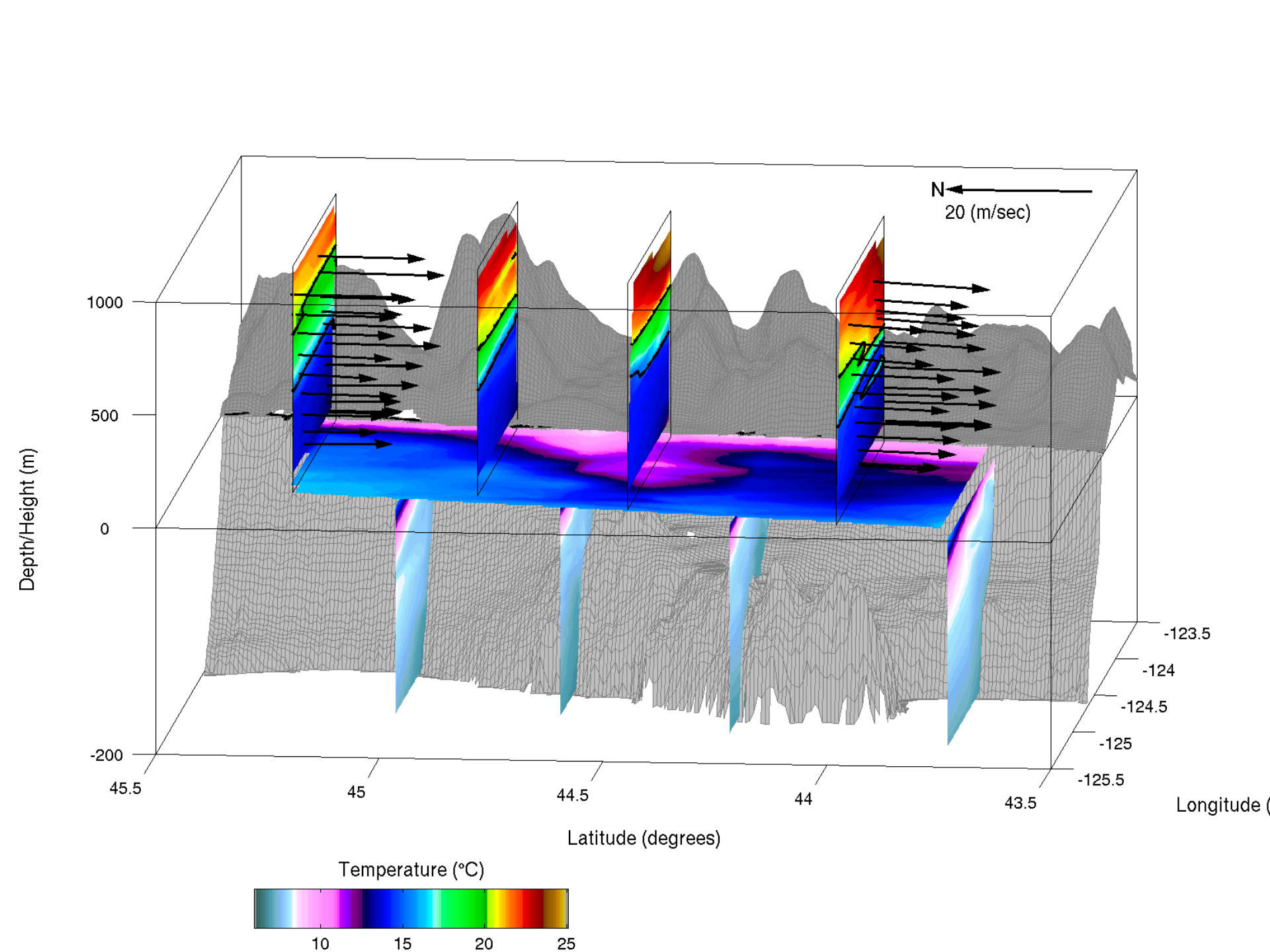
-124.5
-125
-125.5
Longitude (deg
Temperature (°C)
10
15
20
25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Depth/Height (m)
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43.5
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-124
-124.5
-125
-125.5
Longitude (
Temperature (°C)
10
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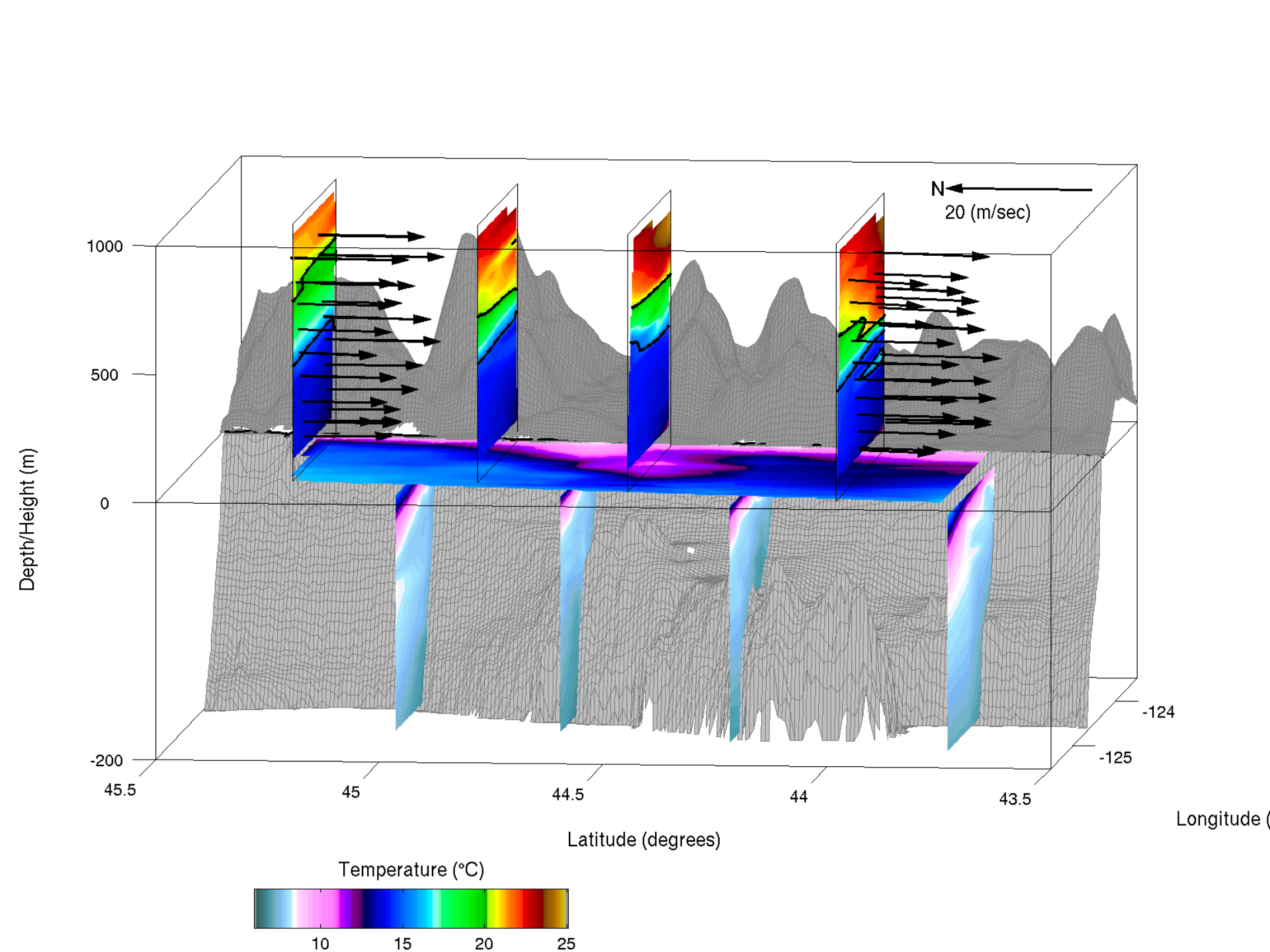
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Depth/Height (m)
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Latitude (degrees)
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-125
Longitude (
Temperature (°C)
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20
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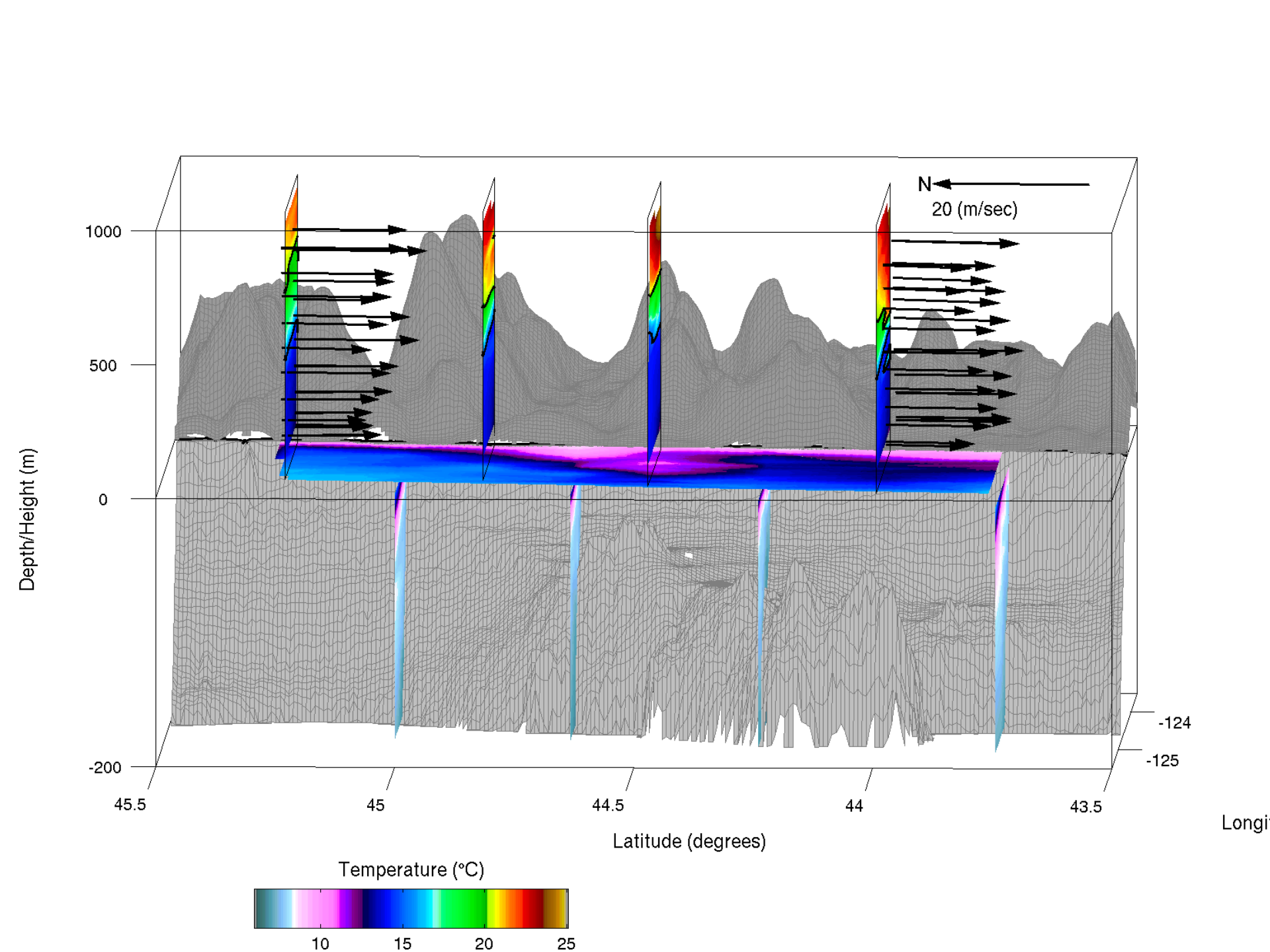
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Depth/Height (m)
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Latitude (degrees)
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Temperature (°C)
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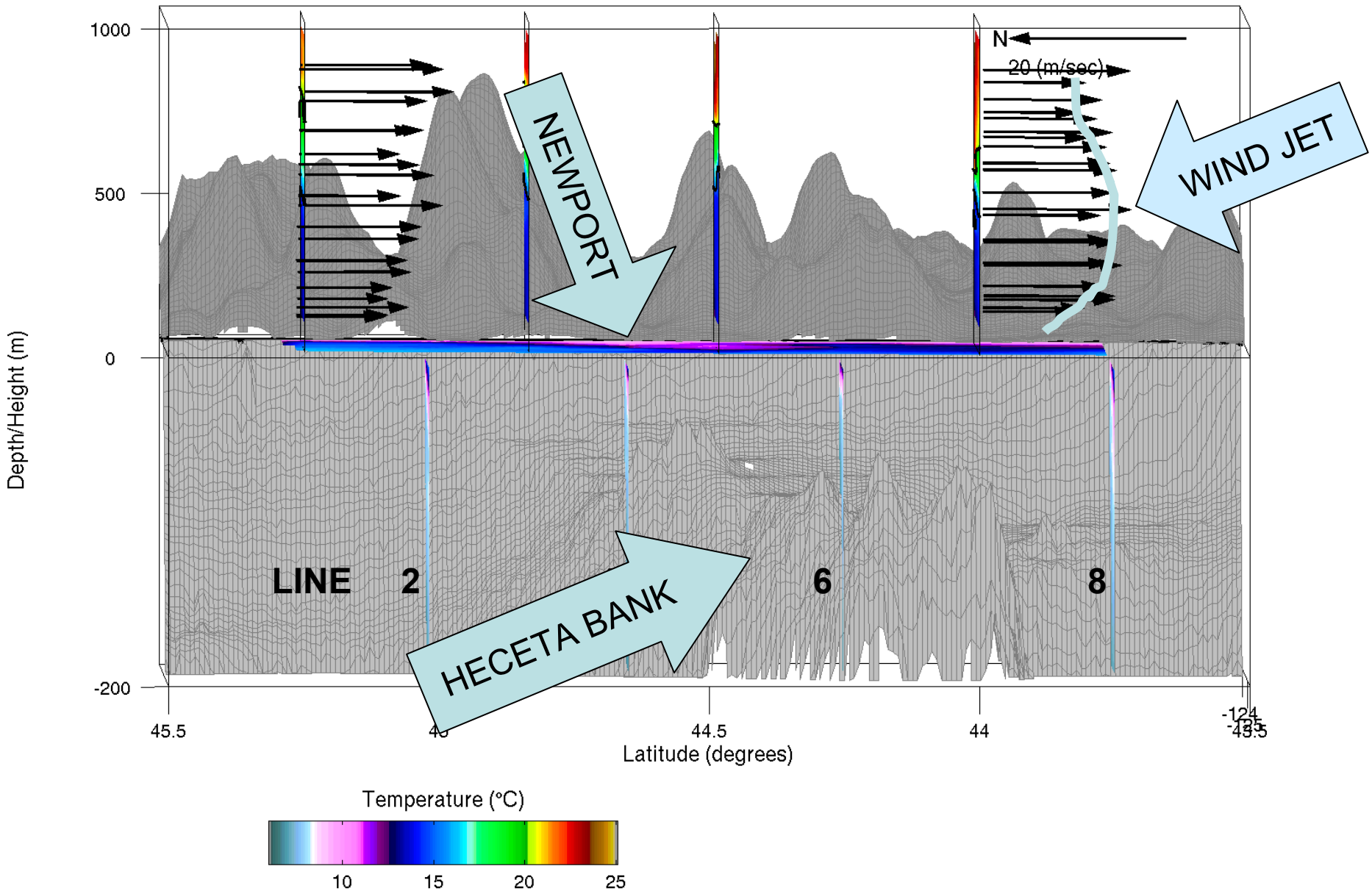
LINE 1
3
5
7
1000
500
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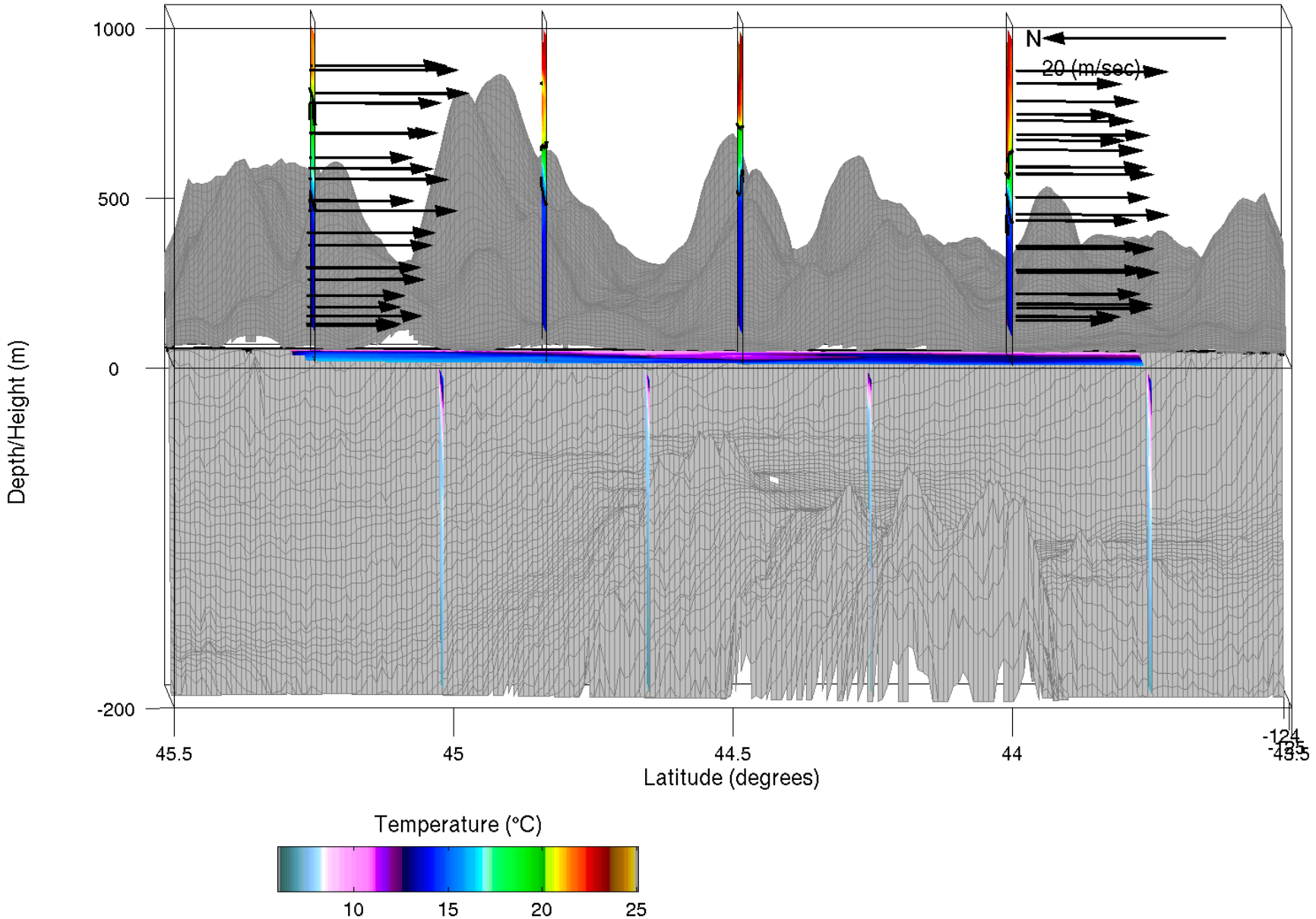
-200
N
20 (m/sec)
NEWPORT
WIND JET
LINE 2
6
8
HECETA BANK
Depth/Height (m)
45.5
44.5
44
-124
Latitude (degrees)
Temperature (°C)
10
15
20
25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0
-200
Depth/Height (m)
N
20 (m/sec)
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44.5
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-125
-43.5
Latitude (degrees)
Temperature (°C)
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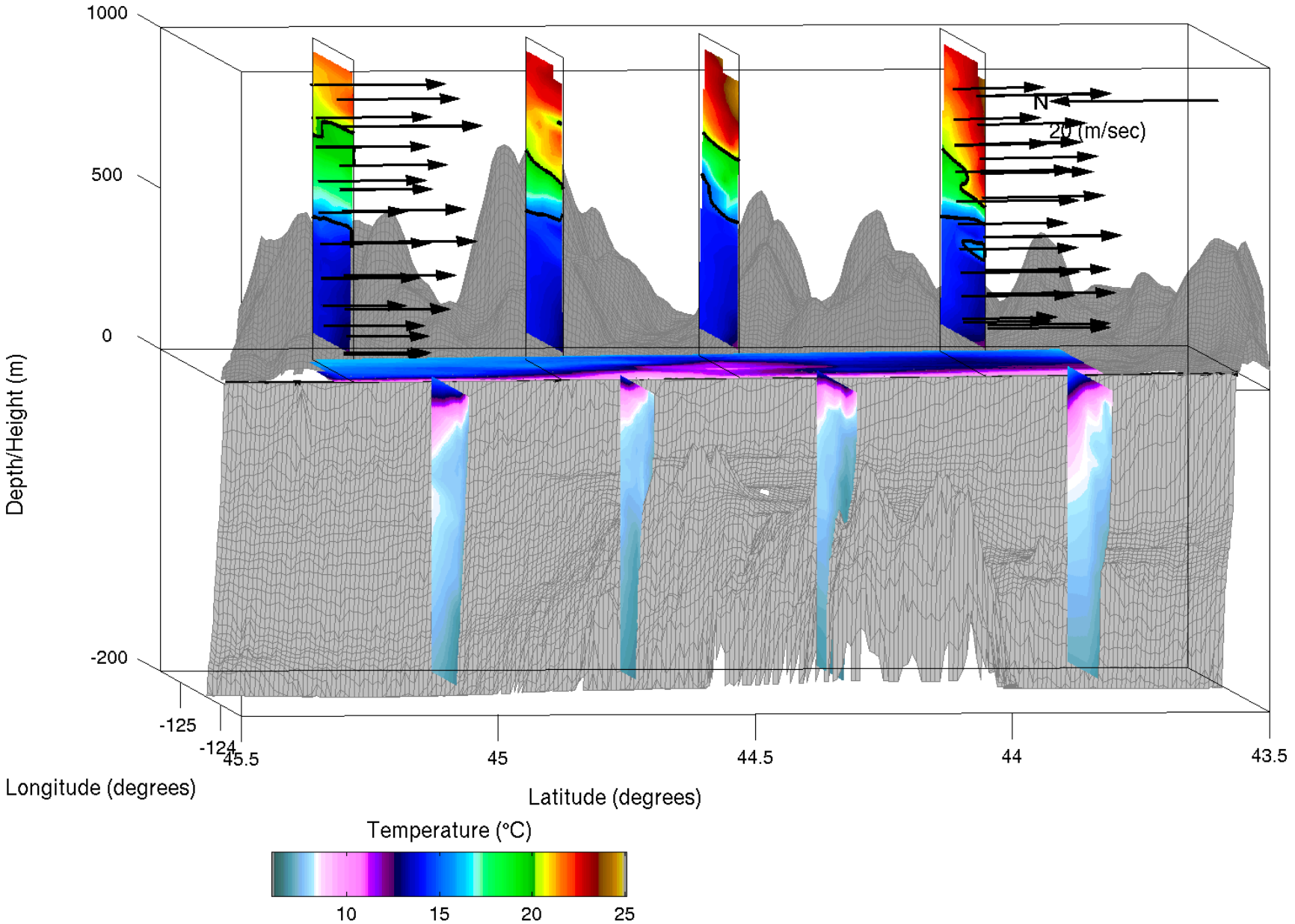
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Depth/Height (m)
N
20 (m/sec)
-125
-124
Longitude (degrees)
45.5
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43.5
Latitude (degrees)
Temperature (°C)
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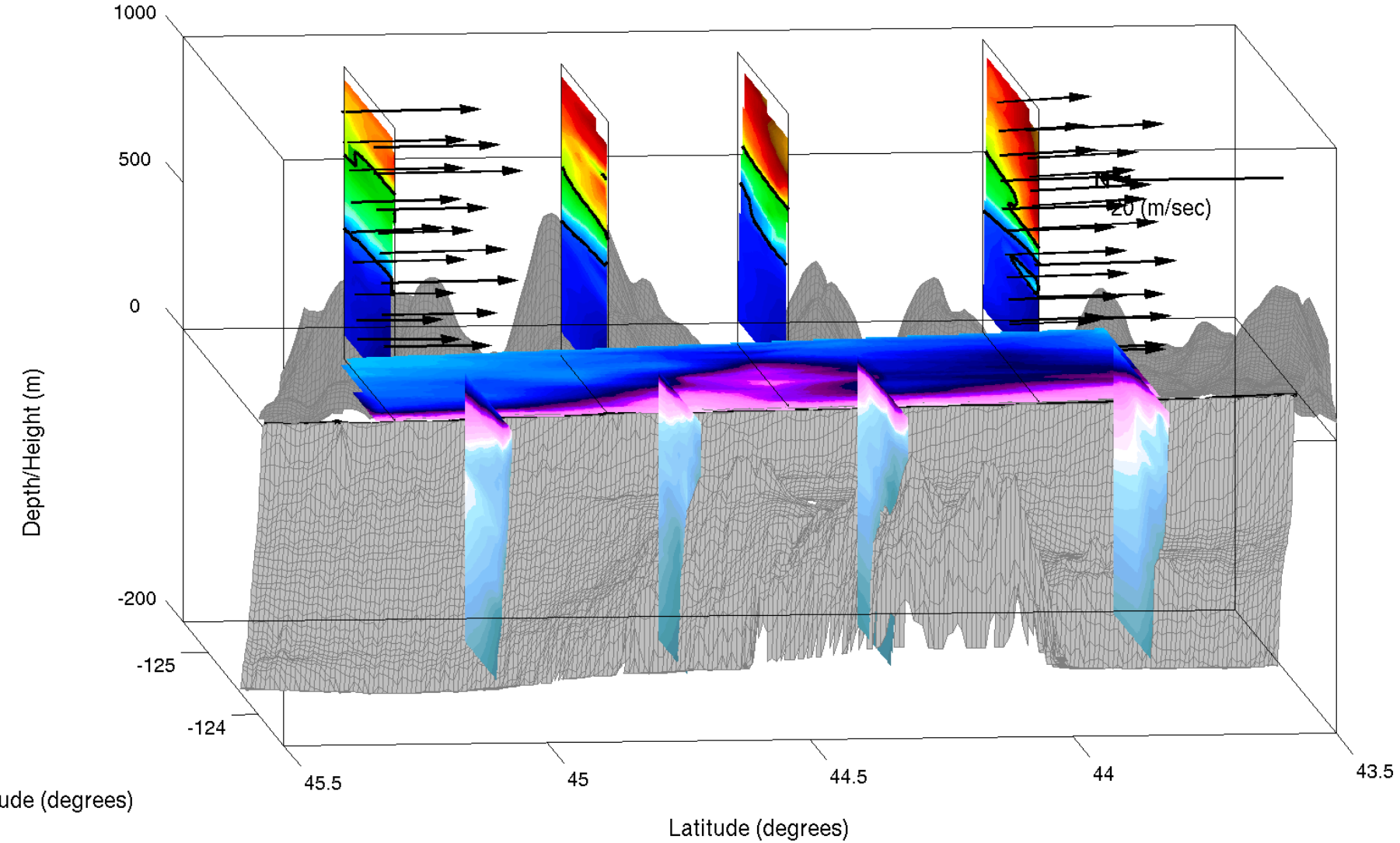
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500
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-200
Depth/Height (m)
20 (m/sec)
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43.5
ude (degrees)
Latitude (degrees)
Temperature (°C)
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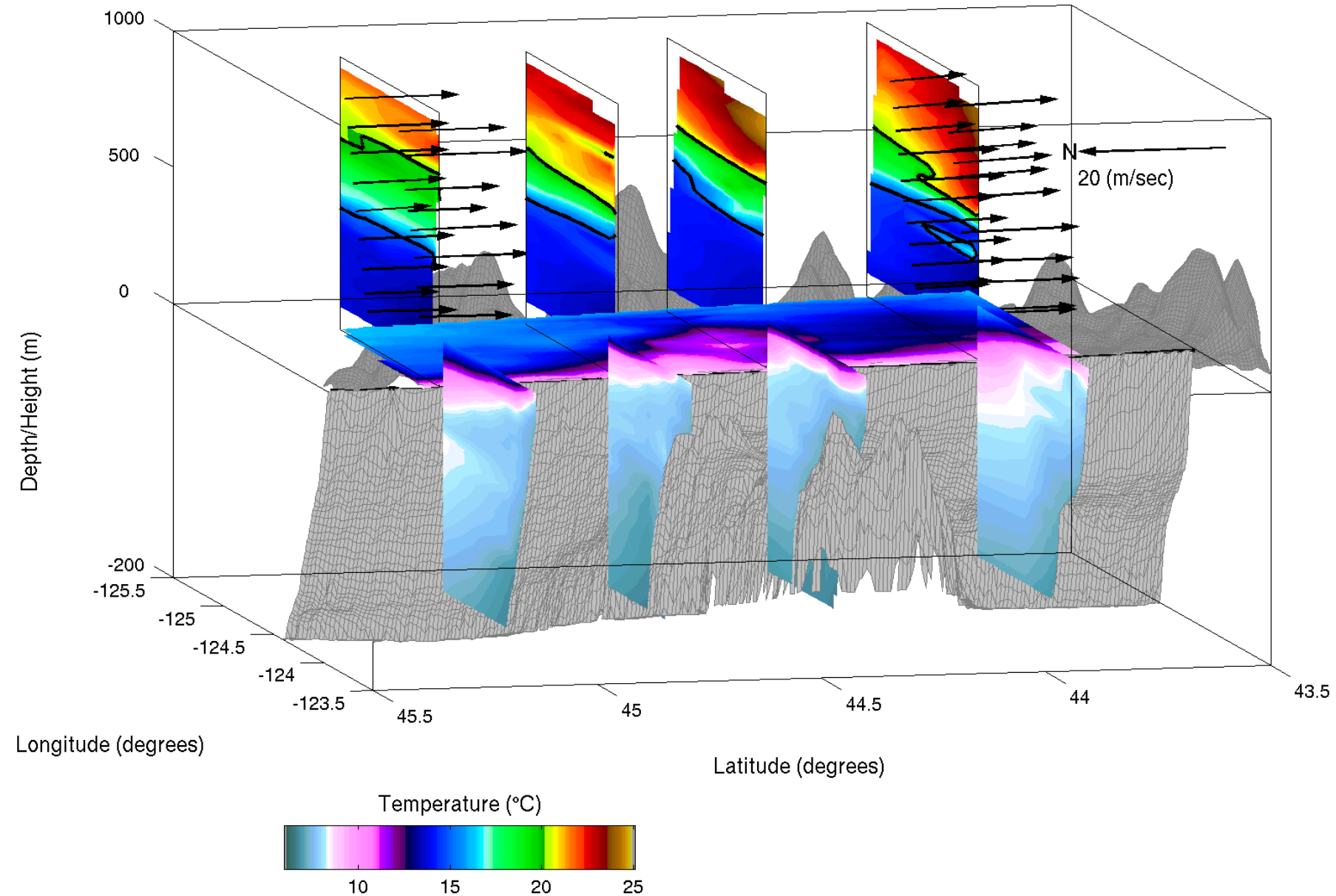
1000
500
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-200
Depth/Height (m)
N
20 (m/sec)
-125.5
-125
-124.5
-124
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Longitude (degrees)
45.5
45
44.5
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43.5
Latitude (degrees)
Temperature (°C)
10
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20
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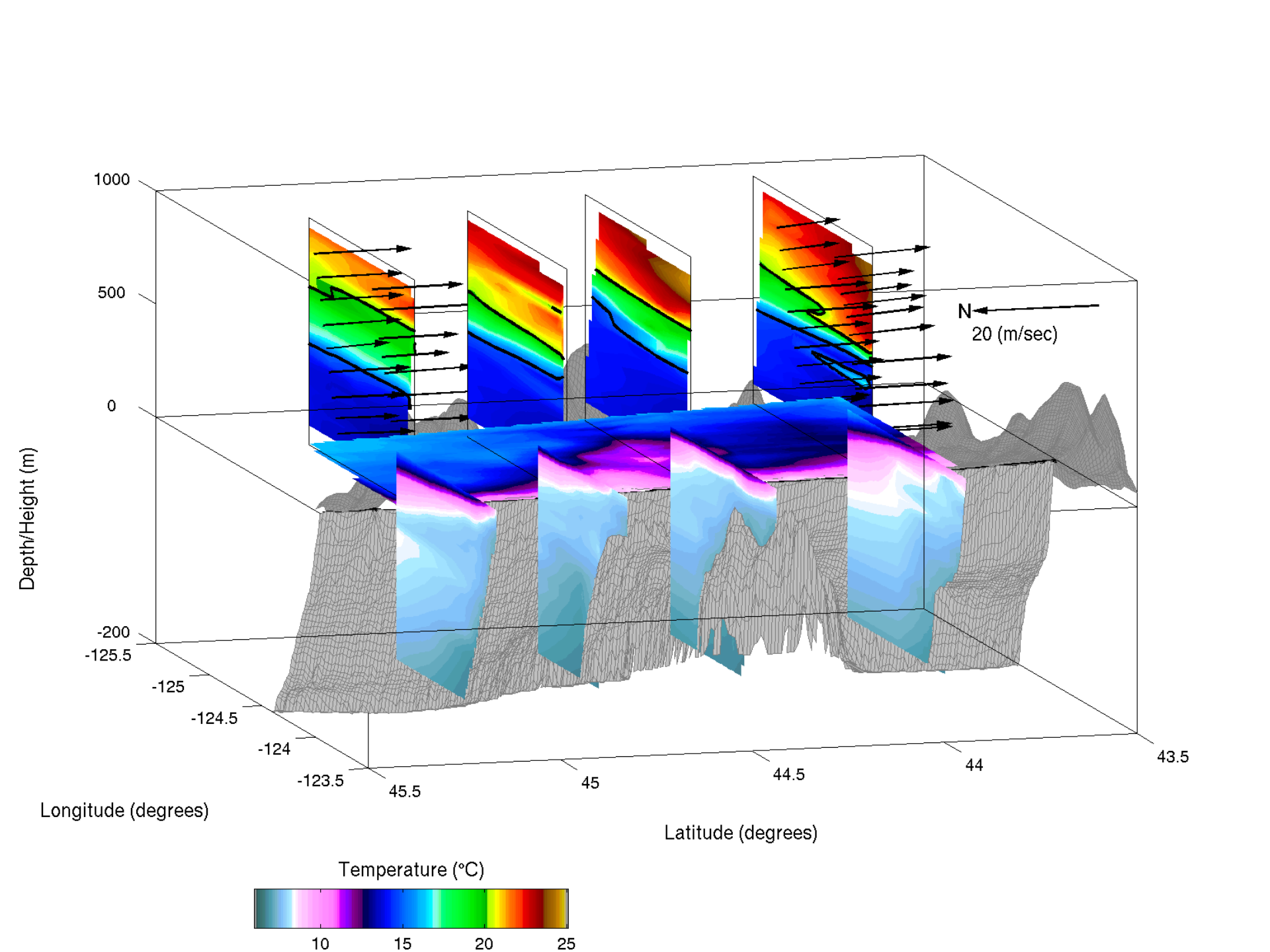
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Depth/Height (m)
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20 (m/sec)
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-125
-124.5
-124
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Longitude (degrees)
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44.5
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43.5
Latitude (degrees)
Temperature (°C)
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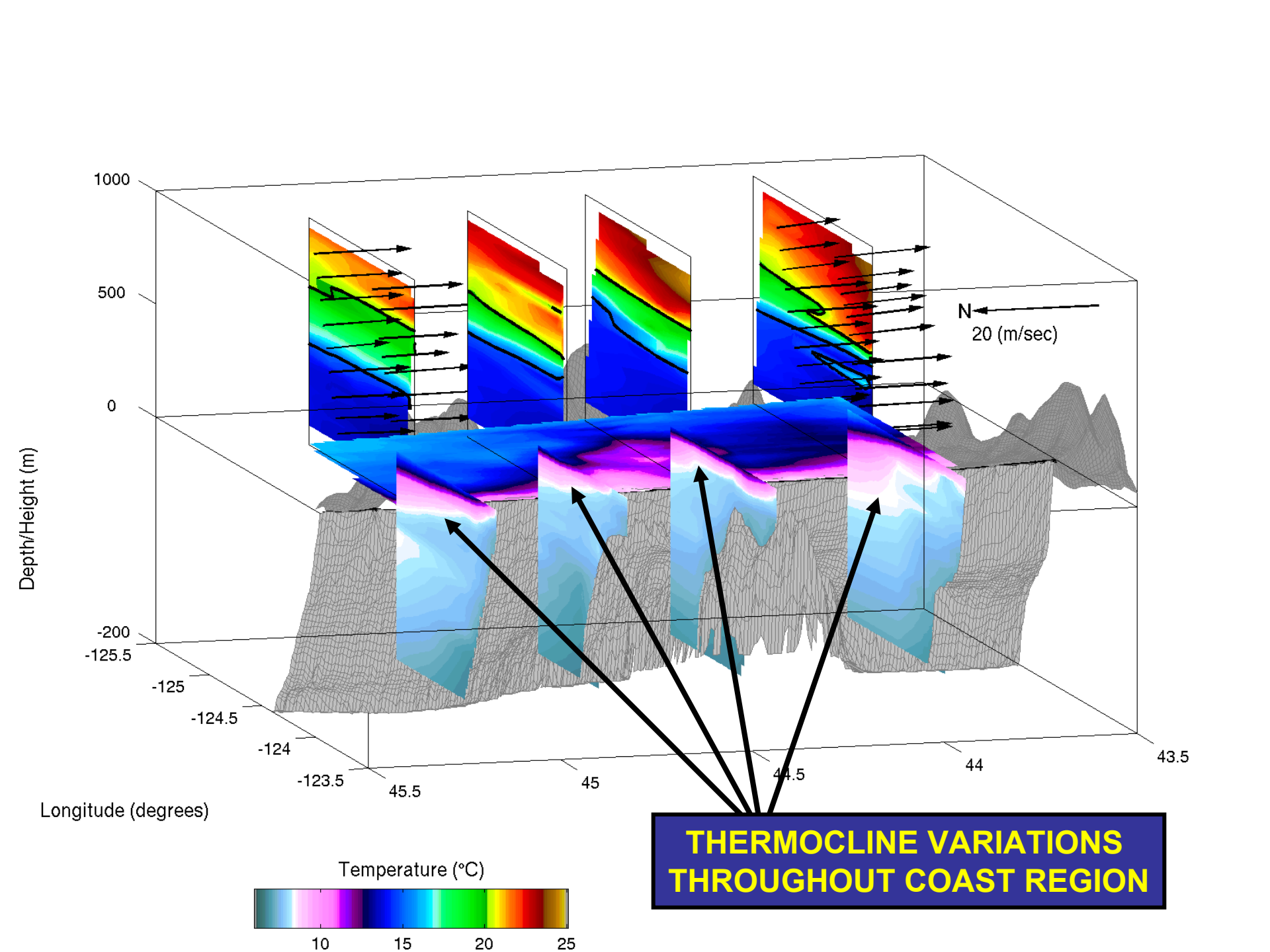
1000
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-200
Depth/Height (m)
-125.5
-125
-124.5
-124
-123.5
Longitude (degrees)
45.5
45
44.5
44
43.5
N
20 (m/sec)
Temperature (°C)
10
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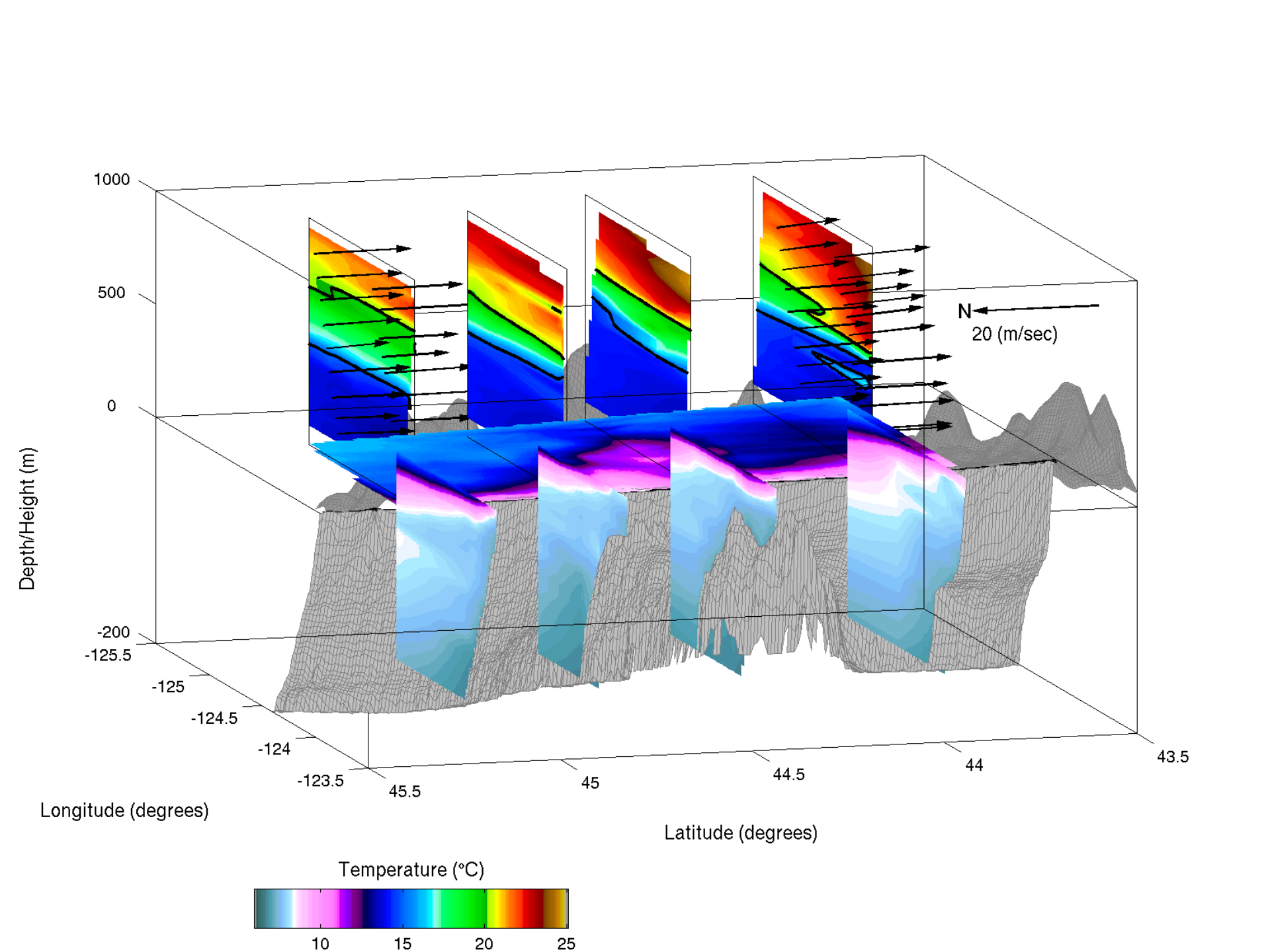
20
25
THERMOCLINE VARIATIONS
THROUGHOUT COAST REGION


1000
500
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Depth/Height (m)
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20 (m/sec)
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-125
-124.5
-124
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Longitude (degrees)
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Latitude (degrees)
Temperature (°C)
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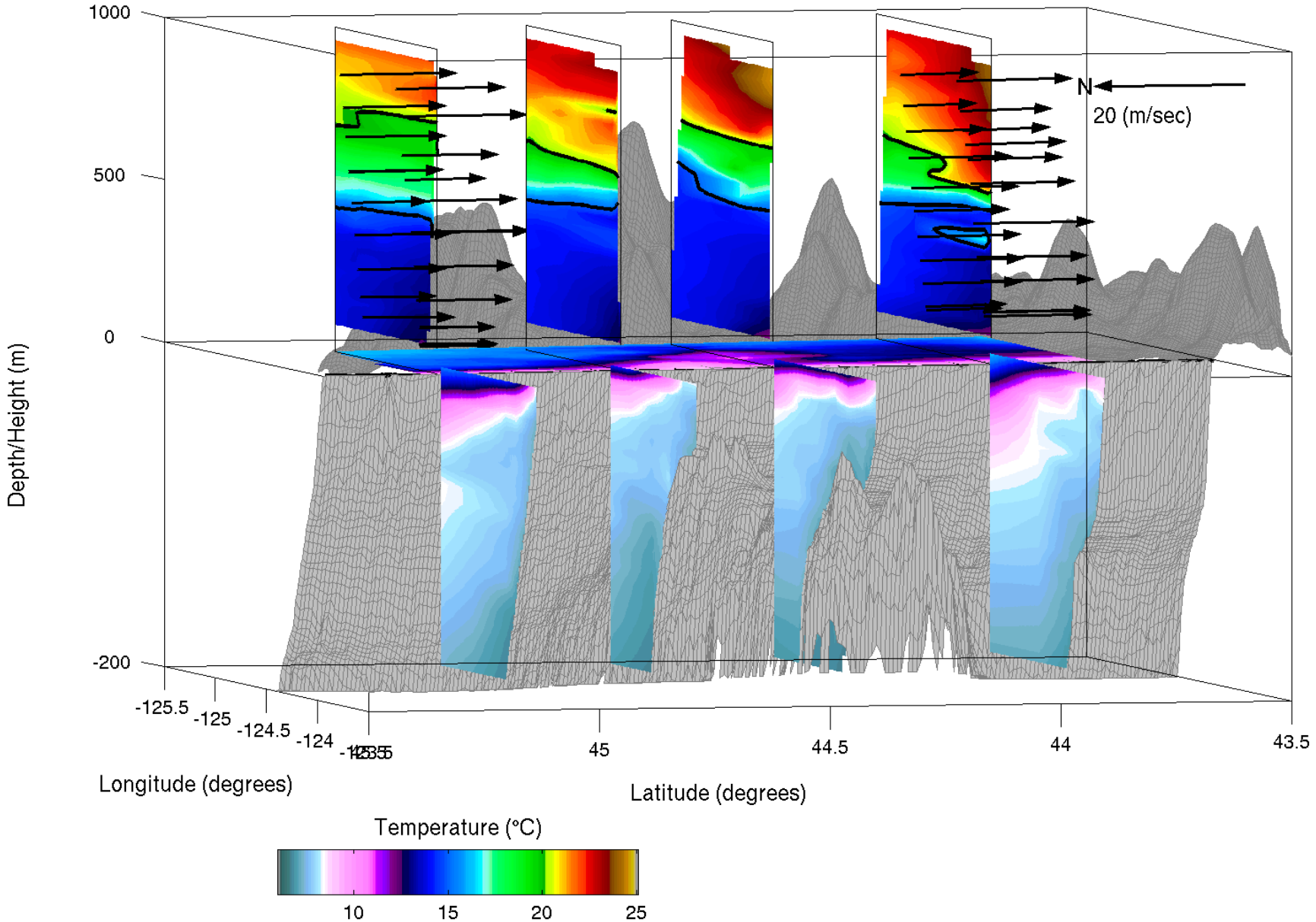
25


1000
500
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Depth/Height (m)
N
20 (m/sec)
-125.5
-125
-124.5
-124
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44.5
44
43.5
Longitude (degrees)
Latitude (degrees)
Temperature (°C)
10
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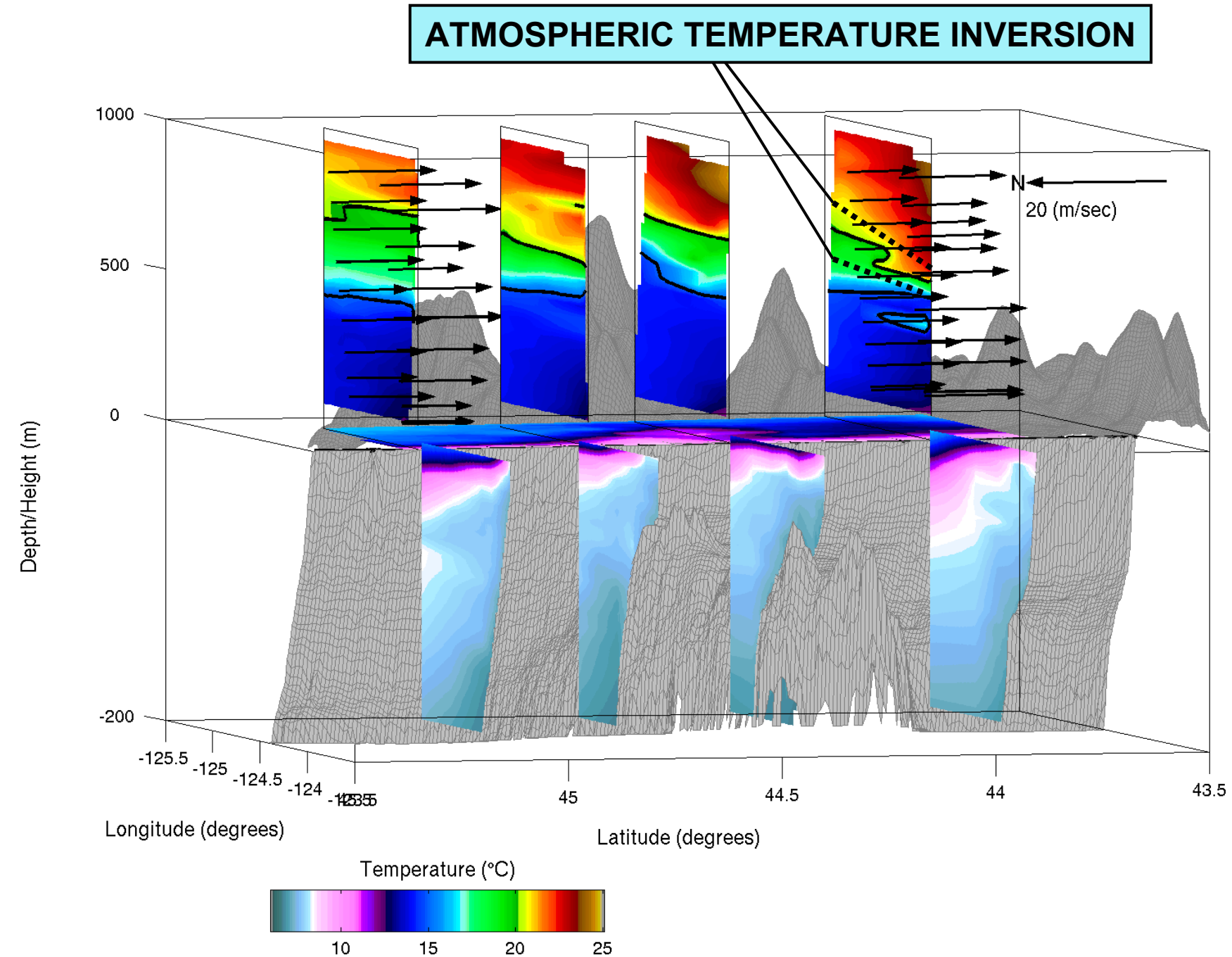
20
25


ATMOSPHERIC TEMPERATURE INVERSION
1000
500
0
-200
Depth/Height (m)
N
20 (m/sec)
-125.5
-125
-124.5
-124
45
44.5
44
43.5
Longitude (degrees)
Latitude (degrees)
Temperature (°C)
10
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20
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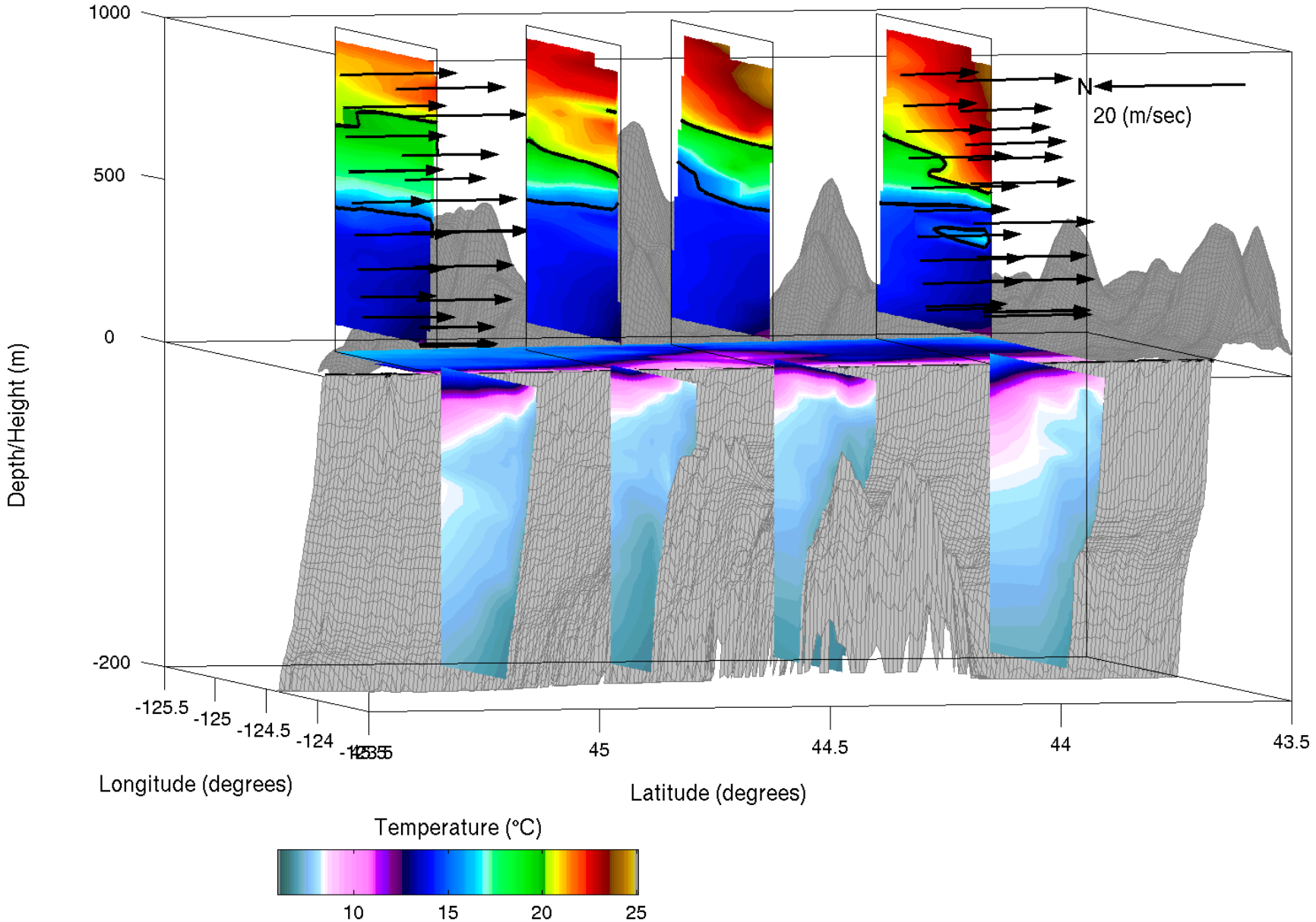
1000
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Depth/Height (m)
N
20 (m/sec)
-125.5
-125
-124.5
-124
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44.5
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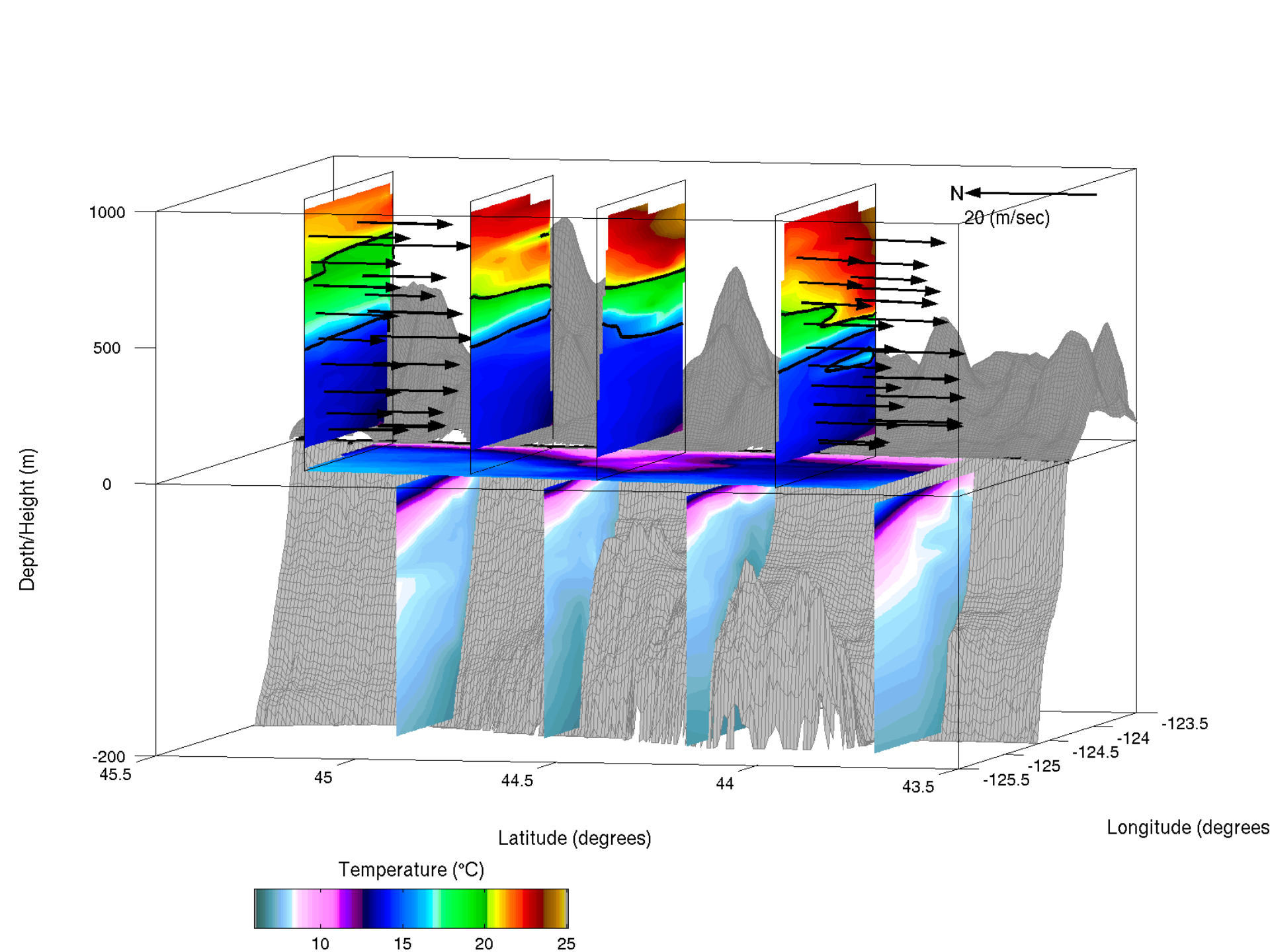
43.5
Longitude (degrees)
Latitude (degrees)
Temperature (°C)
10
15
20
25


N
20 (m/sec)
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Depth/Height (m)
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44.5
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-125.5
-125
-124.5
-124
-123.5
Longitude (degrees
Temperature (°C)
10
15
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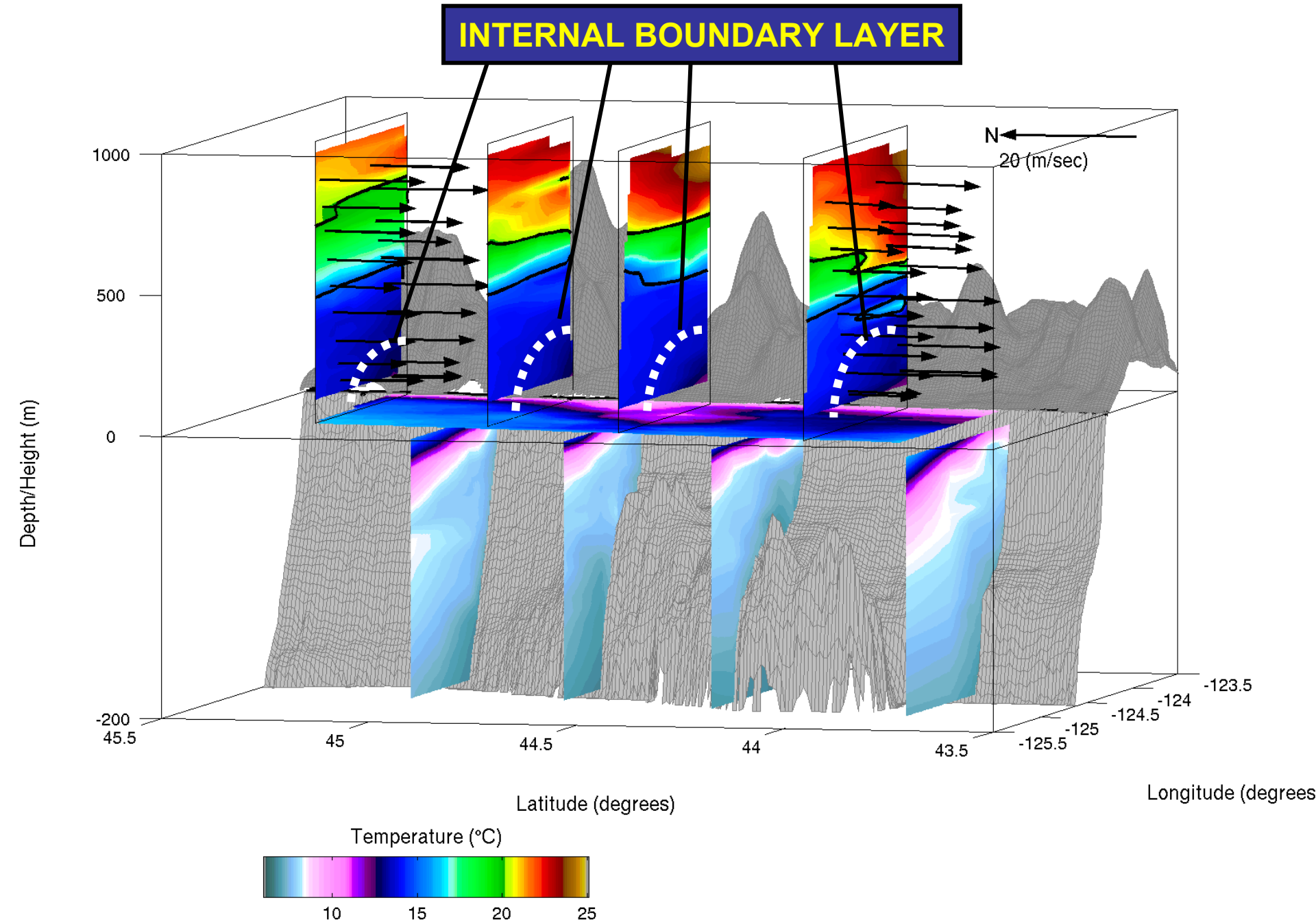
25


INTERNAL BOUNDARY LAYER
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-200
Depth/Height (m)
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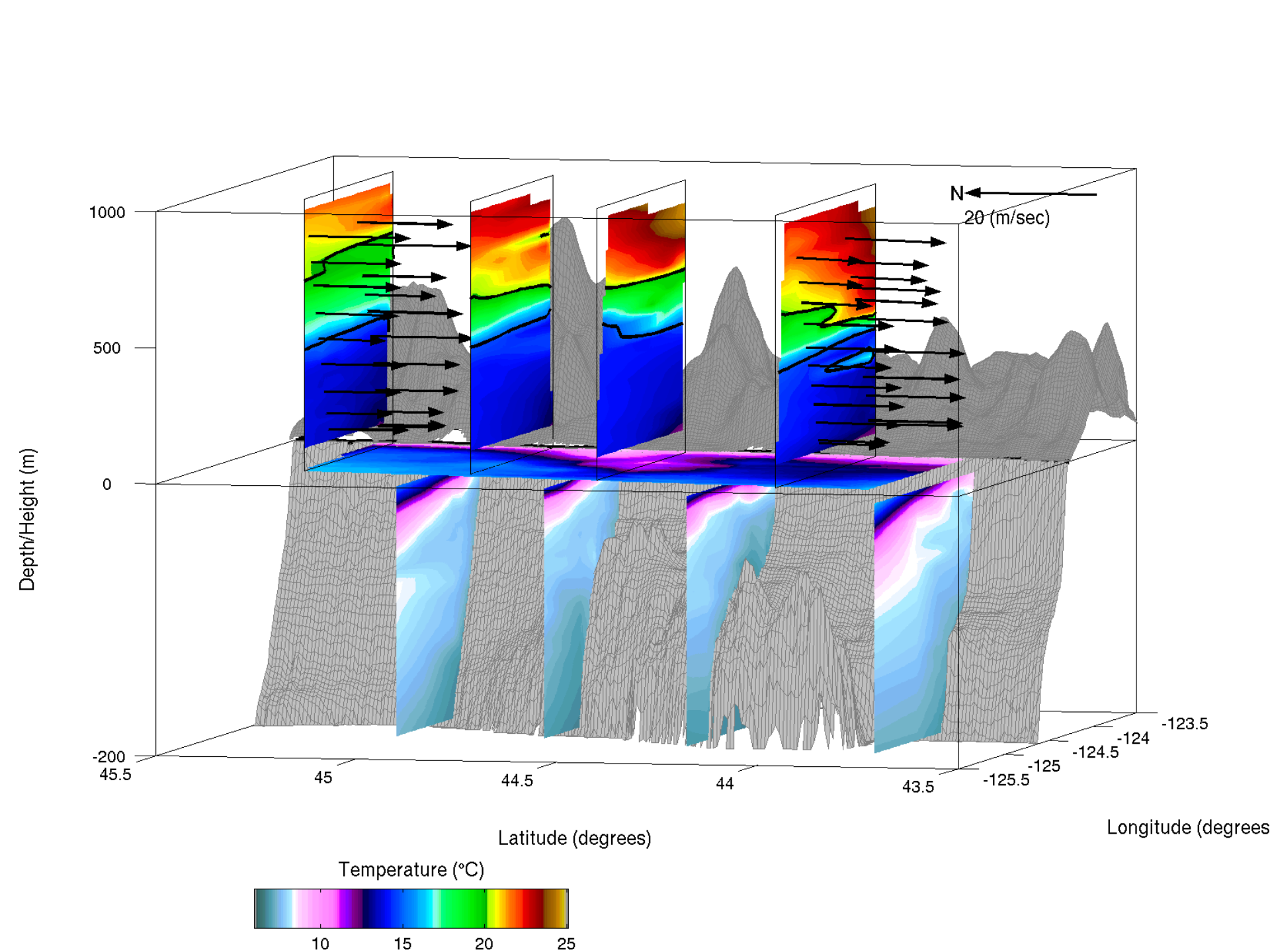
44.5
44
43.5
-125.5
-125
-124.5
-124
-123.5
Latitude (degrees)
Longitude (degrees
Temperature (°C)
10
15
20
25


N
20 (m/sec)
1000
500
0
-200
Depth/Height (m)
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45
44.5
44
43.5
Latitude (degrees)
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-124.5
-124
-123.5
Longitude (degrees
Temperature (°C)
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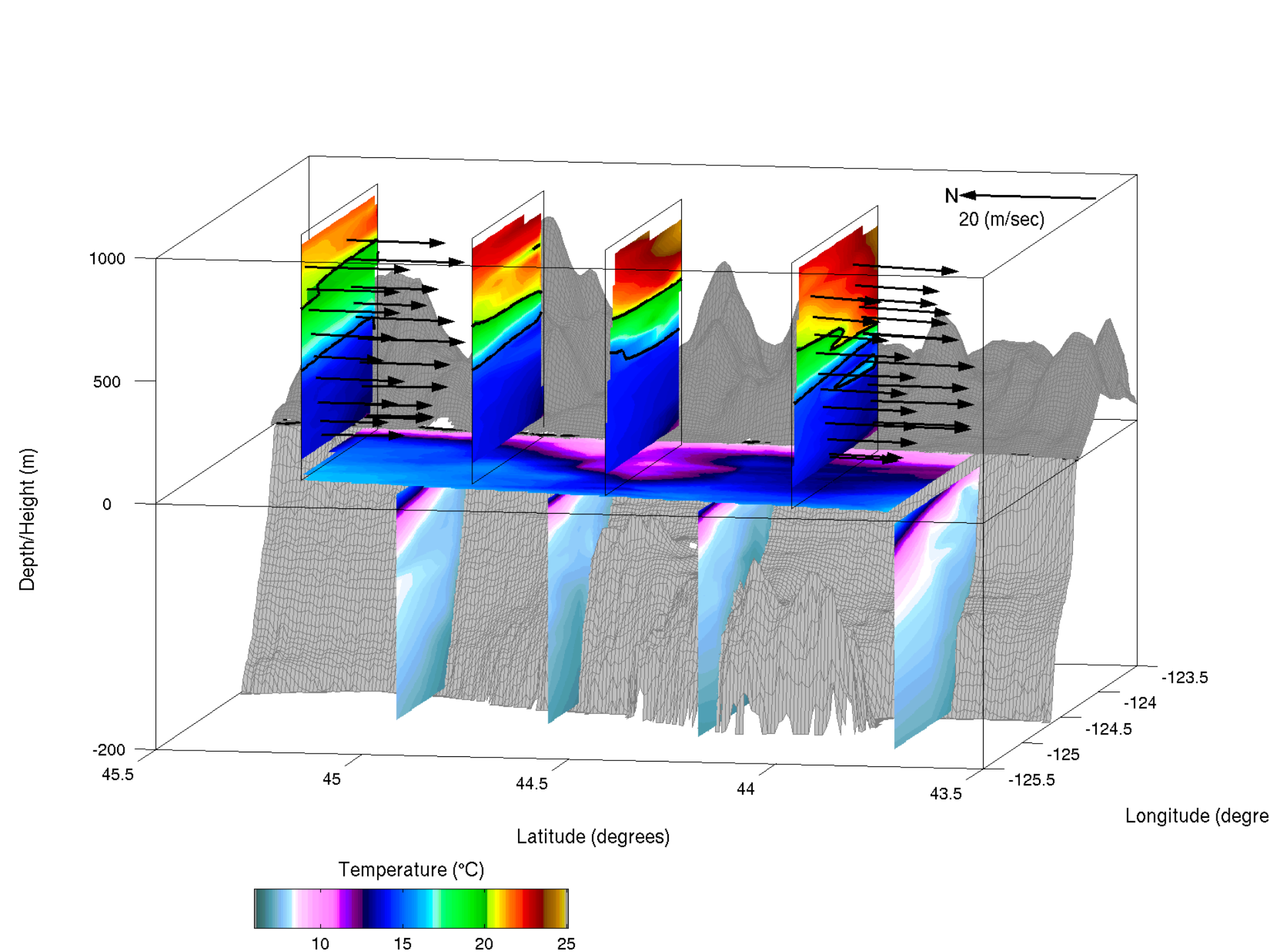
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-200
Depth/Height (m)
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Longitude (degre
Temperature (°C)
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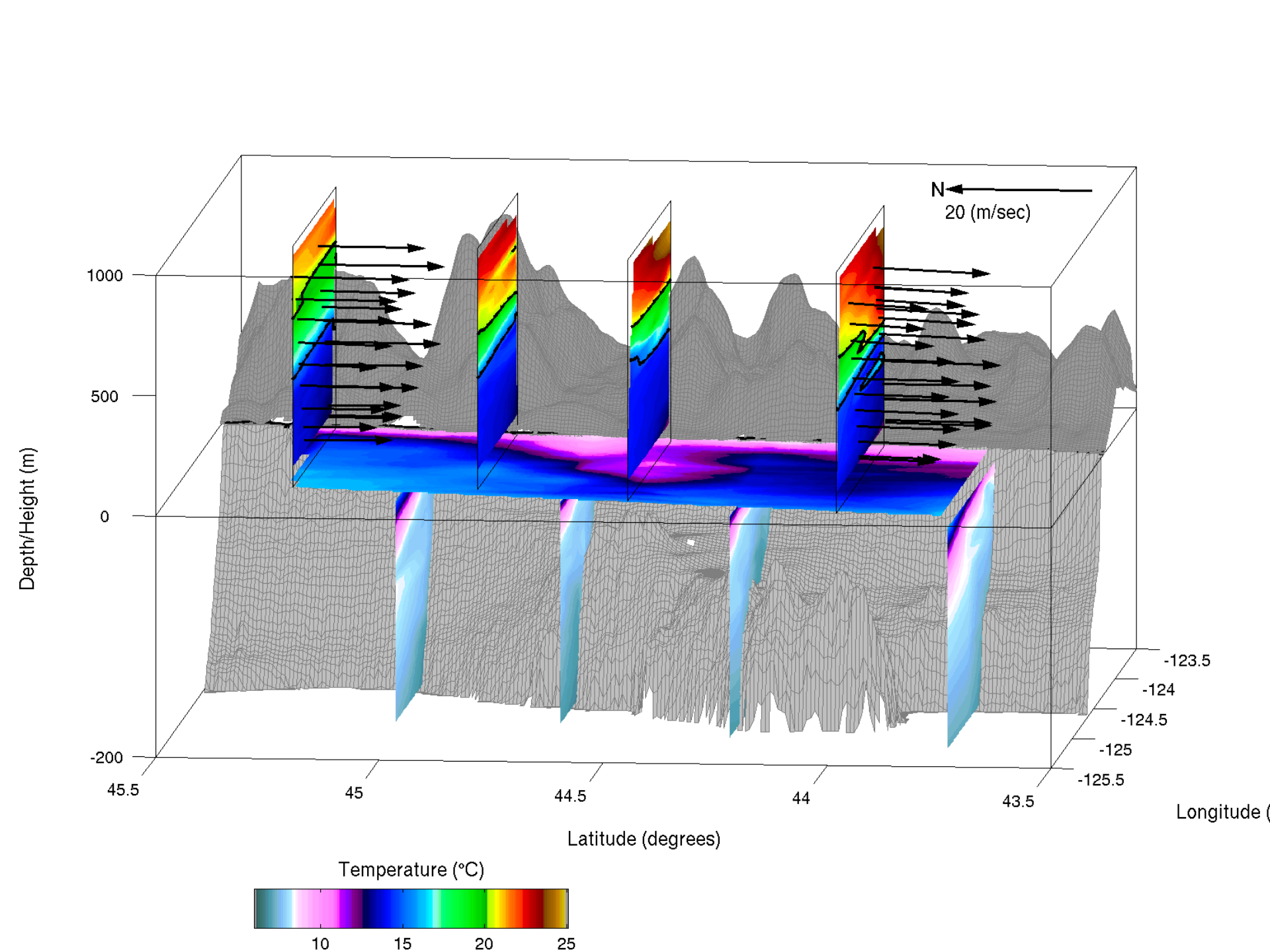
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20 (m/sec)
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Depth/Height (m)
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43.5
Latitude (degrees)
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-125.5
Longitude (
Temperature (°C)
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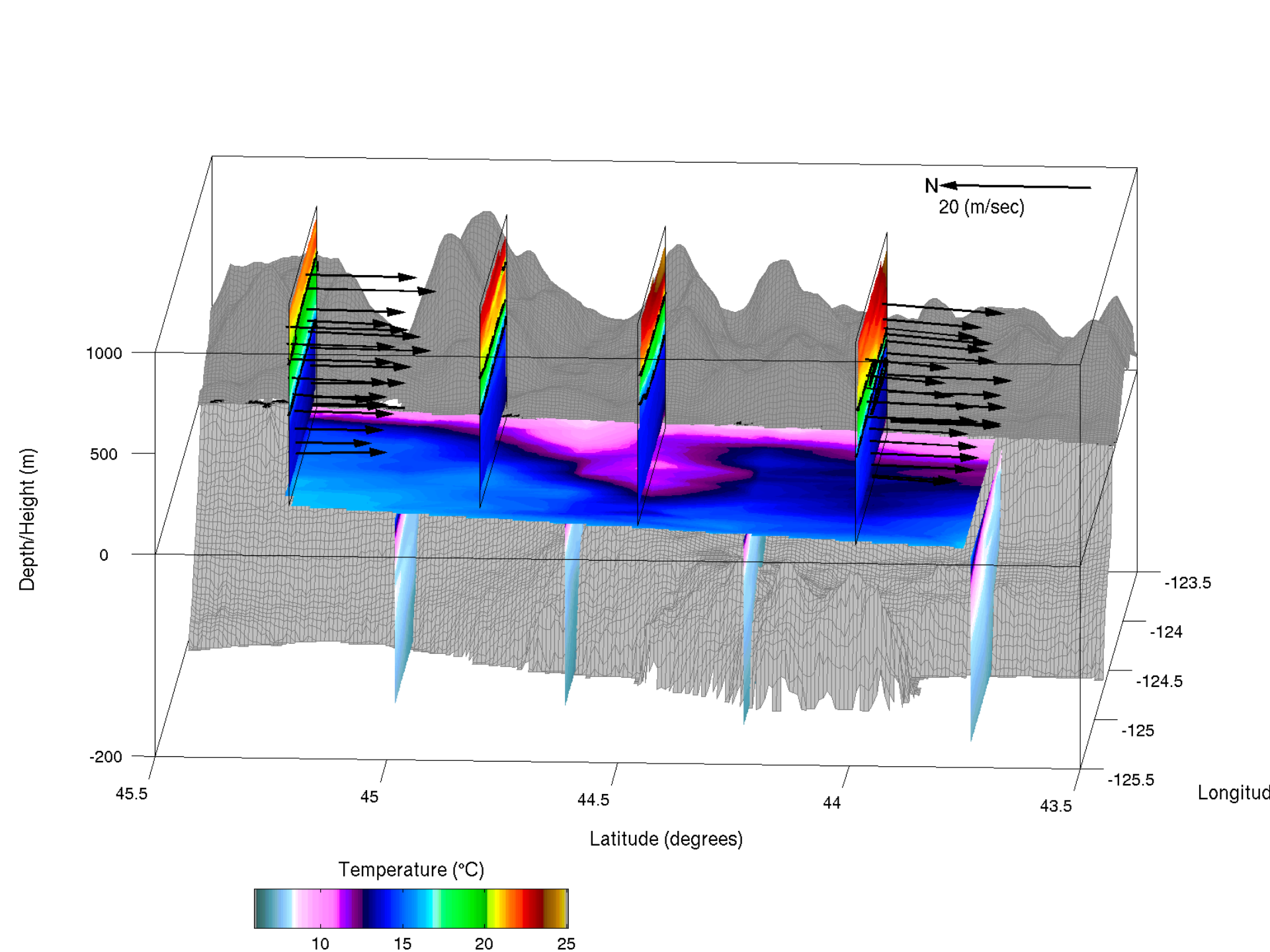
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20 (m/sec)
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-200
Depth/Height (m)
45.5
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Latitude (degrees)
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-124.5
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Longitud
Temperature (°C)
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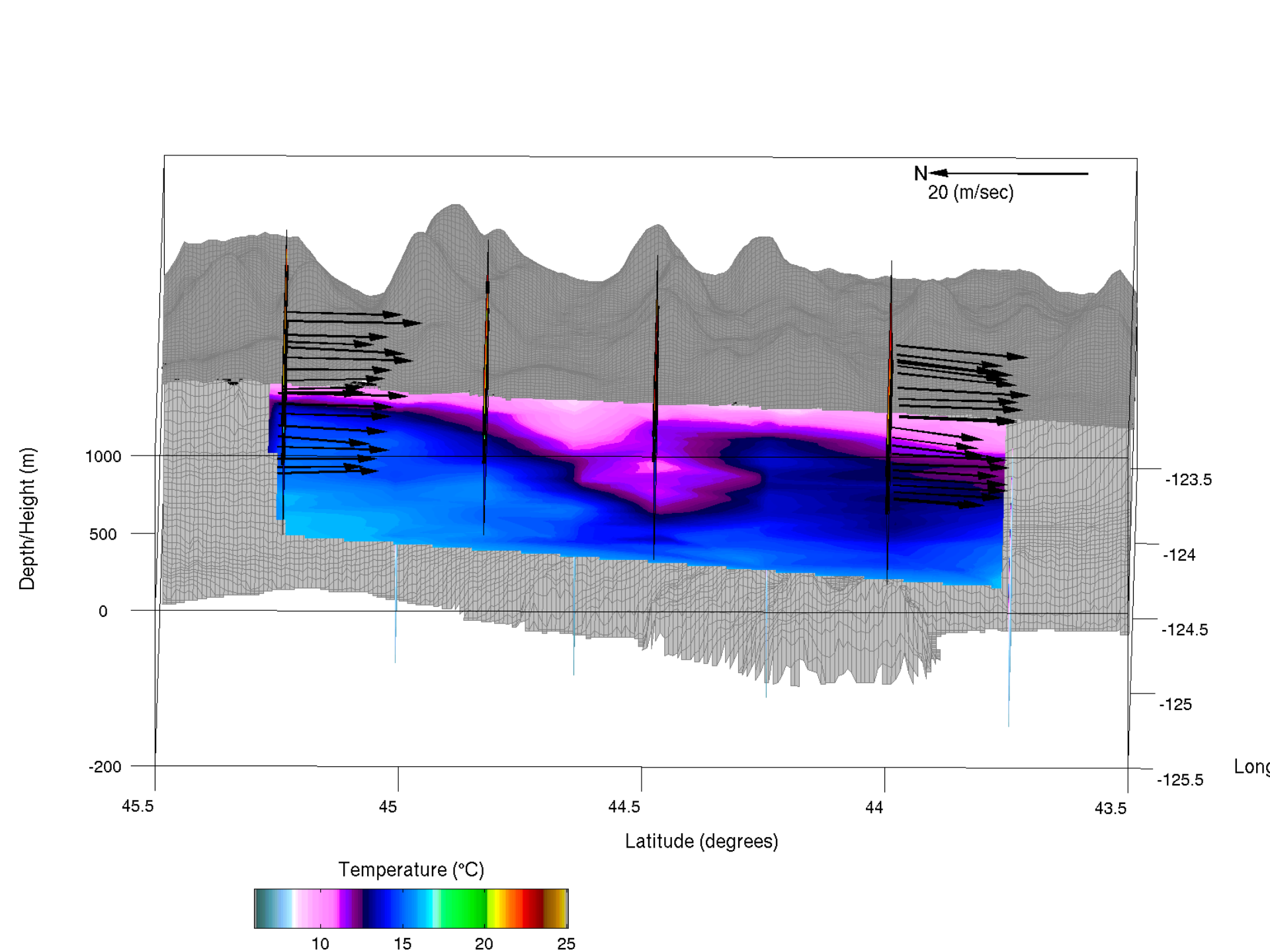
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20 (m/sec)
Depth/Height (m)
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Latitude (degrees)
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-124.5
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-125.5
Long
Temperature (°C)
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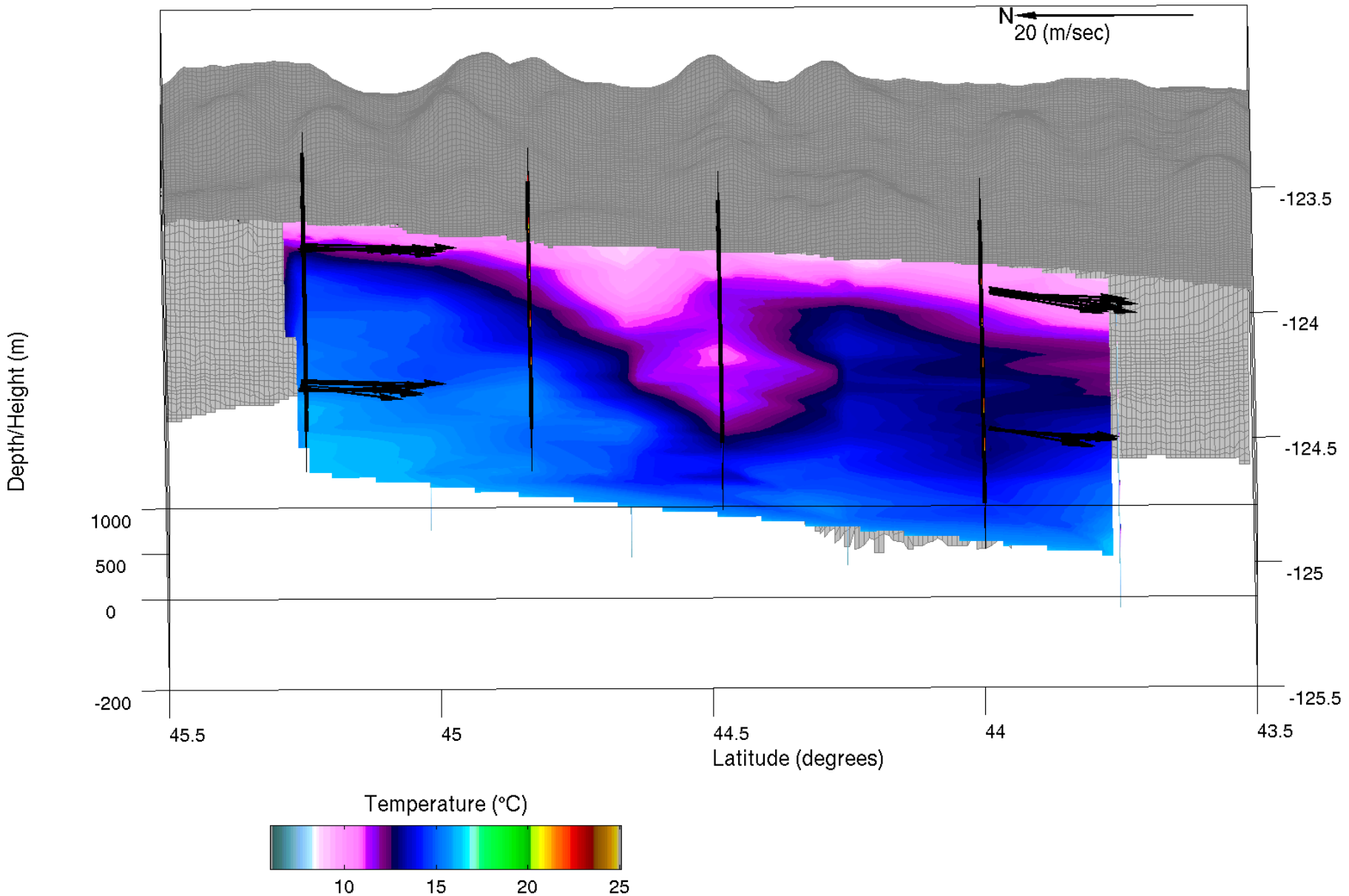
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20 (m/sec)
Depth/Height (m)
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-123.5
-124
-124.5
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-125.5
45.5
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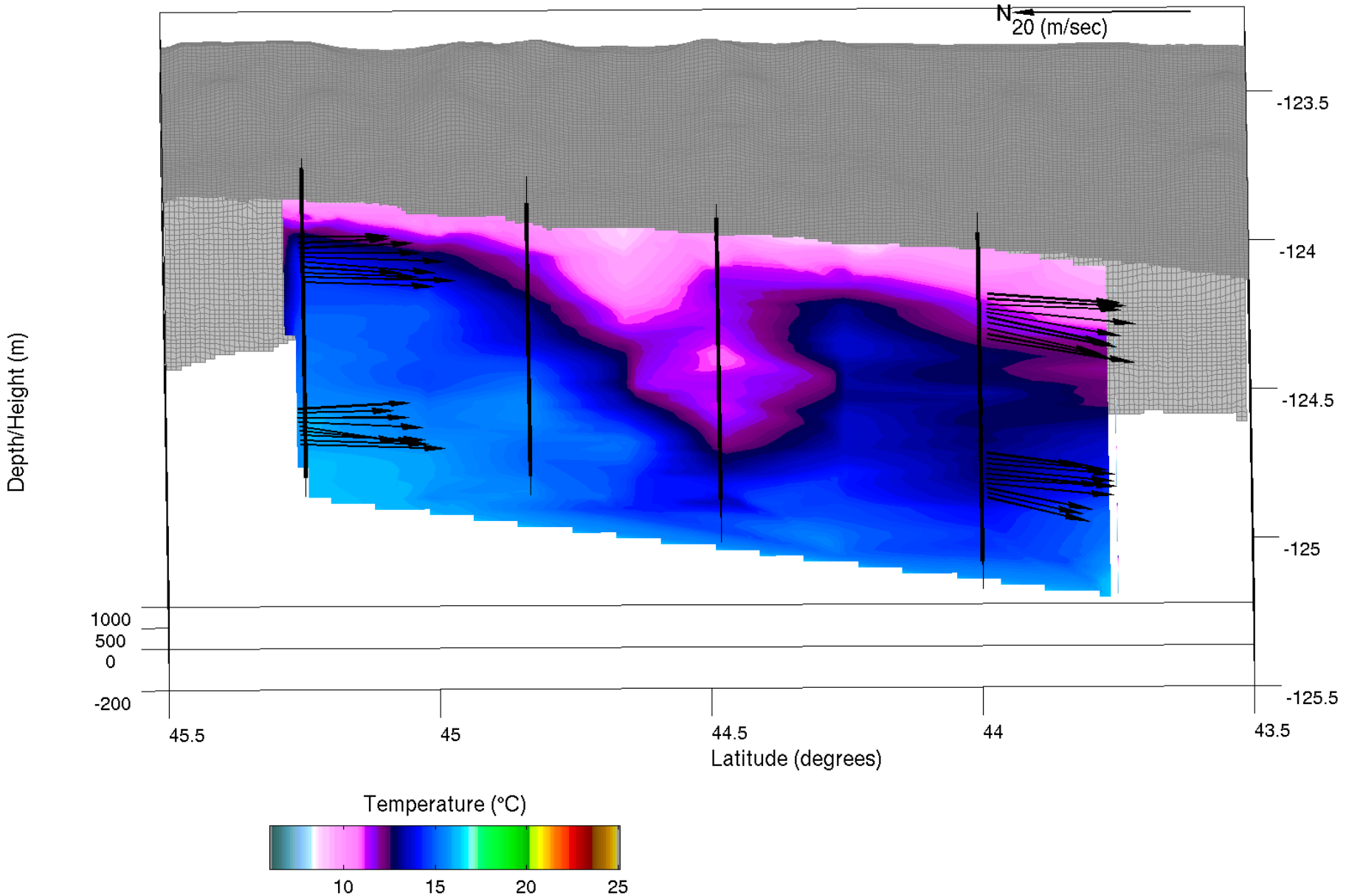
44.5
44
43.5
Latitude (degrees)
Temperature (°C)
10
15
20
25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20 (m/sec)
-123.5
-124
-124.5
-125
-125.5
Depth/Height (m)
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45.5
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44.5
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43.5
Latitude (degrees)
Temperature (°C)
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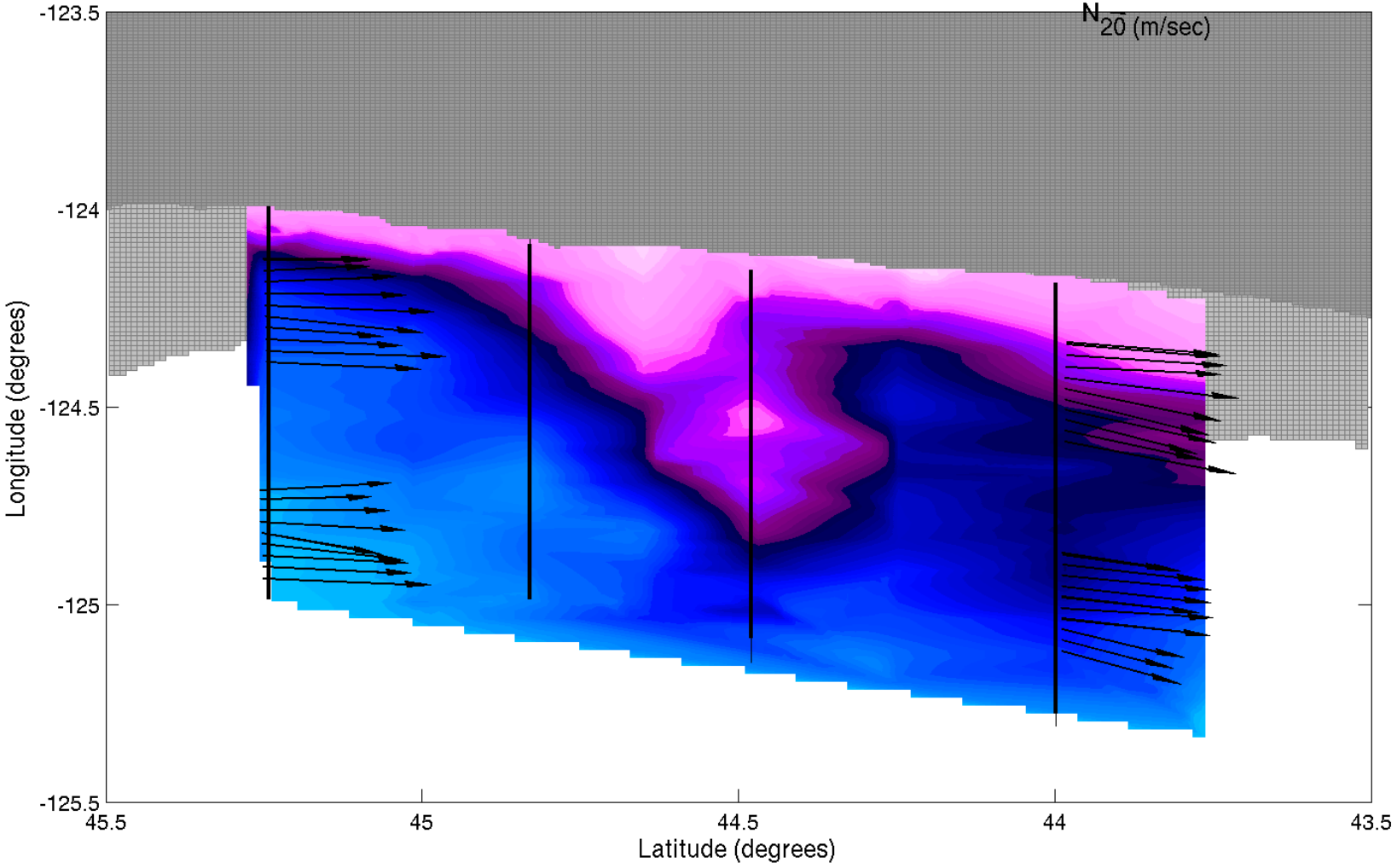
25


N_{20} (m/sec)
-123.5
-124
-124.5
-125
-125.5
Longitude (degrees)
45.5
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44.5
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43.5
Latitude (degrees)
Temperature (°C)
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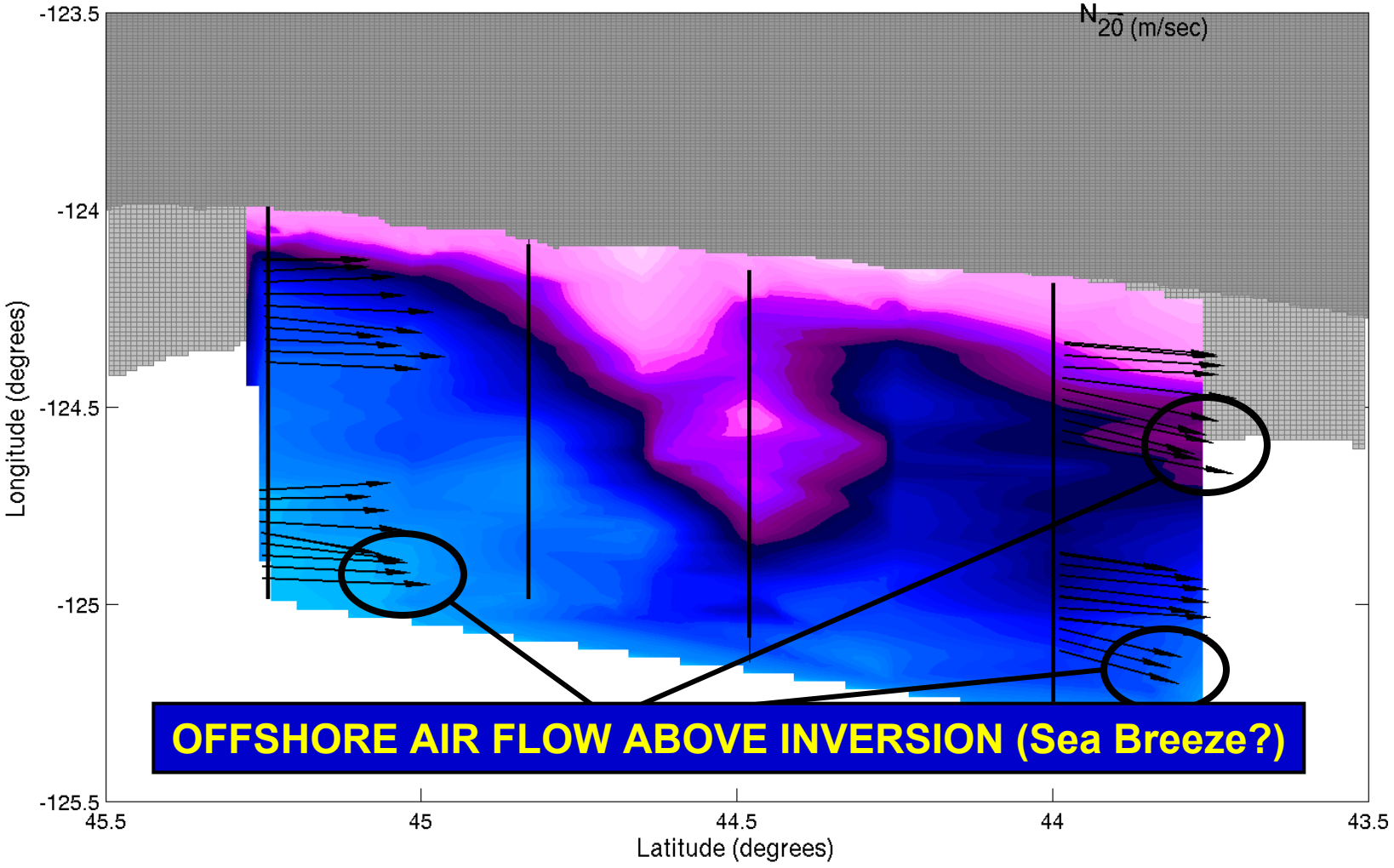
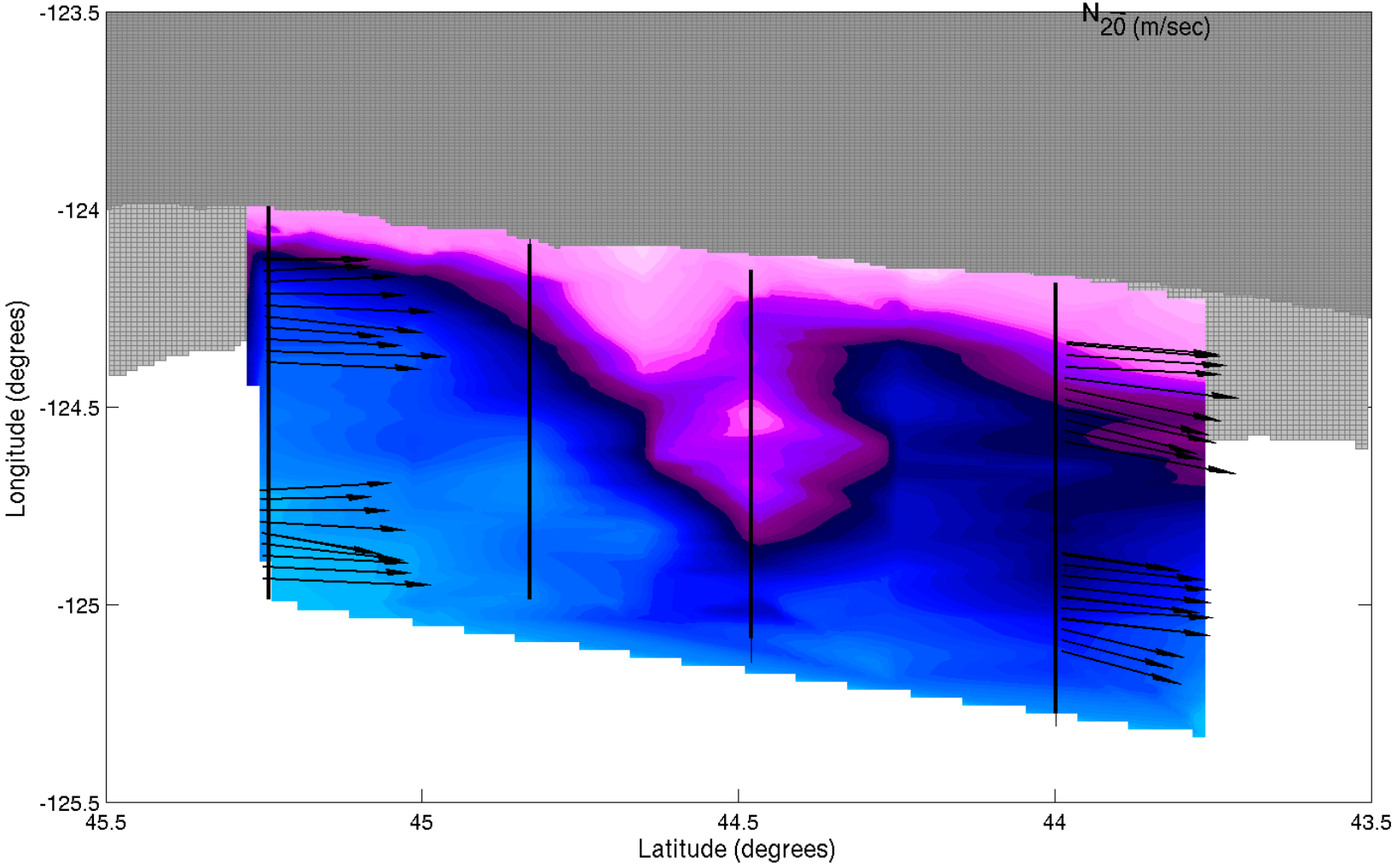
25


N_{20} (m/sec)
-123.5
-124
-124.5
-125
-125.5
Longitude (degrees)
45.5
45
44.5
44
43.5
Latitude (degrees)
OFFSHORE AIR FLOW ABOVE INVERSION (Sea Breeze?)
Temperature (°C)
10
15
20
25


N_{20} (m/sec)
-123.5
-124
-124.5
-125
-125.5
Longitude (degrees)
45.5
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43.5
Latitude (degrees)
Temperature (°C)
10
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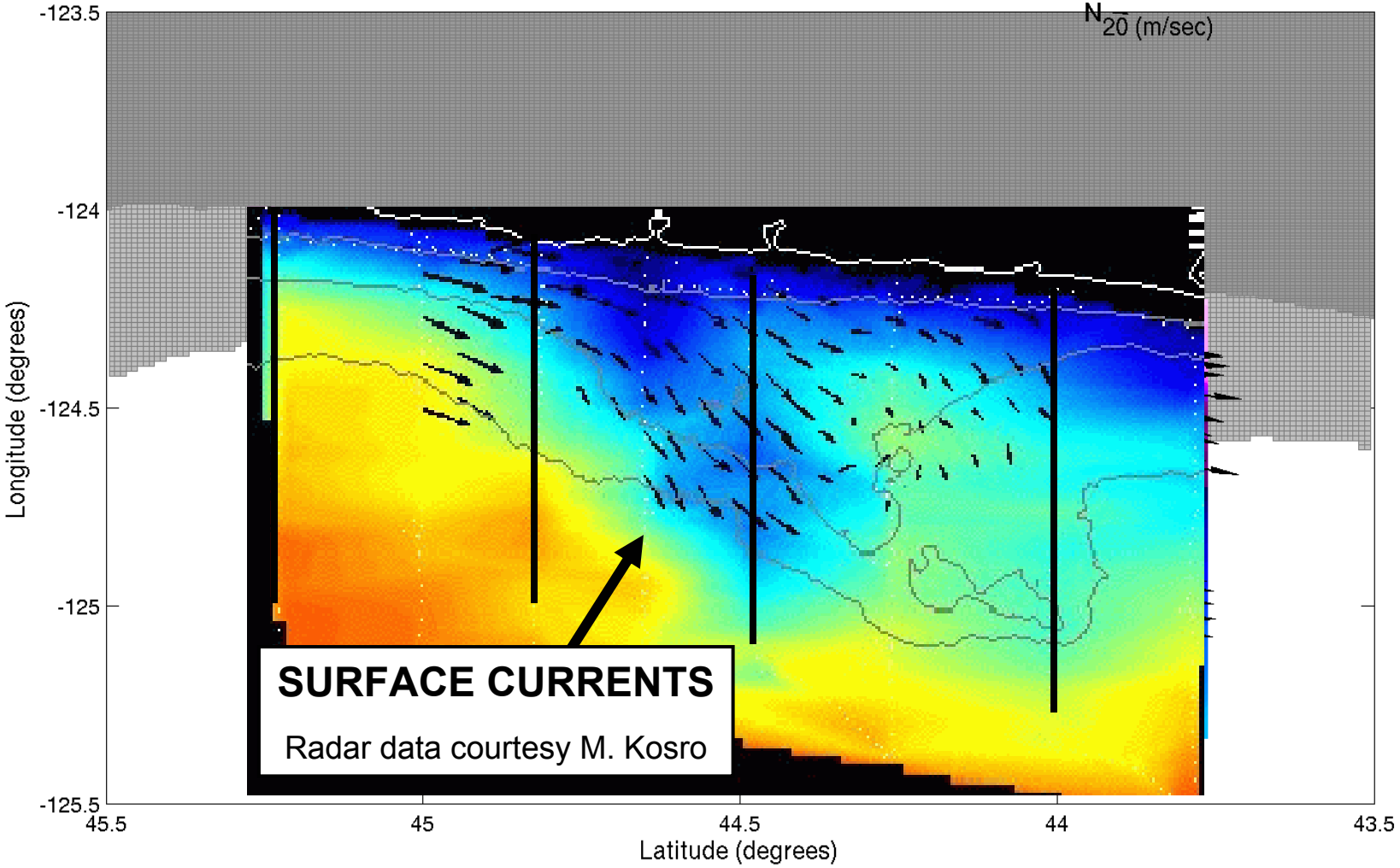
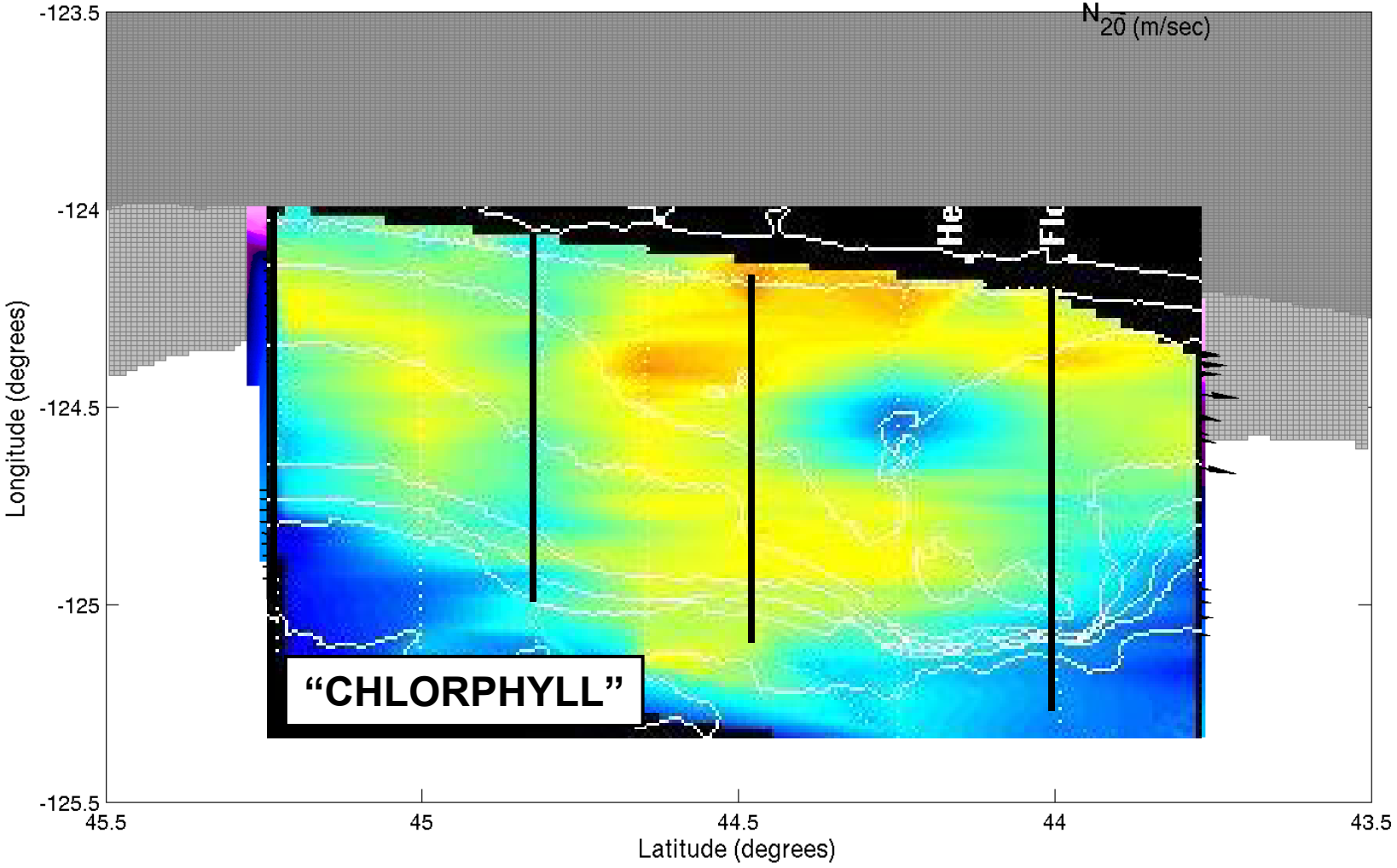
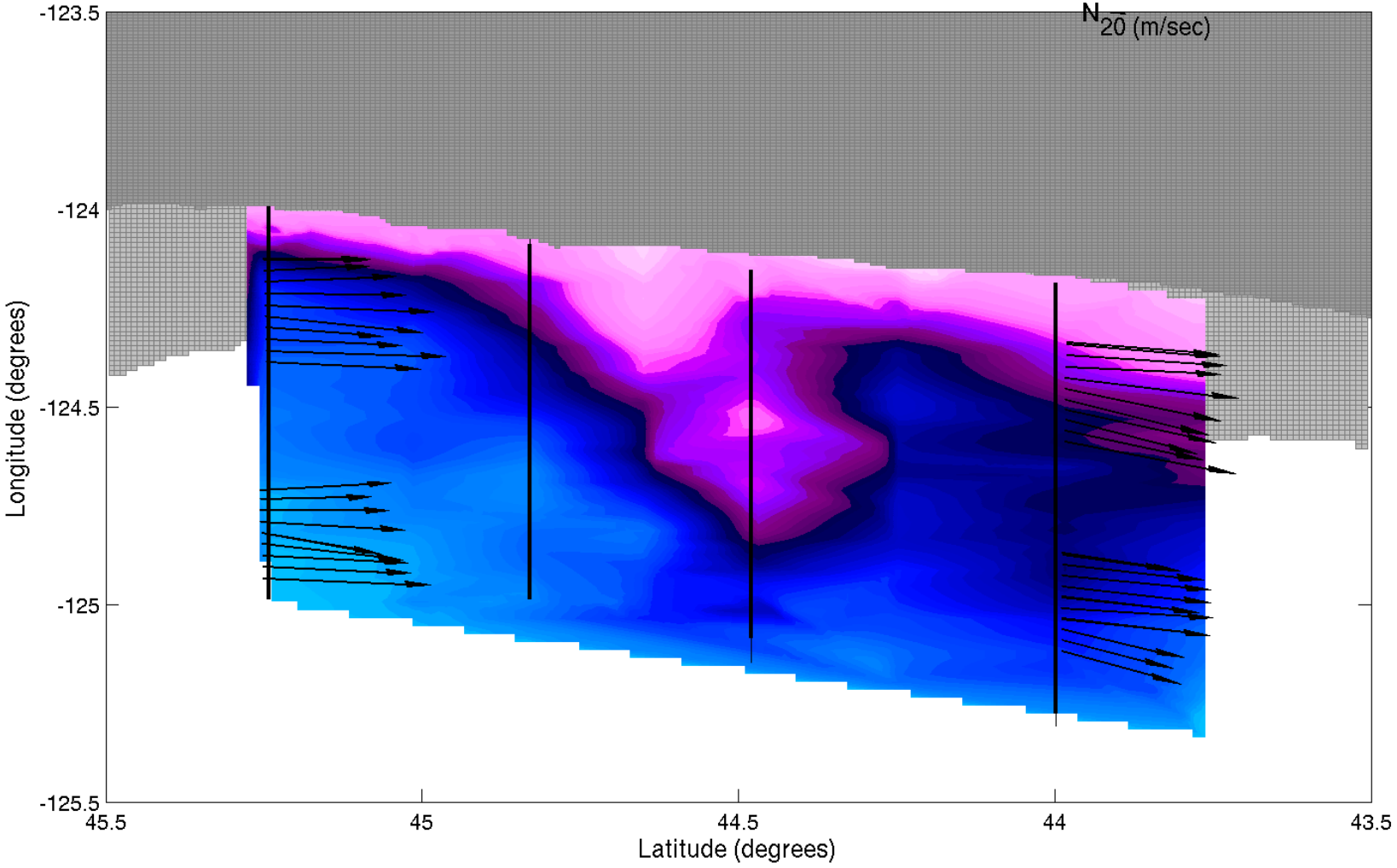
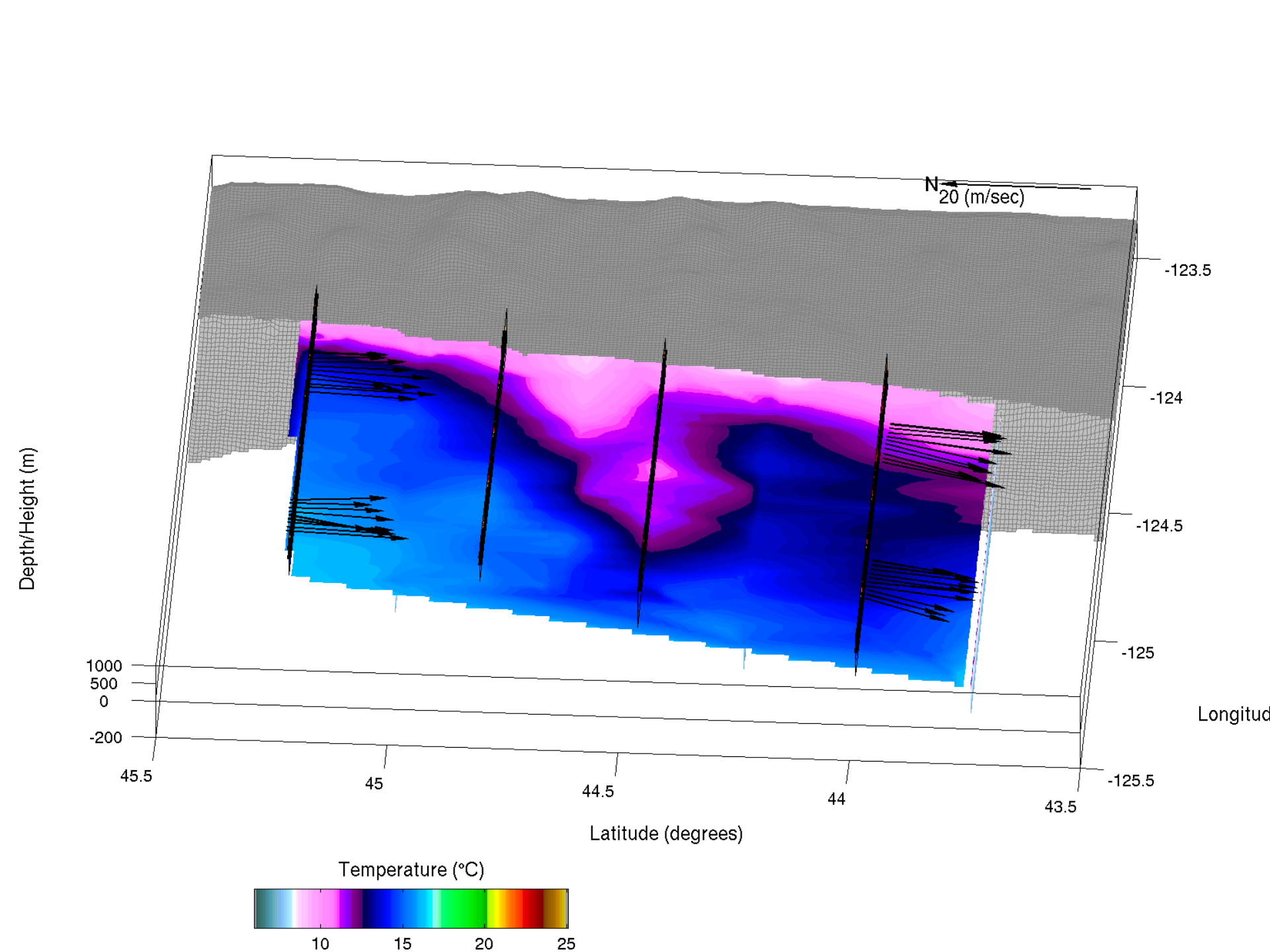

N20 (m/sec)
-123.5
-124
-124.5
-125
-125.5
Longitude (degrees)
45.5
45
44.5
44
43.5
Latitude (degrees)
SURFACE CURRENTS
Radar data courtesy M. Kosro
Temperature (°C)
10
12
14
16
18


-123.5
-124
-124.5
-125
-125.5
Longitude (degrees)
45.5
45
44.5
44
43.5
Latitude (degrees)
N20 (m/sec)
"CHLORPHYLL"
Chlorophyll (relative scale)


N_{20} (m/sec)
-123.5
-124
-124.5
-125
-125.5
Longitude (degrees)
45.5
45
44.5
44
43.5
Latitude (degrees)
Temperature (°C)
10
15
20
25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-124
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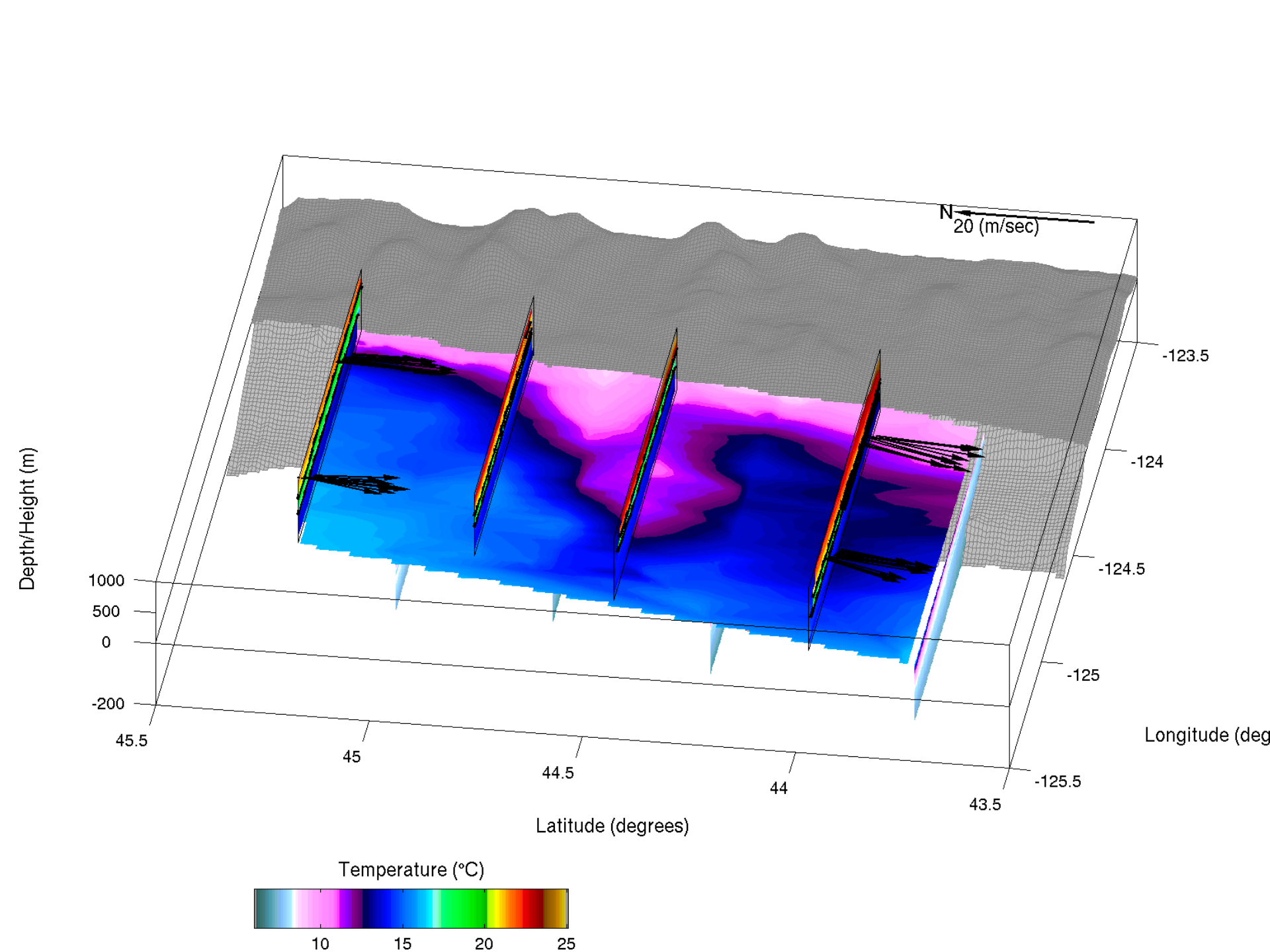
-125
-125.5
Longitud
Temperature (°C)
10
15
20
25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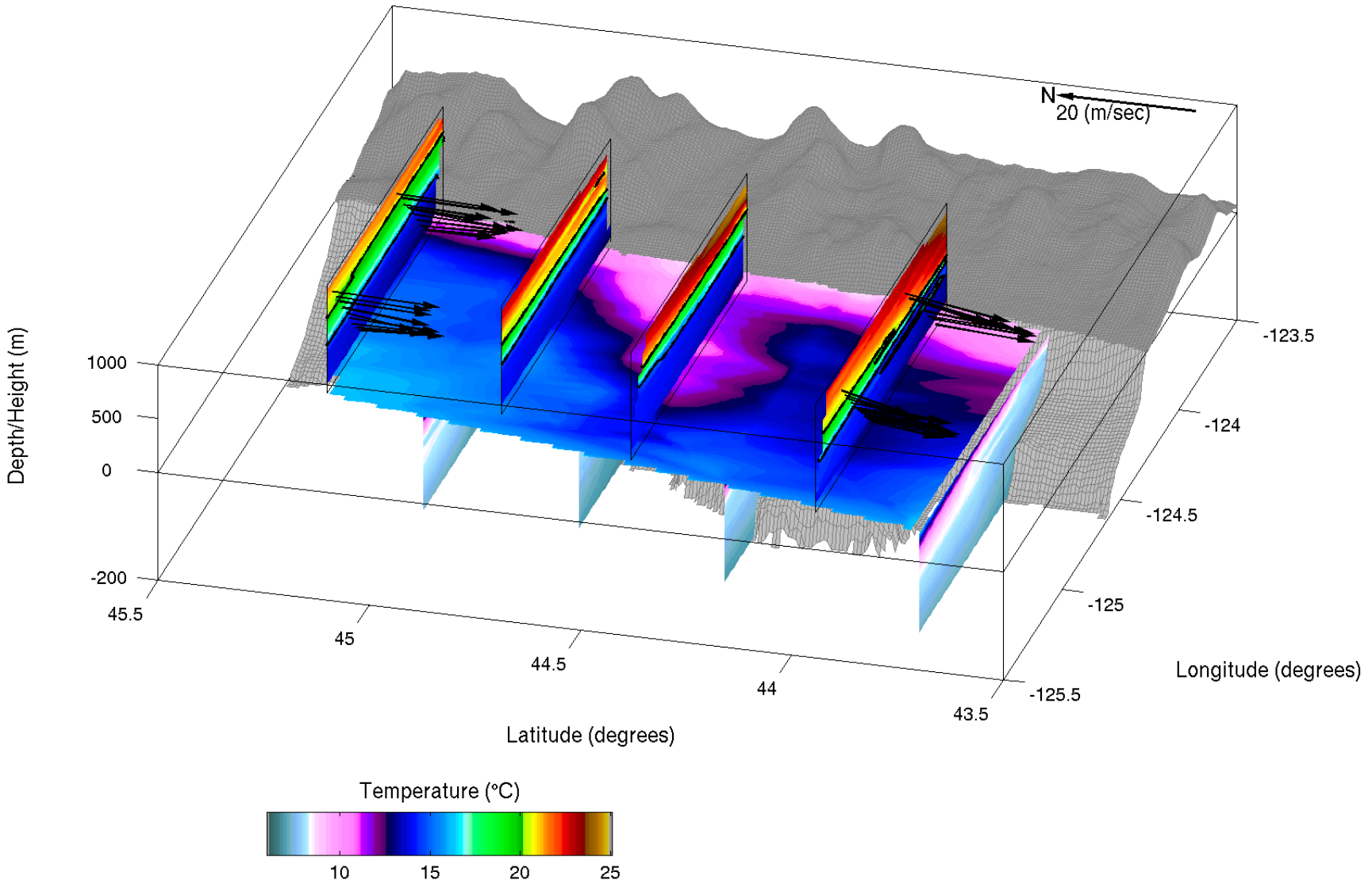
Longitude (deg
Temperature (°C)
10
15
20
25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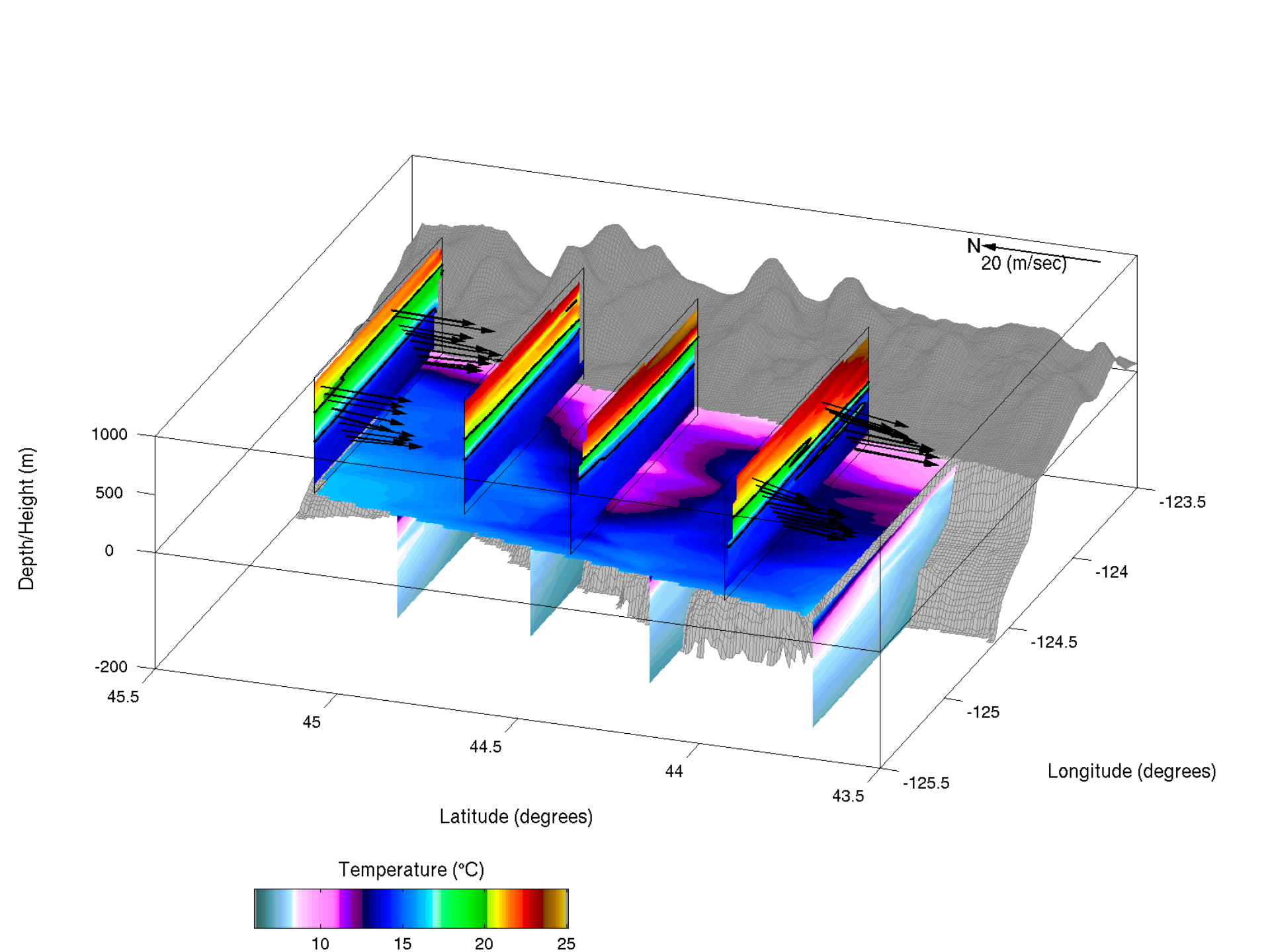
Longitude (degrees)
Temperature (°C)
10
15
20
25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Longitude (degrees)
Temperature (°C)
10
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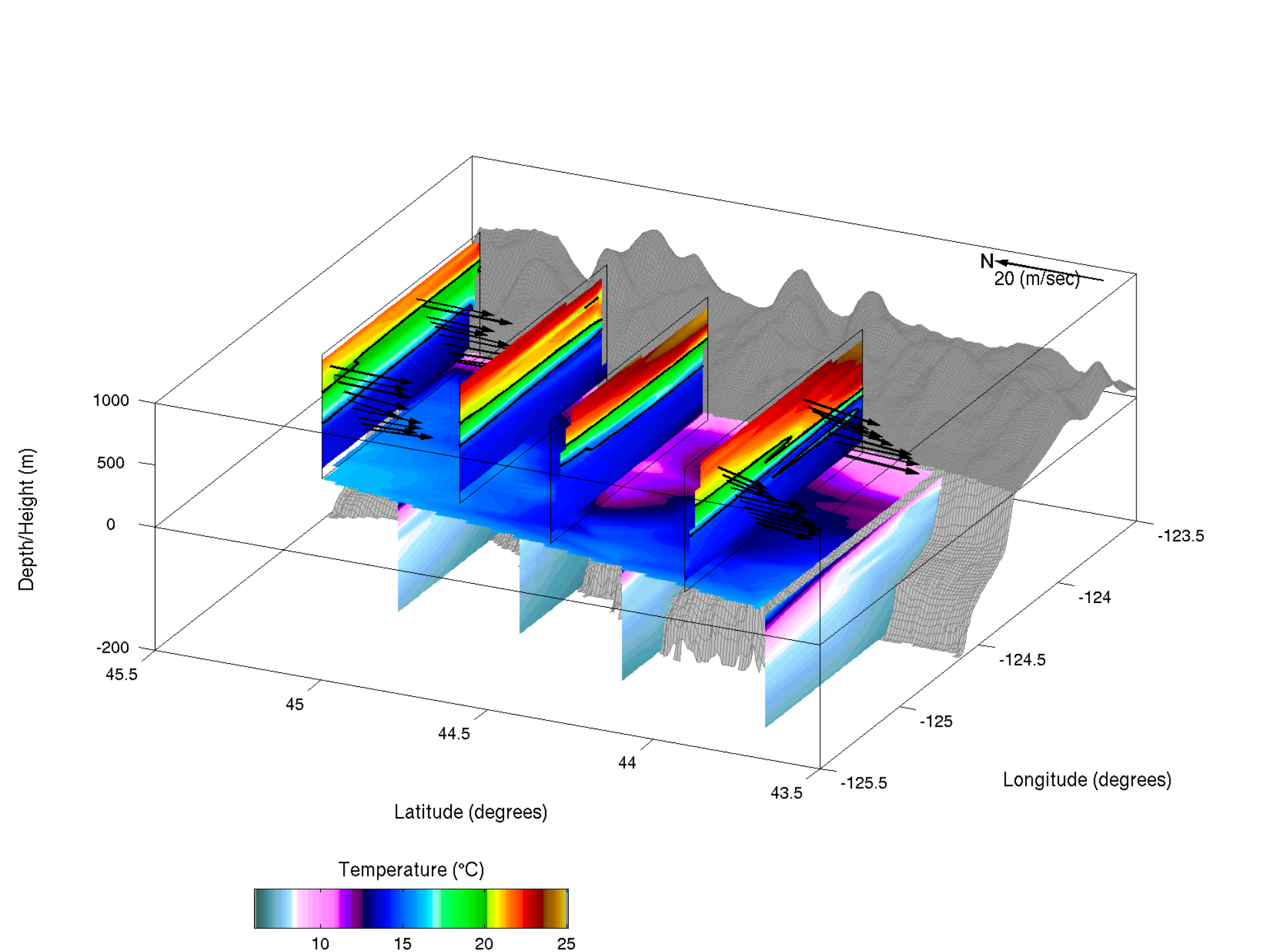
20
25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Longitude (degrees)
Temperature (°C)
10
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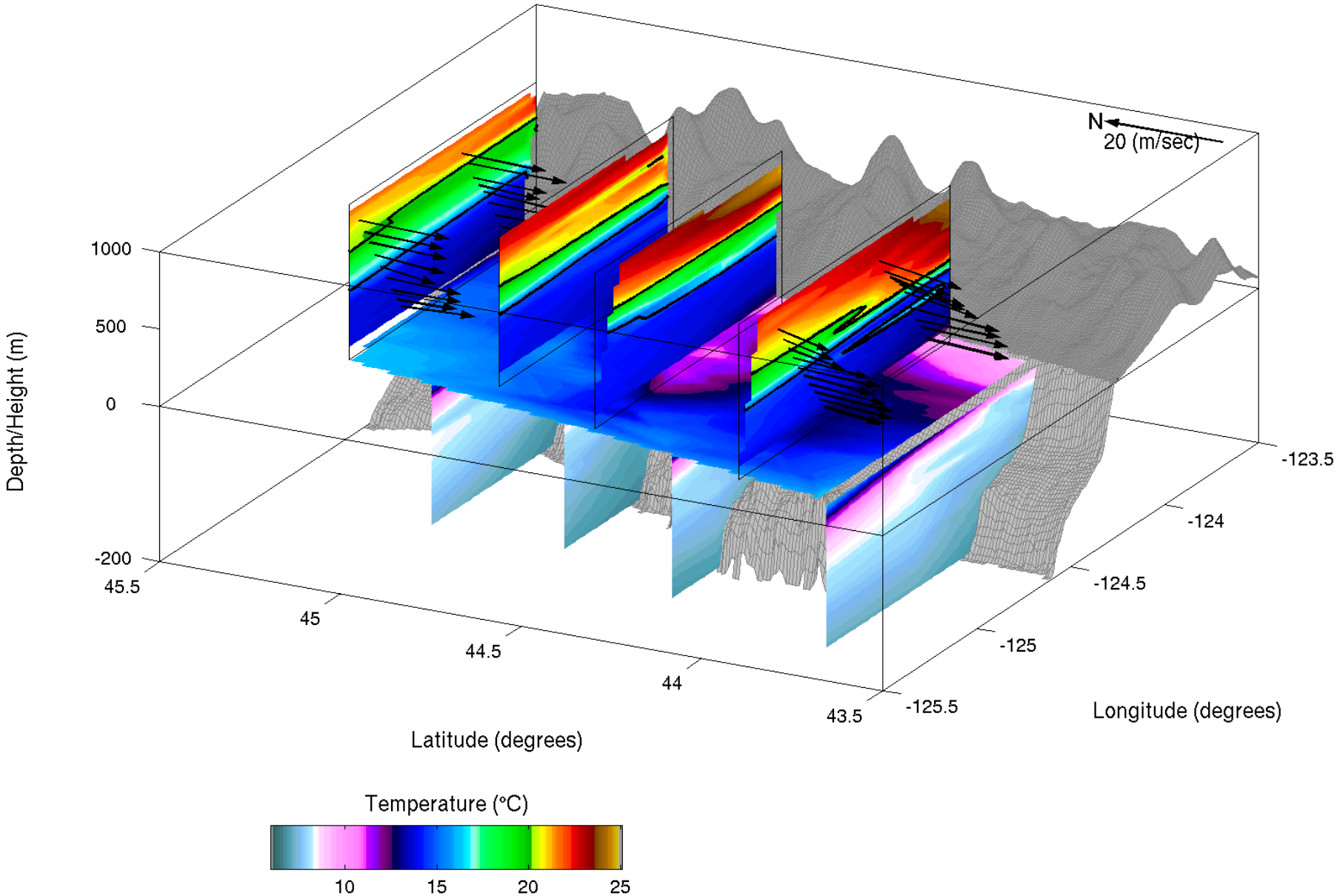
20
25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Longitude (degrees)
Temperature (°C)
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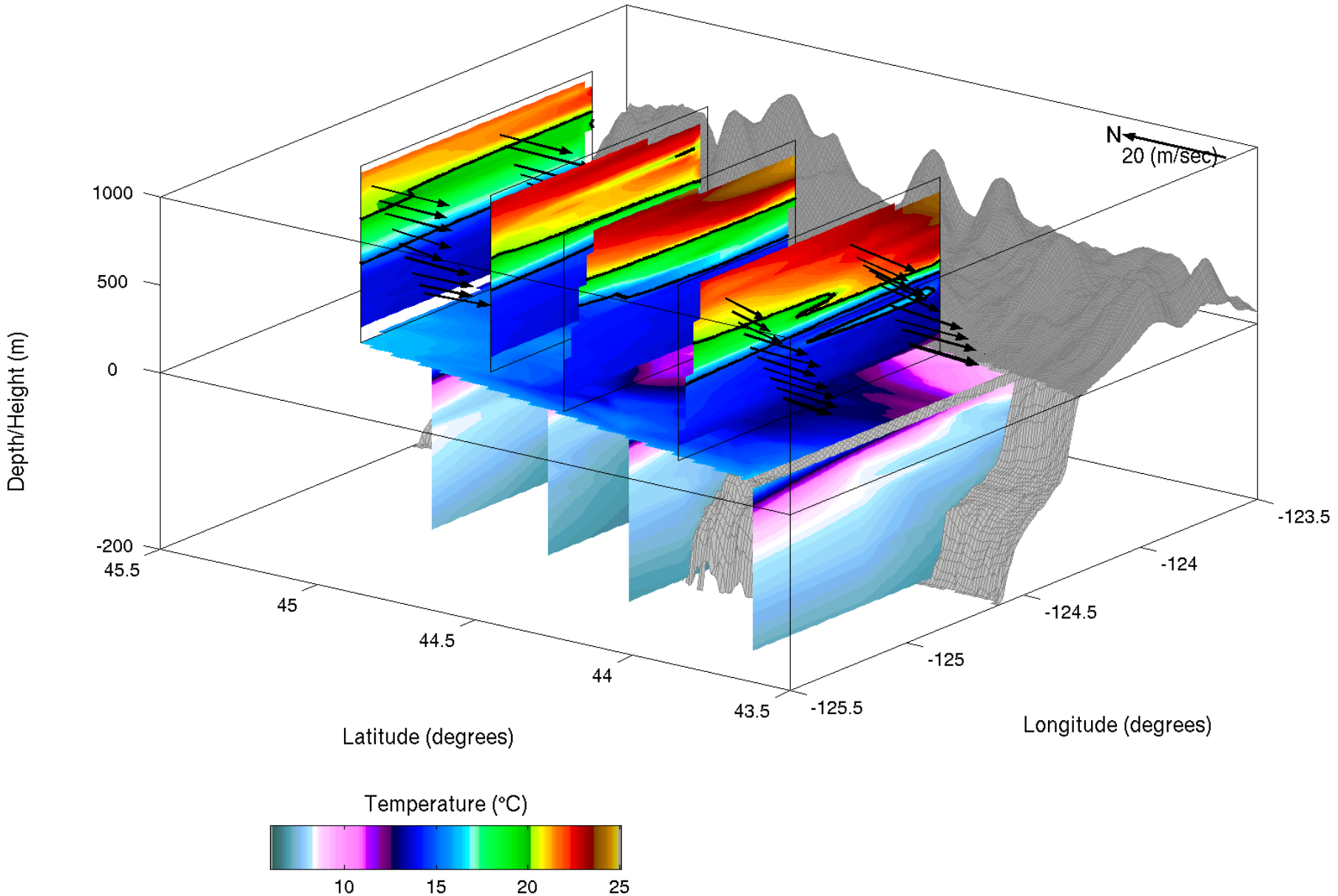
25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-123.5
Longitude (degrees)
Temperature (°C)
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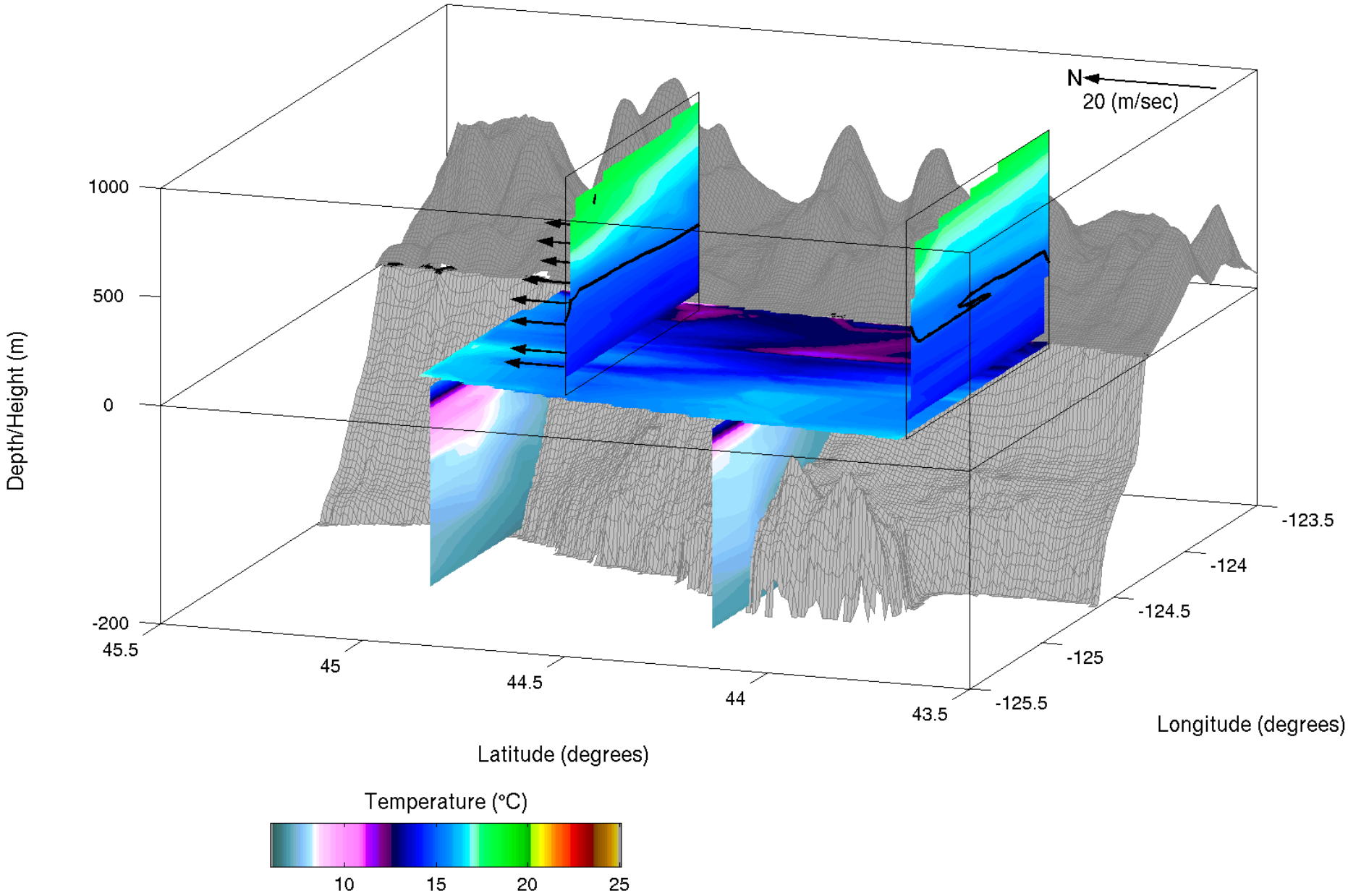
20
25

NORTHWARD WIND CASE

August 1, 2001



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