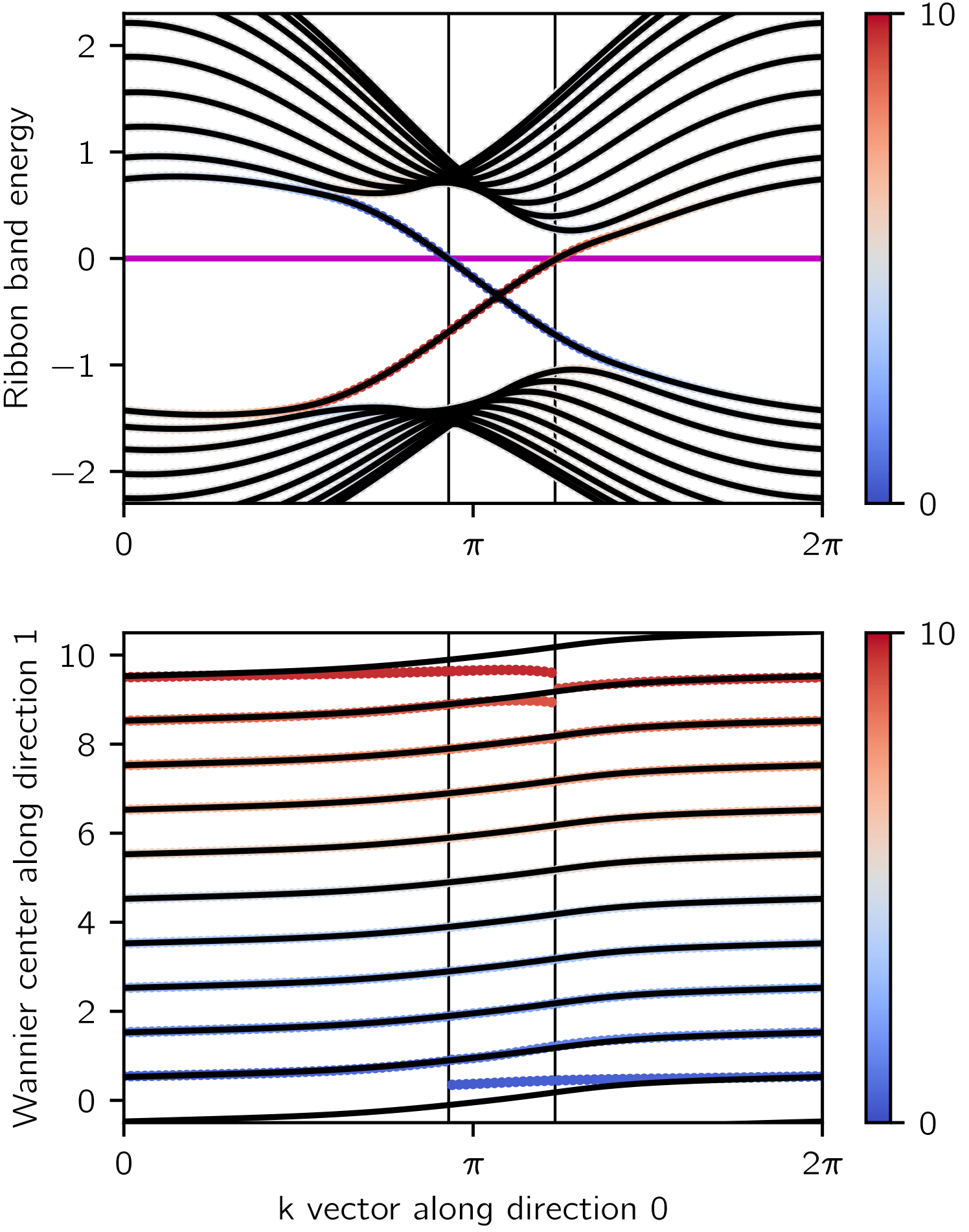
Ribbon band energy
2
1
0
−1
−2
0
π
2π
10
0
Wannier center along direction 1
10
8
6
4
2
0
0
π
2π
10
0
k vector along direction 0