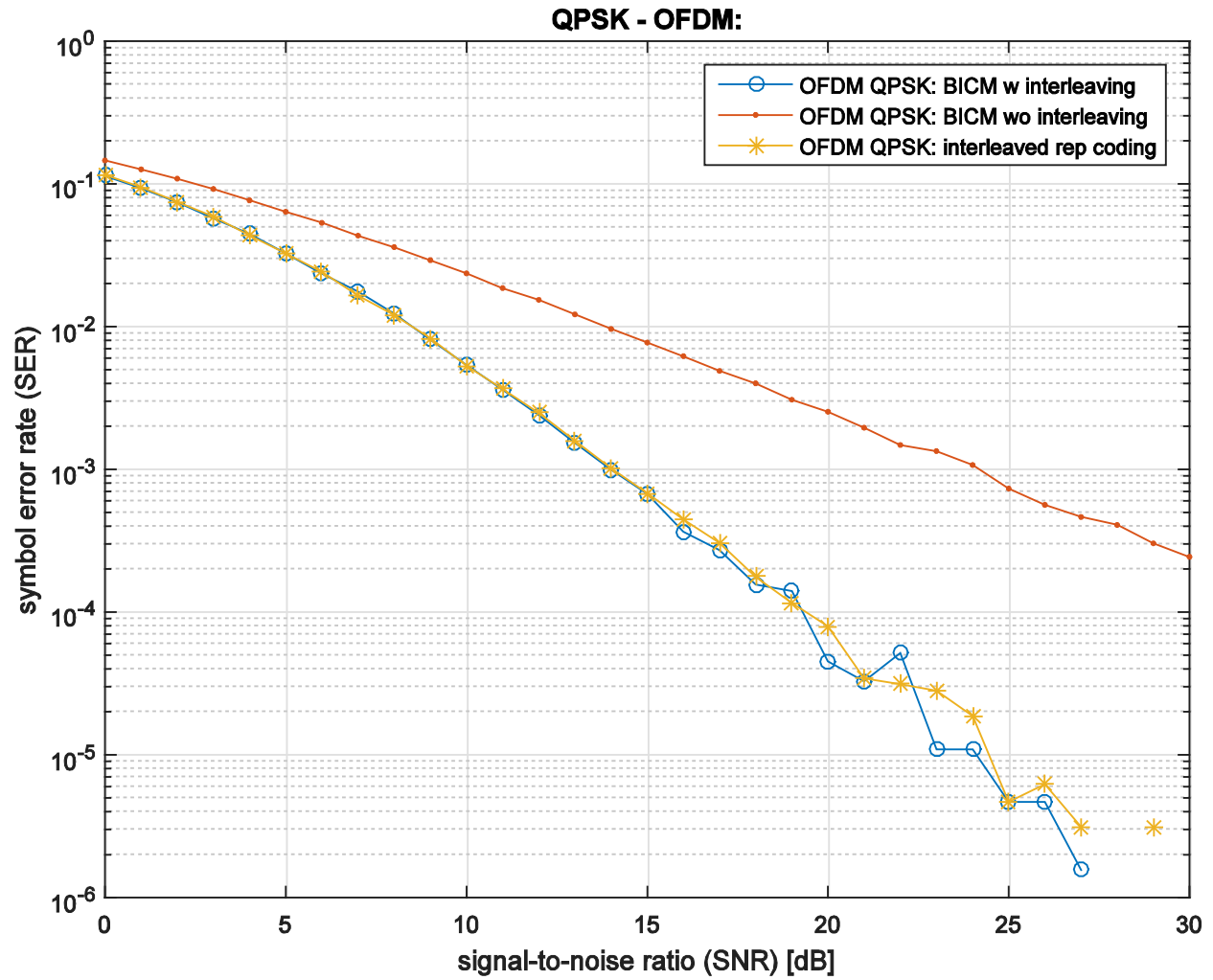
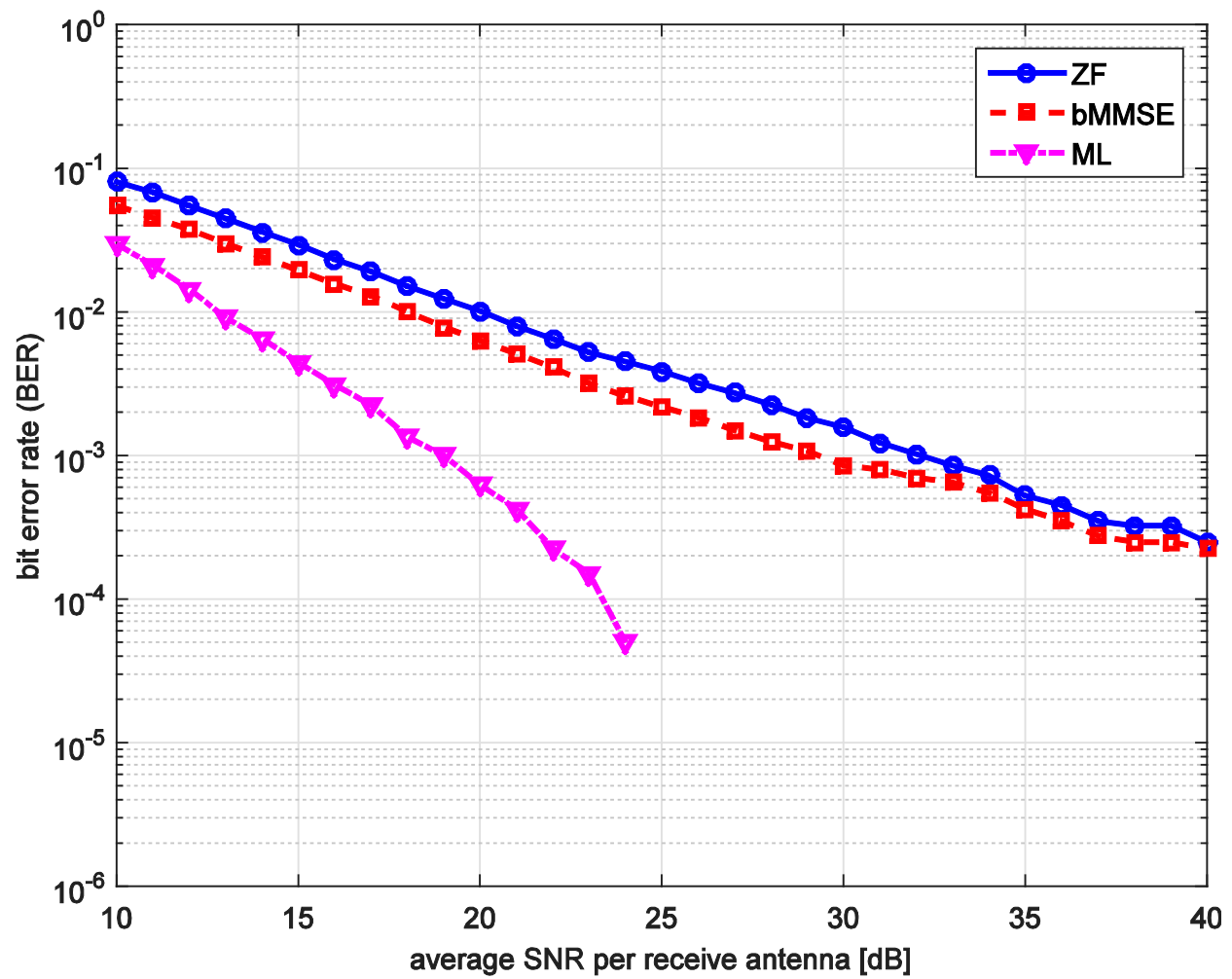


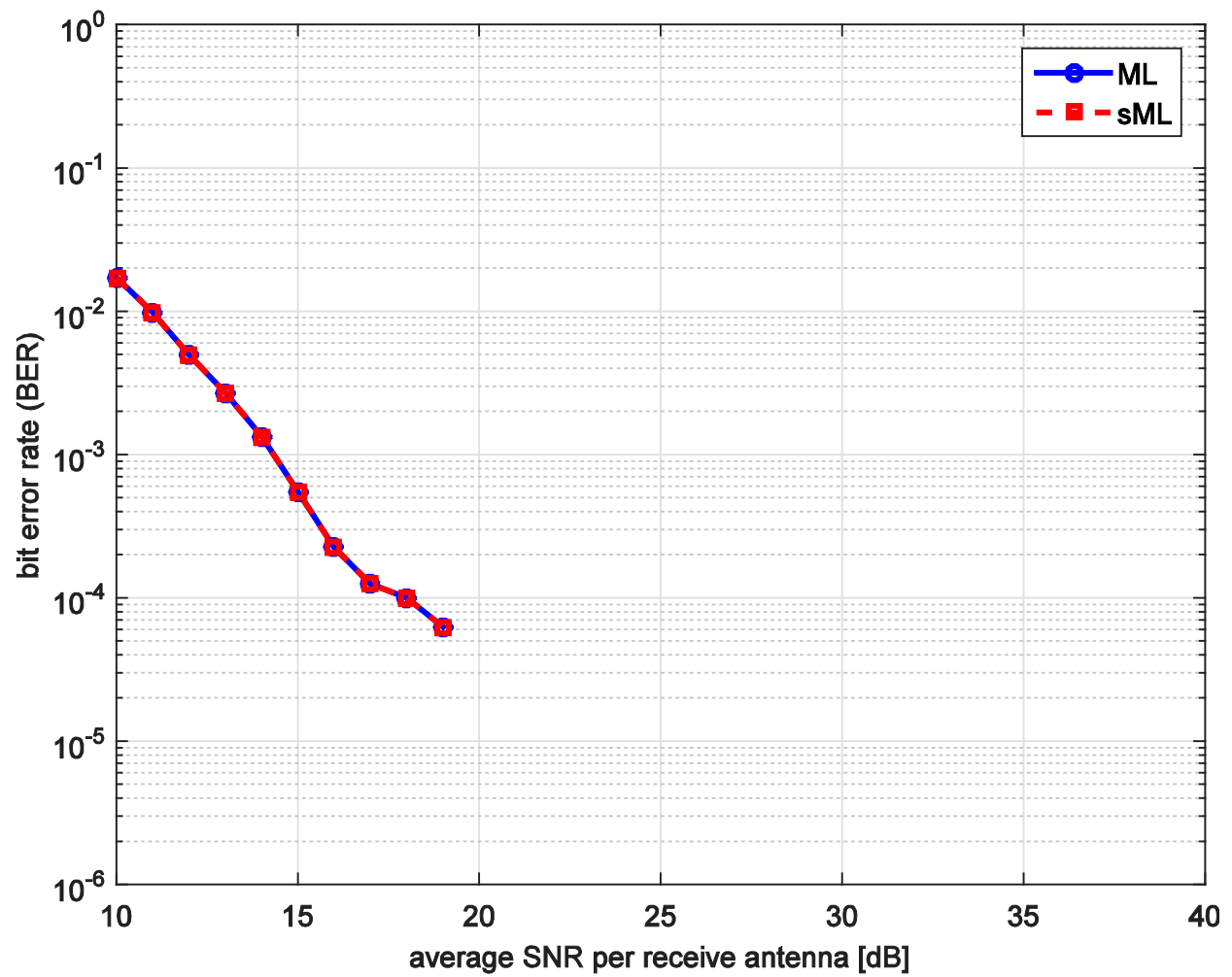
Problem 1

Problem 2

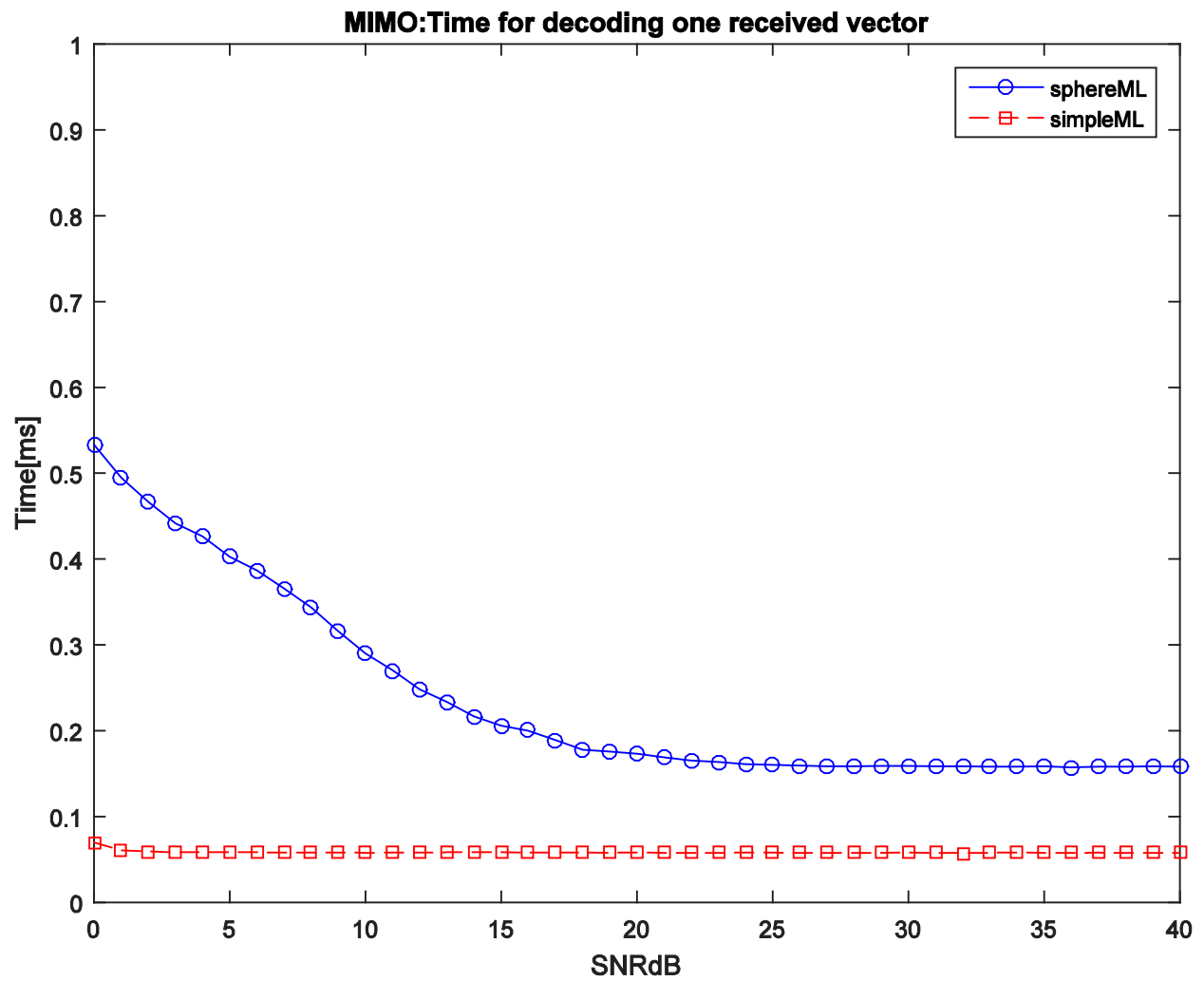




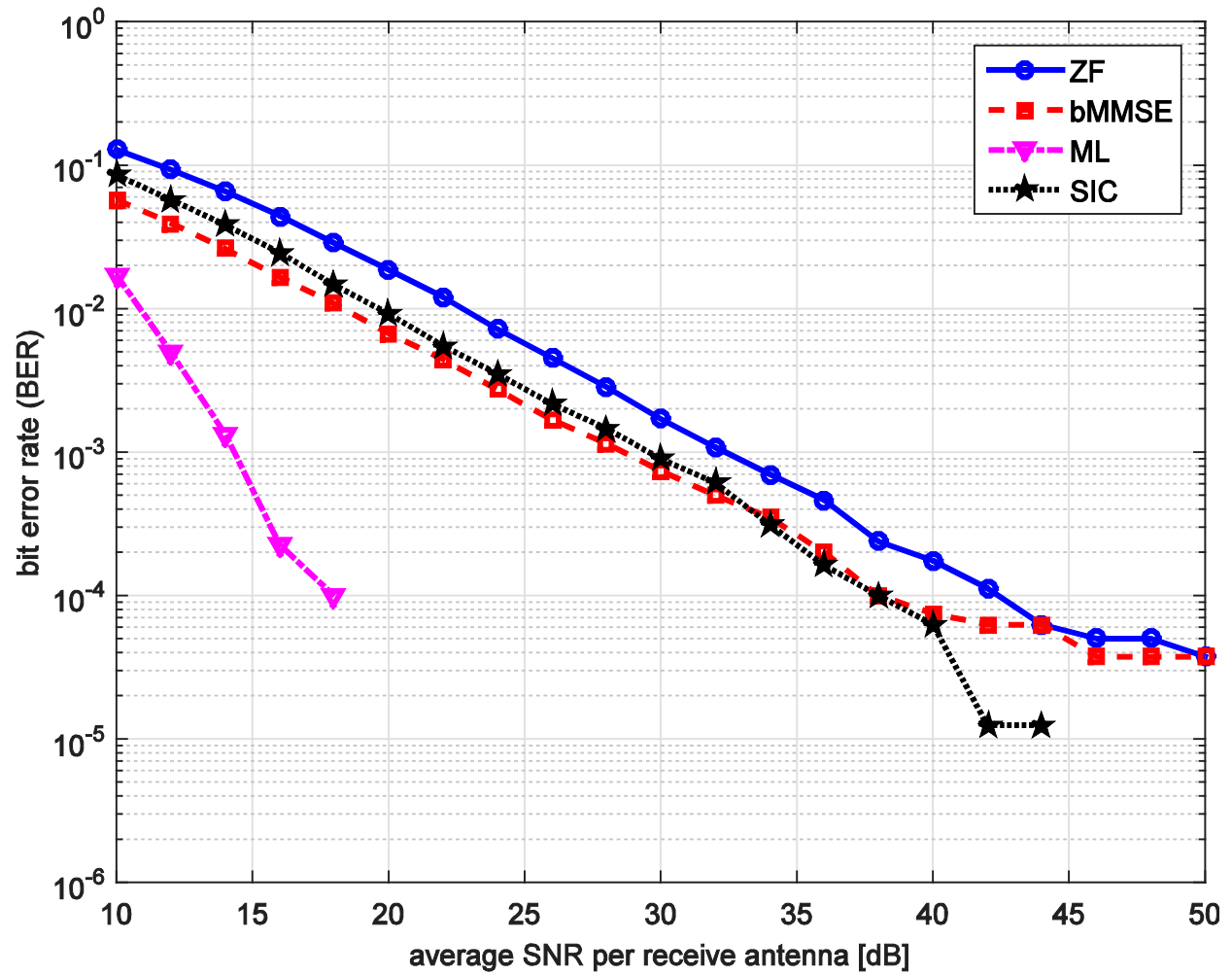
Problem 3 part1



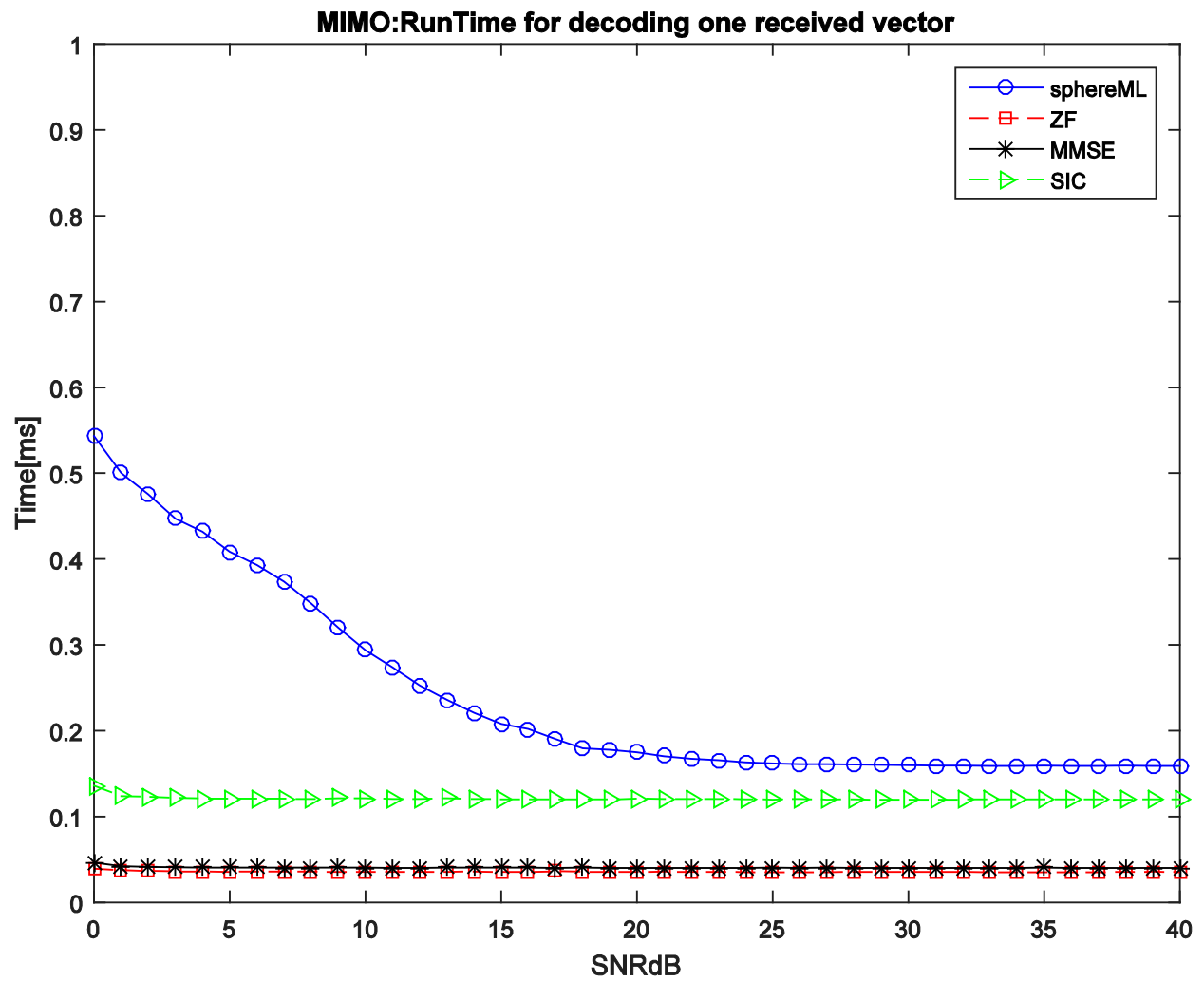
Problem 3 part2 performance



Problem 3 part2 runtime



Problem 3 part3 performance



Problem 3 part3 runtime

