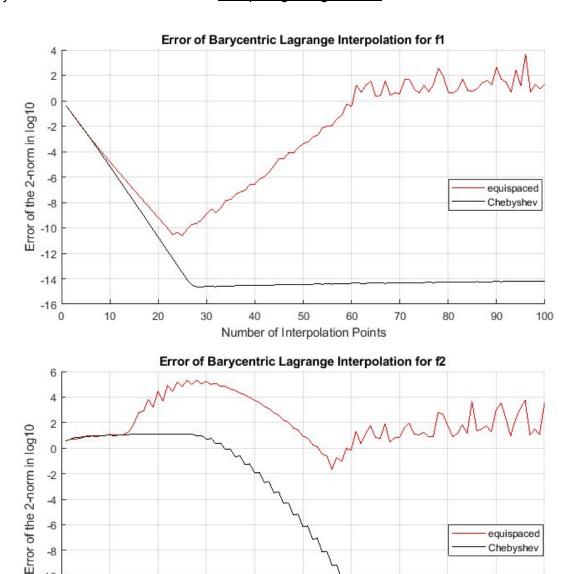
-10 -12 -14

10

20

30



Runge's phenomenon causes errors of extreme oscillations at the ends of large degree interpolating polynomials over equispaced points. To constrain these oscillations, Chebyshev nodes are placed more densely towards the ends. Because the polynomial must go through each node, the oscillations and error are restricted with Chebyshev nodes. Chebyshev nodes are better for interpolating f1.

50

Number of Interpolation Points

80

90

100

Aliasing, the imitation of higher order polynomials without enough interpolation points, is overcome past 30 interpolation points. This is evident by the reduction in error. The Chebyshev nodes are better than equispaced points for interpolating f2 past 15 points.