付 録 D

非対称問題に対するSC前処理の効果

第 5.5.2 **節**の数値実験「**非対称問題に対する前処理の効果** 」に対して，その他の数値例を示す.

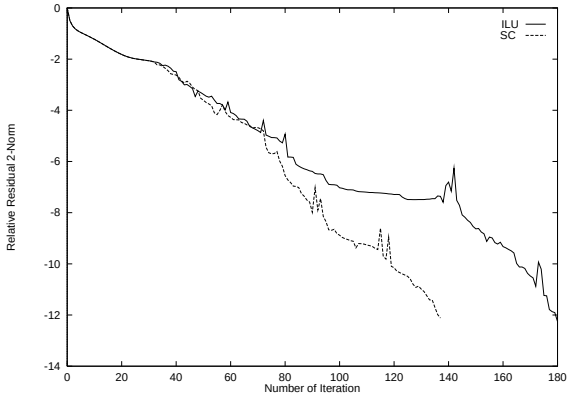
ここでは，方程式 (5.1) に対して,

$v_1 = 0.0, 0.1, 0.2, 0.3, 0.5, 0.8, 1.0, 2.0, 3.0, 5.0, 8.0, 10.0$,

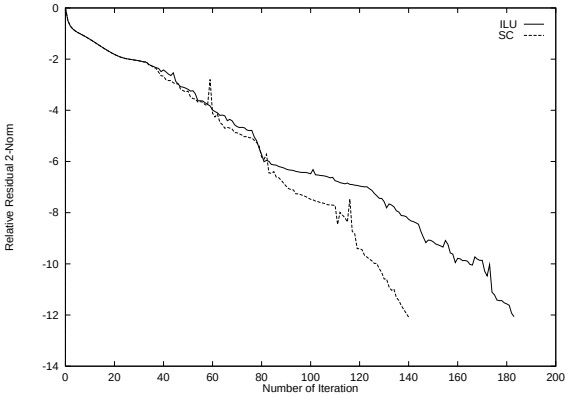
$v_2 = 0.0, 0.1, 0.2, 0.3, 0.5, 0.8, 1.0, 2.0, 3.0, 5.0, 8.0, 10.0$

についての数値実験結果を示した.

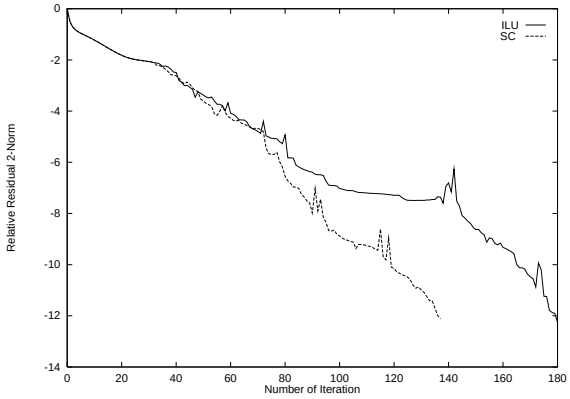
結果は，これら全てに亘り SC 前処理を用いた方が収束は速いことが確認された.



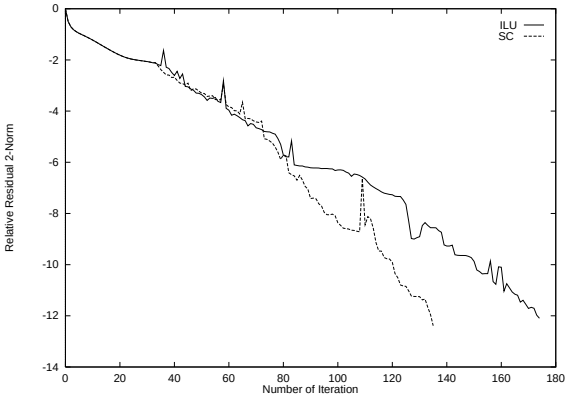
$65\times64 : v_1 = 0.0, v_2 = 0.0$



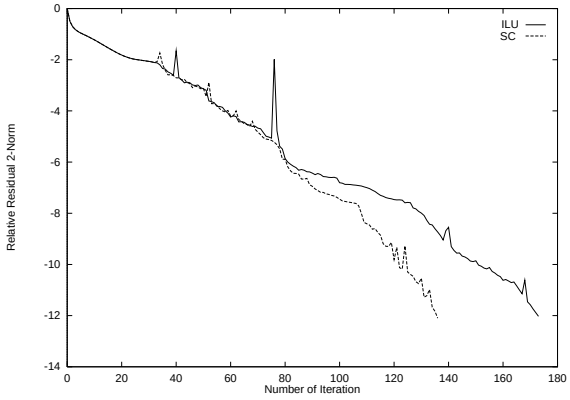
$65\times64 : v_1 = 0.3, v_2 = 0.0$



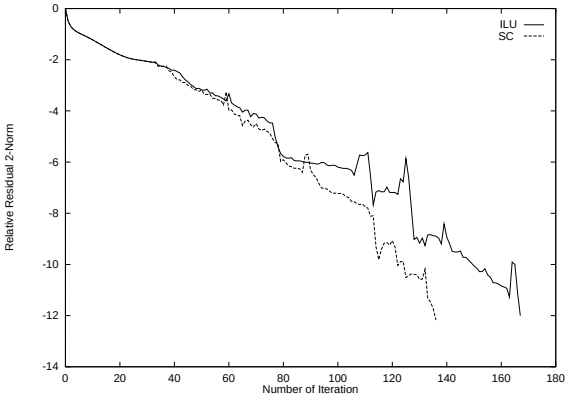
$65\times64 : v_1 = 0.1, v_2 = 0.0$



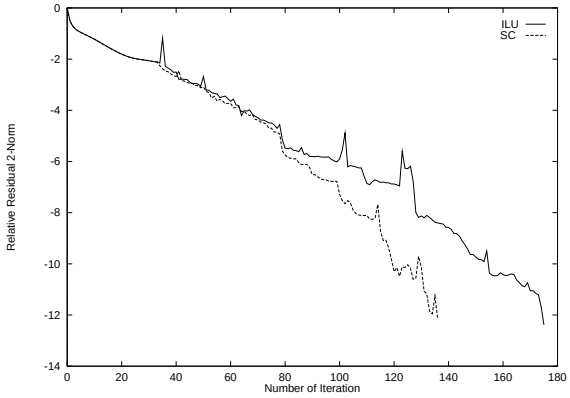
$65\times64 : v_1 = 0.5, v_2 = 0.0$



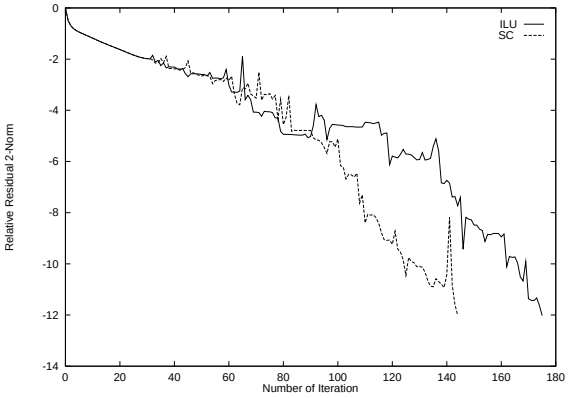
$65\times64 : v_1 = 0.2, v_2 = 0.0$



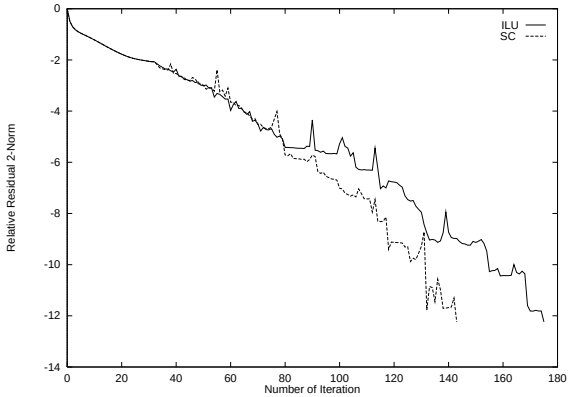
$65\times64 : v_1 = 0.8, v_2 = 0.0$



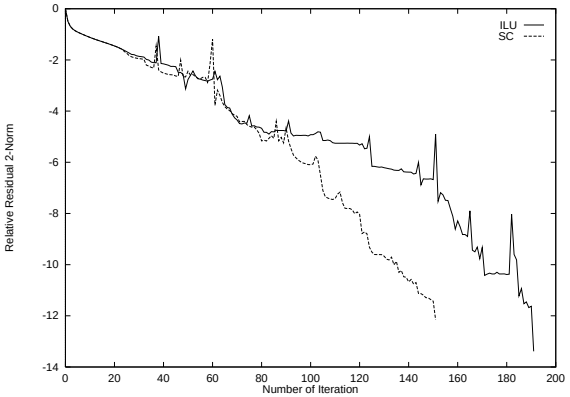
$65\times64 : v_1 = 1.0, v_2 = 0.0$



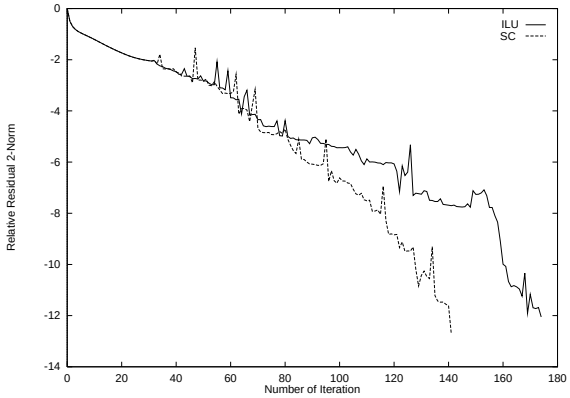
$65\times64 : v_1 = 5.0, v_2 = 0.0$



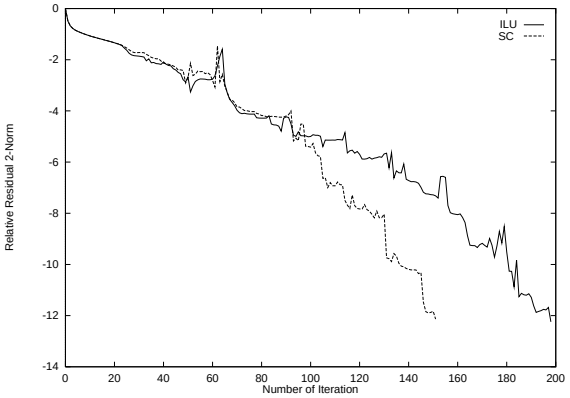
$65\times64 : v_1 = 2.0, v_2 = 0.0$



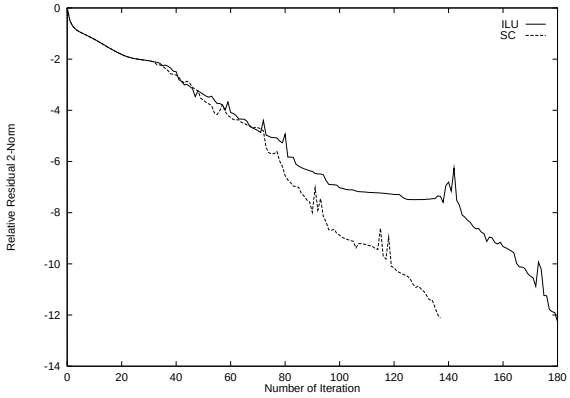
$65\times64 : v_1 = 8.0, v_2 = 0.0$



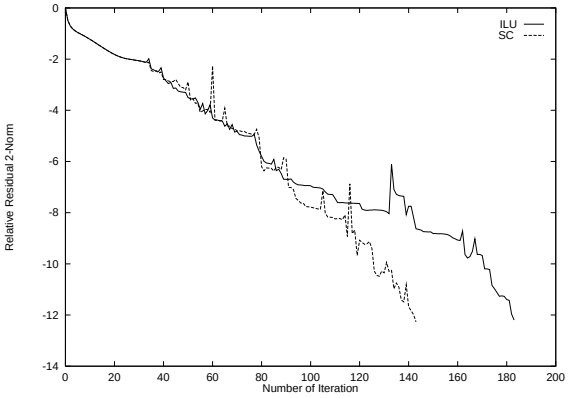
$65\times64 : v_1 = 3.0, v_2 = 0.0$



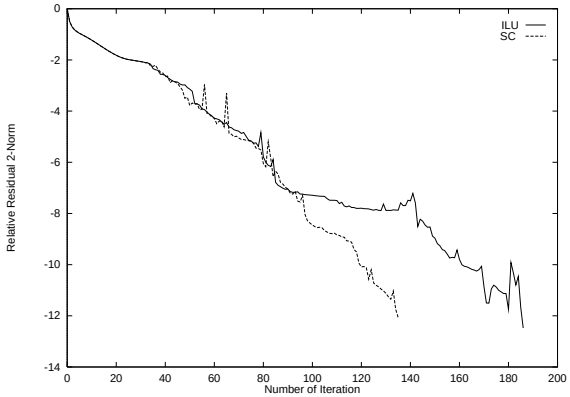
$65\times64 : v_1 = 10.0, v_2 = 0.0$



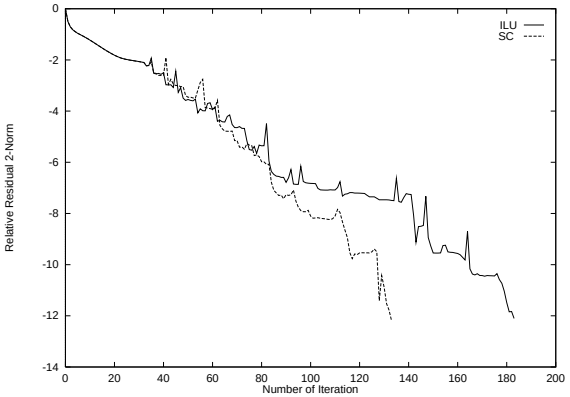
$65\times64 : v_1 = 0.0, v_2 = 0.0$



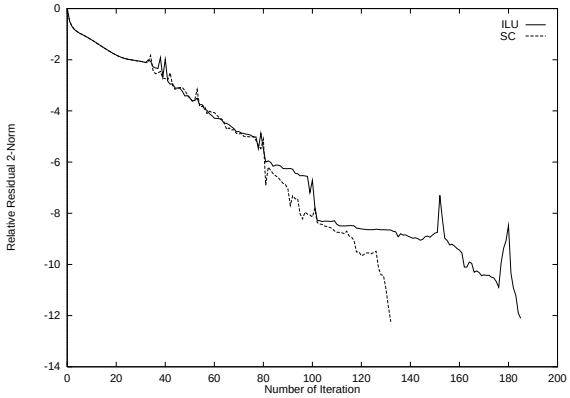
$65\times64 : v_1 = 0.0, v_2 = 0.3$



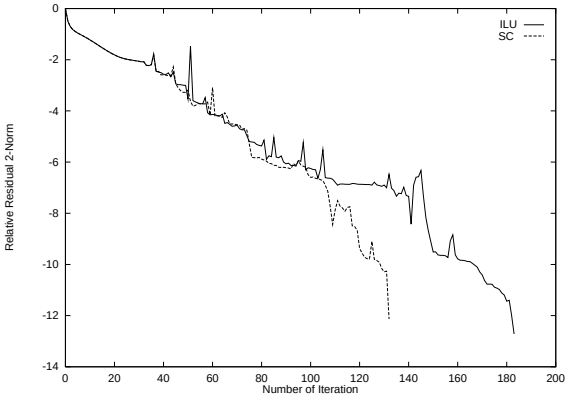
$65\times64 : v_1 = 0.0, v_2 = 0.1$



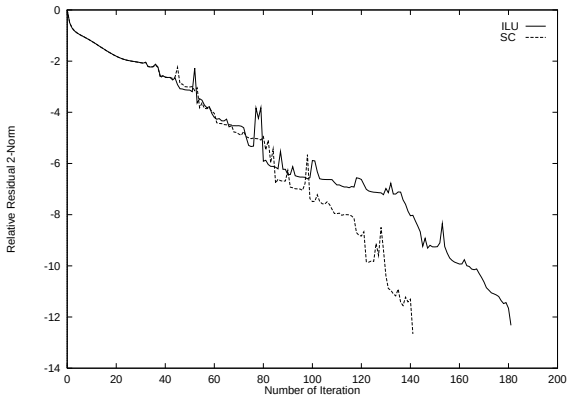
$65\times64 : v_1 = 0.0, v_2 = 0.5$



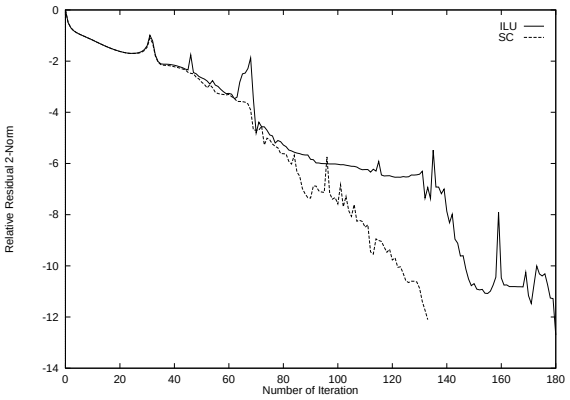
$65\times64 : v_1 = 0.0, v_2 = 0.2$



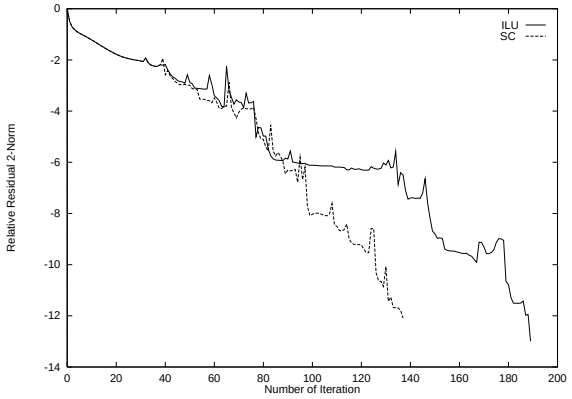
$65\times64 : v_1 = 0.0, v_2 = 0.8$



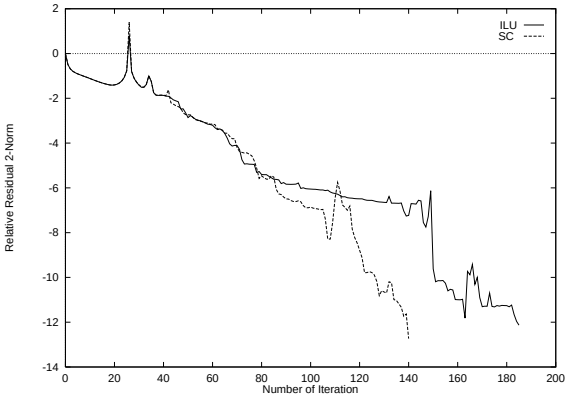
$65\times64 : v_1 = 0.0, v_2 = 1.0$



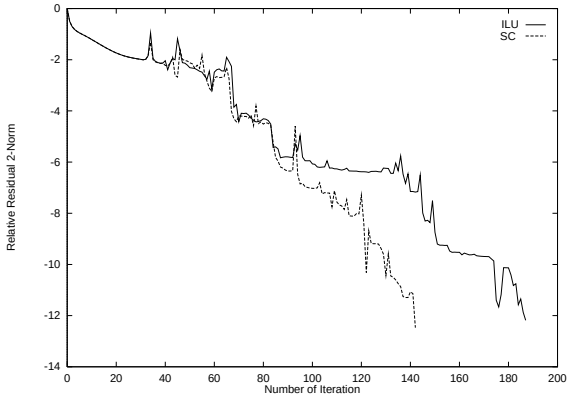
$65\times64 : v_1 = 0.0, v_2 = 5.0$



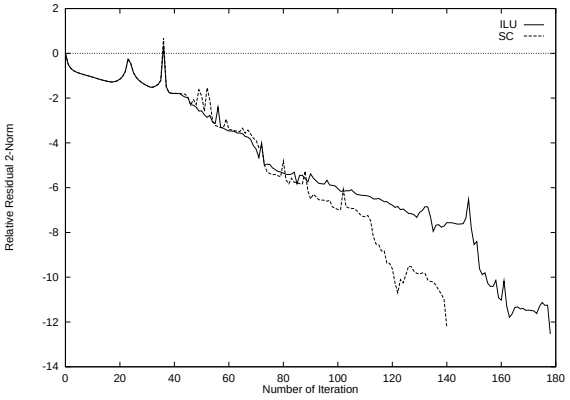
$65\times64 : v_1 = 0.0, v_2 = 2.0$



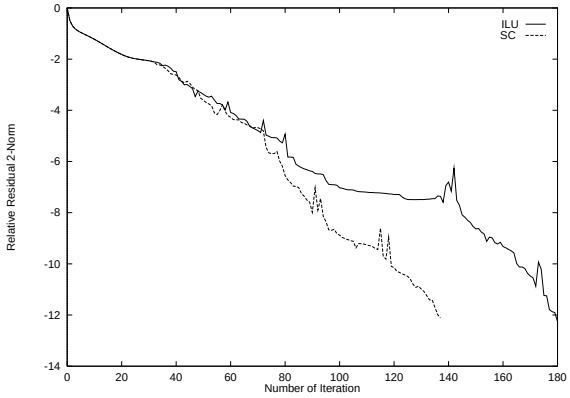
$65\times64 : v_1 = 0.0, v_2 = 8.0$



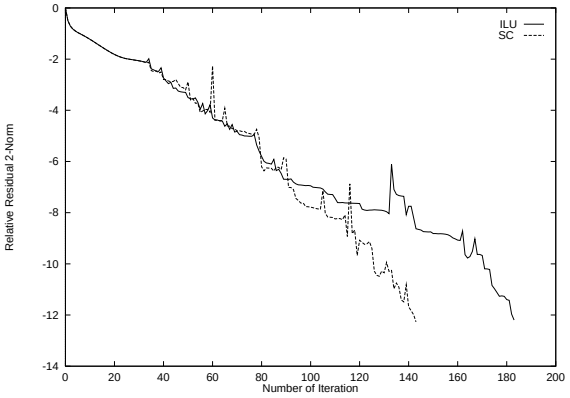
$65\times64 : v_1 = 0.0, v_2 = 3.0$



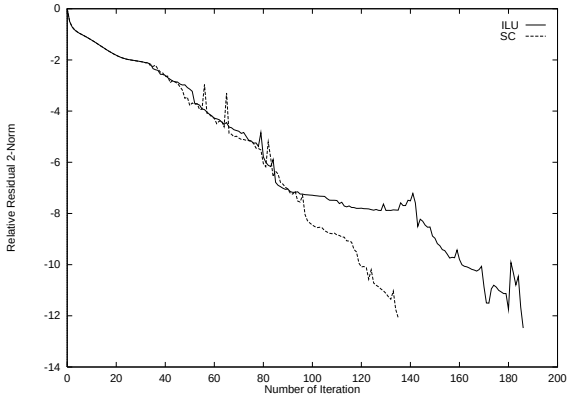
$65\times64 : v_1 = 0.0, v_2 = 10.0$



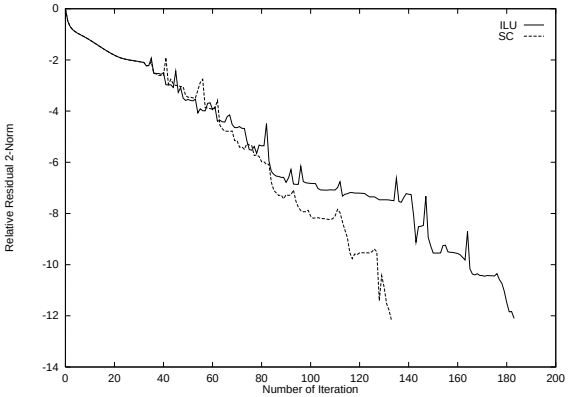
$65\times64 : v_1 = 0.1, v_2 = 0.0$



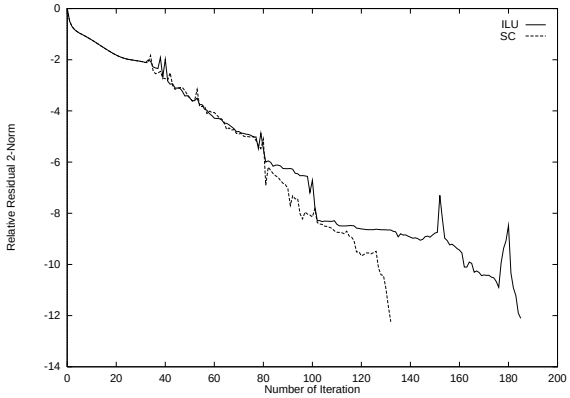
$65\times64 : v_1 = 0.1, v_2 = 0.3$



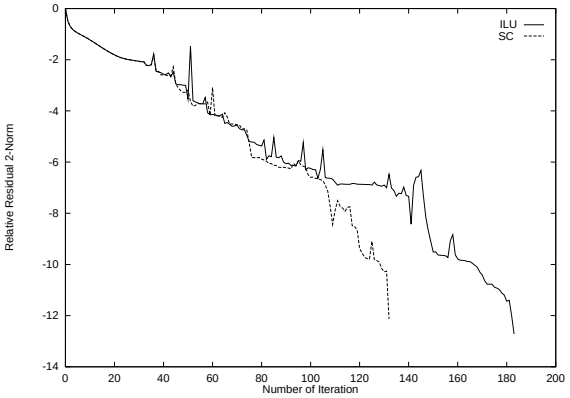
$65\times64 : v_1 = 0.1, v_2 = 0.1$



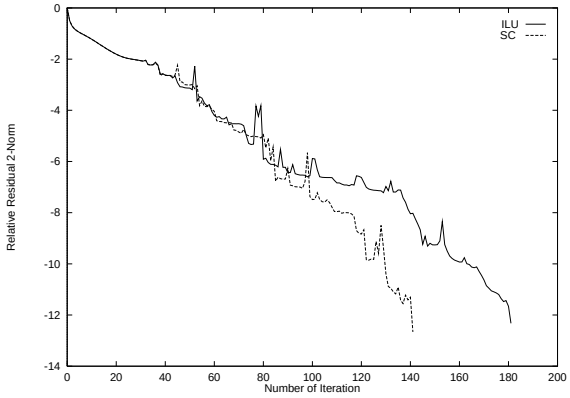
$65\times64 : v_1 = 0.1, v_2 = 0.5$



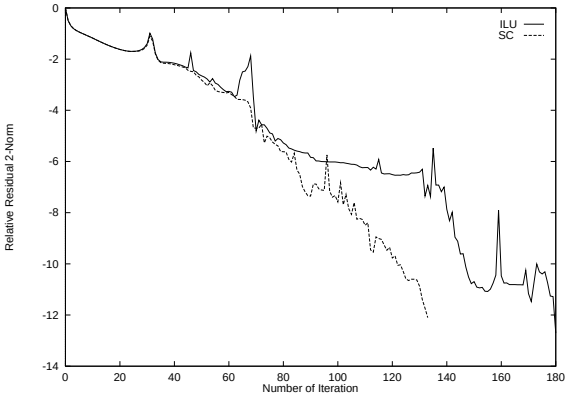
$65\times64 : v_1 = 0.1, v_2 = 0.2$



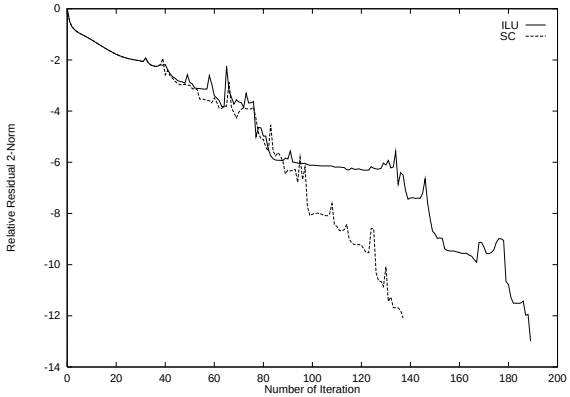
$65\times64 : v_1 = 0.1, v_2 = 0.8$



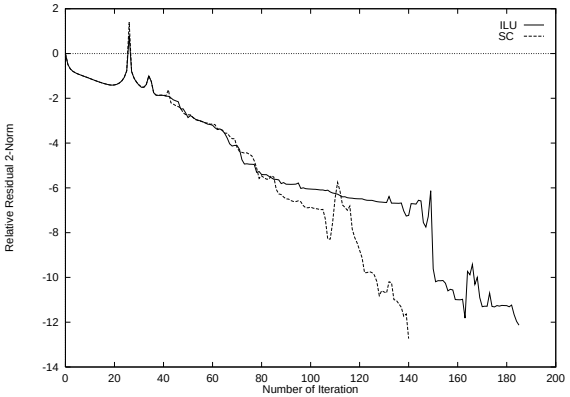
$65\times64 : v_1 = 0.1, v_2 = 1.0$



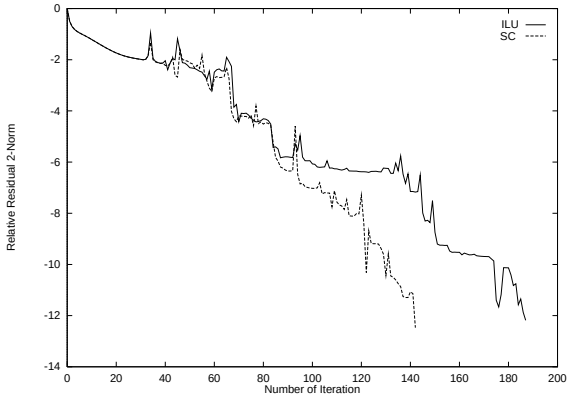
$65\times64 : v_1 = 0.1, v_2 = 5.0$



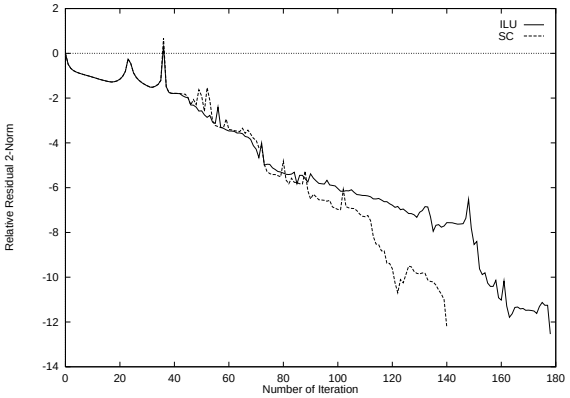
$65\times64 : v_1 = 0.1, v_2 = 2.0$



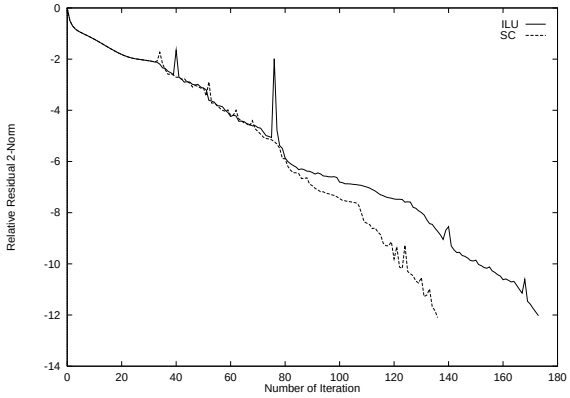
$65\times64 : v_1 = 0.1, v_2 = 8.0$



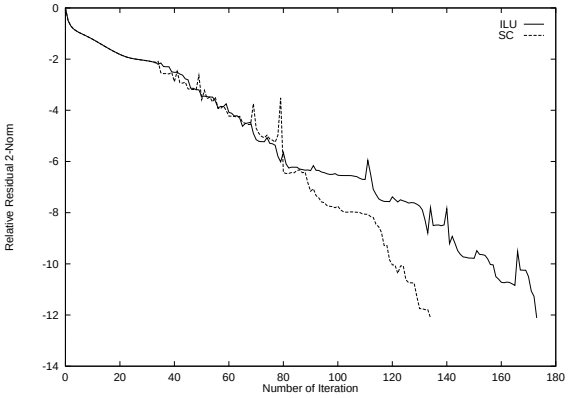
$65\times64 : v_1 = 0.1, v_2 = 3.0$



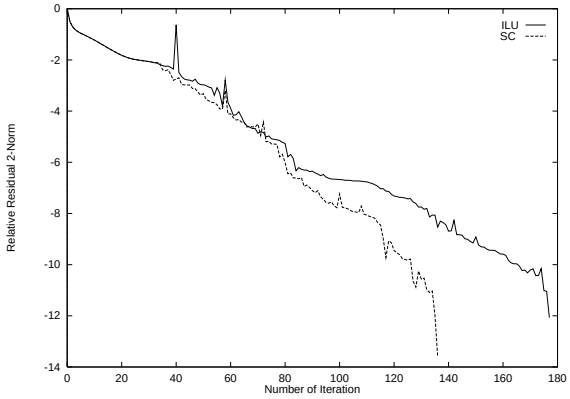
$65\times64 : v_1 = 0.1, v_2 = 10.0$



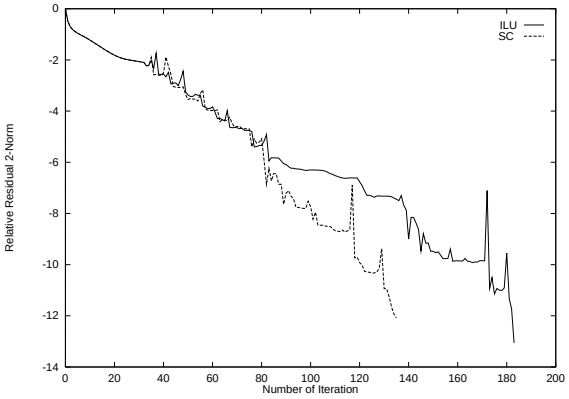
$65\times64 : v_1 = 0.2, v_2 = 0.0$



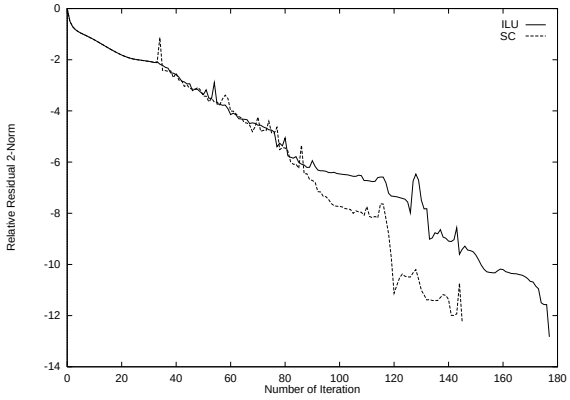
$65\times64 : v_1 = 0.2, v_2 = 0.3$



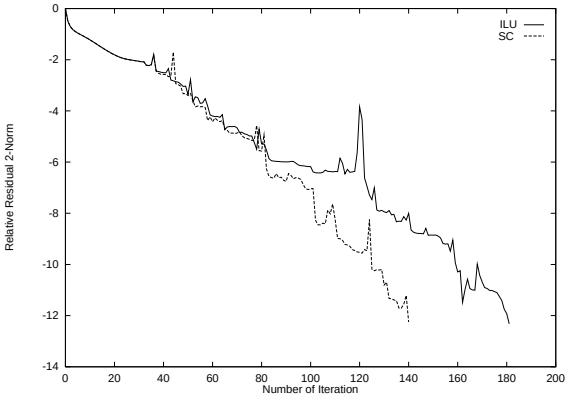
$65\times64 : v_1 = 0.2, v_2 = 0.1$



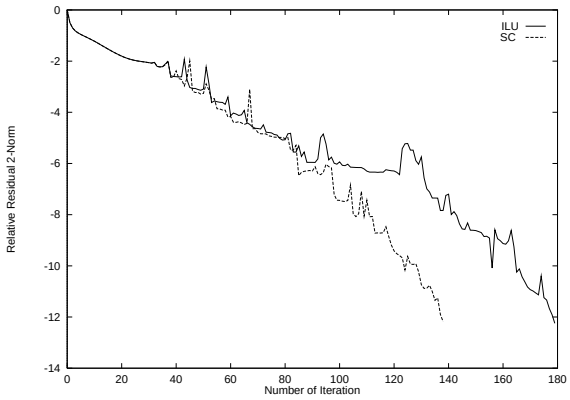
$65\times64 : v_1 = 0.2, v_2 = 0.5$



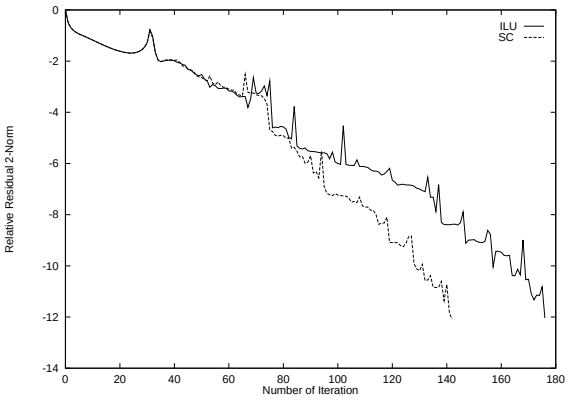
$65\times64 : v_1 = 0.2, v_2 = 0.2$



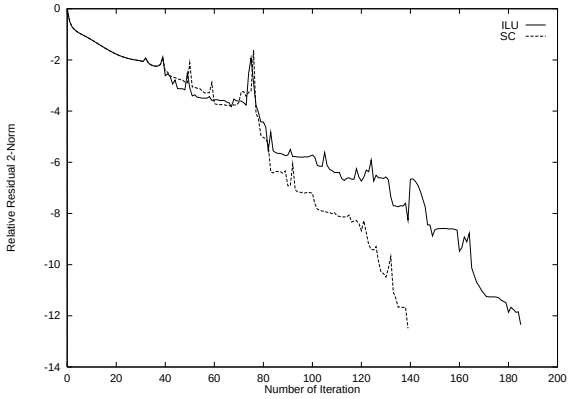
$65\times64 : v_1 = 0.2, v_2 = 0.8$



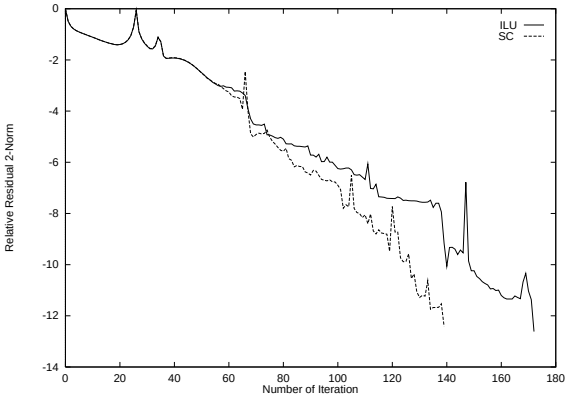
$65\times64 : v_1 = 0.2, v_2 = 1.0$



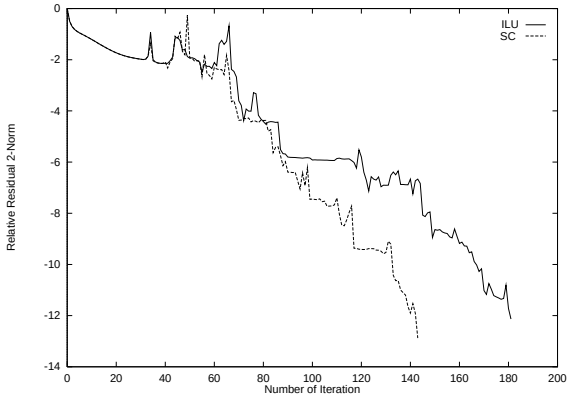
$65\times64 : v_1 = 0.2, v_2 = 5.0$



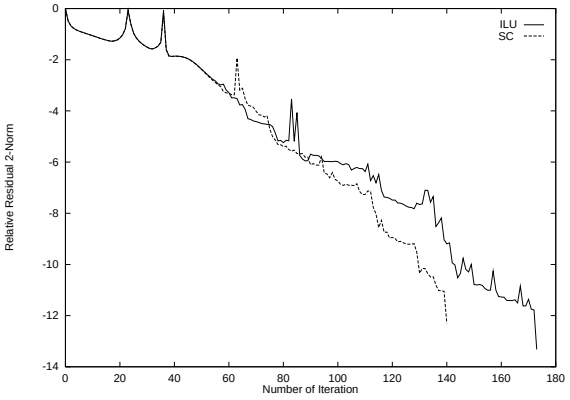
$65\times64 : v_1 = 0.2, v_2 = 2.0$



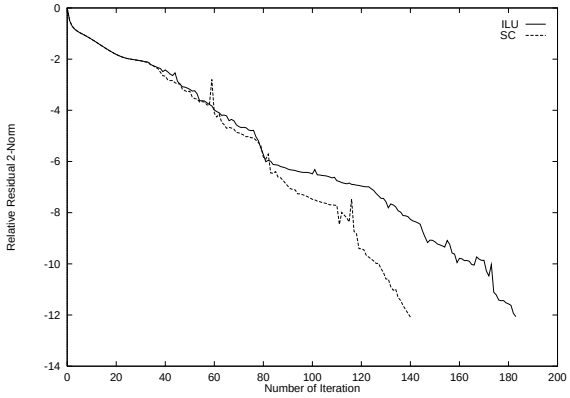
$65\times64 : v_1 = 0.2, v_2 = 8.0$



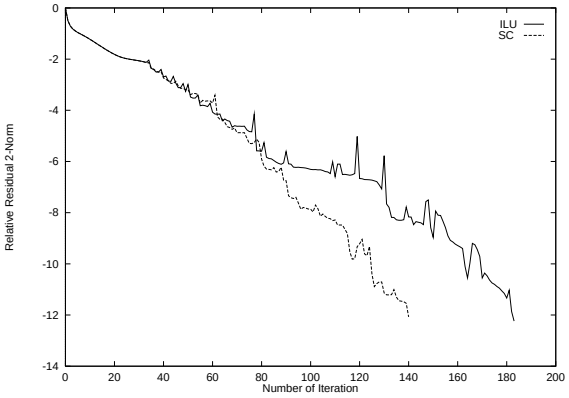
$65\times64 : v_1 = 0.2, v_2 = 3.0$



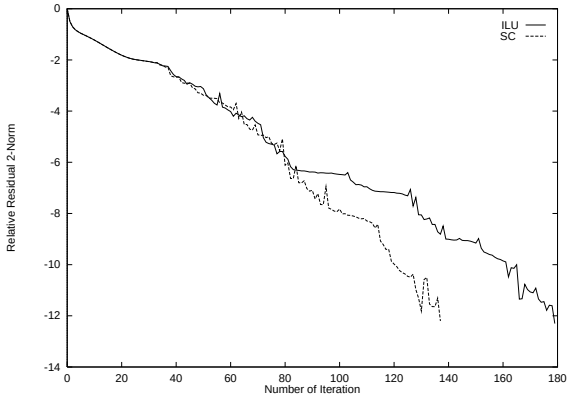
$65\times64 : v_1 = 0.2, v_2 = 10.0$



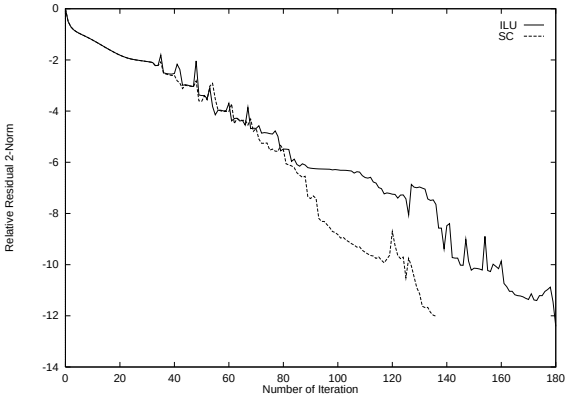
$65\times64 : v_1 = 0.3, v_2 = 0.0$



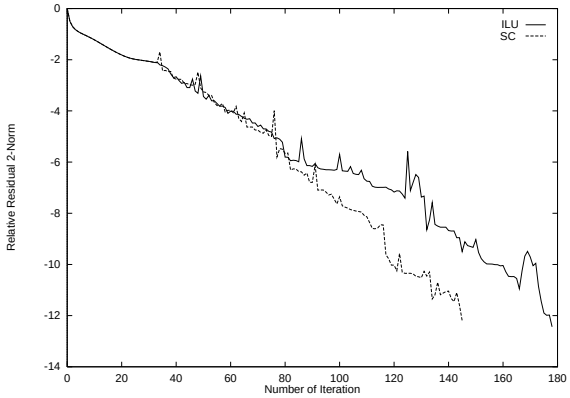
$65\times64 : v_1 = 0.3, v_2 = 0.3$



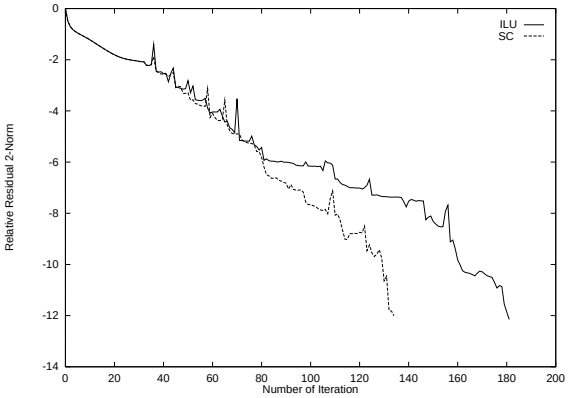
$65\times64 : v_1 = 0.3, v_2 = 0.1$



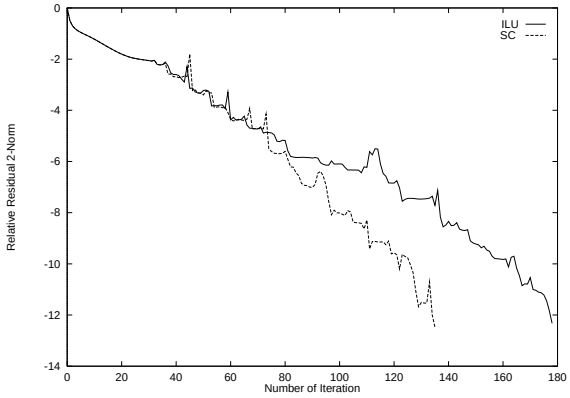
$65\times64 : v_1 = 0.3, v_2 = 0.5$



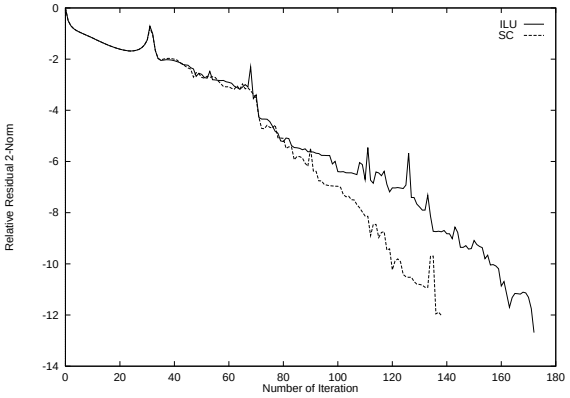
$65\times64 : v_1 = 0.3, v_2 = 0.2$



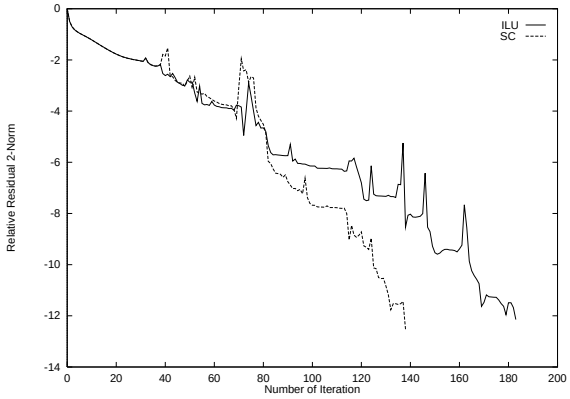
$65\times64 : v_1 = 0.3, v_2 = 0.8$



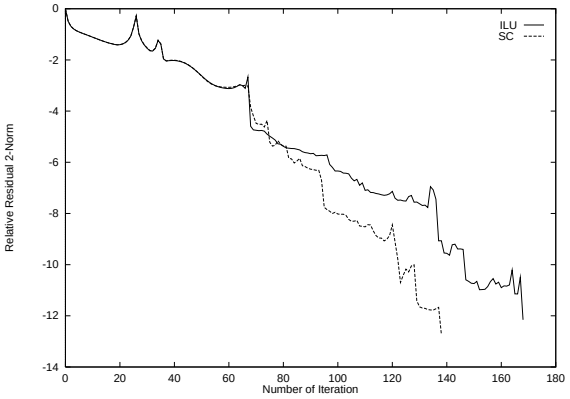
$65\times64 : v_1 = 0.3, v_2 = 1.0$



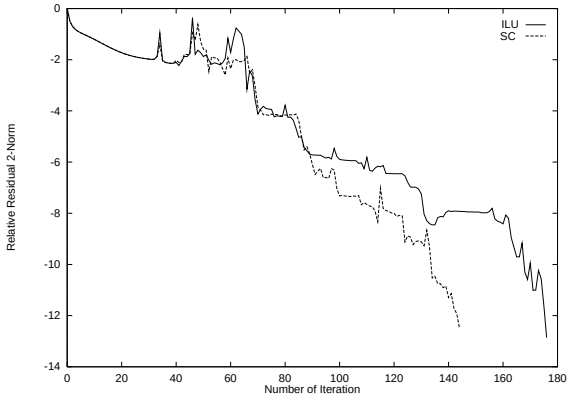
$65\times64 : v_1 = 0.3, v_2 = 5.0$



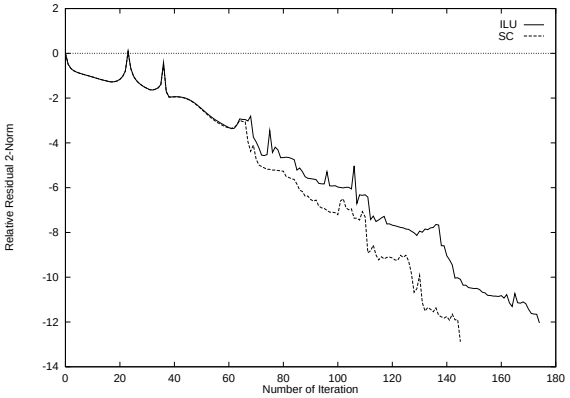
$65\times64 : v_1 = 0.3, v_2 = 2.0$



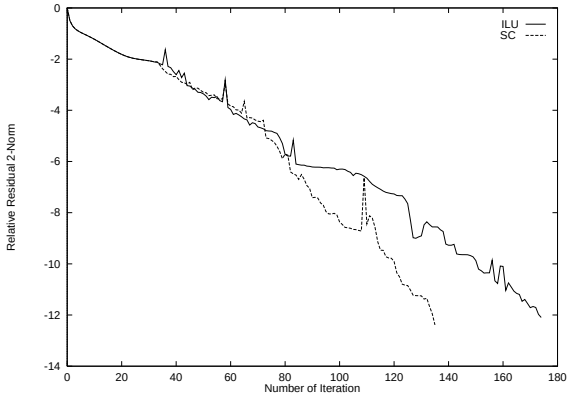
$65\times64 : v_1 = 0.3, v_2 = 8.0$



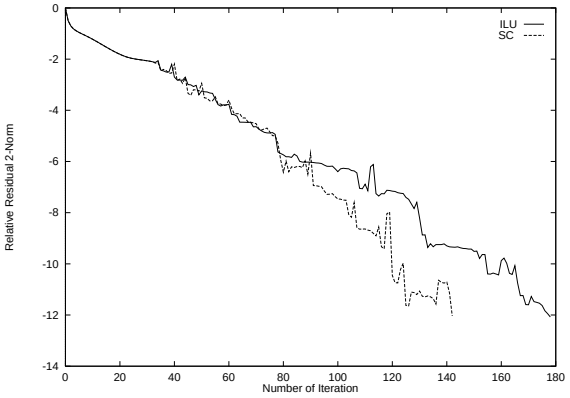
$65\times64 : v_1 = 0.3, v_2 = 3.0$



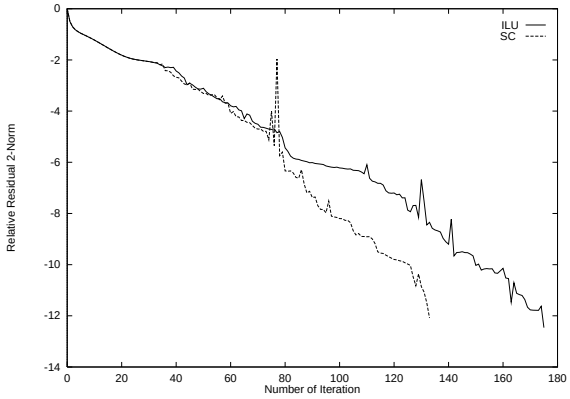
$65\times64 : v_1 = 0.3, v_2 = 10.0$



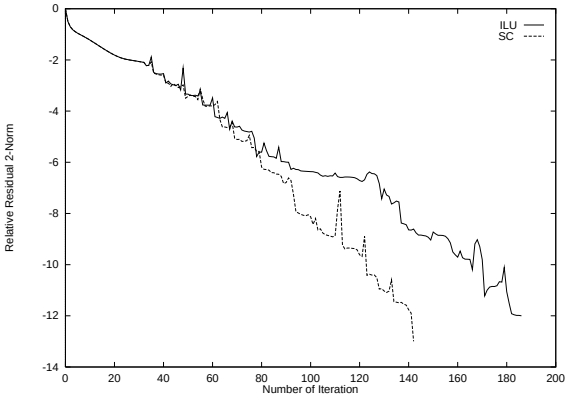
$65\times64 : v_1 = 0.5, v_2 = 0.0$



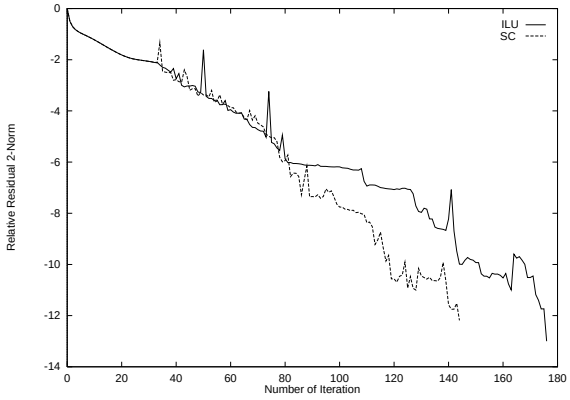
$65\times64 : v_1 = 0.5, v_2 = 0.3$



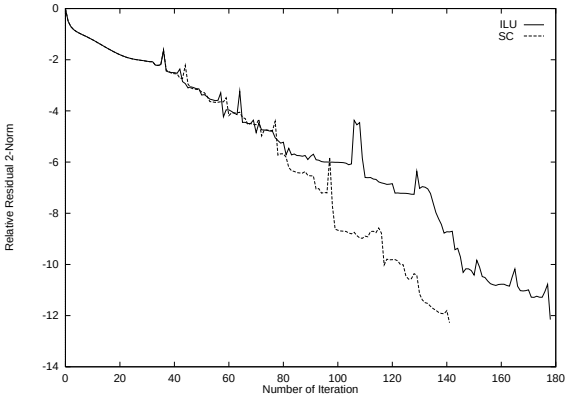
$65\times64 : v_1 = 0.5, v_2 = 0.1$



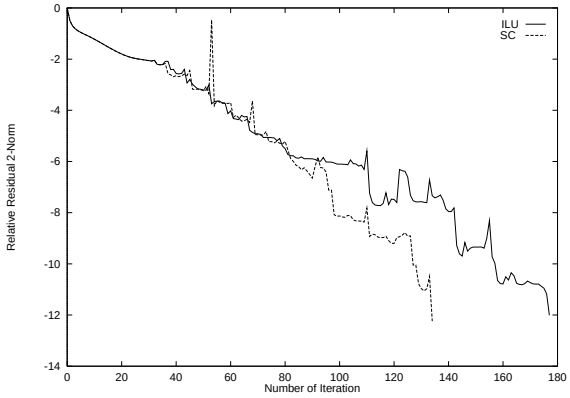
$65\times64 : v_1 = 0.5, v_2 = 0.5$



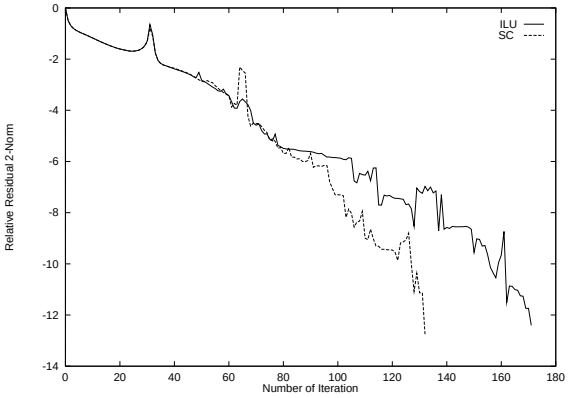
$65\times64 : v_1 = 0.5, v_2 = 0.2$



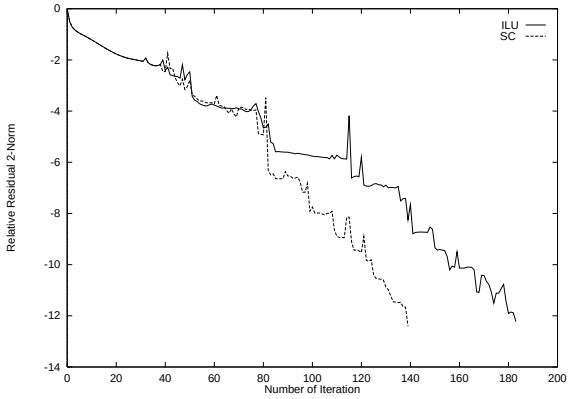
$65\times64 : v_1 = 0.5, v_2 = 0.8$



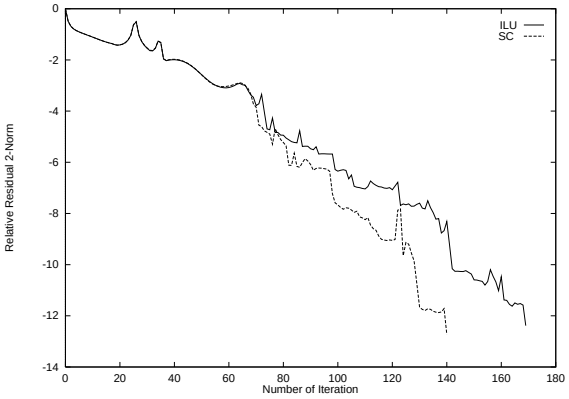
$65\times64 : v_1 = 0.5, v_2 = 1.0$



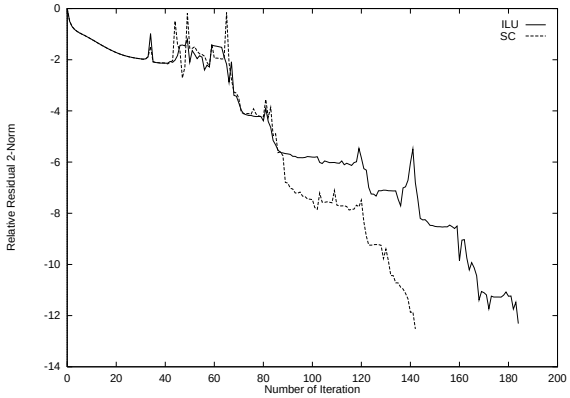
$65\times64 : v_1 = 0.5, v_2 = 5.0$



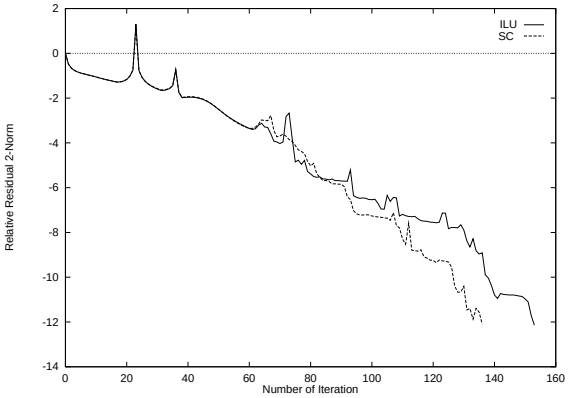
$65\times64 : v_1 = 0.5, v_2 = 2.0$



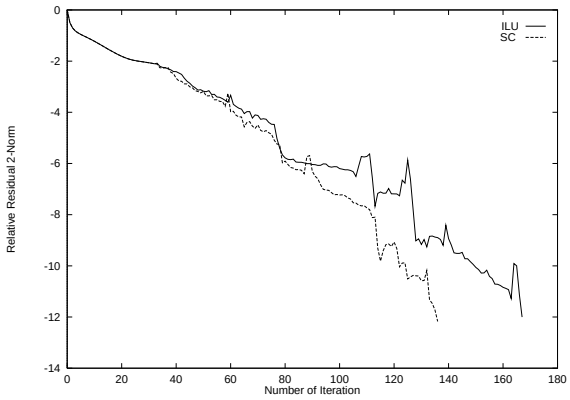
$65\times64 : v_1 = 0.5, v_2 = 8.0$



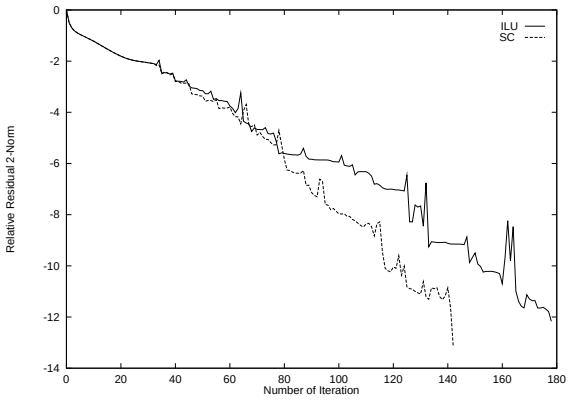
$65\times64 : v_1 = 0.5, v_2 = 3.0$



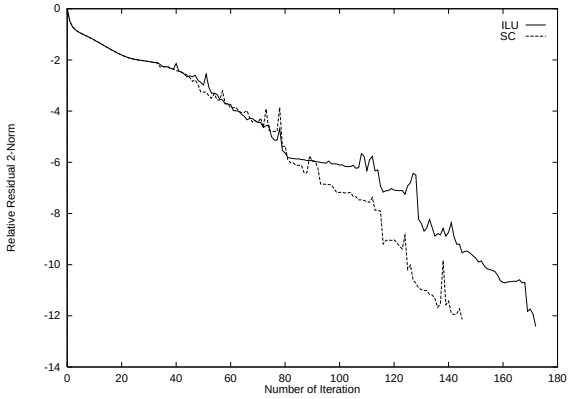
$65\times64 : v_1 = 0.5, v_2 = 10.0$



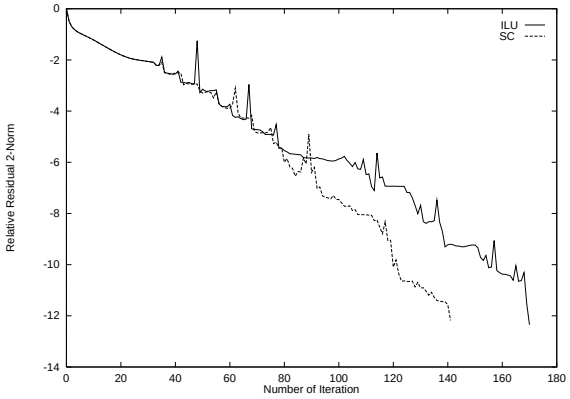
$65\times64 : v_1 = 0.8, v_2 = 0.0$



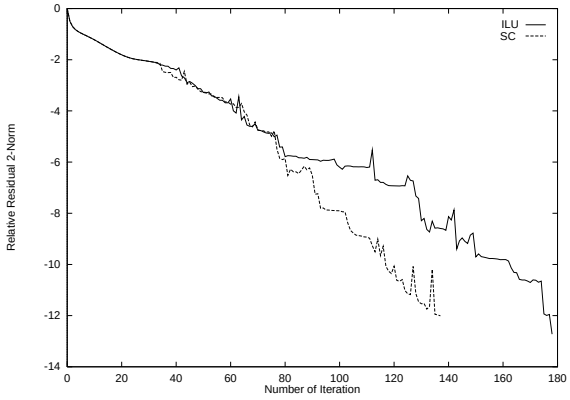
$65\times64 : v_1 = 0.8, v_2 = 0.3$



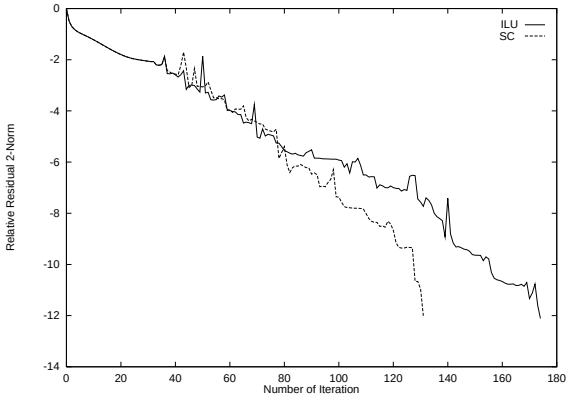
$65\times64 : v_1 = 0.8, v_2 = 0.1$



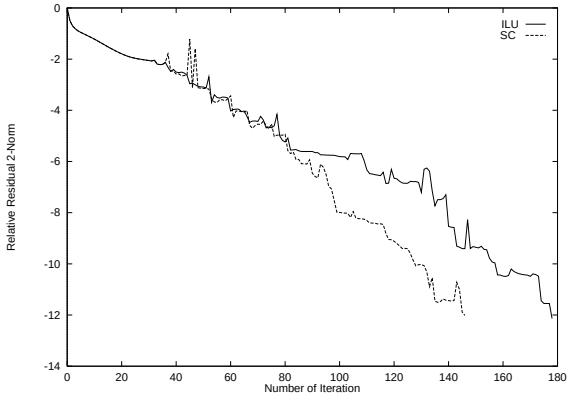
$65\times64 : v_1 = 0.8, v_2 = 0.5$



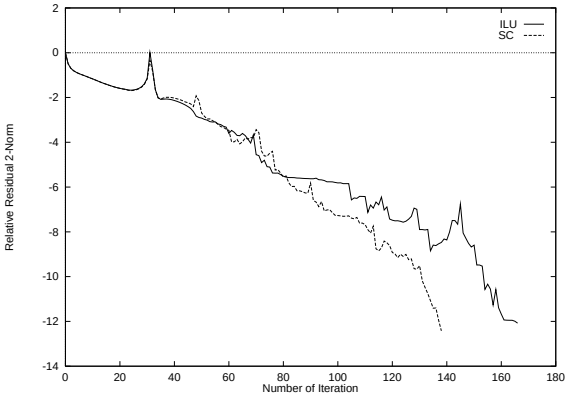
$65\times64 : v_1 = 0.8, v_2 = 0.2$



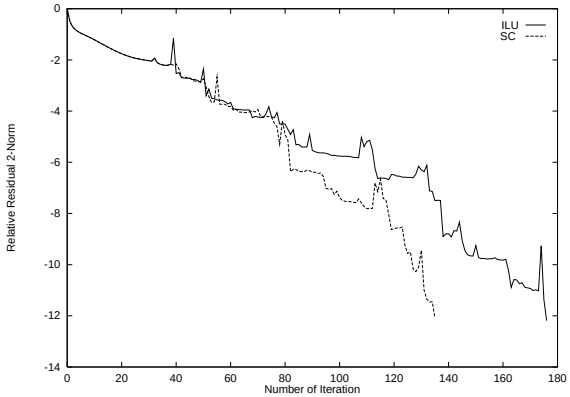
$65\times64 : v_1 = 0.8, v_2 = 0.8$



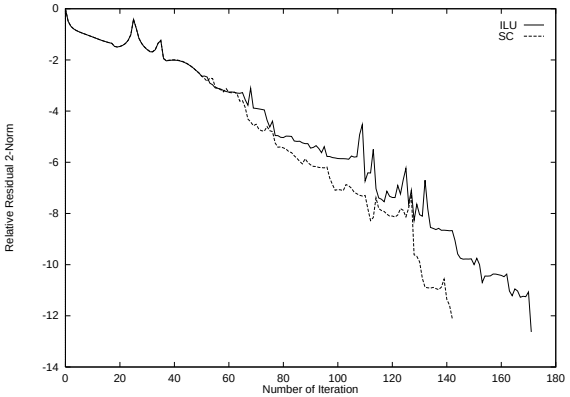
$65\times64 : v_1 = 0.8, v_2 = 1.0$



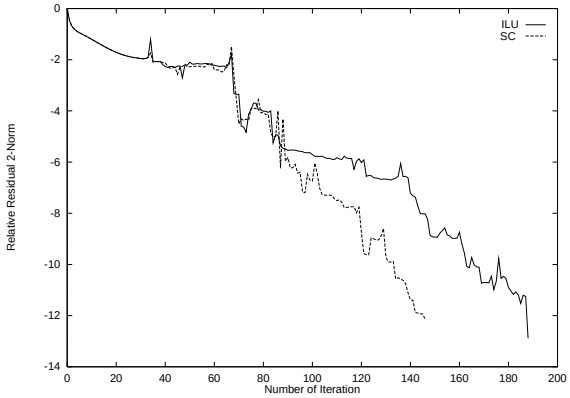
$65\times64 : v_1 = 0.8, v_2 = 5.0$



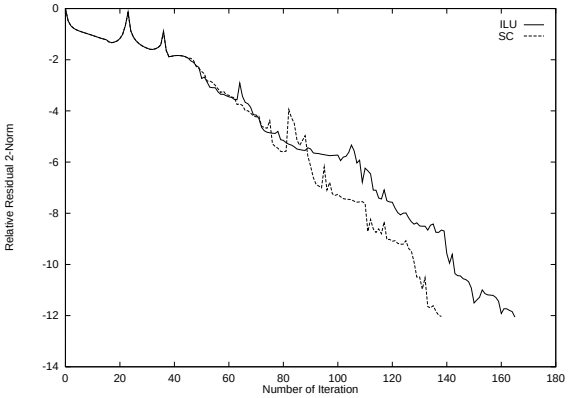
$65\times64 : v_1 = 0.8, v_2 = 2.0$



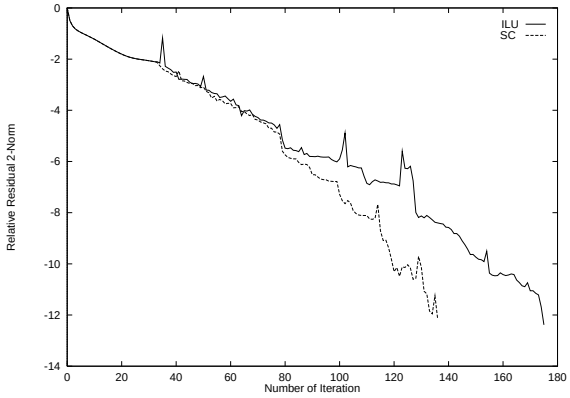
$65\times64 : v_1 = 0.8, v_2 = 8.0$



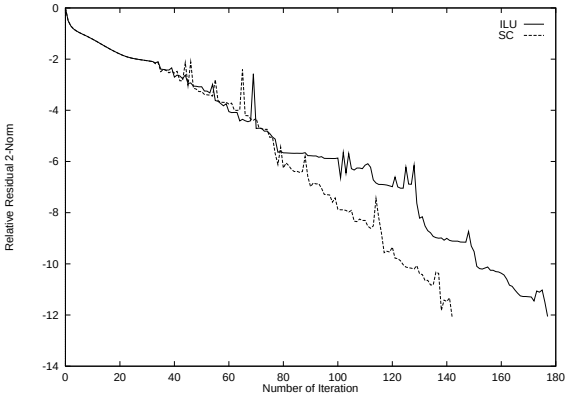
$65\times64 : v_1 = 0.8, v_2 = 3.0$



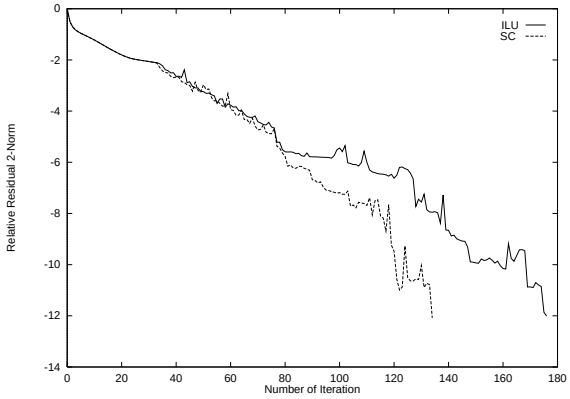
$65\times64 : v_1 = 0.8, v_2 = 10.0$



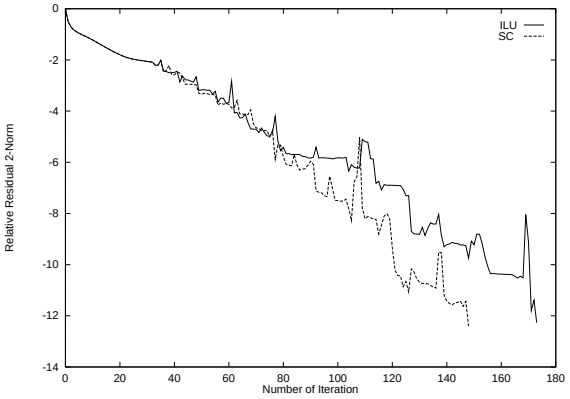
$65\times64 : v_1 = 1.0, v_2 = 0.0$



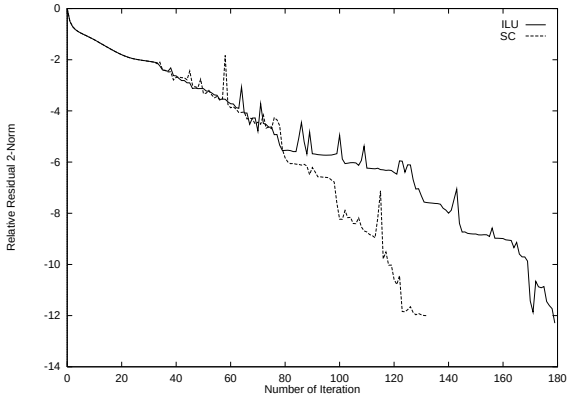
$65\times64 : v_1 = 1.0, v_2 = 0.3$



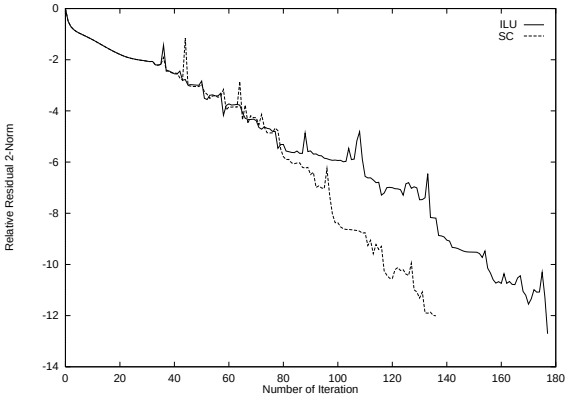
$65\times64 : v_1 = 1.0, v_2 = 0.1$



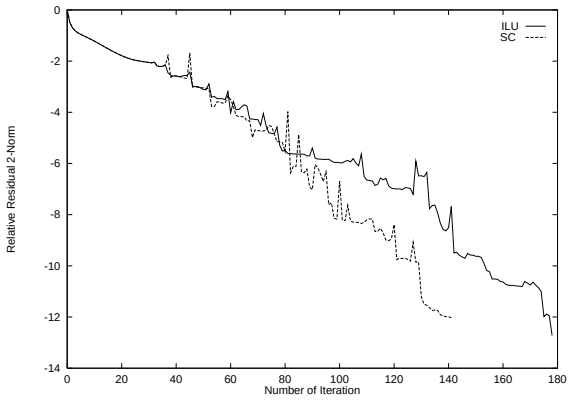
$65\times64 : v_1 = 1.0, v_2 = 0.5$



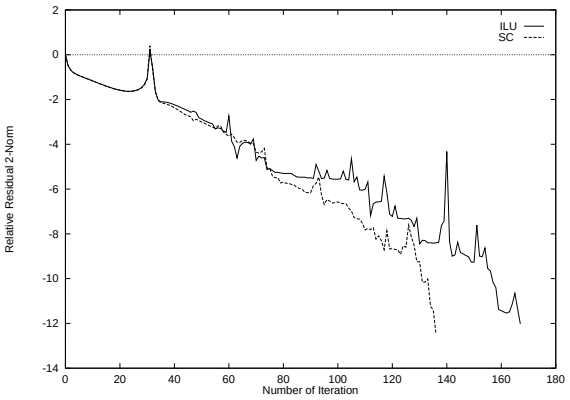
$65\times64 : v_1 = 1.0, v_2 = 0.2$



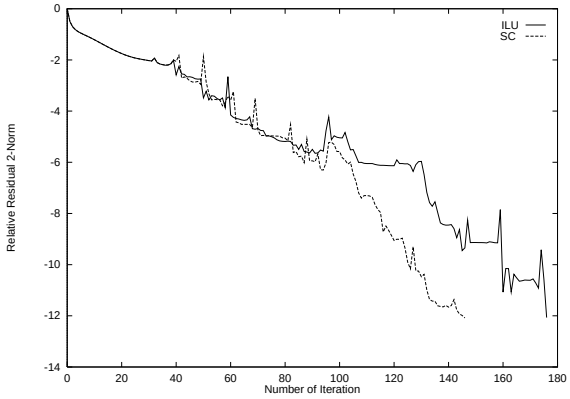
$65\times64 : v_1 = 1.0, v_2 = 0.8$



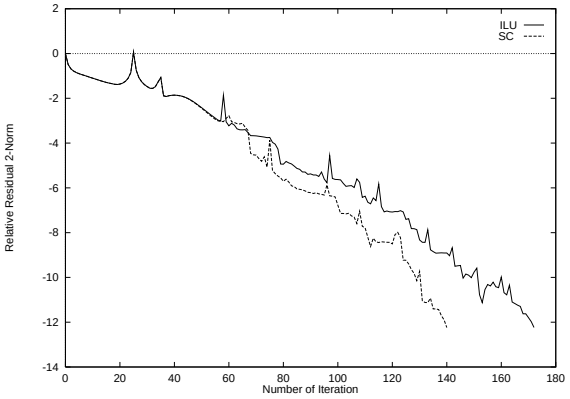
$65\times64 : v_1 = 1.0, v_2 = 1.0$



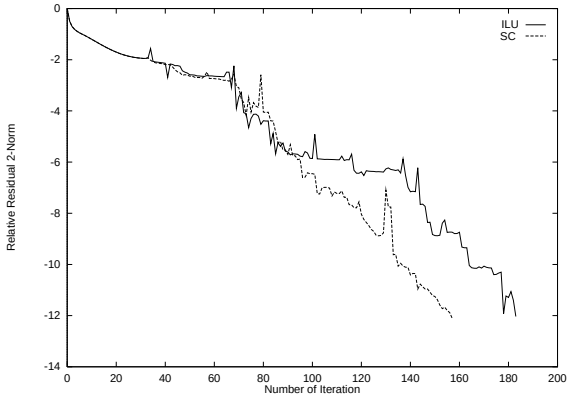
$65\times64 : v_1 = 1.0, v_2 = 5.0$



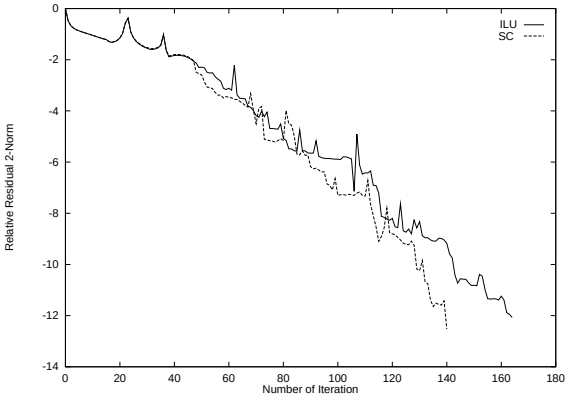
$65\times64 : v_1 = 1.0, v_2 = 2.0$



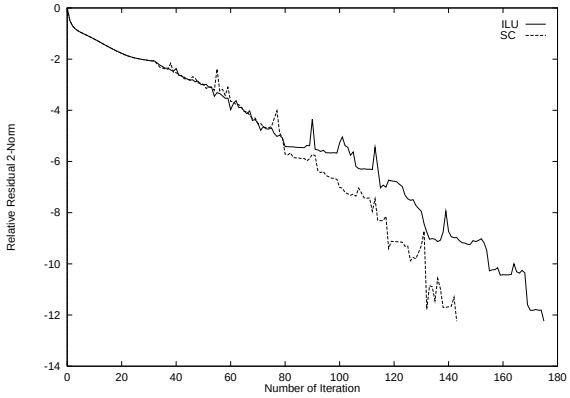
$65\times64 : v_1 = 1.0, v_2 = 8.0$



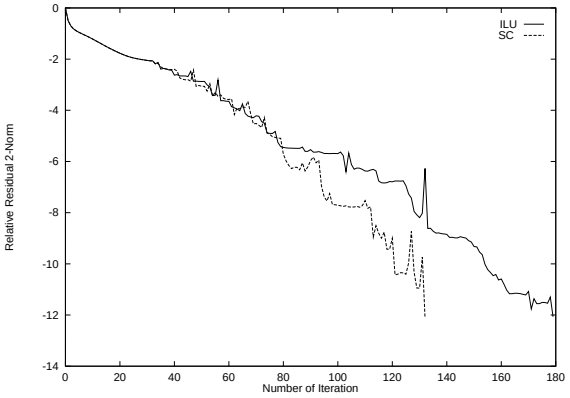
$65\times64 : v_1 = 1.0, v_2 = 3.0$



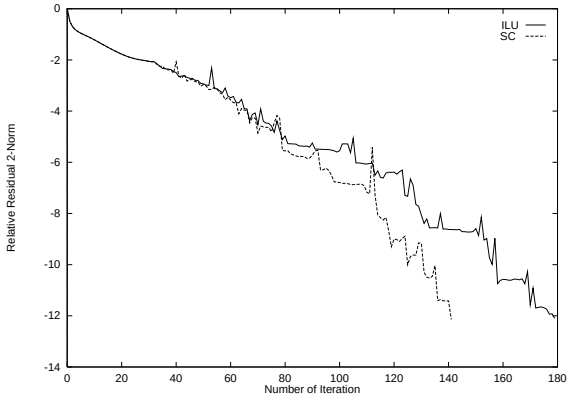
$65\times64 : v_1 = 1.0, v_2 = 10.0$



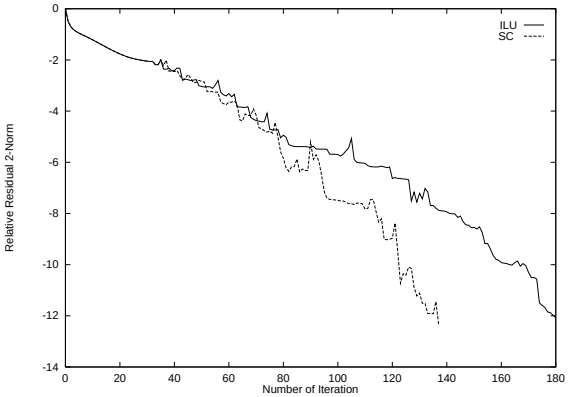
$65\times64 : v_1 = 2.0, v_2 = 0.0$



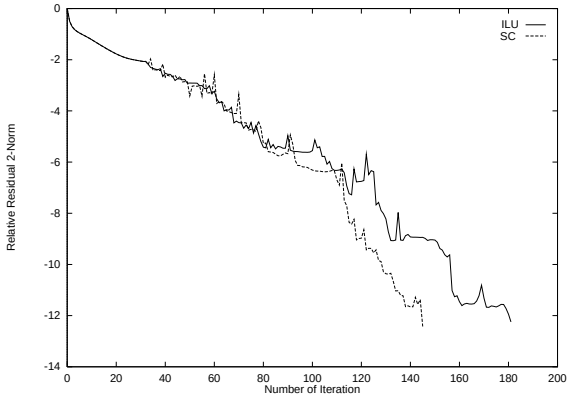
$65\times64 : v_1 = 2.0, v_2 = 0.3$



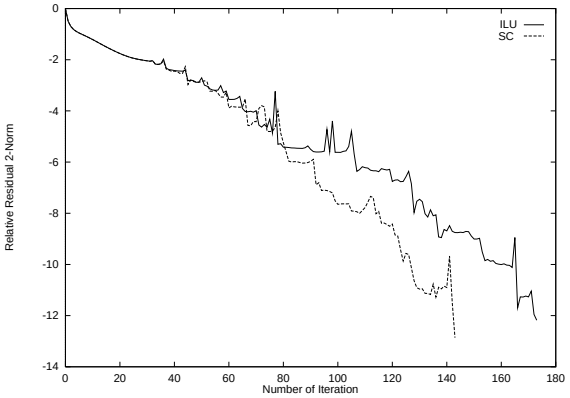
$65\times64 : v_1 = 2.0, v_2 = 0.1$



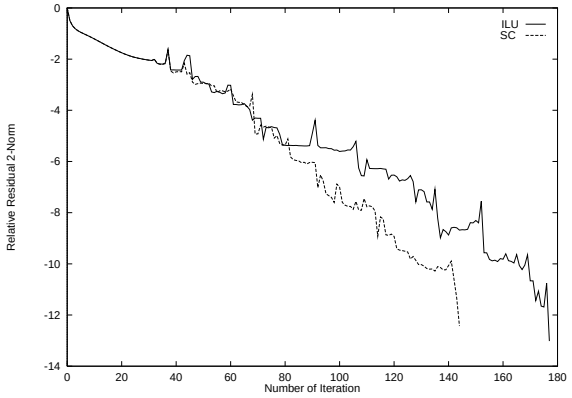
$65\times64 : v_1 = 2.0, v_2 = 0.5$



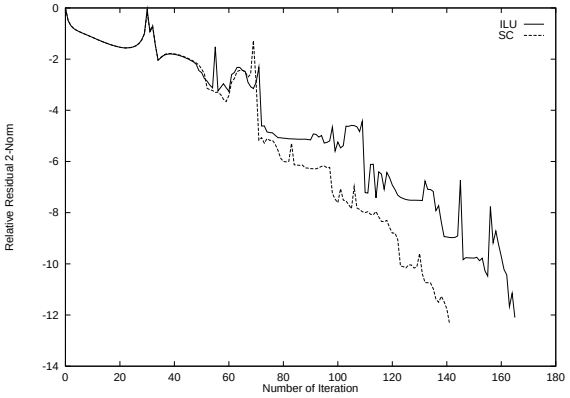
$65\times64 : v_1 = 2.0, v_2 = 0.2$



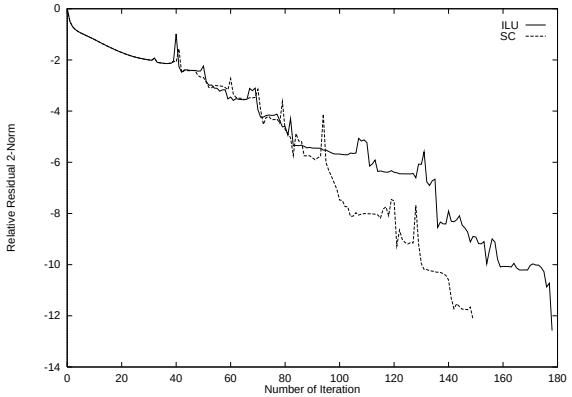
$65\times64 : v_1 = 2.0, v_2 = 0.8$



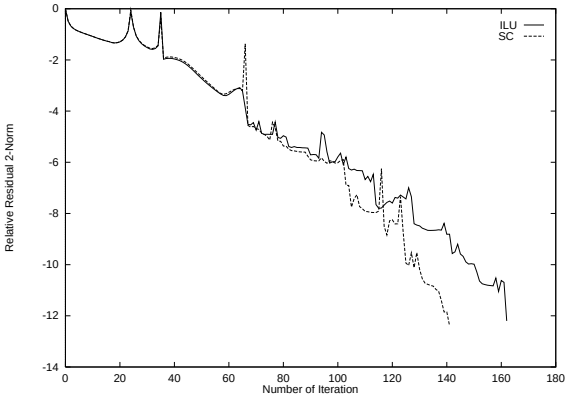
$65\times64 : v_1 = 2.0, v_2 = 1.0$



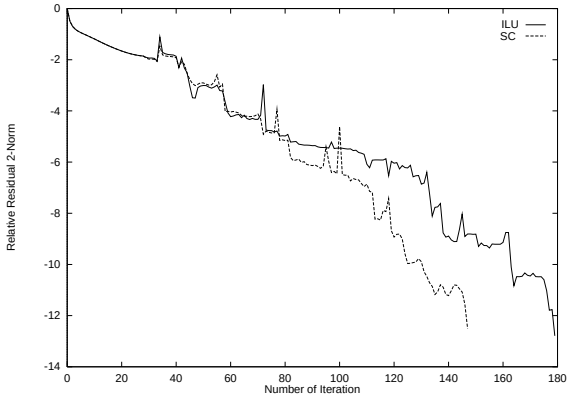
$65\times64 : v_1 = 2.0, v_2 = 5.0$



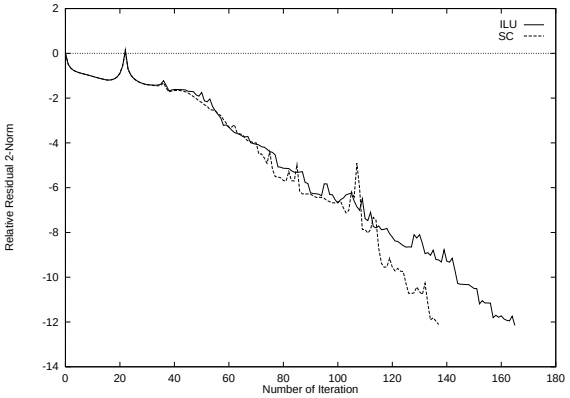
$65\times64 : v_1 = 2.0, v_2 = 2.0$



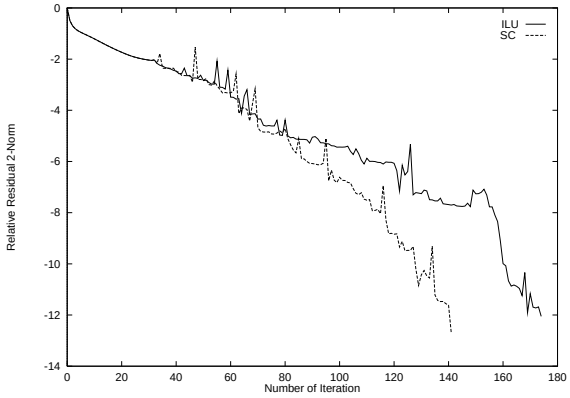
$65\times64 : v_1 = 2.0, v_2 = 8.0$



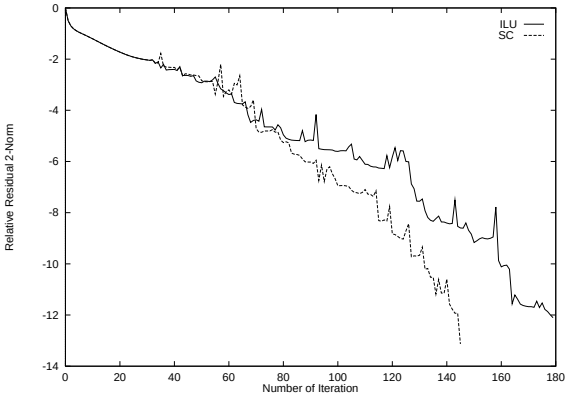
$65\times64 : v_1 = 2.0, v_2 = 3.0$



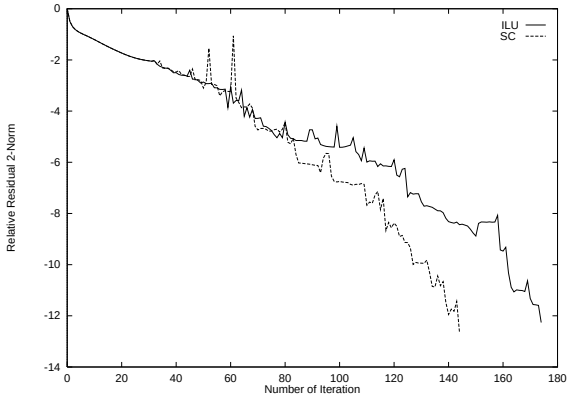
$65\times64 : v_1 = 2.0, v_2 = 10.0$



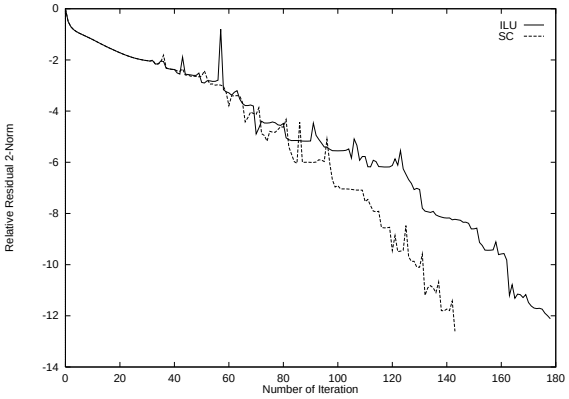
$65\times64 : v_1 = 3.0, v_2 = 0.0$



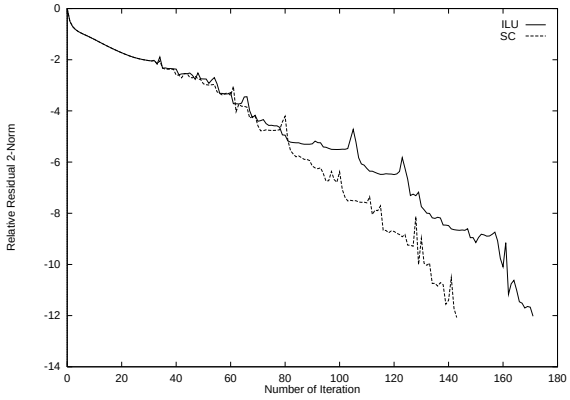
$65\times64 : v_1 = 3.0, v_2 = 0.3$



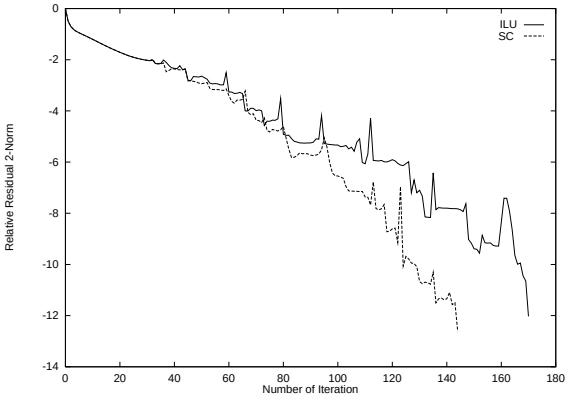
$65\times64 : v_1 = 3.0, v_2 = 0.1$



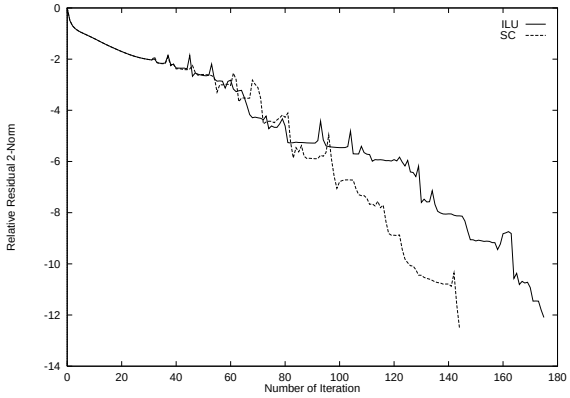
$65\times64 : v_1 = 3.0, v_2 = 0.5$



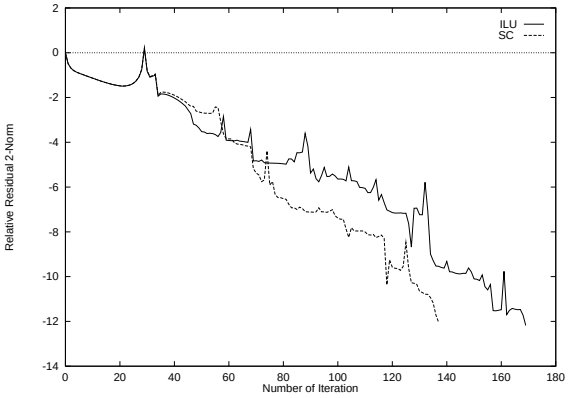
$65\times64 : v_1 = 3.0, v_2 = 0.2$



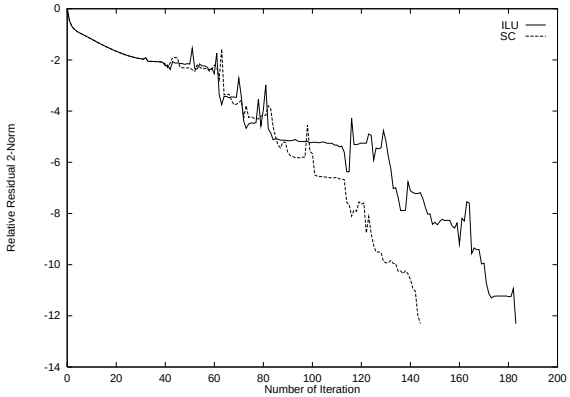
$65\times64 : v_1 = 3.0, v_2 = 0.8$



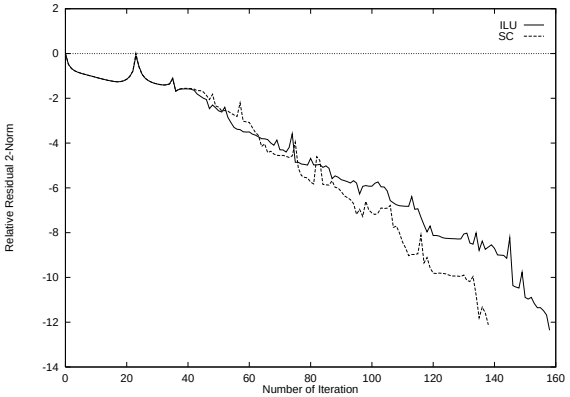
$65\times64 : v_1 = 3.0, v_2 = 1.0$



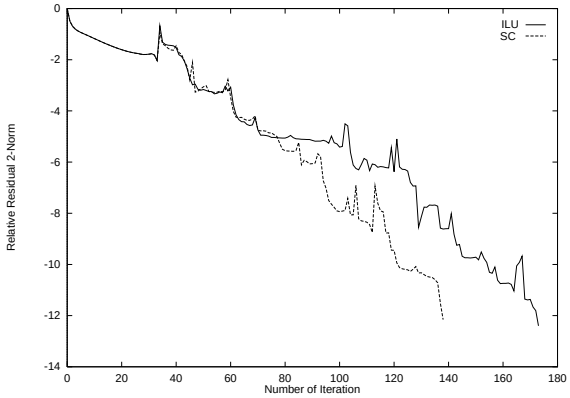
$65\times64 : v_1 = 3.0, v_2 = 5.0$



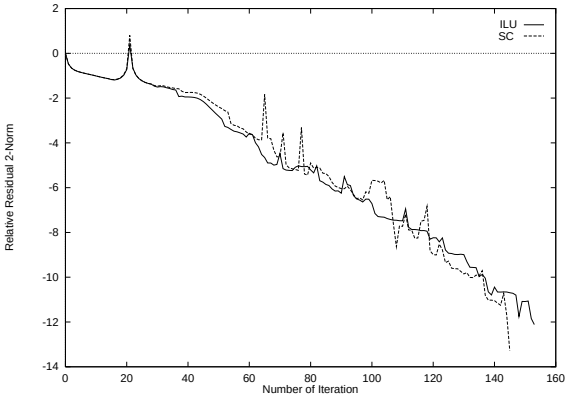
$65\times64 : v_1 = 3.0, v_2 = 2.0$



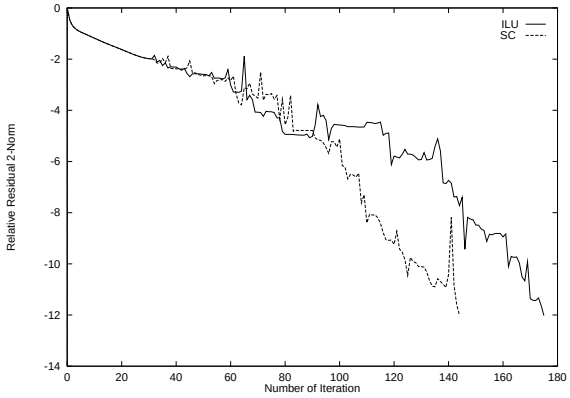
$65\times64 : v_1 = 3.0, v_2 = 8.0$



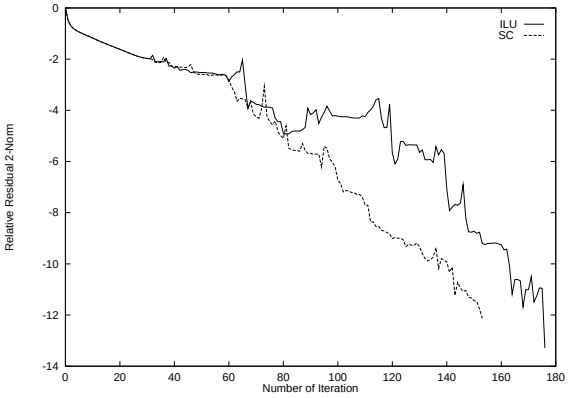
$65\times64 : v_1 = 3.0, v_2 = 3.0$



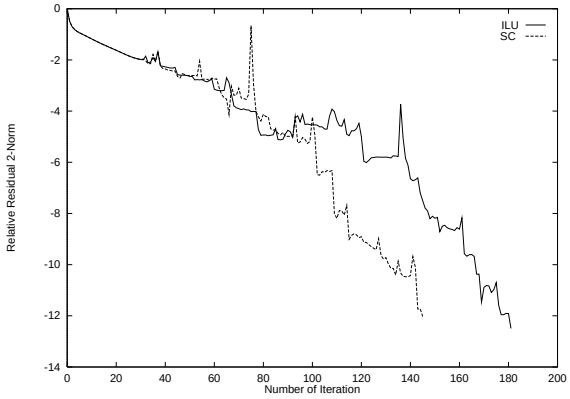
$65\times64 : v_1 = 3.0, v_2 = 10.0$



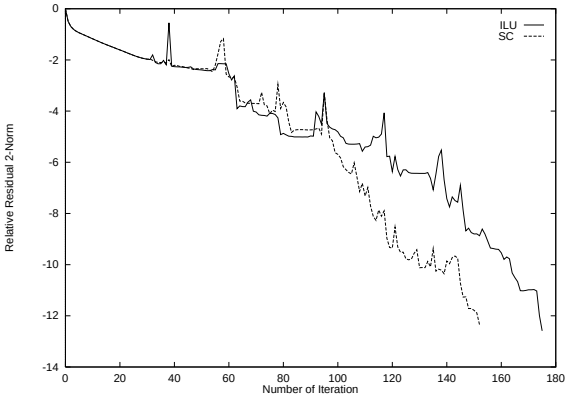
$65\times64 : v_1 = 5.0, v_2 = 0.0$



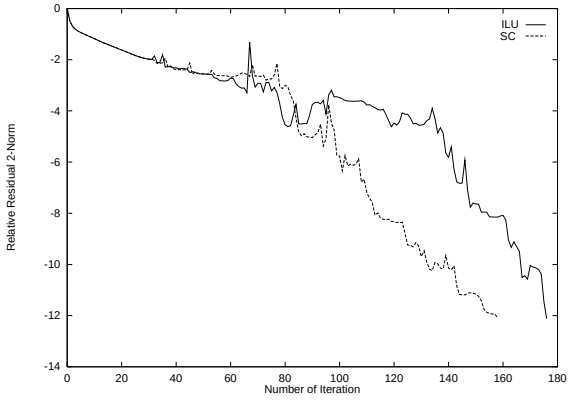
$65\times64 : v_1 = 5.0, v_2 = 0.3$



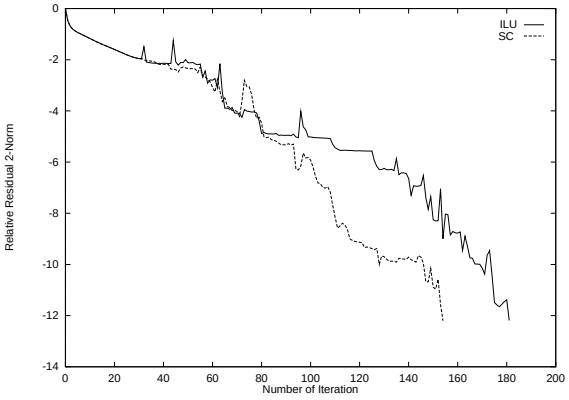
$65\times64 : v_1 = 5.0, v_2 = 0.1$



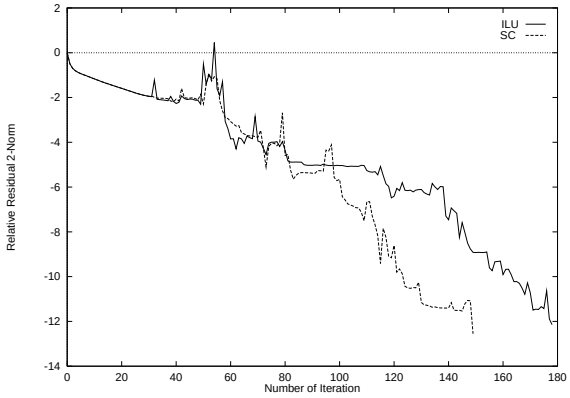
$65\times64 : v_1 = 5.0, v_2 = 0.5$



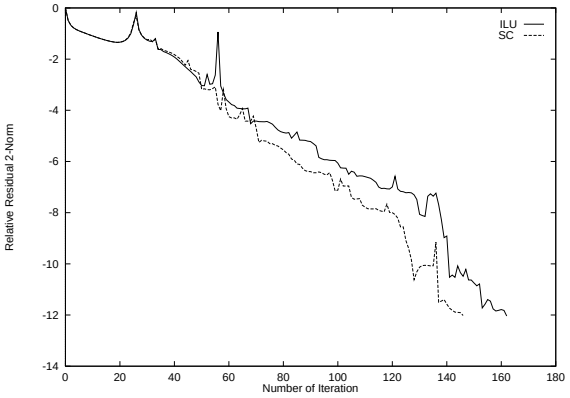
$65\times64 : v_1 = 5.0, v_2 = 0.2$



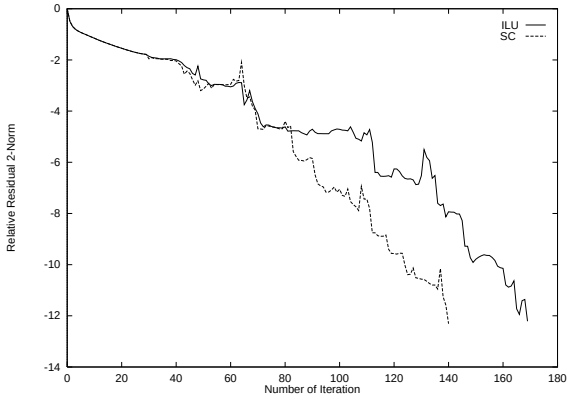
$65\times64 : v_1 = 5.0, v_2 = 0.8$



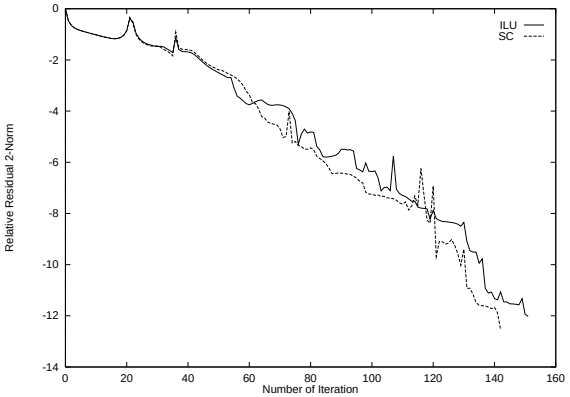
$65\times64 : v_1 = 5.0, v_2 = 1.0$



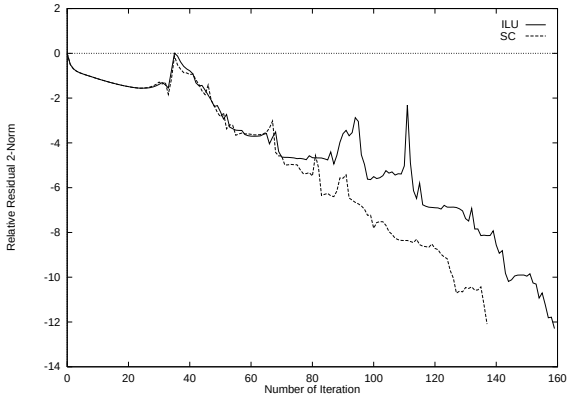
$65\times64 : v_1 = 5.0, v_2 = 5.0$



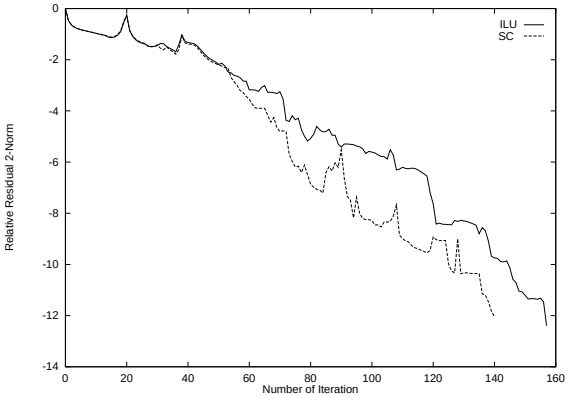
$65\times64 : v_1 = 5.0, v_2 = 2.0$



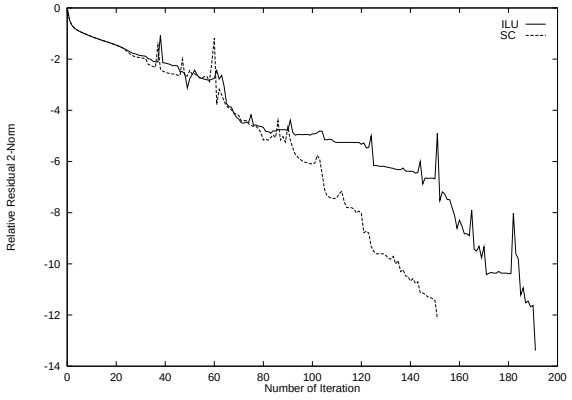
$65\times64 : v_1 = 5.0, v_2 = 8.0$



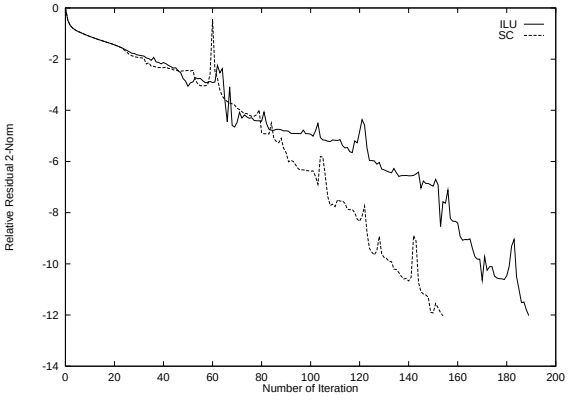
$65\times64 : v_1 = 5.0, v_2 = 3.0$



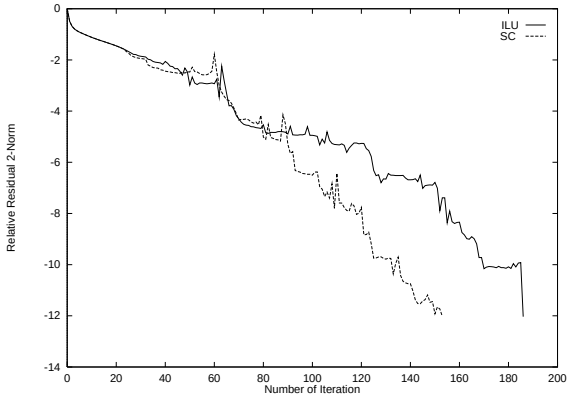
$65\times64 : v_1 = 5.0, v_2 = 10.0$



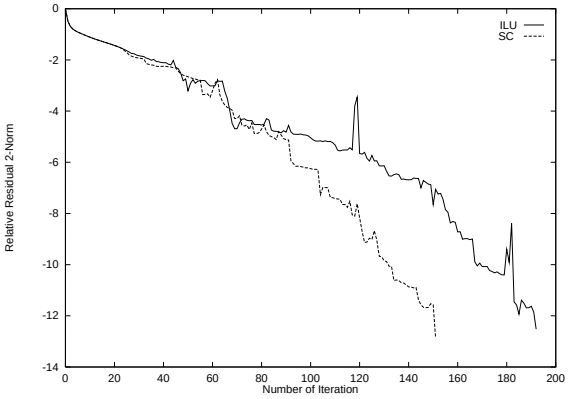
$65\times64 : v_1 = 8.0, v_2 = 0.0$



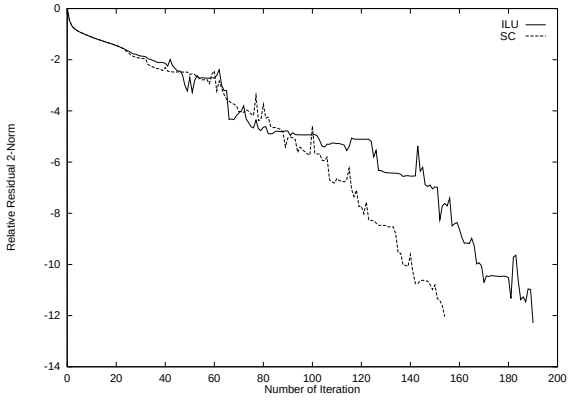
$65\times64 : v_1 = 8.0, v_2 = 0.3$



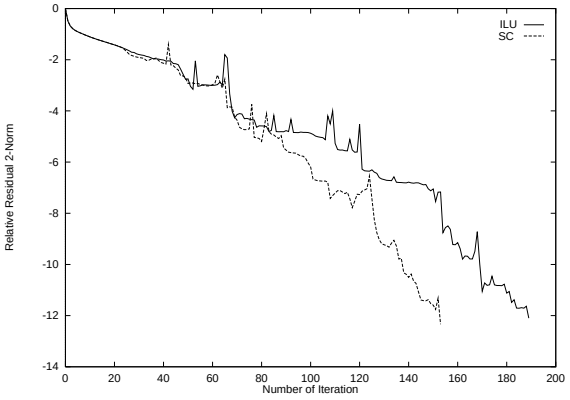
$65\times64 : v_1 = 8.0, v_2 = 0.1$



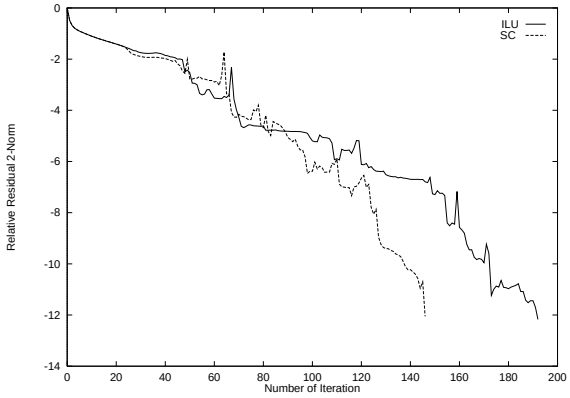
$65\times64 : v_1 = 8.0, v_2 = 0.5$



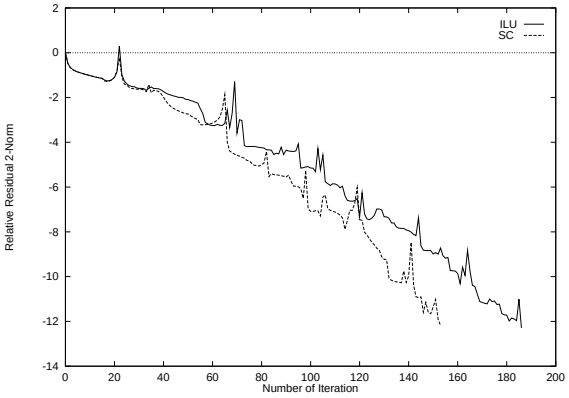
$65\times64 : v_1 = 8.0, v_2 = 0.2$



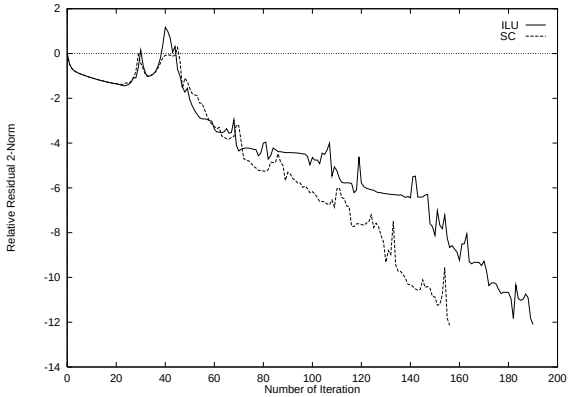
$65\times64 : v_1 = 8.0, v_2 = 0.8$



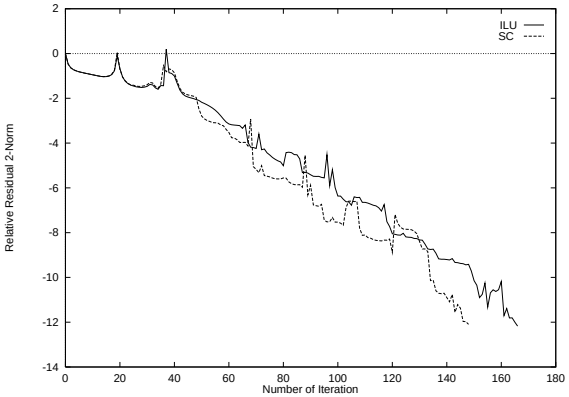
$65\times64 : v_1 = 8.0, v_2 = 1.0$



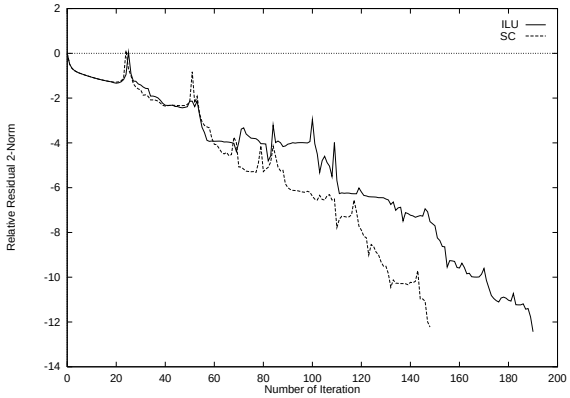
$65\times64 : v_1 = 8.0, v_2 = 5.0$



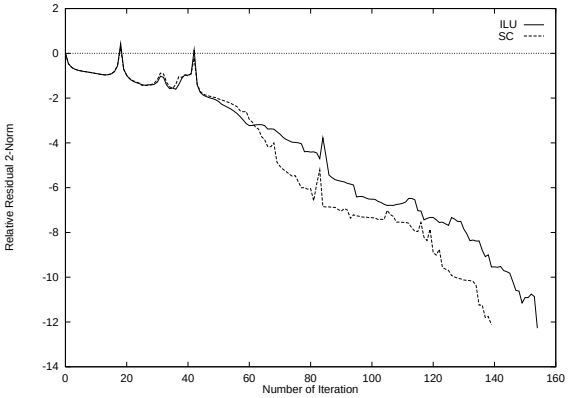
$65\times64 : v_1 = 8.0, v_2 = 2.0$



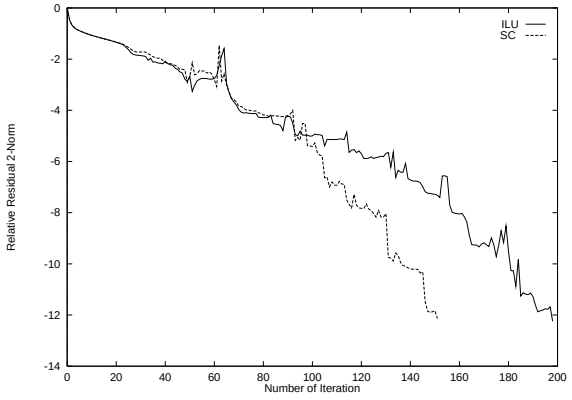
$65\times64 : v_1 = 8.0, v_2 = 8.0$



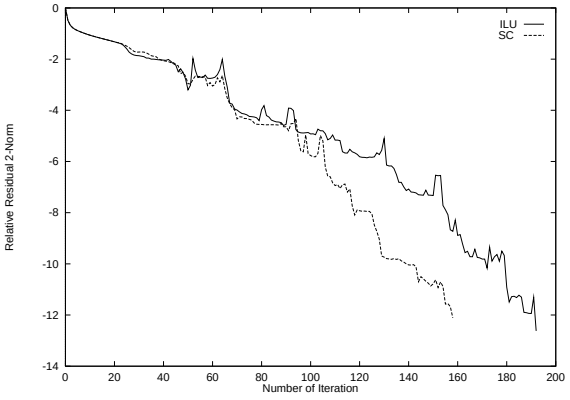
$65\times64 : v_1 = 8.0, v_2 = 3.0$



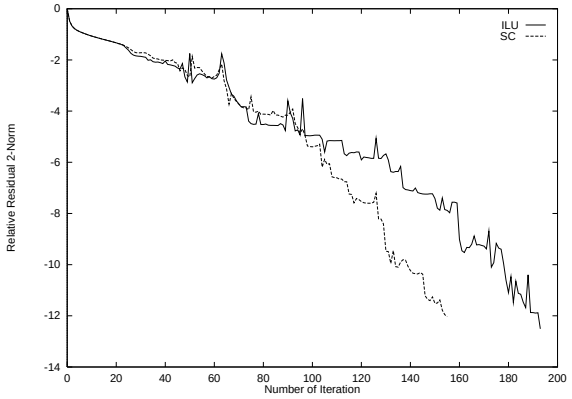
$65\times64 : v_1 = 8.0, v_2 = 10.0$



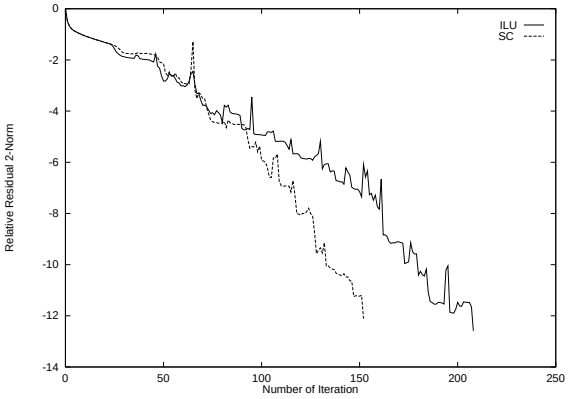
$65\times64 : v_1 = 10.0, v_2 = 0.0$



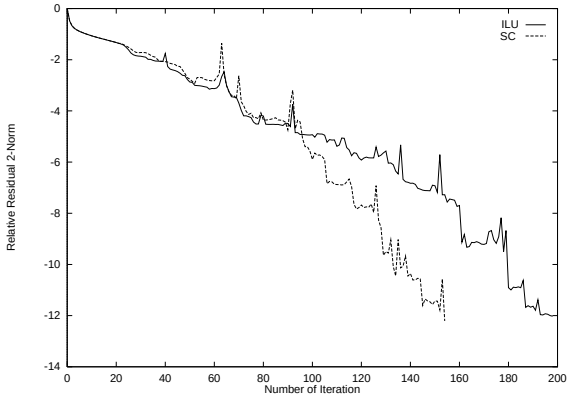
$65\times64 : v_1 = 10.0, v_2 = 0.3$



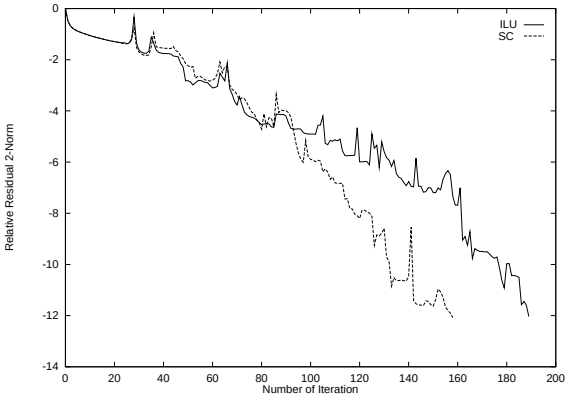
$65\times64 : v_1 = 10.0, v_2 = 0.1$



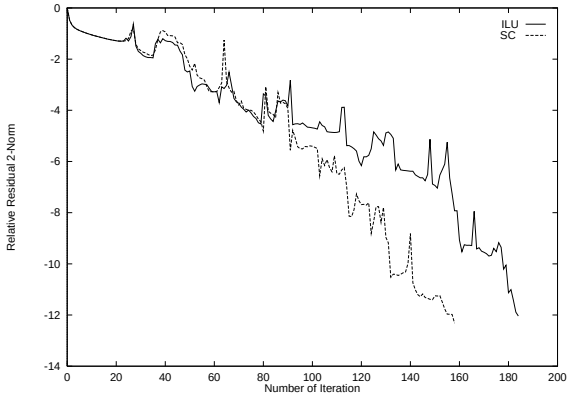
$65\times64 : v_1 = 10.0, v_2 = 0.5$



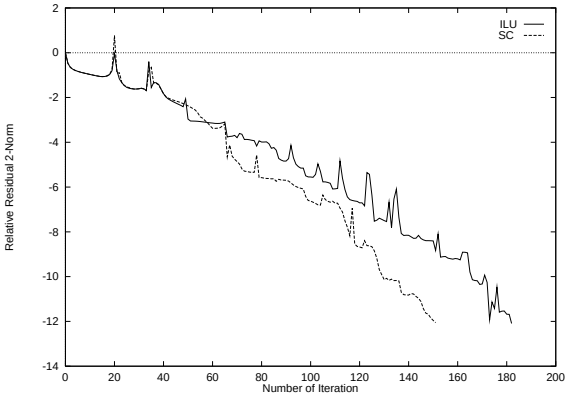
$65\times64 : v_1 = 10.0, v_2 = 0.2$



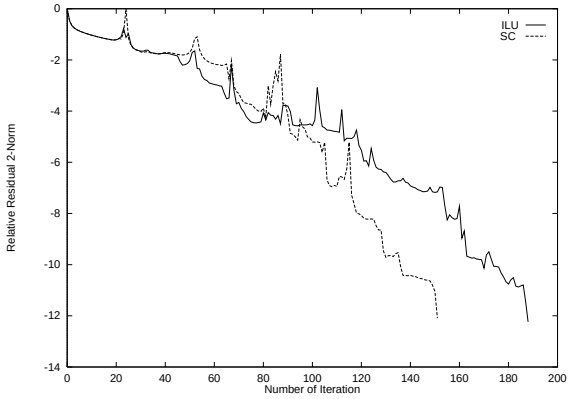
$65\times64 : v_1 = 10.0, v_2 = 0.8$



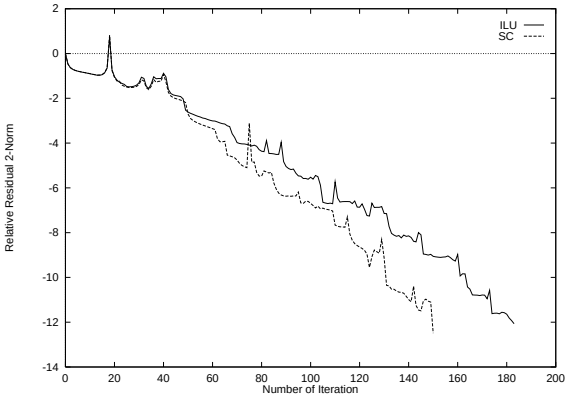
$65\times64 : v_1 = 10.0, v_2 = 1.0$



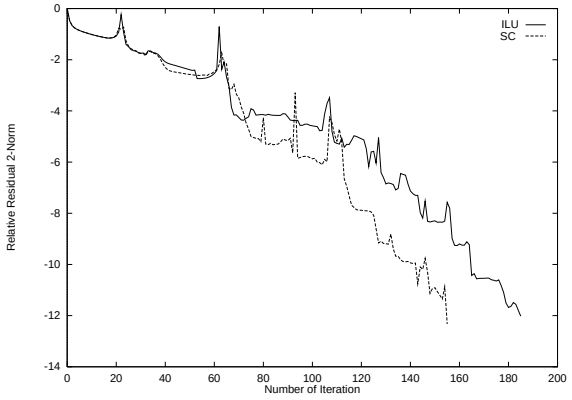
$65\times64 : v_1 = 10.0, v_2 = 5.0$



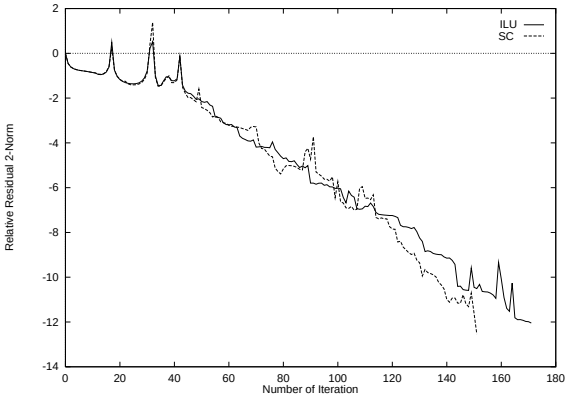
$65\times64 : v_1 = 10.0, v_2 = 2.0$



$65\times64 : v_1 = 10.0, v_2 = 8.0$



$65\times64 : v_1 = 10.0, v_2 = 3.0$



$65\times64 : v_1 = 10.0, v_2 = 10.0$