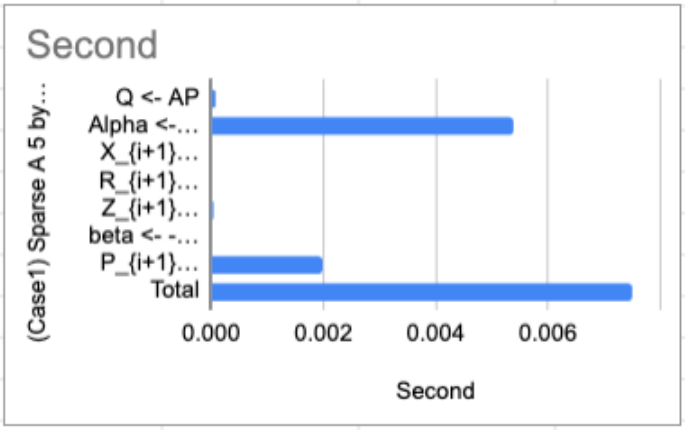
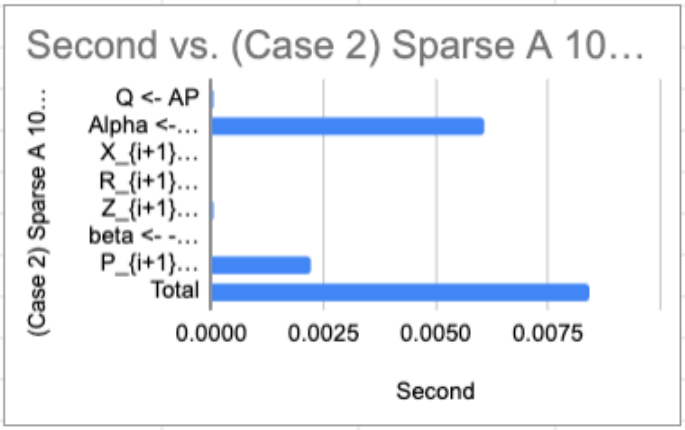
BFBCG (1st iteration)

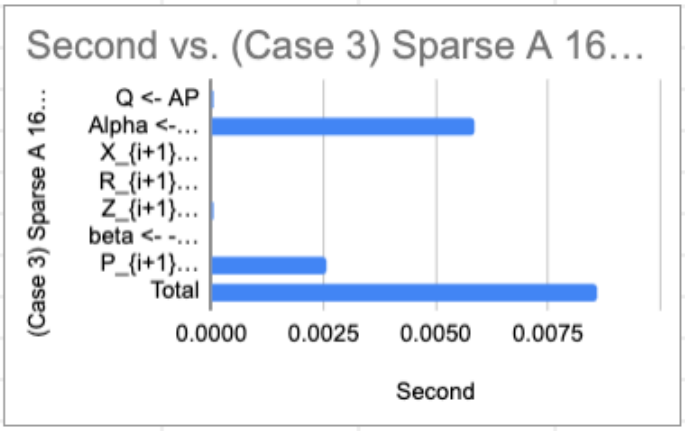
(Case1) Sparse A 5 by 5, Block 3	Second
Q <- AP	0.000059
Alpha <- (P'Q)^{-1} * (P'R)	0.005392
X_{i+1} <- x_{i} + P * alpha	0.000005
R_{i+1} <- R_{i} - Q * alpha	0.000004
Z_{i+1} <- MR_{i+1}	0.000051
beta <- -(P'Q)^{-1} * (Q'Z_{i+1})	0.000012
P_{i+1} = orth(Z_{i+1} + p * beta)	0.001979
Total	0.007502



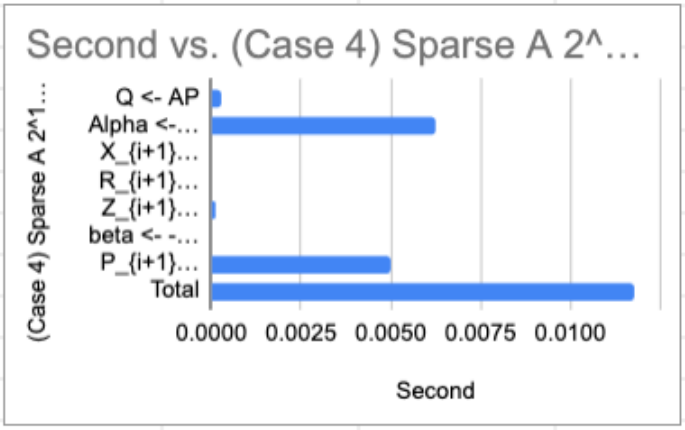
(Case 2) Sparse A 10 by 10, Block 5	Second
Q <- AP	0.000063
Alpha <- (P'Q)^{-1} * (P'R)	0.006069
X_{i+1} <- x_{i} + P * alpha	0.000005
R_{i+1} <- R_{i} - Q * alpha	0.000004
Z_{i+1} <- MR_{i+1}	0.000051
beta <- -(P'Q)^{-1} * (Q'Z_{i+1})	0.000012
P_{i+1} = orth(Z_{i+1} + p * beta)	0.002227
Total	0.008431



(Case 3) Sparse A 16 by 16, Block 15	Second
Q <- AP	0.000071
Alpha <- (P'Q)^{-1} * (P'R)	0.005849
X_{i+1} <- x_{i} + P * alpha	0.000004
R_{i+1} <- R_{i} - Q * alpha	0.000004
Z_{i+1} <- MR_{i+1}	0.000061
beta <- -(P'Q)^{-1} * (Q'Z_{i+1})	0.000012
P_{i+1} = orth(Z_{i+1} + p * beta)	0.00258
Total	0.008581

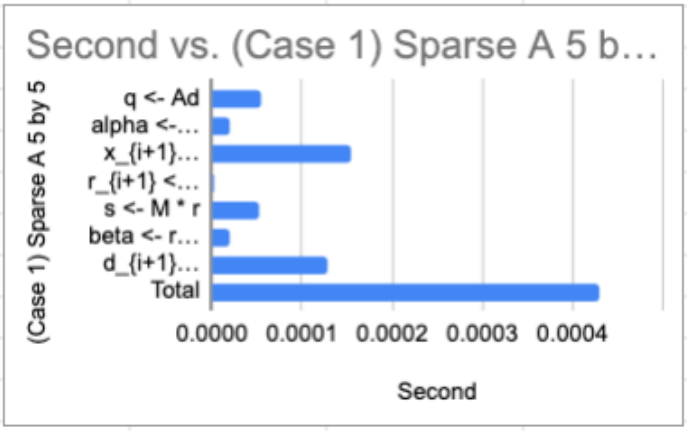


(Case 4) Sparse A 2^15 by 2*15, Block 16	Second
Q <- AP	0.000302
Alpha <- (P'Q)^{-1} * (P'R)	0.006272
X_{i+1} <- x_{i} + P * alpha	0.000006
R_{i+1} <- R_{i} - Q * alpha	0.000004
Z_{i+1} <- MR_{i+1}	0.000137
beta <- -(P'Q)^{-1} * (Q'Z_{i+1})	0.000016
P_{i+1} = orth(Z_{i+1} + p * beta)	0.005015
Total	0.011752

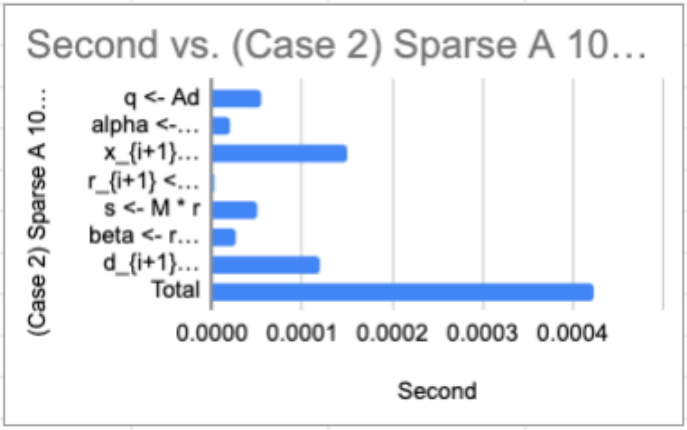


CG (1st iteration)

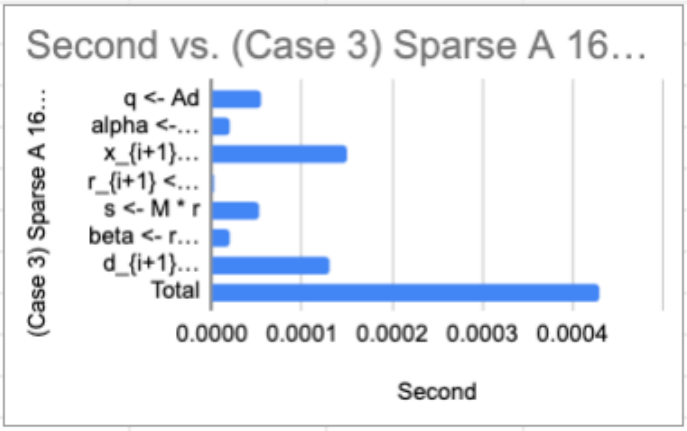
(Case 1) Sparse A 5 by 5	Second
q <- Ad	0.000054
alpha <- delta_{new} / d^{T} * q	0.000019
x_{i+1} <- x_{i} + alpha * d	0.000154
r_{i+1} <- r_{i} - alpha * q	0.000003
s <- M * r	0.000052
beta <- r' * s / delta_old	0.00002
d_{i+1} <- s + d_{i} * beta	0.000128
Total	0.00043



(Case 2) Sparse A 10 by 10	Second
q <- Ad	0.000054
alpha <- delta_{new} / d^{T} * q	0.00002
x_{i+1} <- x_{i} + alpha * d	0.00015
r_{i+1} <- r_{i} - alpha * q	0.000003
s <- M * r	0.000051
beta <- r' * s / delta_old	0.000026
d_{i+1} <- s + d_{i} * beta	0.00012
Total	0.000424



(Case 3) Sparse A 16 by 16	Second
q <- Ad	0.000055
alpha <- delta_{new} / d^{T} * q	0.00002
x_{i+1} <- x_{i} + alpha * d	0.000149
r_{i+1} <- r_{i} - alpha * q	0.000003
s <- M * r	0.000052
beta <- r' * s / delta_old	0.00002
d_{i+1} <- s + d_{i} * beta	0.00013
Total	0.000429



(Case 4) Sparse A 2^15 by 2^15	Second
q <- Ad	0.000351
alpha <- delta_{new} / d^{T} * q	0.000026
x_{i+1} <- x_{i} + alpha * d	0.000144
r_{i+1} <- r_{i} - alpha * q	0.000003
s <- M * r	0.000282
beta <- r' * s / delta_old	0.000027
d_{i+1} <- s + d_{i} * beta	0.000128
Total	0.000961