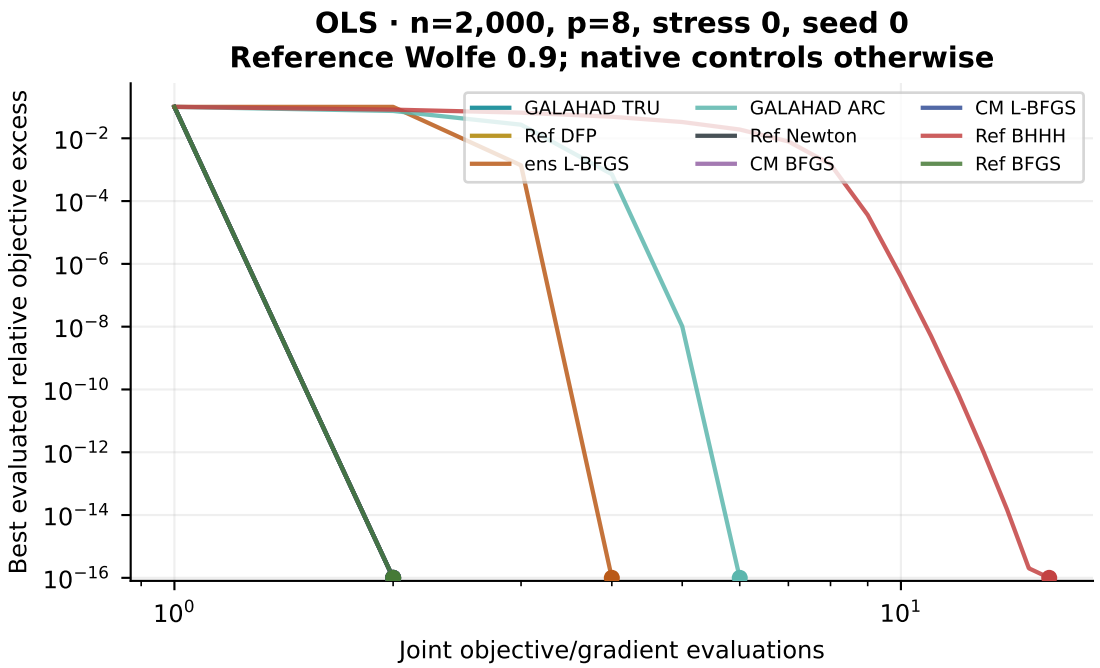
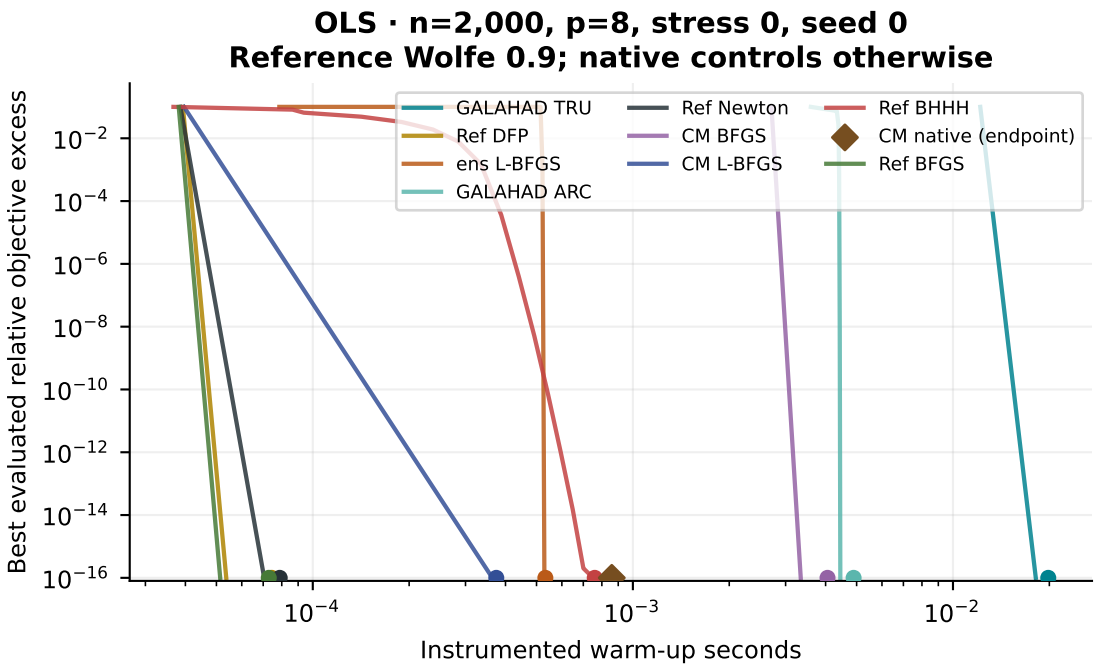
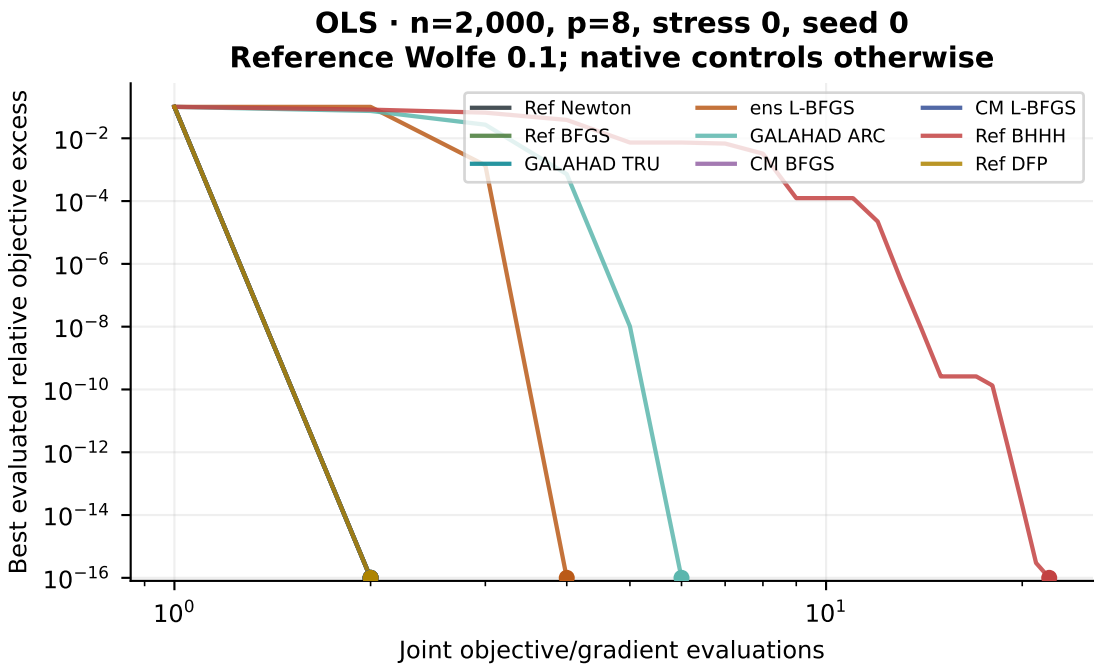
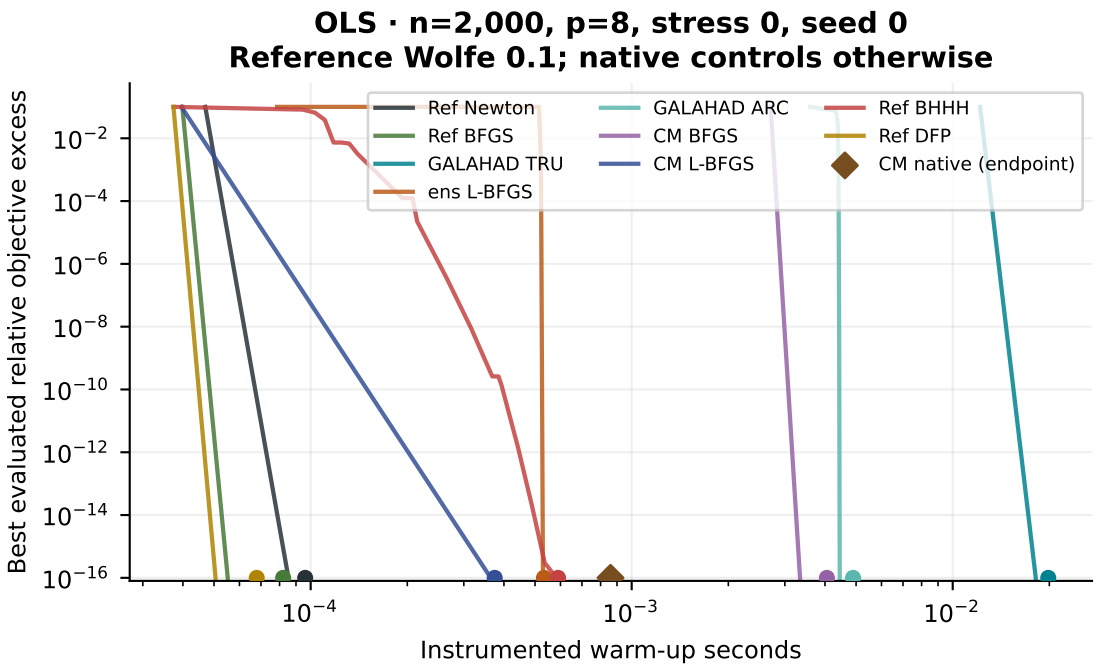
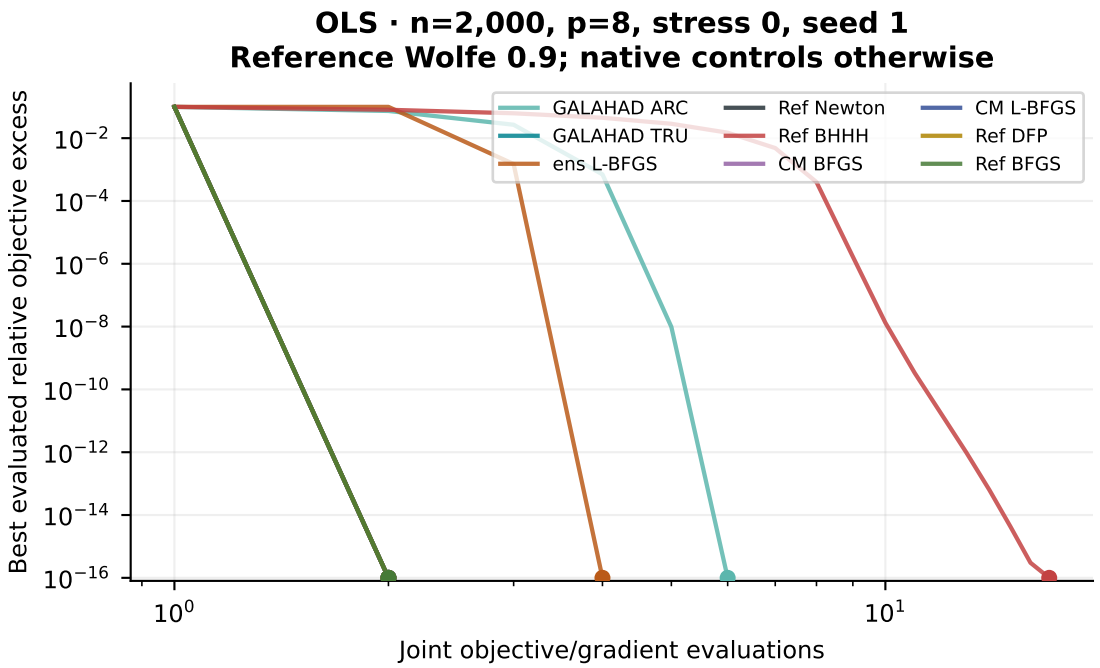
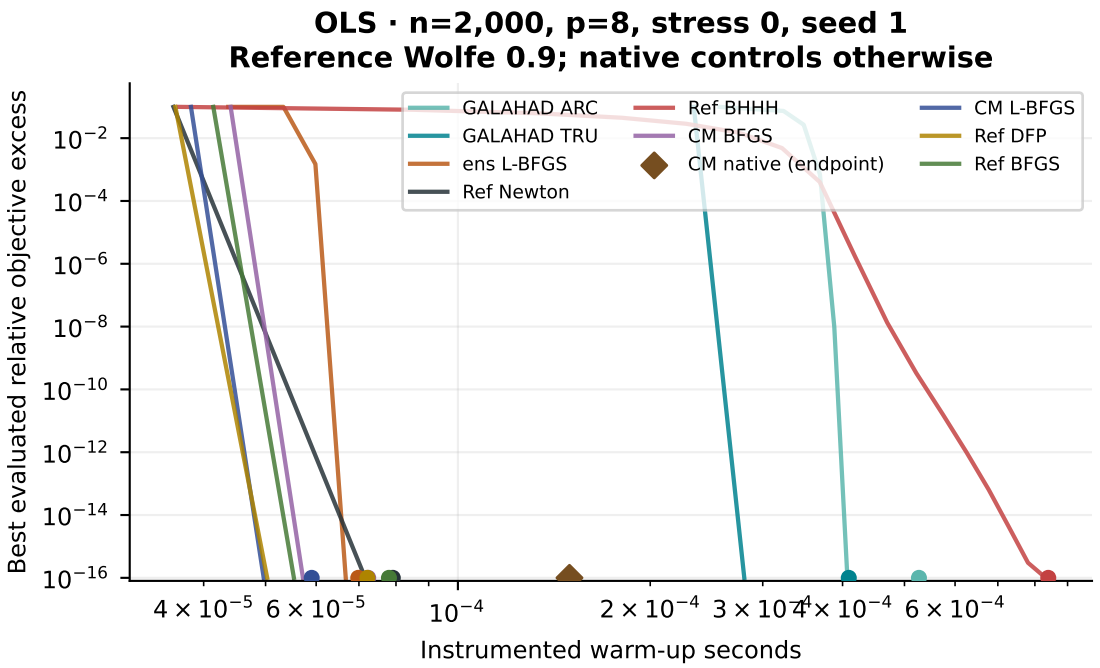

OLS · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
GALAHAD TRU
Ref DFP
ens L-BFGS
GALAHAD ARC
Ref Newton
CM BFGS
CM L-BFGS
Ref BHHH
Ref BFGS
Best evaluated relative objective excess
Joint objective/gradient evaluations

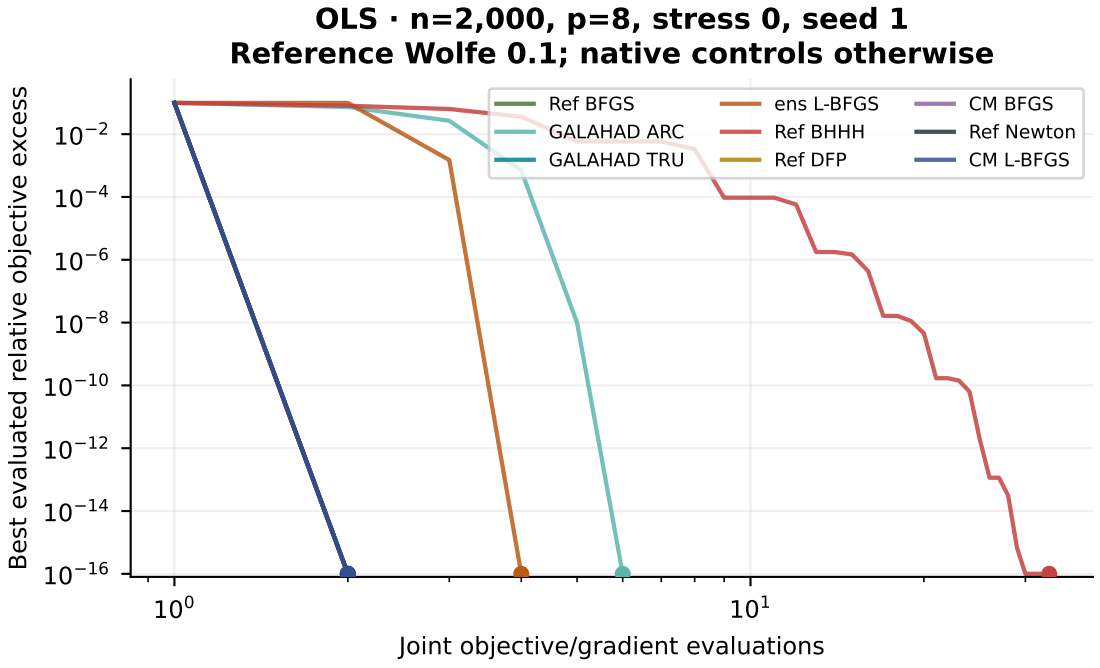

OLS · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
GALAHAD TRU
Ref DFP
ens L-BFGS
GALAHAD ARC
Ref Newton
CM BFGS
CM L-BFGS
Ref BHHH
CM native (endpoint)
Ref BFGS
Best evaluated relative objective excess
Instrumented warm-up seconds

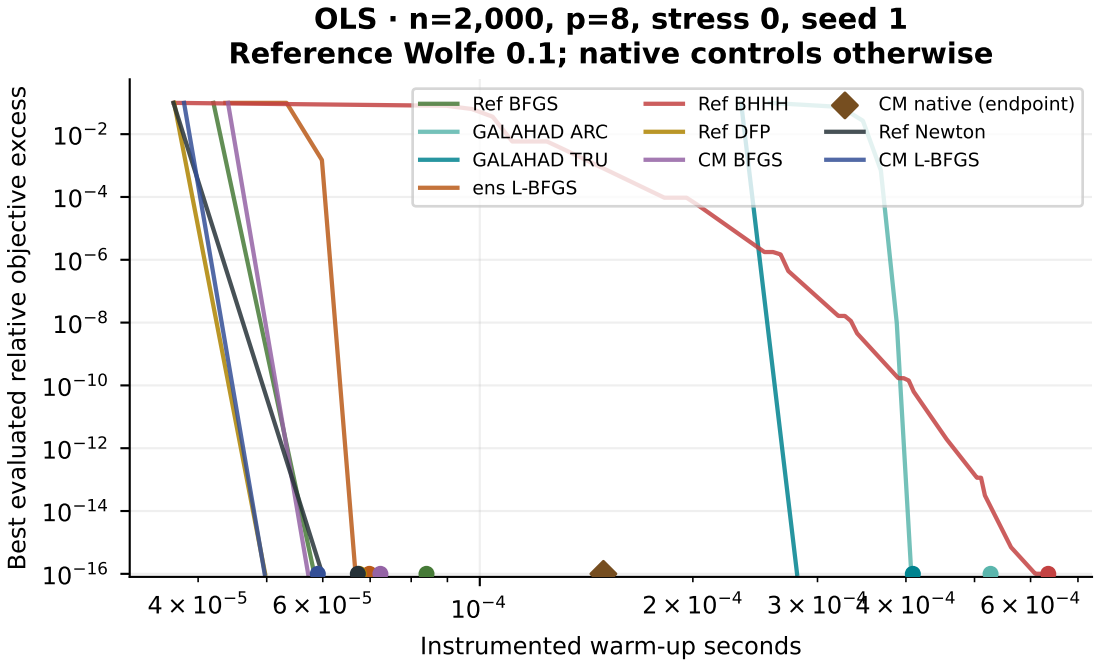

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Ref Newton
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Ref DFP
Best evaluated relative objective excess
Joint objective/gradient evaluations

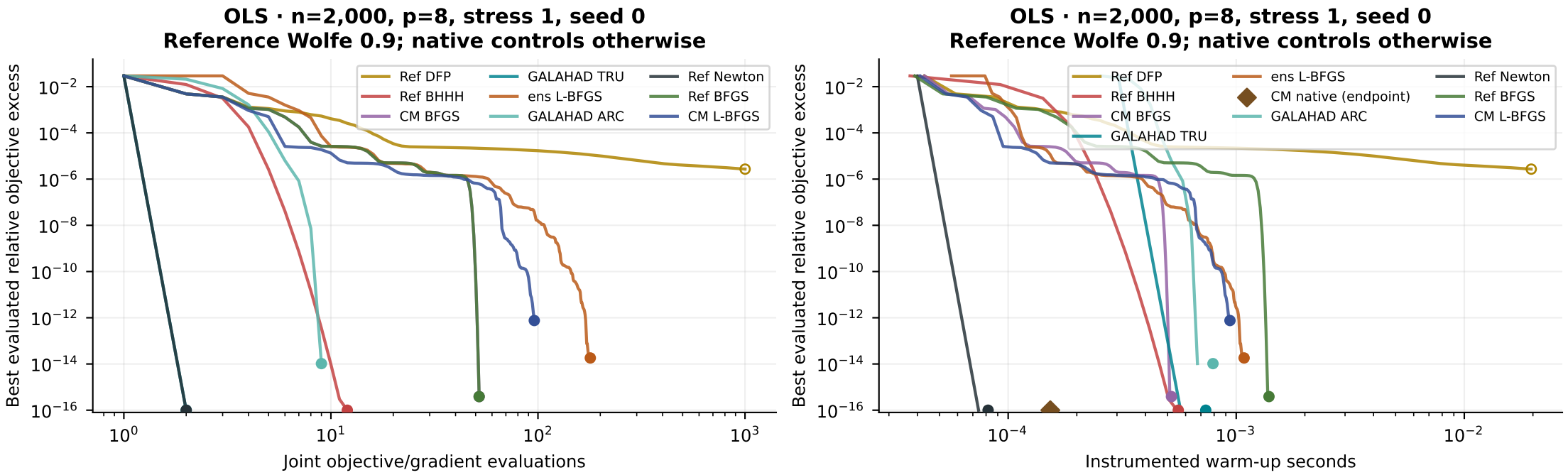

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Ref BFGS
GALAHAD TRU
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CM native (endpoint)
Best evaluated relative objective excess
Instrumented warm-up seconds

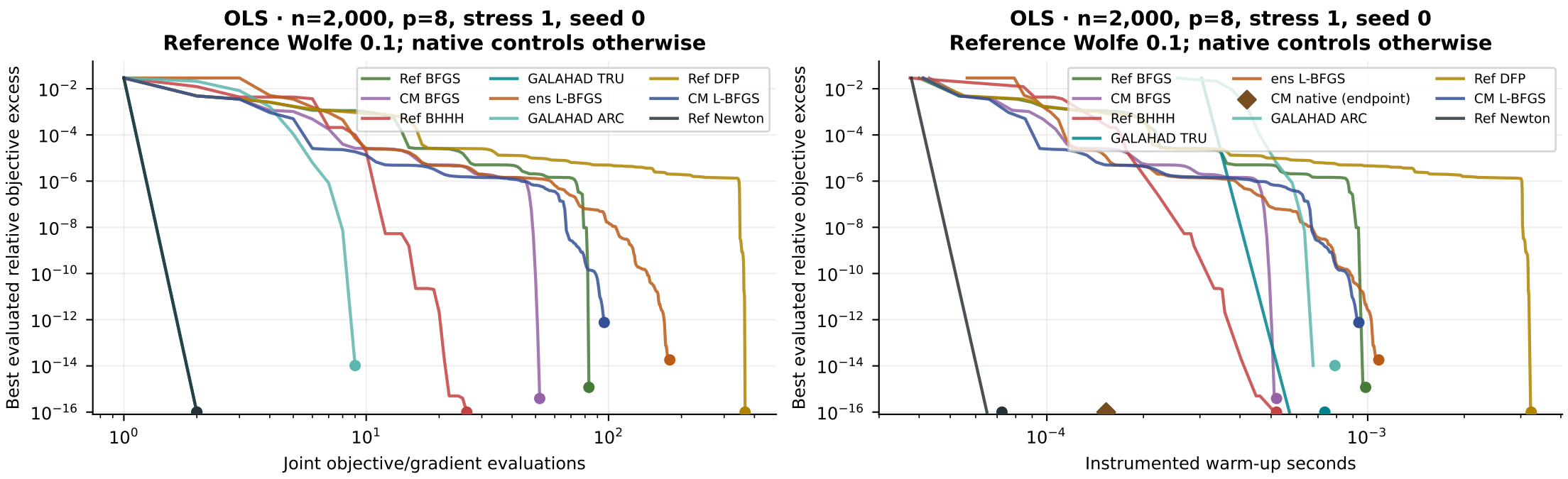

OLS · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.9; native controls otherwise
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Best evaluated relative objective excess
Joint objective/gradient evaluations

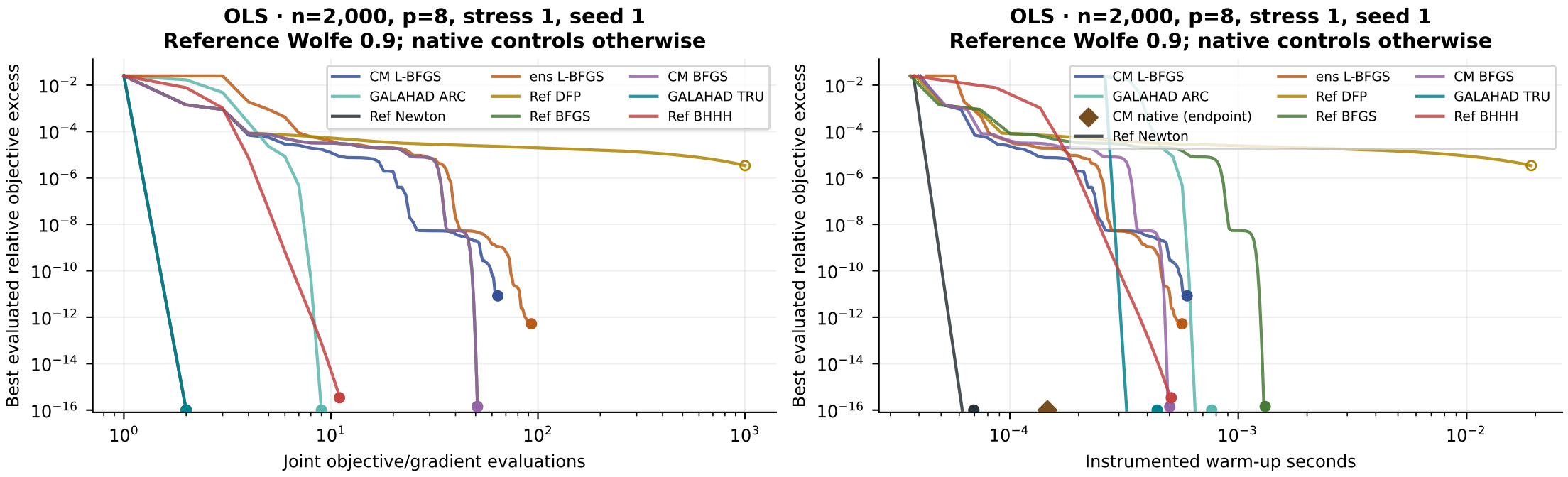

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Best evaluated relative objective excess
Instrumented warm-up seconds

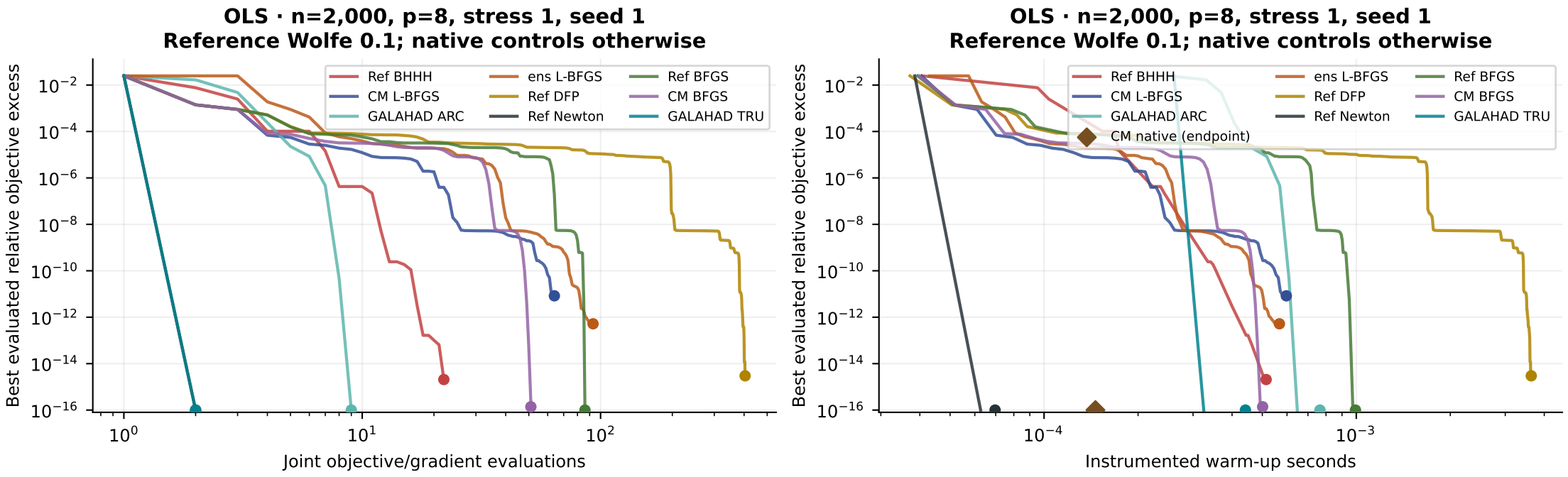

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CM L-BFGS
Best evaluated relative objective excess
Joint objective/gradient evaluations

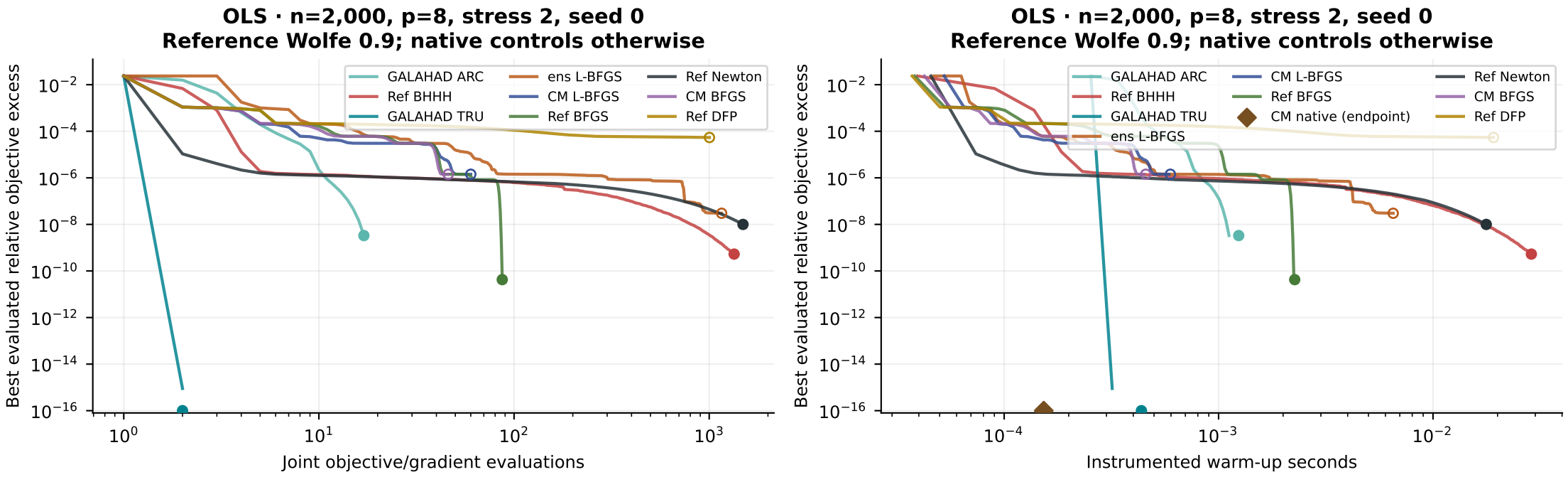

OLS · n=2,000, p=8, stress 0, seed 1
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CM BFGS
CM native (endpoint)
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CM L-BFGS
Best evaluated relative objective excess
Instrumented warm-up seconds


OLS · n=2,000, p=8, stress 1, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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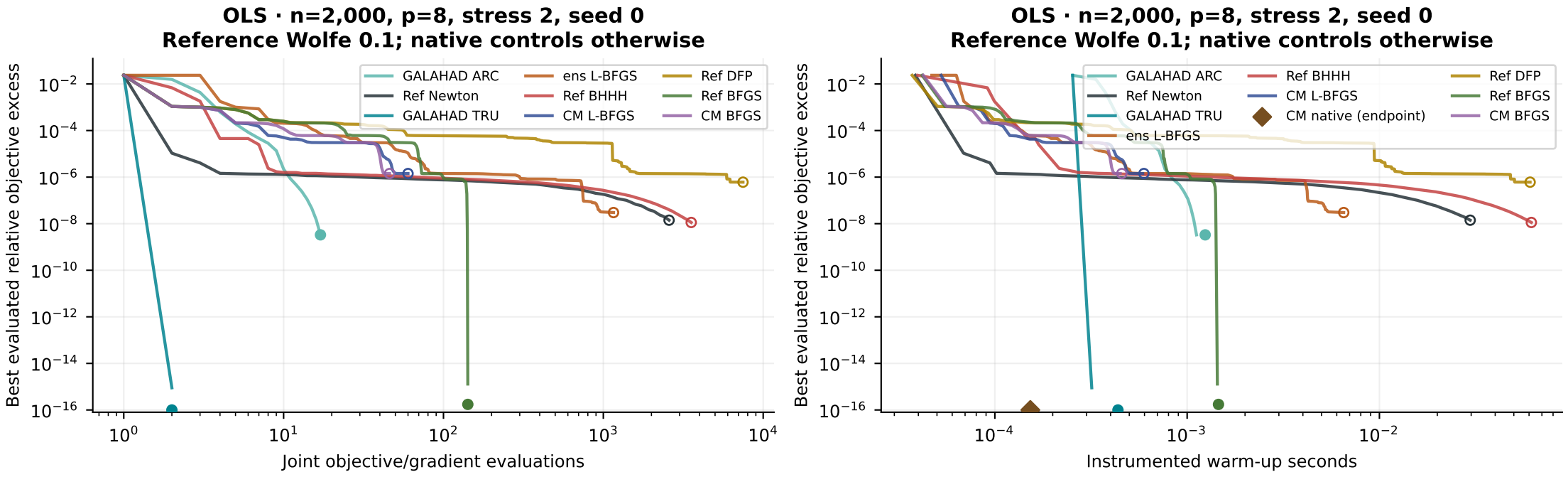

OLS · n=2,000, p=8, stress 1, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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Ref Newton
CM native (endpoint)


OLS · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
CM L-BFGS
GALAHAD ARC
Ref Newton
ens L-BFGS
Ref DFP
Ref BFGS
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Ref BHHH
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Joint objective/gradient evaluations
OLS · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
CM native (endpoint)
Instrumented warm-up seconds

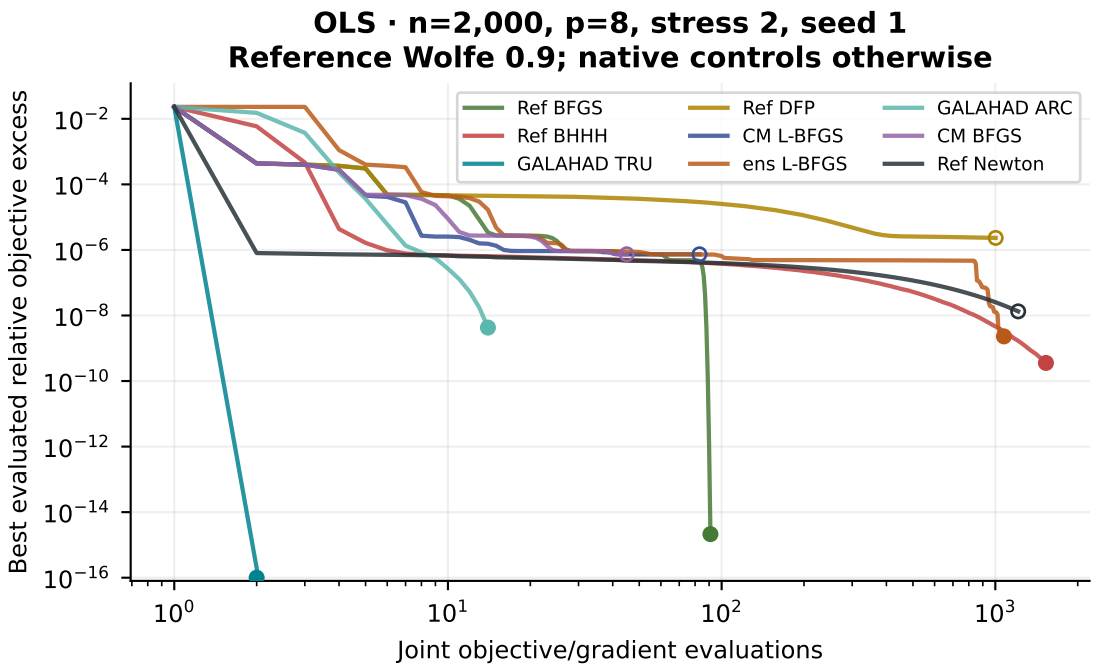

OLS · n=2,000, p=8, stress 1, seed 1
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CM L-BFGS
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CM BFGS
GALAHAD TRU
Best evaluated relative objective excess
Joint objective/gradient evaluations
OLS · n=2,000, p=8, stress 1, seed 1
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Instrumented warm-up seconds

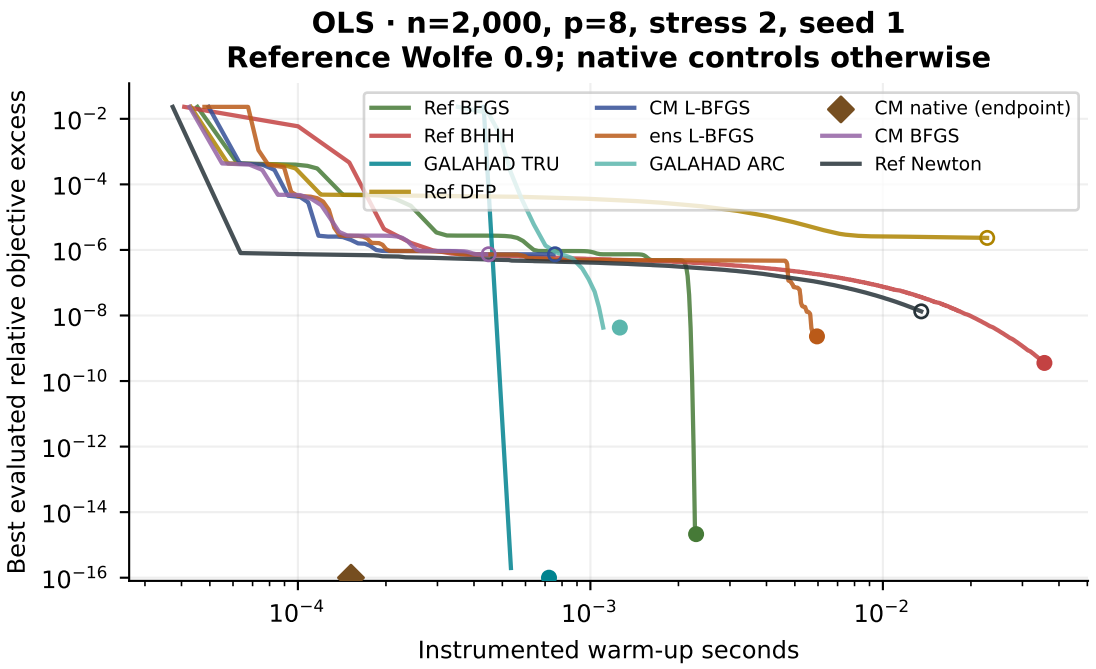

OLS · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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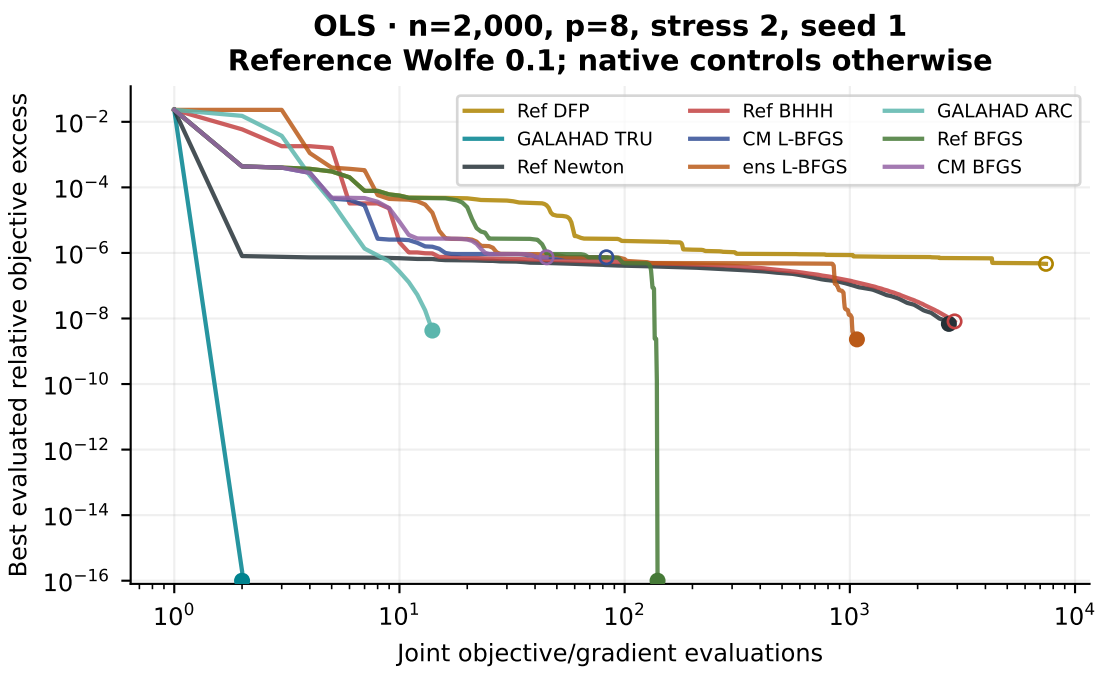
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Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
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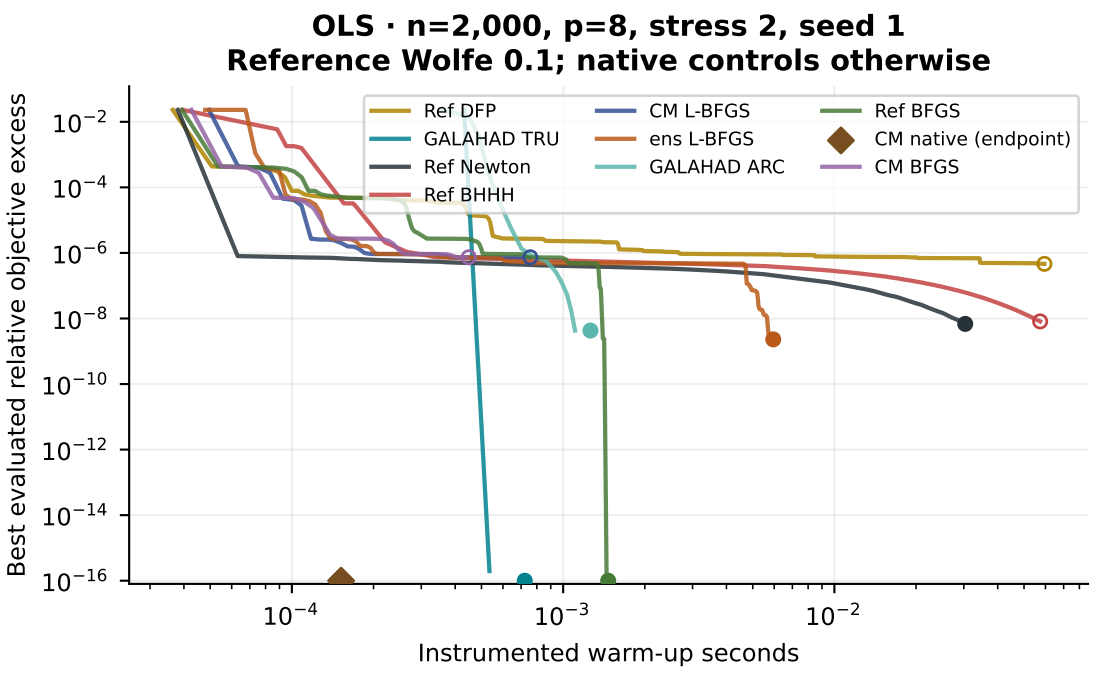

OLS · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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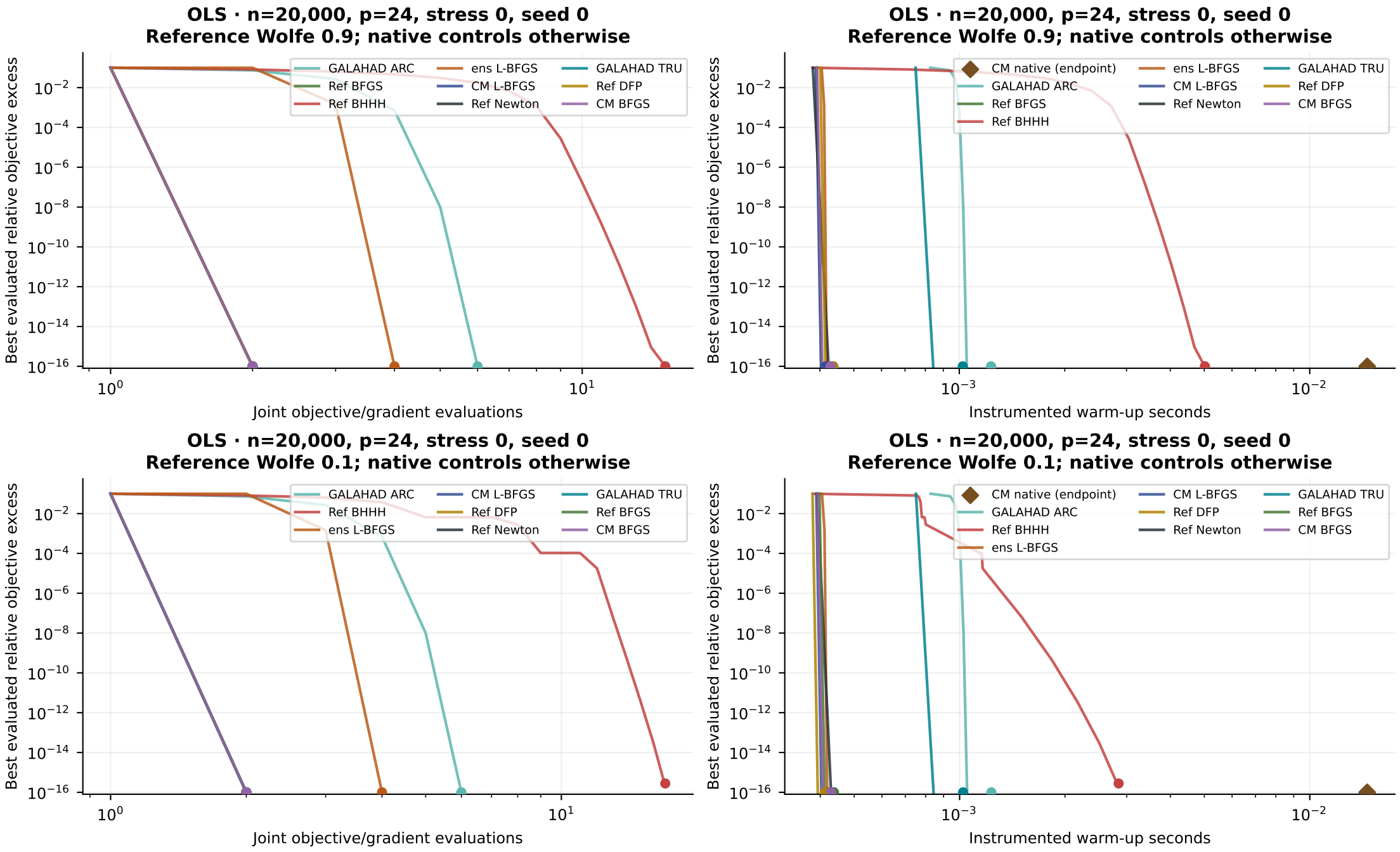
OLS · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
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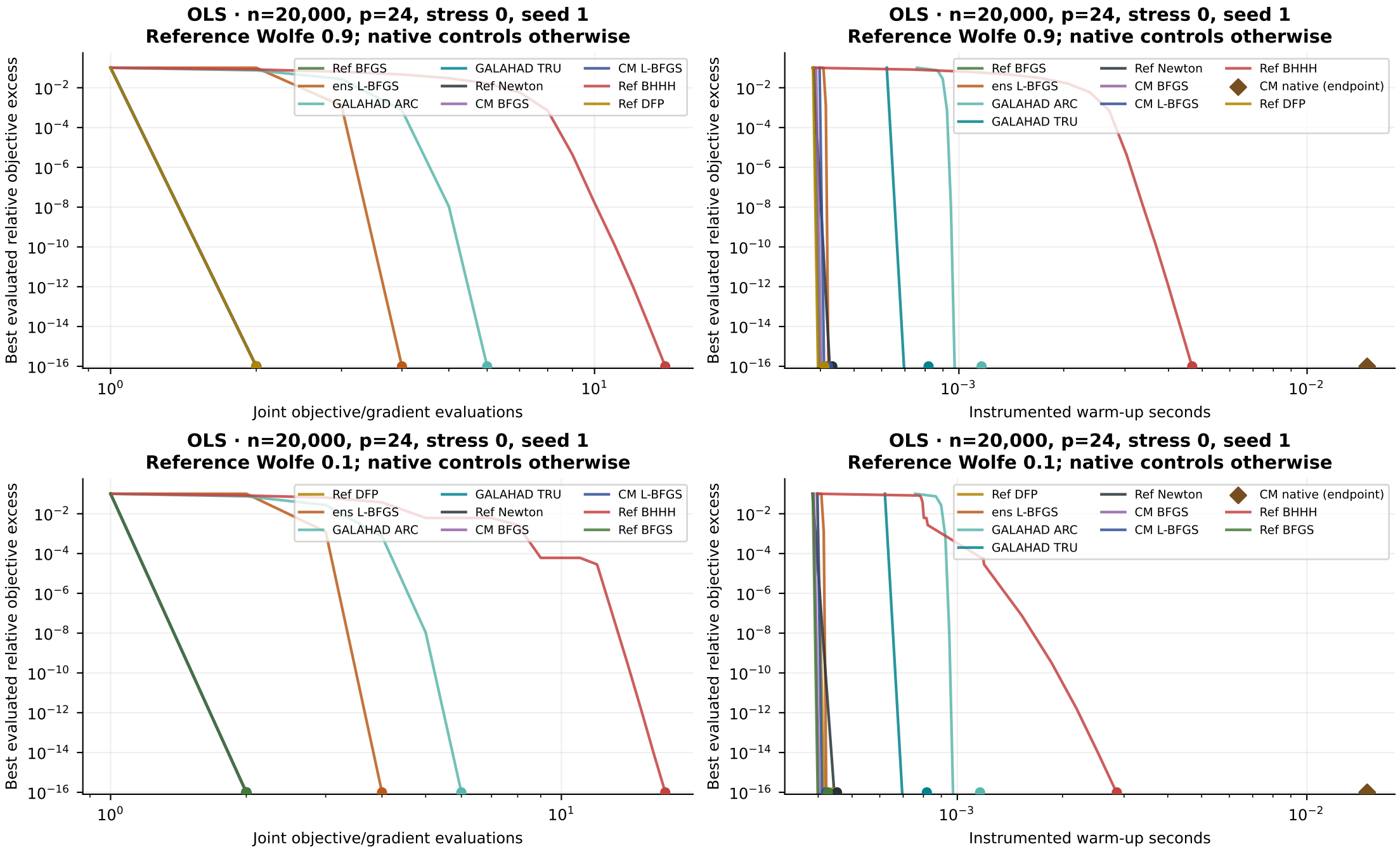

OLS · n=2,000, p=8, stress 2, seed 1
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Best evaluated relative objective excess
Joint objective/gradient evaluations

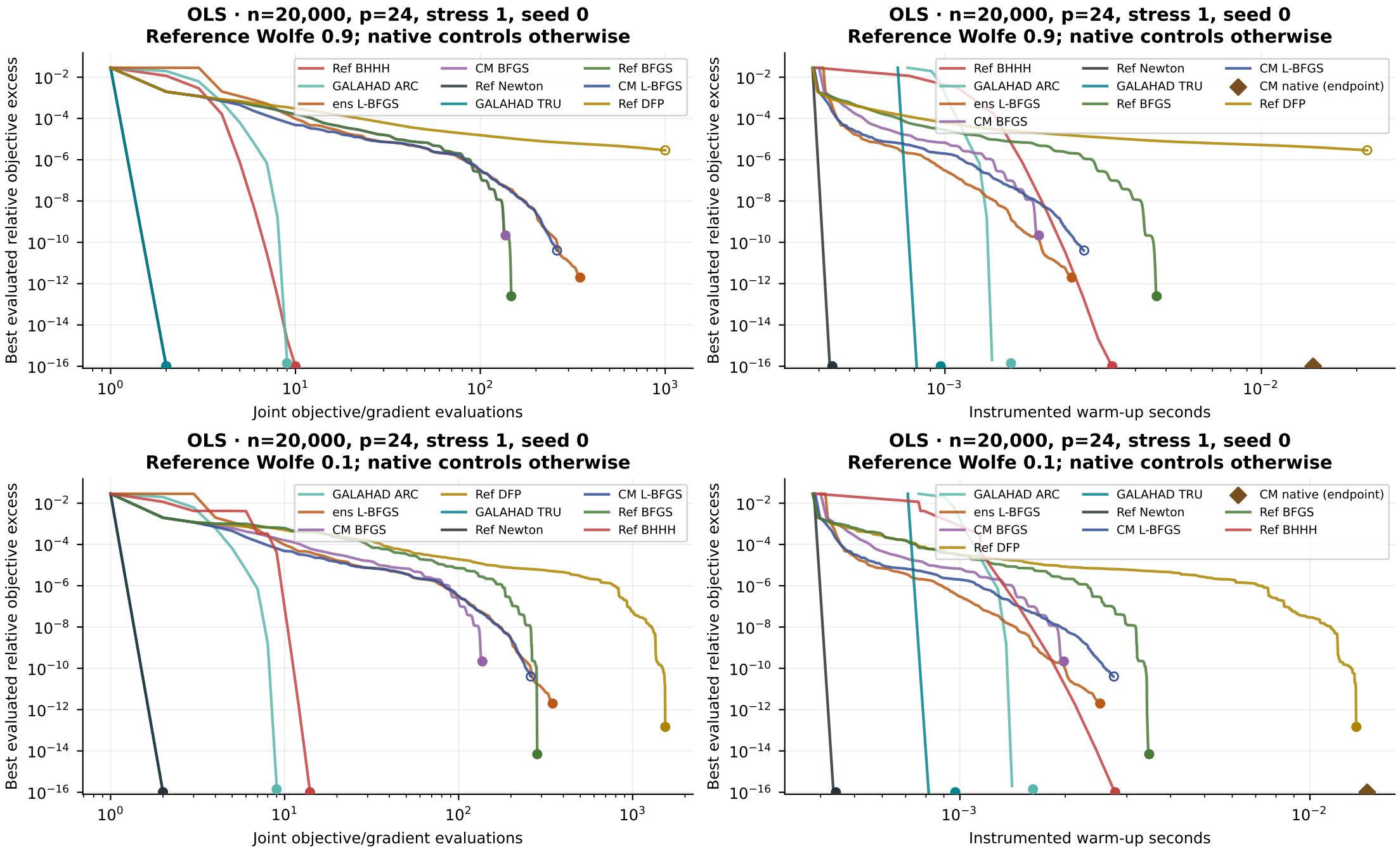

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Best evaluated relative objective excess
Instrumented warm-up seconds

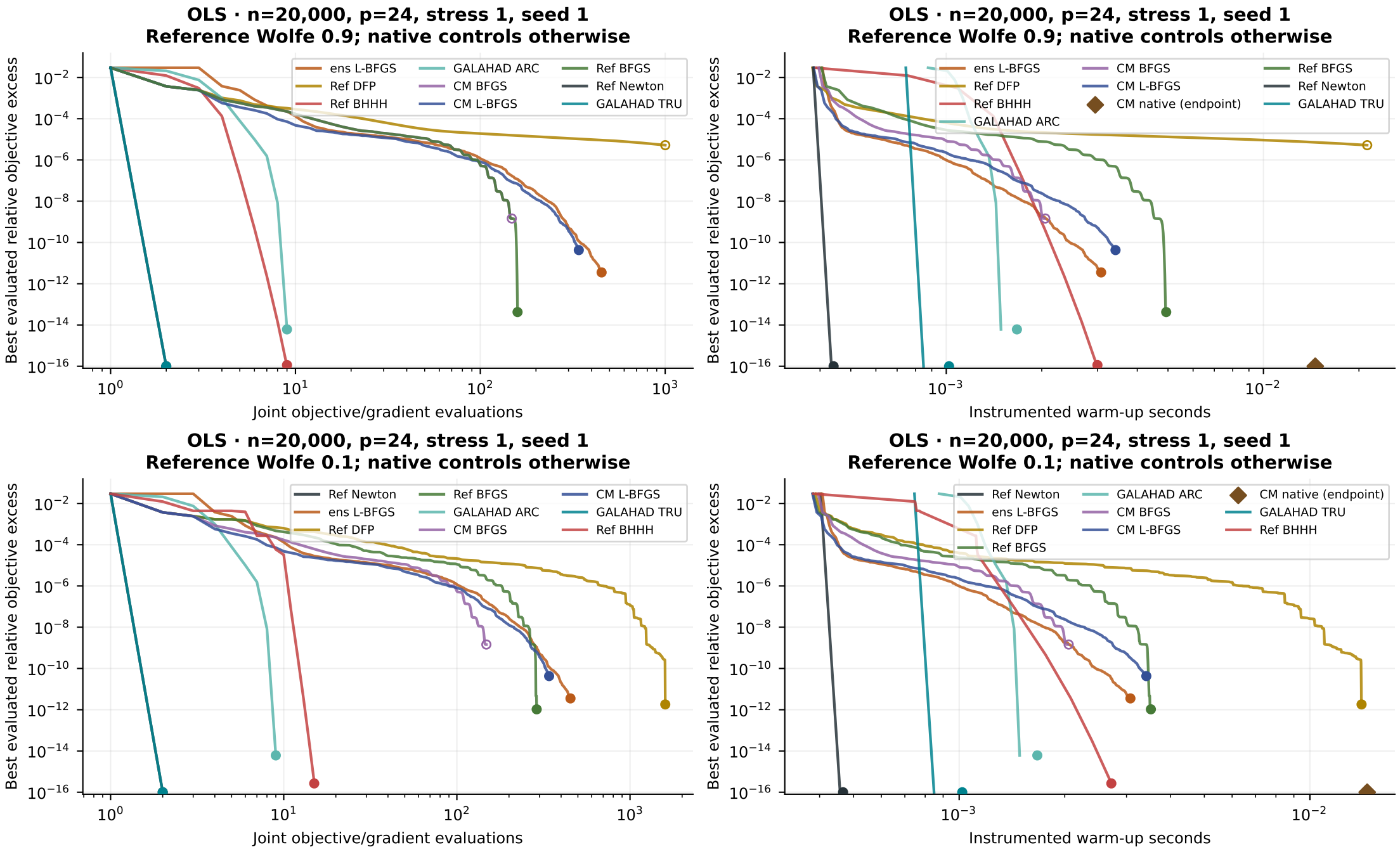

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Ref DFP
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Joint objective/gradient evaluations

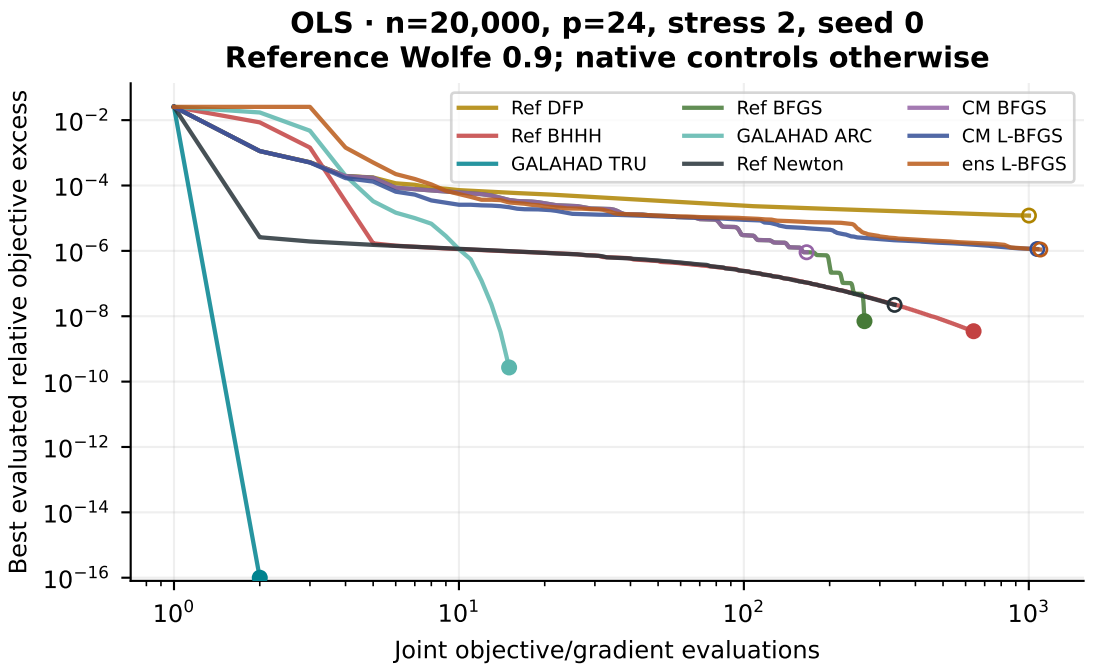

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GALAHAD TRU
Ref Newton
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Best evaluated relative objective excess
Instrumented warm-up seconds

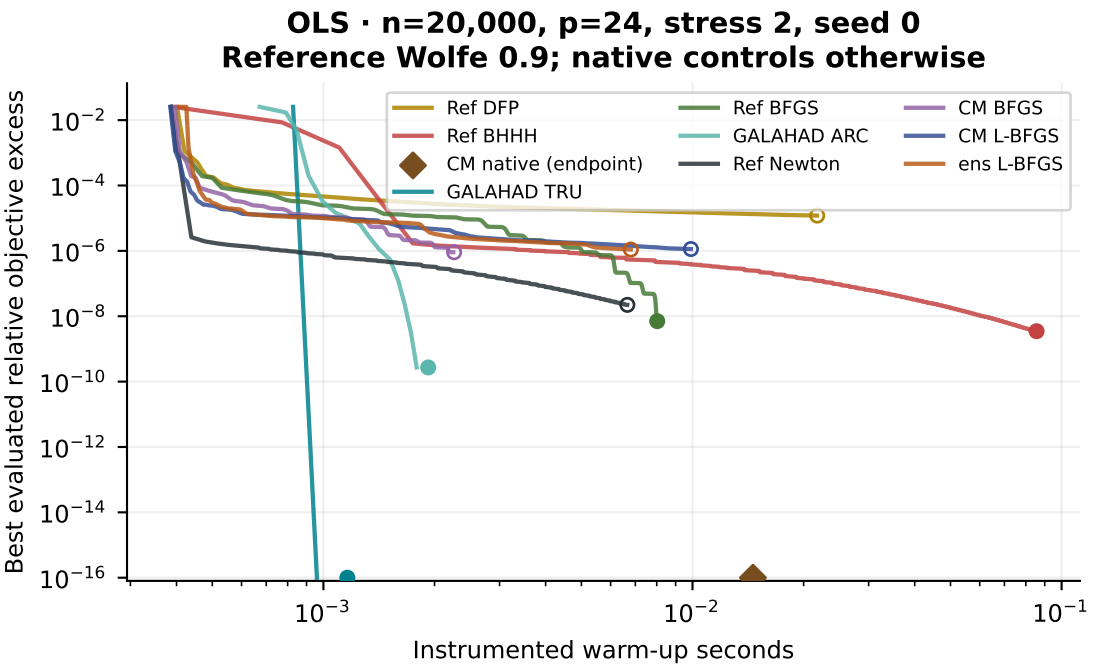

OLS · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
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Joint objective/gradient evaluations
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OLS · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
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OLS · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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Ref BHHH
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OLS · n=20,000, p=24, stress 0, seed 0
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Best evaluated relative objective excess
Instrumented warm-up seconds
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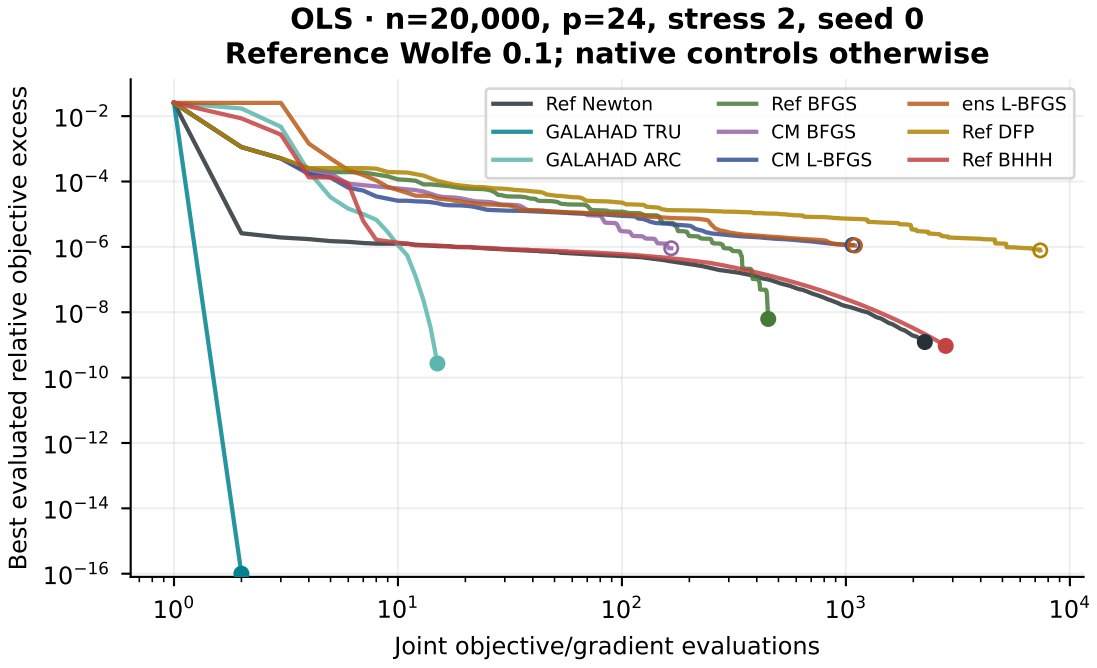

OLS · n=20,000, p=24, stress 0, seed 1
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Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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Ref BHHH
CM native (endpoint)
Ref DFP
OLS · n=20,000, p=24, stress 0, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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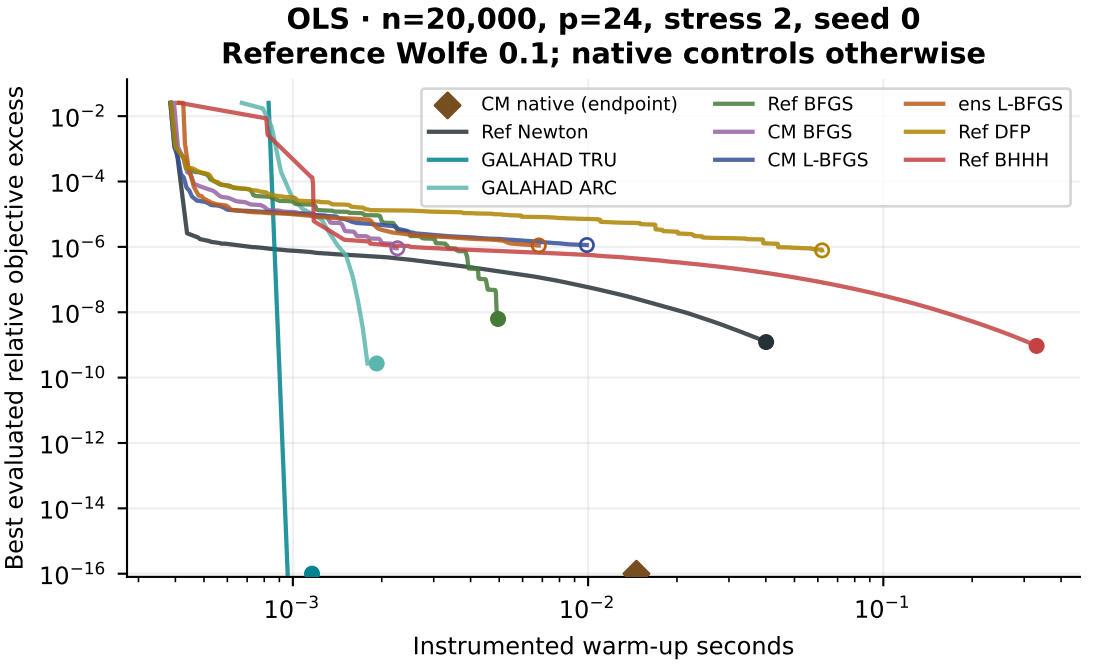

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Joint objective/gradient evaluations
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CM native (endpoint)
OLS · n=20,000, p=24, stress 1, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
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Instrumented warm-up seconds
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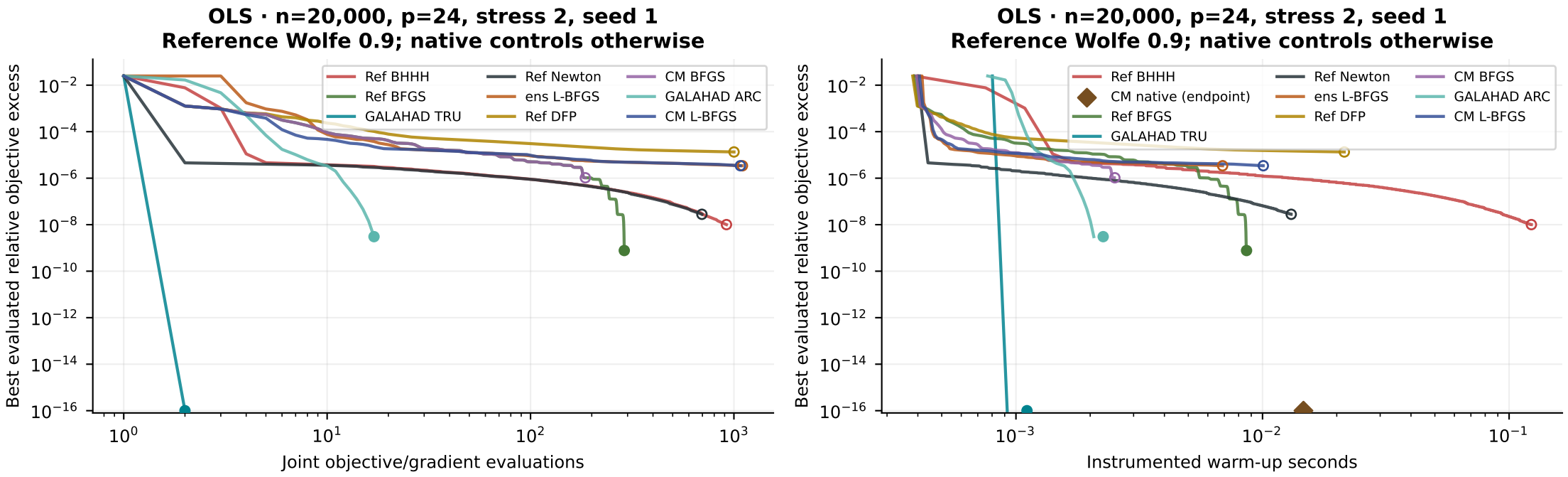

OLS · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
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Joint objective/gradient evaluations
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OLS · n=20,000, p=24, stress 1, seed 1
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OLS · n=20,000, p=24, stress 1, seed 1
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OLS · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
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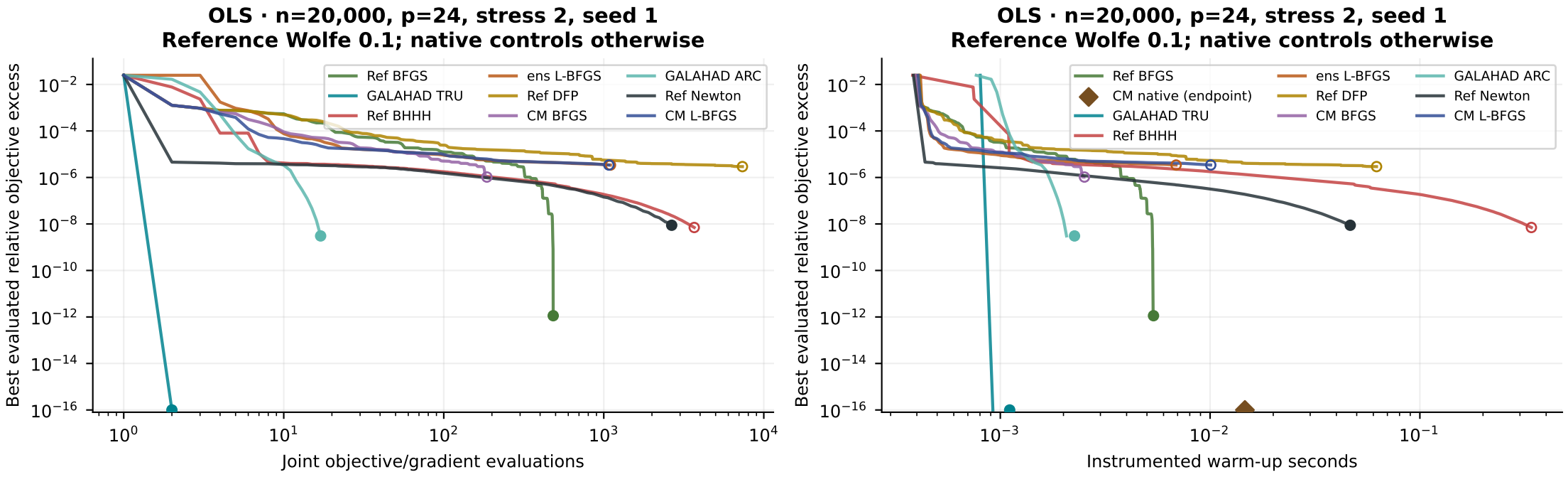

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CM BFGS
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ens L-BFGS
Best evaluated relative objective excess
Joint objective/gradient evaluations

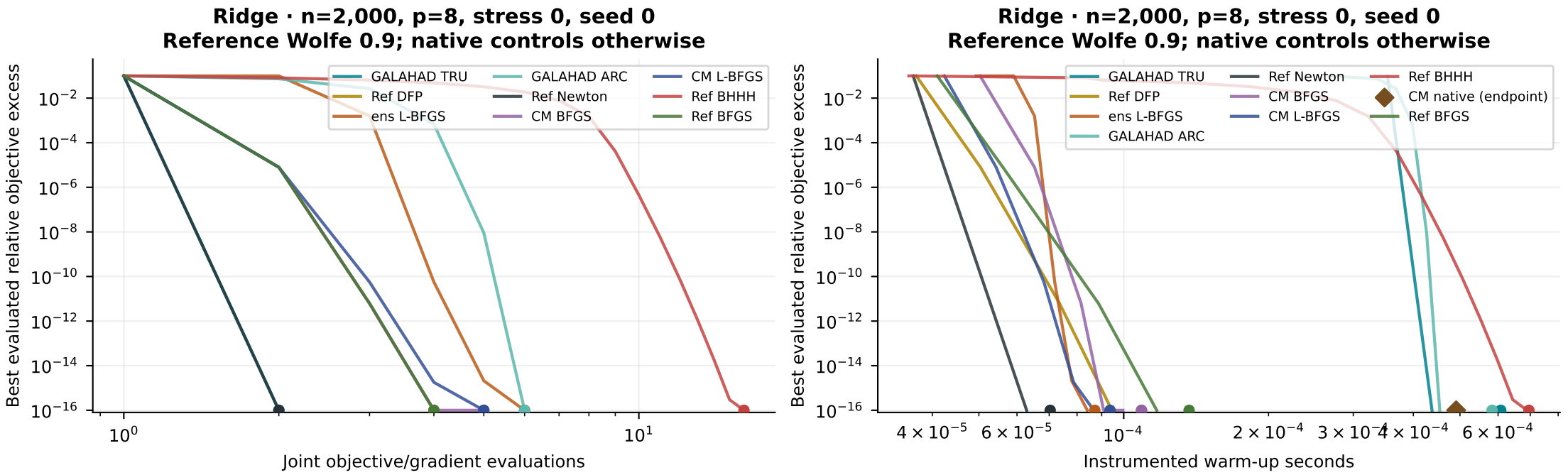

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CM native (endpoint)
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GALAHAD ARC
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Best evaluated relative objective excess
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OLS · n=20,000, p=24, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
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Joint objective/gradient evaluations

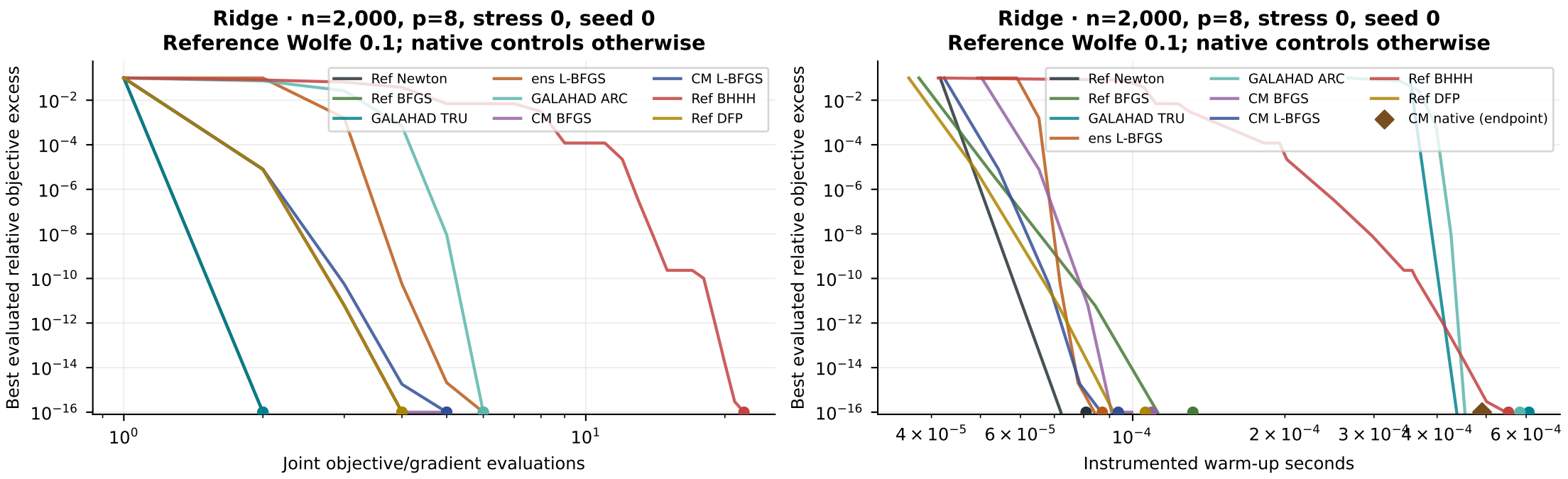

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OLS · n=20,000, p=24, stress 2, seed 1
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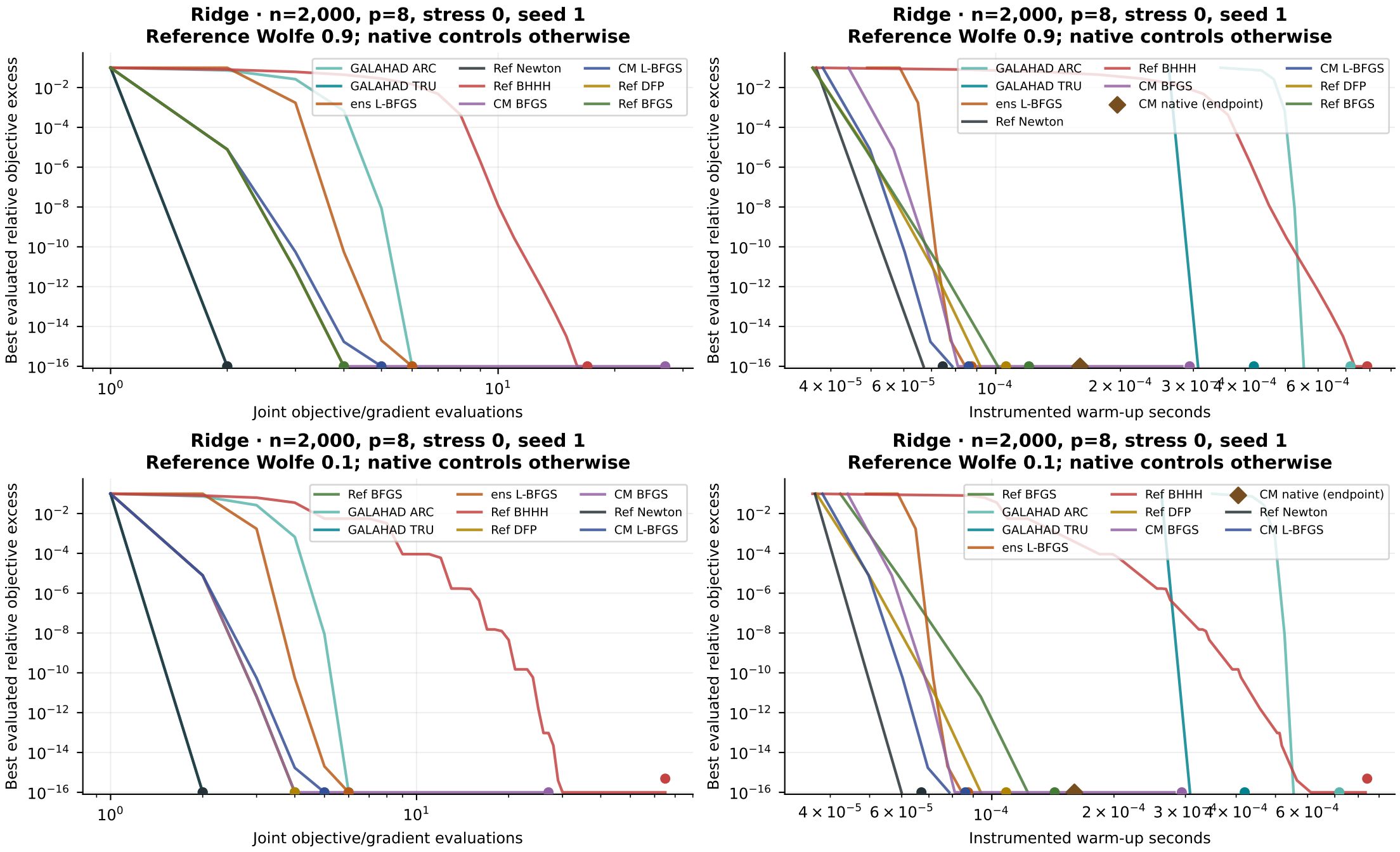

OLS · n=20,000, p=24, stress 2, seed 1
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CM L-BFGS
CM native (endpoint)

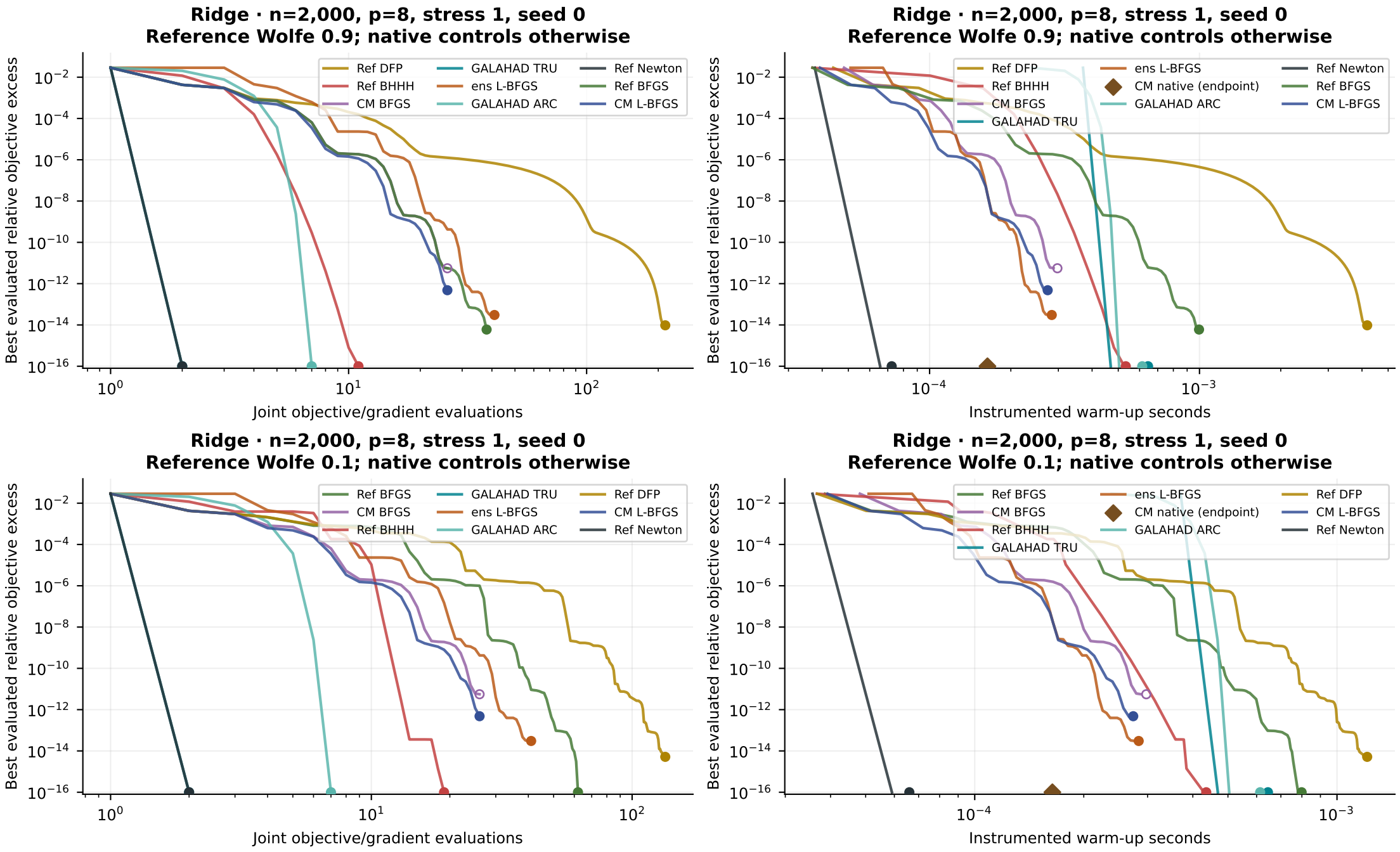

Ridge · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
GALAHAD TRU
Ref DFP
ens L-BFGS
GALAHAD ARC
Ref Newton
CM BFGS
CM L-BFGS
Ref BHHH
Ref BFGS
Best evaluated relative objective excess
Joint objective/gradient evaluations

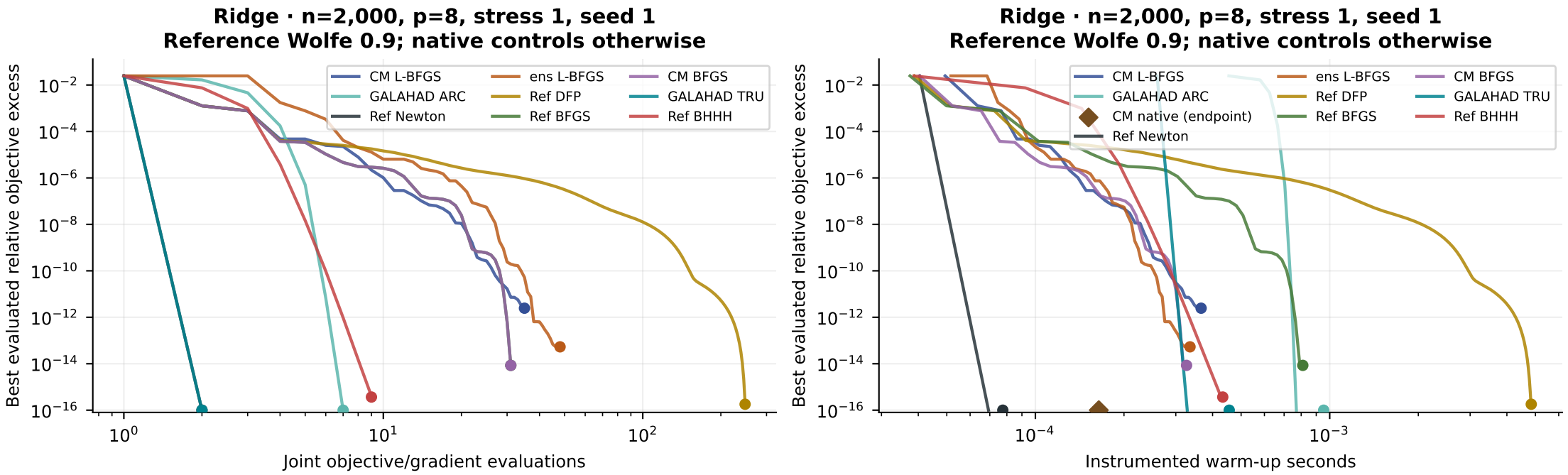
Ridge · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
GALAHAD TRU
Ref DFP
ens L-BFGS
GALAHAD ARC
Ref Newton
CM BFGS
CM L-BFGS
Ref BHHH
CM native (endpoint)
Ref BFGS
Best evaluated relative objective excess
Instrumented warm-up seconds


Ridge · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
Ref Newton
Ref BFGS
GALAHAD TRU
ens L-BFGS
GALAHAD ARC
CM BFGS
CM L-BFGS
Ref BHHH
Ref DFP
Best evaluated relative objective excess
Joint objective/gradient evaluations

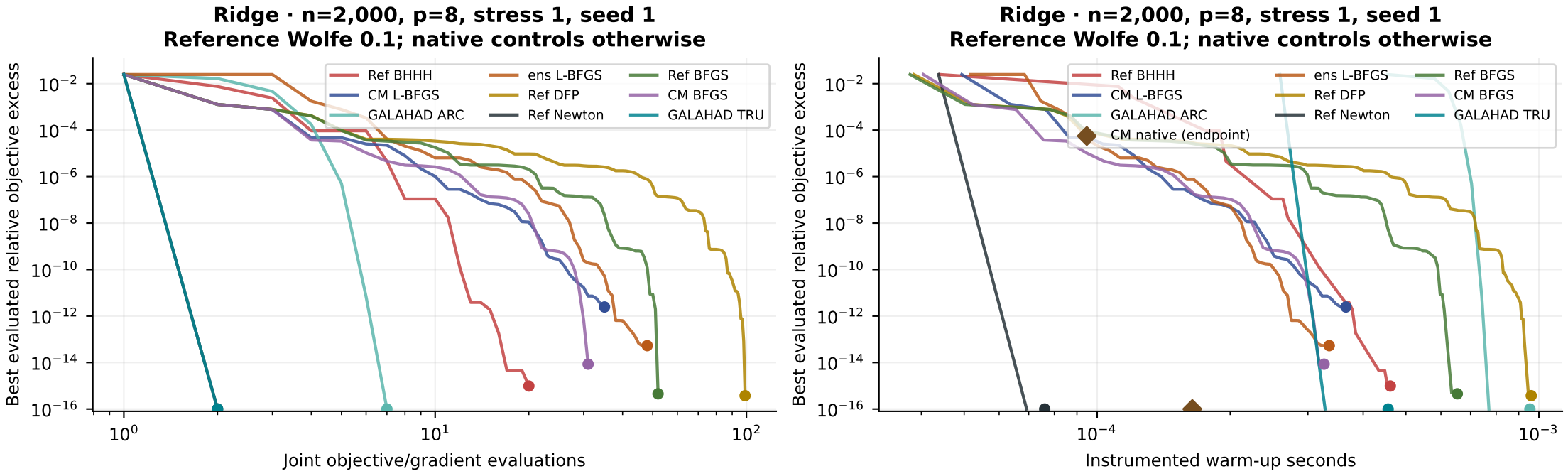
Ridge · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
Ref Newton
Ref BFGS
GALAHAD TRU
ens L-BFGS
GALAHAD ARC
CM BFGS
CM L-BFGS
Ref BHHH
Ref DFP
CM native (endpoint)
Best evaluated relative objective excess
Instrumented warm-up seconds


Ridge · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
GALAHAD ARC
GALAHAD TRU
ens L-BFGS
Ref Newton
Ref BHHH
CM BFGS
CM L-BFGS
Ref DFP
Ref BFGS
Ridge · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
GALAHAD ARC
GALAHAD TRU
ens L-BFGS
Ref Newton
Ref BHHH
CM BFGS
CM native (endpoint)
CM L-BFGS
Ref DFP
Ref BFGS
Ridge · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Ref BFGS
GALAHAD ARC
GALAHAD TRU
ens L-BFGS
Ref BHHH
Ref DFP
CM BFGS
Ref Newton
CM L-BFGS
Ridge · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
Ref BFGS
GALAHAD ARC
GALAHAD TRU
ens L-BFGS
Ref BHHH
Ref DFP
CM BFGS
CM native (endpoint)
Ref Newton
CM L-BFGS

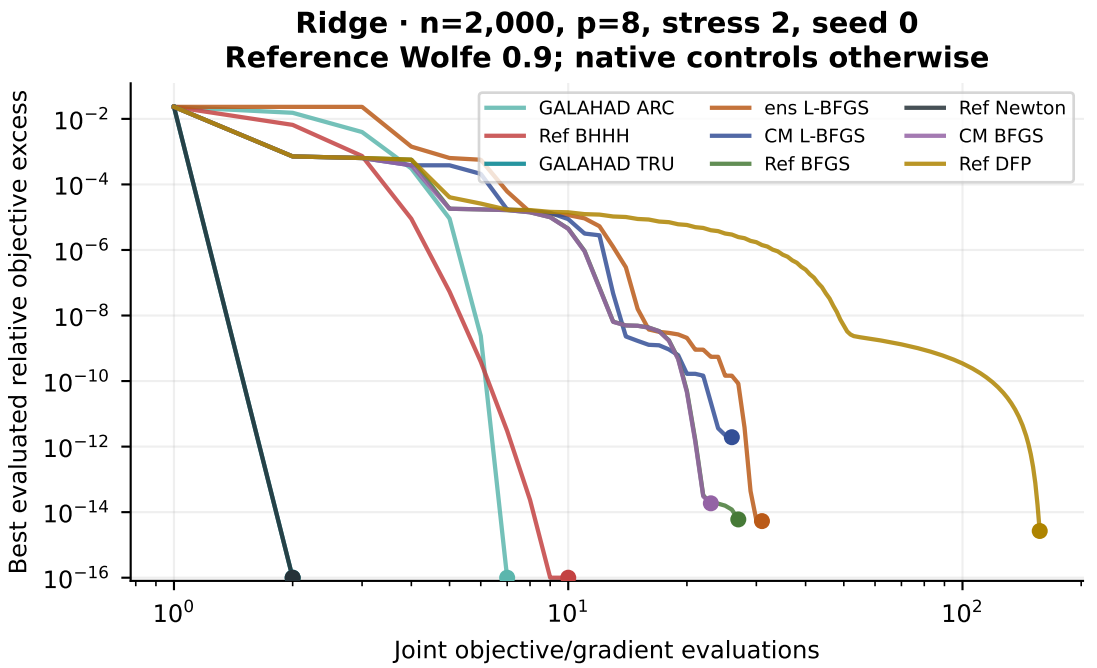

Ridge · n=2,000, p=8, stress 1, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref DFP
Ref BHHH
CM BFGS
GALAHAD TRU
ens L-BFGS
GALAHAD ARC
Ref Newton
Ref BFGS
CM L-BFGS
CM native (endpoint)
Ridge · n=2,000, p=8, stress 1, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref BFGS
CM BFGS
Ref BHHH
GALAHAD TRU
ens L-BFGS
GALAHAD ARC
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CM L-BFGS
Ref Newton
CM native (endpoint)

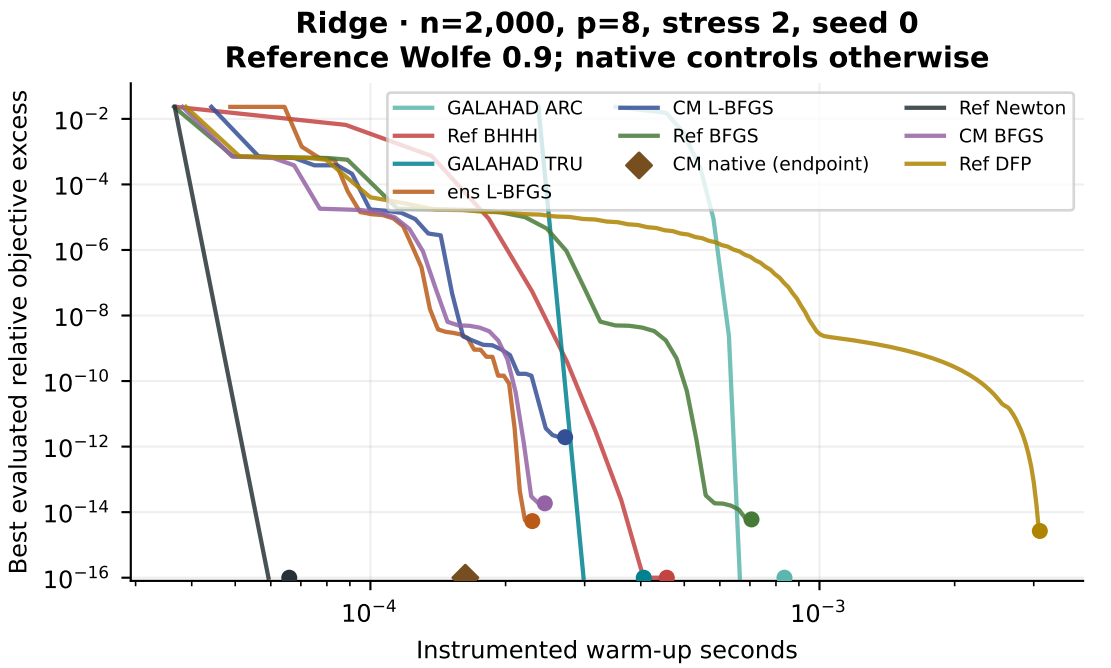

Ridge · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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GALAHAD ARC
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CM BFGS
GALAHAD TRU
Ref BHHH

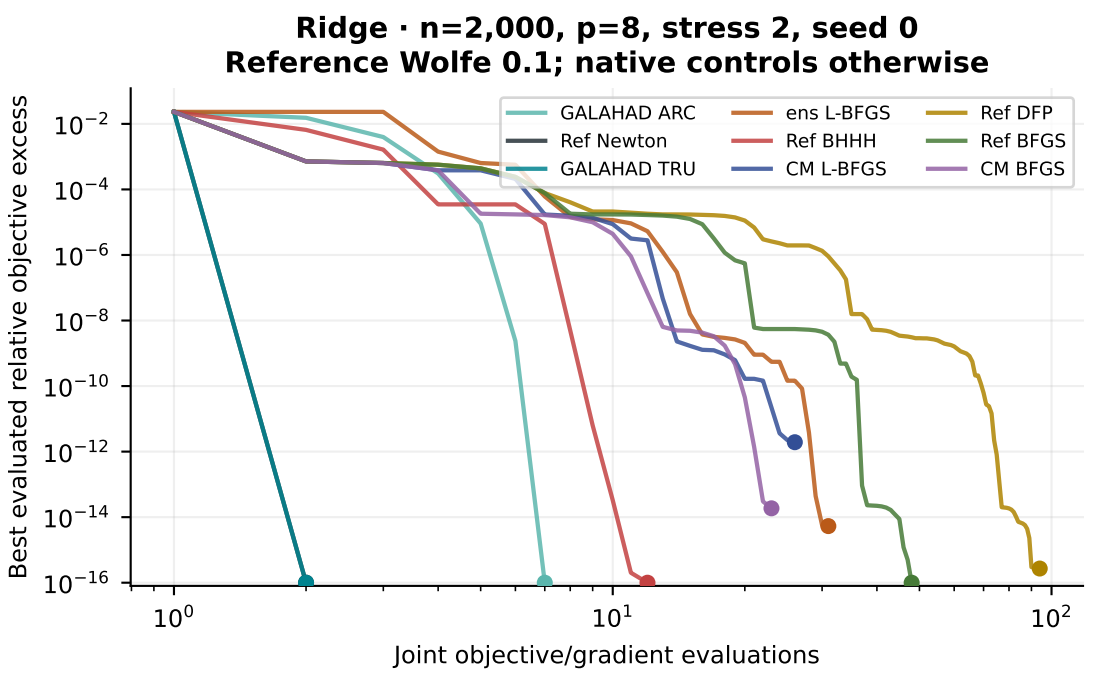
Ridge · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
CM L-BFGS
GALAHAD ARC
CM native (endpoint)
Ref Newton
ens L-BFGS
Ref DFP
Ref BFGS
CM BFGS
GALAHAD TRU
Ref BHHH

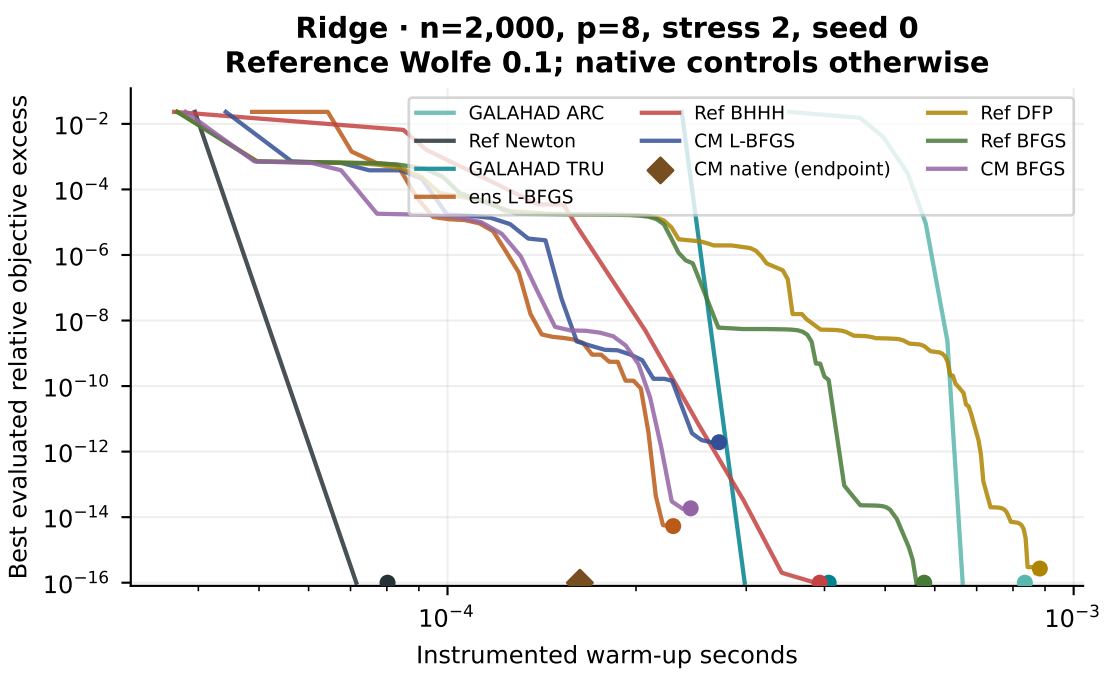

Ridge · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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CM L-BFGS
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Ref BFGS
CM BFGS
GALAHAD TRU

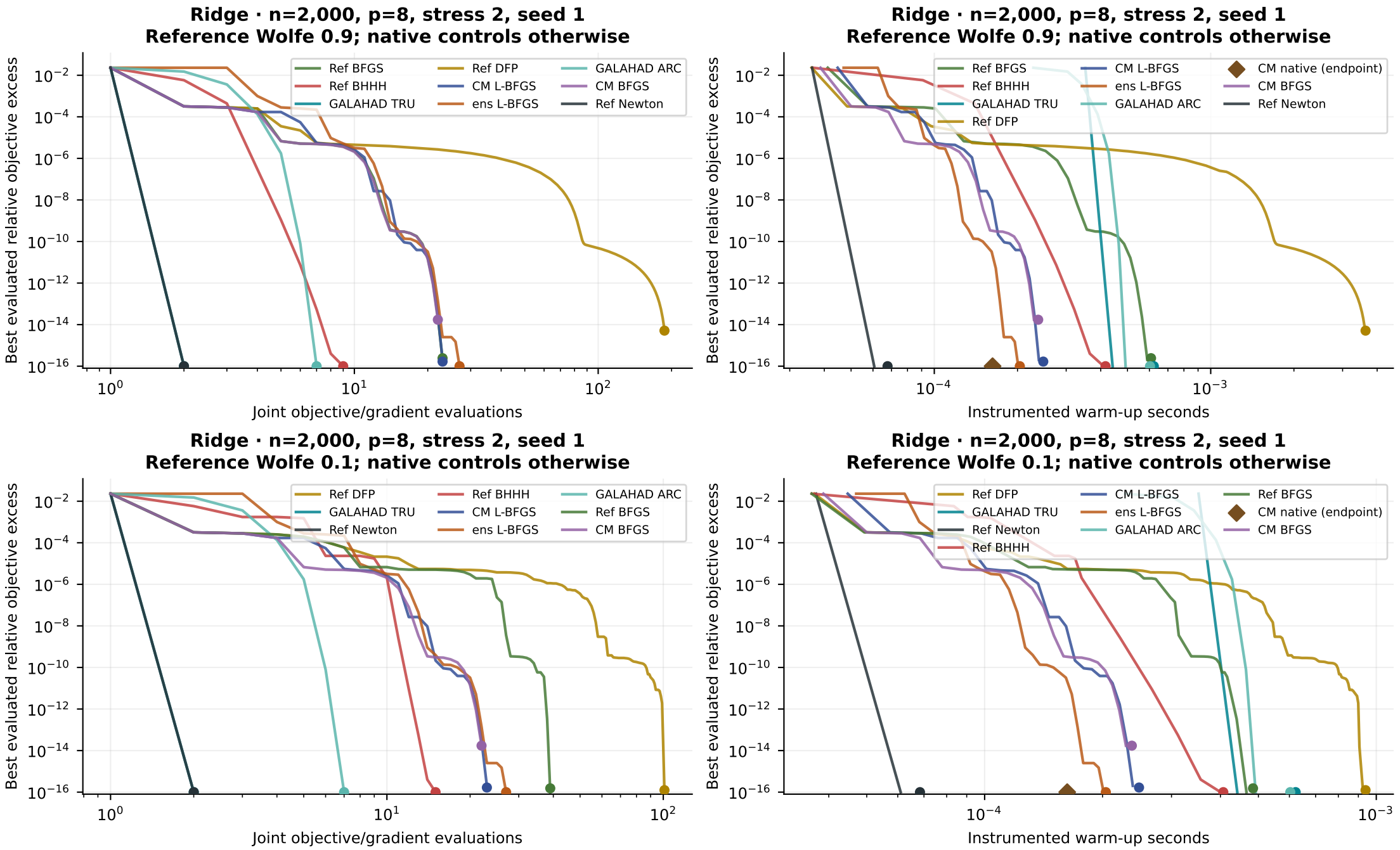
Ridge · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
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CM L-BFGS
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Ref BFGS
CM BFGS
GALAHAD TRU

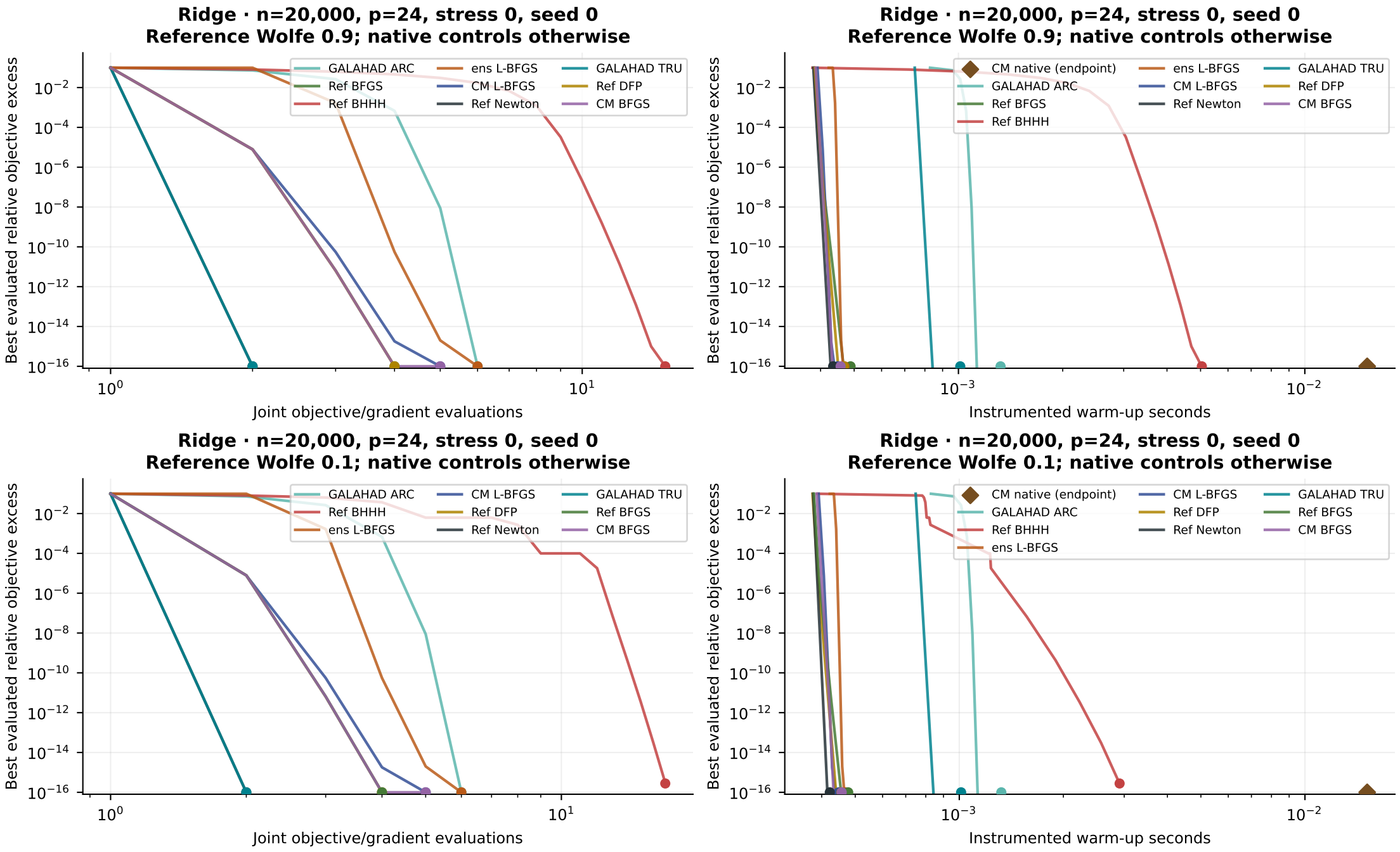

Ridge · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
GALAHAD ARC
Ref BHHH
GALAHAD TRU
ens L-BFGS
CM L-BFGS
Ref BFGS
Ref Newton
CM BFGS
Ref DFP
Best evaluated relative objective excess
Joint objective/gradient evaluations

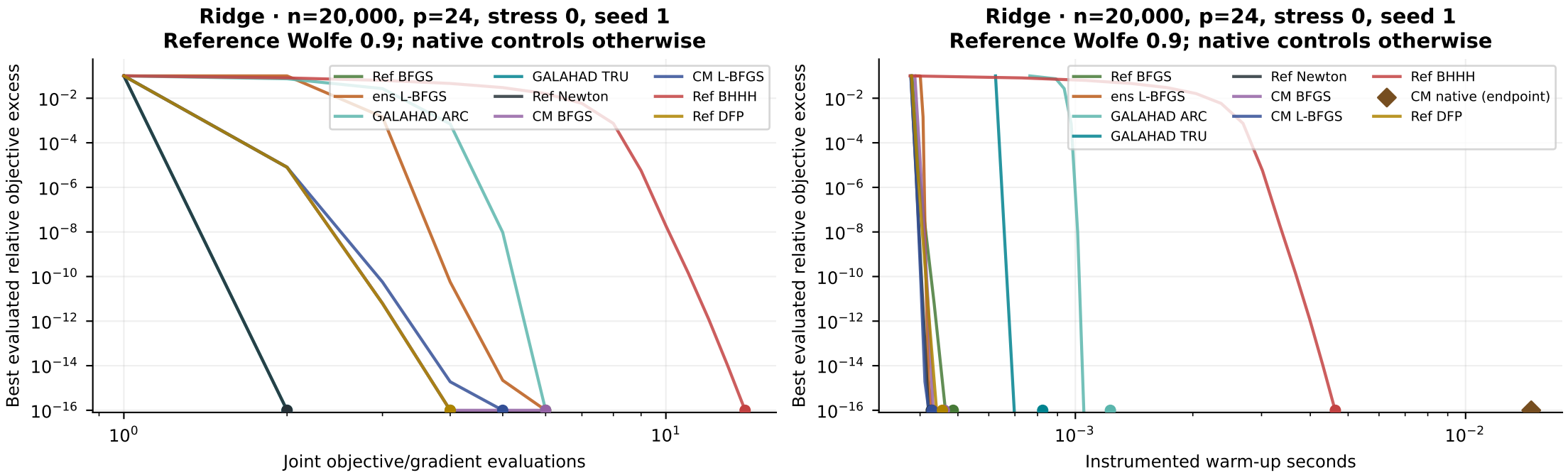

Ridge · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
GALAHAD ARC
Ref BHHH
GALAHAD TRU
ens L-BFGS
CM L-BFGS
Ref BFGS
CM native (endpoint)
Ref Newton
CM BFGS
Ref DFP
Best evaluated relative objective excess
Instrumented warm-up seconds

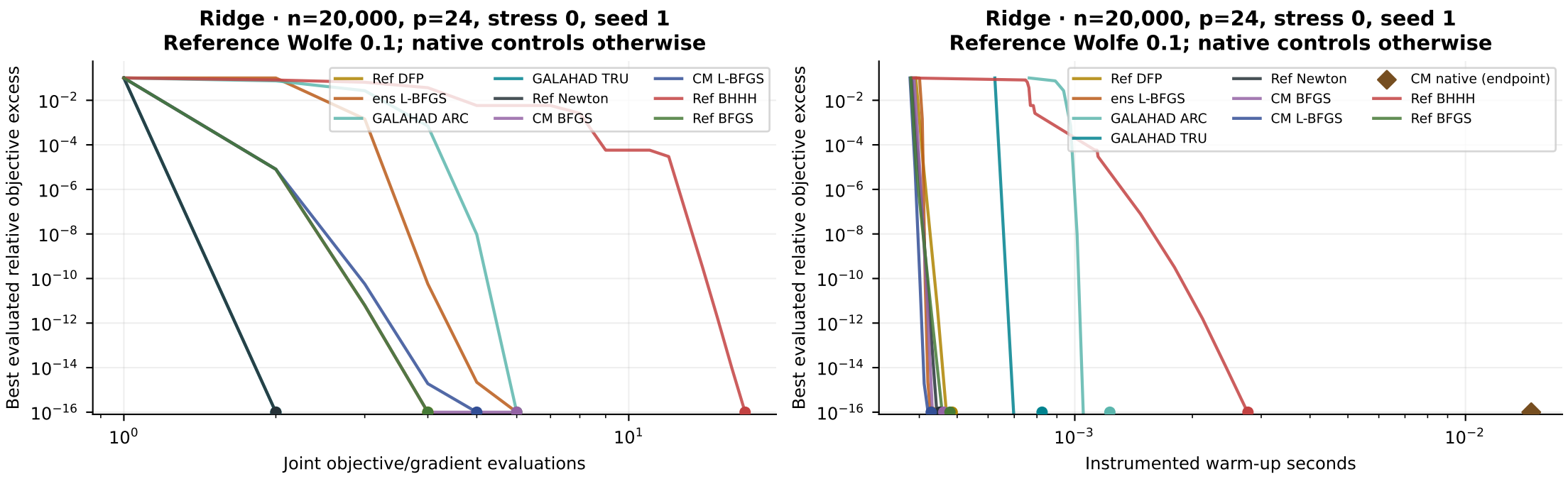

Ridge · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
GALAHAD ARC
Ref Newton
GALAHAD TRU
ens L-BFGS
Ref BHHH
CM L-BFGS
Ref DFP
Ref BFGS
CM BFGS
Best evaluated relative objective excess
Joint objective/gradient evaluations

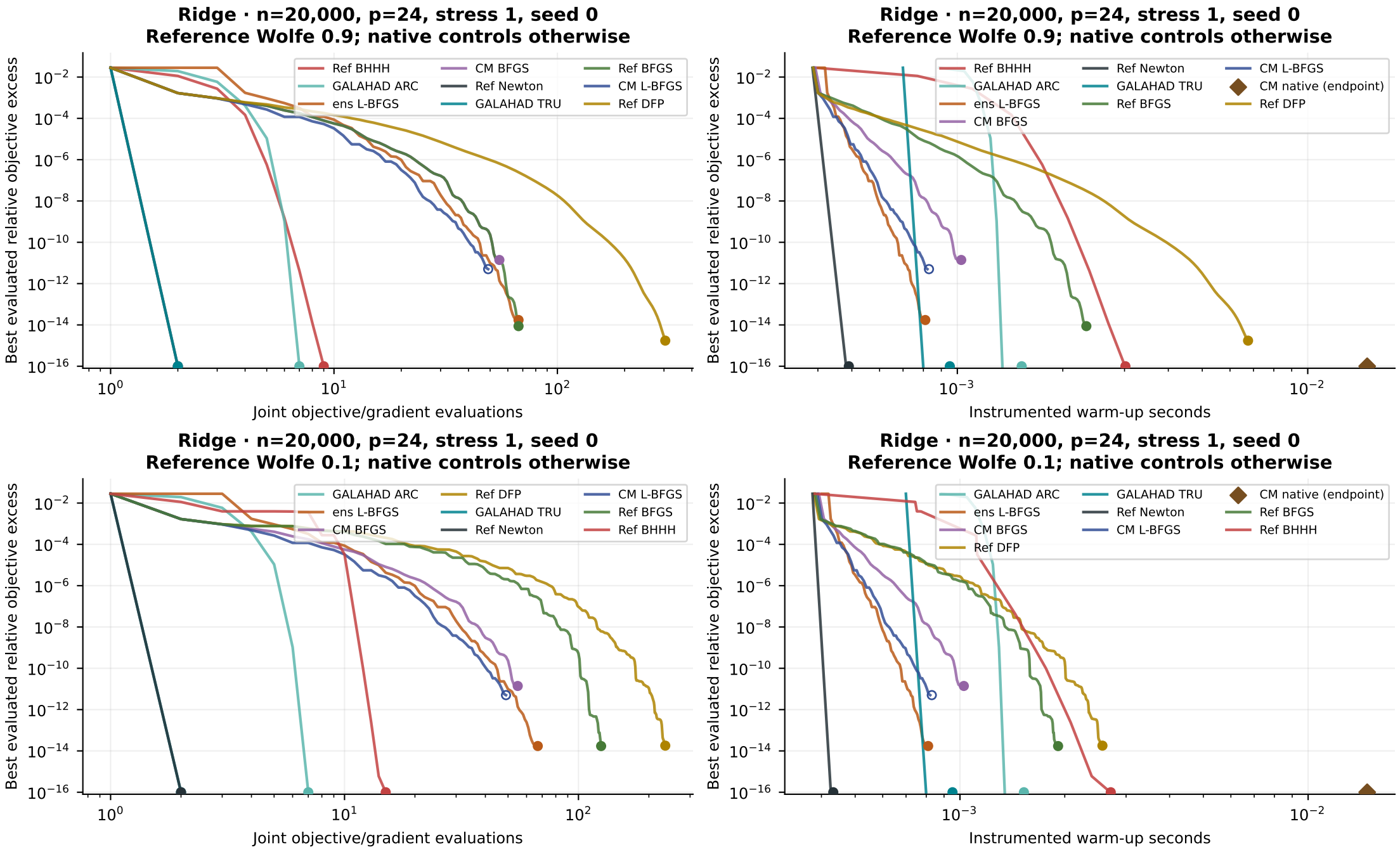

Ridge · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
GALAHAD ARC
Ref Newton
GALAHAD TRU
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CM L-BFGS
CM native (endpoint)
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Ref BFGS
CM BFGS
Best evaluated relative objective excess
Instrumented warm-up seconds

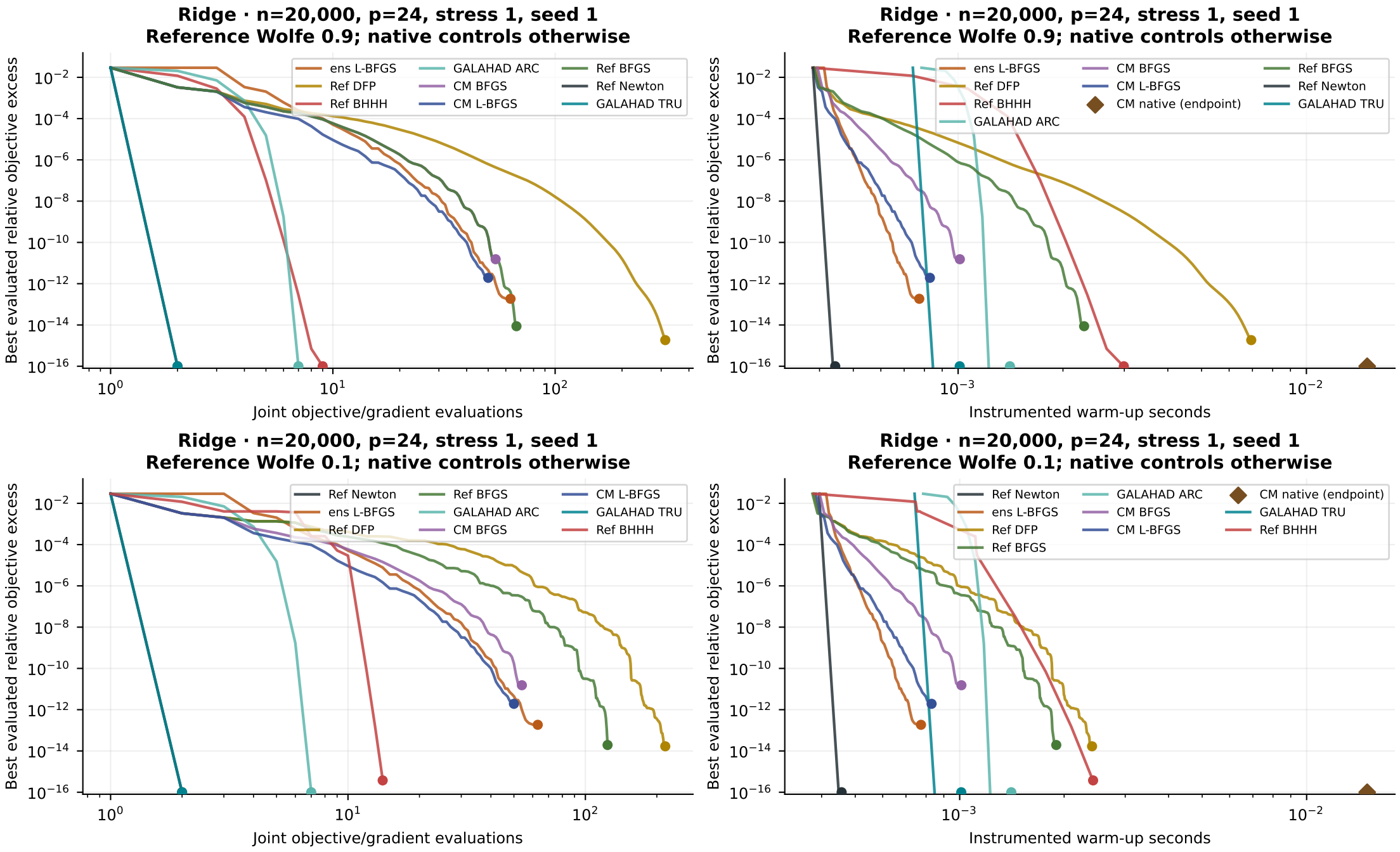

Ridge · n=2,000, p=8, stress 2, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref BFGS
Ref BHHH
GALAHAD TRU
Ref DFP
CM L-BFGS
ens L-BFGS
GALAHAD ARC
CM BFGS
Ref Newton
CM native (endpoint)
Ridge · n=2,000, p=8, stress 2, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref DFP
GALAHAD TRU
Ref Newton
Ref BHHH
CM L-BFGS
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Ref BFGS
CM BFGS
CM native (endpoint)

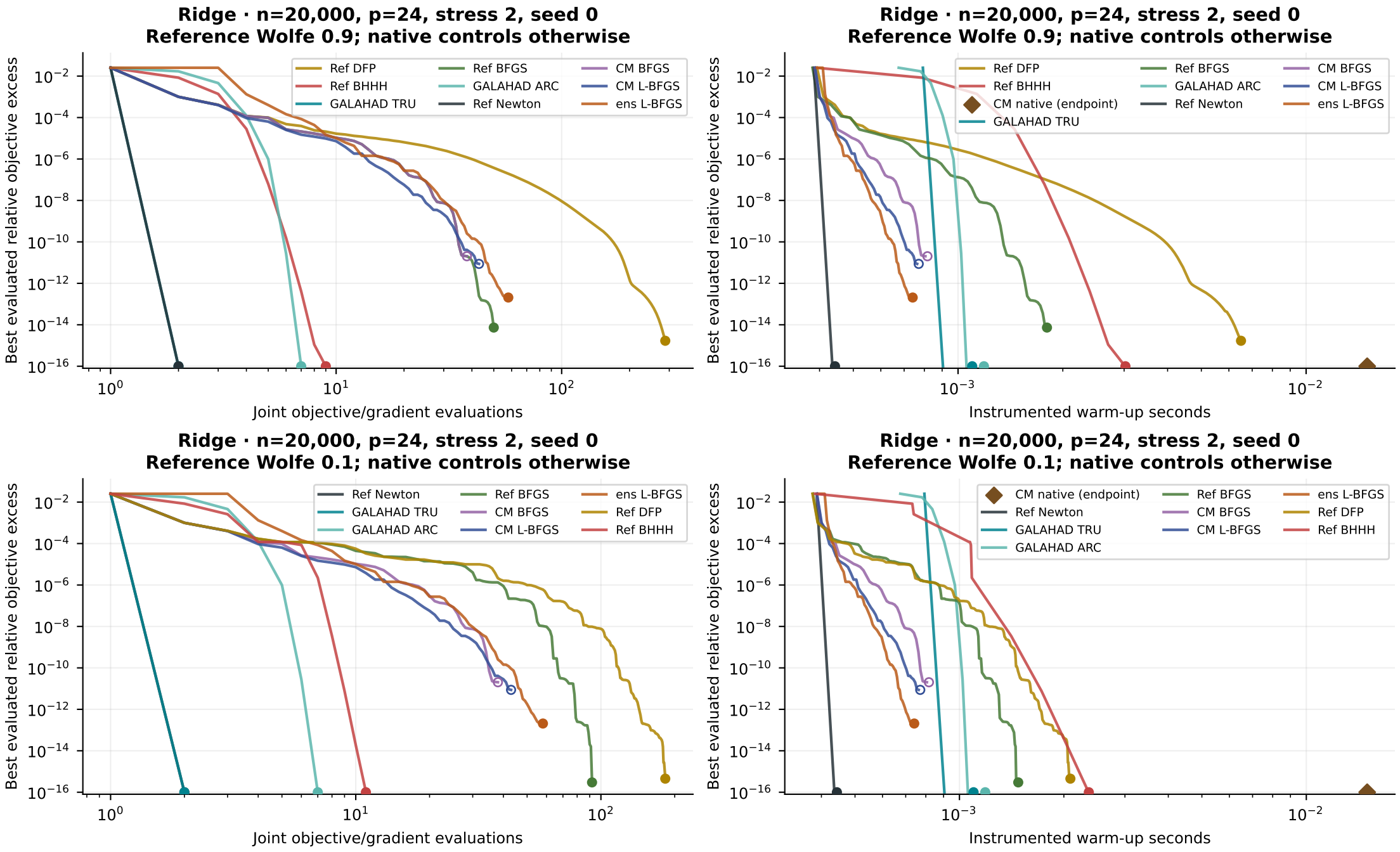

Ridge · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
GALAHAD ARC
Ref BFGS
Ref BHHH
ens L-BFGS
CM L-BFGS
Ref Newton
GALAHAD TRU
Ref DFP
CM BFGS
Ridge · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
CM native (endpoint)
GALAHAD ARC
Ref BFGS
Ref BHHH
ens L-BFGS
CM L-BFGS
Ref Newton
GALAHAD TRU
Ref DFP
CM BFGS
Ridge · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
GALAHAD ARC
Ref BHHH
ens L-BFGS
CM L-BFGS
Ref DFP
Ref Newton
GALAHAD TRU
Ref BFGS
CM BFGS
Ridge · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
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Ref Newton
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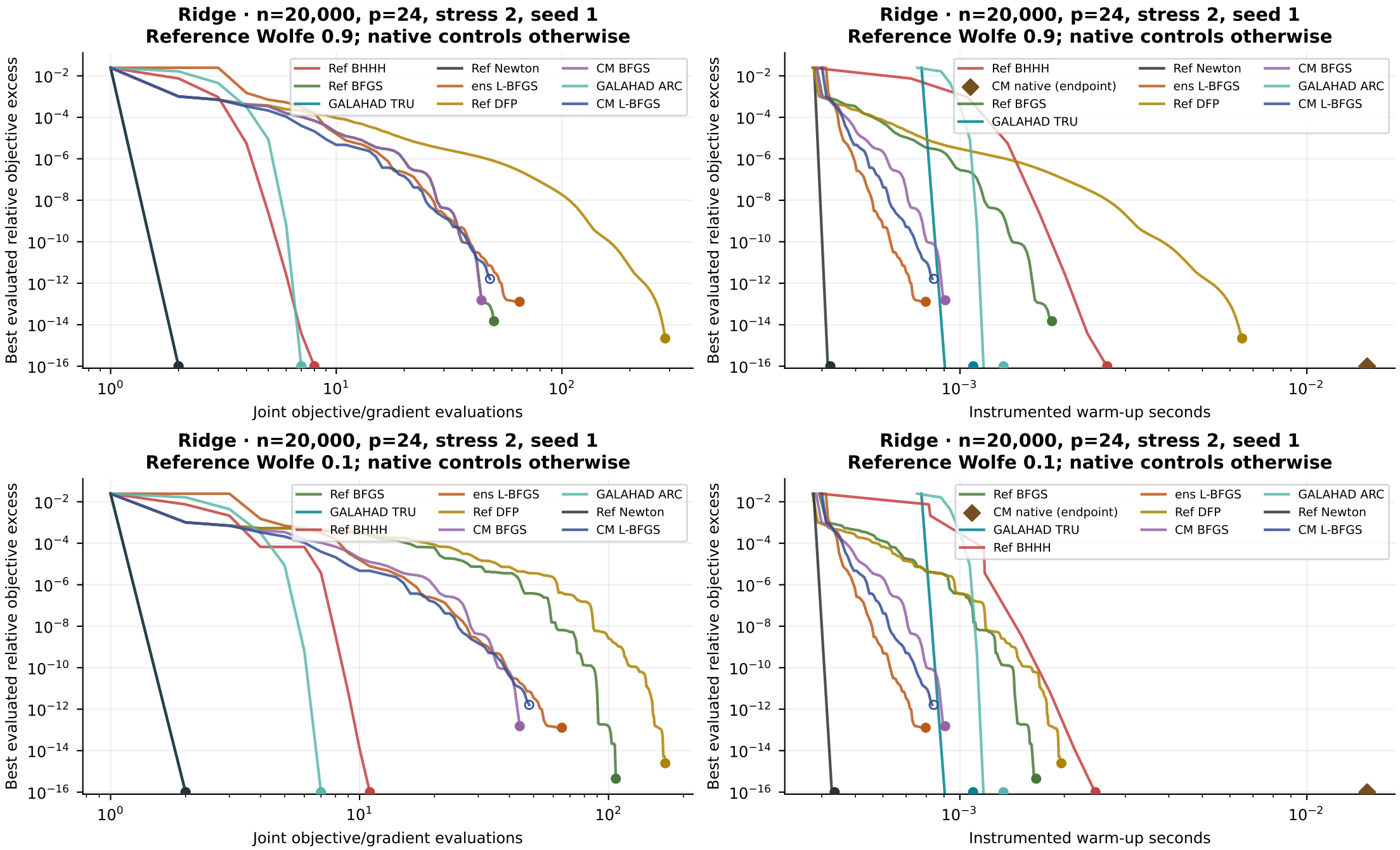

Ridge · n=20,000, p=24, stress 0, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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GALAHAD ARC
GALAHAD TRU
Ref Newton
CM BFGS
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Ref DFP
CM native (endpoint)

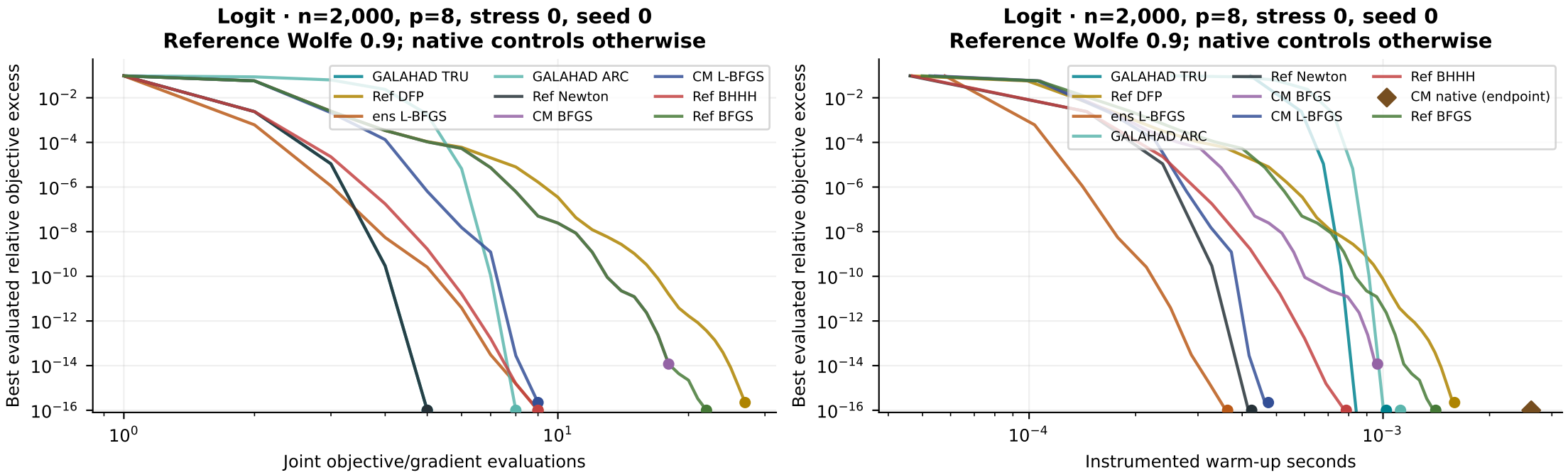

Ridge · n=20,000, p=24, stress 0, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref DFP
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GALAHAD ARC
GALAHAD TRU
Ref Newton
CM BFGS
CM L-BFGS
Ref BHHH
Ref BFGS
CM native (endpoint)


Ridge · n=20,000, p=24, stress 1, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref BHHH
GALAHAD ARC
ens L-BFGS
CM BFGS
Ref Newton
GALAHAD TRU
Ref BFGS
CM L-BFGS
Ref DFP
CM native (endpoint)
Ridge · n=20,000, p=24, stress 1, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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Ref DFP
GALAHAD TRU
Ref Newton
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Ref BFGS
Ref BHHH
CM native (endpoint)

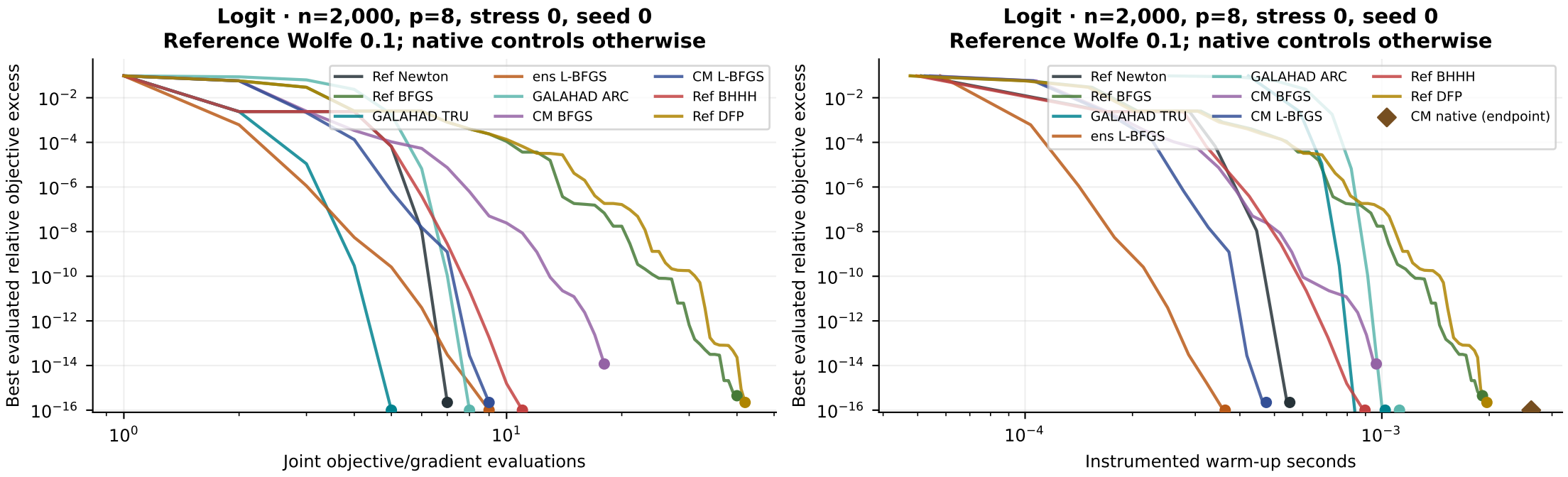

Ridge · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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Ref DFP
Ref BHHH
GALAHAD ARC
CM BFGS
CM L-BFGS
Ref BFGS
Ref Newton
GALAHAD TRU
Ridge · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
ens L-BFGS
Ref DFP
Ref BHHH
GALAHAD ARC
CM BFGS
CM L-BFGS
CM native (endpoint)
Ref BFGS
Ref Newton
GALAHAD TRU
Ridge · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Ref Newton
ens L-BFGS
Ref DFP
Ref BFGS
GALAHAD ARC
CM BFGS
CM L-BFGS
GALAHAD TRU
Ref BHHH
Ridge · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
Ref Newton
ens L-BFGS
Ref DFP
Ref BFGS
GALAHAD ARC
CM BFGS
CM L-BFGS
CM native (endpoint)
GALAHAD TRU
Ref BHHH


Ridge · n=20,000, p=24, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref DFP
Ref BHHH
GALAHAD TRU
Ref BFGS
GALAHAD ARC
Ref Newton
CM BFGS
CM L-BFGS
ens L-BFGS
CM native (endpoint)
Ridge · n=20,000, p=24, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref Newton
GALAHAD TRU
GALAHAD ARC
Ref BFGS
CM BFGS
CM L-BFGS
ens L-BFGS
Ref DFP
Ref BHHH
CM native (endpoint)

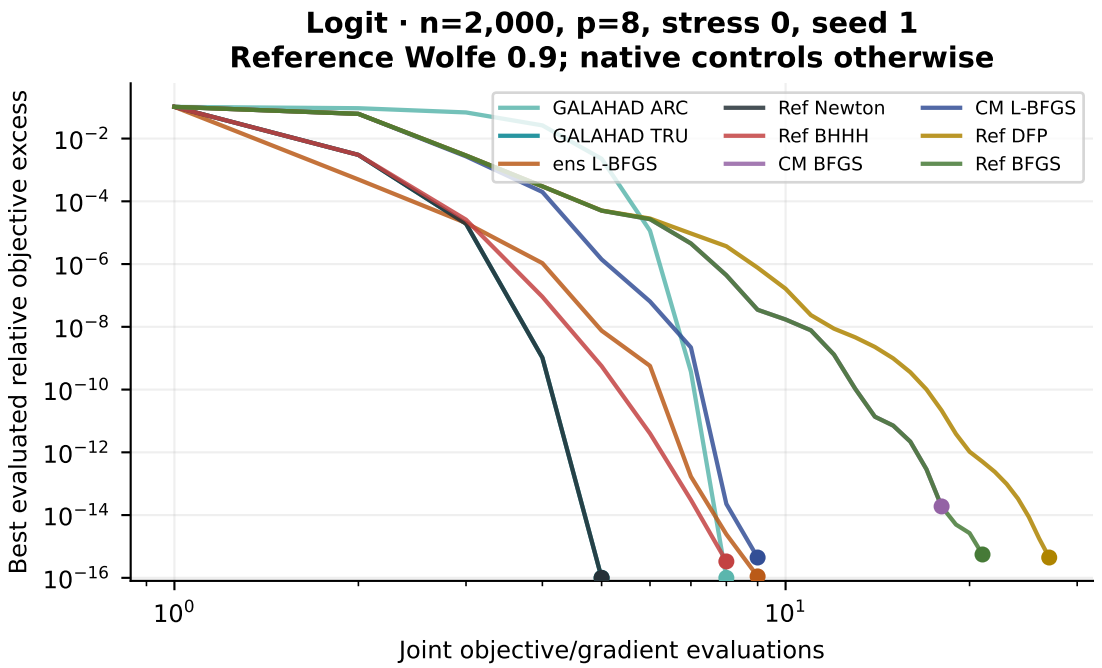

Ridge · n=20,000, p=24, stress 2, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref BHHH
Ref BFGS
GALAHAD TRU
Ref Newton
ens L-BFGS
Ref DFP
CM BFGS
GALAHAD ARC
CM L-BFGS
CM native (endpoint)
Ridge · n=20,000, p=24, stress 2, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref BFGS
GALAHAD TRU
Ref BHHH
ens L-BFGS
Ref DFP
CM BFGS
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Ref Newton
CM L-BFGS
CM native (endpoint)

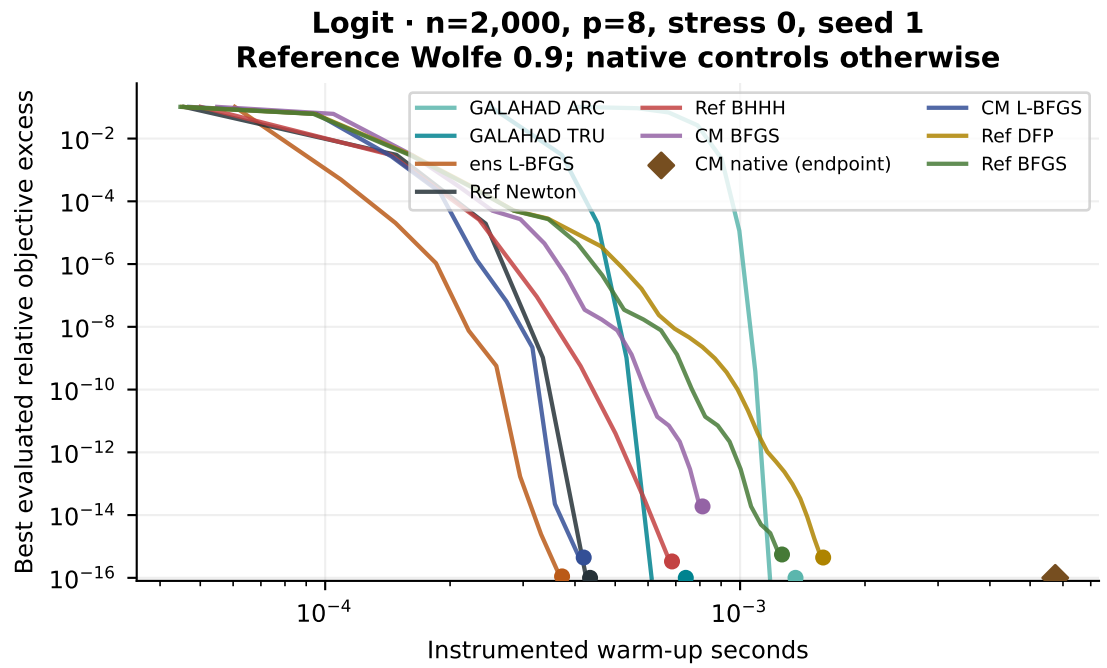

Logit · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
GALAHAD TRU
Ref DFP
ens L-BFGS
GALAHAD ARC
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CM L-BFGS
Ref BHHH
Ref BFGS

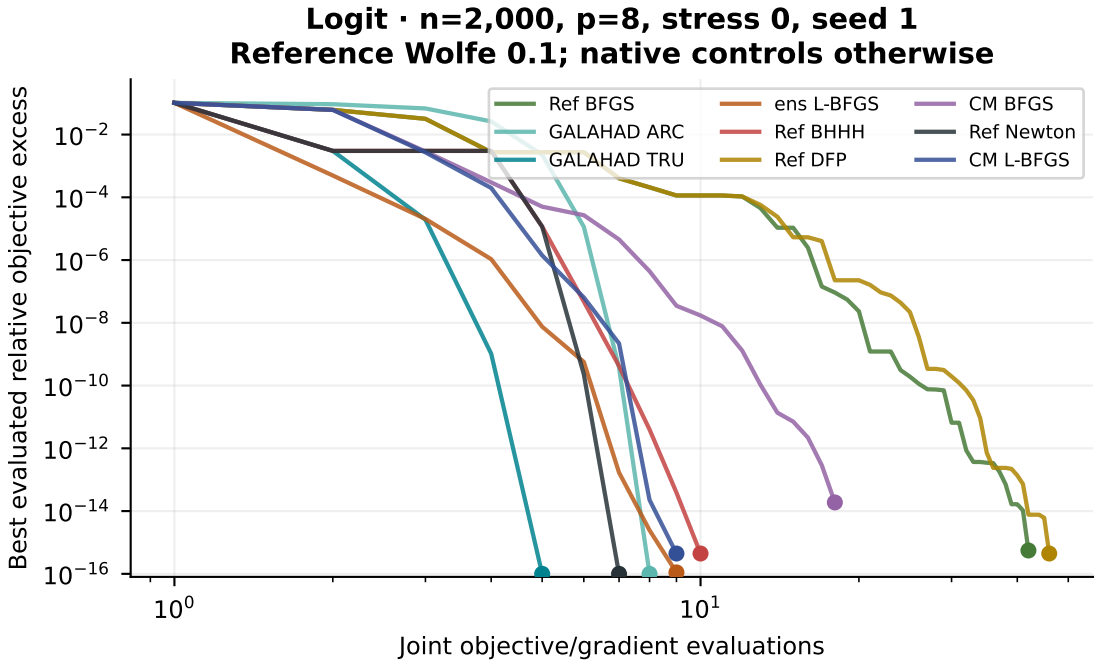
Logit · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
GALAHAD TRU
Ref DFP
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Ref BFGS

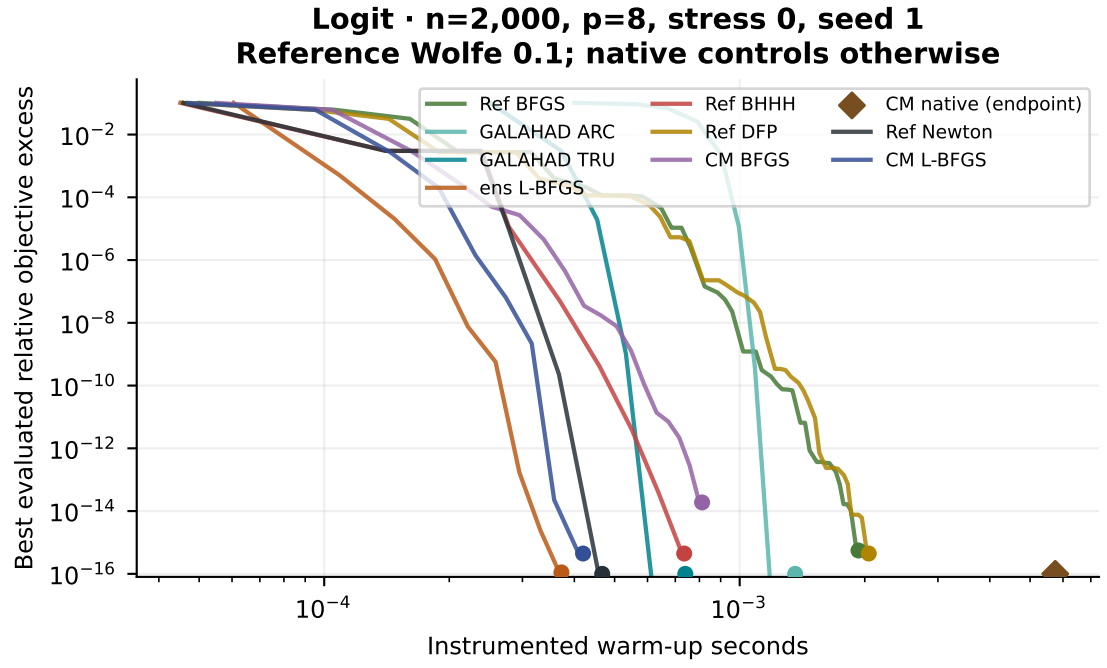

Logit · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Ref Newton
Ref BFGS
GALAHAD TRU
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GALAHAD ARC
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CM L-BFGS
Ref BHHH
Ref DFP

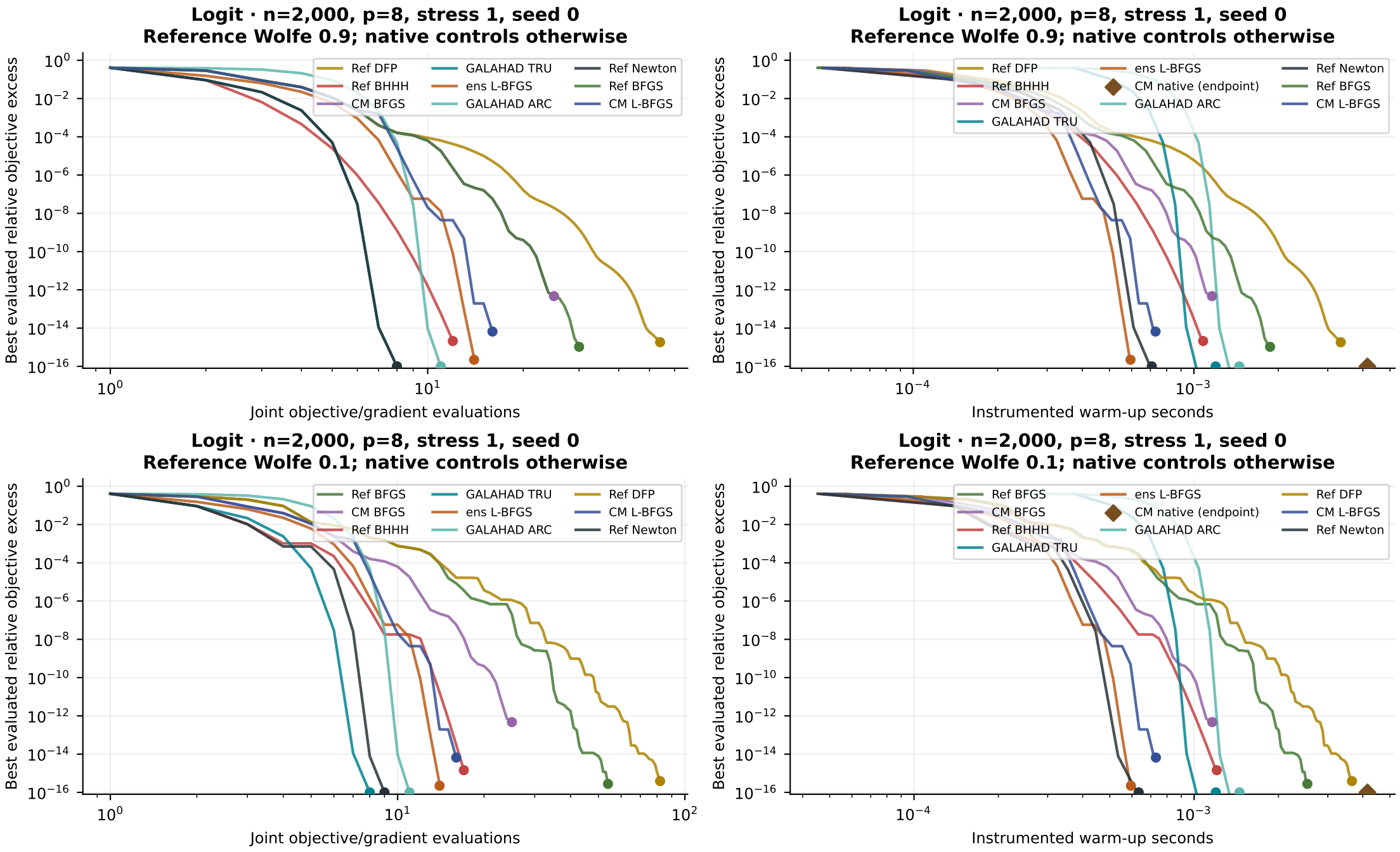
Logit · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
Ref Newton
Ref BFGS
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CM BFGS
CM L-BFGS
Ref BHHH
Ref DFP
CM native (endpoint)

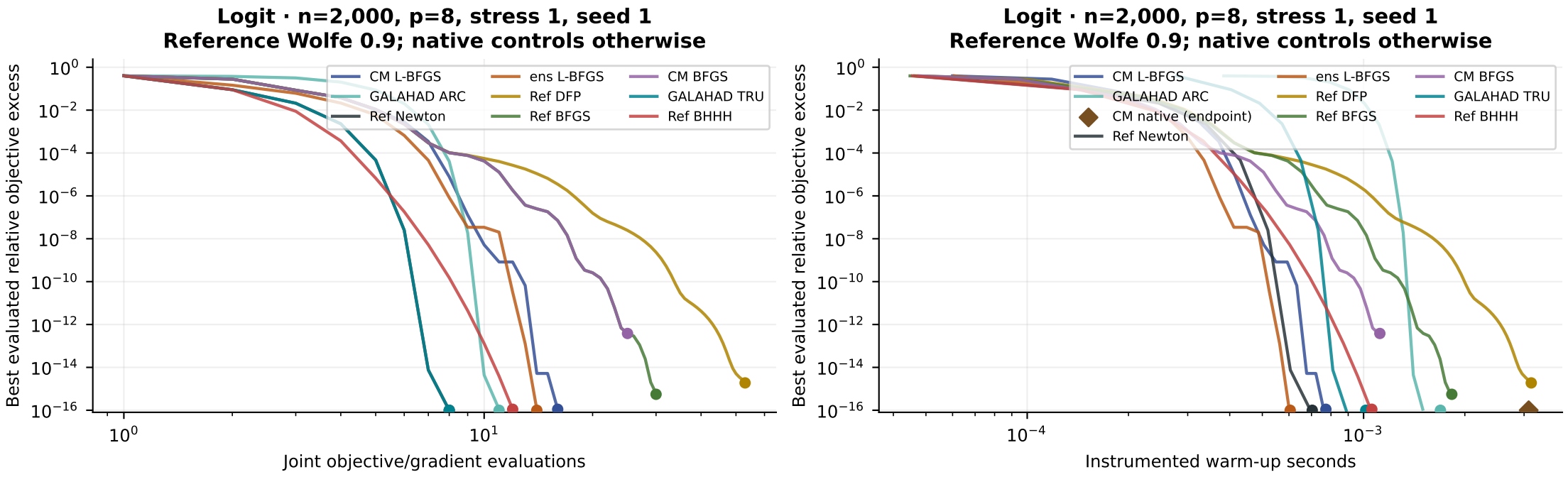

Logit · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.9; native controls otherwise
GALAHAD ARC
GALAHAD TRU
ens L-BFGS
Ref Newton
Ref BHHH
CM BFGS
CM L-BFGS
Ref DFP
Ref BFGS
Best evaluated relative objective excess
Joint objective/gradient evaluations


Logit · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.9; native controls otherwise
GALAHAD ARC
GALAHAD TRU
ens L-BFGS
Ref Newton
Ref BHHH
CM BFGS
CM native (endpoint)
CM L-BFGS
Ref DFP
Ref BFGS
Best evaluated relative objective excess
Instrumented warm-up seconds

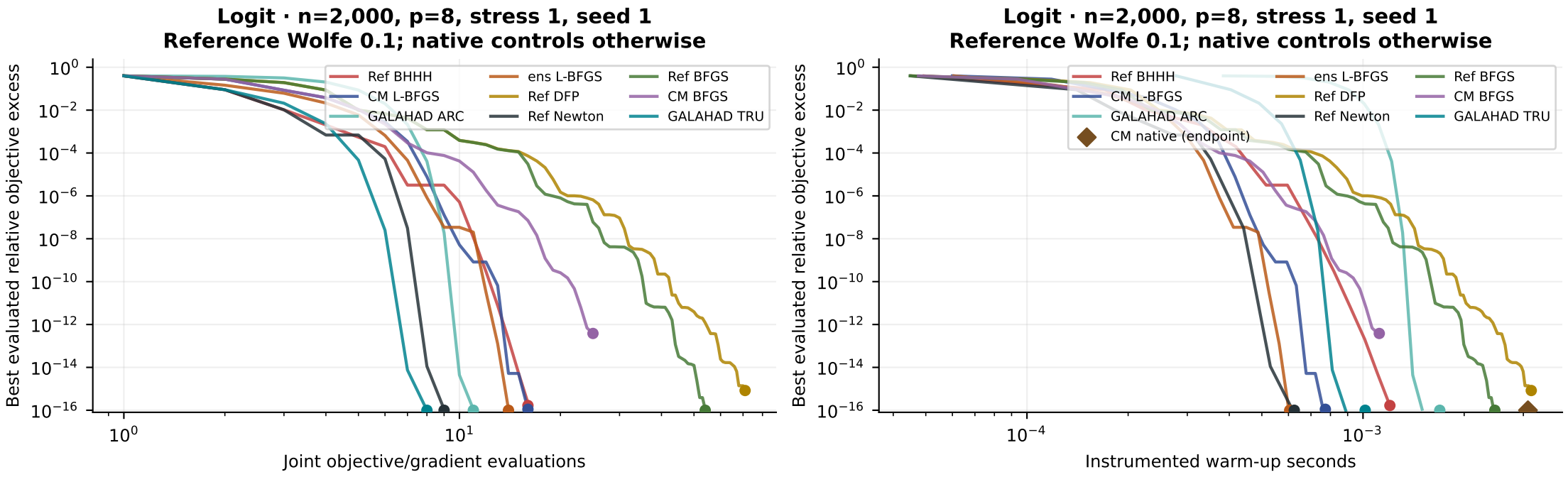

Logit · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.1; native controls otherwise
Ref BFGS
GALAHAD ARC
GALAHAD TRU
ens L-BFGS
Ref BHHH
Ref DFP
CM BFGS
Ref Newton
CM L-BFGS
Best evaluated relative objective excess
Joint objective/gradient evaluations


Logit · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.1; native controls otherwise
Ref BFGS
GALAHAD ARC
GALAHAD TRU
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Ref DFP
CM BFGS
CM native (endpoint)
Ref Newton
CM L-BFGS
Best evaluated relative objective excess
Instrumented warm-up seconds

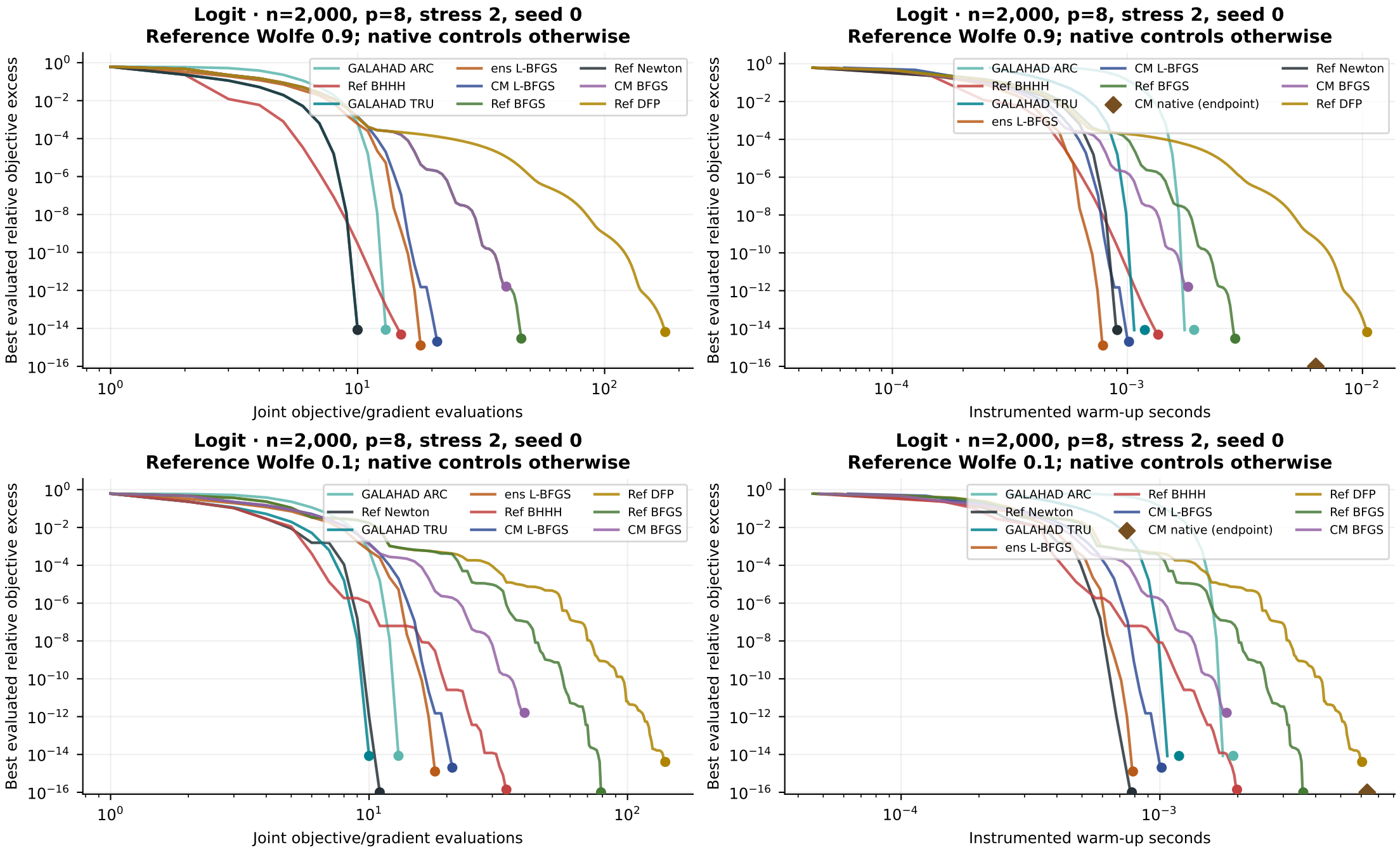

Logit · n=2,000, p=8, stress 1, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref DFP
Ref BHHH
CM BFGS
GALAHAD TRU
ens L-BFGS
GALAHAD ARC
Ref Newton
Ref BFGS
CM L-BFGS
CM native (endpoint)
Logit · n=2,000, p=8, stress 1, seed 0
Reference Wolfe 0.1; native controls otherwise

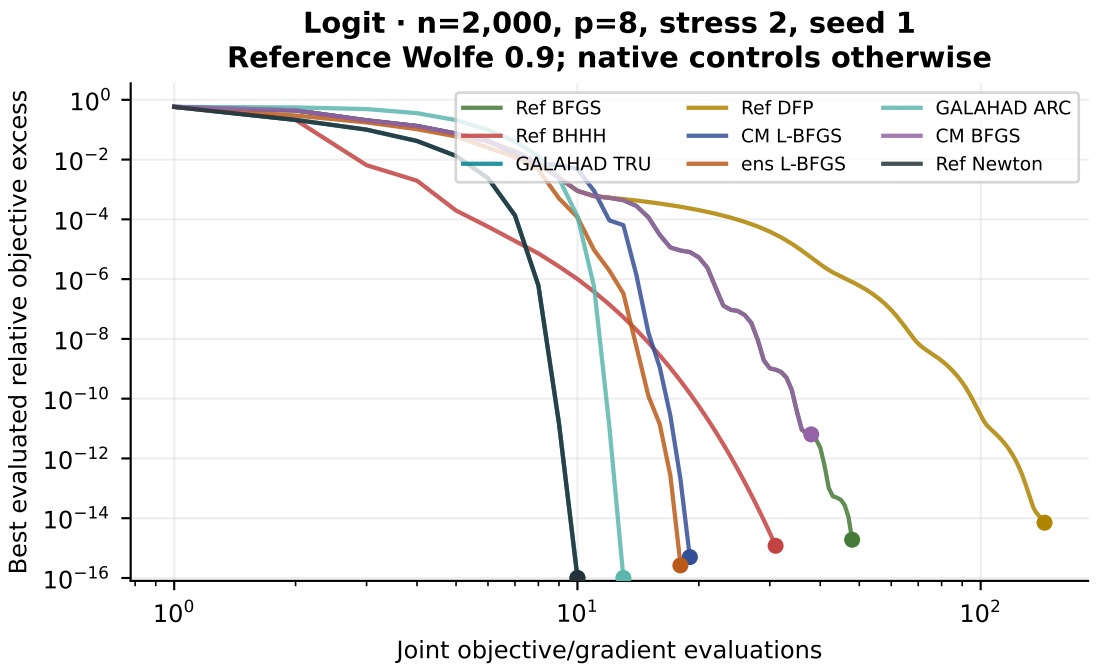

Logit · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
CM L-BFGS
GALAHAD ARC
Ref Newton
ens L-BFGS
Ref DFP
Ref BFGS
CM BFGS
GALAHAD TRU
Ref BHHH

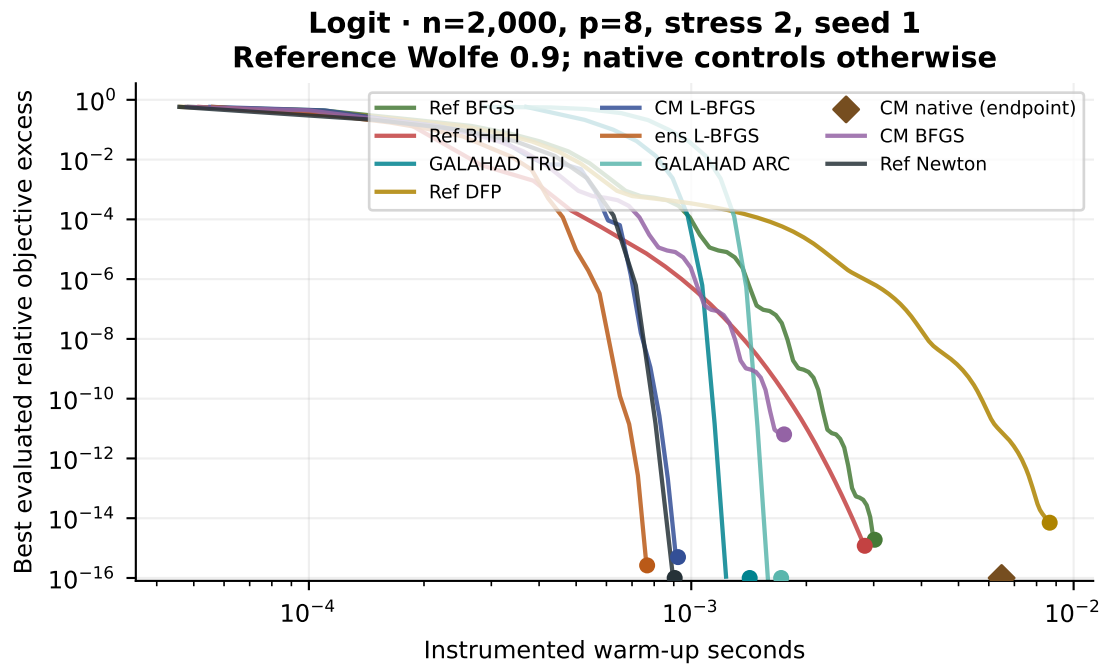
Logit · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
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GALAHAD ARC
CM native (endpoint)
Ref Newton
ens L-BFGS
Ref DFP
Ref BFGS
CM BFGS
GALAHAD TRU
Ref BHHH

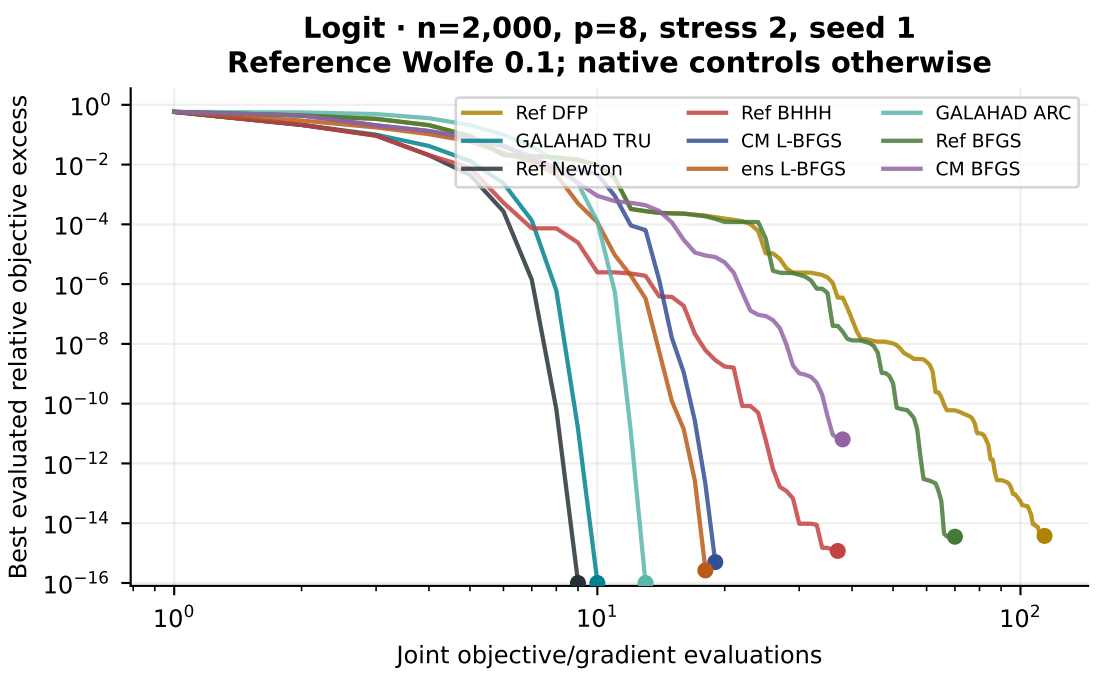

Logit · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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Ref BFGS
CM BFGS
GALAHAD TRU

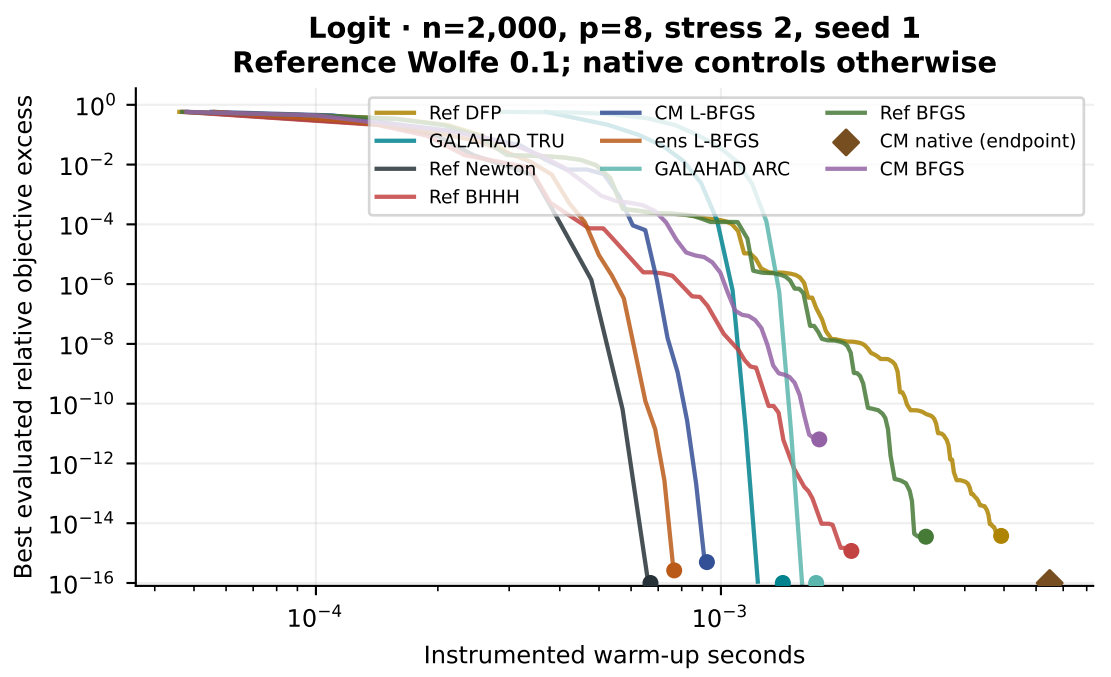
Logit · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
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CM native (endpoint)
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Ref Newton
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GALAHAD TRU

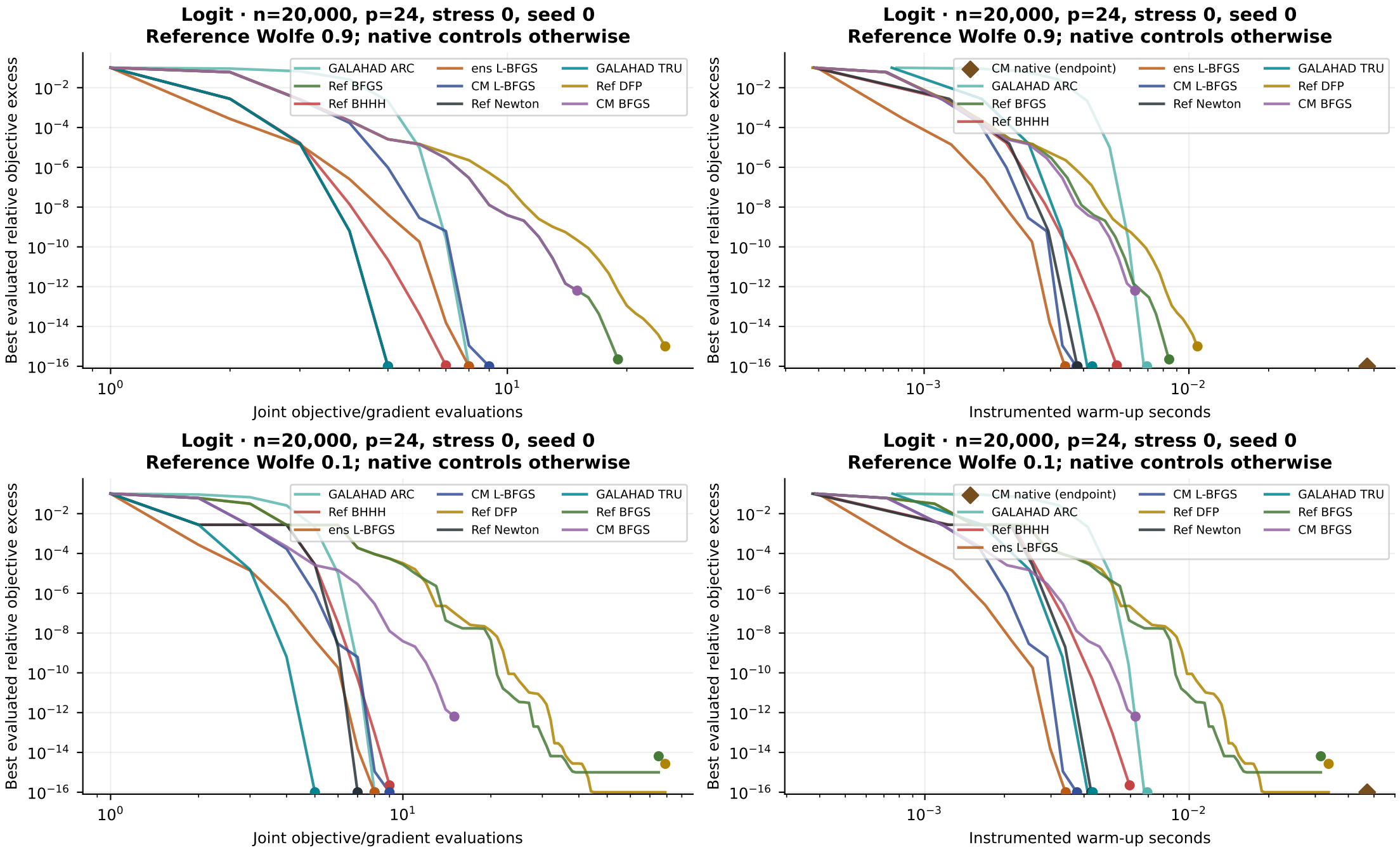

Logit · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
GALAHAD ARC
Ref BHHH
GALAHAD TRU
ens L-BFGS
CM L-BFGS
Ref BFGS
Ref Newton
CM BFGS
Ref DFP
CM native (endpoint)
Logit · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
GALAHAD ARC
Ref Newton
GALAHAD TRU
ens L-BFGS
Ref BHHH
CM L-BFGS
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Ref BFGS
CM BFGS
CM native (endpoint)

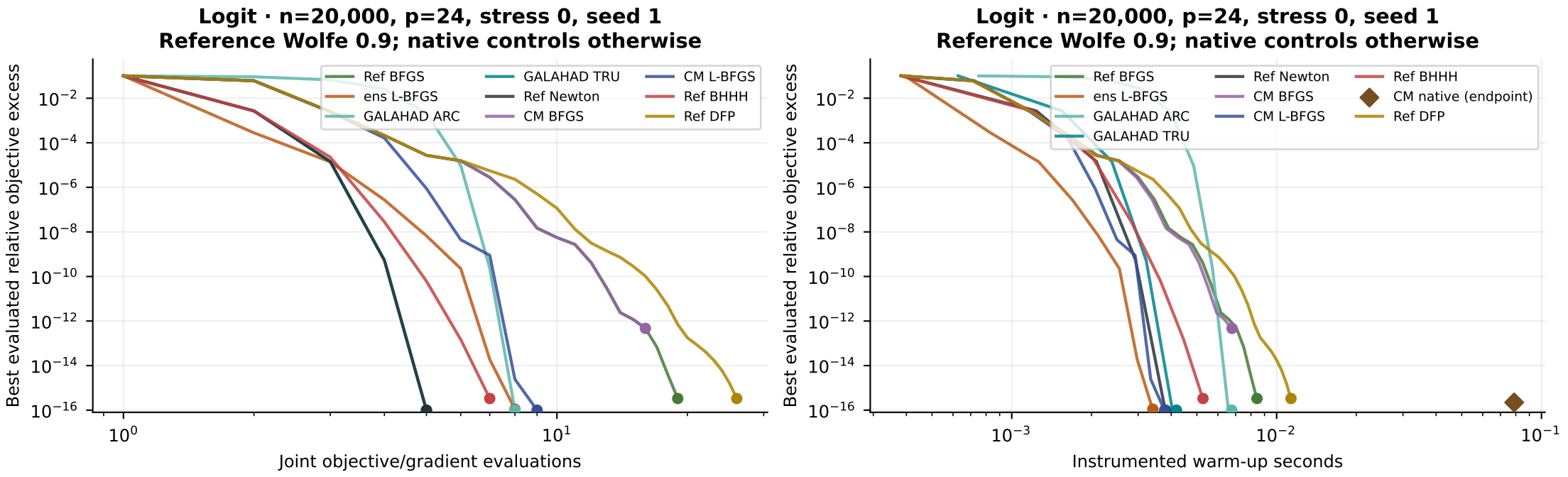

Logit · n=2,000, p=8, stress 2, seed 1
Reference Wolfe 0.9; native controls otherwise
Ref BFGS
Ref BHHH
GALAHAD TRU
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ens L-BFGS
GALAHAD ARC
CM BFGS
Ref Newton
Best evaluated relative objective excess
Joint objective/gradient evaluations

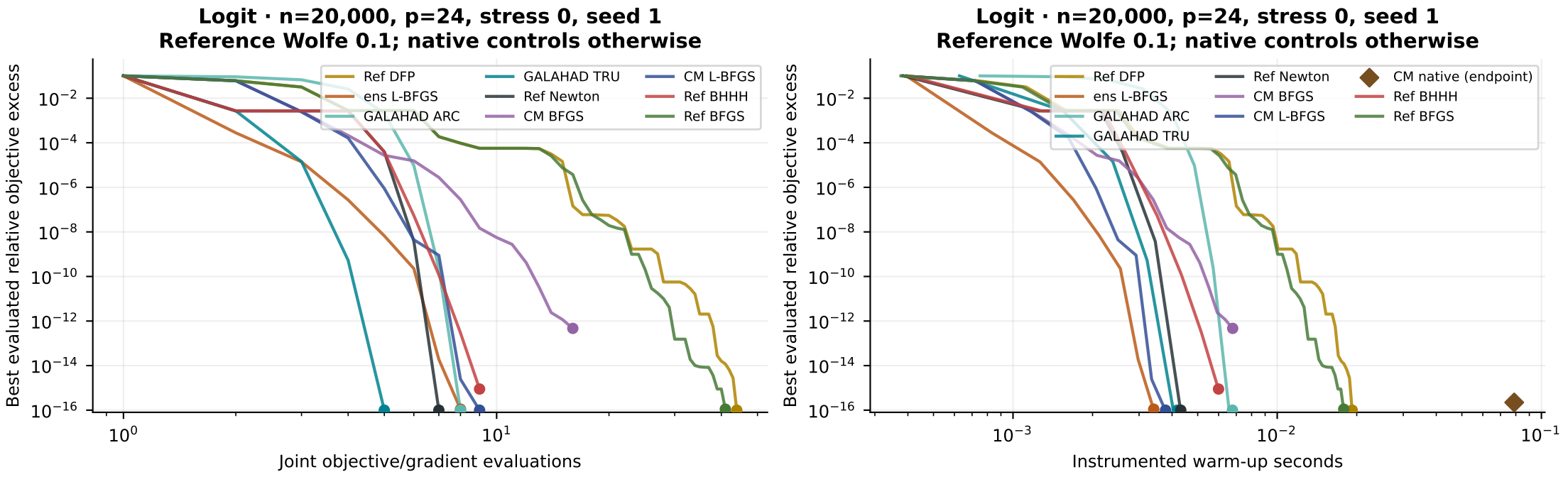

Logit · n=2,000, p=8, stress 2, seed 1
Reference Wolfe 0.9; native controls otherwise
Ref BFGS
Ref BHHH
GALAHAD TRU
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GALAHAD ARC
CM native (endpoint)
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Ref Newton
Best evaluated relative objective excess
Instrumented warm-up seconds

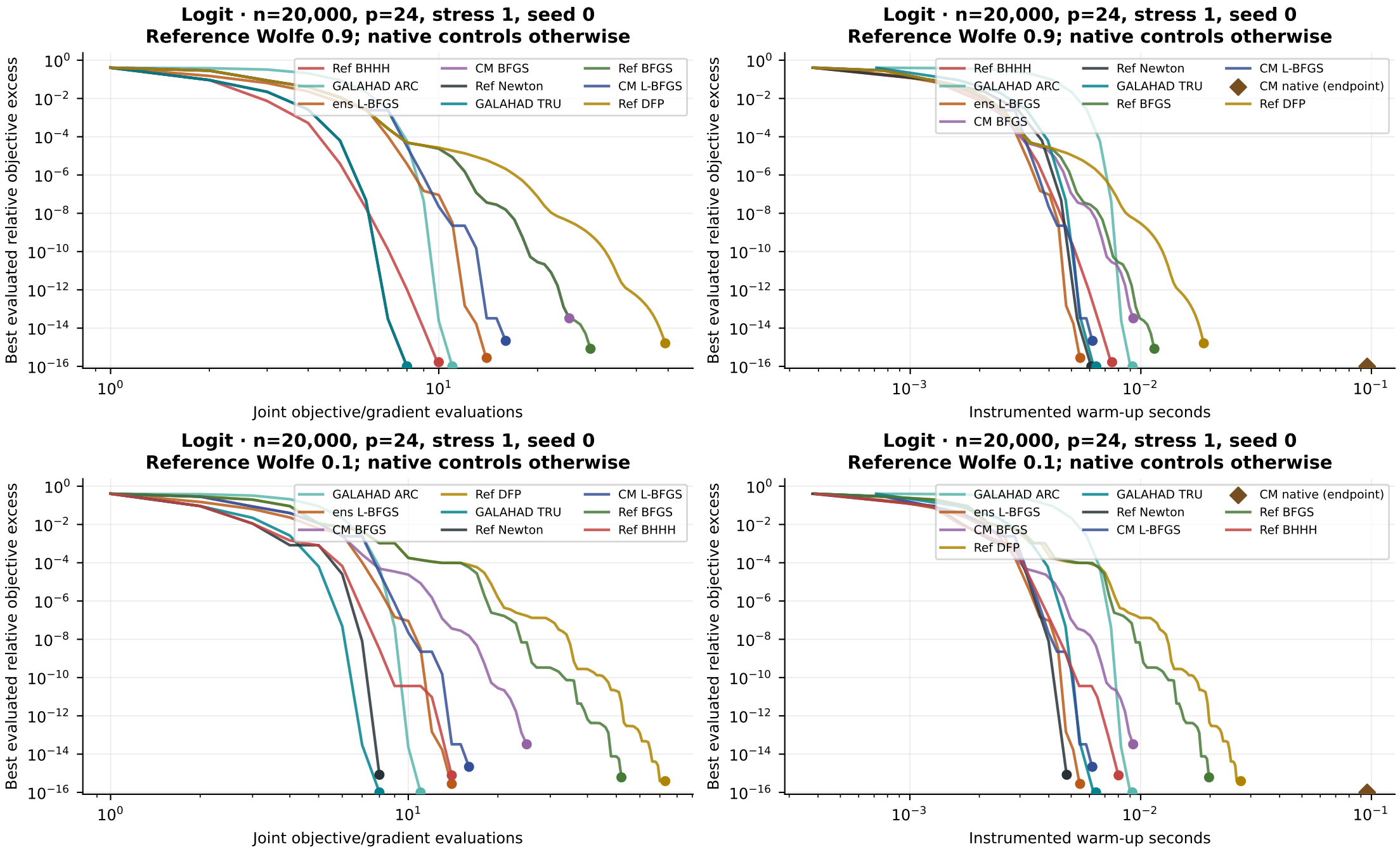

Logit · n=2,000, p=8, stress 2, seed 1
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Ref DFP
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GALAHAD ARC
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Best evaluated relative objective excess
Joint objective/gradient evaluations

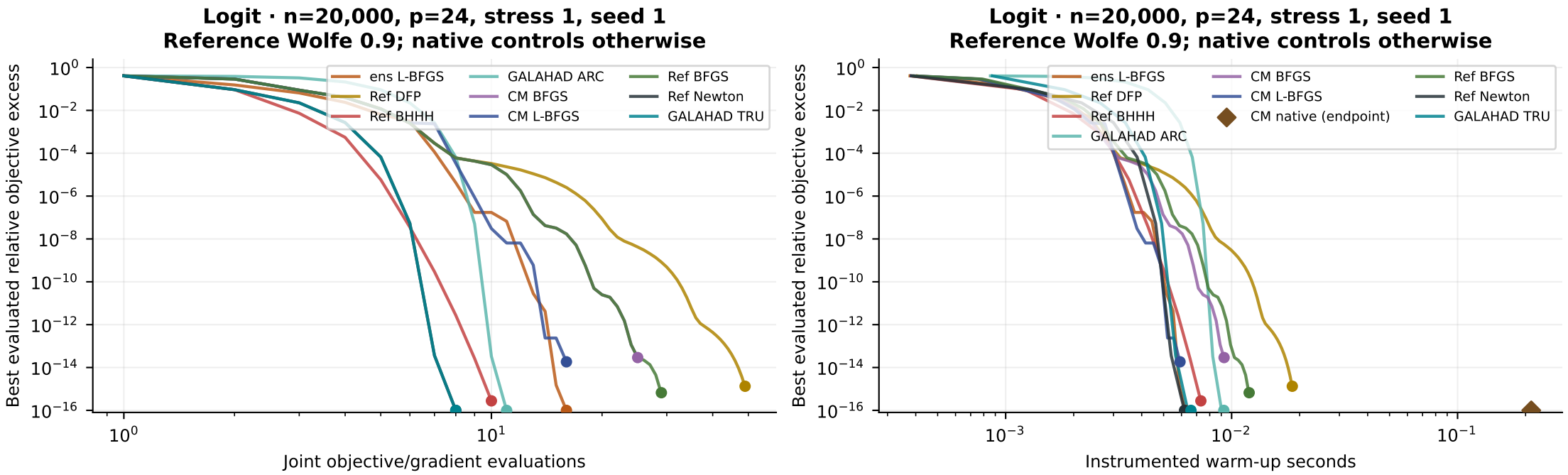

Logit · n=2,000, p=8, stress 2, seed 1
Reference Wolfe 0.1; native controls otherwise
Ref DFP
GALAHAD TRU
Ref Newton
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CM L-BFGS
ens L-BFGS
GALAHAD ARC
Ref BFGS
CM native (endpoint)
CM BFGS
Best evaluated relative objective excess
Instrumented warm-up seconds


Logit · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
GALAHAD ARC
Ref BFGS
Ref BHHH
ens L-BFGS
CM L-BFGS
Ref Newton
GALAHAD TRU
Ref DFP
CM BFGS
CM native (endpoint)
Logit · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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ens L-BFGS
CM L-BFGS
Ref DFP
Ref Newton
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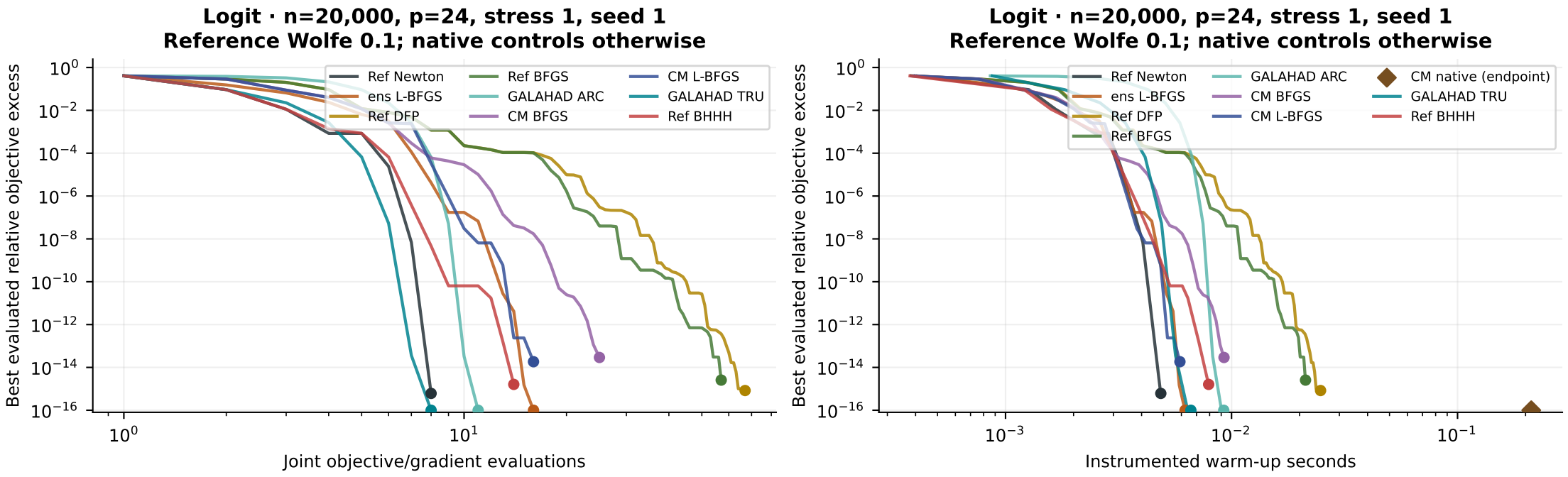

Logit · n=20,000, p=24, stress 0, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref BFGS
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GALAHAD ARC
GALAHAD TRU
Ref Newton
CM BFGS
CM L-BFGS
Ref BHHH
Ref DFP
CM native (endpoint)


Logit · n=20,000, p=24, stress 0, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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GALAHAD TRU
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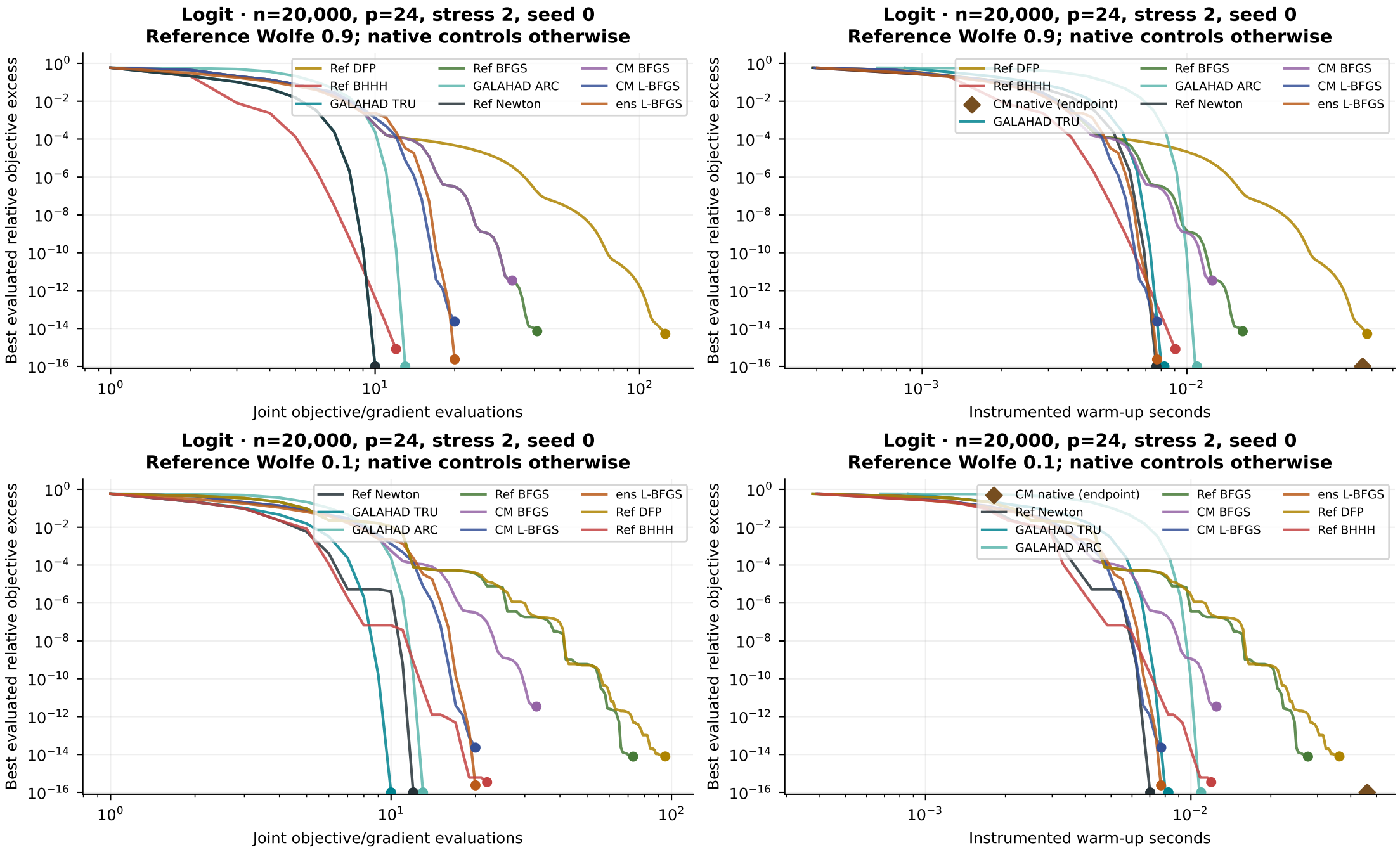

Logit · n=20,000, p=24, stress 1, seed 0
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Instrumented warm-up seconds
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Ref Newton
GALAHAD TRU
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CM L-BFGS
Ref DFP
CM native (endpoint)
Logit · n=20,000, p=24, stress 1, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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Ref DFP
GALAHAD TRU
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CM native (endpoint)

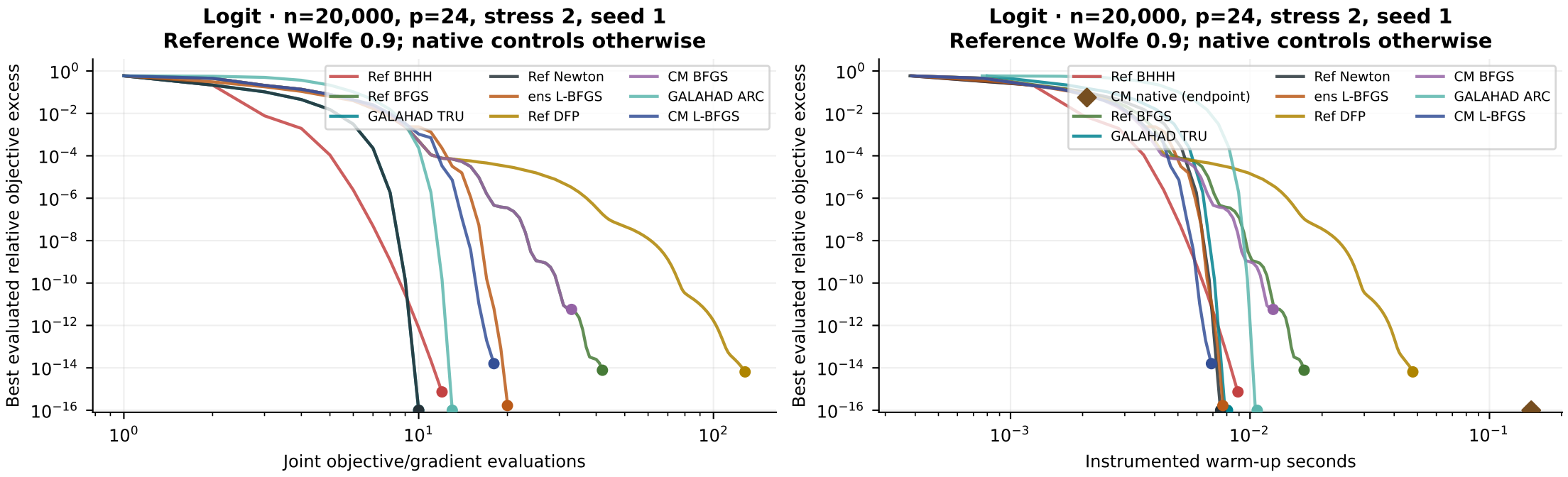

Logit · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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Ref Newton
GALAHAD TRU

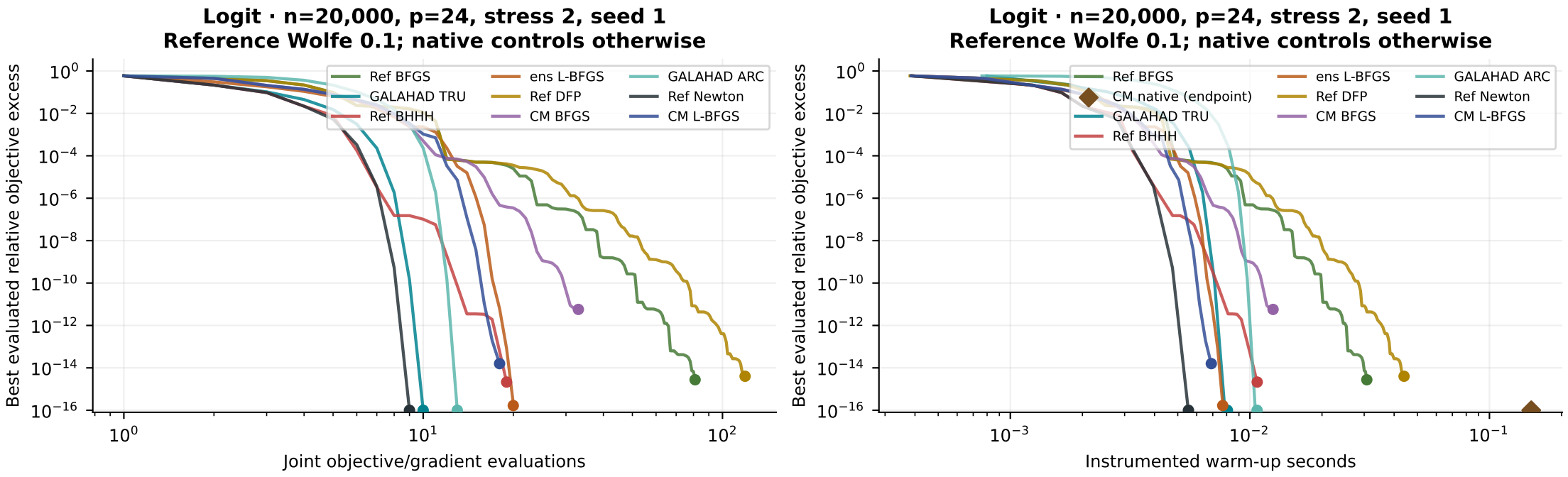
Logit · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
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Instrumented warm-up seconds
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GALAHAD TRU

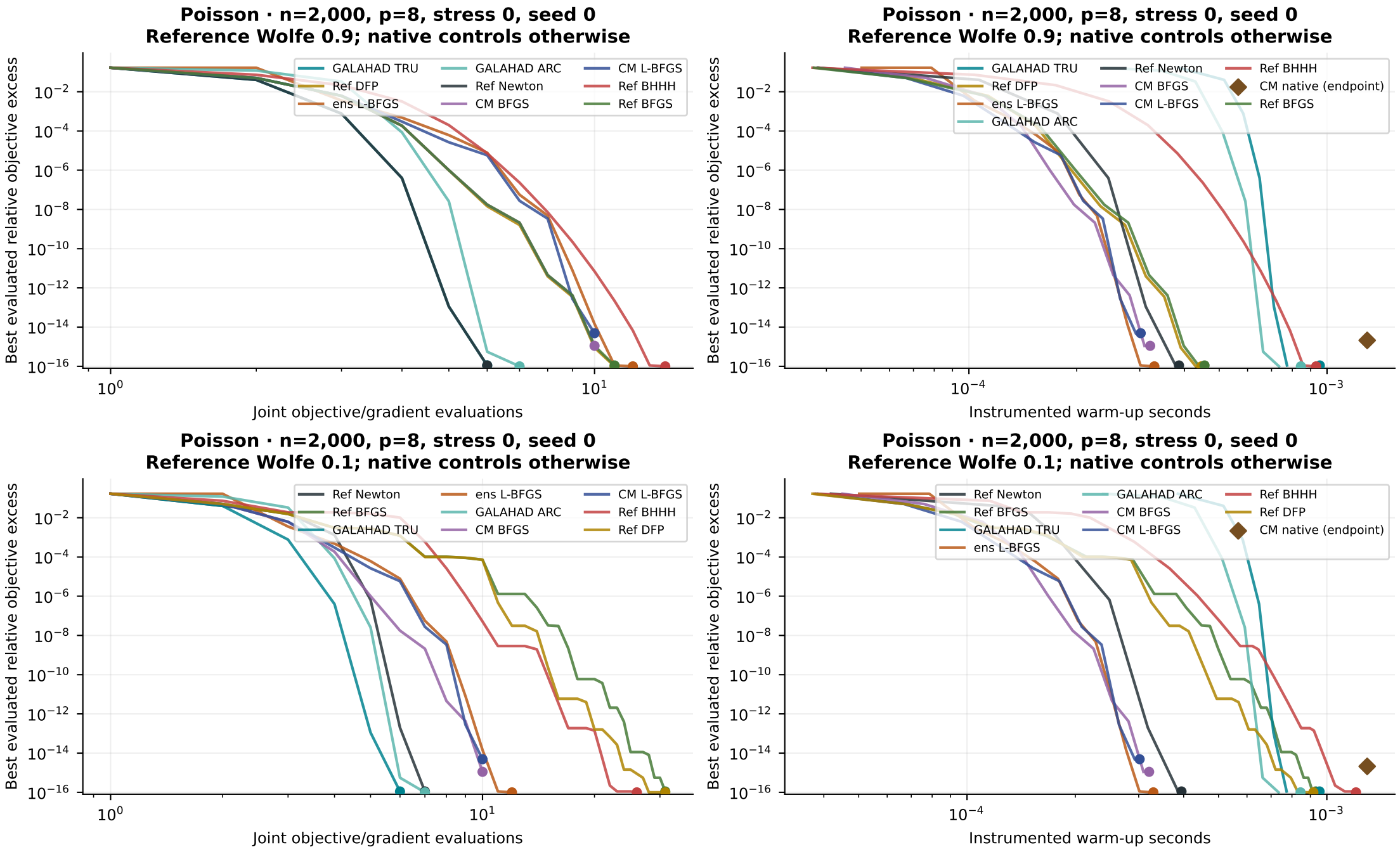

Logit · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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Ref BHHH

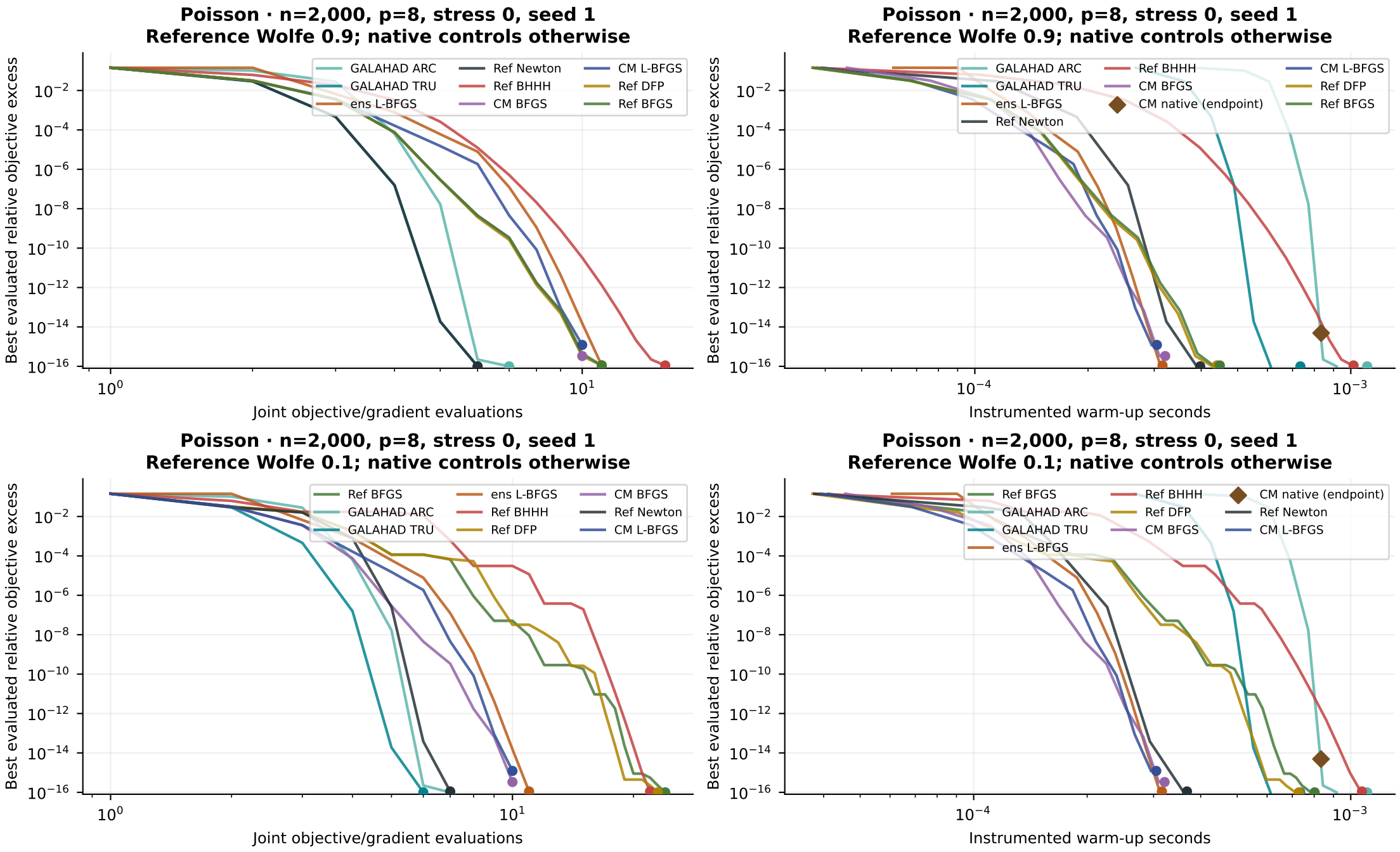
Logit · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
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Ref BHHH

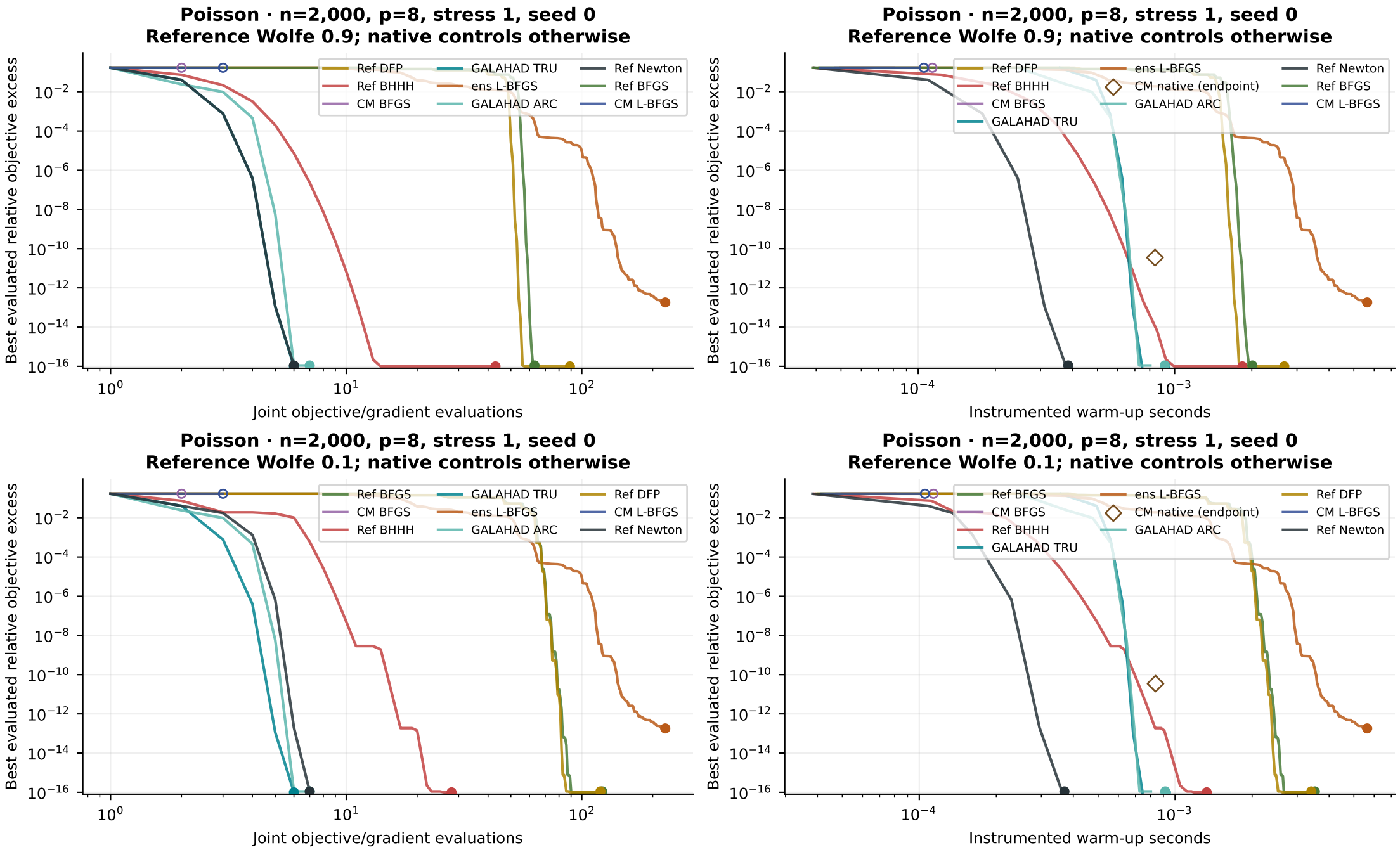

Logit · n=20,000, p=24, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref DFP
Ref BHHH
GALAHAD TRU
Ref BFGS
GALAHAD ARC
Ref Newton
CM BFGS
CM L-BFGS
ens L-BFGS
CM native (endpoint)
Logit · n=20,000, p=24, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref Newton
GALAHAD TRU
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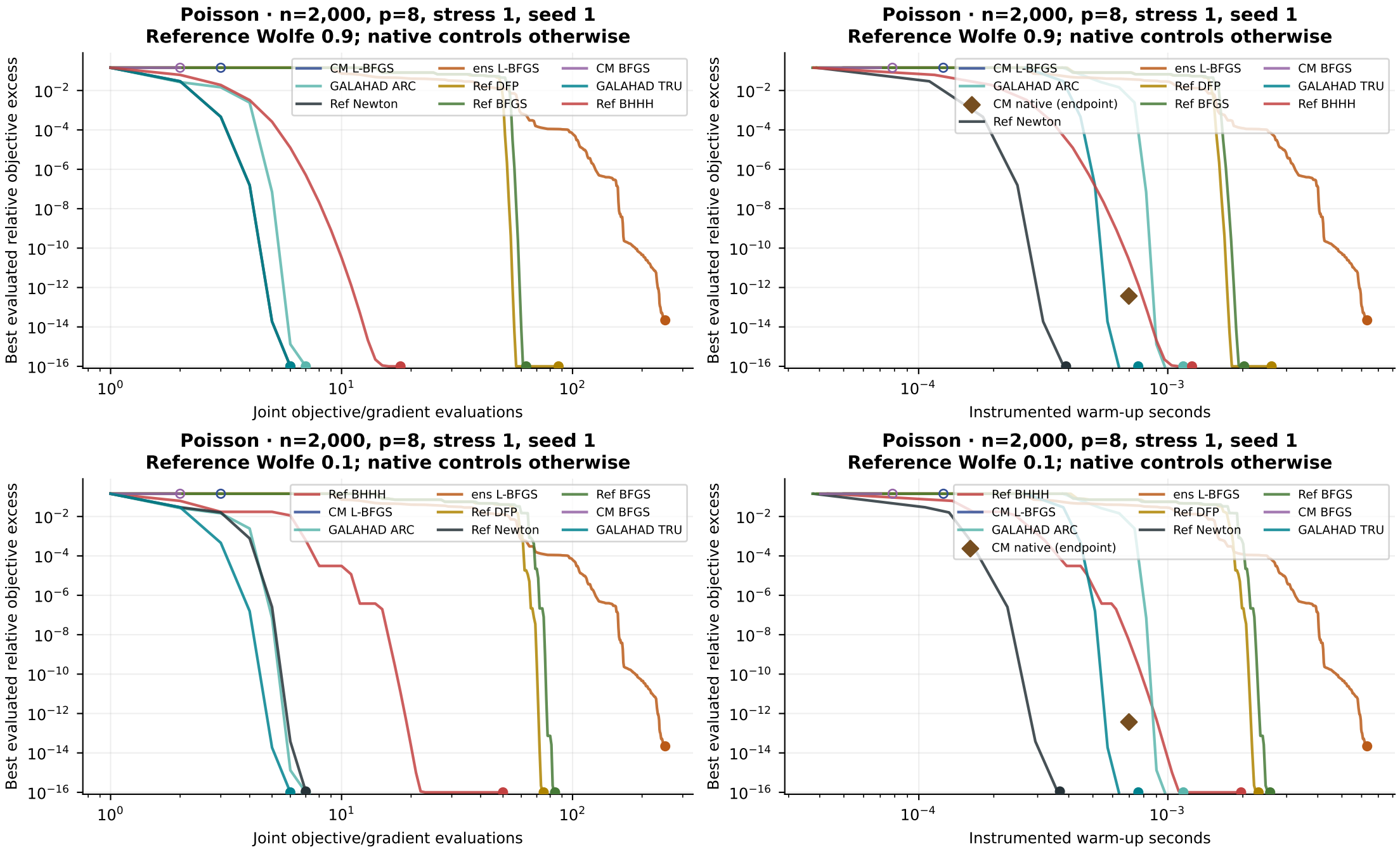

Logit · n=20,000, p=24, stress 2, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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Ref Newton
ens L-BFGS
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CM native (endpoint)

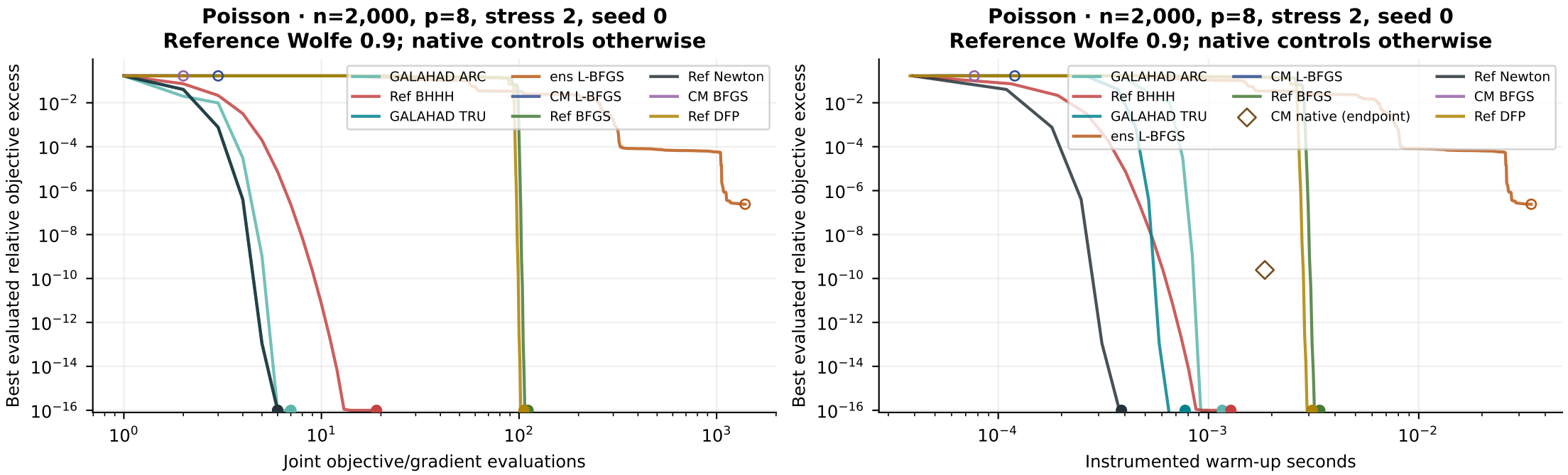

Logit · n=20,000, p=24, stress 2, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref BFGS
GALAHAD TRU
Ref BHHH
ens L-BFGS
Ref DFP
CM BFGS
GALAHAD ARC
Ref Newton
CM L-BFGS
CM native (endpoint)


Poisson · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
GALAHAD TRU
Ref DFP
ens L-BFGS
GALAHAD ARC
Ref Newton
CM BFGS
CM L-BFGS
Ref BHHH
Ref BFGS
Poisson · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
GALAHAD TRU
Ref DFP
ens L-BFGS
GALAHAD ARC
Ref Newton
CM BFGS
CM L-BFGS
Ref BHHH
CM native (endpoint)
Ref BFGS
Poisson · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Ref Newton
Ref BFGS
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Poisson · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
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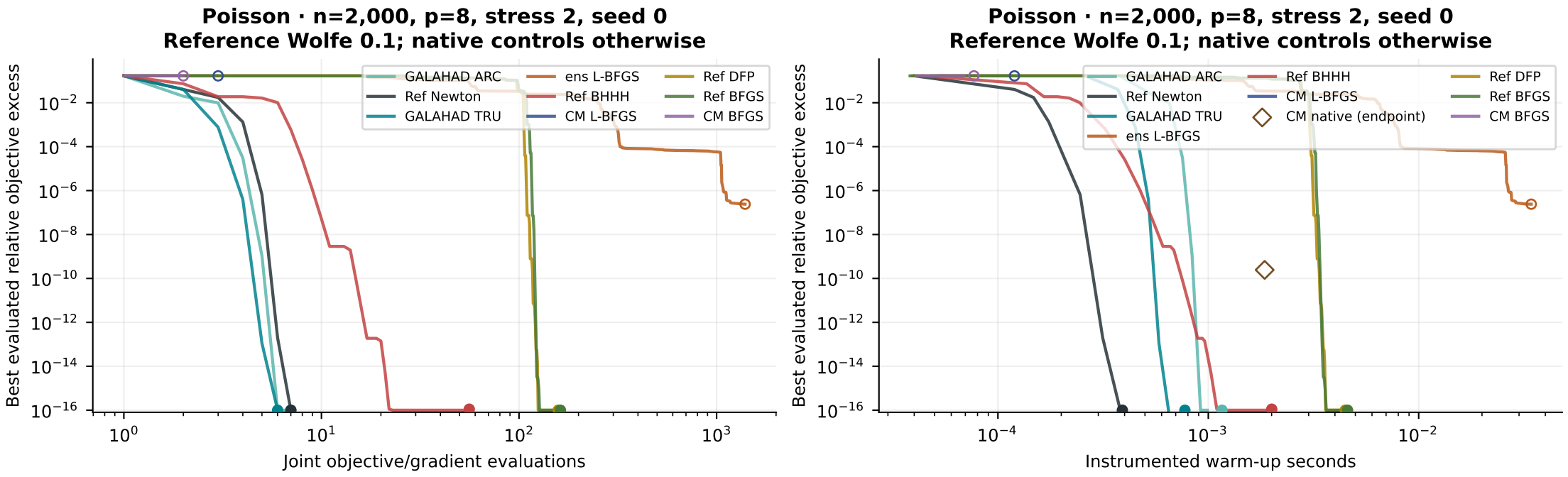

Poisson · n=2,000, p=8, stress 0, seed 1
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Best evaluated relative objective excess
Joint objective/gradient evaluations
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GALAHAD TRU
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Ref Newton
Ref BHHH
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CM L-BFGS
Ref DFP
Ref BFGS
Poisson · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
GALAHAD ARC
GALAHAD TRU
ens L-BFGS
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Ref BHHH
CM BFGS
CM native (endpoint)
CM L-BFGS
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Poisson · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Ref BFGS
GALAHAD ARC
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Poisson · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
Ref BFGS
GALAHAD ARC
GALAHAD TRU
ens L-BFGS
Ref BHHH
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CM BFGS
CM native (endpoint)
Ref Newton
CM L-BFGS


Poisson · n=2,000, p=8, stress 1, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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CM BFGS
GALAHAD TRU
ens L-BFGS
GALAHAD ARC
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Ref BFGS
CM L-BFGS
CM native (endpoint)
Poisson · n=2,000, p=8, stress 1, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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CM native (endpoint)

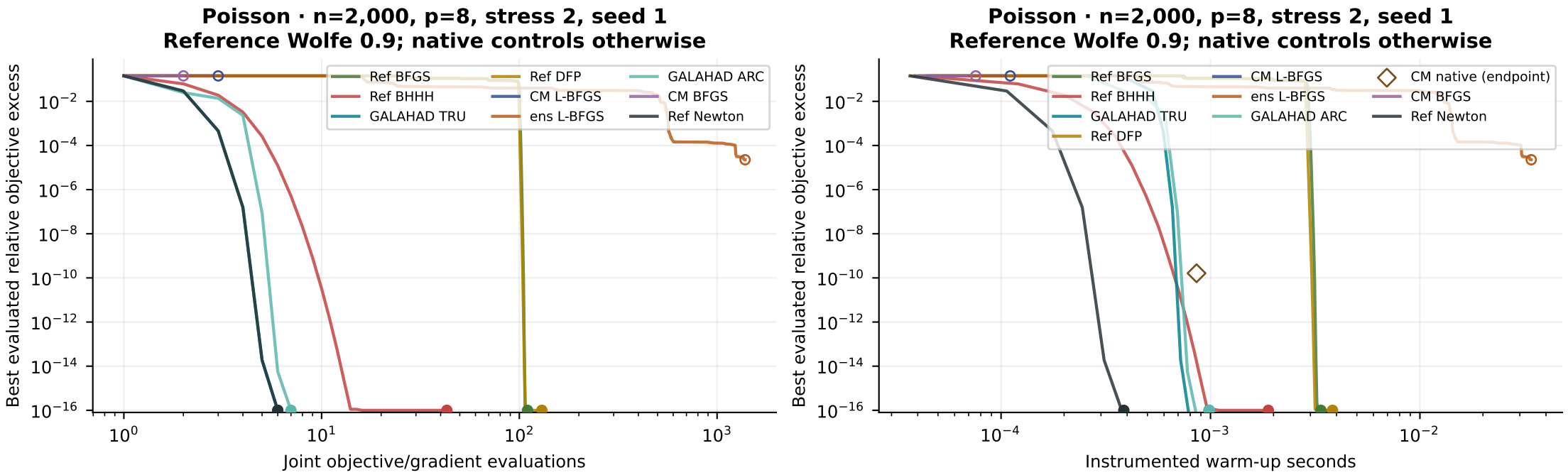

Poisson · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
CM L-BFGS
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Ref DFP
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CM BFGS
GALAHAD TRU
Ref BHHH
CM native (endpoint)
Poisson · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref BHHH
CM L-BFGS
GALAHAD ARC
Ref Newton
ens L-BFGS
Ref DFP
Ref BFGS
CM BFGS
GALAHAD TRU
CM native (endpoint)


Poisson · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
GALAHAD ARC
Ref BHHH
GALAHAD TRU
ens L-BFGS
CM L-BFGS
Ref BFGS
Ref Newton
CM BFGS
Ref DFP

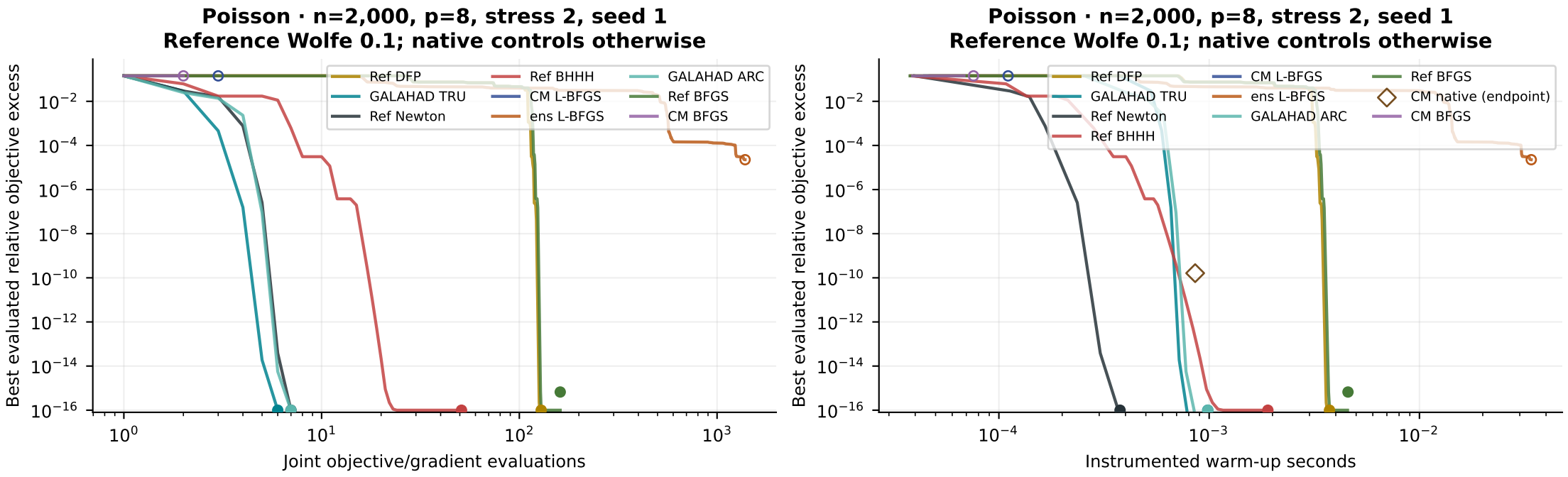
Poisson · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
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Ref BHHH
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ens L-BFGS
CM L-BFGS
Ref BFGS
CM native (endpoint)
Ref Newton
CM BFGS
Ref DFP


Poisson · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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Ref Newton
GALAHAD TRU
ens L-BFGS
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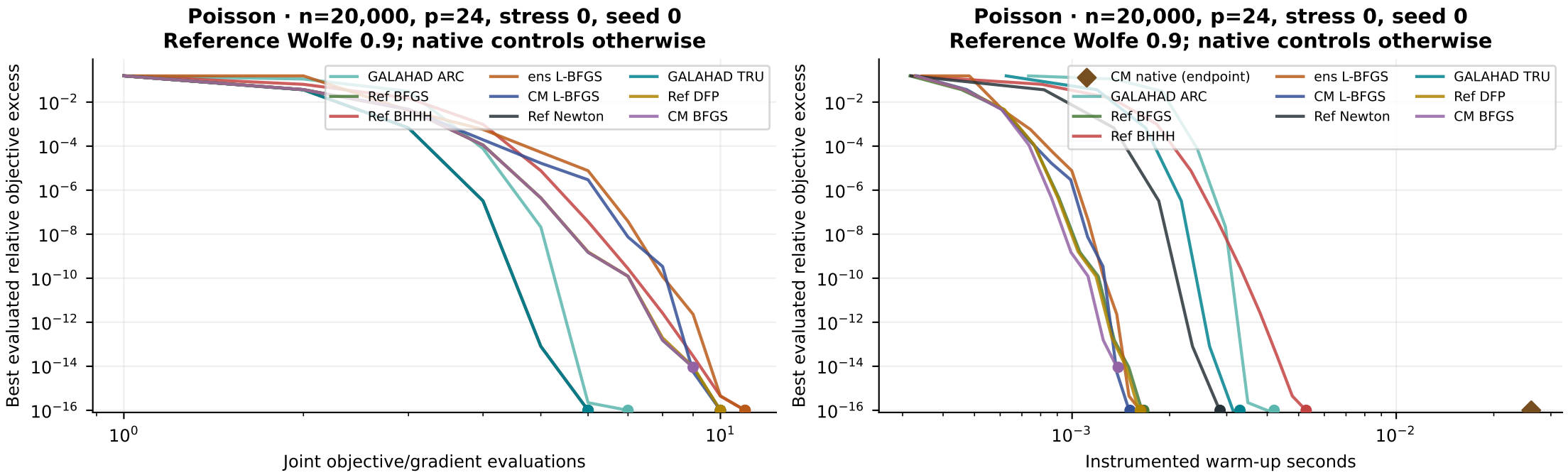
Poisson · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
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Ref BHHH
CM L-BFGS
CM native (endpoint)
Ref DFP
Ref BFGS
CM BFGS


Poisson · n=2,000, p=8, stress 2, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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Ref BHHH
GALAHAD TRU
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ens L-BFGS
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Ref Newton

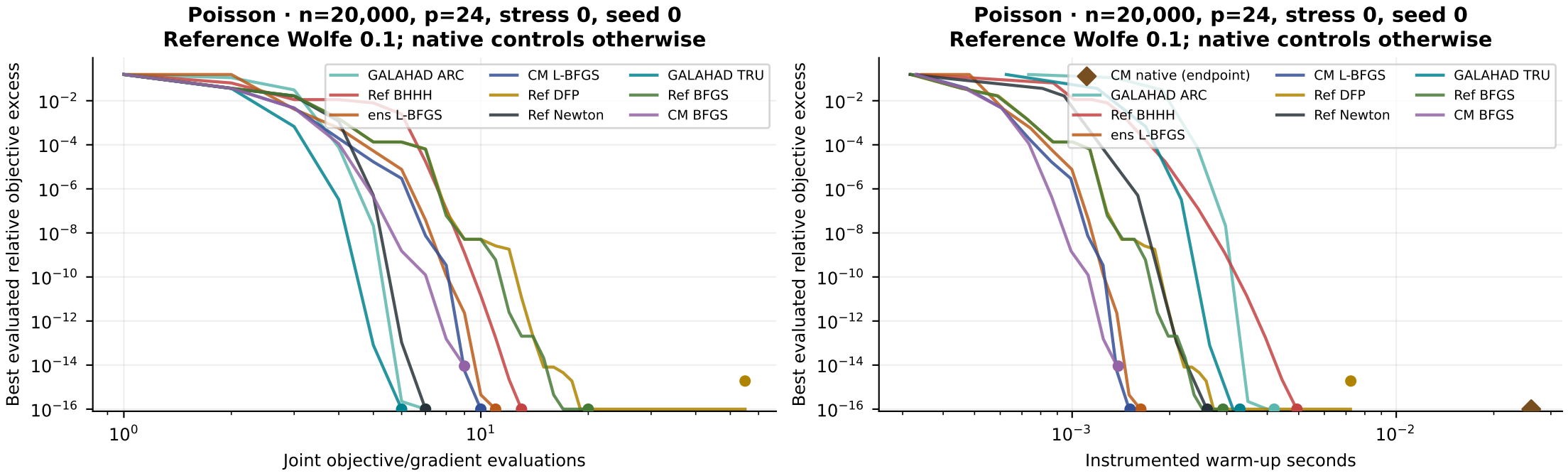
Poisson · n=2,000, p=8, stress 2, seed 1
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Best evaluated relative objective excess
Instrumented warm-up seconds
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CM native (endpoint)
CM BFGS
Ref Newton


Poisson · n=2,000, p=8, stress 2, seed 1
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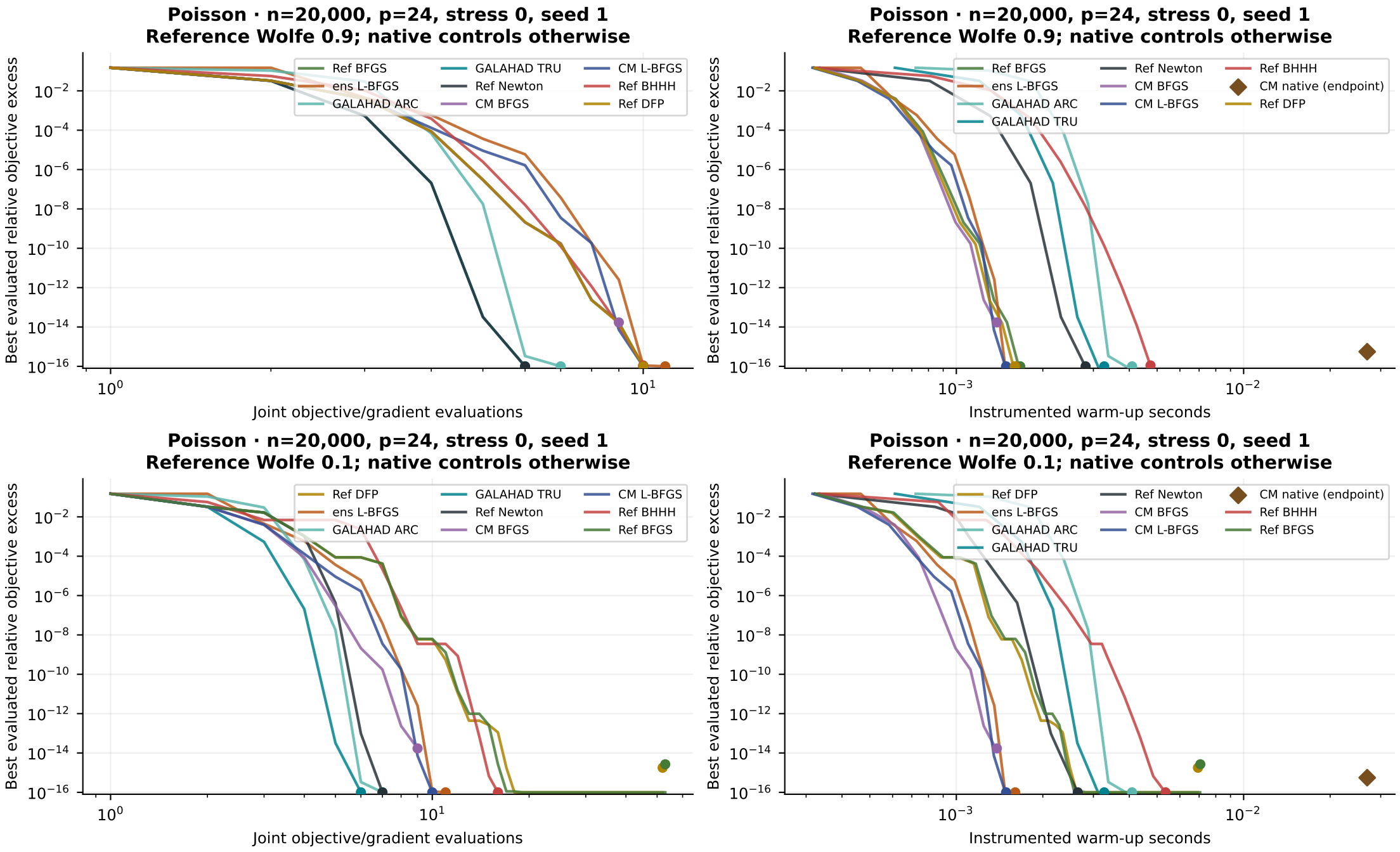
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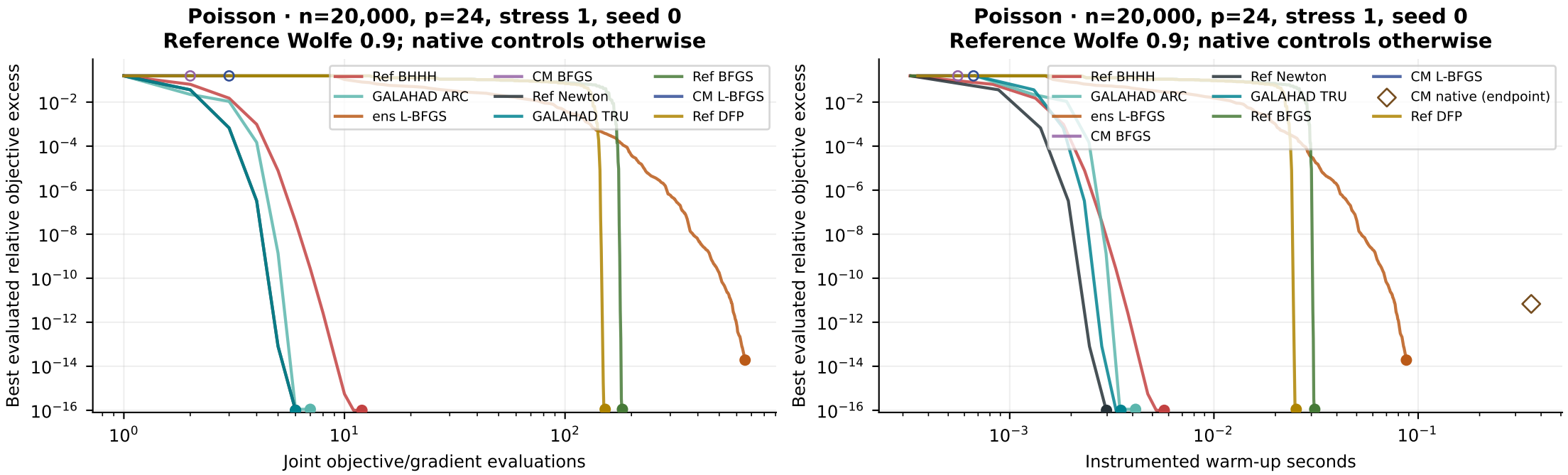

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Joint objective/gradient evaluations
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Ref DFP
CM BFGS

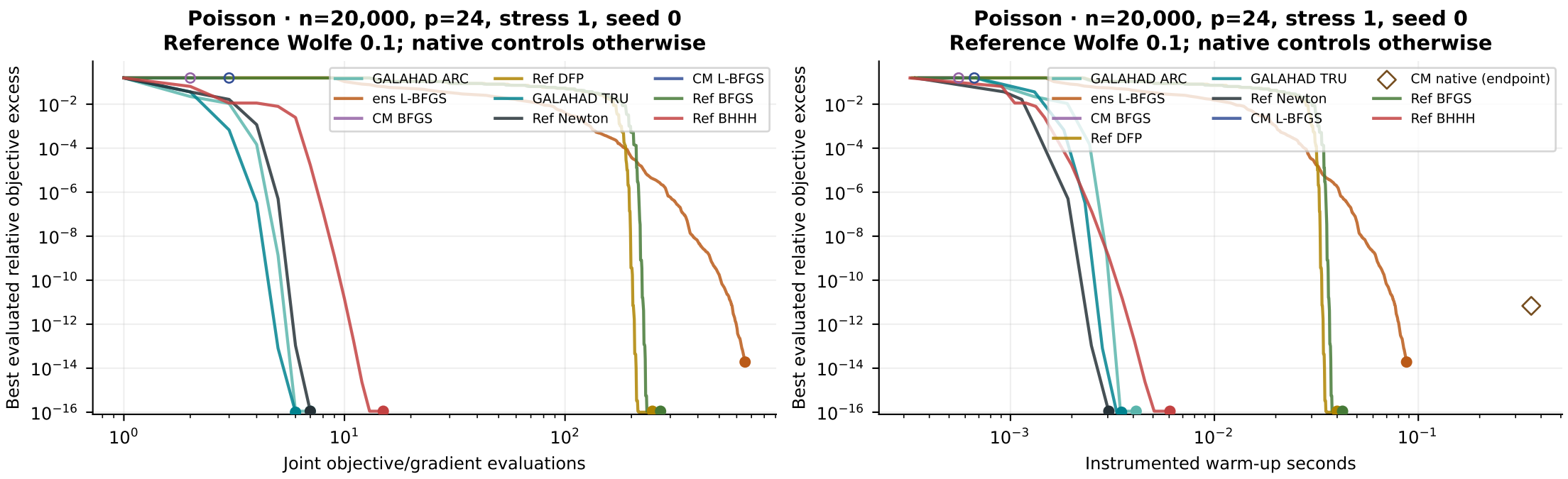
Poisson · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
CM native (endpoint)
GALAHAD ARC
Ref BFGS
Ref BHHH
ens L-BFGS
CM L-BFGS
Ref Newton
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CM BFGS

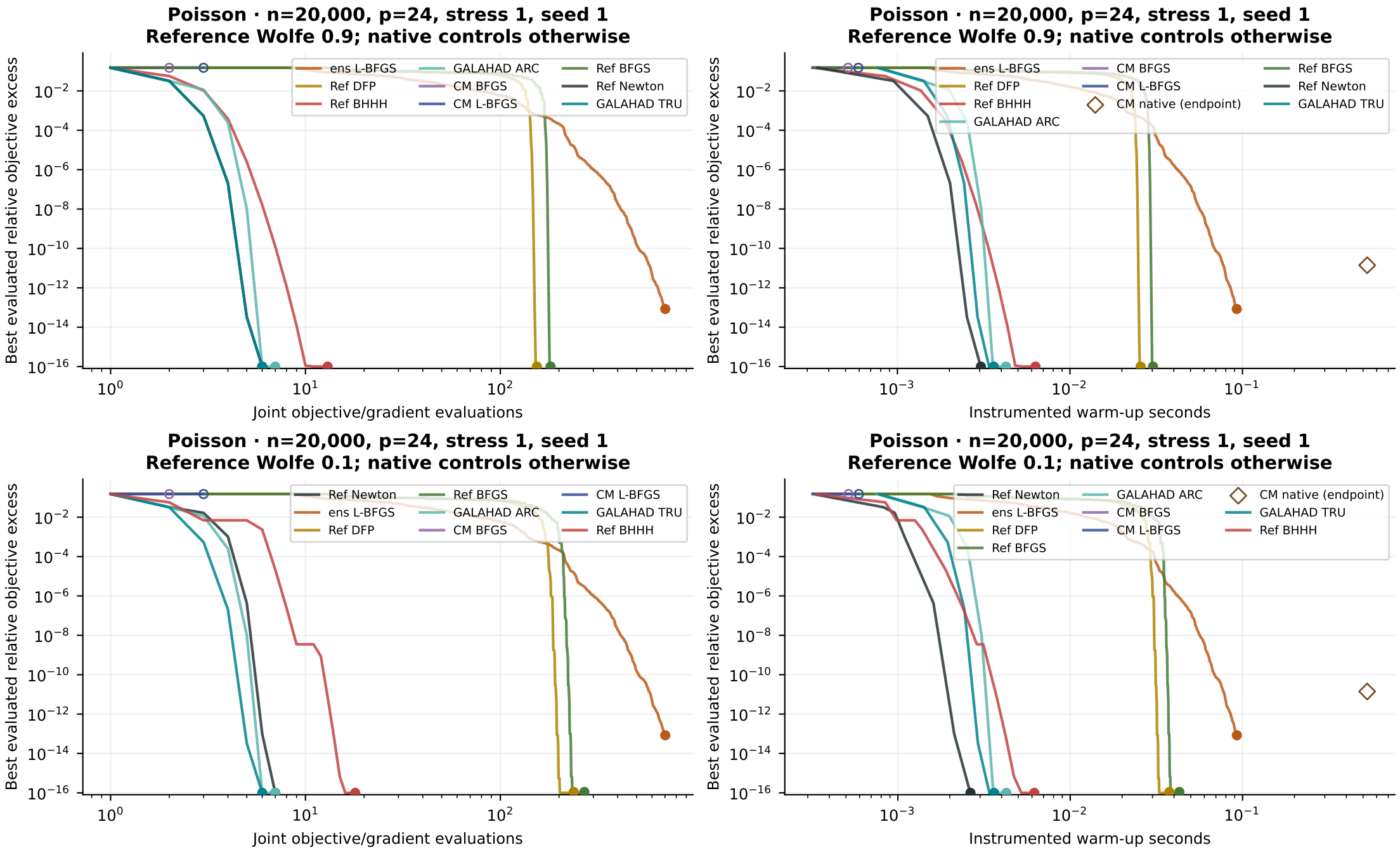

Poisson · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
GALAHAD ARC
Ref BHHH
ens L-BFGS
CM L-BFGS
Ref DFP
Ref Newton
GALAHAD TRU
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CM BFGS

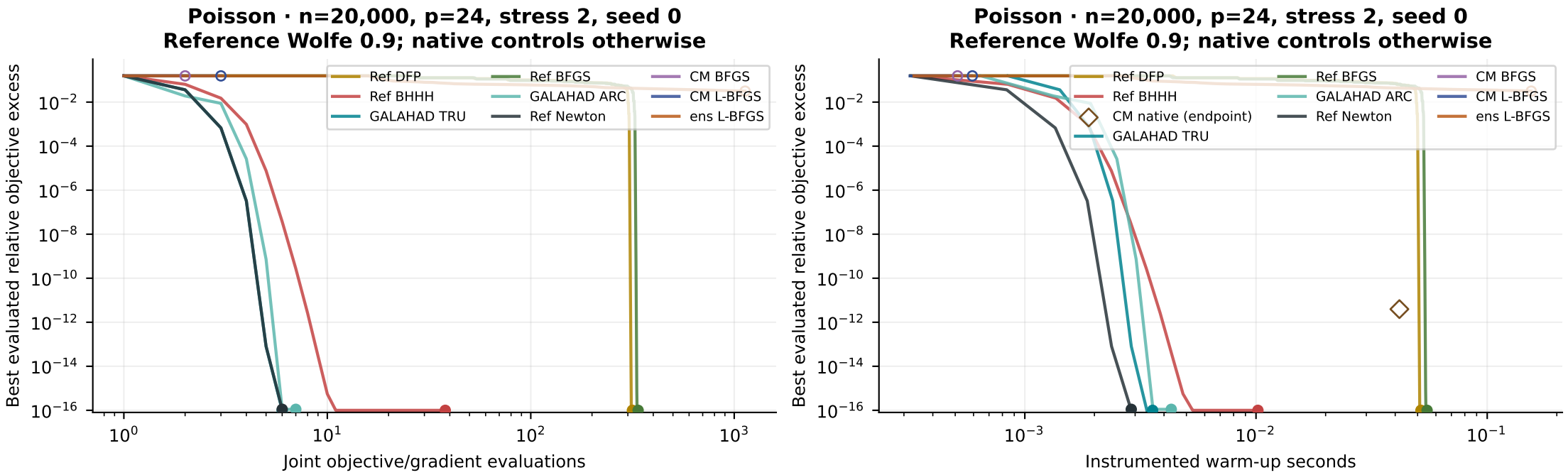
Poisson · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
CM native (endpoint)
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Ref BHHH
ens L-BFGS
CM L-BFGS
Ref DFP
Ref Newton
GALAHAD TRU
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CM BFGS

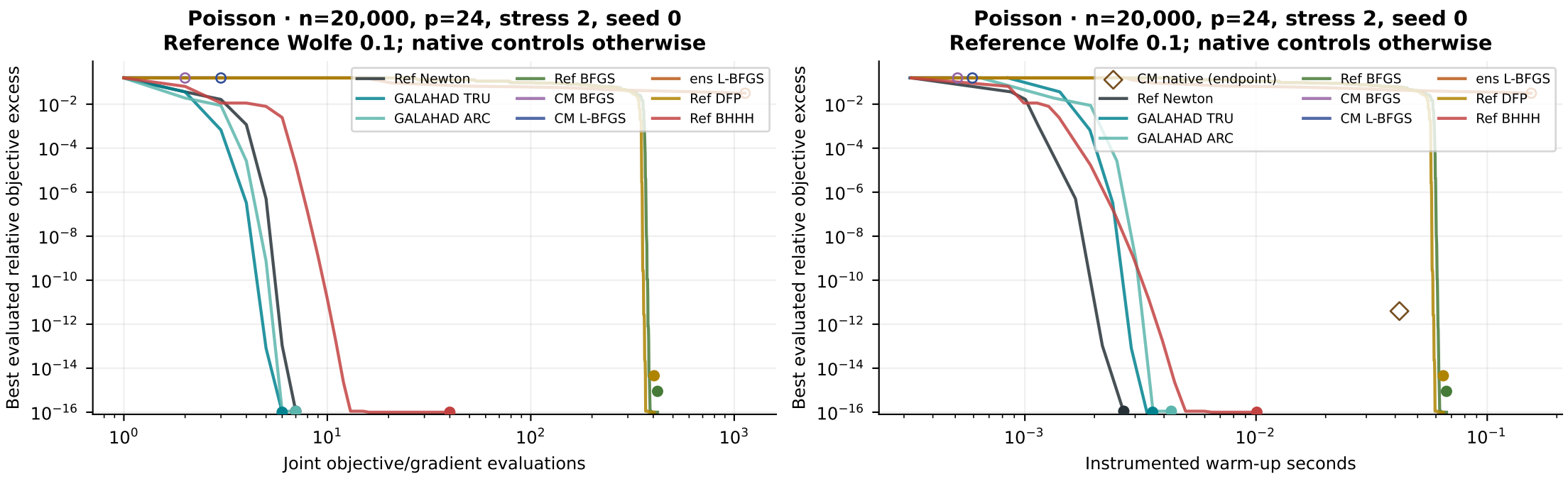

Poisson · n=20,000, p=24, stress 0, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref BFGS
ens L-BFGS
GALAHAD ARC
GALAHAD TRU
Ref Newton
CM BFGS
CM L-BFGS
Ref BHHH
Ref DFP
CM native (endpoint)
Poisson · n=20,000, p=24, stress 0, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref DFP
ens L-BFGS
GALAHAD ARC
GALAHAD TRU
Ref Newton
CM BFGS
CM L-BFGS
Ref BHHH
Ref BFGS
CM native (endpoint)

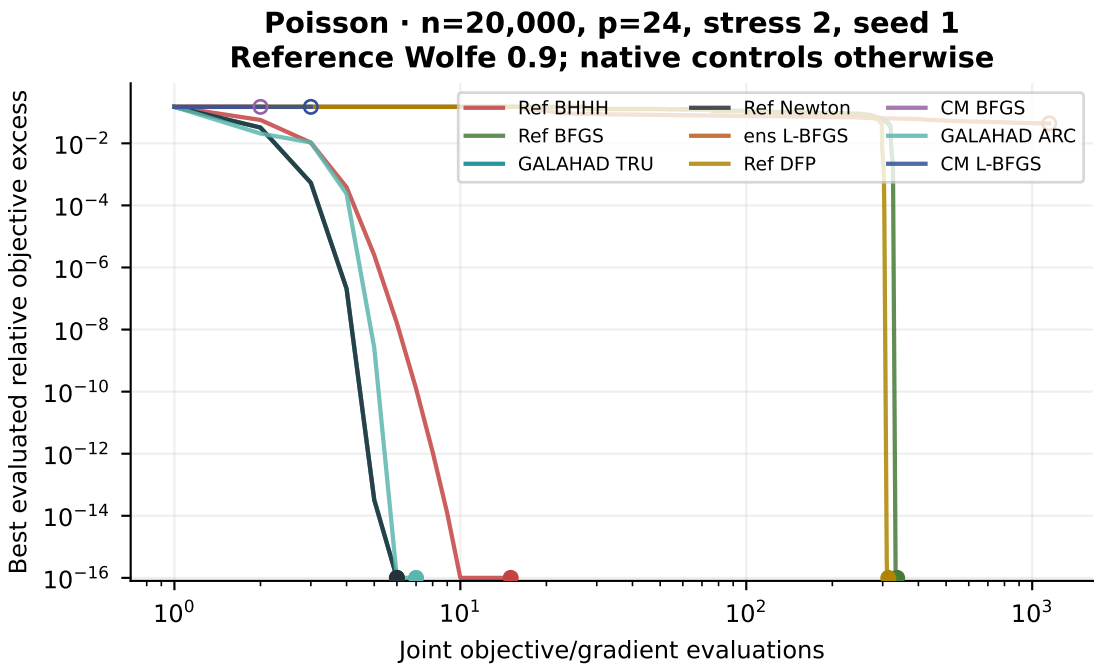

Poisson · n=20,000, p=24, stress 1, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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GALAHAD ARC
ens L-BFGS
CM BFGS
Ref Newton
GALAHAD TRU
Ref BFGS
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Ref DFP
CM native (endpoint)

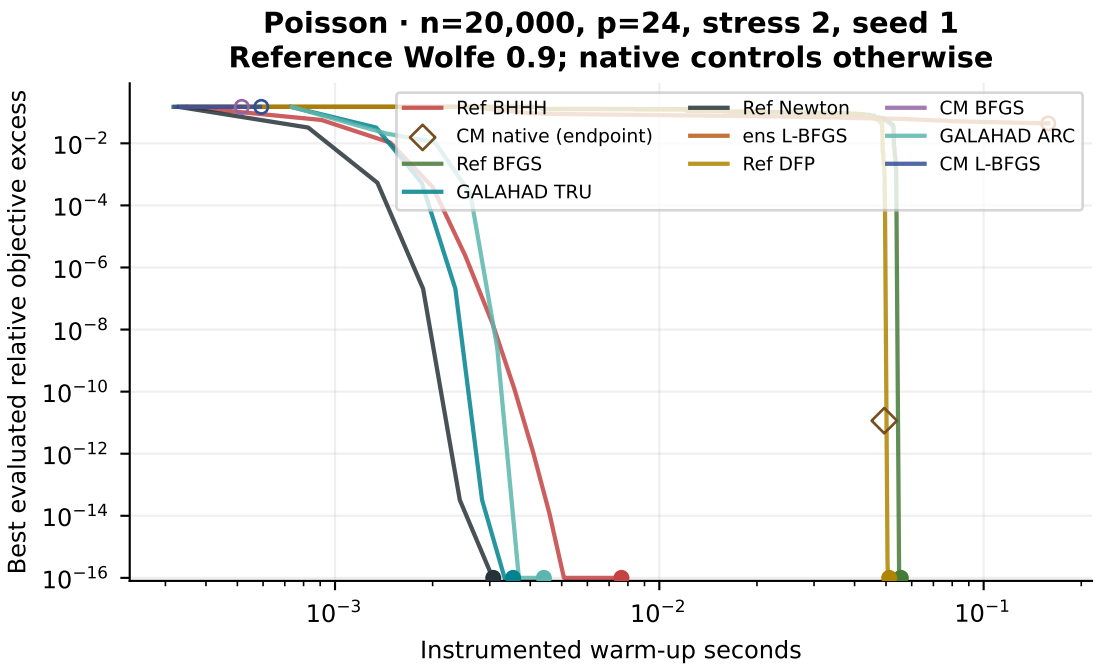

Poisson · n=20,000, p=24, stress 1, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
GALAHAD ARC
ens L-BFGS
CM BFGS
Ref DFP
GALAHAD TRU
Ref Newton
CM L-BFGS
Ref BFGS
Ref BHHH
CM native (endpoint)

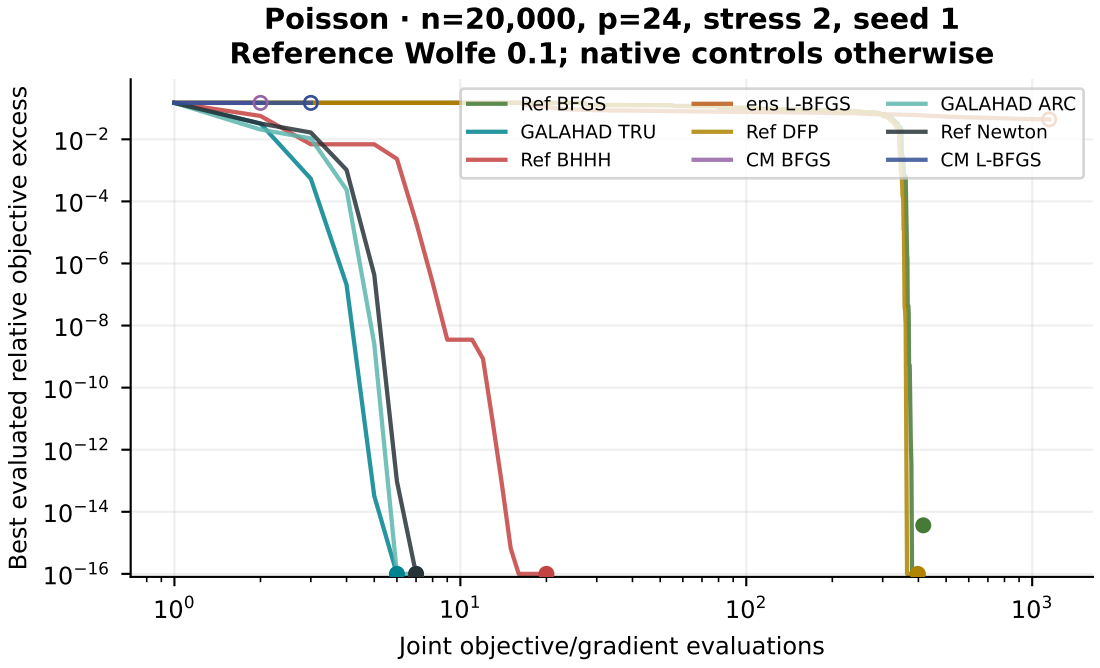

Poisson · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
ens L-BFGS
Ref DFP
Ref BHHH
GALAHAD ARC
CM BFGS
CM L-BFGS
Ref BFGS
Ref Newton
GALAHAD TRU
CM native (endpoint)
Poisson · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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Ref DFP
Ref BFGS
GALAHAD ARC
CM BFGS
CM L-BFGS
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Ref BHHH
CM native (endpoint)

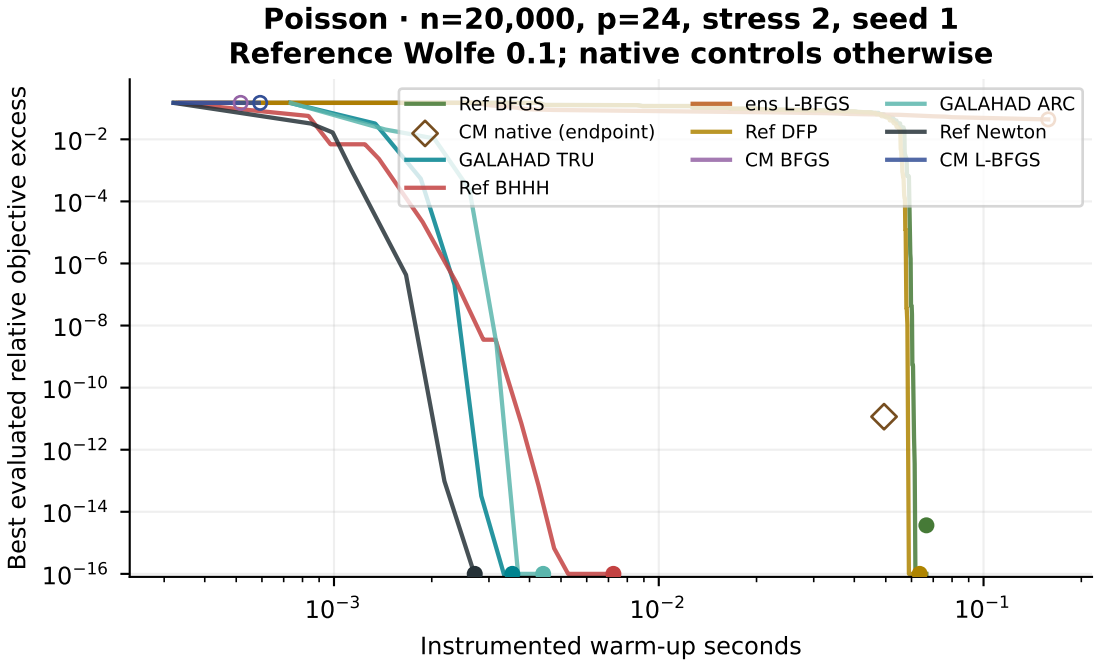

Poisson · n=20,000, p=24, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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GALAHAD ARC
Ref Newton
CM BFGS
CM L-BFGS
ens L-BFGS
CM native (endpoint)

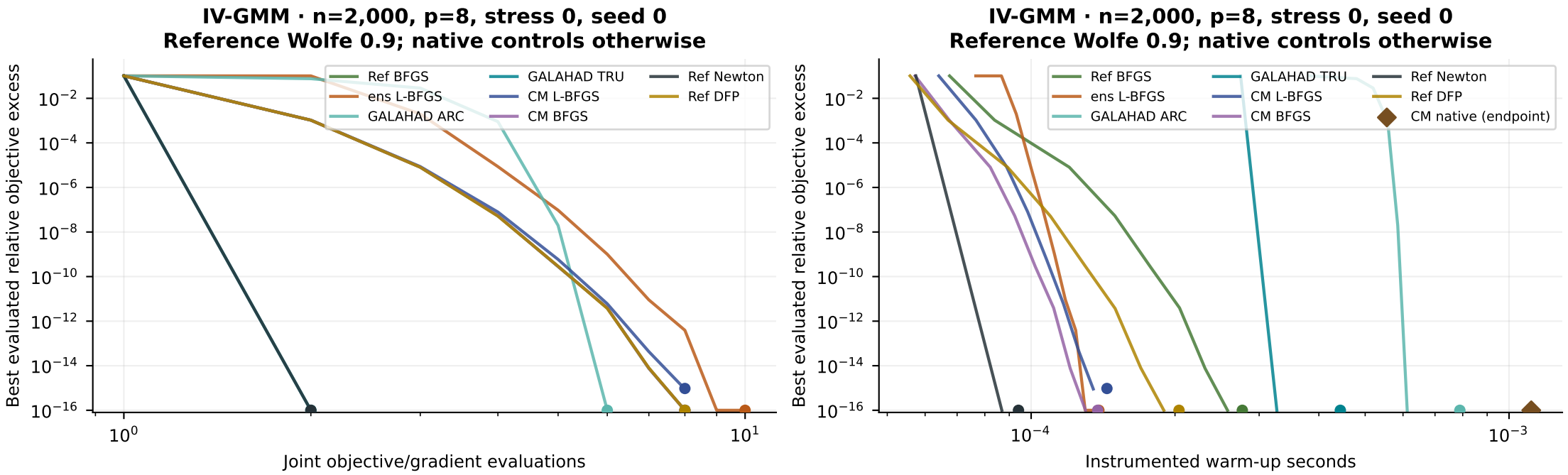

Poisson · n=20,000, p=24, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref Newton
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CM BFGS
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CM native (endpoint)

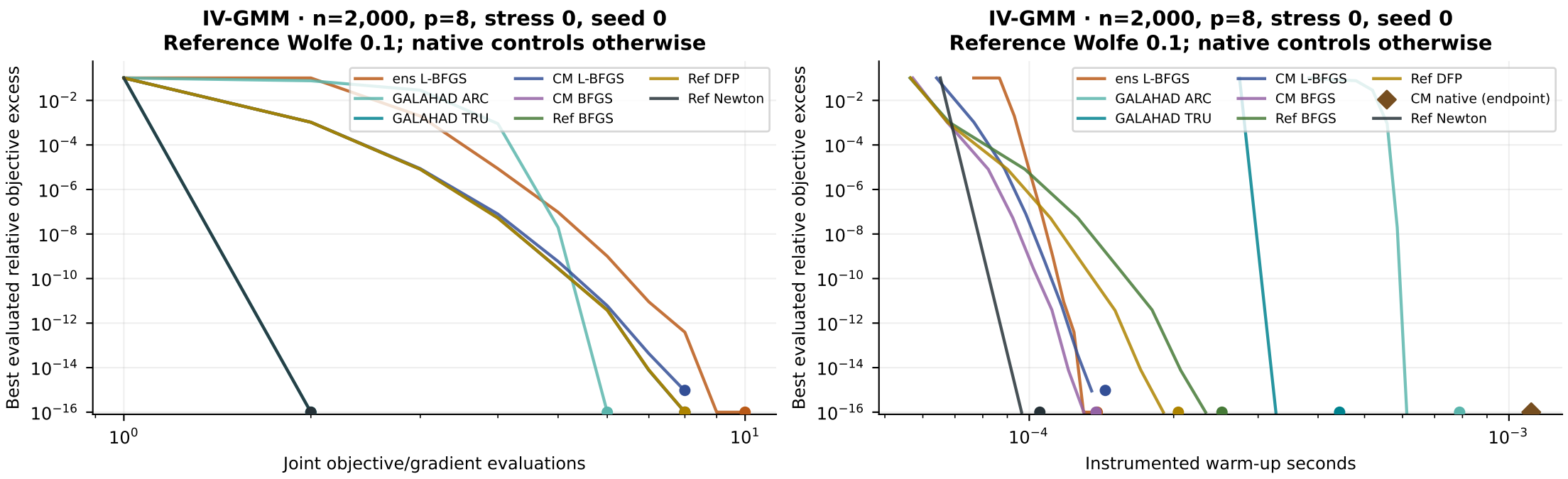

Poisson · n=20,000, p=24, stress 2, seed 1
Reference Wolfe 0.9; native controls otherwise
Ref BHHH
Ref BFGS
GALAHAD TRU
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ens L-BFGS
Ref DFP
CM BFGS
GALAHAD ARC
CM L-BFGS
Best evaluated relative objective excess
Joint objective/gradient evaluations

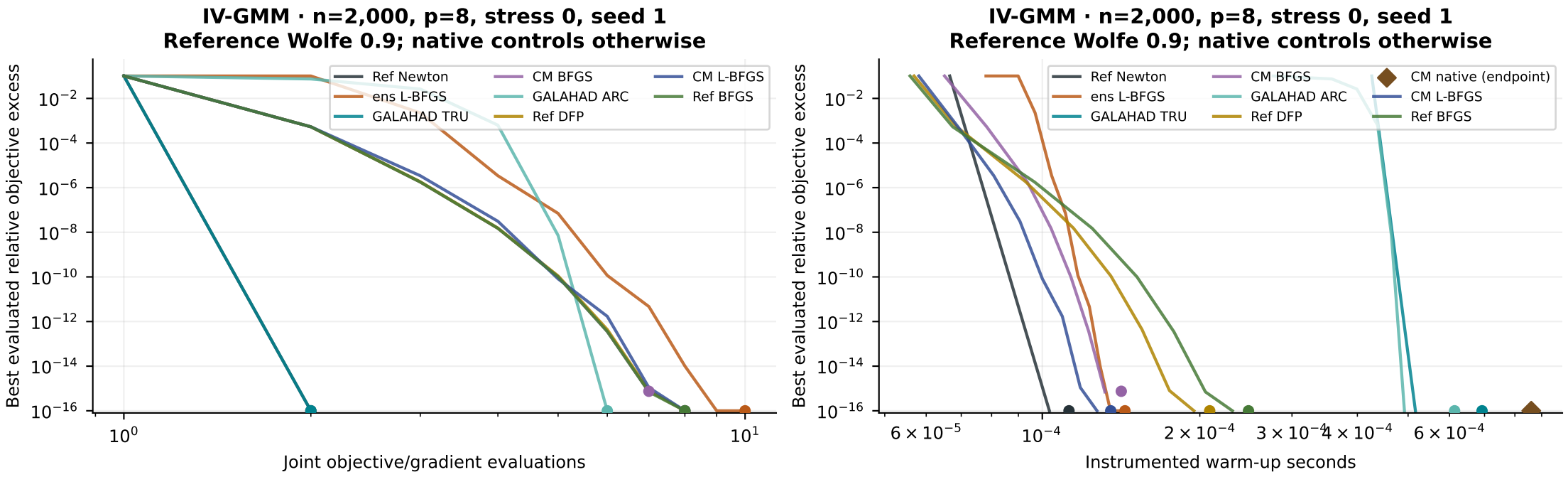

Poisson · n=20,000, p=24, stress 2, seed 1
Reference Wolfe 0.9; native controls otherwise
Ref BHHH
CM native (endpoint)
Ref BFGS
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Ref DFP
CM BFGS
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CM L-BFGS
Best evaluated relative objective excess
Instrumented warm-up seconds

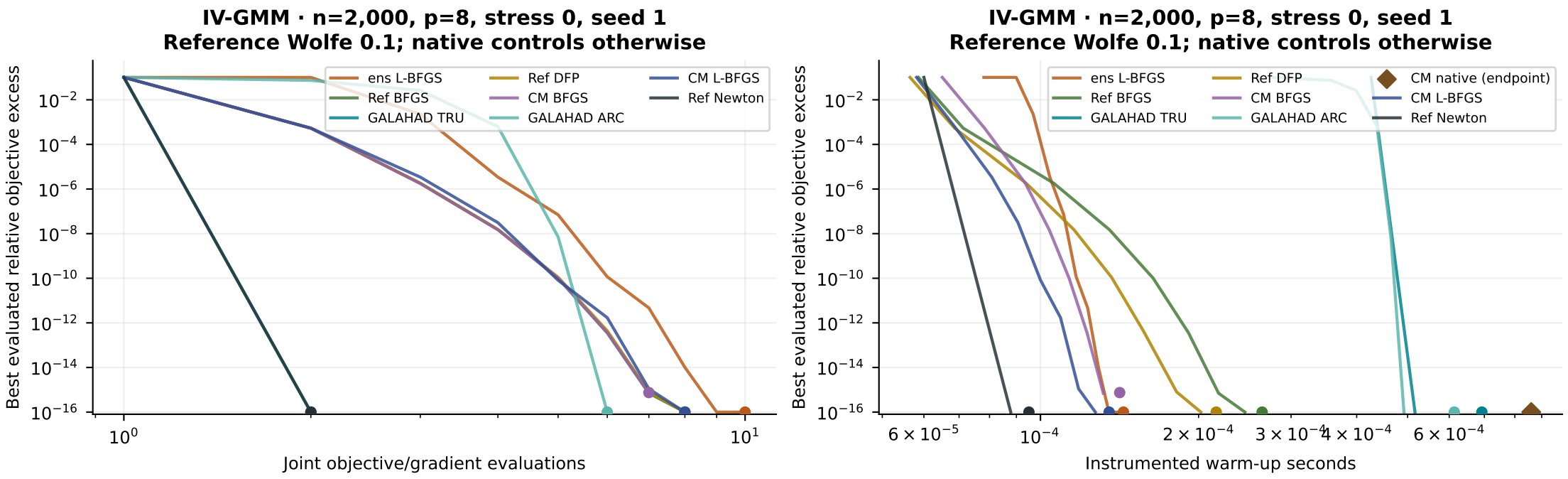

Poisson · n=20,000, p=24, stress 2, seed 1
Reference Wolfe 0.1; native controls otherwise
Ref BFGS
GALAHAD TRU
Ref BHHH
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GALAHAD ARC
Ref Newton
CM L-BFGS
Best evaluated relative objective excess
Joint objective/gradient evaluations

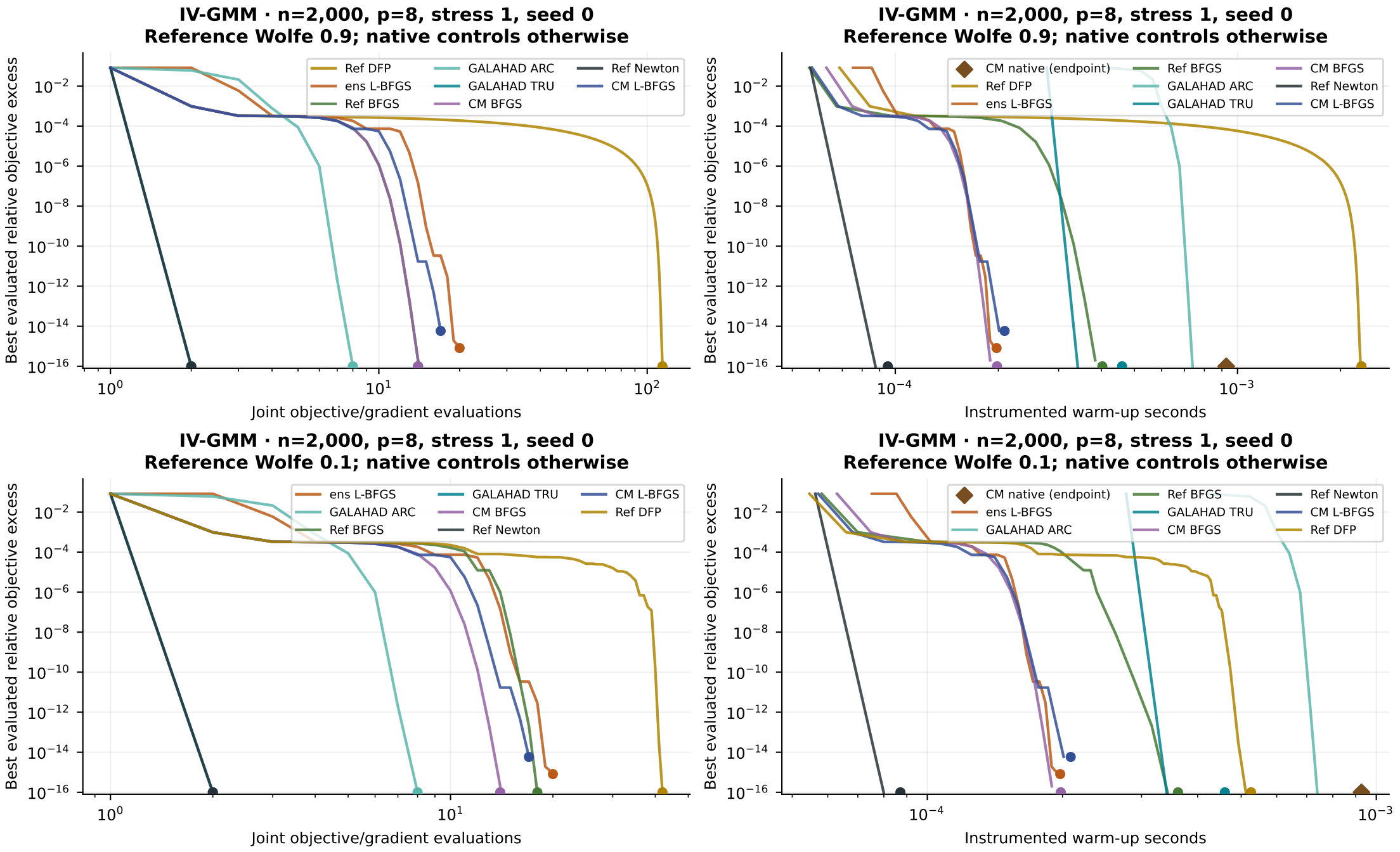

Poisson · n=20,000, p=24, stress 2, seed 1
Reference Wolfe 0.1; native controls otherwise
Ref BFGS
CM native (endpoint)
GALAHAD TRU
Ref BHHH
ens L-BFGS
Ref DFP
CM BFGS
GALAHAD ARC
Ref Newton
CM L-BFGS
Best evaluated relative objective excess
Instrumented warm-up seconds

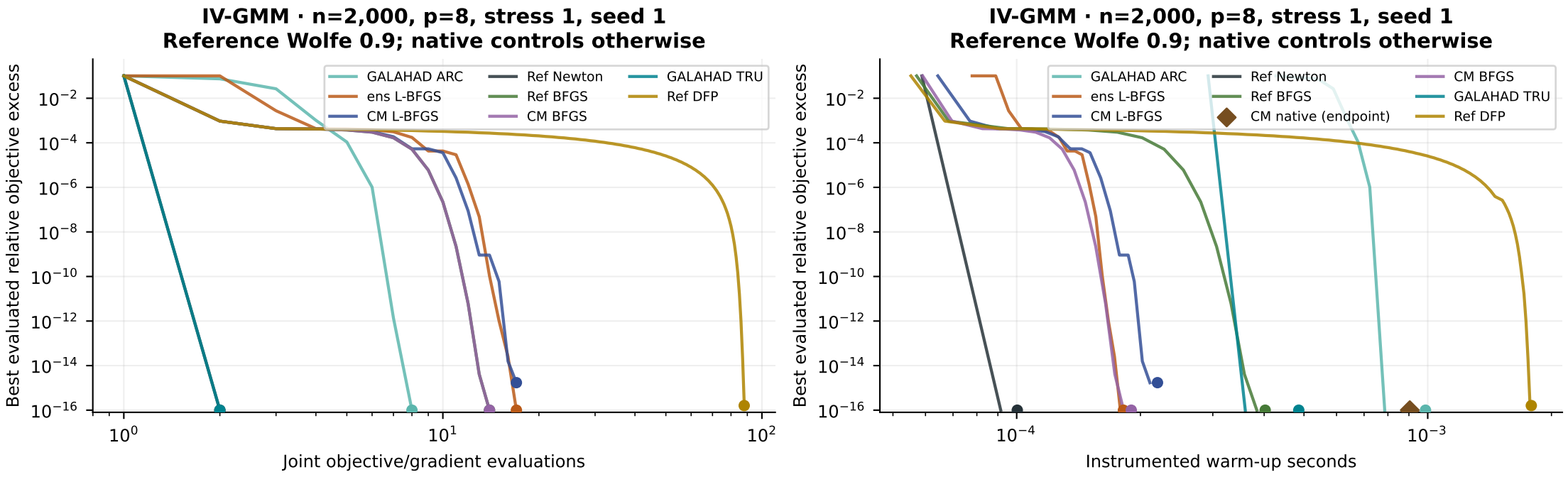

IV-GMM · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref BFGS
ens L-BFGS
GALAHAD ARC
GALAHAD TRU
CM L-BFGS
CM BFGS
Ref Newton
Ref DFP
CM native (endpoint)


IV-GMM · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
ens L-BFGS
GALAHAD ARC
GALAHAD TRU
CM L-BFGS
CM BFGS
Ref BFGS
Ref DFP
Ref Newton
CM native (endpoint)

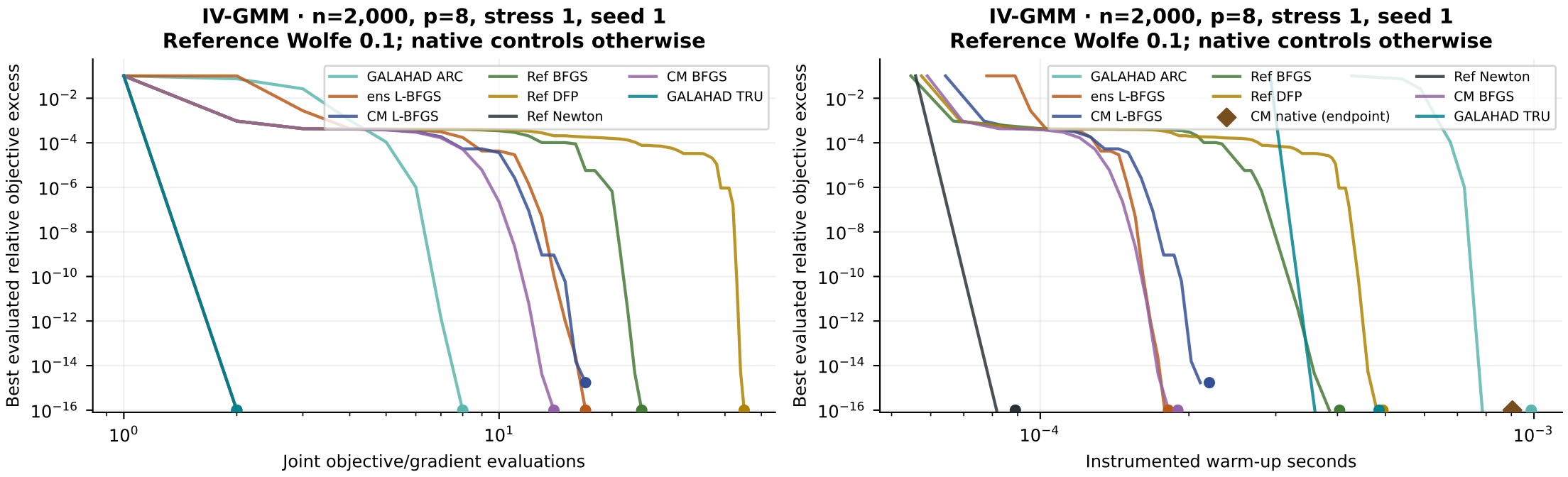

IV-GMM · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref Newton
ens L-BFGS
GALAHAD TRU
CM BFGS
GALAHAD ARC
Ref DFP
CM L-BFGS
Ref BFGS
CM native (endpoint)


IV-GMM · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
ens L-BFGS
Ref BFGS
GALAHAD TRU
Ref DFP
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GALAHAD ARC
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Ref Newton
CM native (endpoint)

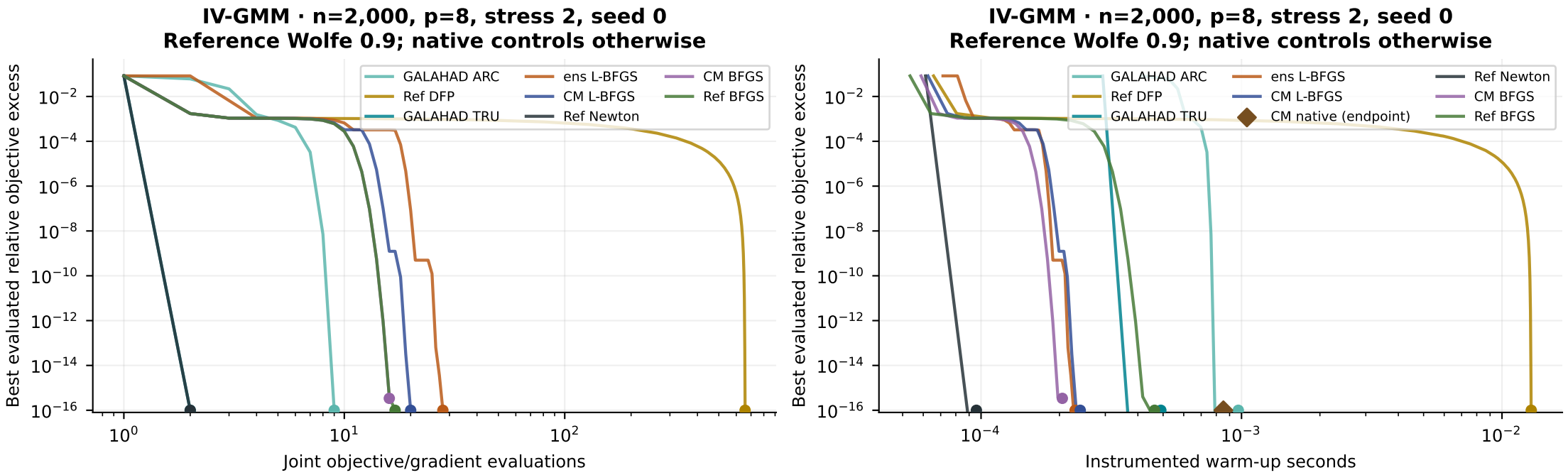

IV-GMM · n=2,000, p=8, stress 1, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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ens L-BFGS
Ref BFGS
GALAHAD ARC
GALAHAD TRU
CM BFGS
Ref Newton
CM L-BFGS
CM native (endpoint)
IV-GMM · n=2,000, p=8, stress 1, seed 0
Reference Wolfe 0.1; native controls otherwise


IV-GMM · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
GALAHAD ARC
ens L-BFGS
CM L-BFGS
Ref Newton
Ref BFGS
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Ref DFP

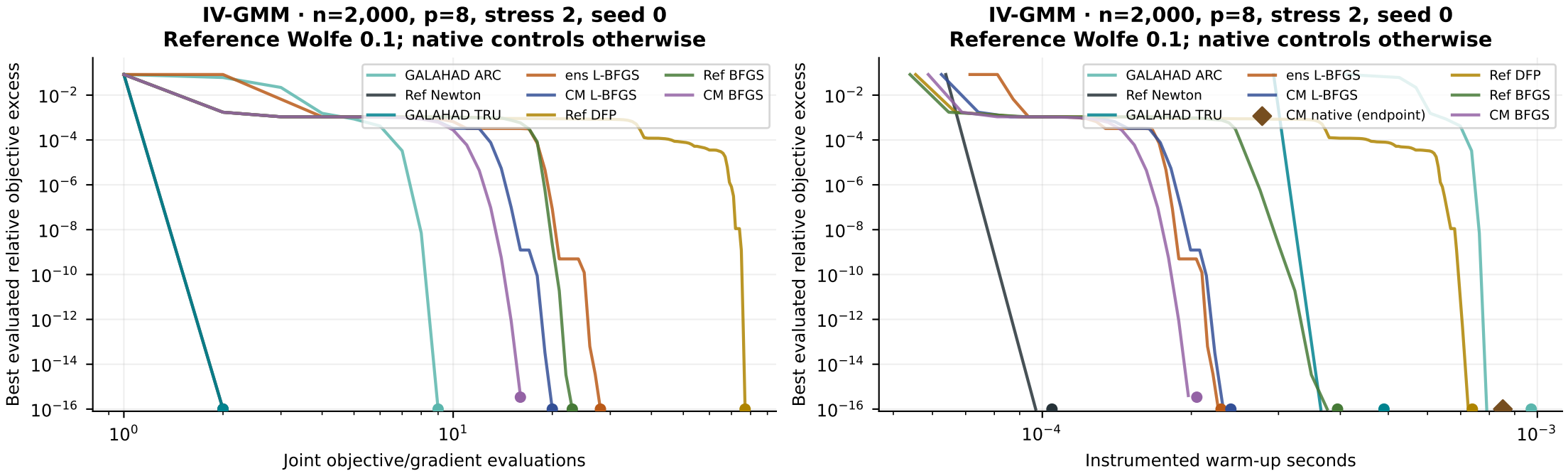
IV-GMM · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
GALAHAD ARC
ens L-BFGS
CM L-BFGS
Ref Newton
Ref BFGS
CM native (endpoint)
CM BFGS
GALAHAD TRU
Ref DFP


IV-GMM · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
GALAHAD ARC
ens L-BFGS
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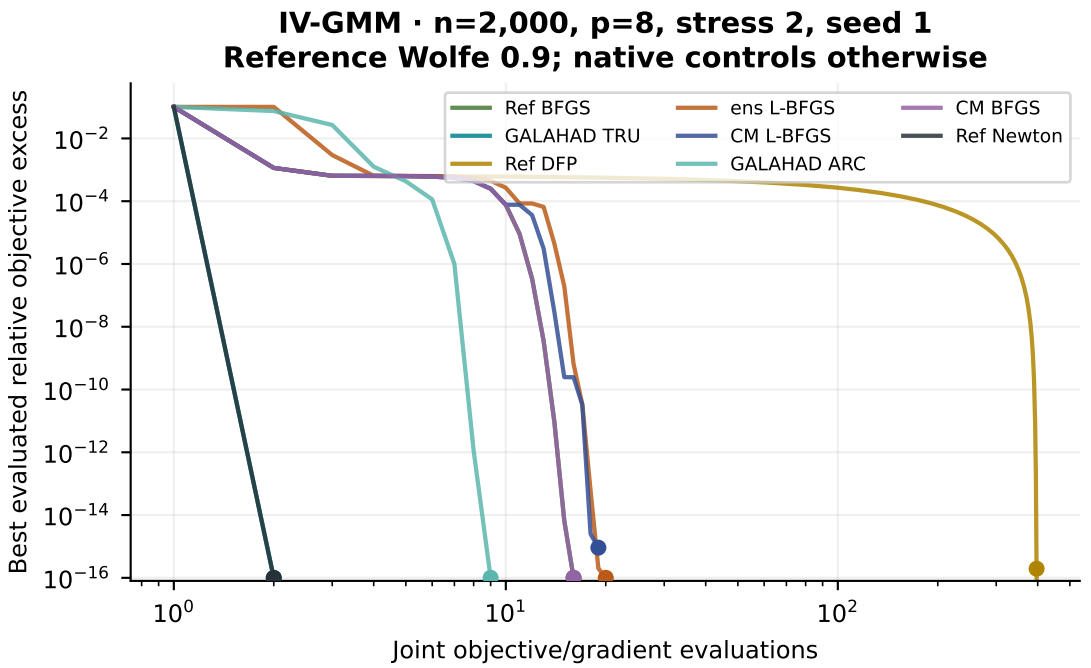
IV-GMM · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
GALAHAD ARC
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GALAHAD TRU

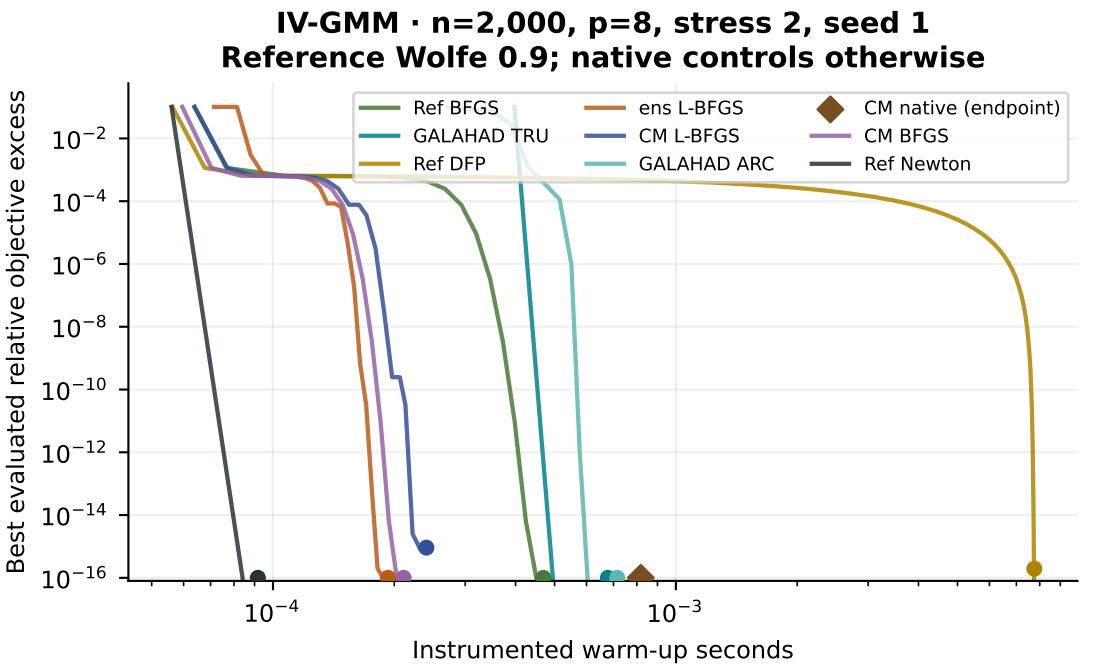

IV-GMM · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
GALAHAD ARC
Ref DFP
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Ref Newton
CM BFGS
Ref BFGS

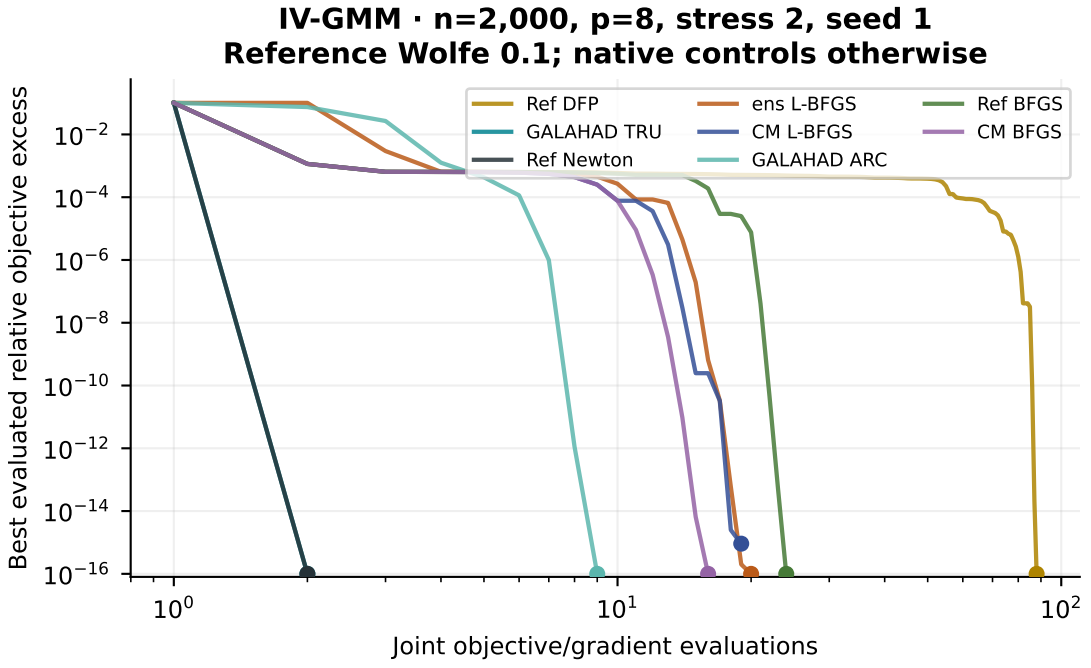
IV-GMM · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
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Ref Newton
CM BFGS
Ref BFGS

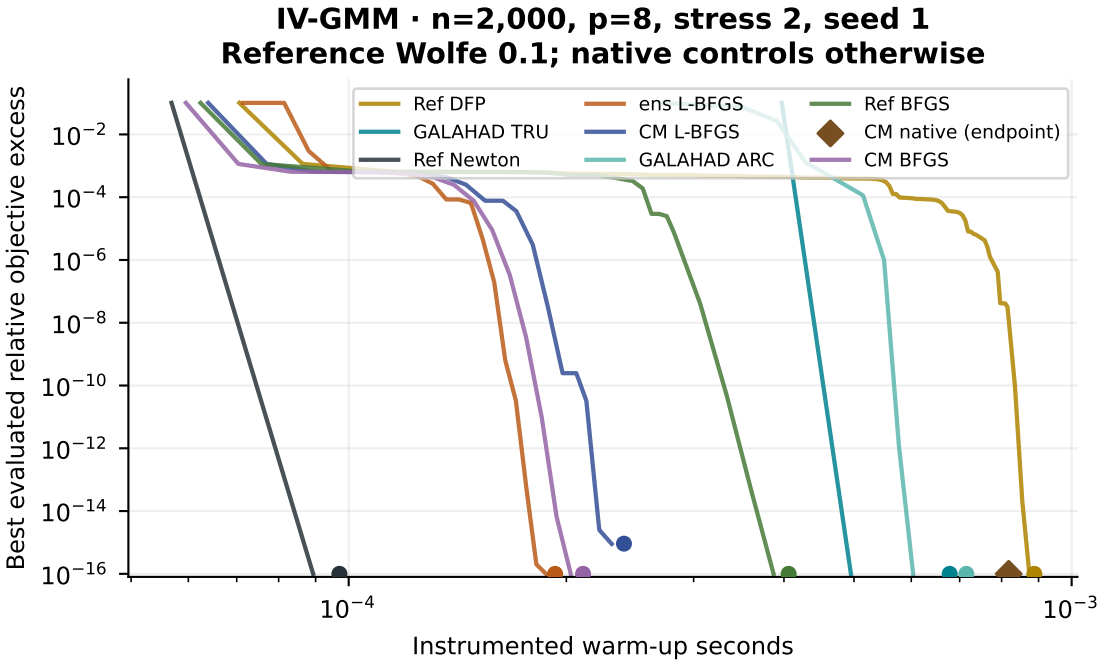

IV-GMM · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
GALAHAD ARC
Ref Newton
GALAHAD TRU
ens L-BFGS
CM L-BFGS
Ref DFP
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CM BFGS

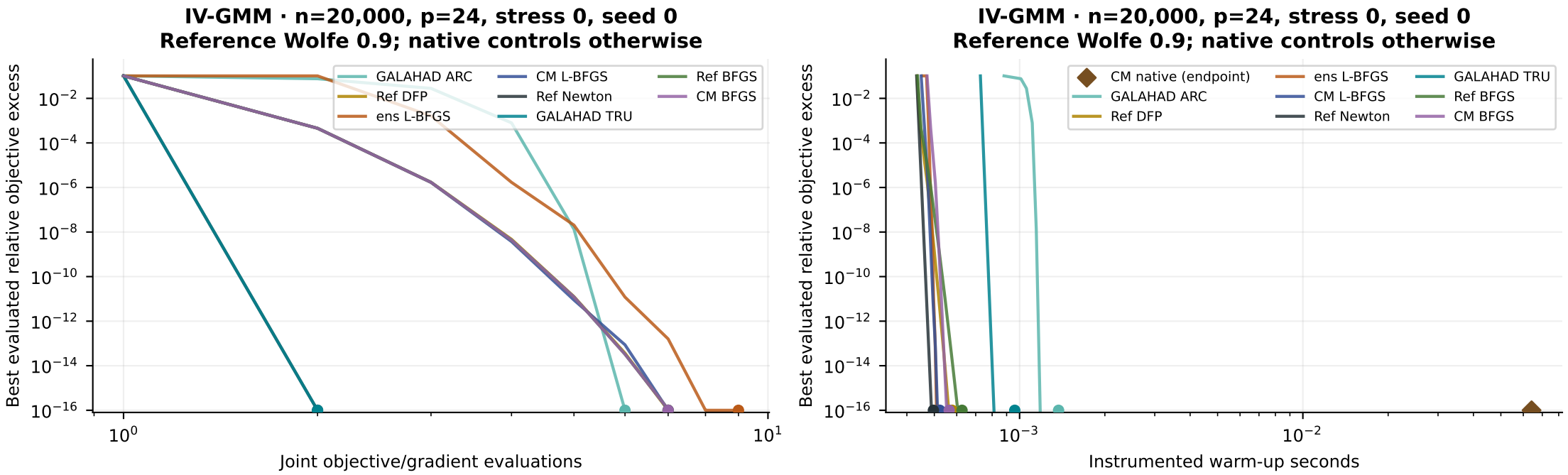
IV-GMM · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
GALAHAD ARC
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GALAHAD TRU
ens L-BFGS
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CM native (endpoint)
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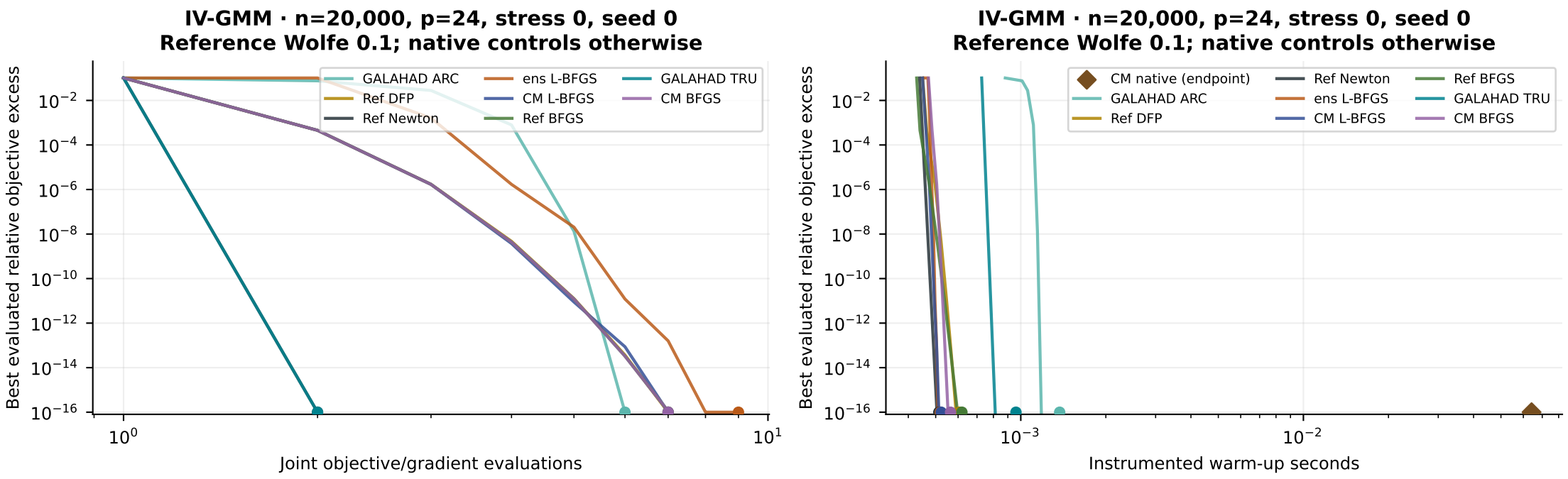

IV-GMM · n=2,000, p=8, stress 2, seed 1
Reference Wolfe 0.9; native controls otherwise
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GALAHAD TRU
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CM L-BFGS
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CM BFGS
Ref Newton
Best evaluated relative objective excess
Joint objective/gradient evaluations

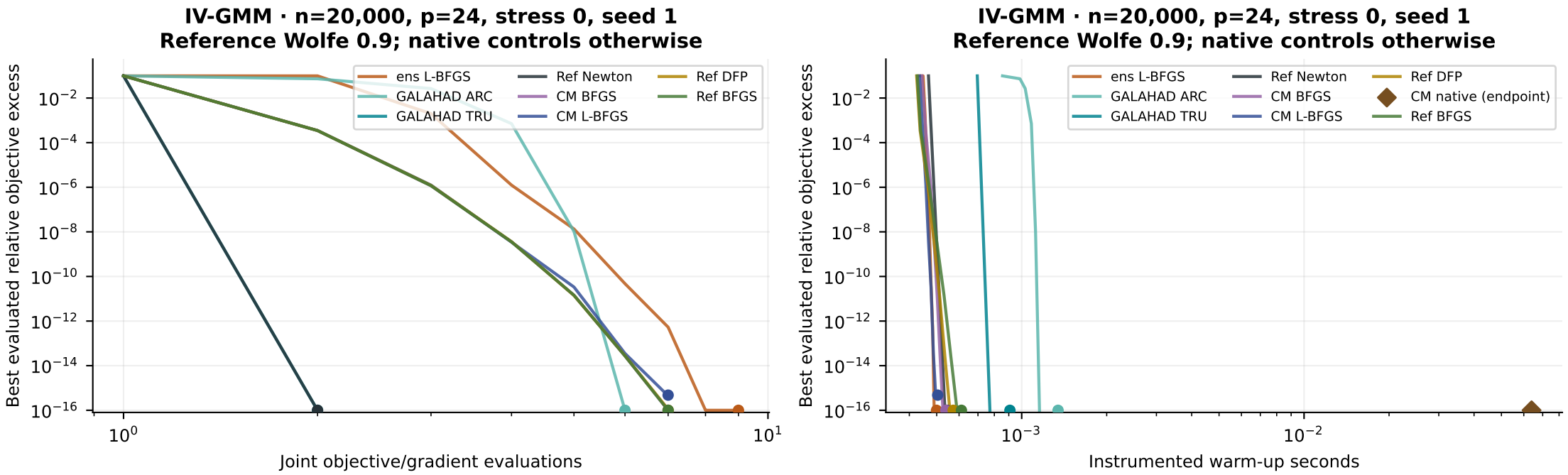

IV-GMM · n=2,000, p=8, stress 2, seed 1
Reference Wolfe 0.9; native controls otherwise
Ref BFGS
GALAHAD TRU
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CM L-BFGS
GALAHAD ARC
CM native (endpoint)
CM BFGS
Ref Newton
Best evaluated relative objective excess
Instrumented warm-up seconds

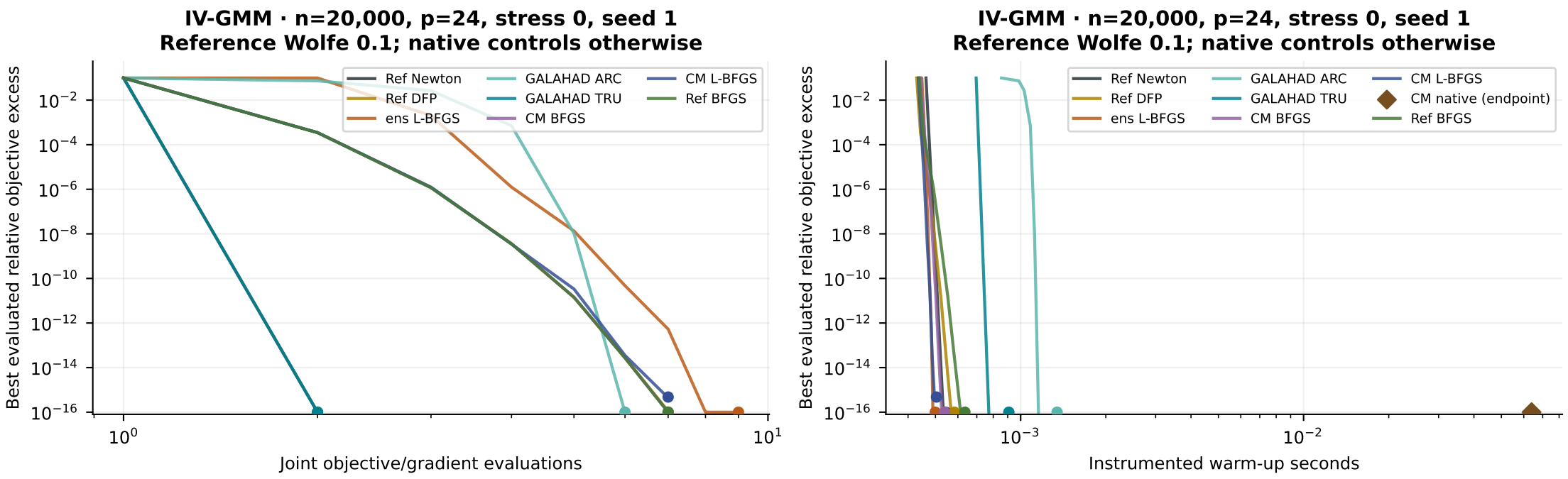

IV-GMM · n=2,000, p=8, stress 2, seed 1
Reference Wolfe 0.1; native controls otherwise
Ref DFP
GALAHAD TRU
Ref Newton
ens L-BFGS
CM L-BFGS
GALAHAD ARC
Ref BFGS
CM BFGS
Best evaluated relative objective excess
Joint objective/gradient evaluations

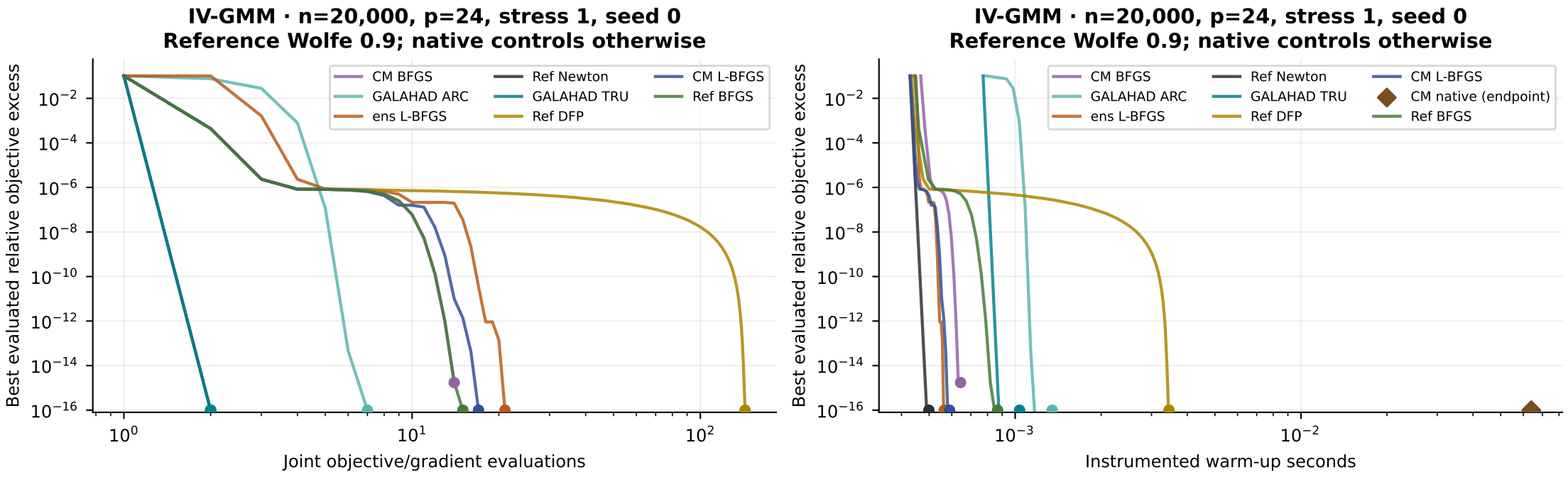

IV-GMM · n=2,000, p=8, stress 2, seed 1
Reference Wolfe 0.1; native controls otherwise
Ref DFP
GALAHAD TRU
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GALAHAD ARC
Ref BFGS
CM native (endpoint)
CM BFGS
Best evaluated relative objective excess
Instrumented warm-up seconds

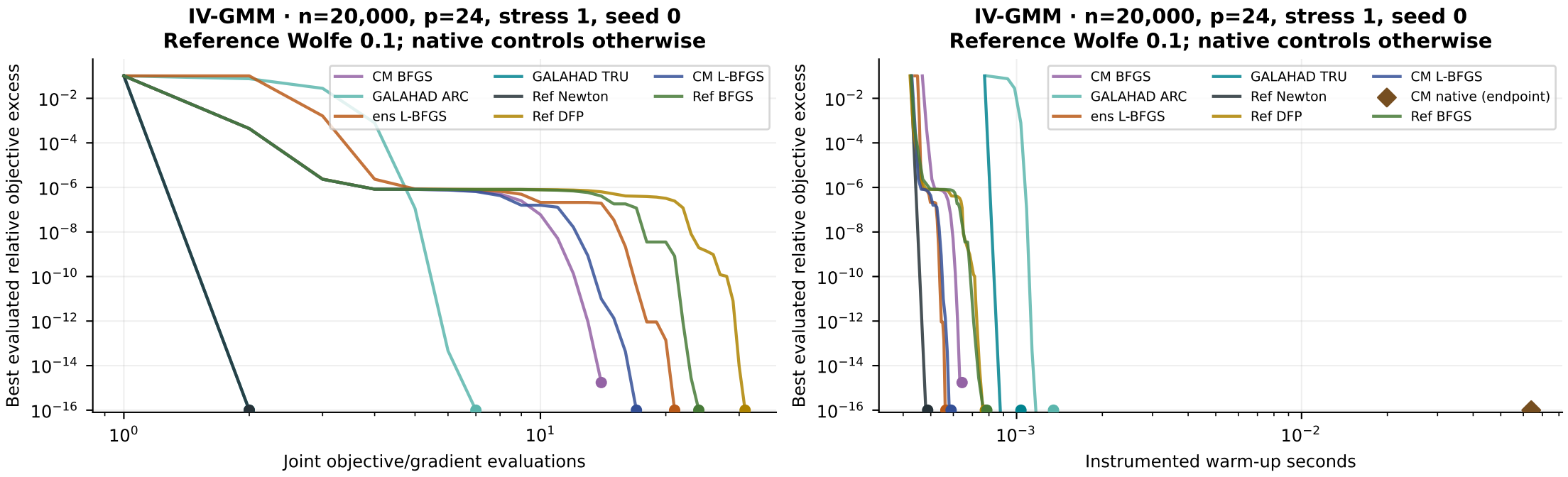

IV-GMM · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
GALAHAD ARC
Ref DFP
ens L-BFGS
CM L-BFGS
Ref Newton
GALAHAD TRU
Ref BFGS
CM BFGS
Best evaluated relative objective excess
Joint objective/gradient evaluations
IV-GMM · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
CM native (endpoint)
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Ref Newton
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CM BFGS
Best evaluated relative objective excess
Instrumented warm-up seconds

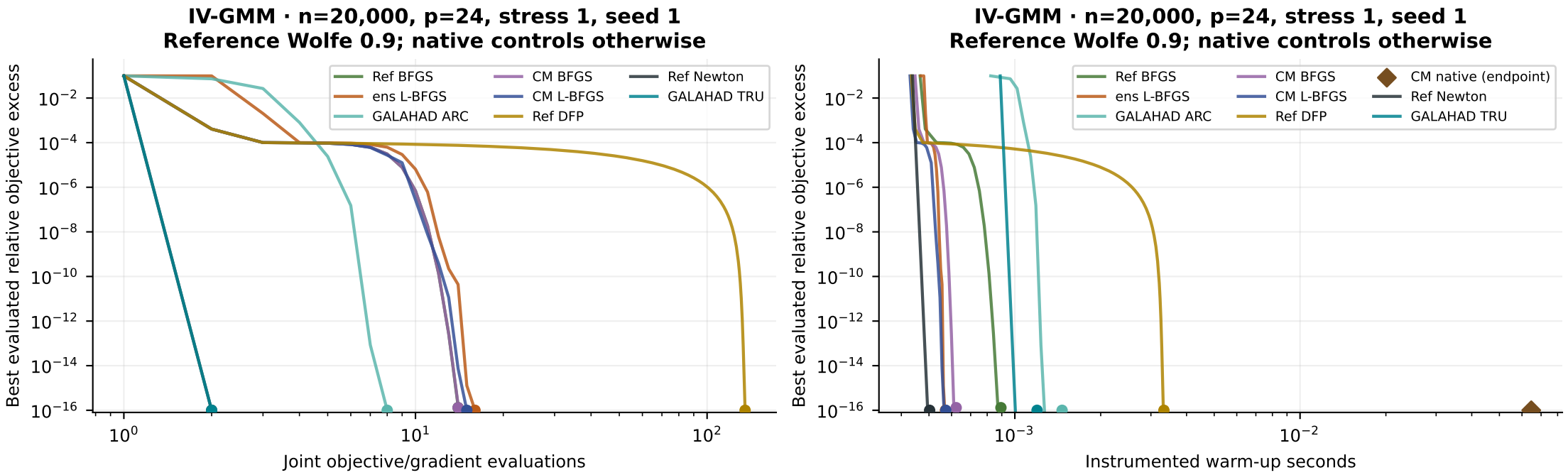

IV-GMM · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
GALAHAD ARC
Ref DFP
Ref Newton
ens L-BFGS
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Ref BFGS
GALAHAD TRU
CM BFGS
Best evaluated relative objective excess
Joint objective/gradient evaluations
IV-GMM · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
CM native (endpoint)
GALAHAD ARC
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CM BFGS
Best evaluated relative objective excess
Instrumented warm-up seconds

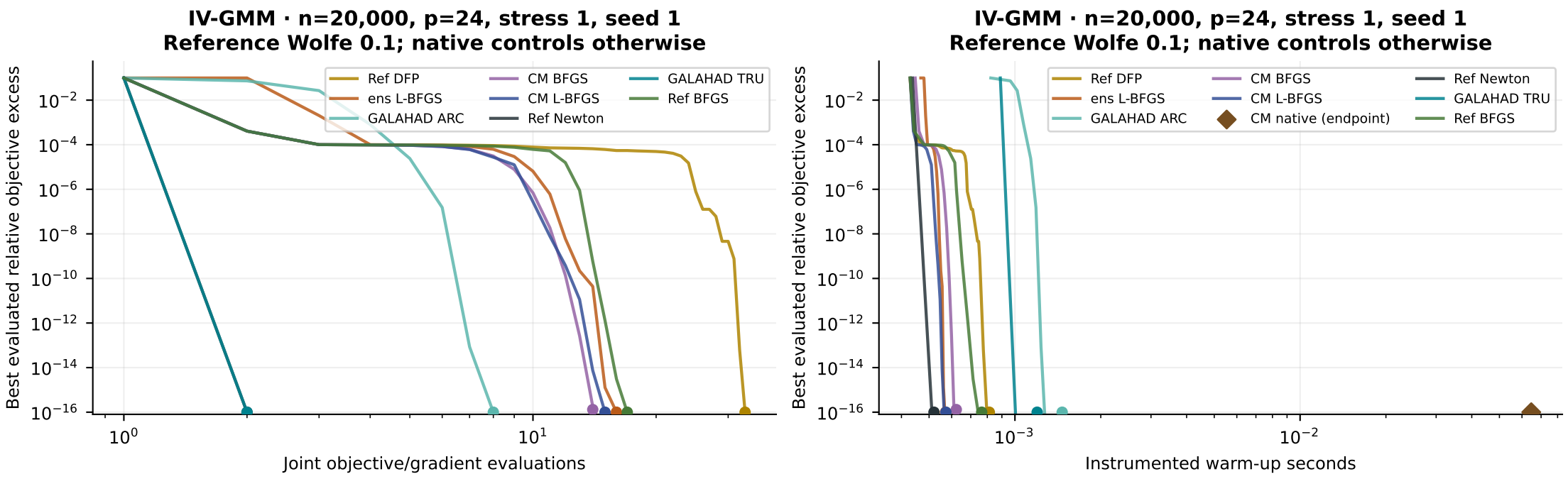

IV-GMM · n=20,000, p=24, stress 0, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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GALAHAD ARC
GALAHAD TRU
Ref Newton
CM BFGS
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Ref DFP
Ref BFGS
IV-GMM · n=20,000, p=24, stress 0, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
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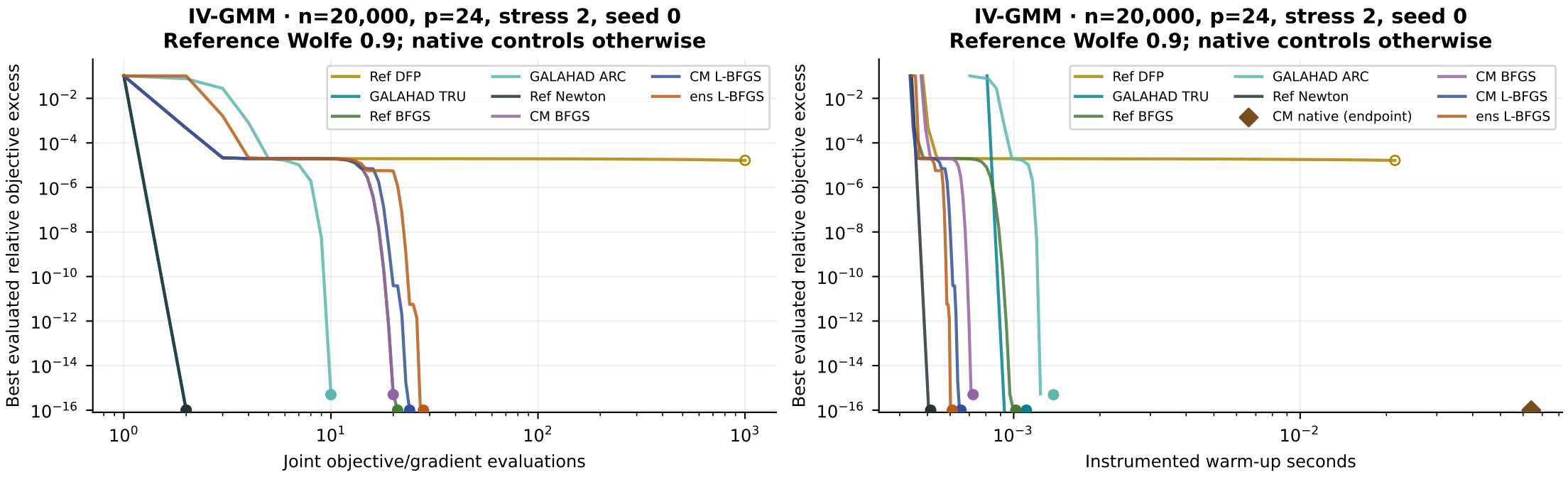

IV-GMM · n=20,000, p=24, stress 0, seed 1
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Best evaluated relative objective excess
Joint objective/gradient evaluations
Ref Newton
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GALAHAD ARC
GALAHAD TRU
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CM L-BFGS
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IV-GMM · n=20,000, p=24, stress 0, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
Ref Newton
Ref DFP
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GALAHAD TRU
CM BFGS
CM L-BFGS
CM native (endpoint)
Ref BFGS

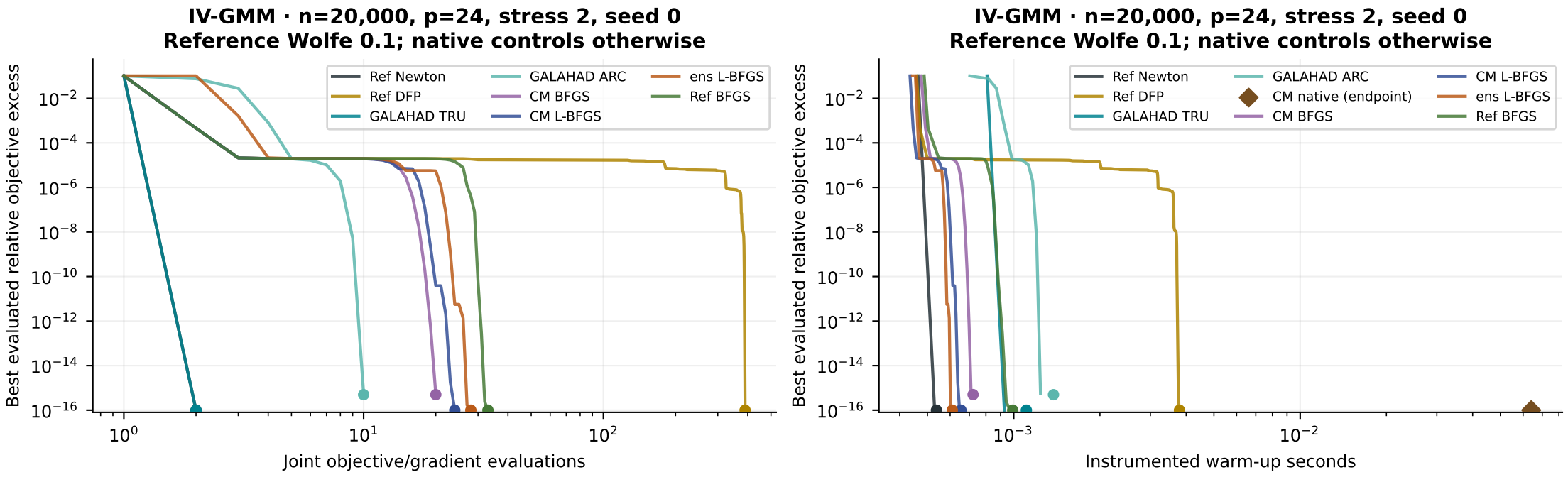

IV-GMM · n=20,000, p=24, stress 1, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
CM BFGS
GALAHAD ARC
ens L-BFGS
Ref Newton
GALAHAD TRU
Ref DFP
CM L-BFGS
Ref BFGS
IV-GMM · n=20,000, p=24, stress 1, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
CM BFGS
GALAHAD ARC
ens L-BFGS
Ref Newton
GALAHAD TRU
Ref DFP
CM L-BFGS
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Ref BFGS

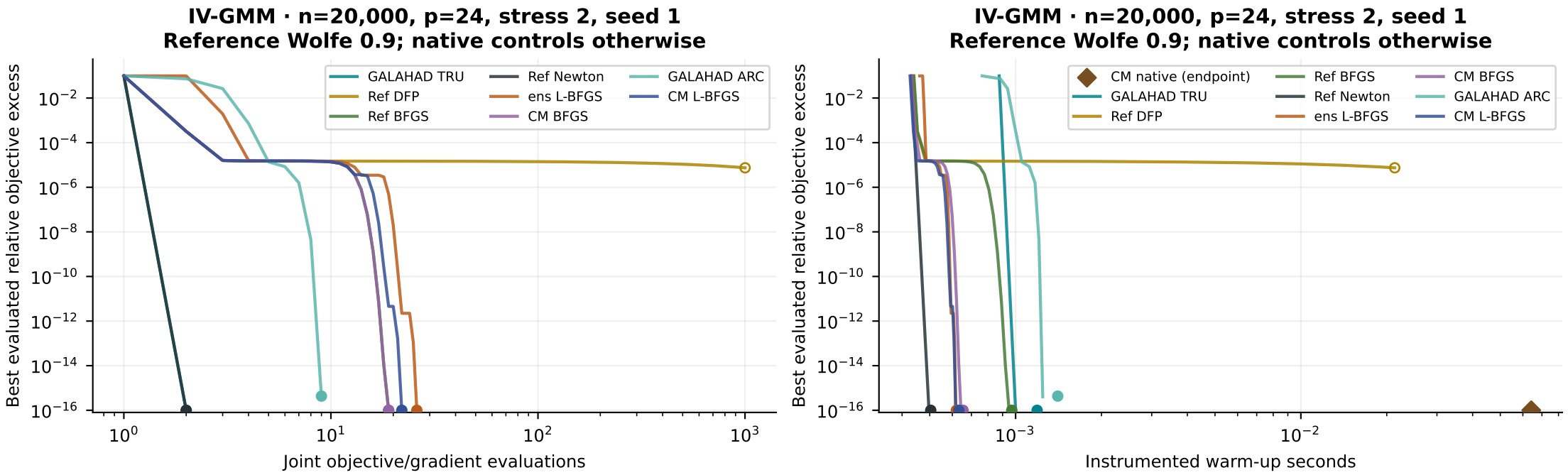

IV-GMM · n=20,000, p=24, stress 1, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
CM BFGS
GALAHAD ARC
ens L-BFGS
GALAHAD TRU
Ref Newton
Ref DFP
CM L-BFGS
Ref BFGS
IV-GMM · n=20,000, p=24, stress 1, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
CM BFGS
GALAHAD ARC
ens L-BFGS
GALAHAD TRU
Ref Newton
Ref DFP
CM L-BFGS
CM native (endpoint)
Ref BFGS


IV-GMM · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref BFGS
ens L-BFGS
GALAHAD ARC
CM BFGS
CM L-BFGS
Ref DFP
Ref Newton
GALAHAD TRU
CM native (endpoint)

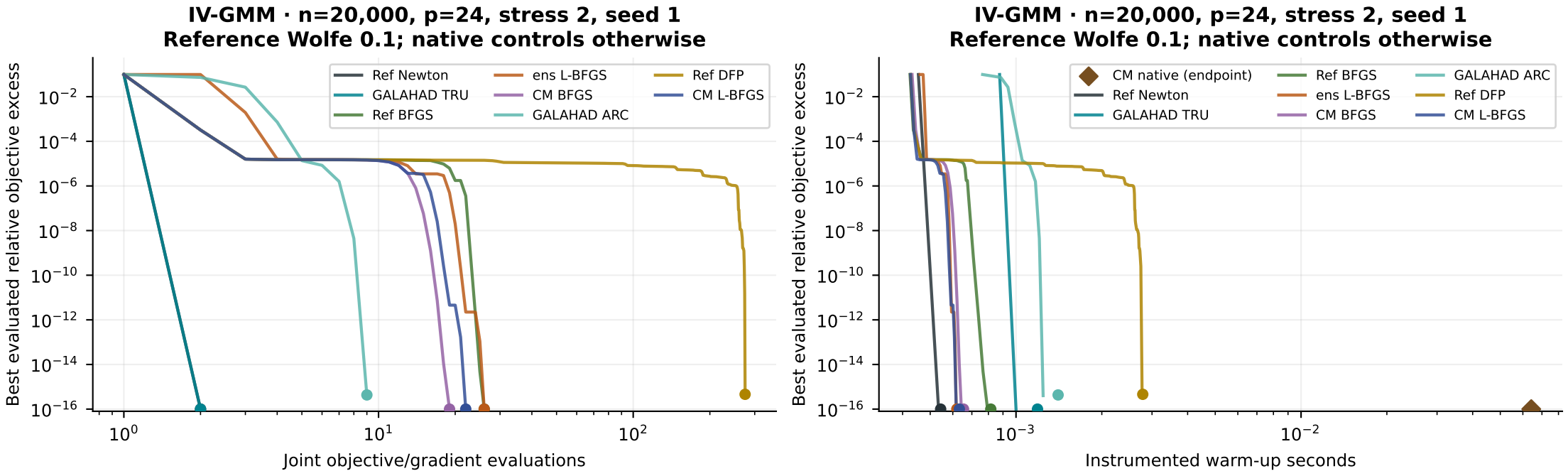

IV-GMM · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref DFP
ens L-BFGS
GALAHAD ARC
CM BFGS
CM L-BFGS
Ref Newton
GALAHAD TRU
Ref BFGS
CM native (endpoint)


IV-GMM · n=20,000, p=24, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref DFP
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Ref BFGS
GALAHAD ARC
Ref Newton
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CM L-BFGS
ens L-BFGS
CM native (endpoint)

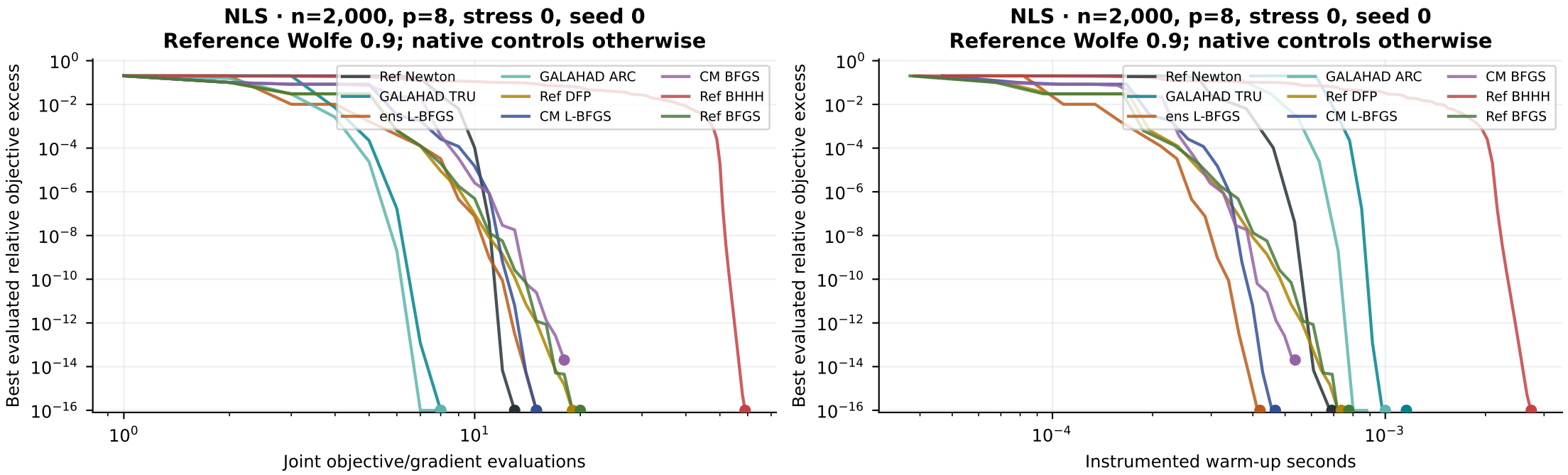

IV-GMM · n=20,000, p=24, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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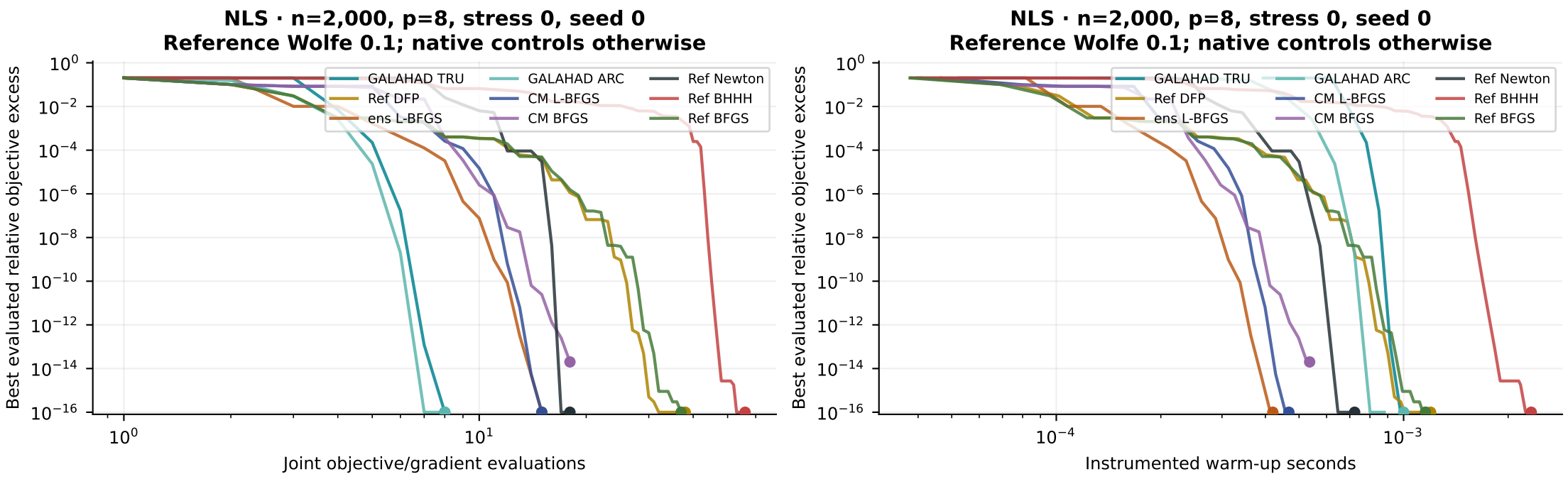

IV-GMM · n=20,000, p=24, stress 2, seed 1
Reference Wolfe 0.9; native controls otherwise
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Joint objective/gradient evaluations
GALAHAD TRU
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Ref Newton
ens L-BFGS
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CM L-BFGS

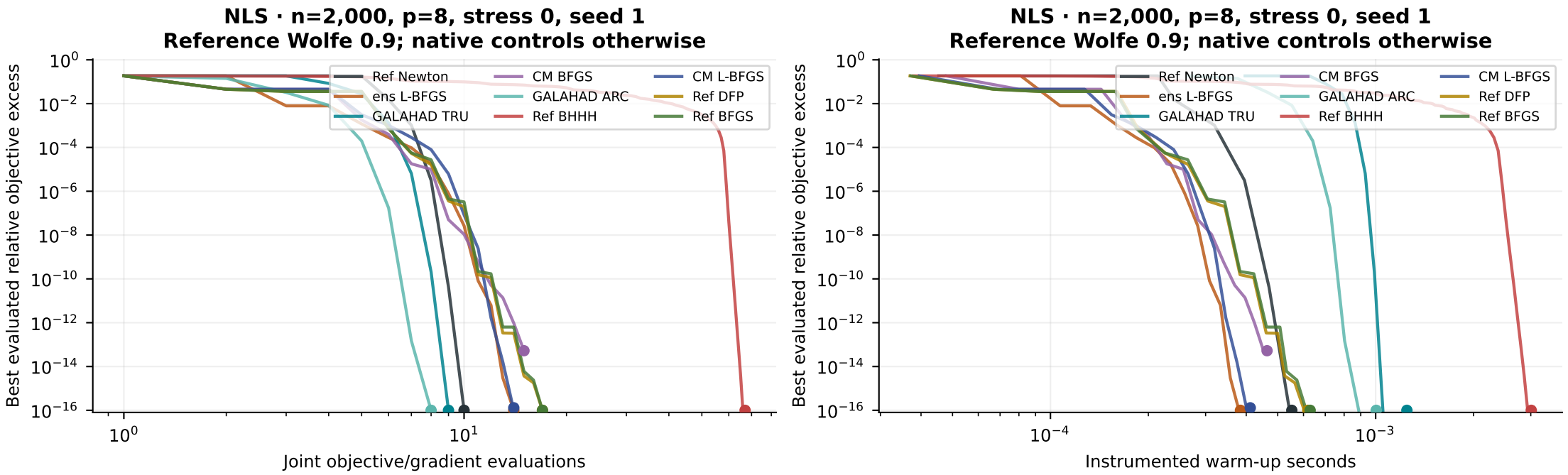
IV-GMM · n=20,000, p=24, stress 2, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
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CM L-BFGS

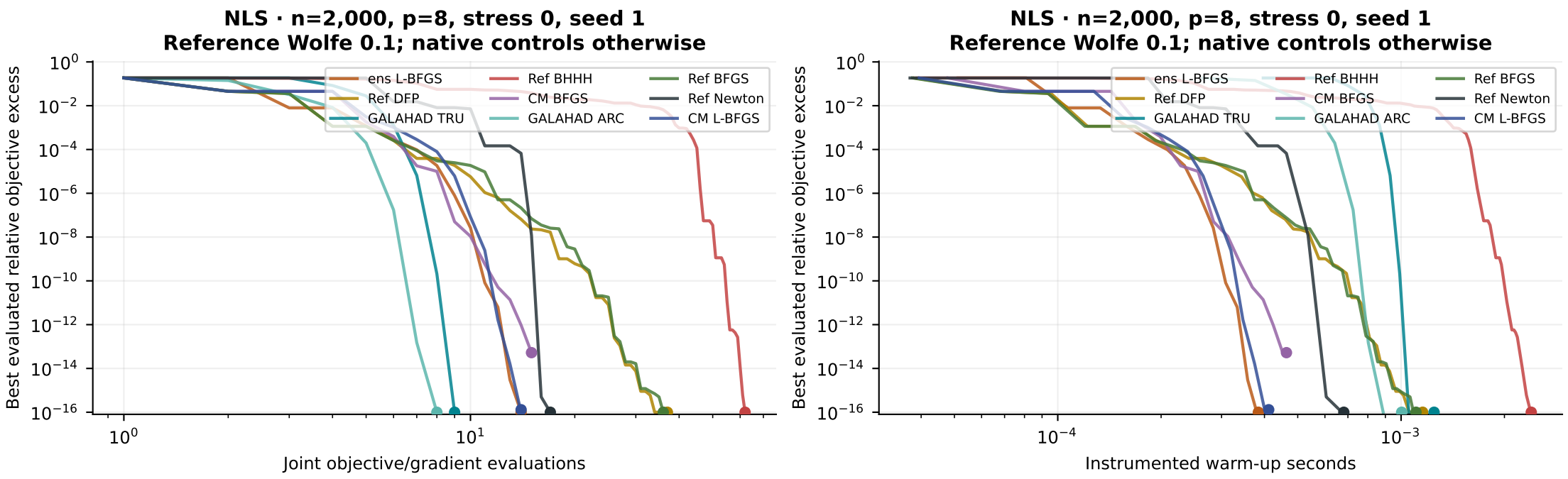

IV-GMM · n=20,000, p=24, stress 2, seed 1
Reference Wolfe 0.1; native controls otherwise
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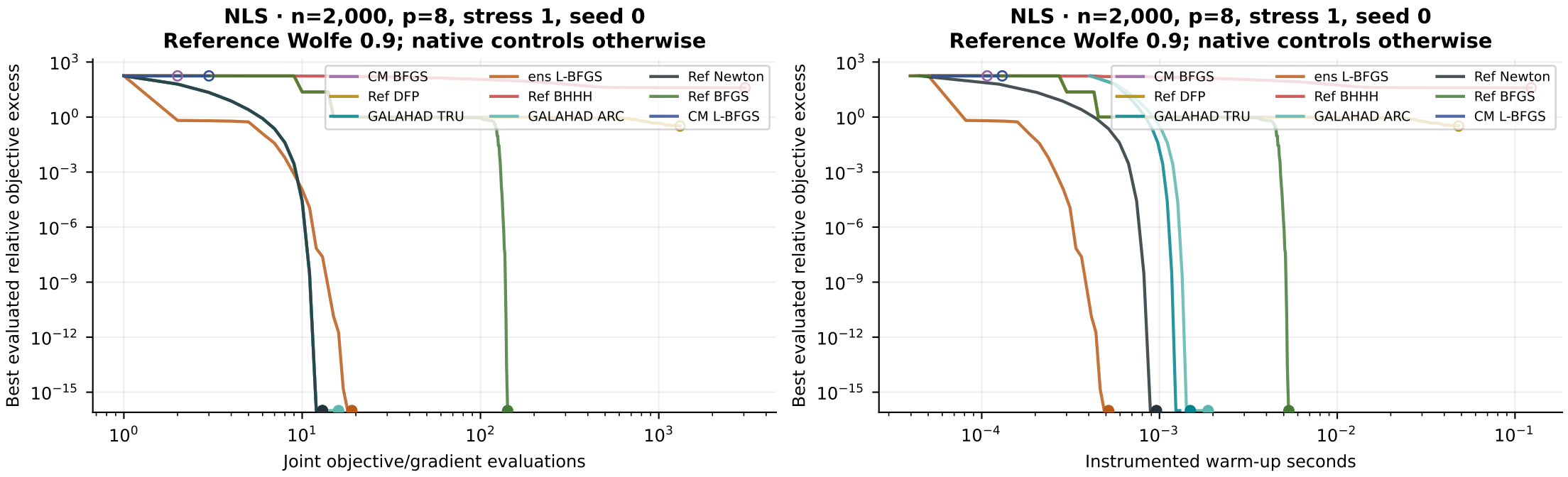
IV-GMM · n=20,000, p=24, stress 2, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
CM native (endpoint)
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Ref BFGS
ens L-BFGS
CM BFGS
GALAHAD ARC
Ref DFP
CM L-BFGS


NLS · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref Newton
GALAHAD TRU
ens L-BFGS
GALAHAD ARC
Ref DFP
CM L-BFGS
CM BFGS
Ref BHHH
Ref BFGS

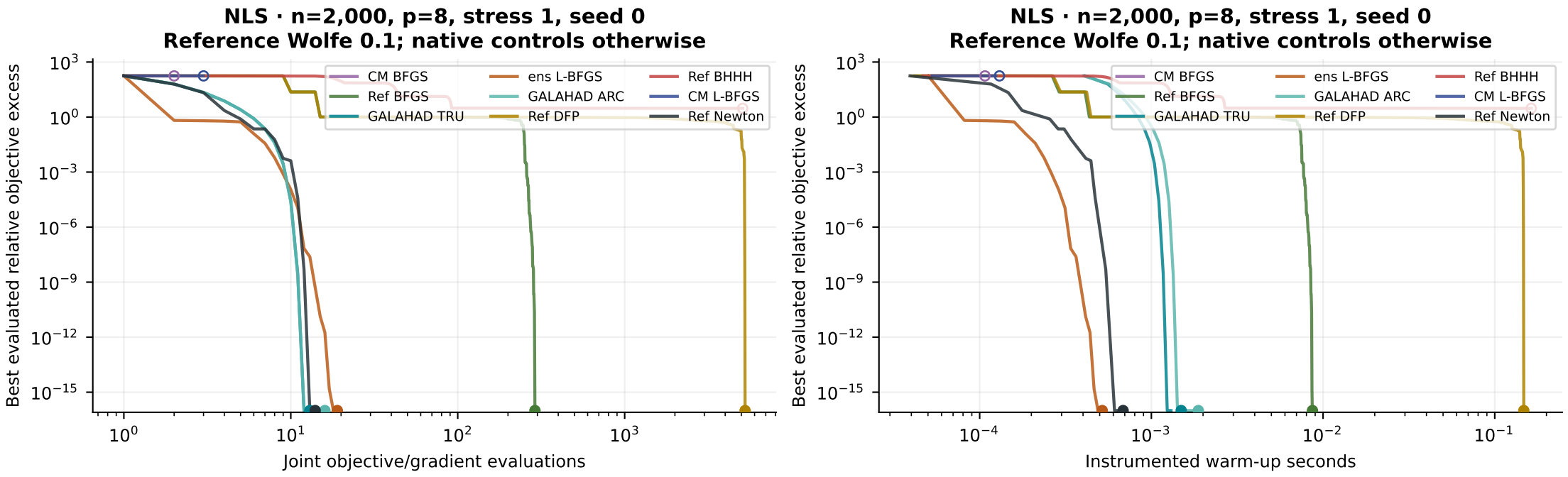

NLS · n=2,000, p=8, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
GALAHAD TRU
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ens L-BFGS
GALAHAD ARC
CM L-BFGS
CM BFGS
Ref Newton
Ref BHHH
Ref BFGS


NLS · n=2,000, p=8, stress 0, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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ens L-BFGS
GALAHAD TRU
CM BFGS
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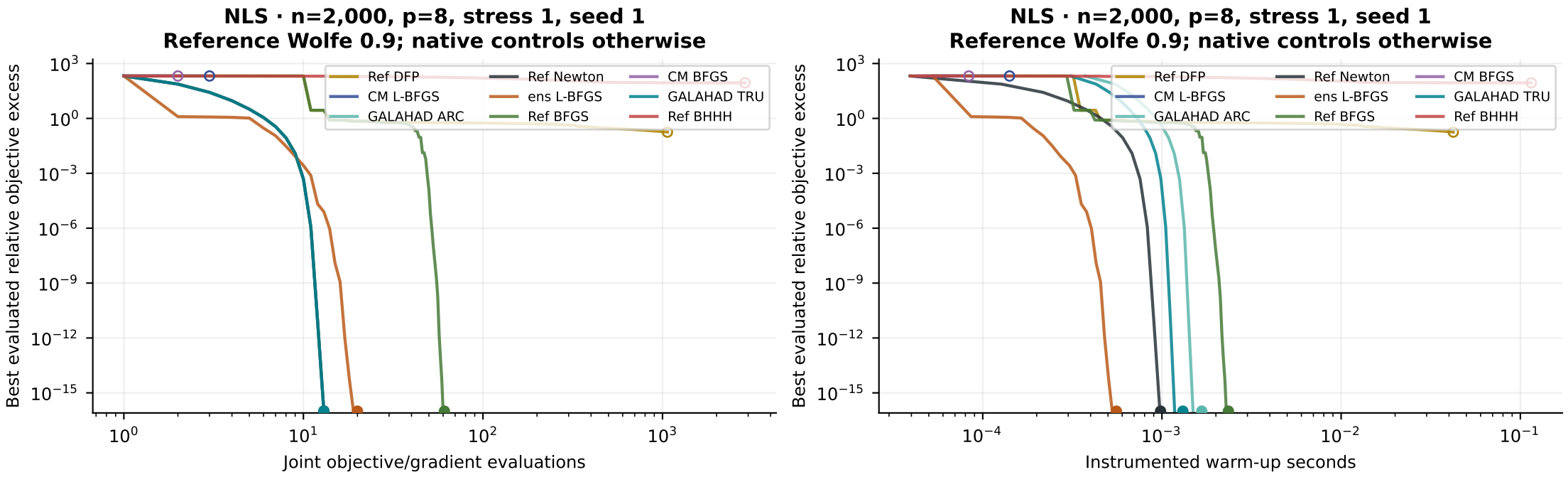

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Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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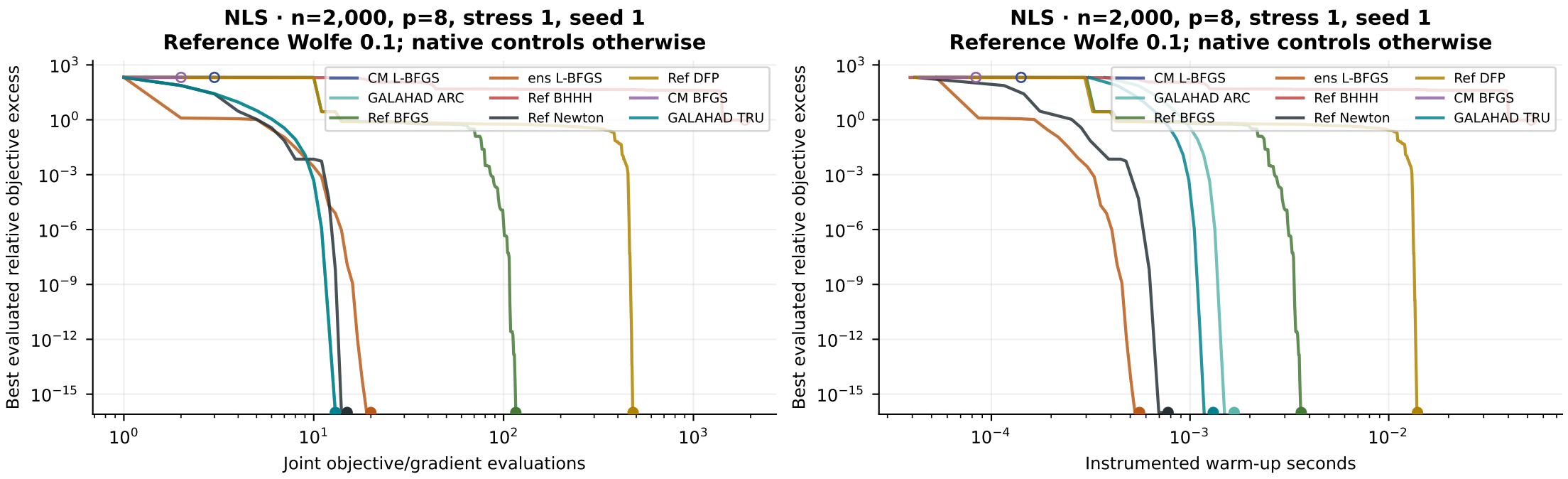

NLS · n=2,000, p=8, stress 1, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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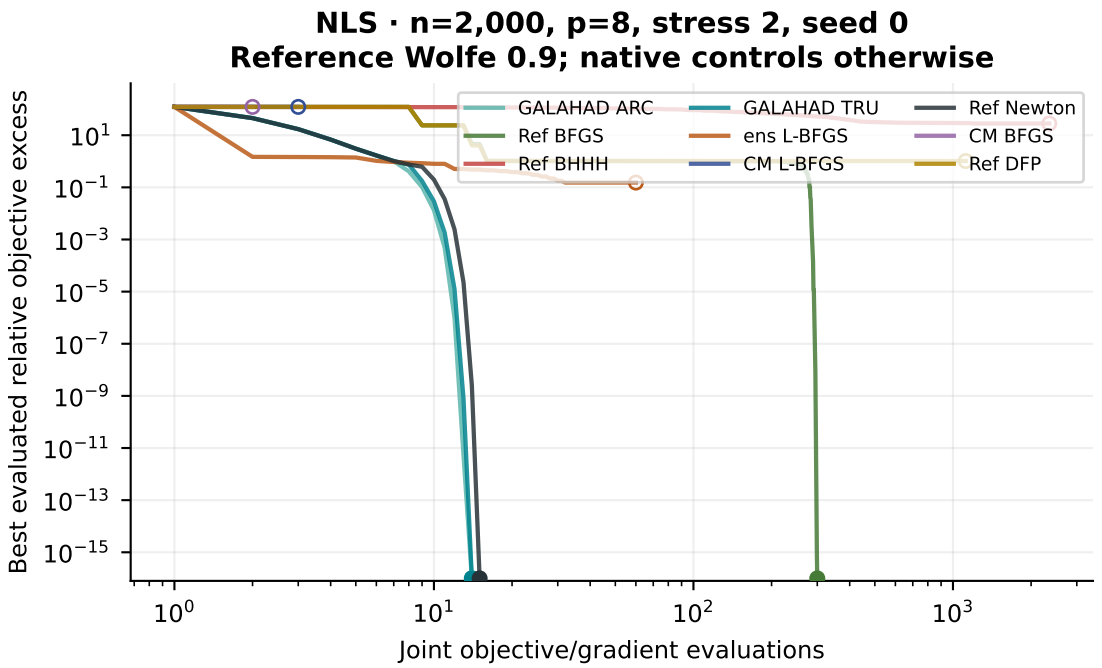
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Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
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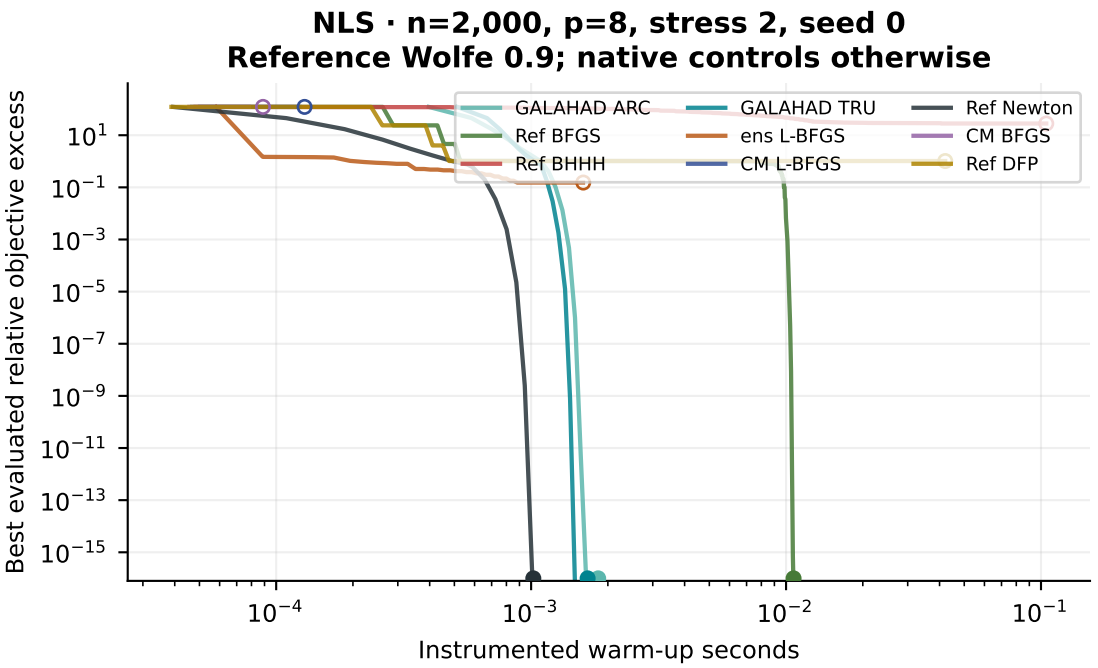

NLS · n=2,000, p=8, stress 1, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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Ref Newton

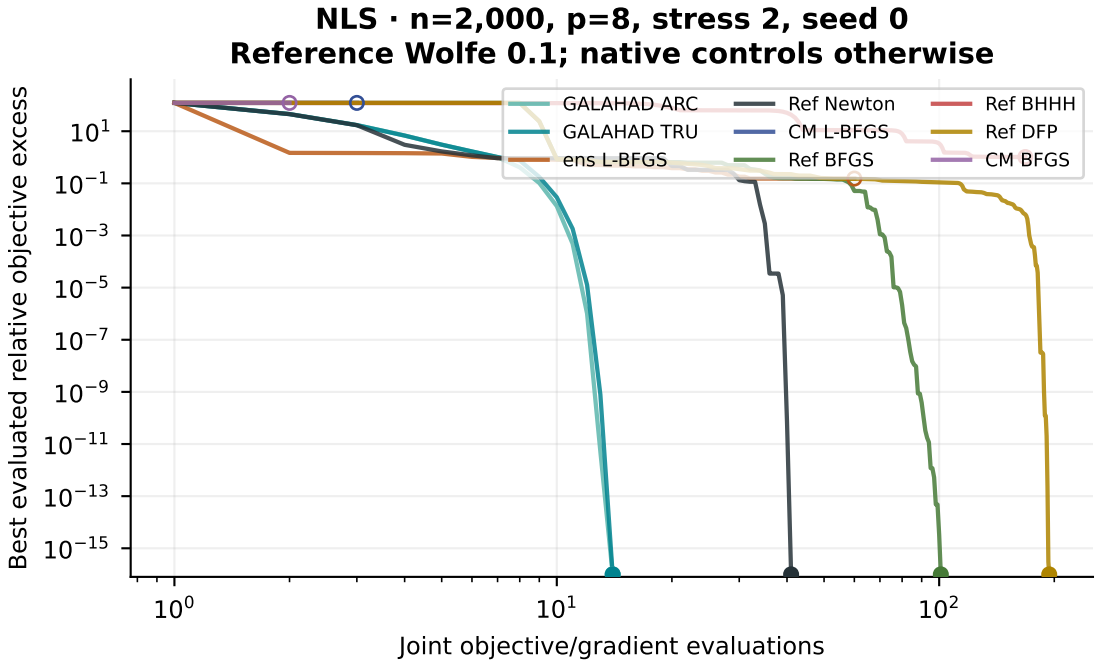
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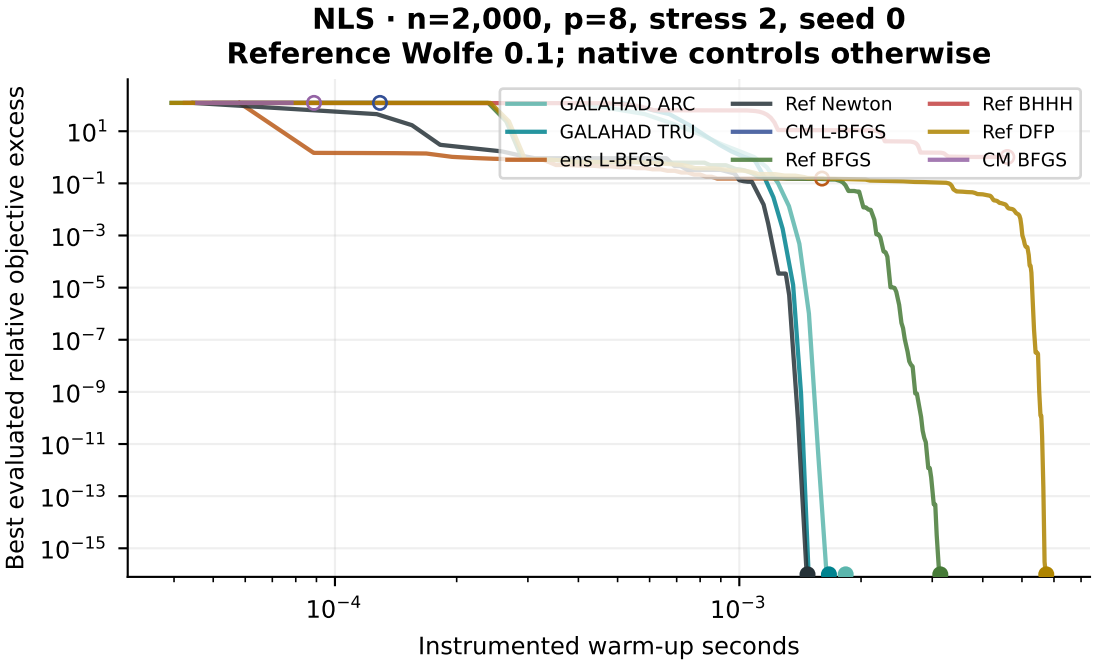

NLS · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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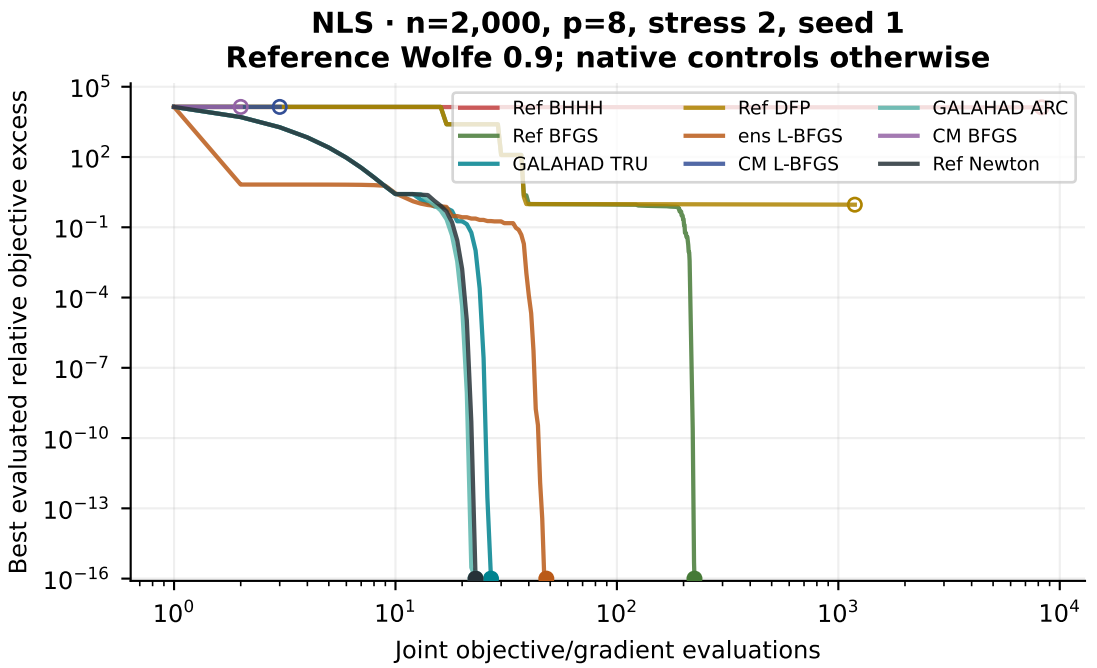

NLS · n=2,000, p=8, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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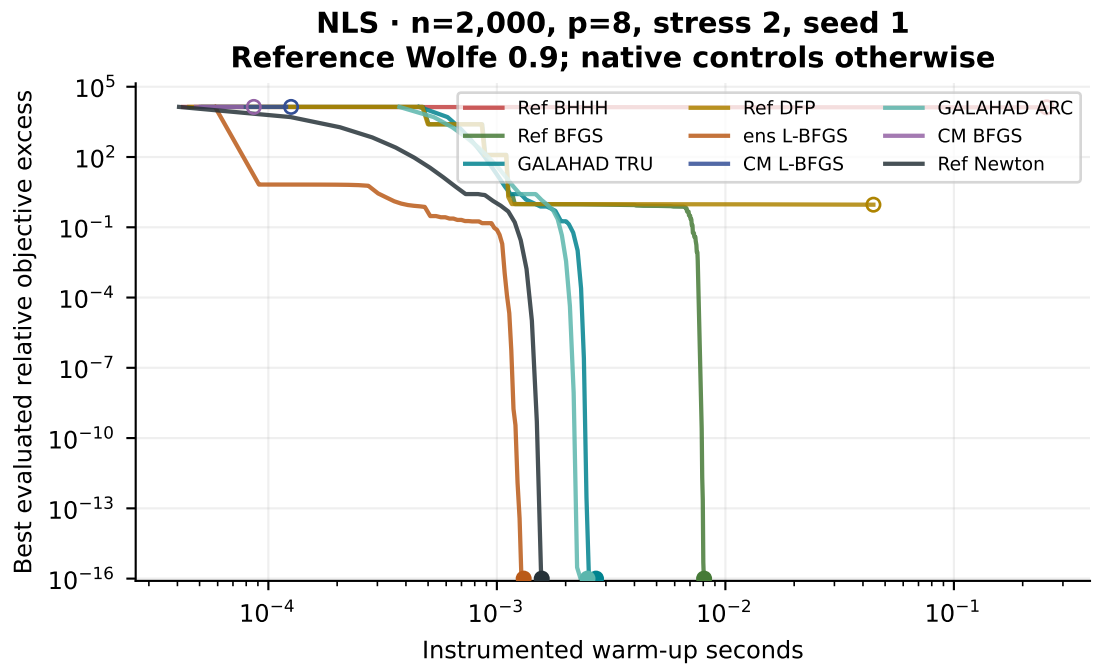

NLS · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
GALAHAD ARC
GALAHAD TRU
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Ref BFGS
ens L-BFGS
CM BFGS
Ref BHHH
CM L-BFGS
Ref DFP
Best evaluated relative objective excess
Joint objective/gradient evaluations

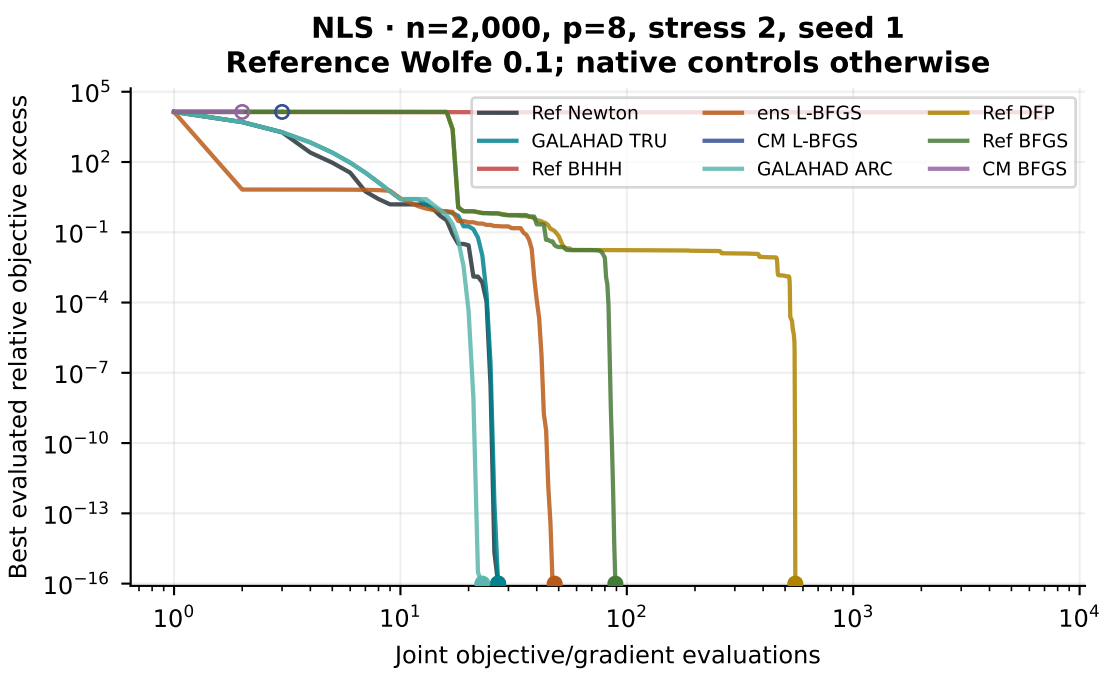

NLS · n=2,000, p=8, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
GALAHAD ARC
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Ref DFP
Best evaluated relative objective excess
Instrumented warm-up seconds

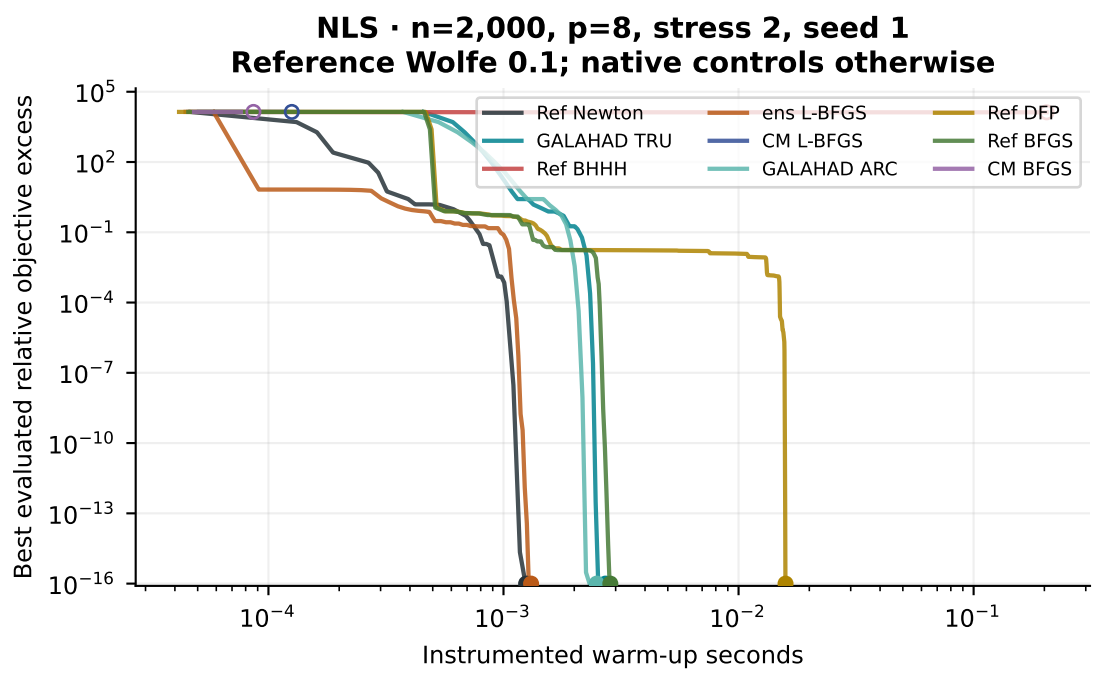

NLS · n=2,000, p=8, stress 2, seed 0
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GALAHAD ARC
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CM BFGS
Best evaluated relative objective excess
Joint objective/gradient evaluations

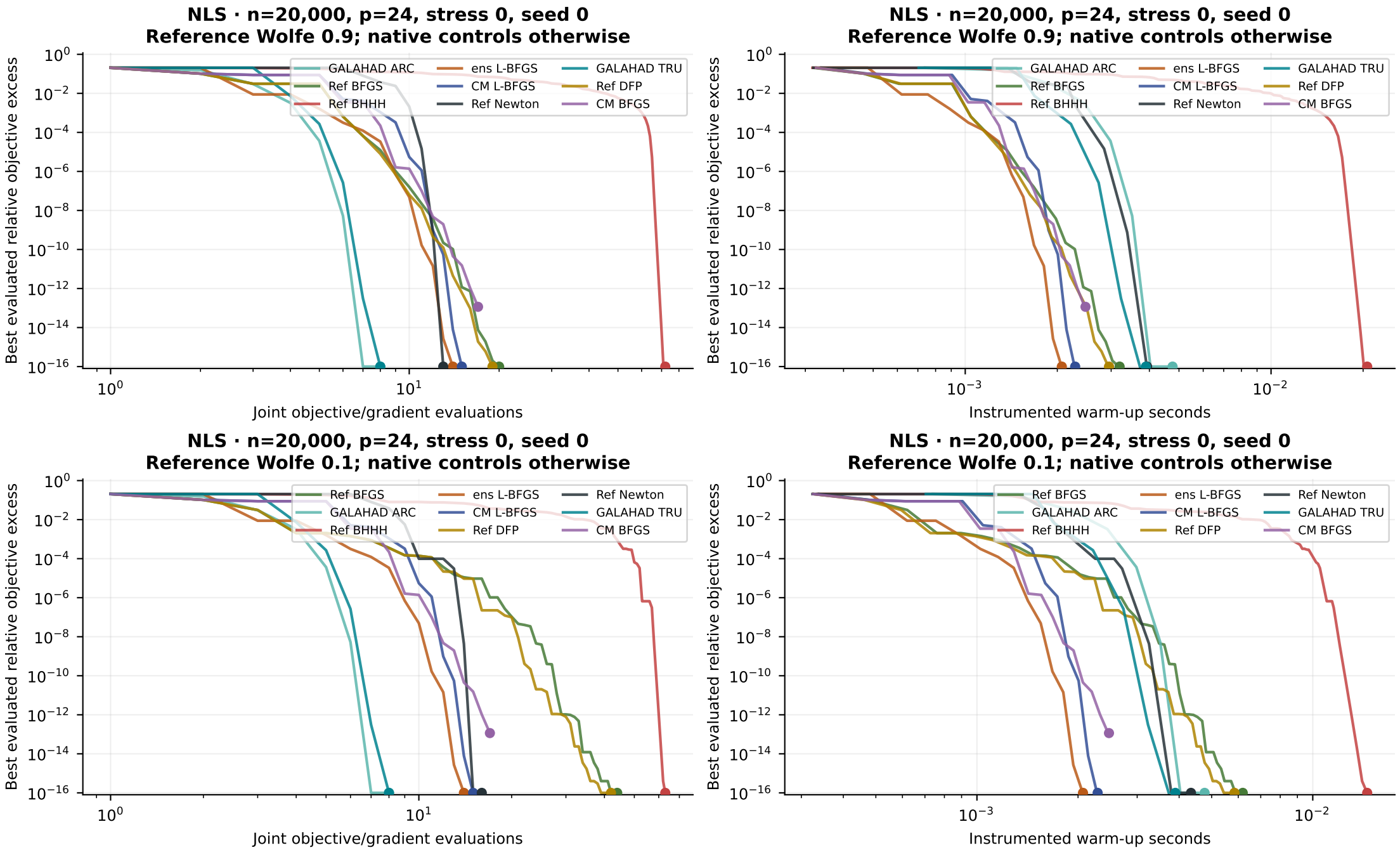

NLS · n=2,000, p=8, stress 2, seed 0
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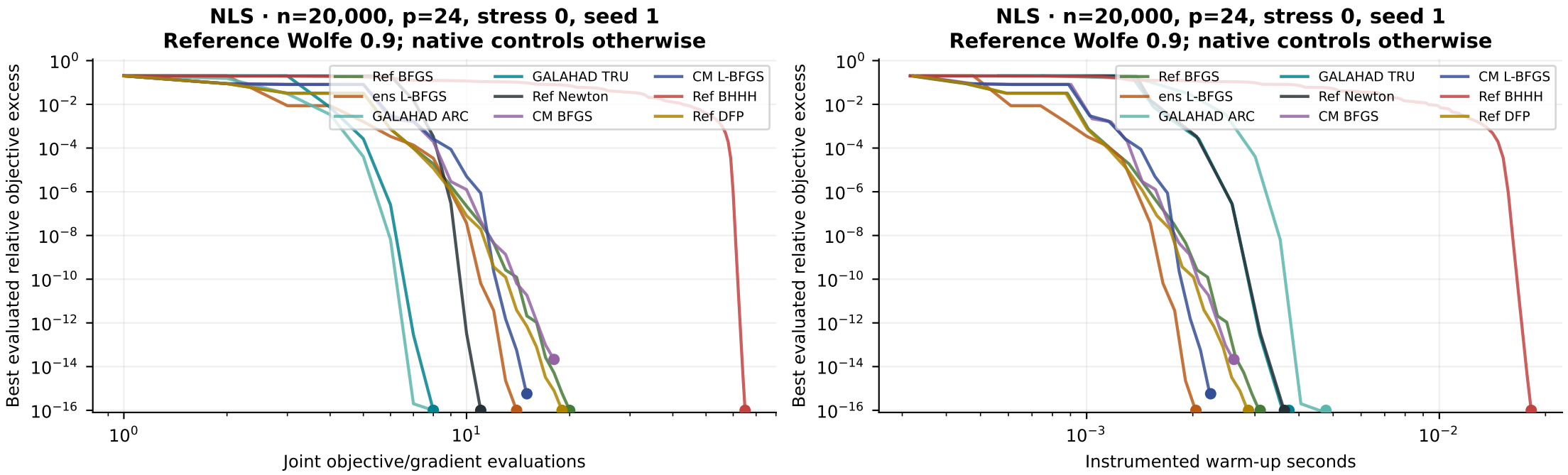

NLS · n=2,000, p=8, stress 2, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
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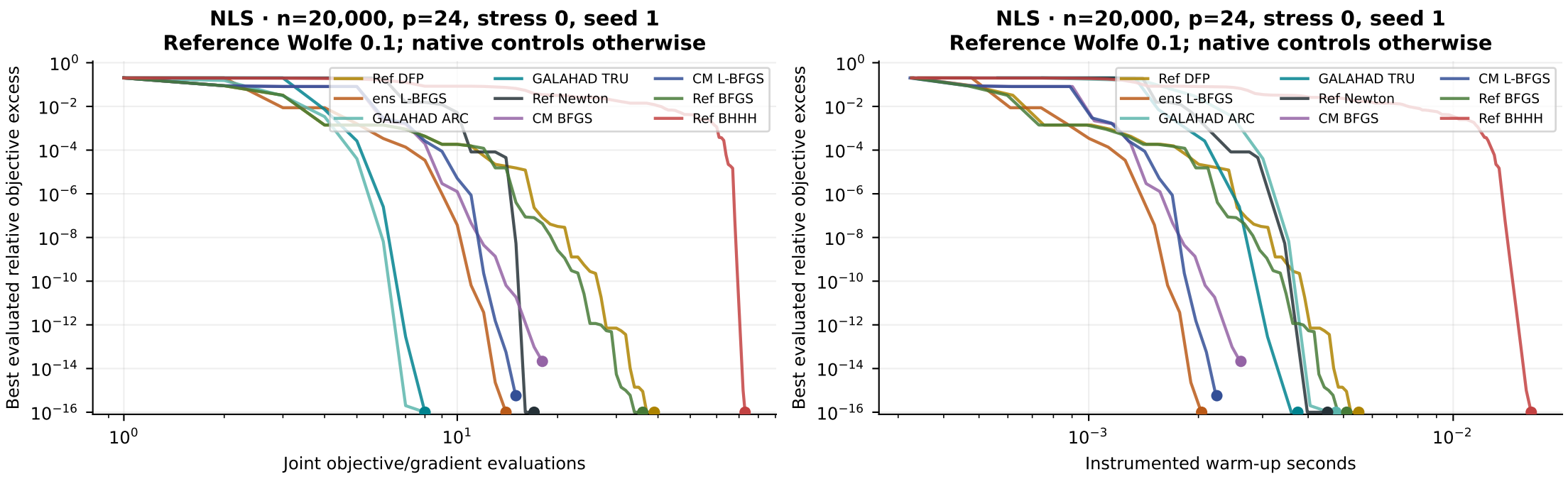

NLS · n=2,000, p=8, stress 2, seed 1
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Best evaluated relative objective excess
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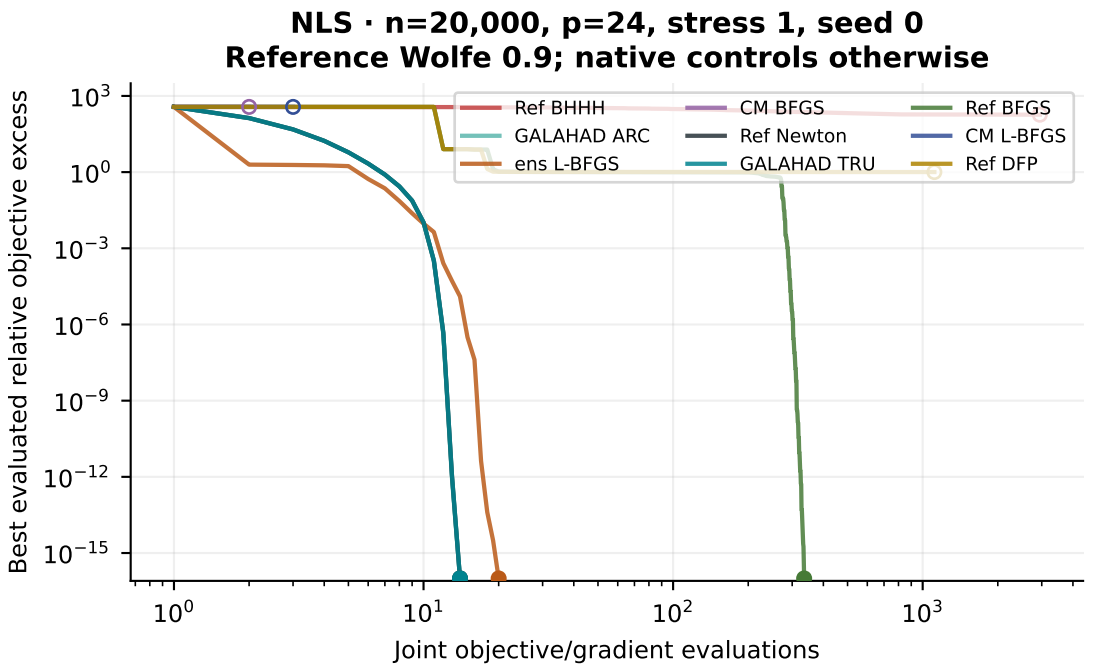

NLS · n=2,000, p=8, stress 2, seed 1
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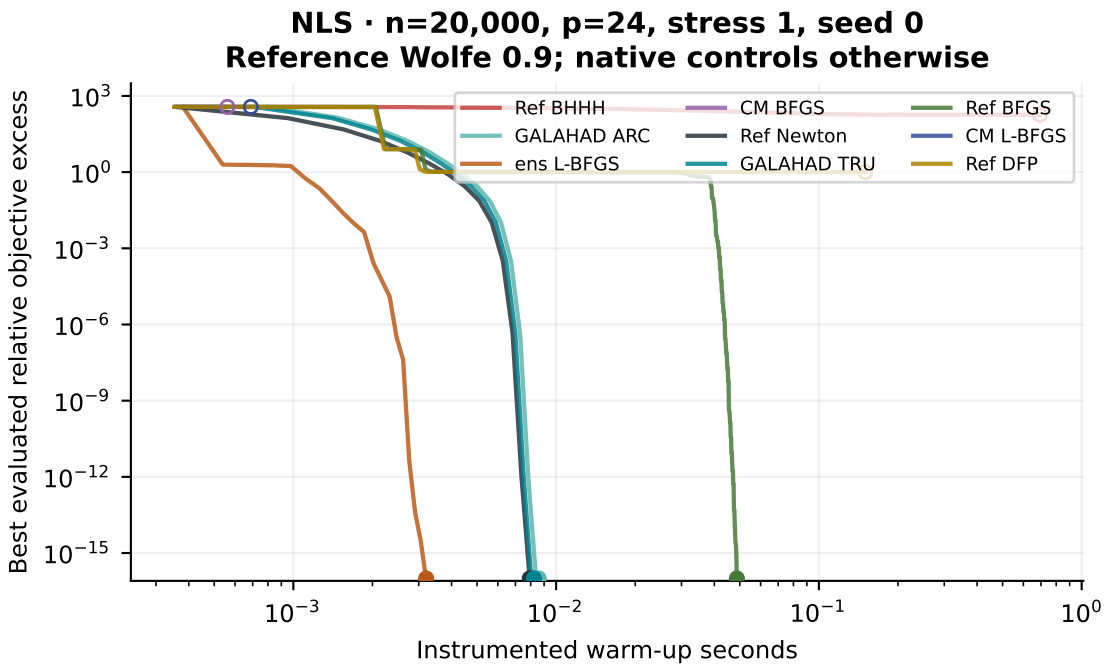

NLS · n=2,000, p=8, stress 2, seed 1
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Best evaluated relative objective excess
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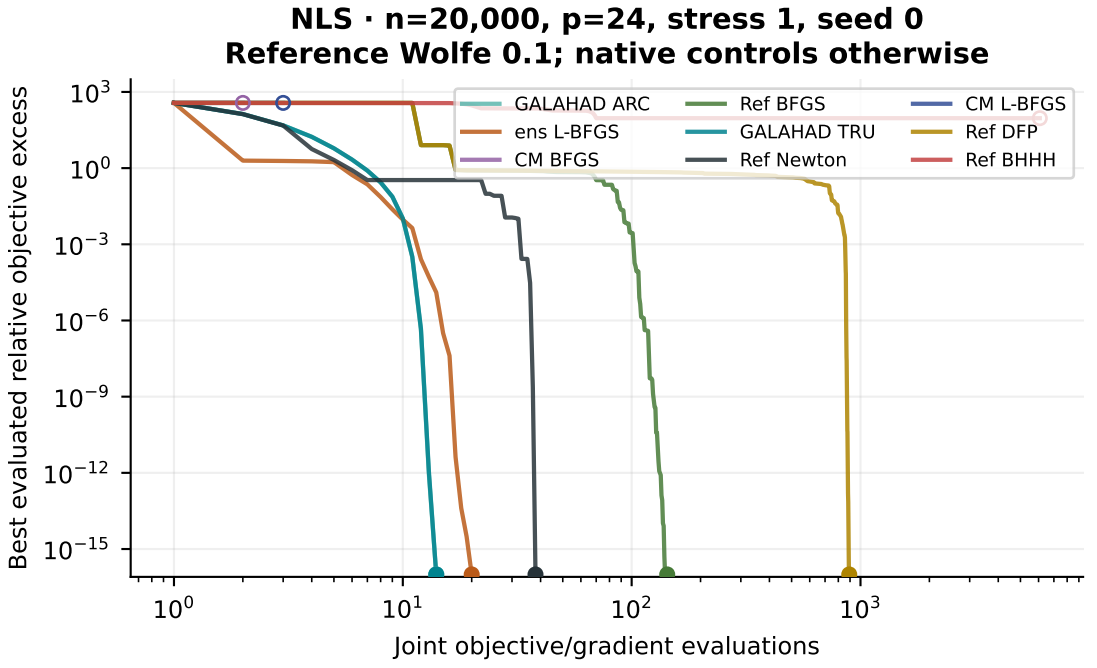

NLS · n=20,000, p=24, stress 0, seed 0
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Instrumented warm-up seconds
GALAHAD ARC
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NLS · n=20,000, p=24, stress 0, seed 0
Reference Wolfe 0.1; native controls otherwise
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Instrumented warm-up seconds
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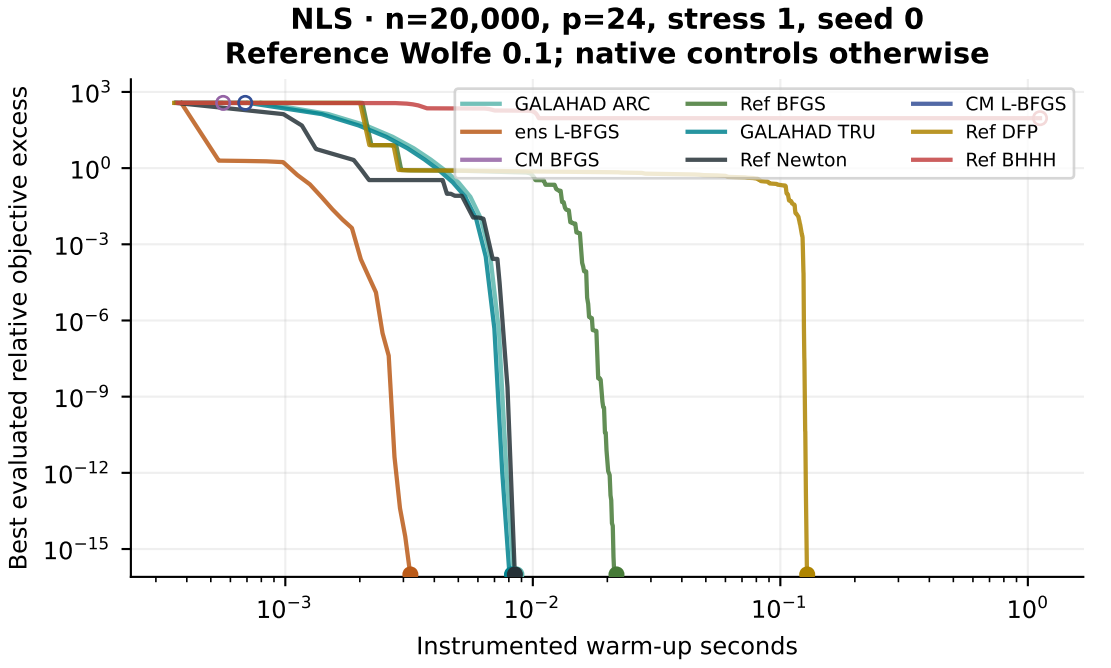

NLS · n=20,000, p=24, stress 0, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
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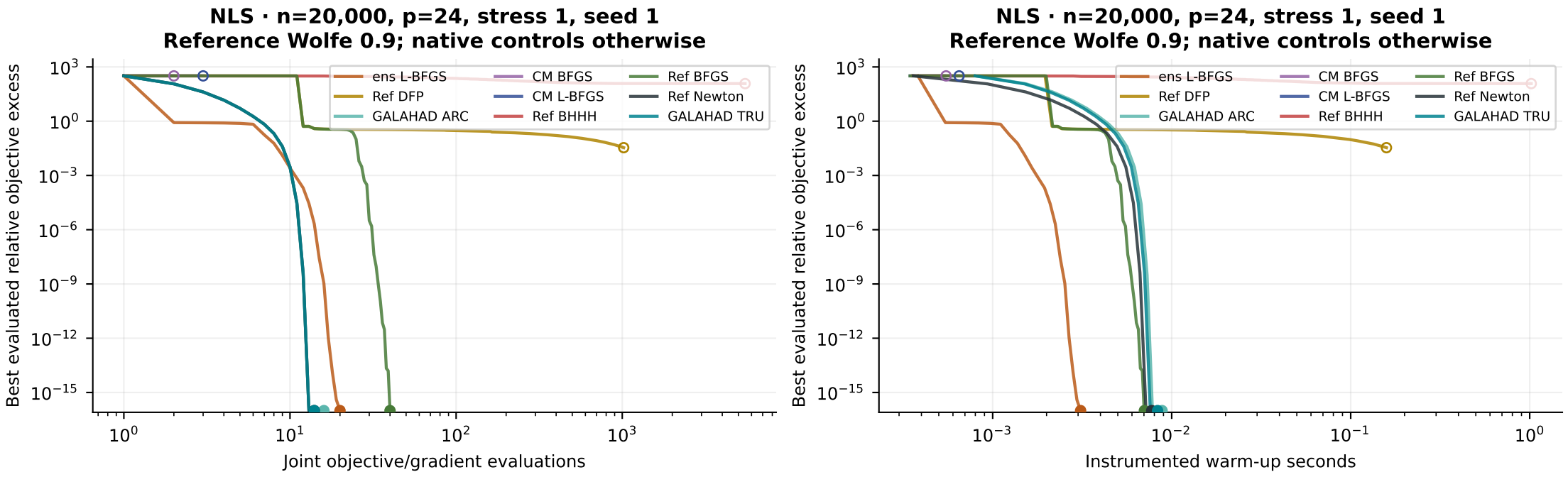

NLS · n=20,000, p=24, stress 0, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
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GALAHAD TRU
Ref Newton
CM BFGS
CM L-BFGS
Ref BFGS
Ref BHHH


NLS · n=20,000, p=24, stress 1, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
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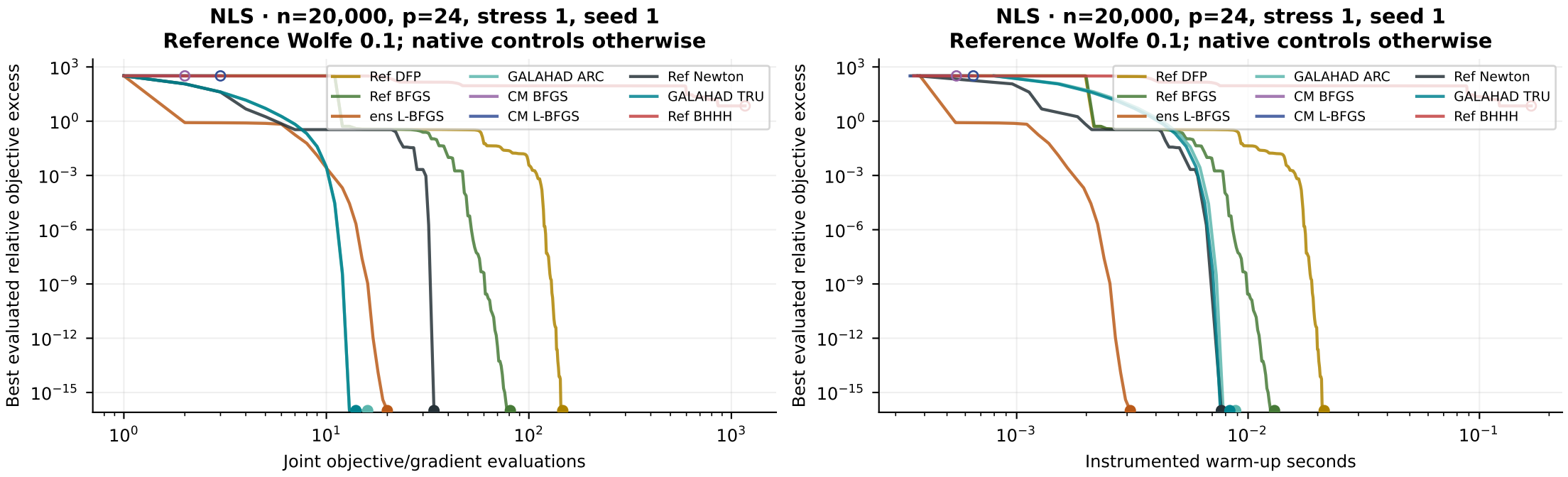

NLS · n=20,000, p=24, stress 1, seed 0
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Best evaluated relative objective excess
Instrumented warm-up seconds
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Ref Newton
GALAHAD TRU
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CM L-BFGS
Ref DFP


NLS · n=20,000, p=24, stress 1, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
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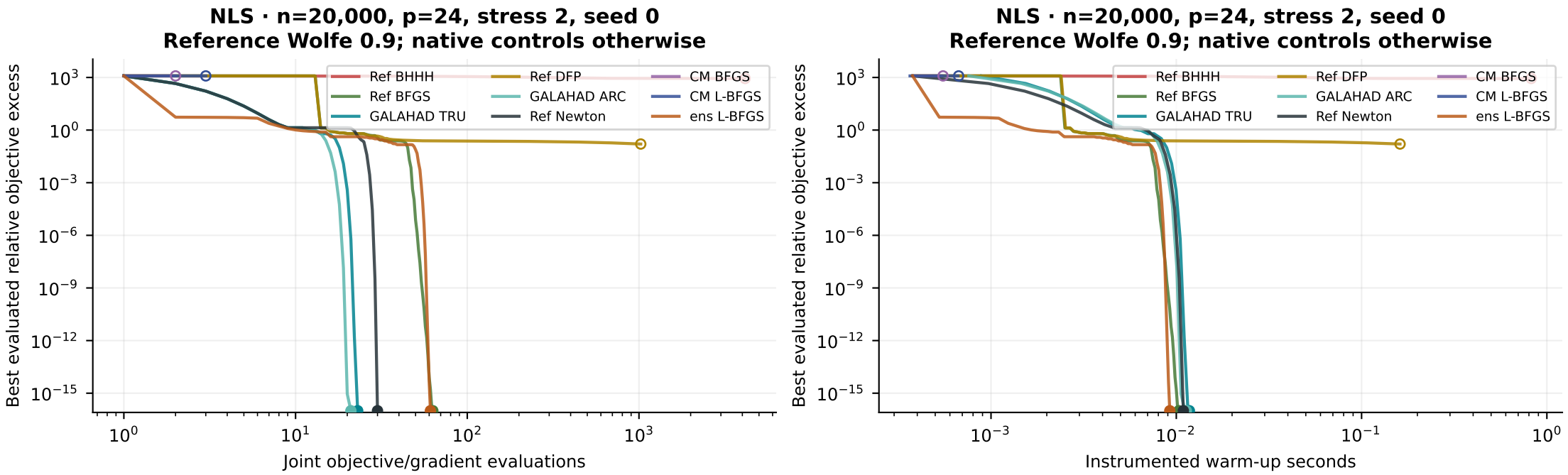

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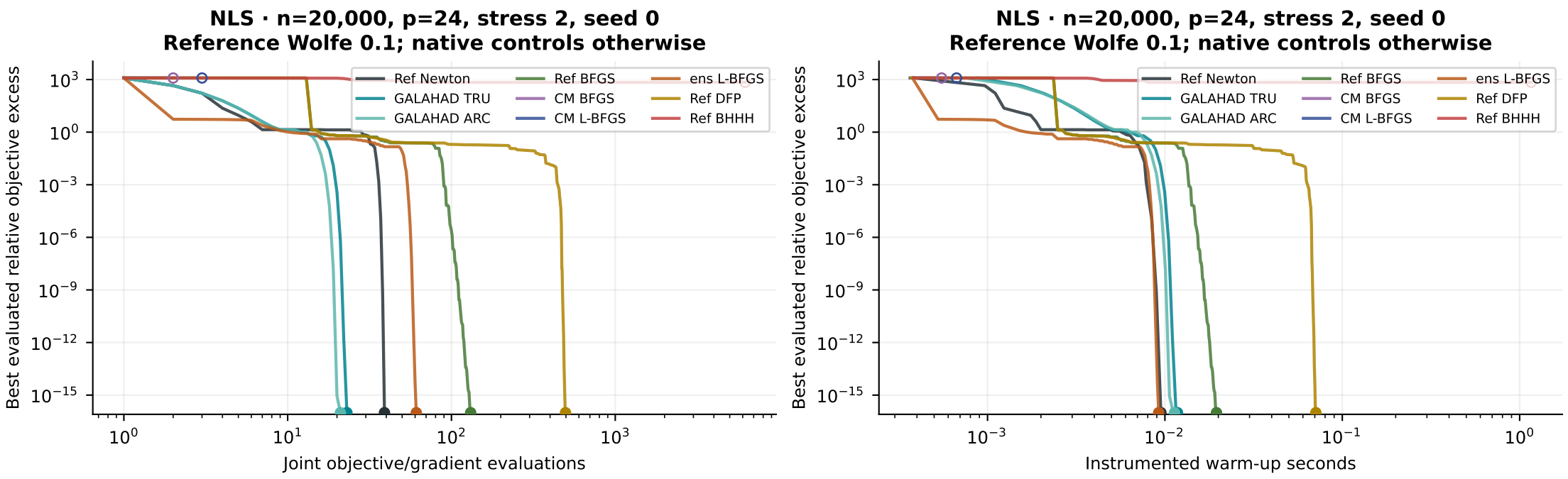

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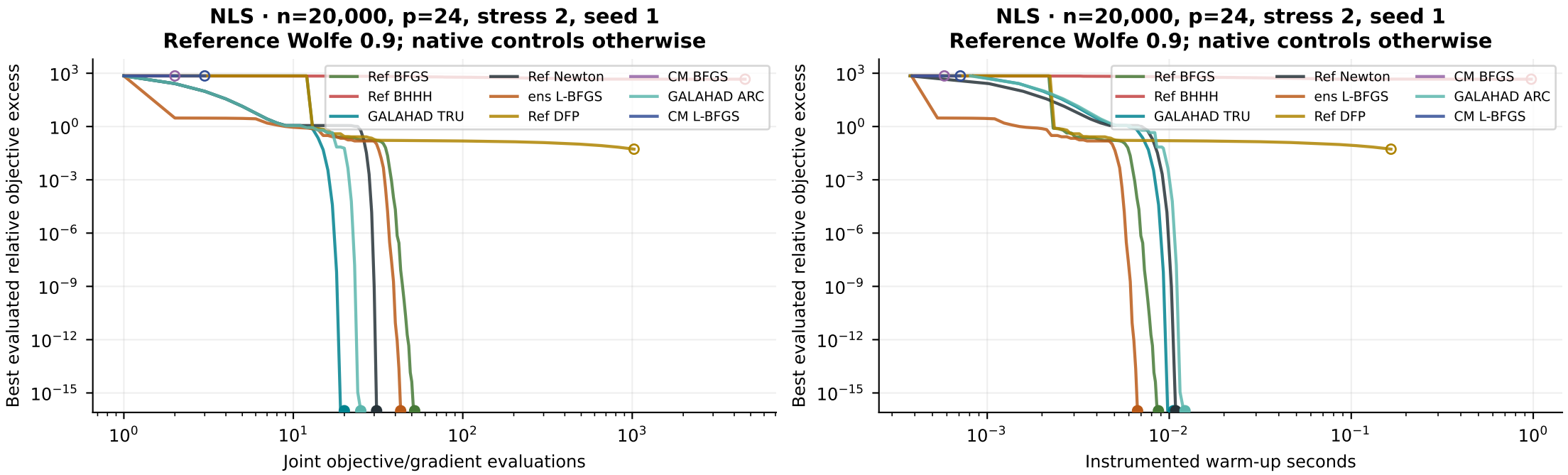
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Ref Newton
GALAHAD TRU

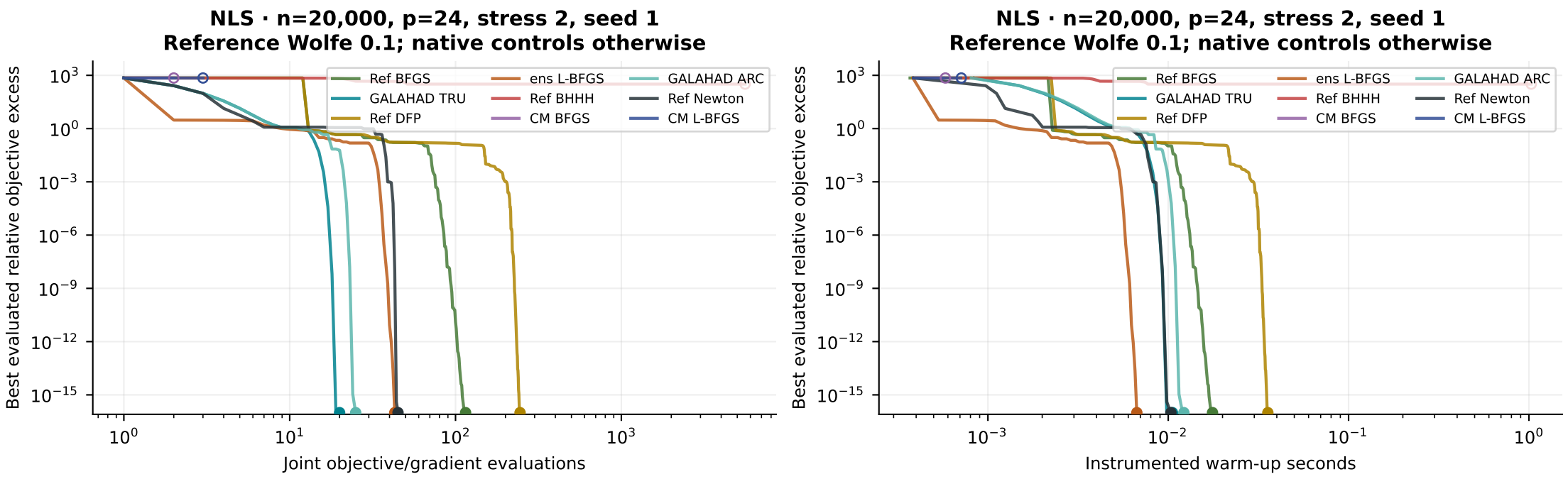

NLS · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Ref DFP
Ref BFGS
ens L-BFGS
GALAHAD ARC
CM BFGS
CM L-BFGS
Ref Newton
GALAHAD TRU
Ref BHHH

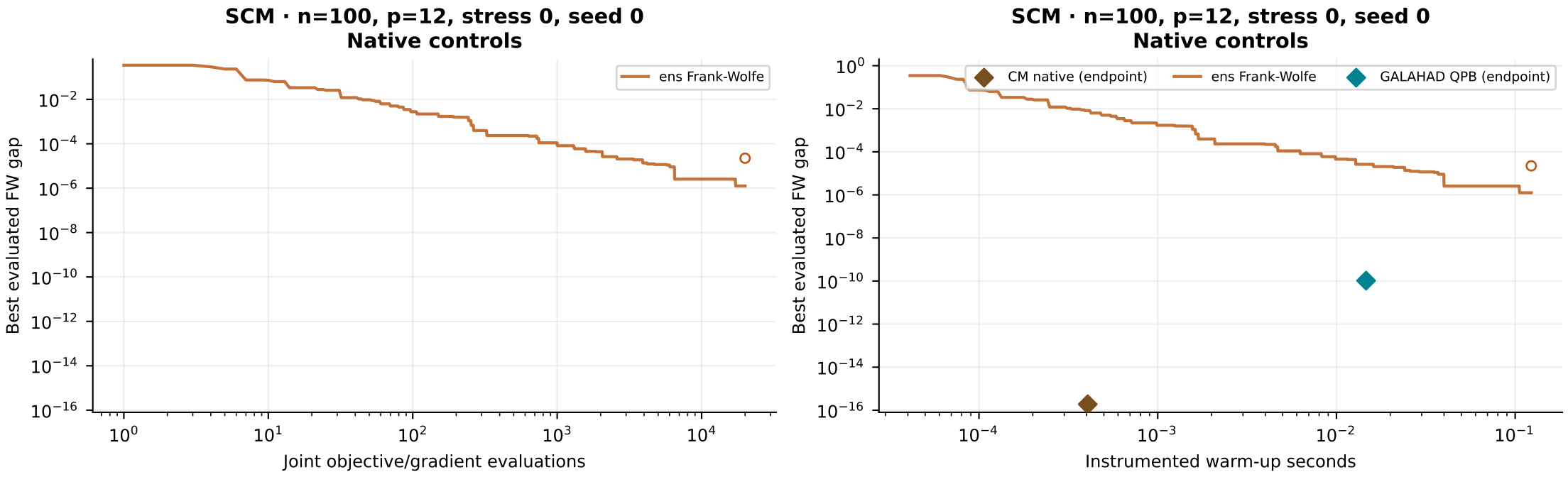
NLS · n=20,000, p=24, stress 1, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Instrumented warm-up seconds
Ref DFP
Ref BFGS
ens L-BFGS
GALAHAD ARC
CM BFGS
CM L-BFGS
Ref Newton
GALAHAD TRU
Ref BHHH

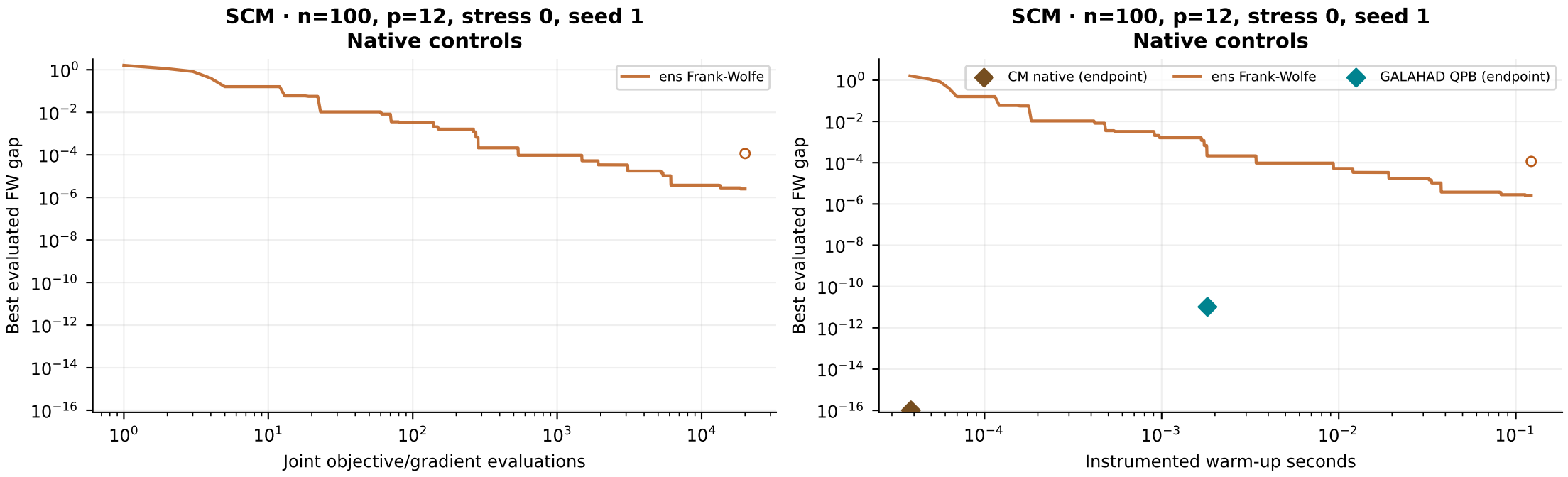

NLS · n=20,000, p=24, stress 2, seed 0
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref BHHH
Ref BFGS
GALAHAD TRU
Ref DFP
GALAHAD ARC
Ref Newton
CM BFGS
CM L-BFGS
ens L-BFGS

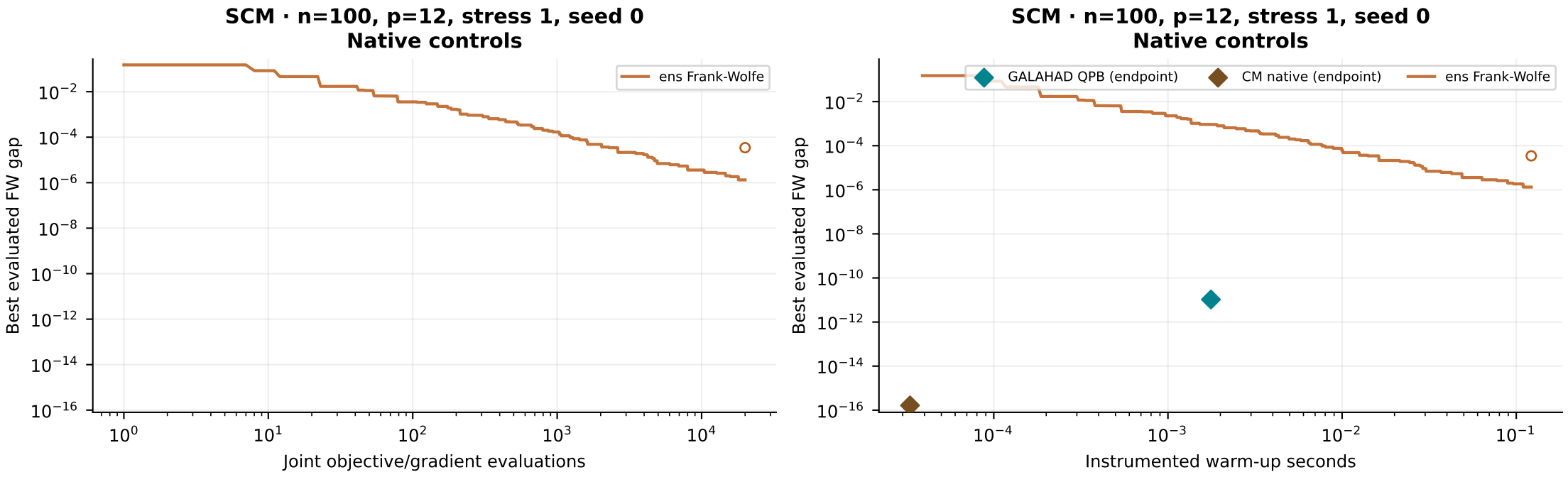

NLS · n=20,000, p=24, stress 2, seed 0
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref Newton
GALAHAD TRU
GALAHAD ARC
Ref BFGS
CM BFGS
CM L-BFGS
ens L-BFGS
Ref DFP
Ref BHHH

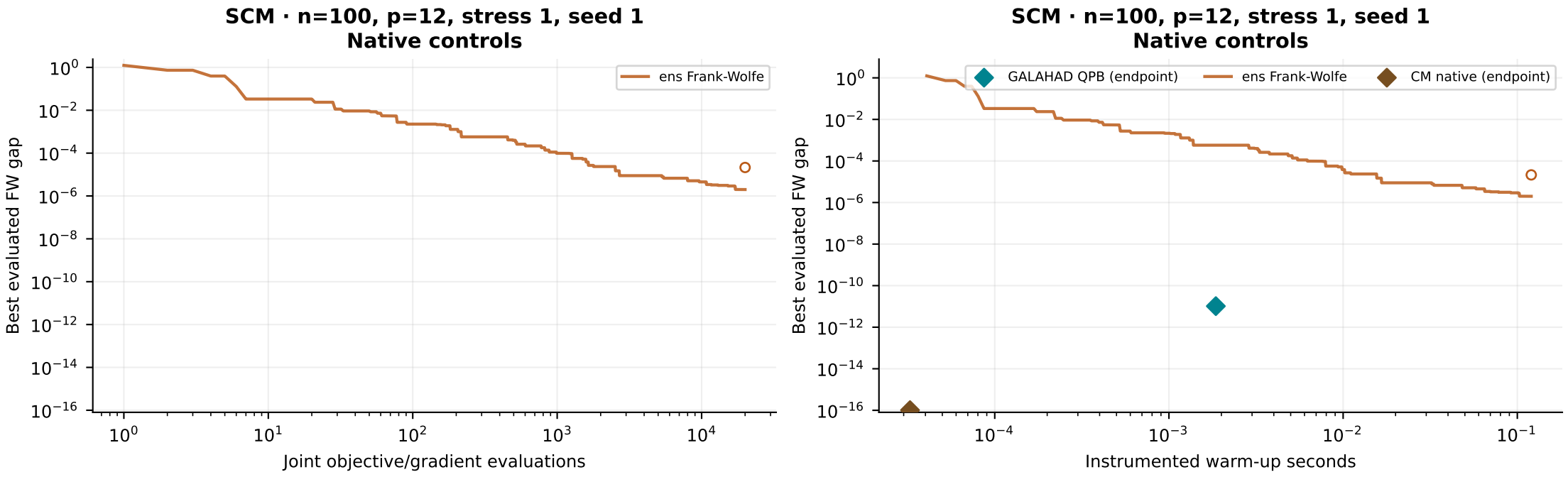

NLS · n=20,000, p=24, stress 2, seed 1
Reference Wolfe 0.9; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref BFGS
Ref BHHH
GALAHAD TRU
Ref Newton
ens L-BFGS
Ref DFP
CM BFGS
GALAHAD ARC
CM L-BFGS

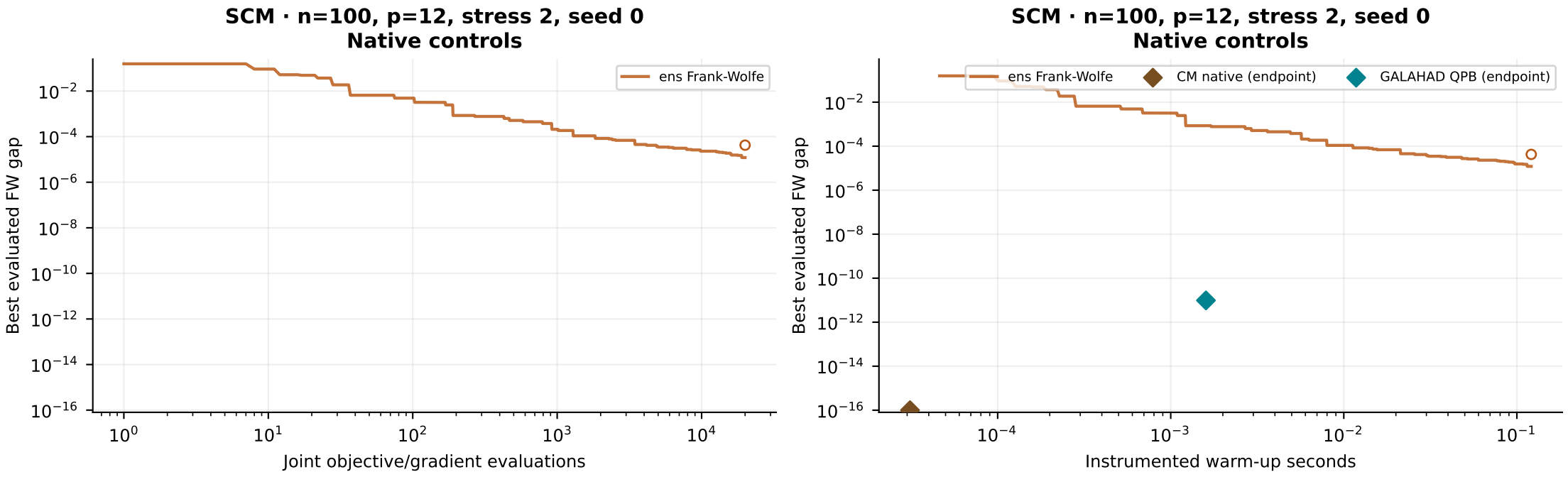

NLS · n=20,000, p=24, stress 2, seed 1
Reference Wolfe 0.1; native controls otherwise
Best evaluated relative objective excess
Joint objective/gradient evaluations
Instrumented warm-up seconds
Ref BFGS
GALAHAD TRU
Ref DFP
ens L-BFGS
Ref BHHH
CM BFGS
GALAHAD ARC
Ref Newton
CM L-BFGS

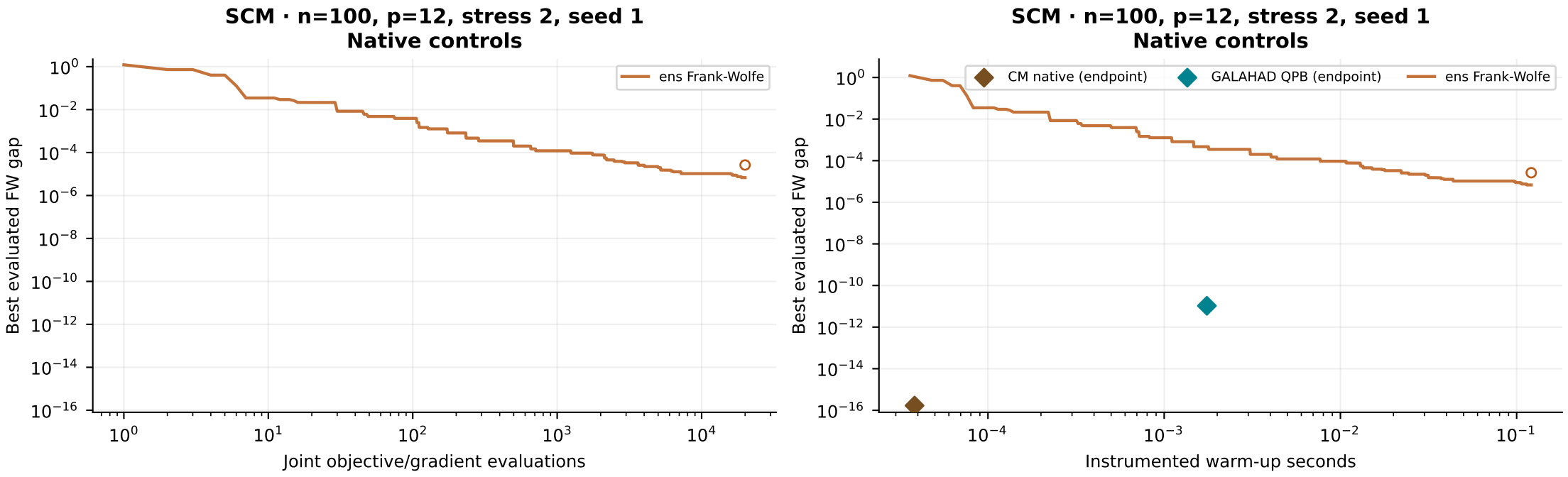

SCM · n=100, p=12, stress 0, seed 0
Native controls
ens Frank-Wolfe
Best evaluated FW gap
Joint objective/gradient evaluations
SCM · n=100, p=12, stress 0, seed 0
Native controls
CM native (endpoint)
ens Frank-Wolfe
GALAHAD QPB (endpoint)
Best evaluated FW gap
Instrumented warm-up seconds

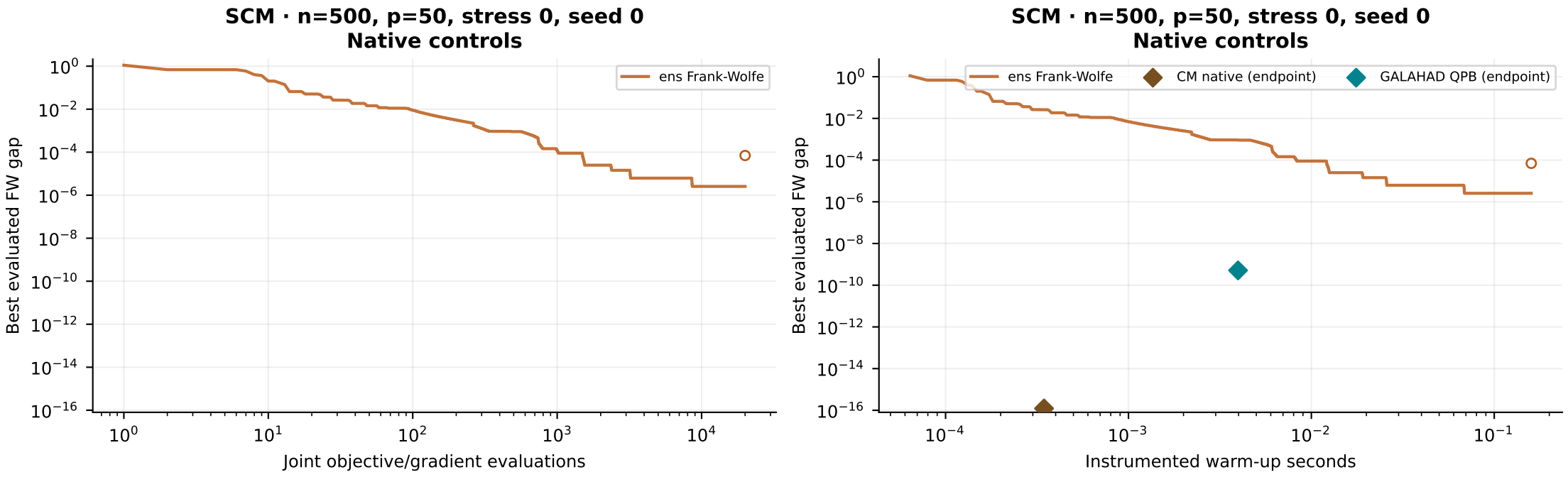

SCM · n=100, p=12, stress 0, seed 1
Native controls
ens Frank-Wolfe
Best evaluated FW gap
Joint objective/gradient evaluations
SCM · n=100, p=12, stress 0, seed 1
Native controls
CM native (endpoint)
ens Frank-Wolfe
GALAHAD QPB (endpoint)
Best evaluated FW gap
Instrumented warm-up seconds

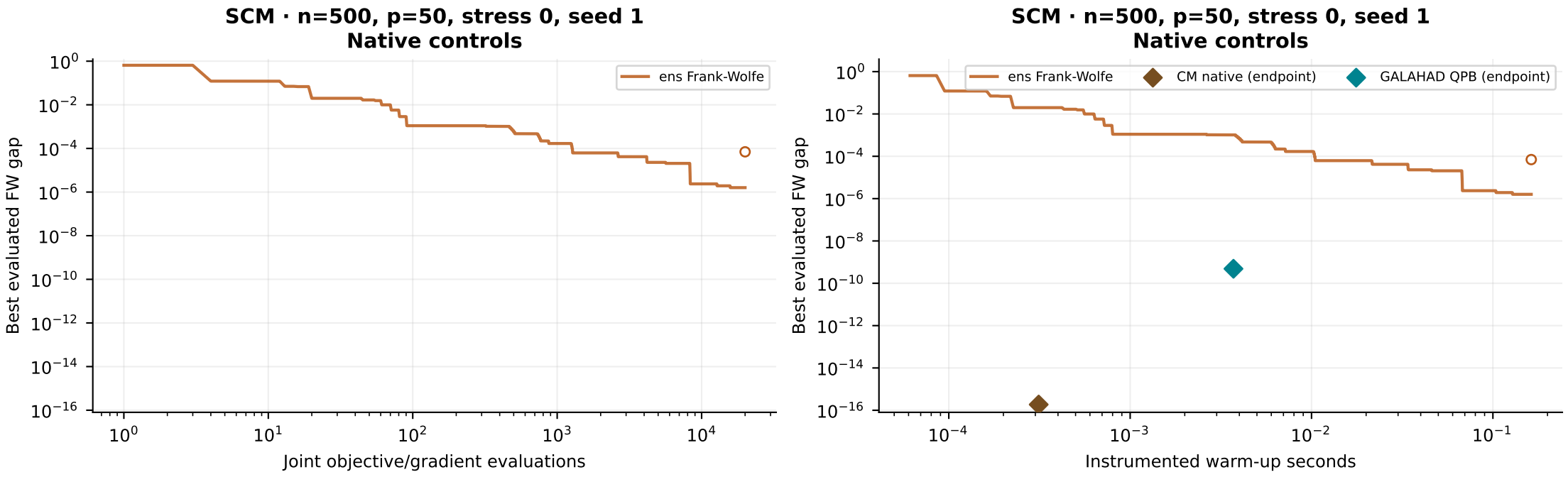

SCM · n=100, p=12, stress 1, seed 0
Native controls
ens Frank-Wolfe
Best evaluated FW gap
Joint objective/gradient evaluations
SCM · n=100, p=12, stress 1, seed 0
Native controls
GALAHAD QPB (endpoint)
CM native (endpoint)
ens Frank-Wolfe
Best evaluated FW gap
Instrumented warm-up seconds

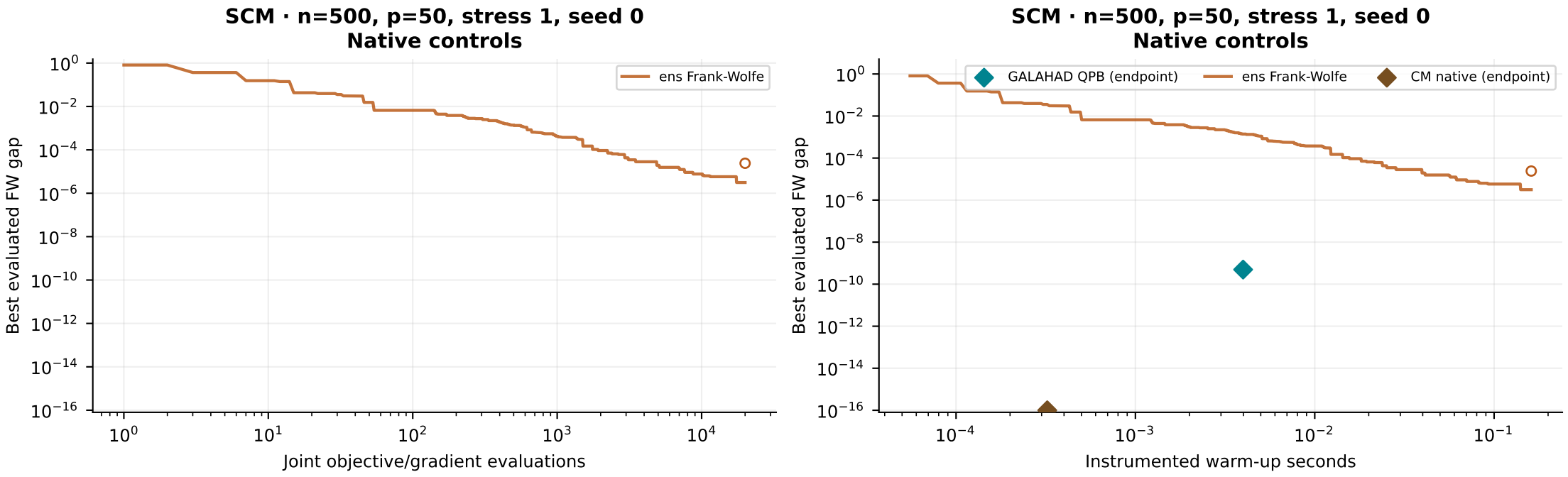

SCM · n=100, p=12, stress 1, seed 1
Native controls
Best evaluated FW gap
Joint objective/gradient evaluations
ens Frank-Wolfe
SCM · n=100, p=12, stress 1, seed 1
Native controls
Best evaluated FW gap
Instrumented warm-up seconds
GALAHAD QPB (endpoint)
ens Frank-Wolfe
CM native (endpoint)

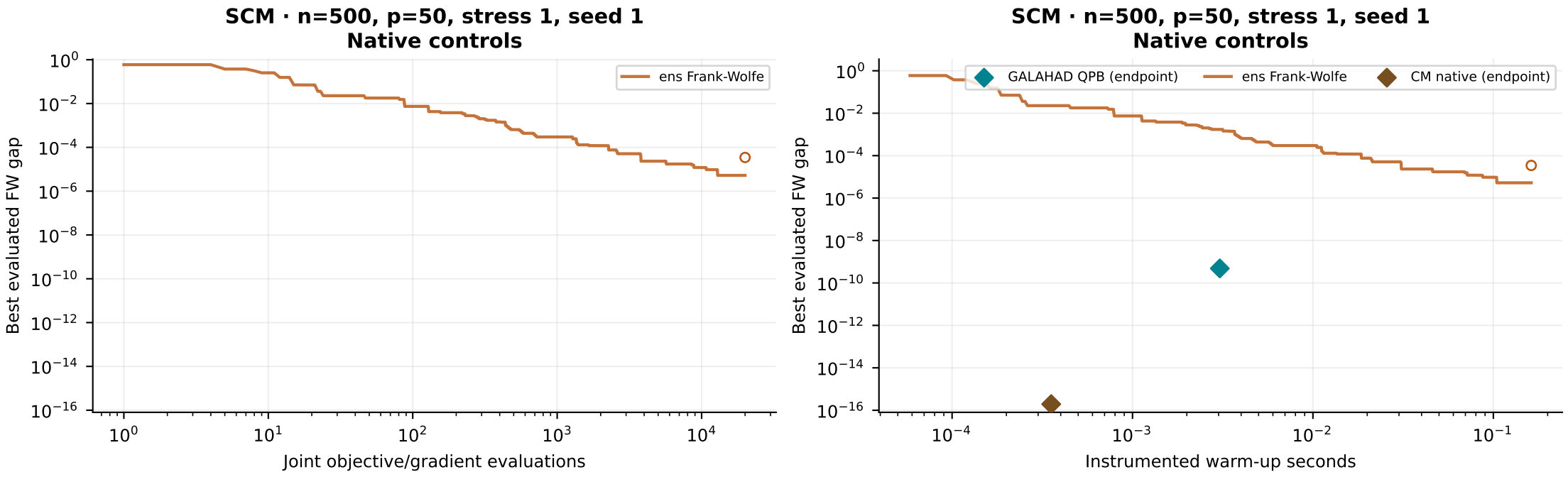

SCM · n=100, p=12, stress 2, seed 0
Native controls
ens Frank-Wolfe
Best evaluated FW gap
Joint objective/gradient evaluations
SCM · n=100, p=12, stress 2, seed 0
Native controls
ens Frank-Wolfe
CM native (endpoint)
GALAHAD QPB (endpoint)
Best evaluated FW gap
Instrumented warm-up seconds

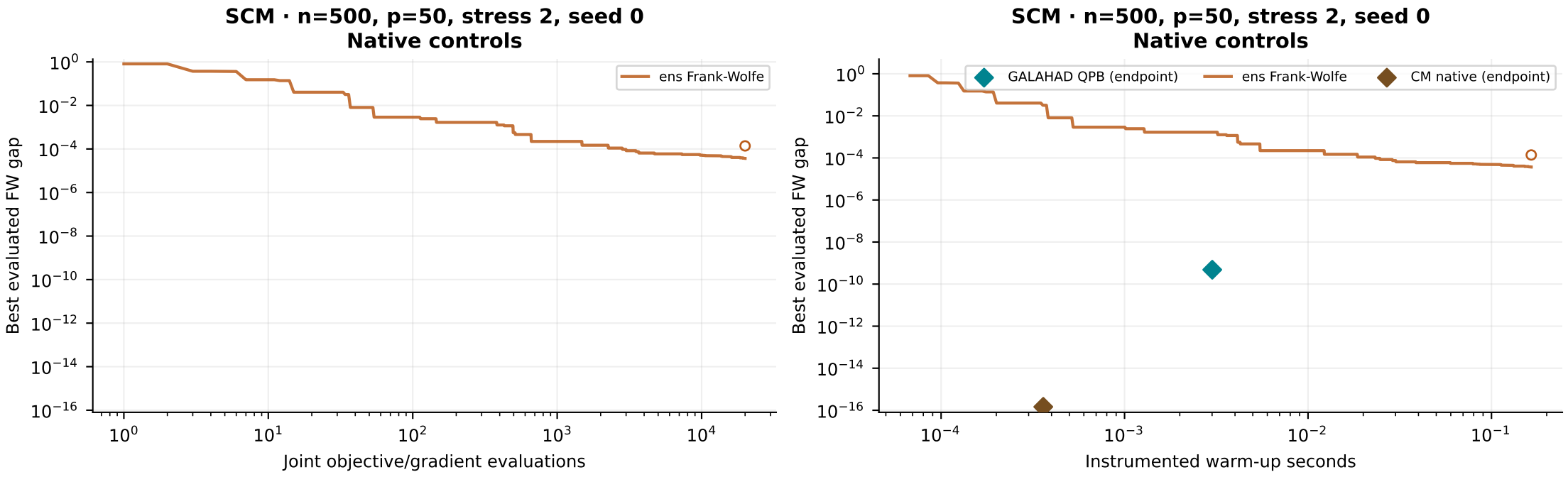

SCM · n=100, p=12, stress 2, seed 1
Native controls
ens Frank-Wolfe
Best evaluated FW gap
Joint objective/gradient evaluations
SCM · n=100, p=12, stress 2, seed 1
Native controls
CM native (endpoint)
GALAHAD QPB (endpoint)
ens Frank-Wolfe
Best evaluated FW gap
Instrumented warm-up seconds

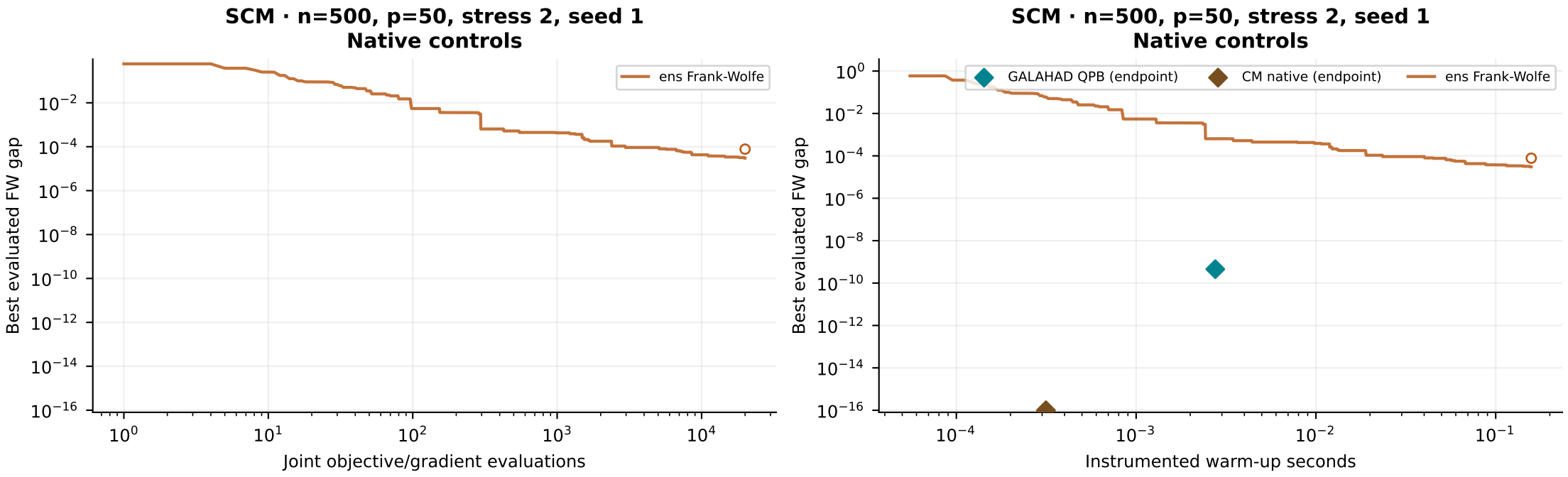

SCM · n=500, p=50, stress 0, seed 0
Native controls
ens Frank-Wolfe
Best evaluated FW gap
Joint objective/gradient evaluations
SCM · n=500, p=50, stress 0, seed 0
Native controls
ens Frank-Wolfe
CM native (endpoint)
GALAHAD QPB (endpoint)
Best evaluated FW gap
Instrumented warm-up seconds


SCM · n=500, p=50, stress 0, seed 1
Native controls
ens Frank-Wolfe
Best evaluated FW gap
Joint objective/gradient evaluations
SCM · n=500, p=50, stress 0, seed 1
Native controls
ens Frank-Wolfe
CM native (endpoint)
GALAHAD QPB (endpoint)
Best evaluated FW gap
Instrumented warm-up seconds


SCM · n=500, p=50, stress 1, seed 0
Native controls
ens Frank-Wolfe
Best evaluated FW gap
Joint objective/gradient evaluations
SCM · n=500, p=50, stress 1, seed 0
Native controls
GALAHAD QPB (endpoint)
ens Frank-Wolfe
CM native (endpoint)
Best evaluated FW gap
Instrumented warm-up seconds


SCM · n=500, p=50, stress 1, seed 1
Native controls
Best evaluated FW gap
Joint objective/gradient evaluations
ens Frank-Wolfe
SCM · n=500, p=50, stress 1, seed 1
Native controls
Best evaluated FW gap
Instrumented warm-up seconds
GALAHAD QPB (endpoint)
ens Frank-Wolfe
CM native (endpoint)


SCM · n=500, p=50, stress 2, seed 0
Native controls
ens Frank-Wolfe
Best evaluated FW gap
Joint objective/gradient evaluations
SCM · n=500, p=50, stress 2, seed 0
Native controls
GALAHAD QPB (endpoint)
ens Frank-Wolfe
CM native (endpoint)
Best evaluated FW gap
Instrumented warm-up seconds


SCM · n=500, p=50, stress 2, seed 1
Native controls
ens Frank-Wolfe
Best evaluated FW gap
Joint objective/gradient evaluations
SCM · n=500, p=50, stress 2, seed 1
Native controls
GALAHAD QPB (endpoint)
CM native (endpoint)
ens Frank-Wolfe
Best evaluated FW gap
Instrumented warm-up seconds