No\_up | NLLA No\_up(#0): [3.7037, 4.0327, 0.1685, 0.1818, 0.0002742, 6.822e-25, 0.0092, 0.0777, 0.0809, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data alpha\_fit 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)

(0, 3)

Time

-0.0004

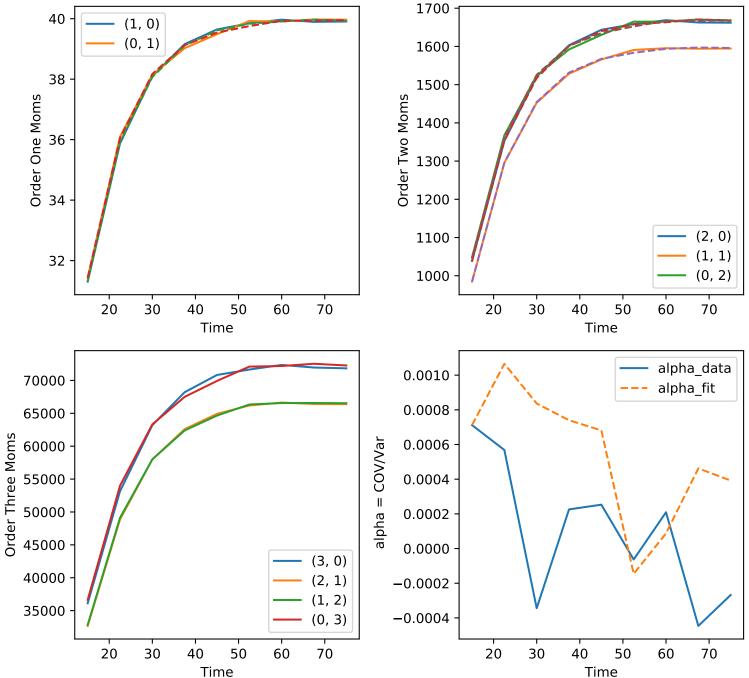
Time

No\_up | NLLA No\_up(#1): [3.5704, 4.0016, 0.1520, 0.2149, 0.0002664, 1.771e-15, 0.0000, 0.0733, 0.0983, 0.0164] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0005 Order Three Moms alpha = COV/Var0.0000 -0.0005(3, 0)(2, 1)-0.0010alpha\_data (1, 2)(0, 3)alpha fit -0.0015

Time

Time

No\_up | NLLA No\_up(#2): [3.1762, 4.1889, 0.1169, 0.2414, 0.0006639, 2.93e-16, 0.0000, 0.0639, 0.1082, 0.0283] 1700 40 (1, 0)(0, 1)1600



No up | NLLA No up(#3): [4.0710, 4.1208, 0.1903, 0.1849, 1.46e-16, 3.249e-16, 0.0038, 0.0849, 0.0817, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha\_data 0.0010 alpha\_fit 0.0008 alpha = COV/Var0.0006 0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)-0.0004(0, 3)

Time

Order Three Moms

Time

No\_up | NLLA No\_up(#4): [4.2278, 4.1545, 0.1936, 0.1875, 2.589e-15, 5.402e-19, 0.0012, 0.0865, 0.0832, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0006 alpha fit 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)-0.0006(1, 2)(0, 3)-0.0008

Time

Time

No\_up | NLLA No\_up(#5): [4.1921, 4.1510, 0.1920, 0.1970, 6.949e-14, 9.376e-14, 0.0000, 0.0870, 0.0890, 0.0043] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 alpha data 0.0002 alpha fit 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)

-0.0004

Time

Time

No\_up | NLLA No\_up(#6): [3.9731, 3.9952, 0.1827, 0.1962, 4.551e-16, 2.005e-13, 0.0000, 0.0834, 0.0898, 0.0066] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 Order Three Moms alpha = COV/Var0.0005 alpha data alpha fit 0.0000 (3, 0)-0.0005(2, 1)(1, 2)(0, 3)-0.0010

Time

Time

No\_up | NLLA No\_up(#7): [4.0999, 3.9743, 0.1912, 0.1799, 8.082e-20, 6.615e-17, 0.0020, 0.0865, 0.0804, 0.0000] (1, 0)(0, 1)Order Two Moms 1300 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time alpha\_data 0.00100 alpha\_fit 0.00075 **Order Three Moms** alpha = COV/Var 0.00050 0.00025 0.00000 (3, 0)-0.00025(2, 1)(1, 2)-0.00050(0, 3)

Time

Time

No up | NLLA No up(#8): [4.1262, 3.9680, 0.1919, 0.1798, 1.072e-15, 5.042e-19, 0.0026, 0.0859, 0.0806, 0.0000] (1, 0) (0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0012 alpha data alpha\_fit 0.0010 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 0.0002 (3, 0)0.0000 (2, 1)(1, 2)-0.0002(0, 3)

Time

Time

No\_up | NLLA No\_up(#9): [4.1252, 3.8854, 0.1929, 0.1771, 3.278e-21, 2.691e-19, 0.0016, 0.0880, 0.0798, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha\_data 0.0008 alpha\_fit 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)-0.0006(1, 2)(0, 3)-0.0008

Time

Time

No\_up | NLLA No\_up(#10): [4.0611, 4.1727, 0.1863, 0.1972, 2.211e-12, 1.077e-20, 0.0000, 0.0847, 0.0882, 0.0046] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 **Order Three Moms** alpha = COV/Var0.0004 0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004alpha data (1, 2)(0, 3)alpha fit -0.0006

Time

Time

No\_up | NLLA No\_up(#11): [4.0069, 4.0125, 0.1855, 0.1830, 1.393e-17, 1.758e-16, 0.0018, 0.0833, 0.0824, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 Order Three Moms 0.0000 = COV/Var-0.0002-0.0004(3, 0)-0.0006(2, 1)(1, 2)alpha data (0, 3)alpha fit -0.0008

Time

Time

No\_up | NLLA No\_up(#12): [4.0932, 4.0080, 0.1927, 0.1816, 5.149e-17, 1.546e-15, 0.0025, 0.0876, 0.0811, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data alpha fit 0.0006 **Order Three Moms** 0.0004 alpha = COV/Var 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)-0.0004

Time

Time

No\_up | NLLA No\_up(#13): [3.5255, 3.9319, 0.1388, 0.2182, 0.0004841, 3.972e-15, 0.0000, 0.0697, 0.0979, 0.0217] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data alpha\_fit 0.0010 0.0008 **Order Three Moms** alpha = COV/Var0.0006 0.0004 0.0002 (3, 0)(2, 1)(1, 2)0.0000

(0, 3)

Time

Time

No\_up | NLLA No\_up(#14):  $[4.1671, 3.9217, 0.1925, 0.1947, \overline{2}.147e-14, 1.\overline{2}16e-14, 0.0000, 0.0880, 0.0897, 0.0068]$ (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 0.0010 **Order Three Moms** alpha = COV/Var0.0005 alpha\_data alpha fit 0.0000 (3, 0)(2, 1)-0.0005(1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#15): [4.2650, 4.1771, 0.2038, 0.1903, 7.48e-18, 1.826e-15, 0.0049, 0.0920, 0.0857, 0.0000] (1, 0)(0, 1) Order January 1300 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)alpha data -0.0004(0, 3)alpha fit

Time

Order Three Moms

Time

No\_up | NLLA No\_up(#16):  $[4.1825, 3.9622, 0.1925, 0.1763, \overline{1}.413e-15, 1.9\overline{2}7e-16, 0.0015, 0.0862, 0.0771, 0.0000]$ (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha\_data alpha\_fit 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 (3, 0)0.0000 (2, 1)(1, 2)(0, 3)-0.0002

Time

Time

No\_up | NLLA No\_up(#17): [3.9634, 3.9707, 0.1836, 0.1821, 1.44e-09, 2.135e-08, 0.0017, 0.0830, 0.0825, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0006 alpha fit 0.0004 0.0002 **Order Three Moms** COV/Var 0.0000 -0.0002alpha -0.0004(3, 0)-0.0006(2, 1)(1, 2)-0.0008(0, 3)

Time

Time

No\_up | NLLA No\_up(#18): [4.0787, 3.9717, 0.1927, 0.1822, Ī.918e-13, 3.954e-14, 0.0033, 0.0874, 0.0830, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)alpha\_data -0.0004(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#19): [2.7662, 4.0471, 0.0861, 0.2629, 0.000991, 4.017e-22, 0.0000, 0.0564, 0.1190, 0.0424] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 0.0010 Order Three Moms alpha = COV/Var0.0005 alpha\_data alpha\_fit 0.0000 (3, 0)(2, 1)-0.0005(1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#20): [4.1334, 4.0331, 0.1926, 0.1841, 2.052e-16, 1.575e-17, 0.0026, 0.0863, 0.0829, 0.0000] 1700 40 (1, 0)(0, 1) 1600 38 1500 0 1400 ms 1300 ms 1300 ms Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)50 60 70 20 40 50 20 30 40 30 60 70 Time Time 0.00075 alpha data 70000 alpha fit 0.00050 65000 **Order Three Moms** 60000 = COV/Var 0.00025 55000 0.00000 50000 alpha -0.00025 45000 (3, 0)-0.0005040000 (2, 1)(1, 2)-0.00075 -35000 (0, 3)

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Time

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Time

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No\_up | NLLA No\_up(#21): [4.0583, 3.9797, 0.1874, 0.1822, 9.078e-18, 2.545e-22, 0.0023, 0.0836, 0.0825, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var 0.0004 0.0002 alpha data alpha fit 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)-0.0006

(0, 3)

Time

Time

No\_up | NLLA No\_up(#22): [4.1371, 4.0533, 0.1894, 0.1905, 8.357e-14, 9.491e-17, 0.0000, 0.0858, 0.0857, 0.0032] 1700 40 (1, 0)(0, 1) 1600 38 1500 Order One Moms Order Two Moms 1400 36 1300 1200 34 (2, 0)1100 (1, 1)32 (0, 2)1000 50 50 20 30 40 60 70 20 30 40 70 60 Time Time 0.0006 70000 0.0005 65000 0.0004 Order Three Moms 60000 alpha = COV/Var 0.0003 55000 0.0002 50000 0.0001 45000 (3, 0)0.0000 40000 (2, 1)-0.0001(1, 2)alpha\_data 35000

(0, 3)

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Time

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-0.0002

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Time

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alpha fit

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No\_up | NLLA No\_up(#23): [4.0290, 3.9874, 0.1795, 0.1965, 6.418e-05, 1.523e-35, 0.0000, 0.0809, 0.0892, 0.0074] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var 0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)alpha\_data (1, 2)-0.0004

(0, 3)

Time

-0.0006

Time

alpha\_fit

No up | NLLA No up(#24): [4.1523, 3.9935, 0.1935, 0.1813, Ī.316e-24, 5.011e-17, 0.0021, 0.0872, 0.0813, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1400 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 20 30 40 50 60 70 20 30 40 50 60 70 Time Time 0.00125 alpha\_data 70000 alpha\_fit 0.00100 65000 0.00075 COV/Var 60000 0.00050 55000 alpha = 0.00025 50000 0.00000 45000 (3, 0)-0.0002540000 (2, 1)(1, 2)35000 -0.00050(0, 3)

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Time

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Order Three Moms

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Time

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No\_up | NLLA No\_up(#25): [4.0669, 4.0184, 0.2031, 0.1857, 9.399e-05, 1.616e-09, 0.0102, 0.0949, 0.0850, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0012 0.0010 0.0008 **Order Three Moms** alpha = COV/Var0.0006 alpha\_data 0.0004 alpha fit 0.0002 (3, 0)0.0000 (2, 1)-0.0002(1, 2)(0, 3)-0.0004

Time

Time

No\_up | NLLA No\_up(#26): [4.0424, 4.2524, 0.2026, 0.2060, 7.134e-05, 2.044e-08, 0.0145, 0.0898, 0.0989, 0.0001] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0020 Order Three Moms 0.0015 alpha = COV/Varalpha\_data 0.0010 alpha\_fit 0.0005 (3, 0)(2, 1)(1, 2)0.0000

(0, 3)

Time

Time

No\_up | NLLA No\_up(#27): [3.9851, 4.0900, 0.1883, 0.1850, 1.636e-17, 2.764e-20, 0.0048, 0.0840, 0.0827, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 0.0002 (3, 0)0.0000 (2, 1)alpha data (1, 2)-0.0002(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#28): [2.8669, 3.9862, 0.0933, 0.2530, 0.0009484, 4.123e-16, 0.0000, 0.0593, 0.1139, 0.0395] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 alpha data alpha fit 0.0010 **Order Three Moms** alpha = COV/Var0.0005 0.0000 (3, 0)(2, 1)(1, 2)-0.0005(0, 3)

Time

Time

No\_up | NLLA No\_up(#29): [4.0739, 4.1576, 0.1836, 0.1930, 2.306e-15, 3.032e-15, 0.0000, 0.0817, 0.0868, 0.0018] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)30 40 50 60 70 20 30 40 50 60 70 20 Time Time 0.00050 70000 65000 0.00025 **Order Three Moms** 60000 COV/Var 0.00000 55000 -0.0002550000 alpha -0.0005045000 (3, 0)-0.0007540000 (2, 1)alpha data (1, 2)-0.0010035000 alpha fit (0, 3)

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Time

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Time

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No\_up | NLLA No\_up(#30): [4.0279, 4.0258, 0.1955, 0.2159, 5.191e-08, 1.147e-08, 0.0000, 0.0943, 0.1011, 0.0138] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0025 0.0020 Order Three Moms alpha = COV/Var 0.0015 alpha data 0.0010 alpha fit 0.0005 (3, 0)(2, 1)0.0000 (1, 2)

(0, 3)

Time

-0.0005

Time

No up | NLLA No up(#31): [3.9863, 4.1300, 0.1886, 0.1896, 4.761e-16, 2.146e-17, 0.0038, 0.0850, 0.0863, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1400 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 20 30 40 50 60 70 20 30 40 50 70 60 Time Time 0.00100 alpha data 70000 alpha\_fit 0.00075 65000 Order Three Moms 0.00050 COV/Var 60000 55000 0.00025 alpha = 50000 0.00000 45000 -0.00025(3, 0)40000 (2, 1)-0.00050(1, 2)35000 (0, 3)-0.00075

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Time

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Time

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No\_up | NLLA No\_up(#32): [4.1655, 3.9834, 0.2010, 0.1822, 7.836e-17, 1.848e-16, 0.0055, 0.0912, 0.0827, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0005 Order Three Moms alpha = COV/Var0.0000 (3, 0)-0.0005(2, 1)alpha data (1, 2)

(0, 3)

Time

-0.0010

Time

alpha fit

No\_up | NLLA No\_up(#33): [3.8783, 3.9285, 0.1775, 0.1885, 3.928e-16, 8.634e-18, 0.0000, 0.0808, 0.0849, 0.0052] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)alpha data (1, 2)-0.0004(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#34): [3.9732, 3.9610, 0.2034, 0.1845, 1.741e-17, 1.54e-17, 0.0102, 0.0938, 0.0855, 0.0000] (1, 0)(0, 1)Order J Order J MOM 1400 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0020 0.0015 Order Three Moms alpha = COV/Var0.0010 0.0005 0.0000 (3, 0)(2, 1)alpha data (1, 2)-0.0005(0, 3)alpha fit 

Time

Time

No\_up | NLLA No\_up(#35): [4.0427, 3.9435, 0.1834, 0.1890, 2.39e-13, 6.115e-15, 0.0000, 0.0821, 0.0865, 0.0036] 40 (1, 0)(0, 1)1600 38 1500 0rder Two Moms 1300 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 50 50 20 30 40 60 70 20 30 40 60 70 Time Time 0.0008 70000 0.0006 65000 0.0004 60000 alpha = COV/Var0.0002 55000 0.0000 50000 -0.000245000 -0.0004(3, 0)40000 (2, 1)-0.0006alpha data (1, 2)35000 (0, 3)alpha fit

-0.0008

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Time

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**Order Three Moms** 

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Time

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No\_up | NLLA No\_up(#36): [4.0728, 3.9986, 0.1908, 0.1825, 1.144e-15, 2.702e-14, 0.0030, 0.0858, 0.0823, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 0.0002 **Order Three Moms** COV/Var 0.0000 alpha : -0.0002-0.0004(3, 0)(2, 1)-0.0006alpha\_data (1, 2)(0, 3)alpha fit

-0.0008

Time

Time

No\_up | NLLA No\_up(#37): [3.7832, 4.0493, 0.1617, 0.2075, 0.0002689, 1.179e-14, 0.0000, 0.0777, 0.0935, 0.0126] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 alpha data alpha fit 0.0008 0.0006 Order Three Moms alpha = COV/Var 0.0004 0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)(0, 3)-0.0006

Time

Time

No\_up | NLLA No\_up(#38): [3.0077, 3.9406, 0.1068, 0.2349, 0.0006873, 3.12e-15, 0.0000, 0.0593, 0.1052, 0.0311] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 60 70 Time Time 0.00150 alpha data 70000 alpha fit 0.00125 65000 0.00100 Order Three Moms COV/Var 60000 0.00075 55000 alpha = 0.00050 50000 0.00025 45000 (3, 0)40000 0.00000 (2, 1)(1, 2)

-0.00025

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Time

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(0, 3)

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Time

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No\_up | NLLA No\_up(#39):  $[3.9945, 3.9552, 0.1827, 0.1820, \overline{1.535}e-16, 1.\overline{082}e-16, 0.0000, 0.0826, 0.0819, 0.0011]$ 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 20 30 40 50 60 70 20 30 40 50 60 70 Time Time 0.00075 alpha\_data 70000 alpha\_fit 0.00050 65000 0.00025 Order Three Moms COV/Var 60000 0.00000 55000 alpha = -0.0002550000 45000 -0.00050(3, 0)40000 (2, 1)-0.00075(1, 2)35000 (0, 3)-0.00100

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Time

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Time

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No\_up | NLLA No\_up(#40): [3.7534, 4.0754, 0.1577, 0.2052, 0.0002107, 4.898e-13, 0.0000, 0.0724, 0.0925, 0.0108] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha data alpha\_fit 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)-0.0006(1, 2)

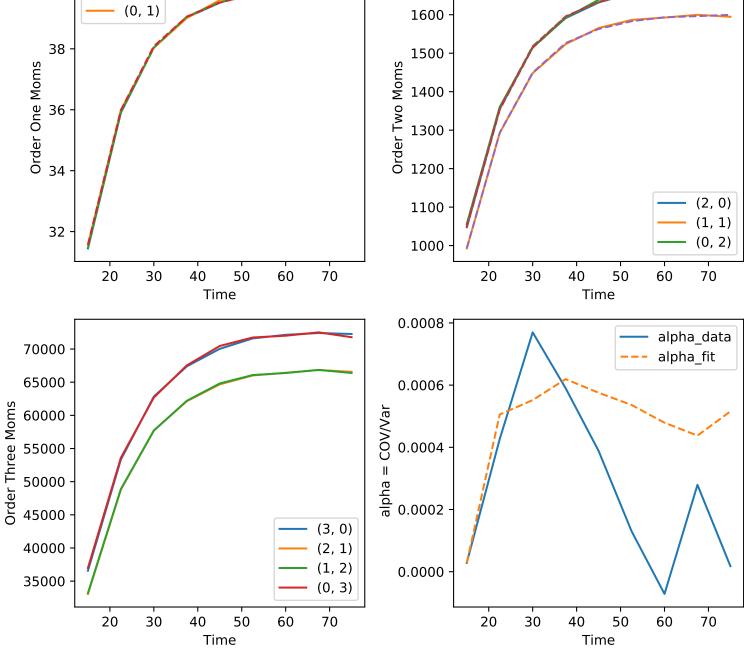
(0, 3)

Time

-0.0008

Time

No\_up | NLLA No\_up(#41): [3.9465, 3.9731, 0.1782, 0.1833, 2.214e-16, 1.752e-15, 0.0000, 0.0795, 0.0812, 0.0027] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha\_data alpha\_fit 0.0006



No\_up | NLLA No\_up(#42): [3.6288, 4.1642, 0.1504, 0.2152, 0.000351, 1.046e-15, 0.0000, 0.0735, 0.0951, 0.0157] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004alpha data (1, 2)(0, 3)alpha fit

-0.0006

Time

Time

No\_up | NLLA No\_up(#43): [4.0274, 3.9764, 0.1832, 0.1836, 7.034e-16, 8.067e-20, 0.0000, 0.0823, 0.0831, 0.0009] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0008 alpha fit 0.0006 **Order Three Moms** alpha = COV/Var 0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)

-0.0004

Time

Time

No\_up | NLLA No\_up(#44): [4.0550, 3.9922, 0.2049, 0.1854, 1.011e-18, 8.09e-15, 0.0093, 0.0939, 0.0853, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 alpha = COV/Var0.0010 alpha\_data alpha fit 0.0005 (3, 0)0.0000 (2, 1)(1, 2)(0, 3)

-0.0005

Time

**Order Three Moms** 

Time

No\_up | NLLA No\_up(#45): [4.2125, 3.9729, 0.1934, 0.1875, 8.267e-16, 2.456e-14, 0.0000, 0.0877, 0.0847, 0.0034] 1700 40 (1, 0)(0, 1) 1600 38 1500 Order One Moms Order Two Moms 1400 36 1300 1200 34 (2, 0)1100 (1, 1)32 1000 (0, 2)40 50 60 70 20 30 40 50 20 30 60 70 Time Time 0.0006 70000 0.0004 65000 Order Three Moms 60000 COV/Var 0.0002 55000 0.0000 alpha = 50000 -0.000245000 -0.0004(3, 0)40000 (2, 1)-0.0006alpha data (1, 2)

(0, 3)

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Time

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-0.0008

alpha fit

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Time

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35000

No up | NLLA No up(#46): [3.9954, 4.0764, 0.1908, 0.1861, 6.194e-05, 1.361e-13, 0.0058, 0.0875, 0.0840, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 0 1400 ms 1300 ms 1300 ms 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)30 40 50 60 70 20 30 40 50 20 60 70 Time Time 70000 0.00075 65000 0.00050 **Order Three Moms** 60000 = COV/Var0.00025 55000 0.00000 50000 alpha -0.0002545000 (3, 0)-0.0005040000 (2, 1)alpha data (1, 2)-0.0007535000 alpha fit (0, 3)

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Time

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Time

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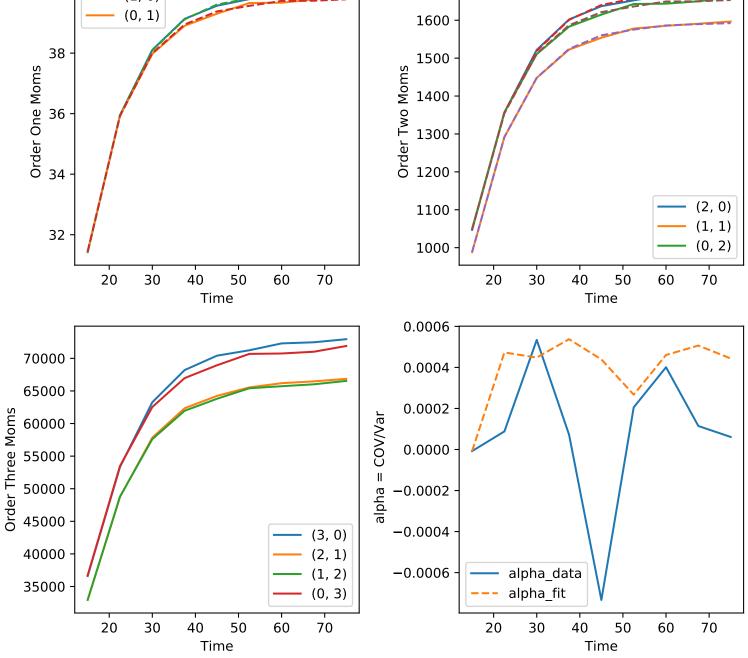
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No\_up | NLLA No\_up(#47): [3.9432, 3.9772, 0.1774, 0.1859, 5.083e-17, 2.473e-18, 0.0000, 0.0789, 0.0838, 0.0023] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.00100 alpha fit 0.00075 **Order Three Moms** alpha = COV/Var0.00050 0.00025 0.00000 (3, 0)-0.00025(2, 1)(1, 2)-0.00050(0, 3)

Time

Time

No up | NLLA No up(#48): [3.9863, 4.0835, 0.1812, 0.1898, Ī.803e-15, 7.949e-15, 0.0000, 0.0816, 0.0846, 0.0025] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time



No up | NLLA No up(#49): [3.9437, 4.0619, 0.1780, 0.1845, 8.912e-21, 5.744e-16, 0.0000, 0.0794, 0.0828, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0000 -0.0002 Order Three Moms COV/Var alpha = -0.0004(3, 0)-0.0006(2, 1)alpha data (1, 2)(0, 3)alpha fit -0.0008

Time

Time

No\_up | NLLA No\_up(#50): [4.0141, 4.0975, 0.1813, 0.1900, 1.167e-15, 5.69e-16, 0.0000, 0.0809, 0.0850, 0.0024] 1700 40 (1, 0)(0, 1)1600 38 1500 Order One Moms Order Two Moms 1400 36 1300 1200 34 (2, 0)1100 (1, 1)32 (0, 2)1000 20 30 40 50 60 70 20 30 40 50 70 60 Time Time 0.00075 70000 0.00050 65000 0.00025 COV/Var 60000 0.00000 55000 -0.0002550000 alpha -0.0005045000 (3, 0)-0.0007540000 (2, 1)-0.00100alpha data (1, 2)35000 alpha fit (0, 3)-0.00125

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Time

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Order Three Moms

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Time

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No\_up | NLLA No\_up(#51): [4.0237, 3.9541, 0.1924, 0.1803, 1.13e-16, 4.174e-17, 0.0044, 0.0872, 0.0812, 0.0000] 40 (1, 0)(0, 1)1600 38 1500 Order J Mom J 1300 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 20 30 40 50 60 70 20 30 40 50 60 70 Time Time 70000 0.00075 65000 0.00050 60000 COV/Var 0.00025 55000 0.00000 alpha = 50000 -0.0002545000 -0.00050(3, 0)40000 (2, 1)-0.00075alpha data (1, 2)35000 alpha fit (0, 3)-0.0010020 40 50 20 30 40 30 60 70 50 60 70

Time

Time

**Order Three Moms** 

No\_up | NLLA No\_up(#52): [4.0681, 3.9650, 0.1927, 0.1805, 1.176e-17, 2.073e-14, 0.0039, 0.0870, 0.0813, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 **Order Three Moms** alpha = COV/Var0.0006 0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002alpha data (1, 2)(0, 3)alpha fit -0.0004

Time

Time

No\_up | NLLA No\_up(#53): [4.1547, 3.8120, 0.1940, 0.1729, Ī.611e-15, 3.699e-14, 0.0028, 0.0868, 0.0776, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms Order One Moms 1400 36 1300 34 1200 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 60 70 Time Time 0.00100 alpha data 70000 alpha\_fit 0.00075 65000 0.00050 Order Three Moms COV/Var 60000 0.00025 55000 alpha = 0.00000 50000 -0.0002545000 (3, 0)40000 -0.00050(2, 1)(1, 2)35000 -0.00075(0, 3)

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Time

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Time

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No\_up | NLLA No\_up(#54): [4.1086, 3.8350, 0.2041, 0.1772, 1.051e-17, 3.791e-14, 0.0080, 0.0932, 0.0812, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 0.0010 **Order Three Moms** alpha = COV/Var0.0005 0.0000 (3, 0)(2, 1)(1, 2)alpha data (0, 3)alpha fit -0.0005

Time

Time

No\_up | NLLA No\_up(#55): [4.0666, 3.9256, 0.1947, 0.1800, 4.554e-23, 2.258e-15, 0.0045, 0.0882, 0.0818, 0.0000] (1, 0)(0, 1)0 January 1300 Jan Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 (3, 0)0.0000 (2, 1)(1, 2)alpha\_data -0.0002(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#56): [4.0349, 3.8047, 0.1795, 0.1711, Ī.467e-13, 2.797e-17, 0.0000, 0.0785, 0.0761, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 04 L Mom supposed 1400 supposed 1400 supposed 1300 supposed 1400 supposed 1500 suppose Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)30 40 50 60 70 20 30 40 50 20 60 70 Time Time 75000 0.00075 alpha data 70000 alpha fit 0.00050 65000 Order Three Moms 0.00025 COV/Var 60000 0.00000 55000 alpha = 50000 -0.00025 45000 (3, 0)-0.0005040000 (2, 1)-0.00075 (1, 2)35000 (0, 3)-0.0010020

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Time

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Time

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No\_up | NLLA No\_up(#57): [3.9160, 3.9660, 0.1813, 0.1803, 6.582e-18, 1.076e-12, 0.0022, 0.0813, 0.0811, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha data alpha\_fit 0.0006 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 -0.0002 (3, 0)(2, 1)-0.0004(1, 2)

(0, 3)

Time

-0.0006

Time

No up | NLLA No up(#58): [4.0455, 3.8846, 0.1890, 0.1792, 2.733e-16, 2.416e-15, 0.0025, 0.0853, 0.0819, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)alpha data (1, 2)-0.0006

(0, 3)

Time

alpha fit

Time

No\_up | NLLA No\_up(#59): [4.1096, 3.9031, 0.1989, 0.1785, 5.55e-16, 1.047e-13, 0.0060, 0.0899, 0.0808, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.00100 0.00075 Order Three Moms COV/Var 0.00050 0.00025 alpha = 0.00000 (3, 0)-0.00025(2, 1)-0.00050alpha data (1, 2)alpha fit (0, 3)

-0.00075

Time

Time

No\_up | NLLA No\_up(#60): [2.9858, 4.0548, 0.1028, 0.2476, 0.0007743, 4.455e-14, 0.0000, 0.0589, 0.1123, 0.0334] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 0.0010 **Order Three Moms** alpha = COV/Var0.0005 0.0000 (3, 0)(2, 1)alpha data (1, 2)-0.0005(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#61): [3.9641, 4.0198, 0.1853, 0.1844, 2.423e-16, 4.337e-17, 0.0037, 0.0825, 0.0838, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0005 Order Three Moms alpha = COV/Var0.0000 -0.0005(3, 0)(2, 1)-0.0010alpha\_data (1, 2)(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#62): [4.0938, 3.9861, 0.1864, 0.1899, 3.037e-15, 5.113e-15, 0.0000, 0.0838, 0.0858, 0.0044] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 alpha data alpha fit 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)

(0, 3)

Time

-0.0004

Time

No\_up | NLLA No\_up(#63): [4.0718, 3.4573, 0.2175, 0.1412, 7.364e-09, 0.0003864, 0.0179, 0.0977, 0.0702, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 alpha\_data alpha\_fit 0.0008 0.0006 **Order Three Moms** alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)-0.0004

Time

Time

No\_up | NLLA No\_up(#64): [4.0493, 3.8788, 0.1788, 0.1898, 7.707e-05, 1.019e-20, 0.0000, 0.0805, 0.0855, 0.0071] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 **Order Three Moms** 0.0004 alpha = COV/Var 0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)(1, 2)alpha data -0.0006(0, 3)alpha fit

-0.0008

Time

Time

No\_up | NLLA No\_up(#65): [3.9864, 3.9258, 0.1819, 0.1907, 3.94e-12, 1.778e-14, 0.0000, 0.0820, 0.0860, 0.0064] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0012 0.0010 **Order Three Moms** alpha = COV/Var0.0008 0.0006 0.0004 0.0002 (3, 0)(2, 1)0.0000 alpha data (1, 2)(0, 3)alpha fit

-0.0002

Time

Time

No\_up | NLLA No\_up(#66): [3.9601, 3.9243, 0.1810, 0.1812, 3.196e-15, 2.672e-15, 0.0000, 0.0821, 0.0808, 0.0022] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0012 alpha\_data alpha\_fit 0.0010 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)-0.0004

Time

Time

No\_up | NLLA No\_up(#67): [3.9252, 3.6846, 0.1912, 0.1620, 3.637e-09, 0.0001319, 0.0071, 0.0862, 0.0752, 0.0000] (1, 0) (0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 0.0002 **Order Three Moms** COV/Var 0.0000 alpha data alpha\_fit alpha = -0.0002-0.0004(3, 0)(2, 1)-0.0006(1, 2)(0, 3)-0.0008

Time

Time

No up | NLLA No up(#68): [4.2626, 3.8364, 0.1984, 0.1751, 2.455e-16, 4.342e-17, 0.0026, 0.0889, 0.0793, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 60 70 20 40 50 20 30 40 50 30 60 70 Time Time alpha data 0.00100 70000 alpha fit 65000 0.00075 Order Three Moms 60000 alpha = COV/Var0.00050 55000 0.00025 50000 0.00000 45000 (3, 0)-0.0002540000 (2, 1)(1, 2)-0.0005035000

(0, 3)

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Time

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Time

No\_up | NLLA No\_up(#69): [3.9442, 3.9871, 0.1877, 0.1817, 5.604e-17, 6.745e-16, 0.0051, 0.0839, 0.0820, 0.0000] (1, 0)(0, 1)Order Two Moms 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.00100 0.00075 Order Three Moms alpha = COV/Var0.00050 0.00025 0.00000 (3, 0)-0.00025(2, 1)alpha data (1, 2)-0.00050alpha fit (0, 3)

Time

Time

No\_up | NLLA No\_up(#70): [3.9457, 3.9227, 0.1786, 0.1824, 1.821e-16, 2.822e-15, 0.0000, 0.0798, 0.0820, 0.0024] 1700 40 (1, 0)(0, 1)1600 38 1500 04 Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 20 30 40 50 60 70 20 30 40 50 70 60 Time Time 75000 0.00075 70000 0.00050 65000 0.00025 Order Three Moms COV/Var 60000 0.00000 55000 alpha = -0.0002550000 45000 -0.00050(3, 0)40000 (2, 1)-0.00075alpha data (1, 2)35000 alpha fit (0, 3)-0.00100

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Time

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Time

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No\_up | NLLA No\_up(#71): [4.0058, 4.0260, 0.1806, 0.1884, 6.194e-16, 9.797e-17, 0.0000, 0.0804, 0.0847, 0.0030] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002 (3, 0)-0.0004(2, 1)(1, 2)alpha data -0.0006(0, 3)alpha fit 

Time

Time

No\_up | NLLA No\_up(#72): [3.7740, 3.9869, 0.1639, 0.2071, 0.0002199, 8.375e-19, 0.0000, 0.0782, 0.0938, 0.0135] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 alpha\_data alpha\_fit 0.0010 Order Three Moms alpha = COV/Var0.0005 0.0000 (3, 0)(2, 1)-0.0005

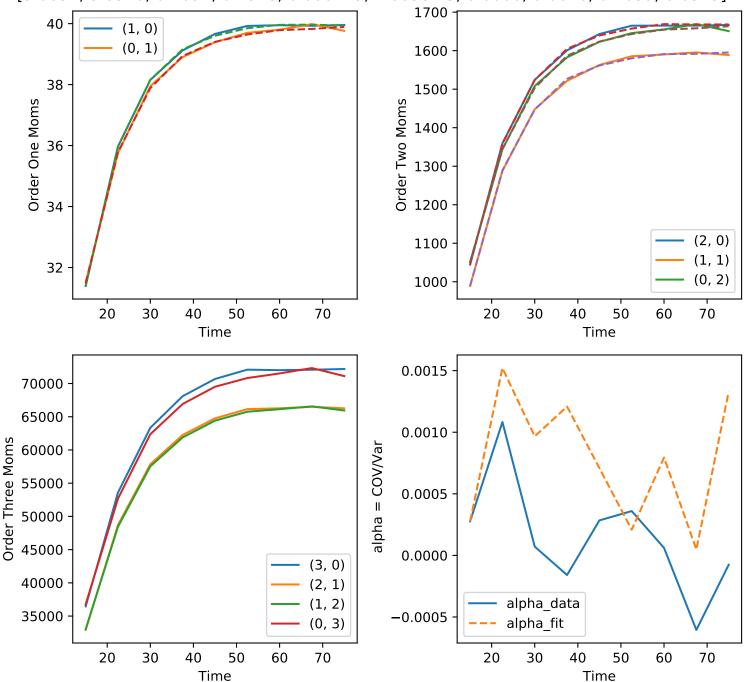
(1, 2)

(0, 3)

Time

Time

No\_up | NLLA No\_up(#73): [3.0852, 3.8376, 0.1097, 0.2328, 0.000729, 7.663e-15, 0.0000, 0.0616, 0.1039, 0.0325] 1700 40 (1, 0)



No\_up | NLLA No\_up(#74): [4.1302, 3.9437, 0.1922, 0.1790, 7.673e-17, 1.153e-15, 0.0015, 0.0871, 0.0803, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 Order Three Moms COV/Var 0.0000 -0.0002alpha -0.0004(3, 0)(2, 1)-0.0006(1, 2)alpha data 

(0, 3)

Time

-0.0008

Time

alpha fit

No up | NLLA No up(#75): [4.1418, 4.0063, 0.1895, 0.1838, Ī.478e-14, 5.Ī11e-22, 0.0000, 0.0858, 0.0811, 0.0025] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 (3, 0)-0.0002(2, 1)alpha\_data (1, 2)

(0, 3)

Time

-0.0004

alpha fit

Time

No\_up | NLLA No\_up(#76): [3.9660, 3.7093, 0.1917, 0.1698, 9.18e-09, 0.0002199, 0.0057, 0.0868, 0.0797, 0.0058] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0005 0.0000 **Order Three Moms** alpha = COV/Var-0.0005-0.0010(3, 0)(2, 1)(1, 2)alpha\_data -0.0015(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#77): [3.9610, 3.9781, 0.1818, 0.1875, 2.769e-17, 2.952e-19, 0.0000, 0.0827, 0.0852, 0.0028] 1700 40 (1, 0)(0, 1) 1600 38 1500 Order J Mow J 1400 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1) 32 (0, 2)1000 50 50 20 30 40 60 70 20 30 40 70 60 Time Time 0.0006 70000 0.0004 65000 0.0002 **Order Three Moms** COV/Var 60000 0.0000 55000 alpha data alpha fit alpha = -0.000250000 45000 -0.0004(3, 0)40000 (2, 1)-0.0006(1, 2)

-0.0008

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Time

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(0, 3)

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Time

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35000

No\_up | NLLA No\_up(#78): [4.1634, 2.9669, 0.2409, 0.1098, 2.266e-19, 0.0006239, 0.0277, 0.1090, 0.0607, 0.0000] 1700 40 (1, 0) (0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 60 70 Time Time alpha\_data 70000 0.00100 alpha\_fit 65000 0.00075 Order Three Moms COV/Var 60000 0.00050 55000 0.00025 alpha = 50000 0.00000 45000 -0.00025(3, 0)40000 (2, 1)-0.00050(1, 2)35000 (0, 3)-0.00075

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Time

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Time

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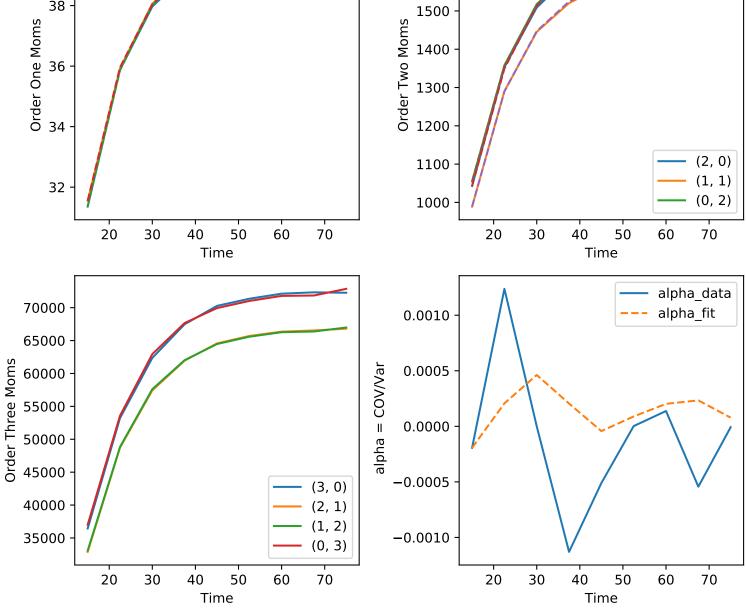
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No\_up | NLLA No\_up(#79):  $[3.9952, 4.0074, 0.1823, 0.1873, \overline{1}.142e-16, 6.\overline{987}e-16, 0.0000, 0.0824, 0.0838, 0.0035]$ (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)(1, 2)alpha data -0.0002(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#80): [3.9313, 3.9549, 0.1763, 0.1822, 7.013e-16, 7.061e-17, 0.0000, 0.0780, 0.0820, 0.0012] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)



No\_up | NLLA No\_up(#81): [3.8999, 3.9867, 0.1773, 0.1912, 2.424e-17, 1.906e-14, 0.0000, 0.0798, 0.0863, 0.0052] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)alpha data (0, 3)alpha fit -0.0004

Time

Time

No up | NLLA No up(#82):  $[3.9152, 4.1742, 0.1785, 0.1980, \overline{1.441}e-13, 1.\overline{342}e-15, 0.0000, 0.0806, 0.0893, 0.0039]$ (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 (3, 0)(2, 1)0.0000 alpha data (1, 2)

(0, 3)

Time

-0.0002

alpha fit

Time

No\_up | NLLA No\_up(#83): [3.4409, 3.9606, 0.1349, 0.2120, 0.0005243, 7.866e-07, 0.0000, 0.0695, 0.0922, 0.0207] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.00075 alpha\_fit 0.00050 **Order Three Moms** COV/Var 0.00025 0.00000 alpha = -0.00025-0.00050 (3, 0)(2, 1)-0.00075 (1, 2)(0, 3)-0.00100

Time

Time

No\_up | NLLA No\_up(#84): [4.0730, 4.1535, 0.1858, 0.1884, 4.066e-15, 1.959e-16, 0.0015, 0.0824, 0.0845, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha data alpha fit 0.0004 alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)

(0, 3)

Time

-0.0006

Time

Order Three Moms

No\_up | NLLA No\_up(#85): [3.9375, 3.9565, 0.1815, 0.1805, 3.69e-16, 7.403e-13, 0.0023, 0.0807, 0.0816, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order One Moms **Order Two Moms** 1400 36 1300 1200 34 1100 (2, 0)(1, 1)32 1000 (0, 2)50 20 30 40 50 60 70 20 30 40 60 70 Time Time 0.0008 alpha data 70000 0.0006 alpha\_fit 65000 0.0004 **Order Three Moms** 60000 COV/Var 0.0002 55000 0.0000 alpha = 50000 -0.000245000 -0.0004(3, 0)40000 (2, 1)-0.0006(1, 2)35000 (0, 3)-0.0008

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Time

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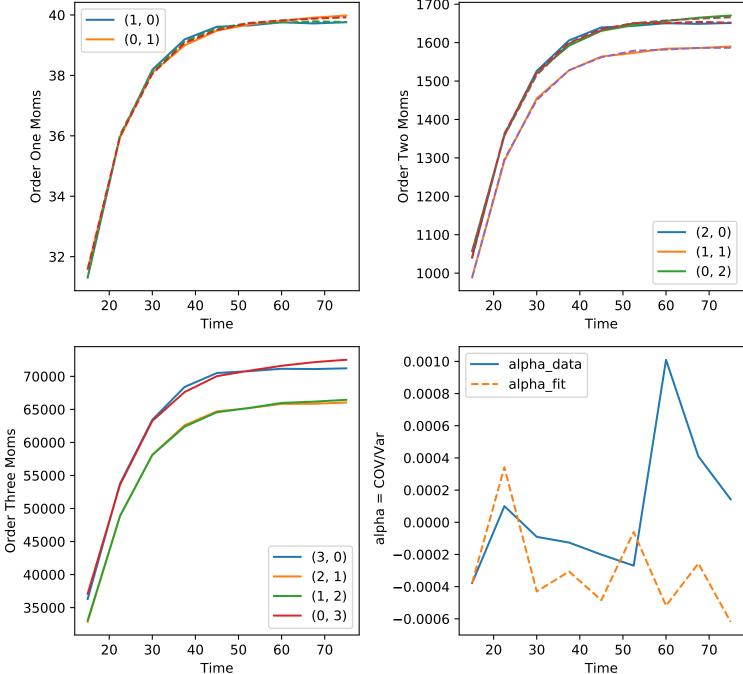
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Time

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No\_up | NLLA No\_up(#86): [3.4607, 3.9589, 0.1475, 0.2027, 0.0006196, 5.13e-19, 0.0097, 0.0757, 0.0908, 0.0129] 1700 40 (1, 0)(0, 1)1600



No\_up | NLLA No\_up(#87): [4.0928, 4.0950, 0.1841, 0.1869, 1.12e-15, 1.45e-15, 0.0000, 0.0817, 0.0833, 0.0011] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha\_data alpha\_fit 0.0005 0.0004 alpha = COV/Var0.0003 0.0002 0.0001 (3, 0)0.0000 (2, 1)(1, 2)-0.0001(0, 3)

Time

Time

**Order Three Moms** 

No\_up | NLLA No\_up(#88): [4.0667, 3.9460, 0.1875, 0.1805, 4.746e-19, 1.221e-17, 0.0029, 0.0828, 0.0819, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 alpha\_data alpha\_fit 0.0000 (3, 0)-0.0002(2, 1)(1, 2)(0, 3)

-0.0004

Time

Time

No\_up | NLLA No\_up(#89): [4.0714, 4.0306, 0.1848, 0.1875, 1.874e-12, 9.491e-18, 0.0000, 0.0828, 0.0845, 0.0022] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 **Order Three Moms** 0.0000 COV/Var -0.0002alpha = ( -0.0004(3, 0)-0.0006(2, 1)(1, 2)alpha data -0.0008(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#90): [3.8232, 4.0455, 0.1813, 0.1842, 1.002e-13, 3.263e-13, 0.0042, 0.0816, 0.0832, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002 (3, 0)(2, 1)-0.0004alpha data (1, 2)

(0, 3)

Time

-0.0006

Time

alpha fit

No\_up | NLLA No\_up(#91): [3.8884, 4.1183, 0.1690, 0.2121, 0.0002589, 8.293e-18, 0.0000, 0.0817, 0.0957, 0.0132] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha data alpha fit 0.0006 **Order Three Moms** alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)-0.0004(0, 3)

Time

Time

No\_up | NLLA No\_up(#92): [4.1134, 4.0290, 0.1868, 0.1827, 3.26e-25, 5.255e-19, 0.0002, 0.0837, 0.0820, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha\_data 0.0006 alpha\_fit 0.0004 alpha = COV/Var0.0002 0.0000 -0.0002-0.0004(3, 0)(2, 1)-0.0006(1, 2)(0, 3)

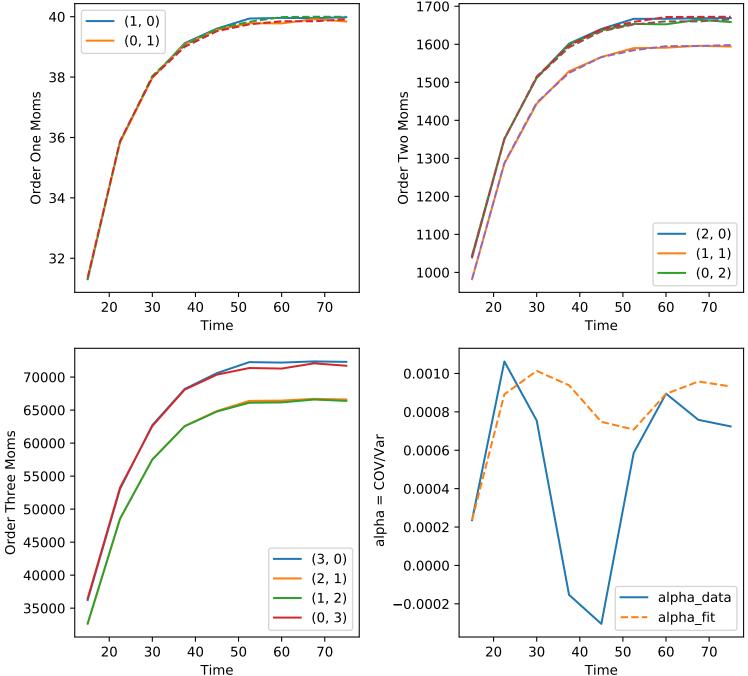
-0.0008

Time

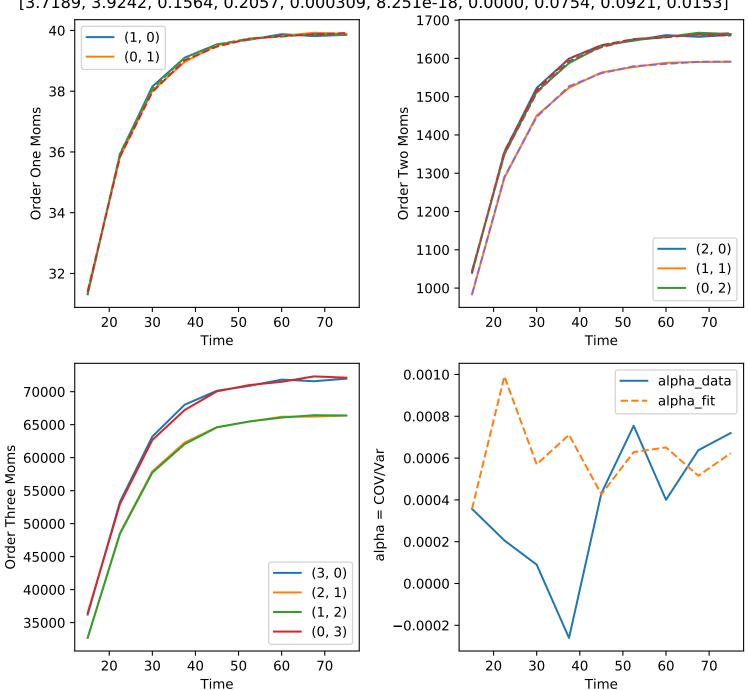
Order Three Moms

Time

No\_up | NLLA No\_up(#93): [3.9315, 4.0018, 0.1871, 0.1832, 2.219e-13, 5.239e-16, 0.0046, 0.0843, 0.0829, 0.0000] 1700 40 (1, 0)(0, 1) 1600



No\_up | NLLA No\_up(#94): [3.7189, 3.9242, 0.1564, 0.2057, 0.000309, 8.251e-18, 0.0000, 0.0754, 0.0921, 0.0153]



No\_up | NLLA No\_up(#95): [4.1514, 4.0825, 0.1902, 0.1812, 9.055e-11, 6.577e-06, 0.0000, 0.0862, 0.0792, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha\_data 0.0005 alpha fit Order Three Moms COV/Var 0.0000 alpha = -0.0005(3, 0)(2, 1)-0.0010(1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#96): [4.0708, 3.9079, 0.1867, 0.1753, 2.846e-17, 2.57e-17, 0.0010, 0.0837, 0.0775, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)30 40 50 60 70 20 30 40 50 60 70 20 Time Time 0.00100 alpha data 70000 alpha\_fit 0.00075 65000 0.00050 60000 COV/Var 0.00025 55000 alpha = 0.00000 50000 -0.0002545000 (3, 0)-0.0005040000 (2, 1)(1, 2)35000 -0.00075(0, 3)

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Time

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Order Three Moms

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Time

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No\_up | NLLA No\_up(#97): [4.0338, 4.0949, 0.1902, 0.1874, 6.247e-16, 2.291e-14, 0.0043, 0.0850, 0.0848, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 **Order Three Moms** alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)alpha data -0.0004(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#98): [3.9009, 3.5384, 0.2026, 0.1489, 8.117e-09, 0.0002884, 0.0137, 0.0914, 0.0717, 0.0001] (1, 0) (0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004alpha data (1, 2)(0, 3)alpha fit -0.0006

Time

Time

No\_up | NLLA No\_up(#99): [3.5117, 4.0143, 0.1505, 0.2129, 0.000363, 5.096e-09, 0.0049, 0.0722, 0.0989, 0.0133] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0012 0.0010 0.0008 **Order Three Moms** alpha = COV/Var0.0006 0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002alpha data (1, 2)

(0, 3)

Time

-0.0004

alpha fit

Time

No\_up | NLLA No\_up(#100): [3.2403, 3.8580, 0.1185, 0.2253, 0.0006797, 1.697e-13, 0.0000, 0.0646, 0.1009, 0.0281] 1700 40 (1, 0)(0, 1)1600 38 1500 Order J Mow J 1400 - 1300 - 1200 - Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 30 40 50 60 70 20 30 40 50 60 70 20 Time Time alpha\_data 70000 0.00100 alpha fit 65000 0.00075 **Order Three Moms** COV/Var 60000 0.00050 55000 alpha = 0.00025 50000 0.00000 45000 (3, 0)40000 -0.00025(2, 1)(1, 2)35000 -0.00050(0, 3)

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Time

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Time

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No\_up | NLLA No\_up(#101): [3.4913, 4.0021, 0.1694, 0.1828, 0.0003012, 2.887e-11, 0.0140, 0.0802, 0.0826, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 alpha\_data alpha\_fit 0.0002 (3, 0)0.0000 (2, 1)(1, 2)

-0.0002

Time

(0, 3)

Time

No\_up | NLLA No\_up(#102): [4.1186, 3.9968, 0.1956, 0.1760, 1.032e-21, 0.0001017, 0.0051, 0.0873, 0.0798, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0006 alpha fit 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#103): [3.9958, 4.0133, 0.1799, 0.1886, 4.244e-17, 1.963e-22, 0.0000, 0.0800, 0.0850, 0.0028] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 -0.0004 **Order Three Moms** alpha = COV/Var 0.0002 0.0000 (3, 0)(2, 1)-0.0002

(1, 2)

(0, 3)

Time

Time

alpha data

alpha fit

No\_up | NLLA No\_up(#104): [3.9826, 3.9568, 0.1820, 0.1787, 3.06e-17, 1.076e-15, 0.0018, 0.0806, 0.0797, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha\_data 0.0004 alpha\_fit 0.0002 Order Three Moms COV/Var 0.0000 alpha = -0.0002 -0.0004(3, 0)(2, 1)(1, 2)-0.0006(0, 3)

Time

Time

No\_up | NLLA No\_up(#105): [4.0143, 4.1365, 0.1849, 0.2037, 9.026e-15, 1.48e-16, 0.0000, 0.0845, 0.0938, 0.0060] (1, 0) (0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 Order Three Moms alpha = COV/Var0.0005 0.0000 (3, 0)-0.0005(2, 1)(1, 2)alpha data (0, 3)-0.0010alpha fit 

Time

Time

No\_up | NLLA No\_up(#106): [3.7368, 4.1078, 0.1637, 0.2020, 0.0001678, 1.496e-16, 0.0000, 0.0769, 0.0915, 0.0077] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 0.0000 **Order Three Moms** alpha = COV/Var-0.0002-0.0004-0.0006(3, 0)-0.0008(2, 1)(1, 2)-0.0010alpha data (0, 3)alpha fit

-0.0012

Time

Time

No\_up | NLLA No\_up(#107): [2.5444, 3.8426, 0.0933, 0.2293, 0.00116, 4.864e-18, 0.0151, 0.0607, 0.1035, 0.0294] 40 (1, 0)(0, 1)1600 38 1500 0 January 1300 Jan Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 60 70 Time Time alpha data 0.00100 70000 alpha fit 0.00075 65000 0.00050 **Order Three Moms** 60000 COV/Var 0.00025 55000 alpha = 0.00000 50000 -0.0002545000 (3, 0)-0.0005040000 (2, 1)(1, 2)-0.0007535000 (0, 3)20 40 50 20 30 40 50 60 70 30 60 70

Time

Time

No\_up | NLLA No\_up(#108): [4.0192, 3.9137, 0.1820, 0.1803, 4.356e-15, 2.197e-12, 0.0000, 0.0814, 0.0811, 0.0012] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0002 0.0000 Order Three Moms alpha = COV/Var-0.0002 -0.0004(3, 0)(2, 1)-0.0006alpha data (1, 2)(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#109): [4.1525, 4.1003, 0.1902, 0.1988, 6.355e-13, 2.177e-30, 0.0000, 0.0863, 0.0903, 0.0056] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 Order Three Moms alpha = COV/Var0.0006 alpha data 0.0004 alpha\_fit 0.0002 (3, 0)0.0000 (2, 1)(1, 2)-0.0002(0, 3)

Time

Time

No\_up | NLLA No\_up(#110): [3.9804, 4.0406, 0.1837, 0.1844, 2.052e-16, 1.025e-14, 0.0023, 0.0821, 0.0830, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0010 alpha fit Order Three Moms alpha = COV/Var0.0005 0.0000 (3, 0)-0.0005(2, 1)(1, 2)(0, 3)-0.0010

Time

Time

No\_up | NLLA No\_up(#111): [4.0889, 4.0970, 0.1855, 0.1911, 7.495e-15, 2.396e-15, 0.0000, 0.0830, 0.0856, 0.0028] (1, 0)(0, 1)Order J Order J Ord Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)(1, 2)alpha data -0.0006

(0, 3)

Time

alpha fit

Time

No\_up | NLLA No\_up(#112): [3.9759, 3.9405, 0.1794, 0.1829, 7.279e-22, 2.86e-20, 0.0000, 0.0800, 0.0827, 0.0017] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms Order One Moms 1400 36 1300 1200 34 (2, 0)1100 (1, 1)32 1000 (0, 2)60 50 20 30 40 50 70 20 30 40 60 70 Time Time 0.0008 70000 0.0006 65000 0.0004 Order Three Moms 60000 alpha = COV/Var0.0002 55000 0.0000 50000 -0.0002 45000 (3, 0)-0.000440000 (2, 1)-0.0006alpha data (1, 2)35000 (0, 3)alpha fit -0.000840 50 20 30 40 20 30 60 70 50 60 70

Time

Time

No\_up | NLLA No\_up(#113): [4.2015, 4.0185, 0.2024, 0.1834, 4.231e-15, 2.334e-14, 0.0063, 0.0907, 0.0828, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0012 0.0010 0.0008 Order Three Moms alpha = COV/Var0.0006 alpha data alpha fit 0.0004 0.0002 (3, 0)0.0000 (2, 1)(1, 2)-0.0002(0, 3)

Time

Time

No\_up | NLLA No\_up(#114): [4.1408, 3.8501, 0.1867, 0.1804, 5.537e-15, 4.385e-14, 0.0000, 0.0831, 0.0817, 0.0025] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 Order Three Moms COV/Var 0.0000 alpha = -0.0002-0.0004(3, 0)(2, 1)-0.0006(1, 2)alpha data (0, 3)alpha fit -0.0008

Time

Time

No\_up | NLLA No\_up(#115): [3.7057, 3.8465, 0.1581, 0.1986, 0.0002311, 8.197e-17, 0.0000, 0.0747, 0.0896, 0.0129] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 0.0006 **Order Three Moms** alpha = COV/Var0.0004 alpha data alpha\_fit 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)

-0.0004

Time

Time

No\_up | NLLA No\_up(#116): [4.0109, 4.0287, 0.1844, 0.1953, 9.074e-19, 1.518e-19, 0.0000, 0.0839, 0.0889, 0.0054] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 0.0002 (3, 0)(2, 1)0.0000 alpha data (1, 2)(0, 3)alpha fit

-0.0002

Time

Time

No\_up | NLLA No\_up(#117): [4.0180, 3.9522, 0.1843, 0.1802, 7.171e-05, 4.862e-22, 0.0027, 0.0839, 0.0811, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 0 January 1300 Jan Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)30 40 50 60 70 20 30 40 50 20 60 70 Time Time 0.00025 70000 65000 0.00000 **Order Three Moms** 60000 = COV/Var-0.00025 55000 -0.0005050000 alpha -0.0007545000 (3, 0)-0.0010040000 (2, 1)alpha data (1, 2)35000 -0.00125alpha fit (0, 3)

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Time

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Time

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No\_up | NLLA No\_up(#118): [4.0364, 3.9260, 0.1846, 0.1867, 2.169e-15, 4.07e-16, 0.0000, 0.0834, 0.0847, 0.0037] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1) (0, 2)Time Time 0.0008 -0.0006 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)alpha data -0.0006(0, 3)alpha fit 

Time

Time

No\_up | NLLA No\_up(#119): [4.1692, 3.9110, 0.1988, 0.1770, 2.553e-16, 6.326e-13, 0.0048, 0.0895, 0.0791, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 Order Three Moms alpha = COV/Var0.0006 alpha\_data 0.0004 alpha fit 0.0002 (3, 0)(2, 1)(1, 2)0.0000 (0, 3)

Time

Time

No\_up | NLLA No\_up(#120): [2.9894, 4.1752, 0.1236, 0.2362, 0.0006889, 6.866e-09, 0.0099, 0.0666, 0.1080, 0.0232] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0020 alpha\_data alpha\_fit 0.0015 **Order Three Moms** alpha = COV/Var 0.0010 0.0005 (3, 0)0.0000 (2, 1)(1, 2)

-0.0005

Time

(0, 3)

Time

No\_up | NLLA No\_up(#121): [4.0448, 3.9955, 0.1855, 0.1812, 5.039e-18, 4.496e-14, 0.0017, 0.0825, 0.0812, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha data alpha fit 0.0006 **Order Three Moms** alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)(1, 2)-0.0002(0, 3)

Time

Time

No\_up | NLLA No\_up(#122): [4.0447, 4.0893, 0.1840, 0.1926, 1.972e-12, 1.228e-14, 0.0000, 0.0829, 0.0866, 0.0035] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)alpha data (0, 3)alpha fit -0.0006

Time

Time

No\_up | NLLA No\_up(#123): [4.0390, 4.0213, 0.1799, 0.1806, 6.803e-20, 7.025e-06, 0.0000, 0.0790, 0.0802, 0.0000] (1, 0) (0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0003 0.0002 Order Three Moms alpha = COV/Var0.0001 0.0000 -0.0001(3, 0)(2, 1)(1, 2)alpha\_data -0.0002(0, 3)alpha fit 

Time

Time

No\_up | NLLA No\_up(#124): [3.9712, 4.0390, 0.1875, 0.1837, 1.968e-18, 3.237e-20, 0.0038, 0.0843, 0.0826, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var 0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002alpha data (1, 2)(0, 3)alpha fit

-0.0004

Time

Time

No\_up | NLLA No\_up(#125): [2.6432, 3.9809, 0.0805, 0.2532, 0.0009659, 6.341e-20, 0.0000, 0.0530, 0.1138, 0.0399] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data alpha fit 0.0010 Order Three Moms alpha = COV/Var0.0005 0.0000 (3, 0)(2, 1)-0.0005

(1, 2)

(0, 3)

Time

Time

No\_up | NLLA No\_up(#126): [4.0061, 3.9603, 0.1897, 0.1803, 5.675e-19, 5.532e-16, 0.0044, 0.0854, 0.0809, 0.0000] (1, 0) (0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 **Order Three Moms** alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)alpha\_data (1, 2)-0.0004(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#127): [4.1566, 3.9169, 0.1897, 0.1783, 3.004e-19, 1.072e-13, 0.0014, 0.0844, 0.0803, 0.0000] (1, 0)(0, 1) Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 (3, 0)(2, 1)(1, 2)-0.0002alpha\_data (0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#128): [3.9660, 3.8900, 0.1785, 0.1798, 2.252e-14, 4.616e-16, 0.0000, 0.0796, 0.0809, 0.0018] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 Order Three Moms COV/Var 0.0000 alpha = -0.0002(3, 0)-0.0004(2, 1)(1, 2)alpha data (0, 3)alpha fit -0.0006

Time

Time

No\_up | NLLA No\_up(#129): [3.9701, 3.7911, 0.1855, 0.1713, 1.508e-17, 4.084e-17, 0.0033, 0.0828, 0.0768, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0010 alpha fit 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)-0.0004

Time

Time

No\_up | NLLA No\_up(#130): [4.0817, 4.2421, 0.1839, 0.2005, 3.287e-17, 3.589e-21, 0.0000, 0.0816, 0.0900, 0.0043] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)alpha data (1, 2)-0.0002(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#131): [4.1302, 3.2425, 0.2336, 0.1257, 9.565e-17, 0.0005569, 0.0251, 0.1048, 0.0667, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 0 January 1300 Jan Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)50 60 70 40 50 20 30 40 20 30 60 70 Time Time alpha\_data 0.00125 70000 alpha\_fit 65000 0.00100 Order Three Moms 60000 COV/Var 0.00075 55000 0.00050 alpha = 50000 0.00025 45000 0.00000 (3, 0)40000 (2, 1)-0.00025(1, 2)35000 (0, 3)

-0.00050

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Time

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Time

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No\_up | NLLA No\_up(#132): [3.9503, 3.6842, 0.1969, 0.1642, 5.624e-20, 9.649e-05, 0.0080, 0.0902, 0.0760, 0.0000] (1, 0)(0, 1)Order Two Moms 1400 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.00100 alpha fit 0.00075 Order Three Moms alpha = COV/Var0.00050 0.00025 0.00000 (3, 0)-0.00025(2, 1)(1, 2)-0.00050(0, 3)

Time

Time

No\_up | NLLA No\_up(#133): [4.2445, 3.9561, 0.2247, 0.1828, 4e-09, 9.956e-08, 0.0135, 0.1047, 0.0838, 0.0000] (1, 0)(0, 1) Order Two Moms 1400 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0025 0.0020 alpha = COV/Var0.0015 alpha\_data alpha\_fit 0.0010 0.0005 (3, 0)(2, 1)(1, 2)0.0000 (0, 3)

Time

Order Three Moms

Time

No\_up | NLLA No\_up(#134): [3.8255, 4.0755, 0.1738, 0.2024, 4.482e-16, 2.245e-16, 0.0000, 0.0782, 0.0921, 0.0082] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 0.0010 Order Three Moms alpha = COV/Var0.0005 0.0000 (3, 0)(2, 1)-0.0005alpha\_data (1, 2)(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#135): [3.9525, 3.8601, 0.1819, 0.1746, 1.415e-10, 1.832e-10, 0.0016, 0.0814, 0.0782, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha data alpha fit 0.0004 0.0002 Order Three Moms COV/Var 0.0000 alpha = -0.0002-0.0004(3, 0) (2, 1)-0.0006(1, 2)(0, 3)-0.0008

Time

Time

No\_up | NLLA No\_up(#136): [4.0837, 3.9388, 0.1879, 0.1792, 1.851e-14, 1.48e-14, 0.0015, 0.0839, 0.0804, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0004 alpha\_fit 0.0002 **Order Three Moms** alpha = COV/Var0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#137): [4.0014, 3.8979, 0.1832, 0.1846, 1.29e-15, 2.811e-18, 0.0000, 0.0829, 0.0834, 0.0038] (1, 0)(0, 1) Order Two Moms 1400 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var 0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)alpha data (0, 3)alpha fit

-0.0004

Time

Time

No\_up | NLLA No\_up(#138): [4.0621, 3.5703, 0.2129, 0.1458, 2.064e-17, 0.0004058, 0.0159, 0.0951, 0.0725, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 0.0000 **Order Three Moms** COV/Var -0.0002alpha = ( -0.0004(3, 0)-0.0006(2, 1)alpha data (1, 2)

-0.0008

alpha fit

Time

(0, 3)

Time

No\_up | NLLA No\_up(#139): [3.8482, 4.0806, 0.1688, 0.1989, 0.0001476, 8.53e-19, 0.0000, 0.0784, 0.0896, 0.0070] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 alpha data alpha\_fit 0.0002 **Order Three Moms** COV/Var 0.0000 -0.0002alpha (3, 0)-0.0004(2, 1)(1, 2)

-0.0006

Time

(0, 3)

Time

No\_up | NLLA No\_up(#140): [4.3074, 3.9562, 0.1972, 0.1884, 3.216e-17, 1.671e-13, 0.0000, 0.0893, 0.0854, 0.0039] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 0.0004 **Order Three Moms** alpha = COV/Var 0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)alpha data (1, 2)-0.0006(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#141): [4.0780, 3.9326, 0.1885, 0.1798, 4.128e-18, 3.248e-14, 0.0018, 0.0847, 0.0815, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0008 alpha\_fit 0.0006 **Order Three Moms** 0.0004 alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)

(0, 3)

Time

-0.0006

Time

No\_up | NLLA No\_up(#142): [4.2009, 4.1929, 0.2005, 0.1916, 1.207e-09, 2.816e-10, 0.0041, 0.0910, 0.0865, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 alpha\_data 0.0002 alpha\_fit 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#143): [2.8395, 4.1830, 0.1010, 0.2749, 0.0009435, 3.655e-09, 0.0045, 0.0629, 0.1289, 0.0409] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0030 alpha\_data alpha fit 0.0025 0.0020 **Order Three Moms** alpha = COV/Var 0.0015 0.0010 0.0005 (3, 0)0.0000 (2, 1)(1, 2)

-0.0005

Time

(0, 3)

Time

No\_up | NLLA No\_up(#144): [3.9905, 3.8914, 0.1879, 0.1766, 2.797e-18, 5.457e-20, 0.0037, 0.0844, 0.0793, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 alpha data alpha fit 0.0008 Order Three Moms 0.0006 alpha = COV/Var0.0004 0.0002 (3, 0)0.0000 (2, 1)(1, 2)-0.0002(0, 3)

Time

Time

No\_up | NLLA No\_up(#145): [4.0788, 3.9989, 0.1861, 0.1927, 5.112e-13, 1.156e-13, 0.0000, 0.0839, 0.0878, 0.0049] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 0.0006 **Order Three Moms** alpha = COV/Var0.0004 alpha\_data alpha\_fit 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)

-0.0004

Time

(0, 3)

Time

No\_up | NLLA No\_up(#146): [4.0113, 4.1810, 0.1863, 0.1899, 6.764e-17, 3.541e-19, 0.0026, 0.0834, 0.0852, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 0.0002 Order Three Moms COV/Var 0.0000 -0.0002alpha -0.0004-0.0006(3, 0)(2, 1)-0.0008(1, 2)alpha data (0, 3)-0.0010alpha fit 

Time

Time

No\_up | NLLA No\_up(#147): [4.1308, 3.7777, 0.1910, 0.1743, 1.005e-15, 1.723e-17, 0.0028, 0.0848, 0.0799, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.00075 0.00050 0.00025 **Order Three Moms** COV/Var 0.00000 alpha = -0.00025-0.00050(3, 0)-0.00075(2, 1)alpha data (1, 2)-0.00100alpha fit (0, 3)

Time

Time

No\_up | NLLA No\_up(#148): [3.9701, 3.6430, 0.2070, 0.1539, 8.53e-18, 0.0002871, 0.0152, 0.0926, 0.0742, 0.0000] (1, 0)(0, 1)Order Two Moms 1400 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0012 alpha\_fit 0.0010 alpha = COV/Var0.0008 0.0006 0.0004 (3, 0)(2, 1)0.0002 (1, 2)(0, 3)0.0000

Time

Order Three Moms

Time

No\_up | NLLA No\_up(#149): [4.2291, 4.1292, 0.1943, 0.1982, 1.059e-18, 1.225e-17, 0.0000, 0.0882, 0.0895, 0.0053] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 0.0002 (3, 0)0.0000 (2, 1)-0.0002(1, 2)alpha data 

(0, 3)

Time

-0.0004

Time

alpha fit

No\_up | NLLA No\_up(#150): [4.0181, 4.0604, 0.1806, 0.1831, 3.46e-23, 1.368e-24, 0.0000, 0.0804, 0.0815, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha\_data alpha\_fit 0.0004 0.0002 Order Three Moms alpha = COV/Var0.0000 -0.0002-0.0004(3, 0)-0.0006(2, 1)-0.0008(1, 2)(0, 3)-0.0010

Time

Time

No\_up | NLLA No\_up(#151): [4.1782, 3.9681, 0.1995, 0.1810, 3.249e-25, 8.387e-19, 0.0033, 0.0914, 0.0816, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0005 **Order Three Moms** alpha = COV/Var0.0000 -0.0005 (3, 0)(2, 1)alpha data (1, 2)-0.0010(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#152): [4.0379, 4.0204, 0.1888, 0.1833, 9.947e-22, 6.086e-27, 0.0040, 0.0838, 0.0826, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)alpha\_data -0.0004(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#153): [3.8879, 3.8968, 0.1824, 0.1776, 1.043e-20, 7.199e-11, 0.0032, 0.0820, 0.0802, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 04er 1 00 Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 20 30 40 50 60 70 20 30 40 50 60 70 Time Time 75000 0.00100 alpha\_data 70000 alpha\_fit 0.00075 65000 0.00050 Order Three Moms COV/Var 60000 0.00025 55000 alpha = 0.00000 50000 45000 -0.00025 (3, 0)40000 (2, 1)-0.00050(1, 2)35000 (0, 3)-0.0007540 50 20 40 50 60 70 20 30 60 70 30

Time

Time

No\_up | NLLA No\_up(#154): [4.1260, 4.0523, 0.2003, 0.1848, 7.333e-21, 2.716e-13, 0.0055, 0.0914, 0.0832, 0.0000] 1700 40 (1, 0)(0, 1) 1600 38 1500 0 January 1300 Jan Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)50 60 70 20 30 40 50 20 30 40 60 70 Time Time 0.00100 70000 0.00075 65000 0.00050 **Order Three Moms** COV/Var 60000 0.00025 55000 alpha = 50000 0.00000 45000 -0.00025 (3, 0)40000 (2, 1)-0.00050alpha data (1, 2)35000 alpha fit (0, 3)-0.00075 40 50 20 30 40 20 30 60 70 50 60 70

Time

Time

No\_up | NLLA No\_up(#155): [4.0963, 3.9747, 0.1838, 0.1829, 2.087e-16, 8.083e-18, 0.0000, 0.0813, 0.0821, 0.0014] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0006 alpha fit 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)(1, 2)-0.0006(0, 3)

Time

Time

No\_up | NLLA No\_up(#156): [4.4558, 3.8367, 0.2014, 0.1725, 7.464e-18, 1.154e-18, 0.0000, 0.0893, 0.0764, 0.0003] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha data alpha fit 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 (3, 0)(2, 1)(1, 2)-0.0002(0, 3)

Time

Time

No\_up | NLLA No\_up(#157): [3.9428, 3.9516, 0.1825, 0.1803, 1.717e-17, 6.632e-16, 0.0027, 0.0814, 0.0815, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha data alpha fit 0.0006 Order Three Moms 0.0004 alpha = COV/Var0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)-0.0004(0, 3)

-0.0006

Time

Time

No\_up | NLLA No\_up(#158): [4.1190, 3.9852, 0.1907, 0.2038, 1.626e-22, 1.065e-21, 0.0000, 0.0876, 0.0934, 0.0106] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0020 0.0015 **Order Three Moms** alpha = COV/Var0.0010 0.0005 (3, 0)0.0000 (2, 1)alpha data (1, 2)-0.0005(0, 3)alpha fit 

Time

Time

No\_up | NLLA No\_up(#159): [3.7846, 4.0367, 0.1682, 0.2069, 0.0001244, 4.648e-25, 0.0000, 0.0785, 0.0940, 0.0121] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0016 0.0014 0.0012 **Order Three Moms** alpha = COV/Var0.0010 0.0008 0.0006 (3, 0)0.0004 (2, 1)0.0002 alpha data (1, 2)(0, 3)alpha fit

0.0000

Time

Time

No\_up | NLLA No\_up(#160): [4.0889, 4.2845, 0.1835, 0.1924, 4.182e-21, 1.99e-05, 0.0002, 0.0809, 0.0858, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha\_data 0.0006 alpha fit 0.0004 **Order Three Moms** alpha = COV/Var 0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)(0, 3)-0.0006

Time

Time

No\_up | NLLA No\_up(#161): [2.8555, 4.0659, 0.0928, 0.2551, 0.0008581, 4.863e-09, 0.0000, 0.0557, 0.1160, 0.0370] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 alpha\_data alpha\_fit 0.0010 Order Three Moms alpha = COV/Var0.0005 0.0000 (3, 0)(2, 1)

-0.0005

Time

(1, 2)

(0, 3)

Time

No\_up | NLLA No\_up(#162): [4.0325, 3.9805, 0.1841, 0.1804, 1.325e-15, 7.422e-16, 0.0005, 0.0826, 0.0810, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order One Moms Order Two Moms 1400 36 1300 1200 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 70 60 Time Time 0.00125 alpha data 70000 alpha fit 0.00100 65000 0.00075 Order Three Moms COV/Var 60000 0.00050 55000 0.00025 alpha = 50000 0.00000 45000 -0.00025(3, 0)40000 (2, 1)-0.00050(1, 2)35000 (0, 3)-0.00075

20

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40

Time

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60

70

50

60

70

20

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40

Time

No\_up | NLLA No\_up(#163): [3.9977, 3.9600, 0.1801, 0.1817, 1.881e-18, 8.316e-24, 0.0000, 0.0802, 0.0817, 0.0010] 1700 40 (1, 0)(0, 1)1600 38 1500 Order One Moms Order Two Moms 1400 36 1300 1200 34 (2, 0)1100 (1, 1)32 (0, 2)1000 50 60 70 30 40 50 20 30 40 20 60 70 Time Time 0.0004 70000 0.0002 65000 0.0000 Order Three Moms COV/Var 60000 -0.000255000 -0.000450000 alpha -0.000645000 (3, 0)-0.000840000 (2, 1)(1, 2)-0.0010alpha data 35000 (0, 3)alpha fit -0.0012

20

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Time

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70

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20

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Time

60

No\_up | NLLA No\_up(#164): [3.3729, 3.2891, 0.1991, 0.1301, 0.000361, 0.0004725, 0.0348, 0.0945, 0.0668, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)70 20 30 40 50 60 20 30 40 50 60 70 Time Time 0.00150 alpha data 70000 alpha fit 0.00125 65000 0.00100 Order Three Moms COV/Var 60000 0.00075 55000 alpha = 50000 0.00050 45000 0.00025 (3, 0)40000 (2, 1)0.00000 (1, 2)35000 (0, 3)-0.00025

20

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Time

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70

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Time

20

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60

No\_up | NLLA No\_up(#165): [4.1719, 4.0649, 0.1896, 0.1941, 3.342e-20, 1.336e-16, 0.0000, 0.0853, 0.0869, 0.0056] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0012 0.0010 0.0008 **Order Three Moms** alpha = COV/Var 0.0006 0.0004 0.0002 (3, 0)0.0000 (2, 1)-0.0002(1, 2)alpha data (0, 3)alpha fit -0.0004

Time

Time

No\_up | NLLA No\_up(#166): [4.2075, 3.9989, 0.1969, 0.1831, 3.847e-19, 1.65e-15, 0.0032, 0.0882, 0.0830, 0.0000] (1, 0)(0, 1)Order One Moms **Order Two Moms** (2, 0)(1, 1)(0, 2)Time Time alpha\_data 0.0008 alpha\_fit 0.0006 alpha = COV/Var0.0004 0.0002 0.0000 -0.0002 (3, 0)(2, 1)-0.0004(1, 2)-0.0006(0, 3)

Time

Order Three Moms

Time

No\_up | NLLA No\_up(#167): [4.0525, 4.1447, 0.1857, 0.1996, 5.417e-14, 5.341e-15, 0.0000, 0.0842, 0.0906, 0.0048] 1700 40 (1, 0)(0, 1) 1600 38 1500 0 1400 Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)40 50 60 70 20 30 40 50 20 30 60 70 Time Time 70000 0.00075 65000 0.00050 Order Three Moms 60000 COV/Var 0.00025 55000 0.00000 alpha = 50000 -0.00025 45000 (3, 0)-0.0005040000 (2, 1)alpha data

(1, 2)

(0, 3)

70

-0.00075

alpha fit

30

40

Time

20

50

60

70

35000

20

40

Time

30

50

No\_up | NLLA No\_up(#168): [4.0066, 3.9978, 0.1798, 0.1829, 8.574e-16, 3.529e-19, 0.0000, 0.0796, 0.0819, 0.0010] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002alpha data (1, 2)(0, 3)alpha fit -0.0004

Time

Time

No\_up | NLLA No\_up(#169): [2.7754, 3.7574, 0.1486, 0.1685, 0.0008586, 3.398e-14, 0.0333, 0.0804, 0.0746, 0.0000] (1, 0)(0, 1)Order J Mom 1400 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.00100 0.00075 Order Three Moms alpha = COV/Var0.00050 0.00025 0.00000 (3, 0)-0.00025(2, 1)alpha data (1, 2)-0.00050alpha fit (0, 3)

Time

Time

No\_up | NLLA No\_up(#170): [3.5828, 4.0871, 0.1465, 0.2276, 0.0004589, 1.929e-16, 0.0000, 0.0749, 0.1036, 0.0215] (1, 0)(0, 1)Order One Moms **Order Two Moms** (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 0.0006 **Order Three Moms** alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)-0.0004(1, 2)alpha\_data (0, 3)alpha fit

-0.0006

Time

Time

No\_up | NLLA No\_up(#171): [3.8560, 4.0398, 0.1707, 0.2059, 0.0001571, 4.365e-16, 0.0000, 0.0806, 0.0928, 0.0120] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0012 0.0010 Order Three Moms alpha = COV/Var0.0008 0.0006 (3, 0)0.0004 (2, 1)(1, 2)alpha\_data 0.0002 (0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#172): [4.1185, 3.9577, 0.1914, 0.1817, 1.859e-22, 4.682e-16, 0.0030, 0.0853, 0.0826, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 Order Three Moms COV/Var 0.0002 0.0000 alpha data alpha\_fit alpha = -0.0002-0.0004(3, 0)-0.0006(2, 1)(1, 2)-0.0008

(0, 3)

Time

Time

No\_up | NLLA No\_up(#173): [3.3909, 3.9979, 0.1611, 0.1850, 0.0005181, 4.874e-24, 0.0157, 0.0812, 0.0821, 0.0029] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha data alpha fit 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)-0.0004(0, 3)

Time

Time

No\_up | NLLA No\_up(#174): [4.2143, 4.0784, 0.1882, 0.1914, 6.607e-11, 1.371e-15, 0.0000, 0.0828, 0.0873, 0.0017] (1, 0)(0, 1)Order Two Moms 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha\_data alpha\_fit 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)

(0, 3)

Time

-0.0004

Time

No\_up | NLLA No\_up(#175): [4.0947, 4.0462, 0.1887, 0.1851, 2.425e-19, 1.392e-18, 0.0013, 0.0848, 0.0834, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha\_data alpha\_fit 0.0006 0.0004 Order Three Moms = COV/Var 0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)(1, 2)-0.0006(0, 3)

-0.0008

Time

Time

No\_up | NLLA No\_up(#176): [4.2308, 2.7483, 0.2621, 0.0841, 5.495e-09, 0.000931, 0.0378, 0.1185, 0.0526, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 alpha data alpha fit 0.0010 alpha = COV/Var 0.0005 0.0000 (3, 0)-0.0005(2, 1)(1, 2)(0, 3)-0.0010

Time

**Order Three Moms** 

Time

No\_up | NLLA No\_up(#177): [4.0711, 3.9454, 0.1857, 0.1795, 1.114e-18, 1.3e-17, 0.0011, 0.0829, 0.0808, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 COV/Var 0.0000 alpha data -0.0002alpha fit alpha : -0.0004(3, 0)(2, 1)-0.0006(1, 2)(0, 3)-0.0008

Time

Time

Order Three Moms

No\_up | NLLA No\_up(#178): [3.9331, 3.9967, 0.1813, 0.1924, 7.659e-14, 1.044e-18, 0.0000, 0.0831, 0.0876, 0.0047] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)alpha data (1, 2)-0.0006alpha fit (0, 3)-0.0008

Time

Time

No\_up | NLLA No\_up(#179): [4.0469, 4.0391, 0.1855, 0.1901, 7.582e-11, 2.483e-15, 0.0000, 0.0841, 0.0859, 0.0032] (1, 0) (0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 0.0002 **Order Three Moms** COV/Var 0.0000 alpha = -0.0002-0.0004(3, 0)(2, 1)-0.0006alpha data (1, 2)(0, 3)alpha fit

-0.0008

Time

Time

No\_up | NLLA No\_up(#180): [4.0265, 4.1203, 0.1974, 0.1868, 5.194e-27, 2.226e-14, 0.0068, 0.0899, 0.0833, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0012 0.0010 Order Three Moms alpha = COV/Var0.0008 0.0006 0.0004 0.0002 (3, 0)(2, 1)0.0000 alpha data (1, 2)(0, 3)alpha fit

-0.0002

Time

Time

No\_up | NLLA No\_up(#181): [3.9996, 4.0276, 0.1838, 0.1817, 3.169e-20, 4.205e-15, 0.0022, 0.0819, 0.0811, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)alpha data (0, 3)alpha fit -0.0004

Time

No up | NLLA No up(#182): [4.1692, 3.9111, 0.1948, 0.1782, 4.622e-14, 1.239e-13, 0.0034, 0.0870, 0.0806, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 Order Three Moms COV/Var 0.0002 0.0000 alpha : -0.0002-0.0004(3, 0)(2, 1)-0.0006(1, 2)alpha data -0.0008(0, 3)alpha fit 

Time

No\_up | NLLA No\_up(#183): [3.6367, 3.9841, 0.1503, 0.2167, 0.0003136, 1.006e-20, 0.0000, 0.0719, 0.0989, 0.0178] (1, 0) (0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 Order Three Moms alpha = COV/Var0.0005 0.0000 (3, 0)-0.0005(2, 1)(1, 2)alpha data 

-0.0010

Time

alpha fit

(0, 3)

Time

No\_up | NLLA No\_up(#184): [4.0982, 3.9430, 0.1940, 0.1810, 5.683e-14, 8.248e-15, 0.0041, 0.0872, 0.0824, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order One Moms Order Two Moms 1400 36 1300 1200 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 70 60 Time Time 0.00100 70000 0.00075 65000 0.00050 **Order Three Moms** COV/Var 60000 0.00025 55000 0.00000 alpha = 50000 -0.00025 45000 (3, 0)-0.0005040000 (2, 1)alpha data (1, 2)-0.0007535000 alpha fit (0, 3)-0.00100

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Time

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No\_up | NLLA No\_up(#185): [2.4620, 3.8806, 0.0629, 0.2528, 0.001158, 4.66e-20, 0.0000, 0.0476, 0.1124, 0.0433] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0005 0.0000 Order Three Moms alpha = COV/Var-0.0005 -0.0010(3, 0)(2, 1)(1, 2)alpha data -0.0015(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#186): [4.0170, 3.8726, 0.1838, 0.1848, 1.335e-14, 2.496e-16, 0.0000, 0.0832, 0.0835, 0.0044] (1, 0) (0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 0.0006 **Order Three Moms** alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002alpha data (1, 2)(0, 3)alpha fit

-0.0004

Time

Time

No\_up | NLLA No\_up(#187): [4.0350, 4.1181, 0.1902, 0.1879, 2.934e-09, 8.618e-12, 0.0034, 0.0856, 0.0849, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data alpha fit 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 0.0002 (3, 0)(2, 1)(1, 2)0.0000

(0, 3)

Time

Time

No\_up | NLLA No\_up(#188): [4.0616, 3.9063, 0.1850, 0.1895, 3.51e-15, 2.653e-16, 0.0000, 0.0835, 0.0856, 0.0060] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.00125 0.00100 0.00075 **Order Three Moms** COV/Var 0.00050 alpha = 0.00025 0.00000 (3, 0)(2, 1)-0.00025alpha data (1, 2)alpha fit (0, 3)-0.00050

Time

No\_up | NLLA No\_up(#189): [4.0003, 3.9656, 0.1808, 0.1874, 8.904e-17, 7.299e-15, 0.0000, 0.0809, 0.0847, 0.0035] (1, 0) (0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 (3, 0)(2, 1)0.0000 alpha data (1, 2)(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#190): [3.9896, 4.0508, 0.1790, 0.1849, 6.688e-15, 2.868e-14, 0.0000, 0.0792, 0.0822, 0.0013] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 **Order Three Moms** COV/Var 0.0000 alpha -0.0002(3, 0)-0.0004(2, 1)(1, 2)alpha data -0.0006(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#191): [3.9799, 4.1774, 0.1814, 0.1951, 1.046e-13, 3.933e-14, 0.0000, 0.0818, 0.0871, 0.0032] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 50 60 70 20 30 40 50 70 30 40 60 Time Time 0.00100 alpha data 70000 alpha fit 0.00075 65000 0.00050 Order Three Moms COV/Var 60000 0.00025 55000 alpha = 0.00000 50000 45000 -0.00025 (3, 0)40000 (2, 1)-0.00050(1, 2)35000 -0.00075(0, 3)

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Time

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Time

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No\_up | NLLA No\_up(#192): [3.9502, 3.9015, 0.1886, 0.1799, 2.232e-15, 8.63e-17, 0.0055, 0.0844, 0.0823, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.00100 0.00075 **Order Three Moms** COV/Var 0.00050 0.00025 alpha = 0.00000 (3, 0)(2, 1)-0.00025alpha data (1, 2)alpha fit (0, 3)-0.00050

Time

No\_up | NLLA No\_up(#193): [3.9863, 3.8903, 0.1827, 0.1750, 3.017e-23, 2.967e-22, 0.0016, 0.0814, 0.0779, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha data alpha fit 0.0004 0.0002 Order Three Moms COV/Var 0.0000 alpha = -0.0002-0.0004(3, 0) (2, 1)-0.0006(1, 2)(0, 3)-0.0008

Time

Time

No\_up | NLLA No\_up(#194): [4.1238, 4.0518, 0.1877, 0.1830, 2.077e-14, 1.262e-17, 0.0016, 0.0831, 0.0815, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002alpha data (1, 2)(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#195): [4.0904, 4.0611, 0.1872, 0.1937, 9.104e-19, 4.095e-18, 0.0000, 0.0849, 0.0876, 0.0043] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 **Order Three Moms** alpha = COV/Var0.0004 0.0002 (3, 0)0.0000 (2, 1)alpha data (1, 2)(0, 3)-0.0002alpha fit 

Time

No\_up | NLLA No\_up(#196): [4.1488, 3.9296, 0.1894, 0.1878, 1.719e-17, 3.723e-16, 0.0000, 0.0854, 0.0842, 0.0054] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0010 alpha fit 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 0.0002 (3, 0)0.0000 (2, 1)(1, 2)-0.0002(0, 3)

Time

Time

No\_up | NLLA No\_up(#197): [4.0503, 3.8569, 0.1798, 0.1742, 6.696e-27, 1.365e-21, 0.0001, 0.0785, 0.0779, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 (3, 0)(2, 1)-0.0002alpha data (1, 2)(0, 3)alpha fit -0.0004

Time

No\_up | NLLA No\_up(#198): [3.8479, 4.1840, 0.1636, 0.2088, 0.0002225, 6.075e-18, 0.0000, 0.0762, 0.0930, 0.0108] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0008 alpha fit 0.0006 **Order Three Moms** alpha = COV/Var0.0004 0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)

(0, 3)

Time

-0.0006

Time

No\_up | NLLA No\_up(#199): [4.0014, 3.9575, 0.1842, 0.1925, 6.939e-20, 6.263e-19, 0.0000, 0.0841, 0.0885, 0.0049] 1700 40 (1, 0)(0, 1) 1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)70 20 30 40 50 60 20 30 40 50 60 70 Time Time alpha data 0.00100 70000 alpha fit 0.00075 65000 Order Three Moms 0.00050 COV/Var 60000 0.00025 55000 alpha = 0.00000 50000 -0.00025 45000 (3, 0)-0.0005040000 (2, 1)(1, 2)35000 -0.00075(0, 3)

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Time

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Time

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No\_up | NLLA No\_up(#200): [4.0379, 4.0801, 0.1829, 0.1844, 3.464e-22, 1.756e-05, 0.0000, 0.0818, 0.0829, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 alpha\_data alpha\_fit 0.0003 0.0002 **Order Three Moms** alpha = COV/Var0.0001 0.0000 -0.0001(3, 0)-0.0002(2, 1)-0.0003(1, 2)(0, 3)-0.0004

Time

Time

No\_up | NLLA No\_up(#201): [3.8569, 4.0295, 0.1720, 0.1947, 8.926e-05, 2.76e-21, 0.0000, 0.0791, 0.0876, 0.0061] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 0.0002 Order Three Moms COV/Var 0.0000 -0.0002alpha -0.0004(3, 0)(2, 1)-0.0006(1, 2)alpha data -0.0008(0, 3)alpha fit 

Time

No\_up | NLLA No\_up(#202): [3.9497, 3.9056, 0.1784, 0.1829, 1.205e-24, 1.433e-13, 0.0000, 0.0796, 0.0819, 0.0034] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0010 alpha fit 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 0.0002 (3, 0)(2, 1)0.0000 (1, 2)(0, 3)

-0.0002

Time

Time

No\_up | NLLA No\_up(#203): [4.0817, 3.9166, 0.1977, 0.1805, 1.822e-08, 5.134e-08, 0.0059, 0.0895, 0.0824, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0012 0.0010 Order Three Moms 0.0008 alpha = COV/Var0.0006 alpha\_data alpha fit 0.0004 0.0002 (3, 0)(2, 1)0.0000 (1, 2)(0, 3)

-0.0002

Time

Time

No\_up | NLLA No\_up(#204): [3.0420, 3.9130, 0.1073, 0.2402, 0.000771, 2.628e-16, 0.0000, 0.0620, 0.1096, 0.0327] 1700 40 (1, 0)(0, 1)1600 38 1500 Order J Mom 1400 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 30 40 50 60 70 20 30 40 50 60 70 20 Time Time 0.00125 alpha data 70000 alpha\_fit 0.00100 65000 Order Three Moms 0.00075 COV/Var 60000 55000 0.00050 alpha = 50000 0.00025 45000 0.00000 (3, 0)40000 (2, 1)-0.00025(1, 2)35000 (0, 3)-0.00050

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Time

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Time

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No\_up | NLLA No\_up(#205): [2.0637, 4.2380, 0.0327, 0.3008, 0.001497, 6.262e-15, 0.0000, 0.0409, 0.1338, 0.0605] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0020 alpha fit 0.0015 alpha = COV/Var0.0010 0.0005 0.0000 (3, 0)(2, 1)-0.0005(1, 2)

(0, 3)

Time

-0.0010

Time

Order Three Moms

No\_up | NLLA No\_up(#206): [4.0947, 3.9545, 0.1835, 0.1819, 1.02e-15, 1.299e-19, 0.0000, 0.0812, 0.0816, 0.0013] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha\_data alpha\_fit 0.0004 alpha = COV/Var0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)

Time

Order Three Moms

Time

No\_up | NLLA No\_up(#207): [4.0074, 3.9475, 0.1856, 0.1798, 2.822e-15, 3.069e-15, 0.0020, 0.0835, 0.0811, 0.0000] (1, 0) (0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time alpha\_data 0.0010 alpha\_fit 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)-0.0004

Time

Time

No\_up | NLLA No\_up(#208): [3.6522, 4.0783, 0.1551, 0.2056, 0.0002229, 4.473e-13, 0.0000, 0.0730, 0.0928, 0.0107] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)alpha data (1, 2)-0.0006(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#209): [4.1668, 4.0621, 0.1899, 0.1901, 9.935e-17, 3.677e-15, 0.0000, 0.0854, 0.0849, 0.0039] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time alpha data alpha\_fit 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 (3, 0)0.0000 (2, 1)(1, 2)-0.0002(0, 3)

Time

No\_up | NLLA No\_up(#210): [4.0537, 3.9377, 0.1889, 0.2030, 1.083e-14, 1.516e-16, 0.0000, 0.0874, 0.0945, 0.0097] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 0.0010 Order Three Moms alpha = COV/Var0.0005 0.0000 (3, 0)-0.0005(2, 1)(1, 2)alpha data -0.0010(0, 3)alpha fit

Time

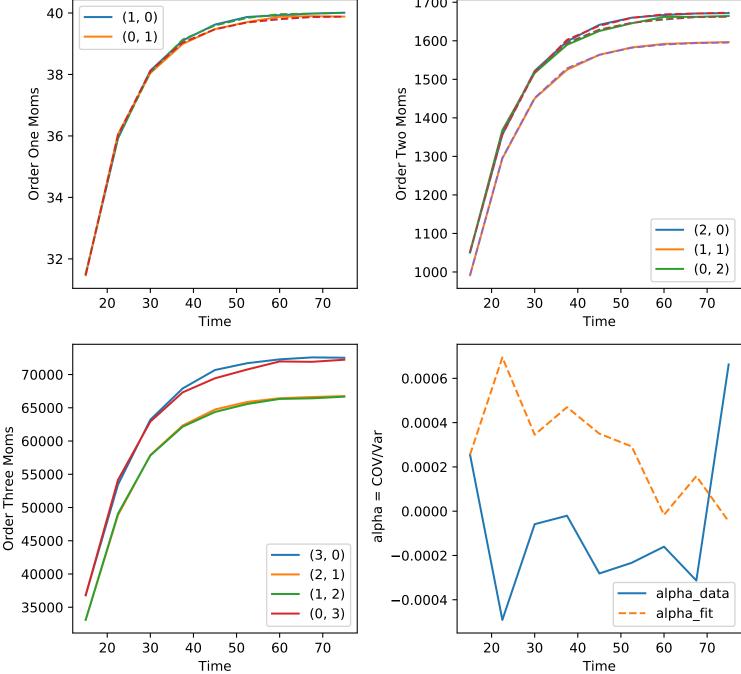
Time

No\_up | NLLA No\_up(#211): [4.0704, 4.0253, 0.1887, 0.1820, 1.75e-05, 1.809e-29, 0.0024, 0.0851, 0.0812, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha data alpha fit 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)-0.0004(0, 3)

Time

Time

No\_up | NLLA No\_up(#212): [3.2623, 4.1898, 0.1274, 0.2281, 0.0005052, 2.444e-17, 0.0000, 0.0660, 0.1018, 0.0211] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 0.0002 0.0000



No\_up | NLLA No\_up(#213): [3.9091, 4.1277, 0.1694, 0.2036, 0.000186, 8.174e-20, 0.0000, 0.0791, 0.0911, 0.0091] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0012 alpha data alpha fit 0.0010 0.0008 alpha = COV/Var0.0006 0.0004 0.0002 (3, 0)0.0000 (2, 1)(1, 2)-0.0002(0, 3)-0.0004

Time

Order Three Moms

Time

No\_up | NLLA No\_up(#214): [4.1214, 3.8673, 0.2152, 0.1805, 4.988e-09, 1.999e-05, 0.0122, 0.0996, 0.0845, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0020 0.0015 Order Three Moms alpha = COV/Var 0.0010 0.0005 0.0000 (3, 0)(2, 1)-0.0005alpha\_data (1, 2)(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#215): [4.1750, 3.3100, 0.2273, 0.1383, 3.066e-09, 0.0005934, 0.0201, 0.1025, 0.0724, 0.0064] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 alpha data alpha fit 0.0008 **Order Three Moms** 0.0006 alpha = COV/Var 0.0004 0.0002 (3, 0)0.0000 (2, 1)(1, 2)(0, 3)-0.0002

Time

Time

No\_up | NLLA No\_up(#216): [3.9955, 3.8522, 0.1793, 0.1740, 2.017e-24, 4.485e-19, 0.0000, 0.0794, 0.0777, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0006 alpha\_fit 0.0004 Order Three Moms alpha = COV/Var 0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)-0.0006(1, 2)(0, 3)-0.0008

Time

Time

No\_up | NLLA No\_up(#217): [3.8136, 3.9546, 0.1753, 0.1951, 1.536e-05, 1.756e-29, 0.0000, 0.0807, 0.0884, 0.0078] 1700 40 (1, 0)(0, 1)1600 38 1500 Order J Order J MOM 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 70 60 Time Time 75000 0.00125 70000 0.00100 65000 Order Three Moms 0.00075 COV/Var 60000 0.00050 55000 alpha\_data alpha = alpha fit 0.00025 50000 0.00000 45000 (3, 0)-0.0002540000 (2, 1)(1, 2)35000 -0.00050(0, 3)50 20 30 40 50 60 70 20 30 40 60 70

Time

Time

No\_up | NLLA No\_up(#218): [4.0375, 4.0835, 0.1839, 0.1913, 5.907e-15, 1.84e-14, 0.0000, 0.0831, 0.0855, 0.0038] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms 0.0004 alpha = COV/Var0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)alpha data -0.0004(0, 3)alpha fit 

Time

Time

No\_up | NLLA No\_up(#219): [4.2108, 4.0397, 0.1868, 0.1877, 8.568e-05, 1.288e-23, 0.0000, 0.0848, 0.0831, 0.0034] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0003 alpha fit 0.0002 **Order Three Moms** alpha = COV/Var 0.0001 0.0000 (3, 0)(2, 1)-0.0001(1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#220): [3.9987, 4.0040, 0.1806, 0.1833, 2.047e-15, 1.034e-16, 0.0000, 0.0807, 0.0820, 0.0009] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0008 alpha fit 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)(1, 2)

-0.0006

Time

(0, 3)

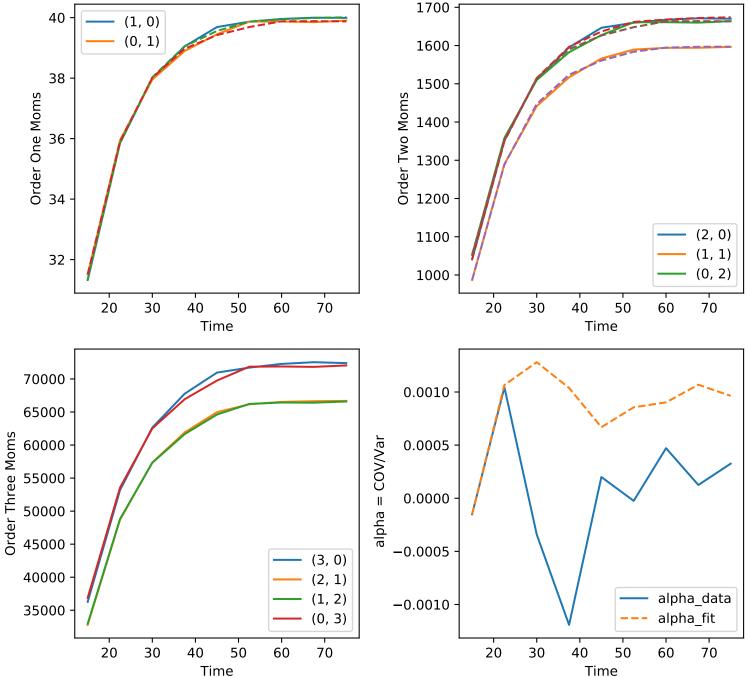
Time

No\_up | NLLA No\_up(#221): [4.1162, 3.9831, 0.1880, 0.1934, 7.785e-06, 2.699e-07, 0.0000, 0.0850, 0.0886, 0.0051] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 0.0006 **Order Three Moms** alpha = COV/Var 0.0004 alpha\_data 0.0002 alpha fit 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)(0, 3)-0.0006

Time

Time

No\_up | NLLA No\_up(#222): [3.7358, 3.9646, 0.1651, 0.2034, 0.0001413, 2.861e-21, 0.0000, 0.0775, 0.0929, 0.0111] (1, 0)(0, 1) 



No\_up | NLLA No\_up(#223): [4.1105, 3.8184, 0.2031, 0.1697, 1.65e-16, 0.0001394, 0.0087, 0.0913, 0.0797, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 0 January 1300 Jan Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)30 40 50 60 70 20 30 40 50 60 70 20 Time Time 0.00075 70000 0.00050 65000 0.00025 **Order Three Moms** COV/Var 60000 0.00000 55000 alpha = 50000 -0.00025 45000 -0.00050(3, 0)40000 (2, 1)-0.00075alpha data (1, 2)35000 alpha fit (0, 3)-0.00100

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No\_up | NLLA No\_up(#224): [4.0381, 3.9685, 0.1942, 0.1806, 5.2e-14, 7.088e-13, 0.0050, 0.0883, 0.0813, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0005 Order Three Moms alpha = COV/Var0.0000 -0.0005(3, 0)(2, 1)alpha data (1, 2)-0.0010(0, 3)alpha fit Time Time

No\_up | NLLA No\_up(#225): [4.1143, 3.8972, 0.1863, 0.1806, 2.435e-11, 9.891e-13, 0.0000, 0.0834, 0.0814, 0.0016] (1, 0)(0, 1)Order One Moms **Order Two Moms** (2, 0)(1, 1)(0, 2)Time Time alpha\_data 0.0006 alpha\_fit 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 -0.0002 (3, 0)(2, 1)-0.0004(1, 2)

(0, 3)

Time

-0.0006

Time

No\_up | NLLA No\_up(#226): [4.1593, 4.0073, 0.1940, 0.1839, 3.27e-22, 9.151e-15, 0.0023, 0.0874, 0.0833, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 alpha data alpha\_fit 0.0005 alpha = COV/Var0.0000 -0.0005 (3, 0)(2, 1)-0.0010(1, 2)(0, 3)

Time

**Order Three Moms** 

Time

No\_up | NLLA No\_up(#227): [4.0813, 3.8303, 0.1858, 0.1726, 4.341e-14, 4.244e-14, 0.0006, 0.0832, 0.0769, 0.0000] (1, 0) (0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha\_data 0.0004 alpha\_fit 0.0002 **Order Three Moms** alpha = COV/Var0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#228): [4.0538, 4.0611, 0.1838, 0.1892, 1.892e-15, 4.627e-18, 0.0000, 0.0824, 0.0840, 0.0035] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0008 alpha fit 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)-0.0004(0, 3)

Time

Time

No\_up | NLLA No\_up(#229): [4.1097, 3.8776, 0.1946, 0.1785, 1.047e-17, 4.992e-15, 0.0047, 0.0871, 0.0816, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 alpha\_data 0.0002 alpha\_fit 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)-0.0004

Time

Time

No\_up | NLLA No\_up(#230): [4.0626, 3.9072, 0.1973, 0.1814, 1.412e-21, 2.84e-14, 0.0065, 0.0893, 0.0835, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order J Order J MOM 1400 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 70 60 Time Time 75000 0.00125 70000 0.00100 65000 0.00075 Order Three Moms COV/Var 60000 0.00050 55000 alpha = 0.00025 50000 0.00000 45000 (3, 0)-0.0002540000 (2, 1)alpha data (1, 2)35000 -0.00050alpha fit (0, 3)40 50 50 60 70 20 30 60 70 20 30 40

Time

Time

No\_up | NLLA No\_up(#231): [4.0445, 4.0813, 0.1929, 0.1861, 1.31e-13, 1.053e-14, 0.0049, 0.0869, 0.0838, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)alpha\_data (1, 2)-0.0004(0, 3)alpha fit 

Time

Time

No\_up | NLLA No\_up(#232): [4.2399, 3.9919, 0.1900, 0.2018, 0.0001006, 1.59e-13, 0.0000, 0.0879, 0.0919, 0.0098] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 20 30 40 50 60 70 20 30 40 50 60 70 Time Time 0.00125 70000 0.00100 65000 0.00075 Order Three Moms alpha = COV/Var60000 0.00050 55000 alpha data 0.00025 alpha\_fit 50000 0.00000 45000 (3, 0)-0.0002540000 (2, 1)-0.00050(1, 2)35000 (0, 3)-0.00075

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Time

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Time

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No\_up | NLLA No\_up(#233): [4.2592, 3.8274, 0.2161, 0.1671, 2.676e-17, 0.0002112, 0.0121, 0.0971, 0.0795, 0.0000] (1, 0)(0, 1)Order One Moms **Order Two Moms** (2, 0)(1, 1)(0, 2)Time Time 0.0014 alpha data alpha fit 0.0012 0.0010 **Order Three Moms** alpha = COV/Var0.0008 0.0006 0.0004 (3, 0)0.0002 (2, 1)0.0000 (1, 2)(0, 3)-0.0002

Time

Time

No\_up | NLLA No\_up(#234): [3.9951, 3.2029, 0.2147, 0.1328, 3.091e-21, 0.0007744, 0.0202, 0.0947, 0.0728, 0.0105] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha\_data alpha fit 0.0006 Order Three Moms alpha = COV/Var 0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)

-0.0004

Time

Time

No\_up | NLLA No\_up(#235): [4.2718, 4.0309, 0.1914, 0.1842, 1.126e-19, 1.035e-22, 0.0000, 0.0844, 0.0817, 0.0015] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 -0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)(2, 1)alpha\_data (1, 2)-0.0004(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#236): [4.2119, 3.3602, 0.2304, 0.1329, 1.792e-08, 0.0005007, 0.0215, 0.1035, 0.0684, 0.0001] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 **Order Three Moms** alpha = COV/Var0.0004 0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004alpha data (1, 2)(0, 3)alpha fit -0.0006

Time

Time

No\_up | NLLA No\_up(#237): [3.9165, 3.8522, 0.1791, 0.1770, 4.156e-19, 5.994e-18, 0.0020, 0.0794, 0.0805, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha\_data alpha\_fit 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002 (3, 0)(2, 1)(1, 2)-0.0004(0, 3)

Time

Time

No\_up | NLLA No\_up(#238): [4.1405, 3.9935, 0.2050, 0.1826, 4.322e-15, 9.197e-16, 0.0078, 0.0935, 0.0828, 0.0000] (1, 0) (0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 0.0010 Order Three Moms alpha = COV/Var0.0005 alpha\_data alpha\_fit 0.0000 (3, 0)(2, 1)(1, 2)-0.0005(0, 3)

Time

Time

No\_up | NLLA No\_up(#239): [3.9426, 3.9900, 0.1790, 0.1883, 3.226e-18, 2.375e-15, 0.0000, 0.0805, 0.0847, 0.0038] (1, 0) (0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 alpha\_data alpha\_fit 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 0.0002 (3, 0)0.0000 (2, 1)

(1, 2)

(0, 3)

Time

-0.0002

Time

No\_up | NLLA No\_up(#240): [3.7726, 3.8139, 0.1631, 0.1861, 0.0001572, 5.326e-16, 0.0000, 0.0752, 0.0835, 0.0071] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 60 70 Time Time 0.00100 alpha data 70000 alpha fit 0.00075 65000 0.00050 Order Three Moms COV/Var 60000 0.00025 55000 0.00000 alpha = 50000 -0.0002545000 (3, 0)-0.0005040000 (2, 1)

(1, 2)

(0, 3)

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Time

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-0.00075

-0.00100

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Time

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No\_up | NLLA No\_up(#241): [3.9954, 4.1933, 0.1809, 0.1964, 3.858e-15, 1.268e-24, 0.0000, 0.0811, 0.0886, 0.0026] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0005 0.0004 Order Three Moms alpha = COV/Var0.0003 0.0002 0.0001 (3, 0)0.0000 (2, 1)-0.0001alpha data (1, 2)(0, 3)alpha fit -0.0002

Time

Time

No\_up | NLLA No\_up(#242): [2.1169, 4.0590, 0.0394, 0.2823, 0.001381, 5.98e-16, 0.0000, 0.0416, 0.1255, 0.0550] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha\_data alpha\_fit 0.0015 Order Three Moms alpha = COV/Var0.0010 0.0005 0.0000 (3, 0)(2, 1)(1, 2)-0.0005(0, 3)

Time

Time

No\_up | NLLA No\_up(#243): [4.0826, 4.0134, 0.1857, 0.1891, 1.548e-19, 5.845e-16, 0.0000, 0.0837, 0.0856, 0.0028] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 Order Three Moms alpha = COV/Var 0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)alpha data 

(0, 3)

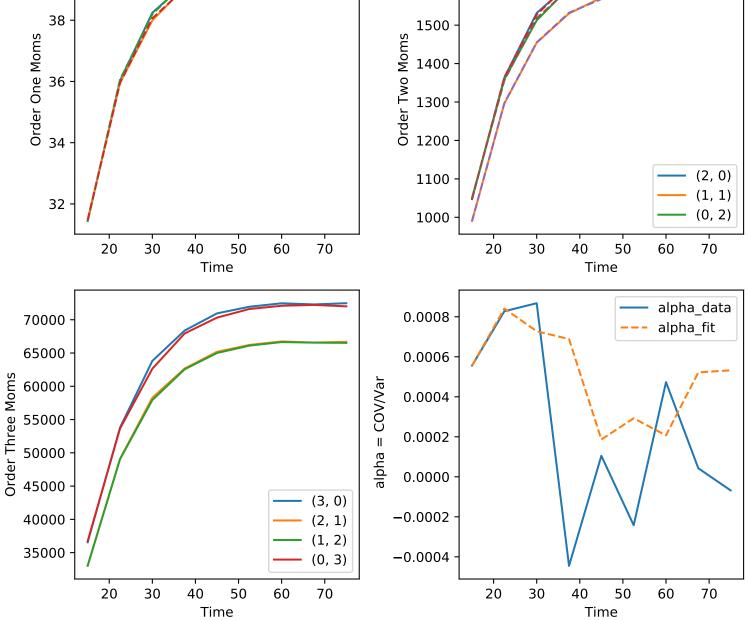
Time

-0.0006

Time

alpha fit

No\_up | NLLA No\_up(#244): [3.5815, 3.9985, 0.1452, 0.2158, 0.0003937, 3.446e-17, 0.0000, 0.0714, 0.0976, 0.0180] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)



No\_up | NLLA No\_up(#245): [4.0301, 3.7519, 0.2178, 0.1663, 2.762e-19, 0.0002055, 0.0167, 0.1001, 0.0805, 0.0000] (1, 0) (0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 0.0010 Order Three Moms alpha = COV/Var0.0005 0.0000 (3, 0)(2, 1)-0.0005alpha data (1, 2)(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#246): [4.0534, 3.8672, 0.1927, 0.1775, 4.997e-18, 8.957e-17, 0.0035, 0.0880, 0.0810, 0.0000] 1700 -(1, 0)40 (0, 1)1600 38 1500 Order One Moms Order Two Moms 1400 36 1300 34 1200 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 70 60 Time Time 0.0010 70000 0.0008 0.0006 Order Three Moms alpha = COV/Var 60000 0.0004 alpha\_data 0.0002 alpha fit 50000 0.0000 (3, 0)-0.000240000 (2, 1)(1, 2)-0.0004(0, 3)

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Time

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Time

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No\_up | NLLA No\_up(#247): [3.1917, 1.4703, 0.1181, 0.1687, 0.0006308, 0.00186, 0.0000, 0.0635, 0.1071, 0.0988] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0030 alpha fit 0.0025 Order Three Moms 0.0020 alpha = COV/Var0.0015 0.0010 0.0005 (3, 0)(2, 1)0.0000 (1, 2)

-0.0005

Time

(0, 3)

Time

No\_up | NLLA No\_up(#248): [4.0830, 3.8344, 0.1873, 0.1742, 1.732e-31, 4.178e-29, 0.0000, 0.0851, 0.0784, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0000 -0.0001Order Three Moms COV/Var -0.0002alpha = -0.0003(3, 0)(2, 1)-0.0004alpha\_data (1, 2)(0, 3)alpha fit -0.0005

Time

Time

No\_up | NLLA No\_up(#249): [3.9509, 3.9348, 0.1771, 0.1939, 7.433e-05, 6.232e-17, 0.0000, 0.0813, 0.0881, 0.0072] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 alpha\_data alpha\_fit 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)

(0, 3)

Time

-0.0004

Time

No\_up | NLLA No\_up(#250): [3.8827, 3.9146, 0.1748, 0.1781, 2.276e-23, 4.444e-14, 0.0000, 0.0780, 0.0792, 0.0010] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0015 alpha fit 0.0010 Order Three Moms alpha = COV/Var0.0005 0.0000 (3, 0)(2, 1)(1, 2)-0.0005(0, 3)

Time

Time

No\_up | NLLA No\_up(#251): [3.9392, 3.7761, 0.1933, 0.1733, 2.311e-17, 3.351e-14, 0.0049, 0.0899, 0.0789, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)60 70 20 30 20 30 40 50 40 50 60 70 Time Time 70000 0.00075 65000 0.00050 Order Three Moms COV/Var 60000 0.00025 55000 alpha = 0.00000 50000 -0.00025 45000 (3, 0)40000 (2, 1)-0.00050alpha data (1, 2)35000 alpha fit (0, 3)-0.00075

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Time

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Time

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No\_up | NLLA No\_up(#252): [2.4647, 4.1794, 0.0638, 0.2828, 0.001188, 1.767e-21, 0.0000, 0.0494, 0.1270, 0.0509] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0025 alpha\_fit 0.0020 **Order Three Moms** alpha = COV/Var0.0015 0.0010 (3, 0)0.0005 (2, 1)(1, 2)0.0000 (0, 3)

Time

Time

No\_up | NLLA No\_up(#253): [3.5172, 4.1564, 0.1786, 0.1899, 0.0004104, 1.18e-15, 0.0209, 0.0861, 0.0857, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 Order Three Moms alpha = COV/Var 0.0005 0.0000 (3, 0)(2, 1)-0.0005(1, 2)alpha data (0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#254): [4.0969, 3.8418, 0.1886, 0.1754, 3.612e-17, 2.655e-17, 0.0009, 0.0854, 0.0793, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha data alpha fit 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)-0.0004(0, 3)

Time

Time

No\_up | NLLA No\_up(#255): [4.0901, 3.9548, 0.1831, 0.1810, 7.354e-22, 8.3e-13, 0.0000, 0.0807, 0.0801, 0.0021] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 alpha\_data alpha\_fit 0.0008 alpha = COV/Var 0.0006 0.0004 0.0002 (3, 0)0.0000 (2, 1)(1, 2)-0.0002(0, 3)

Time

Time

**Order Three Moms** 

No\_up | NLLA No\_up(#256): [3.9632, 4.0383, 0.1716, 0.1924, 8.584e-05, 1.971e-08, 0.0000, 0.0759, 0.0860, 0.0055] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha\_data alpha\_fit 0.0006 **Order Three Moms** 0.0004 alpha = COV/Var 0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)-0.0004(0, 3)

-0.0006

Time

Time

No\_up | NLLA No\_up(#257): [4.0787, 4.0061, 0.1865, 0.1977, 1.202e-07, 2.686e-10, 0.0000, 0.0844, 0.0918, 0.0057] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002alpha data (1, 2)-0.0004(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#258): [4.0450, 3.8898, 0.1858, 0.1774, 1.615e-16, 2.159e-14, 0.0021, 0.0824, 0.0802, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 **Order Three Moms** alpha = COV/Var0.0000 -0.0002(3, 0)-0.0004(2, 1)(1, 2)alpha\_data (0, 3)alpha fit -0.0006

Time

Time

No\_up | NLLA No\_up(#259): [2.5466, 4.0085, 0.1503, 0.1813, 0.001138, 1.531e-21, 0.0463, 0.0857, 0.0811, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order January 1300 and 1300 an Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 30 40 50 60 70 20 30 40 50 60 70 20 Time Time 0.00150 alpha data 70000 alpha\_fit 0.00125 65000 0.00100 COV/Var 60000 0.00075 55000 0.00050 alpha = 50000 0.00025 45000 (3, 0)0.00000 40000 (2, 1)-0.00025(1, 2)

(0, 3)

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Time

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Time

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Order Three Moms

35000

No\_up | NLLA No\_up(#260): [3.8287, 4.1049, 0.1745, 0.1986, 2.854e-05, 1.931e-08, 0.0038, 0.0762, 0.0925, 0.0031] (1, 0) (0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0005 Order Three Moms alpha = COV/Var0.0000 (3, 0)-0.0005(2, 1)(1, 2)alpha data (0, 3)alpha fit -0.0010

Time

Time

No\_up | NLLA No\_up(#261): [4.0650, 3.8495, 0.1923, 0.1761, 7.333e-18, 7.373e-15, 0.0039, 0.0865, 0.0799, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1) (0, 2)Time Time alpha\_data 0.0010 alpha\_fit 0.0008 **Order Three Moms** 0.0006 alpha = COV/Var 0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)-0.0004(0, 3)

Time

Time

No\_up | NLLA No\_up(#262): [4.0553, 3.9604, 0.1980, 0.1810, 1.404e-17, 1.469e-16, 0.0068, 0.0895, 0.0820, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0014 0.0012 0.0010 Order Three Moms alpha = COV/Var 0.0008 0.0006 alpha data alpha fit 0.0004 0.0002 (3, 0)(2, 1)0.0000 (1, 2)-0.0002(0, 3)

Time

Time

No\_up | NLLA No\_up(#263): [3.9833, 4.0666, 0.1793, 0.1907, 1.013e-16, 3.447e-19, 0.0000, 0.0800, 0.0858, 0.0031] (1, 0)(0, 1)Order Two Moms 1300 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)alpha data (0, 3)alpha fit -0.0004

Time

Time

No up | NLLA No up(#264): [4.2250, 4.0846, 0.1912, 0.1887, 5.854e-06, 1.71e-23, 0.0000, 0.0856, 0.0843, 0.0019] 1700 40 (1, 0)(0, 1)1600 38 1500 0 January 1300 Jan Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)50 60 70 40 50 20 30 40 20 30 60 70 Time Time 0.00125 alpha\_data 70000 alpha\_fit 0.00100 65000 **Order Three Moms** 60000 0.00075 COV/Var 55000 0.00050 alpha = 50000 0.00025 45000 0.00000 (3, 0)40000 (2, 1)-0.00025(1, 2)35000 (0, 3)-0.00050

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Time

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Time

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No\_up | NLLA No\_up(#265): [4.0601, 3.9814, 0.1890, 0.1803, 6.405e-15, 1.068e-19, 0.0035, 0.0840, 0.0806, 0.0000] (1, 0)(0, 1)Order Two Moms 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.00100 0.00075 Order Three Moms alpha = COV/Var0.00050 0.00025 0.00000 (3, 0)-0.00025(2, 1)alpha data (1, 2)-0.00050alpha fit (0, 3)

Time

Time

No\_up | NLLA No\_up(#266): [4.0810, 4.0670, 0.1872, 0.1974, 3.447e-17, 2.761e-19, 0.0000, 0.0850, 0.0905, 0.0048] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0005 **Order Three Moms** alpha = COV/Var0.0000 -0.0005 (3, 0)(2, 1)(1, 2)alpha data -0.0010

(0, 3)

Time

Time

alpha fit

No\_up | NLLA No\_up(#267): [3.8930, 4.1046, 0.1682, 0.2023, 0.00019, 3.113e-15, 0.0000, 0.0783, 0.0901, 0.0093] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha\_data alpha\_fit 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)-0.0004(0, 3)

Time

Time

No\_up | NLLA No\_up(#268): [4.0586, 3.8568, 0.1899, 0.1766, 9.219e-14, 1.648e-21, 0.0039, 0.0848, 0.0800, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 0.0004 Order Three Moms alpha = COV/Var 0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)(1, 2)alpha data -0.0006(0, 3)alpha fit 

Time

Time

No\_up | NLLA No\_up(#269): [4.1342, 3.9098, 0.1914, 0.1881, 6.742e-14, 4.509e-14, 0.0000, 0.0875, 0.0853, 0.0050] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.00100 0.00075 **Order Three Moms** 0.00050 COV/Var 0.00025 alpha = 0.00000 (3, 0)-0.00025(2, 1)alpha data (1, 2)-0.00050alpha fit (0, 3)

Time

Time

No\_up | NLLA No\_up(#270): [3.9151, 3.9265, 0.1678, 0.1797, 0.0001047, 4.956e-32, 0.0000, 0.0740, 0.0797, 0.0018] (1, 0) (0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha\_data alpha fit 0.0004 Order Three Moms 0.0002 alpha = COV/Var 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)(0, 3)-0.0006

Time

Time

No\_up | NLLA No\_up(#271): [3.9101, 3.8728, 0.1753, 0.1797, 2.348e-14, 1.023e-13, 0.0000, 0.0777, 0.0805, 0.0023] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0005 0.0004 Order Three Moms alpha = COV/Var0.0003 0.0002 0.0001 0.0000 (3, 0)(2, 1)-0.0001alpha\_data (1, 2)(0, 3)-0.0002alpha fit

Time

Time

No\_up | NLLA No\_up(#272): [4.1222, 4.0318, 0.1972, 0.1854, 6.818e-22, 1.015e-21, 0.0034, 0.0905, 0.0845, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 0.0002 **Order Three Moms** COV/Var 0.0000 -0.0002-0.0004(3, 0)-0.0006(2, 1)(1, 2)alpha\_data -0.0008(0, 3)alpha fit

-0.0010

Time

Time

No\_up | NLLA No\_up(#273): [2.4543, 4.1336, 0.0629, 0.2713, 0.001188, 1.547e-08, 0.0000, 0.0489, 0.1208, 0.0467] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0015 alpha fit 0.0010 Order Three Moms alpha = COV/Var0.0005 0.0000 (3, 0)(2, 1)(1, 2)-0.0005(0, 3)

Time

Time

No\_up | NLLA No\_up(#274): [3.9084, 3.4502, 0.2076, 0.1416, 1.874e-14, 0.0003699, 0.0170, 0.0928, 0.0702, 0.0000] 1700 40 (1, 0)(0, 1) 1600 38 1500 0 1400 Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 20 30 40 50 60 70 20 30 40 50 60 70 Time Time 0.00100 alpha data 70000 alpha fit 0.00075 65000 0.00050 Order Three Moms COV/Var 60000 0.00025 55000 0.00000 50000 alpha -0.0002545000 -0.00050(3, 0)40000 (2, 1)-0.00075(1, 2)35000 (0, 3)-0.00100

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Time

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No\_up | NLLA No\_up(#275): [4.1270, 3.9559, 0.1939, 0.1815, 5.112e-16, 2.103e-16, 0.0029, 0.0878, 0.0825, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 Order Three Moms alpha = COV/Var0.0000 alpha data alpha fit -0.0002 (3, 0)(2, 1)-0.0004(1, 2)

(0, 3)

Time

-0.0006

Time

No up | NLLA No up(#276): [4.1363, 3.9621, 0.1869, 0.1973, 4.411e-13, 1.278e-16, 0.0000, 0.0836, 0.0912, 0.0067] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 60 70 Time Time 0.0012 70000 0.0010 65000 0.0008 **Order Three Moms** alpha = COV/Var60000 0.0006 55000 0.0004 50000 0.0002 45000 0.0000 (3, 0)40000 (2, 1)-0.0002alpha data (1, 2)35000 (0, 3)alpha fit -0.0004

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No up | NLLA No up(#277): [4.3169, 1.7342, 0.3159, 0.0157, 6.894e-14, 0.001563, 0.0649, 0.1425, 0.0348, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 70 60 Time Time 75000 0.0025 alpha\_data 70000 alpha\_fit 0.0020 65000 Order Three Moms alpha = COV/Var 0.0015 60000 55000 0.0010 50000 0.0005 45000 0.0000 (3, 0)40000 (2, 1)-0.0005(1, 2)35000 (0, 3)-0.001040 50 20 30 40 50 60 70 20 30 60 70

Time

Time

No\_up | NLLA No\_up(#278): [4.0297, 3.9691, 0.1819, 0.1912, 3.74e-12, 1.697e-16, 0.0000, 0.0812, 0.0860, 0.0058] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0012 0.0010 0.0008 alpha = COV/Var0.0006 0.0004 0.0002 (3, 0)0.0000 (2, 1)(1, 2)alpha\_data -0.0002(0, 3)alpha fit

Time

**Order Three Moms** 

Time

No\_up | NLLA No\_up(#279): [4.0239, 3.1388, 0.2420, 0.1227, 1.956e-08, 0.0005925, 0.0296, 0.1119, 0.0677, 0.0001] (1, 0) (0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha\_data alpha\_fit 0.0015 Order Three Moms alpha = COV/Var0.0010 0.0005 (3, 0)(2, 1)0.0000 (1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#280): [4.0498, 3.8695, 0.1944, 0.1770, 1.66e-26, 1.156e-15, 0.0051, 0.0880, 0.0805, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 04 L Mom ow 1400 ow 1300 ow 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)50 60 70 20 50 20 40 30 40 30 60 70 Time Time 75000 0.00100 70000 0.00075 65000 0.00050 Order Three Moms COV/Var 60000 0.00025 55000 alpha = 50000 0.00000 45000 -0.00025(3, 0)40000 (2, 1)alpha data -0.00050(1, 2)35000 alpha fit (0, 3)-0.0007520 20 40 50 30 40 60 30 60 70 50 70

Time

Time

No\_up | NLLA No\_up(#281): [4.1370, 3.9212, 0.1865, 0.1799, 3.091e-24, 1.855e-14, 0.0000, 0.0831, 0.0805, 0.0011] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha\_data alpha\_fit 0.0006 0.0004 Order Three Moms alpha = COV/Var 0.0002 0.0000 -0.0002-0.0004(3, 0)(2, 1)-0.0006(1, 2)(0, 3)-0.0008

Time

Time

No\_up | NLLA No\_up(#282): [3.9232, 4.0702, 0.1755, 0.1858, 2.767e-16, 2.257e-19, 0.0000, 0.0778, 0.0824, 0.0015] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0007 0.0006 Order Three Moms alpha = COV/Var0.0005 0.0004 0.0003 0.0002 (3, 0)(2, 1)0.0001 (1, 2)alpha data (0, 3)alpha fit 0.0000

Time

Time

No\_up | NLLA No\_up(#283): [4.1295, 3.9052, 0.1865, 0.1821, 2.442e-05, 5.208e-17, 0.0000, 0.0841, 0.0812, 0.0033] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha data alpha\_fit 0.0006 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 (3, 0)-0.0002(2, 1)

(1, 2)

(0, 3)

Time

-0.0004

Time

No\_up | NLLA No\_up(#284): [4.1620, 3.8961, 0.2010, 0.1761, 6.33e-20, 3.238e-05, 0.0065, 0.0903, 0.0799, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 0.0006 **Order Three Moms** alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)alpha data -0.0004(0, 3)alpha fit -0.0006

Time

Time

No\_up | NLLA No\_up(#285): [4.0271, 3.9652, 0.1883, 0.1819, 1.312e-17, 8.627e-12, 0.0032, 0.0846, 0.0828, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 (3, 0)0.0000 (2, 1)alpha data (1, 2)(0, 3)alpha fit

-0.0002

Time

Time

No\_up | NLLA No\_up(#286): [4.1007, 4.0963, 0.1866, 0.1806, 2.928e-05, 3.167e-08, 0.0013, 0.0840, 0.0782, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha data alpha fit 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)

-0.0004

Time

Time

No\_up | NLLA No\_up(#287): [3.9592, 3.9576, 0.1792, 0.1862, 7.698e-14, 3.907e-15, 0.0000, 0.0803, 0.0836, 0.0037] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 -0.0002-0.0004(3, 0)(2, 1)-0.0006alpha data (1, 2)(0, 3)-0.0008alpha fit

Time

Time

No\_up | NLLA No\_up(#288): [4.0921, 3.9033, 0.1951, 0.1791, 2.392e-19, 4.603e-15, 0.0046, 0.0882, 0.0813, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1400 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 70 60 Time Time 75000 0.0008 70000 0.0006 65000 0.0004 Order Three Moms alpha = COV/Var60000 0.0002 55000 0.0000 50000 -0.000245000 (3, 0)-0.000440000 (2, 1)alpha data (1, 2)-0.000635000 (0, 3)alpha fit -0.000840 50 20 40 60 70 20 30 60 70 30 50

Time

No\_up | NLLA No\_up(#289): [4.0312, 4.0448, 0.1933, 0.1859, 2.019e-14, 4.202e-15, 0.0049, 0.0873, 0.0846, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 **Order Three Moms** 0.0006 alpha = COV/Var 0.0004 0.0002 (3, 0)0.0000 (2, 1)(1, 2)alpha data -0.0002(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#290): [3.9988, 4.0187, 0.1855, 0.1824, 1.248e-10, 2.481e-14, 0.0024, 0.0831, 0.0818, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 70 30 20 30 40 50 60 20 40 50 60 70 Time Time 0.00100 70000 0.00075 65000 0.00050 Order Three Moms COV/Var 60000 0.00025 55000 alpha = 0.00000 50000 -0.00025 45000 (3, 0)40000 (2, 1)-0.00050alpha data (1, 2)35000 -0.00075alpha fit (0, 3)

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No\_up | NLLA No\_up(#291): [4.0790, 3.8829, 0.1904, 0.1768, 1.56e-21, 7.723e-19, 0.0024, 0.0858, 0.0796, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)(2, 1)(1, 2)alpha data -0.0004(0, 3)alpha fit

Time

**Order Three Moms** 

Time

No up | NLLA No up(#292): [3.8747, 4.0494, 0.1771, 0.1854, 1.5e-23, 5.829e-13, 0.0011, 0.0793, 0.0839, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 20 30 40 50 60 70 20 30 40 50 70 60 Time Time alpha\_data 0.00075 70000 alpha\_fit 65000 0.00050 COV/Var 60000 0.00025 55000 0.00000 50000 alpha -0.00025 45000 (3, 0)-0.0005040000 (2, 1)-0.00075(1, 2)35000 (0, 3)-0.0010040 50 20 30 40 50 60 70 20 30 60 70

Time

Time

Order Three Moms

No\_up | NLLA No\_up(#293): [4.1345, 3.9360, 0.2067, 0.1822, 7.083e-20, 3.495e-16, 0.0079, 0.0951, 0.0835, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 0.0010 **Order Three Moms** alpha = COV/Var 0.0005 0.0000 (3, 0)-0.0005(2, 1)(1, 2)alpha\_data (0, 3)alpha fit -0.0010

Time

Time

No\_up | NLLA No\_up(#294): [4.0386, 3.8288, 0.1877, 0.1746, 8.039e-22, 5.62e-17, 0.0036, 0.0833, 0.0788, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time alpha\_data 0.0008 alpha\_fit 0.0006 **Order Three Moms** alpha = COV/Var0.0004 0.0002 (3, 0)0.0000 (2, 1)(1, 2)(0, 3)-0.0002

Time

No\_up | NLLA No\_up(#295): [3.9893, 4.0636, 0.1898, 0.1825, 2.281e-20, 3.361e-16, 0.0048, 0.0850, 0.0812, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0009 0.0008 Order Three Moms alpha = COV/Var0.0007 0.0006 0.0005 (3, 0)(2, 1)0.0004 alpha\_data (1, 2)(0, 3)alpha fit 0.0003 

Time

No\_up | NLLA No\_up(#296): [3.7635, 4.2115, 0.1645, 0.2129, 0.0001658, 2.625e-19, 0.0000, 0.0770, 0.0959, 0.0113] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 20 30 40 50 60 70 20 30 40 50 70 60 Time Time 0.00100 70000 0.00075 65000 0.00050 Order Three Moms COV/Var 60000 0.00025 55000 0.00000 alpha = 50000 -0.0002545000 (3, 0)-0.0005040000 (2, 1)alpha data (1, 2)-0.0007535000 alpha fit (0, 3)

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Time

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Time

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No\_up | NLLA No\_up(#297): [4.0710, 3.9002, 0.1934, 0.1765, 2.802e-15, 1.421e-16, 0.0053, 0.0863, 0.0791, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.00100 0.00075 0.00050 **Order Three Moms** COV/Var 0.00025 alpha = 0.00000 -0.00025(3, 0)-0.00050(2, 1)alpha data (1, 2)-0.00075alpha fit (0, 3)

Time

No\_up | NLLA No\_up(#298): [3.3768, 3.9661, 0.1325, 0.2147, 0.0005025, 1.055e-09, 0.0000, 0.0681, 0.0959, 0.0197] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0004 alpha fit 0.0002 Order Three Moms COV/Var 0.0000 alpha -0.0002(3, 0)-0.0004(2, 1)(1, 2)-0.0006

(0, 3)

Time

Time

No\_up | NLLA No\_up(#299): [4.1669, 4.0546, 0.1886, 0.1833, 5.111e-17, 5.13e-15, 0.0009, 0.0832, 0.0817, 0.0000] (1, 0)(0, 1)Order J Order J Ord Order One Moms (2, 0)(1, 1)(0, 2)Time Time alpha data alpha fit 0.0006 alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)

Time

Order Three Moms

Time

No\_up | NLLA No\_up(#300): [4.1247, 3.9505, 0.1861, 0.1820, 6.695e-14, 1.648e-13, 0.0000, 0.0827, 0.0824, 0.0008] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha\_data 0.0005 alpha fit 0.0004 Order Three Moms alpha = COV/Var0.0003 0.0002 0.0001 0.0000 (3, 0)(2, 1)-0.0001(1, 2)-0.0002(0, 3)

Time

Time

No\_up | NLLA No\_up(#301): [4.0950, 4.0237, 0.1956, 0.1828, 8.309e-24, 9.12e-15, 0.0049, 0.0883, 0.0820, 0.0000] (1, 0)(0, 1) Order Two Moms 1300 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha = COV/Var0.0006 alpha data alpha fit 0.0004 (3, 0)0.0002 (2, 1)(1, 2)(0, 3)0.0000

Time

**Order Three Moms** 

Time

No\_up | NLLA No\_up(#302): [4.1833, 2.8104, 0.2483, 0.0957, 7.76e-17, 0.0007765, 0.0336, 0.1100, 0.0565, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)60 70 30 50 20 30 40 50 20 40 60 70 Time Time 0.00150 alpha data 70000 alpha fit 0.00125 65000 0.00100 Order Three Moms 60000 COV/Var 0.00075 55000 0.00050 alpha = 50000 0.00025 45000 (3, 0)0.00000 40000 (2, 1)(1, 2)-0.0002535000 (0, 3)

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Time

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Time

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No\_up | NLLA No\_up(#303): [4.1437, 4.1115, 0.1886, 0.1924, 2.053e-25, 1.221e-23, 0.0000, 0.0849, 0.0868, 0.0027] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0015 alpha fit 0.0010 Order Three Moms alpha = COV/Var0.0005 (3, 0)0.0000 (2, 1)(1, 2)

(0, 3)

Time

-0.0005

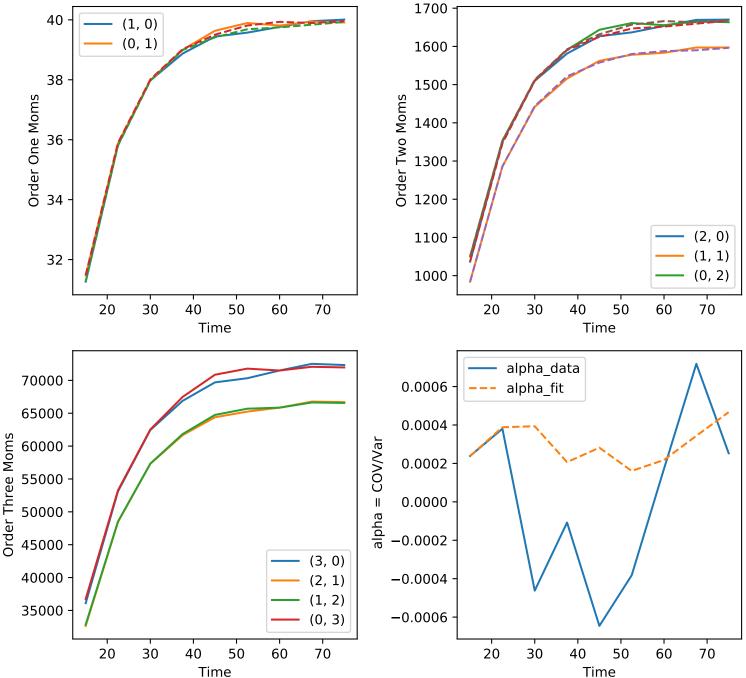
Time

No\_up | NLLA No\_up(#304): [4.1203, 4.0168, 0.1939, 0.1837, 1.439e-19, 4.461e-17, 0.0040, 0.0869, 0.0831, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 **Order Three Moms** alpha = COV/Var 0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)alpha\_data (0, 3)alpha fit -0.0004

Time

Time

No\_up | NLLA No\_up(#305): [3.9710, 3.9167, 0.1810, 0.1802, 9.598e-16, 1.094e-16, 0.0000, 0.0815, 0.0804, 0.0018] 1700 40 (1, 0)



No\_up | NLLA No\_up(#306): [3.8599, 4.0962, 0.1779, 0.2059, 2.162e-12, 1.671e-13, 0.0000, 0.0813, 0.0947, 0.0088] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 0.0010 **Order Three Moms** alpha = COV/Var0.0005 0.0000 (3, 0)-0.0005(2, 1)alpha\_data (1, 2)

(0, 3)

Time

-0.0010

Time

alpha fit

No\_up | NLLA No\_up(#307): [4.0617, 3.9902, 0.1836, 0.1850, 1.412e-19, 8.421e-19, 0.0004, 0.0815, 0.0827, 0.0024] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha data alpha\_fit 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)(1, 2)-0.0002(0, 3)

Time

Time

No\_up | NLLA No\_up(#308): [3.8331, 4.0252, 0.1722, 0.1853, 5.143e-16, 1.966e-16, 0.0000, 0.0765, 0.0826, 0.0020] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 Order Three Moms alpha = COV/Var0.0000 -0.0002(3, 0)(2, 1)-0.0004alpha data (1, 2)(0, 3)alpha fit 

Time

No\_up | NLLA No\_up(#309): [4.1069, 4.0147, 0.1916, 0.1821, 1.91e-14, 2.729e-18, 0.0039, 0.0849, 0.0817, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data alpha fit 0.0008 0.0006 alpha = COV/Var0.0004 0.0002 (3, 0)(2, 1)0.0000 (1, 2)(0, 3)-0.0002

Time

Order Three Moms

Time

No\_up | NLLA No\_up(#310): [3.9321, 4.0577, 0.1824, 0.2002, 6.15e-15, 1.142e-14, 0.0000, 0.0840, 0.0907, 0.0077] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 0.0010 Order Three Moms alpha = COV/Var 0.0005 0.0000 (3, 0)(2, 1)-0.0005alpha\_data (1, 2)(0, 3)alpha fit 

Time

No\_up | NLLA No\_up(#311): [3.5639, 4.1070, 0.1444, 0.2195, 0.0003963, 1.193e-09, 0.0000, 0.0710, 0.1004, 0.0158] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.00075 alpha\_fit 0.00050 0.00025 **Order Three Moms** COV/Var 0.00000 alpha = -0.00025-0.00050(3, 0)-0.00075(2, 1)(1, 2)-0.00100(0, 3)

Time

Time

No\_up | NLLA No\_up(#312): [4.0299, 4.0591, 0.1978, 0.1882, 1.149e-17, 2.556e-16, 0.0070, 0.0899, 0.0866, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 0.0010 Order Three Moms alpha = COV/Var0.0005 0.0000 -0.0005(3, 0)(2, 1)-0.0010(1, 2)alpha data (0, 3)alpha fit -0.0015

Time

Time

No\_up | NLLA No\_up(#313): [3.8577, 3.9429, 0.1756, 0.1840, 1.895e-15, 1.113e-15, 0.0000, 0.0793, 0.0834, 0.0019] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 **Order Three Moms** alpha = COV/Var0.0000 -0.0002-0.0004(3, 0)-0.0006(2, 1)(1, 2)alpha data -0.0008(0, 3)alpha fit

Time

Time

No up | NLLA No up(#314): [3.7884, 2.9301, 0.2281, 0.1025, 3.1e-15, 0.0007542, 0.0309, 0.1025, 0.0592, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 0 1400 Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)30 40 50 60 70 20 30 40 50 60 70 20 Time Time 0.00100 70000 0.00075 65000 **Order Three Moms** 0.00050 60000 COV/Var 55000 0.00025 alpha = 50000 0.00000 45000 -0.00025(3, 0)40000 (2, 1)-0.00050alpha data (1, 2)35000 alpha fit (0, 3)-0.0007540 50 20 30 40 20 30 60 70 50 60 70

Time

No\_up | NLLA No\_up(#315): [4.0350, 3.9067, 0.1838, 0.1816, 7.102e-15, 1.954e-14, 0.0000, 0.0828, 0.0819, 0.0024] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0006 alpha fit 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)(1, 2)-0.0006(0, 3)-0.0008

Time

Time

No\_up | NLLA No\_up(#316): [3.9646, 3.9505, 0.1795, 0.1821, 7.423e-18, 2.235e-18, 0.0000, 0.0803, 0.0814, 0.0020] 1700 40 (1, 0) (0, 1) 1600 38 1500 Order Two Moms Order One Moms 1400 36 1300 34 1200 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 60 70 Time Time 0.00150 alpha\_data 70000 alpha\_fit 0.00125 65000 0.00100 **Order Three Moms** COV/Var 60000 0.00075 55000 0.00050 alpha = 50000 0.00025 45000 (3, 0)0.00000 40000 (2, 1)-0.00025 (1, 2)35000 (0, 3)

-0.00050

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Time

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Time

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No\_up | NLLA No\_up(#317): [4.1327, 4.0690, 0.1885, 0.1969, 1.334e-16, 1.892e-15, 0.0000, 0.0850, 0.0897, 0.0053] (1, 0)(0, 1) Order J Order J Own J 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 0.0002 (3, 0)0.0000 (2, 1)alpha data (1, 2)-0.0002(0, 3)alpha fit

Time

Time

No up | NLLA No up(#318): [4.0437, 3.8836, 0.1840, 0.1753, 4.878e-19, 2.28e-24, 0.0019, 0.0810, 0.0782, 0.0000] (1, 0)(0, 1)W D J 1400 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 0.0000 Order Three Moms COV/Var -0.0002alpha = -0.0004-0.0006(3, 0)(2, 1)-0.0008(1, 2)alpha data (0, 3)alpha fit -0.0010

Time

No\_up | NLLA No\_up(#319): [3.9715, 3.9857, 0.1805, 0.1893, 2.056e-15, 4.461e-17, 0.0000, 0.0812, 0.0864, 0.0031] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)alpha data (1, 2)-0.0006(0, 3)alpha fit -0.0008

Time

Time

No\_up | NLLA No\_up(#320): [4.0994, 3.3730, 0.2146, 0.1373, 2.503e-18, 0.0004223, 0.0177, 0.0944, 0.0696, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.00050 0.00025 Order Three Moms COV/Var 0.00000 -0.00025alpha : -0.00050-0.00075(3, 0)(2, 1)-0.00100alpha data (1, 2)alpha fit (0, 3)-0.00125

Time

Time

No\_up | NLLA No\_up(#321): [4.0439, 4.1265, 0.1840, 0.1935, 1.265e-19, 2.532e-13, 0.0000, 0.0830, 0.0872, 0.0026] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 (3, 0)-0.0002(2, 1)alpha data (1, 2)(0, 3)alpha fit

-0.0004

Time

Time

No\_up | NLLA No\_up(#322): [1.2724, 4.1634, 0.0627, 0.2446, 0.001974, 1.202e-18, 0.0482, 0.0616, 0.1084, 0.0317] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0025 alpha fit 0.0020 0.0015 alpha = COV/Var0.0010 0.0005 0.0000 (3, 0)(2, 1)-0.0005(1, 2)

(0, 3)

Time

-0.0010

Time

**Order Three Moms** 

No\_up | NLLA No\_up(#323): [4.1549, 3.9606, 0.1881, 0.1824, 3.312e-17, 1.547e-23, 0.0000, 0.0840, 0.0806, 0.0028] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.00125 alpha data alpha fit 0.00100 0.00075 Order Three Moms COV/Var 0.00050 alpha = 0.00025 0.00000 (3, 0)(2, 1)-0.00025(1, 2)(0, 3)-0.00050

Time

No\_up | NLLA No\_up(#324): [4.0685, 4.1704, 0.1844, 0.1939, 2.001e-18, 7.122e-14, 0.0000, 0.0825, 0.0868, 0.0025] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0008 alpha fit 0.0006 **Order Three Moms** alpha = COV/Var 0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)-0.0004(0, 3)

Time

Time

No up | NLLA No up(#325): [4.0383, 3.9185, 0.1824, 0.1790, 8.3e-24, 9.104e-22, 0.0009, 0.0805, 0.0810, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 Order Three Moms COV/Var 0.0000 -0.0002alpha -0.0004(3, 0)(2, 1)-0.0006(1, 2)alpha data (0, 3)alpha fit -0.0008Time Time

No\_up | NLLA No\_up(#326): [3.8094, 4.1430, 0.1717, 0.1935, 3.071e-18, 7.35e-18, 0.0000, 0.0766, 0.0868, 0.0029] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004alpha data (1, 2)(0, 3)alpha fit -0.0006

Time

Time

No\_up | NLLA No\_up(#327): [3.9089, 3.8688, 0.1768, 0.1793, 1.043e-13, 7.454e-18, 0.0000, 0.0790, 0.0807, 0.0018] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 Order Three Moms COV/Var 0.0000 alpha = -0.0002 -0.0004 (3, 0)(2, 1)-0.0006(1, 2)alpha data (0, 3)alpha fit -0.0008

Time

Time

No\_up | NLLA No\_up(#328): [4.2864, 4.0382, 0.1935, 0.1849, 2.512e-14, 8.888e-14, 0.0000, 0.0864, 0.0828, 0.0009] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1400 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 40 50 60 70 20 30 40 50 70 30 60 Time Time 0.00050 alpha data 70000 alpha fit 0.00025 65000 0.00000 Order Three Moms COV/Var 60000 -0.0002555000 50000 alpha -0.0005045000 -0.00075(3, 0)40000 (2, 1)-0.00100(1, 2)35000 (0, 3)-0.00125

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Time

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Time

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No\_up | NLLA No\_up(#329): [4.0431, 4.0010, 0.1883, 0.1811, 3.903e-14, 1.647e-15, 0.0023, 0.0848, 0.0810, 0.0000] (1, 0)(0, 1) Order January 1300 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha data alpha fit 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)(1, 2)-0.0002(0, 3)

Time

Time

No\_up | NLLA No\_up(#330): [3.9680, 4.0757, 0.1829, 0.1843, 5.188e-19, 2.196e-15, 0.0021, 0.0817, 0.0821, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0003 Order Three Moms alpha = COV/Var0.0002 alpha data alpha\_fit 0.0001 (3, 0)0.0000 (2, 1)(1, 2)(0, 3)-0.0001

Time

Time

No\_up | NLLA No\_up(#331): [3.0280, 3.9056, 0.1083, 0.2323, 0.0007151, 7.509e-10, 0.0000, 0.0612, 0.1039, 0.0307] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0014 alpha data alpha fit 0.0012 **Order Three Moms** 0.0010 COV/Var 0.0008 alpha = 0.0006 0.0004 (3, 0)(2, 1)0.0002 (1, 2)

(0, 3)

Time

0.0000

Time

No\_up | NLLA No\_up(#332): [4.0090, 4.1272, 0.1781, 0.1867, 1.711e-21, 3.106e-25, 0.0000, 0.0779, 0.0834, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0006 alpha\_fit 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)(2, 1)(1, 2)-0.0004(0, 3)

Time

Time

No\_up | NLLA No\_up(#333): [4.0972, 4.1204, 0.1854, 0.1898, 3.209e-13, 3.496e-13, 0.0000, 0.0828, 0.0854, 0.0011] 1700 40 (1, 0)(0, 1)1600 38 1500 0 January 1300 Jan Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 50 60 70 30 40 50 20 30 40 20 60 70 Time Time 0.00100 70000 0.00075 65000 0.00050 Order Three Moms COV/Var 60000 0.00025 55000 alpha = 0.00000 50000 45000 -0.00025 (3, 0)40000 (2, 1)-0.00050alpha data (1, 2)35000 alpha fit (0, 3)-0.00075

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Time

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Time

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No\_up | NLLA No\_up(#334): [4.0096, 4.0169, 0.1900, 0.1844, 1.996e-16, 6.333e-19, 0.0045, 0.0852, 0.0840, 0.0000] (1, 0) (0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002alpha\_data (1, 2)(0, 3)alpha\_fit

Time

Time

No\_up | NLLA No\_up(#335): [3.7596, 4.1656, 0.1700, 0.1868, 3.696e-23, 2.598e-05, 0.0000, 0.0762, 0.0834, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.00050 0.00025 **Order Three Moms** COV/Var 0.00000 -0.00025 alpha -0.00050-0.00075(3, 0)(2, 1)-0.00100alpha data (1, 2)alpha fit (0, 3)

-0.00125

Time

Time

No\_up | NLLA No\_up(#336): [4.1238, 3.9570, 0.1851, 0.1889, 2.367e-05, 7.791e-20, 0.0000, 0.0829, 0.0853, 0.0046] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)alpha data (0, 3)alpha fit -0.0006

Time

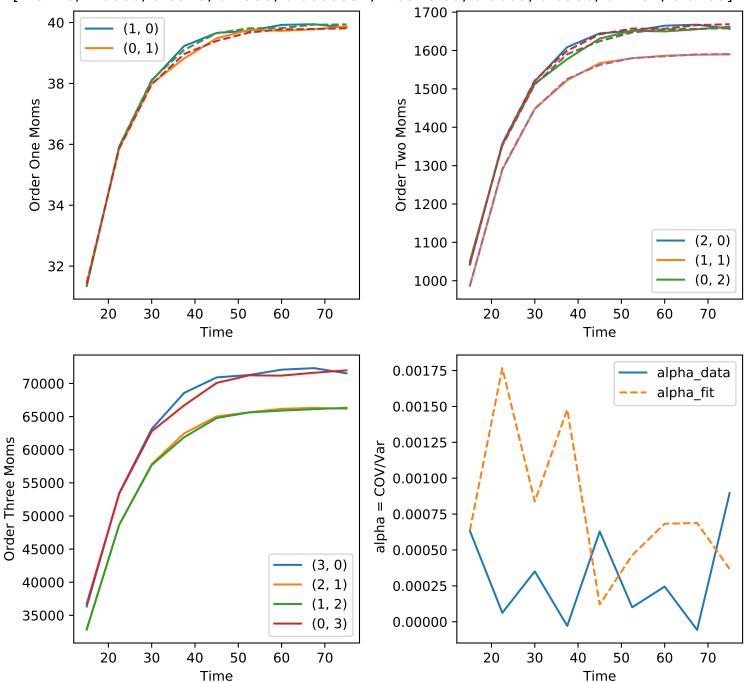
Time

No\_up | NLLA No\_up(#337): [4.0677, 3.9138, 0.1861, 0.1833, 1.649e-14, 4.481e-20, 0.0000, 0.0844, 0.0821, 0.0035] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)alpha\_data (1, 2)-0.0006(0, 3)alpha fit 

Time

Time

No\_up | NLLA No\_up(#338): [2.8448, 4.0086, 0.0923, 0.2598, 0.0009351, 1.831e-09, 0.0003, 0.0580, 0.1187, 0.0403]



No\_up | NLLA No\_up(#339): [3.9605, 4.1378, 0.1802, 0.1994, 2.56e-18, 5.669e-20, 0.0000, 0.0812, 0.0905, 0.0053] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 60 70 Time Time 0.00100 70000 0.00075 65000 **Order Three Moms** 0.00050 COV/Var 60000 0.00025 55000 alpha = 0.00000 50000 -0.00025 45000 (3, 0)40000 -0.00050(2, 1)alpha data (1, 2)35000 -0.00075alpha fit (0, 3)40 50 20 30 40 20 30 60 70 50 60 70

Time

Time

No\_up | NLLA No\_up(#340): [4.0678, 4.0509, 0.1899, 0.1820, 1.887e-14, 1.187e-14, 0.0024, 0.0855, 0.0806, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order J Ord Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 50 50 60 70 30 40 70 20 30 40 20 60 Time Time alpha\_data 70000 0.0008 alpha\_fit 65000 0.0006 Order Three Moms 60000 alpha = COV/Var0.0004 55000 0.0002 50000 45000 0.0000 (3, 0)40000 (2, 1)-0.0002(1, 2)35000 (0, 3)-0.0004

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Time

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Time

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No\_up | NLLA No\_up(#341): [4.0938, 3.9637, 0.1880, 0.1853, 3.639e-14, 4.204e-16, 0.0000, 0.0854, 0.0835, 0.0024] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0004 0.0002 0.0000 **Order Three Moms** alpha = COV/Var-0.0002-0.0004-0.0006-0.0008(3, 0)(2, 1)-0.0010alpha data (1, 2)(0, 3)alpha fit -0.0012

Time

Time

No\_up | NLLA No\_up(#342): [4.0127, 4.0166, 0.1818, 0.2047, 4.926e-08, 9.441e-09, 0.0000, 0.0813, 0.0954, 0.0087] 1700 40 (1, 0)(0, 1)1600 38 1500 Order J Mom 1400 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 20 50 60 70 20 30 40 50 30 40 60 70 Time Time 0.00150 70000 0.00125 65000 Order Three Moms COV/Var 60000 0.00100 0.00075 55000 alpha = 0.00050 50000 0.00025 45000 (3, 0)0.00000 40000 (2, 1)alpha data (1, 2)-0.0002535000 alpha fit (0, 3)

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Time

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Time

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No\_up | NLLA No\_up(#343): [4.0574, 3.8676, 0.1864, 0.1865, 7.881e-15, 6.784e-17, 0.0000, 0.0850, 0.0847, 0.0051] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 50 60 70 20 30 40 50 20 30 40 60 70 Time Time 0.00100 70000 0.00075 65000 0.00050 Order Three Moms COV/Var 60000 0.00025 55000 0.00000 50000 alpha -0.0002545000 (3, 0)-0.0005040000 (2, 1)alpha data (1, 2)-0.0007535000 alpha fit (0, 3)40 50 20 30 40 20 30 60 70 50 60 70

Time

Time

No\_up | NLLA No\_up(#344): [4.3027, 4.1040, 0.1933, 0.1848, 5.058e-14, 2.355e-15, 0.0000, 0.0857, 0.0821, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0002 alpha data alpha fit 0.0000 Order Three Moms -0.0002COV/Var -0.0004alpha -0.0006(3, 0)-0.0008(2, 1)(1, 2)-0.0010(0, 3)

-0.0012

Time

Time

No\_up | NLLA No\_up(#345): [3.2933, 4.0288, 0.1252, 0.2270, 0.0005529, 7.308e-15, 0.0000, 0.0650, 0.1013, 0.0249] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 **Order Three Moms** 0.0006 alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)

-0.0002

-0.0004

Time

alpha\_data

alpha fit

(1, 2)

(0, 3)

Time

No\_up | NLLA No\_up(#346): [3.9781, 3.8196, 0.1875, 0.1745, 1.229e-17, 7.523e-20, 0.0028, 0.0852, 0.0790, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 0.0002 Order Three Moms COV/Var 0.0000 alpha = -0.0002-0.0004(3, 0)(2, 1)-0.0006alpha data (1, 2)-0.0008(0, 3)alpha fit

Time

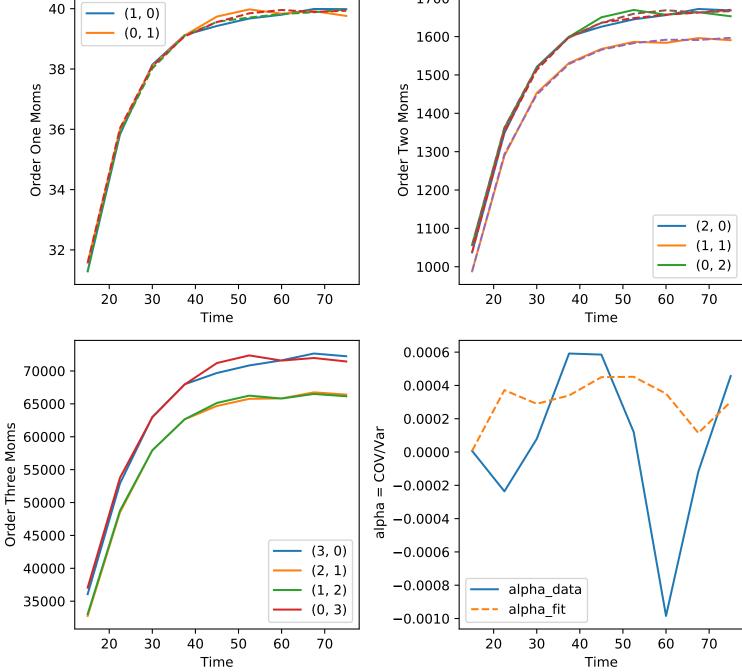
Time

No\_up | NLLA No\_up(#347): [3.8837, 3.9484, 0.1771, 0.1925, 2.11e-16, 3.908e-22, 0.0000, 0.0800, 0.0867, 0.0070] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 50 60 70 40 50 20 30 20 30 40 60 70 Time Time 0.00150 70000 0.00125 65000 0.00100 Order Three Moms COV/Var 60000 0.00075 55000 alpha = 0.00050 50000 45000 0.00025 (3, 0)40000 (2, 1)0.00000 alpha data (1, 2)35000 alpha fit (0, 3)-0.0002540 50 50 60 70 20 30 60 70 20 30 40

Time

Time

No\_up | NLLA No\_up(#348): [4.0213, 4.0588, 0.1813, 0.1871, 6.579e-12, 3.077e-14, 0.0000, 0.0807, 0.0836, 0.0020] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 0.0002 = COV/Var0.0000 -0.0002-0.0004(3, 0)-0.0006



No\_up | NLLA No\_up(#349): [4.1147, 3.8497, 0.1909, 0.1726, 3.014e-15, 2.799e-15, 0.0023, 0.0854, 0.0764, 0.0000] (1, 0) (0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha\_data alpha fit 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 (3, 0)(2, 1)0.0000 (1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#350): [4.0457, 4.0539, 0.1930, 0.1848, 4.588e-18, 1.722e-05, 0.0053, 0.0867, 0.0841, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 0.0006 Order Three Moms alpha = COV/Var 0.0004 alpha\_data 0.0002 alpha fit 0.0000 (3, 0)-0.0002(2, 1)(1, 2)-0.0004(0, 3)

Time

Time

No\_up | NLLA No\_up(#351): [3.1554, 4.0155, 0.1662, 0.1821, 0.0005245, 7.77e-22, 0.0242, 0.0841, 0.0820, 0.0000] 1700 (1, 0)40 (0, 1)1600 38 1500 Order Two Moms 1300 - 1200 - 1 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)70 20 30 40 50 60 20 30 40 50 60 70 Time Time 0.00125 alpha\_data 70000 0.00100 alpha\_fit 0.00075 COV/Var 60000 0.00050 0.00025 alpha = 50000 0.00000 -0.00025 (3, 0)40000 (2, 1)-0.00050(1, 2)-0.00075(0, 3)

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Time

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Order Three Moms

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Time

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No\_up | NLLA No\_up(#352): [4.0675, 3.9011, 0.1833, 0.1812, 5.487e-06, 2.33e-19, 0.0000, 0.0817, 0.0809, 0.0027] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha\_data alpha\_fit 0.0006 **Order Three Moms** alpha = COV/Var 0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#353): [3.9678, 3.9944, 0.1965, 0.1794, 3.107e-18, 8.112e-05, 0.0080, 0.0891, 0.0826, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 Order Three Moms alpha = COV/Var 0.0006 alpha data 0.0004 alpha fit 0.0002 (3, 0)(2, 1)0.0000 (1, 2)(0, 3)

-0.0002

Time

Time

No\_up | NLLA No\_up(#354): [4.1223, 4.1711, 0.1909, 0.1896, 5.594e-22, 2.839e-24, 0.0018, 0.0859, 0.0850, 0.0000] (1, 0)(0, 1)Order One Moms **Order Two Moms** (2, 0)(1, 1)(0, 2)Time Time alpha\_data 0.0008 alpha\_fit 0.0006 **Order Three Moms** alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)

-0.0004

Time

Time

No\_up | NLLA No\_up(#355): [3.7442, 4.0243, 0.1705, 0.1894, 5.351e-13, 2.243e-16, 0.0000, 0.0771, 0.0852, 0.0035] (1, 0)(0, 1)Order Two Moms 1300 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 Order Three Moms = COV/Var0.0002 0.0000 alpha : -0.0002(3, 0)-0.0004(2, 1)(1, 2)alpha data -0.0006(0, 3)alpha fit 

Time

Time

No\_up | NLLA No\_up(#356): [4.1133, 4.0675, 0.1857, 0.1921, 9.574e-17, 7.028e-17, 0.0000, 0.0827, 0.0867, 0.0035] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 alpha\_data 0.0002 alpha fit 0.0000 (3, 0)(2, 1)-0.0002(1, 2)

(0, 3)

Time

-0.0004

Time

No\_up | NLLA No\_up(#357): [3.9767, 4.2263, 0.1839, 0.2145, 3.653e-11, 1.248e-16, 0.0000, 0.0844, 0.0979, 0.0103] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0015 0.0010 Order Three Moms alpha = COV/Var0.0005 0.0000 -0.0005(3, 0)(2, 1)-0.0010alpha\_data (1, 2)(0, 3)alpha fit

-0.0015

Time

Time

No\_up | NLLA No\_up(#358): [4.1365, 2.9305, 0.2477, 0.1006, 3.824e-09, 0.0007986, 0.0339, 0.1102, 0.0593, 0.0000] (1, 0)(0, 1)Order Two Moms 1400 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0020 alpha\_data alpha fit 0.0015 Order Three Moms alpha = COV/Var0.0010 0.0005 (3, 0)(2, 1)0.0000 (1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#359): [4.0949, 3.8484, 0.1871, 0.1811, 6.705e-15, 2.22e-15, 0.0000, 0.0846, 0.0813, 0.0036] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)alpha data (1, 2)-0.0004(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#360): [4.0240, 3.8925, 0.1831, 0.1862, 6.342e-17, 8.298e-14, 0.0000, 0.0824, 0.0838, 0.0050] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 (3, 0)0.0002 (2, 1)(1, 2)alpha data (0, 3)alpha fit 0.0000

Time

Time

No up | NLLA No up(#361): [4.0496, 3.9503, 0.1923, 0.1811, 4.838e-14, 1.46e-14, 0.0053, 0.0857, 0.0821, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 0.0002 (3, 0)(2, 1)0.0000 (1, 2)alpha\_data (0, 3)alpha fit -0.0002

Time

No\_up | NLLA No\_up(#362): [4.1812, 3.9984, 0.1920, 0.1918, 1.96e-13, 5.272e-14, 0.0000, 0.0872, 0.0872, 0.0043] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)(2, 1)-0.0002alpha data (1, 2)(0, 3)alpha fit -0.0004

Time

**Order Three Moms** 

Time

No\_up | NLLA No\_up(#363): [3.9888, 4.2477, 0.1880, 0.2580, 8.119e-05, 1.534e-08, 0.0000, 0.0914, 0.1261, 0.0252] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.004 0.003 Order Three Moms COV/Var 0.002 alpha = 0.001 (3, 0)(2, 1)0.000 (1, 2)alpha data (0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#364): [2.9879, 4.1594, 0.1600, 0.1901, 0.0007375, 1.012e-09, 0.0309, 0.0838, 0.0857, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 0 1400 Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 50 60 70 30 40 50 20 30 40 20 60 70 Time Time alpha\_data 0.00125 70000 alpha\_fit 0.00100 65000 0.00075 Order Three Moms 60000 COV/Var 0.00050 55000 alpha = 0.00025 50000 0.00000 45000 (3, 0)40000 -0.00025(2, 1)(1, 2)

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(0, 3)

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No\_up | NLLA No\_up(#365): [4.0465, 3.8095, 0.1807, 0.1690, 1.119e-05, 1.376e-22, 0.0000, 0.0798, 0.0739, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.00050 0.00025 0.00000 Order Three Moms COV/Var -0.00025 alpha -0.00050-0.00075(3, 0)(2, 1)-0.00100alpha data (1, 2)alpha fit (0, 3)-0.00125

Time

Time

No\_up | NLLA No\_up(#366): [3.9967, 3.8266, 0.1975, 0.1648, 6.094e-12, 0.0002094, 0.0086, 0.0890, 0.0773, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha\_data 0.0003 alpha fit 0.0002 Order Three Moms COV/Var 0.0001 0.0000 alpha = -0.0001-0.0002(3, 0)(2, 1)-0.0003(1, 2)(0, 3)-0.0004

Time

Time

No\_up | NLLA No\_up(#367): [4.0793, 4.0692, 0.1869, 0.1983, 3.351e-06, 2.687e-17, 0.0000, 0.0849, 0.0901, 0.0064] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0012 0.0010 Order Three Moms alpha = COV/Var0.0008 0.0006 0.0004 (3, 0)(2, 1)0.0002 (1, 2)alpha data (0, 3)0.0000 alpha fit

Time

Time

No\_up | NLLA No\_up(#368): [3.1889, 4.0346, 0.1701, 0.1843, 0.0004968, 1.572e-19, 0.0252, 0.0851, 0.0831, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 **Order Three Moms** alpha = COV/Var 0.0005 0.0000 (3, 0)-0.0005(2, 1)(1, 2)alpha data (0, 3)-0.0010alpha fit

Time

Time

No\_up | NLLA No\_up(#369): [4.1508, 4.1097, 0.1877, 0.1868, 9.275e-24, 1.247e-23, 0.0000, 0.0838, 0.0836, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0002 alpha\_data alpha\_fit 0.0001 0.0000 Order Three Moms = COV/Var-0.0001-0.0002-0.0003(3, 0)-0.0004(2, 1)-0.0005(1, 2)

(0, 3)

Time

-0.0006

Time

No\_up | NLLA No\_up(#370): [4.0730, 3.9845, 0.1868, 0.1833, 4.07e-20, 1.772e-17, 0.0022, 0.0826, 0.0834, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 alpha data alpha\_fit 0.0008 0.0006 Order Three Moms alpha = COV/Var 0.0004 0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)(0, 3)-0.0006

Time

No\_up | NLLA No\_up(#371): [3.2100, 4.0790, 0.1227, 0.2354, 0.0005624, 9.551e-09, 0.0000, 0.0648, 0.1074, 0.0259] 1700 40 (1, 0)(0, 1) 1600 38 1500 Order Two Moms 1300 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)50 60 70 20 30 40 50 20 30 40 60 70 Time Time 0.00125 alpha data 70000 alpha fit 0.00100 65000 0.00075 Order Three Moms COV/Var 60000 0.00050 55000 alpha = 0.00025 50000 45000 0.00000 (3, 0)40000 (2, 1)-0.00025(1, 2)35000 (0, 3)-0.00050

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No\_up | NLLA No\_up(#372): [4.0357, 4.0139, 0.1831, 0.1904, 3.747e-16, 3.184e-21, 0.0000, 0.0821, 0.0859, 0.0037] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)alpha data (1, 2)-0.0006(0, 3)alpha fit

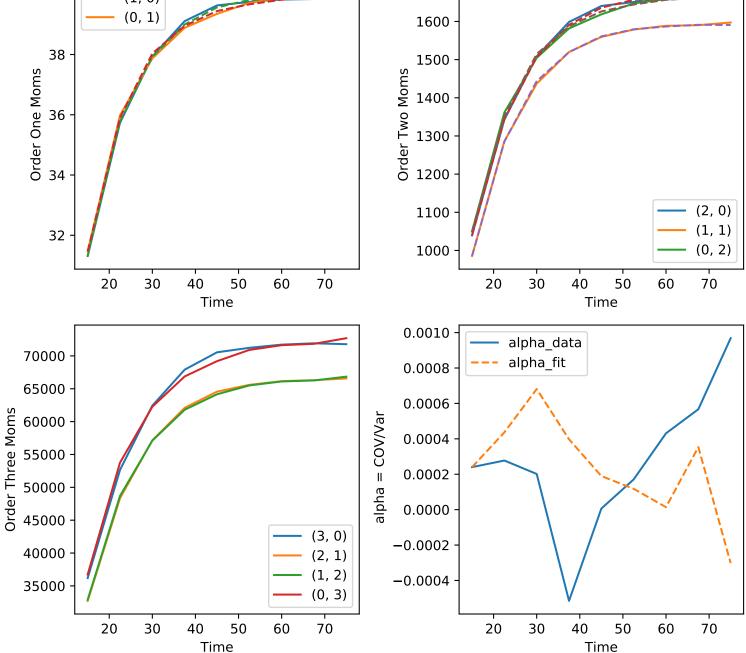
Time

Time

No\_up | NLLA No\_up(#373): [3.9390, 3.2624, 0.2188, 0.1331, 6.419e-18, 0.0003807, 0.0205, 0.0998, 0.0669, 0.0000] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 70 60 Time Time alpha\_data 0.00125 70000 alpha/fit 0.00100 65000 **Order Three Moms** 0.00075 COV/Var 60000 0.00050 55000 alpha = 0.00025 50000 0.00000 45000 (3, 0)-0.0002540000 (2, 1)(1, 2)-0.0005035000 (0, 3)40 50 20 30 40 50 60 70 20 30 60 70

Time

No\_up | NLLA No\_up(#374): [3.1828, 3.9940, 0.1223, 0.2186, 0.0005388, 6.416e-20, 0.0000, 0.0642, 0.0967, 0.0219] (1, 0)(0, 1)Order One Moms Order Two Moms 



No\_up | NLLA No\_up(#375): [3.9297, 3.9132, 0.1772, 0.1772, 2.506e-15, 7.442e-14, 0.0000, 0.0790, 0.0786, 0.0007] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.00075 alpha data alpha fit 0.00050 0.00025 Order Three Moms COV/Var 0.00000 alpha = -0.00025-0.00050(3, 0)(2, 1)-0.00075(1, 2)(0, 3)-0.00100

Time

Time

No\_up | NLLA No\_up(#376): [4.0384, 3.6694, 0.1892, 0.1751, 1.105e-08, 0.0002766, 0.0043, 0.0837, 0.0844, 0.0096] 1700 40 (1, 0)(0, 1)1600 38 1500 Order J Order J Own J 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 (0, 2)1000 50 60 70 30 40 50 20 30 40 20 60 70 Time Time 0.0008 alpha\_data 70000 alpha\_fit 0.0006 65000 0.0004 Order Three Moms 60000 alpha = COV/Var0.0002 55000 0.0000 50000 45000 -0.0002(3, 0)40000 (2, 1)-0.0004(1, 2)35000 (0, 3)-0.0006

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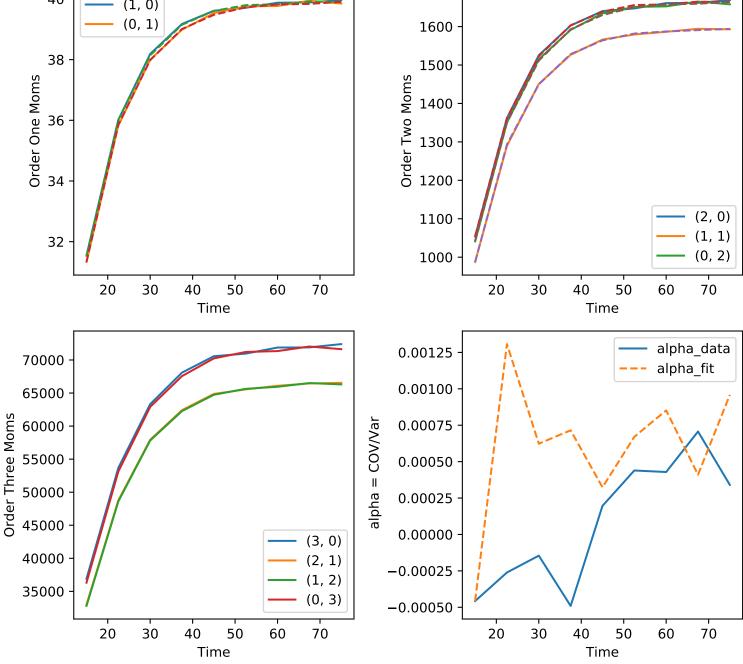
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No\_up | NLLA No\_up(#377): [4.0953, 4.0176, 0.1865, 0.1846, 3.986e-15, 7.611e-15, 0.0000, 0.0840, 0.0821, 0.0019] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha data alpha fit 0.0004 Order Three Moms alpha = COV/Var 0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)(0, 3)-0.0006

Time

Time

No\_up | NLLA No\_up(#378): [3.2402, 3.9790, 0.1230, 0.2305, 0.0005848, 5.975e-07, 0.0000, 0.0652, 0.1039, 0.0268] (1, 0)(0, 1)0 1400 ms 1300 ms 1300 ms Order One Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.00125 alpha fit 0.00100 0.00075 COV/Var 0.00050



No\_up | NLLA No\_up(#379): [4.0676, 4.0090, 0.1827, 0.1868, 1.114e-17, 8.31e-18, 0.0000, 0.0812, 0.0842, 0.0023] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 70 60 Time Time 75000 70000 0.0004 65000 0.0002 Order Three Moms COV/Var 60000 0.0000 55000 alpha = -0.000250000 45000 -0.0004 (3, 0)40000 (2, 1)-0.0006(1, 2)alpha data 35000 (0, 3)alpha fit -0.000840 50 20 50 60 70 20 30 60 70 30 40

Time

No\_up | NLLA No\_up(#380): [4.2061, 3.7863, 0.2372, 0.1840, 1.899e-05, 0.0001019, 0.0201, 0.1122, 0.0928, 0.0000] (1, 0)(0, 1)Order One Moms **Order Two Moms** (2, 0)(1, 1)(0, 2)Time Time 0.0025 0.0020 **Order Three Moms** alpha = COV/Var0.0015 alpha\_data 0.0010 alpha\_fit 0.0005 0.0000 (3, 0)(2, 1)-0.0005(1, 2)(0, 3)-0.0010

Time

Time

No\_up | NLLA No\_up(#381): [4.1062, 4.0672, 0.1857, 0.1883, 2.279e-17, 4.781e-15, 0.0000, 0.0829, 0.0842, 0.0022] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)-0.0004(2, 1)alpha data (1, 2)-0.0006(0, 3)alpha fit

Time

Time

No\_up | NLLA No\_up(#382): [3.9620, 3.9725, 0.1802, 0.1816, 3.09e-14, 4.821e-15, 0.0023, 0.0791, 0.0821, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0006 alpha fit **Order Three Moms** alpha = COV/Var 0.0004 0.0002 (3, 0)0.0000 (2, 1)(1, 2)(0, 3)-0.0002

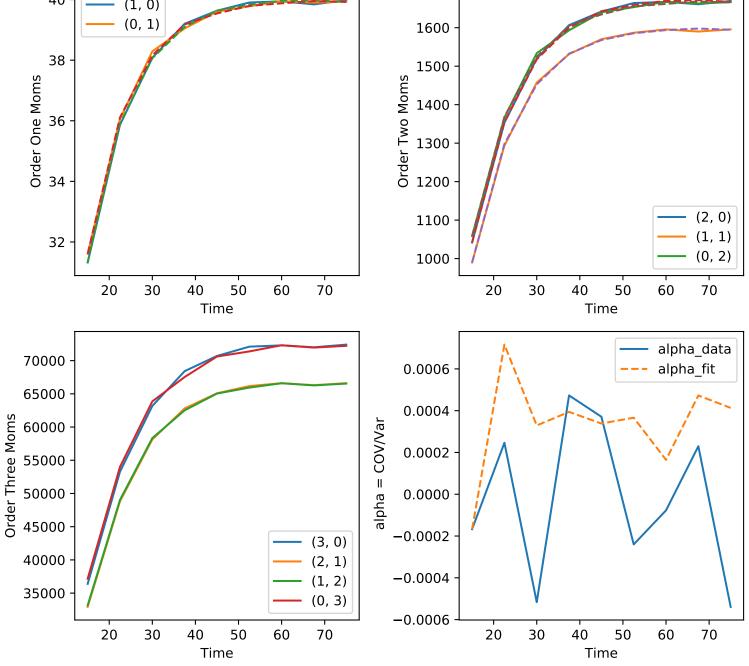
Time

No\_up | NLLA No\_up(#383): [4.1087, 4.0157, 0.2015, 0.1839, 5.295e-17, 3.901e-15, 0.0060, 0.0927, 0.0833, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 0.0008 Order Three Moms alpha = COV/Var0.0006 0.0004 alpha\_data alpha\_fit 0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)-0.0004(0, 3)

Time

Time

No\_up | NLLA No\_up(#384): [3.6362, 4.1431, 0.1548, 0.2111, 0.0002863, 1.089e-05, 0.0000, 0.0754, 0.0943, 0.0135] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha\_data 0.0006 alpha\_fit 



No\_up | NLLA No\_up(#385): [4.0250, 4.1125, 0.1852, 0.2025, 2.884e-17, 2.351e-17, 0.0000, 0.0846, 0.0931, 0.0061] (1, 0)(0, 1)Order Two Moms 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.00100 0.00075 Order Three Moms = COV/Var 0.00050 0.00025 alpha : 0.00000 (3, 0)-0.00025(2, 1)alpha data (1, 2)-0.00050alpha fit (0, 3)

Time

Time

No\_up | NLLA No\_up(#386): [4.0857, 3.8475, 0.1989, 0.1781, 3.779e-16, 1.792e-16, 0.0070, 0.0897, 0.0817, 0.0000] (1, 0)(0, 1)Order Two Moms 1300 1200 Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.00125 0.00100 Order Three Moms alpha = COV/Var0.00075 0.00050 0.00025 (3, 0)0.00000 (2, 1)alpha data (1, 2)-0.00025alpha fit (0, 3)

Time

Time

No\_up | NLLA No\_up(#387): [4.1074, 3.1729, 0.2175, 0.1385, 7.263e-09, 0.0006161, 0.0161, 0.0986, 0.0724, 0.0111] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data alpha fit 0.0010 Order Three Moms alpha = COV/Var0.0005 0.0000 (3, 0)-0.0005(2, 1)(1, 2)(0, 3)

-0.0010

Time

Time

No up | NLLA No up(#388): [4.0840, 4.0251, 0.1891, 0.1819, 8.143e-19, 5.414e-17, 0.0025, 0.0844, 0.0813, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha data alpha fit 0.0004 **Order Three Moms** alpha = COV/Var0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)(0, 3)-0.0004

Time

No up | NLLA No up(#389):  $[3.9590, 3.9853, 0.1802, 0.1835, 4.104e-13, 1.\overline{1}58e-13, 0.0000, 0.0814, 0.0822, 0.0017]$ 1700 40 (1, 0) (0, 1)1600 38 1500 Order Two Moms Order One Moms 1400 36 1300 34 1200 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 60 70 Time Time 0.0004 70000 0.0002 65000 0.0000 **Order Three Moms** COV/Var 60000 -0.000255000 50000 -0.0004alpha 45000 -0.0006(3, 0)40000 (2, 1)-0.0008alpha data (1, 2)35000 (0, 3)alpha fit

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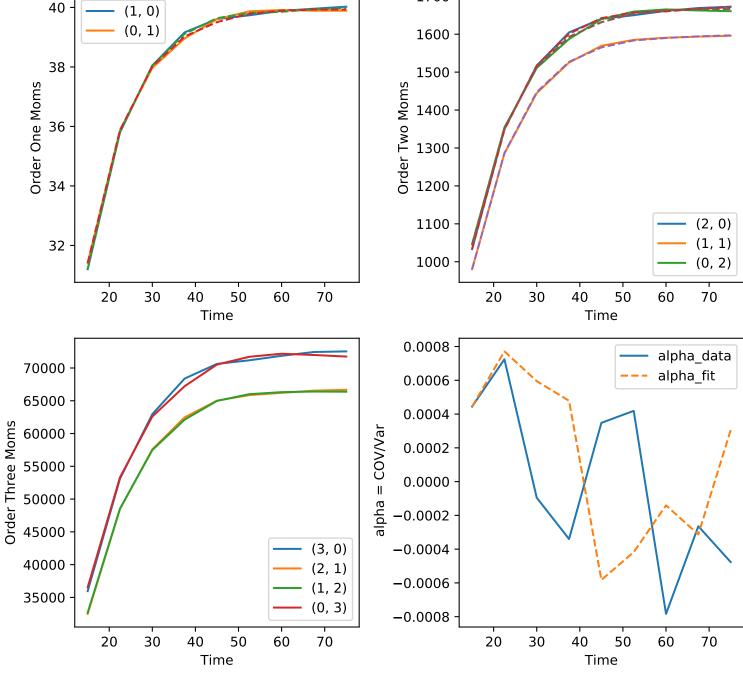
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Time

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No\_up | NLLA No\_up(#390): [2.8234, 3.9737, 0.0922, 0.2405, 0.0008841, 1.512e-17, 0.0000, 0.0570, 0.1069, 0.0341] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 alpha\_data alpha fit 0.0006 0.0004 alpha = COV/Var0.0002 0.0000 -0.0002



No\_up | NLLA No\_up(#391): [3.9399, 3.9561, 0.1777, 0.1818, 2.47e-19, 1.143e-19, 0.0000, 0.0793, 0.0813, 0.0016] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)alpha data (0, 3)alpha fit 

Time

No\_up | NLLA No\_up(#392): [4.0966, 4.1070, 0.1801, 0.1981, 0.0001098, 4.722e-21, 0.0000, 0.0818, 0.0882, 0.0072] 1700 40 (1, 0)(0, 1) 1600 38 1500 Order One Moms Order Two Moms 1400 36 1300 1200 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 60 70 Time Time 0.00100 alpha data 70000 0.00075 alpha\_fit 65000 0.00050 **Order Three Moms** 60000 COV/Var 0.00025 55000 0.00000 alpha = 50000 -0.0002545000 (3, 0)-0.0005040000 (2, 1)-0.00075(1, 2)35000 (0, 3)-0.00100

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No\_up | NLLA No\_up(#393): [3.9168, 4.0337, 0.1761, 0.1869, 5.535e-16, 2.957e-15, 0.0000, 0.0782, 0.0843, 0.0015] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0006 alpha fit 0.0004 Order Three Moms alpha = COV/Var0.0002 0.0000 -0.0002(3, 0)(2, 1)-0.0004(1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#394): [3.9626, 4.0518, 0.1802, 0.1816, 1.697e-14, 3.6e-21, 0.0011, 0.0800, 0.0802, 0.0000] (1, 0)(0, 1) Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0008 alpha fit 0.0006 Order Three Moms 0.0004 alpha = COV/Var0.0002 0.0000 -0.0002 (3, 0)(2, 1)-0.0004(1, 2)(0, 3)-0.0006Time Time

No\_up | NLLA No\_up(#395): [4.1078, 3.9589, 0.1928, 0.1822, 6.595e-21, 1.735e-17, 0.0038, 0.0863, 0.0832, 0.0000] (1, 0)(0, 1)Order Two Moms Order One Moms (2, 0)(1, 1)(0, 2)Time Time 0.0008 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 (3, 0)(2, 1)0.0000 alpha data (1, 2)(0, 3)alpha fit

-0.0002

Time

Time

No\_up | NLLA No\_up(#396): [4.0668, 4.0726, 0.1871, 0.1850, 1.054e-08, 8.669e-06, 0.0017, 0.0835, 0.0832, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0006 alpha data alpha fit 0.0004 **Order Three Moms** alpha = COV/Var 0.0002 0.0000 (3, 0)(2, 1)-0.0002(1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#397): [4.1709, 4.0833, 0.1928, 0.2001, 1.603e-12, 3.895e-16, 0.0000, 0.0883, 0.0913, 0.0067] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time 0.0010 Order Three Moms alpha = COV/Var0.0005 alpha\_data alpha\_fit 0.0000 (3, 0)(2, 1)-0.0005(1, 2)(0, 3)

Time

Time

No\_up | NLLA No\_up(#398): [4.0423, 4.0707, 0.1852, 0.1961, 3.557e-13, 2.476e-17, 0.0000, 0.0843, 0.0889, 0.0053] 1700 40 (1, 0)(0, 1)1600 38 1500 Order Two Moms 1300 1200 Order One Moms 36 34 (2, 0)1100 (1, 1)32 1000 (0, 2)20 30 40 50 60 70 20 30 40 50 70 60 Time Time 0.00100 70000 0.00075 65000 0.00050 **Order Three Moms** COV/Var 60000 0.00025 55000 alpha = 50000 0.00000 45000 -0.00025 (3, 0)40000 (2, 1)-0.00050alpha data (1, 2)35000 alpha fit (0, 3)-0.00075

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No\_up | NLLA No\_up(#399): [3.9558, 4.0503, 0.1819, 0.1832, 1.007e-18, 3.06e-18, 0.0022, 0.0808, 0.0818, 0.0000] (1, 0)(0, 1)Order One Moms Order Two Moms (2, 0)(1, 1)(0, 2)Time Time alpha data 0.0008 alpha fit 0.0006 Order Three Moms alpha = COV/Var0.0004 0.0002 0.0000 (3, 0)-0.0002(2, 1)(1, 2)-0.0004(0, 3)

Time

Time