

All possible hubbard term of four  
state in Fock representation

term: (0, 0) mat\_elmt: ( 1, 1), 1  
term: (0, 0) mat\_elmt: ( 3, 3), 1  
term: (0, 0) mat\_elmt: ( 5, 5), 1  
term: (0, 0) mat\_elmt: ( 7, 7), 1  
term: (0, 0) mat\_elmt: ( 9, 9), 1  
term: (0, 0) mat\_elmt: (11, 11), 1  
term: (0, 0) mat\_elmt: (13, 13), 1  
term: (0, 0) mat\_elmt: (15, 15), 1

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term: (0, 1) mat\_elmt: ( 3, 3), 1  
term: (0, 1) mat\_elmt: ( 7, 7), 1  
term: (0, 1) mat\_elmt: (11, 11), 1  
term: (0, 1) mat\_elmt: (15, 15), 1

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term: (0, 2) mat\_elmt: ( 5, 5), 1  
term: (0, 2) mat\_elmt: ( 7, 7), 1  
term: (0, 2) mat\_elmt: (13, 13), 1  
term: (0, 2) mat\_elmt: (15, 15), 1

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term: (0, 3) mat\_elmt: ( 9, 9), 1  
term: (0, 3) mat\_elmt: (11, 11), 1  
term: (0, 3) mat\_elmt: (13, 13), 1  
term: (0, 3) mat\_elmt: (15, 15), 1

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term: (1, 0) mat\_elmt: ( 3, 3), 1  
term: (1, 0) mat\_elmt: ( 7, 7), 1  
term: (1, 0) mat\_elmt: (11, 11), 1  
term: (1, 0) mat\_elmt: (15, 15), 1

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term: (1, 1) mat\_elmt: ( 2, 2), 1  
term: (1, 1) mat\_elmt: ( 3, 3), 1

term: (1, 1) mat\_elmt: ( 6, 6), 1  
term: (1, 1) mat\_elmt: ( 7, 7), 1  
term: (1, 1) mat\_elmt: (10, 10), 1  
term: (1, 1) mat\_elmt: (11, 11), 1  
term: (1, 1) mat\_elmt: (14, 14), 1  
term: (1, 1) mat\_elmt: (15, 15), 1  
=====

term: (1, 2) mat\_elmt: ( 6, 6), 1  
term: (1, 2) mat\_elmt: ( 7, 7), 1  
term: (1, 2) mat\_elmt: (14, 14), 1  
term: (1, 2) mat\_elmt: (15, 15), 1  
=====

term: (1, 3) mat\_elmt: (10, 10), 1  
term: (1, 3) mat\_elmt: (11, 11), 1  
term: (1, 3) mat\_elmt: (14, 14), 1  
term: (1, 3) mat\_elmt: (15, 15), 1  
=====

term: (2, 0) mat\_elmt: ( 5, 5), 1  
term: (2, 0) mat\_elmt: ( 7, 7), 1  
term: (2, 0) mat\_elmt: (13, 13), 1  
term: (2, 0) mat\_elmt: (15, 15), 1  
=====

term: (2, 1) mat\_elmt: ( 6, 6), 1  
term: (2, 1) mat\_elmt: ( 7, 7), 1  
term: (2, 1) mat\_elmt: (14, 14), 1  
term: (2, 1) mat\_elmt: (15, 15), 1  
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term: (2, 2) mat\_elmt: ( 4, 4), 1  
term: (2, 2) mat\_elmt: ( 5, 5), 1  
term: (2, 2) mat\_elmt: ( 6, 6), 1  
term: (2, 2) mat\_elmt: ( 7, 7), 1  
term: (2, 2) mat\_elmt: (12, 12), 1  
term: (2, 2) mat\_elmt: (13, 13), 1  
term: (2, 2) mat\_elmt: (14, 14), 1

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term: (2, 2) mat_elmt: (15, 15), 1
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term: (2, 3) mat_elmt: (12, 12), 1
term: (2, 3) mat_elmt: (13, 13), 1
term: (2, 3) mat_elmt: (14, 14), 1
term: (2, 3) mat_elmt: (15, 15), 1
=====

term: (3, 0) mat_elmt: ( 9,  9), 1
term: (3, 0) mat_elmt: (11, 11), 1
term: (3, 0) mat_elmt: (13, 13), 1
term: (3, 0) mat_elmt: (15, 15), 1
=====

term: (3, 1) mat_elmt: (10, 10), 1
term: (3, 1) mat_elmt: (11, 11), 1
term: (3, 1) mat_elmt: (14, 14), 1
term: (3, 1) mat_elmt: (15, 15), 1
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term: (3, 2) mat_elmt: (12, 12), 1
term: (3, 2) mat_elmt: (13, 13), 1
term: (3, 2) mat_elmt: (14, 14), 1
term: (3, 2) mat_elmt: (15, 15), 1
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term: (3, 3) mat_elmt: ( 8,  8), 1
term: (3, 3) mat_elmt: ( 9,  9), 1
term: (3, 3) mat_elmt: (10, 10), 1
term: (3, 3) mat_elmt: (11, 11), 1
term: (3, 3) mat_elmt: (12, 12), 1
term: (3, 3) mat_elmt: (13, 13), 1
term: (3, 3) mat_elmt: (14, 14), 1
term: (3, 3) mat_elmt: (15, 15), 1
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