```
Python 3.6.4 |Anaconda custom (64-bit)| (default, Jan 16 2018, 10:22:32) [MSC v.1900 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.

IPython 6.2.1 -- An enhanced Interactive Python.

In [1]: runfile('E:/Daniel/Projects/PhD-RL-Toulouse/projects/Python/test/test_QB.py', wdir='E:/Daniel/Projects/PhD-RL-Toulouse/projects/Python/test')
Directory:
E:\Daniel\Projects\PhD-RL-Toulouse\projects
has been prepended to the module search path.
Log file '../../RL-002-QueueBlocking/logs/test_fv_implementation_20210506_105817.log' has been open for output.
Started at: 2021-05-06 10:58:17
C:\ProgramData\Anaconda\Anaconda3\lib\site-packages\matplotlib\pyplot.py:528: RuntimeWarning: More than 20 figures have been opened. Figures created through
the pyplot interface (`matplotlib.pyplot.figure`) are retained until explicitly closed and may consume too much memory. (To control this warning, see the
rcParam `figure.max_open_warning`).
  max_open_warning, RuntimeWarning)
C:\ProgramData\Anaconda\Anaconda3\lib\site-packages\pandas\core\groupby.py:4291: FutureWarning: using a dict with renaming is deprecated and will be removed in
a future version
  return super(DataFrameGroupBy, self).aggregate(arg, *args, **kwargs)
Ended at: 2021-05-06 14:40:27
Execution time: 222.2 min, 3.7 hours
```
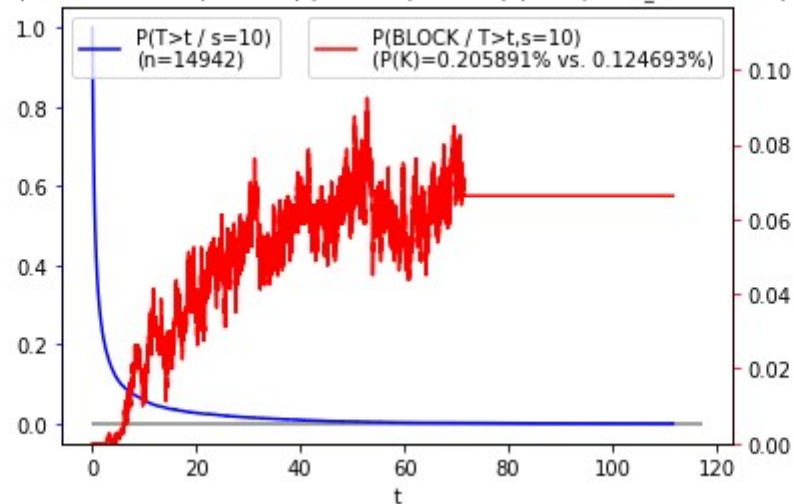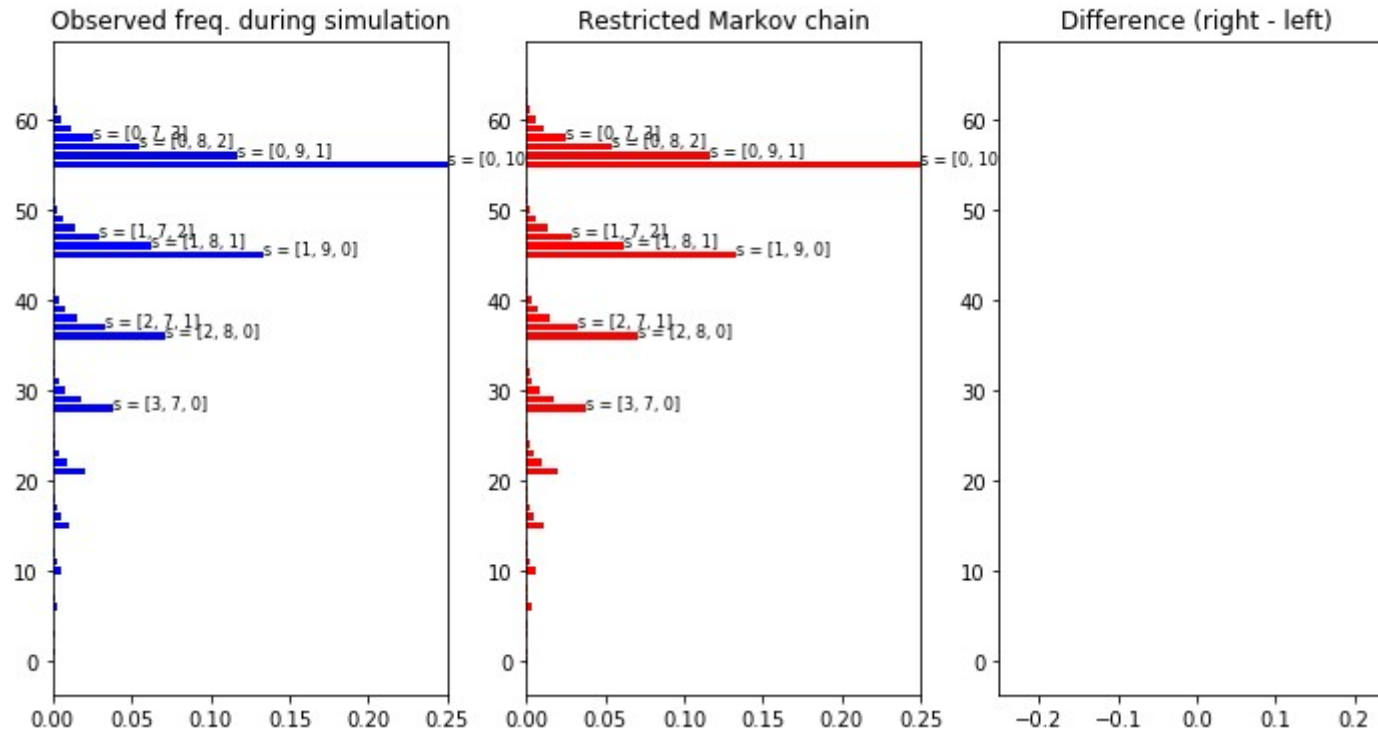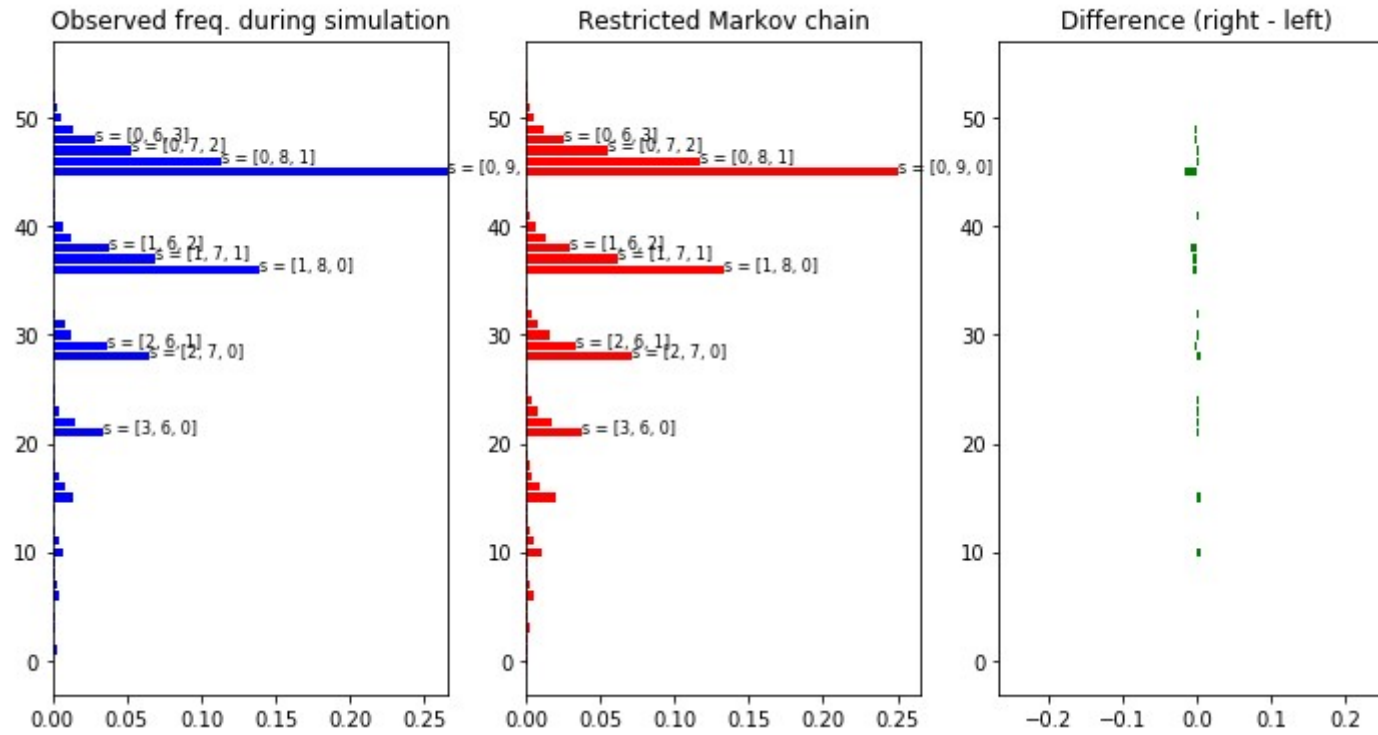

K=20, rhos=[0.4, 0.75, 0.35], N=800, activation size=10, maxtime(1)=57142.9, maxtime(N)=71.4, mean_lifetime=21.0(n=2718), finalize=ABS, seed=1718
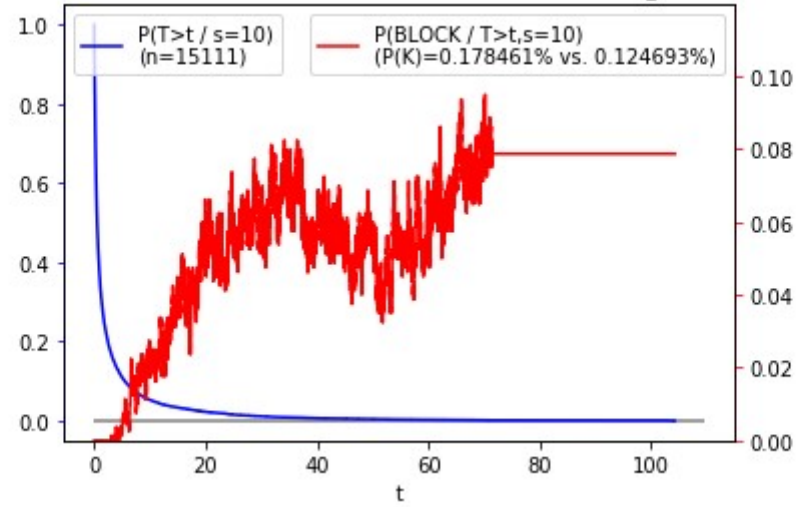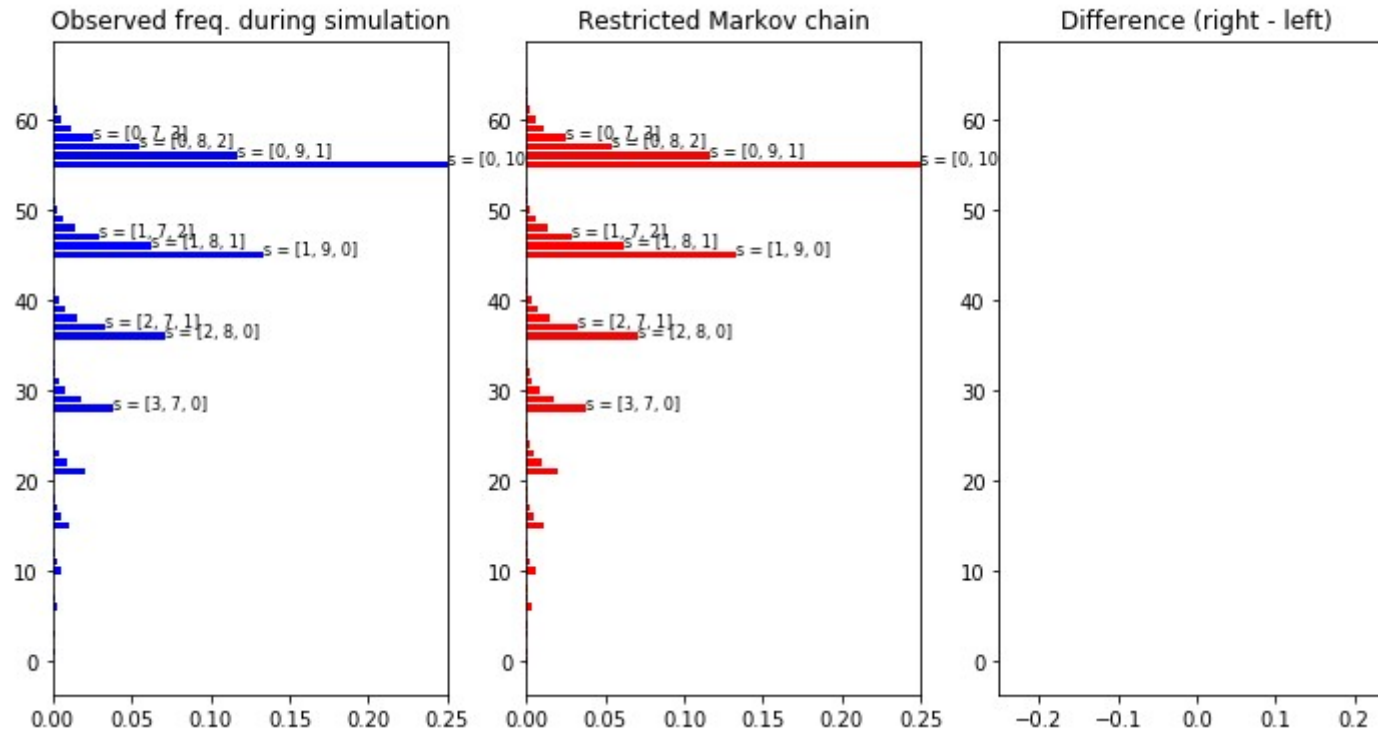
Distribution of ACTIVATION states

| Observed freq. during simulation | Restricted Markov chain | Difference (right - left) |

Distribution of ABSORPTION states

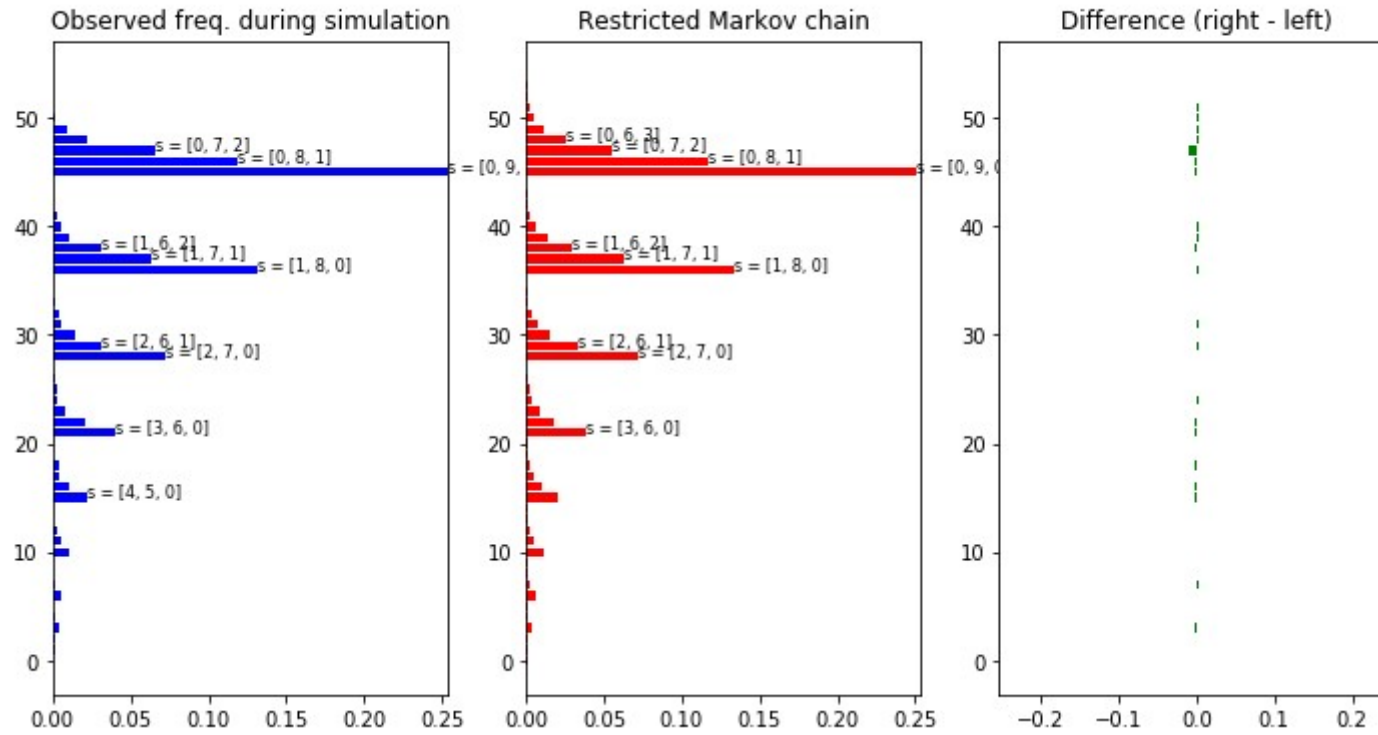Observed freq. during simulation | Restricted Markov chain | Difference (right - left)

K=20, rhos=[0.4, 0.75, 0.35], N=800, activation size=10, maxtime(1)=57142.9, maxtime(N)=71.4, mean_lifetime=21.2(n=2699), finalize=ABS, seed=1719
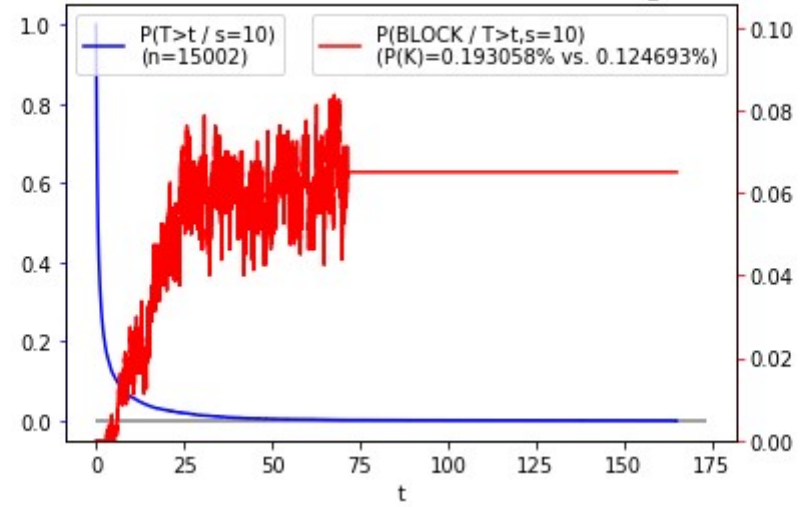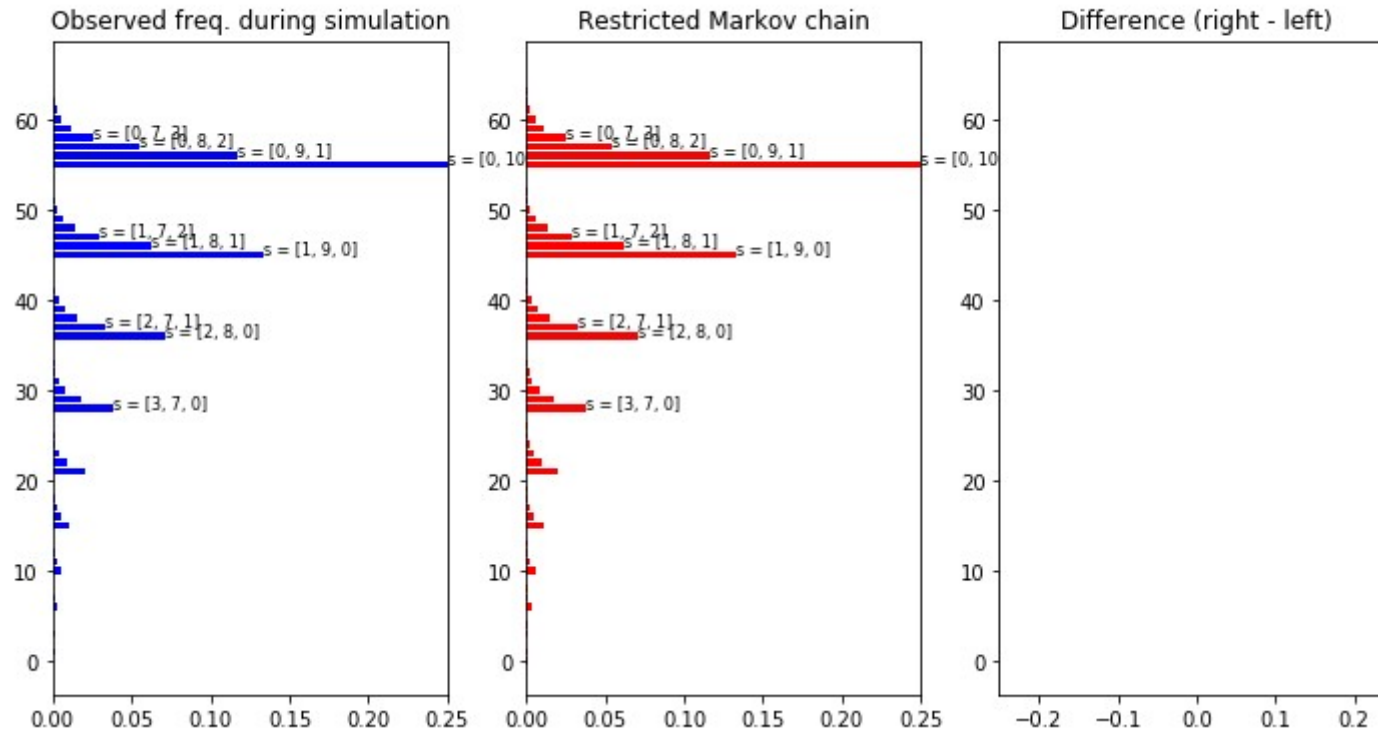
Distribution of ACTIVATION states

Distribution of ABSORPTION states

Observed freq. during simulation — Restricted Markov chain — Difference (right - left)
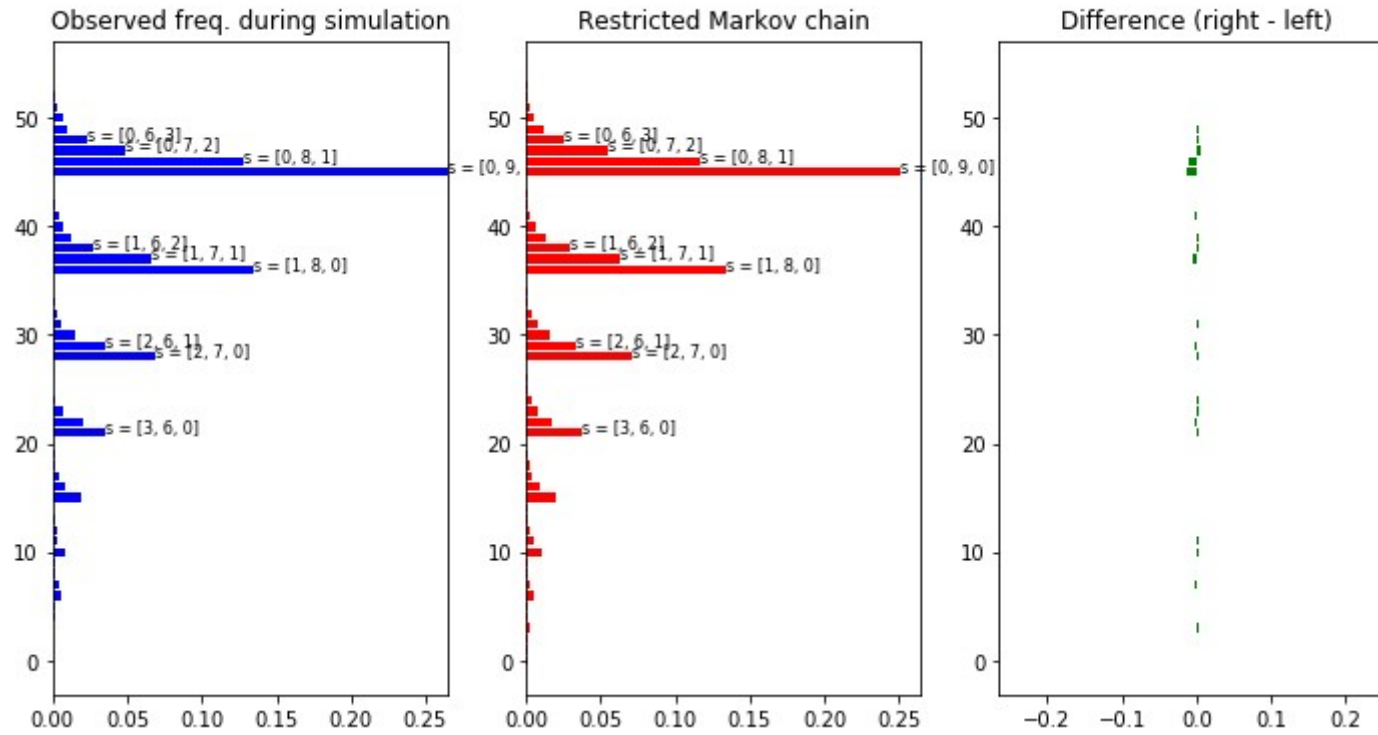
K=20, rhos=[0.4, 0.75, 0.35], N=800, activation size=10, maxtime(1)=57142.9, maxtime(N)=71.4, mean_lifetime=22.7(n=2518), finalize=ABS, seed=1720
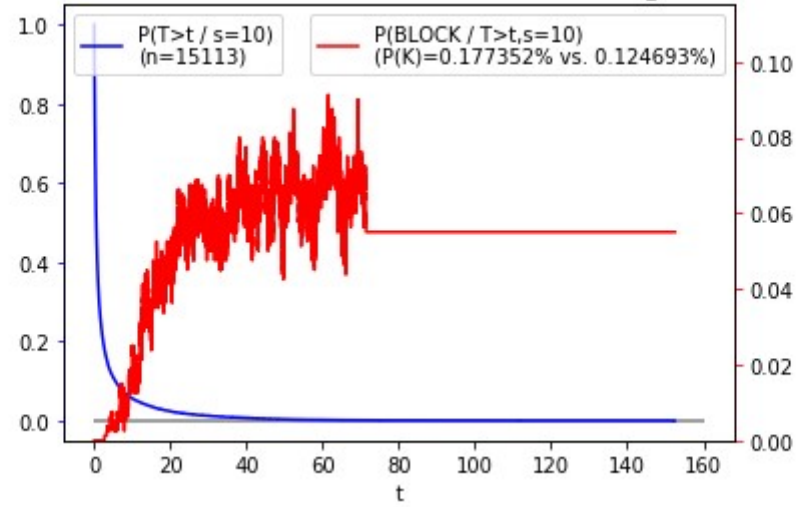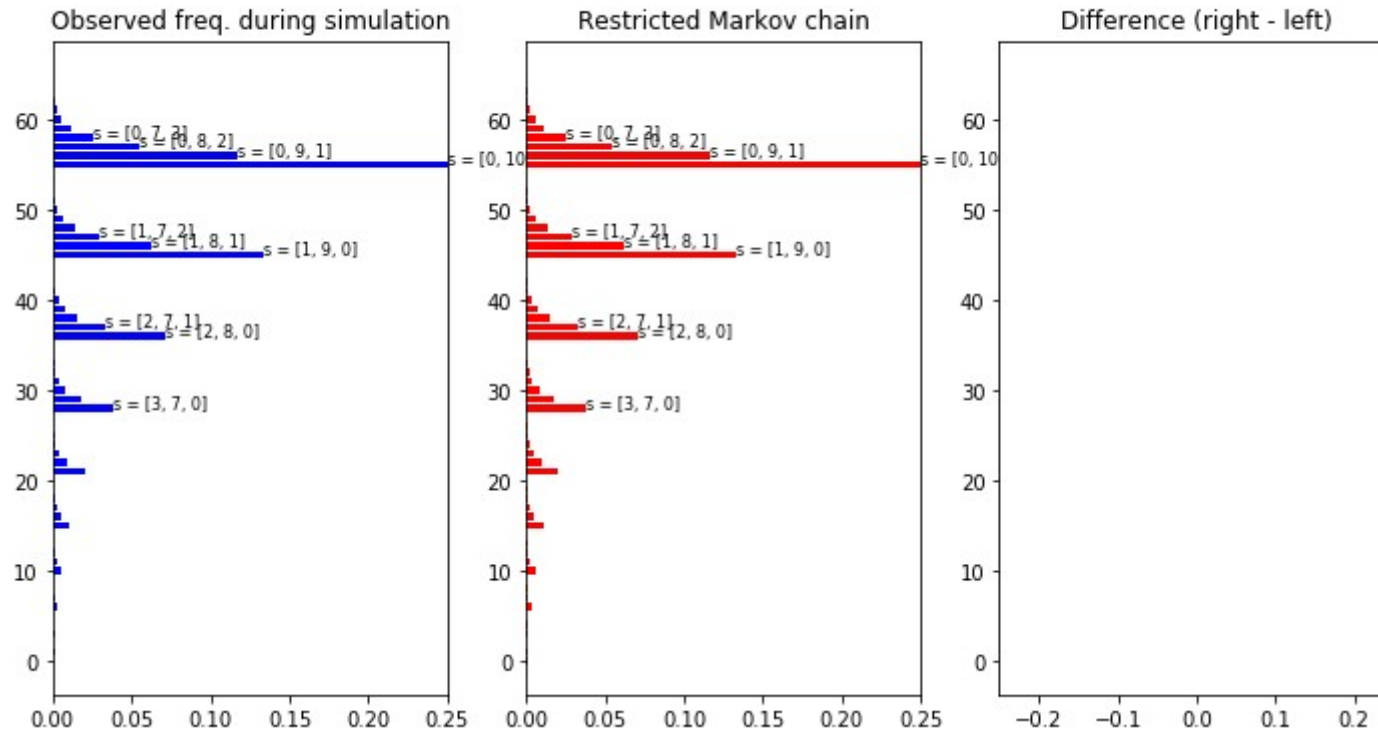
Distribution of ACTIVATION states

Observed freq. during simulation | Restricted Markov chain | Difference (right - left)

Distribution of ABSORPTION states

Observed freq. during simulation — Restricted Markov chain — Difference (right - left)

s = [0, 6, 3]
s = [0, 7, 2]
s = [0, 8, 1]
s = [0, 9, 0]
s = [1, 6, 2]
s = [1, 7, 1]
s = [1, 8, 0]
s = [2, 6, 1]
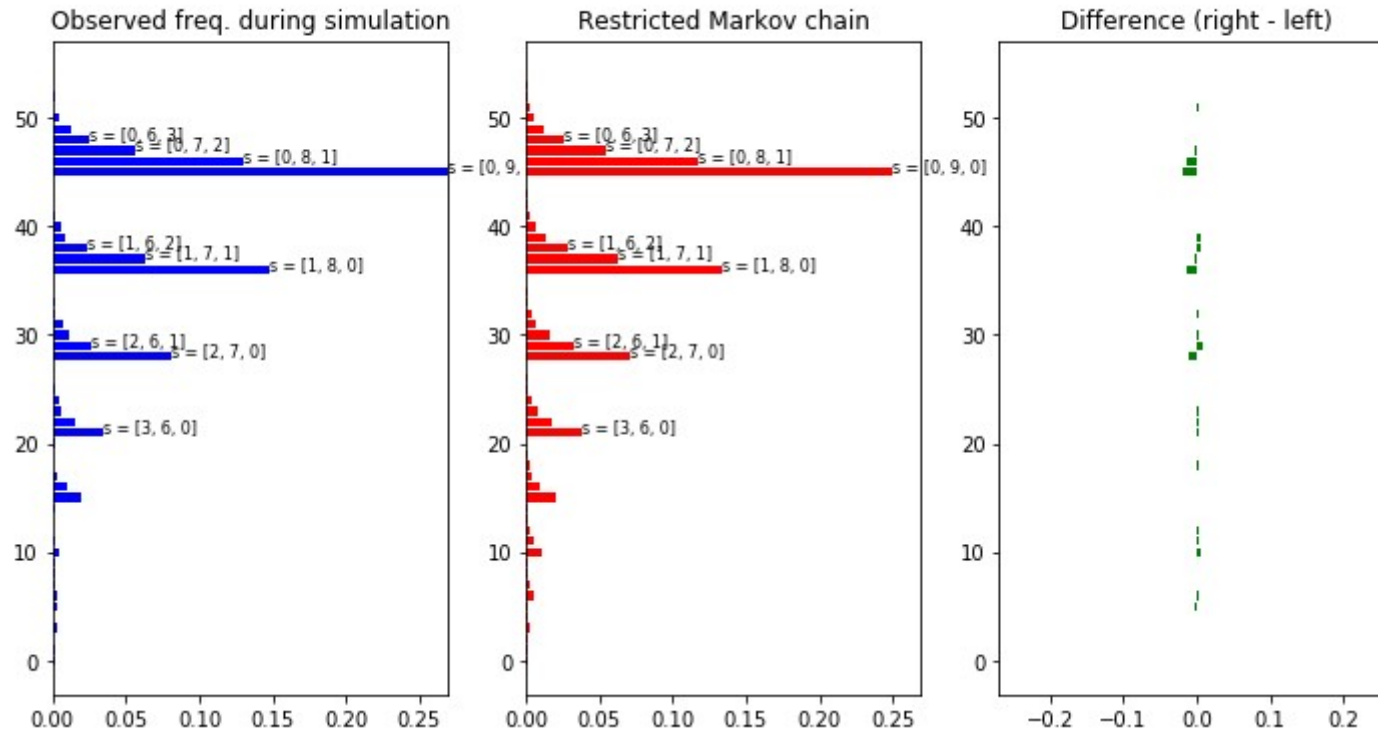s = [2, 7, 0]
s = [3, 6, 0]

K=20, rhos=[0.4, 0.75, 0.35], N=800, activation size=10, maxtime(1)=57142.9, maxtime(N)=71.4, mean_lifetime=21.6(n=2635), finalize=ABS, seed=1721
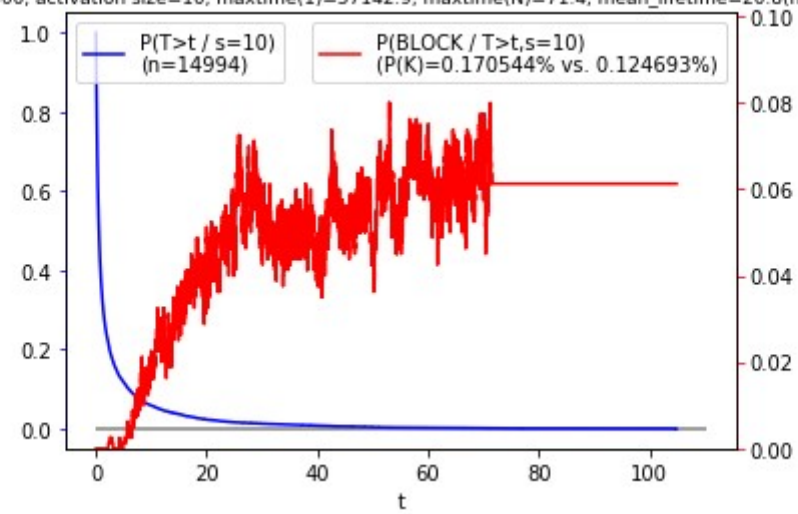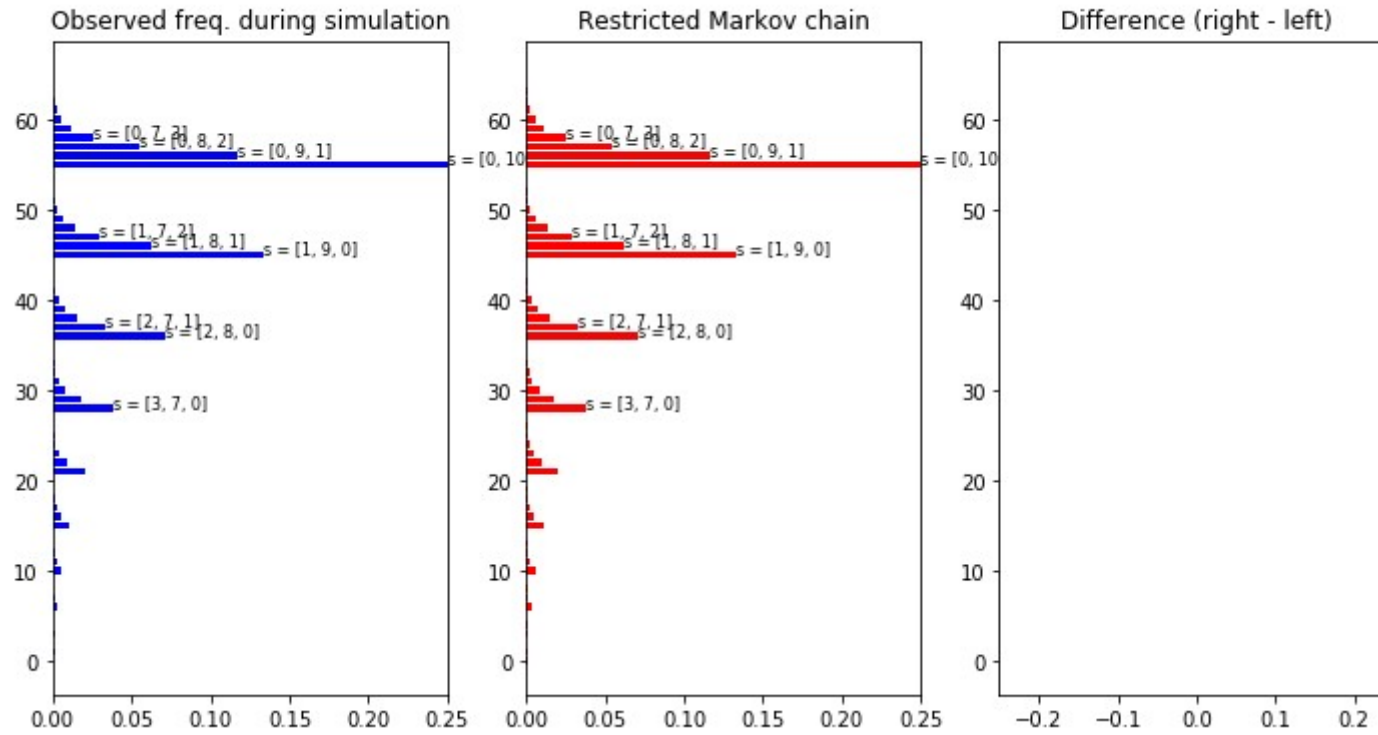
Distribution of ACTIVATION states
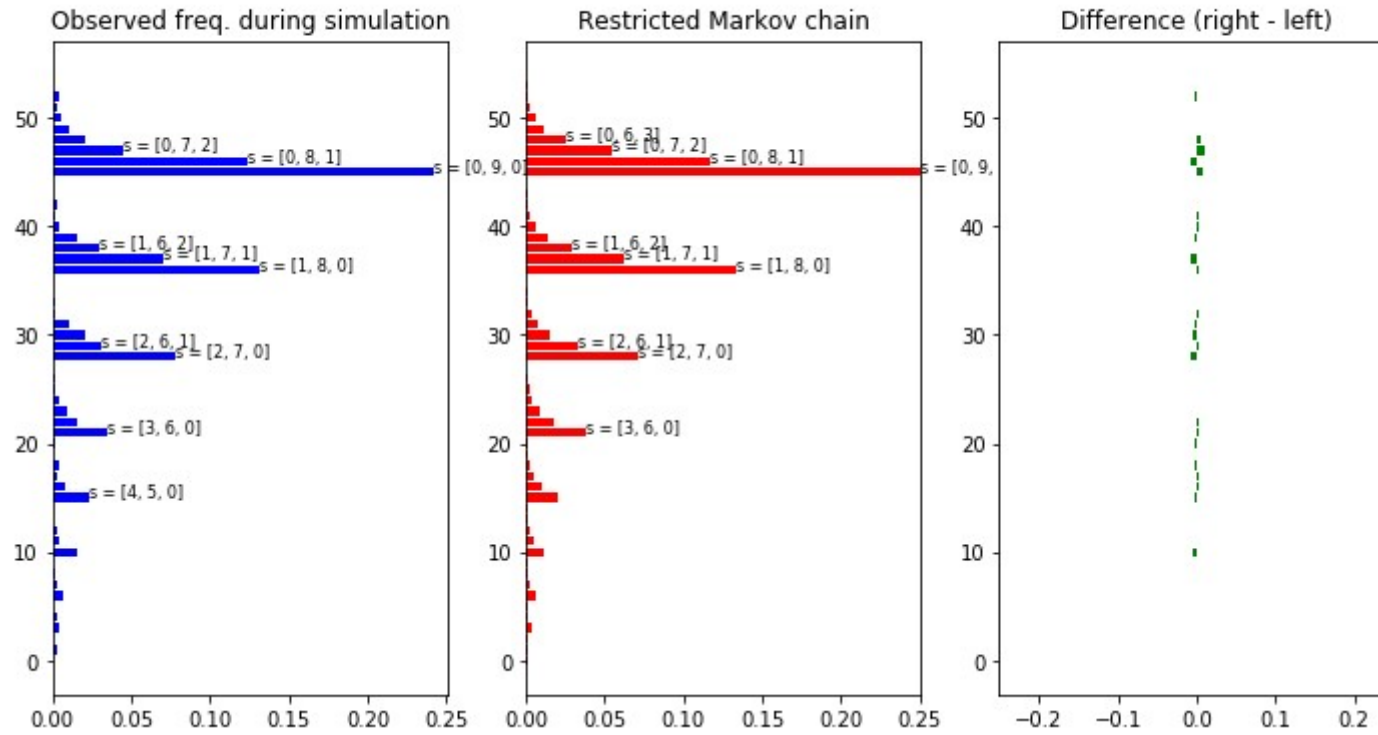
Distribution of ABSORPTION states

Observed freq. during simulation | Restricted Markov chain | Difference (right - left)

s = [0, 6, 3]
s = [0, 7, 2]
s = [0, 8, 1]
s = [0, 9, 0]
s = [1, 6, 2]
s = [1, 7, 1]
s = [1, 8, 0]
s = [2, 6, 1]
s = [2, 7, 0]
s = [3, 6, 0]

K=20, rhos=[0.4, 0.75, 0.35], N=800, activation size=10, maxtime(1)=57142.9, maxtime(N)=71.4, mean_lifetime=20.8(n=2747), finalize=ABS, seed=1722
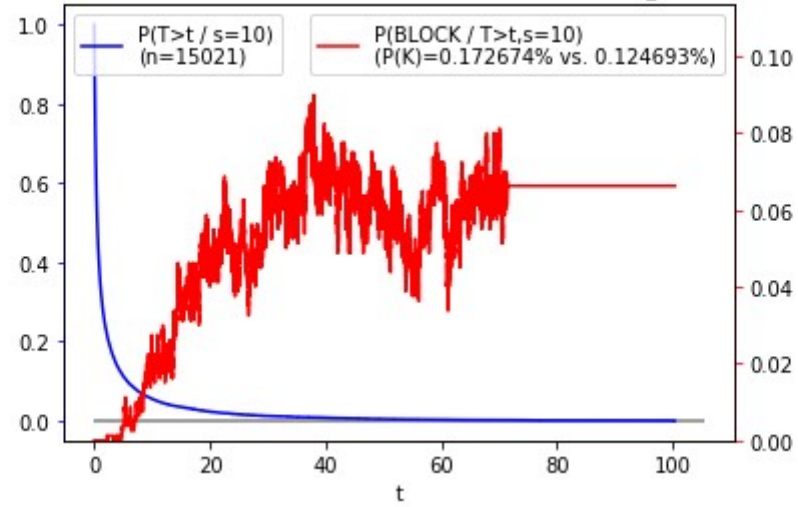
P(T>t / s=10)
(n=14994)

P(BLOCK / T>t,s=10)
(P(K)=0.170544% vs. 0.124693%)

Distribution of ACTIVATION states

Distribution of ABSORPTION states

Observed freq. during simulation — Restricted Markov chain — Difference (right - left)

K=20, rhos=[0.4, 0.75, 0.35], N=800, activation size=10, maxtime(1)=57142.9, maxtime(N)=71.4, mean_lifetime=21.3(n=2671), finalize=ABS, seed=1723

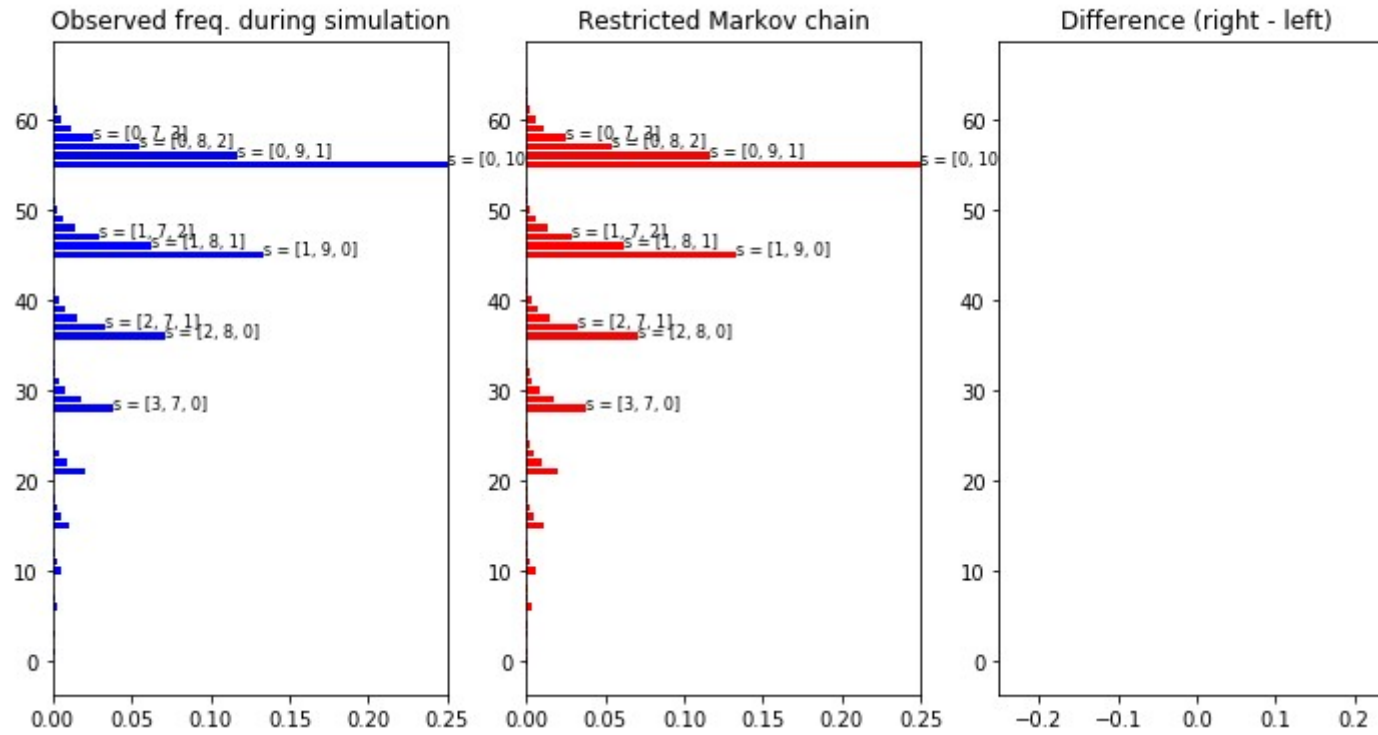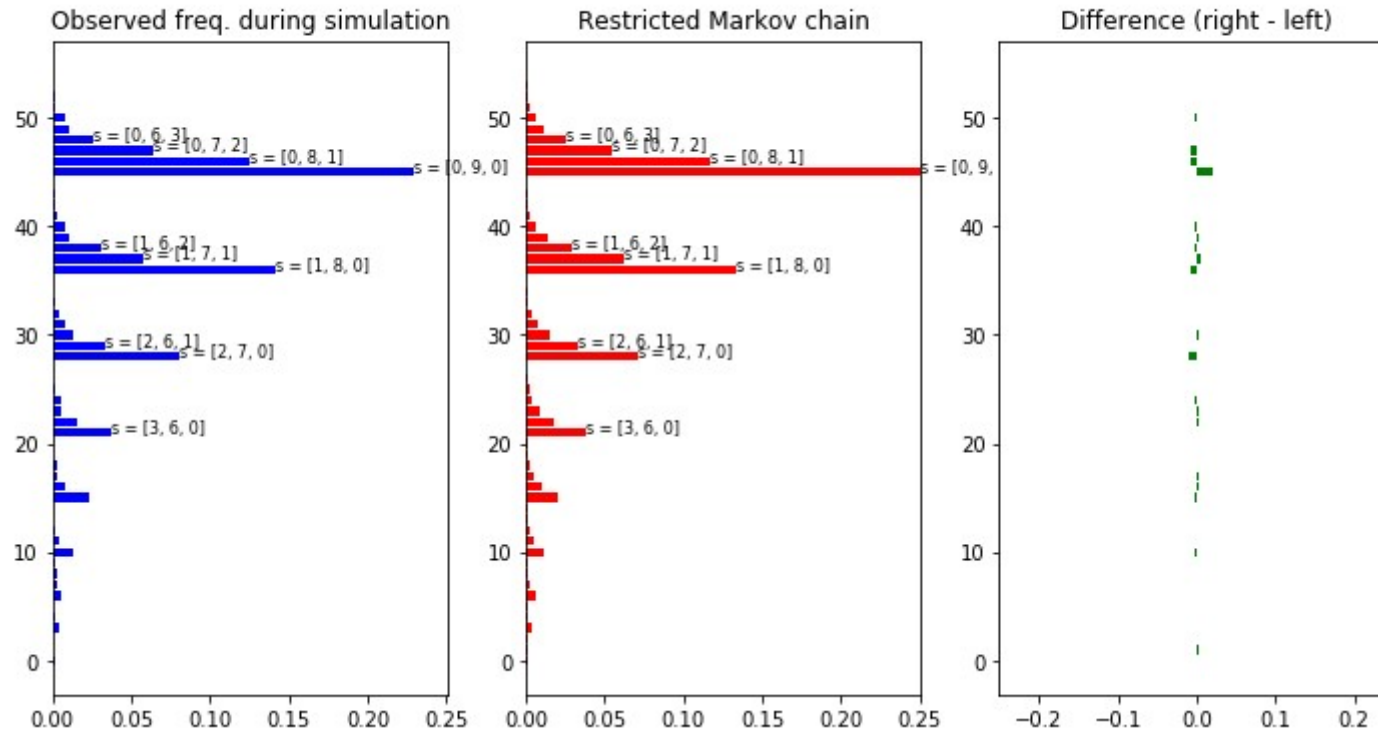Distribution of ACTIVATION states

Distribution of ABSORPTION states

Observed freq. during simulation | Restricted Markov chain | Difference (right - left)

K=20, rhos=[0.4, 0.75, 0.35], N=800, activation size=10, maxtime(1)=57142.9, maxtime(N)=71.4, mean_lifetime=21.5(n=2650), finalize=ABS, seed=1724
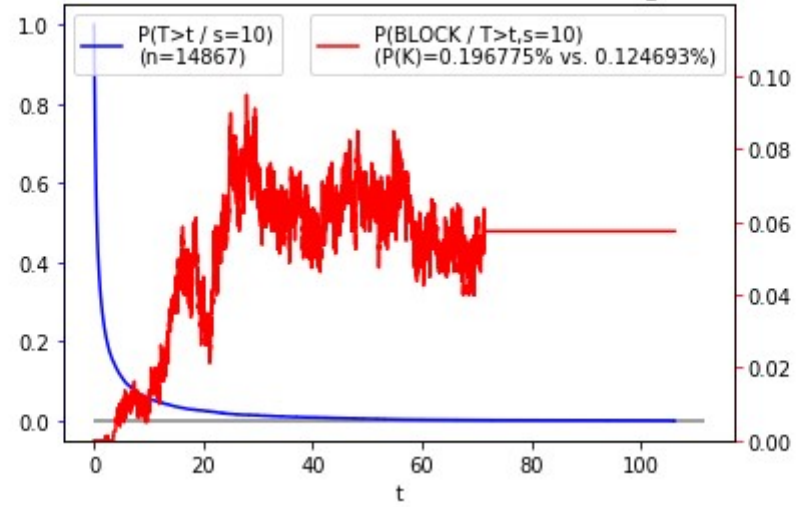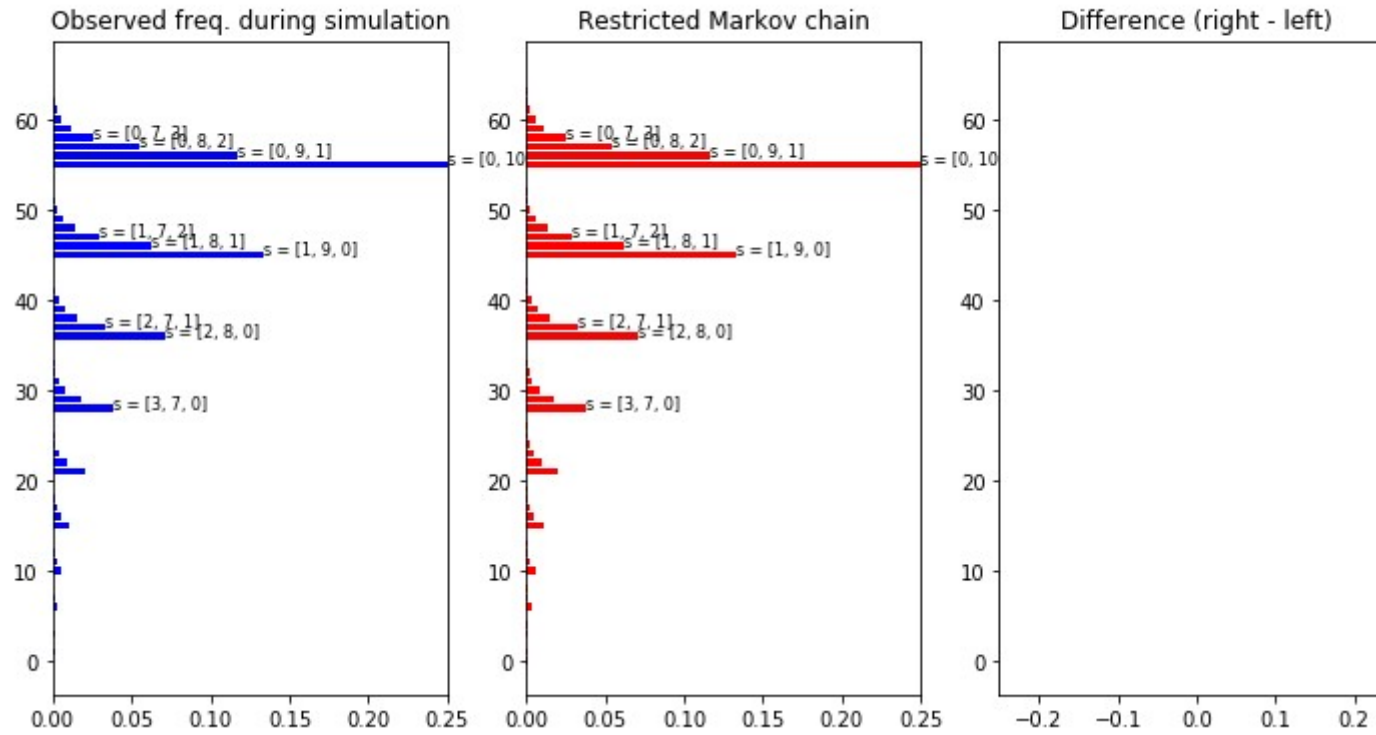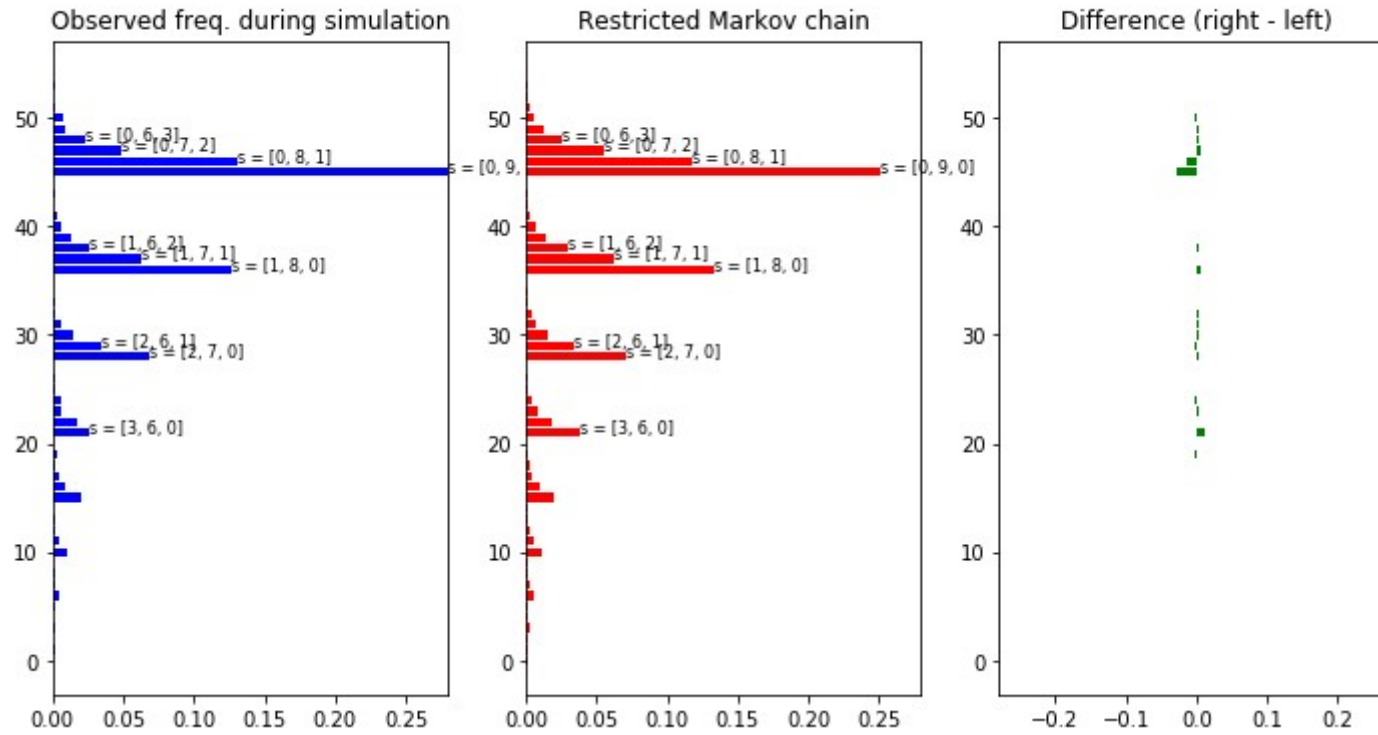
Distribution of ACTIVATION states

Observed freq. during simulation — Restricted Markov chain — Difference (right - left)

Distribution of ABSORPTION states

Observed freq. during simulation | Restricted Markov chain | Difference (right - left)

K=20, rhos=[0.4, 0.75, 0.35], N=800, activation size=10, maxtime(1)=57142.9, maxtime(N)=71.4, mean_lifetime=22.9(n=2489), finalize=ABS, seed=1725
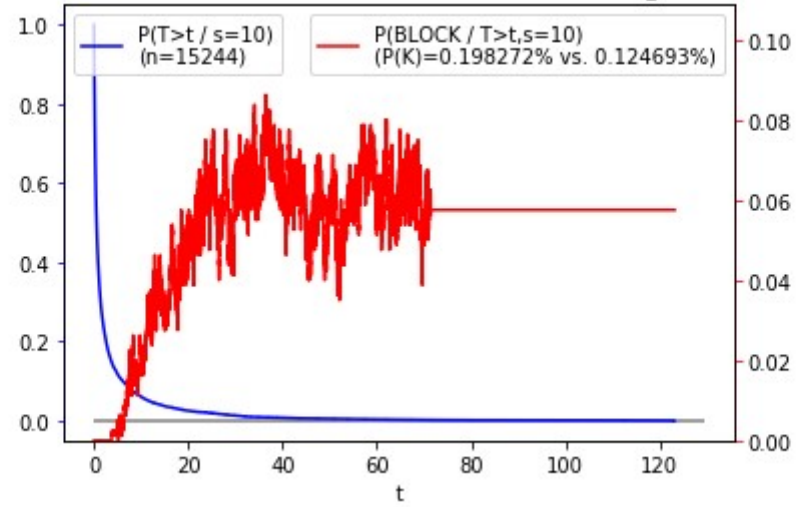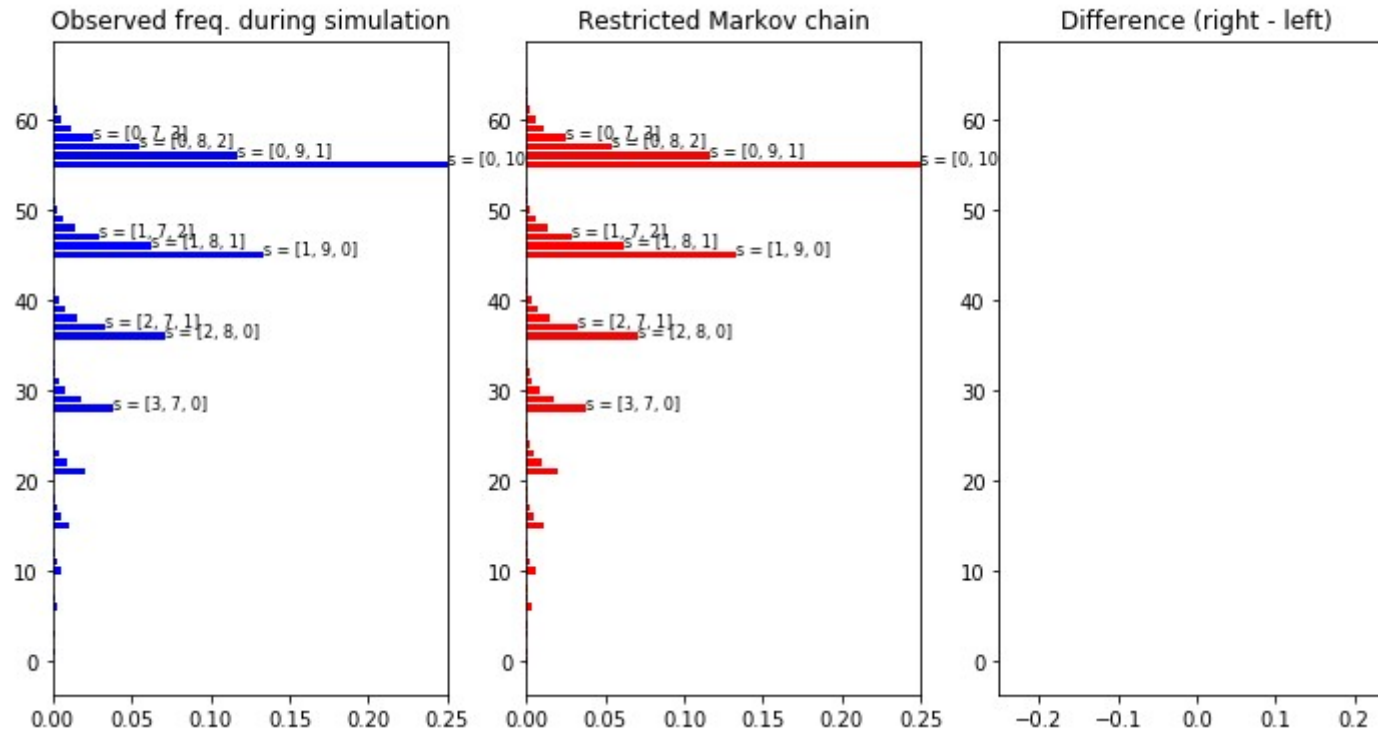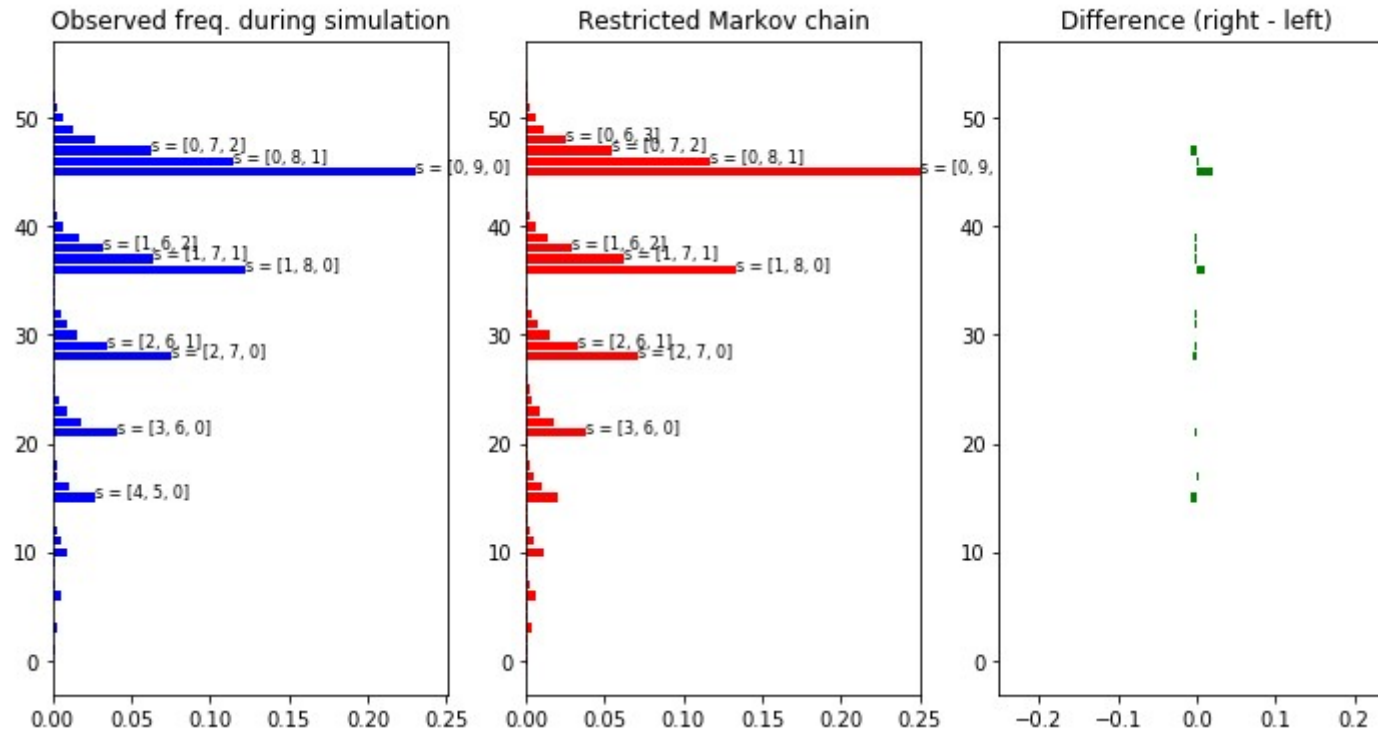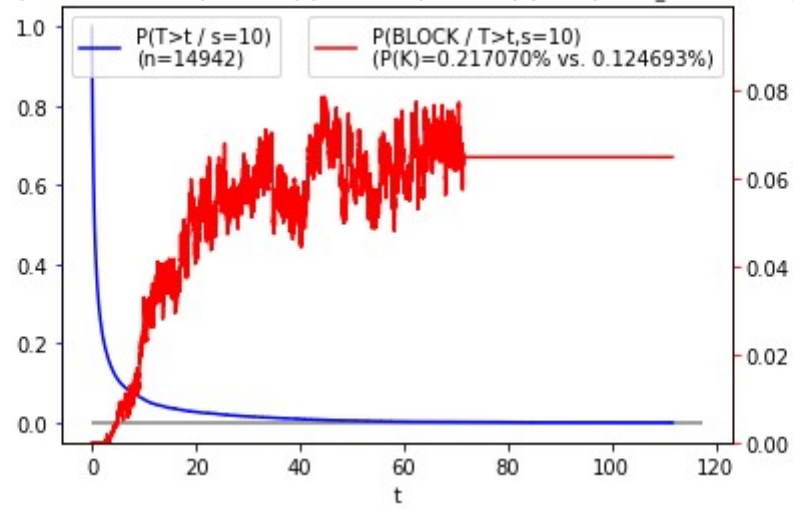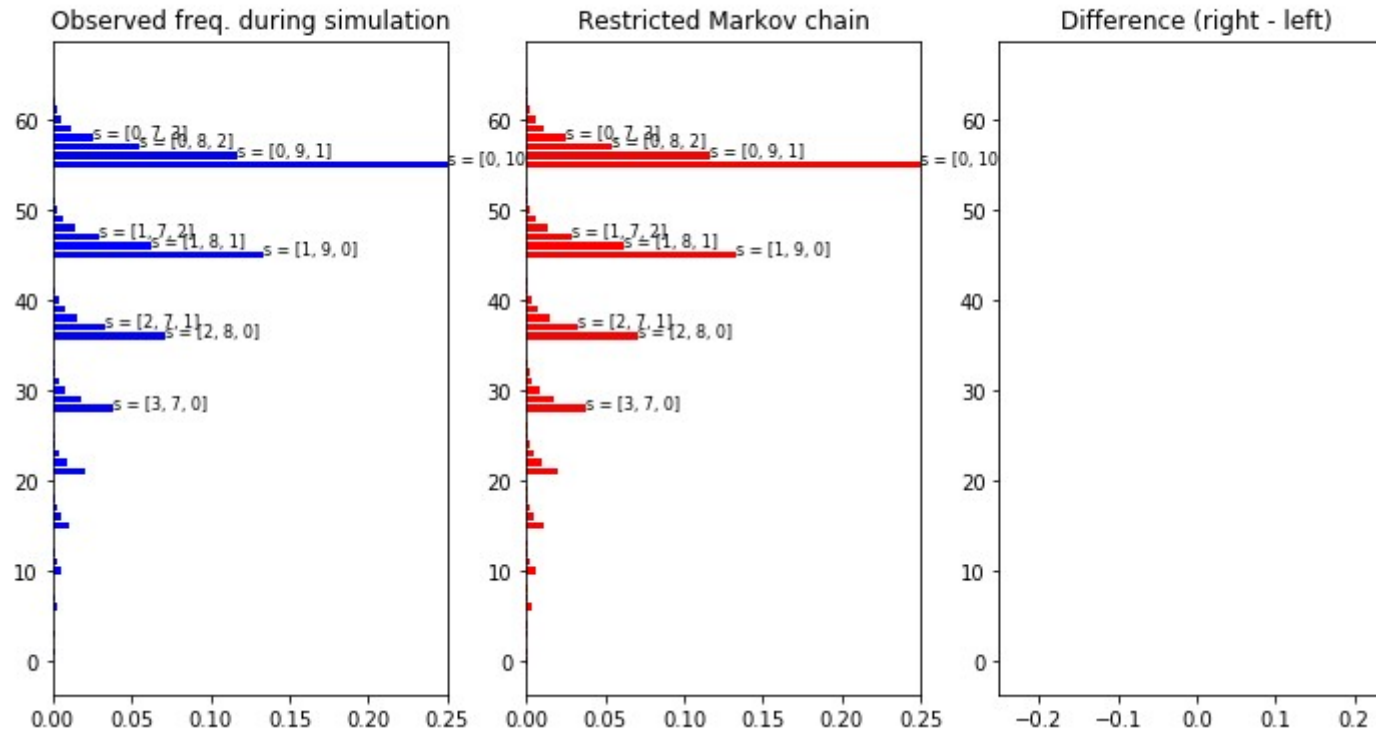
Distribution of ACTIVATION states

Observed freq. during simulation | Restricted Markov chain | Difference (right - left)

Distribution of ABSORPTION states

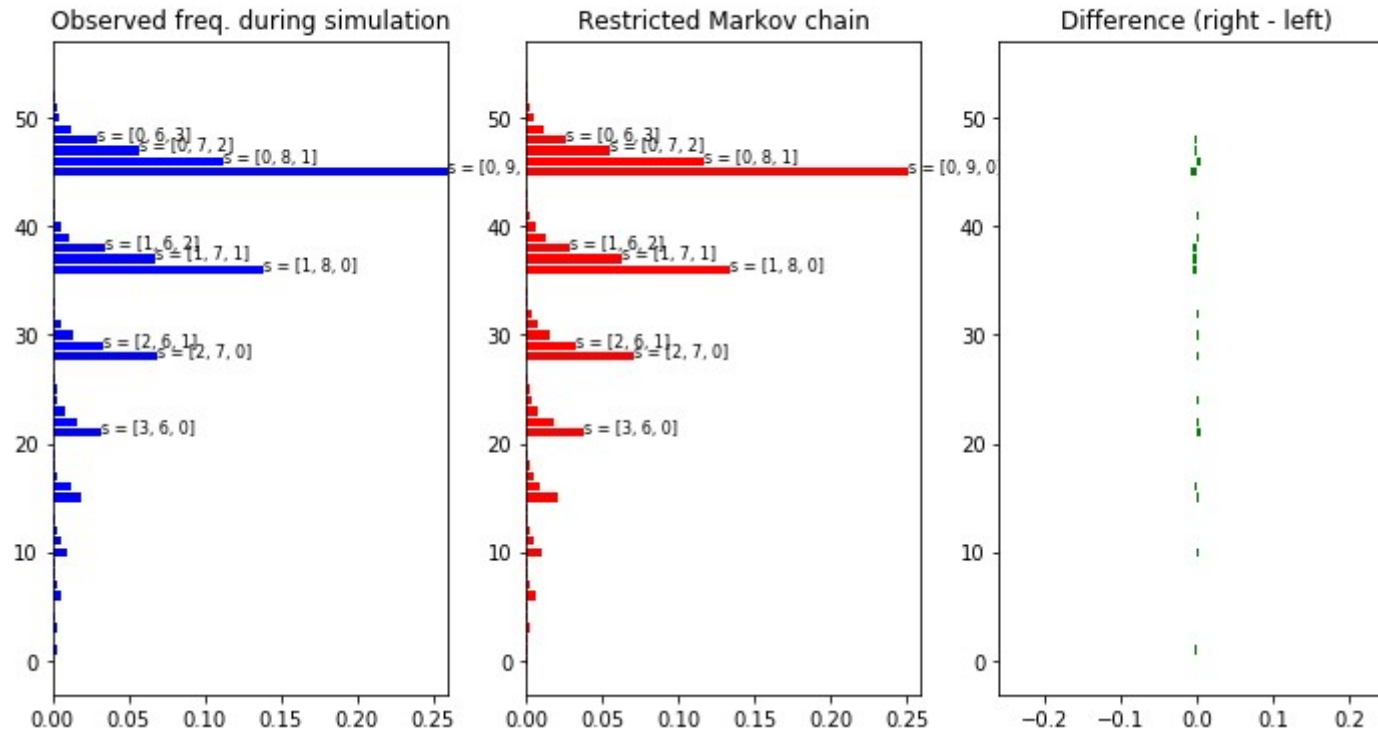Observed freq. during simulation | Restricted Markov chain | Difference (right - left)

K=20, rhos=[0.4, 0.75, 0.35], N=1600, activation size=10, maxtime(1)=114285.7, maxtime(N)=71.4, mean_lifetime=22.1(n=5180), finalize=ABS, seed=1718

P(T>t / s=10)
(n=14942)

P(BLOCK / T>t,s=10)
(P(K)=0.217070% vs. 0.124693%)

Distribution of ACTIVATION states

| Observed freq. during simulation | Restricted Markov chain | Difference (right - left) |

Distribution of ABSORPTION states

Observed freq. during simulation | Restricted Markov chain | Difference (right - left)

s = [0, 6, 3]
s = [0, 7, 2]
s = [0, 8, 1]
s = [0, 9, 0]
s = [1, 6, 2]
s = [1, 7, 1]
s = [1, 8, 0]
s = [2, 6, 1]
s = [2, 7, 0]
s = [3, 6, 0]

K=20, rhos=[0.4, 0.75, 0.35], N=1600, activation size=10, maxtime(1)=114285.7, maxtime(N)=71.4, mean_lifetime=21.6(n=5297), finalize=ABS, seed=1719
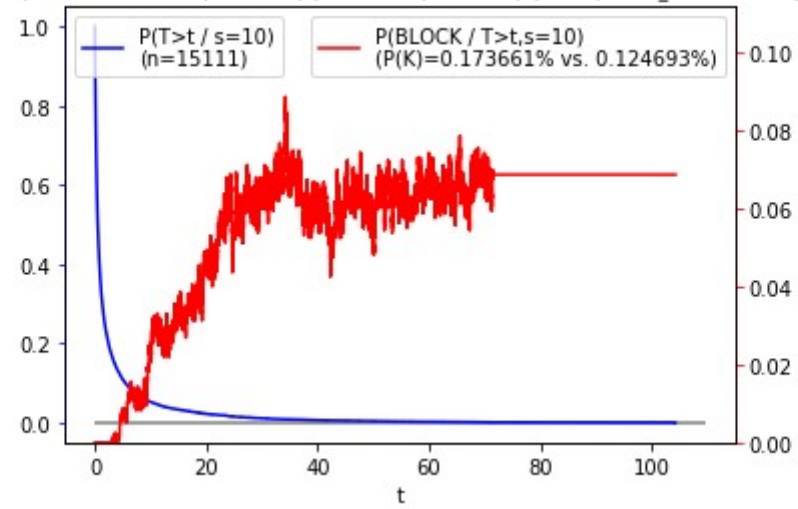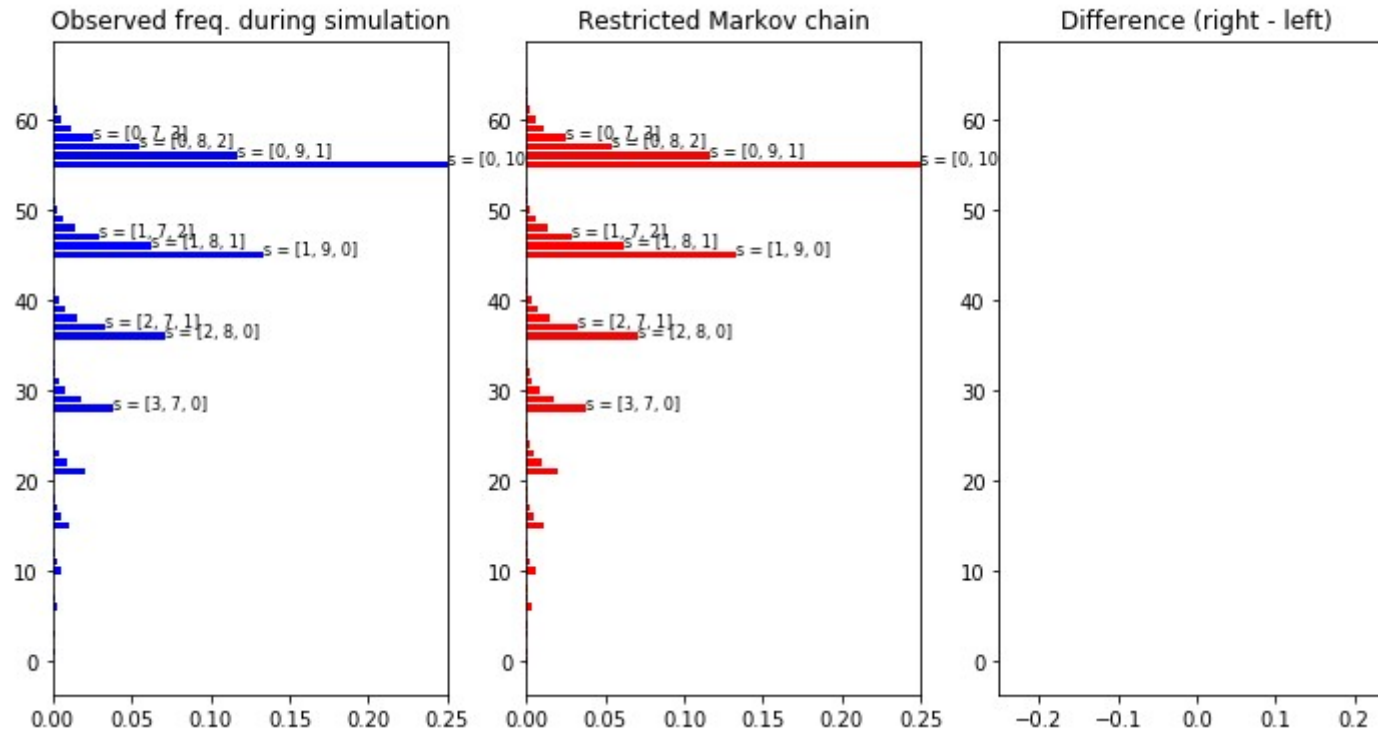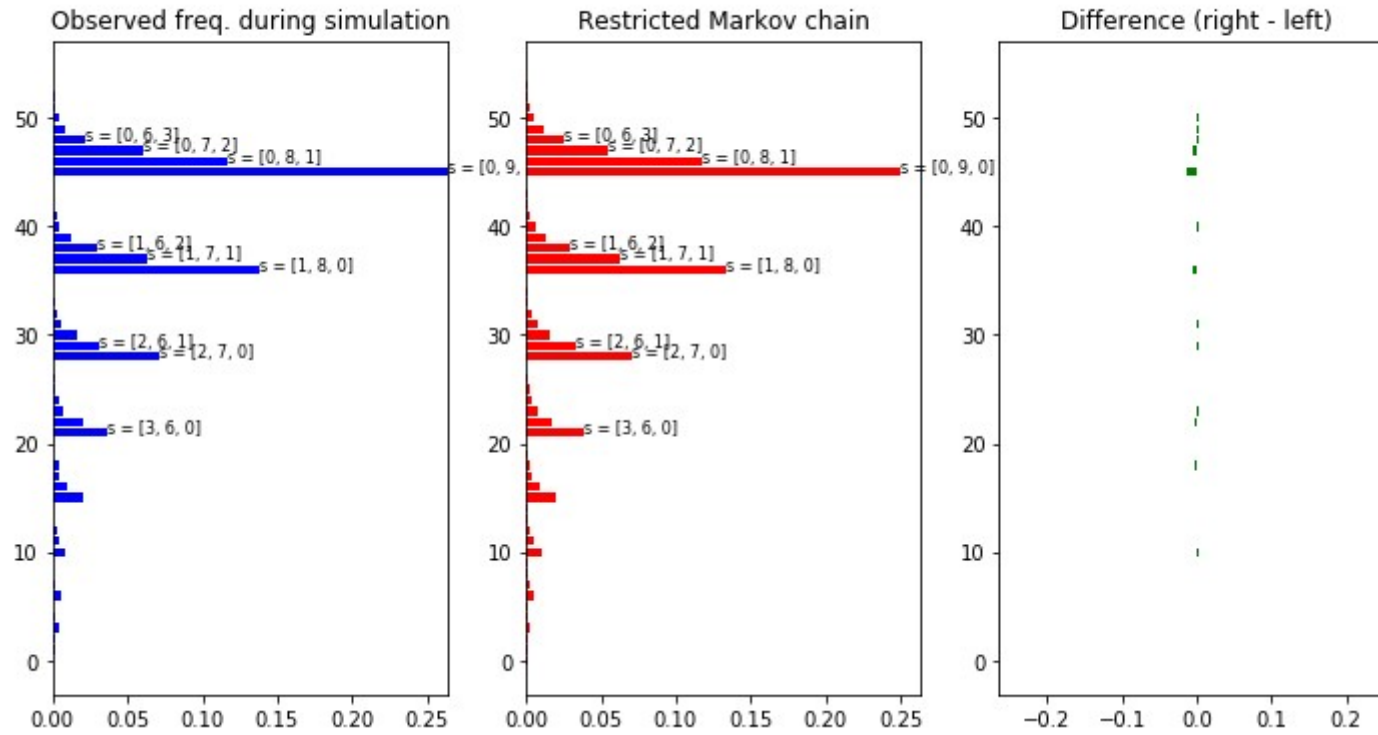
Distribution of ACTIVATION states

Distribution of ABSORPTION states

Observed freq. during simulation | Restricted Markov chain | Difference (right - left)

K=20, rhos=[0.4, 0.75, 0.35], N=1600, activation size=10, maxtime(1)=114285.7, maxtime(N)=71.4, mean_lifetime=22.8(n=5016), finalize=ABS, seed=1720
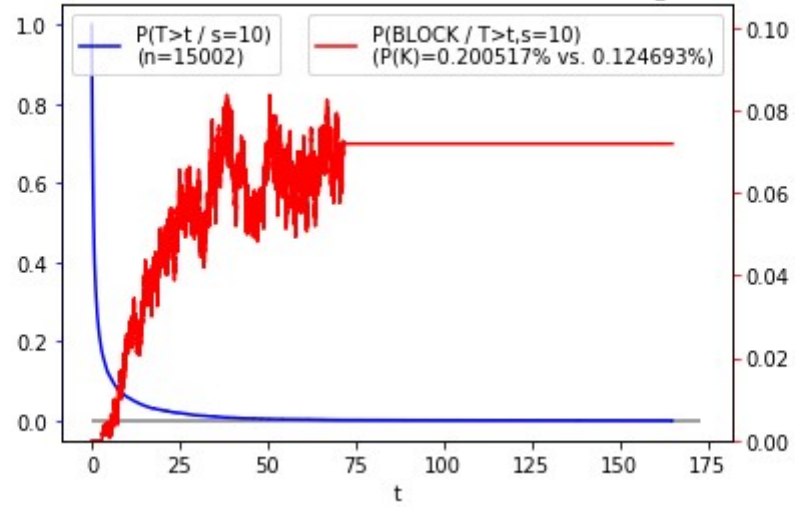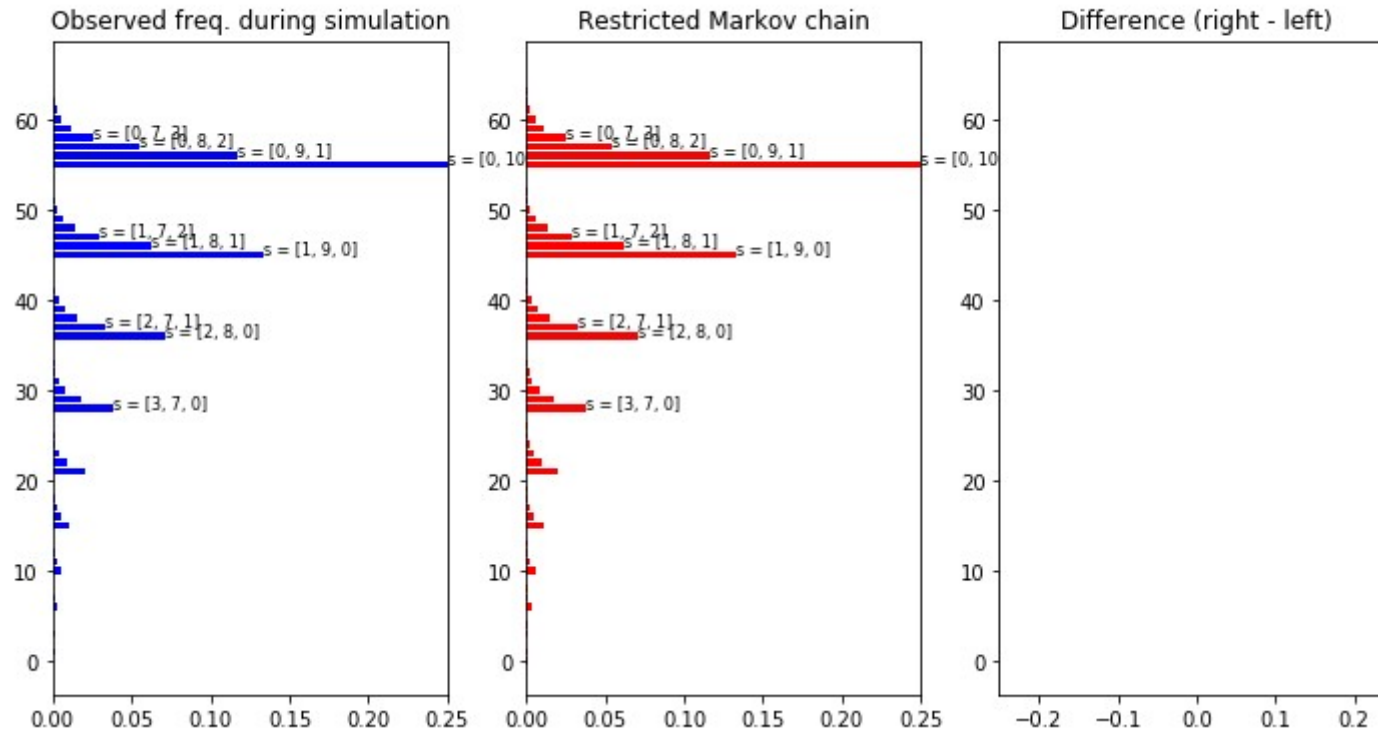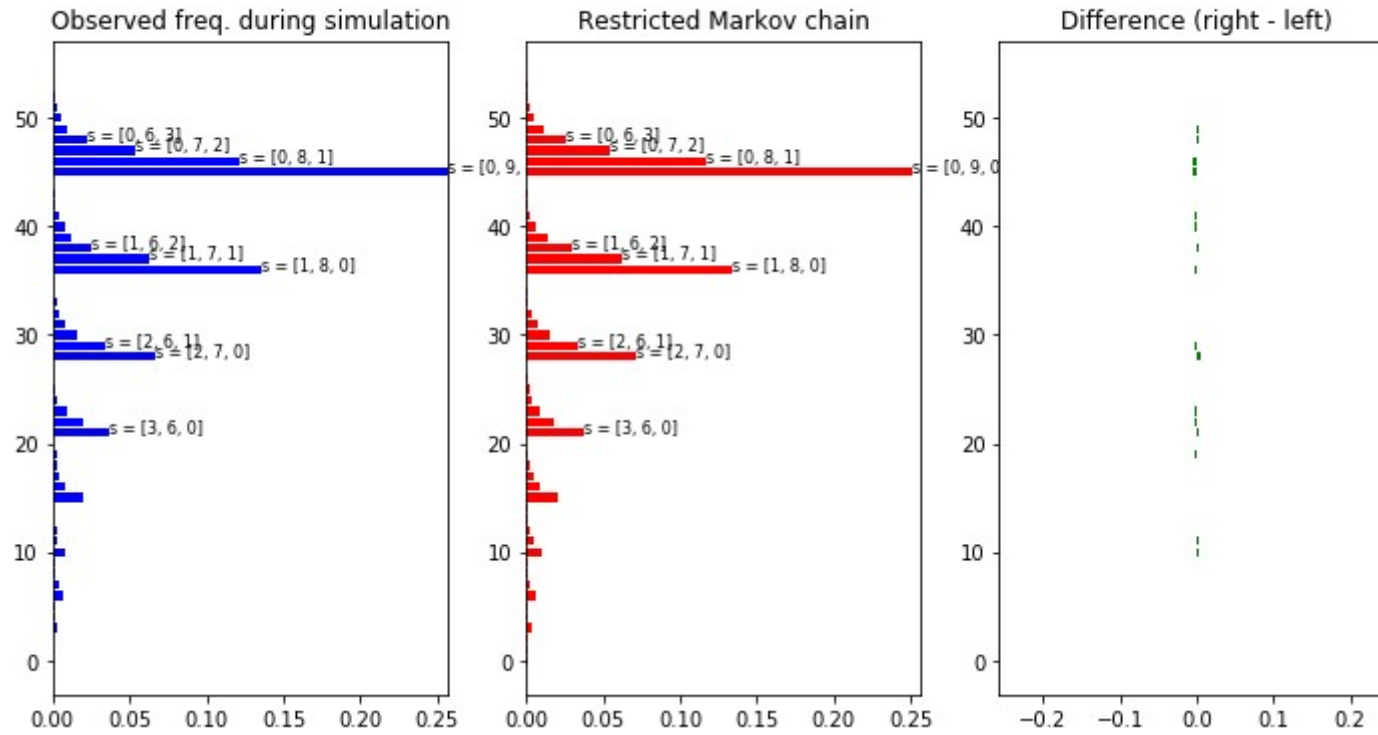
Distribution of ACTIVATION states

| Observed freq. during simulation | Restricted Markov chain | Difference (right - left) |

s = [0, 7, 3]
s = [0, 8, 2]
s = [0, 9, 1]
s = [0, 10

s = [1, 7, 2]
s = [1, 8, 1]
s = [1, 9, 0]

s = [2, 7, 1]
s = [2, 8, 0]

s = [3, 7, 0]

Distribution of ABSORPTION states

Observed freq. during simulation | Restricted Markov chain | Difference (right - left)

s = [0, 6, 3]
s = [0, 7, 2]
s = [0, 8, 1]
s = [0, 9, 0]
s = [1, 6, 2]
s = [1, 7, 1]
s = [1, 8, 0]
s = [2, 6, 1]
s = [2, 7, 0]
s = [3, 6, 0]

K=20, rhos=[0.4, 0.75, 0.35], N=1600, activation size=10, maxtime(1)=114285.7, maxtime(N)=71.4, mean_lifetime=22.1(n=5159), finalize=ABS, seed=1721
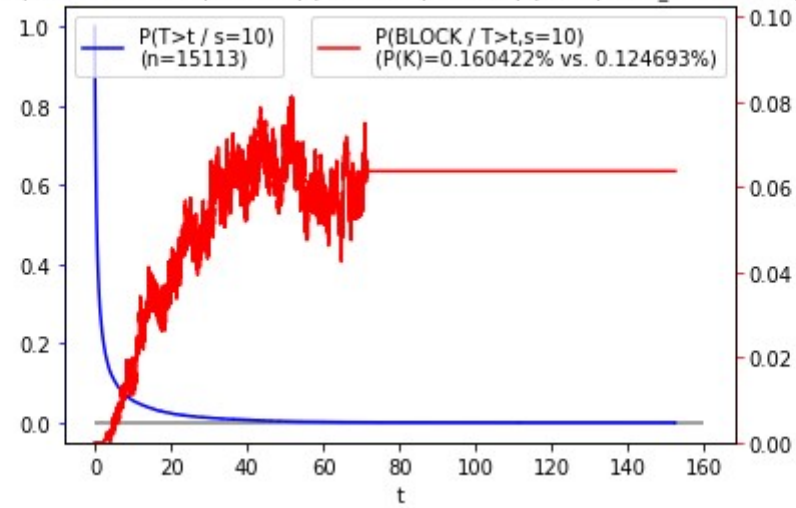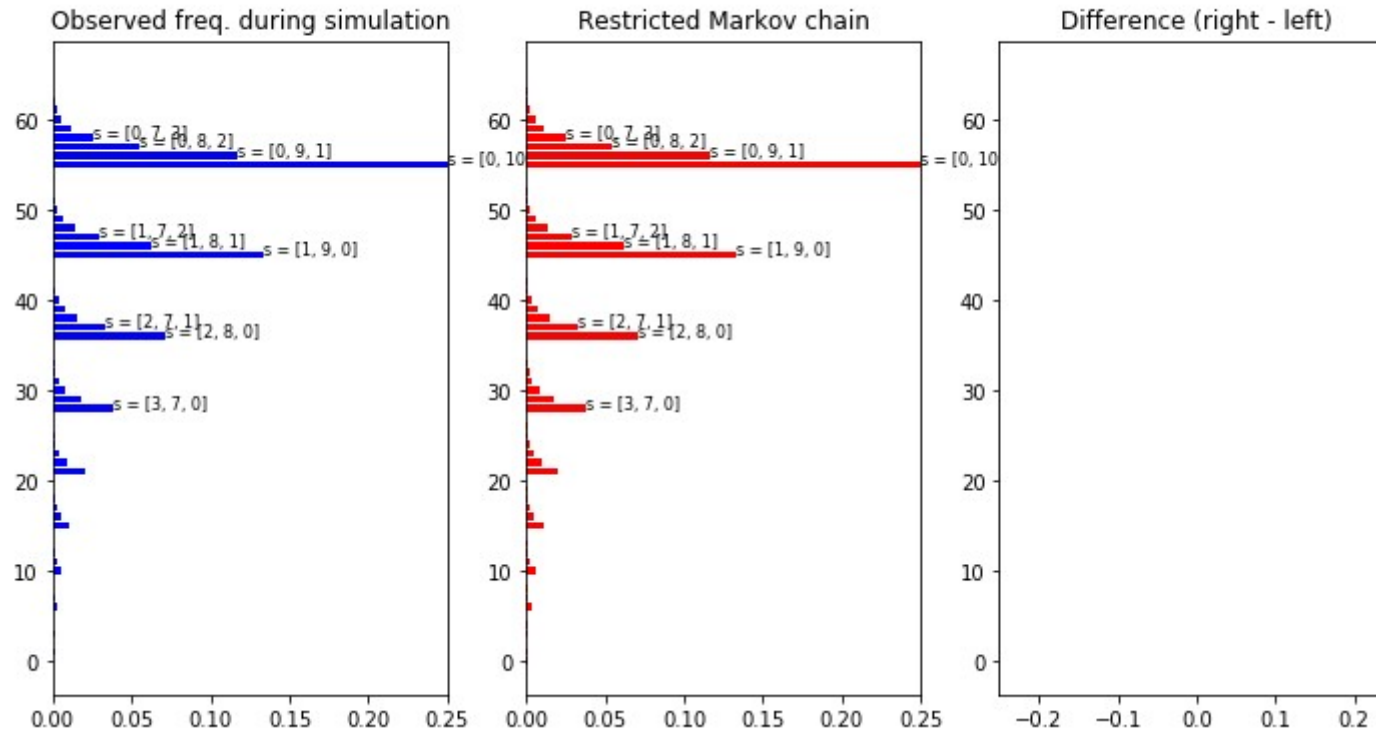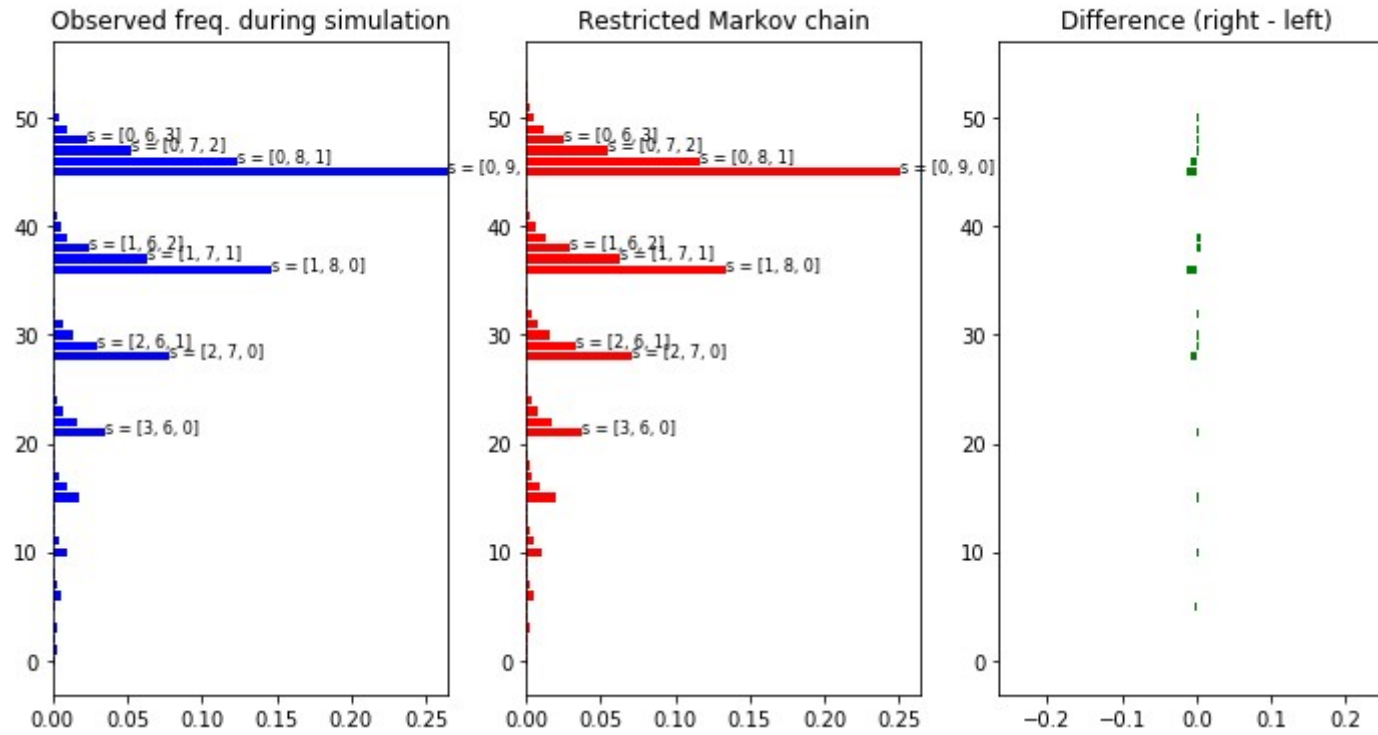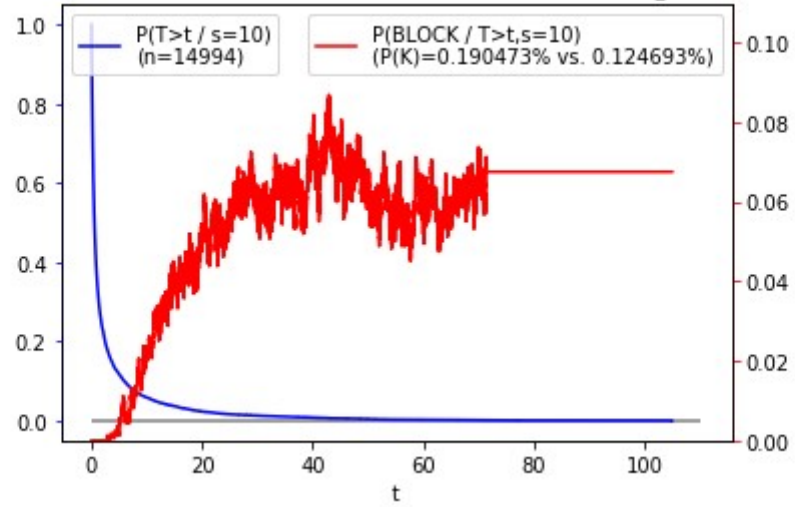
Distribution of ACTIVATION states

Observed freq. during simulation | Restricted Markov chain | Difference (right - left)

Distribution of ABSORPTION states

Observed freq. during simulation | Restricted Markov chain | Difference (right - left)

s = [0, 6, 3]
s = [0, 7, 2]
s = [0, 8, 1]
s = [0, 9, 0]
s = [1, 6, 2]
s = [1, 7, 1]
s = [1, 8, 0]
s = [2, 6, 1]
s = [2, 7, 0]
s = [3, 6, 0]

K=20, rhos=[0.4, 0.75, 0.35], N=1600, activation size=10, maxtime(1)=114285.7, maxtime(N)=71.4, mean_lifetime=21.7(n=5264), finalize=ABS, seed=1722
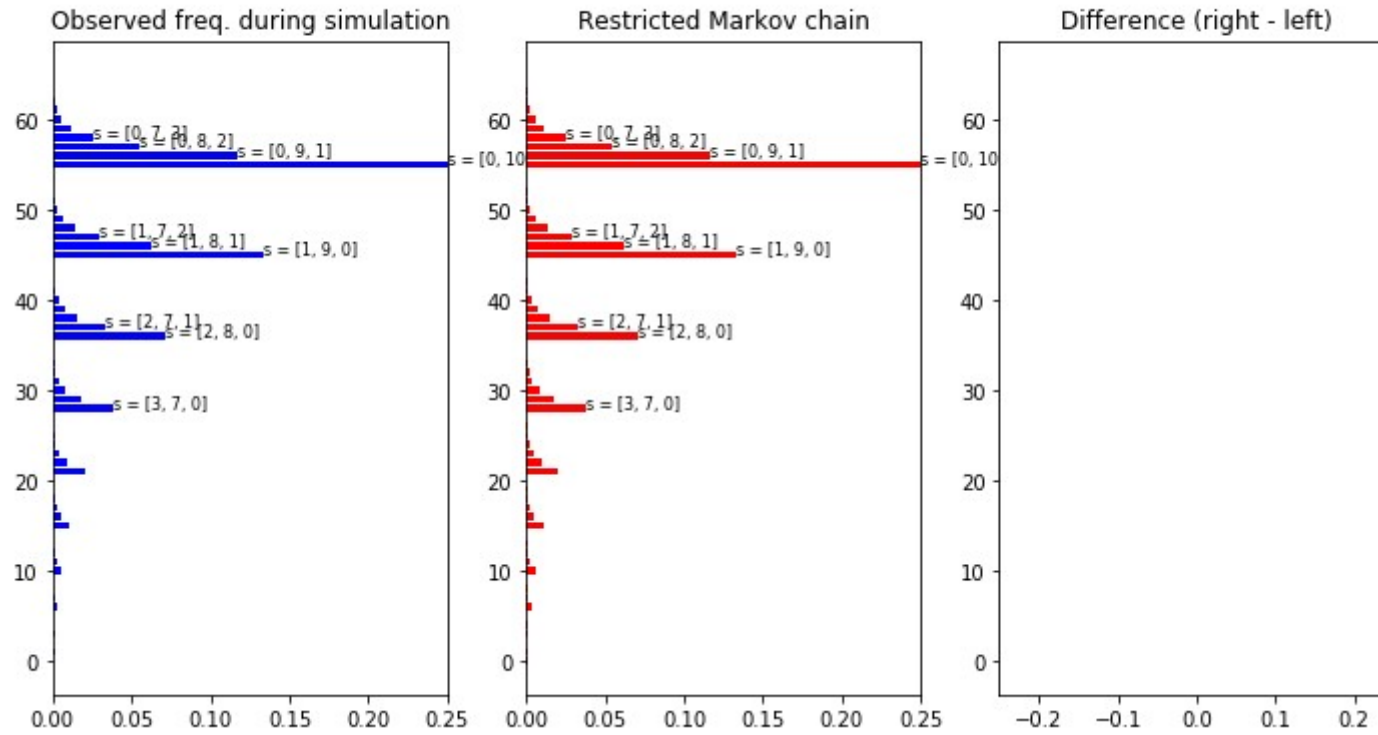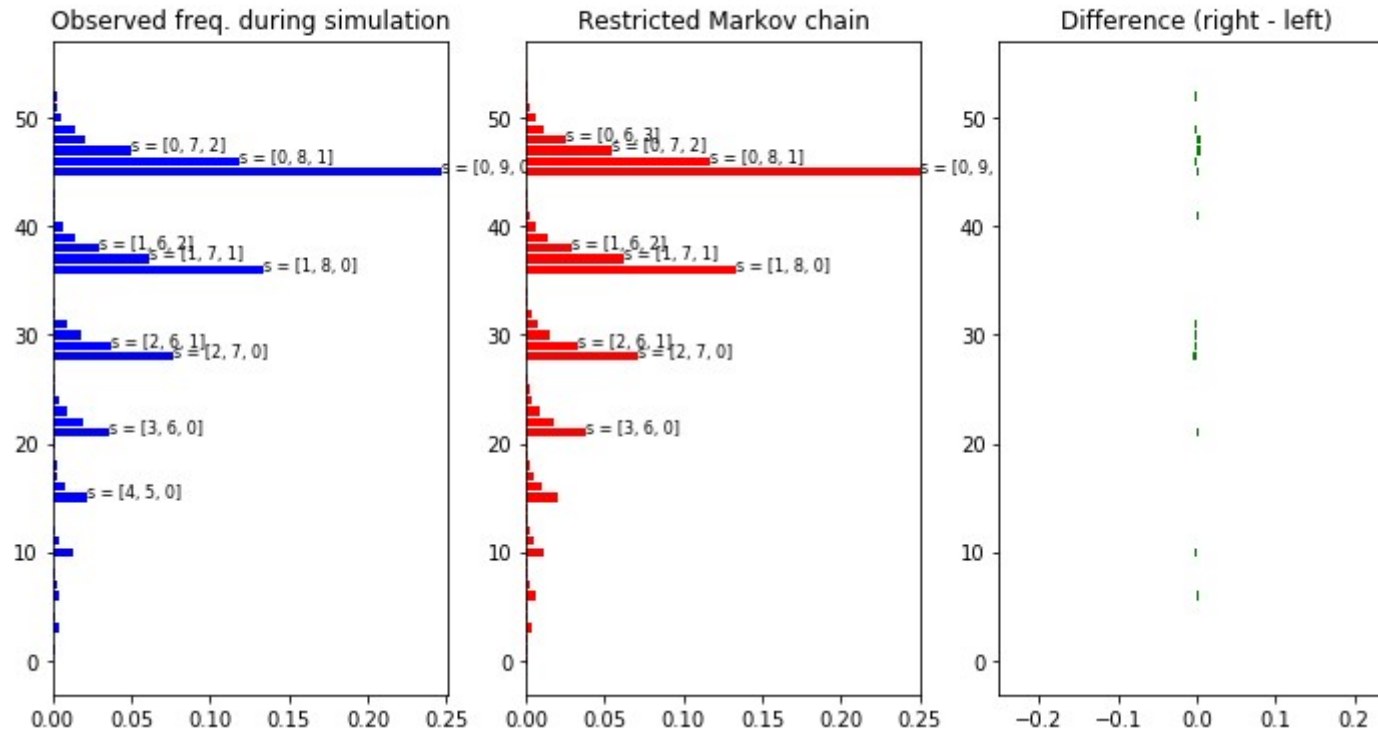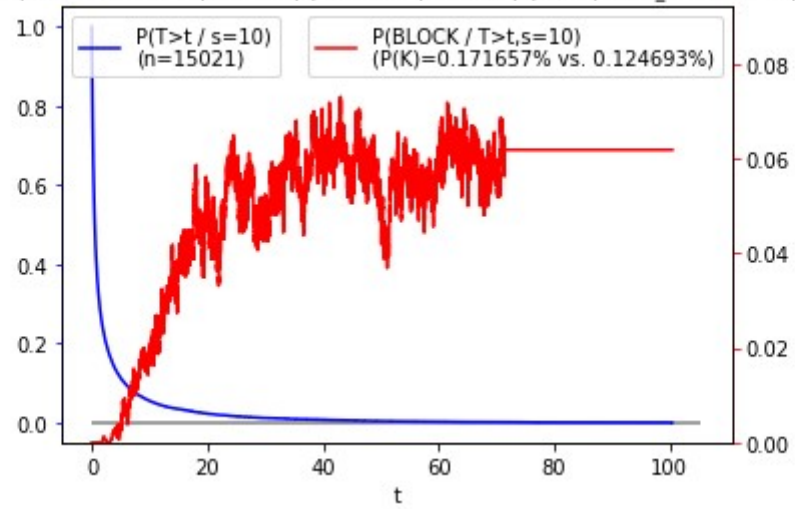
Distribution of ACTIVATION states

Observed freq. during simulation — Restricted Markov chain — Difference (right - left)

Distribution of ABSORPTION states

Observed freq. during simulation	Restricted Markov chain	Difference (right - left)

K=20, rhos=[0.4, 0.75, 0.35], N=1600, activation size=10, maxtime(1)=114285.7, maxtime(N)=71.4, mean_lifetime=21.8(n=5237), finalize=ABS, seed=1723
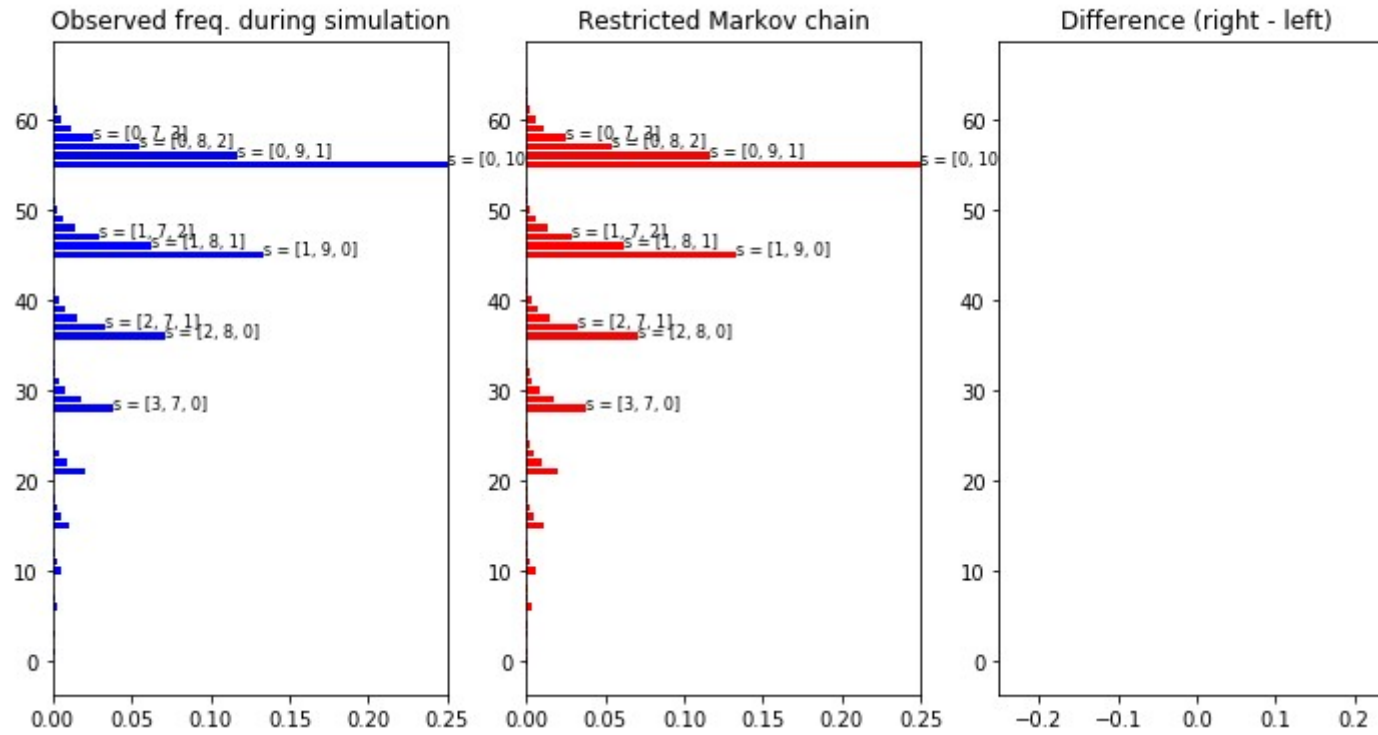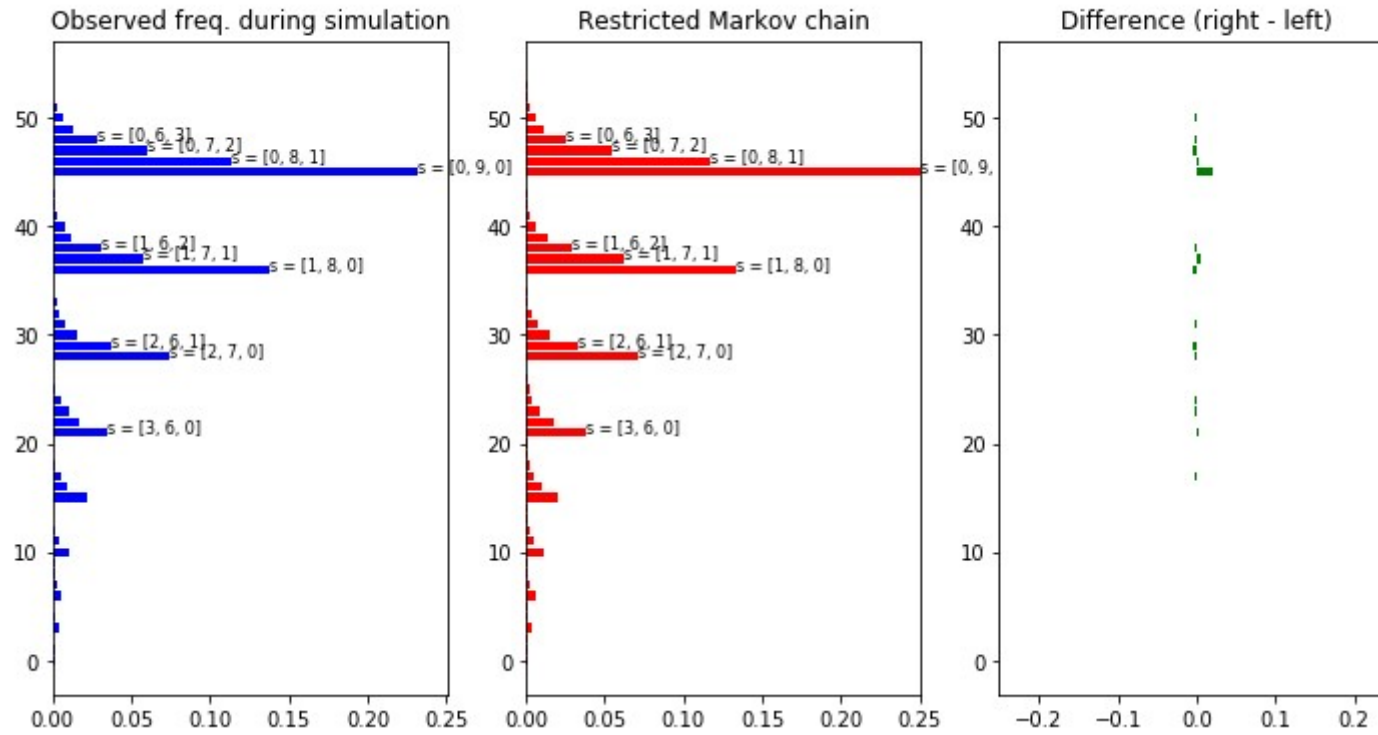
Distribution of ACTIVATION states

Observed freq. during simulation — Restricted Markov chain — Difference (right - left)

Distribution of ABSORPTION states

K=20, rhos=[0.4, 0.75, 0.35], N=1600, activation size=10, maxtime(1)=114285.7, maxtime(N)=71.4, mean_lifetime=21.6(n=5289), finalize=ABS, seed=1724
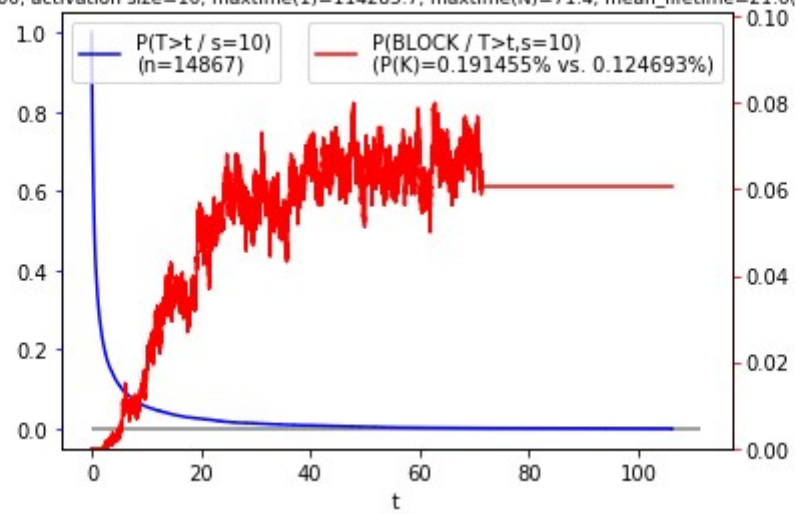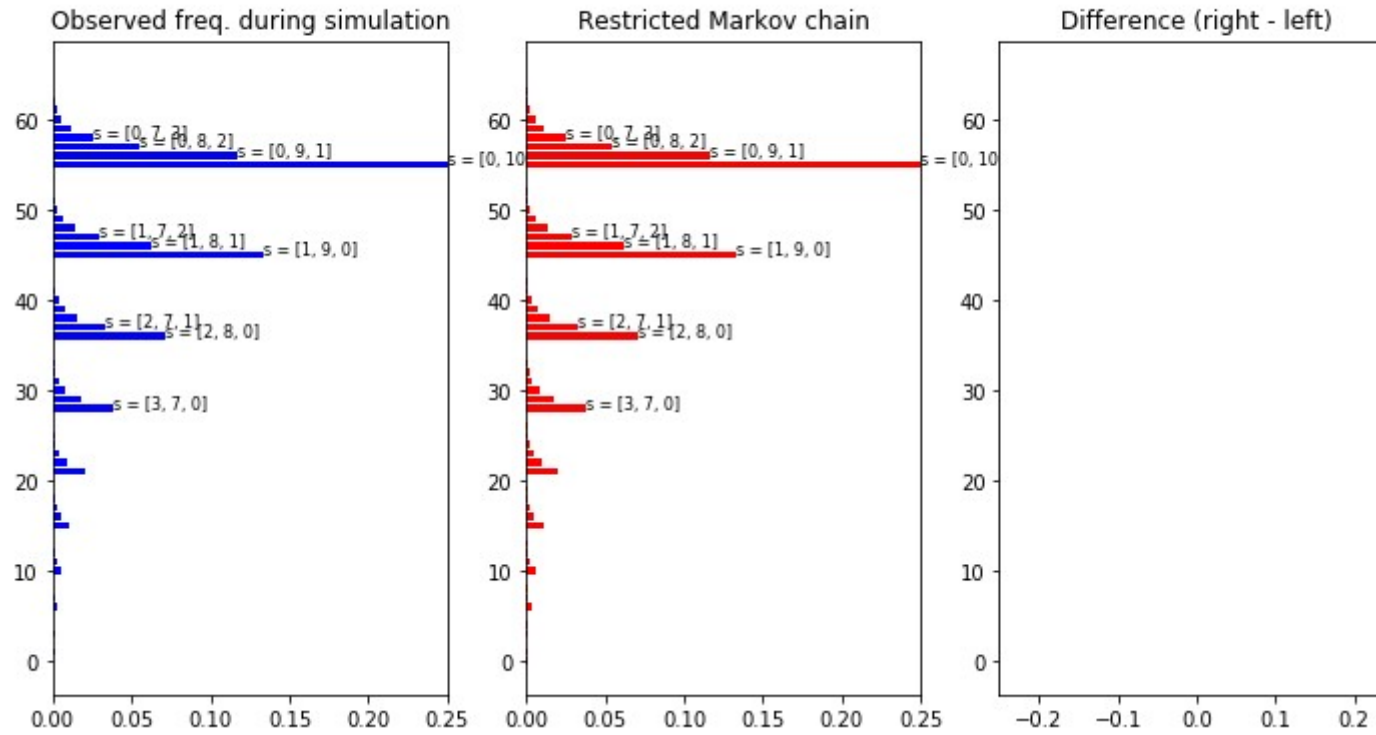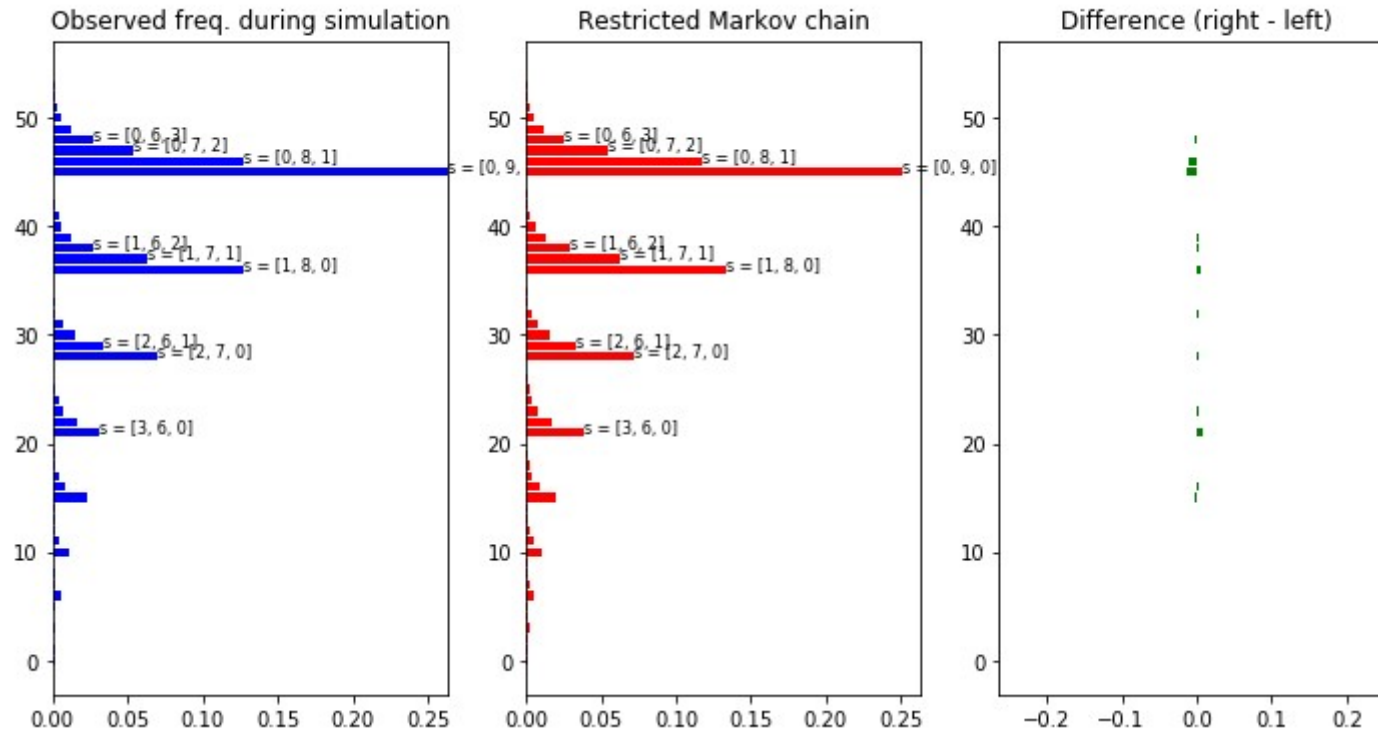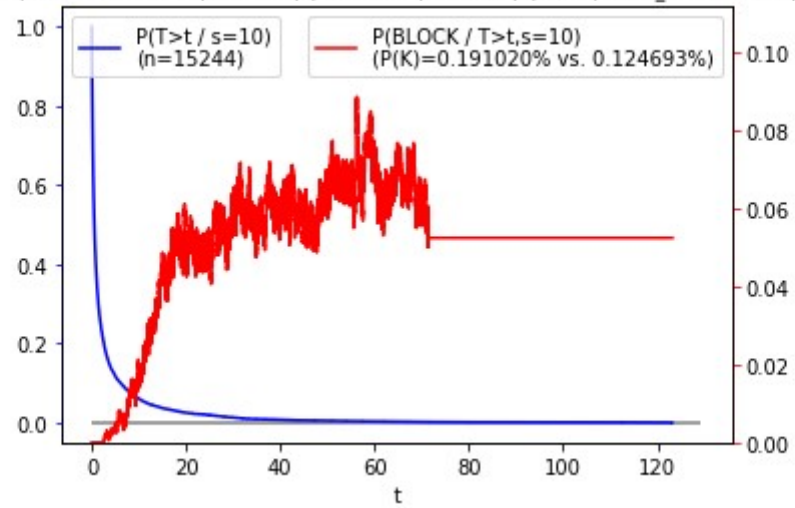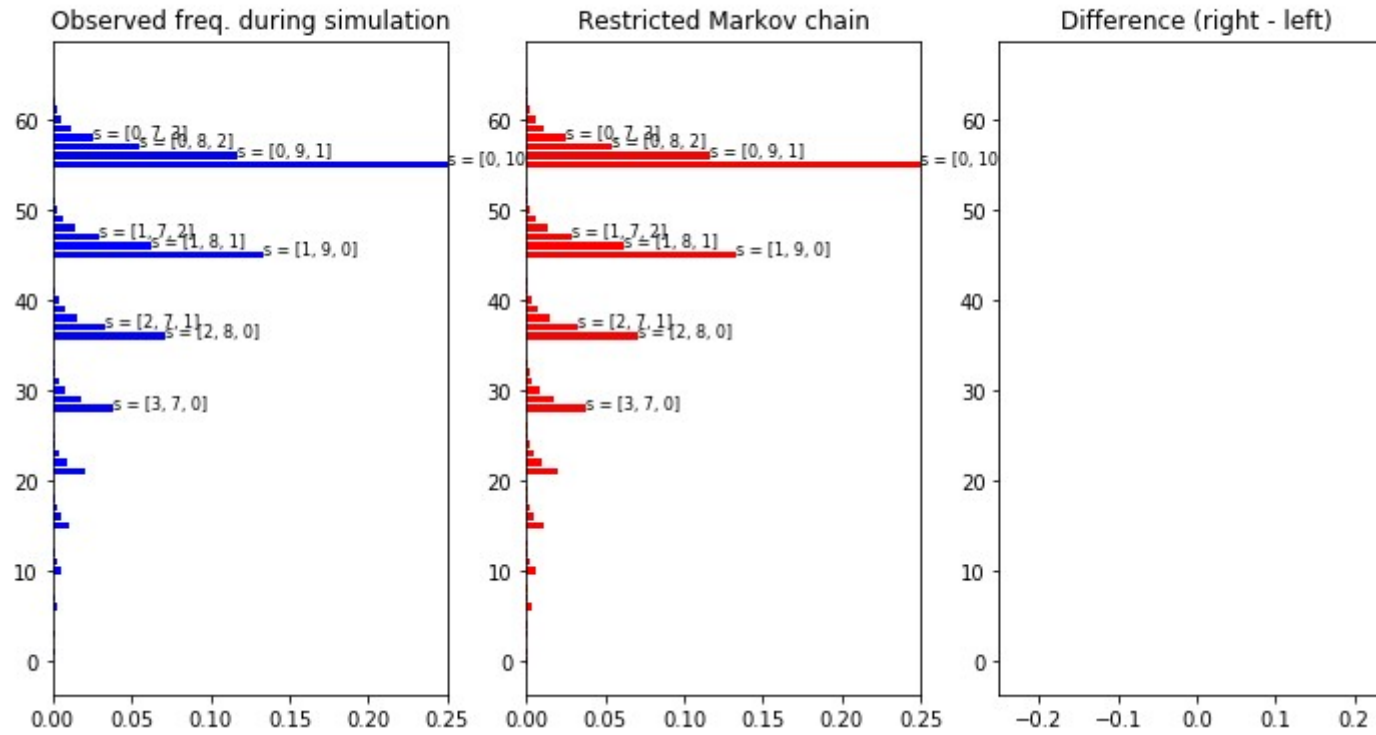
Distribution of ACTIVATION states

Distribution of ABSORPTION states

Observed freq. during simulation

s = [0, 6, 3]
s = [0, 7, 2]
s = [0, 8, 1]
s = [0, 9,
s = [1, 6, 2]
s = [1, 7, 1]
s = [1, 8, 0]
s = [2, 6, 1]
s = [2, 7, 0]
s = [3, 6, 0]

Restricted Markov chain

s = [0, 6, 3]
s = [0, 7, 2]
s = [0, 8, 1]
s = [0, 9, 0]
s = [1, 6, 2]
s = [1, 7, 1]
s = [1, 8, 0]
s = [2, 6, 1]
s = [2, 7, 0]
s = [3, 6, 0]
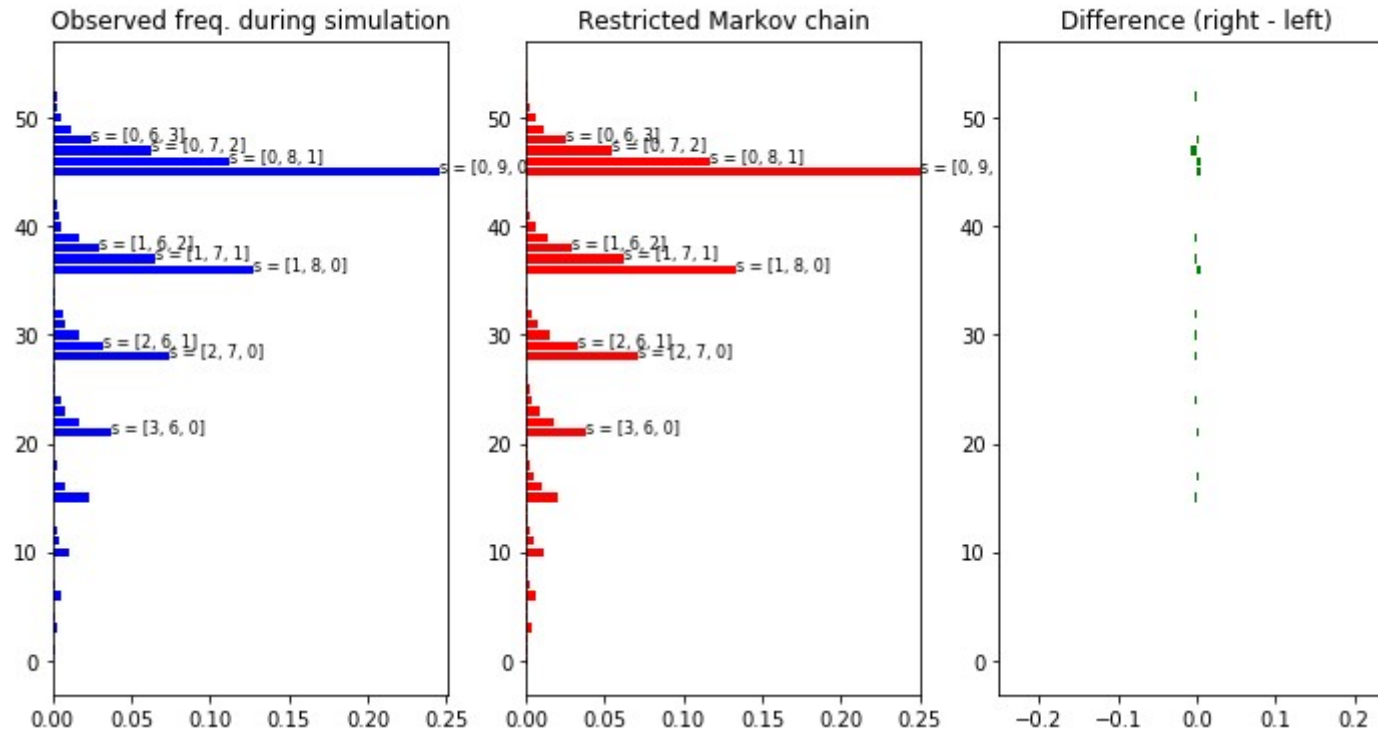
Difference (right - left)

K=20, rhos=[0.4, 0.75, 0.35], N=1600, activation size=10, maxtime(1)=114285.7, maxtime(N)=71.4, mean_lifetime=22.8(n=5009), finalize=ABS, seed=1725
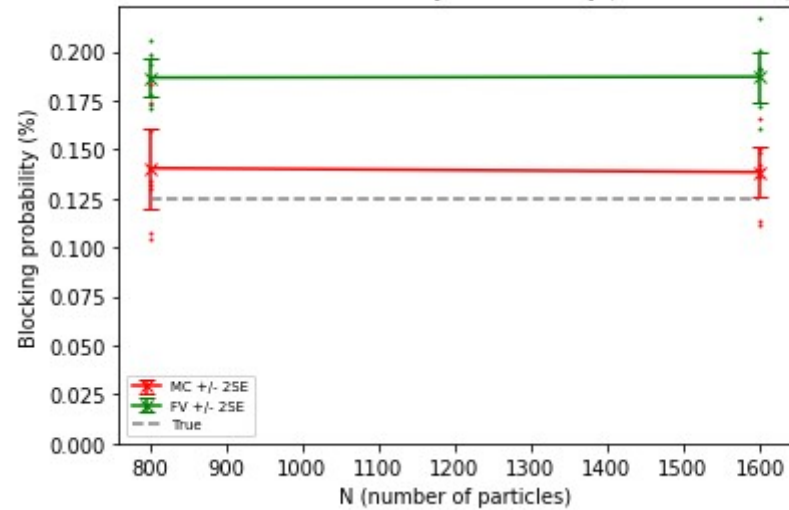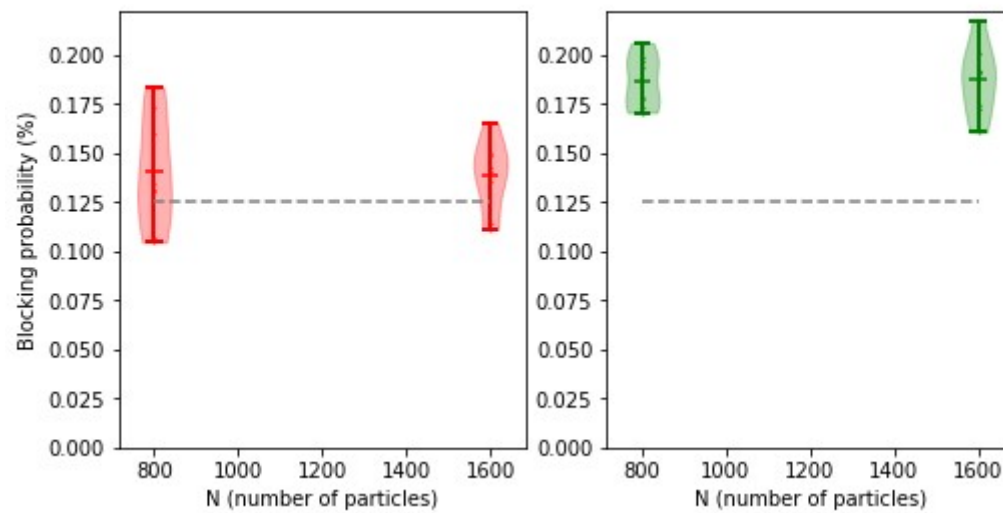
Distribution of ACTIVATION states

Distribution of ABSORPTION states

| Observed freq. during simulation | Restricted Markov chain | Difference (right - left) |

Simulation results for #servers=3, K=20, rhos=[0.4, 0.75, 0.35], (800<=N<=1600), T<=71, Rep=8

Simulation results for #servers=3, K=20, rhos=[0.4, 0.75, 0.35], (800<=N<=1600), T<=71, Rep=8

In [2]: