input joint distr Input parameters (black lines) **X1 X2** p model IK BayesianMS 0.04959375 causal strengths 0.03665625 **X1 X2** 0.0095625 0.5 0.0541875 0.5 0.0733125 0.0541875 bias 0.5 0.108375 baserates 0.15 0.15 0.15 0.614125 mean state **X1** nChains

| betavar | 0 |
|---------|---|
| | |

meanChainlen

|) | sir | 1 |
|---|-----|---|
| | Y | |
| | 1 | |
| | 1 | |
| | 0 | |
| | 0 | |
| | 1 | |
| | 1 | |
| | 0 | |
| | 0 | |
| | | |
| | | |

| n joint distr | | | |
|---------------|----|------------|--|
| | X2 | р | |
| | 1 | 0.11343077 | |
| | 0 | 0.04829231 | |
| | 1 | 0.01306154 | |
| | 0 | 0.05240000 | |
| | 1 | 0.09169231 | |
| | 0 | 0.0555385 | |
| | 1 | 0.09686154 | |
| | 0 | 0.52870769 | |
| | | | |
| | | | |
| | | | |
| | | | |

input joint distr Input parameters (black lines) **X1 X2** p model IK BayesianMS 0.44240625 causal strengths 0.09384375 **X1 X2** 0.0739375 0.5 0.0398125 0.5 0.1876875 0.0398125 bias 0.5 0.079625 baserates 0.65 0.65 0.65 0.042875 mean sim joint distr state **X1** Υ **X2** р nChains 0.40530769 0.08898462 0.07250769 0.04923077

0.16023077

0.04855385

0.08596923

0.08921538

betavar

meanChainlen











