

***SOGA*: Inference of Probabilistic Programs by Second-order Gaussian Approximation Reproducibility Report**

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Table 3: Evaluation of *SOGA* accuracy and runtime as variables increase by using PyMC as ground truth due to PSI timing out. Each row shows the model’s number of variables (# vars), absolute percentage errors ($|\%e|$), and *SOGA* runtime.

<i>Model</i>	<i>SOGA</i>		<i>PyMC</i>		$ \%e $
	<i>time (s)</i>	<i>value</i>	<i>time (s)</i>	<i>value</i>	
<i>timeseries</i> ₅	0.129	0.998	294.057	0.993	0.482
<i>timeseries</i> ₆	0.063	2.048	246.285	2.055	0.339
<i>timeseries</i> ₇	0.055	1.999	513.226	2.004	0.229
<i>timeseries</i> ₈	0.068	2.361	586.282	2.374	0.546
<i>timeseries</i> ₉	0.064	2.879	to	-	-
<i>timeseries</i> ₁₅	0.087	5.347	to	-	-
<i>timeseries</i> ₂₅	0.103	6.185	to	-	-
<i>timeseries</i> ₄₅	0.259	6.575	to	-	-
<i>timeseries</i> ₆₅	0.509	6.622	to	-	-
<i>timeseries</i> ₈₅	0.255	6.628	to	-	-
<i>timeseries</i> ₁₀₀	0.946	6.628	to	-	-