| Methods<br>Metrics | n    | SSE  | CRPS | DSS  | IS1  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| SSE                | 200  | 1.00 | 0.25 | 0.01 | 0.01 | 1.00 | 0.22 | 0.00 | 0.00 | 1.00 | 0.59 | 0.00 | 0.01 | 1.00 | 0.75 | 0.00 | 0.01 | 1.00 | 0.91 | 0.00 | 0.01 |
| SSE                | 400  | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.01 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 |
| SSE                | 800  | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.07 | 0.00 |
| SSE                | 1600 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.70 | 0.00 | 1.00 | 0.00 | 0.96 | 0.00 | 1.00 | 0.00 | 0.65 | 0.00 |
| CRPS               | 200  | 0.89 | 1.00 | 0.15 | 0.01 | 0.95 | 1.00 | 0.16 | 0.00 | 0.98 | 1.00 | 0.96 | 0.00 | 1.00 | 1.00 | 0.84 | 0.00 | 1.00 | 1.00 | 0.99 | 0.08 |
| CRPS               | 400  | 1.00 | 1.00 | 0.64 | 0.22 | 1.00 | 1.00 | 0.47 | 0.15 | 1.00 | 1.00 | 0.97 | 0.02 | 1.00 | 1.00 | 1.00 | 0.02 | 1.00 | 1.00 | 1.00 | 0.82 |
| CRPS               | 800  | 1.00 | 1.00 | 0.79 | 0.15 | 1.00 | 1.00 | 0.77 | 0.09 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.52 | 1.00 | 1.00 | 1.00 | 0.92 |
| CRPS               | 1600 | 1.00 | 1.00 | 0.41 | 0.02 | 1.00 | 1.00 | 0.46 | 0.04 | 1.00 | 1.00 | 1.00 | 0.65 | 1.00 | 1.00 | 1.00 | 0.90 | 1.00 | 1.00 | 1.00 | 0.95 |
| DSS                | 200  | 0.98 | 0.15 | 1.00 | 0.07 | 0.99 | 0.37 | 1.00 | 0.14 | 1.00 | 0.56 | 1.00 | 0.12 | 1.00 | 0.93 | 1.00 | 0.48 | 1.00 | 0.90 | 1.00 | 0.76 |
| DSS                | 400  | 0.92 | 0.03 | 1.00 | 0.02 | 1.00 | 0.17 | 1.00 | 0.07 | 1.00 | 0.86 | 1.00 | 0.49 | 1.00 | 0.47 | 1.00 | 0.08 | 1.00 | 0.00 | 1.00 | 0.01 |
| DSS                | 800  | 0.97 | 0.07 | 1.00 | 0.03 | 1.00 | 0.29 | 1.00 | 0.13 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| DSS                | 1600 | 1.00 | 0.08 | 1.00 | 0.05 | 1.00 | 0.64 | 1.00 | 0.61 | 0.83 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| IS1                | 200  | 0.97 | 0.26 | 0.14 | 1.00 | 0.99 | 0.33 | 0.40 | 1.00 | 1.00 | 0.67 | 1.00 | 1.00 | 1.00 | 0.70 | 1.00 | 1.00 | 1.00 | 0.35 | 1.00 | 1.00 |
| IS1                | 400  | 0.88 | 0.07 | 0.04 | 1.00 | 0.98 | 0.08 | 0.16 | 1.00 | 1.00 | 0.34 | 0.98 | 1.00 | 1.00 | 0.46 | 1.00 | 1.00 | 1.00 | 0.01 | 1.00 | 1.00 |
| IS1                | 800  | 0.89 | 0.03 | 0.02 | 1.00 | 0.98 | 0.07 | 0.80 | 1.00 | 1.00 | 0.55 | 1.00 | 1.00 | 1.00 | 0.11 | 1.00 | 1.00 | 1.00 | 0.13 | 1.00 | 1.00 |
| IS1                | 1600 | 1.00 | 0.13 | 0.06 | 1.00 | 1.00 | 0.12 | 0.47 | 1.00 | 1.00 | 0.10 | 1.00 | 1.00 | 1.00 | 0.07 | 1.00 | 1.00 | 1.00 | 0.11 | 1.00 | 1.00 |

Table 1: Test data

| Methods | n    | SSE  | CRPS | DSS  | IS1  |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| SSE     | 200  | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 0.81 | 1.00 | 1.00 | 1.00 | 0.22 | 1.00 | 1.00 | 1.00 | 0.02 | 1.00 | 0.99 | 1.00 | 0.00 | 1.00 | 0.94 |
| SSE     | 400  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.89 | 1.00 | 1.00 | 1.00 | 0.28 | 1.00 | 1.00 | 1.00 | 0.22 | 1.00 | 0.95 |
| SSE     | 800  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | 0.78 | 1.00 | 1.00 | 1.00 | 0.18 | 1.00 | 0.61 | 1.00 | 0.00 | 1.00 | 0.01 |
| SSE     | 1600 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.89 | 0.00 |
| CRPS    | 200  | 0.99 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| CRPS    | 400  | 0.95 | 1.00 | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| CRPS    | 800  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 1.00 | 0.99 |
| CRPS    | 1600 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 1.00 | 0.97 |
| DSS     | 200  | 0.99 | 0.98 | 1.00 | 1.00 | 0.98 | 0.72 | 1.00 | 1.00 | 0.68 | 0.00 | 1.00 | 0.57 | 0.57 | 0.00 | 1.00 | 0.01 | 0.67 | 0.00 | 1.00 | 0.01 |
| DSS     | 400  | 1.00 | 1.00 | 1.00 | 1.00 | 0.99 | 0.95 | 1.00 | 1.00 | 0.13 | 0.00 | 1.00 | 0.00 | 0.09 | 0.00 | 1.00 | 0.00 | 0.22 | 0.00 | 1.00 | 0.00 |
| DSS     | 800  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.37 | 1.00 | 0.99 | 0.20 | 0.00 | 1.00 | 0.00 | 0.76 | 0.00 | 1.00 | 0.00 | 0.98 | 0.00 | 1.00 | 0.00 |
| DSS     | 1600 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.45 | 1.00 | 0.96 | 0.83 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| IS1     | 200  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.80 | 1.00 | 1.00 | 1.00 | 0.50 | 1.00 | 1.00 | 1.00 | 0.02 | 1.00 | 1.00 |
| IS1     | 400  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.87 | 1.00 | 1.00 | 1.00 | 0.16 | 1.00 | 1.00 | 1.00 | 0.09 | 1.00 | 1.00 |
| IS1     | 800  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.31 | 1.00 | 1.00 | 1.00 | 0.71 | 1.00 | 1.00 | 1.00 | 0.17 | 1.00 | 1.00 |
| IS1     | 1600 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 | 1.00 | 1.00 | 1.00 | 0.45 | 1.00 | 1.00 | 1.00 | 0.33 | 1.00 | 1.00 | 1.00 | 0.10 | 1.00 | 1.00 |

Table 2: Training data