

Table 1: DRPM Model (without spatial cohesion) for different hyperparameter configurations with the following prior values:  $m_0 = 0.0$ ,  $s_0^2 = 10000.0$ ,  $A_\sigma = 10.0$ ,  $A_\tau = 5.0$ ,  $A_\lambda = 5.0$ ,  $b = 1.0$ ,  $a_\alpha = 2.0$ ,  $b_\alpha = 2.0$ .

| Model | M          | starting-alpha | lpml                                      | waic                                     | time                                     | mse                                      | n-singletons | n-clusters | max-cluster-size | min-cluster-size | max-pm25-diff                            |
|-------|------------|----------------|---|--|--|--|--------------|------------|------------------|------------------|--|
| drpm  | 0.100000   | 0.000000       | $-1.355 \cdot 10^{+03}$                   | $2.696 \cdot 10^{+03}$                   | $1.409 \cdot 10^{+01}$                   | $1.276 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.100000       | $-1.843 \cdot 10^{+03}$                   | $3.677 \cdot 10^{+03}$                   | $1.399 \cdot 10^{+01}$                   | $1.425 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.250000       | $-1.558 \cdot 10^{+03}$                   | $3.103 \cdot 10^{+03}$                   | $1.385 \cdot 10^{+01}$                   | $1.345 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.500000       | $-1.351 \cdot 10^{+03}$                   | $2.691 \cdot 10^{+03}$                   | $1.390 \cdot 10^{+01}$                   | $1.280 \cdot 10^{+00}$                   | 2            | 1.057692   | 34               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.750000       | $-1.236 \cdot 10^{+03}$                   | $2.462 \cdot 10^{+03}$                   | $1.391 \cdot 10^{+01}$                   | <b><math>1.236 \cdot 10^{+00}</math></b> | 0            | 1.057692   | 34               | 4                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.900000       | $-1.776 \cdot 10^{+03}$                   | $3.543 \cdot 10^{+03}$                   | $1.388 \cdot 10^{+01}$                   | $1.402 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.000000       | $-1.304 \cdot 10^{+03}$                   | $2.580 \cdot 10^{+03}$                   | $1.448 \cdot 10^{+01}$                   | $1.292 \cdot 10^{+00}$                   | 1            | 1.211538   | 34               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.100000       | $-1.416 \cdot 10^{+03}$                   | $2.820 \cdot 10^{+03}$                   | $1.410 \cdot 10^{+01}$                   | $1.313 \cdot 10^{+00}$                   | 1            | 1.019231   | 34               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.250000       | $-1.539 \cdot 10^{+03}$                   | $3.052 \cdot 10^{+03}$                   | $1.442 \cdot 10^{+01}$                   | $1.310 \cdot 10^{+00}$                   | 3            | 1.153846   | 34               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.500000       | $-1.781 \cdot 10^{+03}$                   | $3.460 \cdot 10^{+03}$                   | $1.428 \cdot 10^{+01}$                   | $1.380 \cdot 10^{+00}$                   | 1            | 1.019231   | 34               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.750000       | $-1.617 \cdot 10^{+03}$                   | $2.871 \cdot 10^{+03}$                   | $1.869 \cdot 10^{+01}$                   | $1.585 \cdot 10^{+00}$                   | 3            | 3.115385   | 34               | 1                | <b><math>1.679 \cdot 10^{+00}</math></b> |
| drpm  | 1.000000   | 0.900000       | $-1.555 \cdot 10^{+03}$                   | $3.096 \cdot 10^{+03}$                   | $1.415 \cdot 10^{+01}$                   | $1.346 \cdot 10^{+00}$                   | 2            | 1.153846   | 34               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.000000       | $-1.295 \cdot 10^{+03}$                   | $2.564 \cdot 10^{+03}$                   | $1.326 \cdot 10^{+01}$                   | $1.267 \cdot 10^{+00}$                   | 2            | 1.115385   | 34               | 1                | <b><math>1.679 \cdot 10^{+00}</math></b> |
| drpm  | 10.000000  | 0.100000       | $-2.372 \cdot 10^{+03}$                   | $3.607 \cdot 10^{+03}$                   | $1.460 \cdot 10^{+01}$                   | $1.376 \cdot 10^{+00}$                   | 1            | 1.019231   | 34               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.250000       | $-1.655 \cdot 10^{+03}$                   | $3.235 \cdot 10^{+03}$                   | $1.328 \cdot 10^{+01}$                   | $1.366 \cdot 10^{+00}$                   | 2            | 1.115385   | 34               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.500000       | $-1.905 \cdot 10^{+03}$                   | $3.636 \cdot 10^{+03}$                   | $1.397 \cdot 10^{+01}$                   | $1.395 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.750000       | $-1.840 \cdot 10^{+03}$                   | $3.679 \cdot 10^{+03}$                   | $1.426 \cdot 10^{+01}$                   | $1.399 \cdot 10^{+00}$                   | 1            | 1.192308   | 34               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.900000       | $-1.752 \cdot 10^{+03}$                   | $3.429 \cdot 10^{+03}$                   | $1.486 \cdot 10^{+01}$                   | $1.411 \cdot 10^{+00}$                   | 3            | 1.326923   | 34               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.000000       | $-1.815 \cdot 10^{+03}$                   | $3.604 \cdot 10^{+03}$                   | $1.366 \cdot 10^{+01}$                   | $1.416 \cdot 10^{+00}$                   | 2            | 1.173077   | 34               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.100000       | $-1.665 \cdot 10^{+03}$                   | $3.301 \cdot 10^{+03}$                   | $1.253 \cdot 10^{+01}$                   | $1.345 \cdot 10^{+00}$                   | 1            | 1.019231   | 34               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.250000       | <b><math>-1.234 \cdot 10^{+03}</math></b> | <b><math>2.445 \cdot 10^{+03}</math></b> | $1.270 \cdot 10^{+01}$                   | $1.271 \cdot 10^{+00}$                   | 1            | 1.096154   | 34               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.500000       | $-1.709 \cdot 10^{+03}$                   | $3.400 \cdot 10^{+03}$                   | $1.213 \cdot 10^{+01}$                   | $1.367 \cdot 10^{+00}$                   | 1            | 1.038462   | 34               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.750000       | $-1.724 \cdot 10^{+03}$                   | $3.354 \cdot 10^{+03}$                   | <b><math>1.211 \cdot 10^{+01}</math></b> | $1.355 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.900000       | $-1.307 \cdot 10^{+03}$                   | $2.594 \cdot 10^{+03}$                   | $1.225 \cdot 10^{+01}$                   | $1.271 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$                   |

Table 2: DRPM Model (without spatial cohesion) for different hyperparameter configurations with the following prior values:  $m_0 = 0.0$ ,  $s_0^2 = 200.0$ ,  $A_\sigma = 0.1$ ,  $A_\tau = 1.0$ ,  $A_\lambda = 1.0$ ,  $b = 1.0$ ,  $a_\alpha = 1.0$ ,  $b_\alpha = 1.0$ .

| Model | M          | starting-alpha | lpml                    | waic                                      | time                                     | mse                                      | n-singletons | n-clusters | max-cluster-size | min-cluster-size | max-pm25-diff                            |
|-------|------------|----------------|-------------------------|---|--|--|--------------|------------|------------------|------------------|--|
| drpm  | 0.100000   | 0.000000       | <i>nan</i>              | $-9.060 \cdot 10^{+02}$                   | $7.070 \cdot 10^{+01}$                   | $1.698 \cdot 10^{+00}$                   | 0            | 9.423077   | 6                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.100000       | <i>nan</i>              | $-9.470 \cdot 10^{+02}$                   | $7.231 \cdot 10^{+01}$                   | $1.696 \cdot 10^{+00}$                   | 0            | 9.403846   | 6                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.250000       | <i>nan</i>              | <b><math>-1.285 \cdot 10^{+03}</math></b> | $6.871 \cdot 10^{+01}$                   | $1.696 \cdot 10^{+00}$                   | 0            | 9.192308   | 6                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.500000       | <b>inf</b>              | $2.044 \cdot 10^{+06}$                    | $2.793 \cdot 10^{+02}$                   | $1.705 \cdot 10^{+00}$                   | 10           | 19.750000  | 3                | 1                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.750000       | <i>nan</i>              | $-2.864 \cdot 10^{+02}$                   | $9.747 \cdot 10^{+01}$                   | $1.706 \cdot 10^{+00}$                   | 0            | 11.173077  | 6                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.900000       | <i>nan</i>              | $-1.051 \cdot 10^{+03}$                   | $8.747 \cdot 10^{+01}$                   | $1.700 \cdot 10^{+00}$                   | 0            | 10.403846  | 5                | 2                | $1.621 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.000000       | <i>nan</i>              | $1.373 \cdot 10^{+03}$                    | $8.179 \cdot 10^{+01}$                   | $1.698 \cdot 10^{+00}$                   | 0            | 11.346154  | 5                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.100000       | <i>nan</i>              | $1.388 \cdot 10^{+03}$                    | $7.188 \cdot 10^{+01}$                   | $1.697 \cdot 10^{+00}$                   | 0            | 10.403846  | 6                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.250000       | <i>nan</i>              | $8.024 \cdot 10^{+02}$                    | $7.629 \cdot 10^{+01}$                   | $1.697 \cdot 10^{+00}$                   | 0            | 10.730769  | 6                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.500000       | <i>nan</i>              | $1.760 \cdot 10^{+04}$                    | $1.046 \cdot 10^{+02}$                   | $1.704 \cdot 10^{+00}$                   | 0            | 13.192308  | 4                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.750000       | <i>nan</i>              | $2.840 \cdot 10^{+03}$                    | $8.302 \cdot 10^{+01}$                   | $1.699 \cdot 10^{+00}$                   | 0            | 11.500000  | 5                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.900000       | <i>nan</i>              | $4.166 \cdot 10^{+02}$                    | $7.703 \cdot 10^{+01}$                   | $1.693 \cdot 10^{+00}$                   | 0            | 10.923077  | 6                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.000000       | <i>nan</i>              | $1.754 \cdot 10^{+03}$                    | $7.557 \cdot 10^{+01}$                   | $1.700 \cdot 10^{+00}$                   | 0            | 11.750000  | 4                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.100000       | <i>nan</i>              | $-6.442 \cdot 10^{+02}$                   | $6.834 \cdot 10^{+01}$                   | $1.692 \cdot 10^{+00}$                   | 0            | 11.115385  | 4                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.250000       | <i>nan</i>              | $3.383 \cdot 10^{+02}$                    | $7.050 \cdot 10^{+01}$                   | $1.697 \cdot 10^{+00}$                   | 0            | 11.269231  | 4                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.500000       | <i>nan</i>              | $-5.428 \cdot 10^{+02}$                   | $6.606 \cdot 10^{+01}$                   | $1.693 \cdot 10^{+00}$                   | 0            | 11.346154  | 4                | 2                | <b><math>1.309 \cdot 10^{+00}</math></b> |
| drpm  | 10.000000  | 0.750000       | <i>nan</i>              | $1.504 \cdot 10^{+02}$                    | $7.174 \cdot 10^{+01}$                   | $1.693 \cdot 10^{+00}$                   | 0            | 11.211538  | 4                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.900000       | <i>nan</i>              | $-4.367 \cdot 10^{+01}$                   | $7.006 \cdot 10^{+01}$                   | $1.690 \cdot 10^{+00}$                   | 0            | 11.096154  | 4                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.000000       | <i>nan</i>              | $7.135 \cdot 10^{+04}$                    | $7.079 \cdot 10^{+01}$                   | $1.603 \cdot 10^{+00}$                   | 2            | 11.173077  | 12               | 1                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.100000       | <i>nan</i>              | $2.838 \cdot 10^{+04}$                    | $6.835 \cdot 10^{+01}$                   | $1.543 \cdot 10^{+00}$                   | 0            | 10.634615  | 12               | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.250000       | <i>nan</i>              | $1.050 \cdot 10^{+06}$                    | $6.767 \cdot 10^{+01}$                   | $1.604 \cdot 10^{+00}$                   | 4            | 12.173077  | 16               | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.500000       | <i>nan</i>              | $5.378 \cdot 10^{+04}$                    | $5.102 \cdot 10^{+01}$                   | $1.665 \cdot 10^{+00}$                   | 6            | 10.038462  | 22               | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.750000       | <i>nan</i>              | $3.766 \cdot 10^{+04}$                    | $2.596 \cdot 10^{+01}$                   | <b><math>1.369 \cdot 10^{+00}</math></b> | 6            | 4.788462   | 34               | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.900000       | $-2.367 \cdot 10^{+04}$ | $3.600 \cdot 10^{+04}$                    | <b><math>2.507 \cdot 10^{+01}</math></b> | $1.595 \cdot 10^{+00}$                   | 8            | 4.000000   | 34               | 1                | $1.679 \cdot 10^{+00}$                   |

Table 3: DRPM Model (without spatial cohesion) for different hyperparameter configurations with the following prior values:  $m_0 = 2.91$ ,  $s_0^2 = 200.0$ ,  $A_\sigma = 0.1$ ,  $A_\tau = 1.0$ ,  $A_\lambda = 1.0$ ,  $b = 1.0$ ,  $a_\alpha = 1.0$ ,  $b_\alpha = 1.0$ .

| Model | M          | starting-alpha | lpml                                      | waic                                      | time                                     | mse                                      | n-singletons | n-clusters | max-cluster-size | min-cluster-size | max-pm25-diff                            |
|-------|------------|----------------|---|---|--|--|--------------|------------|------------------|------------------|--|
| drpm  | 0.100000   | 0.000000       | <i>nan</i>                                | $1.605 \cdot 10^{+03}$                    | $1.023 \cdot 10^{+02}$                   | $1.698 \cdot 10^{+00}$                   | 0            | 9.769231   | 6                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.100000       | <i>nan</i>                                | $-6.992 \cdot 10^{+02}$                   | $8.626 \cdot 10^{+01}$                   | $1.700 \cdot 10^{+00}$                   | 0            | 9.288462   | 6                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.250000       | <i>nan</i>                                | <b><math>-9.548 \cdot 10^{+02}</math></b> | $9.026 \cdot 10^{+01}$                   | $1.699 \cdot 10^{+00}$                   | 0            | 9.557692   | 4                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.500000       | <i>nan</i>                                | $4.279 \cdot 10^{+03}$                    | $1.603 \cdot 10^{+02}$                   | $1.703 \cdot 10^{+00}$                   | 0            | 13.076923  | 6                | 2                | $1.621 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.750000       | <i>nan</i>                                | $7.397 \cdot 10^{+02}$                    | $1.171 \cdot 10^{+02}$                   | $1.703 \cdot 10^{+00}$                   | 0            | 10.615385  | 5                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.900000       | <i>nan</i>                                | $1.613 \cdot 10^{+05}$                    | $2.684 \cdot 10^{+02}$                   | $1.707 \cdot 10^{+00}$                   | 2            | 16.942308  | 4                | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.000000       | <i>nan</i>                                | $-5.382 \cdot 10^{+02}$                   | $7.540 \cdot 10^{+01}$                   | $1.695 \cdot 10^{+00}$                   | 0            | 10.038462  | 5                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.100000       | <i>nan</i>                                | $1.207 \cdot 10^{+03}$                    | $8.646 \cdot 10^{+01}$                   | $1.695 \cdot 10^{+00}$                   | 0            | 10.403846  | 6                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.250000       | <i>nan</i>                                | $1.939 \cdot 10^{+03}$                    | $1.088 \cdot 10^{+02}$                   | $1.700 \cdot 10^{+00}$                   | 0            | 11.615385  | 6                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.500000       | <i>nan</i>                                | $8.012 \cdot 10^{+03}$                    | $1.268 \cdot 10^{+02}$                   | $1.699 \cdot 10^{+00}$                   | 0            | 12.250000  | 4                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.750000       | <i>nan</i>                                | $1.359 \cdot 10^{+04}$                    | $1.309 \cdot 10^{+02}$                   | $1.703 \cdot 10^{+00}$                   | 0            | 12.942308  | 4                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.900000       | <i>nan</i>                                | $-6.555 \cdot 10^{+02}$                   | $7.934 \cdot 10^{+01}$                   | $1.696 \cdot 10^{+00}$                   | 0            | 10.134615  | 5                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.000000       | <i>nan</i>                                | $-2.940 \cdot 10^{+02}$                   | $8.281 \cdot 10^{+01}$                   | $1.695 \cdot 10^{+00}$                   | 0            | 11.442308  | 4                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.100000       | <i>nan</i>                                | $-3.179 \cdot 10^{+02}$                   | $8.891 \cdot 10^{+01}$                   | $1.698 \cdot 10^{+00}$                   | 0            | 11.038462  | 5                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.250000       | <i>nan</i>                                | $1.133 \cdot 10^{+02}$                    | $8.975 \cdot 10^{+01}$                   | $1.698 \cdot 10^{+00}$                   | 0            | 11.115385  | 5                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.500000       | <i>nan</i>                                | $4.355 \cdot 10^{+04}$                    | $1.081 \cdot 10^{+02}$                   | $1.708 \cdot 10^{+00}$                   | 0            | 13.461538  | 4                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.750000       | <i>nan</i>                                | $3.555 \cdot 10^{+04}$                    | $1.091 \cdot 10^{+02}$                   | $1.708 \cdot 10^{+00}$                   | 0            | 13.461538  | 4                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.900000       | <i>nan</i>                                | $-5.003 \cdot 10^{+02}$                   | $8.581 \cdot 10^{+01}$                   | $1.693 \cdot 10^{+00}$                   | 0            | 11.115385  | 4                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.000000       | <i>nan</i>                                | $4.917 \cdot 10^{+03}$                    | $7.870 \cdot 10^{+01}$                   | $1.660 \cdot 10^{+00}$                   | 0            | 9.423077   | 7                | 2                | <b><math>1.290 \cdot 10^{+00}</math></b> |
| drpm  | 100.000000 | 0.100000       | <i>nan</i>                                | $2.491 \cdot 10^{+04}$                    | $7.825 \cdot 10^{+01}$                   | $1.599 \cdot 10^{+00}$                   | 2            | 9.884615   | 18               | 1                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.250000       | <i>nan</i>                                | $7.665 \cdot 10^{+04}$                    | $8.262 \cdot 10^{+01}$                   | $1.690 \cdot 10^{+00}$                   | 6            | 10.711538  | 20               | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.500000       | <i>nan</i>                                | $6.520 \cdot 10^{+04}$                    | $4.903 \cdot 10^{+01}$                   | <b><math>1.499 \cdot 10^{+00}</math></b> | 7            | 7.038462   | 34               | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.750000       | <b><math>-2.685 \cdot 10^{+04}</math></b> | $3.182 \cdot 10^{+04}$                    | <b><math>4.175 \cdot 10^{+01}</math></b> | $1.560 \cdot 10^{+00}$                   | 6            | 6.076923   | 34               | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.900000       | <i>nan</i>                                | $3.391 \cdot 10^{+04}$                    | $5.139 \cdot 10^{+01}$                   | $1.623 \cdot 10^{+00}$                   | 6            | 7.653846   | 34               | 1                | $1.679 \cdot 10^{+00}$                   |

Table 4: DRPM Model for different hyperparameter configurations with the following prior values:  $m_0 = 0.0$ ,  $s_0^2 = 10000.0$ ,  $A_\sigma = 10.0$ ,  $A_\tau = 5.0$ ,  $A_\lambda = 5.0$ ,  $b = 1.0$ ,  $a_\alpha = 2.0$ ,  $b_\alpha = 2.0$ .

| Model | M          | starting-alpha | SpatialCohesion | lpml                                      | waic                                     | time                                     | mse                                      | n-singletons | n-clusters | max-cluster-size | min-cluster-size | max-pm25-diff          |
|-------|------------|----------------|-----------------|---|--|--|--|--------------|------------|------------------|------------------|------------------------|
| drpm  | 0.100000   | 0.000000       | 3               | $-1.353 \cdot 10^{+03}$                   | $2.691 \cdot 10^{+03}$                   | $2.720 \cdot 10^{+01}$                   | $1.284 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 0.100000   | 0.000000       | 4               | $-1.574 \cdot 10^{+03}$                   | $3.115 \cdot 10^{+03}$                   | $3.532 \cdot 10^{+01}$                   | $1.346 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 0.100000   | 0.100000       | 3               | $-1.494 \cdot 10^{+03}$                   | $2.973 \cdot 10^{+03}$                   | $2.689 \cdot 10^{+01}$                   | $1.304 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 0.100000   | 0.100000       | 4               | $-1.803 \cdot 10^{+03}$                   | $3.576 \cdot 10^{+03}$                   | $3.528 \cdot 10^{+01}$                   | $1.391 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 0.100000   | 0.250000       | 3               | $-1.622 \cdot 10^{+03}$                   | $3.232 \cdot 10^{+03}$                   | $2.673 \cdot 10^{+01}$                   | $1.361 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 0.100000   | 0.250000       | 4               | $-1.668 \cdot 10^{+03}$                   | $3.312 \cdot 10^{+03}$                   | $3.067 \cdot 10^{+01}$                   | $1.403 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 0.100000   | 0.500000       | 3               | <b><math>-1.217 \cdot 10^{+03}</math></b> | <b><math>2.422 \cdot 10^{+03}</math></b> | $2.672 \cdot 10^{+01}$                   | $1.257 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 0.100000   | 0.500000       | 4               | $-1.509 \cdot 10^{+03}$                   | $2.988 \cdot 10^{+03}$                   | $3.235 \cdot 10^{+01}$                   | $1.348 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 0.100000   | 0.750000       | 3               | $-1.668 \cdot 10^{+03}$                   | $3.323 \cdot 10^{+03}$                   | $2.685 \cdot 10^{+01}$                   | $1.368 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 0.100000   | 0.750000       | 4               | $-1.703 \cdot 10^{+03}$                   | $3.384 \cdot 10^{+03}$                   | $3.044 \cdot 10^{+01}$                   | $1.377 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 0.100000   | 0.900000       | 3               | $-1.432 \cdot 10^{+03}$                   | $2.850 \cdot 10^{+03}$                   | $2.672 \cdot 10^{+01}$                   | $1.304 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 0.100000   | 0.900000       | 4               | $-1.646 \cdot 10^{+03}$                   | $3.268 \cdot 10^{+03}$                   | $3.044 \cdot 10^{+01}$                   | $1.358 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 1.000000   | 0.000000       | 3               | $-1.707 \cdot 10^{+03}$                   | $3.403 \cdot 10^{+03}$                   | $2.679 \cdot 10^{+01}$                   | $1.391 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 1.000000   | 0.000000       | 4               | $-1.326 \cdot 10^{+03}$                   | $2.606 \cdot 10^{+03}$                   | $4.512 \cdot 10^{+01}$                   | $1.260 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 1.000000   | 0.100000       | 3               | $-1.732 \cdot 10^{+03}$                   | $3.453 \cdot 10^{+03}$                   | $2.708 \cdot 10^{+01}$                   | $1.398 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 1.000000   | 0.100000       | 4               | $-1.783 \cdot 10^{+03}$                   | $3.525 \cdot 10^{+03}$                   | $4.327 \cdot 10^{+01}$                   | $1.418 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 1.000000   | 0.250000       | 3               | $-1.732 \cdot 10^{+03}$                   | $3.451 \cdot 10^{+03}$                   | $2.703 \cdot 10^{+01}$                   | $1.379 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 1.000000   | 0.250000       | 4               | $-1.762 \cdot 10^{+03}$                   | $3.484 \cdot 10^{+03}$                   | $4.219 \cdot 10^{+01}$                   | $1.376 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 1.000000   | 0.500000       | 3               | $-1.421 \cdot 10^{+03}$                   | $2.827 \cdot 10^{+03}$                   | $2.741 \cdot 10^{+01}$                   | $1.320 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 1.000000   | 0.500000       | 4               | $-1.297 \cdot 10^{+03}$                   | $2.552 \cdot 10^{+03}$                   | $4.370 \cdot 10^{+01}$                   | $1.260 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 1.000000   | 0.750000       | 3               | $-1.889 \cdot 10^{+03}$                   | $3.767 \cdot 10^{+03}$                   | $2.684 \cdot 10^{+01}$                   | $1.430 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 1.000000   | 0.750000       | 4               | $-1.548 \cdot 10^{+03}$                   | $3.048 \cdot 10^{+03}$                   | $4.109 \cdot 10^{+01}$                   | $1.304 \cdot 10^{+00}$                   | 0            | 1.019231   | 34               | 5                | $1.753 \cdot 10^{+00}$ |
| drpm  | 1.000000   | 0.900000       | 3               | $-1.312 \cdot 10^{+03}$                   | $2.611 \cdot 10^{+03}$                   | $2.682 \cdot 10^{+01}$                   | $1.279 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 1.000000   | 0.900000       | 4               | $-1.342 \cdot 10^{+03}$                   | $2.642 \cdot 10^{+03}$                   | $4.009 \cdot 10^{+01}$                   | $1.269 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 10.000000  | 0.000000       | 3               | $-1.237 \cdot 10^{+03}$                   | $2.461 \cdot 10^{+03}$                   | $2.672 \cdot 10^{+01}$                   | $1.268 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 10.000000  | 0.000000       | 4               | $-1.861 \cdot 10^{+03}$                   | $3.683 \cdot 10^{+03}$                   | $4.514 \cdot 10^{+01}$                   | $1.440 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 10.000000  | 0.100000       | 3               | $-1.436 \cdot 10^{+03}$                   | $2.857 \cdot 10^{+03}$                   | $2.808 \cdot 10^{+01}$                   | $1.312 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 10.000000  | 0.100000       | 4               | $-1.329 \cdot 10^{+03}$                   | $2.611 \cdot 10^{+03}$                   | $4.479 \cdot 10^{+01}$                   | $1.253 \cdot 10^{+00}$                   | 0            | 1.019231   | 34               | 2                | $1.753 \cdot 10^{+00}$ |
| drpm  | 10.000000  | 0.250000       | 3               | $-1.583 \cdot 10^{+03}$                   | $3.153 \cdot 10^{+03}$                   | $2.689 \cdot 10^{+01}$                   | $1.358 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 10.000000  | 0.250000       | 4               | $-2.121 \cdot 10^{+03}$                   | $3.935 \cdot 10^{+03}$                   | $4.508 \cdot 10^{+01}$                   | $1.487 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 10.000000  | 0.500000       | 3               | $-1.349 \cdot 10^{+03}$                   | $2.683 \cdot 10^{+03}$                   | $2.693 \cdot 10^{+01}$                   | $1.278 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 10.000000  | 0.500000       | 4               | $-1.548 \cdot 10^{+03}$                   | $3.024 \cdot 10^{+03}$                   | $4.166 \cdot 10^{+01}$                   | $1.325 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 10.000000  | 0.750000       | 3               | $-1.330 \cdot 10^{+03}$                   | $2.646 \cdot 10^{+03}$                   | $2.676 \cdot 10^{+01}$                   | $1.262 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 10.000000  | 0.750000       | 4               | $-1.465 \cdot 10^{+03}$                   | $2.887 \cdot 10^{+03}$                   | $3.472 \cdot 10^{+01}$                   | $1.306 \cdot 10^{+00}$                   | 1            | 1.057692   | 34               | 1                | $1.753 \cdot 10^{+00}$ |
| drpm  | 10.000000  | 0.900000       | 3               | $-1.620 \cdot 10^{+03}$                   | $3.225 \cdot 10^{+03}$                   | $2.791 \cdot 10^{+01}$                   | $1.360 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 10.000000  | 0.900000       | 4               | $-1.593 \cdot 10^{+03}$                   | $3.133 \cdot 10^{+03}$                   | $4.081 \cdot 10^{+01}$                   | $1.333 \cdot 10^{+00}$                   | 0            | 1.019231   | 34               | 4                | $1.753 \cdot 10^{+00}$ |
| drpm  | 100.000000 | 0.000000       | 3               | $-1.405 \cdot 10^{+03}$                   | $2.790 \cdot 10^{+03}$                   | $3.020 \cdot 10^{+01}$                   | $1.288 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 100.000000 | 0.000000       | 4               | $-1.613 \cdot 10^{+03}$                   | $3.093 \cdot 10^{+03}$                   | $4.160 \cdot 10^{+01}$                   | $1.325 \cdot 10^{+00}$                   | 0            | 1.076923   | 34               | 2                | $1.753 \cdot 10^{+00}$ |
| drpm  | 100.000000 | 0.100000       | 3               | $-1.718 \cdot 10^{+03}$                   | $3.421 \cdot 10^{+03}$                   | $2.795 \cdot 10^{+01}$                   | $1.398 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 100.000000 | 0.100000       | 4               | $-1.379 \cdot 10^{+03}$                   | $2.692 \cdot 10^{+03}$                   | $4.102 \cdot 10^{+01}$                   | $1.258 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 100.000000 | 0.250000       | 3               | $-1.506 \cdot 10^{+03}$                   | $2.997 \cdot 10^{+03}$                   | $2.712 \cdot 10^{+01}$                   | $1.329 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 100.000000 | 0.250000       | 4               | <i>nan</i>                                | $3.033 \cdot 10^{+03}$                   | $2.733 \cdot 10^{+01}$                   | $1.293 \cdot 10^{+00}$                   | 1            | 1.192308   | 34               | 1                | $1.753 \cdot 10^{+00}$ |
| drpm  | 100.000000 | 0.500000       | 3               | $-1.911 \cdot 10^{+03}$                   | $3.757 \cdot 10^{+03}$                   | $2.963 \cdot 10^{+01}$                   | $1.428 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 100.000000 | 0.500000       | 4               | $-2.357 \cdot 10^{+03}$                   | $3.711 \cdot 10^{+03}$                   | $2.706 \cdot 10^{+01}$                   | $1.457 \cdot 10^{+00}$                   | 1            | 1.057692   | 34               | 1                | $1.753 \cdot 10^{+00}$ |
| drpm  | 100.000000 | 0.750000       | 3               | $-1.251 \cdot 10^{+03}$                   | $2.485 \cdot 10^{+03}$                   | $2.828 \cdot 10^{+01}$                   | <b><math>1.251 \cdot 10^{+00}</math></b> | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 100.000000 | 0.750000       | 4               | $-1.335 \cdot 10^{+03}$                   | $2.639 \cdot 10^{+03}$                   | <b><math>2.437 \cdot 10^{+01}</math></b> | $1.261 \cdot 10^{+00}$                   | 1            | 1.076923   | 34               | 1                | $1.753 \cdot 10^{+00}$ |
| drpm  | 100.000000 | 0.900000       | 3               | $-1.221 \cdot 10^{+03}$                   | $2.427 \cdot 10^{+03}$                   | $2.741 \cdot 10^{+01}$                   | $1.268 \cdot 10^{+00}$                   | 0            | 1.000000   | 34               | 34               | $1.753 \cdot 10^{+00}$ |
| drpm  | 100.000000 | 0.900000       | 4               | $-2.191 \cdot 10^{+03}$                   | $3.947 \cdot 10^{+03}$                   | $3.478 \cdot 10^{+01}$                   | $1.486 \cdot 10^{+00}$                   | 1            | 1.115385   | 34               | 1                | $1.753 \cdot 10^{+00}$ |

Table 5: DRPM Model for different hyperparameter configurations with the following prior values:  $m_0 = 0.0$ ,  $s_0^2 = 200.0$ ,  $A_\sigma = 0.1$ ,  $A_\tau = 1.0$ ,  $A_\lambda = 1.0$ ,  $b = 1.0$ ,  $a_\alpha = 1.0$ ,  $b_\alpha = 1.0$ .

| Method | M          | starting-alpha | SpatialCohesion | lpml                    | waic                    | time                   | mse                                      | n-singletons | n-clusters | max-cluster-size | min-cluster-size | max-pm25-diff                            |
|--------|------------|----------------|-----------------|-------------------------|-------------------------|------------------------|--|--------------|------------|------------------|------------------|--|
| drpm   | 0.100000   | 0.000000       | 3               | $-6.998 \cdot 10^{+03}$ | $3.816 \cdot 10^{+02}$  | $1.195 \cdot 10^{+02}$ | $1.707 \cdot 10^{+00}$                   | 0            | 5.307692   | 24               | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 0.100000   | 0.000000       | 4               | nan                     | $4.619 \cdot 10^{+03}$  | $3.820 \cdot 10^{+02}$ | $1.702 \cdot 10^{+00}$                   | 0            | 14.269231  | 6                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm   | 0.100000   | 0.100000       | 3               | nan                     | $5.034 \cdot 10^{+02}$  | $2.396 \cdot 10^{+02}$ | $1.714 \cdot 10^{+00}$                   | 0            | 9.173077   | 12               | 2                | $1.753 \cdot 10^{+00}$                   |
| drpm   | 0.100000   | 0.100000       | 4               | nan                     | $-1.569 \cdot 10^{+02}$ | $1.922 \cdot 10^{+02}$ | $1.697 \cdot 10^{+00}$                   | 1            | 8.173077   | 10               | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 0.100000   | 0.250000       | 3               | nan                     | $1.203 \cdot 10^{+03}$  | $2.554 \cdot 10^{+02}$ | $1.707 \cdot 10^{+00}$                   | 0            | 9.519231   | 13               | 2                | $1.753 \cdot 10^{+00}$                   |
| drpm   | 0.100000   | 0.250000       | 4               | nan                     | $-5.307 \cdot 10^{+01}$ | $1.962 \cdot 10^{+02}$ | $1.704 \cdot 10^{+00}$                   | 3            | 8.365385   | 25               | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 0.100000   | 0.500000       | 3               | nan                     | $1.705 \cdot 10^{+01}$  | $1.200 \cdot 10^{+02}$ | $1.688 \cdot 10^{+00}$                   | 0            | 5.288462   | 12               | 4                | $1.621 \cdot 10^{+00}$                   |
| drpm   | 0.100000   | 0.500000       | 4               | nan                     | $-4.022 \cdot 10^{+02}$ | $2.208 \cdot 10^{+02}$ | $1.700 \cdot 10^{+00}$                   | 0            | 9.192308   | 8                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm   | 0.100000   | 0.750000       | 3               | $-1.155 \cdot 10^{+03}$ | $-1.919 \cdot 10^{+02}$ | $1.060 \cdot 10^{+02}$ | $1.686 \cdot 10^{+00}$                   | 0            | 4.711538   | 26               | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 0.100000   | 0.750000       | 4               | nan                     | $4.617 \cdot 10^{+02}$  | $2.632 \cdot 10^{+02}$ | $1.709 \cdot 10^{+00}$                   | 0            | 10.711538  | 6                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm   | 0.100000   | 0.900000       | 3               | nan                     | $2.360 \cdot 10^{+02}$  | $1.349 \cdot 10^{+02}$ | $1.683 \cdot 10^{+00}$                   | 3            | 5.673077   | 31               | 1                | $1.753 \cdot 10^{+00}$                   |
| drpm   | 0.100000   | 0.900000       | 4               | nan                     | $-1.612 \cdot 10^{+02}$ | $2.167 \cdot 10^{+02}$ | $1.711 \cdot 10^{+00}$                   | 1            | 8.980769   | 33               | 1                | $1.541 \cdot 10^{+00}$                   |
| drpm   | 1.000000   | 0.000000       | 3               | nan                     | $5.401 \cdot 10^{+02}$  | $1.229 \cdot 10^{+02}$ | $1.686 \cdot 10^{+00}$                   | 0            | 5.923077   | 13               | 2                | $1.621 \cdot 10^{+00}$                   |
| drpm   | 1.000000   | 0.000000       | 4               | nan                     | $3.485 \cdot 10^{+02}$  | $2.057 \cdot 10^{+02}$ | $1.692 \cdot 10^{+00}$                   | 0            | 9.192308   | 7                | 2                | $1.541 \cdot 10^{+00}$                   |
| drpm   | 1.000000   | 0.100000       | 3               | nan                     | $-2.736 \cdot 10^{+02}$ | $1.573 \cdot 10^{+02}$ | $1.681 \cdot 10^{+00}$                   | 0            | 6.807692   | 21               | 2                | $1.541 \cdot 10^{+00}$                   |
| drpm   | 1.000000   | 0.100000       | 4               | nan                     | $1.210 \cdot 10^{+04}$  | $3.018 \cdot 10^{+02}$ | $1.703 \cdot 10^{+00}$                   | 0            | 12.884615  | 6                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 1.000000   | 0.250000       | 3               | nan                     | $-6.314 \cdot 10^{+01}$ | $1.492 \cdot 10^{+02}$ | $1.696 \cdot 10^{+00}$                   | 1            | 6.692308   | 25               | 1                | $1.621 \cdot 10^{+00}$                   |
| drpm   | 1.000000   | 0.250000       | 4               | nan                     | $1.908 \cdot 10^{+03}$  | $2.531 \cdot 10^{+02}$ | $1.702 \cdot 10^{+00}$                   | 0            | 11.250000  | 6                | 2                | $1.541 \cdot 10^{+00}$                   |
| drpm   | 1.000000   | 0.500000       | 3               | nan                     | $-2.245 \cdot 10^{+02}$ | $1.330 \cdot 10^{+02}$ | $1.690 \cdot 10^{+00}$                   | 1            | 6.000000   | 12               | 1                | $1.651 \cdot 10^{+00}$                   |
| drpm   | 1.000000   | 0.500000       | 4               | nan                     | $7.391 \cdot 10^{+02}$  | $2.071 \cdot 10^{+02}$ | $1.698 \cdot 10^{+00}$                   | 0            | 9.269231   | 10               | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm   | 1.000000   | 0.750000       | 3               | nan                     | $-3.912 \cdot 10^{+02}$ | $1.264 \cdot 10^{+02}$ | $1.704 \cdot 10^{+00}$                   | 1            | 5.942308   | 16               | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 1.000000   | 0.750000       | 4               | nan                     | $5.026 \cdot 10^{+03}$  | $2.748 \cdot 10^{+02}$ | $1.701 \cdot 10^{+00}$                   | 0            | 12.192308  | 6                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm   | 1.000000   | 0.900000       | 3               | nan                     | $1.369 \cdot 10^{+03}$  | $1.445 \cdot 10^{+02}$ | $1.706 \cdot 10^{+00}$                   | 2            | 6.557692   | 21               | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 1.000000   | 0.900000       | 4               | nan                     | $3.359 \cdot 10^{+03}$  | $2.249 \cdot 10^{+02}$ | $1.699 \cdot 10^{+00}$                   | 0            | 10.115385  | 18               | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm   | 10.000000  | 0.000000       | 3               | nan                     | $3.861 \cdot 10^{+03}$  | $2.763 \cdot 10^{+02}$ | $1.714 \cdot 10^{+00}$                   | 0            | 11.269231  | 6                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm   | 10.000000  | 0.000000       | 4               | nan                     | $6.664 \cdot 10^{+02}$  | $2.185 \cdot 10^{+02}$ | $1.696 \cdot 10^{+00}$                   | 5            | 10.442308  | 27               | 1                | $1.499 \cdot 10^{+00}$                   |
| drpm   | 10.000000  | 0.100000       | 3               | nan                     | $2.059 \cdot 10^{+03}$  | $2.659 \cdot 10^{+02}$ | $1.731 \cdot 10^{+00}$                   | 0            | 10.884615  | 6                | 2                | $1.621 \cdot 10^{+00}$                   |
| drpm   | 10.000000  | 0.100000       | 4               | nan                     | $4.610 \cdot 10^{+02}$  | $2.190 \cdot 10^{+02}$ | $1.695 \cdot 10^{+00}$                   | 1            | 10.250000  | 9                | 1                | $1.499 \cdot 10^{+00}$                   |
| drpm   | 10.000000  | 0.250000       | 3               | nan                     | $1.663 \cdot 10^{+02}$  | $2.059 \cdot 10^{+02}$ | $1.711 \cdot 10^{+00}$                   | 0            | 9.000000   | 6                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 10.000000  | 0.250000       | 4               | nan                     | $1.740 \cdot 10^{+03}$  | $2.321 \cdot 10^{+02}$ | $1.708 \cdot 10^{+00}$                   | 0            | 11.173077  | 4                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 10.000000  | 0.500000       | 3               | nan                     | $1.586 \cdot 10^{+04}$  | $4.077 \cdot 10^{+02}$ | $1.702 \cdot 10^{+00}$                   | 0            | 14.653846  | 6                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm   | 10.000000  | 0.500000       | 4               | nan                     | $7.133 \cdot 10^{+04}$  | $2.937 \cdot 10^{+02}$ | $1.704 \cdot 10^{+00}$                   | 0            | 12.923077  | 4                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm   | 10.000000  | 0.750000       | 3               | nan                     | $8.571 \cdot 10^{+03}$  | $3.429 \cdot 10^{+02}$ | $1.717 \cdot 10^{+00}$                   | 0            | 12.807692  | 8                | 2                | $1.621 \cdot 10^{+00}$                   |
| drpm   | 10.000000  | 0.750000       | 4               | nan                     | $8.619 \cdot 10^{+02}$  | $2.130 \cdot 10^{+02}$ | $1.697 \cdot 10^{+00}$                   | 5            | 10.480769  | 27               | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 10.000000  | 0.900000       | 3               | nan                     | $3.285 \cdot 10^{+02}$  | $2.334 \cdot 10^{+02}$ | $1.708 \cdot 10^{+00}$                   | 0            | 9.865385   | 6                | 2                | $1.621 \cdot 10^{+00}$                   |
| drpm   | 10.000000  | 0.900000       | 4               | nan                     | $4.820 \cdot 10^{+02}$  | $2.169 \cdot 10^{+02}$ | $1.691 \cdot 10^{+00}$                   | 0            | 10.096154  | 6                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 100.000000 | 0.000000       | 3               | nan                     | $3.567 \cdot 10^{+02}$  | $2.053 \cdot 10^{+02}$ | $1.692 \cdot 10^{+00}$                   | 0            | 9.807692   | 6                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm   | 100.000000 | 0.000000       | 4               | nan                     | $1.557 \cdot 10^{+03}$  | $1.729 \cdot 10^{+02}$ | $1.689 \cdot 10^{+00}$                   | 0            | 10.730769  | 4                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm   | 100.000000 | 0.100000       | 3               | nan                     | $-1.047 \cdot 10^{+02}$ | $1.597 \cdot 10^{+02}$ | $1.706 \cdot 10^{+00}$                   | 2            | 8.192308   | 14               | 1                | $1.478 \cdot 10^{+00}$                   |
| drpm   | 100.000000 | 0.100000       | 4               | nan                     | $1.333 \cdot 10^{+03}$  | $1.721 \cdot 10^{+02}$ | $1.689 \cdot 10^{+00}$                   | 0            | 10.461538  | 6                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm   | 100.000000 | 0.250000       | 3               | nan                     | $-1.661 \cdot 10^{+02}$ | $1.473 \cdot 10^{+02}$ | $1.700 \cdot 10^{+00}$                   | 0            | 7.692308   | 6                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 100.000000 | 0.250000       | 4               | nan                     | $1.144 \cdot 10^{+03}$  | $1.599 \cdot 10^{+02}$ | $1.690 \cdot 10^{+00}$                   | 0            | 10.346154  | 5                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 100.000000 | 0.500000       | 3               | nan                     | $-1.209 \cdot 10^{+02}$ | $1.600 \cdot 10^{+02}$ | $1.705 \cdot 10^{+00}$                   | 4            | 8.211538   | 22               | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 100.000000 | 0.500000       | 4               | nan                     | $3.474 \cdot 10^{+04}$  | $2.268 \cdot 10^{+02}$ | $1.706 \cdot 10^{+00}$                   | 0            | 11.942308  | 4                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm   | 100.000000 | 0.750000       | 3               | nan                     | $8.965 \cdot 10^{+01}$  | $1.578 \cdot 10^{+02}$ | $1.703 \cdot 10^{+00}$                   | 2            | 8.019231   | 25               | 1                | $1.541 \cdot 10^{+00}$                   |
| drpm   | 100.000000 | 0.750000       | 4               | nan                     | $4.219 \cdot 10^{+03}$  | $1.740 \cdot 10^{+02}$ | $1.693 \cdot 10^{+00}$                   | 0            | 10.769231  | 4                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm   | 100.000000 | 0.900000       | 3               | nan                     | $3.636 \cdot 10^{+04}$  | $4.140 \cdot 10^{+02}$ | $1.711 \cdot 10^{+00}$                   | 0            | 15.000000  | 6                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm   | 100.000000 | 0.900000       | 4               | nan                     | $9.101 \cdot 10^{+02}$  | $1.610 \cdot 10^{+02}$ | <b><math>1.676 \cdot 10^{+00}</math></b> | 0            | 10.269231  | 4                | 2                | <b><math>1.277 \cdot 10^{+00}</math></b> |

Table 6: DRPM Model for different hyperparameter configurations with the following prior values:  $m_0 = 2.91$ ,  $s_0^2 = 200.0$ ,  $A_\sigma = 0.1$ ,  $A_\tau = 1.0$ ,  $A_\lambda = 1.0$ ,  $b = 1.0$ ,  $a_\alpha = 1.0$ ,  $b_\alpha = 1.0$ .

| Model | M          | starting-alpha | SpatialCohesion | lpml                    | waic                                      | time                                     | mse                                      | n-singletons | n-clusters | max-cluster-size | min-cluster-size | max-pm25-diff                            |
|-------|------------|----------------|-----------------|-------------------------|---|--|--|--------------|------------|------------------|------------------|--|
| drpm  | 0.100000   | 0.000000       | 3               | nan                     | $2.042 \cdot 10^{+02}$                    | $1.200 \cdot 10^{+02}$                   | $1.697 \cdot 10^{+00}$                   | 0            | 5.211538   | 16               | 3                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.000000       | 4               | nan                     | <b><math>-5.403 \cdot 10^{+02}</math></b> | $2.536 \cdot 10^{+02}$                   | $1.708 \cdot 10^{+00}$                   | 0            | 10.038462  | 6                | 2                | $1.541 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.100000       | 3               | nan                     | $1.539 \cdot 10^{+02}$                    | $1.458 \cdot 10^{+02}$                   | $1.703 \cdot 10^{+00}$                   | 0            | 6.115385   | 10               | 4                | $1.753 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.100000       | 4               | nan                     | $-4.078 \cdot 10^{+02}$                   | $2.056 \cdot 10^{+02}$                   | $1.694 \cdot 10^{+00}$                   | 1            | 8.403846   | 8                | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.250000       | 3               | nan                     | $4.698 \cdot 10^{+02}$                    | <b><math>1.167 \cdot 10^{+02}</math></b> | $1.699 \cdot 10^{+00}$                   | 0            | 5.230769   | 26               | 2                | $1.621 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.250000       | 4               | nan                     | $2.011 \cdot 10^{+03}$                    | $3.255 \cdot 10^{+02}$                   | $1.714 \cdot 10^{+00}$                   | 0            | 12.442308  | 6                | 2                | $1.541 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.500000       | 3               | nan                     | $1.775 \cdot 10^{+02}$                    | $1.430 \cdot 10^{+02}$                   | <b><math>1.678 \cdot 10^{+00}</math></b> | 0            | 6.057692   | 10               | 4                | $1.621 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.500000       | 4               | nan                     | $1.026 \cdot 10^{+04}$                    | $4.347 \cdot 10^{+02}$                   | $1.702 \cdot 10^{+00}$                   | 0            | 15.500000  | 6                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.750000       | 3               | nan                     | $2.282 \cdot 10^{+03}$                    | $2.231 \cdot 10^{+02}$                   | $1.702 \cdot 10^{+00}$                   | 0            | 8.403846   | 12               | 2                | $1.651 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.750000       | 4               | nan                     | $1.025 \cdot 10^{+05}$                    | $5.313 \cdot 10^{+02}$                   | $1.702 \cdot 10^{+00}$                   | 6            | 17.057692  | 6                | 1                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.900000       | 3               | $-5.085 \cdot 10^{+03}$ | $1.269 \cdot 10^{+02}$                    | $1.383 \cdot 10^{+02}$                   | $1.689 \cdot 10^{+00}$                   | 0            | 5.826923   | 27               | 2                | $1.651 \cdot 10^{+00}$                   |
| drpm  | 0.100000   | 0.900000       | 4               | <b>inf</b>              | $1.506 \cdot 10^{+06}$                    | $7.453 \cdot 10^{+02}$                   | $1.705 \cdot 10^{+00}$                   | 14           | 21.480769  | 6                | 1                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.000000       | 3               | nan                     | $-1.318 \cdot 10^{+02}$                   | $1.621 \cdot 10^{+02}$                   | $1.691 \cdot 10^{+00}$                   | 0            | 7.192308   | 13               | 3                | $1.541 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.000000       | 4               | nan                     | $2.158 \cdot 10^{+02}$                    | $2.146 \cdot 10^{+02}$                   | $1.698 \cdot 10^{+00}$                   | 0            | 9.692308   | 21               | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.100000       | 3               | nan                     | $-7.976 \cdot 10^{+01}$                   | $1.298 \cdot 10^{+02}$                   | $1.692 \cdot 10^{+00}$                   | 0            | 6.038462   | 12               | 3                | $1.541 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.100000       | 4               | nan                     | $3.945 \cdot 10^{+02}$                    | $2.063 \cdot 10^{+02}$                   | $1.695 \cdot 10^{+00}$                   | 2            | 9.134615   | 10               | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.250000       | 3               | nan                     | $-2.985 \cdot 10^{+02}$                   | $1.688 \cdot 10^{+02}$                   | $1.708 \cdot 10^{+00}$                   | 0            | 7.326923   | 10               | 3                | $1.621 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.250000       | 4               | nan                     | $5.035 \cdot 10^{+03}$                    | $2.735 \cdot 10^{+02}$                   | $1.703 \cdot 10^{+00}$                   | 0            | 12.038462  | 6                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.500000       | 3               | nan                     | $-8.115 \cdot 10^{+01}$                   | $1.337 \cdot 10^{+02}$                   | $1.697 \cdot 10^{+00}$                   | 1            | 5.923077   | 28               | 1                | $1.621 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.500000       | 4               | nan                     | $1.098 \cdot 10^{+03}$                    | $2.337 \cdot 10^{+02}$                   | $1.704 \cdot 10^{+00}$                   | 0            | 10.461538  | 6                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.750000       | 3               | nan                     | $3.623 \cdot 10^{+03}$                    | $3.103 \cdot 10^{+02}$                   | $1.733 \cdot 10^{+00}$                   | 0            | 11.442308  | 10               | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.750000       | 4               | nan                     | $1.845 \cdot 10^{+03}$                    | $2.356 \cdot 10^{+02}$                   | $1.712 \cdot 10^{+00}$                   | 0            | 10.826923  | 6                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.900000       | 3               | nan                     | $1.046 \cdot 10^{+02}$                    | $2.021 \cdot 10^{+02}$                   | $1.693 \cdot 10^{+00}$                   | 0            | 8.461538   | 8                | 2                | $1.621 \cdot 10^{+00}$                   |
| drpm  | 1.000000   | 0.900000       | 4               | nan                     | $8.390 \cdot 10^{+02}$                    | $2.065 \cdot 10^{+02}$                   | $1.700 \cdot 10^{+00}$                   | 3            | 9.365385   | 11               | 1                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.000000       | 3               | nan                     | $-2.184 \cdot 10^{+02}$                   | $1.511 \cdot 10^{+02}$                   | $1.700 \cdot 10^{+00}$                   | 0            | 7.076923   | 12               | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.000000       | 4               | nan                     | $8.927 \cdot 10^{+02}$                    | $2.130 \cdot 10^{+02}$                   | $1.694 \cdot 10^{+00}$                   | 0            | 10.153846  | 12               | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.100000       | 3               | nan                     | $3.148 \cdot 10^{+03}$                    | $2.252 \cdot 10^{+02}$                   | $1.705 \cdot 10^{+00}$                   | 0            | 9.711538   | 6                | 2                | $1.621 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.100000       | 4               | nan                     | $7.606 \cdot 10^{+02}$                    | $2.127 \cdot 10^{+02}$                   | $1.692 \cdot 10^{+00}$                   | 0            | 10.057692  | 12               | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.250000       | 3               | nan                     | $8.539 \cdot 10^{+02}$                    | $2.464 \cdot 10^{+02}$                   | $1.694 \cdot 10^{+00}$                   | 0            | 10.000000  | 6                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.250000       | 4               | nan                     | $6.605 \cdot 10^{+02}$                    | $2.141 \cdot 10^{+02}$                   | $1.701 \cdot 10^{+00}$                   | 2            | 10.326923  | 32               | 1                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.500000       | 3               | nan                     | $-1.093 \cdot 10^{+01}$                   | $1.476 \cdot 10^{+02}$                   | $1.696 \cdot 10^{+00}$                   | 0            | 7.019231   | 11               | 3                | $1.621 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.500000       | 4               | nan                     | $1.274 \cdot 10^{+03}$                    | $2.252 \cdot 10^{+02}$                   | $1.705 \cdot 10^{+00}$                   | 0            | 10.923077  | 5                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.750000       | 3               | nan                     | $-4.311 \cdot 10^{+02}$                   | $1.509 \cdot 10^{+02}$                   | $1.692 \cdot 10^{+00}$                   | 0            | 7.153846   | 8                | 2                | $1.679 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.750000       | 4               | nan                     | $3.707 \cdot 10^{+03}$                    | $2.248 \cdot 10^{+02}$                   | $1.707 \cdot 10^{+00}$                   | 0            | 10.980769  | 4                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.900000       | 3               | nan                     | $1.279 \cdot 10^{+03}$                    | $2.621 \cdot 10^{+02}$                   | $1.709 \cdot 10^{+00}$                   | 0            | 10.692308  | 6                | 2                | $1.541 \cdot 10^{+00}$                   |
| drpm  | 10.000000  | 0.900000       | 4               | nan                     | $5.950 \cdot 10^{+03}$                    | $2.285 \cdot 10^{+02}$                   | $1.702 \cdot 10^{+00}$                   | 0            | 11.423077  | 6                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.000000       | 3               | nan                     | $-2.753 \cdot 10^{+02}$                   | $1.627 \cdot 10^{+02}$                   | $1.700 \cdot 10^{+00}$                   | 0            | 8.269231   | 21               | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.000000       | 4               | nan                     | $1.196 \cdot 10^{+04}$                    | $1.971 \cdot 10^{+02}$                   | $1.692 \cdot 10^{+00}$                   | 0            | 11.365385  | 8                | 2                | $1.541 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.100000       | 3               | nan                     | $3.094 \cdot 10^{+03}$                    | $2.474 \cdot 10^{+02}$                   | $1.701 \cdot 10^{+00}$                   | 0            | 11.057692  | 6                | 2                | $1.621 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.100000       | 4               | nan                     | $1.142 \cdot 10^{+03}$                    | $1.631 \cdot 10^{+02}$                   | $1.688 \cdot 10^{+00}$                   | 0            | 10.461538  | 4                | 2                | <b><math>1.290 \cdot 10^{+00}</math></b> |
| drpm  | 100.000000 | 0.250000       | 3               | nan                     | $1.019 \cdot 10^{+04}$                    | $3.074 \cdot 10^{+02}$                   | $1.705 \cdot 10^{+00}$                   | 0            | 12.750000  | 6                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.250000       | 4               | nan                     | $2.273 \cdot 10^{+03}$                    | $1.605 \cdot 10^{+02}$                   | $1.708 \cdot 10^{+00}$                   | 0            | 10.326923  | 4                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.500000       | 3               | nan                     | $-1.477 \cdot 10^{+02}$                   | $1.535 \cdot 10^{+02}$                   | $1.702 \cdot 10^{+00}$                   | 0            | 7.942308   | 10               | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.500000       | 4               | nan                     | $5.234 \cdot 10^{+03}$                    | $1.779 \cdot 10^{+02}$                   | $1.716 \cdot 10^{+00}$                   | 0            | 10.750000  | 6                | 2                | $1.495 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.750000       | 3               | nan                     | $1.039 \cdot 10^{+04}$                    | $3.164 \cdot 10^{+02}$                   | $1.717 \cdot 10^{+00}$                   | 0            | 12.923077  | 6                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.750000       | 4               | nan                     | $6.149 \cdot 10^{+03}$                    | $1.788 \cdot 10^{+02}$                   | $1.688 \cdot 10^{+00}$                   | 0            | 11.000000  | 5                | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.900000       | 3               | nan                     | $4.465 \cdot 10^{+02}$                    | $1.563 \cdot 10^{+02}$                   | $1.699 \cdot 10^{+00}$                   | 0            | 8.019231   | 11               | 2                | $1.478 \cdot 10^{+00}$                   |
| drpm  | 100.000000 | 0.900000       | 4               | nan                     | $1.820 \cdot 10^{+03}$                    | $1.601 \cdot 10^{+02}$                   | $1.692 \cdot 10^{+00}$                   | 0            | 10.346154  | 5                | 2                | <b><math>1.290 \cdot 10^{+00}</math></b> |