

**Table S1.** Comparison between temperatures, speed, lateral position by vehicle type and, types of weight measurements.

| Weight measurements | Speed      | Lateral position | Vehicles   |            |            |                           |            |           |  |           |            |                           |           |         |   |            |            |                           |            |           | All vehicles          |            |              |           | All vehicles and pavement temperatures |           |         |           |           |           |         |
|---------------------|------------|------------------|--|------------|------------|---------------------------|------------|-----------|--|-----------|------------|---------------------------|-----------|---------|---|------------|------------|---------------------------|------------|-----------|-----------------------|------------|--------------|-----------|--|-----------|---------|-----------|-----------|-----------|---------|
|                     |            |                  | Three-axle unarticulated truck with 2 groups of axles (3C) |            |            |                           |            |           | Five-axle articulated truck with 3 groups of axles (2S3) |           |            |                           |           |         | Six-axle articulated truck with 3 groups of axles (3S3) |            |            |                           |            |           | Pavement temperatures |            | All vehicles |           |  |           |         |           |           |           |         |
|                     |            |                  | Pavement temperatures                                      |            |            | All pavement temperatures |            |           | Pavement temperatures                                    |           |            | All pavement temperatures |           |         | Pavement temperatures                                   |            |            | All pavement temperatures |            |           | Pavement temperatures |            | All vehicles |           |  |           |         |           |           |           |         |
|                     |            |                  | < 37.0 °C  |            |            | ≥ 37.0 °C                 |            |           | < 37.0 °C  |           |            | ≥ 37.0 °C                 |           |         | < 37.0 °C   |            |            | ≥ 37.0 °C                 |            |           | < 37.0 °C             |            | ≥ 37.0 °C    |           |  |           |         |           |           |           |         |
| GVW                 | 60 km/h    | Center           | 0.0002*  | 0.1690 NS  | -          | 0.0287*                   | 0.0002*    | 0.4240 NS | 0.0328*  | 0.0003*   | -          | 0.0006*                   | 0.0328*   | 0.0001* | 0.0001*   | 0.5235 NS  | -          | 0.0016*                   | 0.0001*    | 0.5235 NS | -                     | 0.0001*    | 0.0001*      | 0.5235 NS | -                                      | 0.9490 NS | -       |           |           |           |         |
|                     |            | Left             | 0.3141 NS  |            | -          |                           | 0.3141 NS  |           | 0.0130*  | 0.0006*   | 0.0130*    |                           | -         | 0.0002* | 0.0026*   | 0.0011*    | -          | 0.0011*                   | 0.0011*    | 0.0011*   |                       |            |              |           |  |           |         |           |           |           |         |
|                     |            | Right            | 0.1056 NSS   |            | 0.0287*    |                           | 0.0027*    |           | 0.0036*  | 0.0001*   | 0.0001*    |                           | -         | -       | -   | 0.1250 NSS | -          | -                         | -          | -         | 0.0001*               |            |              |           |  |           |         |           |           |           |         |
|                     | 70 km/h    | Center           | 0.3750 NSS   | 0.0822 NSS | 0.2950 NSS | 0.0023*                   | 0.2730 NSS | 0.2272 NS | 0.0152*  | 0.0001*   | 0.0038*    | 0.0002*                   | 0.0028*   | 0.0003* | -   | 0.4532 NS  | 0.4532 NSS | 0.1400 NS                 | 0.4532 NSS | -         | 0.0008*               | 0.2088 NSS | 0.5196 NS    | 0.0301*   | 0.0015*                                | 0.0288*   | 0.0288* | 0.7149 NS | 0.0288*   |           |         |
|                     |            | Left             | 0.5215 NSS   |            | 0.2314 NSS |                           | 0.1125 NS  |           | 0.0009*  | 0.8105 NS | 0.0003*    |                           | -         |         | 0.0002*   | 0.0054 NS  | 0.0418*    | 0.0008*                   | 0.7533 NS  |           |                       |            |              |           |  |           |         |           |           |           |         |
|                     |            | Right            | 0.0009*  |            | -          |                           | 0.1129 NS  |           | 0.0048*  | 0.6223 NS | 0.0001*    |                           | 0.0001*   |         | 0.1410 NSS  | 0.1410 NSS | -          | 0.3909 NSS                | 0.3877 NS  | 0.1796 NS |                       |            |              |           |  |           |         |           |           |           |         |
|                     | 80 km/h    | Center           | -  | 0.0048*    | 0.0157*    | 0.0047*                   | -          | 0.0001*   | 0.0001*  | 0.1770 NS | 0.1172 NSS | 0.1566 NS                 | 0.0654 NS | 0.0435* | -   | 0.2211 NS  | 0.8121 NS  | 0.8121 NS                 | 0.2211 NSS | 0.8121 NS | -                     | 0.0008*    | 0.4285 NS    | 0.3745 NS | 0.0337*                                | 0.0011*   | 0.0008* | 0.0011*   | 0.3745 NS | 0.0011*   |         |
|                     |            | Left             | -  |            | 0.1129 NS  |                           | 0.6554 NS  |           | 0.1250 NSS   | 0.1250 NS | 0.0586 NS  |                           | -         |         | 0.0001*   | 0.1668 NS  | 0.1805 NS  | 0.0001*                   | 0.4049 NS  |           |                       |            |              |           |  |           |         |           |           |           |         |
|                     |            | Right            | -  |            | -          |                           | -          |           | -  | -         | -          |                           | -         |         | -   | 0.0002*    | 0.0010*    | 0.0001*                   | 0.0001*    | 0.0001*   | 0.0001*               |            |              |           |  |           |         |           |           |           |         |
|                     | 90 km/h    | Center           | -  | 0.0013*    | 0.0128 NS  | 0.0300*                   | 0.0001*    | 0.1916 NS | 0.0131*  | 0.0001*   | 0.0001*    | 0.1259 NS                 | 0.0131*   | 0.0003* | -   | 0.6875 NS  | 0.2483 NS  | 0.2483 NS                 | 0.0008*    | 0.4049 NS | 0.0764 NS             | 0.0001*    | 0.0001*      | 0.0001*   | 0.0001*                                | 0.0001*   | 0.0001* | 0.0001*   | 0.0001*   | 0.1759 NS | 0.0001* |
|                     |            | Left             | 0.7084 NS  |            | 0.025*     |                           | 0.0001*    |           | 0.2891 NS  | 0.5587 NS | 0.1814 NS  |                           | -         |         | 0.0002*   | 0.0003*    | 0.0001*    | 0.0001*                   | 0.0001*    |           | 0.0001*               |            |              |           |  |           |         |           |           |           |         |
|                     |            | Right            | 0.4527 NS  |            | -          |                           | -          |           | -  | -         | -          |                           | -         |         | -   | 0.0003*    | 0.0003*    | 0.0003*                   | 0.0003*    | 0.0003*   | 0.0003*               |            |              |           |  |           |         |           |           |           |         |
| Axle group (G1)     | 60 km/h    | Center           | 0.4226 NS  | 0.0061*    | -          | 0.0151*                   | 0.4226 NS  | 0.0003*   | -  | 0.0001*   | 0.0009*    | 0.0001*                   | 0.0001*   | 0.0001* | -   | 0.1250 NSS | 0.0156*    | 0.0001*                   | 0.0001*    | 0.0001*   | 0.0001*               | 0.0001*    | 0.0001*      | 0.0001*   | 0.0001*                                | 0.0001*   | 0.0001* | 0.0001*   | 0.0001*   | 0.0043*   | 0.0043* |
|                     |            | Left             | 0.285*   |            | 0.0061*    |                           | 0.0151*    |           | 0.0001*  | 0.0009*   | 0.0001*    |                           | -         |         | 0.0001*   | 0.0001*    | -          | 0.0001*                   | 0.0001*    |           | 0.0001*               |            | 0.0001*      |           |  |           |         |           |           |           |         |
|                     |            | Right            | 0.0018*  |            | -          |                           | -          |           | -  | -         | -          |                           | -         |         | -   | 0.0001*    | 0.0001*    | -                         | 0.0001*    | 0.0001*   | 0.0001*               | 0.0001*    |              |           |  |           |         |           |           |           |         |
|                     | 70 km/h    | Center           | -  | 0.0083*    | 0.0148*    | 0.0127*                   | 0.0148*    | 0.0002*   | 0.0148*  | 0.0001*   | 0.0009*    | 0.0001*                   | 0.0001*   | 0.0001* | -   | 0.0625 NSS | 0.03698 NS | 0.03698 NS                | 0.0006*    | 0.0001*   | 0.0001*               | 0.0001*    | 0.0001*      | 0.0001*   | 0.0001*                                | 0.0001*   | 0.0001* | 0.0036*   | 0.0036*   |           |         |
|                     |            | Left             | 0.8335 NSS   |            | 0.0083*    |                           | 0.2705 NSS |           | 0.2413 NS  | 0.2354 NS | 0.0701 NS  |                           | 0.3878 NS |         | 0.3878 NS   | 0.0005*    | 0.4835 NSS |                           | 0.0001*    |           | 0.0001*               |            | 0.0001*      | 0.0001*   | 0.0001*                                | 0.0001*   | 0.0001* | 0.0001*   | 0.0001*   |           |         |
|                     |            | Right            | 0.0004*  |            | -          |                           | -          |           | -  | -         | -          |                           | -         |         | -   | 0.1046 NS  | 0.0625 NSS | -                         | 0.0001*    |           |                       |            | -            |           | -                                      |           | -       | -         |           |           |         |
|                     | 80 km/h    | Center           | -  | 0.0010*    | 0.2188 NS  | 0.0010*                   | 0.0594 NS  | 0.0007*   | -  | 0.0001*   | 0.7409 NS  | 0.0001*                   | 0.7409 NS | 0.0001* | -   | 0.0001*    | -          | 0.0001*                   | -          | 0.0001*   | -                     | 0.0001*    | -            | 0.0001*   | -                                      | 0.0001*   | -       | 0.0035*   | 0.0035*   |           |         |
|                     |            | Left             | -  |            | 0.2985 NS  |                           | 0.0010*    |           | 0.0544 NS  | 0.8629 NS | 0.0001*    |                           | 0.0001*   |         | 0.0001*   | 0.0001*    | 0.0001*    | 0.0001*                   | 0.0001*    | 0.0001*   |                       |            |              |           |  |           |         |           |           |           |         |
|                     |            | Right            | -  |            | -          |                           | -          |           | -  | -         | -          |                           | -         |         | -   | 0.1250 NS  | 1.0000 NS  | -                         | 0.0001*    | -         | -                     |            | -            | -         |  |           |         |           |           |           |         |
|                     | 90 km/h    | Center           | -  | 0.0402*    | 0.0992 NSS | 0.0402*                   | 0.3092 NSS | 0.0402*   | 0.0992 NSS   | 0.0001*   | 0.0292*    | 0.0001*                   | 0.0237*   | 0.0001* | -   | 0.2181 NS  | 0.5932 NS  | 0.5932 NS                 | 0.0001*    | 0.0001*   | 0.0001*               | 0.0001*    | 0.0001*      | 0.0001*   | 0.0001*                                | 0.0001*   | 0.0001* | 0.0007*   | 0.0007*   |           |         |
|                     |            | Left             | -  |            | 0.3092 NSS |                           | 0.0402*    |           | 0.3092 NSS   | -         | -          |                           | -         |         | 0.2181 NS   | 0.2181 NS  | -          | 0.0001*                   | -          |           | -                     |            | -            | -         |  |           |         |           |           |           |         |
|                     |            | Right            | -  |            | -          |                           | -          |           | -  | -         | -          |                           | -         |         | -   | -          | -          | -                         | -          | -         | -                     | -          | -            | -         |  |           |         |           |           |           |         |
|                     | All speeds | Center           | 0.4226 NS  | 0.0001*    | 0.0018*    | 0.0001*                   | 0.0005*    | 0.0001*   | 0.0001*  | 0.0001*   | 0.0078*    | 0.0001*                   | 0.0345*   | 0.0001* | -   | 0.0618 NS  | 0.1980 NS  | 0.1980 NS                 | 0.0003*    | 0.0001*   | 0.0001*               | 0.0001*    | 0.0001*      | 0.0001*   | 0.0001*                                | 0.0001*   | 0.0001* | 0.0001*   | 0.0001*   | 0.0001*   | 0.0001* |
|                     |            | Left             | 0.5235 NS  |            | 0.0001*    |                           | 0.0003*    |           | 0.4791 NS  | 0.0001*   | 0.0001*    |                           | 0.0001*   |         | 0.0001*   | 0.0001*    | 0.0001*    | 0.0001*                   | 0.0001*    | 0.0001*   | 0.0001*               |            |              |           |  |           |         |           |           |           |         |
|                     |            | Right            | 0.0001*  |            | -          |                           | -          |           | -  | -         | -          |                           | -         |         | -   | 0.0246 NS  | 0.5615 NS  | 0.0879 NS                 | -          | 0.2460 NS | 0.0572 NS             | 0.0572 NS  | 0.1920 NS    |           |  |           |         |           |           |           |         |
| Axle group (G2)     | 60 km/h    | Center           | -  | 0.0157*    | 0.0001*    | 0.1363 NSS                | 0.0001*    | 0.1363 NS | 0.0001*  | 0.0001*   | 0.0001*    | 0.1363 NS                 | 0.        |         |   |            |            |                           |            |           |                       |            |              |           |  |           |         |           |           |           |         |