**Part II: Earth-space path data***[[1]](#footnote-1)+*

TABLE II-11 – Slant path statistics of path length fluctuations

Station number \_ \_ \_ \_ \_ \_

**Receive station**RX site name \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_

RX country(1) \_ \_

RX latitude (–90..90) (degrees) \_ \_ \_ \_ \_ \_ \_

RX longitude (0..360) (degrees) E \_ \_ \_ \_ \_ \_ \_

RX altitude amsl *hgr* (m) \_ \_ \_ \_ \_

RX antenna height ag *hr* (m) \_ \_ \_ \_ \_

RX 3 dB beamwidth *r* (degrees) \_ \_ \_ \_ \_

RX antenna type \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_

RX antenna diameter *D* (m) \_ \_ \_ \_ \_

RX antenna feed type \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_

RX radome? (Y/N) \_ \_ \_

RX figure of merit (dB(K–1)) \_ \_ \_ \_ \_

RX maximum side-lobe angle  4 (degrees) \_ \_ \_ \_ \_

RX relative level of maximum side lobe (dB) \_ \_ \_ \_ \_

RX dynamic range (dB) \_ \_ \_ \_ \_

RX integration time (s) \_ \_ \_ \_ \_

RX path length rms noise floor (mm) \_ \_ \_ \_ \_ \_

**Wind** measurements

Type of instrument \_ \_ \_ \_ \_ \_ \_ \_ \_ \_

Resolution (m/s) \_ \_ \_ \_ \_

Sensor height ag *hw* (m) \_ \_ \_ \_ \_

Average surface wind speed (m/s) \_ \_ \_ \_ \_ \_

Average surface wind direction (deg)(2) \_ \_ \_ \_ \_ \_

**Measurement:** Experiment No. \_ \_ \_

Satellite name \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_

Satellite orbital position (degrees) E \_ \_ \_ \_ \_ \_

Type of experiment \_ \_ \_

Type of filtering(\*) \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_

Start date (yyyy.mm.dd) \_ \_ \_ \_ \_ \_ \_ \_

End date (yyyy.mm.dd) \_ \_ \_ \_ \_ \_ \_ \_

Duration *d* (days)(3) \_ \_ \_ \_ \_ \_ \_

Frequency *f* (GHz) \_ \_ \_ \_ \_ \_

Signal type (CW/BB)(4) \_ \_

Polarization (L/C) \_

Polarization tilt angle *p* (degrees)(5) \_ \_ \_ \_

Elevation angle (degrees) \_ \_ \_ \_

RX baseline separation (m) \_ \_ \_ \_ \_

RX baseline orientation (deg)(2) \_ \_ \_ \_ \_

Rain zone(6) \_ \_

Data sampling interval (s) \_ \_ \_ \_ \_ \_ \_

Calibration interval (days) \_ \_ \_ \_ \_

Data resolution (mm) \_ \_ \_ \_ \_ \_ \_

Standard deviation integration time (sec) \_ \_ \_ \_ \_

**Water vapour concentration** measurements

Type of instrument \_ \_ \_ \_ \_ \_ \_ \_ \_ \_

Resolution (g/m3) \_ \_ \_ \_ \_ \_

Location \_ \_ \_ \_ \_ \_ \_ \_ \_ \_

Average surface temperature (degrees C) \_ \_ \_ \_ \_ \_

Surface relative humidity (%) \_ \_ \_ \_ \_ \_

**Table a:**

Path length standard deviation exceeded for percentage of year (mm)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   |   |   |   |   |   |   |   |   |
| Percentage of year | 0.001 | 0.002 | 0.003 | 0.005 | 0.01 | 0.02 | 0.03 | 0.05 |
|  | 0.1 | 0.2 | 0.3 | 0.5 | 1 | 2 | 3 | 5 |
|   | 10 | 20 | 30 | 50 |   |   |   |   |
| Path Length Standard | Year | – | – | – | – | – | – | – | – |
| Deviation (mm) |   | –– | –– | –– | –– | – | – | – | – |

**Table b:**

Monthly variation of path length standard deviation

Path length standard deviation exceeded for % of the month

Monthly average surface temperature

Monthly average surface relative humidity

Monthly average wind speed

Monthly average wind direction

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Month of year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| 0.01 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.02 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.03 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.05 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.1 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.2 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.3 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.5 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 10 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 20 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 30 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| 50 (mm) |  |  |  |  |  |  |  |  |  |  |  |  |
| Average SurfaceTemperature (deg C) |  |  |  |  |  |  |  |  |  |  |  |  |
| Average SurfaceRelative Humidity (%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Wind Speed (m/s) |  |  |  |  |  |  |  |  |  |  |  |  |
| Average WindDirection(2) (deg) |  |  |  |  |  |  |  |  |  |  |  |  |
| Duration(3) (%) |  |  |  |  |  |  |  |  |  |  |  |  |

**References:**

***Comments:***

(1) See Annex 1 for list of country codes.

(2) Degrees measured as degrees CW from North

(\*) Filtering refers to how the satellite motion/system drift was removed from the measured differential data

(3) Duration is the total time of valid path length measurements for this dataset, expressed as a real number (e.g. 339.888 days).The ratio of duration to the period identified by the start and the end dates of this dataset is the availability (e.g. start=2001/1/1, end=2001/12/31, duration= 339.888 days corresponds to 93.12 % availability).

(4) Signal type in this context are to be defined as: CW (continuous wave), BB (broadband).

(5) Tilt angle is referred to polarisation tilt angle with respect to the local horizontal plane.

(6) See Recommendation ITU-R P.837.

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1. + In addition to the tables provided in this document the submitter is requested to provide the data files according to the instructions available on ITU-R SG 3 Web page: [Study Group 3 databanks - DBSG3](http://www.itu.int/ITU-R/index.asp?category=study-groups&rlink=sg3-dtbank-dbsg3&lang=en). [↑](#footnote-ref-1)