**Data-dictionary  
(temperature-epoch Parquet + summary-covariate CSV)**

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| **Column** | **Type** | **Units** | **Definition & QC notes** |
| **Temperature-epoch Parquet** temperature\_epochs\_<RUN\_NAME>.parquet *(Zstd-compressed)* |  |  |  |
| id | string | – | Device/participant identifier taken from the raw filename (e.g. 1000056\_90001\_0\_0). Primary join key across all tables. |
| time | timestamp (ns, tz = Europe/London) | – | Start of the 30-s epoch, exactly as emitted by **accProcess**. Use for day-night aggregation or cosinor fitting. |
| temp | double | °C | Mean calibrated wrist-sensor temperature over the 30 s window. Calibration uses the axis slopes/offsets stored in the summary JSON. |
| enmoTrunc | double | milli-g (mg) | Activity intensity (Euclidean Norm Minus One, negatives truncated to 0). Include as an acute-activity covariate. |
| dataErrors | int32 | count | Raw 100 Hz packets missing/corrupt inside the epoch. **QC**: drop or down-weight rows with dataErrors > 0 (rare). |
| samples | int32 | count | 100 Hz samples in the epoch (normally 3000). Lets you weight means if partial epochs are kept. |
| clipsBefore | int32 | count | ADC saturations (±8 g) **before** calibration. *High values (>500) may indicate damaged sensor housing.* |
| clipsAfter | int32 | count | ADC saturations **after** calibration (should be ≤ clipsBefore). Persistent non-zero → suspect device fault. |
| **Summary-covariate CSV** summary\_covariates\_<RUN\_NAME>.csv.gz |  |  |  |
| id | string | – | Same identifier as above. |
| goodWear | 0 / 1 | – | ≥ 72 h good wear (quality-goodWearTime). **Recommended filter**: keep 1. |
| goodCal | 0 / 1 | – | Autocalibration converged & residual error ≤ 10 mg. **Filter**: keep 1. |
| calErrAfter\_mg | float | mg | RMS calibration residual (calibration-errsAfter(mg)). **QC**: exclude if > 10 mg or add as covariate. |
| wearDays | float | days | Total valid wear days (wearTime-overall(days)). Use as covariate to control for data density. |
| xOffset\_g, yOffset\_g, zOffset\_g | float | g | Axis-specific bias terms from sphere-fit calibration. Optional device-bias covariates; drop if they don’t change results. |
| clipsBefore, clipsAfter | int | count | File-level sums of saturated readings. High counts suggest impacts or cracked casing; often filtered at >500. |
| startTime, endTime | ISO 8601 string | – | First & last sample timestamps. Useful to merge with season, ambient weather, or assessment-centre date. |