Variable	Full Name	Explanation	Source
subject_id_scorer_date	Actiware Subject ID_Scorer_D	Unique identifier consisting of actiware subject ID and analsysis name.	REDCap
id	Export Identification	File path for the .csv file created during export.	SAS inserted
interval	Interval Type	Available interval types: Rest intervals These are intervals of data that contain periods of time when the subject activity is low and the subject is likely to be at rest. You must set them and, when you do, they are indicated on the actogram by light blue shading. Typically this will be used for the In Bed Period. By setting a Rest Interval you are directing the program to apply the Sleep Interval Detection algorithm for generating Sleep Periods. This algorithm uses the first data point in the rest interval as the Bed Time and the last data point as the Get up Time. From these points, the Sleep Onset and Sleep End is set using the Analysis parameter values that are indicated on the Analysis tab of the Options window. Once you have set a Rest Interval, a Sleep Interval is automatically created within it. Sleep Intervals Data in these intervals represent periods of time in which the subject is likely to be asleep. These intervals are created automatically by the software once a Rest Interval has been set. They represent the period of time between Sleep Onset and Sleep End but are not indicated by any shading. Excluded Intervals Data in these intervals are excluded from all analytical calculations. These intervals are designed for use when subjects remove the Actiwatch or for other invalid periods of data. These are generally set by you and are indicated by dark blue shading. When Convert off-wrist time to Excluded Intervals is selected (Actiwatch Spectrum only), any off-wrist event is automatically shown as an excluded interval. (The Actiwatch Spectrum is capable of determining when it is off the subject's wrist. The device places event markers in the stored data to indicate when the off-wrist status changes. For analysis purposes, the off-wrist time can be automatically converted to excluded intervals by selecting the Convert off-wrist time to Excluded Intervals check box found by selecting Tools > Options > Auto Intervals tab.)	Actiware Export
intervaln	Interval Number	Integer indentifying the sequence of the given interval within interval type and analysis.	Actiware Export
startdate	Start Date	The date at the start of the given Rest, Active, Sleep, Custom or Daily Interval (the date of the start of the first epoch of the given interval).	Actiware Export
startday	Start Day	The day at the start of the given Rest, Active, Sleep, Custom or Daily Interval (the day of the start of the first epoch of the given interval).	Actiware Export
starttime	Start Time	The time at the start of the given Rest, Active, Sleep, Custom, or Daily Interval (the start of the first epoch in the given interval).	Actiware Export
enddate	End Date	The date at the end of the given Rest, Active, Sleep, Custom or Daily Interval (the date of the end of the last epoch of the given interval).	Actiware Export
endday	End Day	The day at the end of the given Rest, Active, Sleep, Custom or Daily Interval (the day of the end of the last epoch of the given interval).	Actiware Export
endtime	End Time	The time at the end of the given Rest, Active, Sleep, Custom, or Daily Interval (the end of the last epoch in the given interval).	Actiware Export
dur	Interval Duration	The time elapsed between the Start Time and the End Time of the given interval, in minutes.	Actiware Export
offwrist	Off-Wrist Time	The total number of epochs between the Start Time and the End Time of the given interval that the Actiwatch indicated that it was not on the subject's wrist, multiplied by the Epoch Length in minutes.	Actiware Export
poffwrist	Percentage of Off-Wrist Time	a) The percentage of Off-Wrist Time to the Interval Duration. b) Total Off-Wrist time divided by Interval Duration multiplied by 100.	Actiware Export
ac_total	Total Activity Counts	The sum of all valid physical activity counts for all epochs from the Start Time to the End Time of the given interval.	Actiware Export

Variable	Full Name	Explanation	Source
ac_avg_min	Average Activity Counts per minute	The average of all valid physical activity counts for all epochs from the Start Time to the End Time of the given interval divided by the Epoch Length in minutes.	Actiware Export
ac_avg_ep	Average Activity Counts per epoch	The average of all valid physical activity counts for all epochs from the Start Time to the End Time of the given interval.	Actiware Export
ac_std	Standard Deviation of Activity Counts	The standard deviation of all valid physical activity counts for all epochs from the Start Time to the End Time of the given interval. The standard deviation is computed with (n – 1) rather than (n) in the denominator of the variance.	Actiware Export
ac_max	Maximum Activity Count	The largest of any valid physical activity count for all epochs from the Start Time to the End Time of the given interval.	Actiware Export
ac_inv_time	Total Invalid Time (Activity)	The total number of epochs between the Start Time and the End Time of the given interval for which the physical activity count was found to exceed the maximum possible value from a properly functioning Actiwatch (i.e., invalid data due to rare hardware error, communication error, or data corruption), plus the total number of epochs with valid physical activity counts manually excluded from the data set by the practitioner using Actiware software, multiplied by the Epoch Length in minutes. (The Total Invalid Time is in minutes).	Actiware Export
ac_pinv	Percentage of Total Invalid Time (Activity)	a) The percentage of Total Invalid Time (Activity) to the Interval Duration. b) Total Invalid Time (Activity) divided by Interval Duration multiplied by 100.	Actiware Export
sw_inv_time	Total Invalid Time (Sleep/Wake)	The total number of epochs between the Start Time and the End Time of the given interval for which the sleep/wake scoring algorithm did not have enough data to determine a SLEEP or WAKE score multiplied by the Epoch Length in minutes.	Actiware Export
sw_pinv	Percentage of Total Invalid Time (Sleep/Wake)	a) The percentage of Total Invalid Time (Sleep/Wake) to the Interval Duration. b) Total Invalid Time (Sleep/Wake) divided by Interval Duration multiplied by 100.	Actiware Export
latency	Onset Latency	a) The time elapsed between the Start Time of a given Rest Interval and the following Sleep Start Time, in minutes. b) The time required for the onset of sleep after first attempting to get to sleep (i.e., from the “lights out” time).	Actiware Export
snooze	Snooze Time	a) The time elapsed between Sleep End Time and the End Time of a given Rest Interval, in minutes. b) The time elapsed between the end of sleep and the time lights are switched on or the subject gets out of bed.	Actiware Export
eff	Sleep Efficiency	a) The percentage of Scored Total Sleep Time to Interval Duration minus Total Invalid Time (Sleep/Wake), for the given Rest Interval. b) Scored Total Sleep Time divided by (Interval Duration minus Total Invalid Time (Sleep/Wake)) of the given Rest Interval multiplied by 100.	Actiware Export
waso	Wake After Sleep Onset	The total number of epochs between the Start Time and the End Time of the given Sleep Interval scored as WAKE by Actiware software (or manually set as WAKE by individual using Actiware software) multiplied by the Epoch Length in minutes.	Actiware Export
wake	Wake Time	The total number of epochs between the Start Time and the End Time of the given interval scored as WAKE by Actiware software (or manually set as WAKE by individual) multiplied by the Epoch Length in minutes.	Actiware Export
pwake	Percentage of Wake Time	a) The percentage of Scored Total Wake Time to Interval Duration minus Total Invalid Time (Sleep/Wake), for the given interval. b) Scored Total Wake Time divided by (Interval Duration minus Total Invalid Time (Sleep/Wake)) multiplied by 100.	Actiware Export
wake_bouts	Total Number of Wake Bouts	The total number of continuous blocks, one or more epochs in duration, with each epoch of each block scored as WAKE, between the Start Time and the End Time of the given interval.	Actiware Export
avg_wake_bout	Average Duration of Wake Bouts	The Scored Total Wake Time divided by the Number of Wake Bouts, for the given interval.	Actiware Export
slptime	Sleep Time	The total number of epochs between the Start Time and the End Time of the given interval scored as SLEEP by Actiware software (or manually set as SLEEP by individual) multiplied by the Epoch Length in minutes.	Actiware Export
pslp	Percentage of Sleep Time	a) The percentage of Scored Total Sleep Time to (Interval Duration minus Total Invalid Time (Sleep/Wake)), for the given interval. b) Scored Total Sleep Time divided by (Interval Duration minus Total Invalid Time (Sleep/Wake)) multiplied by 100.	Actiware Export
sleep_bouts	Total Number of Sleep Bouts	The total number of continuous blocks, one or more epochs in duration, with each epoch of each block scored as SLEEP, between the Start Time and the End Time of the given interval.	Actiware Export
avg_sleep_bout	Average Duration of Sleep Bouts	The Scored Total Sleep Time divided by the Number of Sleep Bouts, for the given interval.	Actiware Export
immtime	Immobile Time	The total number of epochs between the Start Time and the End Time of the given interval scored as IMMOBILE by Actiware software multiplied by the Epoch Length in minutes.	Actiware Export
pimmtime	Percentage of Immobile Time	a) The percentage of Scored Total Immobile Time to (Interval Duration minus Total Invalid Time (Activity)), for the given interval. b) Scored Total Immobile Time divided by (Interval Duration minus Total Invalid Time (Activity)) multiplied by 100.	Actiware Export

Variable	Full Name	Explanation	Source
imm_bouts	Total Number of Immobile Bouts	The total number of continuous blocks, one or more epochs in duration, with each epoch of each block scored as IMMOBILE, between the Start Time and the End Time of the given interval.	Actiware Export
avg_imm_bout	Average Duration of Immobile Bouts	The Scored Total Immobile Time divided by the Number of Immobile Bouts, for the given interval.	Actiware Export
mobile	Mobile Time	The total number of epochs between the Start Time and the End Time of the given interval scored as MOBILE by Actiware software multiplied by the Epoch Length in minutes.	Actiware Export
pmobile	Percentage of Mobile Time	a) The percentage of Scored Total Mobile Time to (Interval Duration minus Total Invalid Time (Activity)), for the given interval. b) Scored Total Mobile Time divided by (Interval Duration minus Total Invalid Time (Activity)) multiplied by 100.	Actiware Export
mobile_bouts	Total Number of Mobile Bouts	The total number of continuous blocks, one or more epochs in duration, with each epoch of each block scored as MOBILE, between the Start Time and the End Time of the given interval.	Actiware Export
avg_mobile_bout	Average Duration of Mobile Bouts	The Scored Total Mobile Time divided by the Number of Mobile Bouts, for the given interval	Actiware Export
imm1	Total Number of 1 minute Immobile Bouts	The total number of continuous blocks 4 epochs in duration; if Epoch Length = 15 seconds, 2 epochs in duration; if Epoch Length = 30 seconds, 1 epoch in duration; if Epoch Length = 60 seconds (not applicable if Epoch Length is greater than 60 seconds), with each epoch of each block scored as IMMOBILE, between the Start Time and the End Time of the given interval.	Actiware Export
pimm1	Percentage of 1 minute Immobile Bouts	a) The percentage of Number of Immobile Bouts 1 Minute in Duration to the Number of Immobile Bouts, for the given interval. b) The number of Immobile Bouts 1 Minute in Duration divided by Number of Immobile Bouts multiplied by 100.	Actiware Export
frag	Fragmentation Index	The sum of Percent Mobile and Percent Immobile Bouts Less Than 1-Minute Duration to the Number of Immobile Bouts, for the given interval. This is also known as the Index of Restlessness or Movement and Fragmentation Index.	Actiware Export
exp_white	Total Exposure to White Light	The sum of all valid light data, in Lux, (white light) for all epochs from the Start Time to the End Time of the given interval multiplied by the Epoch Length in minutes.	Actiware Export
av_white	Average of all White Light	The average of all valid light (white) data for all epochs from the Start Time to the End Time of the given interval.	Actiware Export
std_white	Standard Deviation of all White Light	The standard deviation of all valid light (white) data for all epochs from the Start Time to the End Time of the given interval. The standard deviation is computed with (n – 1) rather than (n) in the denominator of the variance.	Actiware Export
max_white	Maximum Value of all White Light	The datum of highest value (greatest average intensity of light (white) during an epoch) from the set of all valid light data for all epochs from the Start Time to the End Time of the given interval; i.e., the peak value in the data set minus the highest intensity of light the Actiwatch was exposed to during the interval.	Actiware Export
talt_white	Total Accumulation of Light Time	a) The total number of epochs between the Start Time and the End Time of the given interval with valid light data greater than the given Illuminance Threshold multiplied by the Epoch Length in minutes. b) The total accumulation of time, in minutes, during which the Actiwatch was exposed to an intensity of illumination above the given Illuminance or Irradiance/Flux Threshold.	Actiware Export
inv_white	Total Invalid White Light Time	The total number of epochs between the Start Time and the End Time of the given interval in which the white light datum was found to exceed the maximum possible value from a properly functioning Actiwatch; i.e., invalid data due to rare hardware fault, communication error, or data corruption, plus the total number of epochs with valid light or irradiance/flux data manually excluded from the data set by you, multiplied by the Epoch Length in minutes.	Actiware Export
pinv_white	Percentage of Total Invalid White Light Time	a) The percentage of Total Invalid Time (Illuminance) to the Interval Duration. b) Total Invalid Time (Illuminance) divided by Interval Duration multiplied by 100.	Actiware Export
exp_red	Total Exposure to Red Light	The sum of valid irradiance/flux data, in the selected units (red) for all epochs from the Start Time to the End Time of the given interval multiplied by the Epoch Length in minutes.	Actiware Export
av_red	Average of all Red Light	The average of valid irradiance/flux data, in the selected units (red) for all epochs from the Start Time to the End Time of the given interval.	Actiware Export
std_red	Standard Deviation of all Red Light	The standard deviation of all valid irradiance/flux data, in the selected units (red) for all epochs from the Start Time to the End Time of the given interval. The standard deviation is computed with (n – 1) rather than (n) in the denominator of the variance	Actiware Export
max_red	Maximum Value of all Red Light	The datum of highest value (greatest average intensity of irradiance/flux (in the selected units, red, during an epoch) from the set of all valid light or irradiance/flux data for all epochs from the Start Time to the End Time of the given interval; i.e., the peak value in the data set minus the highest intensity of light the Actiwatch was exposed to during the interval.	Actiware Export
talt_red	Total Accumulation of Red Light Time	a) The total number of epochs between the Start Time and the End Time of the given interval with valid light data greater than the given Irradiance/Flux Threshold multiplied by the Epoch Length in minutes. b) The total accumulation of time, in minutes, during which the Actiwatch was exposed to an intensity of illumination above the given Illuminance or Irradiance/Flux Threshold.	Actiware Export

Variable	Full Name	Explanation	Source
inv_red	Total Invalid Red Light Time	The total number of epochs between the Start Time and the End Time of the given interval in which the irradiance/flux datum was found to exceed the maximum possible value from a properly functioning Actiwatch; i.e., invalid data due to rare hardware fault, communication error, or data corruption, plus the total number of epochs with valid light or irradiance/flux data manually excluded from the data set by you, multiplied by the Epoch Length in minutes.	Actiware Export
pinv_red	Percentage of Total Invalid Red Light Time	a) The percentage of Total Invalid Time (Illuminance or Irradiance/Flux) to the Interval Duration. b) Total Invalid Time (Illuminance or Irradiance/Flux) divided by Interval Duration multiplied by 100.	Actiware Export
exp_green	Total Exposure to Green Light	The sum of all valid irradiance/flux data, in the selected units (green) for all epochs from the Start Time to the End Time of the given interval multiplied by the Epoch Length in minutes.	Actiware Export
av_green	Average of all Green Light	The average of valid irradiance/flux data, in the selected units (green) for all epochs from the Start Time to the End Time of the given interval.	Actiware Export
std_green	Standard Deviation of all Green Light	The standard deviation of all valid irradiance/flux data, in the selected units (green), for all epochs from the Start Time to the End Time of the given interval. The standard deviation is computed with (n – 1) rather than (n) in the denominator of the variance	Actiware Export
max_green	Maximum Value of all Green Light	The datum of highest value (greatest average intensity of irradiance/flux (in the selected units, green, during an epoch) from the set of all valid light or irradiance/flux data for all epochs from the Start Time to the End Time of the given interval; i.e., the peak value in the data set minus the highest intensity of light the Actiwatch was exposed to during the interval.	Actiware Export
talt_green	Total Accumulation of Green Light Time	a) The total number of epochs between the Start Time and the End Time of the given interval with valid light data greater than the given Irradiance/Flux Threshold multiplied by the Epoch Length in minutes. b) The total accumulation of time, in minutes, during which the Actiwatch was exposed to an intensity of illumination above the given Illuminance or Irradiance/Flux Threshold.	Actiware Export
inv_green	Total Invalid Green Light Time	The total number of epochs between the Start Time and the End Time of the given interval in which the irradiance/flux datum was found to exceed the maximum possible value from a properly functioning Actiwatch; i.e., invalid data due to rare hardware fault, communication error, or data corruption, plus the total number of epochs with valid light or irradiance/flux data manually excluded from the data set by you, multiplied by the Epoch Length in minutes.	Actiware Export
pinv_green	Percentage of Total Invalid Green Light Time	a) The percentage of Total Invalid Time (Illuminance or Irradiance/Flux) to the Interval Duration. b) Total Invalid Time (Illuminance or Irradiance/Flux) divided by Interval Duration multiplied by 100.	Actiware Export
exp_blue	Total Exposure to Blue Light	The sum of all valid irradiance/flux data, in the selected units (blue) for all epochs from the Start Time to the End Time of the given interval multiplied by the Epoch Length in minutes.	Actiware Export
av_blue	Average of all Blue Light	The average of valid irradiance/flux data, in the selected units (blue) for all epochs from the Start Time to the End Time of the given interval.	Actiware Export
std_blue	Standard Deviation of all Blue Light	The standard deviation of all valid irradiance/flux data, in the selected units (blue), for all epochs from the Start Time to the End Time of the given interval. The standard deviation is computed with (n – 1) rather than (n) in the denominator of the variance	Actiware Export
max_blue	Maximum Value of all Blue Light	The datum of highest value (greatest average intensity of irradiance/flux (in the selected units, blue, during an epoch) from the set of all valid light or irradiance/flux data for all epochs from the Start Time to the End Time of the given interval; i.e., the peak value in the data set minus the highest intensity of light the Actiwatch was exposed to during the interval.	Actiware Export
talt_blue	Total Accumulation of Blue Light Time	a) The total number of epochs between the Start Time and the End Time of the given interval with valid light data greater than the given Irradiance/Flux Threshold multiplied by the Epoch Length in minutes. b) The total accumulation of time, in minutes, during which the Actiwatch was exposed to an intensity of illumination above the given Illuminance or Irradiance/Flux Threshold.	Actiware Export
inv_blue	Total Invalid Blue Light Time	The total number of epochs between the Start Time and the End Time of the given interval in which the irradiance/flux datum was found to exceed the maximum possible value from a properly functioning Actiwatch; i.e., invalid data due to rare hardware fault, communication error, or data corruption, plus the total number of epochs with valid light or irradiance/flux data manually excluded from the data set by you, multiplied by the Epoch Length in minutes.	Actiware Export
pinv_blue	Percentage of Total Invalid Blue Light Time	a) The percentage of Total Invalid Time (Illuminance or Irradiance/Flux) to the Interval Duration. b) Total Invalid Time (Illuminance or Irradiance/Flux) divided by Interval Duration multiplied by 100.	Actiware Export
rti_id_number			REDCap
rti_watch_order			REDCap
validday	Valid day	A 24 hour period that is valid, i.e. not marked by sleep affecting false activity or other watch error, off-wrist with subject ≥ 4 hours, off-wrist ≥ 30 minutes within 10 minutes of the main sleep rest interval 1, Valid Day | 0, Invalid Day	REDCap
sleepornap	Sleep or nap	The longest sleep period of a the day is defined as the main sleep period and all other sleep periods of the day are defined as naps. 1, Main Sleep | 2, Nap	REDCap