



Release Note 3.5.0





RELEASE NOTE 3.5.0

1 RELEASE FEATURES

FEATURES MARKETING

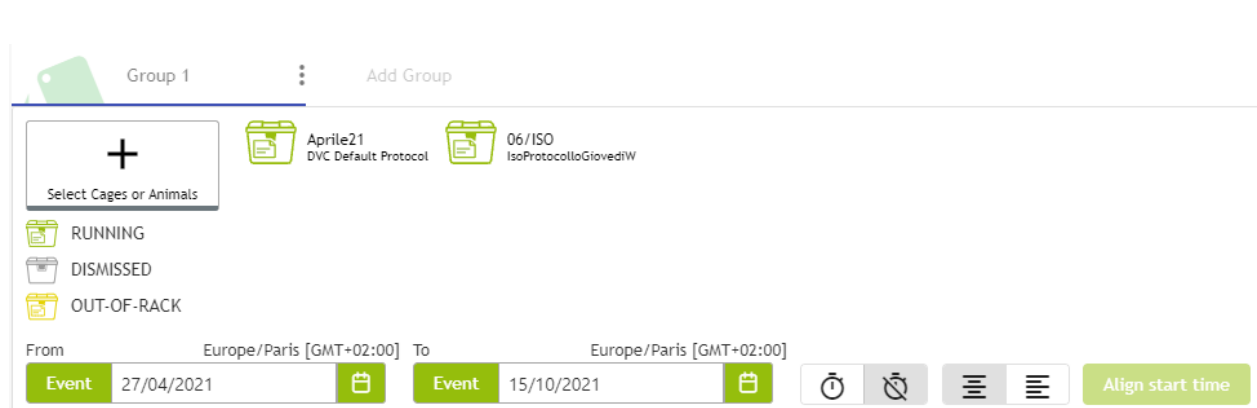
In this DVC® Analytics release 3.5.0, we added significant new features and enhancements and simultaneously fixed some open bugs.

A more detailed list of the new features is reported below:

1.1 FEATURE #1 – STARTING TIME REALIGNMENT

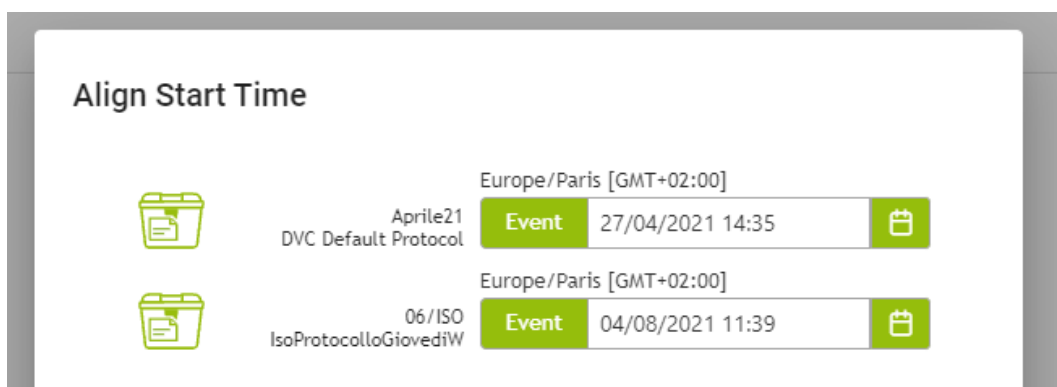
This functionality has been mainly designed to support longitudinal studies where cages belonging to the same group started at different times.

It is now possible to set the initial relative starting time for all cages by clicking the corresponding icon and following the workflow explained below:



By clicking the corresponding button  , the  button is enabled, and it can be clicked.

All selected cages are listed with their starting time related to the cage history.



At this time, it is possible to manually assign an individual starting time for each cage by selecting it from the calendar or the DVC® events.



Align Start Time

Europe/Paris [GMT+02:00]

Event 27/04/2021 14:35

Europe/Paris

06/ISO IsoProtocolGloveDHW

April 2021

Su Mo Tu We Th Fr Sa

28 29 30 31 1 2 3

4 5 6 7 8 9 10

11 12 13 14 15 16 17

18 19 20 21 22 23 24

25 26 27 28 29 30 1

14 : 35

Align Start Time

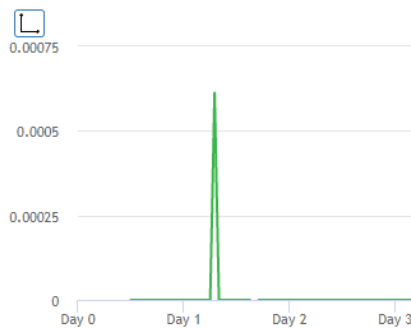
← DVC Default Protocol Aprile21 27/04/2021 14:35:00

| Timestamp | Cage Id | Event Type | Description |
|---------------------|----------|------------------|---------------|
| 27/04/2021 14:12:55 | Aprile21 | Rack (16000002A) | Removed (A1) |
| 27/04/2021 14:35:22 | Aprile21 | Rack (16000002A) | Inserted (A1) |
| 04/05/2021 09:11:28 | Aprile21 | Rack (16000002A) | Removed (A1) |
| 04/05/2021 11:01:12 | Aprile21 | Rack (16000002A) | Inserted (B1) |
| 04/05/2021 12:25:23 | Aprile21 | Rack (16000002A) | Removed (B1) |
| 04/05/2021 13:22:47 | Aprile21 | Rack (16000002A) | Inserted (B1) |

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By applying this feature, the final chart (whatever it is) will have a relative day 0 as a common starting time for both cages (that, in reality, started in different periods)



1.2 FEATURE #2 – BAR PLOT CHART TYPE

There is a new chart type available from the Chart Family "Other", the Bar Plot:

Chart Family

Line Other Live

Chart Type

Heatmap Actogram Box Plot Bar Plot

Day Time Filtration

None Light Dark Custom

Data Time Aggregation

Hour Custom

By design, when the Bar Plot is selected, the Data Time Aggregation can be only the hour (or multiple by selecting "Custom")

Chart Type

Heatmap Actogram Box Plot Bar Plot

Day Time Filtration

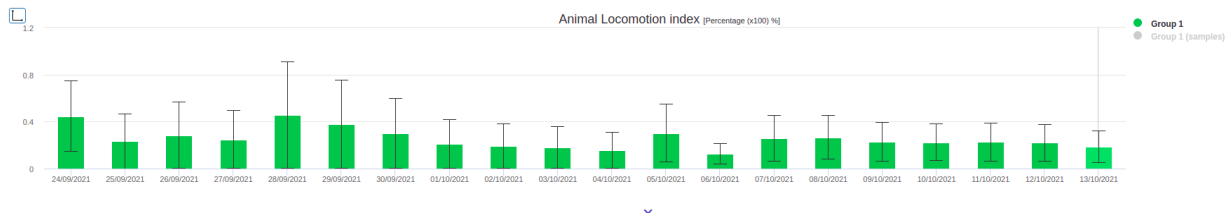
None Light Dark Custom

Data Time Aggregation

Hour Custom

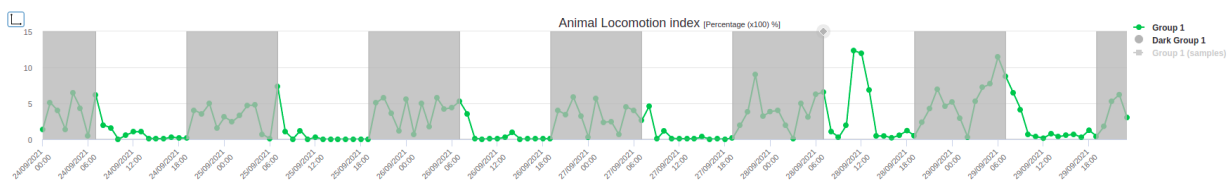
Hour 1

Minute Hour



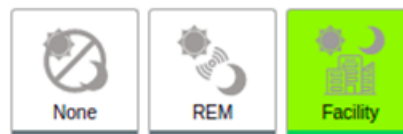
1.3 FEATURE #3 – CHART BACKGROUND

The coloured background of a line chart visualization is beneficial to discriminate quickly interesting potential patterns (for instance, to focus the analysis around the light-dark switch).



To provide such functionality, when the line chart is selected, a new "Chart Background" buttons selection is available:

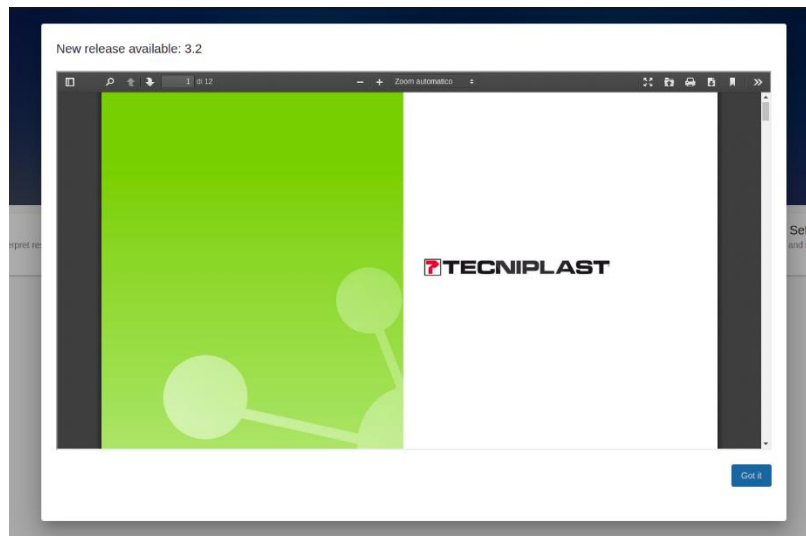
Chart Background



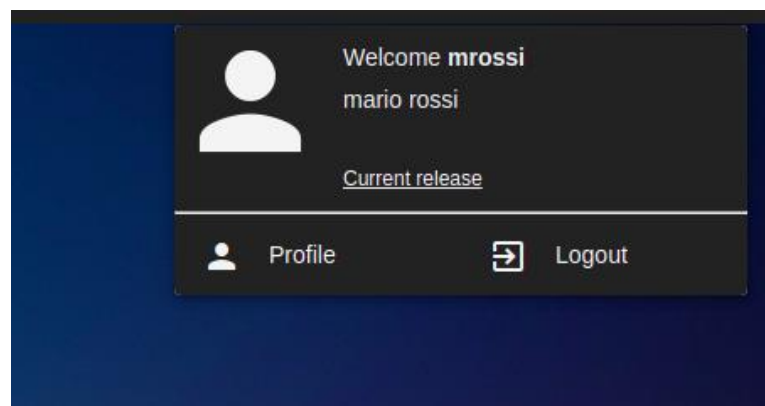
- Clicking "None": no background is applied to the Line Chart
- Clicking "REM": the background (light-dark) follows the Light environmental data generated by the REM device (if any).
- Clicking "Facility": the standard Facility light-dark hours is applied. This is a general setting that is applied to all cages of the Facility (User Settings -> Settings -> Dark Period)

1.4 FEATURE #4 – NEW RELEASE DOCUMENTATION

From this release onward, every time a new release is deployed, the user is alerted just after the first login by an automatic request of downloading the corresponding new DVC® Analytics release.



Moreover, the same file can be found by clicking the icon  (top-right side) and then the "Current release" link.



Please remember that all the instruction manuals and release notes are available at this web page: <https://digitalcage-tecniplast.com/en/manuals.html>

1.5 FEATURE #5 – ENRICHED SEARCH TABLE

The DVC® Cage label has been improved to manage different types of cages (Stock, Experiment and Breeding) as well as their corresponding information. The enriched search table now incorporates such new information for an easier and faster selection.

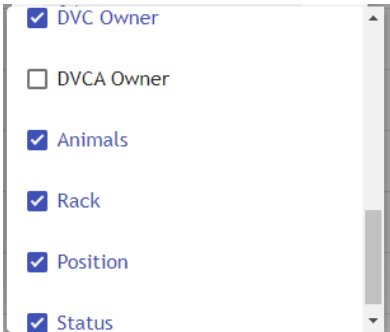
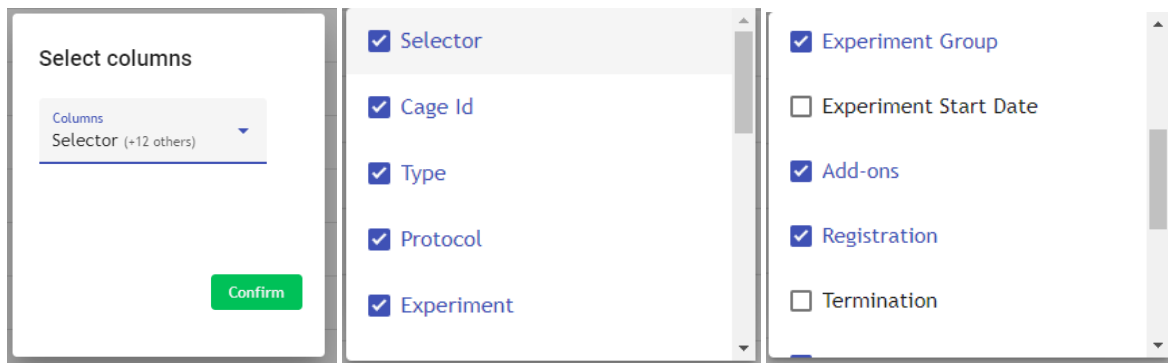
| Cage Id | Type | Protocol | Experiment | Experiment Group | Add-ons | Registration | DVC Owner | Animals | Rack | Position | Status |
|---------------------------------|-------|-----------------------|------------|------------------|---------|--------------|---------------|---------|-----------|----------|--------|
| <input type="checkbox"/> 01/ISO | STOCK | IsoProtocolloGlovedIW | | | | 04/08/2021 | Ricercatore07 | 3 | 19660003A | B6 | |
| <input type="checkbox"/> 02/ISO | STOCK | IsoProtocolloGlovedIW | | | | 04/08/2021 | Ricercatore07 | 4 | 19660003A | C6 | |
| <input type="checkbox"/> 06/ISO | STOCK | IsoProtocolloGlovedIW | | | | 04/08/2021 | Ricercatore07 | 3 | 19660003A | A5 | |
| <input type="checkbox"/> 07/ISO | STOCK | IsoProtocolloGlovedIW | | | | 04/08/2021 | Ricercatore07 | 5 | 19660003A | B5 | |
| <input type="checkbox"/> 09/ISO | STOCK | IsoProtocolloGlovedIW | | | | 04/08/2021 | Ricercatore07 | 0 | 19660003A | D6 | |



More specifically, by default when you search for cages, it is possible now to select also between the:

- Type of the cage (Stock, Experiment, Breeding)
- Experiment ID (only for experiment cages)
- Experiment group (only for experiment cages)
- Add-ons (Running Wheel, Leddy, Cage Divider, Black Cage, Red Cage)
- Rack Serial number

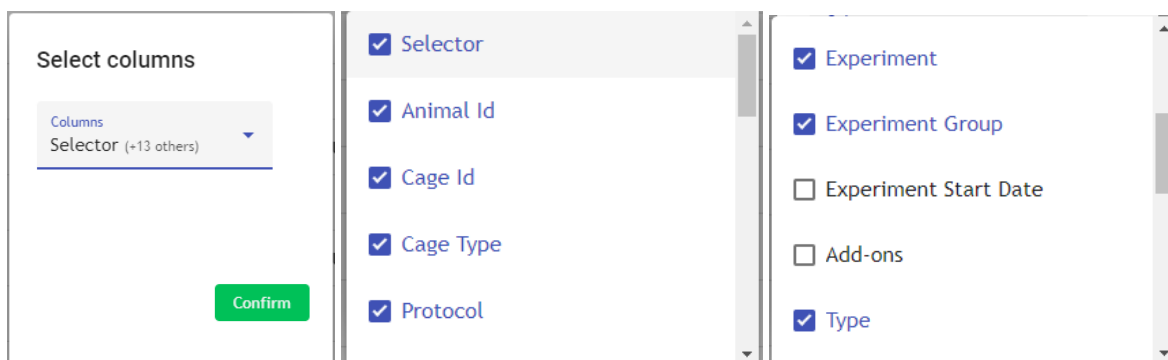
Furthermore, by clicking the bottom-left icon , it is possible to enable/disable all the fields:



Vice versa, by default, when searching for animals, it is possible now to select also between the:

- Type of the cage (Stock, Experiment, Breeding)
- Experiment ID (only for experiment cages)
- Experiment group (only for experiment cages)
- Type (adult, pup)
- Marking

Furthermore, by clicking the bottom-left icon , it is possible to enable/disable all the fields:





| | |
|---|---|
| <input checked="" type="checkbox"/> Sex | <input type="checkbox"/> Mating Date |
| <input checked="" type="checkbox"/> Strain | <input type="checkbox"/> Cage Parent Id |
| <input checked="" type="checkbox"/> Markings | <input checked="" type="checkbox"/> DVC Owner |
| <input checked="" type="checkbox"/> Date Of Birth | <input type="checkbox"/> DVCA Owner |
| <input type="checkbox"/> Weaning Date | <input checked="" type="checkbox"/> Status |

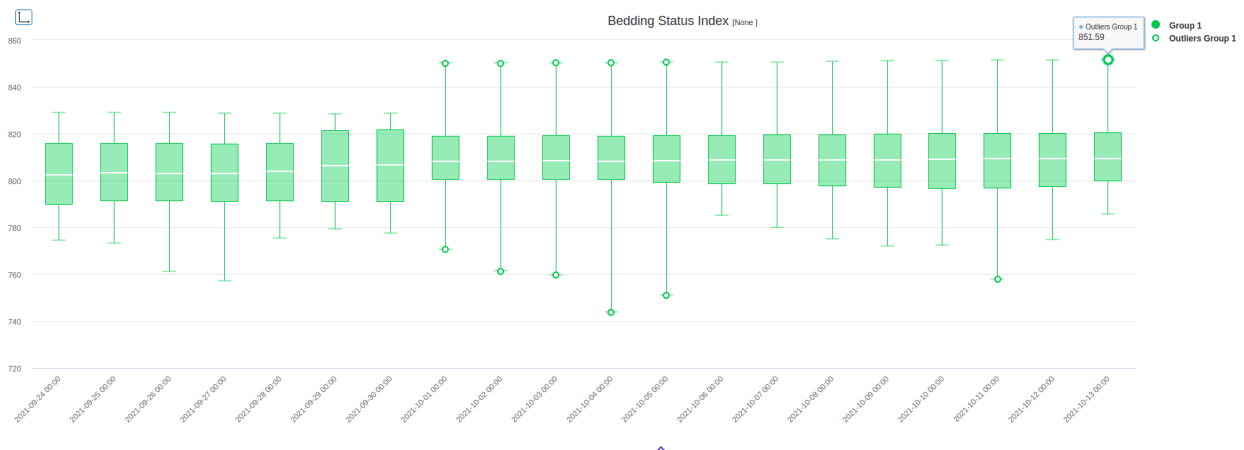
However, please note that it is not possible to save such selection (as a configuration per user). Therefore, the next time the Search Button is clicked, the selection fields will be the original default ones again.

2 ENHANCEMENTS


In this section, there are highlighted some current enhancements that are affecting already existing features that are improved by the present new release proposed.

2.1 ENHANCEMENTS #1 – BAR PLOT OUTLIERS

In this release, we completed the correct implementation of the Bar Plot functionality by adding the outliers:



2.2 ENHANCEMENTS #2 – DOWNLOAD THE CHART

As requested by many, we finally reintroduced the functionality to download the displayed chart locally by clicking the corresponding icon . Three different download formats are available for the most convenient usage (.png, .jpg, .pdf):

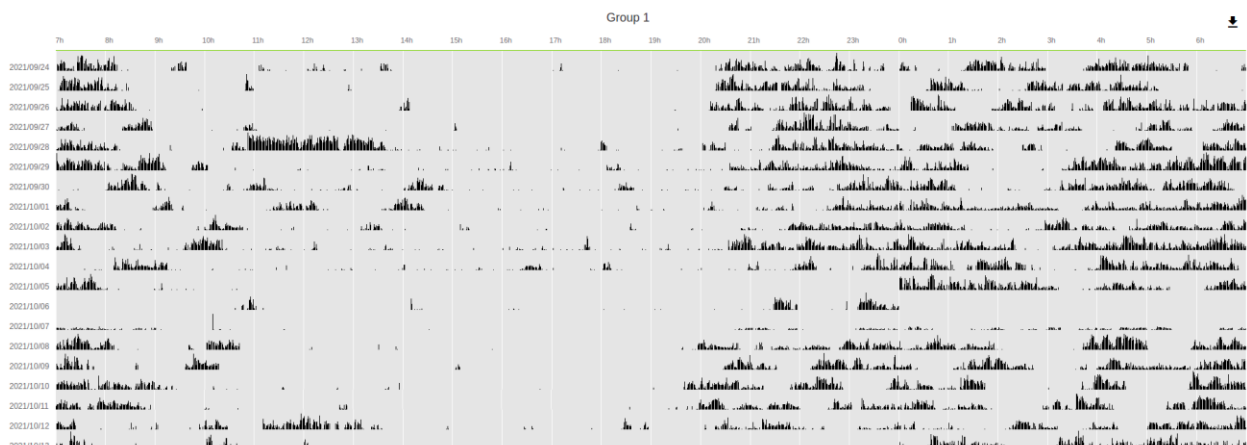


2.3 ENHANCEMENTS #3 – IMPROVED GRAPHIC FOR ACTOGRAM (EX-ACTIGRAM)

As requested by many, we first changed the name of the Actigram to the most known Actogram. Then, we refined the quality of the corresponding chart by eliminating some misleading information and making it simpler to visualize (higher contrast).

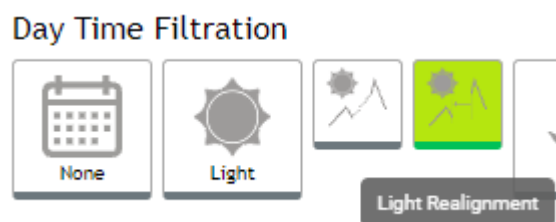
For the sake of clarity, two missing refinements will be added in the next release

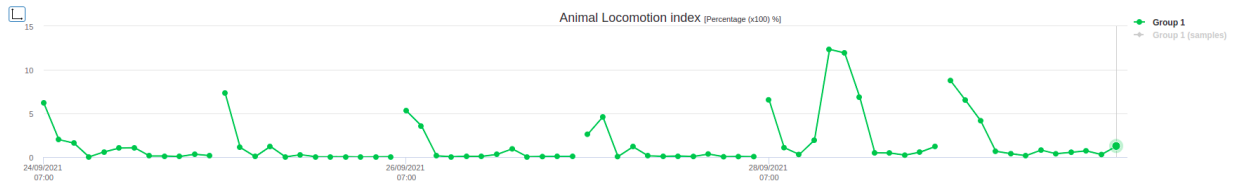
- Background colour (dark-light)
- Possibility to select a 48hrs extension of the chart



2.4 ENHANCEMENTS #4 – DAY TIME FILTRATION REALIGNMENT

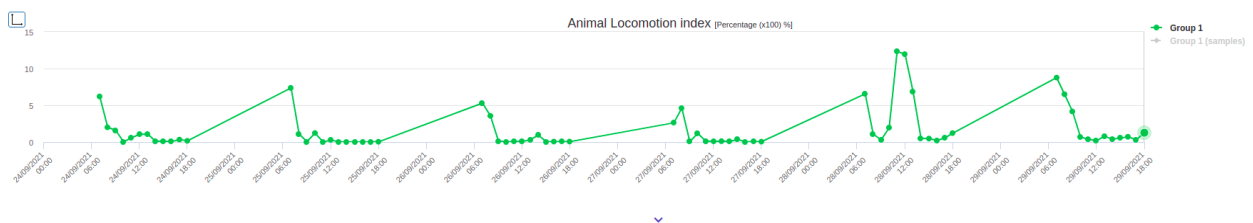
As requested by some, we introduced the possibility to realign day-time-filtered data by shifting the data to become a unique continuous line.





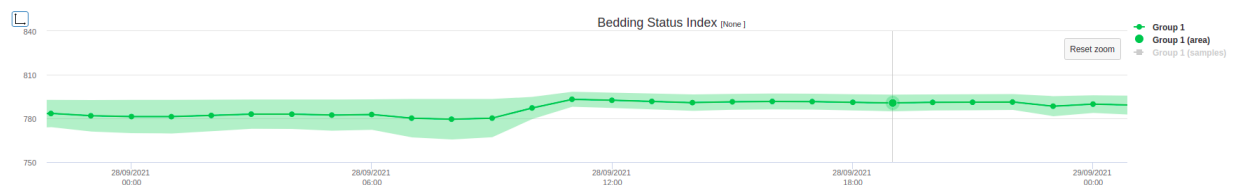
For the sake of clarity, this is simply a graphic functionality added to the previous "Interpolation" available for a while:

Day Time Filtration



2.5 ENHANCEMENTS #5 – DISPERSION AREA

Another graphical improvement requested by some users refers to the possibility of better highlighting the data's dispersion (SEM or interquartile) when a line chart is selected.



3 BUG FIXES

This section refers to bugs that the current release has fixed. There are some potential bugs relating to the overall infrastructure that are not here reported because "invisible" to the final user unless these are not critical bugs that are affecting the overall workflow.

3.1 BUGFIXES #1 – STARTING DAY OF THE WEEK

When the start of the week was set as "Monday" for the Daily Chart visualization, the starting day was erroneously showed as Tuesday. From this release, this bug has been fixed.



3.2 BUGFIXES #2 – DARK PERIOD SETTING NOT O'CLOCK

In the previous versions, if the dark period was set not with the o'clock value (for instance, 18:30), then applying any "Data Time Filtration" with Line Chart resulted in a wrong Line Chart with a misleading horizontal line.

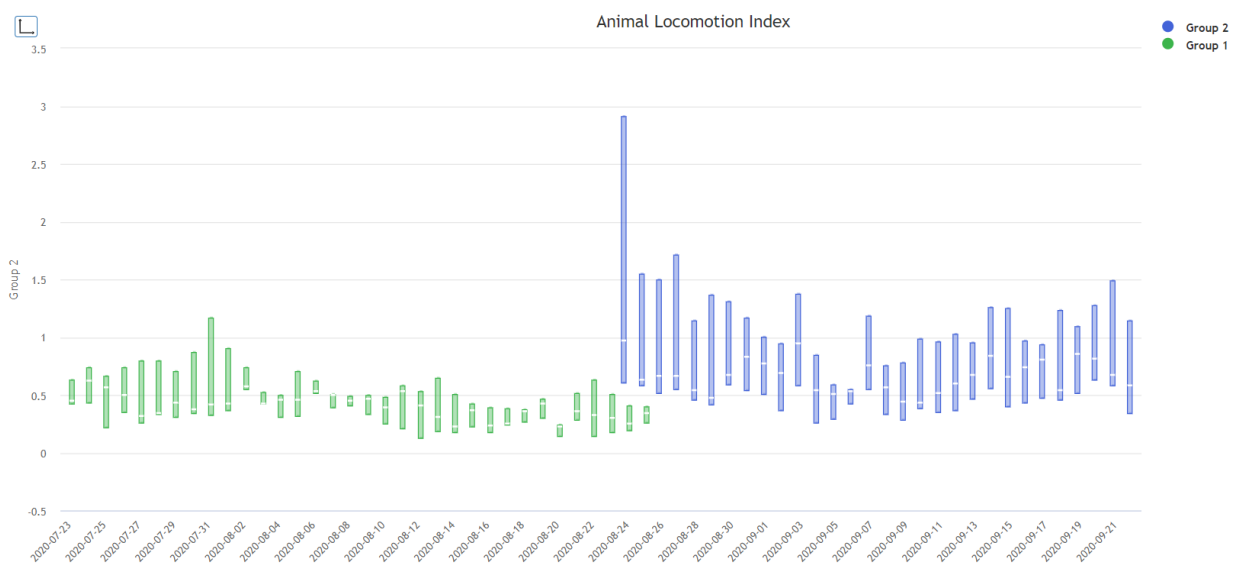
Now this bug was fixed, and any Dark Period can be set.

4 KNOWN ISSUES AND PROBLEMS

There are currently some open bugs/known issues we would like to share to let you carefully handle them:

4.1 OPEN BUG #1 –BOX PLOT NOT ALIGNED ON THE START

In case of running a box plot comparison between different groups, if the start of the two groups is not the same day, they are shifted in the visual representation:



In this case, a quick workaround is to use the BOXPLOT.

4.2 OPEN BUG #2 –HOUR AGGREGATION FOR INDIVIDUAL TRACKING AND RUNNING WHEEL

We are experiencing some issues with the cloud service metric calculations regarding the Individual Tracking and Running Wheel metrics.

The minute calculation is not affected by this issue, and we highly suggest, for the time being, using such data aggregation selection to perform analysis.



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