

Confocal Application Notes

Vol. 5 May 2007



Time Lapse

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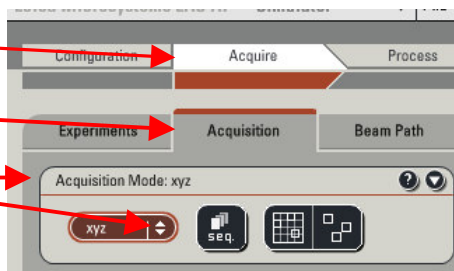
In this issue of our Confocal Application Notes, we wanted to help new users to use the Time Lapse function at its best. Several acquisition modes will allow you to access the Time Lapse window. The choice of the acquisition mode is, of course, dependent on the experiment.

- 1- Choosing the acquisition mode: Per default, the acquisition mode is **xyz** (as shown below). In this mode, no Time Lapse sub-window will be present in the Acquire window.

⇒ **Acquire**

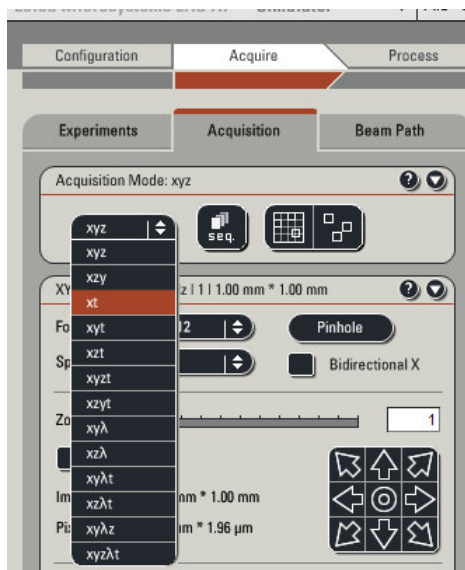
⇒ **Acquisition**

⇒ **In the Acquisition mode, open the drop down window.**



- 2- Select the Acquisition mode you want to use.

- **xt** : x over Time
- **xyt**: xy over time
- **xzt**: xz over Time
- **xyzt**: xyz series over Time
- **xzyt**: xzy series over Time
- **xyλt**: xy Lambda over Time (spectral detection)
- **xzλt**: xz Lambda over Time
- **xyzλt**: xyz series with spectral detection over Time



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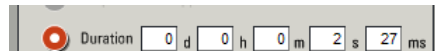
3- After the selection is made, the Time lapse window will automatically appear. The Time window format and contents are dependent of the experiment format as shown below:

- **xt:**

Line Time: dependent on the format (in our example: 512), and the Page Interval.

Page Interval: Time between scanning of the line, hence dependent also on the format of the line. The page Interval can be changed at will, or calculated for the minimal time between pages if the **Minimize** button is checked.

Duration: this function need to be activated (by clicking on the round button) in order to change the total time of scanning. The total time is expressed in day (d), hour (h), minute (m), second (s), and millisecond (ms).



Lines: change the line length.

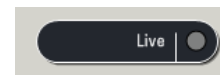
Lines/Page: is activated by checking the **Maximize** button. It will define the number of line per page. By checking the Maximize button, the Lines/Page becomes grayed out.



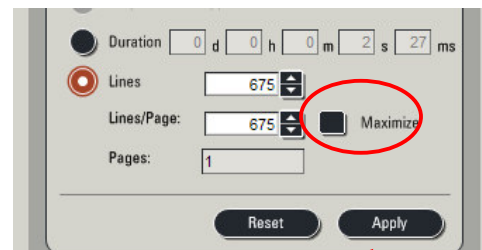
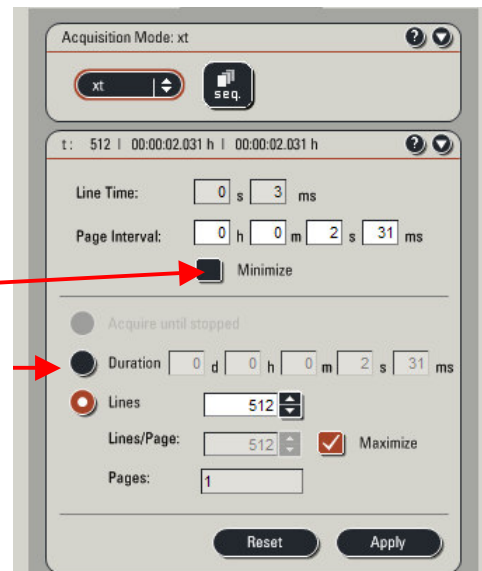
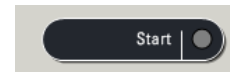
Pages: you can define the number of pages for the total duration of the experiment.

Do NOT forget to click on Apply before to launch the experiment

You can make all adjustments by clicking on the **Live** button



Click on **Start** to begin to scan the experiment .



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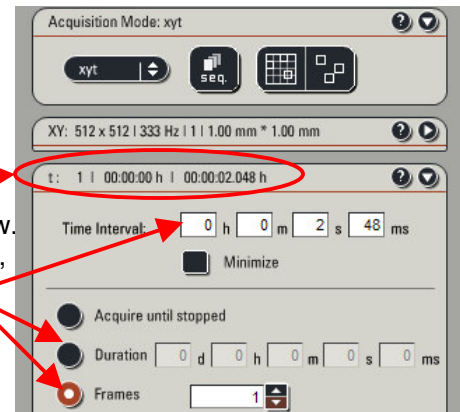


- **xyt:**

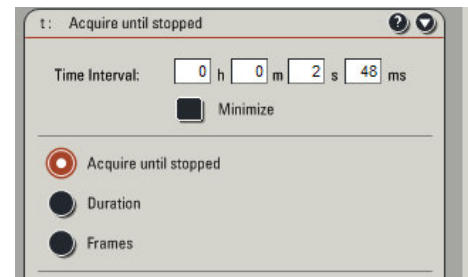
Time Interval: allows to setup the time between frame. The **Minimize** button allows to determine the minimum time needed between frame. This will depend on the format and speed and calculated automatically.

t: 1 / 00.00.00 h / 00.00.02.048 h:

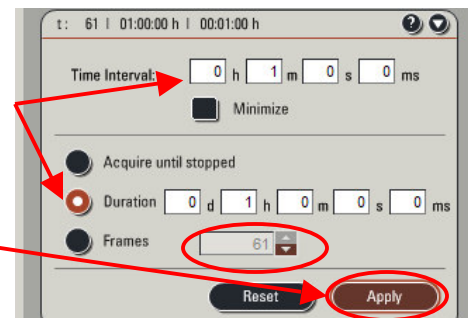
This is the resume of the time series setup in the window. In this example, there is 1 frame setup, no total duration, and the time needed to scan this frame is 2 s 48 ms.



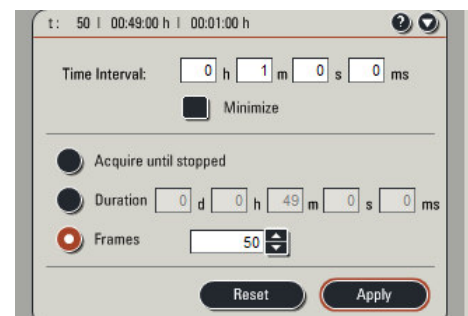
Acquire until stopped: when checked, this function will “override” every other function and the experiment will run as setup in the Time interval until stopped.



Duration: When this function is chosen, you can setup the total duration of the acquisition, and the time interval between frame. Then click on **Apply** and the number of **frame** will be displayed.



Frame: If you choose to enter the **frame** number, you will need to enter the **time interval** between frame, and the total **duration** will automatically be displayed. In this example: we wanted to take 50 frames every minute. The total duration was then displayed as 49 m AFTER the **Apply** button was clicked.



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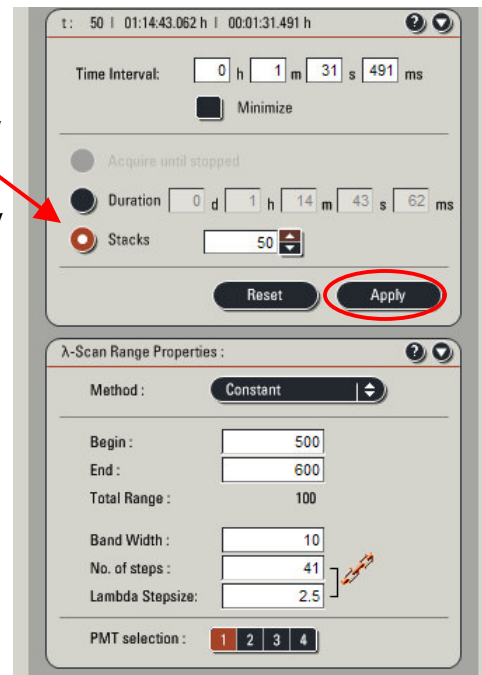
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- **xzt:** same as **xyt**
- **xyzt:** same as **xyt**
- **xzyt:** same as **xyt**

- **xyλt:**
Stacks: in this example we entered 50 stacks of a Lambda series beginning at 500 nm and finishing at 600 nm. This series will be repeated 50 times, every 1m 31s, and for a duration of about 1 h 15m.

Duration and Time interval will work the same way than described in **xyt**.



- **xzλt:** same as **xyλt**
- **xyzλt:** same as **xyt**

Always remember to click on Apply for the values to be taken in account in the time series calculations.