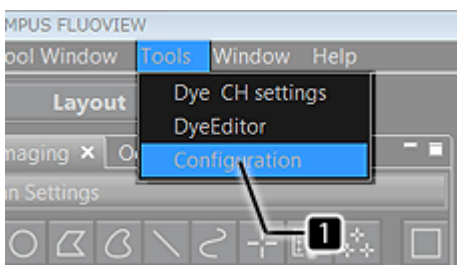


Combining MATL with the Z drift compensation

The Z drift compensation is performed by group or area registered when acquiring MATL^{*1} ([\[Map\] Sub Pane in \[Live\] Window](#)). If the coverslip position^{*2} is changed by drift, the Origin coordinate^{*3} of Z of each area registered is compensated to offset that variation to retain the focus position.

Selecting the timing to execute the Z drift compensation

- 1 Select [Configuration] in the [Tools] menu. The [Configuration] dialog box appears.



- 2 In [Z Drift Compensation in MATL] in [\[ZDC\] in the \[Microscope\] tab](#), select the timing to execute the Z drift compensation.

Each group	Executes the Z drift compensation in the center of the relevant group before acquiring each group ^{*4} .
Each area	Executes the drift compensation in the center of the relevant area before acquiring each area.



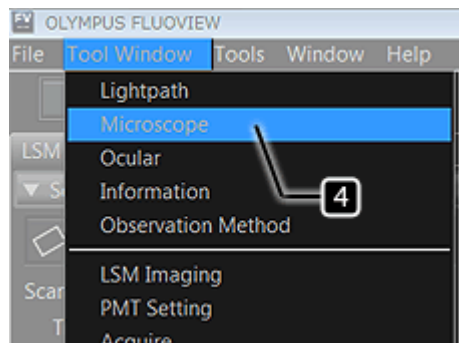
If "Each area" is selected, the focus map^{*5} function cannot be used.

Setting for acquiring the series image

- 3 Set for acquiring the series image according to "Acquiring the series image" in "Acquiring the image" in Operating procedures section.

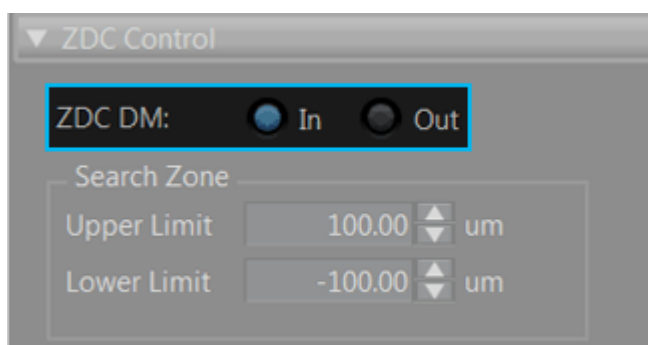
Setting for performing the Z drift compensation

- 4 Select [Microscope] in [Tool Window] menu. [\[Microscope\] Tool Window](#) appears.

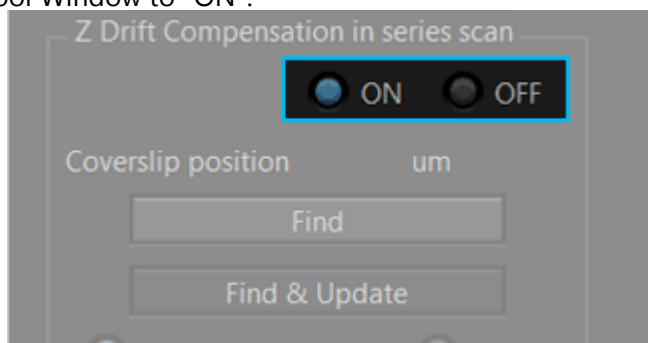


5

Set [ZDC DM] in [\[ZDC Control\] in \[Microscope\] Tool Window](#) to "In" and place the dichroic mirror of ZDC in the light path.

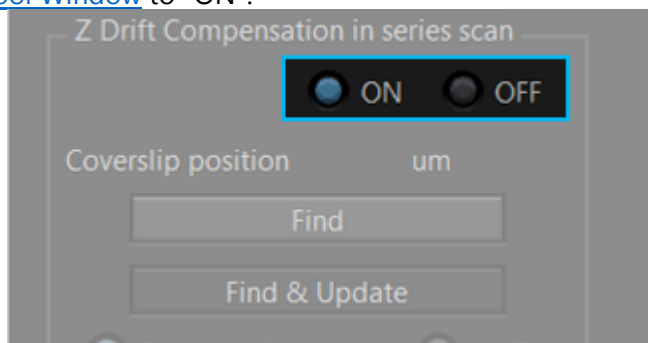


- 6 Set [Z Drift Compensation in series scan] in [ZDC Control] in [Microscope] Tool Window to "ON".



Setting ON/OFF of the Z drift compensation

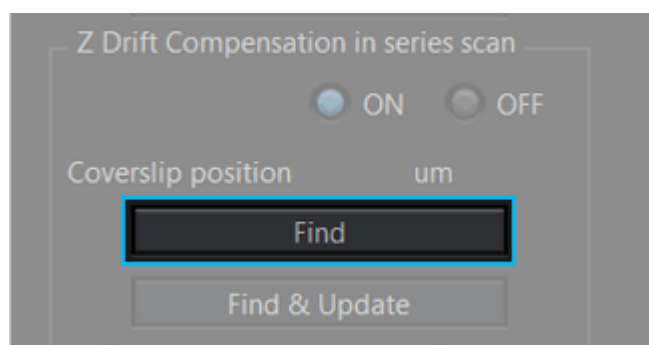
- 7 Set [Z Drift Compensation in series scan] in [\[ZDC Control\] in \[Microscope\] Tool Window](#) to "ON".




Acquiring the coverslip position

- 8

Press the [Find] button of [Coverslip position]. The stage moves to the center position of the group^{*4} of MATL^{*1} registered, and the coverslip top surface position is acquired.



 The Z drift compensation is applied differently depending on whether the coverslip position is acquired by group or only by the first group.

If you acquire the coverslip position only by the first group, the coverslip position acquired is reflected to all groups. Therefore, the drift and the tilt of the cover glass are compensated for all subsequent groups at the same time. In this case, the acquisition area of Z is set only with the first group.

If you acquire the coverslip position by group, the coverslip position is retained by group. Therefore, compensate the tilt of the cover glass manually when setting Z of that group and also compensate the drift only for the Z drift compensation. In this case, you need to set the acquisition area of Z by group.

Registering the group of MATL

 In [\[Map\] Sub Pane in \[Live\] Window](#), register the group^{*4} of MATL^{*1}.

^{*1} MATL is an abbreviation of Multi Area Time Lapse and it means to observe chronological changes in the multiple regions.

^{*2} The coverslip position is the position focused on the top surface of the coverslip.

^{*3} Origin coordinate is the reference position of Z registered in [Origin] in the [\[Series\] Tool Window](#).

^{*4} A group means an area created by pressing the button once in [Register] in [\[Map\] Sub Pane in \[Live\] Window](#).

^{*5} This means the function to correct the tilt using 3 reference points specified by group when acquiring MATL^{*1} including stitching. This function is used when the focus position is shifted by the tilt amount in each field of view even at the same Z position (number of images), such as the XY stage or the specimen is tilted, etc.