MESc 4.0.0

New fetaures:

- fully support for API 1.0
- Tiff export in case of High Speed Arbitrary Frame Scanning (AO data via FemtoAPI)
- Galvo feedback conversion calibration tool
- Waveform from protocol editor can be saved to and load from measurement file
- Protocol can be saved to measurement unit
- direct link to Customer Portal
- Ability to load focusing parameters from a measurement unit
- easy gated PMT handling for LED photostimulation

User experience:

- improved LUT editor with histogram
- linewidth of ROIs can be set
- section accumulation widget extended
- view direction selector widget redesigned
- image layers visibility
- easier usage of the Direct window

Application Layer Interface (API):

- PyPI packages for python 3.6, 3.7 and 3.8 (32bit and 64bit)
- measurement control automation
- simple interface to get access measurement data from Matlab or python

Bugfixes:
- Galvo snap creates one frame
- occasionally Resonant video deadlock eliminated
- GUI bug at Test pattern selection
- OME Tiff export time reduced
- Galvo image arifacts fixed for low pixel dwell times
- Measurement initialization time reduced
- PES improved stability

Known issues:

- displaying large amount of analogue input data could cause performance issue during playback of the measurement unit
- Initialization time before image acquisition takes more time as expected

MESc 3.6.1

- Strict timestamp for each acquired frame
- Measurement control panel refinements

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MESc 3.6.0

- imaging with resonant scanner and photostimulation with galvo scanner at the same time (SIP)
- Protocol editor where you can define any kind of waveforms which can be attached to a specific channel – e.g. laser intensity control or trigger for external devices.
- Test pattern functionality:
    - Test route of photostimulation scanner
    - Test appropriate cycle period which influences galvo scanner speed on the pattern

- Protocol related functionalities:
    - EXPORT protocol: saving current protocol into a .proc file from Immediate window.
    - IMPORT protocol: importing a protocol from a .proc file into Immediate window.
    - SAVE protocol to MU: saving current protocol into measurement unit automatically when measurement starts.
    - LOAD protocol from MU: loading protocol from measurement unit and showing saved waveforms and pattern in the Processing tab.
    - SEND TO immediate: loading protocol from measurement unit to the immediate window as a new protocol in order to be able to repeat the measurement.

- Easy gated PMT handling in protocol editor: no need to worry about the PMT shutter width
- What we save in MESc file:
    - in json format:
        - cycle period
        - whole protocol
        - pattern
    - pattern for X and Y axis separately as a curve vector
    - all output waveforms as curve vectors sent to the microscope during the whole measurement

- GUI changes
    - Background ghost image from measurement unit
    - Zoom and pan with mouse
    - Drawing and editing paths: Line, spline, spiral, list of points
    - Improved waveform editor
    - Inverse waveform
    - Waveform pulse generator
    - Galvo-Resonant scanner alignment tool
    - Galvo scanner feedback conversion calibration tool

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- PMT data invert flag, configurable offset and shift for 8 and 16 bit modes

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MESc 3.5.6 SLE

- Support for S series PES firmware.
- Corrected camera movement in alternative mode

MESc 3.5.5 CE

- Data storage support for MES High Speed Raster Scan mode

MESc 3.5.4 LE

- Speed based movement control of the PES based axes (Objectivearm, XY Stage)
- Improved immediate panel control
- Optional usage feedback system

MESc 3.5.0

- Redesigned Focus widget
- MEScAPI technology preview

MESc 3.4.x

- redesigned measurement panel
- Analog and digital input and output, optionally synchronized to imaging
- Galvo fullframe scan initial version