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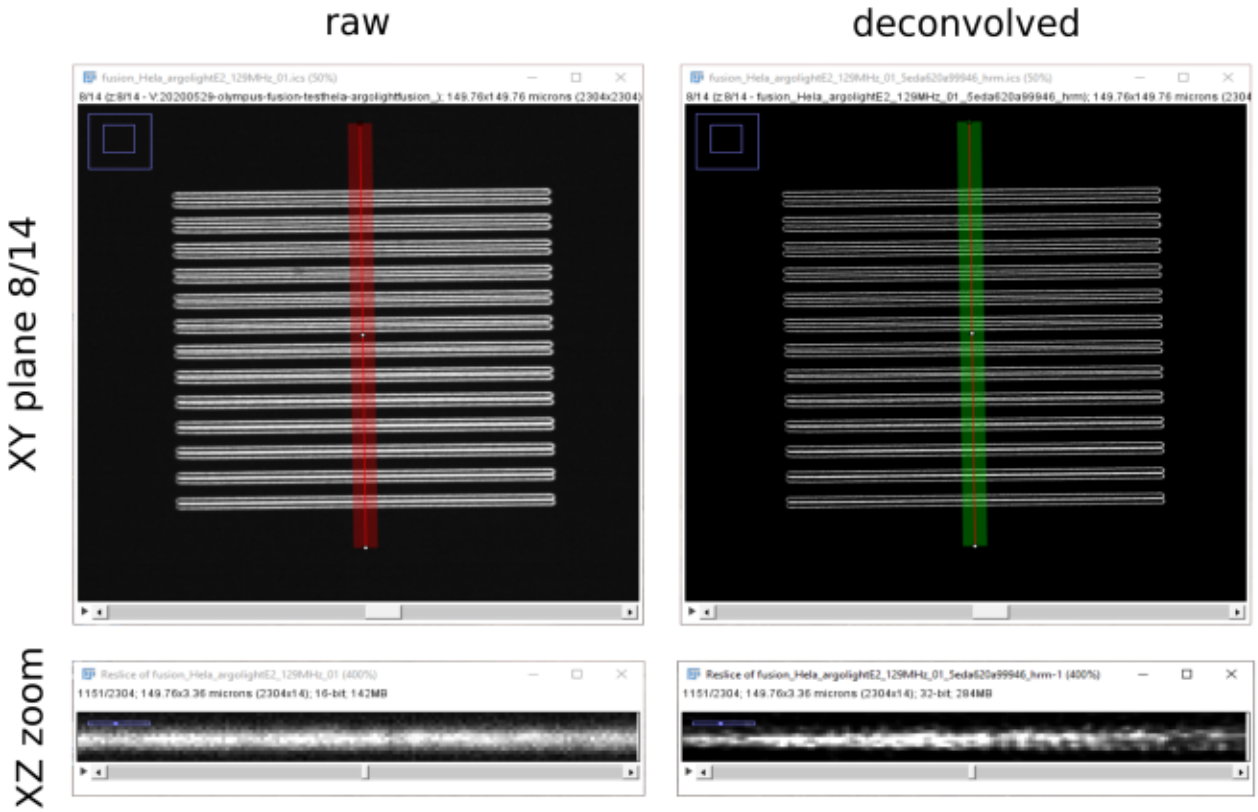
2020-05-29 Huygens HRM intensity preservation tests

At a Glance

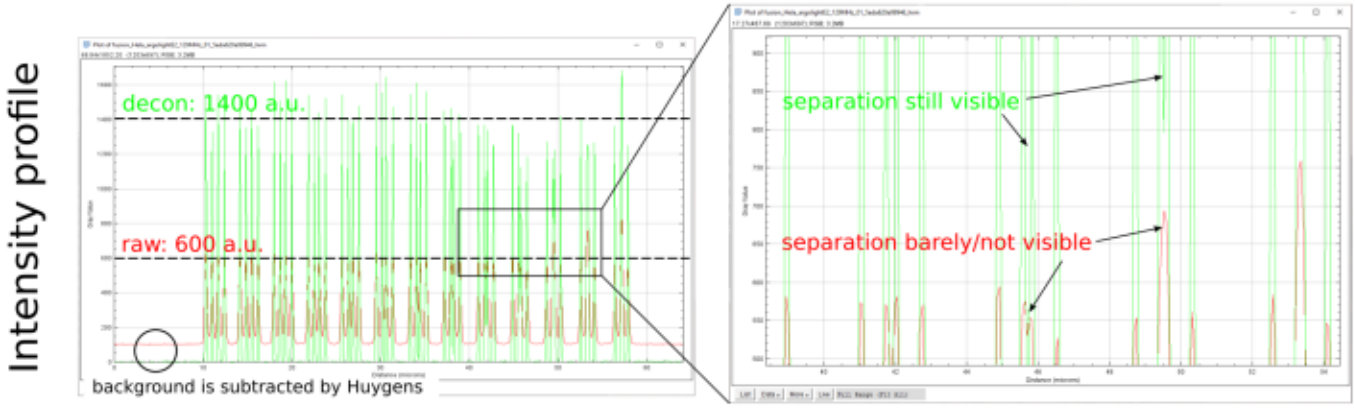
- the intensity values get redistributed to their origin and thus concentrated.
- concentrated signal and increased SNR result in resolution improvement.
- total intensity content in the image remains constant.

Procedure

- target is Argolight-HM pattern E
- recorded on the olympus SpinSR 100x OHR, 14z, 1c
- deconvolved with the HRM (2020-08-06)



Shown is the central slice of a z-stack recorded with a spinning disk confocal (Olympus SpinSR 100x). The sample is a pattern of lines with progressively more narrow spacing (Argolight-HM). note: brightness and contrasted are optimized for each image individually.



Shown are the XY intensity profiles from the previous images. Note that higher signal = higher SNR = better separation of fine structures = higher resolution.

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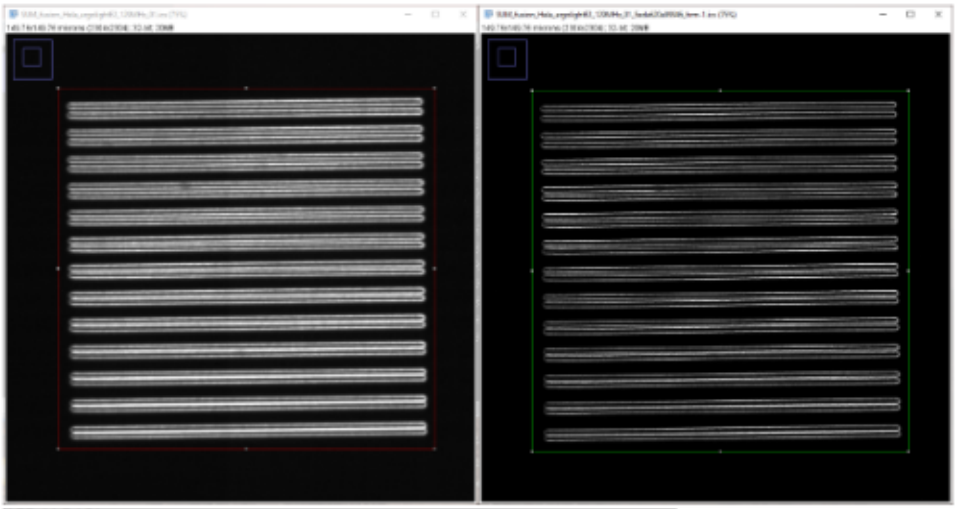

Results

File Edit Font Results

	Mean	StdDev	IntDen	RawIntDen
1	2268	883	6245077	1478124819
2	2286	1558	6295083	1489960526

Shown is the ***sum Intensity projection*** of the previous image stacks. The background has been added back to the deconvolved image.