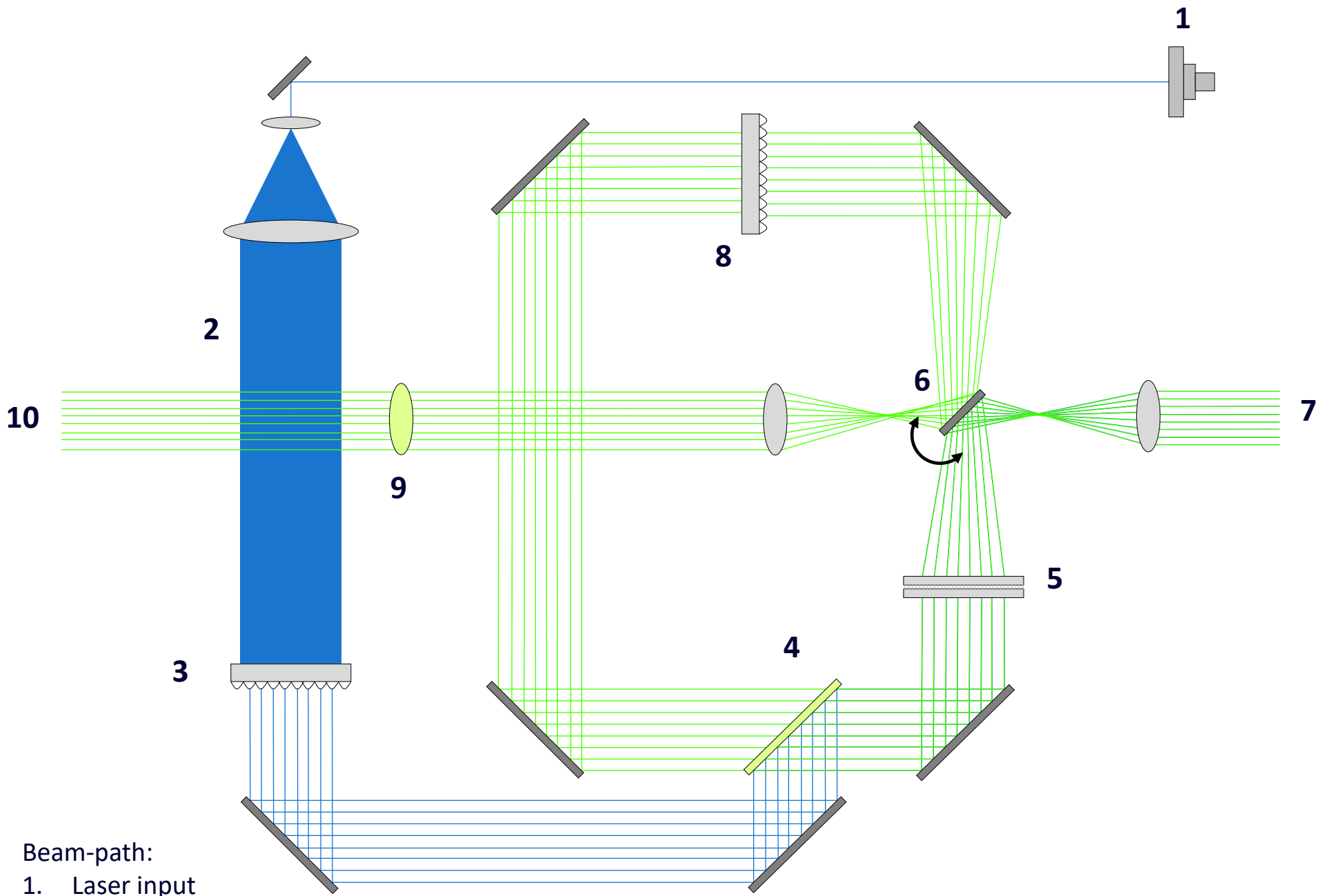


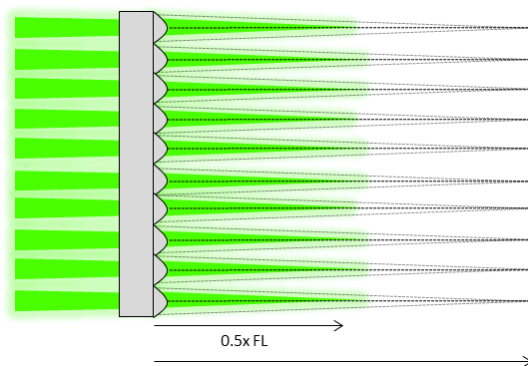
vt-isim Imaging Beyond all Limits



Beam-path:

1. Laser input
2. Beam expansion
3. Ill u-lens array
4. Dichroic
5. Ill & Em PH Array
6. Galvo Scanner
7. Microscope c-mount
8. Em u-lens Array
9. Em Filter
10. Camera c-mount

8. Em u-lens Array



Instant SIM

- Confocal PSF is the product of the emission PSF and excitation PSF
- Therefore a small Pin Hole gives better resolution but worse signal
- A Small pin hole shifted by X gives better resolution, even worse signal and an image shifted by $X/2$
- If we appropriately shift and sum the signal captured by many small pin holes we get increased resolution without loss in signal

