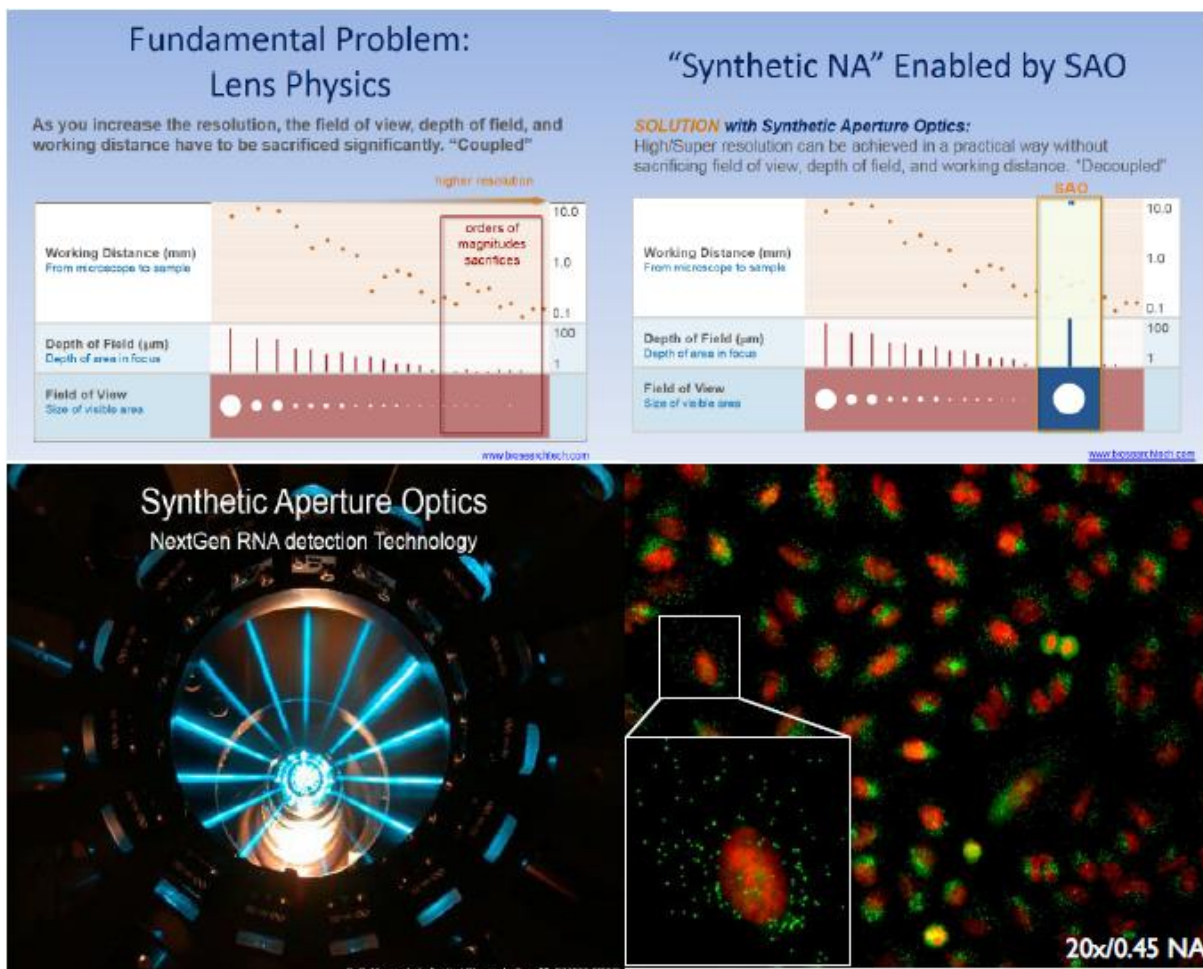


StellarVision – Breaking the Optical Resolution Barrier

Novel Next Generation Synthetic Aperture Optic (SAO) based Fluorescent Microscopy

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Synthetic Aperture Optics (SAO) technology is a fundamentally new optical detection paradigm that enables massively parallelized optical detection. The technique combines coherent interferometric illumination (similar to synthetic aperture radar) and computational image reconstruction (similar to computed tomography) to achieve ultra-high resolution that is far beyond the native resolution of the lens and the camera. Unlike conventional optical detection, resolution can be independently improved without affecting the field of view, working distance, and depth of field, thereby providing a unique mechanism to build a high-speed scanner for ultra-high density imaging. The SAO-based StellarVision gene expression analysis instrument can analyze hundreds of cells simultaneously within a single field of view using a 20x air lens, but with resolution comparable to 100x oil immersion lens or higher.



An automated imaging platform for NextGen Fluorescent RNA, DNA, IF analysis - high-res images from low-mag lenses