

2. Related Works

Optical Flow [9]

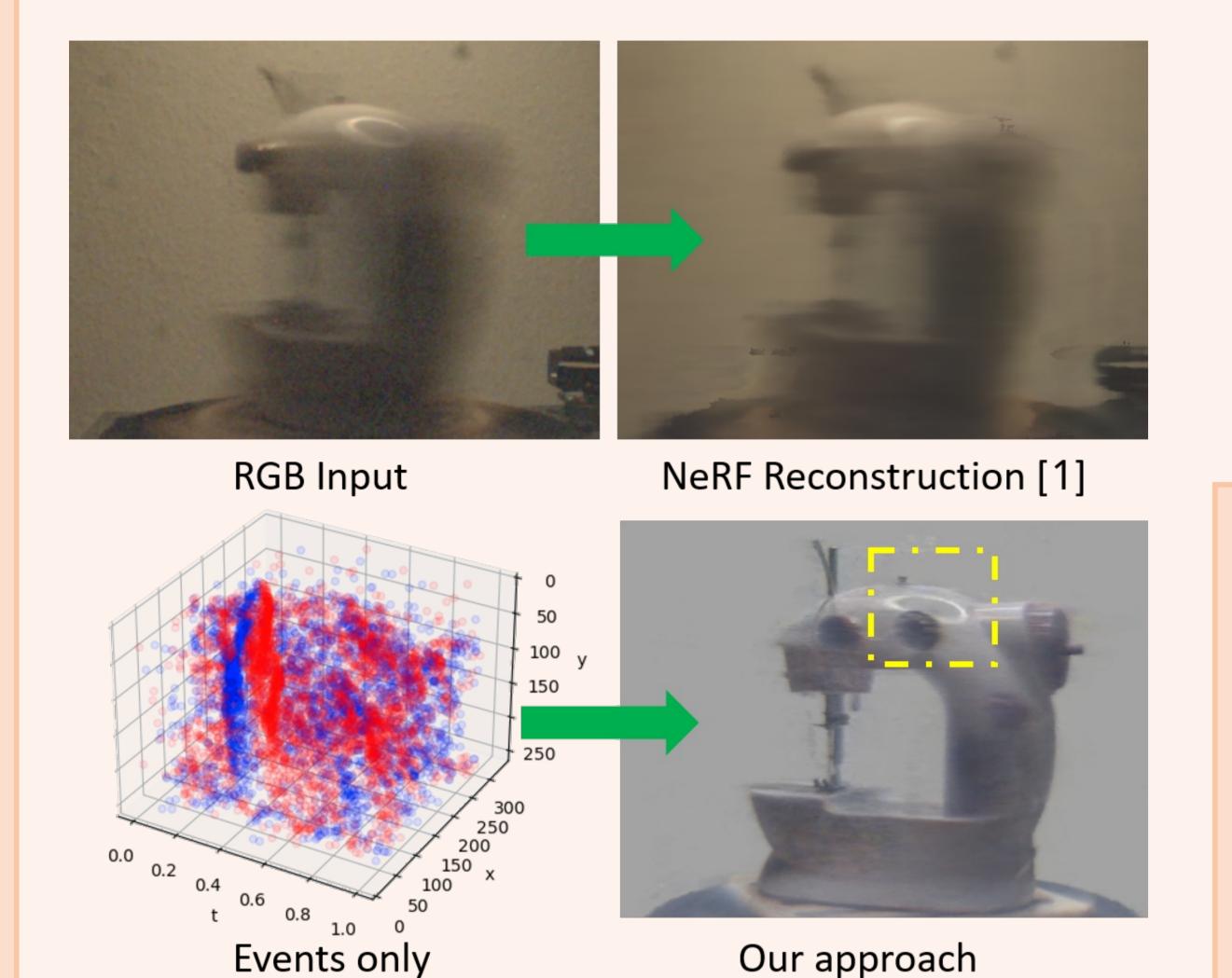
EventNeRF: Neural Radiance Fields from a Single Colour Event Camera

4. Method

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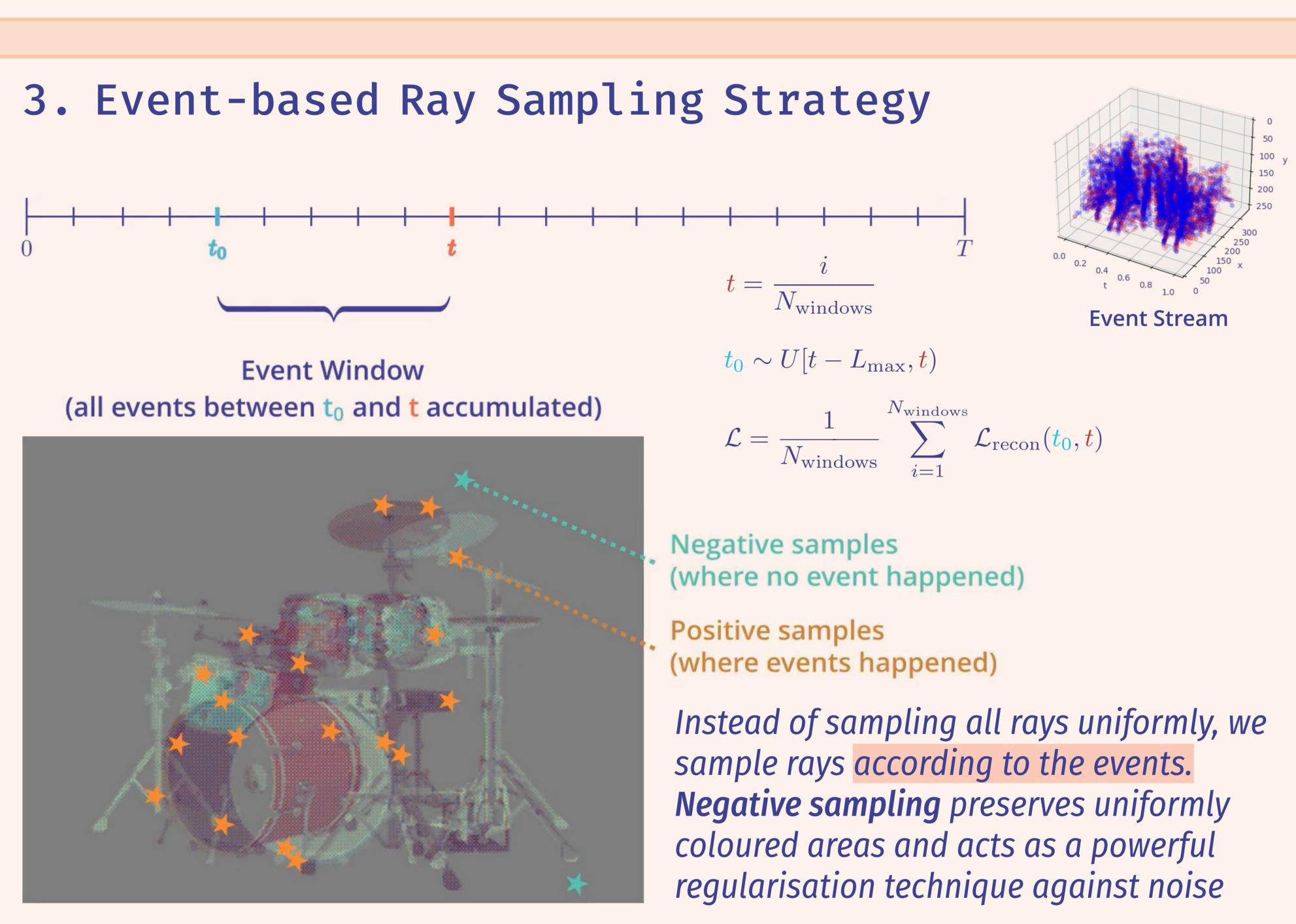
4dqv.mpi-inf.mpg.de/EventNeRF



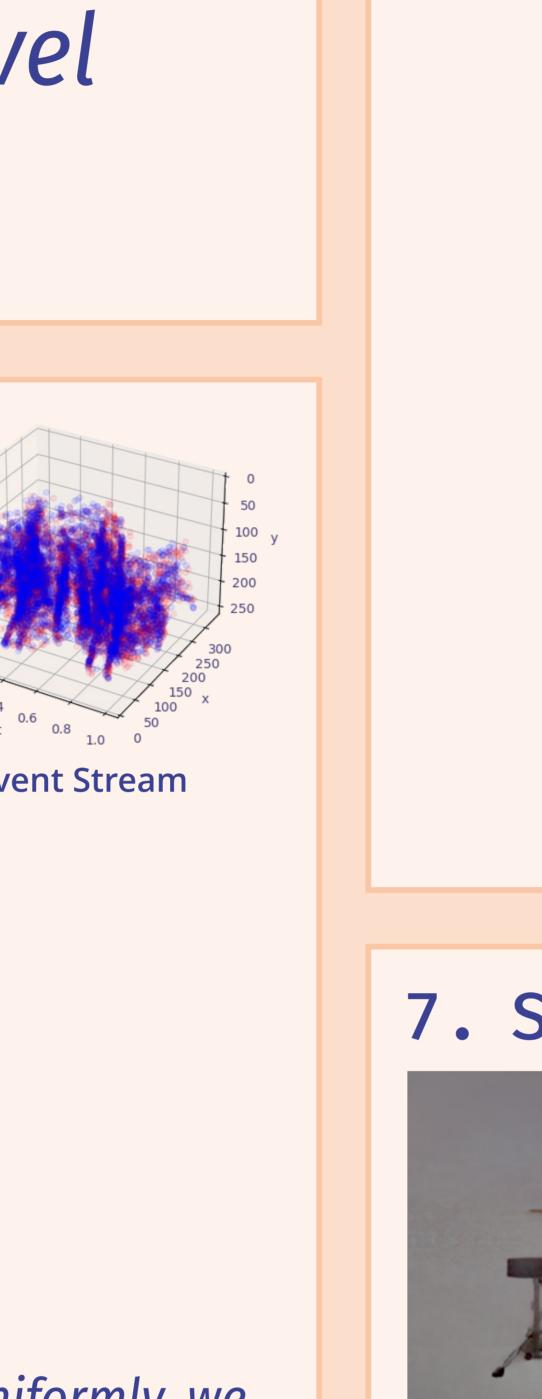
Deblurring [8]

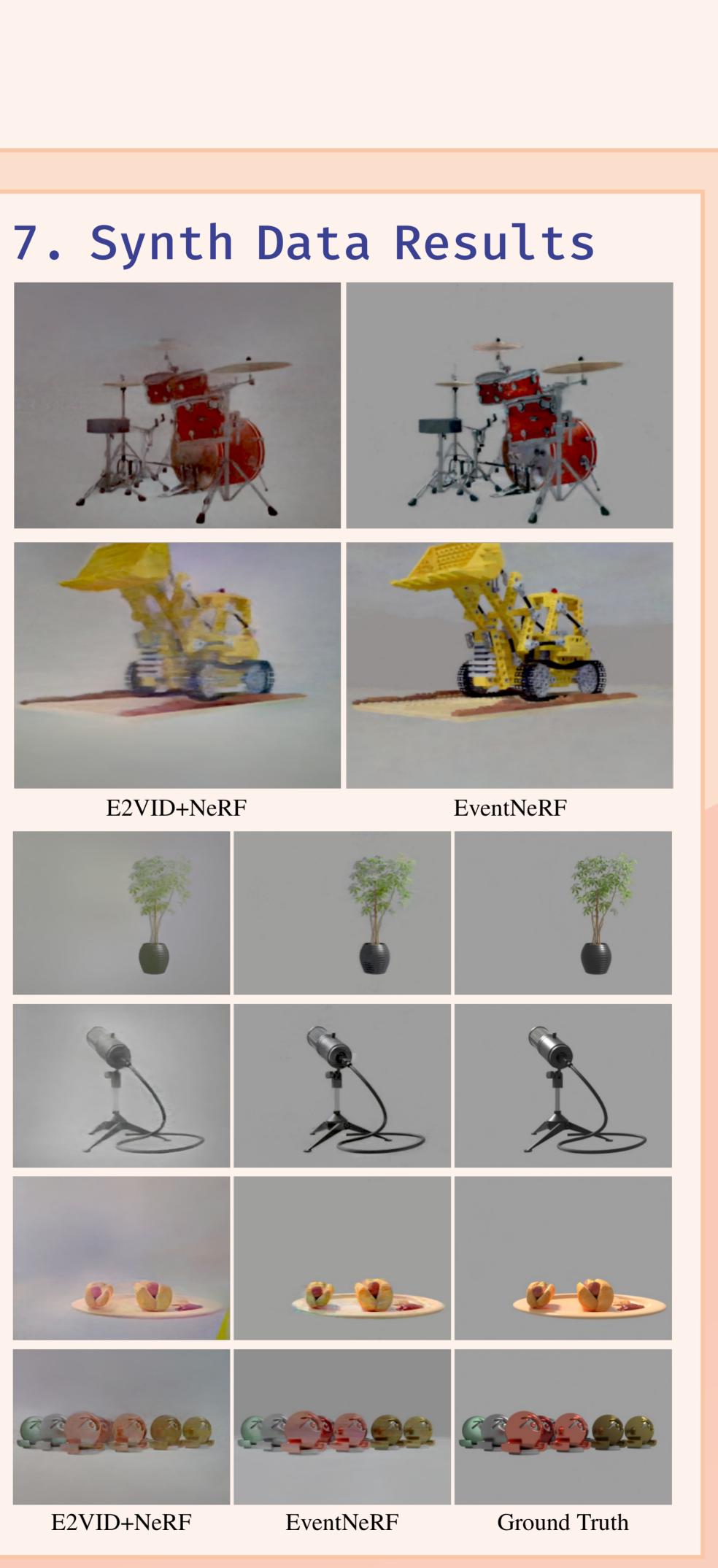
SLAM and Odometry [7]

1. EventNeRF transforms a short monocular event stream into a 3D model allowing novel view synthesis directly in RGB space

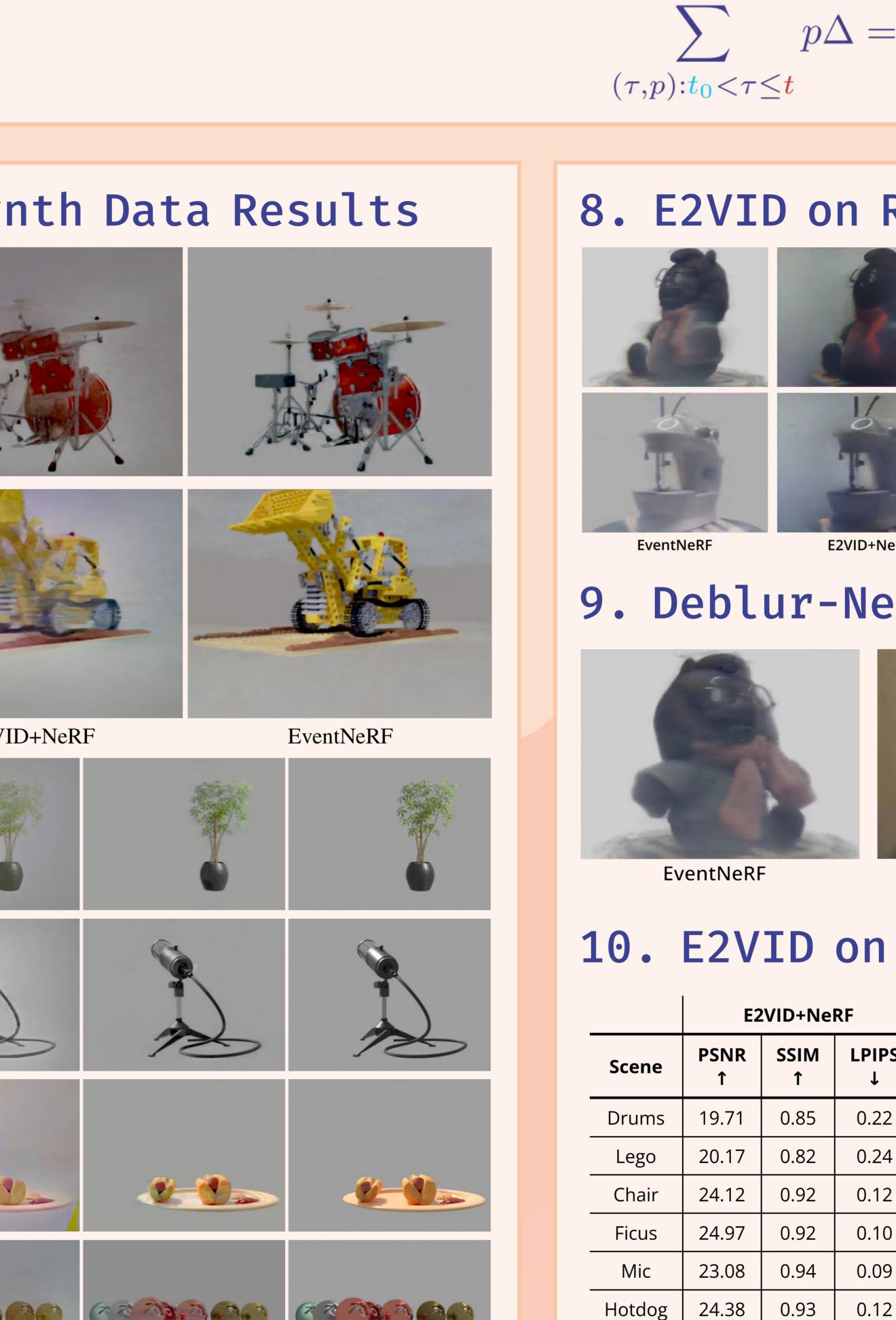


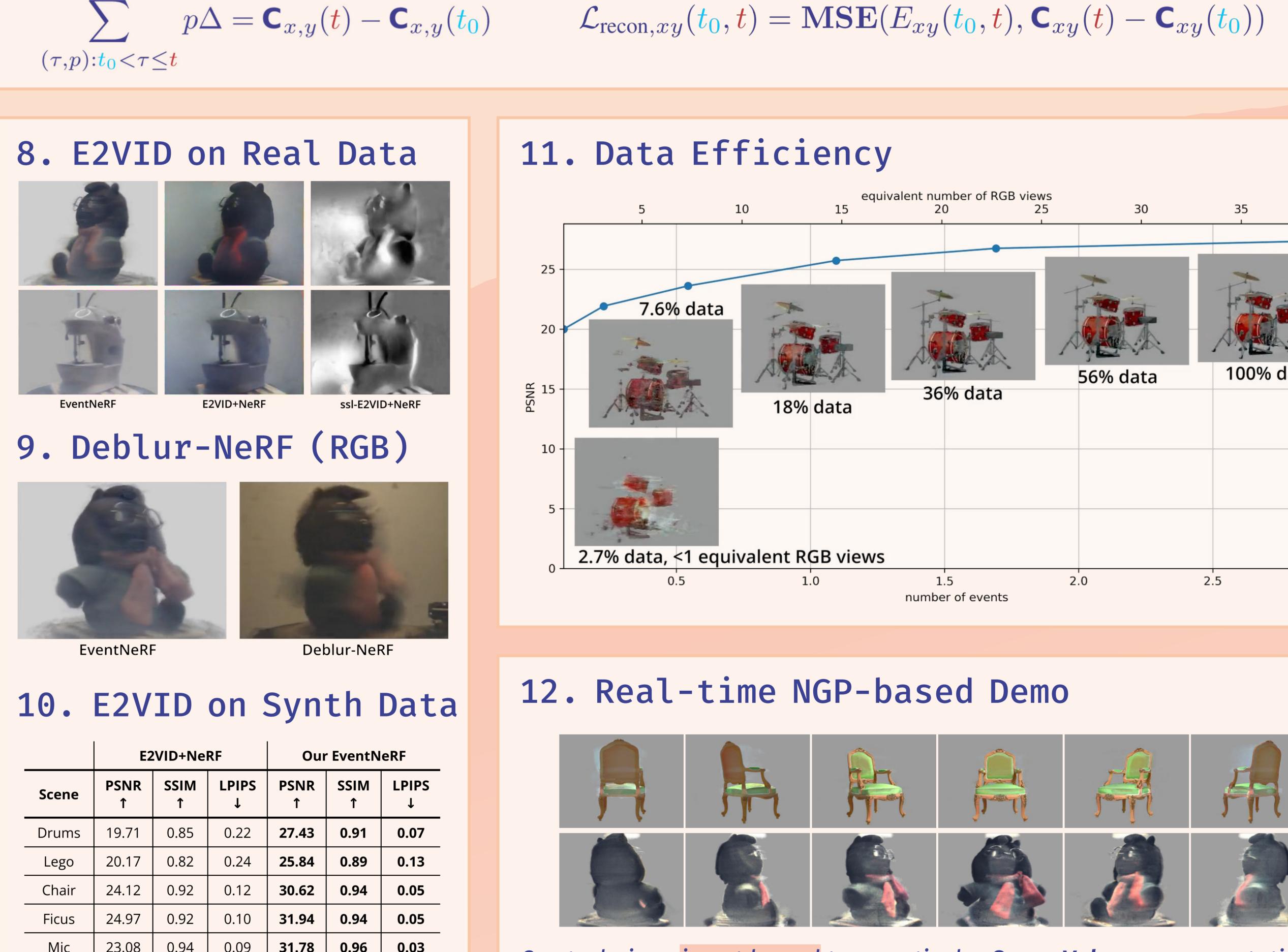




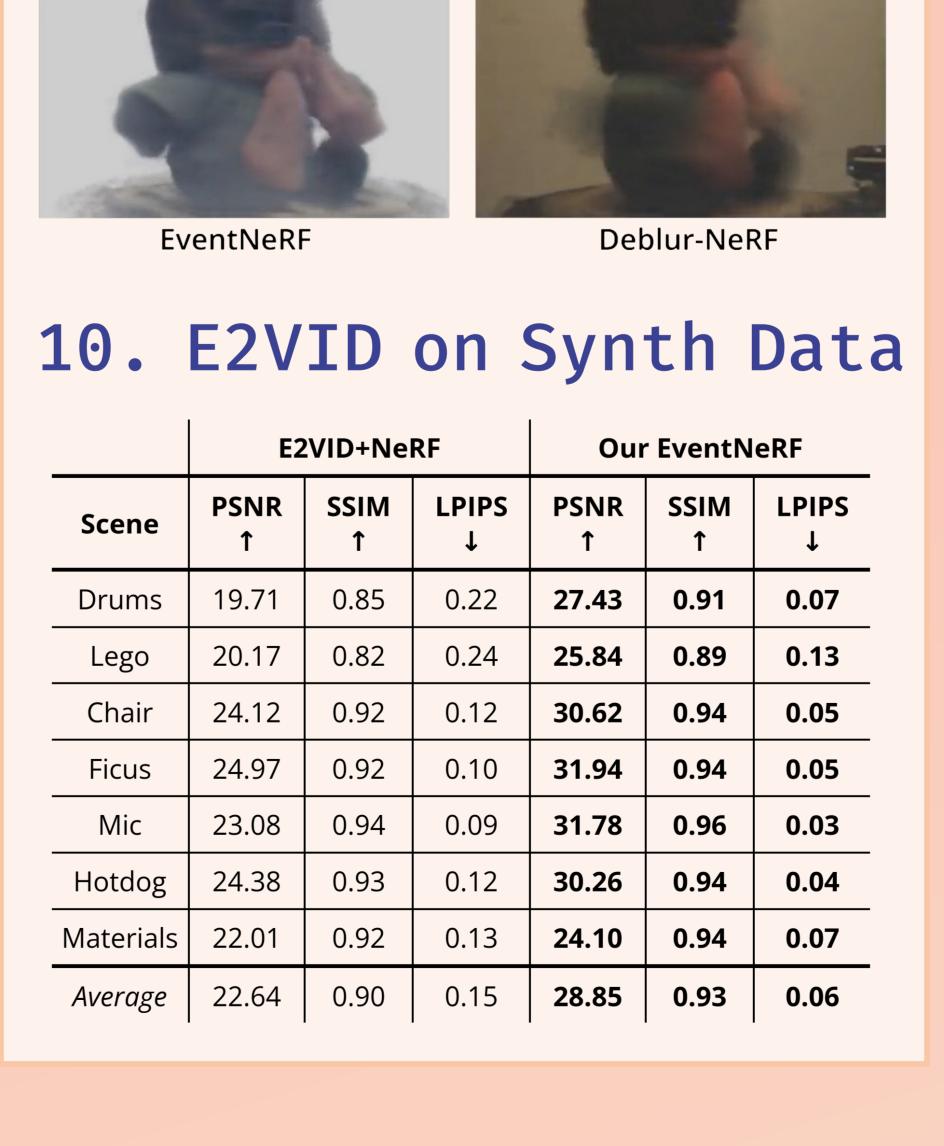


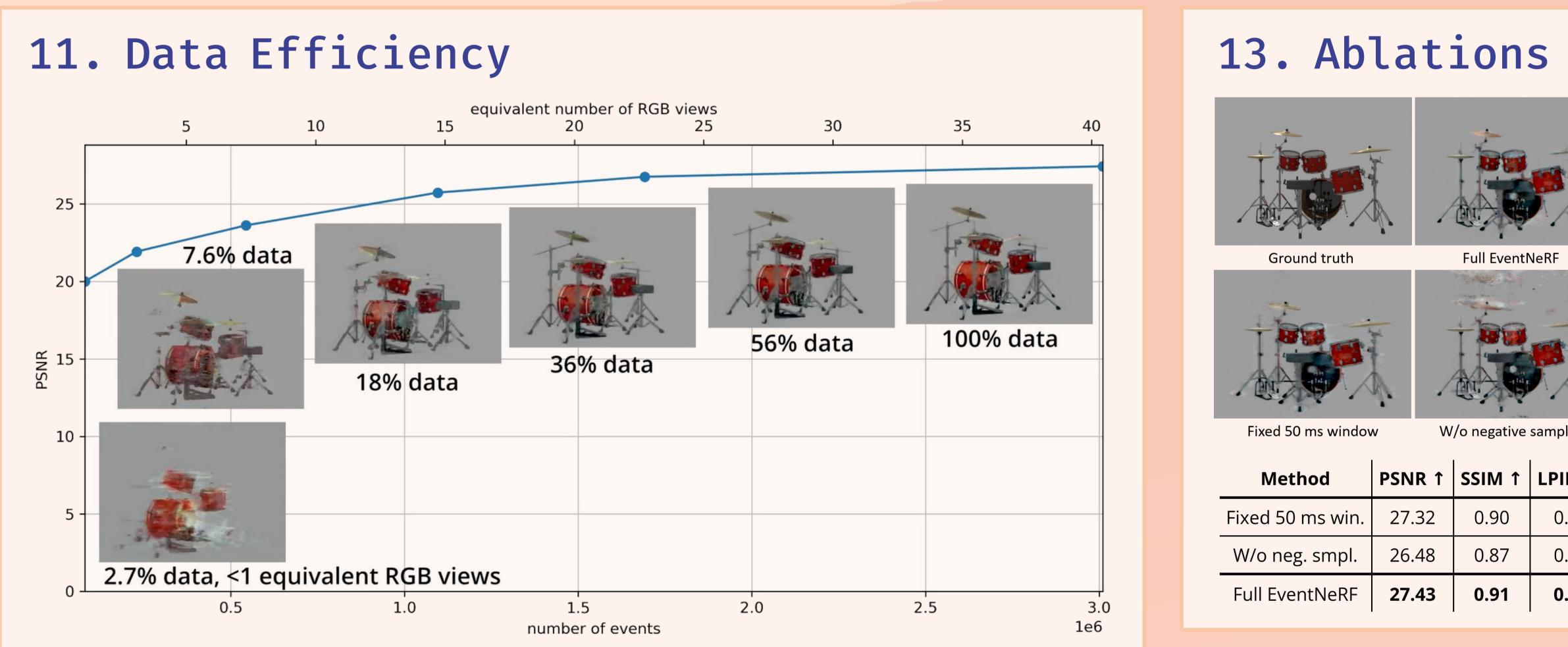
Event Stream



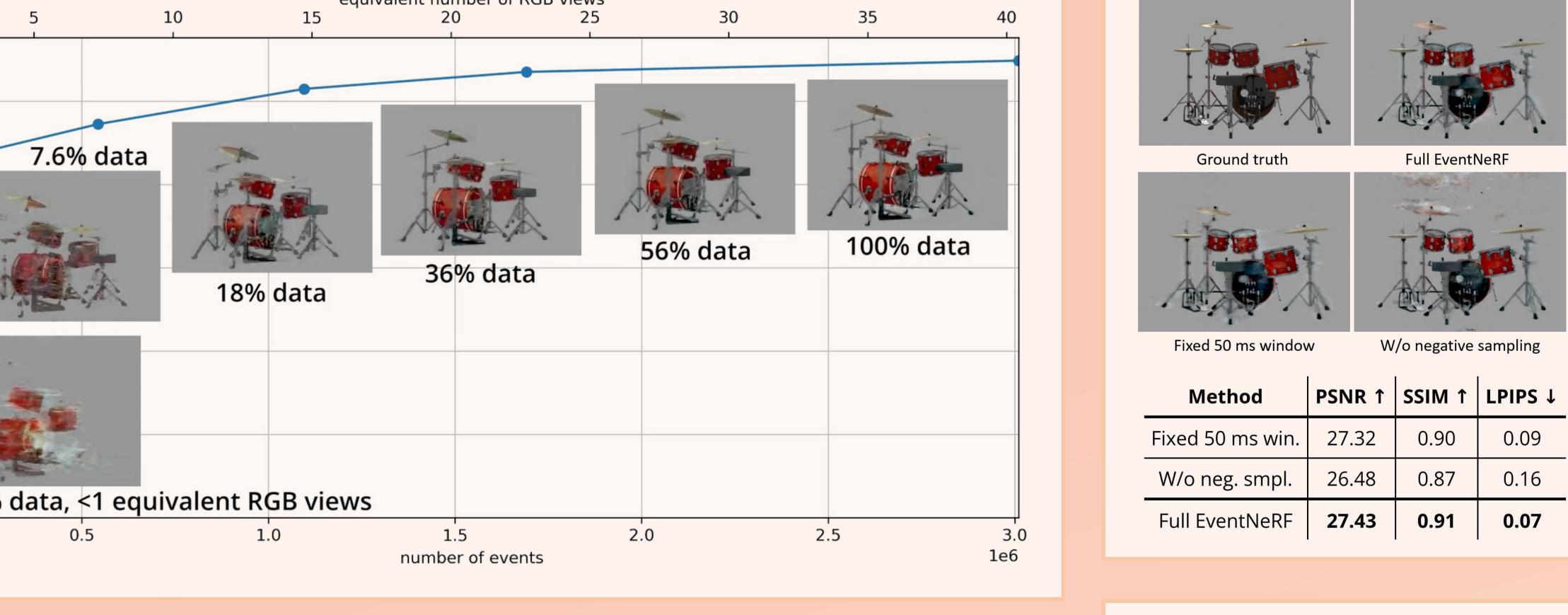


Accumulated Difference

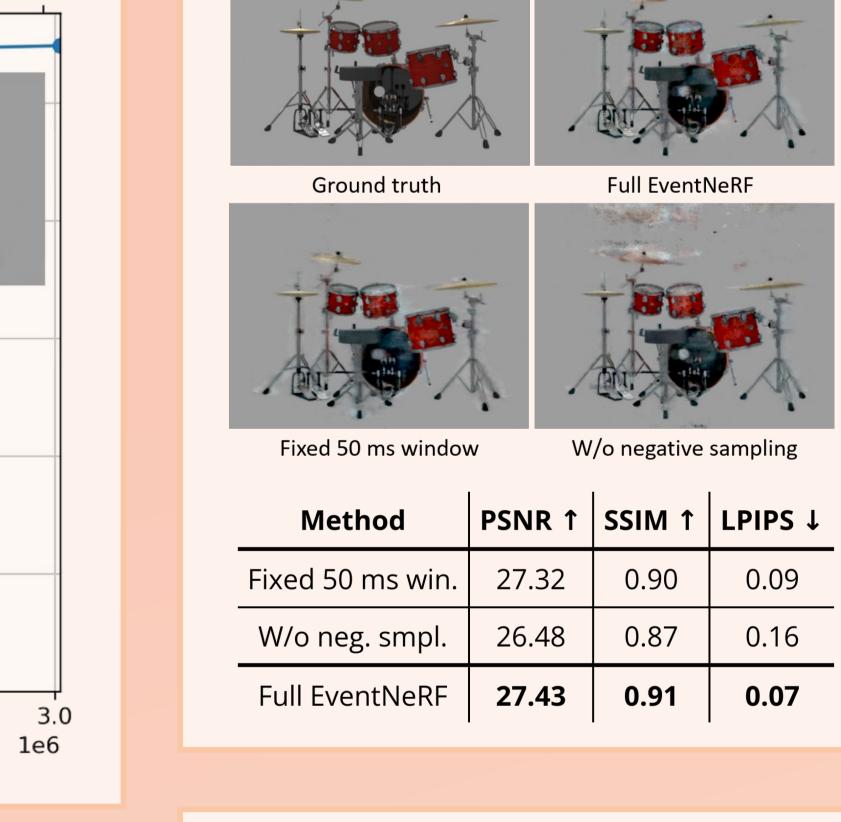




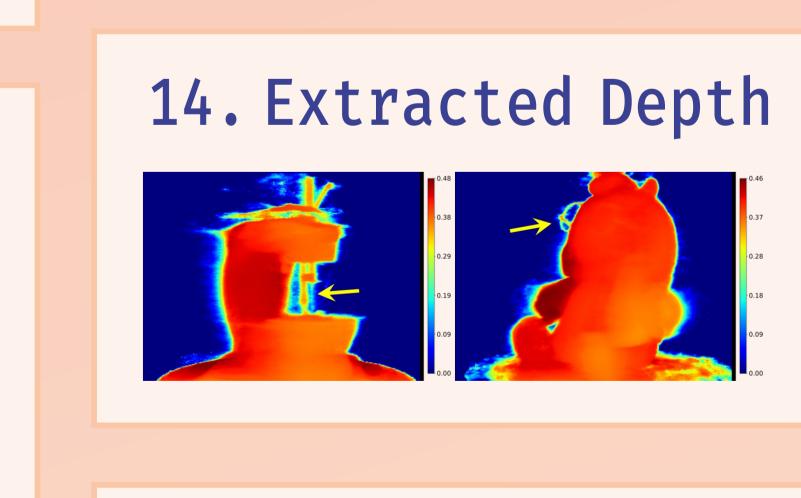
Predicted Difference



subtract



Scene Volume





Our technique is not bound to a particular Scene Volume representation, and therefore we can replace it, for example, with InstantNGP [4], enabling

12. Real-time NGP-based Demo

real-time rendering and training under a minute on a single RTX 2070 GPU









Supervise

rays which

MSE loss

We connect the **Event Stream** with the learned **Scene Volume**, represented by **NeRF** [1], by converting both into the difference between views at times to and the converting both into the difference between views at times to and the converting both into the difference between views at times to and the converting both into the difference between views at times to and the converting both into the difference between views at times to and the converting both into the difference between views at times to and the converting both into the difference between views at times to and the converting both into the difference between views at times to an and the converting both into the difference between views at times to an an accordance to the converting both into the difference between views at times to an accordance to the converting both into the difference between views at times to an accordance to the converting both into the difference between views at times to an accordance to the converting both into the difference between views at times to an accordance to the converting both into the difference between views at times to a converting both into the difference between views at times to a converting both into the difference between views at times to accordance to the converting both into the difference between views at times to accordance to the converting both into the difference between views at times to accordance to the convertion of the convertion



