



SMFoLD Conference
October 28, 2016

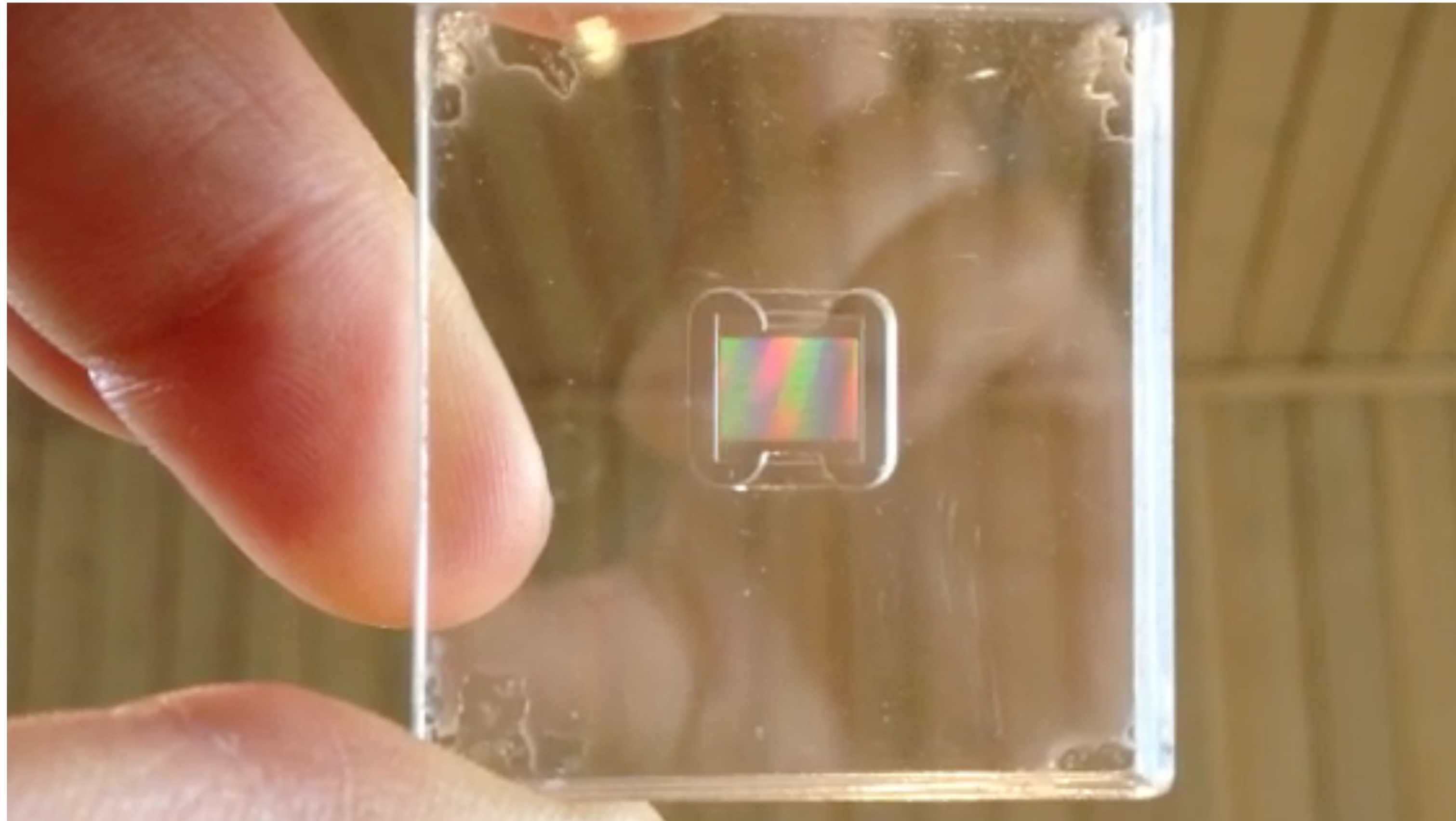
HOW A LYTRO CAMERA WORKS



A diagram illustrating the light field capture process of a Lytro camera. On the left, four white lines originate from the left edge and converge at a single point. From this point, three lines diverge towards the first three lines of a binary code on the right. A fourth line extends horizontally from the right edge of the binary code to the right edge of the frame. The binary code consists of three lines of 10 digits each, rendered in a white, outlined font.

01001000110
100100011010
101001110010

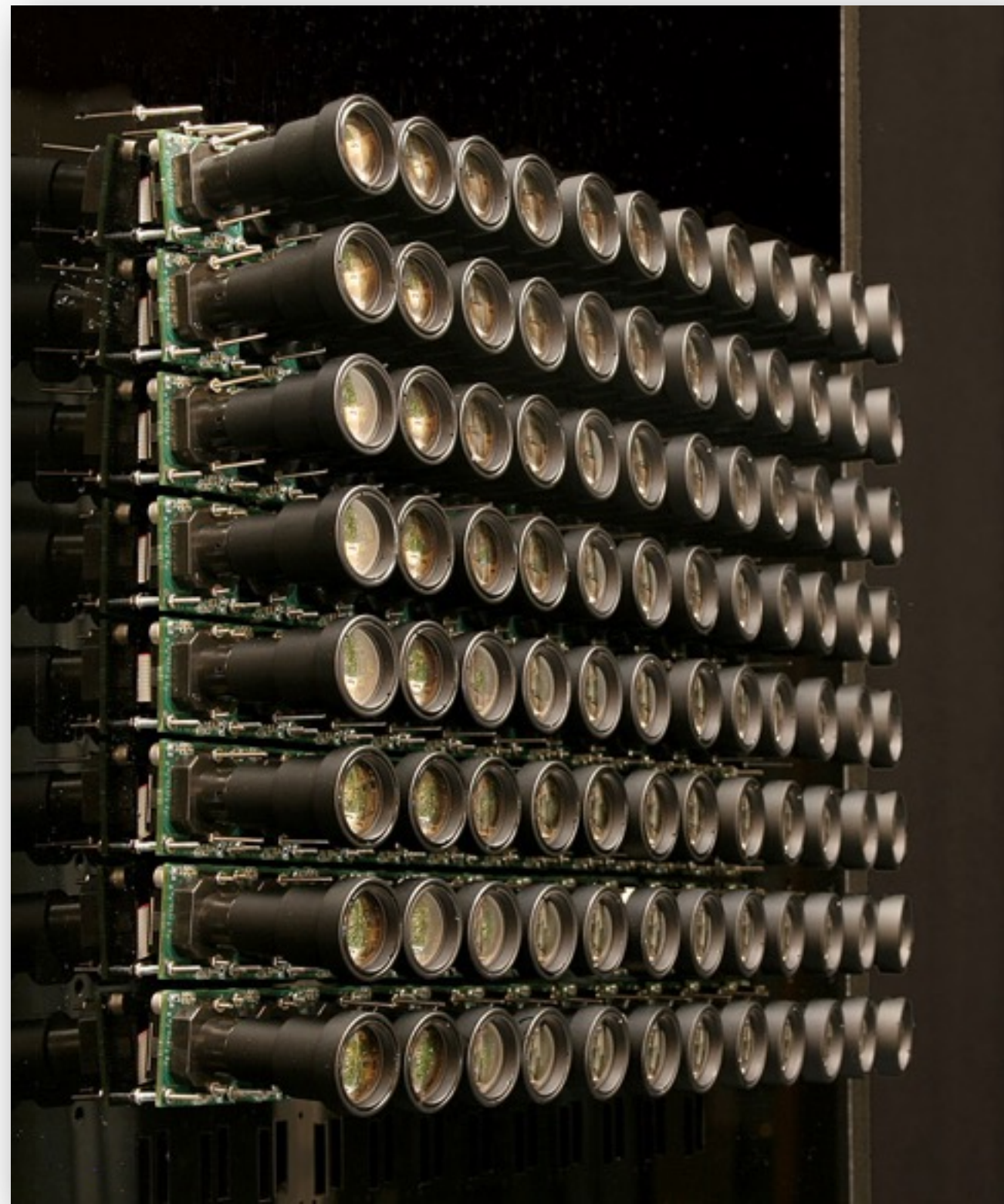
MLA: MICRO LENS ARRAY



Wafer scale piece of glass etched with microscopic lenses.

MLA LIGHT FIELD IS A COMPACT CAMERA ARRAY

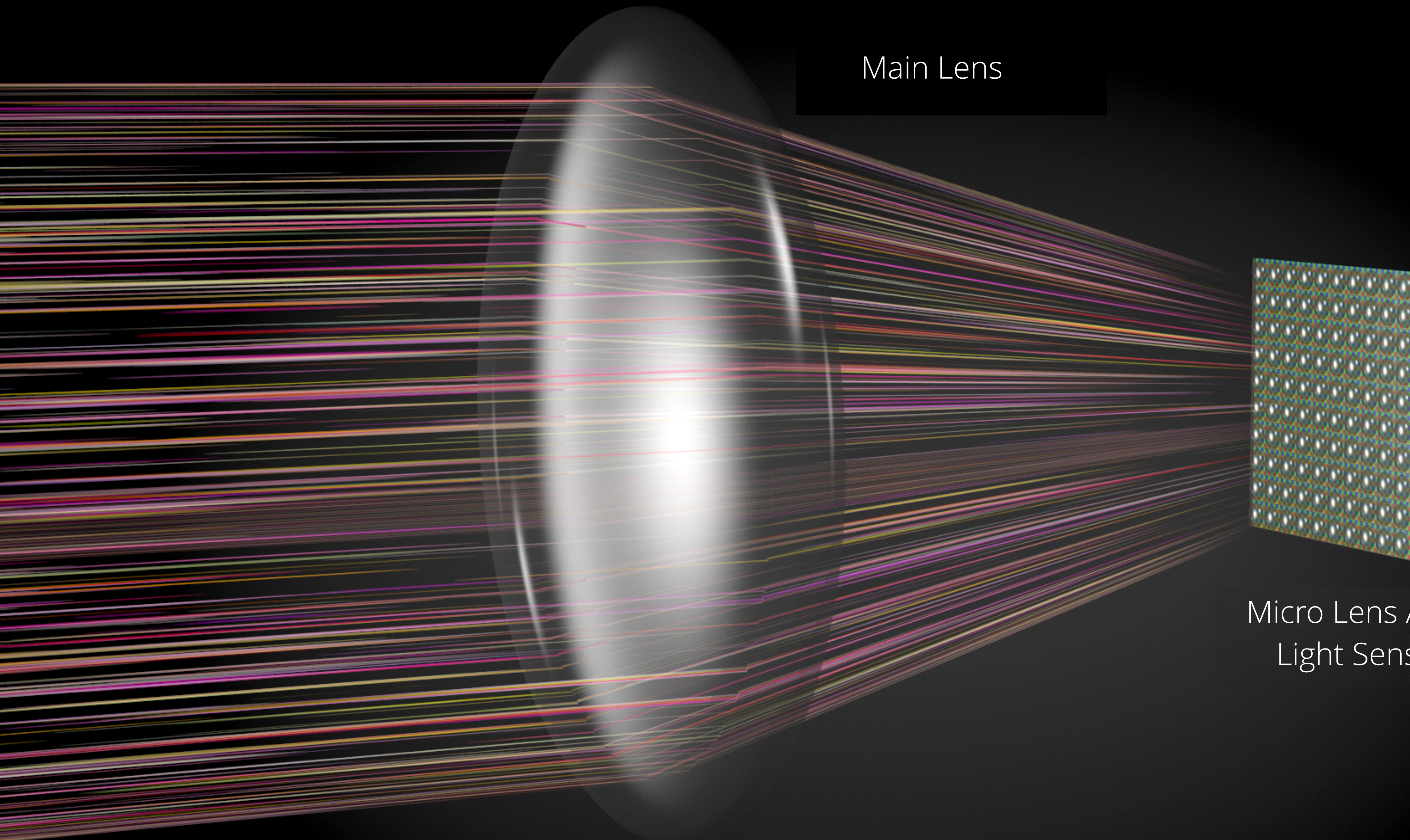
LYTRO



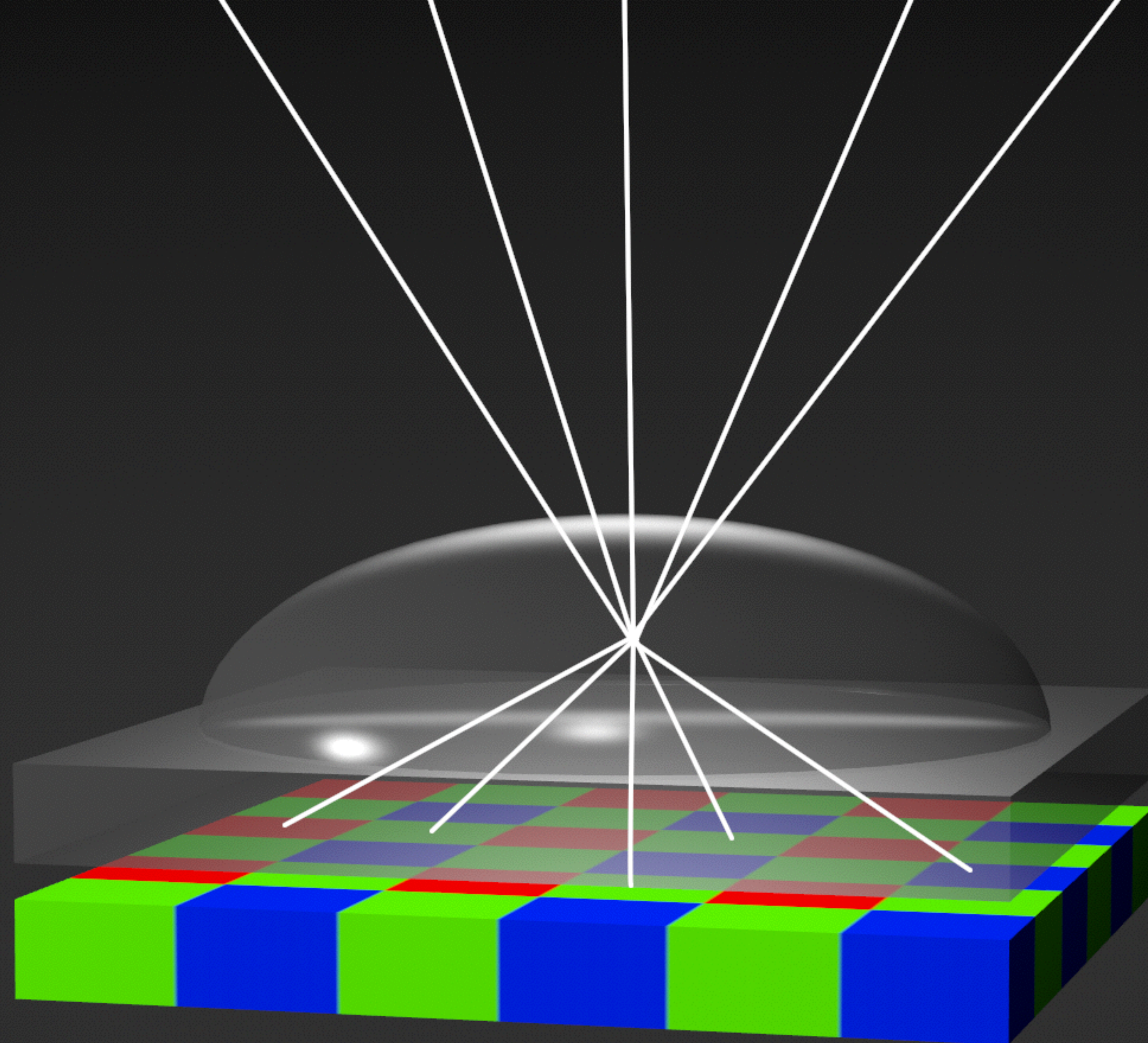
Wilburn Stanford
Frame Array



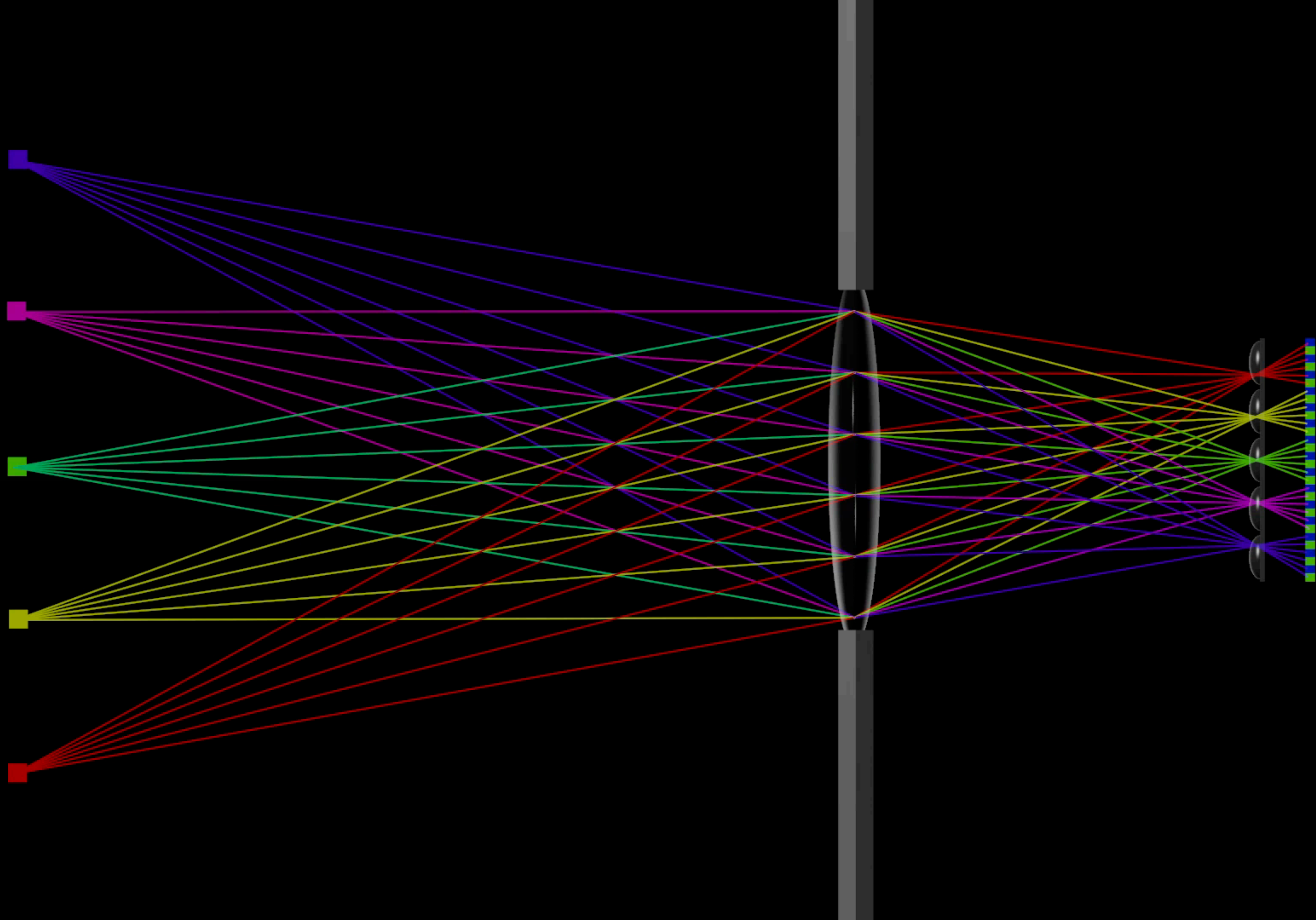
Main Lens



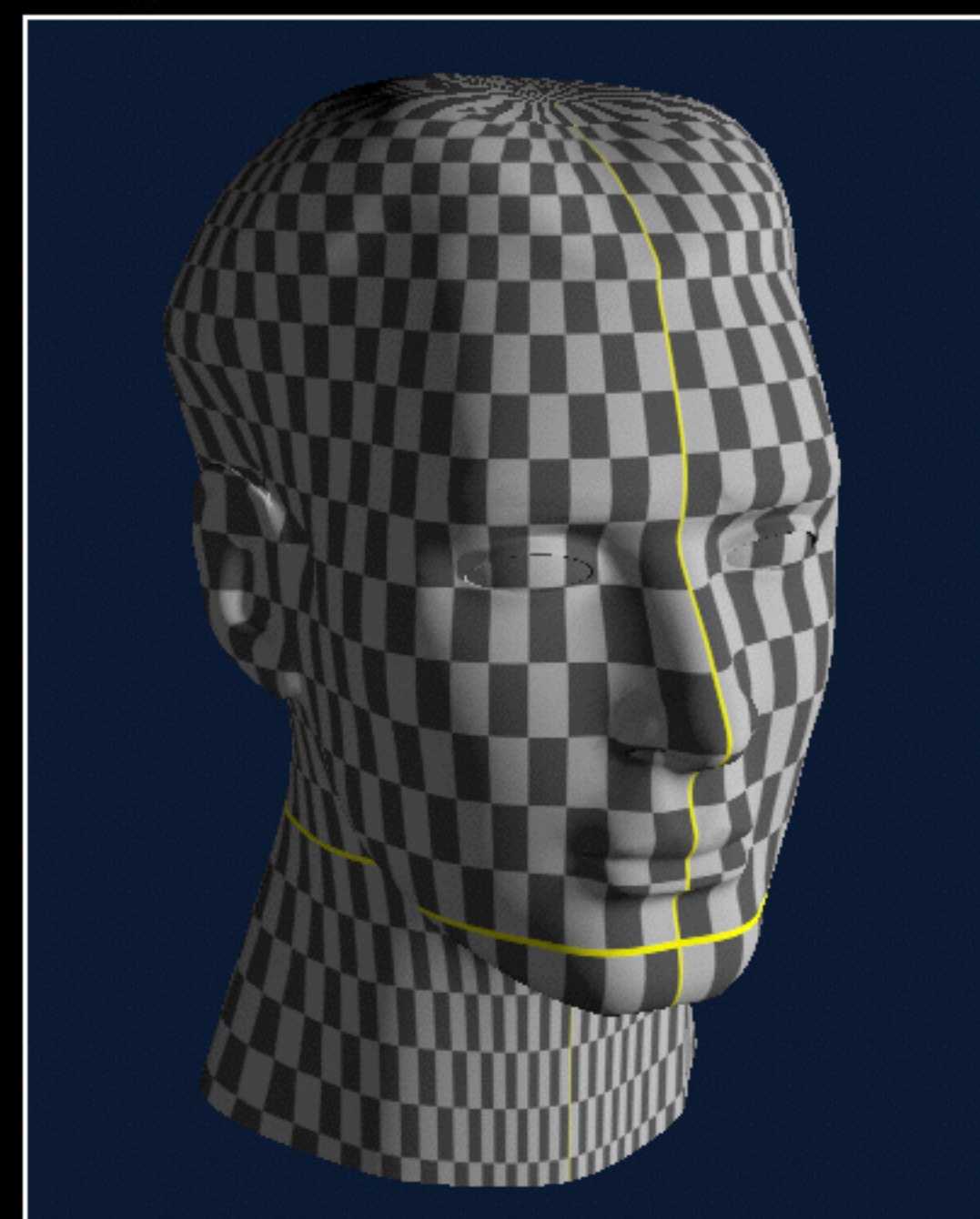
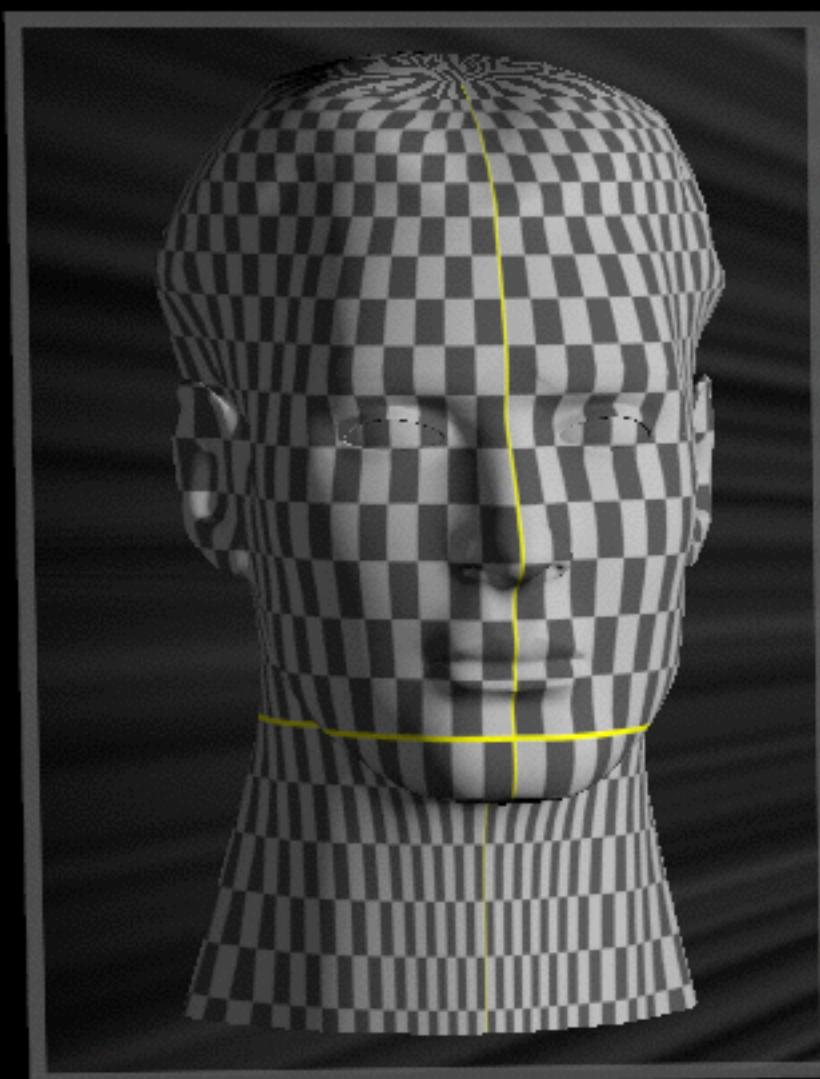
Micro Lens Array
Light Sensor



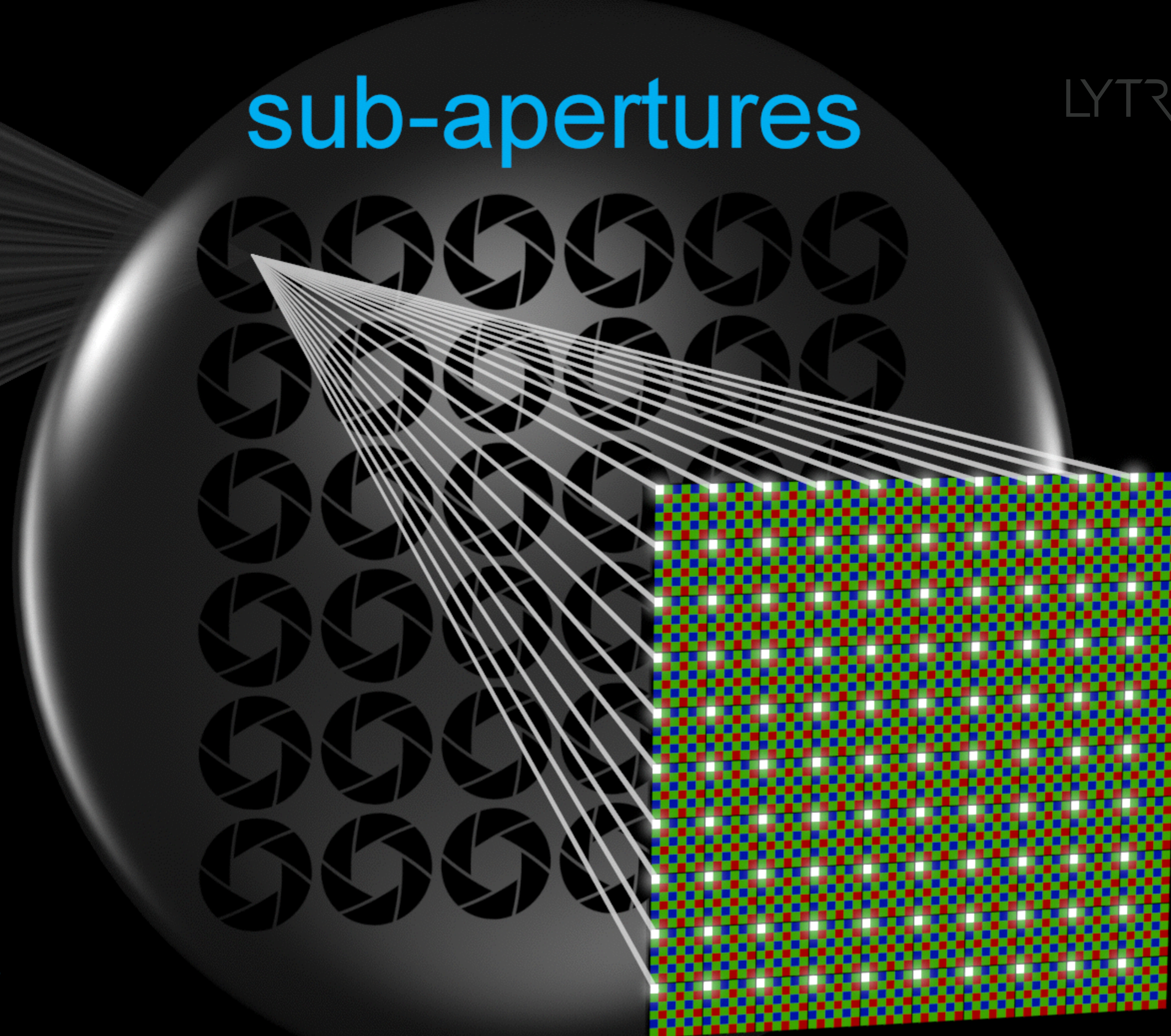
Microlens with Light Sensor



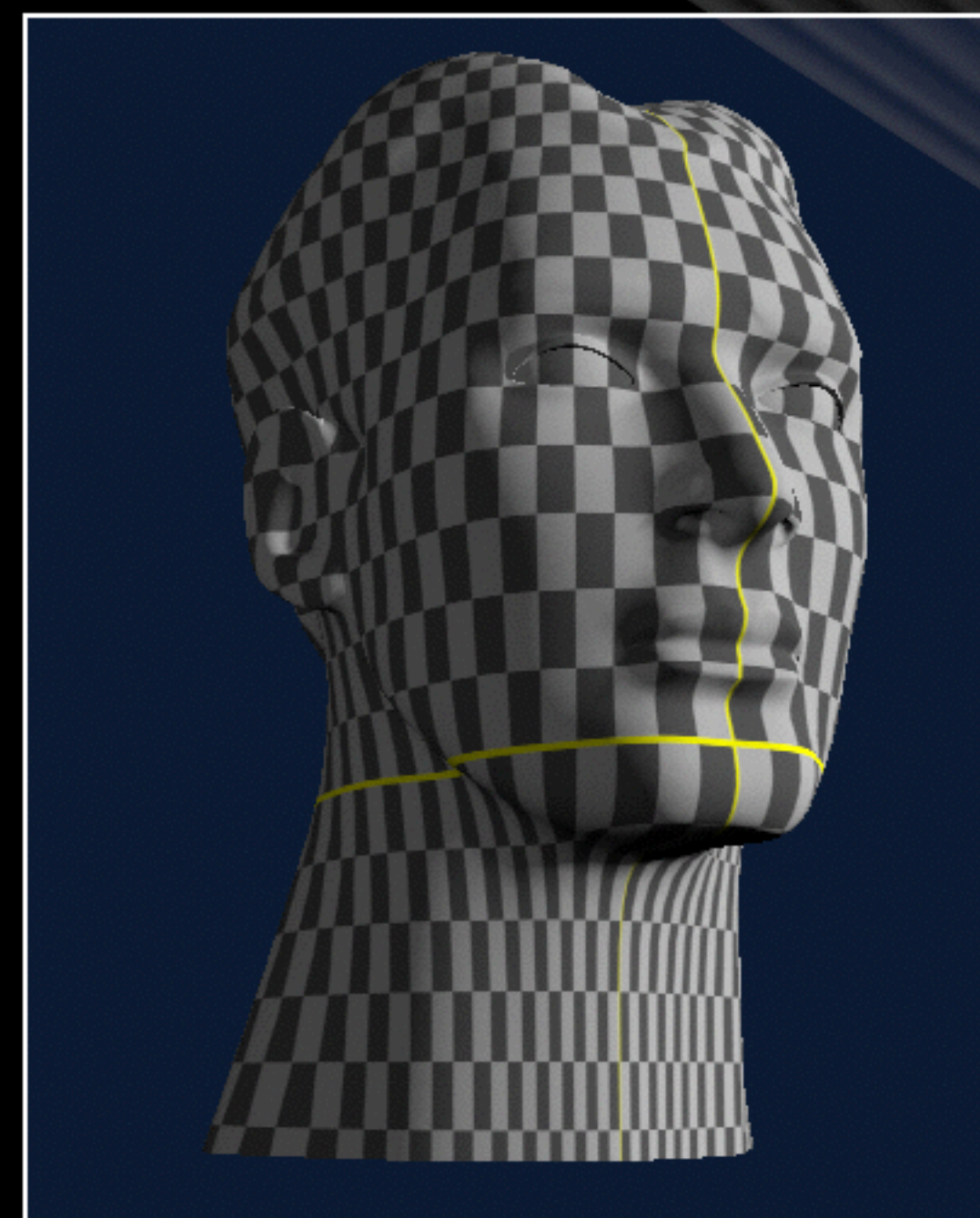
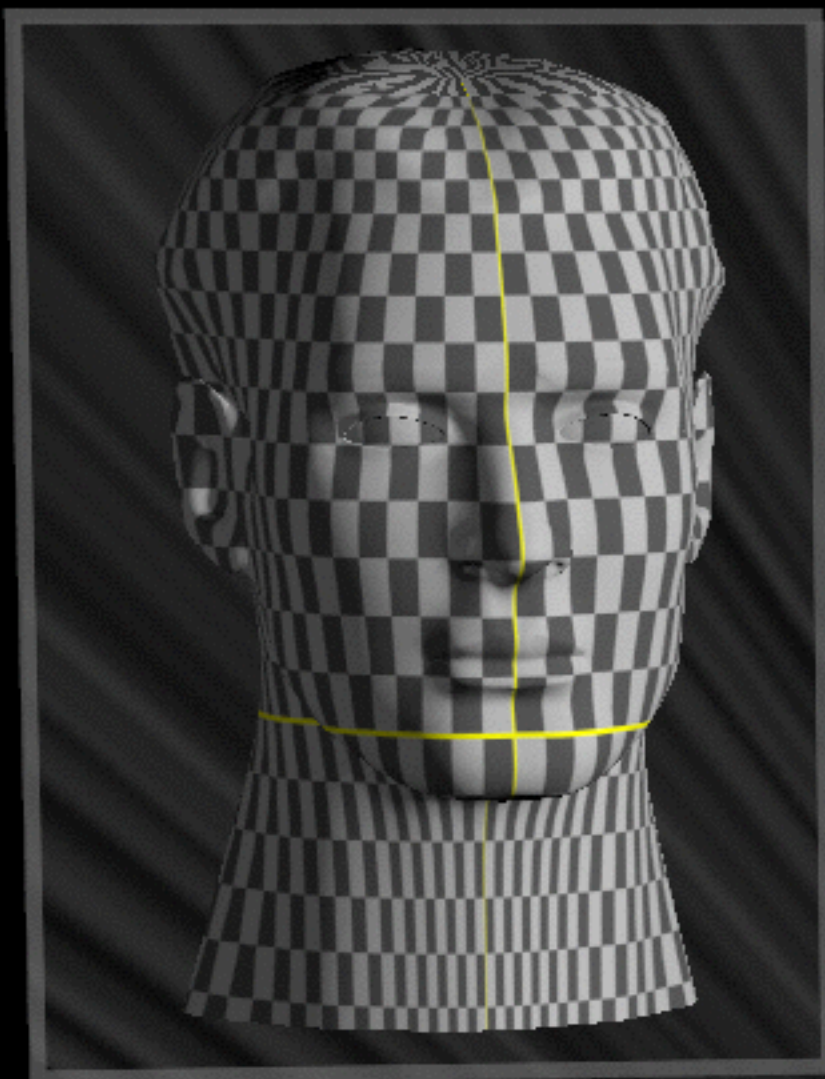
sub-apertures



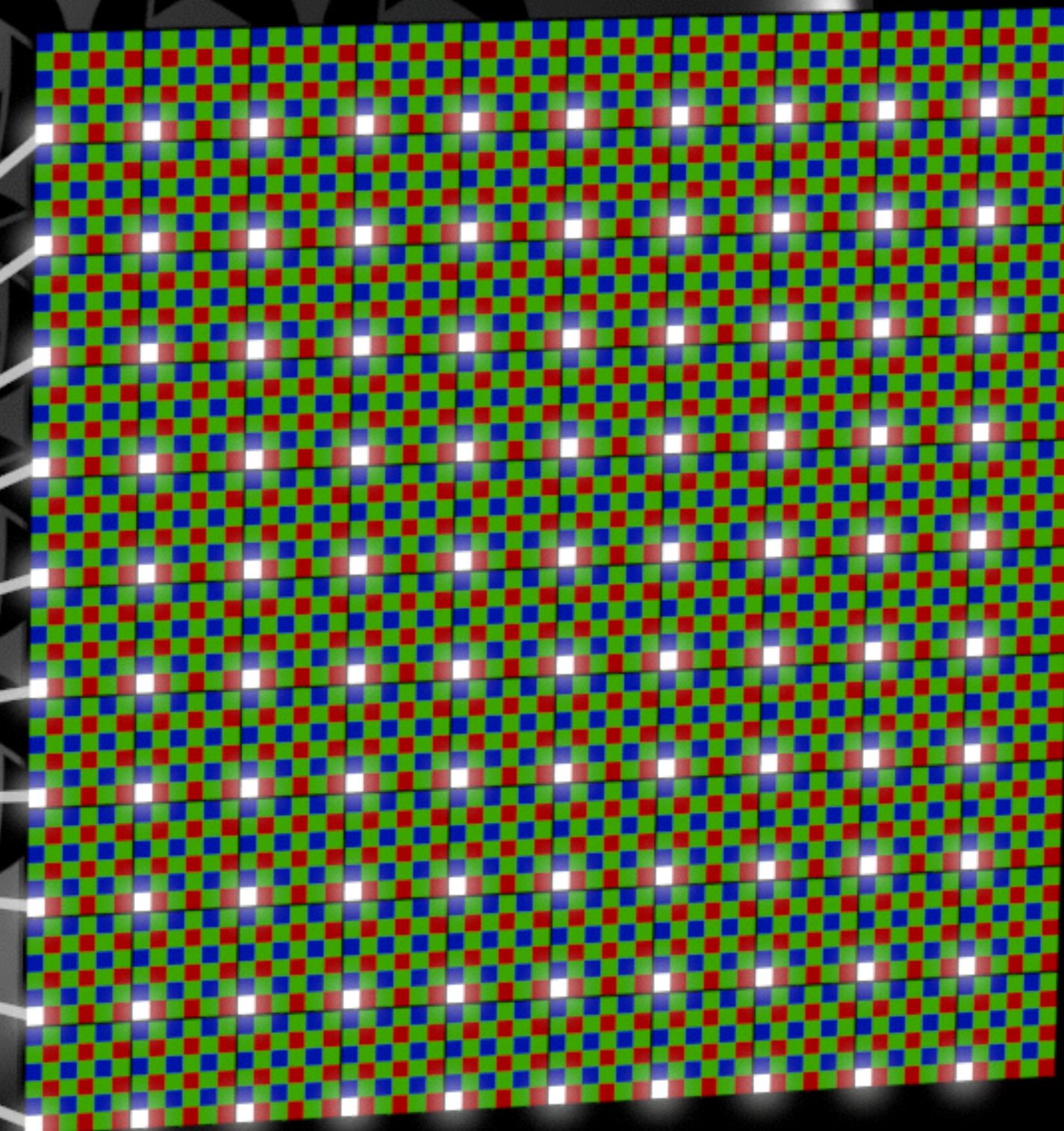
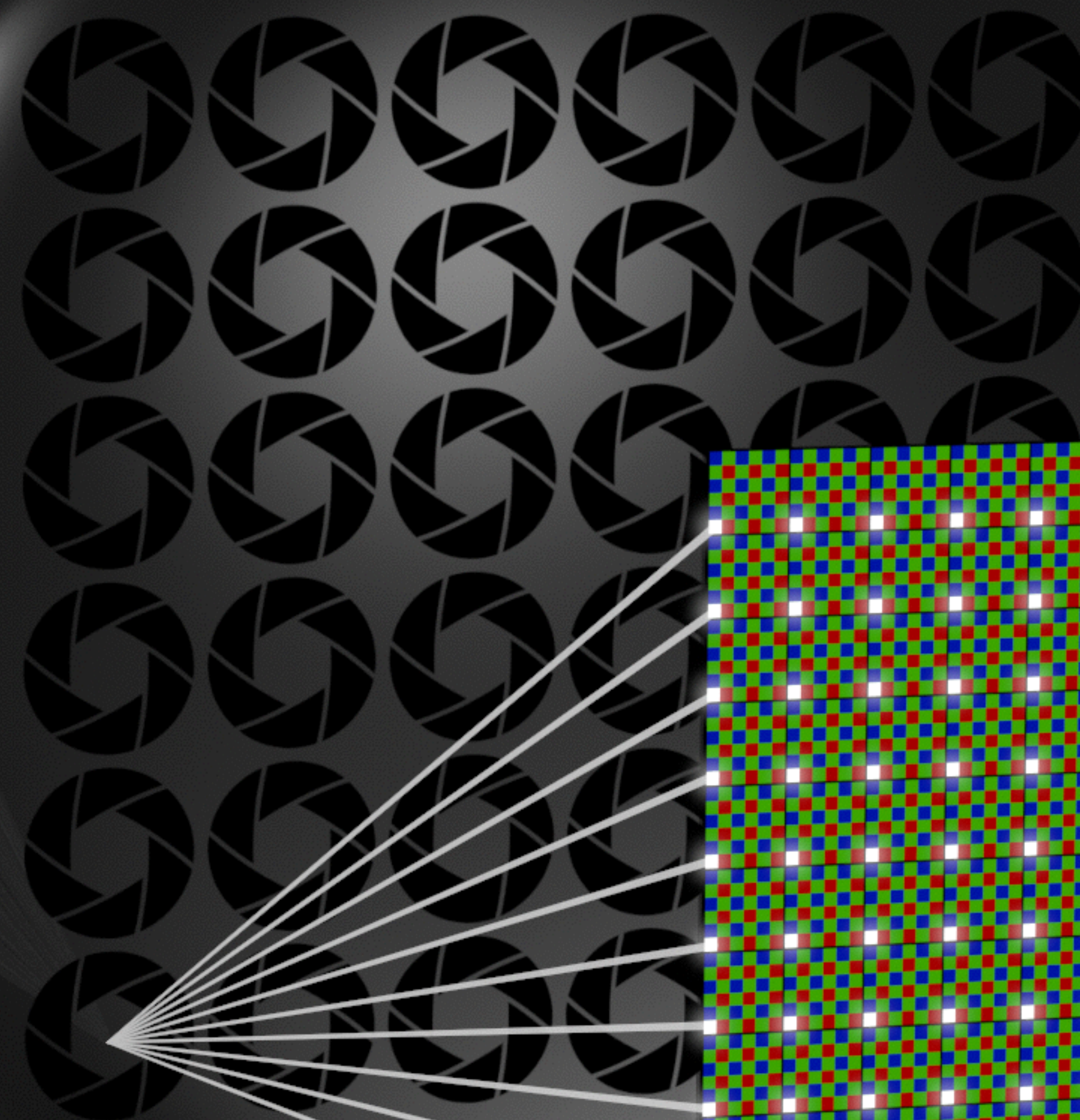
PoV



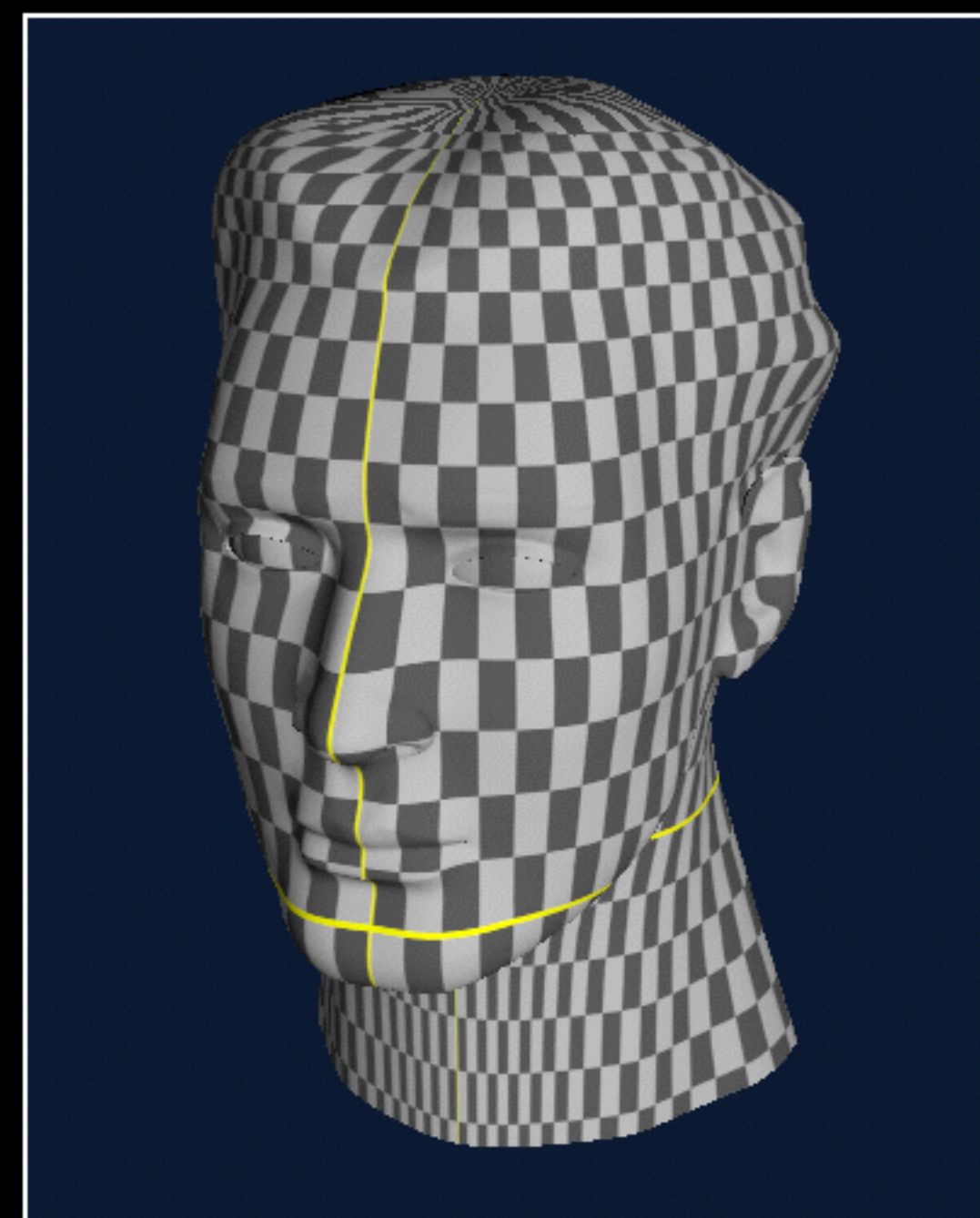
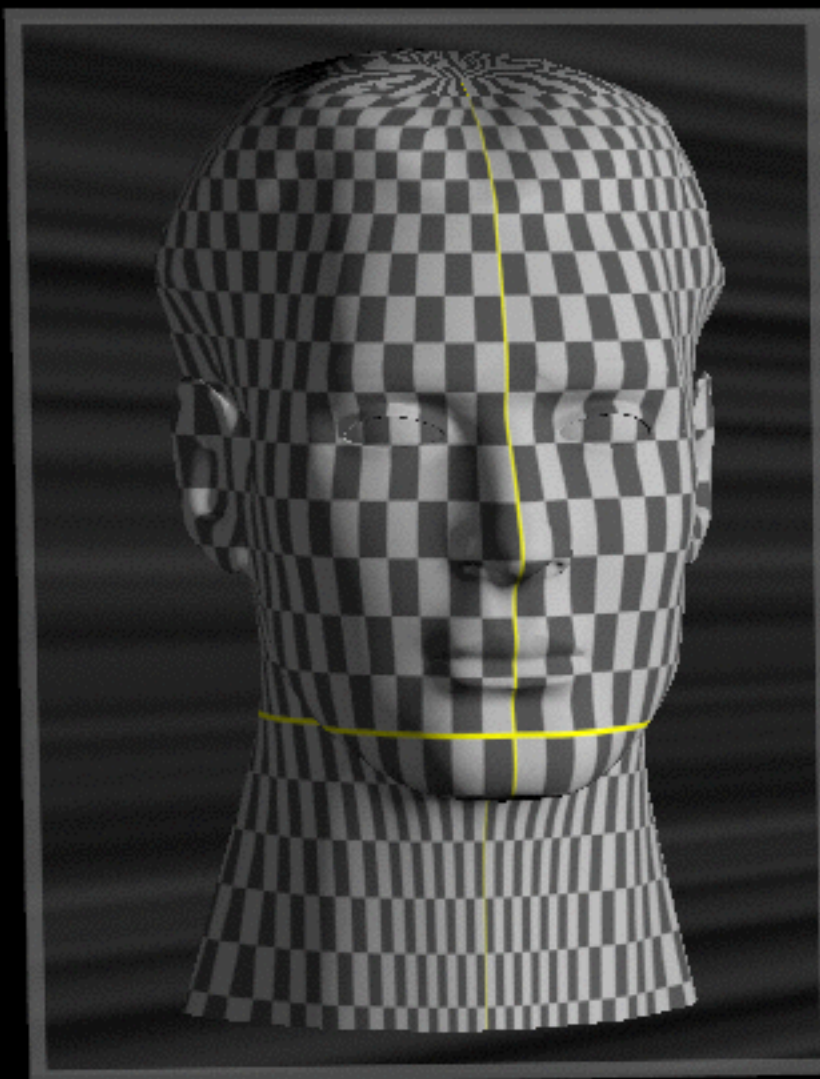
sub-apertures



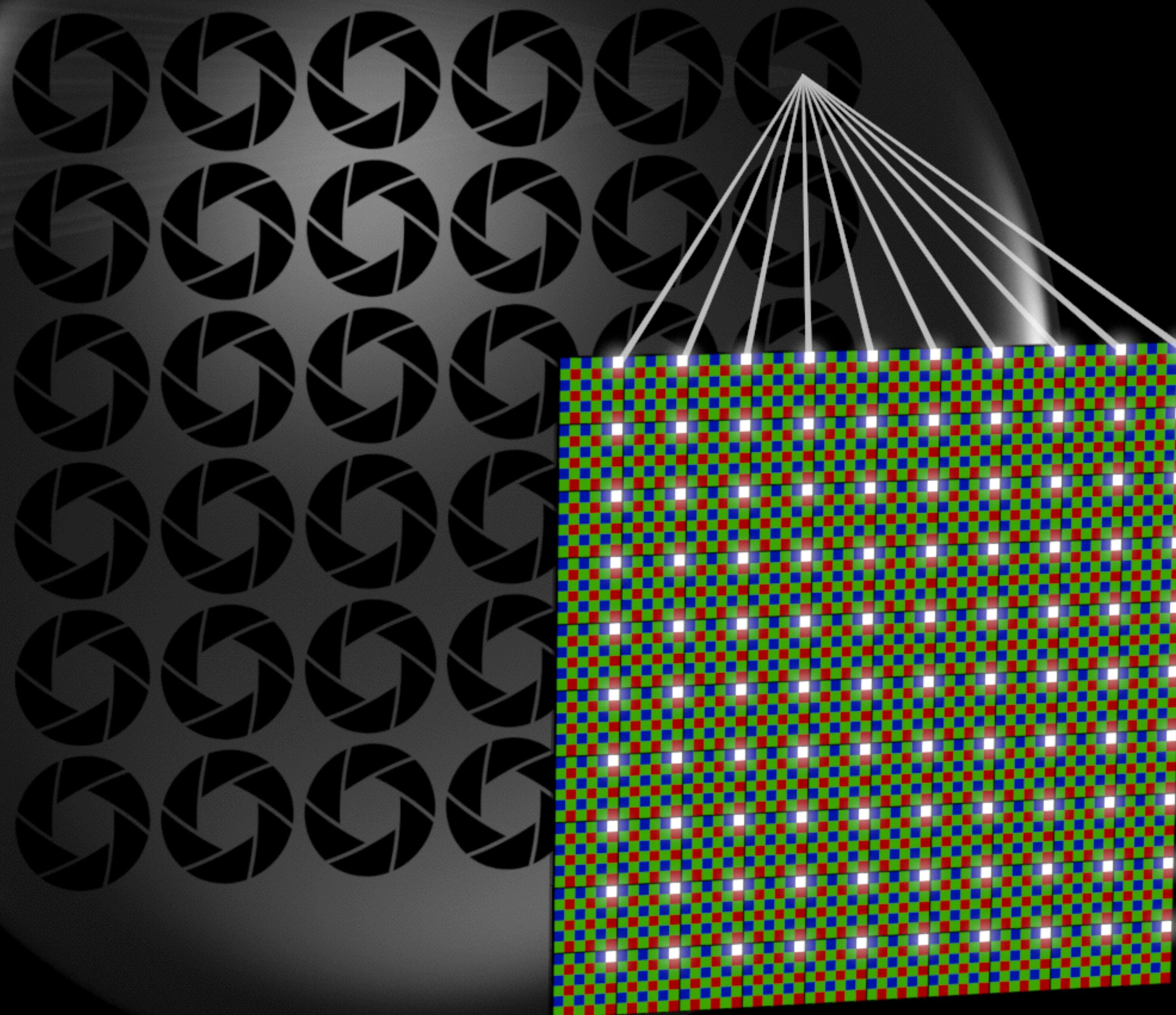
PoV



sub-apertures



PoV



THE 4D IMAGE



XYZ COORDINATES PER PIXEL



LIGHT FIELD CINEMATOGRAPHY



LYTRO CINEMA

The Ultimate Creative Tool for Cinema and Broadcast

THE FIRST END-TO-END LIGHT FIELD CINEMA SOLUTION



Camera



Server



Editing



Distribution Options



GET THE IMPOSSIBLE SHOT



DESIGNED FOR CUTTING-EDGE VFX

A black and white photograph of a film set. In the foreground, a person is standing on a ladder on the left, and another person is on a ladder on the right. In the center, a large professional camera is mounted on a tripod. The background shows various pieces of equipment, including lights and scaffolding. A red and orange gradient overlay covers the middle section of the image, where the text is located.

PRODUCE THE ULTIMATE LIGHT FIELD MASTER

The background image shows the interior of a large, modern theater. In the foreground, there are many rows of dark, upholstered seats facing towards the back of the room. The theater has a high ceiling with a complex, geometric structure. A bright, warm light source is positioned at the far end of the theater, creating a strong lens flare effect that radiates across the upper half of the image. The light transitions from a deep red on the left to a bright orange and yellow on the right, creating a gradient that serves as a backdrop for the title text.

FUTURE OF LYTRO CINEMA

QUESTIONS & ANSWERS

Jon Karafin

Head of Light Field Video
jkarafin@lytro.com