Live demonstration: Bio-inspired asynchronous pixel event tri-color vision sensor

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This work:
New tri-color AER retina:
- Stacked photodiodes
- Low area and power consumption
- Robust color separation algorithm
  -> Can be adapted to other technologies.

Color Separation Algorithm

\[ E_B = \frac{f_B C_B}{e_B} \]
\[ E_G = \frac{(f_G C_G - E_B e_B)}{e_G} \]
\[ E_R = \frac{(f_R C_R - E_G e_G)}{e_B} \]

Example Data:
Color is perceived in a different way than we do

- Narrow band sources: LCD screen
- Natural images
- Infra-red (940nm) Color speed encoding