DIY Ultraviolet Photography
Modifying cameras, building lenses, and selecting filters to see like the bees

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Penetration of light vs. wavelength
Photography in the IR, visible, and UV
Visual response of humans and bees
Human Eye vs. Camera Sensor Response
DSLR camera anatomy

- Pentaprism
- Mirror
- Sensor
- ICF and antialias filter

Incoming full-spectrum image
Regular borosilicate glass is OK for near-UV
Camera lenses are coated to cut UV

Visible light photograph

Near-UV photograph
Dedicated UV lenses are SUPER expensive
Some older prime lenses are uncoated
Photo enlarger lenses are transparent to near-UV
Enlarger lenses are great for near-UV photography.
IR cutoff filter (ICF), antialiasing filter, microlens array, and Bayer color filter array
IR short-pass filter needs to be stacked with UV filter
Baader Planetarium U-Filter 2”
(Venus, Ultraviolet, ZWL 350nm) - $387
Composition and focusing must be done in live-view through LCD screen.
“Bug Vision” filter stacks
How do you add a sense that you don’t have?
Some insects and birds are tetrachromats
Near-UV photography in forensics and quality control

Images courtesy of Stephen C. Warlen, M.S., Forensic Consultant. With permission.
Collodion photography is UV photography
Find more about near-UV photography in my book or by visiting UVIRImaging.com

THANK YOU!

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