

- # NVG Tech & Illusions



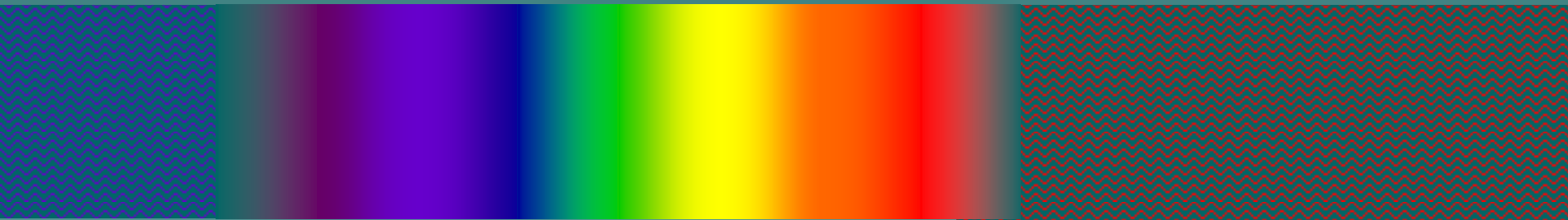
SGT Gary Clark

Helicopter Crewman



Night Vision Goggles

Daylight visible spectrum



400

500

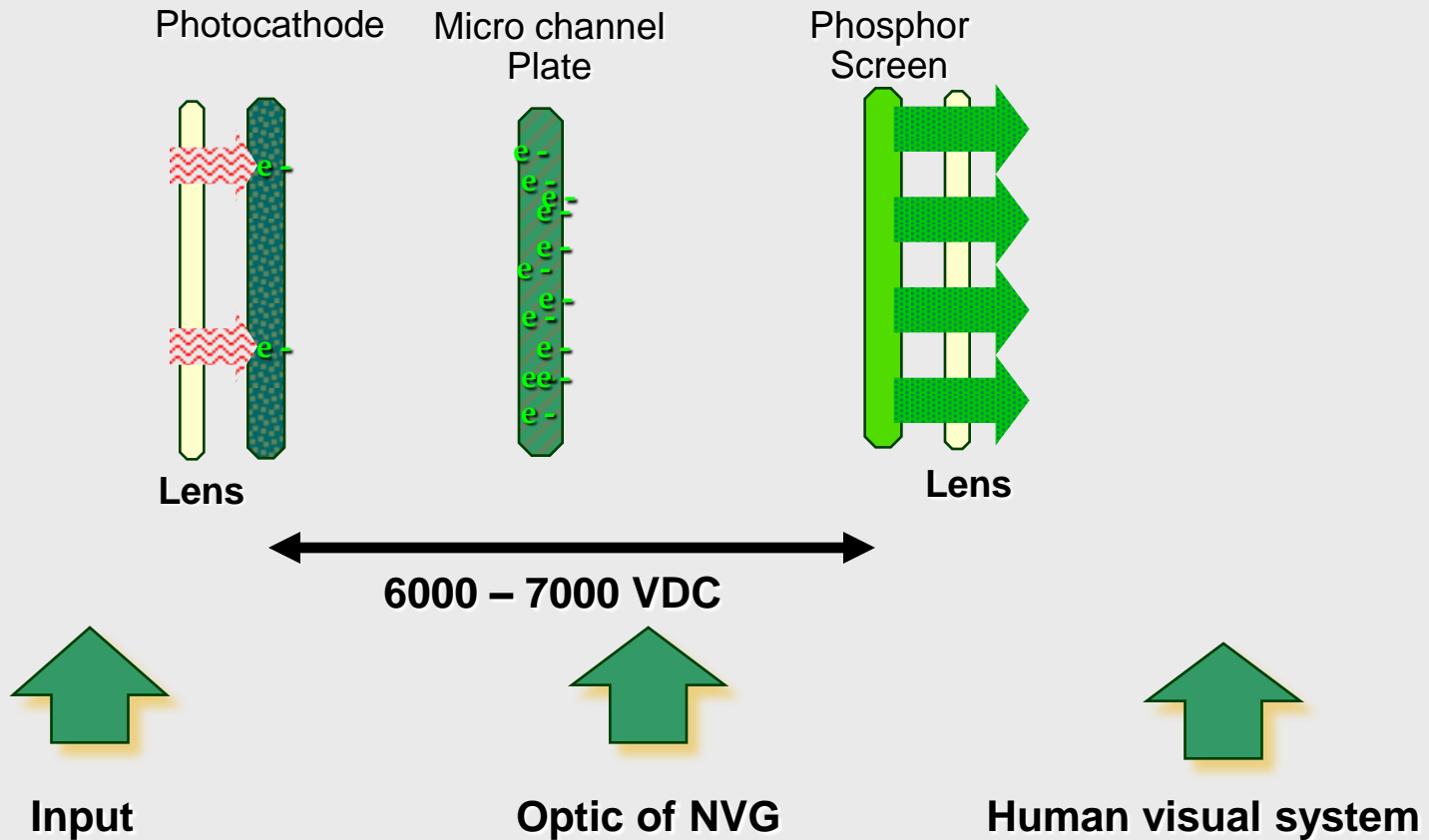
750

950

Ultraviolet
(UV)

Near Infrared
(IR)

Inside the goggles



Illusions

- Autokinesis – When a static light is stared at in the dark, the light appears to move.
- Ground Light Misinterpretation – Confusion of ground lights with stars.

Illusions (cont)

- Relative Motion – Another helicopter hover taxiing past give the illusion that you are moving.
- Reversible Perspective Illusion – An aircraft appears to be moving away where in fact it is coming towards you.

Illusions (cont)

- False Horizons – Cloud formations and/or uneven ground give the illusion that the a/c has drifted or is at an unusual attitude.
- Height Perception Illusion – Flying over areas of very poor contrast e.g. snow, water, desert may make you think you are higher than you are.

Illusions (cont)

- Flicker Vertigo – A well researched illusion. Can be any form of light at a rate between 4 to 20 cycles per second.
- Fascination (Fixation)– A common one for new pilots and crewman getting fixated on a task or object.

Illusions (cont)

- Structural Illusions – These are caused by such things as heatwaves, rain, snow, sleet or other factors obscuring your vision.
- Size - distance Illusion – When looking at a light source that is increasing or decreasing in luminance.

Ways to help with illusions

- Increasing your visual scan
 - Talking to the rest of the crew
 - Cross checking instruments
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