

[54] NIGHT VISION DEVICE LOCALIZED IRRADIANCE ATTENUATION

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[73] Assignee: The United States of America as represented by the Secretary of the Air Force, Washington, D.C.

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#### [57] ABSTRACT

A night vision device enhancement wherein occurrence of a bright object in an input scene of the night vision device is precluded from adversely affecting reproduction of adjacent low radiance level portions of the input scene. By optically limiting or excluding bright object input scene portions from the night vision device input field the disclosed system precludes both image intensifier-related effects, effects such as blooming and current saturation, and also precludes automatic gain control-related effects such as full-field sensitivity decrease based on the bright object. Plural embodiments of the system are disclosed, embodiments based on bright object attenuation by both yet to be developed photo active materials such as photochromics and embodiments which use present state of the art liquid crystal materials and accompanying electronics. Military and non-military uses of the improved night vision device are contemplated.

18 Claims, 3 Drawing Sheets

