Atmosphric Light

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According to the DCP[1] approximation of $J^{dark} \approx 0$, the transmssion map $\tilde{t}(x)$ can be represented as

$$\tilde{t}(x) = 1 - \min_{y \in \Omega(x)} (\min_{c} \frac{I^c(y)}{A^c}) \tag{1}$$

Here, the atmosphric A needs to be estimated. And the Table 1 lists the conventional methods that are uesd to estimate atmosphric light.

Table 1: Conventional methods used to estimate A

Parameter	Selection criterion	Reference
p=0	Highest intensity	[3]
p=0.1	Highest intensity	[1]
p=0.2	Highest intensity	[4]
p=0.1	Minimum entropy	[2]

References

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[3] Jiao Long, Zhenwei Shi, and Wei Tang. Fast haze removal for a single remote sensing image using dark channel prior. In *International Conference on Computer Vision in Remote Sensing*, pages 132–135, 2013.

[4] Chunxia Xiao and Jiajia Gan. Gan, j.: Fast image dehazing using guided joint bilateral filter. vis. comput. 28(6-8), 713-721. *Visual Computer*, 28(6-8):713–721, 2012.