

思考2: Sunny day: 全平均频率为  $\nu$ , 每个光子:  $\epsilon = h\nu$

$$S_{\text{eyes}} = \pi r^2, \quad \lambda \text{ 射光能量: } \frac{N \cdot h\nu}{S_{\text{eyes}}}$$

$$\text{假设 } \nu = 6 \times 10^{14} \text{ Hz} \Rightarrow \frac{N \cdot h\nu}{S_{\text{eyes}}} = 31.6 \text{ W/m}^2$$

$$\text{dimmmest naked eye star: } \frac{1000 \cdot h \cdot \nu}{S_{\text{eyes}}} = 3.5 \times 10^{-12} \text{ W/m}^2$$

$$1 \text{ 光子: } \frac{1 \times h \times \nu}{S_{\text{eyes}}} \approx 3.5 \times 10^{-15} \text{ W/m}^2 \text{ far less than weakest light } 10^{-12} \text{ W/m}^2$$

不行