

# *How to Use Your Eyes* *(And How Animals Use Their Eyes)*



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A photograph of a light-colored lizard, possibly a spiny-tailed lizard, resting on a ground covered with small, light-colored rocks and sparse, dry vegetation. A semi-transparent dark green rectangular box is overlaid on the right side of the image, containing white text. The text is organized into a list with three main points, each followed by a sub-point. The background image shows the lizard's head and front legs in the upper left, and its body extending towards the right. The ground is composed of many small, irregularly shaped rocks in shades of tan and brown. There are some small, green and brown plants scattered throughout the rocky terrain. A piece of dark, weathered wood or driftwood is visible in the lower left corner.

## Organization of this talk

1. How people see  
Six examples, and six morals
2. How animals see  
Twelve examples, and no morals
3. Conclusion  
Just two questions



I.

How people see

9 2 3 8 7

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Evergreen Park, Illinois  
Name: [REDACTED]  
Number: [REDACTED] Date: 9-23-67  
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It is important that there are many experiences of seeing outside the academic theory of the gaze. *How to Use Your Eyes* has 30 kinds of seeing. Some examples:

X-Rays...



Cracks in pavement...





A microscopic view of numerous sand grains of various sizes and shapes, including angular and rounded forms, in shades of tan, yellow, and dark brown, set against a dark background. A green rectangular box highlights a specific grain in the center.

Grains of sand...



A close-up photograph of a grass field. The image shows several thin, green blades of grass in the foreground, some with small, light-colored seed heads. The background is a dense, out-of-focus field of similar grass, creating a bokeh effect. A green rectangular box is drawn over the middle of the image, highlighting a single blade of grass. The text "Grass..." is written in white inside this box.

Grass...





Postage stamps...



1. How people see





Six examples of  
how people see



A.

Butterfly wings:

We look for patterns,  
even when they are meaningless









I. How people see

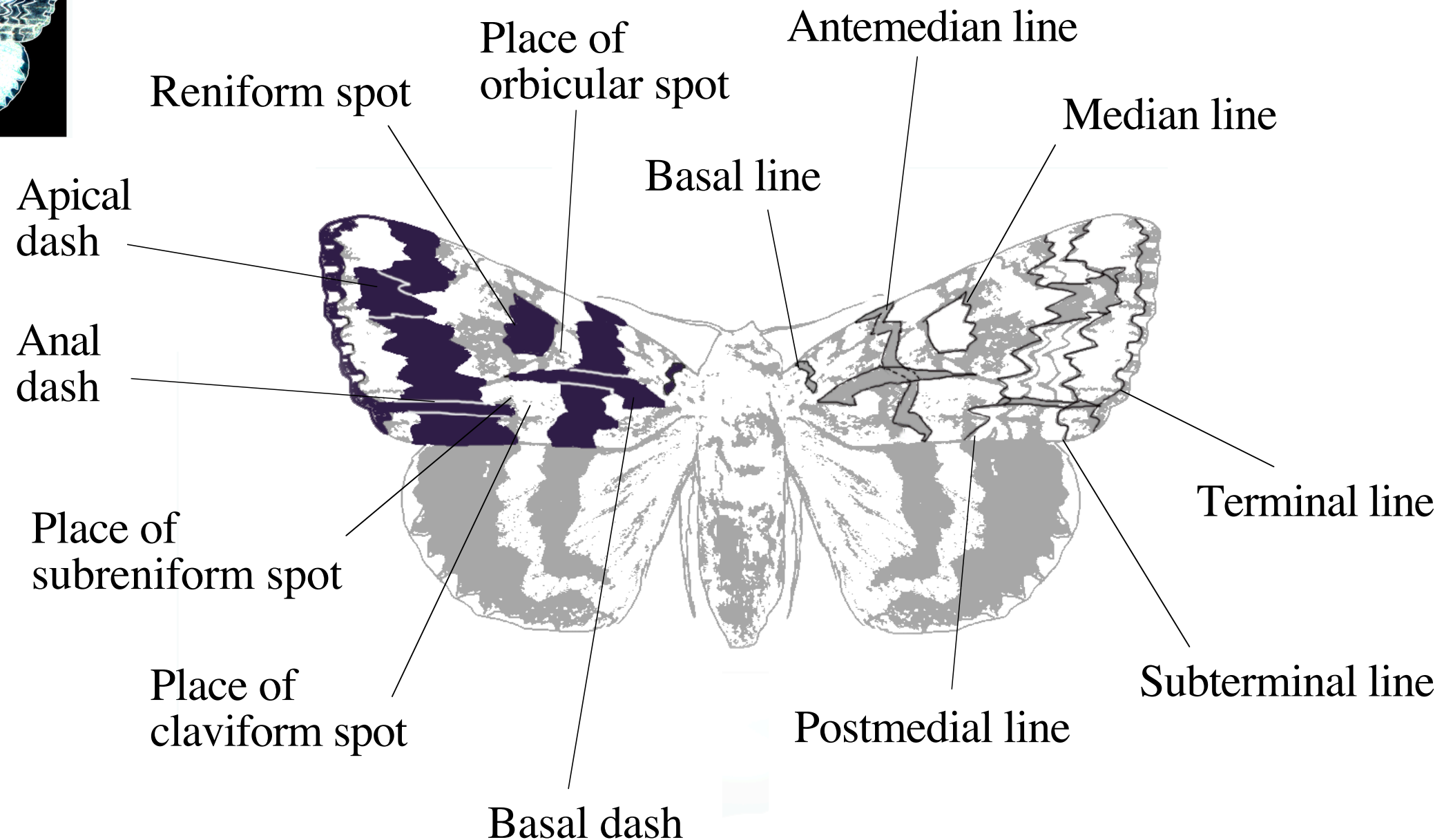
A. Butterfly wings







## Basic Nymphalid (butterfly and moth) “ground plan”



**SPOTS AND  
DASHES**

**LINES**



(We instinctively search for patterns, hoping for meaning.)





B.

Ice halos:

We miss enormous, obvious,  
blindingly bright things























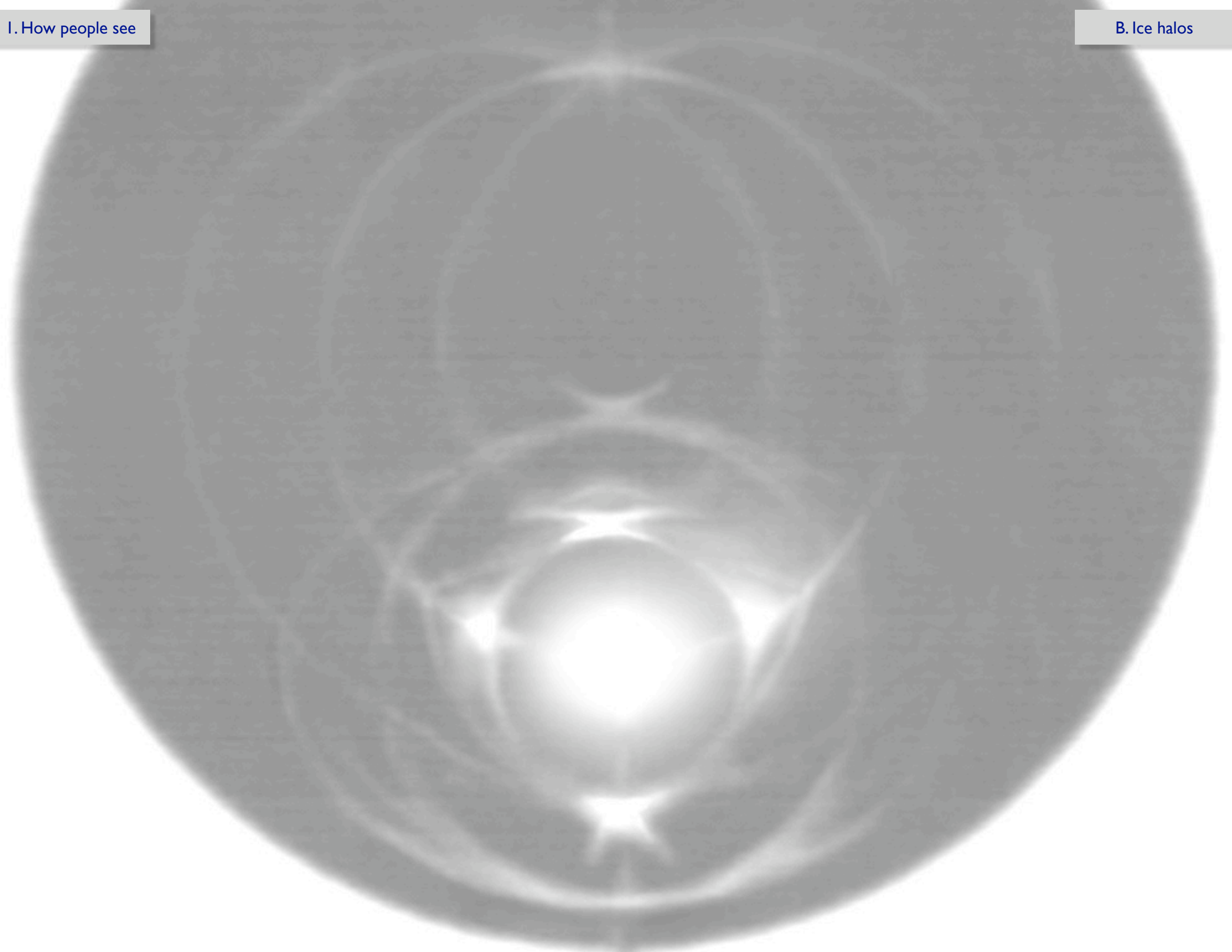




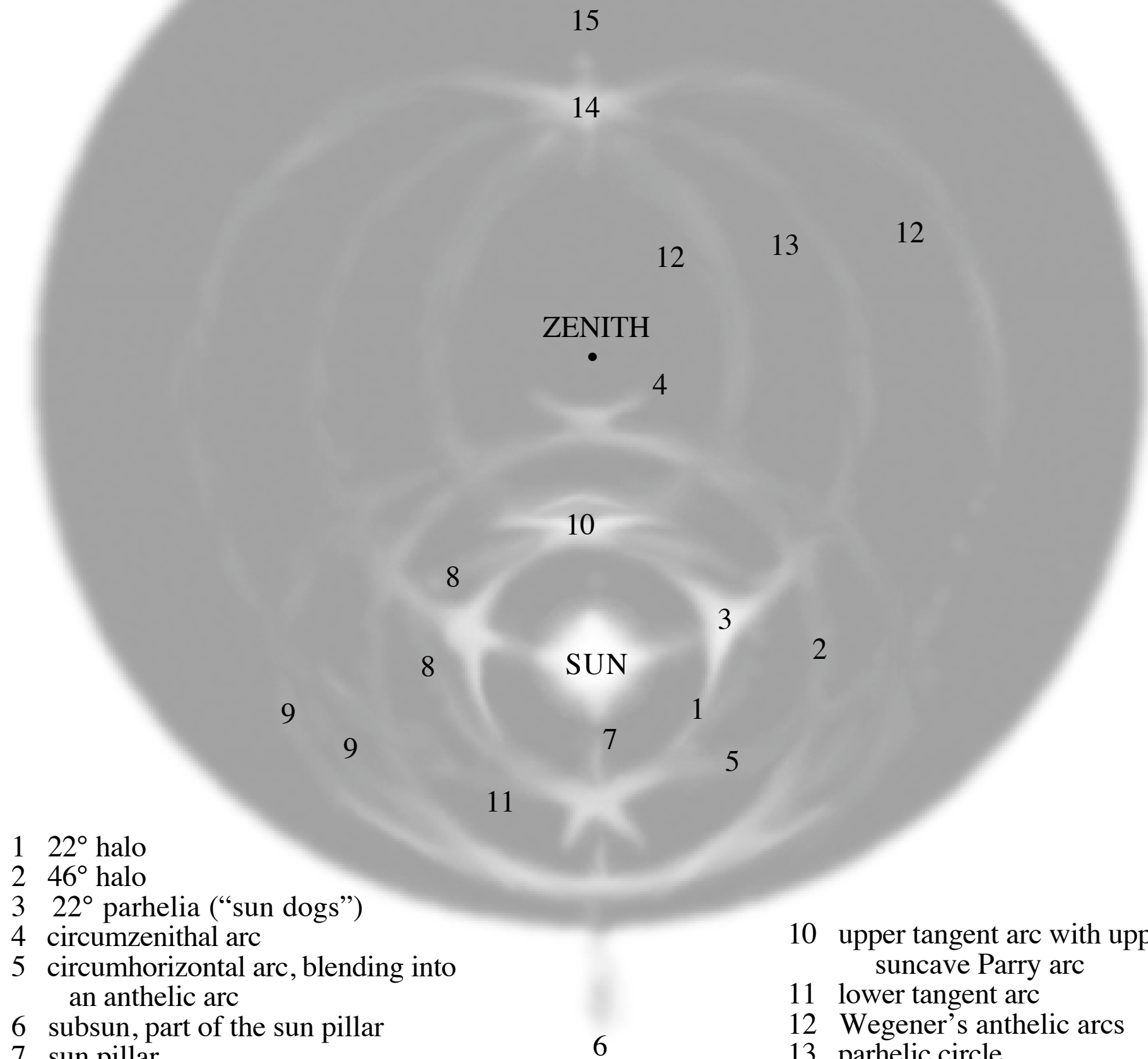












- 1 22° halo
- 2 46° halo
- 3 22° parhelia (“sun dogs”)
- 4 circumzenithal arc
- 5 circumhorizontal arc, blending into an anthelic arc
- 6 subsun, part of the sun pillar
- 7 sun pillar
- 8, 8 Lowitz arcs
- 9, 9 contact arcs to the 46° halo

- 10 upper tangent arc with upper suncave Parry arc
- 11 lower tangent arc
- 12 Wegener’s anthelic arcs
- 13 parhelic circle
- 14 anthelic point
- 15 anthelic pillar

## SOME HALO PHENOMENA



(We miss even enormous, sky-filling events.)





C.

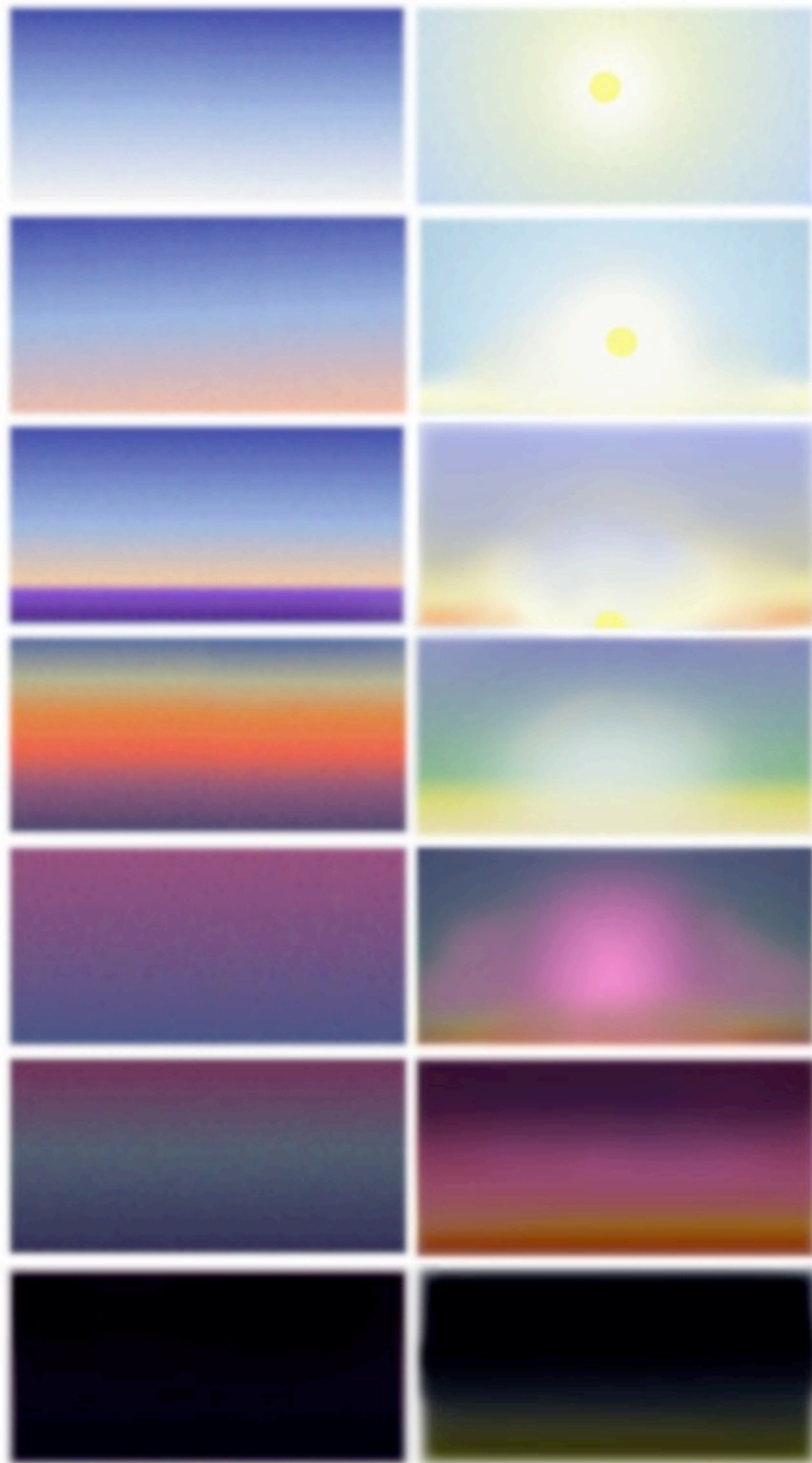
Sunsets:

They show we have very little patience





Looking East,  
away from the sun



Looking West,  
toward the setting sun