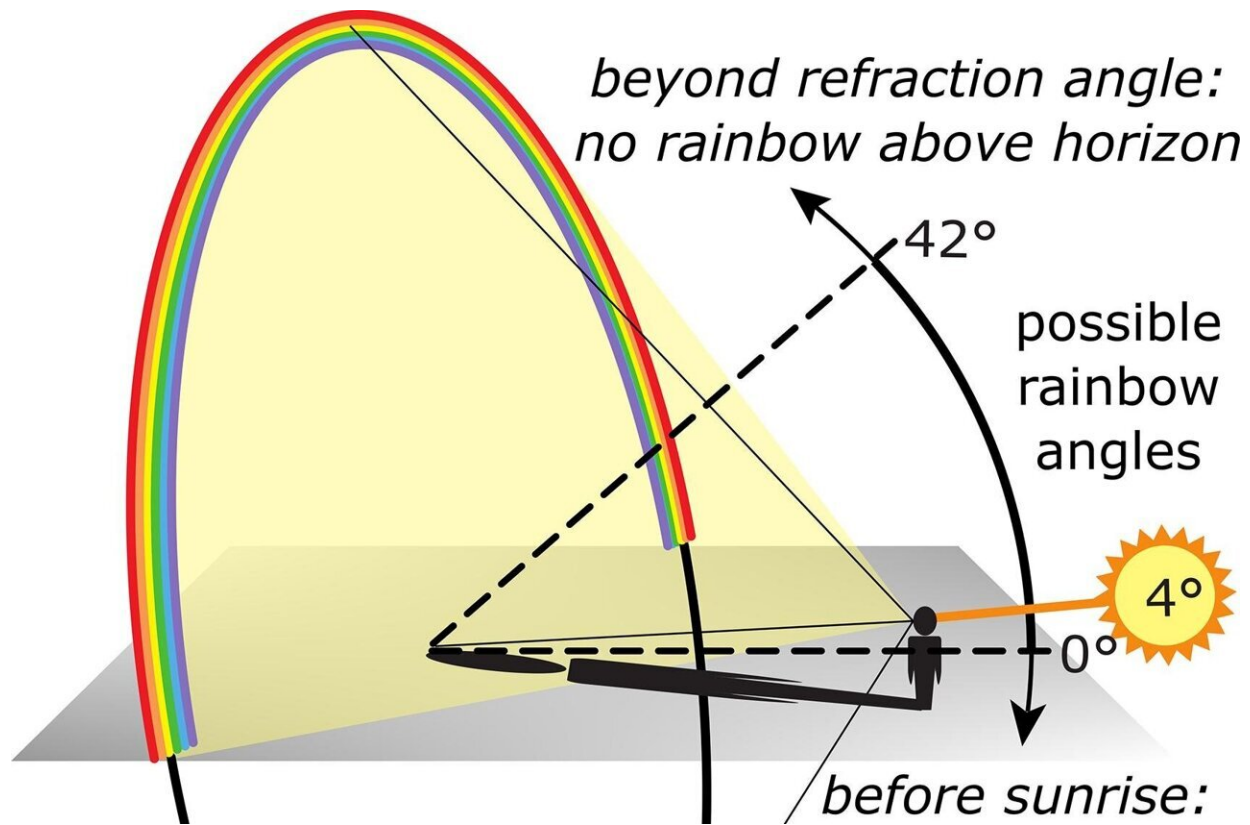


# Climate change to produce more rainbows, study finds

October 31 2022, by Marcie Grabowski



Theoretical requirements for rainbow occurrence. From ground level, primary rainbows are only visible during the day, when sun angles are below  $42^\circ$  and direct sunlight - not blocked by clouds - can be refracted from a droplet of water (rain). Sun angle determines rainbow height in the sky. At sun angles  $>42^\circ$ , light refraction is below the horizon, so rainbows are not visible from ground level. For example, a rainbow can be viewed when the sun is behind the viewer with a solar angle of  $4^\circ$ , but not when the sun is directly overhead ( $90^\circ$ ), before sunrise (

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