

Image credit: NASA

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## A Marvelous Night for a Moondance

This simple image of a waning crescent moon reminds us that we do not go alone in our annual journey around the Sun.

The Earth and Moon are partners in a very slow dance in which one partner circles the other, while both circle the Sun together. Throughout the dance both partners are half illuminated by the light of the Sun, but as the performance unfolds their view of each other continues to change. One partner sees all, then progressively less, then none, then progressively more of the illuminated half of the other, until the dance reprises again, and again.

For the other partner this experience is reversed. When Earthdancer faces her partner with the Sun at her back, she sees Moondancer fully illuminated. In the same moment, Moondancer must face toward the Sun to see her partner, only to find Earthdancer shrouded in the darkness of her own shadow.

Nature is the ultimate choreographer, and the Moondance is much more nuanced than this fairytale suggests. To see just how elegant nature really is, take a few minutes to explore how the phasing of the Moon produces breathtaking total solar eclipses and blood-red lunar eclipses.





