

# Dramatic Solar Light Incorporation

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The Ivie Creek rock art panel is located four miles west of Fremont Junction on Utah Interstate 70, high up on the mine road. The panel can be seen from the Interstate. This is on the east end of Salina Canyon where there are many habitation sites.

Ivie Creek is a solar sunset site. Its location is facing west with a high overhang; it produces a dramatic light effect between 2:00 P.M. and 4:00 P.M. The light comes on to the panel and approximately one hour later it shuts off and the sun reenters the earth on the horizon.

The light dramatizes a large four-foot shield, and aligns with four red hands and three anthropomorphic figures. They appear to be two priests and a medicine man. Without the light, it's just another good panel, but with the lighting effect, it's an overwhelming panel, dramatically expressing the power and importance of the shrine, and bringing prestige to the shaman in charge of the ceremony.

We visited the site five times, recording the light and its movement. The light changes every day by rising higher and moving over, along a diagonal line. On summer solstice, the sun is so high and to the north that it cannot reach the figures under the overhang; it hits the ground in front of the panel. Winter solstice is also a disappointment, as the light is so low that the shadow is above the figures and out of play.

I believe this to be an equinox sunset panel, the equinox being the center point. The sun travels from the equinox down to the winter solstice and must turn around and return to the equinox. It then travels to the summer

solstice and must be turned around and return to the equinox, the center being the Vernal equinox, approximately the 21st of March, or the Autumnal equinox, approximately the 21st of September. The Indian myths tell a story about watching the course of the sun and being worried about it turning around and coming back.

Ray A. Williamson explains:

Because the day-to-day motion along the horizon is so small during this period, it is not apparent to the naked eye. This was a source of grave concern to most traditional societies around the world, including many Native American groups. They feared that if the sun did not begin to move back again, the fields would remain frozen and unsuitable for planting, and all living things would die

This cycle of the renewal of life depends intimately on the continuation of the sun's yearly cycle. Because of their concern for the sun's movements at this time of year, many Native American groups developed elaborate ceremonies designed to entreat the sun to move northward again. The sun, as the Hopi Indians say, is inclined to wander, and must be encouraged to stay on his accustomed course (Williamson 1984: 39).

On Autumnal equinox, the 23rd of September 1988, the light appeared on the panel at a diagonal and the height of the shadow can only be so high; it traversed in a straight line from left to right on the panel facing sunset. On Summer solstice, the path of the shadow traveled in a concave curve. On winter solstice, the path of the shadow traveled in a convex curve. The sun rises in the east and sets in the west only on equinox. All other times it's either north of east or south of east causing a curved path.

The shadow aligned with the snake, the first hand, the second hand, the third hand, and the fourth hand. For a grand finish, the triangle of light illuminated the shield. It could be seen for five miles. What a dramatic solar effect this is!

On cross quarter, November 7, 1988, a very different kind of thing happened. The shadow was vertical on the large anthropomorphs and diagonal on the hand and shield. The shadow aligned the figure and hands. The most interesting part was: when the sun touched the earth on the horizon the shadow touched the bottom of the large shield, and the time that it takes the sun to reenter the earth or disappear behind the horizon equals the diameter of the shield (about 15 minutes). Had it taken any longer, the shield would have had to be lar-

ger. The light shut off for the day at the top edge of the shield.

On two different dates, there were two different actions on the same shield. The probability of the placement of the shield and its diameter are more than just a coincidence; it took a lot of study and watching to place the shield as to be of use in the play of light and as a possible ceremonial function.

#### REFERENCES CITED

- Williamson, Ray A.  
1984 *Living the Sky, The Cosmos of the American Indian*, Houghton Mifflin, Boston, Massachusetts.

IVIE CREEK SOLAR OBSERVATIONS

