http://www.scaas.org/2011conference

Email

Password

Login

Forgot password

2011 Conference -- New Mexico

The CAASW 2011 conference was held at the University of New Mexico in Albuquerque, NM on June 16 - June 18, 2011 at the Hibben Center for Archaeological Research, the site of the historic 1983 conference "Astronomy and Ceremony in the Prehistoric Southwest" [Papers of the Maxwell Museum of Anthropology #2]. CAASW 2011 was both a retrospective, referencing the 1983 Maxwell Conference, and had a contemporary look at recent work in Cultural Astronomy.

Methods, Architecture, and Intervisibility

North, South, East, West: Cultural Intent, Precision and Interp
Tony Hull (University of New Mexico), Carol Ambruster (Villanova Univ Jewell (University of Phoenix)

The cardinal directions, North, South, East, and West, are nearly univ by indigenous peoples. Clearly sacred attributes have been given to t directions. However, the culturally recognized or desired absolute azi the cardinal directions may be less universal. In some cases, like Pue North-South symmetry and southern East-West perimeter, or Casa Ri North-South symmetry, striking cardinality is found. We see intervisil like the North-South centerline of Casa Rinconada being reasonably al Alto. In other cases, like the positions of the Navajo sacred mountain loosely defined. We will examine the accuracy expectations we may h Southwest cultures in definition of the cardinal directions. The assum available can be employed in the research design, in turn allowing use methods to evaluate the propensity of false positives in observed card

Traditional Ritual Site Location and Geographical Consideration Hawaii Island
Michael W. Graves (University of New Mexico)

Polynesian colonists who discovered and settled the Hawaiian Islands navigators and relied upon observations of stellar phenomena to cross distances. The positioning and location of traditional ritual sites, know Hawaii also relied upon celestial features. This has been previously do respect to heiau orientation, and some heiau were said to be used for purposes. Archaeological research in the Kohala district of Hawaii Isla several different aspects of heiau location, landscape positioning, and reflect celestial considerations. Examples are presented to illustrate ea link them to traditional Hawaiian knowledge.

Ethics in Mining Tewa Language for Archaeoastronomy
R.G. Wakeland (Albuquerque, New Mexico)

Public-access bilingual Tewa-English ethnobotany, ethnogeography, et children's story books, dictionary, and Christian hymns range from 19 formats facilitate searches and compilations for archaeoastronomy kn such queries by non-tribal members must be examined for ethics. Cor 2001) linguistic fieldwork protocol requires informed consent from nat Contemporary examples of Tewa people not wanting to disclose lingui the public are work funded by the Esther Martinez native language pre (2003) and University of Washington (1977-2010).

Manifestations of Reflected Sunlight in the Southwest and Mes
Jill Mulholland (Texas A&M University)

I "discovered" a prehistoric, in situ rock that I judged to be used to sig
precursor to mirror signaling) while temporarily erecting a light art ins
National Park, located on the Rio Grande, in Texas. According to Bob M
of the Center for Big Bend Studies (at that time) and an archaeologist
was "manmade," the archaeological site a large one, with a long occup
find brought me back full circle to my undergraduate degree in Mayan
began my interest in uses of light in the Southwest and Mesoamerica.
part time academic and light artist, interested in light in all of its mani

Historically, W.D. Smithers, a Spanish speaking, lifetime resident, aut
photographer of the Big Bend area, wrote about "avisadores and cura
Chronicles of the Big Bend. Curnaderos are/were the indigenous heale
plants for curing purposes. Avisadores were usually curanderos who c
their pockets to signal (i.e. to communicate with). Smithers states tha
communications were detailed, covered many miles and was nickname
Grapevine." The University of Texas Austin, in the Ransom Center, ho
photographs (10,000 of them). The photos are images of curanderos,
signaling with mirrors, native peoples in the US and Mexico, their hom
plants that they used to heal with and other day-to-day occurrences.
mentions that Cortez could never surprise the natives who signaled ah

My current research indicates that "line of sight" signaling was used in
sites from Chaco Canyon, New Mexico, to Paquime or Casas Grandes,
Aztec, Maya and Olmec possessed mirrors made of pyrite, obsidian an
used for self-reflection, scrying, adornment in shields, pectorals and h
worshipped Tezcatlipoca, who wears mirrors and has an obsidian mirr
the one bitten off by the earth monster. Mirrors represent an entrance
marked on ball courts and architecture. Karl Taube identifies many of
meanings of mirrors from the murals at Teotihuacan, (in Art, Ideology
Teotihuacan), that Smithers did.

Arizona/Southwest

An Archaeological and Geological Study of Three Gnomons at t
Archaeoastronomy Site in Northern Arizona
Todd W. Bostwick (Chandler, Arizona), Paul A. Lindberg and Ken Zoll (
Archaeology Center)

For several years, Ken Zoll has been studying the archaeoastronomy s
Heritage Site located on the Coconino National Forest in Northern Ariz
site, two shadow casting rocks, or gnomons, interact throughout the
of petroglyphs pecked into a sandstone cliff, creating a light and shad
has similarities with Pueblo calendars. In addition, a third rock protruc
creates a shadow pattern that is remarkably similar to the outline of t
Mountains, a mountain scared to Pueblo and other Native American gr
because the three gnomons are located high up on the cliff, close insp
not been possible until recently, when a free-standing scaffold was se
accommodate detailed examination of the shadow casting rocks. This
the results of an archaeological and geological study of the three gnor
revealed flaking to the gnomons to enhance their shadow casting prop
the placement of a number of small stone wedges around the protrudi
ensure they stayed firmly in place. Our study has demonstrated the in
examination of shadow-casting rocks to record their archaeological an
characteristics, which can provide positive or negative evidence for th
as gnomons. Determining that humans modified naturally occurring sh
features that interact with petroglyphs can help support arguments th
interactions with petroglyphs were intentionally designed rather than
coincidental.

Astronomy, Water Sources, and Religion
David Johnson (Poughkeepsie, New York)

In 1996 while locating groundwater sources for Nasca, Peru I realized
inhabitants mapped aquifers that flowed independent of the Rio Grand
drainage tributaries with geoglyphs, also known as the Nasca Lines. In
habitation, cemetery and ceremonial sites were located where these a
the river valleys. While many of the geoglyphs mapped the flow of the
shapes documented astronomical events such as the solstices and equ
feature associated with these locations is ritual sites. In each case, as
observatories and ritual sites were located over aquifers.

Eventually I expanded my research along more than a thousand miles
coastal desert and found the same correlation existed. Additional surv
southwestern United States have shown a very similar relationship ex
considers the harsh nature of these parched environments it is only na
ancient residents to study, locate and document aquifers and seasona
quest to locate water and determine seasonal changes rituals played a

	This paper will discuss a variety of sites in both Peru and the southwes where these features are found in conjunction with one another.
	**Sears Point: Opportunity for Archaeoastronomy Research** *Evelyn Billo and Robert Mark (Flagstaff, Arizona)* In an Arizona recording project for the BLM, a massive database of 28 been taken of rock art at Sears Point. Fifteen contemporary tribes cla affiliation with this site. Field observations associated with photograph notation of horizon response where relevant, and particular features o find remarkable. Tom Hoskinson, John Fountain and others have mad archaeoastronomical claims in this area. While it is not our purpose to archaeoastronomical alignments, we express the methods we use for survey. For a small number of rock art panels (~5), we feel that spec suggestive for further observations. We recommend specialists consid further research in cultural astronomy.
	Mesoamerican - Southwest Connection
	**Stars and Sacrifice in Greater Mesoamerica and Beyond** *John B. Carlson Ph.D (The Center for Archaeoastronomy, College Park* Venus or "Great Star" as a male deity of warfare and sacrifice was we Mesoamerican tradition at least by the Late Formative period – approx millennia ago – and perhaps as far back as the Middle Formative (ca. Almanacs, based on the resonances between the pervasive 260-day " and canonical periods for the solar year (365 days) and synodic period days), were used to regulate these practices, which included "astrolog divination. Five are found in the approximately 16 surviving pre-Colun time across Greater Mesoamerica, various conventions for the represe and its denizens including stars, the Sun, Moon, and planets (Venus in evolved. The author has cataloged a wealth of examples from all med these Star and Great Star representations – with their Full, Half, embo personified variations – into five families, with variations, for comparis presentation will briefly introduce this classification system and then c specific examples of stars in the context of human sacrifice, some in t sacrificial instruments.

The Morningstar/Rain/Maize complex in the American Southw

Polly Schaafsma (Santa Fe, New Mexico)

This paper reviews Morningstar iconography in the art and religion of
Southwest as a peripheral manifestation of an ancient and widespread
Mesoamerica. In Mesoamerica, the timed disappearances and reappe
became a metaphor for life cycles of both maize and humans. As a be
was widely associated with both war and death as well as with the con
of renewal. Its associations with a war/fertility complex among maize
throughout Meso and North America was/is pervasive. In late pre-con
and kiva murals Morningstar imagery is closely linked to both warfare
associations with the Horned Serpent point directly to Quetzalcoatl an
Mexico. In addition, the Knifewing/Morningstar configuration in Puebl
identified with scalps acquired in conflict that, in turn, functioned as ra
having explored these associations in earlier publications, this paper s
the symbolism incorporated in this conceptual packet, thus furthering
of the complexity of a single celestial entity and how this drama was p
distant Southwest.

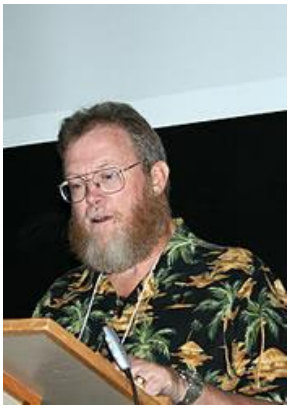
**As the Macaw Flies: Mesoamerican-Southwestern Interaction i
Cosmology, and Materials**

Jonathan E. Reyman, Ph.D. (Illinois State Museum, Springfield, Illinois

The recent discovery of cacao remnants in Chacoan cylindrical jars is j
example of evidence for Mesoamerican-Southwestern interaction alon
parrots, copper bells, pseudo-cloisonné invested materials, pyramid m
architectural features, pyrite mirrors (?), astronomy and cosmology, a
Indeed, George H. Pepper suggested a connection between the Chakc
Chacoans of Pueblo Bonito in terms of the shapes of the cylindrical ve
1920*Pueblo Bonito* report. The evidence for cacao drinking at Chaco C
idea of a connection between the cultures that manufactured the vess

This presentation is a necessarily brief overview of Mesoamerican-Sou
interaction with a focus on astronomy and cosmology: astronomical p
and recorded in both areas, the uses to which such data were put in d
of the underlying cosmology which shaped these activities and which,
by the observations and resultant thought.

The author founded The Feather Distribution Project in 1982 in respon
man's request for macaw feathers. Since then, we have distributed m
macaw, smaller parrot, and wild turkeys to all 31 Pueblo villages *free-*
the course of this project, which is ongoing, a great deal has been lea
Mesoamerican-Southwester interaction across a wide range of issues a
notably the importance of macaws, which were not and are not indige

	Southwest but were all imports, in one form or another, from Mesoam Puebloan cosmology is also briefly discussed.
	Chaco - Mesoamerica
	**Mesoamerican Pochteca and "The Chaco Phenomenon"** *Theodore R. Frisbie (Southern Illinois University)* Astronomical and cosmological counterparts of Mesoamerican ideology evident in Chaco. Past suggestions and recently researched evidences presence at Pueblo Bonito clearly demonstrate that both highly specifi behavioral correlates are extant. The key motivating factor for long-di establish a northern outpost in Chaco Canyon relates to a shift from ja the elite "God Stone" and a previous awareness of the abundance of h turquoise within the American Southwest. This change at ca. 900 AD c onset of the Early Post-Classic (Toltec Horizon). Highly germane to thi current widely accepted notion of "Greater Mesoamerica" wherein con ideology, and more, were commonplace from Pre-Classic times throug Mesoamerican cultural sequence. Toltecan researchers note the undou pochteca at Tula and the acquisition of exotic elite goods extending fr Southwest (turquoise) in the north to Panama (gold) in the south. The whether the militaristic Toltec or a more northerly Mesoamerican poch established themselves at Chaco will be addressed.
	**Heaven on Earth: The Chaco North Road** *James M. Copeland (Farmington, New Mexico)* Chaco and post-Chaco "roads" are essentially large and sometimes ela engineered trails that accommodated, facilitated, and controlled certa during the Pueblo II-III periods (ca. AD 900 -1300) across the Colorad Plateau. Beginning at Pueblo Bonito in Chaco Canyon and extending c length, the North Road (ca. AD 1050 -1150) is one of the few truly reg kind in the San Juan Basin of northwest New Mexico. Previous archae has speculated on the religious role that the roads may have played in past, including the North Road as a symbolic representation of Chacoa that Chaco roads connect a ritual landscape in part defined by religiou architecture. Recent research considers that at least part of the North was to mirror on earth what was present in the night sky at a time of importance.

"A Brilliant Star Arose in the Southeast" Migration, Stellar Navi Chacoan Architecture

Andrew M. Munro (James Cook University) and J. McKim Malville (Univ and James Cook University)

Among the Bonito Phase Great Houses within and near to Chaco Cany architectural traditions with astronomical associations are evident. Th South-Southeast (SSE) orientation was predominant prior to A.D. 100 1000 and 1060, the construction of increasingly accurate architectural cardinal directions of North/South and East/West (NS/EW) began at H Pueblo Alto. During the same period, SSE-facing Chetro Ketl complete cardinal alignment at Chaco; it is positioned due east of Pueblo Bonito A.D. 1075, Pueblo Bonito's gradual reorientation from SSE to precise E alignment was completed. Two of the Late Bonito Great Houses that w constructed A.D. 1100-1140 (Tsin Kletsin and New Alto) complete N/S alignments. All of the other Late Bonito Great Houses at Chaco are po to workable solstice horizon calendars. Some Great Houses manifest t traditions, but the "halo" Great House of Bis sa ani is the sole example incorporates all three. Bis sa ani includes both cardinal N/S E/W and S and is also well positioned to act as a calendrical station for a June sol horizon marker.

The astronomical associations of the cardinal directions and solstice ho explicit, and cultural pertinence for both is well documented in the eth record. The SSE orientation has been more enigmatic. We expand up proposal that the front-facing SSE orientation is most plausibly linked traditions and ancestor veneration. We provide an overview of alterna considered for this orientation. We discuss the ethnographic evidence migration proposal in greater detail, and present a model for use of a device to accomplish stellar navigation to the southeast. The presente consistent with the Hopi Snake Clan migration myth documented by M provides a plausible method to account for centuries of ancestral Pueb architecture to the SSE.

The Enigma of Fajada Butte

J. McKim Malville (University of Colorado)

One of most remarkable features of Fajada Butte is the massive ramp its southwestern side. At the top of the ramp is a fire reddened slab b side. Another firebox was present at the base of the ramp. A road lead the ramp toward the great kiva in Marcia's Rincon, and fires in those b been visible in that great kiva, but probably not at other great kivas o the canyon. Its meaning could be similar to that of stairways in the c have been more symbolic than practical and expressive of shamanic t descent. Judging from its masonry style and associated ceramics, the have been contemporaneous with the Classic Bonito Phase and may h with the carrying of fire to the firebox at its top, perhaps similar to a c at the fire pit at Chimney Rock prior to the arrival of Chacoan influenc the Zuni New Fire Ceremony.

The upper terrace of Fajada Butte contains the sites 29SJ 296 and 29 30-35 rooms including one circular kiva. The presence of manos, utilit cobs, and hearths indicate these remote rooms were used as residenc provided access to a number of petroglyphs, which probably do not pr There are spirals, intertwined spirals, a snake, and two rectangular fig shadows pass at the solstices and equinoxes, although apparently nor interactions of light and shadow uniquely marks those days.

The majority of the ceramics from the rooms comes from the A.D. 12 Verde Black on white. The wall construction of the room does not cont elements in the form of chinking stones or core and veneer constructi Great Houses in the Canyon. The walls of the rooms resemble those o in which maize cobs have been dated to AD 1190. Since the construc predominant ceramics suggest that these rooms were primarily the pr Chaco re-population of the canyon, the various petroglyphs may there later period.

The sandstone slabs that produce the "sun dagger" are 2-3 meters hig approximately 2 metric tons. The consensus of geologists who have in that the slabs are the results of a natural rock fall, part of a single blo cliff, toppled over, and split along bedding planes. Similar sets of thre slabs are found elsewhere in the canyon. The spirals behind the slabs associated with the occupation of the upper ledges of the butte as a re 12th and 13th centuries. The majority of the ceramics are Mesa Verde for 56% of all white ware. Gallup B/w, the "ceramic hallmark" for the Phase, accounted for only 5.6%.

When the area was repopulated in the 1200s the ramp was apparently time to access the rooms on the upper ledge. These rooms may have women and children during threatening times. The last half of the 13t to have been unsettled and dangerous times. Kohler has provided evi kidnapping of woman at that time. Sometime around A.D. 1280, some and children were violently killed at Castle Rock Pueblo, their remains among the ruins of the village. The Castle Rock Pueblo had been built mind, and healed bones of some of the skeletons revealed that this fi pueblo had not been the first.

It is not unusual for uncertainty and danger to provoke an increasing powers that reside in the heavens and appearance of shamanism with symbolism of spirals and circles. Stein and Fowler describe the rooms "pinnacle" structures, briefly occupied for reasons of safety. The room members of the class of defensive settlements and refuges of late Pue those on remote spires in Kayenta as described by Haas and Creamer defensive settlements of Castle Rock, Sand Canyon, and Goodman Po

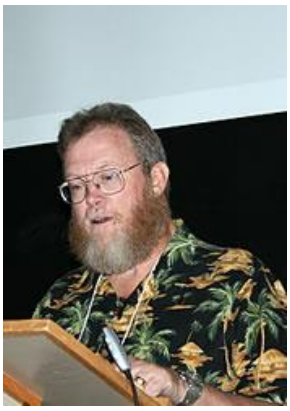
The spiral behind the three slabs clearly marks June solstice, which is indisputably marked at the three-slab site. The date of solstice could h by the primary calendrical station at Piedra del Sol, which is visible fro The diagonal pecked line crossing the larger spiral may parallel the sh by the sun around May 14-15, marking a planting festival. It is highly line was intended to mark minor lunar standstill.

Navajo Ethnoastronomy

Mesoamerican Cosmology in the Dinétah
Michael Aljets (Aztec, New Mexico)

The presentation examines two ceremonial sites in northwest New Me appear to offer visual experiences of aspects seen in Mesoamerican co

Site one reflects the Mesoamerican theme of the "dawn of Life" noted referred to as the long count, and equivalent to the Gregorian date of BCE. The site has Basketmaker petroglyph anthropomorphs, but a figu the group is the focus of attention. It appears that the anthropomorph reflect the three hearthstones of creation. These three hearthstones a the stars Alnitak, Rigel and Saiph in the constellation of Orion. The tria M-42 nebula which is a symbol for the first fire of creation. These astr reflect an ethnohistorical event of creation where the first fire is drilled sunrise on August 11, the sun causes an arrow-like projection to point anthropomorph where the first fire was created.

	Site two is a sandstone boulder located on a talus slope. It is about 80 120 cm in length, and has a tunnel bored through it three cm in diam in length. On the winter solstice, at approximately 2:15 p.m., the sun bore. Due to weather problems, the documentation is poor, but it app shines through the bore when it is at an azimuth of 211° and an altitu The location of the sun at this time is significant for the position of the vertical to the horizon. This observation can be made on a desktop pla turning off the daylight. It would appear that those who created this s to document a key symbol of Mesoamerican cosmology – the World Tr
	**So' Diné: A Review of Navajo Astronomy in Dinétah** *James M. Copeland (Farmington, New Mexico)* In Dinétah, the genesis homeland of the Navajo in northwest New Mex culture change and continuity abound in the archaeological record bet 18th centuries. Navajo astronomical symbolism is one line of archaeo during this dynamic and at times turbulent period of Navajo history. T present most noticeably, although not exclusively so, in rock art, the p to the more well known sandpaintings. A review of the range and div astronomical elements in Dinétah rock art and other forms is presente seasonality of their creation is considered.
	**The Navajo Landscape and Archaeoastronomy** *David M. Brugge (University of New Mexico)* Navajo country is extensive. Traditionally it is bounded by four sacred moun is filled with many places defining a holy landscape that changed through th population distribution has shifted in response to weather patterns and relat peoples. The traditional stories associated with the geography include some features astronomical phenomena. The most suggestive of these accounts is that of Woman, the one fully benign deity in The Navajo pantheon.
	Northern San Juan Region

Evidence of Moiety Organization at Jackson's Castle, Southwes
Robert Bernhart (Cortez, Colorado) and Scott Ortman (Santa Fe, New

This paper describes an equinoctial alignment at the Pueblo III site of
southwest Colorado, and explores what this alignment might have me
community that occupied the site. Jackson's Castle has an observed e
alignment between a two-story structure within the site and a promin
approximately 250 meters to the east that is capped with a large, upr
shrine. We interpret the significance of this alignment through the len
ethnography, following recent studies suggesting that Tewa ancestors
Colorado. In his discussion of Tewa dual organization, Alfonso Ortiz su
change in seasonal leadership originally took place around the equinox
equinoctial alignments are one of the symbolic bases of the moiety sy
of the change in moiety chief, as indicated by the equinoctial alignmen
motion changes in the ritual and subsistence activities of the commun
sun is moving rapidly with respect to the horizon around the equinox,
which the shrine occurs is immovable, we conclude that the builders o
intentionally placed the village so they could mark the equinox in a pu
suggests an attempt to link community sociopolitical organization to c
the cultural landscape.

An Ancient Observatory at Salmon Pueblo
Larry L. Baker (Bloomfield, New Mexico) and Brooks M. Marshall (Azte

Implications have been suggested that observations made by prehisto
were incorporated into the construction of Ancestral Puebloan structur
proposed that architectural floor plans of several buildings in Chaco Ca
and its outliers are the result of astronomical geometry being used. S
have been interpreted for Salmon Pueblo, a Chacoan satellite on the S
River. Continuing research on archaeoastronomy at this site has reve
that functioned as an observatory for making celestial observations. I
constructional features as related to astronomy are presented to supp

The Solar Program at Aztec Ruin Great Kiva
James Farmer (Virginia Commonwealth University)

The restored Great Kiva at Aztec Ruin, New Mexico provides a working investigating potential and previously unrecognized solar alignments b Chacoan Great Kiva designs. Similar solar alignments are well docume ancestral Puebloan Great Kivas, particularly the well known Casa Rinc Chaco Canyon. At Aztec Great Kiva, architectural features such as the uneven placement of windows and the offset central firepit and associ opening, are consistent with other Great Kivas, but reflect design prin and somewhat unexplainable, with the general overall symmetry and most Great Kiva plans. However, specific observable and documented light and shadow cast through and upon these features on solar equin presented herein, suggest that these seemingly "anomalous" design fe reflected clear observance of seasonally specific solar events, as well a choreographing related ritual activity. On certain specific days, rays of the kiva interior through windows, doorways or the ceiling opening, hi directing attention to specific interior kiva features, such as wall niche firepit. Early historic Puebloan ethnographic sources provide compellin ritual activity conducted in kiva settings, associated with similar solar specific calendric or seasonal cycles. J. Walter Fewkes, for example, re initiating and coordinating ritual activity by observing the movement a specific solar light patterns cast upon interior kiva floors or walls. The at Aztec and related Great Kivas suggest a continuity of spatial functio extending back to at least the Chacoan Period in the Southwest, and p deeper insight into specific ceremonial activity practiced within the Gr presentation considers possible implications of the documented solar e associated interpretive problems.

Utilization of Ethnographic Sources for Possible Interpretation Based Archaeoastronomy Sites in the Northern San Juan Regio
Virginia S. Wolf (Chico, California) and Edward Wheeler

The authors have spent years studying archaeoastronomy sites throug Corners area and have gained an understanding of how the ancient Ba Puebloans used light and shadow patterns to pinpoint the solstices. M sites incorporated spiral petroglyphs to demonstrate the solstice, but i additional auxiliary glyphs and pecked depressions were utilized to me the accuracy of the solstice display.

Five very accurate winter and summer solstice sites have been selecte demonstrate some basic mechanics utilized to display or mark the sol were created more than a thousand years ago. Because of similarities patterns began to emerge that suggested elements of compulsive mag

elements were confirmed through ethnographic research and dialog w
elders.

In this high desert environment the growing season is short, rainfall is
farmers are/were always nervous about their potential harvests. Tod
carrying a lucky rabbit's foot or some other lucky object, it will be sho
farmers employed ritual depictions in their solstice displays in hopes o
harvest.

Methods in Archaeoastronomy

Archaeoastronomy Methodology: Landscape Context and Long Sighting at the Big Horn Medicine Wheel, WY as an Example of Extended Site Surveys, Documentation, and Protection

Ivy Merriot and Robert Bargatze (Montana State University)

The Big Horn Medicine Wheel (BHMW) is a nationally protected histori
sacred site. The Wheel's astronomical attributes were not a factor in t
astronomical nature of the Wheel has been under criticism for over tw
Critics believed that the lack of precision of the Wheel's cairn-to-cairn
made it impossible to determine which stars were really aligned with t
The research on these stellar alignments, based on broad pile of rocks
appeared suspect. Research previously done at the Wheel did not take
long base-line sightings, yet a solution to this critique of precision can
by applying the basic archaeoastronomical methodology of long base-
outlying cairns through the center Wheel complex.

John Eddy proposed the first stellar alignments at the Wheel in 1974 a
later Jack Robinson modified that seminal work. Fifty years earlier, in
anthropologist George Bird Grinnell had described, measured distance
directions to a set of distant, outlying cairns surrounding the BHMW. C
may no longer have been present when Eddy and Robinson analyzed t
cairns were likely used to build the *protective* wall around the wheel b
intentioned preservationists who saw significance only in the central w
outlying cairns are added back in to the context of astronomical possi
the long repeated critique concerning angular inaccuracy of stellar sig
increased precision affordable through long baseline sighting. This und
importance of surveying and documenting the contextual, extended la
and shows the usefulness in long base-line sighting as an archaeoastr
methodology. This talk will discuss the specifics of the Big Horn Medic
example of the importance of the general methodology of long base-li
Documenting the larger landscape beyond the most obvious aspects o
important when considering preservation based on possible astronomi

Cultural Astronomy in the Field
Jarita C. Holbrook, Ph.D (University of California, Los Angeles)

Gathering information about the sky from people living today can be a procedure. Who do you ask? How do you weight what people tell you? one must have a good enough command of the night sky in order to n alluded to by people. In addition, one must have a general understand tend to know about the night sky and how they use the night sky. This crash course on a few useful techniques for collecting sky information knowledge from groups of people living today.

Open Session

The Hooper Ranch Pueblo Sun Dagger Shrine
John A. Ruskamp, Jr. (Naperville, Illinois)

Located above the Little Colorado River in east-central Arizona, a prev natural rock formation allows a pointed shaft of sunlight to illuminate petroglyphs during the summer months. At the summer solstice, this divides a spiral glyph in half, as it links several other images together from native folklore about Monster Slayer and his younger brother Chi Based on the estimated age and its associated images, this site may h inspiration for the creation of a highly similar sun dagger located upon Chaco Canyon. Additionally, on top of an overhanging boulder, a drille head of a symbolic stickman petroglyph. In ancient times, this fabrica prayer-sticks offered to the Water Clan god, Panaiyoikyasi, as a sands deity was found buried nearby in a special kiva crypt aligned with the shrine.