

Mystery of Chaco Canyon (1999)

Documentary video produced and directed by Anna Sofaer
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One of the most intriguing complexes of archaeological remains in North America is that associated with Chaco Canyon in present-day northwestern New Mexico. The grand architectural features of Pueblo Bonito, Chetro Ketl, Pueblo Alto, Kin Kletso, Salmon Ruin, and the other great houses in the region are awe inspiring. Their size and fine craftsmanship indicate not only extensive labor and skill in their building but also intensive planning and an appreciation for aesthetic appeal. Likewise the great kivas and extensive Chacoan roads signal special functions in Chacoan society.

Wonderment in these remains is heightened by the setting in which they are found, an unobtrusive canyon in a now-remote region often described as dry and desolate. Together, these factors amaze us, sparking our curiosity in the indigenous people who built and used these fantastic structures while surviving in a harsh environment. In *The Mystery of Chaco Canyon* we learn about yet another astonishing aspect of Chacoan remains—their astronomical associations. For more than a century, archaeologists have studied the remains in and around Chaco Canyon in attempts to understand who the Chacoan people were and how they thrived. Their efforts have resulted in mountains of data derived from the analysis of artifacts, ecofacts, chronological charts, architectural plans, regional maps, and human remains. These traditional bits of archaeological evidence provide clues for piecing together interpretations of the Chacoan past.

Today, new data, increasingly complex analyses, and intricate modes of interpretation are being applied to develop deeper insight into the Chaco phenomenon. In *The Mystery of Chaco Canyon*, filmmaker Anna Sofaer investigates this phenomenon through a coordinated analysis of astronomical associations with features in and around Chaco Canyon. The widely held view of modern archaeologists is that Chaco served as a ritual or sacred center for communal activities by and for a regional population of Puebloan people.

Evidence for this derives from studies of architecture, artifacts, burials, spatial associations, and specialized features, such as roads or pathways. In this video, archaeologist Mike Marshall and others provide insightful discussions of the architecture of the Chacoan great houses. The monumental stature of these structures is clearly evident in remains of these now-ruined buildings. As noted in the video, the buildings' exteriors conveyed meaning through their massiveness and placement in the landscape. Their nonresidential nature is shown in touring through the almost sterile maze of dark, interconnected rooms that formed a seeming hollow core to the overall massive structures. Discussion of the middens of Pueblo Bonito and their general contents also emphasizes the nonresidential focus of the great houses. The ceremonial association of Chaco is highlighted in discussion of the kivas and roads of Chaco. The great kivas and numerous smaller kivas clustered in the great houses were clearly centers of ritual and ceremony, as analogy with modern and historic

Puebloan use of kivas shows. The grand size and large number of the Chacoan kivas indicate ceremony beyond the historically known.

Likewise, the magnificence of the wide and straight pathways that radiate out from Chaco and through the region highlights the ceremonial nature of Chacoan society. The direction, form, and archaeological and landscape associations of the Great North Road, which is shown and discussed in this video, do not suggest trade or other mundane transportation functions but, rather, spiritual significance. The large middens filled with broken pots suggest ritual offerings, an interpretation fitting historic Puebloan beliefs. Well integrated with these discussions of more traditional archaeological data is the real subject of this video—archaeoastronomical interpretation. Through the Solstice Project, video director and producer Sofaer has been involved with archaeoastronomical studies in Chaco since 1977, when she first discovered the now-famous Sun Dagger petroglyph on Fajada Butte. This and other petroglyph symbols spurred her to seek other possible astronomical markers in Chaco Canyon. After a succinct review of the solar associations of the Sun Dagger set of petroglyphs, the video effectively spotlights alignments of the Chacoan great houses. Sofaer (assisted by others, including indigenous persons of Puebloan descent, specialized in geodetic survey, archaeology, history, ethnohistory, and anthropology) has identified solar and lunar alignments for many of the central Chacoan and outlying great houses. Solar alignments have been found at four of the great houses in or adjacent to the canyon. The paired alignments of Pueblo Bonito-Chetro Kettle and Pueblo Alto-Tsin Kletzin intersect to form a complex of four major great houses. Seven other great houses that do not share these solar associations align with cyclical lunar risings and settings on the horizon at their minimum and maximum extremes. (This 18.5-year lunar cycle of the moon is also marked by shadows on the Sun Dagger spiral.) At least four of the houses with lunar associations are linked to the central complex of great houses through their astronomical alignments.

The astounding integration of complex knowledge of the skies with the construction and use of numerous structures and features in and around Chaco Canyon implies a culmination of many generations of indigenous observation and learning. The astronomical associations identified by Sofaer and others raise questions about the mystical nature of Chaco Canyon and the role of astronomical knowledge in the ancient belief system. The integration of such knowledge into large-scale construction projects, clearly planned and erected through intensive and extensive coordinated efforts, causes us to wonder about the sociopolitical organization that once must have dominated Chacoan society.

Research such as that described in this video shows how we have yet much to learn about past societies. In addition, it provides an example of new ways of investigating the prehistoric past. The complex archaeological and astronomical interpretations advanced in *The Mystery of Chaco Canyon* are clearly articulated and presented in a highly stimulating and enjoyable format. Supporting views from a variety of researchers and native peoples are offered along with compelling photography and useful visual models and computer simulations. Reflections on different data sets

(architectural, archaeological, and astronomical) are brought together in a succinct and clear manner through a well-written script, focused individual commentary, and quality narration (by Robert Redford). I only hope that additional works like this will continue to explore related topics, perhaps addressing questions about other features at Chaco and outlying communities. One is left wondering whether the other major Chacoan structures have similar astronomical associations, and, if not, why? What other factors may have led to their construction and perhaps differential planning and use? Is there evidence of the incorporation of this ritual and astronomical knowledge in everyday residential communities? The detailed professional content and artful visual quality of this video (characteristic of Bullfrog Films) make it especially useful for educational purposes. Although the focus on archaeoastronomy makes this video most directly suited for a specialized course in that subject, its integration of astronomical data into discussion of Chaco as a prehistoric ceremonial center also makes it appropriate for general and regional courses in prehistory. This video also promises to offer much to other courses through encouraging discussion of Puebloan cosmology, indigenous interpretation and use of the past, human perceptions of space, and a wide variety of other anthropological, astronomical, historical, and humanistic topics. Very timely, as coordinated research continues to strive for deeper understanding of the fascinating Chaco phenomenon, this wellcrafted video will be highly welcomed by teaching archaeologists as well as the region's indigenous peoples and the general public interested in the prehistory of the American Southwest.