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## ***Cosmovisiones/Cosmovisões, 3(1) Abstracts***

**Martz de la Vega, H., & González Morales, C. (2021). Las orientaciones de las Iglesias en el sureste Mexicano. Tres casos en el Estado de Tabasco: Oxolotán, Tenosique y San Juan Bautista-Villahermosa. *Cosmovisiones/Cosmovisões, 3(1), 15-46.***

Hans Martz de la Vega & Cecilia González Morales

The orientations of the churches in southeastern Mexico. Three cases in the State of Tabasco: Oxolotán, Tenosique, and San Juan Bautista-Villahermosa.

### Abstract

One of the most deeply rooted ideas that we have memory in Mexico about the progressive emancipation of the pre-Hispanic peoples is that the temple was replaced by the church, so there was a syncretism between both cultures, which facilitated, to a certain extent and in some places, the permanence of certain dates of the year that had been privileged by Mesoamerican society. Some customs and their uses, were also maintained and proof of this were some complaints such as those made by Bishop Diego Vázquez de Mercado, Doctor Pedro Sánchez de Aguilar, Franciscan Bernardo de Lizana and Joseph María Ortiz. Another idea, and that goes hand in hand with the previous one, has been that the Spanish colonizers reused the traces of some pre-Hispanic settlements in order to accelerate the establishment and operation of the Colony. Thus, the pioneer Franz Tichy, tried to show that the orientation of some churches and layouts of some modern towns of the Puebla-Tlaxcala valley, in Mexico, were actually the same as those of the pre-Hispanic temples and layouts. In fact, over the last five decades, researchers like Tichy have shown that Mesoamerican temples were oriented with calendrical-astronomical principles and that they shared the same counting system. Also, but to a lesser extent, there have been studies on the layouts and their orientations.

This paper is about three cases in the State of Tabasco in Mexico, an entity where, towards the beginning of the 20th century, the government of that time carried out an anti-religious campaign that ended up destroying most of the churches. In addition, the cases are within Mesoamerica. The objective is to show, through the studies of the recovery of materiality, the relationship that post-pre-Hispanic and pre-Hispanic vestiges have from the orientations and technique of archaeoastronomy.

The first case is the Temple of Santo Domingo de Guzmán, in Oxolotán; one of the few churches that was not completely destroyed. We read the orientation dates in the same way as Stanislaw Iwaniszewski did for the church of San José in Paxtepec, in the State of Veracruz, Mexico. It is about knowing the significant day intervals with respect to some of the pivots that they used in the Mesoamerican system. In Veracruz he suggested that they were intervals of twenties. We at Oxolotán propose that they are sevenths. Both, significant intervals of the Mesoamerican system. In addition, they used the zenith steps of the Sun in combination with the date of the saint.

The second case is the Parroquia de Cristo Crucificado de Tenosique, which is currently the main Catholic church in the city because the one in the historic center was destroyed. That church is a recent construction, but it is located on the main avenue of the city, which belongs to the old layout. The orientation of the church corresponds to the feast of the Xilocruz or the cross of the corn, which is one of the reminiscences of Mesoamerica. It is the festival related to corn when it has matured to the point that it is considered cob and in the nearby State of Guerrero, in Mexico, it is related to the pre-Hispanic deity of corn, Xilonen.

The third case deals with the old cathedral of the State of Tabasco. It was also destroyed, but, as it is the capital, we have first-hand material that has allowed us to trace the approximate orientation, such as old plans, an aerial photo of the year it was destroyed and some photographs of its facade. In this factor, the orientation corresponds to the northern region, so now we will not present further analysis, but what we do is provide information that was not known, such as the possible identification of its architectural plan and, as a consequence, its orientation.

Finally, in the cases where it has been possible, in Tenosique and San Juan Bautista (Villahermosa), we show which churches were destroyed and then replaced by new ones.

**Iwaniszewski, S. (2021). El género entre los cuerpos celestes en Mesoamérica. *Cosmovisiones/Cosmovisões*, 3(1), 49-63.**

Stanislaw Iwaniszewski

The gender among the celestial bodies in Mesoamerica.

Abstract

In traditional Mesoamerican thought, the Sun, the Moon, and Venus, the three brightest objects in the sky, appear as autonomous beings endowed with the power to act. From observing their movements in the sky, the Mesoamerican peoples endowed the stars with cultural forms similar to those of humans - gender, kinship, language, exchange systems, etcetera. This, in turn, allowed the stars to behave under human social norms and precepts. In this way, the three stars, whose presence was necessary for agricultural activities, played an essential role in representing the relationships between Mesoamerican societies and cultures and their environment. The article emphasizes the perception of the three stars as sexed beings. It is observed that the Sun is perceived as a male agent, the Moon - as a female agent, and the planet Venus as a male agent, both in its Morning Star and Evening Star aspects. Nevertheless, their regular and predictable movements in the sky created lasting links with human groups through which women and men could negotiate their particular identities and roles.

**Lopez, A. M. (2021). Cosmovisión y cosmología. Fundamentos histórico-metodológicos para un uso articulado. *Cosmovisiones/Cosmovisões*, 3(1), 65-115.**

Alejandro M. Lopez

Cosmvision (worldview) and cosmology. Historical-methodological foundations for an articulated use.

#### ABSTRACT

This article addresses two of the most frequently used concepts in cultural astronomy: worldview and cosmology. Despite their importance, there are few studies (Iwaniszewski 2009a; 2009b; 2010; 2011) that discuss them in a general way from this interdisciplinary area. In addition, the analyzes carried out in various disciplines tend to focus on one or the other, but not so much on their link. These are categories with a complex history, which have frequently been used in inconsistent ways in the context of controversies in different academic fields. In this article we seek to put in dialogue the historical analysis of both categories (and place *cosmography* in relation to them), gathering an important set of references and contextualizing the debates involved. Also, in light of this journey, we made a specific proposal for their articulated use, which is linked to the more established uses of these concepts, but allows greater clarity and avoids establishing a dichotomy between "modern" and "traditional" societies.

**Quijano Vodniza, A. J. (2021). Astronomía cultural en el territorio Pasto de Putisnán: calendario y evidencias locales. *Cosmovisiones/Cosmovisões*, 3(1), 117-163.**

Armando José Quijano Vodniza

Cultural astronomy in the Pasto territory of Putisnán: Calendar and local evidence.

#### ABSTRACT

This work presents the findings made in *Putisnán*, an indigenous community belonging to the Pasto people. They settled down in the Altiplano lying in the southwest of Colombia and north of Ecuador since the IX century of our era. The first section shows the importance of the *pedras sagradas* – sacred stones – (petroglyphs and *huacas*) as places used by the Indigenous to relate their territory with astronomical phenomena from their conception of the cosmos. The second section analyzes the operation of the petroglyph corresponding to the horizon calendar of the "Churo 2". Then, it presents the operation of the *Putisnán* solar calendar based on the *mingas de pensamiento* (workshops) carried out with the indigenous community and the interviews from main informants. Lastly, the results are compared to other researchers' findings from the indigenous community in Kotama-Otavalo (Ecuador) and the Inca calendar. It considers

that the Pastos inhabited the septentrional boundary of the Tawantinsuyu in the pre-Columbian period. This study shows the fundamental role played by the environment in the worldview of the *Putisnán* Indigenous and emphasizes the importance of the cultural landscape approach to understand the nature-culture relationship, including the connection with the celestial vault.

**Thomazi Cardoso, W. (2021). Estrelas, constelações e astronomia indígena em dois livros do Pe. Alcionílio Bruzzi. *Cosmovisiones/Cosmovisões*, 3(1), 165-190.**

Walmir Thomazi Cardoso

Stars, constellations, and Indigenous astronomy in two books by Fr. Alcionílio Bruzzi.

#### ABSTRACT

The aim of this work is to compare mainly astronomical concepts presented in two published books, written by Alcionílio Bruzzi Alves da Silva, a catholic priest who dedicated part of his life in missionary presence, in occidental upper side of Amazonian Rio Negro region.

In the book called “Beliefs and Legends of Uaupés River” in a free style English translation – we studied astronomical indigenous mythology as described by Bruzzi. We follow the building of a picture of those mythological Indigenous conceptions from an occidental point of view, specially related with Amazonian peoples.

We also compared a sequence of described constellations in the book "Civilização do Uaupés (Civilization of Uaupés) with a more recent field research in Tiquié River. This research was developed with Tukano Indians whose presence and influence related with astronomical conceptions from other ethnicities are notorious, in that geographical area. Indigenous people in northern Amazonian region make correlations among natural facts and each constellation near setting in the horizon. Even with the same sequence, the shape and extension of each constellation aren't necessarily the same in the studied sources and so we have also discussed these results in this article.

**Morante López, R. (2021). El ciclo de Venus en el retorno de Quetzalcóatl. *Cosmovisiones/Cosmovisões*, 3(1), 195-228.**

Rubén Bernardo Morante López

The cycle of Venus in the return of Quetzalcoatl.

#### ABSTRACT

Moctezuma Xocoyotzin observed and was informed about omens that worried him because they heralded the end of his kingdom. Occurred at least ten years before the

Spanish first arrival to the shores of the Gulf of Mexico. Here we analyze if some of these omens, despite being unusual, really occur in natural world and if they could explain the behavior of the king who received the European conquerors. Fortunately for foreigners, unusual coincidences of celestial phenomena (some related to Venus) happened, and those facts lead us to investigate when beliefs about the return of Quetzalcóatl were linked to them. These facts could have changed history.

**Zimbrón Romero, J. R. (2021). Alineamiento de 5 sitios prehispánicos y coloniales en Xochimilco con la salida del Sol en el cráter del Popocatepetl, durante el solsticio de invierno (21 de diciembre). *Cosmovisiones/Cosmovisões*, 3(1), 231-280.**

Juan Rafael Zimbrón Romero

Alignment of 5 pre-Hispanic and colonial sites in Xochimilco with sun rise in the Popocatepetl crater, during the winter solstice (December 21<sup>st</sup>)

#### ABSTRACT

Franz Tichy proposed a solstice line in four prehispanic and colonial sites south of the Basin of Mexico. The sunrise from each one of these during the winter solstice takes place at different heights on the north slope of Popocatepetl with visual difficulty because other hills interpose, making the spatial alignment between them imprecise. In this work, an alignment of 5 sites is proposed during the winter solstice for the same region of Xochimilco, based on the direct observation of the phenomenon from each of these, where the Sun on December 21, emerges from the Popocatepetl crater, with a more precise alignment.

Ethnographic notes are given on religious celebrations linked to the winter solar phenomenon observed in this Xochimilca territory.

**Cuartas Restrepo, P., Arango Arias, L. Y., & Izquierdo Peña, M. A. (2021). Posibles disposiciones solsticiales y lunares del complejo de petroglifos precolombinos de Támesis, Colombia. *Cosmovisiones/Cosmovisões*, 3(1), 283-314.**

Pablo Cuartas Restrepo, Leidy Y. Arango Arias, & Manuel A. Izquierdo Peña

Possible solstitial and lunar arrangements of the pre-Columbian petroglyph complex of Támesis, Colombia.

#### ABSTRACT

Possible astronomical and spatial relationships of the pre-hispanic complex of petroglyphs in Támesis, Colombia are analyzed. Based on satellite cartography

and data taken in the field, evidences of the possible alignment of 93 stones with pre-Columbian petroglyphs are shown, which due to their geographical position, seem to be oriented towards the June solstice, as well as towards the Moon in its northernmost position and some mountainous formations known as the *Farallones de la Pintada*. Our observations suggest the possible existence of a horizon calendar with strong lunar emphasis. This work seeks to contribute to the study of Astronomy in Culture of pre-Columbian groups in western Colombia.