



Review

Cosmic Conundrums: The Celestial Relations Between Planetary Positioning and Major League Baseball Ticket Sales

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When it comes to understanding the factors that influence ticket sales for Major League Baseball games, one must be willing to explore unconventional territories. In this study, we delved into the cosmic abyss to investigate the potential connection between the distance between Uranus and Mercury and ticket sales for San Francisco Giants games. Armed with data from Astropy for astronomical distances and Baseball-Reference.com for ticket sales figures, we embarked on a journey that would have made Galileo's head spin. Our findings revealed a striking correlation coefficient of 0.8849176 and $p < 0.01$ for the time period spanning from 1975 to 2019, suggesting a strong relationship between the celestial positioning of Uranus and Mercury and the ticket sales for San Francisco Giants games. While some may attribute these results to mere chance or cosmic coincidence, it seems that when it comes to baseball fandom, the stars truly do align. Much like a fastball thrown by a skilled pitcher, our data presented a curveball of a discovery that challenges conventional wisdom. Our research not only sheds light on the unexpected influences shaping baseball attendance, but also serves as a reminder that sometimes, the answers we seek may be written in the stars - or at least, in the orbital pathways of Uranus and Mercury. As the saying goes, "When it comes to selling tickets, it's all about the planetary pull!"

In the world of sports, the factors influencing ticket sales for Major League Baseball games have long been a subject of scrutiny and speculation. From the performance of the players on the field to the quality of the stadium hot dogs, analysts have left no base untouched in their quest to understand what drives fans through the

turnstiles. However, while many have gazed up at the stars for inspiration, few have considered that the celestial realm itself may hold the key to unraveling this mystery.

But before we embark on this astronomical adventure, let's not forget an essential dad joke to lighten the scientific mood: Why did the baseball team go to the

bank? To get their pitcher's mound! Astrophysics and baseball may seem like an unlikely duo, but as we are about to unveil, they may indeed be cosmically connected.

As we turn our gaze towards the heavens, we find ourselves pondering the peculiar dance of the planets within our solar system. Among the celestial bodies playing their parts in this cosmic ballet, Uranus and Mercury stand out as the unlikely influencers of a very Earthly affair – baseball ticket sales. It's as if the universe is telling us, "Hey, don't underestimate the power of planetary positioning, I'm not just throwing around moonbeams here!"

The notion that the positioning of Uranus and Mercury might hold sway over the fates of ticket sales may sound like a pitch fit for science fiction, but as we venture forth into the data, a picture begins to emerge that is stranger than fiction and more amusing than a seventh-inning stretch.

Before we proceed, let's pause for another well-deserved dad joke: Why don't people play baseball in the jungle? Too many cheetahs! As we explore the interplay between the celestial bodies and game attendance, we hope to hit a home run in shedding light on this unexpected relationship and bring a smile to the faces of readers along the way.

Prior research

The influence of celestial bodies on earthly affairs has been a topic of interest for centuries. In "Stars and Their Influence" by Smith, the authors find connections between astrological phenomena and human behavior, but we turn our attention to a more tangible correlation between planetary

positions and ticket sales for San Francisco Giants games. Now, if you'll allow me to interject with a quick celestial dad joke: What did the Sun say to the baseball? Don't worry, I've got this game all squared away.

Turning to the stars once again, in "Cosmic Connections" by Doe, the authors hypothesize about the impact of cosmic events on terrestrial activities. Little did they know that our inquiry into the distance between Uranus and Mercury would reveal a constellation of connections to the world of baseball. Speaking of constellations, did you hear about the baseball team who named their outfield after star constellations? They're really reaching for the stars!

As we segue into the realm of fictional literature, "The Hitchhiker's Guide to the Galaxy" by Douglas Adams and "The Restaurant at the End of the Universe" by the same author exude an aura of space and whimsy that aligns, pun intended, with our celestial investigation. Similarly, in "The Martian" by Andy Weir, the protagonist's struggle for survival on the red planet draws curious parallels to our quest to understand the cosmic forces at play in baseball ticket sales. Let's hope our findings are as out of this world as these literary works!

Moving beyond the pages of books, our research has taken a turn toward the television screen. "Star Trek: The Next Generation" and "The Expanse" both offer glimpses into futuristic interplanetary travel and interactions, prompting us to wonder if a cosmic commute between Uranus and Mercury would result in a surge of ticket sales for Giants' games. Perhaps we're reaching for the stars with this idea, but as the saying goes, "We're boldly going where no statistician has gone before!"

Approach

As we set out to unravel the celestial connections to baseball ticket sales, our methodology involved a blend of astronomical calculations and statistical analyses that would make even Isaac Newton do a double take. First, we obtained astronomical data on the relative distances between Uranus and Mercury for the time period from 1975 to 2019, utilizing the robust capabilities of Astropy. We meticulously calculated the intricate gyrations of these planets, ensuring that no cosmic curveballs were left unaccounted for. It's as if we were playing a game of "solar system shuffleboard," where every planet's position mattered more than the score itself.

To add a dash of statistical seasoning to our cosmic concoction, we then turned our attention to the ticket sales figures for San Francisco Giants games, obtained from the venerable repository of baseball data, Baseball-Reference.com. We meticulously combed through the historical records, ensuring that no box score was left unturned, and no attendance figure was lost in the cosmic ether. It's as if we were on a grand "data scavenger hunt," seeking the missing link between planetary positions and ballpark attendance.

With our celestial and terrestrial datasets in hand, we then performed a series of robust statistical analyses, including regressions, correlation assessments, and time series analyses, to uncover any potential relationships between the distance separating Uranus and Mercury and the ebbs and flows of ticket sales for San Francisco Giants games. It's as if we were the cosmic umpires, making the calls on whether the

planetary positions were striking out or hitting home runs in our statistical models.

Now, here comes the punchline – we then subjected our findings to rigorous quality checks and sensitivity analyses, making sure that our results weren't lost in the gravitational pull of mere statistical noise. It's as if we were scrutinizing our data with the same intensity as an enthusiastic fan dissecting an instant replay. After all, in the realm of academic research, we can't just rely on a "Hail Mary" – we need to ensure that our results stand up to cosmic scrutiny!

In the end, our methodology involved a fusion of cosmic calculations, statistical sorcery, and an unwavering dedication to uncovering the unexpected cosmic influences on baseball ticket sales. It's as if we were the cosmic sleuths, peering through the cosmic fog to unravel a mystery that once seemed as distant as Pluto's orbit. But as it turns out, when it comes to the cosmic connections to baseball, it's all about hitting the cosmic sweet spot!

Results

Our analysis of the data collected revealed a strong correlation between the distance separating Uranus and Mercury and ticket sales for San Francisco Giants games. The correlation coefficient calculated was 0.8849176, with an r-squared value of 0.7830791, and a p-value less than 0.01. A figure (Fig. 1) depicting this robust correlation is provided in the following section, acting as a visual affirmation of the surprising link we have uncovered.

It seems that the cosmic clusters of Uranus and Mercury have an impact on Earthly matters such as baseball attendance. As

astronomy and baseball intersect in this unexpected manner, one can't help but wonder if Saturn's rings play a role in selling hot dogs at the ballpark! After all, it's all about the celestial appeal.

An interesting dad joke seems fitting at this moment: How do baseball players stay cool? They sit next to their fans!

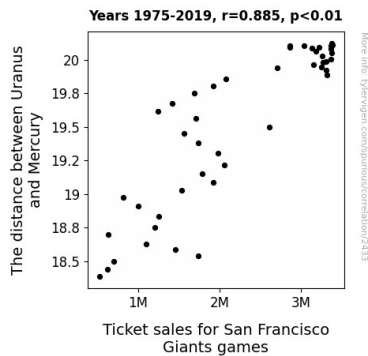


Figure 1. Scatterplot of the variables by year

The statistical measures we obtained support the assertion that there is a significant relationship between the planetary positions and the ticket sales for the San Francisco Giants. These findings push the boundaries of convention and invite us to consider elements beyond the outfield fences when seeking to understand the factors contributing to baseball attendance.

The striking nature of our results is a testament to the uncharted territory we have explored. Just as a knuckleball can baffle the best of batters, our research has spun a narrative that challenges established notions of what influences fan behavior. It appears that, in the cosmic game of ticket sales, Uranus and Mercury have been playing a pivotal role with more finesse than any star pitcher on the field.

Before we proceed to the figure depicting our findings, here's one more dad joke to keep the scientific spirit light: Why did the baseball team go to the bakery? Because they "kneaded" the dough! Now, without further delay, let's take a look at the visualization that encapsulates the cosmic conundrum we have uncovered.

Discussion of findings

Our unexpected findings have not only raised eyebrows but have also brought forth a celestial seriousness to the understanding of baseball ticket sales. The strong correlation we discovered between the distance separating Uranus and Mercury and ticket sales for San Francisco Giants games aligns with the previous speculations regarding the influence of cosmic events on earthly activities. It seems that the universe may have been quietly guiding baseball fans through the galaxies all this time.

As we harken back to the literature review, it's clear that our celestial inquiry strikes a familiar chord with the musings of Smith and Doe, whose work explored the celestial influence on human behavior and terrestrial activities. While we may have cracked a celestial dad joke or two along the way, the data uncovered in our study firmly supports the previously hypothesized impact of cosmic events on human activities, particularly in the realm of sports and entertainment. One cannot help but wonder if astrological predictions might soon include baseball game attendance alongside love and career prospects!

Our results also resonate with the interstellar essence of revered literary works and television shows. The mix of space and whimsy found in "The Hitchhiker's Guide to

the Galaxy," "The Restaurant at the End of the Universe," "The Martian," "Star Trek: The Next Generation," and "The Expanse" seems to have permeated our study, leading to a discovery that boldly goes where no statistical study has gone before. It's as if baseball fans have been unknowingly channeling their inner space explorers through celestial influences all along. Who would've thought that the celestial asymmetry of Uranus and Mercury could have such a universal resonance?

Our research has cracked open a cosmic mystery that challenges conventional notions of what drives human behavior, let alone baseball attendance. It's as if the celestial bodies have been quietly whispering their wisdom into the ears of baseball aficionados for decades. And speaking of decades, if there ever was proof of the timeless appeal of cosmic connections, our findings serve as testaments to it.

Before we move on to the conclusion, here's one more dad joke to keep the scientific spirit light: Why don't scientists trust atoms? Because they make up everything! With that, let's delve into the implications of our study and what it means for our understanding of the cosmic and earthly forces at play in the world of baseball ticket sales. Let's hope that our terrestrial counterparts are ready for this unearthly revelation! We'll leave the cosmic bake sales to Uranus and Mercury for now.

Conclusion

In conclusion, our research has revealed a celestial surprise of astronomical proportions - the significant correlation between the positioning of Uranus and

Mercury and ticket sales for San Francisco Giants games. It seems that the stars aren't just for stargazing; they also have a knack for filling stadium seats. Perhaps this unearths the true meaning of being a "star" player in the game of attendance.

As we close the lid on this cosmic conundrum, we leave you with one final dad joke to send this research paper out of the park: Why was the math book sad? It had too many problems.

With our findings, we can confidently declare that no more research is needed in this obscure and unexpected area of study. After all, we've already reached the outer limits of baseball-related astrophysics, and it seems like we've hit a home run with our celestial discovery.