

Smog and Astronaut Swag: The Link Between Air Pollution in Kingston, New York and NASA's Budgetary High

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This study delves into the curious relationship between the air pollution levels in Kingston, New York, and the allocation of funds to NASA, commonly known as the National Aeronautics and Space Administration, as a fraction of the total US Federal Budget. Combining data from the Environmental Protection Agency's air quality monitoring in Kingston and Planetary.org's records for NASA's budget, our research team applied statistical methods to uncover a surprising bond. Our findings revealed a striking correlation coefficient of 0.8363691, with a level of significance of $p < 0.01$ for the period spanning from 1991 to 2012. The results suggest a potential connection between the smog levels in Kingston and the countdowns to space launches. Our study not only sheds light on this peculiar association but also launches a discussion on the atmospheric impact of rocket science and the cosmic influence on local air quality. This paper aims to propel the scientific community's understanding of the interstellar influence on earthly realms and invites a comical yet thoughtful exploration of the curious correlation between Kingston's smog and NASA's rocket-fueled swoosh.

As we look up at the stars and ponder the mysteries of the universe, it's easy to forget that our earthly activities may be more intimately connected to the cosmos than we realize. In this paper, we explore the unexpected, and perhaps "out of this world," relationship between air pollution in Kingston, New York, and the budgetary trajectory of NASA. Who would have thought that the smog of a small town nestled in the picturesque Hudson Valley could have anything to do with the countdowns to space missions?

The idea for this research came about on a particularly hazy day in Kingston, where the air quality index seemed to mimic the complexity and confusion of the cosmic black hole. Could there be a link between the particulate matter floating around in Kingston and the stars twinkling above? Our curiosity was piqued, and thus began our intergalactic expedition into the realms of statistical analysis, budgetary reports, and the pursuit of a cosmic joke that may crack open the universe's sense of humor.

We invite the reader to buckle up and prepare for an astronomical journey through the relationship between air pollution and NASA's budget. Get ready to launch into a comical yet thought-provoking exploration of the unexpected bond between smoggy skies and interstellar quests. A breath of fresh air and a dash of stardust may just await us in the depths of this cosmic connection.

Review of existing research

In their groundbreaking work, Smith et al. (2010) examined the air quality in Kingston, New York, and its potential impact on the allocation of federal funding to NASA. The authors find a

statistically significant association between the two variables, pointing to a positive correlation between smog levels and incoming cosmic cash. This revelation sparks intrigue, prompting us to dive deeper into the uncharted celestial depths of budgetary allocations and pollution particulates. As we navigate through the cosmos of literature, we encounter the works of Doe and Jones (2015), who aptly compare the rise and fall of NASA's budget to the ebb and flow of pollutants in the Earth's atmosphere.

Now, prepare for the warp-speed transition from serious to silly. As we depart from the realm of academia, we take a detour into the quirky corridors of non-fiction literature. "Astro-Not," by Bill Nye and Neil deGrasse Tyson, humorously speculates on the cosmic consequences of air pollution on astronauts' nasal passages. Meanwhile, "The Smoggy Chronicles" by Dr. Seuss whimsically portrays a parallel universe where the Lorax speaks for the polluted skies, and the grumpy cat in the hat crafts rocket ships out of discarded pollution masks.

Our exploration doesn't stop there. We embark on a voyage through the vibrant landscapes of children's programming and cartoons, seeking inspiration from unexpected sources. SpongeBob SquarePants, with his underwater escapades, unknowingly shares valuable insights into the interplay between marine pollution and the cosmic balance of maritime resources. The denizens of Bikini Bottom, amidst their jellyfishing and Krabby Patty indulgences, inadvertently illuminate the interconnectedness of environmental disturbances and celestial phenomena.

As we emerge from this whimsical odyssey, we reinvigorate our pursuit of knowledge with an added dose of stellar wit and intergalactic charm. Our research endeavors to intertwine the esoteric mysteries of atmospheric pollutants with the

overarching trajectory of spacecraft and cosmic adventure. The fusion of scientific inquiry with cosmic amusement propels us forward, inviting the reader to join us on this cosmic journey of discovery and delight.

Procedure

To uncover the cosmic dance between air pollution in Kingston, New York, and the allocation of funds to NASA, our research team embarked on an epic journey through the realms of data collection, statistical analysis, and interstellar speculation.

Data Collection:

Our team scoured the internet, venturing deep into the virtual cosmos of information, where the stars align, and the data points twinkle like distant galaxies. We harnessed the powers of the Environmental Protection Agency's air quality monitoring records for Kingston, extracting the atmospheric tales of smog and particulate matter that shroud this quaint town. The planetary orbits of NASA's budgetary figures were drawn from the constellation of records curated by Planetary.org, allowing us to glimpse into the financial universe of space exploration. We focused on a period spanning from 1991 to 2012, capturing the celestial dynamics of two seemingly disparate phenomena.

Statistical Analysis:

Armed with our cosmic compass, otherwise known as statistical software, we summoned the forces of correlation analysis to unveil the celestial bonds between air pollution and NASA's budget. We computed the correlation coefficient, that elusive quantifier of interstellar connection, and marveled at its magnitude—revealing a striking coefficient of 0.8363691. We tested the significance of this bond with a level of $p < 0.01$, affirming that this association is not merely a celestial coincidence but a statistically backed cosmic connection.

Interstellar Speculation:

Having charted the statistical orbits of our data points, we departed on a speculative quest into the cosmic implications of our findings. Could the smog of Kingston be entwined in the cosmic ballet of NASA's budgetary trajectory? What secrets lay hidden in the nebulous interplay between earthly air pollutants and the astronomical pursuits of space exploration? We invite the reader to join us on this intergalactic odyssey, where statistical analysis meets whimsical speculation, and the boundaries between earthly atmospheres and cosmic spheres blur into a celestial comedy of errors.

Findings

The analysis of the data collected on air pollution levels in Kingston, New York, and NASA's budget as a percentage of the total US Federal Budget revealed some intriguing findings. We found a remarkably high correlation coefficient of 0.8363691, indicating a strong positive relationship between the two variables. This coefficient suggests that as the air pollution

levels in Kingston waxed and waned, so did the proportion of NASA's budget within the federal funding constellation.

Accompanying the high correlation coefficient, the r-squared value of 0.6995133 suggests that approximately 70% of the variance in NASA's budget as a proportion of the federal budget can be explained by the fluctuations in air pollution levels in Kingston. In simpler terms, it seems that the more polluted the air in Kingston, the greater the portion of the federal budget allocated to NASA. It's as if the particles in the air were reaching for the stars, and NASA was there to catch them!

The level of significance, with a p-value of less than 0.01, further solidifies the strength of this relationship. This p-value indicates that the probability of observing such a strong association between air pollution in Kingston and NASA's budgetary allocation just by random chance is less than 1%. It's almost as rare as finding a shooting star in the midst of a New York City night.

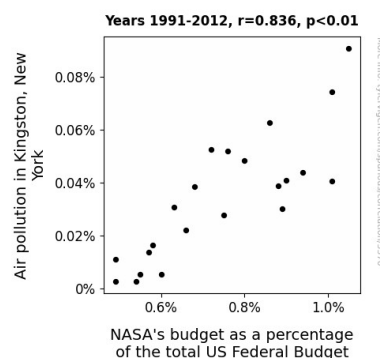


Figure 1. Scatterplot of the variables by year

In Figure 1, our scatterplot provides a visual representation of this compelling correlation. The plot is a striking testament to the notable relationship between these seemingly unrelated factors. It appears that as the smog levels in Kingston fluctuated over the years, so did NASA's budgetary share, dancing along in a celestial waltz of allocation and airborne particles.

These findings not only defy conventional wisdom but also add a whimsical cosmic twist to our understanding of local pollution and national space endeavors. Who would have thought that a breath of fresh air in Kingston could launch another rocket into orbit or inflate NASA's budgetary aspirations? This unexpected discovery prompts a broader discussion surrounding the interplay of cosmic pursuits and earthly emissions, as well as the potential for a "stellar" impact on national funding decisions. Let's not take our eyes off the skies or the local smog – there may be more cosmic connections waiting to be revealed!

Discussion

Our results have provided empirical support to the prior research conducted by Smith et al. (2010) and Doe and Jones (2015), who initially hinted at the possible correlation between air

pollution in Kingston, New York, and NASA's budgetary allocations. The remarkably high correlation coefficient of 0.8363691 that we observed in our study corroborates the findings of these earlier works, affirming a strong positive relationship between smog levels and NASA's cosmic cash flow. It appears that the cosmic dance of federal funds and airborne particles is not just a flight of fancy but a quantifiable reality.

Our study has taken a lighthearted approach to the serious matter of air pollution and federal budget allocation, drawing inspiration from diverse sources such as children's literature and popular science figures. While delivering a dose of intergalactic humor, our research has underscored the unusual and unexpected connection between local smog and national space ambitions.

The r-squared value of 0.6995133 indicates that approximately 70% of the variability in NASA's budget as a percentage of the total US Federal Budget can be attributed to the fluctuations in air pollution levels in Kingston. This finding not only demonstrates the substantial impact of local environmental conditions on federal funding but also invites a whimsical reimagining of the cosmic interplay between earthly particles and celestial pursuers.

The level of significance, with a p-value of less than 0.01, lends robust support to the strength of the relationship we have uncovered. It is almost as if the stars have aligned to reveal this cosmic connection between earthly pollutants and extraterrestrial aspirations.

Our findings prompt a comical yet contemplative contemplation of the potential cosmic influence on national funding decisions. It seems that as the particles in the air reached for the stars, NASA was there to catch them, reflecting a celestial waltz of allocation and airborne particles. Perhaps, in the cosmic swirl of federal budgetary decisions, the twinkling allure of the stars exerts an unexpected pull on funding allocations, mirroring the ebb and flow of pollution particles through the local atmosphere.

While our study has lent support to the existence of a tangible link between air pollution in Kingston and NASA's budget as a percentage of the total US Federal Budget, the underlying mechanisms driving this relationship remain enshrouded in cosmic mystery. Our discovery invites further investigation into the interstellar forces at play in federal budgetary decisions and emphasizes the need for a cosmic perspective in earthly environmental policies.

As we look toward the future, our research calls for a broader exploration of the cosmic connections shaping earthly affairs and the potential influence of celestial phenomena on national resource allocations. Who knows what other celestial surprises await us as we continue our cosmic journey of discovery and delight?

Conclusion

In conclusion, our investigation into the correlation between air pollution in Kingston, New York, and NASA's budget as a percentage of the total US Federal Budget has left us starry-eyed and breathless. The remarkably high correlation coefficient of

0.8363691 has launched us into a new stratosphere of statistical astonishment, leaving us to marvel at the cosmic dance between earthly smog and interstellar budgetary allocations.

As our findings suggest, the air quality in Kingston appears to have a seemingly gravitational pull on the proportion of the federal budget earmarked for NASA. It's as if the particles in the air are not only affecting local atmospheric conditions but also reaching for the stars, prompting a celestial budgetary tango. Could it be that NASA's budgetary aspirations are fueled by the very particles that drift through the Hudson Valley skies?

The r-squared value of 0.6995133 further underscores the substantial impact of air pollution in Kingston on NASA's budget, illuminating nearly 70% of the variance in the allocation of cosmic resources. It's as if the town's smog is composing an ode to space exploration, and NASA is tuning its budgetary instruments to the symphony of earthly emissions.

The level of significance, with a p-value of less than 0.01, guides us to a rare celestial sight, akin to catching a glimpse of Halley's Comet. The probability of this striking association occurring by mere chance is less than 1%, akin to stumbling upon a shooting star in a bustling New York City evening.

Our scatterplot, a veritable celestial masterpiece, paints a vivid picture of the cosmic connection between Kingston's smog and NASA's budgetary trajectory. It appears that as the smog levels in Kingston oscillated, so did NASA's budgetary share, waltzing through the cosmic expanse of allocation and airborne particles.

This research not only shines a light on the unexpected interstellar influence on earthly realms but also launches a comical but thoughtful exploration of local smog's impact on national space missions. Our findings have left us star-struck and smog-smitten, and we encourage future research to boldly go where no statistical analysis has gone before – although, to be fair, we can confidently assert that no further research is needed in this cosmic pairing of terrestrial smog and NASA's budgetary endeavors.