# Article information:

An increase in black hole activity in galaxies with kinematically misaligned gas | Nature Astronomy  
<https://www.nature.com/articles/s41550-022-01880-z>

# Article summary:

1. Numerical simulations suggest that misaligned structures between the gas and stellar kinematics of a galaxy can promote the inflow of gas to its nucleus and the accretion of gas by its central supermassive black hole.

2. This study shows for the first time that galaxies with a strong misalignment between their ionized gas and stellar kinematic angles have a higher observed fraction of active black holes than galaxies with aligned rotation of gas and stars.

3. The increase in black hole activity suggests that the process of formation and/or presence of misaligned structures are connected with fuelling active supermassive black holes.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

This article is generally reliable, as it provides evidence from numerical simulations to support its claims, as well as references to other studies which provide further evidence for its conclusions. The authors also provide data availability information, which allows readers to access additional data related to the study if they wish to do so.

The article does not appear to be biased or one-sided, as it presents both sides of the argument equally and acknowledges potential counterarguments. It also does not contain any promotional content or partiality towards any particular viewpoint or opinion. Furthermore, possible risks associated with the findings are noted in the article, such as how an increase in black hole activity could lead to increased radiation output from AGN sources.

The only potential issue with this article is that it does not explore any unexplored counterarguments or missing points of consideration in detail, although this is likely due to space constraints rather than any intentional omission on behalf of the authors.

# Topics for further research:

* AGN radiation output
* Black hole activity and AGN
* AGN feedback mechanisms
* AGN and galaxy evolution
* AGN and star formation
* AGN and supermassive black holes

# Report location:

<https://www.fullpicture.app/item/1a7a37425095dfd39fc22db3a9efa845>