



LUIS GABRIEL DAHMER HAHN

A Decade of Near-Infrared
Variability in NGC4388:
Insights into the AGN Structure

SHANGHAI ASTRONOMICAL OBSERVATORY

DISCUSSION OUTLINE

Limitation of current studies

Why should we care about NGC4388?

The data we used

Main results

Impact on AGN geometry

AGN structures are mostly unresolved

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Most spectroscopic studies are focused on type 1 AGNs, where the central source outshines the circumnuclear region

WHY SHOULD WE CARE ABOUT NGC4388?

NOT ALL AGNS VARY

According to Sanchez+17, out of 2107 AGNs, only 131 showed signs of variation (6%)

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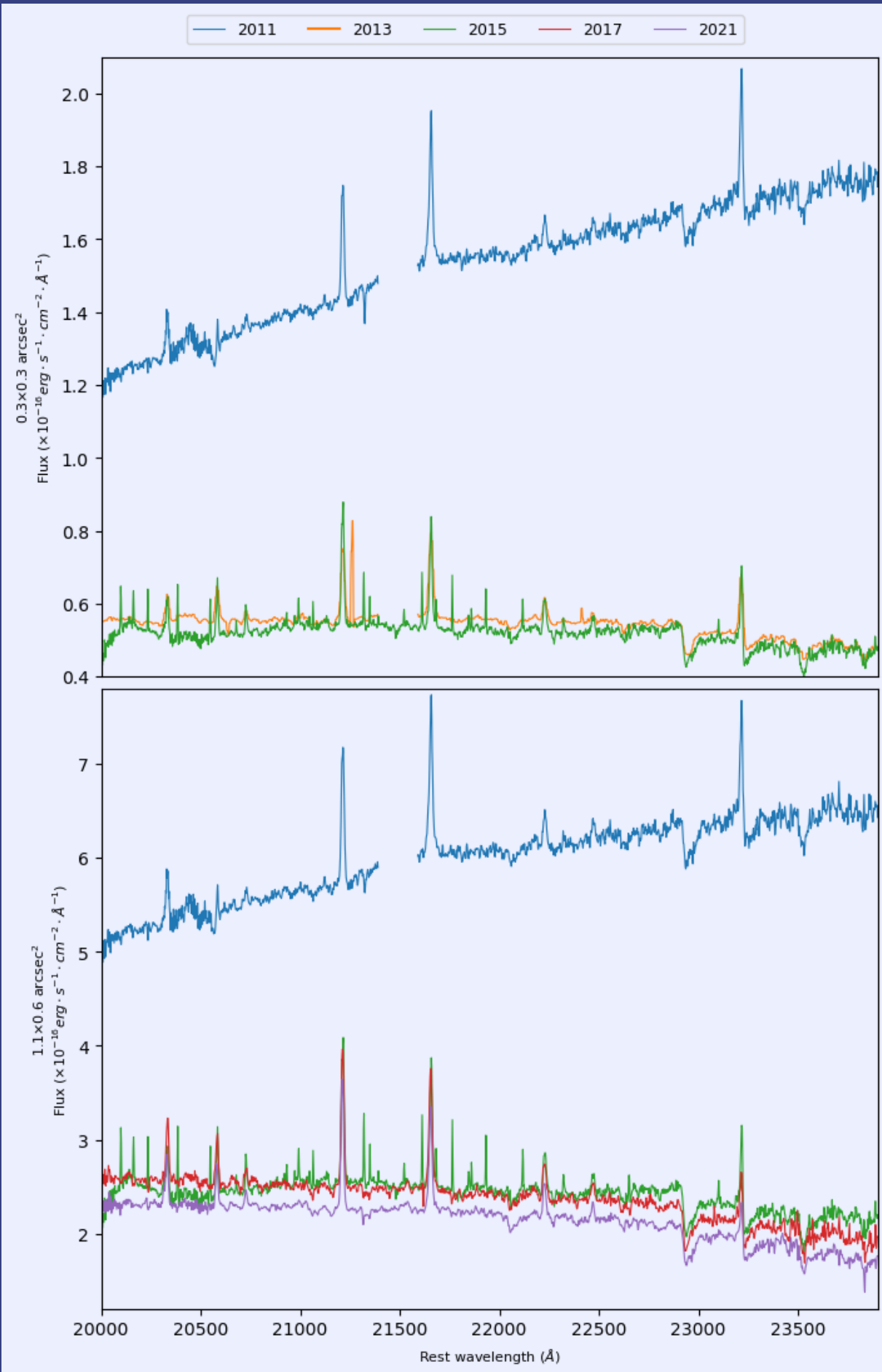
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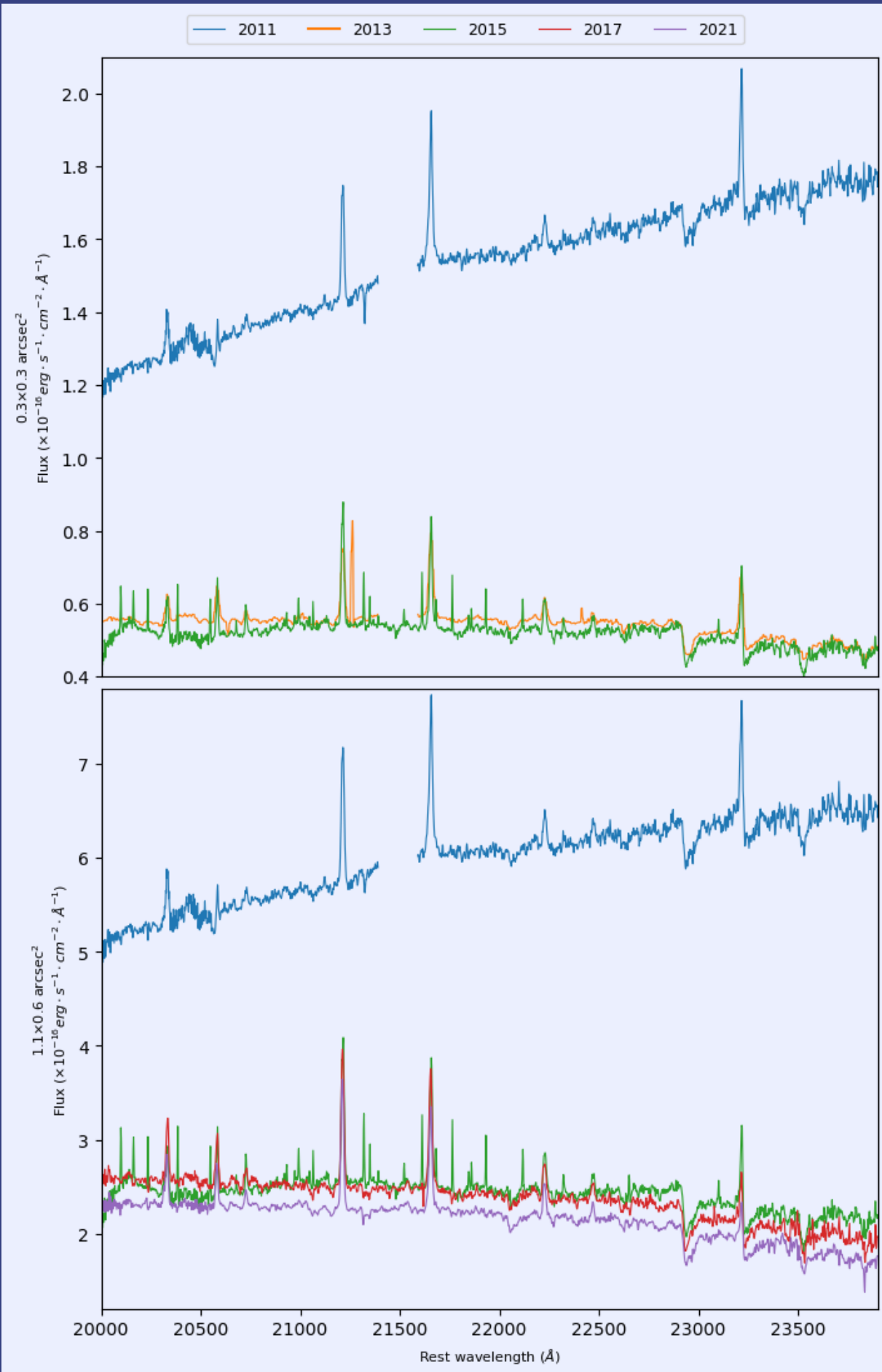
it had variability confirmed in X-rays only



THE DATA & METHODS

FIVE K-BAND SPECTRA

taken between 2011 and 2021, and covering between 20000 and 24500Å



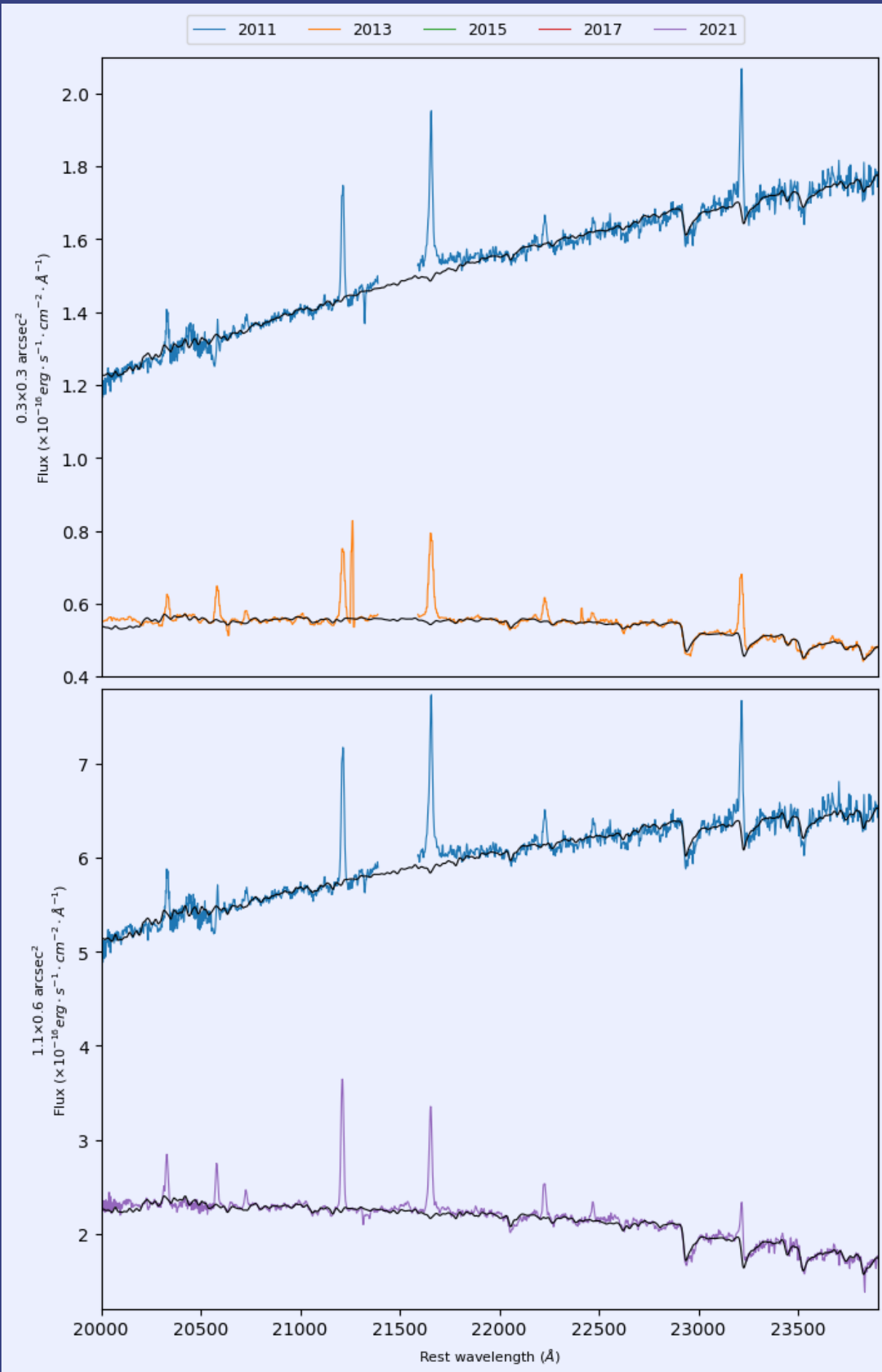
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through stellar population synthesis and emission line fitting, and derived its continuum composition



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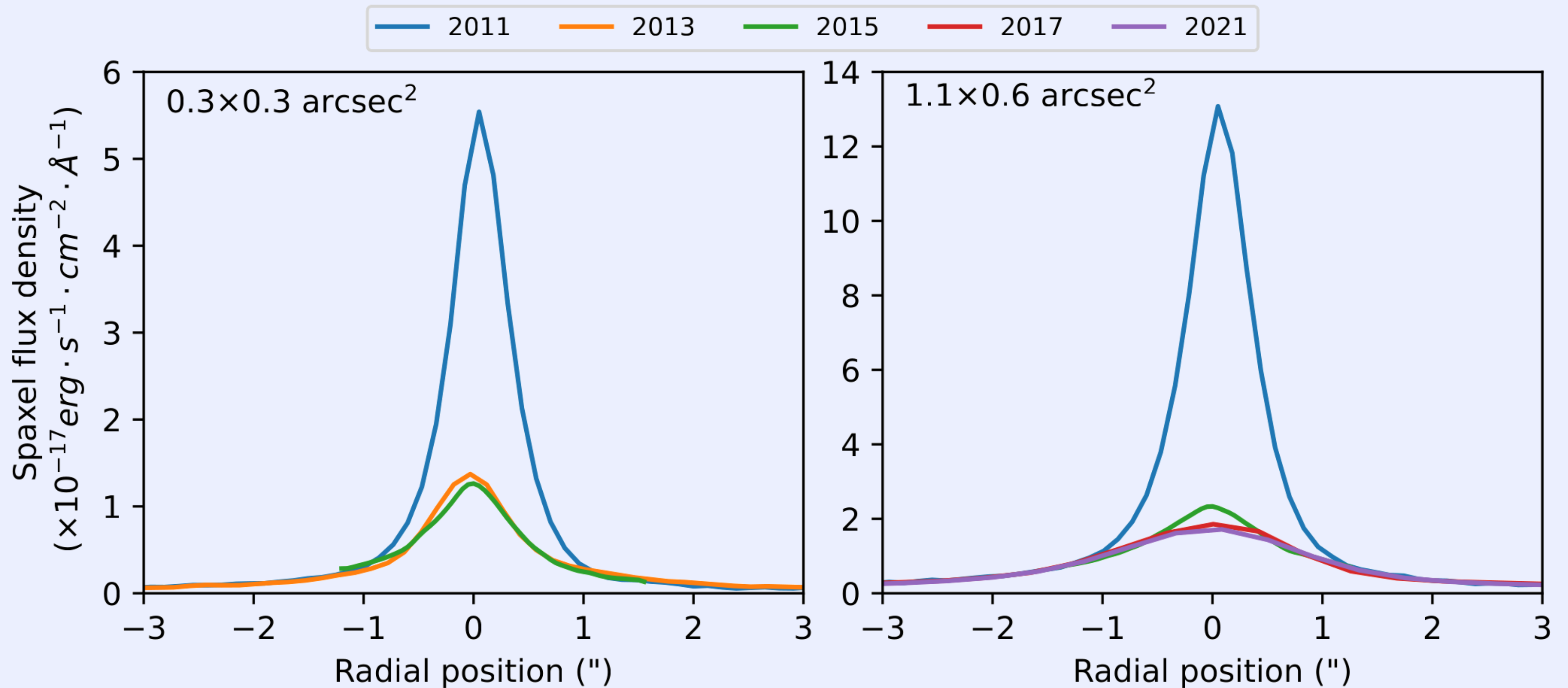
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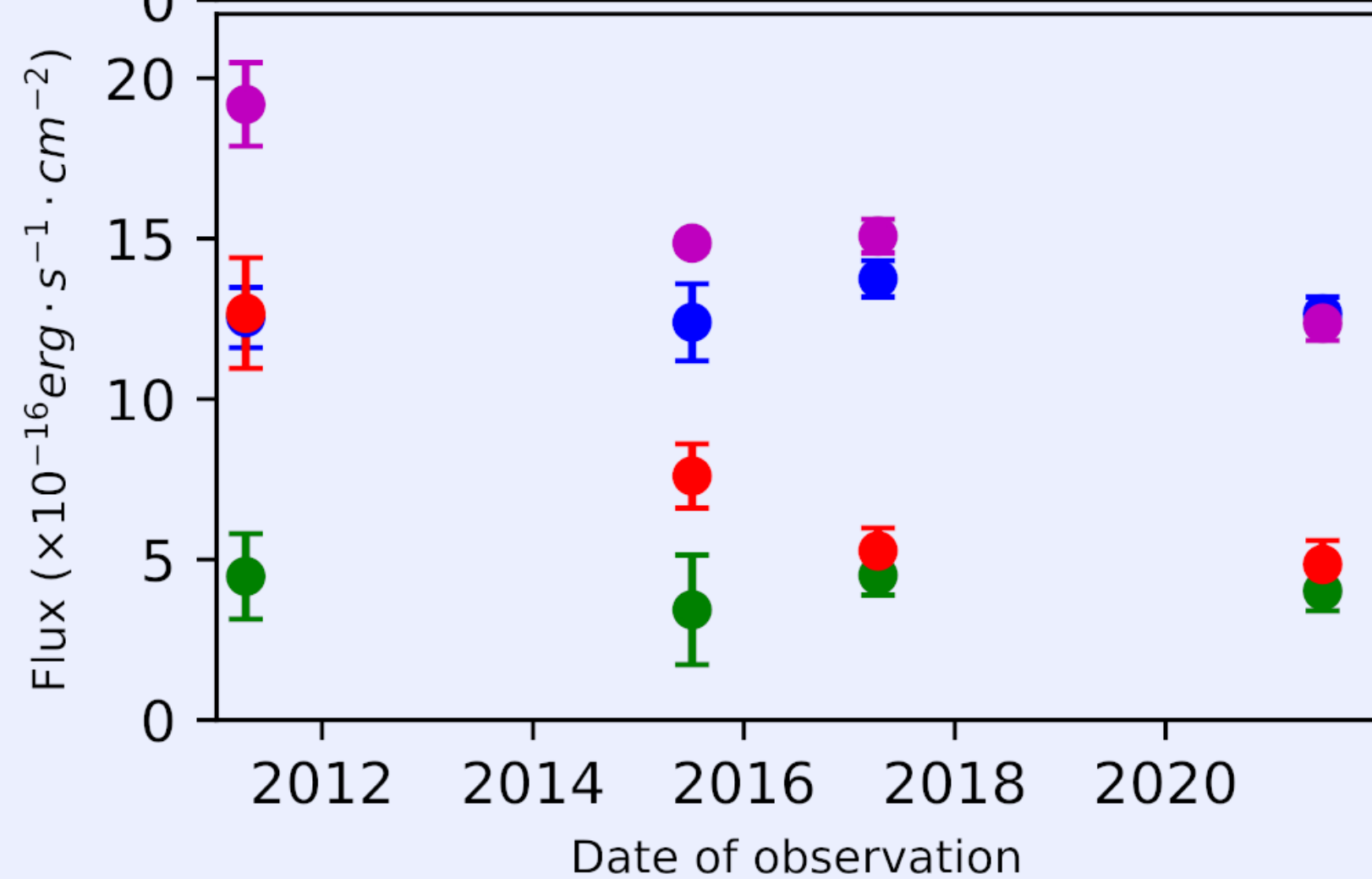
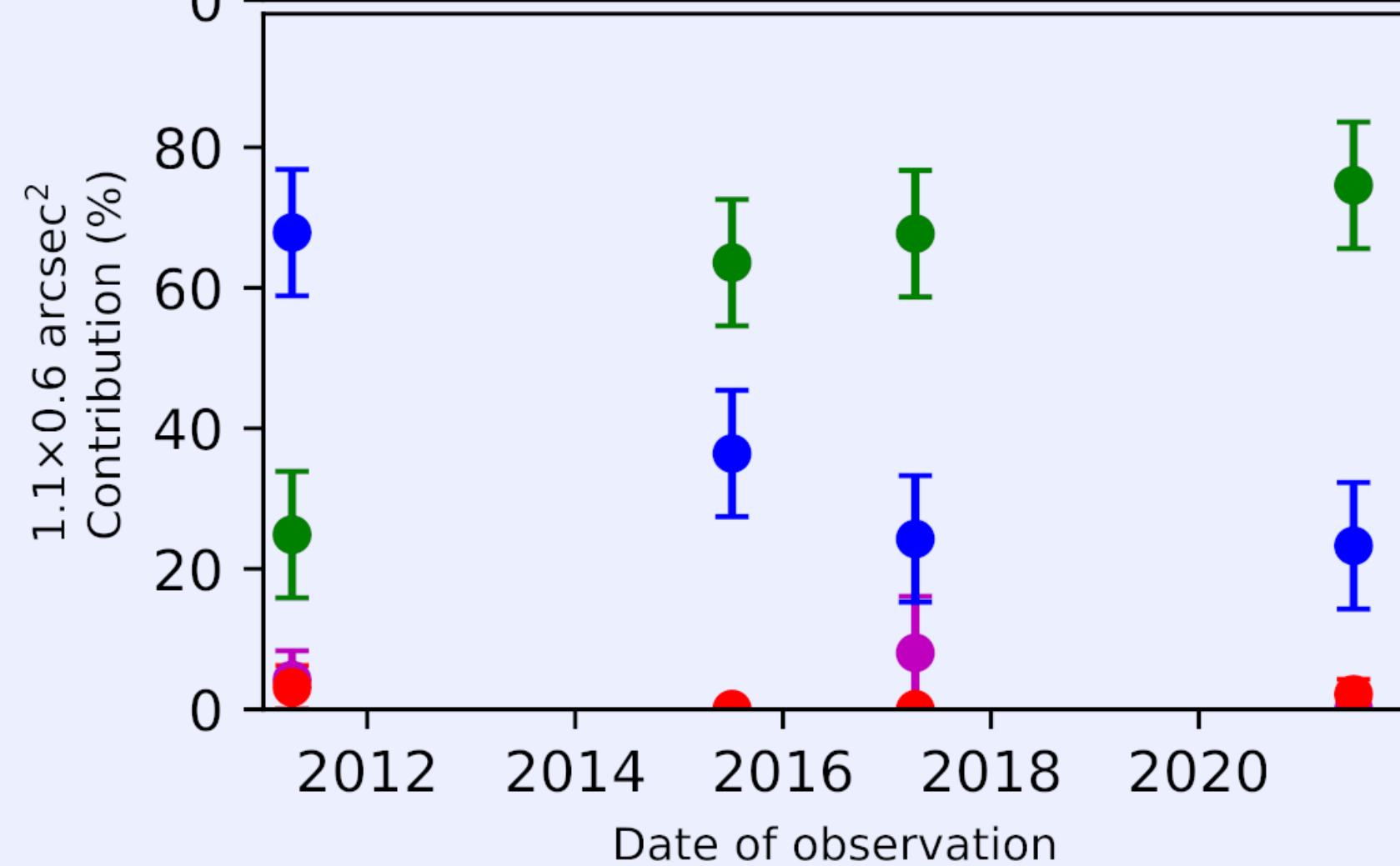
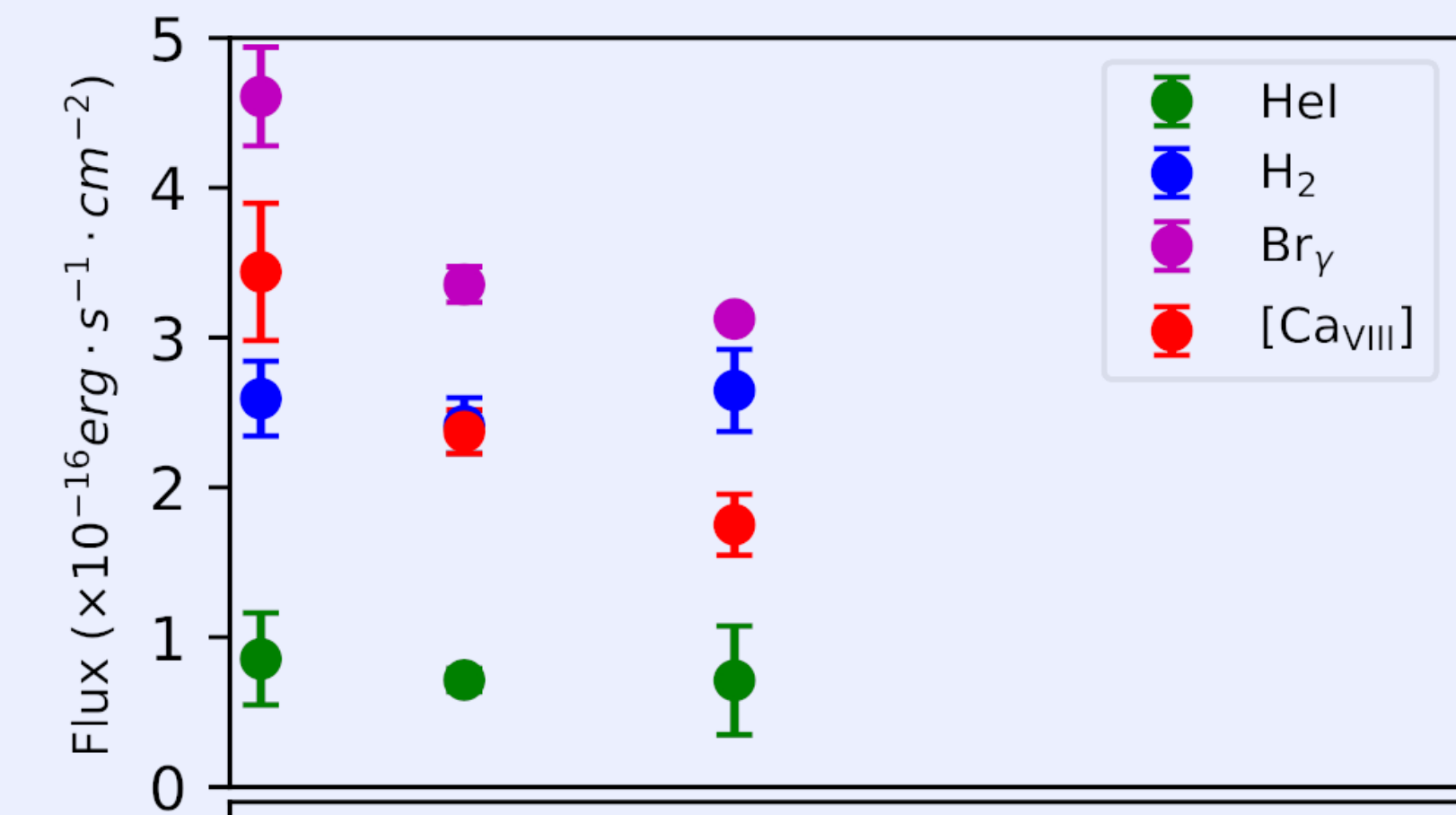
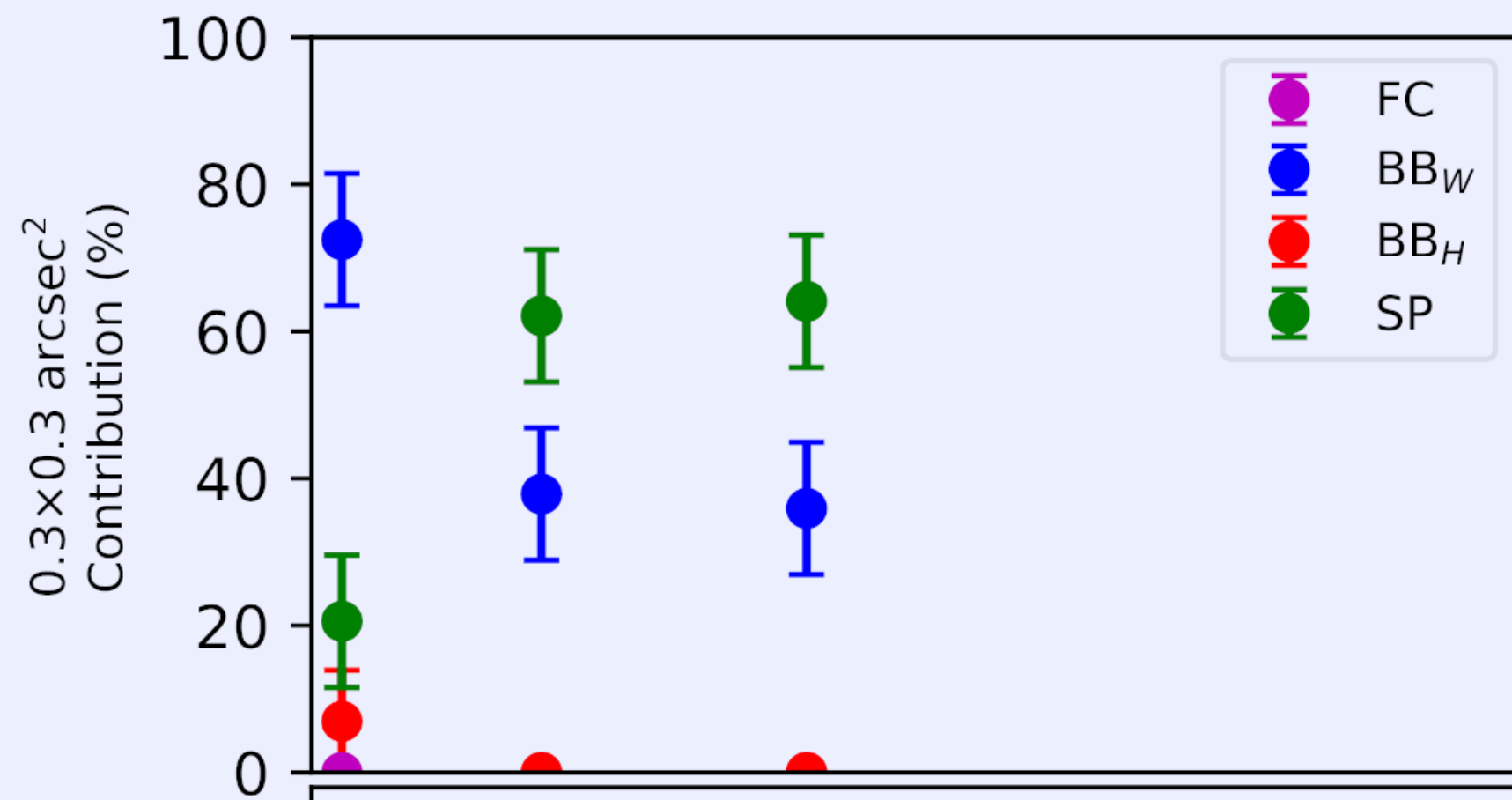
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AND WHAT ABOUT THE LIGHT PROFILE?





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the smaller this structure has to be

WHAT CAN WE
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AGN STRUCTURE?

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LASTLY, COMES HeI and H $_2$,
mostly produced by the host galaxy rather
than in the AGN

Thank you
for your attention