


# My Research into BAL Quasars

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By Jorge Escalera



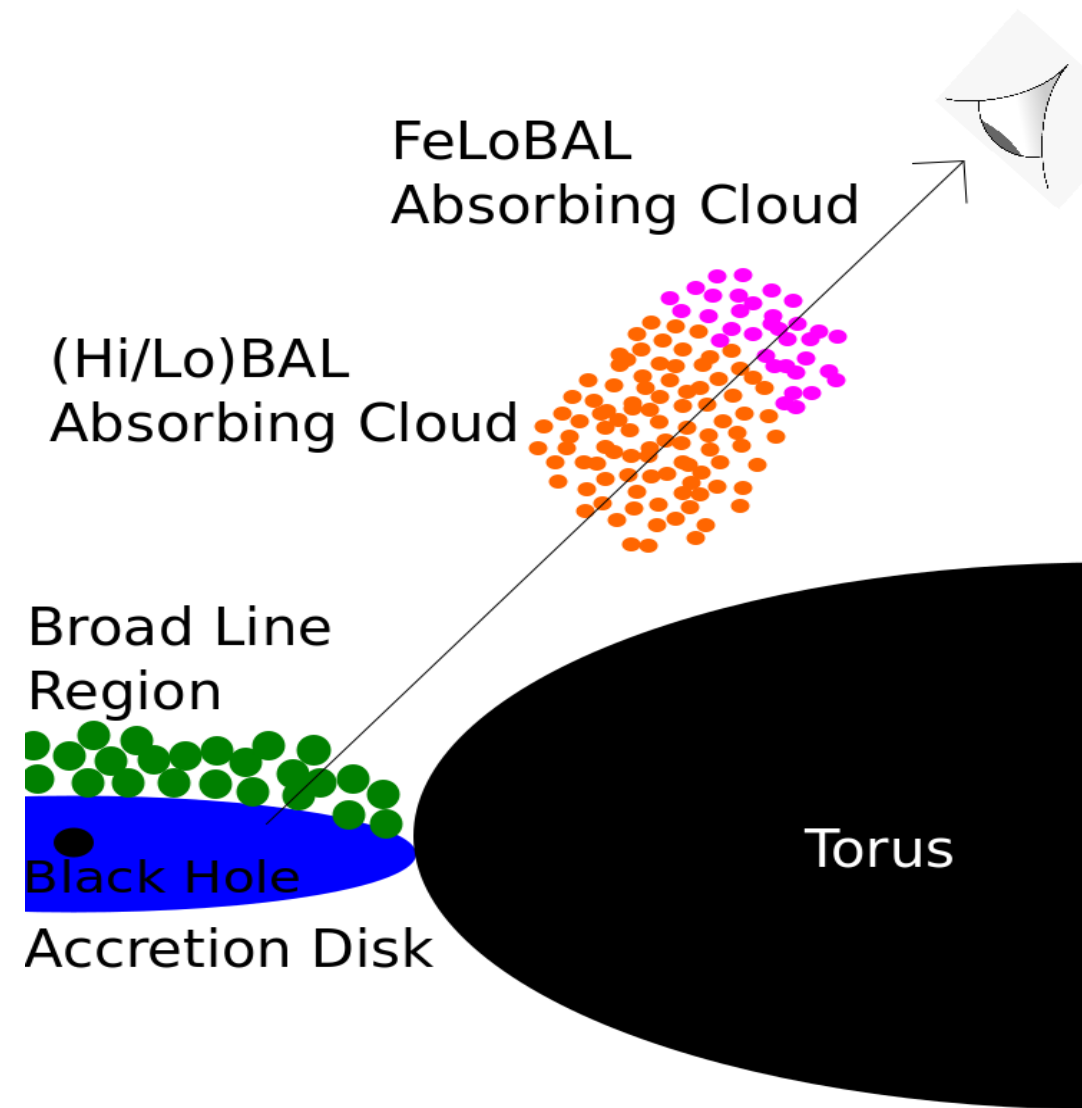
# What is a Quasar (QSO)?

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- Short for Quasi-Stellar Object
- Highly luminous galaxy core that radiates across the EM spectrum
- Incredibly distant : anywhere from 10 million light years to billions of light years away
- Caused by friction between inflowing gases in the accretion disk

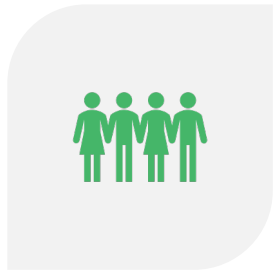
# What is a BALQ?

- Stands for Broad Absorption Line Quasar
- Shows dips in luminosity across a broad range of wavelengths
- Caused by absorption from absorption "clouds" far from the center
- HiBAL, LoBAL, and FeLoBAL subtypes



# SimBAL

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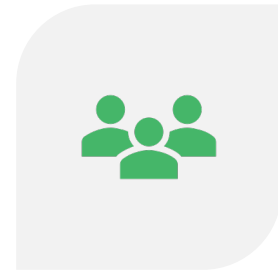
GROUP STUDYING  
BAL QUASARS



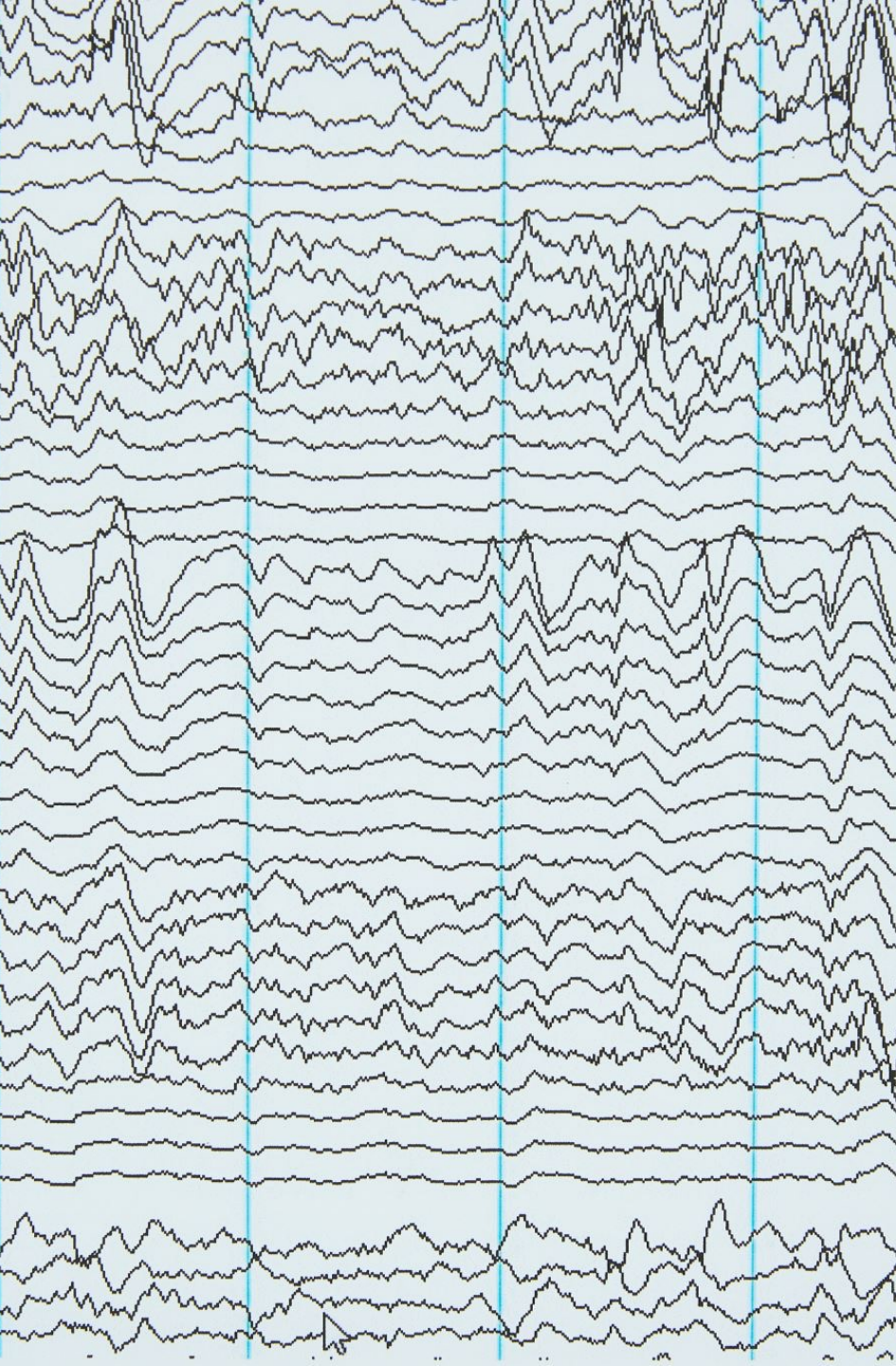
INCLUDES MEMBERS  
FROM UNIVERSITIES  
ACROSS THE  
CONTINENT



SEEKING TO  
UNDERSTAND THE  
PHYSICS BEHIND  
BALQS



MY RESEARCH  
CONTRIBUTES  
TOWARDS THE  
GROUP



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# My Research

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- Studying HiBAL quasars
- Data comes from SDSS
- Distances range from 71.1-91.4 billion light years
- Looking exclusively at emission lines
- Work includes fitting models to HiBAL spectra
- Models are used to classify quasars into four clusters
- ~2,600 spectra to fit and analyze

# Model Fitting Example

