

## Problem Set 4

### 1 Changing-Look AGNs

There are two main categories of CL AGNs:

1. Changing-Obscuration AGNs: variations in the line-of-sight column density, often due to clouds or outflows obscuring the central engine, lead to observable spectral changes.
2. Changing-State AGNs: the continuum emission and broad emission lines appear or disappear, typically triggered by significant changes in the accretion rate of the supermassive black hole.

Several open questions are listed in C. Ramos Almeida and C. Ricci [1]. One of the most intriguing question about CS-AGN is their typical timescales and their frequency of occurrence. New telescopes and surveys will help us answer it.

### Bibliography

- [1] C. Ramos Almeida and C. Ricci, “Nuclear Obscuration in Active Galactic Nuclei,” *Nature Astronomy*, vol. 1, pp. 679–689, Oct. 2017, doi: 10.1038/s41550-017-0232-z.