The restless nature of AGN: 10 years later



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Interpretation of IR variability of AGNs in the hollow, bi-conical, dust-outflow model.

We show that, contrary to simple predictions, most AGNs show at best only a small increase of lags inthe J, H, K, and L bands with increasing wavelength. We suggest that a possible cause of this near simultaneity of the variability from the near-IR to the mid-IR is that the hot dust is in a hollow bi-conical outflow of which we only see the near side. In the proposed model sublimation or recreation of dust in some cloud along our line of sight in the hollow cone could be a factor in explaining the changing look phenomenon of an AGN. The relative wavelength independence of IR lags simplifies the use of IR lags for estimating cosmological parameters.

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