NGC 1068

By

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Dusty torus in the nucleus of NGC1068

Motivation:
Determination of the size of the obscuring torus in the Seyfert 2 nucleus of NGC1068

Torus = key element in the unification of the Type 1 & 2 AGNs

NGC1068: close (15Mpc) and bright (K magnitude of the nucleus ~ 9)

But no direct measurement of the size

SED modeling predicts sizes from < 1 pc up to 10 pc (< 0.014" to 0.14")

Constraint: Radius < 0.125 " (K band AO observations)

→ **VLTI**

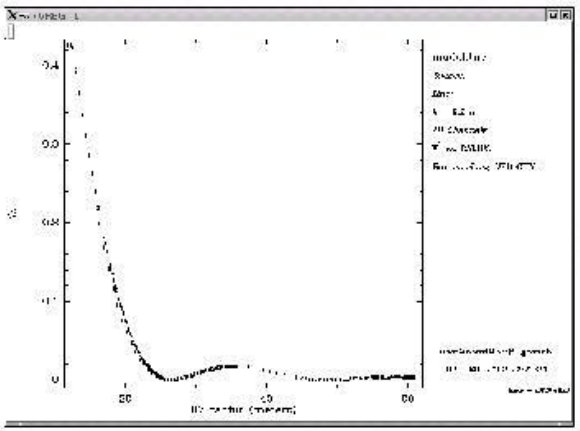
Instrument: AMBER

Set up :
- K band low resolution
- 3 ATs
-

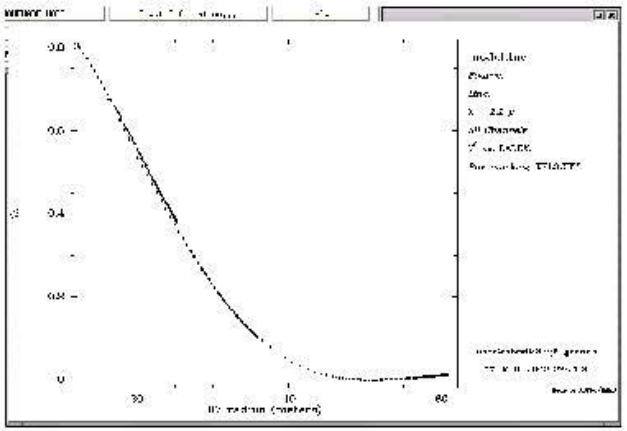
2 Baselines:
B4-D2-G1 (D~12-60m,lambda/D~40-8mas)

1 observation night

20 mas



10 mas



To interpret the data:

Using simulation of the NIR emission of a dusty torus (radiative transfer)

we get size of the emission in K
+ at other wavelengths (other proposal)

⟶ complete model of the torus..... its size