DISK DETECTIVE
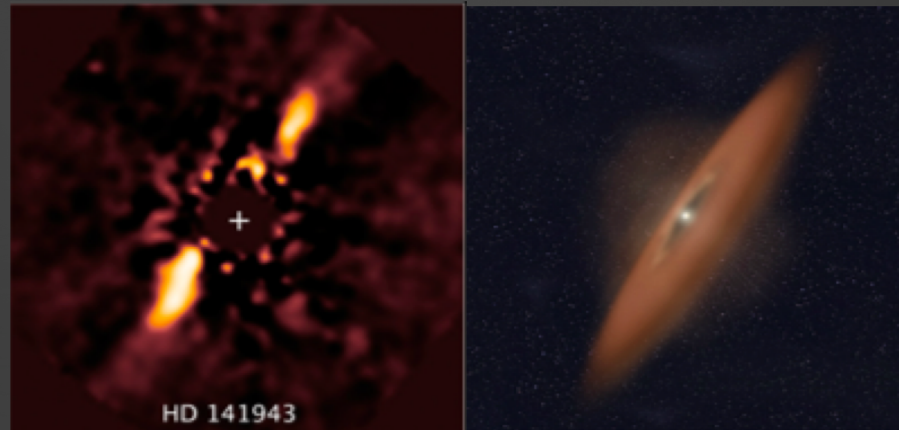
NATALIE KOVACEVIC

DR. WISNIEWSKI
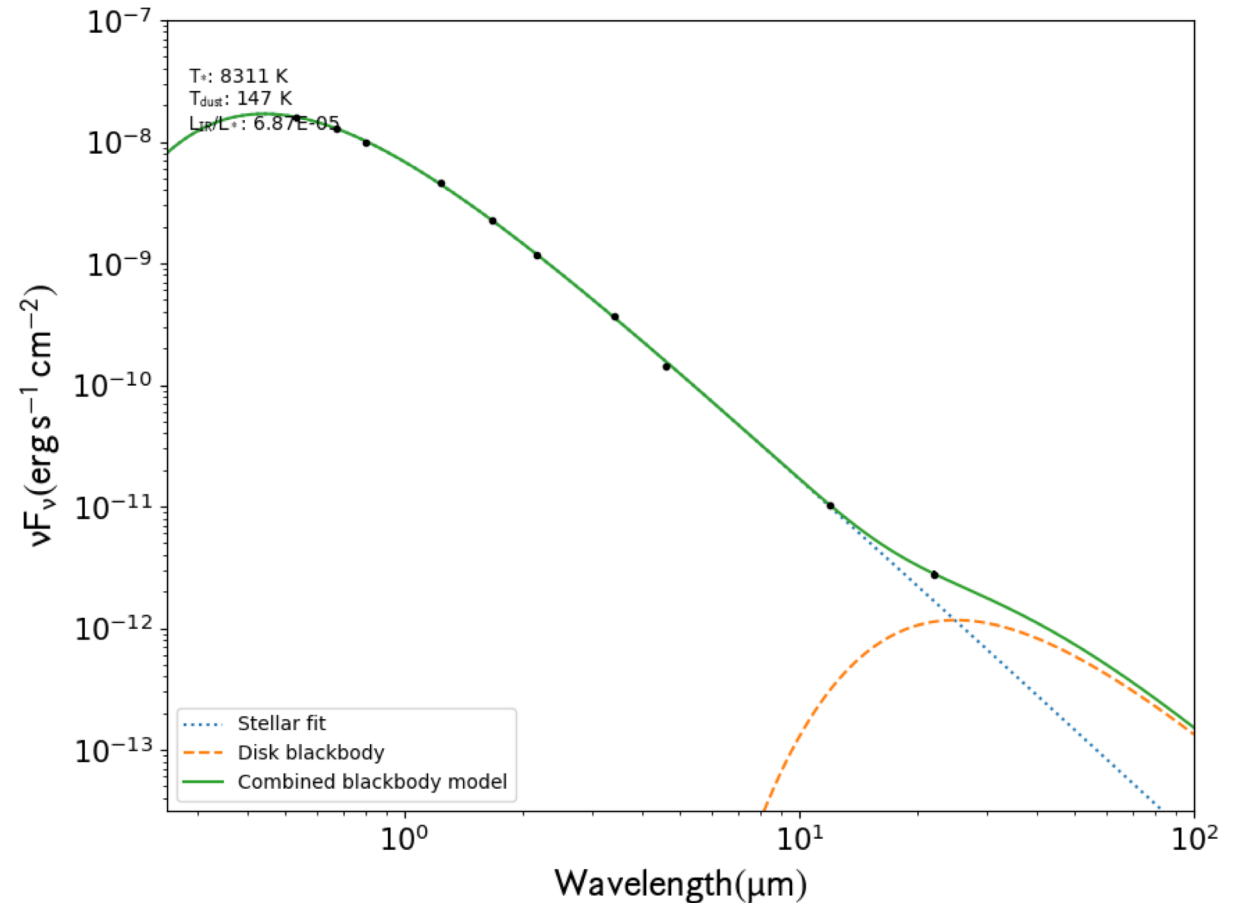
DEBRIS DISKS

- ROCK AND DUST

- EXTREME DEBRIS DISKS

- USED FOR UNDERSTANDING PLANETARY FORMATION AND EVOLUTION
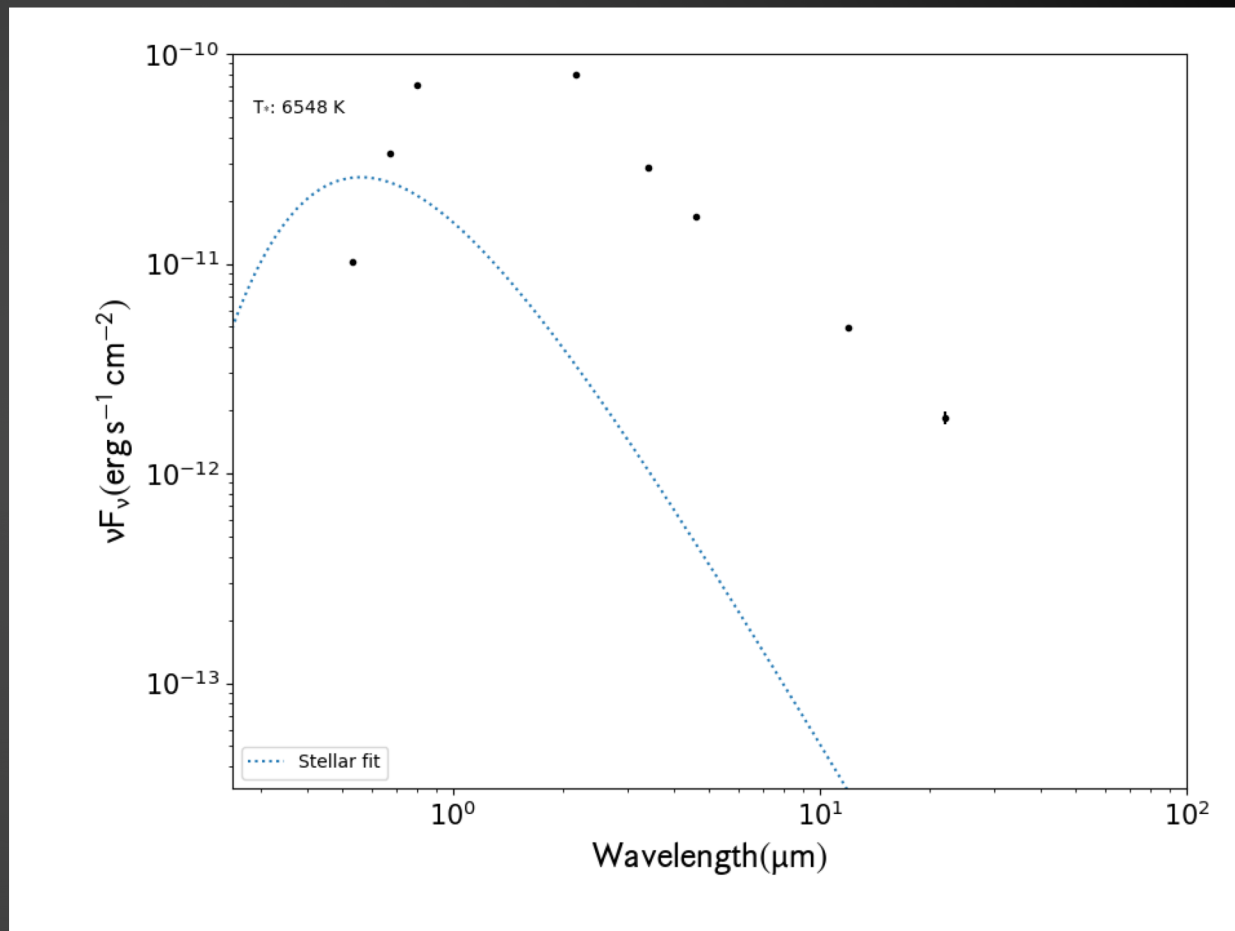

HD 141943

SED

- 176 CANDIDATES GIVEN WITH SEDs

- SED- SPECTRUAL ENERGY DISTRIBUTION

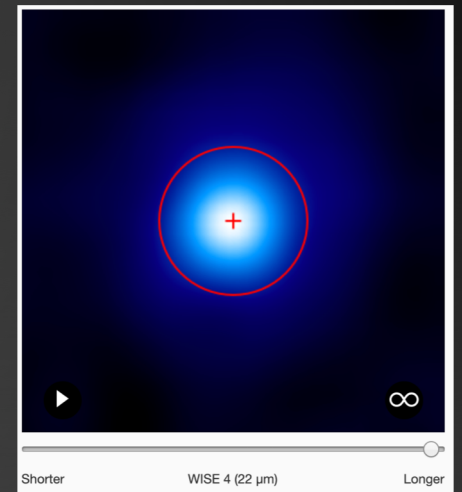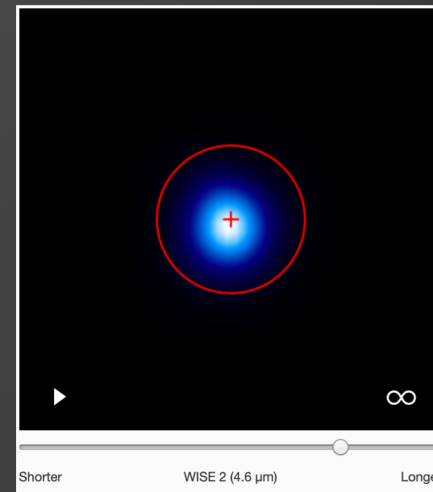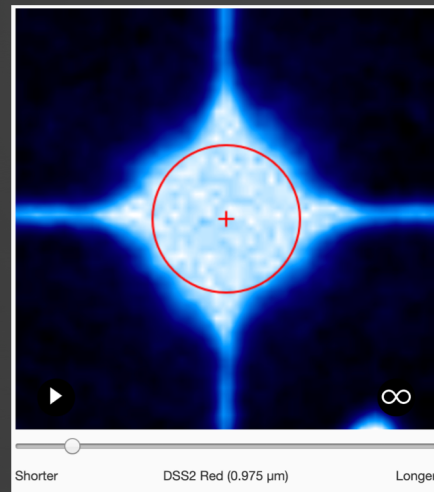- RED EXCESS SHOWS EVIDENCE OF A DISK
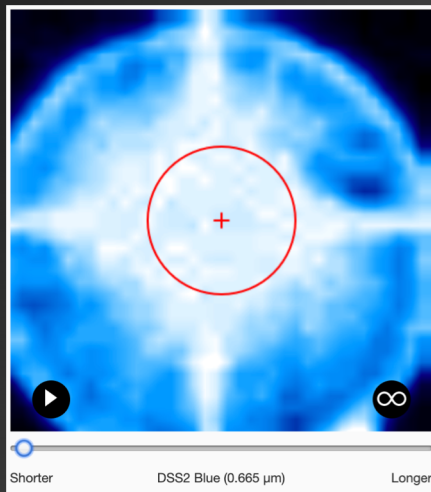
- HAVE TO DO MORE INVESTIGATION

BAD FITS

- 13 SEDs WITH BAD FITS

- HAD TO SEND THEM BACK TO GET REFITTED

- HARD TO DISTINGUISH IF EXCESS IS THERE OR NOT

- FEW ARE STILL HAVING TROUBLES BEING REFITTED

FLIPBOOK IMAGE

- IMAGES SEDs ARE DERIVED FROM

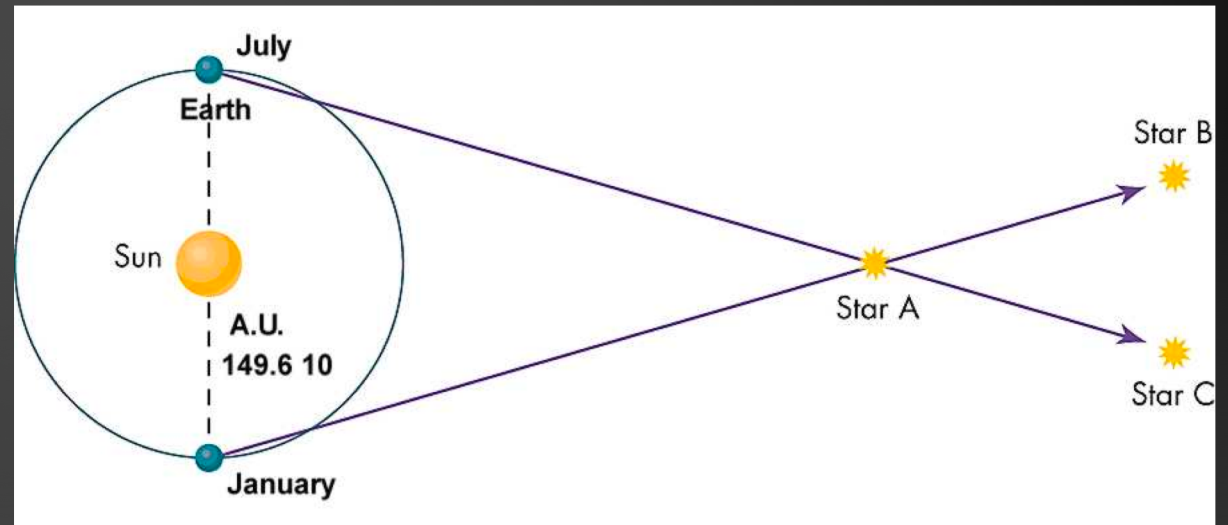- MAKE SURE THEY ARE CLEAN

- TAKEN AT DIFFERENT WAVELENGTHS

3 LISTS

- MADE 3 SEPARATE LISTS

- GOOD CANDIDATES, BAD FITS, AND KNOWN DISKS

- WITH GOOD CANDIDATES LIST:
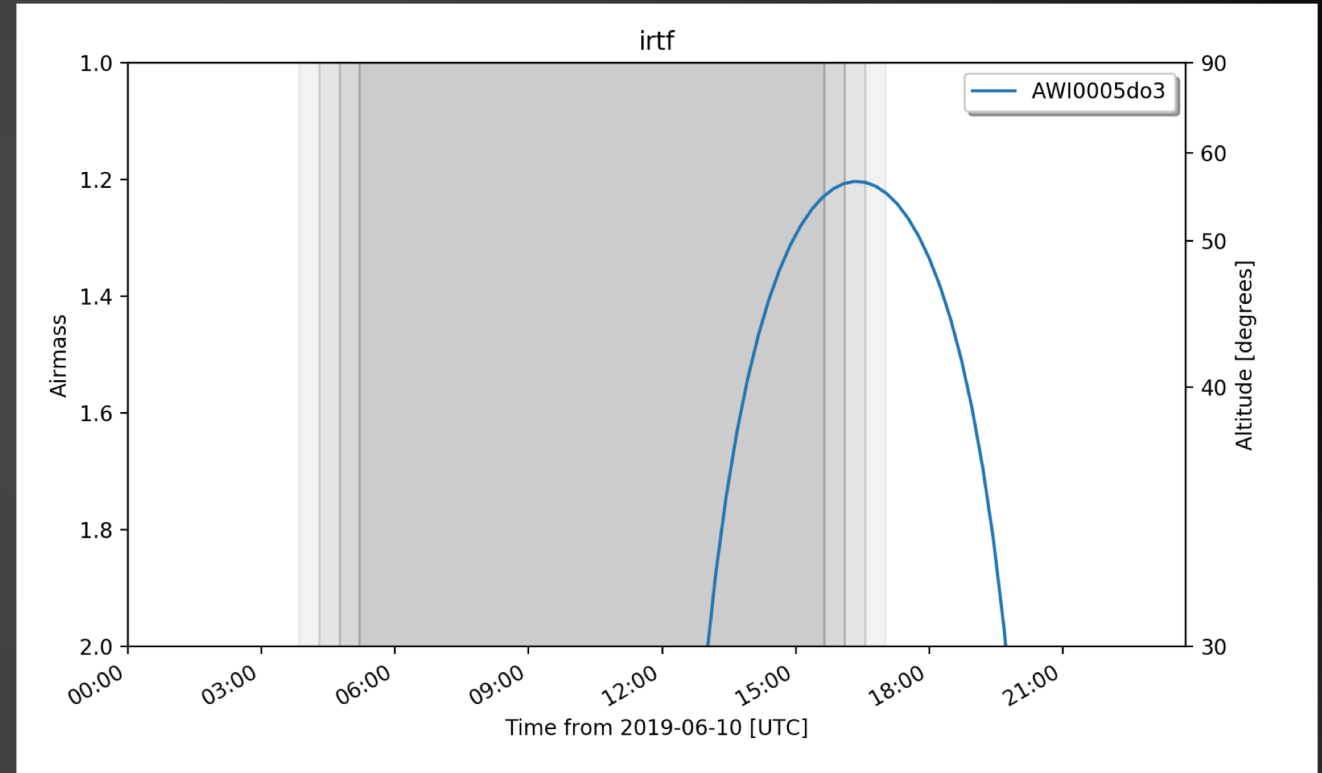
➢ LOOKED AT VARIOUS ASPECTS FOR NOW 64 OBJECTS

GOOD CANDIDATES

- PARALLAX

- RA AND DEC(RIGHT ASCENSION AND DECLINATION)

- NORTHERN OR SOUTHERN HEMISPHERE

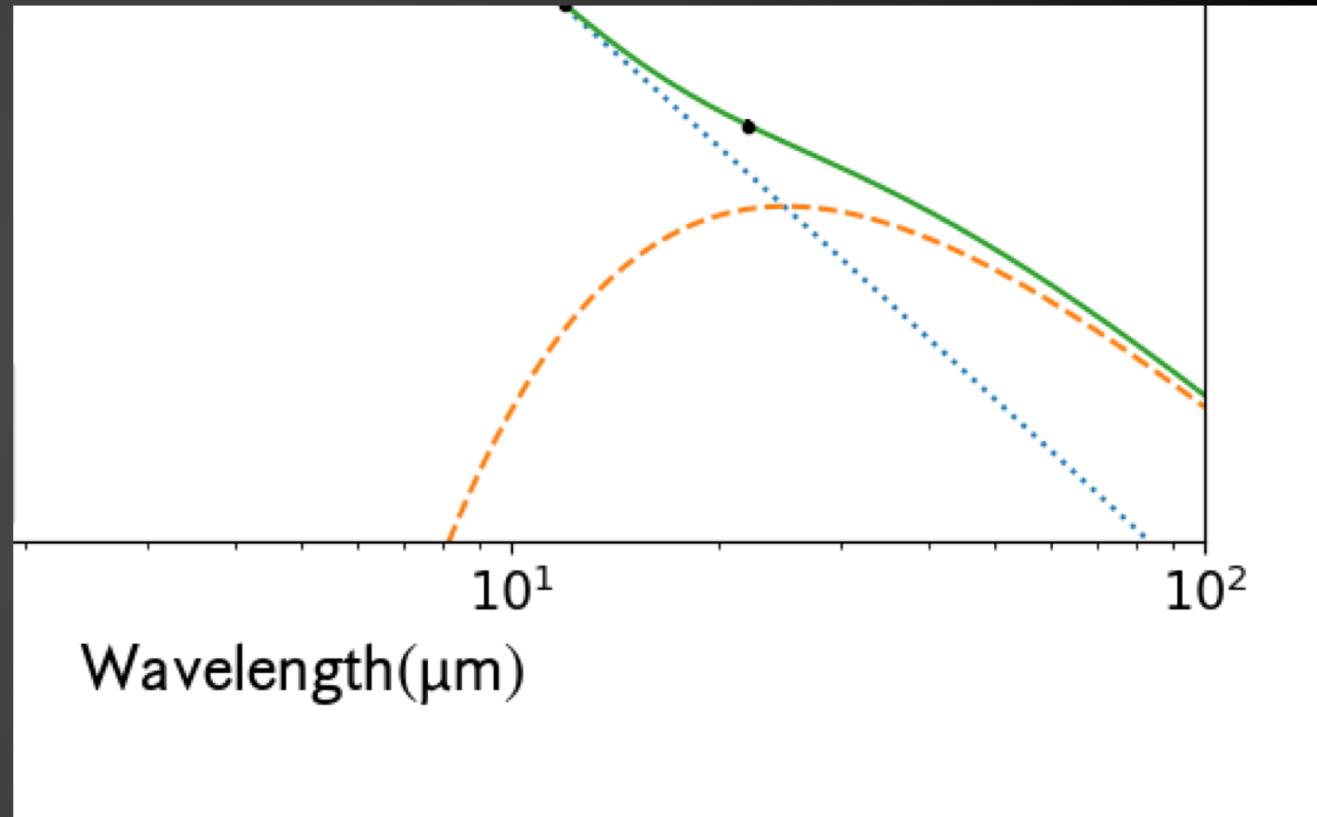➢ GIVEN FROM DECLINATION

WHEN CAN WE SEE THEM?

- USING A PREVIOUSLY MADE CODE

- WHAT MONTHS OF THE YEAR GOOD CANDIDATES ARE VISIBLE

- LOOKED AT THREE OBSERVATORIES:

➢ IRTF, SUBARU, AND APACHE

FINDING FLUX DENSITY

- GIVEN MODEL FLUX DENSITIES FOR GOOD CANDIDATES (64 OBJECTS)

- CALCULATE OBSERVED FLUX DENSITIES

- CAN CALULATE THE VALUE OF THE EXCESSES IN THOSE SEDs

GOOD CHECK

- HAD TO DOUBLE CHECK OBJECTS

- FOUND THAT SOME WERE PUBLISHED BY DISK DETECTIVE

- SOME WERE WELL STUDIED

- NOW 48 OBJECTS

OBSERVED FLUX DENSITY

- FOR 48 OBJECTS

- FOUND SOME COULD NOT BE CALCULATED

- THREW THOSE AWAY (NOT UPSET AT ALL)

- CALCULATED FOR 35

EXCESS

- TELLS YOU IF DISK IS THERE AND IF WE CARE ABOUT IT

- USEFUL IN FIGURING OUT IF EXTREME DISK OR NOT

- FOUND BY SUBTRACTING

- HAD TO CONVERT TO JANSKY
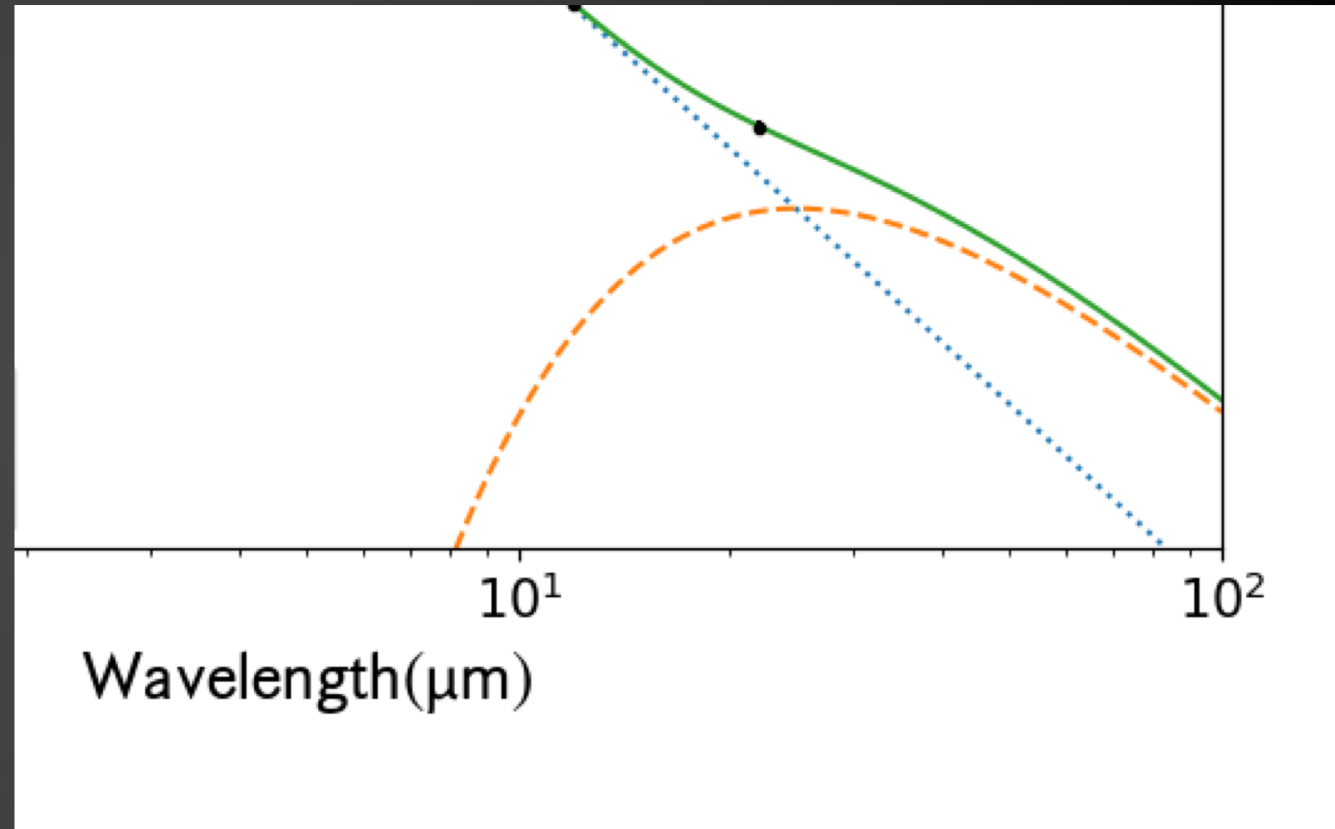
1 Jy = 10-23 erg s-1 cm-2 Hz-1

PROPOSAL

- NOW HAVE ALL INFO

- ACTUALLY OBSERVE THESE OBJECTS

- FINAL LIST: 35 OBJECTS

Thank you for sticking with me!