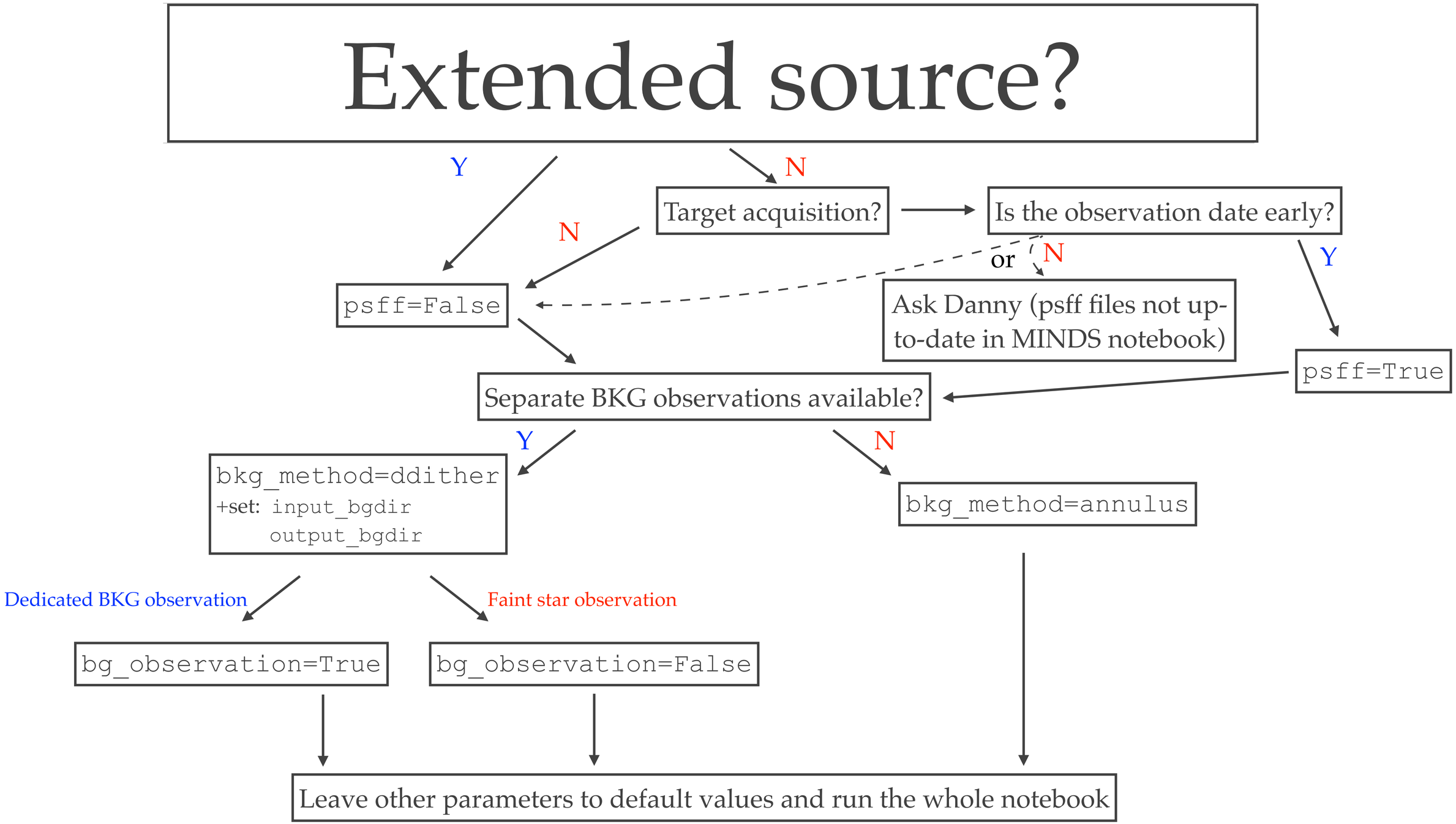
Flow chart 1


Extended source?
Y
N
Target acquisition?
Is the observation date early?
N
Y
or
N
psff=False
Ask Danny (psff files not up-to-date in MINDS notebook)
psff=True
Separate BKG observations available?
Y
N
bkg_method=ddither
+set: input_bgdir
output_bgdir
bkg_method=annulus
Dedicated BKG observation
Faint star observation
bg_observation=True
bg_observation=False
Leave other parameters to default values and run the whole notebook

Flow chart 2

My resulting spectrum with default parameters looks…

Good

Bingo!

Wait, was psff=True?

Y: Was the observation early enough for time correction to be negligible?

Y: Run with psff=False. **Y**: to disentangle H lines from A star. **N**: for proper time correction

N: Run with psff=False. **Y**: to disentangle H lines from A star. **N**: for proper time correction

Great! Now proceed to continuum/line analysis and publish paper!

Bad

Is the spectrum full of residual fringing artefacts?

Y: Do they overlap with rich molecular features?

Y: Looks like you'll have to focus on other parts of your spectrum

N: Use `rfc1d` and run again.

N: Is the spectrum unexpectedly skyrocketing at long wavelengths?

Y: Your target was likely labeled 'EXTENDED' (no BKG sub by default). Try again with either `overwrite_target_classification = True` or `bkg_method=sdither`

N: Is the spectrum showing jumps?

Y: Are the jumps small and random?

N: Only between CH4B and CH4C, and psff=False?

Y: Update jwst pipeline version and use latest CRDS file with `os.environ["CRDS_CONTEXT"] = ""`

N: Check in s3d cubes that the source was not partly cropped out of the field for those bands. If so, act wisely.

Y: Set `correct_jumps`, and run again.

N: Is the spectrum very spiky?

Y: Check that `do_bpc2 = True`. Try other values for `pixel_replace_algo` & `skip_outlier_det_s3`

N: Your spectrum is very noisy then?

Y: Try again with `bkg_method=ddither` (note: slightly underestimates continuum level) or `bkg_method=sdither` (note: potentially inaccurate continuum level at long wavelengths), and choose the least evil for your science.

N: **Then it looks good!**

N: Set `discard_band_cen` to discard faint bands and run again.

N: Is the source very faint?

Y: Check s3d cubes. Can you see the source in all bands?

Y: Do you feel like figuring it out on your own?

N: **Does it look good now?**

Y: **Contact Valentin/ Matthias/Danny (or raise issue at data reduction meeting)**

The notebook couldn't finish running

Have you really followed flow chart 1?

N: Go back to flow chart 1!

Y: Did you follow the guideline instructions to set input uncal files?

N: Go read the guidelines!

Y: Is it your first time running the notebook?

Y: Try uncommenting the first 4 lines of the notebook

N: Did you get an error message?

Y: Is the error message very obscure?

N: Has it been running for >20min?

Y: Wait

N: Connected to the internet?

N: **Try again with internet**