# Additional information from data processing viewpoints

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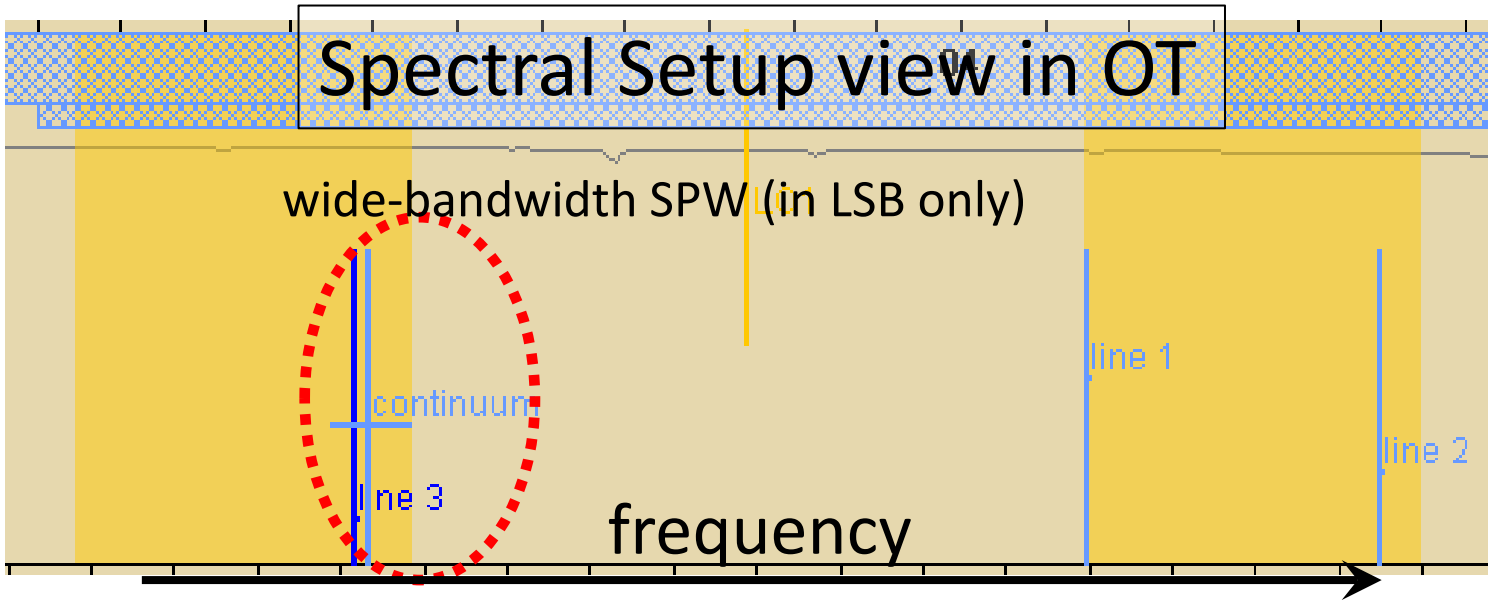
# This talk

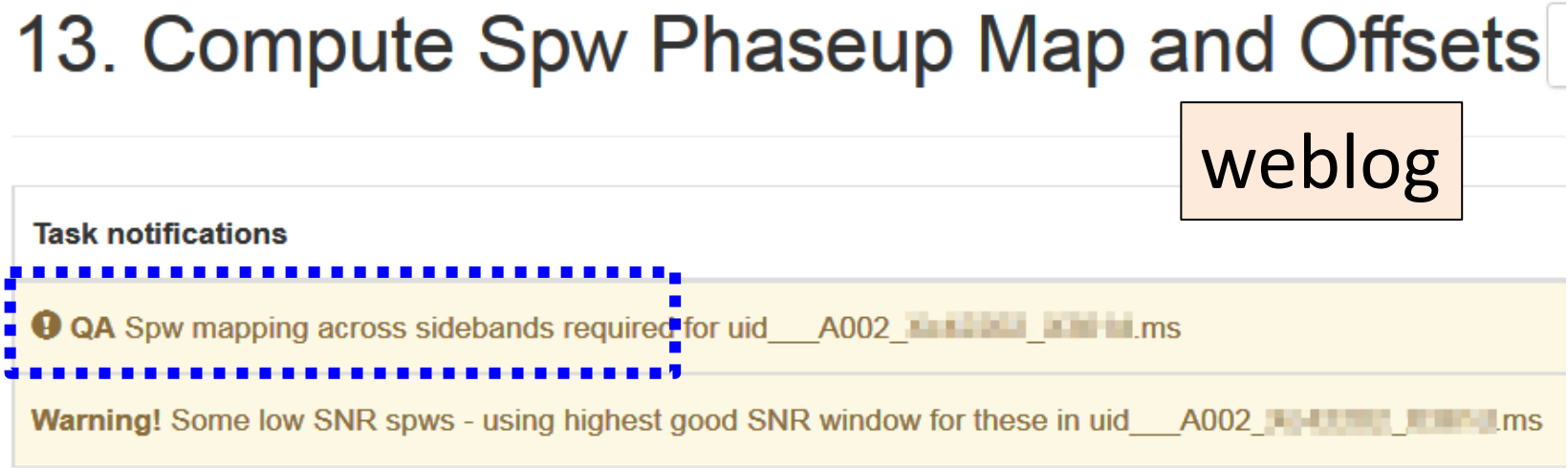
- provides a couple of items which PIs need to take into consideration at the moment of planning observation (spectral setup)
- they may bring difficulties to data reduction and may cause some adverse effect on data quality and calibration accuracy

# Narrow BW observations



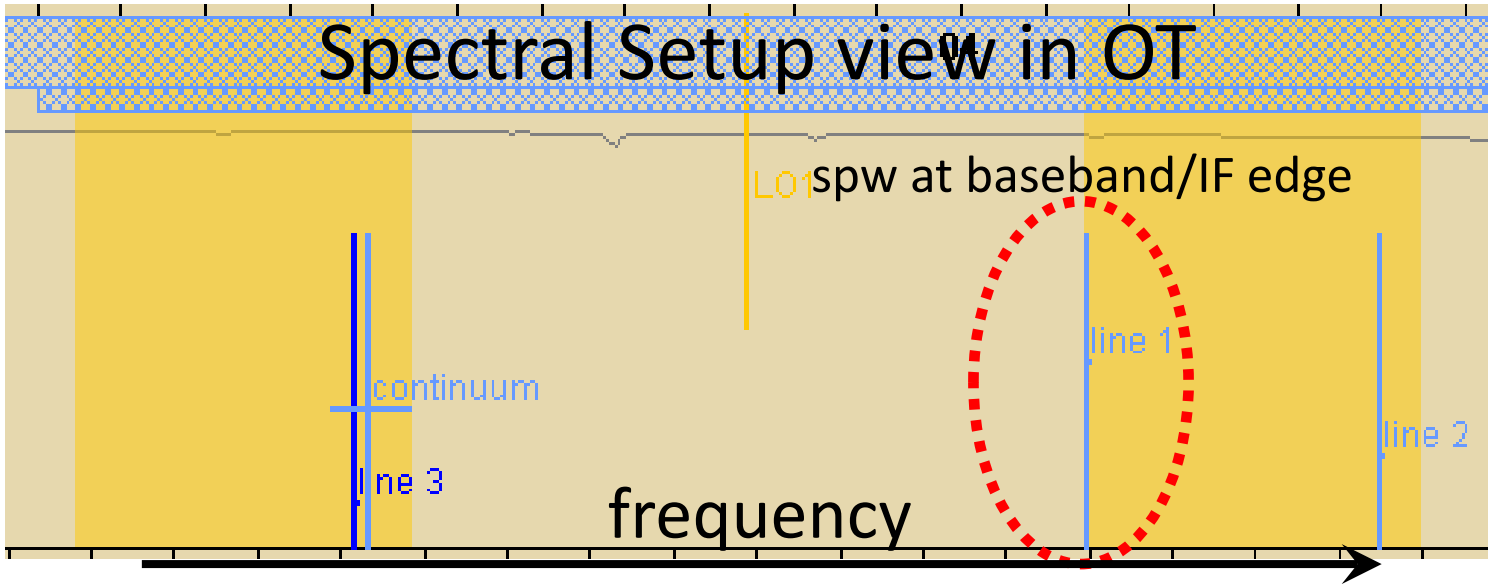

- narrow-bandwidth (BW) spectral windows(SPWs) may bring difficulties to gain calibration (low S/N)
- adding a wide-BW SPW for continuum could help (“SPW Phase-up” will be triggered), but…

# Narrow BW observations



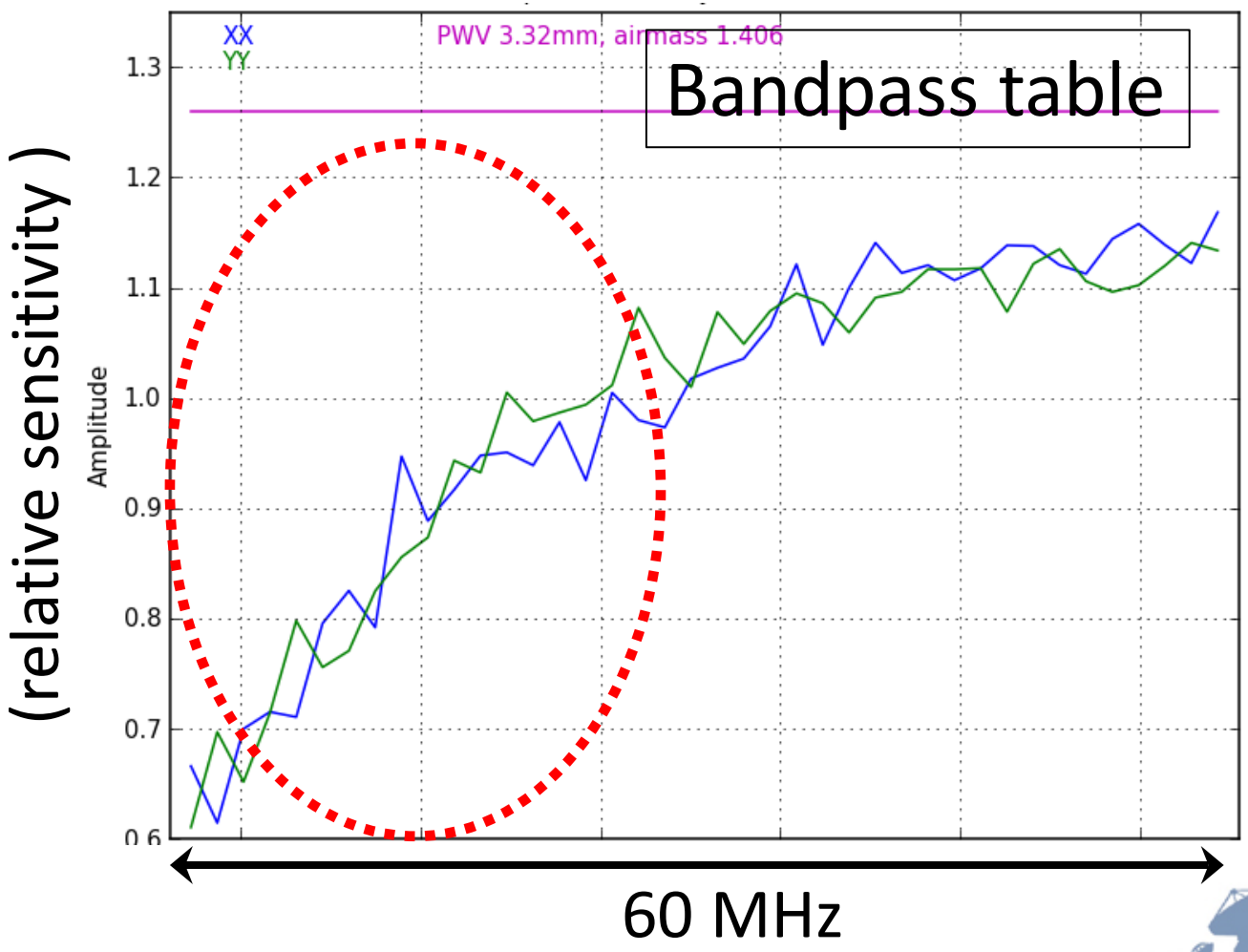

- a wide-BW SPW in only one of the sidebands impose SPW mapping across sidebands (e.g., a gain table obtained in LSB is applied to USB) in calibration step
- this may cause additional gain calibration error
  - in case that significant atmospheric transmission difference btw sidebands is there

# SPW at Sideband edge

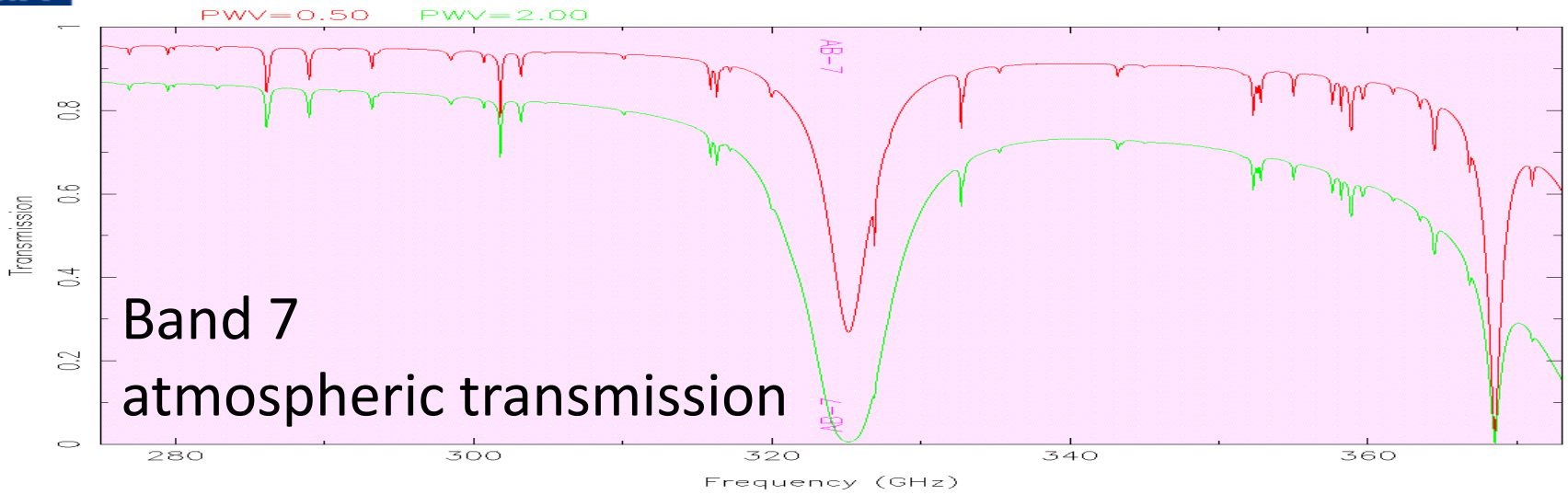



- spectral window placed at the very edge of a sideband likely suffer excess noise due to high system temperature and/or low system gain
- this will cause relatively low sensitivity and/or excess gain/flux error

# SPW at Sideband edge



# Atmospheric absorption




- atmospheric  absorption will cause relatively low sensitivity and/or large gain/flux error
- this can affect Bands 5 and 7-10 especially
- If necessary, the representative frequency should be modified to be at the most restrictive part of the atmosphere where a line needs to be detected