README: colloc_Precipflag_DPR_GMI_YYYYMMDD.sav

File name contains YYYYMMDD as the year, month and day

nch=13 (number of channels. For channel frequency, check out: https://www.star.nesdis.noaa.gov/mirs/gpmgmi.php)
nfov=221
nrec: number of sweep scans for each particular day

Variables:

- Emis: surface emissivity, [no unit], dimension [nch*nfov *nrec]. Valid value: 0<Emis<1
- Emis_std: standard deviation of surface emissivity, same dimension with Emis; can be used as a quality-control for "Emis". If Emis_std is large relative to Emis value, that indicates the emissivity data might be of doubtable quality.
- Chi: convergence robustness factor (no unit). Chi < 1 likely corresponds to clear-sky
- Emis_AK: averaging kernel (no unit). (recommend > 0.9) – this eliminates high water vapor scenes where the surface is not visible at 166 GHz (even if no clouds or precipitation)
- Tysfc: surface type. Integer number, each number represents one type of surface (e.g., 1 is ocean). The value of this number has no physical meaning. Rather, it should be served as a classifier for surface. Dimension [nfov*nrec], valid value: 1,2,3…,13,14
- Latc/lonc: latitude/longitude. Unit is [degree], dimension [nfov*nrec].
- UTC: universal time in [hr] unit. Dimension is [nrec]. UTC is the same for each sweep (i.e., nfov).
- Ts: surface skin temperature. Unit [K]. dimension [nfov*nrec]. This number is only positive over land.
- TWV: total column water vapor. Unit [??], dimension [nfov*nrec], valid value: [0,100]
- CLWP: cloud liquid water path. Unit [kg/m^2], dimension [nfov*nrec], valid value: [0, 12]. CLWP < 0.1 can be used as clear-sky flag (no precip, no cloud)
- Tc: brightness temperature. Unit [K], dimension [nch*nfov*nrec]. Valid value: [50-350]. This is the most important input that are purely from observations. We will try to see if we can solely rely on this variable and of course latitude/longitude/time/season for the precipitation flag prediction.
- PFlag: flag of the type of precipitation. Dimension [nfov*nrec], valid value [0,1,2,3], where 0 is no precipitation, 1 is stratiform, 2 is convective and 3 is other precipitation.
- New definitions of PFlag:
  ;scenario 1: no-precip -> no-precip, flag=0
  ;scenario 2: strat -> strat, flag=1
  ;scenario 3: conv -> conv, flag=2
  ;scenario 4: other -> other,flag=3
  ;scenario 5: no-precip + strat -> mixed#1, flag=4
  ;scenario 6: no-precip + conv -> mixed#2, flag=5

;scenario 7: no-precip + other -> mixed#3, flag=6
;scenario 8: strat + conv -> mixed#4, flag=7
;scenario 9: strat + other -> mixed #5, flag=8
;scenario 10: conv + other -> mixed #6, flag=9

- ;scenario 11: any three -> mixed #7, flag=10