V4.1/V4.2 stratospheric aerosol subtyping flowchart

T : Mid-layer temperature
γ'_{532} : Feature integrated attenuated backscatter 532 nm
δ_p^{est} : Estimated particulate depolarization ratio 532 nm
χ' : Feature color ratio

Stratospheric aerosol feature
(γ'_{532}, δ_p^{est}, χ', latitude, month)

Lat > 50°N
T < -70°C
Dec - Feb

Lat < 50°S
T < -70°C
May - Oct

$\gamma'_{532} > 0.001$ sr^{-1}

Sulfate/other

NO

NO

NO

YES

YES

YES

PSA

Ash

$\delta_p^{est} > 0.15$

YES

NO

$\chi' > 0.5$

YES

NO

Smoke

$\delta_p^{est} > 0.075$

YES

NO