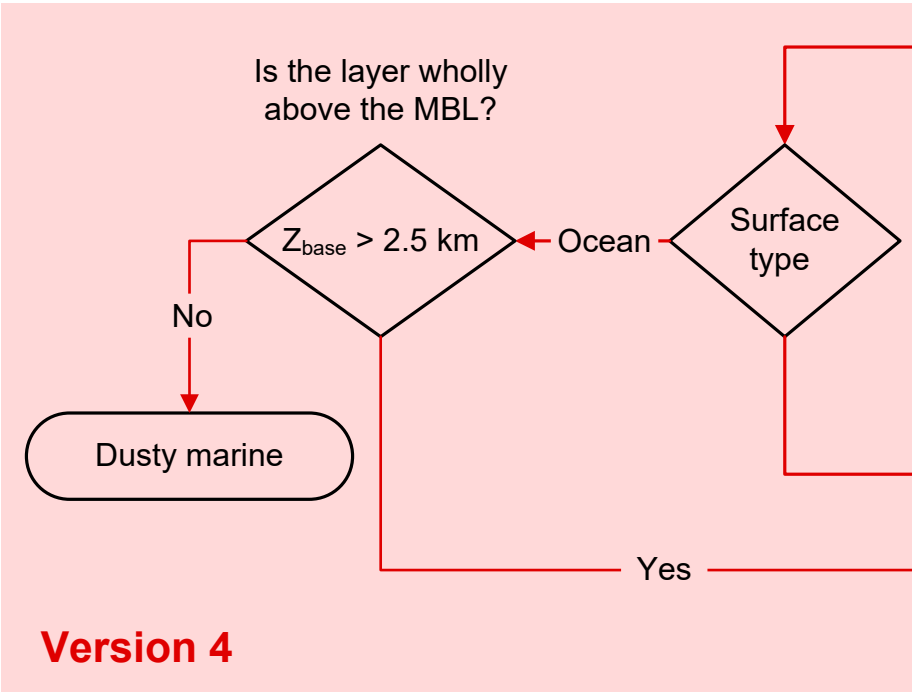
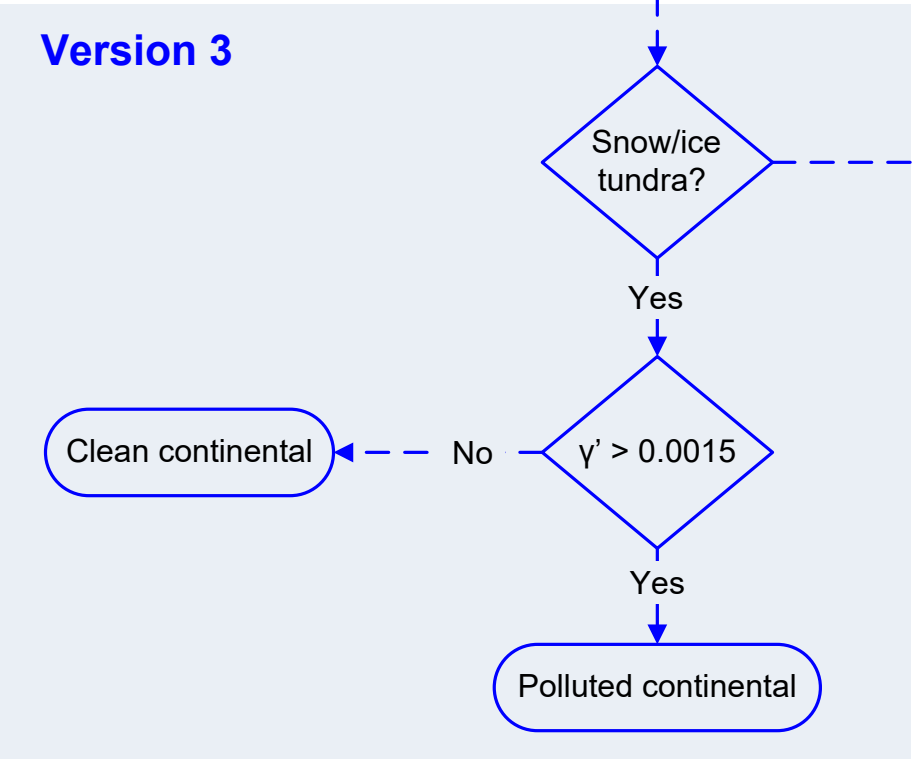


γ' : 532 nm integrated attenuated backscatter
 δ_p^{est} : estimated particulate depolarization ratio
 Z_{top}, Z_{base} : layer top and base altitude



Feature ($\gamma', \delta_p^{est}, \text{surface type}$)

Snow/ice tundra?

Yes

No

Clean continental

Yes

Polluted continental

$\delta_p^{est} > 0.075$

Yes

$\delta_p^{est} > 0.20$

Yes

Desert dust

Desert

No

Clean continental

$Z_{top} > 2.5 \text{ km}$

Yes

Polluted continental/
smoke

No

Yes

Elevated smoke

Surface type

Land

Ocean

$\gamma' > 0.0005$

No

$\gamma' > 0.01$

Yes

Marine

No

$\delta_p^{est} < 0.05$

Yes

No

Yes

$Z_{top} > 2.5 \text{ km}$

No

Is the layer wholly above the MBL?

$Z_{base} > 2.5 \text{ km}$

No

Dusty marine

Yes

Polluted dust

Surface type

Ocean

Land