Convective outflow

Strat/Trop Fold

GOES-12 PATMOS-X
Valid 11:45Z 01/24

Note:
Animation shows thin cirrus outflow off coast of Chile
RAQMS 24 hr FX
Valid 12Z 01/24

- Captures southwestward extent of convective outflow
- Captures strat/trop folding event
RAQMS 48hr CO FX
Valid 12Z 01/25

- N/S gradient in CO at 3Km near 5S associated with mid-level (6km) transport of polluted convective outflow to west
- Maritime convection to ~6km at 100-90W/40S ahead of STE
- Polluted continental convective outflow moving West at 12km
- Large STE at 100W/40S at 12km
RAQMS 72hr CO FX  
Valid 12Z 01/26

- N/S gradient in CO at 3Km near 15S associated with new mid-level (6km) transport of polluted convective outflow to west

- Polluted continental convective outflow moving south at 12km

- Fold broadens west of Chile at 50S at 12km
RAQMS 96hr CO FX  
Valid 12Z 01/27

- N/S gradient in CO at 3Km near 5S associated with new mid-level (6km) transport of polluted convective outflow to southwest
- Maritime convection between 6-9km at 115W/25S
- Polluted continental convective outflow remaining quasi-stationary at 12km
- Fold sheared out at 95-70W/45S at 12km
• N/S gradient in CO at 3Km near 5S associated with new mid-level (6km) transport of polluted convective outflow to southwest
• Maritime convection between 6-9km at 115W/25S
• Polluted continental convective outflow moving southwest at 12km
• Fold sheared out at 12km
RAQMS 96hr CO, HCHO, DMS, O3 FX at 25S
Valid 12Z 01/27

- Continental HCHO > 0.4 ppbv within continental deep convective outflow at 10-15km extends westward to ~80W (A)
- Residual O3 enhancements at 2-5km above marine PBL between 115W-70W possibly due to subsiding air (B)
- DMS shows evidence of marine convective outflow above 6km between 115-105W (C)
RAQMS 96hr CO, HCHO, DMS, O3 FX at 45S
Valid 12Z 01/27
- Mixture of aged pollution and stratospheric air between 8-12km at 110-100W (A)
- Residual continental HCHO enhancements at 1-5km above marine PBL between 115W-80W (B)
- Clean marine BL air off coast of Chile at 80W (C)