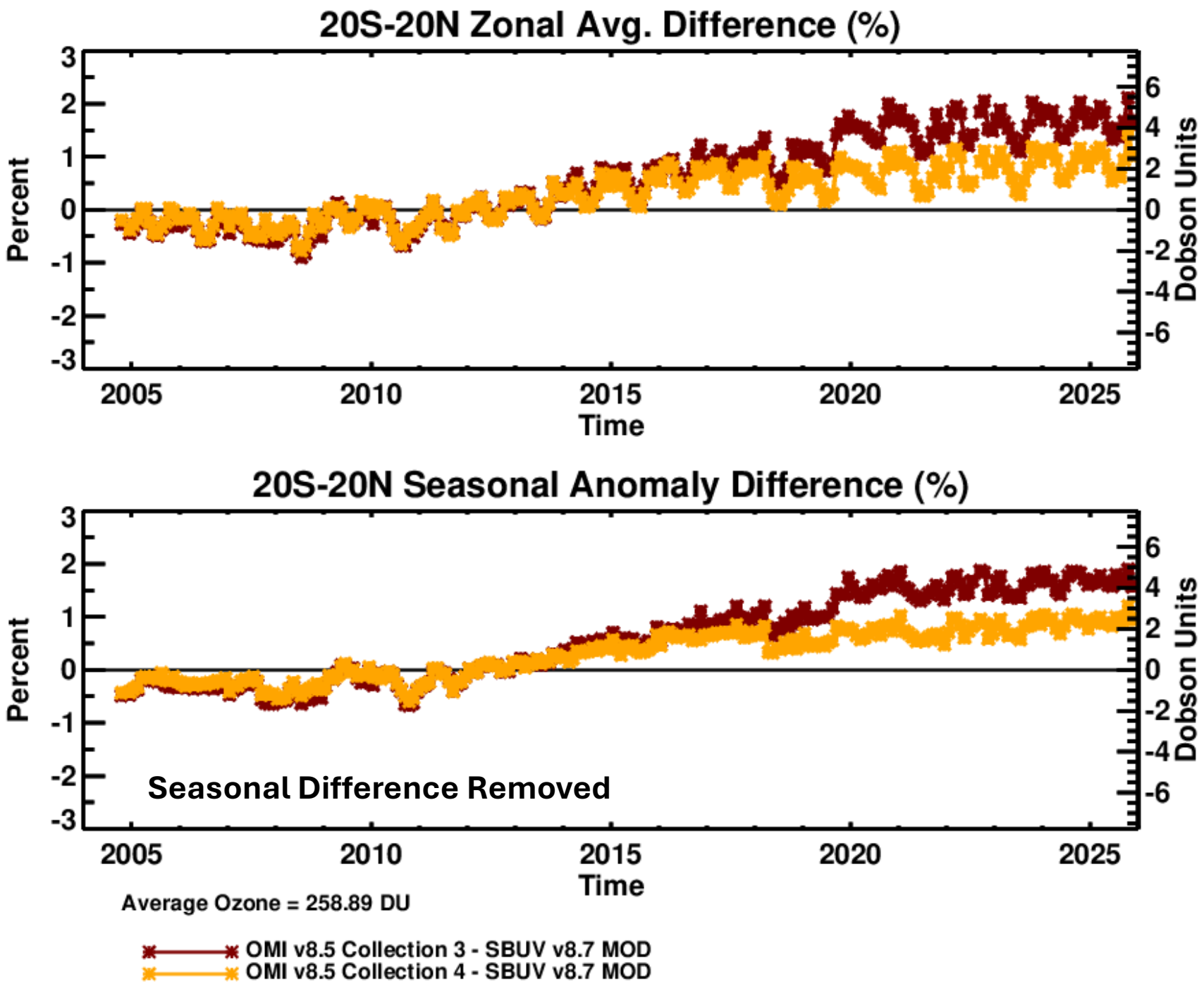
OMI Collection 4 Intercomparisons

30 March 2026

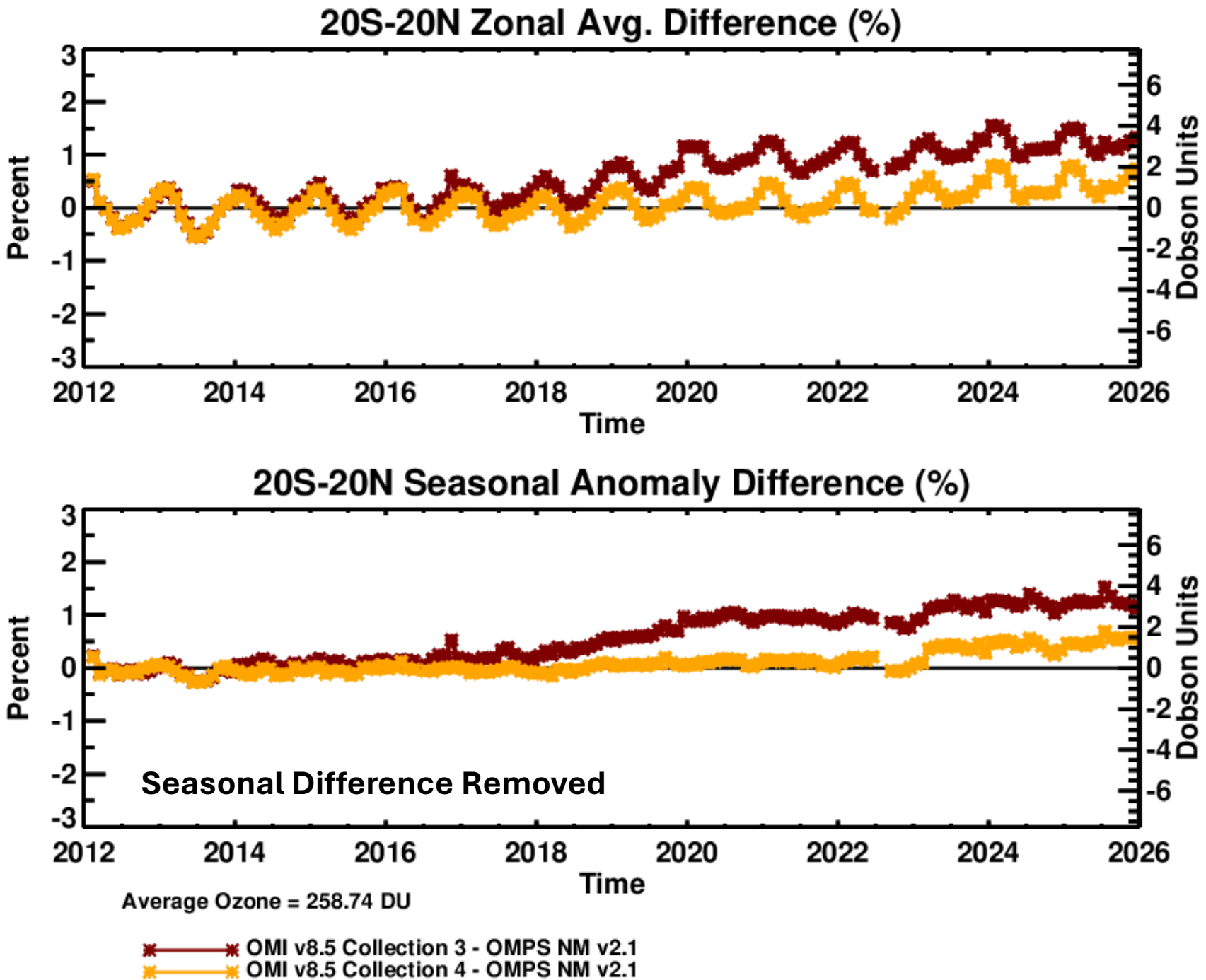
OMI Collection 4 (orange) and OMI Collection 3 (brown) time series difference relative to v8.7 SBUV MOD in the 20S-20N equatorial band.

Collection 3 and 4 are similar through 2013 relative to v8.7 SBUV MOD. The drift relative to MOD is slightly reduced in Collection 4 compared to Collection 3 from 2014-2018, and the more rapid shift relative to MOD from 2018-2020 in Collection3 is reduced in Collection 4.



OMI Collection 4 (orange) and OMI Collection 3 (brown) time series difference relative to v21 S-NPP OMPS Nadir Mapper in the 20S-20N equatorial band.

Collection 3 and 4 are similar through 2013 relative to Suomi-NPP OMPS Nadir Mapper (NM). The slight drift relative to NM in Collection 3 from 2014-2018 is largely eliminated in Collection 4. The sharper drift in Collection 3 from 2018-2020 is also largely eliminated in Collection 4, but both show a jump relative to NM in mid-2023.



OMI Collection 4 (orange) and OMI Collection 3 (brown) time series difference relative to v21 S-NPP OMPS Nadir Mapper in the 35-50 N/S zonal bands.

The difference patterns are similar in the northern and southern middle latitudes, with a small improvement in Collection 4 relative to OMPS NM from 2014-2018 and a notable improvement from 2018-2020 with similar differences thereafter. Collection 4 OMI shows an increasing drift relative to OMPS NM in the 30-50S band starting in ~ 2023.