

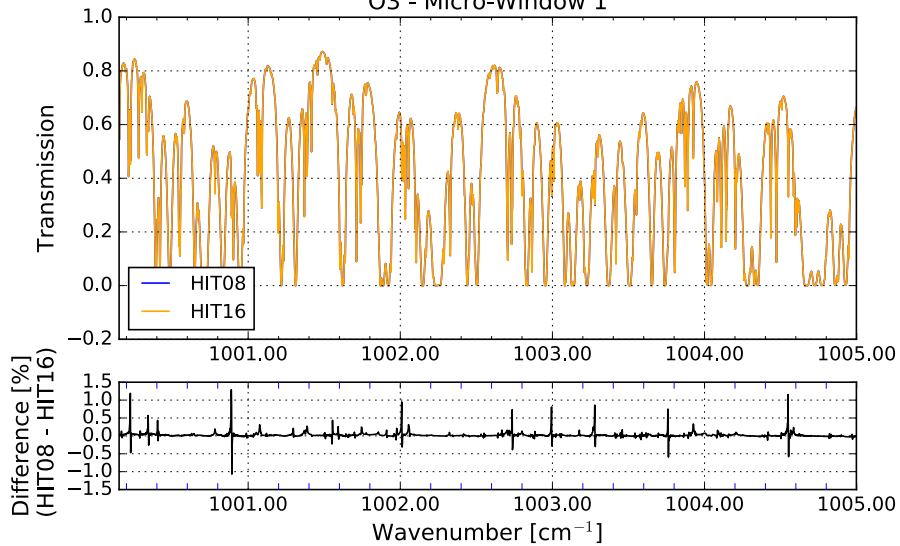
O3 HITRAN 08 / HITRAN 2016 / Interim ATM18 Tests

- Simulations
- Retrieval example & comparison
 - HITRAN 08 / HITRAN 16 / ATM 18 (interim list from Geoff ~Dec 2018)
 - Standard IRWG retrieval windows, our typical retrieval setting for archival data.
 - Each interfering species by window with difference then fit then difference in profiles
 - First H08/H16 then H16/A18
- Correlations
 - Column, fit RMS, DOF

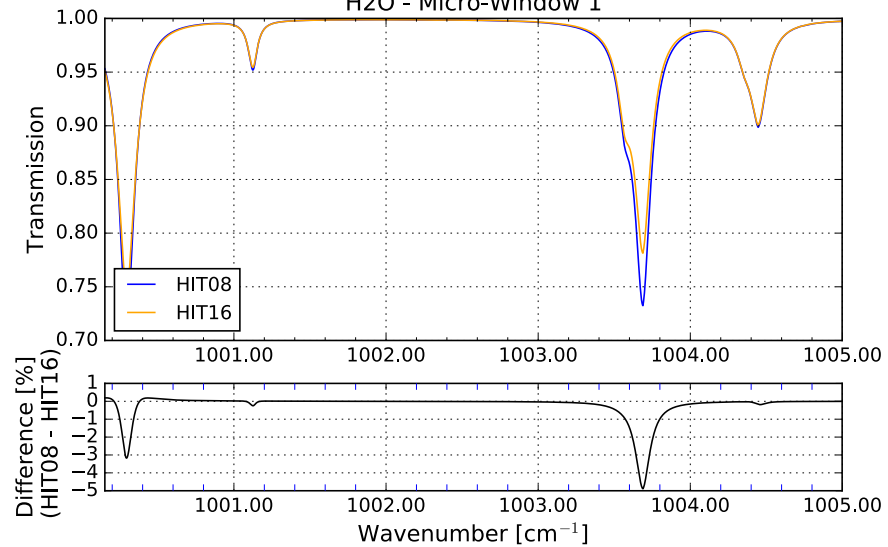
O3 HITRAN 08 / HITRAN 2016 / Interim ATM18 Tests

O3 HITRAN 08 / HITRAN 2016 / Interim ATM18 Tests

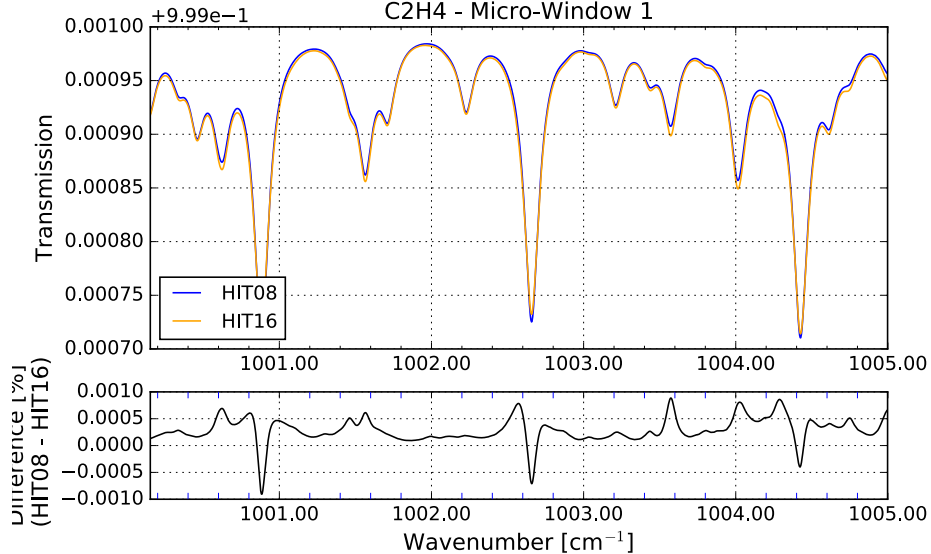
O3 - Micro-Window 1



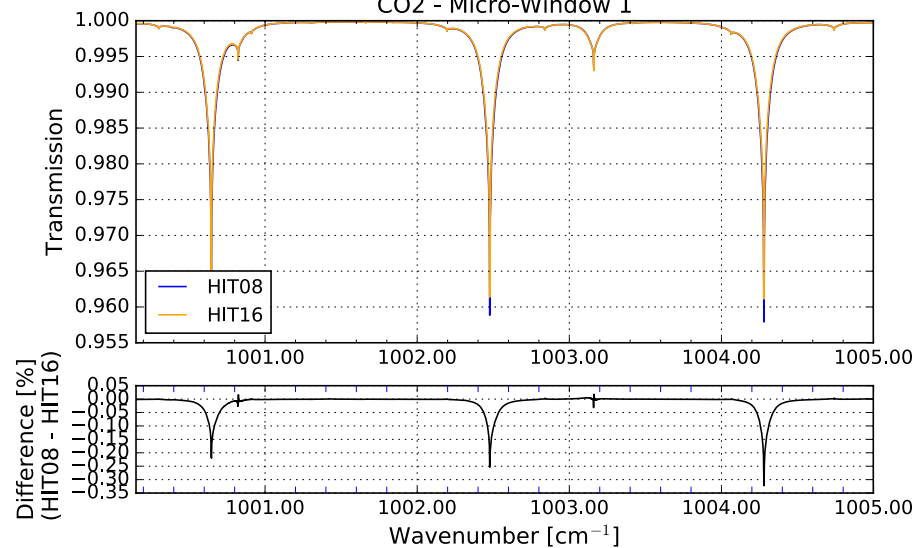
H2O - Micro-Window 1



C2H4 - Micro-Window 1

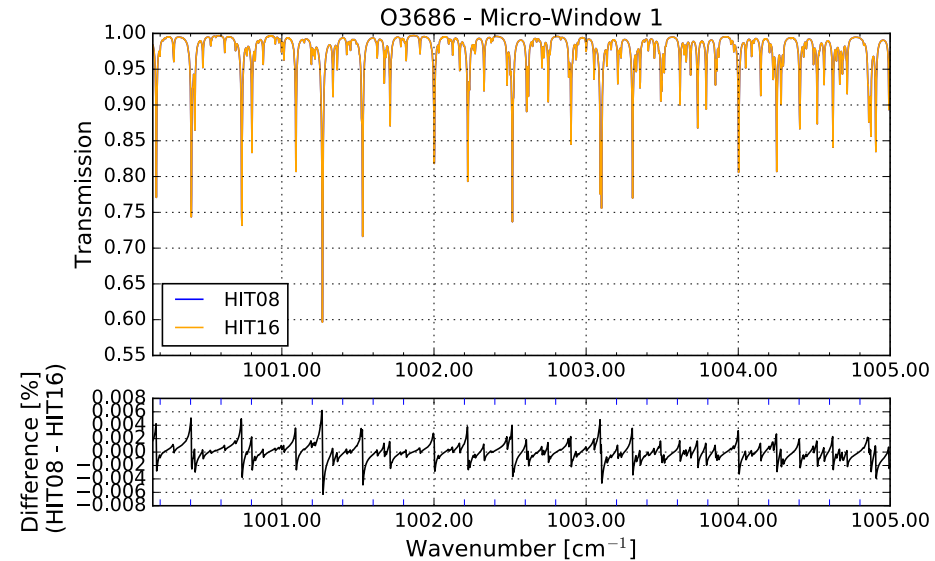
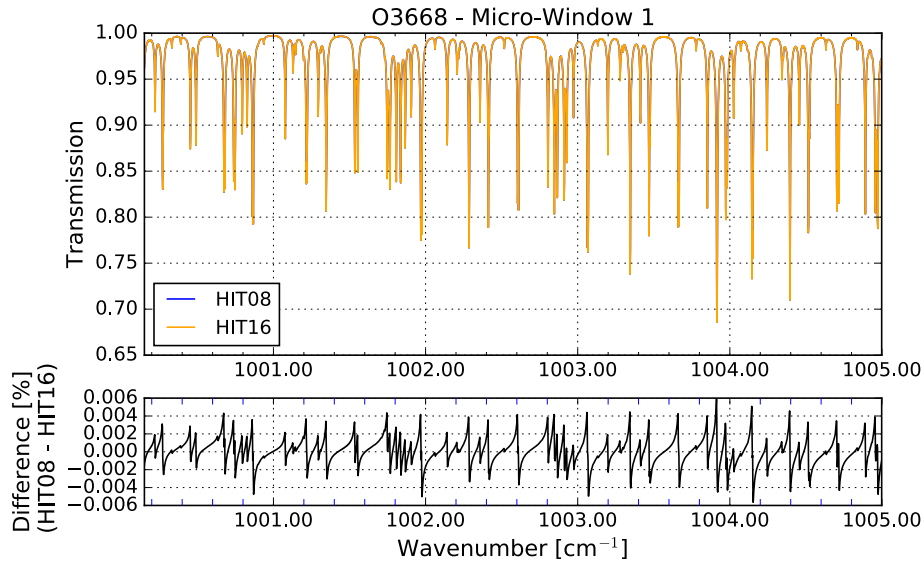


CO2 - Micro-Window 1



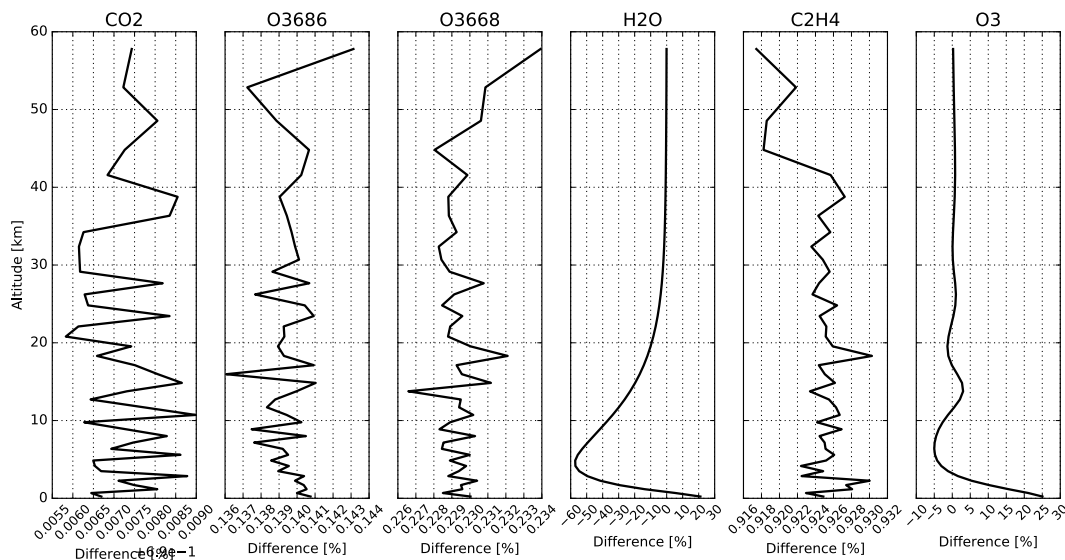
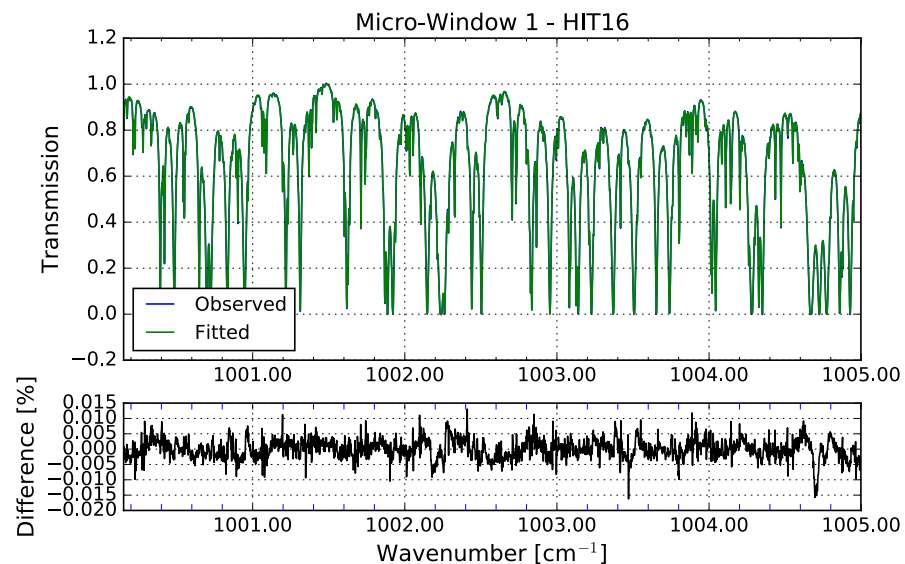
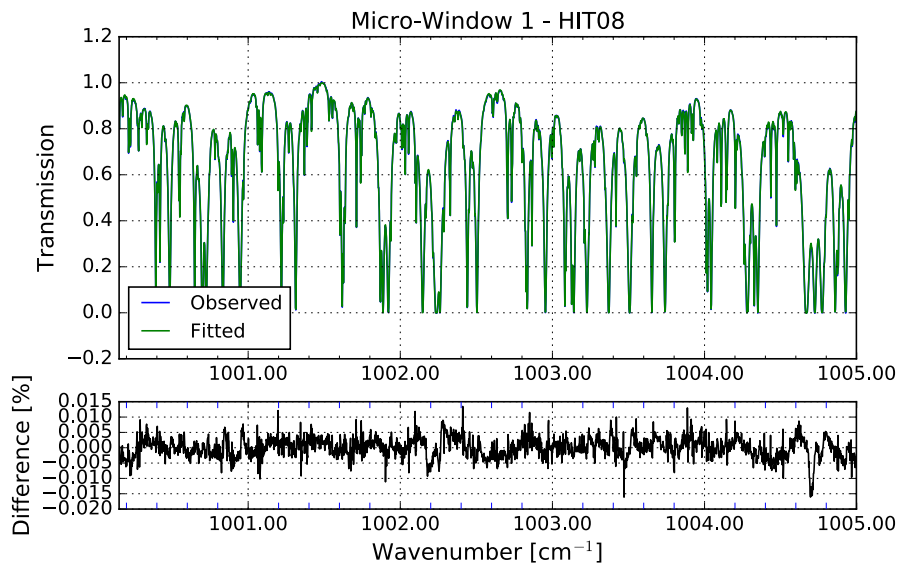
Post test retrieval HIT16 / HIT08

O3 HITRAN 08 / HITRAN 2016 / Interim ATM18 Tests



Post test retrieval HIT16 / HIT08

O3 HITRAN 08 / HITRAN 2016 / Interim ATM18 Tests



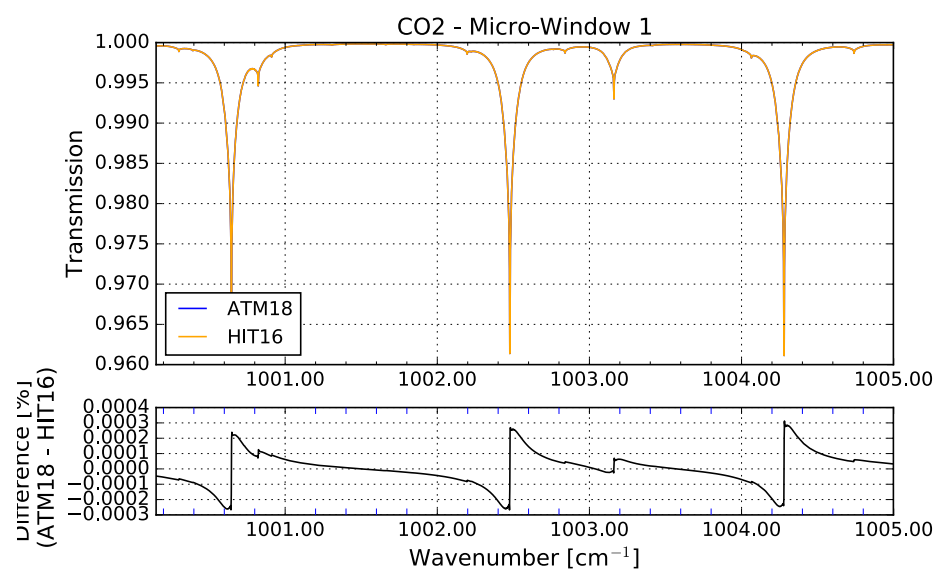
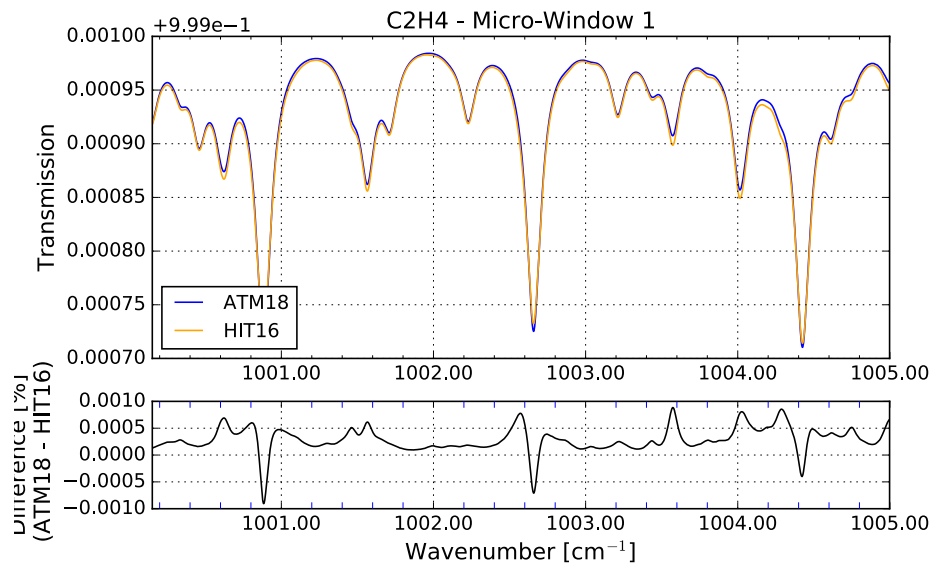
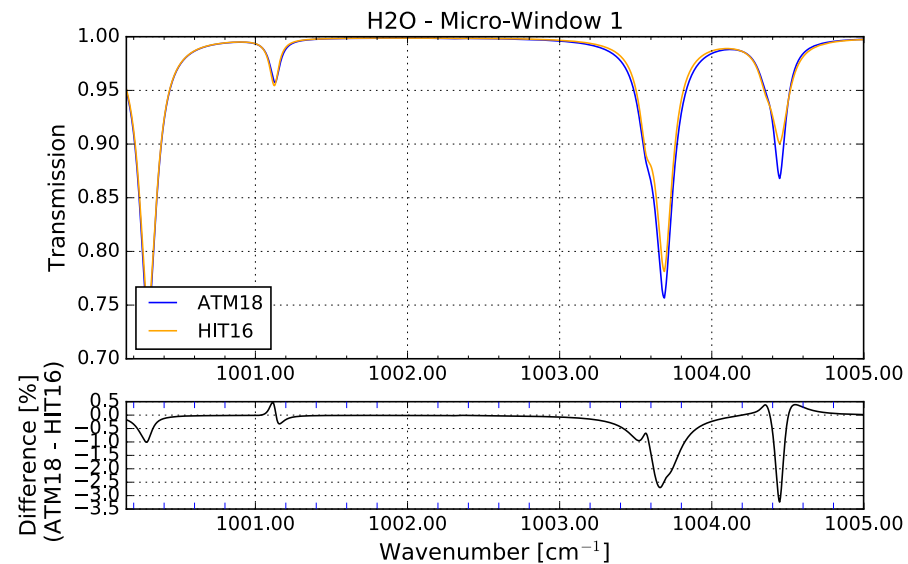
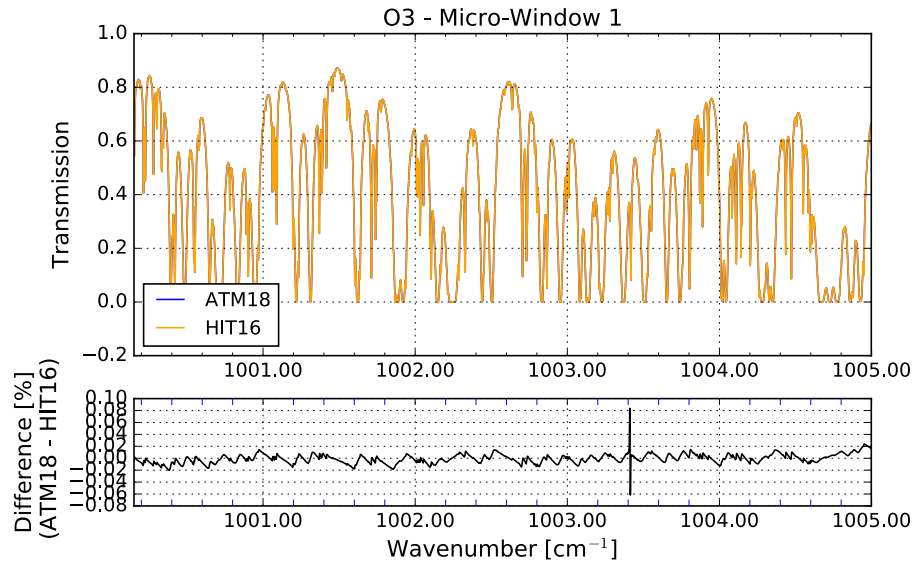
Version = o3_HIT08-Ret-2017
 Total Column = 1.07269698437e+19
 rms = 0.515772
 dof = 5.58905973885
 Version = o3_HIT16-Ret-2017
 Total Column = 1.07240338501e+19
 rms = 0.501106
 dof = 5.61706638924

Difference of o3_HIT08-Ret-2017 - o3_HIT16-Ret-2017

Difference [molec/cm²] = 2.93599364193e+15
 Difference [%] = 0.0273776983826

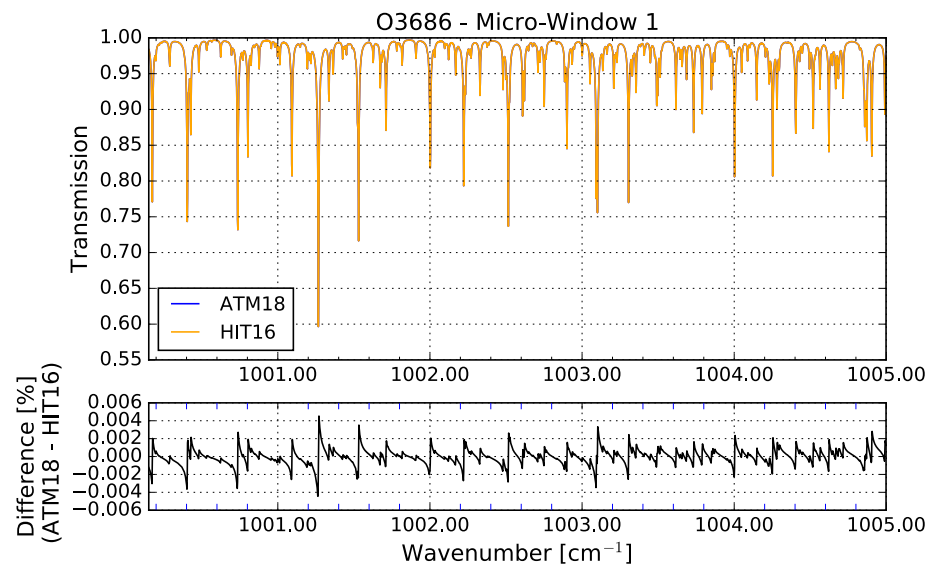
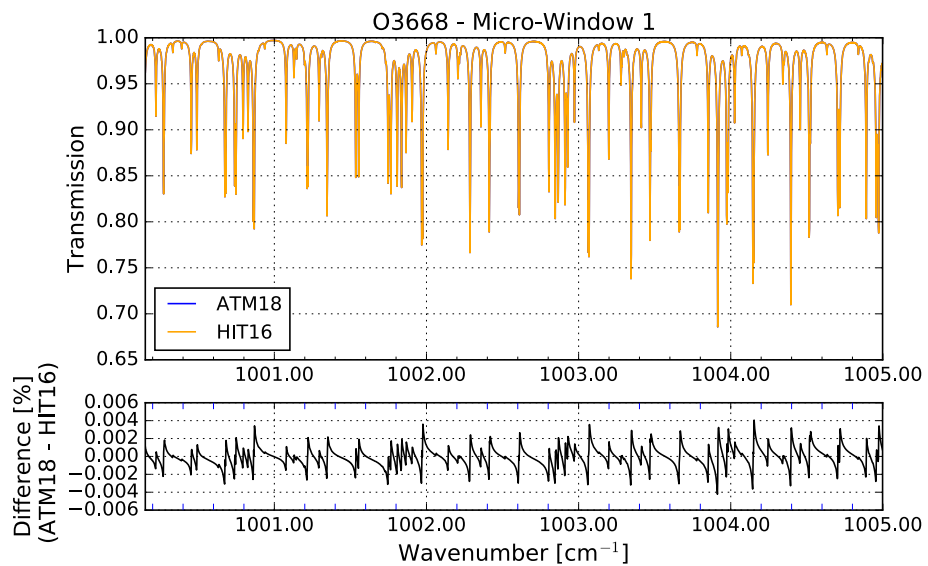
Post test retrieval HIT16 / HIT08

O3 HITRAN 08 / HITRAN 2016 / Interim ATM18 Tests



Post test retrieval HIT16 / ATM18

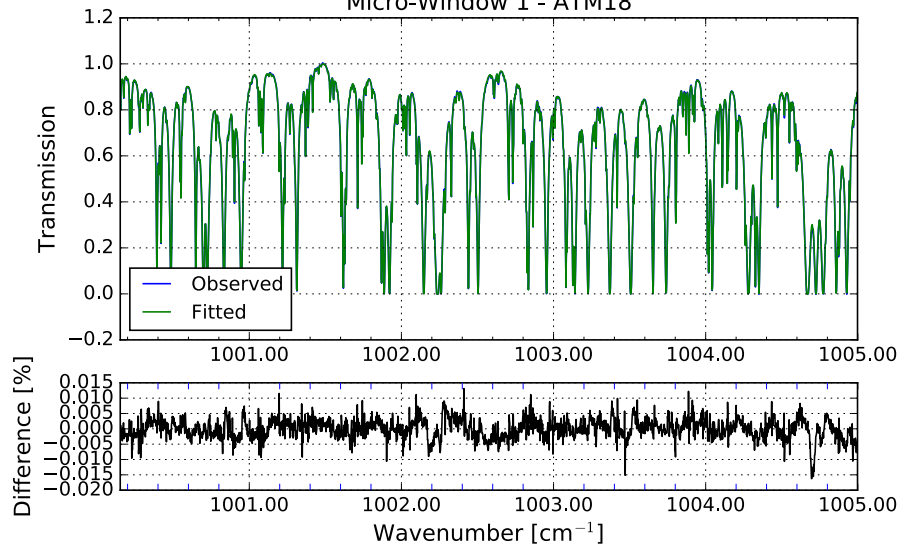
O3 HITRAN 08 / HITRAN 2016 / Interim ATM18 Tests



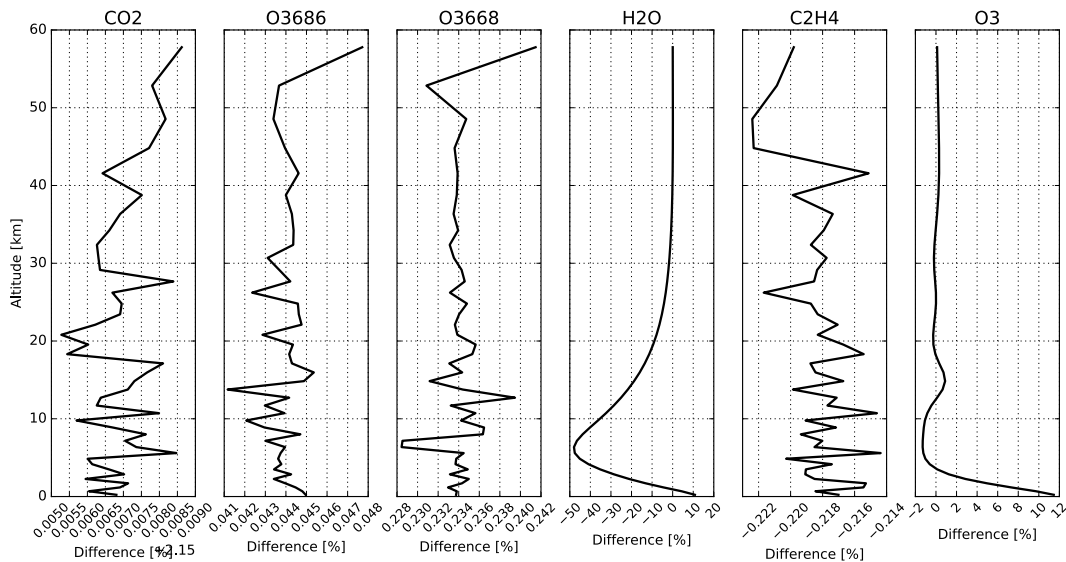
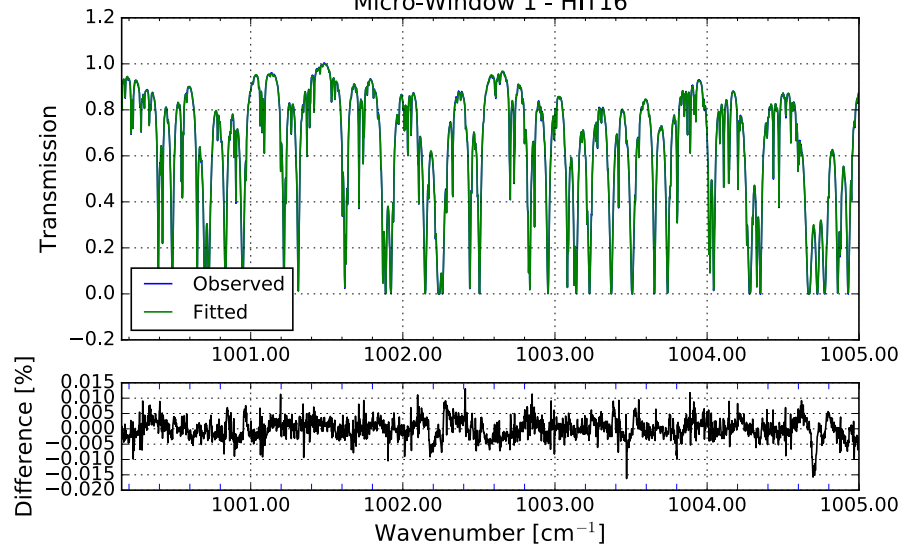
Post test retrieval HIT16 / ATM18

O3 HITRAN 08 / HITRAN 2016 / Interim ATM18 Tests

Micro-Window 1 - ATM18



Micro-Window 1 - HIT16



Version = o3_ATM18-Ret-2017
 Total Column = 1.0724509351e+19
 rms = 0.506129
 dof = 5.60809774795
 Version = o3_HIT16-Ret-2017
 Total Column = 1.07240338501e+19
 rms = 0.501106
 dof = 5.61706638924

Difference of o3_ATM18-Ret-2017 - o3_HIT16-Ret-2017

Difference [molec/cm2] = 4.75500933681e+14
 Difference [%] = 0.00443397456897

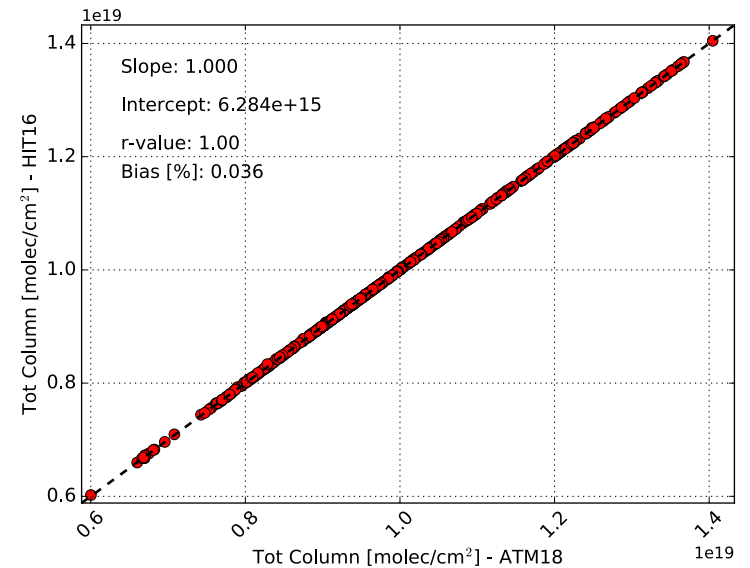
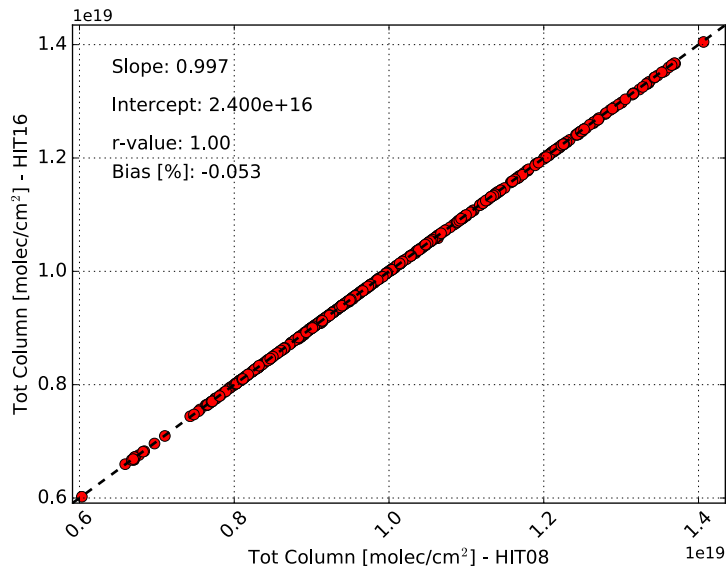
Post test retrieval HIT16 / ATM18

O3 HITRAN 08 / HITRAN 2016 / Interim ATM18 Tests

Column

HIT08 / HIT16

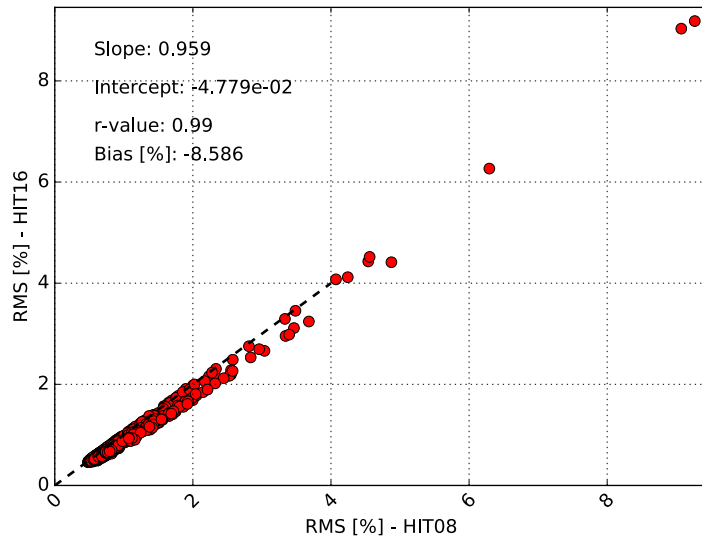
HIT16 / ATM18



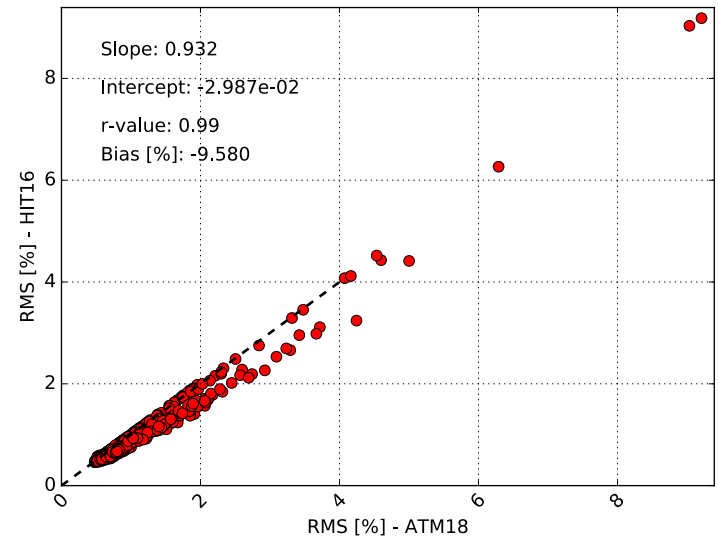
O3 HITRAN 08 / HITRAN 2016 / Interim ATM18 Tests

Fit RMS

HIT08 / HIT16



HIT16 / ATM18

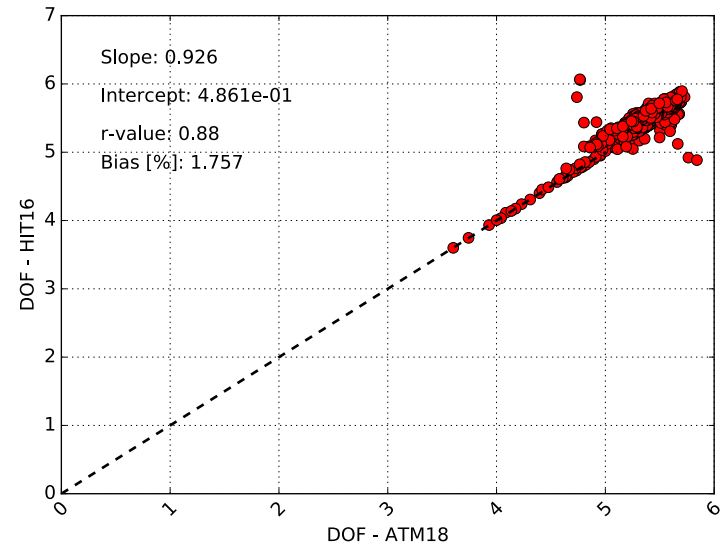
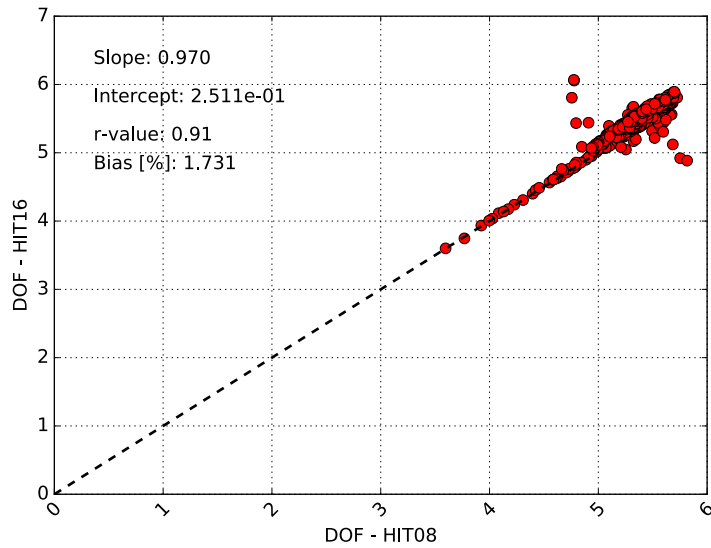


O3 HITRAN 08 / HITRAN 2016 / Interim ATM18 Tests

DOFs

HIT08 / HIT16

HIT16 / ATM18



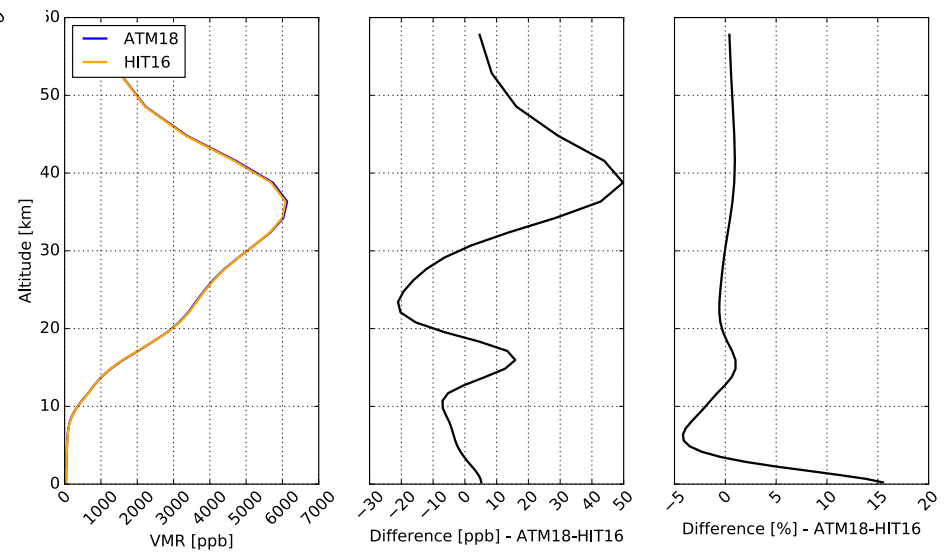
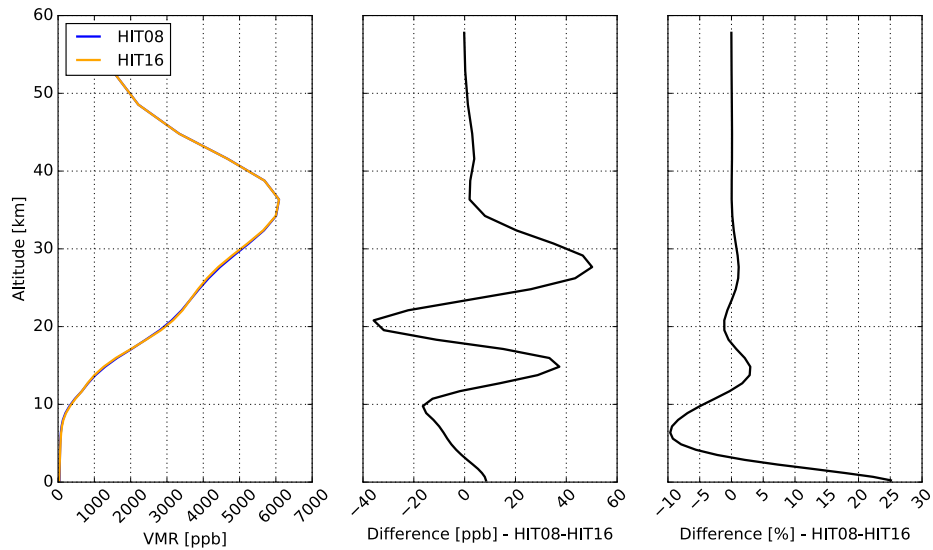
Little change in DOFs

O3 HITRAN 08 / HITRAN 2016 / Interim ATM18 Tests

Profile

HIT08 / HIT16

HIT16 / ATM18



O3 HITRAN 08 / HITRAN 2016 / Interim ATM18 Tests