SFIT4 version 1.0

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many others of the NDACC-IRWG

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[4]University of Liége, Liége, Belgium

NDACC (Online), June 2021

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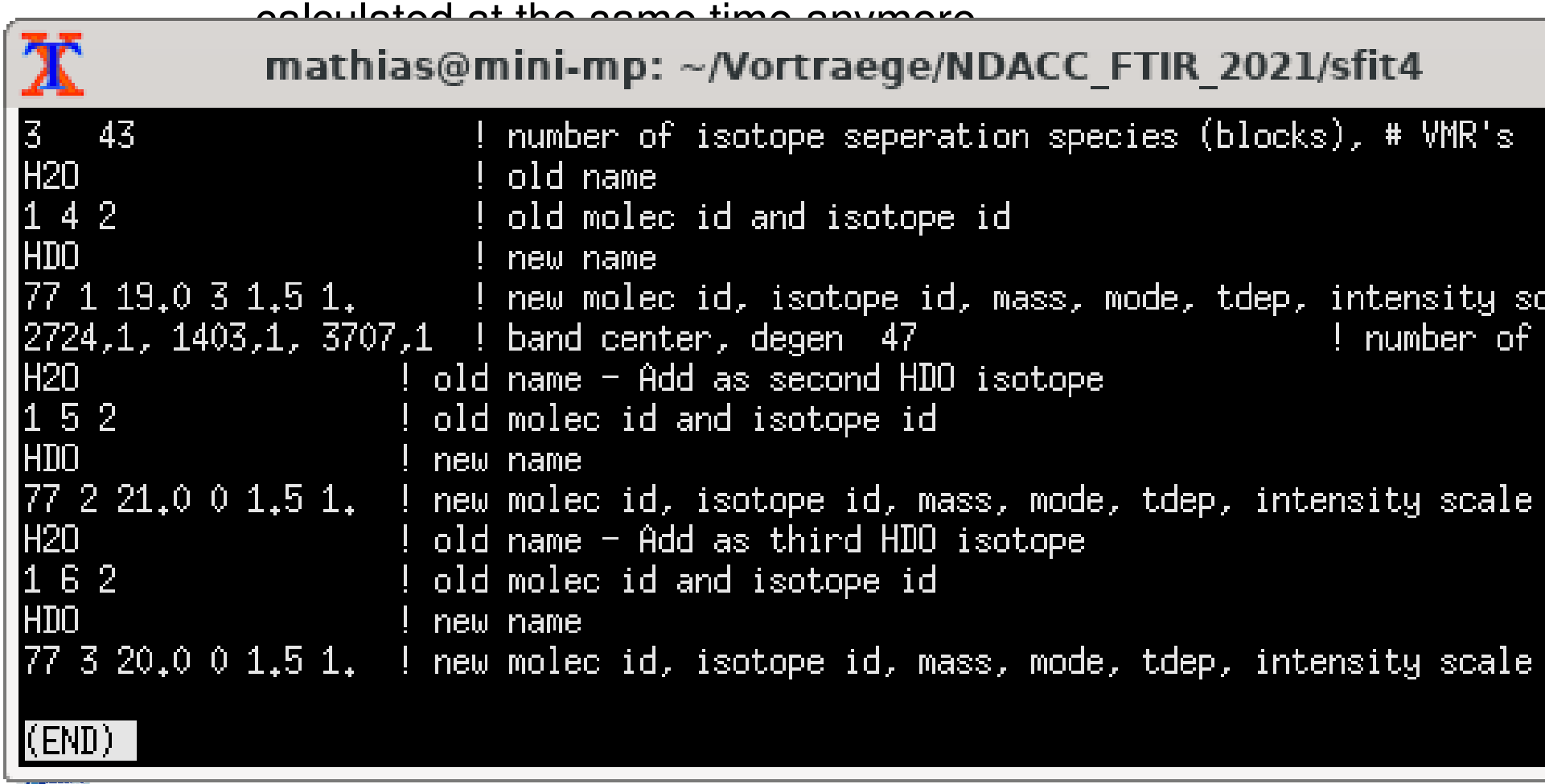

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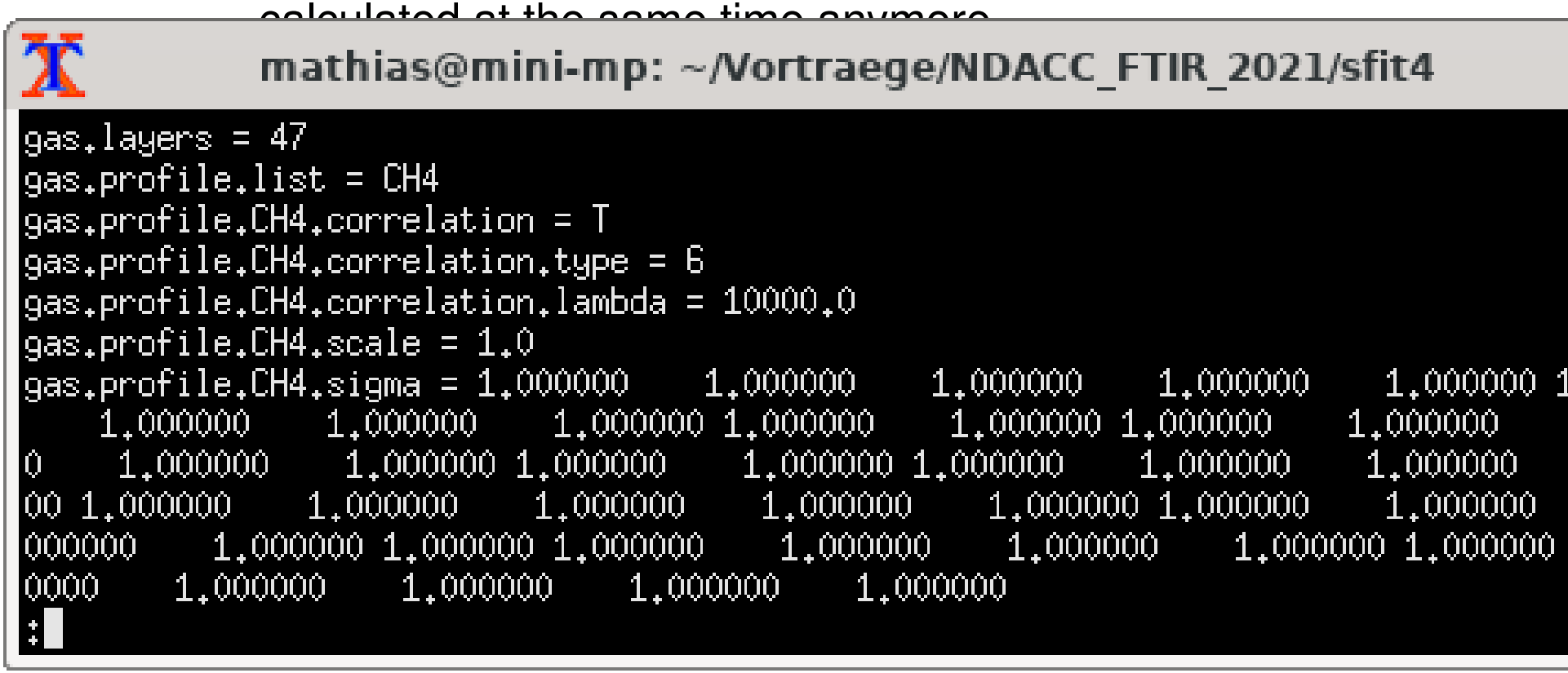

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create_testcase creates a testcases from a running directory. Reads all the files needed for running hbin and sfit4 and packs them into in tarball release.tgz. This can be sent to the maintainers along with description of the problem.

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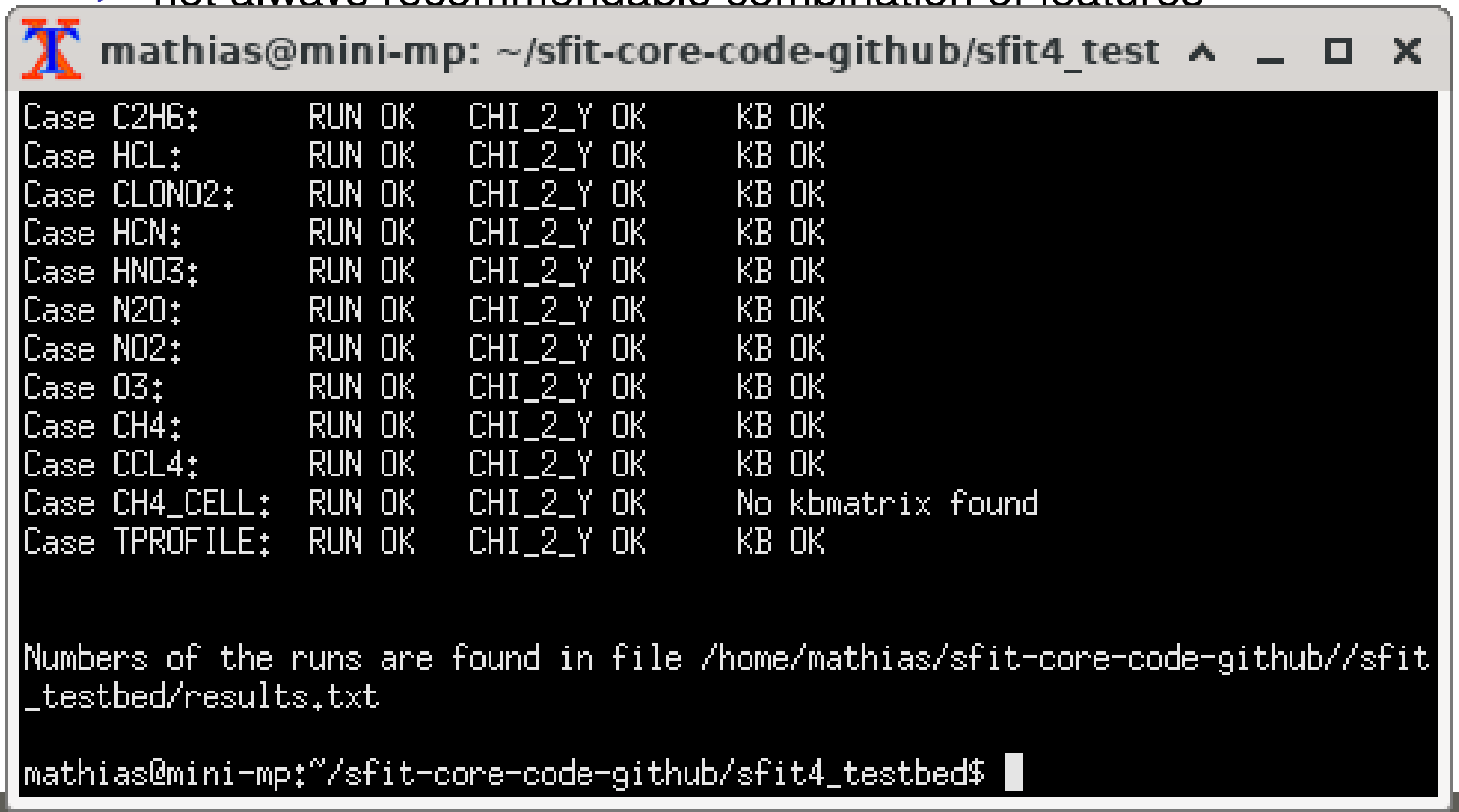

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- More detailed output can be found in results.txt

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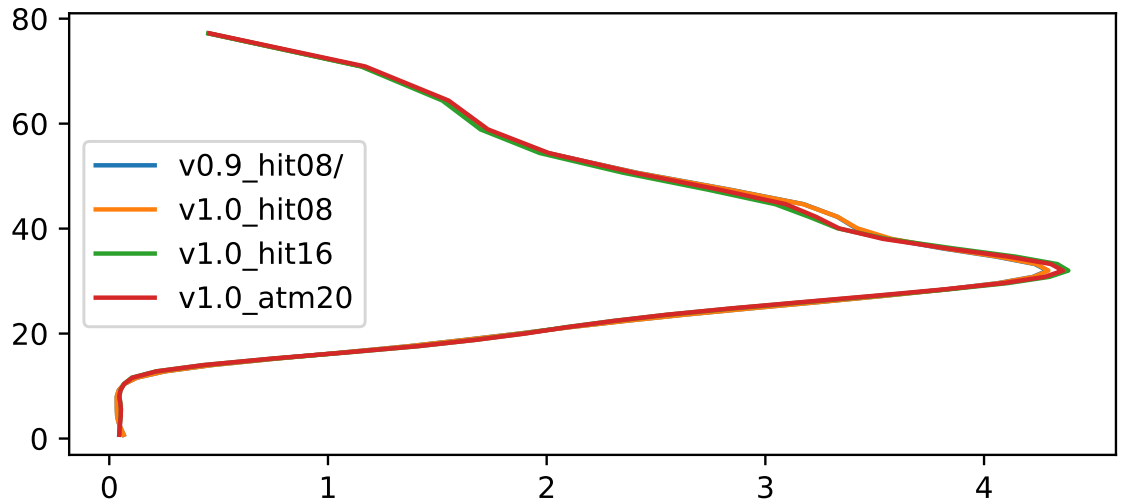
v1.0_hit08	Chi_2: 2.745693	DOFS: 6.315
v1.0_hit16	Chi_2: 2.561871	DOFS: 6.319
v1.0_atm20	Chi_2: 2.382878	DOFS: 6.32



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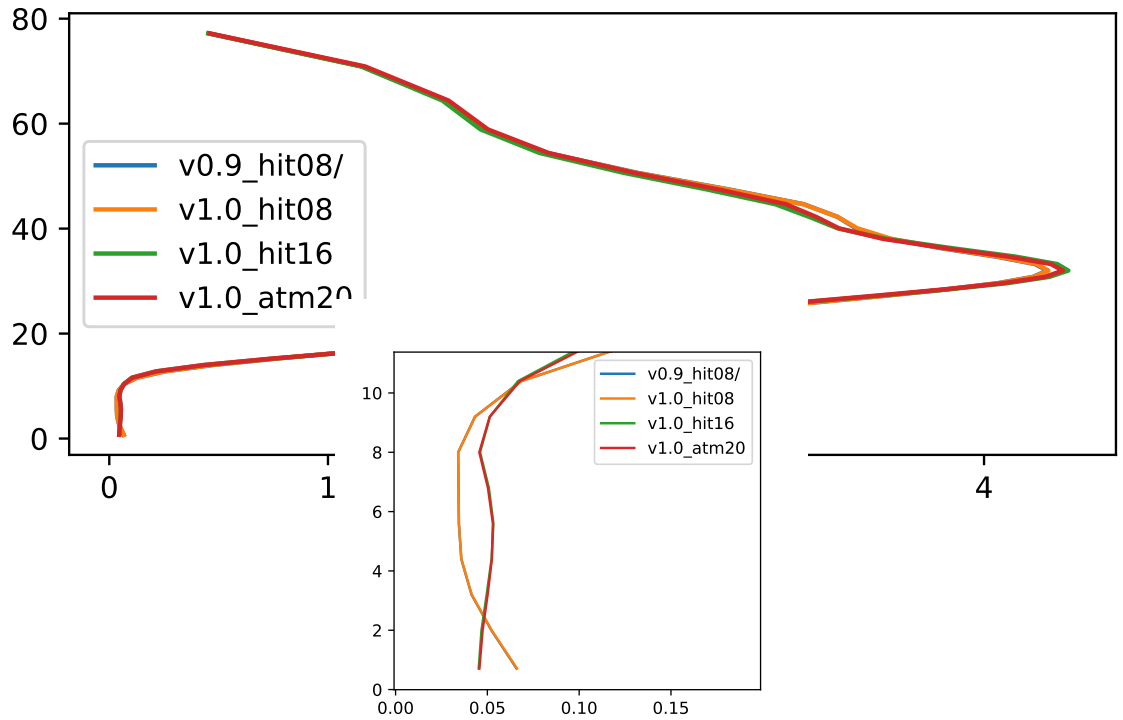

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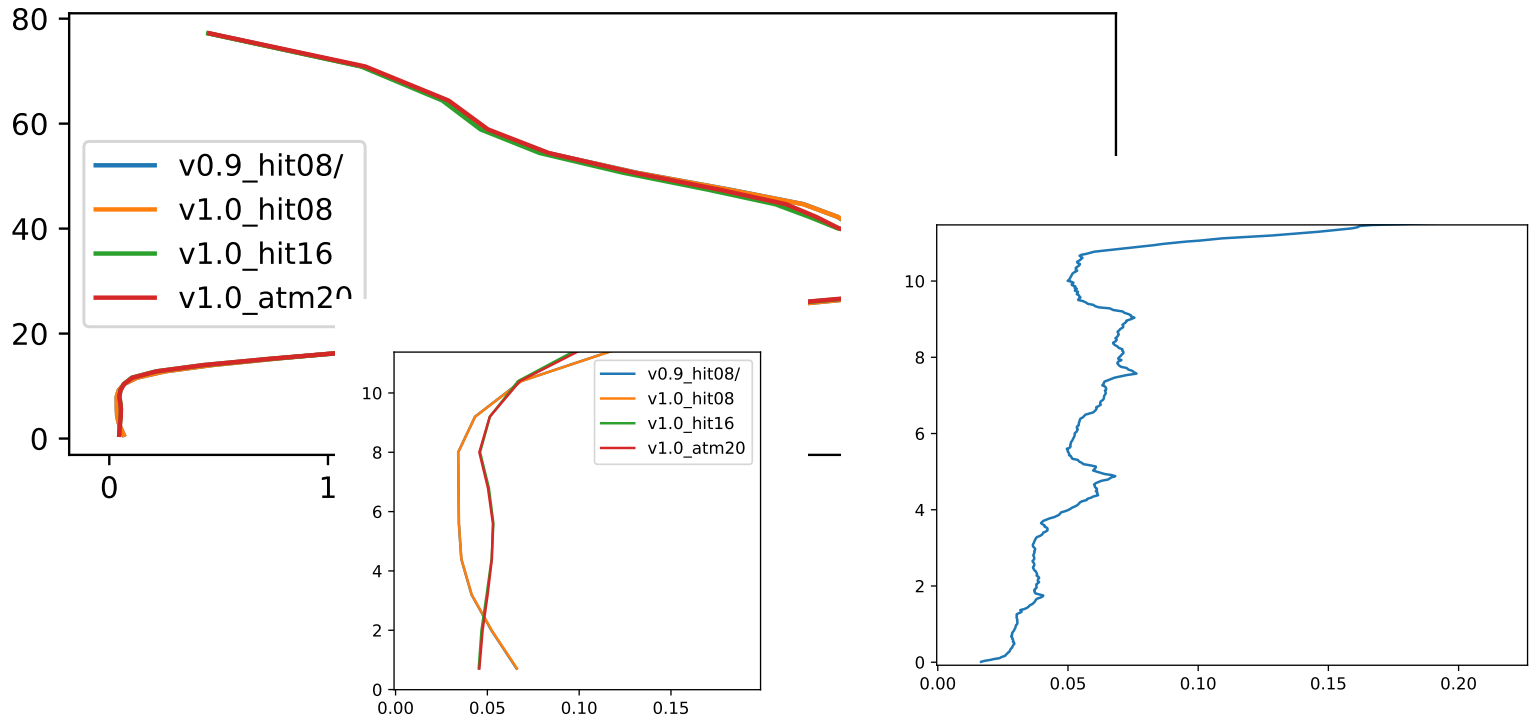

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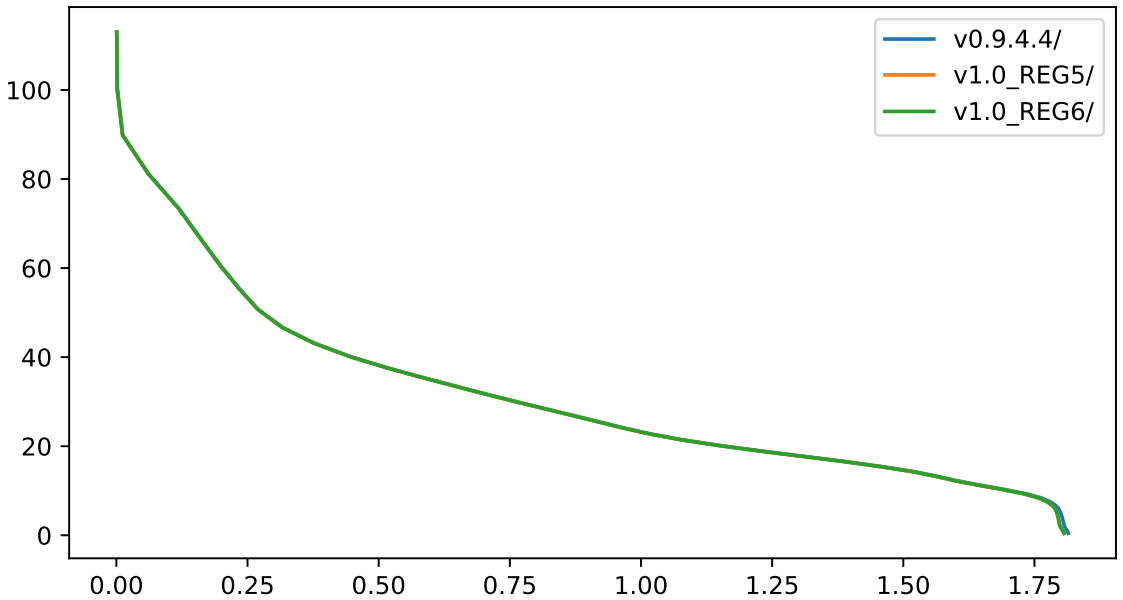
v1.0_REG5_hit08	0.859529	1.692	3.51423
v1.0_REG6_hit08	0.859537	1.688	3.51424



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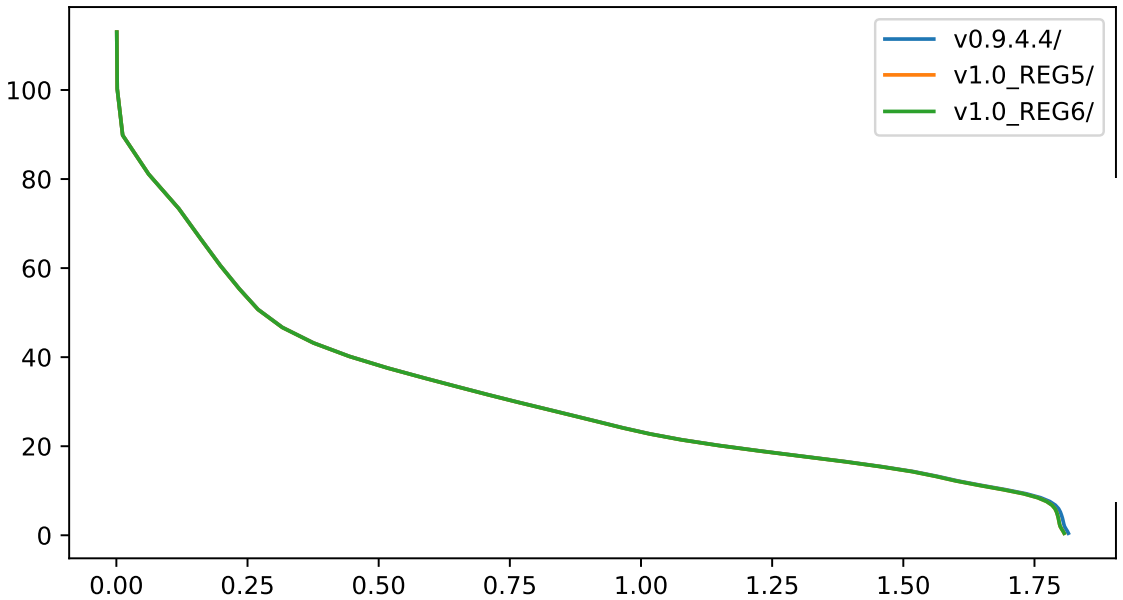
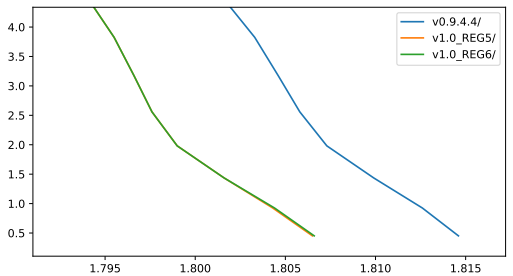
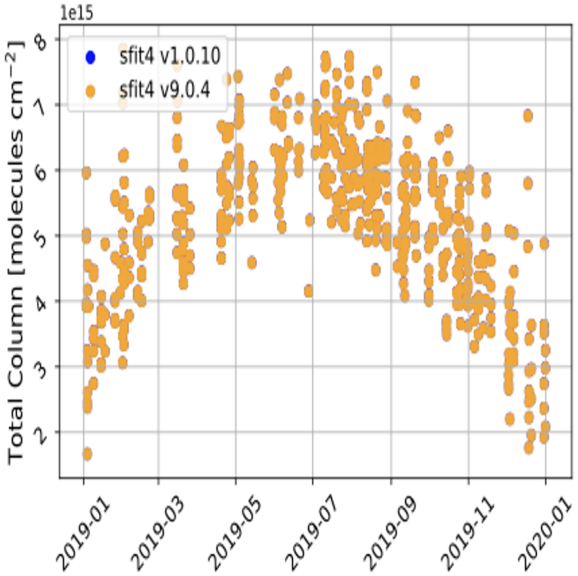
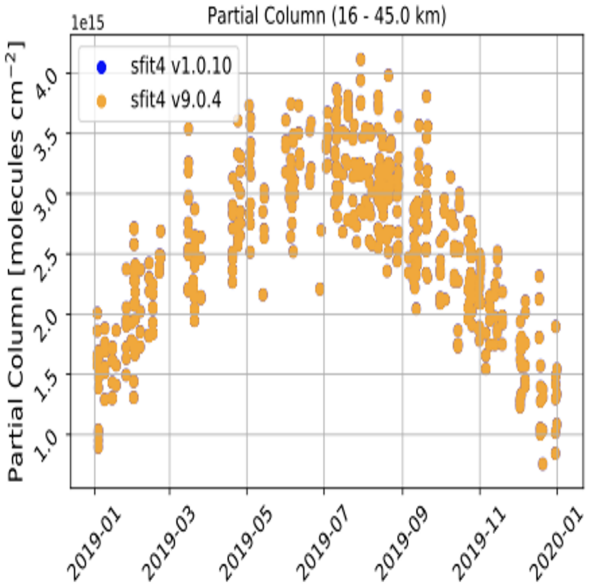


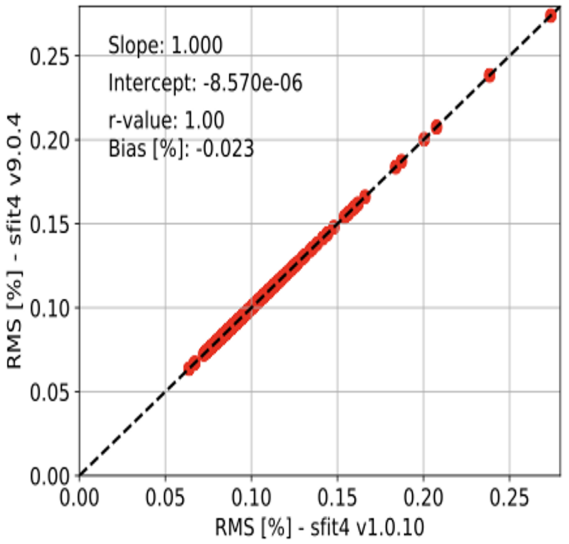


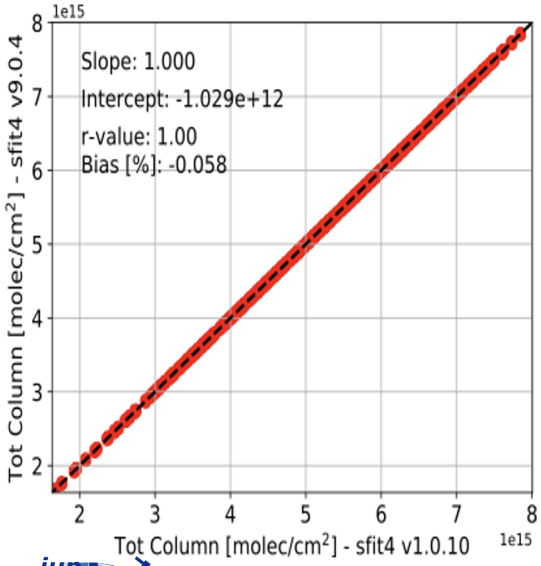
NO_2

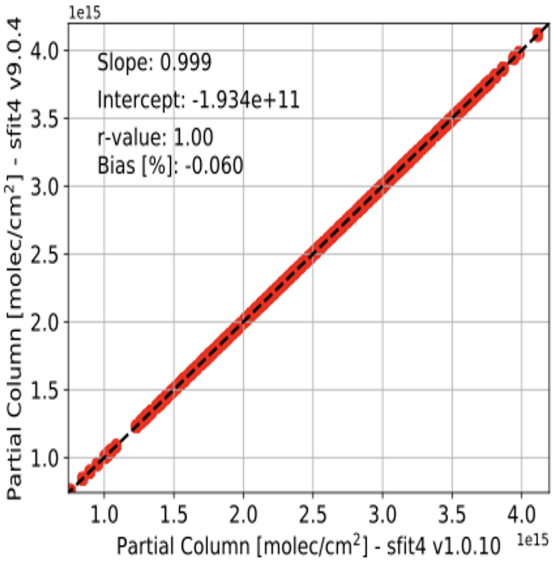
Is there a difference between sfit4 v1.010 and v9.04? …. No

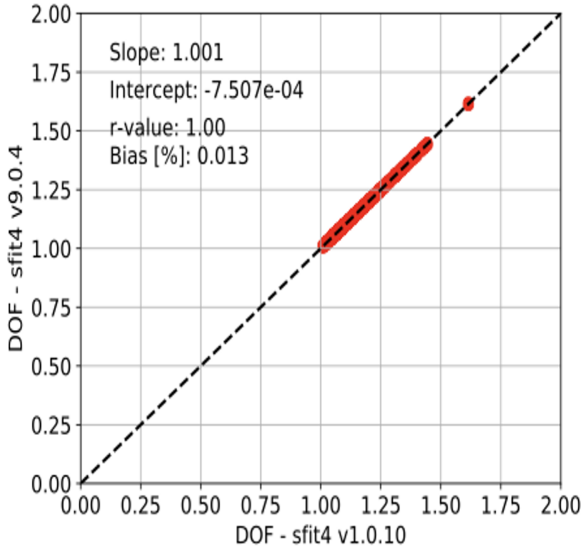




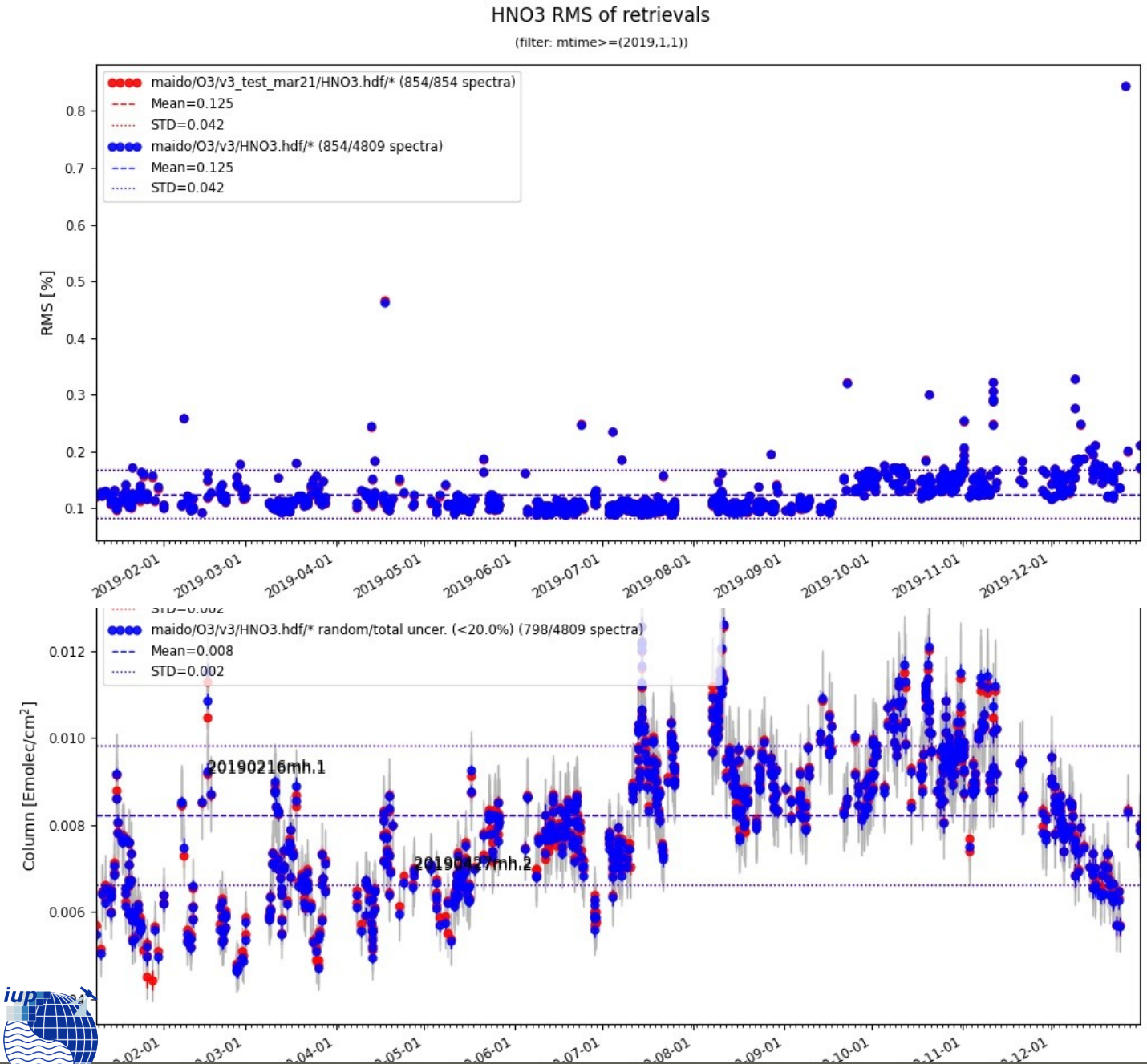








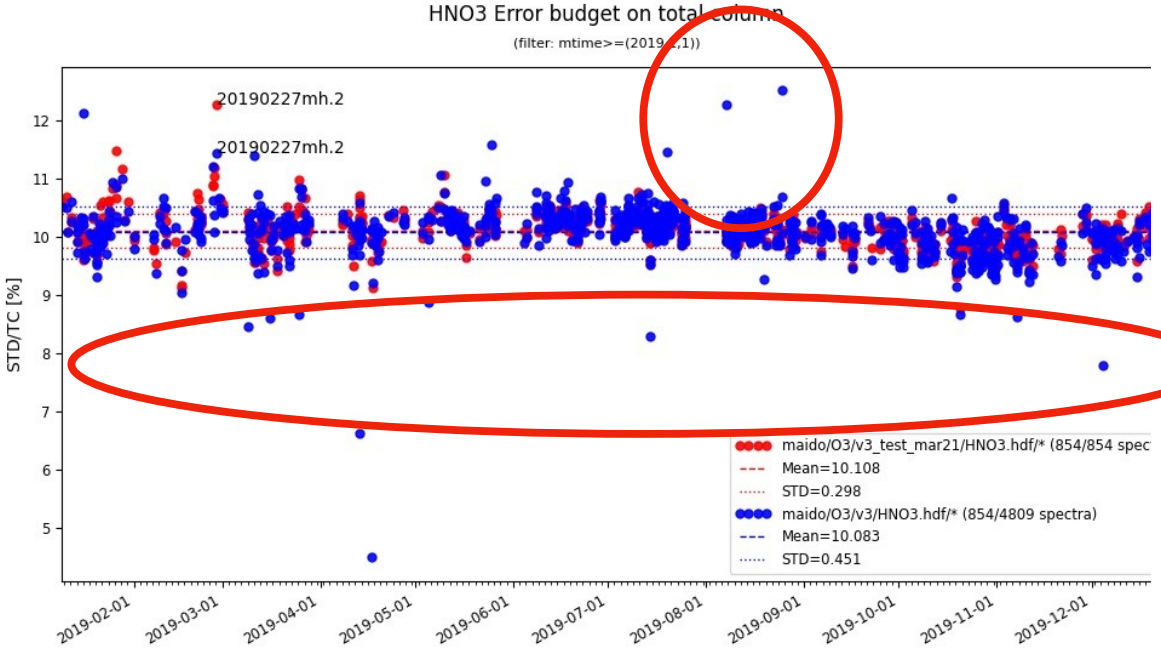
Case study old vs new HNO_3

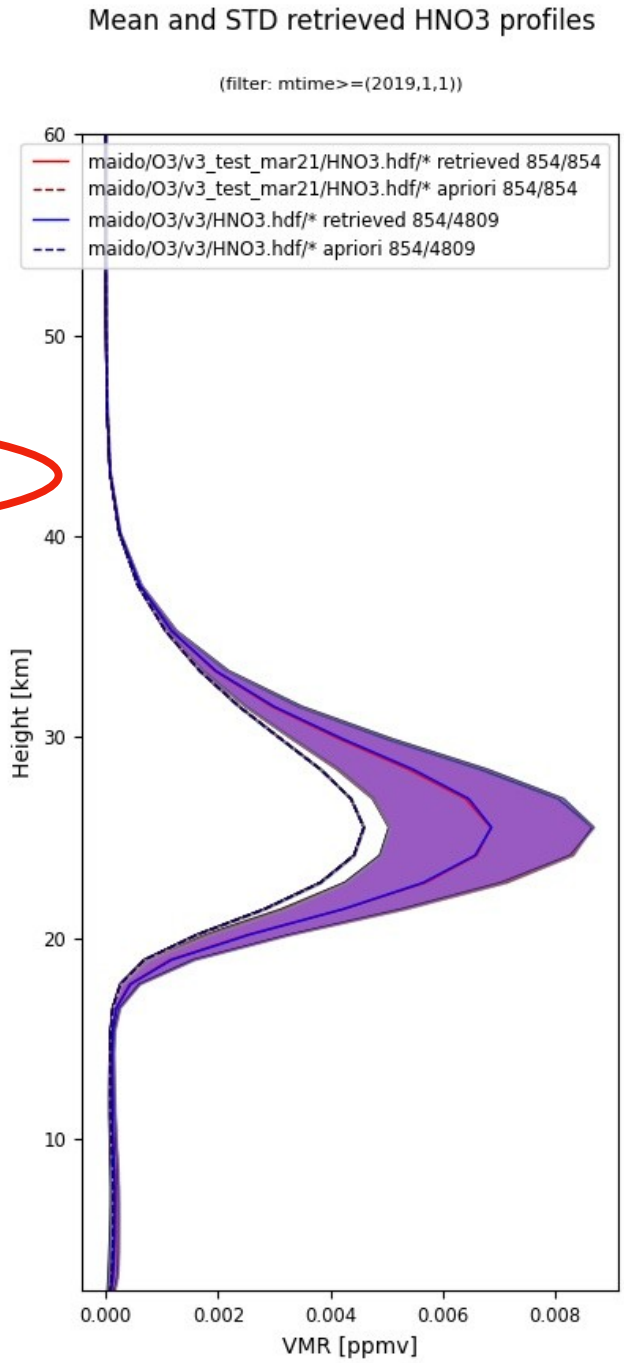


- blue is old
- red is new

- red tested with a slightly stronger regularisation

Case study old vs new HNO_3





- rms, tc, profiles unchanged
- less scatter in uncertainties (temp fix?)

sfit4 not working?

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Miscellenous and Outlook

- parallelisation of sfit4 itself not foreseen

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- Outlook: inclusion of continua in the thermal infrared

Miscellenous and Outlook

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Thanks for your attention

[Gal61] Louis Galatry. Simulateanous Effect of Doppler and Foreign Gas Broadening on Spectral Lines. *Phys. Rev.*, 122(4), 1961.

[TNH13] H. Tran, N.H. Ngo, and J.-M. Hartmann. Efficient computation of some speed-dependent isolated line profiles. *Journal of Quantitative Spectroscopy and Radiative Transfer*, (0):–, 2013.