



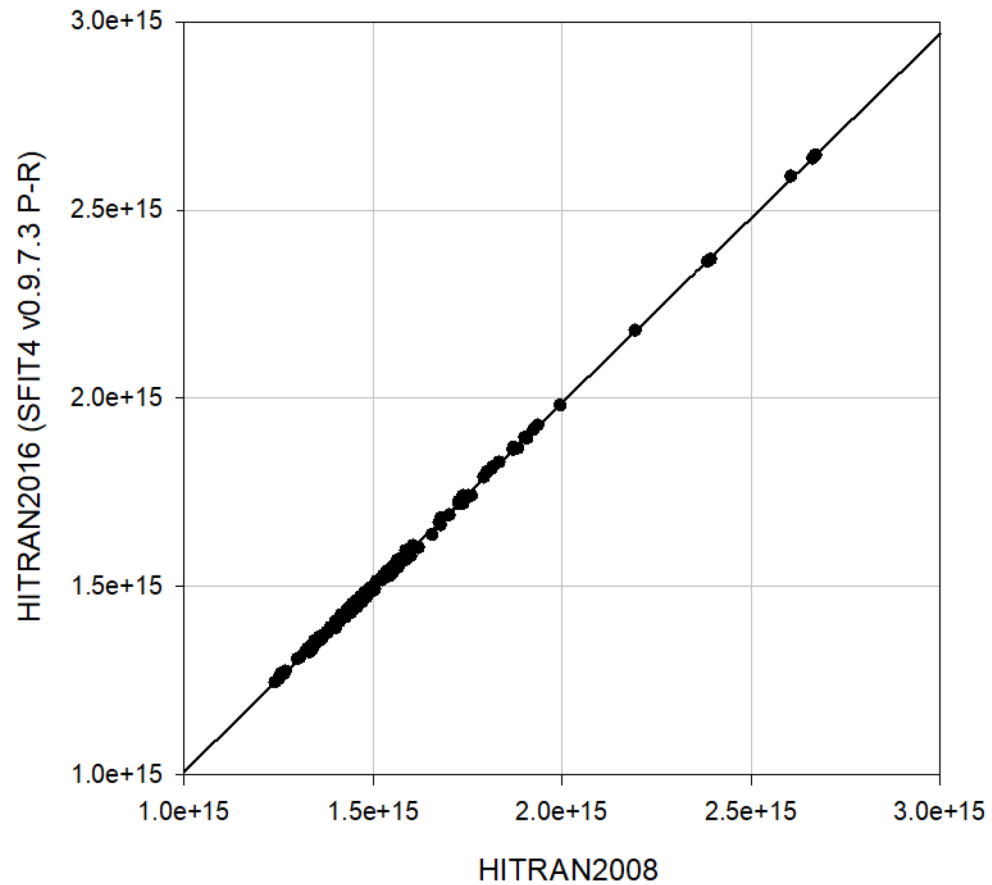
[www.jungfrau.ch](http://www.jungfrau.ch)

# Tests of spectroscopic linelists for HF

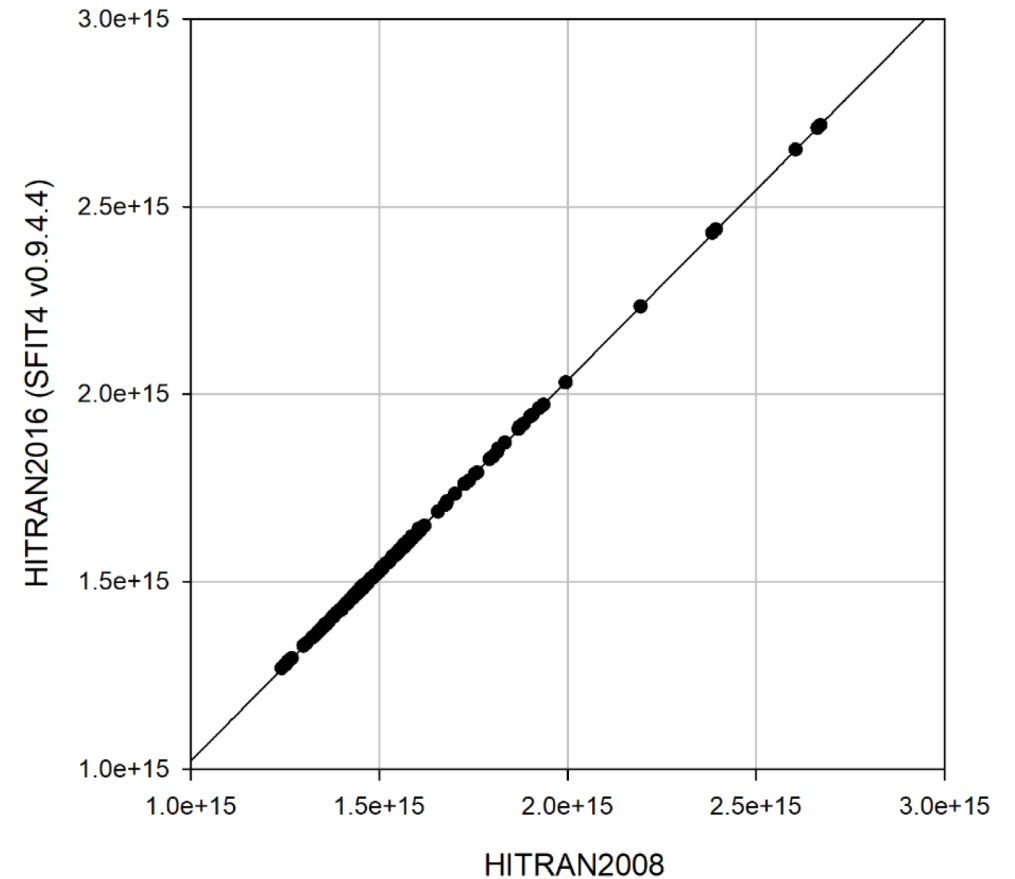
Application to Jungfrauoch spectra

# Hydrogen fluoride – HITRAN2016 vs HITRAN2008

HF total columns (molec cm<sup>-2</sup>)

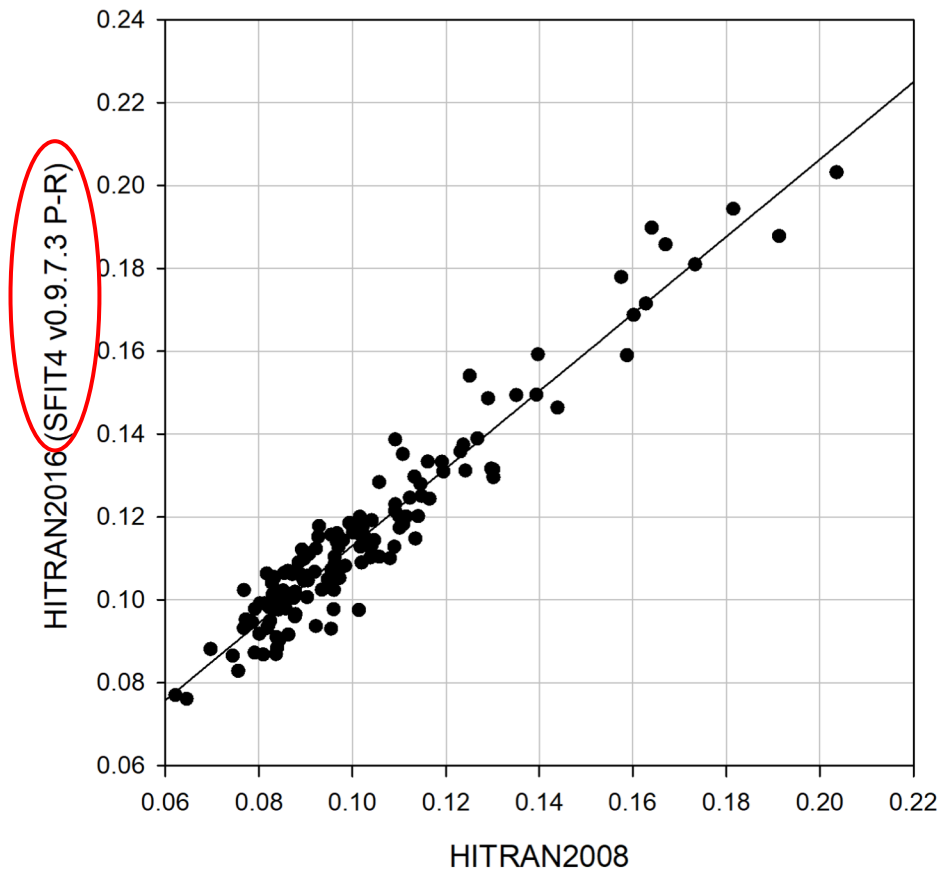


HF total columns (molec cm<sup>-2</sup>)

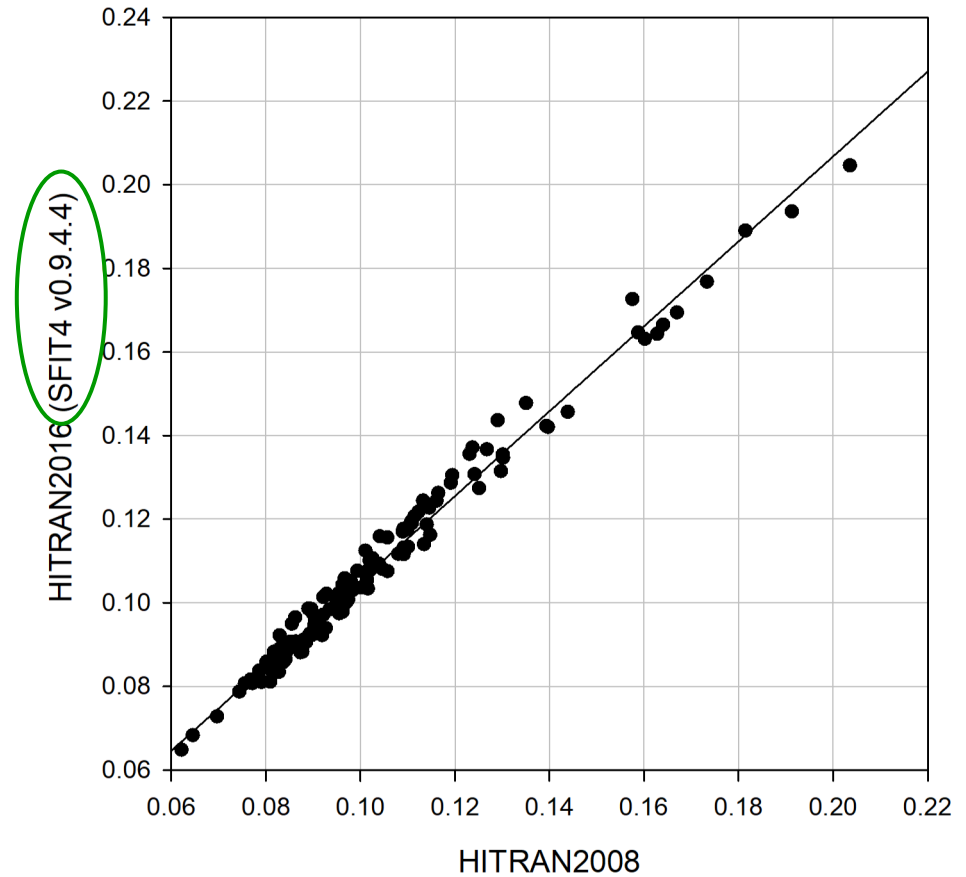


# Hydrogen fluoride – HITRAN2016 vs HITRAN2008

Residuals (RMS)

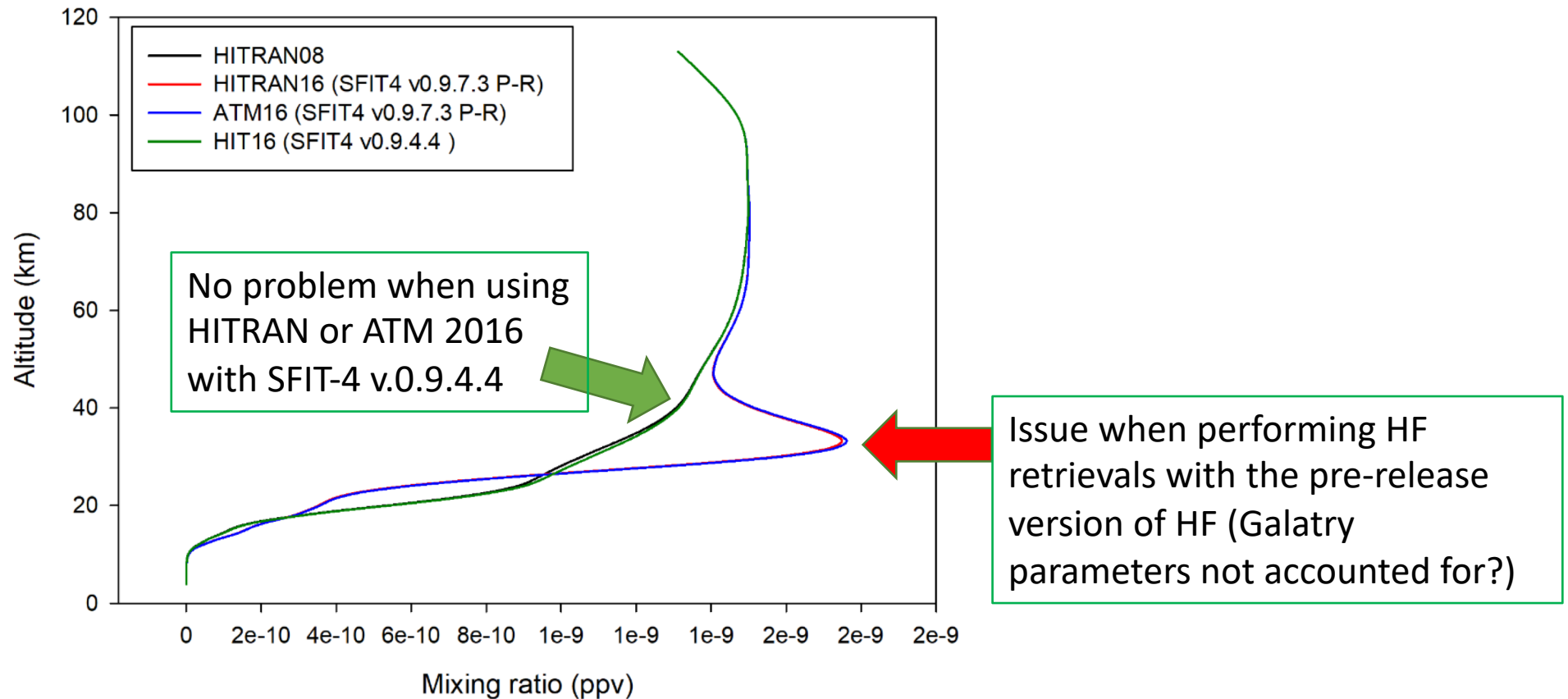


Residuals (RMS)

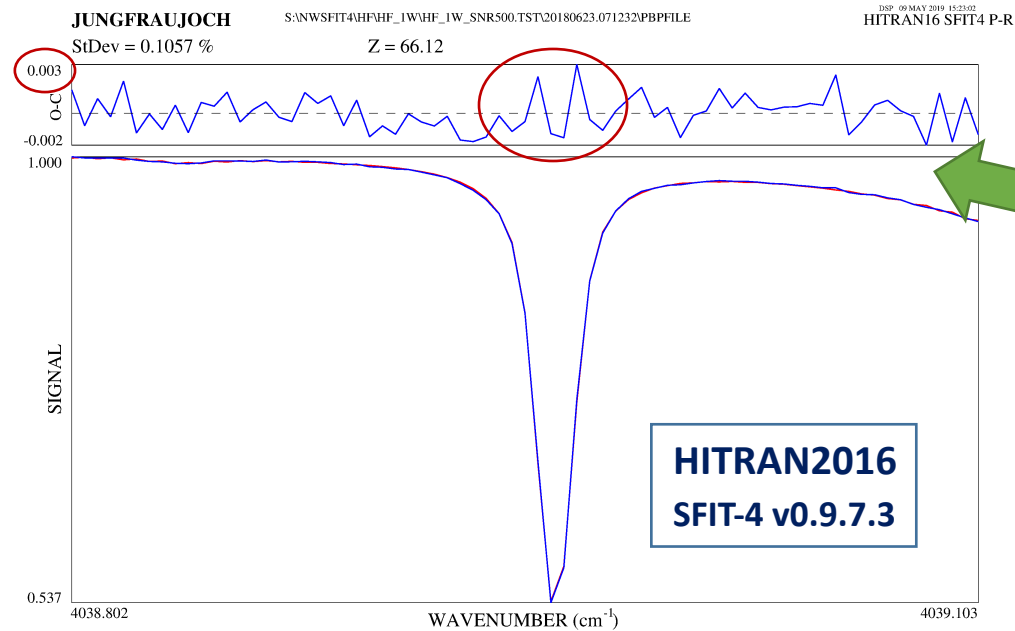


# Hydrogen fluoride – HITRAN2016 vs HITRAN2008

HF profiles

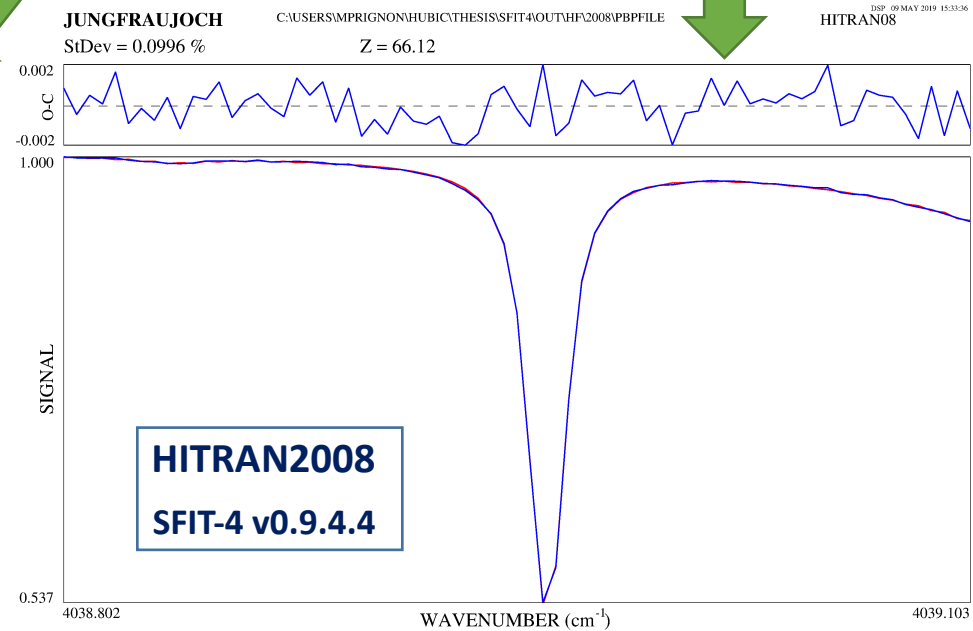
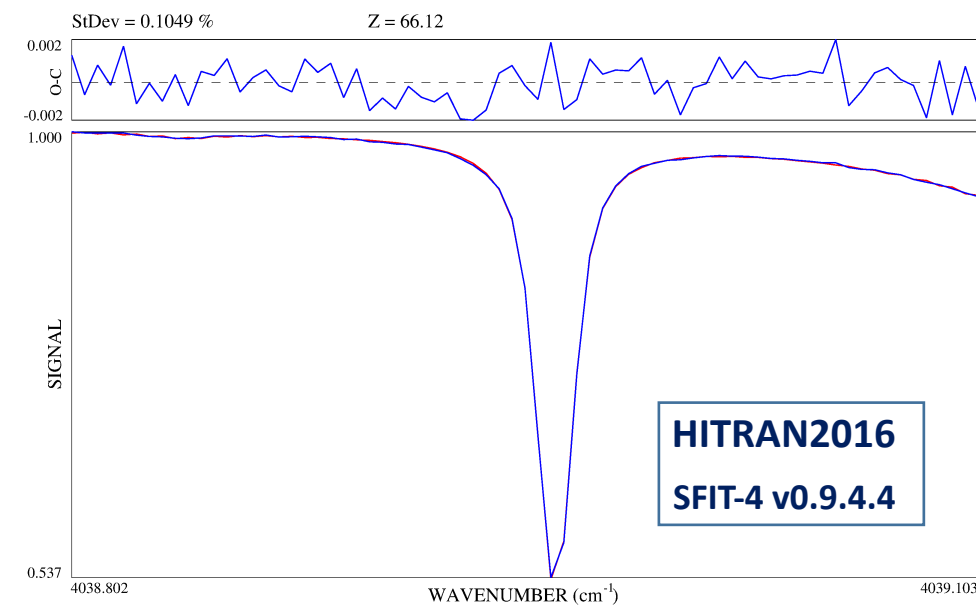


# HF line near 4039 cm<sup>-1</sup> 1



Degradation of the fitting residuals near the line center when using HITRAN2016 and SFIT-4 v0.9.7.3

The fitting residuals are very similar when using HITRAN2016 or HITRAN2008 with SFIT-4 v0.9.4.4



# Summary for HF

HITRAN16 minus HITRAN08  $\pm$  1std

	SFIT4v0.9.7.3 P-R	SFIT4v0.9.4.4
Total Columns	$(-0.15 \pm 0.52)\%$	$(1.92 \pm 0.16)\%$
RMS	$(12.38 \pm 6.71)\%$	$(5.02 \pm 2.83)\%$
DOFS	$(3.91 \pm 0.43\%)$	$(-0.47 \pm 0.06)\%$