



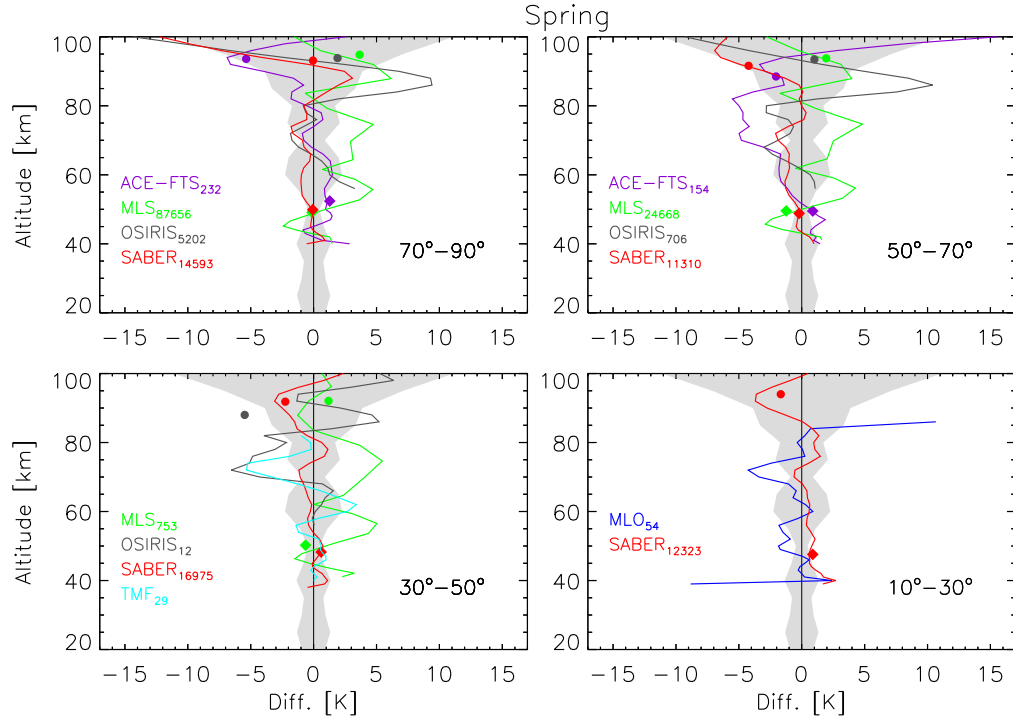
*Supplement of*

**MIPAS temperature from the stratosphere to the lower thermosphere:  
comparison of version vM21 with ACE-FTS, MLS, OSIRIS, SABER, SOFIE  
and lidar measurements**

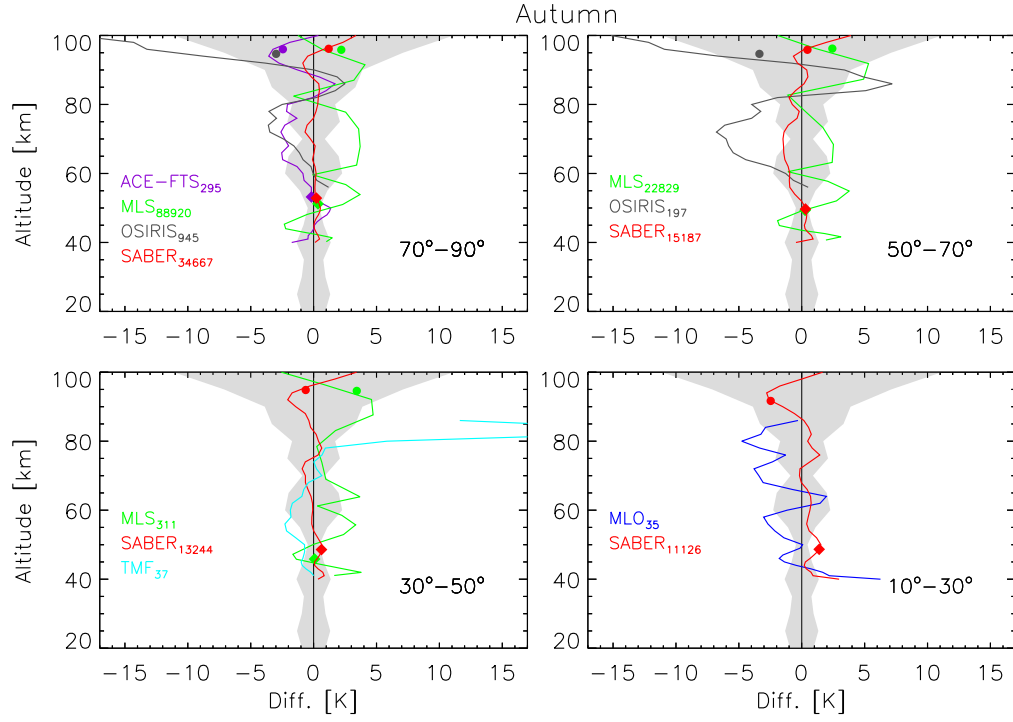
**M. García-Comas et al.**

*Correspondence to:* M. García-Comas (maya@iaa.es)

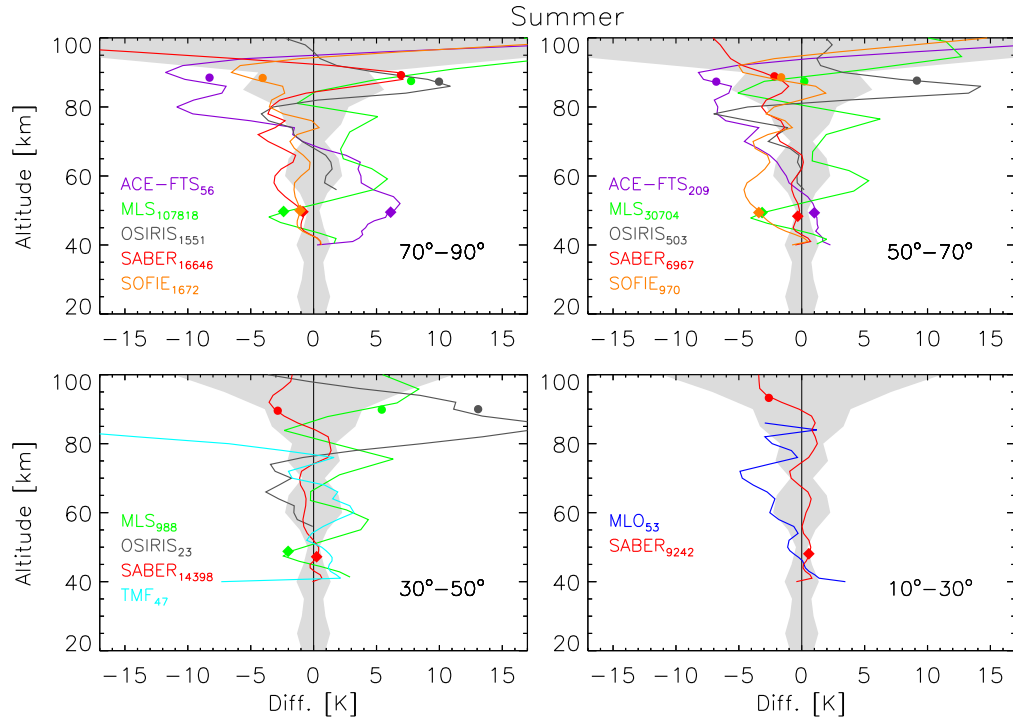
**Content.** The following supplementary material shows MIPAS Upper Atmosphere mode temperature (v621) comparisons with ACE-FTS, MLS, OSIRIS, SABER, SOFIE and the two Rayleigh lidars at Mauna Loa and Table Mountain.



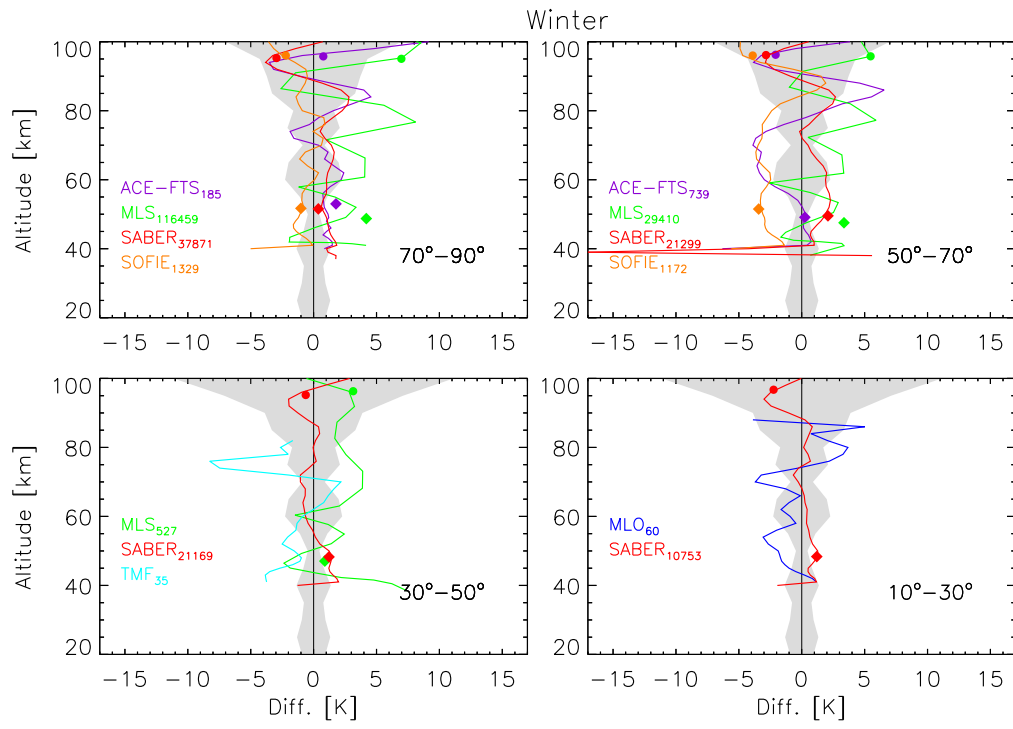
**Fig. S-1.** Spring (MAM for NH and SON for SH) mean temperature differences (MIPAS–instrument) between co-located pairs of measurements of MIPAS (UA mode) and ACE-FTS (purple), MLS (green), OSIRIS (grey), SABER (red), SOFIE (orange), and the Table Mountain (light blue) and Mauna Loa (dark blue) lidars. The number of MIPAS coincidences with each instrument within 2-hours and 1000 km is indicated in the corresponding subscript. Difference in the stratopause (diamond) and mesopause (circle) temperatures at their corresponding altitude in MIPAS averaged co-located profiles are indicated. Shaded areas include MIPAS-only systematic errors.



**Fig. S-2.** As in Fig. S-1 but for autumn (SON for NH and MAM for SH) co-locations.



**Fig. S-3.** As in Fig. S-1 but for summer (JJA for NH and DJF for SH) co-locations.



**Fig. S-4.** As in Fig. S-1 but for winter (DJF for NH and JJA for SH) co-locations.