

Supplement

## Validation of ACE-FTS version 5.2 ozone data with ozonesonde measurements

Jiansheng Zou<sup>1</sup>, Kaley A. Walker<sup>1</sup>, Patrick E. Sheese<sup>1</sup>, Chris D. Boone<sup>2</sup>, Ryan M. Stauffer<sup>3</sup>, Anne M. Thompson<sup>3</sup>, David W. Tarasick<sup>4</sup>

<sup>1</sup>Department of Physics, University of Toronto, Toronto, Ontario, Canada

<sup>2</sup>Department of Chemistry, University of Waterloo, Waterloo, Ontario, Canada

<sup>3</sup>NASA/Goddard Space Flight Center (GSFC), Greenbelt, MD, USA

<sup>4</sup>Environment and Climate Change Canada, Downsview, Toronto, Ontario, Canada

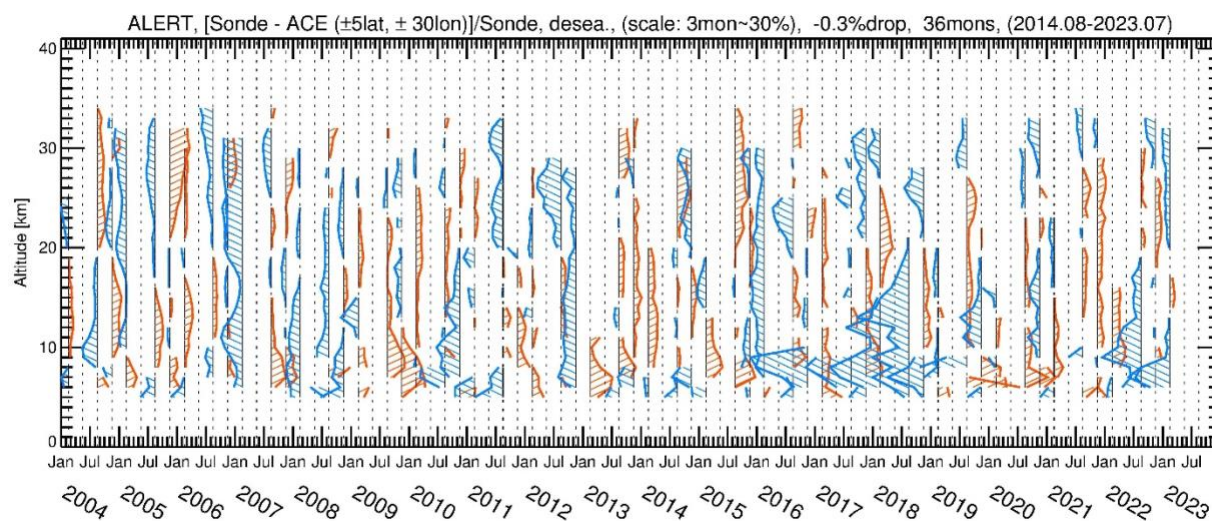


Fig. S1 Seasonally averaged relative differences (%) between the ozonesonde and ACE-FTS de-seasonalized monthly mean time series at Alert, Canada. The red/blue colors indicate the positive/negative differences, respectively. A scale of 30% relative difference is represented by the distance between the two adjacent dashed lines (3 months). The drop-off amount, the period, and the number of months of operating EnSci sondes with S/N > 25000 are indicated at the top. The following figures are similar for the different stations.

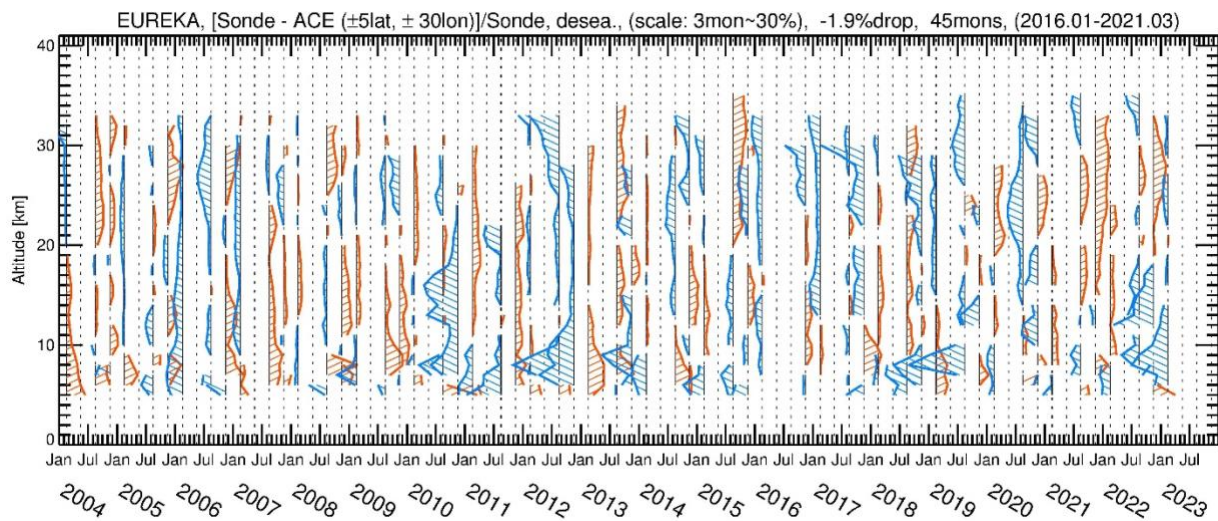


Fig. S2 Eureka

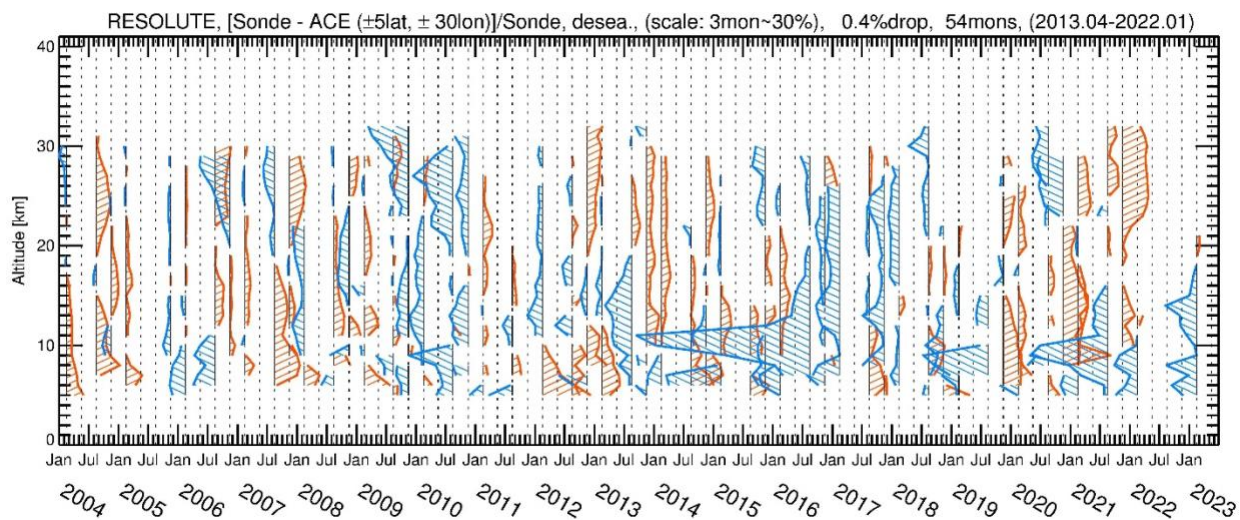


Fig. S3 Resolute



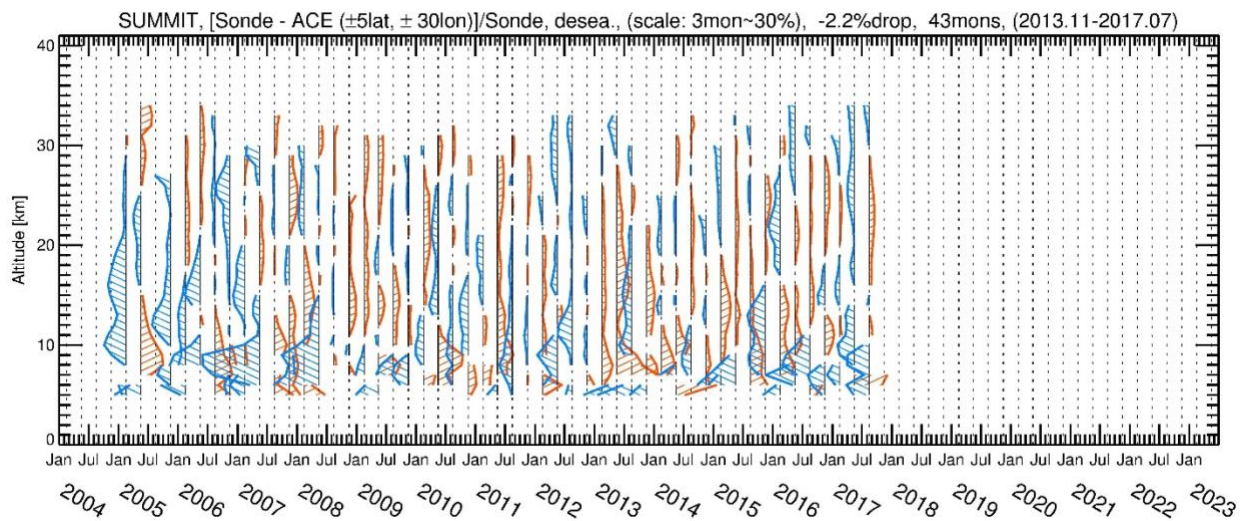


Fig. S4 Summit

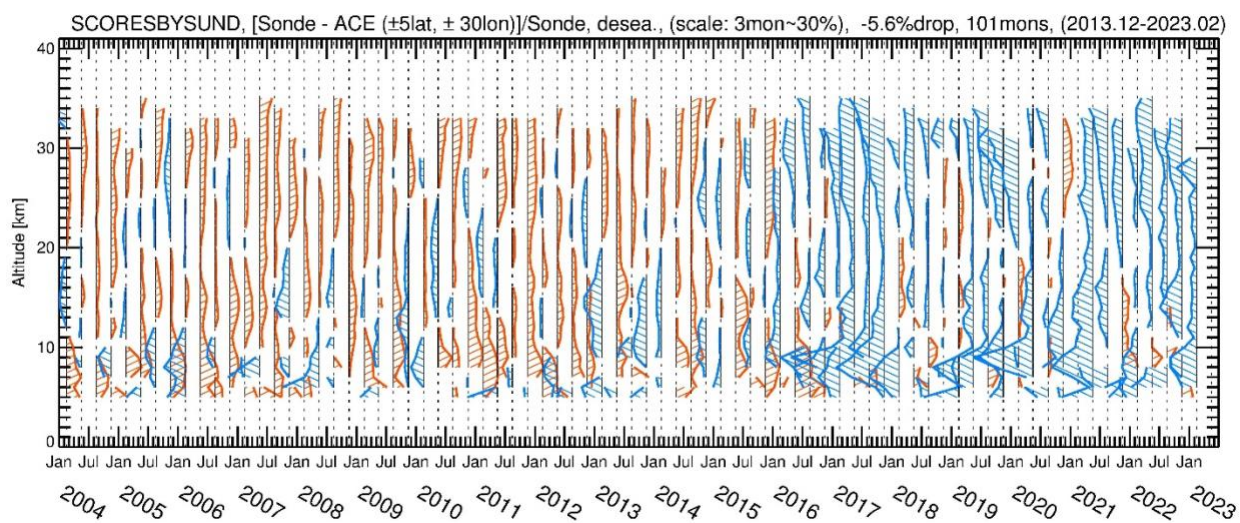


Fig. S5 Scoresbysund

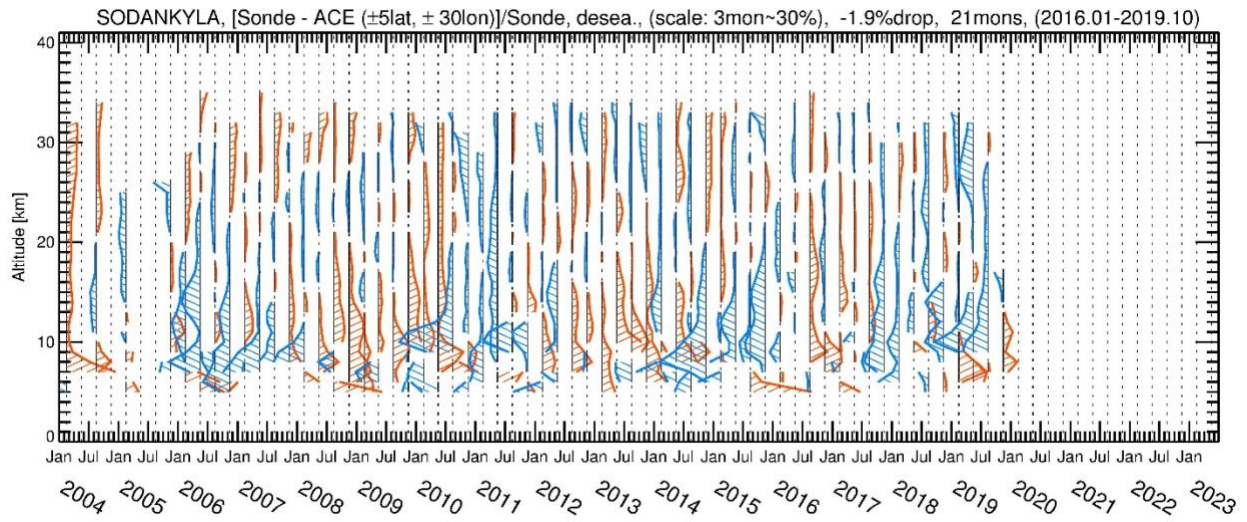


Fig. S6 Sodankyla

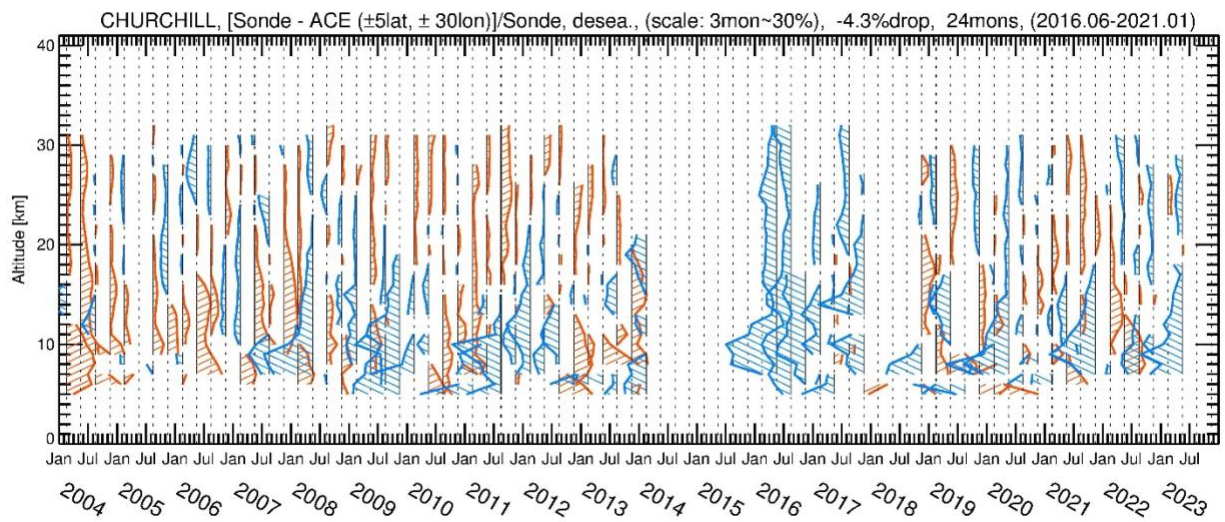


Fig. S7 Churchill



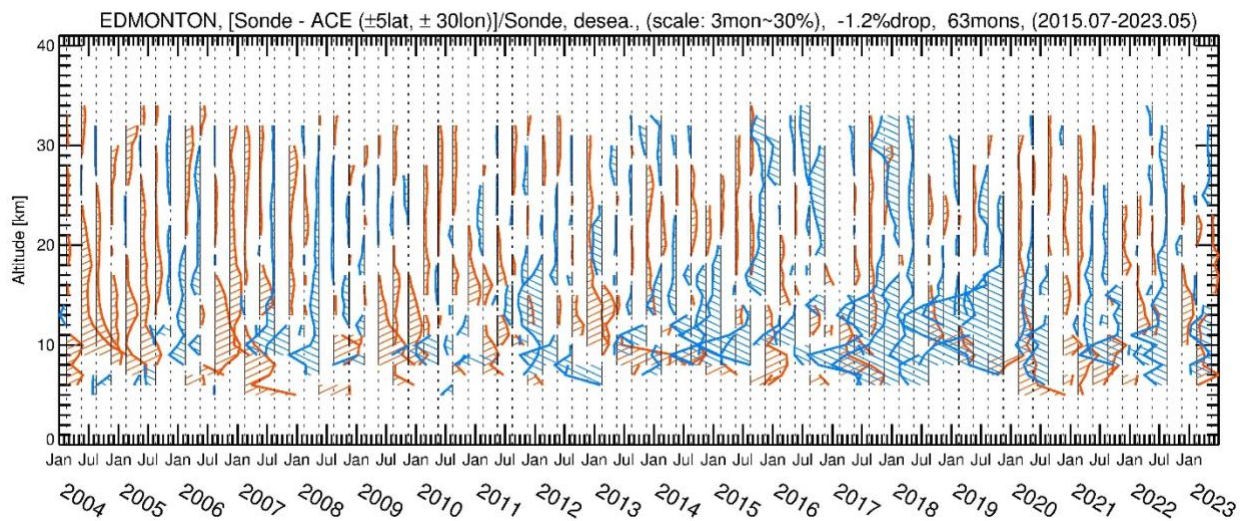


Fig. S8 Edmonton

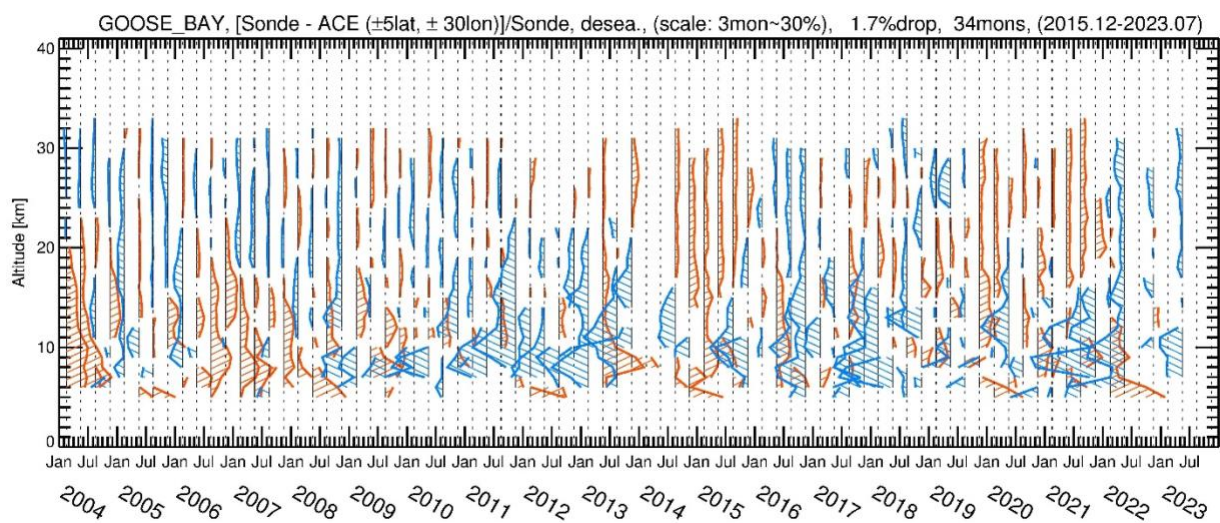


Fig. S9 Goose Bay

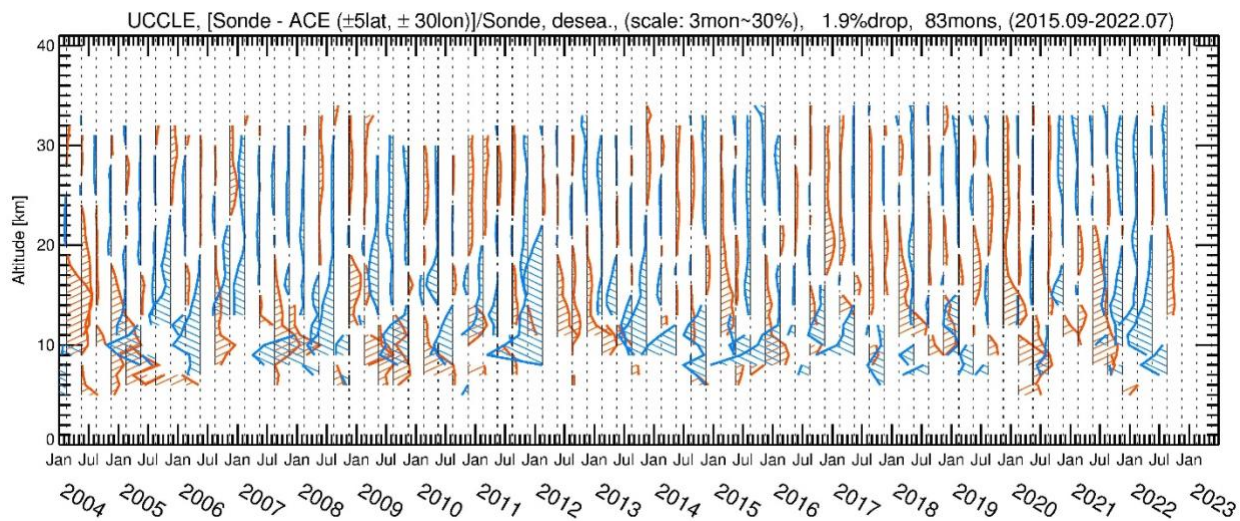


Fig. S10 UCCLE

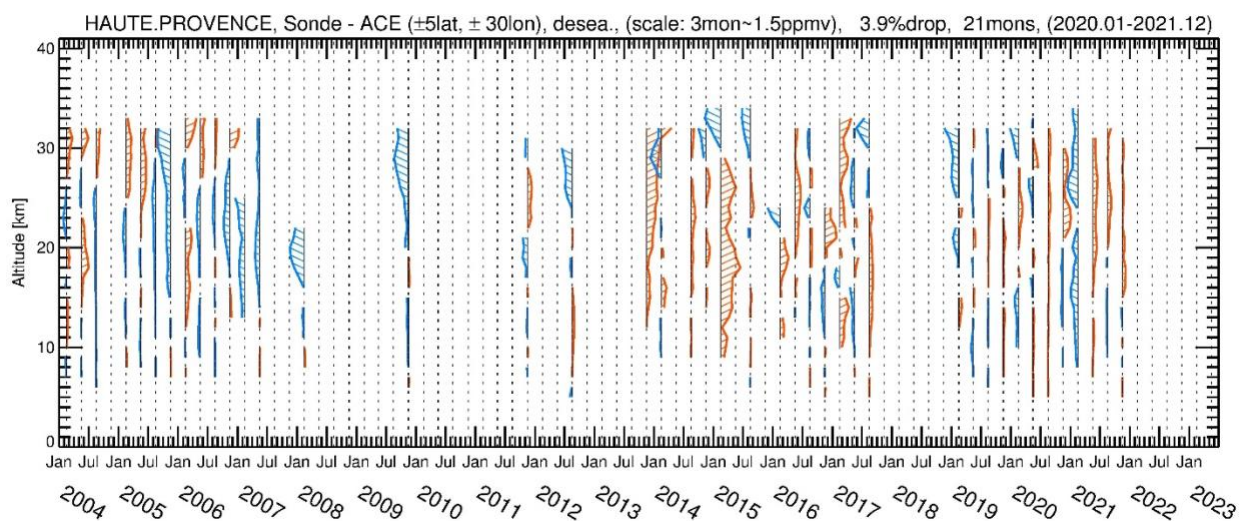


Fig. S11 OHP



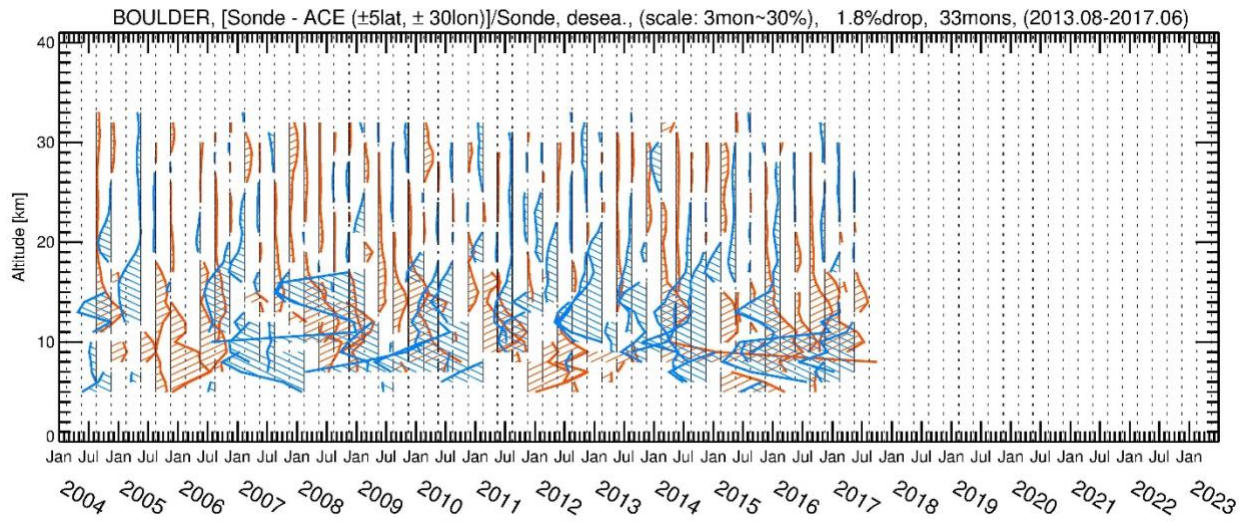


Fig. S12 Boulder

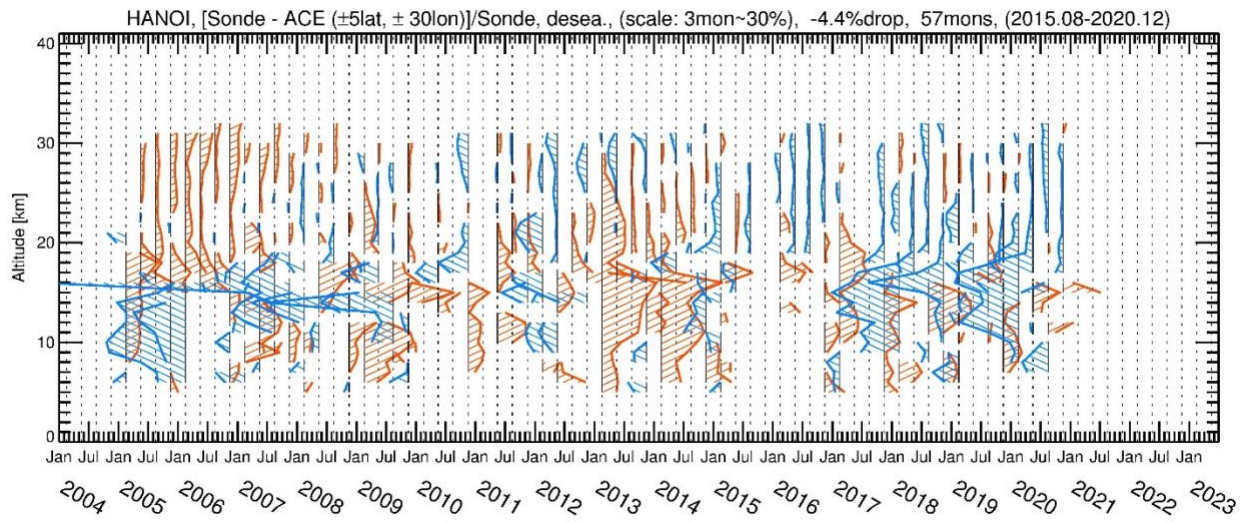


Fig. S13 Hanoi

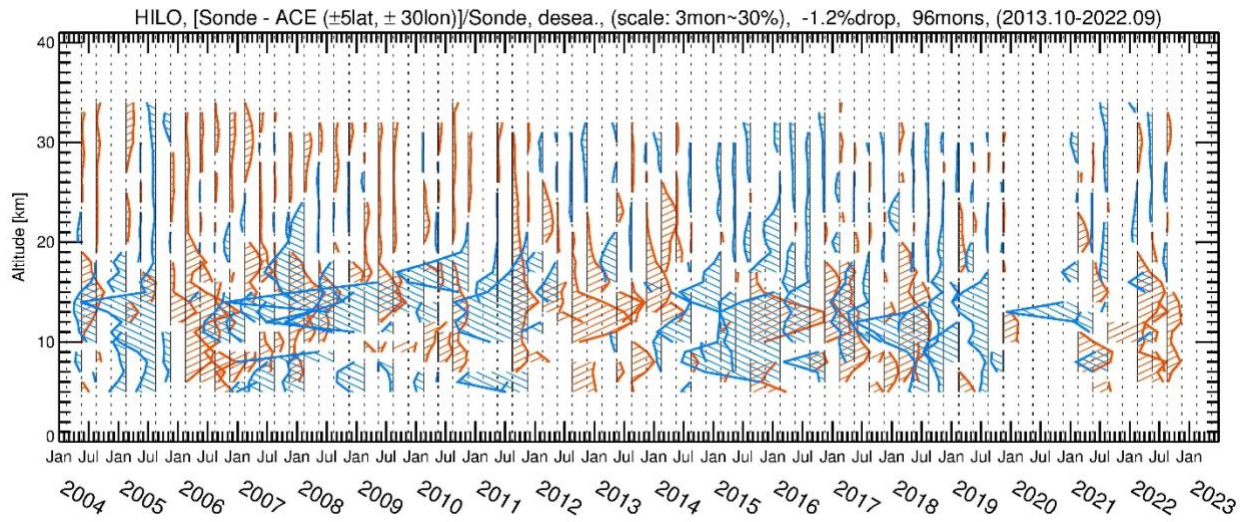


Fig. S14 Hilo

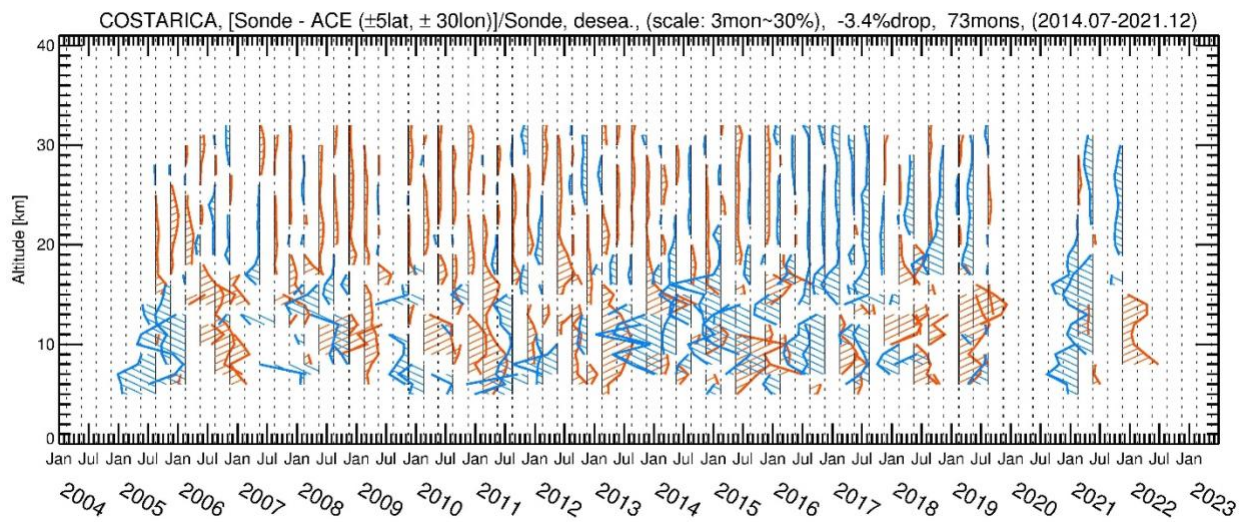


Fig. S15 Costa Rica



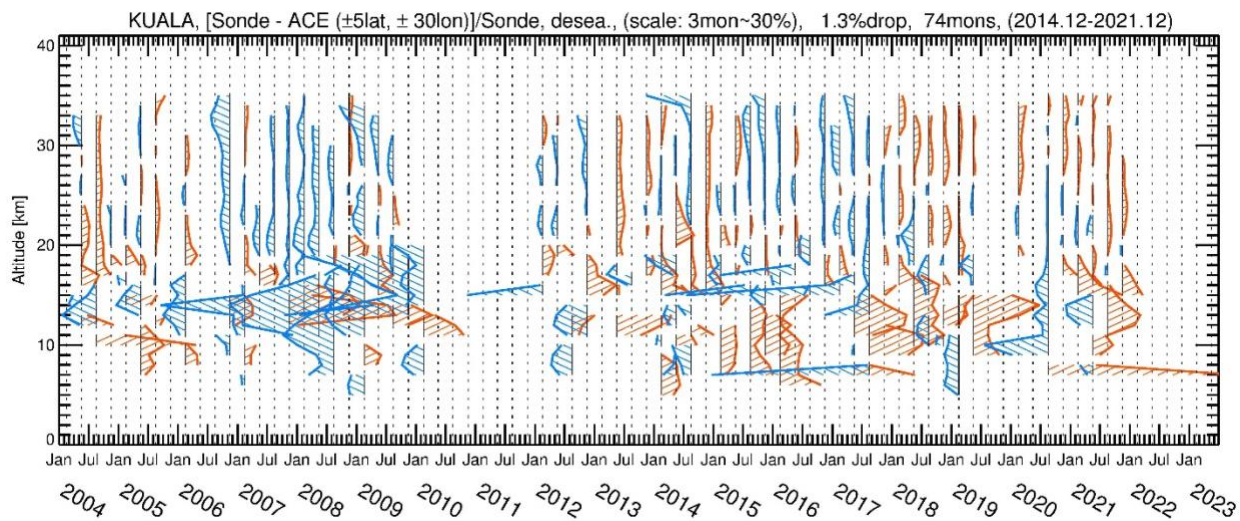


Fig. S16 Kuala Lumpur

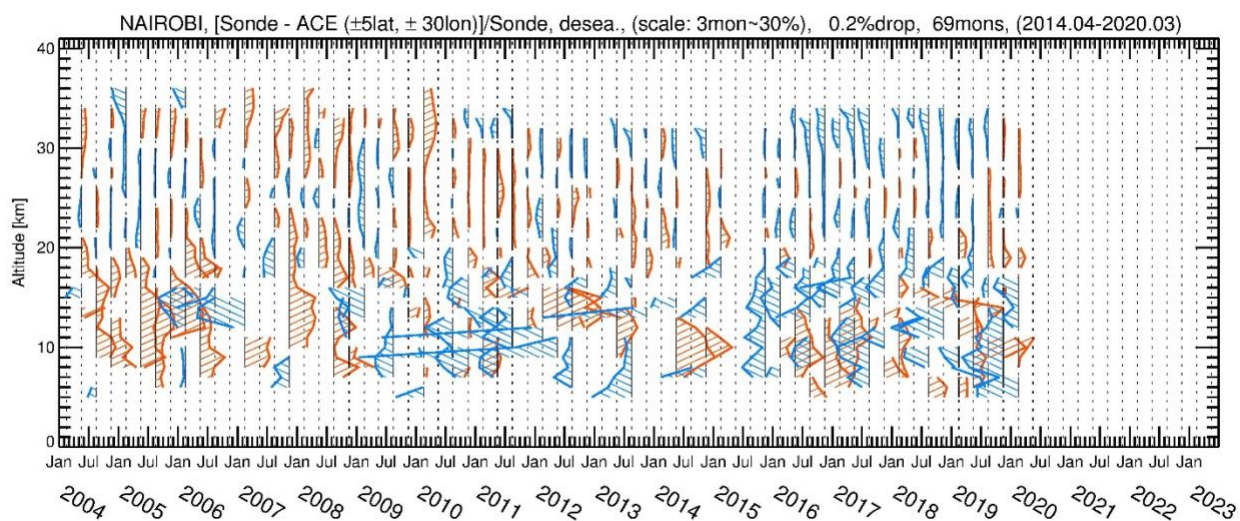


Fig. S17 Nairobi

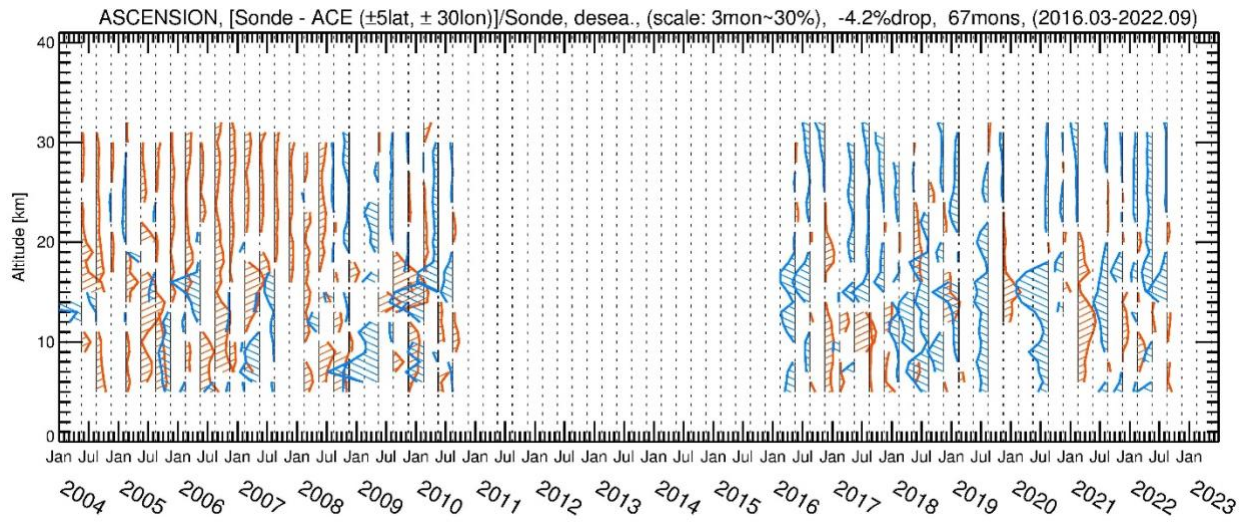


Fig. S18 Ascension

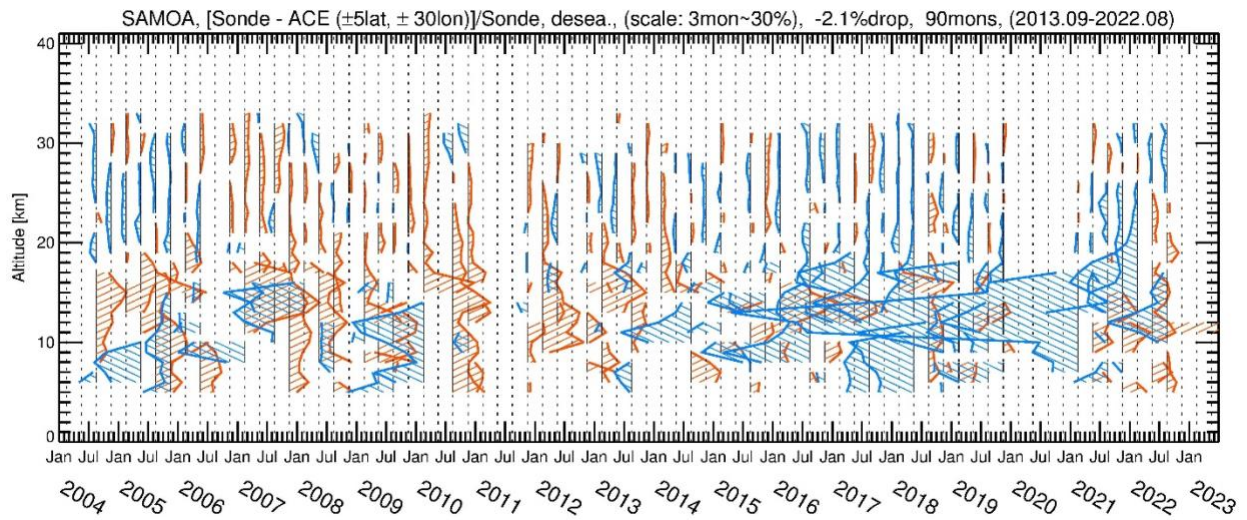


Fig. S19 Samoa



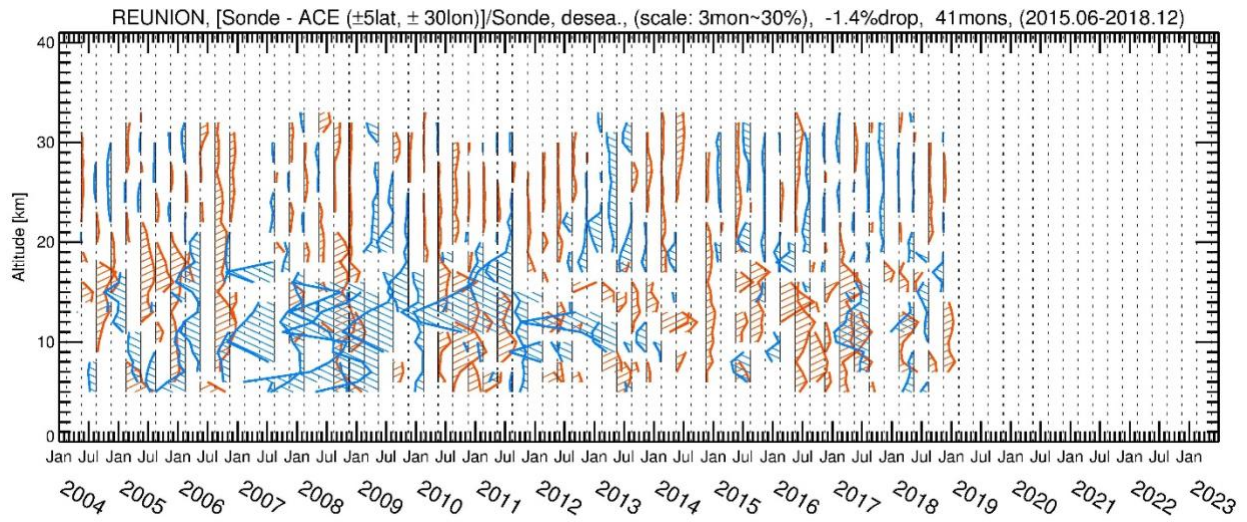


Fig. S20 Reunion

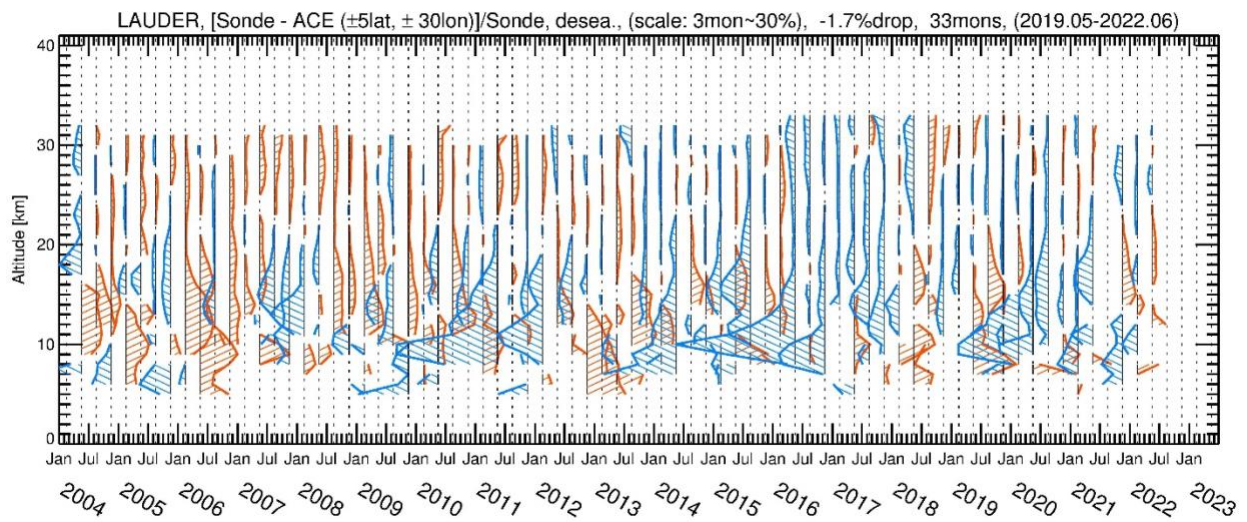


Fig. S21 Lauder

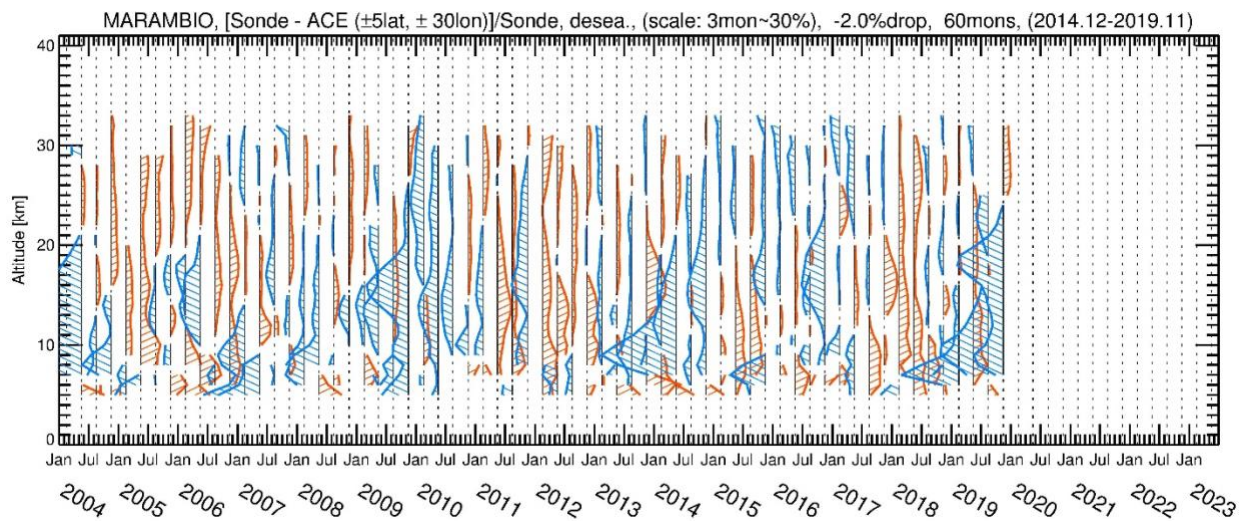


Fig. S22 Marambio

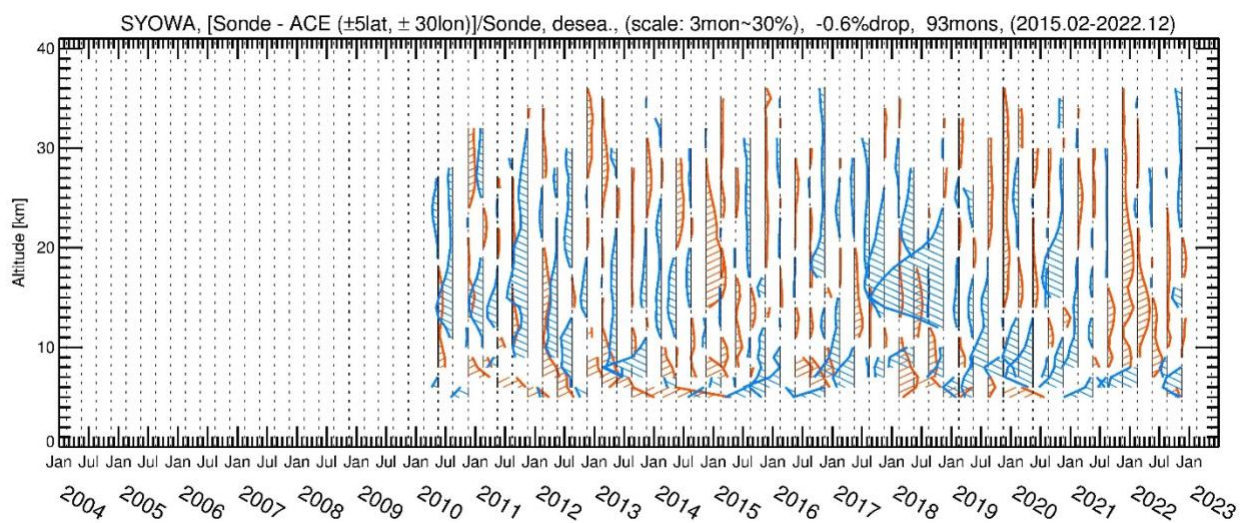


Fig. S23 Syowa