

DAILY PROGRAM

Monday

Session 1

Chair: Pekka Verronen

- 13.45-14.20 Registration
- 14.20-14.40 **Workshop opening**
- 14.40-15.10 **Bernet, L., *Total ozone trends at high-latitudes: a ground-based perspective (invited)***
- 15.10-15.30 Damadeo, R., *WMO Assessment 2022: Chapter 3 Summary*

Session 2

Chair: Irina Petropavlovskikh

- 16.00-16.20 Coldewey-Egbers, M., *Global, regional and seasonal analysis of total ozone trends derived from the 1995-2020 GTO-ECV climate data record*
- 16.20-16.40 Maillard-Barras, E., *DLM estimation of long-term ozone trends from Dobson and Brewer Umkehr profiles*
- 16.40-17.10 **Davis, S.M., *Recent lower stratospheric ozone trends in satellite data and specified dynamics model simulations (invited)***
- 17.10-17.30 Chrysanthou, A., Dhomse, S: *The conundrum of the recent variations in lower stratospheric ozone: An update*
- 18.00-19.00 **Icebreaker**

Tuesday

Session 3


Chair: Andrea Steiner

- 9.00-9.30 **Ramesh, K., *Long-Term Variability and Tendencies in Middle Atmosphere Temperature, Zonal Wind and Diurnal Tides from WACCM6 Simulations during 1850-2014 (invited)***
- 9.30-9.50 Kozubek, M., *Climatology and Long-Term Trends in the Stratospheric Temperature and Wind Using ERA5*

- 9.50-10.10** Hubert, D., *Long-term Changes in the Vertical Distribution of Stratospheric Water Vapor*
- 10.10-10.30** Nath, O., *Long-term trends in middle atmospheric Carbon Monoxide over the tropics*

Session 4

Chair: Viktoria Sofieva

- 11.00-11.20** Szlag, M.E., *Seasonal stratospheric ozone trends over 2000-2018 derived from several merged datasets*
-  **11.20-11.40** Stauffer, R.M., *Regional and seasonal trends in tropical ozone in the lowermost stratosphere from SHADOZ profiles: Reference for models and satellite products*
- 11.40-12.00** Arosio, C., *Zonal asymmetries in ozone trends: a study using satellite limb observations and TOMCAT chemical transport model*


Session 5

Chair: Robert Damadeo

- 13.30-14.00** Steiner, A.K., *Temperature changes and trends in the stratosphere from observations (invited)*
- 14.00-14.20** Murtagh, D., *Trends in the Odin/SMR stratospheric and mesospheric temperature measurements*
- 14.20-14.40** Effertz, P., *Updated Trends of the Stratospheric Ozone Vertical Distribution at Select NOAA Global Monitoring Laboratory Dobson Monitoring Stations Based on the LOTUS Regression Model*
- 14.40-15.00** Steinbrecht, W., *Ozone Trends from Ozone Sondes*
- 15.00-15.20** Sofieva, V.F., *Global and regional ozone profile trends evaluated using the updated Ozone-CCI datasets*

Session 6

Chair: Wolfgang Steinbrecht

-  **15.50-16.10** Weber, M., *Global ozone recovery trends in total ozone from observations and chemistry-climate modeling*

- 16.10-16.30** Dhomse, S.S., *Comparing recovery trends between stratospheric ozone profiles from Chemical Transport Model simulations and observation-based data sets*
- ~~**16.30-16.50** Pope, R.J. - *Investigation of spatiotemporal variability in lower and upper tropospheric ozone in the satellite-era and interactions with climate*~~
- 16.30-16.50** Sheese, P.E., *Trends in ozone and ozone-related species from ACE-FTS measurements in the upper troposphere-stratosphere*
- **16.50-17.10** Cionco, R.G., Elias A.G., *Ozone trends at two extreme southern GAW/WMO stations*
- **17.10-17.30** Heredia, T., *Trends and Oscillations in extreme and total precipitation over a Southern Hemisphere location*

Wednesday

Session 7

Chair: Donal Murtagh

- 9.00-9.20** Nilsen, K., *Polar arctic stratospheric ozone trend analysis by using Dynamic Linear Model*
- 9.20-9.40** Zajicek, R., *Advective transport in the middle atmosphere - trends and drivers*
- 9.40-10.00** Minganti, D.M., *Observations and modeling of N₂O trends to evaluate the changing Brewer-Dobson Circulation in the stratosphere*
- 10.00-10.30** Holappa, L., *Long-term trends of geomagnetic activity (invited)*

Session 8

Chair: Jan Lastovicka

- 11.00-11.30** Kuchar, A., *Long-term changes in mesospheric dynamics in both hemispheres (invited)*
- 11.30-11.50** Latteck, R.L., *Two decades of long-term observations of polar mesospheric echoes at 69N*
- **11.50-12.10** Fiedler, J., Baumgarten, G. *Long-term variations of noctilucent clouds at ALOMAR*
- **12.10-12.30** Luebken, F.J., *Long term trends of mesospheric ice layers: A model study*

16.00-20.30 **Excursion and dinner**

Thursday

Session 9

Chair: R.L.Latteck

- 9.00-9.30 Yue, X., *Long term trend of topside ionosphere and the CO2 effect on equatorial plasma bubble occurrence (invited)*
- 9.30-9.50 Cnossen, I., *Climate change in the upper atmosphere as simulated by WACCM-X and its impacts on space debris*
- 9.50-10.10 Lastovicka, J., *The optimum solar activity proxy for long-term studies of foF2*
- 10.10-10.30 Mursula, K., *Centennial trend in geomagnetic storms*

Session 10

Chair: Michal Kozubek

- 11.00-11.20 Jaen, J., *Studies on mesosphere and lower-thermosphere summer zonal wind at middle and high latitudes and their long-term variability*
- 11.20-11.40 Krishnapriya, K., *Signatures of disrupted Stratospheric QBO 2015-16 and 2019-20 in the Diurnal tides over the low latitude Mesosphere Lower Thermosphere region*
- 11.40-12.00 Solanki, R., *Comparison of Aerosol Optical Depth from Satellite based observation over Surat region*

Session 11

Chair: Kalevi Mursula

- 13.30-14.00 Lastovicka, J., *Progress in investigating long-term trends in the mesosphere, thermosphere and ionosphere (invited)*
- 14.00-14.30 Elias, A.G., *Impact of secular variation of the Earth's magnetic field on the low latitude and equatorial ionospheric trends (invited)*
- 14.30-14.50 Zossi, B.S., *Auroral Particle Precipitation Trend Recorded by DMSP Mission*
- 14.50-15.10 Zossi, M.M., *Stratospheric temperature trends in the Southern Hemisphere*

Session 12

Chair: Ales Kuchar

15.40-16.00 Bloxam, K., *Temperature trends in the Arctic winter stratosphere and the governing roles of dynamics and radiation*

16.00-16.20 Dharmalingam, S., *Long-term Trends in the Upper atmosphere using the incoherent scatter radar observations over Arecibo*

16.20-16.50 Qian, L., *Whole-Atmosphere Model Simulations of the Solar Cycle, Greenhouse Gas, and Geomagnetic Field Effects on the Atmosphere Trends (invited)*

16.50-17.10 Medrano, M., *Long-term trends at the geomagnetic equator: Data retrieval, time series construction, and assessment*

17.10-17.30 Merino, M., *Long-term trends at the geomagnetic equator: Trend analysis*

Friday

Session 13

Chair: Jan Lastovicka

9.00-9.20 Yuan, T., *Long-term trends of mesopause and mesospheric Na layer revealed by a Na lidar at mid-latitude over three decades*

9.20-9.50 Cnossen, I., *Secular change of Earth's magnetic field and its impact on the ionosphere-atmosphere system (invited)*

9.50-10.10 Verronen, P.T., *The Whole Atmosphere Community Climate Model for long-term studies of the D-region ionosphere*

10.10-10.30 **Workshop closing**