The Austrian UV monitoring network: scientific results

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The Austrian UV monitoring network

www.uv-index.at

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Long-term variation of UV and ozone

Innsbruck: 19° solar elevation
Long-term variation of UV and ozone

Innsbruck: linear regression for all weather conditions
Long-term variation of global radiation

Global radiation Innsbruck: 19° solar elevation
Long-term variation of UV and ozone

Innsbruck: linear regression for all weather conditions
linear trend 1998 - 2017 ± 2σ

Wien
Grossenzersdorf
Bad Vöslau
Steyregg
Graz
Dornbirn
Klagenfurt
Innsbruck
Mariapfarr
Kanzenhöhe
Hafelekar
Sonnblick
Long-term variation of global radiation

Global radiation Innsbruck: 19° solar elevation
Long-term variation of UV and ozone

Innsbruck: 19° solar elevation, clear sky
linear trend clear sky 1998 - 2017 $\pm 2\sigma$

- Wien
- Grossenzersdorf
- Bad Vöslau
- Steyregg
- Graz
- Dornbirn
- Klagenfurt
- Innsbruck
- Mariapfarr
- Kanzelhöhe
- Hafelekarschneide
- Sonnblick
UV and ozone

Innsbruck: clear sky, 19° solar elevation

UV \sim O_3^{-RAF}

Albedo effect: ca. +10%
UV and altitude

maximal UV-Index 1998 - 2017

ae = 12.9 %/km

ae = 10.3 %/km
UV and altitude

altitude effect between Hafelekar and Innsbruck
UV and altitude

altitude effect between Hafelekar and Innsbruck

number out of 62176

altitude effect [%/km]
Summary

- overall in Austria no significant variation of UVI, ozone and global radiation in the last 20 years
- UVI and ozone show a RAF of about 0.9
- albedo effect of about +10% for snow-covered terrain
- altitude effect of about 12%/km