

## Données récapitulatives

On this forms one will find the calculations of  $\mu$  and  $\alpha$  for the Dobson-measurements indicated. The details of the observations are collected in two journals *I* and *Ia*. The number of the journal-page where the observation may be found is written below the column with calculations.

- The time of observation is accurate to some seconds and is given in Greenwich Mean Time.
- $\mu$  is corrected voor ozone layer height at 19 km.  
The corrected  $\mu$  is given in de row for  $N_\lambda - N_{\lambda'}$ .
- All measurements are calculated with final coefficients and  $\Delta N$  values:

$$\alpha_{AD} = 1,388 \quad \Delta N_0 = -0,011 \text{ (q.}\phi\text{.P.) atmospheric correction } -0,009$$

$$\Delta N_0 = -0,360 \text{ (F.I.w.f.) atmospheric correction } -0,009$$

$$\alpha_{BD} = 0,788 \quad \Delta N_0 = -0,5010 \text{ (q.}\phi\text{.P.) atmospheric correction } -0,009$$

$$\Delta N_0 = -0,278 \text{ (F.I.w.f.) atmospheric correction } -0,009$$

$$\alpha_c = 0,808 \quad \Delta N_c = +0,016 \text{ (q.}\phi\text{.P.)} \quad \frac{\beta - \beta'}{\alpha - \alpha'} = 0,131$$

$$\Delta N_c = +0,230 \text{ (F.I.w.f.)}$$

- Moon measurements are only calculated for  $\lambda\lambda$  c F.I.w.f with  $\Delta N = +0,187$  and
- $$\frac{\beta - \beta'}{\alpha - \alpha'} = 0,131$$

The calculations of moon-measurements on page 34 to 48 are only provisional. These are used for selection. The final calculations are found on pages 1 to 10 on top.

After the month of August one may find some pages a to n. Some measurements in early spring are given here. They are taken along the lines given by R.J. Hamilton, determination of ozone amounts by the Dobson spectrophotometer using the focused sun method, from the Quarterly Journal of the Royal Met. Soc. Vol90, no 385, July 1964.

Below the columns one will find some indications:

- In the journals *I* and *Ia* the observations are given at the time, indicated by the clock in the observatory. The correction to G.M.T. is given. By example page 90, column 1, 45 minutes, zero seconds. The corrections are also listed at the back pages of the journals *I* and *Ia*.
- A code gives some conditions during the measurements.

Zenith cloud (Z.C)  $\frac{ccc}{3} \frac{1}{2} /hd$

- ccc: type of clouds
- 1: uniform
- 2: moderately variable
- 3: highly variable
- hd: high drifting snow

Direct sun (D.S)  $\frac{4}{5} /ff/hd$

- 4: unobstructed sun
- 5: shadows slightly reduced
- 6: shadows reduced
- ff: strong winds, which did trouble the observatory
- hd: high drifting snow

Zenith Blue (Z.B) 8/9

- 8: clear blue sky
- 9: hazy blue sky

N.B. all focused image measurements calculated are taken with the “low-sun-scattering filter”. Therefore they are indicated as F.I.w.f. (Focused image with filter)  
The definite list of measurements in the final reports is extracted from these columns.

$\mu$  is berekend voor een ozonzwaartepunt op 19 km hoogte en aardstraal van 6359 km.

$\mu$  voor 22 km:

2	Multiply with	1,002
2,4		1,003
2,8		1,004
3,1		1,005
3,4		1,006
3,7		1,007
4,0		1,008
4,3		1,009
4,5		1,010
4,8		1,011
5,0		1,012
5,2		1,013
5,4		1,014
5,6		1,015
5,8		1,016
6,0		1,017
6,2		1,018
6,3		1,019
6,5		1,020
6,6		1,021
6,8		1,022
7,0		1,023

Bij de code voor Ozone data for the world (Antarctica mapje 17-05-1966: brief van Canada Met Office d.d. 21-01-1963)

$\lambda = 3$  is cc'

$\lambda = 7$  in c } q.φ.P hoe  $\mu$  bij het verschil C FIwf en c q.φ.P?

Daarom houdbaar;

$\lambda=3$  S=0 c q.φ.P

$\lambda=7$  S=0 c FIwf

$\lambda=3$  S=2 cc' Z.B

$\lambda=3$  S=3,4,5,6,7 cc' Z.C

Procedure om single daily ozone value te krijgen

- alle D.S en Z.B middelen
- als er geen D.S of Z.B is, alle Z.C. middelen
- als alle metingen dezelfde  $\lambda$  S hebben, dan deze  $\lambda$ S' invullen
- als er meerdere  $\lambda$ 'S zijn, dan  $\lambda=8$
- for filtertype observations  $\lambda=9$  [Kan niet bij mij, want dan geen verschil in AD, BD en c FIwf]
- als zowel D.S. en Z.B gemiddeld zijn dan S=8
- als zenith cloud metingen gemiddeld zijn dan S=9 inbegrepen
- indelen over locale dag
- h heeft tot gevolg dat de gemiddelde tijd ook negatief kan zijn  
"The procedure developed here need not, of course, be adapted generally"

Bij de formulieren

$\lambda=8$ , meer dan een  $\lambda$

S=8 zon + Z.B

S=9 Z.C (+Z.B) (+D.S)

In het algemeen alleen over Z.B + D.S gemiddeld als deze groter in aantal waren. Als er nog al wat D.S. met shadows reduced waren ook 89 genomen.

$\mu > 5$  er nog bij opgeven  
opmerkingen samenstelling

GG= number of measurements included in mean

$\lambda=8$  measurements with different  $\lambda$ 's included in mean

S=8 DS and ZB included in mean

S=9 Zenith Cloud included in mean

All focused image measurements with filter