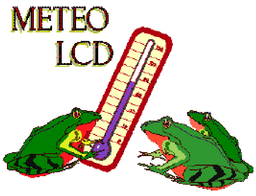
meteoLCD Weblog Customize New Edit Post Howdy, fmassen

meteoLCD Weblog

A weblog on climate, global change and climate measurements

« A severe storm, with a Boltek animation

A last word (1/2)



I did not write any blog for this year, as I was too busy with other tasks (mostly at our Computarium), and immobilized for quite a time after an accident in France in late August 2024.
2024 will be the last year where I managed meteoLCD, starting with its constructions in 1995, and gathering continuously 365/24 data since 1998. Over all this time the main hardware was mostly kept as it was, newer or replacement sensors such as Airvisual PM and different CO2 and O3 sensors were installed. The lightning infrastructure was renewed with an USB model (which did never give complete satisfaction compared to the original PCI Boltek hardware). Our old heavy and expensive air sensors from Envitec (CO2, O3, NO2) came to their end of life several years ago and were replaced by simpler models (Vaisala GMP343 CO2 sensor, miniature CAIRSENS sensors for O3 and NO2).

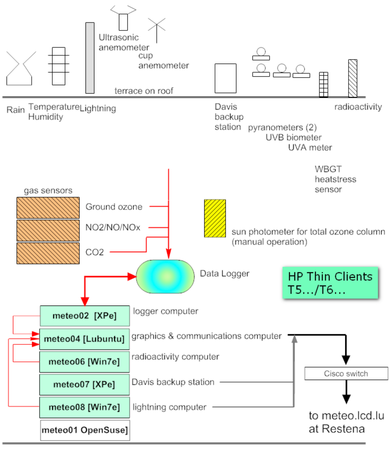
Customize Edit Stats •••

From it's start on, meteoLCD relied heavily on computers, most being older models discarded by our Informatics department. Practically all programming was either written by ourselves (mostly Perl scripts), or open source software (as Linux, Gnuplot, Imagemagick…). Most sensor data were first collected by a Delta-T datalogger, than transferred every half-hour to a first computer, sent to a 2nd to assemble the half-hour files into a daily one, make plots, icons… and transfer everything to our website meteo.lcd.lu hosted by Restena in Luxembourg. A total of 5 computers were constantly running to make the different tasks or collect data. Scheduling software started in the 1990's with a DOS software, than Windows based Automate Pro , Linux Cron and Windows scheduler. The near-live data were accessible for everyone without registration and free of charge. The meteo.lcd.lu website also had many discussions and documentation on climate problems, and many short research papers written by myself and other collaborators. During the years, the computers were continuously replaced by more sturdy and reliable models, up to the last which were second-hand HP Thinclients without any moving parts (it were the moving parts like hard disks or cooling fans which caused most problems during 365/24 operation).

Most unusual for an unofficial station, meteoLCD was admitted in 2001 by the WOUDC (World Ozone and UV radiation Data Center) as station 412 as Luxembourg's only station for UVB radiation and measurements of the thickness of the ozone layer.

Here a picture showing the overall structure for the last years (the XPe has been replaced by Win7e in 2023):

meteoLCD structure 2017 (all HP passive thin clients)



An article given in Ref. 1 (published in 2021 in French) tells the history of meteoLCD.

References:

[1] meteoLCD: 25 ans de présence et de mesures climatologiques
https://ourclimate.lu/papers/MASSEN/LCD_Millesime2021_meteoLCD.pdf
Article on the 25+ years history of meteoLCD, written by Francis Massen and published in the 2021 year book ("Millésime 2021") of the Lycée classique Diekirch. PDF version.

(continue to part 2)

Share this:

Facebook X

Customize buttons

Related

NOx sensor repaired
December 23, 2008
In "Comments"

A test of inexpensive LLS fine particle sensors
November 9, 2018

Equipment problems
December 13, 2008
In "Comments"

Tags: climate change, energy, sustainability, technology

This entry was posted on December 26, 2024 at 11:18 and is filed under Uncategorized. You can follow any responses to this entry through the RSS 2.0 feed. You can leave a response, or trackback from your own site. Edit this entry.

Leave a comment

Blog at WordPress.com.
Entries (RSS) and Comments (RSS).

meteoLCD Weblog

A weblog on climate, global change and climate measurements

« A last word (1/2) A last word (3/3) »

A last word (2/3)

METEO LCD

Customize Edit Stats

Some historic pictures

Here just a few pictures from the 1995 to 2024 period for getting a taste of that history.

On 1995, the first equipment were installed in the lift-machinery cabin on the roof of the LCD (Lycée Classique Diekirch); the grey box houses the datalogger and wiring .

There was a long serial line from the data-logger to a menaced on a temporary cabin on the terrace (photo below). In 2003, the cabin was modernized. In 2005 big transformation work was made to the school building, so that all the equipment was reinstalled in a moveable cabin on the same roof; the communication wires were replaced by a wireless spread-spectrum data-modem..

Here a picture of Jean Moitel (at the left, one of the very active helpers) and myself inside that cabin:

The transformation work on the LCD building made a float room available in Dec. 2003, built around the lift-machinery; here an aerial picture from the definitive emplacement:

A large terrace received the different sensors:

Here Jean-Claude Knock, a chemistry-professor colleague, helps with one of our students to mount the Solar Light UV sensors:

Installation work was not always easy, and working on the anemometers needed some climbing experience.. here a picture of Claude Boes working on the anemometer and wobsun mast ...

We were lucky to get an important grant from the government, which allowed to buy professional instruments for solar radiation and atmospheric gases. The latter were installed in a rack ...

... and a second one was used for the data-logger, ancillary electronic equipment (like power-supplies, UPS, lightning protection, LAN switch ..) and wiring ...

All this equipment work was done in-house as voluntary work. Other original development was also made, as a microcontroller-based interface for the big gamma-radiation sensor, designed and built by Claude Baumann...

... a portable CO2 sensor to be used in underground CO2 measurements for Prof. EK (Jim Lilge, black tee-shirt) designed by Francis Poisson:

... and an autonomous instrument package called "Luxpak" to be lifted up to 2000 m into the lower stratosphere to measure O3 concentration, albedo etc... This was a collaborative work between meteoLCD and the Cimrot boarding school of Luxembourg (director Claude Baumann); among a world-wide tender for participation, meteoLCD was chosen for the Luxpak project, out of about 100, only 7 accepted proposals among 100 submissions. Pictures show Claude Baumann in front of the Luxpak package (which was driven by a vintage Lego RX controller).

(continue to part 3)

Share this:

Facebook X

Customize buttons

Related

TIR LëtzebuergZ 2016: the Rifkin report (part 5)
November 22, 2016 With 2 comments

The winters they are cooling!
November 25, 2013

The Montreal Protocol, a success or not?
September 27, 2021 With 3 comments

This entry was posted on December 20, 2014 at 11:54 and is filed under Uncategorized. You can follow any responses to this entry through the RSS 2.0 feed. You can leave a response, or trackback from your own site. Edit this entry.

Leave a comment

Write a comment...

Comment

Blog at WordPress.com.
Entries (RSS) and Comments (RSS).

meteoLCD Weblog Customize New Edit Post Howdy, fmassen

meteoLCD Weblog

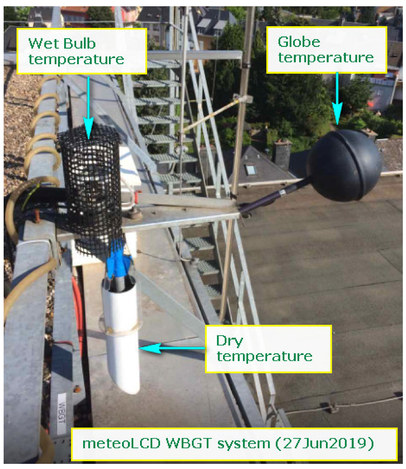
A weblog on climate, global change and climate measurements

« A last word (2/3)

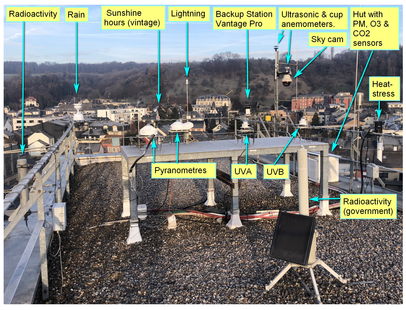
A last word (3/3)

We also started in 2001 a WBGT equipment to measure the heatstress; this was a joint-venture with the medical department of the Luxembourg Army (Dr. Charles Bonert, stationed in Diekirch); see Ref. 3.:

Customize Edit Stats



The last picture shows the installation on the terrace in Dec. 2022:



I am one of the many scientists who remain skeptical of the politically accepted wisdom that practically all recent climate changes are due to human CO2 or other greenhouse gas emissions; the meteoLCD website has an enormous collection (Ref. 2) of discussions and scientific papers on this subject. I and the LCD were often criticized for not adhering to the sometimes hysterical climate Angst; I remain grateful that our directors did not cave in and allowed me to express free scientific liberty.

The future

The 1st January 2025 meteoLCD will be handed over to a new crew: the physics professors Raoul THOLL and Marco GOFFINET are taking over the job in modifying and managing meteoLCD. There will be new loggers and the data will be sent into a cloud (Delta-T link, provisional link); there also probably will be a new website, but many details are still in the works. I am happy that meteoLCD will continue to operate; maintaining a scientific equipment 365/24 in an educational institution is not a job for the faint of heart, and those who assume this endeavor have to be applauded.

My new private website https://ourclimate.lu will contain as an the archive the old meteo.lcd.lu website (up to 31 Dec. 2024), with all data, publications, comments etc… This will be freely accessible.

The meteolcd.wordpress.com blog will stop and be archived at ourclimate.lu/BLOGourclimate/. This web-site will also harbor the new blog postings that I may write from time to time. I thank my son and daughter Gilles and Florence MASSEN for helping out in this migration task.

Let my finish to thank the many people who helped and assisted me in the past: Guy Schintgen+ (lightning protection, electric equipment), Jean Mootz+, Marcel Thilmany+, Jean-Claude Klein, Claude Boes (installation), Mike Zimmer (Dobson measurements), Raoul Tholl (maintenance), Georges Alff+, Roger Meyrath (financing), Roger Brachmond, Robert Bonert, Marcel Kramer (directors of the LCD) and many others I apologize for not mentioning…. Their help was essential, and must not be forgotten.

References:

[1] meteoLCD: 25 ans de présence et de mesures climatologiques
https://ourclimate.lu/papers/MASSEN/LCD_Millesime2021_meteoLCD.pdf
Article on the 25+ years history of meteoLCD, written by Francis Massen and published in the 2021 year book ("Millésime 2021") of the Lycée classique Diekirch. PDF version.

[2] The globalwarming skeptic:
https://ourclimate.lu/globalwarming/index.html

[3] Ambiance Chaude:
https://ourclimate.lu/papers/wbgt/ambiance_chaude.html

Share this:

Facebook X

Customize buttons

This entry was posted on December 26, 2024 at 12:56 and is filed under Uncategorized. You can follow any responses to this entry through the RSS 2.0 feed. You can leave a response, or trackback from your own site. Edit this entry.

Leave a comment

Blog at WordPress.com.
Entries (RSS) and Comments (RSS).