

# Lindau Calibration Photometer

- Built in 1984 (W. Barke and H. Lauche)
- Uses Fritz Peak standard source
- All sources measured at 7 wavelengths from 391.4 nm to 656.2 nm (in Rayleigh/Angstrom)
- Accuracy with  $\pm 10\%$
- Inter-calibrations/cross-calibrations
  - Brightness of the standard source is stable and well-known.
  - Calibration photometer in linear and stable during calibration procedure.
- Now operated by O. Widell (Swedish Space Institute since 2000)
- Instruments cross-calibrated at annual European Optical Meetings.

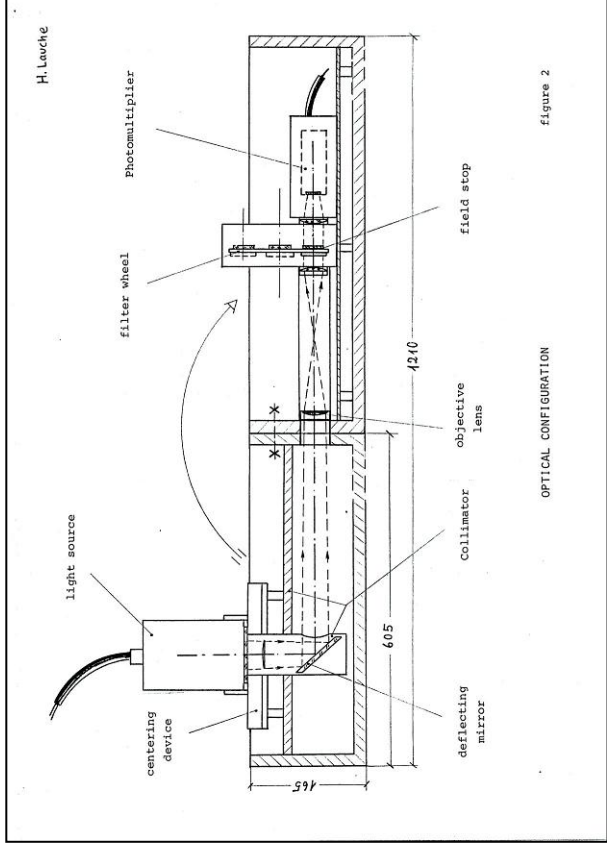
# Portable Calibration Instrument



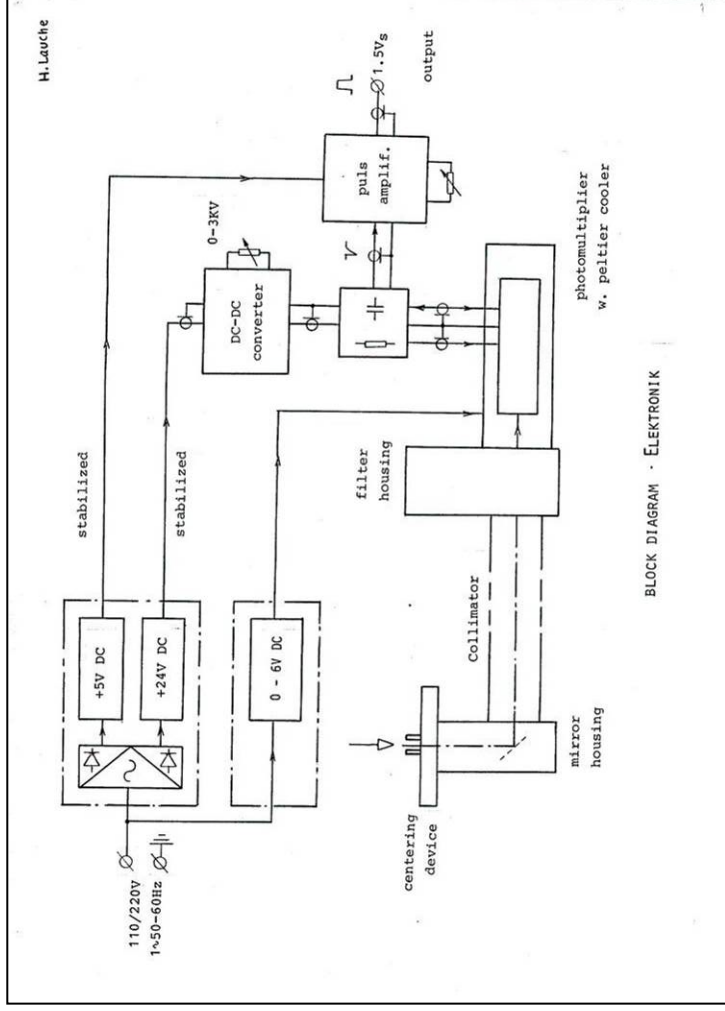
# Very Compact Design



# Simple Instrument Design



Optical Configuration



Electronic Block Diagram

# Optical Calibration Workshop

## Working Data Sheet

Date: ..... Place: ..... Observer: Ola Widell & Hans Henrikson  
 Transfer Source: ..... Test Source: .....  
 Supply: ..... Volt ..... Current (A) Aperture: .....  
 Start time: ..... Room temperature: ..... °C  
 Stop time: ..... thermistor resistance: ..... ohm

Filter wheel position	0	1	2	3	4	5	6	7	8
Filter Peak $\lambda$ (Å)	Black	3918	4280	4866	5573	5882	6299	6562	6707
Filter BW (Å)	---	41	27	25	16	13	12	15	6
Integration period (s)	10	10	10	10	10	10	10	10	10
Measurement 1 (pulses, Hz)									
2									
3									
Mean count rate (Hz)									
Mean count rate - dark count rate (black) (Hz)									
Photom. calib. ( $C \times s^{-1} \times R^{-1} \times A$ )									
Source brightness ( $R \times A^{-1}$ )									
Previous calibration ( $R \times A^{-1}$ )									
Brightness of Fritz Peak source (R/A)		0.34	5.7	3.2	2.6	5.1	9.2	10.2	

Note:

**Photom. Calib.** = Values "mean count rate - dark count rate" for Fritz Peak (FP) source.  
**Source Brightness** = Brightness of Fritz Peak  $\times$  "mean counts - dark counts" for test source  
 "mean count rate - dark count rate" for Fritz Peak (FP) source

**Previous Calibration** = Use the values from last year for this test source.