

The Planck constant

- Analysis worksheet -

| Nebenrechnungen: | | | |
|------------------|--|--|--|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



Tabelle 1: Measurement data of the threshold voltage as as function of the wavelength

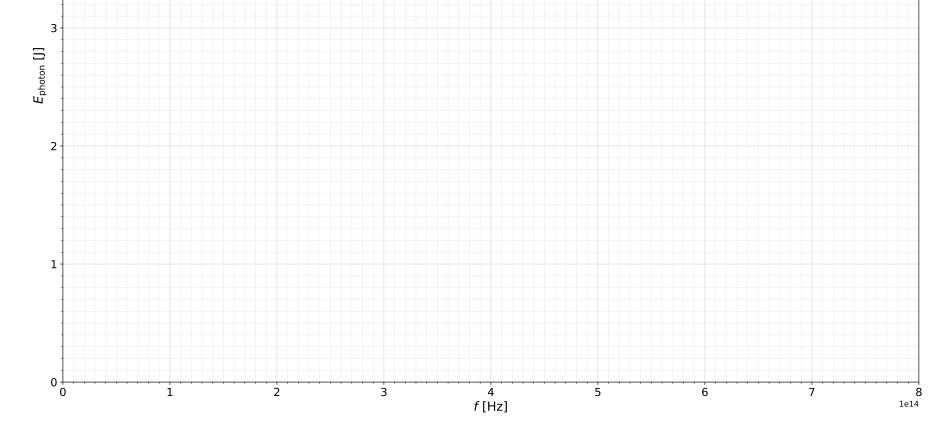
| λ [nm] | u_{λ} [nm] | f [10 ¹⁴ Hz] | $u_f [10^{14} \text{ Hz}]$ | $U_{threshold}$ [V] | $u_U[V]$ | $E_{photon}\left[\mathbf{J}\right]$ | u_E [J] |
|--------|--------------------|-------------------------|----------------------------|---------------------|----------|-------------------------------------|-----------|
| 405 | 7 | 7.40 | 0.13 | | | | |
| 463 | 8 | 6.48 | 0.12 | | | | |
| 469 | 10 | 6.39 | 0.14 | | | | |
| 504 | 18 | 5.95 | 0.22 | | | | |
| 558 | 11 | 5.37 | 0.11 | | | | |
| 575 | 8 | 5.21 | 0.08 | | | | |
| 586 | 8 | 5.12 | 0.07 | | | | |
| 591 | 7 | 5.07 | 0.07 | | | | |
| 595 | 8 | 5.03 | 0.07 | | | | |
| 630 | 5 | 4.76 | 0.04 | | | | |
| 631 | 8 | 4.75 | 0.07 | | | | |
| 655 | 9 | 4.58 | 0.07 | | | | |





1e-19

5 -



Photon energy as a function of the light frequency





