

1 Messwerte und Auswertung

Die Messdaten befinden sich in Tabelle 1. Die Ergebnisse des Fits an die Funktion

$$U(t) = a \sin(bt + c) + d \quad (1)$$

sind

$$a = (1.05 \pm 0.07) \text{ kV} \quad (2)$$

$$b = (0.98 \pm 0.04) \text{ kHz} \quad (3)$$

$$c = 0.05 \pm 0.14 \quad (4)$$

$$d = (-0.02 \pm 0.05) \text{ kV}. \quad (5)$$

Die Messdaten und das Ergebnis des Fits sind in Abbildung 1 geplottet.

Tabelle 1: Messdaten.

| t / ms | U / kV | t / ms | U / kV |
|-----------------|------------------|-----------------|------------------|
| 0.000 | -0.16 ± 0.41 | 3.267 | -0.21 ± 0.29 |
| 0.126 | -0.12 ± 0.36 | 3.393 | -0.21 ± 0.40 |
| 0.251 | 0.50 ± 0.42 | 3.519 | -1.02 ± 0.33 |
| 0.377 | 0.88 ± 0.50 | 3.644 | -0.56 ± 0.35 |
| 0.503 | 0.81 ± 0.35 | 3.770 | -0.47 ± 0.33 |
| 0.628 | 0.29 ± 0.35 | 3.896 | 0.10 ± 0.53 |
| 0.754 | 0.53 ± 0.50 | 4.021 | -0.96 ± 0.37 |
| 0.880 | 0.91 ± 0.43 | 4.147 | -1.09 ± 0.30 |
| 1.005 | 1.17 ± 0.33 | 4.273 | -1.12 ± 0.43 |
| 1.131 | 0.71 ± 0.41 | 4.398 | -0.69 ± 0.29 |
| 1.257 | 0.89 ± 0.34 | 4.524 | -0.86 ± 0.38 |
| 1.382 | 0.61 ± 0.34 | 4.650 | -1.13 ± 0.25 |
| 1.508 | 0.54 ± 0.39 | 4.775 | -0.85 ± 0.28 |
| 1.634 | 1.20 ± 0.25 | 4.901 | -0.95 ± 0.38 |
| 1.759 | 1.34 ± 0.26 | 5.027 | -0.54 ± 0.43 |
| 1.885 | 0.93 ± 0.33 | 5.152 | -1.17 ± 0.38 |
| 2.011 | 1.21 ± 0.30 | 5.278 | -0.96 ± 0.36 |
| 2.136 | 0.99 ± 0.39 | 5.404 | -0.91 ± 0.35 |
| 2.262 | 0.57 ± 0.31 | 5.529 | -1.09 ± 0.27 |
| 2.388 | 0.78 ± 0.28 | 5.655 | -0.49 ± 0.32 |
| 2.513 | 1.35 ± 0.49 | 5.781 | -0.39 ± 0.34 |
| 2.639 | 0.47 ± 0.35 | 5.906 | -0.37 ± 0.45 |
| 2.765 | 0.95 ± 0.37 | 6.032 | -0.34 ± 0.39 |
| 2.890 | -0.48 ± 0.28 | 6.158 | -0.49 ± 0.26 |
| 3.016 | 0.40 ± 0.33 | 6.283 | -0.17 ± 0.39 |

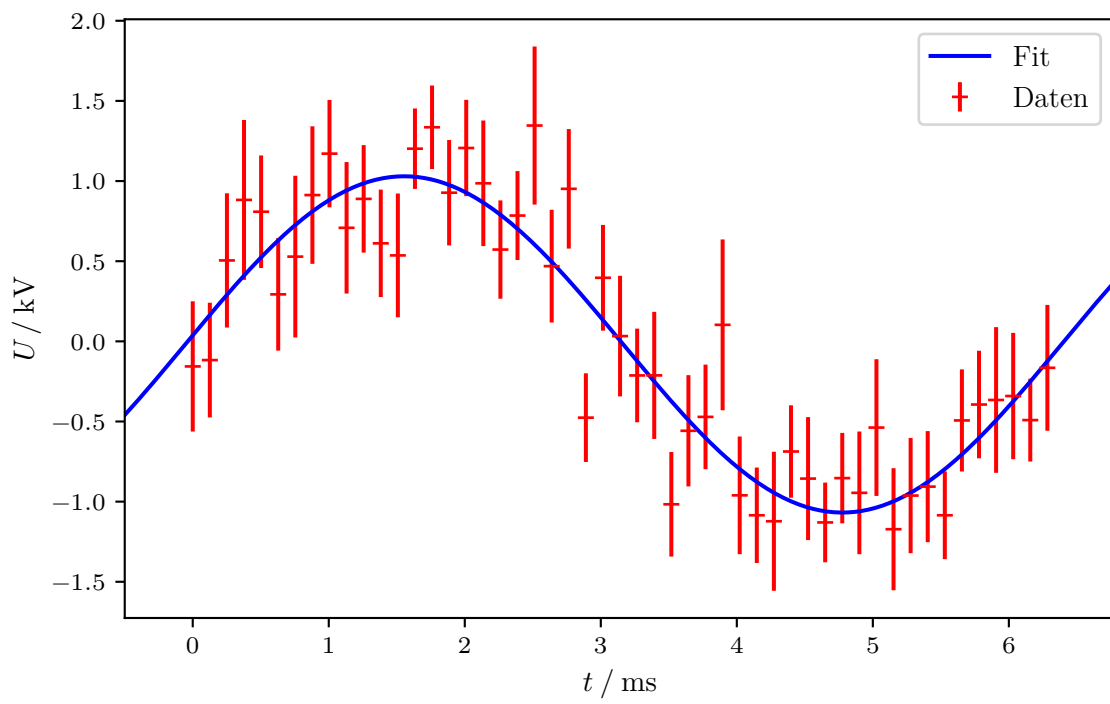


Abbildung 1: Messdaten und Fitergebnis.