

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

$$a = (1.98 \pm 0.07) \text{ kV} \quad (2)$$

$$b = (1.526 \pm 0.021) \text{ kHz} \quad (3)$$

$$c = (0.71 \pm 0.08) \quad (4)$$

$$d = (0.44 \pm 0.05) \text{ kV}. \quad (5)$$

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 | 2.16 ± 0.39 | 3.267 | -0.56 ± 0.41 |
| 0.126 | 1.72 ± 0.30 | 3.393 | -0.05 ± 0.40 |
| 0.251 | 2.20 ± 0.43 | 3.519 | -0.06 ± 0.40 |
| 0.377 | 2.24 ± 0.44 | 3.644 | 0.62 ± 0.40 |
| 0.503 | 2.34 ± 0.25 | 3.770 | 0.44 ± 0.56 |
| 0.628 | 2.40 ± 0.28 | 3.896 | 1.05 ± 0.34 |
| 0.754 | 2.95 ± 0.38 | 4.021 | 1.39 ± 0.33 |
| 0.880 | 1.92 ± 0.35 | 4.147 | 1.45 ± 0.31 |
| 1.005 | 2.36 ± 0.37 | 4.273 | 2.28 ± 0.42 |
| 1.131 | 1.20 ± 0.31 | 4.398 | 2.07 ± 0.46 |
| 1.257 | 1.26 ± 0.44 | 4.524 | 2.43 ± 0.36 |
| 1.382 | 1.13 ± 0.43 | 4.650 | 2.64 ± 0.31 |
| 1.508 | 0.91 ± 0.37 | 4.775 | 2.63 ± 0.31 |
| 1.634 | 0.64 ± 0.46 | 4.901 | 2.70 ± 0.42 |
| 1.759 | 0.26 ± 0.40 | 5.027 | 2.24 ± 0.43 |
| 1.885 | -0.52 ± 0.31 | 5.152 | 1.91 ± 0.41 |
| 2.011 | -0.91 ± 0.40 | 5.278 | 1.80 ± 0.32 |
| 2.136 | -0.74 ± 0.30 | 5.404 | 0.87 ± 0.39 |
| 2.262 | -1.31 ± 0.44 | 5.529 | 0.63 ± 0.38 |
| 2.388 | -1.85 ± 0.36 | 5.655 | 0.30 ± 0.38 |
| 2.513 | -1.88 ± 0.35 | 5.781 | 0.00 ± 0.44 |
| 2.639 | -1.79 ± 0.32 | 5.906 | 0.22 ± 0.38 |
| 2.765 | -1.22 ± 0.47 | 6.032 | -0.68 ± 0.42 |
| 2.890 | -1.28 ± 0.36 | 6.158 | -0.77 ± 0.37 |
| 3.016 | -0.92 ± 0.34 | 6.283 | -0.41 ± 0.39 |

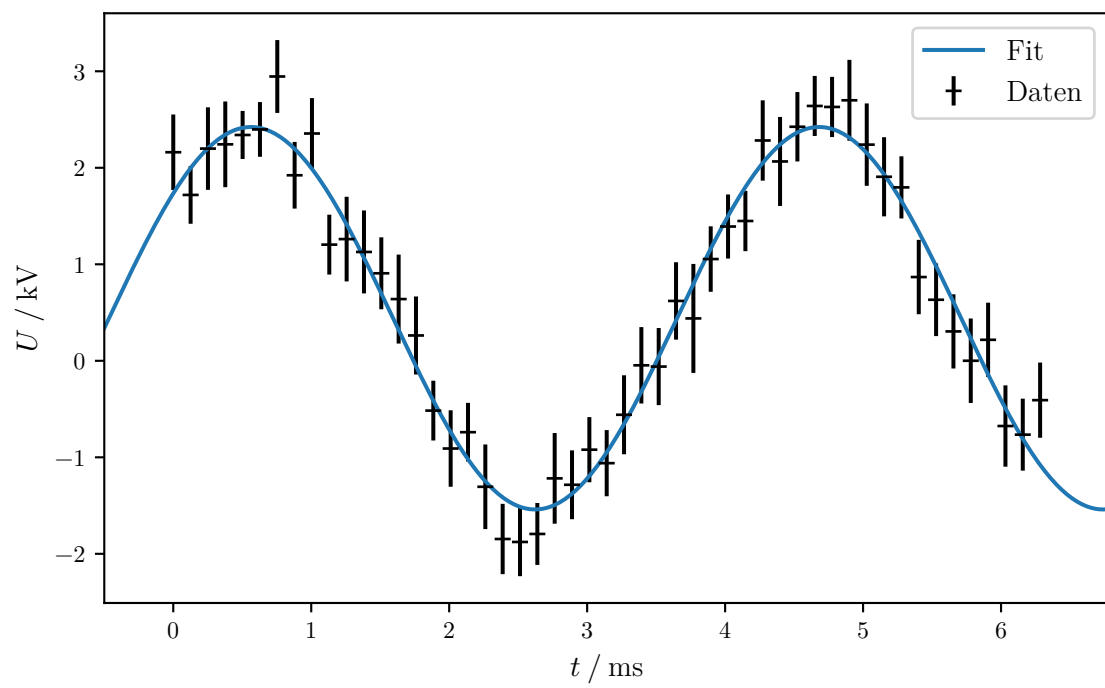


Abbildung 1: Messdaten und Fitergebnis.