

Table 1: Ordinary and Cubic Zeeman Effects

| B-Field [T] | $m_s = \downarrow m_I = \downarrow$ | $m_s = \uparrow m_I = \downarrow$ | $m_s = \downarrow m_I = \uparrow$ | $m_s = \uparrow m_I = \uparrow$ |
|-------------|-------------------------------------|-----------------------------------|-----------------------------------|---------------------------------|
| 1.45 | -0.5000030808532355 | -0.4999969119989301 | -0.5000030880010699 | -0.4999969191467644 |
| | -0.5000030808532355 | -0.4999969119989301 | -0.5000030880010699 | -0.4999969191467644 |
| 5.70 | -0.5000121109403054 | -0.4999878609613113 | -0.5000121390386887 | -0.4999878890596947 |
| | -0.5000121109403054 | -0.4999878609613113 | -0.5000121390386887 | -0.4999878890596947 |
| 11.7 | -0.5000248592985215 | -0.4999750830258496 | -0.5000249169741504 | -0.4999751407014785 |
| | -0.5000248592985215 | -0.4999750830258496 | -0.5000249169741504 | -0.4999751407014785 |
| 45.5 | -0.5000966750498057 | -0.4999031006560818 | -0.5000968993439182 | -0.4999033249501942 |
| | -0.5000966750498057 | -0.4999031006560818 | -0.5000968993439182 | -0.4999033249501942 |

Table 2: Ratio of Higher Order to Ordinary Zeeman Effect

| B-Field [T] | Aligned | Anti-aligned |
|-------------|-----------------------------|----------------------------|
| 1.45 | $-9.898580 \times 10^{-12}$ | 9.898580×10^{-12} |
| 5.70 | $-1.529630 \times 10^{-10}$ | 1.529630×10^{-10} |
| 11.7 | $-6.444787 \times 10^{-10}$ | 6.444787×10^{-10} |
| 45.5 | -9.746747×10^{-9} | 9.746747×10^{-9} |