

$$\text{x}_1 := 4.7 \qquad \text{y}_1 := 5.09 \qquad \text{z}_1 := 0.774 \qquad \text{x}_0 := 0$$

$$\text{x}_2 := 1.579 \qquad \text{y}_2 := 0.858 \qquad \text{z}_2 := 0.78 \qquad \text{y}_0 := 0$$

$$\text{x}_3 := 9 \qquad \text{y}_3 := 3.476 \qquad \text{z}_3 := 1.557 \qquad \text{z}_0 := 0$$

$$\textcolor{green}{\mathbb{N}} := 2$$

$$\text{QA}_1 := \left(\text{x}_1 \quad \text{y}_1 \quad \text{z}_1 \right)^{\text{T}} \qquad \text{R}_1 := \left\{ \begin{array}{ll} 3.190 & \text{if } \text{N} = 1 \\ 5.45 & \text{if } \text{N} = 2 \end{array} \right.$$

$$\text{QA}_2 := \left(\text{x}_2 \quad \text{y}_2 \quad \text{z}_2 \right)^{\text{T}} \qquad \text{R}_2 := \left\{ \begin{array}{ll} 2.423 & \text{if } \text{N} = 1 \\ 9.99 & \text{if } \text{N} = 2 \end{array} \right.$$

$$\text{QA}_3 := \left(\text{x}_3 \quad \text{y}_3 \quad \text{z}_3 \right)^{\text{T}} \qquad \text{R}_3 := \left\{ \begin{array}{ll} 6.232 & \text{if } \text{N} = 1 \\ 2.473 & \text{if } \text{N} = 2 \end{array} \right.$$

$$\text{Q}_0 := \left(\text{x}_0 \quad \text{y}_0 \quad \text{z}_0 \right)^{\text{T}} \qquad \textcolor{green}{\mathbb{R}} := \left(\text{R}_1 \quad \text{R}_2 \quad \text{R}_3 \right)^{\text{T}}$$

$$\text{R}_{11}(\text{x},\text{y},\text{z}) := \sqrt{\left(\text{x}_1 - \text{x}\right)^2 + \left(\text{y}_1 - \text{y}\right)^2 + \left(\text{z}_1 - \text{z}\right)^2}$$

$$\text{R}_{22}(\text{x},\text{y},\text{z}) := \sqrt{\left(\text{x}_2 - \text{x}\right)^2 + \left(\text{y}_2 - \text{y}\right)^2 + \left(\text{z}_2 - \text{z}\right)^2}$$

$$\text{R}_{33}(\text{x},\text{y},\text{z}) := \sqrt{\left(\text{x}_3 - \text{x}\right)^2 + \left(\text{y}_3 - \text{y}\right)^2 + \left(\text{z}_3 - \text{z}\right)^2}$$

$$\text{f}(\text{x},\text{y},\text{z}) := \begin{pmatrix} \text{R}_{11}(\text{x},\text{y},\text{z}) \\ \text{R}_{22}(\text{x},\text{y},\text{z}) \\ \text{R}_{33}(\text{x},\text{y},\text{z}) \end{pmatrix}$$

$$\textcolor{green}{\mathbb{H}}(\text{x},\text{y},\text{z}) := \begin{pmatrix} \frac{\text{d}}{\text{d}\text{x}}\text{R}_{11}(\text{x},\text{y},\text{z}) & \frac{\text{d}}{\text{d}\text{y}}\text{R}_{11}(\text{x},\text{y},\text{z}) & \frac{\text{d}}{\text{d}\text{z}}\text{R}_{11}(\text{x},\text{y},\text{z}) \\ \frac{\text{d}}{\text{d}\text{x}}\text{R}_{22}(\text{x},\text{y},\text{z}) & \frac{\text{d}}{\text{d}\text{y}}\text{R}_{22}(\text{x},\text{y},\text{z}) & \frac{\text{d}}{\text{d}\text{z}}\text{R}_{22}(\text{x},\text{y},\text{z}) \\ \frac{\text{d}}{\text{d}\text{x}}\text{R}_{33}(\text{x},\text{y},\text{z}) & \frac{\text{d}}{\text{d}\text{y}}\text{R}_{33}(\text{x},\text{y},\text{z}) & \frac{\text{d}}{\text{d}\text{z}}\text{R}_{33}(\text{x},\text{y},\text{z}) \end{pmatrix}$$

$$\text{Q}_0 = \begin{pmatrix} 0 \\ 0 \\ 0 \end{pmatrix}$$

$$\text{Q}_1 := \text{Q}_0 + \left(\text{H}\big(\text{Q}_{0_0},\text{Q}_{0_1},\text{Q}_{0_2}\big)^{\text{T}} \cdot \text{H}\big(\text{Q}_{0_0},\text{Q}_{0_1},\text{Q}_{0_2}\big) \right)^{-1} \cdot \text{H}\big(\text{Q}_{0_0},\text{Q}_{0_1},\text{Q}_{0_2}\big)^{\text{T}} \cdot \left(\text{R} - \text{f}\big(\text{Q}_{0_0},\text{Q}_{0_1},\text{Q}_{0_2}\big) \right) = \begin{pmatrix} 20.208 \\ -8.752 \\ -51.451 \end{pmatrix}$$

$$\text{Q}_2 := \text{Q}_1 + \left(\text{H}\big(\text{Q}_{1_0},\text{Q}_{1_1},\text{Q}_{1_2}\big)^{\text{T}} \cdot \text{H}\big(\text{Q}_{1_0},\text{Q}_{1_1},\text{Q}_{1_2}\big) \right)^{-1} \cdot \text{H}\big(\text{Q}_{1_0},\text{Q}_{1_1},\text{Q}_{1_2}\big)^{\text{T}} \cdot \left(\text{R} - \text{f}\big(\text{Q}_{1_0},\text{Q}_{1_1},\text{Q}_{1_2}\big) \right) = \begin{pmatrix} 47.186 \\ 30.022 \\ 0.916 \end{pmatrix}$$

$$Q_3 := Q_2 + \left(H(Q_{2_0}, Q_{2_1}, Q_{2_2})^T \cdot H(Q_{2_0}, Q_{2_1}, Q_{2_2}) \right)^{-1} \cdot H(Q_{2_0}, Q_{2_1}, Q_{2_2})^T \cdot (R - f(Q_{2_0}, Q_{2_1}, Q_{2_2})) = \begin{pmatrix} 14.406 \\ -0.549 \\ -22.514 \end{pmatrix}$$

$$Q_4 := Q_3 + \left(H(Q_{3_0}, Q_{3_1}, Q_{3_2})^T \cdot H(Q_{3_0}, Q_{3_1}, Q_{3_2}) \right)^{-1} \cdot H(Q_{3_0}, Q_{3_1}, Q_{3_2})^T \cdot (R - f(Q_{3_0}, Q_{3_1}, Q_{3_2})) = \begin{pmatrix} 23.447 \\ 12.746 \\ 0.683 \end{pmatrix}$$

$$Q_5 := Q_4 + \left(H(Q_{4_0}, Q_{4_1}, Q_{4_2})^T \cdot H(Q_{4_0}, Q_{4_1}, Q_{4_2}) \right)^{-1} \cdot H(Q_{4_0}, Q_{4_1}, Q_{4_2})^T \cdot (R - f(Q_{4_0}, Q_{4_1}, Q_{4_2})) = \begin{pmatrix} 10.382 \\ 5.558 \\ -2.152 \end{pmatrix}$$

$$Q_6 := Q_5 + \left(H(Q_{5_0}, Q_{5_1}, Q_{5_2})^T \cdot H(Q_{5_0}, Q_{5_1}, Q_{5_2}) \right)^{-1} \cdot H(Q_{5_0}, Q_{5_1}, Q_{5_2})^T \cdot (R - f(Q_{5_0}, Q_{5_1}, Q_{5_2})) = \begin{pmatrix} 10.645 \\ 5.809 \\ 0.498 \end{pmatrix}$$

$$Q_7 := Q_6 + \left(H(Q_{6_0}, Q_{6_1}, Q_{6_2})^T \cdot H(Q_{6_0}, Q_{6_1}, Q_{6_2}) \right)^{-1} \cdot H(Q_{6_0}, Q_{6_1}, Q_{6_2})^T \cdot (R - f(Q_{6_0}, Q_{6_1}, Q_{6_2})) = \begin{pmatrix} 10.129 \\ 6.124 \\ 2.034 \end{pmatrix}$$

$$Q_8 := Q_7 + \left(H(Q_{7_0}, Q_{7_1}, Q_{7_2})^T \cdot H(Q_{7_0}, Q_{7_1}, Q_{7_2}) \right)^{-1} \cdot H(Q_{7_0}, Q_{7_1}, Q_{7_2})^T \cdot (R - f(Q_{7_0}, Q_{7_1}, Q_{7_2})) = \begin{pmatrix} 10.432 \\ 5.881 \\ -0.053 \end{pmatrix}$$

$$Q_9 := Q_8 + \left(H(Q_{8_0}, Q_{8_1}, Q_{8_2})^T \cdot H(Q_{8_0}, Q_{8_1}, Q_{8_2}) \right)^{-1} \cdot H(Q_{8_0}, Q_{8_1}, Q_{8_2})^T \cdot (R - f(Q_{8_0}, Q_{8_1}, Q_{8_2})) = \begin{pmatrix} 10.235 \\ 6.037 \\ 1.52 \end{pmatrix}$$

$$Q_{10} := Q_9 + \left(H(Q_{9_0}, Q_{9_1}, Q_{9_2})^T \cdot H(Q_{9_0}, Q_{9_1}, Q_{9_2}) \right)^{-1} \cdot H(Q_{9_0}, Q_{9_1}, Q_{9_2})^T \cdot (R - f(Q_{9_0}, Q_{9_1}, Q_{9_2})) = \begin{pmatrix} 12.688 \\ 4.194 \\ -15.958 \end{pmatrix}$$

$$Q_{11} := Q_{10} + \left(H(Q_{10_0}, Q_{10_1}, Q_{10_2})^T \cdot H(Q_{10_0}, Q_{10_1}, Q_{10_2}) \right)^{-1} \cdot H(Q_{10_0}, Q_{10_1}, Q_{10_2})^T \cdot (R - f(Q_{10_0}, Q_{10_1}, Q_{10_2})) = \begin{pmatrix} 18.526 \\ 7.508 \\ 1.199 \end{pmatrix}$$

$$Q_{12} := Q_{11} + \left(H(Q_{11_0}, Q_{11_1}, Q_{11_2})^T \cdot H(Q_{11_0}, Q_{11_1}, Q_{11_2}) \right)^{-1} \cdot H(Q_{11_0}, Q_{11_1}, Q_{11_2})^T \cdot (R - f(Q_{11_0}, Q_{11_1}, Q_{11_2})) = \begin{pmatrix} 10.051 \\ 6.892 \\ -3.492 \end{pmatrix}$$

$$Q_{13} := Q_{12} + \left(H(Q_{12_0}, Q_{12_1}, Q_{12_2})^T \cdot H(Q_{12_0}, Q_{12_1}, Q_{12_2}) \right)^{-1} \cdot H(Q_{12_0}, Q_{12_1}, Q_{12_2})^T \cdot (R - f(Q_{12_0}, Q_{12_1}, Q_{12_2})) = \begin{pmatrix} 11.426 \\ 5.271 \\ 0.246 \end{pmatrix}$$

$$Q_{14} := Q_{13} + \left(H(Q_{13_0}, Q_{13_1}, Q_{13_2})^T \cdot H(Q_{13_0}, Q_{13_1}, Q_{13_2}) \right)^{-1} \cdot H(Q_{13_0}, Q_{13_1}, Q_{13_2})^T \cdot (R - f(Q_{13_0}, Q_{13_1}, Q_{13_2})) = \begin{pmatrix} 10.176 \\ 6.189 \\ 1.24 \end{pmatrix}$$

$$Q_{15} := Q_{14} + \left(H(Q_{14_0}, Q_{14_1}, Q_{14_2})^T \cdot H(Q_{14_0}, Q_{14_1}, Q_{14_2}) \right)^{-1} \cdot H(Q_{14_0}, Q_{14_1}, Q_{14_2})^T \cdot (R - f(Q_{14_0}, Q_{14_1}, Q_{14_2})) = \begin{pmatrix} 9.458 \\ 6.606 \\ 6.839 \end{pmatrix}$$

$$Q_{16} := Q_{15} + \left(H(Q_{15_0}, Q_{15_1}, Q_{15_2})^T \cdot H(Q_{15_0}, Q_{15_1}, Q_{15_2}) \right)^{-1} \cdot H(Q_{15_0}, Q_{15_1}, Q_{15_2})^T \cdot (R - f(Q_{15_0}, Q_{15_1}, Q_{15_2})) = \begin{pmatrix} 10.845 \\ 5.997 \\ 2.786 \end{pmatrix}$$

$$Q_{17} := Q_{16} + \left(H(Q_{16_0}, Q_{16_1}, Q_{16_2})^T \cdot H(Q_{16_0}, Q_{16_1}, Q_{16_2}) \right)^{-1} \cdot H(Q_{16_0}, Q_{16_1}, Q_{16_2})^T \cdot (R - f(Q_{16_0}, Q_{16_1}, Q_{16_2})) = \begin{pmatrix} 10.236 \\ 6.086 \\ 1.103 \end{pmatrix}$$

$$Q_{18} := Q_{17} + \left(H(Q_{17_0}, Q_{17_1}, Q_{17_2})^T \cdot H(Q_{17_0}, Q_{17_1}, Q_{17_2}) \right)^{-1} \cdot H(Q_{17_0}, Q_{17_1}, Q_{17_2})^T \cdot (R - f(Q_{17_0}, Q_{17_1}, Q_{17_2})) = \begin{pmatrix} 9.811 \\ 6.343 \\ 4.321 \end{pmatrix}$$

$$Q_{19} := Q_{18} + \left(H(Q_{18_0}, Q_{18_1}, Q_{18_2})^T \cdot H(Q_{18_0}, Q_{18_1}, Q_{18_2}) \right)^{-1} \cdot H(Q_{18_0}, Q_{18_1}, Q_{18_2})^T \cdot (R - f(Q_{18_0}, Q_{18_1}, Q_{18_2})) = \begin{pmatrix} 10.281 \\ 6.055 \\ 2.143 \end{pmatrix}$$

$$Q_{20} := Q_{19} + \left(H(Q_{19_0}, Q_{19_1}, Q_{19_2})^T \cdot H(Q_{19_0}, Q_{19_1}, Q_{19_2}) \right)^{-1} \cdot H(Q_{19_0}, Q_{19_1}, Q_{19_2})^T \cdot (R - f(Q_{19_0}, Q_{19_1}, Q_{19_2})) = \begin{pmatrix} 10.394 \\ 5.915 \\ 0.176 \end{pmatrix}$$

$$Q_{21} := Q_{20} + \left(H(Q_{20_0}, Q_{20_1}, Q_{20_2})^T \cdot H(Q_{20_0}, Q_{20_1}, Q_{20_2}) \right)^{-1} \cdot H(Q_{20_0}, Q_{20_1}, Q_{20_2})^T \cdot (R - f(Q_{20_0}, Q_{20_1}, Q_{20_2})) = \begin{pmatrix} 10.196 \\ 6.062 \\ 1.726 \end{pmatrix}$$

$$Q_{22} := Q_{21} + \left(H(Q_{21_0}, Q_{21_1}, Q_{21_2})^T \cdot H(Q_{21_0}, Q_{21_1}, Q_{21_2}) \right)^{-1} \cdot H(Q_{21_0}, Q_{21_1}, Q_{21_2})^T \cdot (R - f(Q_{21_0}, Q_{21_1}, Q_{21_2})) = \begin{pmatrix} 10.74 \\ 5.65 \\ -2.251 \end{pmatrix}$$

$$Q_{23} := Q_{22} + \left(H(Q_{22_0}, Q_{22_1}, Q_{22_2})^T \cdot H(Q_{22_0}, Q_{22_1}, Q_{22_2}) \right)^{-1} \cdot H(Q_{22_0}, Q_{22_1}, Q_{22_2})^T \cdot (R - f(Q_{22_0}, Q_{22_1}, Q_{22_2})) = \begin{pmatrix} 10.661 \\ 5.844 \\ 0.605 \end{pmatrix}$$

$$Q_{24} := Q_{23} + \left(H(Q_{23_0}, Q_{23_1}, Q_{23_2})^T \cdot H(Q_{23_0}, Q_{23_1}, Q_{23_2}) \right)^{-1} \cdot H(Q_{23_0}, Q_{23_1}, Q_{23_2})^T \cdot (R - f(Q_{23_0}, Q_{23_1}, Q_{23_2})) = \begin{pmatrix} 10.103 \\ 6.143 \\ 2.205 \end{pmatrix}$$

$$Q_{25} := Q_{24} + \left(H(Q_{24_0}, Q_{24_1}, Q_{24_2})^T \cdot H(Q_{24_0}, Q_{24_1}, Q_{24_2}) \right)^{-1} \cdot H(Q_{24_0}, Q_{24_1}, Q_{24_2})^T \cdot (R - f(Q_{24_0}, Q_{24_1}, Q_{24_2})) = \begin{pmatrix} 10.367 \\ 5.93 \\ 0.421 \end{pmatrix}$$