

Linear fit Camera cam = 1

Data from proposal 8982.
Target NGC1850

$$M = \begin{pmatrix} -0.03003 \\ -0.03079 \\ 0.03083 \\ -0.03019 \end{pmatrix} \quad \begin{array}{l} a10 \\ a11 \\ b10 \\ b11 \end{array}$$

Extracted parameters

$$xscale := \sqrt{(M_2)^2 + (M_4)^2} \quad xscale = 0.04312$$

$$yscale := \sqrt{(M_1)^2 + (M_3)^2} \quad yscale = 0.04304$$

$$\beta_x := \text{angle}(M_4, M_2) \quad \beta_x = 225.564\text{deg} \quad \beta_x - 2 \cdot \pi = -134.436\text{deg}$$

$$\beta_y := \text{angle}(M_3, M_1) \quad \beta_y = 315.756\text{deg} \quad \beta_y - 2 \cdot \pi = -44.244\text{deg}$$

$$\beta_y - \beta_x = 90.192\text{deg}$$

Quadratic fit Camera c = "1"

$$M = \begin{pmatrix} -0.02997 \\ -0.03058 \\ -2.33361 \times 10^{-7} \\ 2.20324 \times 10^{-9} \\ -8.95984 \times 10^{-7} \\ 0.03089 \\ -0.03007 \\ -2.96246 \times 10^{-7} \\ 1.07246 \times 10^{-8} \\ -5.32685 \times 10^{-7} \end{pmatrix} \quad \begin{array}{l} a10 \\ a11 \\ a20 \\ a21 \\ a22 \\ b10 \\ b11 \\ b20 \\ b21 \\ b22 \end{array}$$

Extracted parameters

$$xscale := \sqrt{(M_2)^2 + (M_7)^2} \quad xscale = 0.042886$$

$$yscale := \sqrt{(M_1)^2 + (M_6)^2} \quad yscale = 0.043040$$

$$\beta_x := \text{angle}(M_6, M_1) \quad \beta_x = 315.87\text{deg}$$

$$\beta_y := \text{angle}(M_7, M_2) \quad \beta_y = 225.488\text{deg}$$

Linear fit Camera cam = 2

$$M = \begin{pmatrix} -0.05353 \\ -0.05348 \\ 0.05306 \\ -0.05383 \end{pmatrix} \quad \begin{matrix} a10 \\ a11 \\ b10 \\ b11 \end{matrix}$$

Extracted parameters

$$\begin{aligned} \text{xscale} &:= \sqrt{(M_2)^2 + (M_4)^2} & \text{xscale} &= 0.07588 \\ \text{yscale} &:= \sqrt{(M_1)^2 + (M_3)^2} & \text{yscale} &= 0.07537 \\ \beta_x &:= \text{angle}(M_4, M_2) & \beta_x &= 224.815\text{deg} & \beta_x - 2 \cdot \pi &= -135.185\text{deg} \\ \beta_y &:= \text{angle}(M_3, M_1) & \beta_y &= 314.747\text{deg} & \beta_y - 2 \cdot \pi &= -45.253\text{deg} \\ & & \beta_y - \beta_x &= 89.932\text{deg} \end{aligned}$$

Quadratic fit Camera cam = 2

$$M = \begin{pmatrix} -0.05371 \\ -0.05362 \\ 6.00480 \times 10^{-7} \\ 1.04885 \times 10^{-8} \\ 5.86256 \times 10^{-7} \\ 0.05295 \\ -0.05411 \\ 4.08142 \times 10^{-7} \\ -4.82528 \times 10^{-9} \\ 1.20380 \times 10^{-6} \end{pmatrix} \quad \begin{matrix} a10 \\ a11 \\ a20 \\ a21 \\ a22 \\ b10 \\ b11 \\ b20 \\ b21 \\ b22 \end{matrix}$$

Extracted parameters

$$\begin{aligned} \text{xscale} &:= \sqrt{(M_2)^2 + (M_7)^2} & \text{xscale} &= 0.076175 \\ \text{yscale} &:= \sqrt{(M_1)^2 + (M_6)^2} & \text{yscale} &= 0.075425 \\ \beta_x &:= \text{angle}(M_6, M_1) & \beta_x &= 314.591\text{deg} \\ \beta_y &:= \text{angle}(M_7, M_2) & \beta_y &= 224.74\text{deg} \end{aligned}$$

Linear fit Camera cam = 3

$$M = \begin{pmatrix} -0.14267 \\ -0.14378 \\ 0.14384 \\ -0.14347 \end{pmatrix} \begin{matrix} a10 \\ a11 \\ b10 \\ b11 \end{matrix}$$

Extracted parameters

$$xscale := \sqrt{(M_2)^2 + (M_4)^2} \quad xscale = 0.20312$$

$$yscale := \sqrt{(M_1)^2 + (M_3)^2} \quad yscale = 0.20259$$

$$\beta_x := \text{angle}(M_4, M_2) \quad \beta_x = 225.062\text{deg} \quad \beta_x - 2 \cdot \pi = -134.938\text{deg}$$

$$\beta_y := \text{angle}(M_3, M_1) \quad \beta_y = 315.234\text{deg} \quad \beta_y - 2 \cdot \pi = -44.766\text{deg}$$

$$\beta_y - \beta_x = 90.172\text{deg}$$

Quadratic fit Camera cam = 3

$$M = \begin{pmatrix} -0.14142 \\ -0.14366 \\ -4.65995 \times 10^{-6} \\ -4.35227 \times 10^{-8} \\ -5.32277 \times 10^{-7} \\ 0.14311 \\ -0.14286 \\ 2.67906 \times 10^{-6} \\ 3.26543 \times 10^{-8} \\ -2.50191 \times 10^{-6} \end{pmatrix} \begin{matrix} a10 \\ a11 \\ a20 \\ a21 \\ a22 \\ b10 \\ b11 \\ b20 \\ b21 \\ b22 \end{matrix}$$

Extracted parameters

$$xscale := \sqrt{(M_2)^2 + (M_7)^2} \quad xscale = 0.202599$$

$$yscale := \sqrt{(M_1)^2 + (M_6)^2} \quad yscale = 0.201198$$

$$\beta_x := \text{angle}(M_6, M_1) \quad \beta_x = 315.339\text{deg}$$

$$\beta_y := \text{angle}(M_7, M_2) \quad \beta_y = 225.159\text{deg}$$