

LGS WFS Unit

Anna Moore & Viswa Velur

Mechanisms and required accuracy

TOTAL COUNTS

| | LOCATION | TYPE | RANGE OF TRAVEL | MIN. STEP SIZE | TOTAL NUMBER | MECHANISMS | ENCODER COUNT | LIMIT SWITCH |
|---|-----------------------------------|----------------------|---|---|--------------|------------|-------------------|--------------|
| 1 | LGS CHANNEL (UNIT FOCUS) | ΔZ | ~ 10 mm | $10 \mu\text{m}$ | 9 | 53 | 106 53 | 106 |
| 2 | LGS CHANNEL (LENSLET XY STAGE) | $\Delta X, \Delta Y$ | $\Delta X \sim 10$ mm $\Delta Y \sim 1$ mm | $5 \mu\text{m}$ ($\frac{1}{10}$ th pix) $5 \mu\text{m}$ " | 18 | | | |
| 3 | LGS CHANNEL (DETECTOR FOCUS) | ΔZ | Few mm | 1 μm | 9 | | | |
| 4 | PICK-OFF $\theta 1$ mechanism | $\Delta \theta$ | 360° | $(0.2'' \equiv 145 \mu\text{m})$ in F/P $\approx 115''$ (180mm level cam) | 8 | | | |
| 5 | PICK-OFF $\theta 2$ mechanism | $\Delta \theta$ | 360° | $(0.2'' \equiv 145 \mu\text{m})$ FP $\approx 300''$ (70mm level cam) | 8 | | | |
| 6 | LGS WFS unit FOCUS | ΔZ | ~ 130 mm | ~ 0.5 mm (or more?) (this inaccuracy compensated by 1) | 1 | | | |