

GLAST Large Area Telescope:

Explanation of Personnel Access Platform Operations and Associated Operational Risk Mitigations

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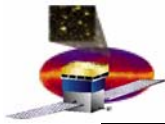
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LAT I&T MGSE Team

- Eric M. Gawehn - Dept. Mgr



- Bill Olson – Engineering



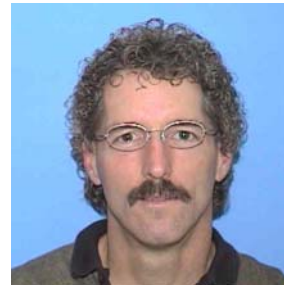
- Wing Ng – Design



- Reggie Rogers – Design & Manufacturing Process



- Steve Score – Design



- Patrick V. Williams - Design



LAT 4x4 Integration Stand, ISO View

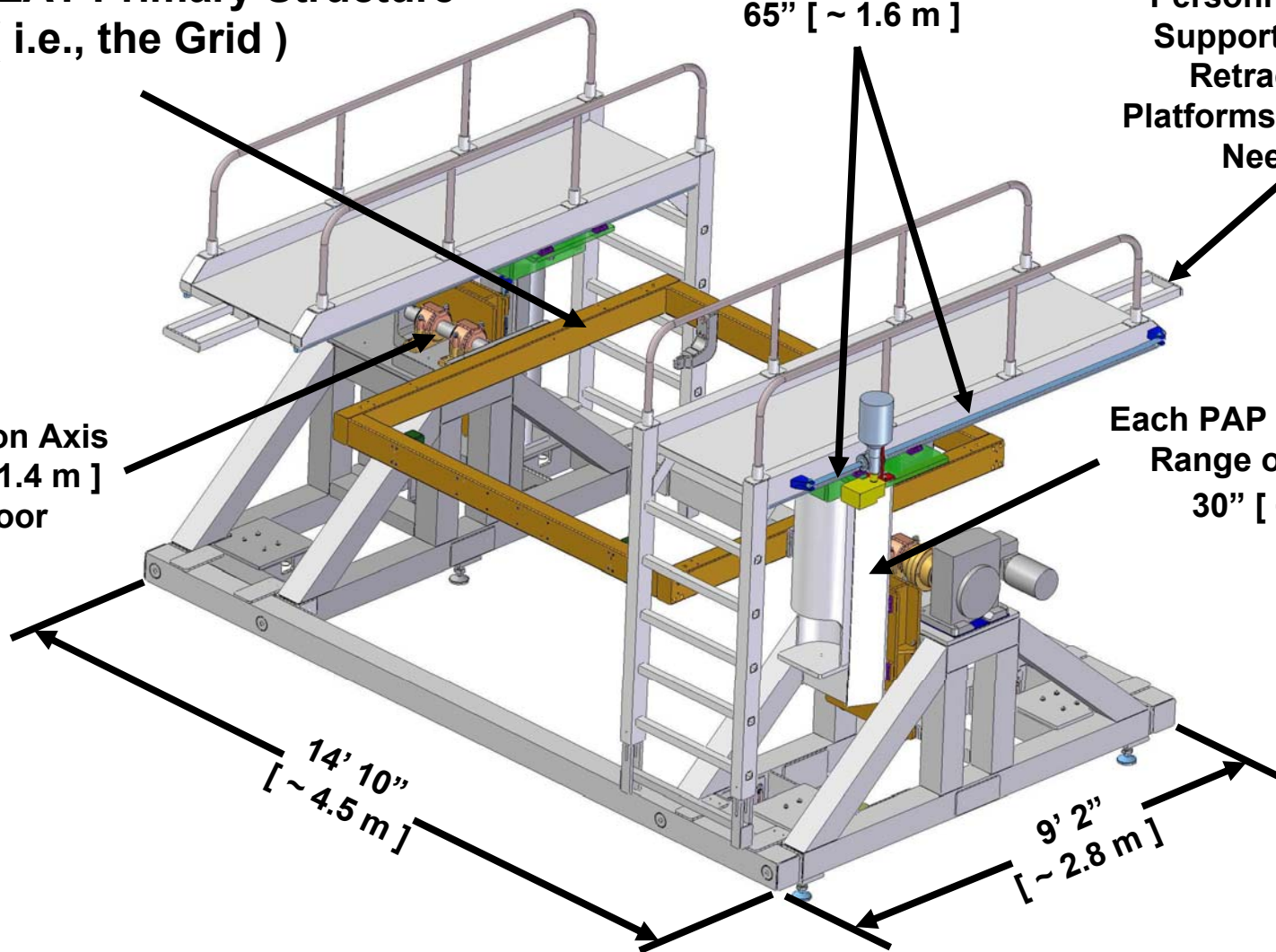
Grid Perimeter Ring Will Support LAT Primary Structure (i.e., the Grid)

Each PAP has a Horizontal Range of Motion of 65" [~ 1.6 m]

Personnel Chest Support Frames Retract into Platforms When Not Needed

LAT Rotation Axis is ~ 53" [~1.4 m] from Floor

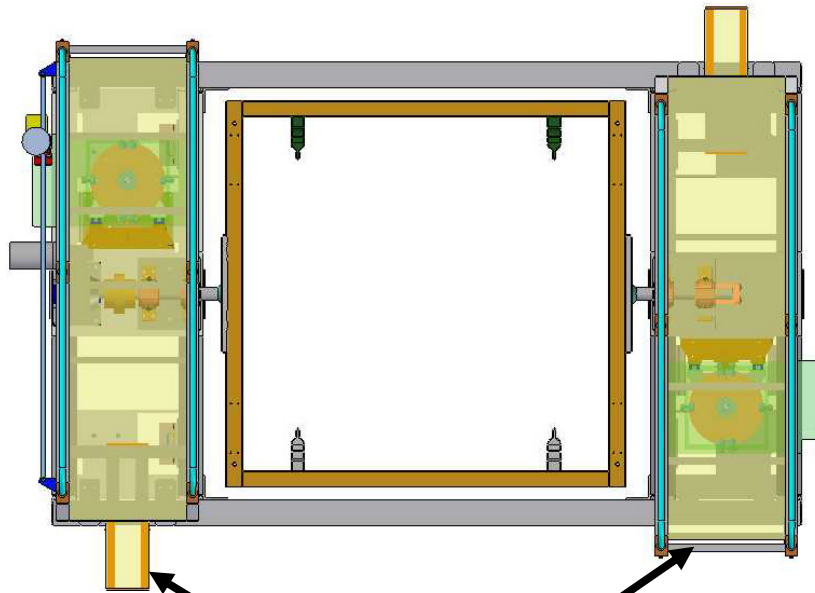
Each PAP has a Vertical Range of Motion of 30" [~ 0.8 m]



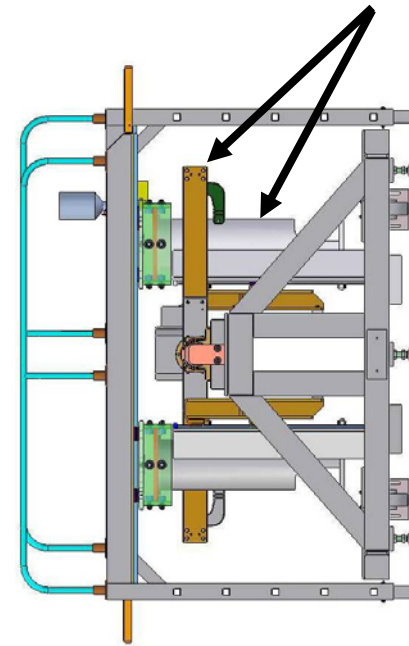
PAP Movement Sequence

Each PAP Motion is Operated “Individually”
by a Technician on the Ground. Two
“Spotters” Will Provide Feedback to PAP
“Driver” to Assist Impact Avoidance

Limit Switches prevent
power from being
supplied to PAP Drives
Unless LAT is Level
within $\pm 1^\circ$ (TBC)



PAPs Shown in Parked Position

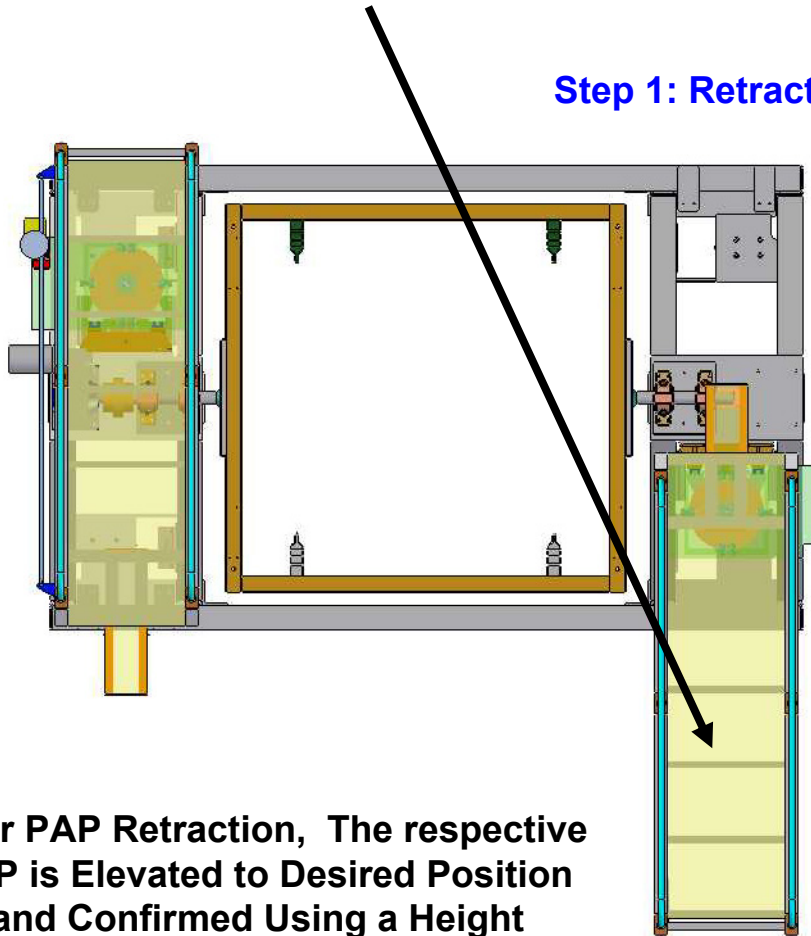


Only One Drive will Receive
Power at a Time

PAP Movement Sequence, Continued

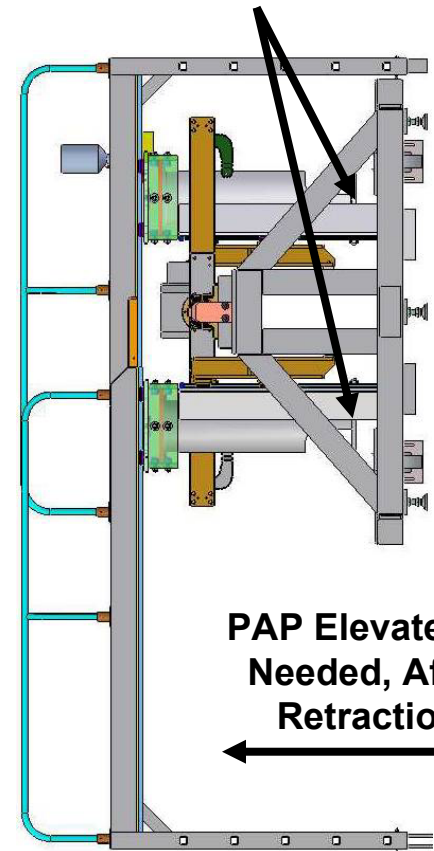
If LAT is Level, One PAP can be Retracted from Parked Position at a Time

Step 1: Retract a PAP



After PAP Retraction, The respective PAP is Elevated to Desired Position and Confirmed Using a Height Validation "Yard Stick"

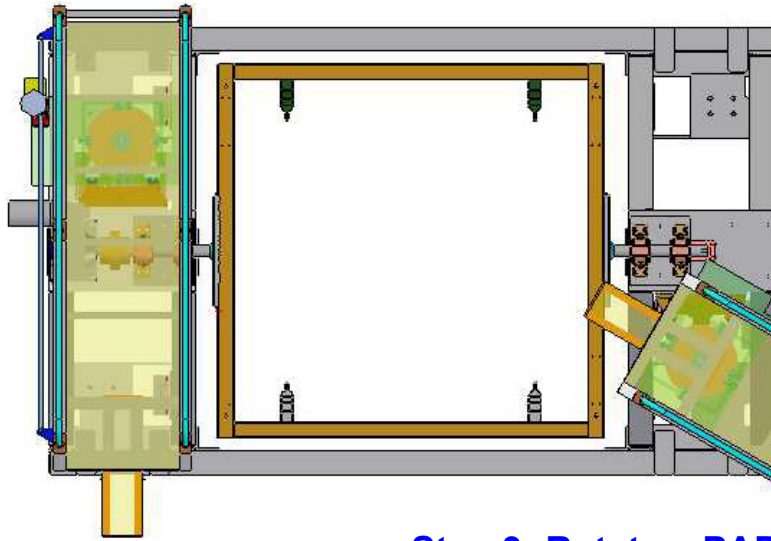
Hard Mechanical Stops will be Adjusted for CAL Access Operations



PAP Elevated, If Needed, After Retraction

Step 2: Elevate PAP to Work Height as Required

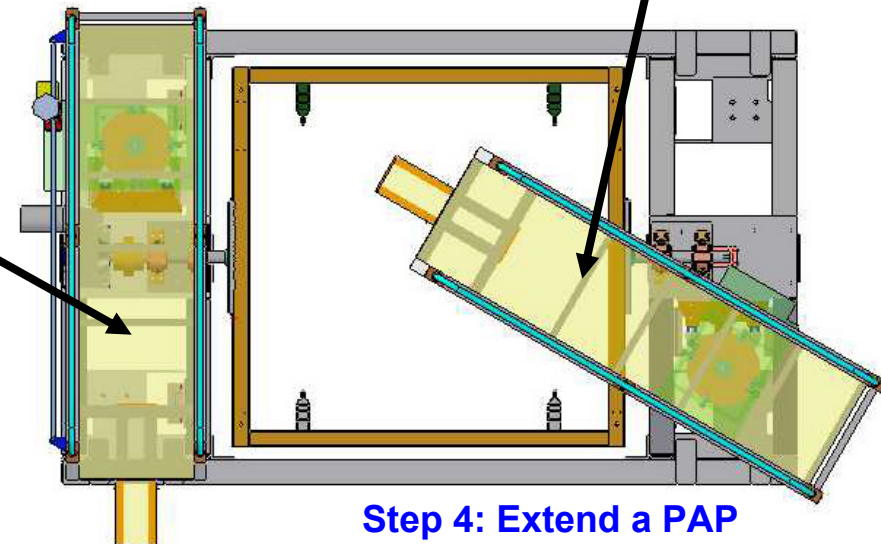
PAP Movement Sequence, Continued



Step 3: Rotate a PAP

After Correct PAP Height is Verified, the PAP is Rotated to Align with Desired Bay for Planned Operations

After PAP Rotation is Complete, PAP is Slowly Extended to Desired Bay

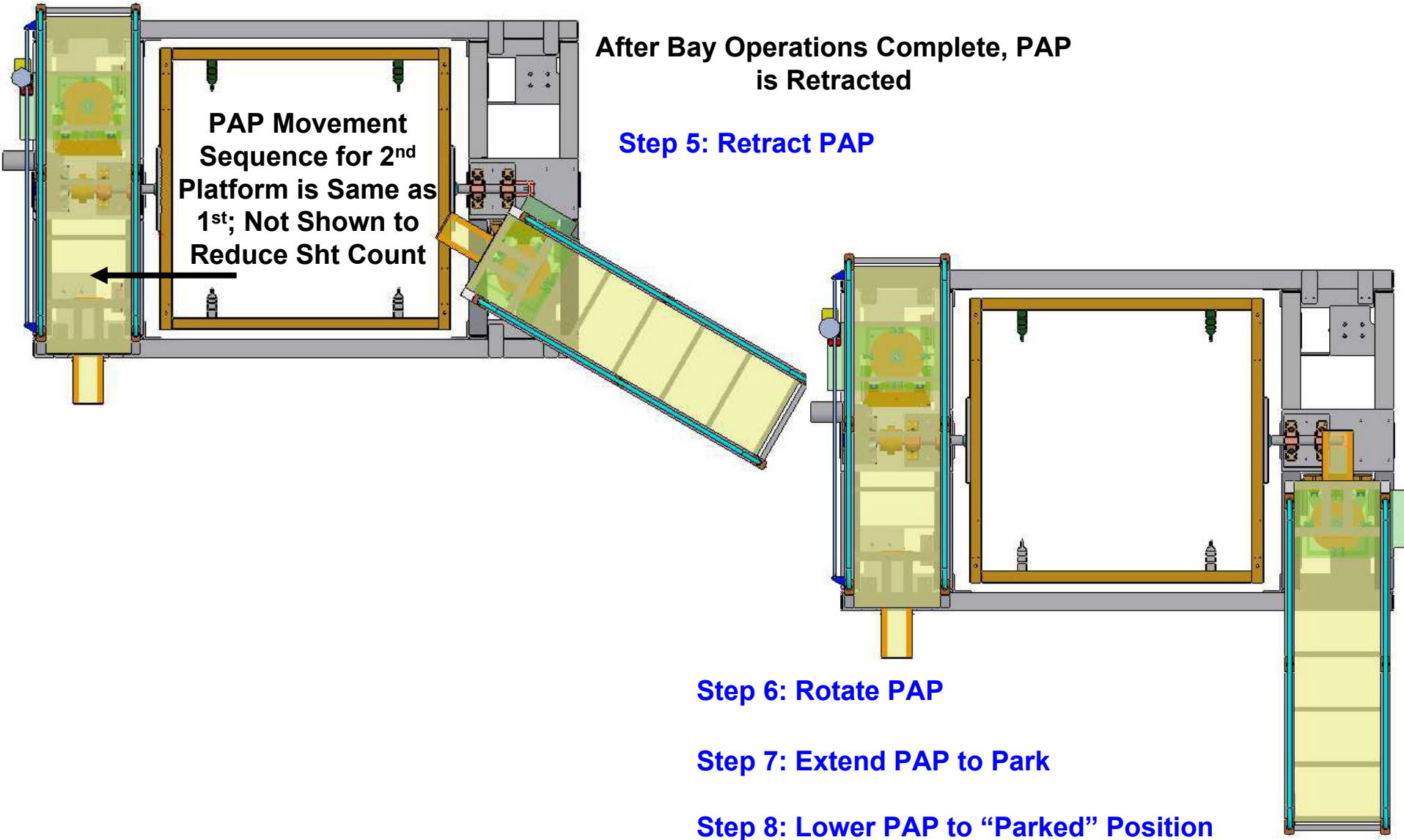


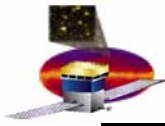
Step 4: Extend a PAP

Movement of 2nd PAP Occurs After Completion of 1st PAP, and in the Same Manner

Again, Power is Only Available to One Drive at a Time !

PAP Movement Sequence, Continued





For More Information About LAT MGSE

- **4x4 Integration Stand**
 - **LAT – TD – 03782, Entire**
 - **Appendix A**
 - Contingency Operations – CAL
 - Contingency Operations - TKR
 - Operations Planning History / Summary of Trades
- **All LAT MGSE, Go To:**
http://www-glast.slac.stanford.edu/IntegrationTest/MGSE/default_MGSE.htm