

| | Trip | FBD | Scale Readings & Average (kg) | $\sum \vec{F}_z = F_N - F_g$ (N) | a_z (m/s ²) | acceleration direction (↑ or ↓) | velocity direction (↑ or ↓) |
|-----------|-------|-----|-------------------------------|----------------------------------|---------------------------|---------------------------------|-----------------------------|
| Up Trip | Start | | | Bewkes +44.5 | +0.46 | ↑ | ↑ |
| | | | | Johnson +80 | +0.82 | | |
| | Stop | | | -824 | -8.4 | ↓ | ↑ |
| | | | | -24 | -0.25 | | |
| Down Trip | Start | | | -45 | -0.46 | ↓ | ↓ |
| | | | | -22 | -0.23 | | |
| | Stop | | | +89 | +0.91 | ↑ | ↓ |
| | | | | +78 | +0.80 | | |