Validation of OTI: Harmonic Oscillator acceleration profile orbit shapes vertical action J_z 15 350 10 250 250 200 5° 150 |vertical true 100 OTI inferred a_z OTI inferred particle J_z values uncertainty 50 -15one-to-one line true $a_z(z)$ true orbit -100100 200 250 300 350 vertical position, z [kpc] vertical velocity, v_z [km s⁻¹] inferred J_z [km kpc s⁻¹]