

c1

 $M_{tar} = 0.01M_{\oplus}$  $M_{tar} = 0.1M_{\oplus}$  $M_{tar} = 1.0M_{\oplus}$  $\gamma = 0.70$  $\gamma = 0.35$  $\gamma = 0.20$  $\gamma = 0.10$ 

$M_{tar}$ $\bar{\rho} = 3.47g/cm^3$ $\bar{h} = 6.90 * 10^6 cm$ 100104 particles  $M_{imp}$ $\bar{\rho} = 3.47g/cm^3$ $\bar{h} = 6.93 * 10^6 cm$ 70139 particles		$M_{tar}$ $\bar{\rho} = 3.47g/cm^3$ $\bar{h} = 6.90 * 10^6 cm$ 100104 particles  $M_{imp}$ $\bar{\rho} = 3.62g/cm^3$ $\bar{h} = 7.08 * 10^6 cm$ 19994 particles	
$M_{tar}$ $\bar{\rho} = 3.86g/cm^3$ $\bar{h} = 1.43 * 10^7 cm$ 100104 particles  $M_{imp}$ $\bar{\rho} = 3.81g/cm^3$ $\bar{h} = 1.45 * 10^7 cm$ 70139 particles	$M_{tar}$ $\bar{\rho} = 3.86g/cm^3$ $\bar{h} = 1.43 * 10^7 cm$ 100104 particles  $M_{imp}$ $\bar{\rho} = 3.76g/cm^3$ $\bar{h} = 1.47 * 10^7 cm$ 35102 particles	$M_{tar}$ $\bar{\rho} = 3.86g/cm^3$ $\bar{h} = 1.43 * 10^7 cm$ 100104 particles  $M_{imp}$ $\bar{\rho} = 3.78g/cm^3$ $\bar{h} = 1.50 * 10^7 cm$ 19994 particles	$M_{tar}$ $\bar{\rho} = 3.86g/cm^3$ $\bar{h} = 1.43 * 10^7 cm$ 100104 particles  $M_{imp}$ $\bar{\rho} = 3.85g/cm^3$ $\bar{h} = 1.52 * 10^7 cm$ 10049 particles
$M_{tar}$ $\bar{\rho} = 5.54g/cm^3$ $\bar{h} = 2.69 * 10^7 cm$ 100085 particles  $M_{imp}$ $\bar{\rho} = 5.20g/cm^3$ $\bar{h} = 2.77 * 10^7 cm$ 70124 particles		$M_{tar}$ $\bar{\rho} = 5.54g/cm^3$ $\bar{h} = 2.69 * 10^7 cm$ 100085 particles  $M_{imp}$ $\bar{\rho} = 4.34g/cm^3$ $\bar{h} = 3.04 * 10^7 cm$ 19994 particles	