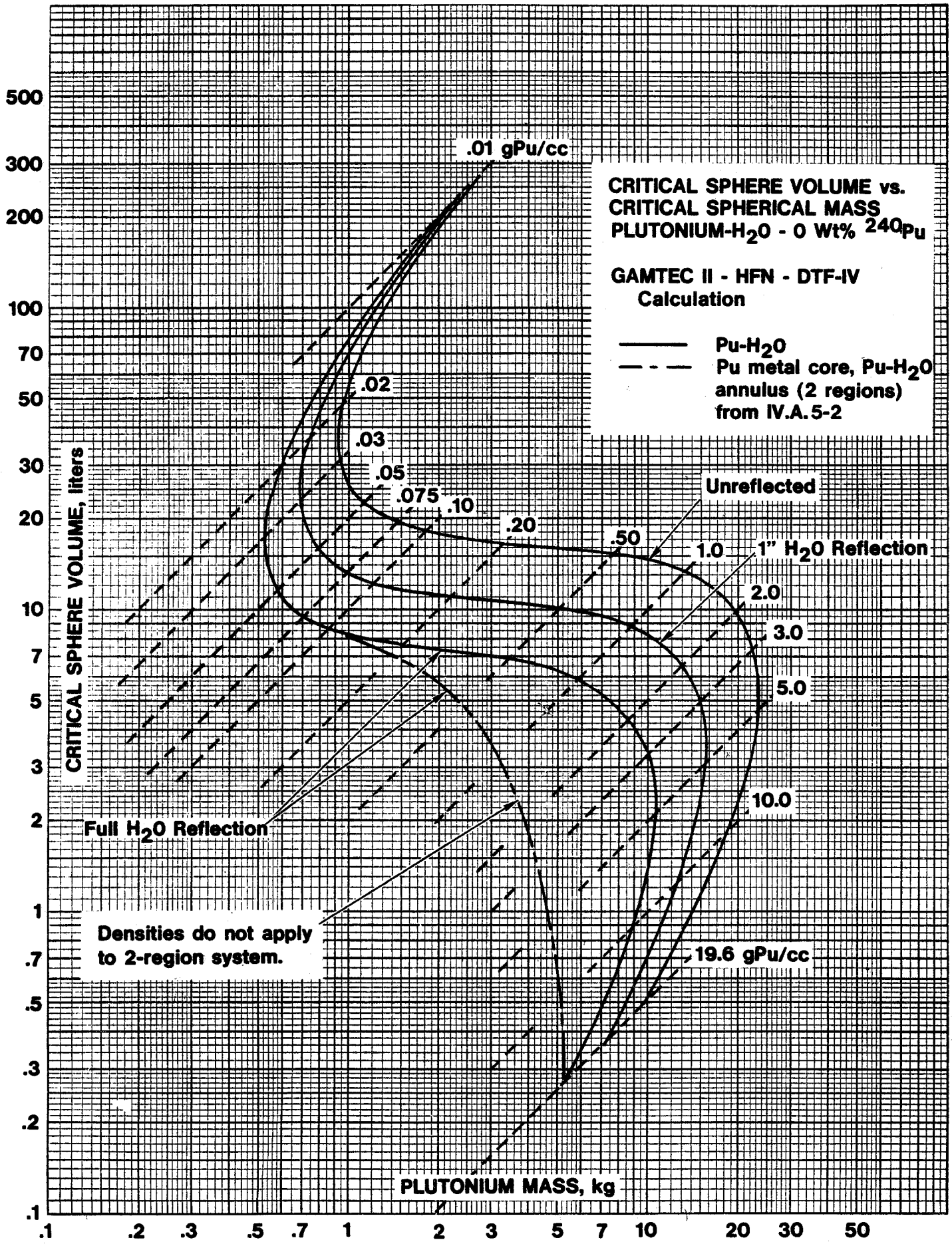
CRITICAL SPHERE VOLUME vs.
CRITICAL SPHERICAL MASS
PLUTONIUM-H_2O - 0 Wt% ^{240}Pu
GAMTEC II - HFN - DTF-IV
Calculation
Pu-H_2O
Pu metal core, Pu-H_2O annulus (2 regions) from IV.A.5-2
.01 gPu/cc
.02
.03
.05
.075
.10
.20
.50
1.0
2.0
3.0
5.0
10.0
19.6 gPu/cc
Unreflected
1" H_2O Reflection
Full H_2O Reflection
Densities do not apply to 2-region system.
CRITICAL SPHERE VOLUME, liters
PLUTONIUM MASS, kg
500
300
200
100
70
50
30
20
10
7
5
3
2
1
.7
.5
.3
.2
.1
.1
.2
.3
.5
.7
1
2
3
5
7
10
20
30
50