Step = 0

$\vec{r}_1^{\,0} = (0.75000000;\ 0.75000000;\ 0.50000000)$; $\vec{r}_2^{\,0} = (1.25000000;\ 0.75000000;\ 0.50000000)$;

$\vec{r}_{12}^{\,0} = (-0.50000000;\ 0.00000000;\ 0.00000000)$; $\vec{r}_{21}^{\,0} = (0.50000000;\ 0.00000000;\ 0.00000000)$;

$\left|\vec{r}_{12}^{\,0}\right| = 0.50000000$;

$U^0 = 111.54752063$;

$F_{12} = 5006.91772912$;

$\vec{F}_{12}{}^0 = (-5006.91772912;\ 0.00000000;\ 0.00000000)$;
$\vec{F}_{21}{}^0 = (5006.91772912;\ 0.00000000;\ 0.00000000)$;

$\vec{v}_1{}^0 = (vx_1; vy_1; vz_1) = (1.00000000;\ 1.00000000;\ 0.00000000)$;

$\vec{v}_2{}^0 = (vx_2; vy_2; vz_2) = (-1.00000000;\ 1.00000000;\ 0.00000000)$;

$E_{kin} = 398.01000000$

$E_{term} = 199.00500000$

$E_{pot} = -0.54622684$

$E_{int} = 198.45877316$

$E = 397.46377316$

$T = 48.04626134$

$P = 120.89453602$

Step = 1

$\vec{r}_1^{\,1} = (0.75194968;\ 0.75200000;\ 0.50000000)$; $\vec{r}_2^{\,1} = (1.24805032;\ 0.75200000;\ 0.50000000)$;

$\vec{r}_{12}^{\,1} = (-0.49610064;\ 0.00000000;\ 0.00000000)$; $\vec{r}_{21}^{\,1} = (0.49610064;\ 0.00000000;\ 0.00000000)$;

$\left|\vec{r}_{12}^{\,1}\right| = 0.49610064$;

$U^1 = 133.63179182$;

$F_{12} = 5941.47012343$;

$\vec{F}_{12}{}^1 = (-5941.47012343;\ 0.00000000;\ 0.00000000)$;
$\vec{F}_{21}{}^1 = (5941.47012343;\ 0.00000000;\ 0.00000000)$;

$\vec{v}_1{}^1 = (vx_1; vy_1; vz_1) = (0.94498436;\ 1.00000000;\ 0.00000000)$;

$\vec{v}_2{}^1 = (vx_2; vy_2; vz_2) = (-0.94498436;\ 1.00000000;\ 0.00000000)$;

$E_{kin} = 376.71555688$

$E_{term} = 177.71055688$

$E_{pot} = -0.56741003$

$E_{int} = 177.14314685$

$E = 376.14814685$

$T = 42.90509213$

$P = 137.62450995$

Step = 2

$\vec{r}_1^{\,3} = (0.75377994;\ 0.75400000;\ 0.50000000)$; $\vec{r}_2^{\,3} = (1.24622006;\ 0.75400000;\ 0.50000000)$;

$\vec{r}_{12}^{\,3} = (-0.49244013;\ 0.00000000;\ 0.00000000)$; $\vec{r}_{21}^{\,3} = (0.49244013;\ 0.00000000;\ 0.00000000)$;

$\left|\vec{r}_{12}^{\,3}\right| = 0.49244013$;

$U^3 = 158.24373608$;

$F_{12} = 6988.53430826$;

$\vec{F}_{12}{}^3 = (-6988.53430826;\ 0.00000000;\ 0.00000000)$;

$\vec{F}_{21}{}^3 = (6988.53430826;\ 0.00000000;\ 0.00000000)$;

$\vec{v}_1{}^3 = (vx_1; vy_1; vz_1) = (0.88001109;\ 1.00000000;\ 0.00000000)$;

$\vec{v}_2{}^3 = (vx_2; vy_2; vz_2) = (-0.88001109;\ 1.00000000;\ 0.00000000)$;

$E_{kin} = 353.11835760$

$E_{term} = 154.11335760$

$E_{pot} = -0.58800411$

$E_{int} = 153.52535349$

$E = 352.53035349$

$T = 37.20796290$

$P = 156.23589269$