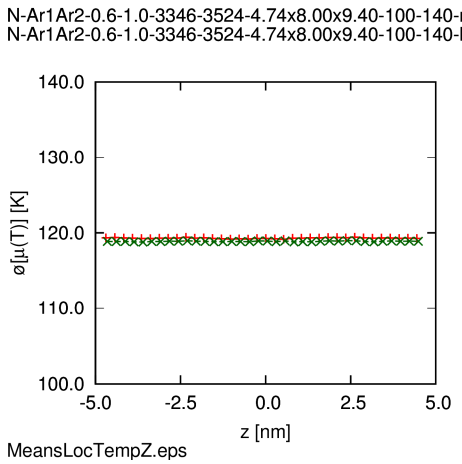
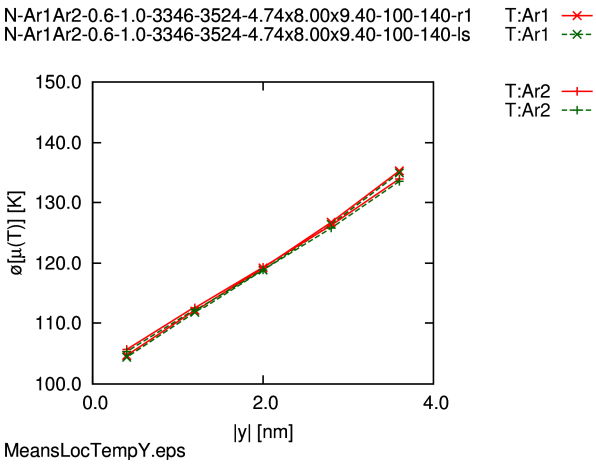
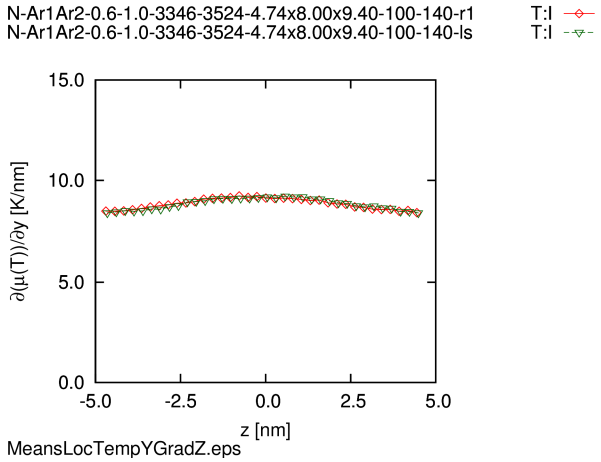


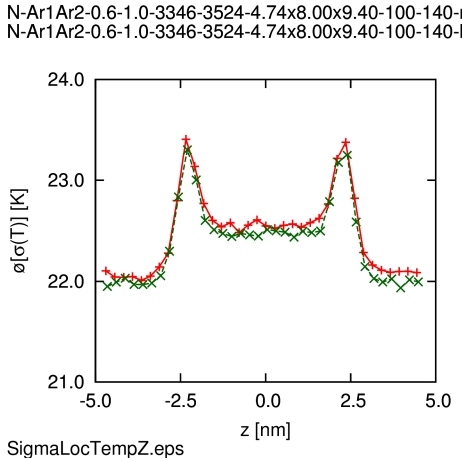
MeansLocTempZ.eps



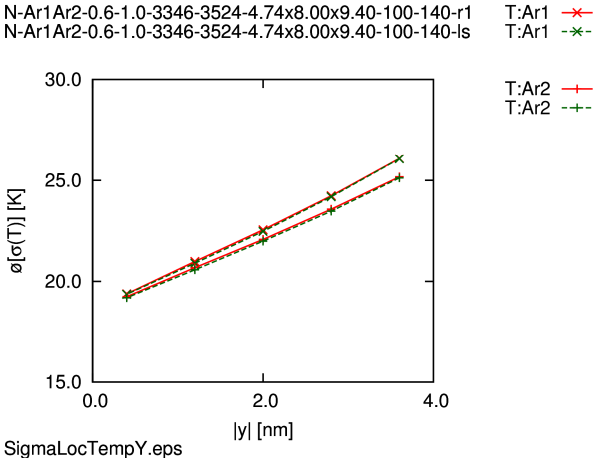
MeansLocTempY.eps



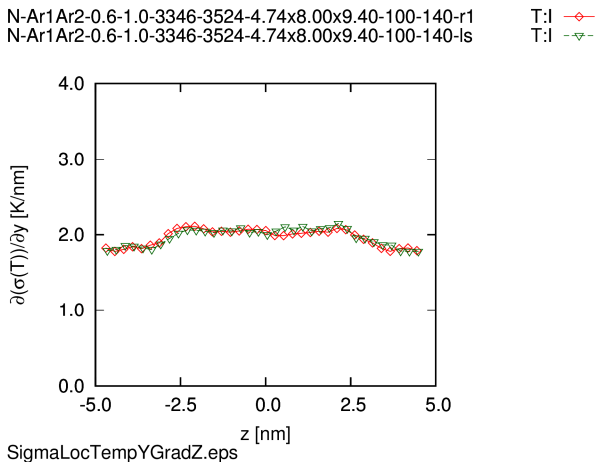
MeansLocTempYGradZ.eps



SigmaLocTempZ.eps

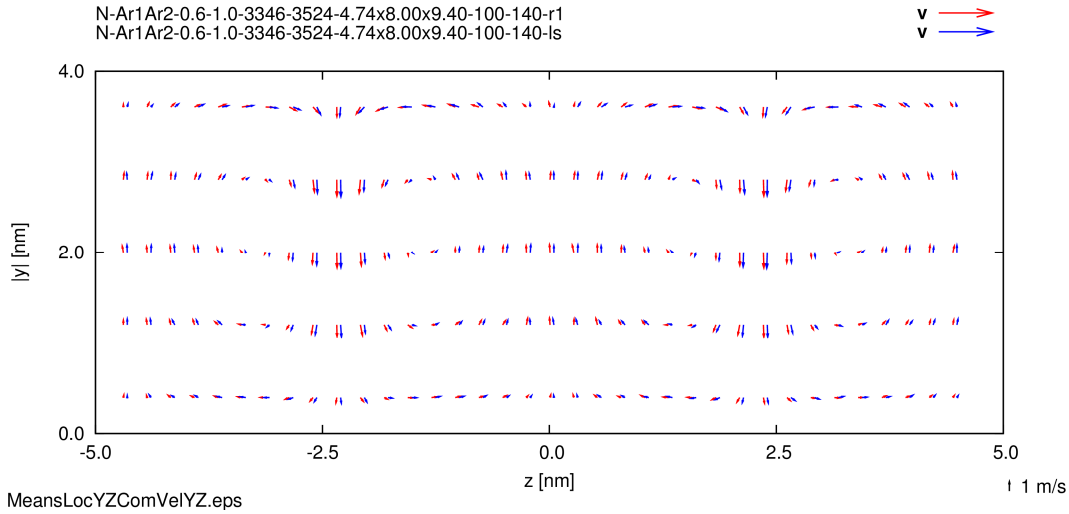


SigmaLocTempY.eps

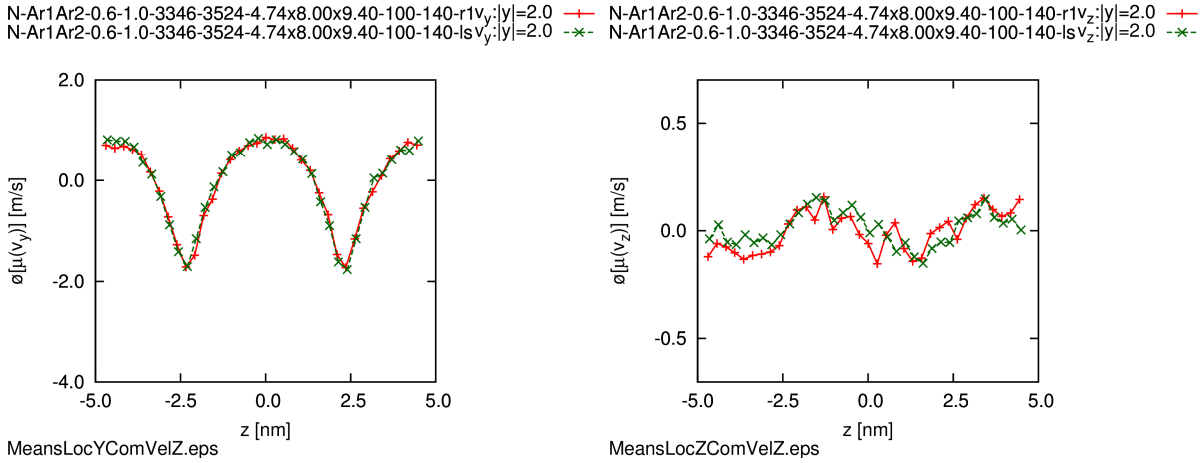


SigmaLocTempYGradZ.eps

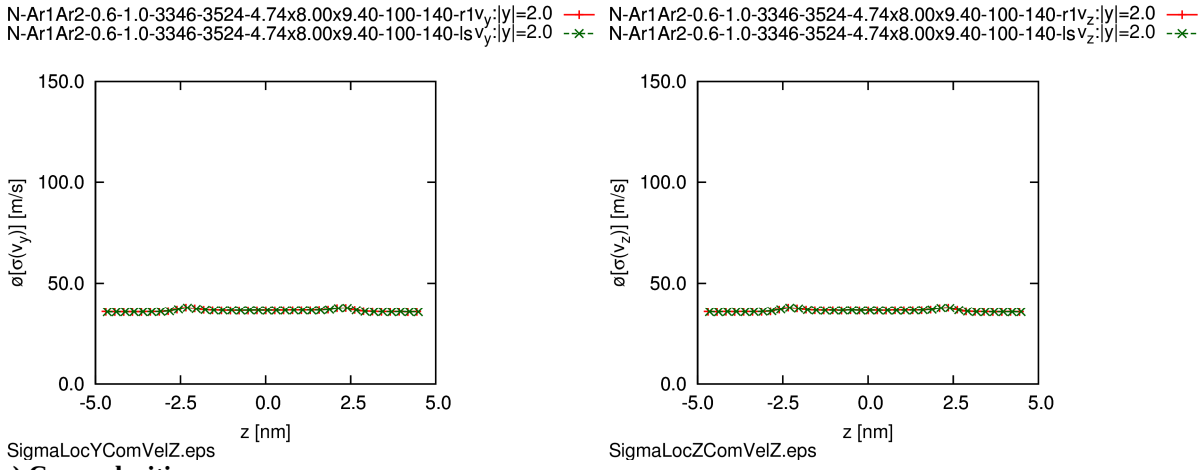
b) Temperatures



MeansLocYZComVelYZ.eps

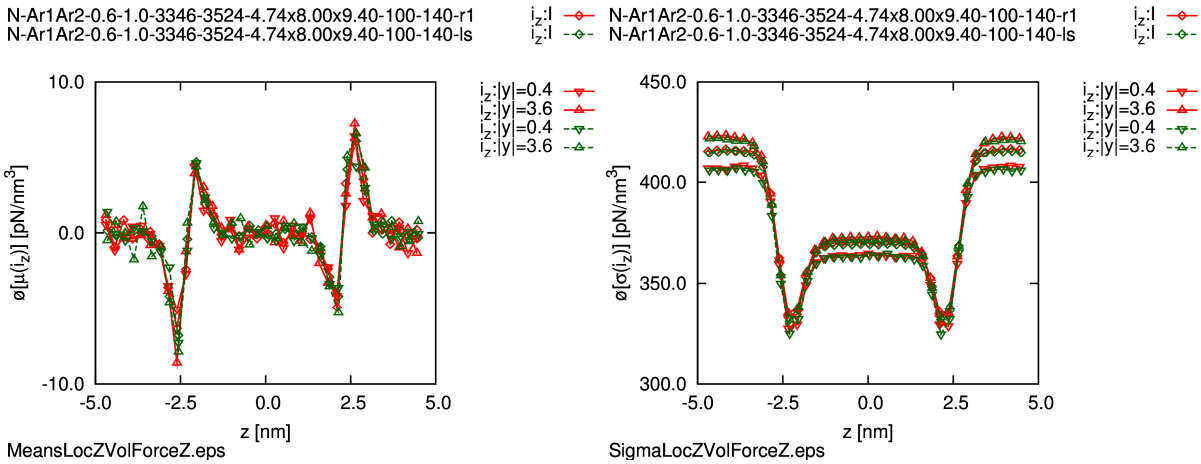


MeansLocYComVelZ.eps MeansLocZComVelZ.eps

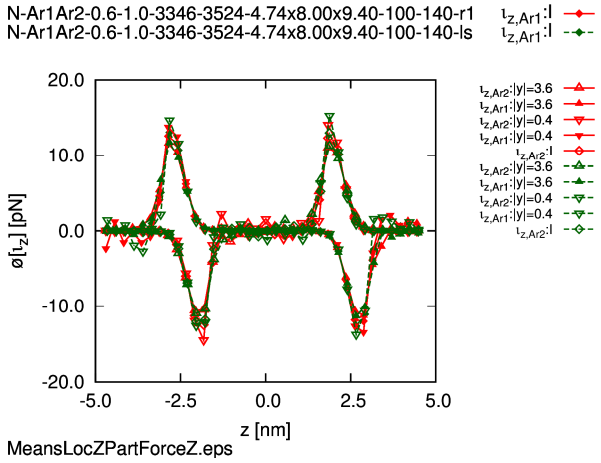


SigmaLocYComVelZ.eps SigmaLocZComVelZ.eps

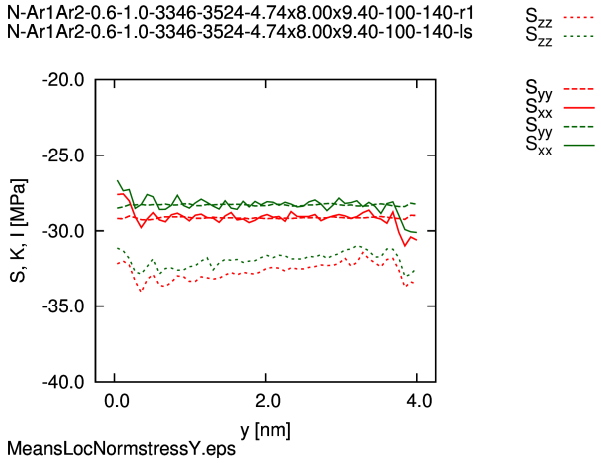
c) Com velocities



d) Volume forces

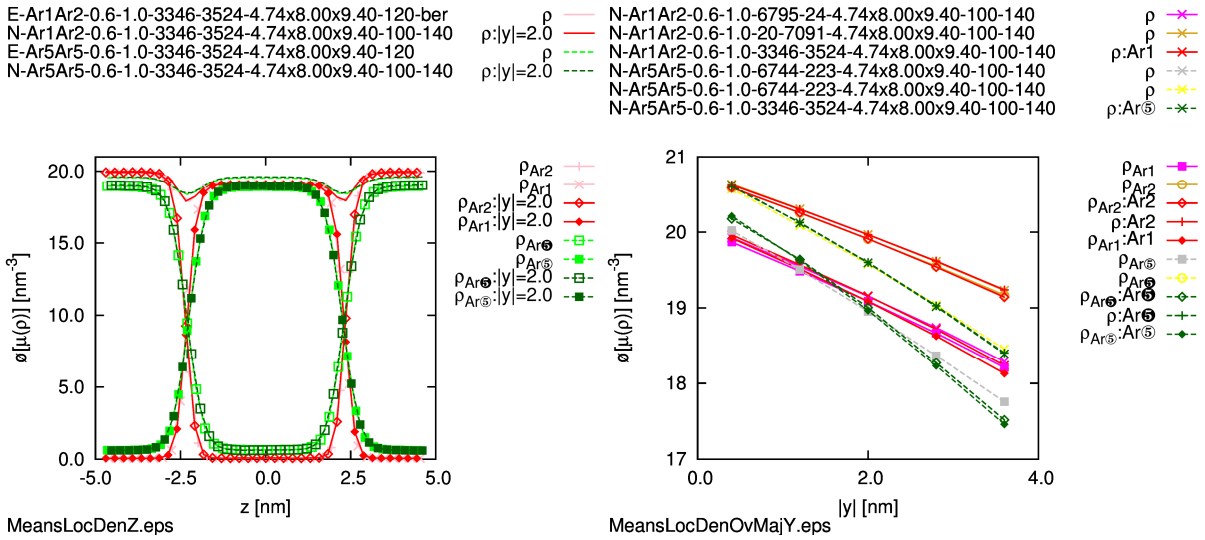


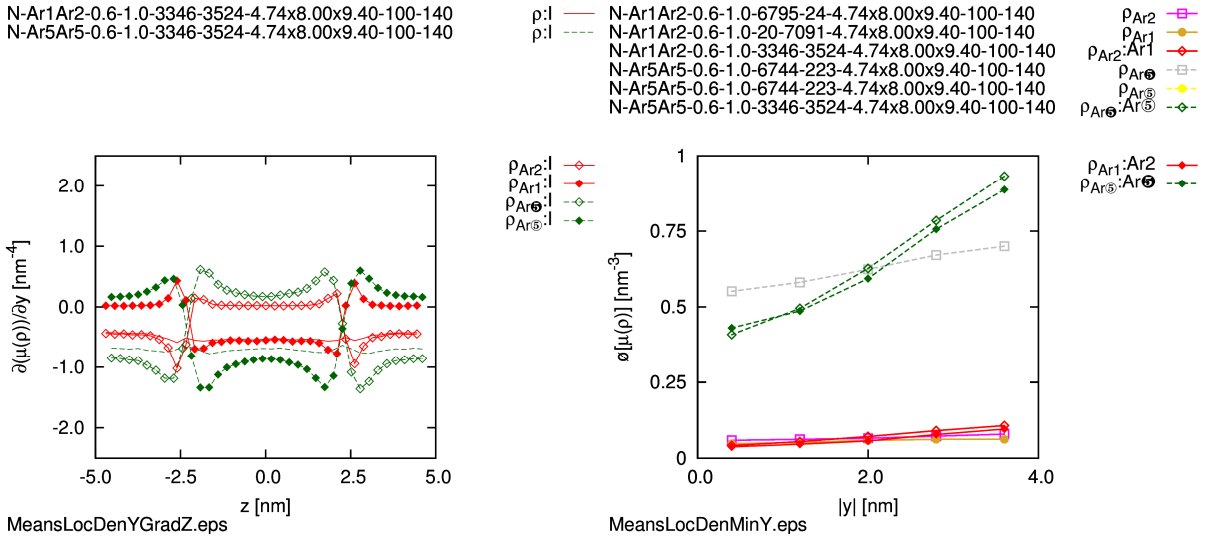
e) Particle forces

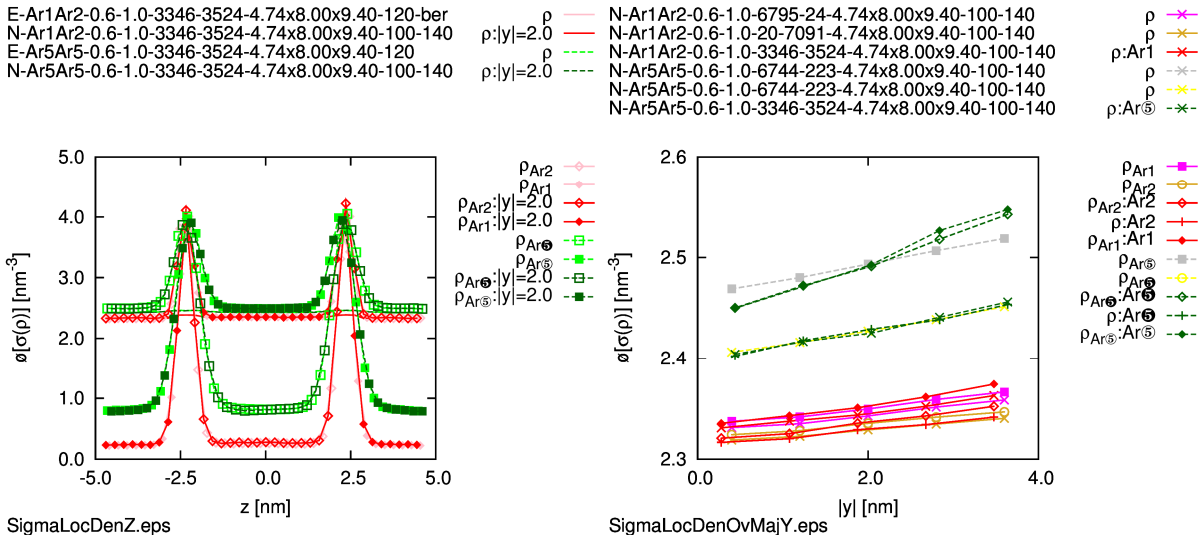


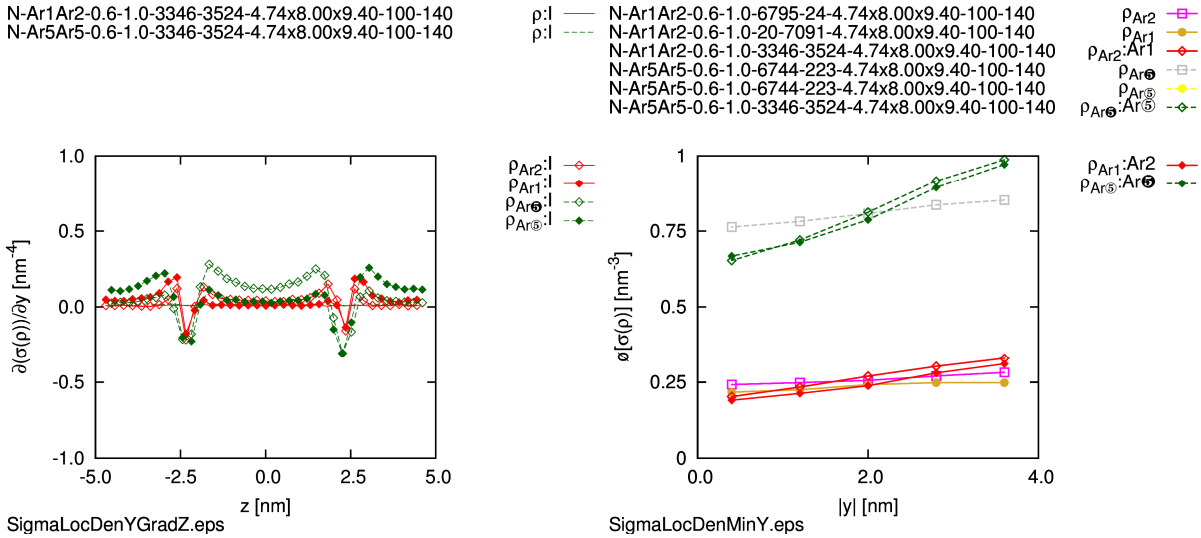
f) Normal stresses

Figure 41 Comparison of the summarised local observables in several heterophasic nonequilibrium interfacial systems with strict and loose thermostats N-Ar1Ar2-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140-r1 and N-Ar1Ar2-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140-loose; We include also their corresponding systems in the comparison.

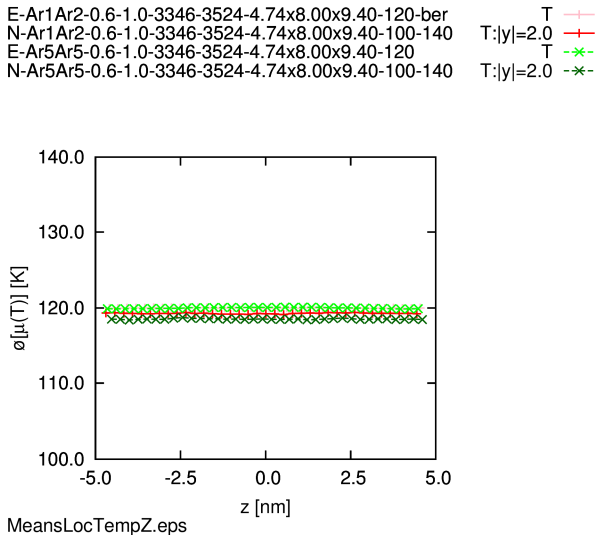

E-Ar1Ar2-0.6-1.0-3346-3524-4.74x8.00x9.40-120-ber ρ
N-Ar1Ar2-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140 ρ:|y|=2.0
E-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-120 ρ
N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140 ρ:|y|=2.0
ρAr2
ρAr1
ρAr2:|y|=2.0
ρAr1:|y|=2.0
ρAr⑥
ρAr⑤
ρAr⑥:|y|=2.0
ρAr⑤:|y|=2.0
ø[μ(ρ)] [nm-3]
z [nm]
MeansLocDenZ.eps
N-Ar1Ar2-0.6-1.0-6795-24-4.74x8.00x9.40-100-140 ρ
N-Ar1Ar2-0.6-1.0-20-7091-4.74x8.00x9.40-100-140 ρ
N-Ar1Ar2-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140 ρ:Ar1
N-Ar5Ar5-0.6-1.0-6744-223-4.74x8.00x9.40-100-140 ρ
N-Ar5Ar5-0.6-1.0-6744-223-4.74x8.00x9.40-100-140 ρ
N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140 ρ:Ar⑤
ρAr1
ρAr2
ρAr2:Ar2
ρ:Ar2
ρAr1:Ar1
ρAr⑤
ρAr⑥
ρAr⑥:Ar⑥
ρ:Ar⑥
ρAr⑤:Ar⑤
ø[μ(ρ)] [nm-3]
|y| [nm]
MeansLocDenOvMajY.eps


N-Ar1Ar2-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140 ρ:I
N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140 ρ:I
ρAr2:I
ρAr1:I
ρAr⑥:I
ρAr⑤:I
∂(μ(ρ))/∂y [nm-4]
z [nm]
MeansLocDenYGradZ.eps
N-Ar1Ar2-0.6-1.0-6795-24-4.74x8.00x9.40-100-140
N-Ar1Ar2-0.6-1.0-20-7091-4.74x8.00x9.40-100-140
N-Ar1Ar2-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140
N-Ar5Ar5-0.6-1.0-6744-223-4.74x8.00x9.40-100-140
N-Ar5Ar5-0.6-1.0-6744-223-4.74x8.00x9.40-100-140
N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140
ρAr2
ρAr1
ρAr2:Ar1
ρAr⑥
ρAr⑤
ρAr⑥:Ar⑤
ρAr1:Ar2
ρAr⑤:Ar⑥
ø[μ(ρ)] [nm-3]
|y| [nm]
MeansLocDenMinY.eps

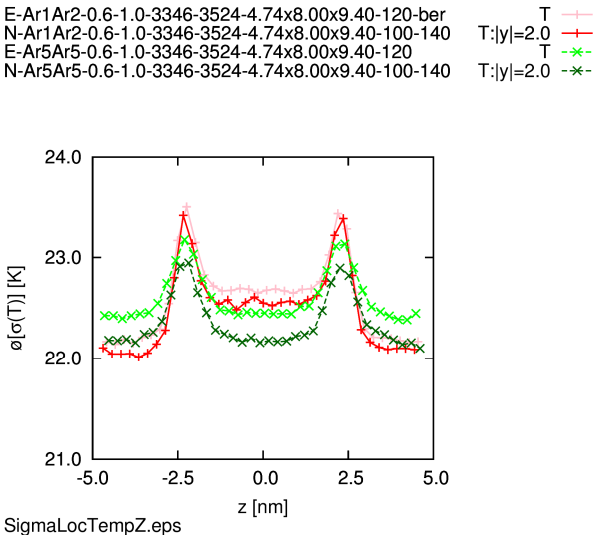

E-Ar1Ar2-0.6-1.0-3346-3524-4.74x8.00x9.40-120-ber
N-Ar1Ar2-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140
E-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-120
N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140
ø[σ(ρ)] [nm^-3]
z [nm]
SigmaLocDenZ.eps
N-Ar1Ar2-0.6-1.0-6795-24-4.74x8.00x9.40-100-140
N-Ar1Ar2-0.6-1.0-20-7091-4.74x8.00x9.40-100-140
N-Ar1Ar2-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140
N-Ar5Ar5-0.6-1.0-6744-223-4.74x8.00x9.40-100-140
N-Ar5Ar5-0.6-1.0-6744-223-4.74x8.00x9.40-100-140
N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140
|y| [nm]
SigmaLocDenOvMajY.eps


N-Ar1Ar2-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140
N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140
∂(σ(ρ))/∂y [nm^-4]
z [nm]
SigmaLocDenYGradZ.eps
N-Ar1Ar2-0.6-1.0-6795-24-4.74x8.00x9.40-100-140
N-Ar1Ar2-0.6-1.0-20-7091-4.74x8.00x9.40-100-140
N-Ar1Ar2-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140
N-Ar5Ar5-0.6-1.0-6744-223-4.74x8.00x9.40-100-140
N-Ar5Ar5-0.6-1.0-6744-223-4.74x8.00x9.40-100-140
N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140
ø[σ(ρ)] [nm^-3]
|y| [nm]
SigmaLocDenMinY.eps

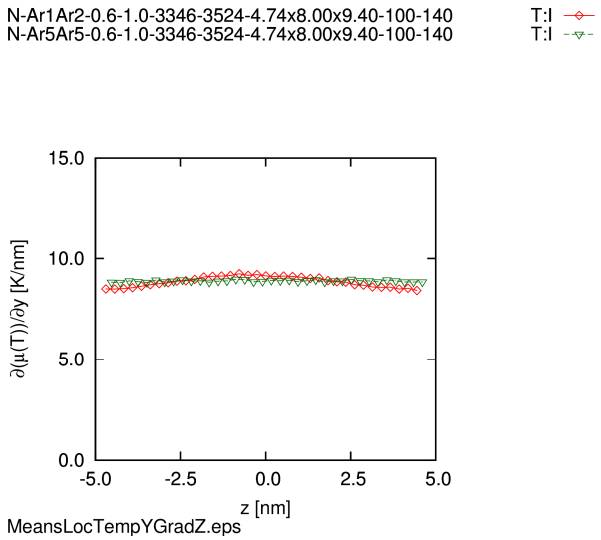
a) Densities



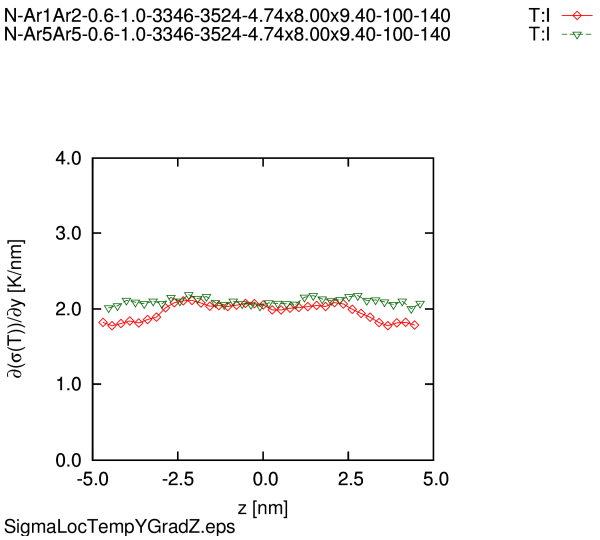
MeansLocTempZ.eps



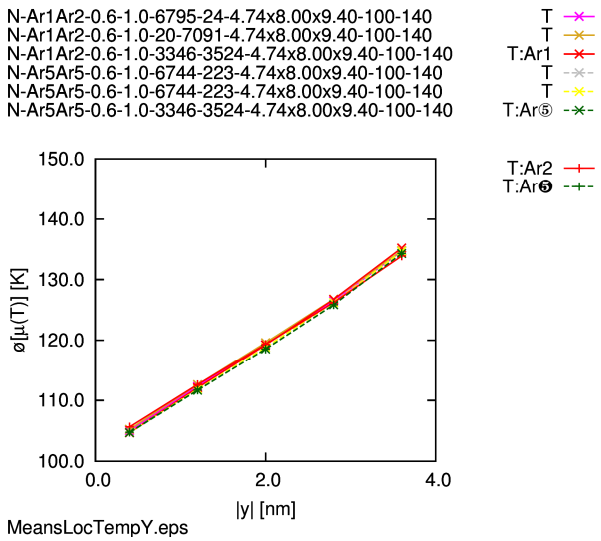
SigmaLocTempZ.eps



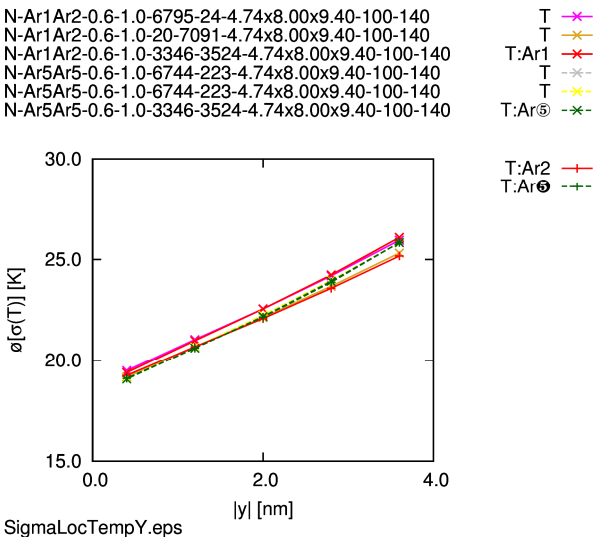
MeansLocTempYGradZ.eps



SigmaLocTempYGradZ.eps

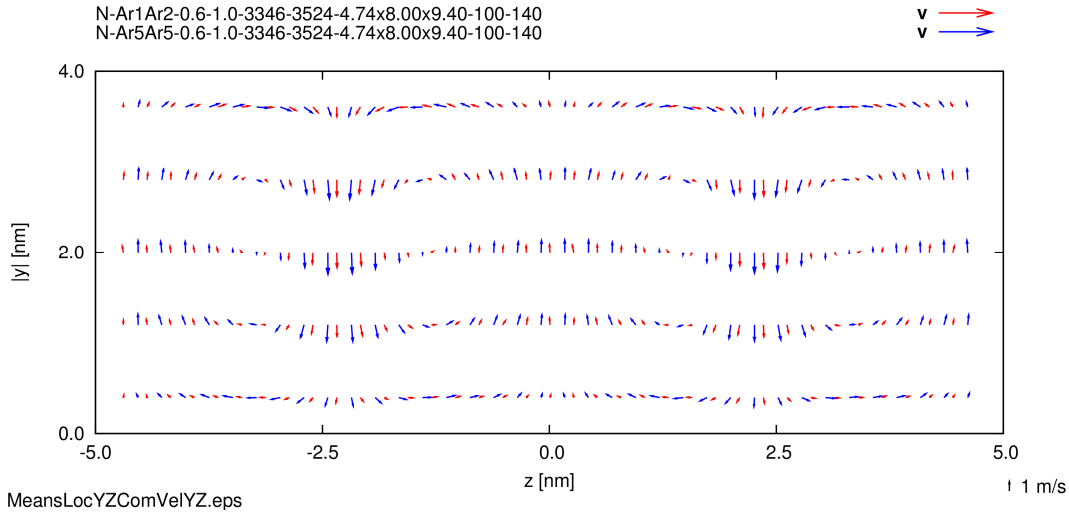


MeansLocTempY.eps

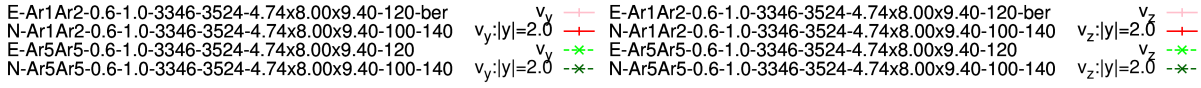


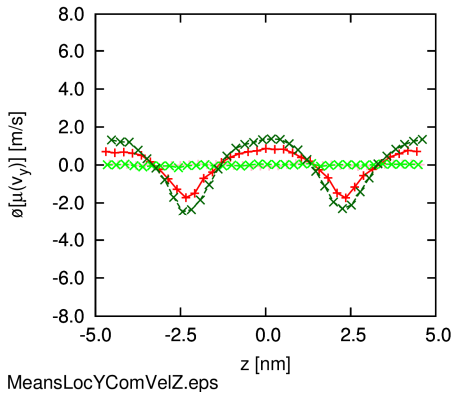
SigmaLocTempY.eps

b) Temperatures

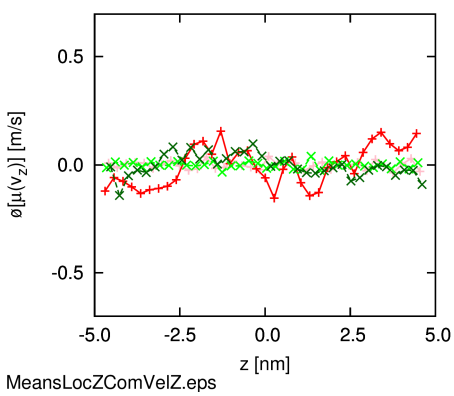


MeansLocYZComVelYZ.eps

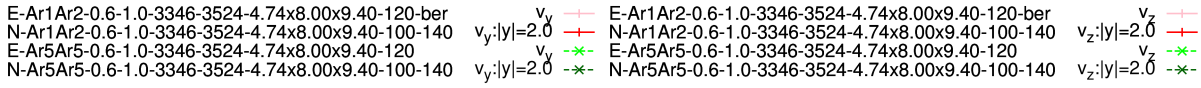


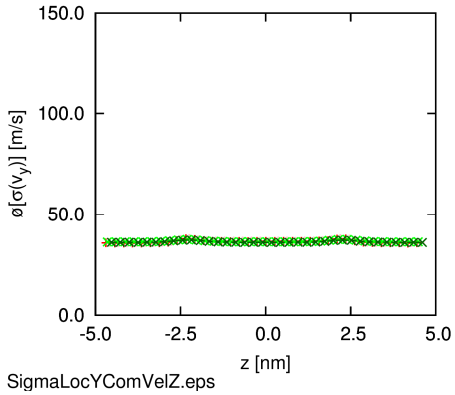


MeansLocYComVelZ.eps

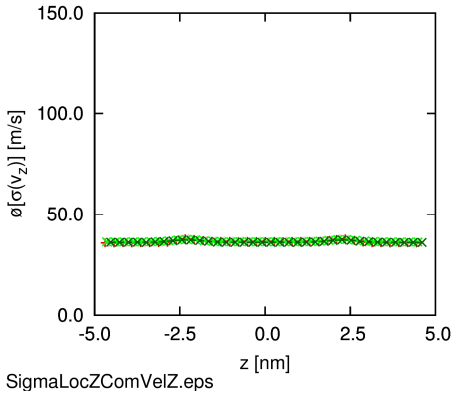


MeansLocZComVelZ.eps



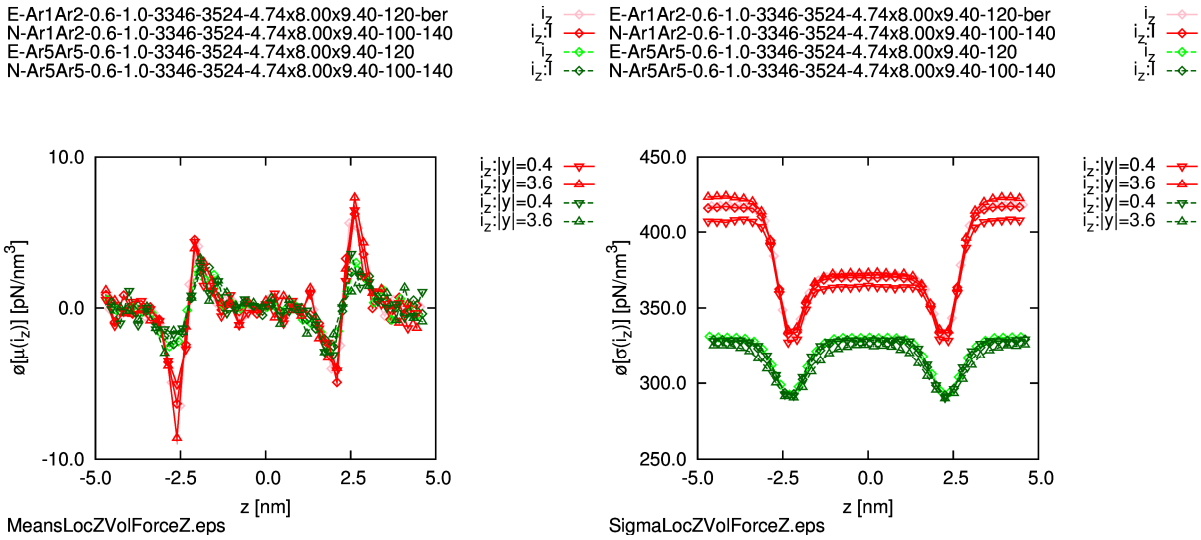


SigmaLocYComVelZ.eps

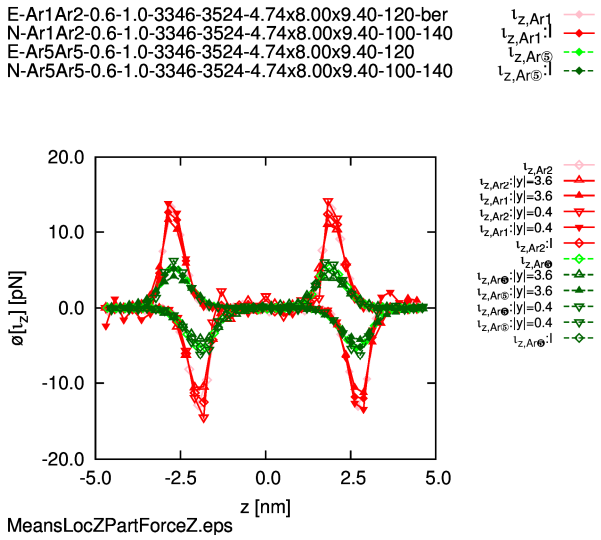


SigmaLocZComVelZ.eps

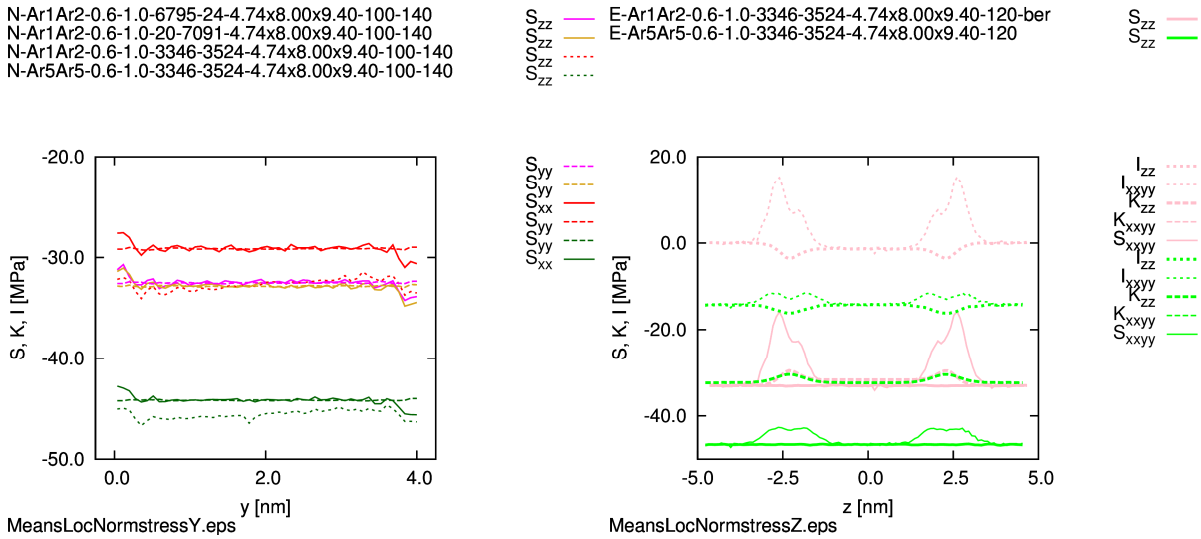
c) Com velocities



d) Volume forces



e) Particle forces



f) Normal stresses

Figure 42 Comparison of the summarised local observables in the first homo- and heterophasic nonequilibrium interfacial systems N-Ar1Ar2-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140-r1 and N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140; We include also their corresponding systems in the comparison.

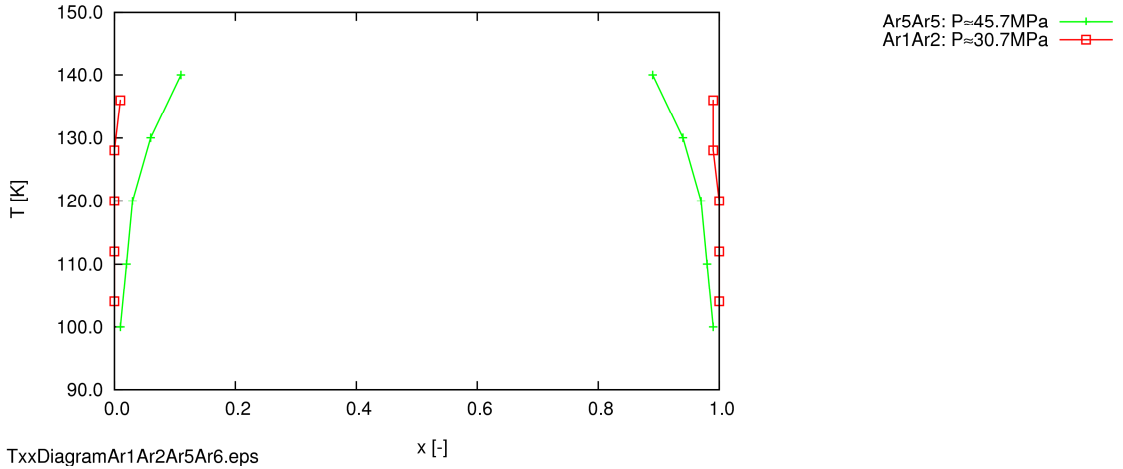
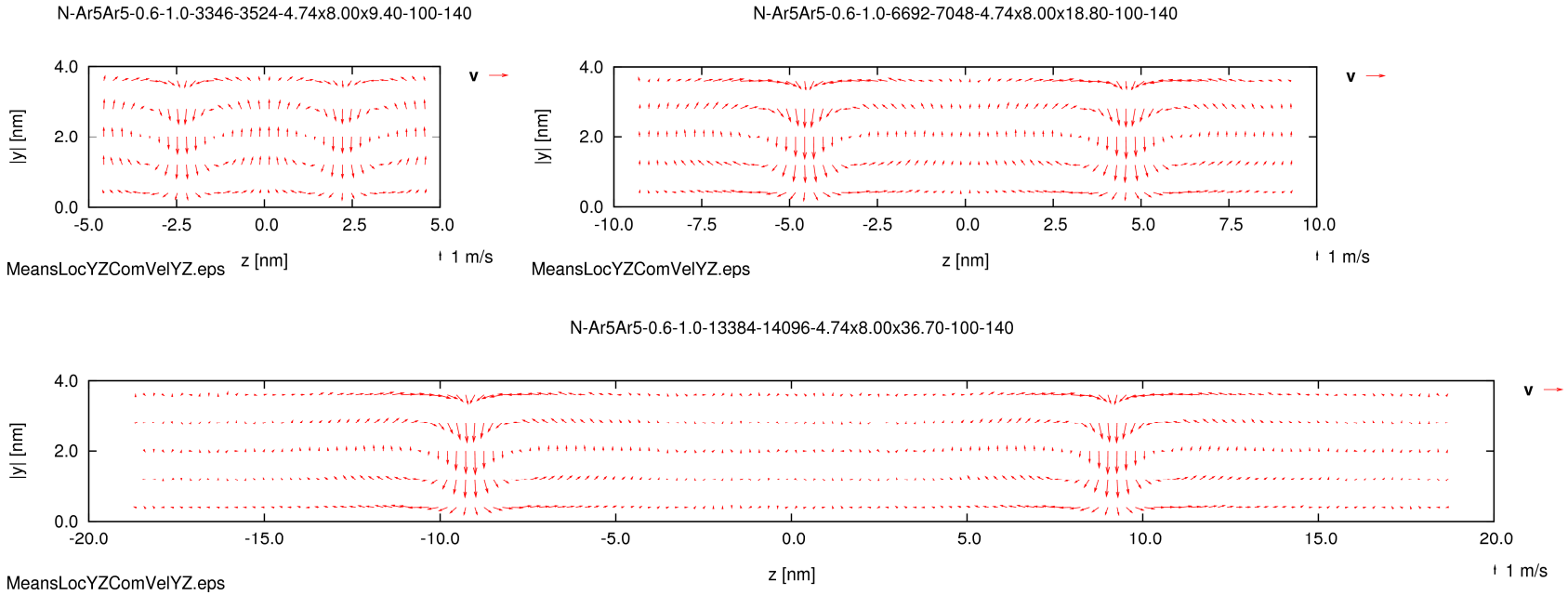
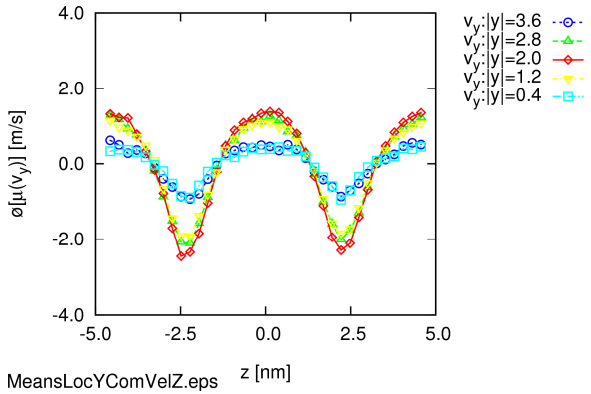


Figure 43 Comparison of the mutual solubilites in the Ar1Ar2 and in the Ar5Ar5 mixture as function of the temperature



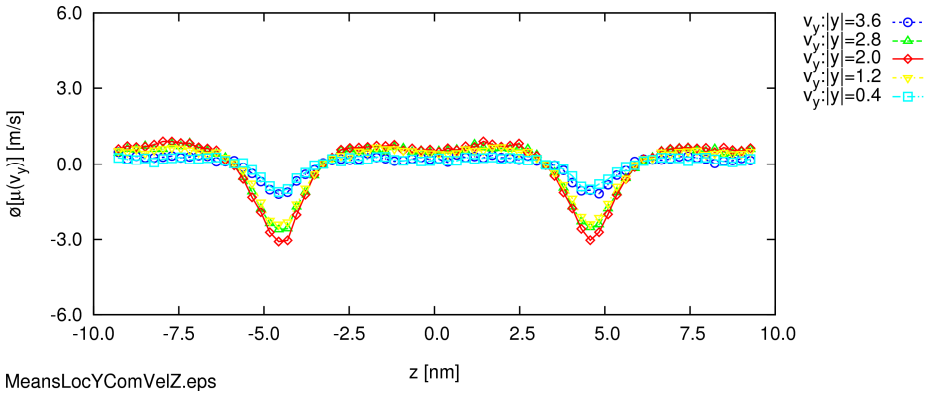
a) Velocities

N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140



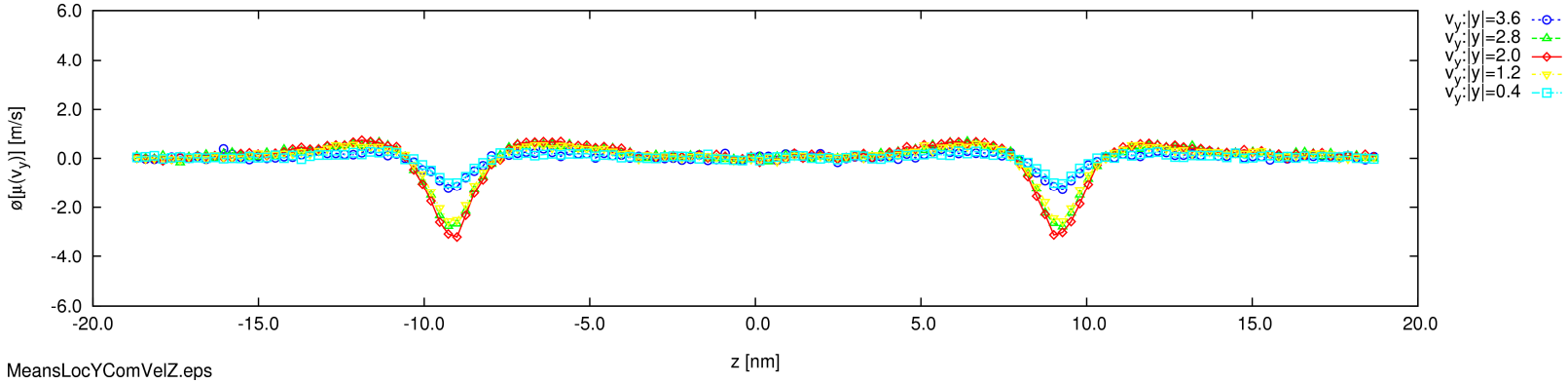
MeansLocYComVelZ.eps

N-Ar5Ar5-0.6-1.0-6692-7048-4.74x8.00x18.80-100-140

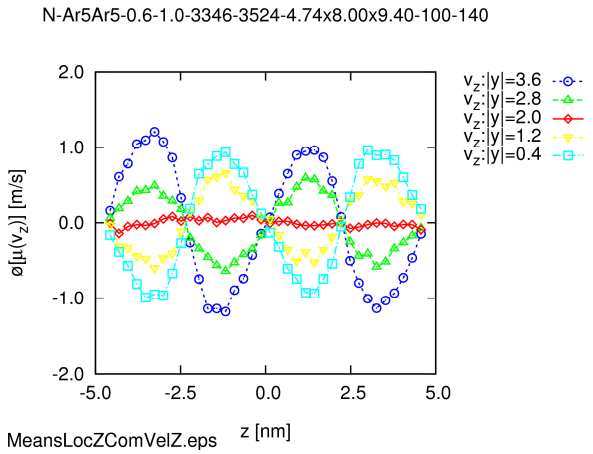


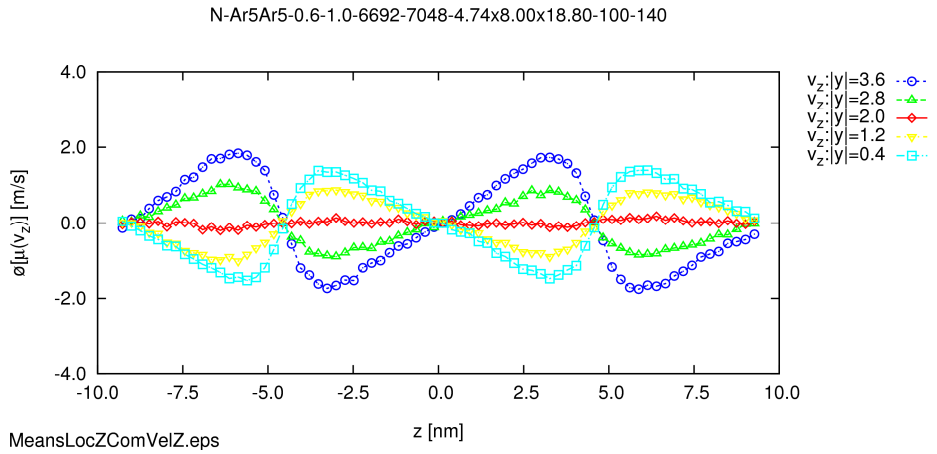
MeansLocYComVelZ.eps

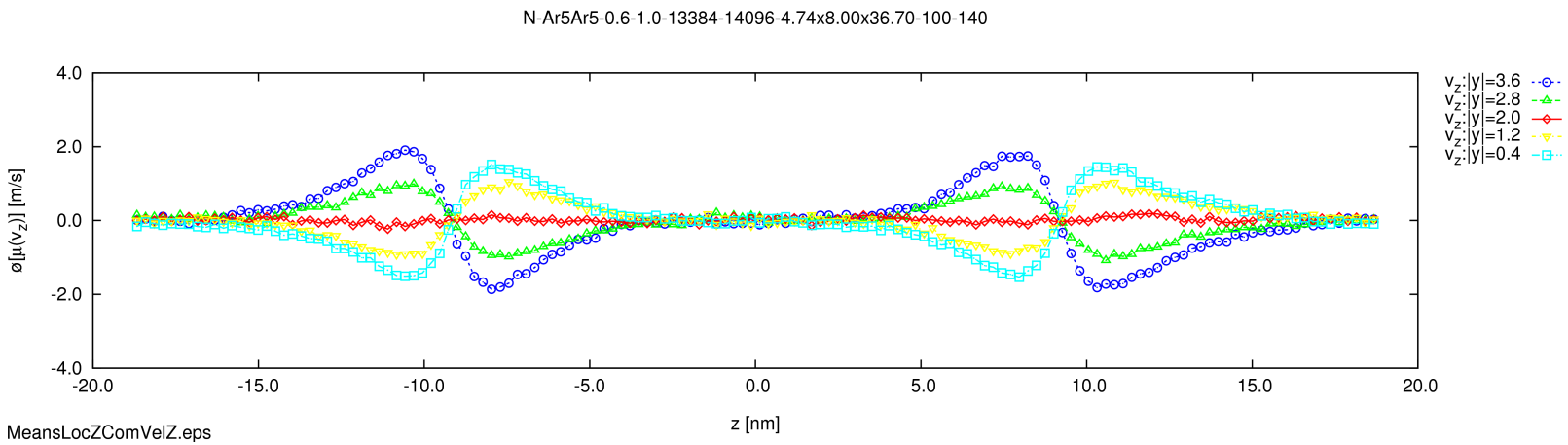
N-Ar5Ar5-0.6-1.0-13384-14096-4.74x8.00x36.70-100-140



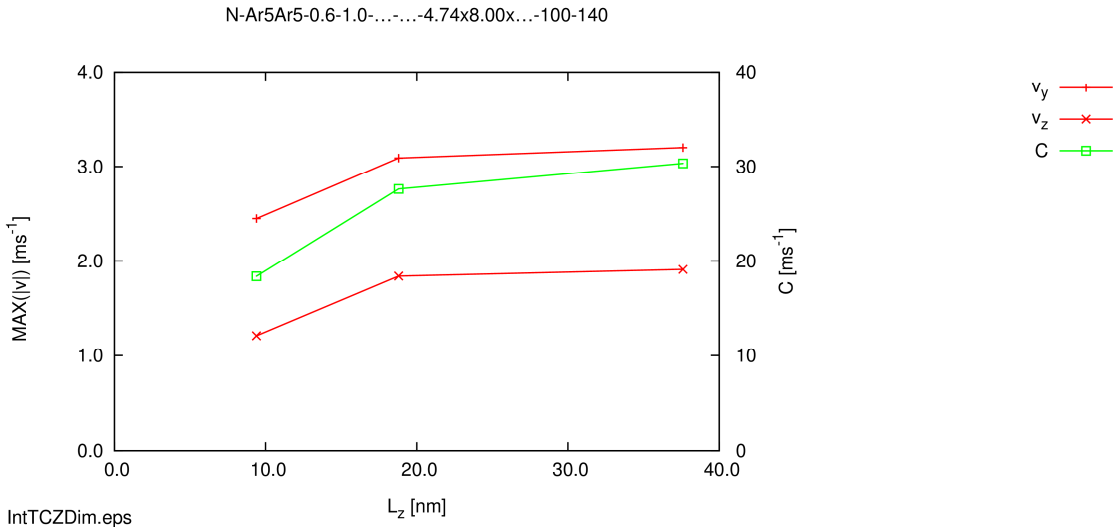
MeansLocYComVelZ.eps





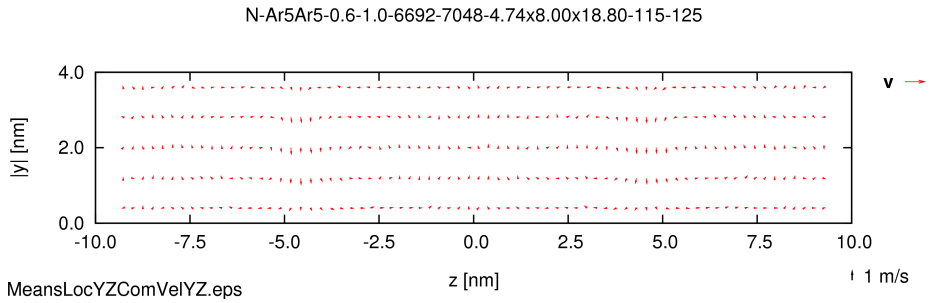


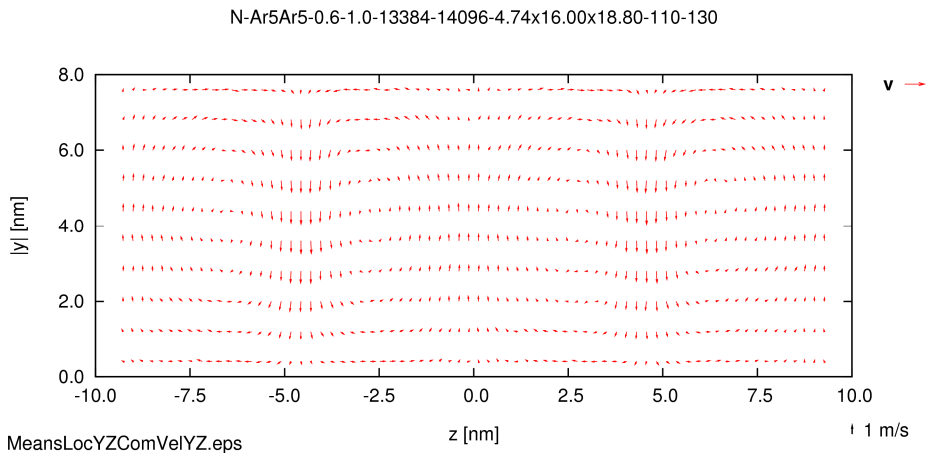
b) Velocity components

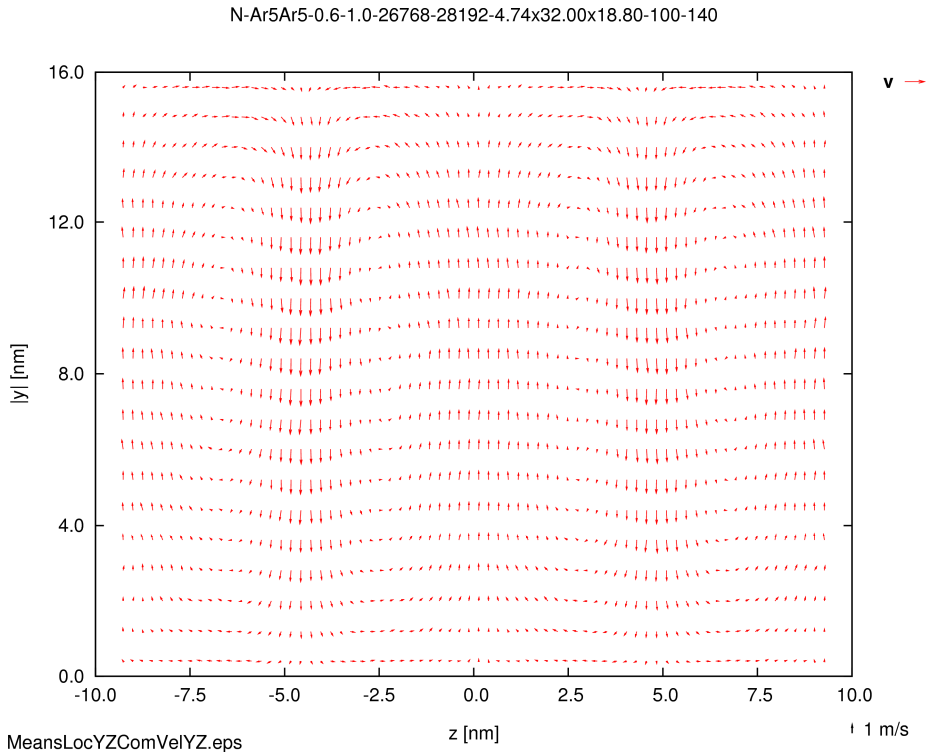


c) Intensity

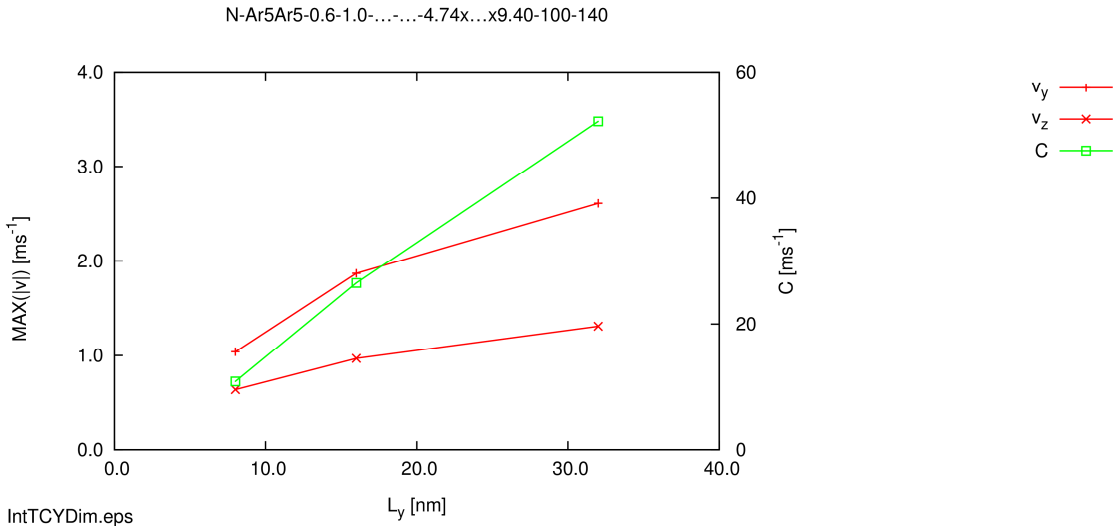
Figure 44 Comparison of the thermocapillary convection in Ar5Ar5 systems with different *z*-dimensions





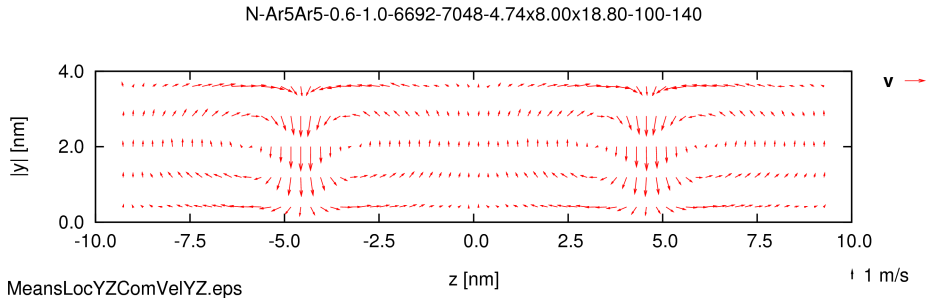


a) Velocities



b) Intensity

Figure 45 Comparison of the thermocapillary convection in Ar5Ar5 systems with different *y*-dimensions



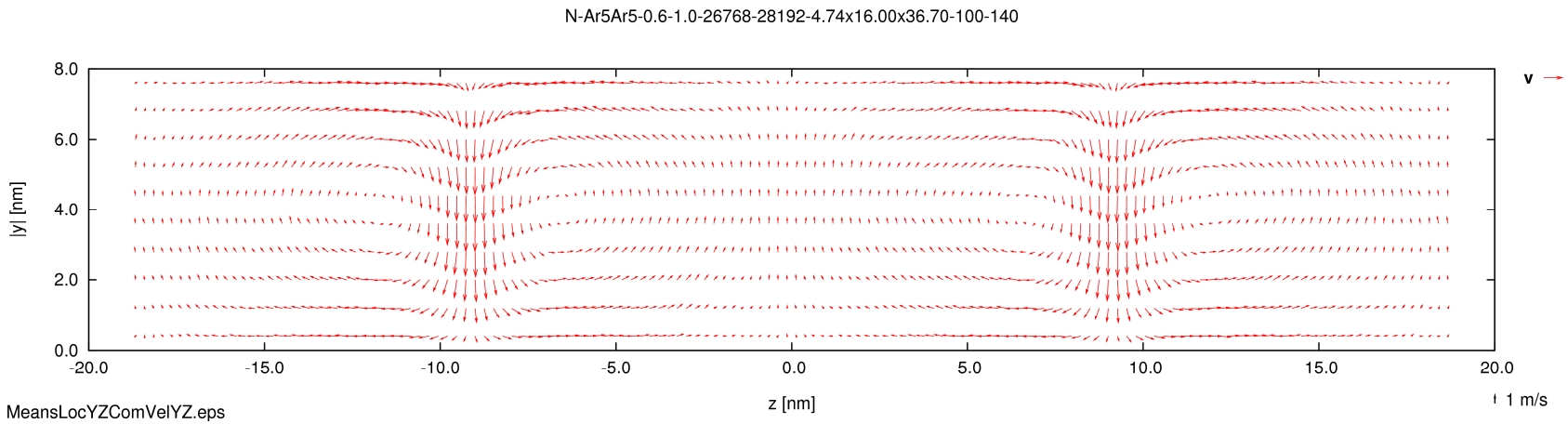
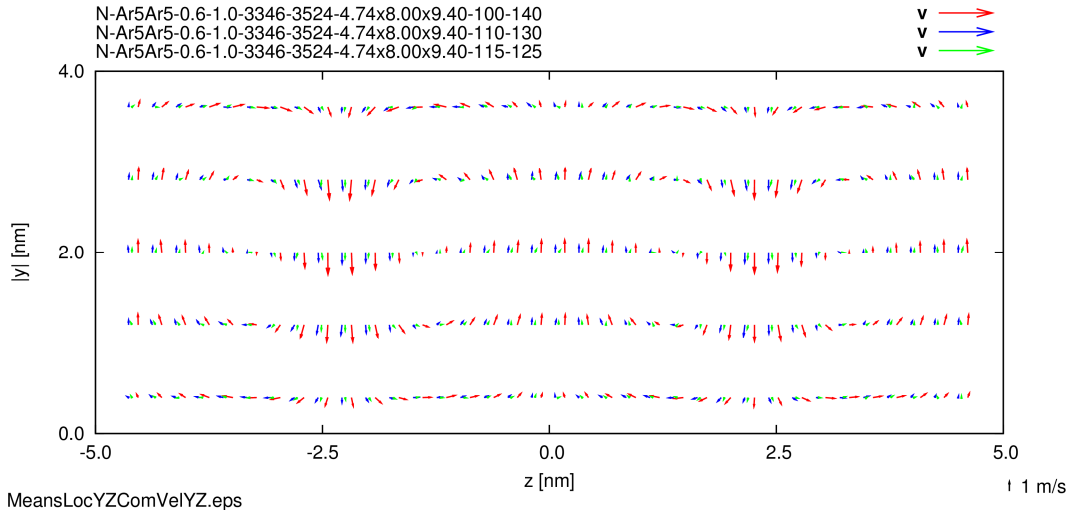
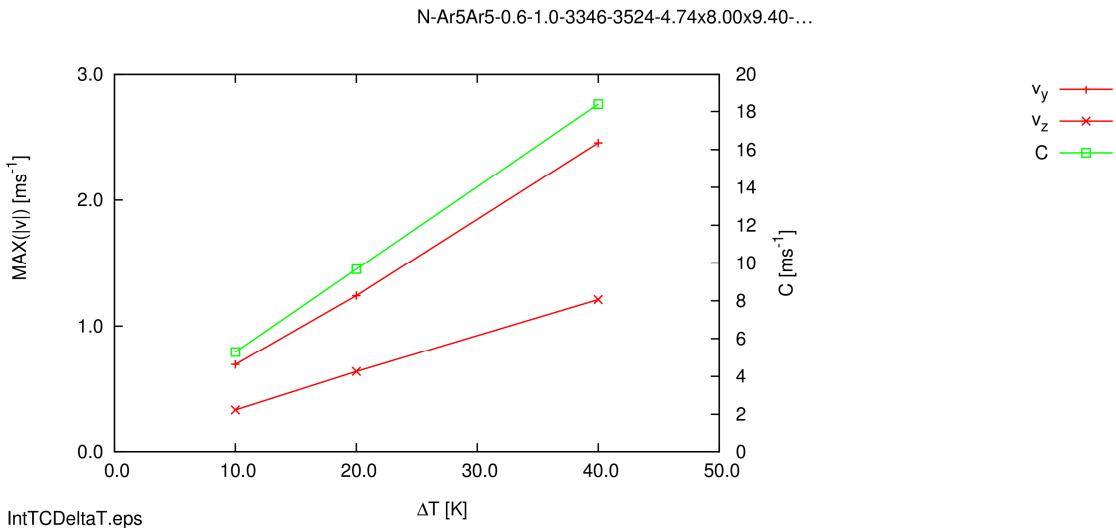


Figure 46 Comparison of the thermocapillary convection in Ar5Ar5 systems with different *y*- and *z*-dimensions



a) Velocities



b) Intensity

Figure 47 Comparison of the local com velocities in Ar5Ar5 nonequilibrium interfacial systems that differ only in the temperature difference between the thermostated regions

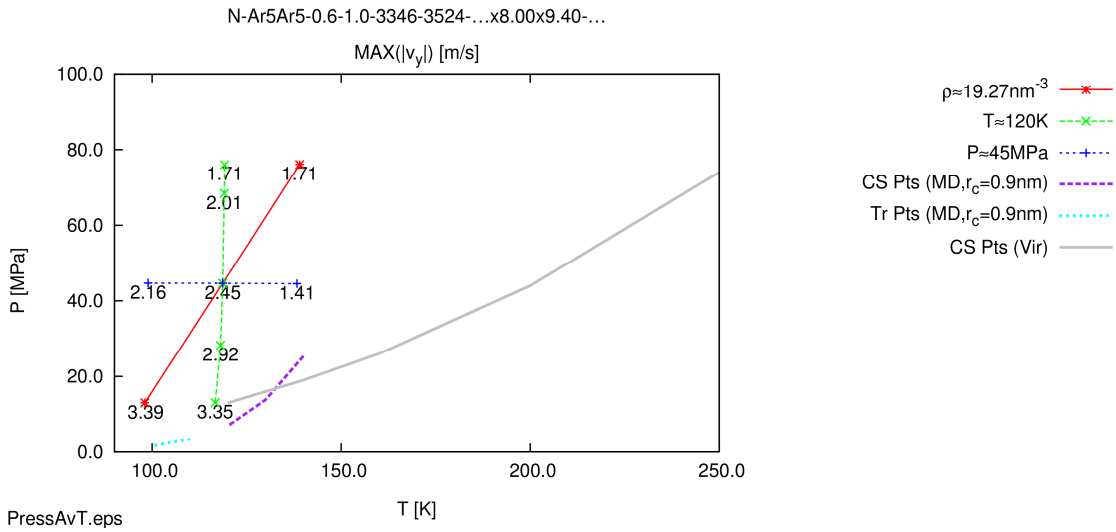
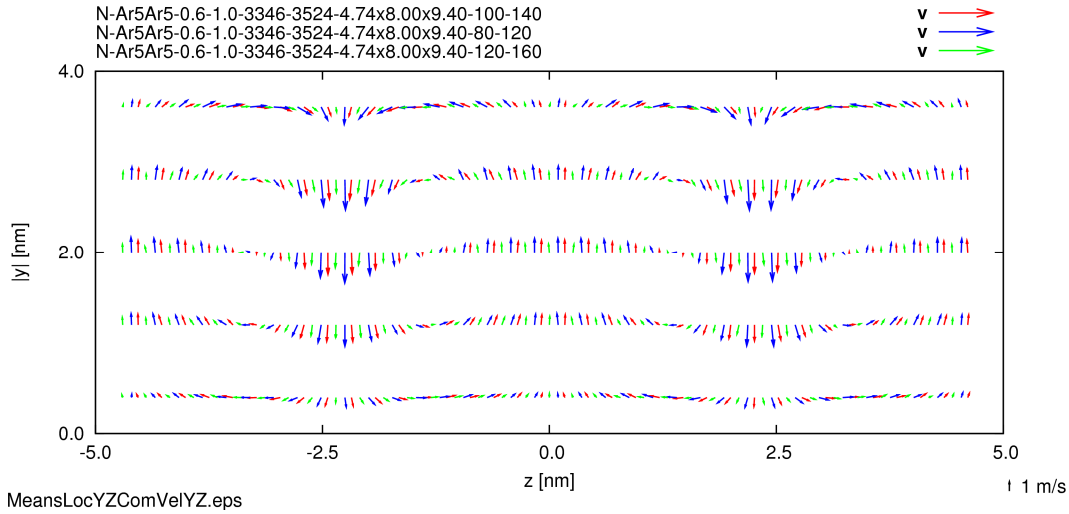
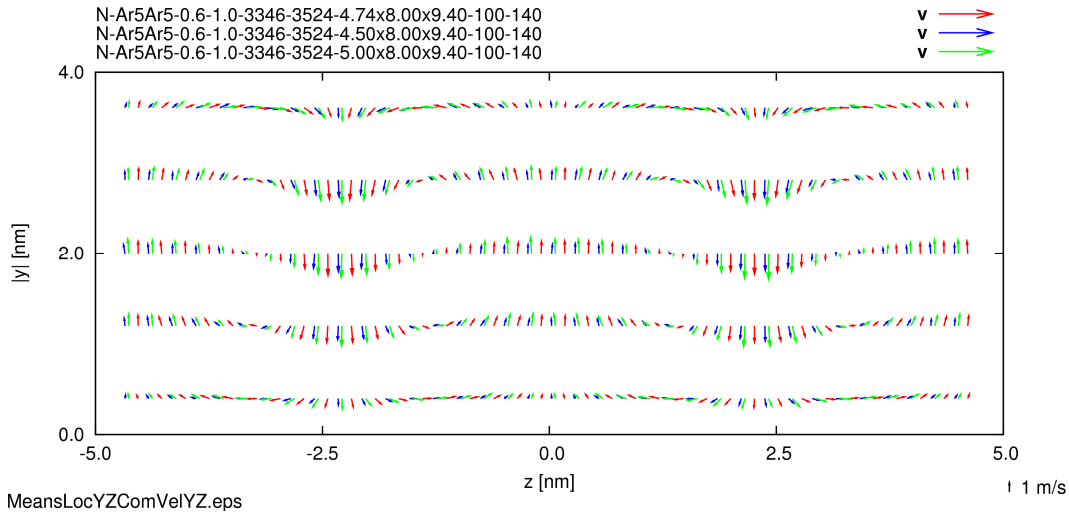
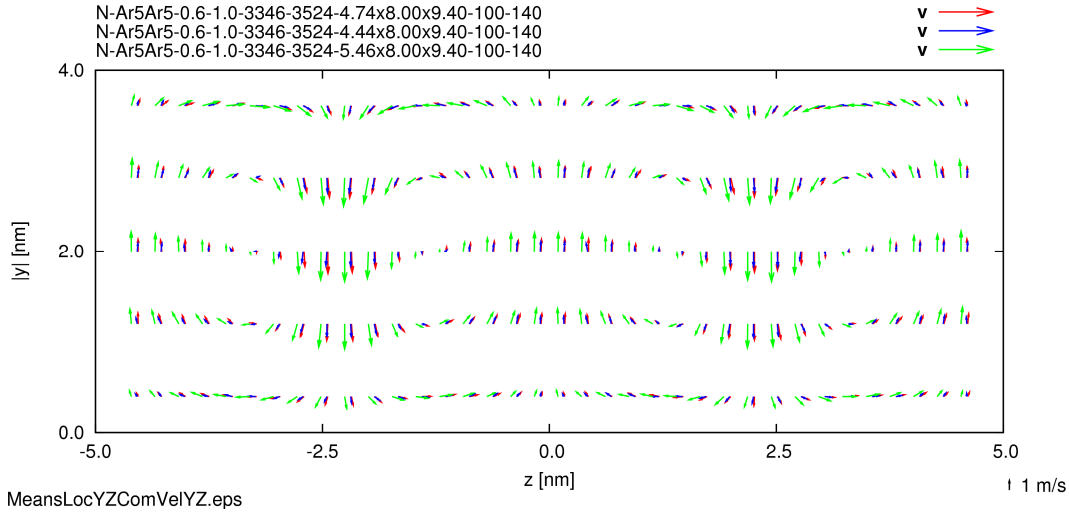


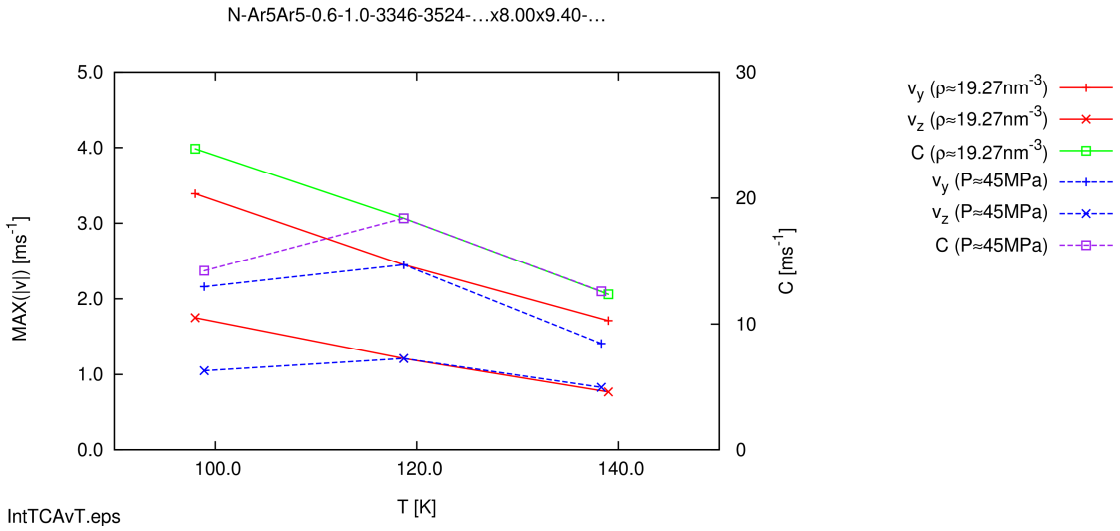
Figure 48 Section of the Ar5Ar5 *pxT*-diagram at x_{Ar5}≈0.5 with indication of the global pressures and temperatures in selected systems



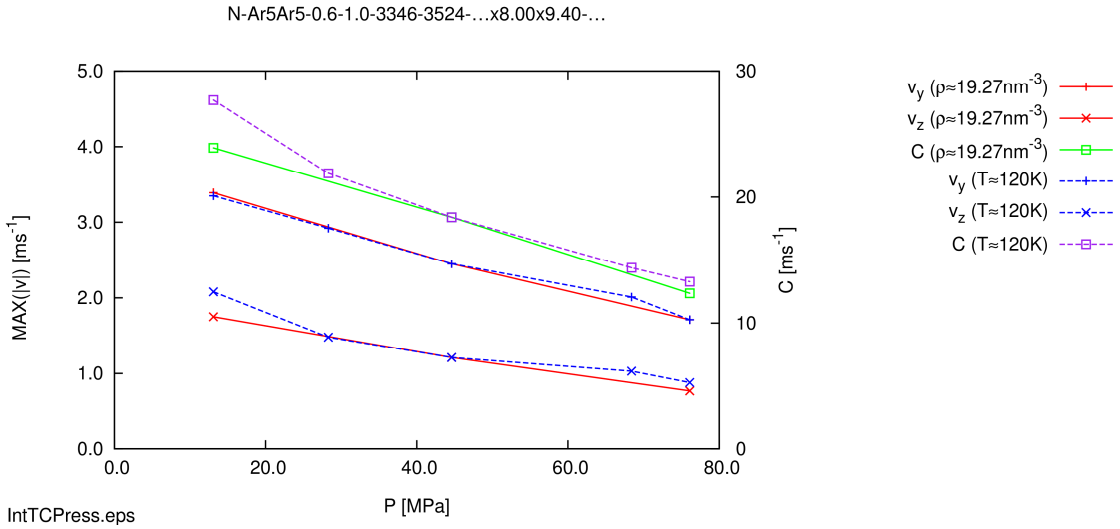




a) Velocities



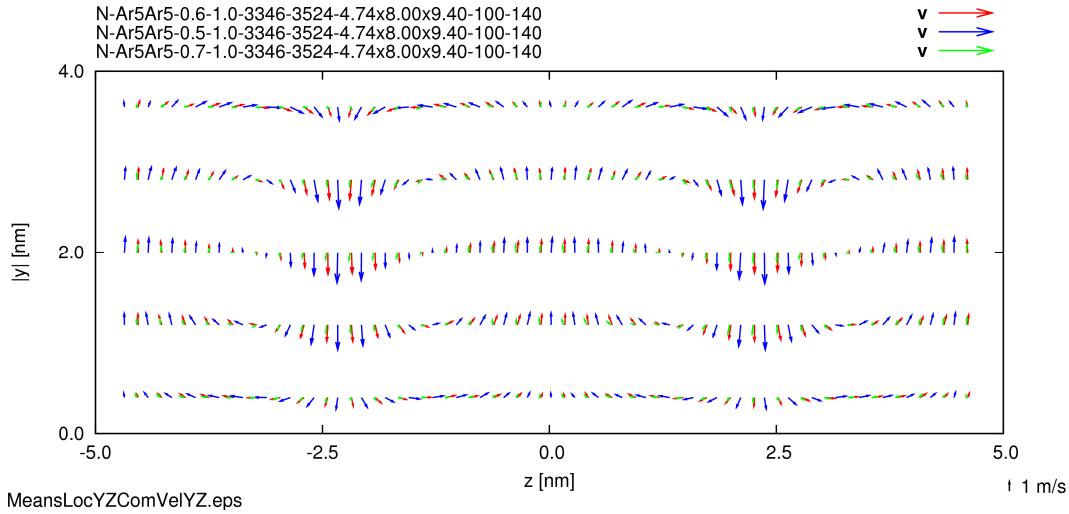
IntTCAvT.eps



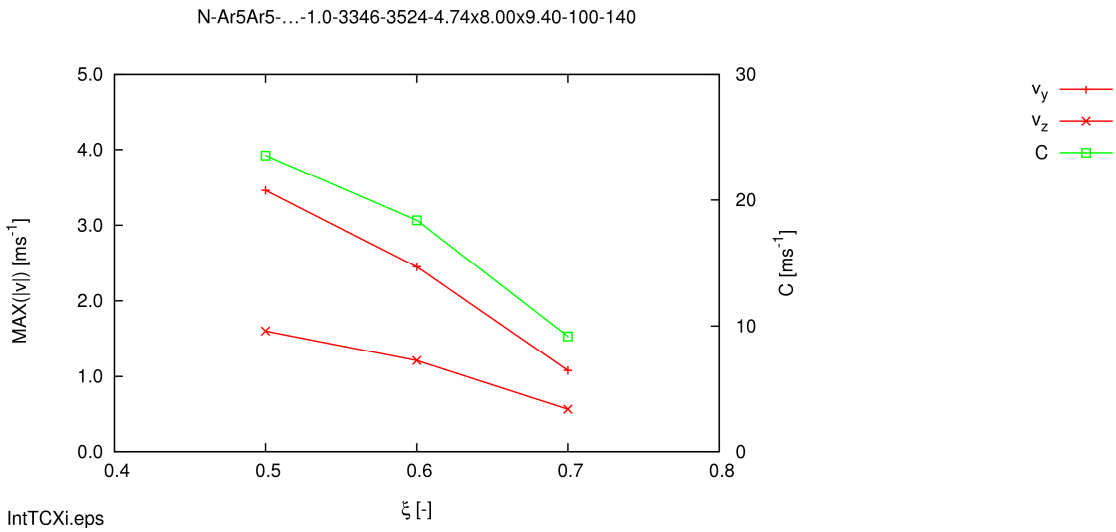
IntTCPress.eps

b) Intensity

Figure 49 Comparison of the thermocapillary convection in several Ar5Ar5 systems that differ in the global temperatures and pressures



a) Velocities



b) Intensity

Figure 50 Comparison of the thermocapillary convection in several Ar5Ar5 systems that differ only in the values of the mixing parameter ξ

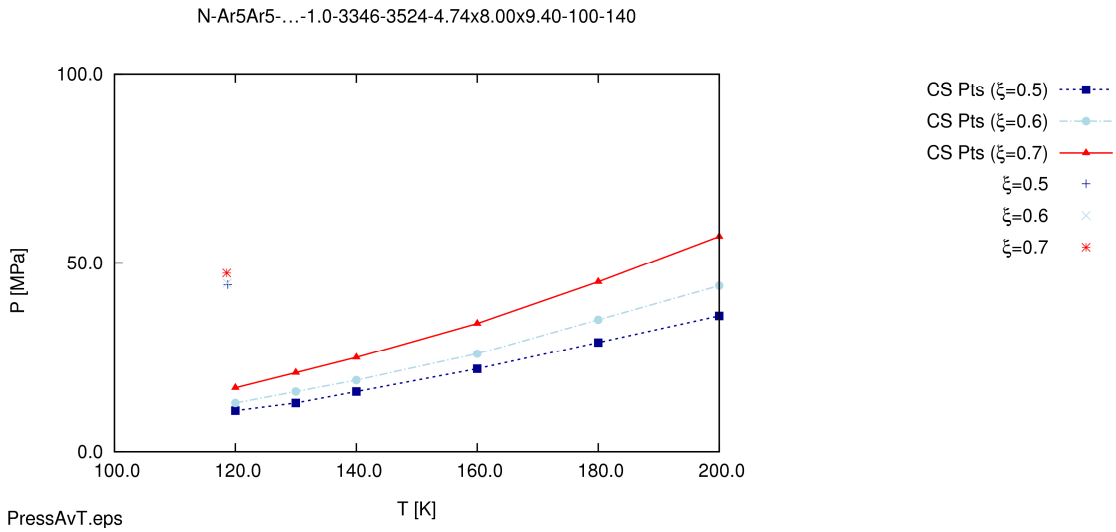
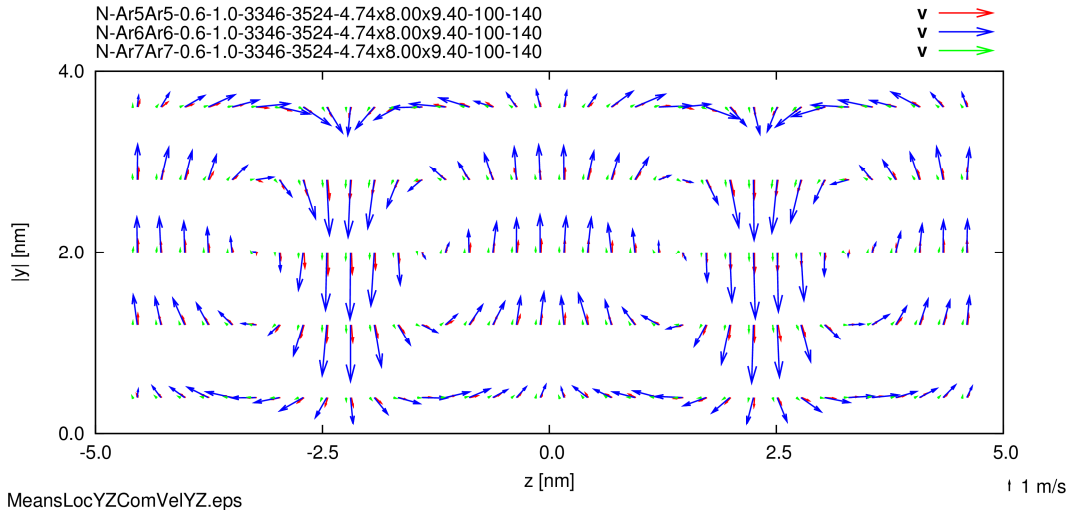
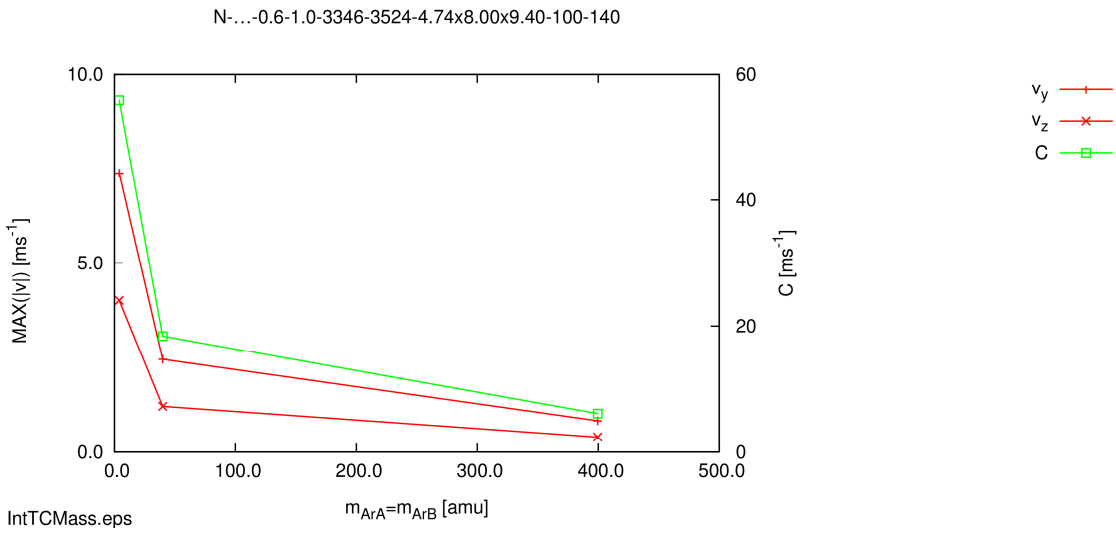


Figure 51 Cut of the Ar5Ar5 pxT diagram at $x_{Ar@}$≈0.5 with indication of the global pressures and temperatures in the systems with different mixing parameter values ξ



a) Velocities



b) Intensity

Figure 52 Comparison of the thermocapillary convection in Ar5Ar5 systems with different particle masses, m_{ArA} and m_{ArB}

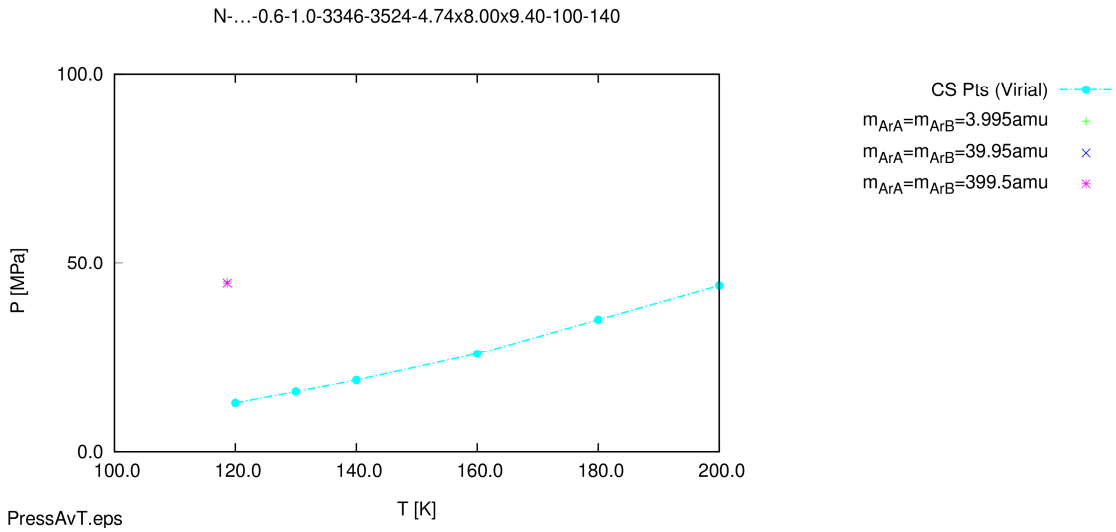
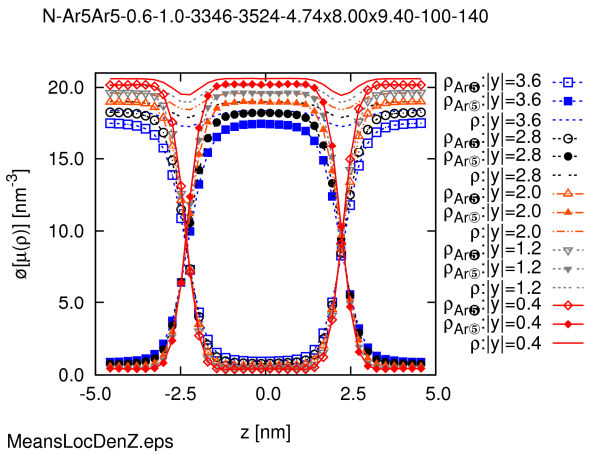
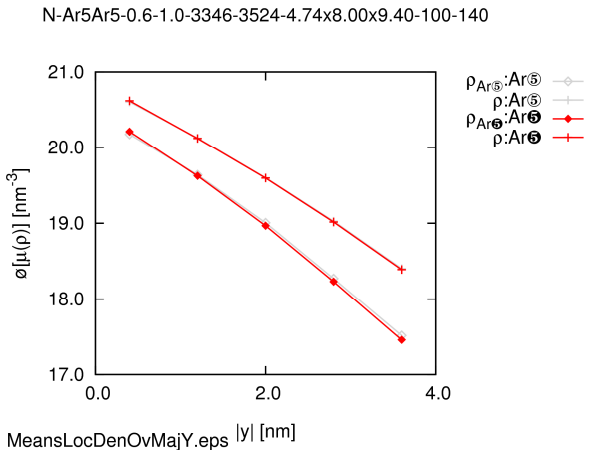
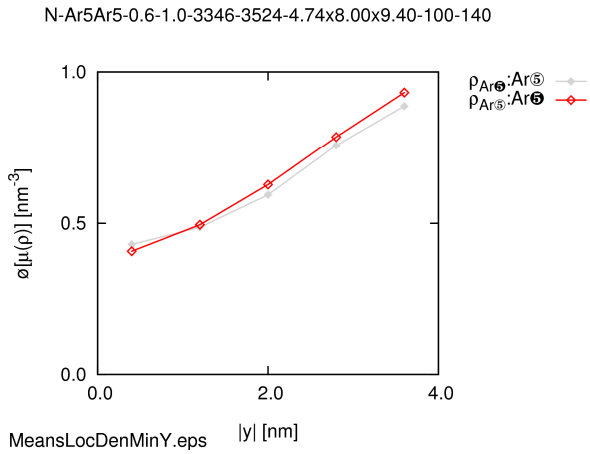


Figure 53 Cut of the Ar5Ar5 pxT diagram at $x_{Ar_{\mathcal{B}}}$≈0.5 with indication of the global pressures and temperatures in the systems with different particle masses, m_{ArA} and m_{ArB}

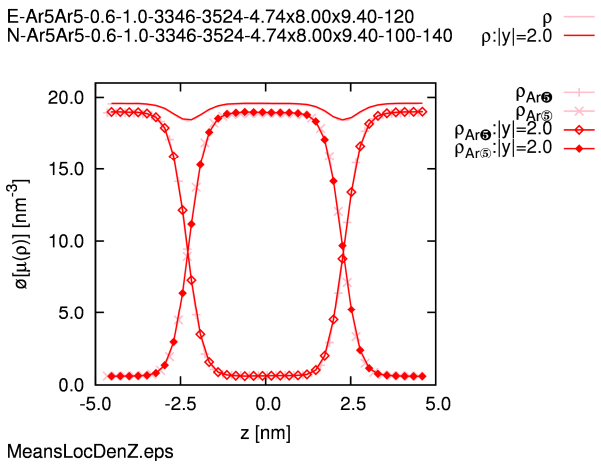


a) Typical density *z*-dependence; We use the first homophasic nonequilibrium interfacial system as an example, N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140.

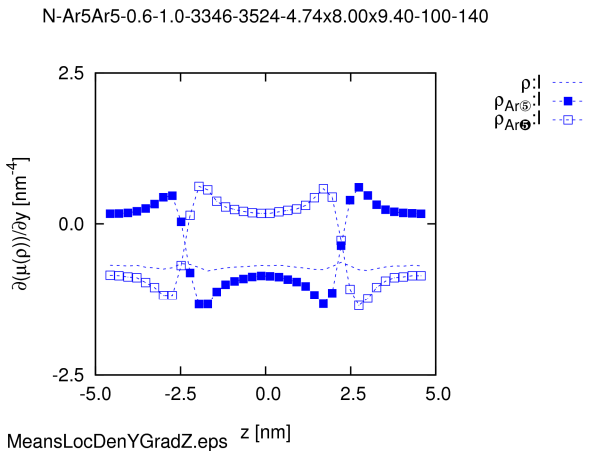




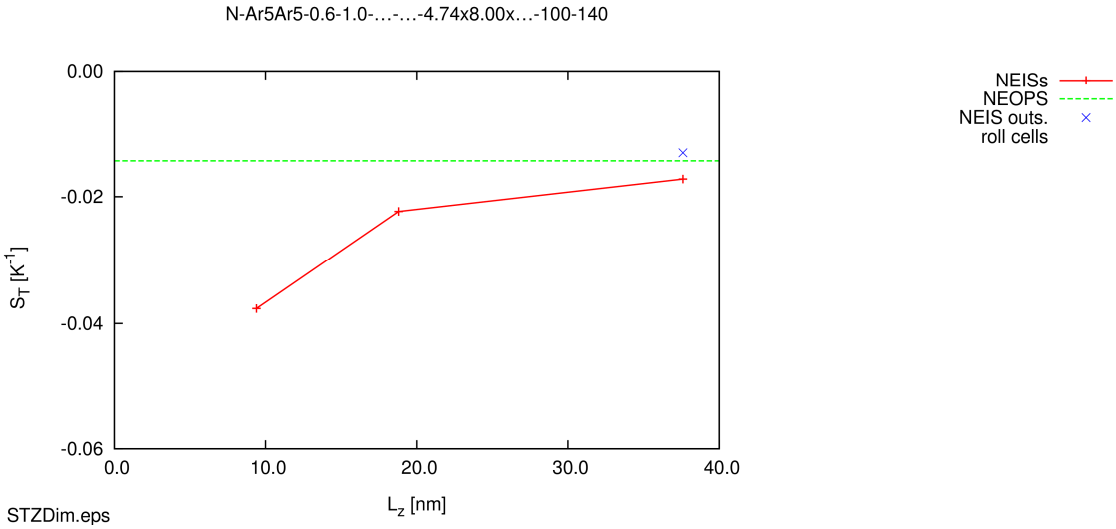
b) Typical density *y*-dependence; We use the first homophasic nonequilibrium interfacial system as an example, N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140.



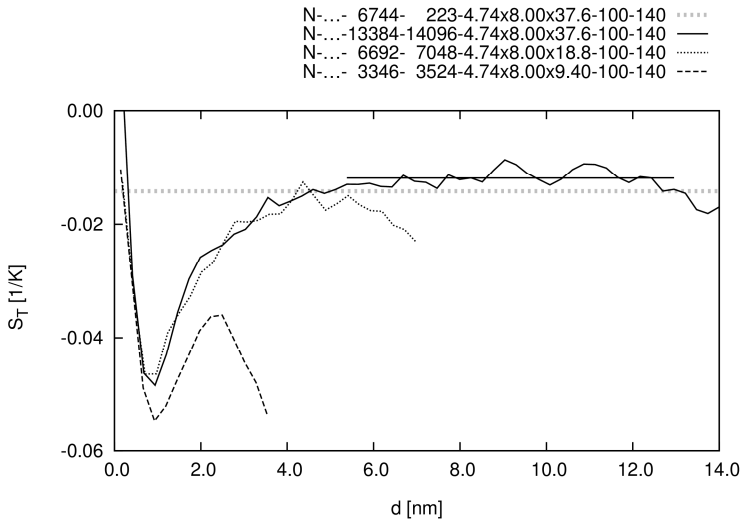
c) Similarity of the density *z*-profiles at the centres between the thermostated regions in a nonequilibrium interfacial system and the same profiles in its corresponding equilibrium interfacial system. We use the systems N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140 and E-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-120 as an example.



d) Typical *z*-dependence of the density *y*-gradients; We use the first homophasic nonequilibrium interfacial system as an example, N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140.



e) Comparison of the Soret coefficient in nonequilibrium interfacial systems of different *z*-dimensions and their corresponding nonequilibrium one-phase system



f) Comparison of the locally computed formal Soret coefficients as function of the distance, *d*, from the Gibbs dividing surface in nonequilibrium interfacial systems of different lengths, *Lz*; We show only one side of an interface for better readability. The figure gives additionally the Soret coefficient in the corresponding nonequilibrium one-phase system for comparison.

Figure 54 Detailed analysis of the density distribution in the homophasic nonequilibrium interfacial systems

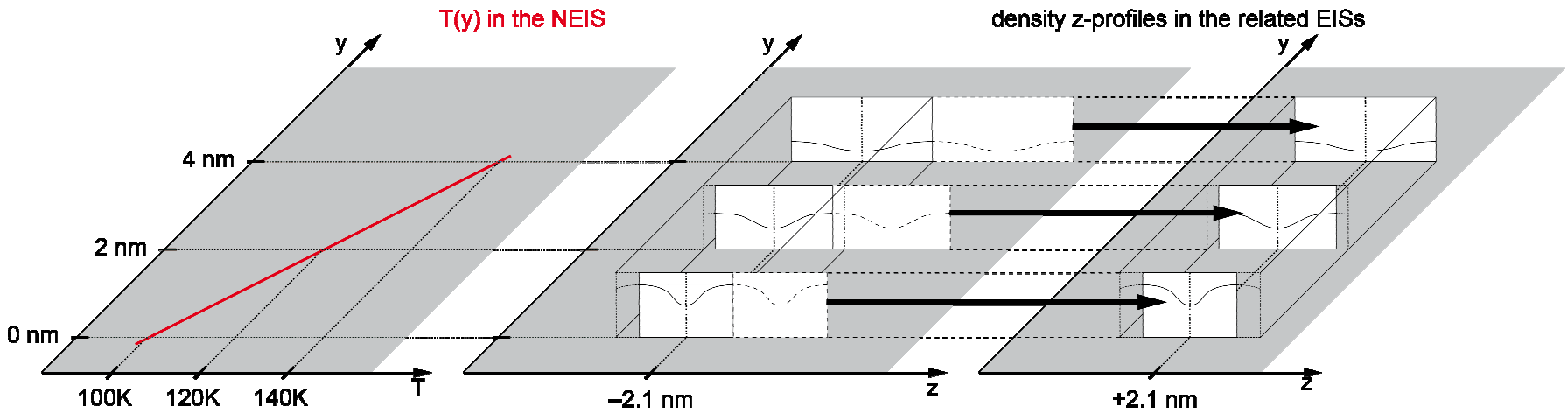
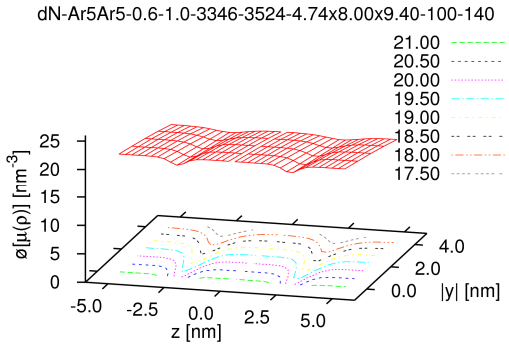
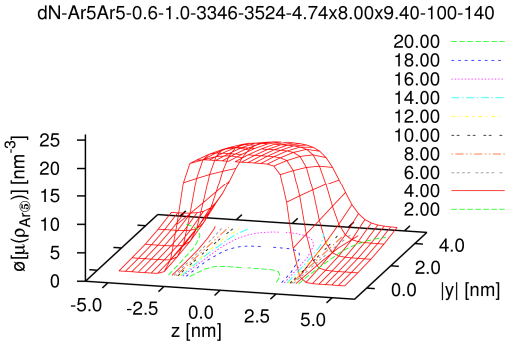


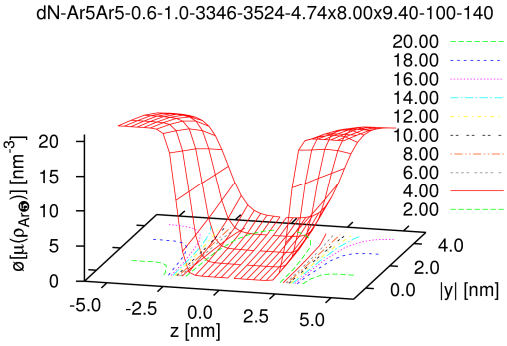
Figure 55 **Equilibrium density distribution to expect in a homophasic nonequilibrium interfacial system;**
We construct such a distribution by linear interpolation and combination of the density *z*-profiles in several related equilibrium interfacial systems (EISs).



MeansLocDenOverallYZNEMD.eps

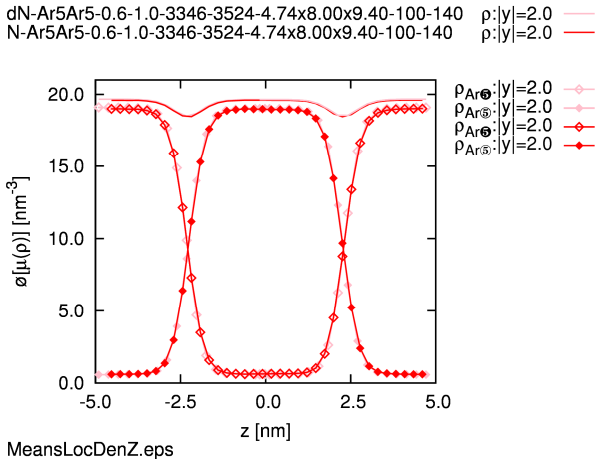


MeansLocDenAr1YZNEMD.eps



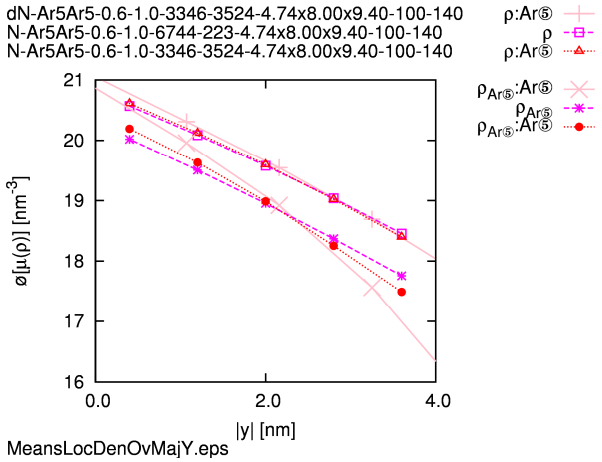
MeansLocDenAr2YZNEMD.eps

a) Densities as function of *y* and *z*

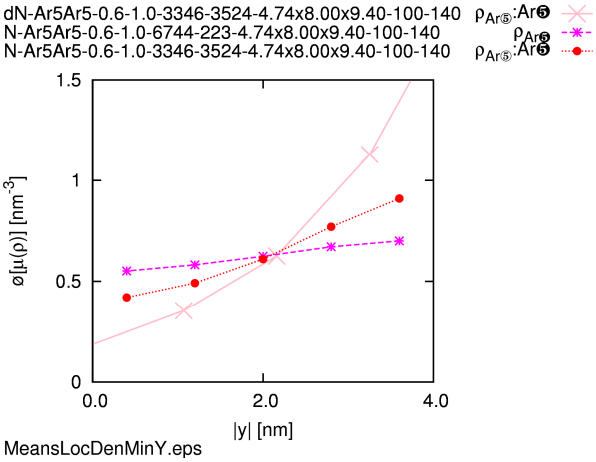


MeansLocDenZ.eps

b) Comparison of the density *z*-profiles at the centres between the thermostated regions

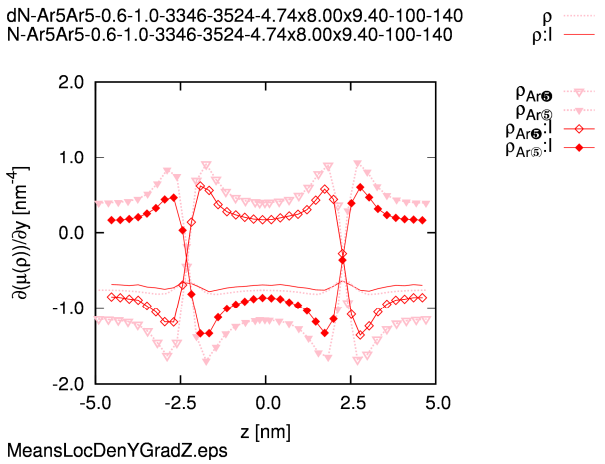


MeansLocDenOvMajY.eps



MeansLocDenMinY.eps

c) Comparison of the densities as function of *y* in the phases



d) Comparison of the density *y*-gradients

Figure 56 Example of the density distribution to expect in a nonequilibrium interfacial system based on its related equilibrium interfacial systems;
We use the first homophasic nonequilibrium interfacial system as an example, N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140.

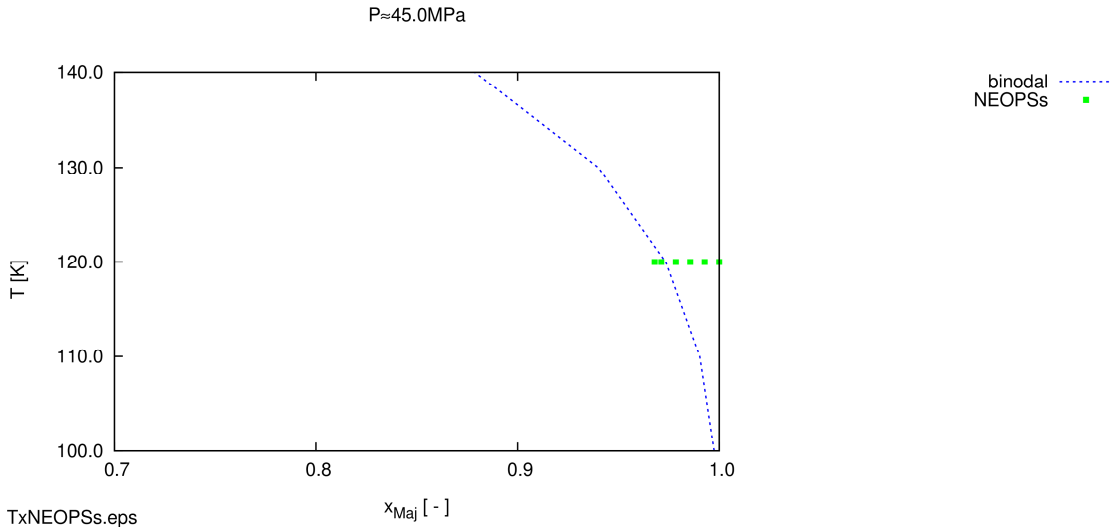


Figure 57 Phase diagram indicating the global states in several differently composed but otherwise comparable nonequilibrium one-phase systems

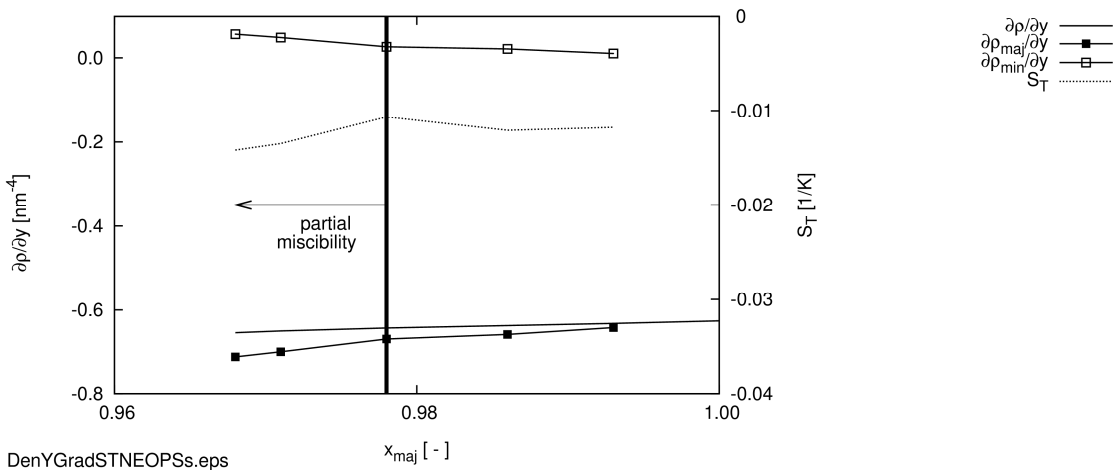
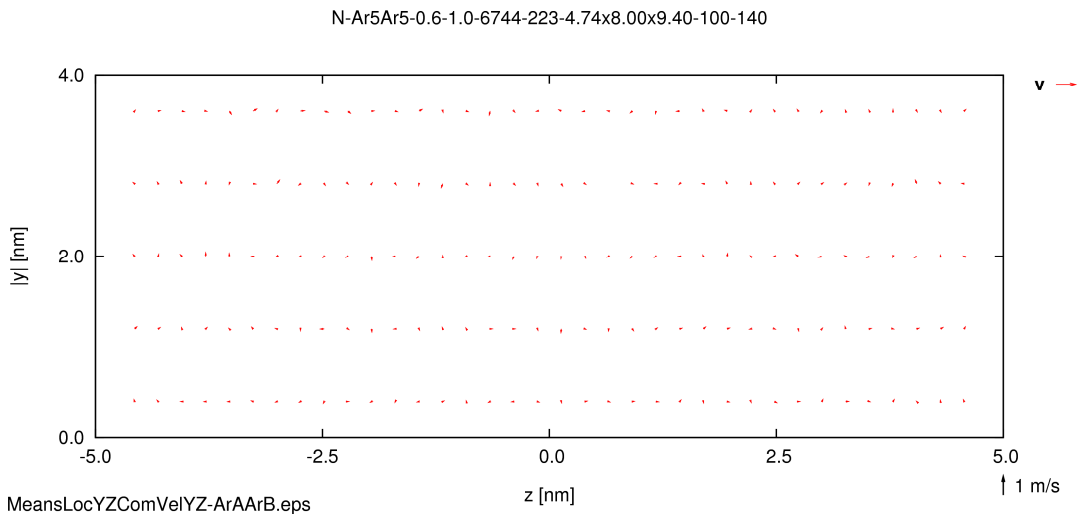
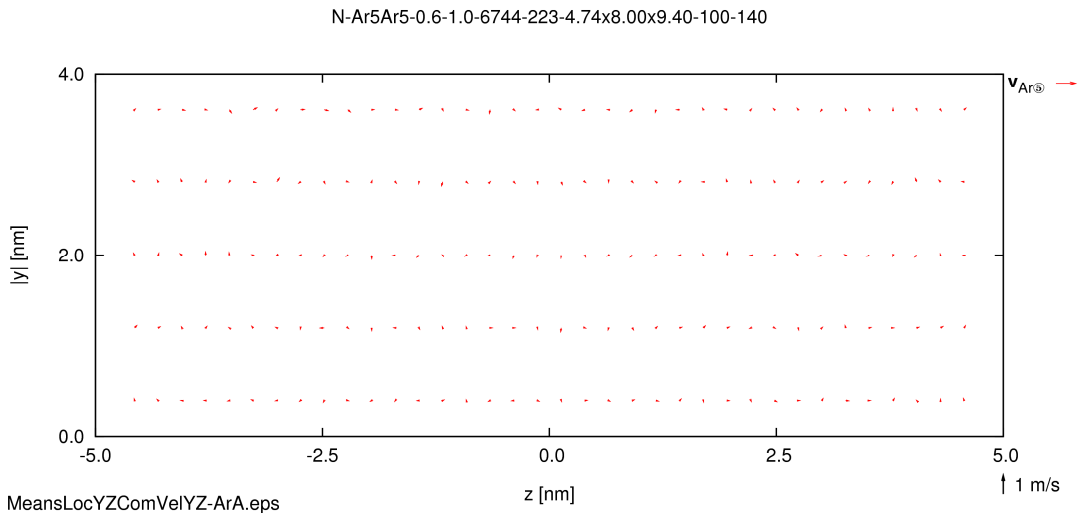
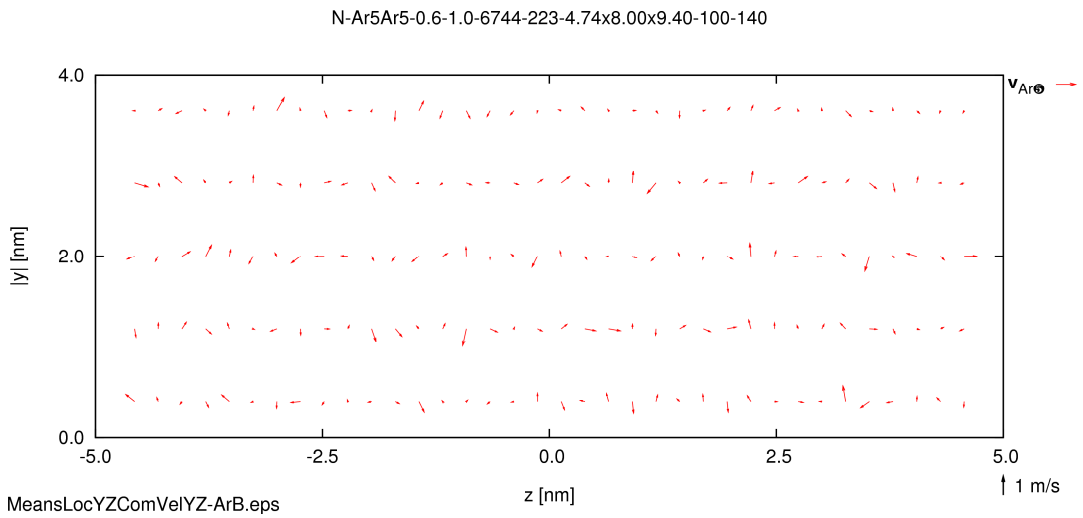


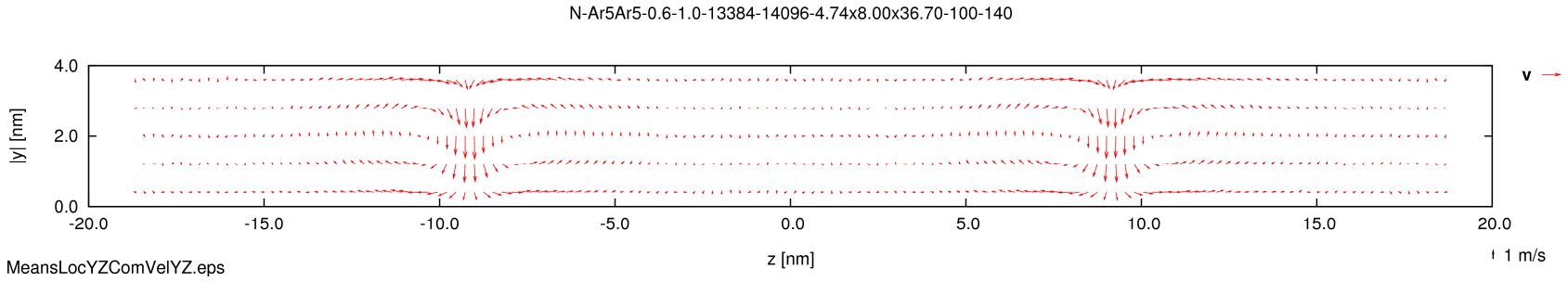
Figure 58 Concentration dependence of the different density *y*-gradients and of the Soret coefficients in otherwise similar nonequilibrium one-phase systems



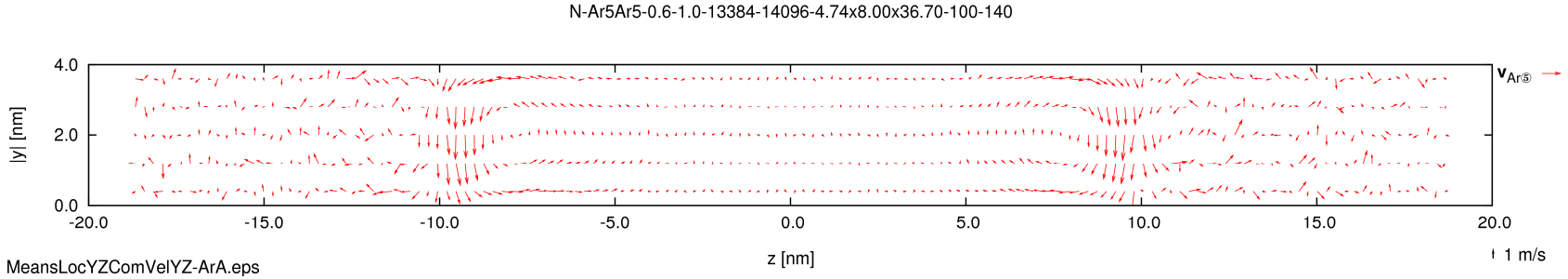




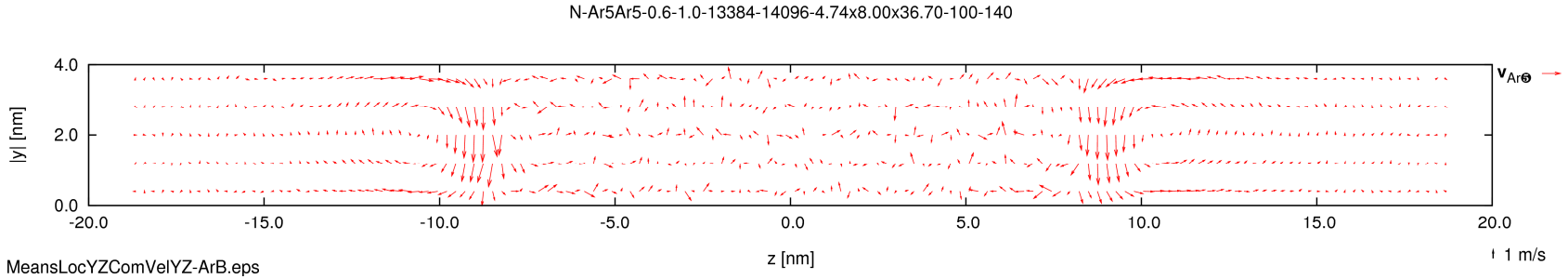
a) Nonequilibrium one-phase system; here N-Ar5Ar5-0.6-1.0-6744-223-4.74x8.00x9.40-100-140



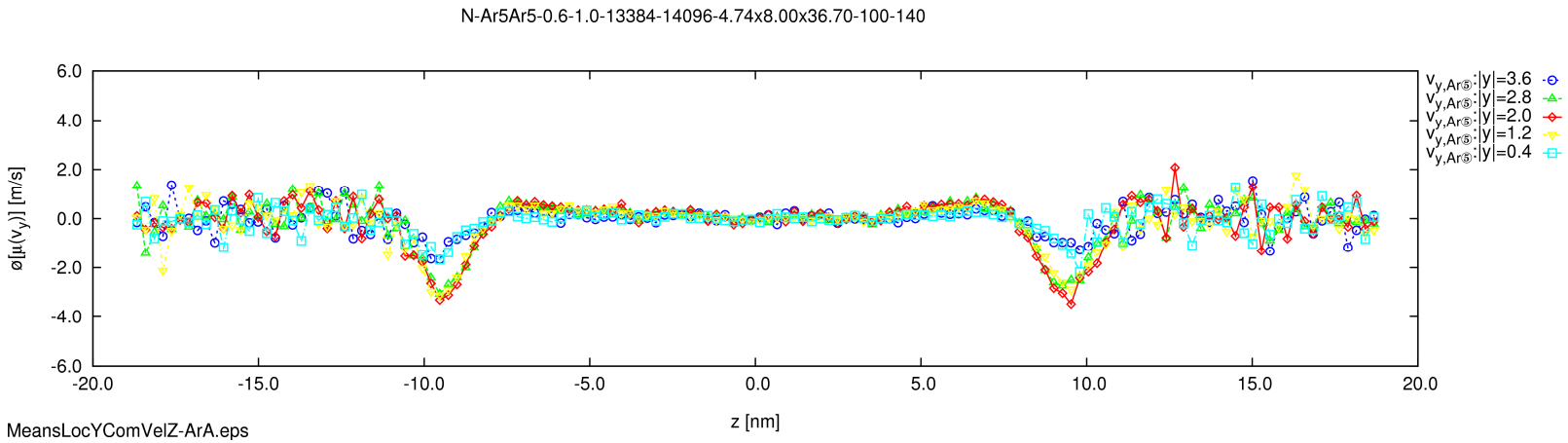
MeansLocYZComVelYZ.eps



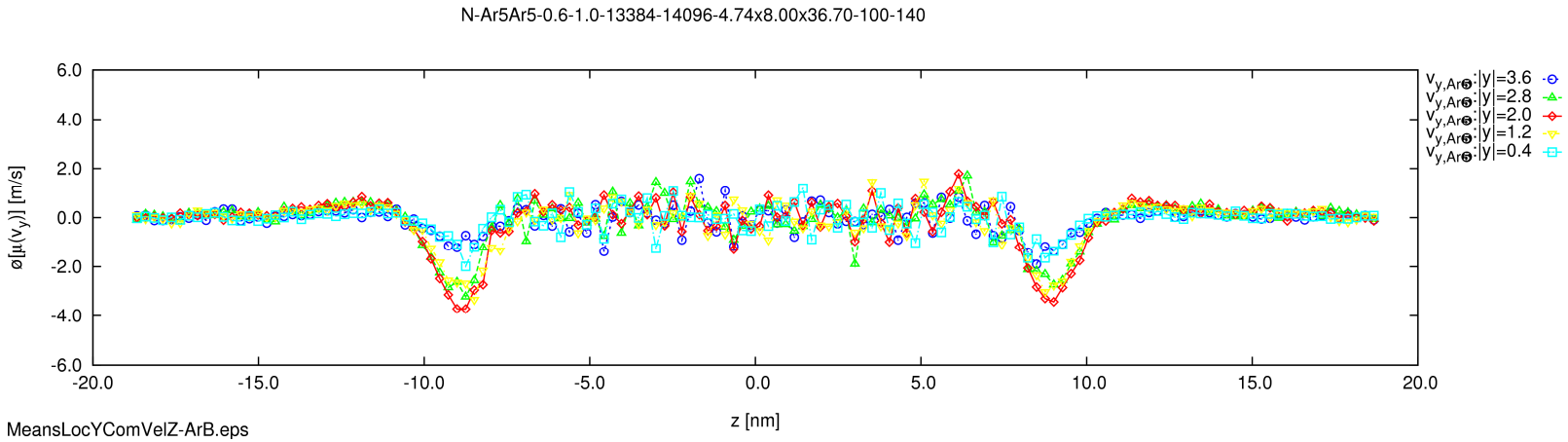
MeansLocYZComVelYZ-ArA.eps



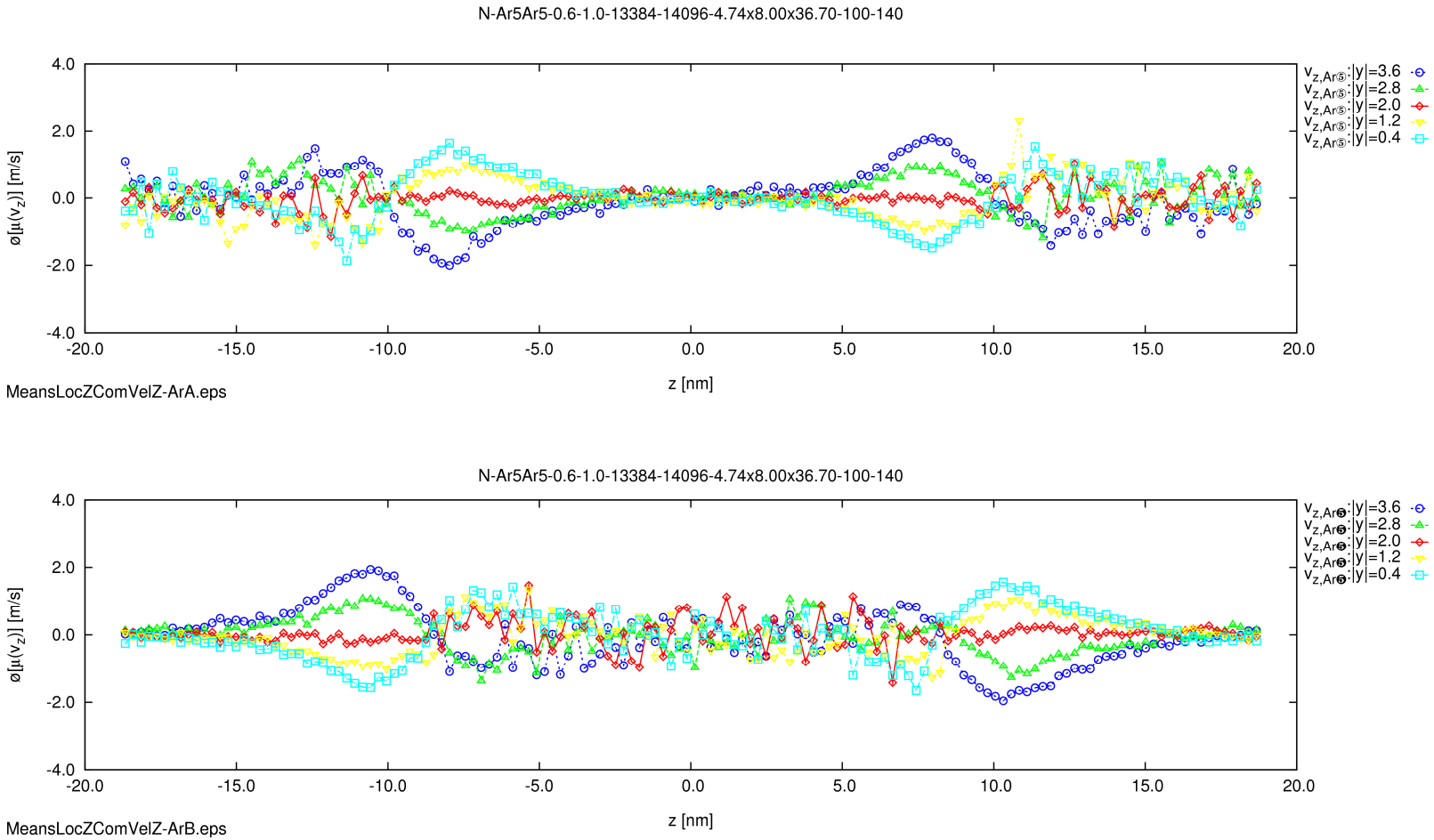
MeansLocYZComVelYZ-ArB.eps



MeansLocYComVelZ-ArA.eps

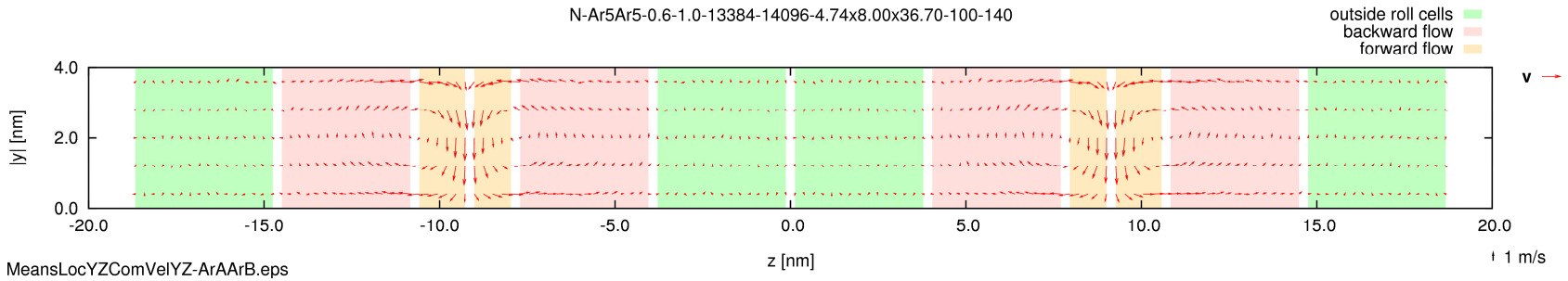


MeansLocYComVelZ-ArB.eps

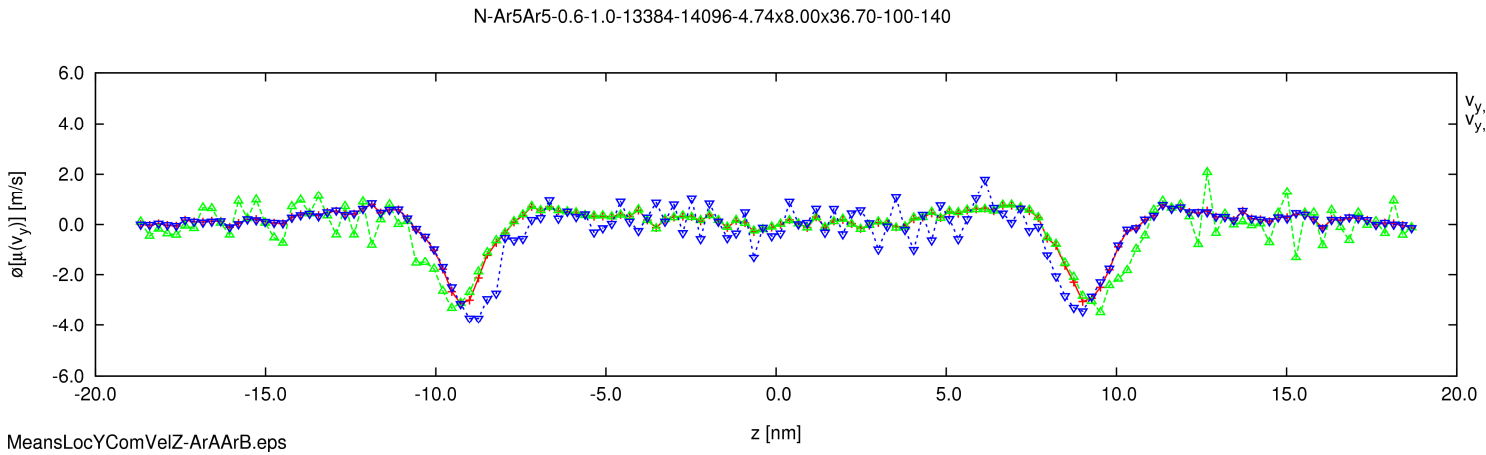


b) Homophasic nonequilibrium interfacial system; here N-Ar5Ar5-0.6-1.0-13384-14096-4.74x8.00x37.6-100-140

Figure 59 Particle specific com velocities in selected nonequilibrium one-phase and interfacial systems



MeansLocYZComVelYZ-ArAArB.eps



MeansLocYComVelZ-ArAArB.eps

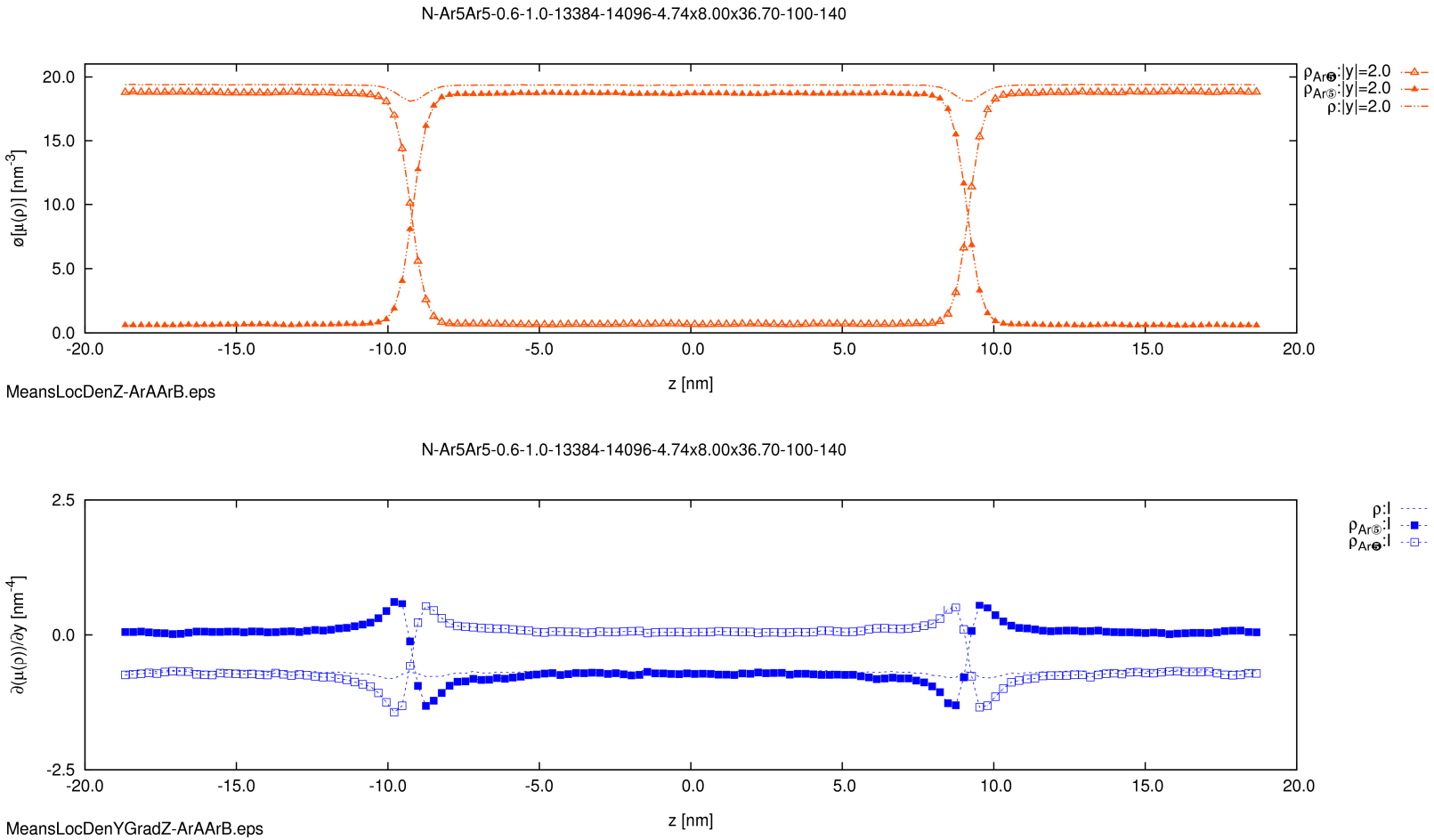
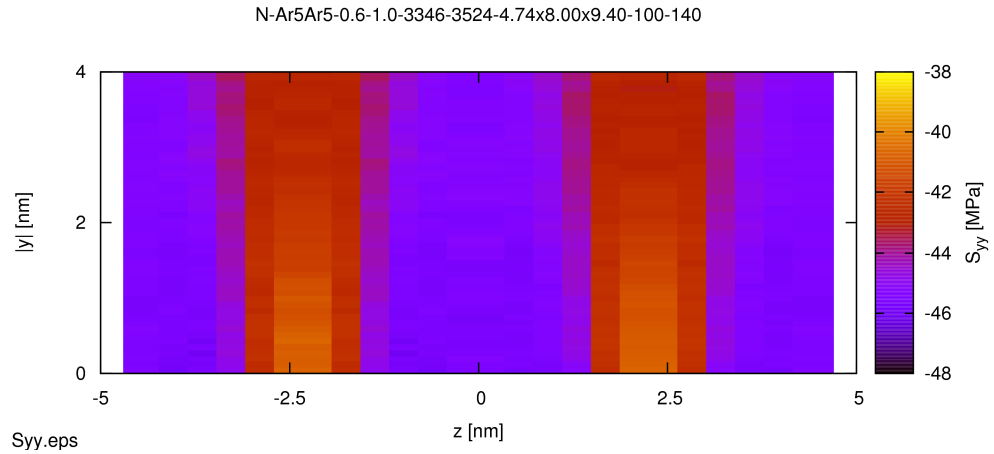
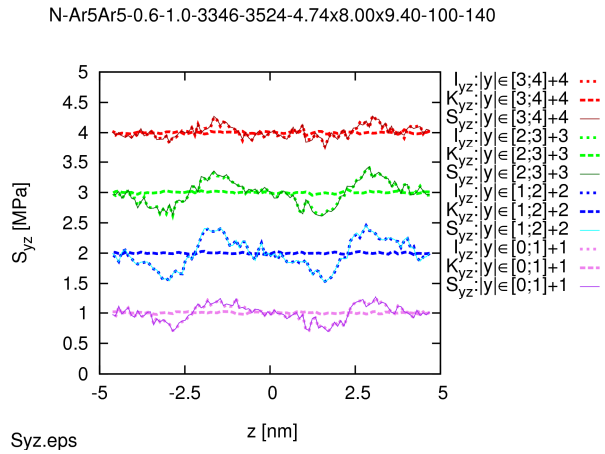


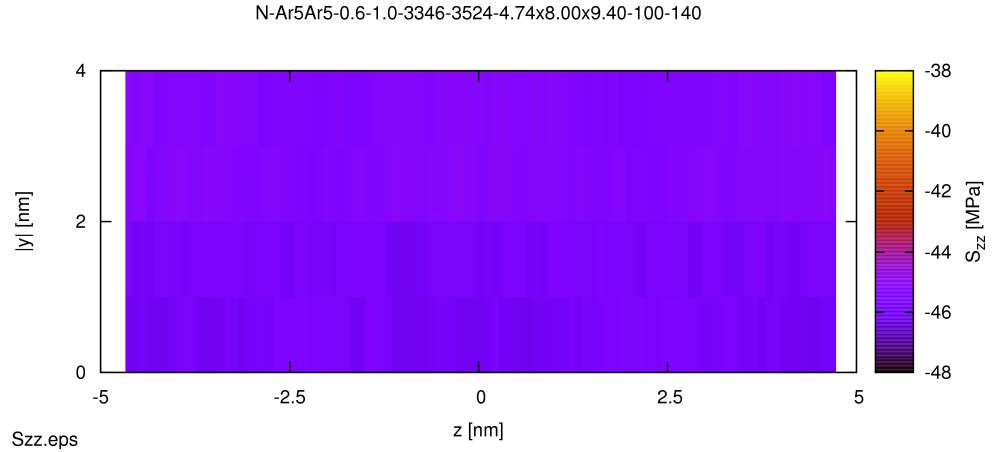
Figure 60 Relation between the central particle specific com *y*-velocities, densities and density *y*-gradients at the centres between the thermostated regions in a homophasic nonequilibrium interfacial system
here N-Ar5Ar5-0.6-1.0-13384-14096-4.74x8.00x37.6-100-140



a) Normal stresses, S_{yy}



b) Shear stresses, S_{yz}



c) Normal stresses, S_{zz}

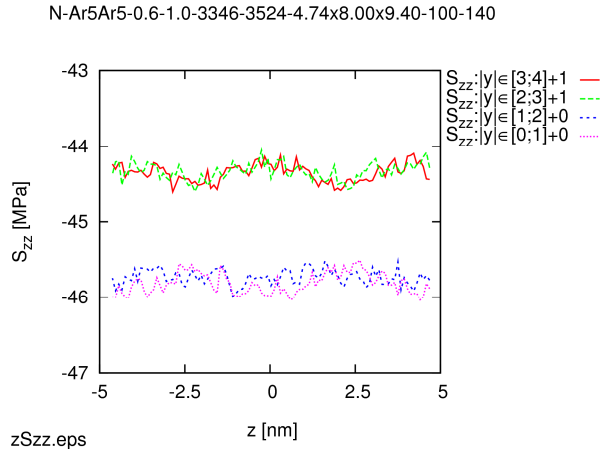


Figure 61 Distributions of selected stress tensor elements using the first homophasic nonequilibrium interfacial system as an example N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140

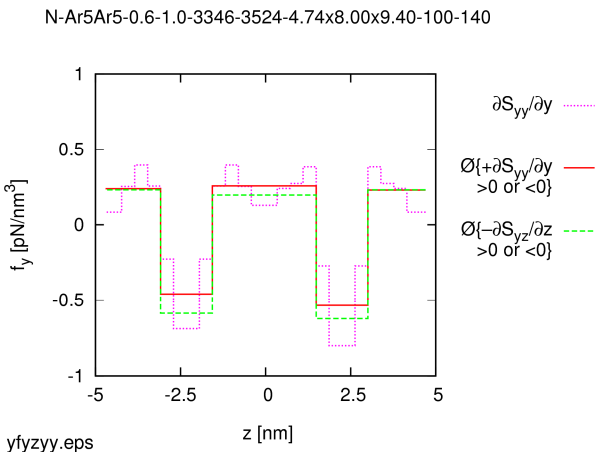


Figure 62 **Comparison of the local volume *y*-forces obtained from the normal stresses, S_{yy}, and from the shear stresses, S_{yz}, in the first homophasic nonequilibrium interfacial system N-Ar5Ar5-0.6-1.0-3346-3524-4.74x8.00x9.40-100-140; The graph shows additionally the *y*-forces from the normal stresses over the same regions as those from the shear stresses to make the similarity more easy to read.**

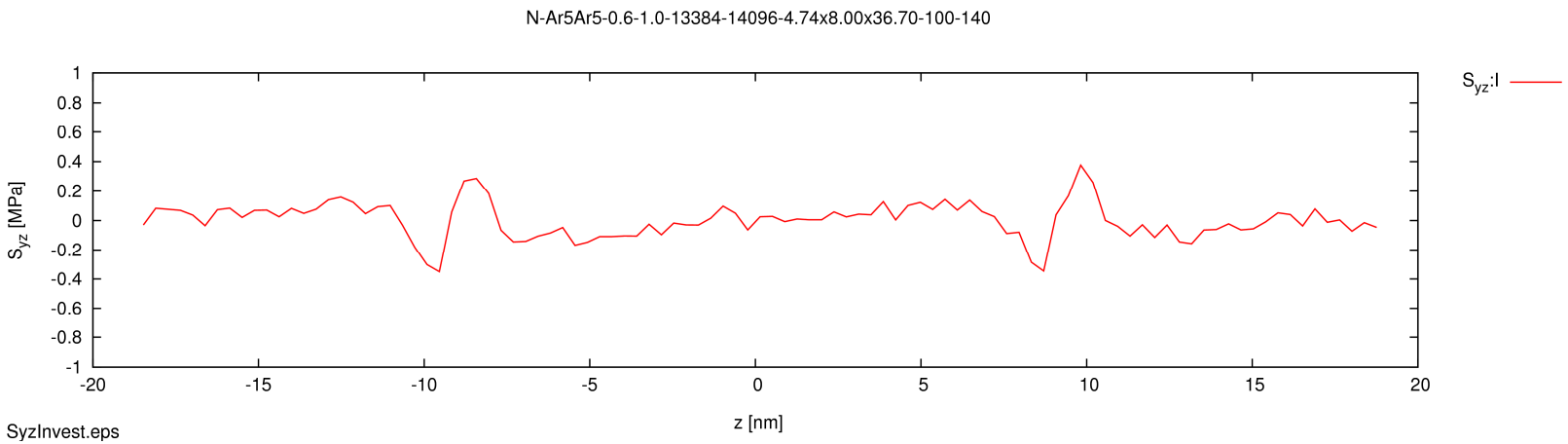
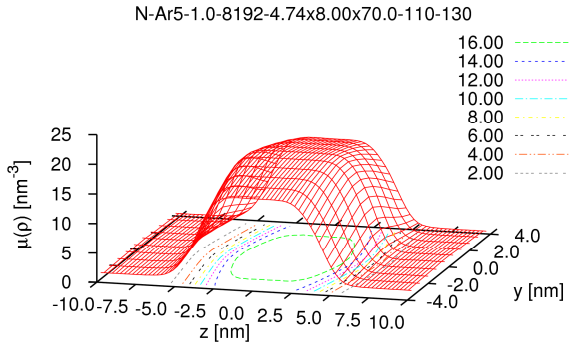
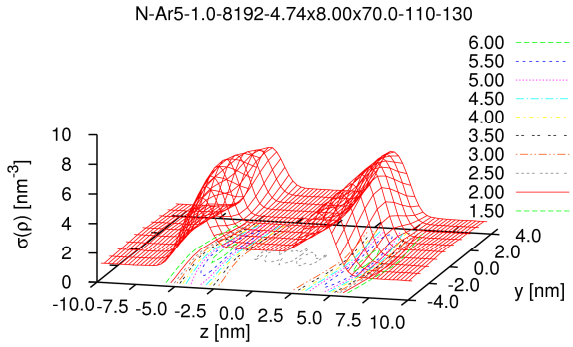


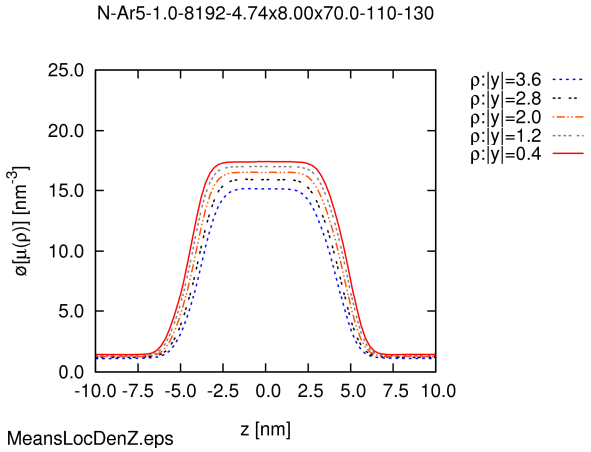
Figure 63 **Shear stresses, *Syz*, as function of z in the nonequilibrium interfacial system, N-Ar5Ar5-0.6-1.0-13384-14096-4.74x8.00x37.6-100-140**



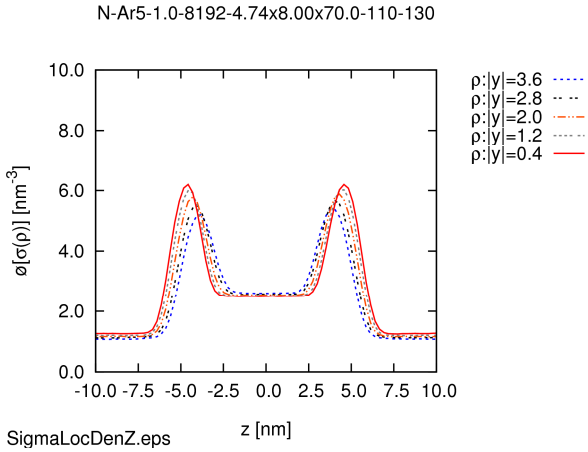
MeansLocDenOverallYZ.eps



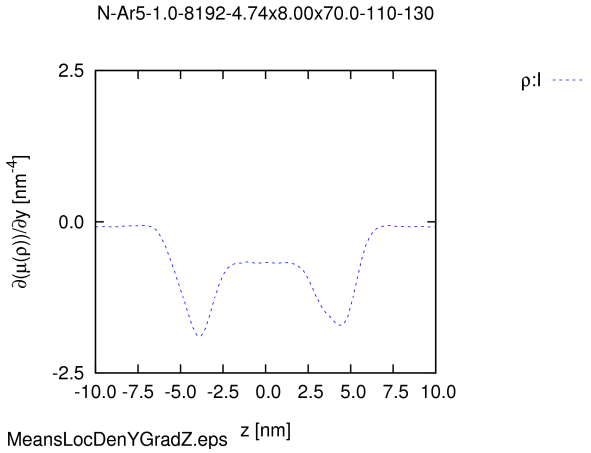
SigmaLocDenOverallYZ.eps



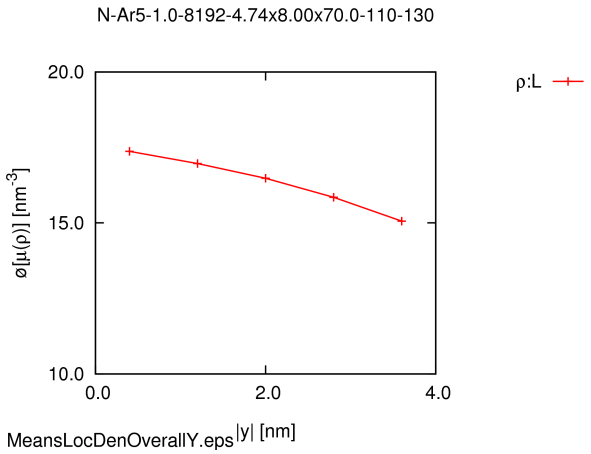
MeansLocDenZ.eps



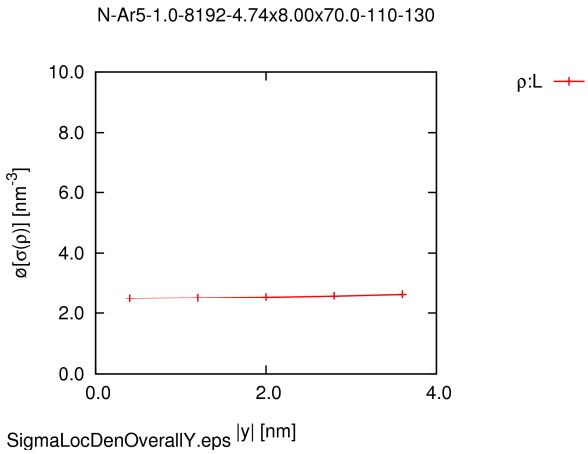
SigmaLocDenZ.eps



MeansLocDenYGradZ.eps

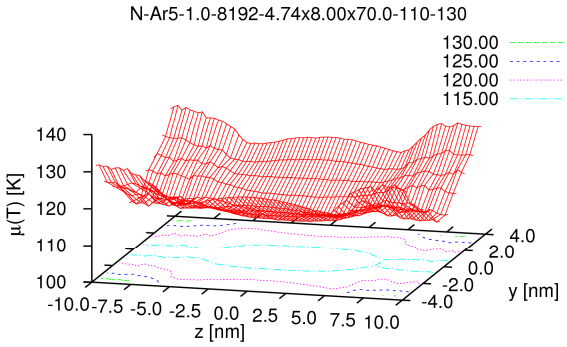


MeansLocDenOverallY.eps

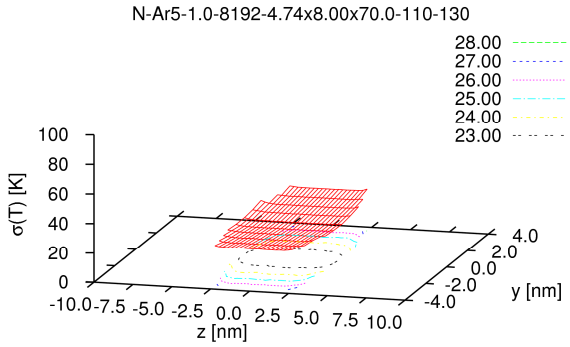


SigmaLocDenOverallY.eps

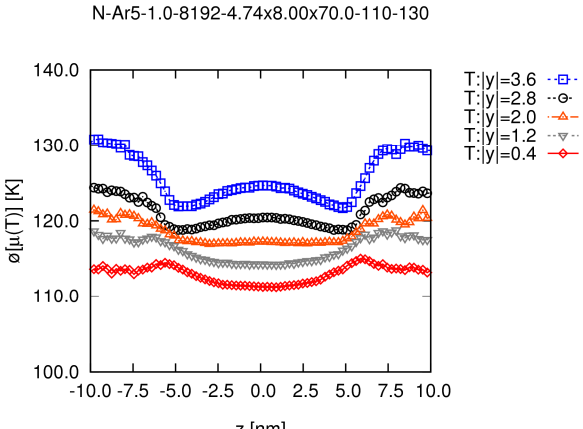
a) Densities



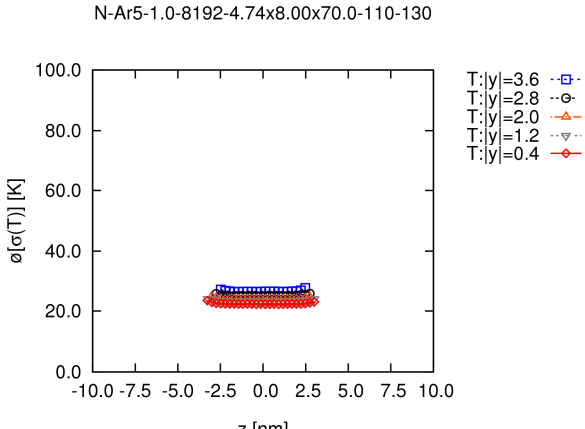
MeansLocTempYZ.eps



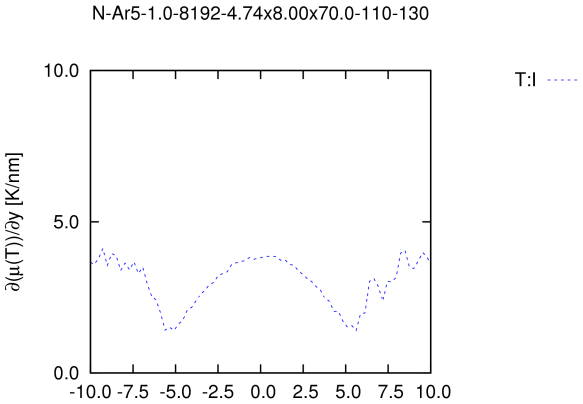
SigmaLocTempYZ.eps



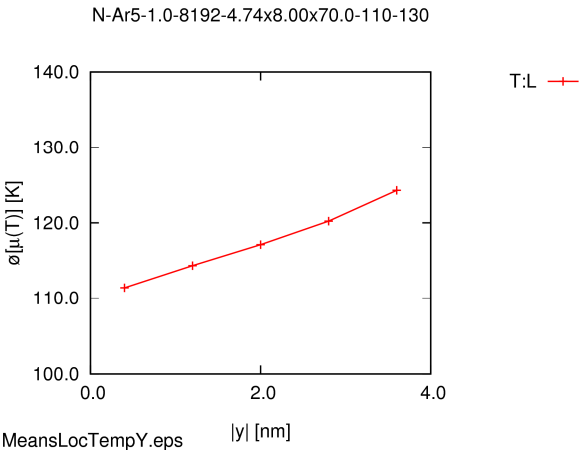
MeansLocTempZ.eps



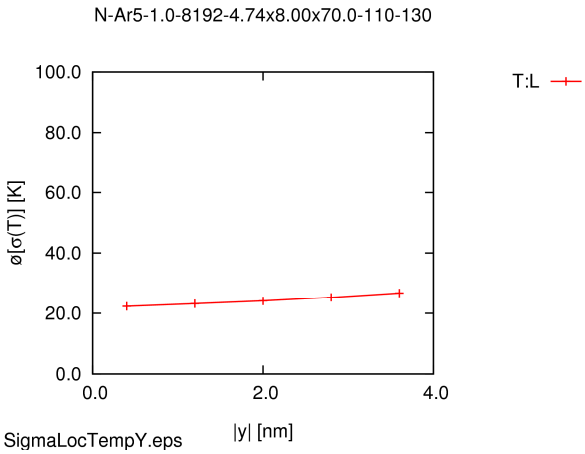
SigmaLocTempZ.eps



MeansLocTempYGradZ.eps

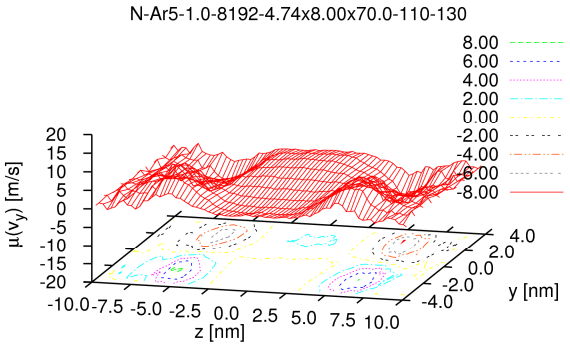


MeansLocTempY.eps

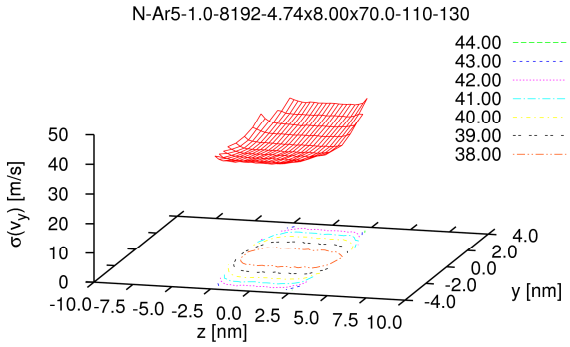


SigmaLocTempY.eps

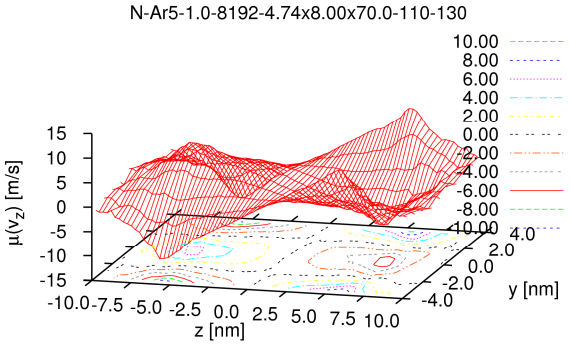
b) Temperatures



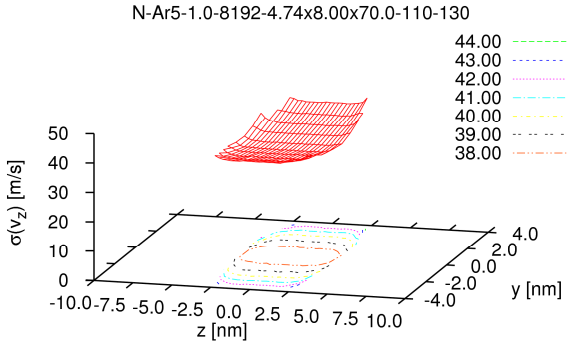
MeansLocYComVelYZ.eps



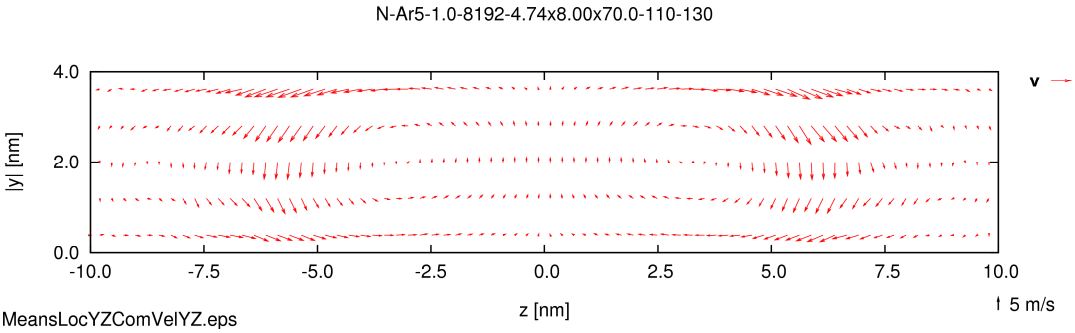
SigmaLocYComVelYZ.eps



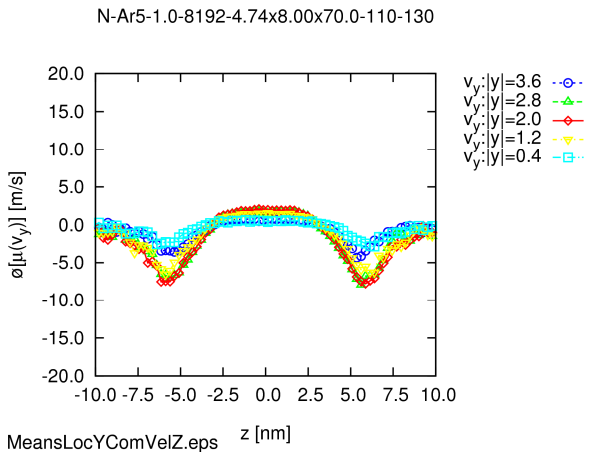
MeansLocZComVelYZ.eps



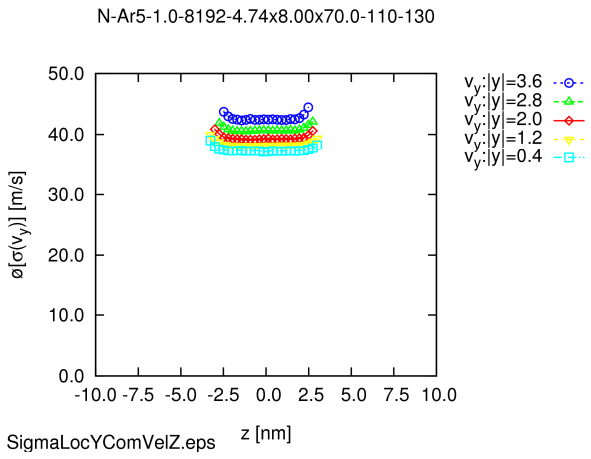
SigmaLocZComVelYZ.eps



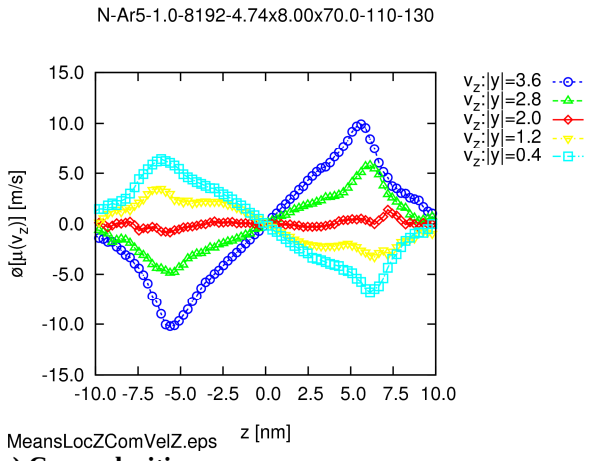
MeansLocYZComVelYZ.eps



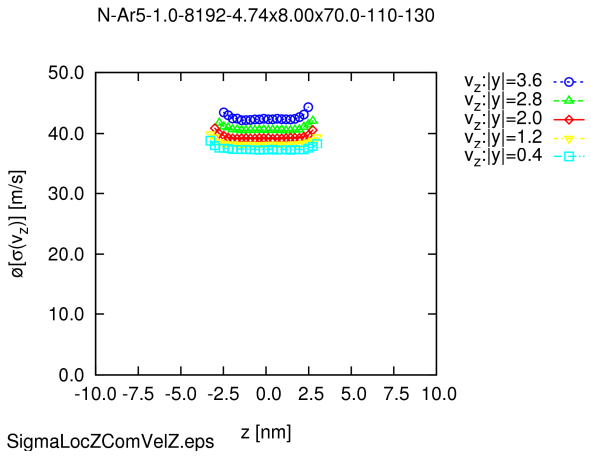
MeansLocYComVelZ.eps



SigmaLocYComVelZ.eps

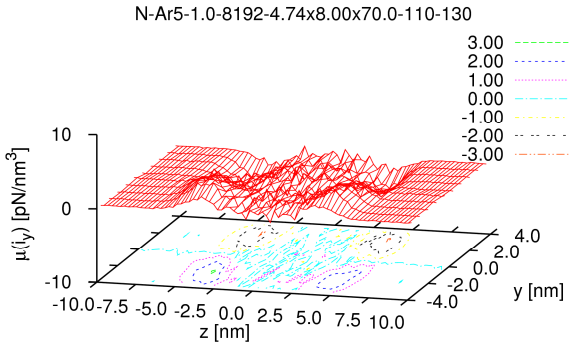


MeansLocZComVelZ.eps

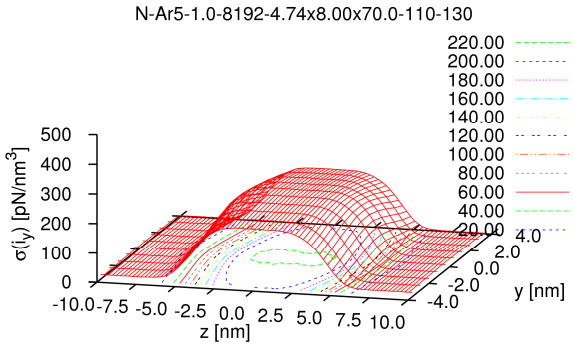


SigmaLocZComVelZ.eps

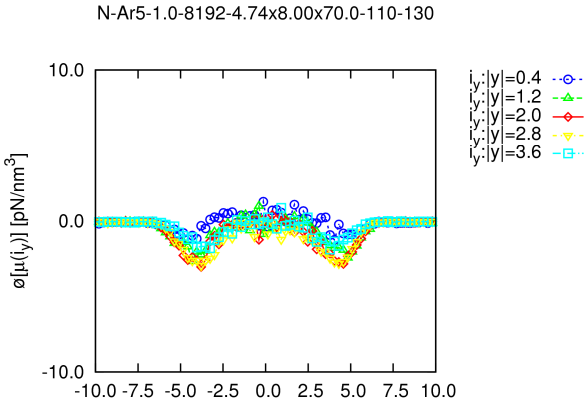
c) Com velocities



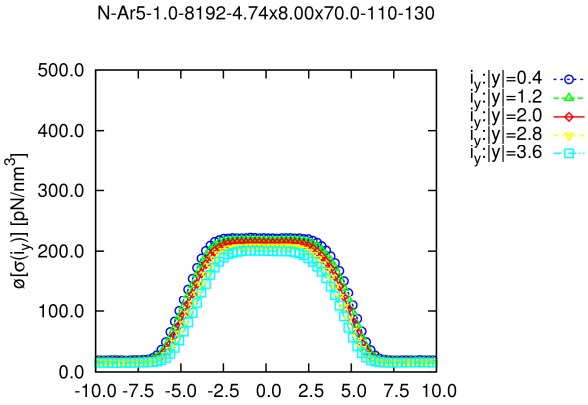
MeansLocYVolForceYZ.eps



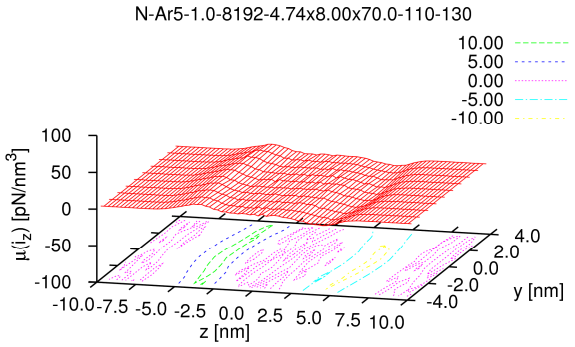
SigmaLocYVolForceYZ.eps



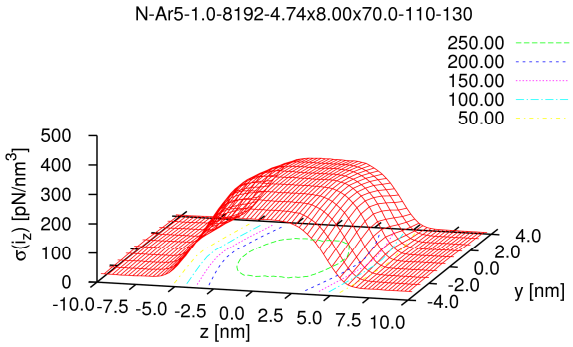
MeansLocYVolForceZ.eps



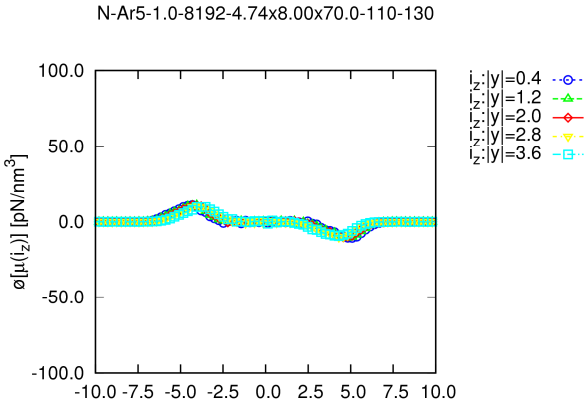
SigmaLocYVolForceZ.eps



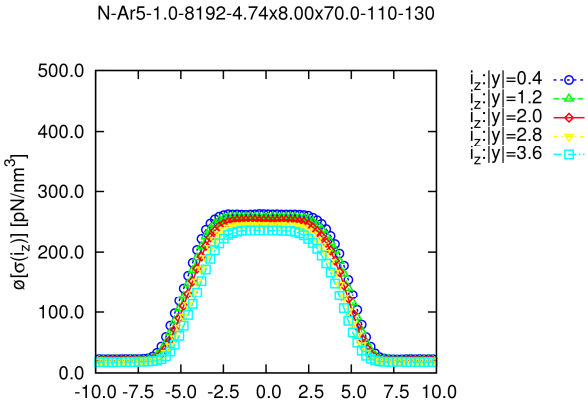
MeansLocZVolForceYZ.eps



SigmaLocZVolForceYZ.eps

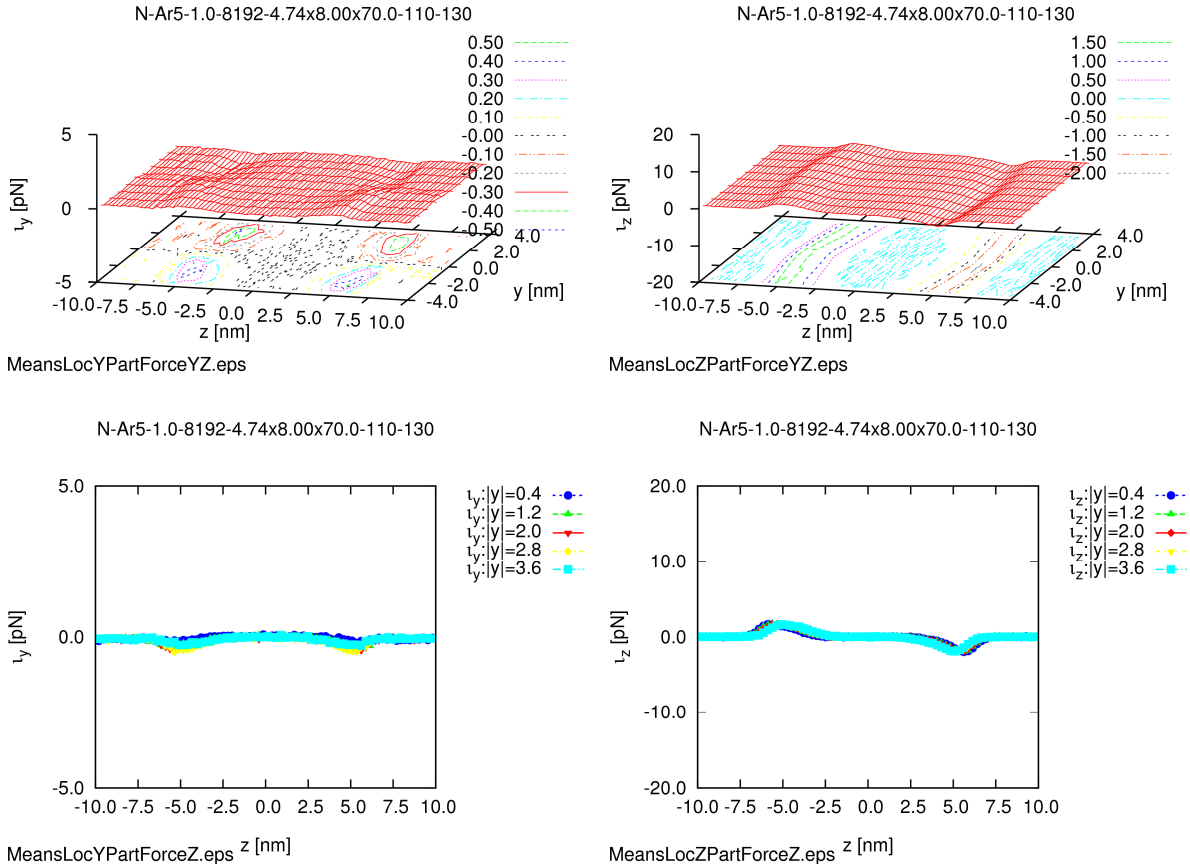


MeansLocZVolForceZ.eps

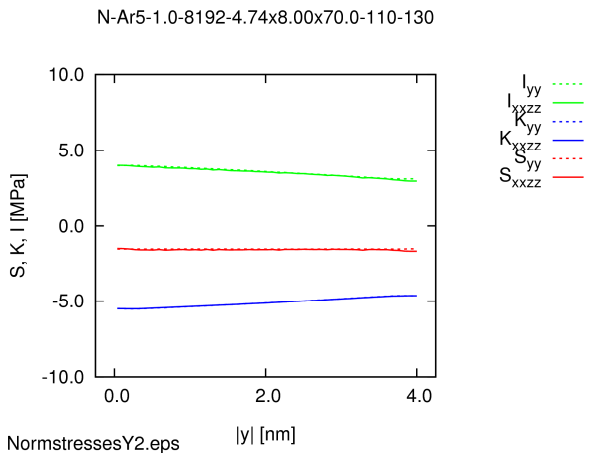


SigmaLocZVolForceZ.eps

d) Volume forces

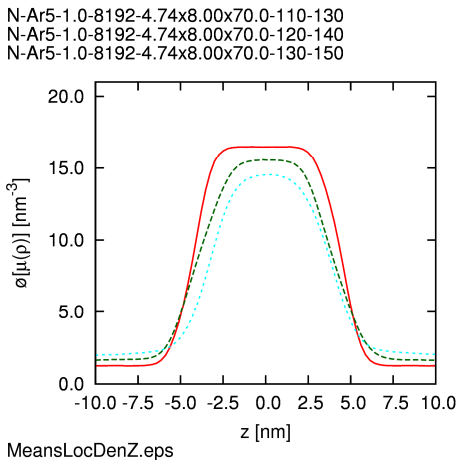


e) Particle forces

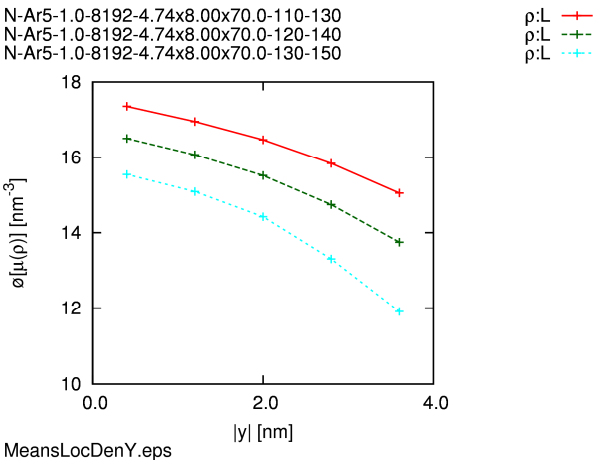


f) Normal Stresses

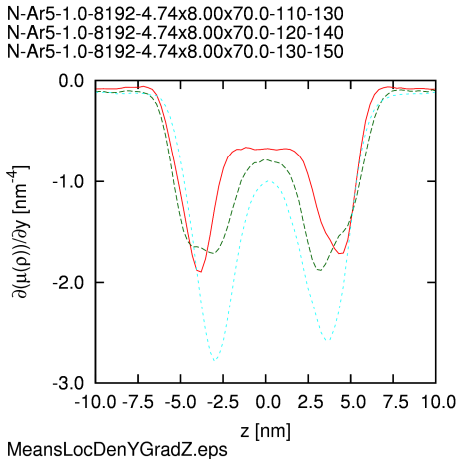
Figure 64 Local densities in the unary nonequilibrium liquid-vapour system N-Ar5-1.0-8192-4.74x8.00x70.0-110-130



MeansLocDenZ.eps

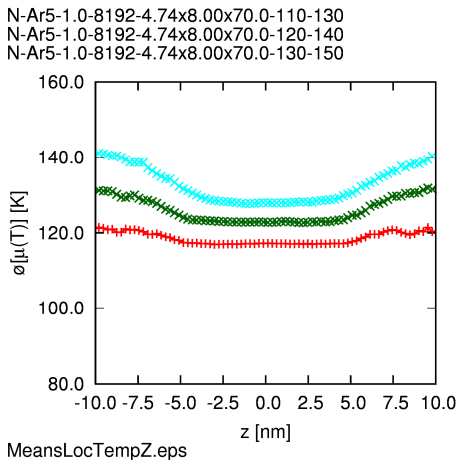


MeansLocDenY.eps

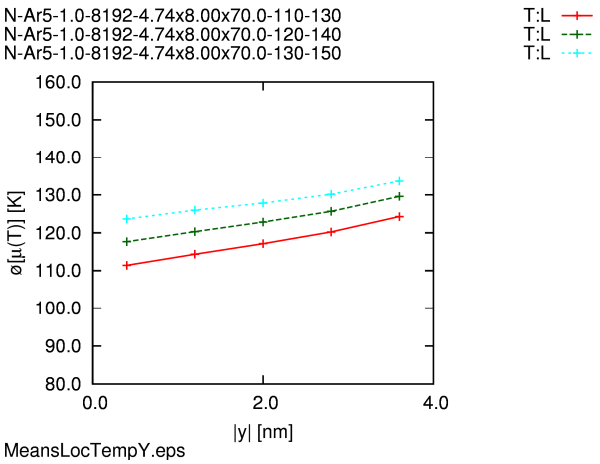


MeansLocDenYGradZ.eps

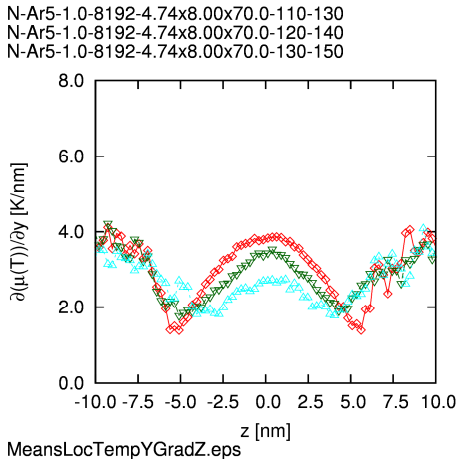
a) Densities



MeansLocTempZ.eps

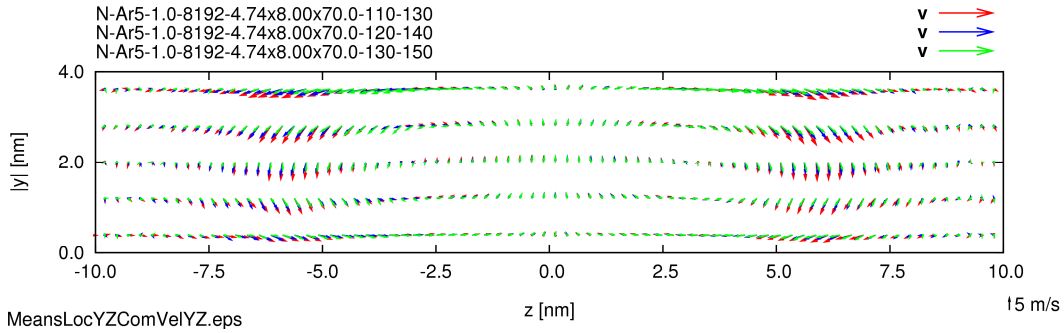


MeansLocTempY.eps

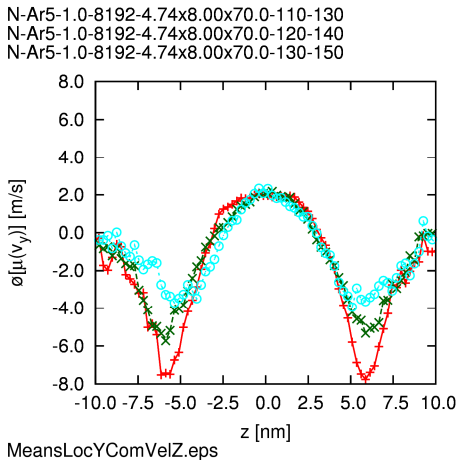


MeansLocTempYGradZ.eps

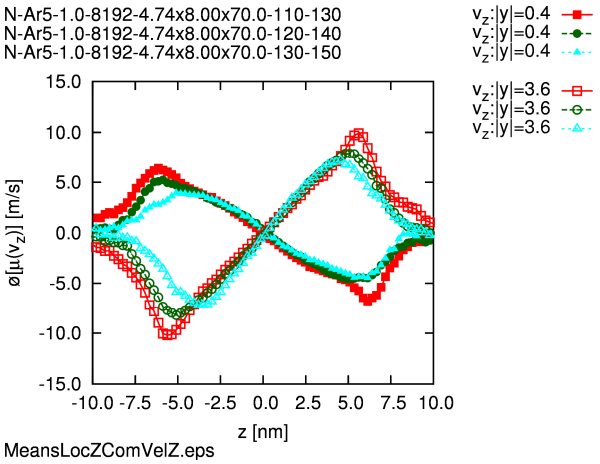
b) Temperatures



MeansLocYZComVelYZ.eps

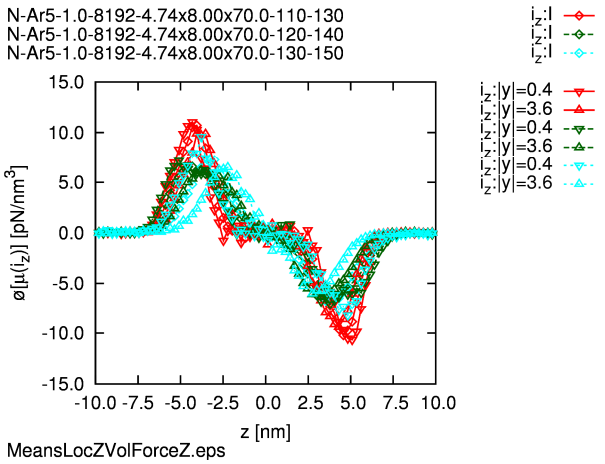


MeansLocYComVelZ.eps



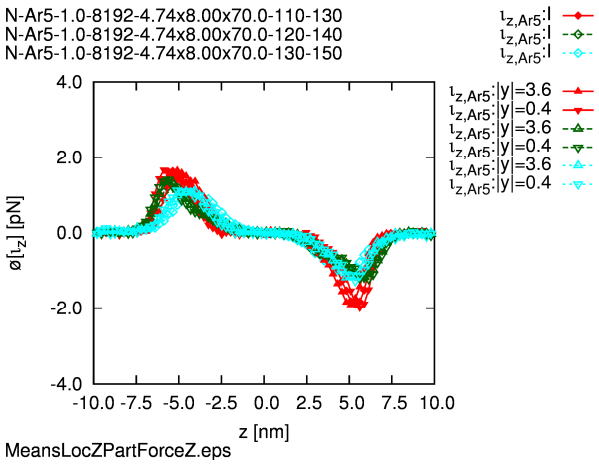
MeansLocZComVelZ.eps

c) Com velocities



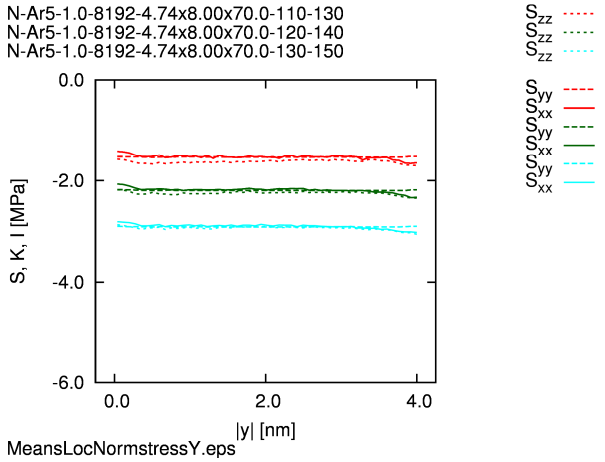
MeansLocZVolForceZ.eps

d) Volume forces



MeansLocZPartForceZ.eps

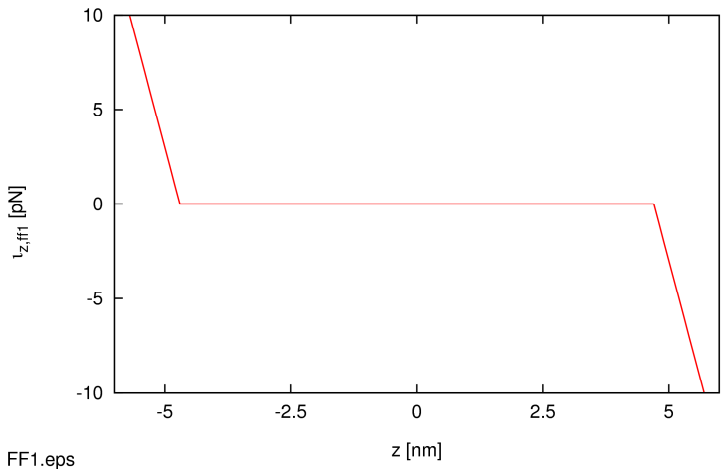
e) Particle forces



MeansLocNormstressY.eps

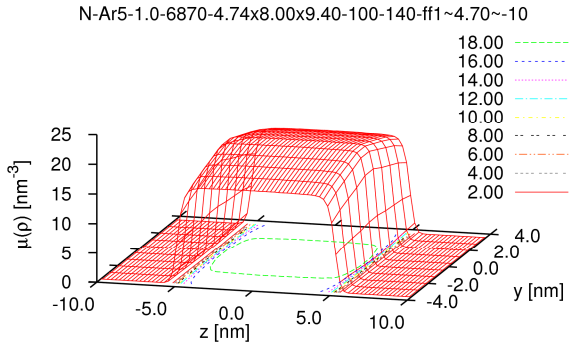
f) Normal stresses

Figure 65 Comparison of the local observables in several unary nonequilibrium liquid-vapour systems with different average system temperatures N-Ar5-1.0-8192-4.74x8.00x70.0-110-130, N-Ar5-1.0-8192-4.74x8.00x70.0-120-140, and N-Ar5-1.0-8192-4.74x8.00x70.0-130-150

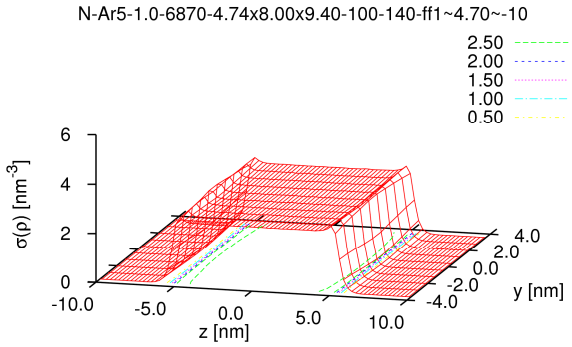


FF1.eps

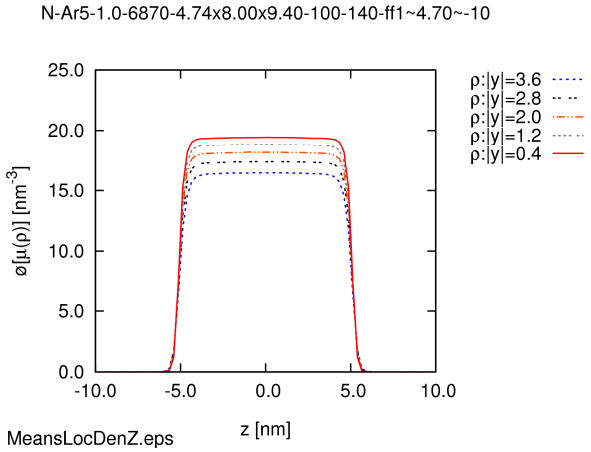
Figure 66 Purely repulsive external force field of the type "ff1" in the first solid-liquid interfacial system N-Ar5-1.0-6870-4.74x8.00x50.0-100-140-ff1~4.70~−10



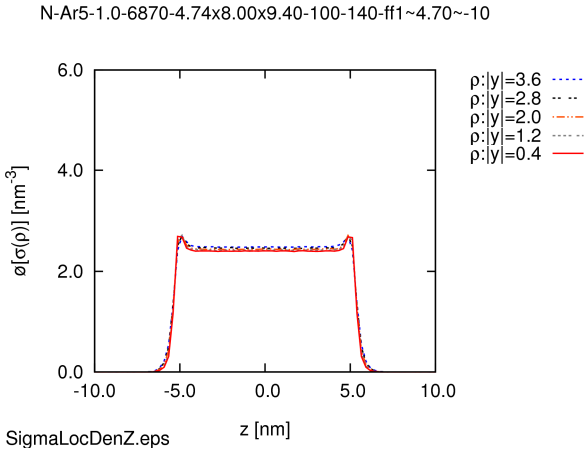
MeansLocDenOverallYZ.eps



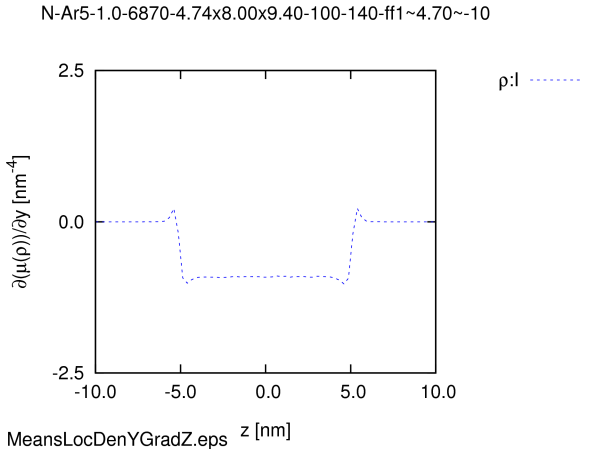
SigmaLocDenOverallYZ.eps



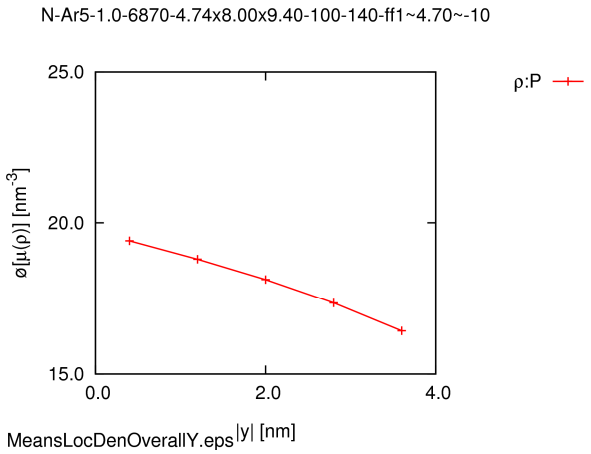
MeansLocDenZ.eps



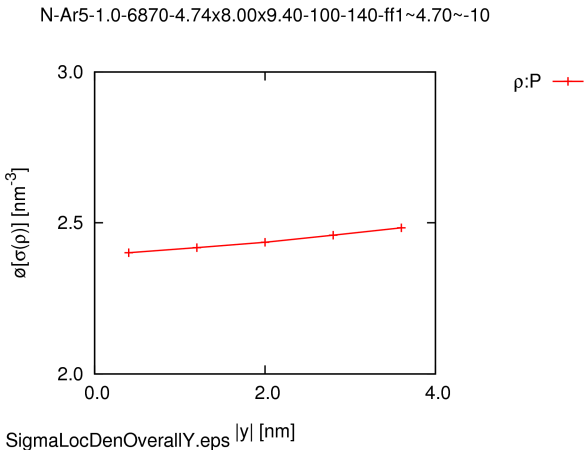
SigmaLocDenZ.eps



MeansLocDenYGradZ.eps

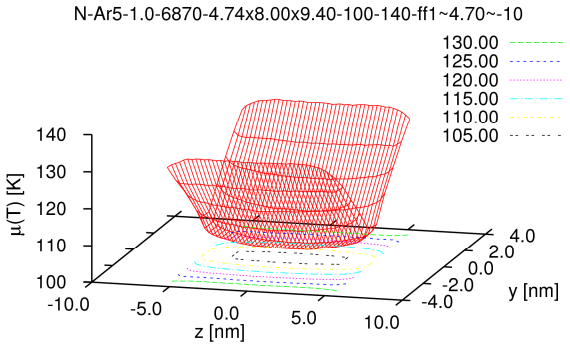


MeansLocDenOverallY.eps

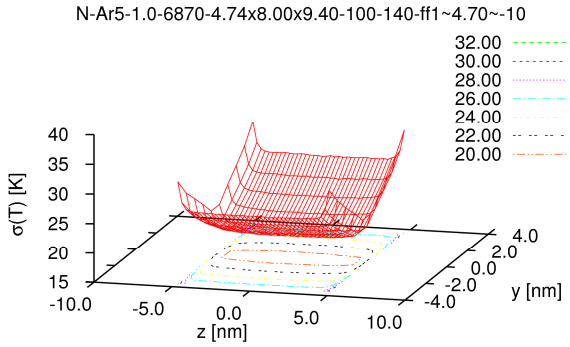


SigmaLocDenOverallY.eps

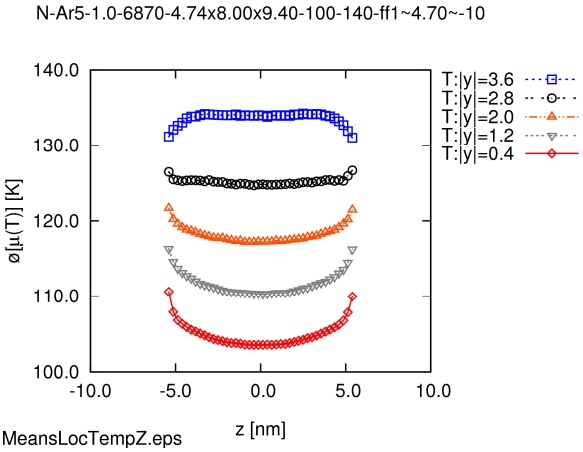
a) Densities



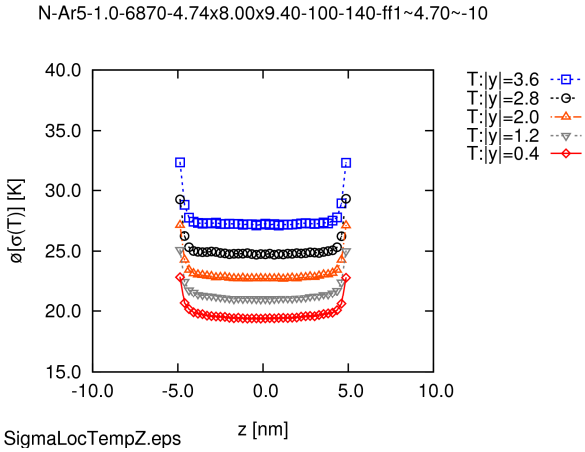
MeansLocTempYZ.eps



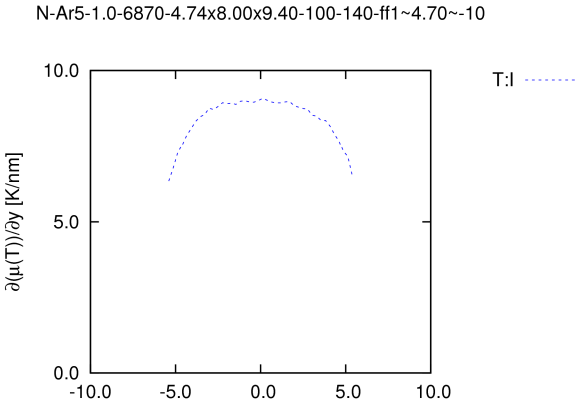
SigmaLocTempYZ.eps



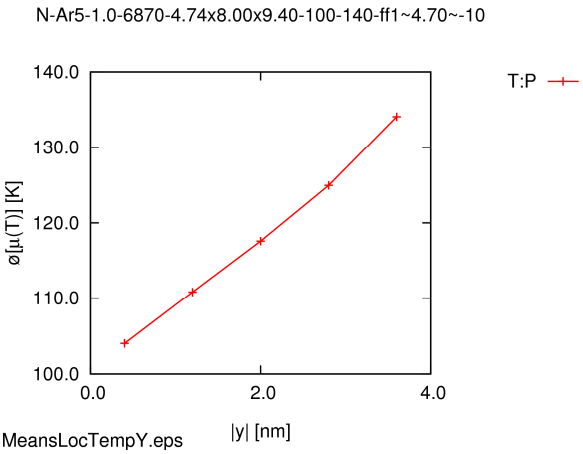
MeansLocTempZ.eps



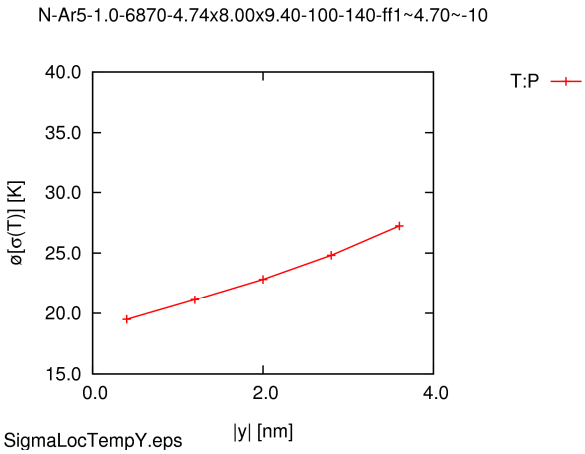
SigmaLocTempZ.eps



MeansLocTempYGradZ.eps

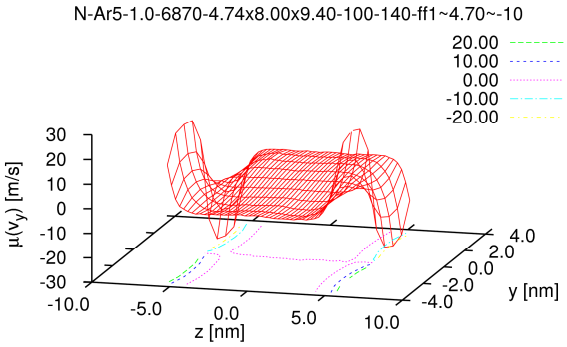


MeansLocTempY.eps

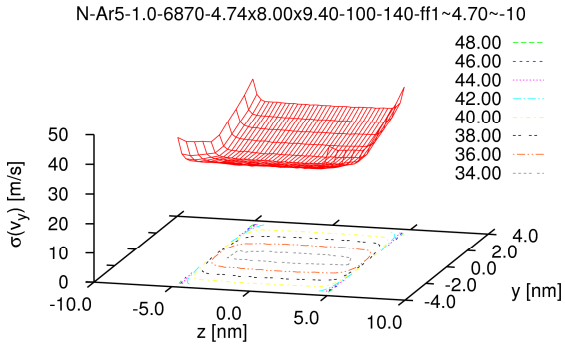


SigmaLocTempY.eps

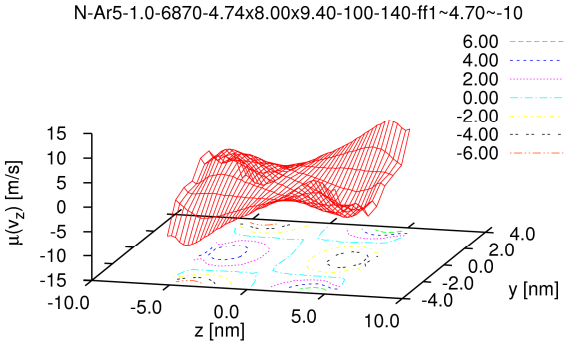
b) Temperatures



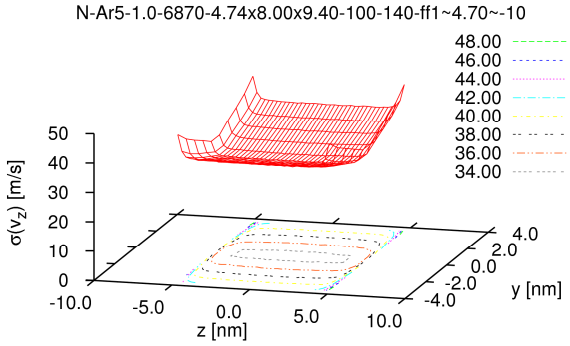
MeansLocYComVelYZ.eps



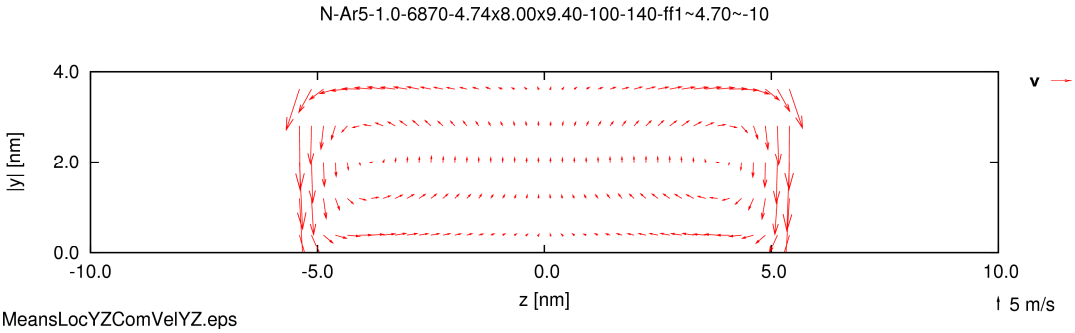
SigmaLocYComVelYZ.eps



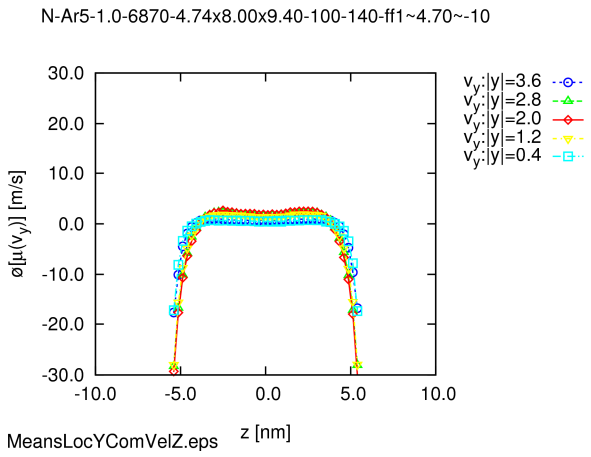
MeansLocZComVelYZ.eps



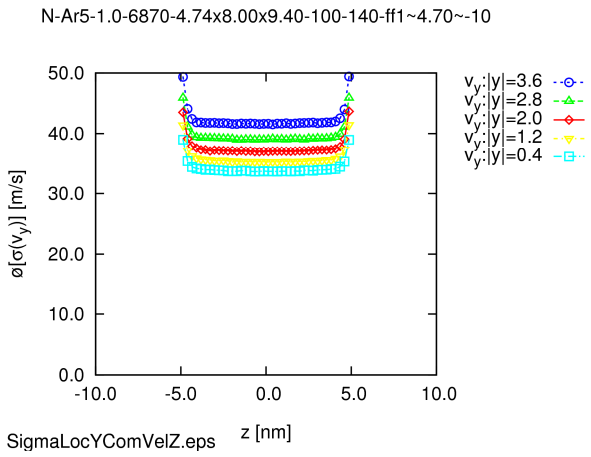
SigmaLocZComVelYZ.eps



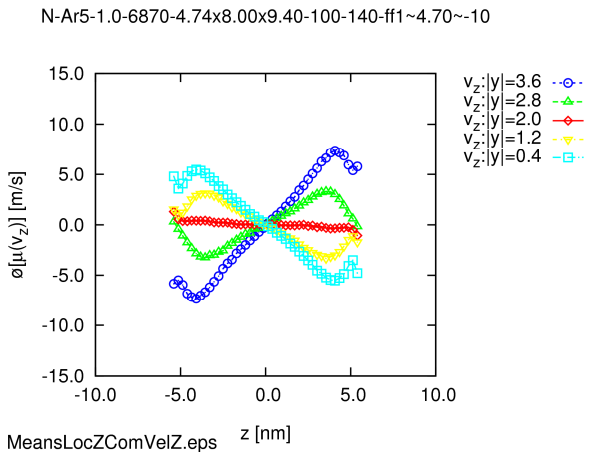
MeansLocYZComVelYZ.eps



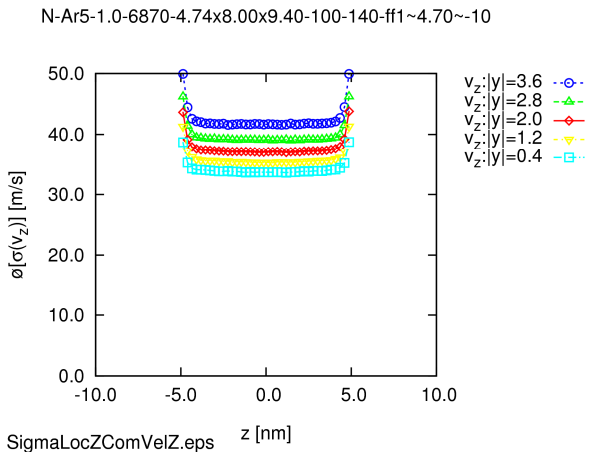
MeansLocYComVelZ.eps



SigmaLocYComVelZ.eps

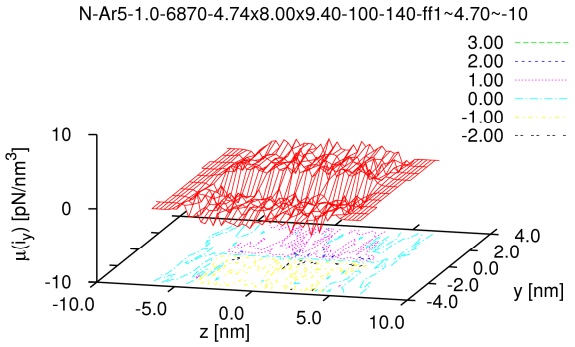


MeansLocZComVelZ.eps

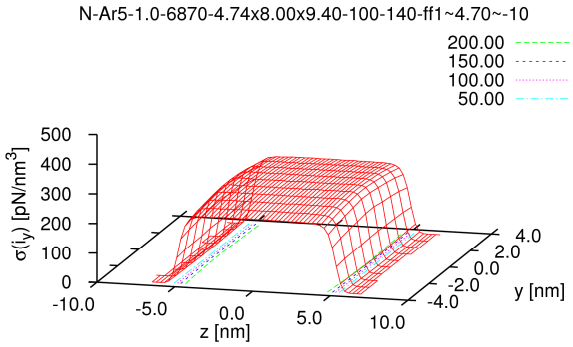


SigmaLocZComVelZ.eps

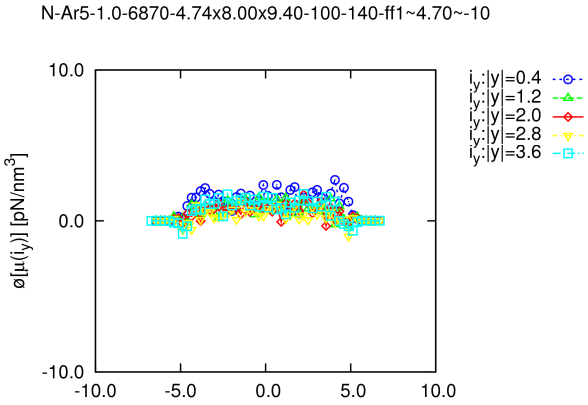
c) Com velocities



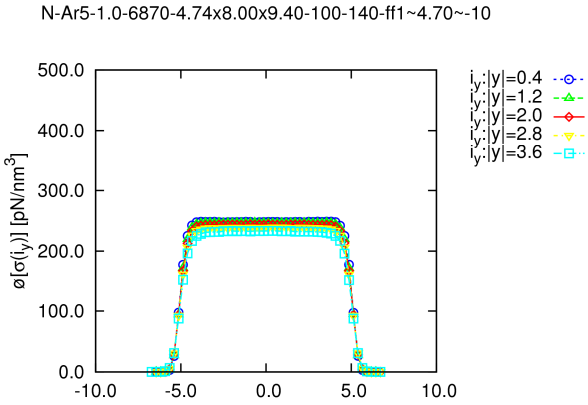
MeansLocYVolForceYZ.eps



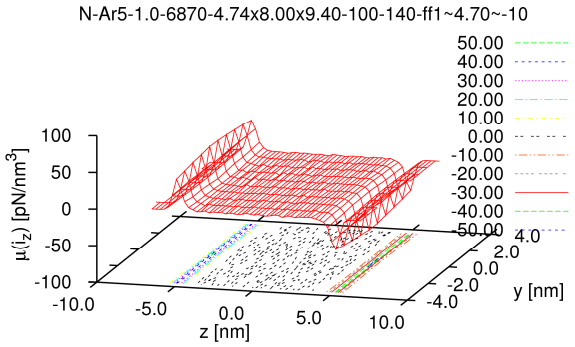
SigmaLocYVolForceYZ.eps



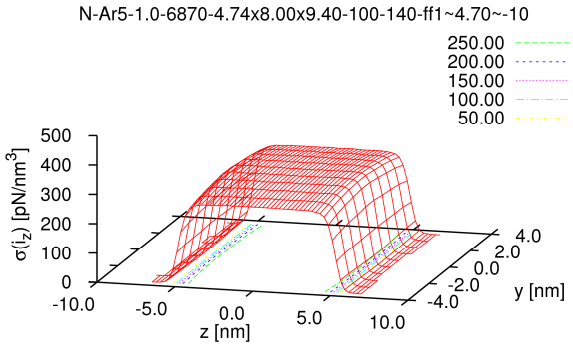
MeansLocYVolForceZ.eps



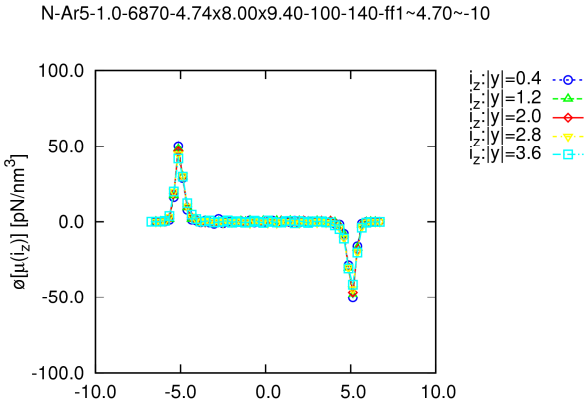
SigmaLocYVolForceZ.eps



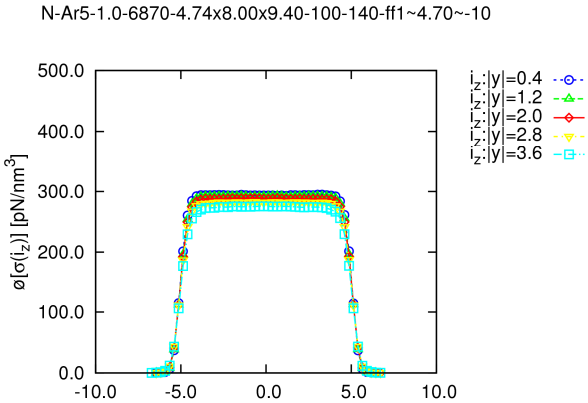
MeansLocZVolForceYZ.eps



SigmaLocZVolForceYZ.eps

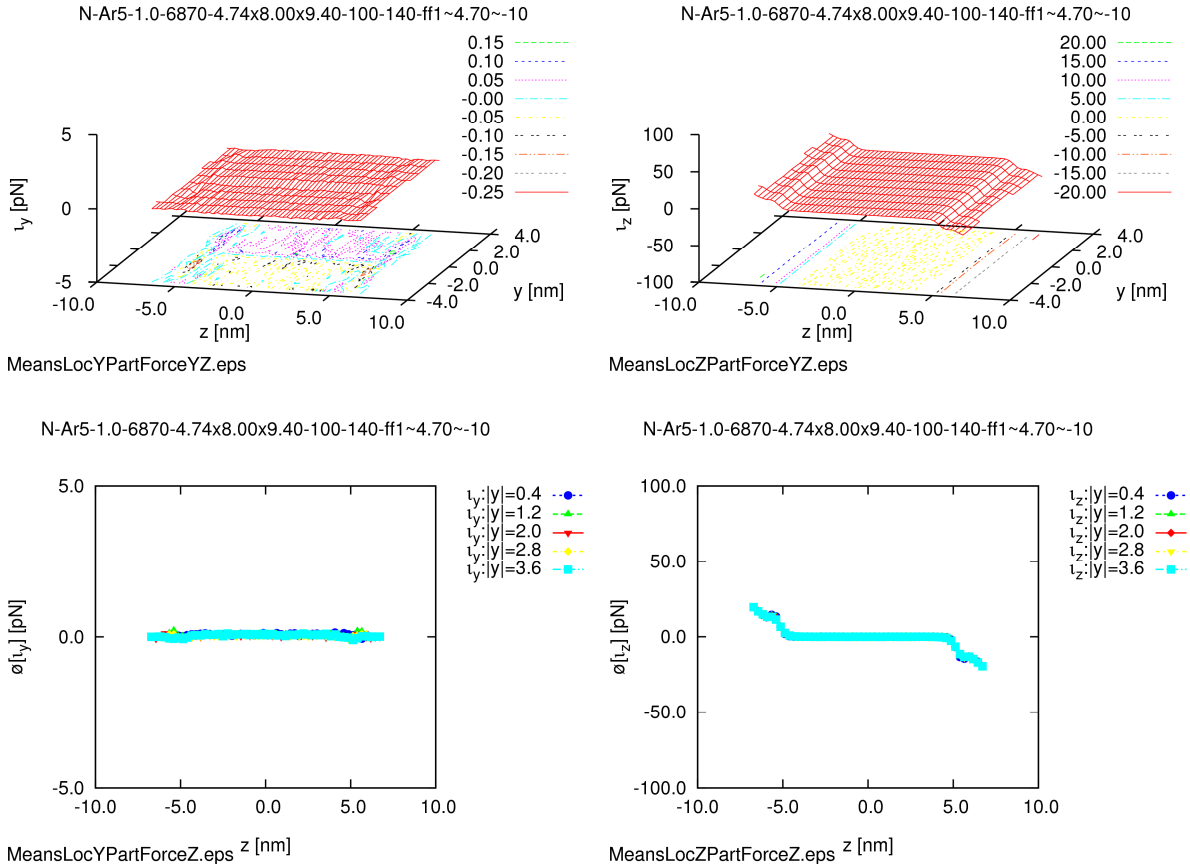


MeansLocZVolForceZ.eps



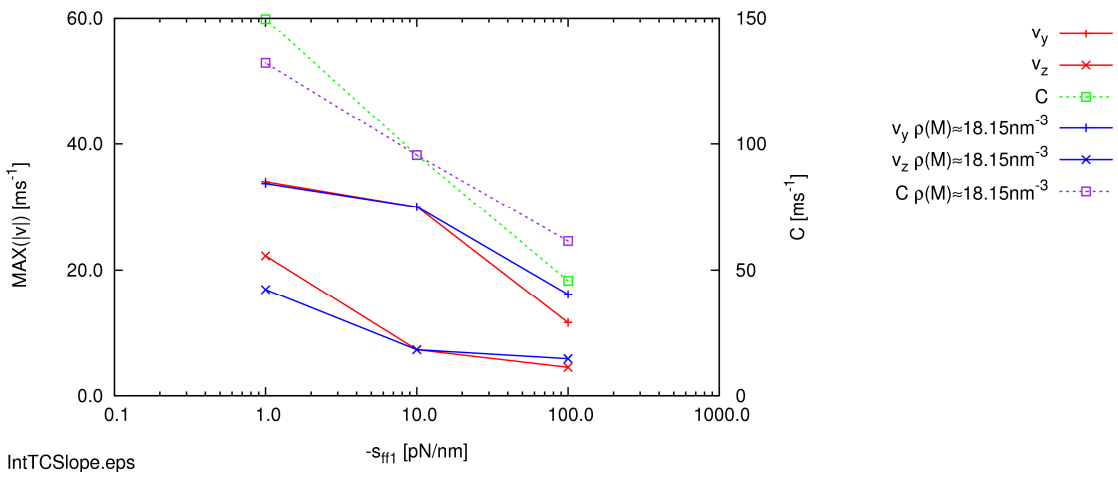
SigmaLocZVolForceZ.eps

d) Volume forces



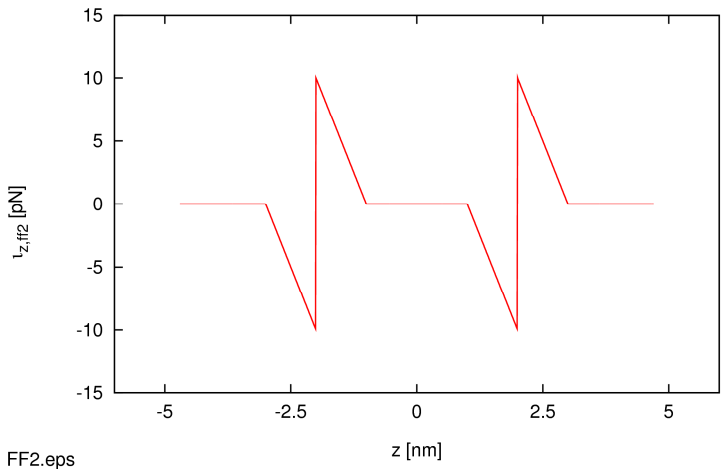
e) Particle forces

Figure 67 Local observables in the first solid-liquid interfacial system with a purely repulsive force field of the type "ff1"
N-Ar5-1.0-6870-4.74x8.00x50.0-100-140-ff1~4.70~−10



IntTCSlope.eps

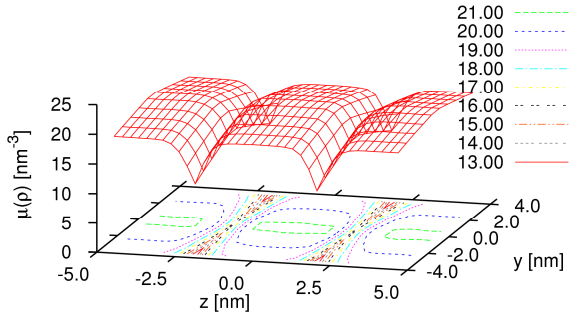
Figure 68 **Intensity of the convection as function of the slope in the first solid-liquid system with an external force field of the type "ff1"**
N-Ar5-1.0-6870-4.74x8.00x50.0-100-140-ff1~4.70~−10



FF2.eps

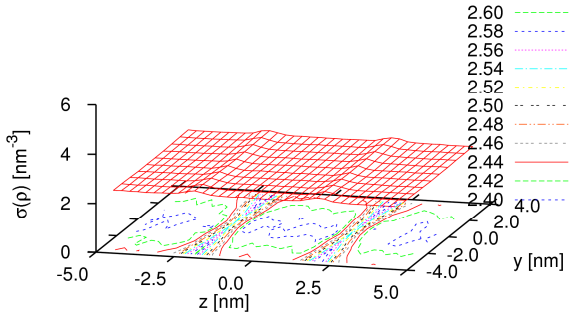
Figure 69 **Repulsive external fore field of the type "ff2" in the unary nonequilibrium interfacial reference system**
N-Ar5-1.0-6870-4.74x8.00x9.40-100-140-ff2~1.0~3.0~10

N-Ar5-0.6-1.0-6870-4.74x8.00x9.40-100-140-ff2~1.0~3.0~10



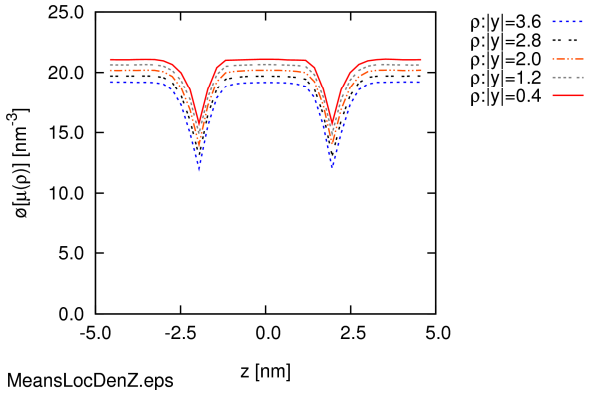
MeansLocDenOverallYZ.eps

N-Ar5-0.6-1.0-6870-4.74x8.00x9.40-100-140-ff2~1.0~3.0~10



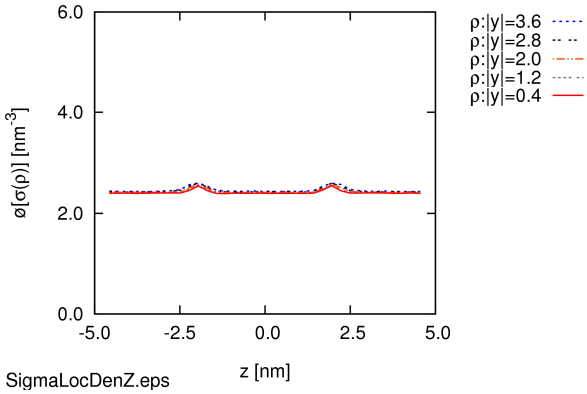
SigmaLocDenOverallYZ.eps

N-Ar5-0.6-1.0-6870-4.74x8.00x9.40-100-140-ff2~1.0~3.0~10



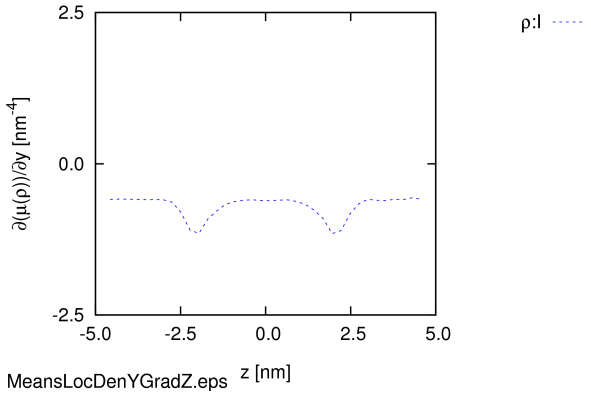
MeansLocDenZ.eps

N-Ar5-0.6-1.0-6870-4.74x8.00x9.40-100-140-ff2~1.0~3.0~10



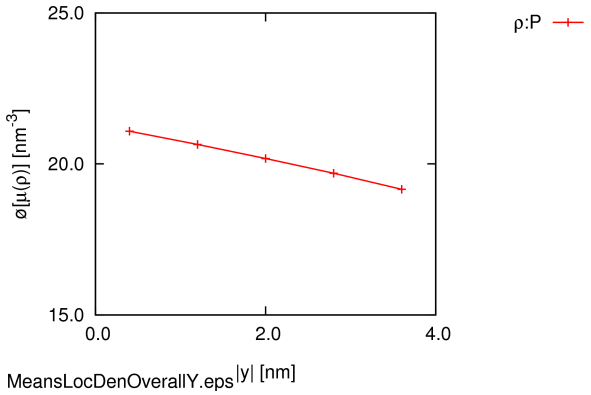
SigmaLocDenZ.eps

N-Ar5-0.6-1.0-6870-4.74x8.00x9.40-100-140-ff2~1.0~3.0~10



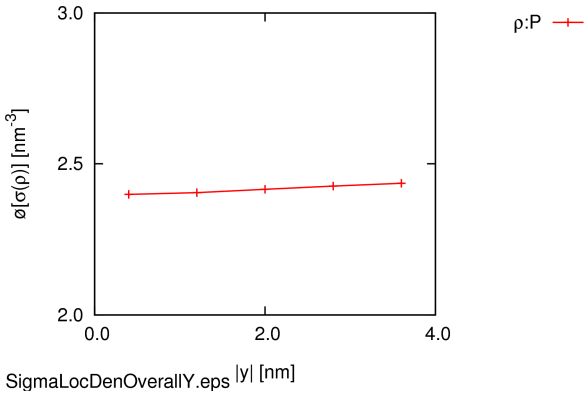
MeansLocDenYGradZ.eps

N-Ar5-0.6-1.0-6870-4.74x8.00x9.40-100-140-ff2~1.0~3.0~10



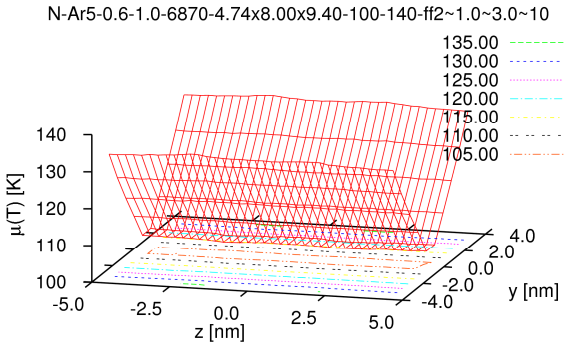
MeansLocDenOverallY.eps

N-Ar5-0.6-1.0-6870-4.74x8.00x9.40-100-140-ff2~1.0~3.0~10

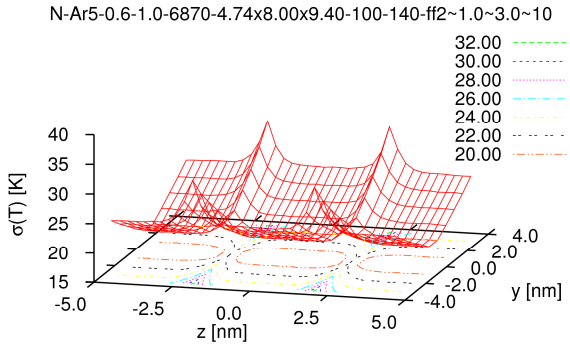


SigmaLocDenOverallY.eps

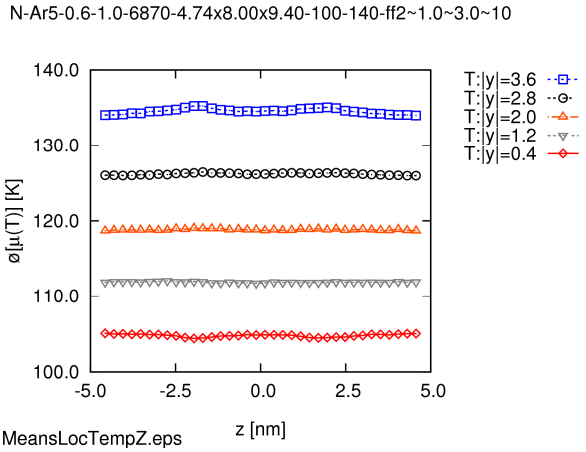
a) Densities



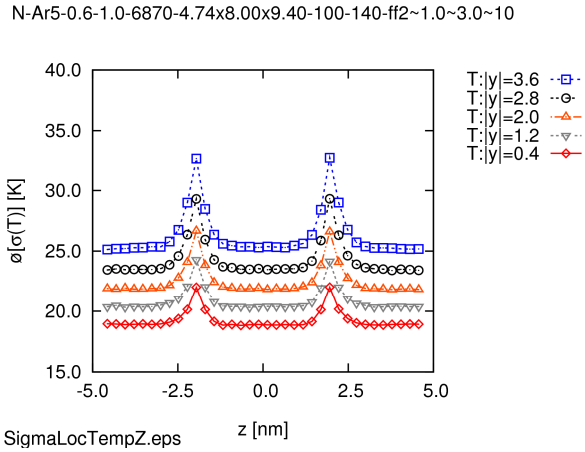
MeansLocTempYZ.eps



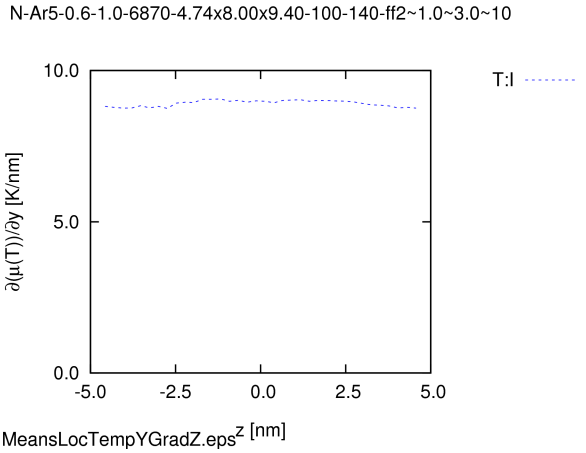
SigmaLocTempYZ.eps



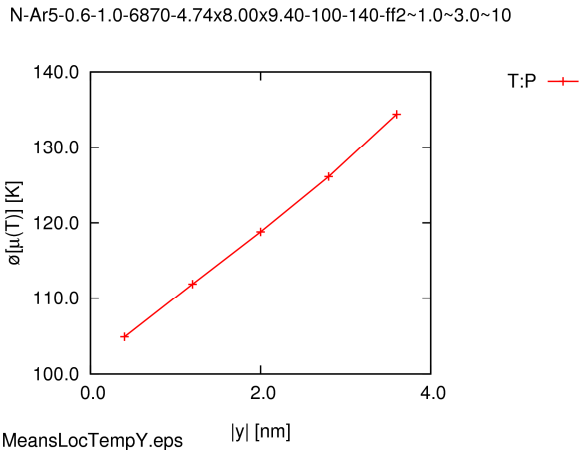
MeansLocTempZ.eps



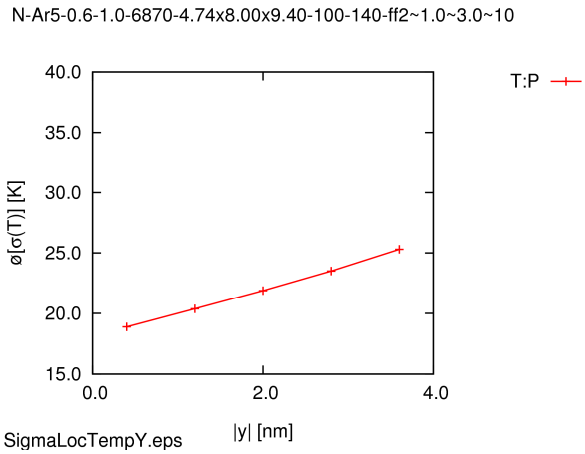
SigmaLocTempZ.eps



MeansLocTempYGradZ.eps

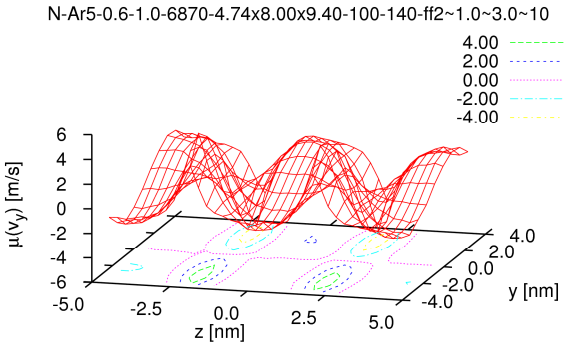


MeansLocTempY.eps

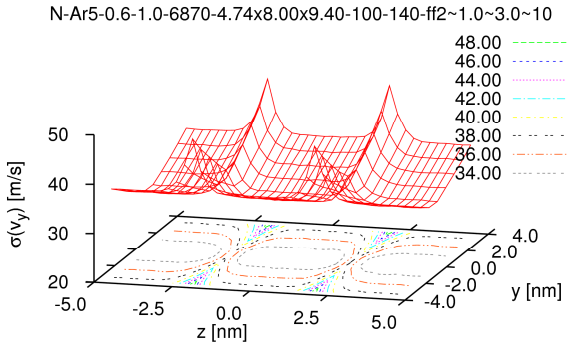


SigmaLocTempY.eps

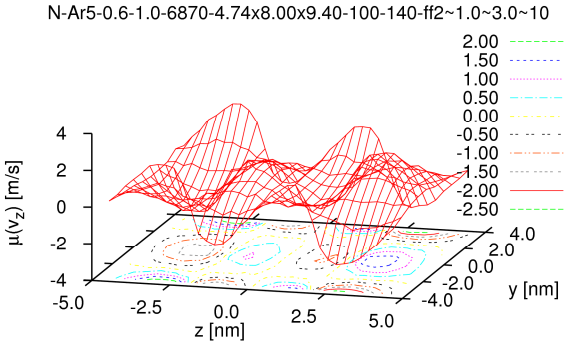
b) Temperatures



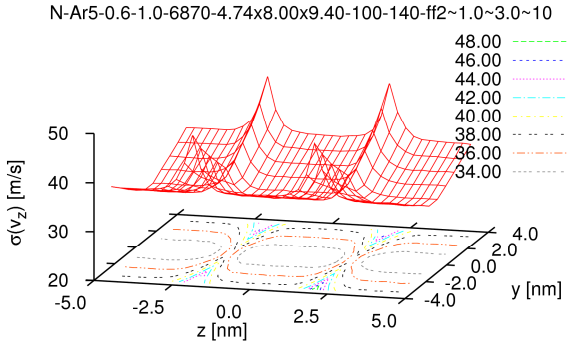
MeansLocYComVelYZ.eps



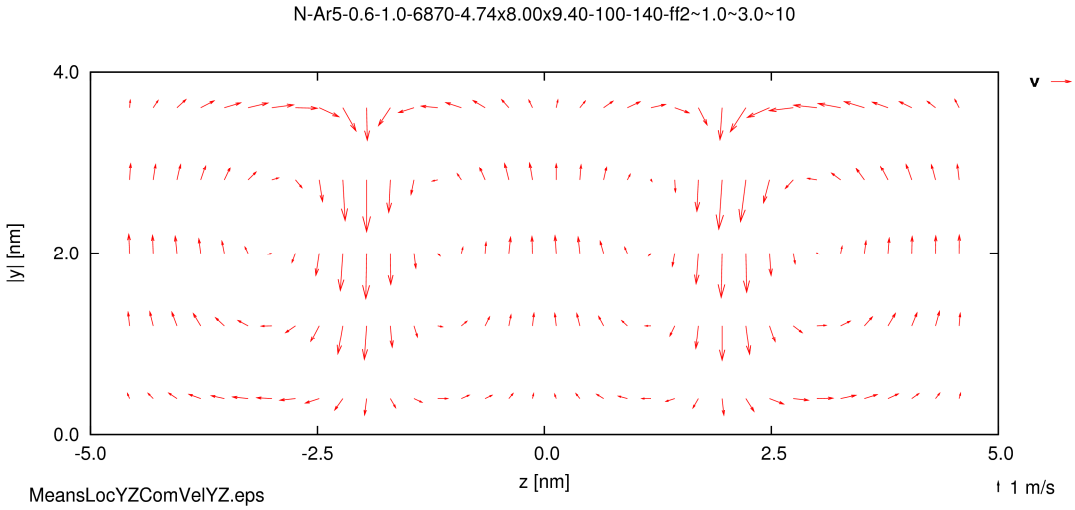
SigmaLocYComVelYZ.eps



MeansLocZComVelYZ.eps

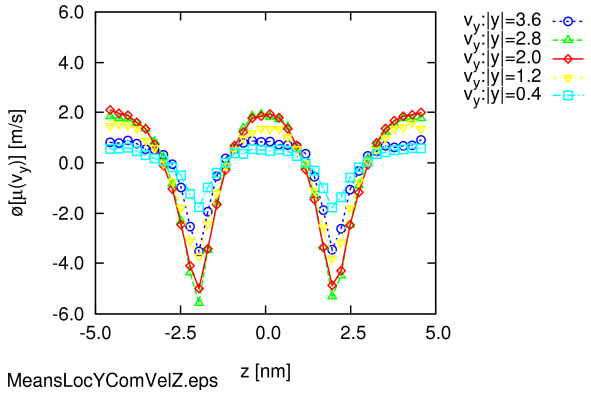


SigmaLocZComVelYZ.eps



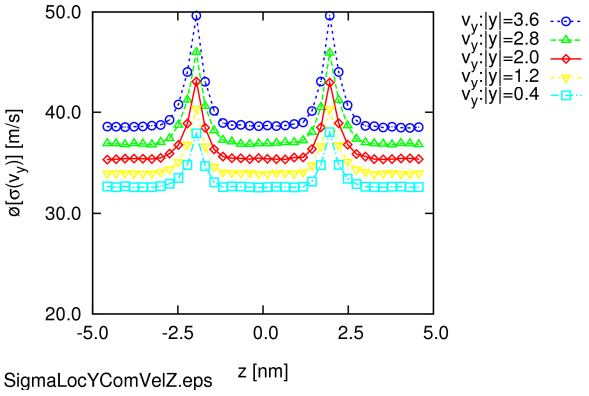
MeansLocYZComVelYZ.eps

N-Ar5-0.6-1.0-6870-4.74x8.00x9.40-100-140-ff2~1.0~3.0~10



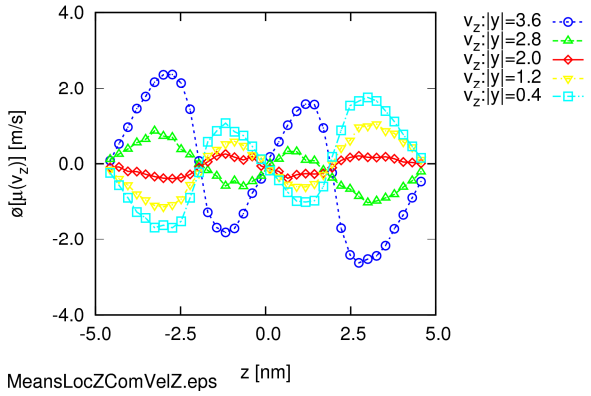
MeansLocYComVelZ.eps

N-Ar5-0.6-1.0-6870-4.74x8.00x9.40-100-140-ff2~1.0~3.0~10



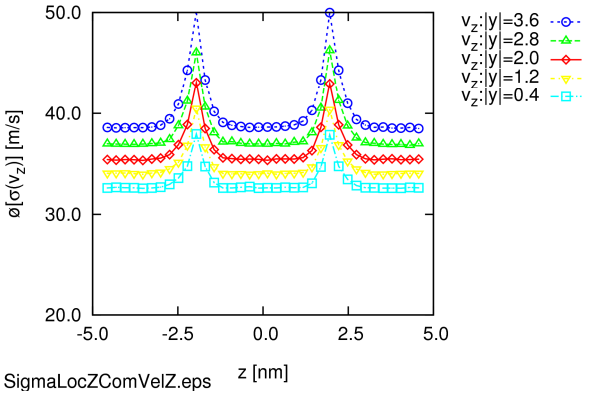
SigmaLocYComVelZ.eps

N-Ar5-0.6-1.0-6870-4.74x8.00x9.40-100-140-ff2~1.0~3.0~10



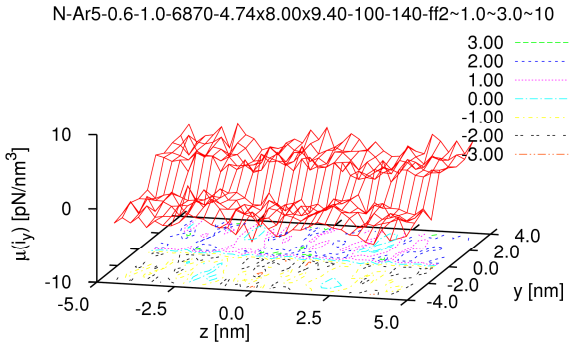
MeansLocZComVelZ.eps

N-Ar5-0.6-1.0-6870-4.74x8.00x9.40-100-140-ff2~1.0~3.0~10

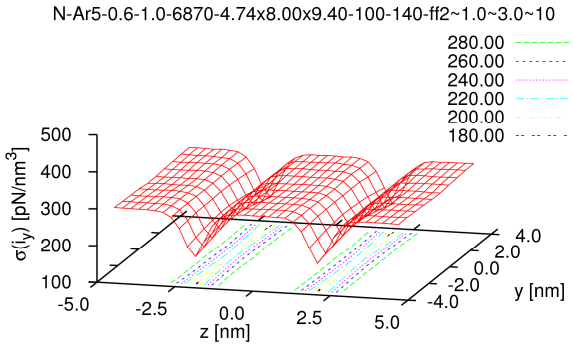


SigmaLocZComVelZ.eps

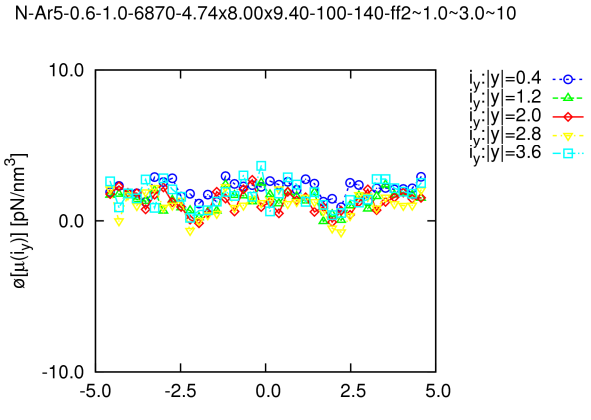
c) Com velocities



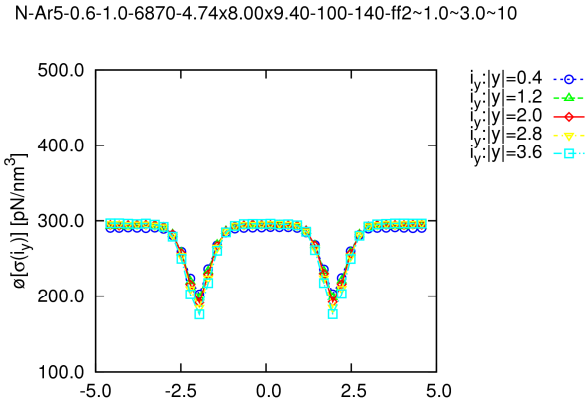
MeansLocYVolForceYZ.eps



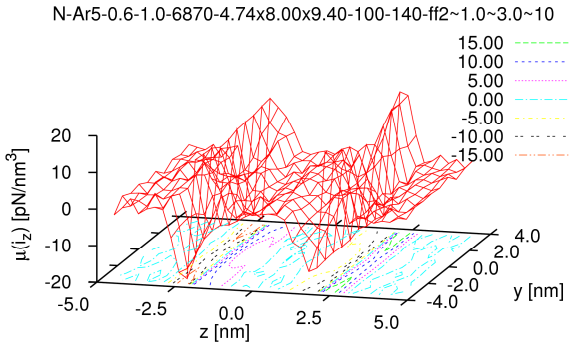
SigmaLocYVolForceYZ.eps



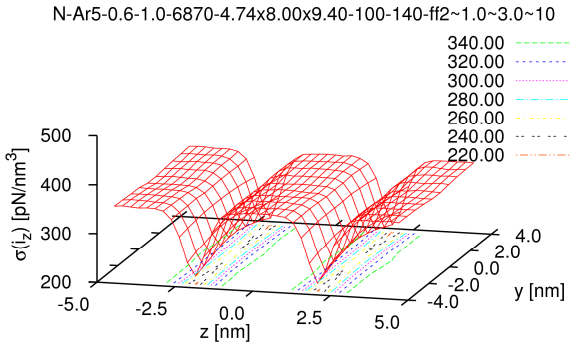
MeansLocYVolForceZ.eps



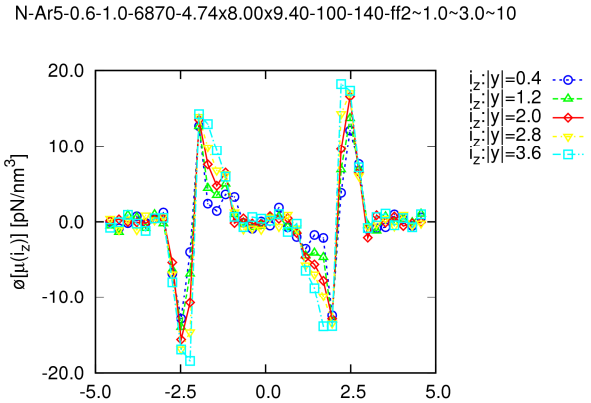
SigmaLocYVolForceZ.eps



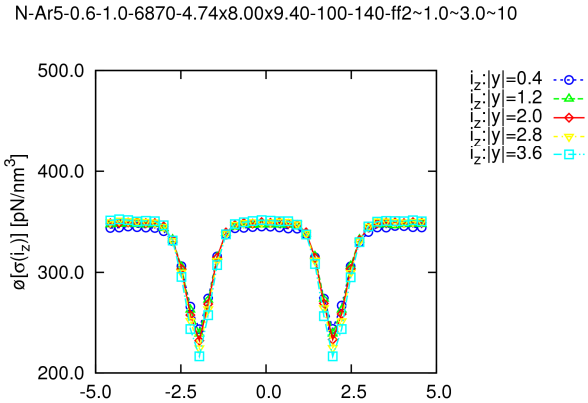
MeansLocZVolForceYZ.eps



SigmaLocZVolForceYZ.eps

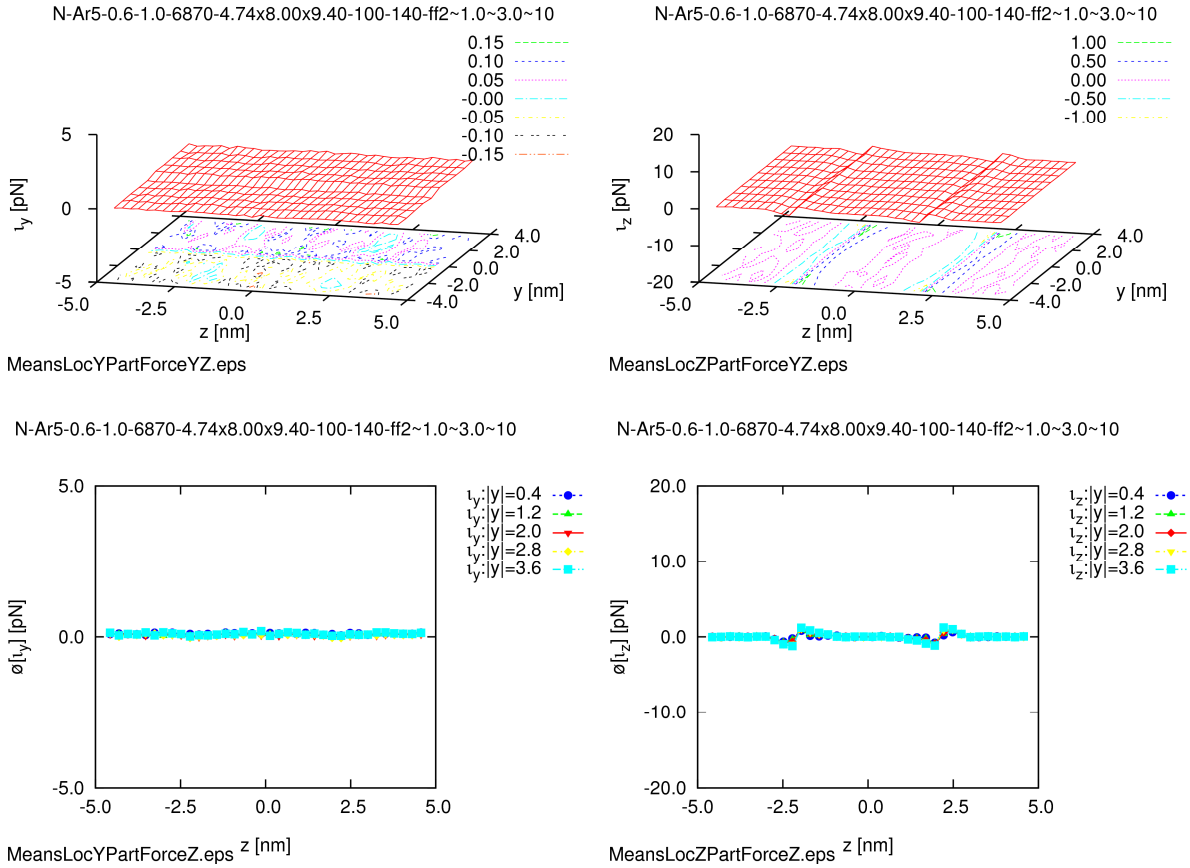


MeansLocZVolForceZ.eps



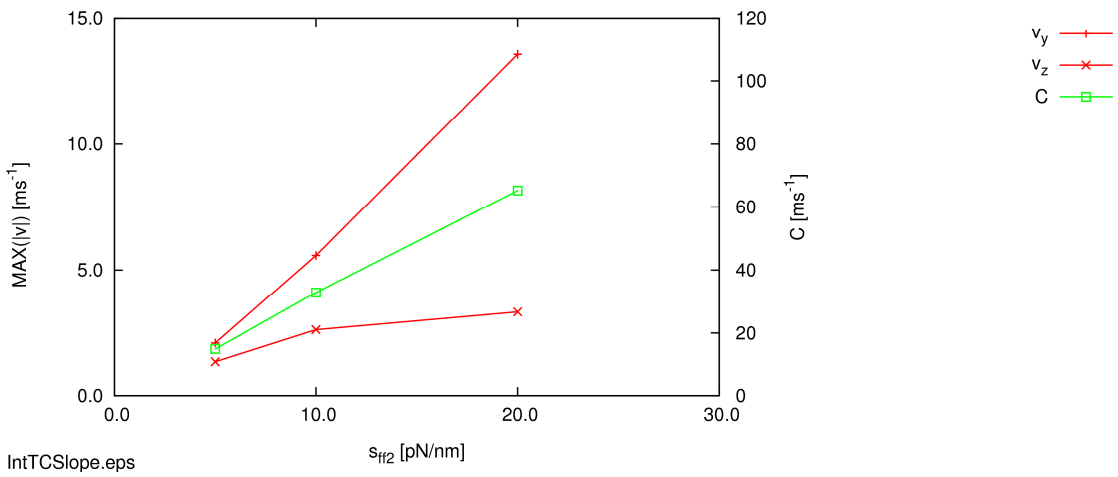
SigmaLocZVolForceZ.eps

d) Volume forces



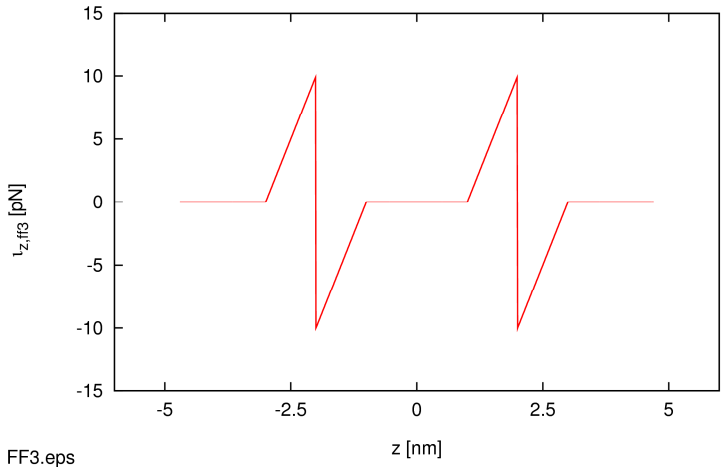
e) Particle forces

Figure 70 Local observables in the unary nonequilibrium interfacial system with a repulsive force field of the type "ff2", N-Ar1-1.0-6870-4.74x8.00x9.40-100-140-ff2~1.0~3.0~1



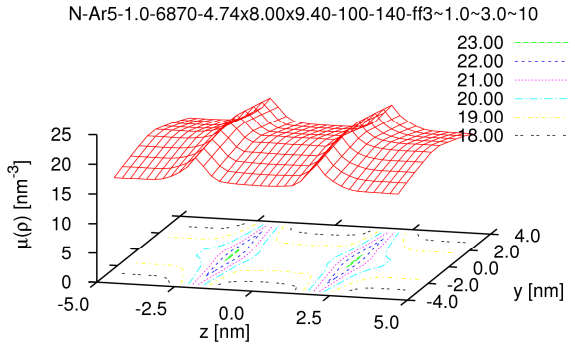
IntTCSlope.eps

Figure 71 **Intensity of the thermocapillary convection in several unary nonequilibrium interfacial systems that differ only in the slope of the external force field "ff2"**

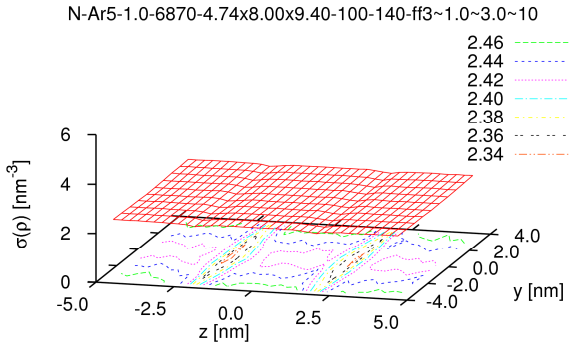


FF3.eps

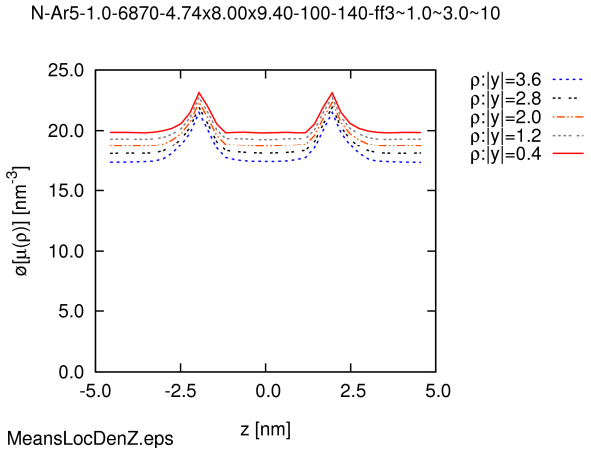
Figure 72 **Attractive external fore field of the type "ff3" in the unary nonequilibrium interfacial reference system, N-Ar5-1.0-6870-4.74x8.00x9.40-100-140-ff3~1.0~3.0~10**



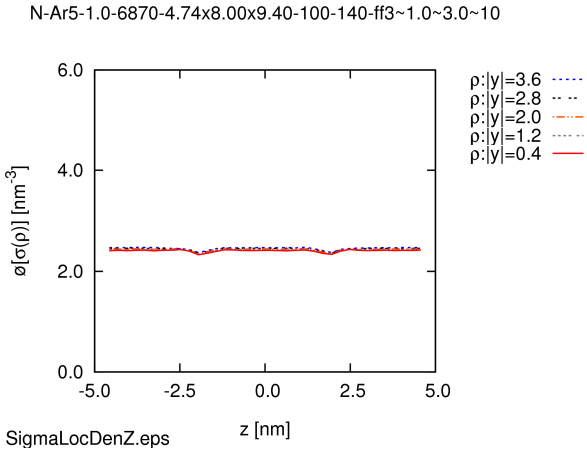
MeansLocDenOverallYZ.eps



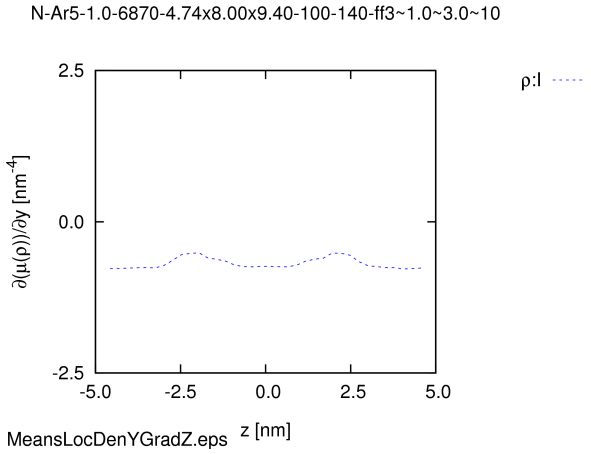
SigmaLocDenOverallYZ.eps



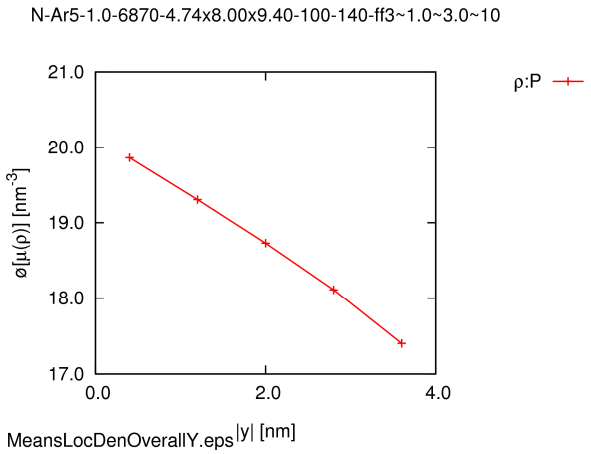
MeansLocDenZ.eps



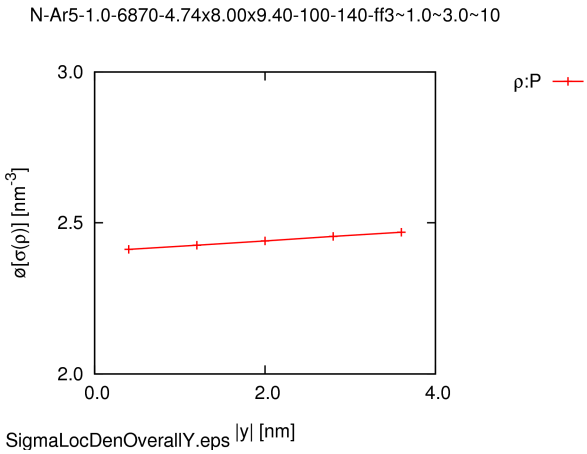
SigmaLocDenZ.eps



MeansLocDenYGradZ.eps

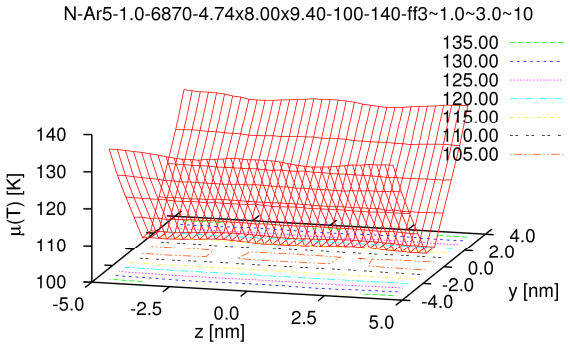


MeansLocDenOverallY.eps

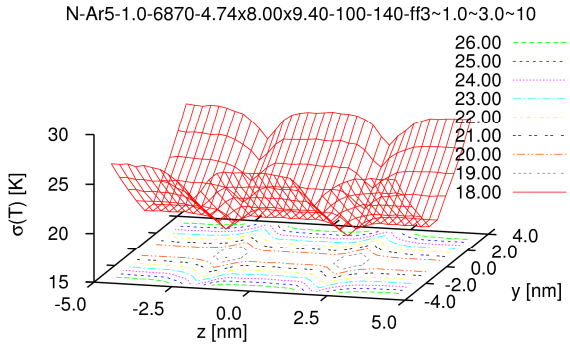


SigmaLocDenOverallY.eps

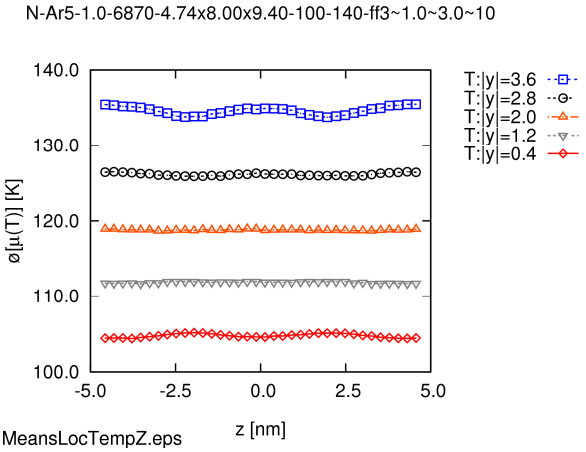
a) Densities



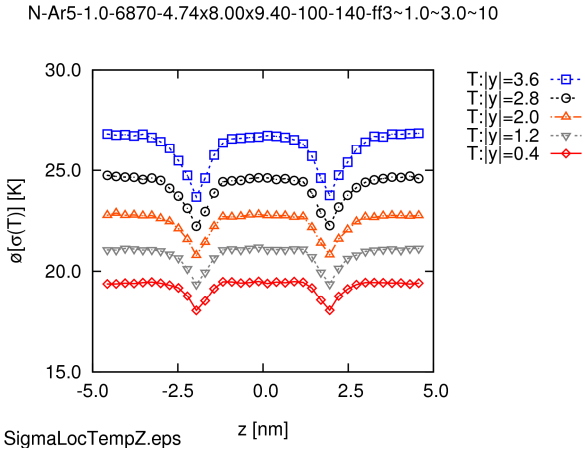
MeansLocTempYZ.eps



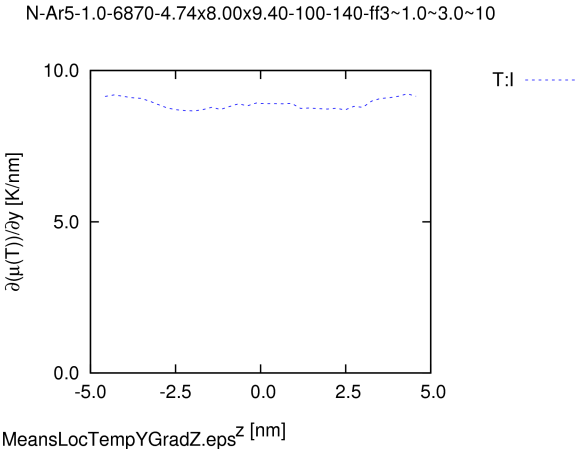
SigmaLocTempYZ.eps



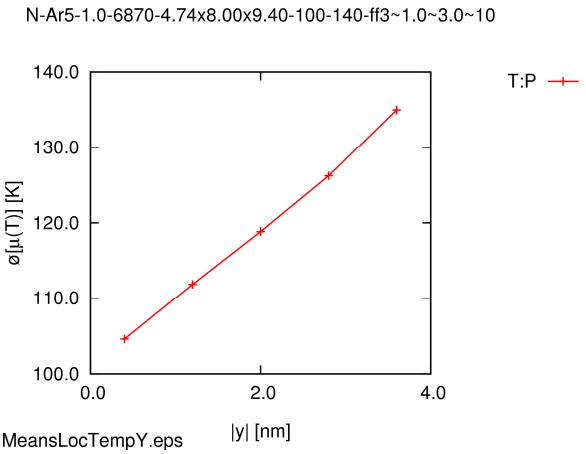
MeansLocTempZ.eps



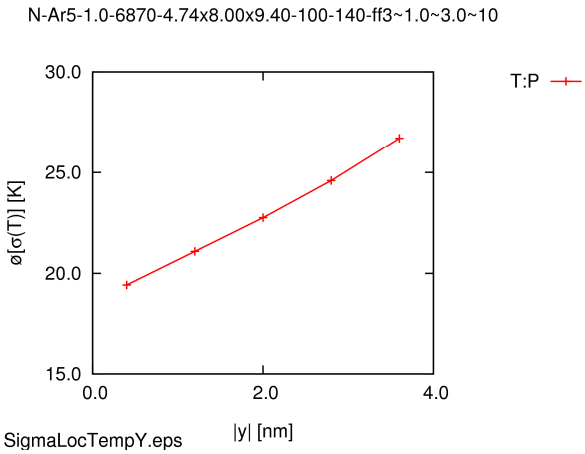
SigmaLocTempZ.eps



MeansLocTempYGradZ.eps

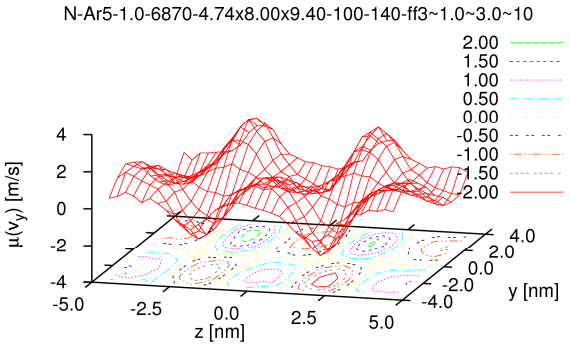


MeansLocTempY.eps

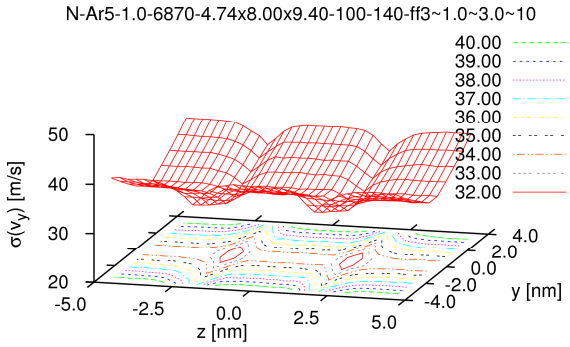


SigmaLocTempY.eps

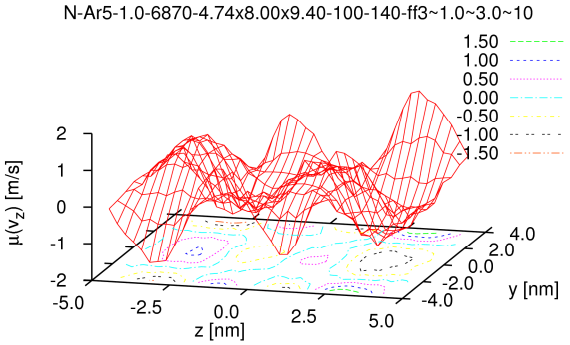
b) Temperatures



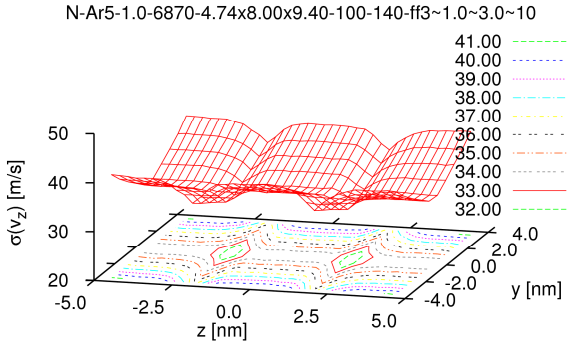
MeansLocYComVelYZ.eps



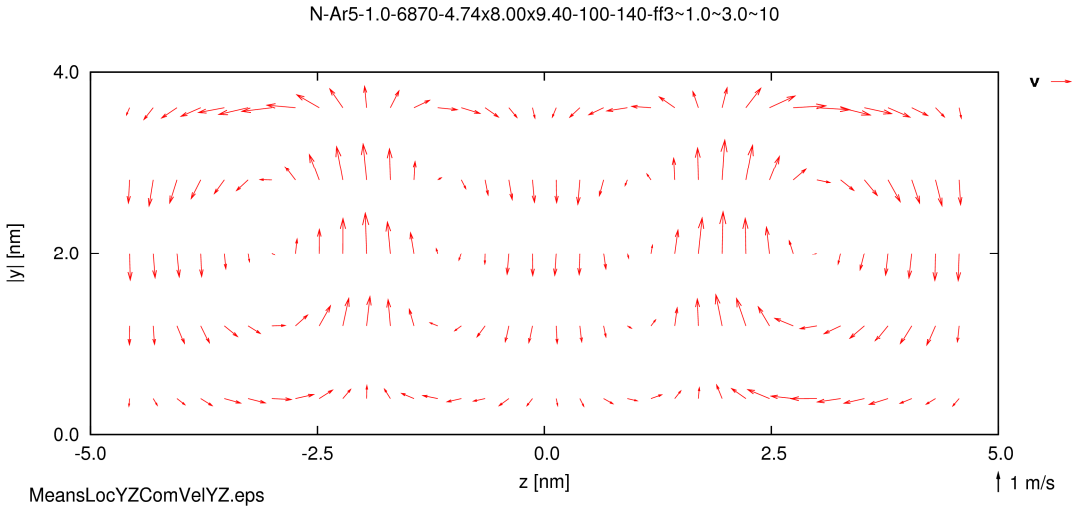
SigmaLocYComVelYZ.eps



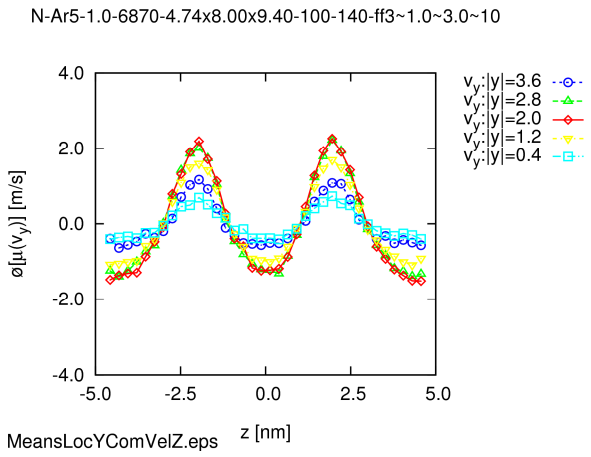
MeansLocZComVelYZ.eps

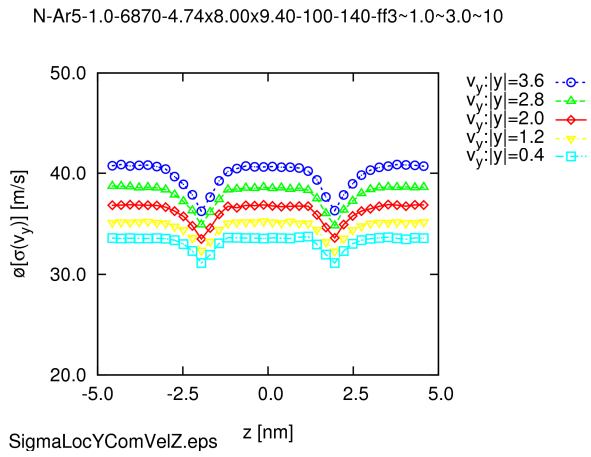


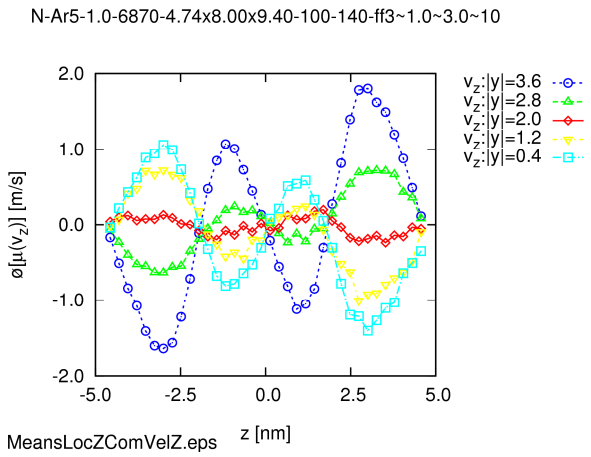
SigmaLocZComVelYZ.eps

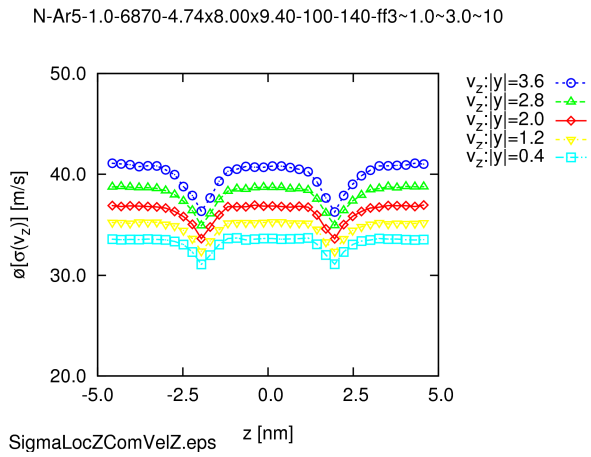


MeansLocYZComVelYZ.eps

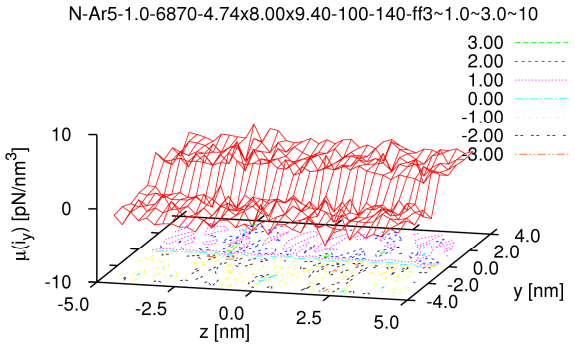




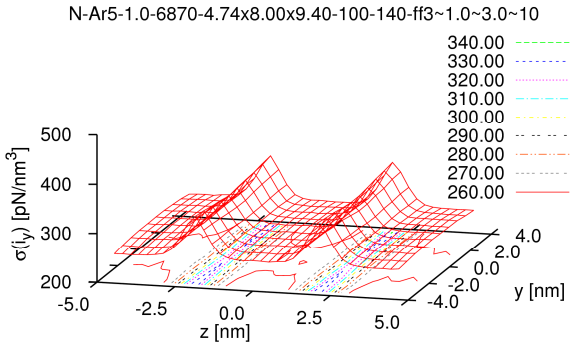




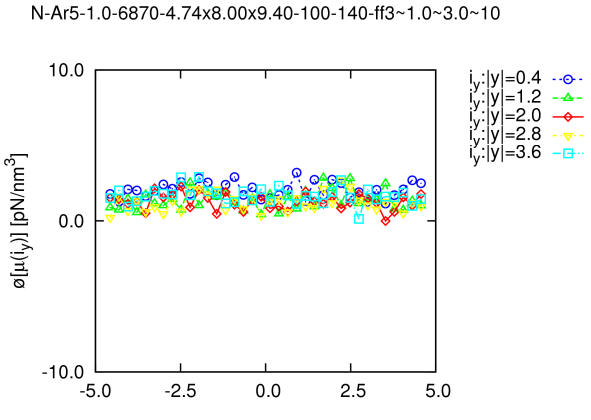
c) Com velocities



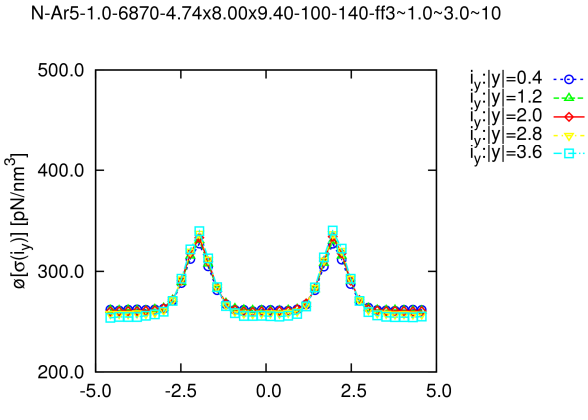
MeansLocYVolForceYZ.eps



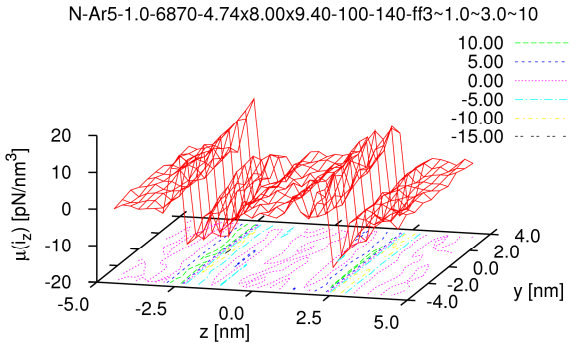
SigmaLocYVolForceYZ.eps



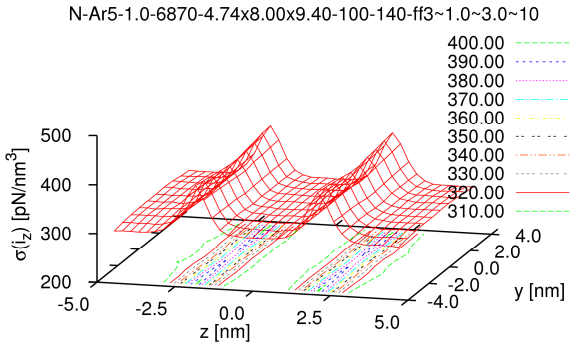
MeansLocYVolForceZ.eps



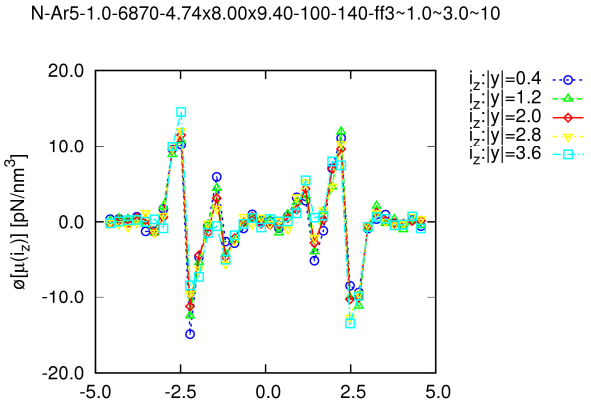
SigmaLocYVolForceZ.eps



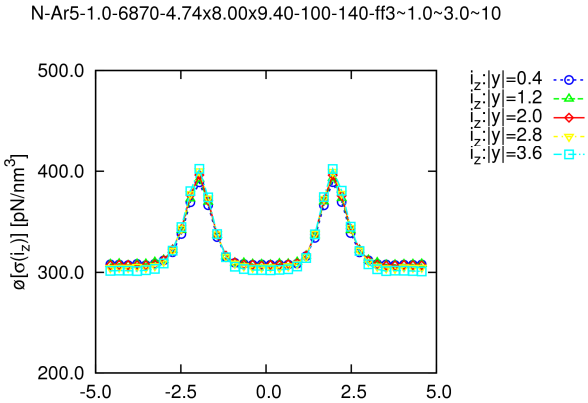
MeansLocZVolForceYZ.eps



SigmaLocZVolForceYZ.eps

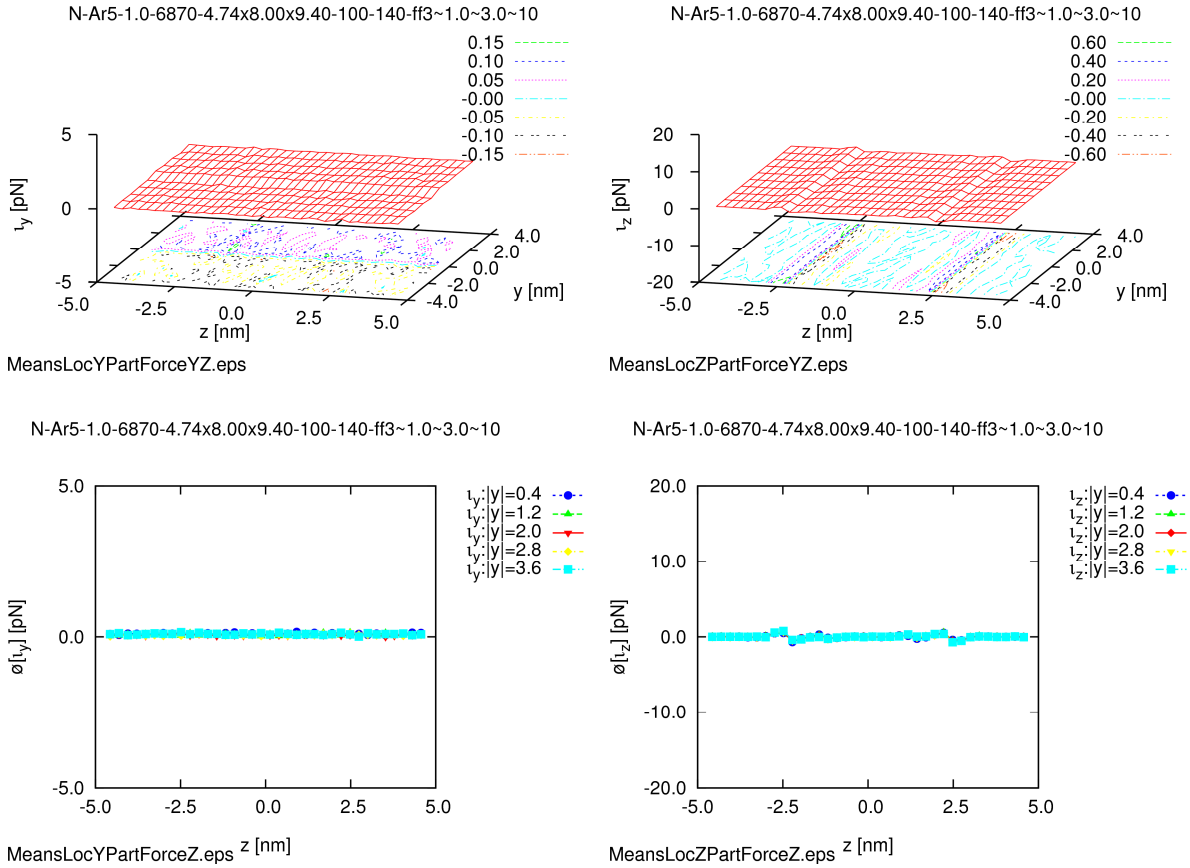


MeansLocZVolForceZ.eps



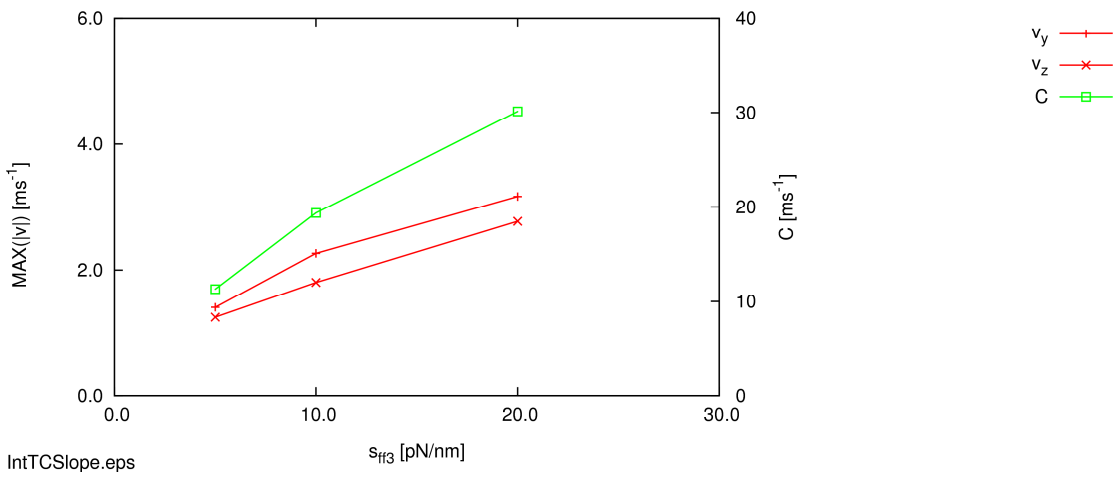
SigmaLocZVolForceZ.eps

d) Volume forces



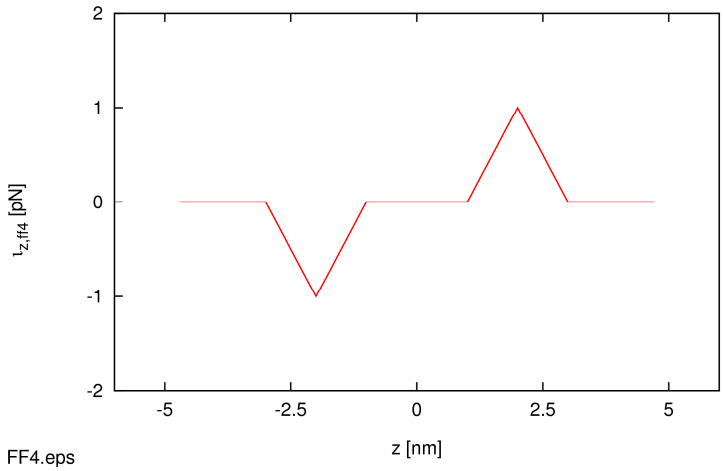
e) Particle forces

Figure 73 Local observables in the unary nonequilibrium interfacial system with attractive force field of the type "ff3", N-Ar5-1.0-6870-4.74x8.00x9.40-100-140-ff3



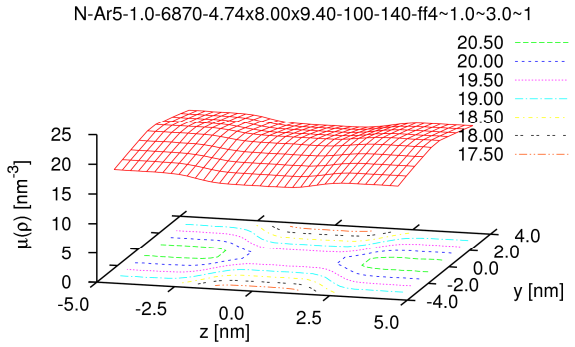
IntTCSlope.eps

Figure 74 **Intensity of the thermocapillary convection in several unary nonequilibrium interfacial systems that differ only in the slope of the external force field "ff3"**

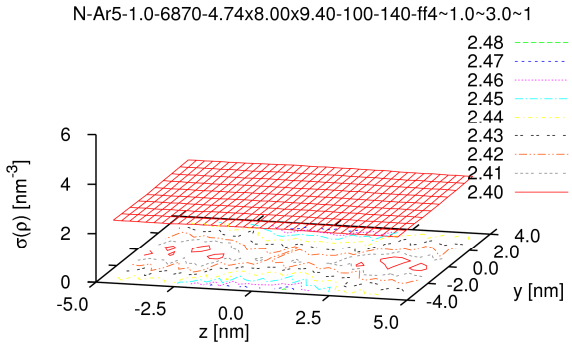


FF4.eps

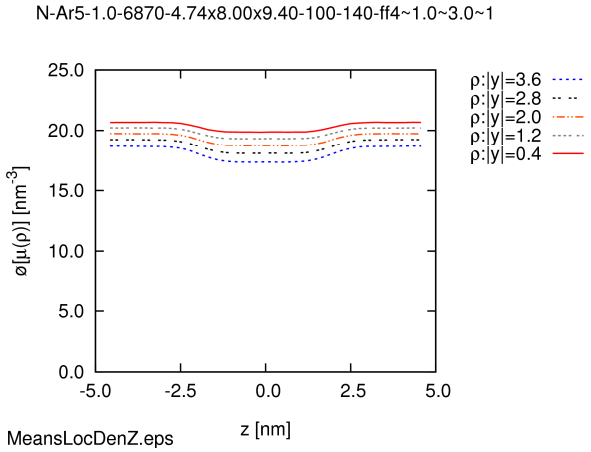
Figure 75 **Attractive-repulsive external fore field of the type "ff4" in the unary nonequilibrium interfacial reference system N-Ar5-1.0-6870-4.74x8.00x9.40-100-140-ff4~1.0~3.0~1**



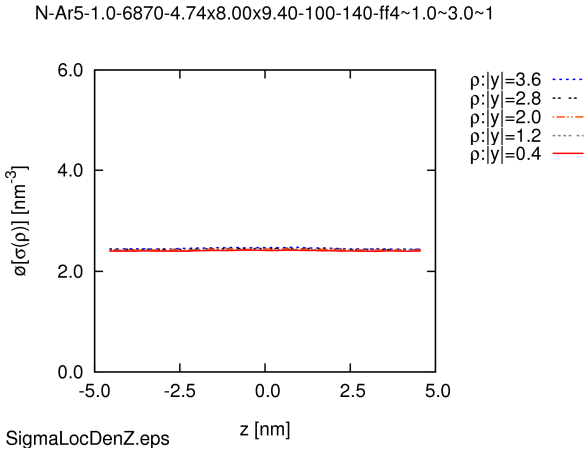
MeansLocDenOverallYZ.eps



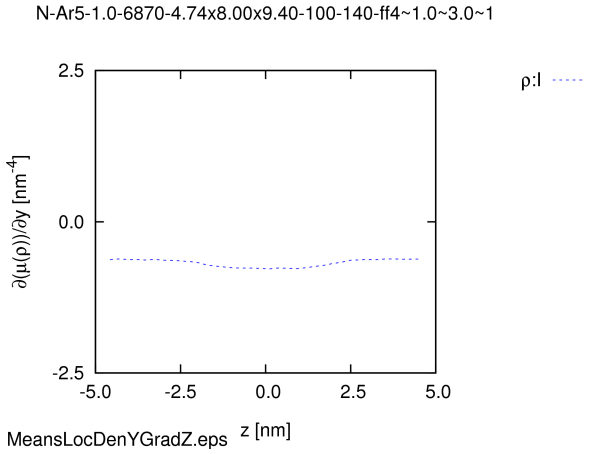
SigmaLocDenOverallYZ.eps



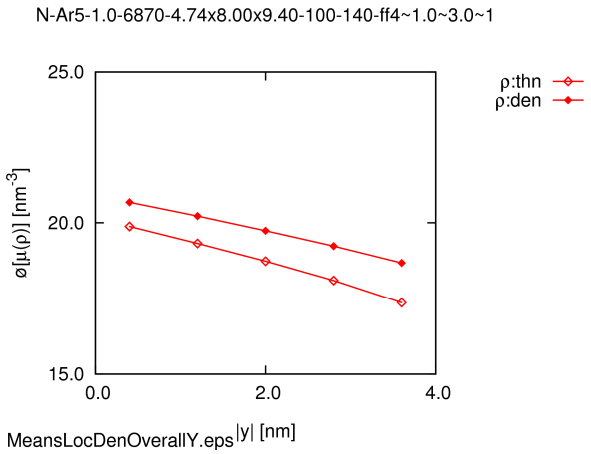
MeansLocDenZ.eps



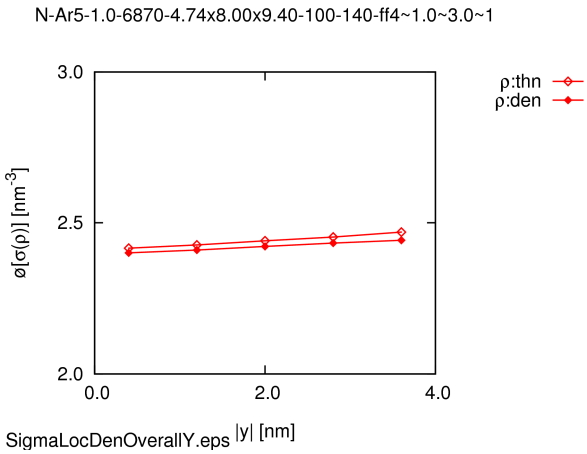
SigmaLocDenZ.eps



MeansLocDenYGradZ.eps

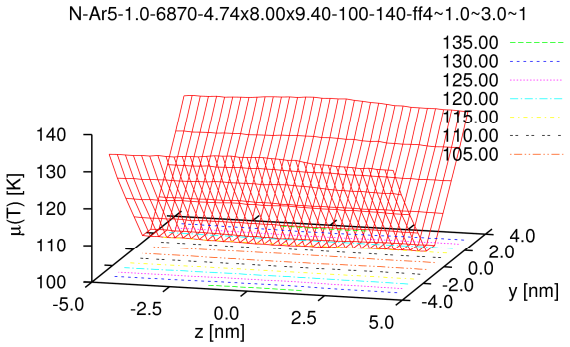


MeansLocDenOverallY.eps

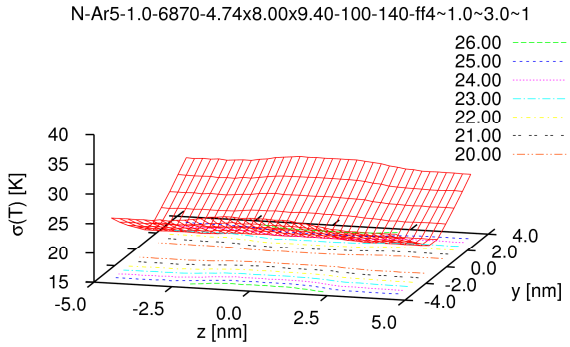


SigmaLocDenOverallY.eps

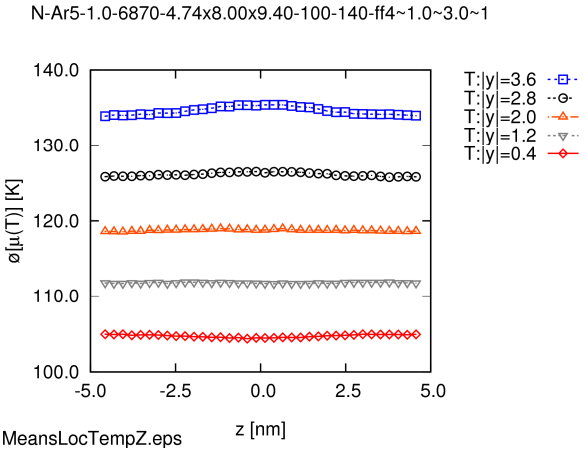
a) Densities



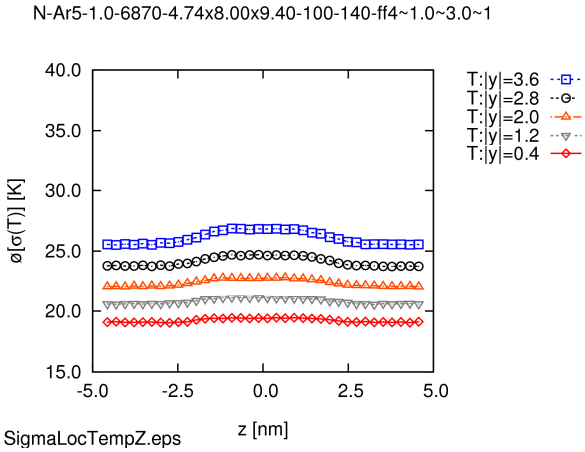
MeansLocTempYZ.eps



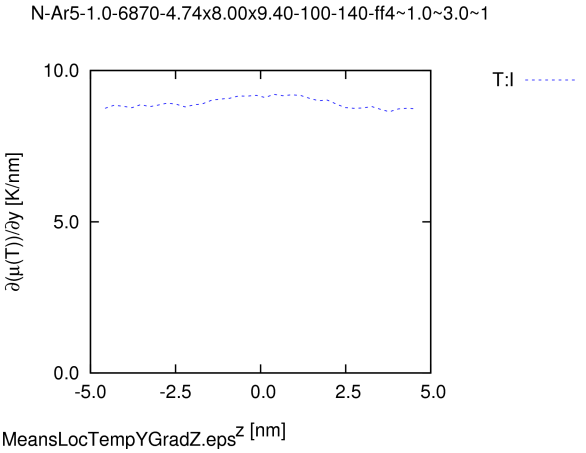
SigmaLocTempYZ.eps



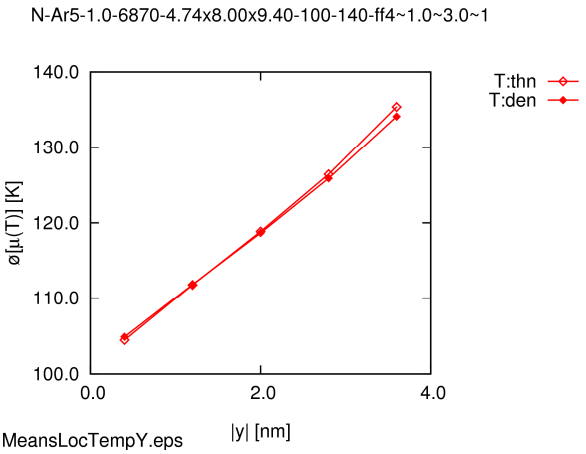
MeansLocTempZ.eps



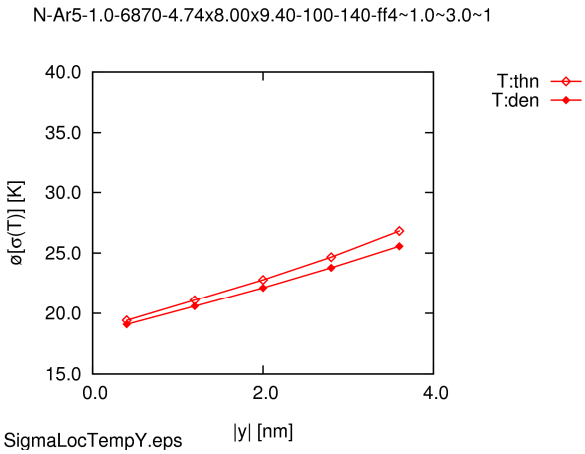
SigmaLocTempZ.eps



MeansLocTempYGradZ.eps

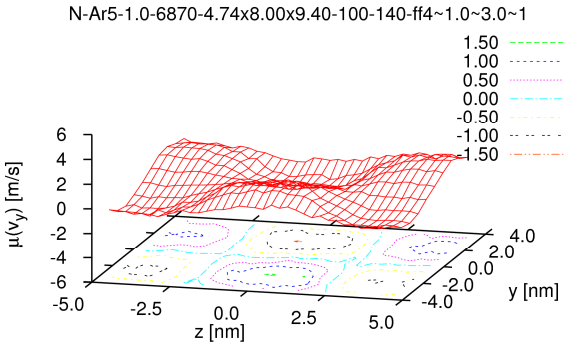


MeansLocTempY.eps

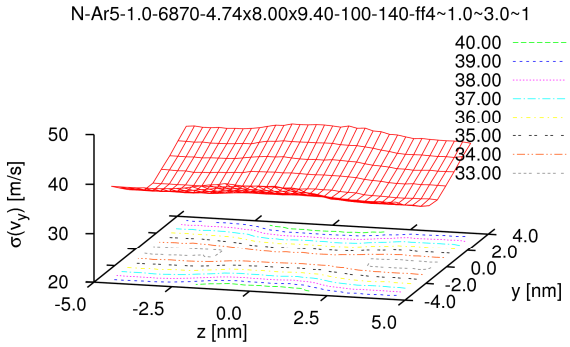


SigmaLocTempY.eps

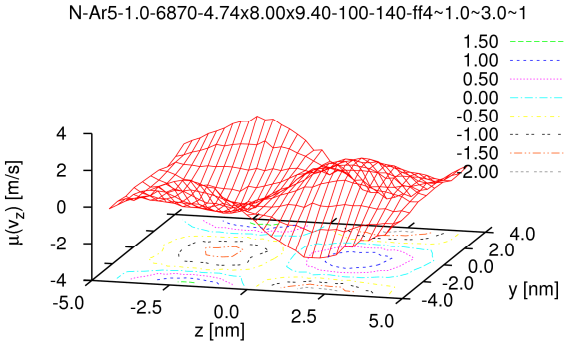
b) Temperatures



MeansLocYComVelYZ.eps



SigmaLocYComVelYZ.eps



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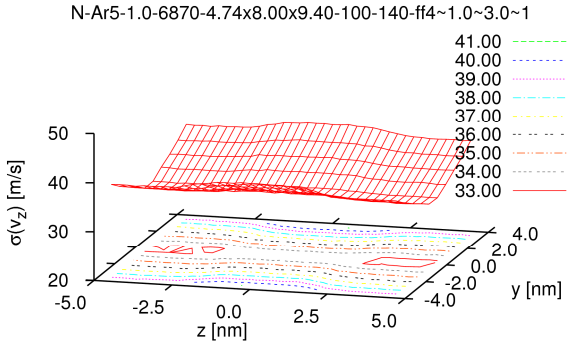
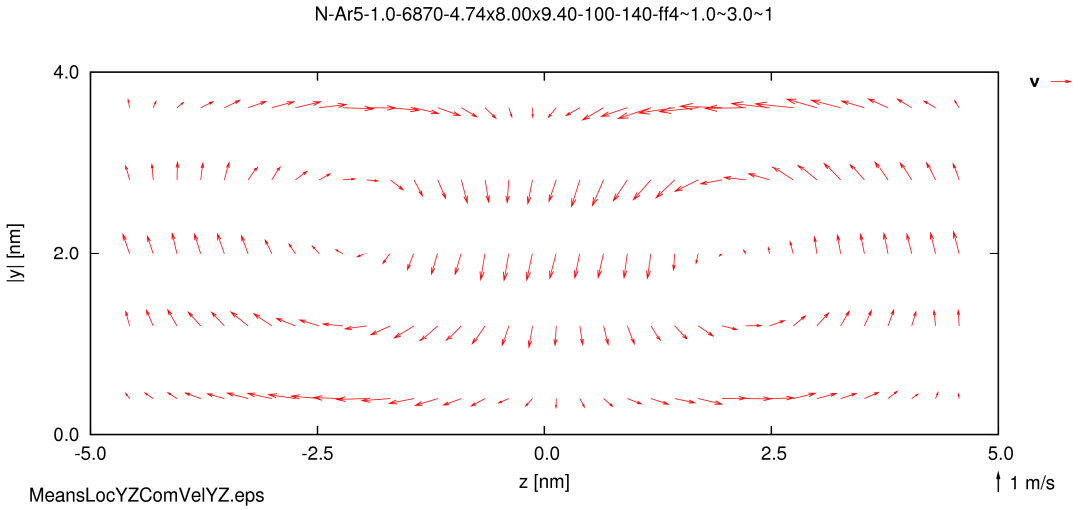
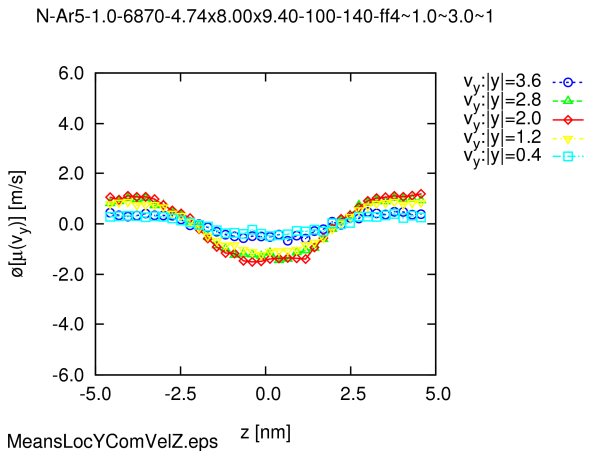
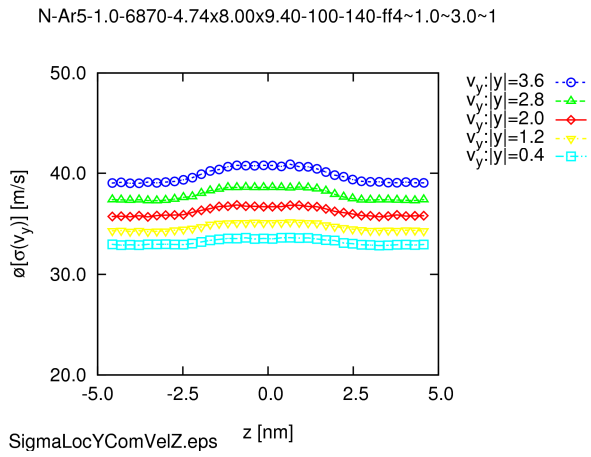


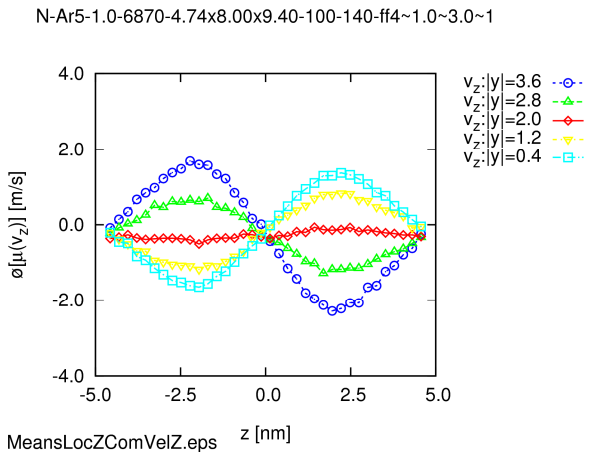
SigmaLocZComVelYZ.eps

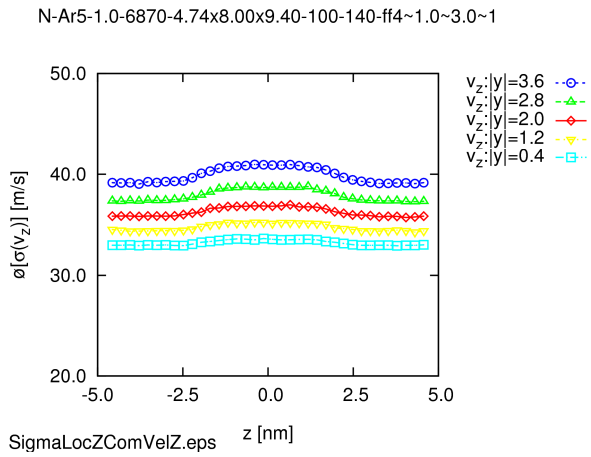


MeansLocYZComVelYZ.eps

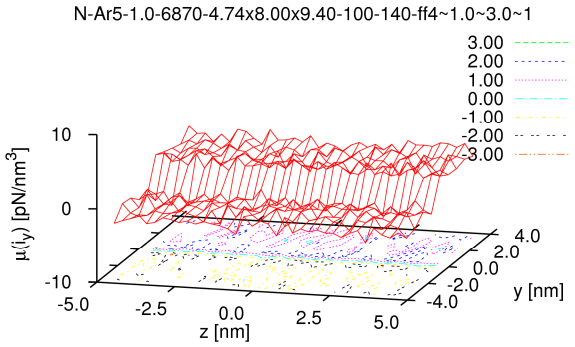




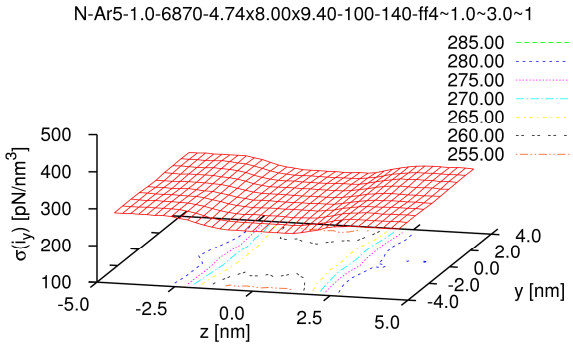




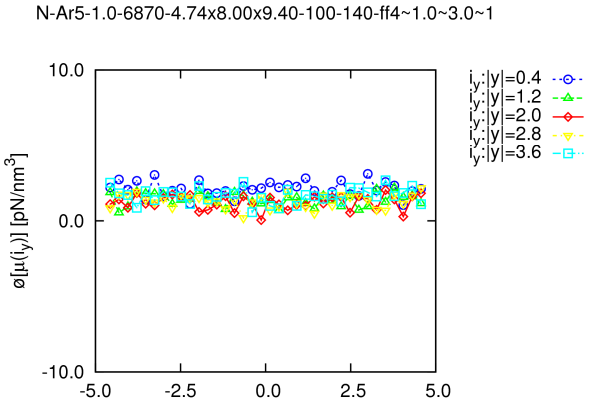
c) Com velocities



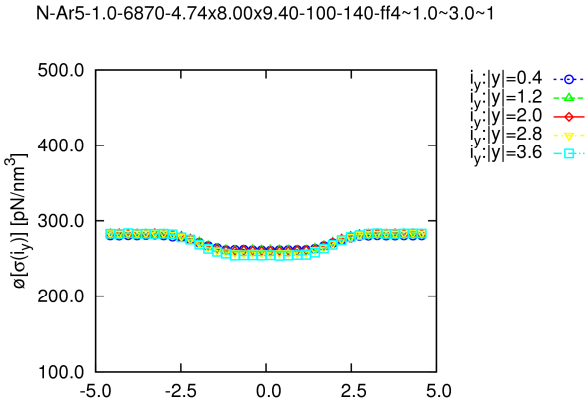
MeansLocYVolForceYZ.eps



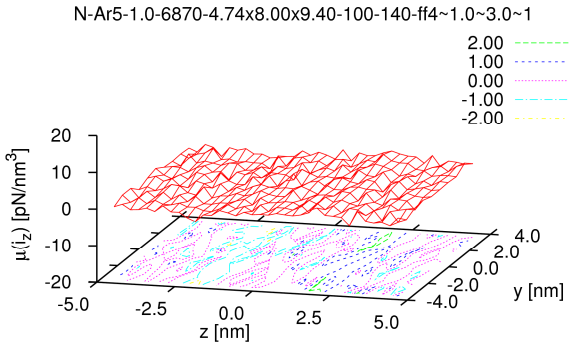
SigmaLocYVolForceYZ.eps



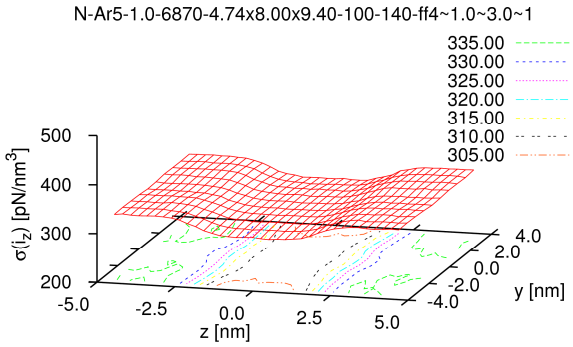
MeansLocYVolForceZ.eps



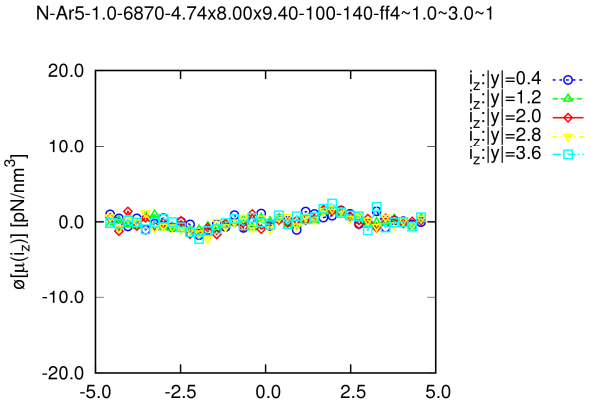
SigmaLocYVolForceZ.eps



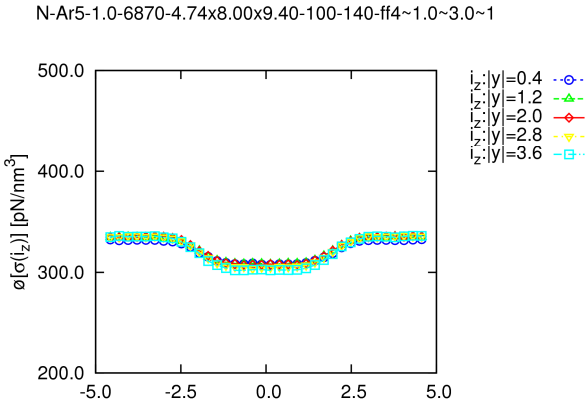
MeansLocZVolForceYZ.eps



SigmaLocZVolForceYZ.eps

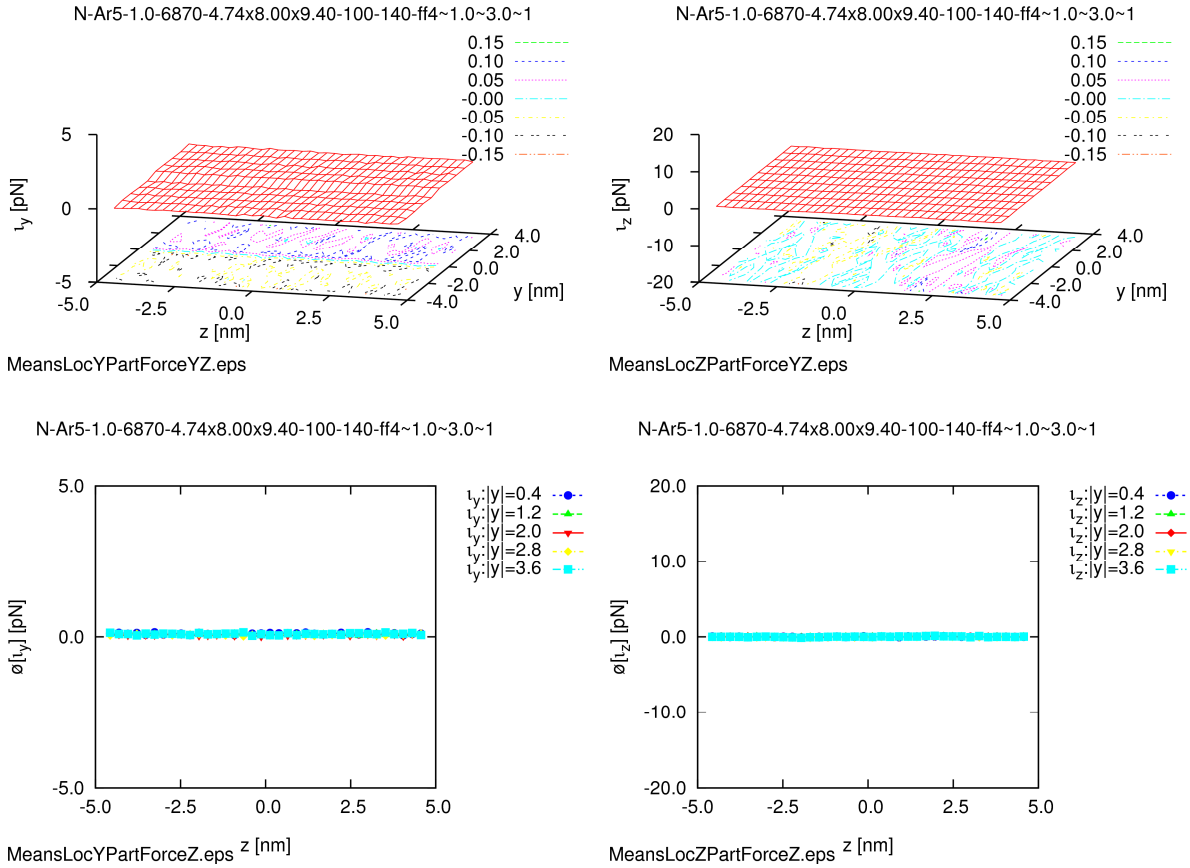


MeansLocZVolForceZ.eps



SigmaLocZVolForceZ.eps

d) Volume forces



e) Particle forces

Figure 76 Local observables in the unary nonequilibrium interfacial system with an attractive-repulsive force field of the type "ff4", N-Ar1-1.0-6870-4.74x8.00x9.40-100-140-ff4~1.0~3.0~1

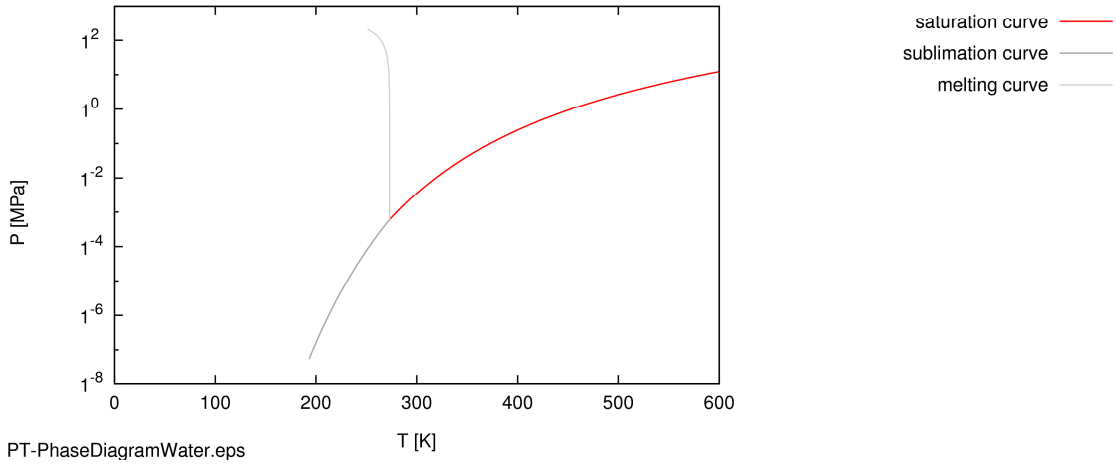


Figure 77 ***PT*-phase diagram of water**

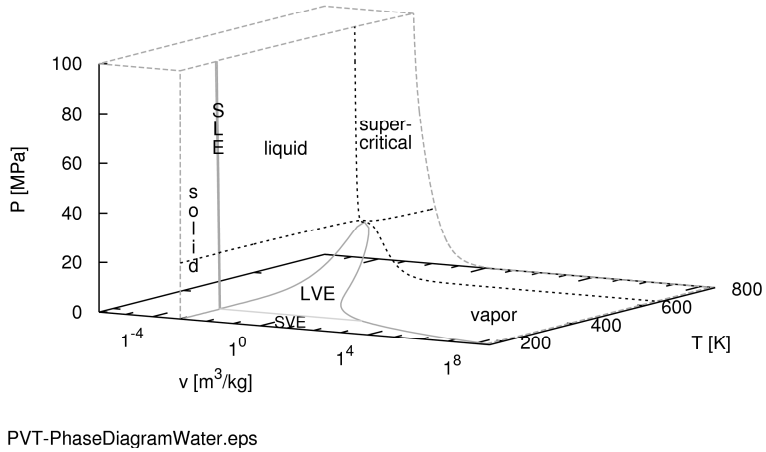


Figure 78 ***PVT*-phase diagram of water**

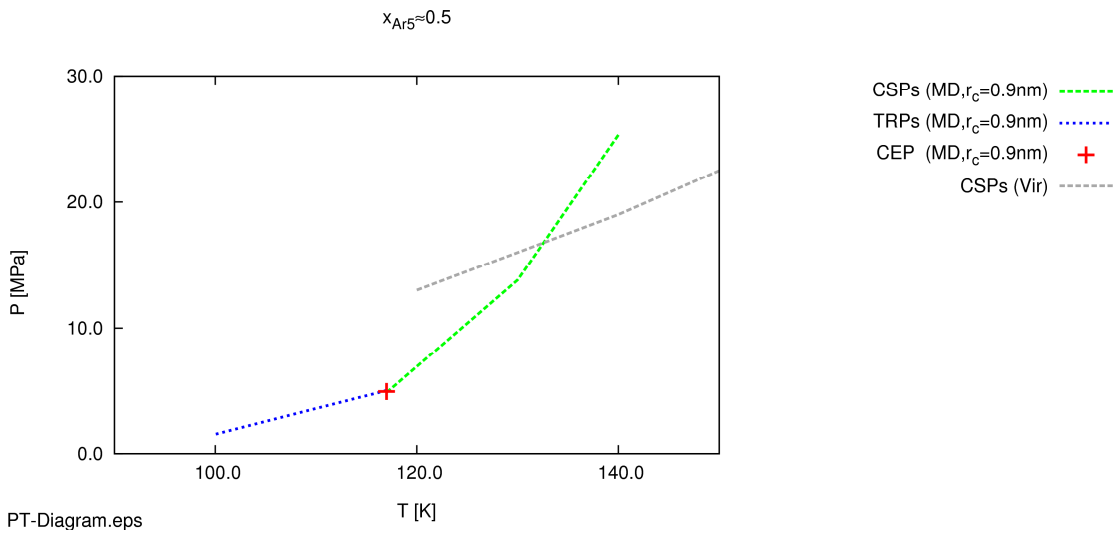


Figure 79 ***PT*-phase diagram of the Ar5Ar5 mixture with equimolar composition**

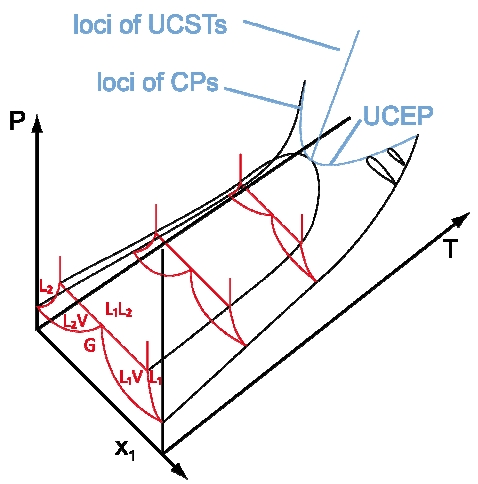


Figure 80 **Qualitative *PxT*-phase diagram of the Ar5Ar5 mixture**

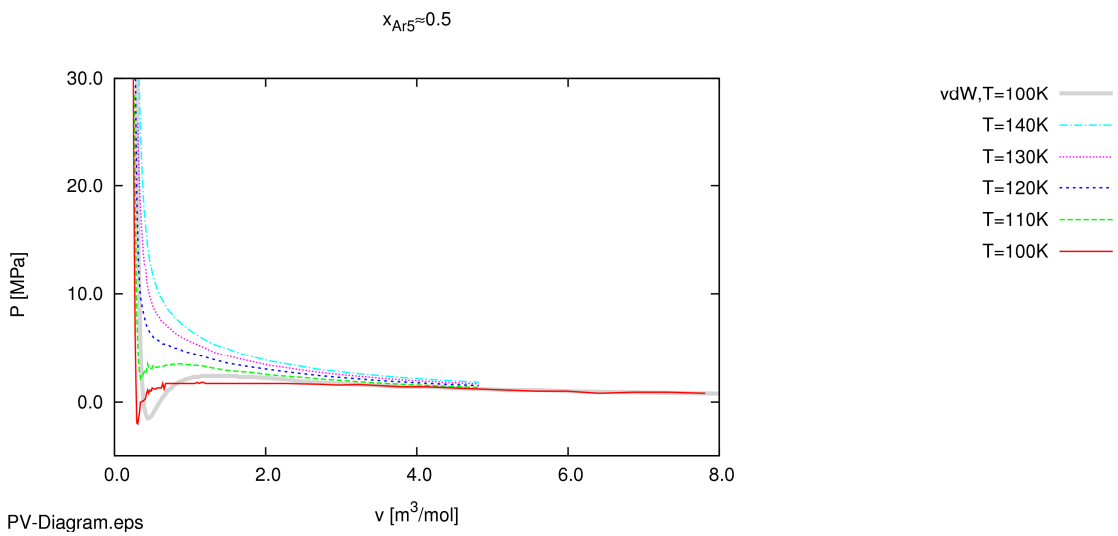


Figure 81 ***PV*-data as obtained in several EMD simulations of an equimolar Ar5Ar5 mixture at different temperatures**
Moreover, we give an example of *PV*-data as obtained from the van der Waals equation of state in the wet steam region of a comparable substance

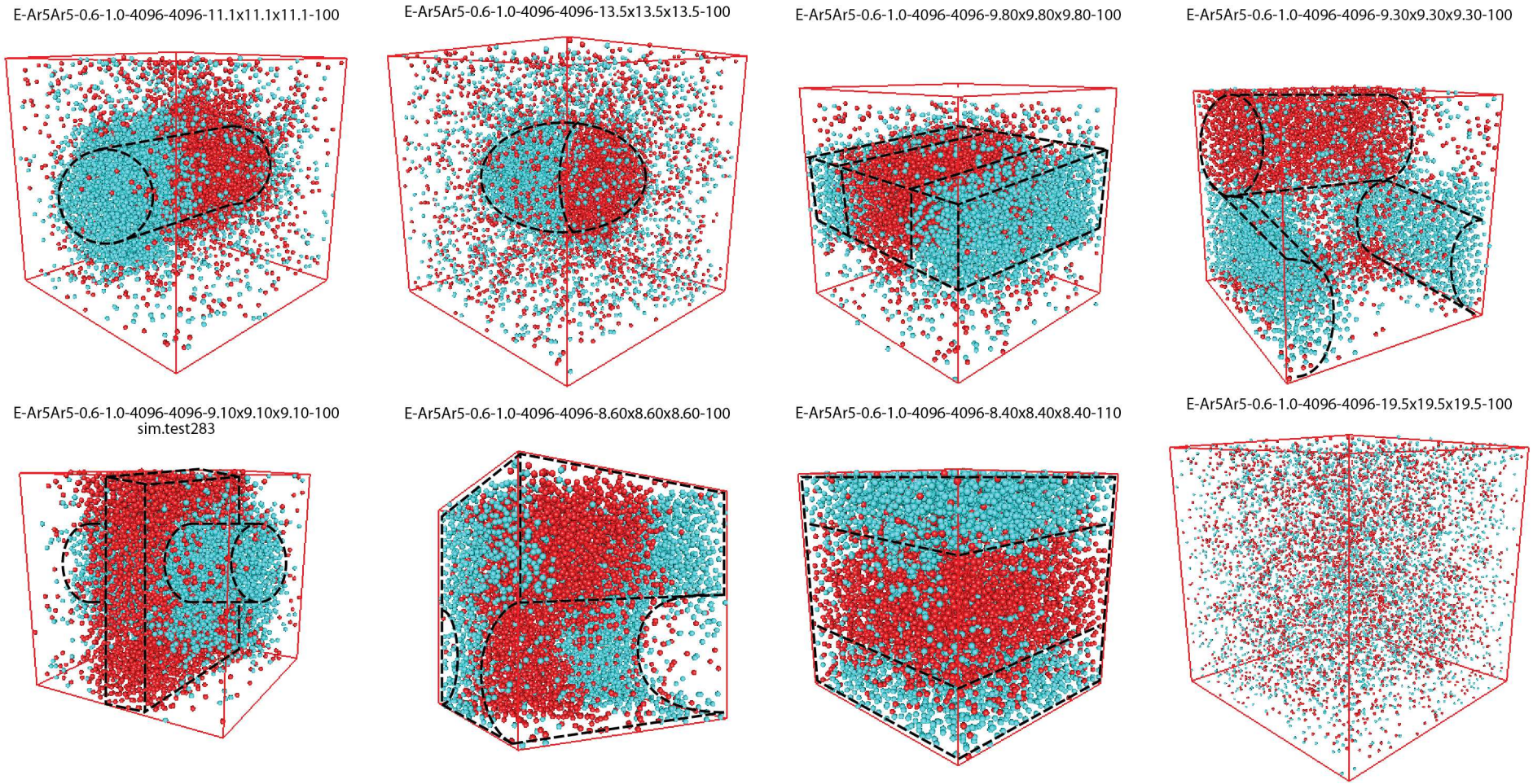
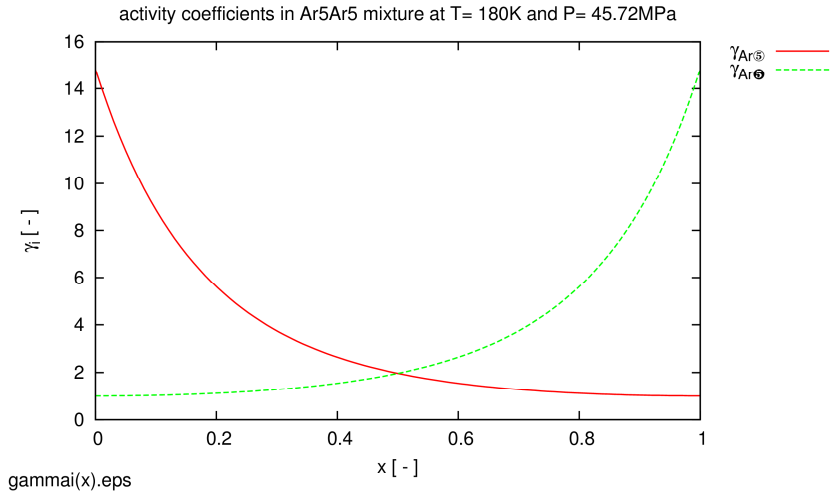
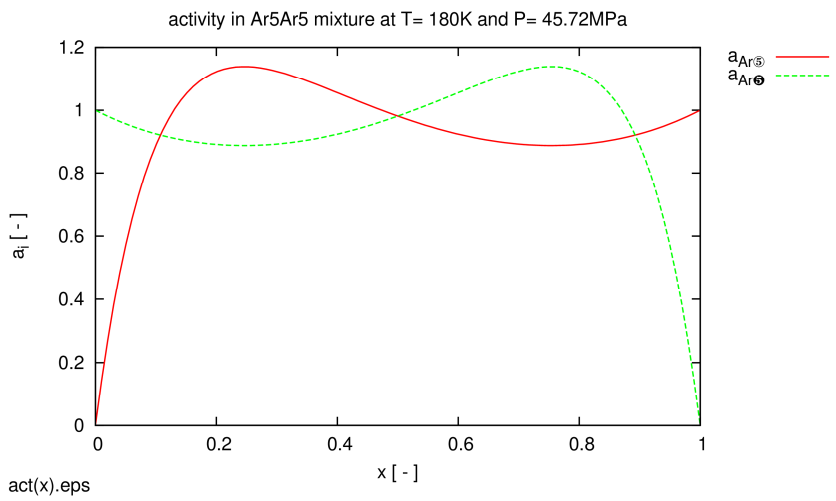


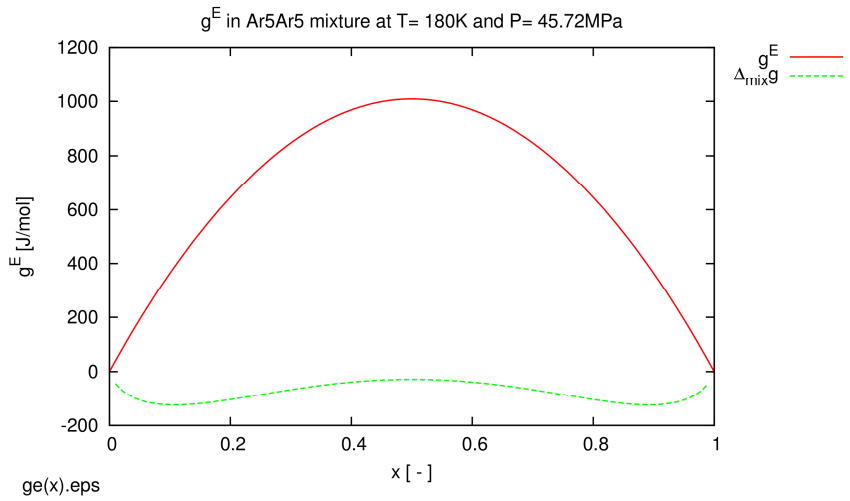
Figure 82 Examples of unusual stable configurations found in the liquid-liquid-vapour region of the Ar5Ar5 mixture



a) Activity coefficients

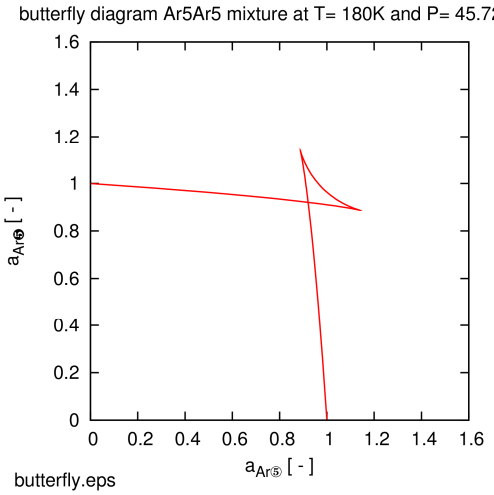


b) Activities

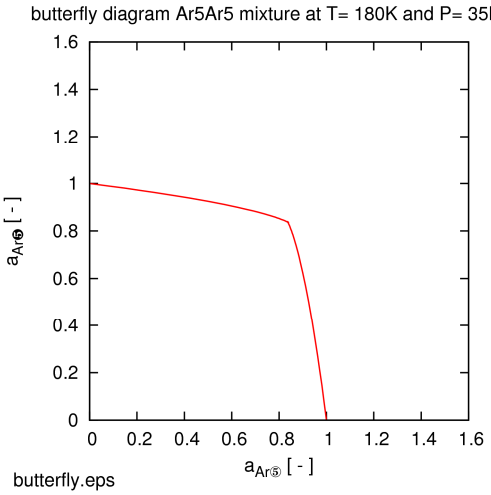


c) Molar excess Gibbs energy and molar Gibbs energy change of mixing

Figure 83 Example of the concentration dependence of different thermodynamic properties related to the mixing behaviour of the Ar5Ar5 mixture



a) Partial miscibility remote from the critical solution point



b) Partial miscibility near the critical solution point

Figure 84 Examples of "butterfly" diagrams of the Ar5Ar5 mixture

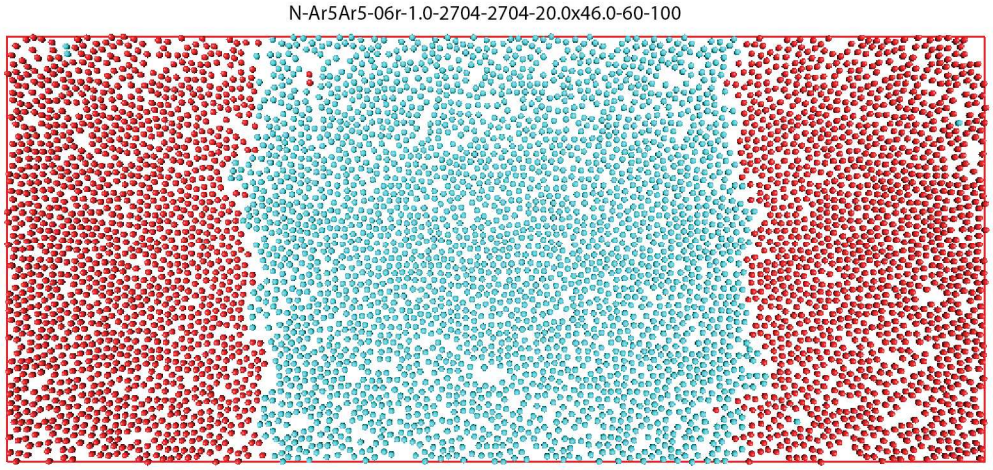
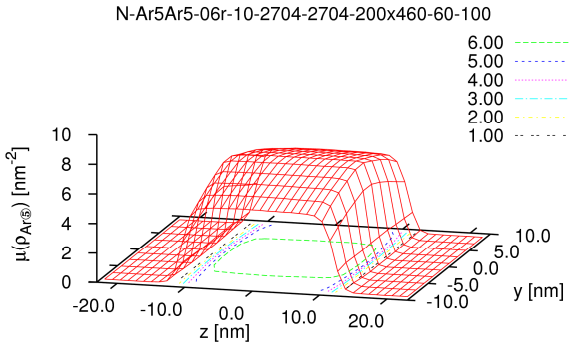
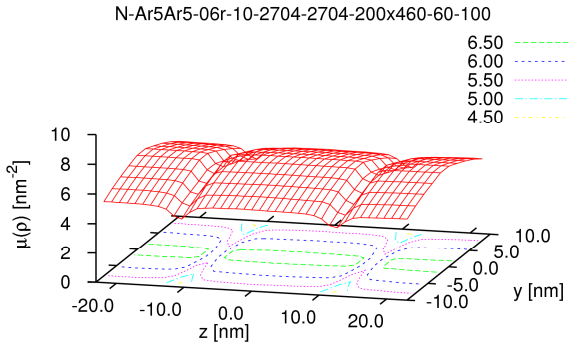


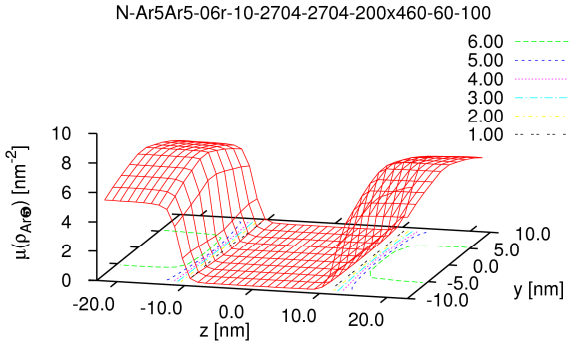
Figure 85 Snap shot of a configuration in the two-dimensional nonequilibrium interfacial system N-Ar5Ar5-0.6r-1.0-2704-2704-20.0x46.0-60-100



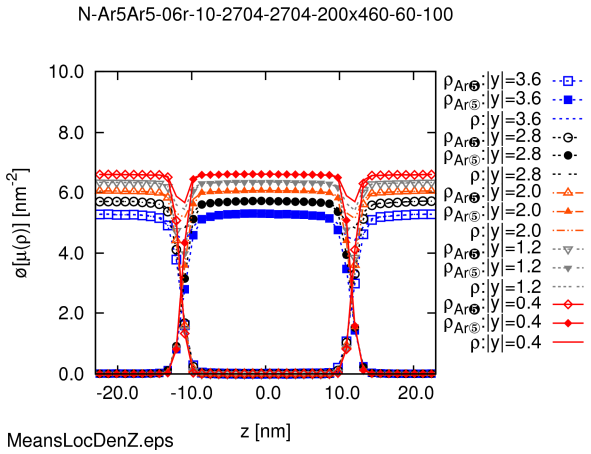
MeansLocDenAr1YZ.eps



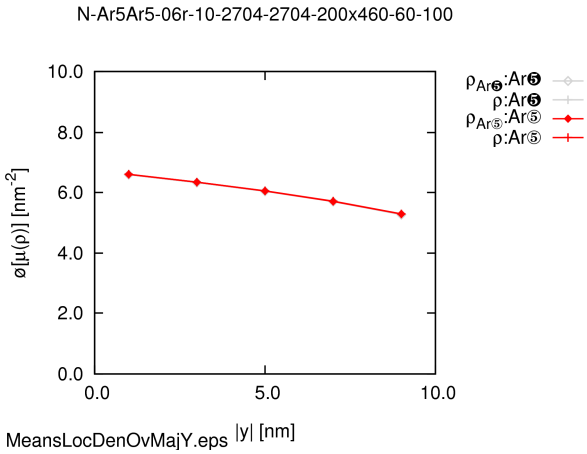
MeansLocDenOverallYZ.eps



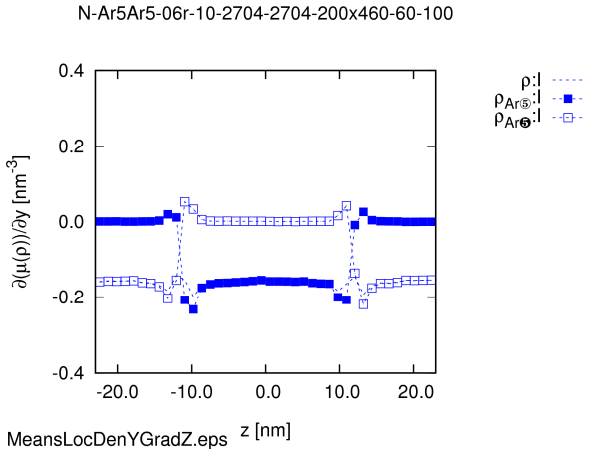
MeansLocDenAr2YZ.eps



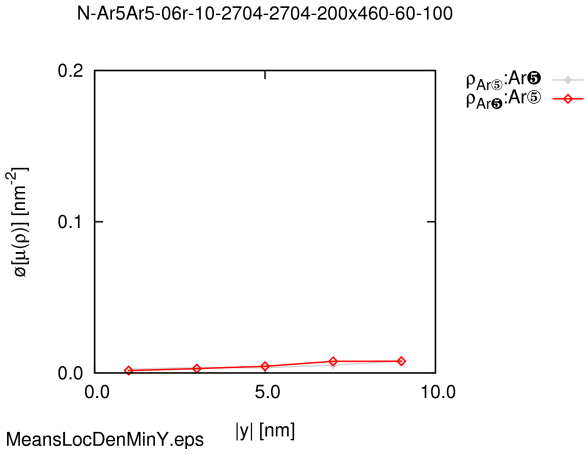
MeansLocDenZ.eps



MeansLocDenOvMajY.eps

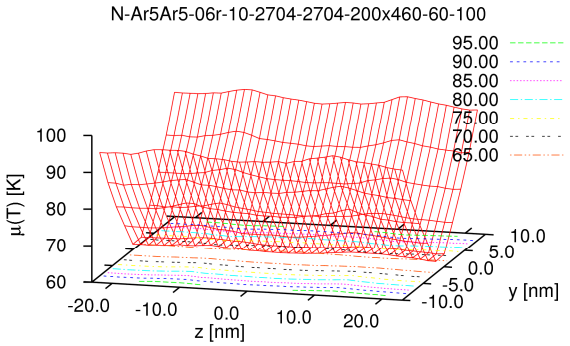


MeansLocDenYGradZ.eps

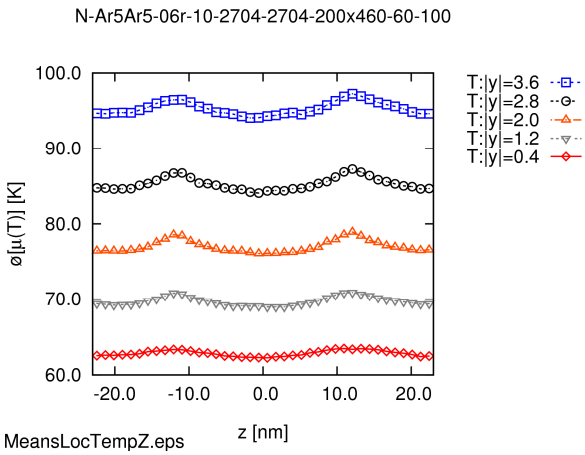


MeansLocDenMinY.eps

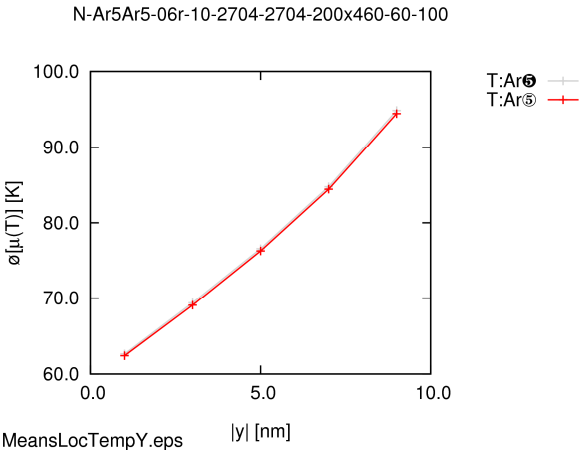
a) Densities



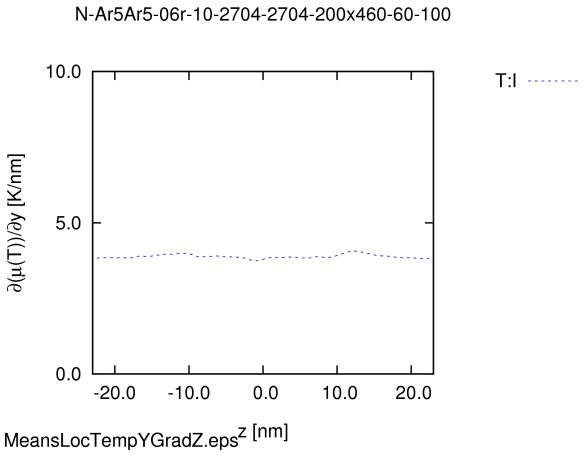
MeansLocTempYZ.eps



MeansLocTempZ.eps

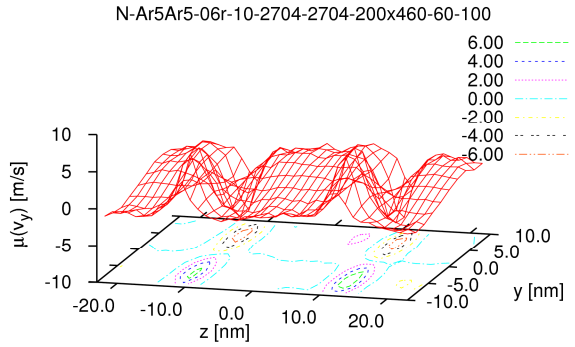


MeansLocTempY.eps

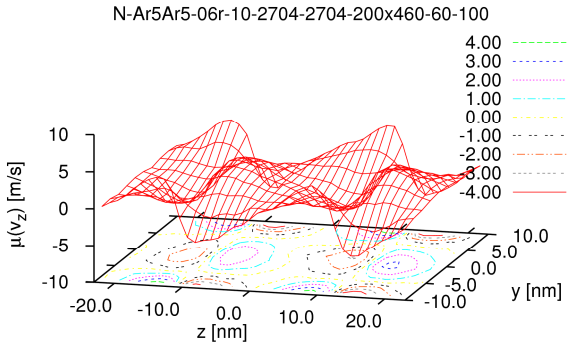


MeansLocTempYGradZ.eps

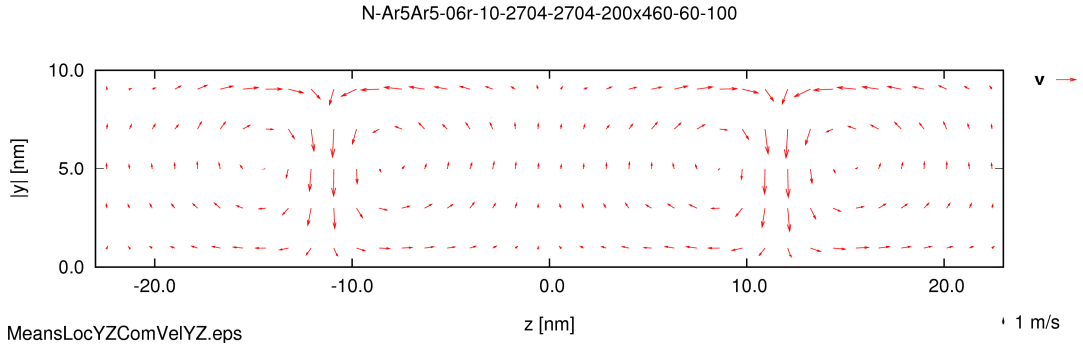
b) Temperatures



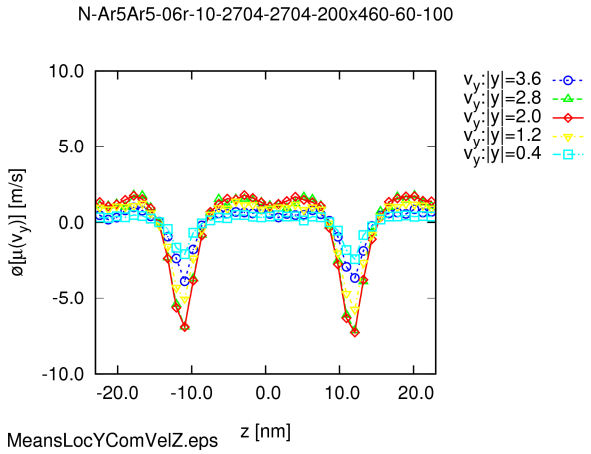
MeansLocYComVelYZ.eps



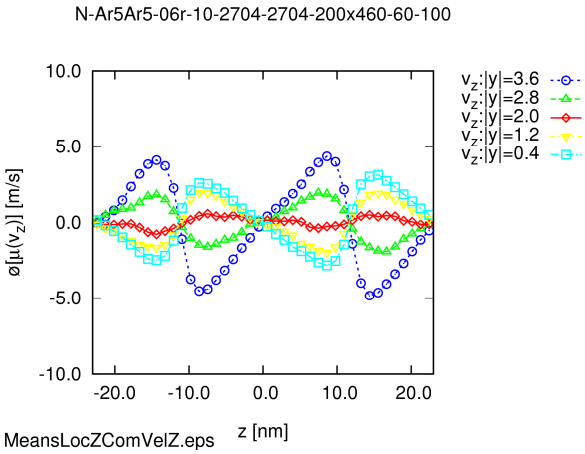
MeansLocZComVelYZ.eps



MeansLocYZComVelYZ.eps



MeansLocYComVelZ.eps



MeansLocZComVelZ.eps

c) Com velocities

Figure 86 Local observables in the two-dimensional nonequilibrium interfacial system N-Ar5Ar5-0.6r-1.0-2704-2704-20.0x46.0-60-100