Verification of freesif test-data

Datasets have been established for testing of freesif. This document gives a systematic comparison of these datasets (visualized in Paraview) to the original data visualized in Xtract.

All datasets and .vtu-files have been created with freesif and the verified datasets will be used for the freesif test suite.

All the verified datasets are located in ‘*tests/files/verified\_testdata.h5’* in the freesif repository. All the vtu-files are located in ‘*tests/files/vtu’* directory.

Contents

[test01\_1stord\_linstat\_R1 3](#_Toc513272662)

[LD\_plates (3-node triangular elements) 3](#_Toc513272663)

[Element results 3](#_Toc513272664)

[General stress 3](#_Toc513272665)

[Von Mises stress 9](#_Toc513272666)

[Principal stress 11](#_Toc513272667)

[Decomposed stress 15](#_Toc513272668)

[Membrane Von Mises stress 21](#_Toc513272669)

[Membrane principal stress 22](#_Toc513272670)

[Node results 24](#_Toc513272671)

[Displacement 24](#_Toc513272672)

[LD\_beams (2-node beams) 30](#_Toc513272673)

[Beam forces 30](#_Toc513272674)

[MD\_plates (4-node quad elements) 36](#_Toc513272675)

[Element results 36](#_Toc513272676)

[General stress 36](#_Toc513272677)

[Von Mises stress 42](#_Toc513272678)

[Principal stress 44](#_Toc513272679)

[Deccomposed stress 48](#_Toc513272680)

[Membrane Von Mises stress 54](#_Toc513272681)

[Membrane principal stress 55](#_Toc513272682)

[Node results 57](#_Toc513272683)

[Displacement 57](#_Toc513272684)

[test01\_2ndord\_linstat\_R1 63](#_Toc513272685)

[LD\_plates (6-node triangular elements) 63](#_Toc513272686)

[Element results 63](#_Toc513272687)

[General stress 63](#_Toc513272688)

[Von Mises stress 73](#_Toc513272689)

[Principal stress 75](#_Toc513272690)

[Decomposed stress 81](#_Toc513272691)

[Membrane Von Mises stress 89](#_Toc513272692)

[Membrane principal stress 90](#_Toc513272693)

[Node results 92](#_Toc513272694)

[Displacement 92](#_Toc513272695)

[LD\_beams (3-node beam elements) 98](#_Toc513272696)

[Beam forces 98](#_Toc513272697)

[MD\_plates (8-node quad elements) 104](#_Toc513272698)

[Element results 104](#_Toc513272699)

[General stress 104](#_Toc513272700)

[Von Mises stress 114](#_Toc513272701)

[Principal stress 116](#_Toc513272702)

[Decomposed stress 122](#_Toc513272703)

[Membrane Von Mises stress 130](#_Toc513272704)

[Membrane principal stress 131](#_Toc513272705)

[Node results 133](#_Toc513272706)

[Displacement 133](#_Toc513272707)

# test01\_1stord\_linstat\_R1

## LD\_plates (3-node triangular elements)

### Element results

#### General stress

|  |  |
| --- | --- |
| Component, Layer | SIGXX, Upper |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | SIGYY, Upper |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUXY, Upper |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | SIGXX, Lower |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | SIGYY, Lower |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUXY, Lower |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Von Mises stress

|  |  |
| --- | --- |
| Component, Layer | VONMISES, Upper |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/vonmisesstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | VONMISES, Lower |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/vonmisesstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Principal stress

|  |  |
| --- | --- |
| Component, Layer | P1, Upper |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/principalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | P2, Upper |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/principalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | P1, Lower |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/principalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | P2, Lower |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/principalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Decomposed stress

|  |  |
| --- | --- |
| Component | SIGMX |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | SIGMY |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | SIGBX |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | SIGBY |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | TAUMXY |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | TAUBXY |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Membrane Von Mises stress

|  |  |
| --- | --- |
| Component | MVONMISES |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/vonmisesstress\_m |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Membrane principal stress

|  |  |
| --- | --- |
| Component | P1 |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/principalstress\_m |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | P2 |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/elemres/principalstress\_m |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

### Node results

#### Displacement

|  |  |
| --- | --- |
| Component | X |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/noderes/displacement |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | Y |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/noderes/displacement |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview | |

|  |  |
| --- | --- |
| Component | Z |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/noderes/displacement |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | RX |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/noderes/displacement |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | RY |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/noderes/displacement |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | RZ |
| Dataset | test01\_1stord\_linstat\_R1/LD\_plates/noderes/displacement |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

## LD\_beams (2-node beams)

### Beam forces

|  |  |
| --- | --- |
| Component | NXX |
| Dataset | test01\_1stord\_linstat\_R1/LD\_beams/elemres/beamforce |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_beams\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | NXY |
| Dataset | test01\_1stord\_linstat\_R1/LD\_beams/elemres/beamforce |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_beams\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | NXZ |
| Dataset | test01\_1stord\_linstat\_R1/LD\_beams/elemres/beamforce |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_beams\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | MXX |
| Dataset | test01\_1stord\_linstat\_R1/LD\_beams/elemres/beamforce |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_beams\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | MXY |
| Dataset | test01\_1stord\_linstat\_R1/LD\_beams/elemres/beamforce |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_beams\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | MXZ |
| Dataset | test01\_1stord\_linstat\_R1/LD\_beams/elemres/beamforce |
| Vtu-file | test01\_1stord\_linstat\_R1\_LD\_beams\_elemres.vtu |
| Xtract: | |
| Paraview: | |

## MD\_plates (4-node quad elements)

### Element results

#### General stress

|  |  |
| --- | --- |
| Component, Layer | SIGXX, Upper |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | SIGYY, Upper |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUXY, Upper |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | SIGXX, Lower |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | SIGYY, Lower |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUXY, Lower |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Von Mises stress

|  |  |
| --- | --- |
| Component, Layer | VONMISES, Upper |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/vonmisesstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | VONMISES, Lower |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/vonmisesstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Principal stress

|  |  |
| --- | --- |
| Component, Layer | P1, Upper |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/principalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | P2, Upper |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/principalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | P1, Lower |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/principalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | P2, Lower |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/principalstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Deccomposed stress

|  |  |
| --- | --- |
| Component | SIGMX |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | SIGMY |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | SIGBX |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | SIGBY |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | TAUMXY |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | TAUBXY |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Membrane Von Mises stress

|  |  |
| --- | --- |
| Component | MVONMISES |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/vonmisesstress\_m |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Membrane principal stress

|  |  |
| --- | --- |
| Component | P1 |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/principalstress\_m |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | P2 |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/elemres/principalstress\_m |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

### Node results

#### Displacement

|  |  |
| --- | --- |
| Component | X |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/noderes/displacement |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | Y |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/noderes/displacement |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | Z |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/noderes/displacement |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | RX |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/noderes/displacement |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | RY |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/noderes/displacement |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | RZ |
| Dataset | test01\_1stord\_linstat\_R1/MD\_plates/noderes/displacement |
| Vtu-file | test01\_1stord\_linstat\_R1\_MD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

# test01\_2ndord\_linstat\_R1

## LD\_plates (6-node triangular elements)

### Element results

#### General stress

|  |  |
| --- | --- |
| Component, Layer | SIGXX, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | SIGYY, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUXY, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUXZ, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUYZ, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | SIGXX, Lower |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | SIGYY, Lower |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUXY, Lower |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUXZ, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUYZ, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Von Mises stress

|  |  |
| --- | --- |
| Component, Layer | VONMISES, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/vonmisesstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | VONMISES, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/vonmisesstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Principal stress

|  |  |
| --- | --- |
| Component, Layer | P1, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/principalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | P2, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/principalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | P3, Upper |
| Dataset |  |
| Vtu-file |  |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | P1, Lower |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/principalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | P2, Lower |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/principalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | P3, Lower |
| Dataset |  |
| Vtu-file |  |
| Xtract: | |
| Paraview: | |

#### Decomposed stress

|  |  |
| --- | --- |
| Component | SIGMX |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | SIGMY |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | SIGBX |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | SIGBY |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | TAUMXY |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | TAUBXY |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | TAUBXZ |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | TAUBYZ |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Membrane Von Mises stress

|  |  |
| --- | --- |
| Component | MVONMISES |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/vonmisesstress\_m |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Membrane principal stress

|  |  |
| --- | --- |
| Component | P1 |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/principalstress\_m |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | P2 |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/elemres/principalstress\_m |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

### Node results

#### Displacement

|  |  |
| --- | --- |
| Component | X |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/noderes/displacement |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | Y |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/noderes/displacement |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | Z |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/noderes/displacement |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | RX |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/noderes/displacement |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | RY |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/noderes/displacement |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | RZ |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_plates/noderes/displacement |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |

## LD\_beams (3-node beam elements)

### Beam forces

|  |  |
| --- | --- |
| Component | NXX |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_beams/elemres/beamforce |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_beams\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | NXY |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_beams/elemres/beamforce |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_beams\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | NXZ |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_beams/elemres/beamforce |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_beams\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | MXX |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_beams/elemres/beamforce |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_beams\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | MXY |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_beams/elemres/beamforce |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_beams\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | MXZ |
| Dataset | test01\_2ndord\_linstat\_R1/LD\_beams/elemres/beamforce |
| Vtu-file | test01\_2ndord\_linstat\_R1\_LD\_beams\_elemres.vtu |
| Xtract: | |
| Paraview: | |

## MD\_plates (8-node quad elements)

### Element results

#### General stress

|  |  |
| --- | --- |
| Component, Layer | SIGXX, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | SIGYY, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |
|  | |

|  |  |
| --- | --- |
| Component, Layer | TAUXY, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUXZ, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUYZ, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | SIGXX, Lower |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | SIGYY, Lower |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUXY, Lower |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUXZ, Lower |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | TAUYZ, Lower |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/generalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Von Mises stress

|  |  |
| --- | --- |
| Component, Layer | VONMISES, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/vonmisesstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |
| Note:  Element node values are identical, but rendering of the stress field inside some of the elements are different. | |

|  |  |
| --- | --- |
| Component, Layer | VONMISES, Lower |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/vonmisesstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |
| Note:  Element node values are identical, but rendering of the stress field inside some of the elements are different. | |

#### Principal stress

|  |  |
| --- | --- |
| Component, Layer | P1, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/principalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |
| Note:  Element node values are identical, but rendering of the stress field inside some of the elements are different. | |

|  |  |
| --- | --- |
| Component, Layer | P2, Upper |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/principalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |
| Note:  Element node values are identical, but rendering of the stress field inside some of the elements are different. | |

|  |  |
| --- | --- |
| Component, Layer | P3, Upper |
| Dataset |  |
| Vtu-file |  |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component, Layer | P1, Lower |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/principalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |
| Note:  Element node values are identical, but rendering of the stress field inside some of the elements are different. | |

|  |  |
| --- | --- |
| Component, Layer | P2, Lower |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/principalstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |
| Note:  Element node values are identical, but rendering of the stress field inside some of the elements are different. | |

|  |  |
| --- | --- |
| Component, Layer | P3, Lower |
| Dataset |  |
| Vtu-file |  |
| Xtract: | |
| Paraview: | |

#### Decomposed stress

|  |  |
| --- | --- |
| Component | SIGMX |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | SIGMY |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | SIGBX |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | SIGBY |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | TAUMXY |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | TAUBXY |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | TAUBXZ |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | TAUBYZ |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/decomposedstress |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Membrane Von Mises stress

|  |  |
| --- | --- |
| Component | MVONMISES |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/vonmisesstress\_m |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

#### Membrane principal stress

|  |  |
| --- | --- |
| Component | P1 |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/principalstress\_m |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

|  |  |
| --- | --- |
| Component | P2 |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/elemres/principalstress\_m |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_elemres.vtu |
| Xtract: | |
| Paraview: | |

### Node results

#### Displacement

|  |  |
| --- | --- |
| Component | X |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/noderes/displacement |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |
| Note:  Node values are identical, but rendering of the displacement field inside some of the elements is different. | |

|  |  |
| --- | --- |
| Component | Y |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/noderes/displacement |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |
| Note:  Node values are identical, but rendering of the displacement field inside some of the elements is different. | |

|  |  |
| --- | --- |
| Component | Z |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/noderes/displacement |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |
| Note:  Node values are identical, but rendering of the displacement field inside some of the elements is different. | |

|  |  |
| --- | --- |
| Component | RX |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/noderes/displacement |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |
| Note:  Node values are identical, but rendering of the displacement field inside some of the elements is different. | |

|  |  |
| --- | --- |
| Component | RY |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/noderes/displacement |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |
| Note:  Node values are identical, but rendering of the displacement field inside some of the elements is different. | |

|  |  |
| --- | --- |
| Component | RZ |
| Dataset | test01\_2ndord\_linstat\_R1/MD\_plates/noderes/displacement |
| Vtu-file | test01\_2ndord\_linstat\_R1\_MD\_plates\_noderes.vtu |
| Xtract: | |
| Paraview: | |
| Note:  Node values are identical, but rendering of the displacement field inside some of the elements is different. | |