



Simulation Summary Report

Project Title: Bracket with hole

Description: 3D, Stress Analysis, Isotropic, Quasi-static, Mesh

Created By: pmasscasestudies

Project Created: 08/07/2023-21:43

Report Created: 10/31/2023-10:39

Analysis Type: Stress Analysis

Solver: quasi-static

Dimension: 3

```
{"dateTime": {"month": "08", "hour": "21", "year": "2023", "day": "07", "minute": "43"}, "time_increment": 1e-08, "quasi_static": {"max_iteration": 1000, "tolerance": 1e-07, "precondition": 1e-10}, "feModels": [{"horizon": {"horizon_type": "sphere", "hr": 3.1}, "elements_filename": "elements.txt", "nodes_filename": "nodes.txt", "name": "FE-Shape-1", "refinement": 0, "element_type": "Tetrahedron", "dimension": 3}, {"horizon": {"horizon_type": "sphere", "hr": 3.1}, "elements_filename": "elements.txt", "nodes_filename": "nodes.txt", "name": "FE-Shape-2", "refinement": 0, "element_type": "Tetrahedron", "dimension": 3}], "analysis": {"quasi_static": {"max_iteration": 1000, "tolerance": 1e-07, "precondition": 1e-10}, "load_segments": [{"name": "Segment-1", "type": "quasi-static", "num_save": 1, "ratio_segment": 1, "num_segment": 1}], "iteration_damage": "false", "max_bond_breakage": 6, "zero_energy": {"type": "bond-associated", "bond_associated_family": 1.5}, "name": "analysis1", "type": "Stress Analysis", "dimension": 3, "inclusion_damage": "true", "solver": "quasi-static", "time_increment": 1e-08}, "materials": [{"density": 1e-05, "elastic_properties": {"E": 210000, "G": 80769, "nu": 0.3}, "name": "mat1", "failure_parameters": {"Scr": 0, "Xc": 0, "type": "Critical-Stretch", "Eccr": 0, "ft": 0, "S23": 0, "Stcr": 0, "w0": 0, "Xt": 0, "s0": 1000, "Etr": 0, "ef": 0, "c": 0, "Yc": 0, "D1": 0, "D2": 0, "D3": 0, "D4": 0, "phi": 0, "D5": 0, "Ecr": 0, "S12": 0, "Sccr": 0, "Yt": 0, "fc": 0}, "behavior": "elastic", "type": "isotropic", "dimension": 3}], "plotSetting": {"markerSize": "5", "markerOpacity": "1", "cameraEye": {"x": "1", "y": "1", "z": "1"}, "edgeColor": "middlegray", "edgeWidth": "0.05", "markerColor": "mutedblue", "colorscale": "RdBu", "materialColor": "blue", "lineColor": "black", "damageColor": "red", "aspectRatio": {"x": "1", "y": "1", "z": "1"}, "lineWidth": "1"}, "iteration_damage": "false", "project_name": "Bracket with hole", "max_bond_breakage": 6, "owner": "pmasscasestudies", "models": [{"output_zones": [], "random_solids": [], "solids": [], "failure_zones": [], "name": "model1", "boundary_zones": [], "cracks": [], "laminated_solids": [], "dimension": 3, "voids": [], "inclusions": []}], "inclusion_damage": "true", "project_id": "48a0a898-bd62-422c-a846-f24fd8d666ae", "description": "3D, Stress Analysis, Isotropic, Quasi-static, Mesh"}
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Undeformed Grid

Number of Points: 88118

min-x: 0.72318

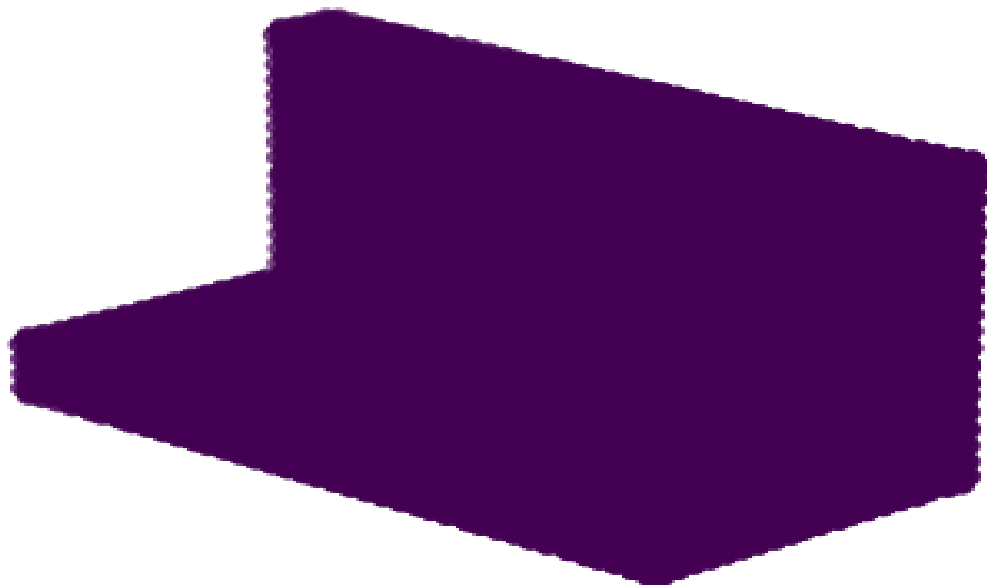
max-x: 99.2361175

min-y: 0.747965

max-y: 199.26153

min-z: 0.700435

max-z: 99.2516825



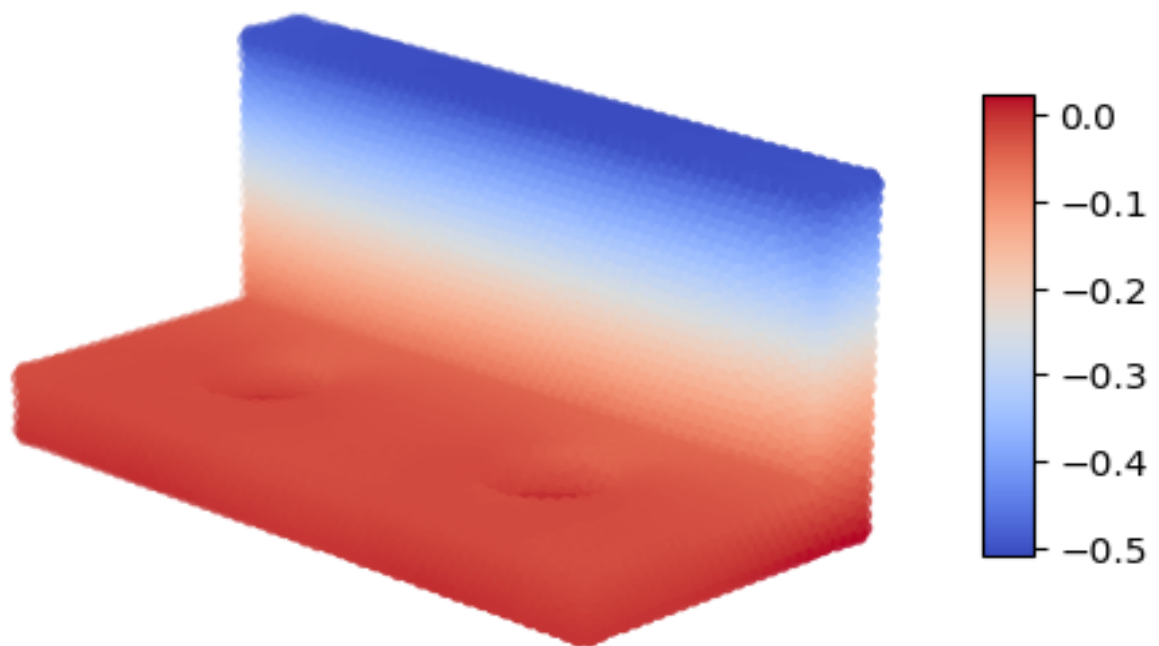
Run Name: run0

Solution Output: out_0_0

Field: u-x

min-u-x: -0.507885

max-u-x: 0.0239777



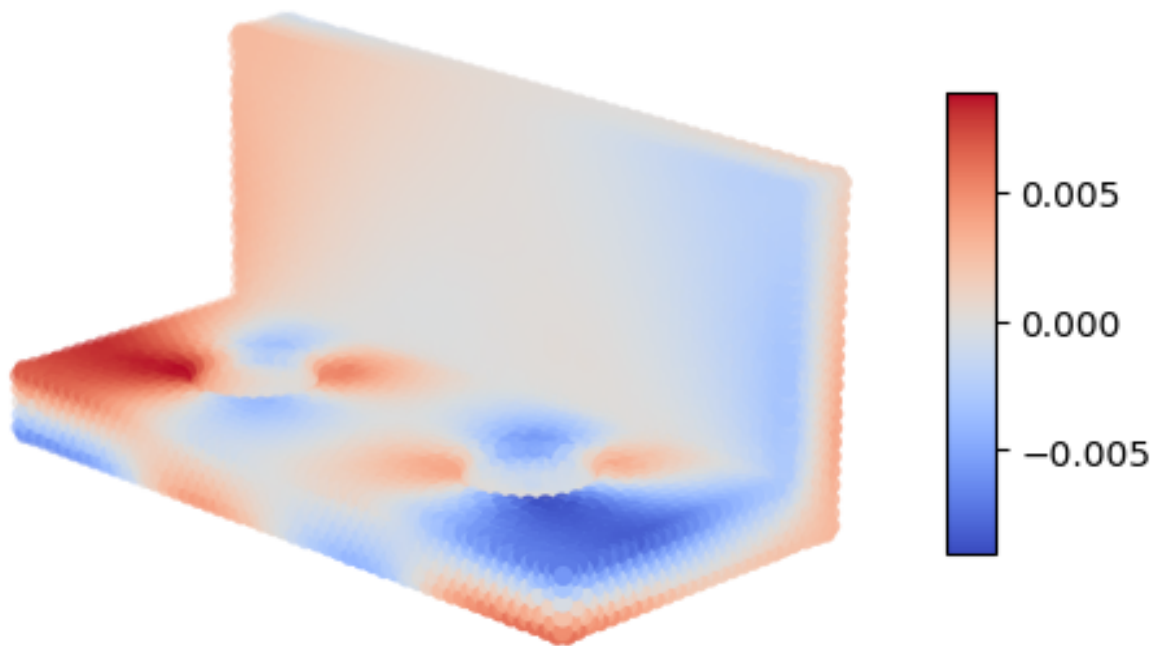
Run Name: run0

Solution Output: out_0_0

Field: u-y

min-u-y: -0.00897827

max-u-y: 0.00887228



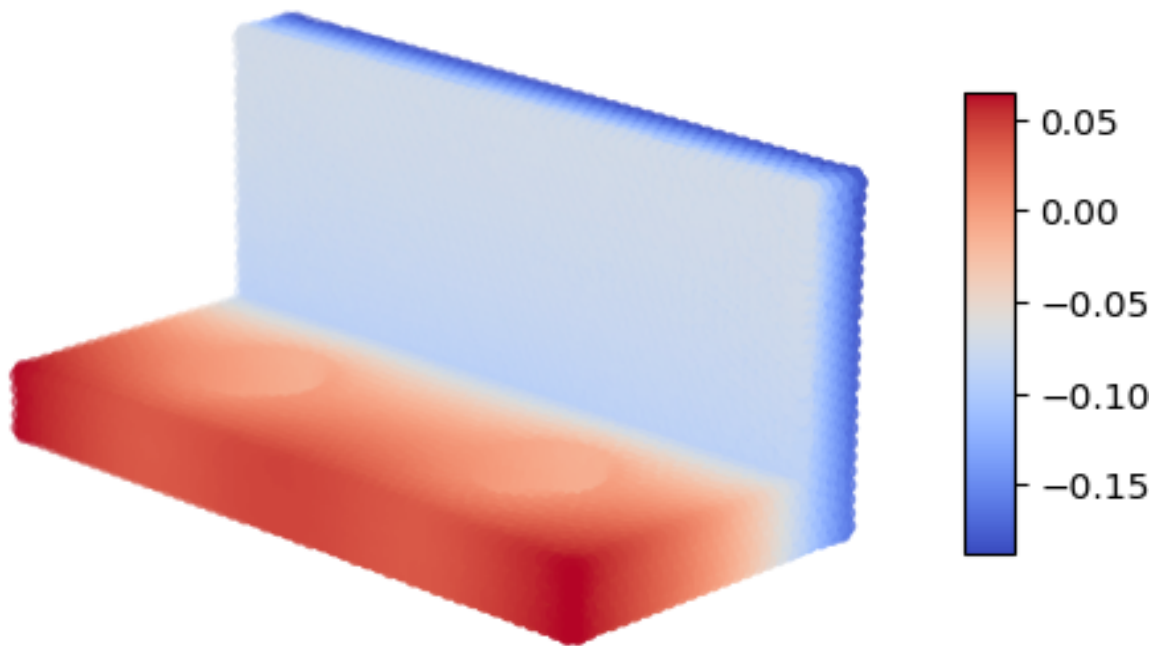
Run Name: run0

Solution Output: out_0_0

Field: u-z

min-u-z: -0.187275

max-u-z: 0.0648632



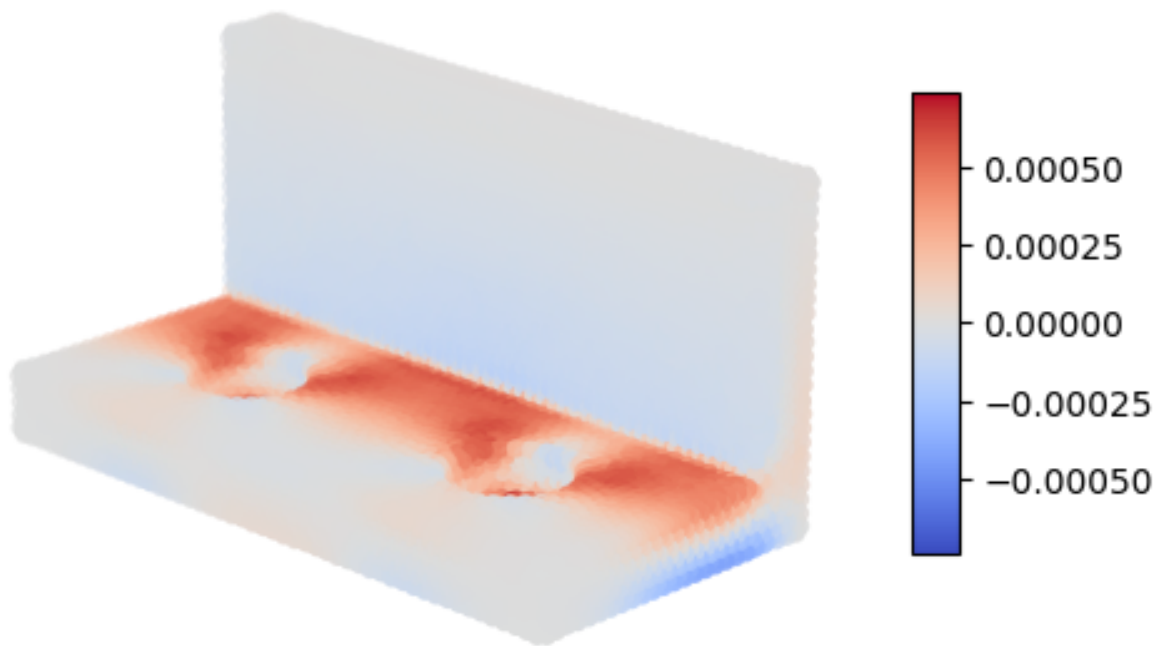
Run Name: run0

Solution Output: out_0_0

Field: e-x

min-e-x: -0.000735939

max-e-x: 0.000737514



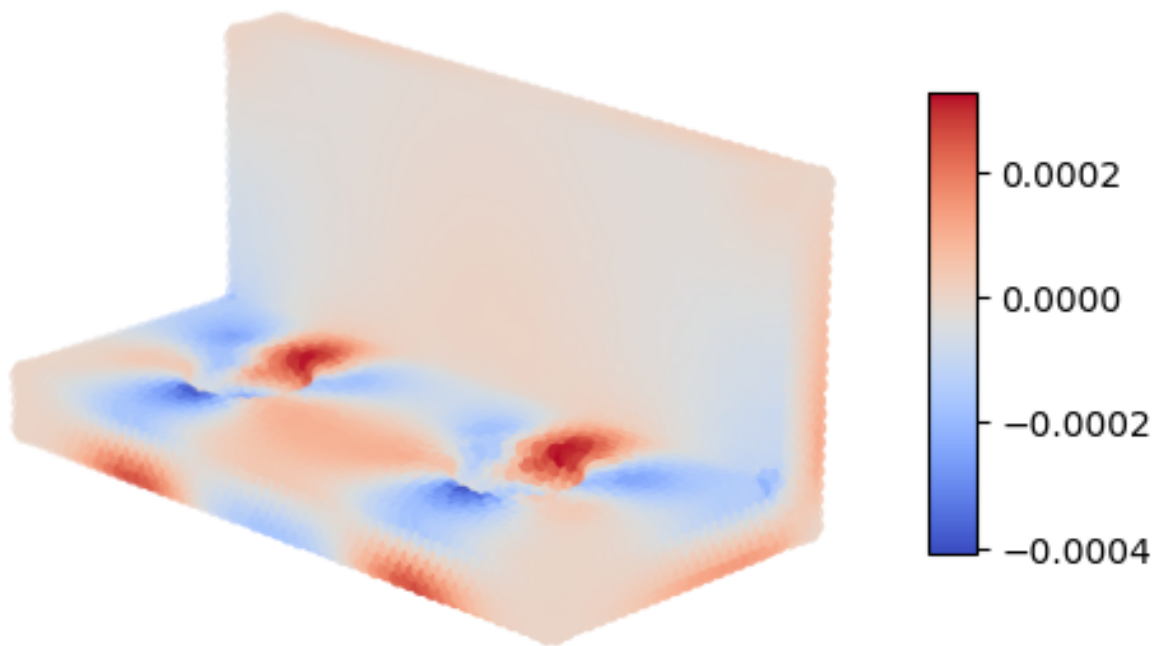
Run Name: run0

Solution Output: out_0_0

Field: e-y

min-e-y: -0.000407992

max-e-y: 0.000326157



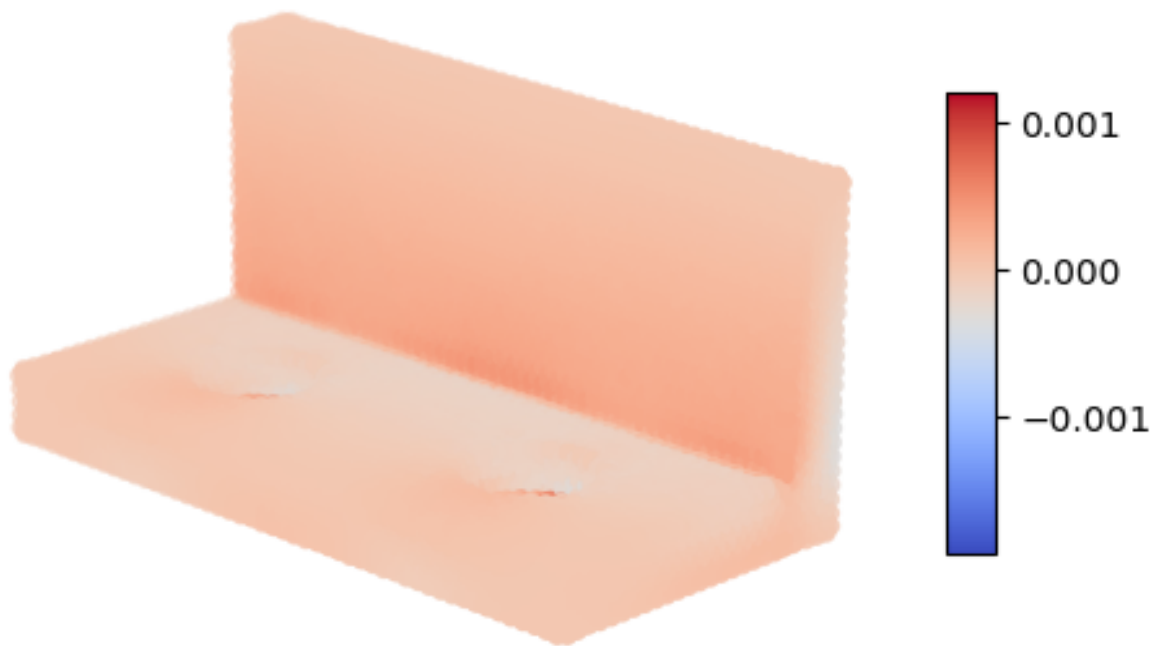
Run Name: run0

Solution Output: out_0_0

Field: e-z

min-e-z: -0.00191898

max-e-z: 0.00120094



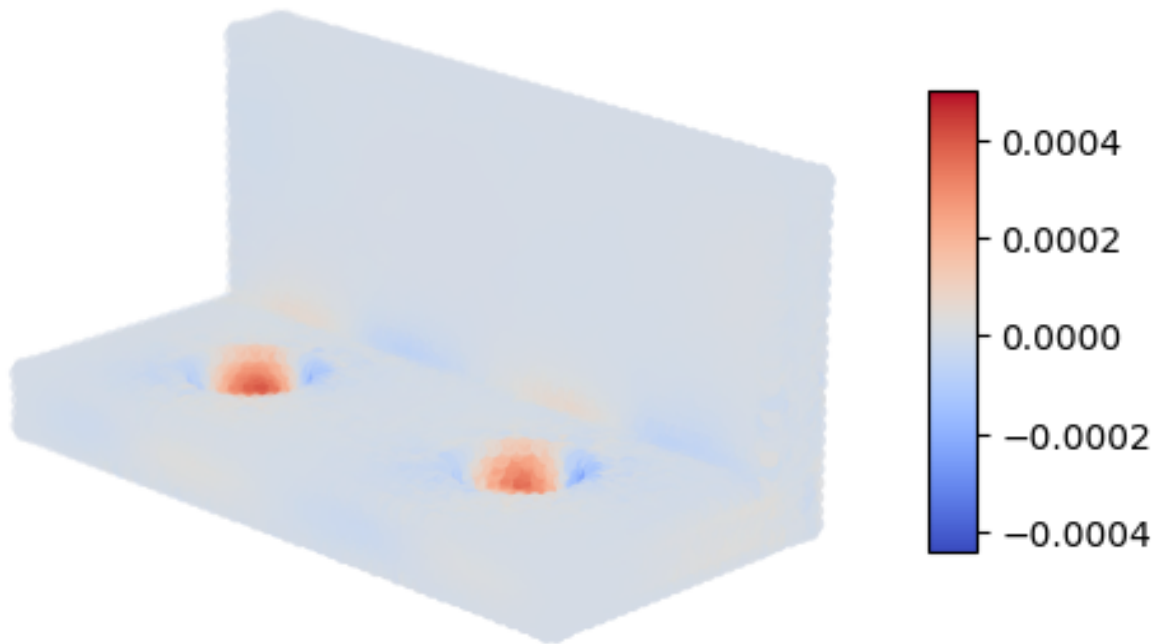
Run Name: run0

Solution Output: out_0_0

Field: e-xy

min-e-xy: -0.000438949

max-e-xy: 0.000500481



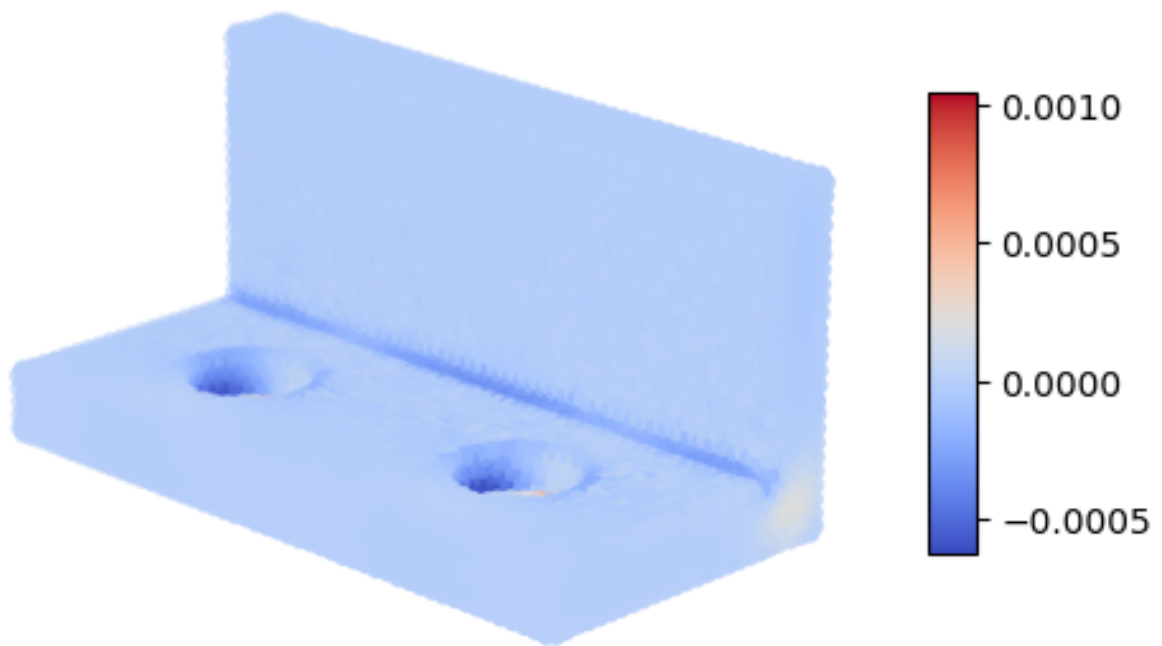
Run Name: run0

Solution Output: out_0_0

Field: e-yz

min-e-yz: -0.000619723

max-e-yz: 0.00104497



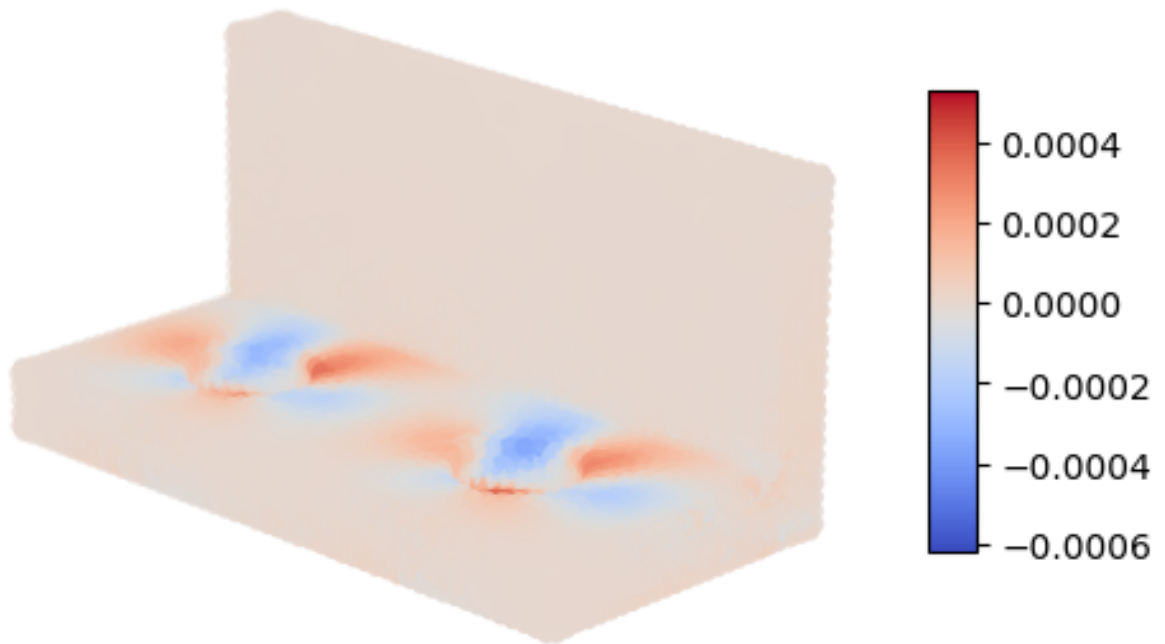
Run Name: run0

Solution Output: out_0_0

Field: e-zx

min-e-zx: -0.000616789

max-e-zx: 0.000530743



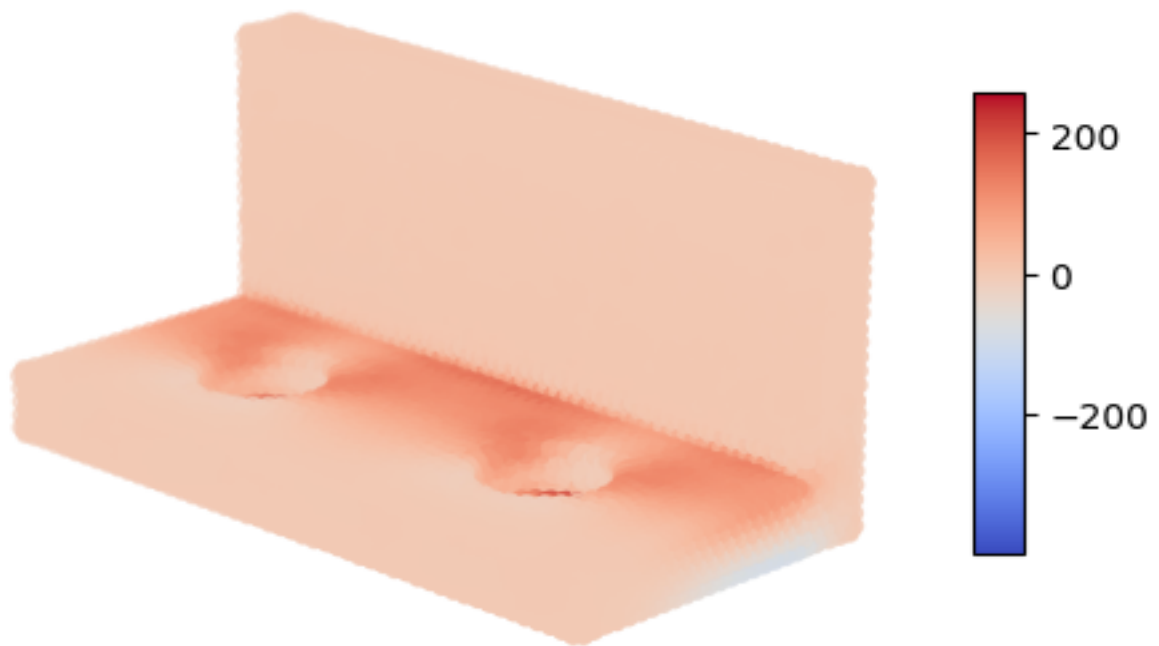
Run Name: run0

Solution Output: out_0_0

Field: s-x

min-s-x: -398.809

max-s-x: 259.141



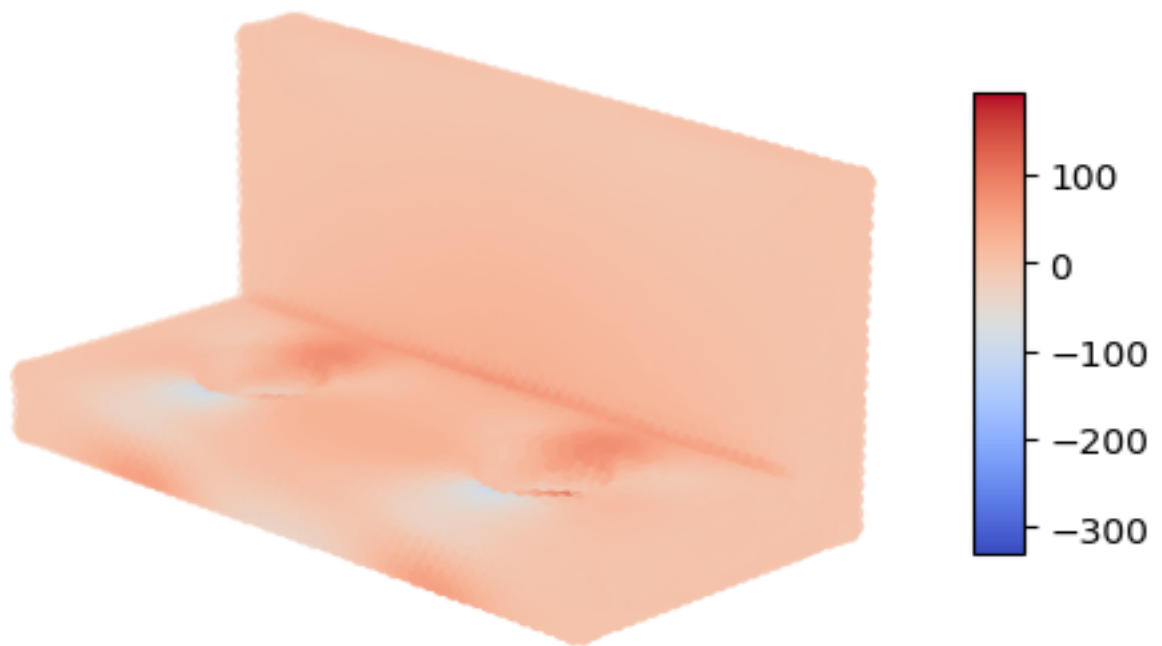
Run Name: run0

Solution Output: out_0_0

Field: s-y

min-s-y: -328.774

max-s-y: 194.104



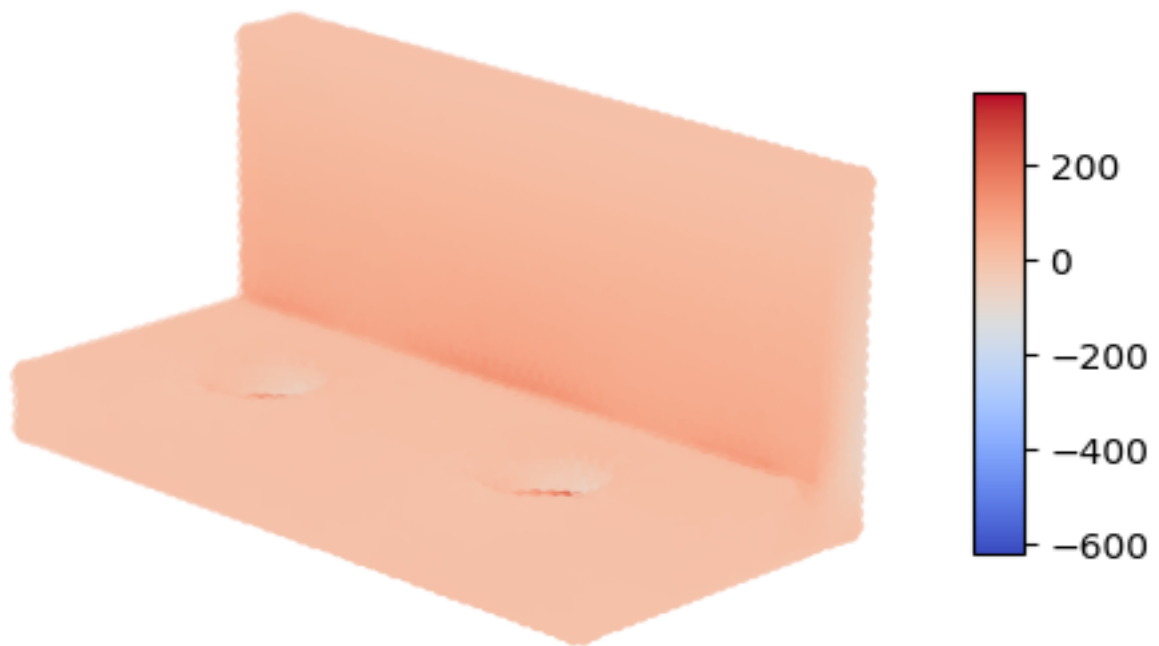
Run Name: run0

Solution Output: out_0_0

Field: s-z

min-s-z: -621.261

max-s-z: 355.695



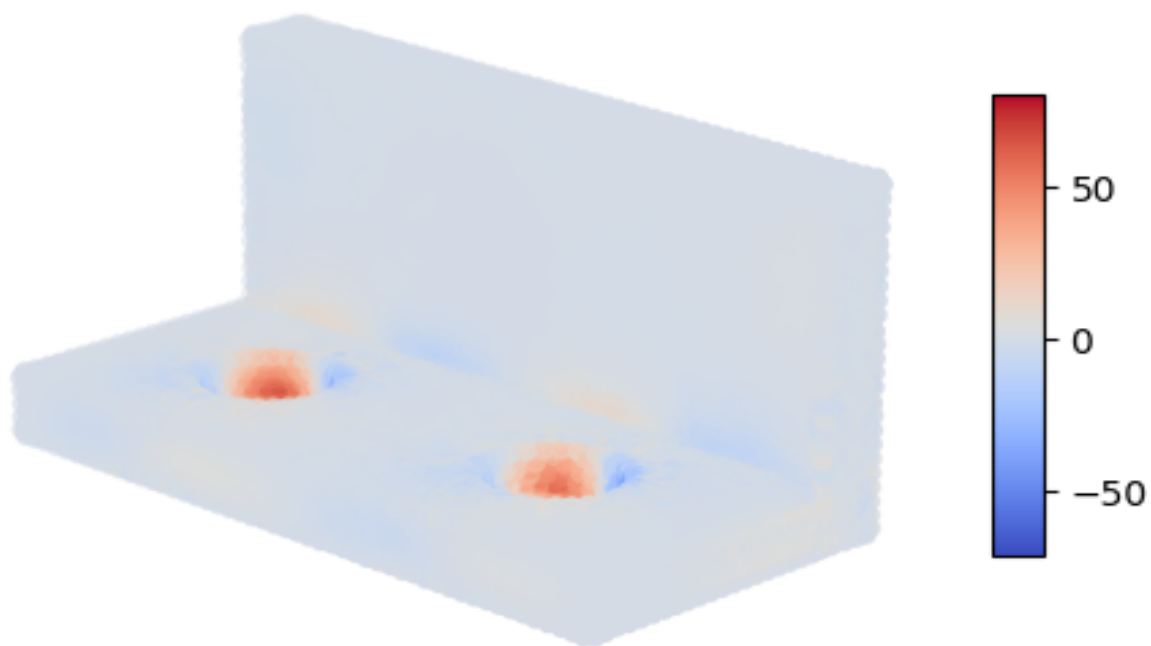
Run Name: run0

Solution Output: out_0_0

Field: s-xy

min-s-xy: -70.9071

max-s-xy: 80.847



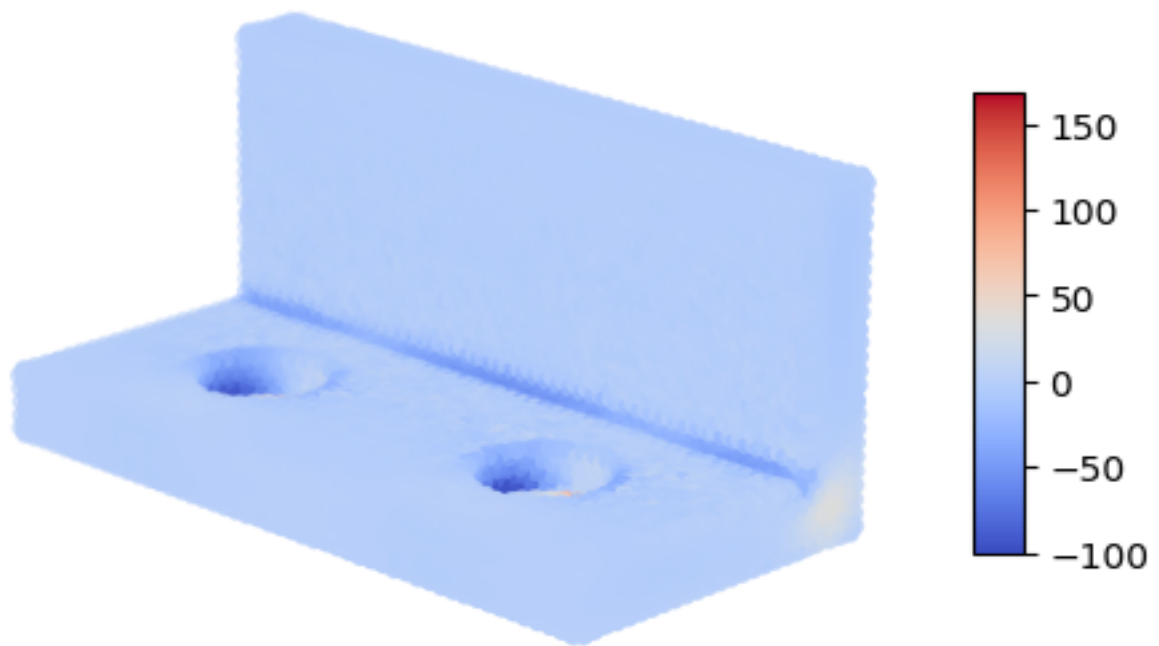
Run Name: run0

Solution Output: out_0_0

Field: s-yz

min-s-yz: -100.109

max-s-yz: 168.803



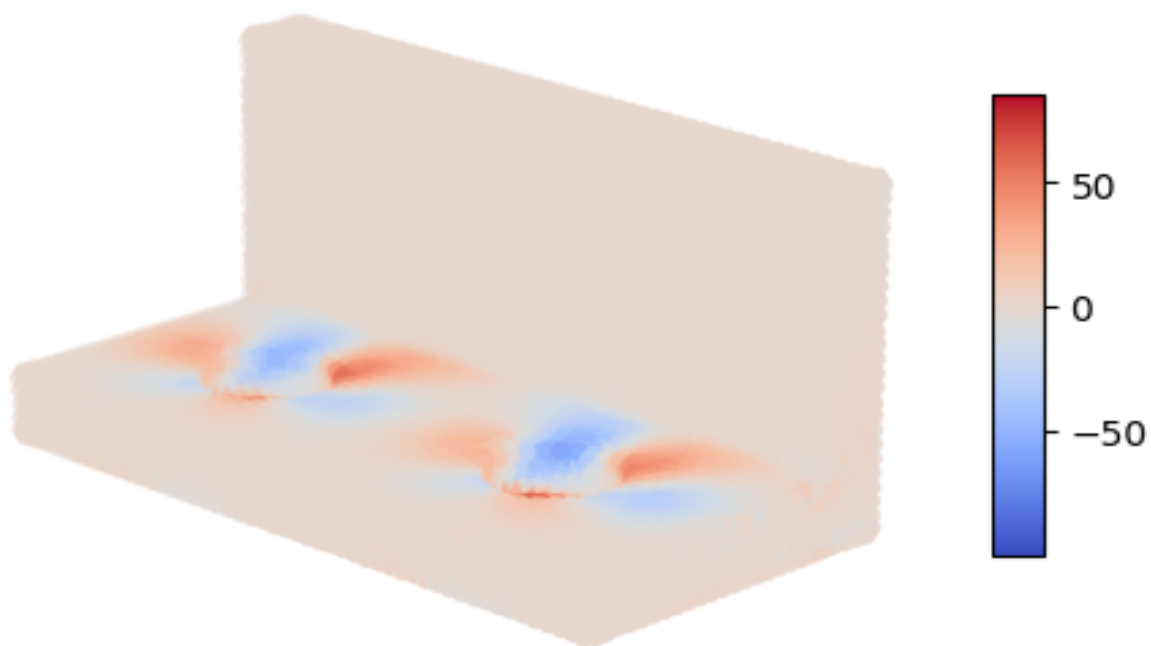
Run Name: run0

Solution Output: out_0_0

Field: s-zx

min-s-zx: -99.6352

max-s-zx: 85.7355



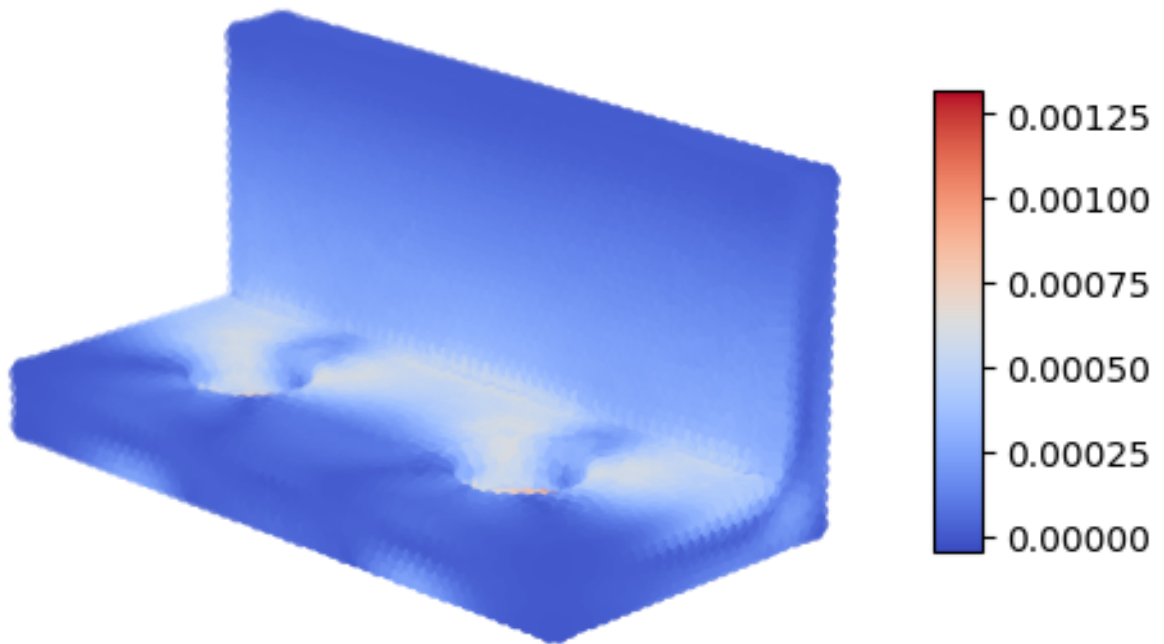
Run Name: run0

Solution Output: out_0_0

Field: e-p1

min-e-p1: -4.16508e-05

max-e-p1: 0.00132092



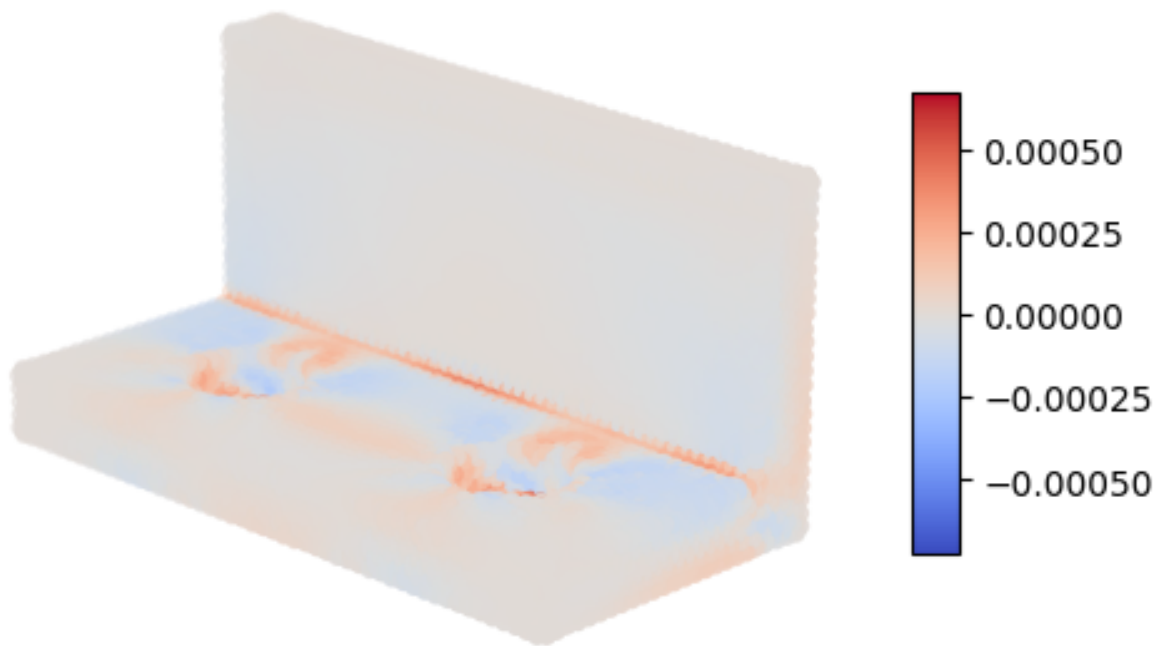
Run Name: run0

Solution Output: out_0_0

Field: e-p2

min-e-p2: -0.000720768

max-e-p2: 0.000676598



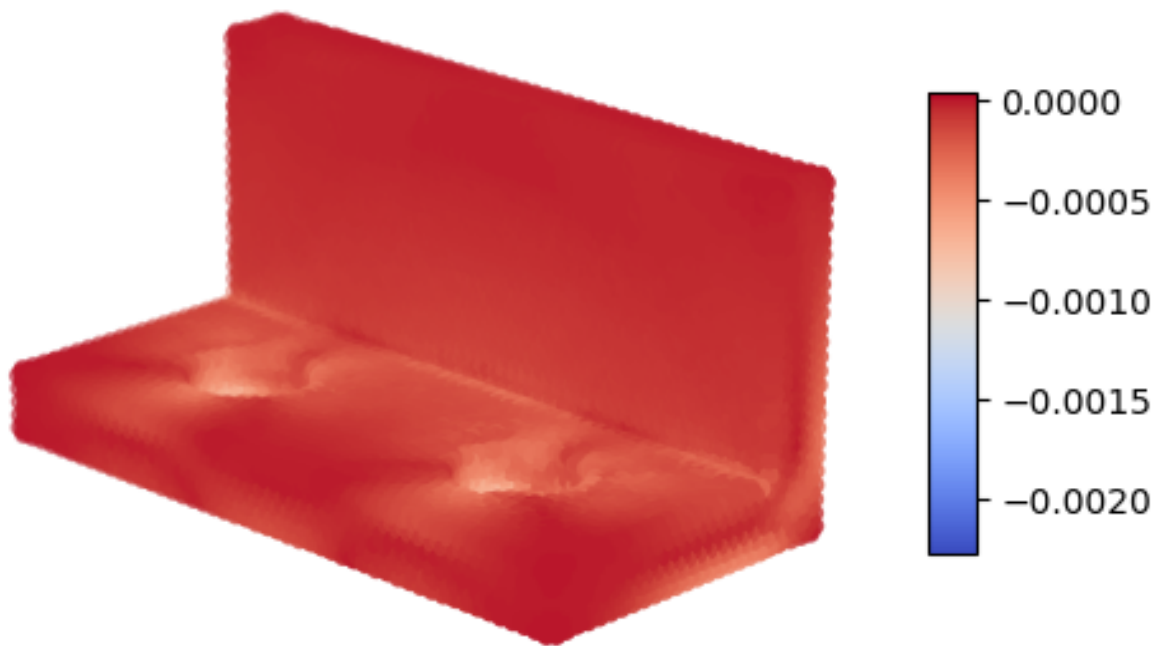
Run Name: run0

Solution Output: out_0_0

Field: e-p3

min-e-p3: -0.00226483

max-e-p3: 4.25509e-05



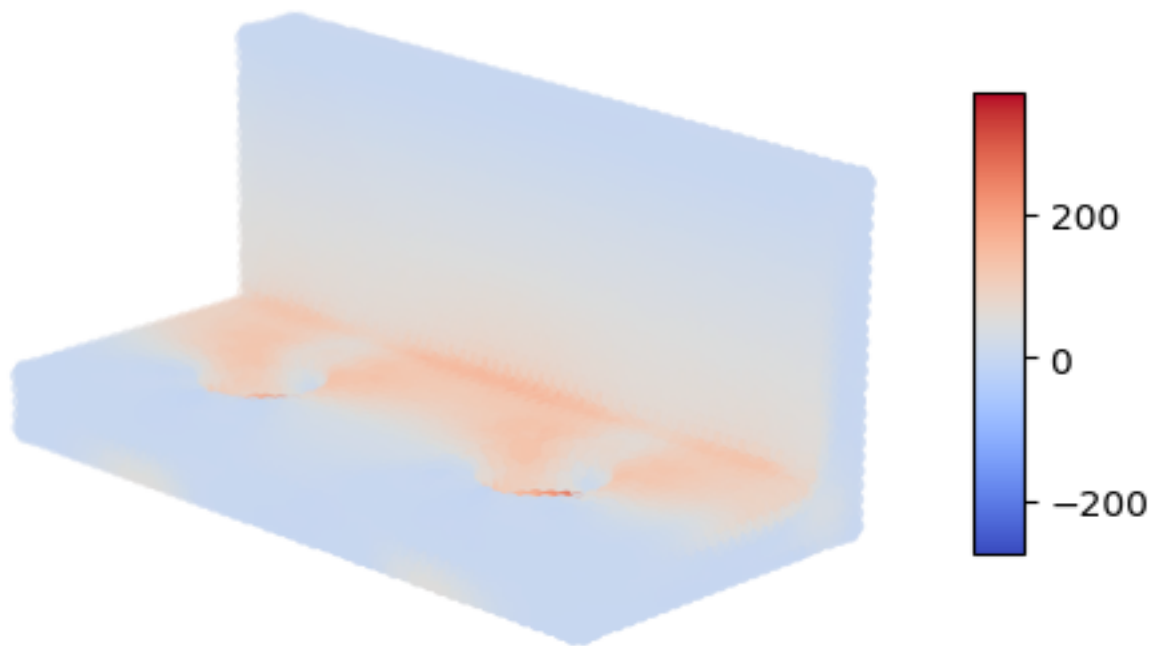
Run Name: run0

Solution Output: out_0_0

Field: s-p1

min-s-p1: -272.461

max-s-p1: 371.828



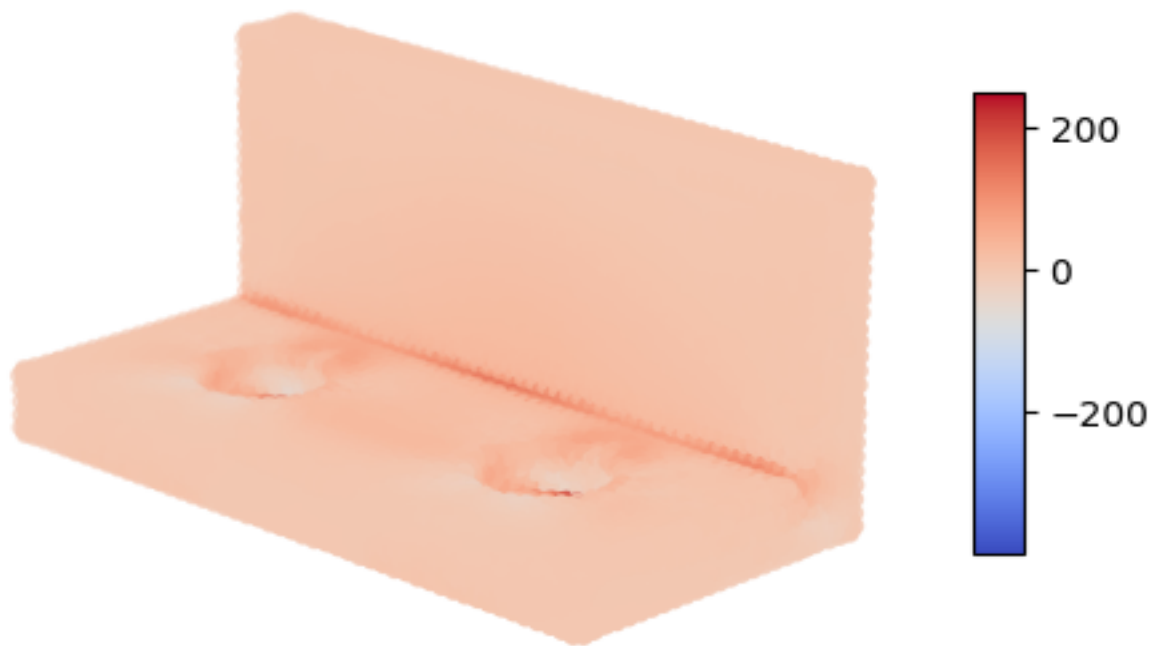
Run Name: run0

Solution Output: out_0_0

Field: s-p2

min-s-p2: -399.255

max-s-p2: 249.301



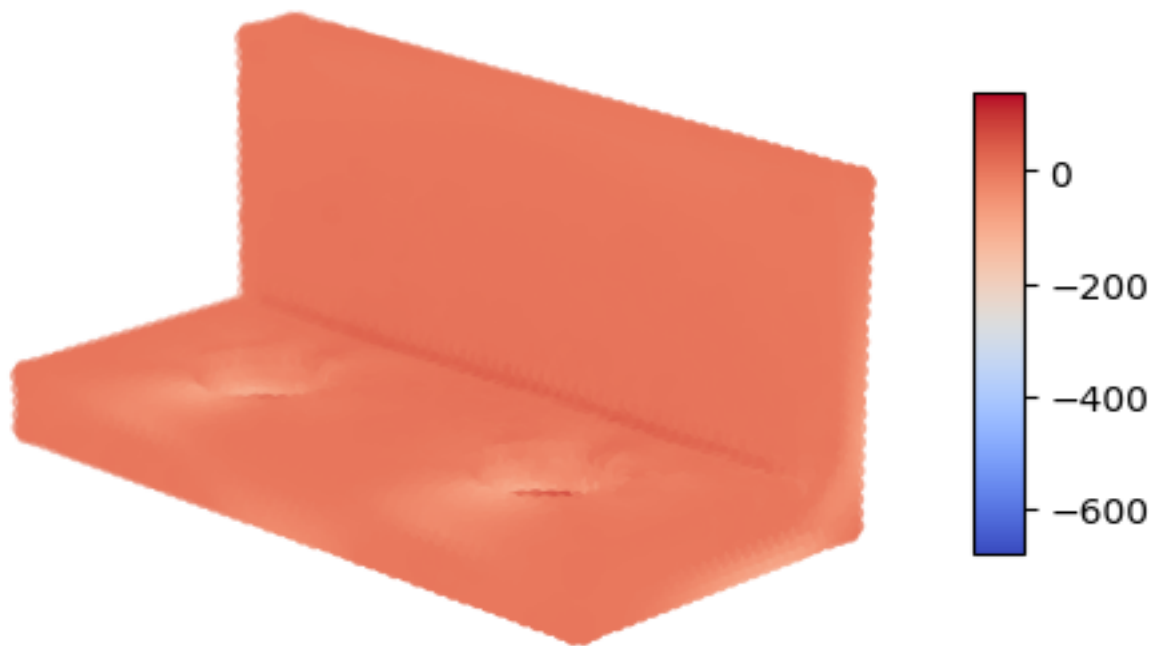
Run Name: run0

Solution Output: out_0_0

Field: s-p3

min-s-p3: -677.129

max-s-p3: 140.096



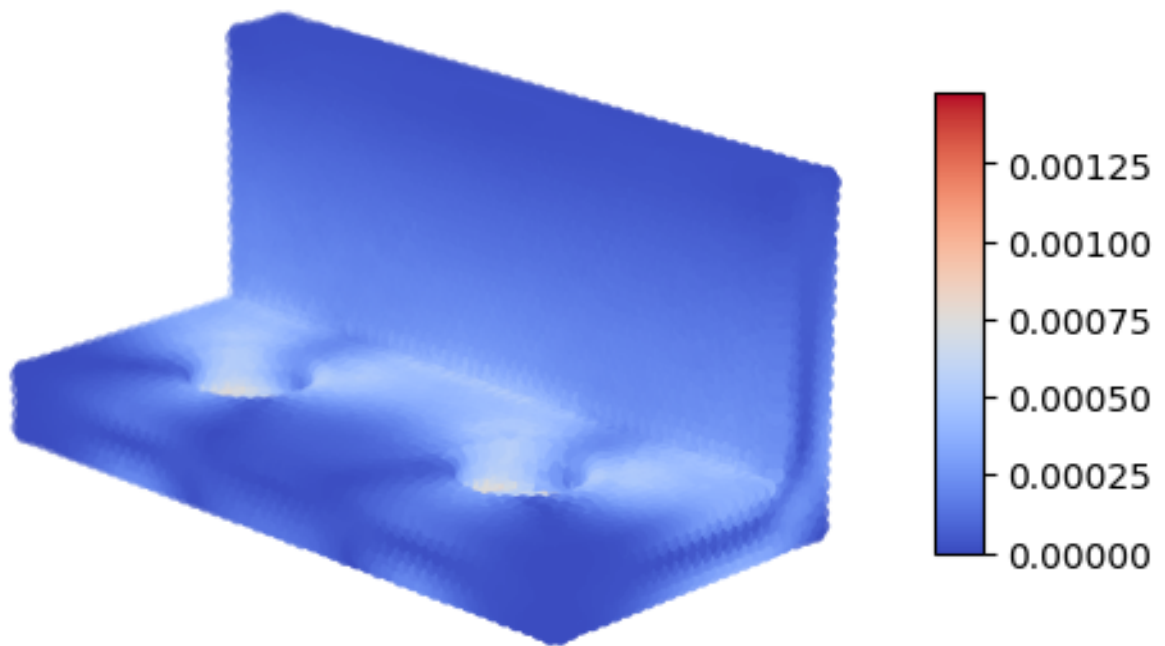
Run Name: run0

Solution Output: out_0_0

Field: e-eq

min-e-eq: 0.0

max-e-eq: 0.00147953



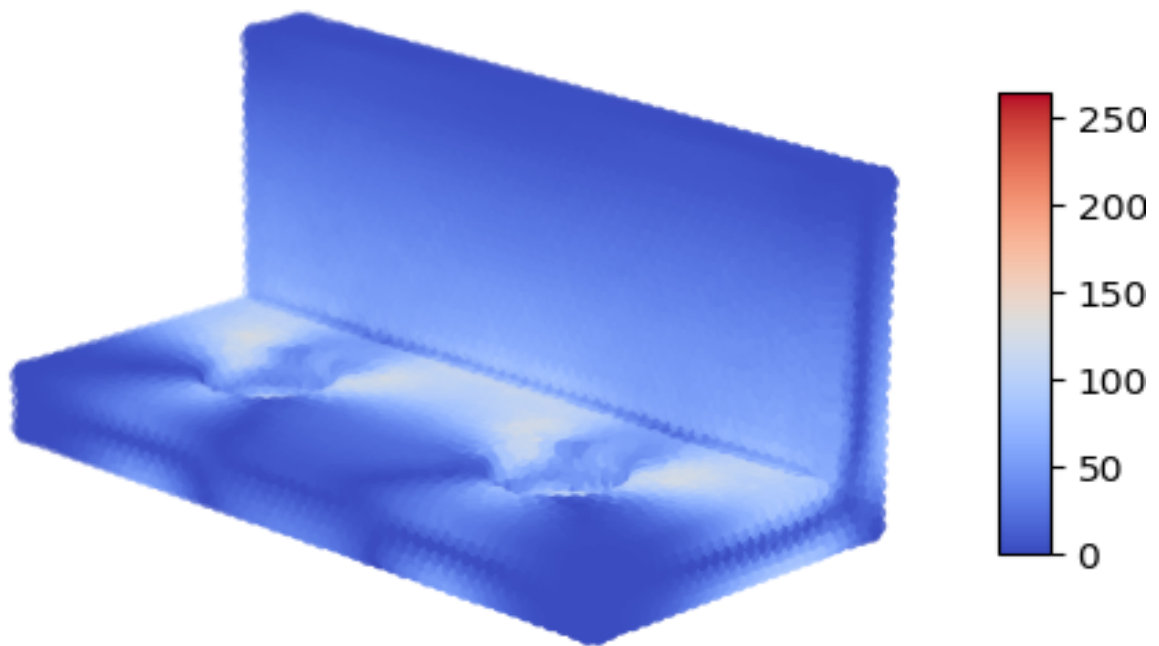
Run Name: run0

Solution Output: out_0_0

Field: s-eq

min-s-eq: 0.0

max-s-eq: 264.517



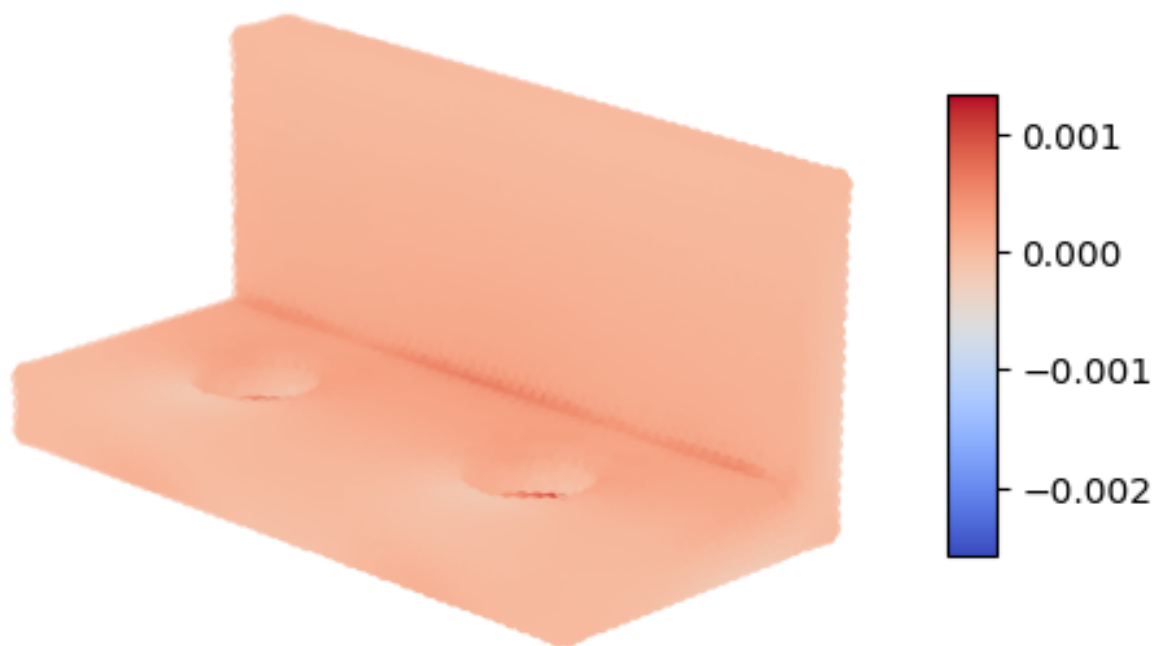
Run Name: run0

Solution Output: out_0_0

Field: e-vol

min-e-vol: -0.00256792

max-e-vol: 0.0013348



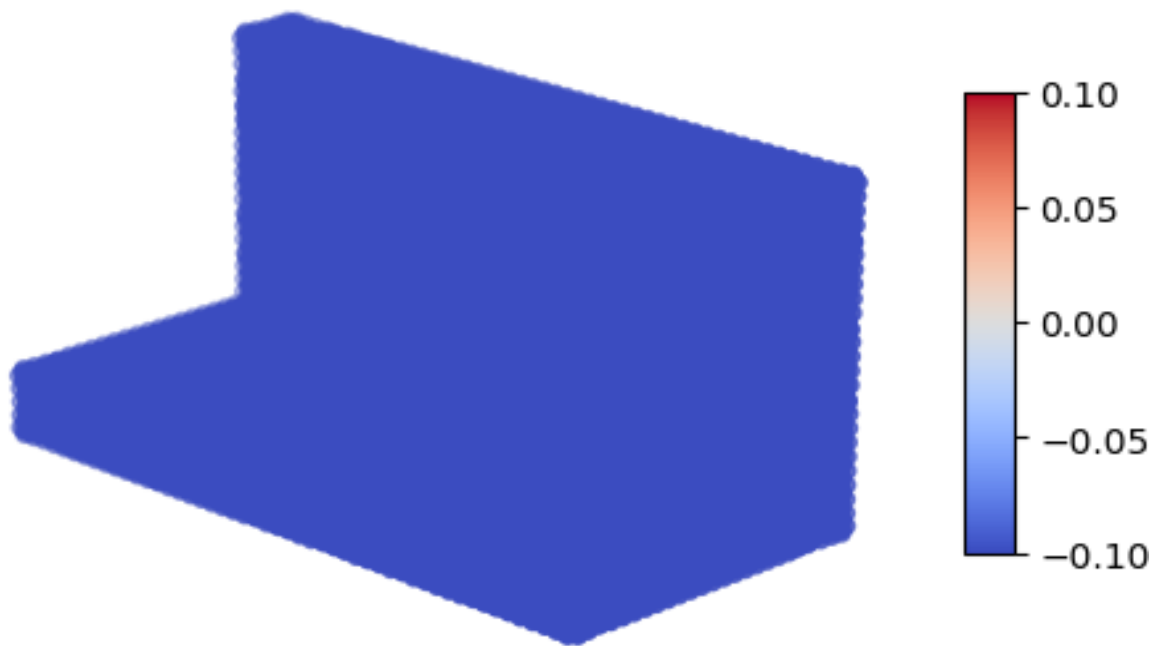
Run Name: run0

Solution Output: out_0_0

Field: damage-ini

min-damage-ini: 0.0

max-damage-ini: 0.0



Run Name: run0

Solution Output: out_0_0

Field: damage

min-damage: 0.0

max-damage: 0.0

