

Standard Tests Report

Compare com1DFAPy simulations to benchmark results

avaMalST

Simulation name: *relMal1to3_null_dfa_0.15500*

Test Info

This test runs the Mal test.

Simulation Parameters

Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	relMal1to3	relMal1to3
Entrainment	No	No
Resistance	No	No
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	87904128.03	87904128.03
Final mass [kg]	87904128.03	87904128.03
Entrained mass [kg]	0.00	0.00
Entrained volume [m3]	non existent	0.00
Stop criterion	< 1.00 percent of PKE	< 1.00 percent of PKE
Avalanche run time [s]	176.1	173.60
Computation time [s]	non existent	404.48

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	2959.0	2959.0
max peak pressure [kPa]	558.3	559.1
max peak flow depth [m]	24.8	25.2
max peak flow velocity [ms-1]	52.8	52.9

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (561.50) Difference is: Max = 248.14, Mean = -0.48 and Min = -236.07

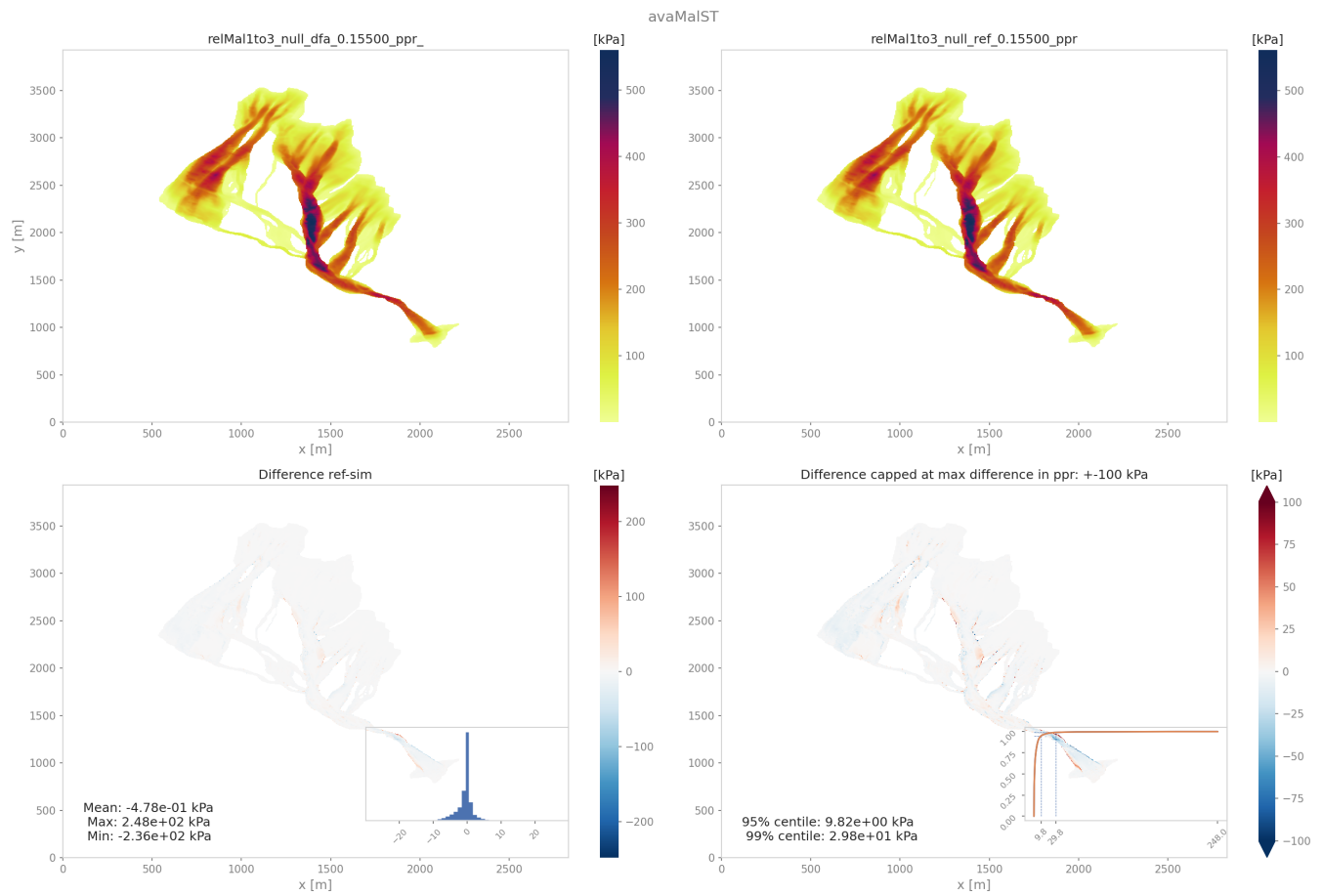


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (25.14) Difference is: Max = 1.71, Mean = -0.00 and Min = -3.52

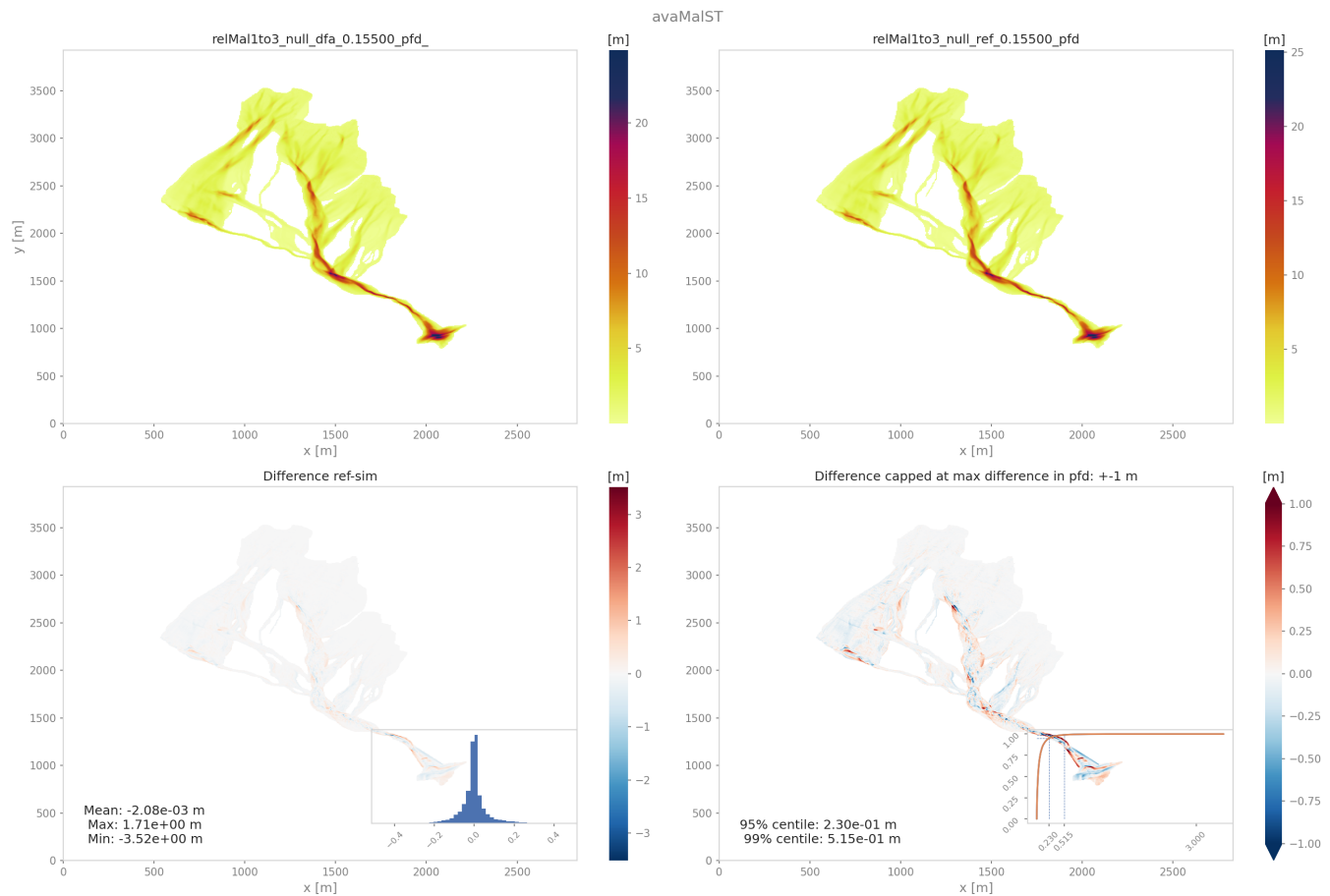


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (52.99) Difference is: Max = 31.50, Mean = -0.05 and Min = -30.73

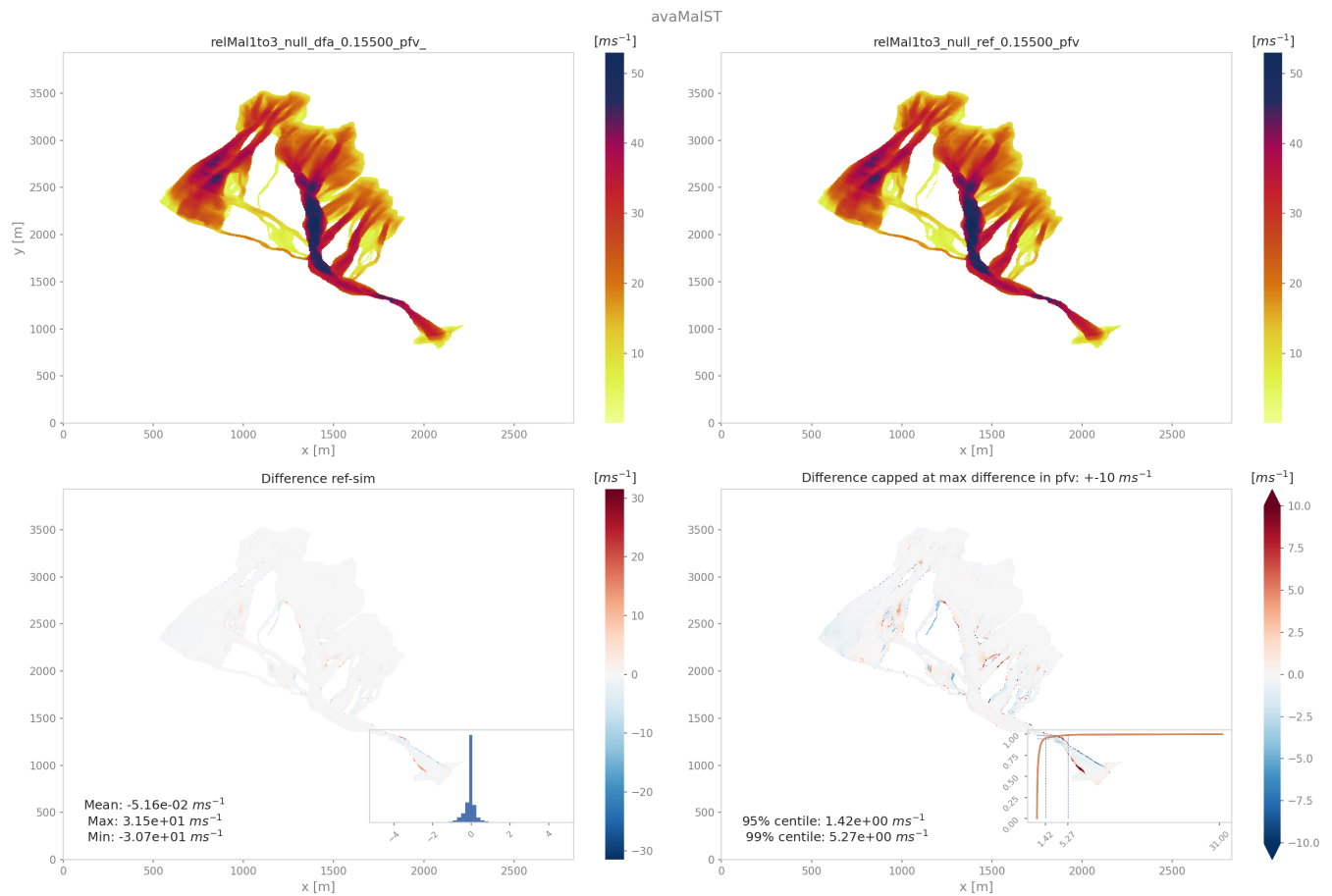


Figure: Aimec comparison of mean and max values along path

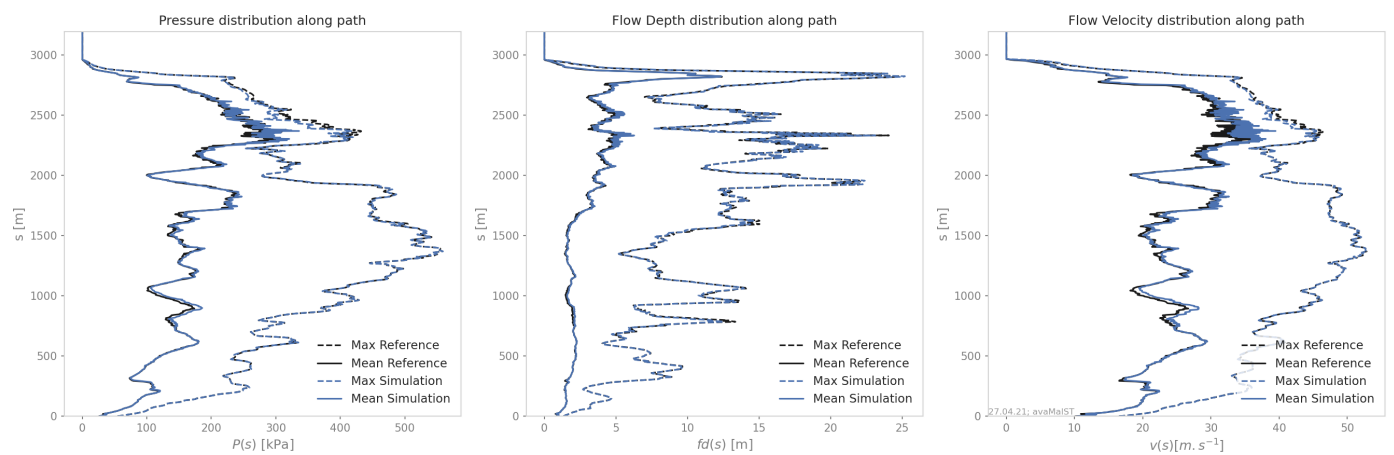
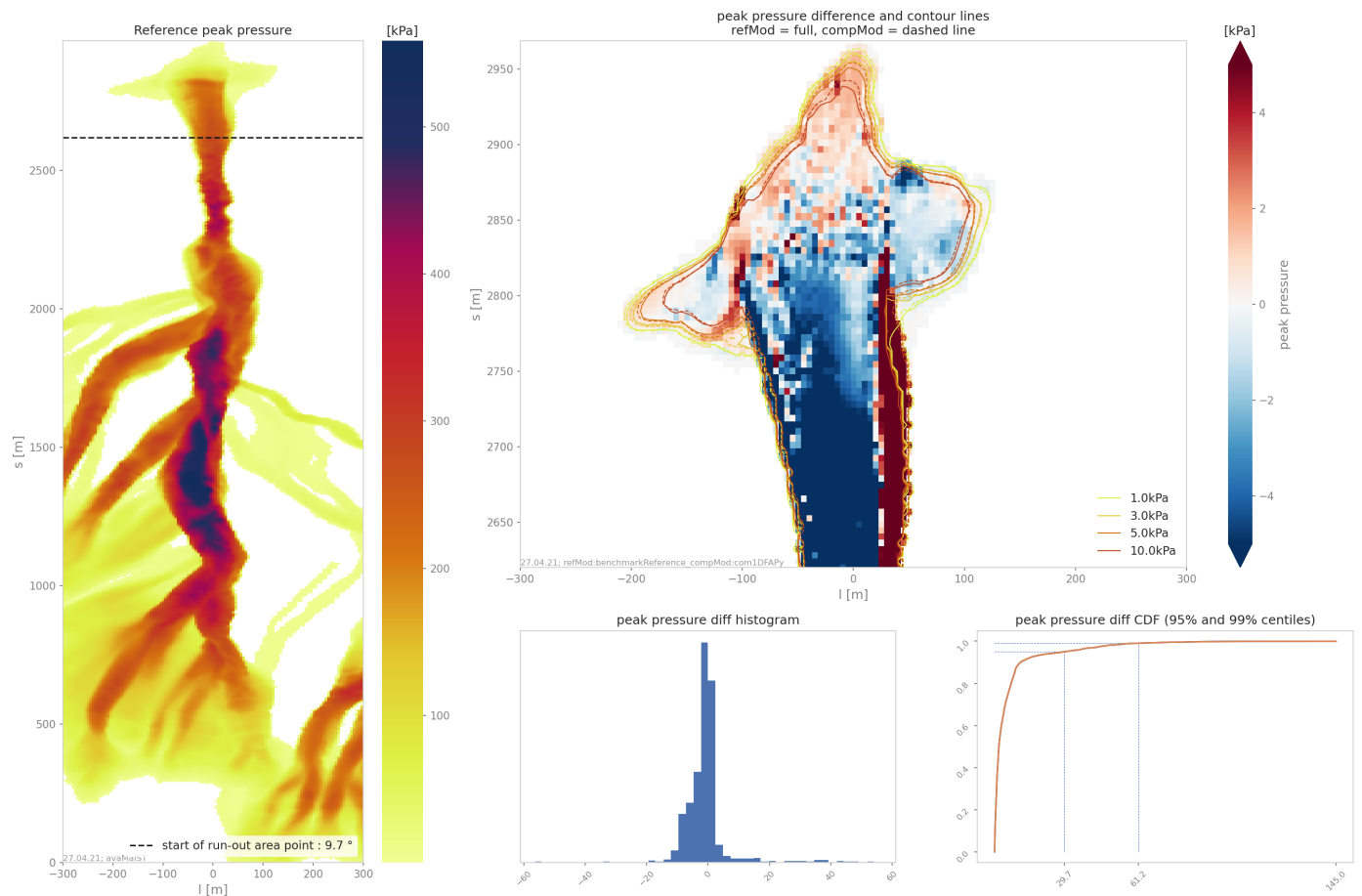


Figure: Aimec area analysis



avaBowl

Simulation name: *release1BL_null_dfa_0.15500*

Test Info

This test uses a bowl-shaped geometry.

Simulation Parameters

Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	release1BL	release1BL
Entrainment	No	No
Resistance	No	No
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	20196151.98	20196153.70
Final mass [kg]	20196151.98	20196153.70
Entrained mass [kg]	0.00	0.00
Entrained volume [m3]	non existent	0.00
Stop criterion	< 1.00 percent of PKE	< 1.00 percent of PKE

Parameter	Reference	Simulation
Avalanche run time [s]	190.1	195.30
Computation time [s]	non existent	99.10

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	2156.4	2156.4
max peak pressure [kPa]	297.4	303.5
max peak flow depth [m]	5.0	4.8
max peak flow velocity [ms-1]	38.6	39.0

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (297.77) Difference is: Max = 26.57, Mean = 0.55 and Min = -46.36

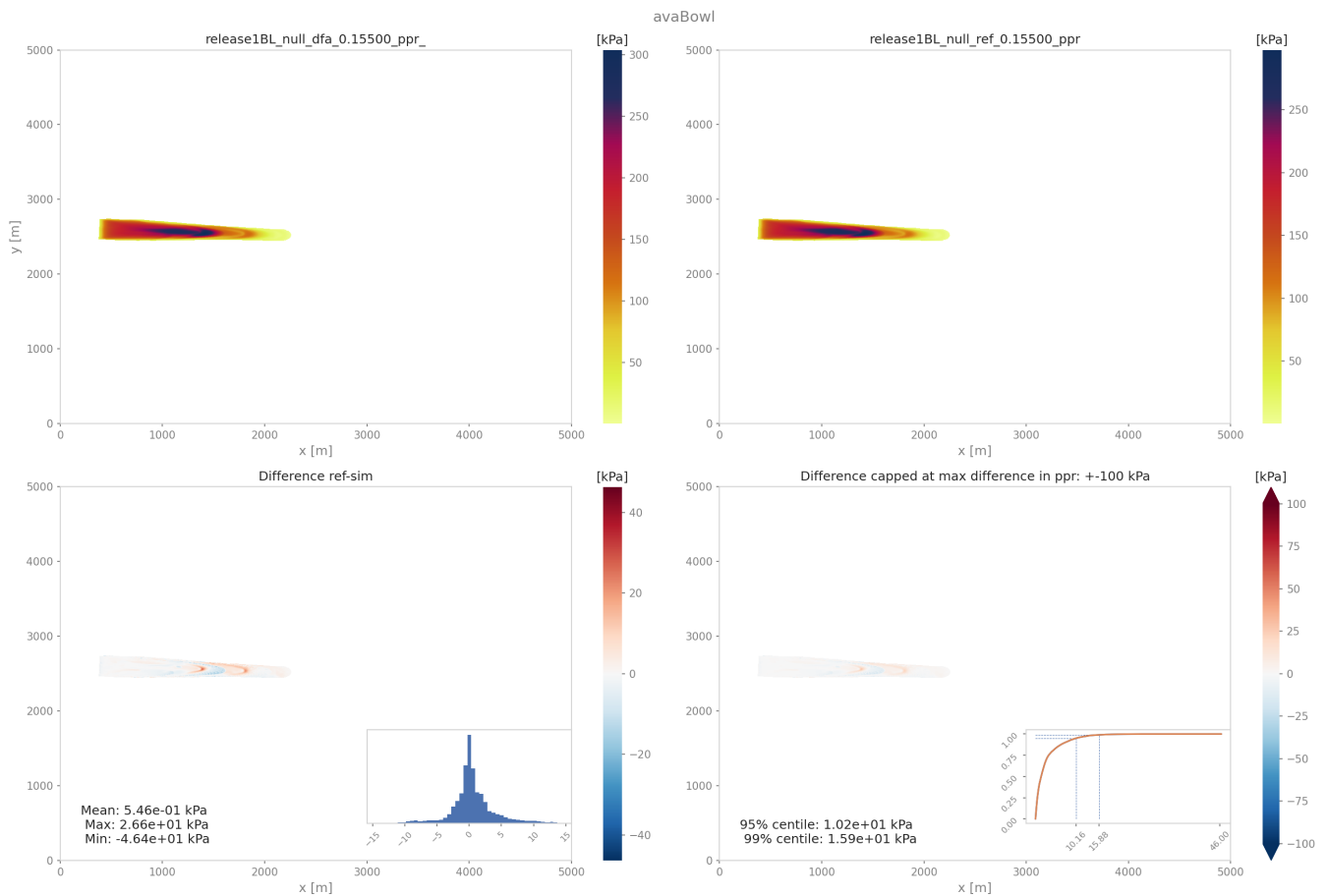


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (5.02) Difference is: Max = 1.41, Mean = -0.00 and Min = -1.12

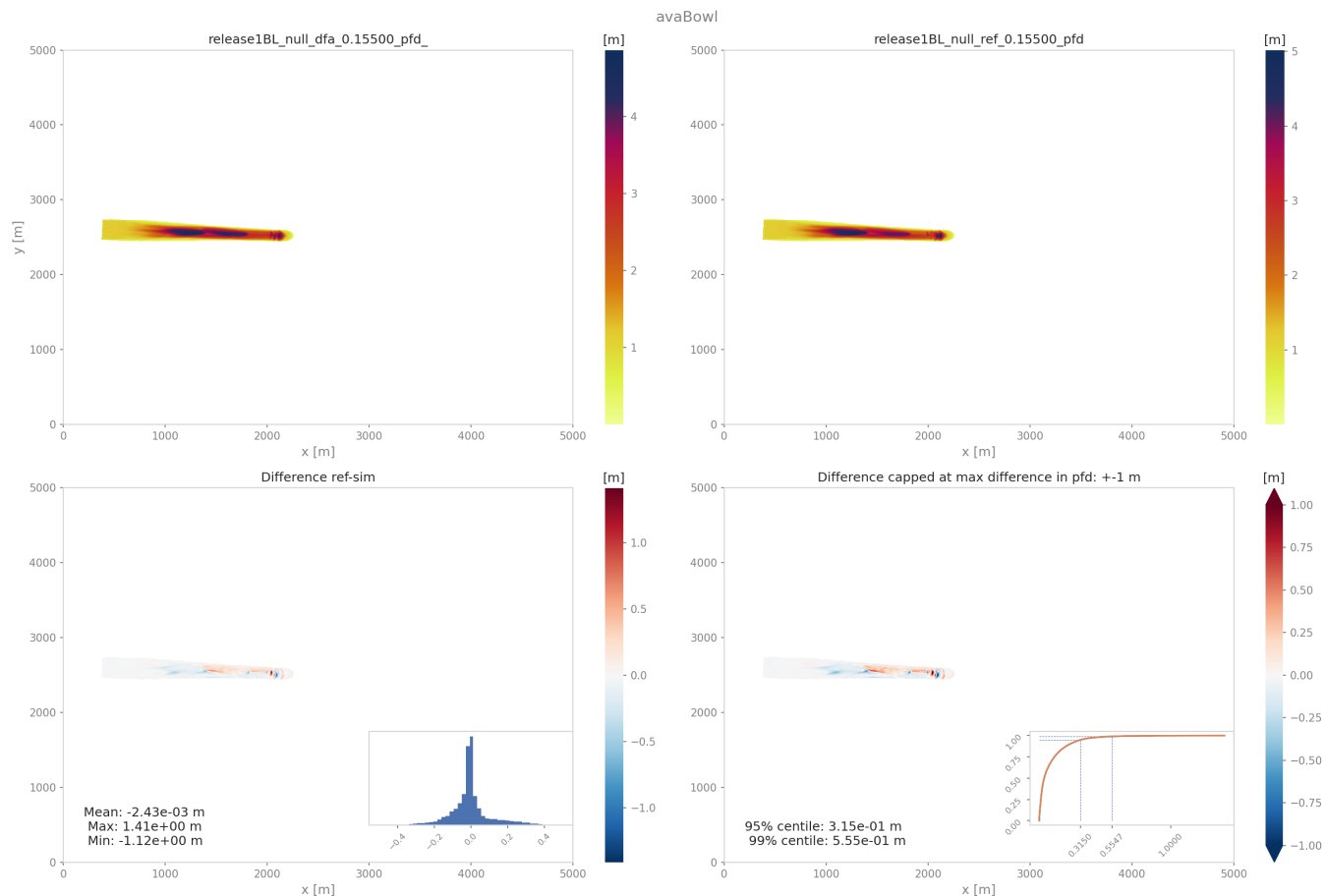


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (38.59) Difference is: Max = 8.17, Mean = 0.07 and Min = -15.22

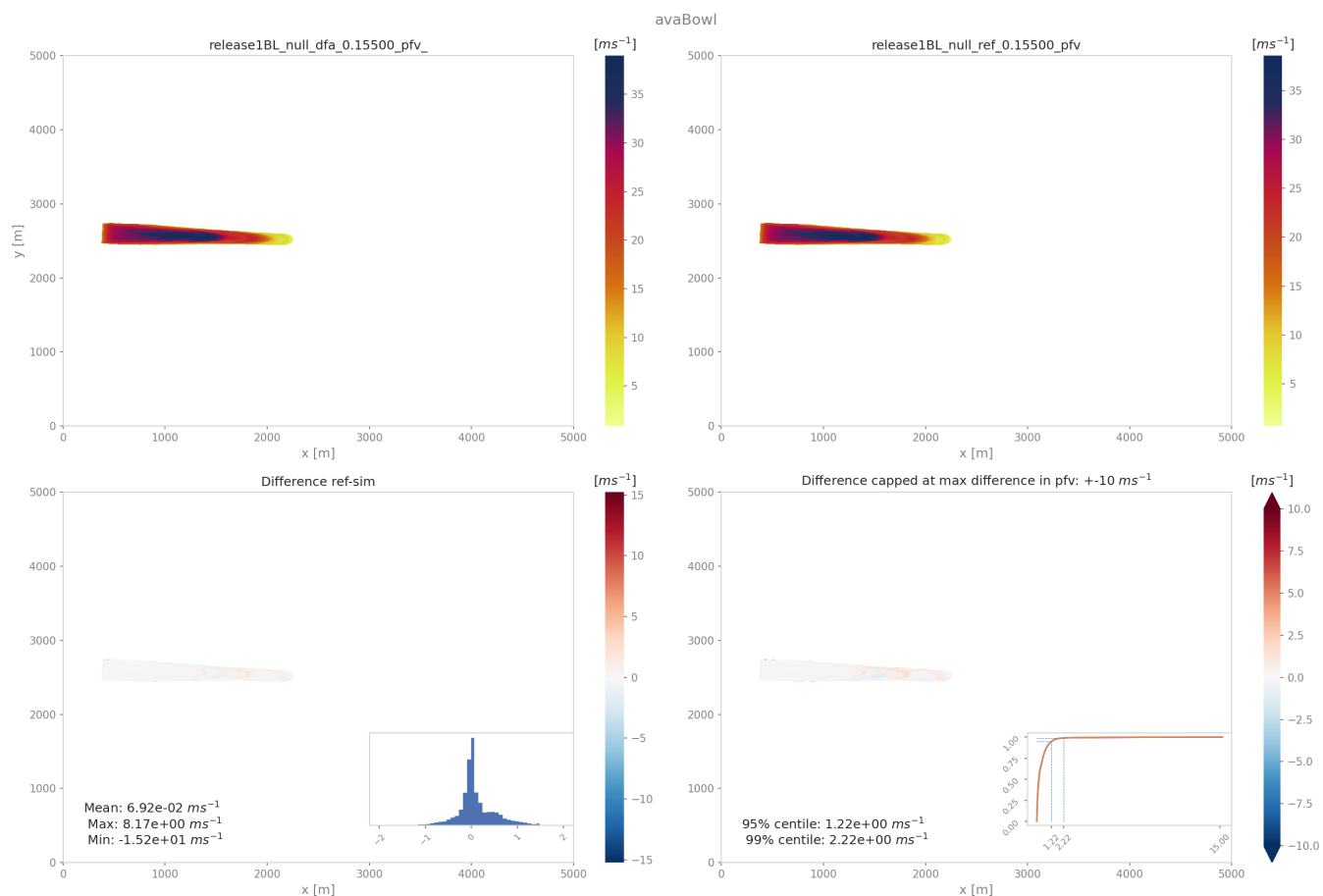


Figure: Aimec comparison of mean and max values along path

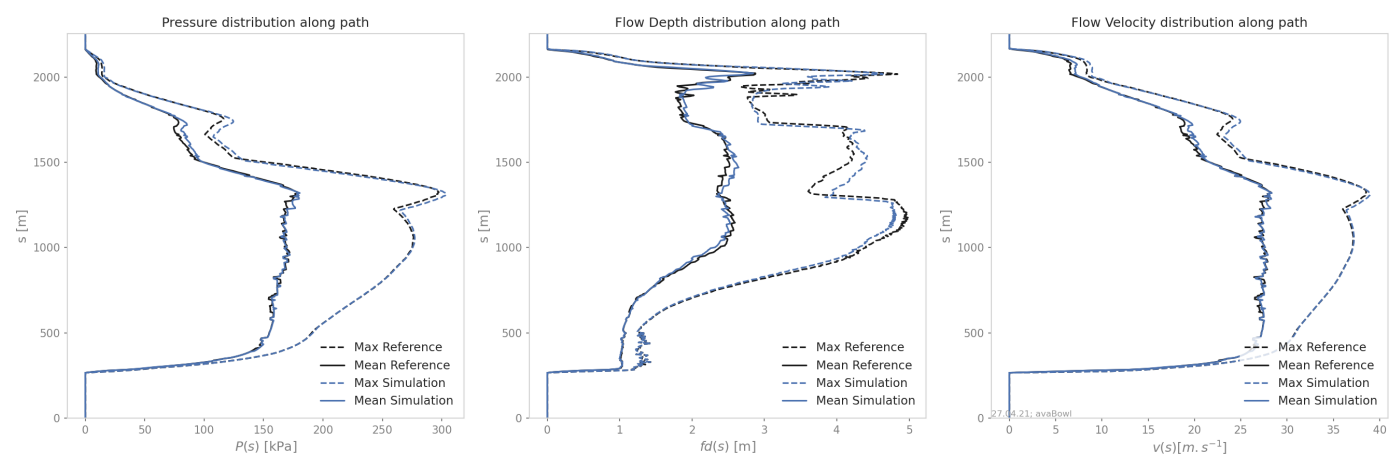
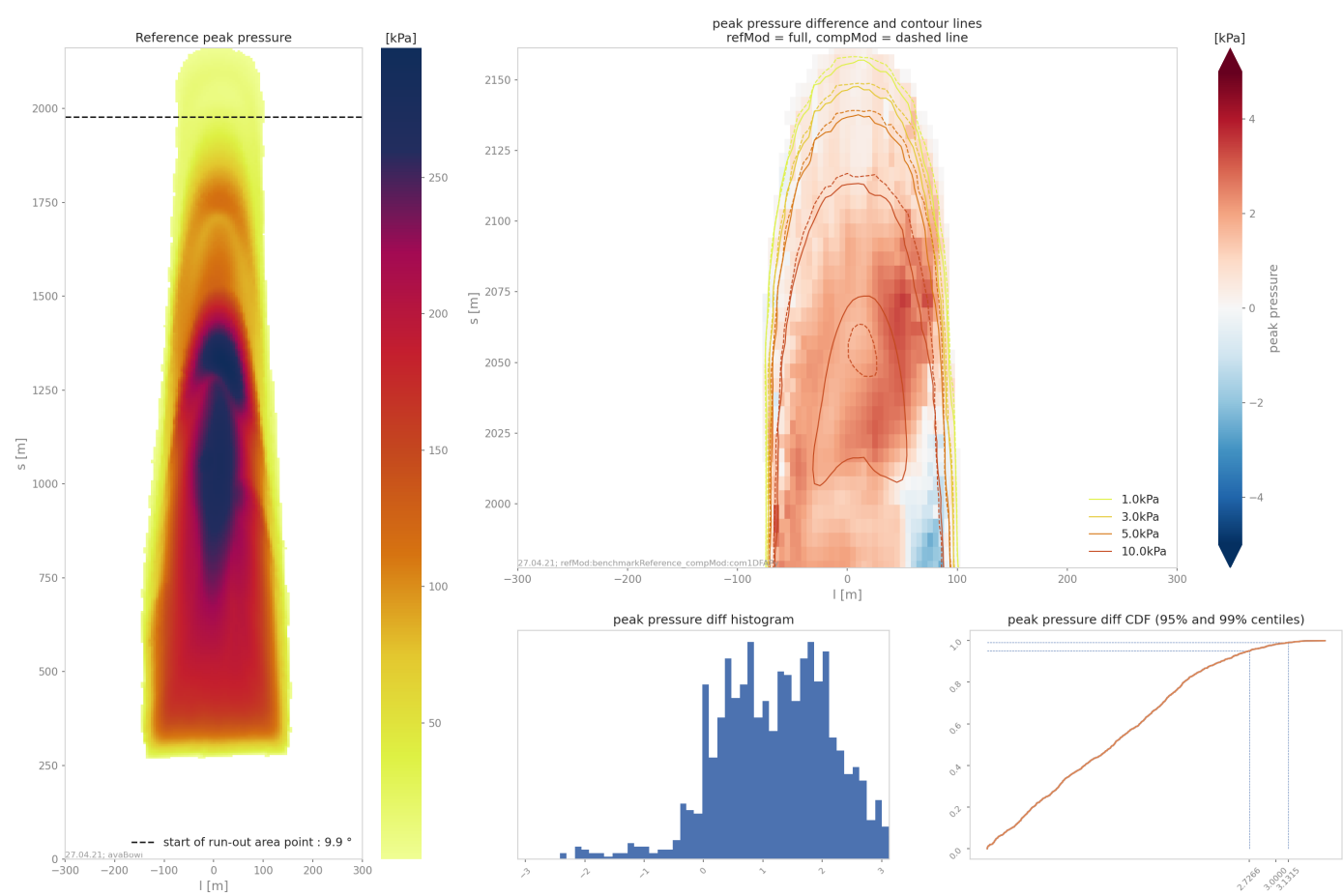


Figure: Aimec area analysis



avaKotST

Simulation name: *relKot_null_dfa_0.15500*

Test Info

This test runs the Kot test.

Simulation Parameters

Parameter	Reference	Simulation
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Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	relKot	relKot
Entrainment	No	No
Resistance	No	No
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	4325818.99	4325819.00
Final mass [kg]	4325818.99	4325819.00
Entrained mass [kg]	0.00	0.00
Entrained volume [m3]	non existent	0.00
Stop criterion	< 1.00 percent of PKE	< 1.00 percent of PKE
Avalanche run time [s]	112.2	116.60
Computation time [s]	non existent	11.86

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	1622.1	1610.0
max peak pressure [kPa]	358.5	347.7
max peak flow depth [m]	5.5	4.9
max peak flow velocity [ms-1]	42.3	41.7

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (364.56) Difference is: Max = 339.78, Mean = -0.59 and Min = -161.69

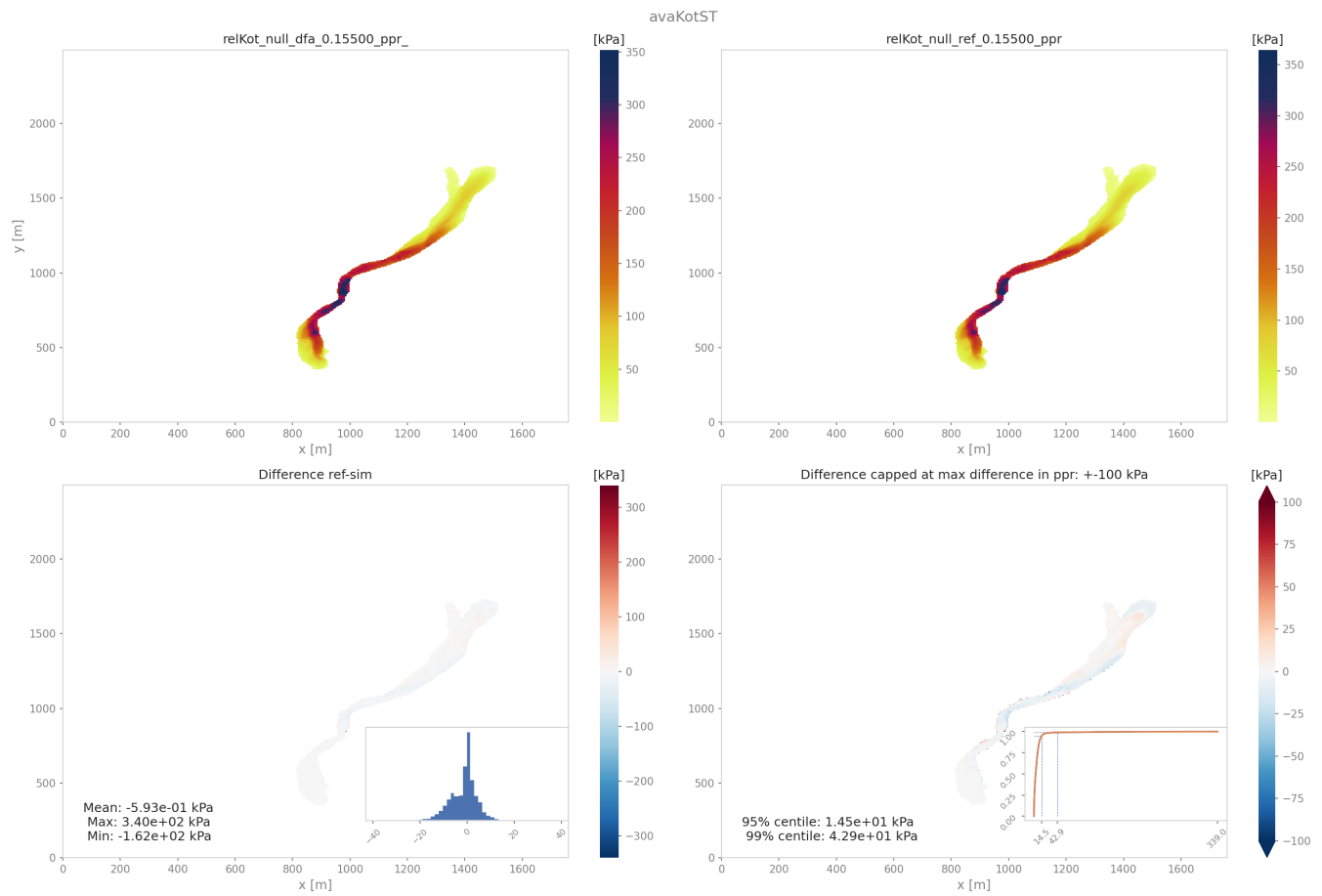


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (5.64) Difference is: Max = 0.88, Mean = -0.02 and Min = -0.73

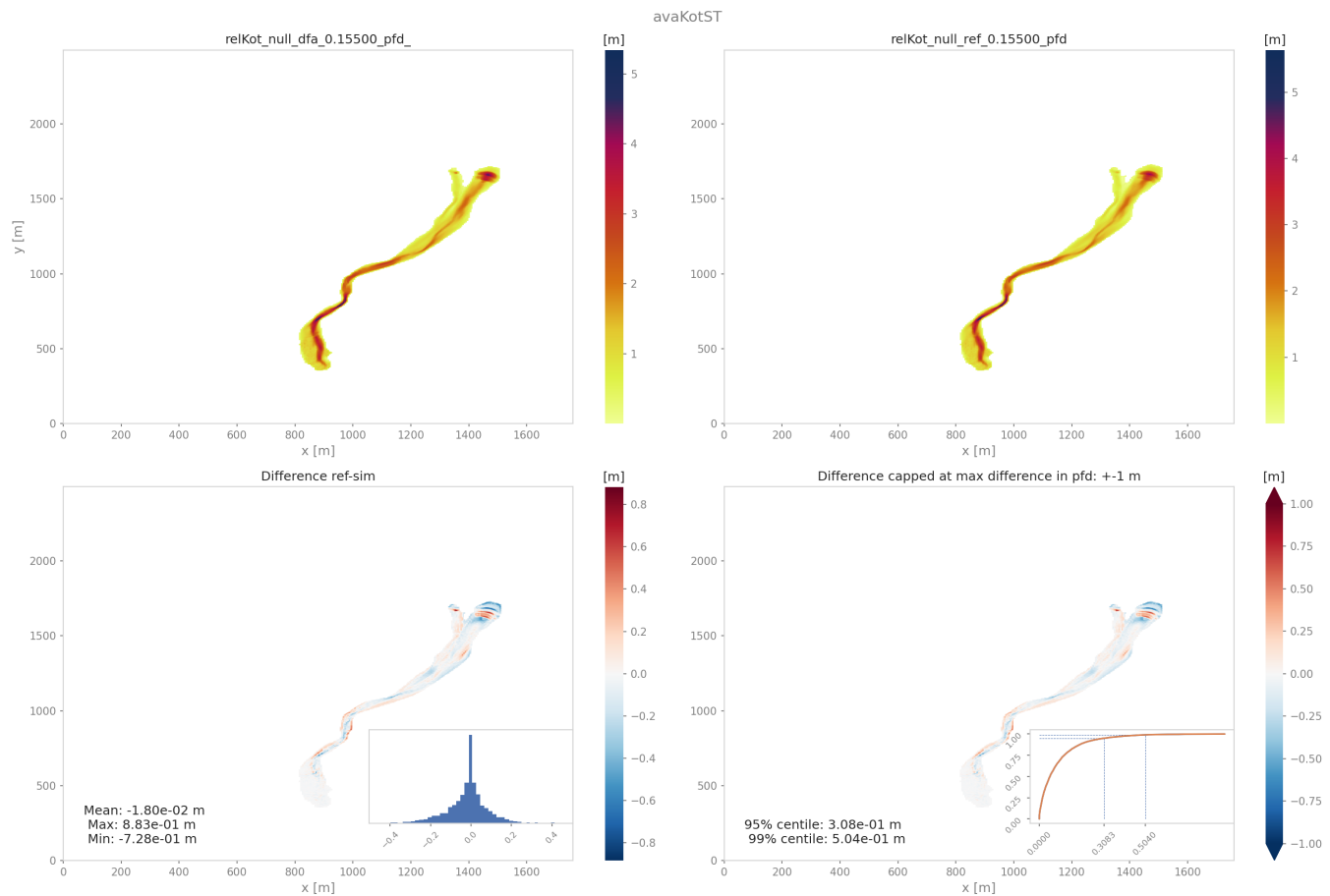


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (42.69) Difference is: Max = 41.22, Mean = -0.09 and Min = -28.43

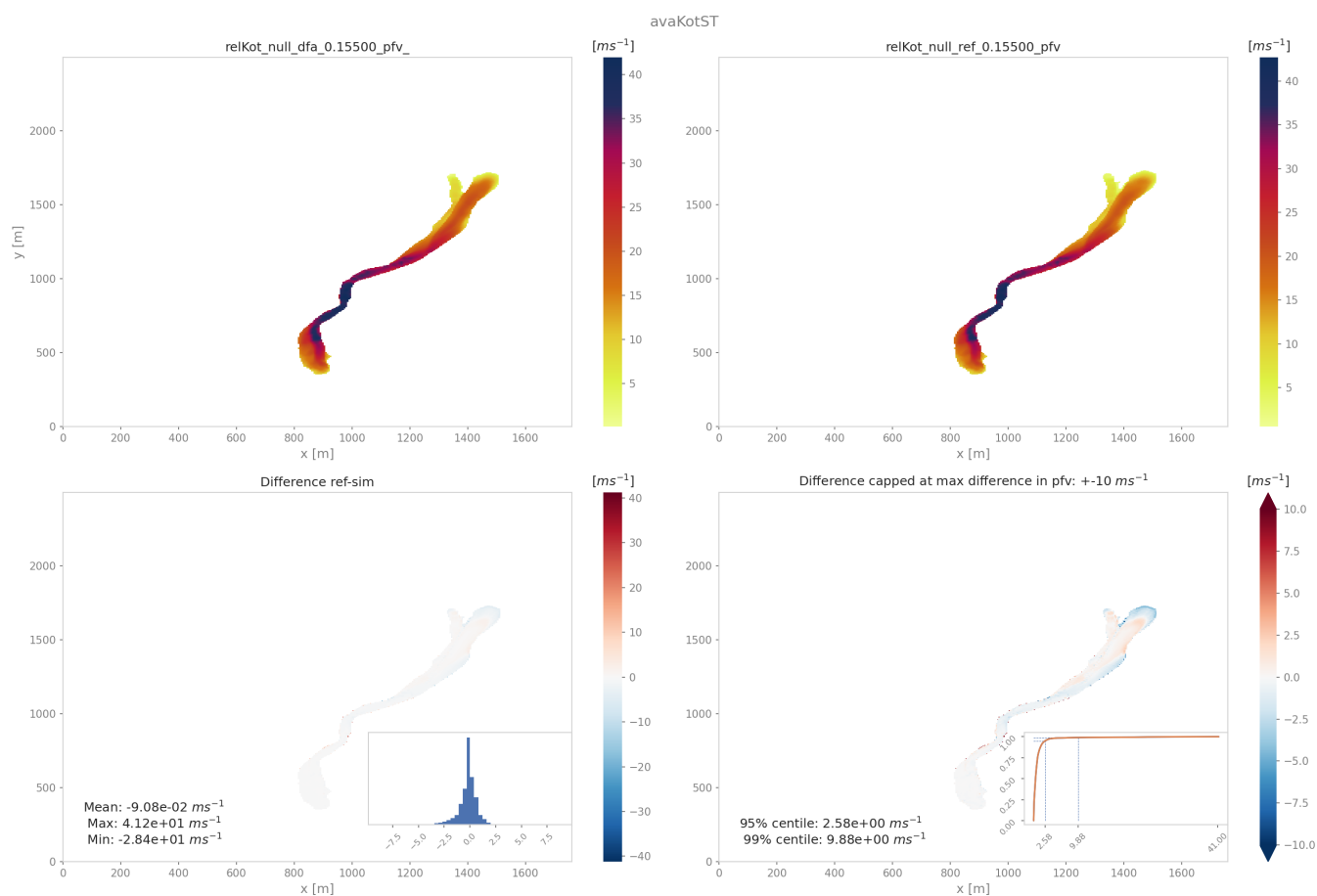


Figure: Aimec comparison of mean and max values along path

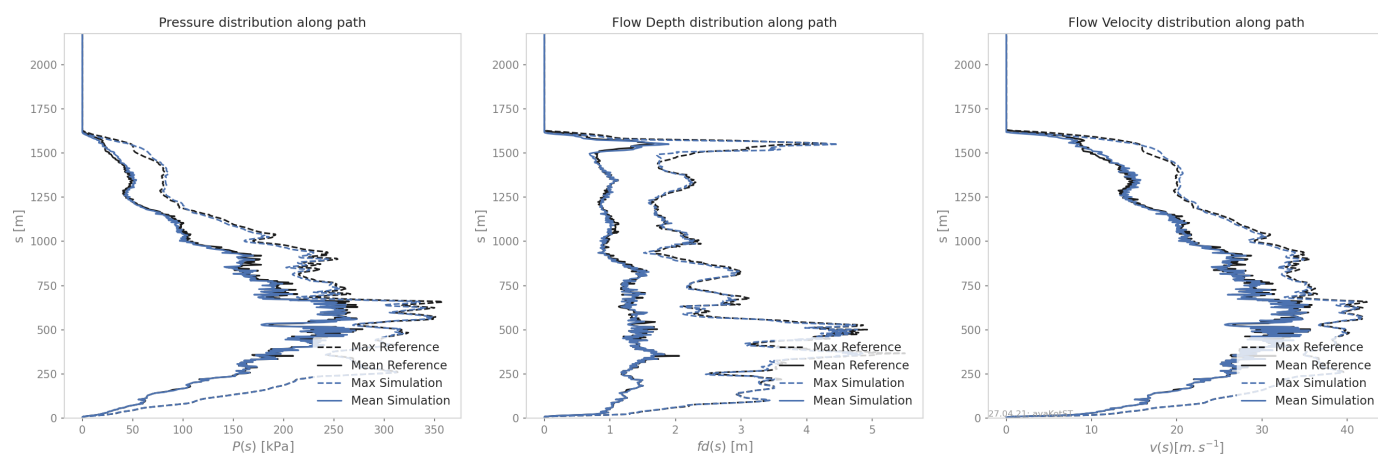
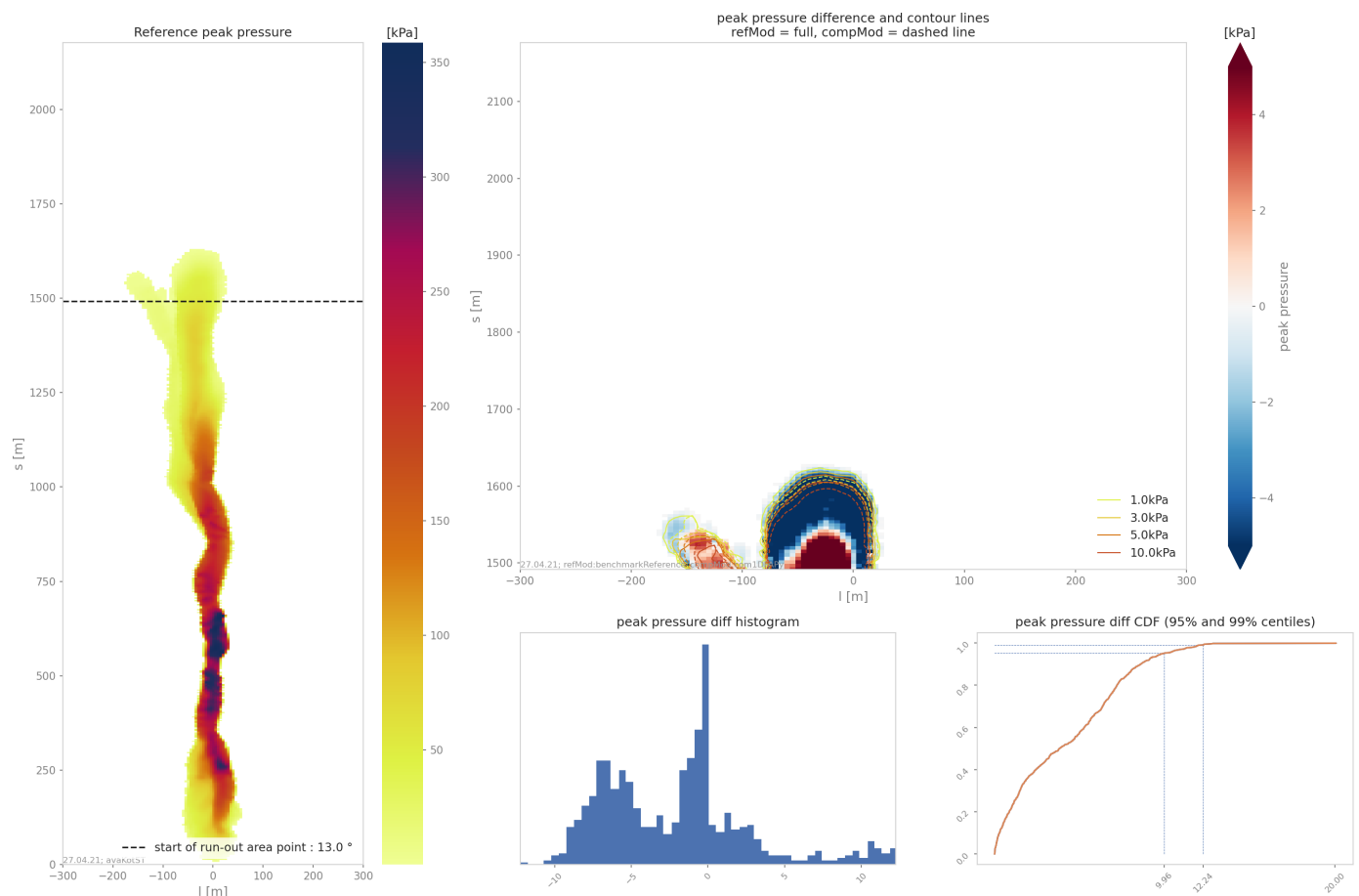


Figure: Aimec area analysis



avaHitST

Simulation name: *relHit_null_dfa_0.15500*

Test Info

This test runs the Hit test.

Simulation Parameters

Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	relHit	relHit
Entrainment	No	No
Resistance	No	No
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	53584431.99	53584431.99
Final mass [kg]	53584431.99	53584431.99
Entrained mass [kg]	0.00	0.00
Entrained volume [m3]	non existent	0.00
Stop criterion	< 1.00 percent of PKE	< 1.00 percent of PKE

Parameter	Reference	Simulation
Avalanche run time [s]	158.0	156.60
Computation time [s]	non existent	115.38

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	1909.0	1913.8
max peak pressure [kPa]	550.7	549.7
max peak flow depth [m]	10.0	10.0
max peak flow velocity [ms-1]	52.5	52.4

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (556.62) Difference is: Max = 276.88, Mean = -1.04 and Min = -168.07

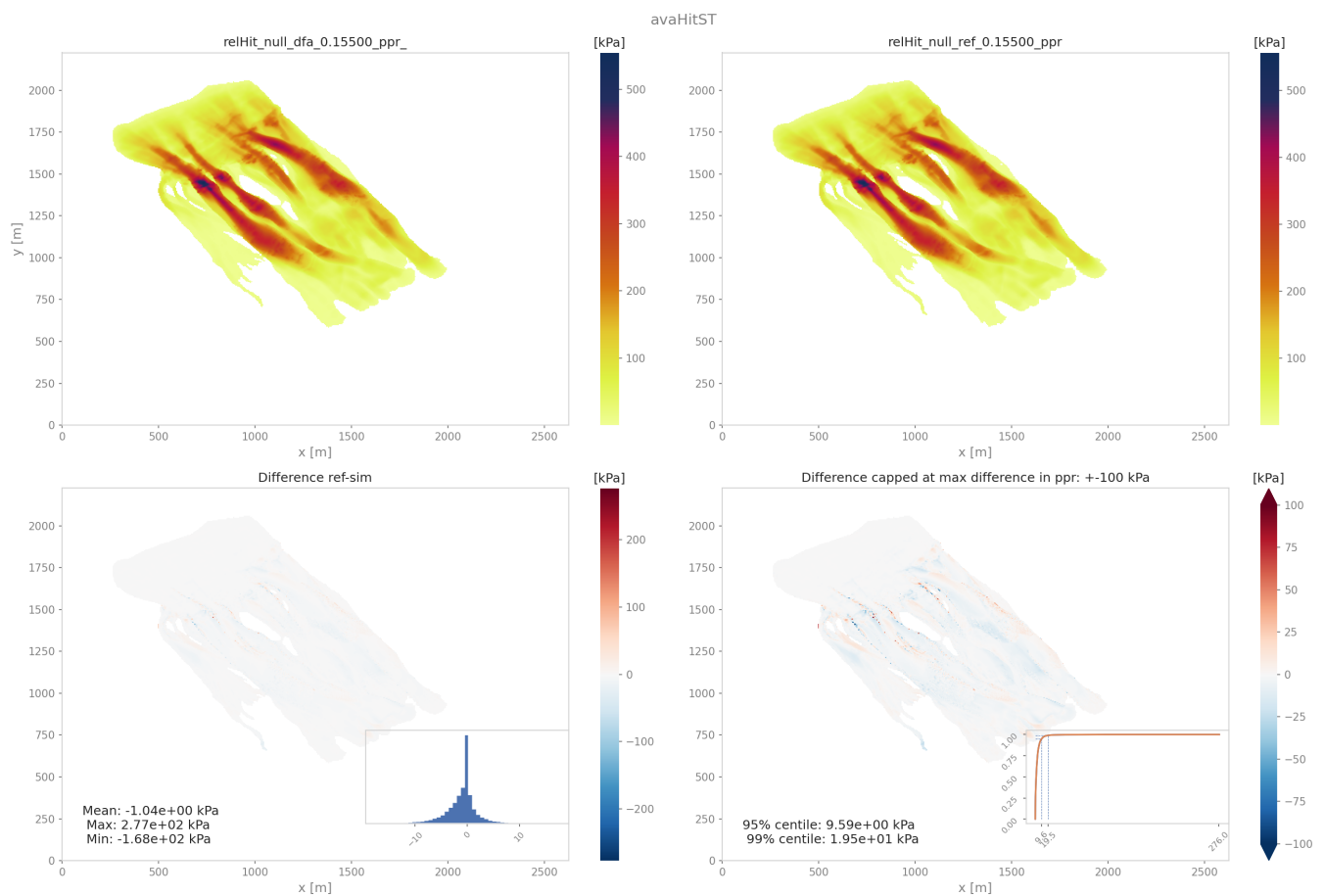


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (10.09) Difference is: Max = 1.47, Mean = -0.02 and Min = -2.34

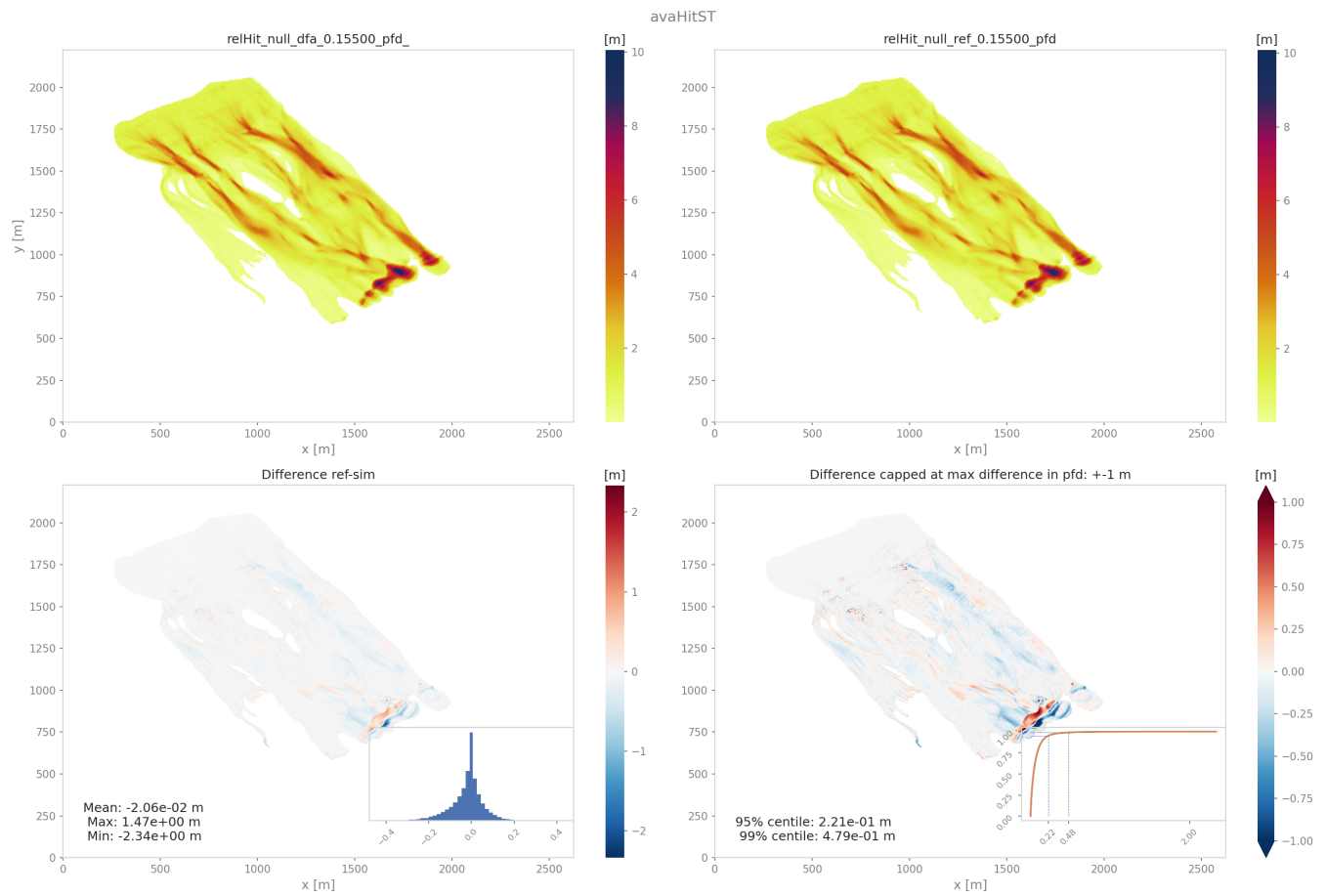


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (52.76) Difference is: Max = 29.29, Mean = -0.12 and Min = -20.02

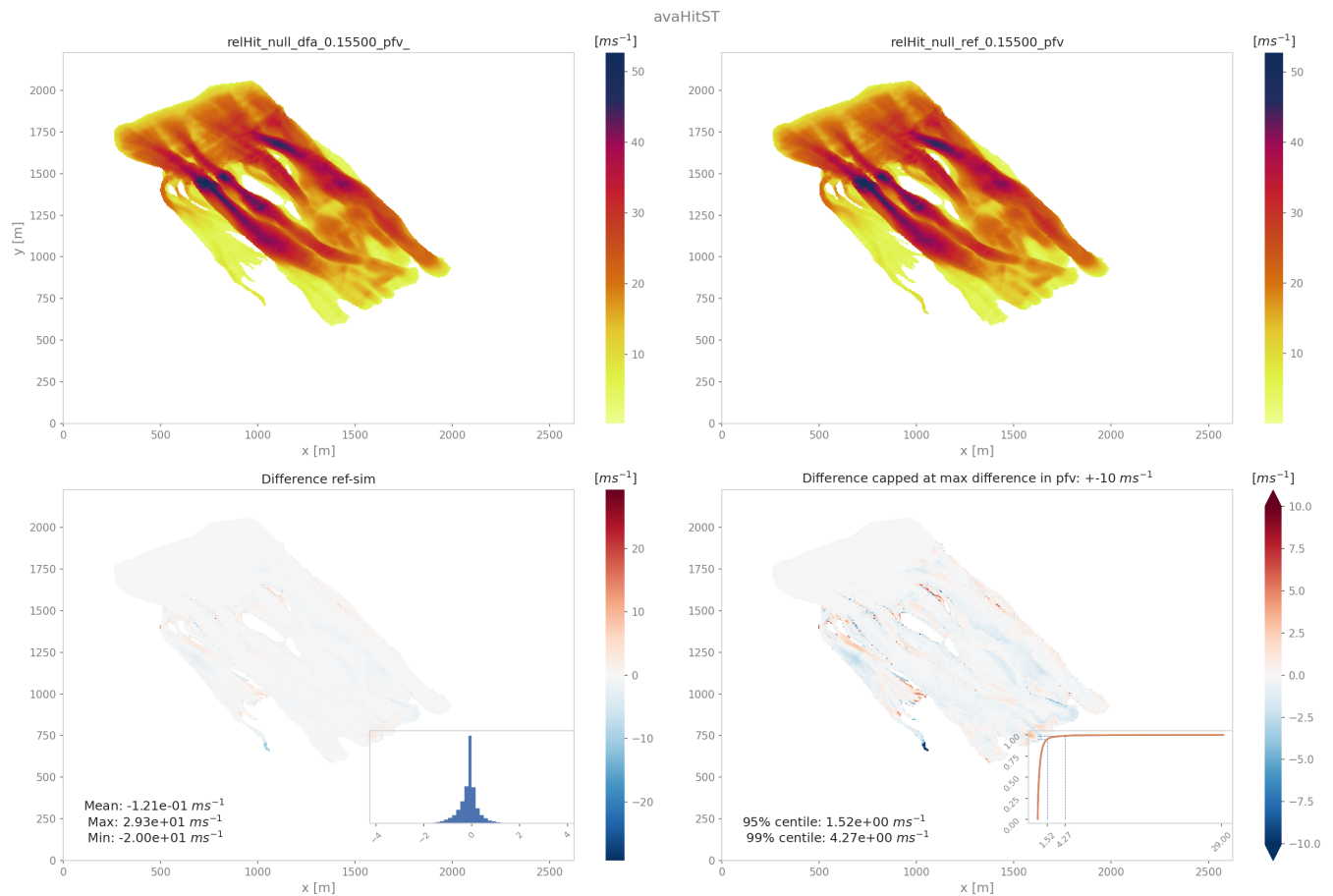


Figure: Aimec comparison of mean and max values along path

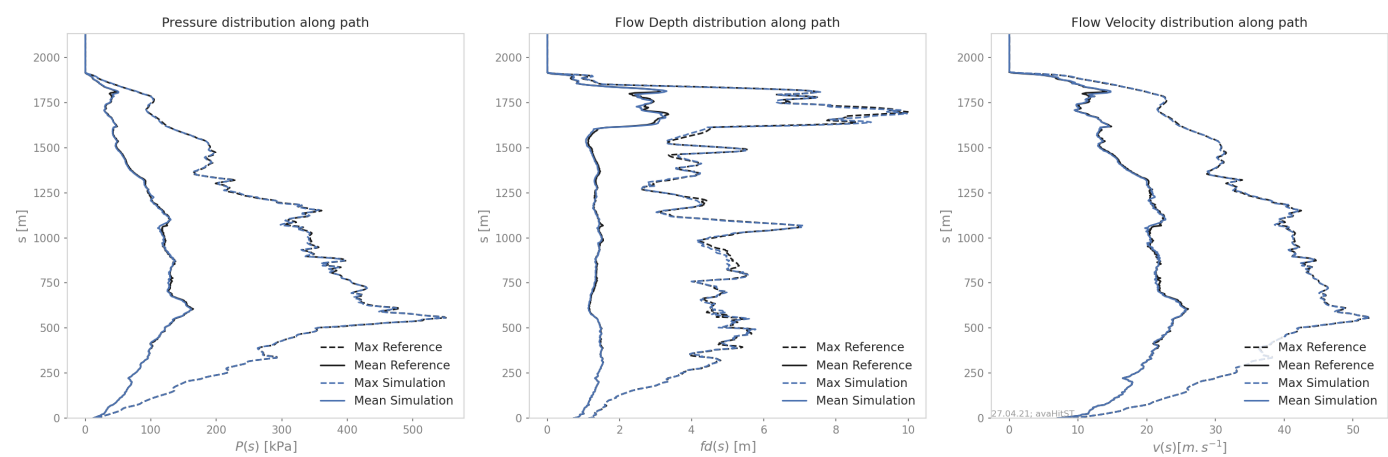
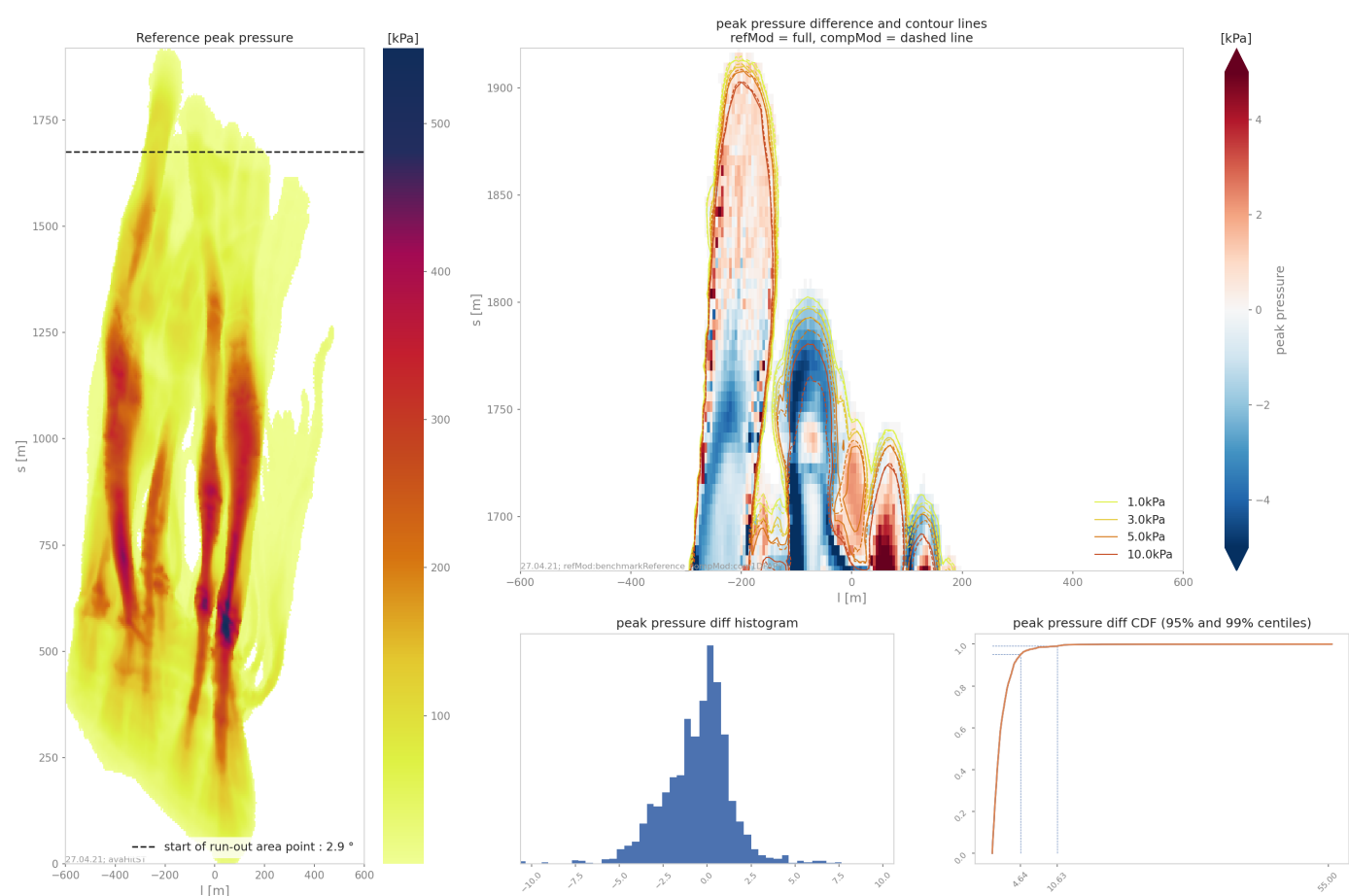


Figure: Aimec area analysis



avalInclinedPlane

Simulation name: *release1IP_entres_dfa_0.15500*

Test Info

This test runs on a linearly sloping surface.

Simulation Parameters

Parameter	Reference	Simulation
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Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	release1IP	release1IP
Entrainment	Yes	Yes
Resistance	Yes	Yes
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	20000000.09	19999955.61
Final mass [kg]	21735111.13	21742546.84
Entrained mass [kg]	-na-	1742591.23
Entrained volume [m3]	non existent	17425.91
Stop criterion	end Time reached: 400.00	end Time reached: 400.00
Avalanche run time [s]	400.00	400.00
Computation time [s]	non existent	111.73

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	4510.0	4510.0
max peak pressure [kPa]	275.9	281.0
max peak flow depth [m]	3.9	3.9
max peak flow velocity [ms-1]	37.1	37.5

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (275.92) Difference is: Max = 78.48, Mean = -1.75 and Min = -89.08

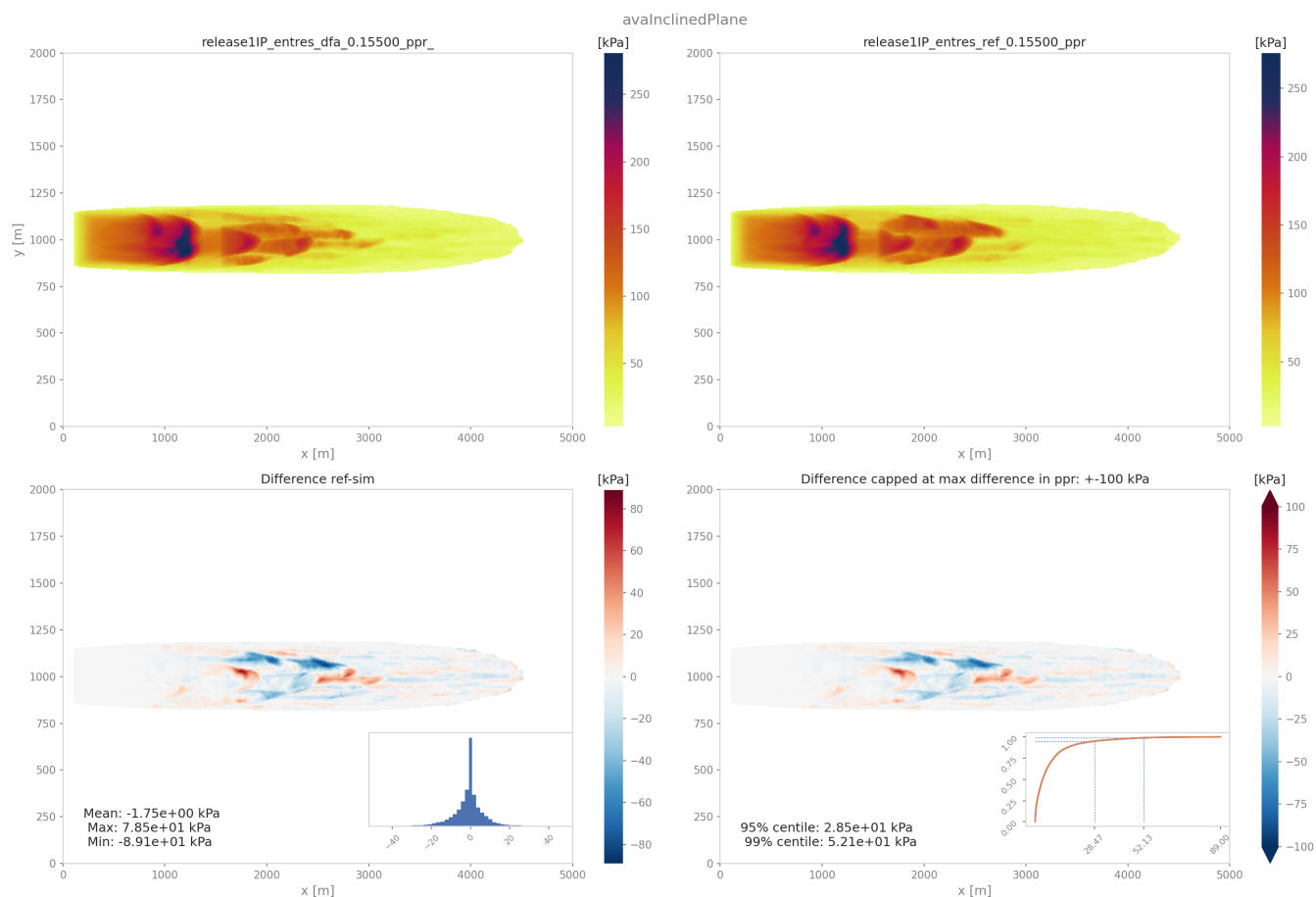


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (3.95) Difference is: Max = 1.22, Mean = -0.03 and Min = -1.72

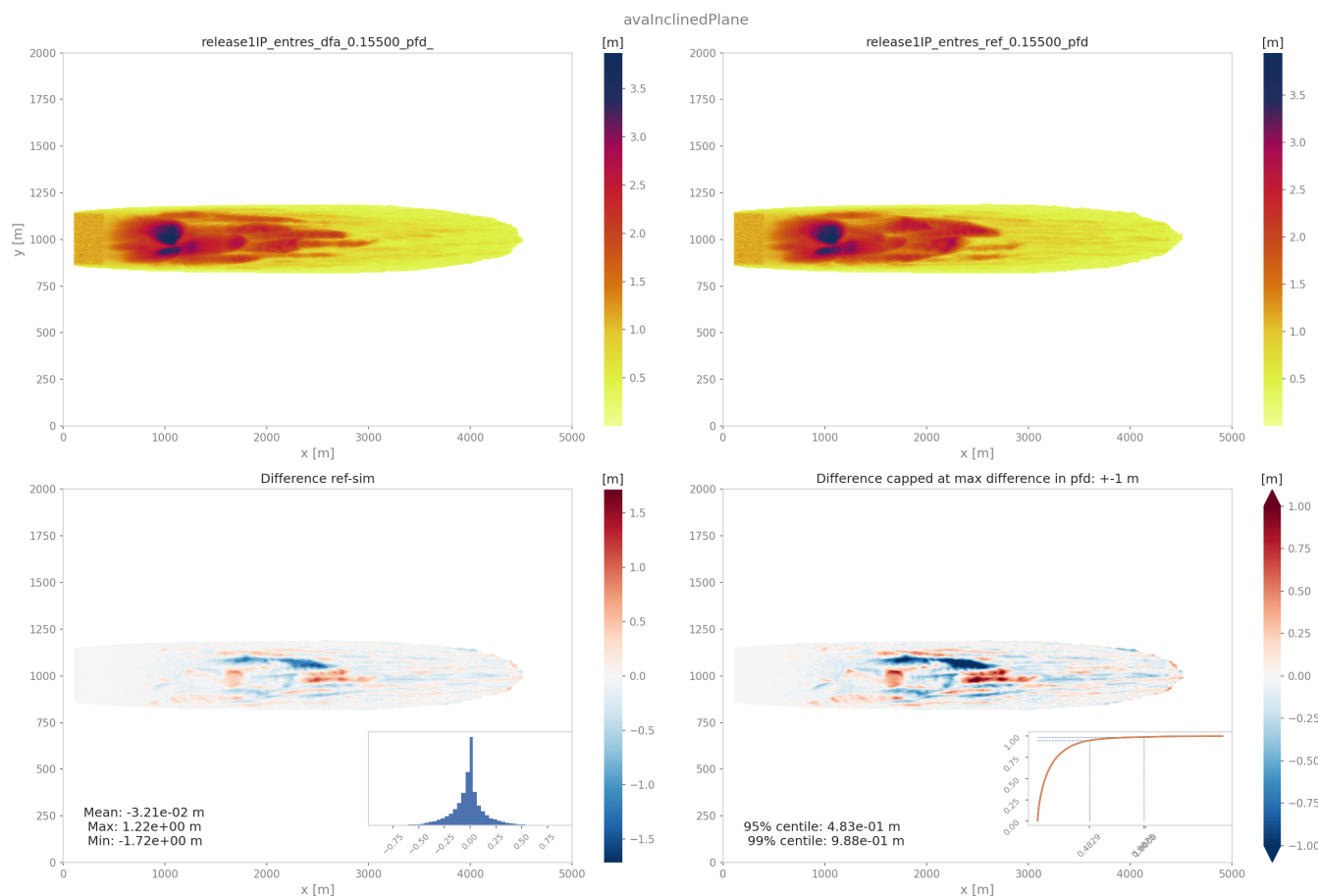


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (37.14) Difference is: Max = 11.31, Mean = -0.25 and Min = -11.37

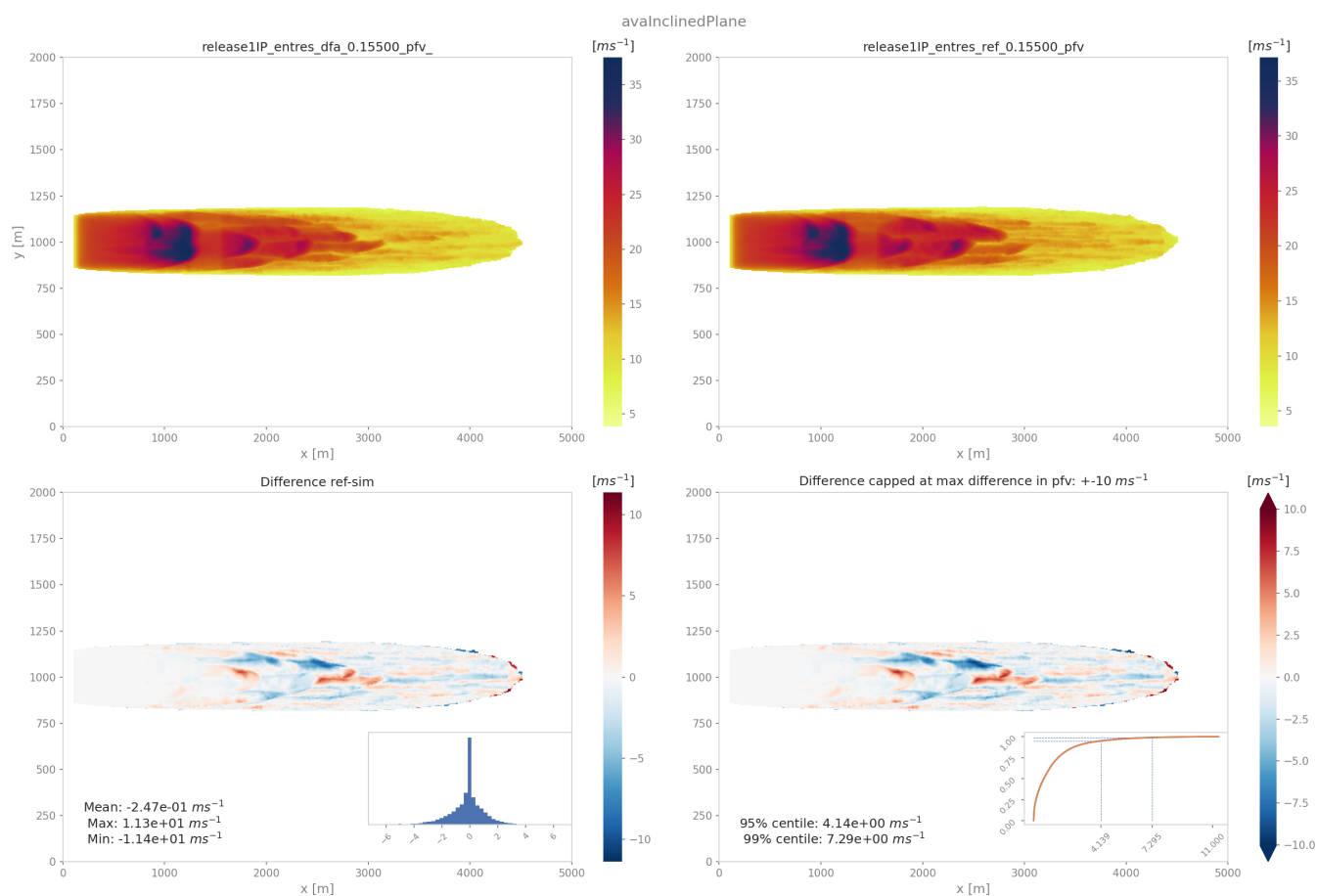


Figure: Aimec comparison of mean and max values along path

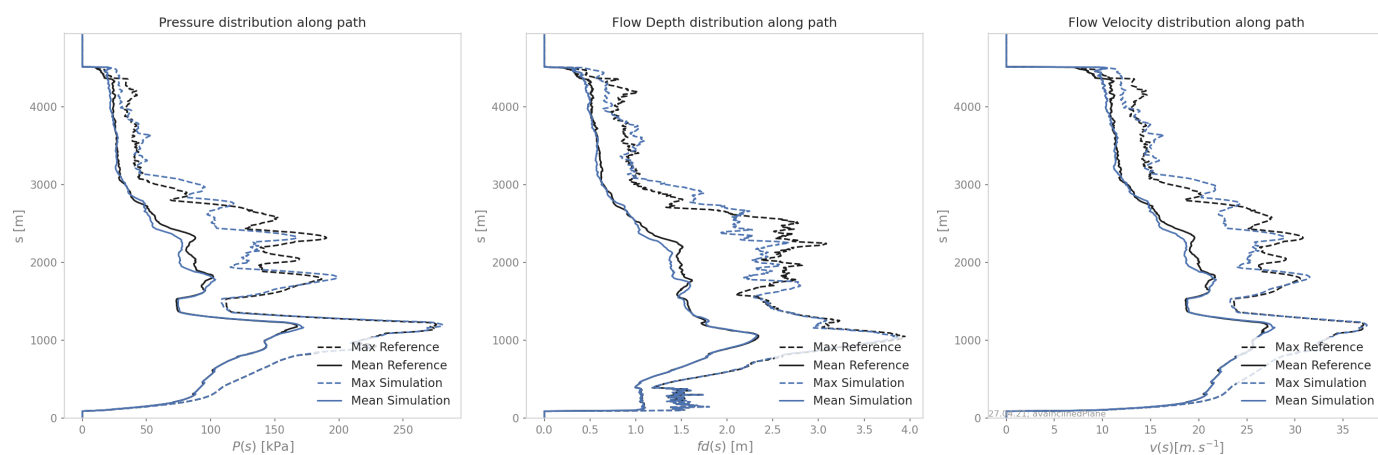
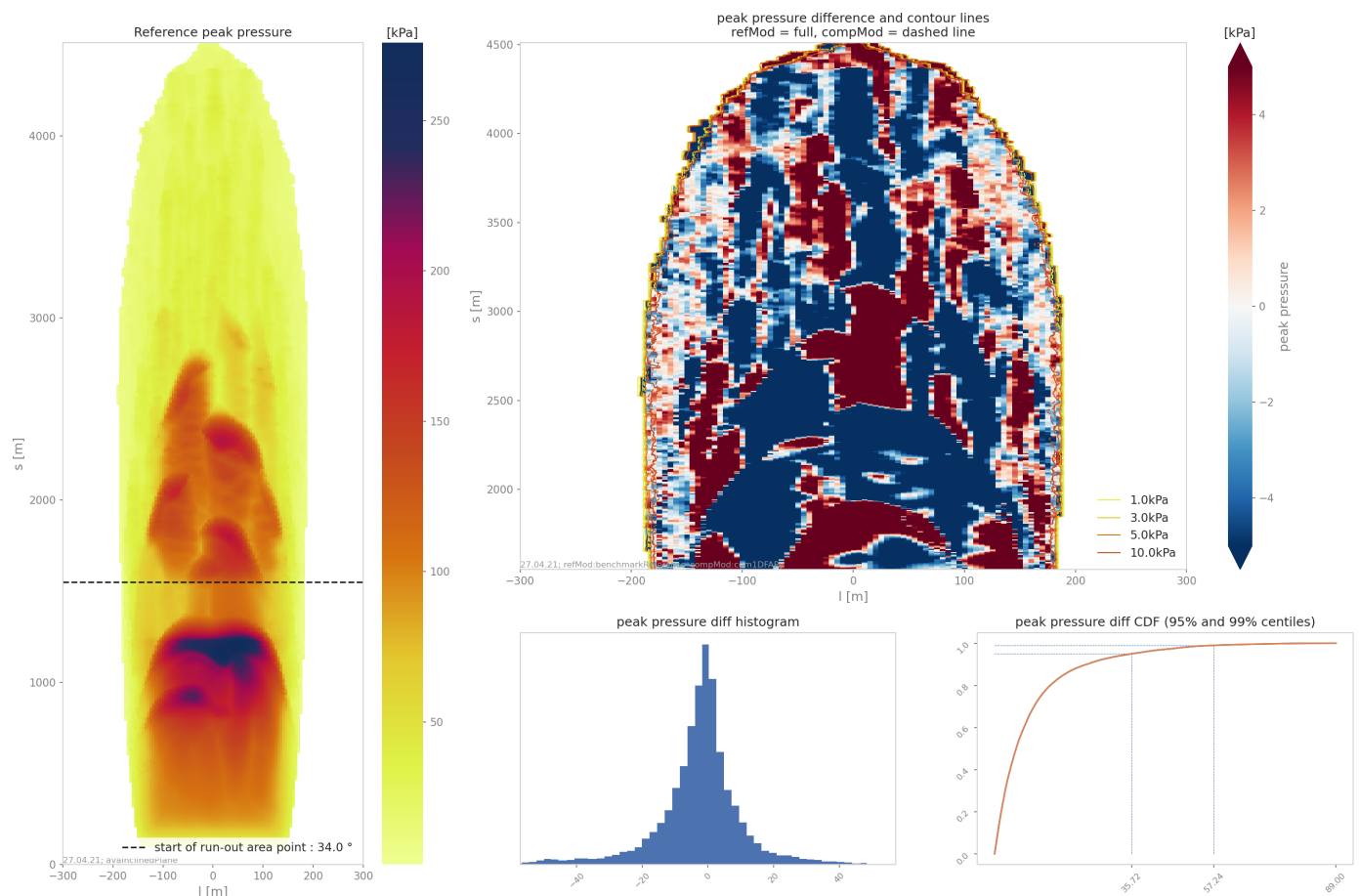


Figure: Aimec area analysis



avaHelixChannel

Simulation name: *release1HX_ent_dfa_0.15500*

Test Info

This test uses a helix-shaped geometry with a channel with a channel.

Simulation Parameters

Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	release1HX	release1HX
Entrainment	Yes	Yes
Resistance	No	No
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	34354423.99	34354423.90
Final mass [kg]	35018418.98	35009622.66
Entrained mass [kg]	-na-	655198.76
Entrained volume [m3]	non existent	6551.99
Stop criterion	< 1.00 percent of PKE	< 1.00 percent of PKE

Parameter	Reference	Simulation
Avalanche run time [s]	141.5	142.30
Computation time [s]	non existent	71.17

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	1491.6	1496.2
max peak pressure [kPa]	551.2	551.4
max peak flow depth [m]	7.3	7.2
max peak flow velocity [ms-1]	52.5	52.5

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (551.83) Difference is: Max = 329.80, Mean = -0.10 and Min = -165.43

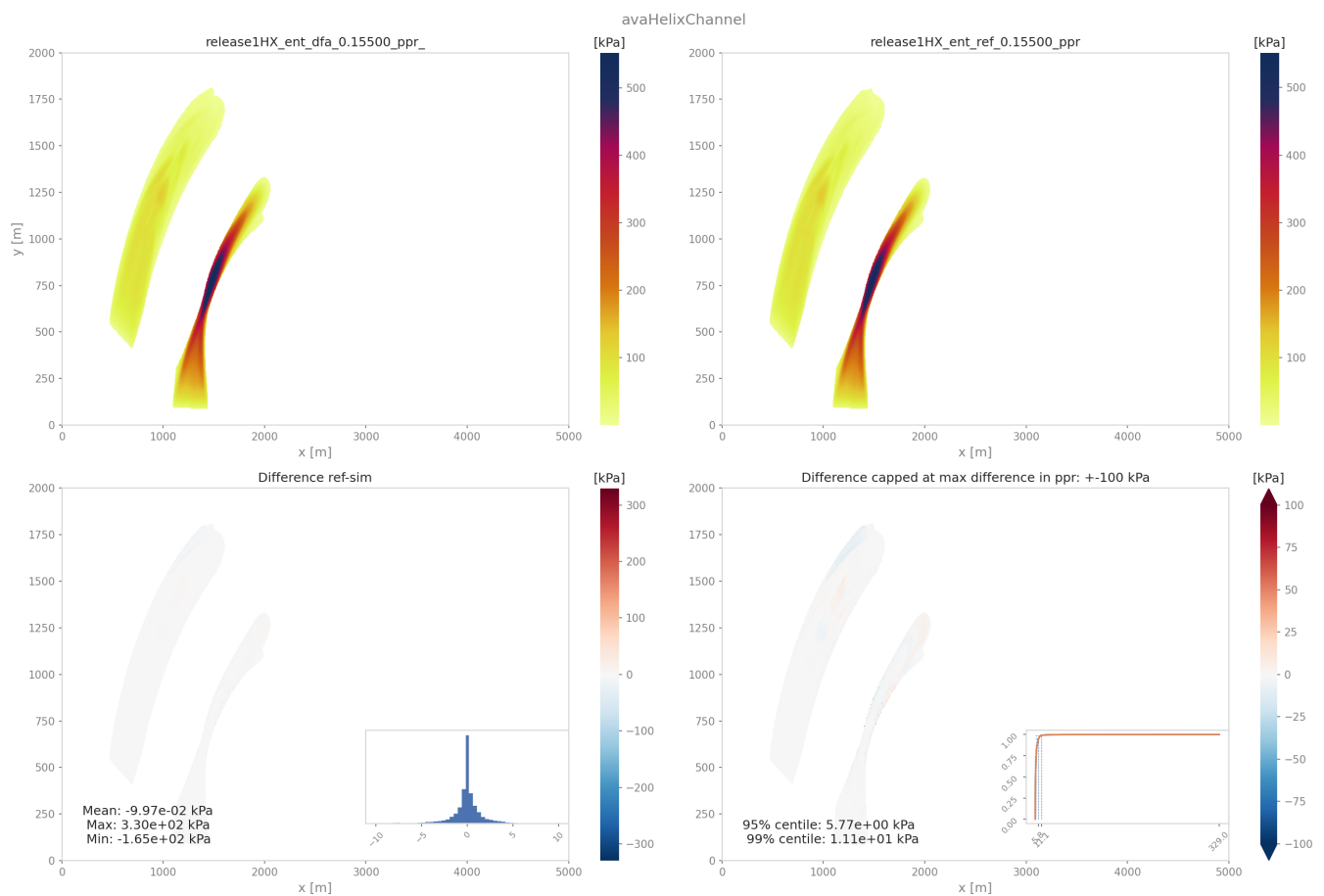


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (7.39) Difference is: Max = 1.90, Mean = -0.02 and Min = -1.05

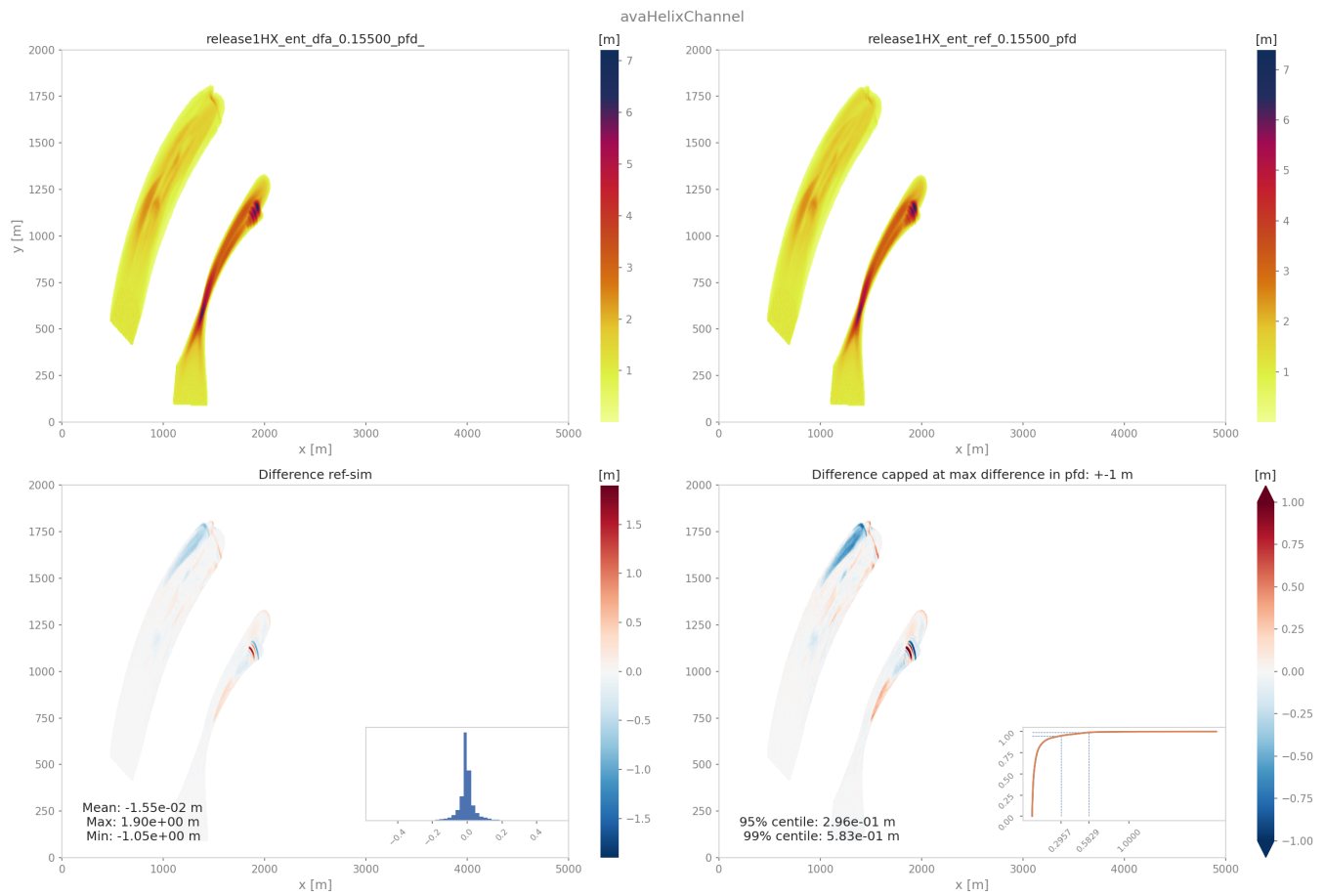


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (52.53) Difference is: Max = 40.61, Mean = -0.02 and Min = -28.76

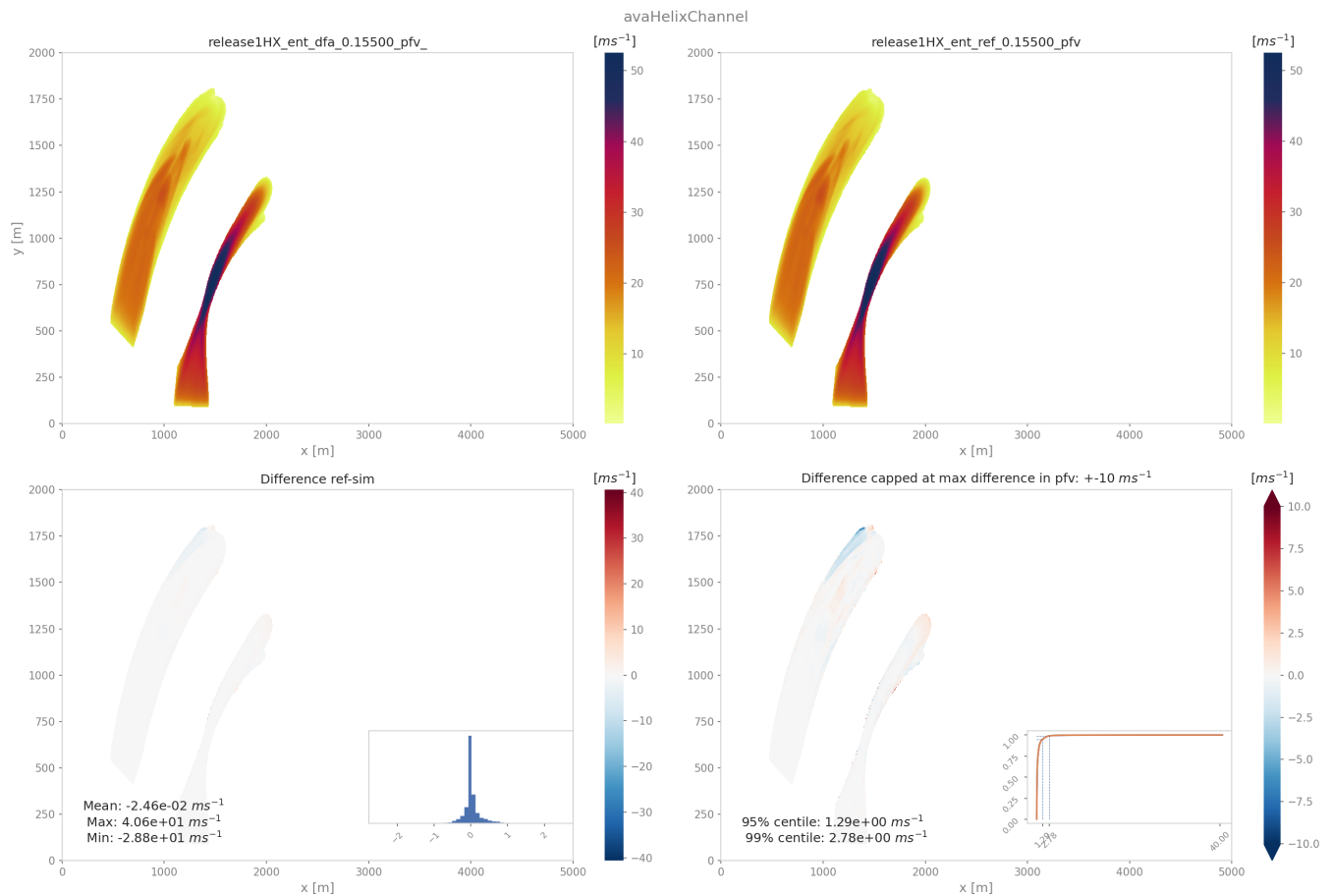


Figure: Aimec comparison of mean and max values along path

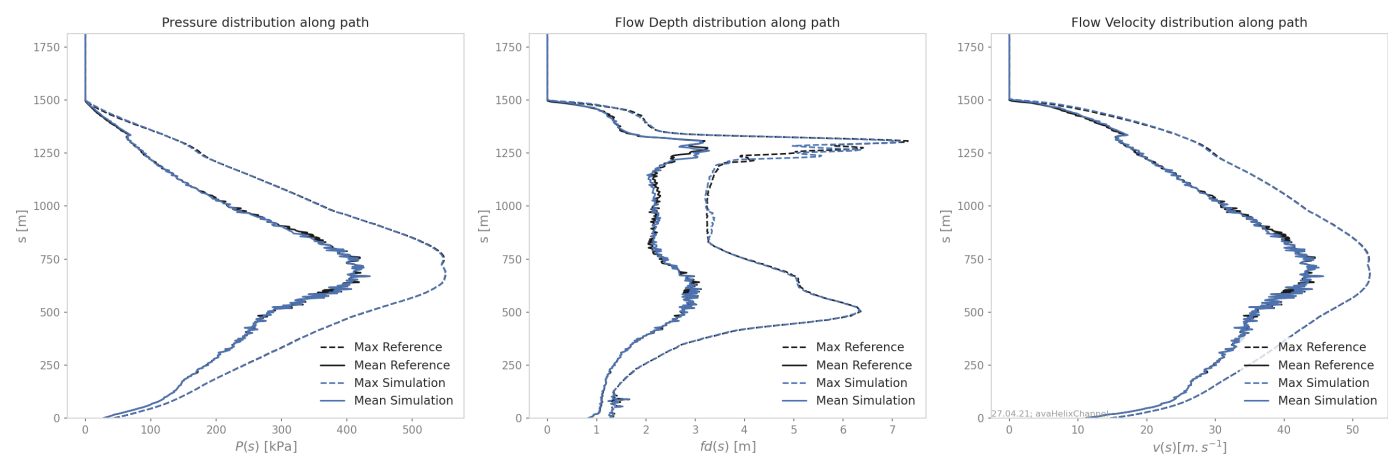
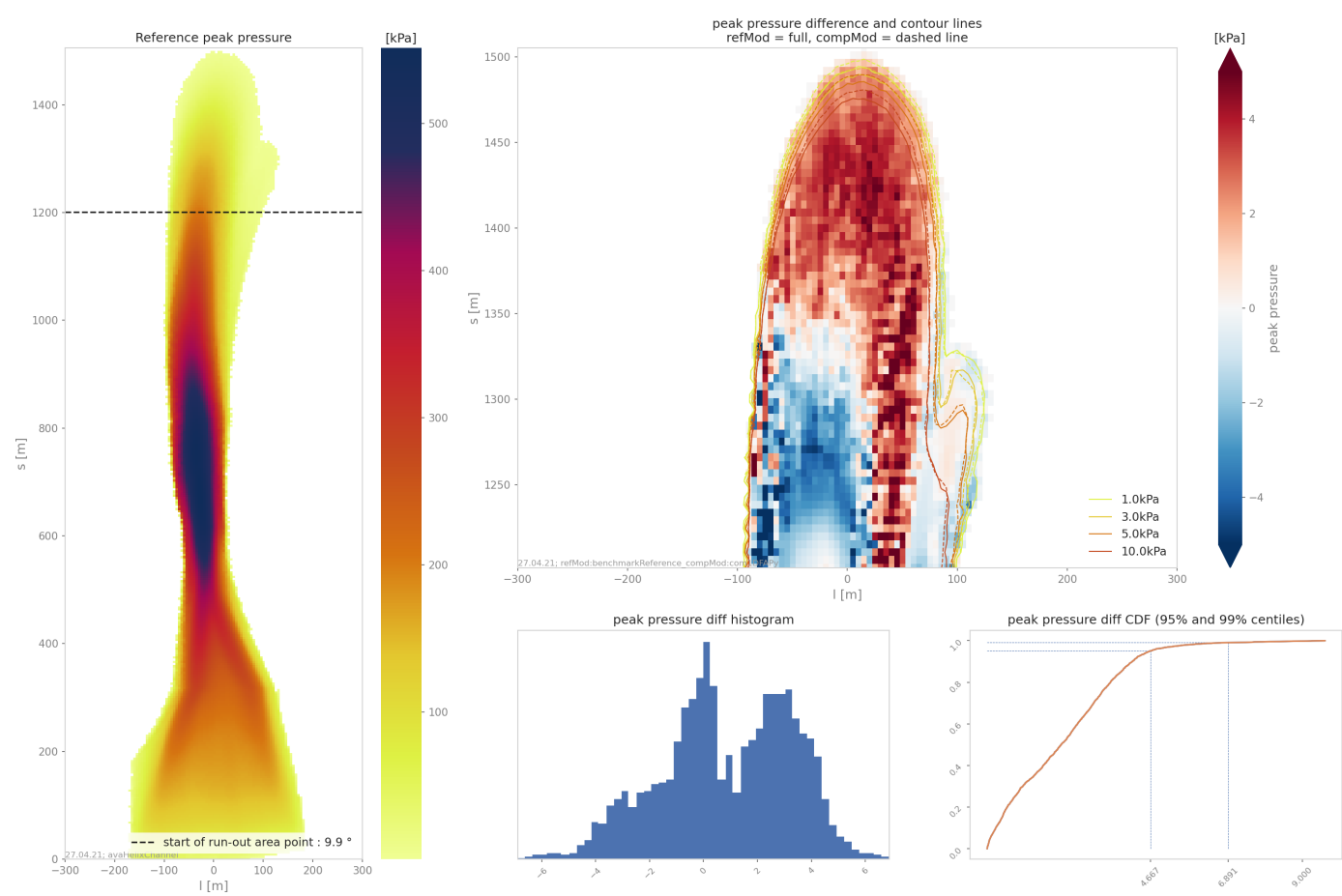


Figure: Aimec area analysis



avaParabola

Simulation name: release1PF_res_dfa_0.15500

Test Info

This test runs on a parabolically sloping surface with a flat foreland.

Simulation Parameters

Parameter	Reference	Simulation
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Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	release1PF	release1PF
Entrainment	No	No
Resistance	Yes	Yes
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	20657132.08	20657129.90
Final mass [kg]	20657132.08	20657129.90
Entrained mass [kg]	0.00	0.00
Entrained volume [m3]	non existent	0.00
Stop criterion	< 1.00 percent of PKE	< 1.00 percent of PKE
Avalanche run time [s]	159.1	161.10
Computation time [s]	non existent	48.14

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	2913.9	2913.9
max peak pressure [kPa]	120.8	121.1
max peak flow depth [m]	2.9	2.9
max peak flow velocity [ms-1]	24.6	24.6

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (120.85) Difference is: Max = 7.08, Mean = -0.10 and Min = -24.12

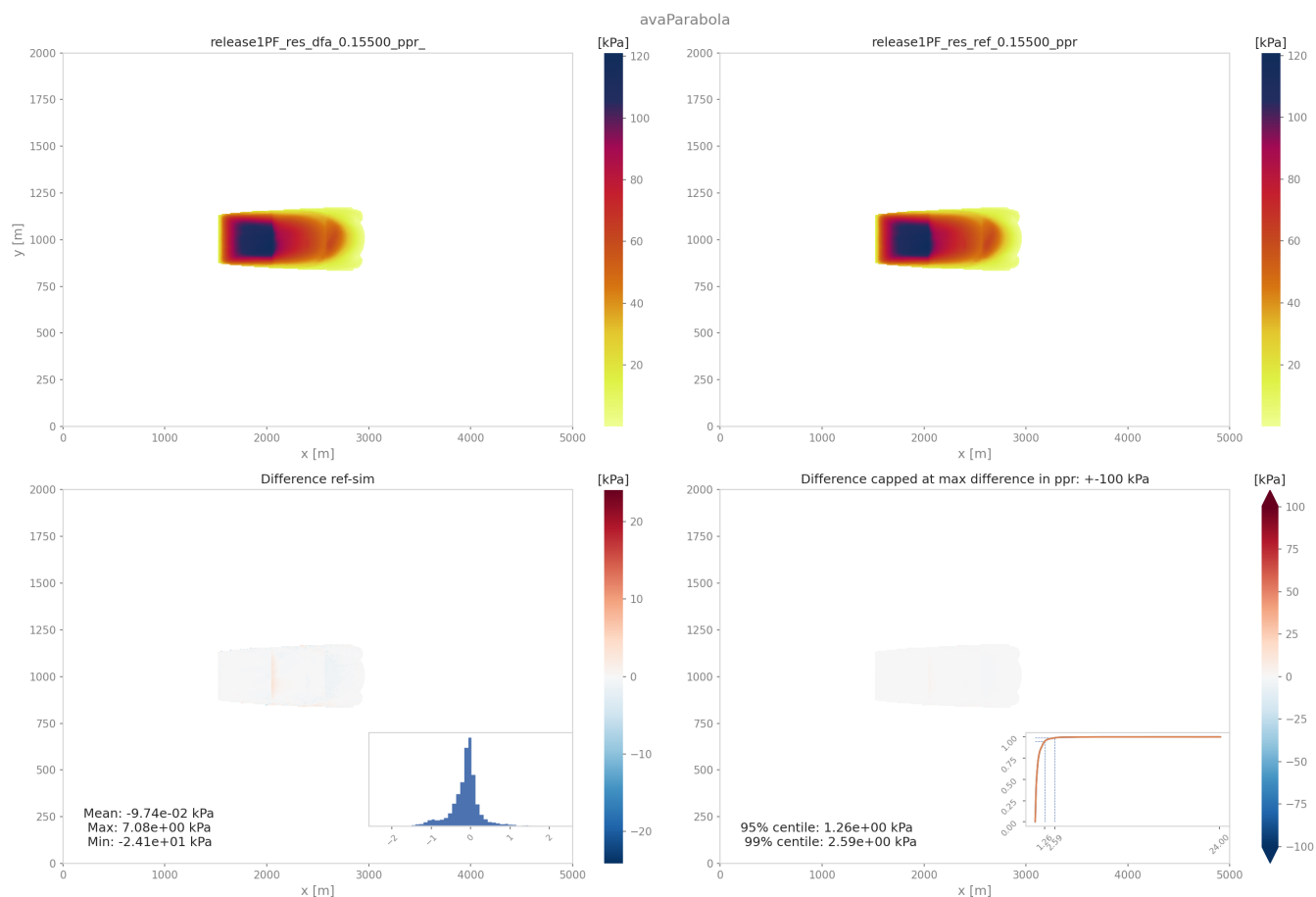


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (2.88) Difference is: Max = 0.66, Mean = -0.00 and Min = -0.43

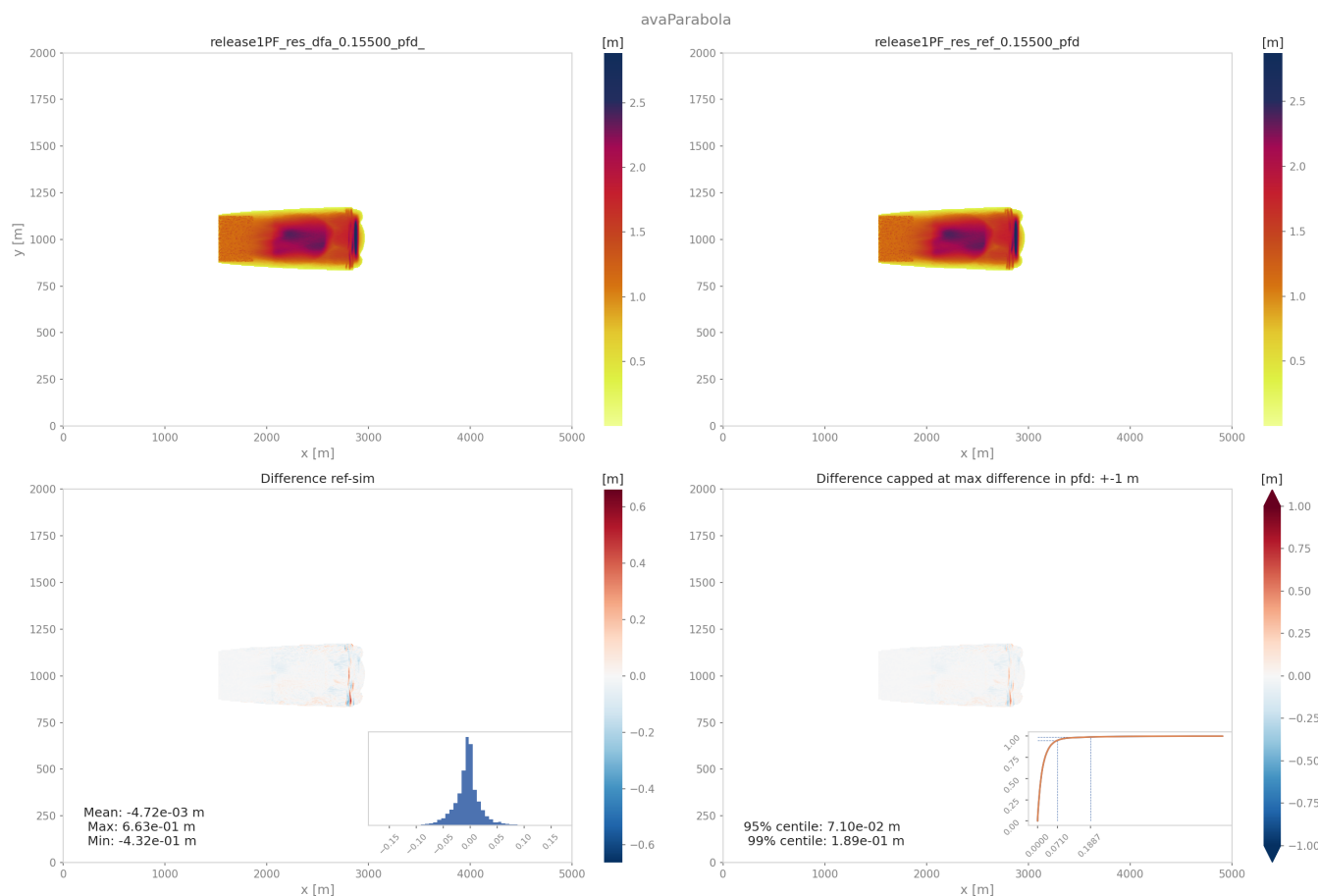


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (24.58) Difference is: Max = 5.95, Mean = -0.02 and Min = -10.98

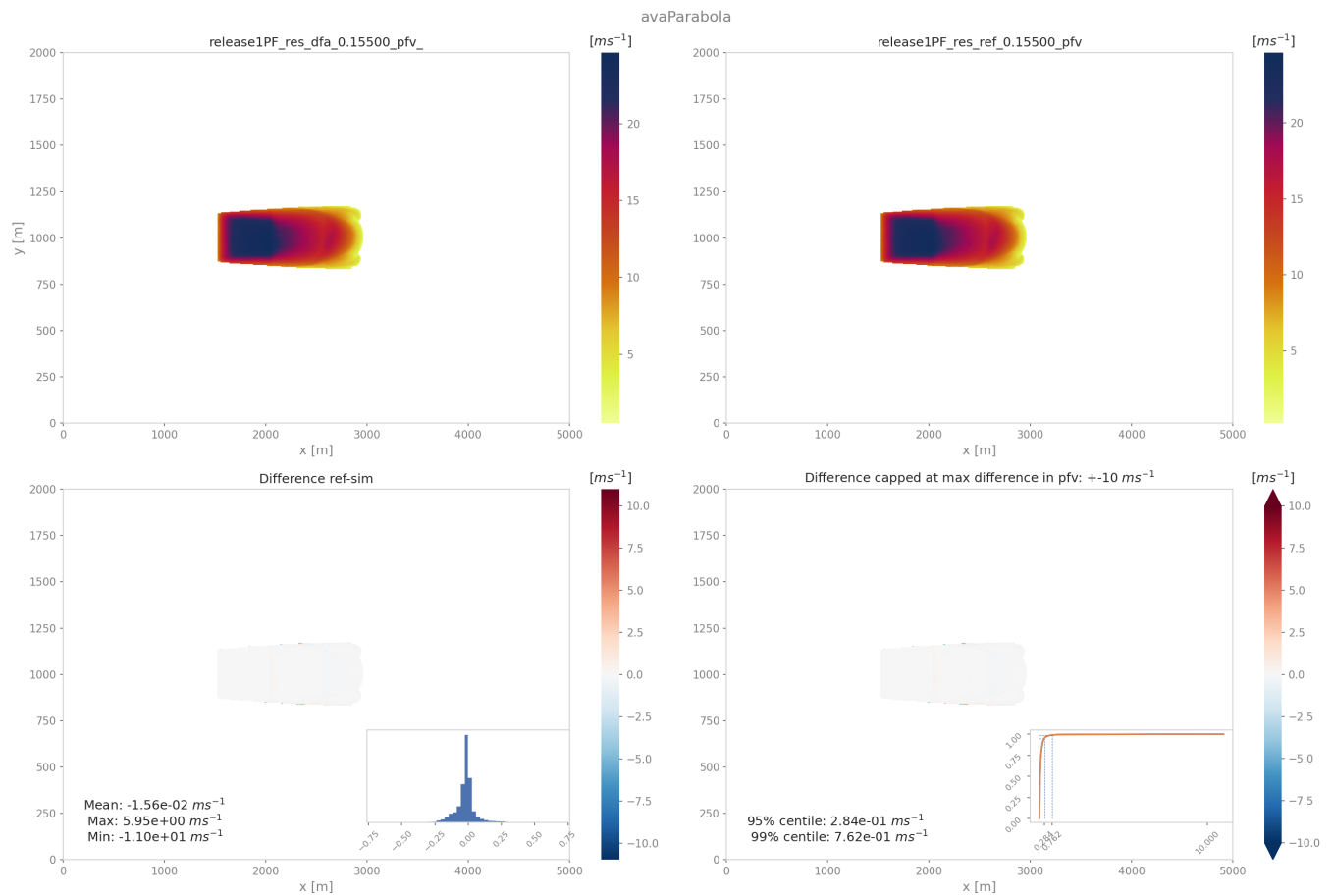


Figure: Aimec comparison of mean and max values along path

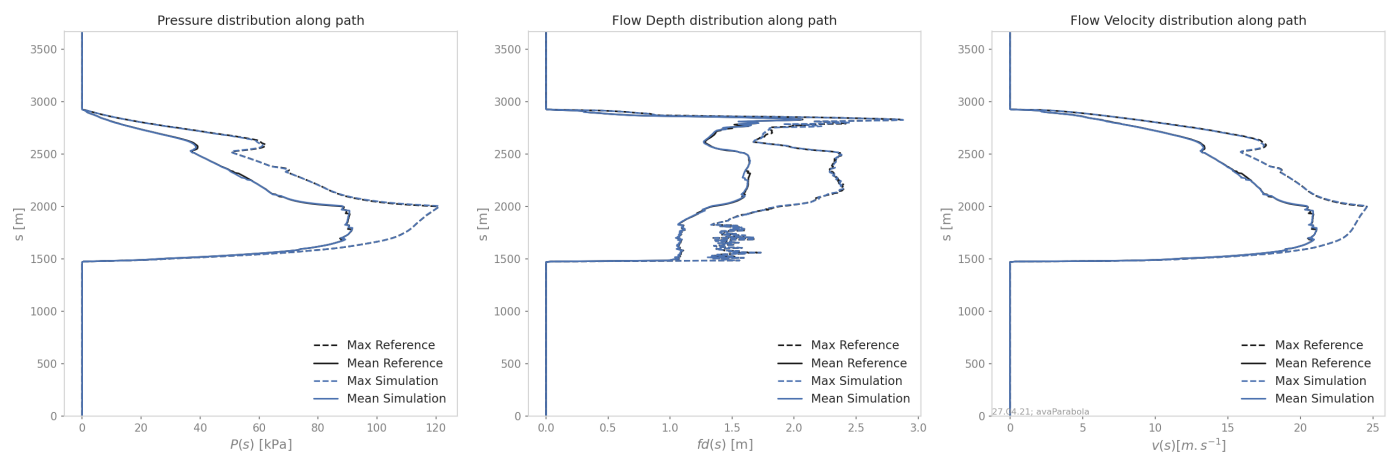
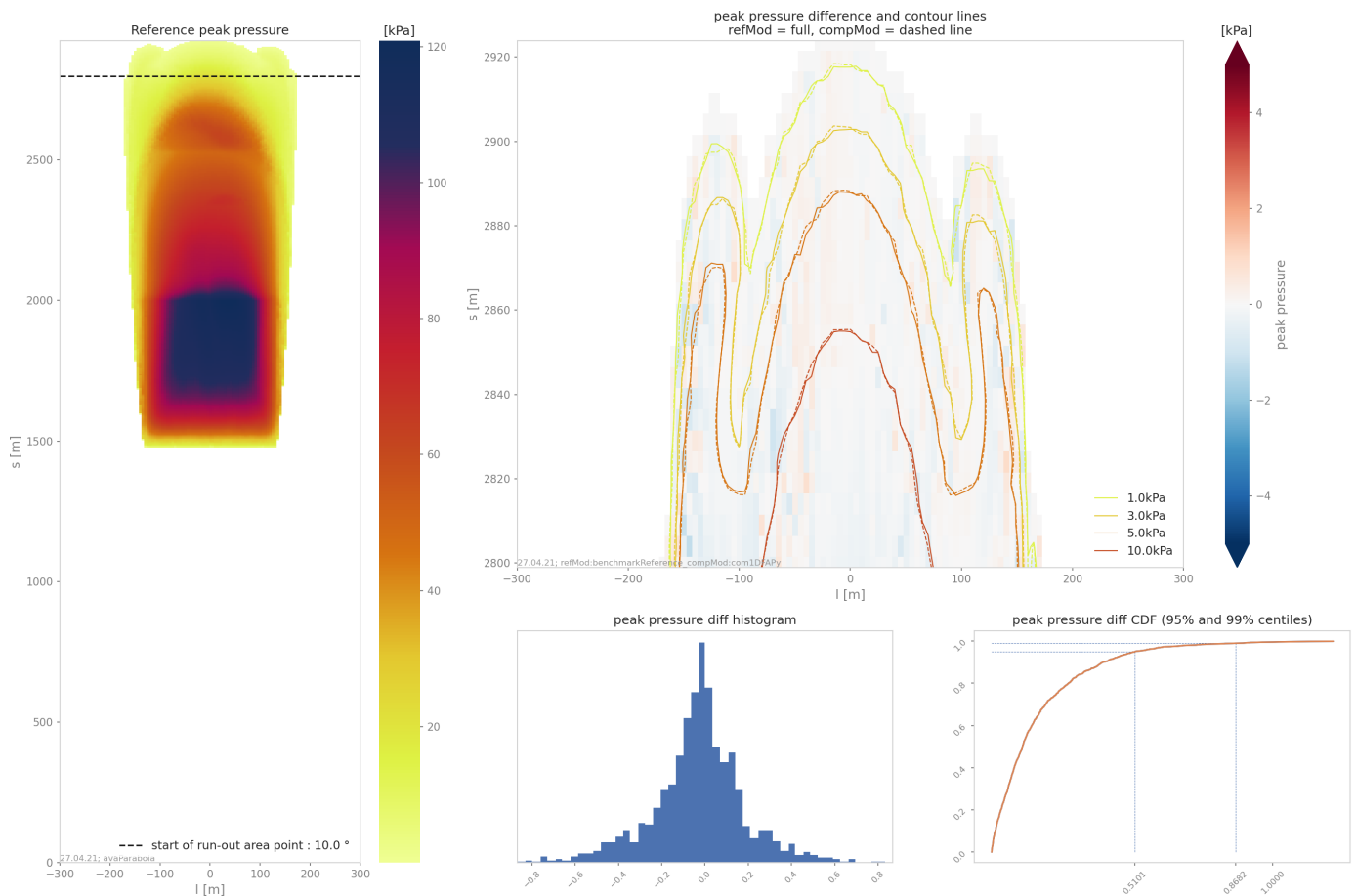


Figure: Aimec area analysis



avaHockeySmall

Simulation name: **release1HS_null_dfa_0.15500**

Test Info

This test uses a hockey stick-shaped geometry, where a linearly sloping surface transitions smoothly into a flat foreland. This geometry also includes a channel.

Simulation Parameters

Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	release1HS	release1HS
Entrainment	No	No
Resistance	No	No
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	10000000.04	9999977.91
Final mass [kg]	10000000.04	9999977.91
Entrained mass [kg]	0.0	0.00
Entrained volume [m3]	non existent	0.00
Stop criterion	end Time reached: 400.00	end Time reached: 400.00

Parameter	Reference	Simulation
Avalanche run time [s]	400.00	400.00
Computation time [s]	non existent	77.18

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	3283.7	3273.7
max peak pressure [kPa]	181.4	180.8
max peak flow depth [m]	2.9	2.8
max peak flow velocity [ms-1]	30.1	30.1

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (181.43) Difference is: Max = 55.53, Mean = 0.53 and Min = -56.34

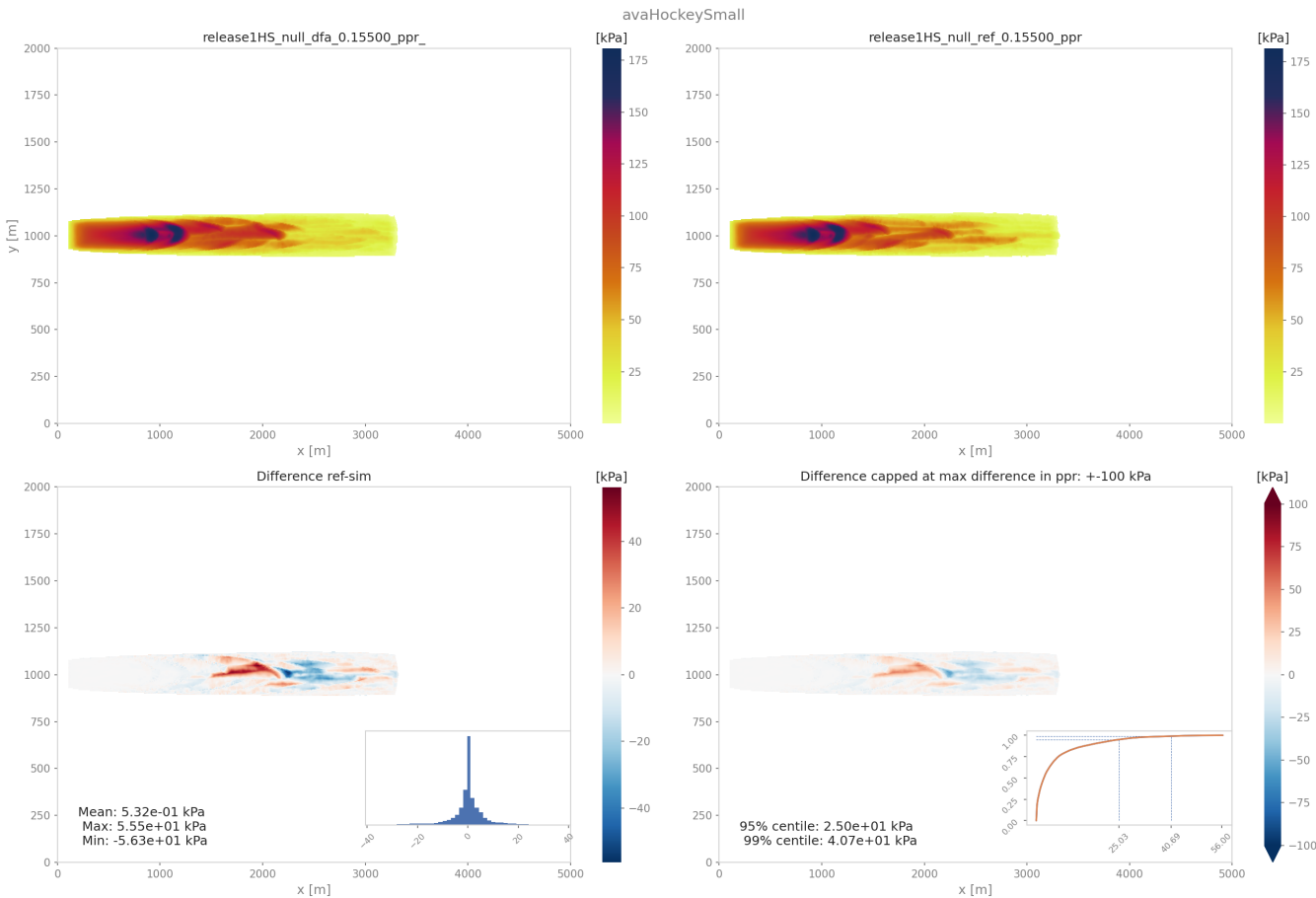


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (2.90) Difference is: Max = 1.25, Mean = 0.00 and Min = -0.97

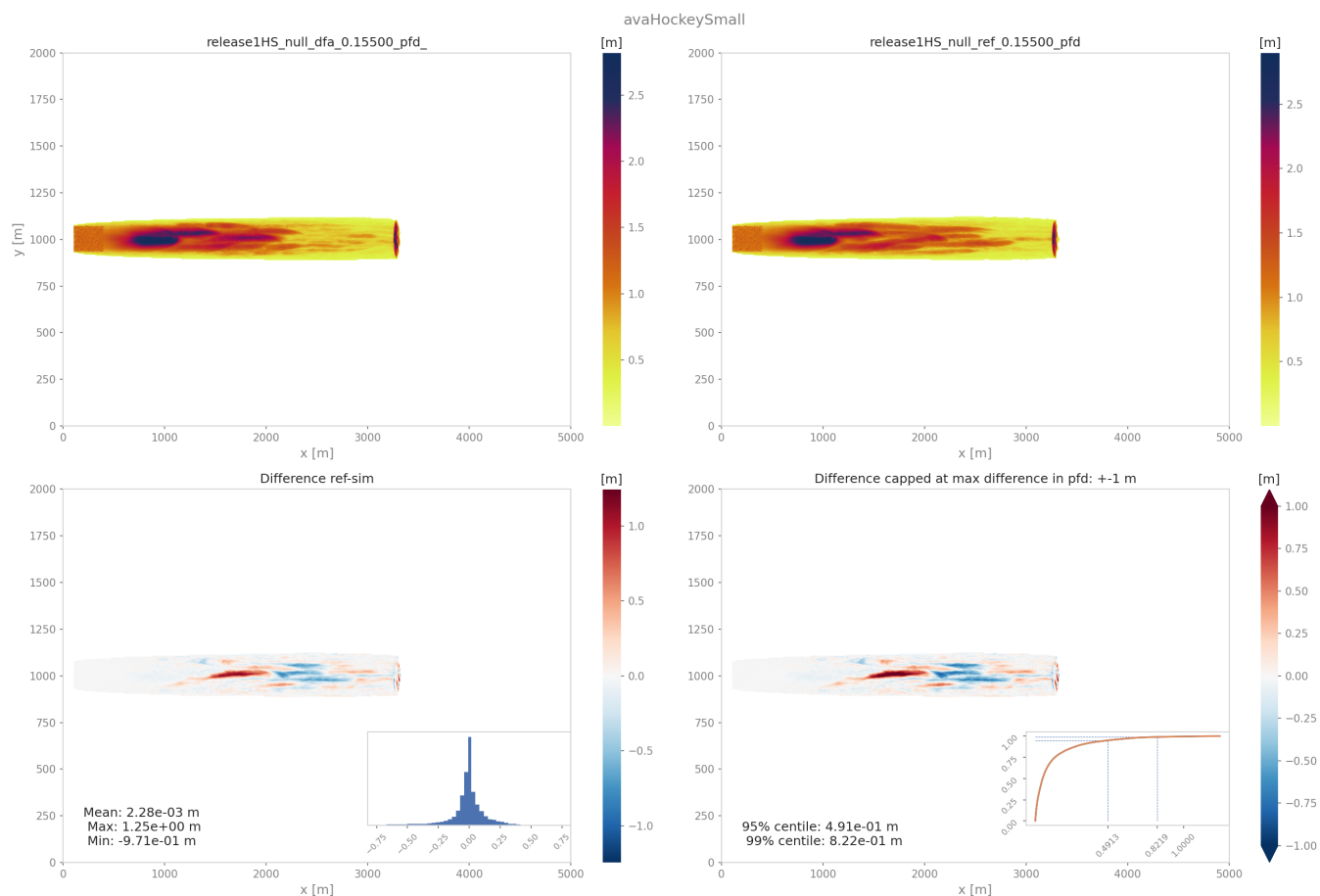


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (30.12) Difference is: Max = 7.75, Mean = 0.05 and Min = -11.48

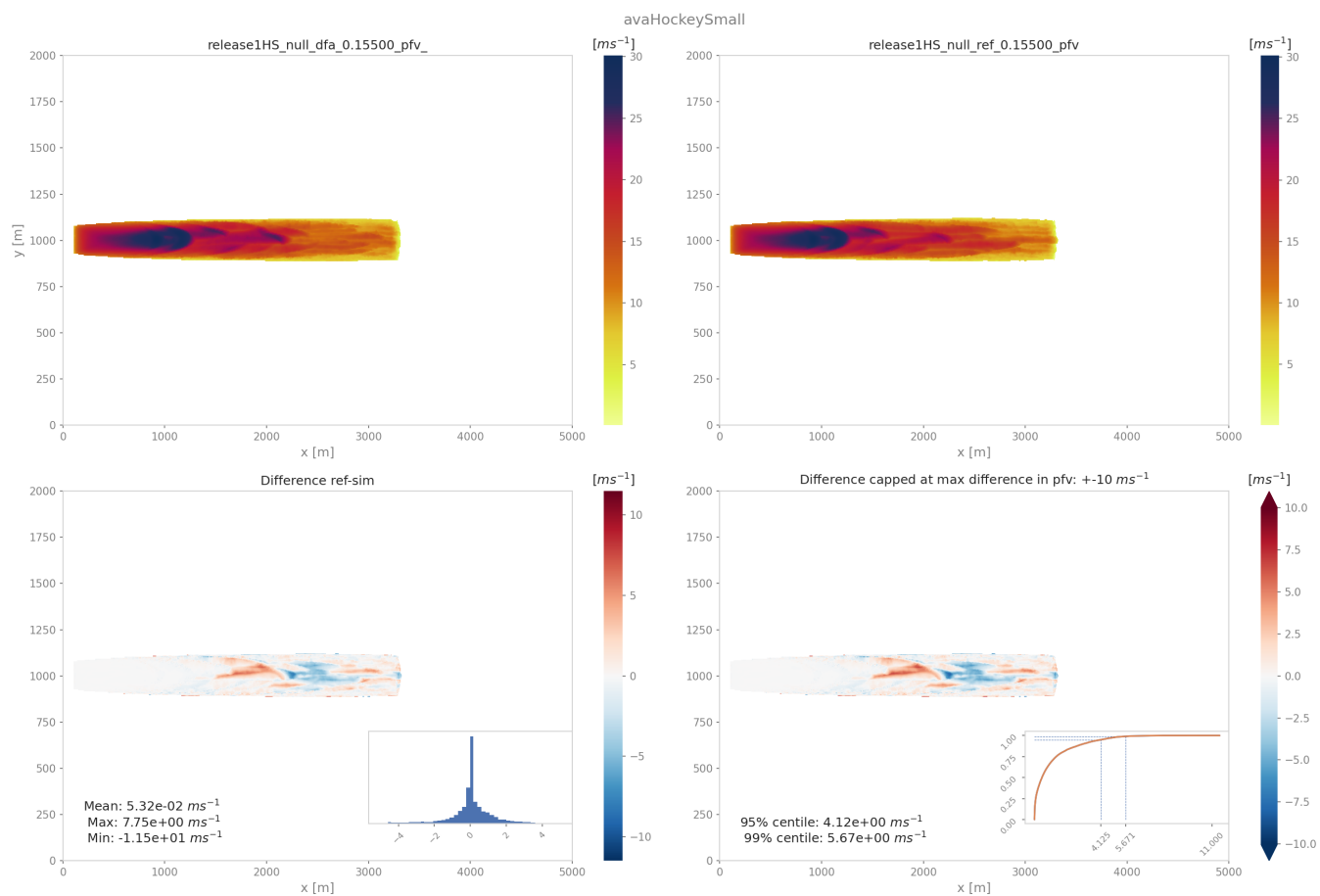


Figure: Aimec comparison of mean and max values along path

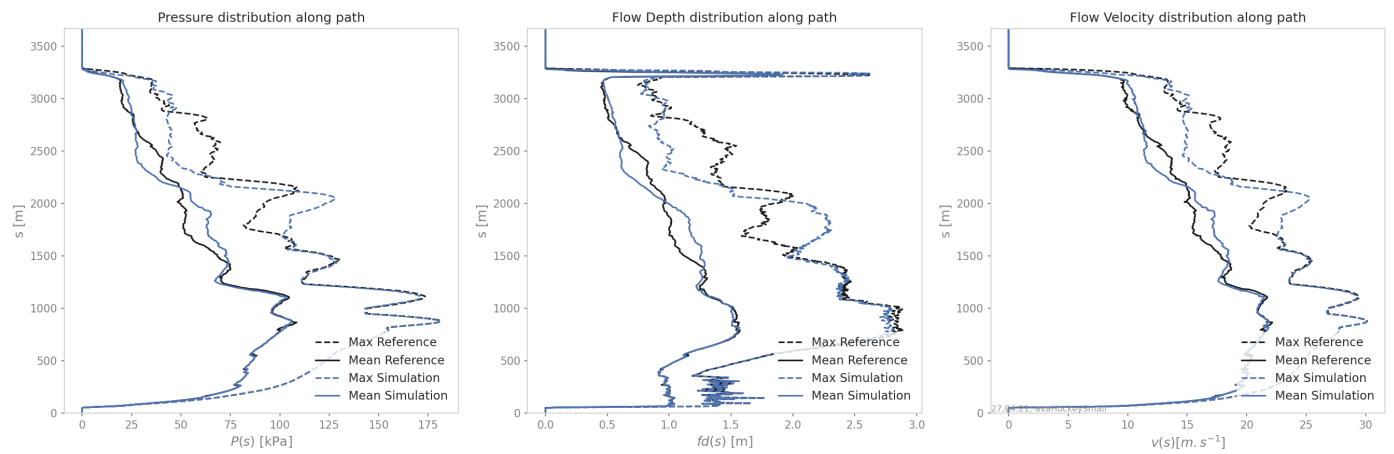
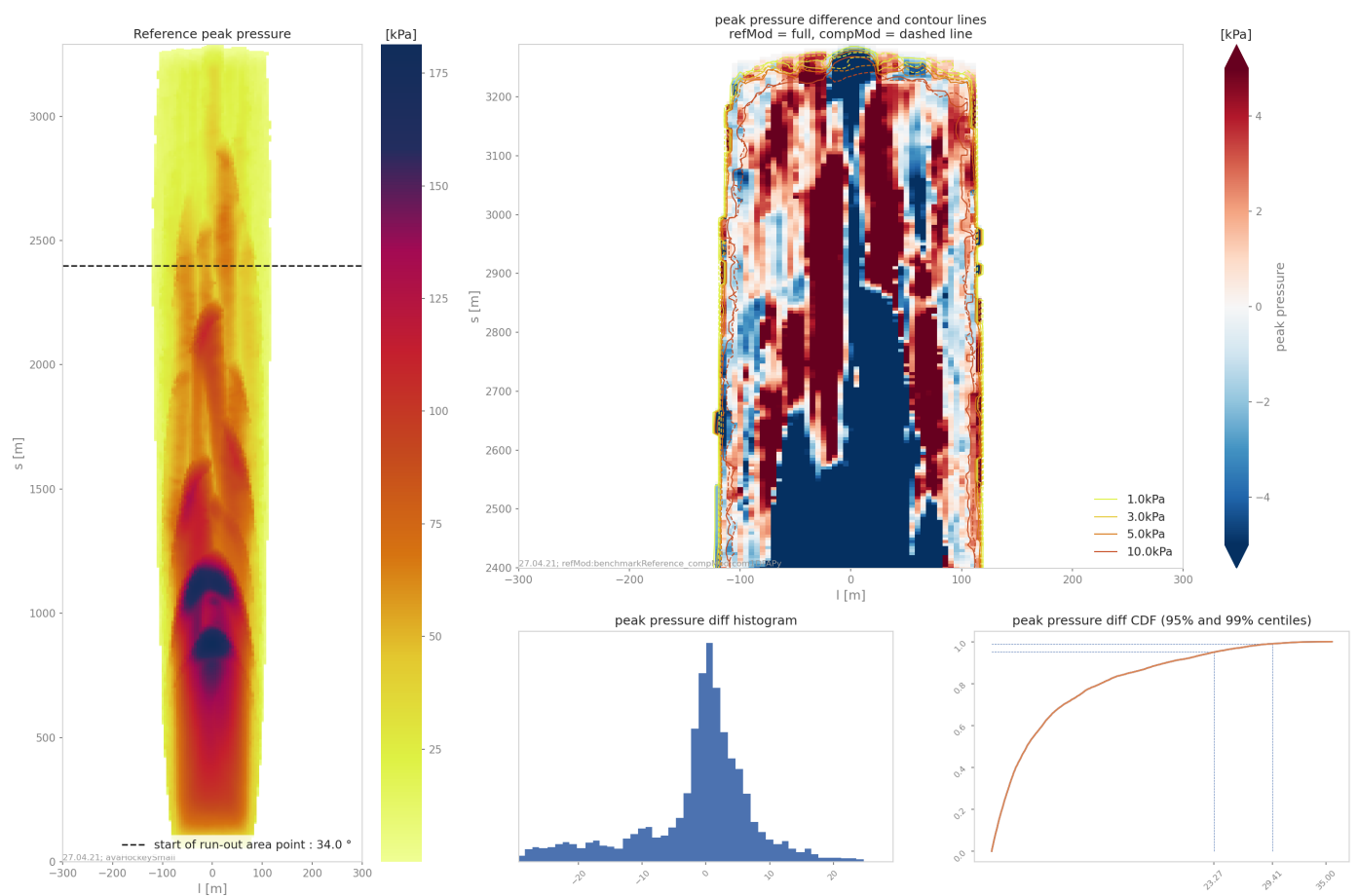


Figure: Aimec area analysis



avaHockeyChannel

Simulation name: *release1HS_ent_dfa_0.15500*

Test Info

This test uses a hockey stick-shaped geometry, where a linearly sloping surface transitions smoothly into a flat foreland.

Simulation Parameters

Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	release1HS	release1HS
Entrainment	Yes	Yes
Resistance	No	No
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	19939294.00	19939294.00
Final mass [kg]	20287572.96	20292742.73
Entrained mass [kg]	-na-	353448.73
Entrained volume [m3]	non existent	3534.49
Stop criterion	< 1.00 percent of PKE	< 1.00 percent of PKE
Avalanche run time [s]	301.0	306.50
Computation time [s]	non existent	122.20

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	3438.7	3433.7
max peak pressure [kPa]	552.6	534.8
max peak flow depth [m]	7.2	7.2
max peak flow velocity [ms-1]	52.6	51.7

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (552.60) Difference is: Max = 163.24, Mean = -1.68 and Min = -229.39

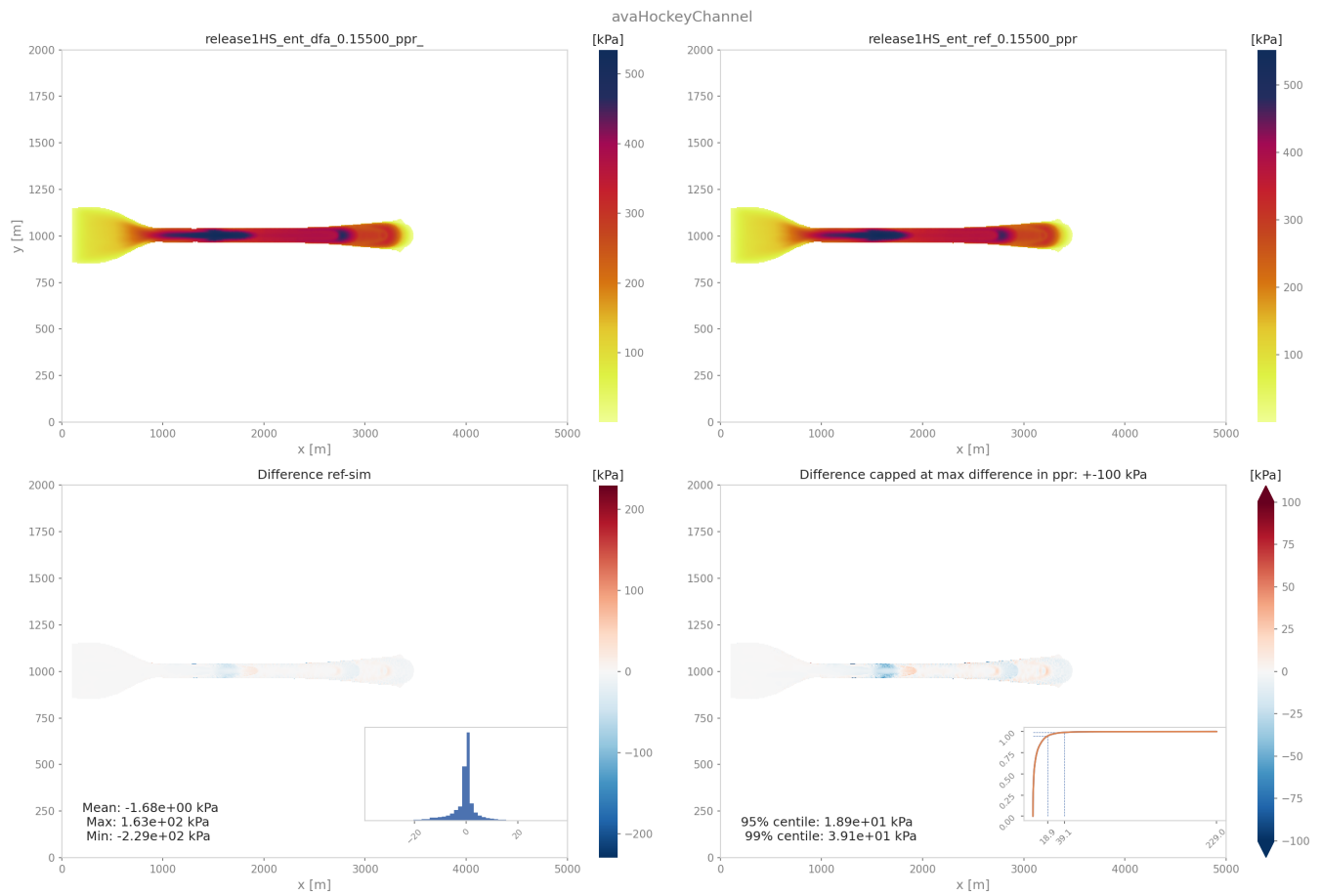


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (7.24) Difference is: Max = 0.44, Mean = -0.03 and Min = -0.66

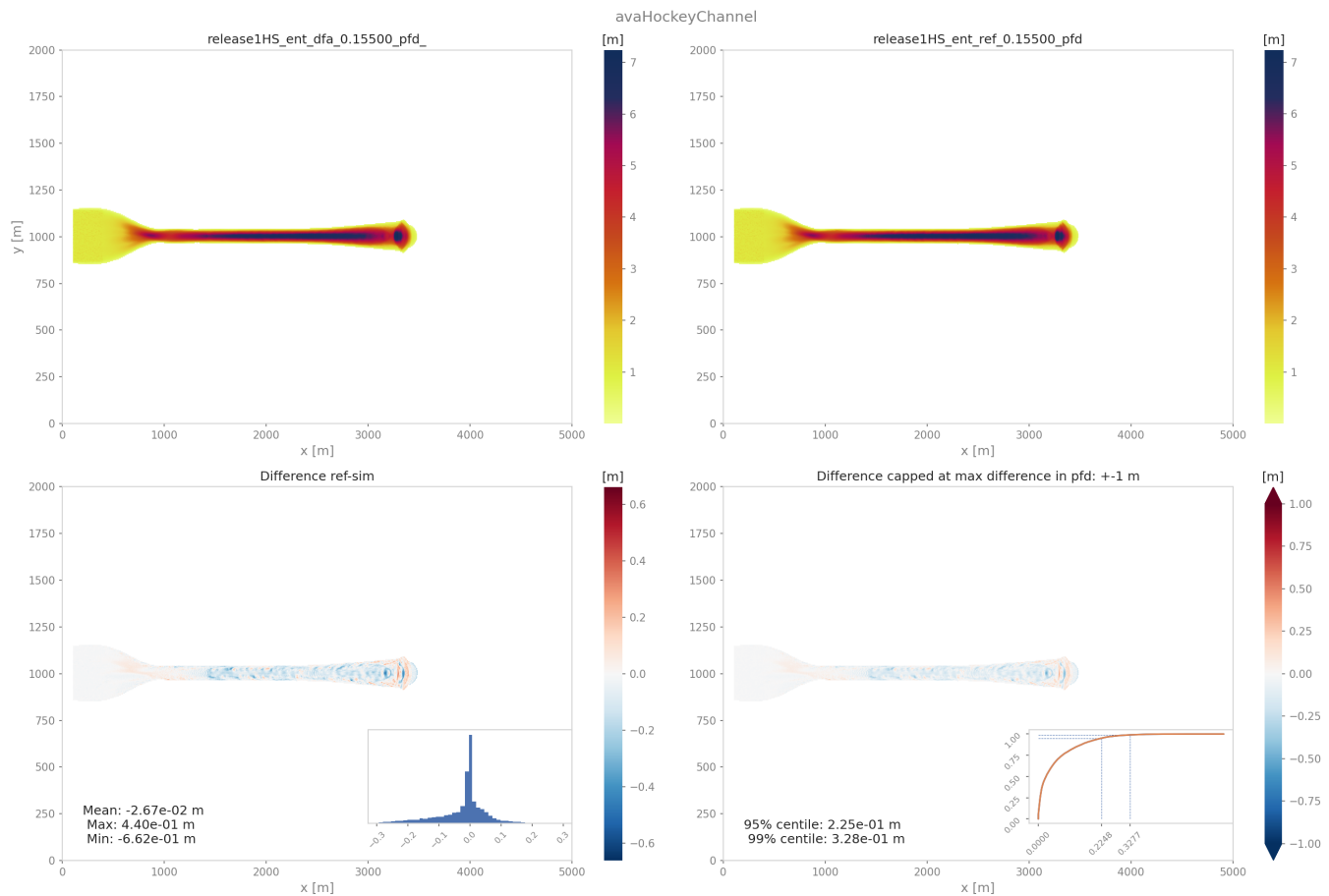


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (52.56) Difference is: Max = 28.57, Mean = -0.15 and Min = -33.87

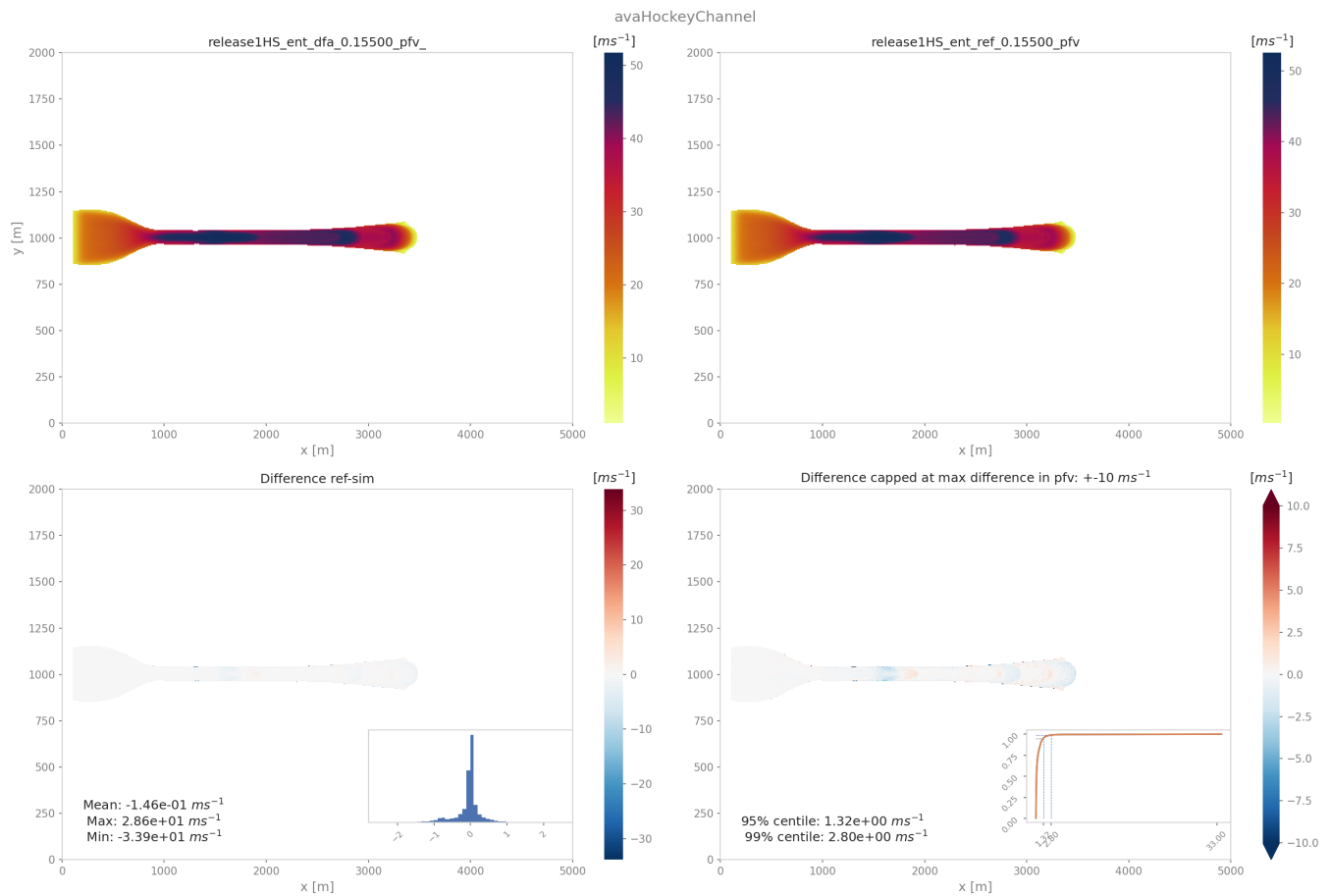


Figure: Aimec comparison of mean and max values along path

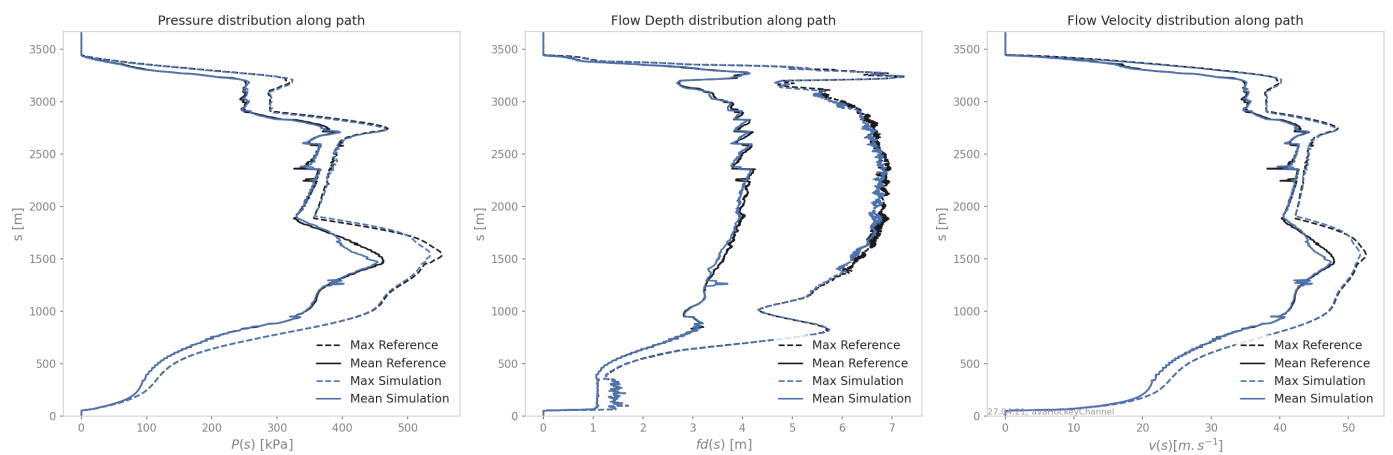
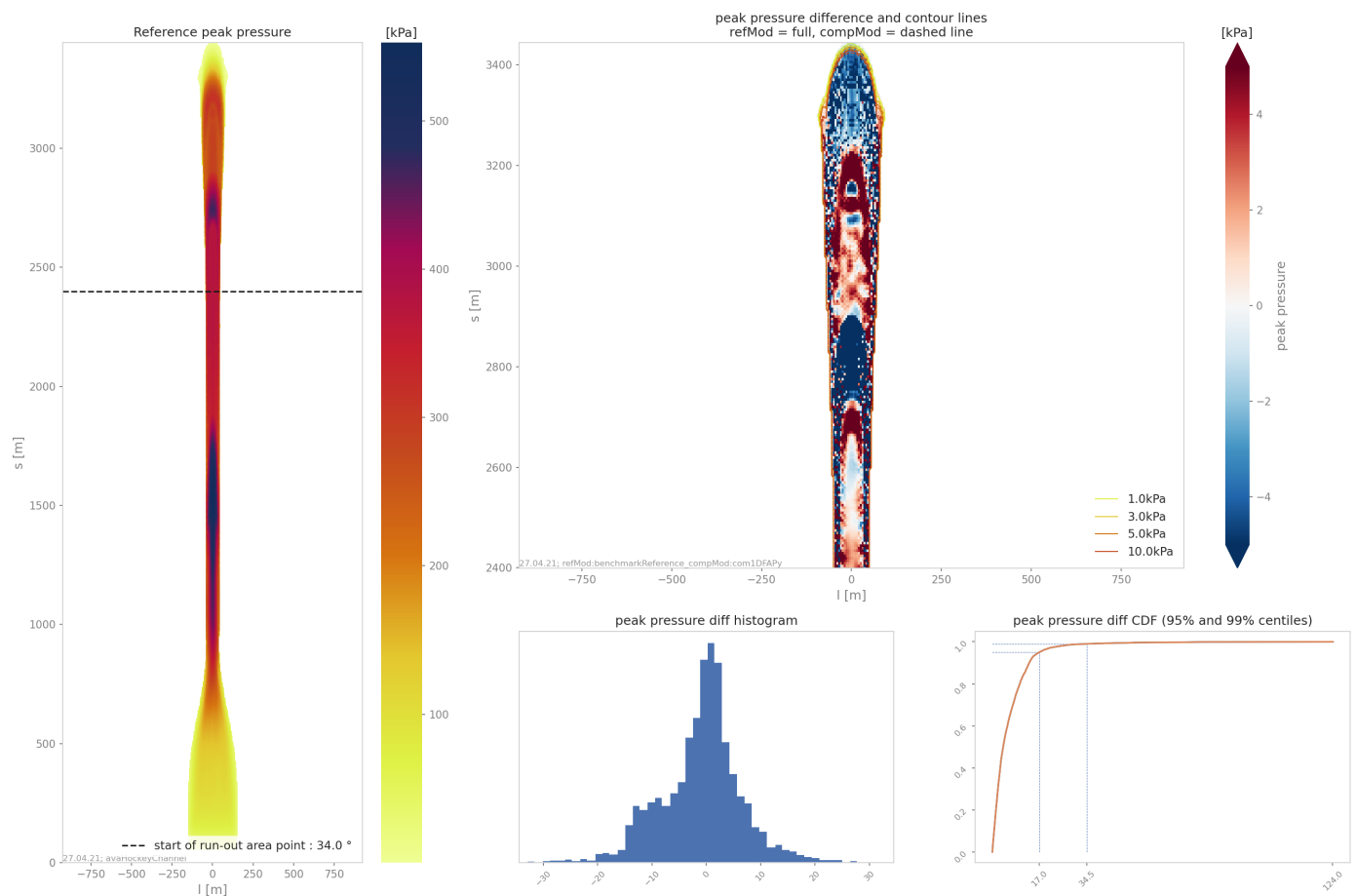


Figure: Aimec area analysis



avaHockeyChannel

Simulation name: **release2HS_ent_dfa_0.15500**

Test Info

This test uses a hockey stick-shaped geometry, where a linearly sloping surface transitions smoothly into a flat foreland.

Simulation Parameters

Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	release2HS	release2HS
Entrainment	Yes	Yes
Resistance	No	No
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	24569688.015	24569688.02
Final mass [kg]	24569688.01	24569688.02
Entrained mass [kg]	-na-	0.00
Entrained volume [m3]	non existent	0.00
Stop criterion	end Time reached: 400.00	end Time reached: 400.00

Parameter	Reference	Simulation
Avalanche run time [s]	400.00	400.00
Computation time [s]	non existent	128.68

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	3293.7	3288.7
max peak pressure [kPa]	239.8	237.7
max peak flow depth [m]	3.3	3.2
max peak flow velocity [ms-1]	34.6	34.5

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (239.78) Difference is: Max = 49.95, Mean = -0.66 and Min = -39.47

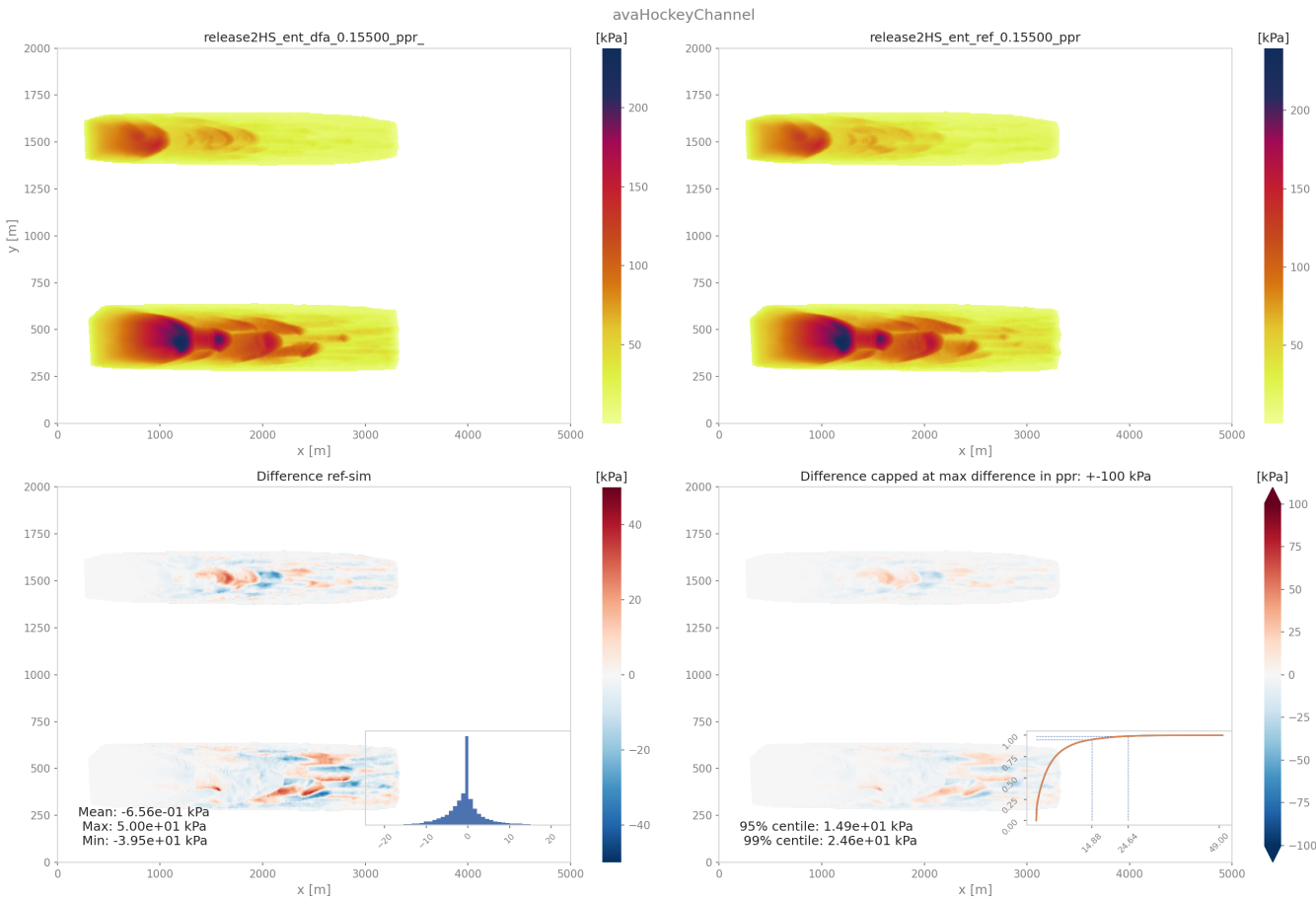


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (3.27) Difference is: Max = 1.15, Mean = -0.01 and Min = -0.86

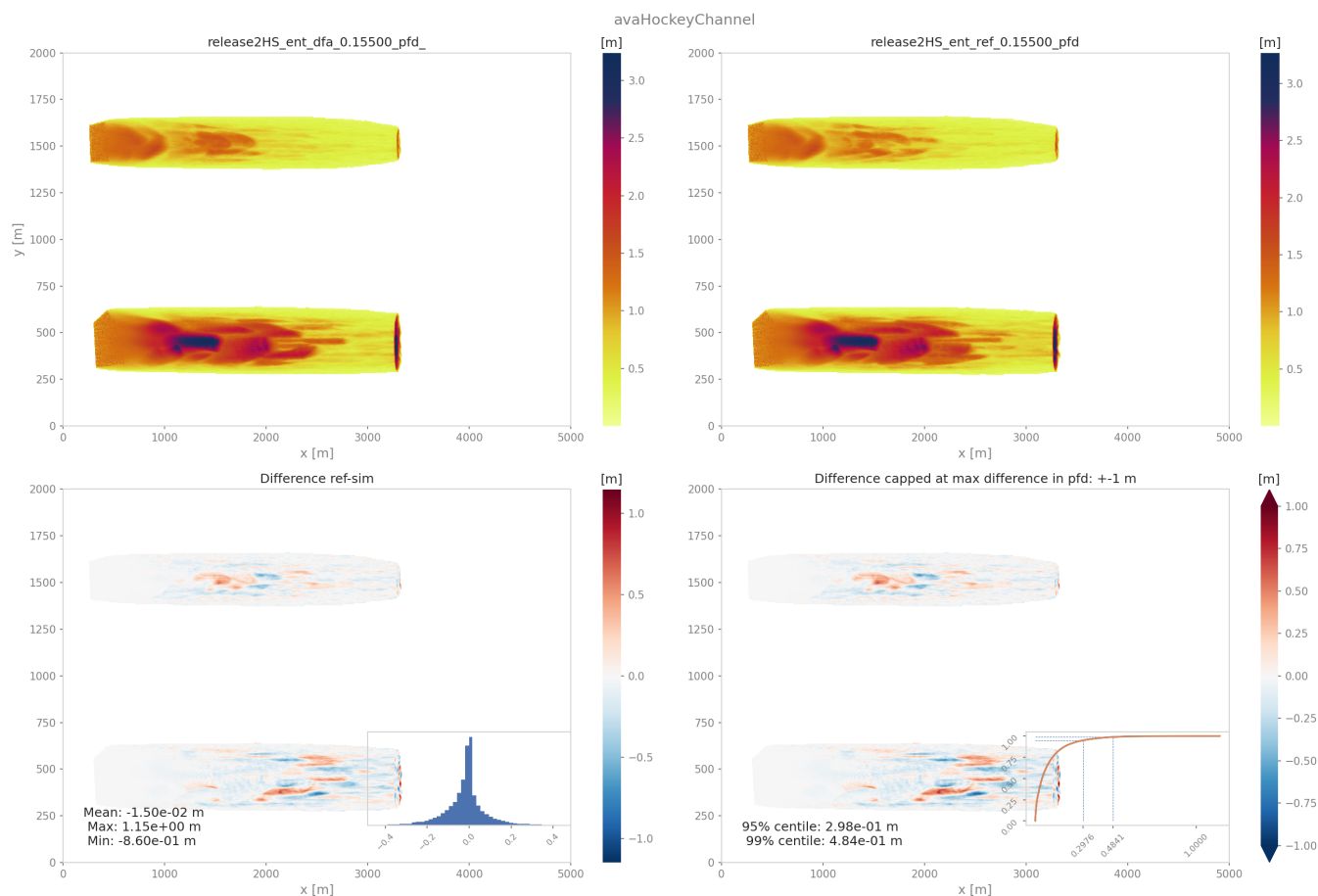


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (34.63) Difference is: Max = 8.71, Mean = -0.14 and Min = -8.00

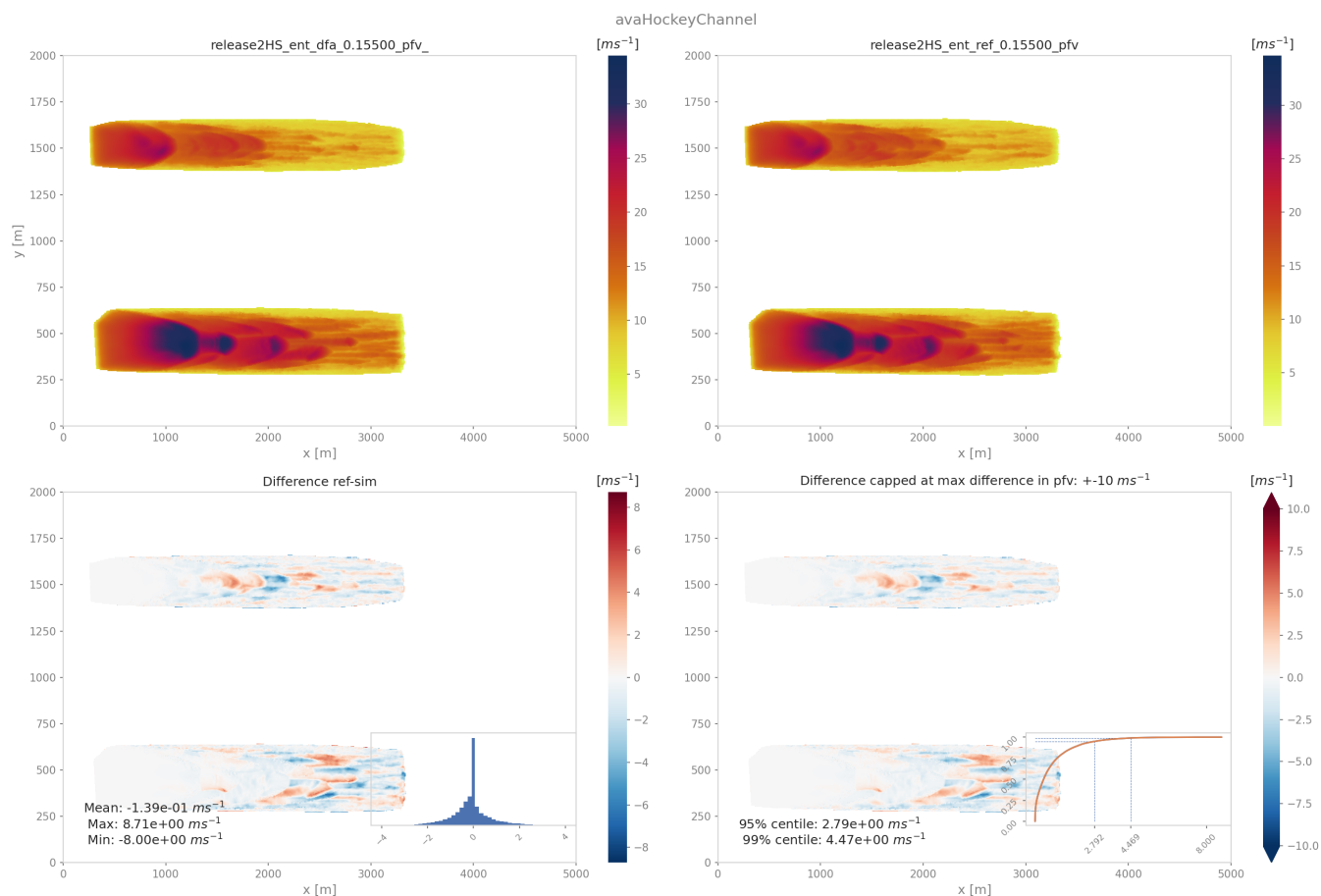


Figure: Aimec comparison of mean and max values along path

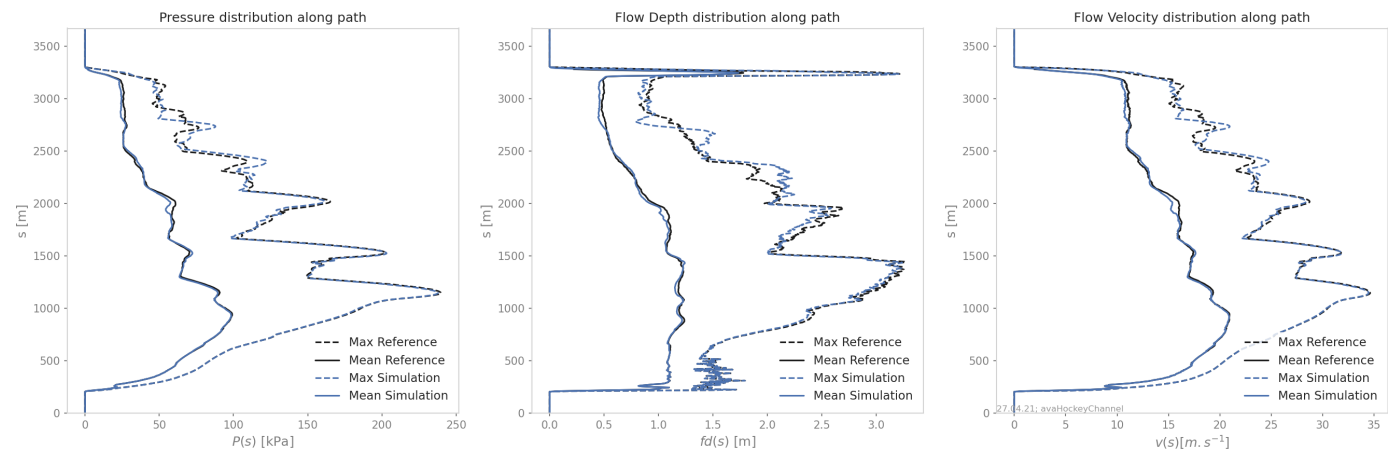
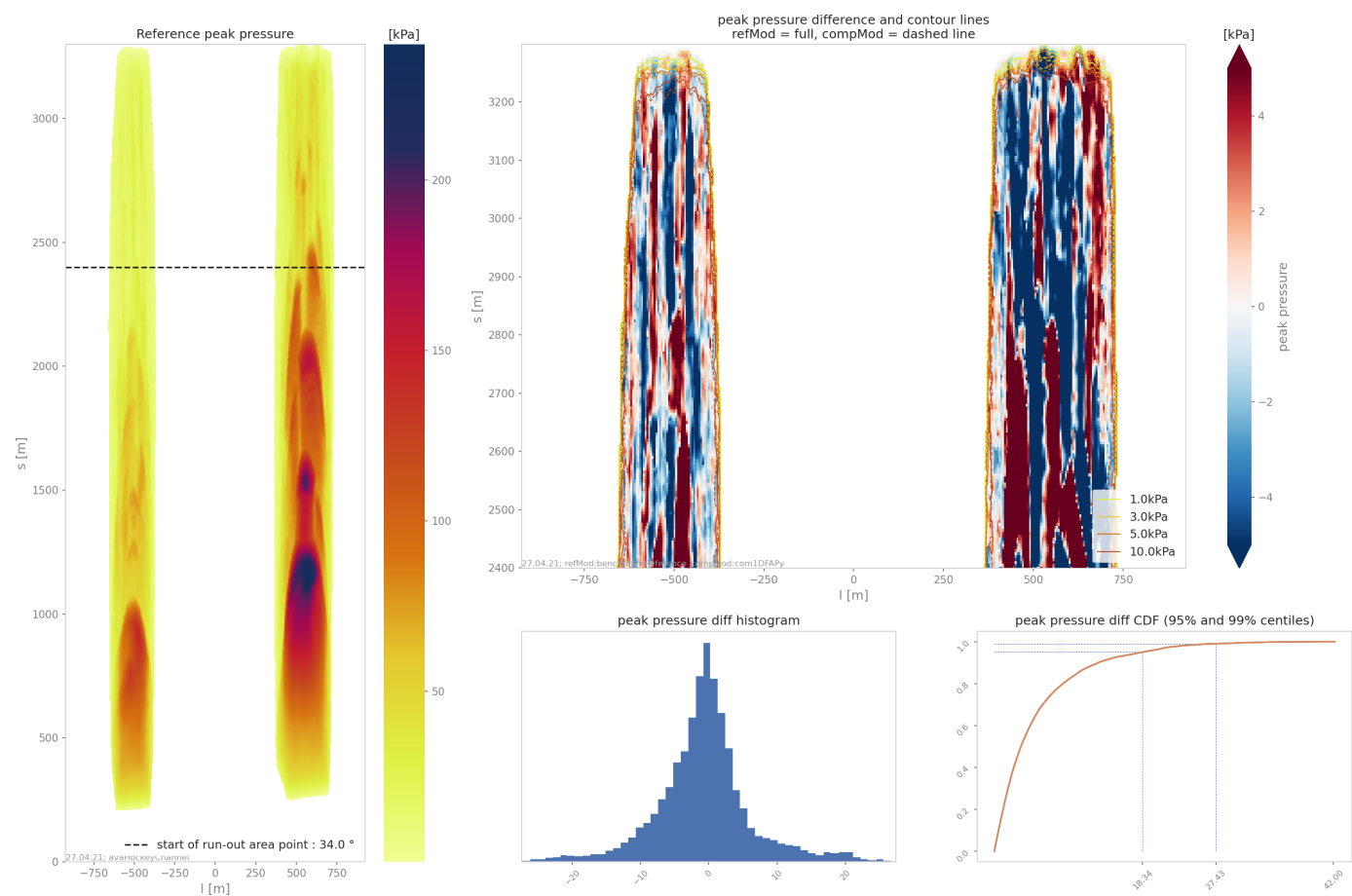


Figure: Aimec area analysis



avaGarST

Simulation name: *relGar_null_dfa_0.15500*

Test Info

This test runs the Gar test.

Simulation Parameters

Parameter	Reference	Simulation
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Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	relGar	relGar
Entrainment	No	No
Resistance	No	No
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	12355490.01	12355490.01
Final mass [kg]	12355490.01	12355490.01
Entrained mass [kg]	0.00	0.00
Entrained volume [m3]	non existent	0.00
Stop criterion	< 1.00 percent of PKE	< 1.00 percent of PKE
Avalanche run time [s]	123.9	124.10
Computation time [s]	non existent	29.95

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	2102.0	2102.0
max peak pressure [kPa]	496.7	497.5
max peak flow depth [m]	12.7	11.3
max peak flow velocity [ms-1]	49.8	49.9

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (498.44) Difference is: Max = 428.32, Mean = 1.03 and Min = -323.70

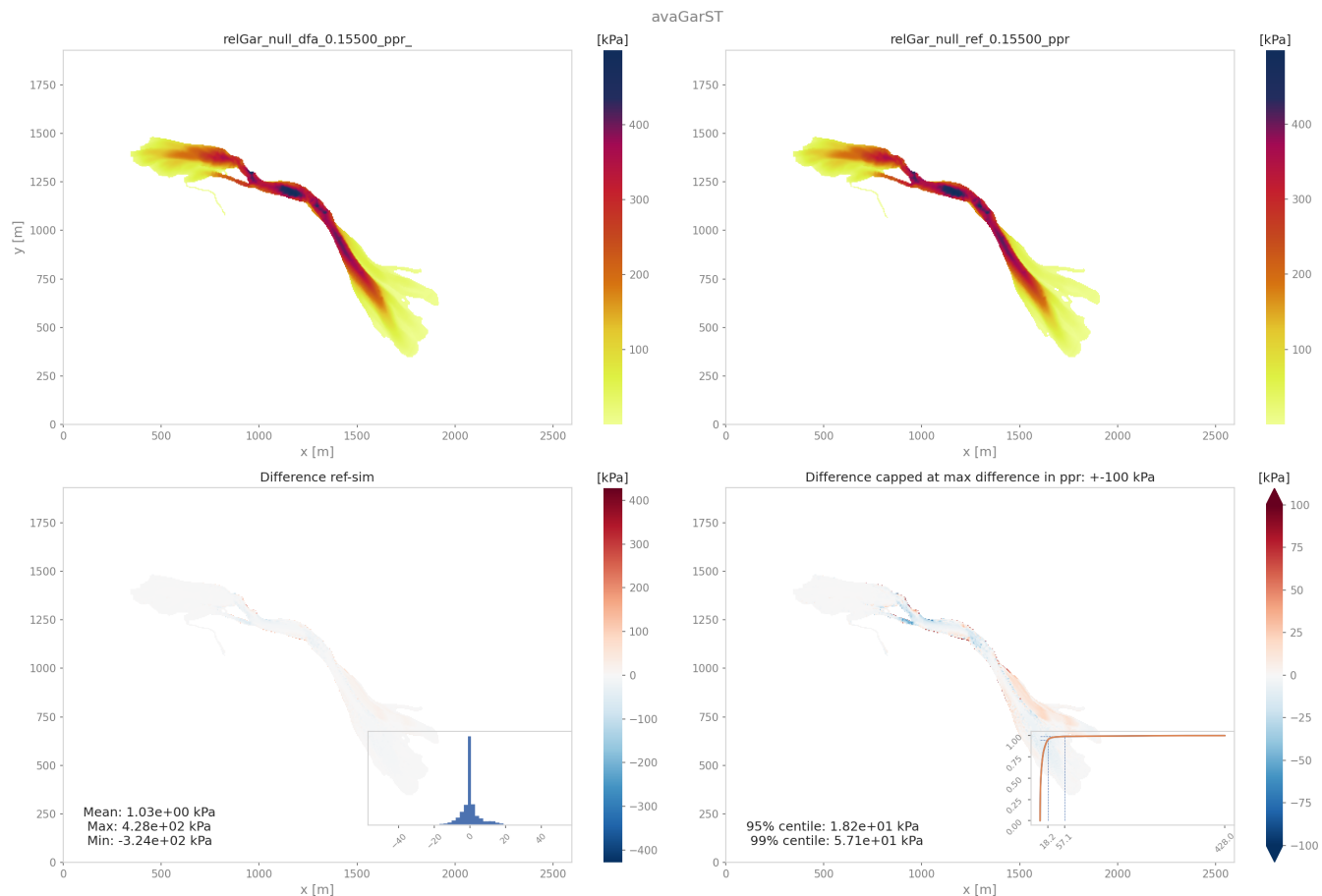


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (14.51) Difference is: Max = 2.07, Mean = 0.02 and Min = -2.52

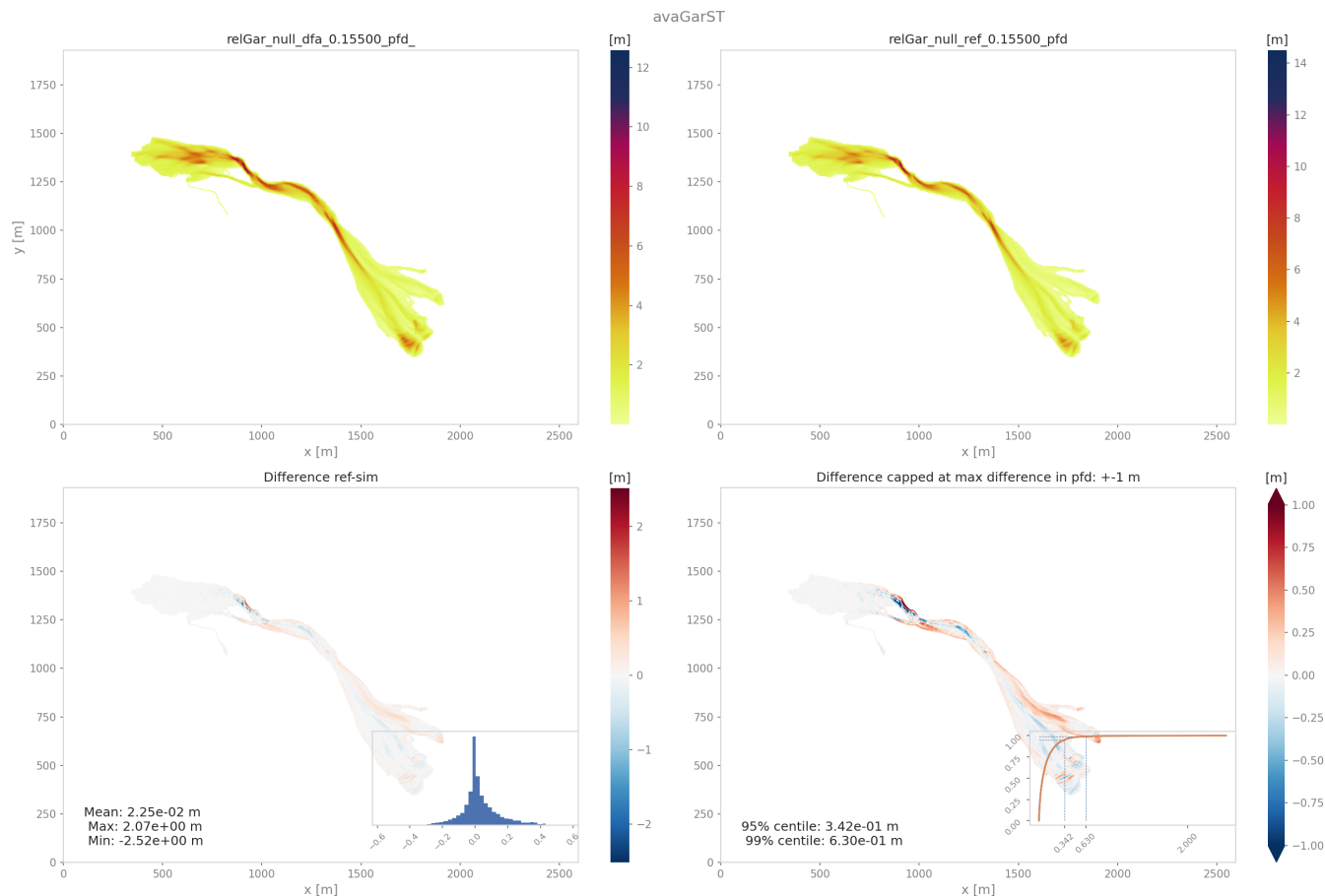


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (49.92) Difference is: Max = 46.28, Mean = 0.35 and Min = -40.23

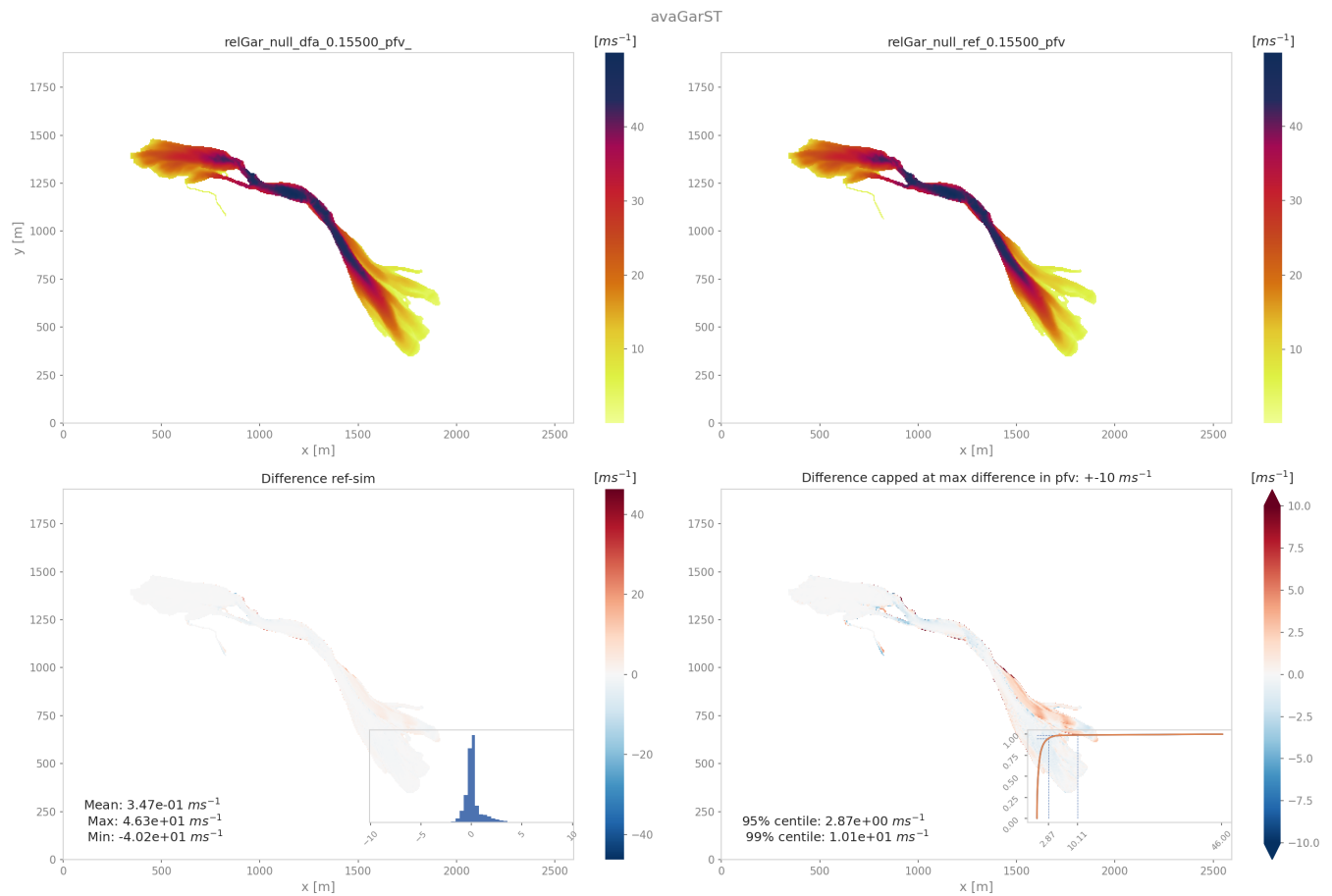


Figure: Aimec comparison of mean and max values along path

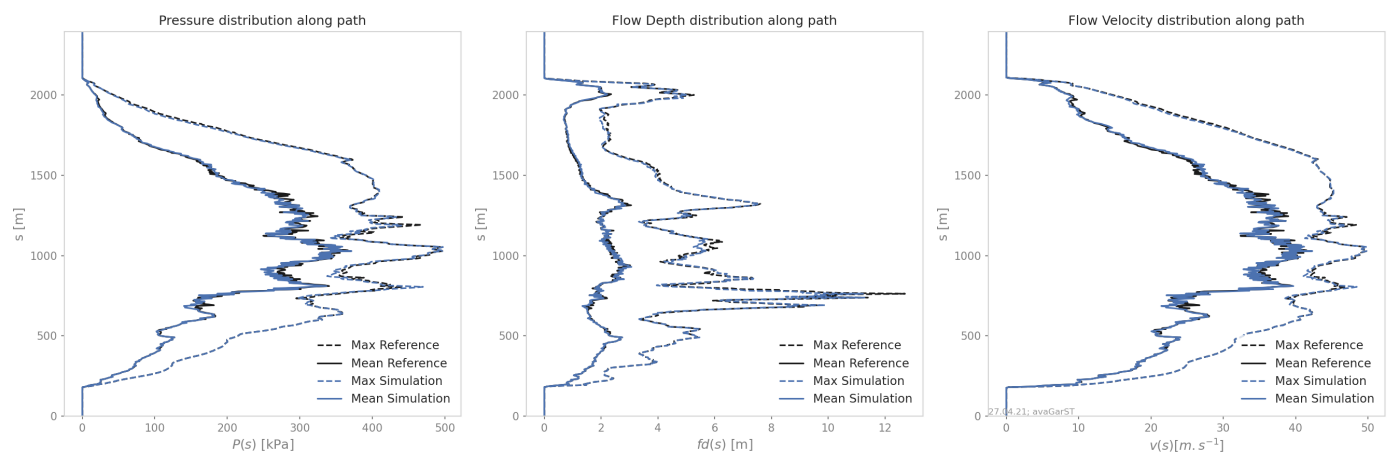
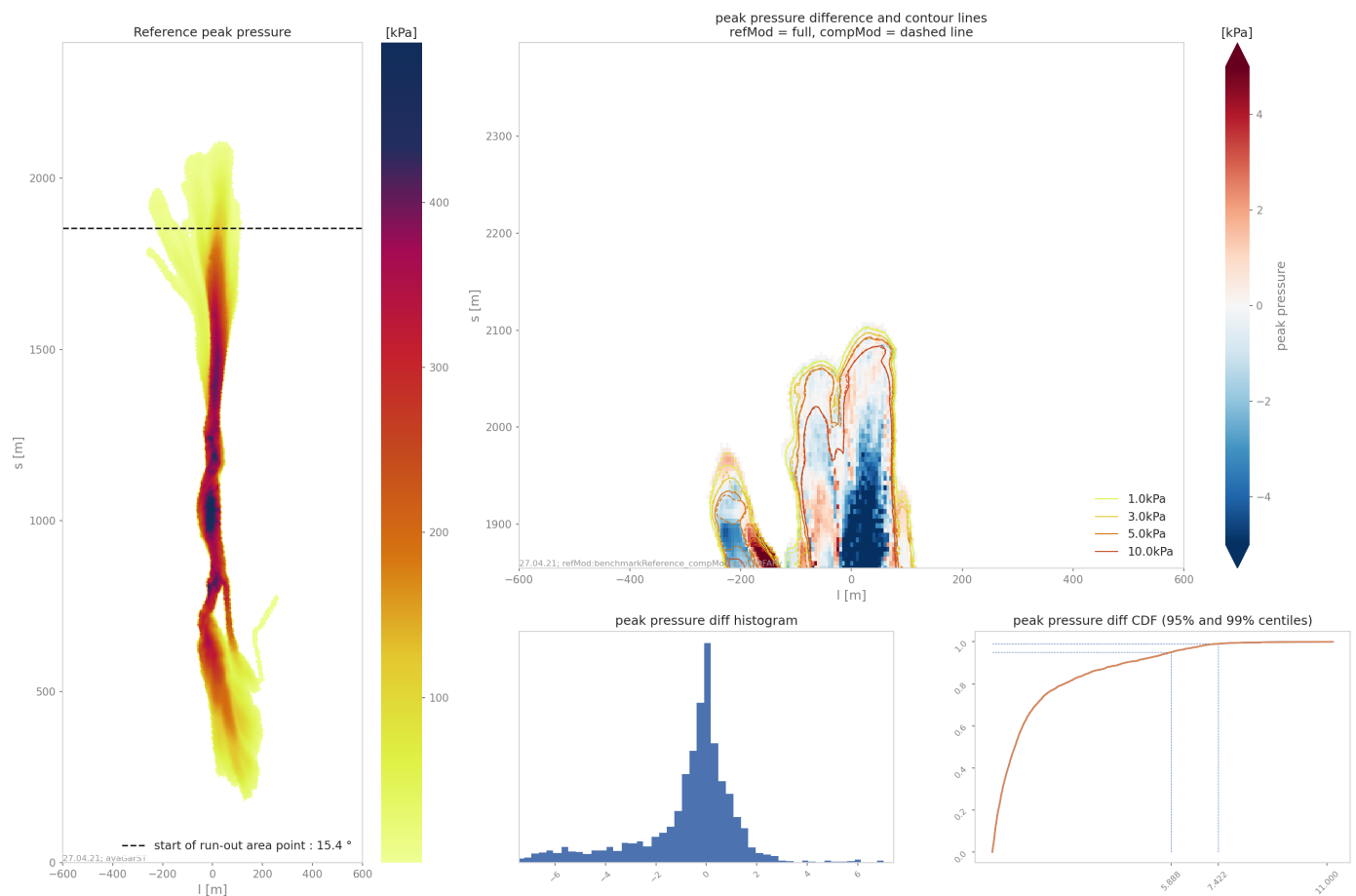


Figure: Aimec area analysis



avaGarST

Simulation name: *relGar2_null_dfa_0.15500*

Test Info

This test runs the Gar test.

Simulation Parameters

Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	relGar2	relGar2
Entrainment	No	No
Resistance	No	No
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	67116520.00	67116520.00
Final mass [kg]	67116520.00	67116520.00
Entrained mass [kg]	0.00	0.00
Entrained volume [m3]	non existent	0.00
Stop criterion	< 1.00 percent of PKE	< 1.00 percent of PKE

Parameter	Reference	Simulation
Avalanche run time [s]	104.9	104.70
Computation time [s]	non existent	146.13

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	2247.4	2243.7
max peak pressure [kPa]	719.7	709.5
max peak flow depth [m]	31.2	29.3
max peak flow velocity [ms-1]	60.0	59.6

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (721.62) Difference is: Max = 580.07, Mean = -0.87 and Min = -371.68

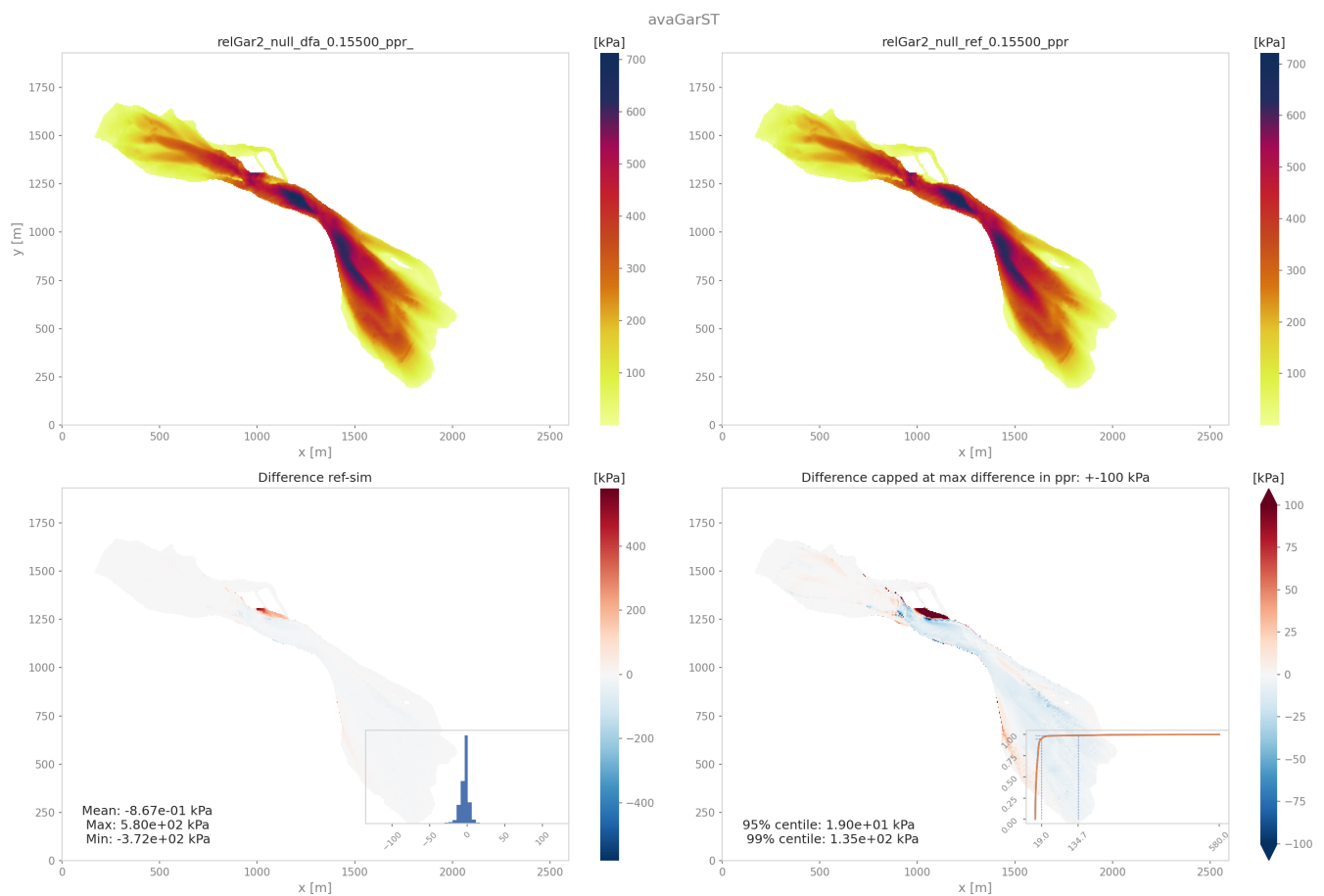


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (34.82) Difference is: Max = 4.23, Mean = 0.01 and Min = -4.88

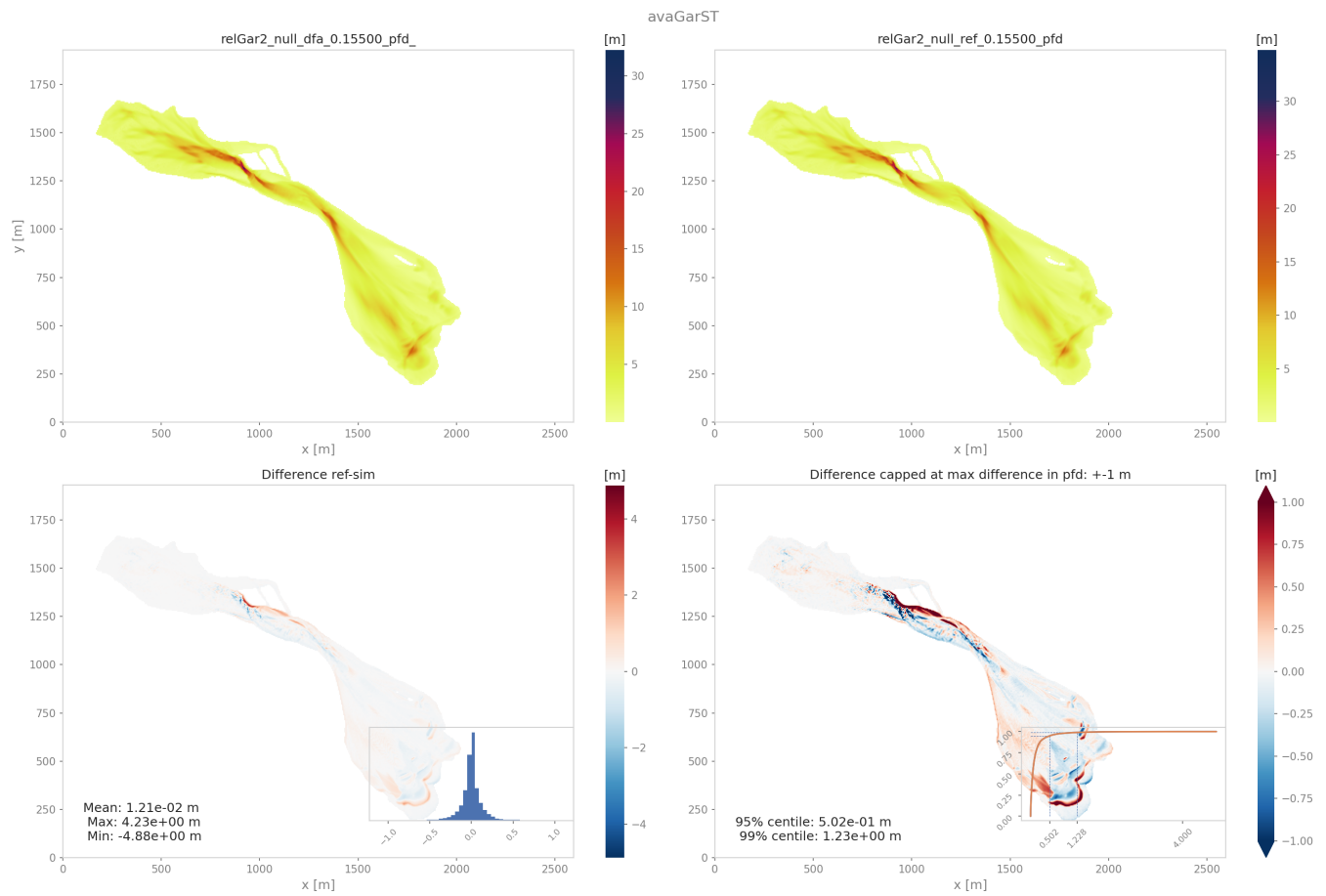


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (60.07) Difference is: Max = 53.85, Mean = 0.04 and Min = -43.11

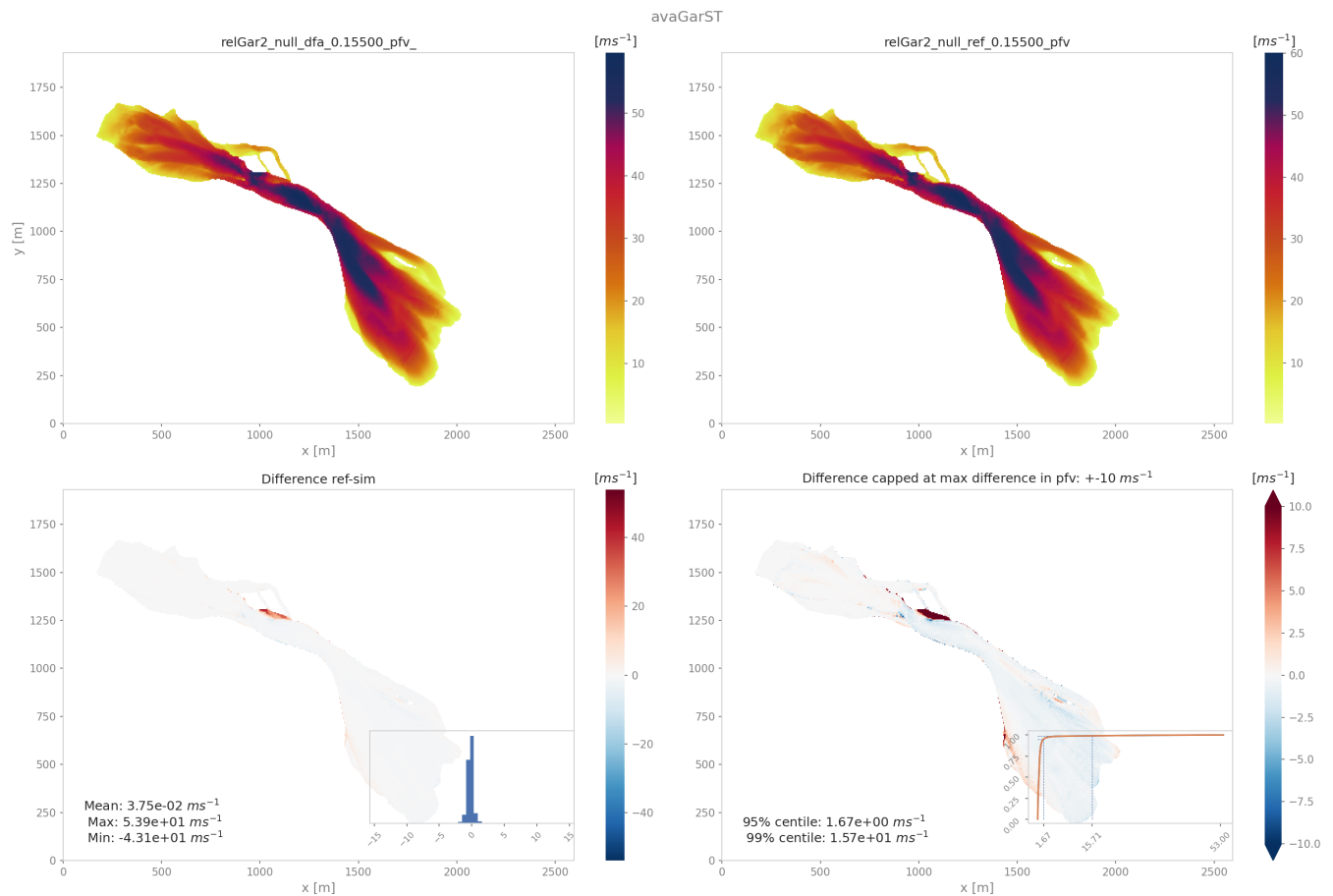


Figure: Aimec comparison of mean and max values along path

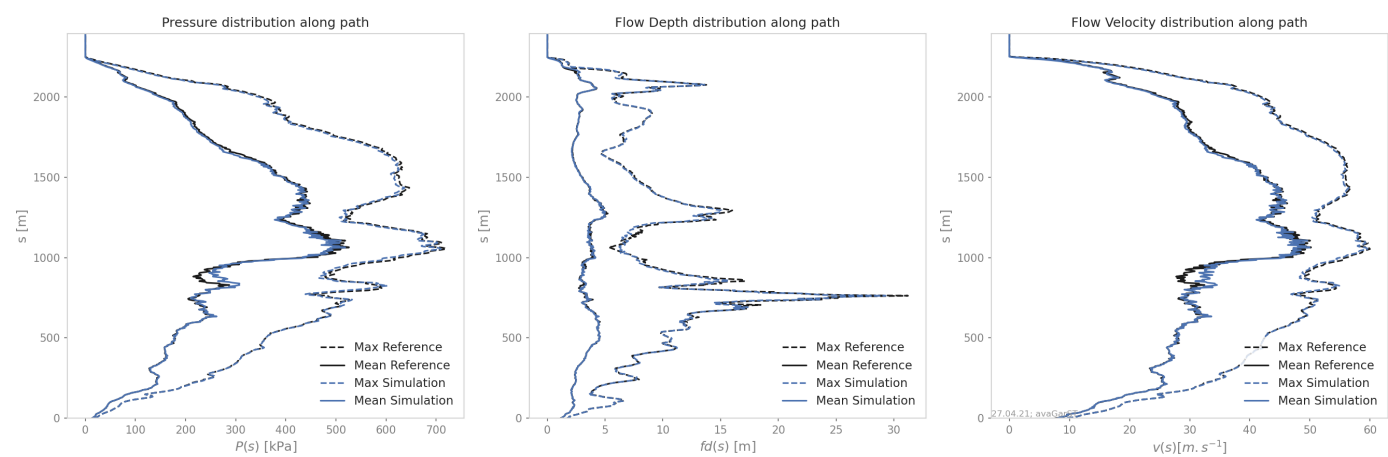
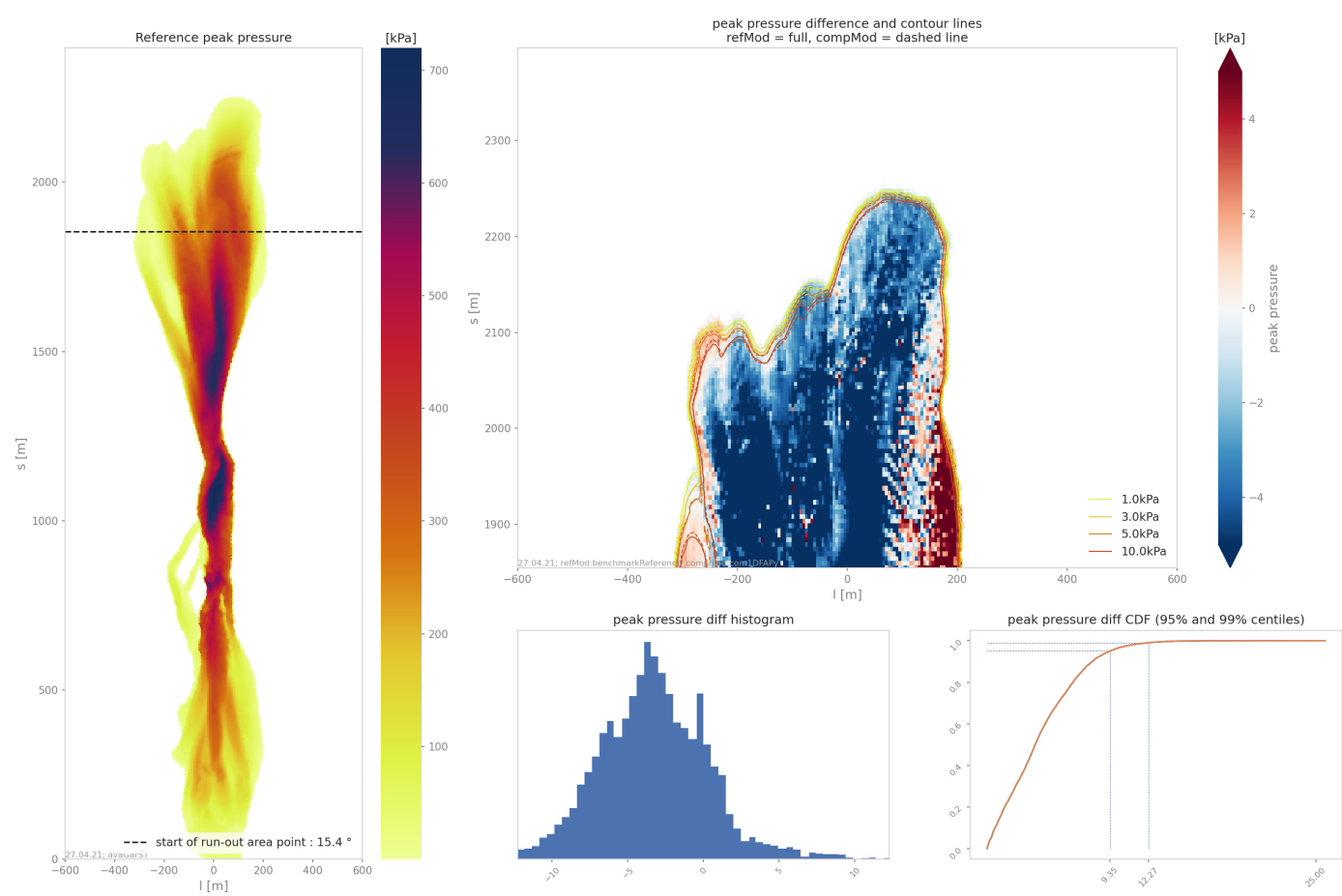


Figure: Aimec area analysis



avaGarST

Simulation name: relGar6_null_dfa_0.15500

Test Info

This test runs the Gar test.

Simulation Parameters

Parameter	Reference	Simulation
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Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	relGar6	relGar6
Entrainment	No	No
Resistance	No	No
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	22167257.98	22167257.99
Final mass [kg]	22167257.98	22167257.99
Entrained mass [kg]	0.00	0.00
Entrained volume [m3]	non existent	0.00
Stop criterion	< 1.00 percent of PKE	< 1.00 percent of PKE
Avalanche run time [s]	96.7	96.40
Computation time [s]	non existent	32.57

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	2109.5	2109.5
max peak pressure [kPa]	313.9	314.1
max peak flow depth [m]	10.0	9.7
max peak flow velocity [ms-1]	39.6	39.6

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (314.98) Difference is: Max = 222.12, Mean = 0.41 and Min = -174.05

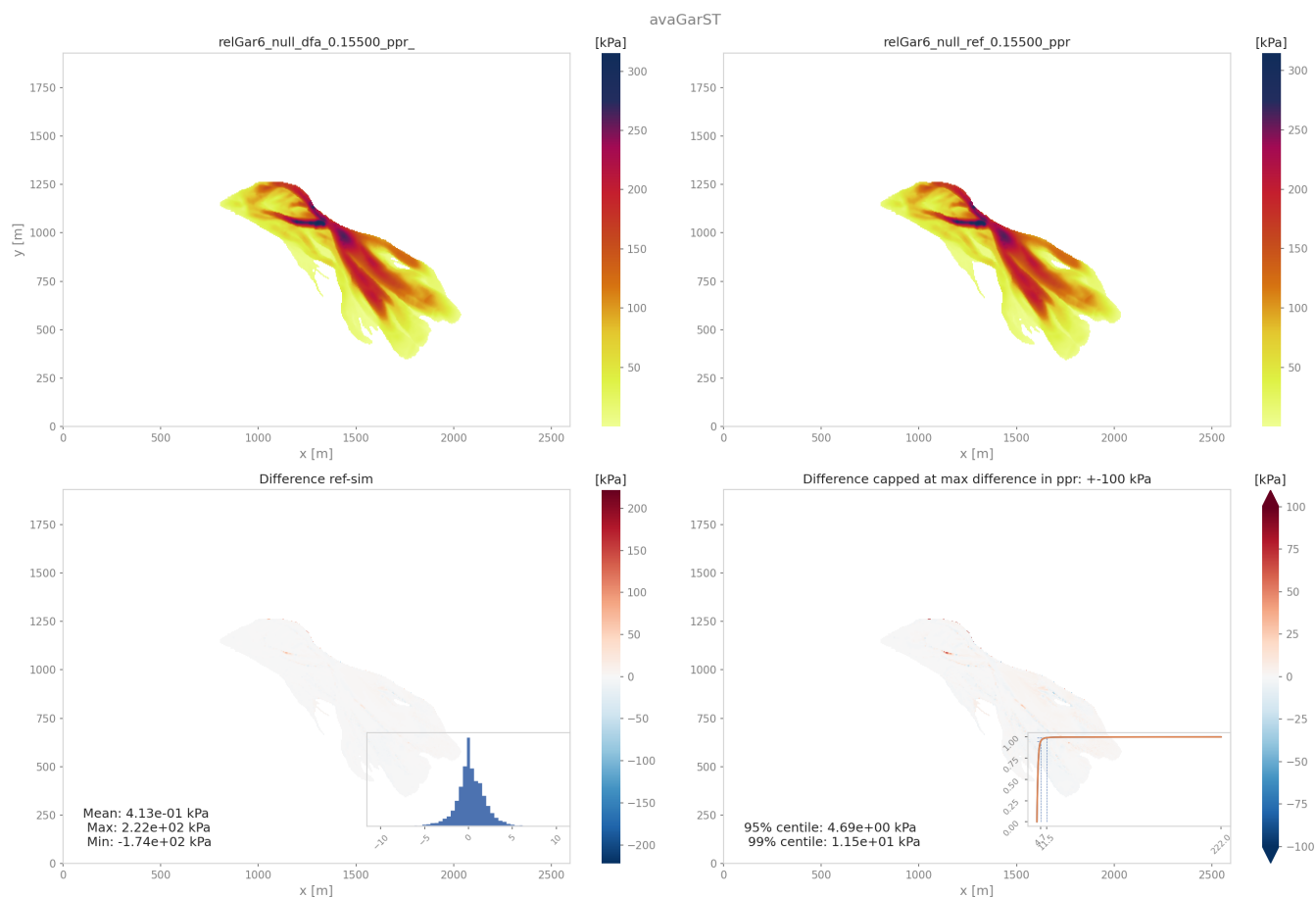


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (10.26) Difference is: Max = 0.54, Mean = 0.00 and Min = -0.53

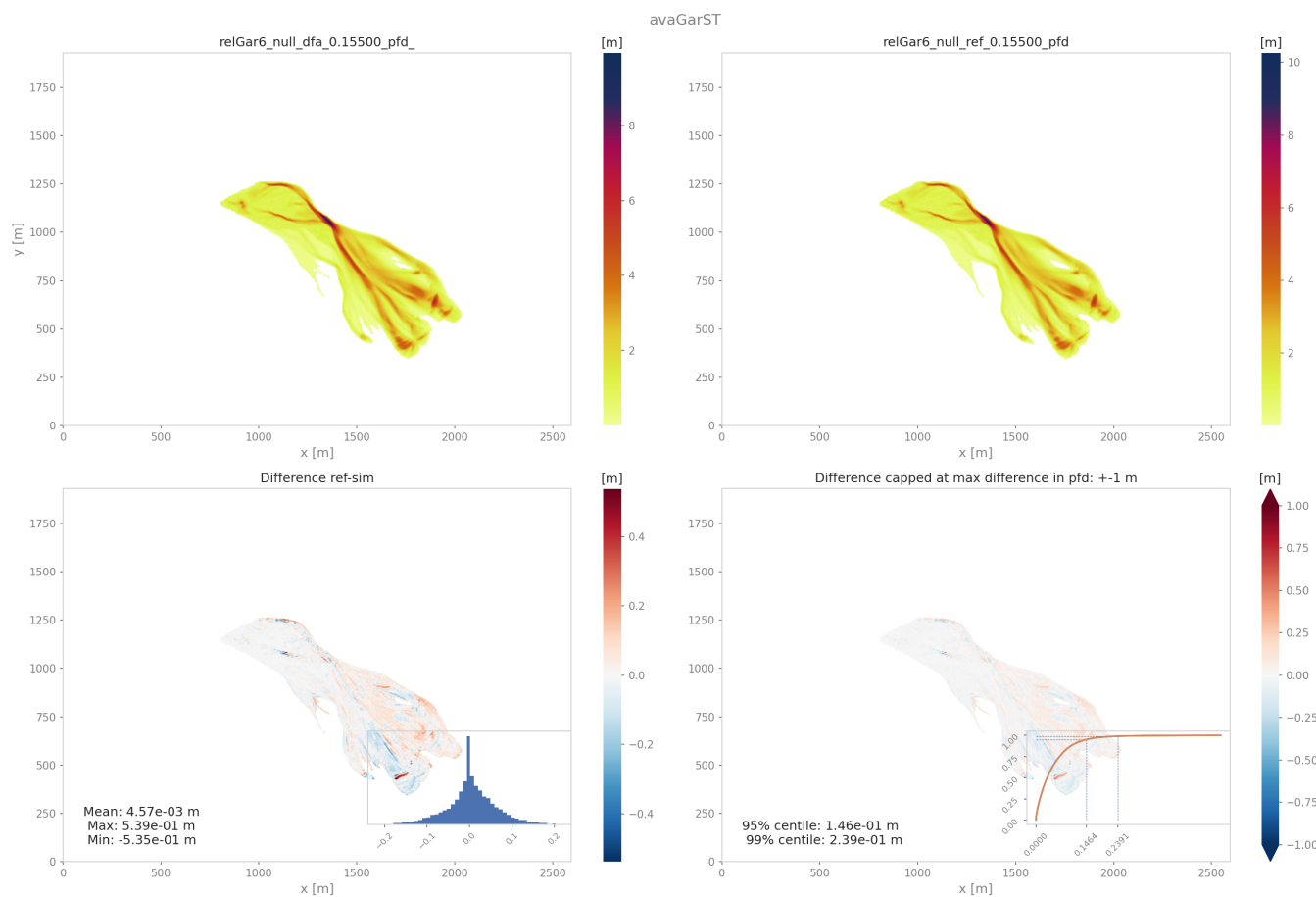


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (39.68) Difference is: Max = 33.33, Mean = 0.06 and Min = -29.50

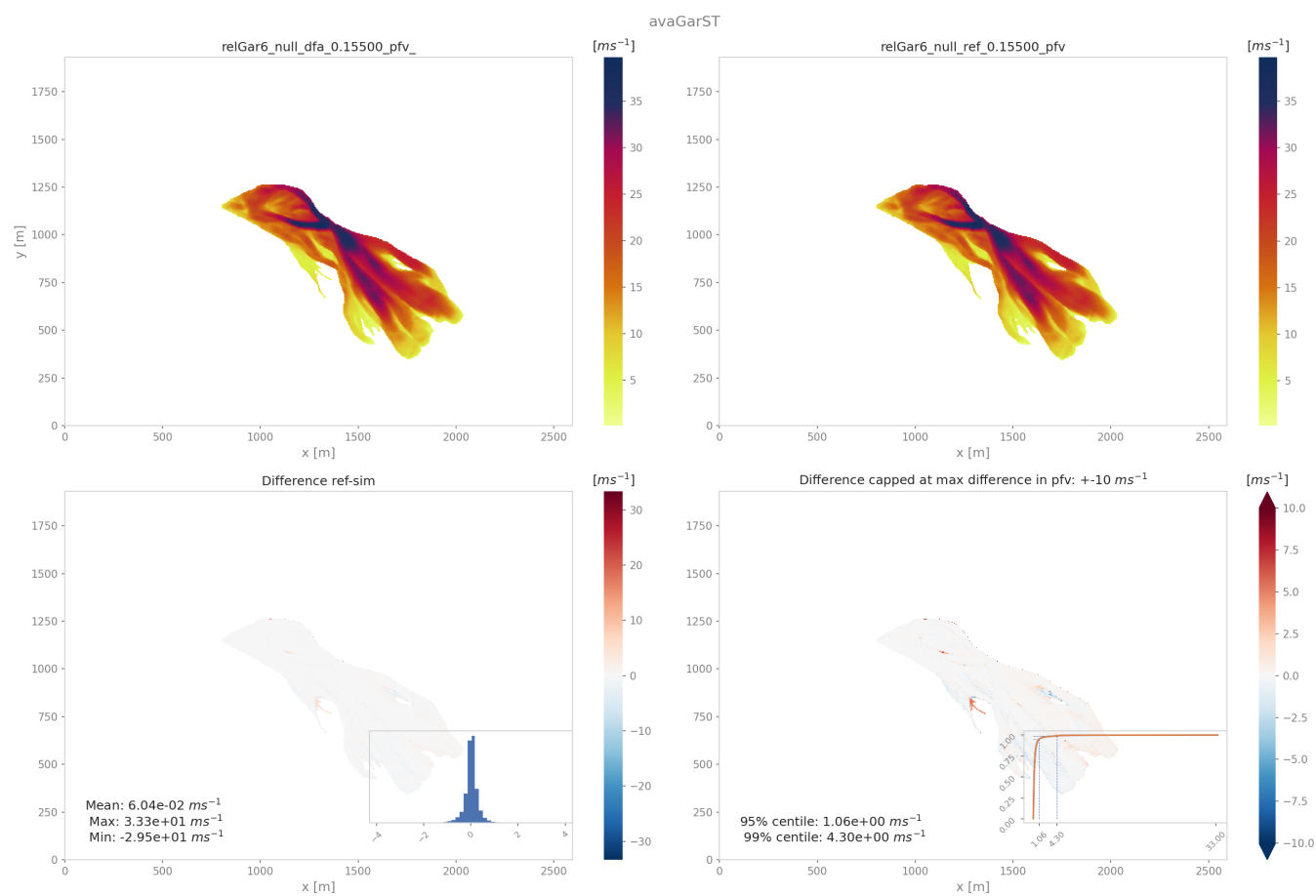


Figure: Aimec comparison of mean and max values along path

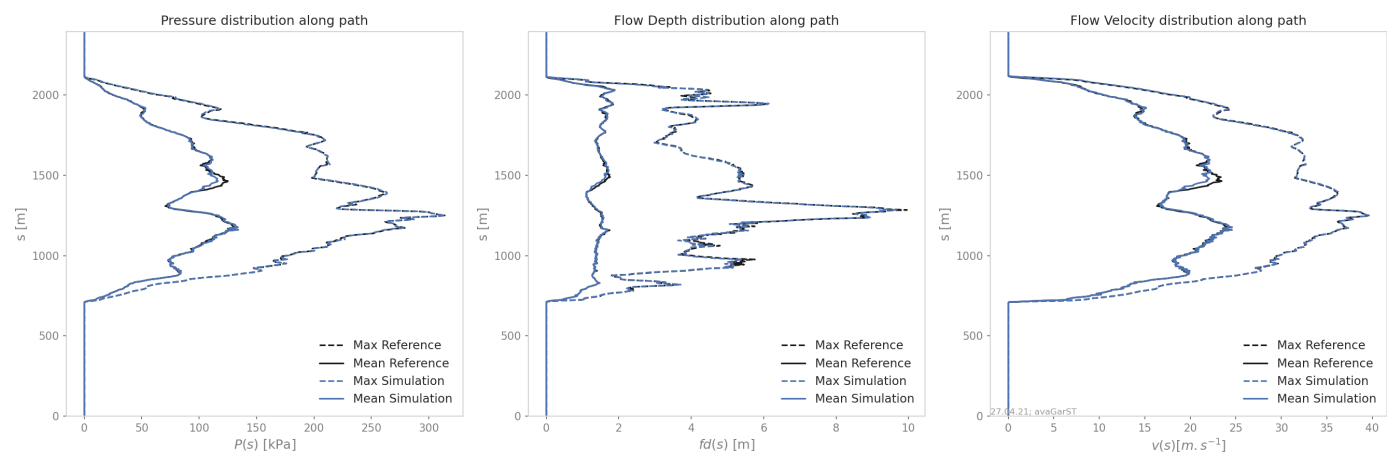
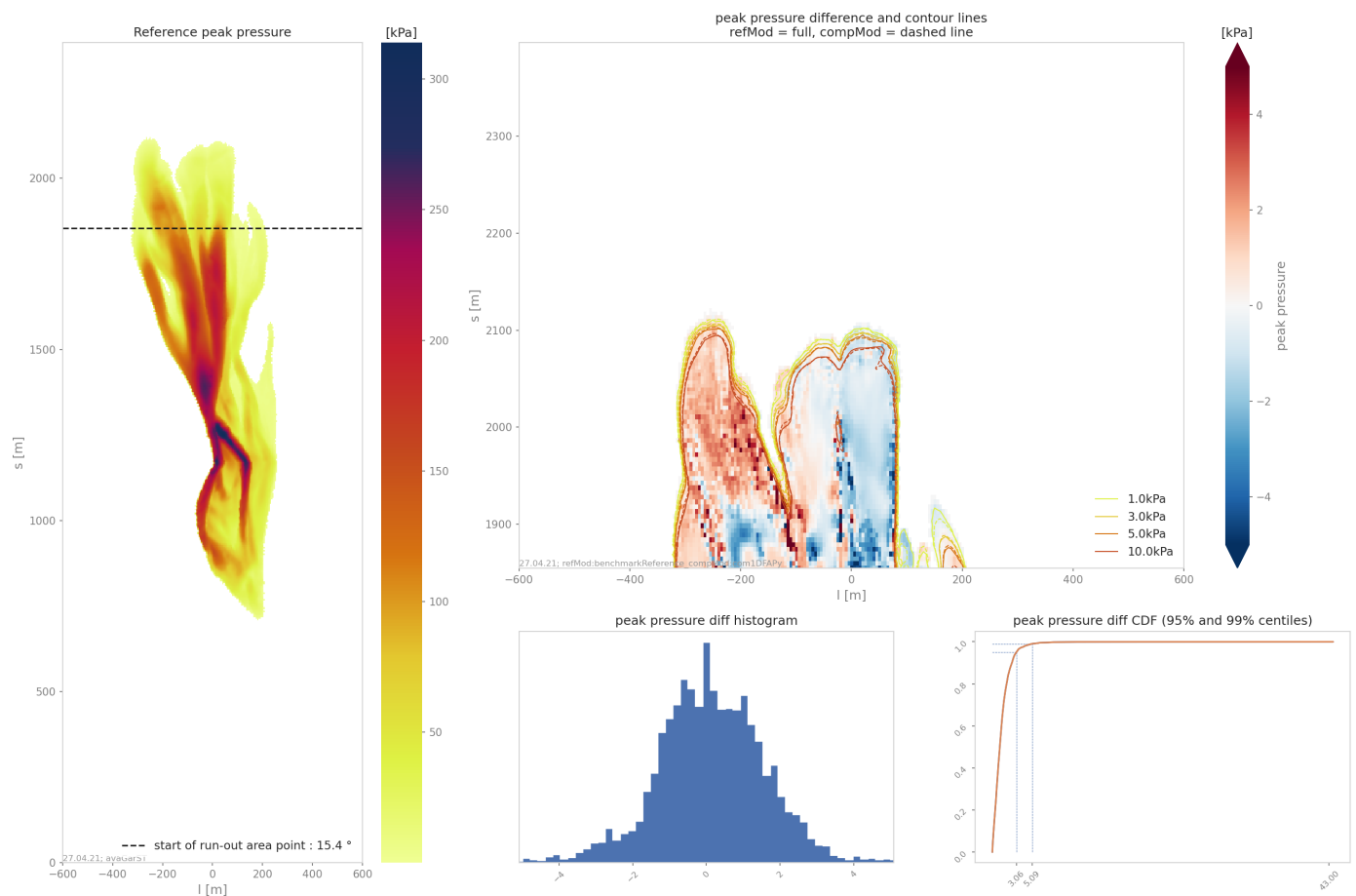


Figure: Aimec area analysis



avaWogST

Simulation name: *relWog_null_dfa_0.15500*

Test Info

This test runs the Wog test.

Simulation Parameters

Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	relWog	relWog
Entrainment	No	No
Resistance	No	No
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	33090744.01	33090744.01
Final mass [kg]	33090744.01	33090744.01
Entrained mass [kg]	0.00	0.00
Entrained volume [m3]	non existent	0.00
Stop criterion	< 1.00 percent of PKE	< 1.00 percent of PKE

Parameter	Reference	Simulation
Avalanche run time [s]	165.5	166.00
Computation time [s]	non existent	111.97

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	2088.7	2083.8
max peak pressure [kPa]	419.0	420.9
max peak flow depth [m]	13.3	12.8
max peak flow velocity [ms-1]	45.8	45.9

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (419.74) Difference is: Max = 216.65, Mean = 0.23 and Min = -184.15

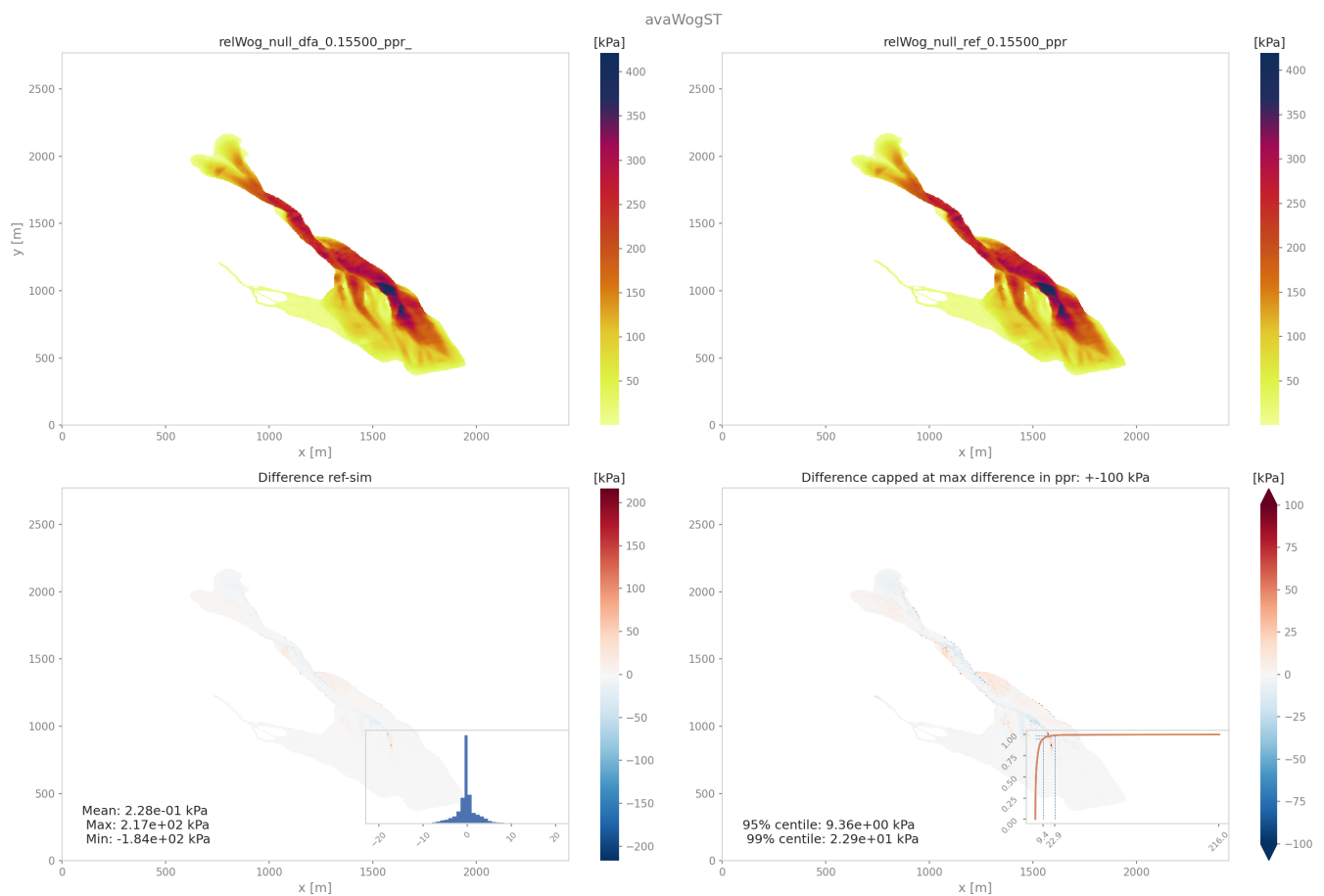


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (14.07) Difference is: Max = 1.70, Mean = -0.00 and Min = -2.57

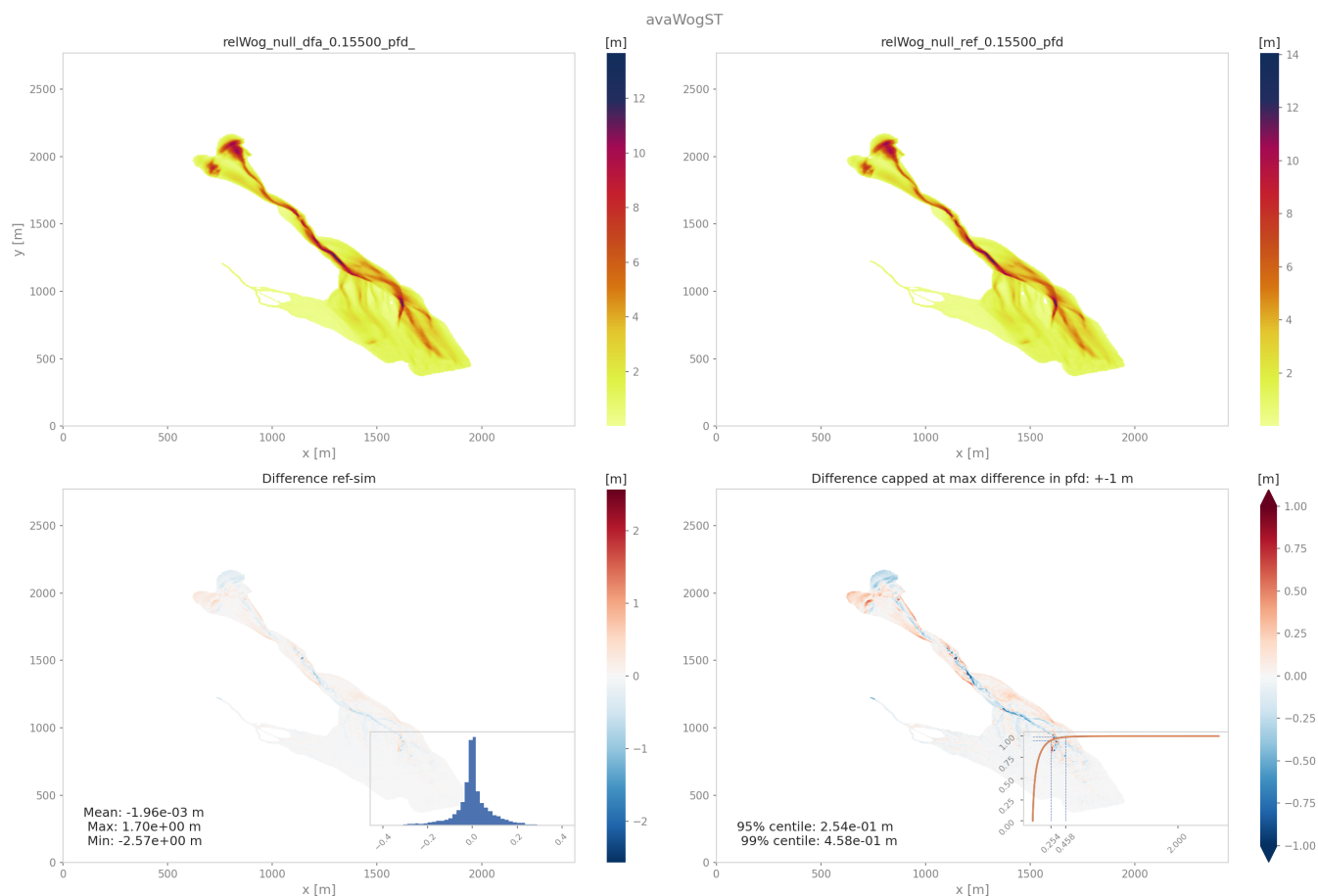


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (45.81) Difference is: Max = 32.91, Mean = 0.05 and Min = -30.34

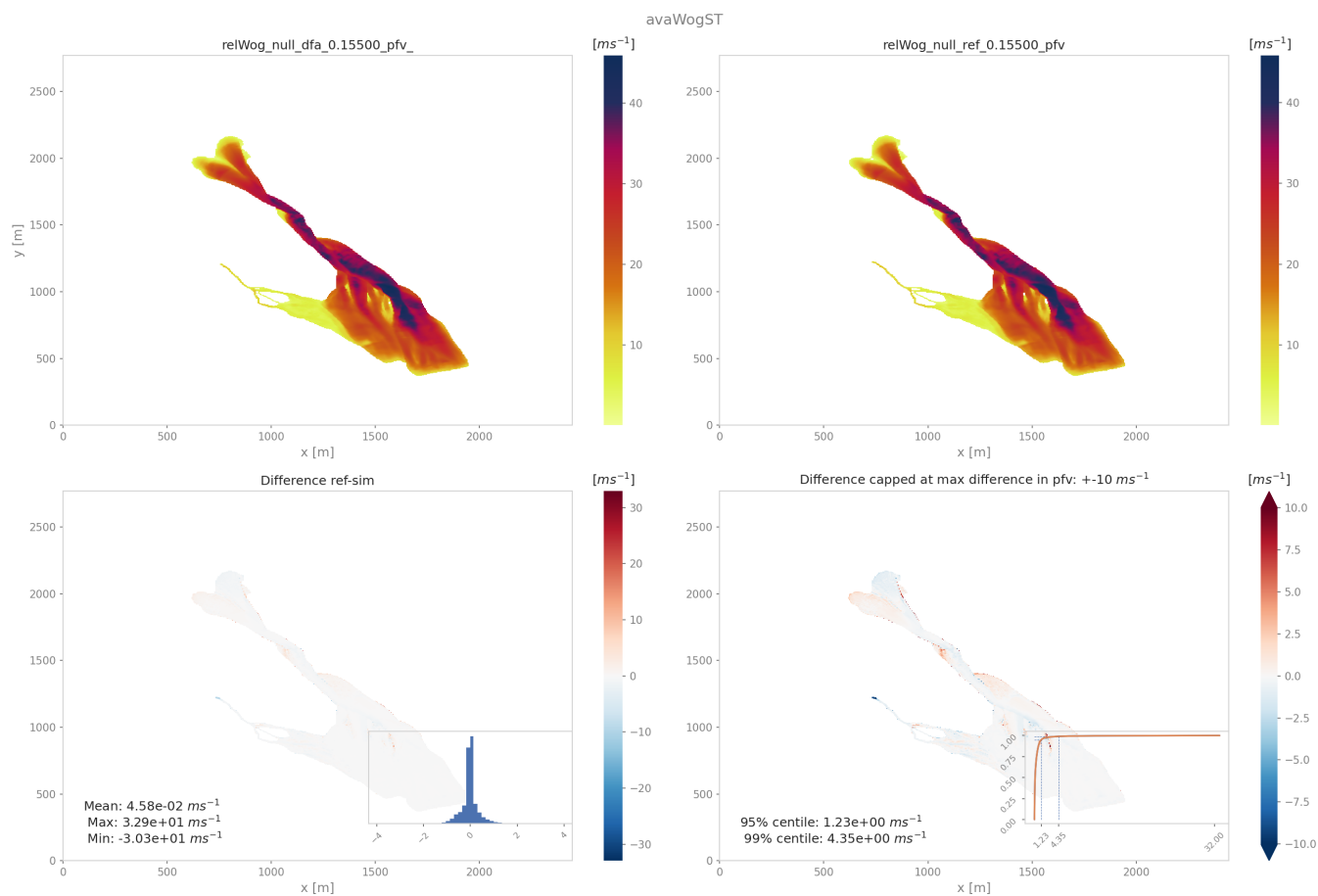


Figure: Aimec comparison of mean and max values along path

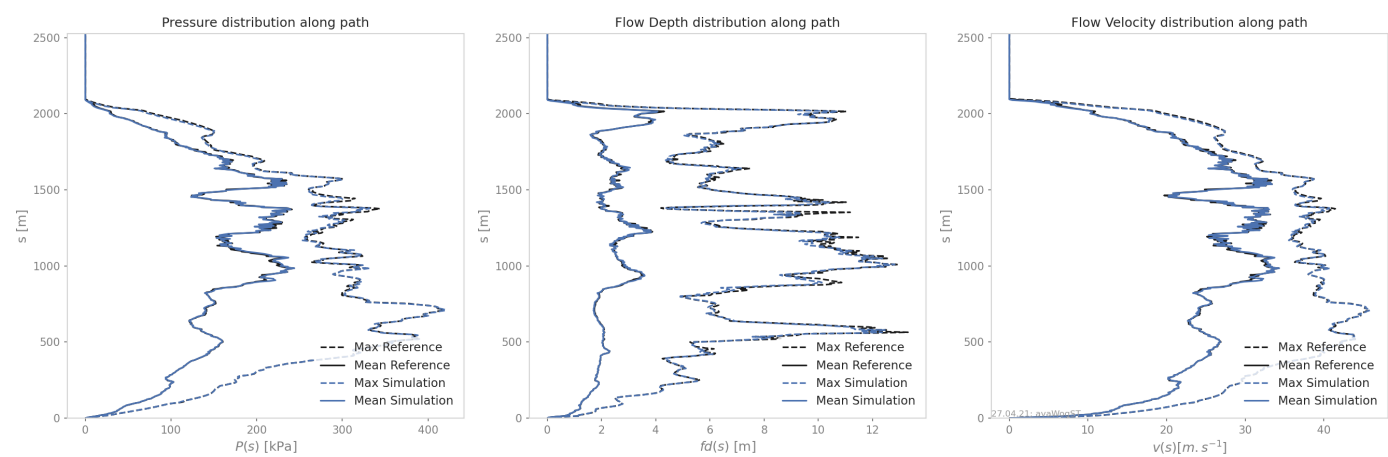
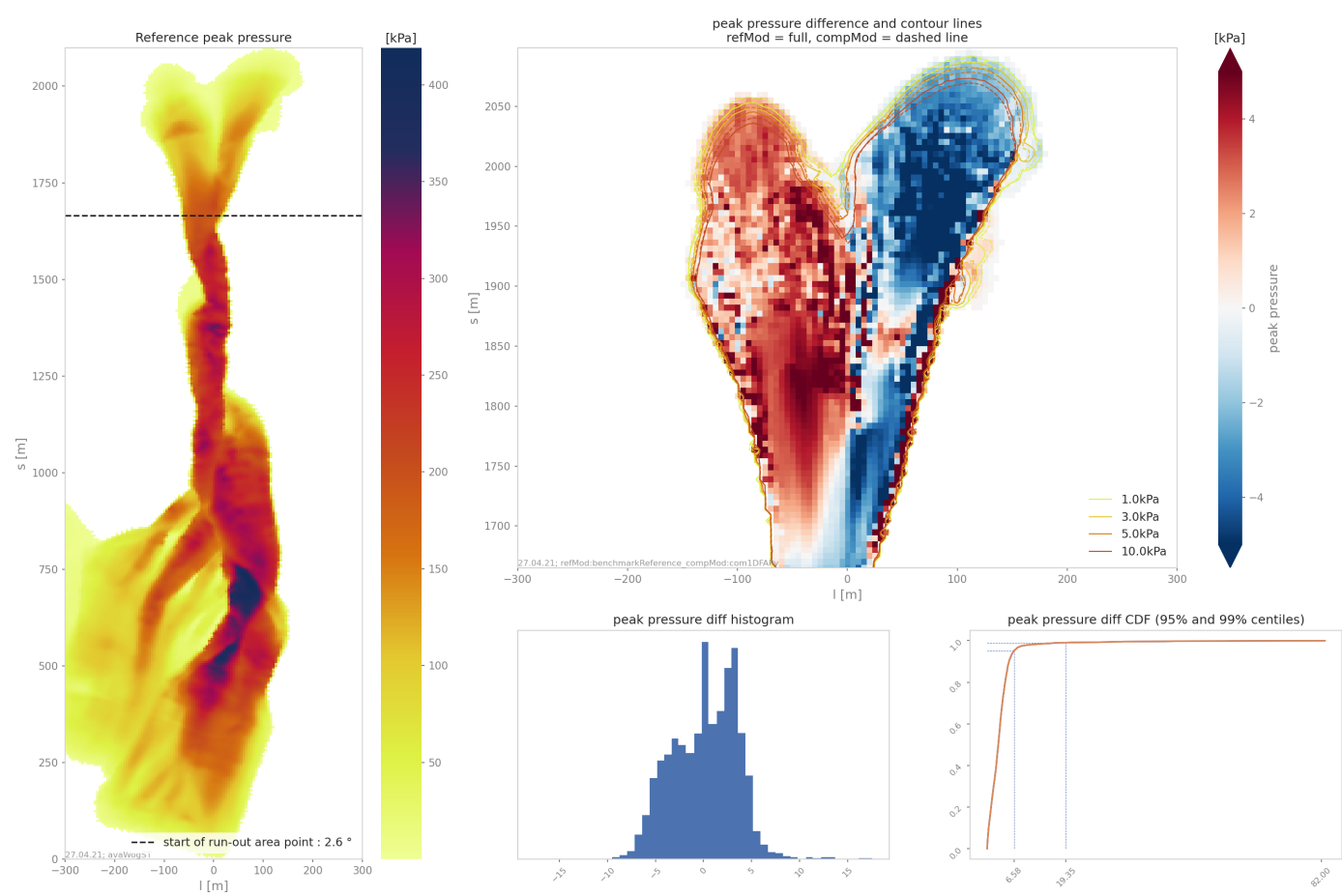


Figure: Aimec area analysis



avaHelix

Simulation name: *release1HX_null_dfa_0.15500*

Test Info

This test uses a helix-shaped geometry.

Simulation Parameters

Parameter	Reference	Simulation
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Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	release1HX	release1HX
Entrainment	No	No
Resistance	No	No
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	20522418.00	20522417.46
Final mass [kg]	20522418.00	20522417.46
Entrained mass [kg]	0.00	0.00
Entrained volume [m3]	non existent	0.00
Stop criterion	< 1.00 percent of PKE	< 1.00 percent of PKE
Avalanche run time [s]	144.5	144.40
Computation time [s]	non existent	47.73

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	1348.6	1343.9
max peak pressure [kPa]	236.9	232.6
max peak flow depth [m]	3.3	3.2
max peak flow velocity [ms-1]	34.4	34.1

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (237.67) Difference is: Max = 16.39, Mean = -1.23 and Min = -26.55

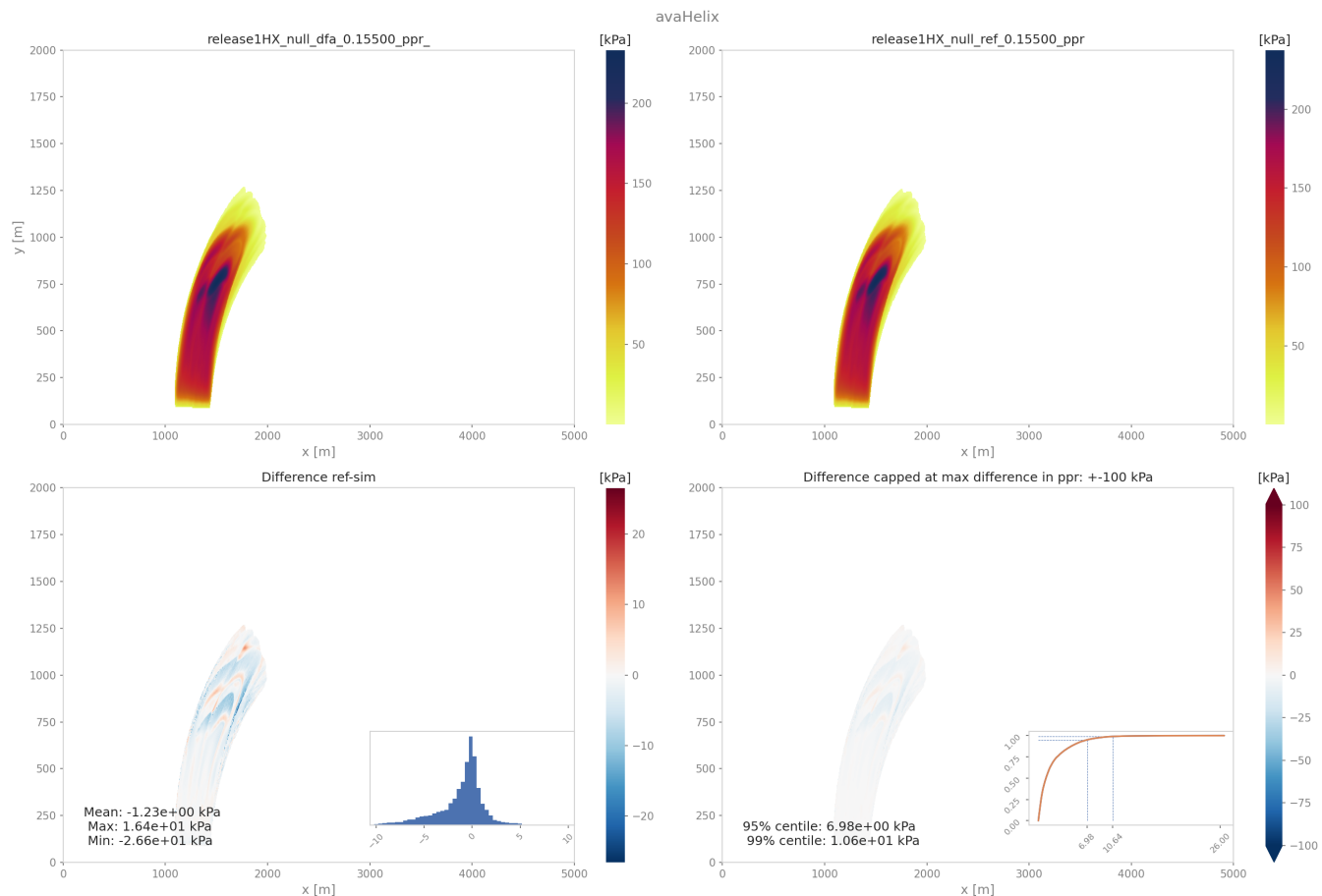


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (3.30) Difference is: Max = 1.22, Mean = -0.04 and Min = -1.03

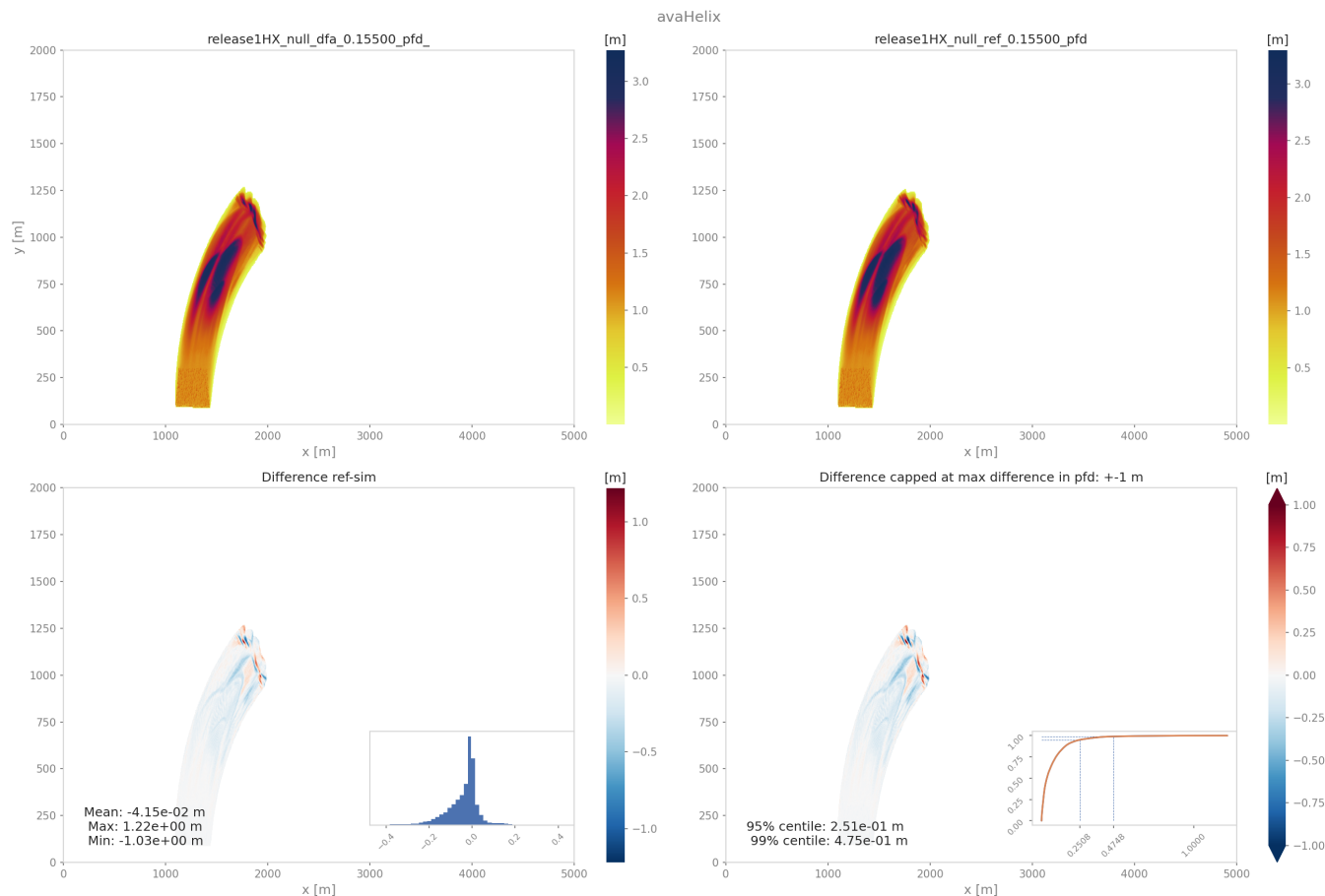


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (34.47) Difference is: Max = 9.05, Mean = -0.18 and Min = -9.12

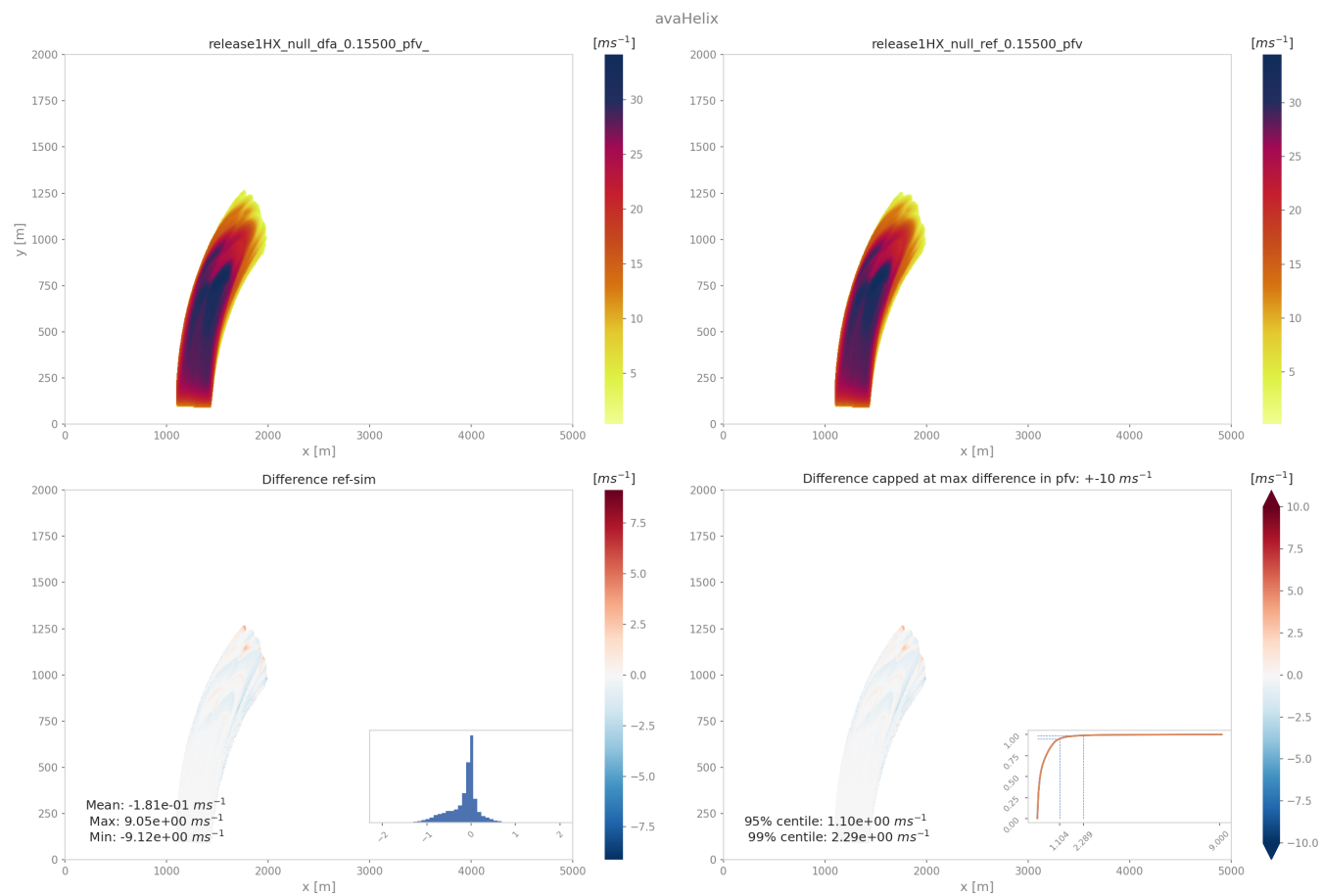


Figure: Aimec comparison of mean and max values along path

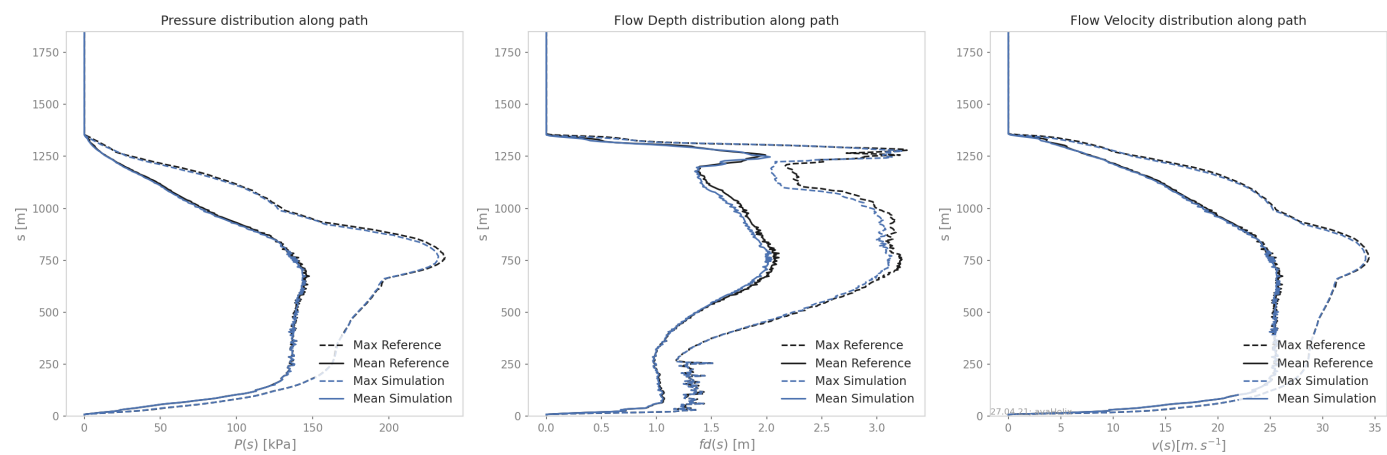
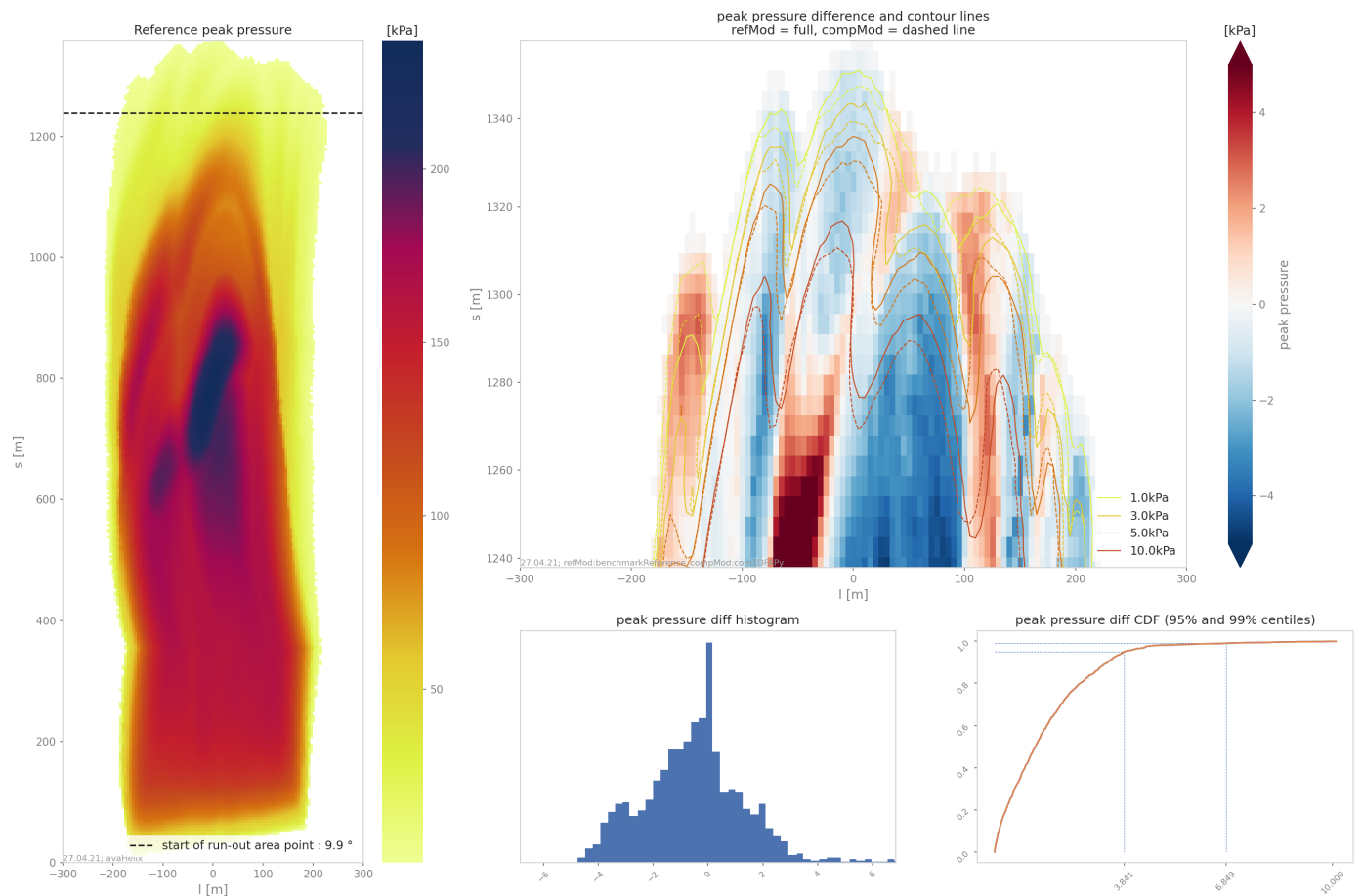


Figure: Aimec area analysis



avaAlrST

Simulation name: *relAlr_null_dfa_0.15500*

Test Info

This test runs on a Alr DEM.

Simulation Parameters

Parameter	Reference	Simulation
Program version	macro	development
Release Area Scenario	relAlr	relAlr
Entrainment	No	No
Resistance	No	No
Mu	0.15500	0.15500
Density [kgm-3]	200	200
Friction model	samosAT	samosAT
Initial mass [kg]	10634661.97	10634661.98
Final mass [kg]	10634661.97	10634661.98
Entrained mass [kg]	0.00	0.00
Entrained volume [m3]	non existent	0.00
Stop criterion	< 1.00 percent of PKE	< 1.00 percent of PKE

Parameter	Reference	Simulation
Avalanche run time [s]	189.2	188.60
Computation time [s]	non existent	46.73

Aimec Analysis

Characteristics	Reference	Simulation
runout [m]	2762.7	2772.6
max peak pressure [kPa]	345.5	342.4
max peak flow depth [m]	8.9	7.5
max peak flow velocity [ms-1]	41.6	41.4

Comparison Plots

Figure: ppr

Warning absolute difference exceeds the tolerance of 1 percent of ppr-max value (345.91) Difference is: Max = 266.67, Mean = 1.13 and Min = -312.51

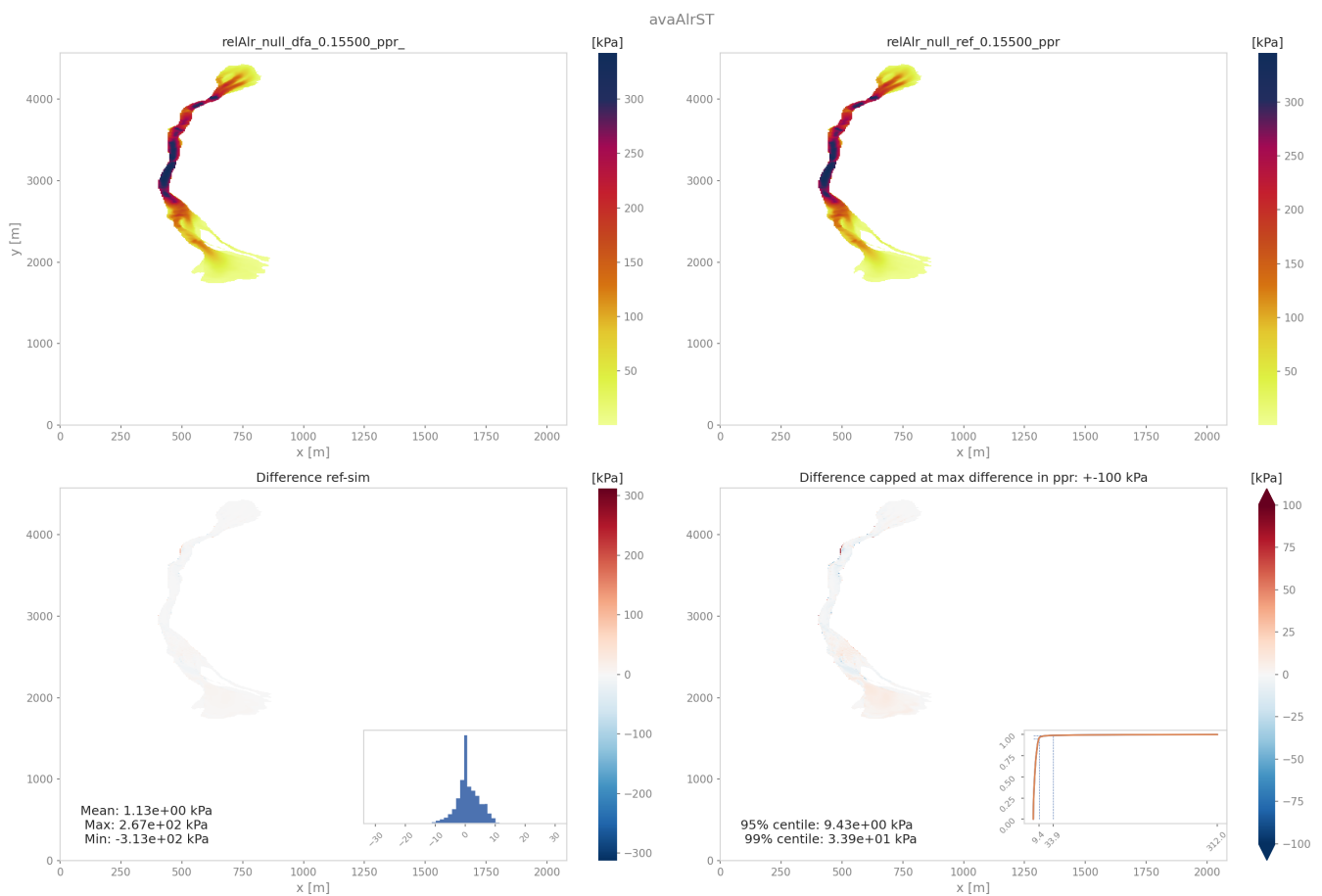


Figure: pfd

Warning absolute difference exceeds the tolerance of 1 percent of pfd-max value (9.65) Difference is: Max = 1.28, Mean = 0.03 and Min = -2.49

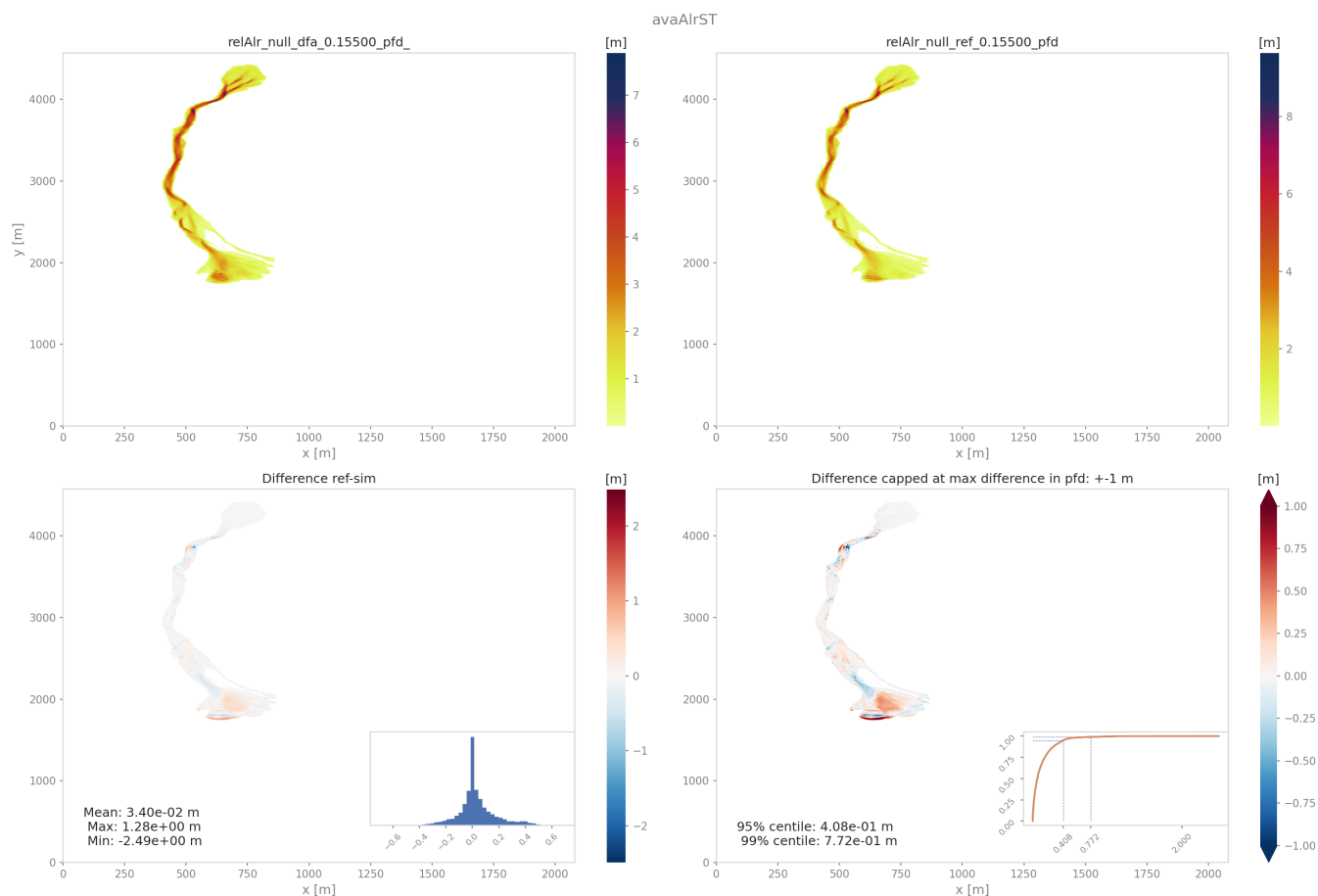


Figure: pfv

Warning absolute difference exceeds the tolerance of 1 percent of pfv-max value (41.59) Difference is: Max = 36.52, Mean = 0.39 and Min = -39.53

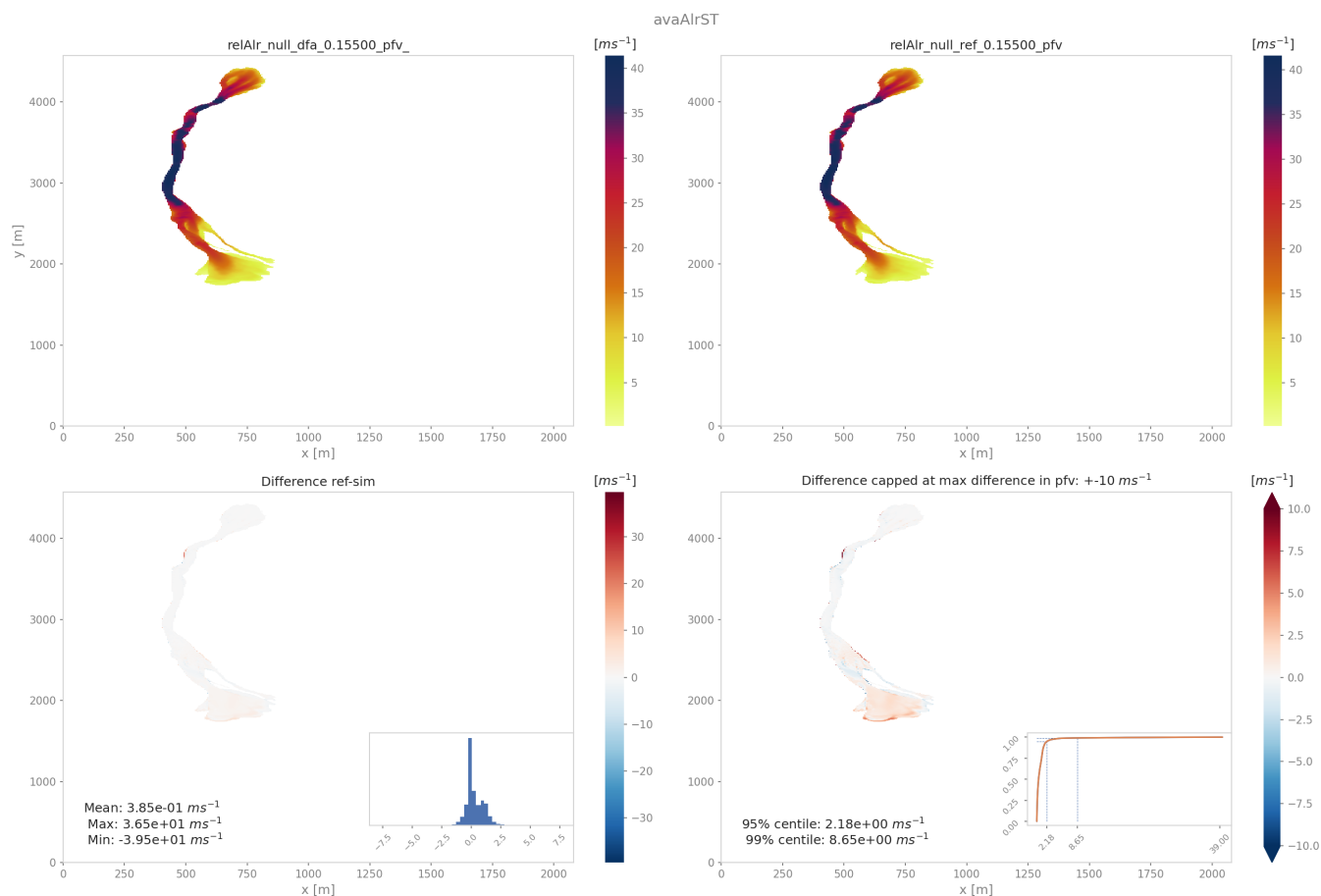


Figure: Aimec comparison of mean and max values along path

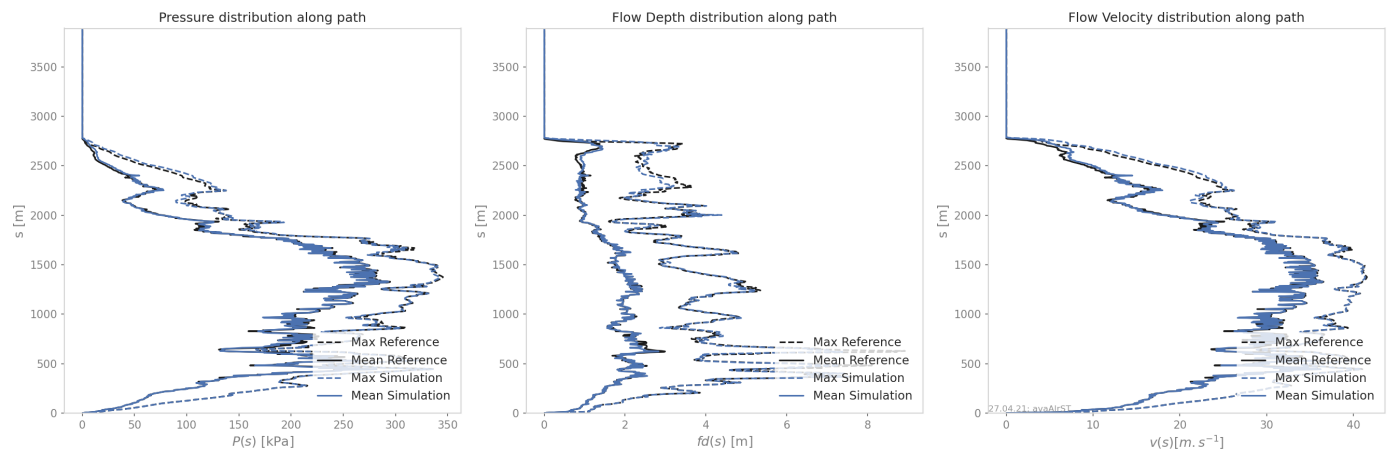


Figure: Aimec area analysis

