

December 17, 2025 - Release 0.1.90

1. FemzipReader: support for the latest femunzip libs 17.1.1120.
2. Support fsifor2 with external ID array.
3. BinoutReader: support for BINOUT_MATSUM_ADDED_CMS_MASS and BINOUT_MATSUM_ADDED_SMS_MASS.
4. Read the SET_PART_TREE information from d3plot with CESE result.

September 11, 2025 - Release 0.1.89

1. Get double time value via D3P_TIMES
2. FemzipReader: Using the API of CHECK_FOR_SIDACT_FILE to check femzip file or not after version of 17.
3. Fix bug: Extract D3P_SHELL/SOLID/TSHELL_EFFECTIVE_PLASTIC_STRAIN in the absence of stress data.

August 5, 2025 - Release 0.1.88

1. Fix bug: crash in reading d3thdt file containing SPH and lots of history element ids.

August 4, 2025 - Release 0.1.87

1. MS: support complex variable data output from LSDYNA.
2. Fix bug: Return wrong value in calling GetDataBool(D3P_HAS_SOLID_STRESS.... for the d3drf file.

July 21, 2025 - Release 0.1.86

1. BinoutReader: Fixed checking directory name problem for every branch.
2. BinoutReader: Fixed problem of reading BINOUT_ABSTATCPG_NPARTICLES in abstat_cpg branch.

July 16, 2025 - Release 0.1.85

1. BinoutReader: Add BINOUT_ABSTATCPG_ID_BAG and BINOUT_ABSTATCPG_ID_PART for python API

July 10, 2025 - Release 0.1.84

1. BinoutReader: Support for abstat_cpg branch.
2. BinoutReader: Fixed solid hist branch bug.

May 30, 2025 - Release 0.1.83

1. BinoutReader: Fixed empty TRHIST data from binout using Isreader.

April 11, 2025 - Release 0.1.82

1. Update femunzip libraries to 17.1.901

March 28, 2025 - Release 0.1.81

1. BinoutReader: Support BINOUT_SBTOUT_RING_FORCEBELT1, BINOUT_SBTOUT_RING_FORCEBELT2, BINOUT_SBTOUT_RING_WARPANG_THET

February 5, 2025 - Release 0.1.80

1. Fix bug: d3plot was mistakenly assumed to be the interface force file.

January 15, 2025 - Release 0.1.79

1. Support ISPG.
2. Support CPM,MS,SPH,DES ,sort-array,intfor and NVH related files for DP version.
3. BinoutReader: Add testing data rcforc no data.
4. BinoutReader: Fixed rcforc no data only metadata directory brings bug of endless loop.

August 23, 2024 - Release 0.1.78

1. Support SPH and sort-array for DP version
2. Support intfor and NVH related files for DP version
3. Support DES for DP version
4. d3lsda: fix bug in reading node data

June 26, 2024 - Release 0.1.77

1. Support CPM, MS for DP version

April 29, 2024 - Release 0.1.76

MS: support the d3plot from the solver: CESE 2D axisym CFD

April 23, 2024 - Release 0.1.75

1. Fix bug about d3lsda, importing error and fringe stress error
2. Fix bug about d3lsda: D3P_SOLID_EFFECTIVE_PLASTIC_STRAIN
3. Fix bug about MS
4. Fix bug about getting d3p_control for double version
5. Fix bug in getting D3P_SHELL_CONNECTIVITY_MAT from double version
6. Fix bug in getting D3P_ALL_DELETION from double version
7. ReadControl: handle the case of ioshl[i]=0 instead of 1000

March 6, 2024 - Release 0.1.74

1. Fix bug about thermal it option
2. FemzipReader: free point when error return.
3. hdf5: fix bug about adaptive model
4. FemzipReader: fixed the problem when calling deletion APIs. It's better in state num loop to finish reading the deletion related which is the femzip API rules, or the efficient problem.

September 7, 2023 - Release 0.1.73

1. Fix bug in getting D3P_NODE_COORDINATES if there exists rigid body data.
2. Fix bug: read nodal velocity with model having rigid body compression data.
3. Fix libraries link bug

August 8, 2023 - Release 0.1.72

1. support python311(for now, lsreader supports python36, python37, python38, python39, python310, python 311)
2. update hdf5
3. fix bug of ms
4. add D3P_HAS_INF
5. improve the efficiency of extracting data by part

May 27, 2023 - Release 0.1.71

1. hdf5: use vonmises reduction to deal with stress and strain only
2. fix bug about ms of solid 20 and solid27

March 23, 2023 - Release 0.1.70

1. add D3P_HAS_INF

March17, 2023 - Release 0.1.69

1. BinoutReader: fix bug of cannot read properly BINOUT_RCFORC_TIE_COUNT.
2. FemzipReader: Add the license related libs which can access the extended femzip lib.
3. support hdf5
4. BINOUT_ELOUT_YIELD is only available in the idtype = BINOUT_ELOUT_ID_SOLID.
5. support using cache by part
6. fix bug about by part
7. speed up of writing hdf5
8. BinoutReader: support for the ipt selection of sigma_xx and plastic_eps components in the elout/beam branch.
9. Add callback of writing hdf5
10. update interface force.

February 3, 2023 - Release 0.1.68

1. BinoutReader: Add abstat_cpm2bag.binout0000.
2. BinoutReader: support for searching the part_id's bag index if the bag id is not be set in parameter.
3. BinoutReader: add parameter description to document.
4. BinoutReader:fix python and c wrapper problem, the keyword arg of "stateindex".
5. BinoutReader: fix autocode related codes.
6. BinoutReader: Add the multiple ipt in elout branch testing file.
7. BinoutReader: support for the new format elout branch.
8. fix bug about part variables when there are rigid bodies
9. BinoutReader: fix offset error on all data fetched from "subsystem_inertia_info".Data fetched are always fetched from last systemid.
10. BinoutReader: Add elout beam ipts testing file.
11. BinoutReader: fix failing call with BINOUT_ELOUT_NUM_IPT and p.idtype = BINOUT_ELOUT_ID_BEAM.

December 15, 2022 - Release 0.1.67

1. BinoutReader: support for new components of BINOUT_ABSTATCPM_ENHANCE_VENT, BINOUT_ABSTATCPM_LEAK_ENERGY, BINOUT_ABSTATCPM_PART_TEMP, BINOUT_ABSTATCPM_POR_VOLUME, BINOUT_ABSTATCPM_PRES_PARTICLE.
2. BinoutReader: fix problem of elout beam dynamic ids for every state.
3. BinoutReader: support for sphvicinity branch.

December 1, 2022 - Release 0.1.66

1. BinoutReader: Add dem_rcforc.binout
2. BinoutReader: fix crashing on reading BINOUT_SPHOUT_NUMBER_OF_NEIGHBORS,
3. BinoutReader: fix program hangs while reading BINOUT_DEMECFORC_NUM_TIMESTEP.
4. BinoutReader: support for the new components of BINOUT_DEMRCFORC_TOTAL_FORCE, BINOUT_DEMRCFORC_MOMENT_X, BINOUT_DEMRCFORC_MOMENT_Y, BINOUT_DEMRCFORC_MOMENT_Z, BINOUT_DEMRCFORC_TOTAL_MOMENT, BINOUT_DEMRCFORC_MASS
5. add D3P_BEAM_INTERNAL_ENERGY_DENSITY and D3P_NODE_KINETIC_ENERGY_DENSITY

October 14, 2022 - Release 0.1.65

1. fix bug about D3P_NODE_DISPLACEMENT and D3P_NODE_COORDINATES
2. fix bug: read displacement data
3. fix wrapper bugs of binoutreader
4. support for getting legend ids and legend string
5. support for set legend API to plot curve of binoutreader
6. fix bug about d3lsda compress
7. update d3lsda for reduction by mat group
8. fix bug of extracting BINOUT_ABSTATCPM_INFLATOR_E
9. support for chamber_data/num_particle
10. support for "bag_data/heat_convection"
11. support flux and pleak in dbfsi branch
12. support parameter part id in abstat_cpm branch
13. support the ABSTATCPM_SPECIES, if the species id is 0, that means air
14. fix BINOUT_DBBEMAC_X no need id parameter

August 16, 2022 - Release 0.1.64

1. BinoutReader: improve the example.py and document.
2. add BINOUT_BNDOUT_RESULTANT_FORCE
3. add
D3P_HAS_RAW_NODE_COORDINATES
D3P_HAS_RAW_NODE_DISPLACEMENTS
D3P_NODE_DISPLACEMENTS

August 3, 2022 - Release 0.1.63

1. fix bug about D3P_HAS_HEAT_FLUX
2. update ms variables, add 1042, 1043, 1044, 1045, 1046, 1047, 1048
3. change file to d3max if name includes "d3max" in d3spcm

July 1, 2022 - Release 0.1.62

1. BinoutReader: fix potential problems in NumTimeStep.
2. BinoutReader: fix wrapper c problem and add test.
3. BinoutReader: add spforc test.
4. add the return code for d3lsda.
5. Fix bug: close d3plot files in case they are idle.

June 20, 2022 - Release 0.1.61

1. MS: Change label from "Magnetic" field to B field.
2. fix the bug of encapsulating to python.
3. support up to 8168 files open simultaneously.
4. update ms: support inquiry structural type when ms data is on structural element.
5. add D3P_MS_DATA_IS_ON_STRUCTURE_NODE.
6. update lsreaderPro.py to fix bug when calculating nodal average value.
7. support inquiry for d3part and d3max.

June 8, 2022 - Release 0.1.60

1. Support for getting stone wall energy related components value.
2. Support for dbbamac branch.
3. Support for icvout branch.
4. Support for BINOUT_TRHIST_PRESSURE.
5. re-implement BINOUT_TRHIST_NUM_ID and BINOUT_TRHIST_IDS replace of BINOUT_TRHIST_NUM_TRACER and BINOUT_TRHIST_TRACERS.

May 10, 2022 - Release 0.1.59

1. Fix bug about reading d3plot with adaptive data.

April 15, 2022 - Release 0.1.58

1. Fix bug about binoutreader enumeration name
2. Fix bug about soft link file on Linux

March 26, 2022 - Release 0.1.57

1. Improvements of the process of opening file(add return state).
2. Fix bug: one state occupies one more d3plot files

March 7, 2022 - Release 0.1.56

1. transfer the changes from LSPP to speed up the reader in case there exists a large number of d3plot files.

March 1, 2022 - Release 0.1.55

1. fix bug about fsi interface force file
2. add D3P_FTG***EXPECTED_FATIGUE_CYCLES

February 24, 2022 - Release 0.1.54

1. add D3P_FTG***EXPECTED_FATIGUE_CYCLES

February 10, 2022 - Release 0.1.53

1. fix bug about D3P_NODE_***.
2. update documents.

January 18, 2022 - Release 0.1.52

1. fix bug about interface force.

January 10, 2022 - Release 0.1.51

1. fix bug about shell data for rigid body case 2.

December 28, 2021 - Release 0.1.50

1. fix free memory bug.
2. fix bug about adaptive model.
3. fix bug about ale.

December 13, 2021 - Release 0.1.49

1. fix bug about D3P_XXX_ELEMENT_CENTROID
2. BinoutReader: support for tprint branch new components.
3. BinoutReader: support for the temperature max, min, norm for state index.
4. fix bug about d3lsda
5. update the type to LSR_***
6. support rigid body coordinates, velocities, accelerations

November 19, 2021 - Release 0.1.48

1. improvements about d3lsda.
2. fix bug about rigid body data with adaptivity.

October 22, 2021 - Release 0.1.47

1. update the message of writing d3lsda file.

2. support compressing for d3lsda file.
3. fix the dynamic ids with state problem for binoutreader.
4. fix bug about des data from old format.

October 8, 2021 - Release 0.1.46

1. support for elout strain dev(R13) version format
2. fix bug about lsda

September 24, 2021 - Release 0.1.45

1. add femzip in femzip version.

September 17, 2021 - Release 0.1.44

1. remove femzip in regular version

September 13, 2021 - Release 0.1.43

1. fix bug about MS, remove "quality index factor"
2. add inquiry API of femzip file

August 31, 2021 - Release 0.1.42

1. fix bug about ale
2. fix bug about getting elout history var data

August 18, 2021 - Release 0.1.41

1. fix bug about femzip files
2. fix bug when there are both 3d element and 2d element for ale database
3. fix bug about python wrapper
4. fix bug about history number for ale database
5. ignore ipt now that all ale database only have one integrated point

August 10, 2021 - Release 0.1.40

1. support string ndarray in binoutreader
2. add D3P_2D_ALE_HAS*
3. add D3P_HAS*STRAIN_RATE
4. fix bug about the crash of inquire APIs of SPH
5. fix bug about D3P_ALE_HAS_SPECIES_MASS(D3P_2D_ALE_HAS_SPECIES_MASS)

August 2, 2021 - Release 0.1.39

1. add

D3P_2D_ALE_DENSITY

D3P_2D_ALE_VOLUME_FRACTION

D3P_2D_ALE_DOMINANT_MATERIAL

D3P_2D_ALE_SPECIES_MASS

support 2d ale database

July 28, 2021 - Release 0.1.38

1. improve d3lsdareader and d3lsdawriter

2. add D3P_XXX_SIGNED_VON_MISES_STRAIN

June 24, 2021 - Release 0.1.37

1. Add D3P_XXX_1ST_PRINCIPAL_STRESS, D3P_XXX_2ND_PRINCIPAL_STRESS, D3P_XXX_3RD_PRINCIPAL_STRESS and D3P_XXX_TRESCA_STRESS for shell, solid, tshell, sph.

2. Add D3P_XXX_MAX_PRINCIPAL_STRAIN, D3P_XXX_2ND_PRINCIPAL_STRAIN, D3P_XXX_MIN_PRINCIPAL_STRAIN and D3P_XXX_TRESCA_STRAIN for shell, solid, tshell, sph.

June 17, 2021 - Release 0.1.36

1. support femzip on Windows.

2. support by part for Infinitesimal strains, Green strains, Almansi strains and strain rate.

3. add D3P_XXX_VON_MISES_STRAIN, D3P_XXX_SIGNED_VON_MISES_STRESS.

June 4, 2021 - Release 0.1.35

1. support Infinitesimal strains, Green strains, Almansi strains and strain rate for solid, shell, thell

2. improve d3lsda

3. fix bug about D3P_USER_NUMBER_ALL_DATA

May 13, 2021 - Release 0.1.34

1. fix bug about ipartset_user

2. improve d3lsdawirter and d3lsdareader

May 6, 2021 - Release 0.1.33

1. Fix bug about D3P_TITLE

2. Fix bug about D3P_CPM_GEOM_DATA

3. Add i_rigid_body in D3P_Init and D3P_Reset for C version
4. improve d3lsdawriter and d3lsdareader

April 23, 2021 - Release 0.1.32

1. BinoutReader: fix bug about BINOUT_RWFOR_IDS.
2. support fsifor file.

April 14, 2021 - Release 0.1.31

1. binoutreader: support for the rwhfor wall branch format data and fix the wrapper force id to python problem.
2. fix bug about nodout_ssd caused by different dyna version.
3. fix bug about D3P_HAS_PART_TITLE/D3P_HAS_PART_NAME/D3P_HAS_PART_NAME_STRUCT.
4. Add C API for d3lsda format file.
5. Improve d3lsda writer and reader(add some enumerations).

March 29, 2021 - Release 0.1.30

1. Support binout->rcforc->moment.
2. Support d3thdt(shell solid beam).
3. Add patch to handle ANSA's model.
4. Fix bug: handle model with more than 100 million elements.
5. Support BINOUT_RCFORC_RESULTANT_FORCE

March 6, 2021 - Release 0.1.29

1. Fix bug: extract multisolver state data.
2. Fix bug: extract sph connectivity with rigid body data.
3. Fix bug: extract stress of elout branch.

March 4, 2021 - Release 0.1.28

1. fix bug about MS timesteps.
2. support date==0 as the general d3plot file type.

March 3, 2021 - Release 0.1.27

1. fix bug about MS.
2. fix bug about beam connectivity.
3. update MS APIs, add:
D3P_MS_DOMAIN_HAS_PART_NAME,
D3P_MS_DOMAIN_HAS_PART_MAT,

D3P_MS_DOMAIN_HAS_PART_IDS,
D3P_MS_DOMAIN_HAS_NODE_IDS,
D3P_MS_DOMAIN_HAS_ELEM_IDS,
D3P_MS_DOMAIN_NUM_PART,
D3P_MS_DOMAIN_PART_MAT,
D3P_MS_DOMAIN_PART_IDS,
D3P_MS_DOMAIN_IS_ADAPTIVE,
D3P_MS_DOMAIN_NUM_NODE,
D3P_MS_DOMAIN_NODE_IDS,
D3P_MS_DOMAIN_NUM_NODE_ON_SURFACE,
D3P_MS_DOMAIN_NODE_IDS_ON_SURFACE,
D3P_MS_DOMAIN_NODE_COORDINATES,
D3P_MS_DOMAIN_NUM_ELEM,
D3P_MS_DOMAIN_ELEM_IDS,
D3P_MS_SOLID_CONNECTIVITY_MAT,
D3P_MS_SHELL_CONNECTIVITY_MAT,
D3P_MS_BEAM_CONNECTIVITY_MAT,

February 28, 2021 - Release 0.1.26

1. Support d3thdt file, add:

D3T_NUM_STATES
D3T_TIMES
D3T_NUM_SHELL
D3T_SHELL_CONNECTIVITY_MAT
D3T_SHELL_IDS
D3T_NUM_SHELL_PLOT
D3T_SHELL_IDS_PLOT
D3T_SHELL_MX_HISTORY
D3T_SHELL_MY_HISTORY
D3T_SHELL_MXY_HISTORY
D3T_SHELL_QX_HISTORY
D3T_SHELL_QY_HISTORY
D3T_SHELL_NX_HISTORY
D3T_SHELL_NY_HISTORY
D3T_SHELL_NXY_HISTORY

February 18, 2021 - Release 0.1.25

1. fix bug when reading data from adaptive MS

2. Add inquiry API:

1. D3P_FREQUENCY_HAS***
2. D3P_HAS_SOLID_STRAIN
3. D3P_HAS_TSHELL_STRAIN
4. D3P_HAS_SHELL_STRAIN
5. D3P_BEAM_AXIAL_FORCE
6. D3P_HAS_BEAM_AXIAL_FORCE
7. D3P_HAS_BEAM_S_SHEAR_RESULTANT
8. D3P_HAS_BEAM_S_BENDING_MOMENT
9. D3P_HAS_BEAM_T_BENDING_MOMENT
10. D3P_HAS_BEAM_TORSIONAL_RESULTANT
11. D3P_HAS_PART_IDS
12. D3P_HAS_GLOBAL_KINETIC_ENERGY
13. D3P_HAS_GLOBAL_INTERNAL_ENERGY
14. D3P_HAS_GLOBAL_TOTAL_ENERGY
15. D3P_HAS_GLOBAL_VELOCITY
16. D3P_HAS_PART_NAME
17. D3P_HAS_PART_NAME_STRUCT
18. D3P_HAS_PART_INTERNAL_ENERGY
19. D3P_HAS_PART_KINETIC_ENERGY
20. D3P_HAS_PART_VELOCITY
21. D3P_HAS_PART_MASS
22. D3P_HAS_PART_HOURLASS
23. D3P_HAS_RIGID_WALL_FORCE
24. D3P_HAS_RIGID_WALL_POSITION
25. D3P_HAS_NODE_IDS
26. D3P_HAS_NODE_MASS_SCALING
27. D3P_HAS_NODE_TEMPERATURE_DIVIDE_TIME
28. D3P_HAS_NODE_RESIDUAL_FORCE
29. D3P_HAS_NODE_RESIDUAL_MOMENT
30. D3P_HAS_NODE_PENETRATION
31. D3P_HAS_NODE_RELATIVE_PENETRATION
32. D3P_HAS_NODE_CONTACT_ENERGY_DENSITY
33. D3P_HAS_SOLID_IDS
34. D3P_HAS_SOLID_VON_MISES_STRESS
35. D3P_HAS_SOLID_PLASTIC_STRAIN
36. D3P_HAS_SOLID_THERMAL_STRAIN
37. D3P_HAS_TSHELL_IDS
38. D3P_HAS_TSHELL_VON_MISES_STRESS
39. D3P_HAS_BEAM_IDS
40. D3P_HAS_SHELL_IDS
41. D3P_HAS_SHELL_VON_MISES_STRESS
42. D3P_HAS_SHELL_PLASTIC_STRAIN
43. D3P_HAS_SHELL_THERMAL_STRAIN
44. D3P_HAS_SHELL_ELEMENT_DEPENDENT_VAR_1
45. D3P_HAS_SHELL_ELEMENT_DEPENDENT_VAR_2
46. D3P_HAS_SPH_RAIDUS
47. D3P_HAS_SPH_PRESSURE
48. D3P_HAS_SPH_STRESS
49. D3P_HAS_SPH_PLASTIC_STRAIN

50. D3P_HAS_SPH_DENSITY
51. D3P_HAS_SPH_INTERNAL_ENERGY
52. D3P_HAS_SPH_MASS
53. D3P_HAS_SPH_VON_MISES_STRESS
54. D3P_HAS_SHELL_THICKNESS
55. D3P_HAS_SPH_VON_MISES_STRESS
56. D3P_ALE_HAS_MATERIAL_IDS
57. D3P_ALE_HAS_DENSITY
58. D3P_ALE_HAS_VOLUME_FRACTION
59. D3P_ALE_HAS_DOMINANT_MATERIAL
60. D3P_ALE_HAS_SPECIES_MASS
61. D3P_HAS_D3PLOT
62. D3P_EIGV_NODE_COORDINATES
63. D3P_EIGV_NODE_VELOCITIES
64. D3P_EIGV_NODE_ACCELERATIONS
65. D3P_EIGV_NODE_COORDINATES_DOUBLE
66. D3P_EIGV_NODE_VELOCITIES_DOUBLE
67. D3P_EIGV_NODE_ACCELERATIONS_DOUBLE
68. D3P_EIGV_NUM_NODES

February 11, 2021 - Release 0.1.24

1. fix bug about disbout branch of binout

February 3, 2021 - Release 0.1.23

1. fix bug about shell strain.

February 1, 2021 - Release 0.1.22

1. Add
D3P_HAS_EIGV,
D3P_FTG_HAS_SOLID_VARIABLES,
D3P_FTG_HAS_TSHELL_VARIABLES,
D3P_FTG_HAS_BEAM_VARIABLES,
D3P_FTG_HAS_SHELL_VARIABLES
2. fix bug about the number of solid history variables(considering ALE variables).
3. support D3P_NUM_FREQUENCY and D3P_FREQUENCIES for d3eigv file.
4. Add
D3P_ACS_HAS_***
D3P_ATV_HAS_***
D3P_EIGV_AC_HAS_ACOUSTIC_PRESSURE_REAL
D3P_ERP_HAS_***
D3P_ACP_HAS_***

January 26, 2021 - Release 0.1.21

1. Fix bug about D3P_SHELL_STATE_DATA.
2. Add
D3P_NUM_SOLID20
D3P_NUM_SOLID27
D3P_SOLID20_CONNECTIVITY_EXTRA
D3P_SOLID27_CONNECTIVITY_EXTRA
3. Add INF_NUM_SEGMENT_STATE and INF_SEGMENT_STATE_DATA.
4. Fix bug about idmax.
5. Add D3P_PART_NAME_STRUCT.
6. Fix bug about D3P_GLOBAL_TOTAL_ENERGY_HISTORY.
7. Add D3P_NUM_SOLID_THERMAL_STATE_DATA and D3P_SOLID_THERMAL_STATE_DATA.
8. Fix bug about rigid wall

January 7, 2021 - Release 0.1.20

1. Support extracting nodal data by specifying the range(use idmin and idmax).
2. Add return code for D3P_***_INTERNAL_ID.

January 4, 2021 - Release 0.1.19

1. BinoutReader: support for directory name with one digit, such as d1, d2...
2. Fix bug about bndout branch of binout.

December 26, 2020 - Release 0.1.18

1. Support extracting data of road surface.
2. Support extracting data of nodal state data(like D3P_NODE_RESIDUAL_FORCE).
3. Support extracting data of rigid body motion.
4. Fix bug about BinoutReader(like xxx.xxx.binout and xxx.xxx.d3ssd in the same directory).

December 17, 2020 - Release 0.1.17

1. Add return code.
2. Add the option to choose if the error message will be printed.

December 14, 2020 - Release 0.1.16

1. fix bug about elout branch of binout.

December 2, 2020 - Release 0.1.15

1. fix bug about rigid wall.

November 30, 2020 - Release 0.1.14

1. Add
D3P_SHELL_ELEMENT_DEPENDENT_VAR_1
D3P_SHELL_ELEMENT_DEPENDENT_VAR_2
2. Support interface force file.

November 26, 2020 - Release 0.1.13

1. Add
D3P_NUM_SPH_VARS,
D3P_EXTRA_CONTROL,
D3P_NUM_HIGHER_ORDER_ELEMENT_PART,
D3P_HIGHER_ORDER_ELEMENT_PART_VERSION,
D3P_HIGHER_ORDER_ELEMENT_PART_DATA,
D3P_NUM_RIGID_BODY_SHELL_ELEMENT,
D3P_NUM_MATERIAL_TYPE,
D3P_NUM_***_STATE_DATA(shell, solid, tshell, beam, sph),
D3P_***_STATE_DATA(shell, solid, tshell, beam, sph).
2. Fix bug about rigid wall.

November 16, 2020 – Release 0.1.12:

1. Add D3P_***_VON_MISES_STRESS(shell, tshell, solid, sph).
2. Add D3P_CONTROL.

November 3, 2020 – Release 0.1.11:

1. Fix bug about shell strain.

October 14, 2020 – Release 0.1.10:

1. Fix bug about sph.
2. Support dbsensor branch for binout.

October 14, 2020 – Release 0.1.9:

1. Optimize the APIs of extracting DES data.

October 14, 2020 – Release 0.1.8:

1. Support these data type for Python:

D3P_DES_DATA_IN_STATE,
D3P_CPM_GEOM_DATA,
D3P_CPM_STATE_DATA,
D3P_CPM_STATE_GEOM_DATA

October 9, 2020 – Release 0.1.7:

1. Fix bug about numpy array for BinoutReader.
2. Fix bug about extracting shell stress of special adaptive model.
3. Fix bug about D3P_FREQUENCIES for Python.

September 30, 2020 – Release 0.1.6:

1. Fix bug about eloutdet branch of binout.
2. Add BINOUT_JNTFORC_ID_STIFFNESS_TRANSLATIONAL and BINOUT_JNTFORC_ID_STIFFNESS_GENERALIZED to support jntforc branch of binout for Python.
3. Remove message when using numpy for BinoutReader.
4. Update documents.

September 24, 2020 – Release 0.1.5:

1. Add:
D3P_HAS_SOLID_STRESS
D3P_HAS_IDS
2. Support numpy for BinoutReader in Python.
3. Fix bug about trhist branch of BinoutReader.

September 7, 2020 – Release 0.1.4:

1. Support some more branches in binoutreader:
dcfail
dbfsi
nodouthf
prtube

gceout
defgeo
dem_rcforc
brngout

2. Support extracting nodal data by part.
3. Support extracting element data by part set.
4. Support extracting nodal data by part set.

August 12, 2020 – Release 0.1.3:

1. Fix some bug about tprint branch of binoutreader.
2. Support extracting nodal data by part for d3plotreader.
3. Support very large binout file that expands into binout%001 binout%002, etc.

July 30, 2020 – Release 0.1.2:

1. Fix some bugs
2. Add extra parameter names:

D3P_NUM_SPH_PART
D3P_NUM_SHELL_PART
D3P_NUM_SOLID_PART
D3P_NUM_TSHELL_PART
D3P_NUM_BEAM_PART

July 27, 2020 – Release 0.1.1:

1. Add:

D3P_HAS_NODE_COORDINATES
D3P_HAS_NODE_VELOCITIES
D3P_HAS_NODE_ACCELERATIONS
D3P_HAS_SOLID_EFFECTIVE_PLASTIC_STRAIN
D3P_HAS_SOLID_HISTORY_VAR
D3P_HAS_TSHELL_STRESS
D3P_HAS_TSHELL_EFFECTIVE_PLASTIC_STRAIN
D3P_HAS_TSHELL_HISTORY_VAR
D3P_HAS_SHELL_STRESS
D3P_HAS_SHELL_EFFECTIVE_PLASTIC_STRAIN
D3P_HAS_SHELL_HISTORY_VAR
D3P_HAS_SHELL_MX(MY, MXY, QX, QY, NX, NY, NXY)
D3P_HAS_SHELL_INTERNAL_ENERGY_DENSITY

D3P_HAS_BEAM_AXIAL_STRESS
D3P_HAS_BEAM_RS_SHEAR_STRESS
D3P_HAS_BEAM_TR_SHEAR_STRESS
D3P_HAS_BEAM_AXIAL_PLASTIC_STRAIN
D3P_HAS_BEAM_AXIAL_STRAIN
D3P_HAS_BEAM_HISTORY_VAR
D3P_HAS_SPH_STRAIN_RATE
D3P_HAS_SPH_STRAIN

July 20, 2020 – Release 0.1.0:

1. Add static libraries of LS-Reader.
2. Add macro LSREADER_VERSION in d3plotreader.h and d3plotreaderc.h.
3. Support ipart_user for *D3P_PART_XXX*.
4. Add version description about dynamic libraries of LS-Reader on Windows.
5. Support exception handling for C++.

July 16, 2020 – Release 0.0.33:

1. Support ALE data.
2. Add D3P_HAS_HEAT_FLUX and D3P_NUM_TEMPERATURE.