

/geometry/test/

Geometry verification control setup.

Helps in detecting possible overlapping regions.

Sub-directories :

Commands :

tolerance [*Tolerance*] [*Unit*]

Define tolerance (in mm) by which overlaps reports should be reported. By default, all overlaps are reported, i.e. tolerance is set to: 0*mm.

Available at all Geant4 states.

Parameters

Tolerance	type d	Omittable : current value is used as the default value.
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Unit	type s	Omittable : default value = mm	Parameter candidates : pc km m cm mm um nm Ang fm parsec kilometer meter centimeter millimeter micrometer nanometer angstrom fermi
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verbosity [*verbosity*]

Specify if running in verbosity mode or not.
By default verbosity is set to ON (TRUE).

Available Geant4 state(s) : Idle

Parameters

verbosity	type b	Omittable : default value = 1
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resolution [*resolution*]

Set the number of points on surface to be generated for checking overlaps.

Available at all Geant4 states.

Parameters

resolution type i Omittable : default value = 10000

recursion_start [*initial_level*]

Set the initial level in the geometry tree for recursion.
recursive_test will then start from the specified level.

Available at all Geant4 states.

Parameters

initial_level type i Omittable : default value = 0

recursion_depth [*recursion_depth*]

Set the depth in the geometry tree for recursion.
recursive_test will then stop after reached the specified depth.
By default, recursion will proceed for the whole depth.

Available at all Geant4 states.

Parameters

recursion_depth type i Omittable : default value = -1

maximum_errors [*maximum_errors*]

Set the maximum number of overlap errors to report
for each single volume being checked.
Once reached the maximum number specified, overlaps
affecting that volume further than that are simply ignored.

Available at all Geant4 states.

Parameters

maximum_errors type i Omittable : default value = 1

run

Start running the recursive overlap check.
Volumes are recursively asked to verify for overlaps
for points generated on the surface against their

respective mother volume and sisters at the same level, performing for all daughters and daughters of daughters, etc.

NOTE: it may take a very long time, depending on the geometry complexity !

Available Geant4 state(s) : Idle