



7. Manipulating data: Geometrical Tool

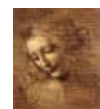


The Geometrical Displacements Calculator Tool

- This tool implements the following methods:

- Impact Parameter
- Distance of Closest Approach
- Distance between two Vertices

* The Impact Parameter method uses the Transporter tool to take the Particle pointOnTrack to the Z position of the vertex.



The Impact Parameter Method

- This method has four signatures:

- *geomDispCalculator()* → *calcImpactPar(Particle, Vertex, ip, ipErr)*;
Impact parameter significance = $ip/ipErr$

- *geomDispCalculator()* → *calcImpactPar(Particle, Vertex, ip, ipErr, ipVector, errMatrix)*;

- *geomDispCalculator()* → *calcImpactPar(Particle, xyzPoint, ip, ipErr)*;

- *geomDispCalculator()* → *calcImpactPar(Particle, xyzPoint, ip, ipErr, ipVector, errMatrix)*;



Distances Calculation

- Distance of Closest Approach

- *geomDispCalculator()* → *calcCloseAppr(Particle, Particle, dist, distErr)*

- Distance between two Vertices

- *geomDispCalculator()* → *calcVertexDis(Vertex, Vertex, dist, distErr)*

