

Command First_Derivative Dialog Result Folder PROCESSED Result Name ☐ Append Result Name as Suffix <table><thead><tr><th>Result Name</th><th>Signal Type</th><th>Signal Folder</th><th>Signal Name</th><th></th></tr></thead><tbody></tbody></table> OK Cancel		Result Name	Signal Type	Signal Folder	Signal Name		Derivative of a Signal
Result Name	Signal Type	Signal Folder	Signal Name				
First_Derivative							
/Signal_Types=		The type of signal to be processed					
/Signal_Names=		The names of the signals to be processed					
/Signal_Folder=		The name of the signal folder					

Compute the first derivative at each point of a signal. The first and last data points become DATA_NOT_FOUND (identified in the C3D file as a POINT Reliability value of &endash;1).

Derivatives are calculated using Finite Difference Algorithms.

Given the signal:

$x(t_i)$ for $i=1, 2, \dots, n$ The first derivative is calculated using: $x\dot{(t_i)} = (x(t_{i+1}) - x(t_{i-1})) / (t_{i+1} - t_{i-1})$

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