

Command First_Derivative Dialog Result Folder PROCESSED Result Name ☐ Append Result Name as Suffix <table><tr><th>Result Name</th><th>Signal Type</th><th>Signal Folder</th><th>Signal Name</th><th></th></tr><tr><td colspan="5"></td></tr></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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