

Local axes of frames with offset joints

The local axes of [frames](#) with offset [joints](#) are determined as follows:

- **Original axes** (without offset) – Calculate local axes according to the local-1 axis, as oriented from joint i to joint j. Depending upon user specification, basic or advanced local-axes parameters are used. The local axes resolved are then displayed in the GUI.
- **Local 1** – Once joints are offset, the frame may now have a local-1 axis which differs from that of the original orientation. The dot product of both the original and new local-1 axis are positive.
- **Local 2** – The local-2 axis of the offset frame is parallel to the original local 1-2 plane.
- **Local 3** – The local-3 axis is calculated as the cross product of the new local-1 and local-2 axes.