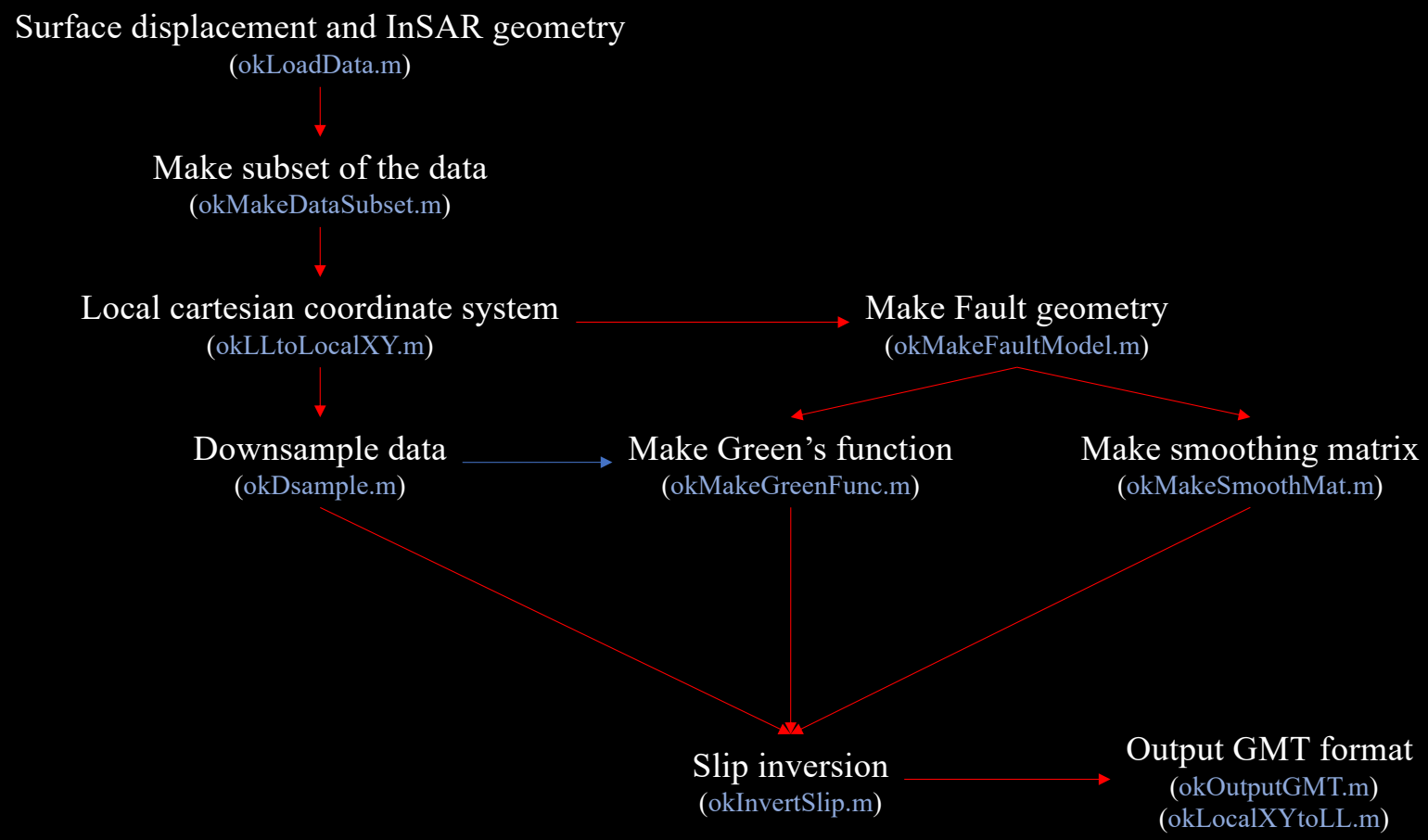
Basic workflow



okMakeDsampleParam.m → okDsample.m

(Down-sampling InSAR data)

okMakeDsampleParam(Functype,varargin)

FuncType == 'quadtree'

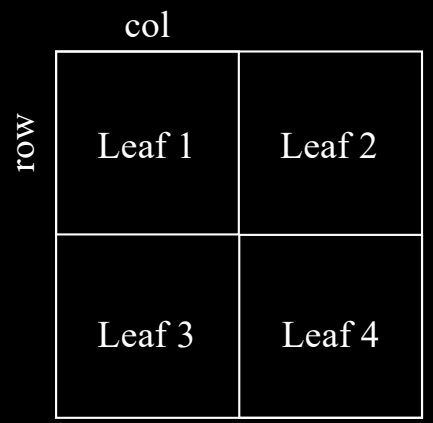
Criterion: 'variance*' or 'curvature**'

Tolerance: Variance threshold in each leaf

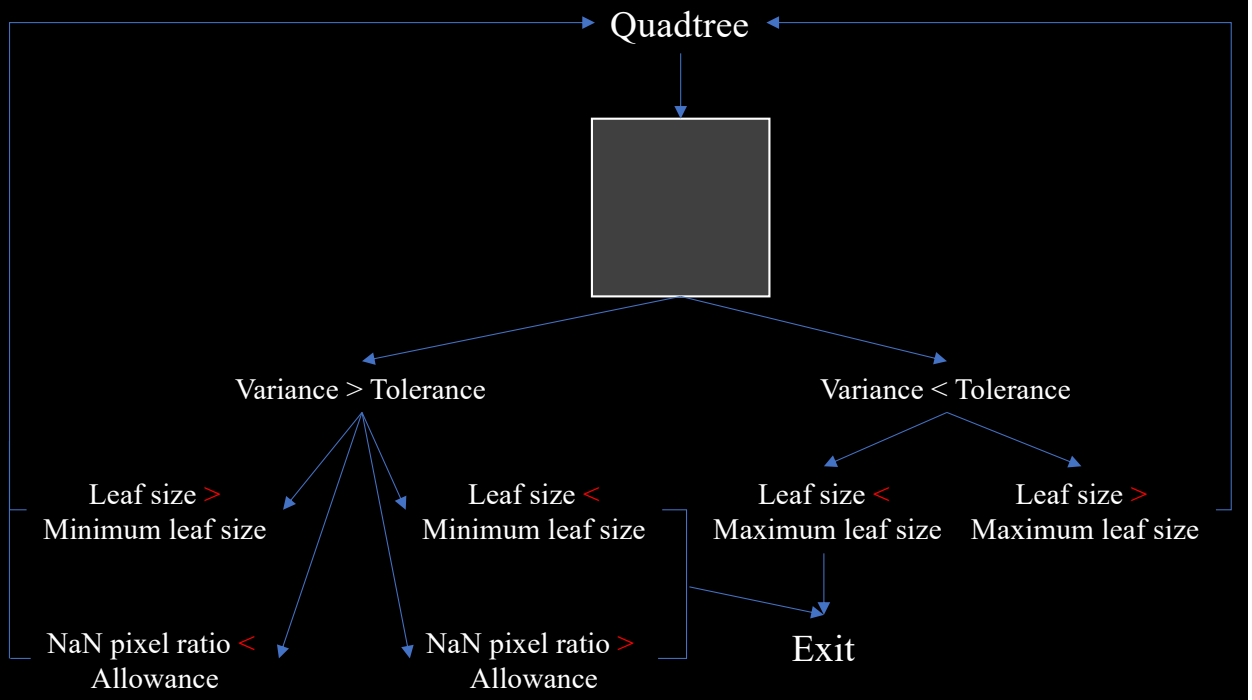
LeafMinSize: The minimum size one leaf can be

LeafMaxSize: The maximum size one leaf can be

NaNPixelAllow: The maximum allowed NaN pixel ratio



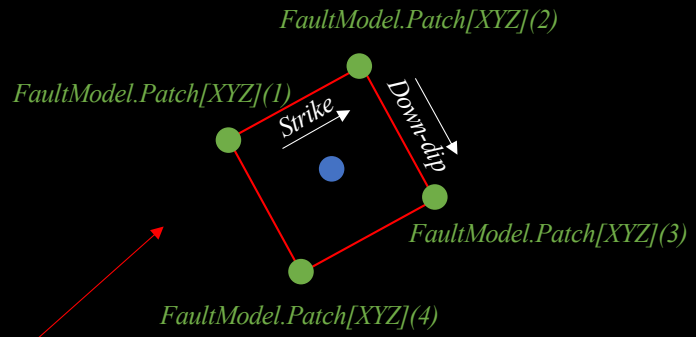
Leaf size = row x col

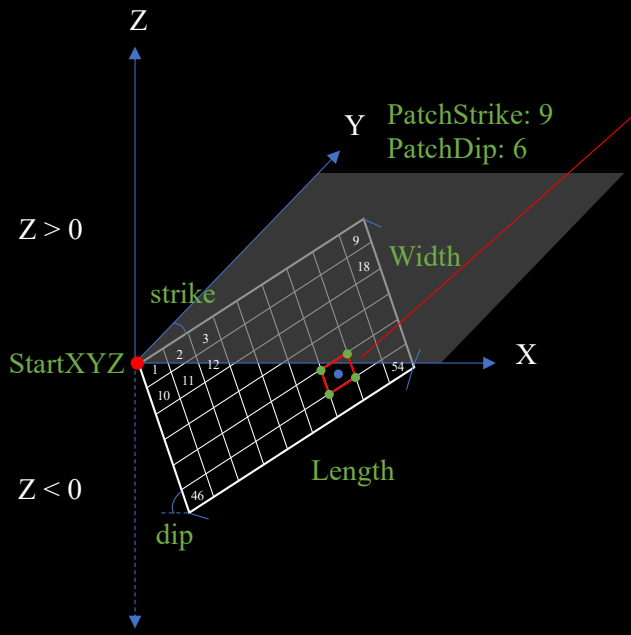


*'*variance': Jonsson, S. (2002). Modeling volcano and earthquake deformation from satellite radar interferometric observations. Stanford University.*

*'**curvature': Simons, M., Fialko, Y., & Rivera, L. (2002). Coseismic deformation from the 1999 M w 7.1 Hector Mine, California, earthquake as inferred from InSAR and GPS observations. Bulletin of the Seismological Society of America, 92(4), 1390-1402.*

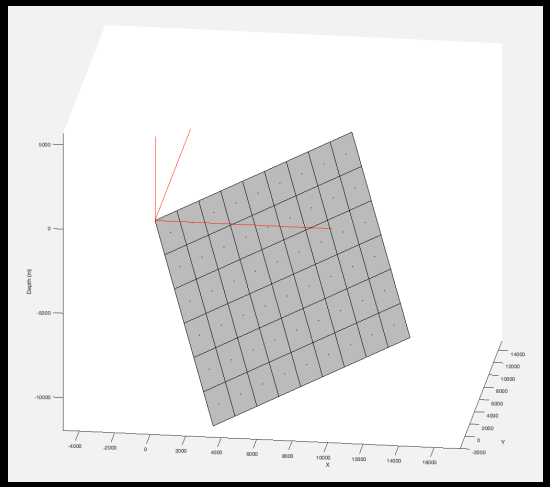
okMakeFaultModel.m






```
okMakeFaultModel(StartXYZ,Length,Width,Strike,Dip,PatchStrike,PatchDip)
```

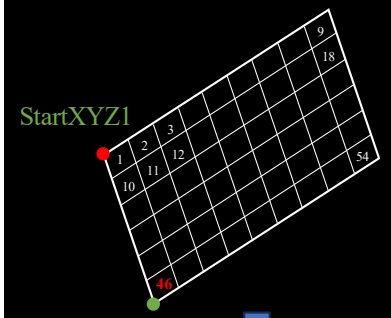
```
FaultModel = okMakeFaultModel([0,0,0],18000,12000,30,70,9,6)
okPlot(FaultModel,'FaultModel')
```



okCombineFaultModel.m

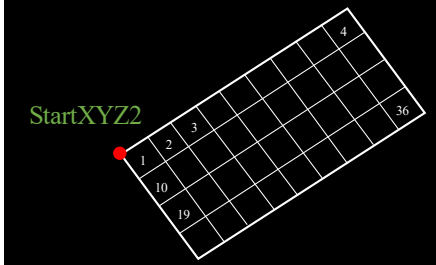
(To make a listric fault geometry)

Fault 1




```
FaultModel1 =
okMakeFaultModel([0,0,0],18000,12000,30,70,9,6)
```

Fault 2




```
StartXYZ2 =
[FaultModel1.PatchX(4,46),
FaultModel1.PatchY(4,46),
FaultModel.PatchZ(4,46)]

FaultModel2 =
okMakeFaultModel(StartXYZ2,18000,8000,30,40,9,4)
```

```
Combined =
okCombineFaultModel({FaultModel1,FaultModel2},'dip')
```

Combined fault model