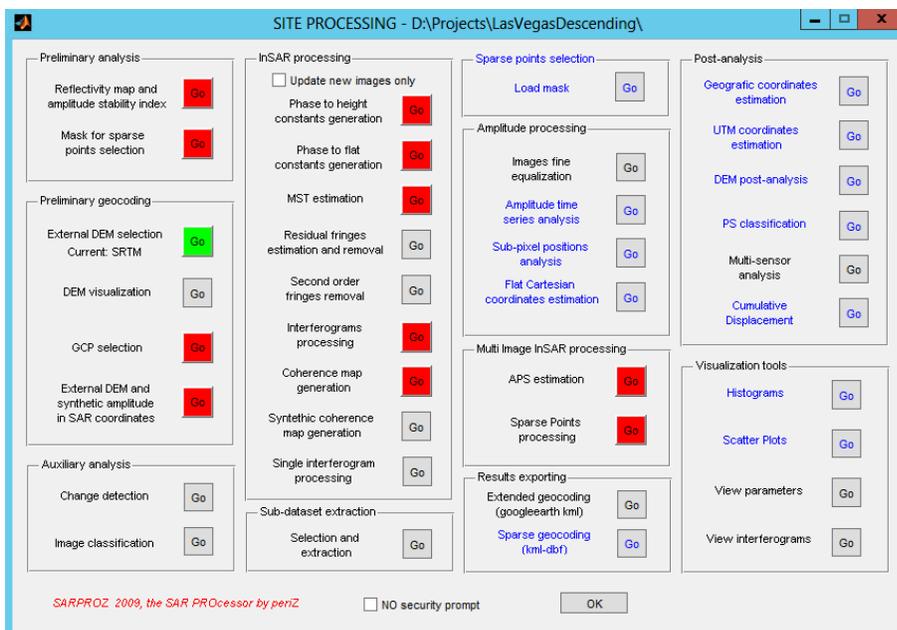
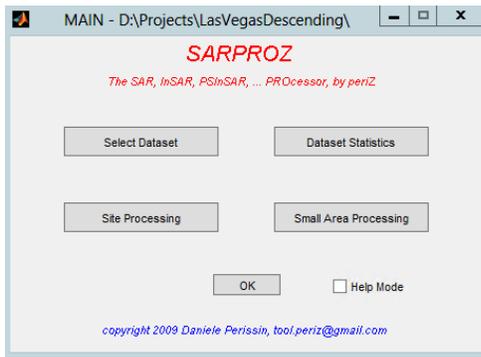
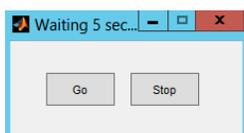


Pre-processing

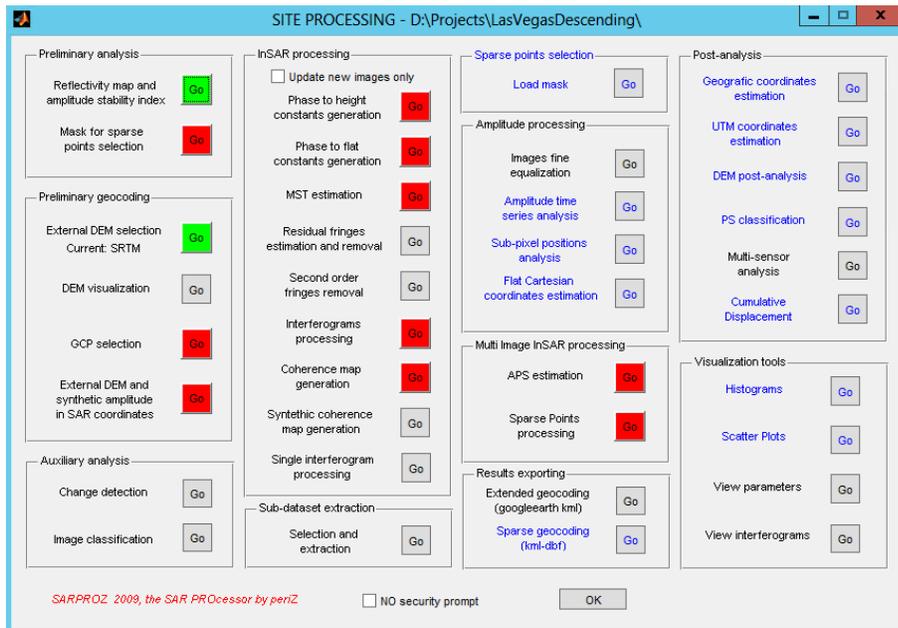
After the files are imported, we can start processing them. After importing and/or selecting the dataset, press the **Site Processing** button in the **MAIN** window.



First, the steps in the Preliminary analysis group need to be done. Press the **Go** button next to the Reflectivity map and amplitude stability index label. Press **Go** on the upcoming security prompt.



In the future we always assume that you directly press, **Go** on the security prompts. You may also consider to check the **NO security prompt** check box on the bottom of the **SITE PROCESSING** window.



After the processing the button color is changing to green. Next, press the **Go** button next to the **Mask for sparse point selection**. In the Matlab command window you have to select the option for the initial point mask selection:

choose your option:

0 all points (no mask),

1 local max (default),

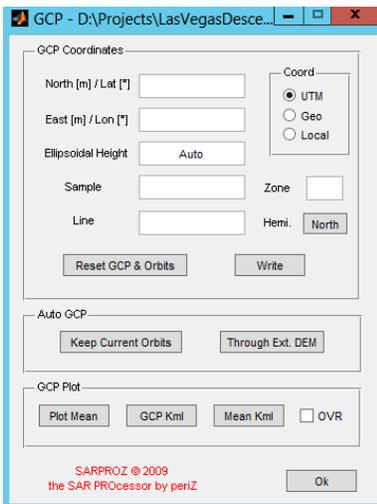
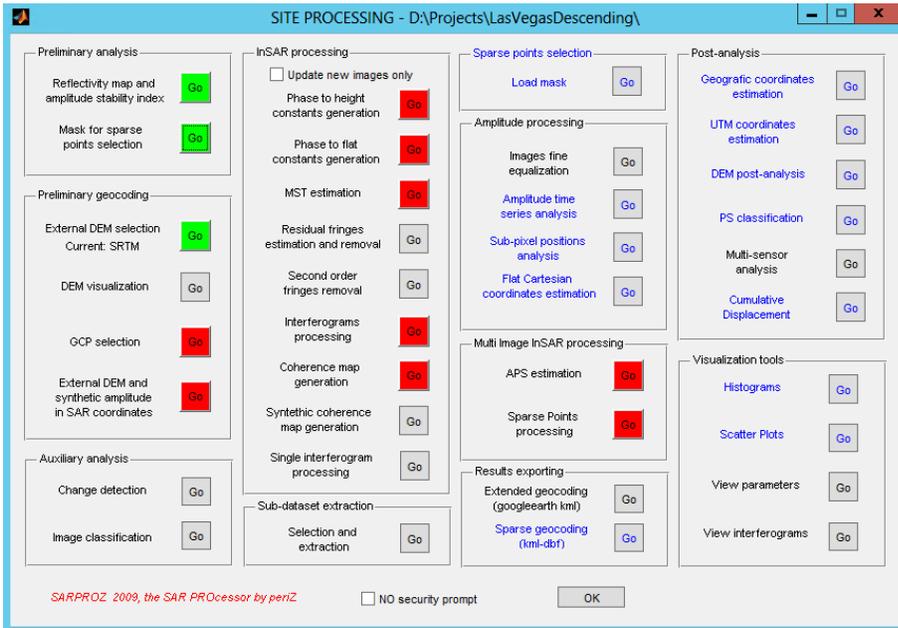
2 local max without range lobes,

3 local max without range and azimuth lobes

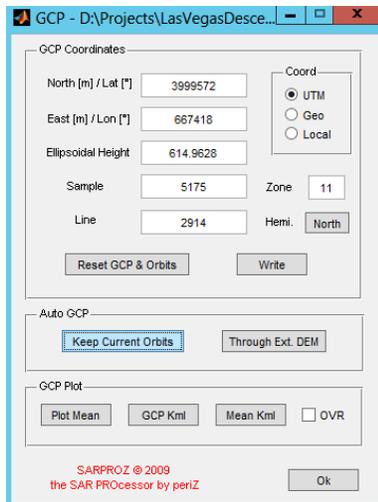
any else exits

In our example, we press 1 and Enter in the command window to select the default local max option.

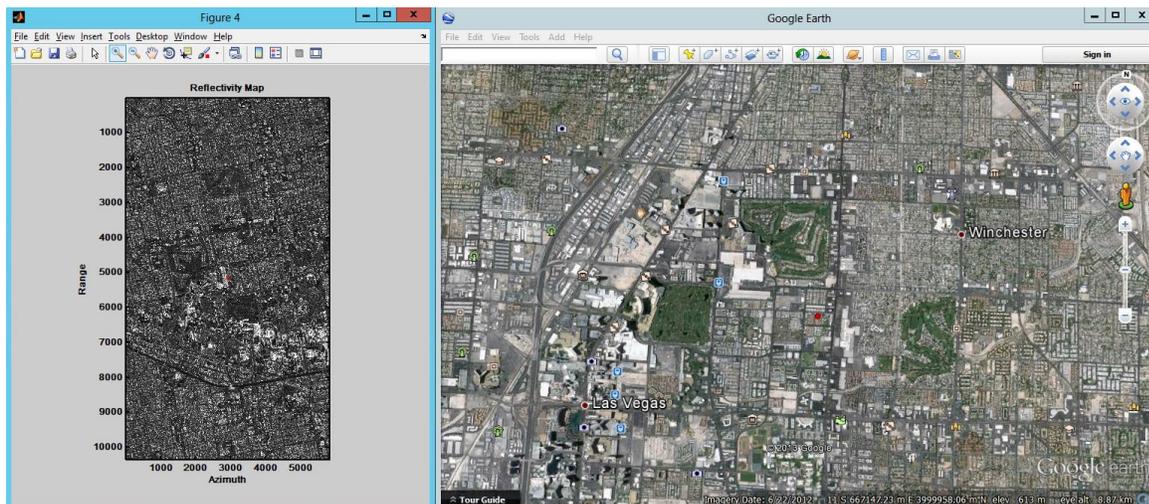
Afterwards, we work on the Preliminary geocoding. Using the standard option of an SRTM DEM, we press the Go button next to the GCP selection label in the SITE PROCESSING window.



In the upcoming GCP window, we first try the Auto GCP options by pressing Keep Current Orbits.

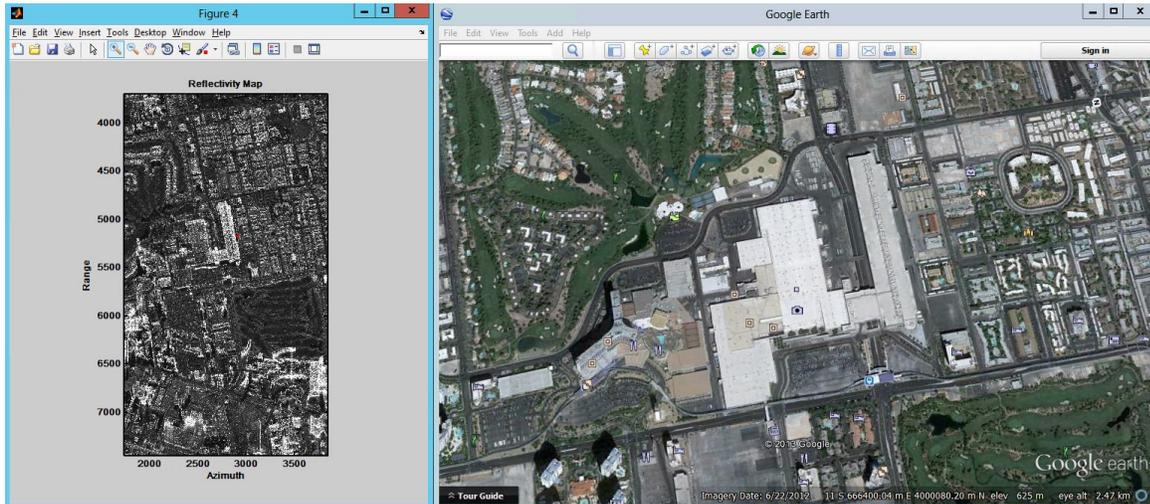


We are then checking the results using the functions in the **GCP Plot** group by pressing **Plot Mean** and **GCP Kml**.

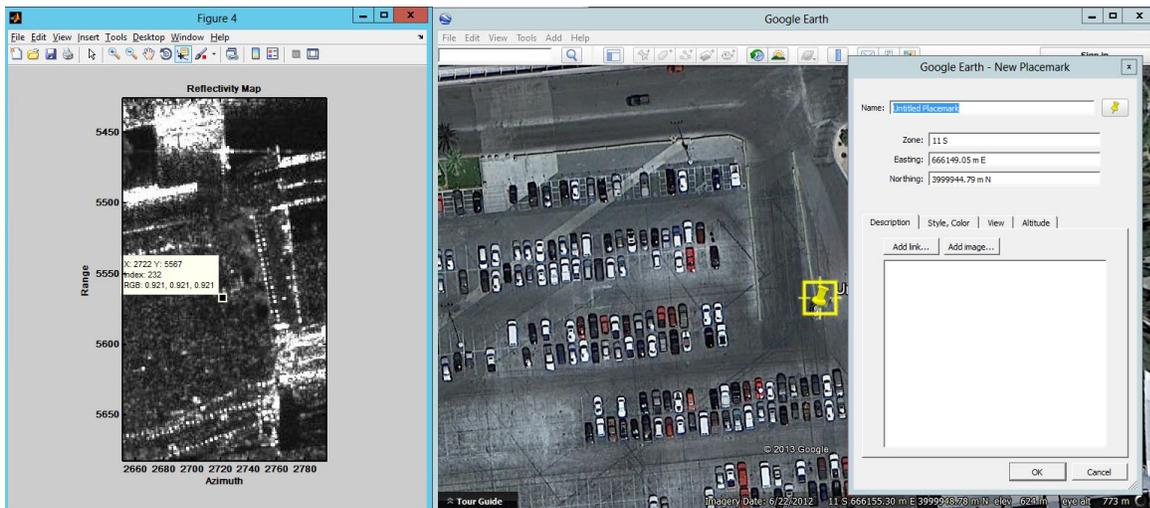


In our example, we are not really satisfied with the automatically selected point. Therefore, we are going to select one manually. Depending on the available data and the resolution, there are different strategies for selecting good tie-points for geo-coding. Often poles are very good and precise points if you can clearly identify them in both images.

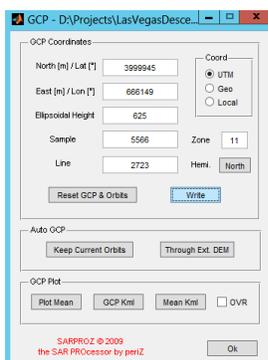
To identify the points, we suggest to rotate the view in Google Earth to match the view in the SAR image, as this will make it easier to identify the homologous points.



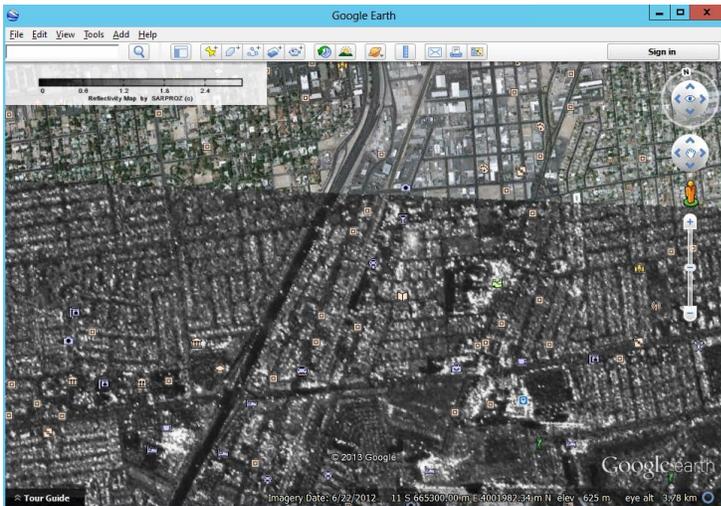
After setting the placemarkers in both images, we are copying the values in the GCP window. Be careful to enter the values correctly, because X & Y are not in the same order as the Sample & Line in the GCP window.



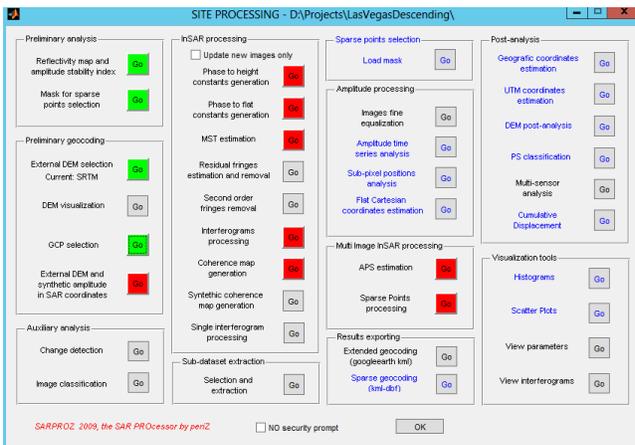
Then we press Write in the GCP window.



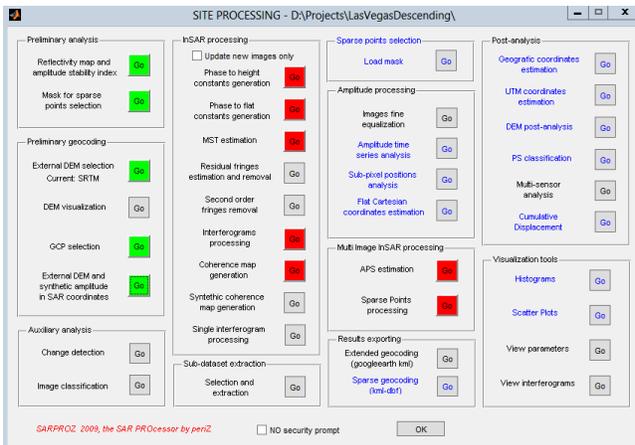
Finally, we check the results by pressing **Mean Kml** in the **GCP Plot** group.



Then we press **Ok** to close the **GCP** window.



Then we calculate the DEM in SAR coordinates by pressing the **Go** button next to the **External DEM and synthetic amplitude in SAR coordinates** label. This step is optional and only necessary if you want to use a DEM to assist the PS-InSAR processing later.



Finally, we are going to the InSAR processing group. First, press the Go button next to the Phase to height constants generation label. Then, press the Go button next to the Phase to flat constants generation label. Now, the pre-processing steps are finished.

