Bulgaria airports
guide

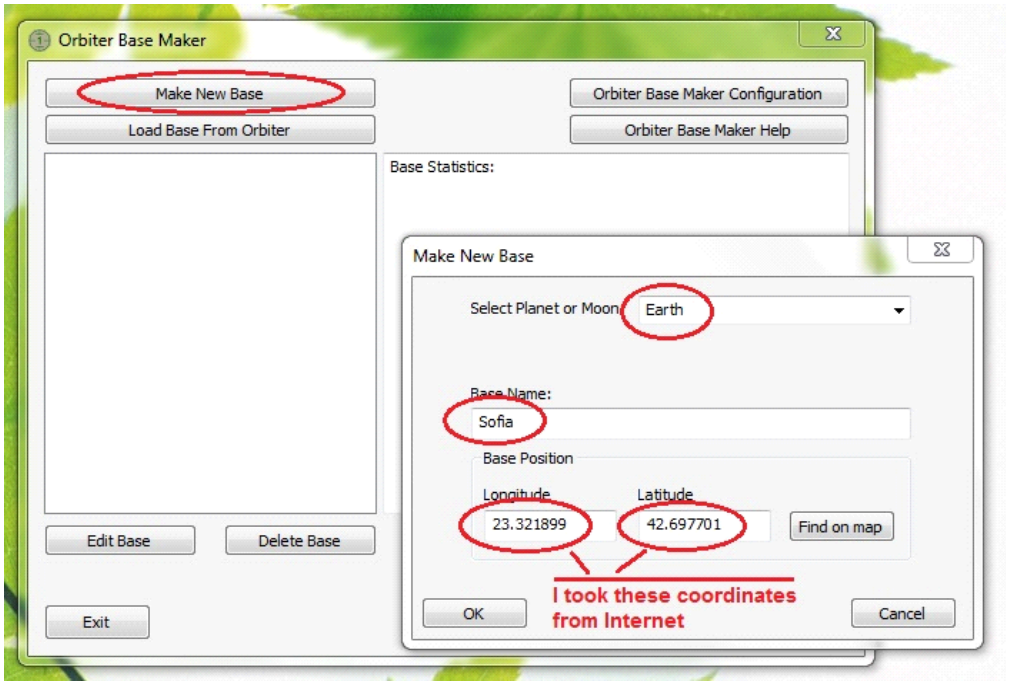
Bulgaria airports Add-on page: https://www.orbithangar.com/showAddon.php?id=81eb9fca-7d00-4197-b9a6-1ec188152ac2

Contents

First steps

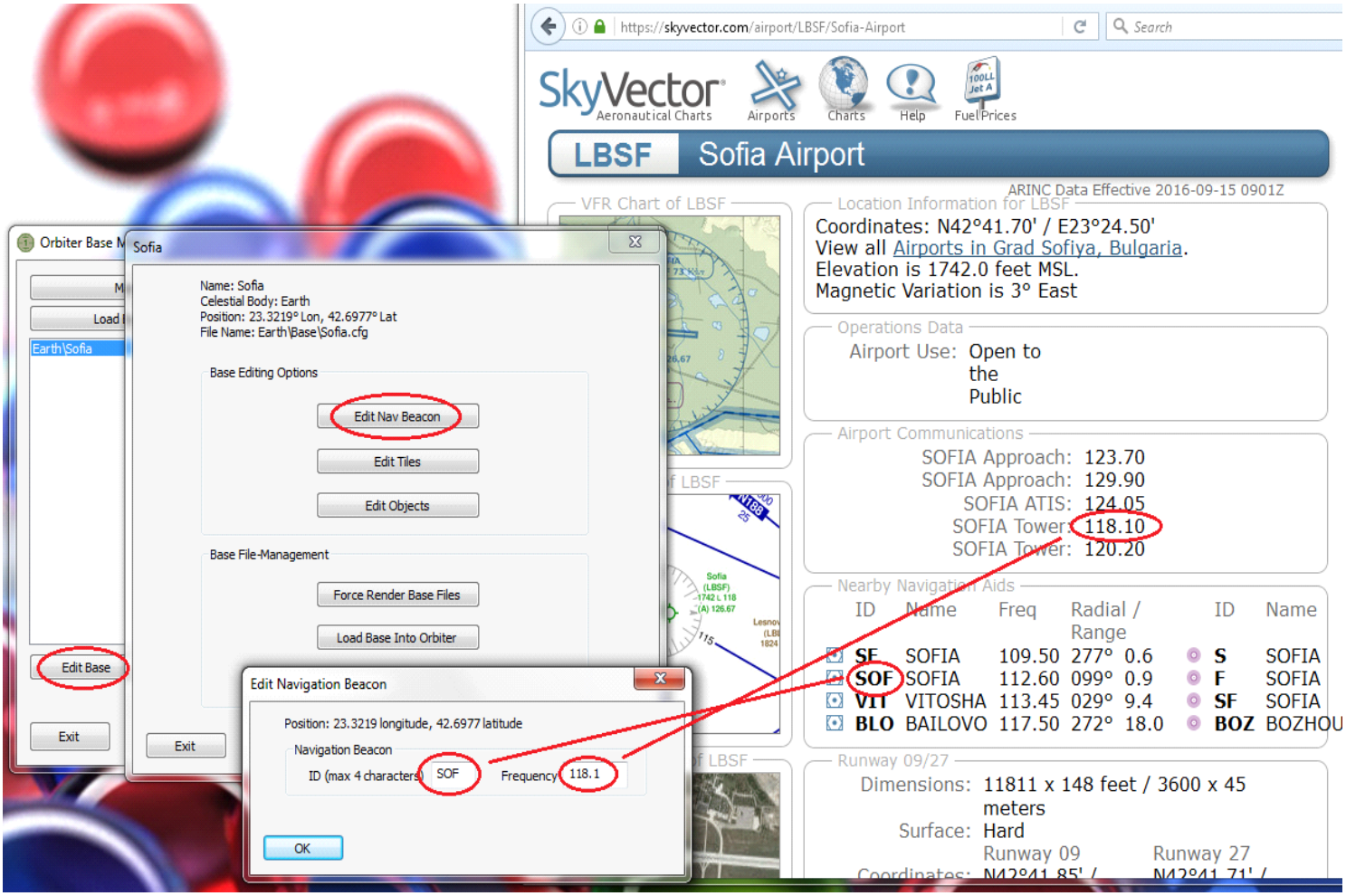
Welcome in this document i will describe how i made Bulgaria airports surface bases.
For starters I readed this guide
Tutorial: How to create surface bases: https://www.orbithangar.com/showAddon.php?id=c91cf480-1642-4faf-abd0-8e8ce8a93f09

For the creation of the bases I downloaded and using next program
Orbiter Base Maker V2.0.3: https://www.orbithangar.com/showAddon.php?id=843d44ed-0816-4ea3-b767-d4748d002bf5



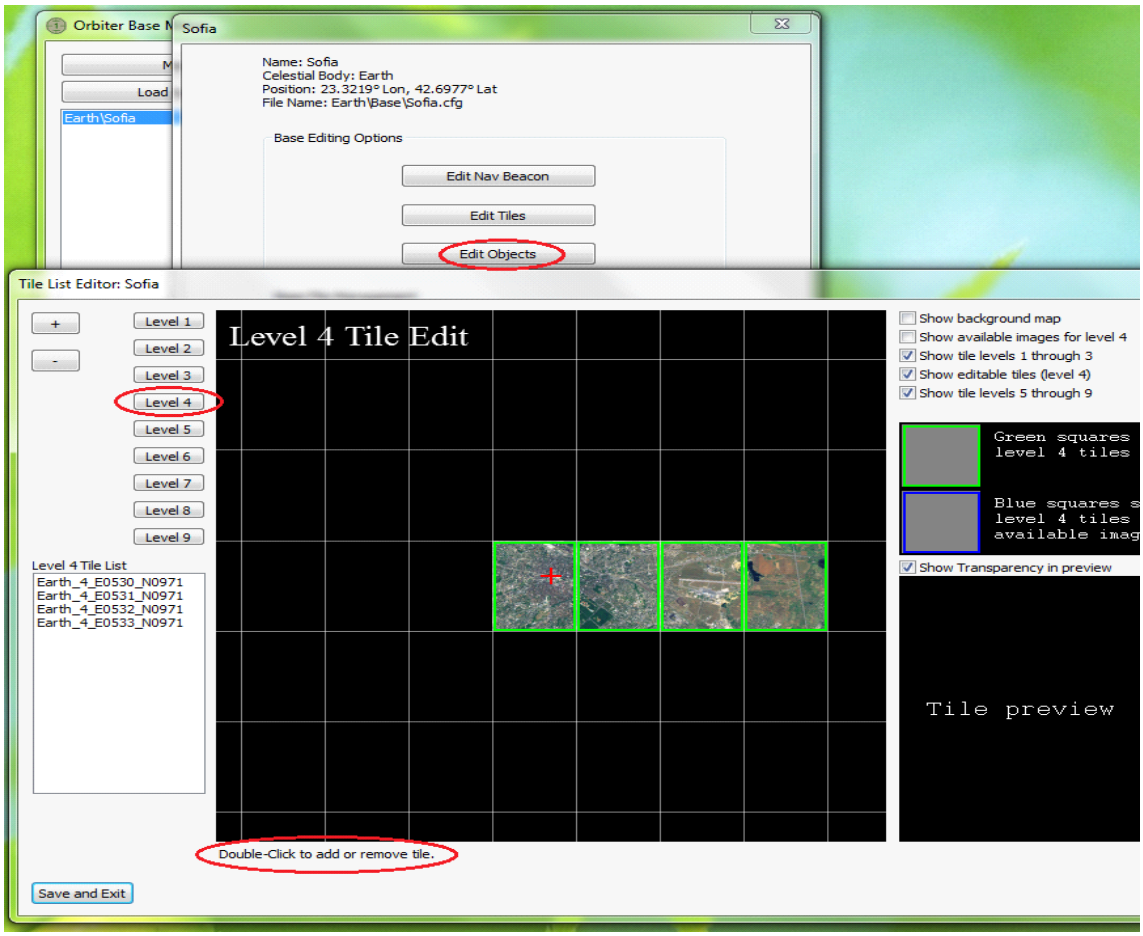
Data for airports

you can take information from next address: https://skyvector.com

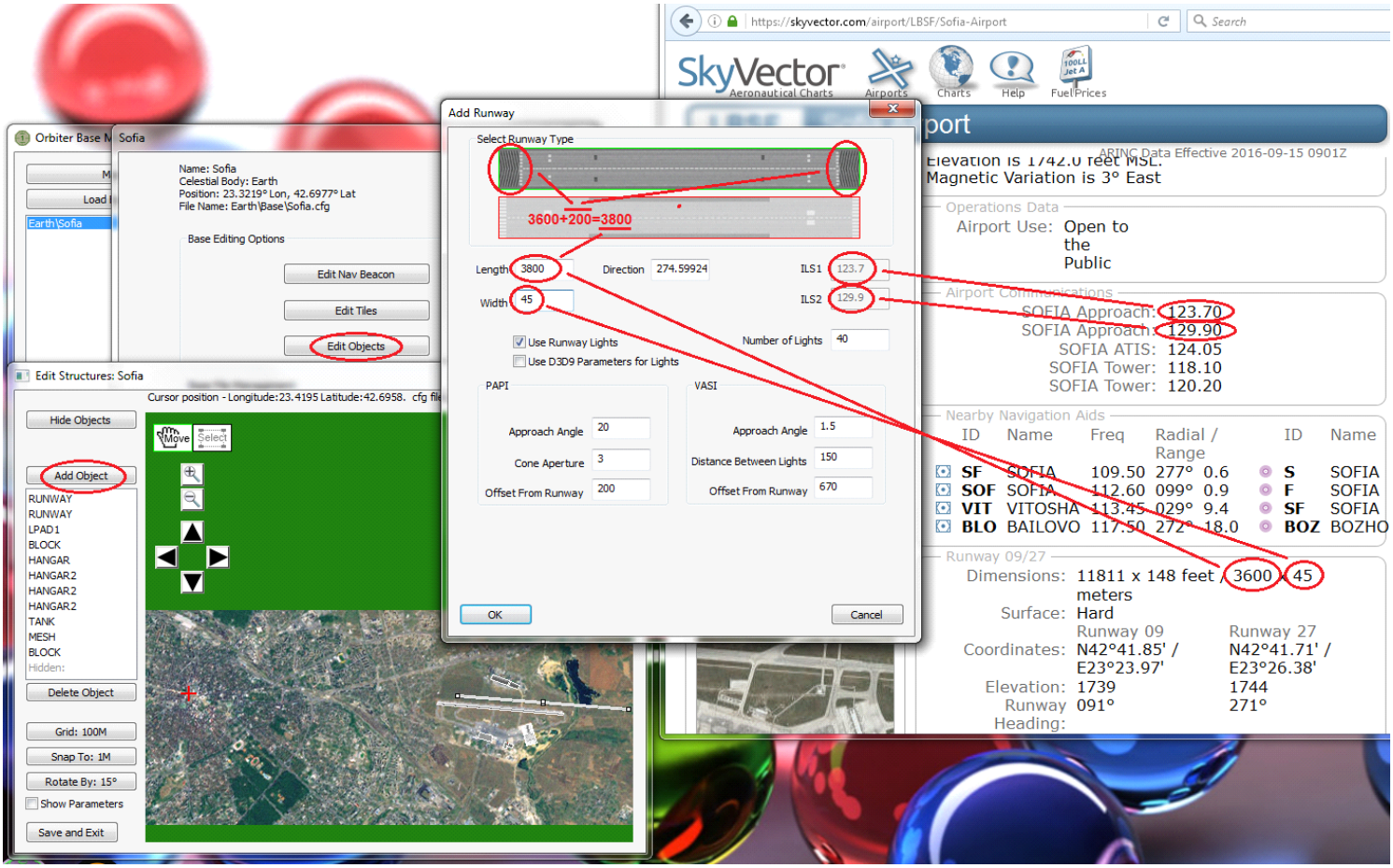


Adding surface temporary

Adding map tiles to easy placing and positioned correctly objects

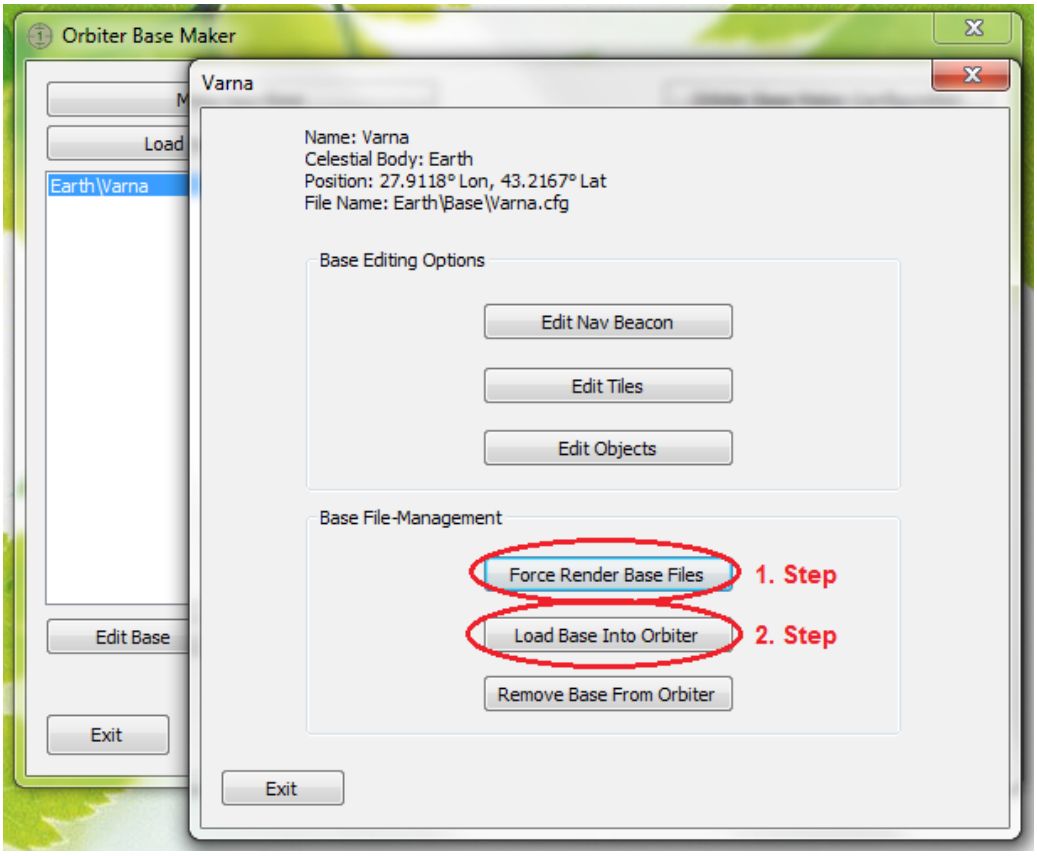


Adding and positioning objects



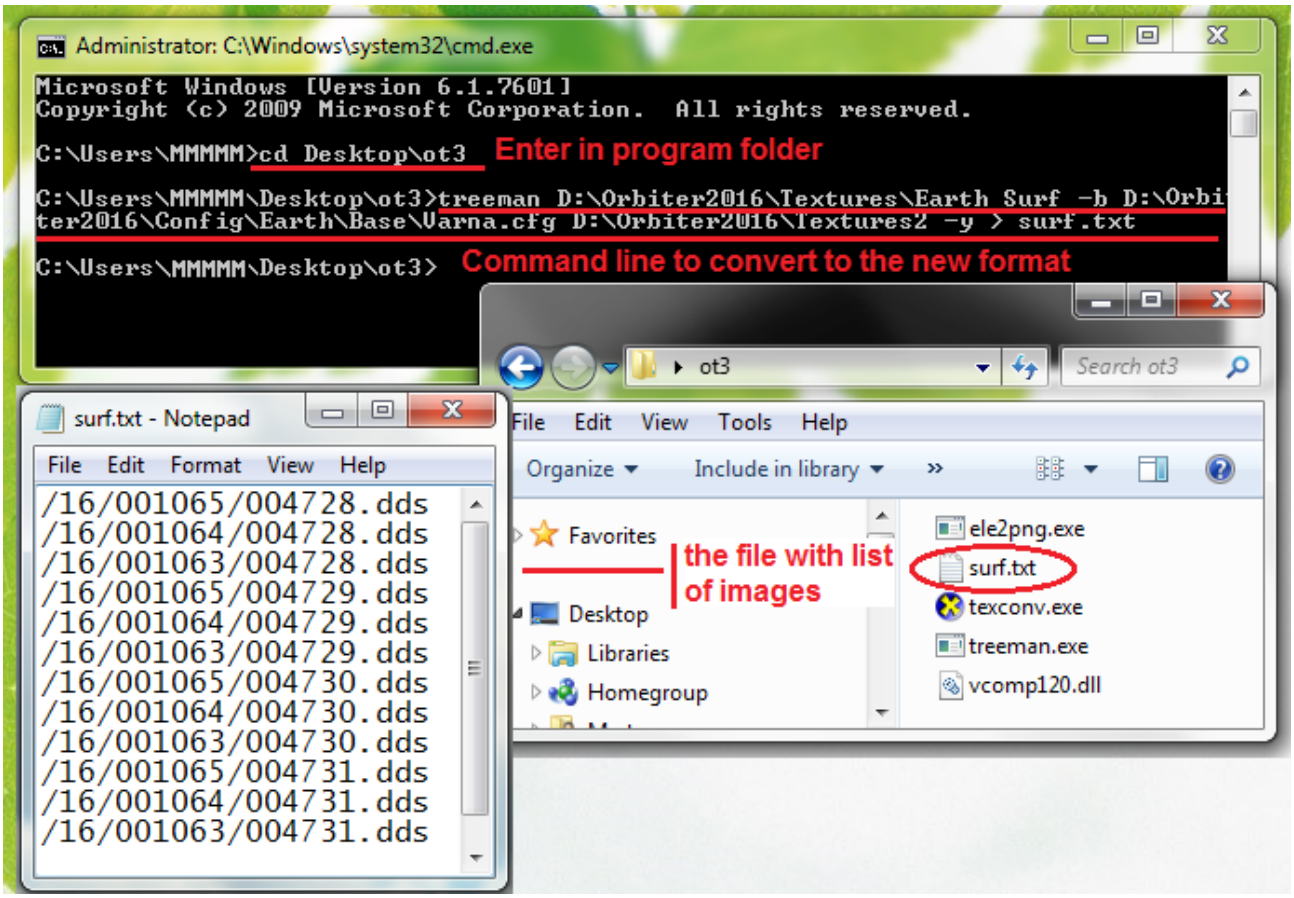
Generate the base

After you complete with the modeling on the base press “Force Render Base” and “Load Base Into Orbiter” buttons



Convert textures

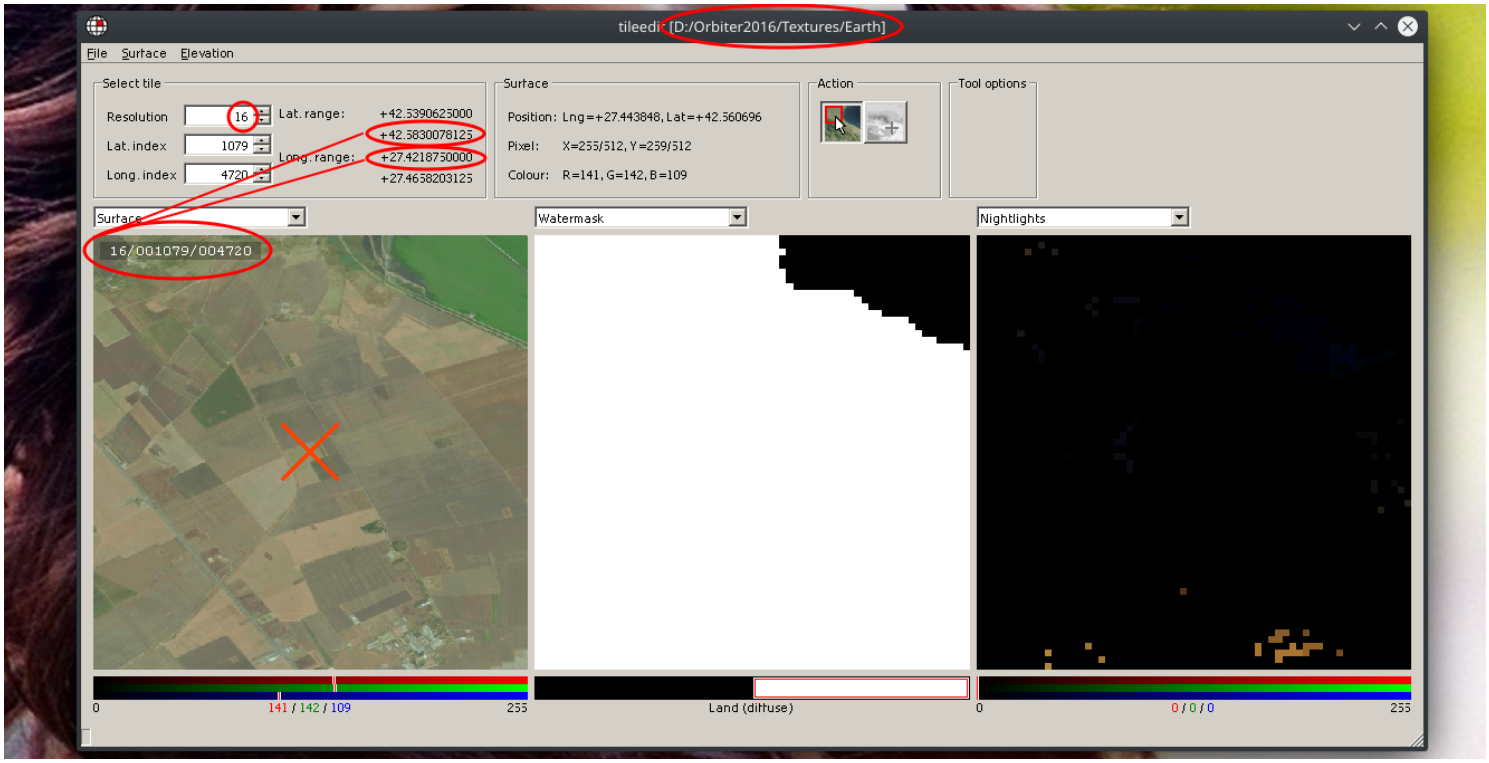
Into new format of orbiter 2016 should use the following the tool
Orbiter texture tree tools (OT3): http://www.orbiter-forum.com/showthread.php?t=37452

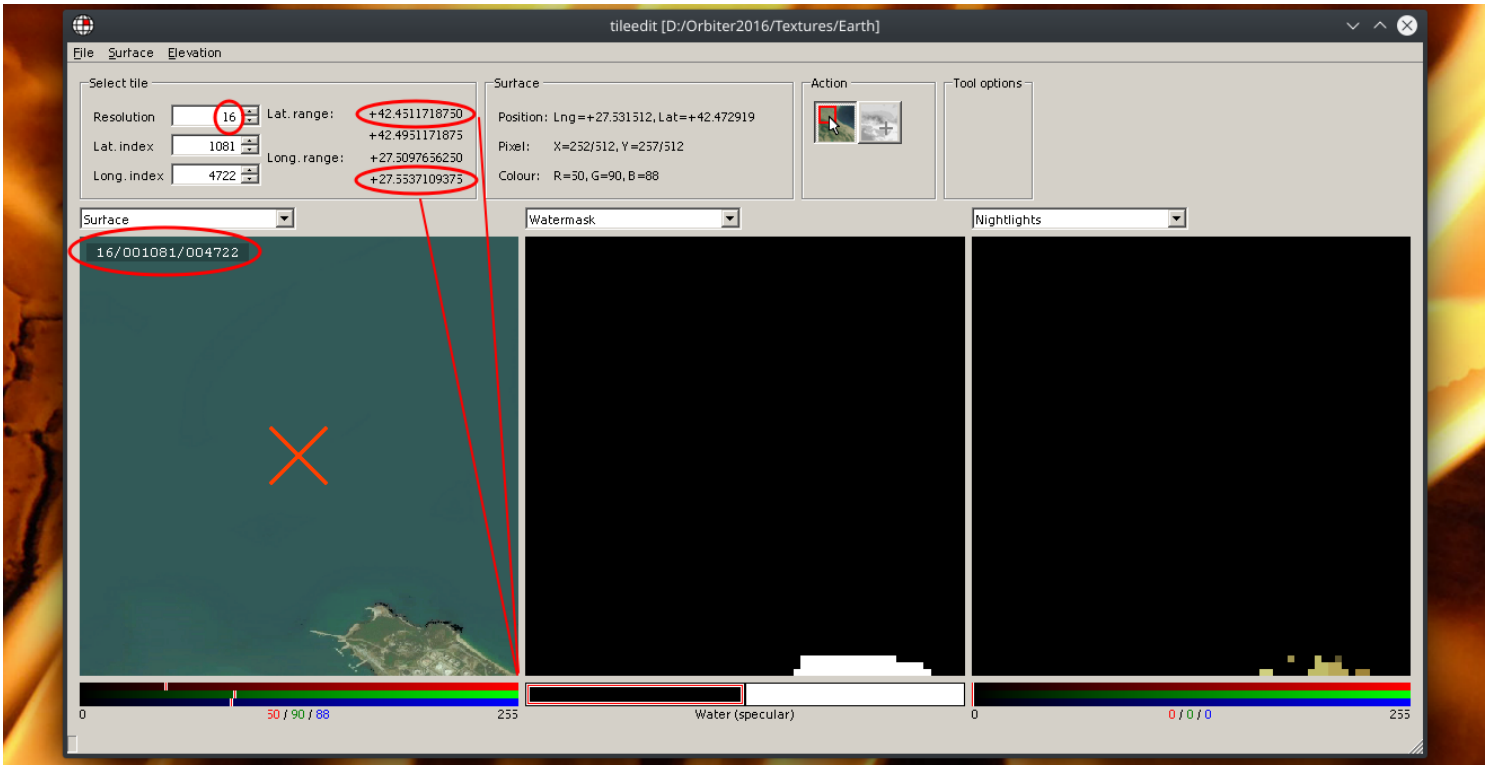


Used command:
treeman D:\Orbiter2016\Textures\Earth Surf -b D:\Orbiter2016\Config\Earth\Base\Varna.cfg D:\Orbiter2016\Textures2 -y > list.txt
with this command You will convert old names of images to new names of images and placing them in new folders structure and will be generated a file “list.txt” with list of images.
But for better surface map I general image in PNG format with next programs
SASPlanet: http://www.sasgis.org/download/
tileedit https://www.orbiter-forum.com/showthread.php?t=40442

tileedit information

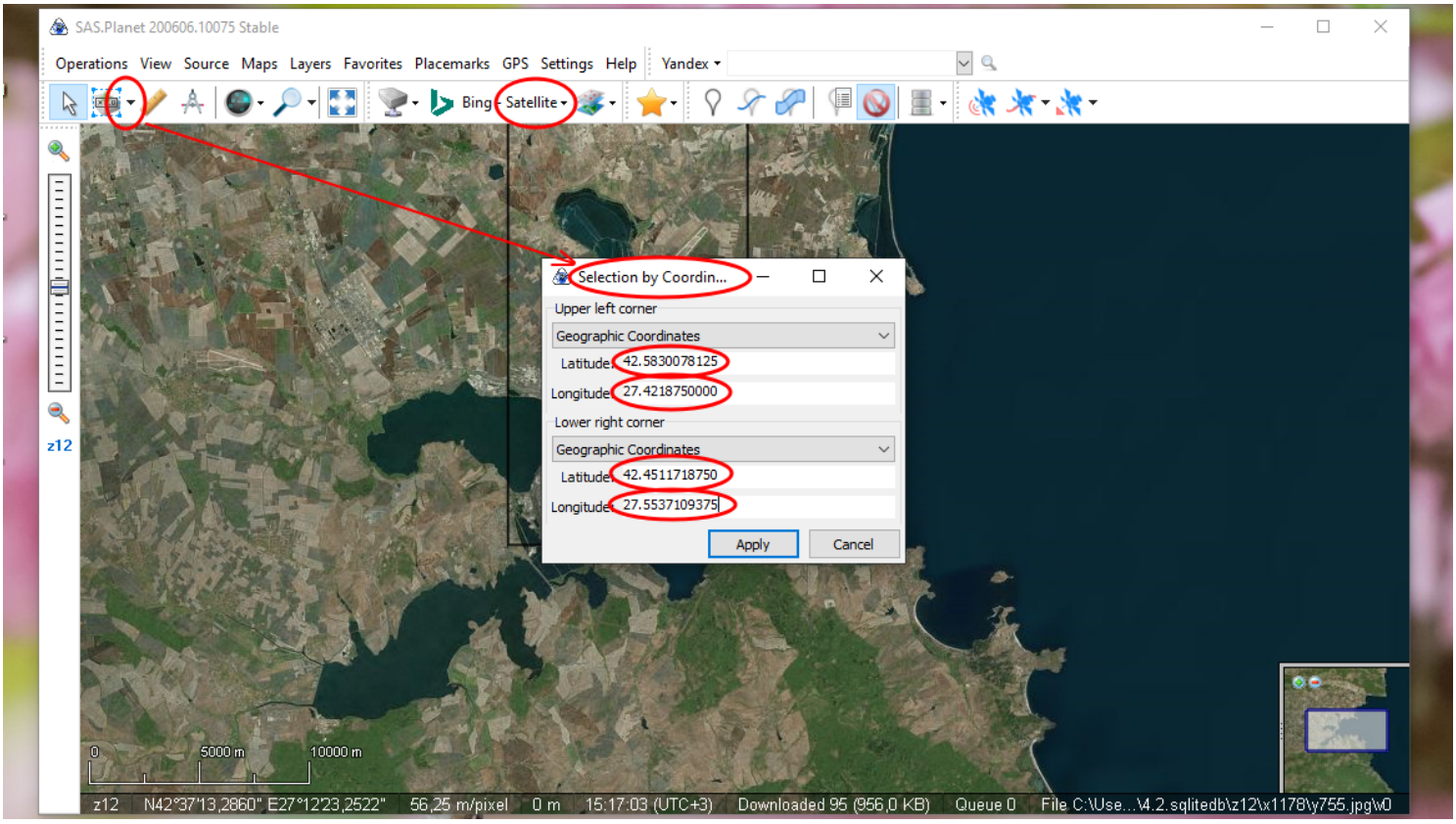
From tileedit should to be taken:
- Coordinates of upper left (+42..., +27...) and lower right (+42..., +27...) corners
- Name of the folder (16/001079) and file name (004720) of upper left tile
- Name of the folder (16/001081) and file name (004722) of lower right tile





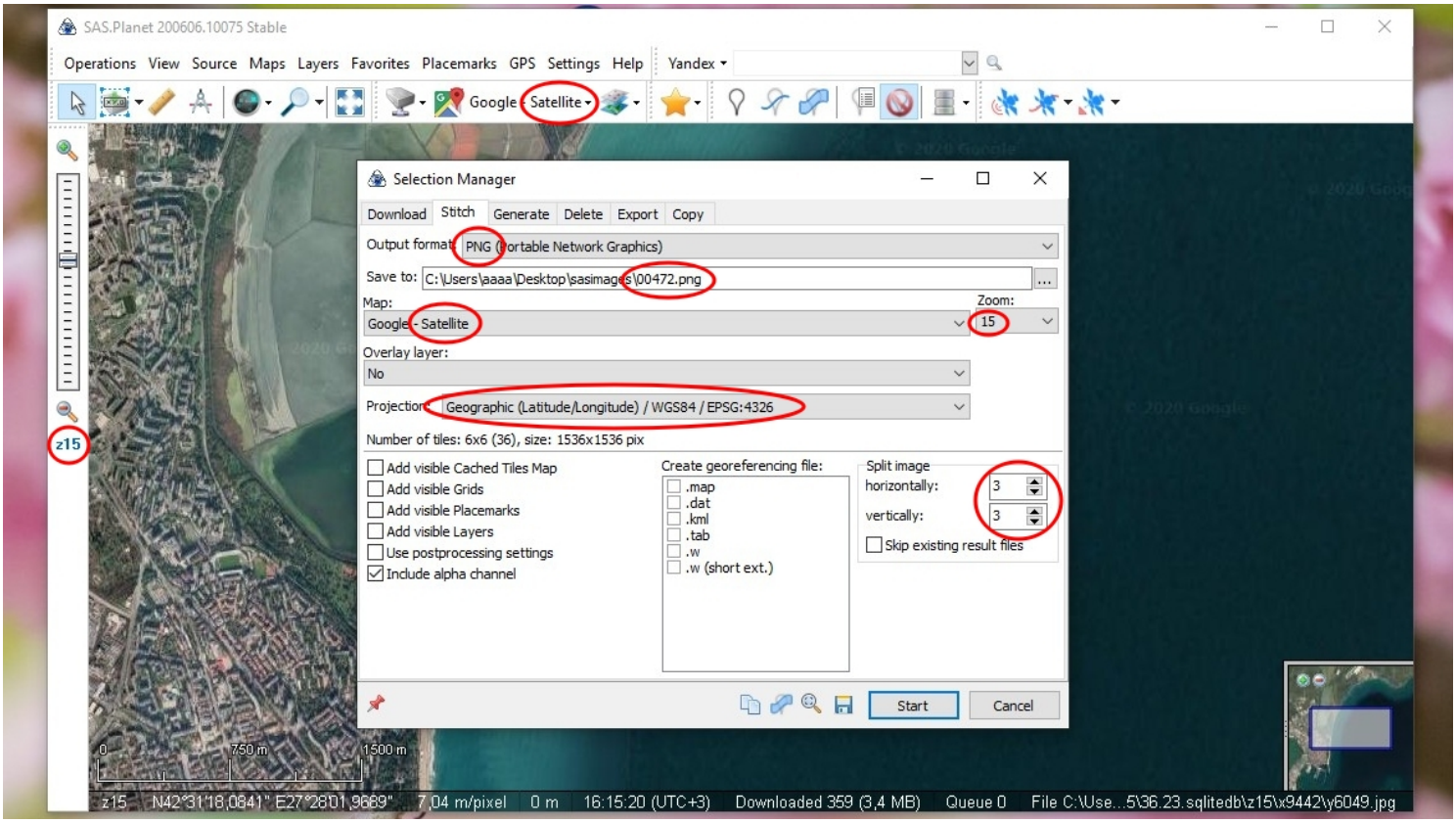
SASPlanet for new textures

Coordinates should to be used in SASPlanet program for download new high resolution map



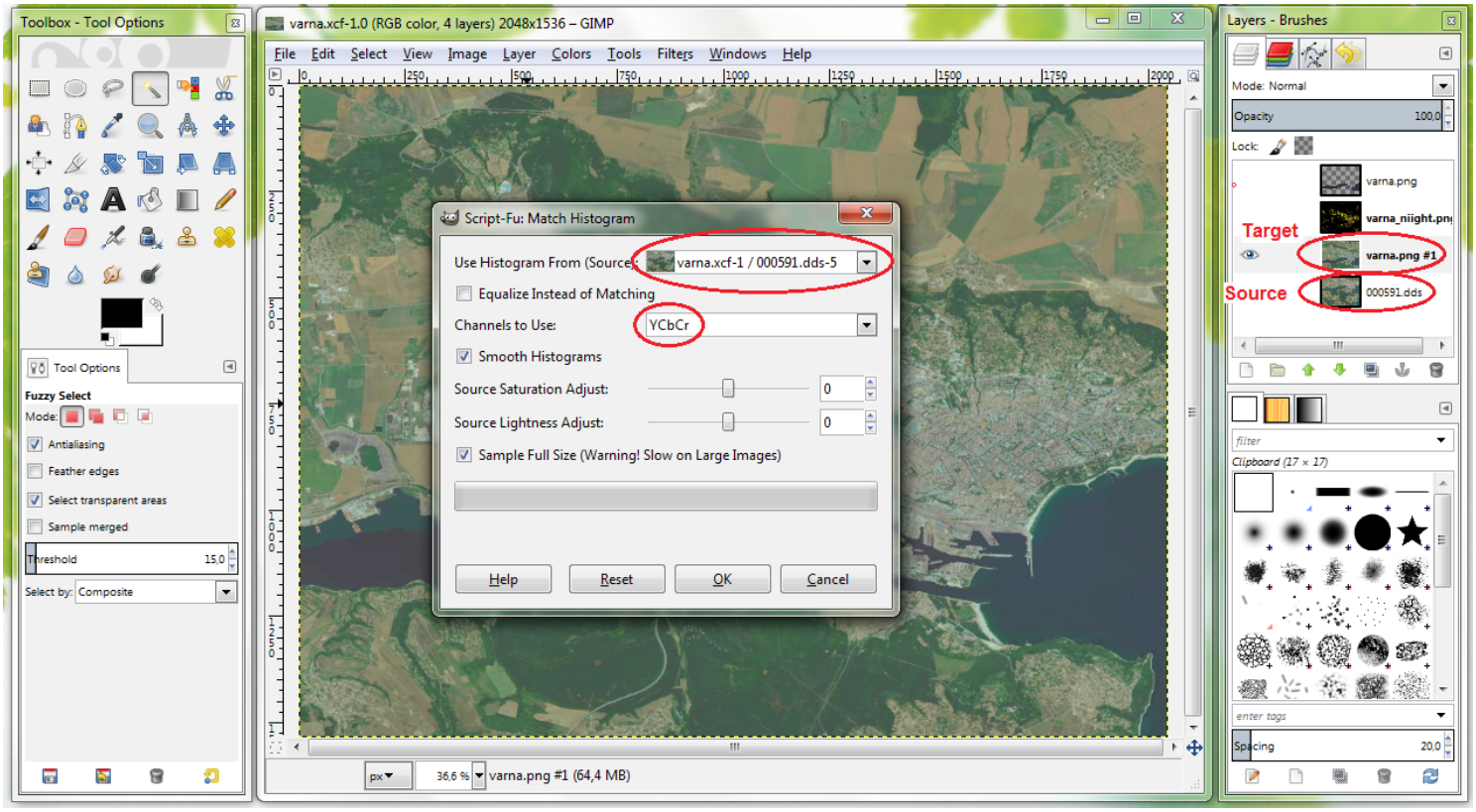
Selecting zoom level minus one from tileedit

Numbers for splitting of image by horizontally and vertically are counted from upper left tile to lower right tile from tileedit, and if yours area is different then counted right tiles



Reduce the color for new textures

Difference between the splitted image and native orbiter textures can be use this addition for Gimp
Gimp script: Histogram Match: http://www.silent9.com/blog/archives/162-Gimp-Script-Histogram-Match.html

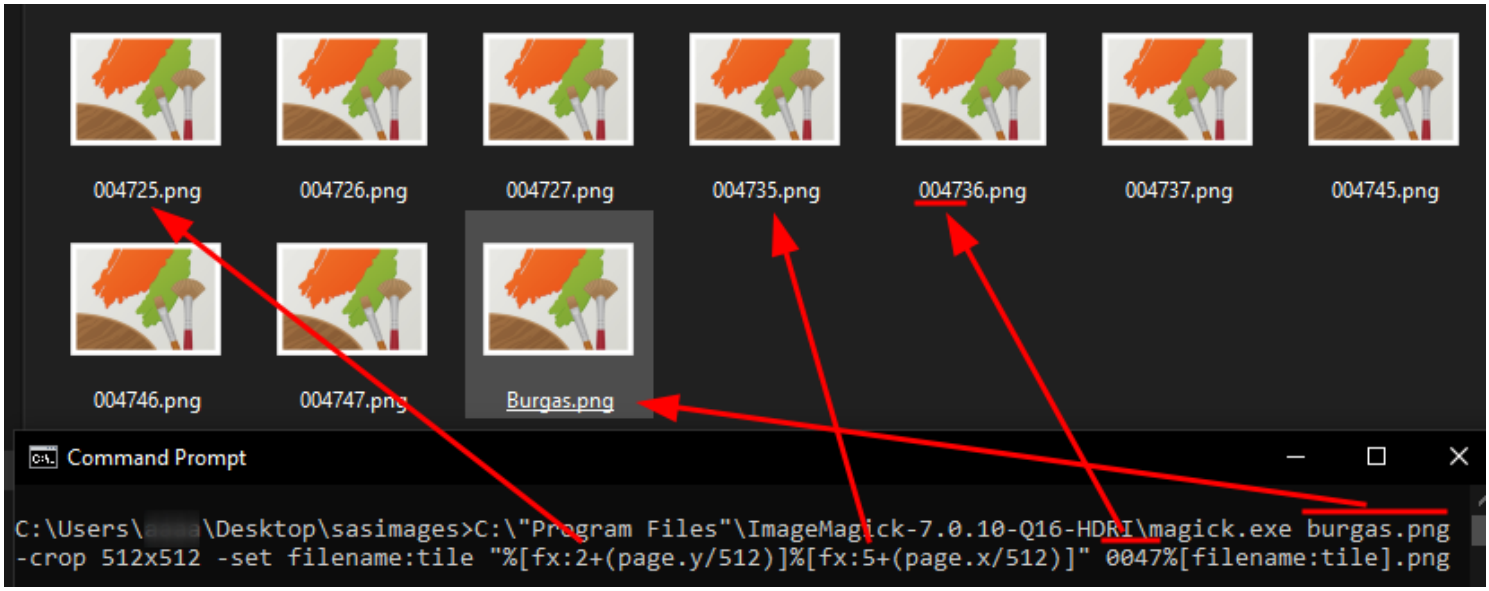


Splitting for new textures

For splitting image in files with size 512x512 are used next program and command:
ImageMagick (open source): https://imagemagick.org/script/download.php

C:\"Program Files"\ImageMagick-7.0.10-Q16-HDRI\magick burgas.png -crop 512x512 -set filename:tile "%[fx:2+(page.y/512)]%[fx:0+(page.x/512)]" 0047%[filename:tile].png

Result: as numbers 0047,2 and 5 are taken from tileedit program



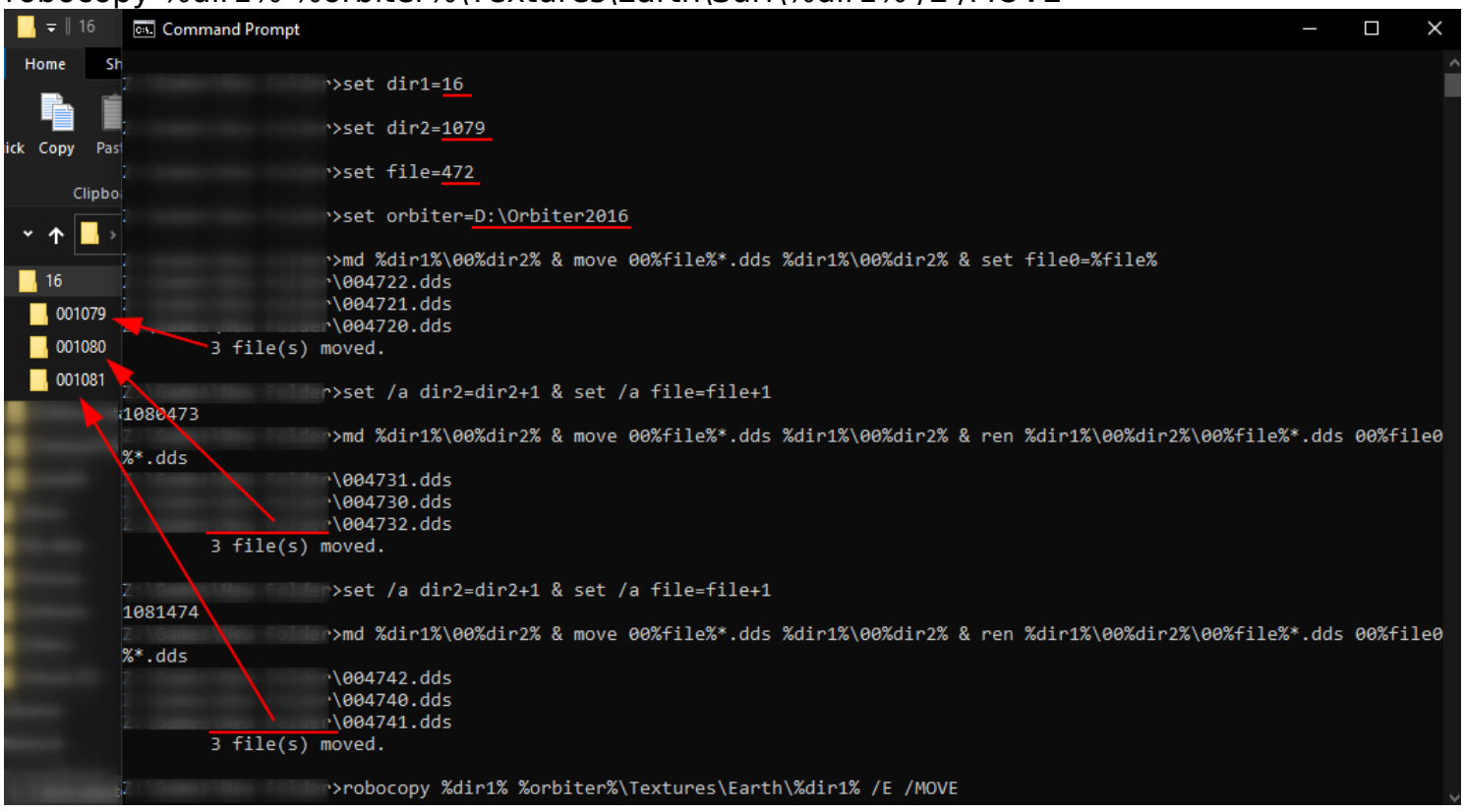
Converting splitted files

To the converting splitted files into dds format and delete png files is use the following command
C:\"Program Files"\ImageMagick-7.0.10-Q16-HDRI\magick mogrify -format dds -define dds:compression=dxt1 -define dds:cluster-fit=true -define dds:mipmaps=10 *.png & del 0*.png

Move and partially rename

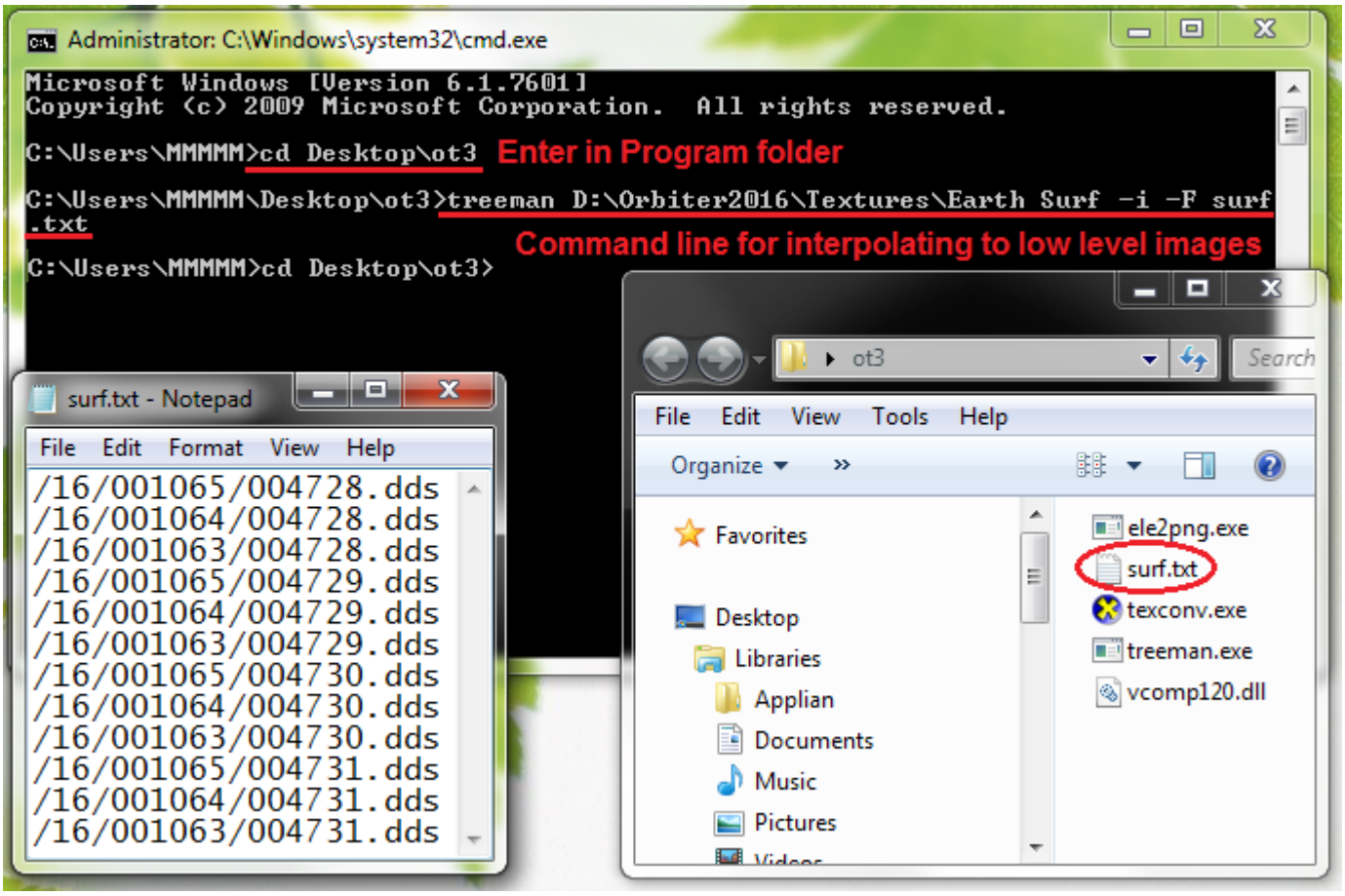
After converting of the files is necessary to be moved and partially renamed at tree structure in folders with next commands!

Commands for procedures:
:: Components bellow are taken from from tileedit program (16\001079\004720)
:: Just edit parameters in four rows with yours and execute in the terminal
:: Write your level in this case it is level 16
set dir1=16
:: Write your sublevel without first 00 from tileedit
set dir2=1079
:: Write your file name without first 00 and the last 0
set file=472
:: Write location of your Orbiter directory
set orbiter=D:\Orbiter2016
:: md … → made directory, move … → move the files, ren … → rename of the files
md %dir1%\00%dir2% & move 00%file%*.dds %dir1%\00%dir2% & set file0=%file%
set /a dir2=dir2+1 & set /a file=file+1
md %dir1%\00%dir2% & move 00%file%*.dds %dir1%\00%dir2% & ren %dir1%\00%dir2%\
00%file%*.dds 00%file0%*.dds
:: Copy commands bellow without robocoy … one more time if your map
:: is bigger than 3x3 tiles as is this example for smaller remove next commands
set /a dir2=dir2+1 & set /a file=file+1
md %dir1%\00%dir2% & move 00%file%*.dds %dir1%\00%dir2% & ren %dir1%\00%dir2%\
00%file%*.dds 00%file0%*.dds
:: Command to transfer into your Orbiter directory
robocopy %dir1% %orbiter%\Textures\Earth\Surf\%dir1% /E /MOVE



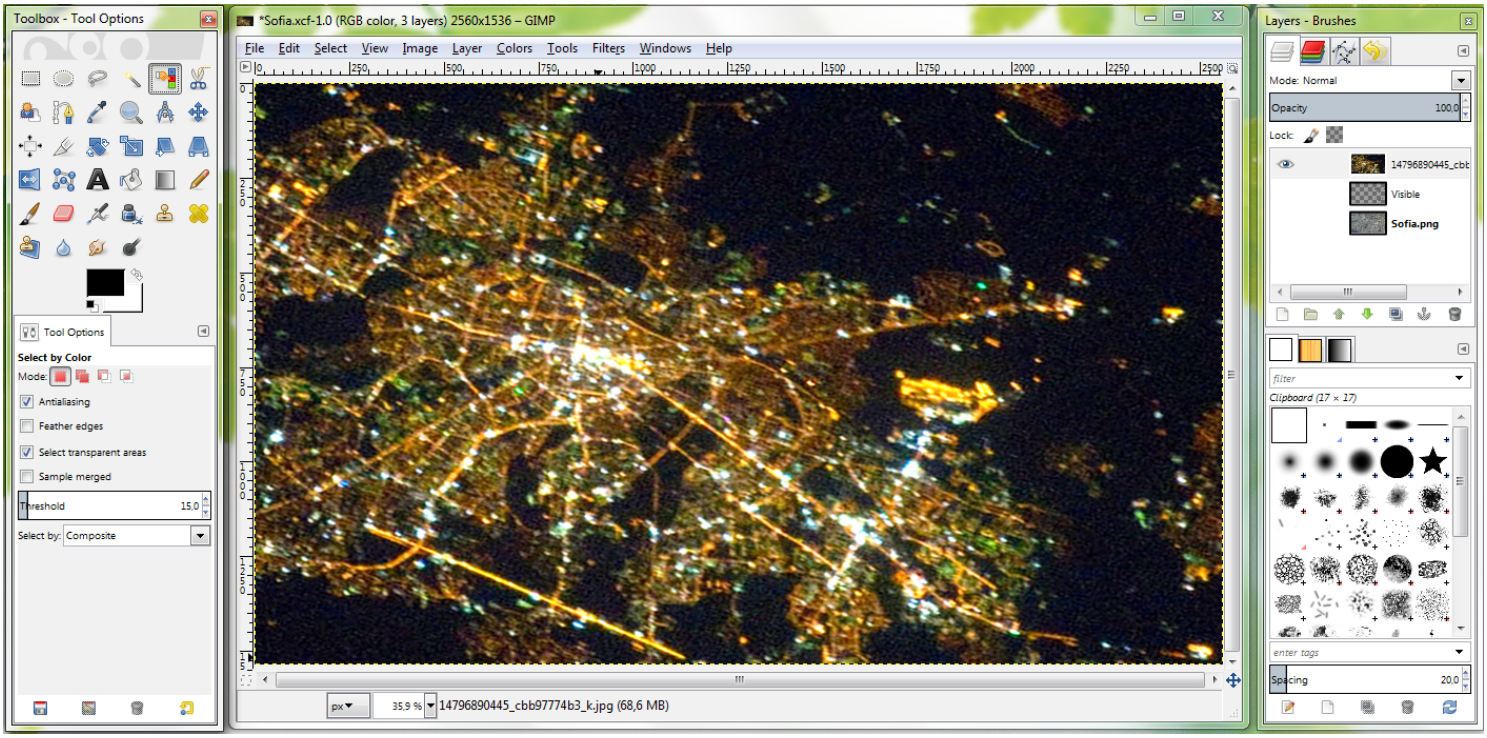
Generate low level for new textures

Low level of textures is necessary to being interpolating with the following command:
treeman D:\Orbiter2016\Textures\Earth Surf -i -F list.txt



Night mask

For night image (Mask)



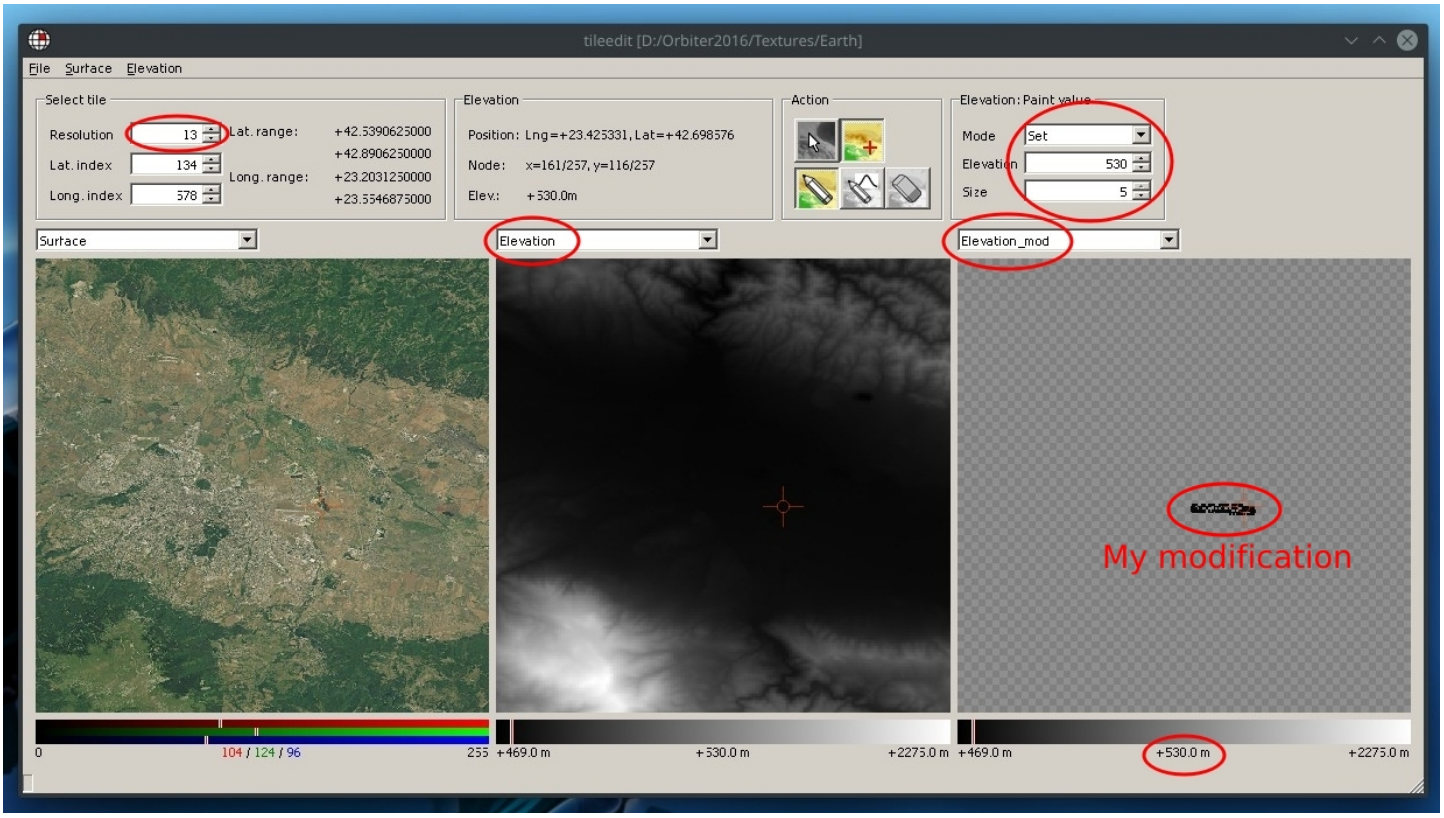
After image is ready is needed to be repeated steps of splitting and conversion but for a Mask folder

Command for generate low level for Mask

treeman D:\Orbiter2016\Textures\Earth Mask -i -F list.txt

Creating the elevation files

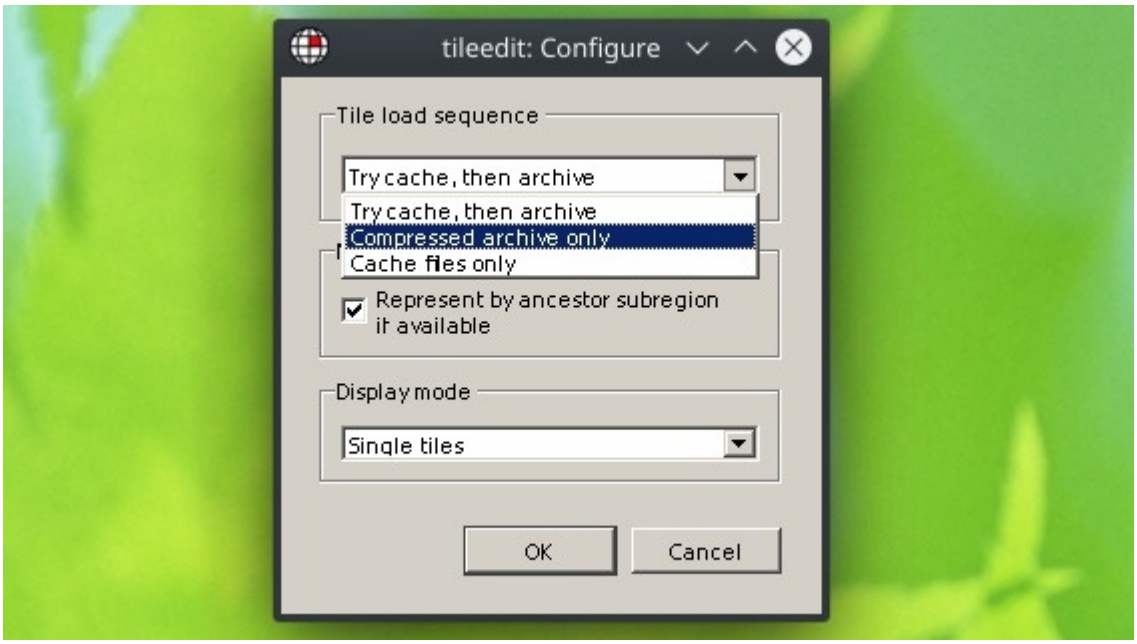
Open yours Orbiter folder in my case it is “D:/Orbiter2016/Textures/Earth”



Here should to be change Resolution to 13, Mode to Set and Size between 3-5 of the pen then to draw on the map as you choice altitude in my case it is 530 meters in Elevation field

these steps should to generate a flat area with altitude 530 meters for a smooth landing

but in case of problem with generation on the files open configure option from file menu and switch to “Compressed archive only”, then press the button OK wait a bit and switch again to “Try cache, then archive” and again press the button OK, this should to generate files and folder structure in Oribter folder



And the structure of the folders should looks something like on the picture below