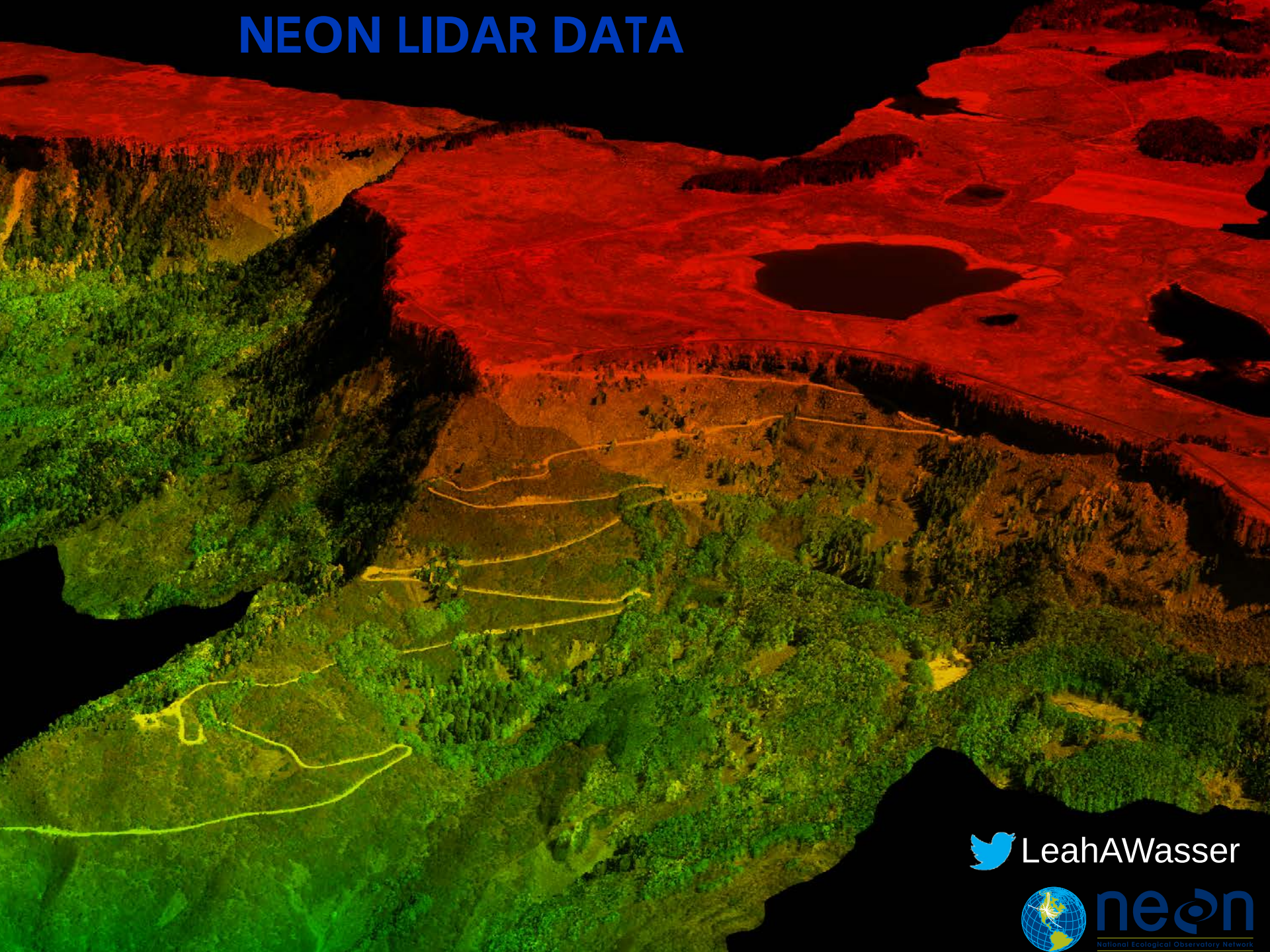
NEON LIDAR DATA



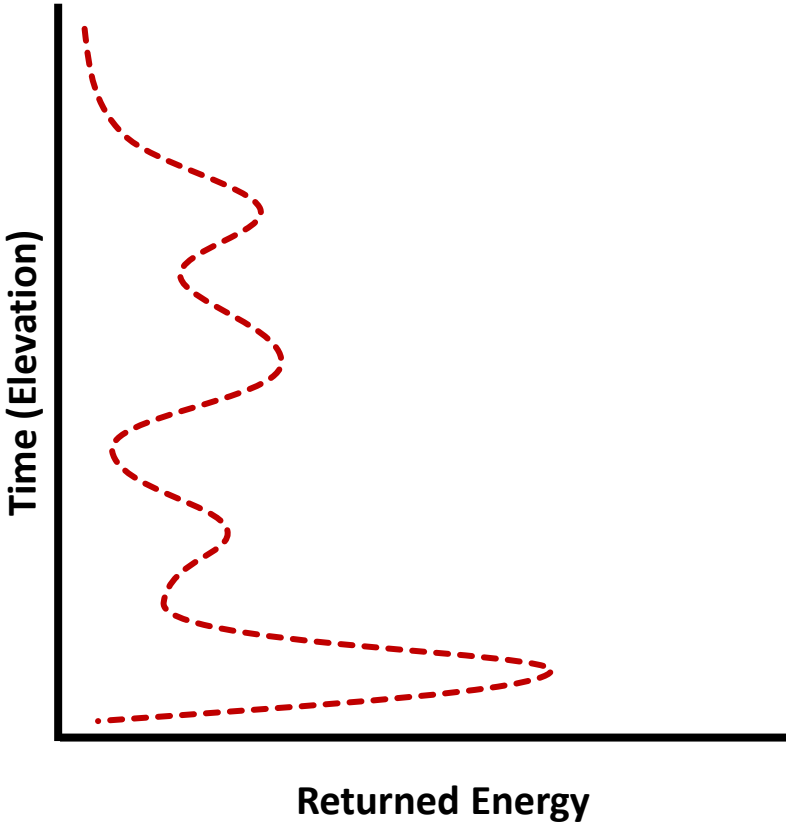
LeahAWasser

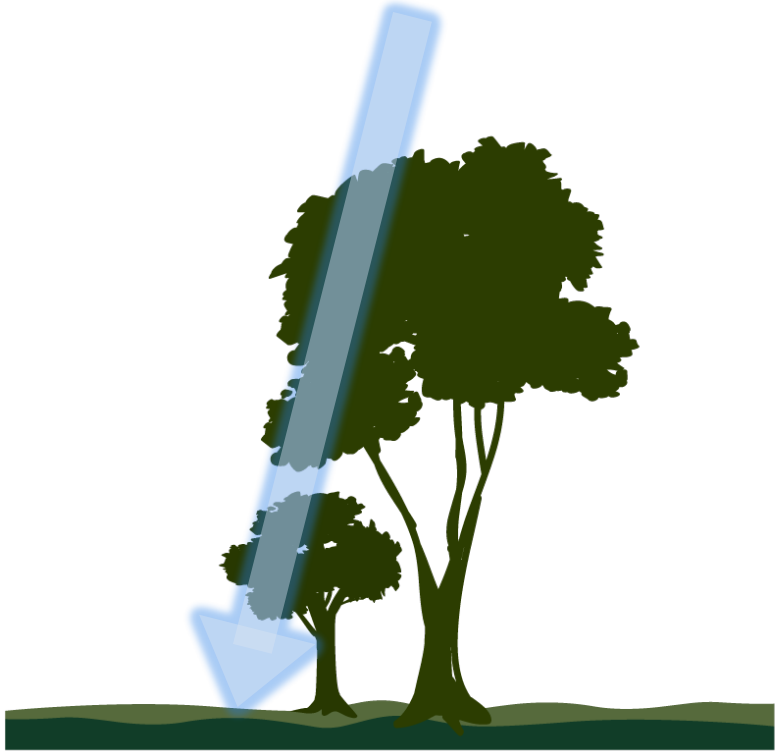
National Ecological Observatory Network

http://lwasser.github.io/NEON_HigherEd/

For some overview videos about LiDAR data…

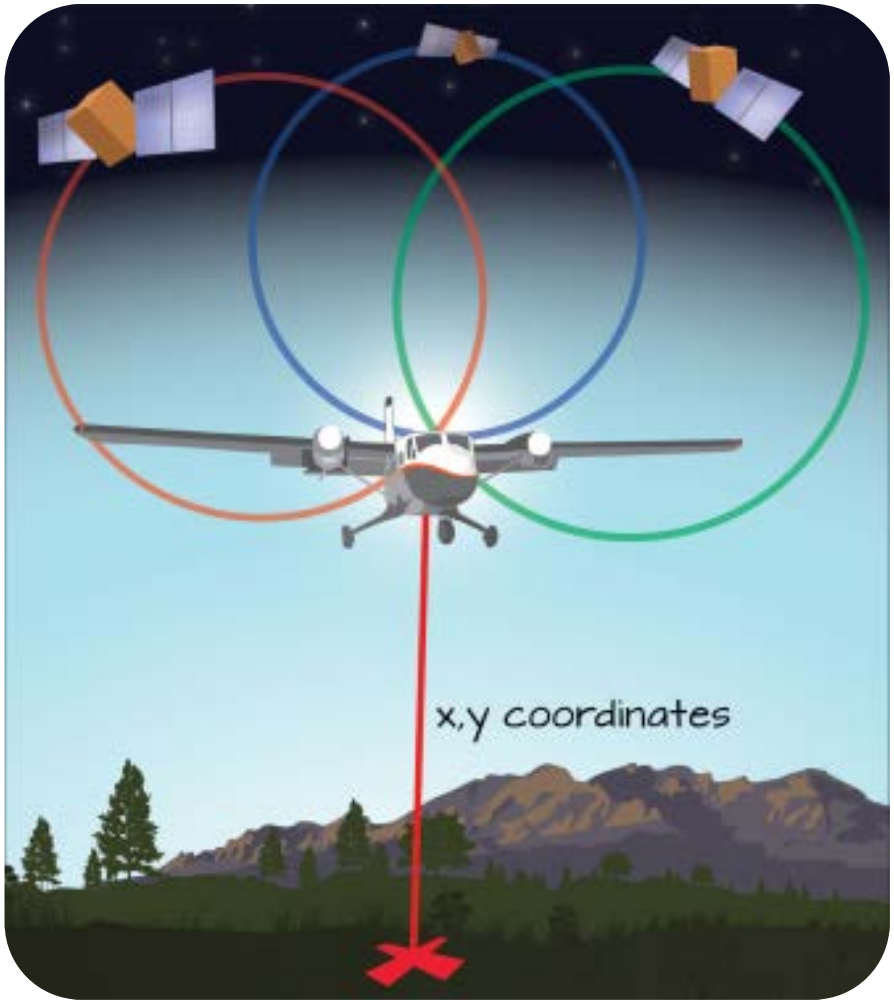
Reflected Light Energy



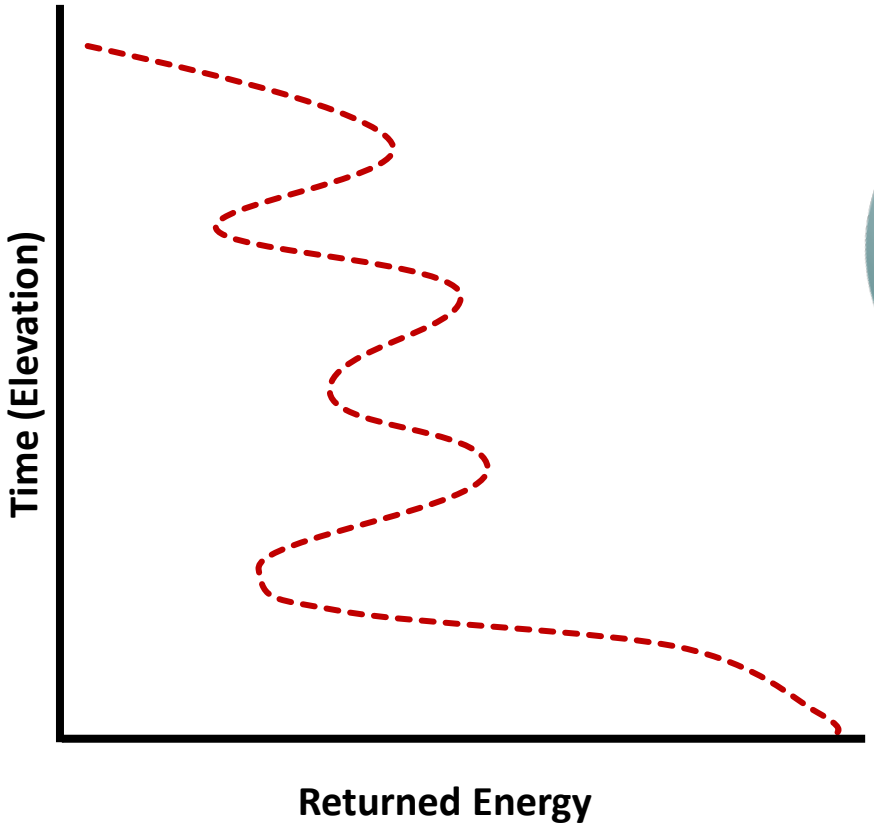


LiDAR Records

Geographic Location of Returns

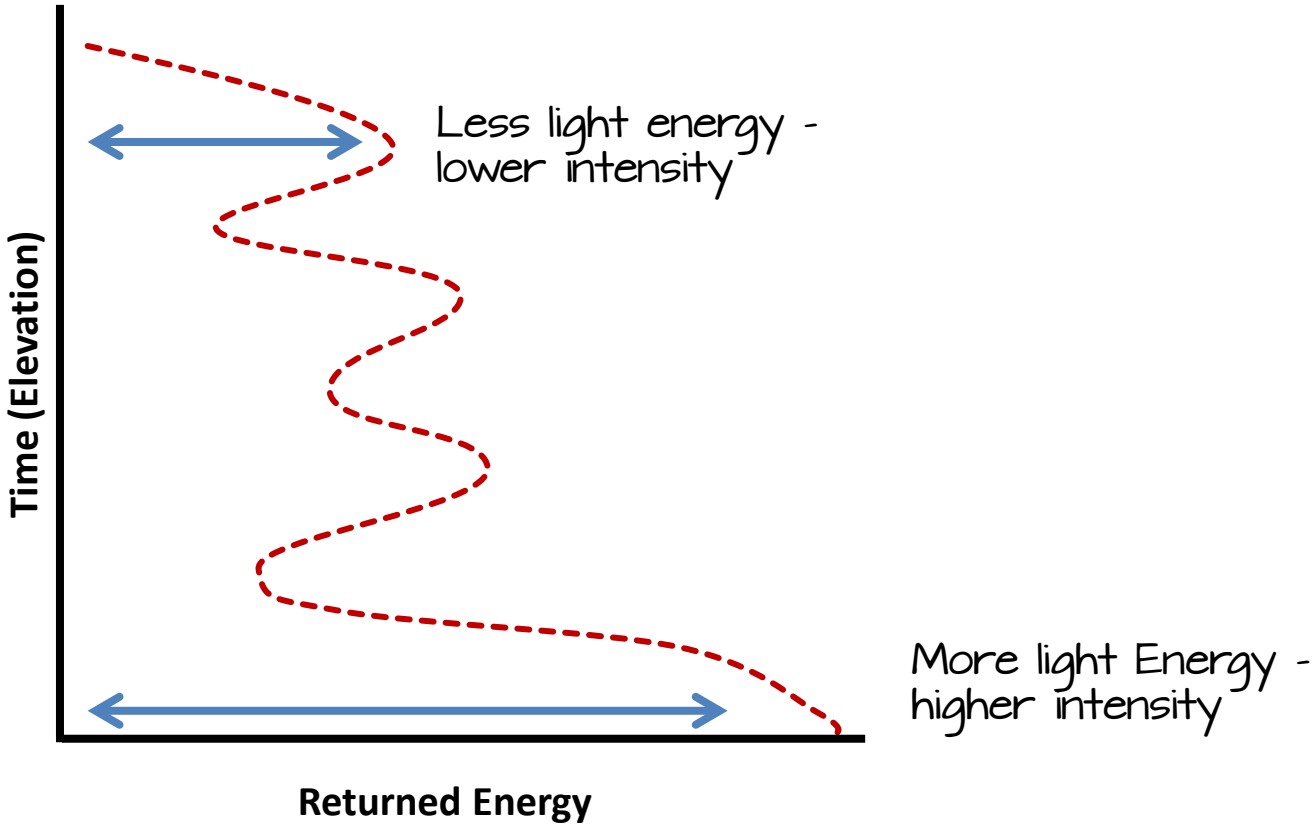


LiDAR Records
Travel Time



LiDAR Records

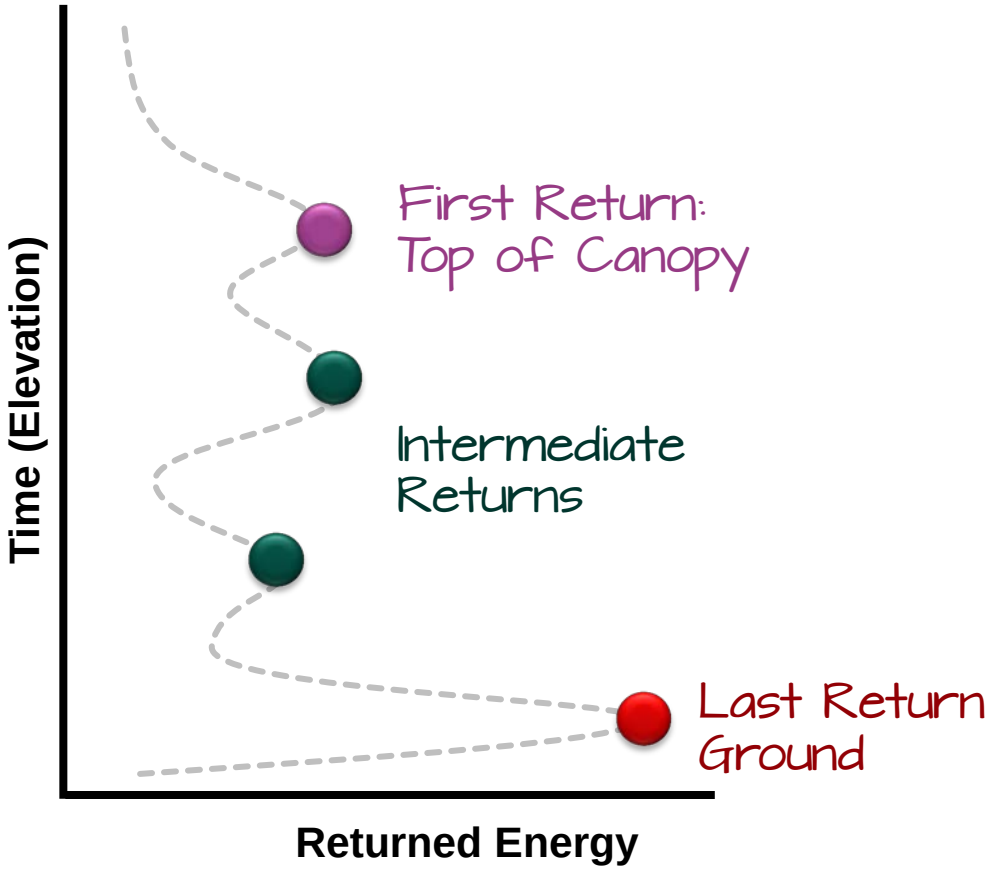
Amount of Light (Intensity)

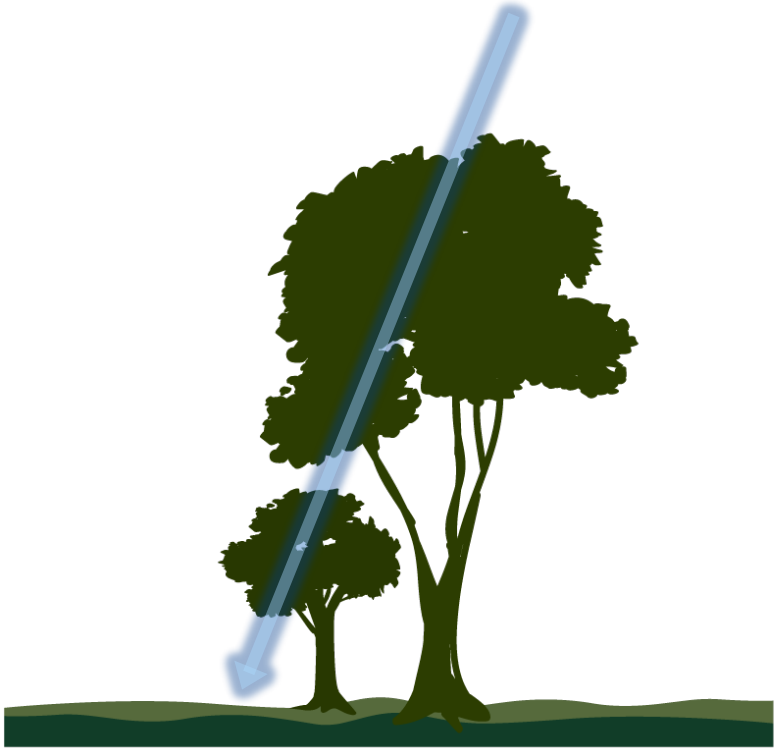


LiDAR Data Provides X,Y,Z + Intensity

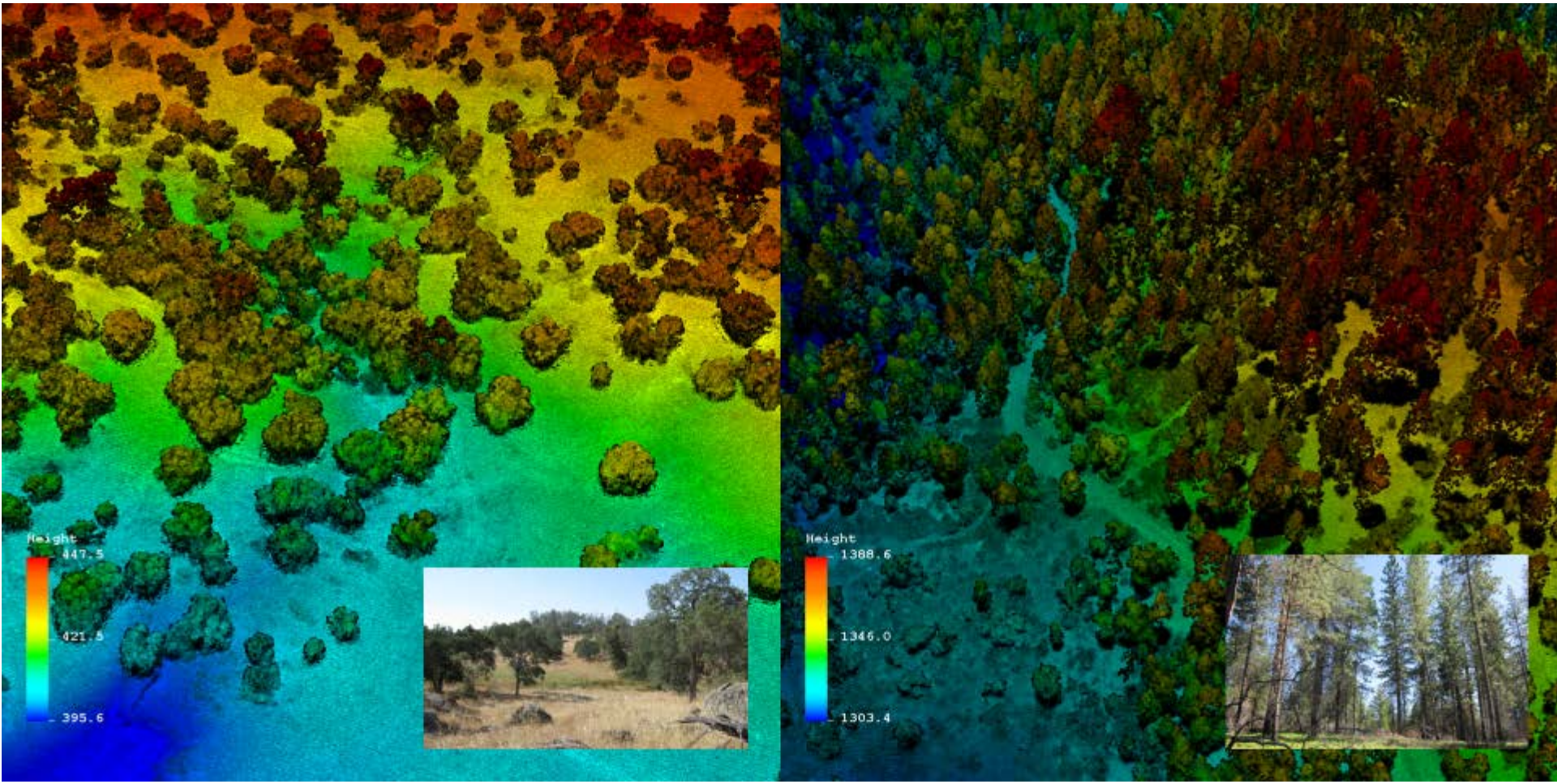
1. Geographic Location (x,y)
2. Travel Time (elevation / z)
3. Amount of light (intensity)

Discrete LiDAR - Multiple Returns

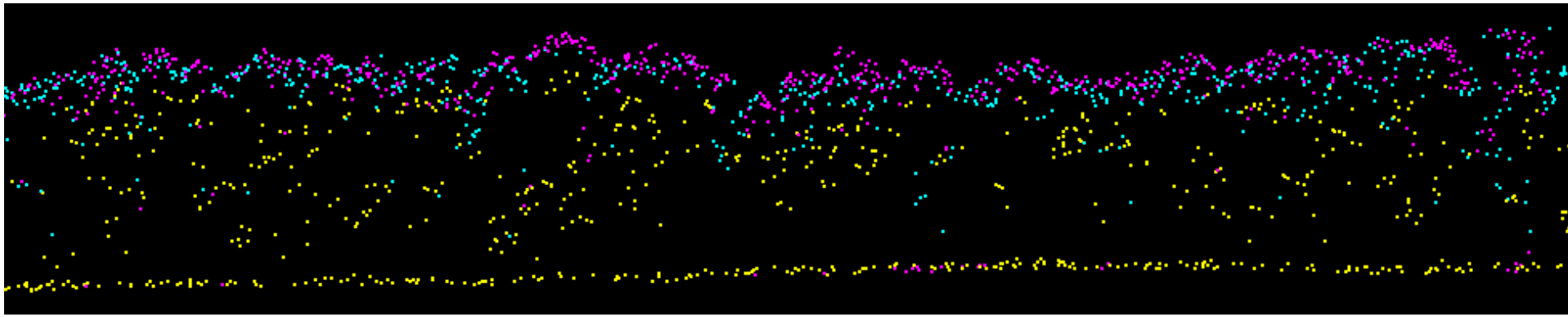


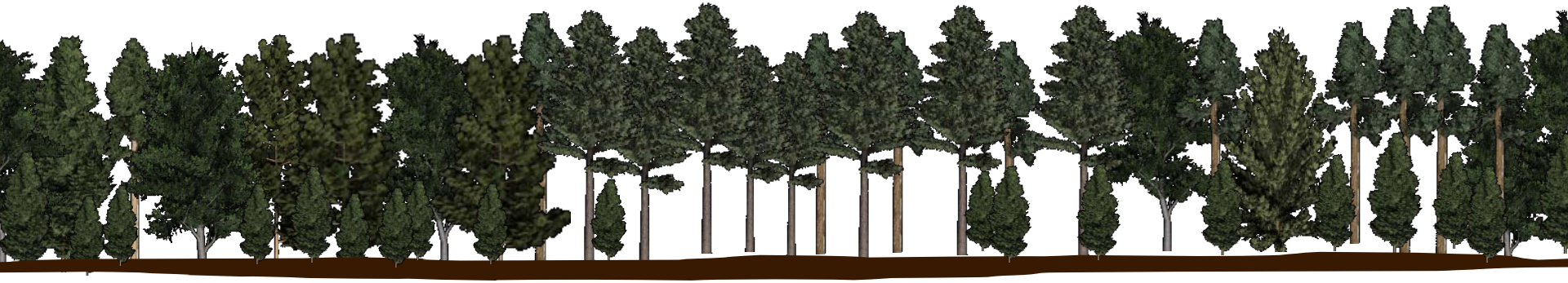


Discrete LiDAR

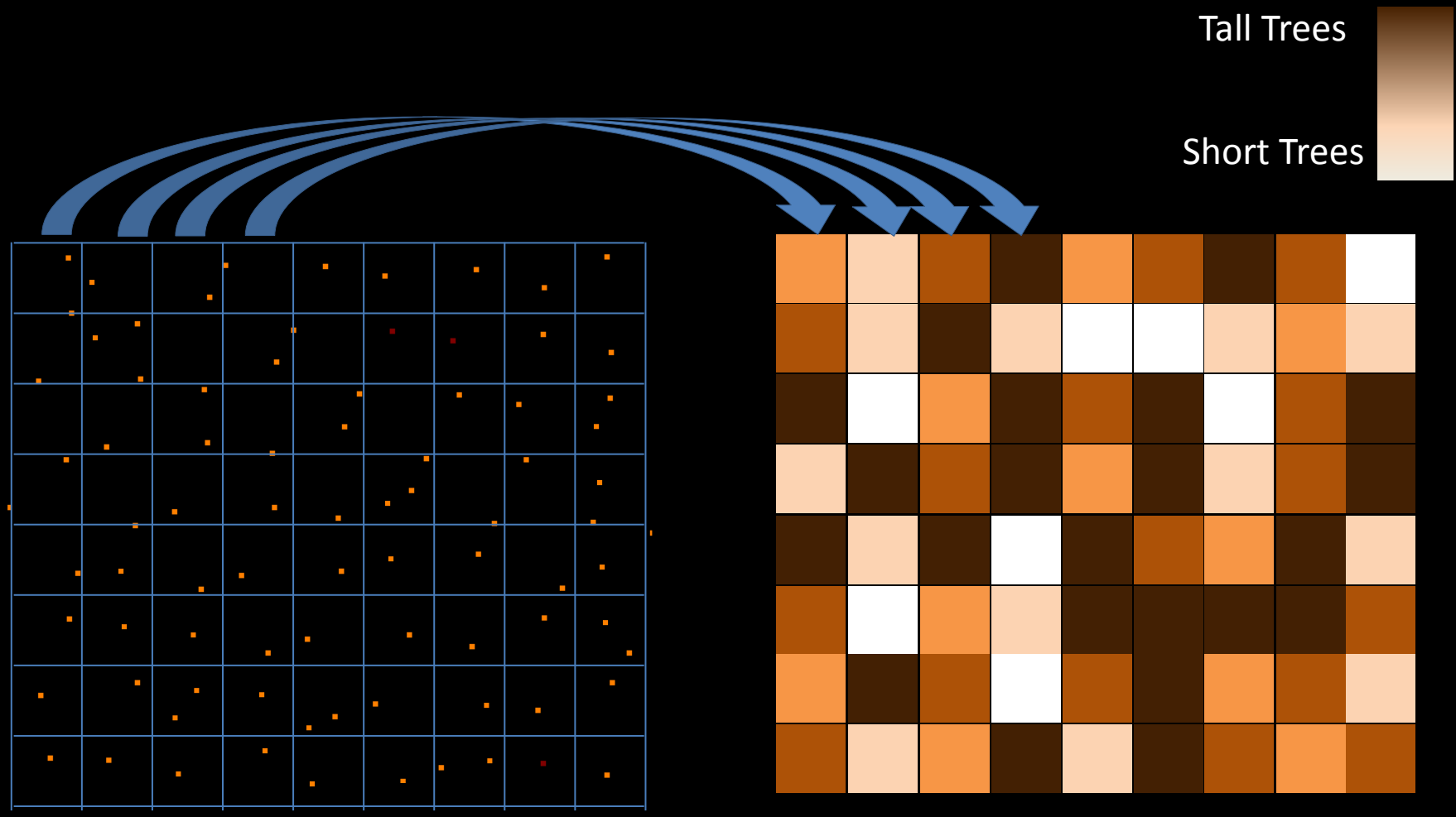


Plas.io





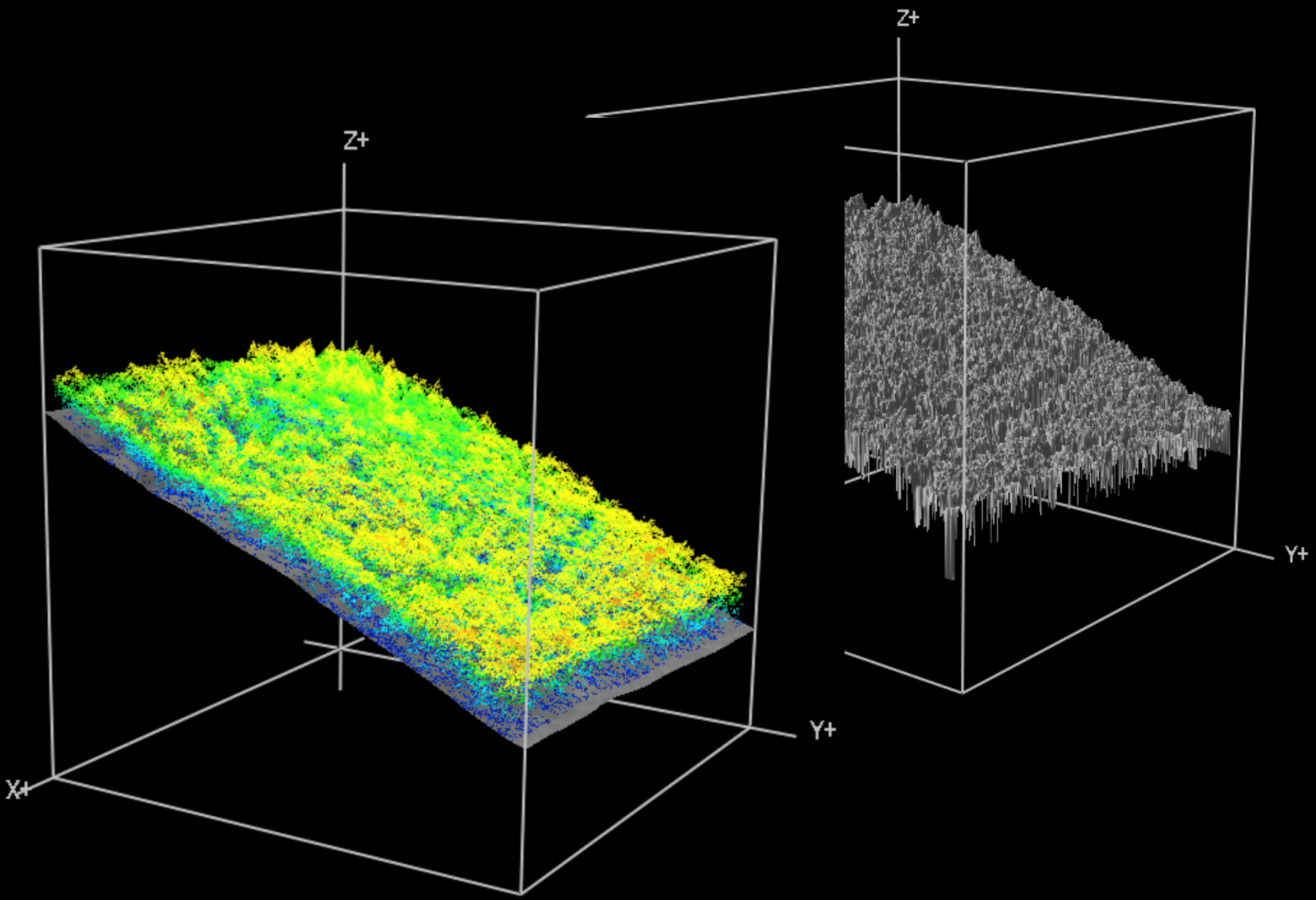
We Derive Rasters From LiDAR Data



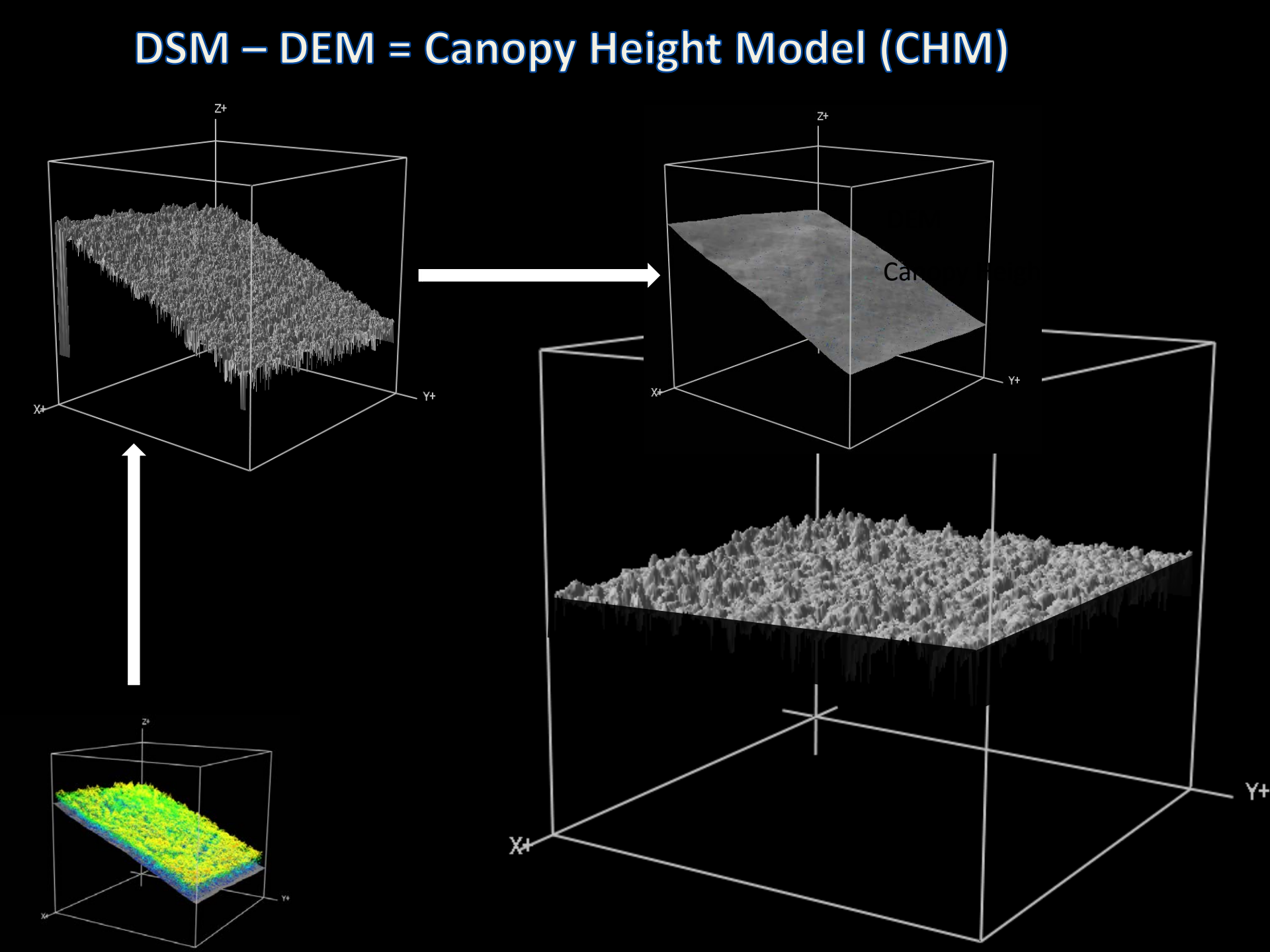
PLAS.IO

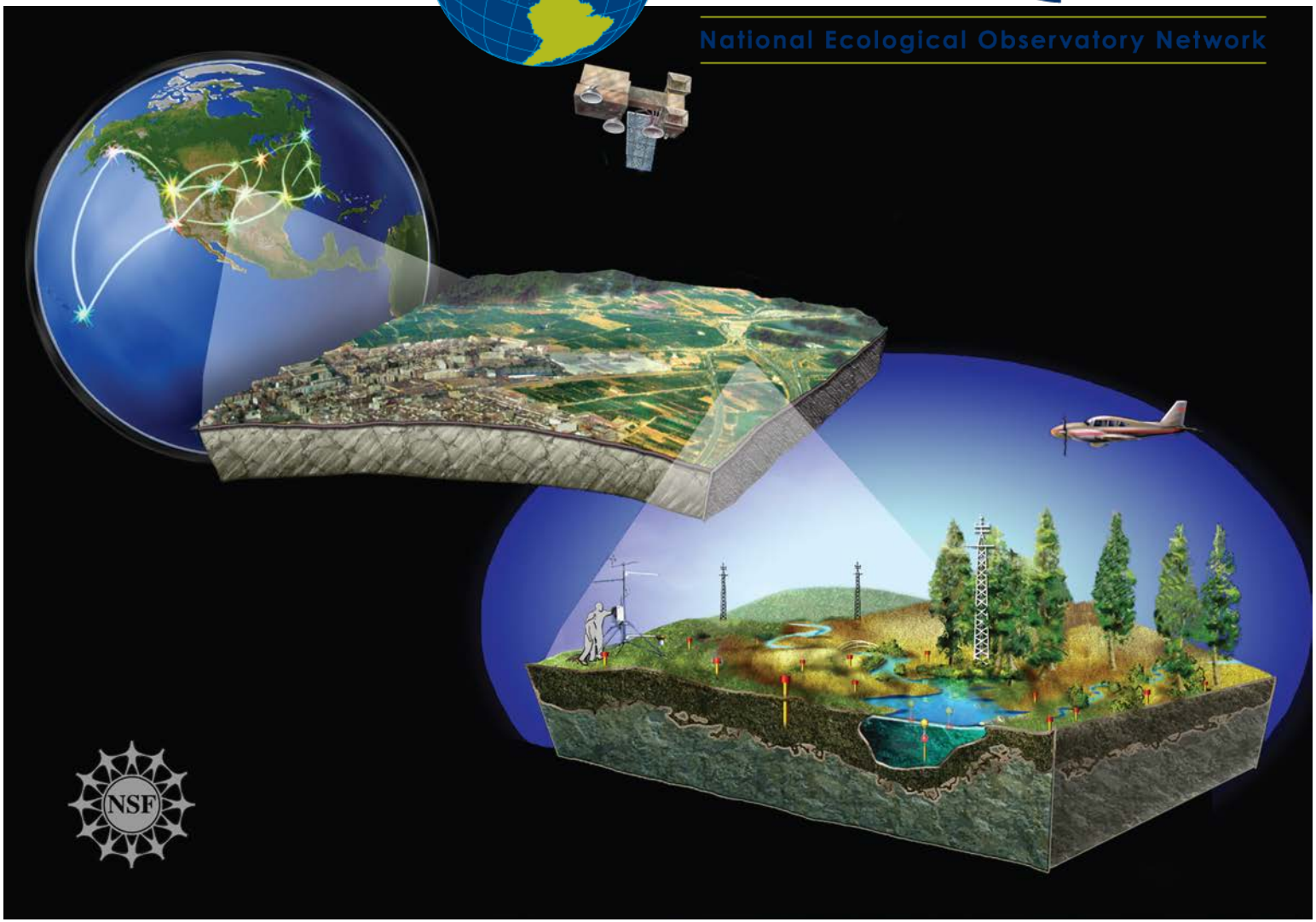
Let’s check out some LiDAR data before going any further.

http://neoninc.org/leah_test/ESA2014/DTM.html



DSM – DEM = Canopy Height Model (CHM)

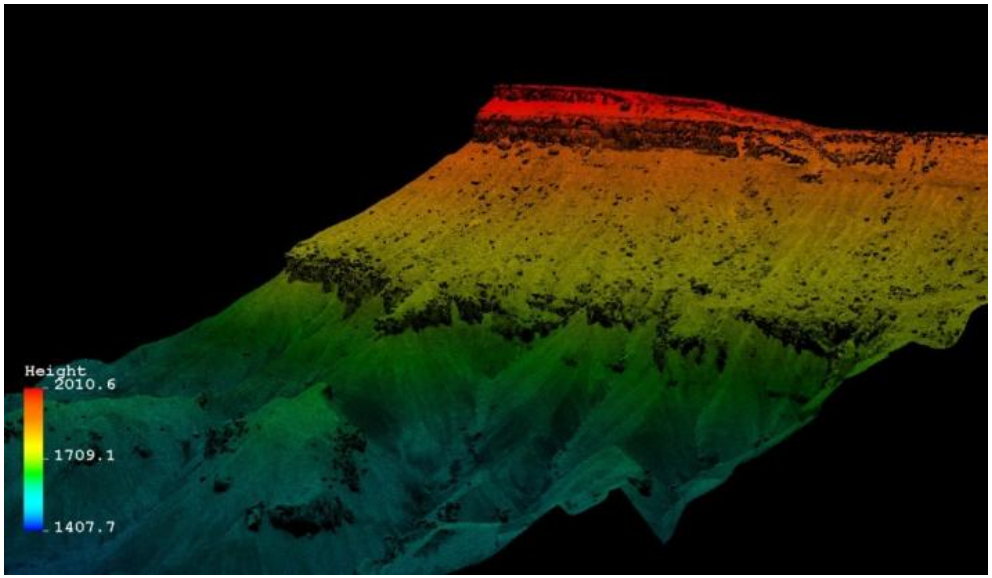


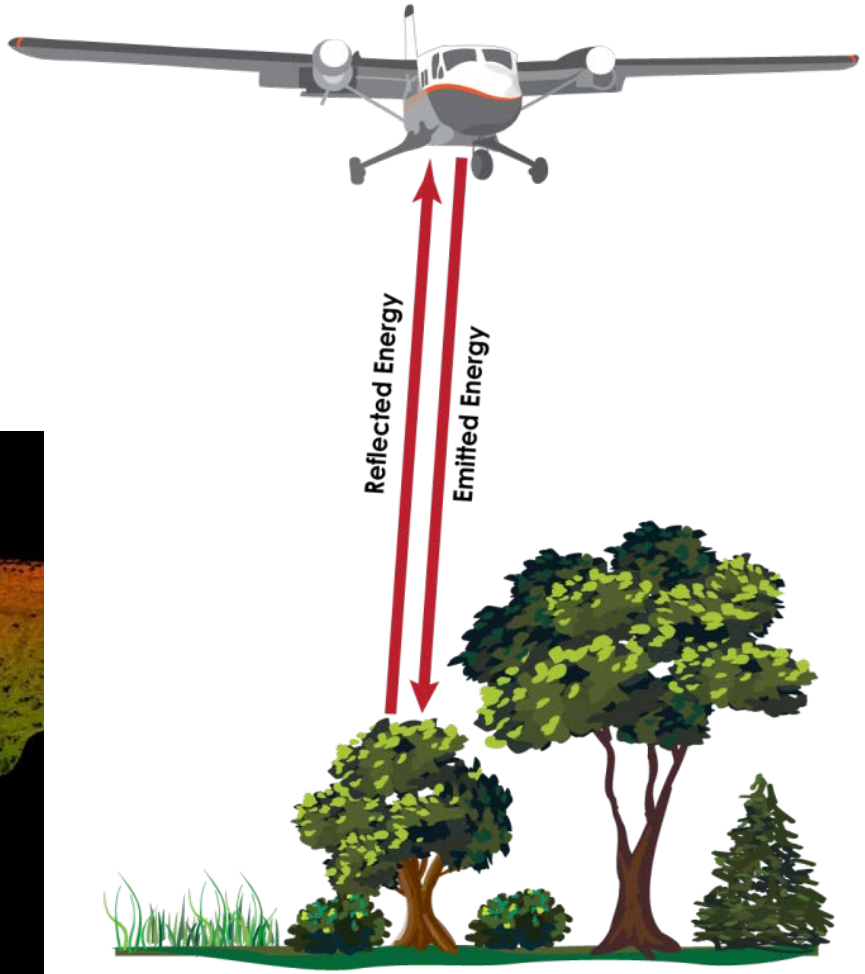


Free ecological data!

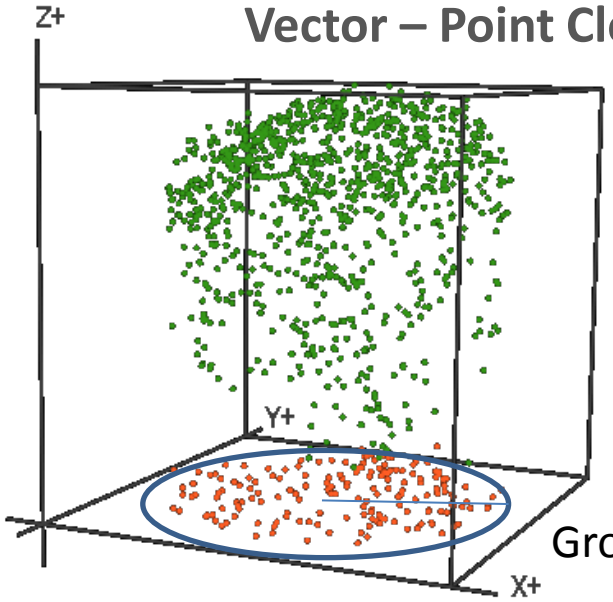
www.neoninc.org

Science and Geolocation with LiDAR





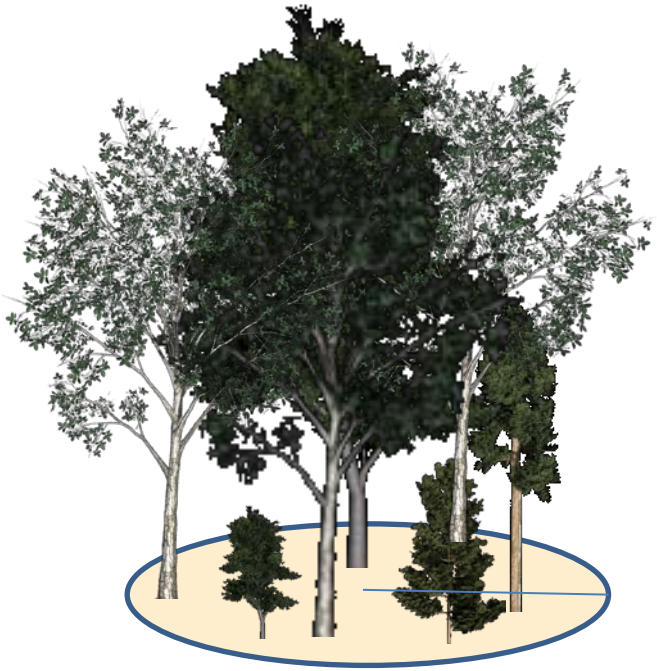
LiDAR Data Products

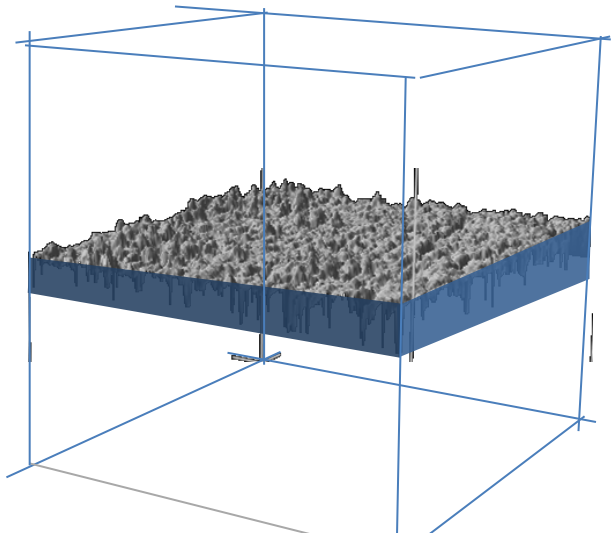


Vector – Point Clouds

Vegetation Returns

Ground Returns





Raster