

```
#Load Packages
library(easypackages)
libraries("rgdal", "gdalUtils", "raster", "lidR", "rGEDI", "rhdf5", "raster", "canopyLazR", "future",
"sf", "sp", "rgeos", "GISTools", "dplyr")
```

```
#2A Download and Clip to Camera Extent
```

```
ul_lon<- -115.05
lr_lon<- -114.0828
ul_lat<- 43.97
lr_lat<- 43.45
```

```
# Specifying the date range
```

```
daterange=c("2019-01-01", "2021-12-31")
```

```
#2A
```

```
gLevel2A<-gedifinder(product="GEDI02_A",ul_lat, ul_lon, lr_lat,
lr_lon,version="002",daterange=daterange)
outdir="/Volumes/Extreme Pro/GEDI/gedi_2a_test"
gediDownload(filepath=gLevel2A,outdir=outdir)
```

```
#clip
```

```
file_list_2a<-list.files("/Volumes/Extreme Pro/GEDI/GEDI_data_collect/gedi_2a", full.names
= TRUE)
name_list_2a<-list.files("/Volumes/Extreme Pro/GEDI/GEDI_data_collect/gedi_2a")
```

```
for (i in 1:length(file_list_2a)){
  gedilevel2a<-readLevel2A(file_list_2a[i])
  clipLevel2A(gedilevel2a, -115.05, -114.0828, 43.45,
43.97,output=file.path("/Volumes/Extreme Pro/GEDI/GEDI_data_collect/gedi_2a_clip",
name_list_2a[i]))
  rm(gedilevel2a)
}
```

```
#Get all 2A variables
```

```
file_list_2a_clip<-list.files("/Volumes/Extreme
Pro/GEDI/GEDI_data_collect/gedi_2a_clip_test", full.names = TRUE)
```

```
#first df to bind to in loop
```

```
gedilevel2a<- readLevel2A(file_list_2a_clip[1])
level2AM<-getLevel2AM(gedilevel2a)
```

```
level2AM$shot_number<-paste0(level2AM$shot_number)
```

```
first_2a<-level2AM
```

```
file_list_2a_clip<-file_list_2a_clip[2:length(file_list_2a_clip)]#remove first file used above
#loop
```

```
for (i in 1:length(file_list_2a_clip)){
```

```
  gedilevel2a<- readLevel2A(file_list_2a_clip[i])
```

```
level2AM<-getLevel2AM(gedilevel2a)

level2AM$shot_number<-paste0(level2AM$shot_number)

first_2a<-rbind(first_2a, level2AM)

rm(level2AM,gedilevel2a)
}

write.csv(first_2a, "GEDI_2a_data_all.csv")
```