

MAP MAKING WITH LIO-SAM (ROS2)

<https://github.com/TixiaoShan/LIO-SAM/tree/ros2>

Recording with Ouster OS2 (DO NOT USE record.xml)

Launch Ouster OS2 DRIVER

```
ros2 launch ouster_ros sensor.launch.xml viz:=false \  
  sensor_hostname:=os-992315000023.local
```

make sure `sensor.launch.xml` is set up per directions given in the LIO SAM ROS2 Repo

Record Bag

```
cd /media/jeffoh/trc-1tb/bagsJeff
```

```
ros2 bag record -o test666 /ouster/imu /ouster/points # change highlighted name
```

Launch LIO SAM

```
ros2 launch lio_sam run.launch.py
```

Play bag file in another terminal (while in bagsJeff)

```
ros2 bag play test666
```

Once the mapping is done, save to a directory

```
ros2 service call /lio_sam/save_map lio_sam/srv/SaveMap "{resolution: 0.2, destination:  
/Downloads/service_LOAM}" # change directory as needed
```

WITH NOVATEL IMU DATA

```
ros2 launch novatel_gps_driver tester_for_usb.launch.py
```

```
ros2 bag record -o please /imu /ouster/points # change highlighted name
```

TIME SYNCHRONIZATION ISSUES PRESENT

“unsynced timestamp of lidar and imu data may cause jittering/shaking, etc.” -liosam repo
look into cycloneDDS settings

IMPORTANT: USE ROS TIME FOR OUSTER TIME STAMP MODE!!!!
THE NOVATEL IMU USES ROS TIME