

# Gas Dispersion Simulator Installation Guide

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The simulator was developed for ROS Indigo. It is highly recommended to read the introduction tutorials in the ROS wiki (<http://wiki.ros.org/ROS/Tutorials>) before starting.

The following steps allow to create a dedicated catkin workspace for the simulator.

- 1) Inside the ROS working directory, if not already present, create a folder called “**src**”
- 2) Go to **catkin\_ws/src** and create a folder called “**simulated\_tdlas**” and copy the following folders: **dispersion\_simulation**, **environment**, **msgs\_and\_srvs**, **launch** and **simulated\_tdlas**
- 3) Go to “**simulated\_tdlas**” and run **catkin\_make**. The compiler should throw error messages.
- 4) Run **source devel/setup.sh**.
- 5) Run again **catkin\_make**. The code should compile successfully.
- 6) Before launching the simulator, edit the two **demo\_XXX\_launch.launch** and verify that the launch variables “/environment\_data” and “/wind\_data” are pointing to the locations of the environment file and wind file respectively.
- 7) In “**simulated\_tdlas**” run **roslaunch demo\_XXX\_launch.data**. An rviz window should open and show the gas dispersion simulation.
- 8) If you cannot see the green laser shoot around the room, in Rviz access to “Display” panel and modify the marker topic “Mox04/Sensor\_display” in “Tdlas04/Sensor\_display”