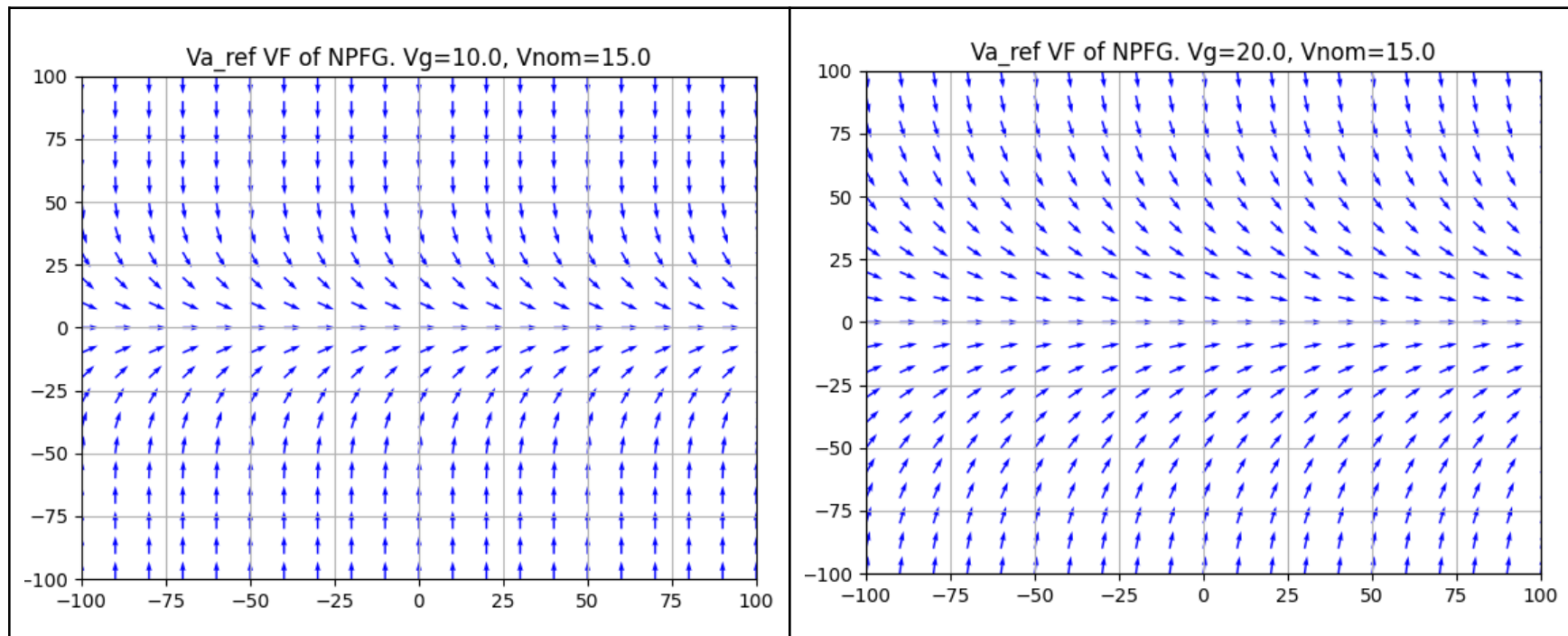# About

As discussed in the Weekly meeting from Jan 4, 2023 , an effort to visualize the Vector Field was tried out. Which hopefully gives more insight into how the NPFG expects/ commands vehicle to move.

Straight Path

Script can be found here.

Straight path passing through origin with 0 course angle (X+ direction)

Ground speed 10m/s. Track error boundary was 70.71 m.	Ground speed 20m/s. Track error boundary was 141.42 m.

Observations
- Regardless of vehicle's true air-speed (which equals ground speed, in wind-less environment simulated), the commanded air reference velocity had a constant magnitude of 15 m/s (nominal airspeed).
  - <u>Is this desired? Do we really want to command the vehicle to always stick to nominal airspeed?</u>
  - Note, the airspeed manipulating logic hasn't been implemented yet (only minimum ground-speed requirement)
- With higher ground speed, track-error boundary is higher (larger), and air-velocity reference vector starts turning it's bearing earlier (further from the path) > As expected