

## 仿真运行过程说明

ACC 系统使用 Carsim(2019.0)联合 MATLAB/Simulink(2018b)仿真,

ACC\_constant.cpar 文件表示使用定距离巡航, ACC\_safe.cpar 文件基于安全距离巡航。求解结果包含于文件中(先定速巡航遇到前车后跟随巡航)。工况和环境设置均在 ACC\_Adaptive 类下。

### (1) 定距离巡航

The screenshot displays the ACC simulation interface with three main sections:

- Simulated Test Specifications:**
  - Math Model: Ind\_Ind
  - C-Class, Hatchback
  - Procedure: vx=0
  - Miscellaneous Data: 1200 m, One Lane, Mu = 0.85
  - Miscellaneous: Adaptive Cruise and Follow
- Run Control with Simulink:**
  - Run Now, Send to Simulink, Models: ACC\_constant
  - Do not set file type here, Write all outputs
  - Output Variables:
  - Some buttons are dimmed because the data set is locked
  - Set time step here
  - Do not set time, station, or direction here
- Analyze Results (Post Processing):**
  - Video, Video + Plot, Set color
  - 180 deg. Azimuth, 15 deg. El., Veh. Ref.
  - Keep Last, Most Recent Output
  - Plot, More plots: 3, Only these plots
  - Longitudinal Speed (Vxz\_Fwd) vs. Time #1
  - Distances for Closest 2 Objects, Sensor 1
  - Longitudinal Accel. of CG's vs. Time

选择 datasets 中 my\_acc 类下的 ACC\_constant, 具体设置如上图所示

### (2) 安全距离巡航

The screenshot displays the ACC simulation interface with three main sections:

- Simulated Test Specifications:**
  - Math Model: Ind\_Ind
  - C-Class, Hatchback
  - Procedure: vx=0
  - Miscellaneous Data: 1200 m, One Lane, Mu = 0.85
  - Miscellaneous: Adaptive Cruise and Follow
- Run Control with Simulink:**
  - Run Now, Send to Simulink, Models: ACC\_safe
  - Do not set file type here, Write all outputs
  - Output Variables:
  - Some buttons are dimmed because the data set is locked
  - Set time step here
  - Do not set time, station, or direction here
- Analyze Results (Post Processing):**
  - Video, Video + Plot, Set color
  - 180 deg. Azimuth, 15 deg. El., Veh. Ref.
  - Keep Last, Most Recent Output
  - Plot, More plots: 3, Only these plots
  - Longitudinal Speed (Vxz\_Fwd) vs. Time #1
  - Distances for Closest 2 Objects, Sensor 1
  - Longitudinal Accel. of CG's vs. Time

选择 datasets 中 my\_acc 类下的 ACC\_safe, 具体设置如上图所示