

Import libraries

```
In [1]: # Python libraries
import os
import sys
import pandas as pd # for data manipulation
import numpy as np # for data manipulation
import tensorflow as tf
from sklearn.model_selection import train_test_split
from datetime import datetime
import time

# Plotting
import matplotlib.pyplot as plt

# To enable LaTeX and select a font
plt.rcParams.update({
    "text.usetex": True,
    "font.family": "sans-serif",
    "font.sans-serif": "Helvetica",
})

# Using ipynb import functions defined in other nb
sys.path.append("myfun/")
from ipynb.fs.defs.myfun_load_dataset import *
from ipynb.fs.full.myfun_nn import *
from ipynb.fs.defs.myfun_plot import *
```

2023-09-11 20:29:22.916320: I tensorflow/core/platform/cpu_feature_guard.cc:193] This TensorFlow binary is optimized with oneAPI Deep Neural Network Library (oneDNN) to use the following CPU instructions in performance-critical operations: SSE4.1 SSE4.2 AVX AVX2 FMA To enable them in other operations, rebuild TensorFlow with the appropriate compiler flags.

Tensorflow/Keras: 2.11.0
sklearn: 1.3.0

Data Acquisition

```
In [2]: # Load the dataset
par_dir = os.path.dirname(os.getcwd()) # parent dir
dir_name = par_dir + "/NN-interaction"
```

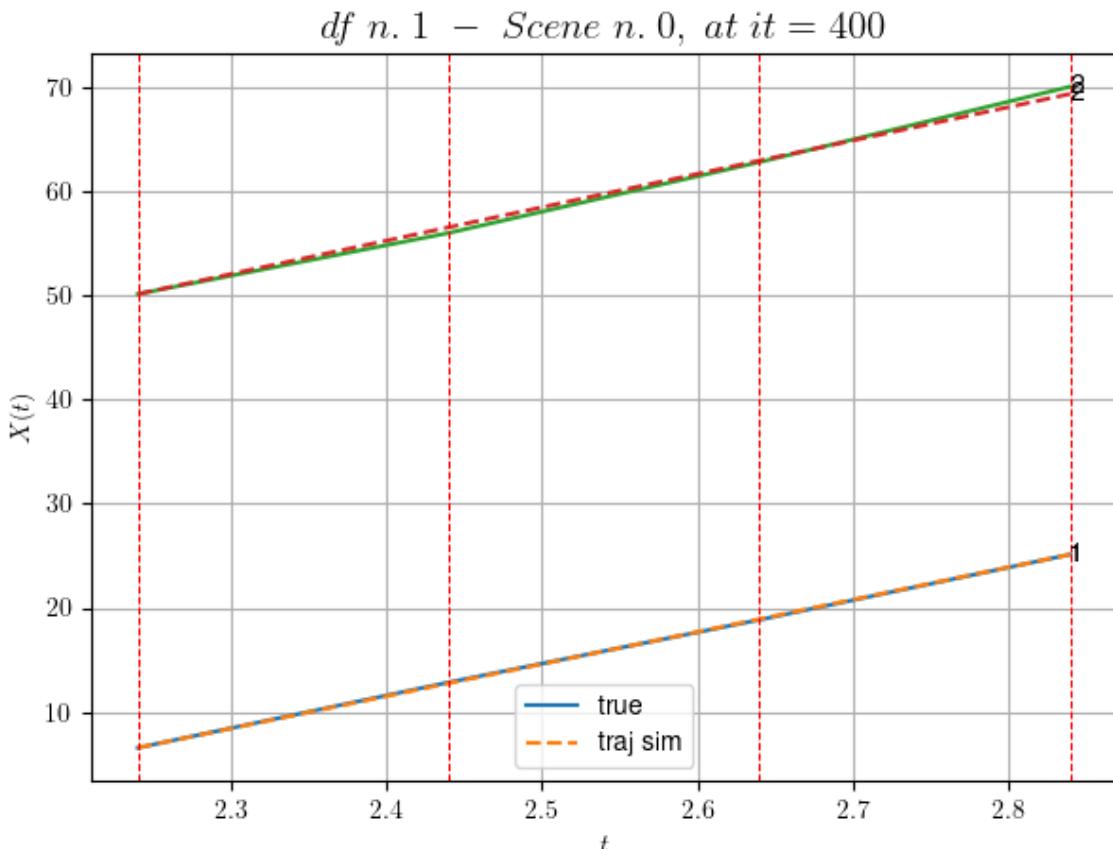
```
In [3]: processed_flag = 'pre'
# load the data
_, dflist = load_dataset(dir_name, processed_flag)
dataset = dflist
```

```
In [4]: # params
DOE =[1,2,1] #Design of experiment
v0_guess = 30
NUM_ITER = 500
LEARNING_RATE_v0 = 0.5
flag_save = True
```

NN: 1-2-1

```
In [5]: info_nn2 = solve_nn_dataset(DOE, v0_guess, dataset, processed_flag, N
```

```
-----
NN structure: 1-2-1
*****
*****
In df n.1/10 we have 109 scenes
df n.1, scene n.0/109
=====
=====
We have 3 time intervals inside [2.24,2.84]
* err= 0.102739968793566
* Learning rate NN = 6.560998735949397e-05
* diff = 4.698410978054568e-07
```



For scene 0/109

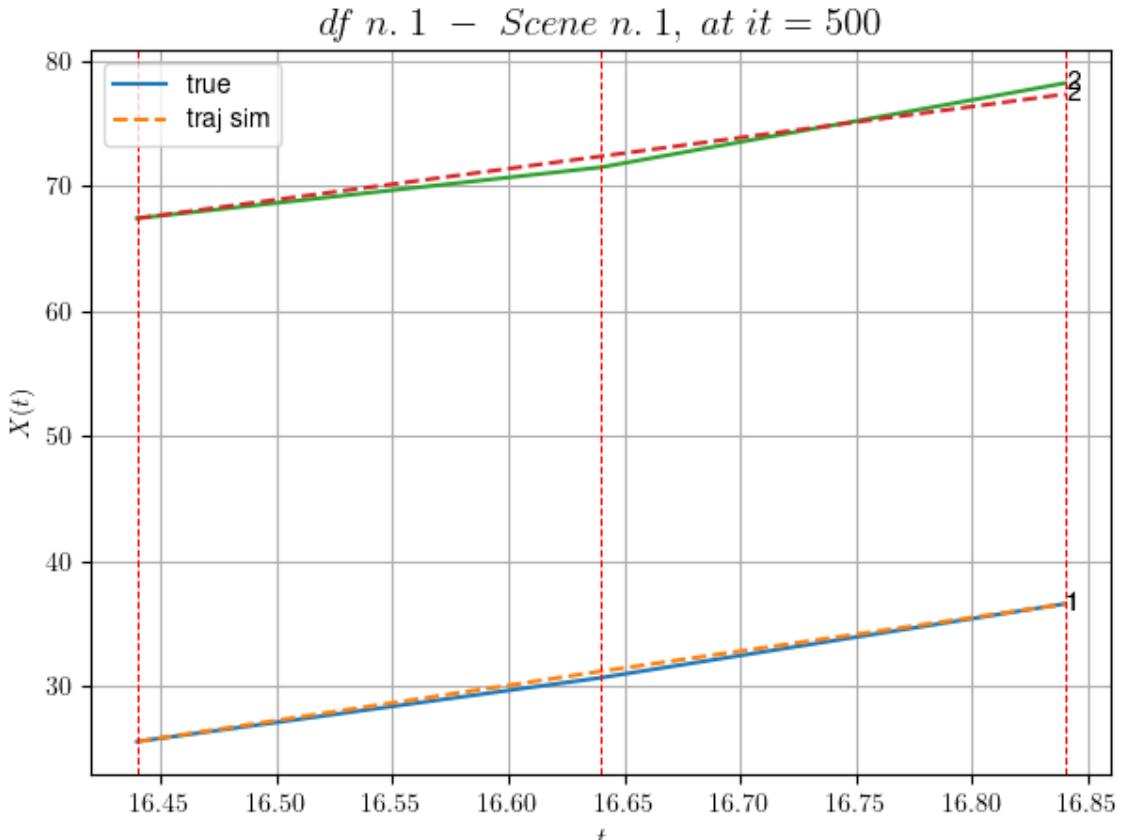
- * use LR_NN=0.0001 with err=0.5357113121503057 at it=24
- * v0_scn_mean = 31.977260886110777
- * MAE = 0.10273331106628164

```
=====
=====
df n.1, scene n.1/109
=====
```

```
=====
=====
We have 2 time intervals inside [16.44,16.84]
- Time interval n.0: [16.44, 16.64]
  * y_true: [25.53040317]
  * v_ann: [28.086904525756836, 24.819169840097512]
```

```
- Time interval n.1: [16.64, 16.84]
  * y_true: [29.53066068]
  * v_ann: [26.891016006469727, 24.819169840097512]
```

```
* err= 0.3037748172539817
* Learning rate NN = 3.6449993785936385e-05
* diff = 1.603483561951613e-05
```

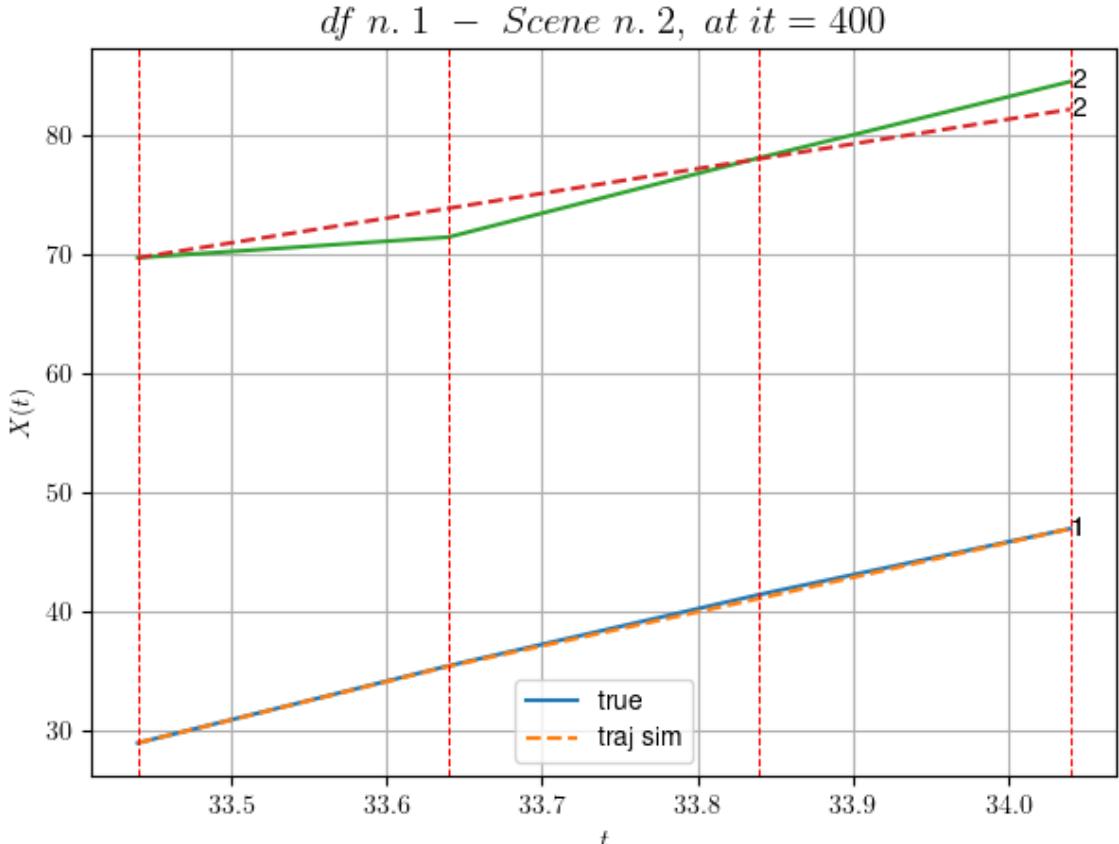


For scene 1/109

```
* use LR_NN=5e-05 with err=0.8980984313087368 at it=24
* v0_scn_mean = 25.026403046453996
* MAE = 0.2819370155605512
```

df n.1, scene n.2/109

```
We have 3 time intervals inside [33.44,34.04]
* err= 1.4231706873418022
* Learning rate NN = 3.2804993679746985e-05
* diff = 9.721597997724984e-07
```



For scene 2/109

- * use LR_NN=5e-05 with err=5.232456457497198 at it=24
- * v0_scn_mean = 21.19884278533948
- * MAE = 1.2237283080243577

df n.1, scene n.3/109

We have 4 time intervals inside [37.44, 38.24]

- Time interval n.0: [37.44, 37.64]
 - * y_true: [20.4107518]
 - * v_ann: [26.11495018005371, 27.295254165821063]

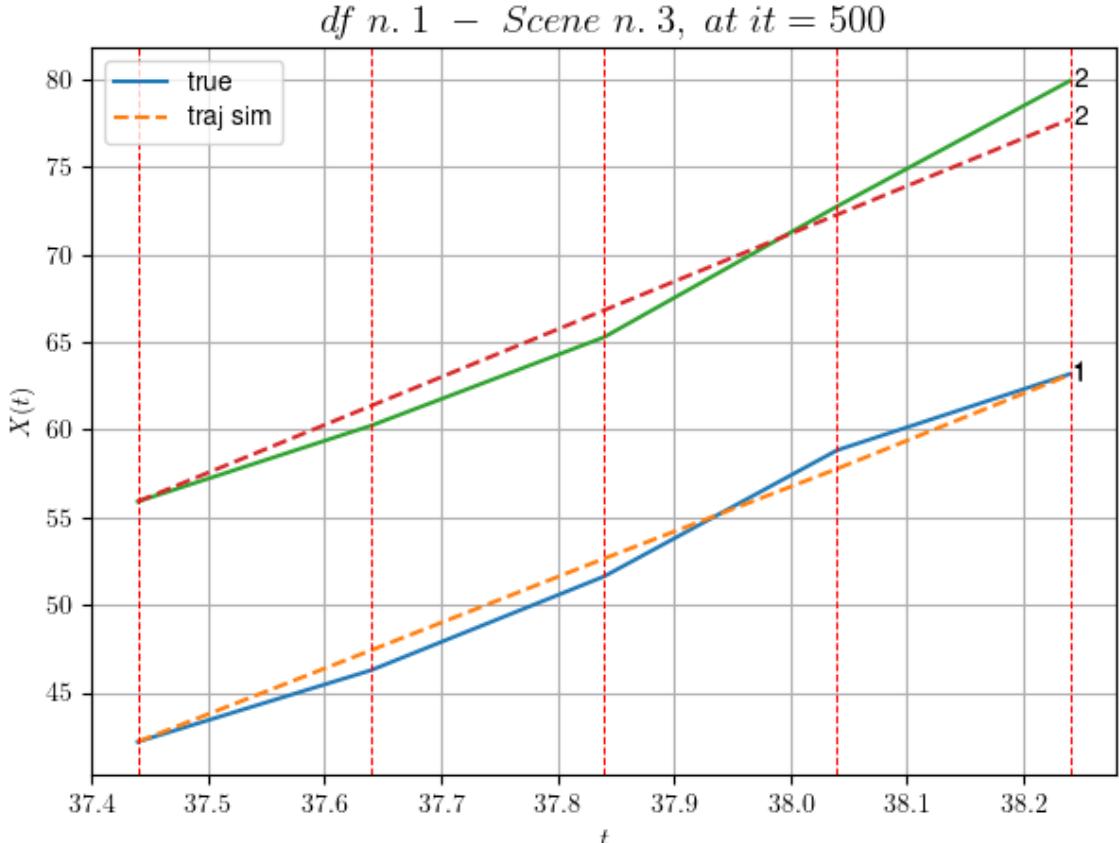
- Time interval n.1: [37.64, 37.84]
 - * y_true: [26.78126893]
 - * v_ann: [26.16466522216797, 27.295254165821063]

- Time interval n.2: [37.84, 38.04]
 - * y_true: [36.04216131]
 - * v_ann: [25.657087326049805, 27.295254165821063]

- Time interval n.3: [38.04, 38.24]
 - * y_true: [21.78153493]

```
* v_ann: [26.863666534423828, 27.295254165821063]
```

```
* err= 1.2135063833808422
* Learning rate NN = 4.7829678806010634e-05
* diff = 5.1047430296158325e-06
```



For scene 3/109

```
* use LR_NN=0.0001 with err=1.4602815596625622 at it=24
* v0_scn_mean = 27.403443999167497
* MAE = 1.1116515963001523
```

df n.1, scene n.4/109

We have 3 time intervals inside [44.24, 44.84]

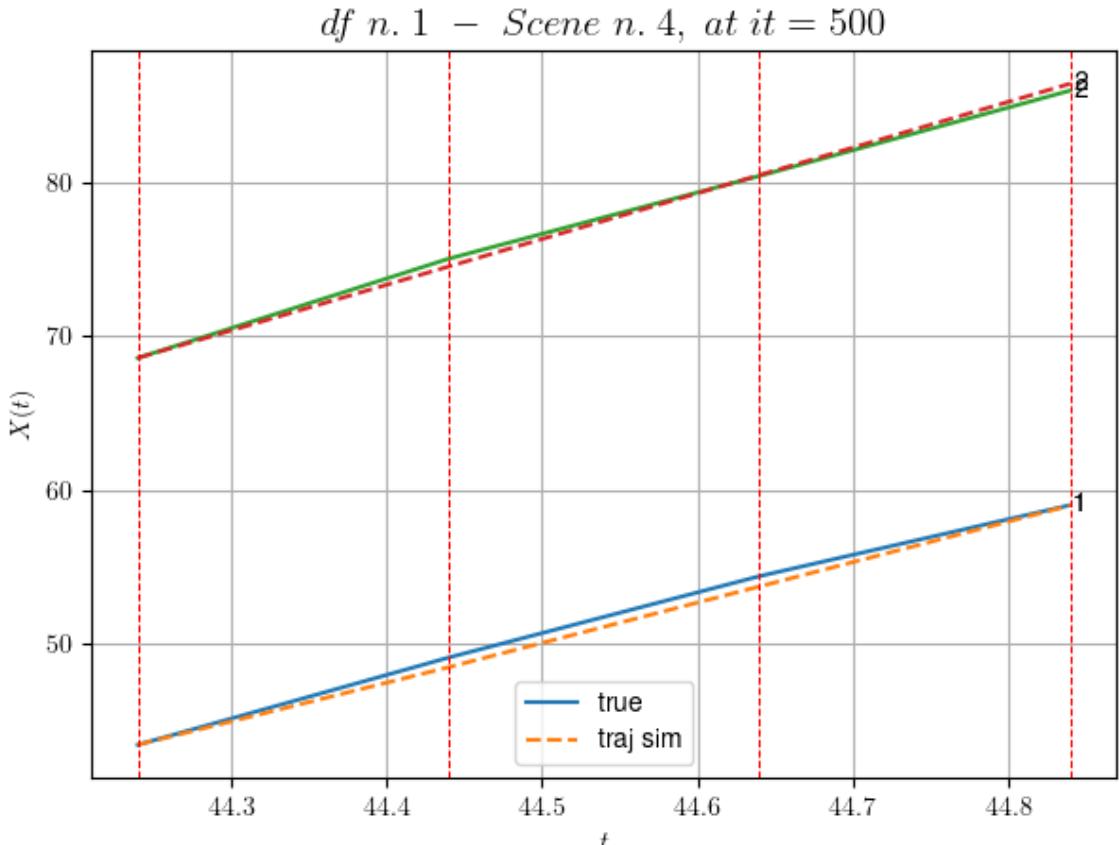
- Time interval n.0: [44.24, 44.44]
 - * y_true: [28.36118373]
 - * v_ann: [25.22194480895996, 29.733272374894106]

- Time interval n.1: [44.44, 44.64]
 - * y_true: [26.45136946]
 - * v_ann: [26.240537643432617, 29.733272374894106]

- Time interval n.2: [44.64, 44.84]

```
* y_true: [23.12145598]
* v_ann: [26.351484298706055, 29.733272374894106]
```

```
* err= 0.16316365764609744
* Learning rate NN = 2.952449540316593e-05
* diff = 1.5952711952538223e-06
```



For scene 4/109

```
* use LR_NN=5e-05 with err=0.1878772282519282 at it=24
* v0_scn_mean = 29.7439414798963
* MAE = 0.1391826423288708
```

df n.1, scene n.5/109

We have 5 time intervals inside [52.84, 53.84]

- Time interval n.0: [52.84, 53.04]
 - * y_true: [24.68117551]
 - * v_ann: [29.5606632232666, 35.9128223540259]

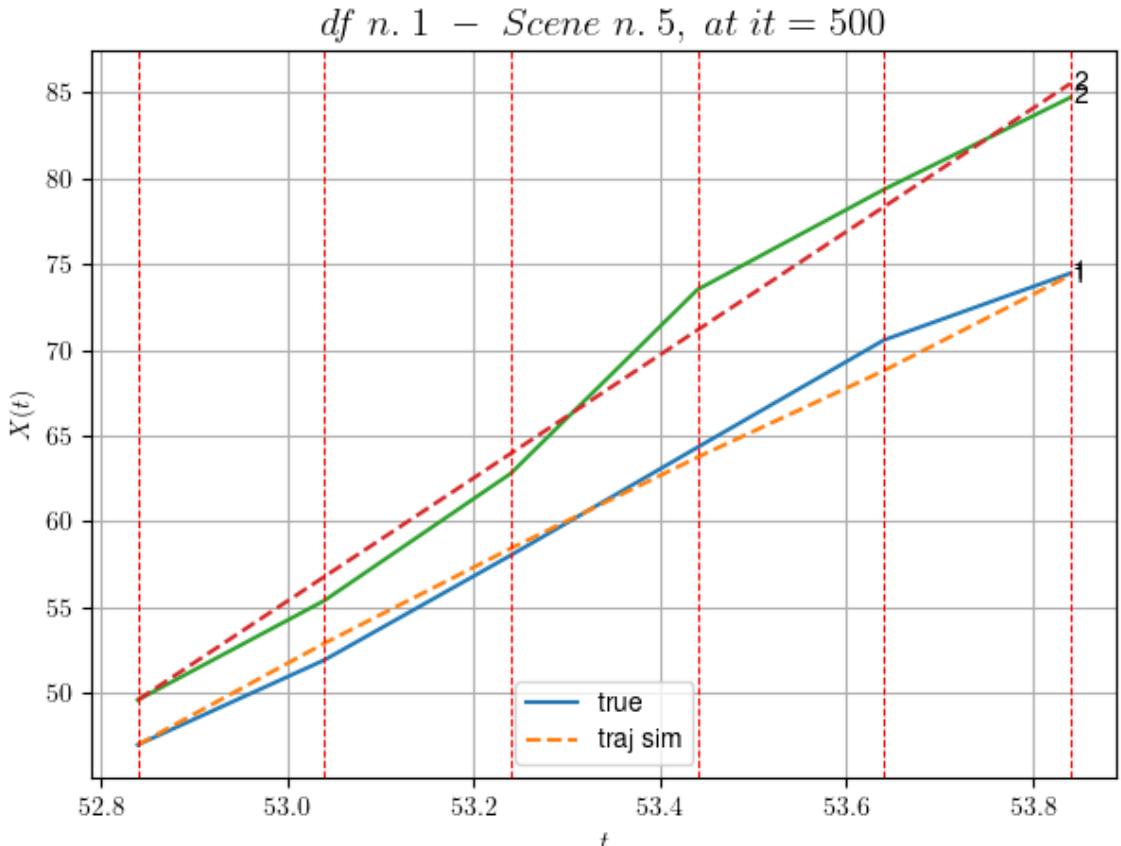
- Time interval n.1: [53.04, 53.24]
 - * y_true: [30.52180624]
 - * v_ann: [27.648481369018555, 35.9128223540259]

```
- Time interval n.2: [53.24, 53.44]
* y_true: [31.41247605]
* v_ann: [26.518754959106445, 35.9128223540259]
```

```
- Time interval n.3: [53.44, 53.64]
* y_true: [31.2776072]
* v_ann: [25.253360748291016, 35.9128223540259]
```

```
- Time interval n.4: [53.64, 53.84]
* y_true: [19.45696001]
* v_ann: [27.755382537841797, 35.9128223540259]
```

```
* err= 1.262879645772371
* Learning rate NN = 0.0003874204121530056
* diff = 0.02578883210666394
```



For scene 5/109

```
* use LR_NN=0.001 with err=25.338277306086134 at it=24
* v0_scn_mean = 35.676309459910044
* MAE = 1.2380127459418153
```

df n.1, scene n.6/109

We have 2 time intervals inside [54.84, 55.24]

- Time interval n.0: [54.84, 55.04]
 - * y_true: [39.69303006]
 - * v_ann: [36.13719177246094, 30.333444658289164]
-

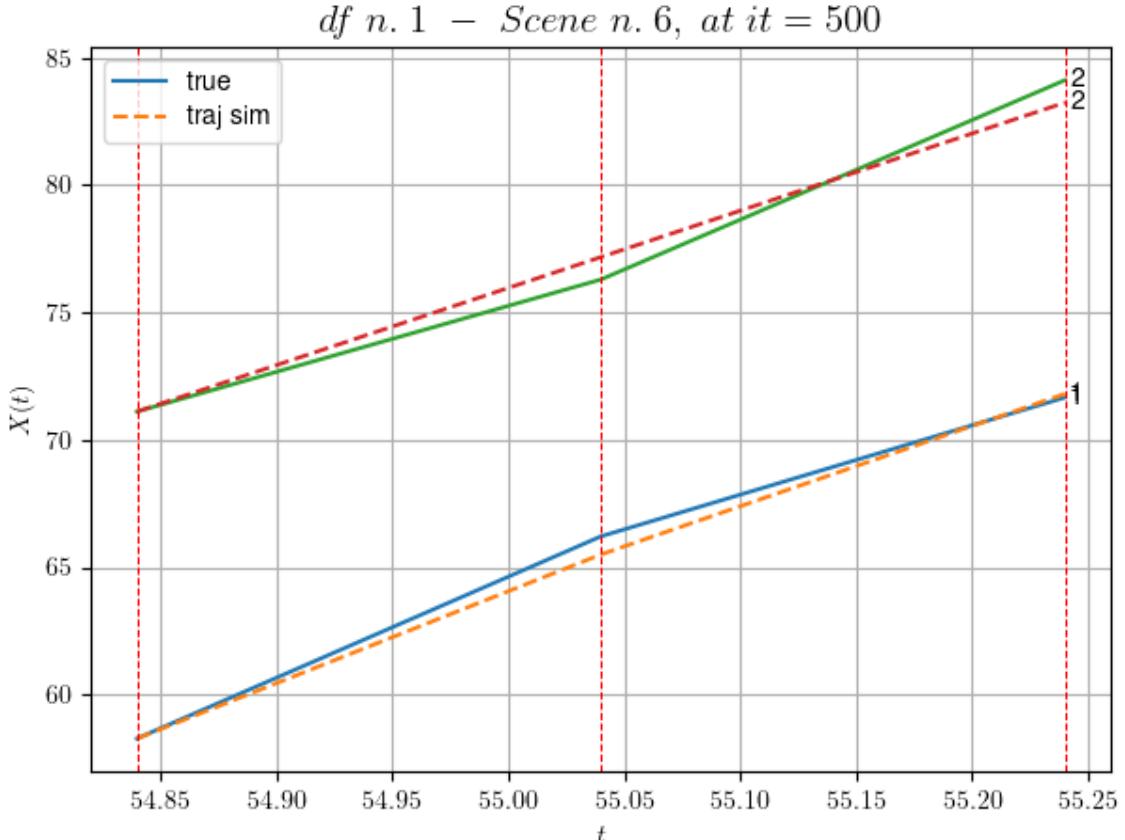
- Time interval n.1: [55.04, 55.24]

- * y_true: [27.26241914]
 - * v_ann: [31.526777267456055, 30.333444658289164]
-

* err= 0.34585377621286006

* Learning rate NN = 7.289998757187277e-05

* diff = 0.00107287319936622



For scene 6/109

- * use LR_NN=0.0001 with err=0.5217314022785179 at it=24
 - * v0_scn_mean = 30.320106871960196
 - * MAE = 0.34585377621286006
-
-

df n.1, scene n.7/109

We have 4 time intervals inside [56.84, 57.64]

- Time interval n.0: [56.84, 57.04]
 - * y_true: [23.35104229]
 - * v_ann: [24.28993797302246, 35.49695649017796]

```

-----  

- Time interval n.1: [57.04, 57.24]  

* y_true: [29.99173244]  

* v_ann: [25.259492874145508, 35.49695649017796]  

-----
```

```

-----  

- Time interval n.2: [57.24, 57.44]  

* y_true: [26.49185212]  

* v_ann: [27.675382614135742, 35.49695649017796]  

-----
```

```

-----  

- Time interval n.3: [57.44, 57.64]  

* y_true: [27.20243748]  

* v_ann: [29.260225296020508, 35.49695649017796]  

-----
```

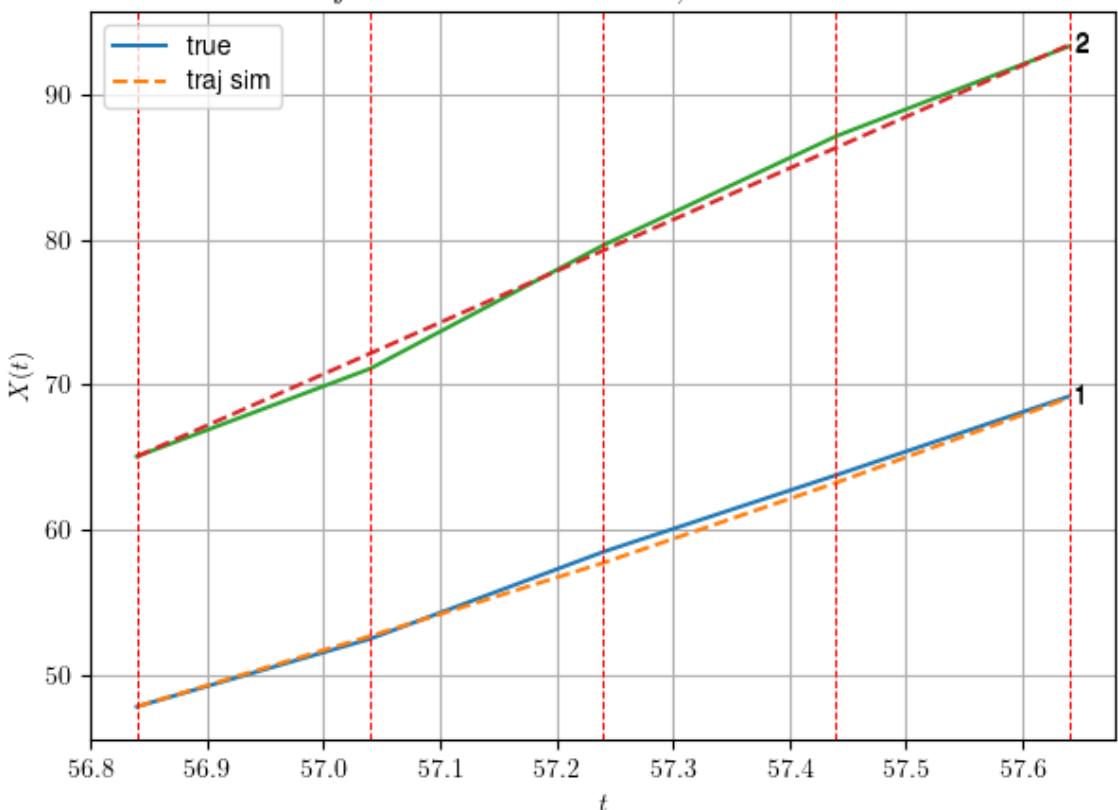
```

* err= 0.27661041966192856  

* Learning rate NN = 4.7829678806010634e-05  

* diff = 0.0011744670510148714
```

df n. 1 – Scene n. 7, at it = 500



For scene 7/109

```

* use LR_NN=0.0001 with err=4.505917046326852 at it=24  

* v0 scn mean = 35.277078230612474  

* MAE = 0.27661041966192856
```

```
df n.1, scene n.8/109
```

```
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=====
```

We have 4 time intervals inside [60.04, 60.84]
 - Time interval n.0: [60.04, 60.24]
 * y_true: [32.6313833]
 * v_ann: [33.28725051879883, 26.52161959108594]

```
-----
-----
```

- Time interval n.1: [60.24, 60.44]
 * y_true: [35.39191239]
 * v_ann: [30.721120834350586, 26.52161959108594]

```
-----
-----
```

- Time interval n.2: [60.44, 60.64]
 * y_true: [29.16197739]
 * v_ann: [29.459814071655273, 26.52161959108594]

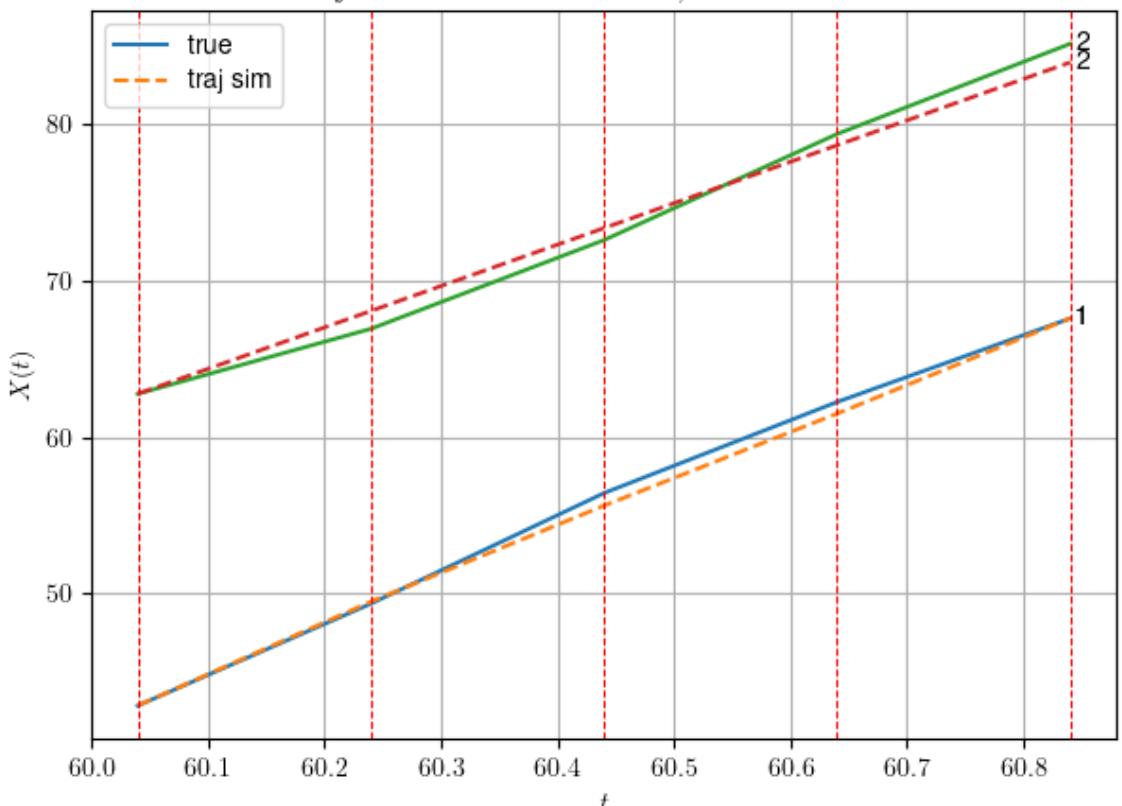
```
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-----
```

- Time interval n.3: [60.64, 60.84]
 * y_true: [26.75220161]
 * v_ann: [30.479473114013672, 26.52161959108594]

```
-----
```

* err= 0.5043453839442034
 * Learning rate NN = 2.3914839403005317e-05
 * LR_NN=5e-05 with err=1.3527270040094381 at it=24

df n. 1 – Scene n. 8, at it = 500



For scene 8/109

* use LR_NN=5e-05 with err=1.3527270040094381 at it=24

```
* vθ_scn_mean = 26.660754807415895
* MAE = 0.45587763008525156
```

```
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```

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```

```
df n.1, scene n.9/109
```

```
=====
```

```
=====
```

```
We have 5 time intervals inside [80.64,81.64]
```

```
- Time interval n.0: [80.64, 80.84]
  * y_true: [33.34215633]
  * v_ann: [32.857452392578125, 29.04281001033892]
```

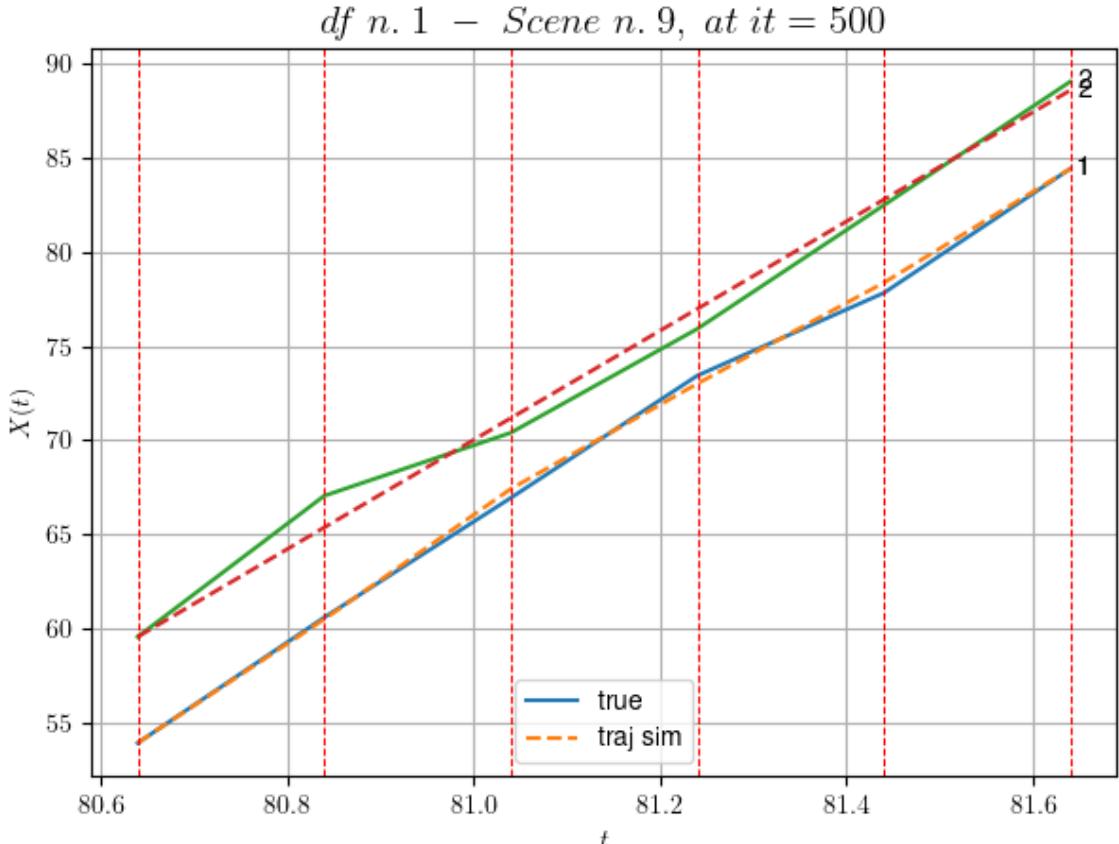
```
- Time interval n.1: [80.84, 81.04]
  * y_true: [31.76283343]
  * v_ann: [34.63908386230469, 29.04281001033892]
```

```
- Time interval n.2: [81.04, 81.24]
  * y_true: [32.4827505]
  * v_ann: [27.950708389282227, 29.04281001033892]
```

```
- Time interval n.3: [81.24, 81.44]
  * y_true: [21.98271265]
  * v_ann: [26.830434799194336, 29.04281001033892]
```

```
- Time interval n.4: [81.44, 81.64]
  * y_true: [33.00400249]
  * v_ann: [30.265378952026367, 29.04281001033892]
```

```
* err= 0.4651724006645495
* Learning rate NN = 0.0003874204121530056
* diff = 0.001607660610030051
```



For scene 9/109

- * use LR_NN=0.001 with err=1.5830957301604762 at it=24
- * v0_scn_mean = 29.081097609918185
- * MAE = 0.46338281327647574

df n.1, scene n.10/109

We have 3 time intervals inside [87.84, 88.44]

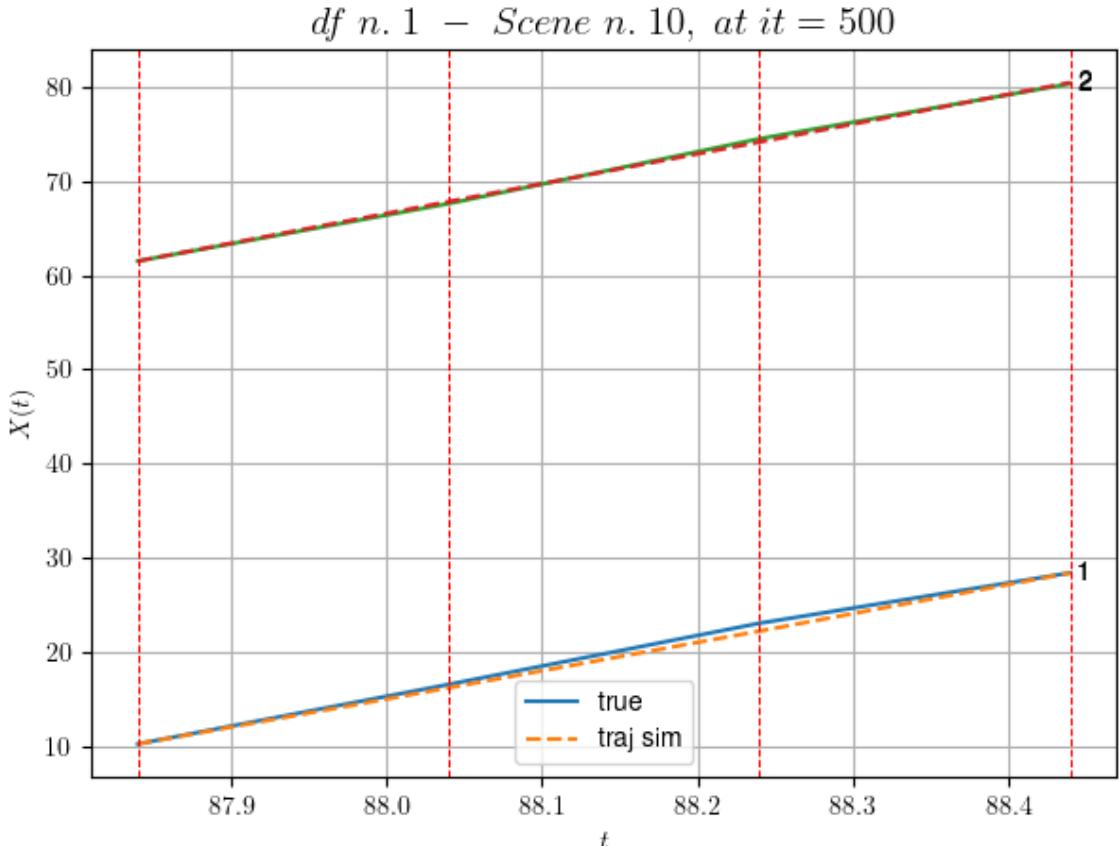
- Time interval n.0: [87.84, 88.04]
 - * y_true: [31.60011691]
 - * v_ann: [29.790225982666016, 31.600487611858412]

- Time interval n.1: [88.04, 88.24]
 - * y_true: [32.50025586]
 - * v_ann: [30.13619041442871, 31.600487611858412]

- Time interval n.2: [88.24, 88.44]
 - * y_true: [26.76036252]
 - * v_ann: [30.8817138671875, 31.600487611858412]

- * err= 0.1273972057015348
- * Learning rate NN = 2.952449540316593e-05

* diff = 0.0001522308074146106



For scene 10/109

* use LR_NN=5e-05 with err=0.33503924495199394 at it=24
 * v0_scn_mean = 31.536468107396537
 * MAE = 0.1273972057015348

df n.1, scene n.11/109

We have 5 time intervals inside [89.04, 90.04]

- Time interval n.0: [89.04, 89.24]
 - * y_true: [23.80112307]
 - * v_ann: [24.323413848876953, 33.1264525586585]

- Time interval n.1: [89.24, 89.44]
 - * y_true: [30.25175591]
 - * v_ann: [27.12034034729004, 33.1264525586585]

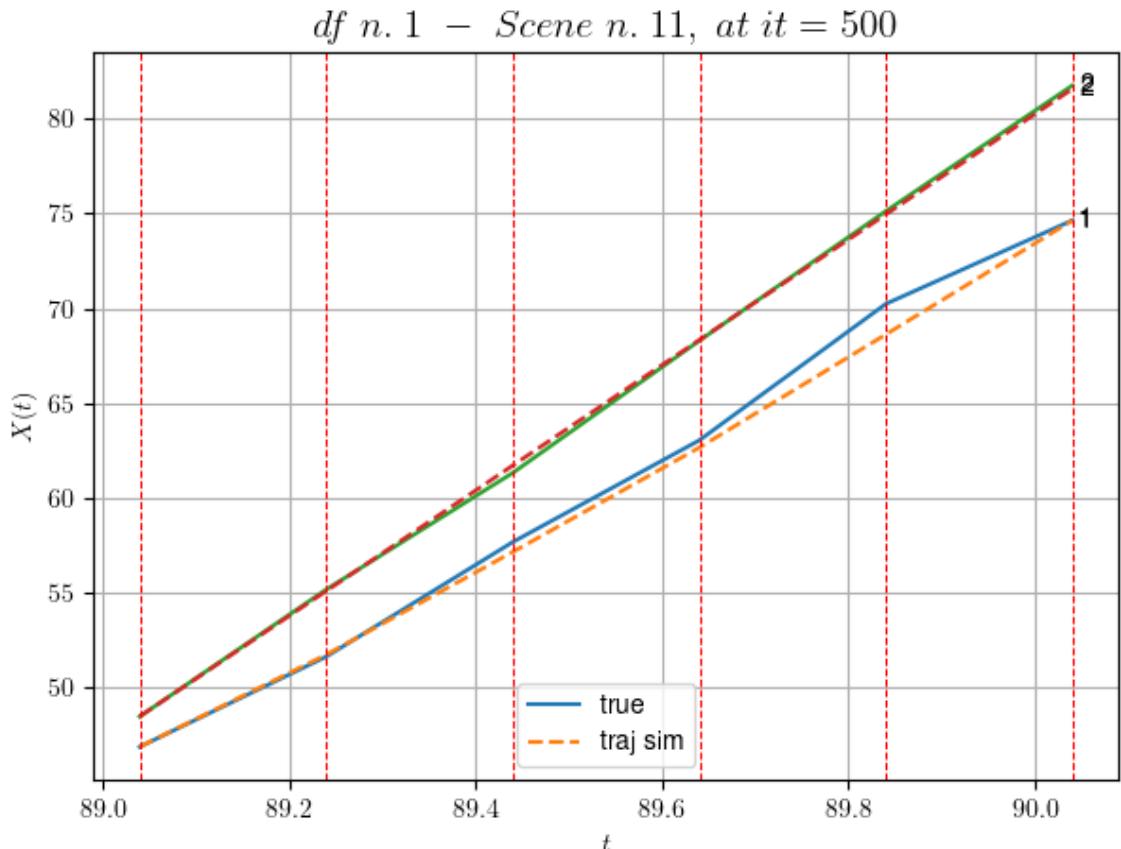
- Time interval n.2: [89.44, 89.64]
 - * y_true: [26.85189703]
 - * v_ann: [27.544403076171875, 33.1264525586585]

- Time interval n.3: [89.64, 89.84]

```
* y_true: [36.00310026]
* v_ann: [29.857303619384766, 33.1264525586585]
```

```
- Time interval n.4: [89.84, 90.04]
* y_true: [22.05223989]
* v_ann: [30.069372177124023, 33.1264525586585]
```

```
* err= 0.2712512932355456
* Learning rate NN = 0.0001937102060765028
* diff = 0.004198701062705978
```



For scene 11/109

```
* use LR_NN=0.0005 with err=6.793427488916254 at it=24
* v0_scn_mean = 33.001394456336136
* MAE = 0.2560472903365913
```

df n.1, scene n.12/109

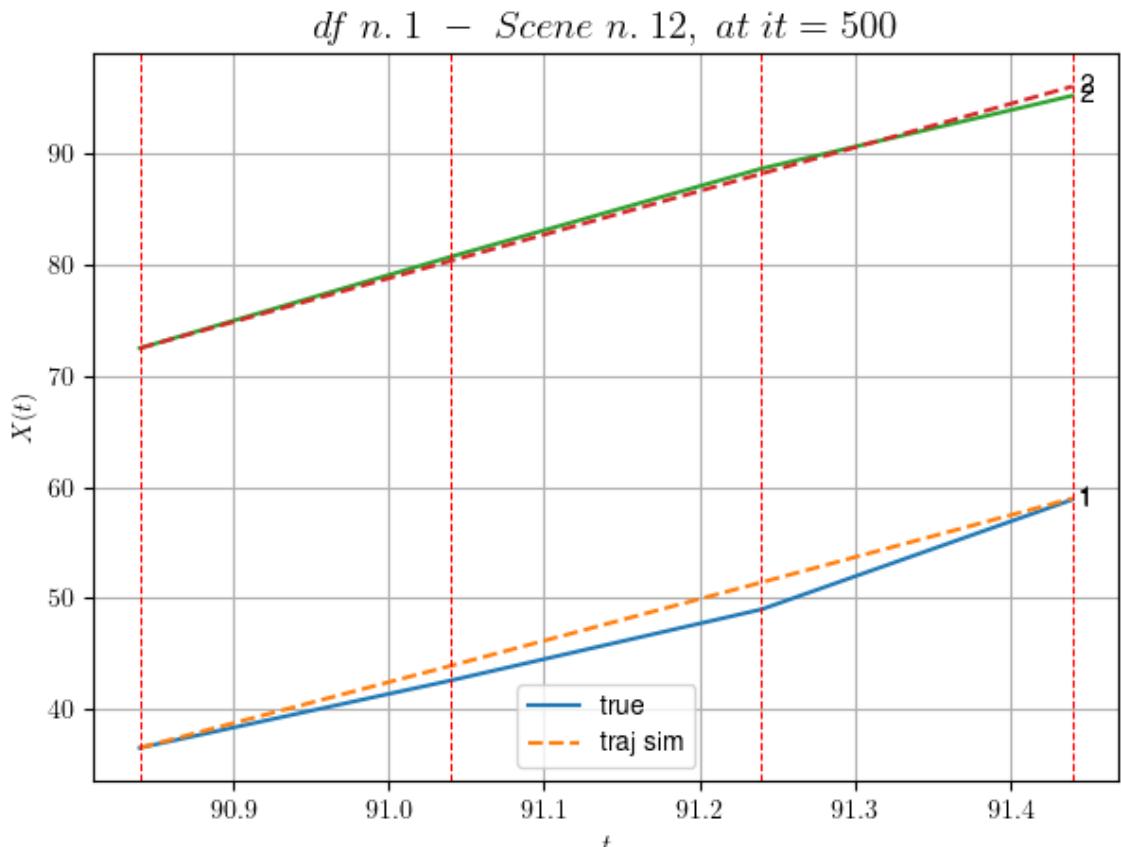
We have 3 time intervals inside [90.84, 91.44]

```
- Time interval n.0: [90.84, 91.04]
* y_true: [30.30091015]
* v_ann: [36.90692901611328, 39.26169927714703]
```

- Time interval n.1: [91.04, 91.24]
 - * y_true: [32.01131791]
 - * v_ann: [37.545326232910156, 39.26169927714703]

- Time interval n.2: [91.24, 91.44]
 - * y_true: [49.37285732]
 - * v_ann: [37.7625732421875, 39.26169927714703]

- * err= 1.087390600722266
- * Learning rate NN = 2.952449540316593e-05
- * diff = 0.0024072455568528994



For scene 12/109

- * use LR_NN=5e-05 with err=6.606668929287306 at it=24
- * v0_scn_mean = 38.89123130613207
- * MAE = 1.0864122762501771

df n.1, scene n.13/109

We have 3 time intervals inside [109.24,109.84]

- Time interval n.0: [109.24, 109.44]
 - * y_true: [27.49662615]
 - * v_ann: [25.10439109802246, 36.87036026795297]

```

-----  

- Time interval n.1: [109.44, 109.64]  

* y_true: [30.32701959]  

* v_ann: [28.787492752075195, 36.87036026795297]
-----
```

```

-----  

- Time interval n.2: [109.64, 109.84]  

* y_true: [27.65727146]  

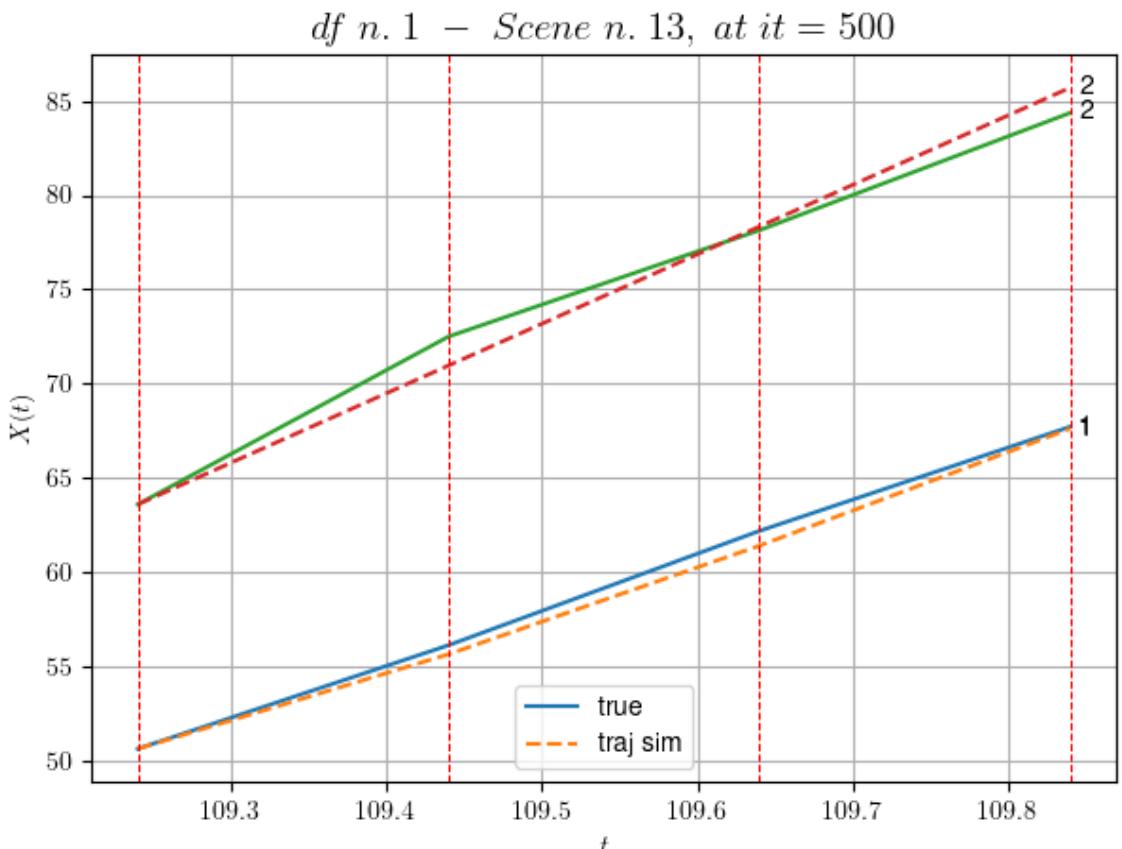
* v_ann: [31.08795928955078, 36.87036026795297]
-----
```

```

* err= 0.6316429649831001  

* Learning rate NN = 0.0005904899444431067  

* diff = 0.003666321608522205
```



For scene 13/109

```

* use LR_NN=0.001 with err=2.9279486508670995 at it=24
* v0_scn_mean = 36.59554585728716
* MAE = 0.4686758922707573
=====
```

```

df n.1, scene n.14/109
=====
```

```

We have 5 time intervals inside [116.04,117.04]
- Time interval n.0: [116.04, 116.24]
* y_true: [26.72014114]
* v_ann: [32.53212356567383, 35.75445949476133]
```

```

- Time interval n.1: [116.24, 116.44]
  * y_true: [27.07912387]
  * v_ann: [33.87855529785156, 35.75445949476133]
```

```

- Time interval n.2: [116.44, 116.64]
  * y_true: [35.55057522]
  * v_ann: [30.76276969909668, 35.75445949476133]
```

```

- Time interval n.3: [116.64, 116.84]
  * y_true: [40.15103224]
  * v_ann: [33.0547981262207, 35.75445949476133]
```

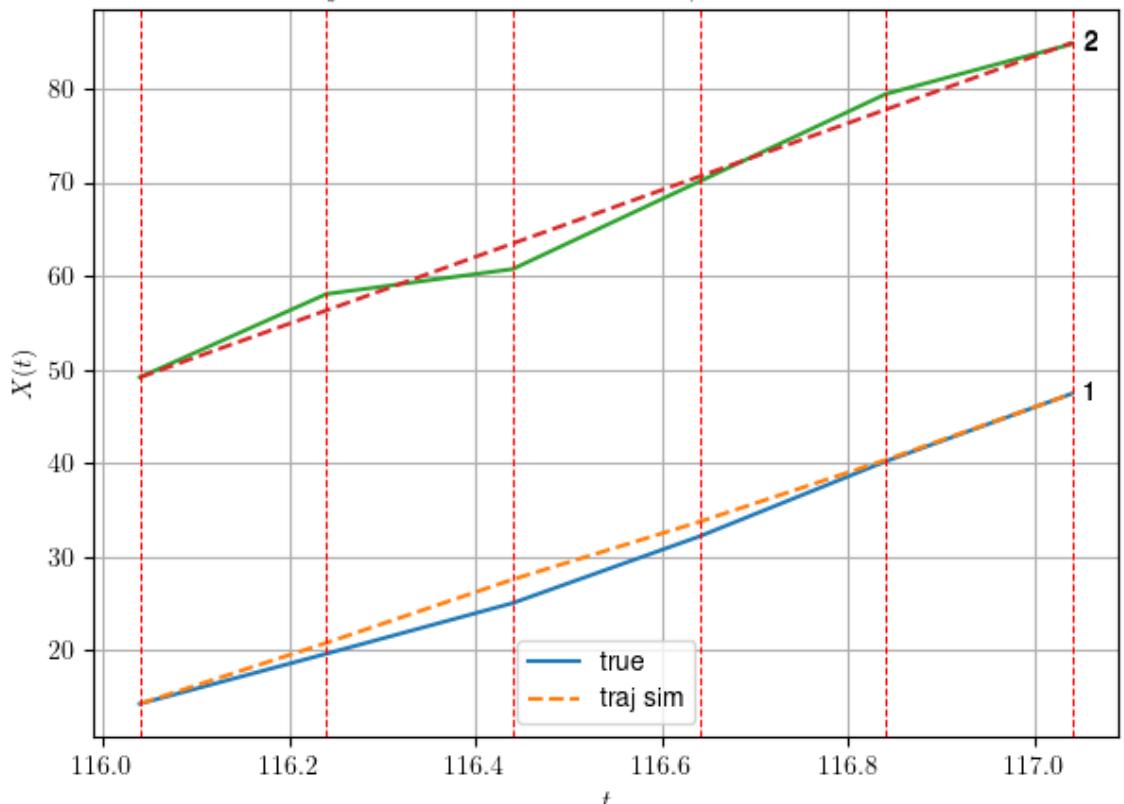
```

- Time interval n.4: [116.84, 117.04]
  * y_true: [36.20135733]
  * v_ann: [35.36960983276367, 35.75445949476133]
```

```

* err= 1.9801991880251837
* Learning rate NN = 3.874203684972599e-05
* diff = 0.0041100040121681007
```

df n. 1 – Scene n. 14, at it = 500



For scene 14/109

```

* use LR_NN=0.0001 with err=8.02148512029293 at it=24
* v0_scn_mean = 35.5242811501501
```

* MAE = 1.8593603237974683

df n.1, scene n.15/109

We have 3 time intervals inside [120.84, 121.44]

- Time interval n.0: [120.84, 121.04]

* y_true: [31.55149536]

* v_ann: [27.503957748413086, 32.62642337288283]

- Time interval n.1: [121.04, 121.24]

* y_true: [29.5468664]

* v_ann: [31.345733642578125, 32.62642337288283]

- Time interval n.2: [121.24, 121.44]

* y_true: [28.27701719]

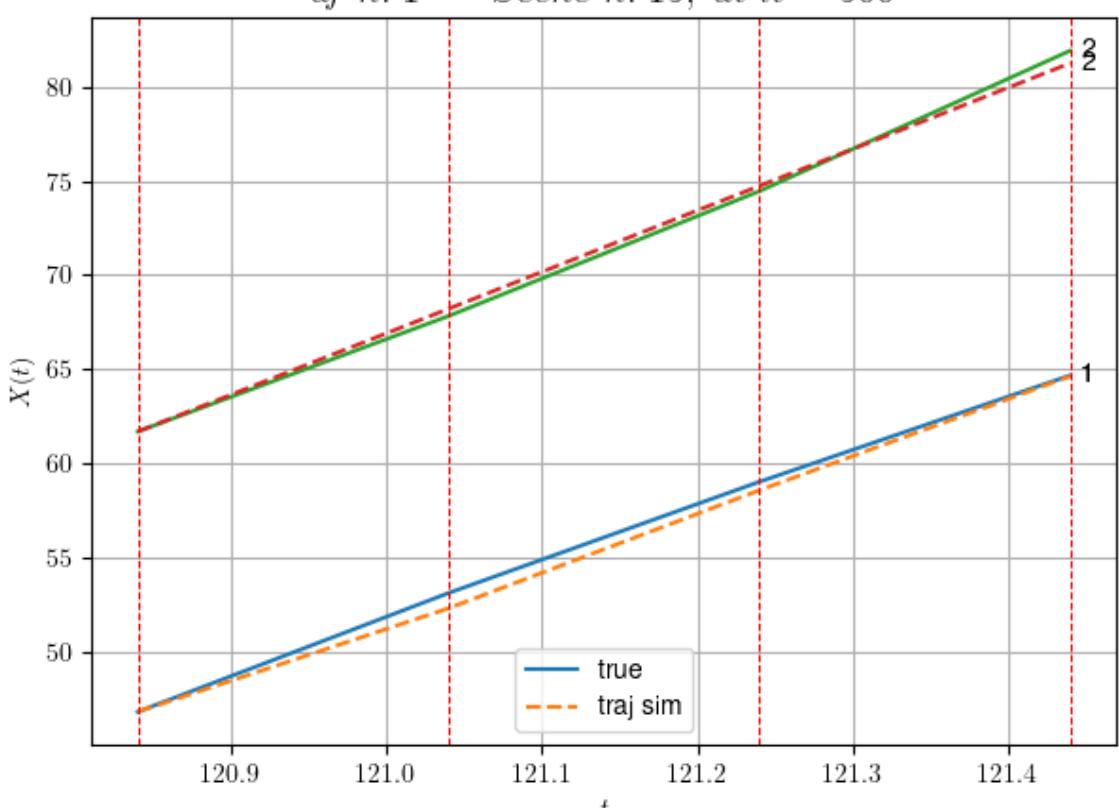
* v_ann: [30.277894973754883, 32.62642337288283]

* err= 0.19091333552763046

* Learning rate NN = 0.0005904899444431067

* diff = 0.0001602701545457001

df n. 1 – Scene n. 15, at it = 500



For scene 15/109

* use LR_NN=0.001 with err=0.7665889624248574 at it=24

```
* vθ_scn_mean = 32.521366437987375
* MAE = 0.1345537378969131
```

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```

```
df n.1, scene n.16/109
```

```
=====
```

```
=====
```

```
We have 4 time intervals inside [130.64,131.44]
```

```
- Time interval n.0: [130.64, 130.84]
  * y_true: [25.75092635]
  * v_ann: [25.85615348815918, 33.61924590429418]
```

```
-----
```

```
- Time interval n.1: [130.84, 131.04]
  * y_true: [30.67141813]
  * v_ann: [28.139244079589844, 33.61924590429418]
```

```
-----
```

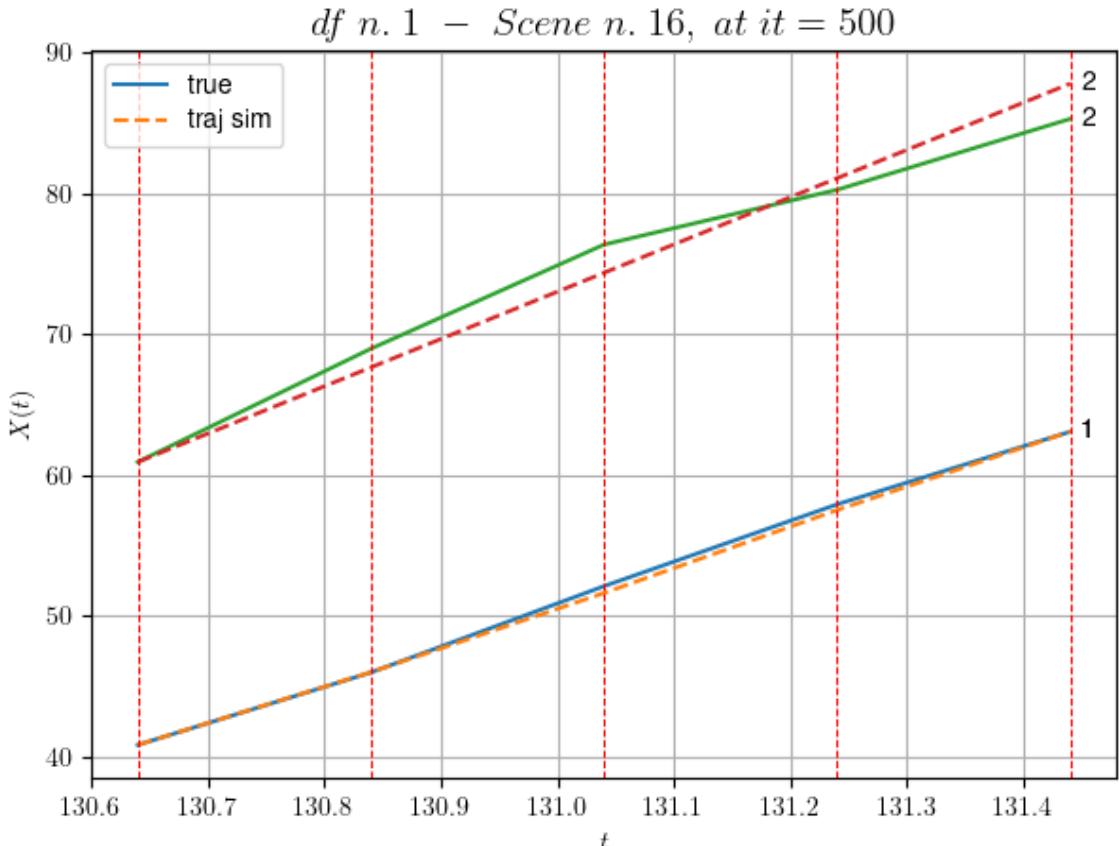
```
- Time interval n.2: [131.04, 131.24]
  * y_true: [29.07678141]
  * v_ann: [29.47718048095703, 33.61924590429418]
```

```
-----
```

```
- Time interval n.3: [131.24, 131.44]
  * y_true: [25.82680503]
  * v_ann: [27.884397506713867, 33.61924590429418]
```

```
-----
```

```
* err= 1.3138463376853882
* Learning rate NN = 4.7829678806010634e-05
* diff = 0.8500676000040302e-06
```



For scene 16/109

- * use LR_NN=0.0001 with err=1.880576127707144 at it=24
- * v0_scn_mean = 33.47447606815015
- * MAE = 1.1525531687680475

df n.1, scene n.17/109

We have 3 time intervals inside [140.64, 141.24]

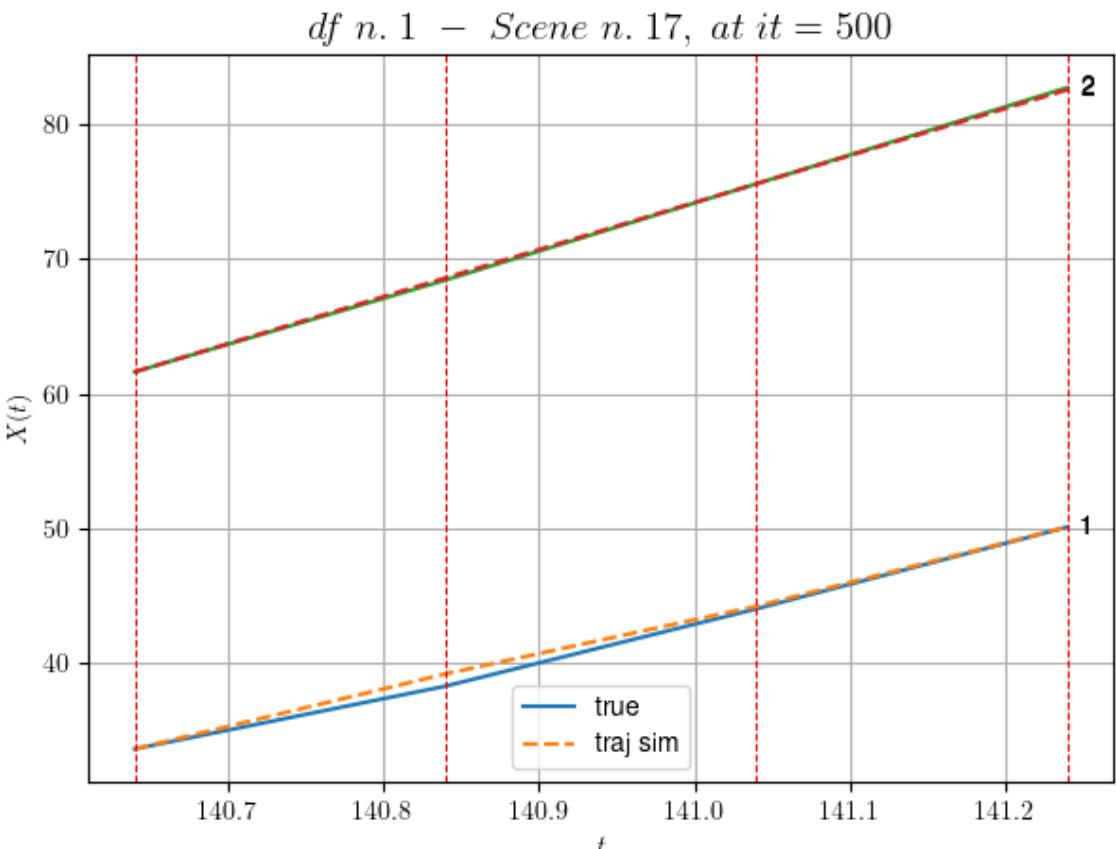
- Time interval n.0: [140.64, 140.84]
 - * y_true: [23.34058075]
 - * v_ann: [27.88389778137207, 34.92834910020679]

- Time interval n.1: [140.84, 141.04]
 - * y_true: [28.71099355]
 - * v_ann: [25.10778045654297, 34.92834910020679]

- Time interval n.2: [141.04, 141.24]
 - * y_true: [30.37630847]
 - * v_ann: [29.46356964111328, 34.92834910020679]

- * err= 0.1144472022648422
- * Learning rate NN = 0.0002952449722215533

* diff = 0.00033227151556601553

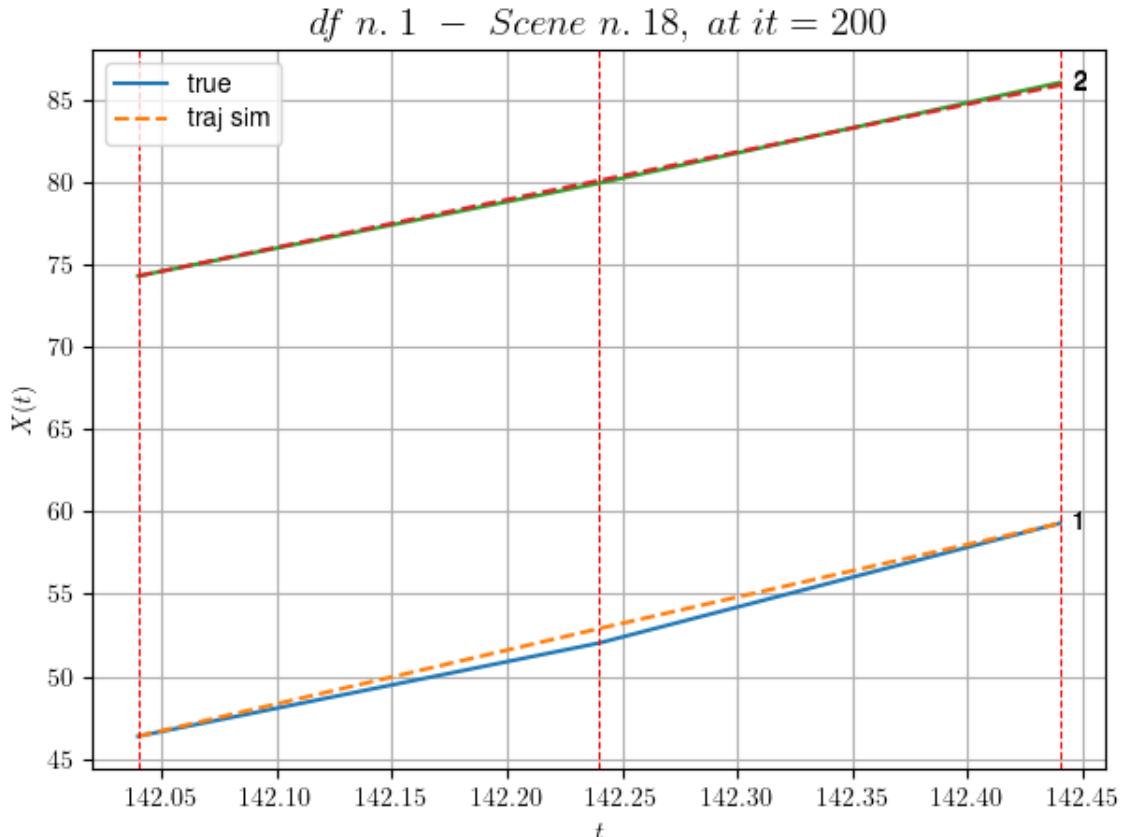


For scene 17/109

* use LR_NN=0.0005 with err=1.8353973357939446 at it=24
 * v0_scn_mean = 34.73121513623562
 * MAE = 0.07614892186200409

df n.1, scene n.18/109

We have 2 time intervals inside [142.04,142.44]
 * err= 0.1366579426629223
 * Learning rate NN = 4.499999704421498e-05
 * diff = 3.4692036898764655e-07

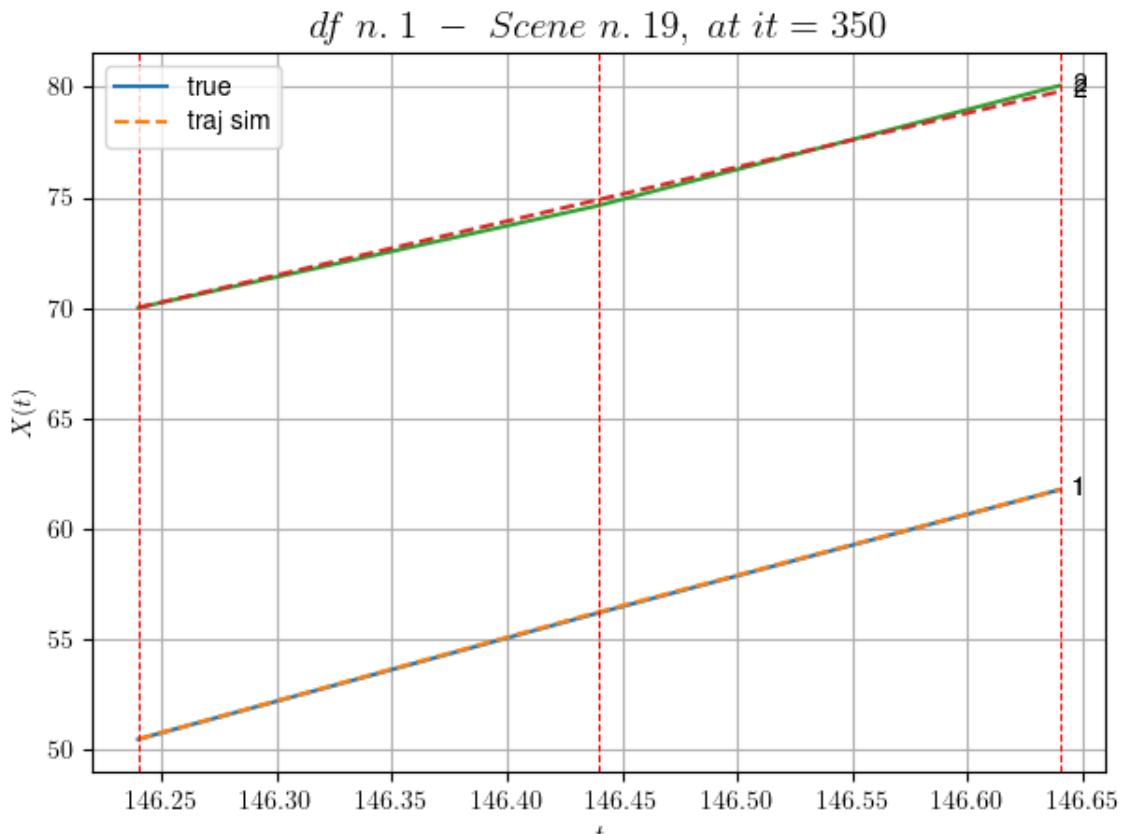


For scene 18/109

* use LR_NN=5e-05 with err=0.16898535450345128 at it=24
* v0_scn_mean = 29.067133026958437
* MAE = 0.12441796402061674

df n.1, scene n.19/109

We have 2 time intervals inside [146.24,146.64]
* err= 0.023574004069047826
* Learning rate NN = 8.099999104160815e-05
* diff = 1.6019785456511393e-07

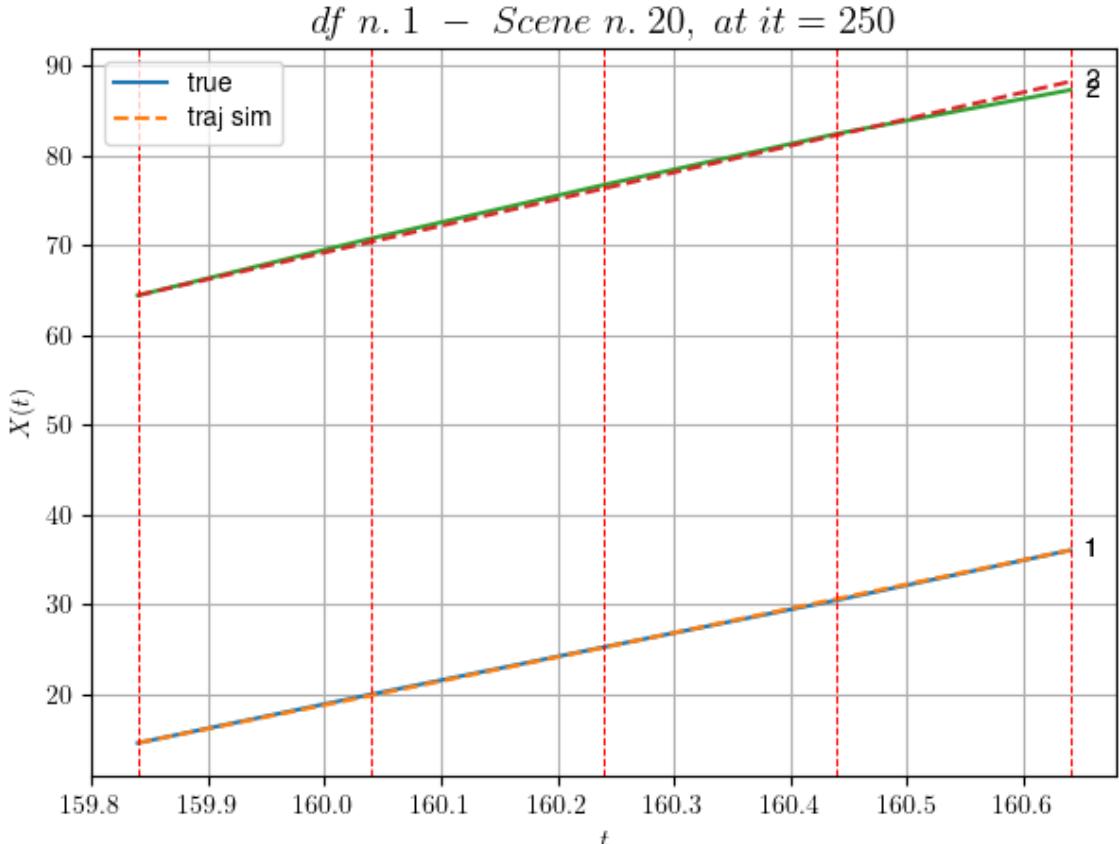


For scene 19/109

* use LR_NN=0.0001 with err=0.9423923093745856 at it=24
* v0_scn_mean = 24.796402820684353
* MAE = 0.02125010671396533

df n.1, scene n.20/109

We have 4 time intervals inside [159.84,160.64]
* err= 0.1251362322178085
* Learning rate NN = 3.6449993785936385e-05
* diff = 6.105545954371294e-07



For scene 20/109

- * use LR_NN=5e-05 with err=0.14817000569834646 at it=24
- * v0_scn_mean = 29.815140139063462
- * MAE = 0.1251362322178085

df n.1, scene n.21/109

We have 2 time intervals inside [193.24, 193.64]

- Time interval n.0: [193.24, 193.44]
 - * y_true: [31.99185522]
 - * v_ann: [43.18524932861328, 38.08399937691371]

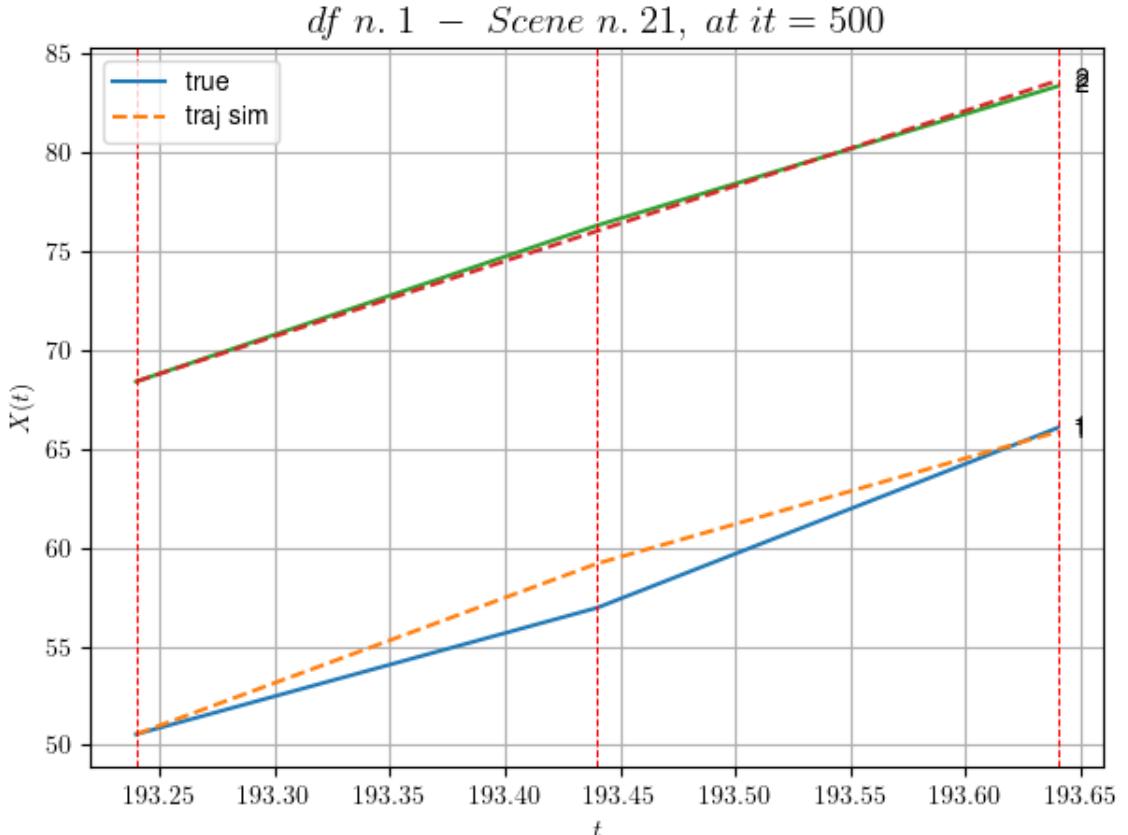
- Time interval n.1: [193.44, 193.64]

- * y_true: [45.57332335]
 - * v_ann: [33.33652114868164, 38.08399937691371]

- * err= 0.8694211400971572

- * Learning rate NN = 0.00036449998151510954

- * diff = 0.0006205860977330779



For scene 21/109

- * use LR_NN=0.0005 with err=3.5142844999546132 at it=24
- * v0_scn_mean = 37.76063940189918
- * MAE = 0.804310230779333

df n.1, scene n.22/109

We have 3 time intervals inside [194.84, 195.44]

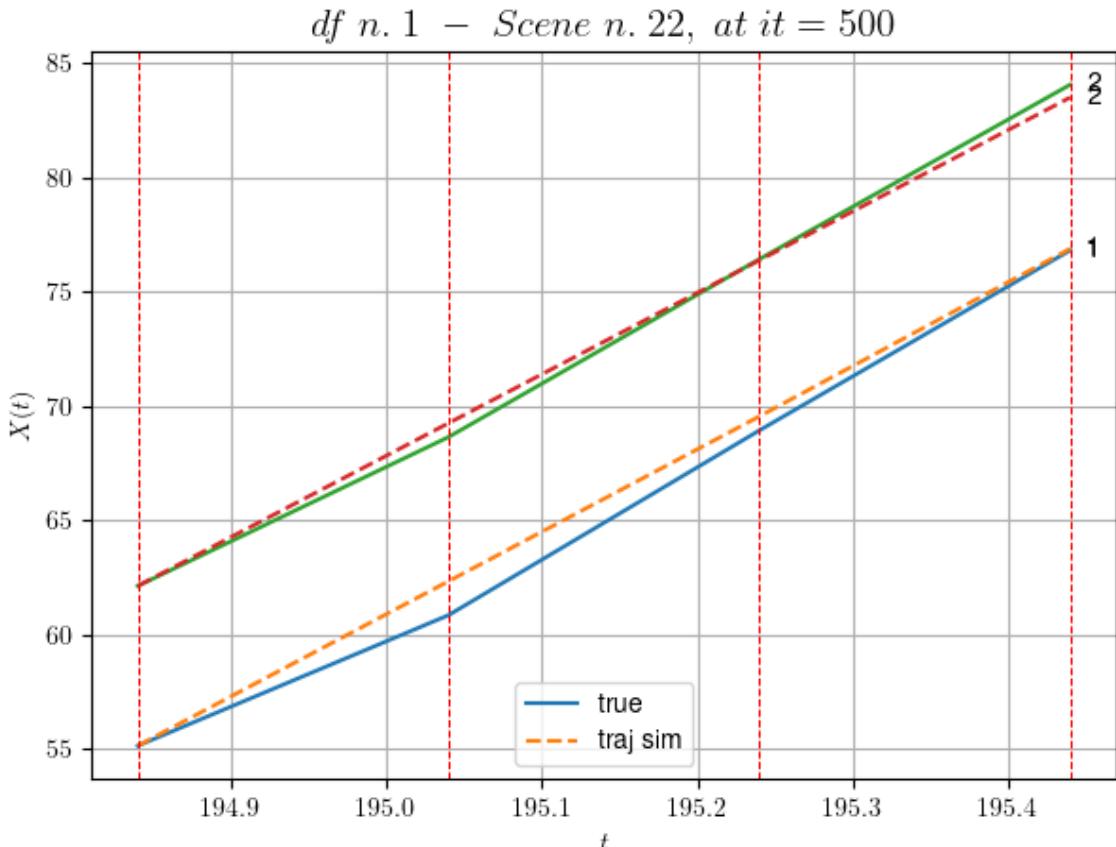
- Time interval n.0: [194.84, 195.04]
 - * y_true: [28.55698867]
 - * v_ann: [35.97132110595703, 35.592723260001165]

- Time interval n.1: [195.04, 195.24]
 - * y_true: [40.37855819]
 - * v_ann: [36.027278900146484, 35.592723260001165]

- Time interval n.2: [195.24, 195.44]
 - * y_true: [39.37369802]
 - * v_ann: [36.659786224365234, 35.592723260001165]

- * err= 0.40789556019267725
- * Learning rate NN = 0.0002952449722215533

* diff = 0.00027553569121635535



For scene 22/109

* use LR_NN=0.0005 with err=2.8998527671520464 at it=24
 * v0_scn_mean = 35.36901432964347
 * MAE = 0.3977992930038689

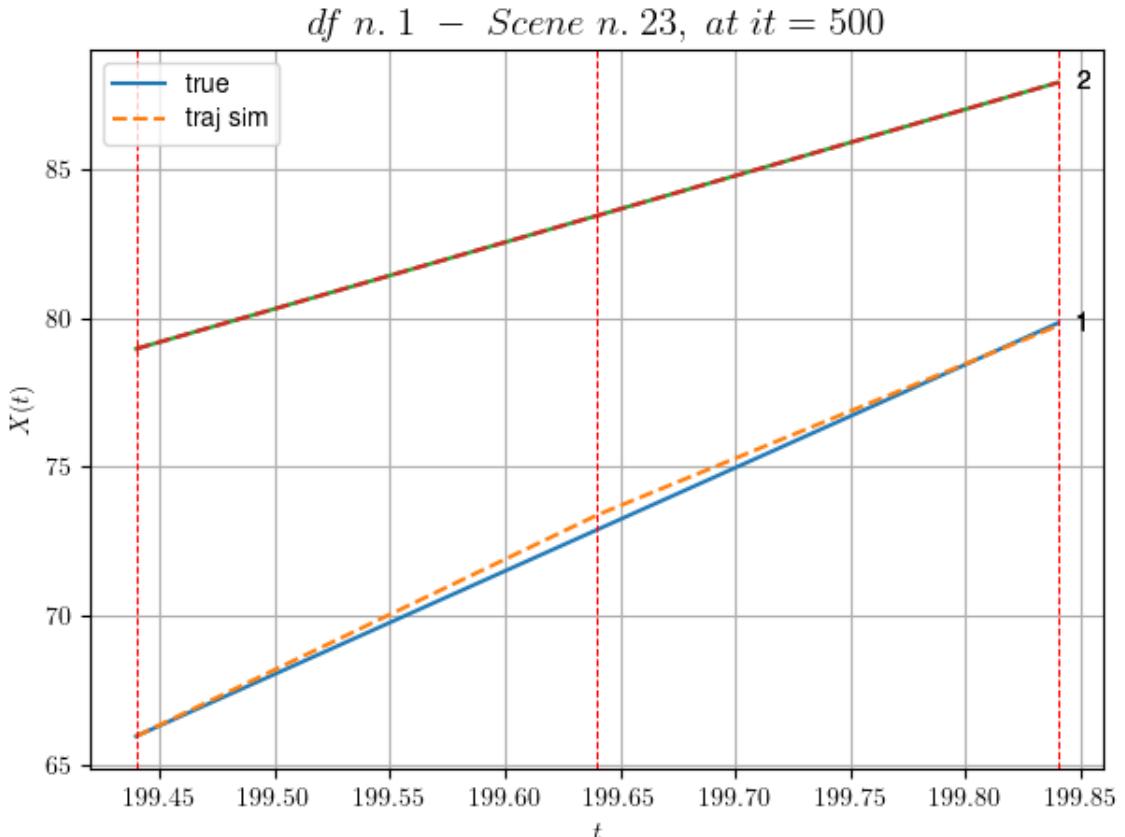
df n.1, scene n.23/109

We have 2 time intervals inside [199.44, 199.84]

- Time interval n.0: [199.44, 199.64]
 - * y_true: [34.74310553]
 - * v_ann: [37.20132827758789, 22.40301272986044]

- Time interval n.1: [199.64, 199.84]
 - * y_true: [34.7739018]
 - * v_ann: [31.84920883178711, 22.40301272986044]

- * err= 0.04173635705991927
- * Learning rate NN = 7.289998757187277e-05
- * diff = 0.00030173060792981765



For scene 23/109

- * use LR_NN=0.0001 with err=2.0069277864643436 at it=24
- * v0_scn_mean = 22.70689222060814
- * MAE = 0.04173635705991927

df n.1, scene n.24/109

We have 4 time intervals inside [200.44, 201.24]

- Time interval n.0: [200.44, 200.64]
 - * y_true: [32.7110423]
 - * v_ann: [33.30415344238281, 30.71027389121812]

- Time interval n.1: [200.64, 200.84]
 - * y_true: [31.56133984]
 - * v_ann: [32.154075622558594, 30.71027389121812]

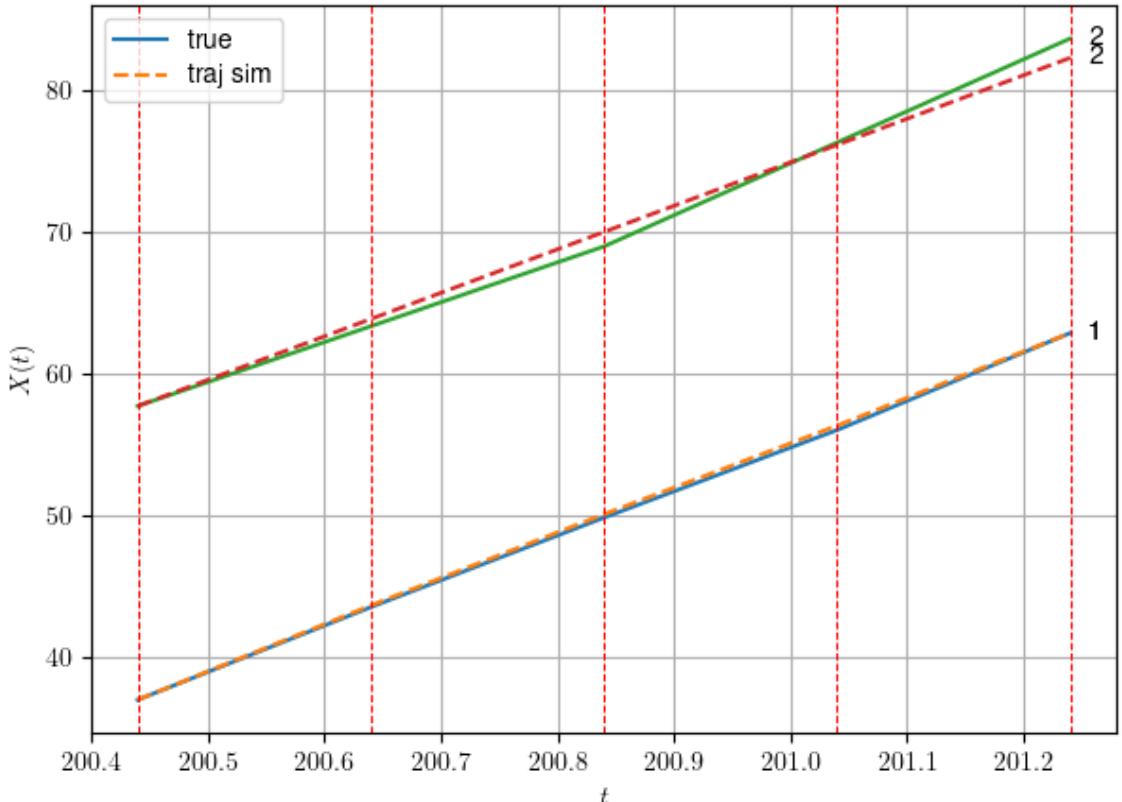
- Time interval n.2: [200.84, 201.04]
 - * y_true: [30.91169527]
 - * v_ann: [31.288070678710938, 30.71027389121812]

- Time interval n.3: [201.04, 201.24]
 - * y_true: [34.21237513]

```
* v_ann: [32.6676139831543, 30.71027389121812]
```

```
* err= 0.3367140534859281
* Learning rate NN = 2.3914839403005317e-05
* diff = 5.115028792690435e-06
```

df n. 1 – Scene n. 24, at it = 500



For scene 24/109

```
* use LR_NN=5e-05 with err=0.4977606840921488 at it=24
* v0 scn mean = 30.681862935575076
* MAE = 0.33671322409769433
```

df n.1, scene n.25/109

We have 3 time intervals inside [209.64, 210.24]

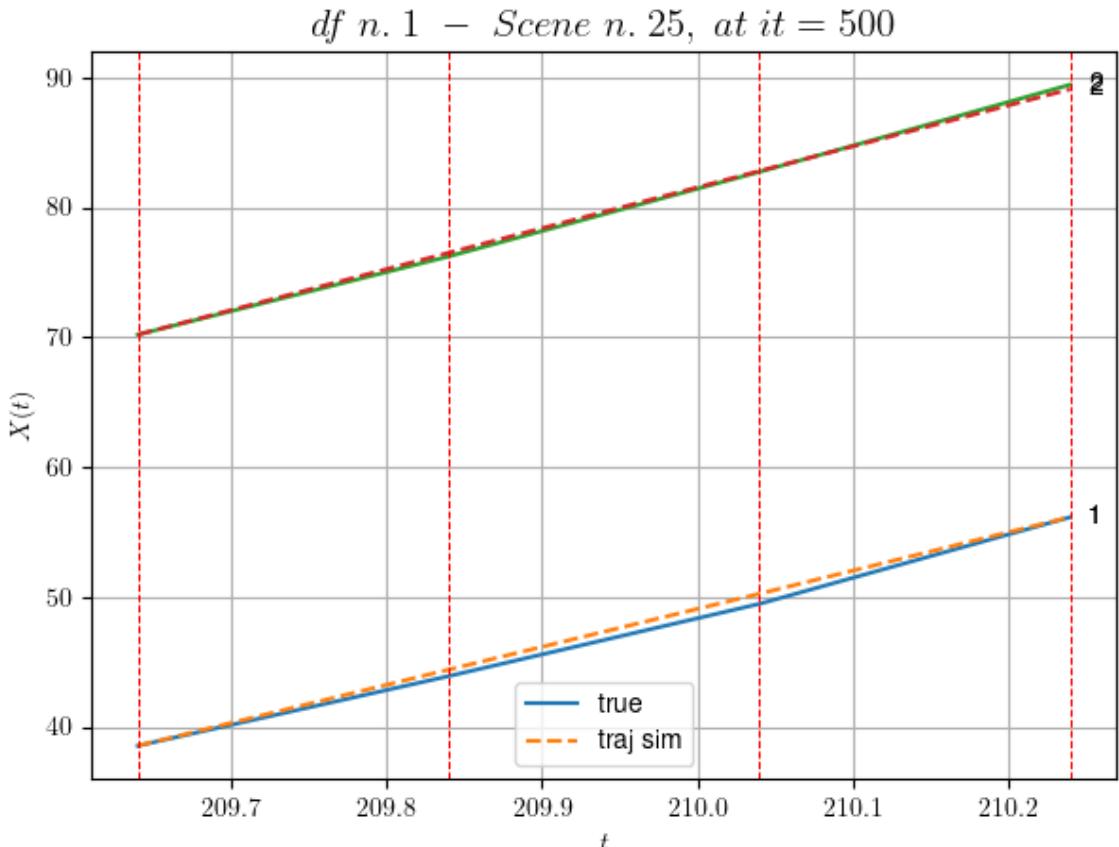
- Time interval n.0: [209.64, 209.84]
 - * y_true: [26.81089057]
 - * v_ann: [29.310623168945312, 31.507071372239256]

- Time interval n.1: [209.84, 210.04]
 - * y_true: [27.83624351]
 - * v_ann: [29.228300094604492, 31.507071372239256]

- Time interval n.2: [210.04, 210.24]

```
* y_true: [33.3769543]
* v_ann: [29.584096908569336, 31.507071372239256]
```

```
* err= 0.1328049170000597
* Learning rate NN = 5.904899080633186e-05
* diff = 6.776210056957943e-07
```



For scene 25/109

```
* use LR_NN=0.0001 with err=0.35063897881245737 at it=24
* v0_scn_mean = 31.446788517361316
* MAE = 0.13185943537984937
```

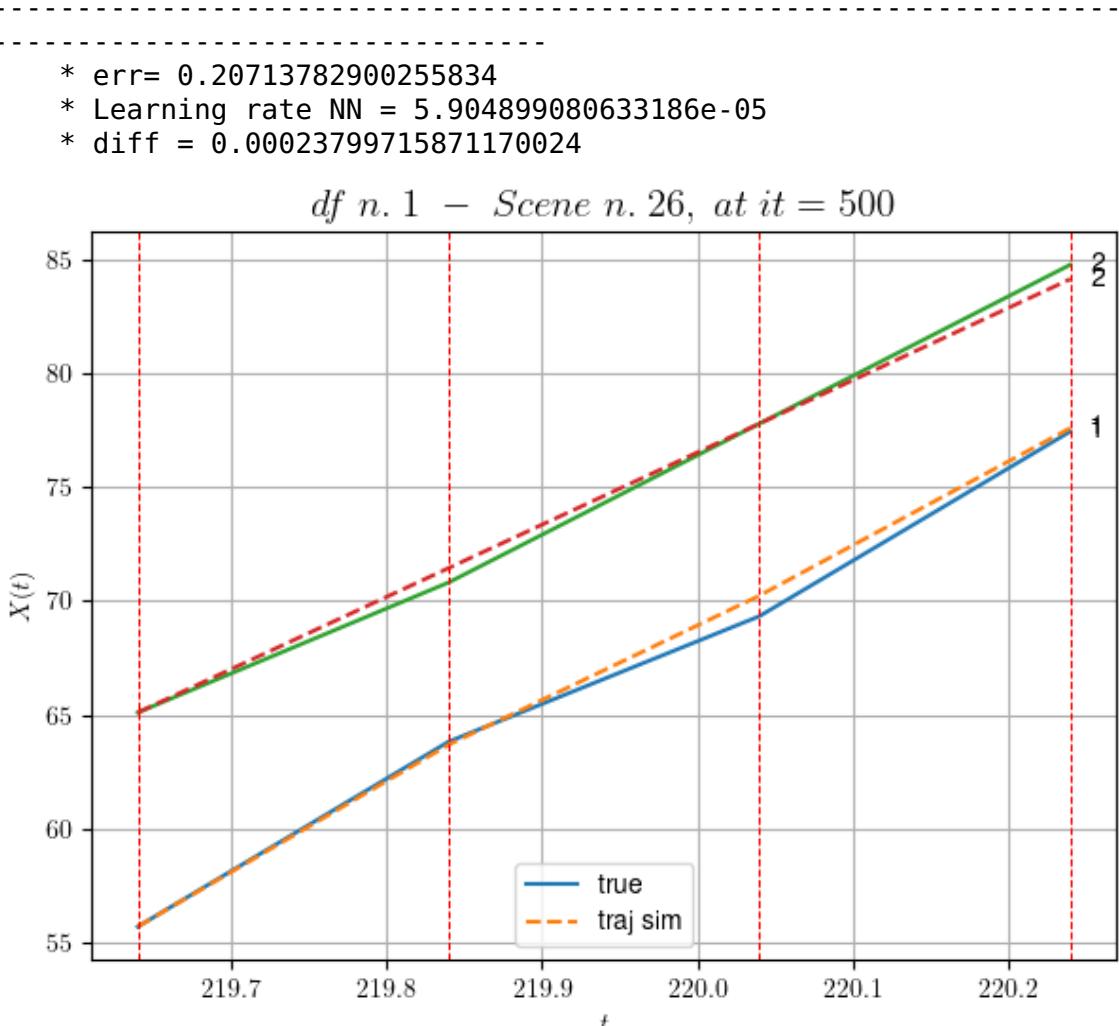
df n.1, scene n.26/109

We have 3 time intervals inside [219.64, 220.24]

- Time interval n.0: [219.64, 219.84]
 - * y_true: [40.60281708]
 - * v_ann: [39.915184020996094, 31.715821070729945]

- Time interval n.1: [219.84, 220.04]
 - * y_true: [27.552367]
 - * v_ann: [32.7556037902832, 31.715821070729945]

```
- Time interval n.2: [220.04, 220.24]
* y_true: [40.55423042]
* v_ann: [36.78126907348633, 31.715821070729945]
```

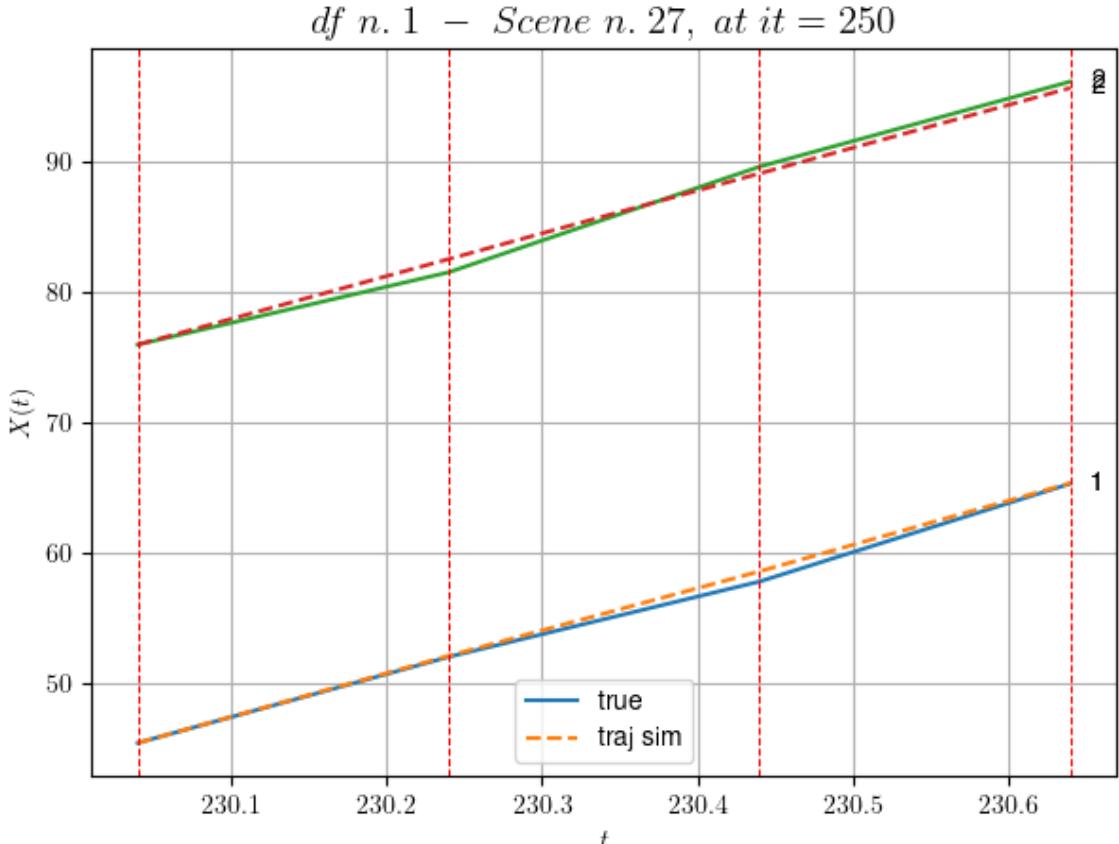


For scene 26/109

```
* use LR_NN=0.0001 with err=0.5039933985112477 at it=24
* v0_scn_mean = 31.647188227913798
* MAE = 0.2065313469521301
```

df n.1, scene n.27/109

```
We have 3 time intervals inside [230.04,230.64]
* err= 0.26963594324398193
* Learning rate NN = 4.049999552080408e-05
* diff = 7.858148653450137e-07
```



For scene 27/109

* use LR_NN=5e-05 with err=1.0259522078082168 at it=24
 * v0_scn_mean = 32.582534735433235
 * MAE = 0.26963404035799643

df n.1, scene n.28/109

We have 4 time intervals inside [239.44, 240.24]

- Time interval n.0: [239.44, 239.64]
 * y_true: [28.64102922]
 * v_ann: [39.76340866088867, 25.426381424530433]

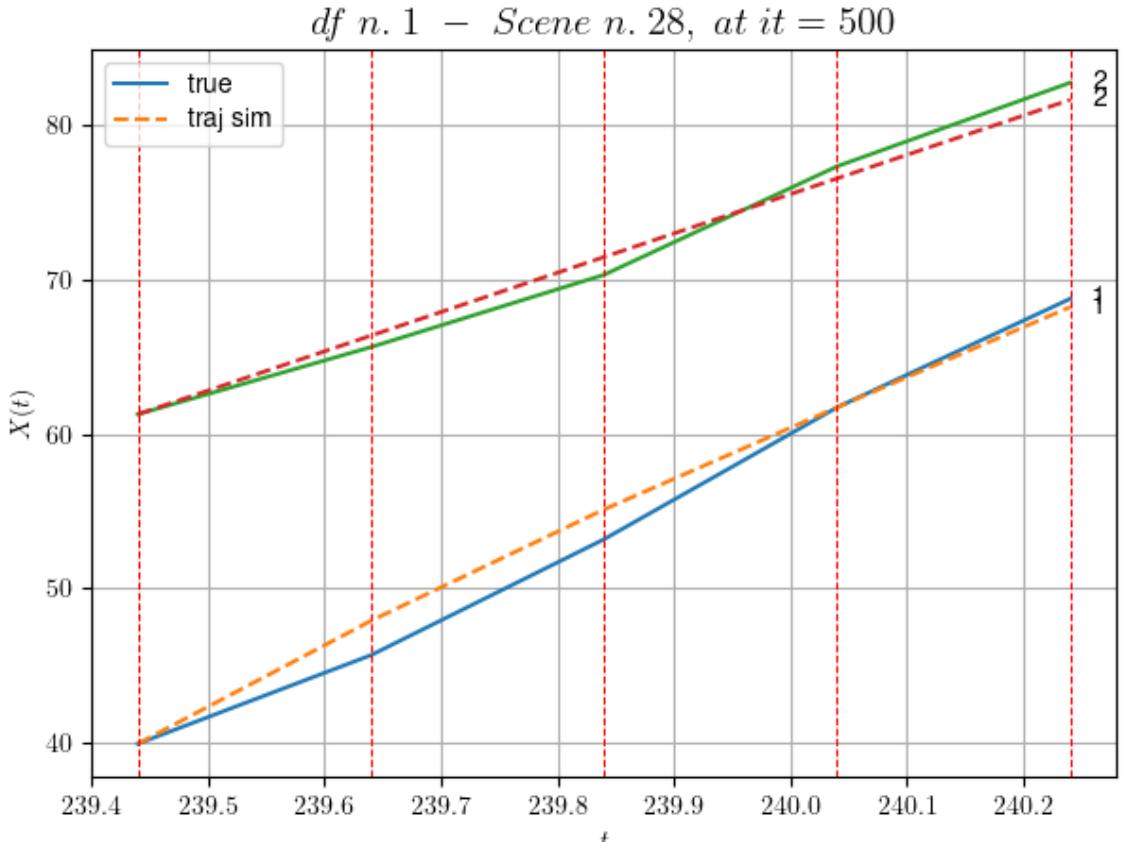
- Time interval n.1: [239.64, 239.84]
 * y_true: [37.49184091]
 * v_ann: [36.007469177246094, 25.426381424530433]

- Time interval n.2: [239.84, 240.04]
 * y_true: [42.66274465]
 * v_ann: [33.03252410888672, 25.426381424530433]

- Time interval n.3: [240.04, 240.24]
 * y_true: [35.12300522]

```
* v_ann: [32.446353912353516, 25.426381424530433]
```

```
* err= 1.2660875335793094
* Learning rate NN = 4.7829678806010634e-05
* diff = 0.010306985029912008
```



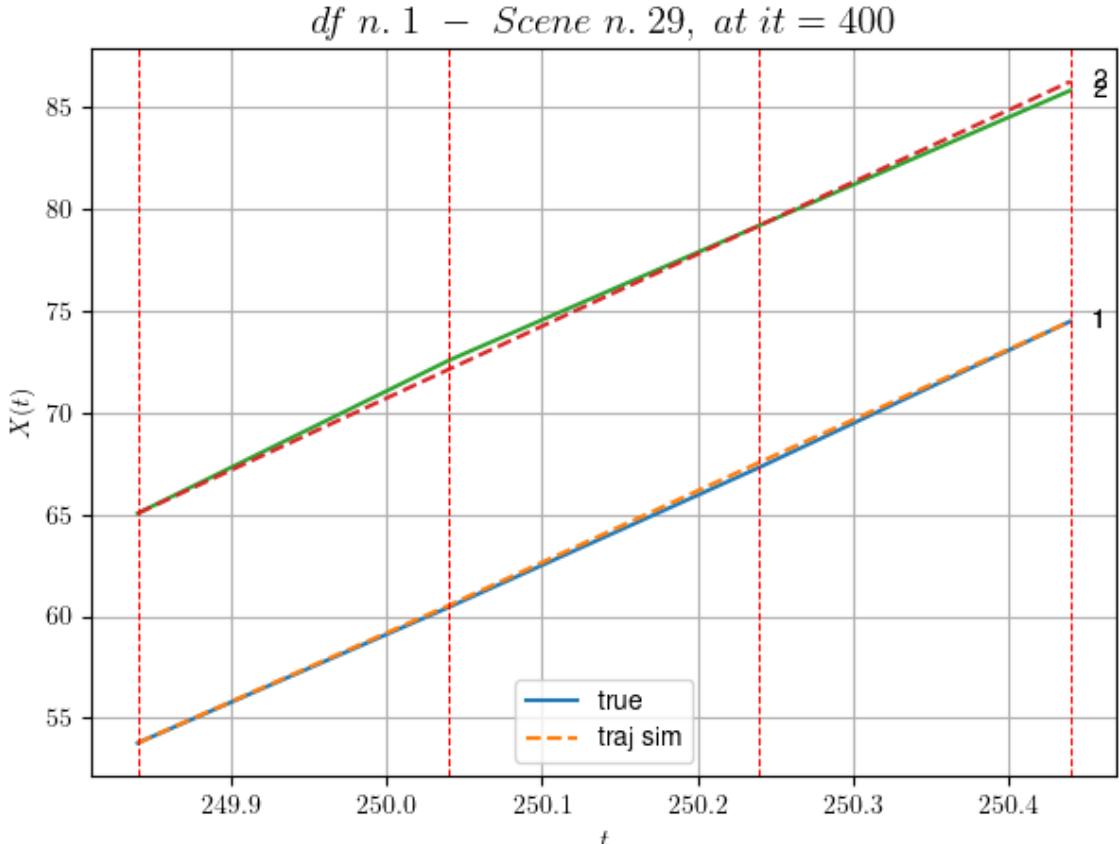
For scene 28/109

```
* use LR_NN=0.0001 with err=3.6764040752806624 at it=24
* v0_scn_mean = 25.609326167514048
* MAE = 1.2627175758555318
```

df n.1, scene n.29/109

```
We have 3 time intervals inside [249.84, 250.44]
```

```
* err= 0.056128747156779873
* Learning rate NN = 6.560998735949397e-05
* diff = 1.2036775415280587e-07
```



For scene 29/109

```
* use LR_NN=0.0001 with err=1.8349298541239905 at it=24
* v0_scn_mean = 35.09792473317487
* MAE = 0.04999656011632647
```

df n.1, scene n.30/109

We have 4 time intervals inside [251.44, 252.24]

- Time interval n.0: [251.44, 251.64]
 - * y_true: [32.20057892]
 - * v_ann: [28.424087524414062, 35.46332801832241]

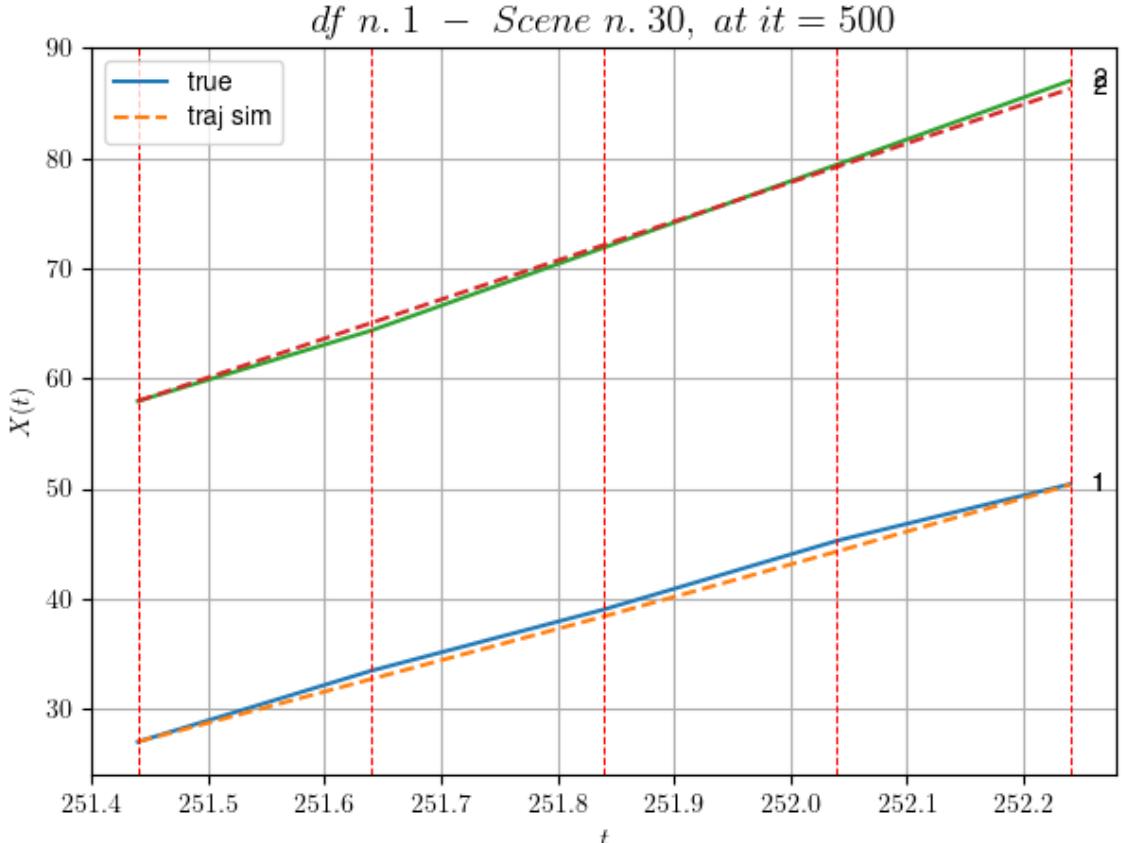
- Time interval n.1: [251.64, 251.84]
 - * y_true: [27.90071663]
 - * v_ann: [28.526142120361328, 35.46332801832241]

- Time interval n.2: [251.84, 252.04]
 - * y_true: [31.20108088]
 - * v_ann: [29.4909877770996, 35.46332801832241]

- Time interval n.3: [252.04, 252.24]
 - * y_true: [25.7011433]

```
* v_ann: [30.208881378173828, 35.46332801832241]
```

```
* err= 0.3034528548172726
* Learning rate NN = 4.782968062500004e-06
* diff = 7.740517997922858e-05
```



For scene 30/109

```
* use LR_NN=1e-05 with err=4.6104794285016775 at it=24
* v0_scn_mean = 35.24479489763158
* MAE = 0.3030234708626506
```

df n.1, scene n.31/109

We have 10 time intervals inside [261.64, 263.64]

- Time interval n.0: [261.64, 261.84]
 - * y_true: [20.93010778]
 - * v_ann: [26.706993103027344, 31.89274028454605]

- Time interval n.1: [261.84, 262.04]
 - * y_true: [19.94015095]
 - * v_ann: [31.02664566040039, 31.89274028454605]

- Time interval n.2: [262.04, 262.24]

```
* y_true: [30.02039251]
* v_ann: [31.196178436279297, 31.89274028454605]

-----
- Time interval n.3: [262.24, 262.44]
* y_true: [42.44088104]
* v_ann: [31.03792381286621, 31.89274028454605]

-----
- Time interval n.4: [262.44, 262.64]
* y_true: [29.93084335]
* v_ann: [28.105533599853516, 31.89274028454605]

-----
- Time interval n.5: [262.64, 262.84]
* y_true: [34.57147294]
* v_ann: [28.55462074279785, 31.89274028454605]

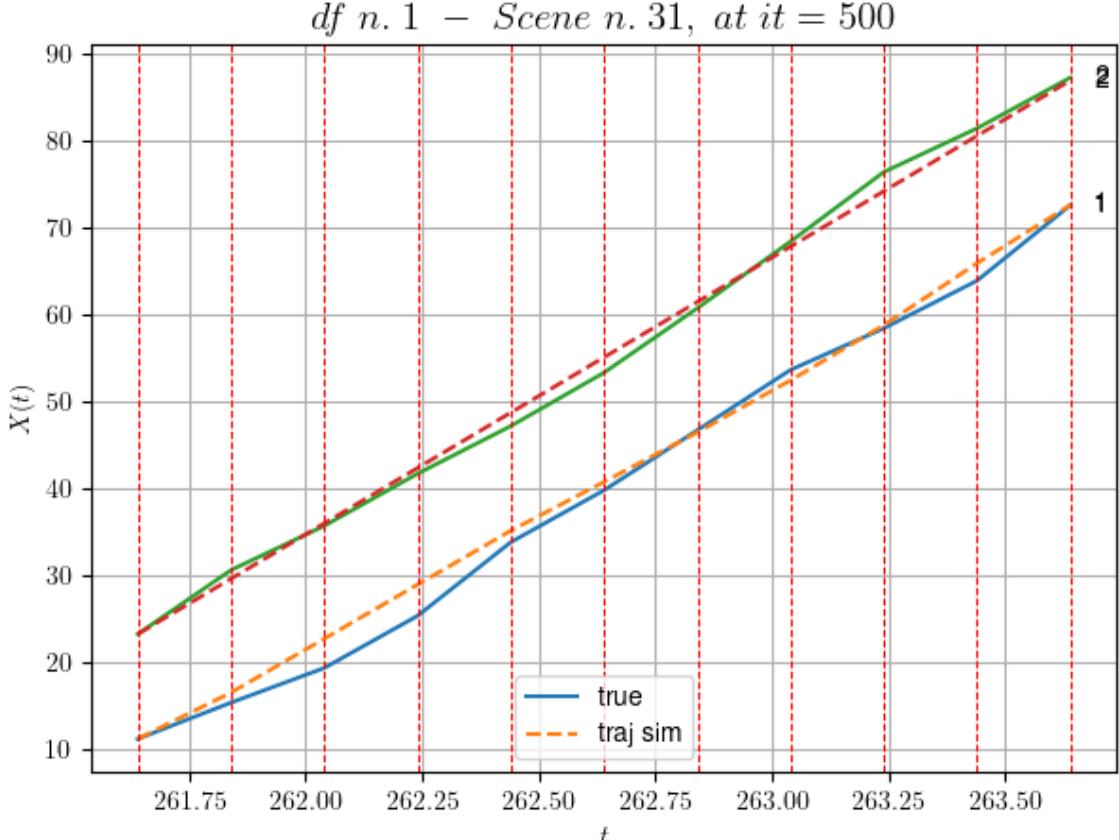
-----
- Time interval n.6: [262.84, 263.04]
* y_true: [34.76181544]
* v_ann: [29.99164390563965, 31.89274028454605]

-----
- Time interval n.7: [263.04, 263.24]
* y_true: [23.95156631]
* v_ann: [31.726280212402344, 31.89274028454605]

-----
- Time interval n.8: [263.24, 263.44]
* y_true: [27.4721836]
* v_ann: [35.68284225463867, 31.89274028454605]

-----
- Time interval n.9: [263.44, 263.64]
* y_true: [43.4543127]
* v_ann: [33.58940887451172, 31.89274028454605]

* err= 2.1674505015036907
* Learning rate NN = 6.754255446139723e-05
* diff = 0.017864032581111466
```



For scene 31/109

- * use LR_NN=0.0005 with err=5.674638920976758 at it=24
- * v0_scn_mean = 31.817030673178234
- * MAE = 2.0174974402602843

df n.1, scene n.32/109

We have 3 time intervals inside [271.04, 271.64]

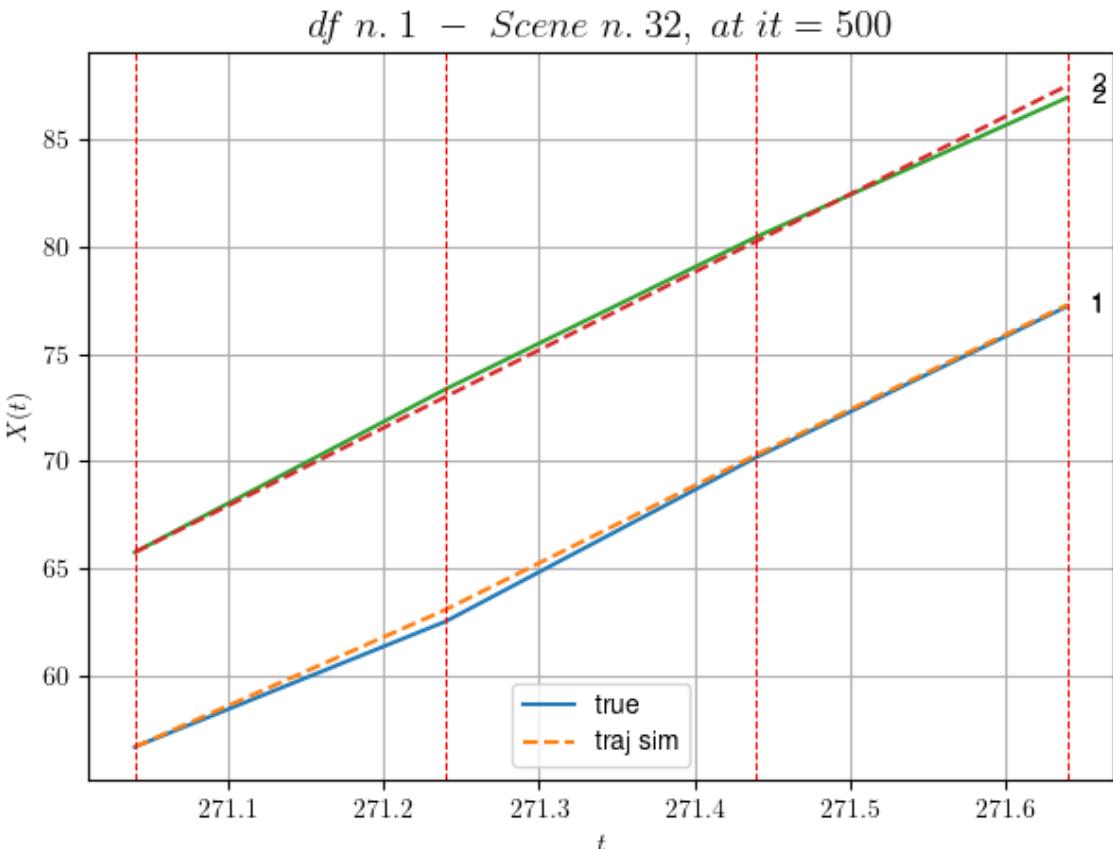
- Time interval n.0: [271.04, 271.24]
 - * y_true: [29.28204901]
 - * v_ann: [32.02021408081055, 36.2988846650166]

- Time interval n.1: [271.24, 271.44]
 - * y_true: [38.30326342]
 - * v_ann: [36.13871765136719, 36.2988846650166]

- Time interval n.2: [271.44, 271.64]
 - * y_true: [35.20368408]
 - * v_ann: [34.98337173461914, 36.2988846650166]

- * err= 0.09975344341517696
- * Learning rate NN = 5.904899080633186e-05

* diff = 0.00010923961858012865



For scene 32/109

* use LR_NN=0.0001 with err=2.56561542187984 at it=24
 * v0_scn_mean = 36.046929278462876
 * MAE = 0.09491239796107105

df n.1, scene n.33/109

We have 4 time intervals inside [272.24, 273.04]

- Time interval n.0: [272.24, 272.44]
 - * y_true: [28.87017174]
 - * v_ann: [33.535640716552734, 35.46878260310071]

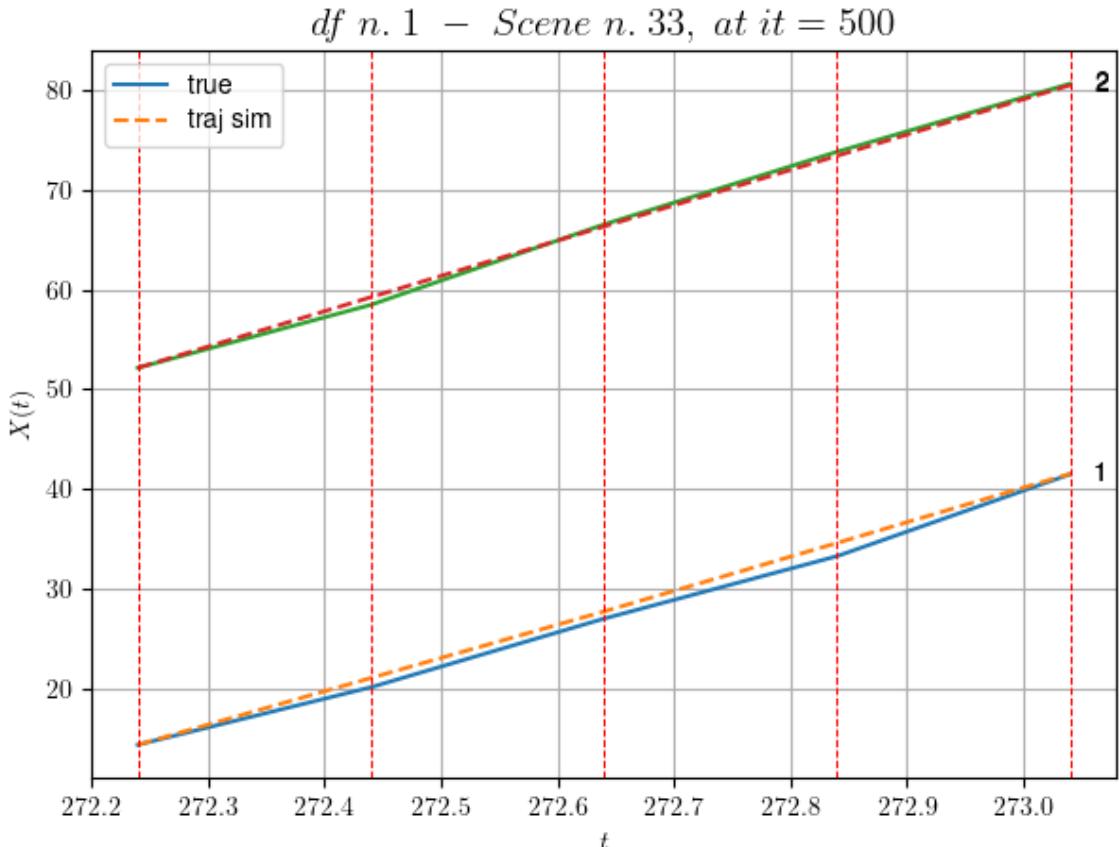
- Time interval n.1: [272.44, 272.64]
 - * y_true: [34.43039204]
 - * v_ann: [33.370330810546875, 35.46878260310071]

- Time interval n.2: [272.64, 272.84]
 - * y_true: [31.36055806]
 - * v_ann: [34.37963104248047, 35.46878260310071]

- Time interval n.3: [272.84, 273.04]

```
* y_true: [41.11115543]
* v_ann: [34.72706604003906, 35.46878260310071]
```

```
* err= 0.39691503866402655
* Learning rate NN = 2.3914839403005317e-05
* diff = 3.964169724424149e-06
```



For scene 33/109

```
* use LR_NN=5e-05 with err=4.337475828414525 at it=24
* v0_scn_mean = 35.25003129901817
* MAE = 0.3943167156189541
```

df n.1, scene n.34/109

We have 5 time intervals inside [291.64, 292.64]

- Time interval n.0: [291.64, 291.84]
 - * y_true: [35.45036349]
 - * v_ann: [37.89492416381836, 34.11909568874986]

- Time interval n.1: [291.84, 292.04]

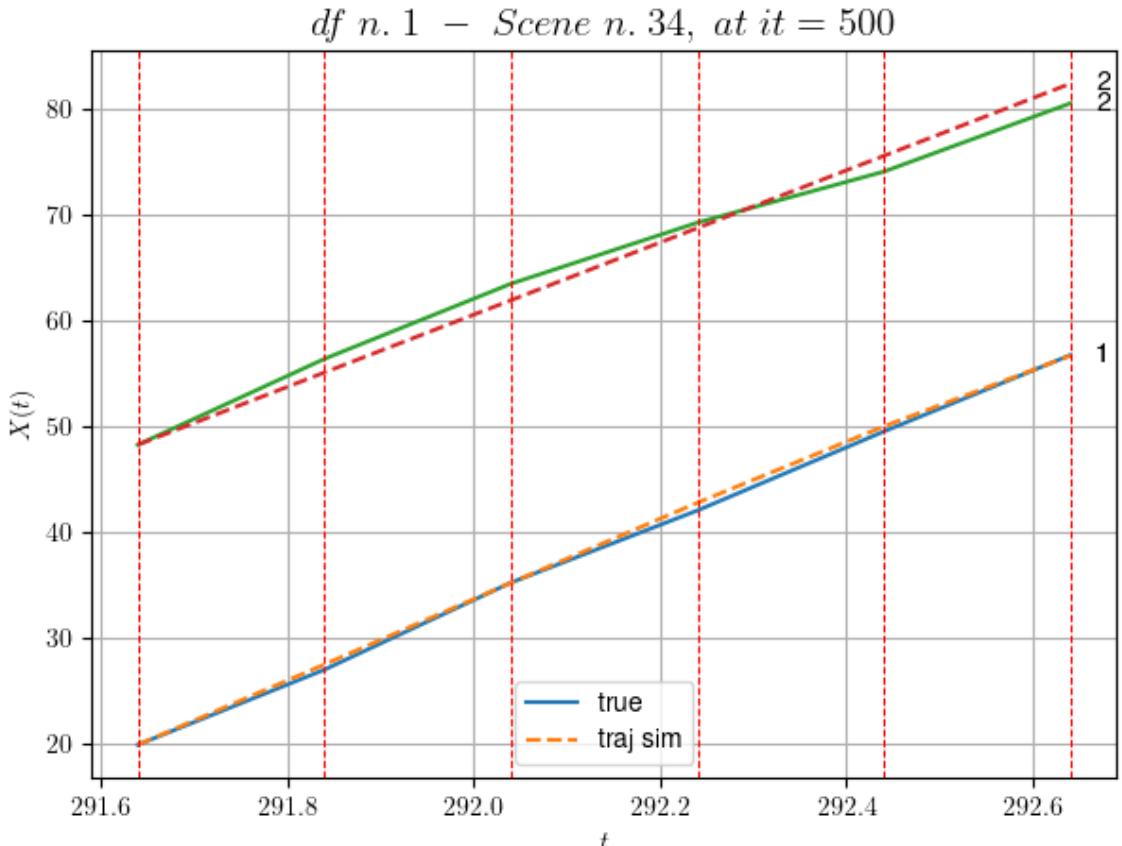
- * y_true: [41.11075316]
 - * v_ann: [38.592342376708984, 34.11909568874986]

```
- Time interval n.2: [292.04, 292.24]
* y_true: [34.09093472]
* v_ann: [37.803016662597656, 34.11909568874986]
```

```
- Time interval n.3: [292.24, 292.44]
* y_true: [37.32147853]
* v_ann: [36.066097259521484, 34.11909568874986]
```

```
- Time interval n.4: [292.44, 292.64]
* y_true: [36.09190656]
* v_ann: [33.393375396728516, 34.11909568874986]
```

```
* err= 0.9195375772085657
* Learning rate NN = 3.874203684972599e-05
* diff = 0.001830896474113386
```



For scene 34/109

```
* use LR_NN=0.0001 with err=2.817673094065155 at it=24
* v0_scn_mean = 33.95433186123161
* MAE = 0.818325554785576
```

df n.1, scene n.35/109

We have 3 time intervals inside [294.64, 295.24]

- Time interval n.0: [294.64, 294.84]
 - * y_true: [25.10005748]
 - * v_ann: [24.905847549438477, 31.912591419183403]
-

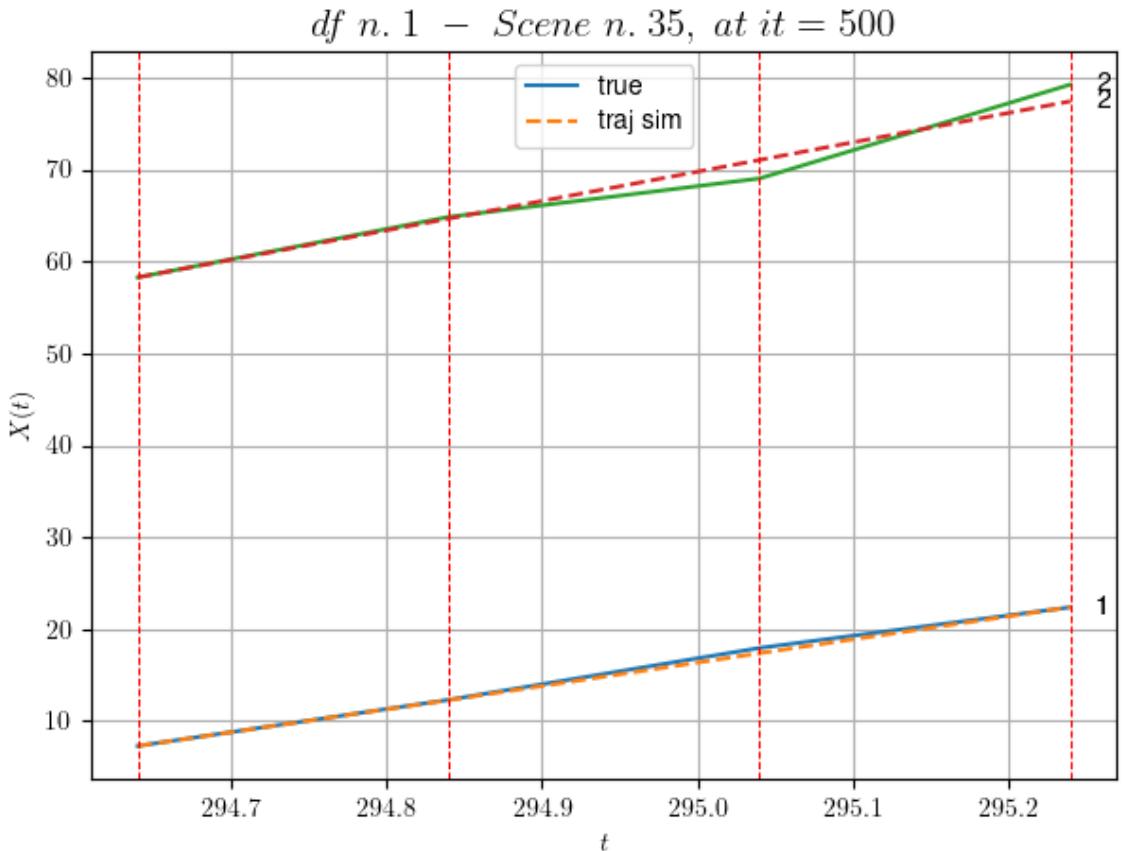
- Time interval n.1: [294.84, 295.04]
 - * y_true: [28.17013329]
 - * v_ann: [25.53519630432129, 31.912591419183403]
-

- Time interval n.2: [295.04, 295.24]
 - * y_true: [22.14017228]
 - * v_ann: [25.033647537231445, 31.912591419183403]
-

* err= 0.9651585193552863

* Learning rate NN = 5.9048988987342454e-06

* diff = 8.945036802376904e-06



For scene 35/109

- * use LR_NN=1e-05 with err=3.223430470625424 at it=24
 - * v0_scn_mean = 31.836087762433213
 - * MAE = 0.9649794110125693
-
-

df n.1, scene n.36/109

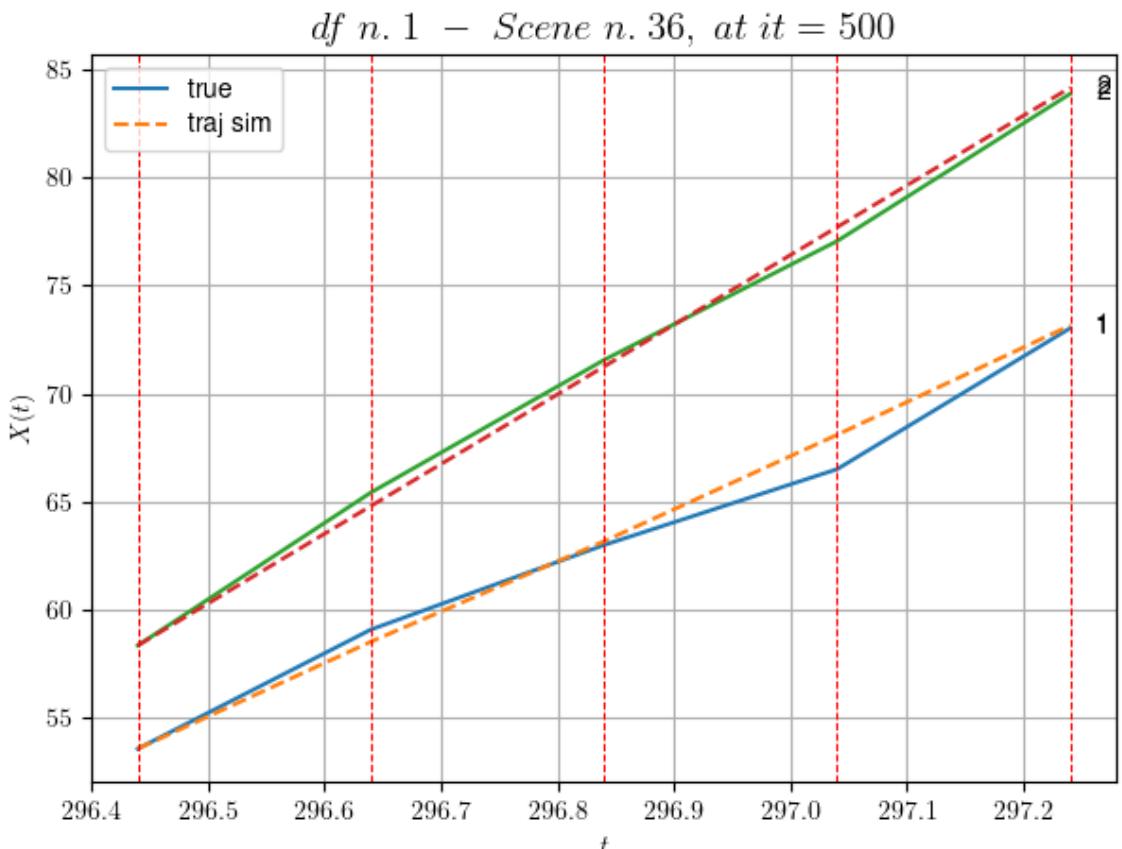
```
=====
=====
We have 4 time intervals inside [296.44,297.24]
- Time interval n.0: [296.44, 296.64]
  * y_true: [27.57673439]
  * v_ann: [24.76601791381836, 32.254865471371716]
```

```
-----
- Time interval n.1: [296.64, 296.84]
  * y_true: [19.54627216]
  * v_ann: [23.223058700561523, 32.254865471371716]
```

```
-----
- Time interval n.2: [296.84, 297.04]
  * y_true: [17.55160174]
  * v_ann: [24.63034439086914, 32.254865471371716]
```

```
-----
- Time interval n.3: [297.04, 297.24]
  * y_true: [32.62813612]
  * v_ann: [25.299760818481445, 32.254865471371716]
```

```
*****
* err= 0.38659665377864233
* Learning rate NN = 0.000478296831715852
* diff = 0.000711500540207517
```



For scene 36/109

* use LR_NN=0.001 with err=1.4730076249530275 at it=24
 * v0_scn_mean = 32.1646708525343

* MAE = 0.3861009238809631

```
=====
=====
df n.1, scene n.37/109
=====
=====
```

We have 4 time intervals inside [298.04, 298.84]

- Time interval n.0: [298.04, 298.24]
 - * y_true: [30.57625271]
 - * v_ann: [22.498512268066406, 33.342662459053855]

```
-----
```

- Time interval n.1: [298.24, 298.44]
 - * y_true: [30.57625271]
 - * v_ann: [23.739824295043945, 33.342662459053855]

```
-----
```

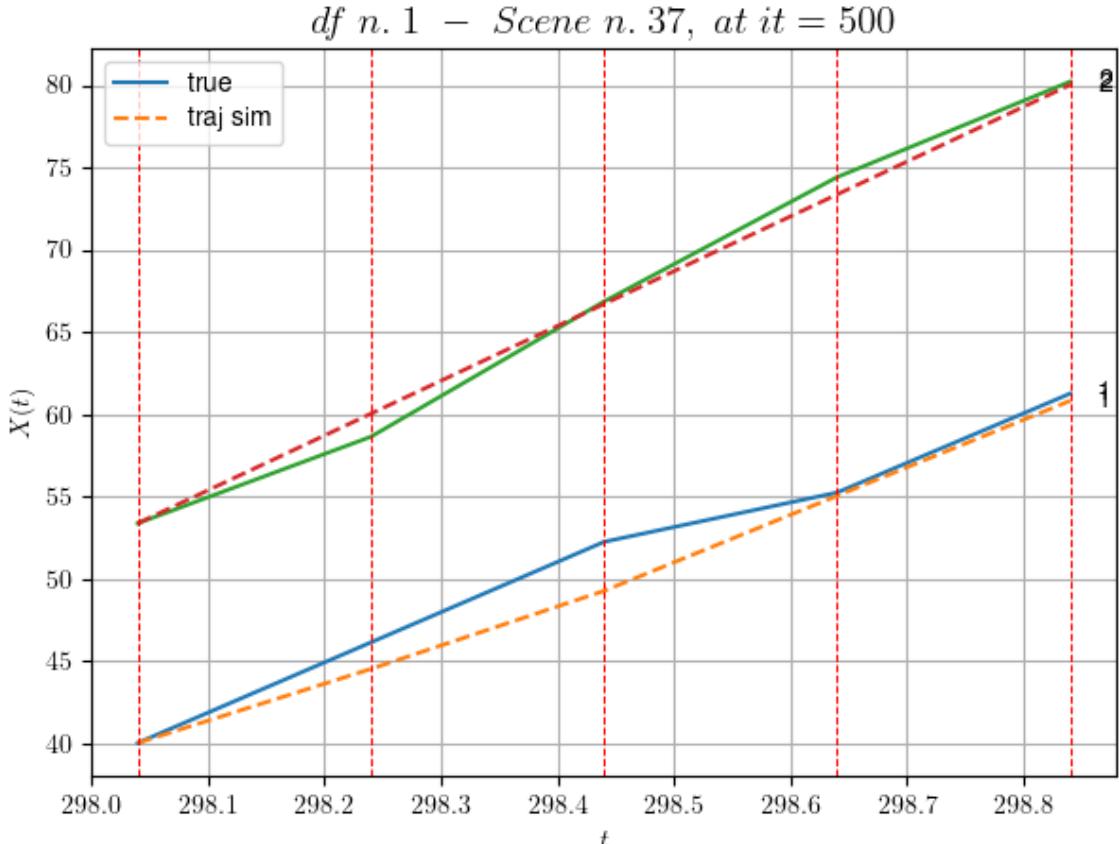
- Time interval n.2: [298.44, 298.64]
 - * y_true: [15.00082942]
 - * v_ann: [28.930612564086914, 33.342662459053855]

```
-----
```

- Time interval n.3: [298.64, 298.84]
 - * y_true: [30.12717078]
 - * v_ann: [28.91205406188965, 33.342662459053855]

```
-----
```

- * err= 1.4879706542036344
- * Learning rate NN = 0.000239148415857926
- * diff = 0 0103145111072100000



For scene 37/109

- * use LR_NN=0.0005 with err=3.483342409609774 at it=24
- * v0_scn_mean = 33.208955960713446
- * MAE = 1.4108123596950644

df n.1, scene n.38/109

We have 5 time intervals inside [301.44, 302.44]

- Time interval n.0: [301.44, 301.64]
 - * y_true: [23.98073382]
 - * v_ann: [30.71500015258789, 25.446081747008463]

- Time interval n.1: [301.64, 301.84]
 - * y_true: [31.29145934]
 - * v_ann: [30.120346069335938, 25.446081747008463]

- Time interval n.2: [301.84, 302.04]
 - * y_true: [33.7516476]
 - * v_ann: [28.275901794433594, 25.446081747008463]

- Time interval n.3: [302.04, 302.24]
 - * y_true: [26.67180193]

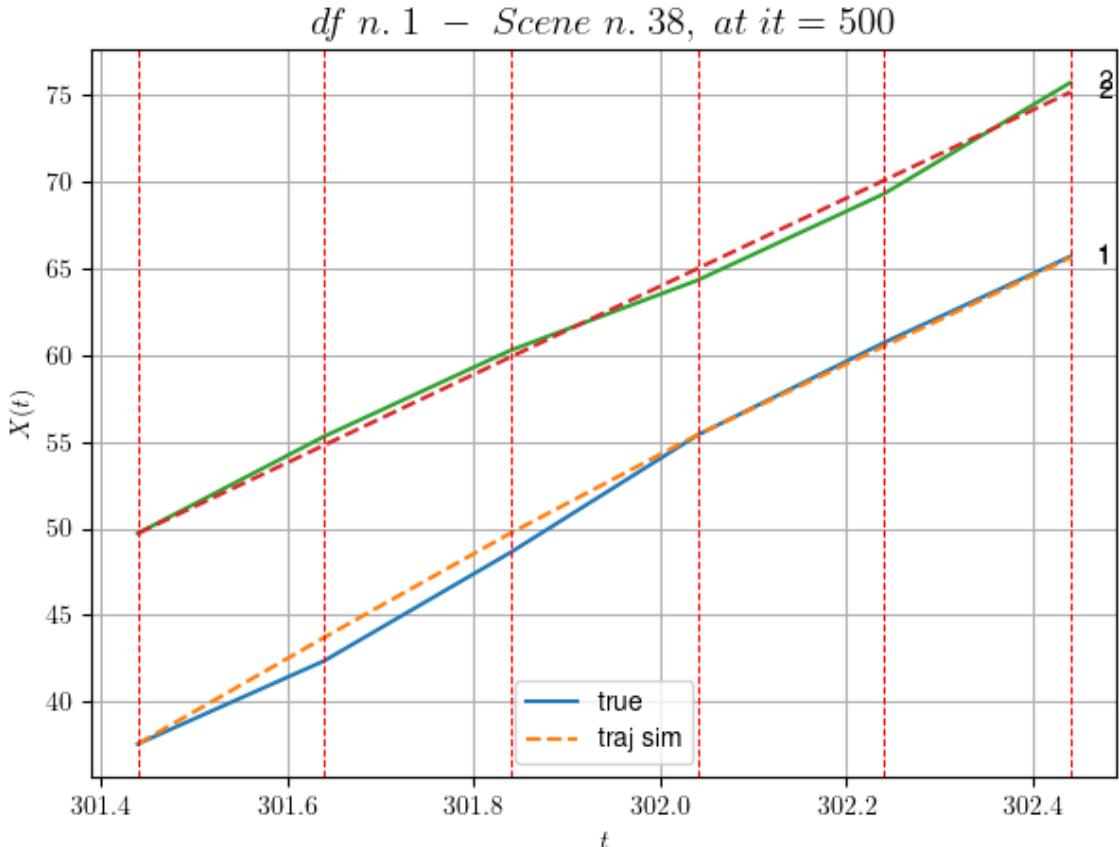
```
* v_ann: [25.573637008666992, 25.446081747008463]
```

```
- Time interval n.4: [302.24, 302.44]
```

```
* y_true: [24.90184051]
```

```
* v_ann: [25.535062789916992, 25.446081747008463]
```

```
* err= 0.40559473276657865
* Learning rate NN = 0.0001937102060765028
* diff = 0.038723105743197705
```



For scene 38/109

```
* use LR_NN=0.0005 with err=4.642952804184078 at it=24
```

```
* v0_scn_mean = 25.628238477093106
```

```
* MAE = 0.40559473276657865
```

df n.1, scene n.39/109

We have 2 time intervals inside [307.24, 307.64]

```
- Time interval n.0: [307.24, 307.44]
```

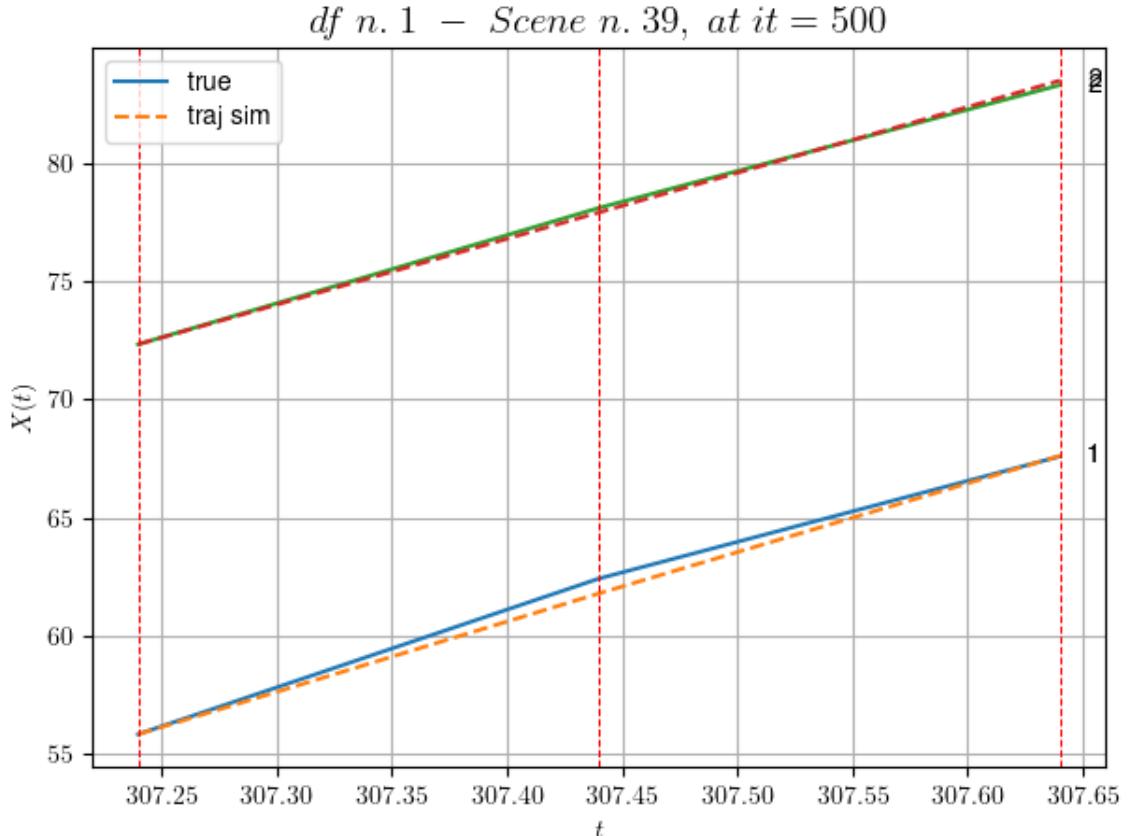
```
* y_true: [32.90225561]
```

```
* v_ann: [29.756799697875977, 27.873164065566776]
```

```
- Time interval n.1: [307.44, 307.64]
```

```
* y_true: [25.81209386]
* v_ann: [29.08092498779297, 27.873164065566776]
```

```
* err= 0.07834801307624575
* Learning rate NN = 7.289998757187277e-05
* diff = 3.642390756883329e-05
```



For scene 39/109

```
* use LR_NN=0.0001 with err=0.2527287177996662 at it=24
* v0_scn_mean = 27.95823750292857
* MAE = 0.07753287901067413
```

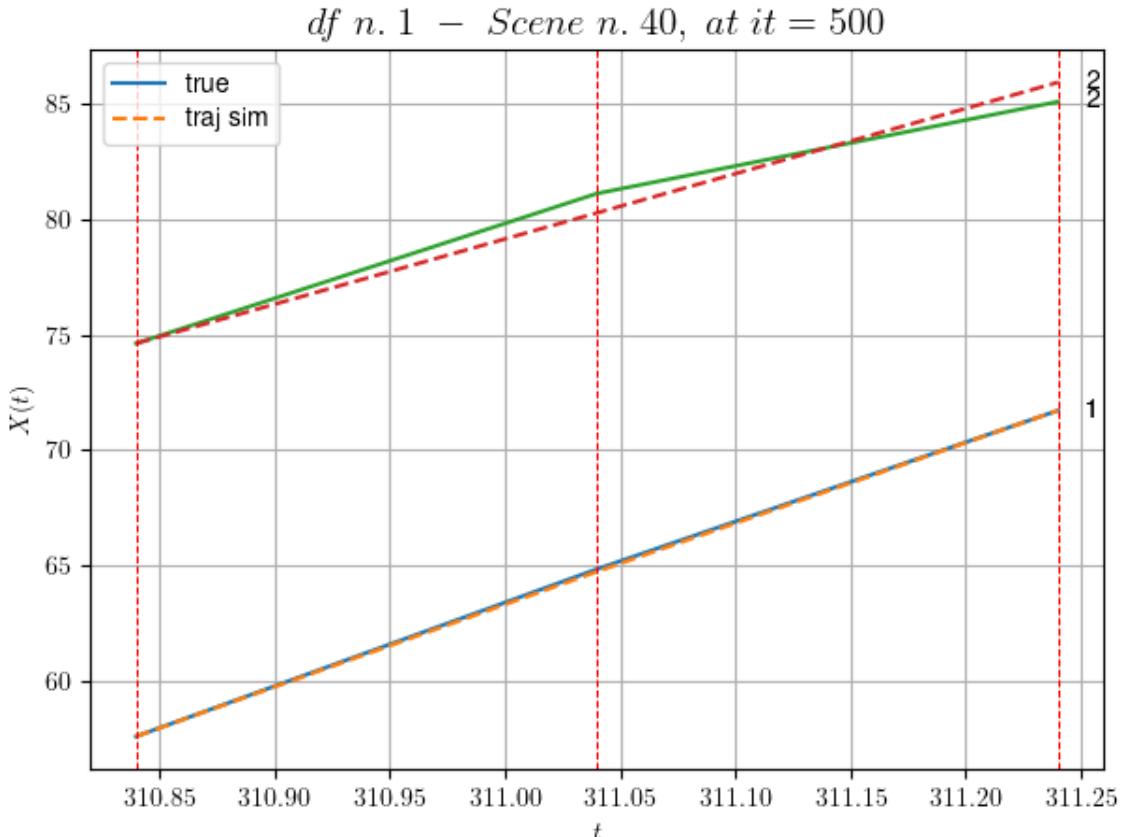
df n.1, scene n.40/109

We have 2 time intervals inside [310.84, 311.24]

- Time interval n.0: [310.84, 311.04]
 - * y_true: [36.31768759]
 - * v_ann: [35.779624938964844, 28.339874463061264]

- Time interval n.1: [311.04, 311.24]
 - * y_true: [34.42805305]
 - * v_ann: [34.985023498535156, 28.339874463061264]

```
* err= 0.2375339723612489
* Learning rate NN = 0.00036449998151510954
* diff = 5.732670280700347e-06
```



For scene 40/109

```
* use LR_NN=0.0005 with err=0.4213651038648798 at it=24
* v0_scn_mean = 28.406279484525776
* MAE = 0.2374933772366085
```

df n.1, scene n.41/109

We have 3 time intervals inside [316.44, 317.04]

- Time interval n.0: [316.44, 316.64]
 - * y_true: [37.30178767]
 - * v_ann: [31.258638381958008, 37.33434122714766]

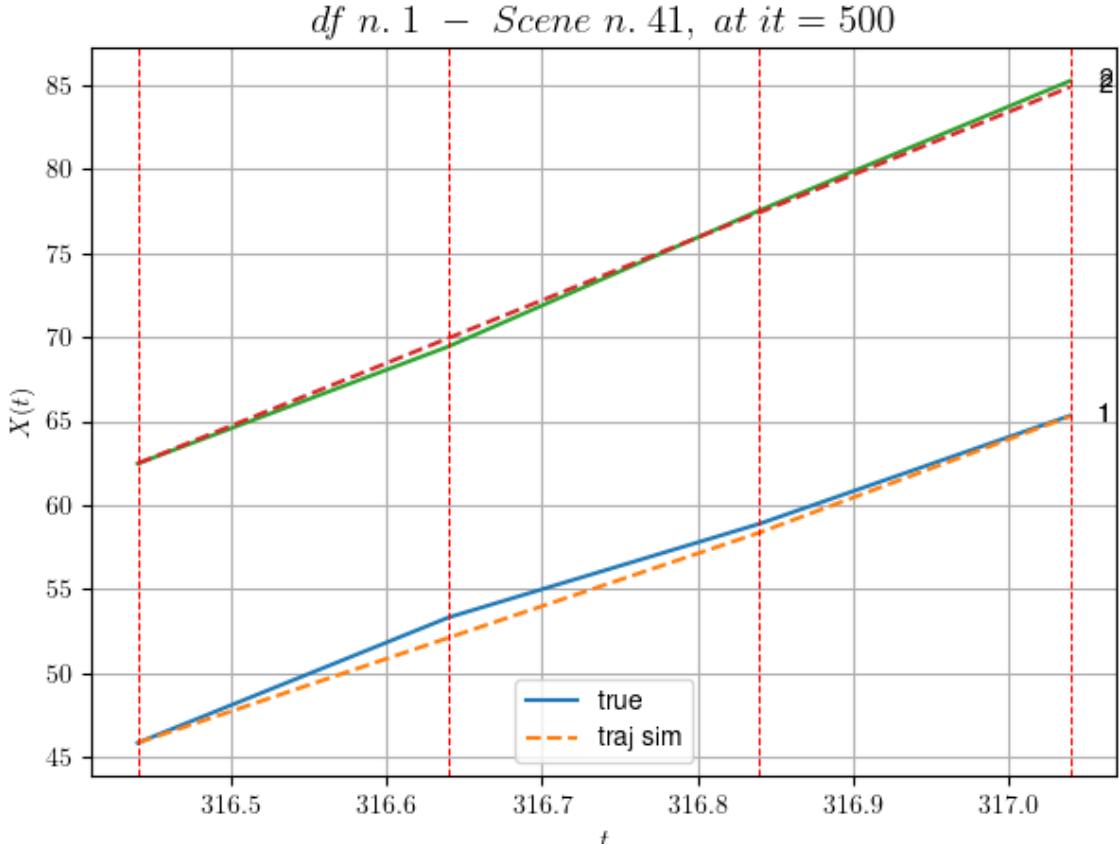
- Time interval n.1: [316.64, 316.84]
 - * y_true: [27.85170332]
 - * v_ann: [31.274751663208008, 37.33434122714766]

- Time interval n.2: [316.84, 317.04]
 - * y_true: [32.2024108]
 - * v_ann: [34.5968132019043, 37.33434122714766]

```

* err= 0.267965810142643
* Learning rate NN = 5.904899080633186e-05
* diff = 4.337566516032787e-05

```



For scene 41/109

```

* use LR_NN=0.0001 with err=4.40565606189761 at it=24
* v0_scn_mean = 37.04096757811771
* MAE = 0.26417124311286977

```

df n.1, scene n.42/109

We have 6 time intervals inside [317.64, 318.84]

- Time interval n.0: [317.64, 317.84]
 - * y_true: [33.22656212]
 - * v_ann: [29.65837860107422, 33.19471835365514]

-
- Time interval n.1: [317.84, 318.04]
 - * y_true: [28.08686413]
 - * v_ann: [31.219587326049805, 33.19471835365514]

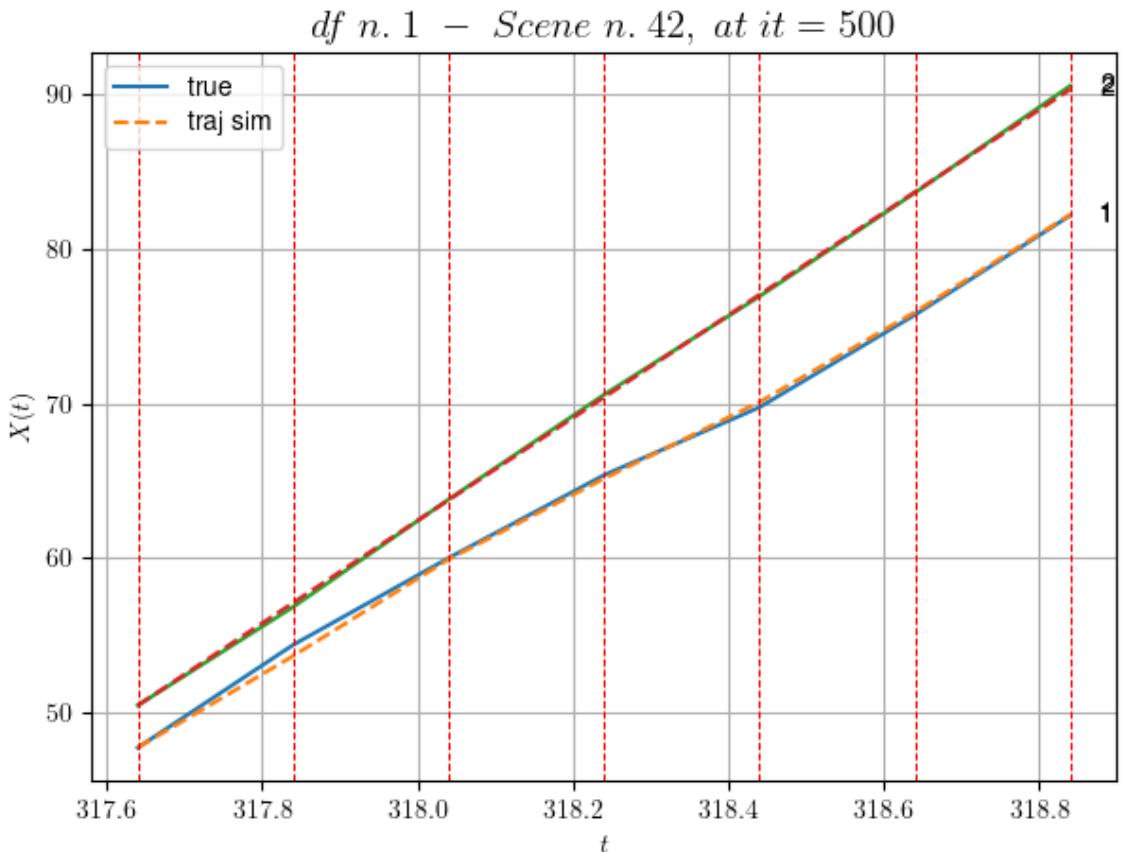
-
- Time interval n.2: [318.04, 318.24]
 - * y_true: [26.80193964]
 - * v_ann: [26.10561752319336, 33.19471835365514]

```
- Time interval n.3: [318.24, 318.44]
* y_true: [21.92189]
* v_ann: [24.736413955688477, 33.19471835365514]
```

```
- Time interval n.4: [318.44, 318.64]
* y_true: [29.86332637]
* v_ann: [29.083572387695312, 33.19471835365514]
```

```
- Time interval n.5: [318.64, 318.84]
* y_true: [32.15368857]
* v_ann: [31.530765533447266, 33.19471835365514]
```

```
* err= 0.06368621631622341
* Learning rate NN = 0.00031381050939671695
* diff = 0.0012200264149509754
```



For scene 42/109

```
* use LR_NN=0.001 with err=10.733674564854978 at it=24
* v0_scn_mean = 33.06692961953174
* MAE = 0.06368621631622341
```

df n.1, scene n.43/109

```
=====
=====
We have 4 time intervals inside [320.44,321.24]
- Time interval n.0: [320.44, 320.64]
  * y_true: [33.93064809]
  * v_ann: [33.050209045410156, 32.19336724924335]
```

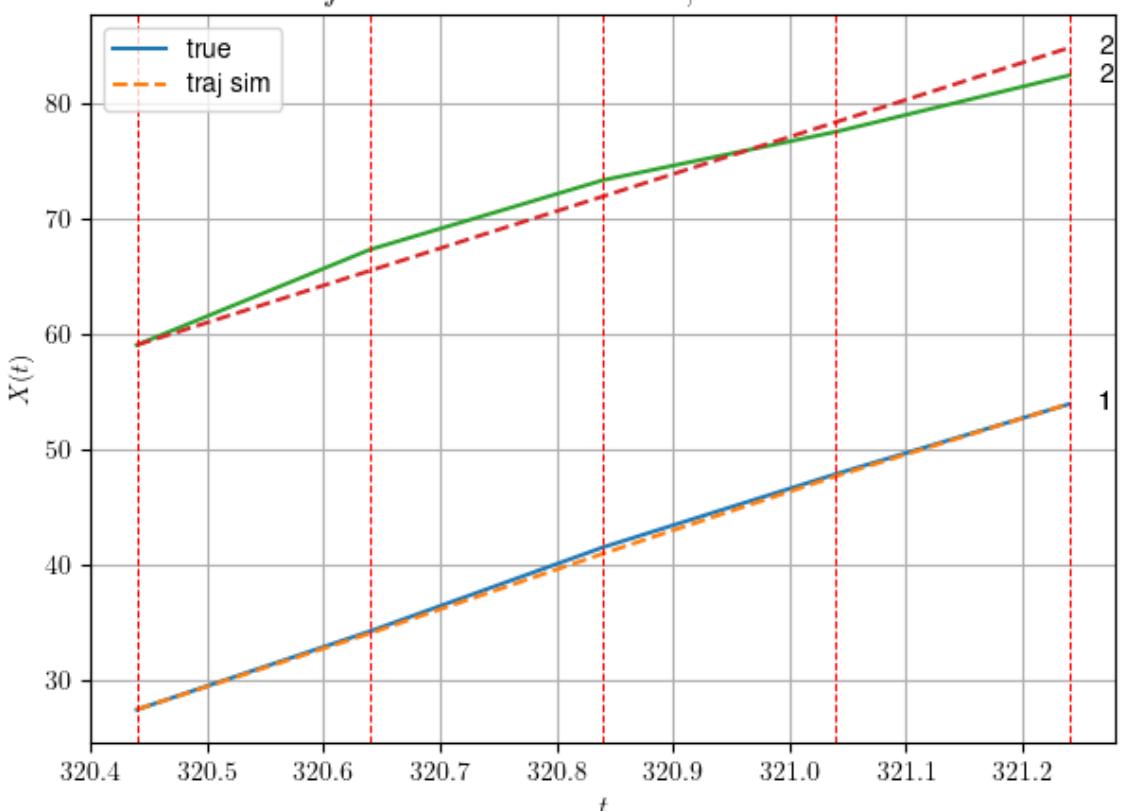
```
-----
- Time interval n.1: [320.64, 320.84]
  * y_true: [36.40102009]
  * v_ann: [34.54679489135742, 32.19336724924335]
```

```
-----
- Time interval n.2: [320.84, 321.04]
  * y_true: [31.75123703]
  * v_ann: [33.571502685546875, 32.19336724924335]
```

```
-----
- Time interval n.3: [321.04, 321.24]
  * y_true: [30.29153361]
  * v_ann: [31.328062057495117, 32.19336724924335]
```

```
*****
* err= 1.2093995001661872
* Learning rate NN = 2.3914839403005317e-05
* diff = 1.607257977376264e-06
```

df n. 1 – Scene n. 43, at it = 500



For scene 43/109

* use LR_NN=5e-05 with err=1.1311195420470648 at it=24
 * v0_scn_mean = 32.10563255929043

* MAE = 1.0295641173948153

=====

=====

df n.1, scene n.44/109

=====

=====

We have 10 time intervals inside [324.44, 326.44]

- Time interval n.0: [324.44, 324.64]
 - * y_true: [27.85017685]
 - * v_ann: [25.45917510986328, 29.183614022792057]

- Time interval n.1: [324.64, 324.84]
 - * y_true: [26.1002778]
 - * v_ann: [25.745576858520508, 29.183614022792057]

- Time interval n.2: [324.84, 325.04]
 - * y_true: [26.05041313]
 - * v_ann: [26.852214813232422, 29.183614022792057]

- Time interval n.3: [325.04, 325.24]
 - * y_true: [27.75061978]
 - * v_ann: [27.977279663085938, 29.183614022792057]

- Time interval n.4: [325.24, 325.44]
 - * y_true: [28.85087529]
 - * v_ann: [29.163963317871094, 29.183614022792057]

- Time interval n.5: [325.44, 325.64]
 - * y_true: [31.80128105]
 - * v_ann: [31.126619338989258, 29.183614022792057]

- Time interval n.6: [325.64, 325.84]
 - * y_true: [22.60113815]
 - * v_ann: [29.49638557434082, 29.183614022792057]

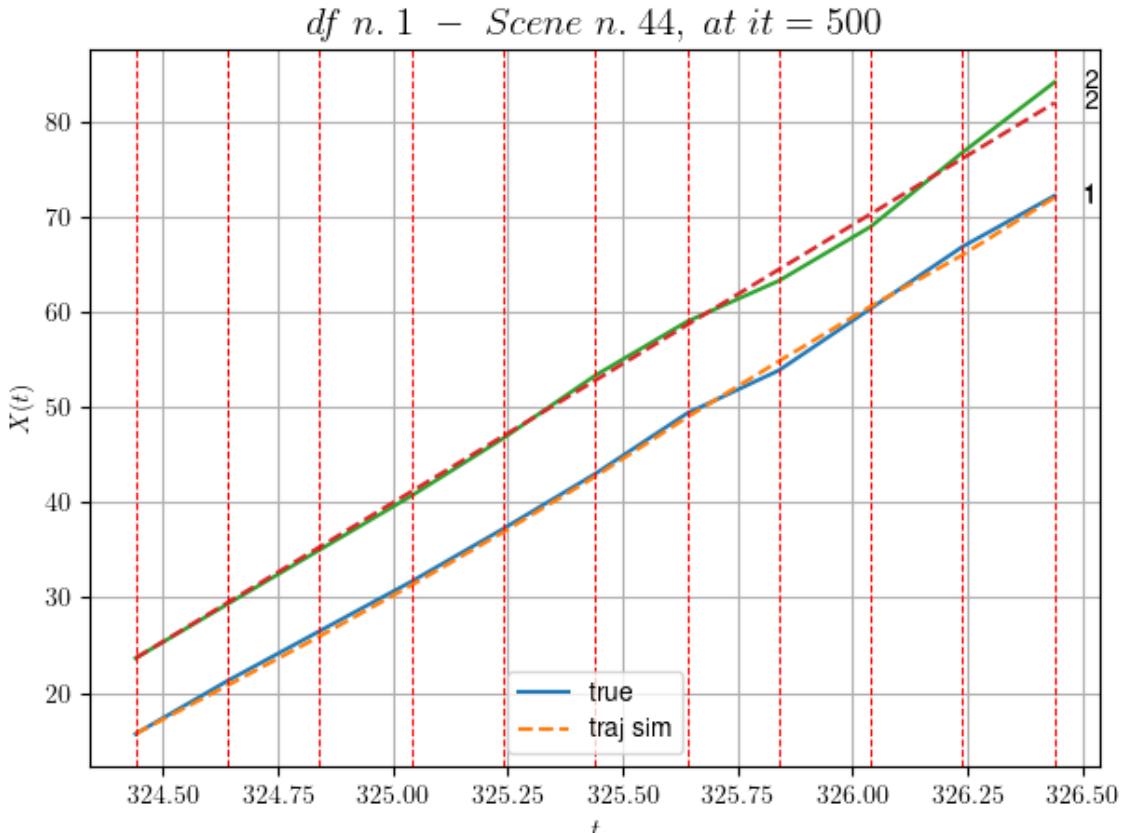
- Time interval n.7: [325.84, 326.04]
 - * y_true: [32.52725213]
 - * v_ann: [28.894880294799805, 29.183614022792057]

- Time interval n.8: [326.04, 326.24]
 - * y_true: [32.52725213]

```
* v_ann: [26.99913215637207, 29.183614022792057]
```

```
- Time interval n.9: [326.24, 326.44]
* y_true: [26.72764736]
* v_ann: [30.133018493652344, 29.183614022792057]
```

```
* err= 0.5423792124860962
* Learning rate NN = 6.754255082341842e-06
* diff = 0 0003624984641359408
```



For scene 44/109

```
* use LR_NN=5e-05 with err=0.9662314864677654 at it=24
* v0_scn_mean = 29.21626946187412
* MAE = 0.5354644118266833
```

df n.1, scene n.45/109

```
We have 8 time intervals inside [332.24,333.84]
- Time interval n.0: [332.24, 332.44]
* y_true: [25.53074236]
* v_ann: [34.794185638427734, 26.651206522068165]
```

```
- Time interval n.1: [332.44, 332.64]
* y_true: [36.42146061]
```

* v_ann: [33.27507019042969, 26.651206522068165]

- Time interval n.2: [332.64, 332.84]
* y_true: [36.36192075]
* v_ann: [30.220890045166016, 26.651206522068165]

- Time interval n.3: [332.84, 333.04]
* y_true: [29.40195398]
* v_ann: [27.472951889038086, 26.651206522068165]

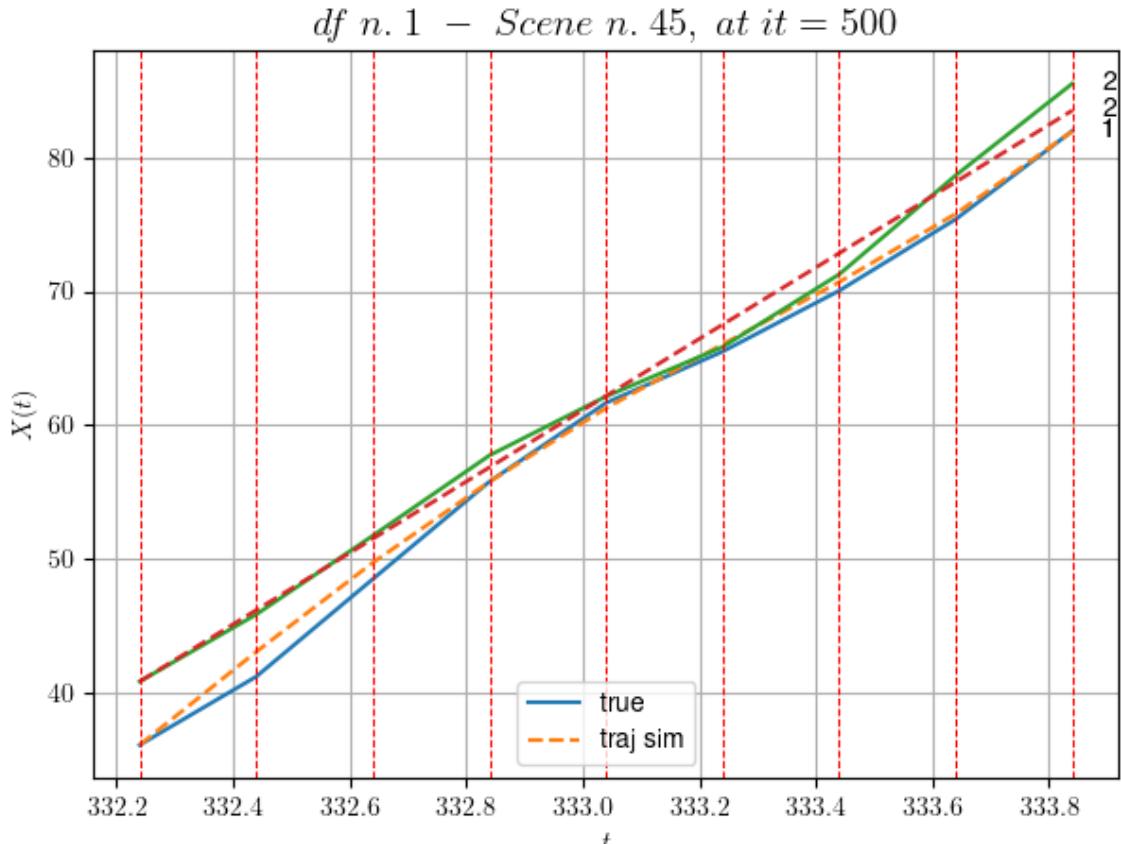
- Time interval n.4: [333.04, 333.24]
* y_true: [19.16071664]
* v_ann: [23.810869216918945, 26.651206522068165]

- Time interval n.5: [333.24, 333.44]
* y_true: [22.72210839]
* v_ann: [23.254358291625977, 26.651206522068165]

- Time interval n.6: [333.44, 333.64]
* y_true: [26.70265572]
* v_ann: [25.476409912109375, 26.651206522068165]

- Time interval n.7: [333.64, 333.84]
* y_true: [32.94386414]
* v_ann: [30.79402732849121, 26.651206522068165]

* err= 0.9141170709180542
* Learning rate NN = 0.00020589104678947479
* diff = 0.0015778584483296942

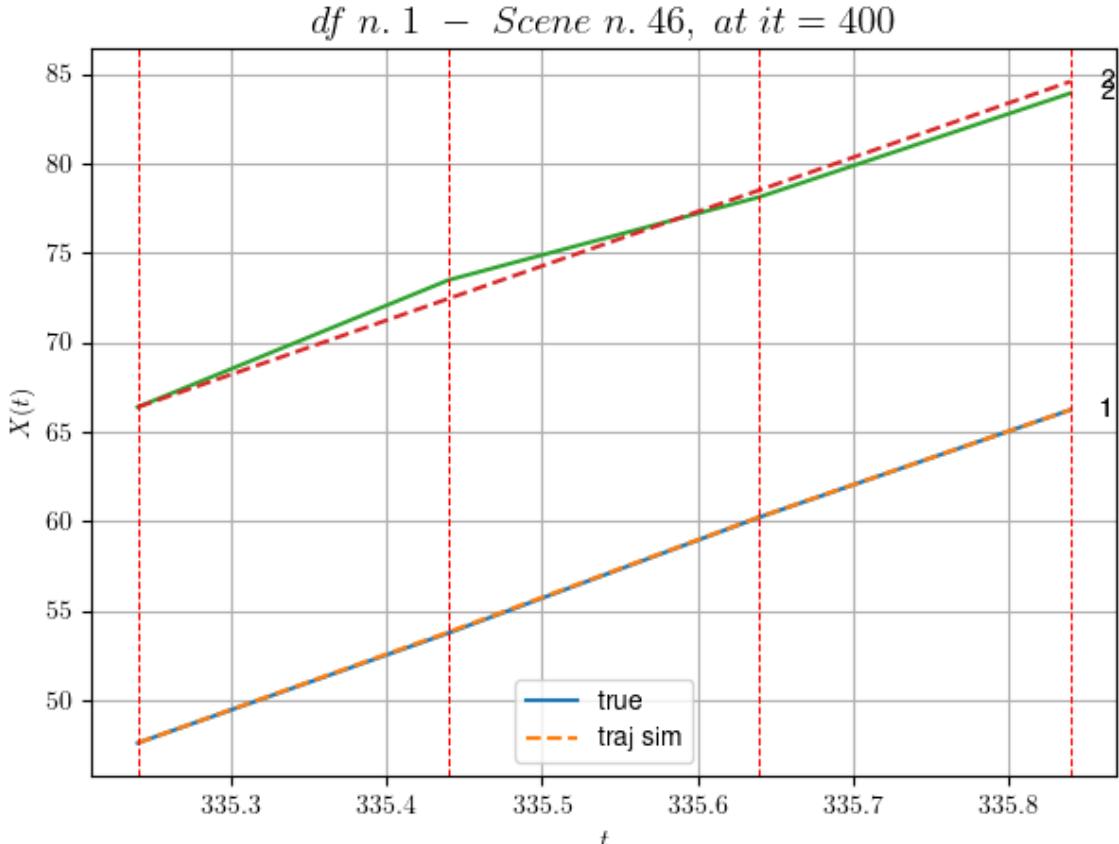


For scene 45/109

* use LR_NN=0.001 with err=6.661378828605601 at it=24
* v0_scn_mean = 26.78515826115884
* MAE = 0.9091650696310394

df n.1, scene n.46/109

We have 3 time intervals inside [335.24, 335.84]
* err= 0.20686664519181605
* Learning rate NN = 6.560998735949397e-05
* diff = 3.234825155795651e-07



For scene 46/109

- * use LR_NN=0.0001 with err=0.18726736846740807 at it=24
- * v0_scn_mean = 30.32037741809997
- * MAE = 0.19055910977419185

df n.1, scene n.47/109

We have 4 time intervals inside [344.44, 345.24]

- Time interval n.0: [344.44, 344.64]
 - * y_true: [27.53063305]
 - * v_ann: [26.080480575561523, 33.831971388560845]

- Time interval n.1: [344.64, 344.84]
 - * y_true: [26.17089419]
 - * v_ann: [27.26471519470215, 33.831971388560845]

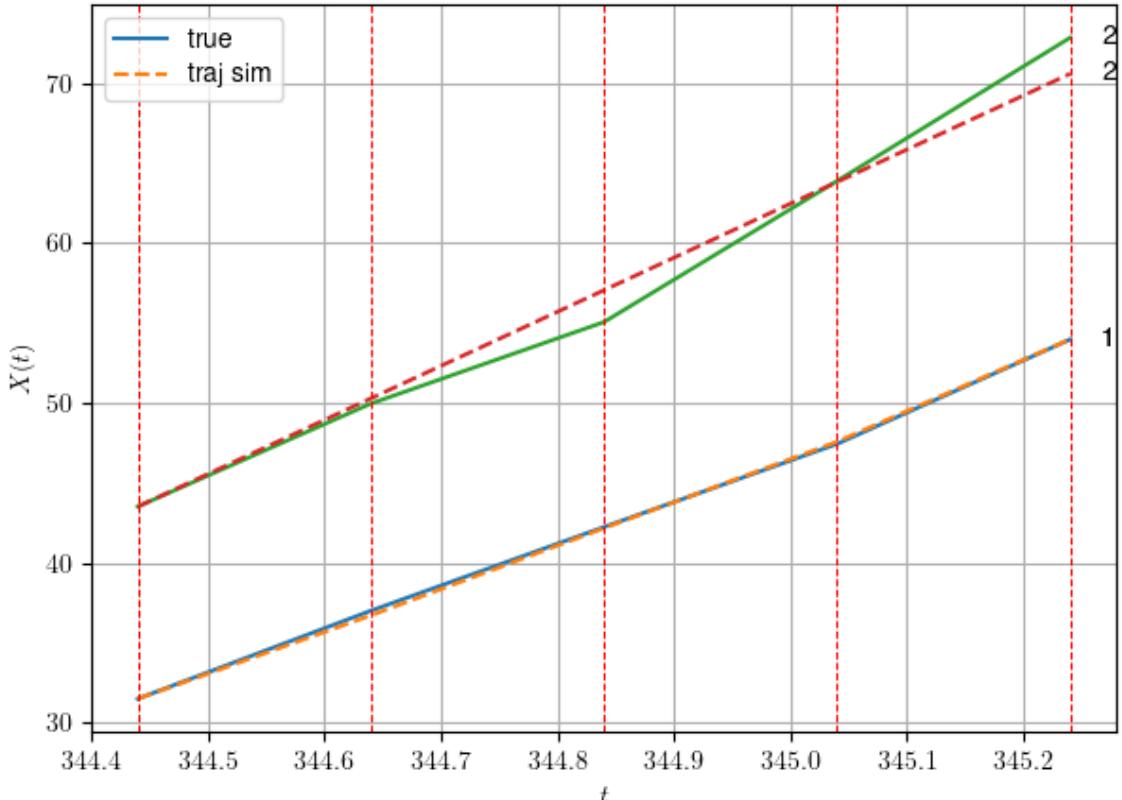
- Time interval n.2: [344.84, 345.04]
 - * y_true: [25.97595237]
 - * v_ann: [27.01778793334961, 33.831971388560845]

- Time interval n.3: [345.04, 345.24]
 - * y_true: [32.67663097]

```
* v_ann: [32.05646896362305, 33.831971388560845]
```

```
* err= 0.9278674166651012
* Learning rate NN = 4.7829678806010634e-05
* diff = 1.0289622502712703e-05
```

df n. 1 – Scene n. 47, at it = 500



For scene 47/109

```
* use LR_NN=0.0001 with err=3.490811558824959 at it=24
* v0_scn_mean = 33.678692533049045
* MAE = 0.9278674166651012
```

df n.1, scene n.48/109

We have 4 time intervals inside [349.64, 350.44]

- Time interval n.0: [349.64, 349.84]
 - * y_true: [34.02093414]
 - * v_ann: [31.97104835510254, 30.663808885196488]

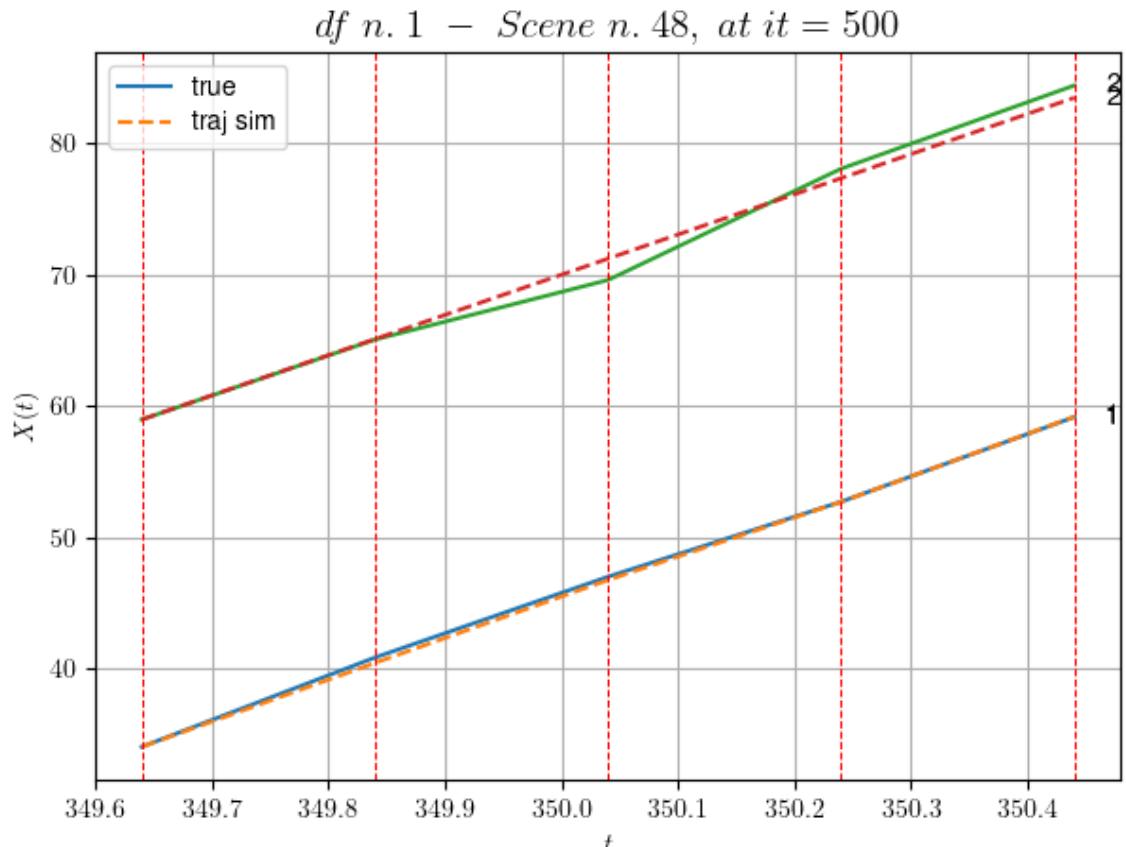
- Time interval n.1: [349.84, 350.04]
 - * y_true: [30.7912183]
 - * v_ann: [31.609512329101562, 30.663808885196488]

- Time interval n.2: [350.04, 350.24]

```
* y_true: [28.60141935]
* v_ann: [29.766340255737305, 30.663808885196488]
```

```
- Time interval n.3: [350.24, 350.44]
* y_true: [32.28190572]
* v_ann: [32.46601867675781, 30.663808885196488]
```

```
* err= 0.42821102840465286
* Learning rate NN = 4.7829678806010634e-05
* diff = 7.885259693307667e-06
```



For scene 48/109

```
* use LR_NN=0.0001 with err=0.5497981042597506 at it=24
* v0_scn_mean = 30.637256529793465
* MAE = 0.4277105236306023
```

df n.1, scene n.49/109

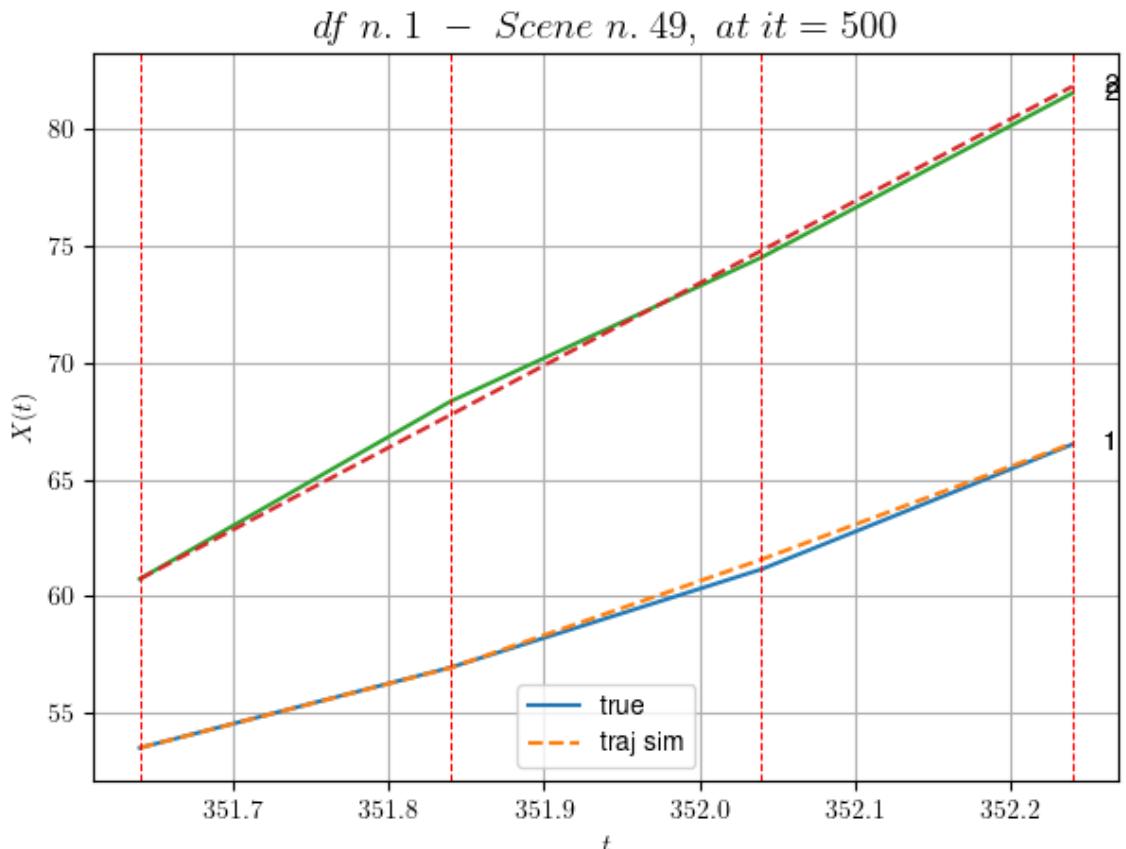
We have 3 time intervals inside [351.64, 352.24]

```
- Time interval n.0: [351.64, 351.84]
* y_true: [17.20102191]
* v_ann: [17.124910354614258, 35.128237730719775]
```

- Time interval n.1: [351.84, 352.04]
 - * y_true: [21.01146522]
 - * v_ann: [23.177038192749023, 35.128237730719775]

- Time interval n.2: [352.04, 352.24]
 - * y_true: [26.72713019]
 - * v_ann: [24.837345123291016, 35.128237730719775]

- * err= 0.0840441421572487
- * Learning rate NN = 0.0005904899444431067
- * diff = 0.0005881329968142057



For scene 49/109

- * use LR_NN=0.001 with err=1.7293514991174466 at it=24
- * v0_scn_mean = 34.92310822153167
- * MAE = 0.08273529455802646

df n.1, scene n.50/109

We have 5 time intervals inside [352.84,353.84]

- Time interval n.0: [352.84, 353.04]
 - * y_true: [30.00089881]
 - * v_ann: [23.434009552001953, 29.02856357779697]

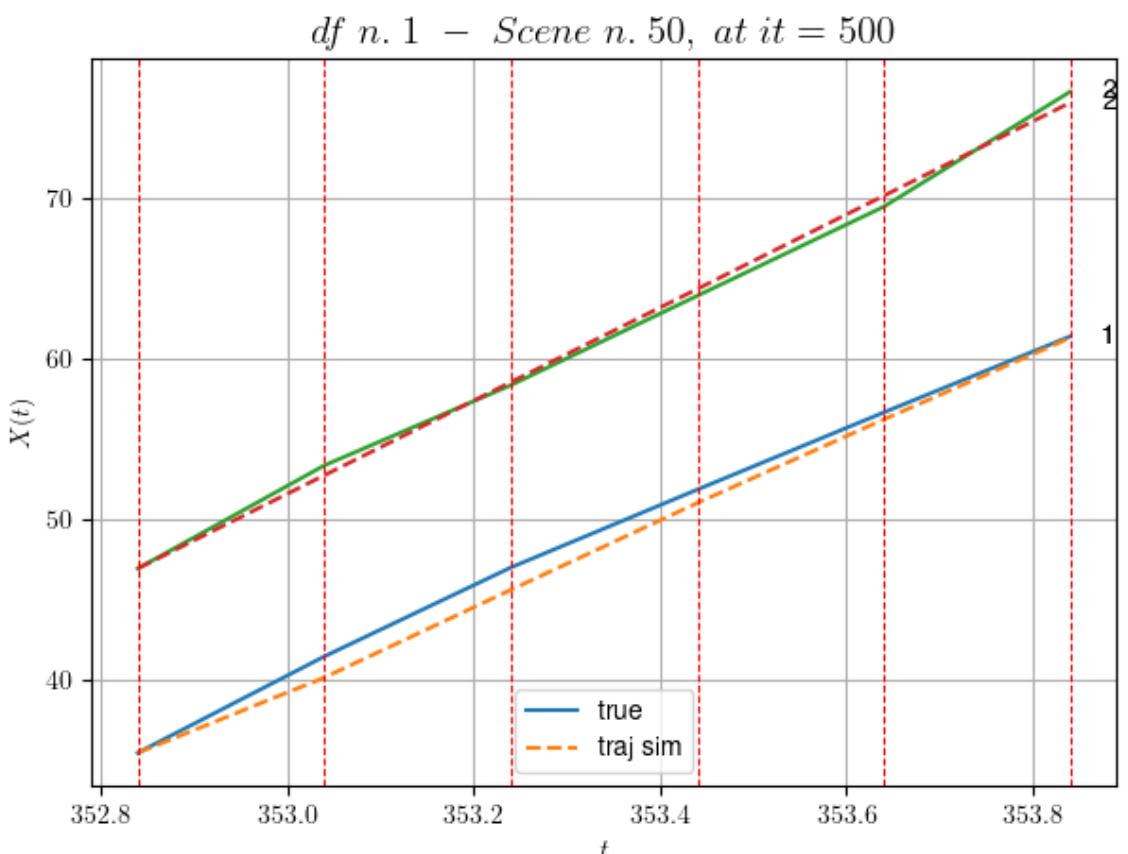
- Time interval n.1: [353.04, 353.24]
 * y_true: [27.71101029]
 * v_ann: [27.311899185180664, 29.02856357779697]

- Time interval n.2: [353.24, 353.44]
 * y_true: [24.27617752]
 * v_ann: [27.070812225341797, 29.02856357779697]

- Time interval n.3: [353.44, 353.64]
 * y_true: [24.04635791]
 * v_ann: [26.03592300415039, 29.02856357779697]

- Time interval n.4: [353.64, 353.84]
 * y_true: [23.7016285]
 * v_ann: [25.426870346069336, 29.02856357779697]

* err= 0.5073416554401428
 * Learning rate NN = 0.0003874204121530056
 * diff = 0.0004524577723661327



For scene 50/109

* use LR_NN=0.001 with err=0.7584653417430217 at it=24
 * v0_scn_mean = 29.067421034677555
 * MAE = 0.4919382925289335

```
=====
=====

df n.1, scene n.51/109
=====

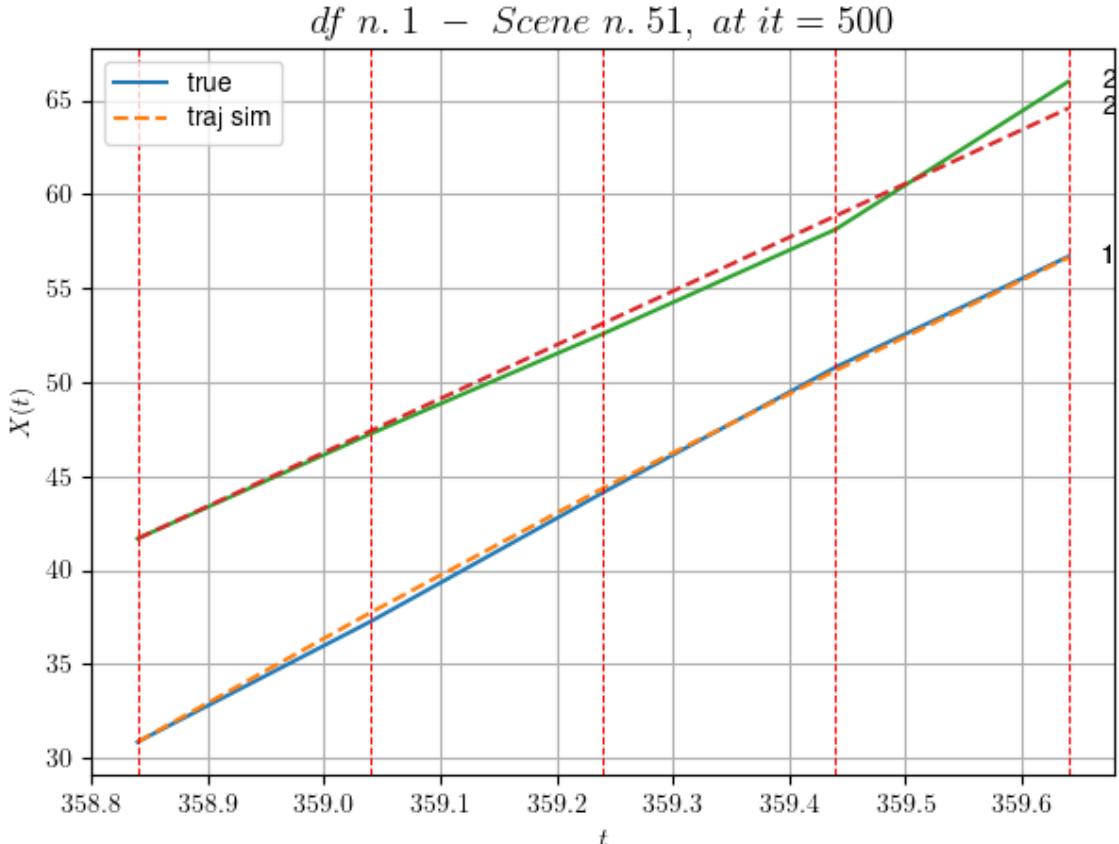
=====
We have 4 time intervals inside [358.84,359.64]
- Time interval n.0: [358.84, 359.04]
  * y_true: [31.9907758]
  * v_ann: [34.359397888183594, 28.626441976919438]

-----
- Time interval n.1: [359.04, 359.24]
  * y_true: [34.35123345]
  * v_ann: [33.12821578979492, 28.626441976919438]

-----
- Time interval n.2: [359.24, 359.44]
  * y_true: [33.37134022]
  * v_ann: [31.319692611694336, 28.626441976919438]

-----
- Time interval n.3: [359.44, 359.64]
  * y_true: [29.4517673]
  * v_ann: [30.052532196044922, 28.626441976919438]

-----
* err= 0.31685265680613467
* Learning rate NN = 4.7829678806010634e-05
* dfff = 0.0006021025062274071
```



For scene 51/109

- * use LR_NN=0.0001 with err=0.686112965064265 at it=24
- * v0_scn_mean = 28.681384297832913
- * MAE = 0.31404533453460076

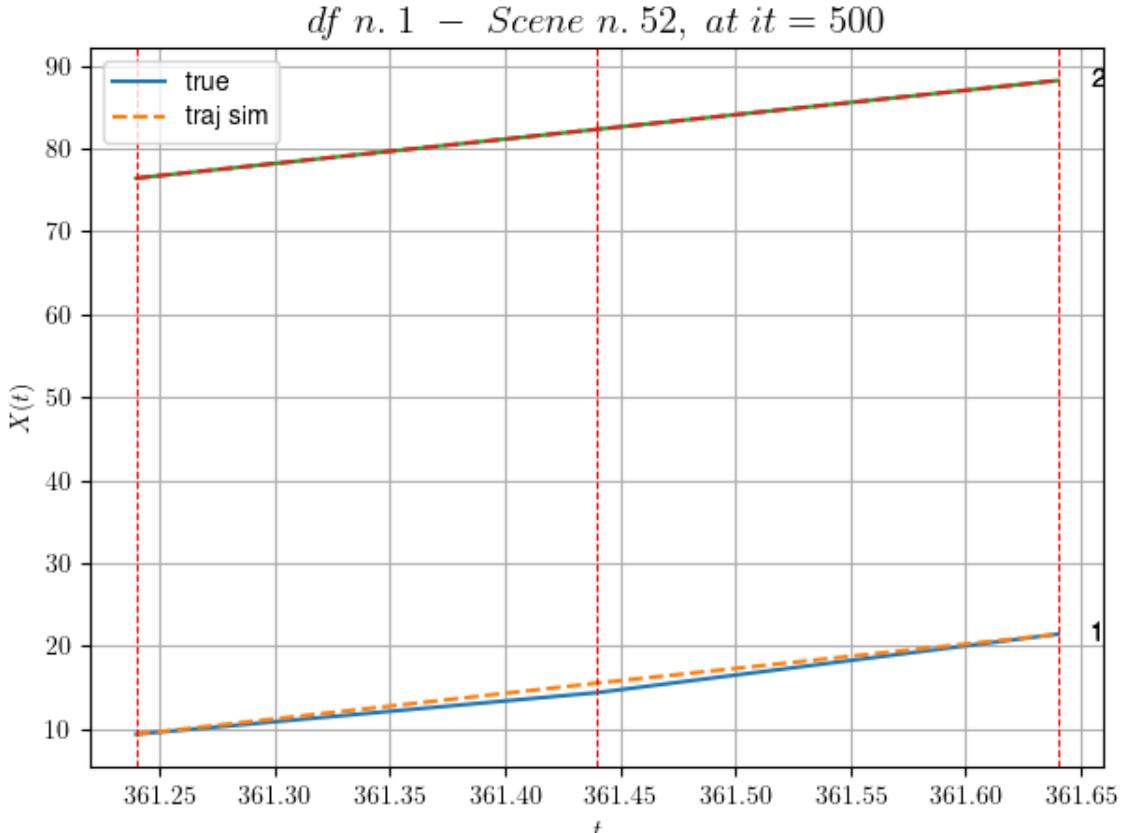
df n.1, scene n.52/109

We have 2 time intervals inside [361.24, 361.64]

- Time interval n.0: [361.24, 361.44]
 - * y_true: [25.09007353]
 - * v_ann: [30.8521728515625, 29.453860908621515]

- Time interval n.1: [361.44, 361.64]
 - * y_true: [35.31024178]
 - * v_ann: [29.4569149017334, 29.453860908621515]

- * err= 0.221400740577024
- * Learning rate NN = 3.6449993785936385e-05
- * diff = 0.0002563571228078043



For scene 52/109

- * use LR_NN=5e-05 with err=0.29396583059177245 at it=24
- * v0_scn_mean = 29.47570647227185
- * MAE = 0.2050533701373663

df n.1, scene n.53/109

We have 6 time intervals inside [362.84, 364.04]

- Time interval n.0: [362.84, 363.04]
 - * y_true: [59.17020934]
 - * v_ann: [35.5779914855957, 30.313976428341626]

- Time interval n.1: [363.04, 363.24]
 - * y_true: [26.94023047]
 - * v_ann: [33.82278060913086, 30.313976428341626]

- Time interval n.2: [363.24, 363.44]
 - * y_true: [23.39031489]
 - * v_ann: [33.133338928222656, 30.313976428341626]

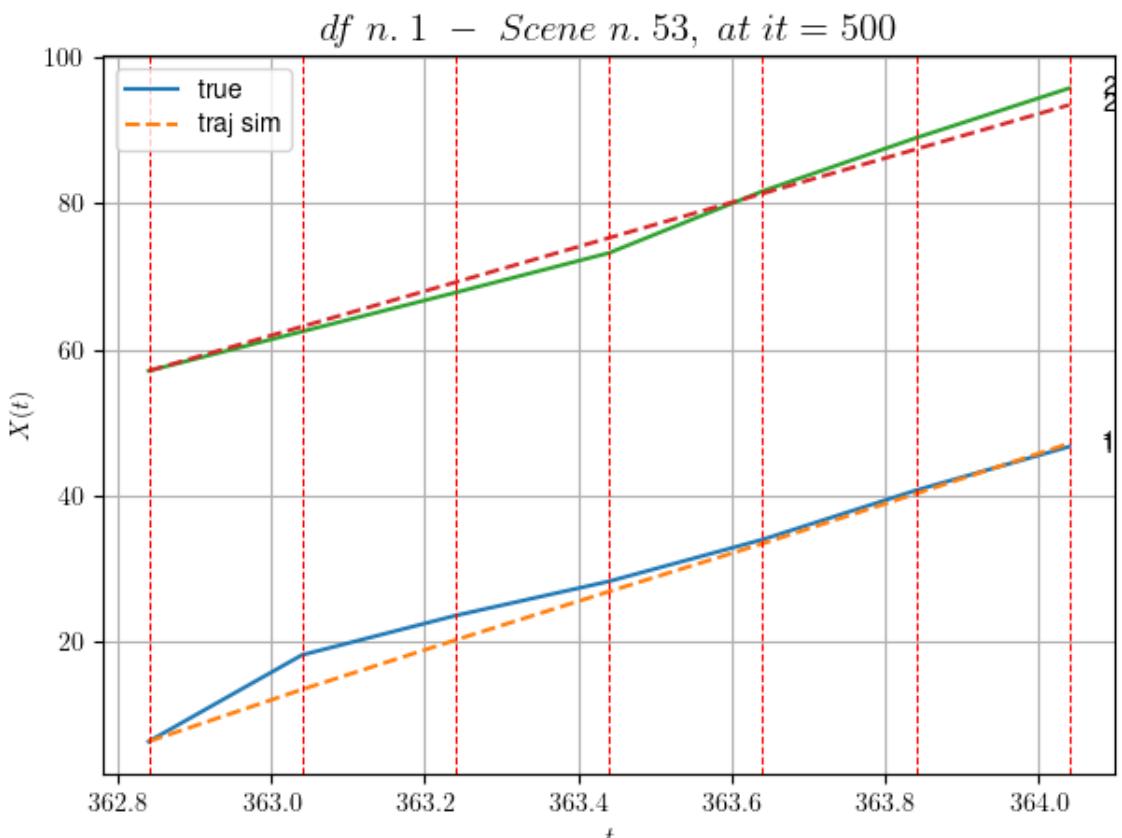
- Time interval n.3: [363.44, 363.64]
 - * y_true: [28.55056389]

```
* v_ann: [32.72610855102539, 30.313976428341626]
```

```
- Time interval n.4: [363.64, 363.84]
* y_true: [33.66093634]
* v_ann: [34.131690979003906, 30.313976428341626]
```

```
- Time interval n.5: [363.84, 364.04]
* y_true: [29.94110461]
* v_ann: [34.44535446166992, 30.313976428341626]
```

```
* err= 3.6075427428083993
* Learning rate NN = 1.5690524378442205e-05
* diff = 0.0038220007837077574
```



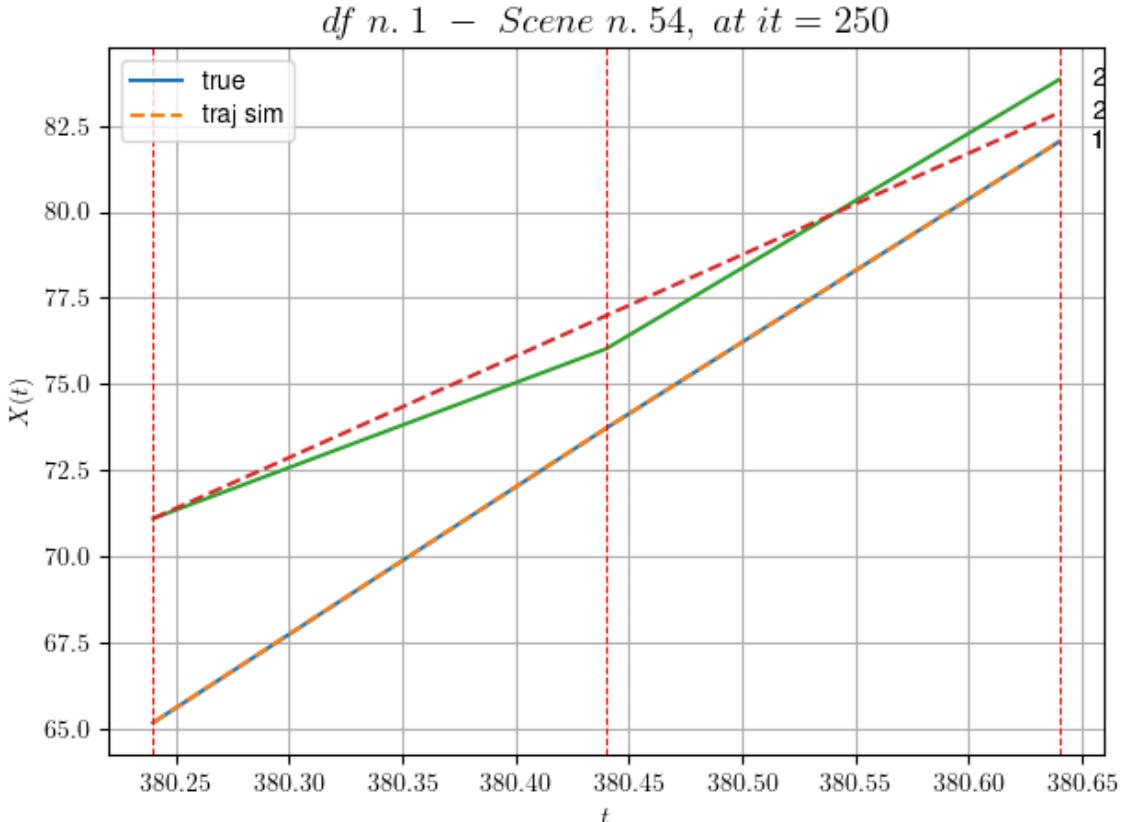
For scene 53/109

```
* use LR_NN=5e-05 with err=321.49748025121306 at it=24
* v0_scn_mean = 30.30141737121034
* MAE = 3.5595695608819717
```

df n.1, scene n.54/109

We have 2 time intervals inside [380.24,380.64]
* err= 0.3089625782514678

* Learning rate NN = 0.0004500000213738531
 * diff = 2 1651110127200520.07



For scene 54/109

* use LR_NN=0.0005 with err=1.7283485409162371 at it=24
 * v0_scn_mean = 29.48592804353529
 * MAE = 0.30896230531994373

df n.1, scene n.55/109

We have 5 time intervals inside [385.04, 386.04]

- Time interval n.0: [385.04, 385.24]
 - * y_true: [29.06003834]
 - * v_ann: [28.541034698486328, 36.00289770478589]

- Time interval n.1: [385.24, 385.44]
 - * y_true: [28.54010433]
 - * v_ann: [29.655351638793945, 36.00289770478589]

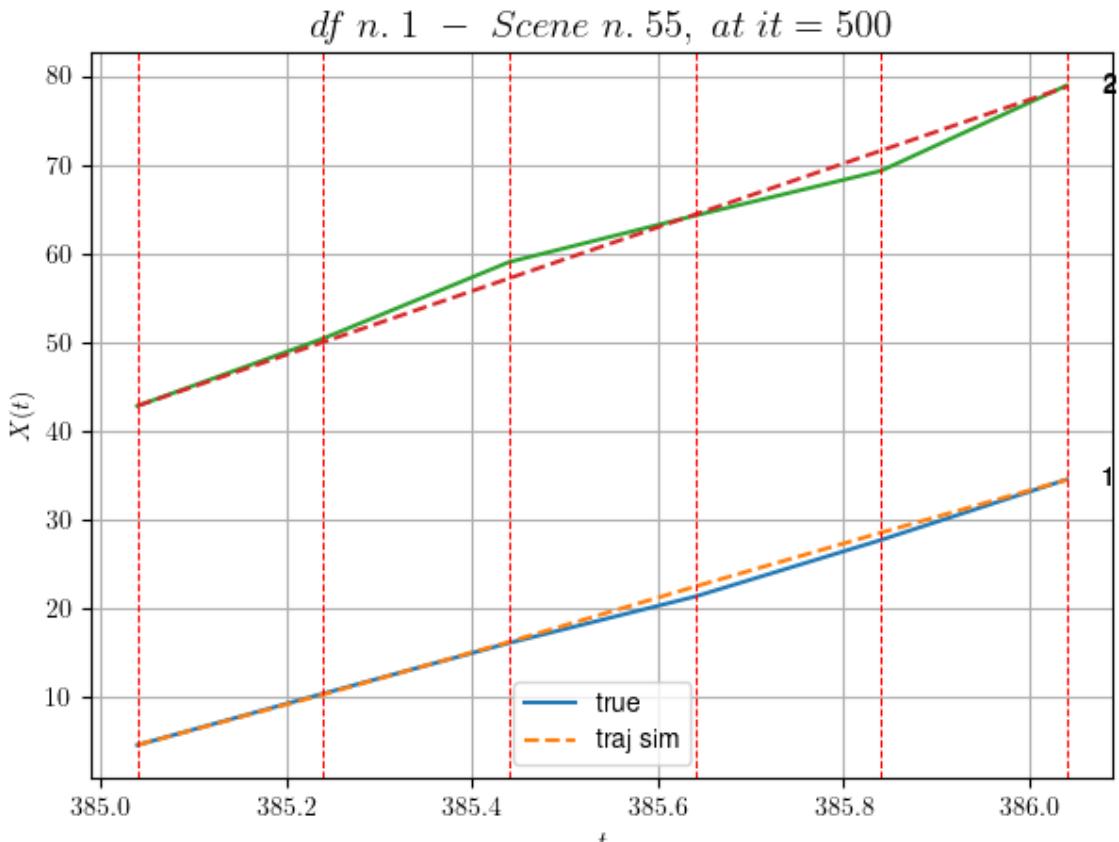
- Time interval n.2: [385.44, 385.64]
 - * y_true: [26.16018293]
 - * v_ann: [31.217260360717773, 36.00289770478589]

- Time interval n.3: [385.64, 385.84]

```
* y_true: [31.92038858]
* v_ann: [30.39959716796875, 36.00289770478589]
```

```
- Time interval n.4: [385.84, 386.04]
* y_true: [34.1406537]
* v_ann: [29.873353958129883, 36.00289770478589]
```

```
* err= 0.8963875414887292
* Learning rate NN = 1.9371018424862996e-05
* diff = 0.0054270182729545535
```



For scene 55/109

```
* use LR_NN=5e-05 with err=6.59937570347882 at it=24
* v0_scn_mean = 35.76278179663971
* MAE = 0.8914746228214547
```

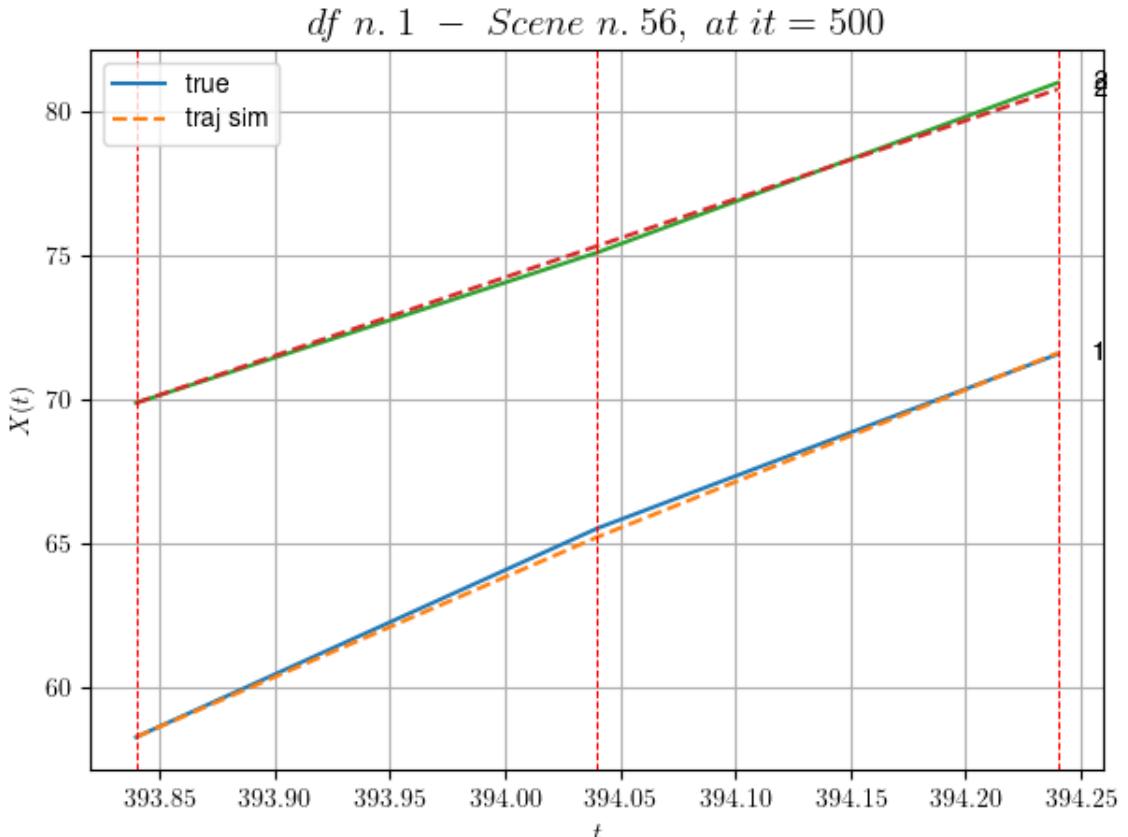
df n.1, scene n.56/109

We have 2 time intervals inside [393.84,394.24]

```
- Time interval n.0: [393.84, 394.04]
* y_true: [36.27268123]
* v_ann: [34.756553649902344, 27.26962421653079]
```

```
- Time interval n.1: [394.04, 394.24]
  * y_true: [30.30786624]
  * v_ann: [32.025901794433594, 27.26962421653079]
```

```
* err= 0.032832261122231594
* Learning rate NN = 0.00036449998151510954
* diff = 0.000863453301537441
```



For scene 56/109

```
* use LR_NN=0.0005 with err=0.22444355125099255 at it=24
* v0_scn_mean = 27.378839247848976
* MAE = 0.032832261122231594
```

df n.1, scene n.57/109

We have 4 time intervals inside [402.04, 402.84]

```
- Time interval n.0: [402.04, 402.24]
  * y_true: [38.60215299]
  * v_ann: [40.194610595703125, 31.006759212236094]
```

```
- Time interval n.1: [402.24, 402.44]
  * y_true: [38.60215299]
  * v_ann: [35.76703643798828, 31.006759212236094]
```

```

-----  

- Time interval n.2: [402.44, 402.64]  

* y_true: [32.70290702]  

* v_ann: [32.46442794799805, 31.006759212236094]
-----
```

```

-----  

- Time interval n.3: [402.64, 402.84]  

* y_true: [32.70290702]  

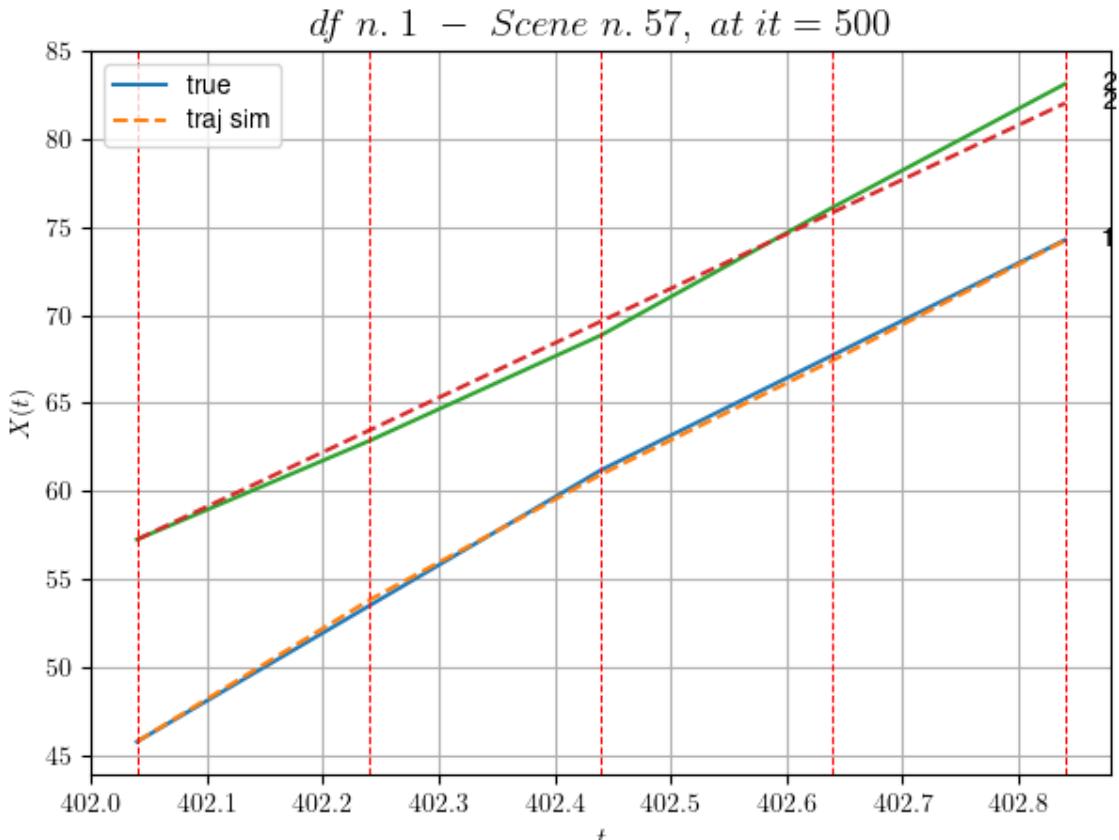
* v_ann: [33.986572265625, 31.006759212236094]
-----
```

```

* err= 0.2520123332955431  

* Learning rate NN = 4.7829678806010634e-05  

* diff = 6.210474433454571e-05
```



For scene 57/109

```

* use LR_NN=0.0001 with err=0.6591990355370156 at it=24
* v0_scn_mean = 30.96648884375453
* MAE = 0.25198013259226465
=====
```

df n.1, scene n.58/109

```

=====  

We have 5 time intervals inside [403.64,404.64]  

- Time interval n.0: [403.64, 403.84]  

* y_true: [27.97561343]  

* v_ann: [25.675437927246094, 32.57978285326566]
```

```
- Time interval n.1: [403.84, 404.04]
  * y_true: [27.97561343]
  * v_ann: [26.35291862487793, 32.57978285326566]
```

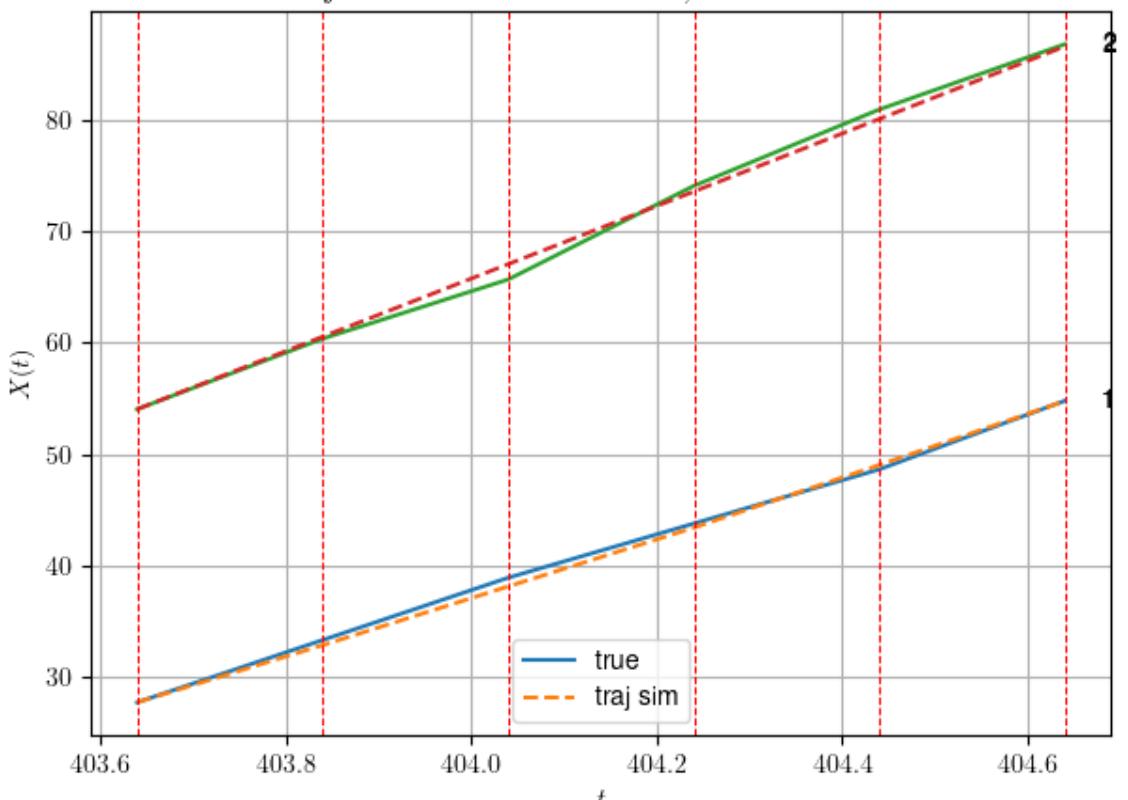
```
- Time interval n.2: [404.04, 404.24]
  * y_true: [24.32591098]
  * v_ann: [26.38413429260254, 32.57978285326566]
```

```
- Time interval n.3: [404.24, 404.44]
  * y_true: [24.32591098]
  * v_ann: [28.15654945373535, 32.57978285326566]
```

```
- Time interval n.4: [404.44, 404.64]
  * y_true: [30.80180131]
  * v_ann: [28.71613883972168, 32.57978285326566]
```

```
* err= 0.3399355780532111
* Learning rate NN = 3.874203684972599e-05
* diff = 4.612667208786503e-05
```

df n. 1 – Scene n. 58, at it = 500



For scene 58/109

```
* use LR_NN=0.0001 with err=1.9165750218960624 at it=24
* v0_scn_mean = 32.47659153915465
* MAE = 0.3384436637228548
```

```
=====
=====
```

df n.1, scene n.59/109

```
=====
=====
```

We have 5 time intervals inside [411.64,412.64]

- Time interval n.0: [411.64, 411.84]
 - * y_true: [28.51083931]
 - * v_ann: [32.87868881225586, 35.852941117112124]

```
-----
```

- Time interval n.1: [411.84, 412.04]
 - * y_true: [38.00152248]
 - * v_ann: [32.65194320678711, 35.852941117112124]

```
-----
```

- Time interval n.2: [412.04, 412.24]
 - * y_true: [32.76167763]
 - * v_ann: [34.623870849609375, 35.852941117112124]

```
-----
```

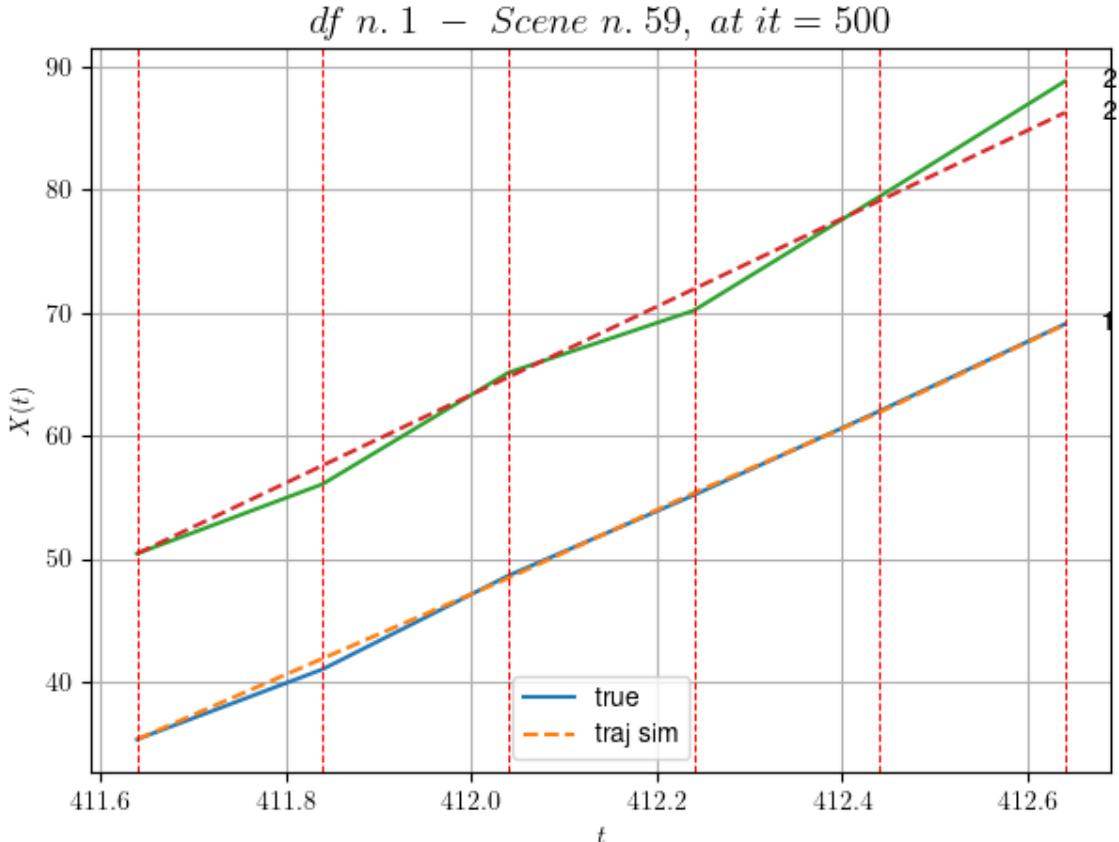
- Time interval n.3: [412.24, 412.44]
 - * y_true: [34.16232332]
 - * v_ann: [32.73009490966797, 35.852941117112124]

```
-----
```

- Time interval n.4: [412.44, 412.64]
 - * y_true: [35.38292867]
 - * v_ann: [35.720130920410156, 35.852941117112124]

```
-----
```

- * err= 1.0811077970770582
- * Learning rate NN = 1.9371018424862996e-05
- * diff = 0 00011396810805663835



For scene 59/109

* use LR_NN=5e-05 with err=8.962316486392922 at it=24
 * v0_scn_mean = 35.61882347247282
 * MAE = 1.0810978824293294

df n.1, scene n.60/109

We have 3 time intervals inside [429.24, 429.84]

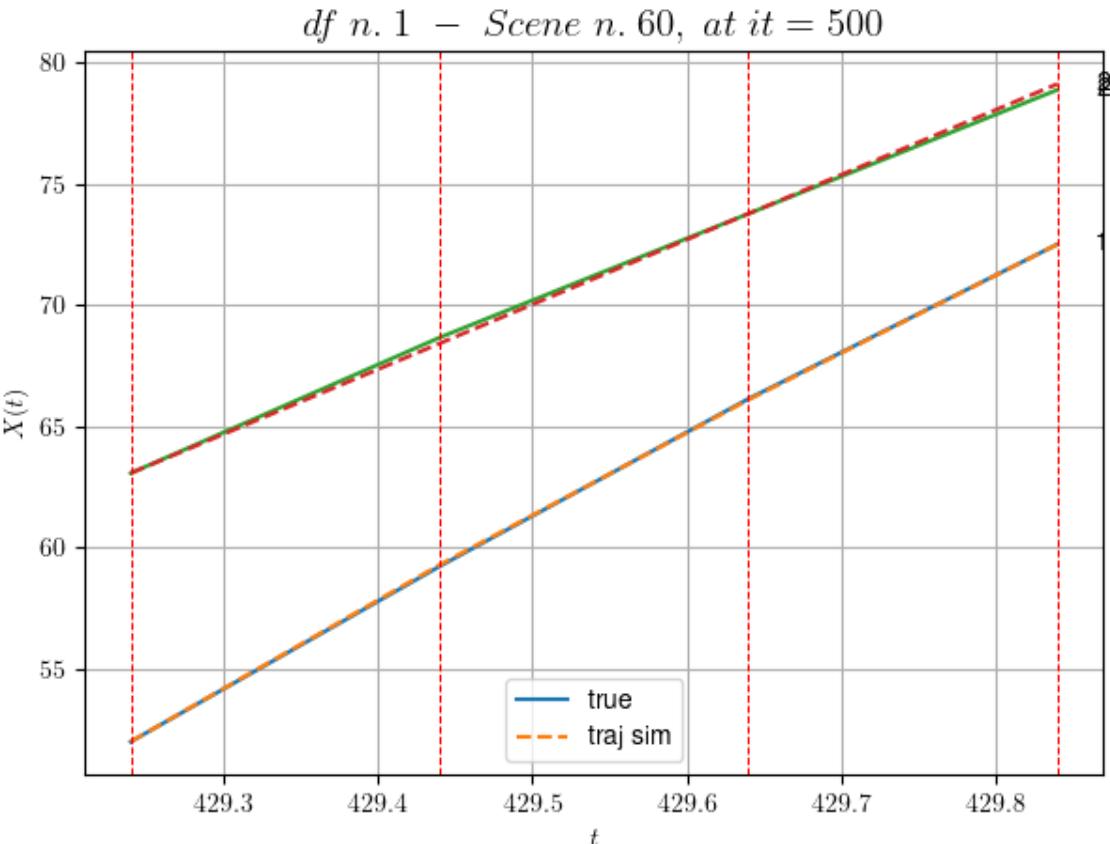
- Time interval n.0: [429.24, 429.44]
 * y_true: [36.17723915]
 * v_ann: [36.488853454589844, 26.764923514729134]

- Time interval n.1: [429.44, 429.64]
 * y_true: [34.5674548]
 * v_ann: [34.04365539550781, 26.764923514729134]

- Time interval n.2: [429.64, 429.84]
 * y_true: [31.87296901]
 * v_ann: [32.070430755615234, 26.764923514729134]

* err= 0.015406835322977222
 * Learning rate NN = 0.0005904899444431067

* diff = 4.56876311566122e-05



For scene 60/109

- * use LR_NN=0.001 with err=1.3512514575405048 at it=24
- * v0_scn_mean = 26.894326574115578
- * MAE = 0.015406835322977222

df n.1, scene n.61/109

We have 6 time intervals inside [431.04, 432.24]

- Time interval n.0: [431.04, 431.24]
 - * y_true: [29.15044808]
 - * v_ann: [30.04348373413086, 27.91482717316297]

- Time interval n.1: [431.24, 431.44]
 - * y_true: [31.45067763]
 - * v_ann: [29.730091094970703, 27.91482717316297]

- Time interval n.2: [431.44, 431.64]
 - * y_true: [27.86084986]
 - * v_ann: [29.64116859436035, 27.91482717316297]

- Time interval n.3: [431.64, 431.84]

```
* y_true: [31.63128236]
* v_ann: [29.545583724975586, 27.91482717316297]
```

```
- Time interval n.4: [431.84, 432.04]
```

```
* y_true: [31.49166882]
```

```
* v_ann: [29.61862564086914, 27.91482717316297]
```

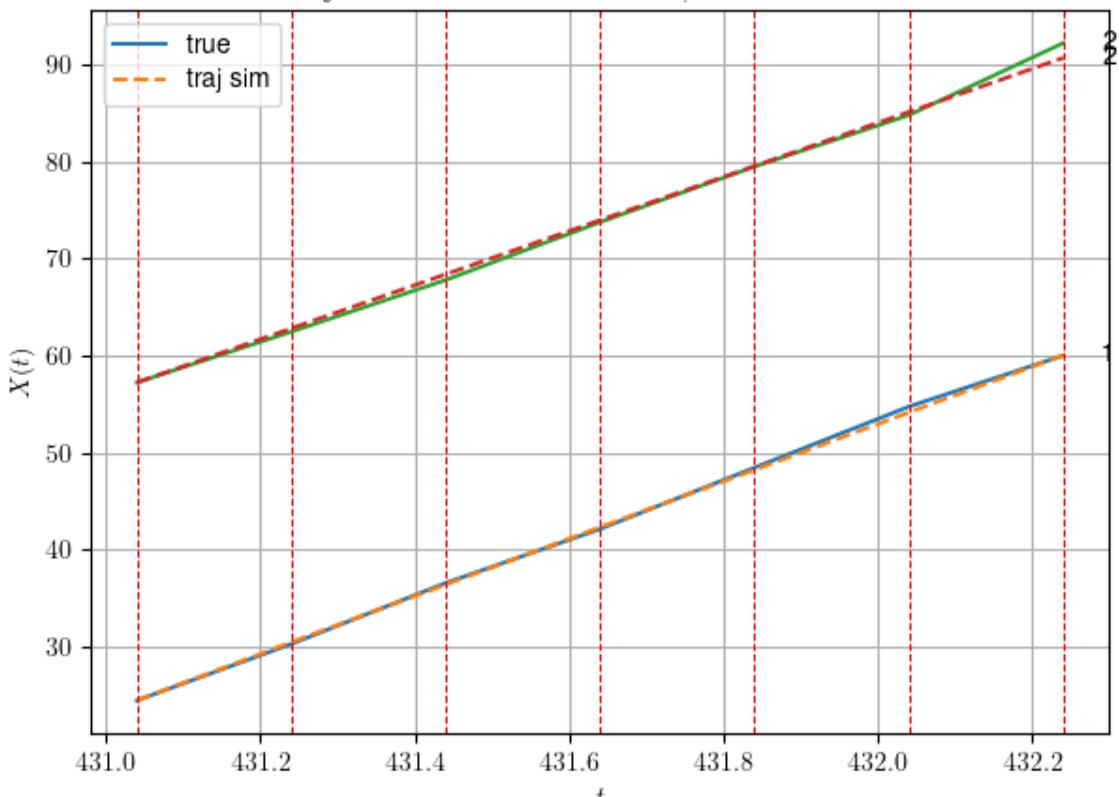
```
- Time interval n.5: [432.04, 432.24]
```

```
* y_true: [26.376716]
```

```
* v_ann: [29.514223098754883, 27.91482717316297]
```

```
* err= 0.24724389275737527
* Learning rate NN = 1.5690524378442205e-05
* diff = 0.0009017612127444341
```

df n. 1 – Scene n. 61, at it = 500



For scene 61/109

```
* use LR_NN=5e-05 with err=1.0722346047263227 at it=24
```

```
* v0_scn_mean = 27.998234086220915
```

```
* MAE = 0.24613265045224608
```

df n.1, scene n.62/109

We have 5 time intervals inside [444.24, 445.24]

```
- Time interval n.0: [444.24, 444.44]
* y_true: [24.85115092]
* v_ann: [22.608936309814453, 28.494973095574913]

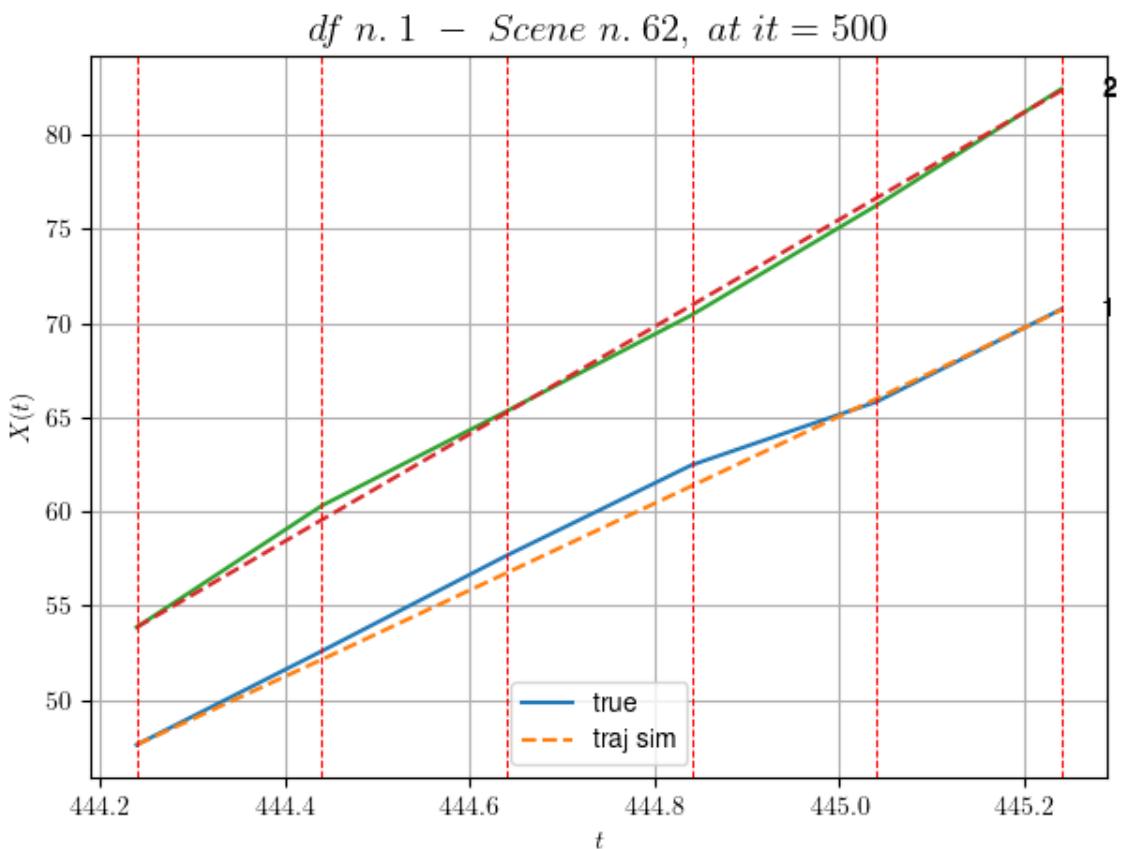
-----
- Time interval n.1: [444.44, 444.64]
* y_true: [25.38154149]
* v_ann: [23.017322540283203, 28.494973095574913]

-----
- Time interval n.2: [444.64, 444.84]
* y_true: [24.0216414]
* v_ann: [23.076841354370117, 28.494973095574913]

-----
- Time interval n.3: [444.84, 445.04]
* y_true: [16.80133324]
* v_ann: [23.18027687072754, 28.494973095574913]

-----
- Time interval n.4: [445.04, 445.24]
* y_true: [24.59226228]
* v_ann: [23.549179077148438, 28.494973095574913]

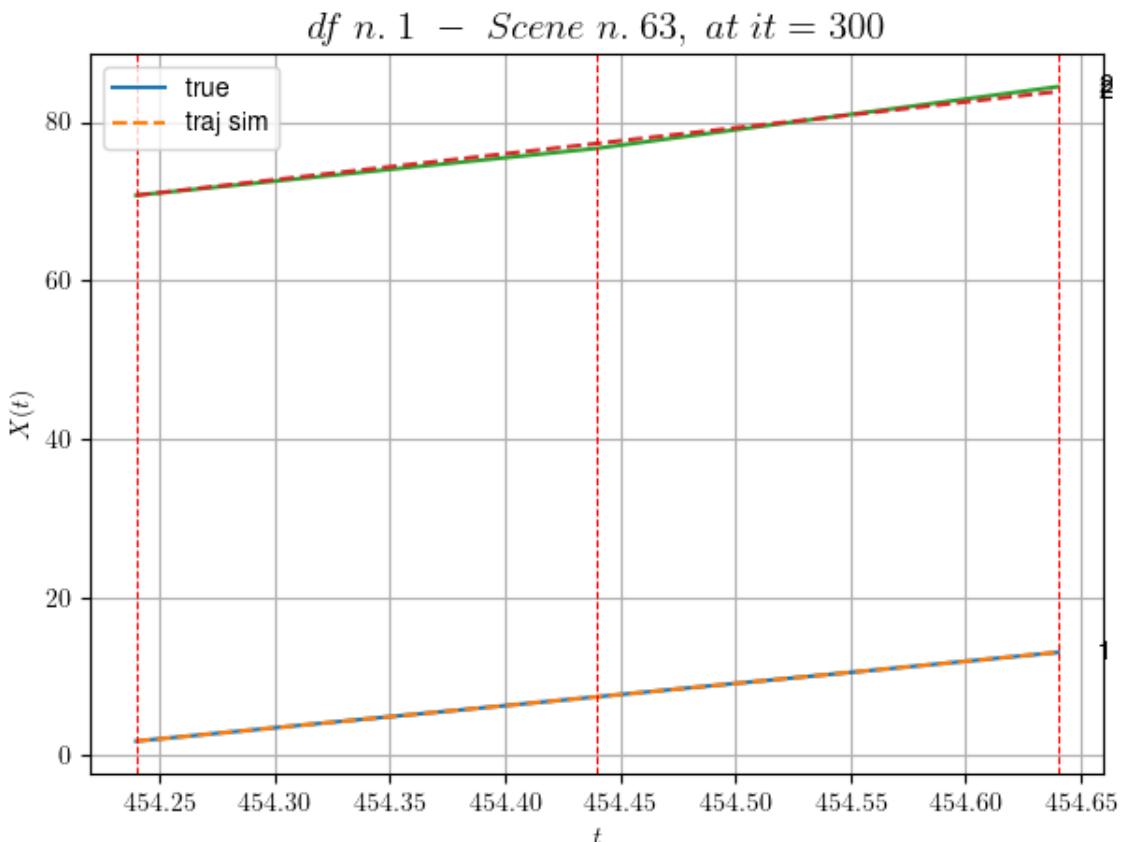
-----
* err= 0.27652436078463694
* Learning rate NN = 3.874203684972599e-05
* diff = 0.001989349146667596
```



```
For scene 62/109
* use LR_NN=0.0001 with err=1.951675215442374 at it=24
* v0_scn_mean = 28.555174171741214
* MAE = 0.27652436078463694
```

```
df n.1, scene n.63/109
```

```
We have 2 time intervals inside [454.24,454.64]
* err= 0.12845955370753953
* Learning rate NN = 8.099998922261875e-06
* diff = 3.0637550868517494e-07
```



```
For scene 63/109
* use LR_NN=1e-05 with err=0.6062808325034372 at it=24
* v0_scn_mean = 32.58262290876988
* MAE = 0.12845955370753953
```

```
df n.1, scene n.64/109
```

```
We have 3 time intervals inside [456.24,456.84]
- Time interval n.0: [456.24, 456.44]
  * y_true: [27.10074139]
  * v_ann: [25.858142852783203, 29.144063618158704]
```

```

-----  

- Time interval n.1: [456.44, 456.64]  

* y_true: [22.25077732]  

* v_ann: [26.321134567260742, 29.144063618158704]
-----
```

```

-----  

- Time interval n.2: [456.64, 456.84]  

* y_true: [28.55124928]  

* v_ann: [25.703441619873047, 29.144063618158704]
-----
```

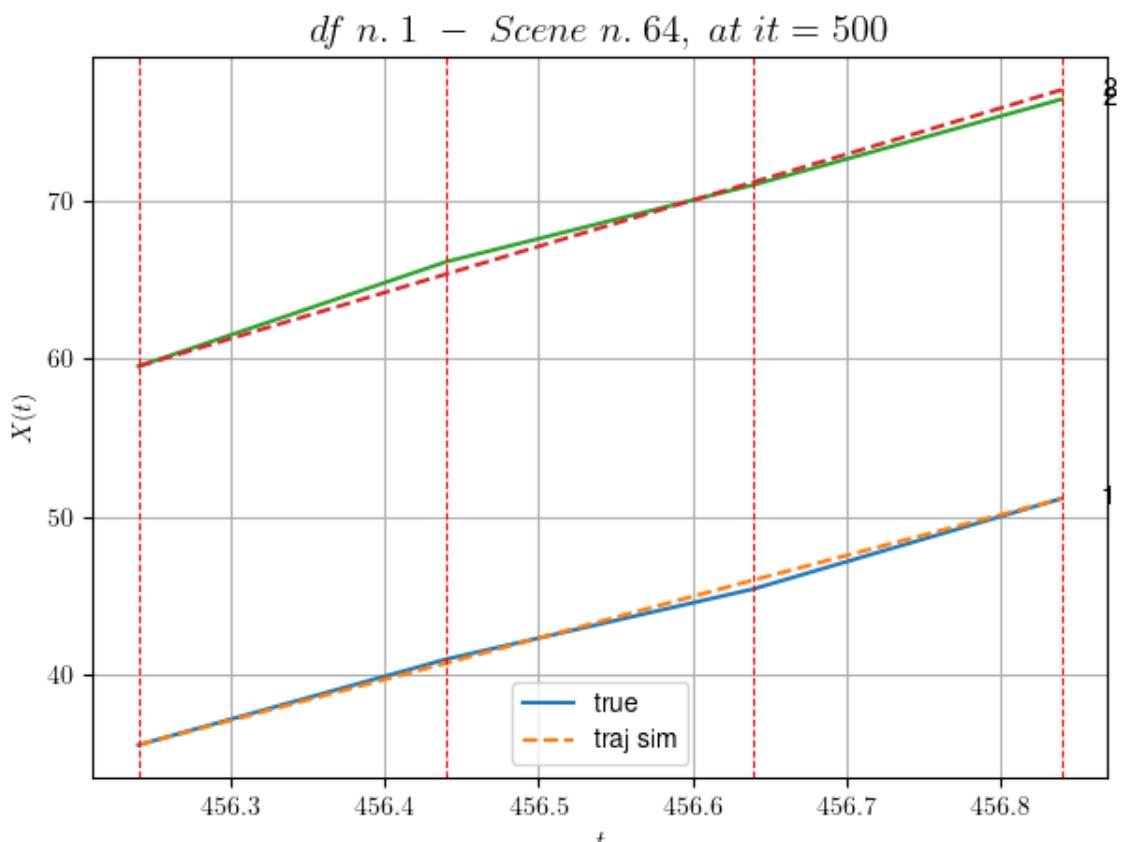
```

* err= 0.17240822702755038  

* Learning rate NN = 2.952449540316593e-05  

* diff = 2 0016665866218241680.05

```



```

For scene 64/109
* use LR_NN=5e-05 with err=0.2820713555397532 at it=24
* v0_scn_mean = 29.17830107342649
* MAE = 0.17210605779225066
=====
```

```
df n.1, scene n.65/109
=====
```

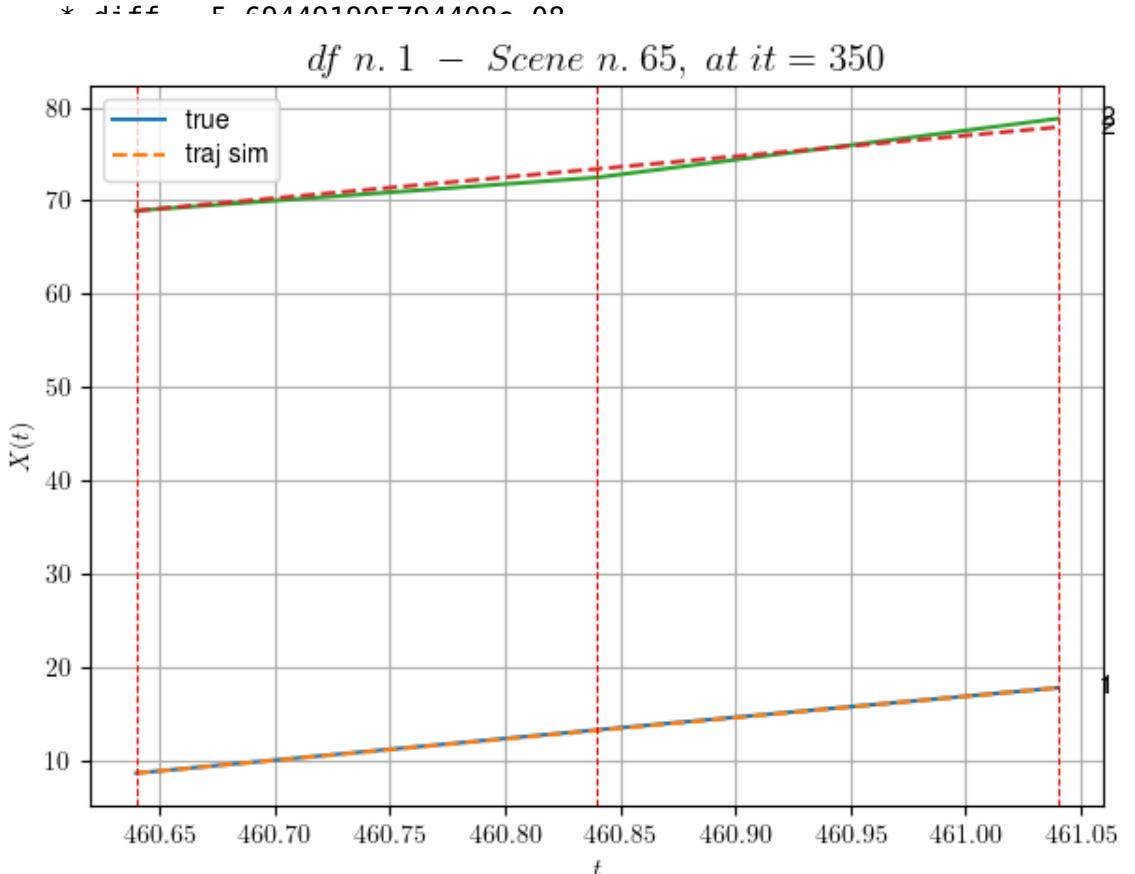
```

=====  

We have 2 time intervals inside [460.64,461.04]  

* err= 0.2791678945008433  

* Learning rate NN = 8.099998922261875e-06
=====
```



For scene 65/109

```
* use LR_NN=1e-05 with err=1.7441819179672502 at it=24  
* v0_scn_mean = 22.82707742347396  
* MAE = 0.25136549392575147
```

df n.1. scene n.66/109

We have 3 time intervals inside [463.04, 463.64]

- Time interval n=0: [463.04 - 463.24]

* v true: [21.05099884]

* y_ancr: [211996955531] * y_ann: [26.996910095214844, 19.6620060476544651]

- Time interval n-1: [463.24, 463.44]

* y true: [28 1918149]

* y_ann: [25.78363800048828, 19.662006047654465]

- Time interval n. 2: [463 44 463 64]

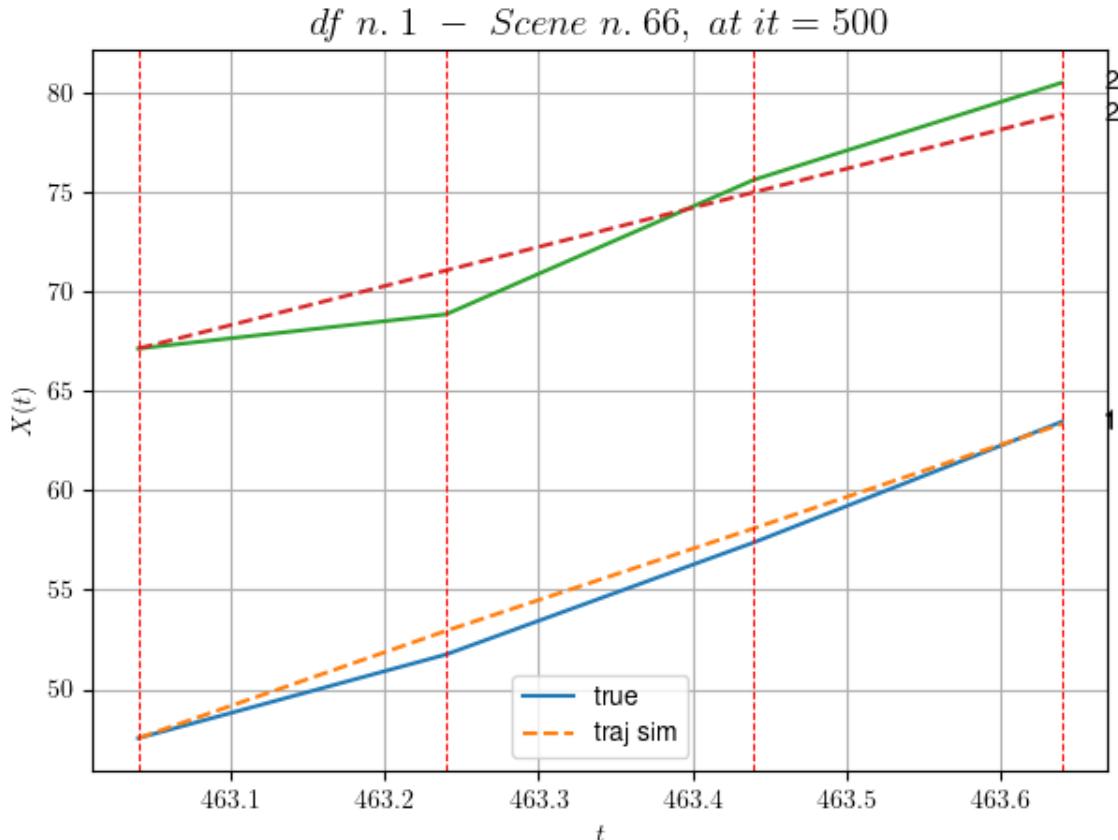
* v true: [30 35202585]

* y_true: [30.33202383] * y_nn: [26.243837356567383, 19.662006047654465]

* err= 1.2119589195845326

* Learning rate NN = 2.952449540316593e-05

* diff = 0.0003148776832264666



For scene 66/109

* use LR_NN=5e-05 with err=6.880983941760035 at it=24
 * v0_scn_mean = 20.075525805668892
 * MAE = 1.1034606655955643

df n.1, scene n.67/109

We have 5 time intervals inside [472.24, 473.24]

- Time interval n.0: [472.24, 472.44]
 * y_true: [28.01055649]
 * v_ann: [26.702913284301758, 22.76470215605652]

- Time interval n.1: [472.44, 472.64]
 * y_true: [25.87069506]
 * v_ann: [26.456283569335938, 22.76470215605652]

- Time interval n.2: [472.64, 472.84]
 * y_true: [23.02078938]
 * v_ann: [26.0078125, 22.76470215605652]

- Time interval n.3: [472.84, 473.04]

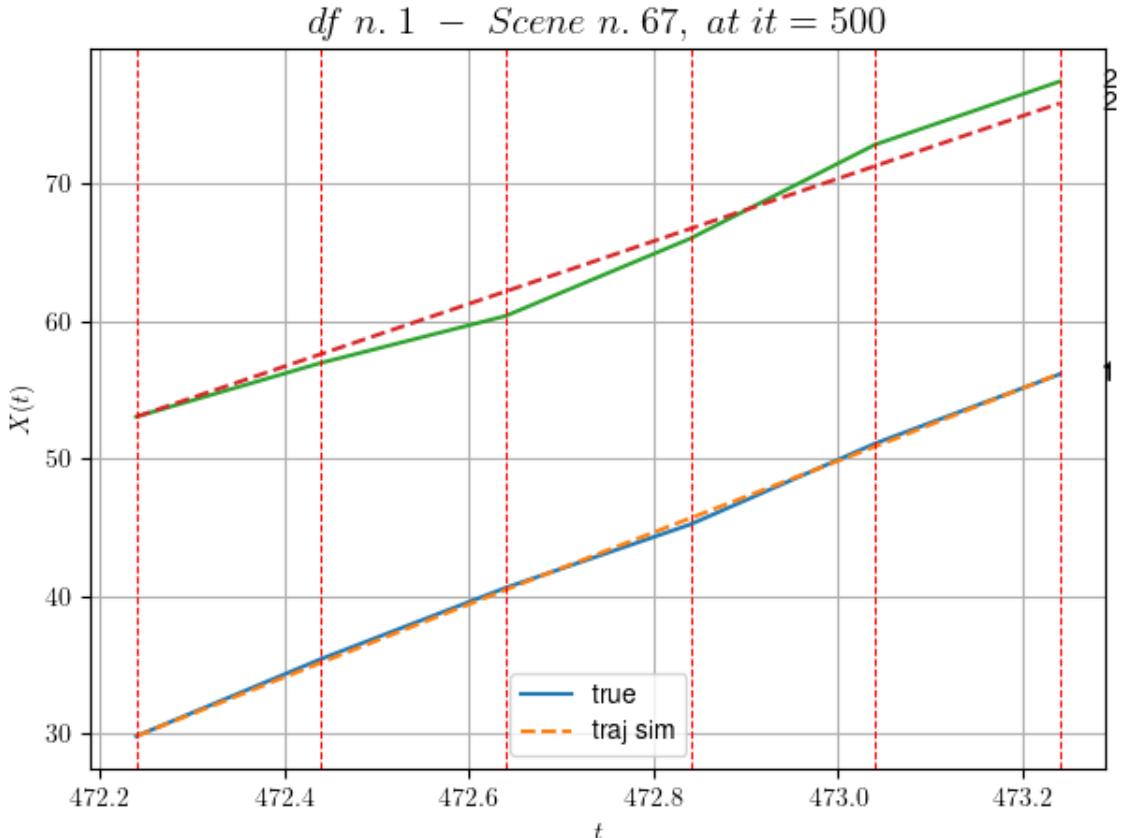
```
* y_true: [29.37129061]
* v_ann: [25.99532699584961, 22.76470215605652]
```

```
- Time interval n.4: [473.04, 473.24]
```

```
* y_true: [25.18134673]
```

```
* v_ann: [26.49452018737793, 22.76470215605652]
```

```
* err= 0.7821964905068752
* Learning rate NN = 1.9371018424862996e-05
* diff = 0.0003090608000894113
```



For scene 67/109

```
* use LR_NN=5e-05 with err=8.50260193628446 at it=24
```

```
* v0_scn_mean = 23.054114069758935
```

```
* MAE = 0.6953304957729933
```

df n.1, scene n.68/109

We have 3 time intervals inside [474.84, 475.44]

```
- Time interval n.0: [474.84, 475.04]
```

```
* y_true: [2.42235732]
```

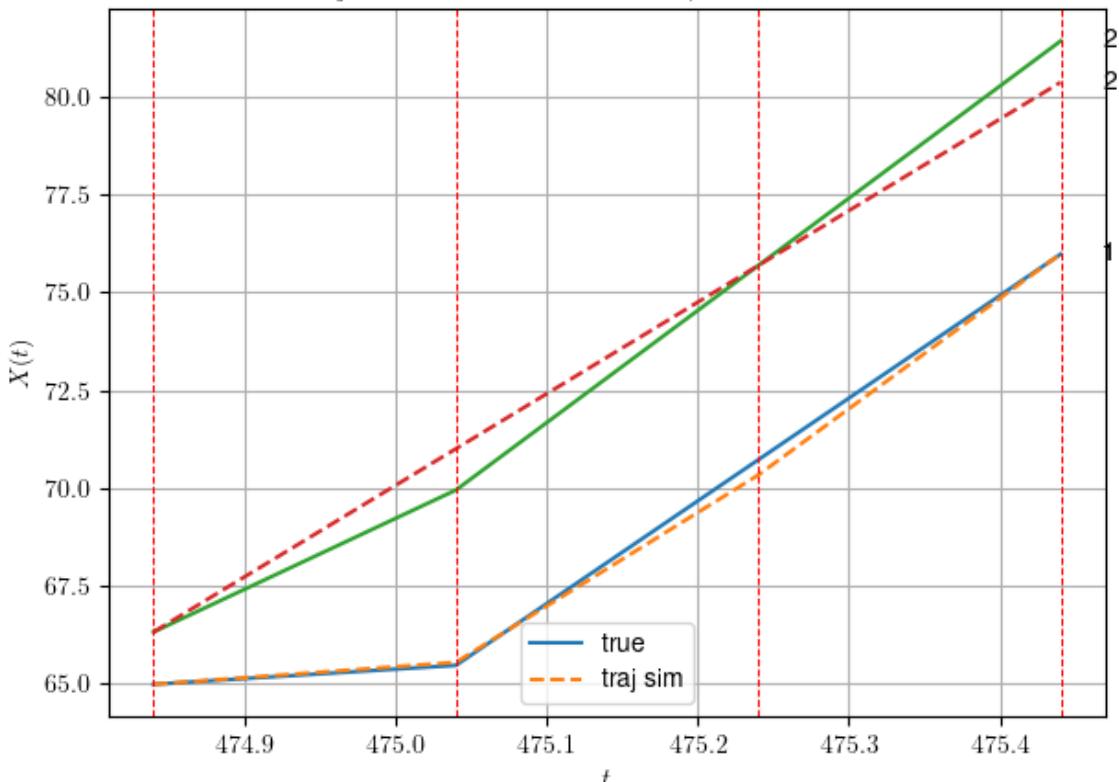
```
* v_ann: [2.81125807762146, 23.444882134000895]
```

- Time interval n.1: [475.04, 475.24]
 * y_true: [26.3025336]
 * v_ann: [23.96059226989746, 23.444882134000895]

- Time interval n.2: [475.24, 475.44]
 * y_true: [26.3025336]
 * v_ann: [28.293888092041016, 23.444882134000895]

* err= 0.2989685088377414
 * Learning rate NN = 0.0002952449722215533
 * diff = 0.00048065303360006473

df n. 1 – Scene n. 68, at it = 500



For scene 68/109

* use LR_NN=0.0005 with err=2.745570485181108 at it=24
 * v0_scn_mean = 23.707086848590237
 * MAE = 0.297044641646644

df n.1, scene n.69/109

We have 6 time intervals inside [479.24, 480.44]
 - Time interval n.0: [479.24, 479.44]
 * y_true: [25.80039081]
 * v_ann: [35.41374969482422, 18.356873791100757]

- Time interval n.1: [479.44, 479.64]
 * y_true: [32.03070589]
 * v_ann: [32.35750198364258, 18.356873791100757]

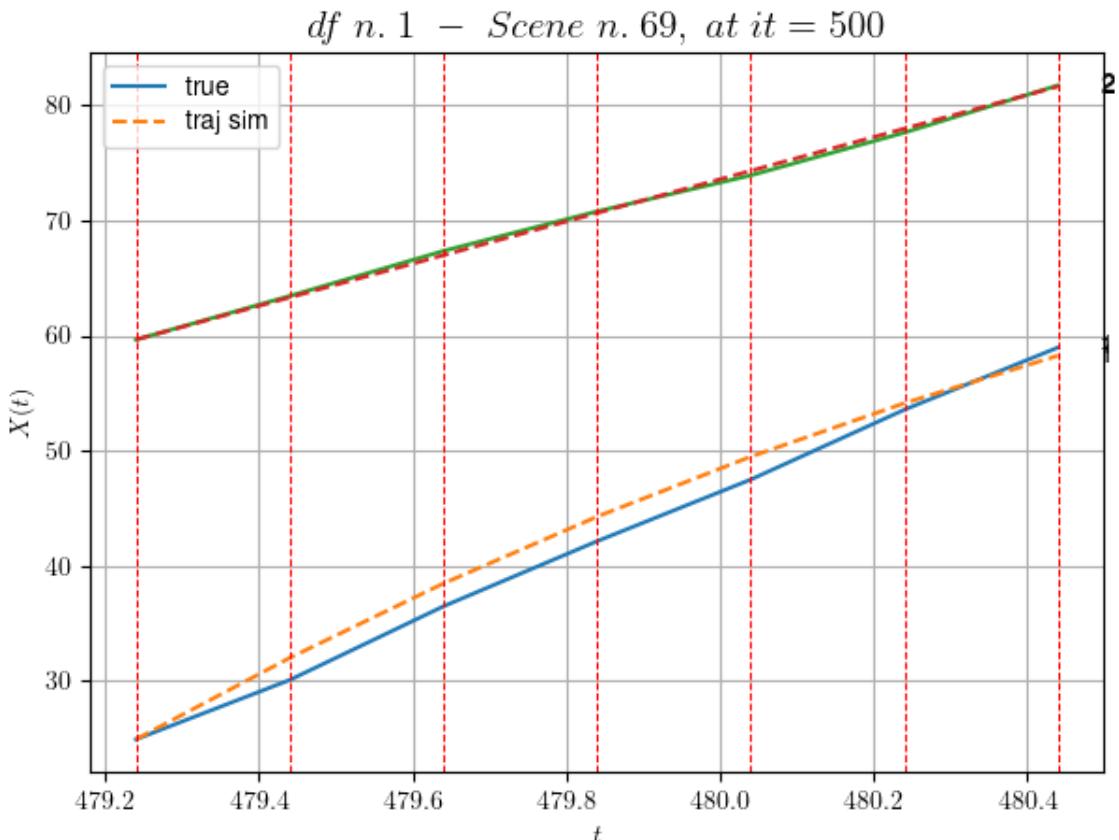
- Time interval n.2: [479.64, 479.84]
 * y_true: [28.3308487]
 * v_ann: [29.070646286010742, 18.356873791100757]

- Time interval n.3: [479.84, 480.04]
 * y_true: [26.8210504]
 * v_ann: [26.101333618164062, 18.356873791100757]

- Time interval n.4: [480.04, 480.24]
 * y_true: [30.39151938]
 * v_ann: [23.256656646728516, 18.356873791100757]

- Time interval n.5: [480.24, 480.44]
 * y_true: [27.06165505]
 * v_ann: [20.702709197998047, 18.356873791100757]

* err= 1.2471767680093946
 * Learning rate NN = 3.138104830213706e-06
 * diff = 0.014183355763381256



```
For scene 69/109
* use LR_NN=1e-05 with err=36.19233437397145 at it=24
* v0_scn_mean = 18.822598839367515
* MAE = 1.2368842150406927
```

```
=====
=====
```

```
df n.1, scene n.70/109
```

```
=====
=====
```

```
We have 5 time intervals inside [483.44,484.44]
```

```
- Time interval n.0: [483.44, 483.64]
  * y_true: [12.92542385]
  * v_ann: [21.242414474487305, 20.27954545125619]
```

```
-----
-----
```

```
- Time interval n.1: [483.64, 483.84]
  * y_true: [16.04562218]
  * v_ann: [20.358823776245117, 20.27954545125619]
```

```
-----
-----
```

```
- Time interval n.2: [483.84, 484.04]
  * y_true: [20.72591968]
  * v_ann: [19.211069107055664, 20.27954545125619]
```

```
-----
-----
```

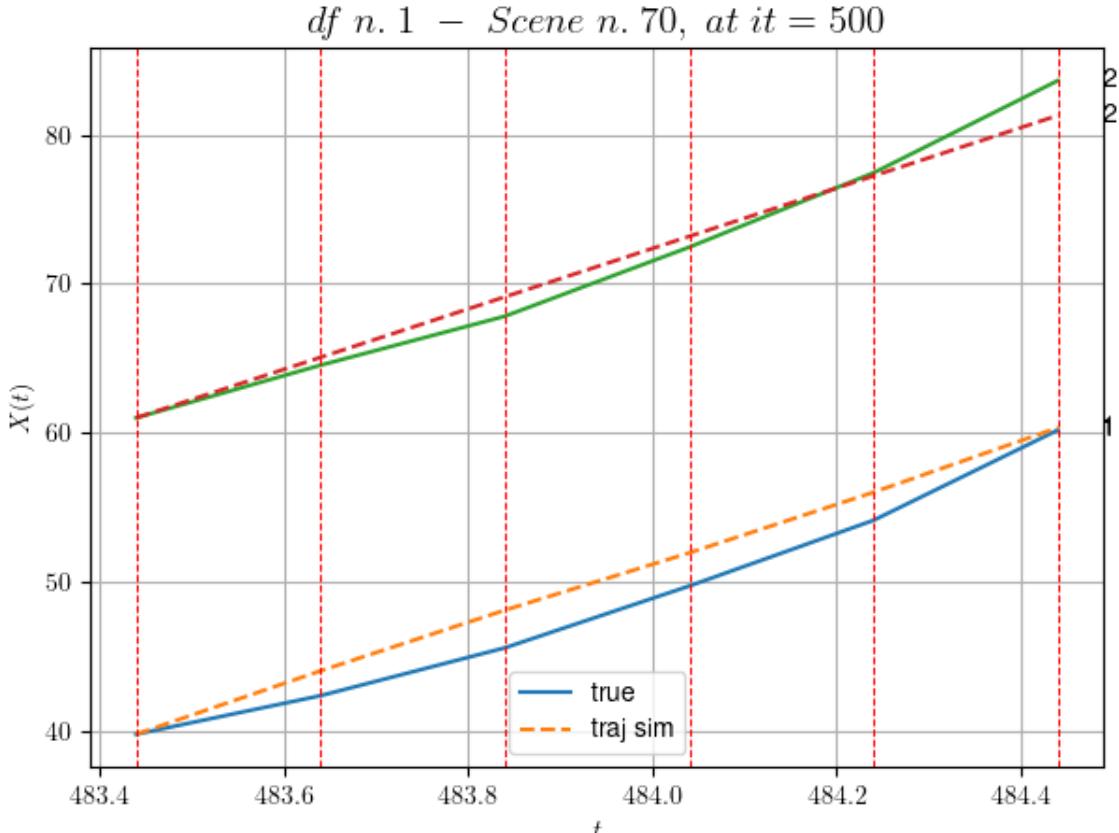
```
- Time interval n.3: [484.04, 484.24]
  * y_true: [22.0437041]
  * v_ann: [20.324804306030273, 20.27954545125619]
```

```
-----
-----
```

```
- Time interval n.4: [484.24, 484.44]
  * y_true: [30.27195457]
  * v_ann: [21.654661178588867, 20.27954545125619]
```

```
-----
-----
```

```
* err= 2.1378764140176205
* Learning rate NN = 1.9371018424862996e-05
* diff = 0.04360432791325719
```



For scene 70/109

* use LR_NN=5e-05 with err=16.990895668444736 at it=24
 * v0_scn_mean = 20.66836363313161
 * MAE = 2.1378764140176205

df n.1, scene n.71/109

We have 4 time intervals inside [489.04, 489.84]

- Time interval n.0: [489.04, 489.24]
 * y_true: [26.7517836]
 * v_ann: [33.362178802490234, 22.729734196719704]

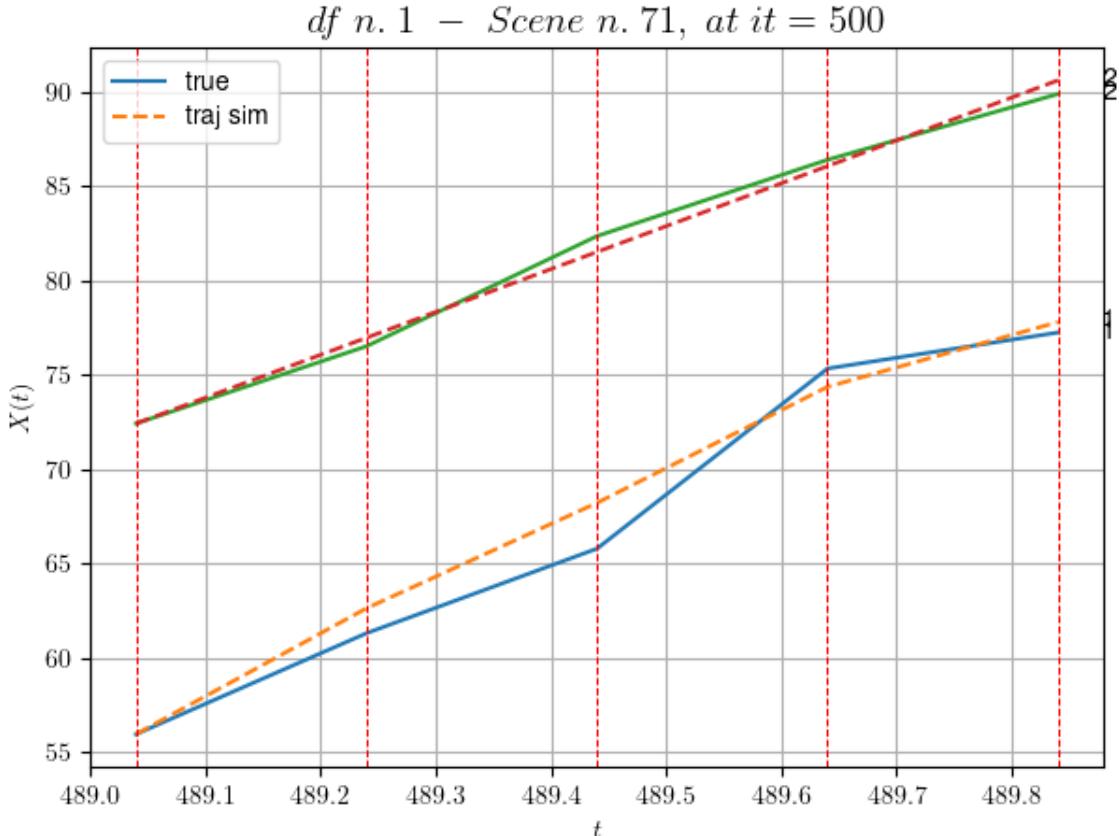
- Time interval n.1: [489.24, 489.44]
 * y_true: [22.40175221]
 * v_ann: [27.911556243896484, 22.729734196719704]

- Time interval n.2: [489.44, 489.64]
 * y_true: [47.70460004]
 * v_ann: [30.73673439025879, 22.729734196719704]

- Time interval n.3: [489.64, 489.84]
 * y_true: [9.55107371]

```
* v_ann: [17.167482376098633, 22.729734196719704]
```

```
* err= 1.0415607204038313
* Learning rate NN = 4.7829678806010634e-05
* diff = 0.00495543630652695
```



For scene 71/109

```
* use LR_NN=0.0001 with err=7.5010938817585515 at it=24
* v0_scn_mean = 23.02054482879494
* MAE = 1.0381614397269754
```

df n.1, scene n.72/109

We have 4 time intervals inside [515.64, 516.44]

- Time interval n.0: [515.64, 515.84]
 - * y_true: [6.11048435]
 - * v_ann: [5.667046546936035, 6.109715857612039]

- Time interval n.1: [515.84, 516.04]
 - * y_true: [6.11048435]
 - * v_ann: [5.682600498199463, 6.109715857612039]

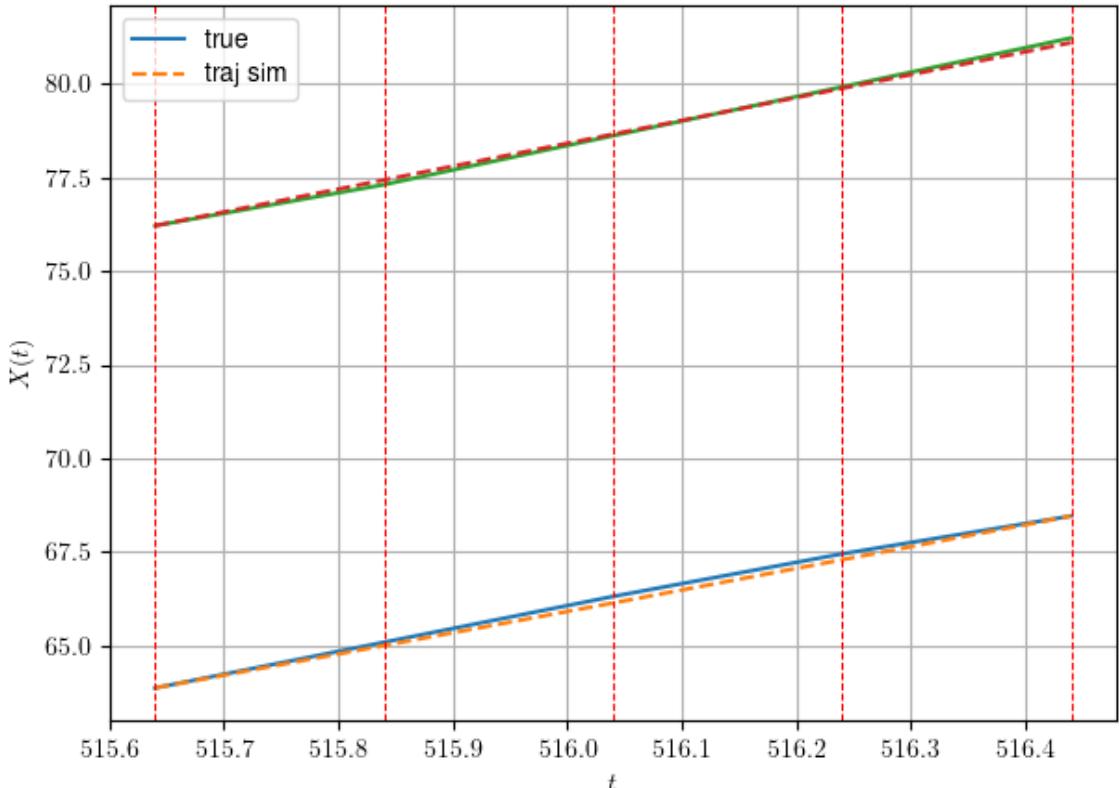
- Time interval n.2: [516.04, 516.24]

```
* y_true: [5.68648241]
* v_ann: [5.771299362182617, 6.109715857612039]
```

```
- Time interval n.3: [516.24, 516.44]
* y_true: [5.05047951]
* v_ann: [5.820898532867432, 6.109715857612039]
```

```
* err= 0.009761169322619636
* Learning rate NN = 0.000478296831715852
* diff = 8.255600021653528e-07
```

df n. 1 – Scene n. 72, at it = 500



For scene 72/109

```
* use LR_NN=0.001 with err=68.10345892903081 at it=24
* v0_scn_mean = 7.065327223125263
* MAE = 0.009743959561468198
```

df n.1, scene n.73/109

```
We have 5 time intervals inside [529.64,530.64]
- Time interval n.0: [529.64, 529.84]
* y_true: [25.15062432]
* v_ann: [32.545875549316406, 22.628998285035223]
```

```
- Time interval n.1: [529.84, 530.04]
```

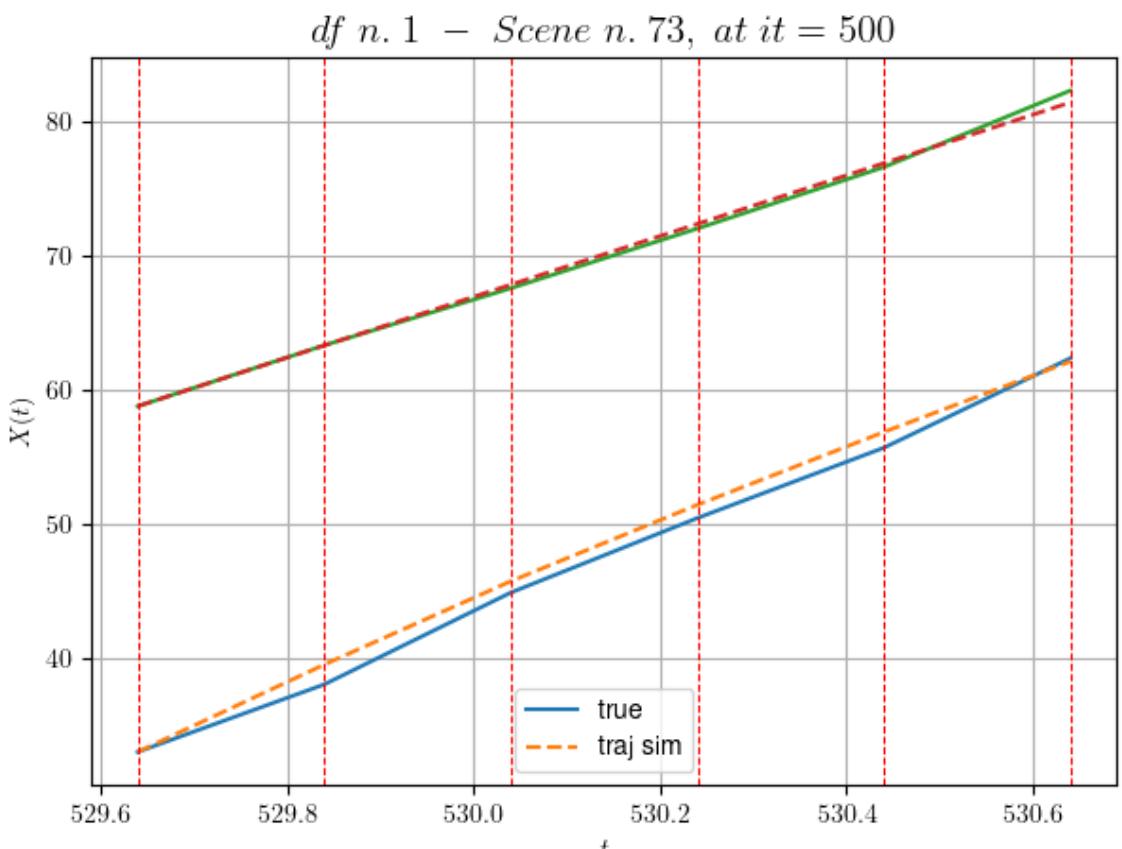
```
* y_true: [34.2011529]
* v_ann: [31.031091690063477, 22.628998285035223]
```

```
- Time interval n.2: [530.04, 530.24]
* y_true: [27.75123099]
* v_ann: [28.456525802612305, 22.628998285035223]
```

```
- Time interval n.3: [530.24, 530.44]
* y_true: [26.20143731]
* v_ann: [27.124866485595703, 22.628998285035223]
```

```
- Time interval n.4: [530.44, 530.64]
* y_true: [33.35225987]
* v_ann: [26.284595489501953, 22.628998285035223]
```

```
* err= 0.5303618365621694
* Learning rate NN = 3.874203684972599e-05
* diff = 0.004078993533831454
```



For scene 73/109

```
* use LR_NN=0.0001 with err=10.204157053004412 at it=24
* v0_scn_mean = 22.923838353577274
* MAE = 0.5252161695917997
```

```
df n.1, scene n.74/109
=====
=====
We have 8 time intervals inside [531.64,533.24]
- Time interval n.0: [531.64, 531.84]
  * y_true: [53.04019205]
  * v_ann: [38.35488510131836, 22.3826484059026]

-----
- Time interval n.1: [531.84, 532.04]
  * y_true: [26.08021954]
  * v_ann: [33.38395309448242, 22.3826484059026]

-----
- Time interval n.2: [532.04, 532.24]
  * y_true: [27.42037034]
  * v_ann: [32.10580825805664, 22.3826484059026]

-----
- Time interval n.3: [532.24, 532.44]
  * y_true: [23.47043117]
  * v_ann: [29.85910415649414, 22.3826484059026]

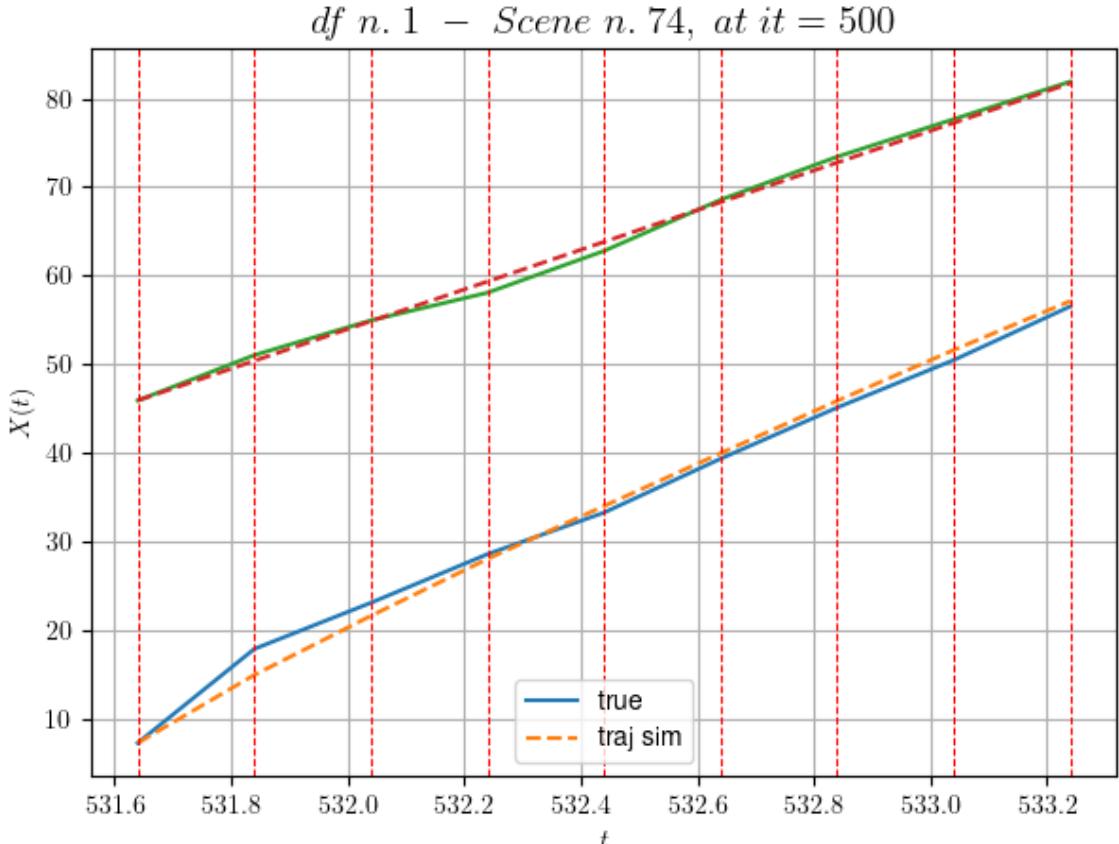
-----
- Time interval n.4: [532.44, 532.64]
  * y_true: [30.41082403]
  * v_ann: [29.83235740661621, 22.3826484059026]

-----
- Time interval n.5: [532.64, 532.84]
  * y_true: [28.87097713]
  * v_ann: [29.550065994262695, 22.3826484059026]

-----
- Time interval n.6: [532.84, 533.04]
  * y_true: [26.81121038]
  * v_ann: [28.68801498413086, 22.3826484059026]

-----
- Time interval n.7: [533.04, 533.24]
  * y_true: [30.30169714]
  * v_ann: [27.631206512451172, 22.3826484059026]

-----
* err= 1.0018299912098647
* Learning rate NN = 2.058910467894748e-06
* diff = 0.0013200632044909621
```



For scene 74/109

* use LR_NN=1e-05 with err=26.802626665114904 at it=24
 * v0_scn_mean = 22.687342469608616
 * MAE = 1.000251387918093

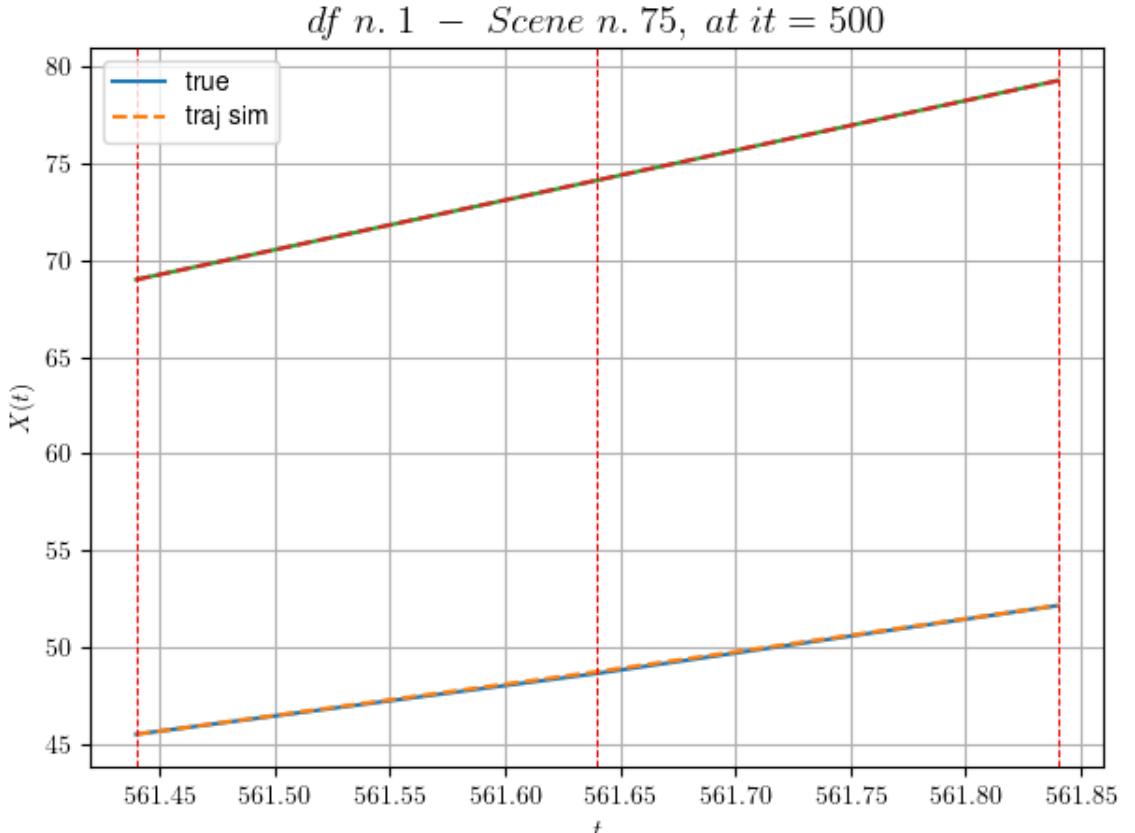
df n.1, scene n.75/109

We have 2 time intervals inside [561.44, 561.84]

- Time interval n.0: [561.44, 561.64]
 * y_true: [15.73405929]
 * v_ann: [16.184141159057617, 25.72772216046492]

- Time interval n.1: [561.64, 561.84]
 * y_true: [17.55083024]
 * v_ann: [17.130884170532227, 25.72772216046492]

* err= 0.0013899475574741323
 * Learning rate NN = 0.00036449998151510954
 * diff = 1.816000181242795e-06



For scene 75/109

- * use LR_NN=0.0005 with err=0.6068039159644782 at it=24
- * v0_scn_mean = 25.898613274012114
- * MAE = 0.0013476989936959843

df n.1, scene n.76/109

We have 4 time intervals inside [564.24, 565.04]

- Time interval n.0: [564.24, 564.44]
 - * y_true: [17.83478281]
 - * v_ann: [21.72153091430664, 14.268347650199761]

- Time interval n.1: [564.44, 564.64]
 - * y_true: [17.83478281]
 - * v_ann: [20.345346450805664, 14.268347650199761]

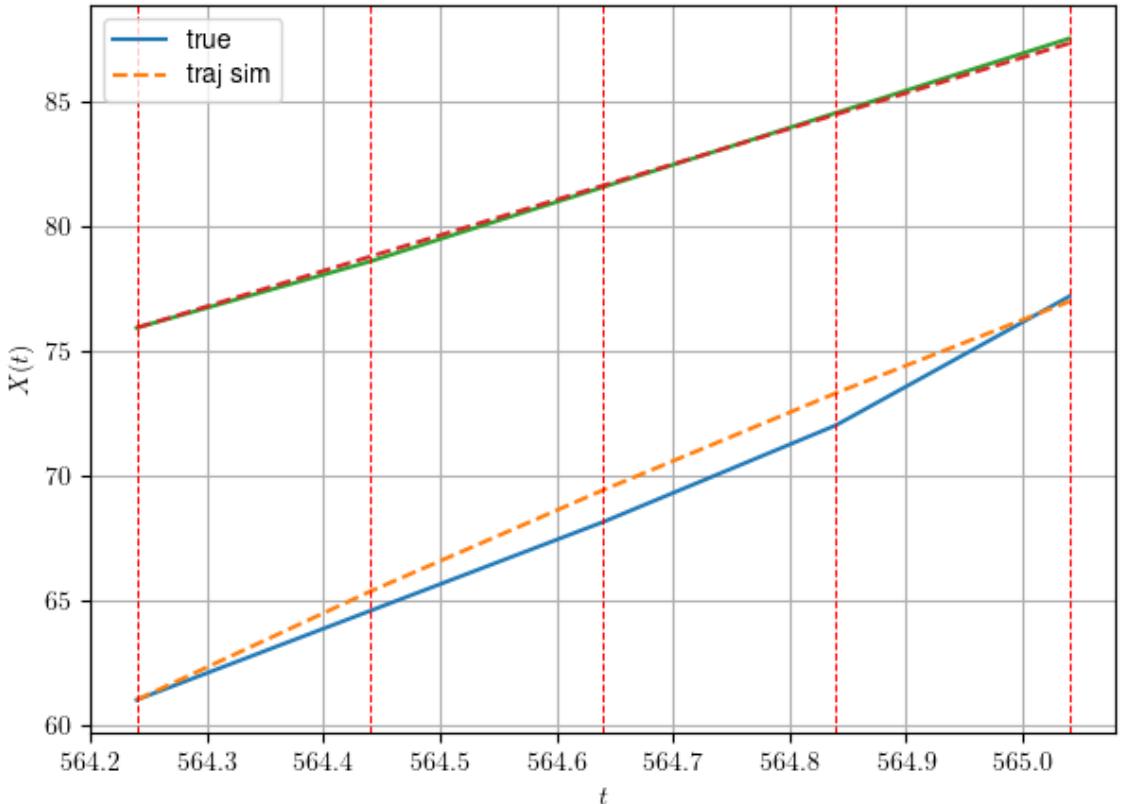
- Time interval n.2: [564.64, 564.84]
 - * y_true: [19.43339212]
 - * v_ann: [19.482952117919922, 14.268347650199761]

- Time interval n.3: [564.84, 565.04]
 - * y_true: [25.82782936]

```
* v_ann: [18.359901428222656, 14.268347650199761]
```

```
* err= 0.40289734732199395
* Learning rate NN = 4.7829678806010634e-05
* diff = 0.00014809078191901914
```

df n. 1 – Scene n. 76, at it = 500



For scene 76/109

```
* use LR_NN=0.0001 with err=29.737646191038774 at it=24
* v0 scn mean = 14.89761374407166
* MAE = 0.4013229368031522
```

df n.1, scene n.77/109

We have 8 time intervals inside [571.04, 572.64]

- Time interval n.0: [571.04, 571.24]
 - * y_true: [10.66294747]
 - * v_ann: [10.997783660888672, 20.877122500554435]

- Time interval n.1: [571.24, 571.44]
 - * y_true: [10.91066813]
 - * v_ann: [10.697362899780273, 20.877122500554435]

- Time interval n.2: [571.44, 571.64]

```
* y_true: [10.91066813]
* v_ann: [10.506200790405273, 20.877122500554435]
```

```
-----  
- Time interval n.3: [571.64, 571.84]  
* y_true: [10.91066813]  
* v_ann: [10.59416389465332, 20.877122500554435]
```

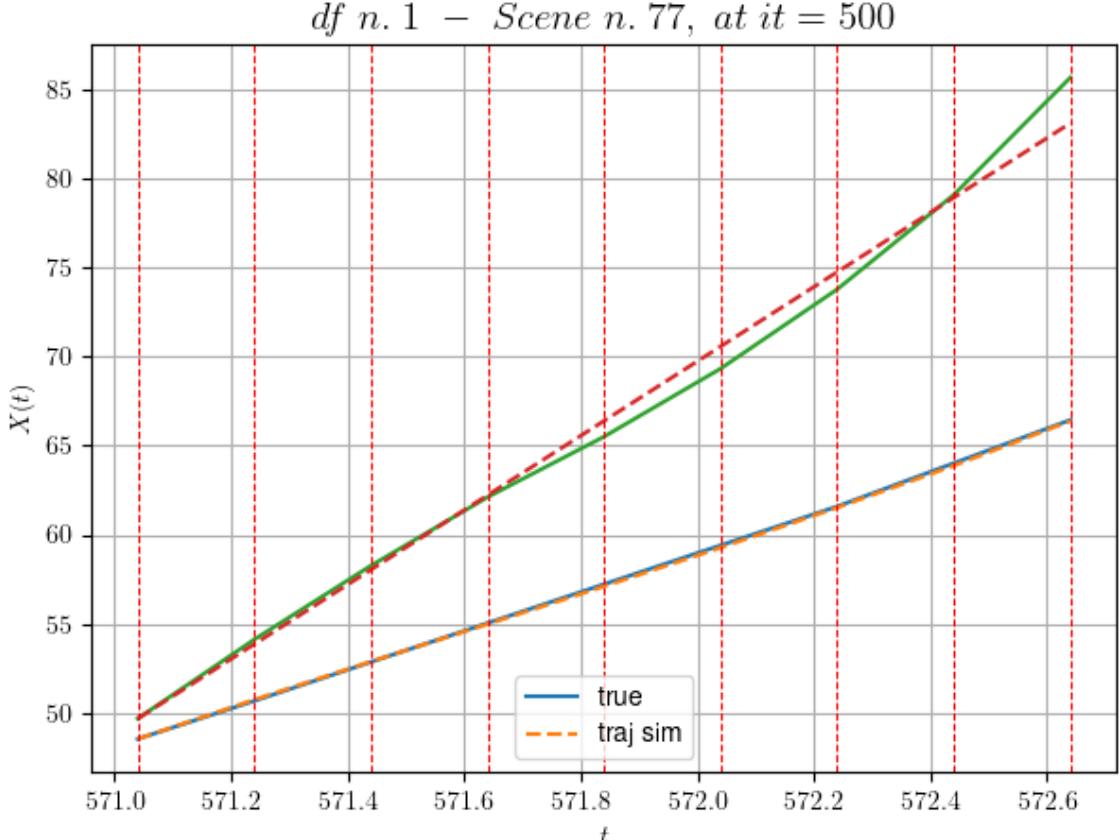
```
-----  
- Time interval n.4: [571.84, 572.04]  
* y_true: [10.91066813]  
* v_ann: [10.85099983215332, 20.877122500554435]
```

```
-----  
- Time interval n.5: [572.04, 572.24]  
* y_true: [10.91066813]  
* v_ann: [11.24936294555664, 20.877122500554435]
```

```
-----  
- Time interval n.6: [572.24, 572.44]  
* y_true: [12.13107553]  
* v_ann: [11.757314682006836, 20.877122500554435]
```

```
-----  
- Time interval n.7: [572.44, 572.64]  
* y_true: [12.13107553]  
* v_ann: [12.561487197875977, 20.877122500554435]
```

```
-----  
* err= 0.5572382856783115  
* Learning rate NN = 0.00010294552339473739  
* diff = 0.000553220683165101
```



For scene 77/109

```
* use LR_NN=0.0005 with err=43.83375510417209 at it=24
* v0_scn_mean = 21.242037600465594
* MAE = 0.5572382856783115
```

df n.1, scene n.78/109

We have 11 time intervals inside [592.44, 594.64]

- Time interval n.0: [592.44, 592.64]
 - * y_true: [15.26011691]
 - * v_ann: [16.049806594848633, 12.85710764055448]

- Time interval n.1: [592.64, 592.84]
 - * y_true: [15.09015603]
 - * v_ann: [15.88306713104248, 12.85710764055448]

- Time interval n.2: [592.84, 593.04]
 - * y_true: [14.43018672]
 - * v_ann: [15.727319717407227, 12.85710764055448]

- Time interval n.3: [593.04, 593.24]
 - * y_true: [18.17030736]

```
* v_ann: [15.565268516540527, 12.85710764055448]
```

```
- Time interval n.4: [593.24, 593.44]
* y_true: [14.59028713]
* v_ann: [15.534811973571777, 12.85710764055448]
```

```
- Time interval n.5: [593.44, 593.64]
* y_true: [15.22037721]
* v_ann: [15.315045356750488, 12.85710764055448]
```

```
- Time interval n.6: [593.64, 593.84]
* y_true: [13.44037198]
* v_ann: [15.07536792755127, 12.85710764055448]
```

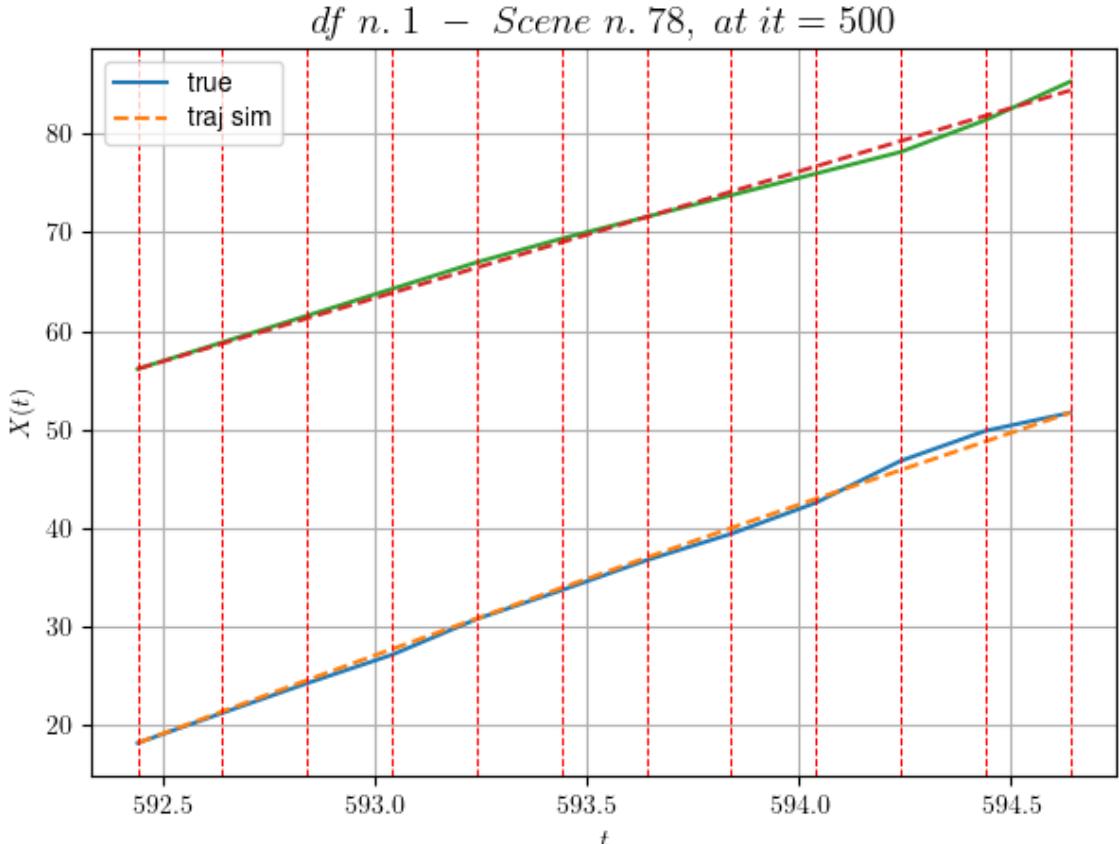
```
- Time interval n.7: [593.84, 594.04]
* y_true: [15.79052842]
* v_ann: [14.817652702331543, 12.85710764055448]
```

```
- Time interval n.8: [594.04, 594.24]
* y_true: [21.27083337]
* v_ann: [14.6281099319458, 12.85710764055448]
```

```
- Time interval n.9: [594.24, 594.44]
* y_true: [15.24067558]
* v_ann: [14.50612735748291, 12.85710764055448]
```

```
- Time interval n.10: [594.44, 594.64]
* y_true: [9.15045602]
* v_ann: [14.604267120361328, 12.85710764055448]
```

```
* err= 0.28056284639182716
* Learning rate NN = 1.0941892469418235e-05
* diff = 0.0008100834594287343
```



For scene 78/109

- * use LR_NN=0.0001 with err=250.1451802105444 at it=24
- * v0_scn_mean = 13.542823334801044
- * MAE = 0.28013144863351613

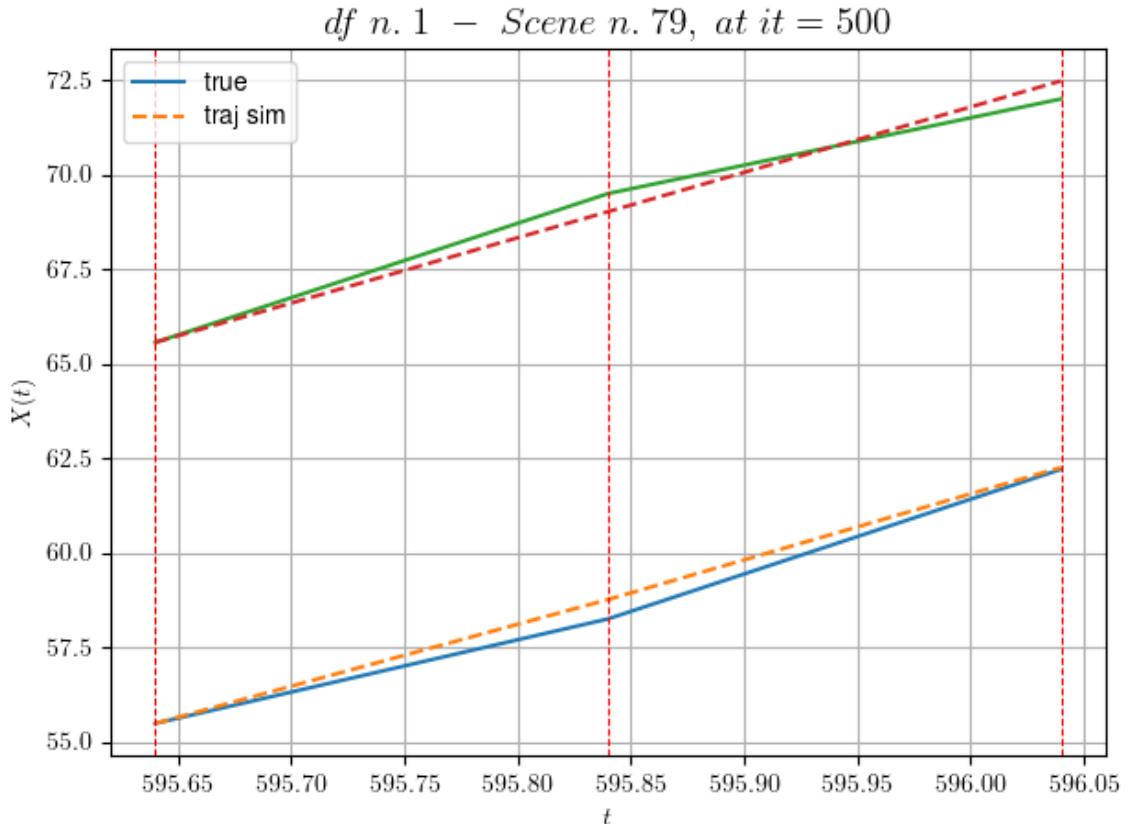
df n.1, scene n.79/109

We have 2 time intervals inside [595.64, 596.04]

- Time interval n.0: [595.64, 595.84]
 - * y_true: [13.82084467]
 - * v_ann: [16.382169723510742, 17.284900942460105]

- Time interval n.1: [595.84, 596.04]
 - * y_true: [19.77136821]
 - * v_ann: [17.44983673095703, 17.284900942460105]

- * err= 0.12008091946071228
- * Learning rate NN = 7.289998757187277e-05
- * diff = 6.192392681228509e-05



For scene 79/109

- * use LR_NN=0.0001 with err=6.127948898451684 at it=24
- * v0_scn_mean = 17.79350490466467
- * MAE = 0.11992252602779185

df n.1, scene n.80/109

We have 4 time intervals inside [597.64, 598.44]

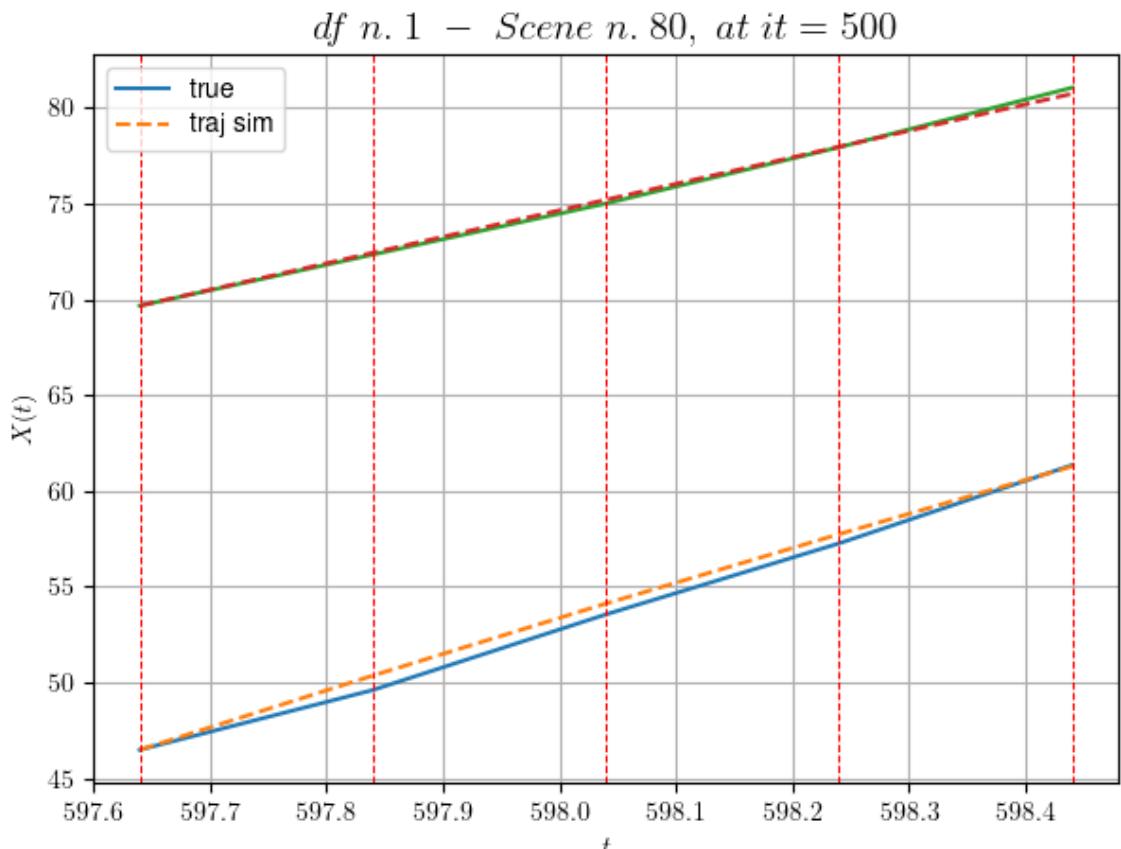
- Time interval n.0: [597.64, 597.84]
 - * y_true: [15.60070033]
 - * v_ann: [19.37082862854004, 13.840959609622185]

- Time interval n.1: [597.84, 598.04]
 - * y_true: [19.75102085]
 - * v_ann: [18.809465408325195, 13.840959609622185]

- Time interval n.2: [598.04, 598.24]
 - * y_true: [18.55110518]
 - * v_ann: [18.12809181213379, 13.840959609622185]

- Time interval n.3: [598.24, 598.44]
 - * y_true: [20.45139489]
 - * v_ann: [17.701200485229492, 13.840959609622185]

```
* err= 0.12761724921759796
* Learning rate NN = 2.3914839403005317e-05
* diff = 4.8429792860876786e-05
```



For scene 80/109

```
* use LR_NN=5e-05 with err=31.03367935244196 at it=24
* v0_scn_mean = 14.487321225113682
* MAE = 0.12625796855078186
```

df n.1, scene n.81/109

We have 2 time intervals inside [14.24, 14.64]

- Time interval n.0: [14.24, 14.44]
 - * y_true: [32.1443344 20.77111865]
 - * v_ann: [26.451946258544922, 26.900569915771484, 2
 - 7.636278285272237]

- Time interval n.1: [14.44, 14.64]
 - * y_true: [32.5721373 24.27162308]
 - * v_ann: [28.42053985595703, 28.009126663208008, 2

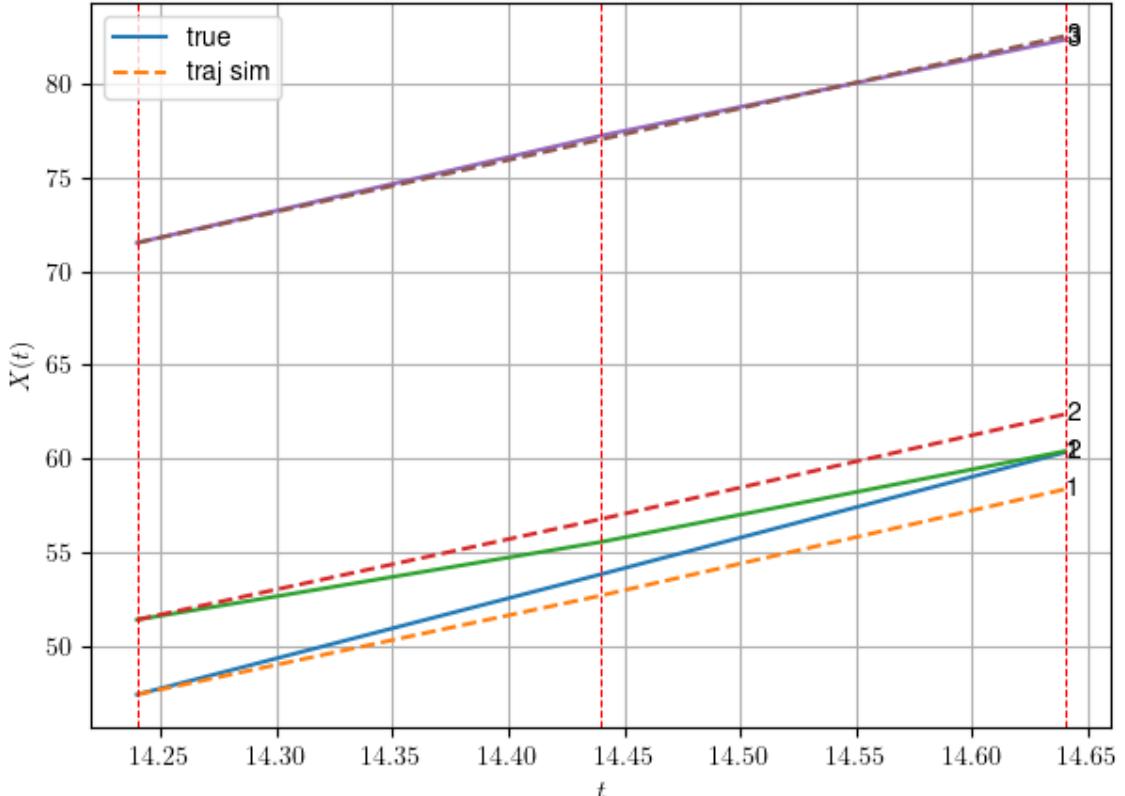
7.636278285272237]

```

* err= 1.1831141761832362
* Learning rate NN = 0.0007289999630302191
* diff = 0.0002002664110077584

```

df n. 1 – Scene n. 81, at it = 500



For scene 81/109

```

* use LR_NN=0.001 with err=16.615866775068792 at it=24
* v0_scn_mean = 27.778101482029896
* MAE = 1.1831141761832362

```

df n.1, scene n.82/109

We have 5 time intervals inside [23.64, 24.64]

- Time interval n.0: [23.64, 23.84]
 - * y_true: [26.6509107 26.65125804]
 - * v_ann: [26.200653076171875, 24.26305389404297, 3 1.1844205658401]

- Time interval n.1: [23.84, 24.04]
 - * y_true: [29.05143519 29.47691739]
 - * v_ann: [26.970720291137695, 25.998065948486328, 3 1.1844205658401]

- Time interval n.2: [24.04, 24.24]
 - * y_true: [29.05143519 29.47691739]
 - * v_ann: [28.449546813964844, 28.73419761657715, 3

1.1844205658401]

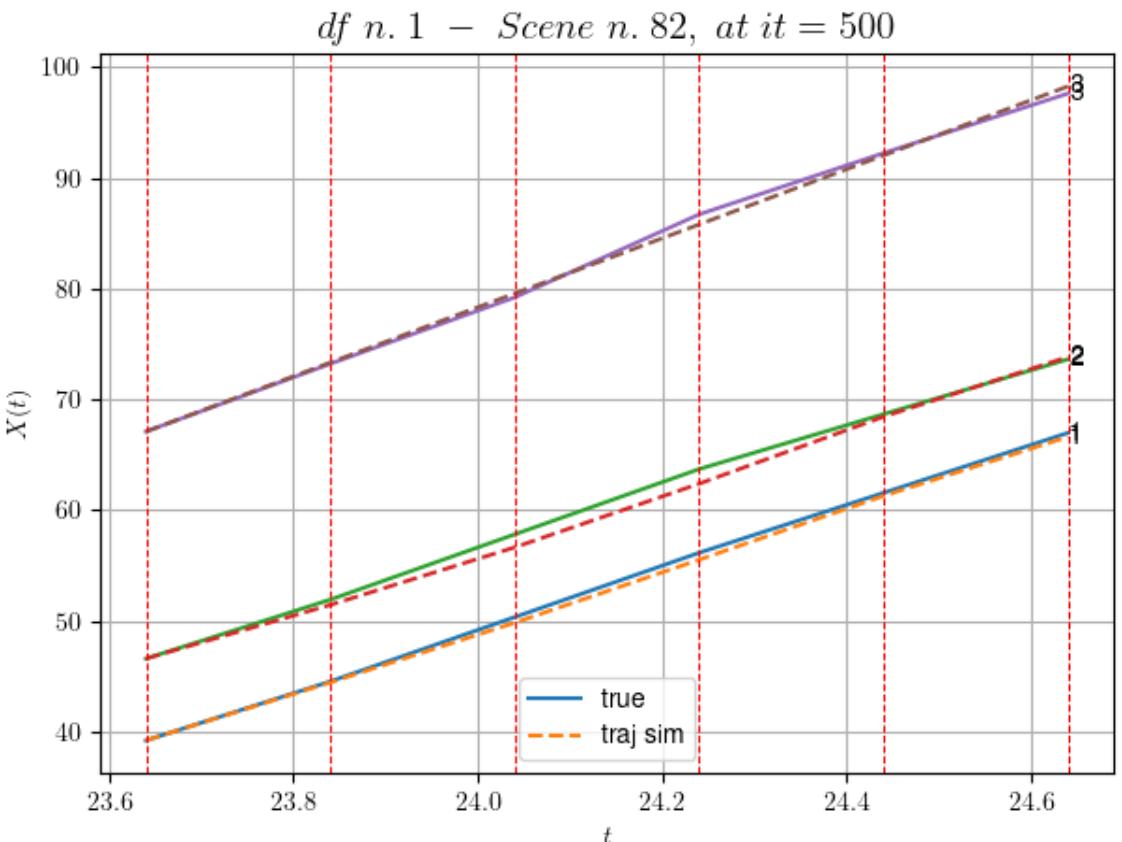
```
- Time interval n.3: [24.24, 24.44]
  * y_true: [27.07699139 24.80226709]
  * v_ann: [28.840301513671875, 30.275306701660156, 3
```

1.1844205658401]

```
- Time interval n.4: [24.44, 24.64]
  * y_true: [27.07699139 24.80226709]
  * v_ann: [26.687210083007812, 26.9951229095459, 31.]
```

1844205658401]

```
* err= 0.31822541412429844  
* Learning rate NN = 0.0003874204121530056  
* diff = 0.01167518264586942
```



For scene 82/109

```
* use LR_NN=0.001 with err=23.988912389462968 at it=24  
* v0_scn_mean = 31.11335538506763  
* MAE = 0.17678663391120067
```

df n.1. scene n.83/109

We have 5 time intervals inside [72.44, 73.44]

- Time interval n.0: [72.44, 72.64]
 - * y_true: [25.85001228 31.10049693]
 - * v_ann: [27.569965362548828, 28.707109451293945, 28.250920573908427]
-

- Time interval n.1: [72.64, 72.84]
 - * y_true: [30.00006309 33.82077482]
 - * v_ann: [27.554325103759766, 28.776599884033203, 28.250920573908427]
-

- Time interval n.2: [72.84, 73.04]
 - * y_true: [23.75011307 26.19081077]
 - * v_ann: [27.656131744384766, 28.133935928344727, 28.250920573908427]
-

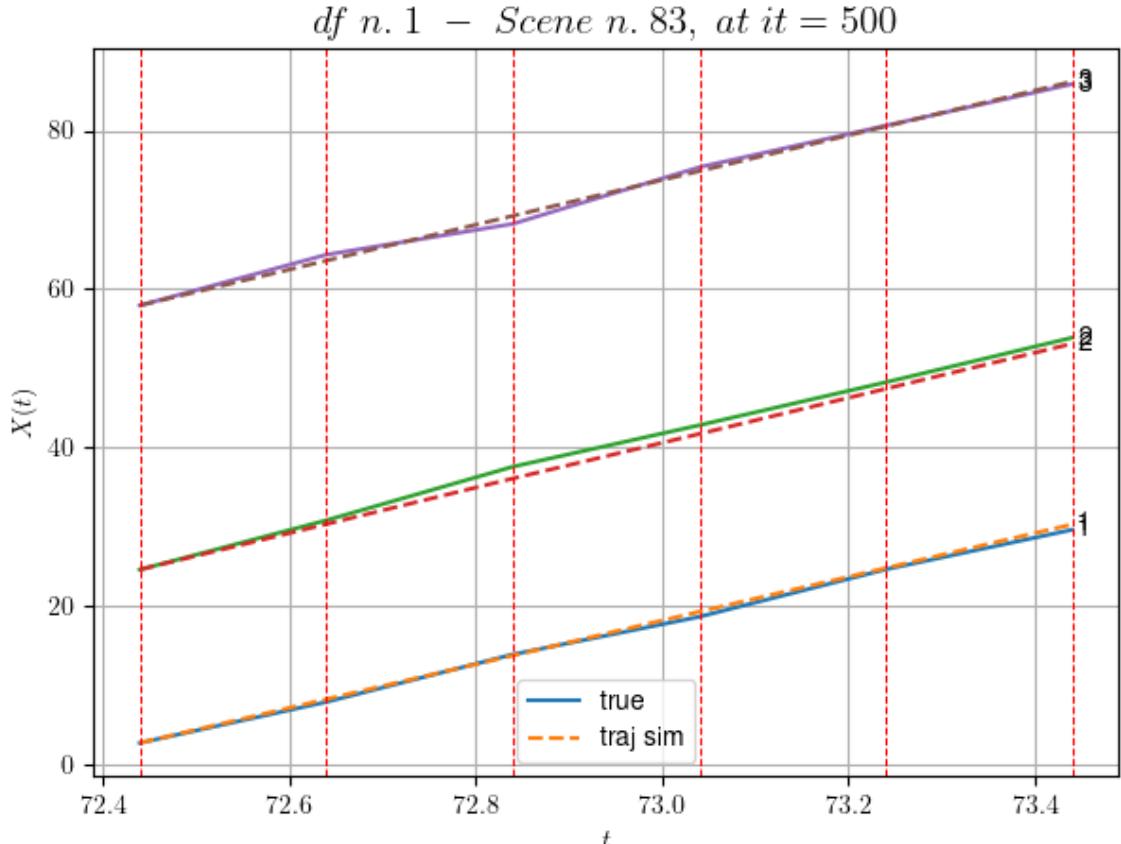
- Time interval n.3: [73.04, 73.24]
 - * y_true: [29.90025591 27.11111625]
 - * v_ann: [27.55647850036621, 28.491662979125977, 28.250920573908427]
-

- Time interval n.4: [73.24, 73.44]
 - * y_true: [25.05033948 28.161422]
 - * v_ann: [27.576595306396484, 28.456350326538086, 28.250920573908427]
-

* err= 0.4369903952509087

* Learning rate NN = 3.874203684972599e-06

* diff = 0.0030199462017564405



For scene 83/109

- * use LR_NN=1e-05 with err=3.6456205951104135 at it=24
- * v0_scn_mean = 28.35586526094395
- * MAE = 0.21080029368109762

df n.1, scene n.84/109

We have 3 time intervals inside [84.24, 84.84]

- Time interval n.0: [84.24, 84.44]
 - * y_true: [29.4403562 23.48047527]
 - * v_ann: [26.77962875366211, 27.90901756286621, 29.494365593581737]

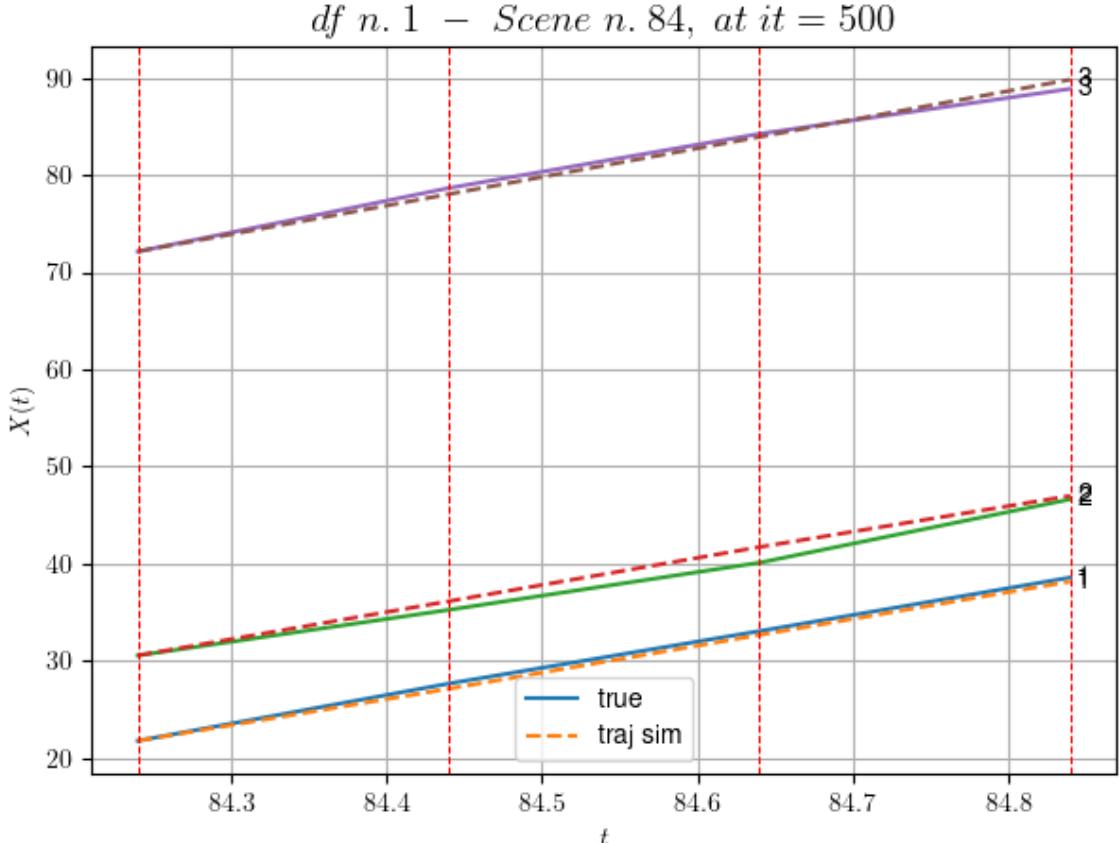
- Time interval n.1: [84.44, 84.64]
 - * y_true: [27.01049004 24.28067739]
 - * v_ann: [27.717348098754883, 27.90300178527832, 29.494365593581737]

- Time interval n.2: [84.64, 84.84]
 - * y_true: [27.60069732 32.65118399]
 - * v_ann: [27.51727867126465, 26.37056541442871, 29.494365593581737]

```

* err= 0.45810643773913845
* Learning rate NN = 0.0002952449722215533
* diff = 0.000797110158897274

```



For scene 84/109

```

* use LR_NN=0.0005 with err=21.347737187445983 at it=24
* v0_scn_mean = 29.524703635264988
* MAE = 0.4566312372912795

```

df n.1, scene n.85/109

We have 2 time intervals inside [131.64, 132.04]

- Time interval n.0: [131.64, 131.84]
 - * y_true: [30.80073929 29.11067519]
 - * v_ann: [29.29222869873047, 29.032699584960938, 2

8.442892702247352]

- Time interval n.1: [131.84, 132.04]

- * y_true: [30.16079766 28.07097758]

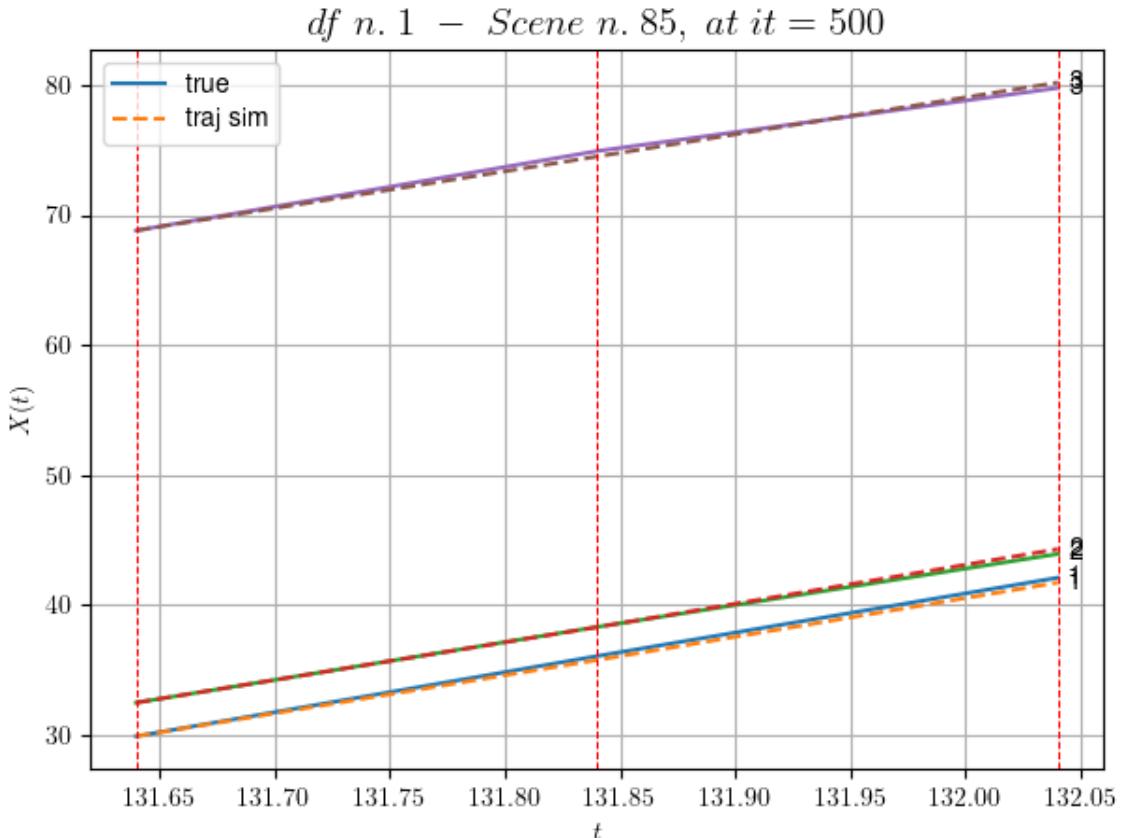
- * v_ann: [29.807159423828125, 30.021934509277344, 2

8.442892702247352]

* err= 0.07978988417355214

* Learning rate NN = 0.00036449998151510954

* diff = 6.2872172329545e-05



For scene 85/109

* use LR_NN=0.0005 with err=17.115819425119298 at it=24
 * v0_scn_mean = 28.536319070201344
 * MAE = 0.07902588179804132

df n.1, scene n.86/109

We have 2 time intervals inside [148.04, 148.44]

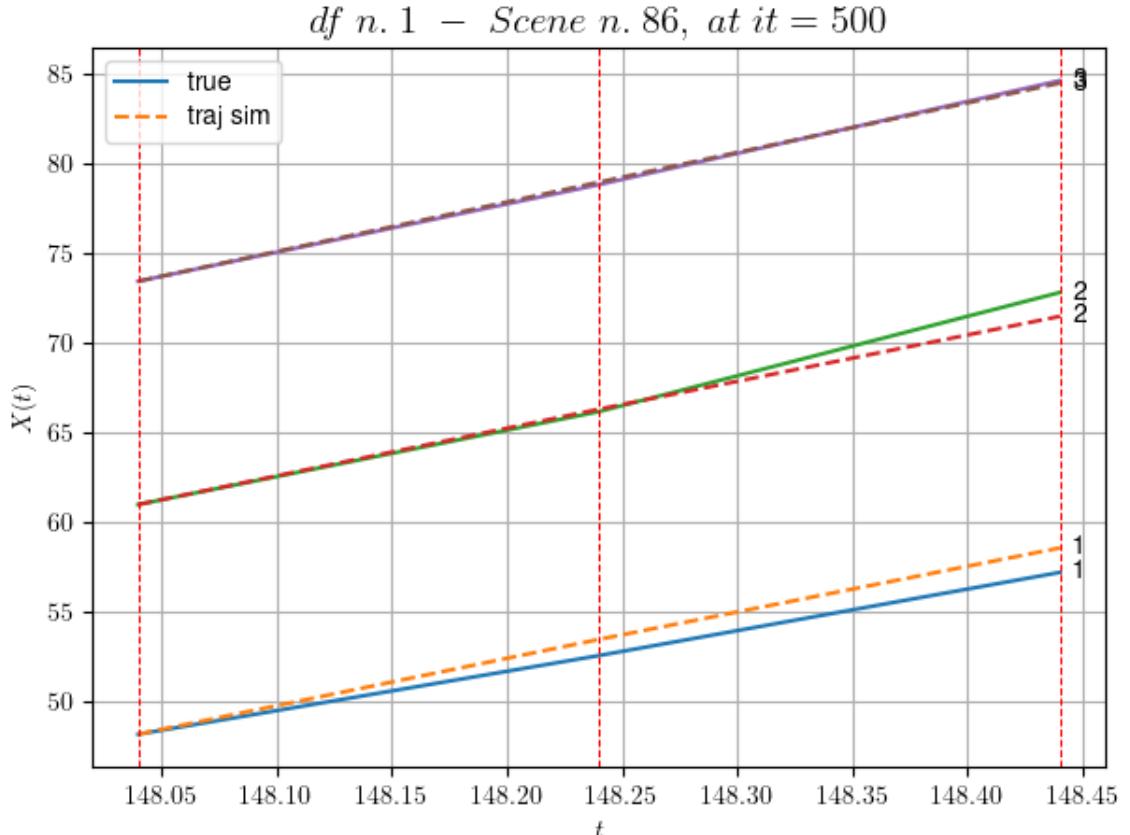
- Time interval n.0: [148.04, 148.24]
 - * y_true: [21.93113488 25.90203153]
 - * v_ann: [26.438507080078125, 26.571863174438477, 27.621656721216258]

- Time interval n.1: [148.24, 148.44]
 - * y_true: [23.17638158 33.20310746]
 - * v_ann: [25.489242553710938, 25.8770751953125, 27.621656721216258]

* err= 0.5003357709622558

* Learning rate NN = 7.289998757187277e-05

* diff = 0.0004869105775162641



For scene 86/109

- * use LR_NN=0.0001 with err=0.8072917168140984 at it=24
- * v0_scn_mean = 27.76435721116075
- * MAE = 0.4975504156007644

df n.1, scene n.87/109

We have 2 time intervals inside [161.64, 162.04]

- Time interval n.0: [161.64, 161.84]
 - * y_true: [31.66062591 25.70084842]
 - * v_ann: [28.548851013183594, 27.781829833984375, 3

4.711815198036014]

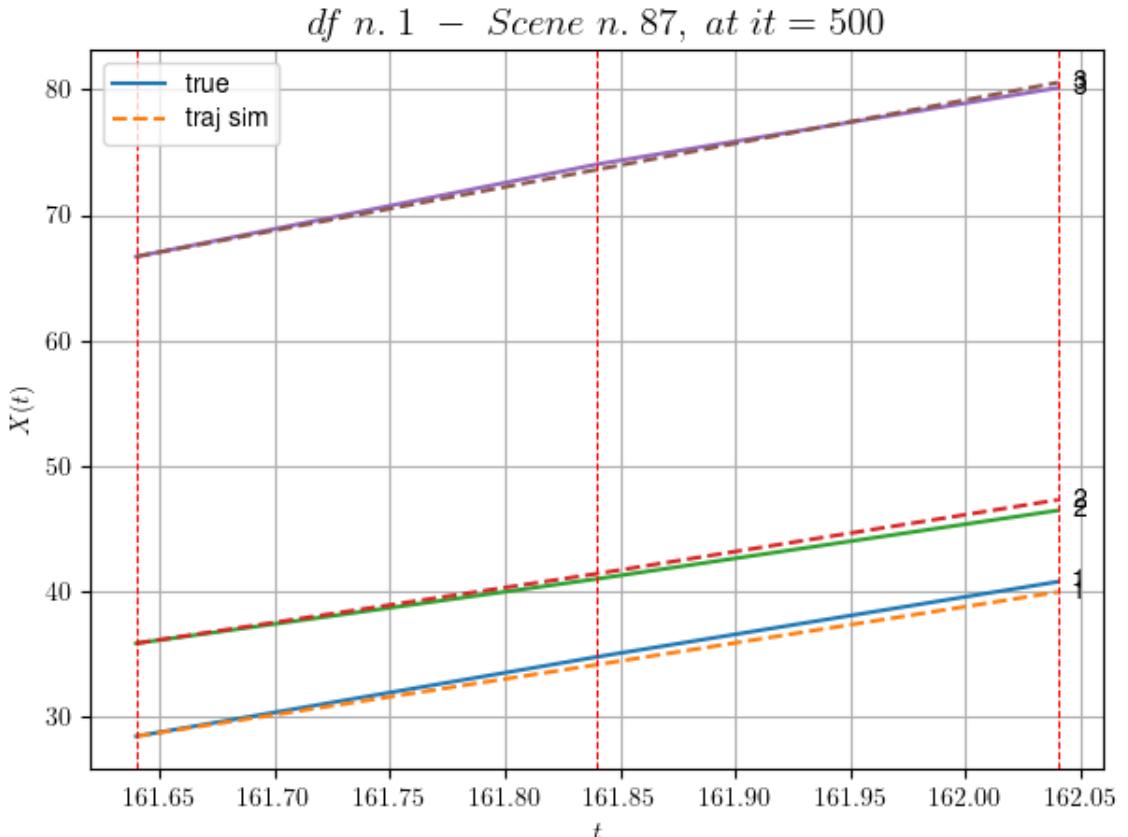
- Time interval n.1: [161.84, 162.04]
 - * y_true: [29.96082912 27.30094687]
 - * v_ann: [28.961639404296875, 29.43075942993164, 3

4.711815198036014]

- * err= 0.2560271587389075

- * Learning rate NN = 3.6449993785936385e-05

- * diff = 0.0002940600321627018



For scene 87/109

* use LR_NN=5e-05 with err=14.358344689185778 at it=24
 * v0_scn_mean = 34.42910649770428
 * MAE = 0.2560271587389075

df n.1, scene n.88/109

We have 3 time intervals inside [164.04, 164.64]

- Time interval n.0: [164.04, 164.24]
 - * y_true: [27.950014 32.5307084]
 - * v_ann: [20.802936553955078, 27.485685348510742, 32.432850946243285]

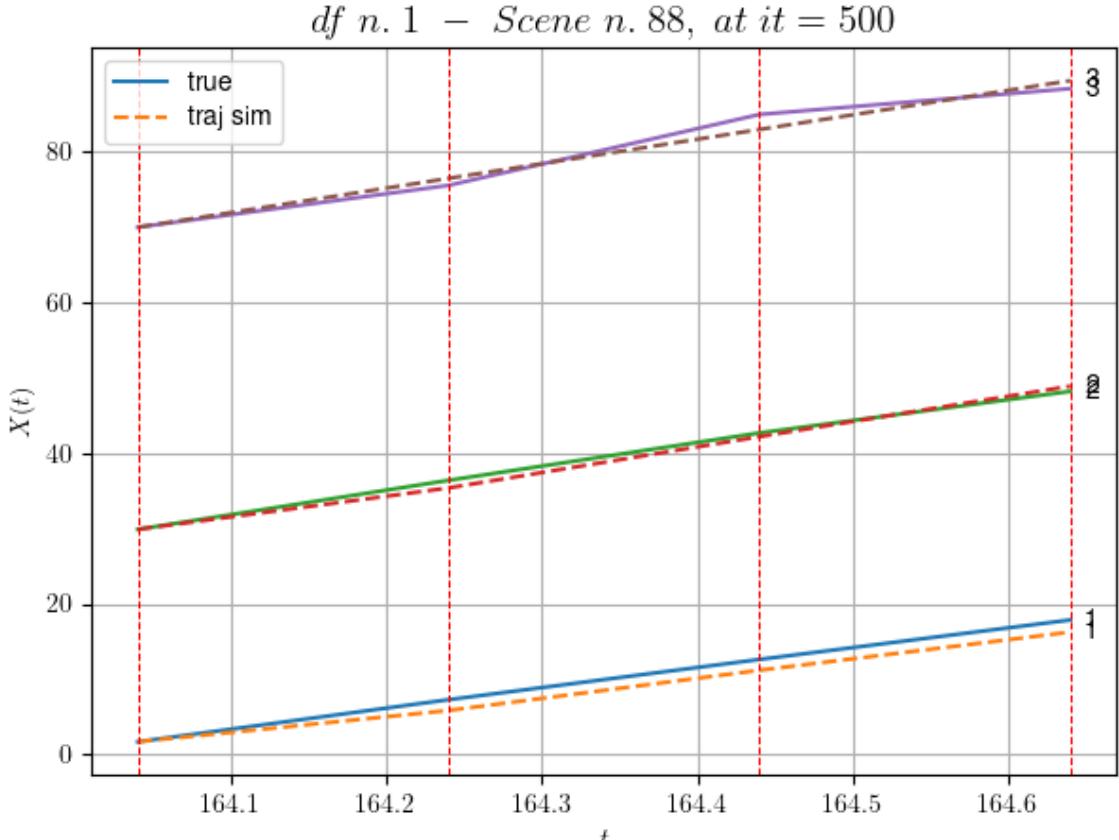
- Time interval n.1: [164.24, 164.44]
 - * y_true: [26.70005561 31.43096027]
 - * v_ann: [26.670583724975586, 34.021522521972656, 32.432850946243285]

- Time interval n.2: [164.44, 164.64]
 - * y_true: [26.20012328 27.61110245]
 - * v_ann: [25.340795516967773, 33.520294189453125, 32.432850946243285]

```

* err= 1.199406800006645
* Learning rate NN = 0.0002952449722215533
* diff = 0.009963790466856581

```



For scene 88/109

```

* use LR_NN=0.0005 with err=1.574456090752891 at it=24
* v0_scn_mean = 32.28687999869838
* MAE = 0.9807531166449728

```

df n.1, scene n.89/109

We have 2 time intervals inside [215.64, 216.04]

- Time interval n.0: [215.64, 215.84]
 - * y_true: [29.28007092 34.74092457]
 - * v_ann: [27.76367950439453, 34.18327331542969, 37.48377847226517]

- Time interval n.1: [215.84, 216.04]

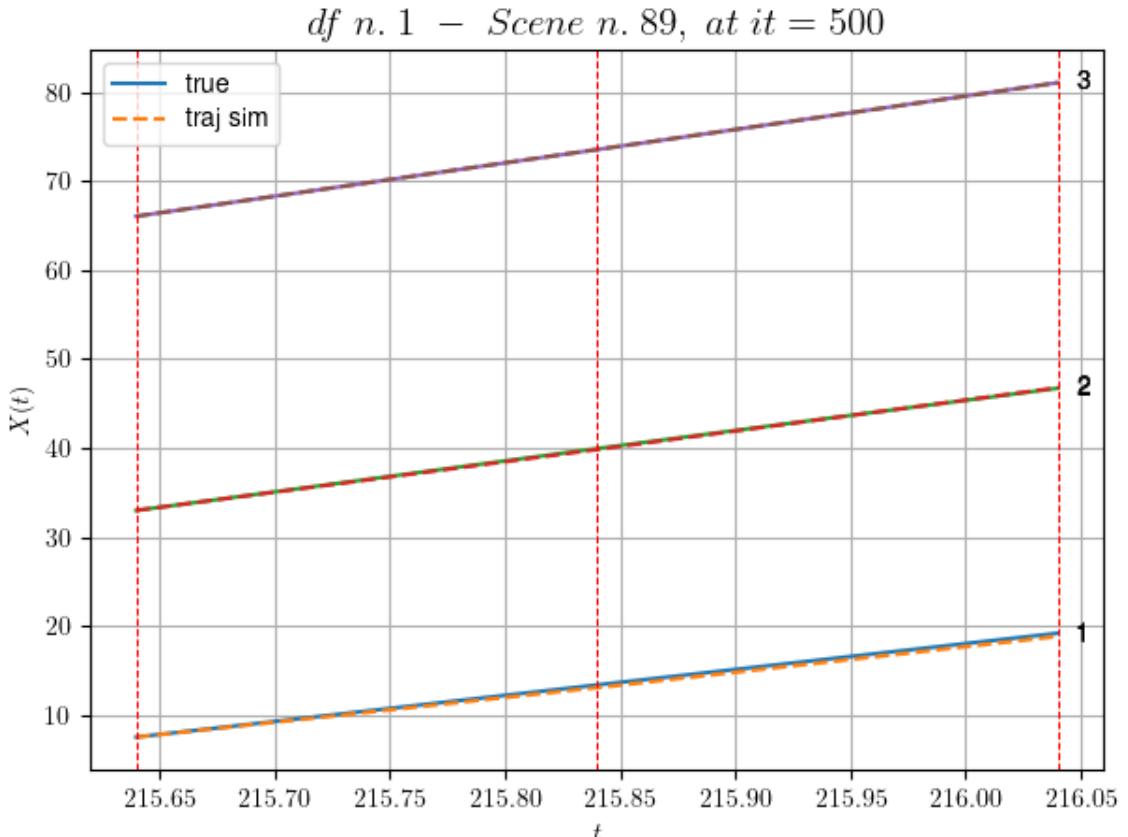
- * y_true: [29.05016449 33.87124084]

- * v_ann: [28.774738311767578, 34.74485778808594, 37.48377847226517]

* err= 0.0263472784648044

* Learning rate NN = 3.6449993785936385e-05

* diff = 0.0003107072195261025



For scene 89/109

* use LR_NN=5e-05 with err=1.344722791795486 at it=24
 * v0_scn_mean = 37.034752099934416
 * MAE = 0.0263472784648044

df n.1, scene n.90/109

We have 2 time intervals inside [216.64, 217.04]

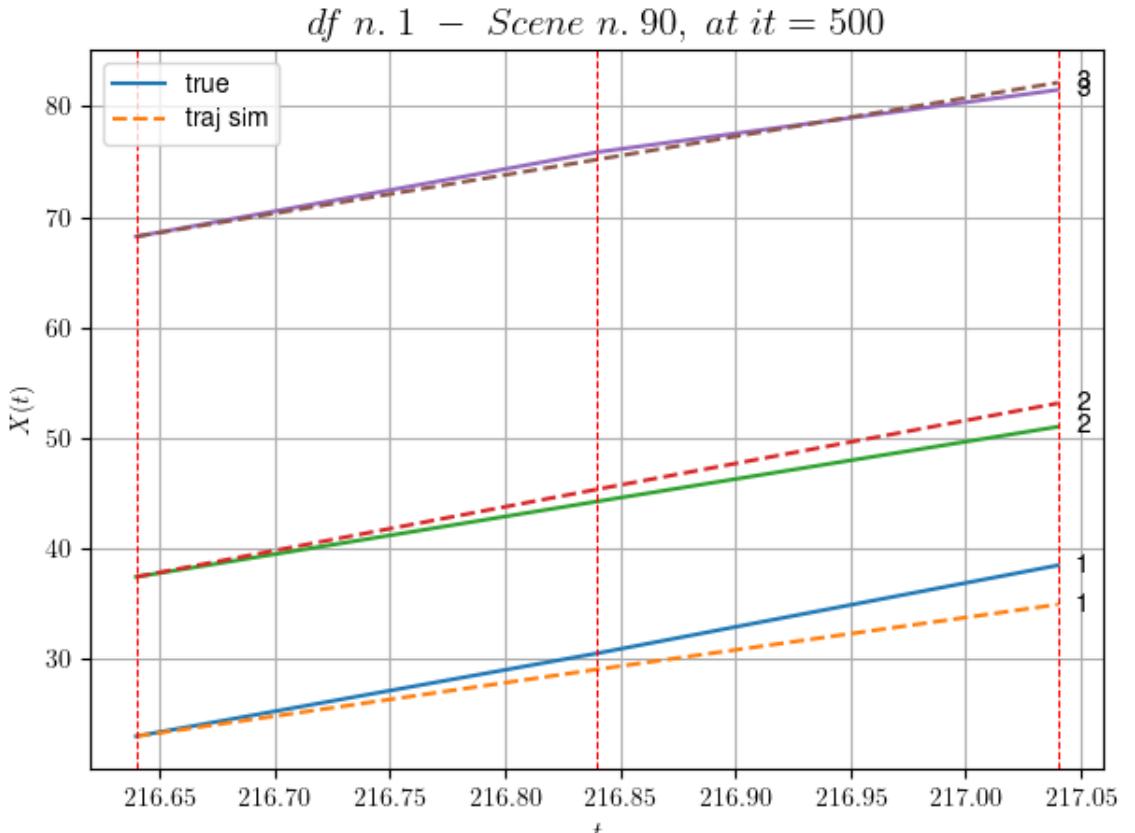
- Time interval n.0: [216.64, 216.84]
 - * y_true: [37.52054047 34.13112536]
 - * v_ann: [30.25655746459961, 39.62337875366211, 34.851825110755385]

- Time interval n.1: [216.84, 217.04]
 - * y_true: [39.83095433 33.81148861]
 - * v_ann: [29.37371253967285, 38.94209671020508, 34.851825110755385]

* err= 2.364232212128338

* Learning rate NN = 7.289998757187277e-05

* diff = 0.28532151734824884



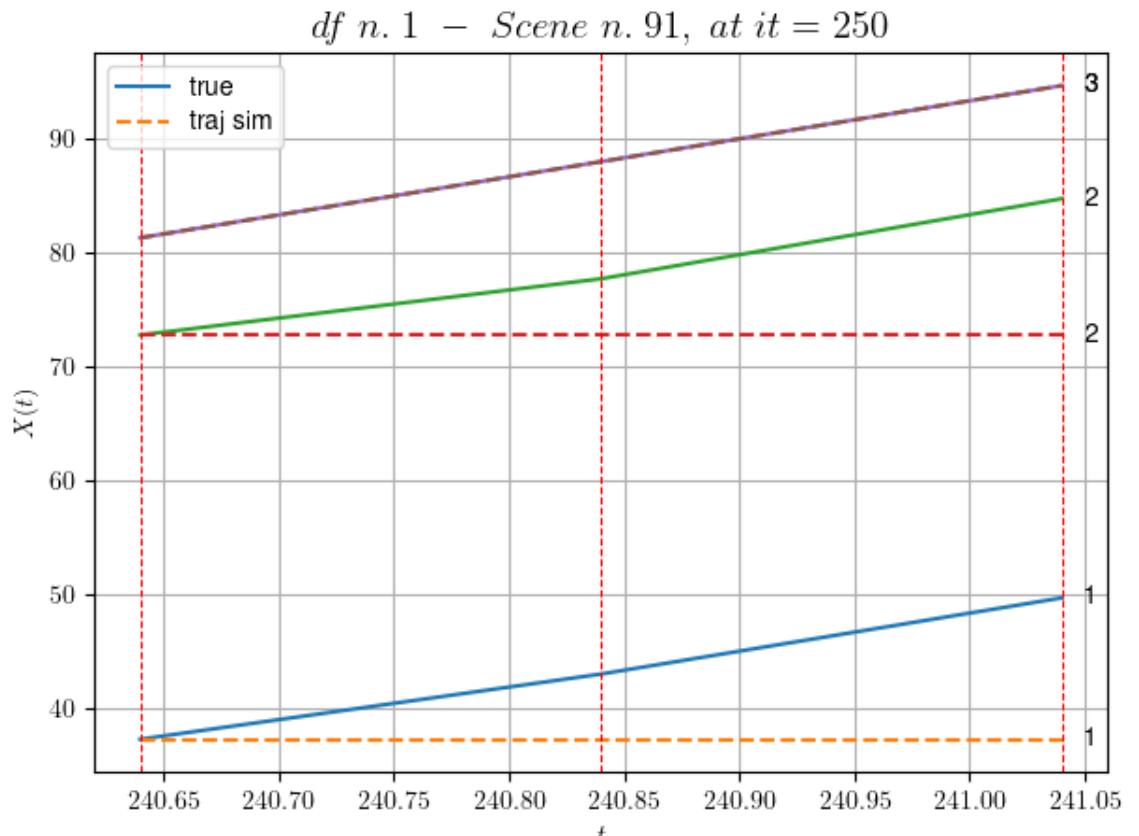
For scene 90/109

- * use LR_NN=0.0001 with err=10.282709890675788 at it=24
- * v0_scn_mean = 34.56071582194618
- * MAE = 2.364232212128338

df n.1, scene n.91/109

We have 2 time intervals inside [240.64, 241.04]

- * err= 39.18451300208877
- * Learning rate NN = 0.0004500000213738531
- * diff = 6.027624053217551e-07



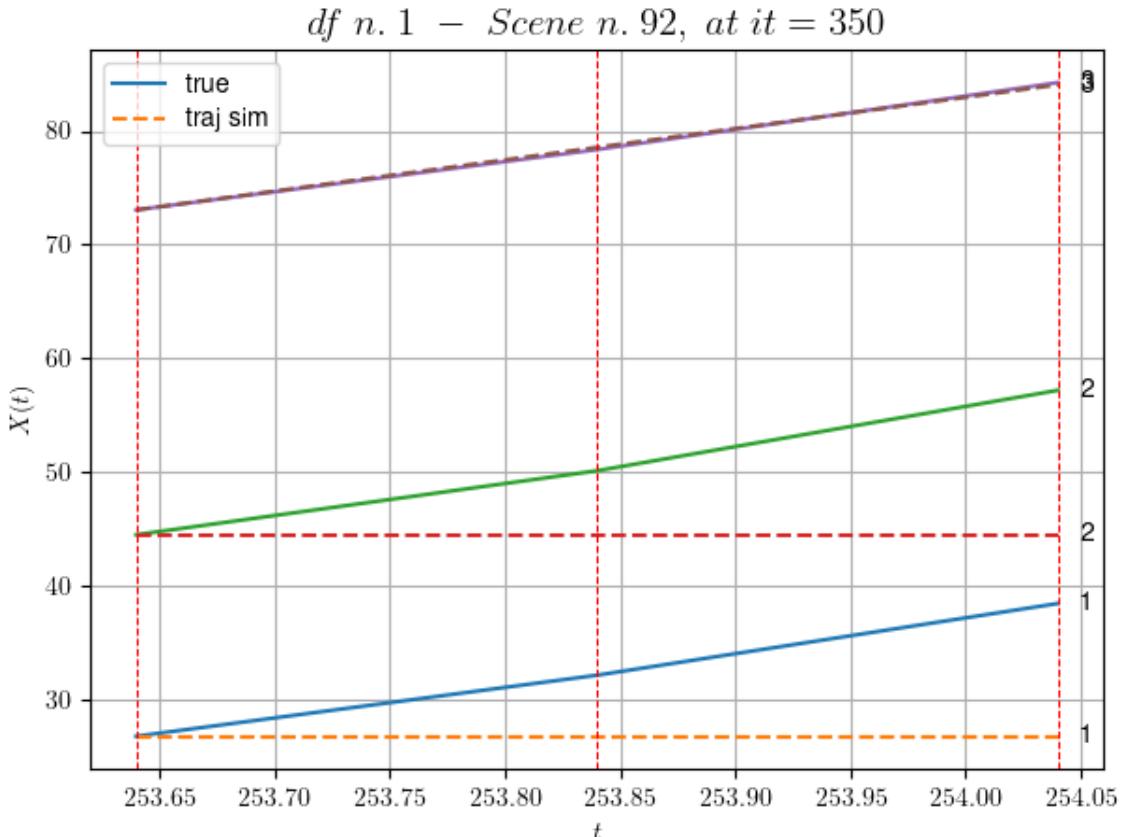
For scene 91/109

- * use LR_NN=0.0005 with err=10.340919776838282 at it=24
- * v0_scn_mean = 32.94348129408409
- * MAE = 7.555715231140492

df n.1, scene n.92/109

We have 2 time intervals inside [253.64, 254.04]

- * err= 39.72001782907544
- * Learning rate NN = 4.049999552080408e-05
- * diff = 6.937600858236692e-07



For scene 92/109

```
* use LR_NN=5e-05 with err=1.5798128080028826 at it=24
* v0_scn_mean = 27.691316850195815
* MAE = 39.71913461759049
```

df n.1, scene n.93/109

We have 5 time intervals inside [262.64, 263.64]

- Time interval n.0: [262.64, 262.84]
 - * y_true: [36.75102901 34.57147294]
 - * v_ann: [30.76156234741211, 30.573591232299805, 3

5.931097427464266]

- Time interval n.1: [262.84, 263.04]
 - * y_true: [20.65076329 34.76181544]
 - * v_ann: [31.81645393371582, 32.955997467041016, 3

5.931097427464266]

- Time interval n.2: [263.04, 263.24]
 - * y_true: [40.30193432 23.95156631]
 - * v_ann: [30.718074798583984, 30.56503677368164, 3

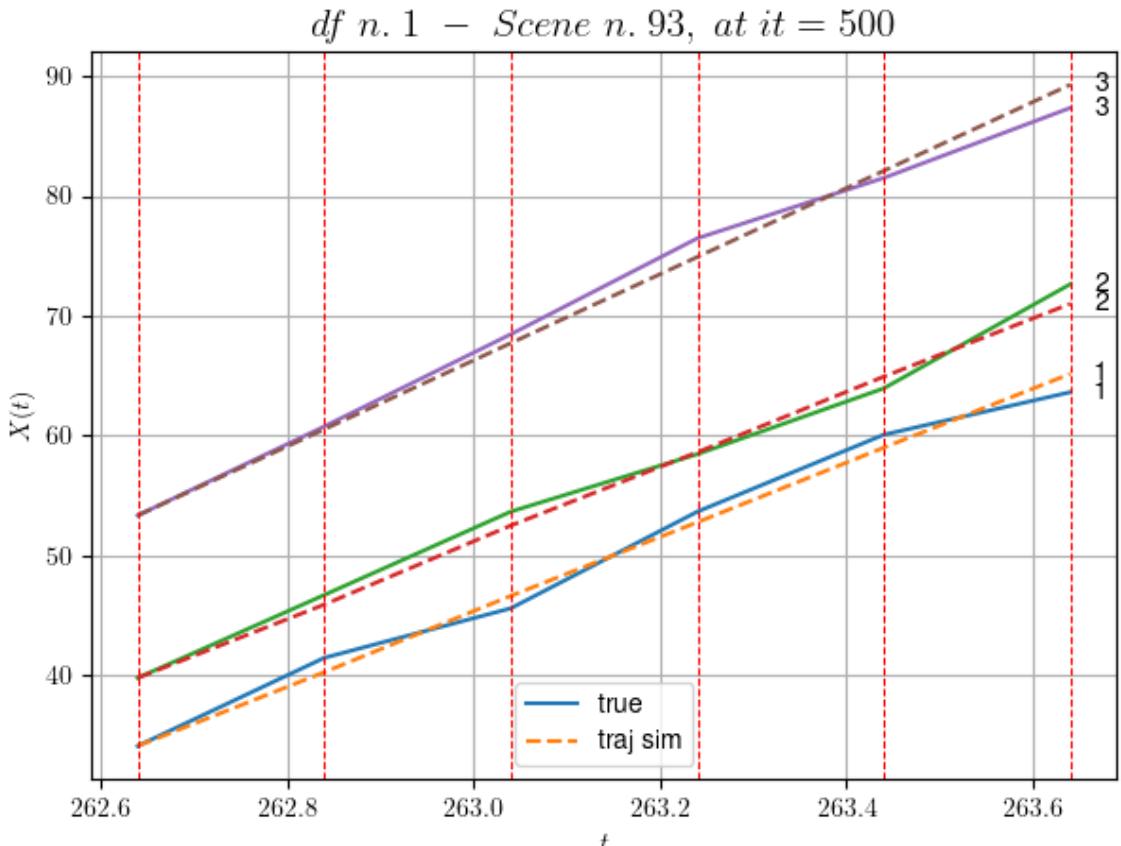
5.931097427464266]

```
- Time interval n.3: [263.24, 263.44]
  * y_true: [32.10201673 27.4721836 ]
  * v_ann: [31.124568939208984, 31.541635513305664, 3
5.931097427464266]
```

```
- Time interval n.4: [263.44, 263.64]
  * y_true: [17.75131644 43.4543127 ]
  * v_ann: [30.78704261779785, 30.39785385131836, 35.
931097427464266]
```

* err= 1.0856821157729446

* Learning rate NN = 0.0001937102060765028
* diff = 0.0036171361708543515



For scene 93/109

* use LR_NN=0.0005 with err=34.06494415868096 at it=24
* vθ_scn_mean = 35.57523184811011
* MAF = 1.0616488424998045

df n.1 scene n.94/109

We have 4 time intervals inside [314.84,315.64]

- Time interval n.0: [314.84, 315.04]
 * y true: [29.62016755 31.54681236]

```

* v_ann: [29.629920959472656, 29.79387855529785, 3
0.926247858926992]

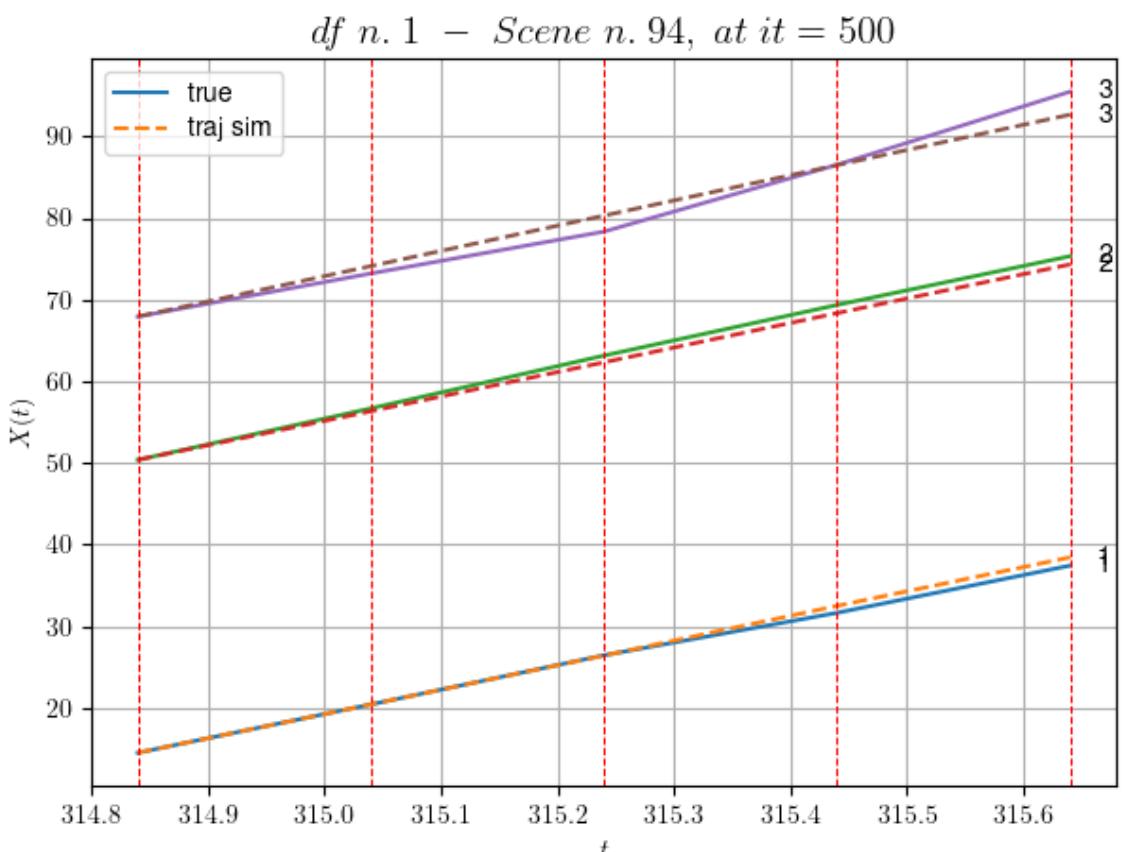
-----
- Time interval n.1: [315.04, 315.24]
* y_true: [30.12030665 32.32740505]
* v_ann: [29.950929641723633, 29.953720092773438, 3
0.926247858926992]

-----
- Time interval n.2: [315.24, 315.44]
* y_true: [25.99040223 31.02242591]
* v_ann: [30.410137176513672, 30.14838981628418, 3
0.926247858926992]

-----
- Time interval n.3: [315.44, 315.64]
* y_true: [28.95064907 29.88823464]
* v_ann: [29.756322860717773, 29.8634090423584, 30.
926247858926992]

-----
* err= 1.144468079006398
* Learning rate NN = 2.3914839403005317e-05
* diff = 0.001955338149622232

```



For scene 94/109

```

* use LR_NN=5e-05 with err=22.42343456352509 at it=24
* v0_scn_mean = 30.870673028977784
* MAE = 1.0967155586575943

```

```
=====
=====
```

df n.1, scene n.95/109

```
=====
=====
```

We have 6 time intervals inside [325.24,326.44]

- Time interval n.0: [325.24, 325.44]
 - * y_true: [29.06068603 28.85087529]
 - * v_ann: [29.36784553527832, 28.850616455078125, 29.804033810068834]

```
-----
```

- Time interval n.1: [325.44, 325.64]
 - * y_true: [28.37089255 31.80128105]
 - * v_ann: [29.37055778503418, 28.73299217224121, 29.804033810068834]

```
-----
```

- Time interval n.2: [325.64, 325.84]
 - * y_true: [30.70143178 22.60113815]
 - * v_ann: [29.311920166015625, 28.87718963623047, 29.804033810068834]

```
-----
```

- Time interval n.3: [325.84, 326.04]
 - * y_true: [31.42655806 32.52725213]
 - * v_ann: [29.464750289916992, 28.80194854736328, 29.804033810068834]

```
-----
```

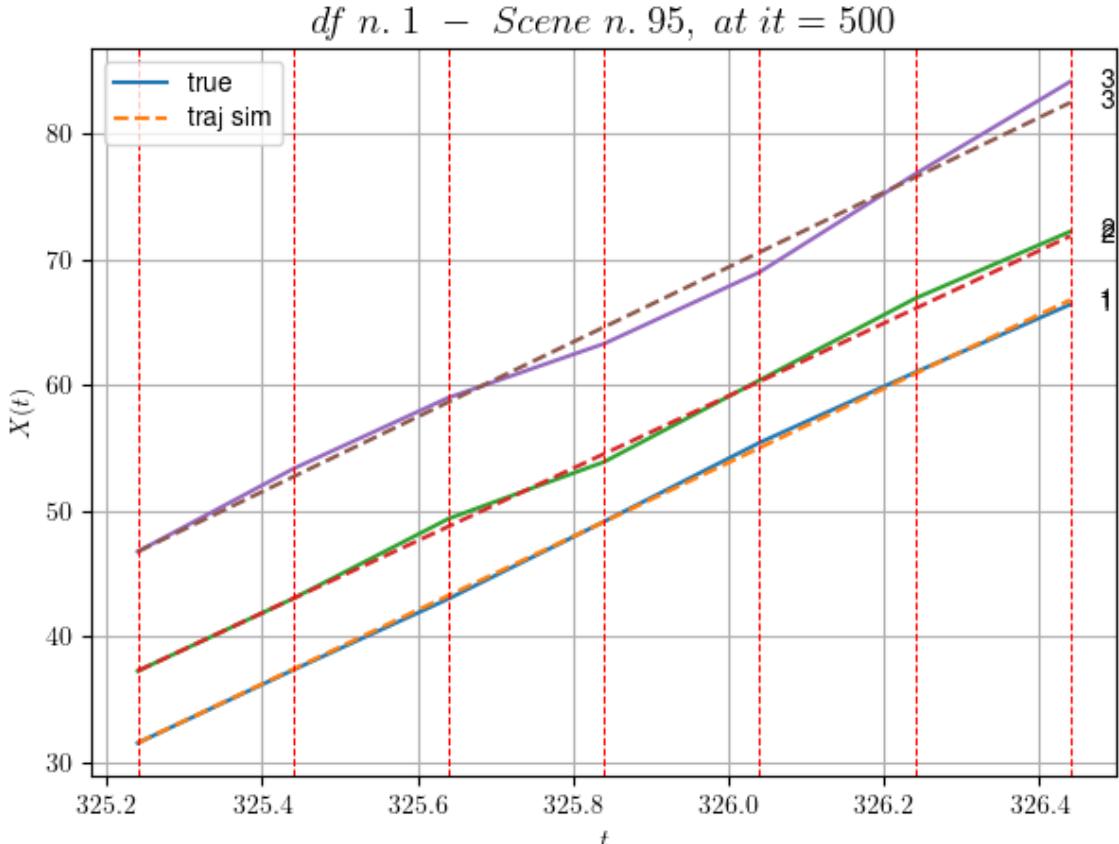
- Time interval n.4: [326.04, 326.24]
 - * y_true: [27.9669351 32.52725213]
 - * v_ann: [29.505176544189453, 29.025367736816406, 29.804033810068834]

```
-----
```

- Time interval n.5: [326.24, 326.44]
 - * y_true: [27.10202936 26.72764736]
 - * v_ann: [29.412267684936523, 28.894901275634766, 29.804033810068834]

```
-----
```

* err= 0.45813530517998263
* Learning rate NN = 3.138104875688441e-05
* diff = 0.00011111930559859484



For scene 95/109

- * use LR_NN=0.0001 with err=18.832633605603544 at it=24
- * v0_scn_mean = 29.81579177266638
- * MAE = 0.44203130740104163

df n.1, scene n.96/109

We have 3 time intervals inside [354.04, 354.64]

- Time interval n.0: [354.04, 354.24]
 - * y_true: [29.77169216 32.15176545]
 - * v_ann: [30.4617862701416, 27.629030227661133, 32.693522172934934]

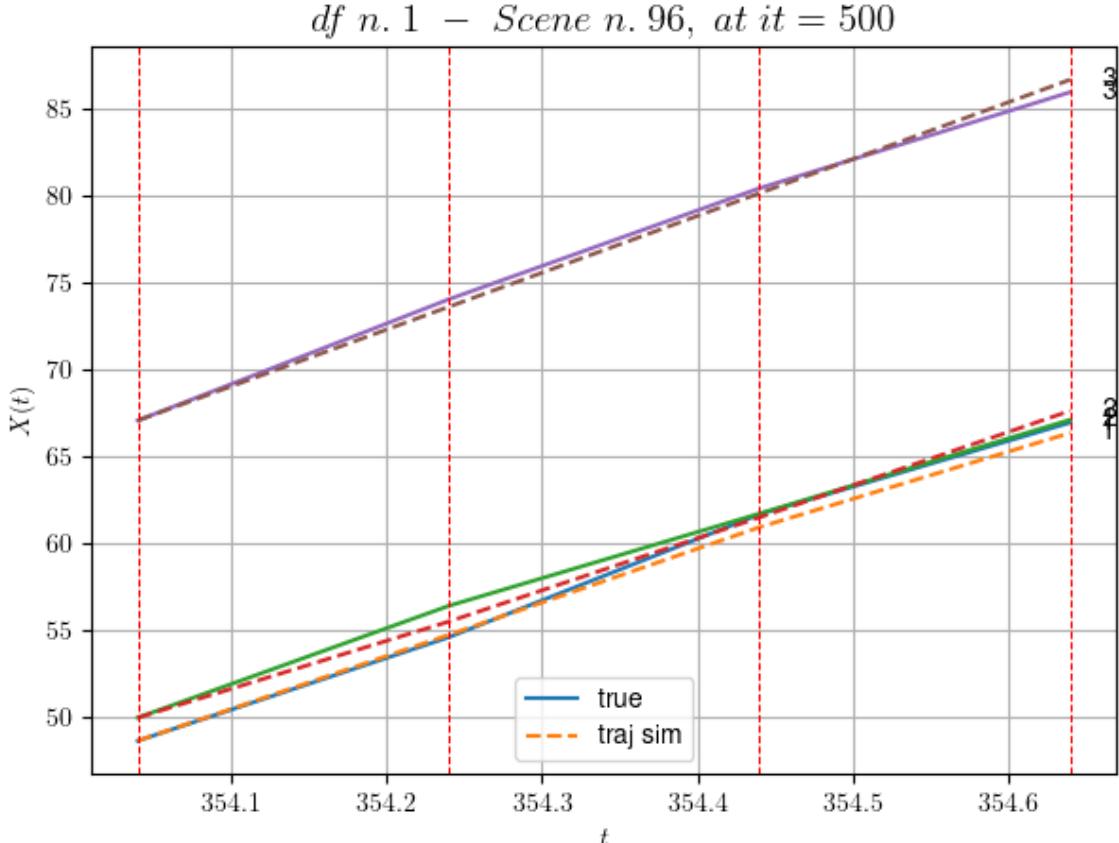
- Time interval n.1: [354.24, 354.44]
 - * y_true: [35.38251939 26.55179403]
 - * v_ann: [30.983474731445312, 29.981908798217773, 32.693522172934934]

- Time interval n.2: [354.44, 354.64]
 - * y_true: [26.40441101 27.01000163]
 - * v_ann: [27.154922485351562, 30.69680404663086, 32.693522172934934]

```

* err= 0.2368703246295967
* Learning rate NN = 0.0002952449722215533
* diff = 0.003991232343697693

```



For scene 96/109

```

* use LR_NN=0.0005 with err=32.541351721581016 at it=24
* v0_scn_mean = 32.531910963492436
* MAE = 0.2368703246295967

```

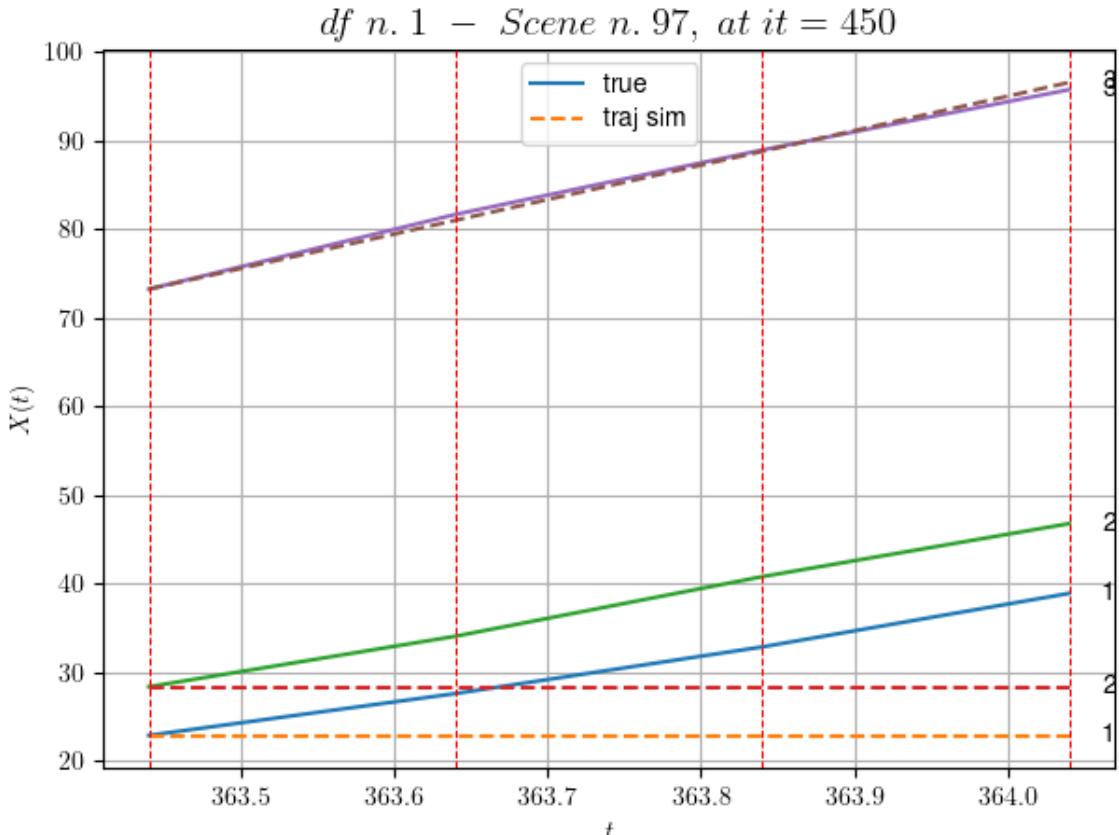
df n.1, scene n.97/109

We have 3 time intervals inside [363.44, 364.04]

```

* err= 75.67002338386273
* Learning rate NN = 0.0002952449722215533
* diff = 4.596013809532451e-07

```



For scene 97/109

```
* use LR_NN=0.0005 with err=22.644988251122072 at it=24
* v0_scn_mean = 38.32859532908732
* MAE = 6.432220055002449
```

df n.1, scene n.98/109

We have 4 time intervals inside [386.64, 387.44]

- Time interval n.0: [386.64, 386.84]
 - * y_true: [28.15052447 34.1607672]
 - * v_ann: [33.93588638305664, 35.83779525756836, 39.

346100167622154]

- Time interval n.1: [386.84, 387.04]
 - * y_true: [34.00091123 38.91120777]
 - * v_ann: [33.43892288208008, 32.04165267944336, 39.

346100167622154]

- Time interval n.2: [387.04, 387.24]
 - * y_true: [32.52639997 34.00151192]
 - * v_ann: [34.2933349609375, 36.06703567504883, 39.3

46100167622154]

```

-----  

- Time interval n.3: [387.24, 387.44]  

* y_true: [32.52639997 39.36234046]  

* v_ann: [33.74259948730469, 33.61002731323242, 39.  

346100167622154]
-----
```

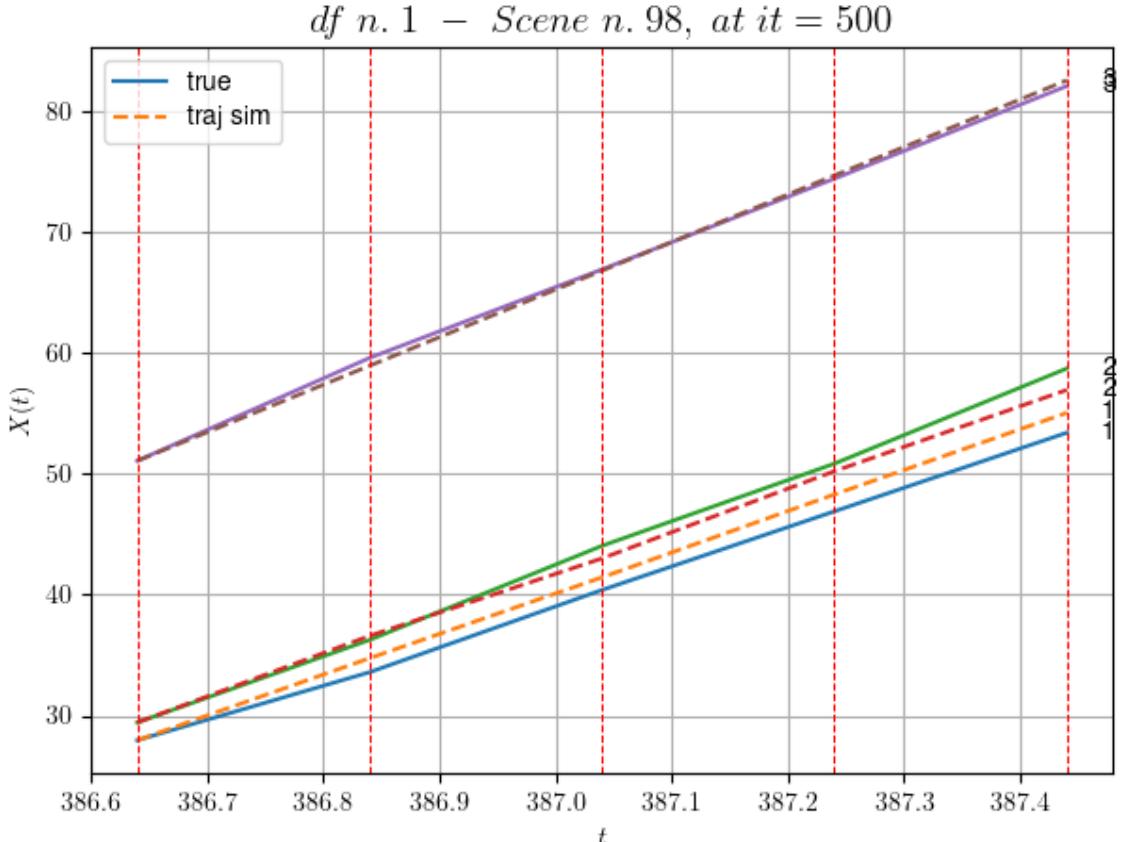
```

-----  

* err= 0.8360781075114798  

* Learning rate NN = 0.000239148415857926  

* diff = 0.006734801911537747
-----
```



For scene 98/109

```

* use LR_NN=0.0005 with err=47.06394732951827 at it=24  

* v0_scn_mean = 38.78533457718466  

* MAE = 0.4027651334687608
=====
```

df n.1, scene n.99/109

```

=====
```

```

We have 2 time intervals inside [431.84,432.24]  

- Time interval n.0: [431.84, 432.04]  

* y_true: [30.8908033 31.49166882]  

* v_ann: [32.32825469970703, 32.451839447021484, 3  

0.084161636188366]
=====
```

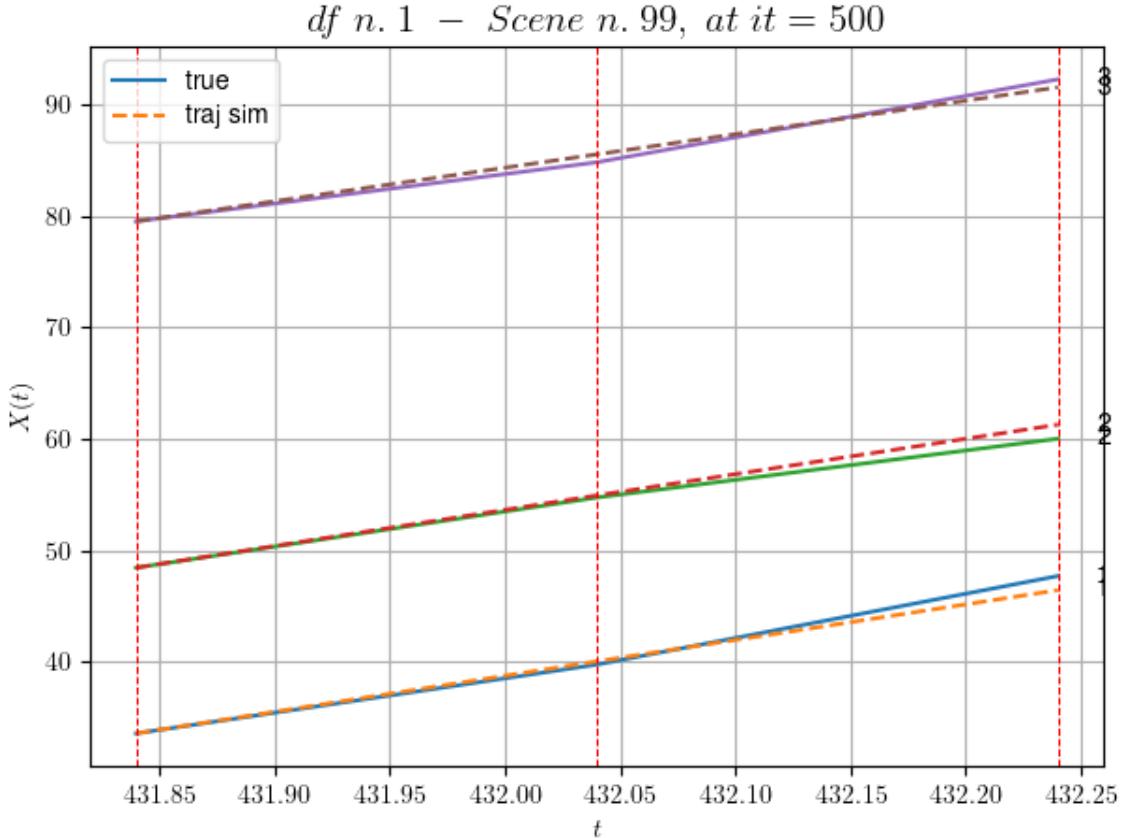
```

- Time interval n.1: [432.04, 432.24]  

* y_true: [39.73151551 26.376716 ]
=====
```

```
* v_ann: [31.957857131958008, 31.733352661132812, 3
0.084161636188366]
```

```
* err= 0.48144179363909295
* Learning rate NN = 7.289998757187277e-05
* diff = 0.0009955770111379492
```



For scene 99/109

```
* use LR_NN=0.0001 with err=7.697264473195862 at it=24
* v0_scn_mean = 30.079111941794554
* MAE = 0.3976567844904853
```

df n.1, scene n.100/109

We have 3 time intervals inside [446.24, 446.84]

- Time interval n.0: [446.24, 446.44]
 - * y_true: [25.89017971 23.30046083]
 - * v_ann: [26.172359466552734, 26.71969223022461, 2
9.554429209126578]

- Time interval n.1: [446.44, 446.64]
 - * y_true: [28.05031625 27.72075411]
 - * v_ann: [24.900684356689453, 23.590923309326172, 2
9.554429209126578]

```

-----  

- Time interval n.2: [446.64, 446.84]  

  * y_true: [26.94045507 27.8009832 ]  

  * v_ann: [27.40504264831543, 30.007118225097656, 2  

  9.554429209126578]

```

```

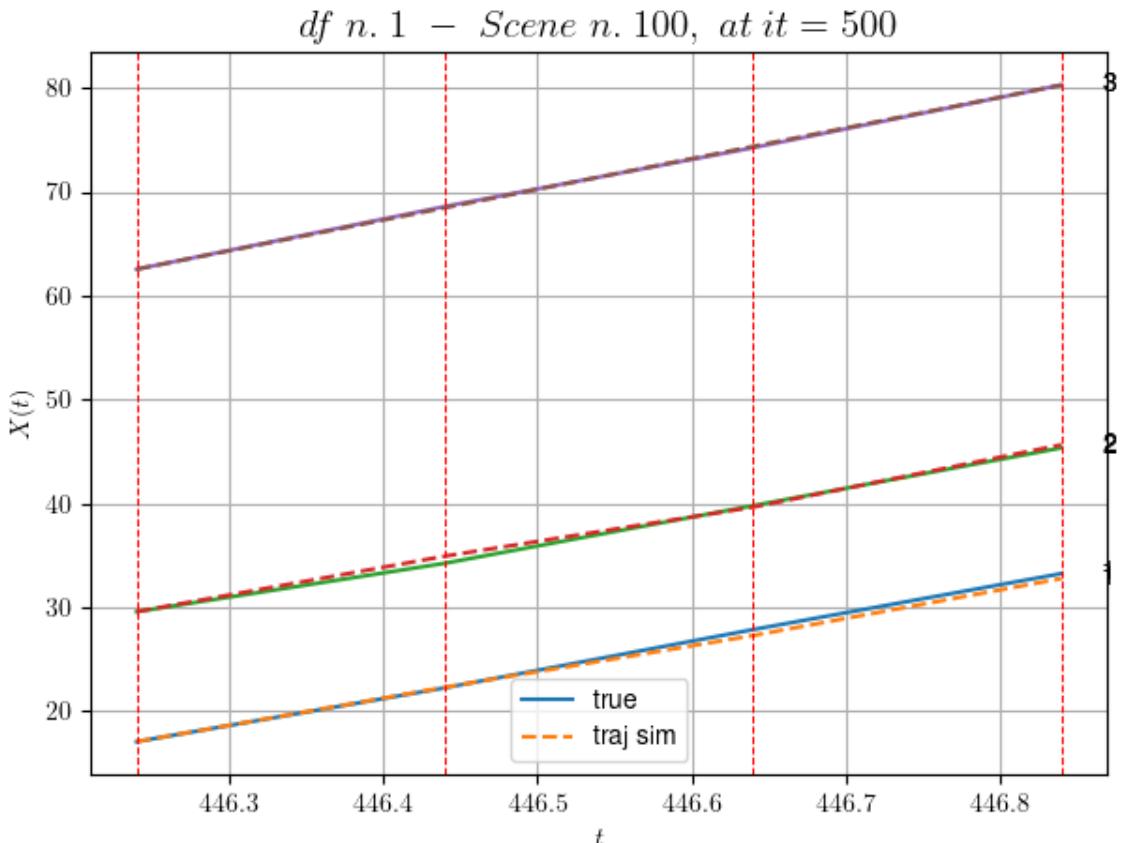
-----  

* err= 0.09785174885127725  

* Learning rate NN = 0.0002952449722215533  

* diff = 0.00015027810872102215

```



For scene 100/109

```

* use LR_NN=0.0005 with err=11.812181397338021 at it=24  

* v0_scn_mean = 29.581163436573075  

* MAE = 0.09746515934220946

```

df n.1, scene n.101/109

We have 3 time intervals inside [447.44,448.04]

```

- Time interval n.0: [447.44, 447.64]  

  * y_true: [31.0713577 29.31148494]  

  * v_ann: [27.400897979736328, 26.900983810424805, 3  

  2.5848600451766]

```

- Time interval n.1: [447.64, 447.84]

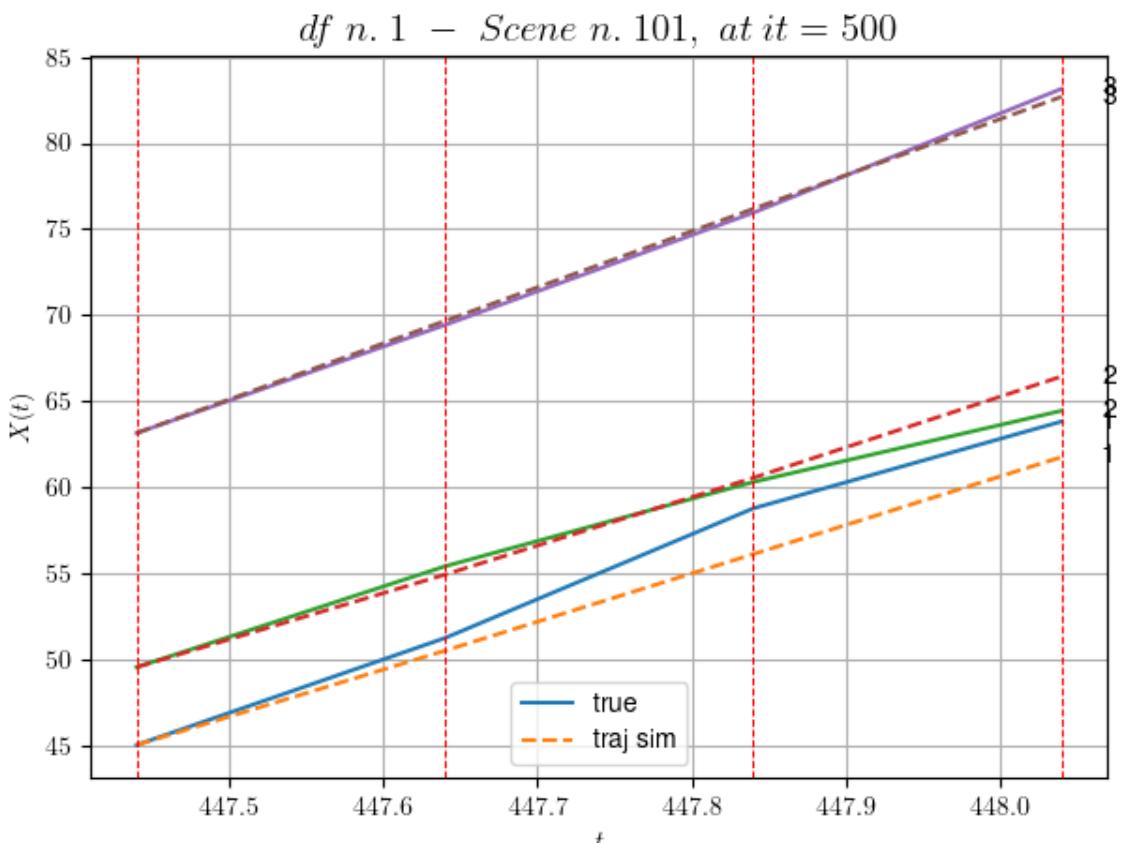
```

* y_true: [37.68225285 24.50151408]
* v_ann: [28.053775787353516, 28.123472213745117, 3
2.5848600451766]

-----
- Time interval n.2: [447.84, 448.04]
* y_true: [25.261801 20.71149408]
* v_ann: [28.221773147583008, 29.469926834106445, 3
2.5848600451766]

-----
* err= 1.3731703172338081
* Learning rate NN = 0.0002952449722215533
* diff = 0.0016006220254165007

```



For scene 101/109

```

* use LR_NN=0.0005 with err=25.75666686735667 at it=24
* v0_scn_mean = 32.429768558521346
* MAE = 1.3731703172338081

```

df n.1, scene n.102/109

We have 2 time intervals inside [495.84, 496.24]

- Time interval n.0: [495.84, 496.04]
 - * y_true: [23.1307843 13.57637571]
 - * v_ann: [19.05422019958496, 19.12515640258789, 23.

56309349087199]

```

-----  

- Time interval n.1: [496.04, 496.24]  

  * y_true: [23.23098731 16.2618474 ]  

  * v_ann: [18.997421264648438, 19.097015380859375, 2  

  3.56309349087199]

```

```

-----  

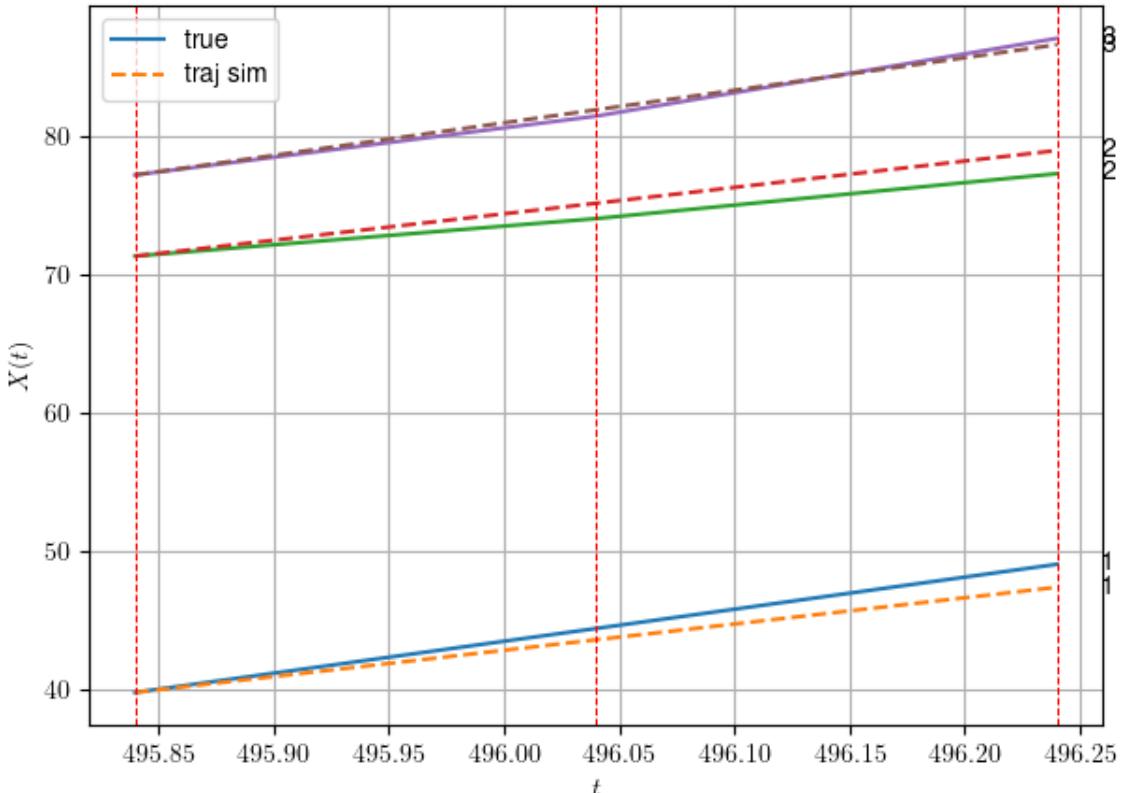
* err= 0.8768623713230328  

* Learning rate NN = 3.6449993785936385e-05  

* diff = 0.006619488000575768

```

df n. 1 – Scene n. 102, at it = 500



For scene 102/109

```

* use LR_NN=5e-05 with err=2.9467879730139486 at it=24
* v0_scn_mean = 23.94930759241675
* MAE = 0.8768623713230328

```

=====

=====

=====

df n.1, scene n.103/109

=====

=====

We have 4 time intervals inside [496.84, 497.64]

```

- Time interval n.0: [496.84, 497.04]  

  * y_true: [19.47545433 17.05100655]  

  * v_ann: [18.251619338989258, 18.080612182617188, 2  

  3.67102213011841]

```

- Time interval n.1: [497.04, 497.24]

```

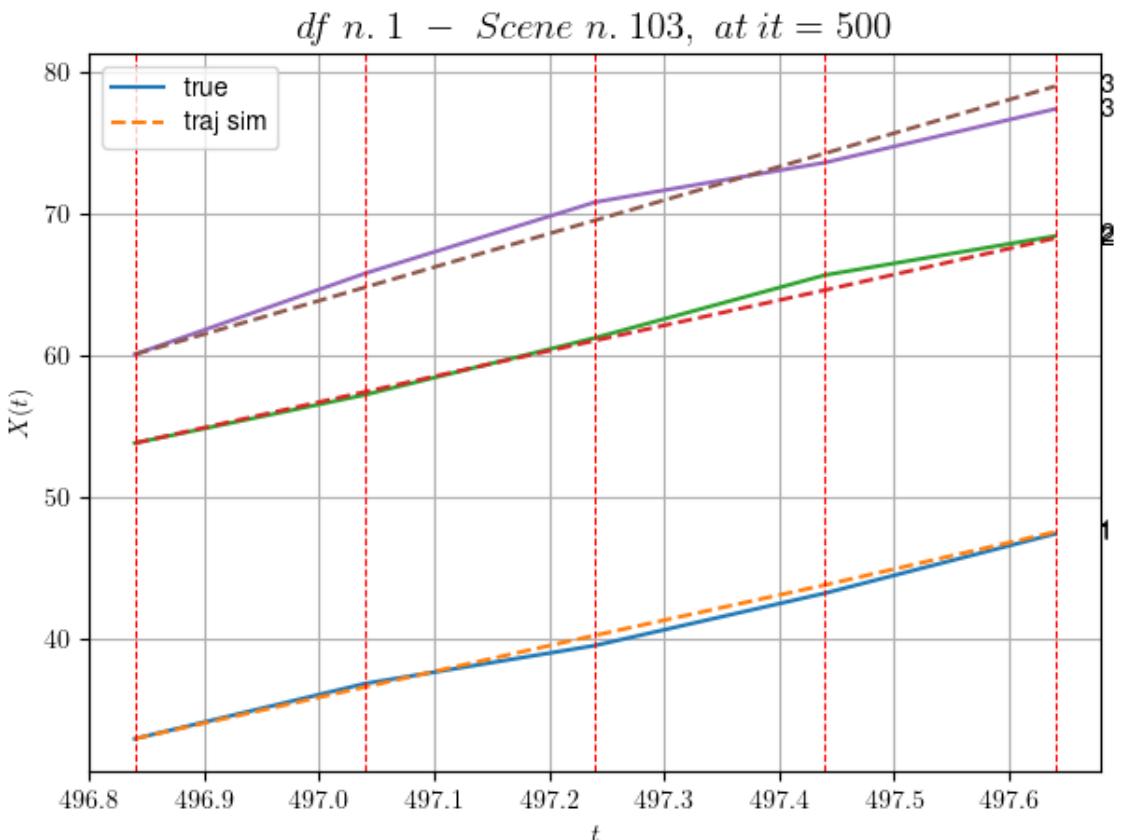
* y_true: [13.44536038 20.12642582]
* v_ann: [18.266407012939453, 18.1218318939209, 23.
67102213011841]

-----
- Time interval n.2: [497.24, 497.44]
* y_true: [18.49565962 22.17670532]
* v_ann: [17.802335739135742, 17.842914581298828, 2
3.67102213011841]

-----
- Time interval n.3: [497.44, 497.64]
* y_true: [20.96085077 13.7761341 ]
* v_ann: [18.712154388427734, 18.332794189453125, 2
3.67102213011841]

-----
* err= 0.517949643409901
* Learning rate NN = 0.000239148415857926
* diff = 0.00012505163016485188

```



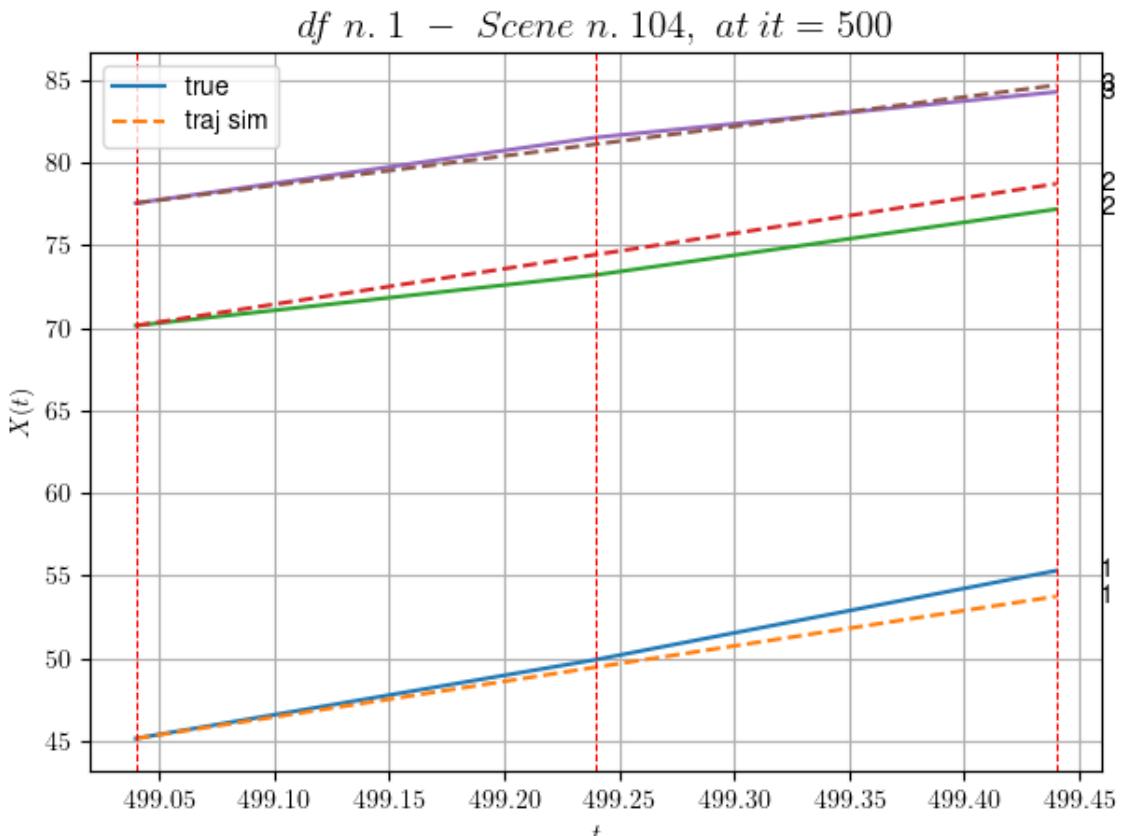
For scene 103/109
* use LR_NN=0.0005 with err=13.607487043419221 at it=24
* v0_scn_mean = 24.050760518153353
* MAE = 0.517813760456013

df n.1, scene n.104/109

```
=====
=====
We have 2 time intervals inside [499.04,499.44]
- Time interval n.0: [499.04, 499.24]
  * y_true: [23.84103851 15.32650765]
  * v_ann: [21.562938690185547, 21.480335235595703, 1
  7.832163517131026]
```

```
=====
- Time interval n.1: [499.24, 499.44]
  * y_true: [26.92142921 19.88726092]
  * v_ann: [21.406124114990234, 21.41227149963379, 1
  7.832163517131026]
```

```
=====
* err= 0.760380352006434
* Learning rate NN = 3.6449993785936385e-05
* diff = 0.00661351209728811
```



```
For scene 104/109
* use LR_NN=5e-05 with err=5.260767895008755 at it=24
* v0_scn_mean = 18.56223315979364
* MAE = 0.5781934325949901
```

```
=====
=====
df n.1, scene n.105/109
```

```
=====
We have 2 time intervals inside [500.64,501.04]
```

```

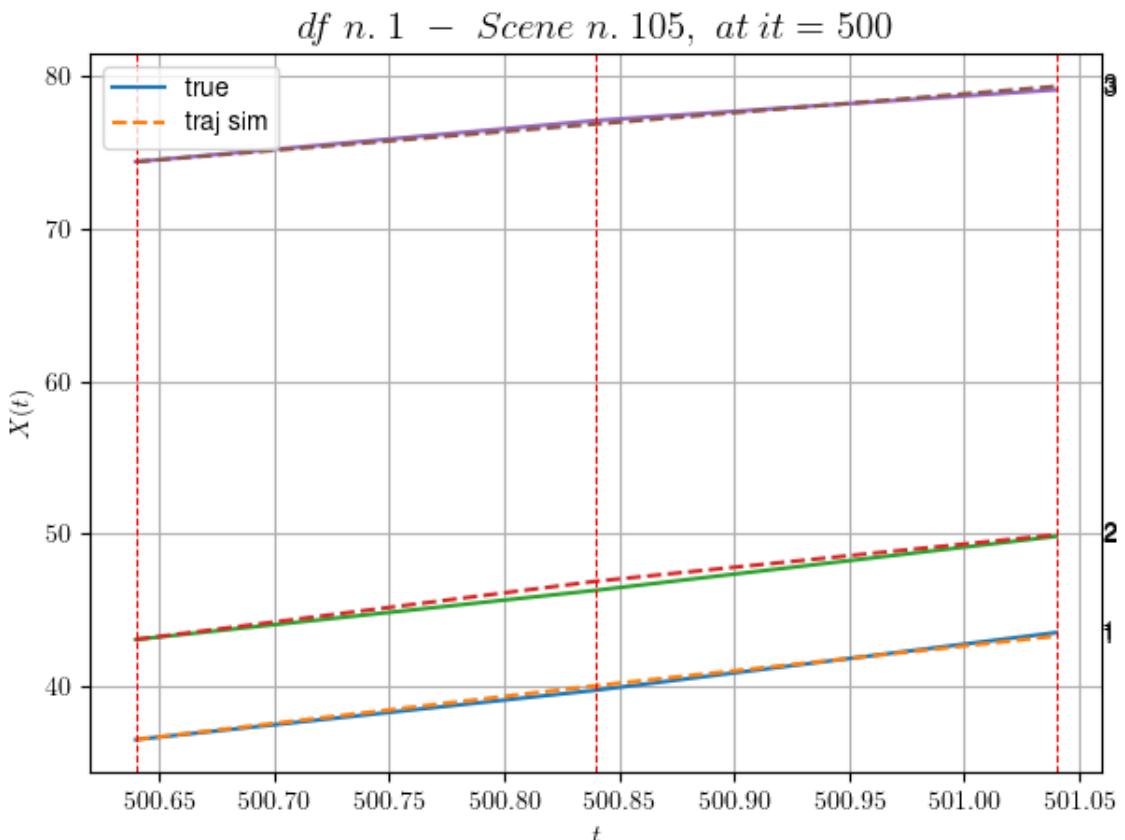
    - Time interval n.0: [500.64, 500.84]
      * y_true: [16.2004483 16.13562888]
      * v_ann: [17.68732261657715, 19.102582931518555, 1
      2.361370218693859]
```

```

    - Time interval n.1: [500.84, 501.04]
      * y_true: [18.900675 17.67575332]
      * v_ann: [16.26296615600586, 15.256227493286133, 1
      2.361370218693859]
```

```

* err= 0.06802743827629805
* Learning rate NN = 0.0007289999630302191
* diff = 0 000162223111451502126
```



For scene 105/109

```

* use LR_NN=0.001 with err=10.917215993872473 at it=24
* v0_scn_mean = 13.419687213635829
* MAE = 0.06802743827629805
```

df n.1, scene n.106/109

```

We have 4 time intervals inside [502.24,503.04]
- Time interval n.0: [502.24, 502.44]
  * y_true: [20.97545504 14.04040867]
  * v_ann: [17.54189109802246, 17.697853088378906, 1
  5.581016722933695]
```

```

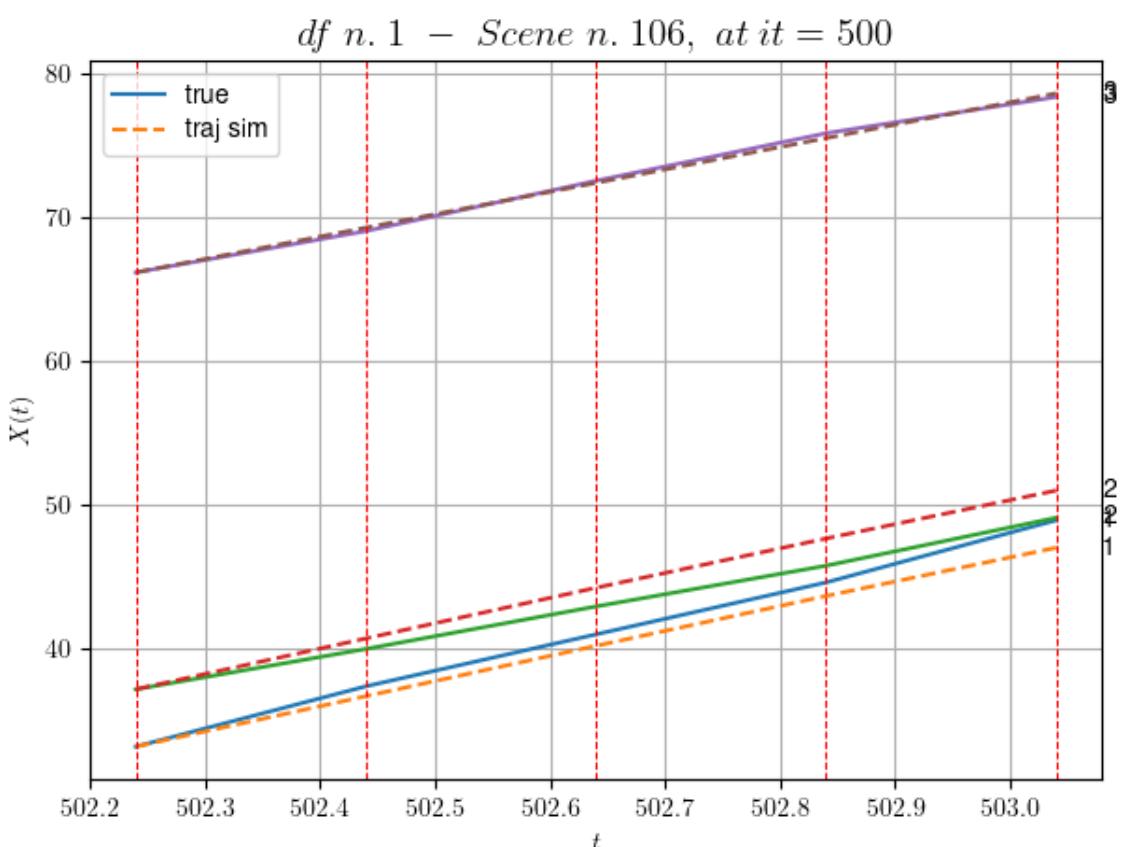
-----
- Time interval n.1: [502.44, 502.64]
  * y_true: [18.07559412 14.7904947 ]
  * v_ann: [17.51556968688965, 17.63185691833496, 15.
581016722933695]

-----
- Time interval n.2: [502.64, 502.84]
  * y_true: [18.07559412 14.18054394]
  * v_ann: [17.350650787353516, 17.14503288269043, 1
5.581016722933695]

-----
- Time interval n.3: [502.84, 503.04]
  * y_true: [21.64181695 16.68485314]
  * v_ann: [16.798099517822266, 16.70771026611328, 1
5.581016722933695]

-----
* err= 1.0216544257640499
* Learning rate NN = 0.000239148415857926
* diff = 0.0007299353050933544

```



For scene 106/109
* use LR_NN=0.0005 with err=34.148682943163344 at it=24
* v0_scn_mean = 16.446155072176875
* MAE = 1.0209219074469968

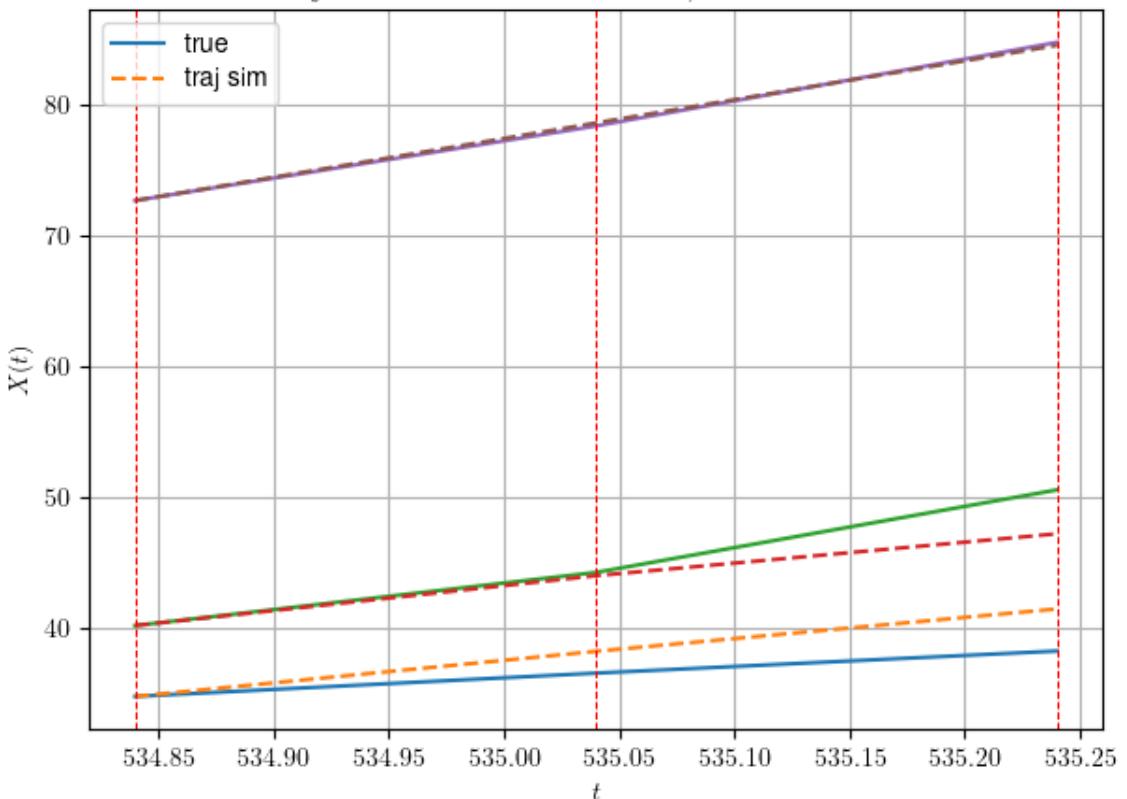
```
=====
df n.1, scene n.107/109
=====
```

```
We have 2 time intervals inside [534.84,535.24]
- Time interval n.0: [534.84, 535.04]
  * y_true: [ 8.93323515 20.37071651]
  * v_ann: [17.296981811523438, 19.116445541381836, 2
9.753482357834674]
```

```
- Time interval n.1: [535.04, 535.24]
  * y_true: [ 8.47527286 31.64140498]
  * v_ann: [16.241073608398438, 16.067136764526367, 2
9.753482357834674]
```

```
* err= 2.744595423801069
* Learning rate NN = 0.00036449998151510954
* diff = 0.00040261724348900074
```

df n. 1 – Scene n. 107, at it = 500



For scene 107/109

```
* use LR_NN=0.0005 with err=1.0051835502759285 at it=24
* v0_scn_mean = 29.768273405296465
* MAE = 2.6322495814348295
```

```
df n.1, scene n.108/109
```

```
=====
=====
```

We have 3 time intervals inside [573.84,574.44]
 - Time interval n.0: [573.84, 574.04]
 * y_true: [20.07571717 13.74586409]
 * v_ann: [13.238435745239258, 13.669425010681152,
 9.338719660906806]

```
-----
-----
```

- Time interval n.1: [574.04, 574.24]
 * y_true: [13.45064024 11.92582032]
 * v_ann: [14.050505638122559, 14.788189888000488,
 9.338719660906806]

```
-----
-----
```

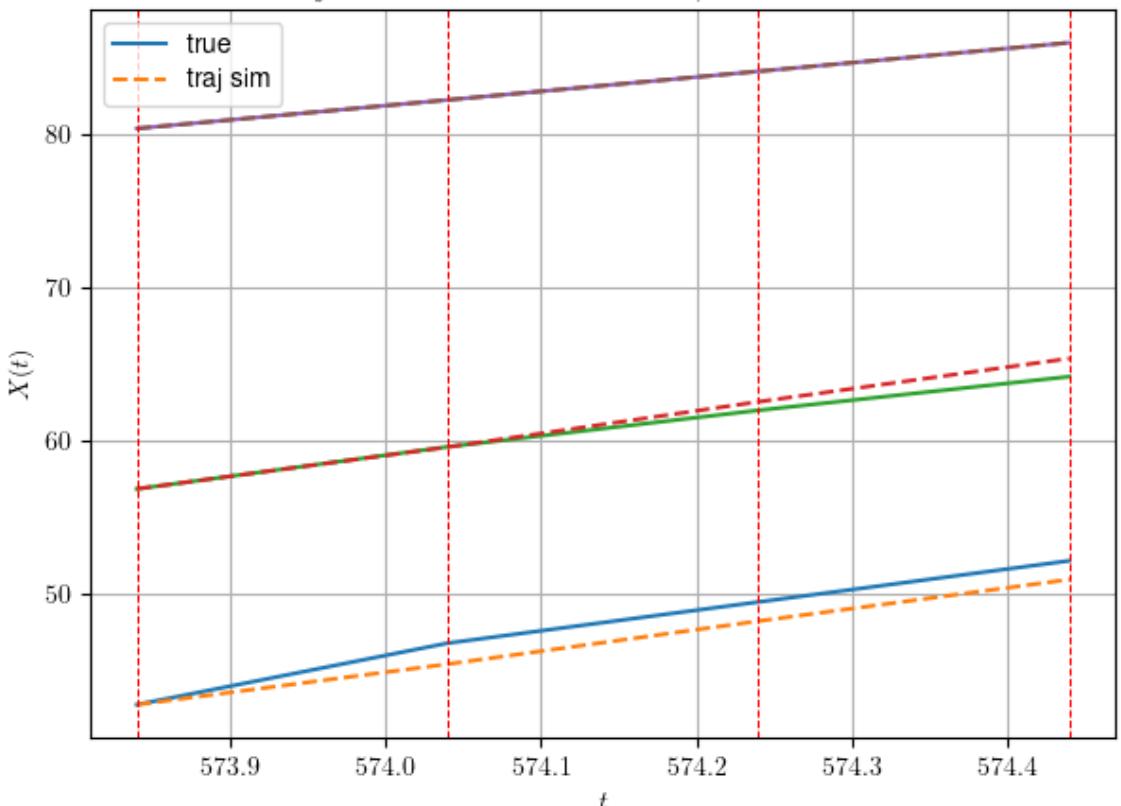
- Time interval n.2: [574.24, 574.44]
 * y_true: [13.45064024 11.00083908]
 * v_ann: [13.574127197265625, 14.14422607421875, 9.
 338719660906806]

```
* err= 0.5531932061919701  

* Learning rate NN = 0.0002952449722215533  

* diff = 0.0003709108934955019
```

df n. 1 – Scene n. 108, at it = 500



For scene 108/109

- * use LR_NN=0.0005 with err=22.688852551571088 at it=24
- * v0_scn_mean = 10.578395553606006
- * MAE = 0.552672831104478

```
=====
=====

For df=1 with 109 scenes, time taken:      1956.04
*****
*****  
*****  
*****  
*****  
*****  
In df n.2/10 we have 69 scenes
df n.2, scene n.0/69
=====
=====

We have 5 time intervals inside [13.16,14.16]
- Time interval n.0: [13.16, 13.36]
  * y_true: [14.81021865]
  * v_ann: [11.852422714233398, 24.635349855264966]

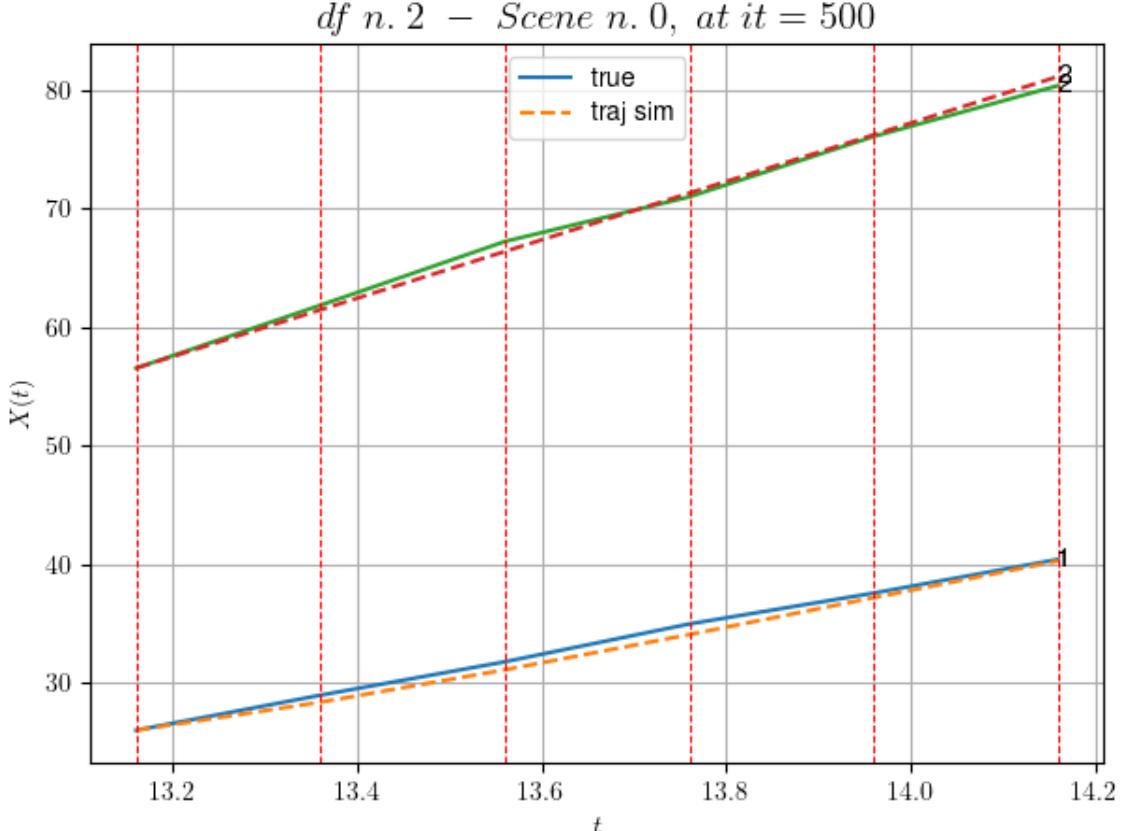
-----
- Time interval n.1: [13.36, 13.56]
  * y_true: [14.11025668]
  * v_ann: [13.668837547302246, 24.635349855264966]

-----
- Time interval n.2: [13.56, 13.76]
  * y_true: [15.96034483]
  * v_ann: [14.888137817382812, 24.635349855264966]

-----
- Time interval n.3: [13.76, 13.96]
  * y_true: [13.04033517]
  * v_ann: [15.577881813049316, 24.635349855264966]

-----
- Time interval n.4: [13.96, 14.16]
  * y_true: [14.25042294]
  * v_ann: [15.485513687133789, 24.635349855264966]

-----
* err= 0.2802354198633395
* Learning rate NN = 0.0001937102060765028
* diff = 0.0020272820218592558
```



For scene 0/69

- * use LR_NN=0.0005 with err=6.100026208106283 at it=24
- * v0_scn_mean = 24.849935861013392
- * MAE = 0.2521893665915701

df n.2, scene n.1/69

We have 3 time intervals inside [14.76, 15.36]

- Time interval n.0: [14.76, 14.96]
 - * y_true: [12.25064682]
 - * v_ann: [10.130280494689941, 27.615406088656982]

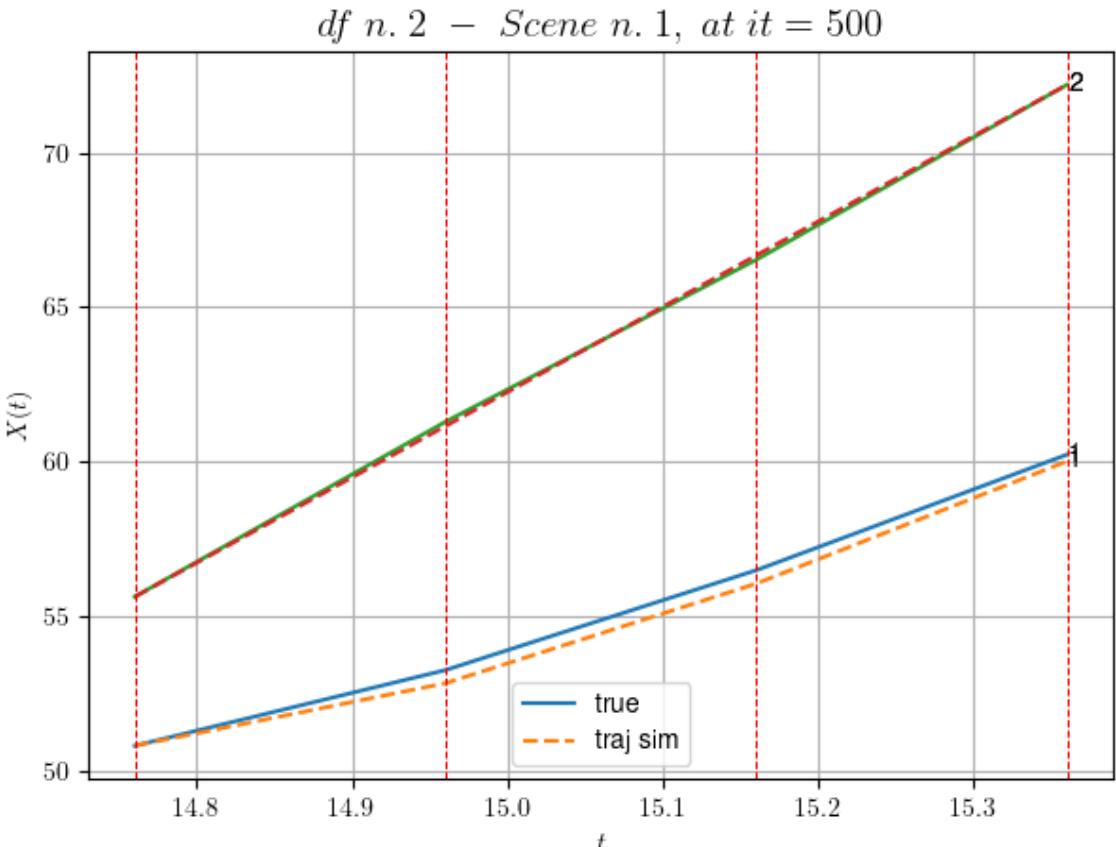
- Time interval n.1: [14.96, 15.16]
 - * y_true: [16.16094924]
 - * v_ann: [16.117919921875, 27.615406088656982]

- Time interval n.2: [15.16, 15.36]
 - * y_true: [18.71122804]
 - * v_ann: [19.797136306762695, 27.615406088656982]

- * err= 0.05667975839047678

- * Learning rate NN = 0.0002952449722215533

* diff = 0.0018703836480827019



For scene 1/69

* use LR_NN=0.0005 with err=0.5029107671783375 at it=24
 * v0_scn_mean = 27.710789845092453
 * MAE = 0.05667975839047678

df n.2, scene n.2/69

We have 4 time intervals inside [52.76, 53.56]

- Time interval n.0: [52.76, 52.96]
 - * y_true: [30.25172942]
 - * v_ann: [35.548274993896484, 18.434937295304355]

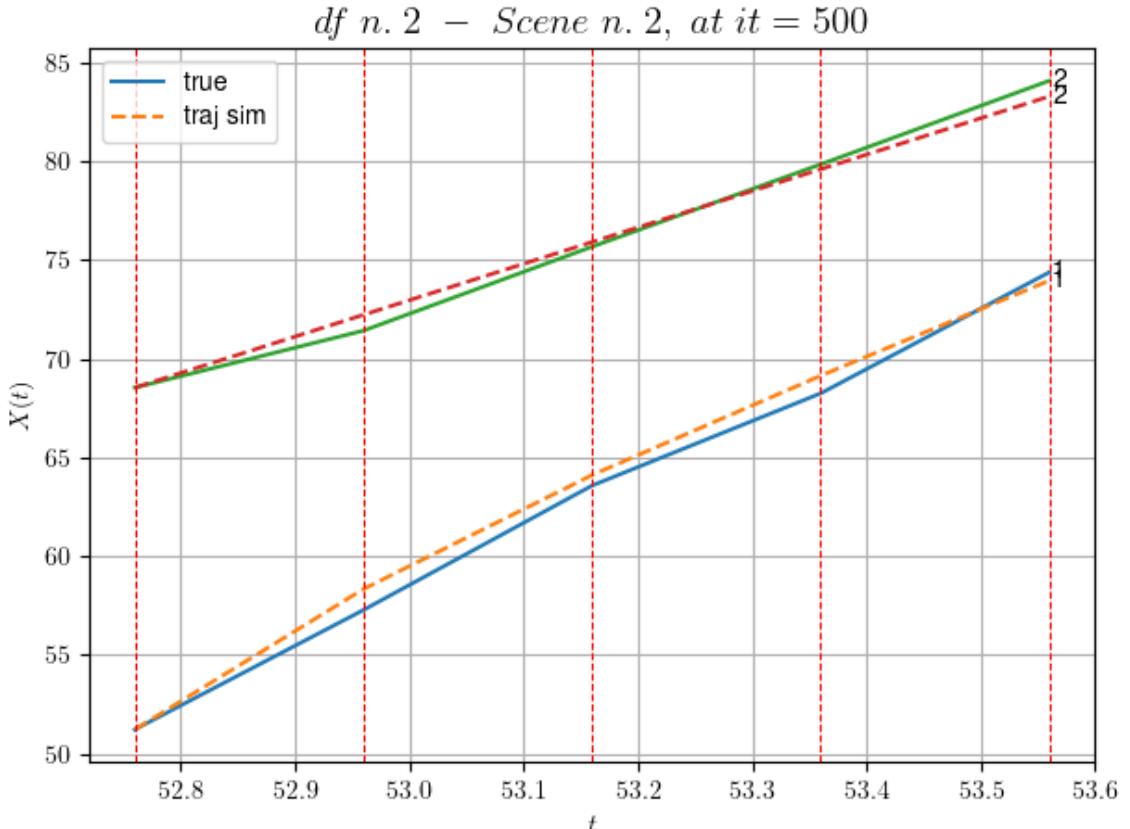
- Time interval n.1: [52.96, 53.16]
 - * y_true: [31.50223079]
 - * v_ann: [28.874757766723633, 18.434937295304355]

- Time interval n.2: [53.16, 53.36]
 - * y_true: [23.35196402]
 - * v_ann: [25.146825790405273, 18.434937295304355]

- Time interval n.3: [53.36, 53.56]

```
* y_true: [30.65301597]
* v_ann: [24.08711814880371, 18.434937295304355]
```

```
* err= 0.3769995912955837
* Learning rate NN = 4.7829678806010634e-05
* diff = 0.0004263490494783584
```



For scene 2/69

```
* use LR_NN=0.0001 with err=15.243542280598044 at it=24
* v0_scn_mean = 18.897539803403806
* MAE = 0.37197680192338817
```

df n.2, scene n.3/69

We have 4 time intervals inside [54.56, 55.36]

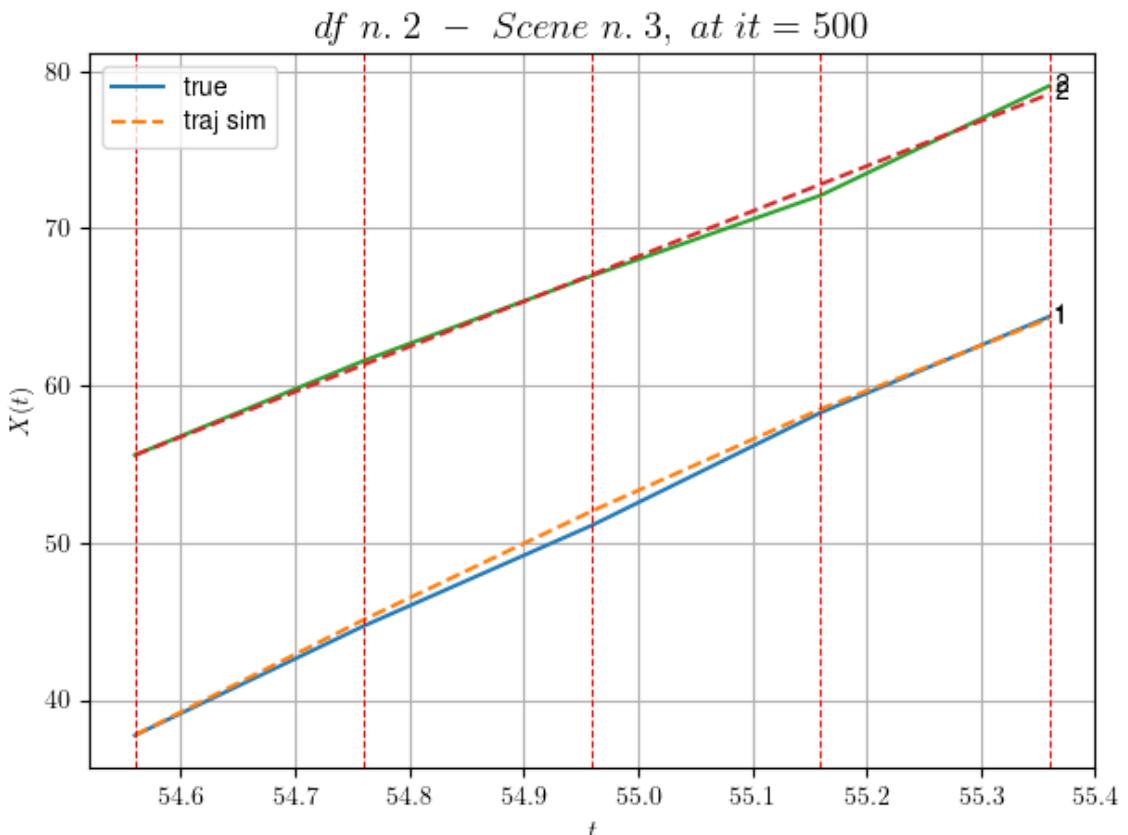
- Time interval n.0: [54.56, 54.76]
 - * y_true: [34.74114002]
 - * v_ann: [36.71603775024414, 28.716321309649867]

- Time interval n.1: [54.76, 54.96]
 - * y_true: [32.07140907]
 - * v_ann: [34.63011169433594, 28.716321309649867]

- Time interval n.2: [54.96, 55.16]
 - * y_true: [35.83207283]
 - * v_ann: [32.42076873779297, 28.716321309649867]

- Time interval n.3: [55.16, 55.36]
 - * y_true: [30.55218752]
 - * v_ann: [28.7957820892334, 28.716321309649867]

- * err= 0.1881570740860726
- * Learning rate NN = 4.7829678806010634e-05
- * diff = 7.1472042241667762e-05



For scene 3/69

- * use LR_NN=0.0001 with err=0.4021510717795442 at it=24
- * v0_scn_mean = 28.767668457254025
- * MAE = 0.18648532863088524

df n.2, scene n.4/69

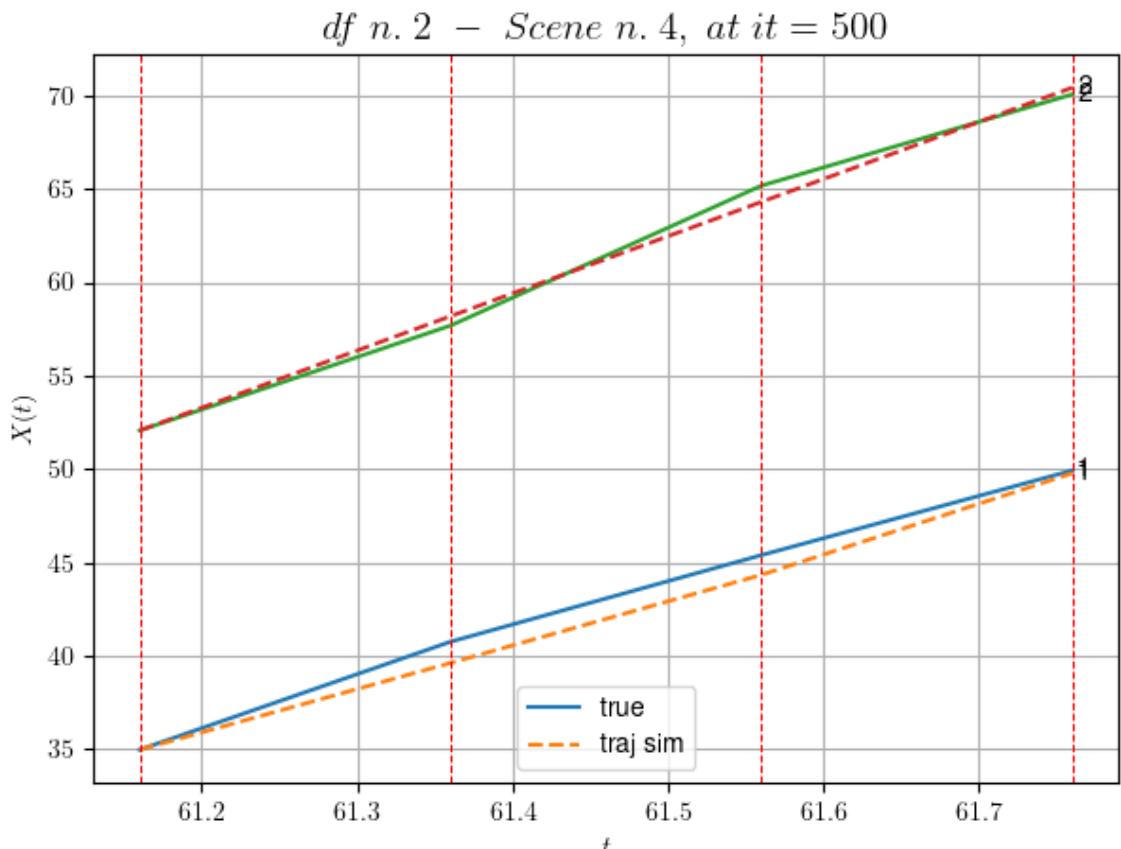
We have 3 time intervals inside [61.16, 61.76]

- Time interval n.0: [61.16, 61.36]
 - * y_true: [28.89080545]
 - * v_ann: [23.207080841064453, 30.583768746276007]

- Time interval n.1: [61.36, 61.56]
 * y_true: [23.17083447]
 * v_ann: [23.575458526611328, 30.583768746276007]

- Time interval n.2: [61.56, 61.76]
 * y_true: [22.65102829]
 * v_ann: [27.183860778808594, 30.583768746276007]

* err= 0.4458981783311921
 * Learning rate NN = 5.904899080633186e-05
 * diff = 8.52651714884356e-05



For scene 4/69

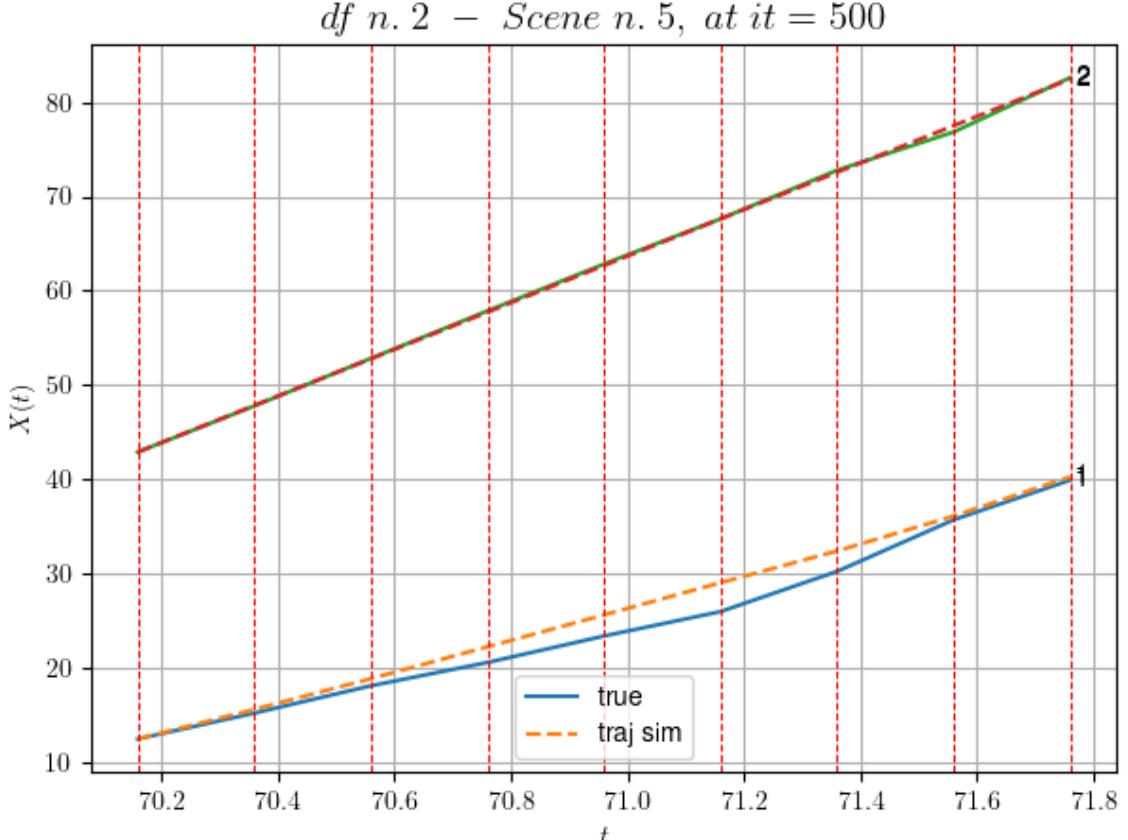
* use LR_NN=0.0001 with err=0.5116105861375781 at it=24
 * v0_scn_mean = 30.56041799642937
 * MAE = 0.359843838679064

df n.2, scene n.5/69

We have 8 time intervals inside [70.16, 71.76]

- Time interval n.0: [70.16, 70.36]
 * y_true: [13.71005372]
 * v_ann: [15.662331581115723, 24.741322770864855]

```
-----  
    - Time interval n.1: [70.36, 70.56]  
      * y_true: [14.49007965]  
      * v_ann: [16.306438446044922, 24.741322770864855]  
  
-----  
    - Time interval n.2: [70.56, 70.76]  
      * y_true: [12.37009292]  
      * v_ann: [16.90816307067871, 24.741322770864855]  
  
-----  
    - Time interval n.3: [70.76, 70.96]  
      * y_true: [14.04013356]  
      * v_ann: [16.94330596923828, 24.741322770864855]  
  
-----  
    - Time interval n.4: [70.96, 71.16]  
      * y_true: [12.96015691]  
      * v_ann: [17.090391159057617, 24.741322770864855]  
  
-----  
    - Time interval n.5: [71.16, 71.36]  
      * y_true: [21.35447694]  
      * v_ann: [16.813013076782227, 24.741322770864855]  
  
-----  
    - Time interval n.6: [71.36, 71.56]  
      * y_true: [27.36057802]  
      * v_ann: [18.524911880493164, 24.741322770864855]  
  
-----  
    - Time interval n.7: [71.56, 71.76]  
      * y_true: [21.04057885]  
      * v_ann: [20.820358276367188, 24.741322770864855]  
  
-----  
* err= 1.3020142339679845  
* Learning rate NN = 0.00010294552339473739  
* diff = 0.0017639490722247686
```



For scene 5/69

```
* use LR_NN=0.0005 with err=13.720290139734184 at it=24
* v0_scn_mean = 24.95166985999004
* MAE = 0.3185685667162103
```

df n.2, scene n.6/69

We have 6 time intervals inside [77.56, 78.76]

- Time interval n.0: [77.56, 77.76]
 - * y_true: [21.77061473]
 - * v_ann: [27.24651336669922, 14.529876108312969]

- Time interval n.1: [77.76, 77.96]
 - * y_true: [26.75095459]
 - * v_ann: [26.611164093017578, 14.529876108312969]

- Time interval n.2: [77.96, 78.16]
 - * y_true: [19.2308048]
 - * v_ann: [23.677104949951172, 14.529876108312969]

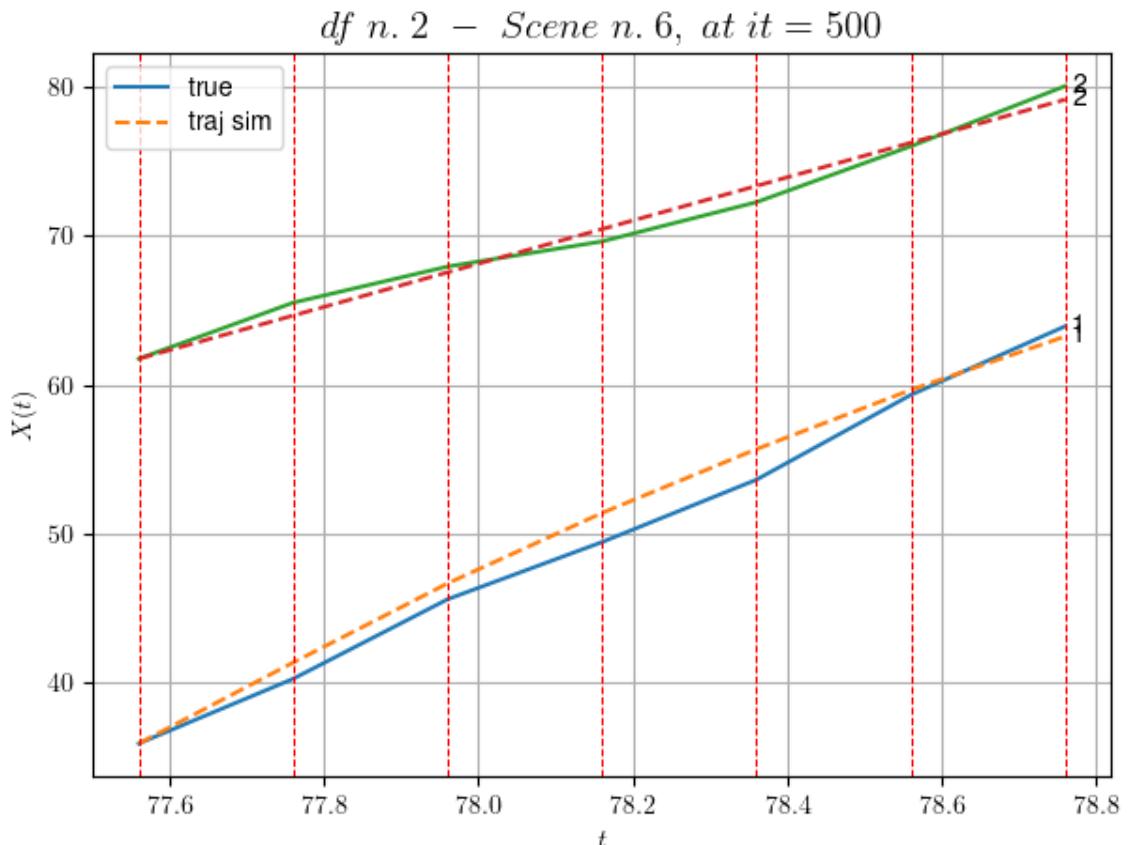
- Time interval n.3: [78.16, 78.36]
 - * y_true: [20.98109156]

```
* v_ann: [21.483009338378906, 14.529876108312969]
```

```
- Time interval n.4: [78.36, 78.56]
  * y_true: [28.51175595]
  * v_ann: [19.918380737304688, 14.529876108312969]
```

```
- Time interval n.5: [78.56, 78.76]
  * y_true: [23.121652]
  * v_ann: [18.00519561767578, 14.529876108312969]
```

```
* err= 1.0453771772066036
* Learning rate NN = 3.138104830213706e-06
* diff = 0.0005056022505380842
```



For scene 6/69

```
* use LR_NN=1e-05 with err=63.55204594657285 at it=24
* v0_scn_mean = 15.148681063862176
* MAE = 1.044350646126121
```

df n.2, scene n.7/69

We have 5 time intervals inside [84.96, 85.96]
 - Time interval n.0: [84.96, 85.16]

```
* y_true: [14.95056422]
* v_ann: [14.876270294189453, 24.168678500842805]
```

```
- Time interval n.1: [85.16, 85.36]
* y_true: [15.66066483]
* v_ann: [14.837485313415527, 24.168678500842805]
```

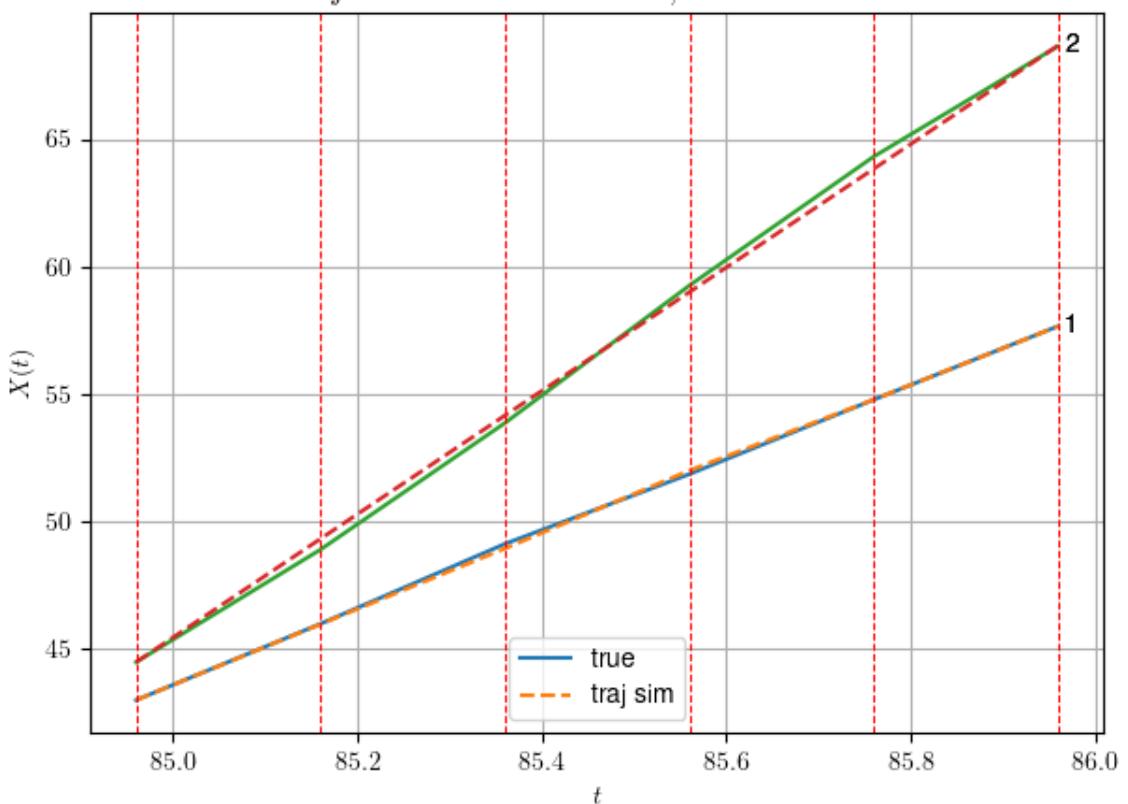
```
- Time interval n.2: [85.36, 85.56]
* y_true: [13.67066032]
* v_ann: [15.269291877746582, 24.168678500842805]
```

```
- Time interval n.3: [85.56, 85.76]
* y_true: [14.59078665]
* v_ann: [13.920260429382324, 24.168678500842805]
```

```
- Time interval n.4: [85.76, 85.96]
* y_true: [14.41085932]
* v_ann: [14.35912036895752, 24.168678500842805]
```

```
* err= 0.05119016471270914
* Learning rate NN = 0.0019371019443497062
* diff = 0.0003095541892998849
```

df n. 2 – Scene n. 7, at it = 500



For scene 7/69

```
* use LR_NN=0.005 with err=6.200864835803483 at it=24
* v0_scn_mean = 24.40193136076456
* MAE = 0.05119016471270914
```

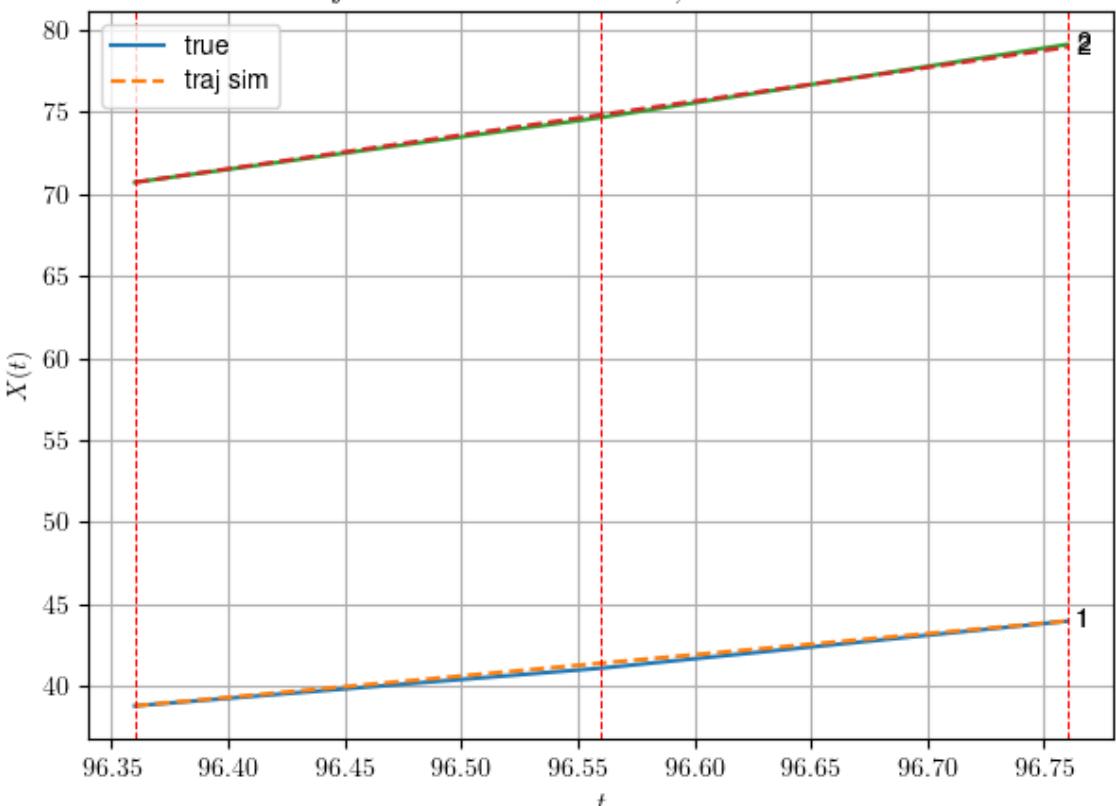
df n.2, scene n.8/69

```
We have 2 time intervals inside [96.36, 96.76]
- Time interval n.0: [96.36, 96.56]
  * y_true: [11.49034742]
  * v_ann: [13.018586158752441, 20.598848215629825]
```

```
- Time interval n.1: [96.56, 96.76]
  * y_true: [14.32646364]
  * v_ann: [12.8644380569458, 20.598848215629825]
```

```
* err= 0.024936491407194922
* Learning rate NN = 3.6449993785936385e-05
* diff = 3.093466628858316e-05
```

df n. 2 – Scene n. 8, at it = 500



For scene 8/69

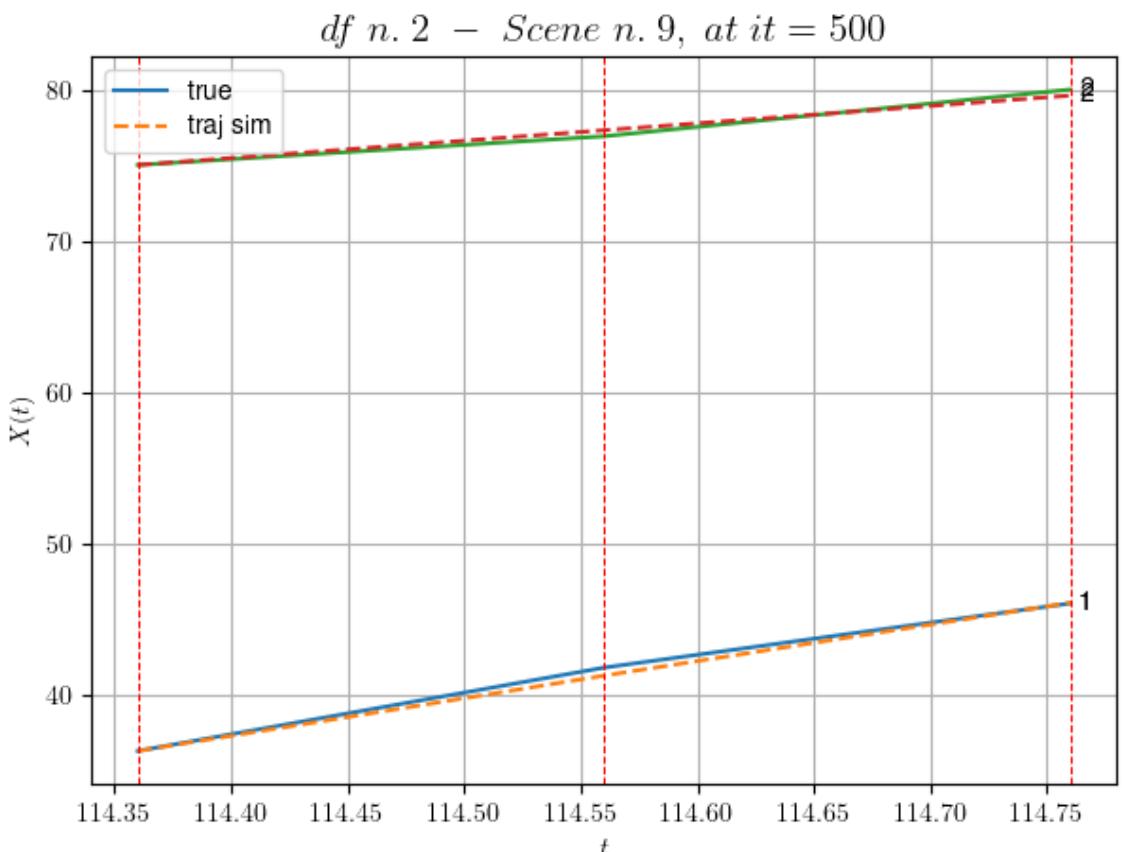
```
* use LR_NN=5e-05 with err=2.8579981357205657 at it=24
* v0_scn_mean = 20.974894286932816
* MAE = 0.024830617573977334
```

df n.2, scene n.9/69

We have 2 time intervals inside [114.36, 114.76]
 - Time interval n.0: [114.36, 114.56]
 * y_true: [27.56081405]
 * v_ann: [24.91141700744629, 11.48465294773633]

- Time interval n.1: [114.56, 114.76]
 * y_true: [21.25080883]
 * v_ann: [24.120101928710938, 11.48465294773633]

* err= 0.09957961734101048
 * Learning rate NN = 3.6449993785936385e-05
 * diff = 0.0002603680133848735



For scene 9/69

* use LR_NN=5e-05 with err=11.019076562710133 at it=24
 * v0_scn_mean = 12.225266829685468
 * MAE = 0.09951628645623842

df n.2, scene n.10/69

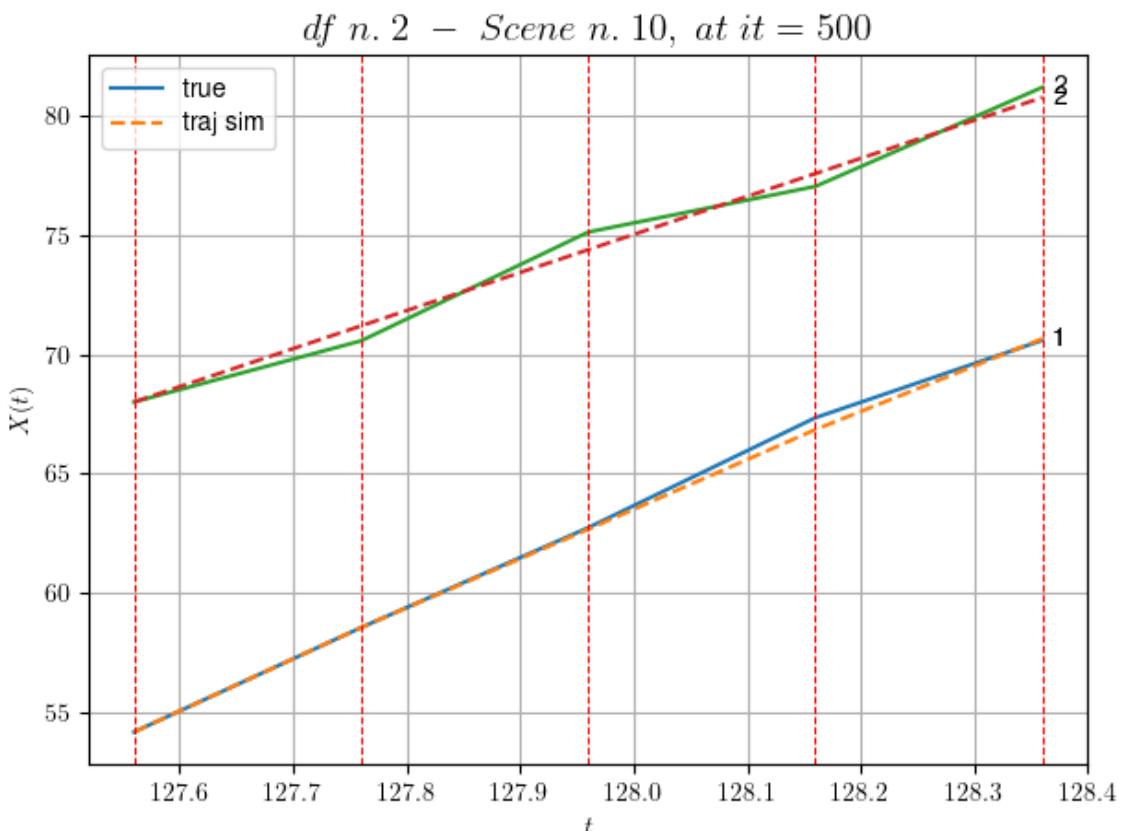
```
=====
We have 4 time intervals inside [127.56,128.36]
- Time interval n.0: [127.56, 127.76]
  * y_true: [21.85131651]
  * v_ann: [21.851367950439453, 15.931637978874075]

-----
- Time interval n.1: [127.76, 127.96]
  * y_true: [20.90145861]
  * v_ann: [20.566390991210938, 15.931637978874075]

-----
- Time interval n.2: [127.96, 128.16]
  * y_true: [23.00184718]
  * v_ann: [20.8469295501709, 15.931637978874075]

-----
- Time interval n.3: [128.16, 128.36]
  * y_true: [16.20146224]
  * v_ann: [19.039661407470703, 15.931637978874075]

-----
* err= 0.1665118851121457
* Learning rate NN = 4.7829678806010634e-05
* diff = 0.0006056466851861175
```



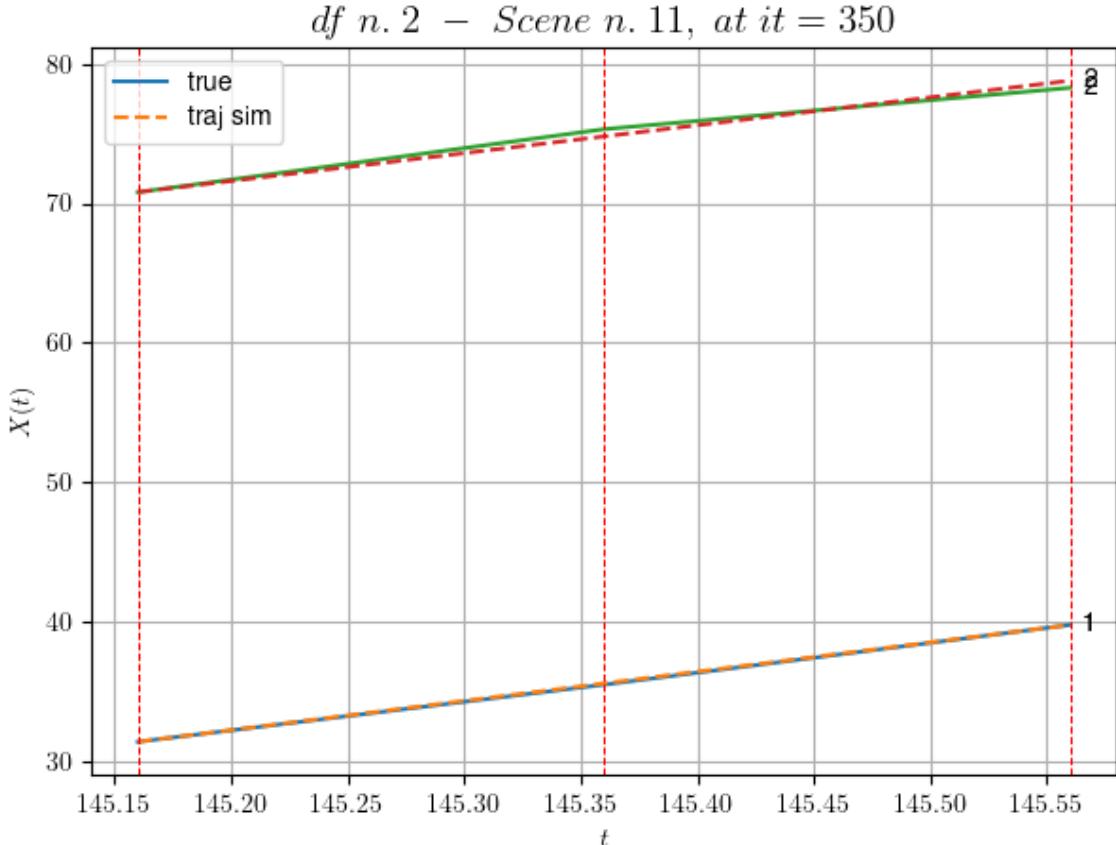
For scene 10/69
 * use LR_NN=0.0001 with err=23.382806628253892 at it=24
 * v0_scn_mean = 16.49437245961165
 * MAE = 0.1665118851121457

```
=====
=====
```

df n.2, scene n.11/69

```
=====
=====
```

We have 2 time intervals inside [145.16,145.56]
 * err= 0.0904908659263034
 * Learning rate NN = 8.099999104160815e-05
 * diff = 1.979766287851792e-07



For scene 11/69

- * use LR_NN=0.0001 with err=3.7549306883874674 at it=24
- * v0_scn_mean = 20.589118746424205
- * MAE = 0.0904908659263034

```
=====
=====
```

df n.2, scene n.12/69

```
=====
=====
```

We have 6 time intervals inside [163.76,164.96]

- Time interval n.0: [163.76, 163.96]
 - * y_true: [22.33118282]
 - * v_ann: [18.374820709228516, 19.717171056115834]

- Time interval n.1: [163.96, 164.16]
 - * y_true: [19.30705544]

```
* v_ann: [18.55278968811035, 19.717171056115834]
```

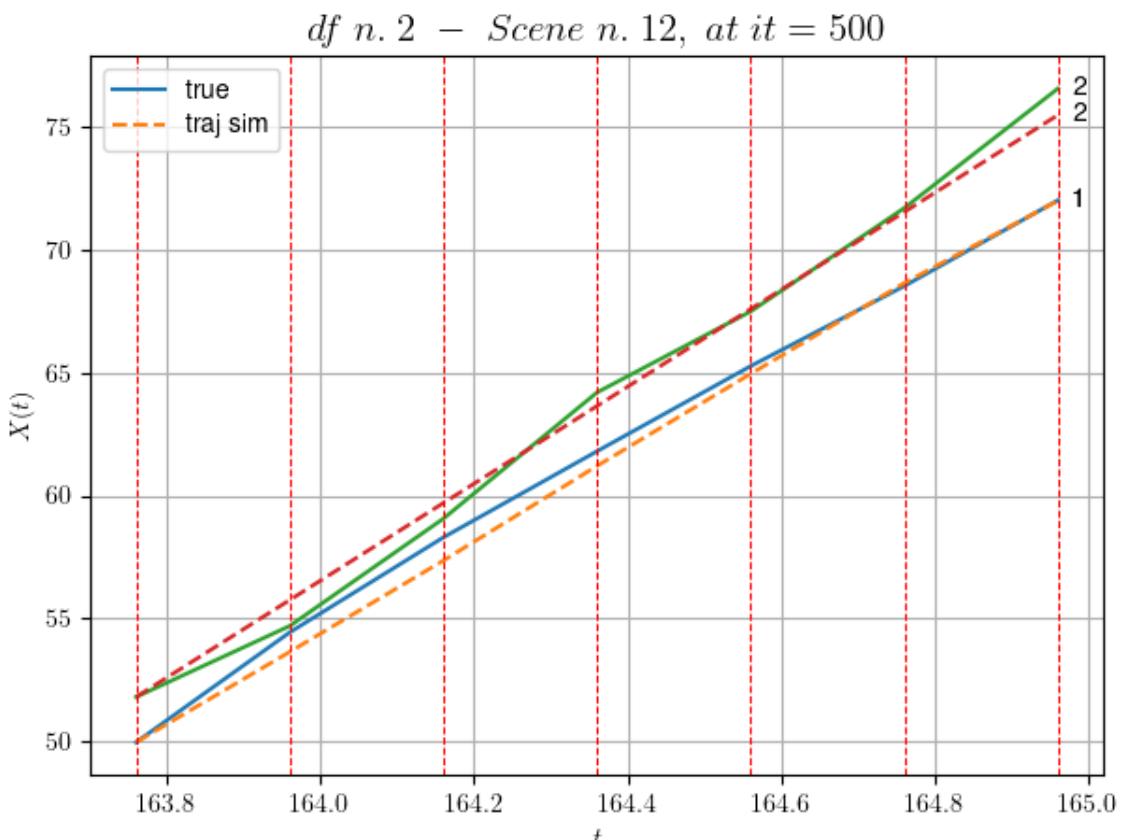
```
- Time interval n.2: [164.16, 164.36]
* y_true: [17.5112259]
* v_ann: [19.237398147583008, 19.717171056115834]
```

```
- Time interval n.3: [164.36, 164.56]
* y_true: [17.31134712]
* v_ann: [18.72407341003418, 19.717171056115834]
```

```
- Time interval n.4: [164.56, 164.76]
* y_true: [16.27141068]
* v_ann: [18.45195770263672, 19.717171056115834]
```

```
- Time interval n.5: [164.76, 164.96]
* y_true: [17.43166556]
* v_ann: [16.730241775512695, 19.717171056115834]
```

```
* err= 0.3570953379839651
* Learning rate NN = 0.0015690524596720934
* diff = 0.001557000050701064E
```



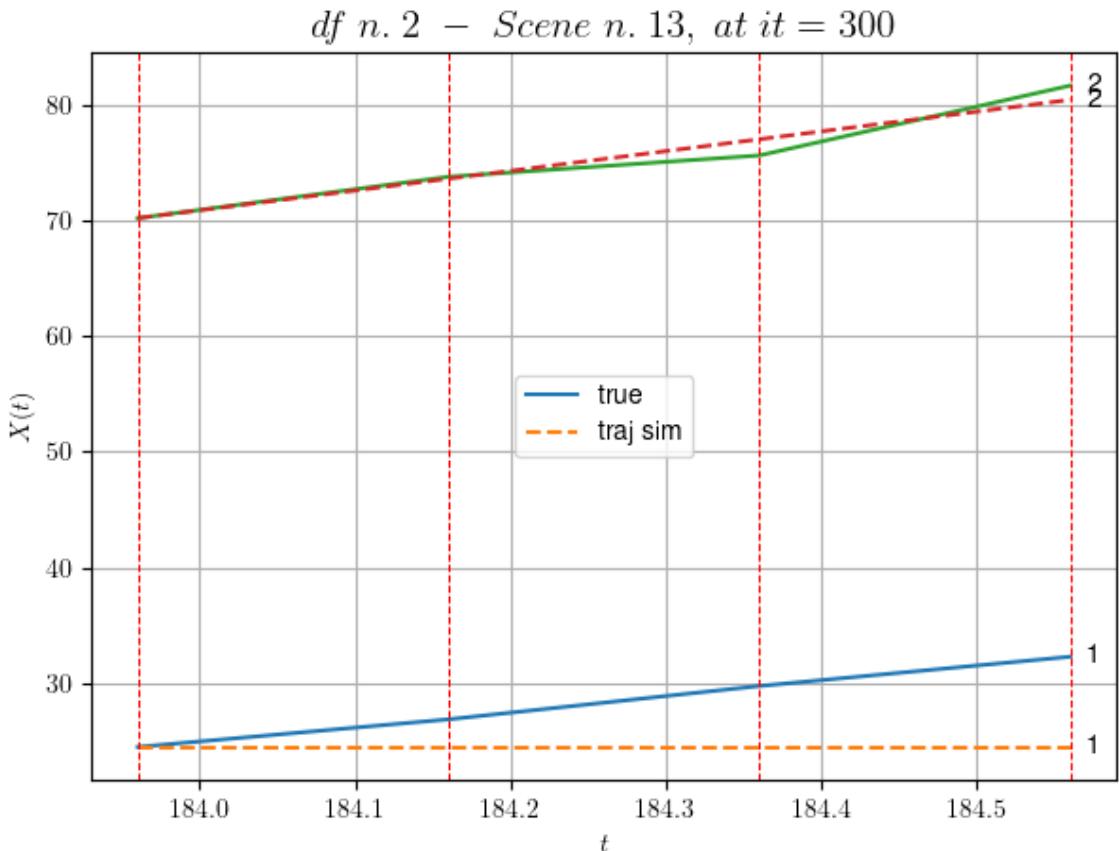
For scene 12/69

```
* use LR_NN=0.005 with err=26.140612969243723 at it=24
* v0_scn_mean = 20.12848421379231
```

* MAE = 0.3570953379839651

df n.2, scene n.13/69

We have 3 time intervals inside [183.96,184.56]
 * err= 12.224951095746059
 * Learning rate NN = 0.00036449998151510954
 * diff = 2.226386524029067e-07



For scene 13/69

* use LR_NN=0.0005 with err=23.274499251691722 at it=24
 * v0_scn_mean = 17.915023335570915
 * MAE = 12.214922651917625

df n.2, scene n.14/69

We have 10 time intervals inside [198.16,200.16]

- Time interval n.0: [198.16, 198.36]
 - * y_true: [24.60086798]
 - * v_ann: [21.45718765258789, 17.756279251512893]

- Time interval n.1: [198.36, 198.56]

```
* y_true: [19.85085228]
* v_ann: [21.808359146118164, 17.756279251512893]

-----
- Time interval n.2: [198.56, 198.76]
* y_true: [19.65099051]
* v_ann: [21.125106811523438, 17.756279251512893]

-----
- Time interval n.3: [198.76, 198.96]
* y_true: [21.65127406]
* v_ann: [20.781349182128906, 17.756279251512893]

-----
- Time interval n.4: [198.96, 199.16]
* y_true: [20.20137444]
* v_ann: [20.47867202758789, 17.756279251512893]

-----
- Time interval n.5: [199.16, 199.36]
* y_true: [18.45142335]
* v_ann: [20.576099395751953, 17.756279251512893]

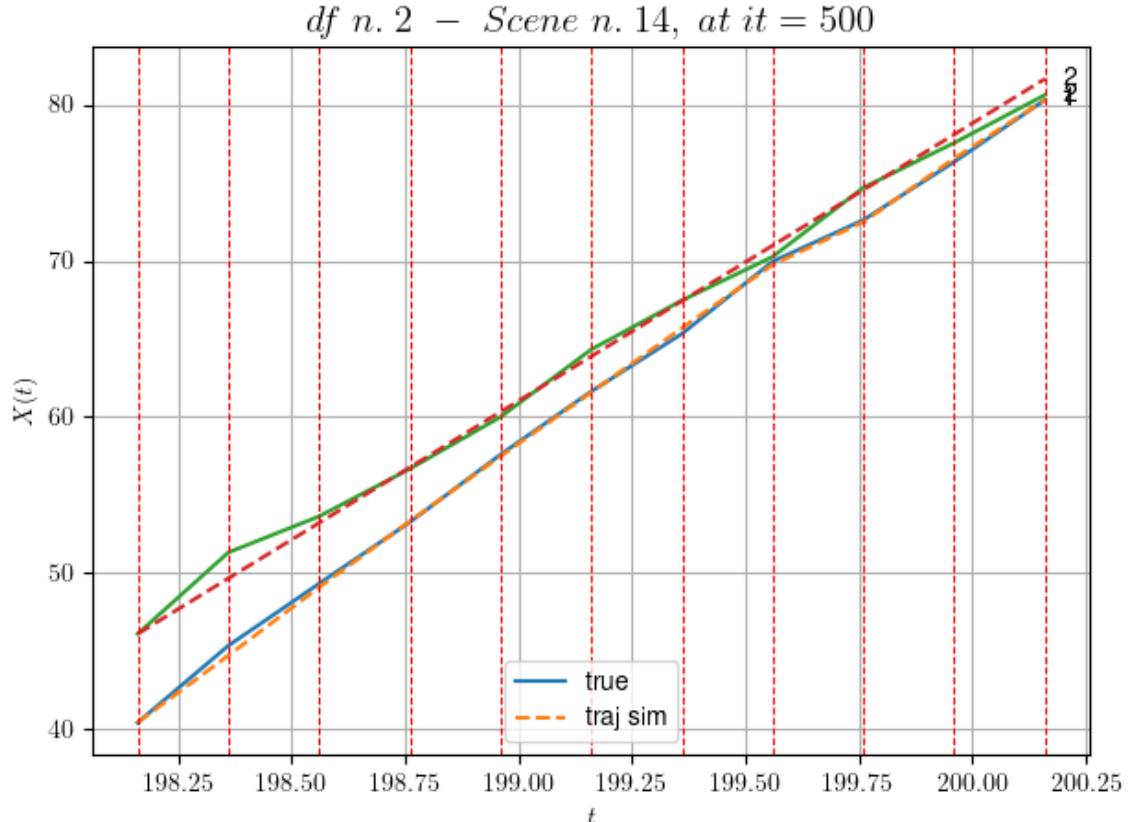
-----
- Time interval n.6: [199.36, 199.56]
* y_true: [23.11925224]
* v_ann: [20.276662826538086, 17.756279251512893]

-----
- Time interval n.7: [199.56, 199.76]
* y_true: [13.30128192]
* v_ann: [13.680235862731934, 17.756279251512893]

-----
- Time interval n.8: [199.76, 199.96]
* y_true: [18.55195156]
* v_ann: [20.303220748901367, 17.756279251512893]

-----
- Time interval n.9: [199.96, 200.16]
* y_true: [19.85230976]
* v_ann: [18.739774703979492, 17.756279251512893]

* err= 0.26520667055753055
* Learning rate NN = 0.00013508510892279446
* diff = 0.0003644871218048129
```



For scene 14/69

```
* use LR_NN=0.001 with err=109.49608821220023 at it=24
* v0_scn_mean = 18.246028081358972
* MAE = 0.26520667055753055
```

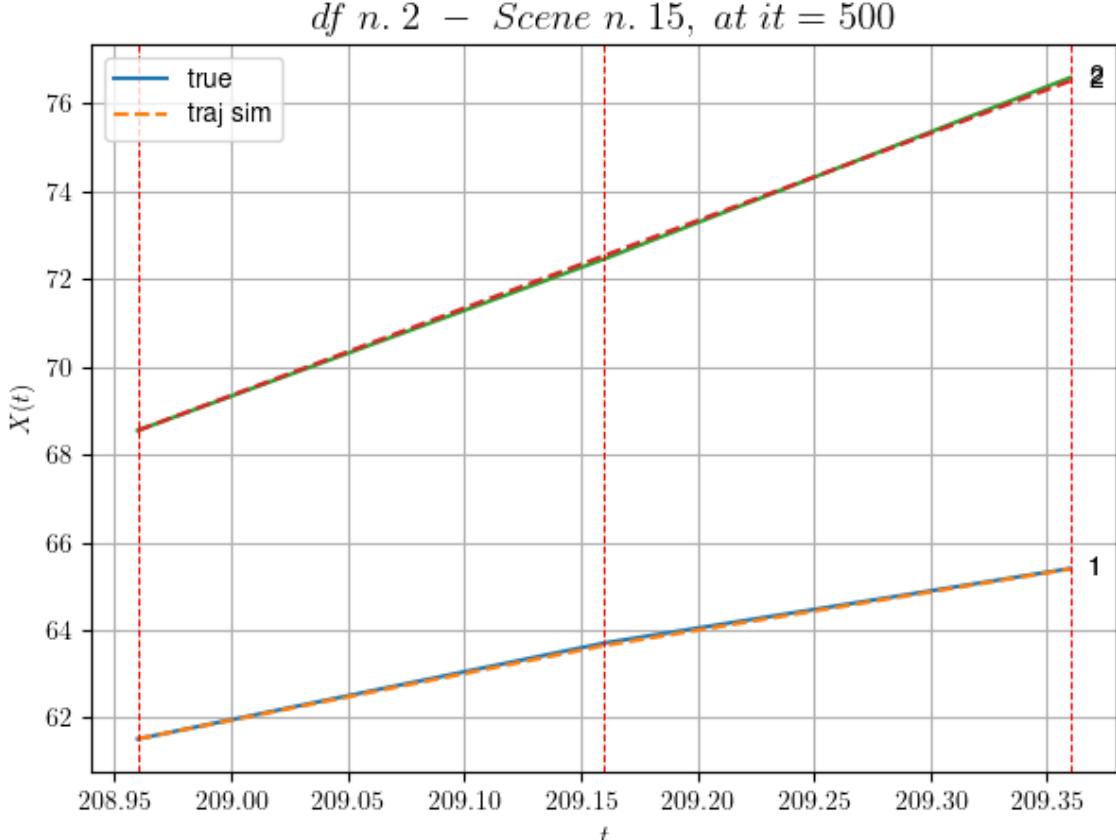
df n.2, scene n.15/69

We have 2 time intervals inside [208.96, 209.36]

- Time interval n.0: [208.96, 209.16]
 - * y_true: [10.93080354]
 - * v_ann: [10.645550727844238, 19.925309614241876]

- Time interval n.1: [209.16, 209.36]
 - * y_true: [8.50069201]
 - * v_ann: [8.73792839050293, 19.925309614241876]

- * err= 0.0025183457373027796
 - * Learning rate NN = 7.289998757187277e-05
 - * diff = 1.0224700269839161e-05



For scene 15/69

- * use LR_NN=0.0001 with err=3.8172242460896144 at it=24
- * v0_scn_mean = 20.328297229595496
- * MAE = 0.0024404539058077096

df n.2, scene n.16/69

We have 9 time intervals inside [210.56, 212.36]

- Time interval n.0: [210.56, 210.76]
 - * y_true: [15.80031472]
 - * v_ann: [15.985898971557617, 22.562964085931366]

- Time interval n.1: [210.76, 210.96]
 - * y_true: [21.08915117]
 - * v_ann: [18.285093307495117, 22.562964085931366]

- Time interval n.2: [210.96, 211.16]
 - * y_true: [16.15047692]
 - * v_ann: [18.13943862915039, 22.562964085931366]

- Time interval n.3: [211.16, 211.36]
 - * y_true: [24.85089544]

```
* v_ann: [19.425928115844727, 22.562964085931366]
```

```
- Time interval n.4: [211.36, 211.56]
* y_true: [14.9506415]
* v_ann: [19.428367614746094, 22.562964085931366]
```

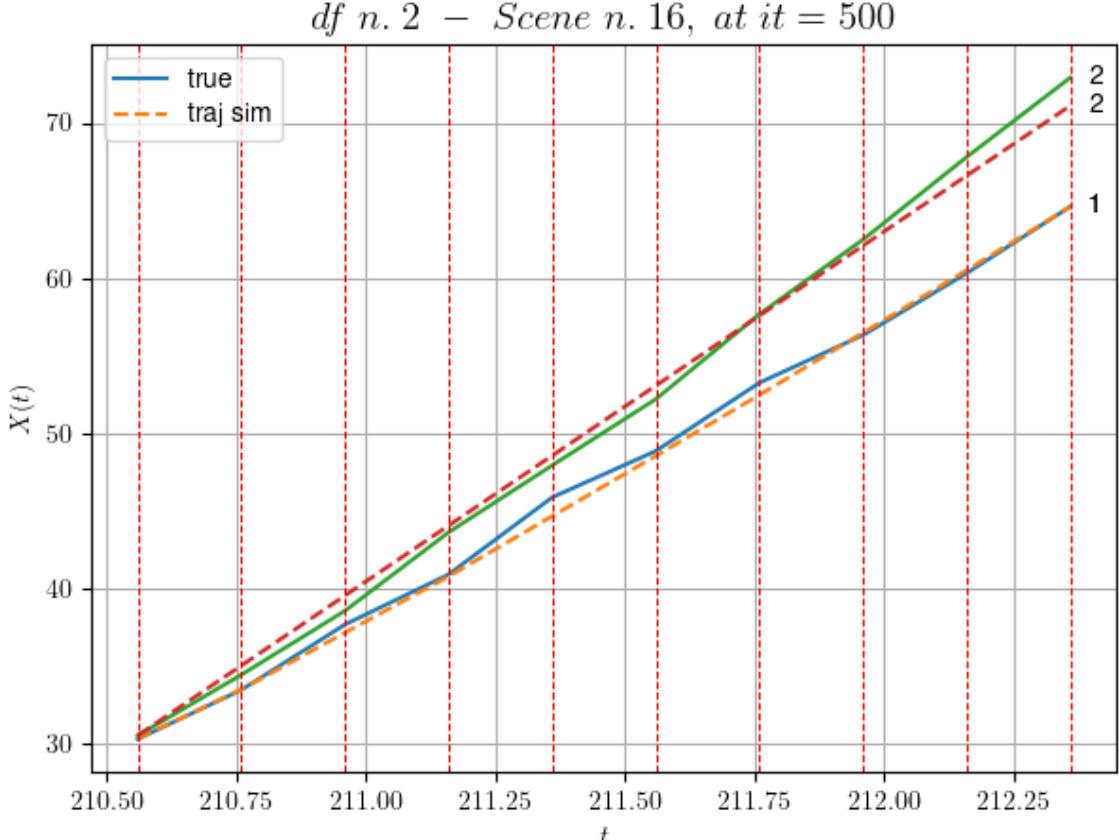
```
- Time interval n.5: [211.56, 211.76]
* y_true: [22.00109747]
* v_ann: [19.645381927490234, 22.562964085931366]
```

```
- Time interval n.6: [211.76, 211.96]
* y_true: [15.35088179]
* v_ann: [20.056673049926758, 22.562964085931366]
```

```
- Time interval n.7: [211.96, 212.16]
* y_true: [19.95129864]
* v_ann: [20.161026000976562, 22.562964085931366]
```

```
- Time interval n.8: [212.16, 212.36]
* y_true: [21.50160509]
* v_ann: [20.447650909423828, 22.562964085931366]
```

```
* err= 0.504507052303286
* Learning rate NN = 0.00016677174426149577
* diff = 0.001959018007178237
```



For scene 16/69

- * use LR_NN=0.001 with err=31.435771867400188 at it=24
- * v0_scn_mean = 22.860445522437825
- * MAE = 0.504507052303286

df n.2, scene n.17/69

We have 3 time intervals inside [215.36, 215.96]

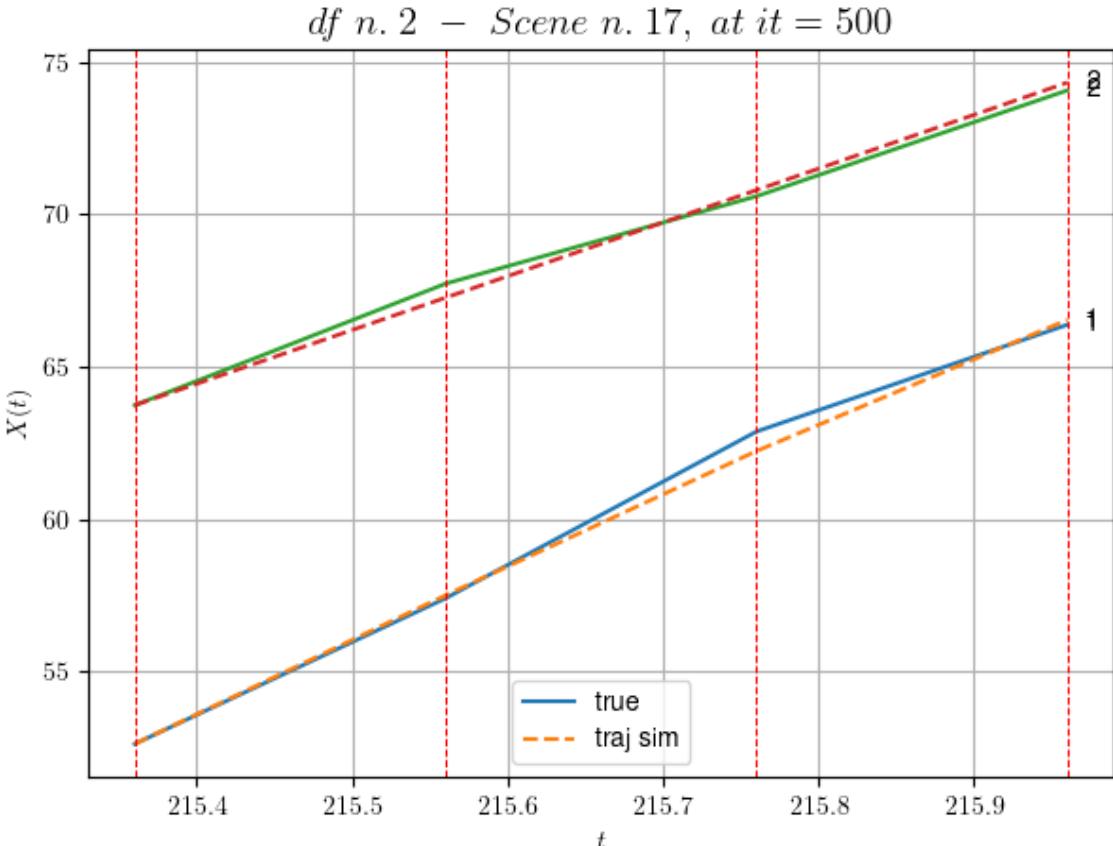
- Time interval n.0: [215.36, 215.56]
 - * y_true: [23.8914478]
 - * v_ann: [24.391708374023438, 17.643232536852203]

- Time interval n.1: [215.56, 215.76]
 - * y_true: [27.35187922]
 - * v_ann: [23.649703979492188, 17.643232536852203]

- Time interval n.2: [215.76, 215.96]
 - * y_true: [17.52141306]
 - * v_ann: [21.524110794067383, 17.643232536852203]

- * err= 0.09552415686602007
- * Learning rate NN = 5.904899080633186e-05

* diff = 0.0012945074608027296



For scene 17/69

* use LR_NN=0.0001 with err=11.20195256734762 at it=24
 * v0_scn_mean = 18.13750323528356
 * MAE = 0.09552415686602007

df n.2, scene n.18/69

We have 4 time intervals inside [218.36, 219.16]

- Time interval n.0: [218.36, 218.56]
 * y_true: [9.80048787]
 * v_ann: [10.057928085327148, 19.2918574497649]

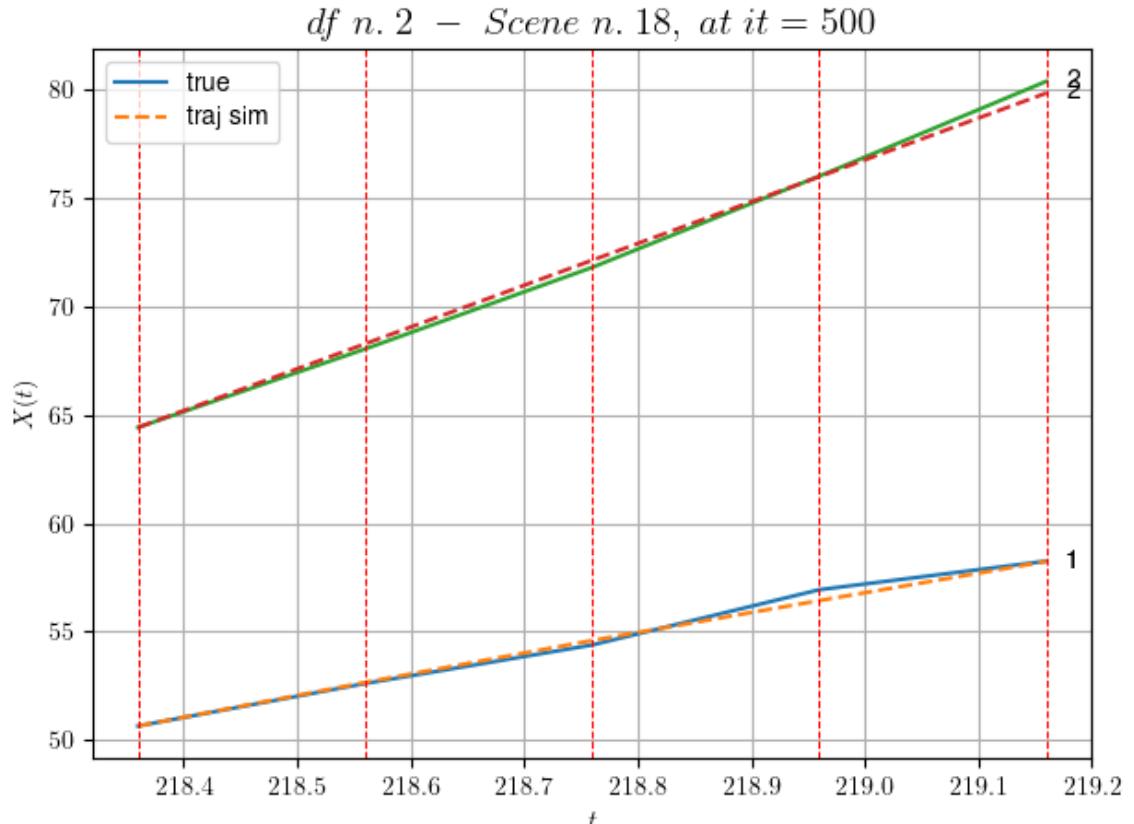
- Time interval n.1: [218.56, 218.76]
 * y_true: [8.90049368]
 * v_ann: [9.680652618408203, 19.2918574497649]

- Time interval n.2: [218.76, 218.96]
 * y_true: [12.75076549]
 * v_ann: [9.205677032470703, 19.2918574497649]

- Time interval n.3: [218.96, 219.16]

```
* y_true: [6.600424]
* v_ann: [9.021090507507324, 19.2918574497649]
```

```
* err= 0.07598138065670602
* Learning rate NN = 2.3914839403005317e-05
* diff = 3.507943886772724e-05
```



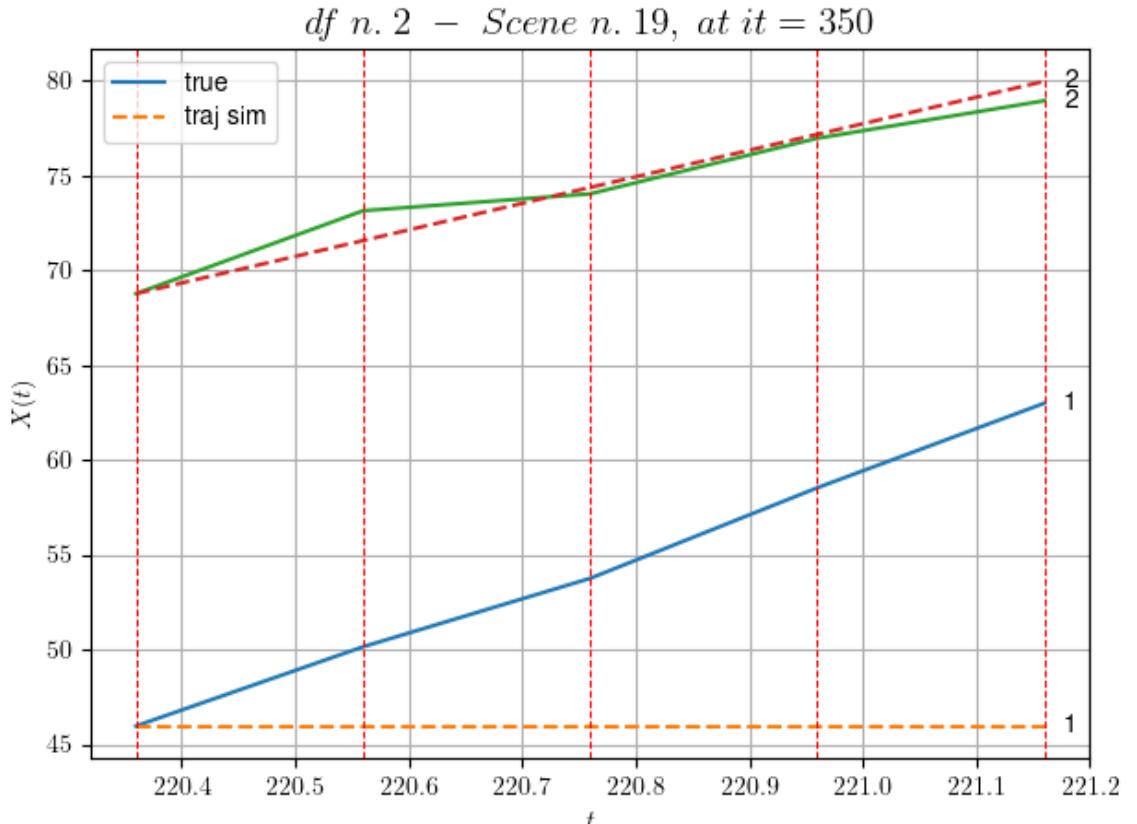
For scene 18/69

```
* use LR_NN=5e-05 with err=13.374686015365478 at it=24
* v0_scn_mean = 19.720183151692158
* MAE = 0.07202877072934372
```

df n.2, scene n.19/69

We have 4 time intervals inside [220.36,221.16]

```
* err= 52.908086519991976
* Learning rate NN = 0.0005904899444431067
* diff = 4.6763822325601723e-07
```



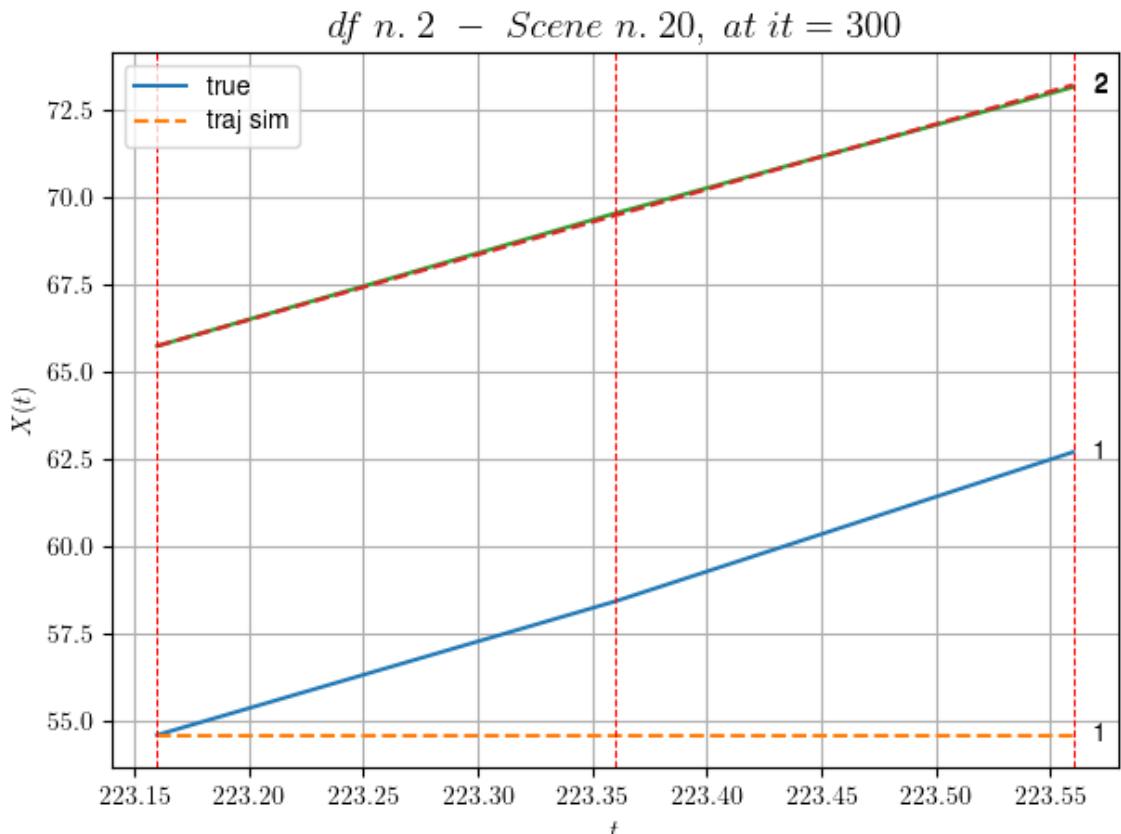
For scene 19/69

- * use LR_NN=0.001 with err=33.737422724892426 at it=24
- * v0_scn_mean = 14.910916996782536
- * MAE = 38.48130524653157

df n.2, scene n.20/69

We have 2 time intervals inside [223.16, 223.56]

- * err= 13.396534825200536
- * Learning rate NN = 0.00040499999886378646
- * diff = 1.1704924496314106e-07

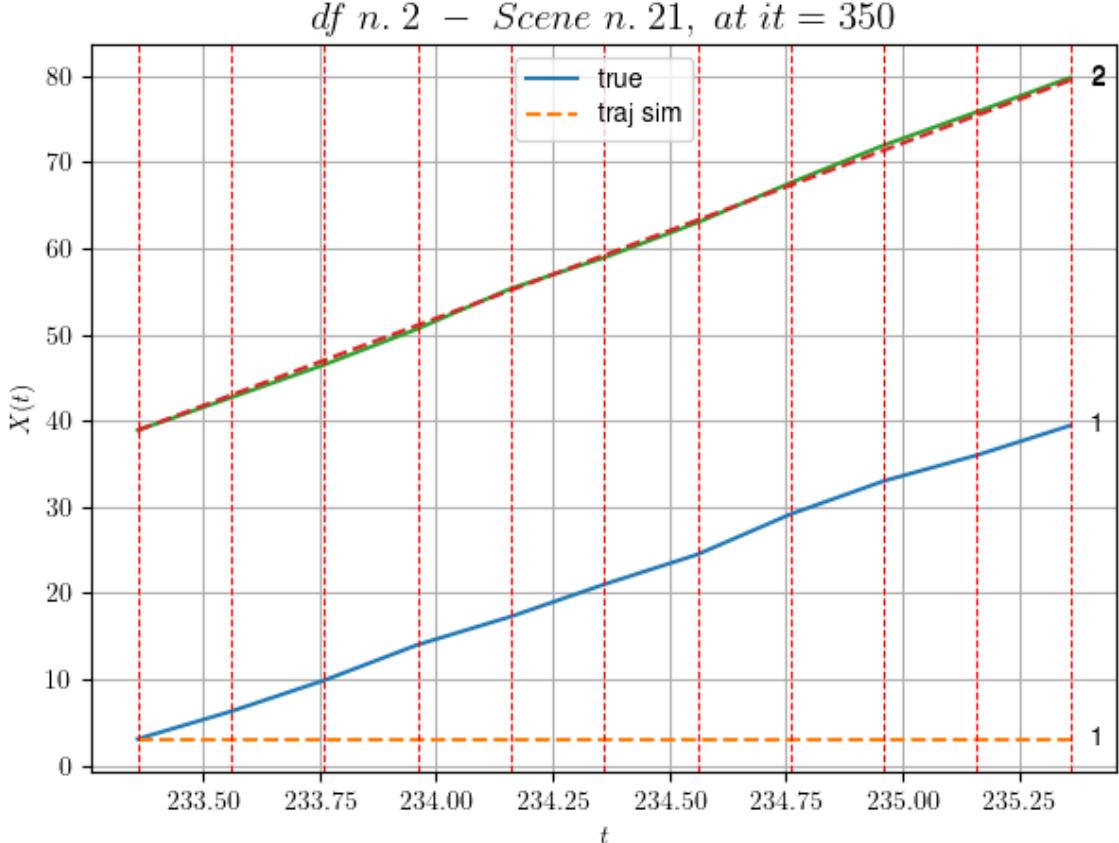


For scene 20/69

```
* use LR_NN=0.0005 with err=4.3205237155139145 at it=24
* v0_scn_mean = 19.45181203520947
* MAE = 13.396534825200536
```

df n.2, scene n.21/69

```
We have 10 time intervals inside [233.36,235.36]
* err= 233.56701066628088
* Learning rate NN = 1.2709323527815286e-05
* diff = 2.8394410378496104e-07
```



For scene 21/69

- * use LR_NN=5e-05 with err=64.63322259583006 at it=24
- * v0_scn_mean = 20.85502436518779
- * MAE = 233.5585993496133

df n.2, scene n.22/69

We have 7 time intervals inside [246.36, 247.76]

- Time interval n.0: [246.36, 246.56]
 - * y_true: [19.95129864]
 - * v_ann: [20.743316650390625, 3.5380917275259507]

- Time interval n.1: [246.56, 246.76]
 - * y_true: [17.951325]
 - * v_ann: [19.11741828918457, 3.5380917275259507]

- Time interval n.2: [246.76, 246.96]
 - * y_true: [19.60162726]
 - * v_ann: [17.67300033569336, 3.5380917275259507]

- Time interval n.3: [246.96, 247.16]
 - * y_true: [7.95071562]

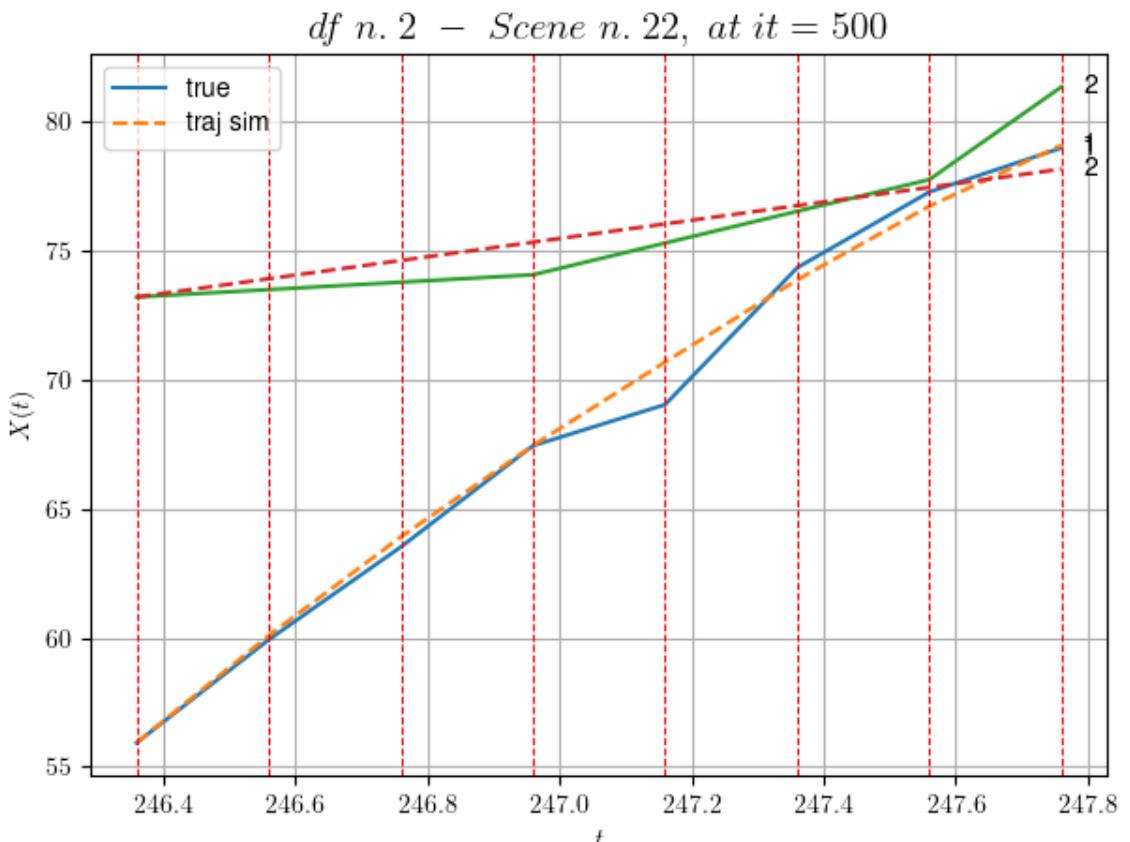
```
* v_ann: [16.158084869384766, 3.5380917275259507]
```

```
- Time interval n.4: [247.16, 247.36]
* y_true: [26.50263379]
* v_ann: [15.913908004760742, 3.5380917275259507]
```

```
- Time interval n.5: [247.36, 247.56]
* y_true: [14.6516272]
* v_ann: [14.26111125946045, 3.5380917275259507]
```

```
- Time interval n.6: [247.56, 247.76]
* y_true: [8.53878151]
* v_ann: [11.810111045837402, 3.5380917275259507]
```

```
* err= 1.044759522898463
* Learning rate NN = 2.5418647055630572e-05
* diff = 0.0028093553990207187
```



For scene 22/69

```
* use LR_NN=0.0001 with err=243.8291507742111 at it=24
* v0_scn_mean = 4.596568058222695
* MAE = 1.0184991155105292
```

```
df n.2, scene n.23/69
```

```
=====
=====
```

We have 4 time intervals inside [250.16, 250.96]

- Time interval n.0: [250.16, 250.36]
 - * y_true: [20.04064227]
 - * v_ann: [18.19632911682129, 17.36451537391269]

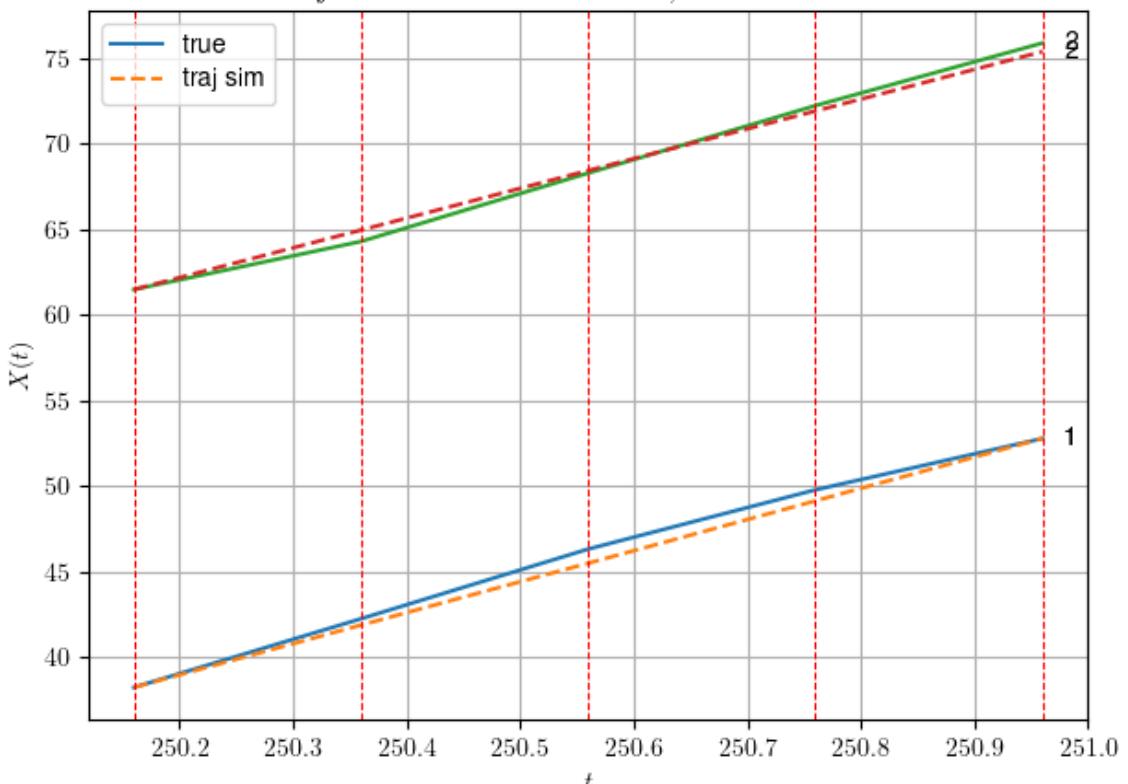
-
- Time interval n.1: [250.36, 250.56]
 - * y_true: [20.33077522]
 - * v_ann: [18.052257537841797, 17.36451537391269]

-
- Time interval n.2: [250.56, 250.76]
 - * y_true: [17.28077239]
 - * v_ann: [18.193254470825195, 17.36451537391269]

-
- Time interval n.3: [250.76, 250.96]
 - * y_true: [15.0007656]
 - * v_ann: [18.246776580810547, 17.36451537391269]

- * err= 0.20400658854196158
- * Learning rate NN = 2.3914839403005317e-05
- * diff = 4.2488715796790144e-05

df n. 2 – Scene n. 23, at it = 500



For scene 23/69

* use LR_NN=5e-05 with err=18.35393376348601 at it=24

```
* vθ_scn_mean = 17.869934758859603
* MAE = 0.20175224488546142
```

```
=====
```

df n.2, scene n.24/69

```
=====
```

We have 3 time intervals inside [253.96, 254.56]

- Time interval n.0: [253.96, 254.16]

* y_true: [3.96001286]

* v_ann: [5.5483598709106445, 19.05988430920207]

- Time interval n.1: [254.16, 254.36]

* y_true: [5.65002208]

* v_ann: [4.844815254211426, 19.05988430920207]

- Time interval n.2: [254.36, 254.56]

* y_true: [5.43002353]

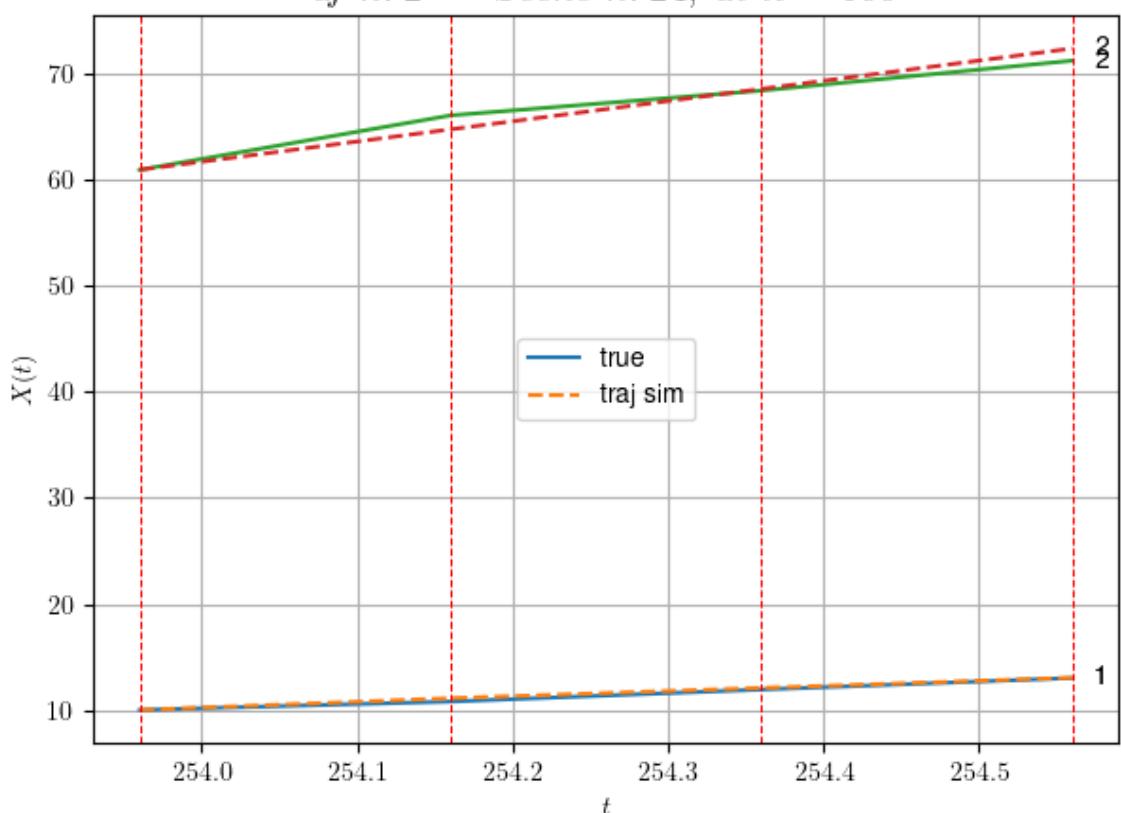
* v_ann: [4.755802154541016, 19.05988430920207]

* err= 0.40065571923704657

* Learning rate NN = 5.9048988987342454e-06

* diff = 6.145728117135096e-06

df n. 2 – Scene n. 24, at it = 500



```
For scene 24/69
* use LR_NN=1e-05 with err=10.228758991100642 at it=24
* v0_scn_mean = 19.497488936750415
* MAE = 0.4004595582096352
```

```
=====
=====
```

```
df n.2, scene n.25/69
```

```
=====
=====
```

```
We have 8 time intervals inside [256.56,258.16]
```

```
- Time interval n.0: [256.56, 256.76]
  * y_true: [19.53061148]
  * v_ann: [21.290897369384766, 18.832978045462543]
```

```
-----
-----
```

```
- Time interval n.1: [256.76, 256.96]
  * y_true: [21.00079129]
  * v_ann: [20.84943962097168, 18.832978045462543]
```

```
-----
-----
```

```
- Time interval n.2: [256.96, 257.16]
  * y_true: [23.14105686]
  * v_ann: [20.409948348999023, 18.832978045462543]
```

```
-----
-----
```

```
- Time interval n.3: [257.16, 257.36]
  * y_true: [13.85071565]
  * v_ann: [19.912370681762695, 18.832978045462543]
```

```
-----
-----
```

```
- Time interval n.4: [257.36, 257.56]
  * y_true: [22.48137092]
  * v_ann: [20.945083618164062, 18.832978045462543]
```

```
-----
-----
```

```
- Time interval n.5: [257.56, 257.76]
  * y_true: [24.69174696]
  * v_ann: [21.02041244506836, 18.832978045462543]
```

```
-----
-----
```

```
- Time interval n.6: [257.76, 257.96]
  * y_true: [14.19111843]
  * v_ann: [20.337778091430664, 18.832978045462543]
```

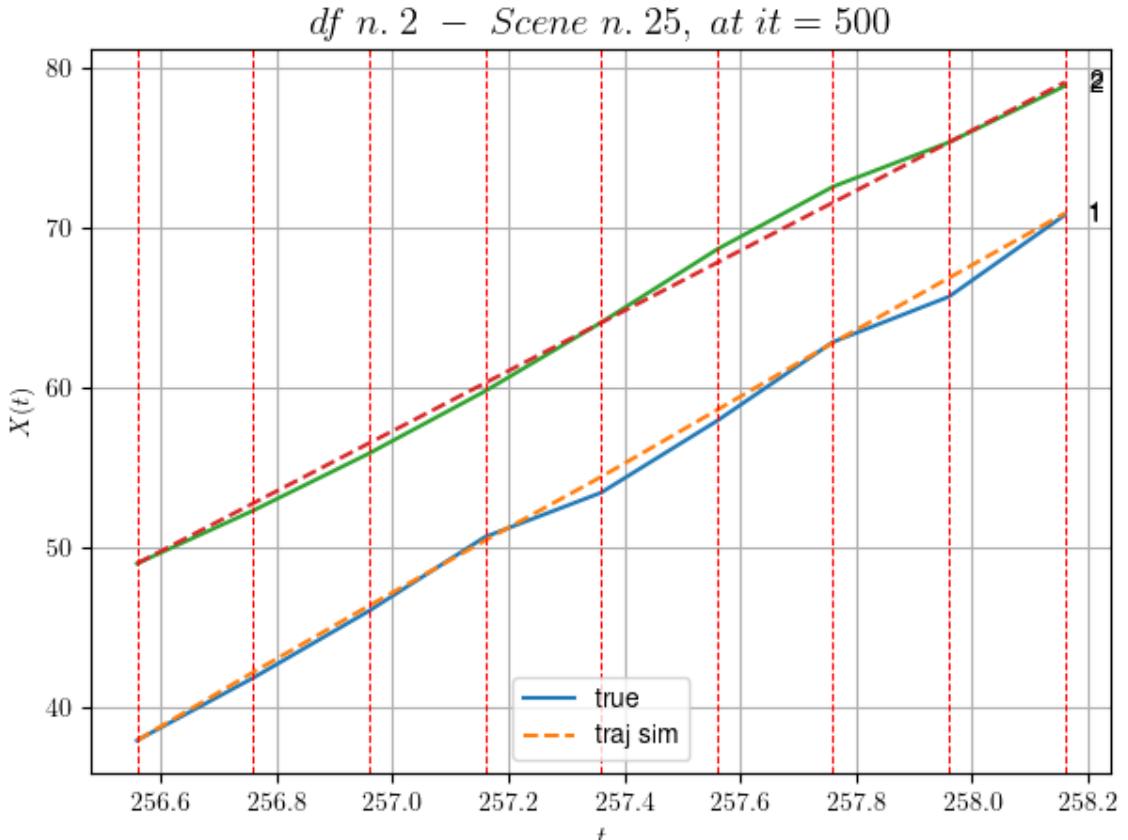
```
-----
-----
```

```
- Time interval n.7: [257.96, 258.16]
  * y_true: [25.60234094]
  * v_ann: [20.23988151550293, 18.832978045462543]
```

```

* err= 0.31779473355214477
* Learning rate NN = 1.029455233947374e-05
* diff = 0.0001964802654261799

```



For scene 25/69

```

* use LR_NN=5e-05 with err=55.54059399511081 at it=24
* v0_scn_mean = 19.279658923558493
* MAE = 0.315784872439595

```

df n.2, scene n.26/69

We have 2 time intervals inside [275.56, 275.96]

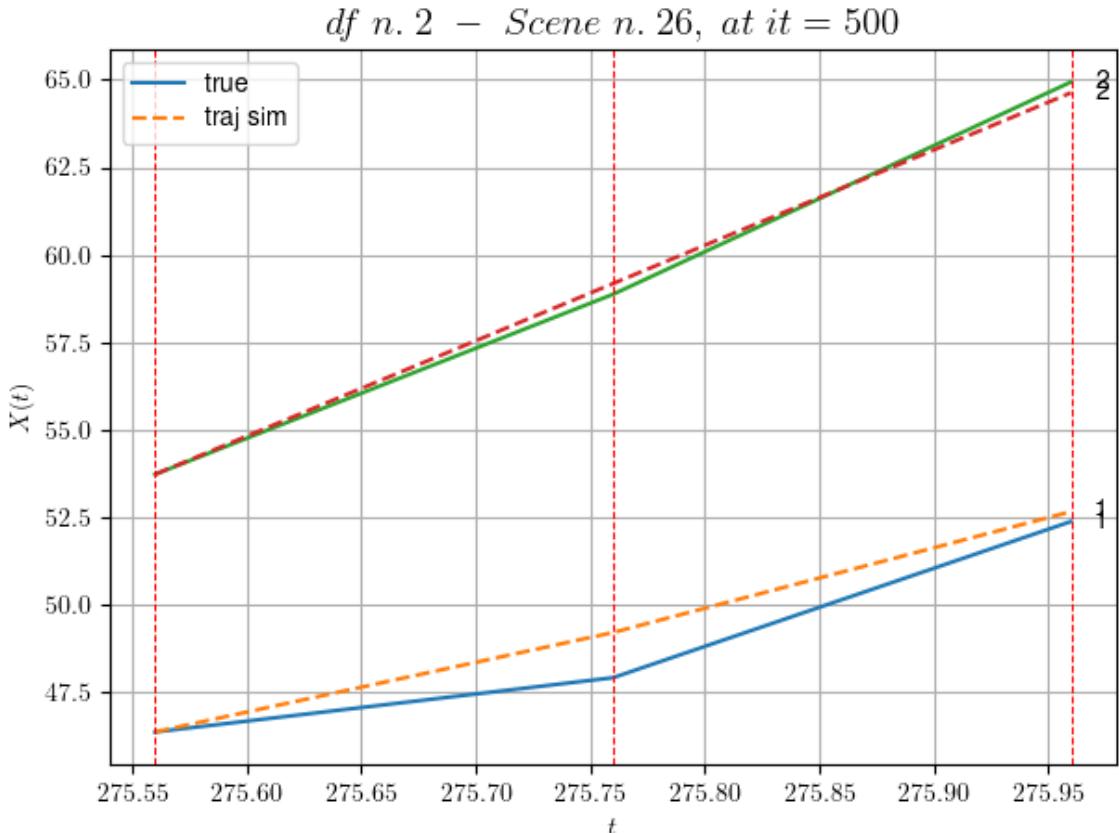
- Time interval n.0: [275.56, 275.76]
 - * y_true: [7.75034114]
 - * v_ann: [14.203036308288574, 27.245148829197323]

- Time interval n.1: [275.76, 275.96]
 - * y_true: [22.30520974]
 - * v_ann: [17.269136428833008, 27.245148829197323]

```

* err= 0.3223176371323417
* Learning rate NN = 7.289998757187277e-05
* diff = 0.0036173494196286016

```



For scene 26/69

- * use LR_NN=0.0001 with err=0.4235356558693403 at it=24
- * v0_scn_mean = 27.355342876006034
- * MAE = 0.3223176371323417

df n.2, scene n.27/69

We have 3 time intervals inside [287.36, 287.96]

- Time interval n.0: [287.36, 287.56]
 - * y_true: [19.57128016]
 - * v_ann: [24.971439361572266, 19.08174409433995]

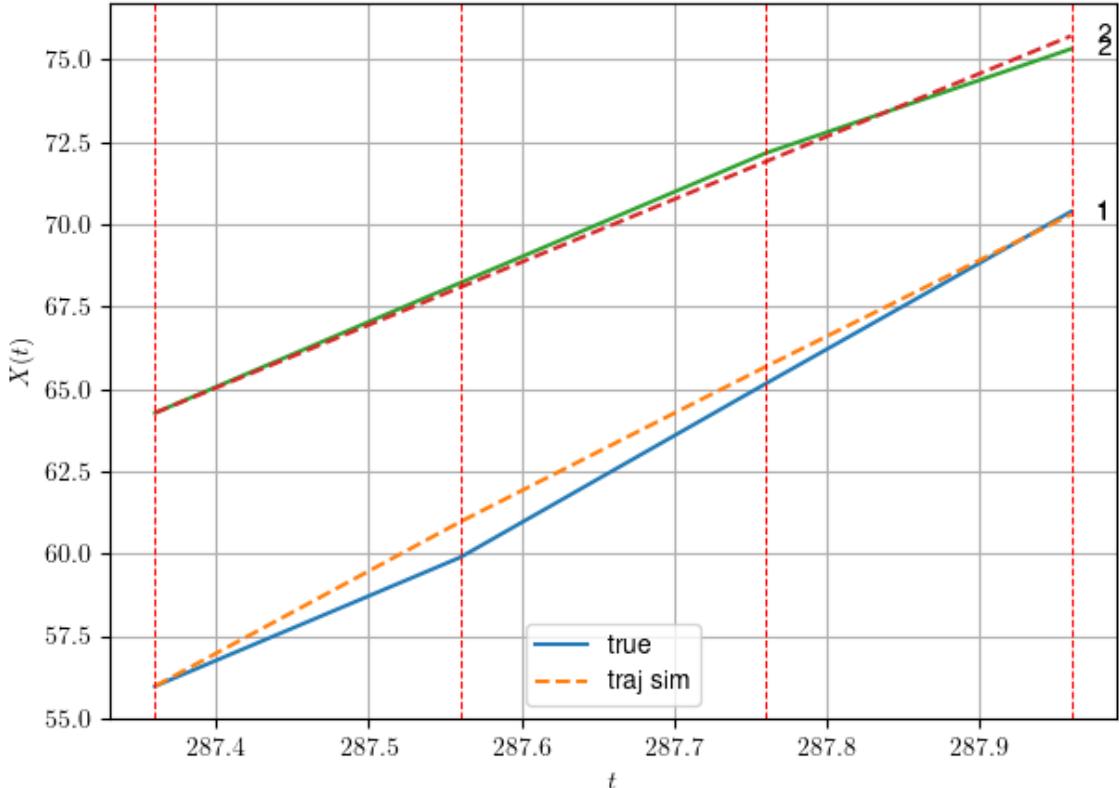
- Time interval n.1: [287.56, 287.76]
 - * y_true: [26.37205005]
 - * v_ann: [23.542686462402344, 19.08174409433995]

- Time interval n.2: [287.76, 287.96]
 - * y_true: [26.13226254]
 - * v_ann: [23.095502853393555, 19.08174409433995]

- * err= 0.20997652652645418
- * Learning rate NN = 0.0002952449722215533

* diff = 0 002000502615657991

df n. 2 - Scene n. 27, at it = 500



For scene 27/69

* use LR_NN=0.0005 with err=9.005456525204504 at it=24
 * v0 scn mean = 19.51847433048307
 * MAE = 0.20794435749192658

df n.2, scene n.28/69

We have 3 time intervals inside [292.96, 293.56]

- Time interval n.0: [292.96, 293.16]
 - * y_true: [8.97521593]
 - * v_ann: [11.299592971801758, 19.771247175293336]

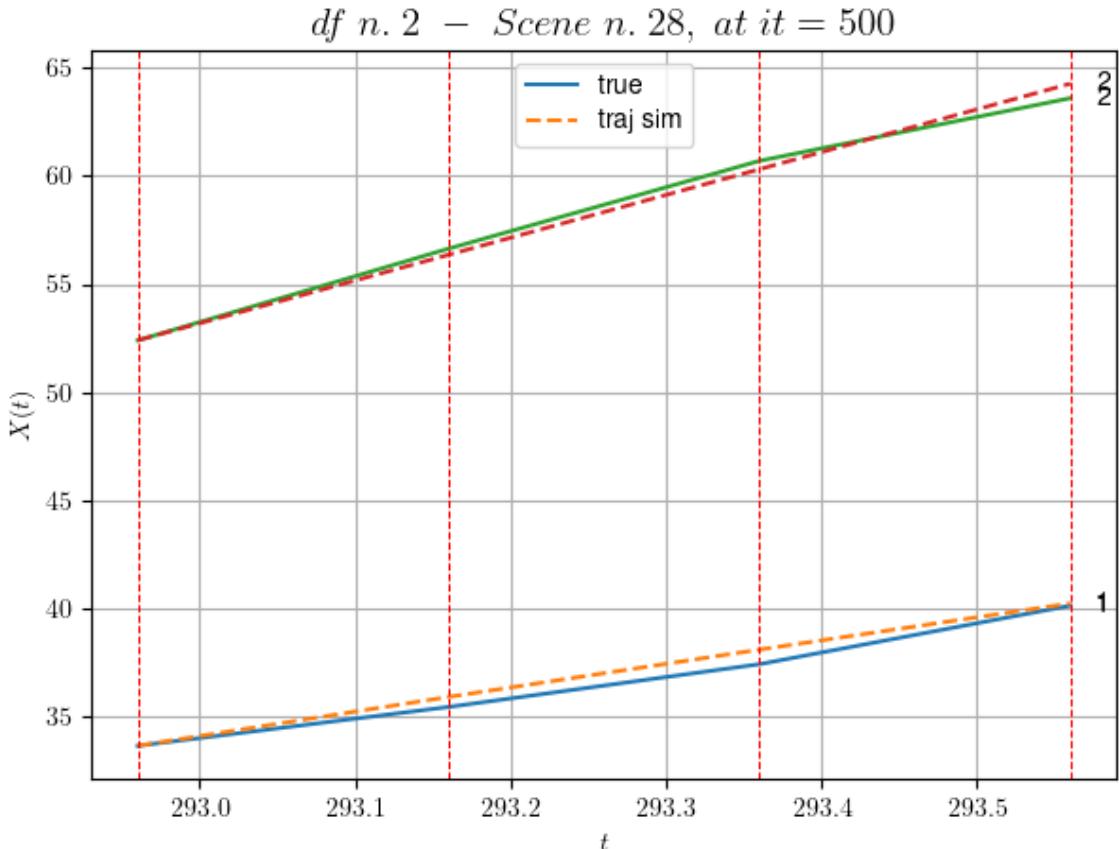
- Time interval n.1: [293.16, 293.36]
 - * y_true: [9.88525546]
 - * v_ann: [10.928522109985352, 19.771247175293336]

- Time interval n.2: [293.36, 293.56]
 - * y_true: [13.52541357]
 - * v_ann: [10.671469688415527, 19.771247175293336]

* err= 0.16986018246470513

* Learning rate NN = 5.904899080633186e-05

* diff = 0.002023957548458577



For scene 28/69

* use LR_NN=0.0001 with err=7.912777237266723 at it=24
 * v0_scn_mean = 20.180397288200624
 * MAE = 0.16986018246470513

df n.2, scene n.29/69

We have 2 time intervals inside [314.96, 315.36]

- Time interval n.0: [314.96, 315.16]
 - * y_true: [23.83200106]
 - * v_ann: [15.744966506958008, 19.975403002157083]

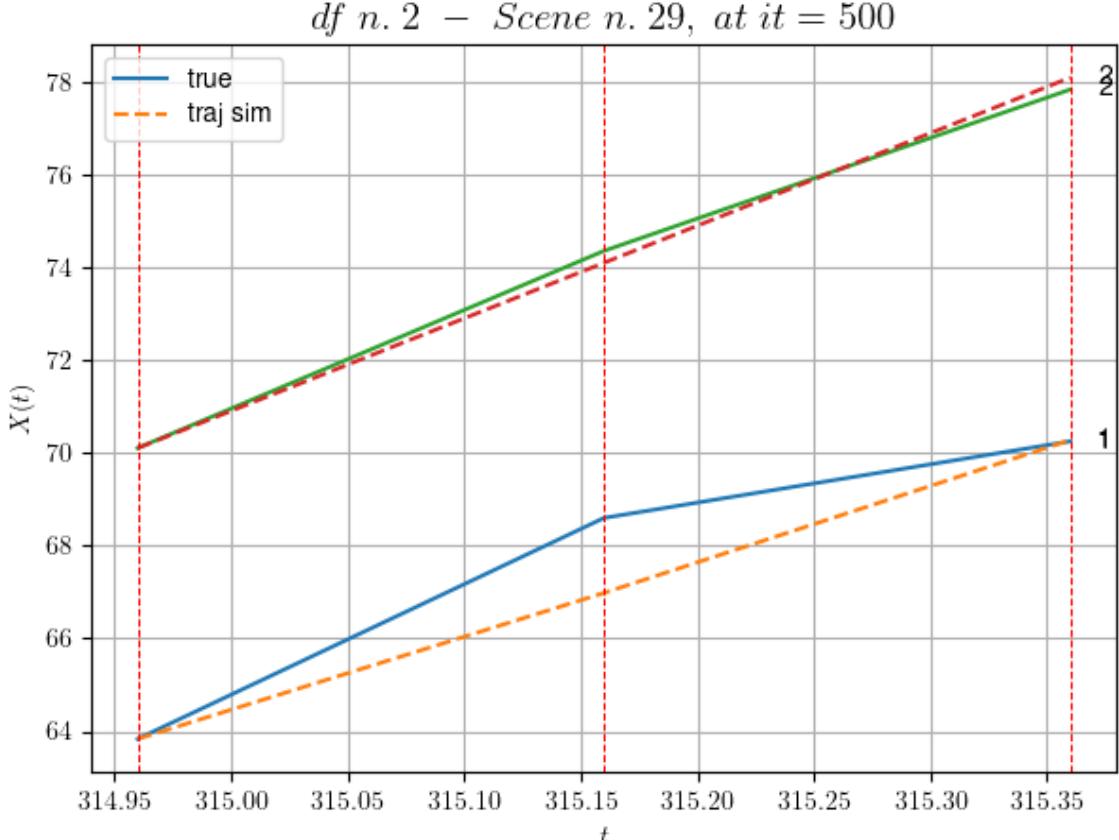
- Time interval n.1: [315.16, 315.36]

- * y_true: [8.26224636]
 - * v_ann: [16.482004165649414, 19.975403002157083]

- * err= 0.45819412866155457

- * Learning rate NN = 0.00036449998151510954

- * diff = 0.00014727230924754808



For scene 29/69

- * use LR_NN=0.0005 with err=3.938617135355099 at it=24
- * v0_scn_mean = 20.376386881991273
- * MAE = 0.4533362290937313

df n.2, scene n.30/69

We have 3 time intervals inside [332.76, 333.36]

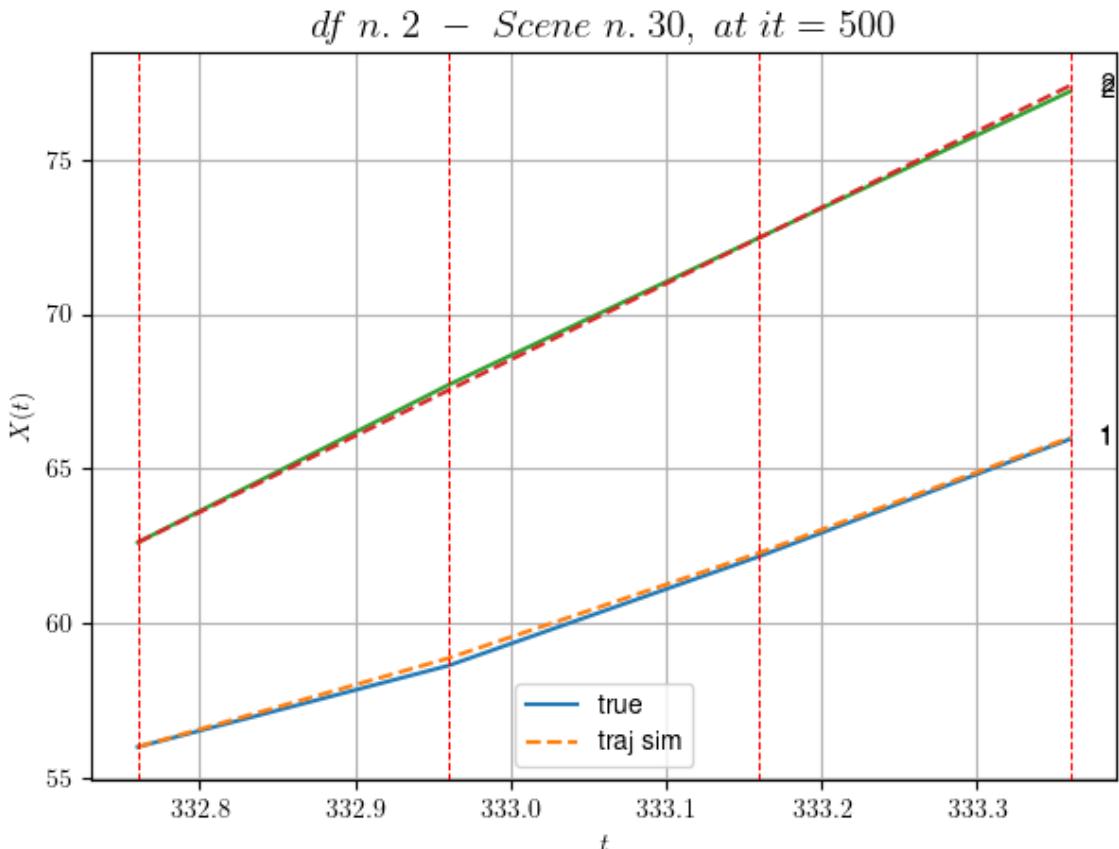
- Time interval n.0: [332.76, 332.96]
 - * y_true: [13.15083663]
 - * v_ann: [14.345800399780273, 24.607227640643536]

- Time interval n.1: [332.96, 333.16]
 - * y_true: [17.65124615]
 - * v_ann: [17.019729614257812, 24.607227640643536]

- Time interval n.2: [333.16, 333.36]
 - * y_true: [18.95150362]
 - * v_ann: [18.634883880615234, 24.607227640643536]

- * err= 0.017065503707470675
- * Learning rate NN = 0.0002952449722215533

* diff = 0.00040435904011104987



For scene 30/69

* use LR_NN=0.0005 with err=2.1550025857278245 at it=24
 * v0_scn_mean = 24.822938534974565
 * MAE = 0.017065503707470675

df n.2, scene n.31/69

We have 7 time intervals inside [354.76, 356.16]

- Time interval n.0: [354.76, 354.96]
 - * y_true: [15.35025294]
 - * v_ann: [14.473915100097656, 18.73800634953447]

- Time interval n.1: [354.96, 355.16]
 - * y_true: [16.45032349]
 - * v_ann: [14.64302921295166, 18.73800634953447]

- Time interval n.2: [355.16, 355.36]
 - * y_true: [17.47042754]
 - * v_ann: [15.263042449951172, 18.73800634953447]

- Time interval n.3: [355.36, 355.56]

```
* y_true: [15.05042697]
* v_ann: [15.960371017456055, 18.73800634953447]
```

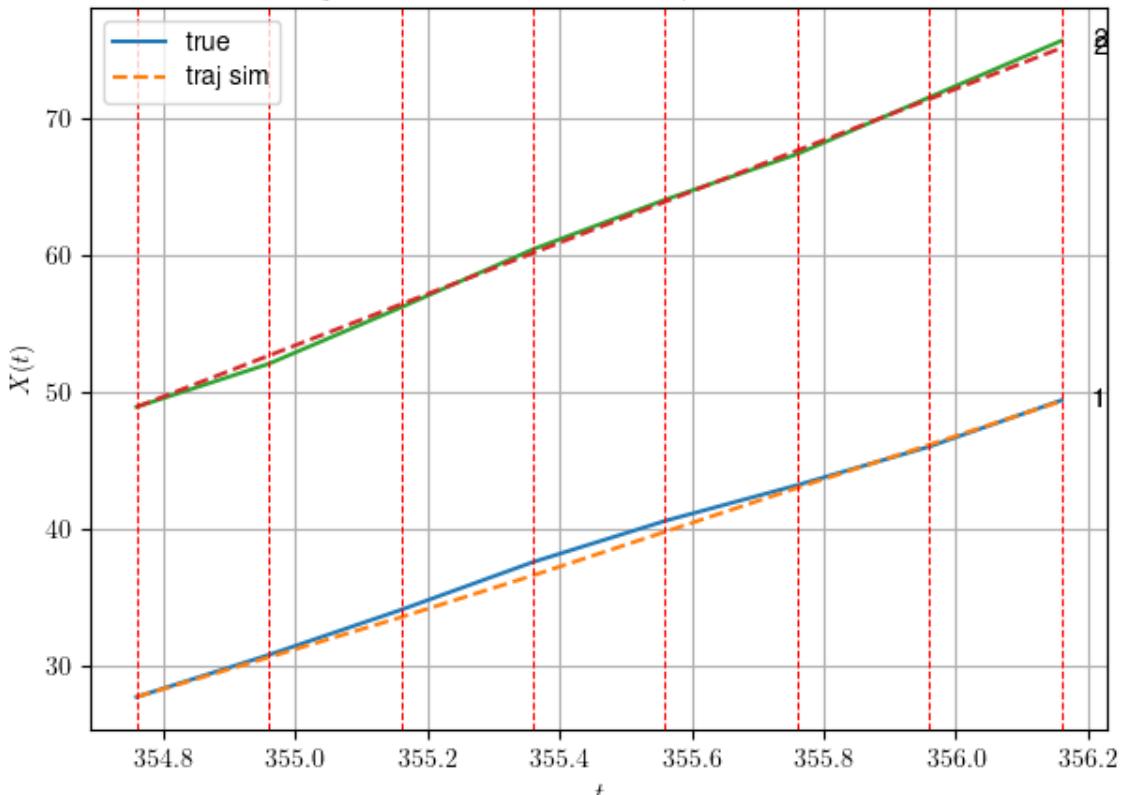
```
- Time interval n.4: [355.56, 355.76]
* y_true: [13.05043358]
* v_ann: [16.040861129760742, 18.73800634953447]
```

```
- Time interval n.5: [355.76, 355.96]
* y_true: [14.08053077]
* v_ann: [15.747490882873535, 18.73800634953447]
```

```
- Time interval n.6: [355.96, 356.16]
* y_true: [16.93073503]
* v_ann: [15.923813819885254, 18.73800634953447]
```

```
* err= 0.17766000605728022
* Learning rate NN = 0.00012709324073512107
* diff = 0.00047995865226468926
```

df n. 2 – Scene n. 31, at it = 500

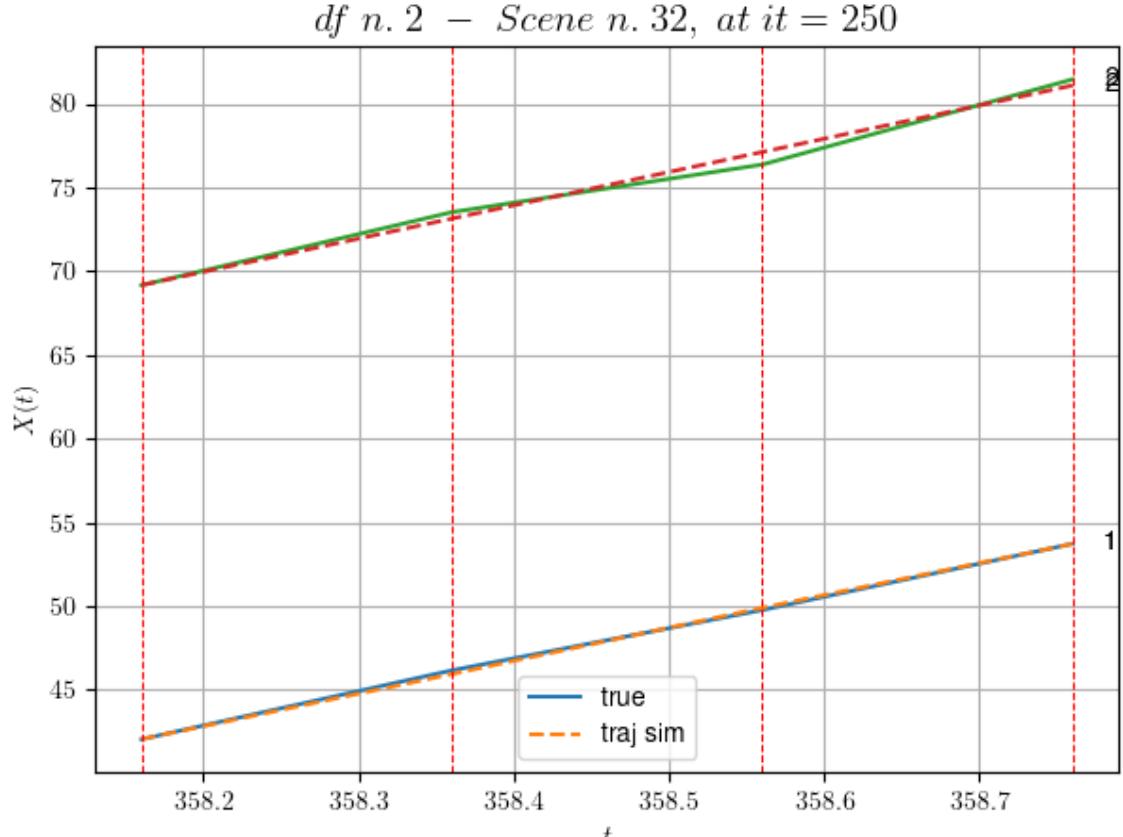


For scene 31/69

```
* use LR_NN=0.0005 with err=43.541387567502305 at it=24
* v0_scn_mean = 19.188486095467205
* MAE = 0.12431670043670509
```

```
df n.2, scene n.32/69
```

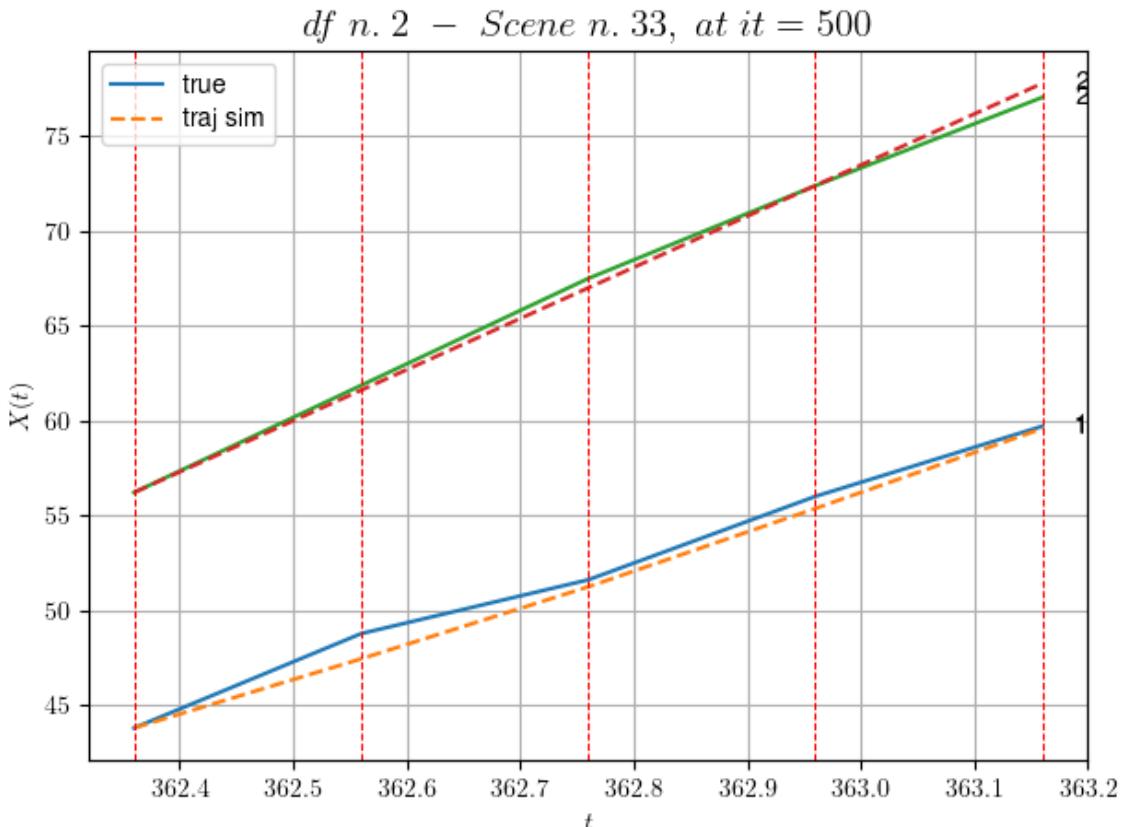
We have 3 time intervals inside [358.16,358.76]
 * err= 0.1137246535853564
 * Learning rate NN = 8.099999104160815e-05
 * diff = 3.3320625340838017e-07



- Time interval n.2: [362.76, 362.96]
- * y_true: [21.95124893]
- * v_ann: [20.62493896484375, 26.931159292590547]

- Time interval n.3: [362.96, 363.16]
- * y_true: [18.48118796]
- * v_ann: [21.05008888244629, 26.931159292590547]

- * err= 0.3179414528132289
- * Learning rate NN = 4.7829678806010634e-05
- * diff = 0.001443614628272305



For scene 33/69

- * use LR_NN=0.0001 with err=1.897066867901066 at it=24
- * v0_scn_mean = 27.053912920860977
- * MAE = 0.3173049129953376

df n.2, scene n.34/69

We have 5 time intervals inside [365.16,366.16]

- Time interval n.0: [365.16, 365.36]
- * y_true: [16.50108755]
- * v_ann: [16.36791229248047, 23.672070636508167]

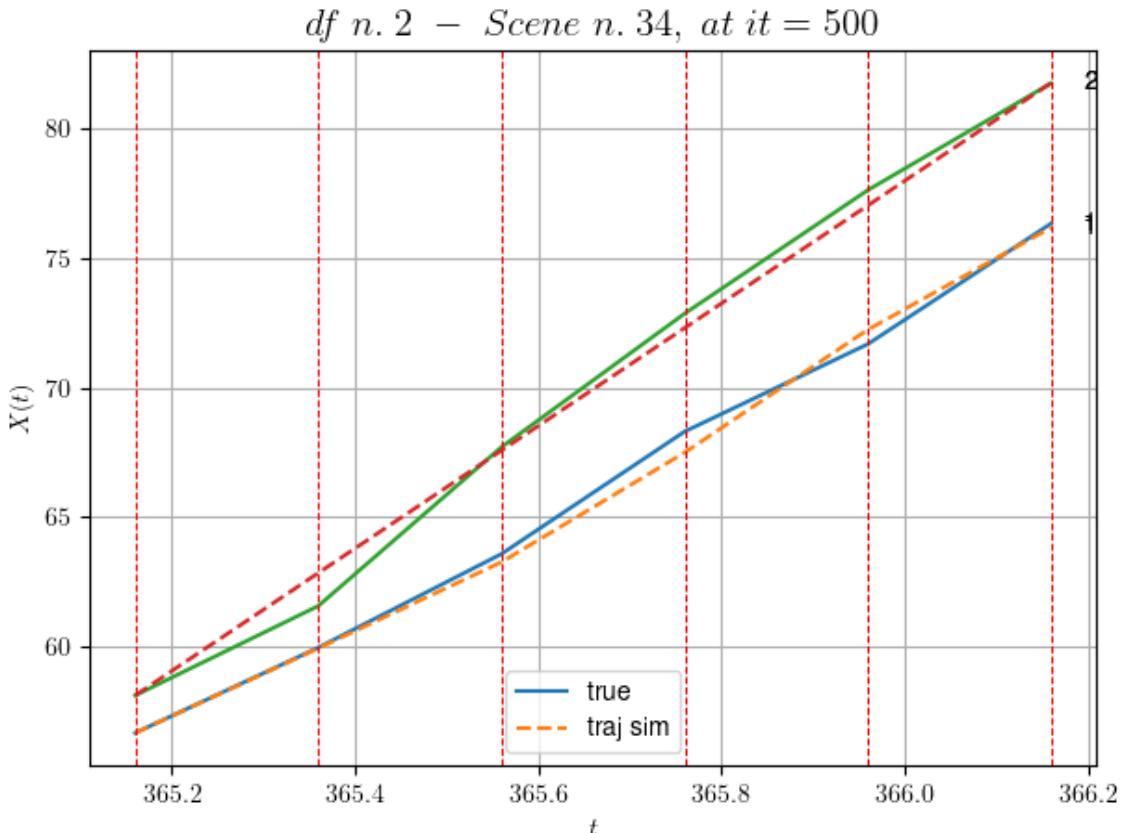
```
- Time interval n.1: [365.36, 365.56]
  * y_true: [18.10133819]
  * v_ann: [16.66329002380371, 23.672070636508167]
```

```
- Time interval n.2: [365.56, 365.76]
  * y_true: [23.65199157]
  * v_ann: [21.162940979003906, 23.672070636508167]
```

```
- Time interval n.3: [365.76, 365.96]
  * y_true: [16.90160161]
  * v_ann: [23.748607635498047, 23.672070636508167]
```

```
- Time interval n.4: [365.96, 366.16]
  * y_true: [23.30246885]
  * v_ann: [19.70877456665039, 23.672070636508167]
```

```
* err= 0.2834072681448112
* Learning rate NN = 0.0019371019443497062
* diff = 0.012220123277268202
```



For scene 34/69

```
* use LR_NN=0.005 with err=7.020076988614309 at it=24
* v0_scn_mean = 23.925187810999187
* MAE = 0.2834072681448112
```

```
=====
=====

df n.2, scene n.35/69
=====
=====

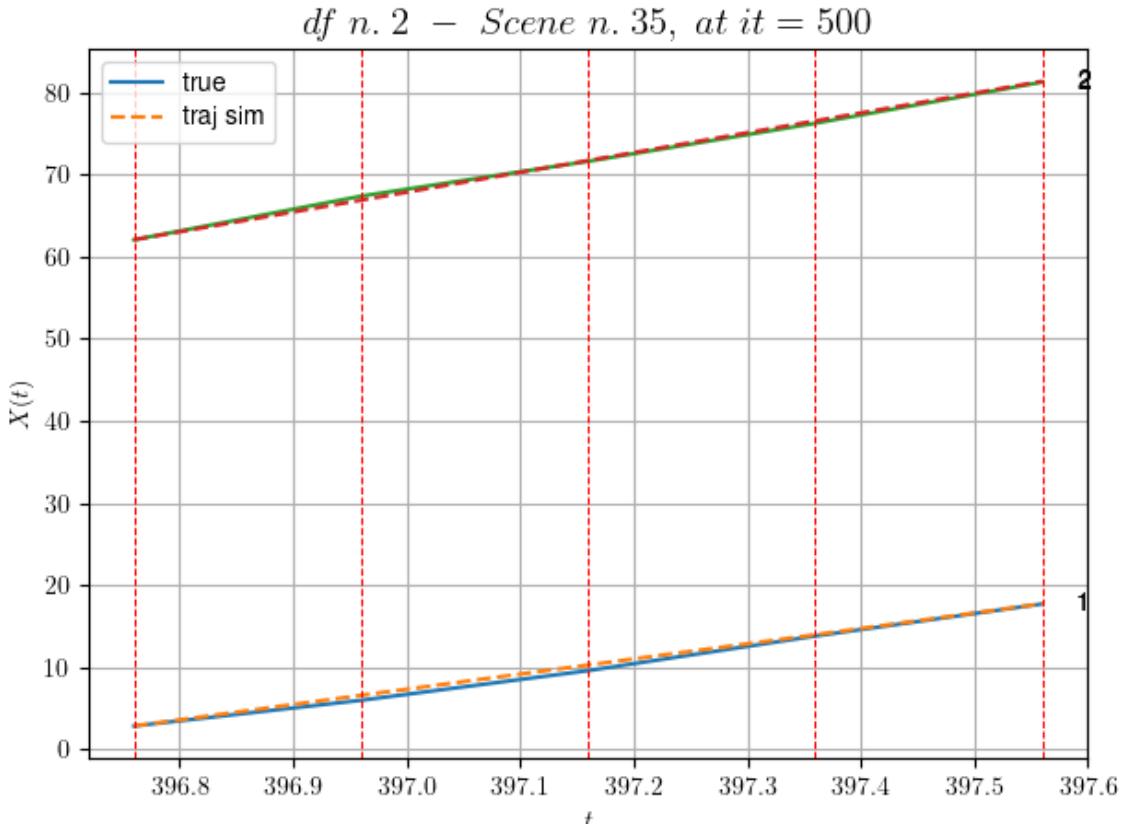
We have 4 time intervals inside [396.76,397.56]
- Time interval n.0: [396.76, 396.96]
  * y_true: [15.65000795]
  * v_ann: [18.676679611206055, 24.122244815730042]

-----
- Time interval n.1: [396.96, 397.16]
  * y_true: [18.06002531]
  * v_ann: [18.439821243286133, 24.122244815730042]

-----
- Time interval n.2: [397.16, 397.36]
  * y_true: [21.04006026]
  * v_ann: [18.436798095703125, 24.122244815730042]

-----
- Time interval n.3: [397.36, 397.56]
  * y_true: [19.54009809]
  * v_ann: [18.881145477294922, 24.122244815730042]

-----
* err= 0.11974994975611794
* Learning rate NN = 4.782968062500004e-06
* diff = 1.1483319319660623e-05
```



For scene 35/69

- * use LR_NN=1e-05 with err=4.4545846193028735 at it=24
- * v0_scn_mean = 24.357355023055757
- * MAE = 0.11842314993141853

df n.2, scene n.36/69

We have 5 time intervals inside [399.56, 400.56]

- Time interval n.0: [399.56, 399.76]
 - * y_true: [22.65080888]
 - * v_ann: [18.580482482910156, 22.285901484028233]

- Time interval n.1: [399.76, 399.96]
 - * y_true: [15.05063497]
 - * v_ann: [18.716083526611328, 22.285901484028233]

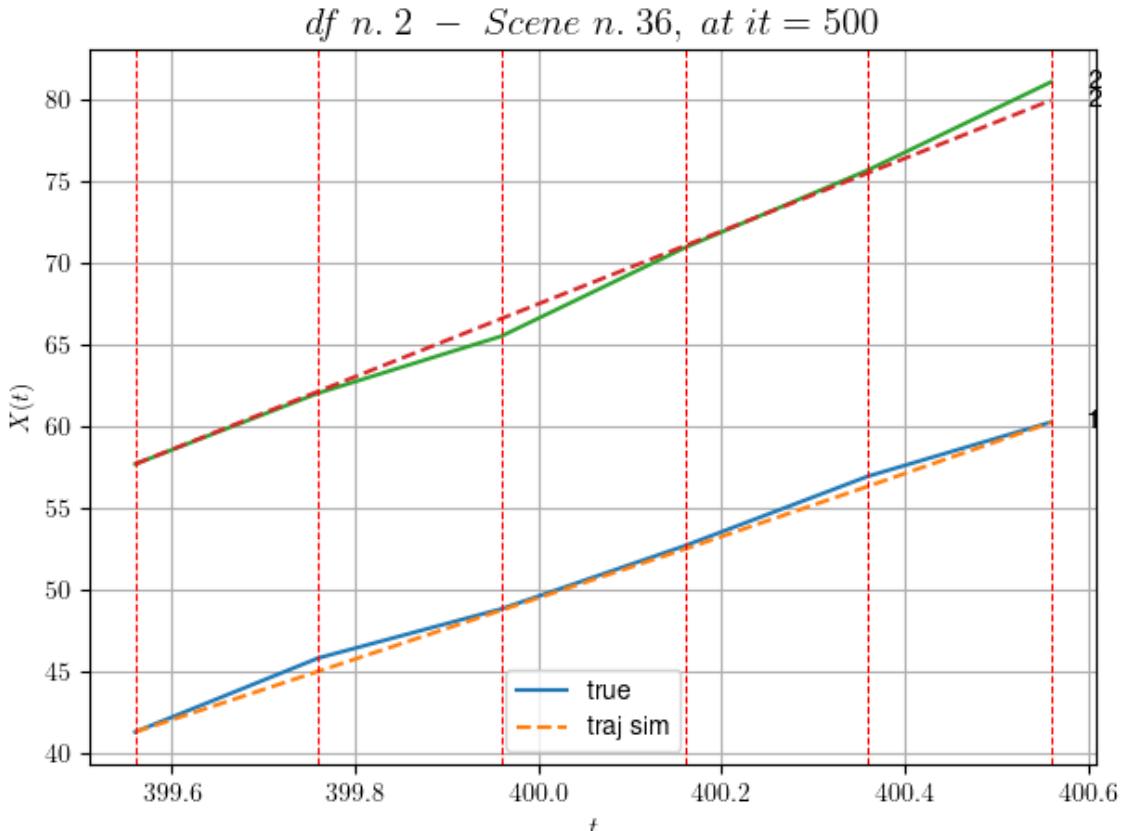
- Time interval n.2: [399.96, 400.16]
 - * y_true: [19.30093791]
 - * v_ann: [18.70012664794922, 22.285901484028233]

- Time interval n.3: [400.16, 400.36]
 - * y_true: [21.30120859]

```
* v_ann: [19.24195671081543, 22.285901484028233]
```

- Time interval n.4: [400.36, 400.56]
 - * y_true: [16.60107718]
 - * v_ann: [19.5300350189209, 22.285901484028233]

- * err= 0.2959770369373338
- * Learning rate NN = 1.9371018424862996e-05
- * diff = 0.0005560402257140201



For scene 36/69

- * use LR_NN=5e-05 with err=10.3496153714765 at it=24
- * v0_scn_mean = 22.594465424608366
- * MAE = 0.28203247381287944

df n.2, scene n.37/69

We have 4 time intervals inside [411.36, 412.16]

- Time interval n.0: [411.36, 411.56]
 - * y_true: [25.28122446]
 - * v_ann: [23.46653938293457, 24.337743181531014]

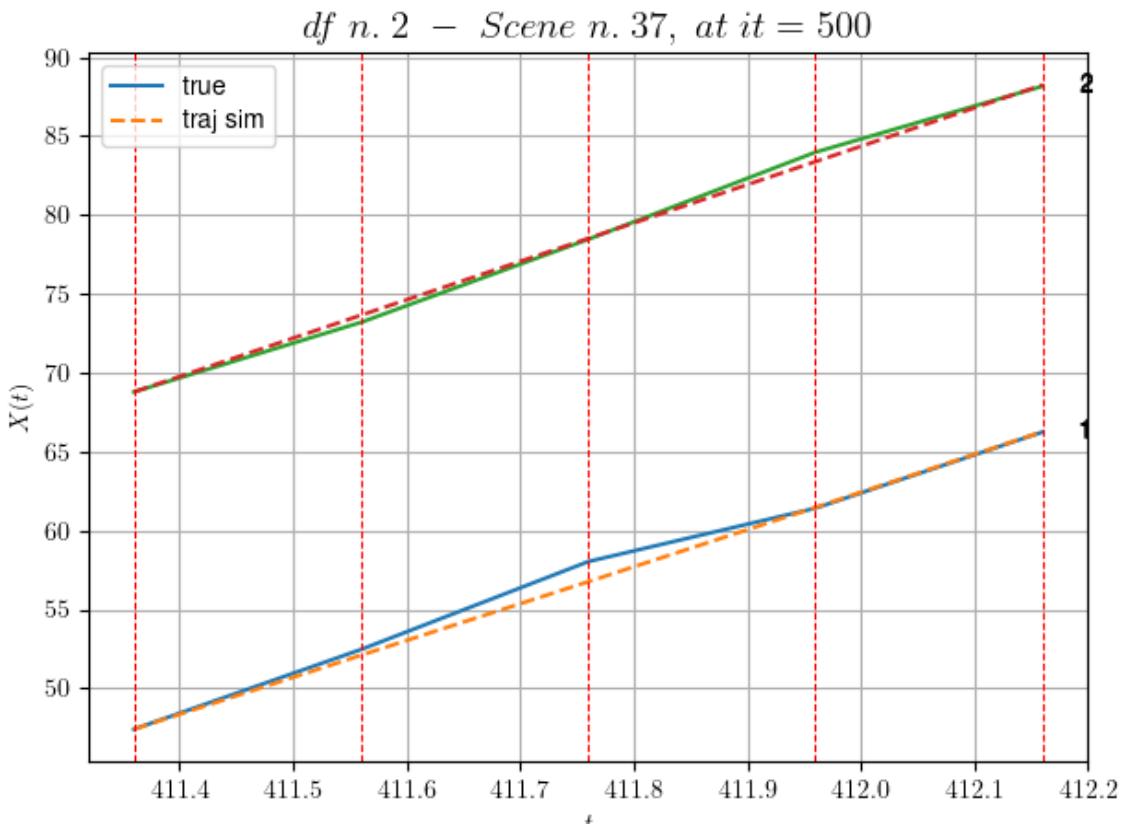
- Time interval n.1: [411.56, 411.76]
 - * y_true: [27.86165985]

```
* v_ann: [23.303308486938477, 24.337743181531014]
```

```
- Time interval n.2: [411.76, 411.96]
* y_true: [16.92114849]
* v_ann: [23.53614616394043, 24.337743181531014]
```

```
- Time interval n.3: [411.96, 412.16]
* y_true: [24.16192805]
* v_ann: [24.060056686401367, 24.337743181531014]
```

```
* err= 0.2331930475641601
* Learning rate NN = 2.3914839403005317e-05
* diff = 1.2376812090764133e-06
```



For scene 37/69

```
* use LR_NN=5e-05 with err=3.9038523074134854 at it=24
* v0_scn_mean = 24.564233454226837
* MAE = 0.23045422995637238
```

df n.2, scene n.38/69

We have 3 time intervals inside [413.96, 414.56]
- Time interval n.0: [413.96, 414.16]

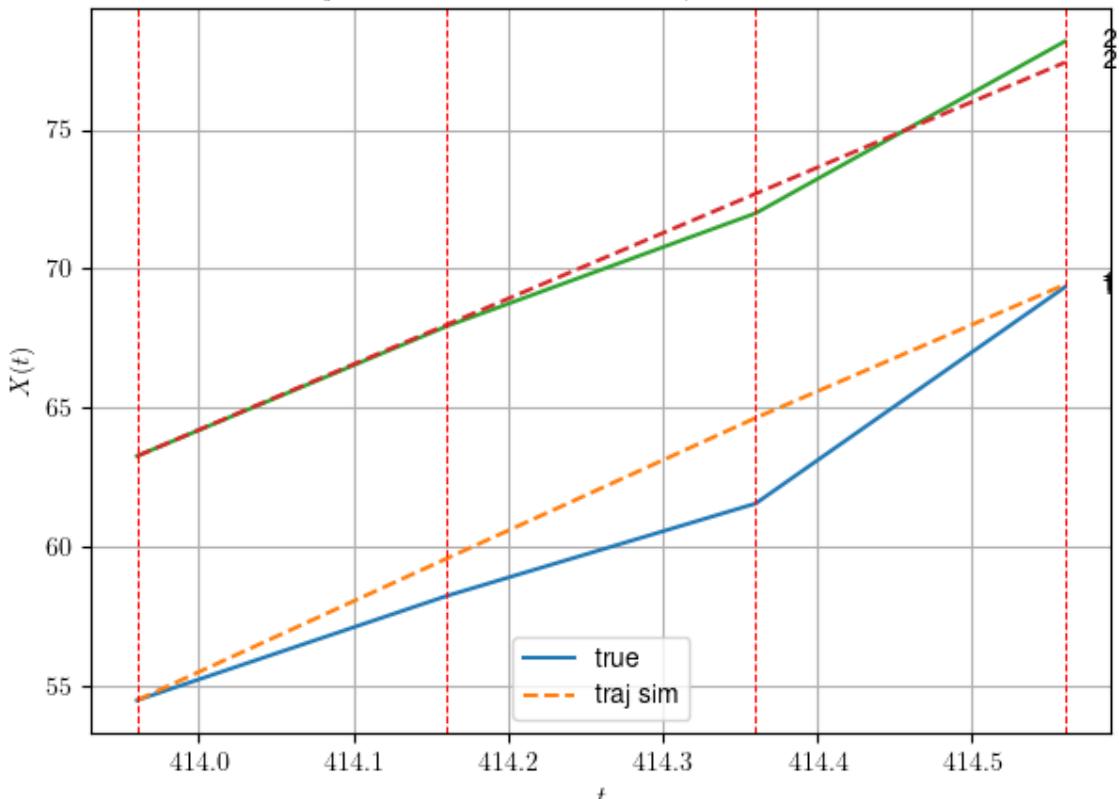
```
* y_true: [18.75115567]
* v_ann: [25.475955963134766, 23.615524542916493]
```

```
- Time interval n.1: [414.16, 414.36]
* y_true: [16.65115772]
* v_ann: [25.334388732910156, 23.615524542916493]
```

```
- Time interval n.2: [414.36, 414.56]
* y_true: [38.95323614]
* v_ann: [23.98501968383789, 23.615524542916493]
```

```
* err= 1.5489271445801431
* Learning rate NN = 0.0002952449722215533
* diff = 0.0000562511057717000
```

df n. 2 – Scene n. 38, at it = 500



For scene 38/69

```
* use LR_NN=0.0005 with err=4.333960502900598 at it=24
* v0_scn_mean = 23.870903561150865
* MAE = 1.514986562522865
```

df n.2, scene n.39/69

We have 6 time intervals inside [428.56, 429.76]

```
- Time interval n.0: [428.56, 428.76]
 * y_true: [22.45041238]
 * v_ann: [-2.0471376046771184e-05, 19.2778103565244
34]

-----
- Time interval n.1: [428.76, 428.96]
 * y_true: [16.60039646]
 * v_ann: [-2.381859849265311e-05, 19.2778103565244
4]

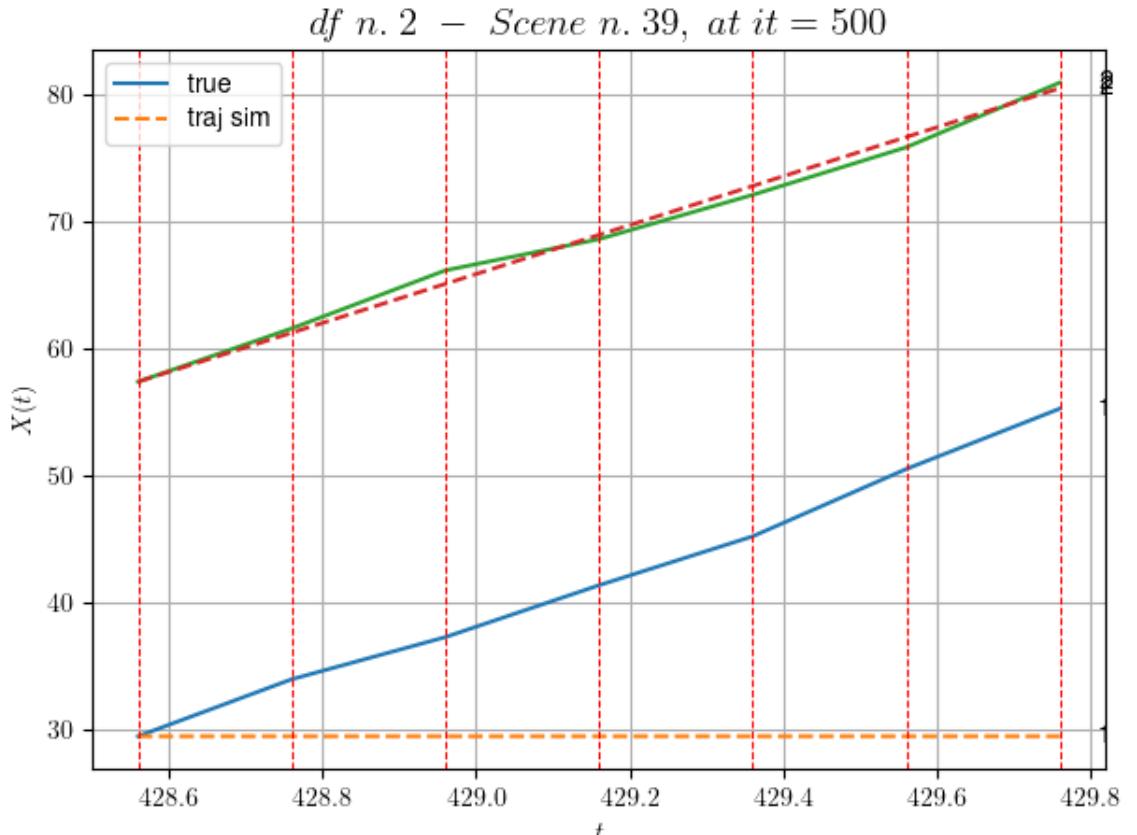
-----
- Time interval n.2: [428.96, 429.16]
 * y_true: [20.43058574]
 * v_ann: [-1.2385097761580255e-05, 19.2778103565244
34]

-----
- Time interval n.3: [429.16, 429.36]
 * y_true: [19.26068658]
 * v_ann: [-2.8984013624722138e-05, 19.2778103565244
34]

-----
- Time interval n.4: [429.36, 429.56]
 * y_true: [26.54113816]
 * v_ann: [-3.5016673791687936e-05, 19.2778103565244
34]

-----
- Time interval n.5: [429.56, 429.76]
 * y_true: [23.79124092]
 * v_ann: [-7.906600512797013e-05, 19.2778103565244
4]

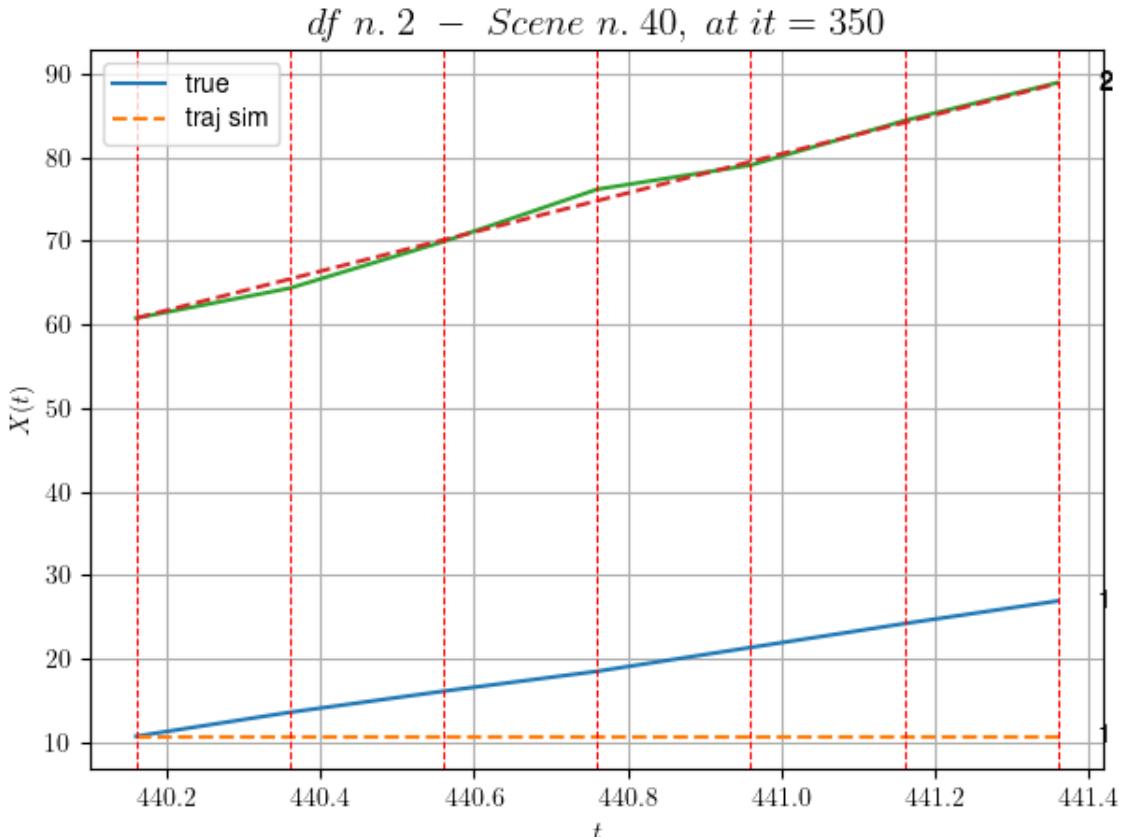
-----
* err= 113.08405180406146
* Learning rate NN = 0.00015690525469835848
* diff = 1.5077045066572627e-05
```



df n.2, scene n.40/69

We have 6 time intervals inside [440.16,441.36]

- * err= 46.91956330190284
- * Learning rate NN = 4.304671165300533e-06
- * diff = 1.0105221548428744e-07



For scene 40/69

```
* use LR_NN=1e-05 with err=11.14183266827823 at it=24
* v0_scn_mean = 23.759054431573883
* MAE = 46.91340412529142
```

df n.2, scene n.41/69

We have 7 time intervals inside [442.36, 443.76]

- Time interval n.0: [442.36, 442.56]
 - * y_true: [12.43042647]
 - * v_ann: [11.830875396728516, 21.85795817065097]

- Time interval n.1: [442.56, 442.76]
 - * y_true: [15.80061825]
 - * v_ann: [12.798785209655762, 21.85795817065097]

- Time interval n.2: [442.76, 442.96]
 - * y_true: [13.31057742]
 - * v_ann: [13.536779403686523, 21.85795817065097]

- Time interval n.3: [442.96, 443.16]
 - * y_true: [11.01053508]

```
* v_ann: [14.25611686706543, 21.85795817065097]
```

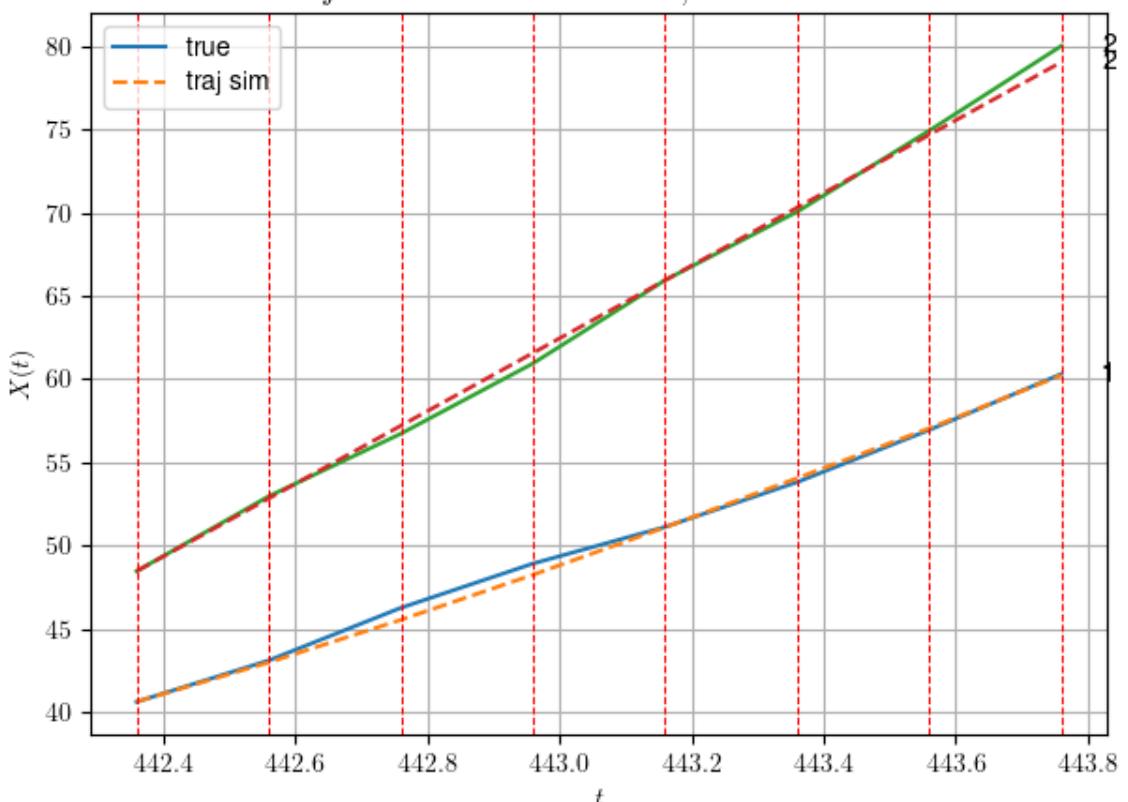
```
- Time interval n.4: [443.16, 443.36]
* y_true: [13.47072378]
* v_ann: [14.794382095336914, 21.85795817065097]
```

```
- Time interval n.5: [443.36, 443.56]
* y_true: [15.67093348]
* v_ann: [14.988622665405273, 21.85795817065097]
```

```
- Time interval n.6: [443.56, 443.76]
* y_true: [16.84112333]
* v_ann: [15.963050842285156, 21.85795817065097]
```

```
* err= 0.17353494168769265
* Learning rate NN = 0.00025418648147024214
* diff = 0.003303790877678542
```

df n. 2 – Scene n. 41, at it = 500



For scene 41/69

```
* use LR_NN=0.001 with err=23.008548168483724 at it=24
* v0_scn_mean = 22.183639843763906
* MAE = 0.17353494168769265
```

```
df n.2, scene n.42/69
=====
=====
We have 5 time intervals inside [483.16,484.16]
- Time interval n.0: [483.16, 483.36]
  * y_true: [13.10044424]
  * v_ann: [15.095452308654785, 18.47029090270145]

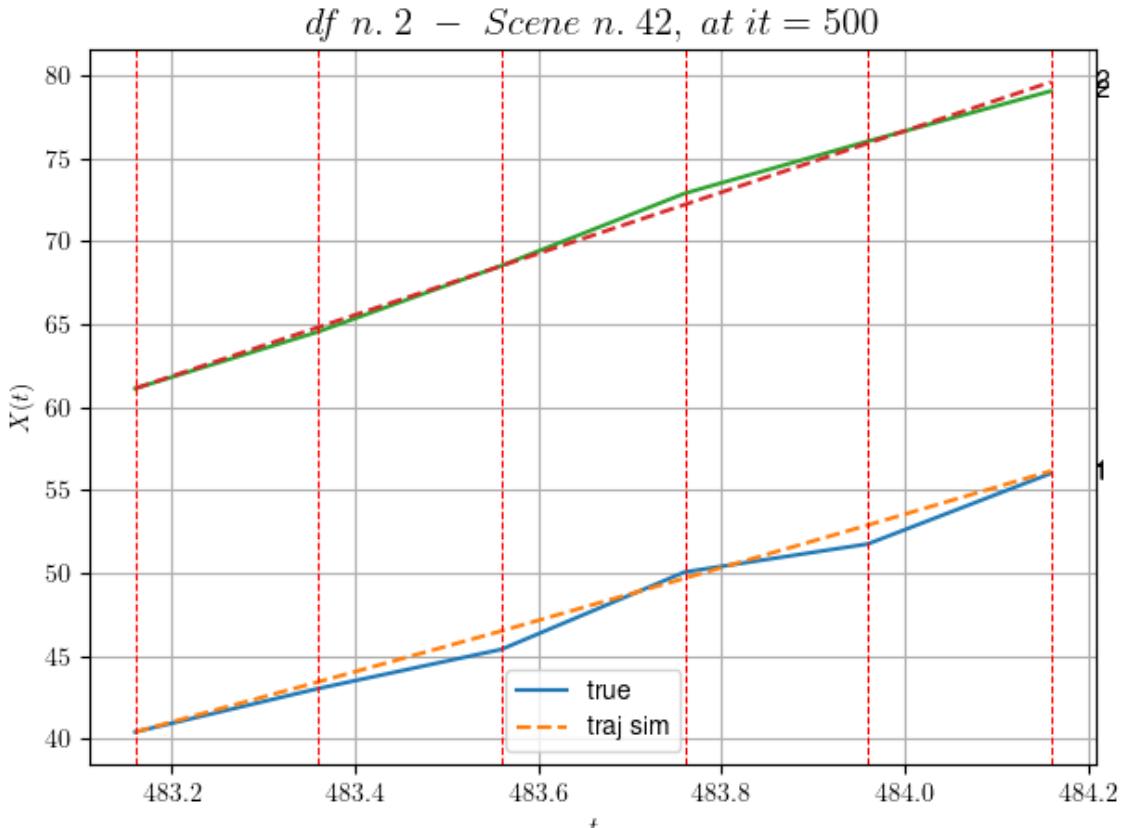
-----
- Time interval n.1: [483.36, 483.56]
  * y_true: [11.80044885]
  * v_ann: [15.350809097290039, 18.47029090270145]

-----
- Time interval n.2: [483.56, 483.76]
  * y_true: [23.3010318]
  * v_ann: [15.866564750671387, 18.47029090270145]

-----
- Time interval n.3: [483.76, 483.96]
  * y_true: [8.45042492]
  * v_ann: [16.02237892150879, 18.47029090270145]

-----
- Time interval n.4: [483.96, 484.16]
  * y_true: [21.30119954]
  * v_ann: [16.30959129333496, 18.47029090270145]

-----
* err= 0.30683551454390035
* Learning rate NN = 1.9371018424862996e-05
* diff = 0 0014658893353624025
```



For scene 42/69

- * use LR_NN=5e-05 with err=24.80553535996707 at it=24
- * v0_scn_mean = 18.931479266504855
- * MAE = 0.3045853481528406

df n.2, scene n.43/69

We have 3 time intervals inside [494.76, 495.36]

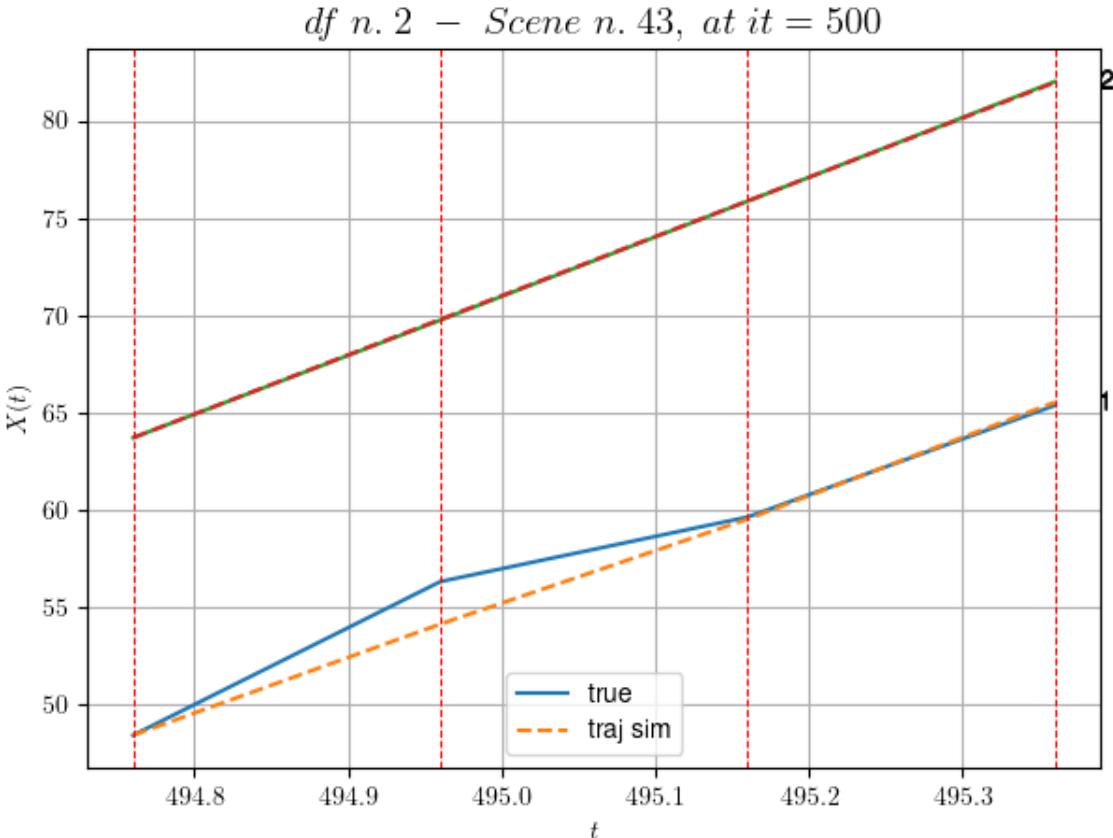
- Time interval n.0: [494.76, 494.96]
 - * y_true: [39.5021068]
 - * v_ann: [28.572099685668945, 30.442979864263112]

- Time interval n.1: [494.96, 495.16]
 - * y_true: [16.60108256]
 - * v_ann: [26.99461555480957, 30.442979864263112]

- Time interval n.2: [495.16, 495.36]
 - * y_true: [28.7021737]
 - * v_ann: [30.062976837158203, 30.442979864263112]

- * err= 0.6027201128788202
- * Learning rate NN = 5.904899080633186e-05

* diff = 5.3639872219433124e-05



For scene 43/69

* use LR_NN=0.0001 with err=0.6452298610190097 at it=24
 * v0_scn_mean = 30.42526066969607
 * MAE = 0.5966043130742872

df n.2, scene n.44/69

We have 7 time intervals inside [513.16, 514.56]

- Time interval n.0: [513.16, 513.36]
 - * y_true: [21.8303416]
 - * v_ann: [21.261865615844727, 22.16942692857503]

- Time interval n.1: [513.36, 513.56]
 - * y_true: [22.29045729]
 - * v_ann: [20.97707748413086, 22.16942692857503]

- Time interval n.2: [513.56, 513.76]
 - * y_true: [18.24046898]
 - * v_ann: [21.005231857299805, 22.16942692857503]

- Time interval n.3: [513.76, 513.96]

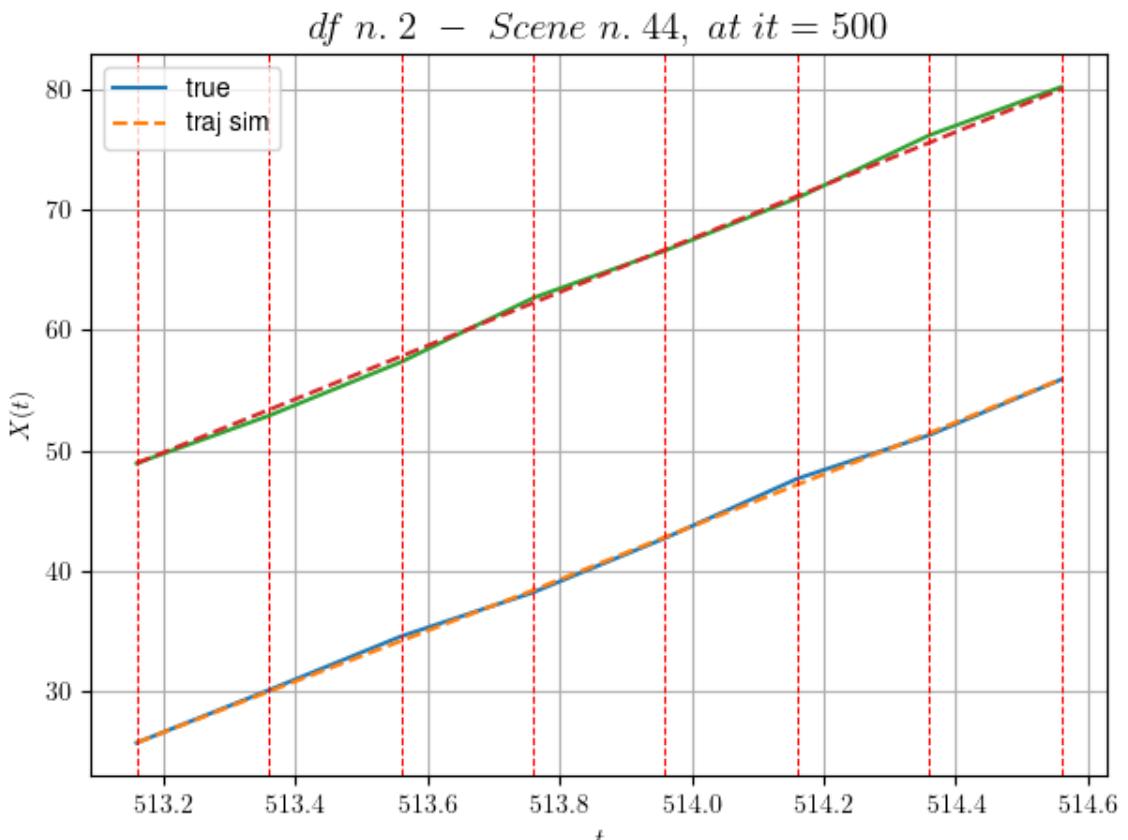
```
* y_true: [22.54072782]
* v_ann: [22.114028930664062, 22.16942692857503]
```

```
- Time interval n.4: [513.96, 514.16]
* y_true: [24.65098297]
* v_ann: [21.721345901489258, 22.16942692857503]
```

```
- Time interval n.5: [514.16, 514.36]
* y_true: [18.09085031]
* v_ann: [21.391843795776367, 22.16942692857503]
```

```
- Time interval n.6: [514.36, 514.56]
* y_true: [23.12130086]
* v_ann: [22.433704376220703, 22.16942692857503]
```

```
* err= 0.09712000773296343
* Learning rate NN = 1.2709323527815286e-05
* dfff = 7.000567620527102e-05
```



For scene 44/69

```
* use LR_NN=5e-05 with err=20.847624967569747 at it=24
* v0_scn_mean = 22.482649851371917
* MAE = 0.09262253936450635
```

```
df n.2, scene n.45/69
```

We have 2 time intervals inside [530.96,531.36]

- Time interval n.0: [530.96, 531.16]

- * y_true: [27.47191731]

- * v_ann: [25.742971420288086, 18.78540832306951]

- Time interval n.1: [531.16, 531.36]

- * y_true: [21.08169407]

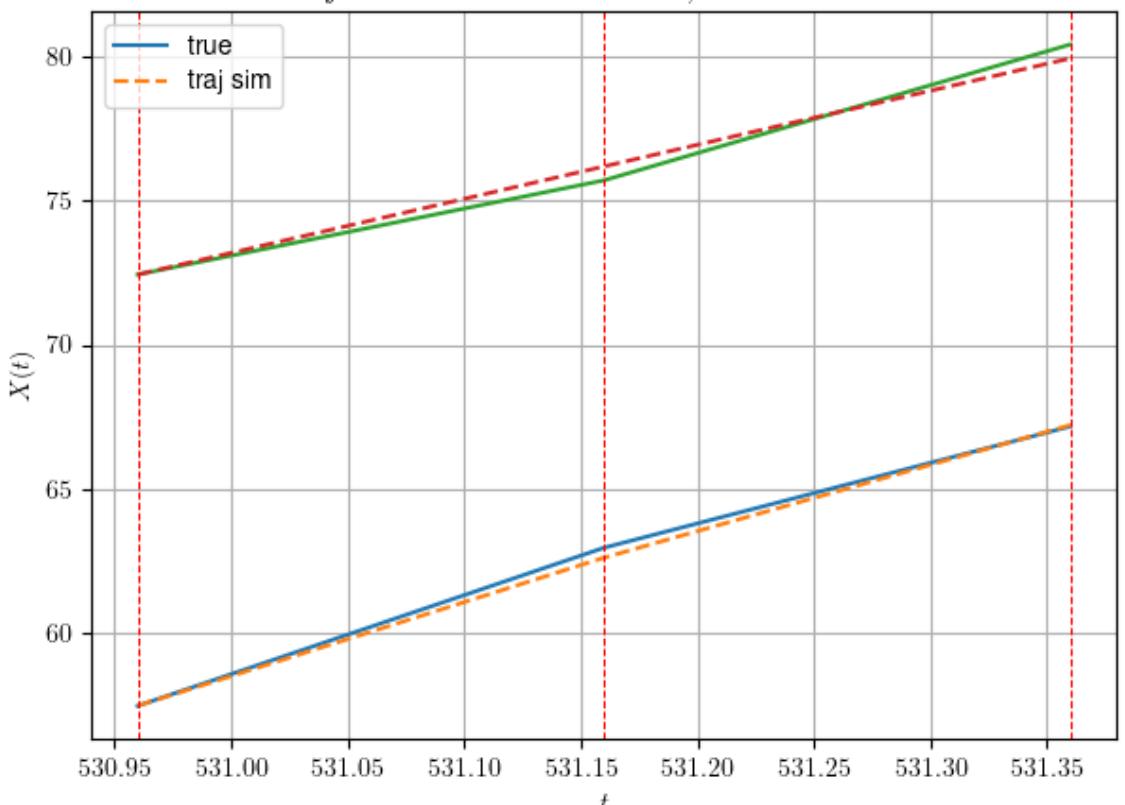
- * v_ann: [23.050556182861328, 18.78540832306951]

- * err= 0.09799118566853503

- * Learning rate NN = 7.289998757187277e-05

- * diff = 4.1450408755416834e-05

df n. 2 – Scene n. 45, at it = 500



For scene 45/69

- * use LR_NN=0.0001 with err=3.9195204844397447 at it=24

- * v0_scn_mean = 19.2339919900604

- * MAE = 0.09154528245680024

```
df n.2, scene n.46/69
```

We have 4 time intervals inside [534.96,535.76]

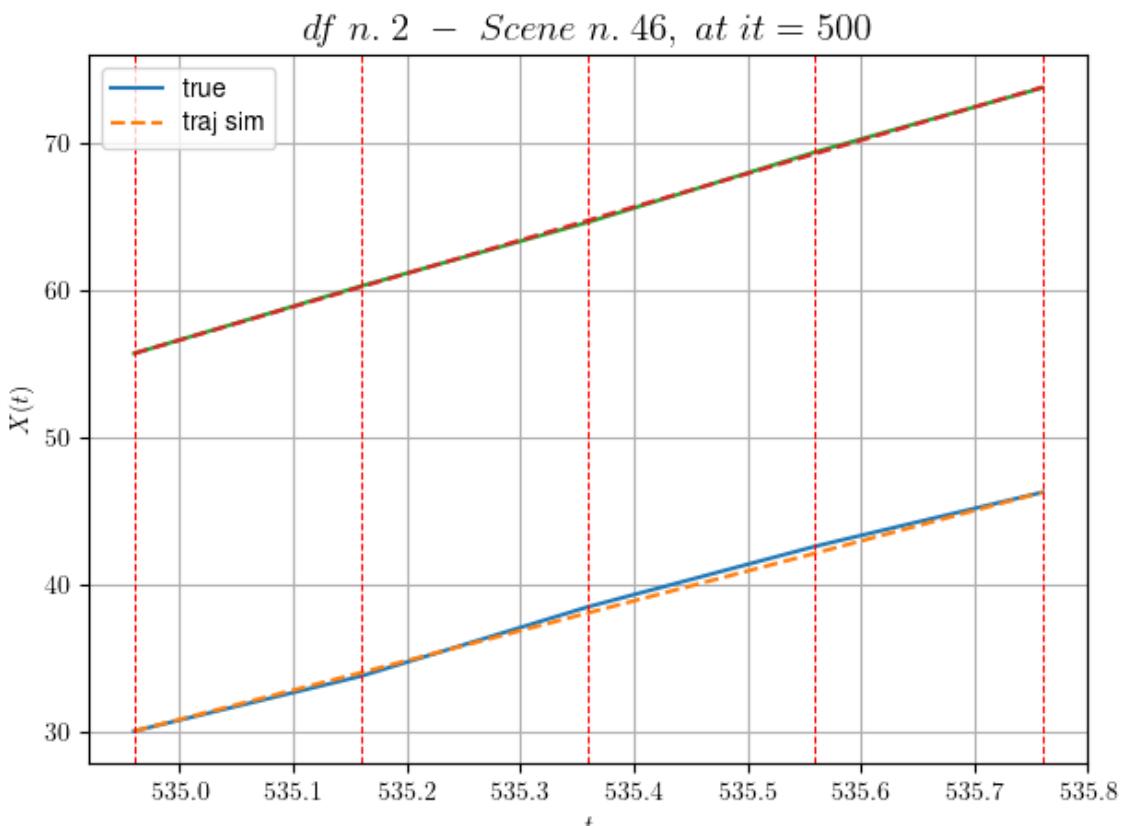
- Time interval n.0: [534.96, 535.16]
 * y_true: [18.70035331]
 * v_ann: [19.871156692504883, 22.621725364454704]

- Time interval n.1: [535.16, 535.36]
 * y_true: [23.55057295]
 * v_ann: [20.32208824157715, 22.621725364454704]

- Time interval n.2: [535.36, 535.56]
 * y_true: [20.55063096]
 * v_ann: [20.267641067504883, 22.621725364454704]

- Time interval n.3: [535.56, 535.76]
 * y_true: [18.350678]
 * v_ann: [20.687240600585938, 22.621725364454704]

* err= 0.04789075607732581
 * Learning rate NN = 2.3914839403005317e-05
 * diff = 9.032219194123753e-05



For scene 46/69

* use LR_NN=5e-05 with err=6.595741288945349 at it=24
 * v0_scn_mean = 22.916856349819273
 * MAE = 0.04776553183123228

df n.2, scene n.47/69

We have 2 time intervals inside [547.76, 548.16]

- Time interval n.0: [547.76, 547.96]

- * y_true: [25.25158957]

- * v_ann: [19.289064407348633, 17.735297210156133]

- Time interval n.1: [547.96, 548.16]

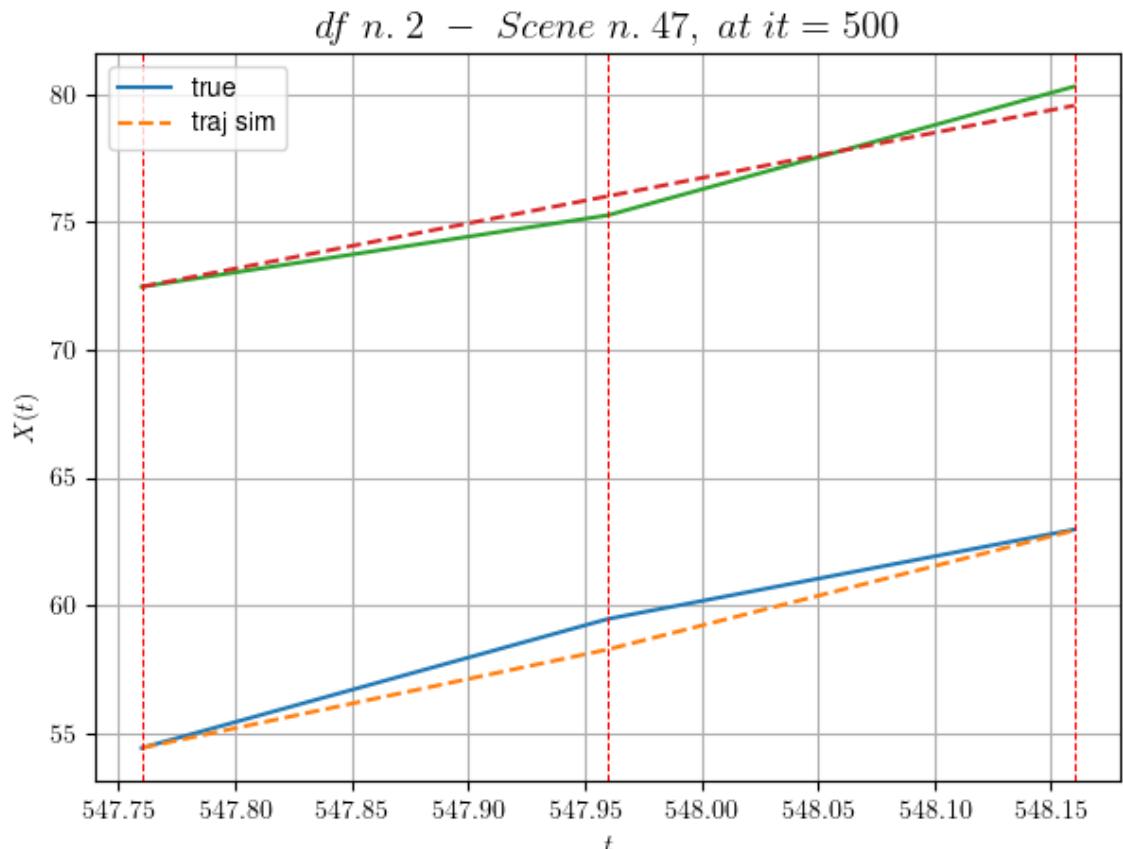
- * y_true: [17.50127175]

- * v_ann: [23.298532485961914, 17.735297210156133]

- * err= 0.4230792108023883

- * Learning rate NN = 0.0007289999630302191

- * diff = 0.0007994866832509717



For scene 47/69

- * use LR_NN=0.001 with err=5.084024393190822 at it=24

- * v0_scn_mean = 18.22588532165681

- * MAE = 0.4230792108023883

df n.2, scene n.48/69

```
=====
We have 6 time intervals inside [557.96,559.16]
- Time interval n.0: [557.96, 558.16]
  * y_true: [21.95035828]
  * v_ann: [23.944950103759766, 18.26598960498383]

-----
- Time interval n.1: [558.16, 558.36]
  * y_true: [31.40071757]
  * v_ann: [23.015668869018555, 18.26598960498383]

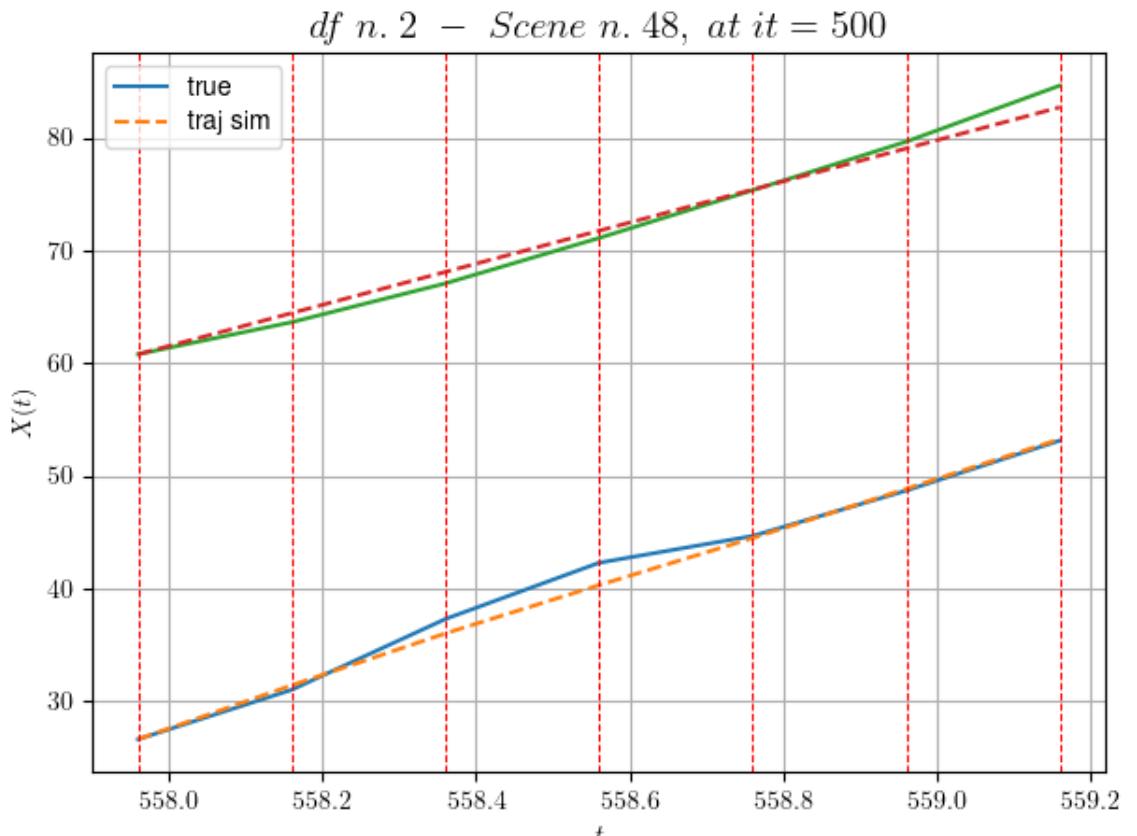
-----
- Time interval n.2: [558.36, 558.56]
  * y_true: [24.95077032]
  * v_ann: [21.416845321655273, 18.26598960498383]

-----
- Time interval n.3: [558.56, 558.76]
  * y_true: [11.90043764]
  * v_ann: [20.8748836517334, 18.26598960498383]

-----
- Time interval n.4: [558.76, 558.96]
  * y_true: [20.15085338]
  * v_ann: [21.9039363861084, 18.26598960498383]

-----
- Time interval n.5: [558.96, 559.16]
  * y_true: [22.20111676]
  * v_ann: [22.057830810546875, 18.26598960498383]

-----
* err= 0.8579733927353629
* Learning rate NN = 3.138104830213706e-06
* diff = 0.00018703129371866467
```

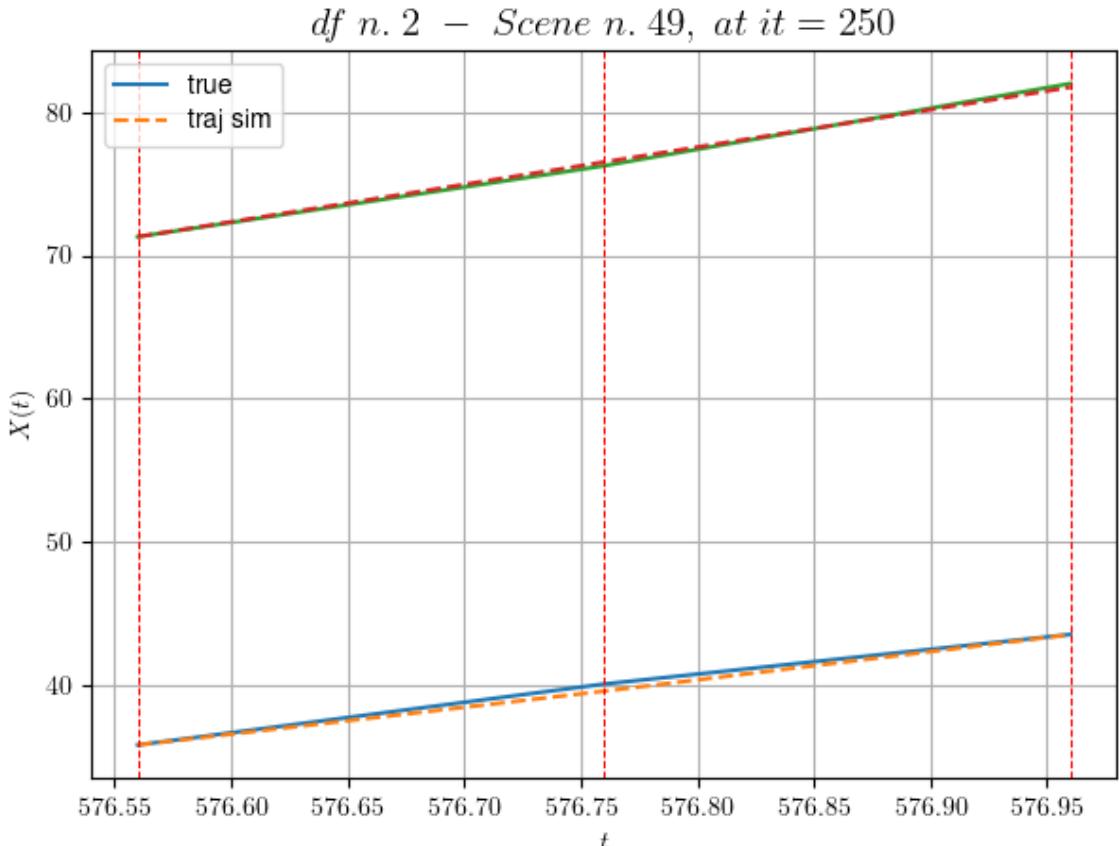


For scene 48/69

```
* use LR_NN=1e-05 with err=33.44209317628181 at it=24
* v0_scn_mean = 18.735350020695048
* MAE = 0.7938790109311773
```

df n.2, scene n.49/69

```
We have 2 time intervals inside [576.56,576.96]
* err= 0.06391882232888943
* Learning rate NN = 8.999999408842996e-05
* diff = 7.765249400298879e-07
```

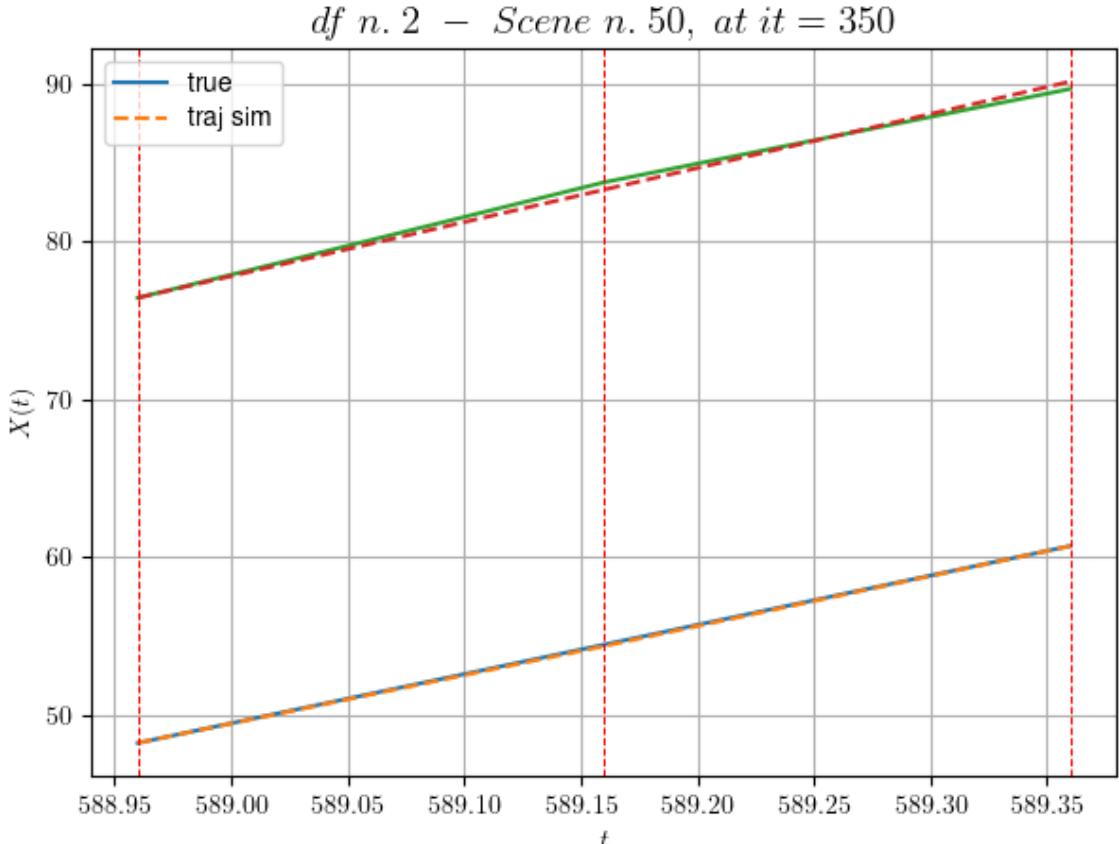


For scene 49/69

* use LR_NN=0.0001 with err=0.5238771714203265 at it=24
* v0_scn_mean = 26.384002719415346
* MAE = 0.06295974888301276

df n.2, scene n.50/69

We have 2 time intervals inside [588.96,589.36]
* err= 0.07415849862083668
* Learning rate NN = 4.049999552080408e-05
* diff = 8.563533052119432e-08



For scene 50/69

- * use LR_NN=5e-05 with err=0.5374049333282973 at it=24
- * v0_scn_mean = 33.979903425908745
- * MAE = 0.06695893412009218

df n.2, scene n.51/69

We have 4 time intervals inside [86.16, 86.96]

- Time interval n.0: [86.16, 86.36]
 - * y_true: [16.74023073 23.1409288]
 - * v_ann: [18.22878646850586, 18.228567123413086, 16.2353300601459]

- Time interval n.1: [86.36, 86.56]
 - * y_true: [19.40034801 15.51071286]
 - * v_ann: [19.749332427978516, 18.121929168701172, 16.2353300601459]

- Time interval n.2: [86.56, 86.76]
 - * y_true: [19.59044325 21.61118084]
 - * v_ann: [18.645679473876953, 17.199928283691406, 16.2353300601459]

```

-----  

- Time interval n.3: [86.76, 86.96]  

* y_true: [16.37044892 15.10091945]  

* v_ann: [19.813209533691406, 16.99091148376465, 1  

6.2353300601459]
-----
```

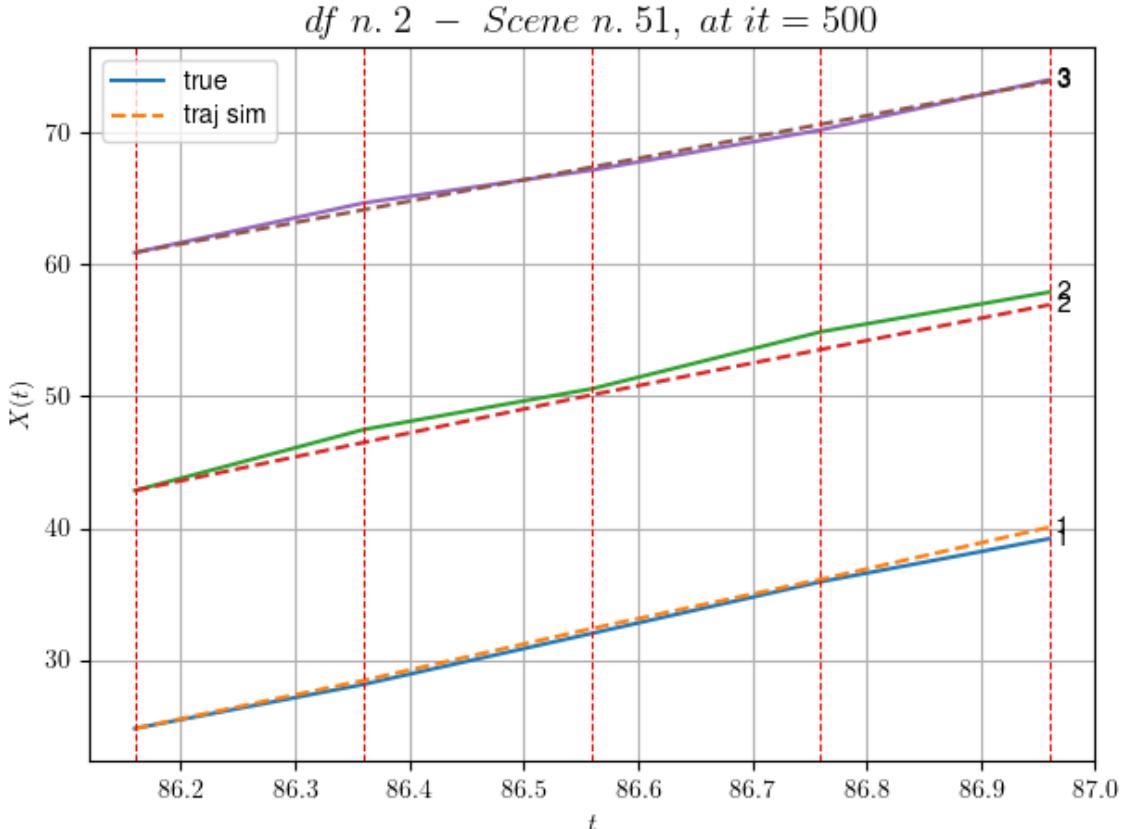
```

-----  

* err= 0.36255684536490085  

* Learning rate NN = 0.000239148415857926  

* diff = 0.00046889527920201957
-----
```



For scene 51/69

```

* use LR_NN=0.0005 with err=15.884945435114723 at it=24
* v0_scn_mean = 17.061209638533246
* MAE = 0.3624986641831451
=====
```

df n.2, scene n.52/69

```

=====
=====
```

We have 4 time intervals inside [109.36, 110.16]

```

- Time interval n.0: [109.36, 109.56]
* y_true: [28.77160952 15.03115545]
* v_ann: [22.824129104614258, 23.00418472290039, 2
0.033858704331603]
=====
```

```

-----  

- Time interval n.1: [109.56, 109.76]
* y_true: [23.64157457 15.83133823]
-----
```

```

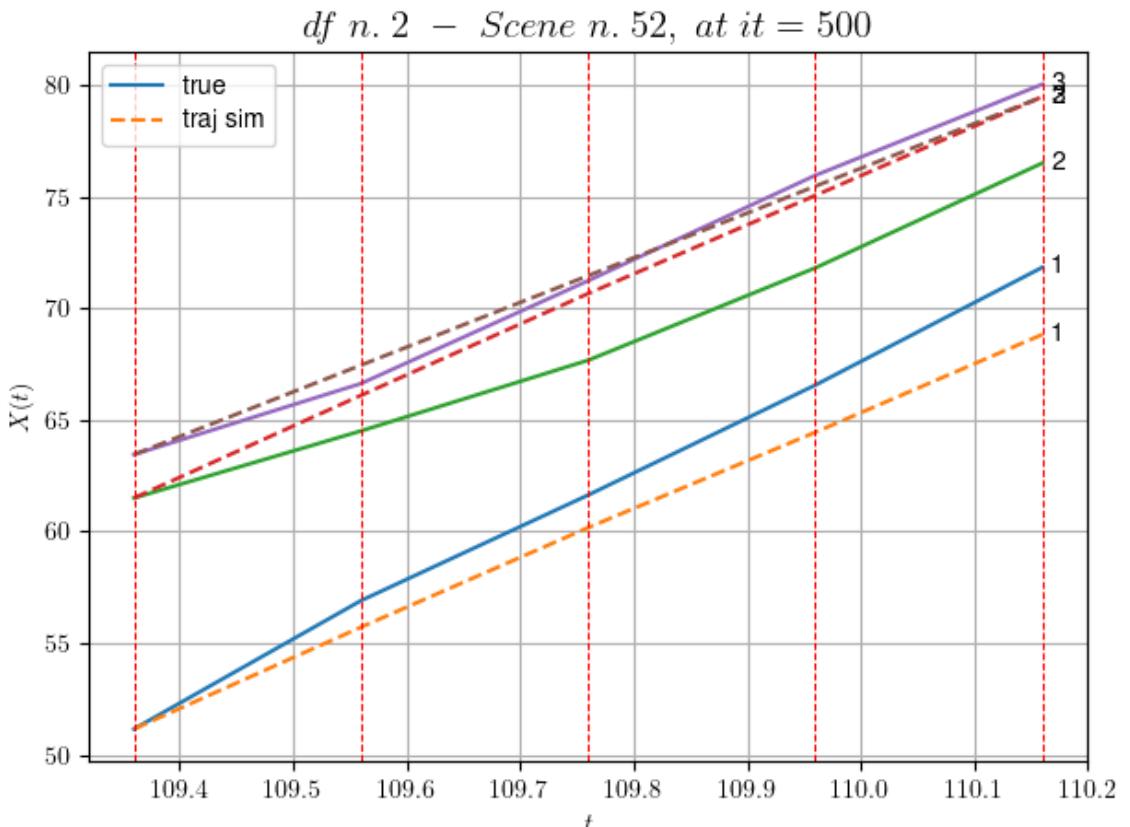
* v_ann: [22.29252815246582, 22.79911231994629, 20.
033858704331603]

-----
- Time interval n.2: [109.76, 109.96]
* y_true: [24.63196009 20.68195399]
* v_ann: [21.352924346923828, 21.968198776245117, 2
0.033858704331603]

-----
- Time interval n.3: [109.96, 110.16]
* y_true: [26.38241903 23.49250056]
* v_ann: [21.92190933227539, 22.12820816040039, 20.
033858704331603]

-----
* err= 3.27906626644358
* Learning rate NN = 0.000478296831715852
* diff = 0 025150714081560555

```



For scene 52/69

```

* use LR_NN=0.001 with err=11.24087590125658 at it=24
* v0_scn_mean = 20.631826734613448
* MAE = 2.3076238923580905
=====
```

df n.2, scene n.53/69

We have 4 time intervals inside [170.36, 171.16]

- Time interval n.0: [170.36, 170.56]
 - * y_true: [25.3307413 19.52081588]
 - * v_ann: [25.42753028869629, 27.7722377770996, 16.

151609391477848]

- Time interval n.1: [170.56, 170.76]
 - * y_true: [29.74113537 17.1608437]
 - * v_ann: [22.153711318969727, 19.500164031982422, 1

6.151609391477848]

- Time interval n.2: [170.76, 170.96]
 - * y_true: [24.43113316 23.6413756]
 - * v_ann: [23.954275131225586, 24.782384872436523, 1

6.151609391477848]

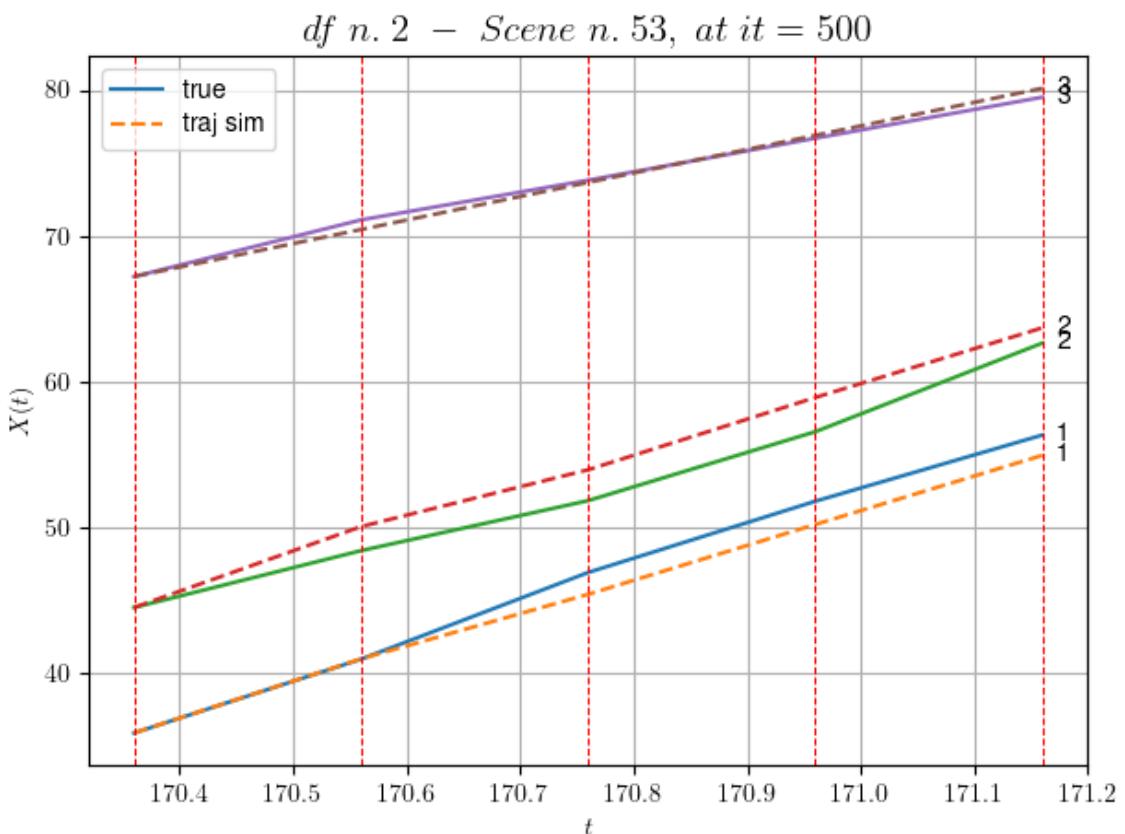
- Time interval n.3: [170.96, 171.16]
 - * y_true: [22.71130298 30.41206279]
 - * v_ann: [23.731369018554688, 23.915443420410156, 1

6.151609391477848]

* err= 1.4266394317656068

* Learning rate NN = 0.000478296831715852

* diff = 0.04825516474321945



For scene 53/69

```
* use LR_NN=0.001 with err=39.01250215265953 at it=24
* v0_scn_mean = 16.98251220622642
* MAE = 1.4266394317656068
```

```
=====
=====
```

```
df n.2, scene n.54/69
```

```
=====
=====
```

```
We have 4 time intervals inside [179.36,180.16]
```

```
- Time interval n.0: [179.36, 179.56]
  * y_true: [10.36002857 23.43048282]
  * v_ann: [18.105236053466797, 17.389039993286133, 2
2.08199952987891]
```

```
-----
-----
```

```
- Time interval n.1: [179.56, 179.76]
  * y_true: [10.37004005 22.87060641]
  * v_ann: [17.80153465270996, 17.261810302734375, 2
2.08199952987891]
```

```
-----
-----
```

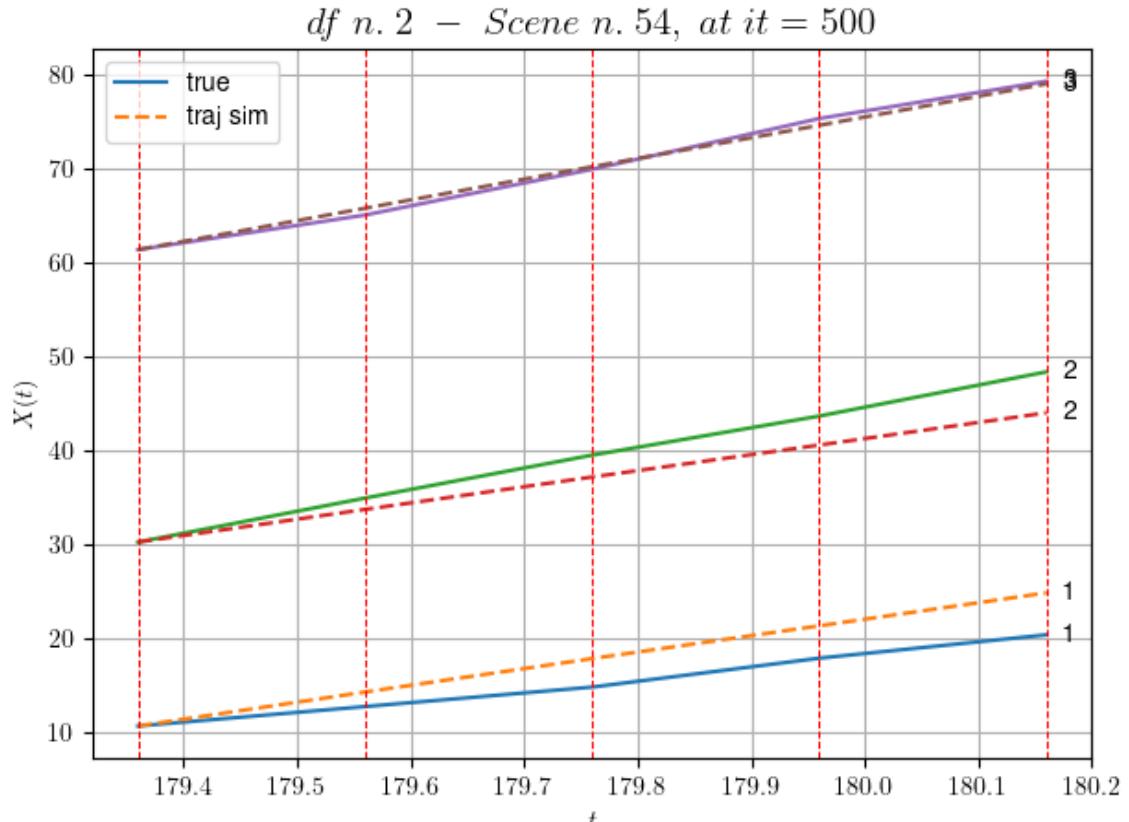
```
- Time interval n.2: [179.76, 179.96]
  * y_true: [15.39008451 20.81068862]
  * v_ann: [17.450244903564453, 17.020471572875977, 2
2.08199952987891]
```

```
-----
-----
```

```
- Time interval n.3: [179.96, 180.16]
  * y_true: [12.44008929 23.53096892]
  * v_ann: [17.570459365844727, 17.172435760498047, 2
2.08199952987891]
```

```
-----
-----
```

```
* err= 5.342736772354144
* Learning rate NN = 4.7829678806010634e-05
* diff = 0.01961801087062627
```

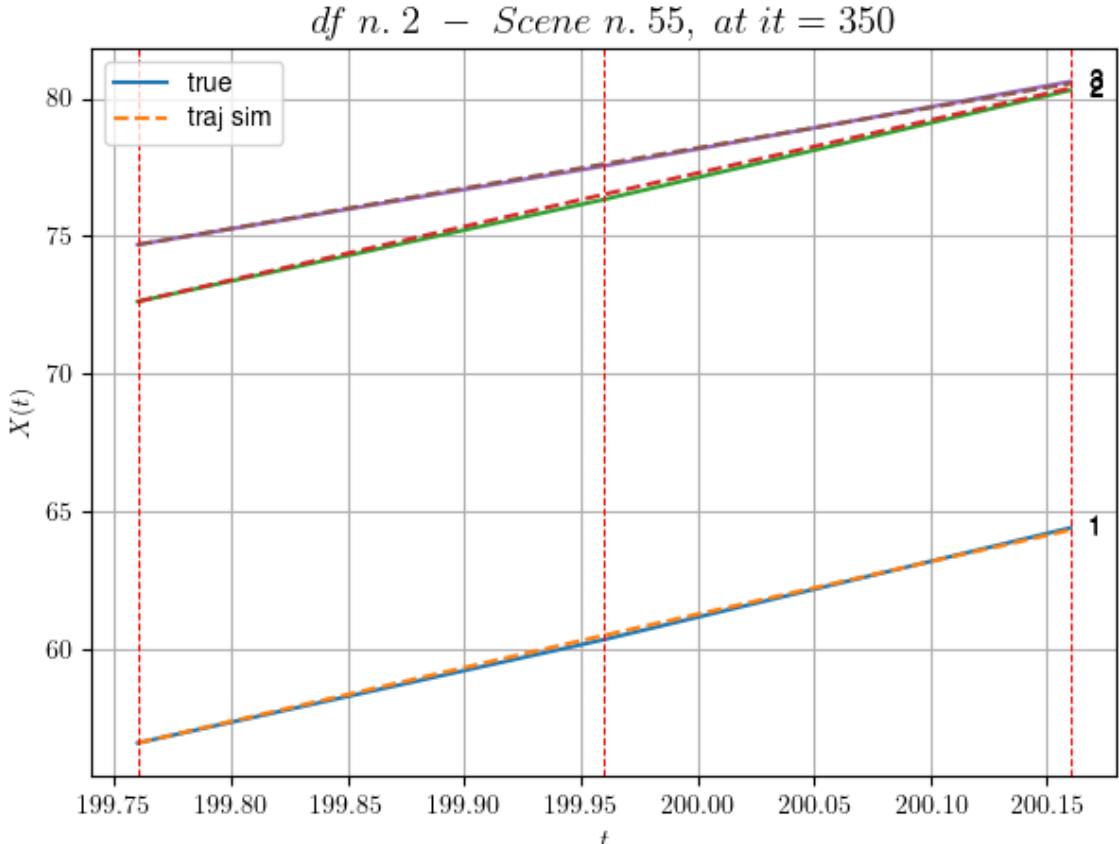


For scene 54/69

- * use LR_NN=0.0001 with err=5.896179327772688 at it=24
- * v0_scn_mean = 22.557079202585083
- * MAE = 5.342736772354144

df n.2, scene n.55/69

We have 2 time intervals inside [199.76,200.16]
 * err= 0.008853979562738326
 * Learning rate NN = 0.00040499999886378646
 * diff = 3.5765551927545436e-07



For scene 55/69

- * use LR_NN=0.0005 with err=10.600490455817592 at it=24
- * v0_scn_mean = 15.967231232237888
- * MAE = 0.008845952970572595

df n.2, scene n.56/69

We have 4 time intervals inside [212.56, 213.36]

- Time interval n.0: [212.56, 212.76]
 - * y_true: [14.43013055 12.85042103]
 - * v_ann: [16.421688079833984, 16.783336639404297, 2 0.507135320916607]

- Time interval n.1: [212.76, 212.96]
 - * y_true: [10.79011916 33.80137312]
 - * v_ann: [16.09173583984375, 16.422290802001953, 2 0.507135320916607]

- Time interval n.2: [212.96, 213.16]
 - * y_true: [16.24022861 13.70067627]
 - * v_ann: [17.027406692504883, 17.23526382446289, 2 0.507135320916607]

```

-----  

- Time interval n.3: [213.16, 213.36]  

* y_true: [10.73017559 21.10118973]  

* v_ ann: [16.7029972076416, 16.856508255004883, 20.  

507135320916607]
-----
```

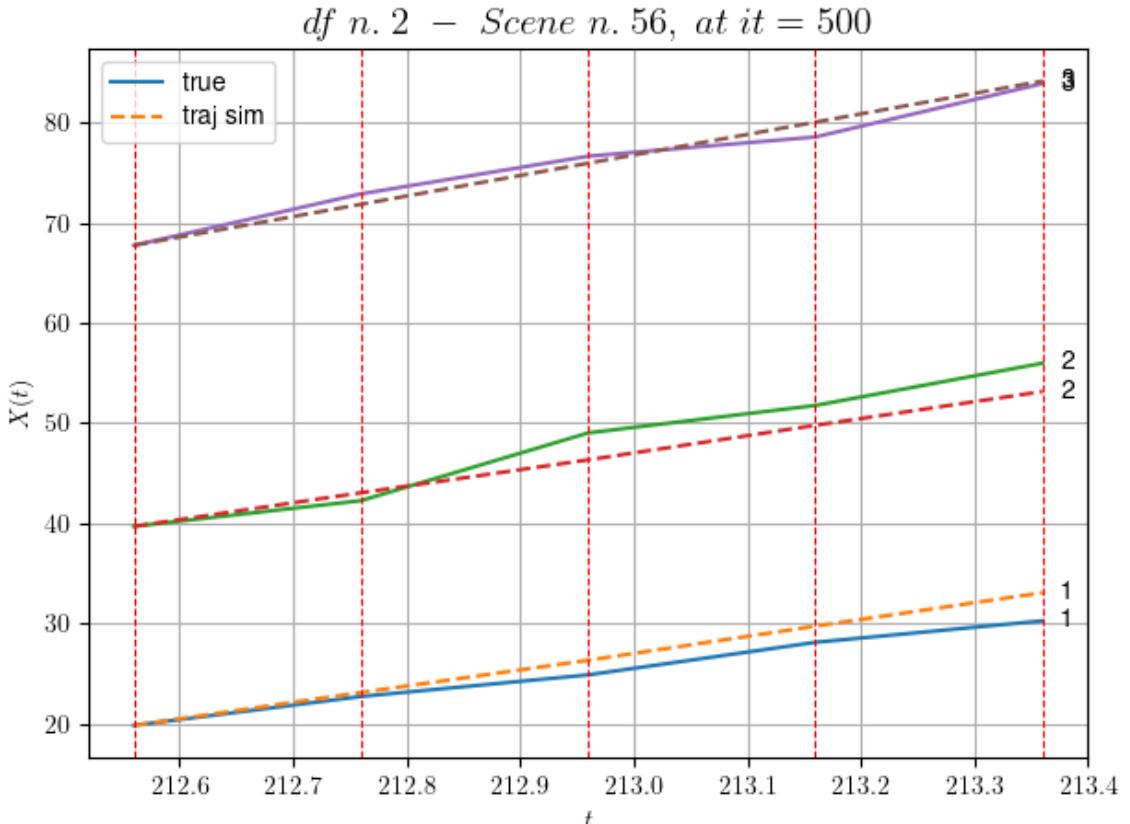
```

-----  

* err= 2.4283362710684284  

* Learning rate NN = 4.7829678806010634e-05  

* diff = 0.013421002440522578
-----
```



For scene 56/69

```

* use LR_NN=0.0001 with err=8.830252501164226 at it=24
* v0_scn_mean = 21.076706775452422
* MAE = 2.4283362710684284
-----
```

df n.2, scene n.57/69

```

=====  

=====  

We have 3 time intervals inside [318.16,318.76]  

- Time interval n.0: [318.16, 318.36]  

* y_true: [13.01007537 20.36054455]  

* v_ ann: [16.800737380981445, 17.06637954711914, 2  

0.355197629163968]
=====
```

```

-----  

- Time interval n.1: [318.36, 318.56]  

* y_true: [14.27010639 20.89068863]
-----
```

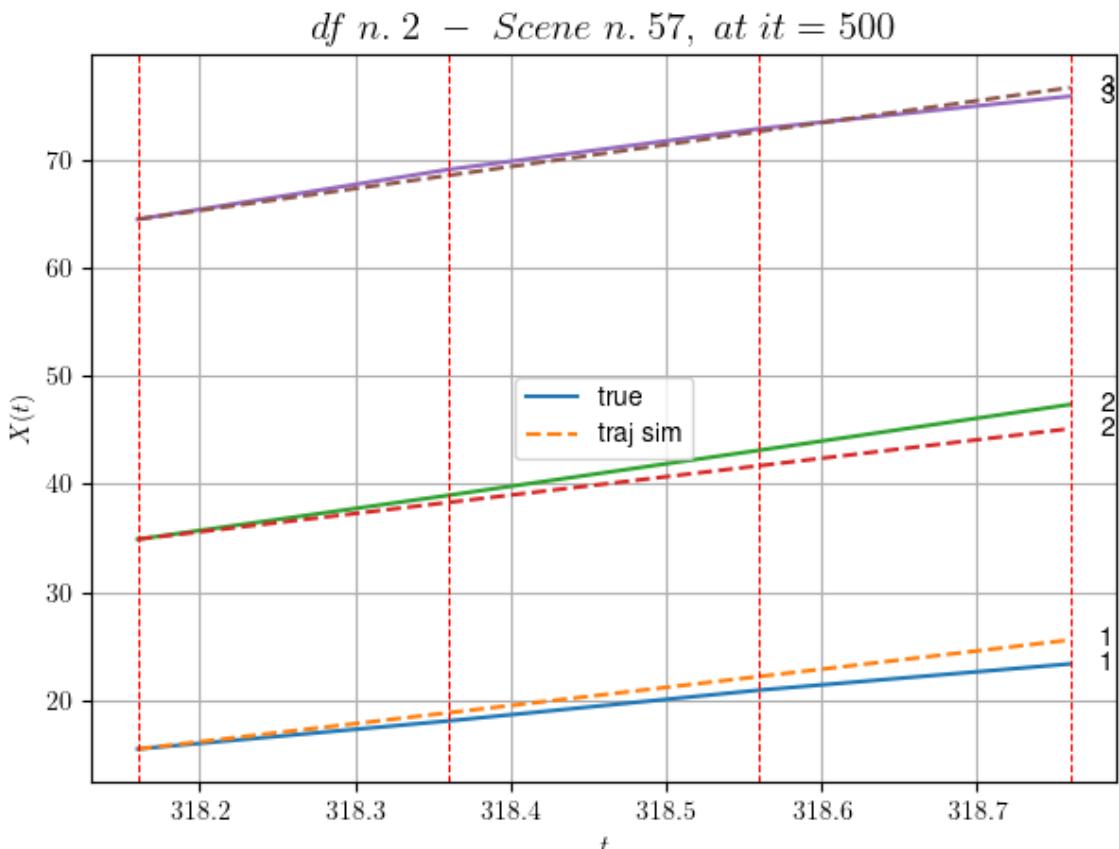
```

* v_ann: [16.797077178955078, 17.021648406982422, 2
0.355197629163968]

-----
- Time interval n.2: [318.56, 318.76]
* y_true: [12.16011799 21.20084683]
* v_ann: [16.938772201538086, 17.15583038330078, 2
0.355197629163968]

-----
* err= 1.301555743772796
* Learning rate NN = 5.904899080633186e-05
* diff = 0.0011122062711280251

```



For scene 57/69

```

* use LR_NN=0.0001 with err=4.963089527731369 at it=24
* v0_scn_mean = 20.93388533838313
* MAE = 1.2575038952965631
=====
```

df n.2, scene n.58/69

```
=====
```

We have 4 time intervals inside [430.16, 430.96]

```

- Time interval n.0: [430.16, 430.36]
* y_true: [15.83005748 20.27065425]
* v_ann: [18.862817764282227, 18.776491165161133, 2
1.236902740721792]
```

```

-----  

-----  

    - Time interval n.1: [430.36, 430.56]  

      * y_true: [19.99011659 24.33092793]  

      * v_ann: [18.897859573364258, 18.86803436279297, 2  

1.236902740721792]  

-----  

-----  

    - Time interval n.2: [430.56, 430.76]  

      * y_true: [14.67011767 20.05093433]  

      * v_ann: [19.267446517944336, 18.94135856628418, 2  

1.236902740721792]  

-----  

-----  

    - Time interval n.3: [430.76, 430.96]  

      * y_true: [14.38015429 21.97121967]  

      * v_ann: [19.239253997802734, 18.697460174560547, 2  

1.236902740721792]  

-----  

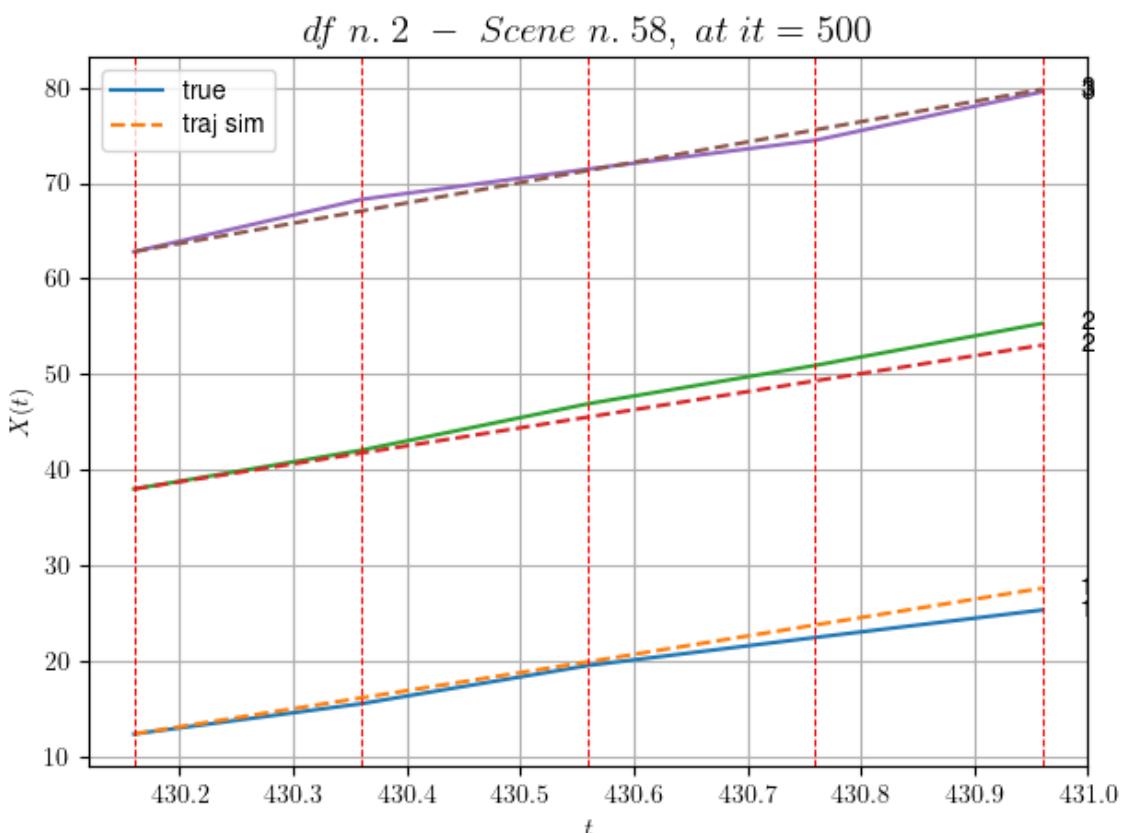
-----  

* err= 1.3307483280957701  

* Learning rate NN = 2.3914839403005317e-05  

* diff = 0 0004489621188623616

```



For scene 58/69

```

* use LR_NN=5e-05 with err=8.649624796230857 at it=24
* v0_scn_mean = 21.76268818283406
* MAE = 1.3294264768705666

```

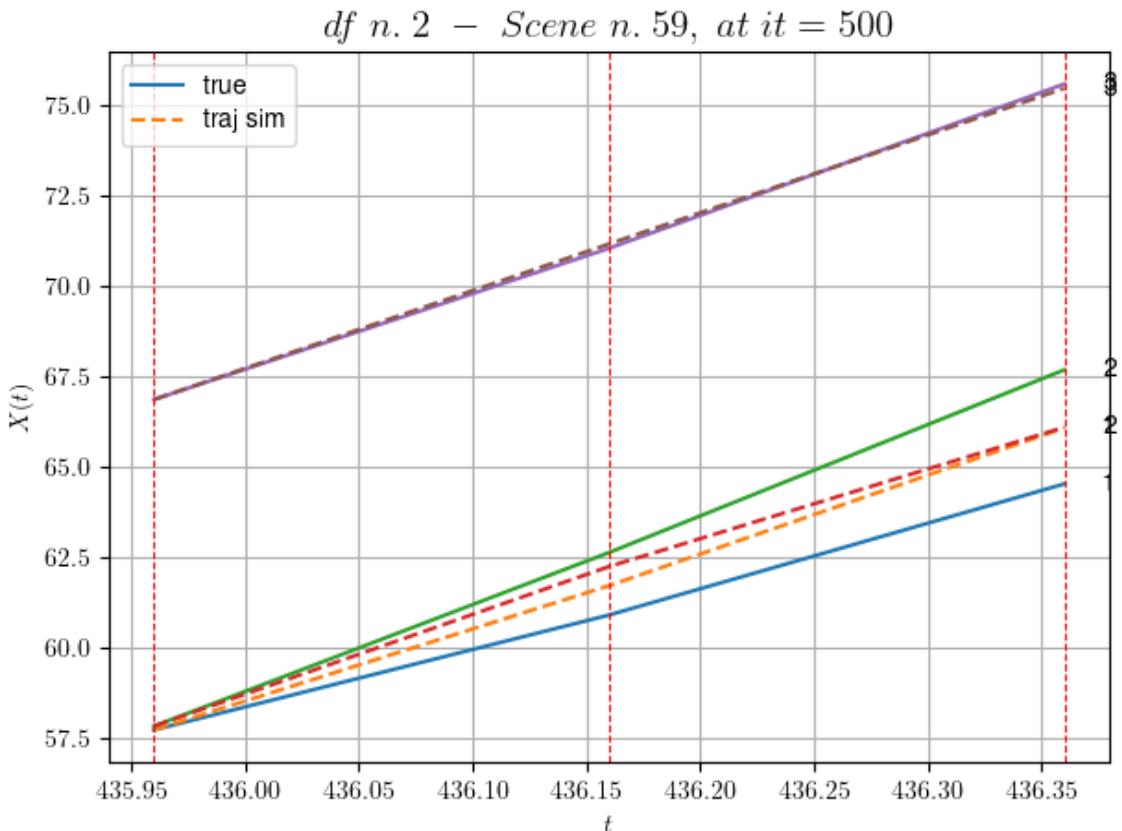
```
df n.2, scene n.59/69
```

We have 2 time intervals inside [435.96, 436.36]

- Time interval n.0: [435.96, 436.16]
 - * y_true: [15.85107698 23.95169404]
 - * v_ann: [19.899978637695312, 22.018381118774414, 2
 - 1.458715492508794]

-
- Time interval n.1: [436.16, 436.36]
 - * y_true: [18.0813972 25.19206379]
 - * v_ann: [21.762723922729492, 19.20429229736328, 2
 - 1.458715492508794]

-
- * err= 0.6370830183137889
 - * Learning rate NN = 0.0036449995823204517
 - * diff = 0.0002138692914049889



For scene 59/69

- * use LR_NN=0.005 with err=2.9884670131310123 at it=24
 - * v0_scn_mean = 21.971192179472784
 - * MAE = 0.6011057581494755
-
-

```
df n.2, scene n.60/69
```

```
=====
We have 5 time intervals inside [442.76,443.76]
- Time interval n.0: [442.76, 442.96]
  * y_true: [18.06141662 13.31057742]
  * v_ann: [21.740304946899414, 19.58416748046875, 2
2.775896802504942]

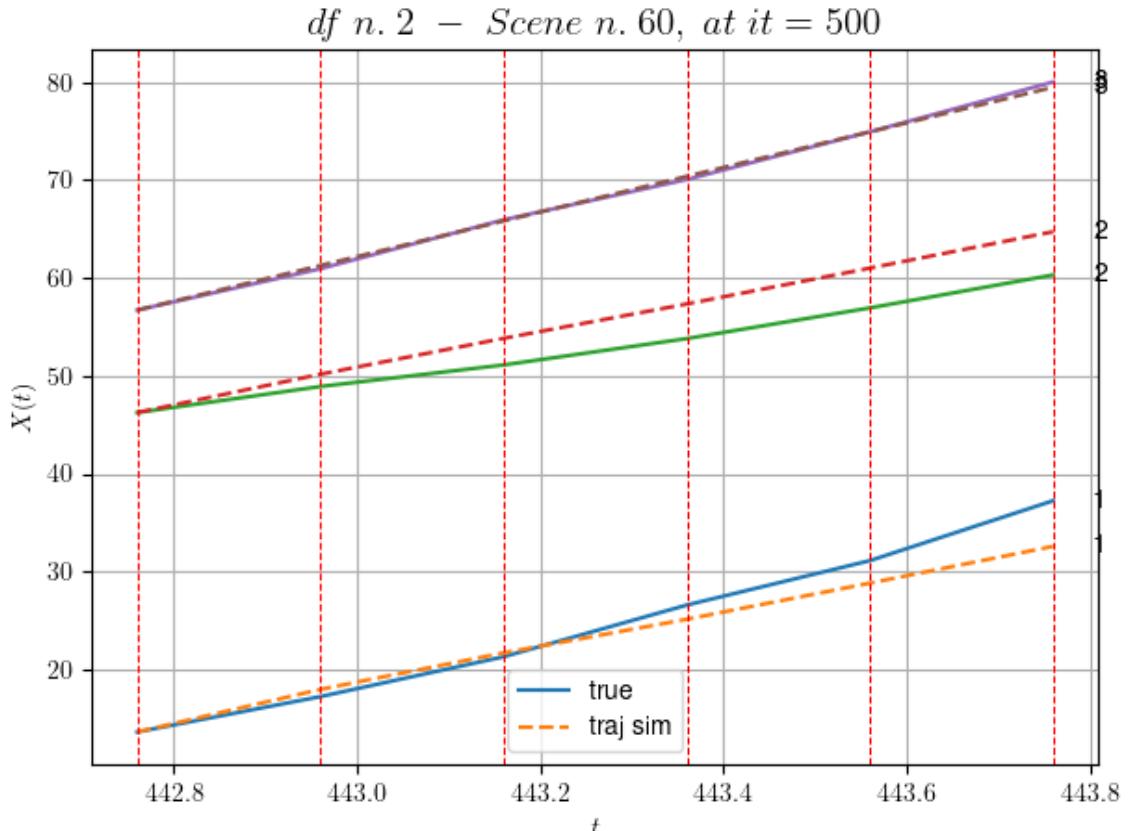
-----
- Time interval n.1: [442.96, 443.16]
  * y_true: [20.34015276 11.01053508]
  * v_ann: [18.648197174072266, 18.329809188842773, 2
2.775896802504942]

-----
- Time interval n.2: [443.16, 443.36]
  * y_true: [26.42894929 13.47072378]
  * v_ann: [17.190908432006836, 17.554304122924805, 2
2.775896802504942]

-----
- Time interval n.3: [443.36, 443.56]
  * y_true: [22.70036274 15.67093348]
  * v_ann: [18.460968017578125, 18.31797981262207, 2
2.775896802504942]

-----
- Time interval n.4: [443.56, 443.76]
  * y_true: [30.60068675 16.84112333]
  * v_ann: [18.788318634033203, 18.60037612915039, 2
2.775896802504942]

-----
* err= 4.878292778394565
* Learning rate NN = 0.0001937102060765028
* diff = 0.06001053272010613
```



For scene 60/69

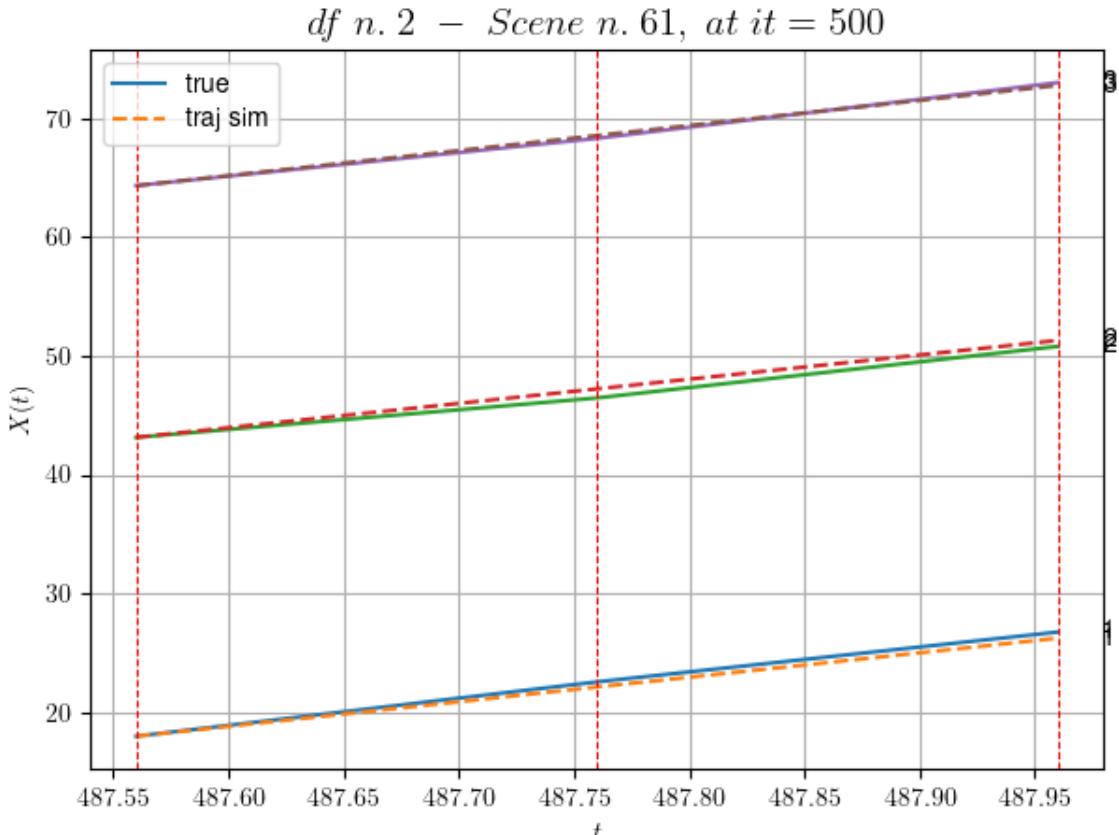
```
* use LR_NN=0.0005 with err=8.32387818897797 at it=24
* v0_scn_mean = 23.209342670008237
* MAE = 3.6847040676031
```

df n.2, scene n.61/69

```
We have 2 time intervals inside [487.56,487.96]
- Time interval n.0: [487.56, 487.76]
  * y_true: [22.90018755 16.61065196]
  * v_ann: [20.753408432006836, 20.43077850341797, 2
  1.111900247992196]

-----
- Time interval n.1: [487.76, 487.96]
  * y_true: [21.00025249 21.71102285]
  * v_ann: [20.575515747070312, 20.413909912109375, 2
  1.111900247992196]

-----
* err= 0.1560421313854947
* Learning rate NN = 3.6449993785936385e-05
* diff = 0.00015762104106190056
```



For scene 61/69

```
* use LR_NN=5e-05 with err=1.6989965361574286 at it=24
* v0_scn_mean = 21.645185834056154
* MAE = 0.15344030624184093
```

df n.2, scene n.62/69

We have 5 time intervals inside [531.76, 532.76]

- Time interval n.0: [531.76, 531.96]
 - * y_true: [23.26110286 19.80102444]
 - * v_ann: [21.45890235900879, 21.846738815307617, 1

7.91173132808066]

- Time interval n.1: [531.96, 532.16]
 - * y_true: [19.37730225 14.13461647]
 - * v_ann: [21.36970329284668, 21.70334243774414, 17.

91173132808066]

- Time interval n.2: [532.16, 532.36]
 - * y_true: [16.15104075 20.18132342]
 - * v_ann: [18.721515655517578, 20.216808319091797, 1

7.91173132808066]

```

-----  

- Time interval n.3: [532.36, 532.56]  

* y_true: [21.60157988 27.91216632]  

* v_ann: [20.251174926757812, 19.6663818359375, 17.  

91173132808066]
-----
```

```

-----  

- Time interval n.4: [532.56, 532.76]  

* y_true: [19.65163525 25.90233391]  

* v_ann: [21.186115264892578, 21.30248260498047, 1  

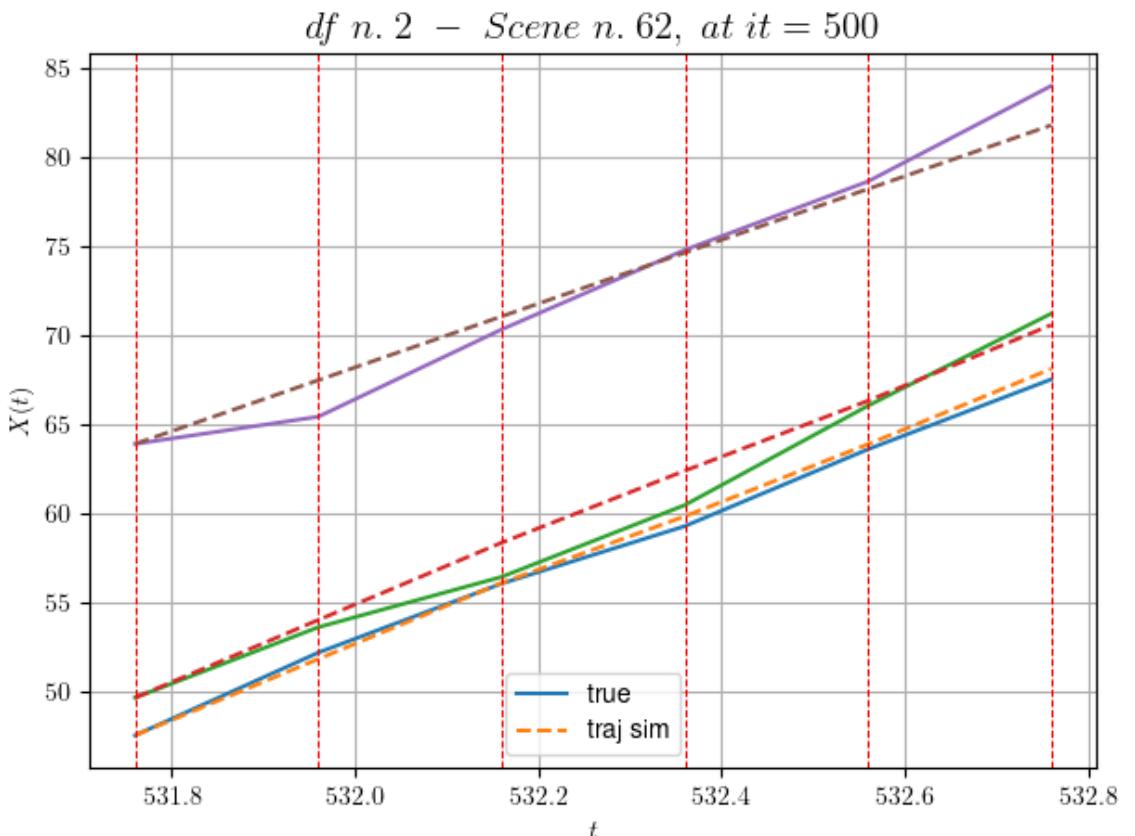
7.91173132808066]
-----
```

```

* err= 1.0432158838633712  

* Learning rate NN = 0.0003874204121530056  

* diff = 0.010232341671388978
```



For scene 62/69

```

* use LR_NN=0.001 with err=37.042492318680395 at it=24
* v0_scn_mean = 18.6370269056581
* MAE = 1.0024307456391026
```

df n.2, scene n.63/69

```

=====  

We have 4 time intervals inside [538.36,539.16]  

- Time interval n.0: [538.36, 538.56]  

* y_true: [17.69068154 17.20117669]
```

```

* v_ann: [20.3533992767334, 20.27962875366211, 21.5
18869344524177]

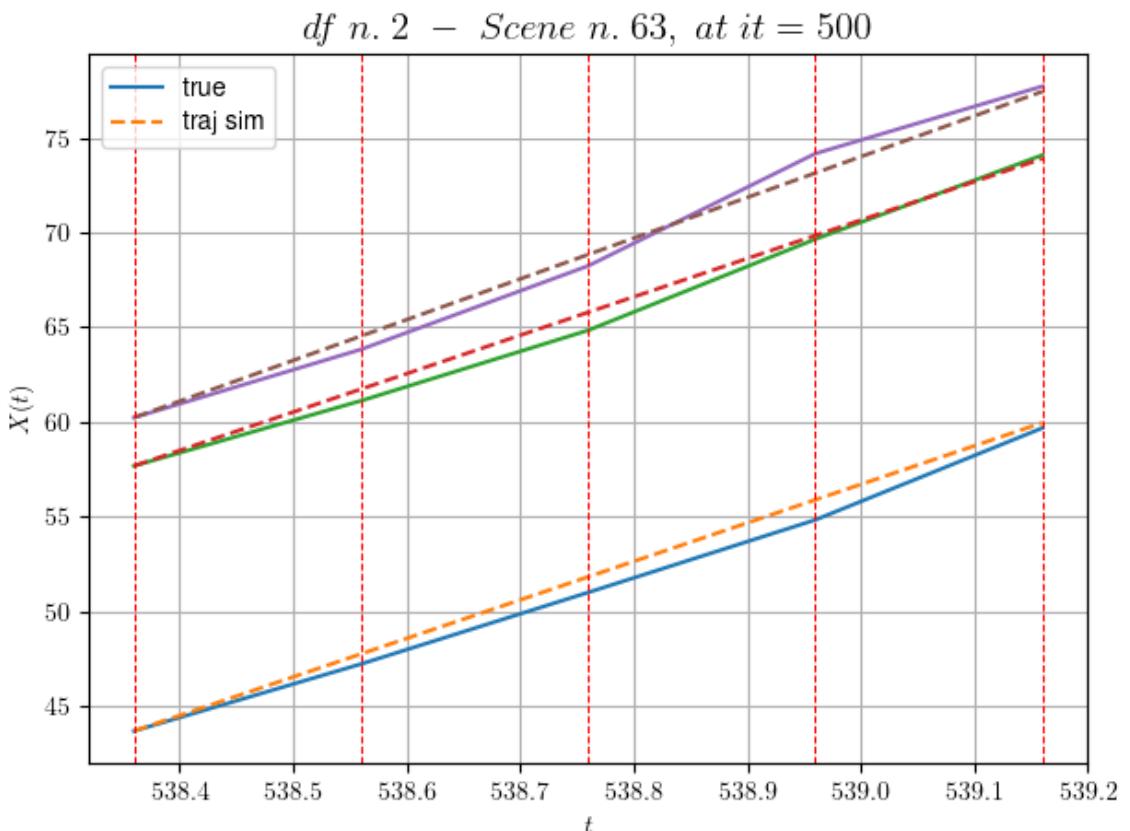
-----
- Time interval n.1: [538.56, 538.76]
* y_true: [18.89091077 18.60142936]
* v_ann: [20.340614318847656, 20.27407455444336, 2
1.518869344524177]

-----
- Time interval n.2: [538.76, 538.96]
* y_true: [19.15102468 24.05210496]
* v_ann: [20.333642959594727, 20.274446487426758, 2
1.518869344524177]

-----
- Time interval n.3: [538.96, 539.16]
* y_true: [24.26158149 22.202218 ]
* v_ann: [20.344955444335938, 20.28424644470215, 2
1.518869344524177]

-----
* err= 0.3663814775159769
* Learning rate NN = 4.782968062500004e-06
* diff = 0.00022574042210066222

```



For scene 63/69

```

* use LR_NN=1e-05 with err=48.84662072969078 at it=24
* v0_scn_mean = 22.027736803068112
* MAE = 0.36591302187785546

```

```
=====
=====

df n.2, scene n.64/69
=====

=====
We have 6 time intervals inside [541.16,542.36]
- Time interval n.0: [541.16, 541.36]
  * y_true: [22.67086863 28.23390149]
  * v_ann: [23.27227210998535, 22.988571166992188, 2
0.48999097546747]

-----
- Time interval n.1: [541.36, 541.56]
  * y_true: [19.45088023 23.11862329]
  * v_ann: [23.666017532348633, 23.85455894470215, 2
0.48999097546747]

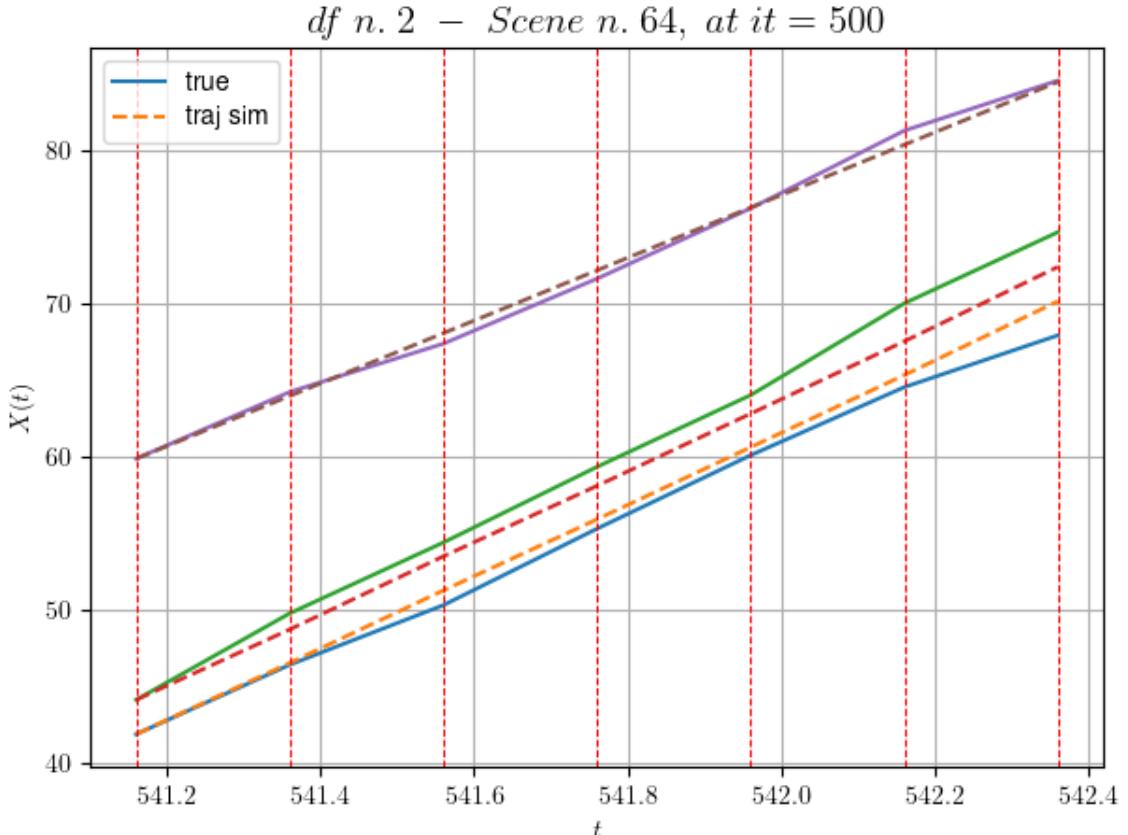
-----
- Time interval n.2: [541.56, 541.76]
  * y_true: [24.96136667 24.68114114]
  * v_ann: [23.203638076782227, 23.00069808959961, 2
0.48999097546747]

-----
- Time interval n.3: [541.76, 541.96]
  * y_true: [23.96154506 23.41644837]
  * v_ann: [23.52403450012207, 23.552005767822266, 2
0.48999097546747]

-----
- Time interval n.4: [541.96, 542.16]
  * y_true: [22.22167267 29.9460798 ]
  * v_ann: [23.550731658935547, 23.59590721130371, 2
0.48999097546747]

-----
- Time interval n.5: [542.16, 542.36]
  * y_true: [16.91142821 23.23526684]
  * v_ann: [24.071666717529297, 24.312828063964844, 2
0.48999097546747]

-----
* err= 1.1927699761755337
* Learning rate NN = 0.00031381050939671695
* diff = 0.005237194813939805
```



For scene 64/69

```
* use LR_NN=0.001 with err=27.86702413421305 at it=24
* v0_scn_mean = 21.060591089960486
* MAE = 1.1839478788077282
```

df n.2, scene n.65/69

We have 2 time intervals inside [549.76, 550.16]

- Time interval n.0: [549.76, 549.96]
 - * y_true: [23.30098965 17.25125335]
 - * v_ann: [22.36260986328125, 22.109542846679688, 2

2.495719525410742]

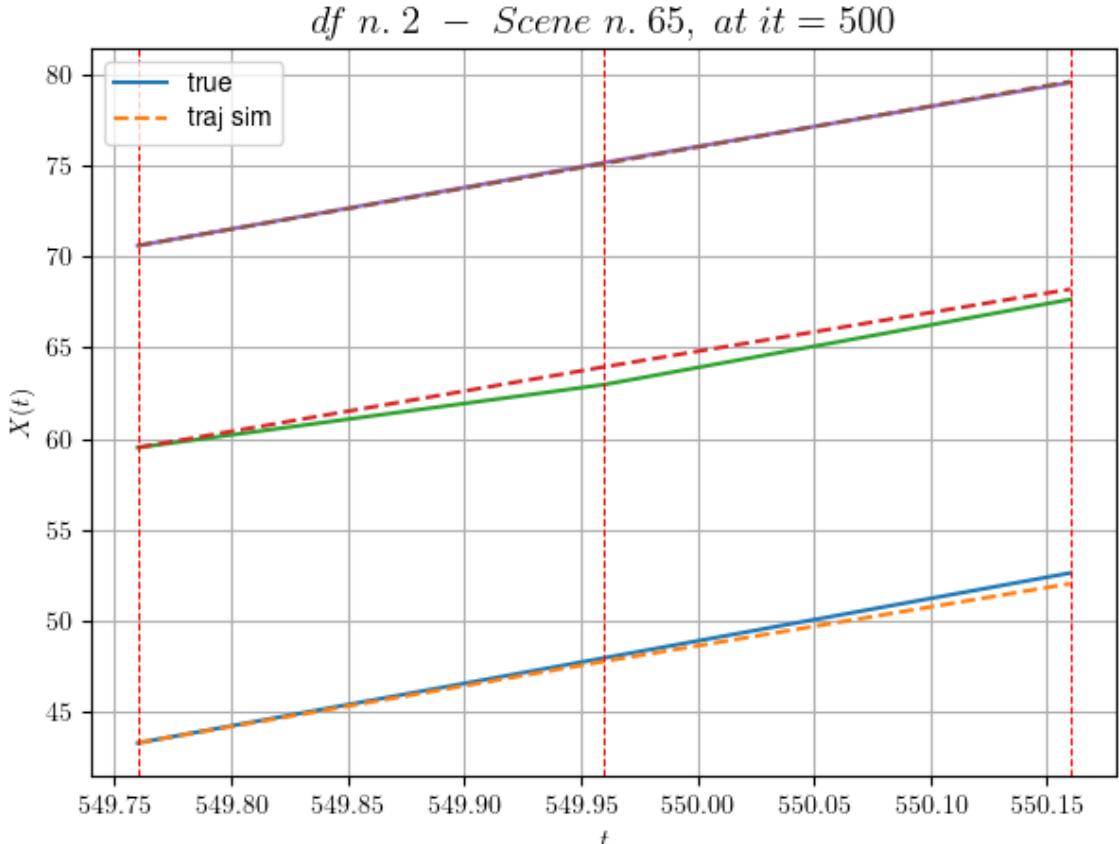
- Time interval n.1: [549.96, 550.16]
 - * y_true: [23.30098965 23.35192881]
 - * v_ann: [21.3117618560791, 21.303781509399414, 22.

495719525410742]

* err= 0.18273602675088219

* Learning rate NN = 0.00036449998151510954

* diff = 0.00010474326440013115



For scene 65/69

- * use LR_NN=0.0005 with err=1.4097439209699194 at it=24
- * v0_scn_mean = 22.94597601695853
- * MAE = 0.1817015983359429

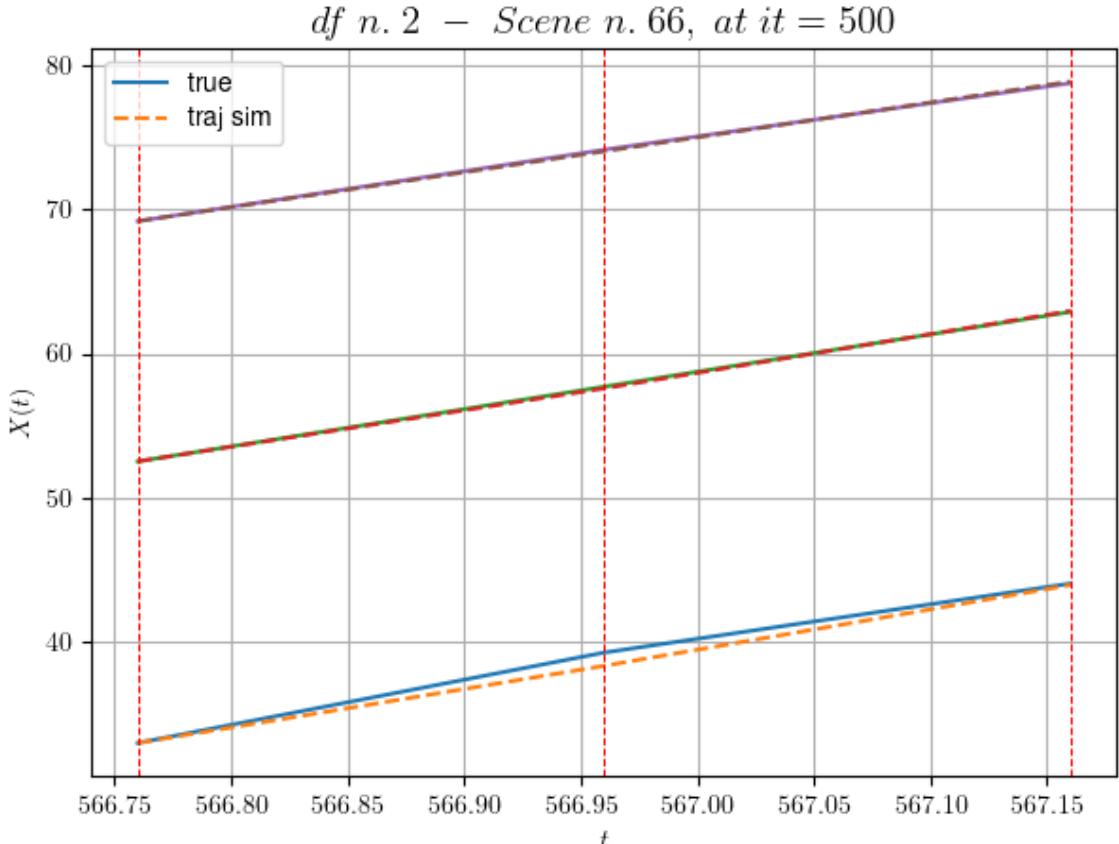
df n.2, scene n.66/69

We have 2 time intervals inside [566.76, 567.16]

- Time interval n.0: [566.76, 566.96]
 - * y_true: [31.35080123 25.9264585]
 - * v_ann: [26.74648094177246, 25.324081420898438, 24.222520391151665]

- Time interval n.1: [566.96, 567.16]
 - * y_true: [23.95081051 25.9264585]
 - * v_ann: [28.027254104614258, 26.894739151000977, 24.222520391151665]

- * err= 0.10055506051459673
- * Learning rate NN = 0.00036449998151510954
- * diff = 0.00017616287379472462



For scene 66/69

```
* use LR_NN=0.0005 with err=0.8750741071978969 at it=24
* v0_scn_mean = 24.56916890828682
* MAE = 0.09908116230979817
```

df n.2, scene n.67/69

We have 3 time intervals inside [87.56, 88.16]

- Time interval n.0: [87.56, 87.76]
 - * y_true: [20.56019483 17.07029985 18.3510221]
 - * v_ann: [19.860225677490234, 20.44600486755371, 2

0.155317306518555, 23.399103331764543]

- Time interval n.1: [87.76, 87.96]
 - * y_true: [21.72029145 17.49039467 19.46124504]
 - * v_ann: [19.026012420654297, 18.762405395507812, 1

8.861038208007812, 23.399103331764543]

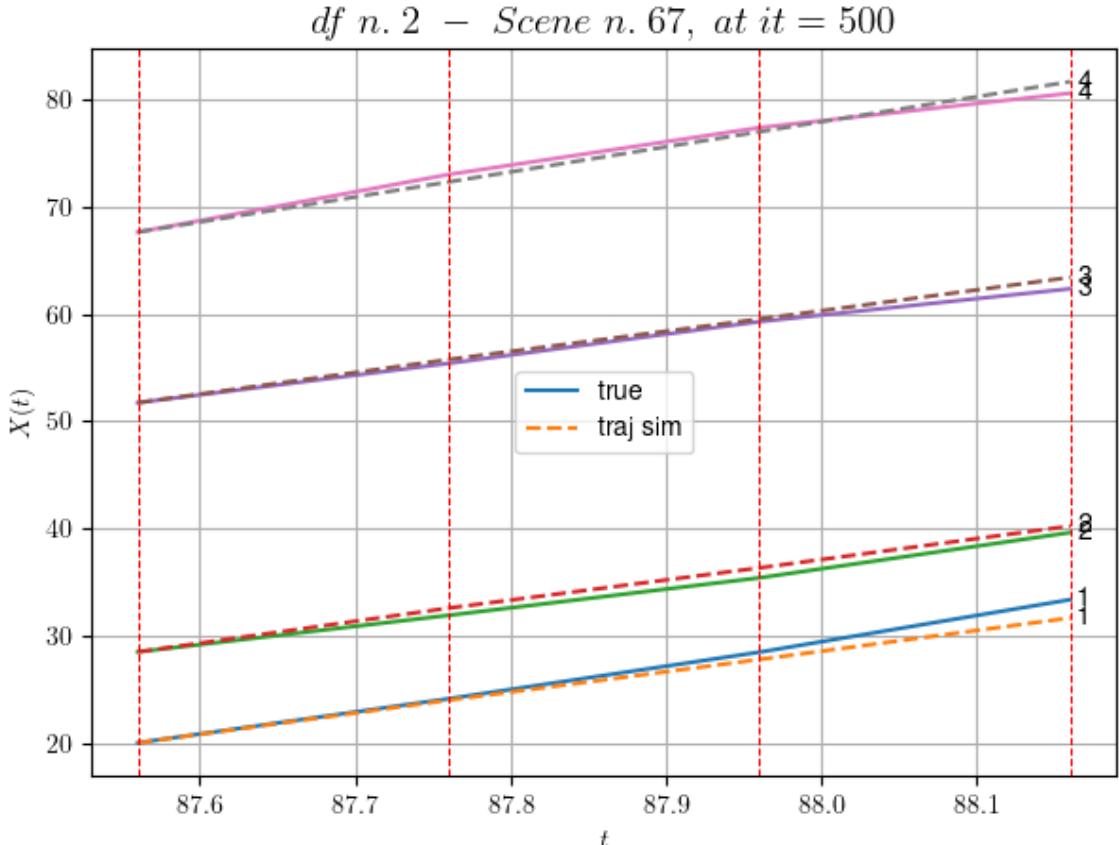
- Time interval n.2: [87.96, 88.16]
 - * y_true: [24.51045762 21.12058621 15.36109554]
 - * v_ann: [19.374832153320312, 19.52257537841797, 1

9.472103118896484, 23.399103331764543]

```

* err= 0.5123345416970333
* Learning rate NN = 0.0005904899444431067
* diff = 0.00024517546822688807

```



For scene 67/69

```

* use LR_NN=0.001 with err=8.811622204804289 at it=24
* v0_scn_mean = 23.927153585033075
* MAE = 0.5123345416970333

```

df n.2, scene n.68/69

We have 2 time intervals inside [305.96,306.36]

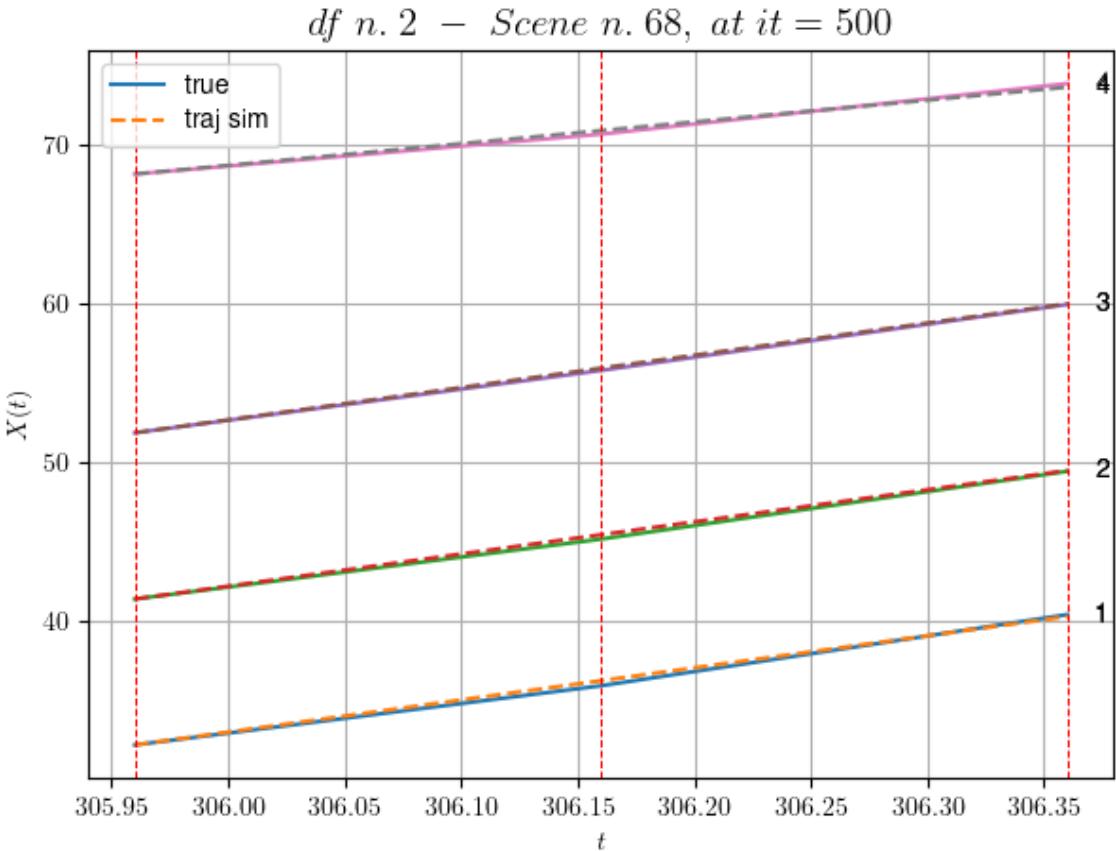
- Time interval n.0: [305.96, 306.16]
 - * y_true: [18.64270885 18.88070057 19.63111636]
 - * v_ann: [20.238605499267578, 20.261640548706055, 2 0.366371154785156, 13.681341801173655]

- Time interval n.1: [306.16, 306.36]
 - * y_true: [22.41204338 21.34093202 20.7913521]
 - * v_ann: [20.200572967529297, 20.222379684448242, 2 0.289464950561523, 13.681341801173655]

```
* err= 0.02698841111833262
```

```
* Learning rate NN = 3.6449993785936385e-05
```

* diff = 6.320071980002451e-06



For scene 68/69

* use LR_NN=5e-05 with err=5.460394012821479 at it=24
 * v0_scn_mean = 14.986781354008933
 * MAE = 0.02644886022753755

For df=2 with 69 scenes, time taken: 1670.72

In df n.3/10 we have 90 scenes
 df n.3, scene n.0/90

We have 7 time intervals inside [9.36, 10.76]

- Time interval n.0: [9.36, 9.56]
 - * y_true: [21.20002029]
 - * v_ann: [25.459787368774414, 32.52950262782101]

-
- Time interval n.1: [9.56, 9.76]

- * y_true: [27.90008682]
- * v_ann: [25.76557159423828, 32.52950262782101]

-
- Time interval n.2: [9.76, 9.96]

```
* y_true: [27.05016725]
* v_ann: [26.651235580444336, 32.52950262782101]
```

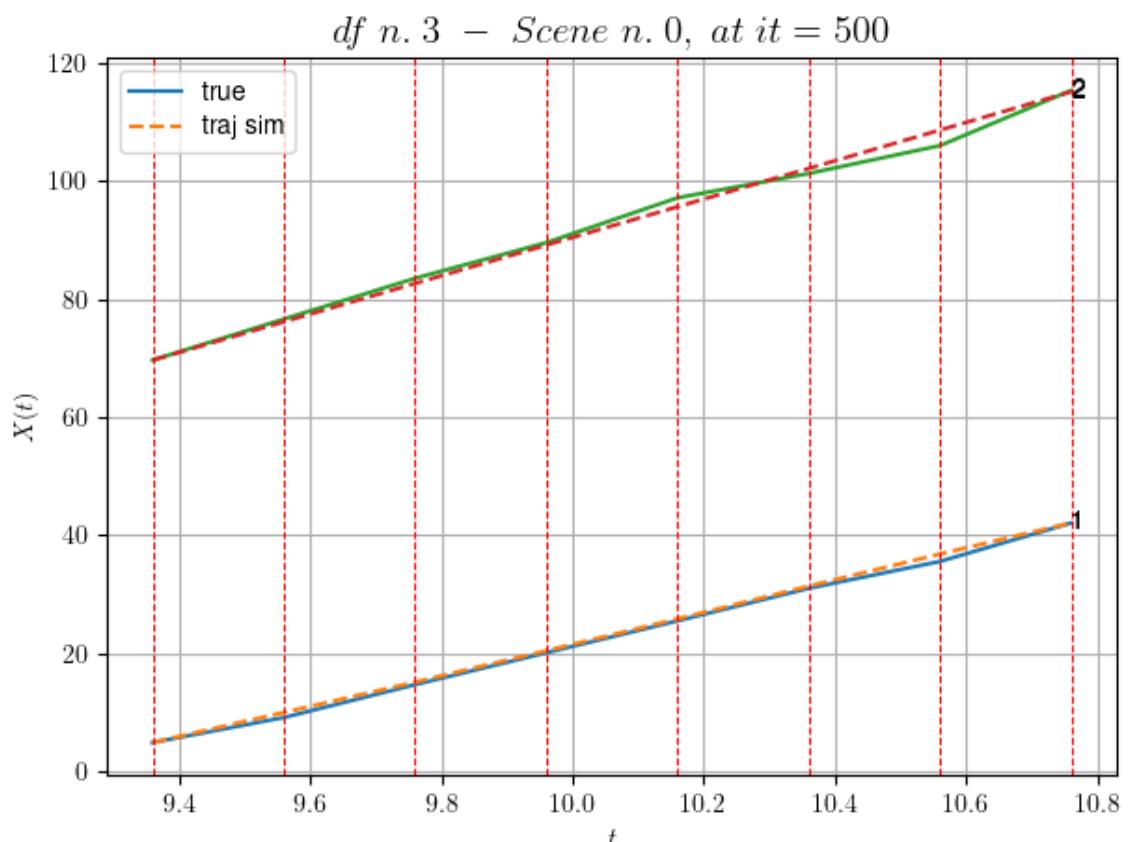
```
- Time interval n.3: [9.96, 10.16]
* y_true: [27.05027848]
* v_ann: [26.967979431152344, 32.52950262782101]
```

```
- Time interval n.4: [10.16, 10.36]
* y_true: [27.60042478]
* v_ann: [27.81890869140625, 32.52950262782101]
```

```
- Time interval n.5: [10.36, 10.56]
* y_true: [22.82551322]
* v_ann: [27.245561599731445, 32.52950262782101]
```

```
- Time interval n.6: [10.56, 10.76]
* y_true: [32.62597085]
* v_ann: [26.452495574951172, 32.52950262782101]
```

```
* err= 0.8777625968772709
* Learning rate NN = 2.5418647055630572e-05
* diff = 0.004939804452963159
```



For scene 0/90

```
* use LR_NN=0.0001 with err=2.7615915426976434 at it=24
* v0_scn_mean = 32.428322522727484
* MAE = 0.8751917395306463
```

```
=====
```

df n.3, scene n.1/90

```
=====
```

```
We have 6 time intervals inside [12.76,13.96]
- Time interval n.0: [12.76, 12.96]
  * y_true: [25.56253837]
  * v_ann: [30.955459594726562, 33.32970746415818]
```

```
- Time interval n.1: [12.96, 13.16]
  * y_true: [28.79893317]
  * v_ann: [29.861907958984375, 33.32970746415818]
```

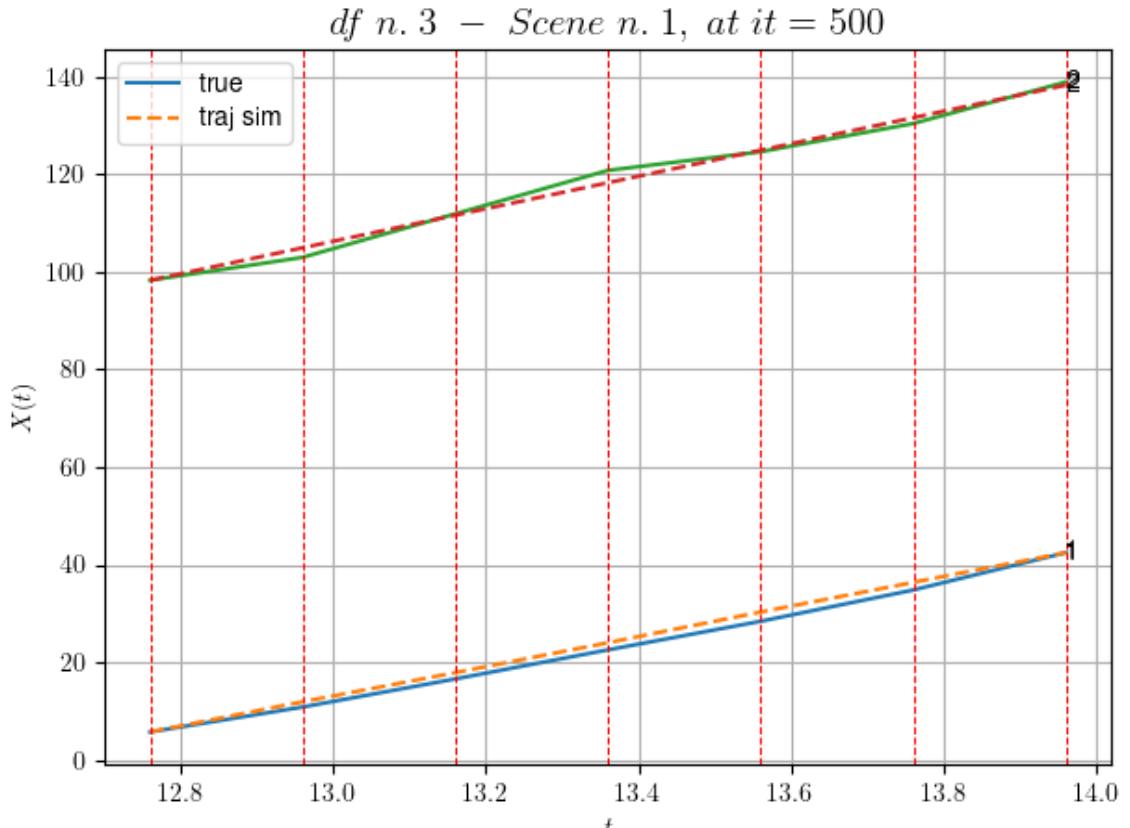
```
- Time interval n.2: [13.16, 13.36]
  * y_true: [29.813898]
  * v_ann: [30.678682327270508, 33.32970746415818]
```

```
- Time interval n.3: [13.36, 13.56]
  * y_true: [29.27421556]
  * v_ann: [31.446575164794922, 33.32970746415818]
```

```
- Time interval n.4: [13.56, 13.76]
  * y_true: [32.06311816]
  * v_ann: [30.393747329711914, 33.32970746415818]
```

```
- Time interval n.5: [13.76, 13.96]
  * y_true: [38.31363463]
  * v_ann: [30.50480842590332, 33.32970746415818]
```

```
* err= 1.667755821823074
* Learning rate NN = 1.5690524378442205e-05
* diff = 0.01938551632849439
```

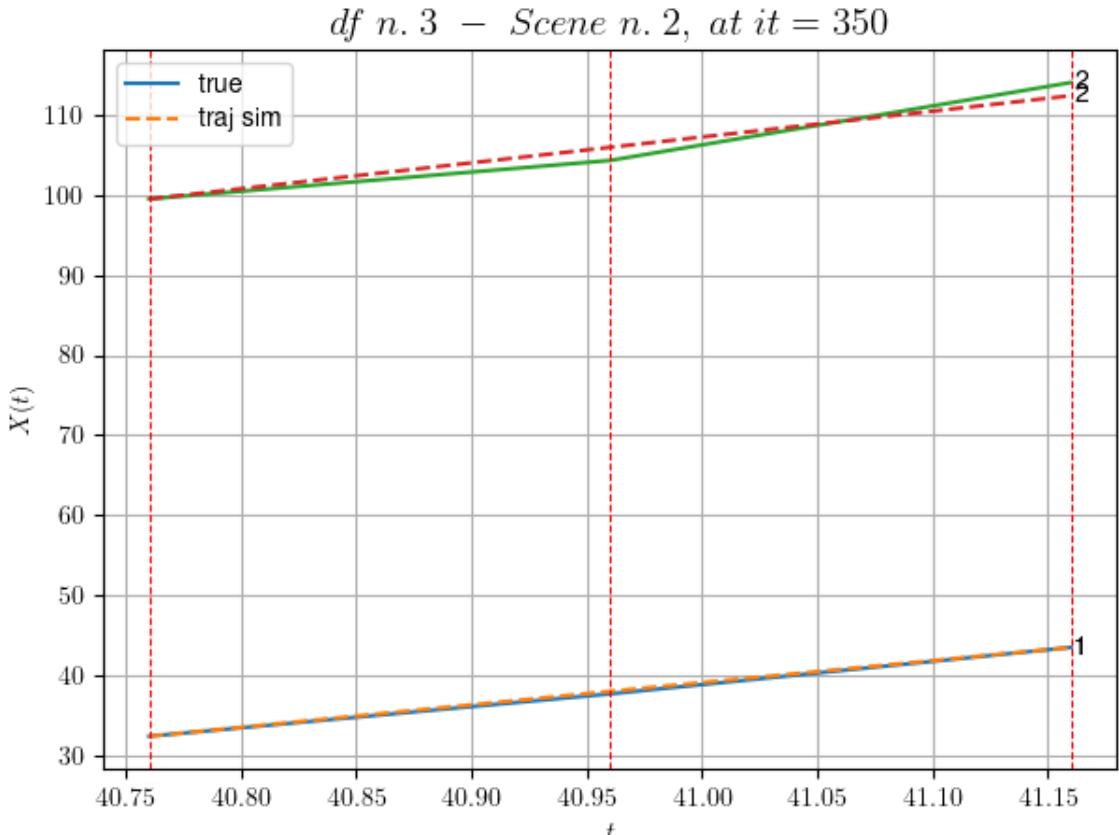


For scene 1/90

* use LR_NN=5e-05 with err=5.198397294838615 at it=24
* v0_scn_mean = 33.19651916561727
* MAE = 1.667755152504902

df n.3, scene n.2/90

We have 2 time intervals inside [40.76,41.16]
* err= 0.914325826980188
* Learning rate NN = 4.049999552080408e-05
* diff = 4.66889074068888e-08



For scene 2/90

- * use LR_NN=5e-05 with err=1.3196083585032818 at it=24
- * v0_scn_mean = 32.08077588692776
- * MAE = 0.914325758206679

df n.3, scene n.3/90

We have 4 time intervals inside [79.56, 80.36]

- Time interval n.0: [79.56, 79.76]
 - * y_true: [24.92680088]
 - * v_ann: [22.128767013549805, 49.42636153730823]

- Time interval n.1: [79.76, 79.96]
 - * y_true: [25.18697287]
 - * v_ann: [22.577091217041016, 49.42636153730823]

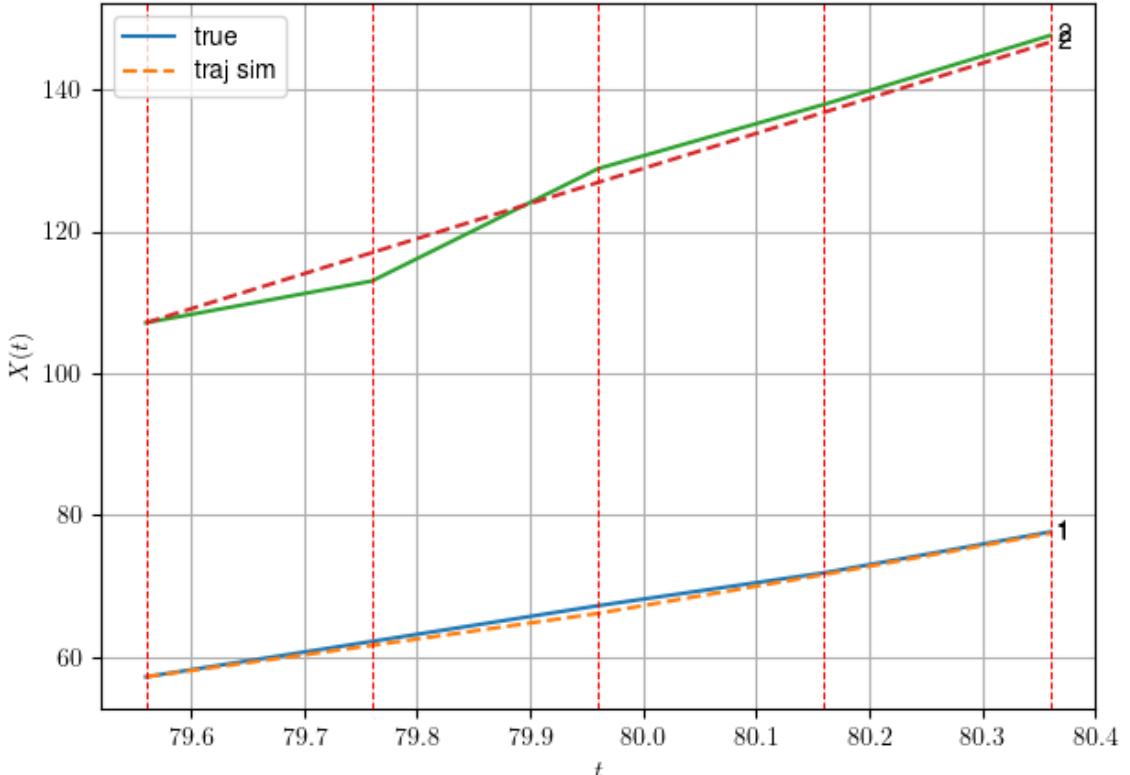
- Time interval n.2: [79.96, 80.16]
 - * y_true: [23.15223081]
 - * v_ann: [27.312744140625, 49.42636153730823]

- Time interval n.3: [80.16, 80.36]
 - * y_true: [28.84312962]

```
* v_ann: [29.087749481201172, 49.42636153730823]
```

```
* err= 2.349026659084762
* Learning rate NN = 4.782968062500004e-06
* diff = 5.9562862567918984e-05
```

df n. 3 – Scene n. 3, at it = 500



For scene 3/90

```
* use LR_NN=1e-05 with err=53.10214849414265 at it=24
* v0_scn_mean = 48.64930707596422
* MAE = 2.3479592592033285
```

df n.3, scene n.4/90

We have 5 time intervals inside [115.36, 116.36]

- Time interval n.0: [115.36, 115.56]
 - * y_true: [36.92160322]
 - * v_ann: [28.435340881347656, 42.47633471767082]

- Time interval n.1: [115.56, 115.76]
 - * y_true: [35.25200551]
 - * v_ann: [27.19941520690918, 42.47633471767082]

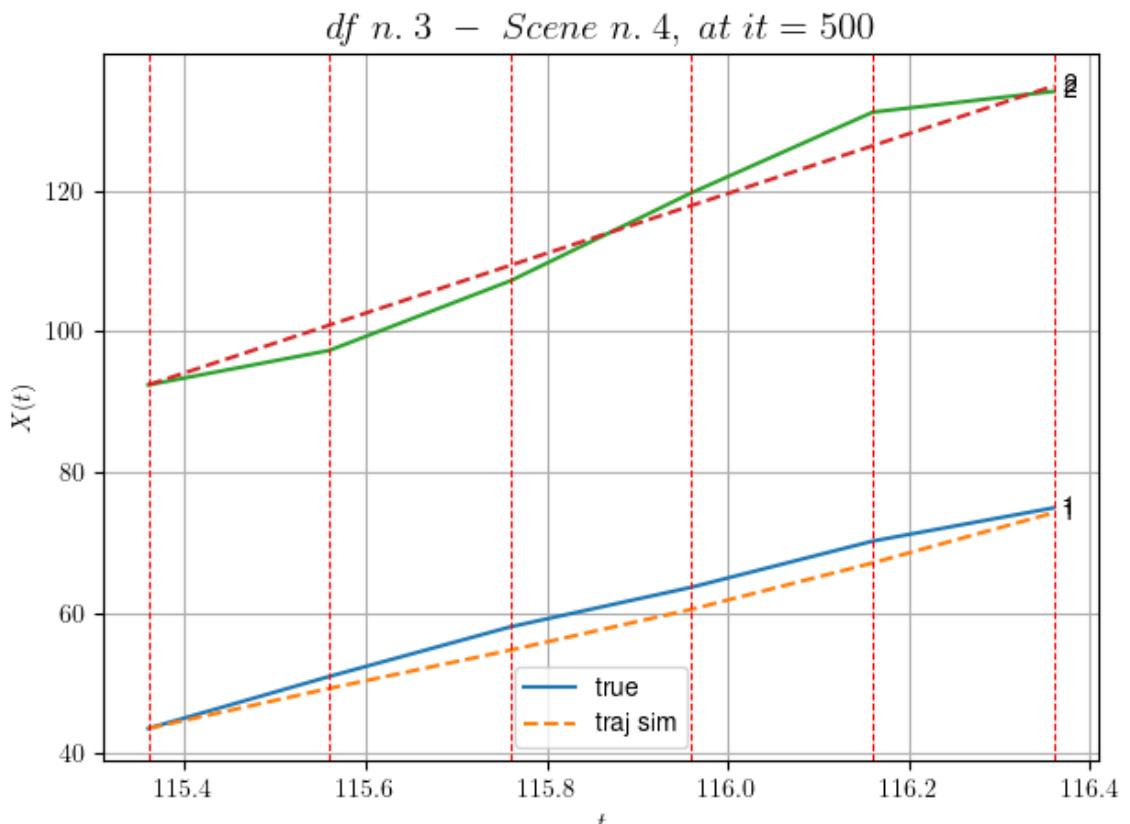
- Time interval n.2: [115.76, 115.96]
 - * y_true: [28.14198214]

```
* v_ann: [28.987550735473633, 42.47633471767082]
```

```
- Time interval n.3: [115.96, 116.16]
* y_true: [32.75283438]
* v_ann: [32.91797637939453, 42.47633471767082]
```

```
- Time interval n.4: [116.16, 116.36]
* y_true: [23.66235705]
* v_ann: [35.727264404296875, 42.47633471767082]
```

```
* err= 6.511194208283295
* Learning rate NN = 3.874203684972599e-06
* diff = 0.011308271096925004
```



For scene 4/90

```
* use LR_NN=1e-05 with err=40.72784006565874 at it=24
* v0_scn_mean = 41.9772813290593
* MAE = 6.504205132417196
```

df n.3, scene n.5/90

We have 17 time intervals inside [138.16,141.56]
- Time interval n.0: [138.16, 138.36]

```
* y_true: [20.20049512]
* v_ann: [25.009742736816406, 28.31863912796769]
```

```
- Time interval n.1: [138.36, 138.56]
* y_true: [34.05418098]
* v_ann: [26.694089889526367, 28.31863912796769]
```

```
- Time interval n.2: [138.56, 138.76]
* y_true: [19.55085484]
* v_ann: [24.441980361938477, 28.31863912796769]
```

```
- Time interval n.3: [138.76, 138.96]
* y_true: [25.71133535]
* v_ann: [30.055971145629883, 28.31863912796769]
```

```
- Time interval n.4: [138.96, 139.16]
* y_true: [28.44182357]
* v_ann: [30.16277503967285, 28.31863912796769]
```

```
- Time interval n.5: [139.16, 139.36]
* y_true: [31.62238978]
* v_ann: [29.623159408569336, 28.31863912796769]
```

```
- Time interval n.6: [139.36, 139.56]
* y_true: [17.15160439]
* v_ann: [31.569366455078125, 28.31863912796769]
```

```
- Time interval n.7: [139.56, 139.76]
* y_true: [37.57385655]
* v_ann: [30.06909942626953, 28.31863912796769]
```

```
- Time interval n.8: [139.76, 139.96]
* y_true: [21.65266443]
* v_ann: [28.651138305664062, 28.31863912796769]
```

```
- Time interval n.9: [139.96, 140.16]
* y_true: [32.03445568]
* v_ann: [31.675683975219727, 28.31863912796769]
```

```
- Time interval n.10: [140.16, 140.36]
```

```
* y_true: [31.91506312]
* v_ann: [25.288785934448242, 28.31863912796769]
```

```
- Time interval n.11: [140.36, 140.56]
* y_true: [23.65435061]
* v_ann: [24.980979919433594, 28.31863912796769]
```

```
- Time interval n.12: [140.56, 140.76]
* y_true: [42.04863469]
* v_ann: [28.37379264831543, 28.31863912796769]
```

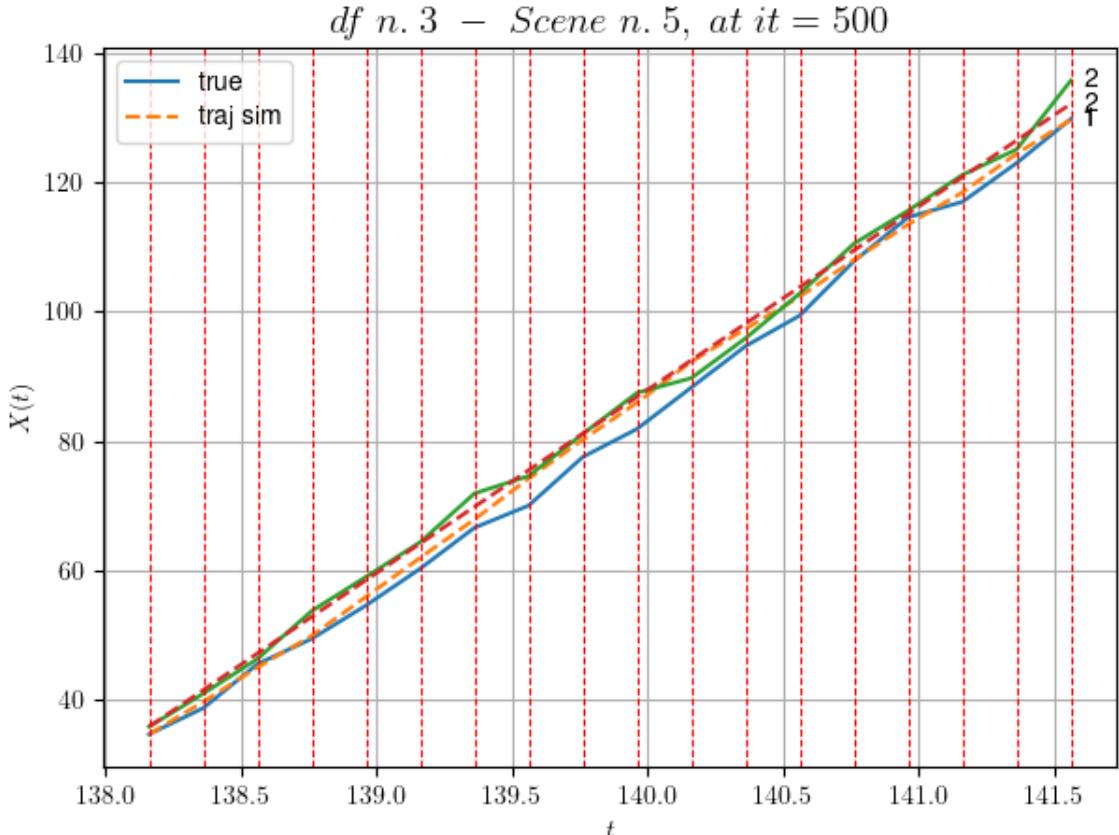
```
- Time interval n.13: [140.76, 140.96]
* y_true: [33.92792147]
* v_ann: [27.430814743041992, 28.31863912796769]
```

```
- Time interval n.14: [140.96, 141.16]
* y_true: [11.9131035]
* v_ann: [24.811981201171875, 28.31863912796769]
```

```
- Time interval n.15: [141.16, 141.36]
* y_true: [30.01833255]
* v_ann: [29.72998046875, 28.31863912796769]
```

```
- Time interval n.16: [141.36, 141.56]
* y_true: [33.94025545]
* v_ann: [26.466264724731445, 28.31863912796769]
```

```
* err= 3.4232841915148766
* Learning rate NN = 3.090312748099677e-05
```



For scene 5/90

- * use LR_NN=0.001 with err=9.410963667334693 at it=24
- * v0_scn_mean = 28.38589356283618
- * MAE = 3.3807045786940404

df n.3, scene n.6/90

We have 4 time intervals inside [154.56, 155.36]

- Time interval n.0: [154.56, 154.76]
 - * y_true: [16.792902]
 - * v_ann: [20.285451889038086, 33.88242010375711]

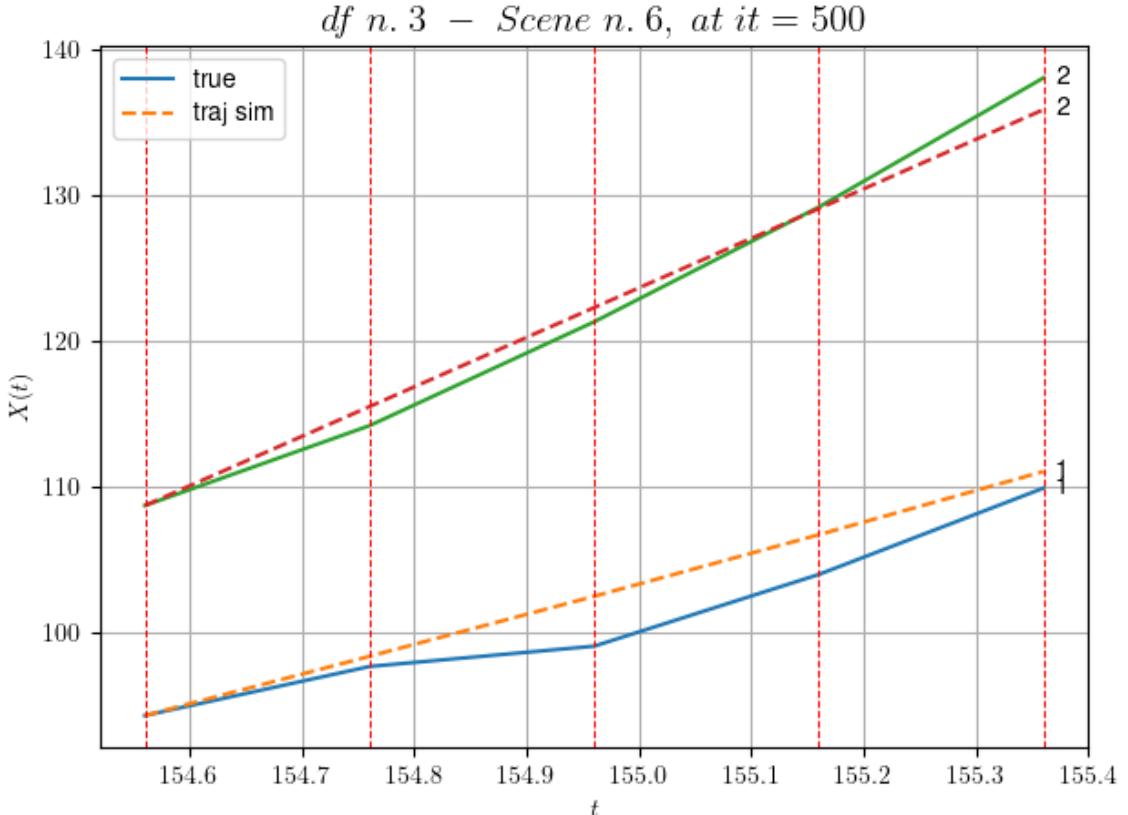
- Time interval n.1: [154.76, 154.96]
 - * y_true: [6.96129808]
 - * v_ann: [20.545568466186523, 33.88242010375711]

- Time interval n.2: [154.96, 155.16]
 - * y_true: [24.54499404]
 - * v_ann: [21.067895889282227, 33.88242010375711]

- Time interval n.3: [155.16, 155.36]
 - * y_true: [29.55644658]

```
* v_ann: [21.64678955078125, 33.88242010375711]
```

```
* err= 2.8229447031011086
* Learning rate NN = 4.782968062500004e-06
* diff = 0.02287492457113105
```



For scene 6/90

```
* use LR_NN=1e-05 with err=3.696214119567064 at it=24
* v0_scn_mean = 33.72712329963887
* MAE = 2.8229447031011086
```

df n.3, scene n.7/90

We have 3 time intervals inside [183.16, 183.76]

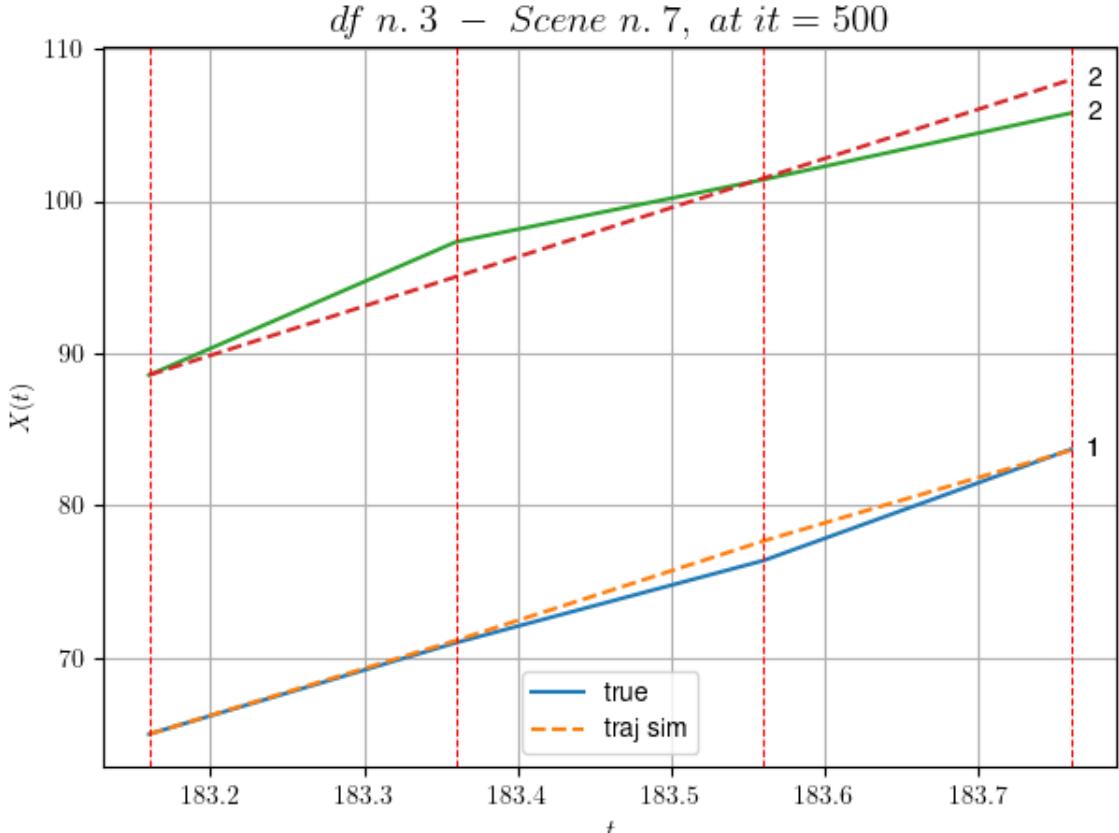
- Time interval n.0: [183.16, 183.36]
 - * y_true: [30.02270449]
 - * v_ann: [30.757083892822266, 32.31398331046886]

- Time interval n.1: [183.36, 183.56]
 - * y_true: [26.94282364]
 - * v_ann: [32.636905670166016, 32.31398331046886]

- Time interval n.2: [183.56, 183.76]
 - * y_true: [36.47456732]

```
* v_ann: [29.731781005859375, 32.31398331046886]
```

```
* err= 1.4680511947746346
* Learning rate NN = 5.904899080633186e-05
* diff = 0.0019159787566294106
```



For scene 7/90

```
* use LR_NN=0.0001 with err=1.3145525423735103 at it=24
* v0_scn_mean = 32.22142397806802
* MAE = 1.4680511947746346
```

df n.3, scene n.8/90

We have 8 time intervals inside [199.96, 201.56]

- Time interval n.0: [199.96, 200.16]
 - * y_true: [39.74420354]
 - * v_ann: [38.121177673339844, 35.4826339277588]

- Time interval n.1: [200.16, 200.36]
 - * y_true: [28.52349607]
 - * v_ann: [37.822296142578125, 35.4826339277588]

- Time interval n.2: [200.36, 200.56]

```
* y_true: [36.06528968]
* v_ann: [35.95530319213867, 35.4826339277588]
```

```
-----  
-----  
- Time interval n.3: [200.56, 200.76]  
* y_true: [38.41658036]  
* v_ann: [38.86730194091797, 35.4826339277588]
```

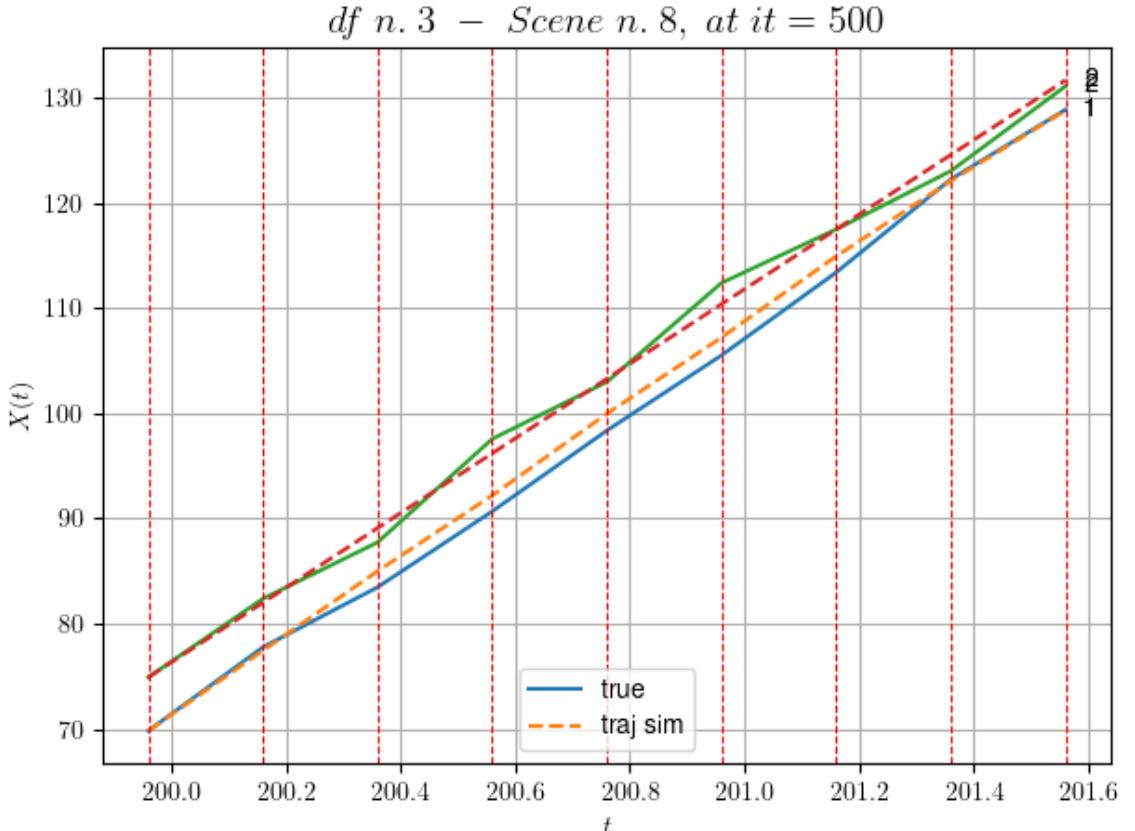
```
-----  
-----  
- Time interval n.4: [200.76, 200.96]  
* y_true: [35.78711418]  
* v_ann: [36.232818603515625, 35.4826339277588]
```

```
-----  
-----  
- Time interval n.5: [200.96, 201.16]  
* y_true: [39.39907556]  
* v_ann: [38.63179397583008, 35.4826339277588]
```

```
-----  
-----  
- Time interval n.6: [201.16, 201.36]  
* y_true: [44.30182053]  
* v_ann: [35.792808532714844, 35.4826339277588]
```

```
-----  
-----  
- Time interval n.7: [201.36, 201.56]  
* y_true: [33.01988723]  
* v_ann: [33.558372497558594, 35.4826339277588]
```

```
-----  
-----  
* err= 1.29432656176111  
* Learning rate NN = 0.00020589104678947479  
* diff = 0.01926689884855315
```



For scene 8/90

- * use LR_NN=0.001 with err=16.193396733287198 at it=24
- * v0_scn_mean = 35.26332857068987
- * MAE = 1.2775880646844555

df n.3, scene n.9/90

We have 4 time intervals inside [215.56, 216.36]

- Time interval n.0: [215.56, 215.76]
 - * y_true: [37.72349345]
 - * v_ann: [38.55048370361328, 30.842897264970155]

- Time interval n.1: [215.76, 215.96]
 - * y_true: [31.43339605]
 - * v_ann: [33.312320709228516, 30.842897264970155]

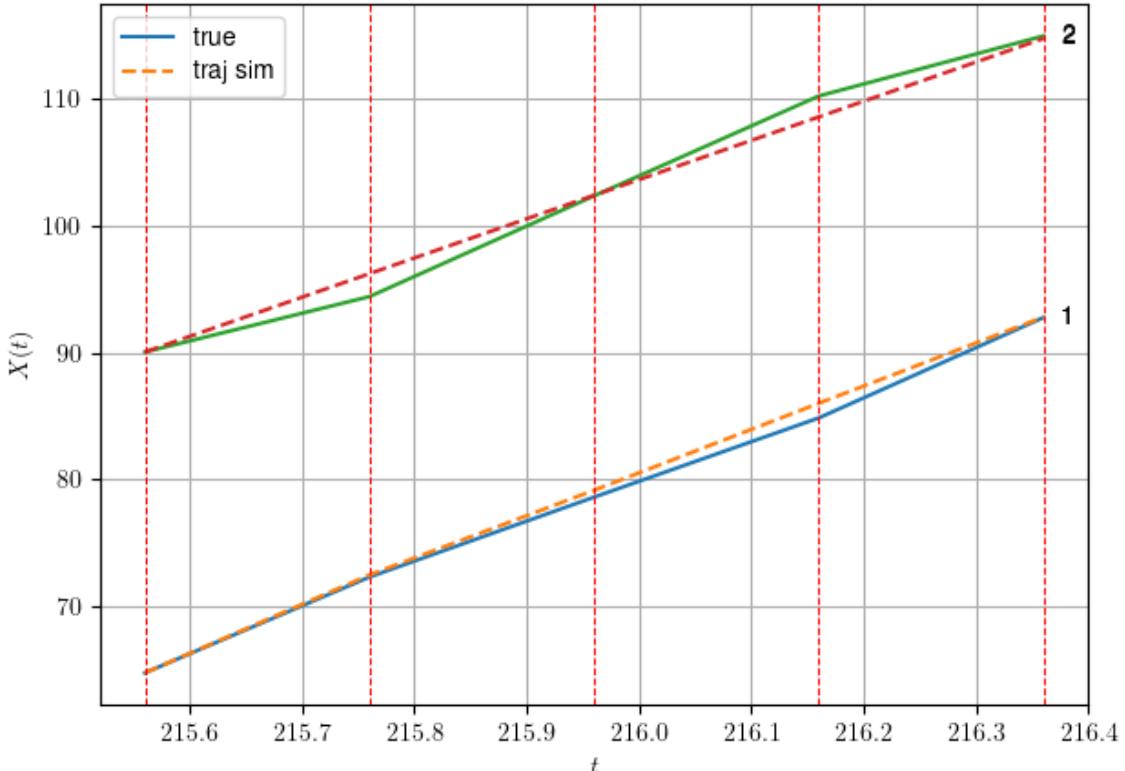
- Time interval n.2: [215.96, 216.16]
 - * y_true: [31.16401611]
 - * v_ann: [34.22016143798828, 30.842897264970155]

- Time interval n.3: [216.16, 216.36]
 - * y_true: [39.50602884]

```
* v_ann: [33.9174919128418, 30.842897264970155]
```

```
* err= 0.7648486868896405
* Learning rate NN = 0.000239148415857926
* diff = 7 422591474193219e-05
```

df n. 3 – Scene n. 9, at it = 500



For scene 9/90

```
* use LR_NN=0.0005 with err=1.2567812445714228 at it=24
* v0_scn_mean = 30.80918137437758
* MAE = 0.7648224150639918
```

df n.3, scene n.10/90

We have 9 time intervals inside [234.76, 236.56]

- Time interval n.0: [234.76, 234.96]
 - * y_true: [32.05217047]
 - * v_ann: [24.017601013183594, 40.37210690695793]

- Time interval n.1: [234.96, 235.16]
 - * y_true: [29.65244542]
 - * v_ann: [24.569347381591797, 40.37210690695793]

- Time interval n.2: [235.16, 235.36]
 - * y_true: [16.45155324]

* v_ann: [25.075780868530273, 40.37210690695793]

- Time interval n.3: [235.36, 235.56]
* y_true: [26.65283483]
* v_ann: [23.959325790405273, 40.37210690695793]

- Time interval n.4: [235.56, 235.76]
* y_true: [25.00304068]
* v_ann: [24.73904037475586, 40.37210690695793]

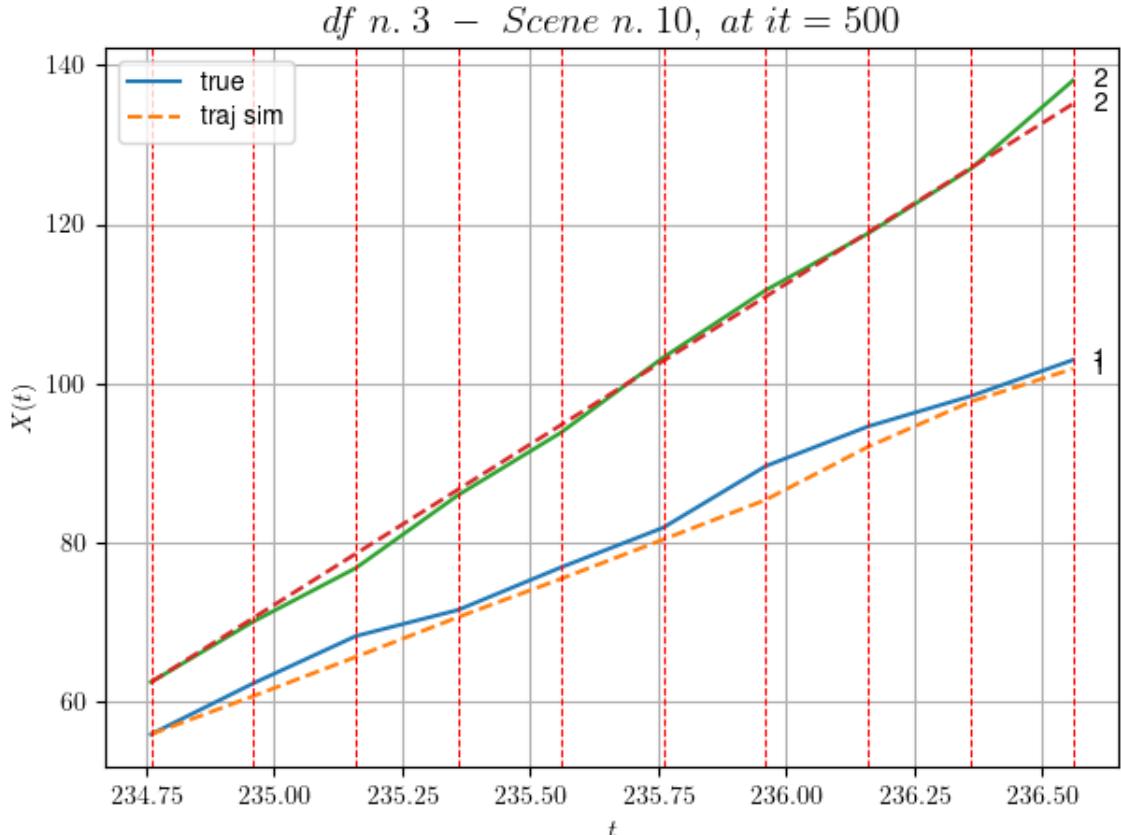
- Time interval n.5: [235.76, 235.96]
* y_true: [38.65548213]
* v_ann: [24.93229866027832, 40.37210690695793]

- Time interval n.6: [235.96, 236.16]
* y_true: [24.9540797]
* v_ann: [33.34579849243164, 40.37210690695793]

- Time interval n.7: [236.16, 236.36]
* y_true: [19.00340646]
* v_ann: [28.277883529663086, 40.37210690695793]

- Time interval n.8: [236.36, 236.56]
* y_true: [22.75284466]
* v_ann: [20.739486694335938, 40.37210690695793]

* err= 2.754494628629339
* Learning rate NN = 8.338587213074788e-05
* diff = 0.6355800495986097



For scene 10/90

```
* use LR_NN=0.0005 with err=102.81566728160975 at it=24
* v0_scn_mean = 39.957222630759944
* MAE = 2.754494628629339
```

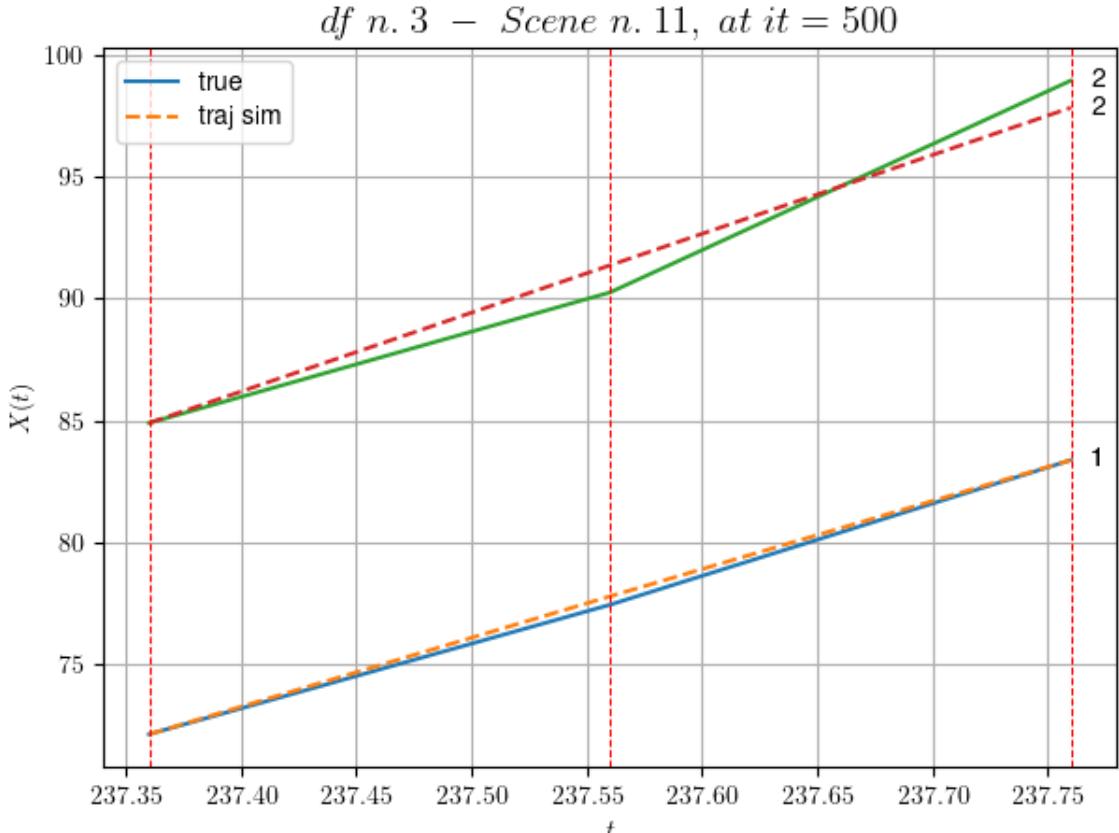
df n.3, scene n.11/90

We have 2 time intervals inside [237.36, 237.76]

- Time interval n.0: [237.36, 237.56]
 - * y_true: [26.58288419]
 - * v_ann: [28.30719566345215, 32.371778764504576]

- Time interval n.1: [237.56, 237.76]
 - * y_true: [29.70372271]
 - * v_ann: [27.9819278717041, 32.371778764504576]

```
* err= 0.4331665503837652
* Learning rate NN = 7.289998757187277e-05
* diff = 4.736389040749245e-06
```



For scene 11/90

- * use LR_NN=0.0001 with err=0.7939735458966449 at it=24
- * v0_scn_mean = 32.27690761394284
- * MAE = 0.43279184573055157

df n.3, scene n.12/90

We have 12 time intervals inside [268.56, 270.96]

- Time interval n.0: [268.56, 268.76]
 - * y_true: [29.3500352]
 - * v_ann: [28.8953914642334, 29.56802314012508]

- Time interval n.1: [268.76, 268.96]
 - * y_true: [29.08008566]
 - * v_ann: [28.88862419128418, 29.56802314012508]

- Time interval n.2: [268.96, 269.16]
 - * y_true: [24.64016214]
 - * v_ann: [28.893430709838867, 29.56802314012508]

- Time interval n.3: [269.16, 269.36]
 - * y_true: [27.79028745]

* v_ann: [29.004623413085938, 29.56802314012508]

- Time interval n.4: [269.36, 269.56]
* y_true: [27.06043503]
* v_ann: [28.993867874145508, 29.56802314012508]

- Time interval n.5: [269.56, 269.76]
* y_true: [32.18076388]
* v_ann: [29.01740074157715, 29.56802314012508]

- Time interval n.6: [269.76, 269.96]
* y_true: [32.77104018]
* v_ann: [28.71661949157715, 29.56802314012508]

- Time interval n.7: [269.96, 270.16]
* y_true: [29.95131945]
* v_ann: [29.108165740966797, 29.56802314012508]

- Time interval n.8: [270.16, 270.36]
* y_true: [29.70158012]
* v_ann: [29.249427795410156, 29.56802314012508]

- Time interval n.9: [270.36, 270.56]
* y_true: [25.63174114]
* v_ann: [29.656707763671875, 29.56802314012508]

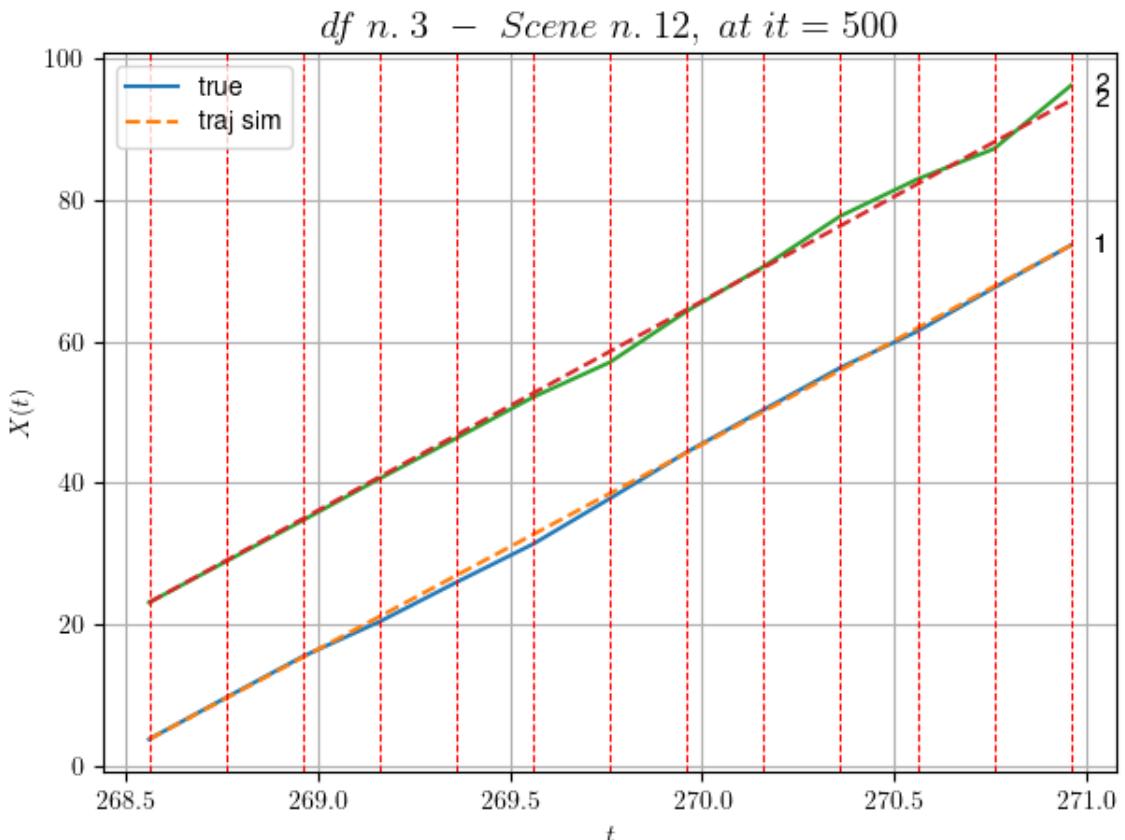
- Time interval n.10: [270.56, 270.76]
* y_true: [30.75243246]
* v_ann: [29.45924186706543, 29.56802314012508]

- Time interval n.11: [270.76, 270.96]
* y_true: [30.06304641]
* v_ann: [28.946735382080078, 29.56802314012508]

* err= 0.5730990302091992

* Learning rate NN = 8.862932190822903e-06

* diff = 0.0004556552792127633

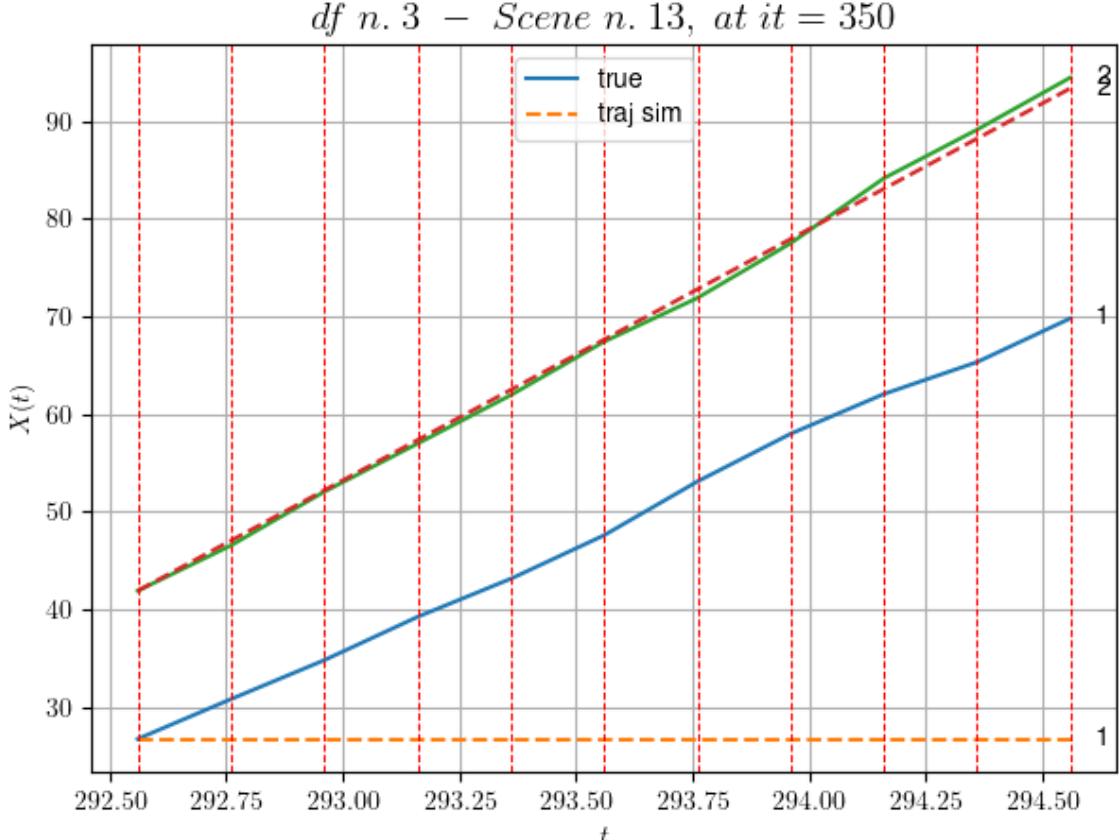


For scene 12/90

```
* use LR_NN=0.0001 with err=0.6211001623821463 at it=24
* v0_scn_mean = 29.585302214516727
* MAE = 0.5427898534419778
```

df n.3, scene n.13/90

```
We have 10 time intervals inside [292.56,294.56]
* err= 328.0395558009477
* Learning rate NN = 0.00025418648147024214
* diff = 1.818700070543855e-07
```



For scene 13/90

- * use LR_NN=0.001 with err=11.976620231189248 at it=24
- * v0_scn_mean = 25.984358458842813
- * MAE = 105.66309033007937

df n.3, scene n.14/90

We have 4 time intervals inside [299.76, 300.56]

- Time interval n.0: [299.76, 299.96]
 - * y_true: [31.41374449]
 - * v_ann: [32.04948806762695, 35.5562018199698]

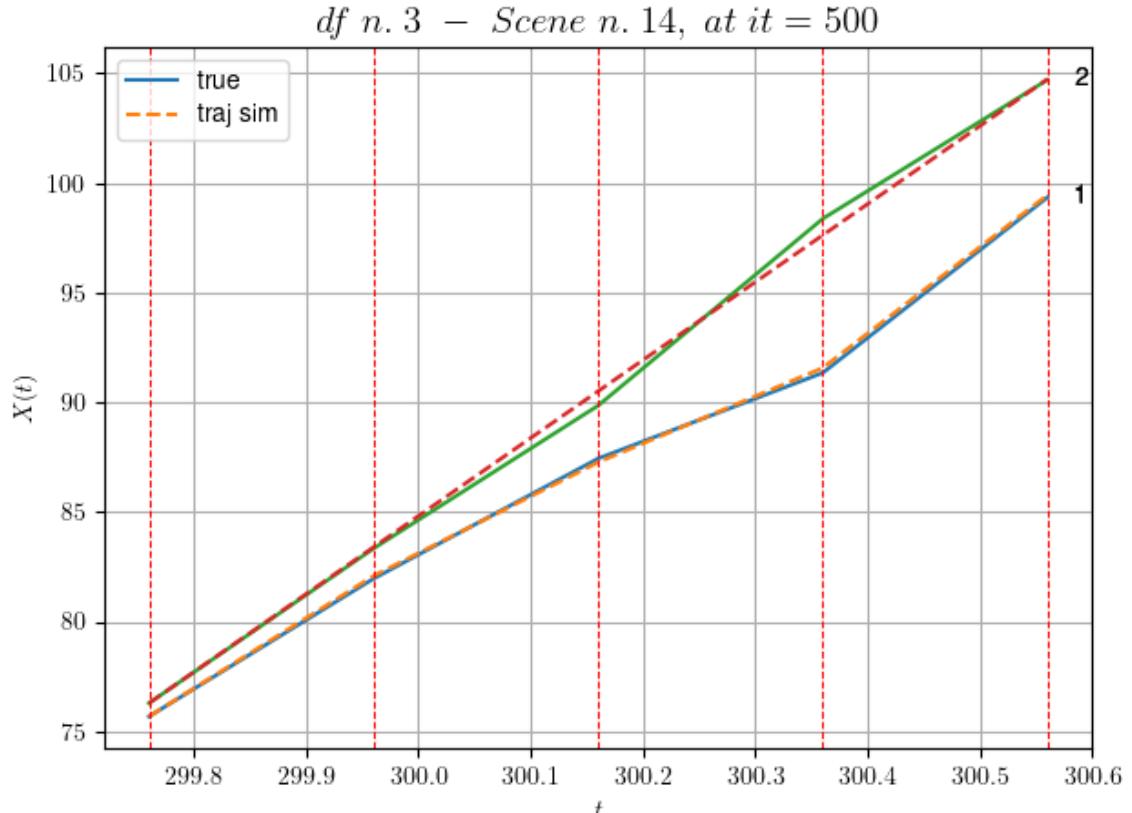
- Time interval n.1: [299.96, 300.16]
 - * y_true: [27.37378642]
 - * v_ann: [25.89091682434082, 35.5562018199698]

- Time interval n.2: [300.16, 300.36]
 - * y_true: [19.53299053]
 - * v_ann: [21.49831199645996, 35.5562018199698]

- Time interval n.3: [300.36, 300.56]
 - * y_true: [39.98711868]

* v_ann: [39.393367767333984, 35.5562018199698]

* err= 0.11036251332657991
 * Learning rate NN = 0.000478296831715852
 * diff = 0.0002660546611984588



For scene 14/90

* use LR_NN=0.001 with err=5.988398551050761 at it=24
 * v0_scn_mean = 35.33395374721195
 * MAE = 0.11036251332657991

df n.3, scene n.15/90

We have 5 time intervals inside [331.56, 332.56]

- Time interval n.0: [331.56, 331.76]
 - * y_true: [29.36025951]
 - * v_ann: [28.8726863861084, 25.00216687994896]

- Time interval n.1: [331.76, 331.96]
 - * y_true: [26.13036592]
 - * v_ann: [27.32593536376953, 25.00216687994896]

- Time interval n.2: [331.96, 332.16]
 - * y_true: [26.45053806]

* v_ann: [26.872880935668945, 25.00216687994896]

- Time interval n.3: [332.16, 332.36]

* y_true: [30.48083307]

* v_ann: [27.55657958984375, 25.00216687994896]

- Time interval n.4: [332.36, 332.56]

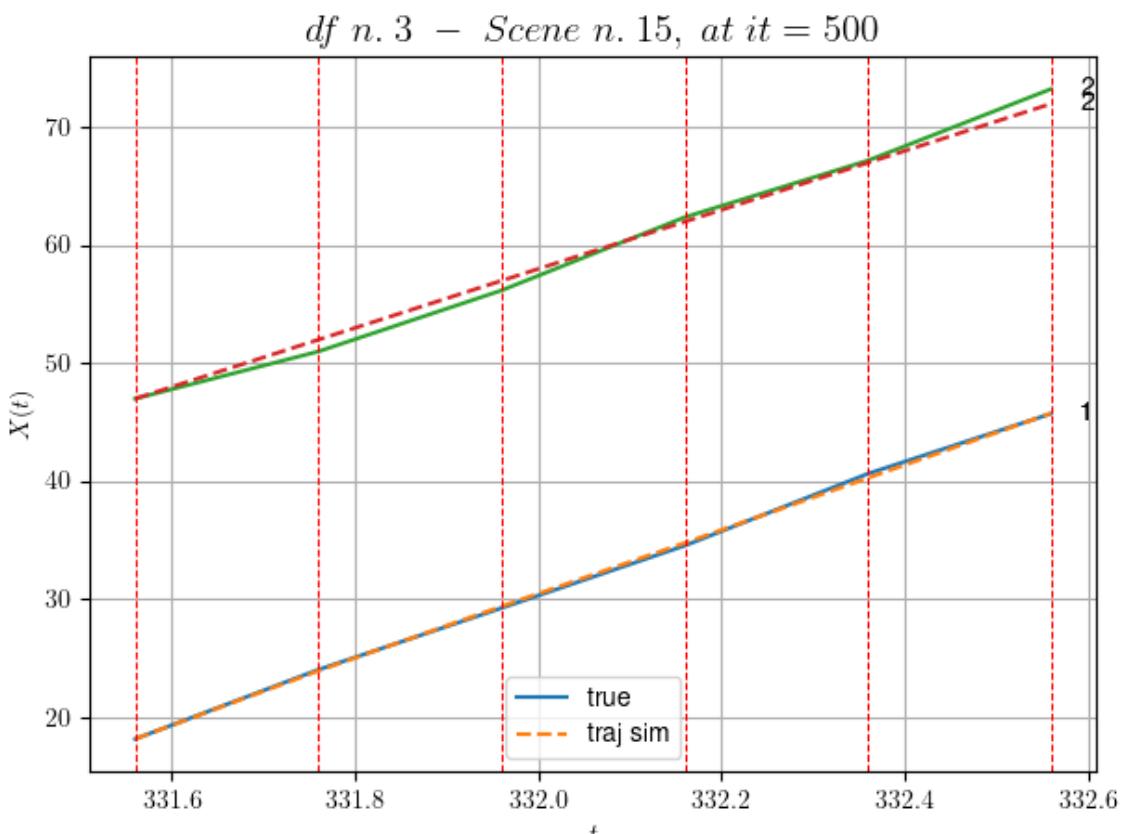
* y_true: [25.46093572]

* v_ann: [27.399124145507812, 25.00216687994896]

* err= 0.3024892774197751

* Learning rate NN = 1.9371018424862996e-05

* diff = 0.0007580352387535627



For scene 15/90

* use LR_NN=5e-05 with err=3.9604621045489536 at it=24

* v0_scn_mean = 25.202080204712793

* MAE = 0.27889902235994496

df n.3, scene n.16/90

We have 3 time intervals inside [338.36,338.96]

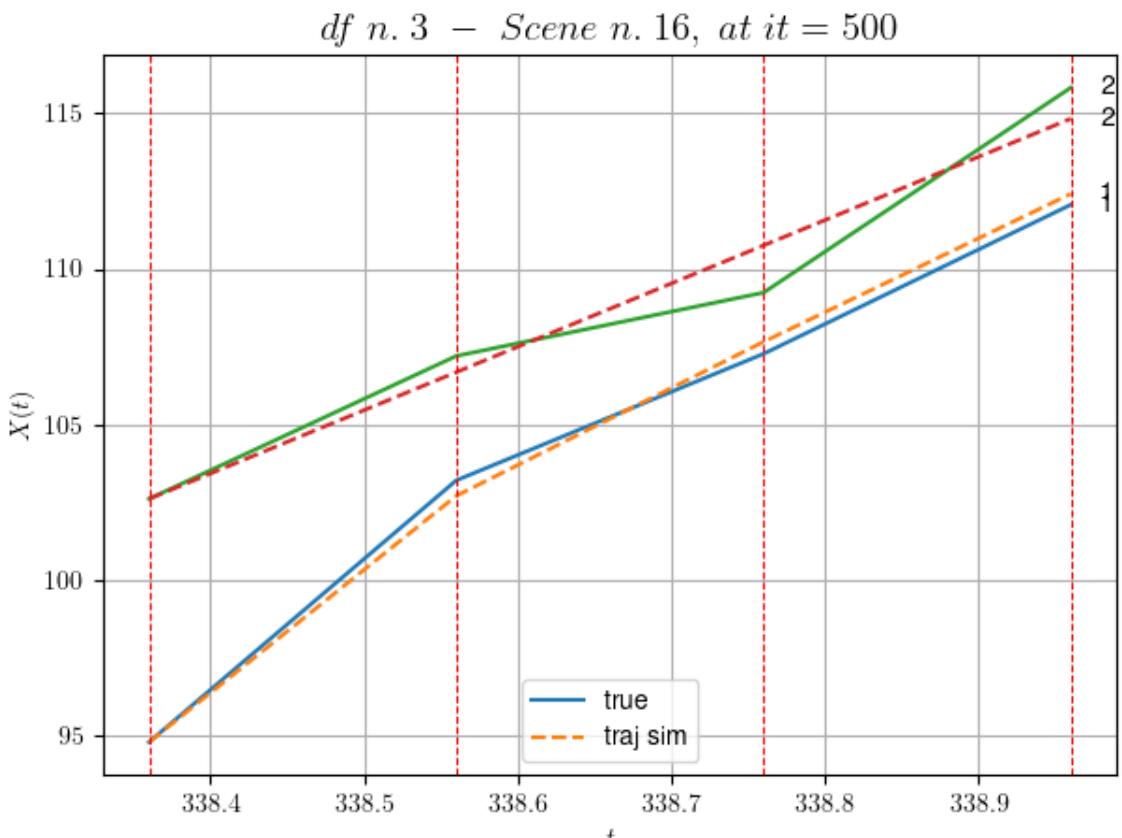
- Time interval n.0: [338.36, 338.56]

```
* y_true: [42.04765341]
* v_ann: [39.56169128417969, 20.358070226672716]
```

```
- Time interval n.1: [338.56, 338.76]
* y_true: [20.3284091]
* v_ann: [24.744434356689453, 20.358070226672716]
```

```
- Time interval n.2: [338.76, 338.96]
* y_true: [23.95541551]
* v_ann: [23.762554168701172, 20.358070226672716]
```

```
* err= 0.5101885529109502
* Learning rate NN = 0.0005904899444431067
* diff = 0.002980189867309746
```



For scene 16/90

```
* use LR_NN=0.001 with err=7.303728371081284 at it=24
* v0_scn_mean = 20.74374741753214
* MAE = 0.5101885529109502
```

df n.3, scene n.17/90

We have 4 time intervals inside [377.56,378.36]

```

    - Time interval n.0: [377.56, 377.76]
      * y_true: [28.58096669]
      * v_ann: [26.20009422302246, 38.59992828377887]

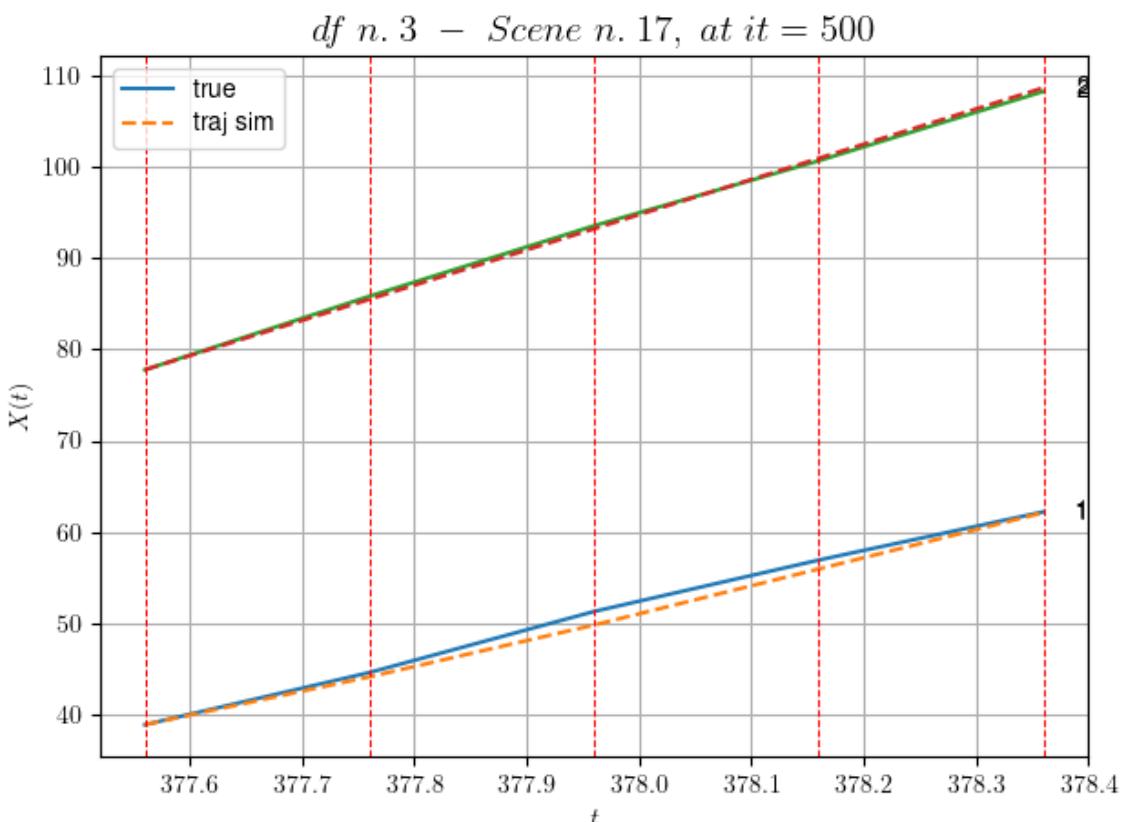
-----
    - Time interval n.1: [377.76, 377.96]
      * y_true: [33.41151221]
      * v_ann: [28.386945724487305, 38.59992828377887]

-----
    - Time interval n.2: [377.96, 378.16]
      * y_true: [28.14158578]
      * v_ann: [30.661352157592773, 38.59992828377887]

-----
    - Time interval n.3: [378.16, 378.36]
      * y_true: [26.41181793]
      * v_ann: [30.83100700378418, 38.59992828377887]

* err= 0.38454369448659553
* Learning rate NN = 2.3914839403005317e-05
* diff = 0 0014466964739252575

```



For scene 17/90

```

* use LR_NN=5e-05 with err=8.779525647549583 at it=24
* v0_scn_mean = 38.255931152494654
* MAE = 0.38454369448659553

```

```
df n.3, scene n.18/90
```

```
=====
=====

We have 6 time intervals inside [385.76,386.96]
- Time interval n.0: [385.76, 385.96]
  * y_true: [27.95094629]
  * v_ann: [34.83313751220703, 27.617874781176976]

-----
- Time interval n.1: [385.96, 386.16]
  * y_true: [33.20147506]
  * v_ann: [35.28536605834961, 27.617874781176976]

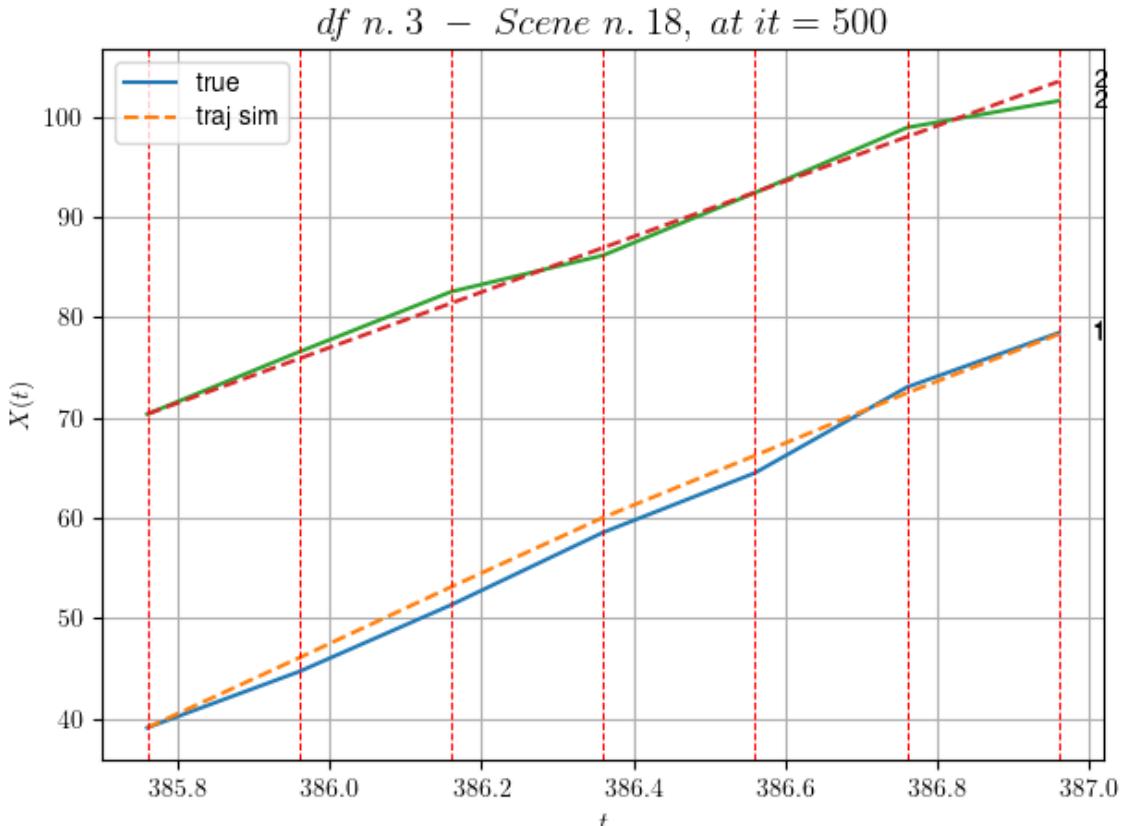
-----
- Time interval n.2: [386.16, 386.36]
  * y_true: [36.102098]
  * v_ann: [34.55649948120117, 27.617874781176976]

-----
- Time interval n.3: [386.36, 386.56]
  * y_true: [29.65215787]
  * v_ann: [30.875490188598633, 27.617874781176976]

-----
- Time interval n.4: [386.56, 386.76]
  * y_true: [42.70388188]
  * v_ann: [31.16684913635254, 27.617874781176976]

-----
- Time interval n.5: [386.76, 386.96]
  * y_true: [27.10298598]
  * v_ann: [29.27833366394043, 27.617874781176976]

-----
* err= 1.2562627769186303
* Learning rate NN = 3.138104830213706e-06
* diff = 0.0008370157669814748
```



For scene 18/90

- * use LR_NN=1e-05 with err=4.285703500496982 at it=24
 - * v0_scn_mean = 27.71315978991171
 - * MAE = 1.2530663999015492
-
-

df n.3, scene n.19/90

We have 4 time intervals inside [402.76, 403.56]

- Time interval n.0: [402.76, 402.96]
 - * y_true: [32.26367754]
 - * v_ann: [33.54847717285156, 34.519670722292254]
-

- Time interval n.1: [402.96, 403.16]
 - * y_true: [31.06421017]
 - * v_ann: [33.05451965332031, 34.519670722292254]
-

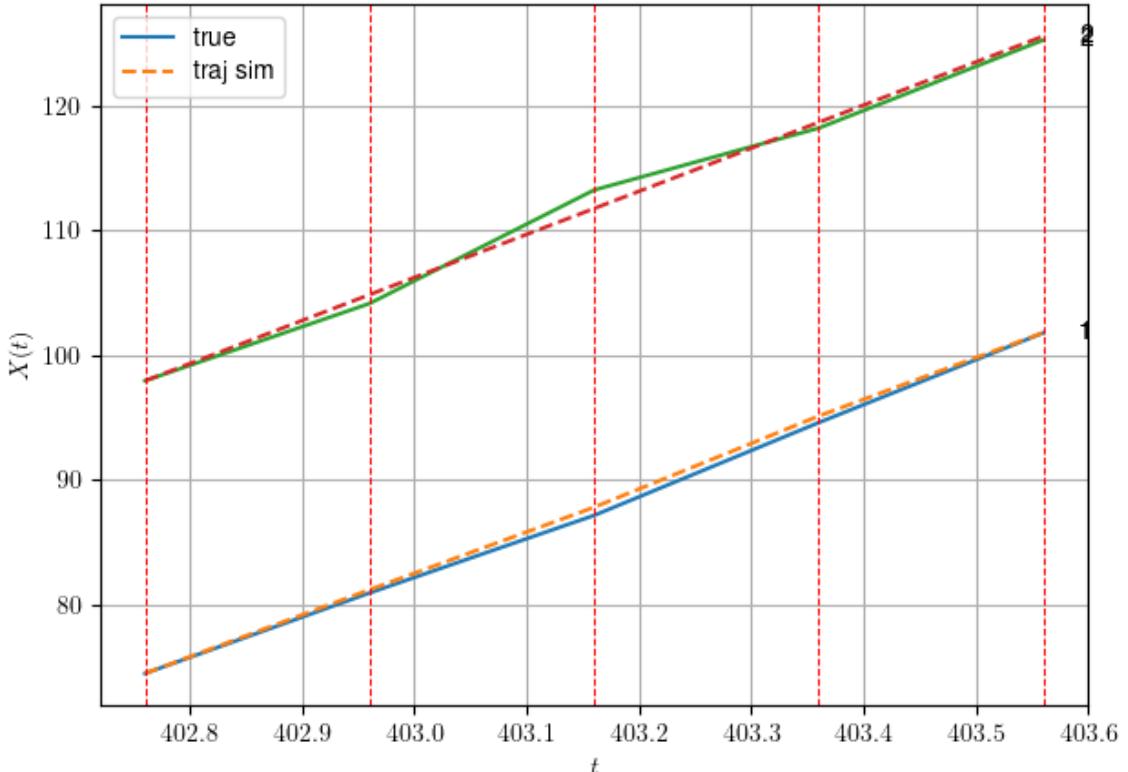
- Time interval n.2: [403.16, 403.36]
 - * y_true: [37.17770982]
 - * v_ann: [36.53190994262695, 34.519670722292254]
-

- Time interval n.3: [403.36, 403.56]
 - * y_true: [35.95654106]

* v_ann: [33.42440414428711, 34.519670722292254]

* err= 0.3779089526555752
 * Learning rate NN = 2.3914839403005317e-05
 * diff = 1.2484008224042156e-06

df n. 3 - Scene n. 19, at it = 500



For scene 19/90

* use LR_NN=5e-05 with err=2.7628430835266364 at it=24
 * v0_scn_mean = 34.338883893435835
 * MAE = 0.37725486324922347

df n.3, scene n.20/90

We have 5 time intervals inside [417.16, 418.16]

- Time interval n.0: [417.16, 417.36]
 - * y_true: [27.85257929]
 - * v_ann: [31.359041213989258, 31.447990123716004]

- Time interval n.1: [417.36, 417.56]
 - * y_true: [31.20340101]
 - * v_ann: [31.12189483642578, 31.447990123716004]

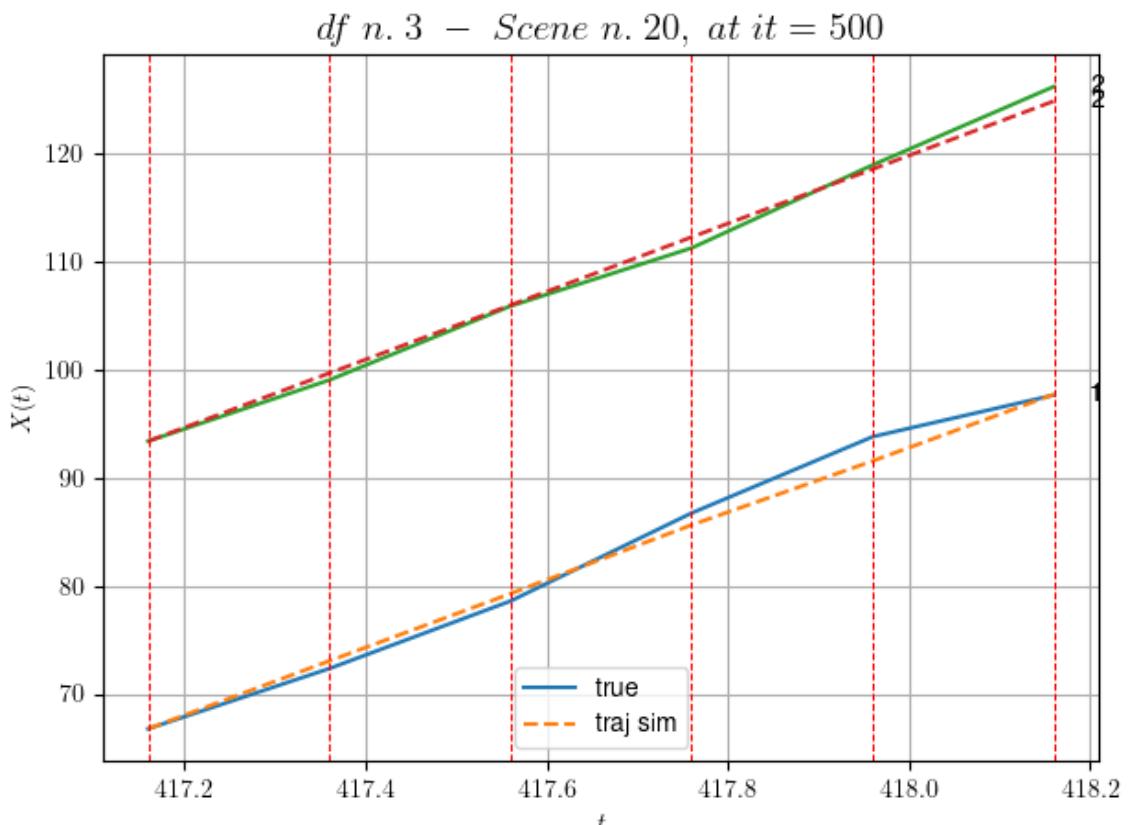
- Time interval n.2: [417.56, 417.76]
 - * y_true: [40.70532339]

```
* v_ann: [31.761756896972656, 31.447990123716004]
```

```
- Time interval n.3: [417.76, 417.96]
* y_true: [35.30550423]
* v_ann: [29.614227294921875, 31.447990123716004]
```

```
- Time interval n.4: [417.96, 418.16]
* y_true: [19.25337396]
* v_ann: [30.759469985961914, 31.447990123716004]
```

```
* err= 0.8823168309144245
* Learning rate NN = 1.9371018424862996e-05
* diff = 0 010171957307932411
```



For scene 20/90

```
* use LR_NN=5e-05 with err=1.550949769019672 at it=24
* v0_scn_mean = 31.39007051877823
* MAE = 0.8585656758775693
```

df n.3, scene n.21/90

We have 2 time intervals inside [427.36, 427.76]

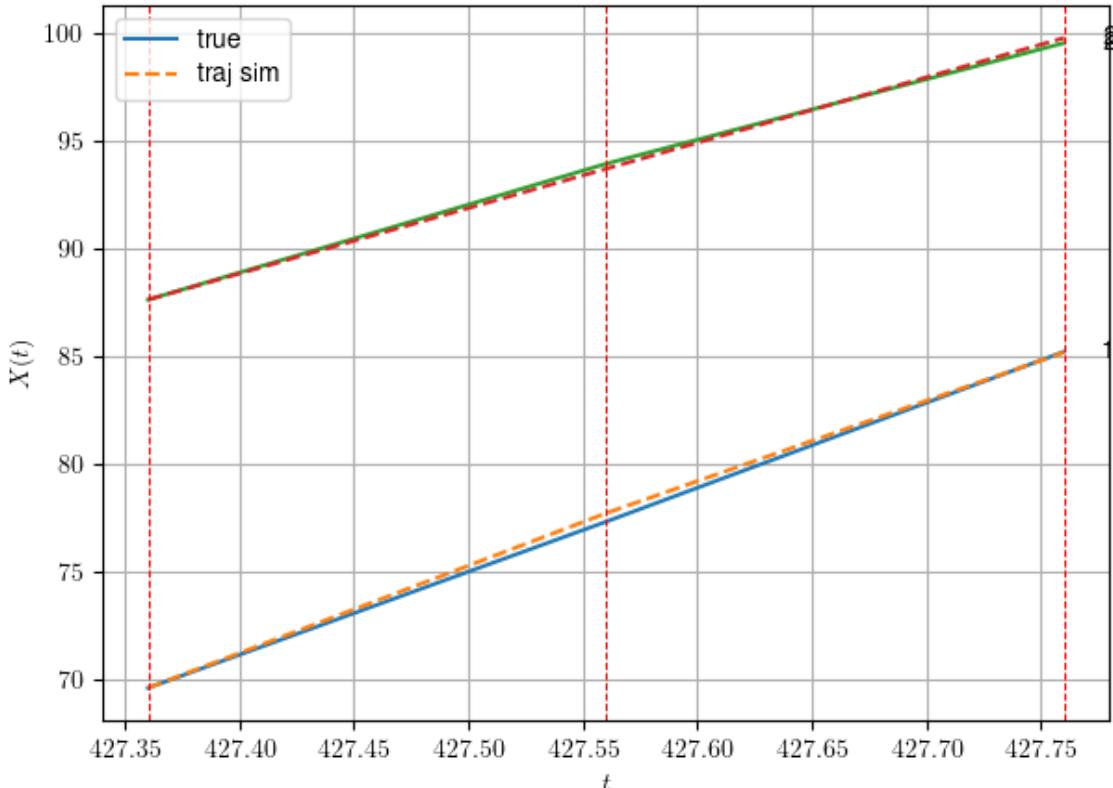
```
- Time interval n.0: [427.36, 427.56]
* y_true: [38.56400372]
```

```
* v_ann: [40.53754806518555, 30.361525596812886]
```

- Time interval n.1: [427.56, 427.76]
 - * y_true: [39.44508031]
 - * v_ann: [37.310890197753906, 30.361525596812886]

- * err= 0.04449123351984348
- * Learning rate NN = 7.289998757187277e-05
- * diff = 2.221897787893501e-05

df n. 3 – Scene n. 21, at it = 500



For scene 21/90

- * use LR_NN=0.0001 with err=0.04935891309428659 at it=24
- * v0_scn_mean = 30.347064572943644
- * MAE = 0.040373728403792636

df n.3, scene n.22/90

We have 3 time intervals inside [431.76,432.36]

- Time interval n.0: [431.76, 431.96]
 - * y_true: [42.05694869]
 - * v_ann: [43.90062713623047, 25.89688933392221]

- Time interval n.1: [431.96, 432.16]

```
* y_true: [44.06855704]
* v_ann: [38.396202087402344, 25.89688933392221]
```

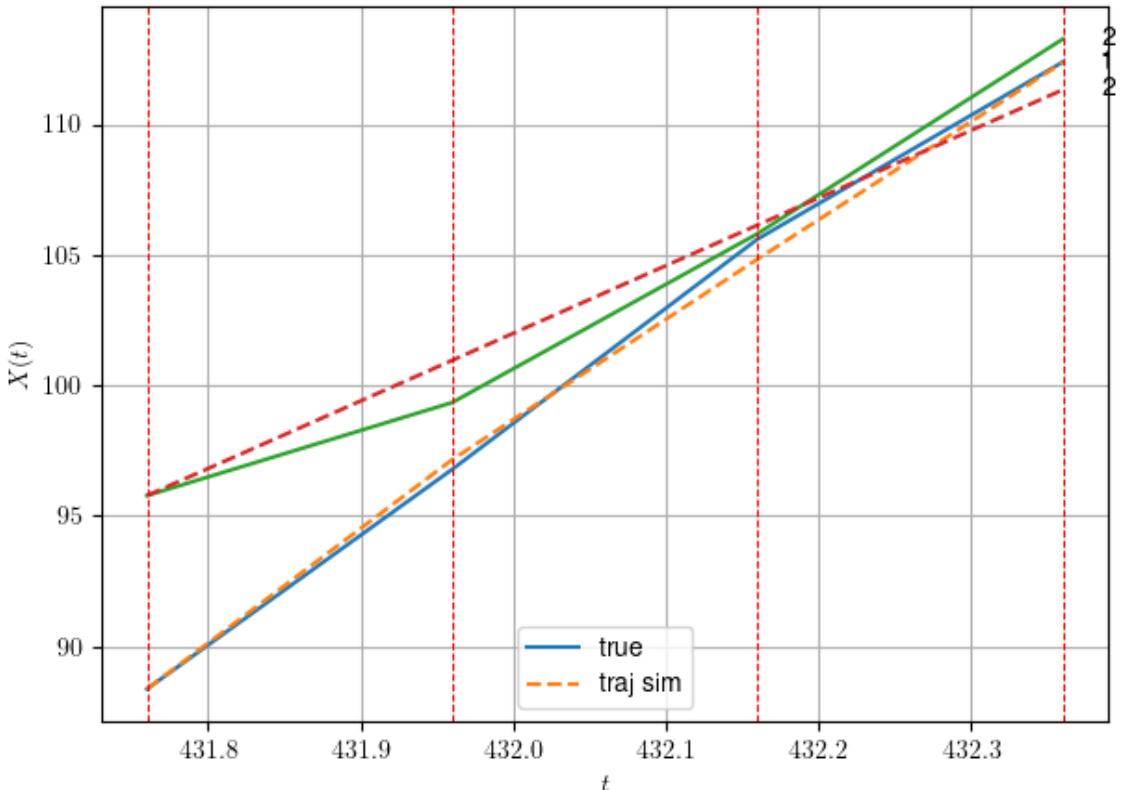
```
- Time interval n.2: [432.16, 432.36]
```

```
* y_true: [33.89770032]
```

```
* v_ann: [37.63349914550781, 25.89688933392221]
```

```
* err= 0.901937272686099
* Learning rate NN = 0.0005904899444431067
* diff = 6.352604315403529e-05
```

df n. 3 – Scene n. 22, at it = 500



For scene 22/90

```
* use LR_NN=0.001 with err=5.606584438615169 at it=24
* v0_scn_mean = 26.061013760533513
* MAE = 0.824228872143109
```

df n.3, scene n.23/90

We have 7 time intervals inside [436.16, 437.56]

```
- Time interval n.0: [436.16, 436.36]
```

```
* y_true: [28.38049676]
```

```
* v_ann: [30.904356002807617, 32.92393930276299]
```

```
- Time interval n.1: [436.36, 436.56]
```

```
* y_true: [31.10077619]
* v_ann: [32.04057312011719, 32.92393930276299]
```

```
-----  
-----  
- Time interval n.2: [436.56, 436.76]  
* y_true: [33.35116865]  
* v_ann: [31.025781631469727, 32.92393930276299]
```

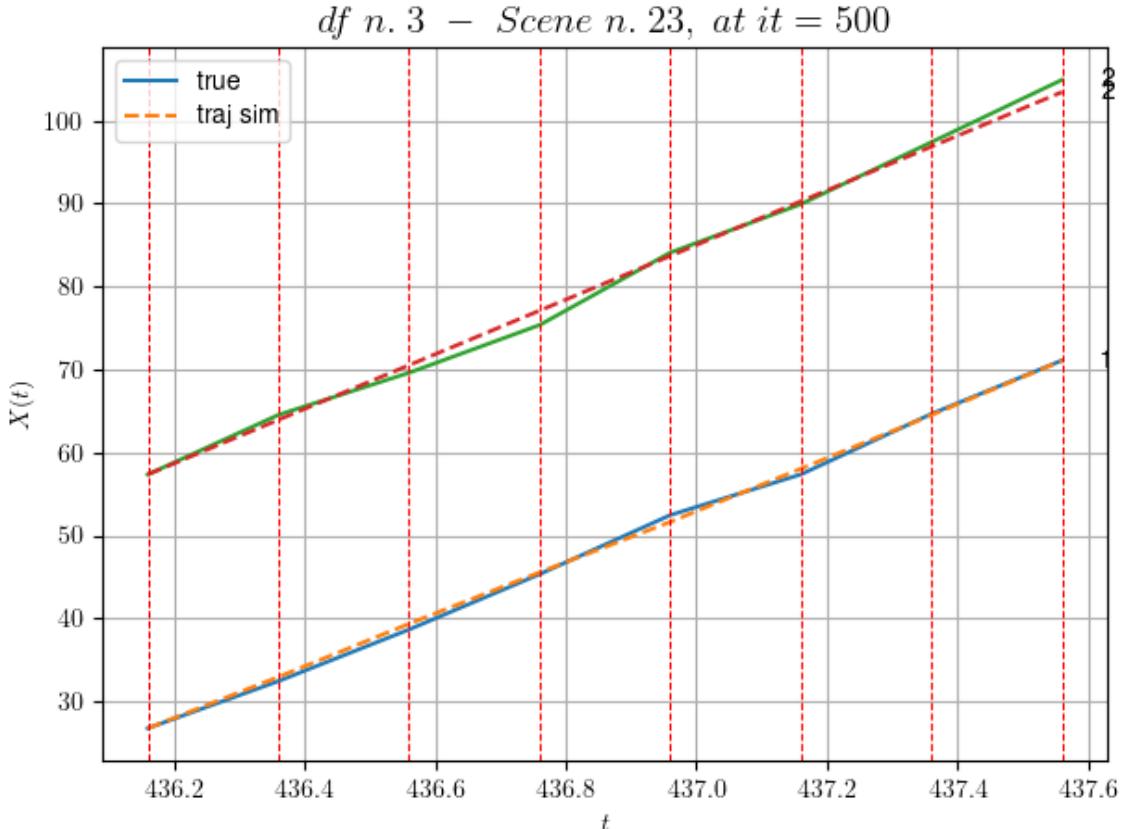
```
-----  
-----  
- Time interval n.3: [436.76, 436.96]  
* y_true: [35.59162813]  
* v_ann: [30.377758026123047, 32.92393930276299]
```

```
-----  
-----  
- Time interval n.4: [436.96, 437.16]  
* y_true: [24.54147266]  
* v_ann: [32.004638671875, 32.92393930276299]
```

```
-----  
-----  
- Time interval n.5: [437.16, 437.36]  
* y_true: [36.46262809]  
* v_ann: [32.372108459472656, 32.92393930276299]
```

```
-----  
-----  
- Time interval n.6: [437.36, 437.56]  
* y_true: [32.2428709]  
* v_ann: [32.76727294921875, 32.92393930276299]
```

```
-----  
-----  
* err= 0.556405843128427  
* Learning rate NN = 1.2709323527815286e-05  
* diff = 0.00043691978851123636
```



For scene 23/90

- * use LR_NN=5e-05 with err=4.069910804080175 at it=24
- * v0_scn_mean = 32.806981730675574
- * MAE = 0.5561190000077075

df n.3, scene n.24/90

We have 3 time intervals inside [438.16, 438.76]

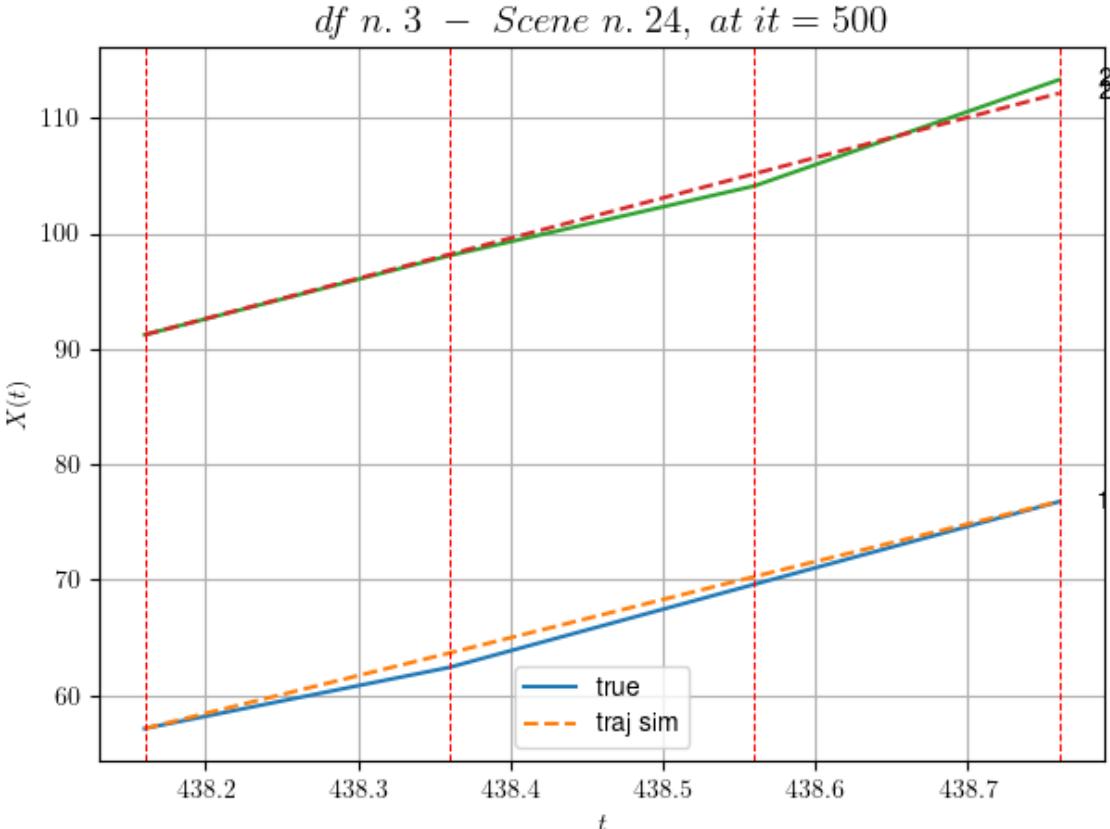
- Time interval n.0: [438.16, 438.36]
 - * y_true: [26.48183539]
 - * v_ann: [32.69037628173828, 34.868378093315464]

- Time interval n.1: [438.36, 438.56]
 - * y_true: [35.94307189]
 - * v_ann: [33.0901985168457, 34.868378093315464]

- Time interval n.2: [438.56, 438.76]
 - * y_true: [35.82358849]
 - * v_ann: [32.57185745239258, 34.868378093315464]

- * err= 0.5625546288126724
- * Learning rate NN = 2.952449540316593e-05

* diff = 6.280128121614583e-05



For scene 24/90

* use LR_NN=5e-05 with err=2.549292467224312 at it=24
 * v0_scn_mean = 34.673642969620474
 * MAE = 0.5576742590979569

df n.3, scene n.25/90

We have 10 time intervals inside [464.56, 466.56]

- Time interval n.0: [464.56, 464.76]
 - * y_true: [27.69098082]
 - * v_ann: [27.822847366333008, 24.498602704881193]

- Time interval n.1: [464.76, 464.96]
 - * y_true: [18.42077628]
 - * v_ann: [28.059246063232422, 24.498602704881193]

- Time interval n.2: [464.96, 465.16]
 - * y_true: [33.36180608]
 - * v_ann: [27.883087158203125, 24.498602704881193]

- Time interval n.3: [465.16, 465.36]
 - * y_true: [30.0319773]

* v_ann: [26.19743537902832, 24.498602704881193]

- Time interval n.4: [465.36, 465.56]
* y_true: [28.782318]
* v_ann: [27.061113357543945, 24.498602704881193]

- Time interval n.5: [465.56, 465.76]
* y_true: [28.59272475]
* v_ann: [27.58033561706543, 24.498602704881193]

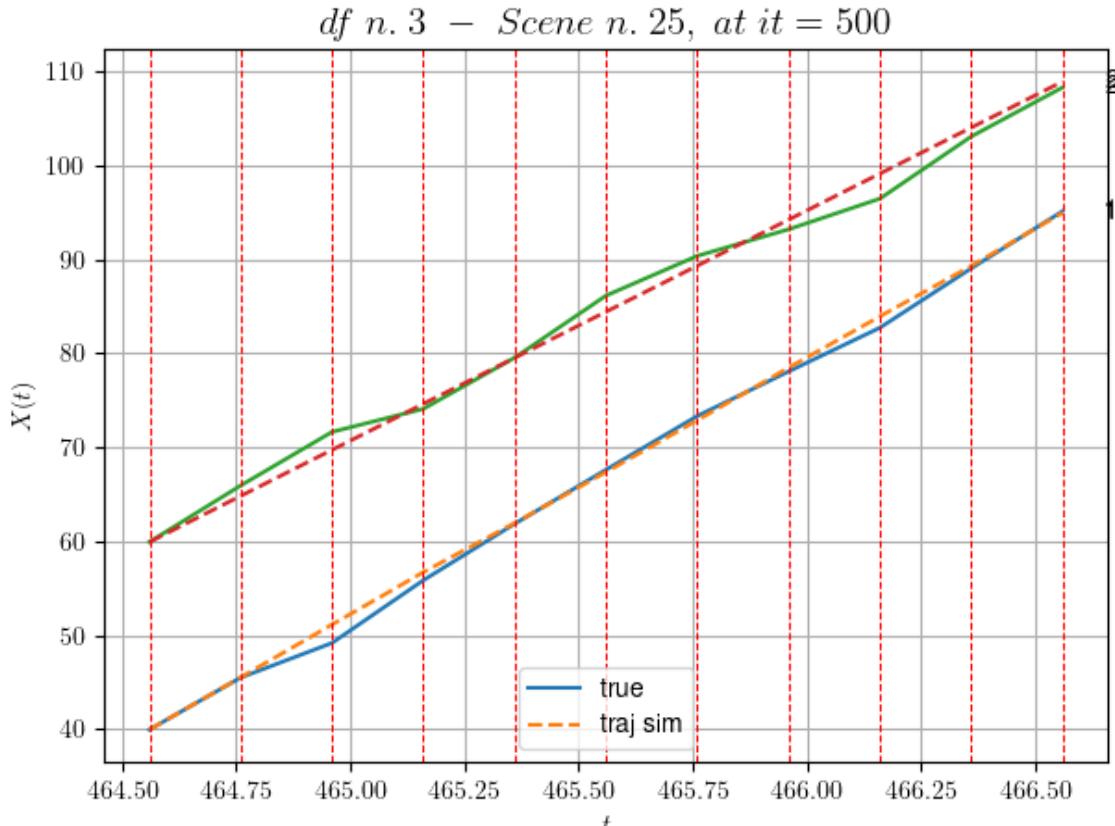
- Time interval n.6: [465.76, 465.96]
* y_true: [23.70259195]
* v_ann: [27.974197387695312, 24.498602704881193]

- Time interval n.7: [465.96, 466.16]
* y_true: [23.26288454]
* v_ann: [27.295942306518555, 24.498602704881193]

- Time interval n.8: [466.16, 466.36]
* y_true: [31.61450449]
* v_ann: [26.88471031188965, 24.498602704881193]

- Time interval n.9: [466.36, 466.56]
* y_true: [30.37492519]
* v_ann: [28.22690200805664, 24.498602704881193]

* err= 1.1447497901056163
* Learning rate NN = 6.754255446139723e-05
* diff = 0.02695215162880138



For scene 25/90

```
* use LR_NN=0.0005 with err=26.00750463639873 at it=24
* v0_scn_mean = 24.71865859664379
* MAE = 1.1447497901056163
```

df n.3, scene n.26/90

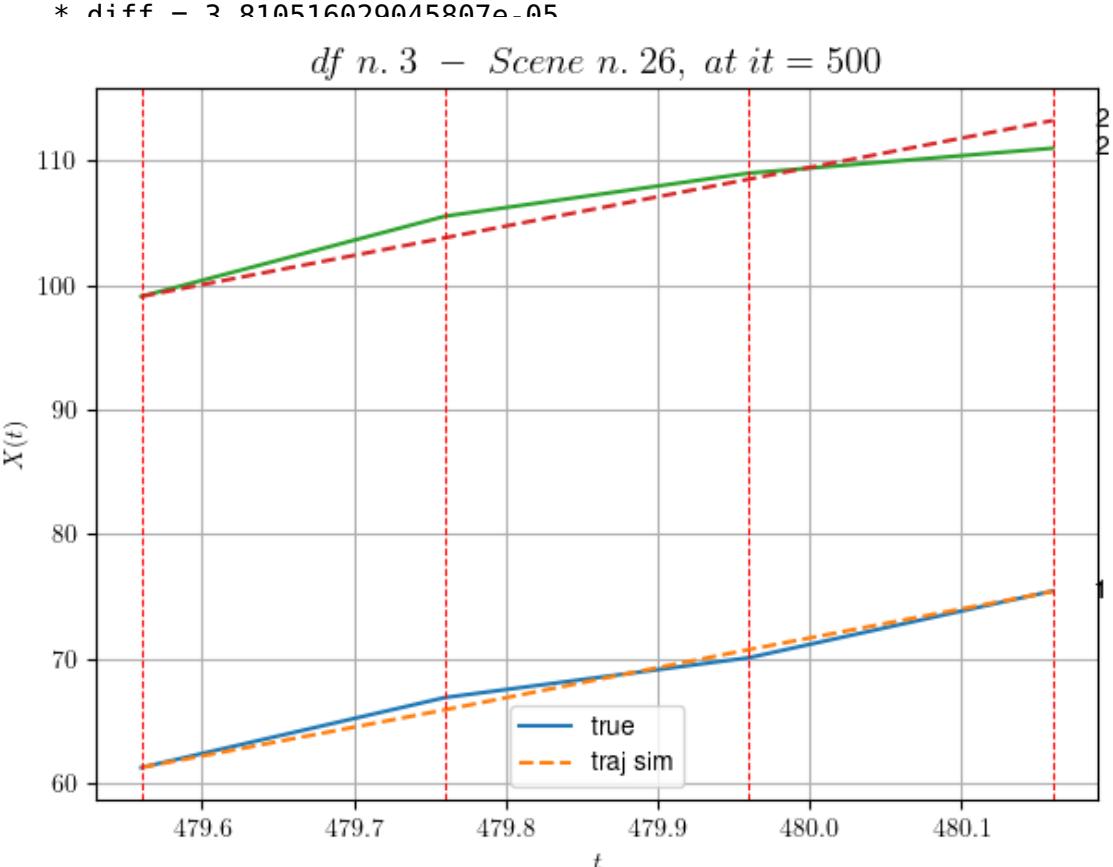
We have 3 time intervals inside [479.56, 480.16]

- Time interval n.0: [479.56, 479.76]
 - * y_true: [28.13211047]
 - * v_ann: [23.199417114257812, 23.54320077756769]

- Time interval n.1: [479.76, 479.96]
 - * y_true: [15.98145013]
 - * v_ann: [24.16913604736328, 23.54320077756769]

- Time interval n.2: [479.96, 480.16]
 - * y_true: [26.79272857]
 - * v_ann: [23.35089111328125, 23.54320077756769]

* err= 1.1973797091727099
 * Learning rate NN = 2.952449540316593e-05



For scene 26/90

* use LR_NN=5e-05 with err=5.406010913864512 at it=24
 * v0_scn_mean = 23.801472746415666
 * MAE = 1.1973797091727099

df n.3, scene n.27/90

We have 5 time intervals inside [486.56, 487.56]

- Time interval n.0: [486.56, 486.76]
 * y_true: [22.56167732]
 * v_ann: [20.21356201171875, 25.858119431708317]

- Time interval n.1: [486.76, 486.96]
 * y_true: [23.21197857]
 * v_ann: [20.95026206970215, 25.858119431708317]

- Time interval n.2: [486.96, 487.16]
 * y_true: [17.98171719]
 * v_ann: [22.149829864501953, 25.858119431708317]

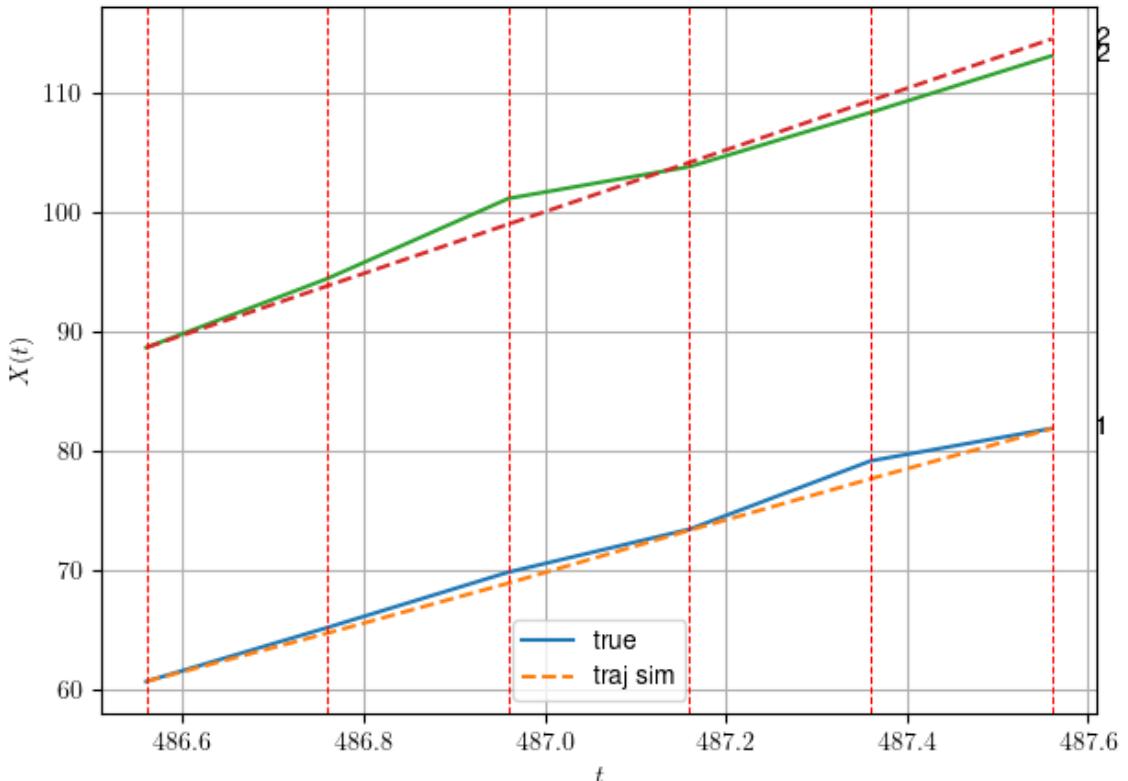
- Time interval n.3: [487.16, 487.36]
 * y_true: [28.62315801]

* v_ann: [21.571136474609375, 25.858119431708317]

- Time interval n.4: [487.36, 487.56]
 * y_true: [13.60161023]
 * v_ann: [20.977615356445312, 25.858119431708317]

* err= 0.9507303730648897
 * Learning rate NN = 3.874203684972599e-06
 * diff = 0.0007070647891658233

df n. 3 – Scene n. 27, at it = 500



For scene 27/90

* use LR_NN=1e-05 with err=5.117997485436923 at it=24
 * v0_scn_mean = 26.023794654408928
 * MAE = 0.9496067204017257

df n.3, scene n.28/90

We have 6 time intervals inside [538.76,539.96]
 - Time interval n.0: [538.76, 538.96]
 * y_true: [20.99100466]
 * v_ann: [20.1369571685791, 28.565734069846478]

- Time interval n.1: [538.96, 539.16]
 * y_true: [24.97142443]

```
* v_ann: [22.071706771850586, 28.565734069846478]
```

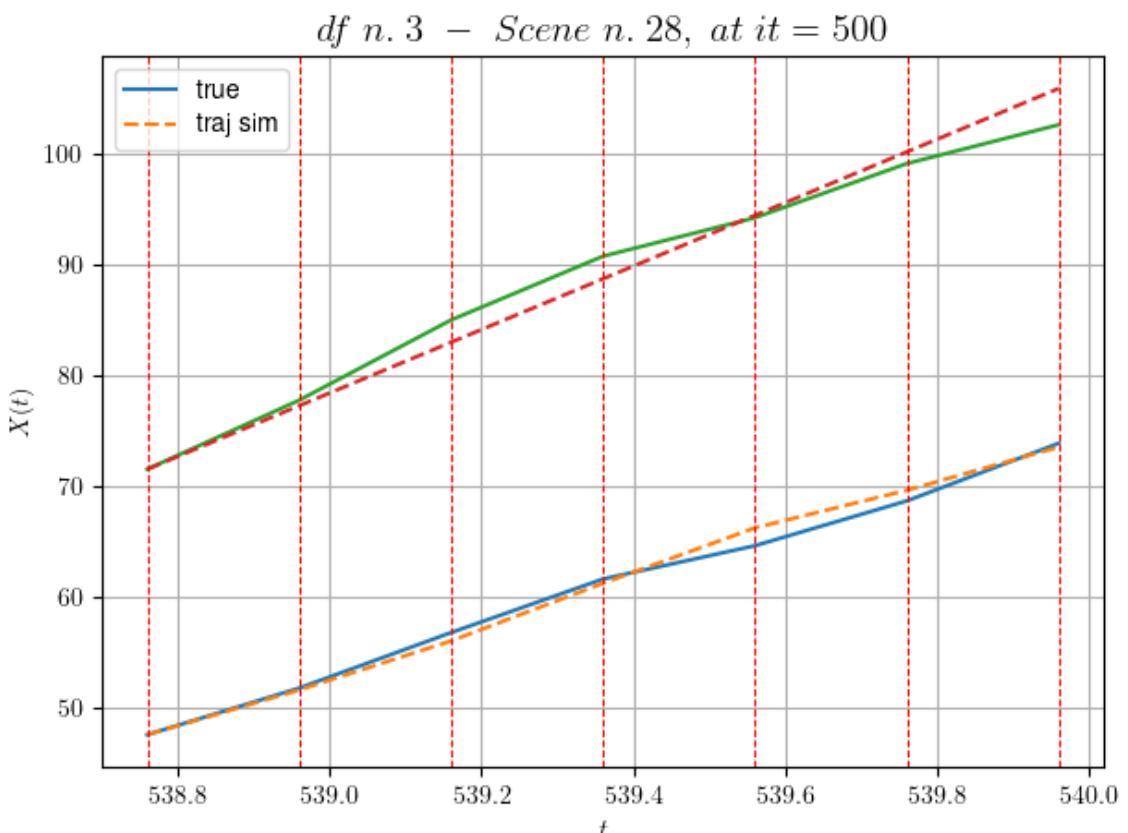
```
- Time interval n.2: [539.16, 539.36]
* y_true: [24.1116136]
* v_ann: [25.938953399658203, 28.565734069846478]
```

```
- Time interval n.3: [539.36, 539.56]
* y_true: [14.99112189]
* v_ann: [24.958192825317383, 28.565734069846478]
```

```
- Time interval n.4: [539.56, 539.76]
* y_true: [20.18175812]
* v_ann: [16.919334411621094, 28.565734069846478]
```

```
- Time interval n.5: [539.76, 539.96]
* y_true: [25.92252017]
* v_ann: [19.475032806396484, 28.565734069846478]
```

```
* err= 1.7569859380994597
* Learning rate NN = 0.00031381050939671695
* diff = 0.016643479273258155
```



For scene 28/90

* use LR_NN=0.001 with err=2.7855741743497724 at it=24

```
* vθ_scn_mean = 28.623104707041463
* MAE = 1.621032054860025
```

```
=====
```

df n.3, scene n.29/90

```
=====
```

We have 5 time intervals inside [544.16, 545.16]

- Time interval n.0: [544.16, 544.36]
 - * y_true: [11.03044025]
 - * v_ann: [21.205347061157227, 26.245021293269282]

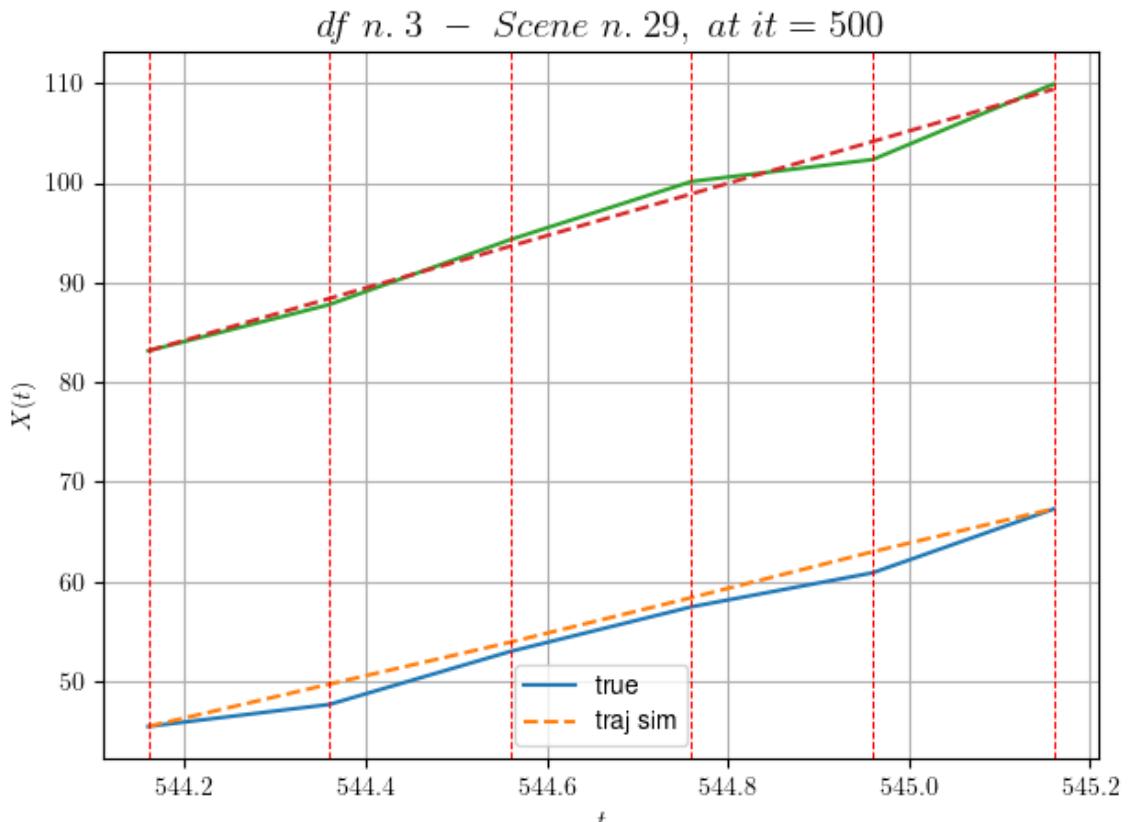
- Time interval n.1: [544.36, 544.56]
 - * y_true: [26.59442737]
 - * v_ann: [21.060941696166992, 26.245021293269282]

- Time interval n.2: [544.56, 544.76]
 - * y_true: [22.38126049]
 - * v_ann: [22.358856201171875, 26.245021293269282]

- Time interval n.3: [544.76, 544.96]
 - * y_true: [17.05115247]
 - * v_ann: [22.99558448791504, 26.245021293269282]

- Time interval n.4: [544.96, 545.16]
 - * y_true: [32.00259919]
 - * v_ann: [21.553625106811523, 26.245021293269282]

```
* err= 1.3523285792247548
* Learning rate NN = 3.874203684972599e-05
* diff = 0.008928252495472577
```



```
For scene 29/90
* use LR_NN=0.0001 with err=4.066460084044747 at it=24
* v0_scn_mean = 26.395220441510638
* MAE = 1.3206079684965653
```

```
=====
=====
```

```
df n.3, scene n.30/90
```

```
=====
=====
```

```
We have 3 time intervals inside [563.76,564.36]
```

```
- Time interval n.0: [563.76, 563.96]
  * y_true: [25.25123233]
  * v_ann: [19.06589126586914, 27.431374274164337]
```

```
-----
-----
```

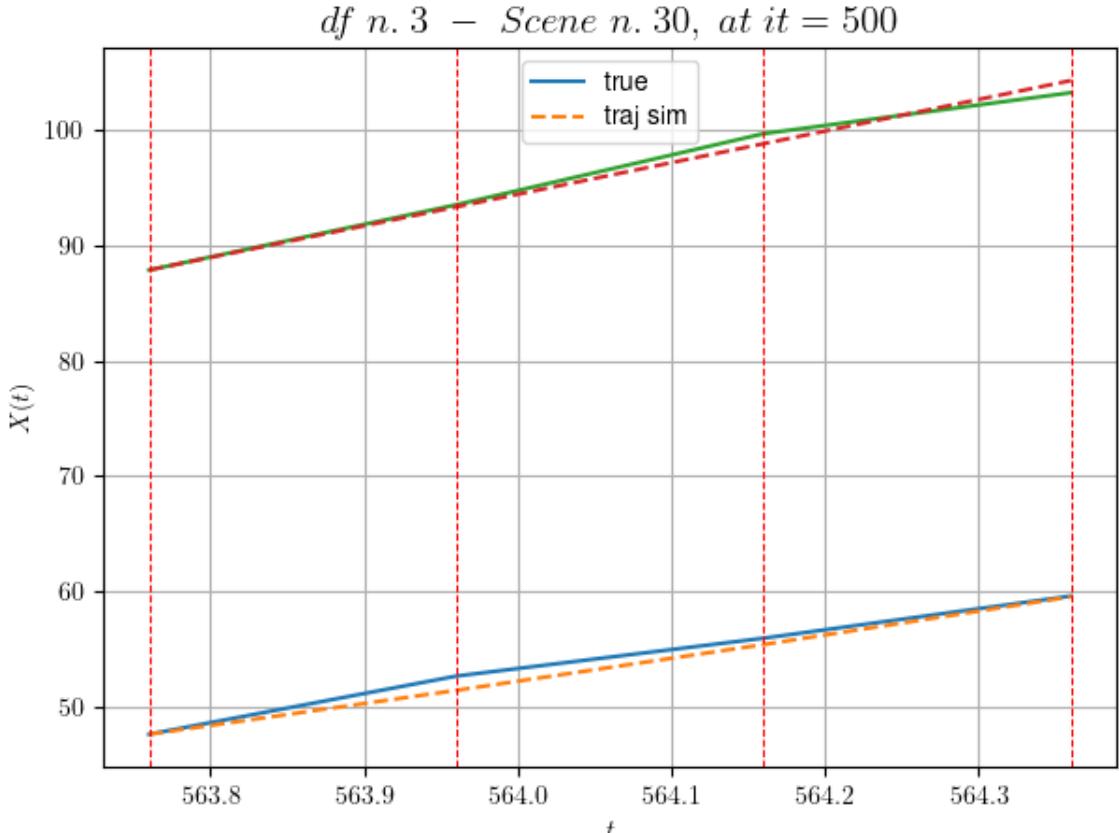
```
- Time interval n.1: [563.96, 564.16]
  * y_true: [16.45094022]
  * v_ann: [19.88926124572754, 27.431374274164337]
```

```
-----
-----
```

```
- Time interval n.2: [564.16, 564.36]
  * y_true: [18.30118347]
  * v_ann: [20.735422134399414, 27.431374274164337]
```

```
-----
-----
```

```
* err= 0.46812525260119375
* Learning rate NN = 2.952449540316593e-05
* diff = 2.476859108035967e-05
```



For scene 30/90

- * use LR_NN=5e-05 with err=1.1259858065376955 at it=24
- * v0_scn_mean = 27.534119303177285
- * MAE = 0.46504297003497075

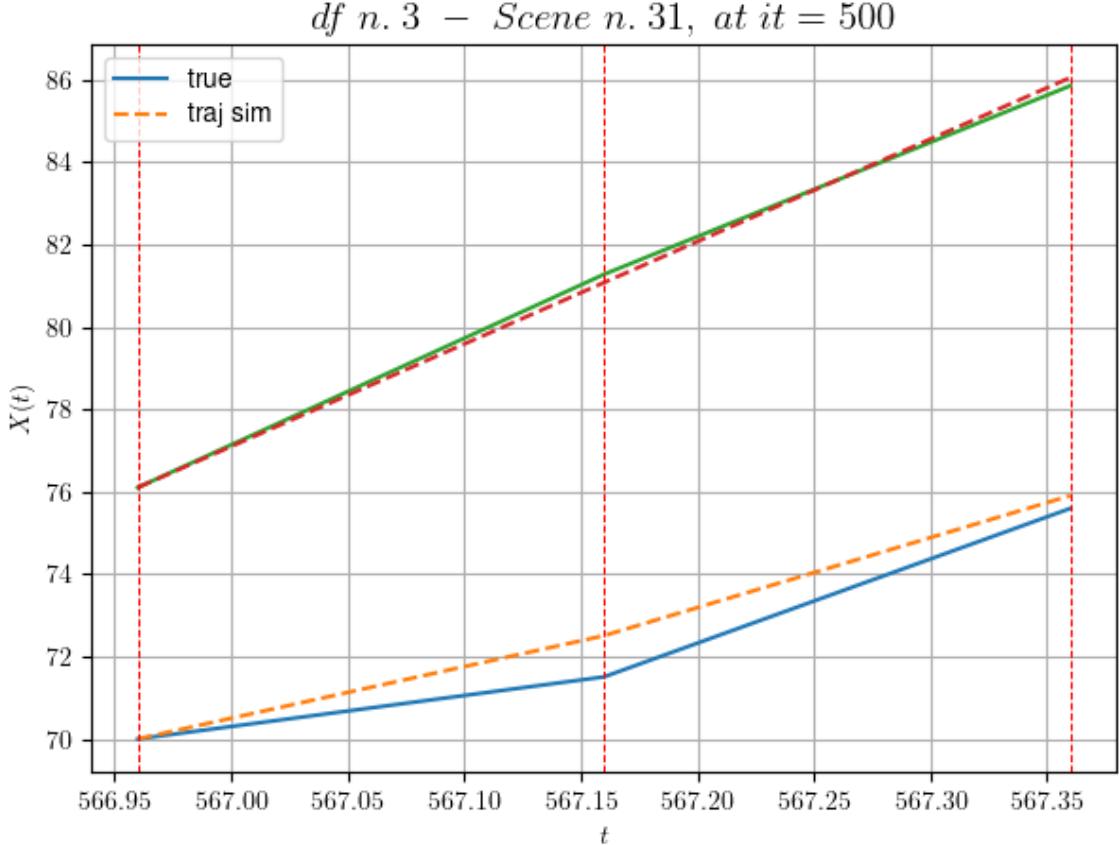
df n.3, scene n.31/90

We have 2 time intervals inside [566.96, 567.36]

- Time interval n.0: [566.96, 567.16]
 - * y_true: [7.53069511]
 - * v_ann: [12.532821655273438, 24.86641811764766]

- Time interval n.1: [567.16, 567.36]
 - * y_true: [20.43212573]
 - * v_ann: [16.985252380371094, 24.86641811764766]

- * err= 0.1961786186628417
- * Learning rate NN = 0.00036449998151510954
- * diff = 0.0005526427456551131



For scene 31/90

- * use LR_NN=0.0005 with err=1.1048919467181348 at it=24
- * v0_scn_mean = 25.071761392907963
- * MAE = 0.1947955482999442

df n.3, scene n.32/90

We have 4 time intervals inside [573.76, 574.56]

- Time interval n.0: [573.76, 573.96]
 - * y_true: [17.20183898]
 - * v_ann: [24.488483428955078, 29.32939981959972]

- Time interval n.1: [573.96, 574.16]
 - * y_true: [34.7042468]
 - * v_ann: [27.155107498168945, 29.32939981959972]

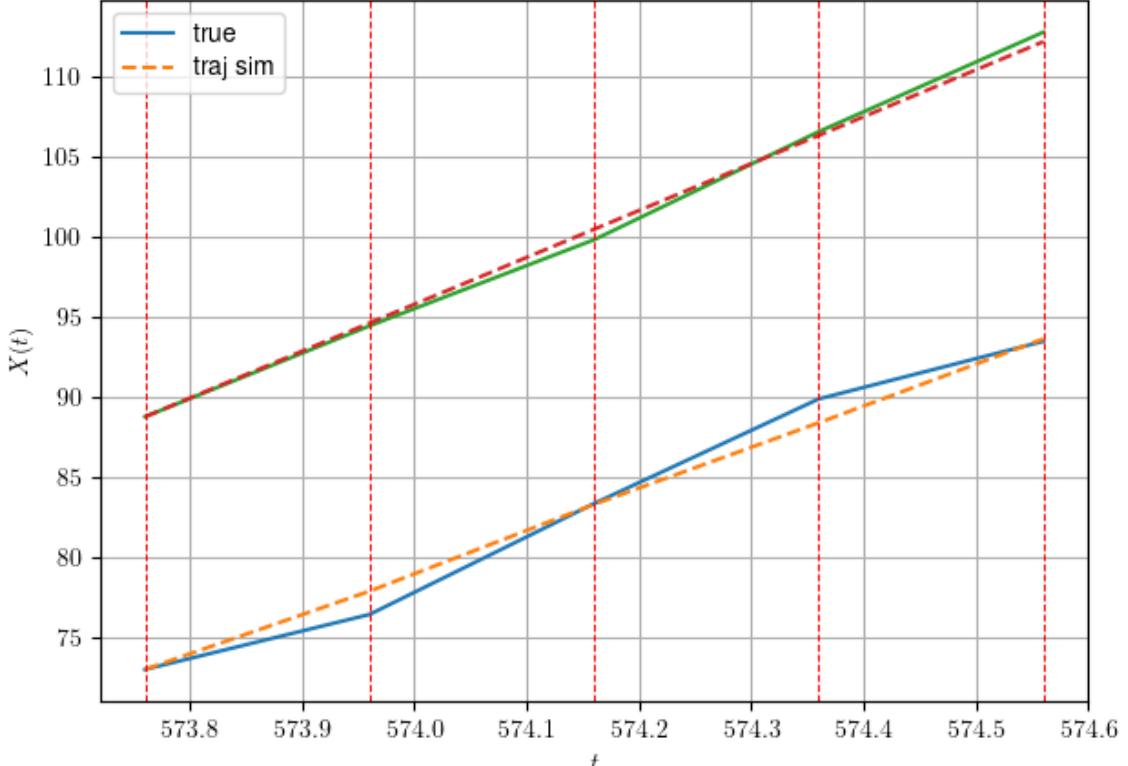
- Time interval n.2: [574.16, 574.36]
 - * y_true: [32.70470322]
 - * v_ann: [25.508420944213867, 29.32939981959972]

- Time interval n.3: [574.36, 574.56]
 - * y_true: [18.00289984]

```
* v_ann: [26.21906280517578, 29.32939981959972]
```

```
* err= 0.5247044802135226
* Learning rate NN = 2.3914839403005317e-05
* diff = 0.00040191251822474516
```

df n. 3 – Scene n. 32, at it = 500



For scene 32/90

```
* use LR_NN=5e-05 with err=0.5507860865239035 at it=24
* v0_scn_mean = 29.356223826811917
* MAE = 0.5247044802135226
```

df n.3, scene n.33/90

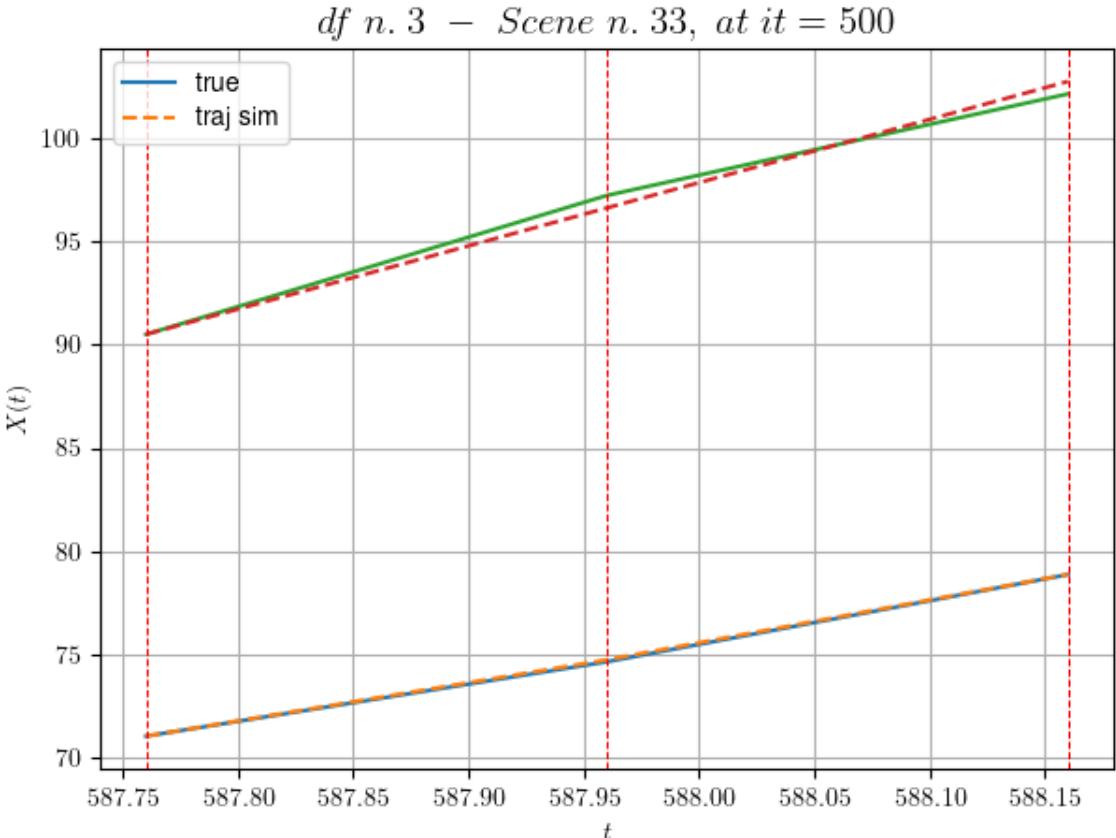
We have 2 time intervals inside [587.76, 588.16]

- Time interval n.0: [587.76, 587.96]
 - * y_true: [18.03186122]
 - * v_ann: [18.52056884765625, 30.655329633493345]

- Time interval n.1: [587.96, 588.16]
 - * y_true: [21.13239239]
 - * v_ann: [20.703989028930664, 30.655329633493345]

```
* err= 0.12324025257515588
* Learning rate NN = 0.00036449998151510954
```

* diff = 2.0960096801941885e-06



For scene 33/90

- * use LR_NN=0.0005 with err=0.10996345773561333 at it=24
- * v0_scn_mean = 30.629116448159255
- * MAE = 0.11439142178976695

df n.3, scene n.34/90

We have 7 time intervals inside [590.36, 591.76]

- Time interval n.0: [590.36, 590.56]
 - * y_true: [11.65068678]
 - * v_ann: [11.628077507019043, 19.035476639426562]

- Time interval n.1: [590.56, 590.76]
 - * y_true: [9.35059372]
 - * v_ann: [9.440214157104492, 19.035476639426562]

- Time interval n.2: [590.76, 590.96]
 - * y_true: [6.3504254]
 - * v_ann: [6.987783432006836, 19.035476639426562]

- Time interval n.3: [590.96, 591.16]

```
* y_true: [16.8512193]
* v_ann: [10.985862731933594, 19.035476639426562]
```

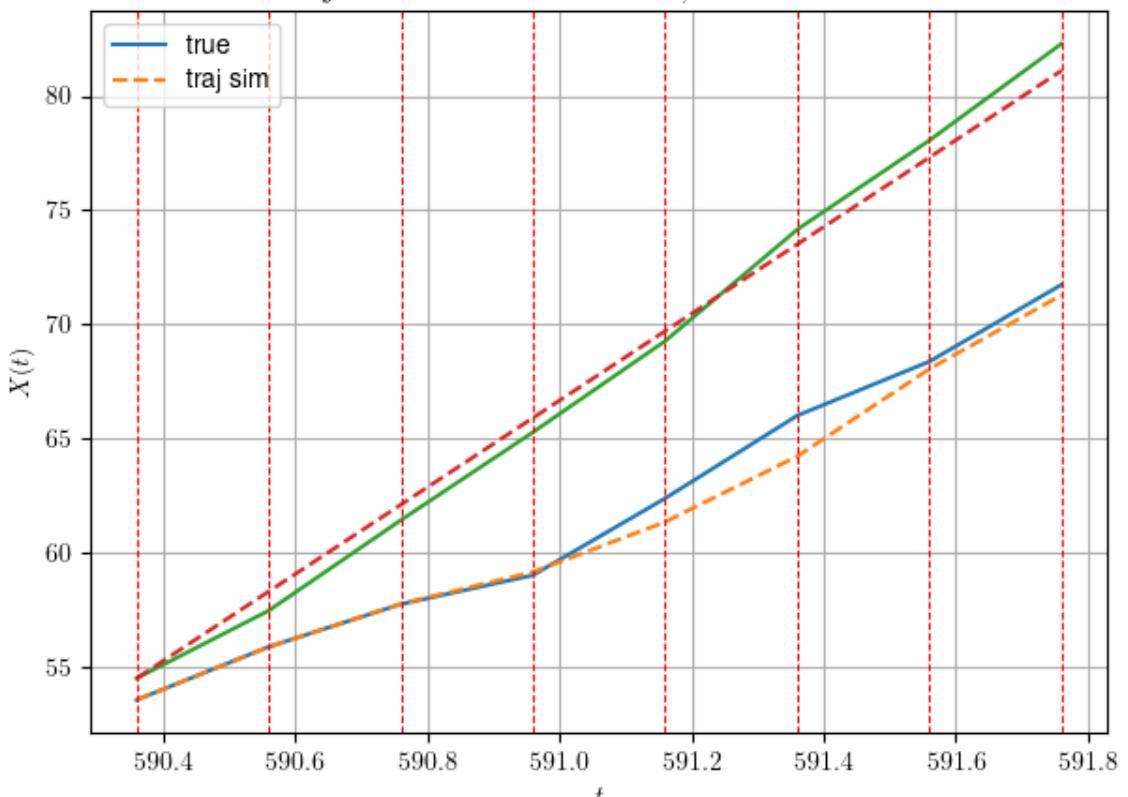
```
- Time interval n.4: [591.16, 591.36]
* y_true: [18.15146703]
* v_ann: [14.378960609436035, 19.035476639426562]
```

```
- Time interval n.5: [591.36, 591.56]
* y_true: [11.85104821]
* v_ann: [19.157197952270508, 19.035476639426562]
```

```
- Time interval n.6: [591.56, 591.76]
* y_true: [16.85161923]
* v_ann: [16.183496475219727, 19.035476639426562]
```

```
* err= 0.5447712567215046
* Learning rate NN = 0.0012709323782473803
* diff = 0.012299549350169525
```

df n. 3 – Scene n. 34, at it = 500



For scene 34/90

```
* use LR_NN=0.005 with err=40.447621096782235 at it=24
* v0_scn_mean = 19.474057573765798
* MAE = 0.36305428421066976
```

```
df n.3, scene n.35/90
```

We have 3 time intervals inside [16.16, 16.76]

- Time interval n.0: [16.16, 16.36]
 - * y_true: [27.36596872 40.6089382]
 - * v_ann: [28.583484649658203, 21.068504333496094, 3

9.22728178683309]

- Time interval n.1: [16.36, 16.56]
 - * y_true: [22.16572117 32.62072047]
 - * v_ann: [32.99435043334961, 25.342079162597656, 3

9.22728178683309]

- Time interval n.2: [16.56, 16.76]
 - * y_true: [24.04131334 24.91936545]
 - * v_ann: [35.03592300415039, 20.93647575378418, 39.

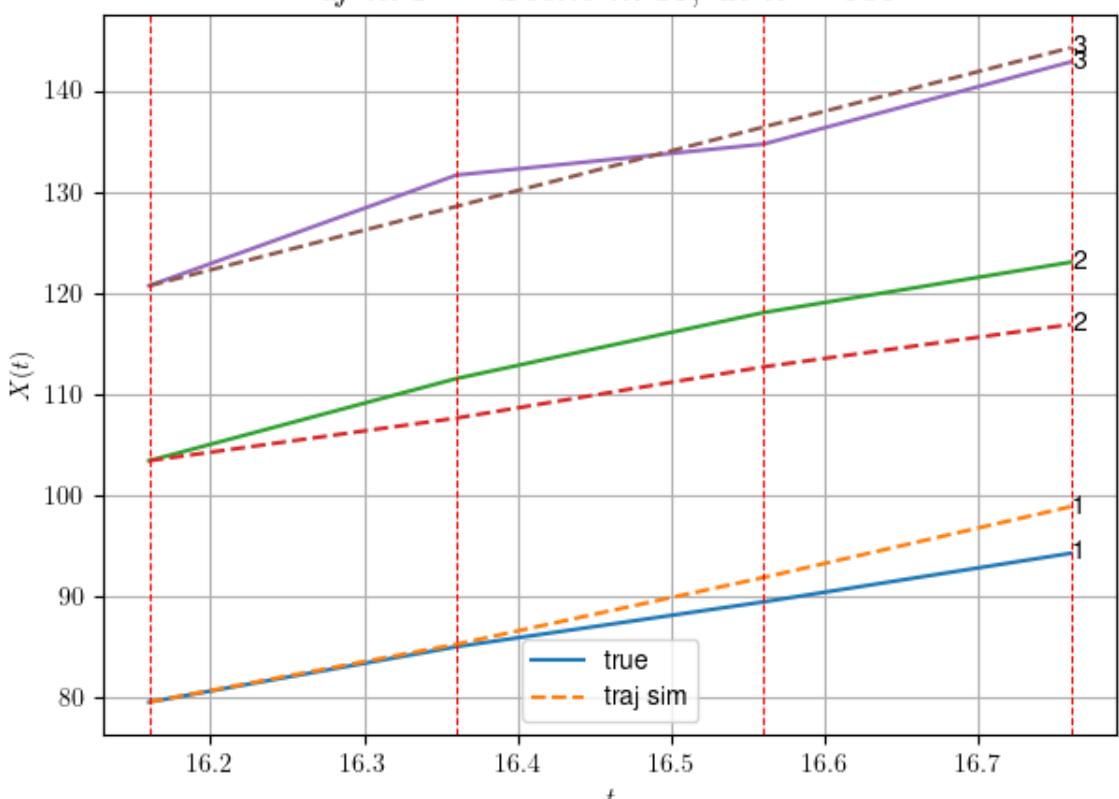
22728178683309]

* err= 10.28826541925512

* Learning rate NN = 5.904899080633186e-05

* diff = 0.013203424542343356

df n. 3 – Scene n. 35, at it = 500



For scene 35/90

* use LR_NN=0.0001 with err=13.423498086521656 at it=24

* v0_scn_mean = 38.673645293908116

* MAE = 10.28826541925512

df n.3, scene n.36/90

We have 2 time intervals inside [17.56, 17.96]

- Time interval n.0: [17.56, 17.76]

* y_true: [26.87631442 28.75240293]

* v_ann: [15.331589698791504, 40.767948150634766, 3
7.34160894188888]

- Time interval n.1: [17.76, 17.96]

* y_true: [26.32655772 34.05345458]

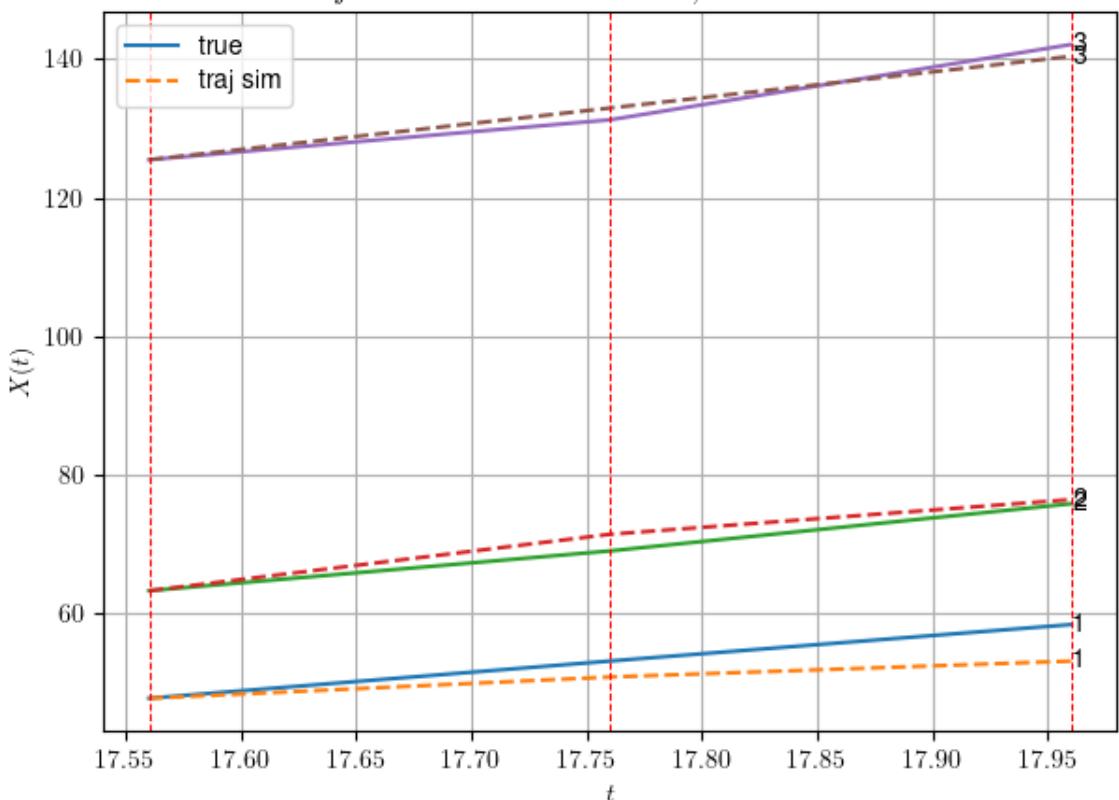
* v_ann: [11.509088516235352, 25.042062759399414, 3
7.34160894188888]

* err= 5.008116575028798

* Learning rate NN = 7.289998757187277e-05

* diff = 0.14747293703120157

df n. 3 – Scene n. 36, at it = 500



For scene 36/90

* use LR_NN=0.0001 with err=10.161541507708417 at it=24

* v0_scn_mean = 36.901112734997966

* MAE = 5.008116575028798

```
=====
```

df n.3, scene n.37/90

```
=====
```

```
We have 4 time intervals inside [23.96, 24.76]
- Time interval n.0: [23.96, 24.16]
  * y_true: [31.9527567 21.95230333]
  * v_ann: [22.158475875854492, 23.25558853149414, 2
7.0166643536972]
```

```
-----
```

```
- Time interval n.1: [24.16, 24.36]
  * y_true: [26.79271708 14.85171745]
  * v_ann: [23.437698364257812, 30.265178680419922, 2
7.0166643536972]
```

```
-----
```

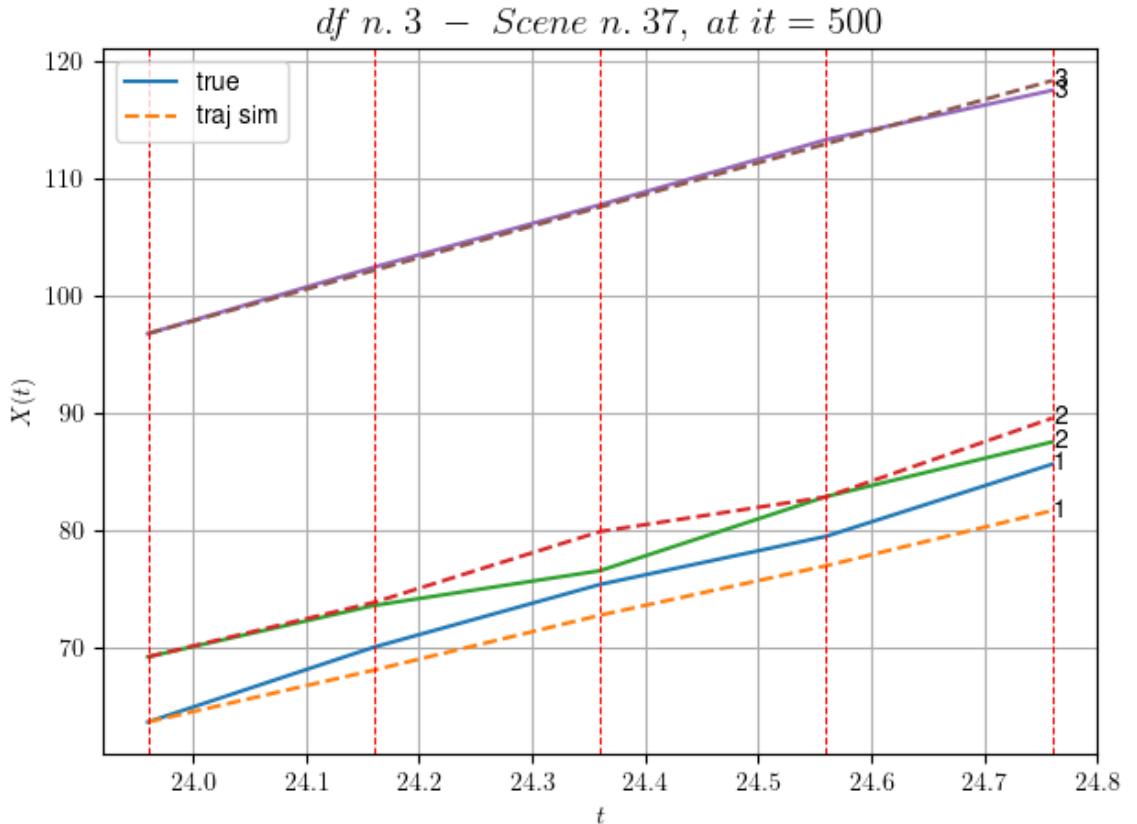
```
- Time interval n.2: [24.36, 24.56]
  * y_true: [20.5424093 31.65411216]
  * v_ann: [21.122737884521484, 14.812005043029785, 2
7.0166643536972]
```

```
-----
```

```
- Time interval n.3: [24.56, 24.76]
  * y_true: [30.8240747 23.35345154]
  * v_ann: [23.561704635620117, 33.60979080200195, 2
7.0166643536972]
```

```
-----
```

```
* err= 3.2725643309270445
* Learning rate NN = 0.000478296831715852
* diff = 0.15157101675061766
```



For scene 37/90

- * use LR_NN=0.001 with err=38.33920692562331 at it=24
- * v0_scn_mean = 27.195664358530063
- * MAE = 3.2725643309270445

df n.3, scene n.38/90

We have 4 time intervals inside [42.96, 43.76]

- Time interval n.0: [42.96, 43.16]
 - * y_true: [34.44093898 36.40531345]
 - * v_ann: [30.171615600585938, 29.6446475982666, 27.35067344092239]

- Time interval n.1: [43.16, 43.36]
 - * y_true: [27.09071898 44.10770887]
 - * v_ann: [30.578092575073242, 29.8790225982666, 27.35067344092239]

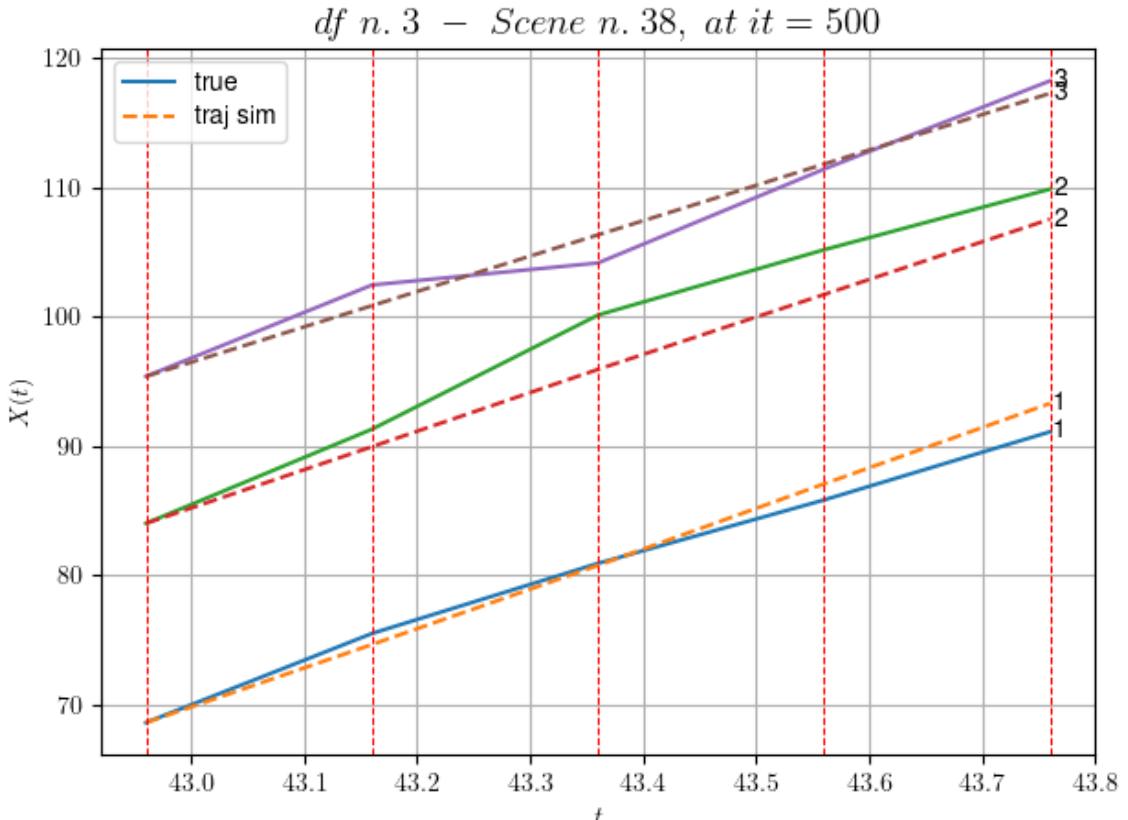
- Time interval n.2: [43.36, 43.56]
 - * y_true: [24.51583897 25.2301032]
 - * v_ann: [31.504920959472656, 28.92700958251953, 27.35067344092239]

```

    - Time interval n.3: [43.56, 43.76]
      * y_true: [26.35394512 23.45522926]
      * v_ann: [31.109535217285156, 29.139238357543945, 2
    7.35067344092239]
```

```

    * err= 3.4829312631554994
    * Learning rate NN = 2.3914839403005317e-05
    * diff = 0.02821044362334124
```



For scene 38/90

```

    * use LR_NN=5e-05 with err=25.823940059787162 at it=24
    * v0_scn_mean = 27.50963291551802
    * MAE = 3.4829312631554994
```

df n.3, scene n.39/90

We have 2 time intervals inside [61.76, 62.16]

```

    - Time interval n.0: [61.76, 61.96]
      * y_true: [28.79377133 7.10177762]
      * v_ann: [31.531057357788086, 29.577350616455078, 2
    7.83009041676716]
```

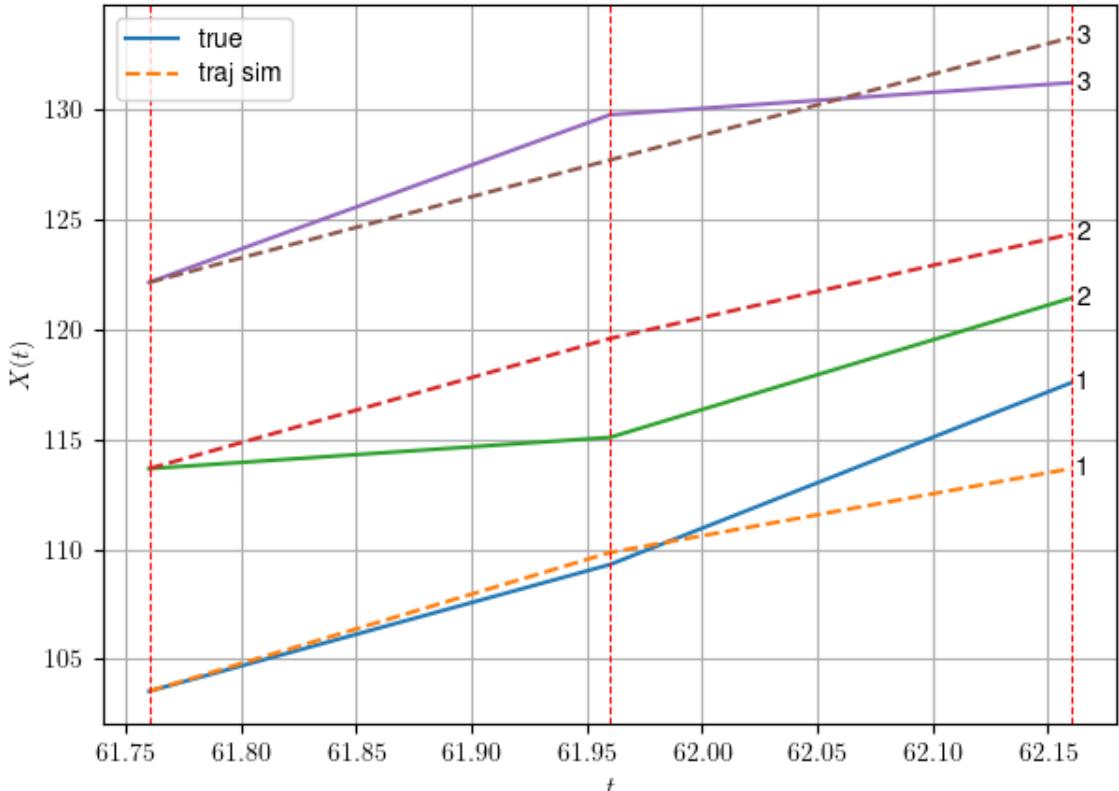
```

    - Time interval n.1: [61.96, 62.16]
      * y_true: [41.29768472 31.64601894]
      * v_ann: [19.063472747802734, 23.74077033996582, 2
```

7.83009041676716]

```
* err= 5.85012271444538
* Learning rate NN = 0.0007289999630302191
* diff = 0 0018424208058585023
```

df n. 3 – Scene n. 39, at it = 500



For scene 39/90

```
* use LR_NN=0.001 with err=7.447973526134141 at it=24
* v0_scn_mean = 27.96028489433693
* MAE = 5.4604100596680105
```

df n.3, scene n.40/90

We have 2 time intervals inside [63.76, 64.16]

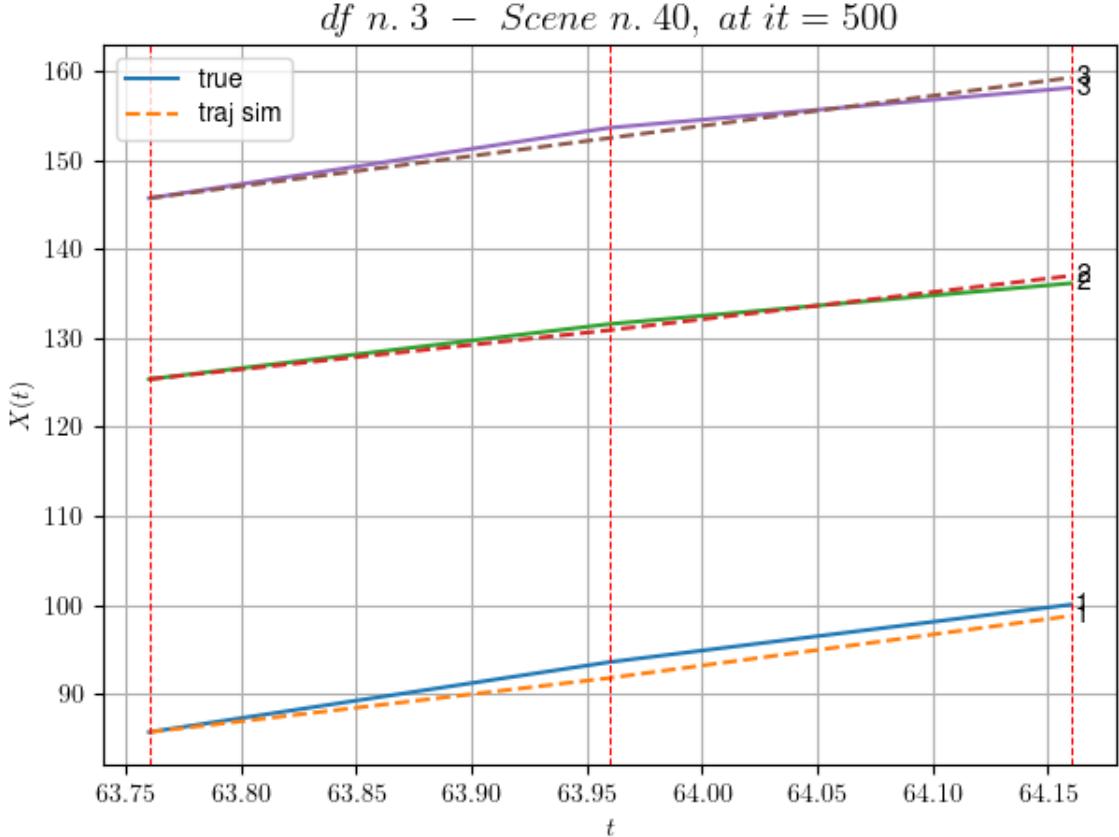
- Time interval n.0: [63.76, 63.96]
 - * y_true: [39.33120973 30.97229006]
 - * v_ann: [30.415300369262695, 27.497385025024414, 3

3.83988267438108]

- Time interval n.1: [63.96, 64.16]
 - * y_true: [32.2308074 22.86038312]
 - * v_ann: [34.826812744140625, 30.52277183532715, 3

3.83988267438108]

```
* err= 0.9539715261707703
* Learning rate NN = 7.289998757187277e-05
* diff = 0.022243920609029688
```



For scene 40/90

```
* use LR_NN=0.0001 with err=1.7776475978423336 at it=24
* v0_scn_mean = 33.609489886320794
* MAE = 0.5531389964500252
```

df n.3, scene n.41/90

We have 3 time intervals inside [67.16, 67.76]

- Time interval n.0: [67.16, 67.36]
 - * y_true: [27.17586615 28.72375126]
 - * v_ann: [25.384063720703125, 25.4384708404541, 32.

13932154245653]

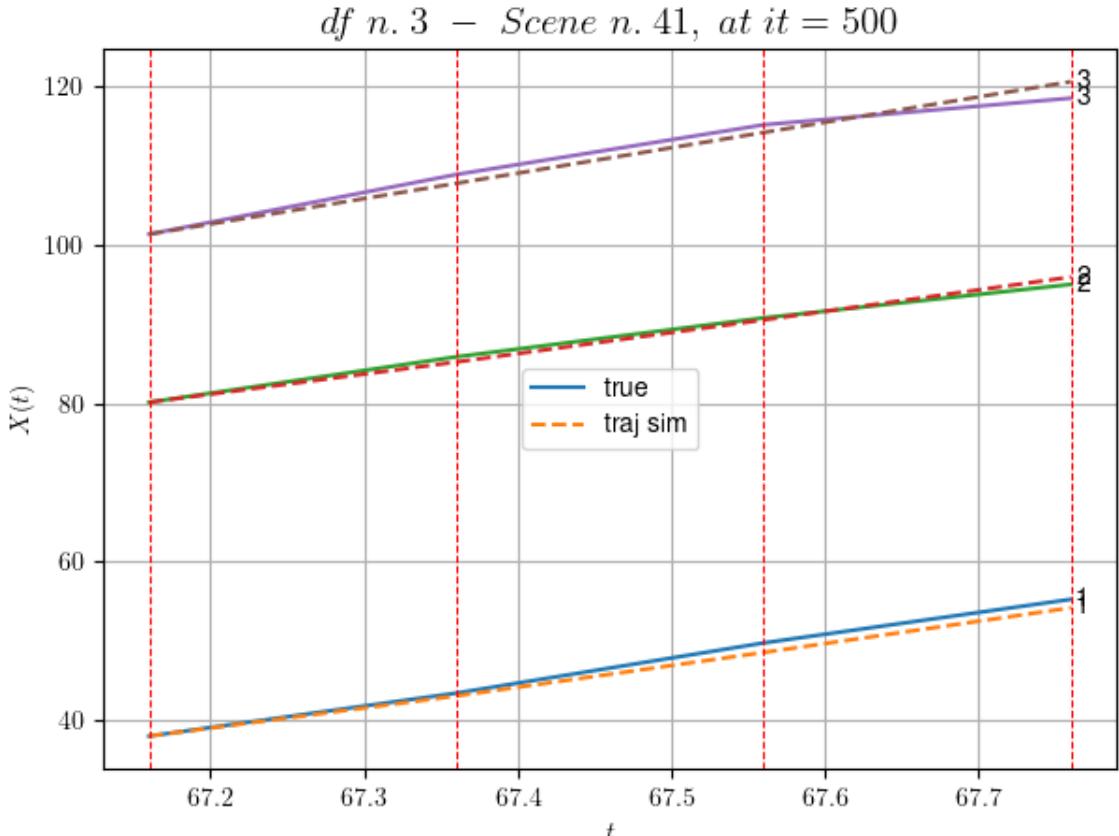
- Time interval n.1: [67.36, 67.56]
 - * y_true: [31.70635664 24.62373081]
 - * v_ann: [27.47547149658203, 26.586286544799805, 3

2.13932154245653]

- Time interval n.2: [67.56, 67.76]
 - * y_true: [27.5714436 21.15852297]
 - * v_ann: [28.23911476135254, 27.147920608520508, 3

2.13932154245653]

- * err= 0.8869781000911615
- * Learning rate NN = 5.904899080633186e-05
- * diff = 0.006255656691572797



For scene 41/90

- * use LR_NN=0.0001 with err=4.298525807558518 at it=24
- * v0_scn_mean = 32.010962345959875
- * MAE = 0.7440225304827779

df n.3, scene n.42/90

We have 7 time intervals inside [72.76, 74.16]

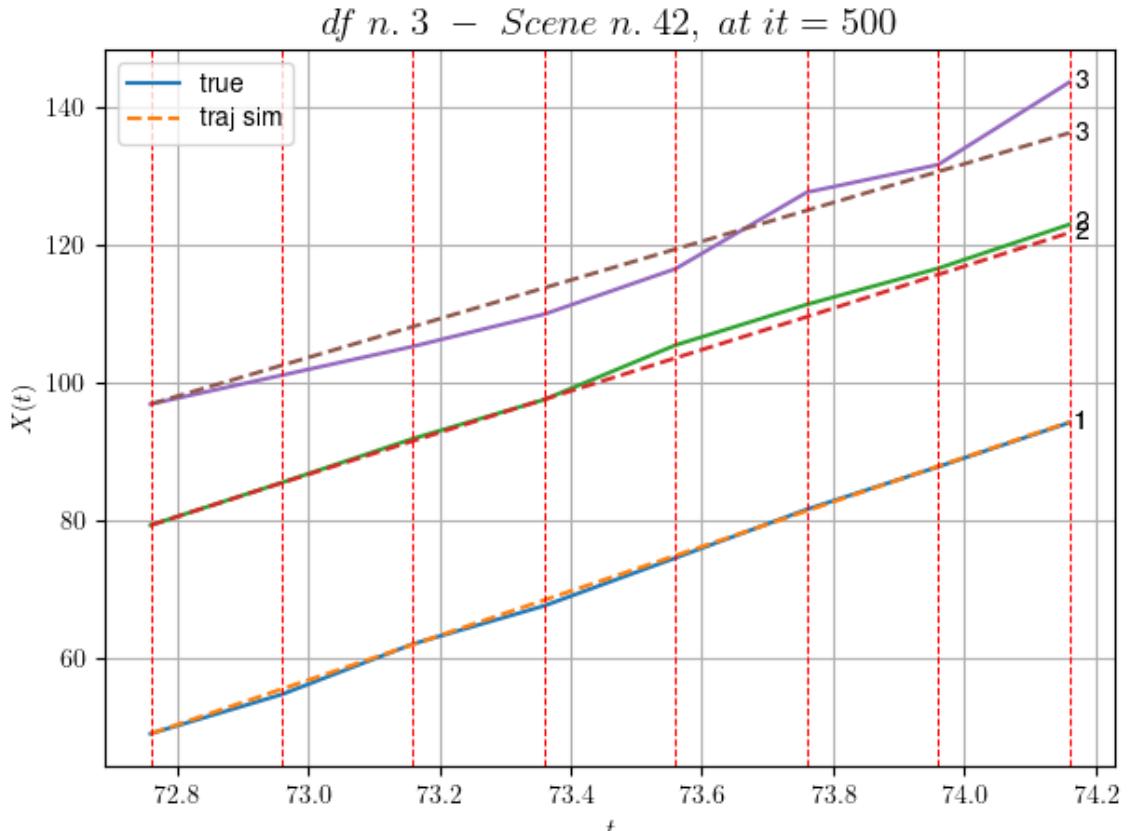
- Time interval n.0: [72.76, 72.96]
 - * y_true: [28.501496 30.93407752]
 - * v_ann: [32.352745056152344, 30.725265502929688, 2

8.121240263140308]

- Time interval n.1: [72.96, 73.16]
 - * y_true: [36.65243351 31.9148258]
 - * v_ann: [32.36606979370117, 30.44293975830078, 28.

121240263140308]

```
-----  
    - Time interval n.2: [73.16, 73.36]  
      * y_true: [27.70226144 28.33497935]  
      * v_ann: [32.30451965332031, 30.19197654724121, 28.  
121240263140308]  
  
-----  
    - Time interval n.3: [73.36, 73.56]  
      * y_true: [34.7534691 39.55781959]  
      * v_ann: [32.243568420410156, 30.031625747680664, 2  
8.121240263140308]  
  
-----  
    - Time interval n.4: [73.56, 73.76]  
      * y_true: [35.21414381 29.47666535]  
      * v_ann: [32.485267639160156, 29.910615921020508, 2  
8.121240263140308]  
  
-----  
    - Time interval n.5: [73.76, 73.96]  
      * y_true: [30.89430642 26.20657024]  
      * v_ann: [32.34775924682617, 30.593910217285156, 2  
8.121240263140308]  
  
-----  
    - Time interval n.6: [73.96, 74.16]  
      * y_true: [32.05509091 31.88895952]  
      * v_ann: [32.15623092651367, 30.39577865600586, 28.  
121240263140308]  
  
-----  
* err= 4.400314984801558  
* Learning rate NN = 2.541864660088322e-06  
* diff = 0.023233342063972096
```

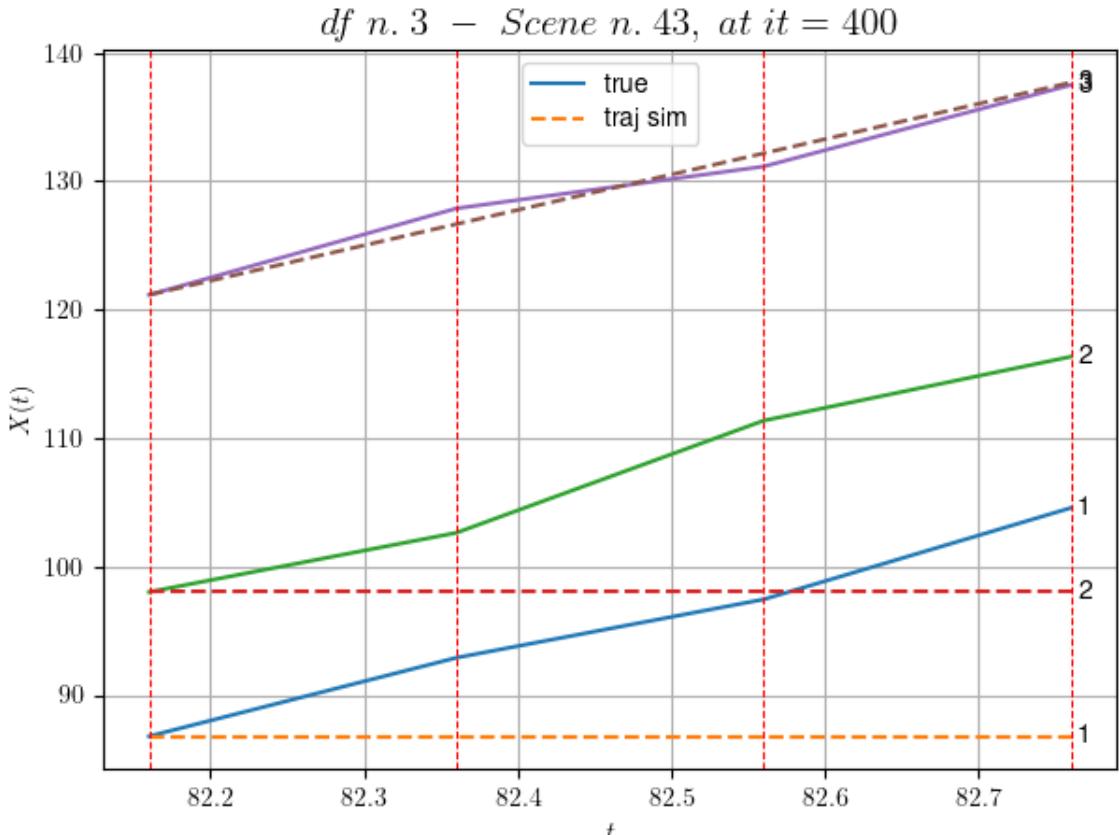


For scene 42/90

- * use LR_NN=1e-05 with err=49.09521062439097 at it=24
 - * v0_scn_mean = 28.233965762999603
 - * MAE = 4.400314984801558
-
-

df n.3, scene n.43/90

- We have 3 time intervals inside [82.16,82.76]
- * err= 83.67339567539929
 - * Learning rate NN = 0.0006560999318026006
 - * diff = 6.578215163699497e-07

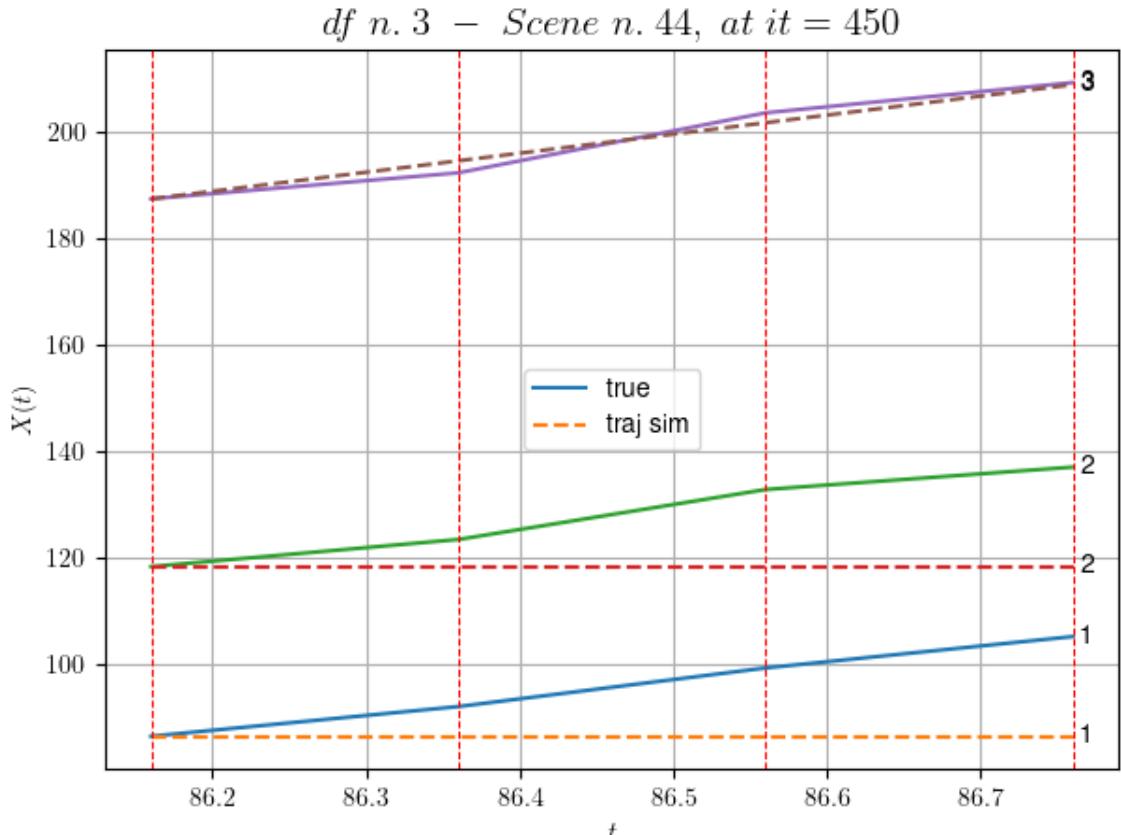


For scene 43/90

- * use LR_NN=0.001 with err=7.174197433659892 at it=24
 - * v0_scn_mean = 27.733969268662268
 - * MAE = 18.523824117677602
-
-

df n.3, scene n.44/90

We have 3 time intervals inside [86.16, 86.76]
 * err= 95.01334851939237
 * Learning rate NN = 2.952449540316593e-05
 * diff = 5.340909297046892e-07



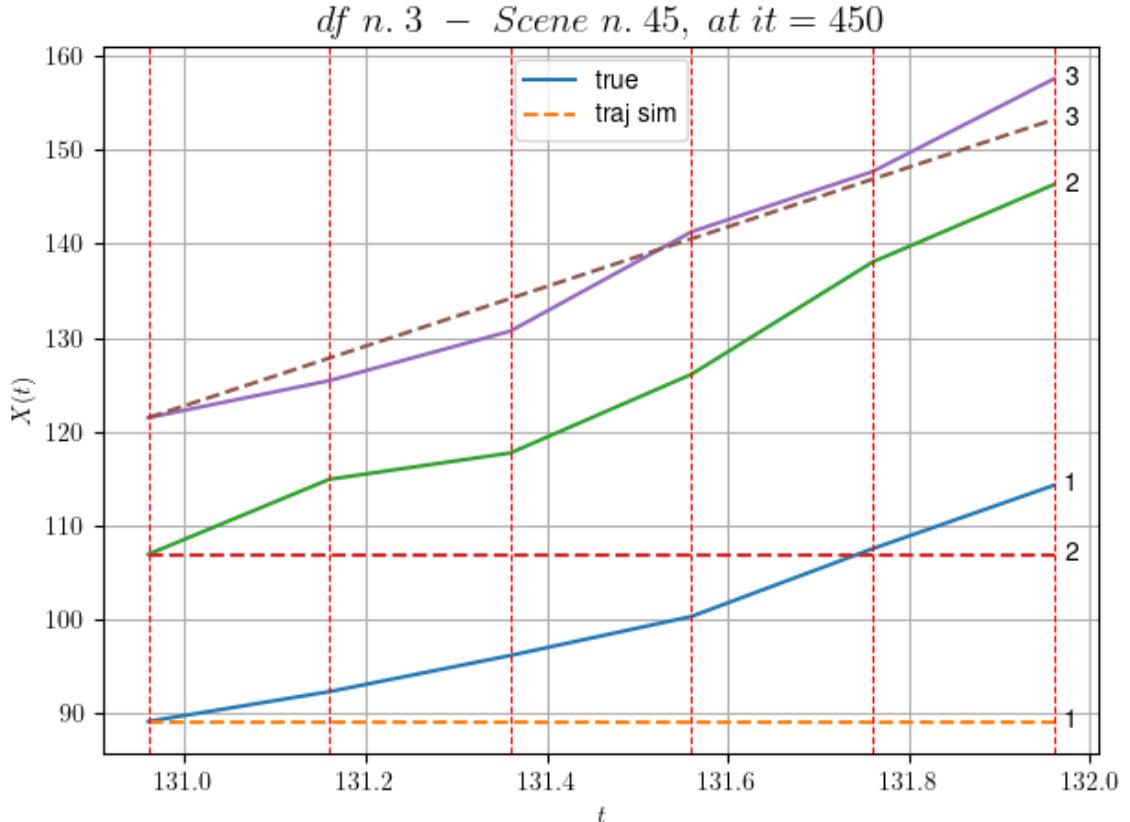
For scene 44/90

```
* use LR_NN=5e-05 with err=13.976884495399341 at it=24
* v0_scn_mean = 35.380421172315195
* MAE = 95.01334851939237
```

df n.3, scene n.45/90

We have 5 time intervals inside [130.96, 131.96]

```
* err= 236.6668351132366
* Learning rate NN = 4.304671165300533e-06
* diff = 7.218565372113517e-07
```



For scene 45/90

- * use LR_NN=1e-05 with err=57.357743169004884 at it=24
- * v0_scn_mean = 31.635515460700706
- * MAE = 236.6668351132366

df n.3, scene n.46/90

We have 12 time intervals inside [139.16, 141.56]

- Time interval n.0: [139.16, 139.36]
 - * y_true: [22.50033849 31.62238978]
 - * v_ann: [27.850324630737305, 27.521976470947266, 2

8.14463056725909]

- Time interval n.1: [139.36, 139.56]
 - * y_true: [29.90063418 17.15160439]
 - * v_ann: [27.697492599487305, 27.498876571655273, 2

8.14463056725909]

- Time interval n.2: [139.56, 139.76]
 - * y_true: [27.10078793 37.57385655]
 - * v_ann: [26.722782135009766, 27.293851852416992, 2

8.14463056725909]

```
- Time interval n.3: [139.76, 139.96]
  * y_true: [25.40095052 21.65266443]
  * v_ann: [27.932538986206055, 27.53266143798828, 2
8.14463056725909]

-----
- Time interval n.4: [139.96, 140.16]
  * y_true: [21.40097883 32.03445568]
  * v_ann: [26.92599868774414, 27.32762908935547, 28.
14463056725909]

-----
- Time interval n.5: [140.16, 140.36]
  * y_true: [21.7011754 31.91506312]
  * v_ann: [26.829696655273438, 27.36670684814453, 2
8.14463056725909]

-----
- Time interval n.6: [140.36, 140.56]
  * y_true: [30.50199276 23.65435061]
  * v_ann: [26.783855438232422, 27.309371948242188, 2
8.14463056725909]

-----
- Time interval n.7: [140.56, 140.76]
  * y_true: [27.90220498 42.04863469]
  * v_ann: [26.869272232055664, 27.342613220214844, 2
8.14463056725909]

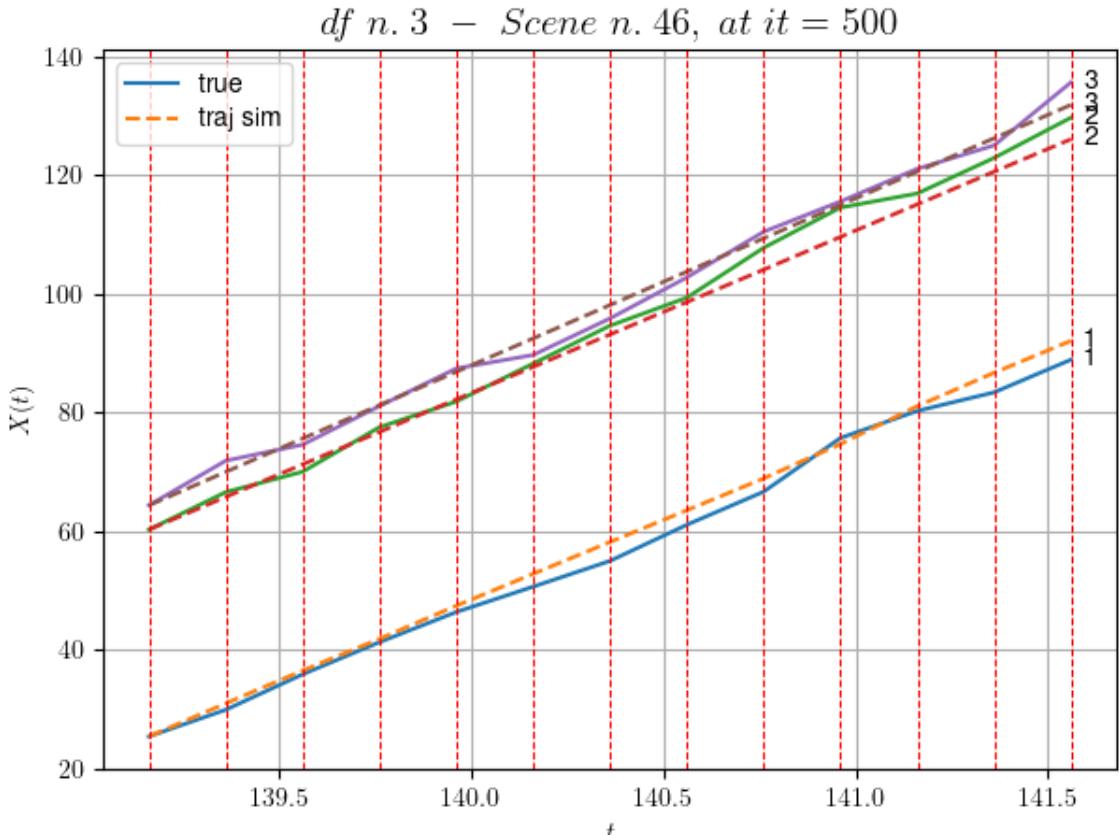
-----
- Time interval n.8: [140.76, 140.96]
  * y_true: [45.30444602 33.92792147]
  * v_ann: [29.027851104736328, 27.645097732543945, 2
8.14463056725909]

-----
- Time interval n.9: [140.96, 141.16]
  * y_true: [22.85268623 11.9131035 ]
  * v_ann: [31.913339614868164, 27.462491989135742, 2
8.14463056725909]

-----
- Time interval n.10: [141.16, 141.36]
  * y_true: [15.65202595 30.01833255]
  * v_ann: [28.220489501953125, 27.59130859375, 28.14
463056725909]

-----
- Time interval n.11: [141.36, 141.56]
  * y_true: [27.55395105 33.94025545]
  * v_ann: [26.902294158935547, 27.378992080688477, 2
8.14463056725909]
```

```
* err= 3.956915597873916
* Learning rate NN = 4.431466732057743e-05
* diff = 0.03010814813677376
```



For scene 46/90

```
* use LR_NN=0.0005 with err=291.19110321474096 at it=24
* v0_scn_mean = 28.255952649921543
* MAE = 3.3319629532058097
```

df n.3, scene n.47/90

We have 3 time intervals inside [143.76, 144.36]

- Time interval n.0: [143.76, 143.96]
 - * y_true: [30.62207823 41.7261053]
 - * v_ann: [30.320119857788086, 30.257078170776367, 2

9.414744463246922]

- Time interval n.1: [143.96, 144.16]

- * y_true: [21.21173425 33.31570327]

- * v_ann: [31.25091552734375, 30.70985984802246, 29.

414744463246922]

```

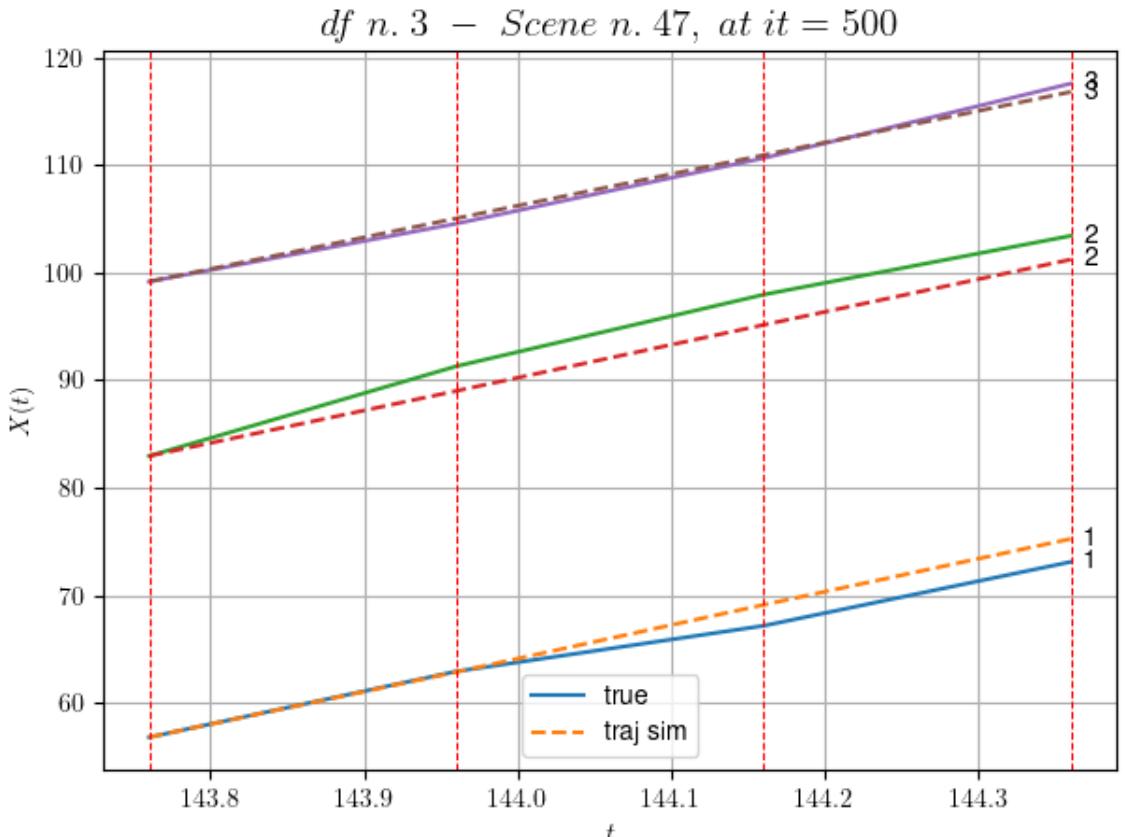
- Time interval n.2: [144.16, 144.36]
  * y_true: [29.72284222 27.36558717]
  * v_ann: [30.70482635498047, 30.39801597595215, 29.
414744463246922]

```

```

* err= 2.281559483248941
* Learning rate NN = 2.952449540316593e-05
* diff = 0.012763991149752574

```



For scene 47/90

```

* use LR_NN=5e-05 with err=16.94824815242341 at it=24
* v0_scn_mean = 29.449859769175458
* MAE = 2.281559483248941

```

df n.3, scene n.48/90

We have 3 time intervals inside [149.36, 149.96]

```

- Time interval n.0: [149.36, 149.56]
  * y_true: [25.90049539 27.45094024]
  * v_ann: [26.343399047851562, 33.03850173950195, 2
3.44355532852118]

```

```

- Time interval n.1: [149.56, 149.76]
  * y_true: [21.18057417 22.42095425]
  * v_ann: [25.487319946289062, 26.779605865478516, 2

```

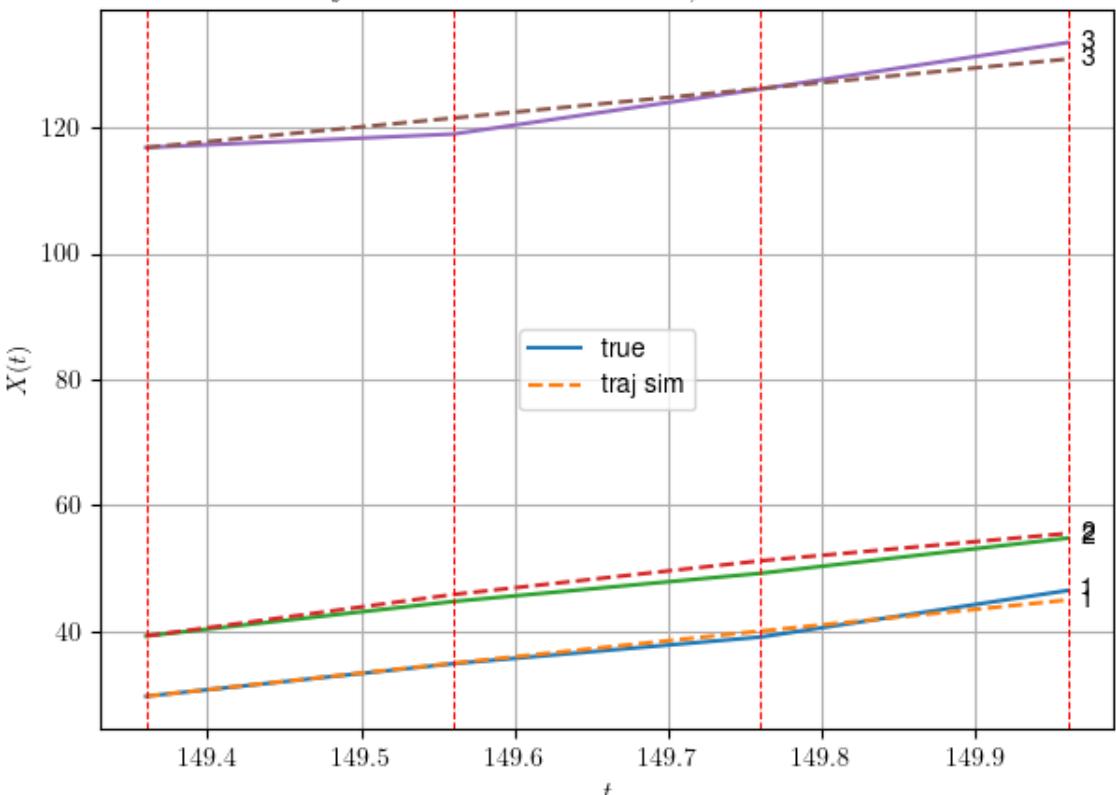
3.44355532852118]

- Time interval n.2: [149.76, 149.96]
 - * y_true: [37.02126181 27.98148311]
 - * v_ann: [24.716283798217773, 21.783164978027344, 2

3.44355532852118]

- * err= 1.8625254950482855
- * Learning rate NN = 5.904899080633186e-05
- * diff = 0.005357001325570014

df n. 3 – Scene n. 48, at it = 500



For scene 48/90

- * use LR_NN=0.0001 with err=27.459216251335985 at it=24
- * v0_scn_mean = 23.83694171443967
- * MAE = 1.8625254950482855

df n.3, scene n.49/90

- We have 3 time intervals inside [156.16,156.76]
 - Time interval n.0: [156.16, 156.36]
 - * y_true: [12.56997445 35.72646923]
 - * v_ann: [21.80603790283203, 30.134260177612305, 3

6.779616906742966]

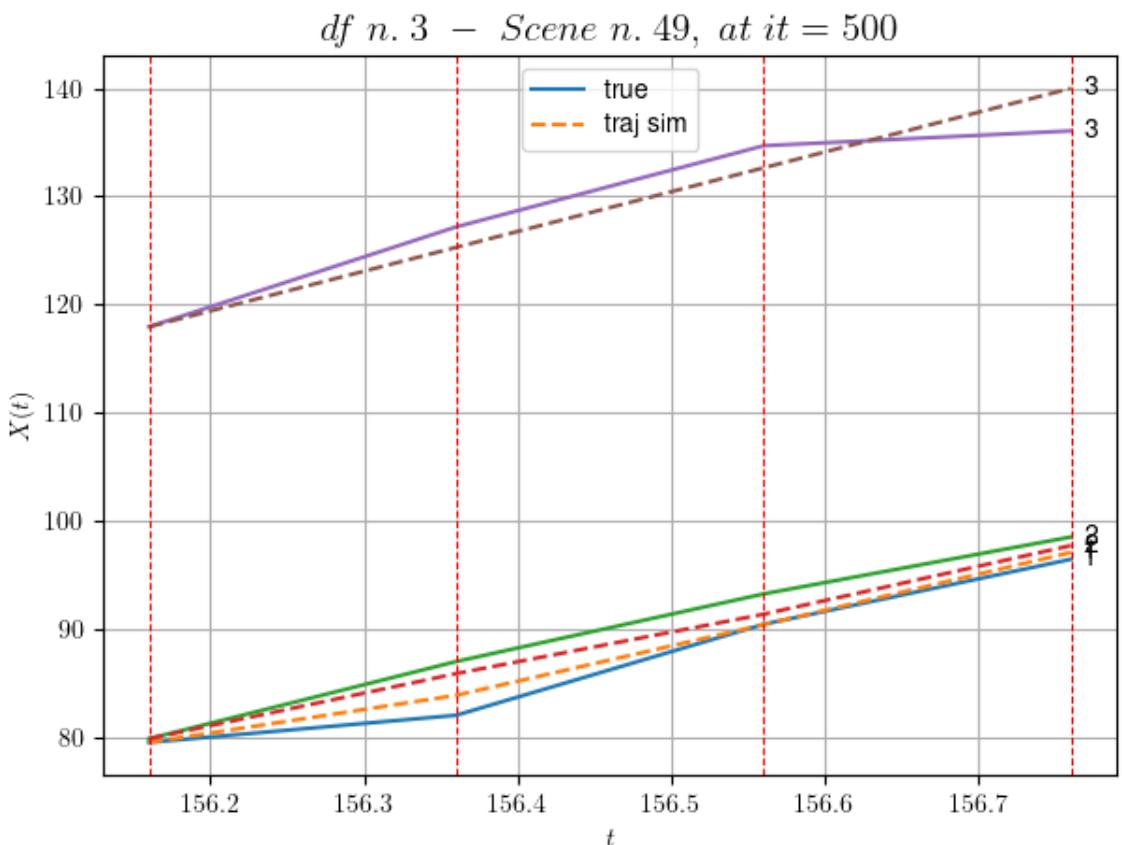
```

- Time interval n.1: [156.36, 156.56]
  * y_true: [42.07610638 31.26485338]
  * v_ann: [32.65726089477539, 27.453781127929688, 3
  6.779616906742966]

-----
- Time interval n.2: [156.56, 156.76]
  * y_true: [30.09491831 26.35466702]
  * v_ann: [33.441062927246094, 31.778594970703125, 3
  6.779616906742966]

-----
* err= 2.707166688164273
* Learning rate NN = 5.904899080633186e-05
* diff = 0.00756637972507912

```



For scene 49/90
* use LR_NN=0.0001 with err=30.879767348282655 at it=24
* v0_scn_mean = 36.37284019672802
* MAE = 2.5892335963642603

df n.3, scene n.50/90

We have 4 time intervals inside [207.96, 208.76]
- Time interval n.0: [207.96, 208.16]
 * y_true: [30.12104774 28.85226703]
 * v_ann: [29.92467498779297, 30.0157413482666, 31.1

2490964519082]

```

-----  

-----  

    - Time interval n.1: [208.16, 208.36]  

      * y_true: [31.19139939 27.73265496]  

      * v_ann: [29.85572052001953, 29.970434188842773, 3  

1.12490964519082]  

-----  

-----  

    - Time interval n.2: [208.36, 208.56]  

      * y_true: [31.59181924 26.81292648]  

      * v_ann: [29.79762840270996, 29.905719757080078, 3  

1.12490964519082]  

-----  

-----  

    - Time interval n.3: [208.56, 208.76]  

      * y_true: [33.88244728 28.87369213]  

      * v_ann: [29.713899612426758, 29.86953353881836, 3  

1.12490964519082]  

-----  

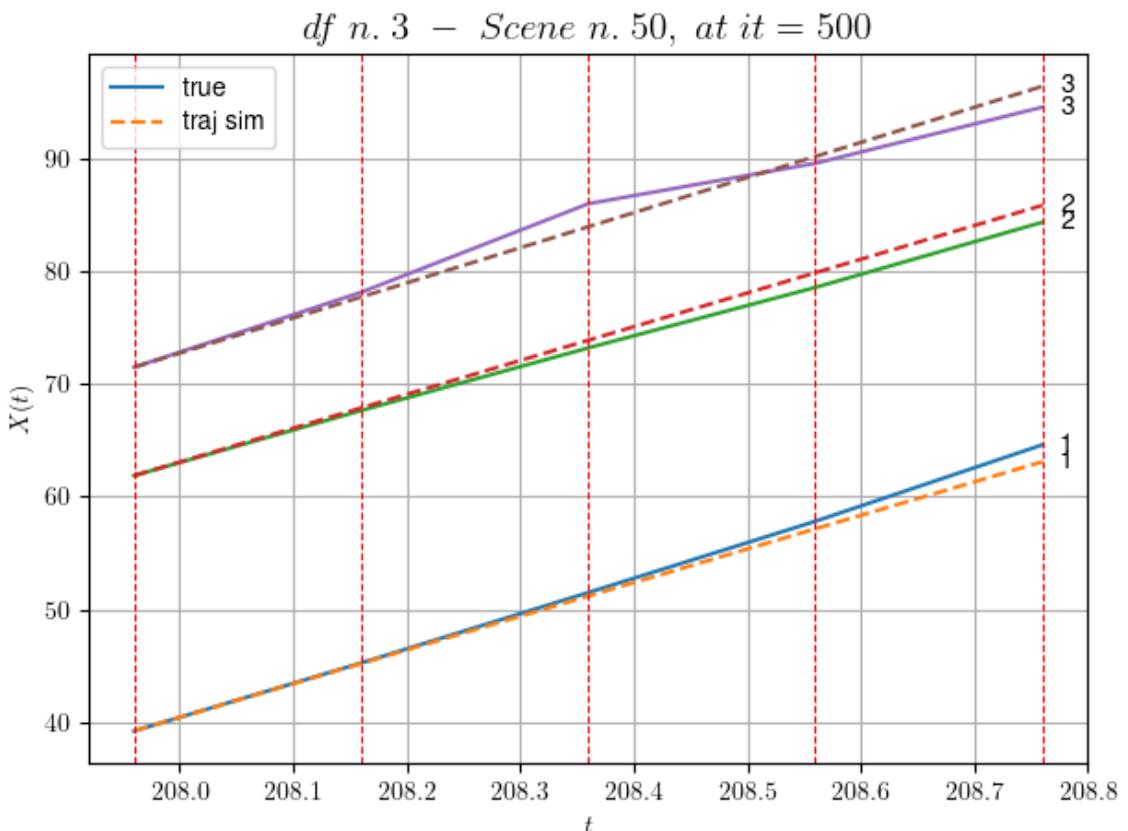
-----  

* err= 1.0237228961067428  

* Learning rate NN = 4.7829678806010634e-05  

* diff = 0.0006474355455099445

```



For scene 50/90

```

* use LR_NN=0.0001 with err=10.865837709427993 at it=24
* v0_scn_mean = 31.057415116985315
* MAE = 1.0237228961067428

```

```
=====
=====

df n.3, scene n.51/90
=====

=====
We have 5 time intervals inside [218.16,219.16]
- Time interval n.0: [218.16, 218.36]
  * y_true: [26.47083003 31.40159485]
  * v_ann: [31.51947784423828, 33.92940902709961, 31.
946925583263653]

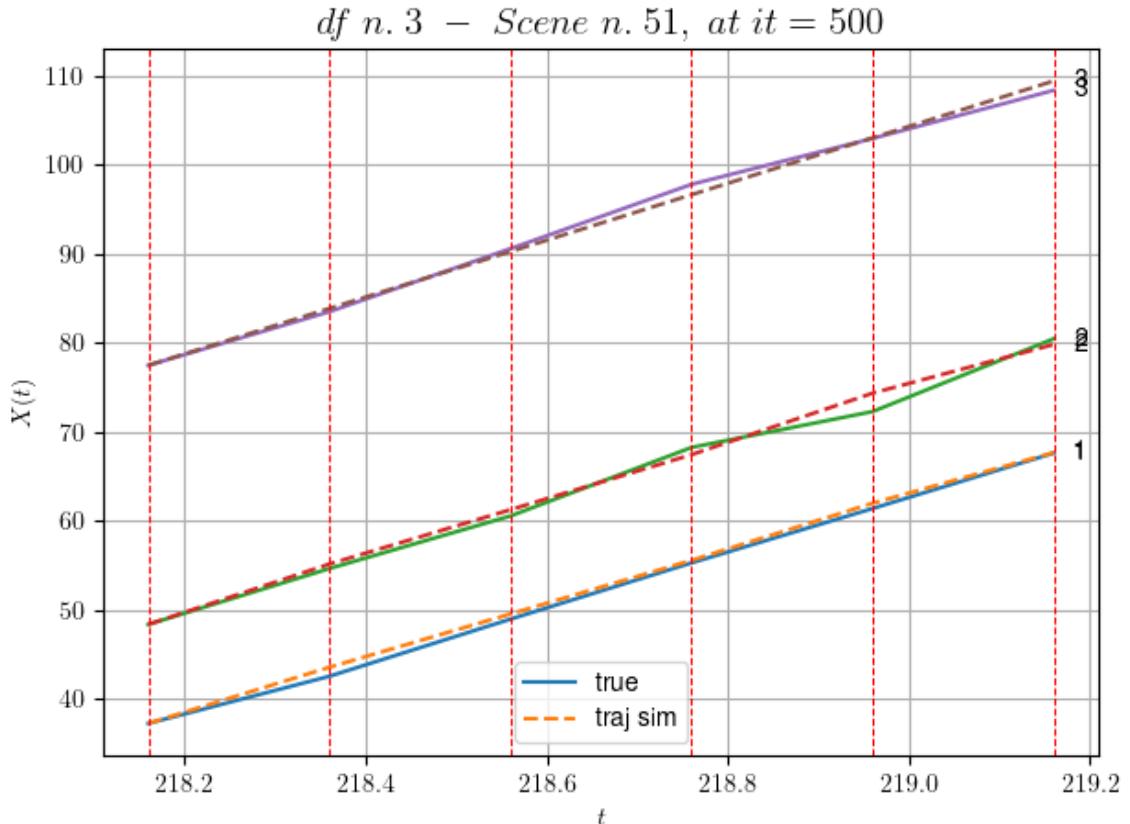
-----
- Time interval n.1: [218.36, 218.56]
  * y_true: [32.09751616 29.50187244]
  * v_ann: [29.941646575927734, 30.508865356445312, 3
1.946925583263653]

-----
- Time interval n.2: [218.56, 218.76]
  * y_true: [31.61167285 38.50305628]
  * v_ann: [30.115436553955078, 30.933931350708008, 3
1.946925583263653]

-----
- Time interval n.3: [218.76, 218.96]
  * y_true: [30.522016 20.15190279]
  * v_ann: [32.07377243041992, 34.525047302246094, 3
1.946925583263653]

-----
- Time interval n.4: [218.96, 219.16]
  * y_true: [31.13252968 40.9045659 ]
  * v_ann: [28.48076629638672, 27.348430633544922, 3
1.946925583263653]

-----
* err= 0.5888293237182303
* Learning rate NN = 0.0001937102060765028
* diff = 0.0211182206211110769
```



For scene 51/90

* use LR_NN=0.0005 with err=30.079729217361983 at it=24
 * v0_scn_mean = 31.83011013568038
 * MAE = 0.5518715784285937

df n.3, scene n.52/90

We have 4 time intervals inside [222.96, 223.76]

- Time interval n.0: [222.96, 223.16]
 - * y_true: [37.21103813 39.71315438]
 - * v_ann: [35.322872161865234, 34.34051513671875, 31.279750687417586]

- Time interval n.1: [223.16, 223.36]
 - * y_true: [31.35126998 28.99272163]
 - * v_ann: [36.160888671875, 34.43009948730469, 31.279750687417586]

- Time interval n.2: [223.36, 223.56]
 - * y_true: [33.72173898 31.78369531]
 - * v_ann: [35.01131057739258, 33.83551788330078, 31.279750687417586]

```

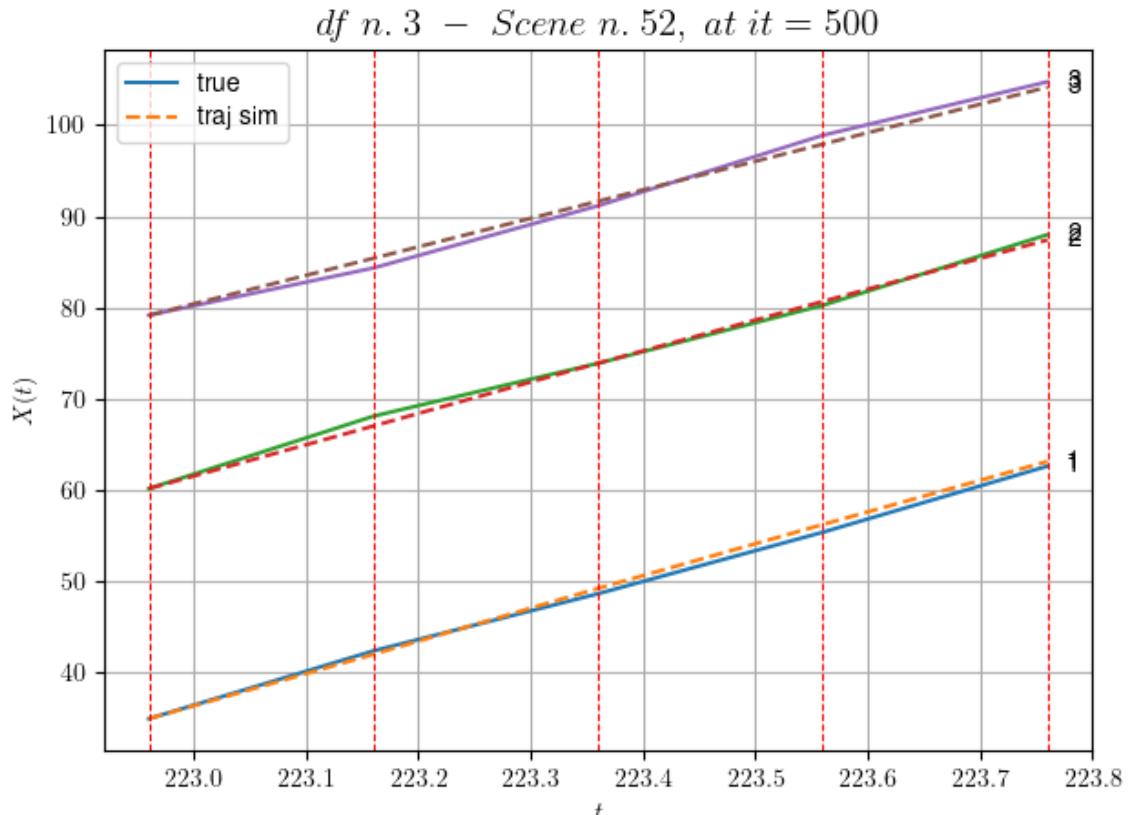
- Time interval n.3: [223.56, 223.76]
  * y_true: [36.23248355 38.79526469]
  * v_ann: [34.60535430908203, 33.76250457763672, 31.
279750687417586]

```

```

* err= 0.3879356780658199
* Learning rate NN = 4.7829678806010634e-05
* diff = 0.0020846568178360947

```



For scene 52/90

```

* use LR_NN=0.0001 with err=6.315929655964098 at it=24
* v0_scn_mean = 31.202965703630593
* MAE = 0.3879356780658199

```

df n.3, scene n.53/90

```

We have 6 time intervals inside [247.36,248.56]
- Time interval n.0: [247.36, 247.56]
  * y_true: [24.34113117 25.37248976]
  * v_ann: [8.178346888598753e-12, 25.03841400146484
4, 29.199545092787652]

```

```

- Time interval n.1: [247.56, 247.76]
  * y_true: [20.86113385 27.00305492]
  * v_ann: [5.4384877677671195e-12, 24.16735458374023

```

4, 29.199545092787652]

- Time interval n.2: [247.76, 247.96]
 - * y_true: [25.44173909 29.15378269]
 - * v_ann: [4.809127271757085e-13, 27.36282348632812]

5, 29.199545092787652]

- Time interval n.3: [247.96, 248.16]
 - * y_true: [34.05263307 29.24437105]
 - * v_ann: [1.1102808261534772e-13, 30.64018630981445]

3, 29.199545092787652]

- Time interval n.4: [248.16, 248.36]
 - * y_true: [24.6823336 32.34552948]
 - * v_ann: [7.490007420708766e-13, 28.86218643188476]

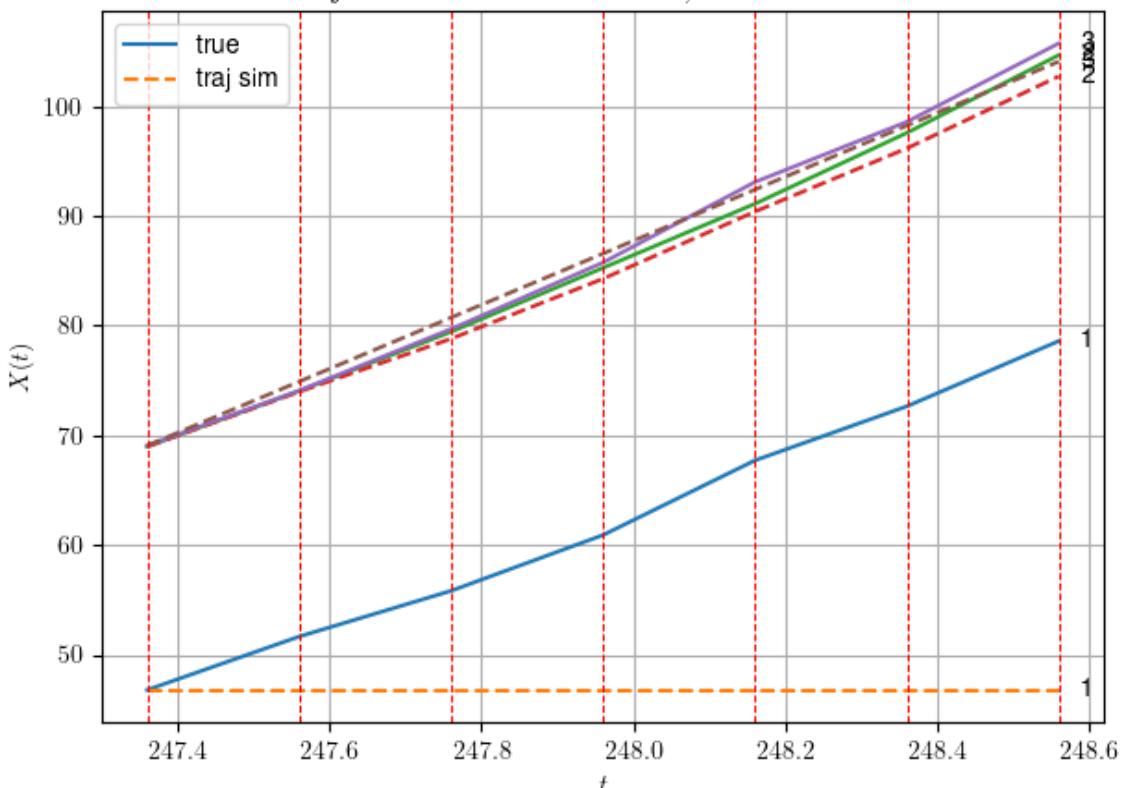
6, 29.199545092787652]

- Time interval n.5: [248.36, 248.56]
 - * y_true: [29.77329807 35.48696999]
 - * v_ann: [3.5930497265619296e-14, 32.8492012023925]

8, 29.199545092787652]

- * err= 116.17428212711593
- * Learning rate NN = 0.00031381050939671695
- * diff = 0.000012001742063102

df n. 3 – Scene n. 53, at it = 500



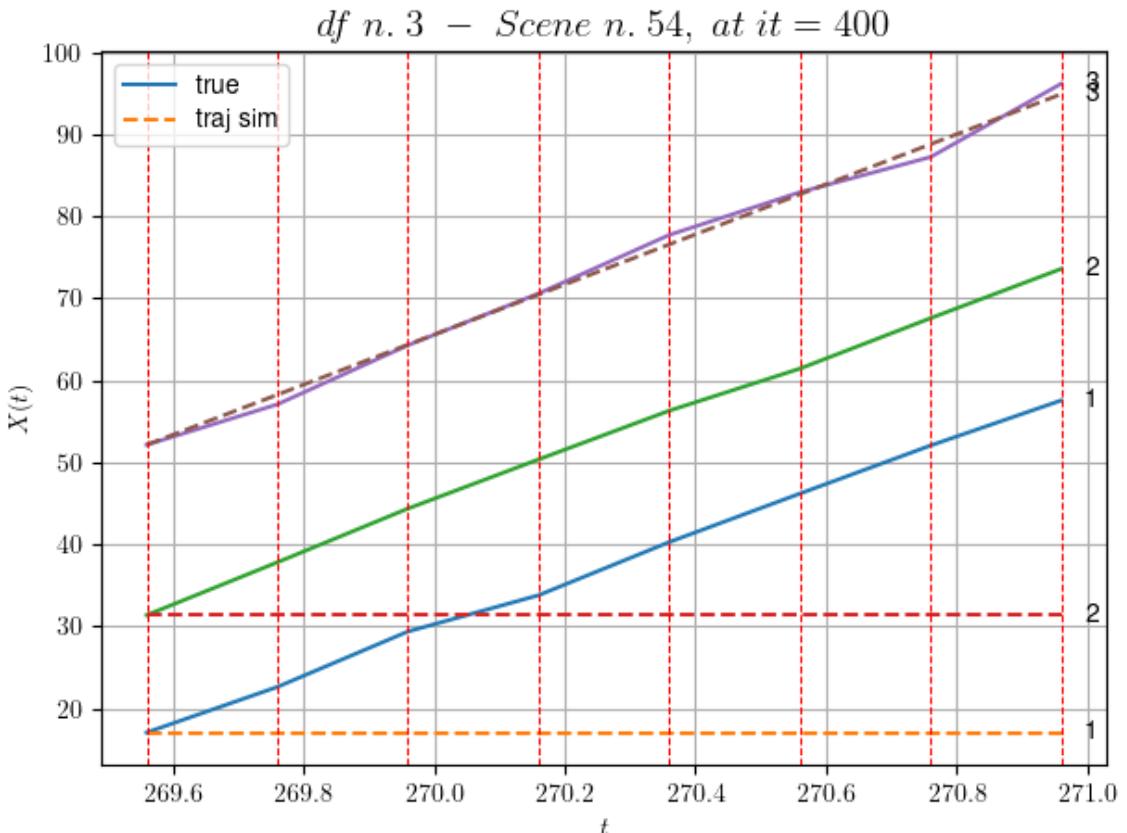
```

For scene 53/90
* use LR_NN=0.001 with err=84.21022299584115 at it=24
* v0_scn_mean = 29.247572351281853
* MAE = 11.527451405063696
=====
```

```
df n.3, scene n.54/90
=====
```

```

We have 7 time intervals inside [269.56,270.96]
* err= 412.6898694862521
* Learning rate NN = 3.138104875688441e-05
* diff = 4.021303539047949e-07
```



```

For scene 54/90
* use LR_NN=0.0001 with err=6.008006582883604 at it=24
* v0_scn_mean = 30.49873756909922
* MAE = 412.6898694862521
=====
```

```
df n.3, scene n.55/90
=====
```

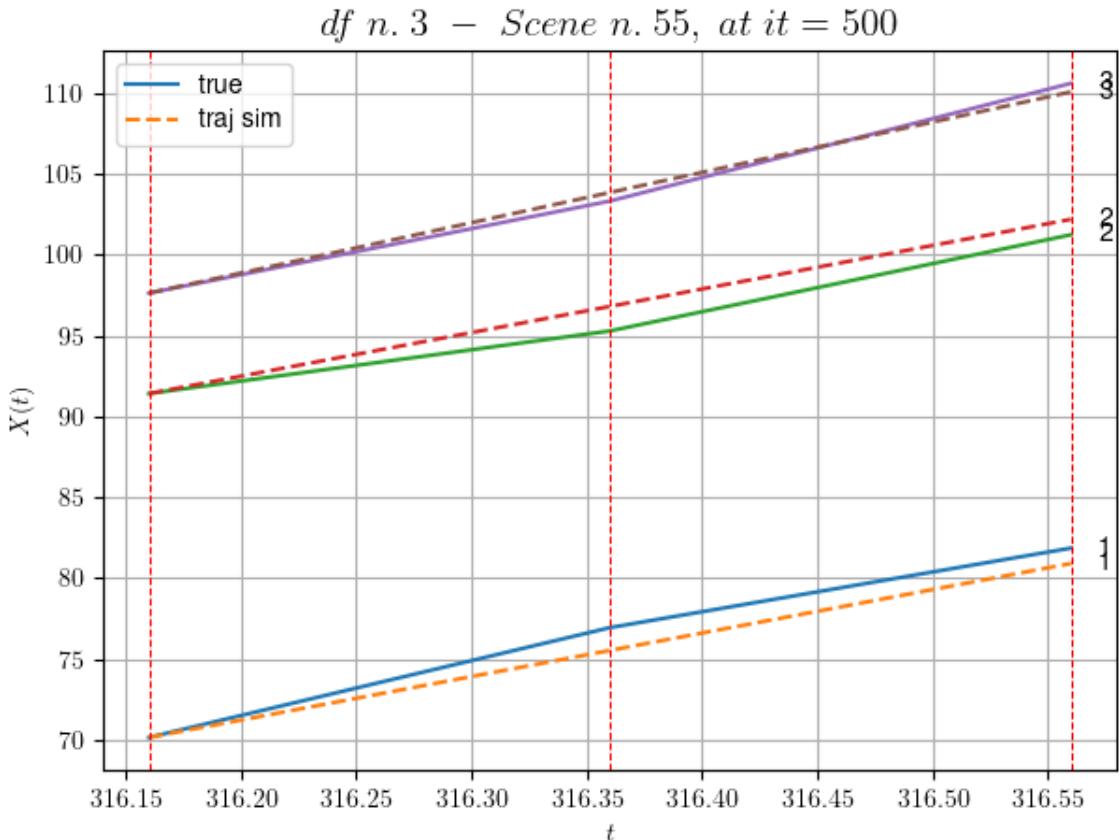
```

We have 2 time intervals inside [316.16,316.56]
- Time interval n.0: [316.16, 316.36]
  * y_true: [33.9635286 19.3731464]
  * v_ann: [26.918502807617188, 26.9614200592041, 31.
```

1197313072506]

- Time interval n.1: [316.36, 316.56]
 - * y_true: [24.60296417 29.75560281]
 - * v_ann: [26.89202880859375, 26.934078216552734, 3 1.1197313072506]

- * err= 0.7401723268168038
- * Learning rate NN = 7.289998757187277e-05
- * diff = 0.00222362400764071421



For scene 55/90

- * use LR_NN=0.0001 with err=3.2916933573467517 at it=24
- * v0_scn_mean = 31.052547479089903
- * MAE = 0.7401723268168038

df n.3, scene n.56/90

We have 4 time intervals inside [317.76,318.56]

- Time interval n.0: [317.76, 317.96]
 - * y_true: [22.24301013 28.10582296]
 - * v_ann: [25.431446075439453, 24.590904235839844, 2 8.729606502534722]

```

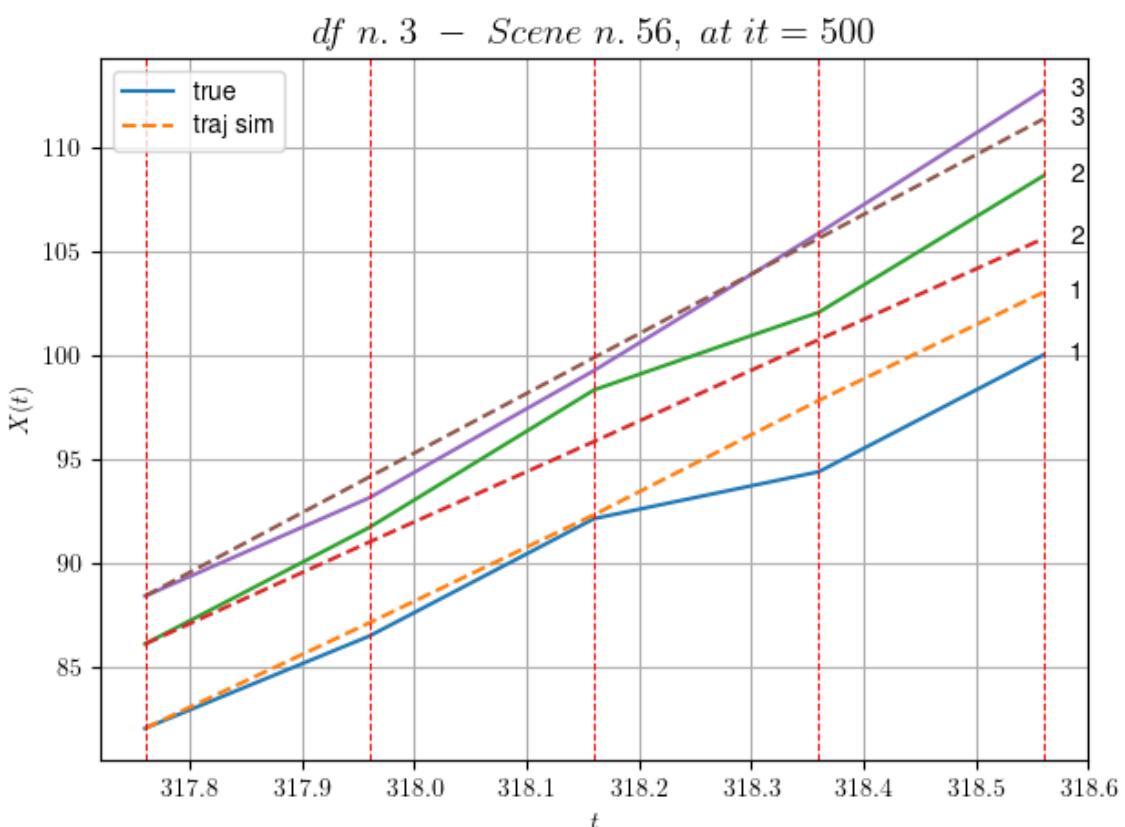
    - Time interval n.1: [317.96, 318.16]
      * y_true: [28.26433817 33.10585656]
      * v_ann: [26.019872665405273, 24.192350387573242, 2
8.729606502534722]

-----
    - Time interval n.2: [318.16, 318.36]
      * y_true: [11.28182915 18.67354228]
      * v_ann: [27.516695022583008, 24.524362564086914, 2
8.729606502534722]

-----
    - Time interval n.3: [318.36, 318.56]
      * y_true: [28.12514655 32.86712293]
      * v_ann: [26.028610229492188, 24.333213806152344, 2
8.729606502534722]

-----
* err= 2.816592548381545
* Learning rate NN = 0.000239148415857926
* diff = 0.004609927535938141

```



For scene 56/90

```

* use LR_NN=0.0005 with err=26.534358499305128 at it=24
* v0_scn_mean = 28.80583005534457
* MAE = 1.9973891597568114

```

```
df n.3, scene n.57/90
```

```
=====
=====
```

We have 6 time intervals inside [325.76, 326.96]

- Time interval n.0: [325.76, 325.96]
 - * y_true: [25.31057708 30.22149101]
 - * v_ann: [26.94821548461914, 27.842405319213867, 3
3.13555230710725]

```
-----
```

- Time interval n.1: [325.96, 326.16]
 - * y_true: [25.23074384 33.46208613]
 - * v_ann: [27.094470977783203, 27.977054595947266, 3
3.13555230710725]

```
-----
```

- Time interval n.2: [326.16, 326.36]
 - * y_true: [24.63092838 29.01218385]
 - * v_ann: [27.861528396606445, 29.087665557861328, 3
3.13555230710725]

```
-----
```

- Time interval n.3: [326.36, 326.56]
 - * y_true: [17.72077879 27.33248549]
 - * v_ann: [27.171276092529297, 27.964818954467773, 3
3.13555230710725]

```
-----
```

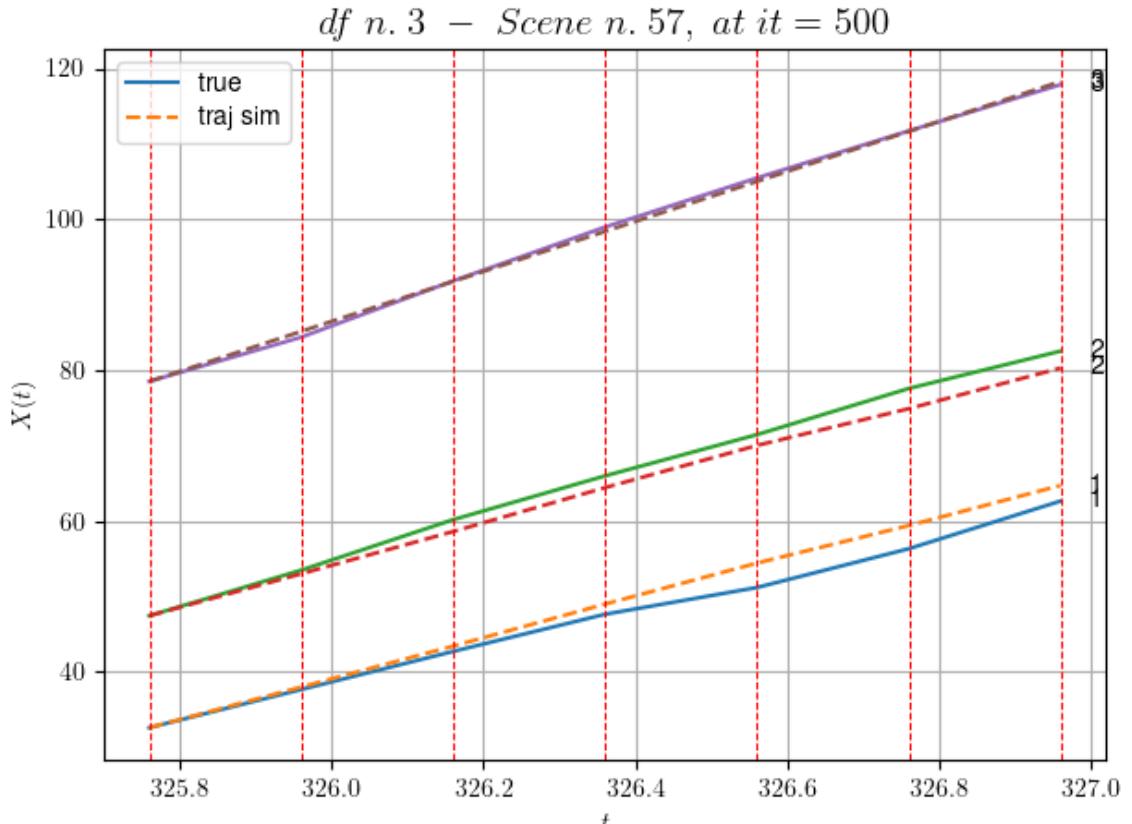
- Time interval n.4: [326.56, 326.76]
 - * y_true: [25.71142574 30.60327071]
 - * v_ann: [24.898521423339844, 24.380216598510742, 3
3.13555230710725]

```
-----
```

- Time interval n.5: [326.76, 326.96]
 - * y_true: [31.6120671 24.79299826]
 - * v_ann: [26.587387084960938, 26.950857162475586, 3
3.13555230710725]

```
-----
```

- * err= 2.2521667704189263
- * Learning rate NN = 0.00015690525469835848
- * ~~diff = 0.0010151630045001E~~



For scene 57/90

- * use LR_NN=0.0005 with err=10.693827197126682 at it=24
- * v0_scn_mean = 32.94741930946037
- * MAE = 1.55458772140624

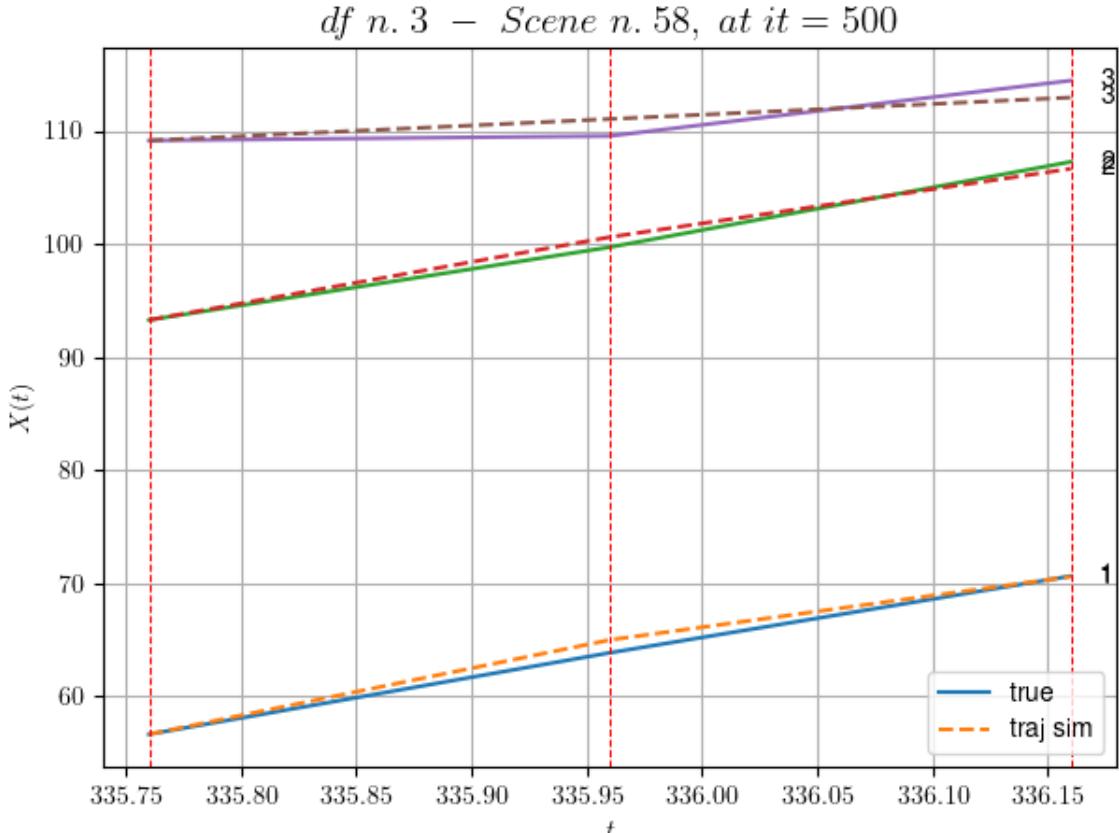
df n.3, scene n.58/90

We have 2 time intervals inside [335.76, 336.16]

- Time interval n.0: [335.76, 335.96]
 - * y_true: [36.00253797 32.17585284]
 - * v_ann: [41.68950653076172, 36.62870407104492, 9.495680524399125]

- Time interval n.1: [335.96, 336.16]
 - * y_true: [33.90297107 37.71766361]
 - * v_ann: [27.975801467895508, 30.20818328857422, 9.495680524399125]

- * err= 0.774337889406568
- * Learning rate NN = 0.00036449998151510954
- * diff = 0.007011240781060302



For scene 58/90

```
* use LR_NN=0.0005 with err=16.873626042563092 at it=24
* v0_scn_mean = 10.725938772335933
* MAE = 0.7354661635662479
```

df n.3, scene n.59/90

We have 3 time intervals inside [371.16, 371.76]

- Time interval n.0: [371.16, 371.36]
 - * y_true: [24.42036896 26.80112378]
 - * v_ann: [27.074037551879883, 27.16182518005371, 3

2.53950759922608]

- Time interval n.1: [371.36, 371.56]
 - * y_true: [25.21053633 31.30165898]
 - * v_ann: [26.93729019165039, 26.86067771911621, 32.

53950759922608]

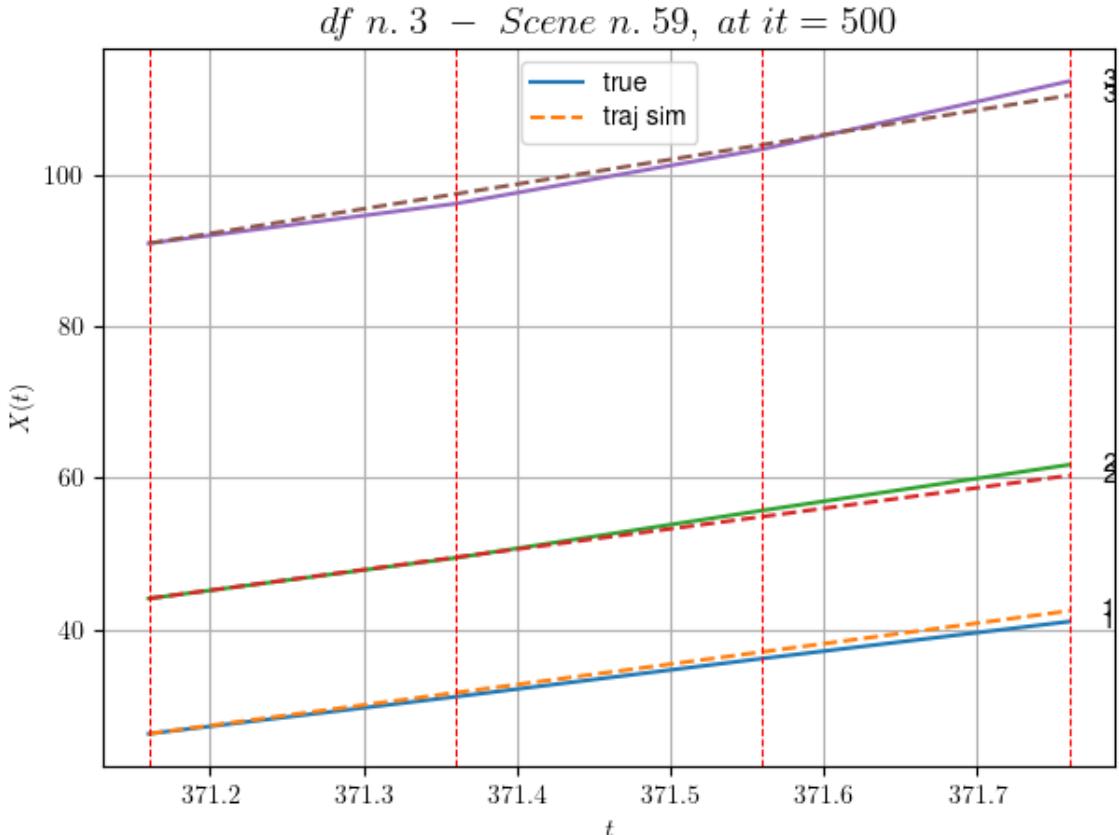
- Time interval n.2: [371.56, 371.76]
 - * y_true: [24.36067127 30.15199262]
 - * v_ann: [27.06484603881836, 27.134397506713867, 3

2.53950759922608]

```

* err= 0.9328914867547994
* Learning rate NN = 2.952449540316593e-05
* diff = 0.0006052259432098861

```



For scene 59/90

```

* use LR_NN=5e-05 with err=8.394647503379517 at it=24
* v0 scn mean = 32.38713725729067
* MAE = 0.9328914867547994

```

df n.3, scene n.60/90

We have 4 time intervals inside [387.36, 388.16]

- Time interval n.0: [387.36, 387.56]
 - * y_true: [32.47194771 39.46360823]
 - * v_ann: [28.702985763549805, 30.912776947021484, 33.03189808825746]

- Time interval n.1: [387.56, 387.76]
 - * y_true: [28.80212467 26.65295039]
 - * v_ann: [34.9056510925293, 39.00895309448242, 33.03189808825746]

- Time interval n.2: [387.76, 387.96]
 - * y_true: [28.30253286 24.25305315]

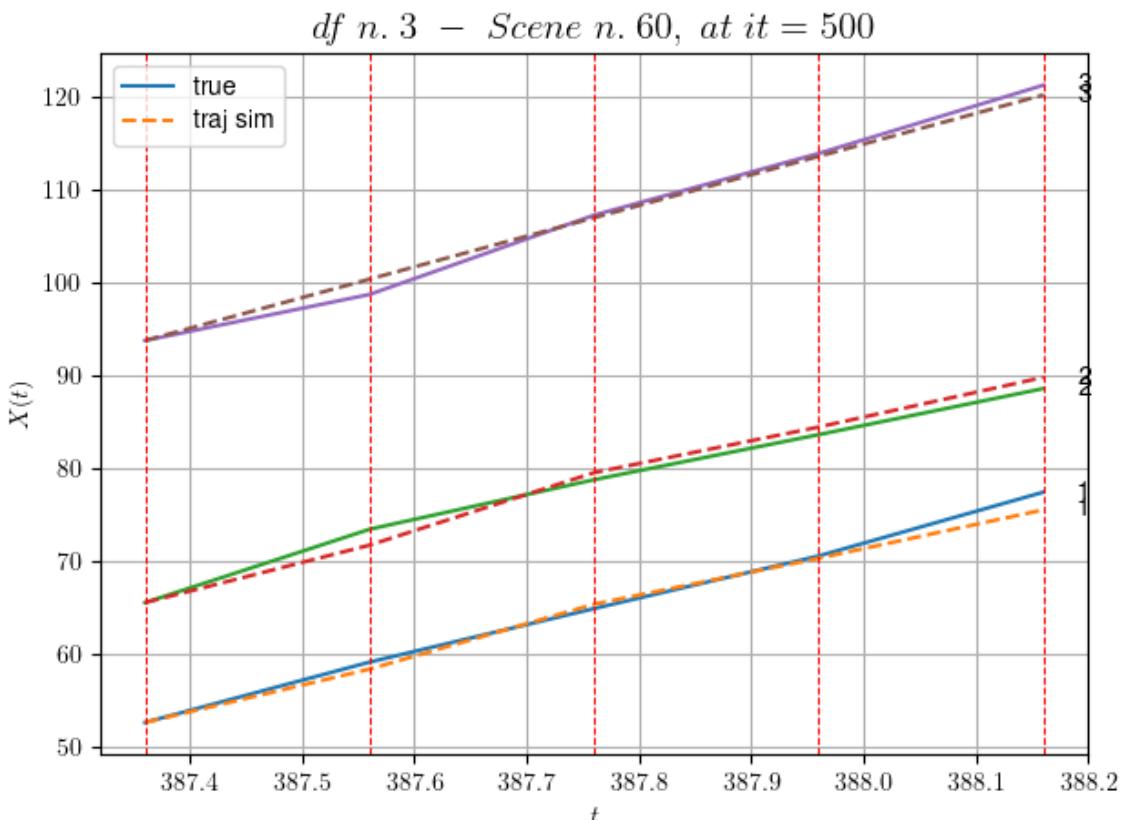
```

* v_ann: [24.71698570251465, 24.539384841918945, 3
3.03189808825746]

-----
- Time interval n.3: [387.96, 388.16]
* y_true: [34.31356051 24.78356316]
* v_ann: [26.052671432495117, 26.730731964111328, 3
3.03189808825746]

-----
* err= 0.939261254263008
* Learning rate NN = 0.000478296831715852
* diff = 0.0087730602012016251

```



For scene 60/90

```

* use LR_NN=0.001 with err=16.157355528279567 at it=24
* v0_scn_mean = 32.849984339086745
* MAE = 0.939261254263008

```

df n.3, scene n.61/90

```

We have 2 time intervals inside [390.36, 390.76]
- Time interval n.0: [390.36, 390.56]
* y_true: [34.37306474 33.21473815]
* v_ann: [32.27952194213867, 31.907176971435547, 3
6.35426043629126]

```

```

-----  

- Time interval n.1: [390.56, 390.76]  

  * y_true: [31.79338609 29.7348149 ]  

  * v_ann: [32.378273010253906, 32.425052642822266, 3  

  6.35426043629126]
-----
```

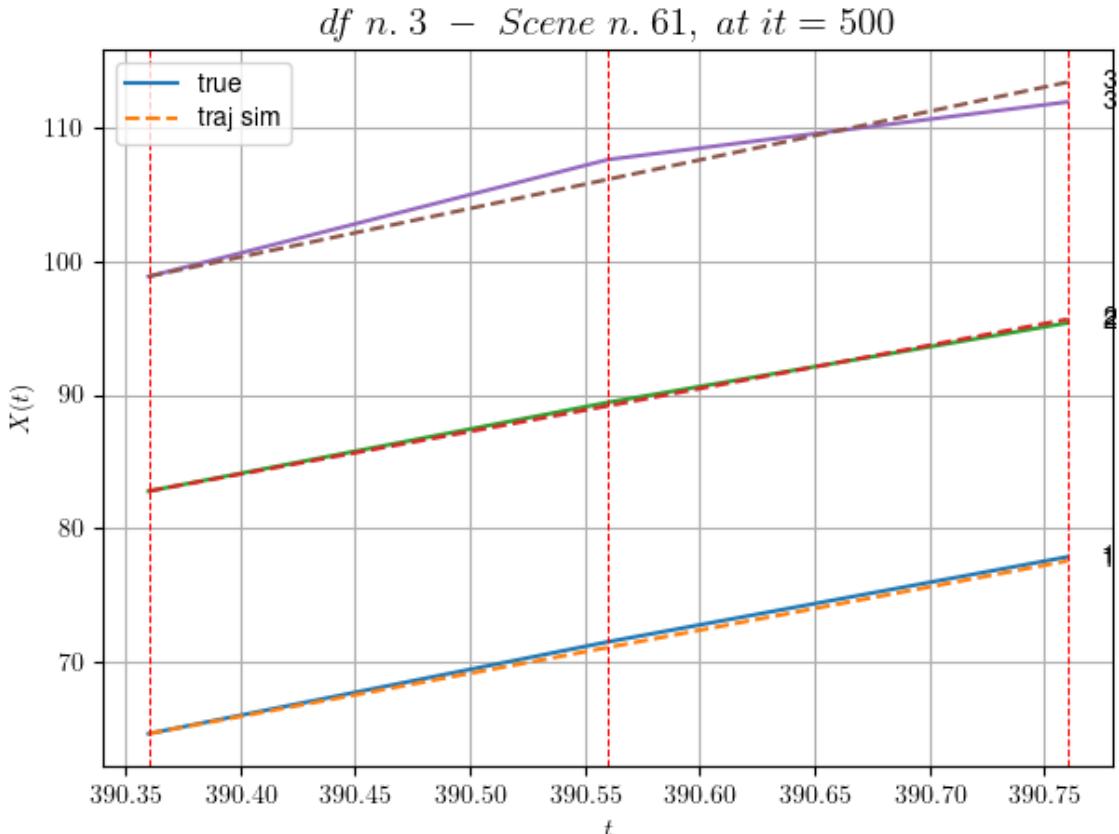
```

-----  

* err= 0.5317497943939921  

* Learning rate NN = 3.6449993785936385e-05  

* diff = 7.344303445400158e-05
-----
```



For scene 61/90

```

* use LR_NN=5e-05 with err=1.1150051891416417 at it=24
* v0_scn_mean = 35.973005095405604
* MAE = 0.48332483336229054
=====
```

df n.3, scene n.62/90

```

=====
=====  

We have 4 time intervals inside [427.96,428.76]
-----
```

```

- Time interval n.0: [427.96, 428.16]  

  * y_true: [33.16108667 24.70091575]  

  * v_ann: [30.27886962890625, 4.764413503746711e-19,  

  37.34985617547935]
-----
```

```

- Time interval n.1: [428.16, 428.36]  

  * y_true: [36.08159054 35.68166414]  

  * v_ann: [33.79052734375, 1.4519460902464947e-20, 3
-----
```

7. 34985617547935]

```

-----
-----  

    - Time interval n.2: [428.36, 428.56]  

      * y_true: [27.64533545 36.4184567 ]  

      * v_ann: [34.121280670166016, 2.118014537694067e-2  

0, 37.34985617547935]  

-----  

-----  

    - Time interval n.3: [428.56, 428.76]  

      * y_true: [24.96174823 38.17283814]  

      * v_ann: [30.213211059570312, 1.490732621480849e-2  

0, 37.34985617547935]  

-----  

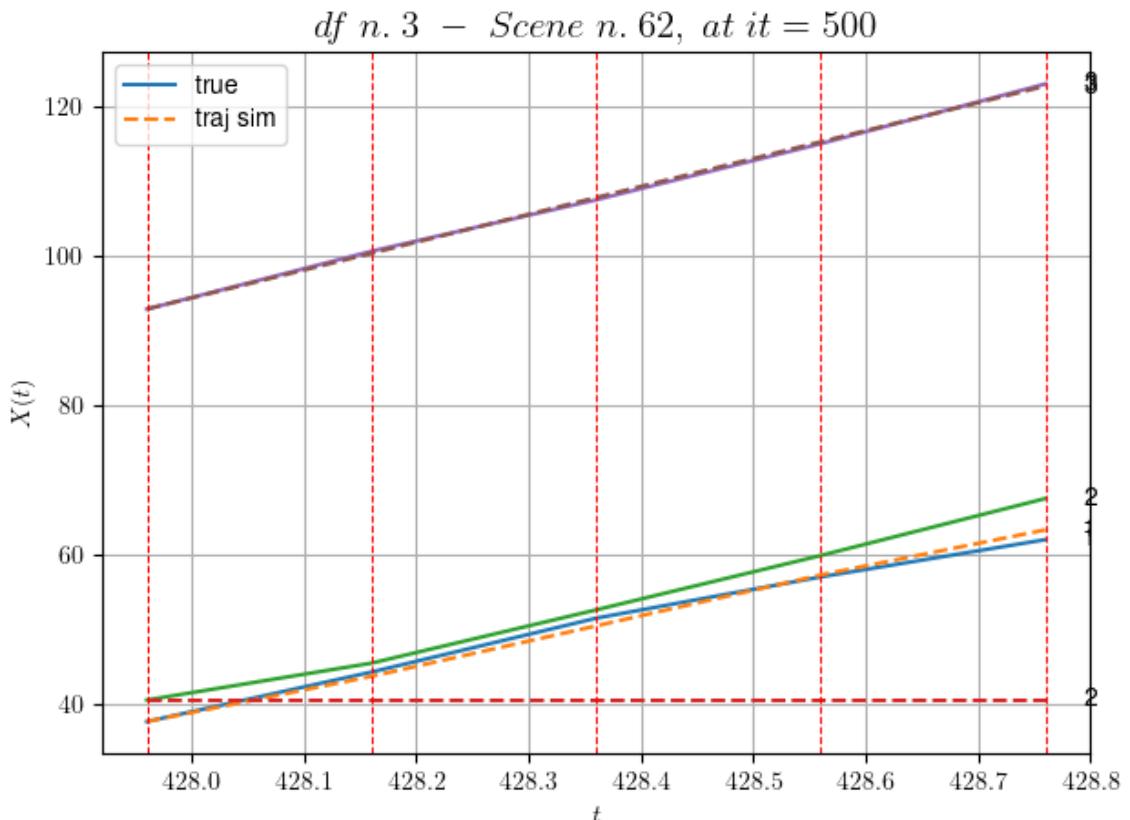
-----  

* err= 85.15310737047979  

* Learning rate NN = 0.000239148415857926  

* diff = 8.519943966689425e-05

```



For scene 62/90

```

* use LR_NN=0.0005 with err=72.41367208604986 at it=24
* v0_scn_mean = 36.90886513494334
* MAE = 13.694961371308418
=====
```

df n.3, scene n.63/90

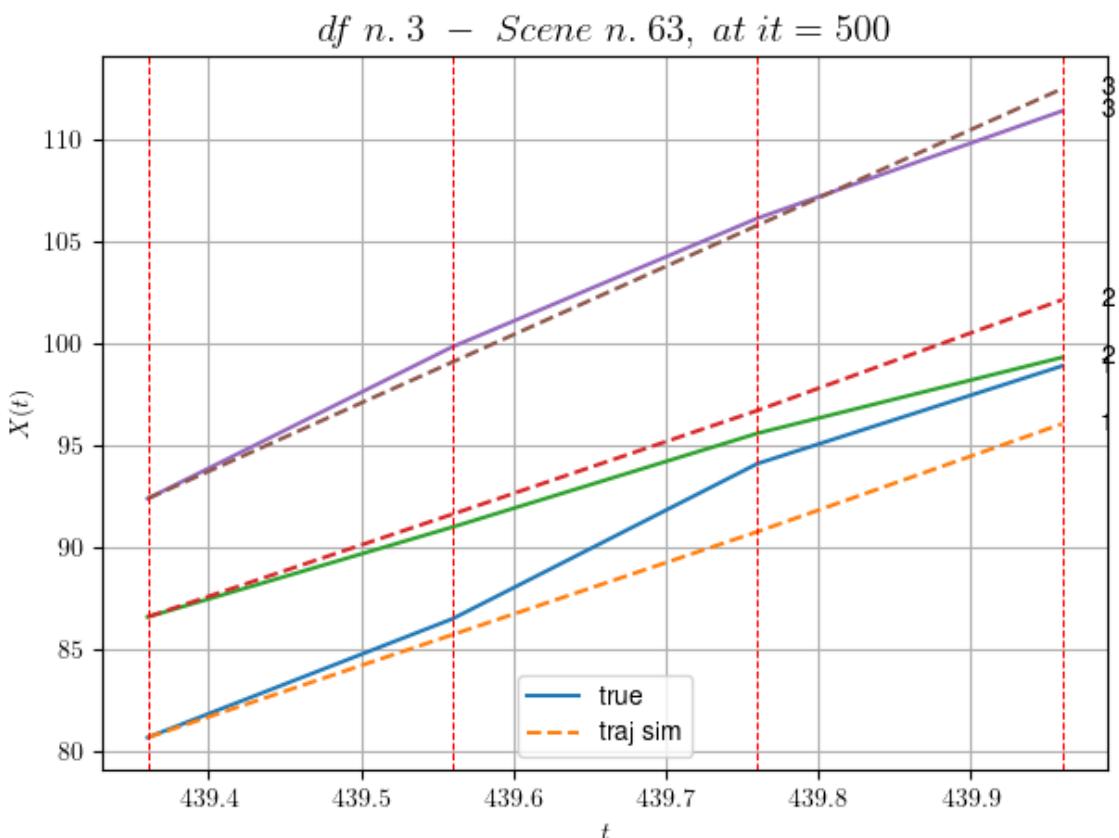
We have 3 time intervals inside [439.36, 439.96]

- Time interval n.0: [439.36, 439.56]
 - * y_true: [29.12388438 22.06331107]
 - * v_ann: [25.226573944091797, 25.222261428833008, 3.53637857273001]
-

- Time interval n.1: [439.56, 439.76]
 - * y_true: [38.07606081 22.99369197]
 - * v_ann: [25.271724700927734, 25.450834274291992, 3.53637857273001]
-

- Time interval n.2: [439.76, 439.96]
 - * y_true: [23.98424021 18.65338098]
 - * v_ann: [26.476463317871094, 27.16512107849121, 3.53637857273001]
-

* err= 2.6129316187053995
 * Learning rate NN = 0.0002952449722215533
 * diff = 0.0050157905276060025



For scene 63/90

- * use LR_NN=0.0005 with err=13.747670226623738 at it=24
 - * v0_scn_mean = 33.32419601714205
 - * MAE = 1.2325058744551154
-
-

```
df n.3, scene n.64/90
```

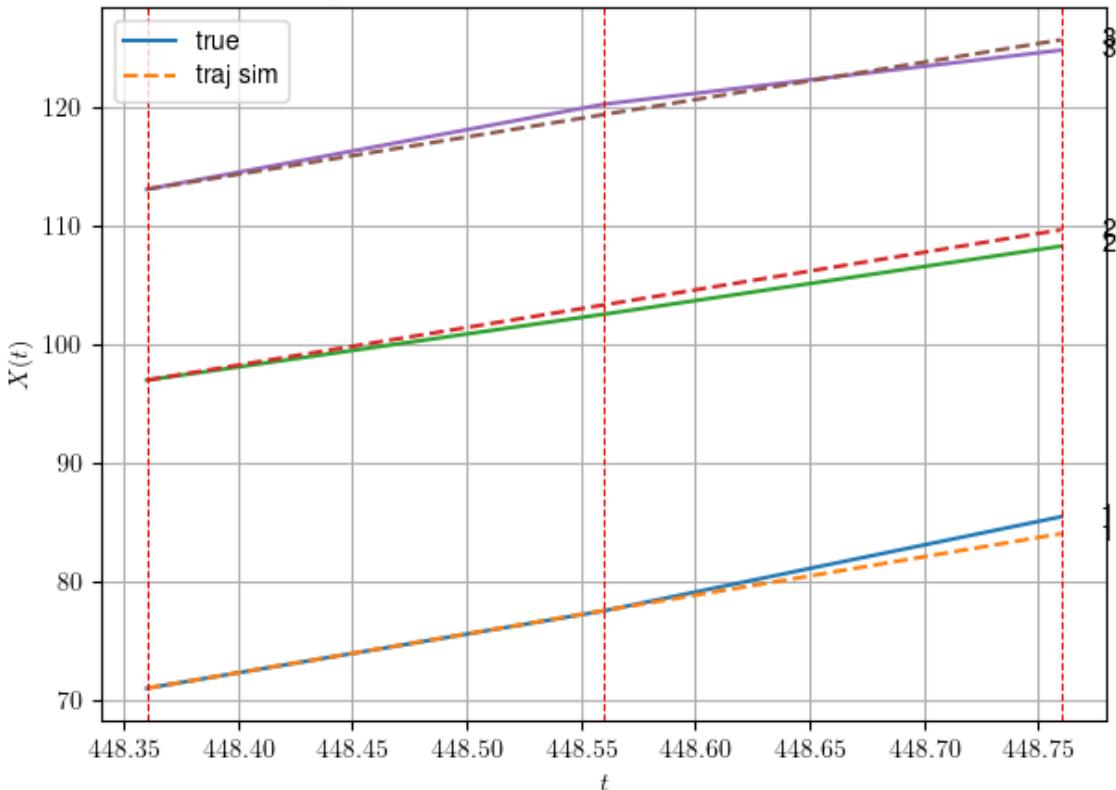
We have 2 time intervals inside [448.36, 448.76]

- Time interval n.0: [448.36, 448.56]
 - * y_true: [32.70350359 27.85524745]
 - * v_ann: [32.83293914794922, 31.785490036010742, 31.585048186377787]
-

- Time interval n.1: [448.56, 448.76]
 - * y_true: [39.76511656 28.75604876]
 - * v_ann: [32.47716522216797, 31.75818634033203, 31.585048186377787]
-

- * err= 0.6801498615942069
- * Learning rate NN = 3.6449993785936385e-05
- * diff = 0.008900304275750504

df n. 3 – Scene n. 64, at it = 500



For scene 64/90

- * use LR_NN=5e-05 with err=0.5717105744712502 at it=24
 - * v0_scn_mean = 31.48994536635909
 - * MAE = 0.5239842476667393
-
-

```
df n.3, scene n.65/90
```

We have 7 time intervals inside [465.16, 466.56]

- Time interval n.0: [465.16, 465.36]
 - * y_true: [25.95020905 30.0319773]
 - * v_ann: [27.37885856628418, 26.910263061523438, 24.722079065128806]

- Time interval n.1: [465.36, 465.56]
 - * y_true: [21.30025919 28.782318]
 - * v_ann: [27.843971252441406, 27.151620864868164, 24.722079065128806]

- Time interval n.2: [465.56, 465.76]
 - * y_true: [22.00036741 28.59272475]
 - * v_ann: [26.3813419342041, 26.334068298339844, 24.722079065128806]

- Time interval n.3: [465.76, 465.96]
 - * y_true: [26.90061063 23.70259195]
 - * v_ann: [25.732952117919922, 25.995553970336914, 24.722079065128806]

- Time interval n.4: [465.96, 466.16]
 - * y_true: [23.75070885 23.26288454]
 - * v_ann: [25.432628631591797, 25.864192962646484, 24.722079065128806]

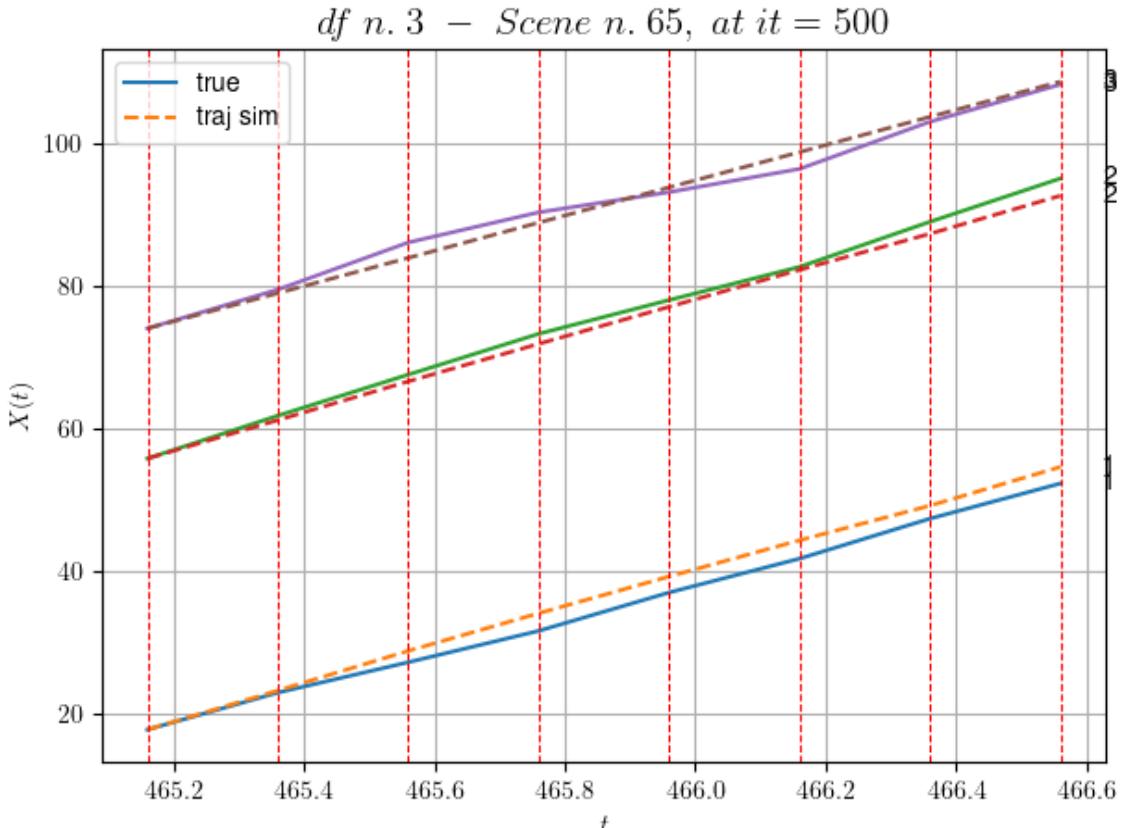
- Time interval n.5: [466.16, 466.36]
 - * y_true: [28.05107156 31.61450449]
 - * v_ann: [24.271215438842773, 25.34365463256836, 24.722079065128806]

- Time interval n.6: [466.36, 466.56]
 - * y_true: [24.65117633 30.37492519]
 - * v_ann: [27.172164916992188, 26.66830062866211, 24.722079065128806]

* err= 2.3195008462883684

* Learning rate NN = 0.00012709324073512107

* diff = 0.01615996423855659



For scene 65/90

```
* use LR_NN=0.0005 with err=66.21823203950468 at it=24
* v0_scn_mean = 25.038754084253735
* MAE = 2.3195008462883684
```

df n.3, scene n.66/90

We have 6 time intervals inside [467.16, 468.36]

- Time interval n.0: [467.16, 467.36]
 - * y_true: [14.52040439 29.14139959]
 - * v_ann: [19.373641967773438, 20.867958068847656, 2 0.776262852605434]

- Time interval n.1: [467.36, 467.56]
 - * y_true: [8.96028804 21.01119683]
 - * v_ann: [20.459959030151367, 21.184328079223633, 2 0.776262852605434]

- Time interval n.2: [467.56, 467.76]
 - * y_true: [15.62056342 22.22157858]
 - * v_ann: [18.18834114074707, 18.513042449951172, 2 0.776262852605434]

```

-----  

    - Time interval n.3: [467.76, 467.96]  

      * y_true: [19.48080782 28.40220095]  

      * v_ann: [18.557540893554688, 18.91155242919922, 2  

0.776262852605434]  

-----  

    - Time interval n.4: [467.96, 468.16]  

      * y_true: [16.10078185 22.34213456]  

      * v_ann: [21.274169921875, 21.333009719848633, 20.7  

76262852605434]  

-----  

    - Time interval n.5: [468.16, 468.36]  

      * y_true: [18.12099432 23.56241547]  

      * v_ann: [20.33138084411621, 20.088605880737305, 2  

0.776262852605434]  

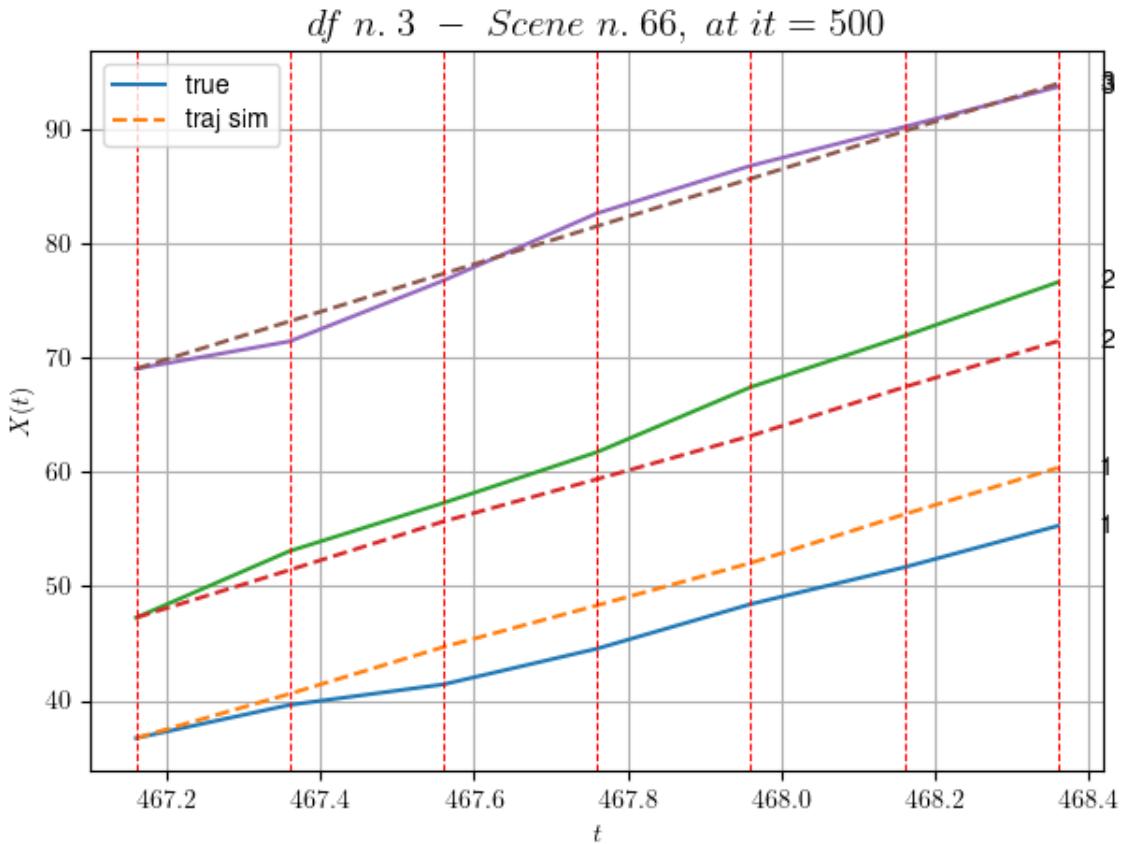
-----  

* err= 7.997503927060353  

* Learning rate NN = 0.00031381050939671695  

* diff = 0.002611027512165

```



For scene 66/90
* use LR_NN=0.001 with err=16.250162418011616 at it=24
* v0_scn_mean = 21.329686667323084
* MAE = 7.997503927060353

df n.3, scene n.67/90

We have 3 time intervals inside [480.76, 481.36]

- Time interval n.0: [480.76, 480.96]

- * y_true: [26.72145209 13.04113053]

- * v_ann: [17.829614639282227, 18.372695922851562, 1
8.304841737444658]

- Time interval n.1: [480.96, 481.16]

- * y_true: [27.70182882 12.50117676]

- * v_ann: [17.662412643432617, 18.522390365600586, 1
8.304841737444658]

- Time interval n.2: [481.16, 481.36]

- * y_true: [16.26121495 12.26123448]

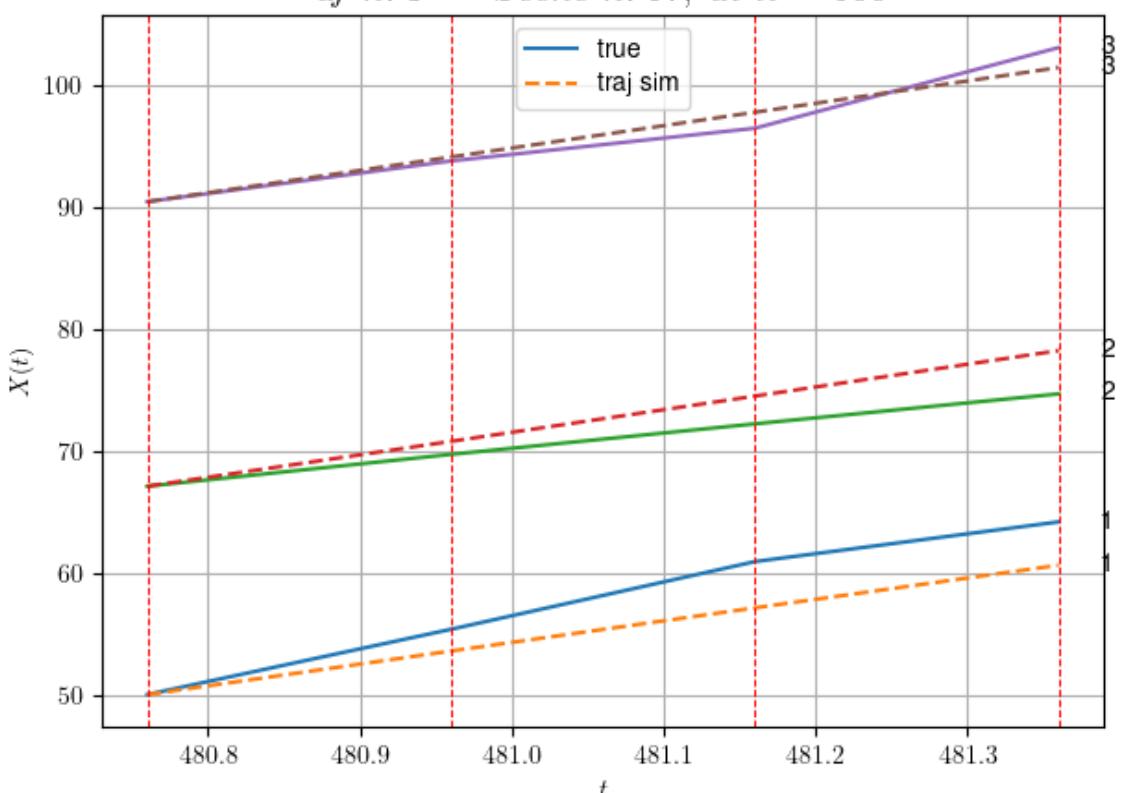
- * v_ann: [17.46596908569336, 18.63312339782715, 18.
304841737444658]

- * err= 4.4517301577065735

- * Learning rate NN = 2.952449540316593e-05

- * diff = 0.0017715180740811576

df n. 3 – Scene n. 67, at it = 500



For scene 67/90

- * use LR_NN=5e-05 with err=15.836905400225477 at it=24

- * v0_scn_mean = 19.006550708110947

- * MAE = 4.404116108158721

```
=====
=====
```

df n.3, scene n.68/90

```
=====
=====
```

We have 2 time intervals inside [487.16, 487.56]

- Time interval n.0: [487.16, 487.36]

- * y_true: [6.3002445 28.62315801]

- * v_ann: [14.694195747375488, 14.661504745483398, 2
3.07183162168719]

```
-----
```

- Time interval n.1: [487.36, 487.56]

- * y_true: [10.63044184 13.60161023]

- * v_ann: [14.714263916015625, 14.88884162902832, 2
3.07183162168719]

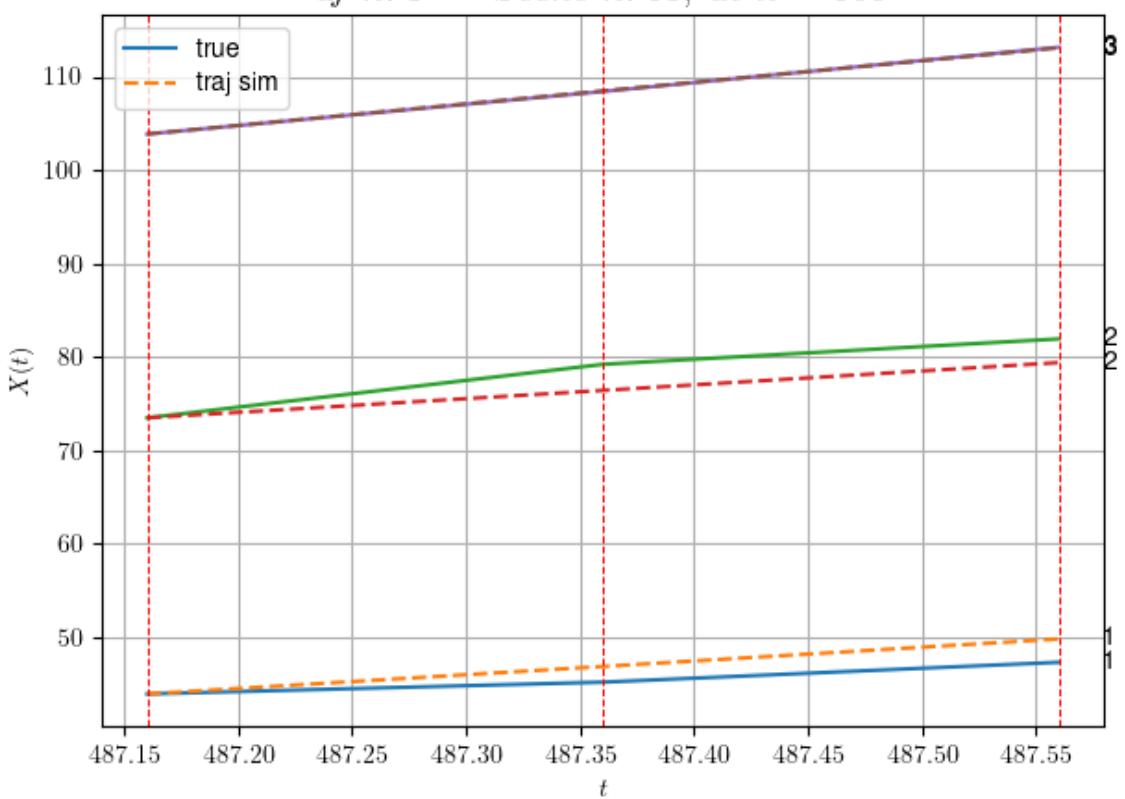
```
-----
```

- * err= 2.586323608637072

- * Learning rate NN = 3.6449993785936385e-05

- * diff = 0.0015658545179393357

df n. 3 – Scene n. 68, at it = 500



For scene 68/90

- * use LR_NN=5e-05 with err=3.8735530040370065 at it=24

- * v0_scn_mean = 23.487521413325705

- * MAE = 2.586323608637072

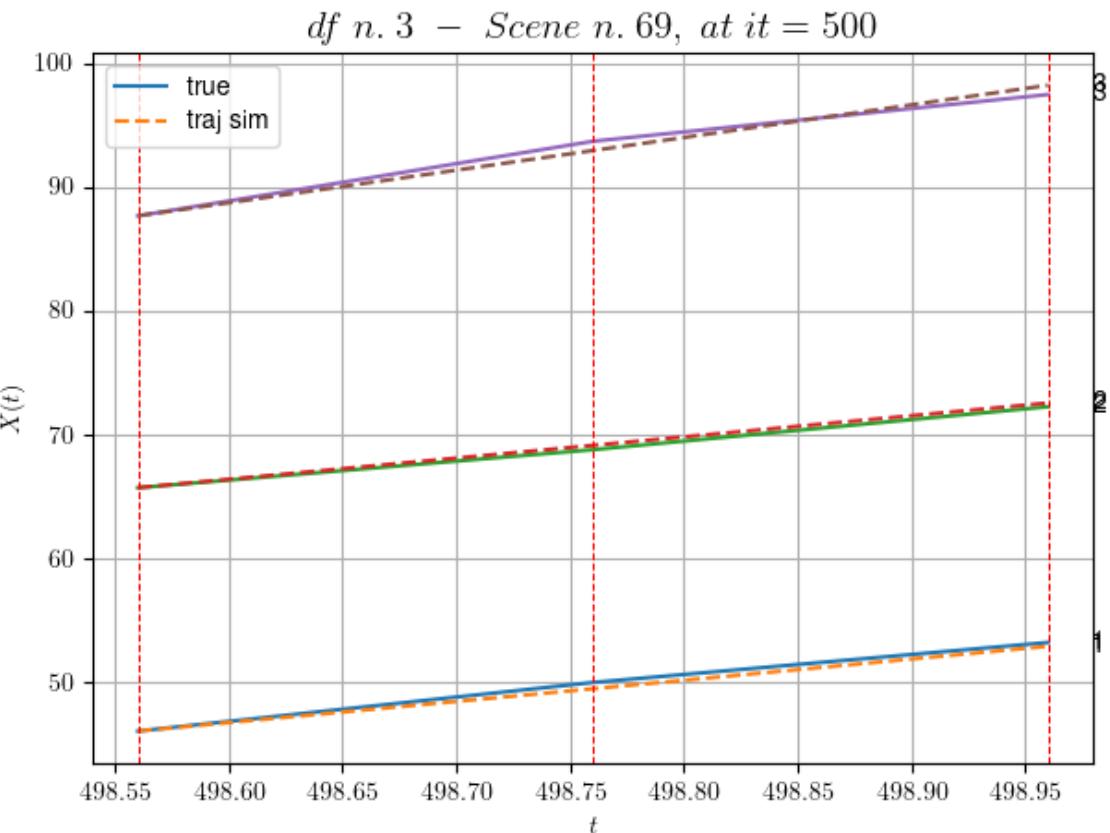
```
=====
=====
```

df n.3, scene n.69/90

We have 2 time intervals inside [498.56, 498.96]
 - Time interval n.0: [498.56, 498.76]
 * y_true: [19.66086018 15.38134444]
 * v_ann: [17.14317512512207, 17.131433486938477, 2
 6.404262964943346]

- Time interval n.1: [498.76, 498.96]
 * y_true: [16.17082592 17.38167269]
 * v_ann: [17.166887283325195, 17.13829803466797, 2
 6.404262964943346]

* err= 0.1871968269956631
 * Learning rate NN = 3.6449993785936385e-05
 * diff = 8.19839882575113e-05



For scene 69/90

* use LR_NN=5e-05 with err=13.174689525186592 at it=24
 * v0_scn_mean = 26.620007025605396
 * MAE = 0.1871968269956631

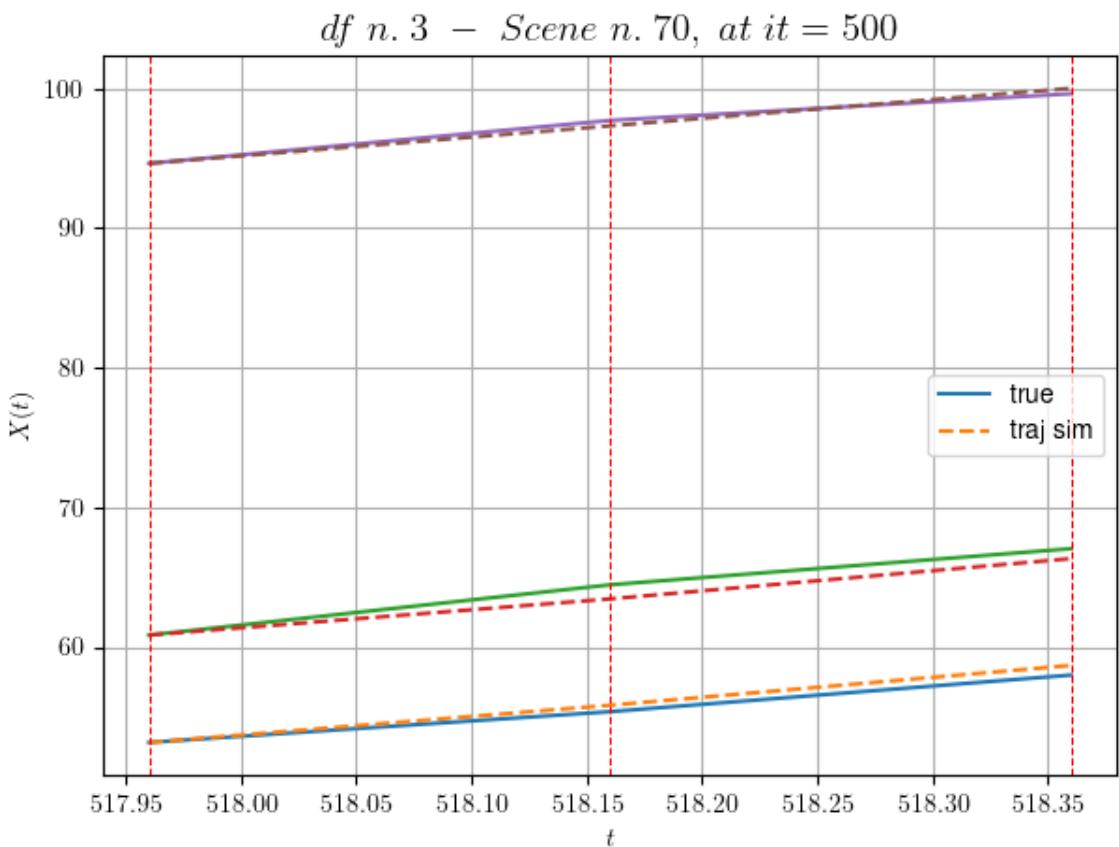
df n.3, scene n.70/90

We have 2 time intervals inside [517.96, 518.36]

- Time interval n.0: [517.96, 518.16]
 - * y_true: [11.01062169 17.99135838]
 - * v_ann: [13.308833122253418, 12.953339576721191, 1 3.435738688973677]
-

- Time interval n.1: [518.16, 518.36]
 - * y_true: [13.11081201 12.94110202]
 - * v_ann: [14.275753021240234, 14.427677154541016, 1 3.435738688973677]
-

- * err= 0.2789923320369913
- * Learning rate NN = 0.0007289999630302191
- * diff = 4.13800785320495e-06



For scene 70/90

- * use LR_NN=0.001 with err=7.723701300551601 at it=24
 - * v0_scn_mean = 14.429593623935691
 - * MAE = 0.2789923320369913
-
-

df n.3, scene n.71/90

We have 4 time intervals inside [527.36, 528.16]

- Time interval n.0: [527.36, 527.56]
 - * y_true: [14.45064103 23.0016556]

```

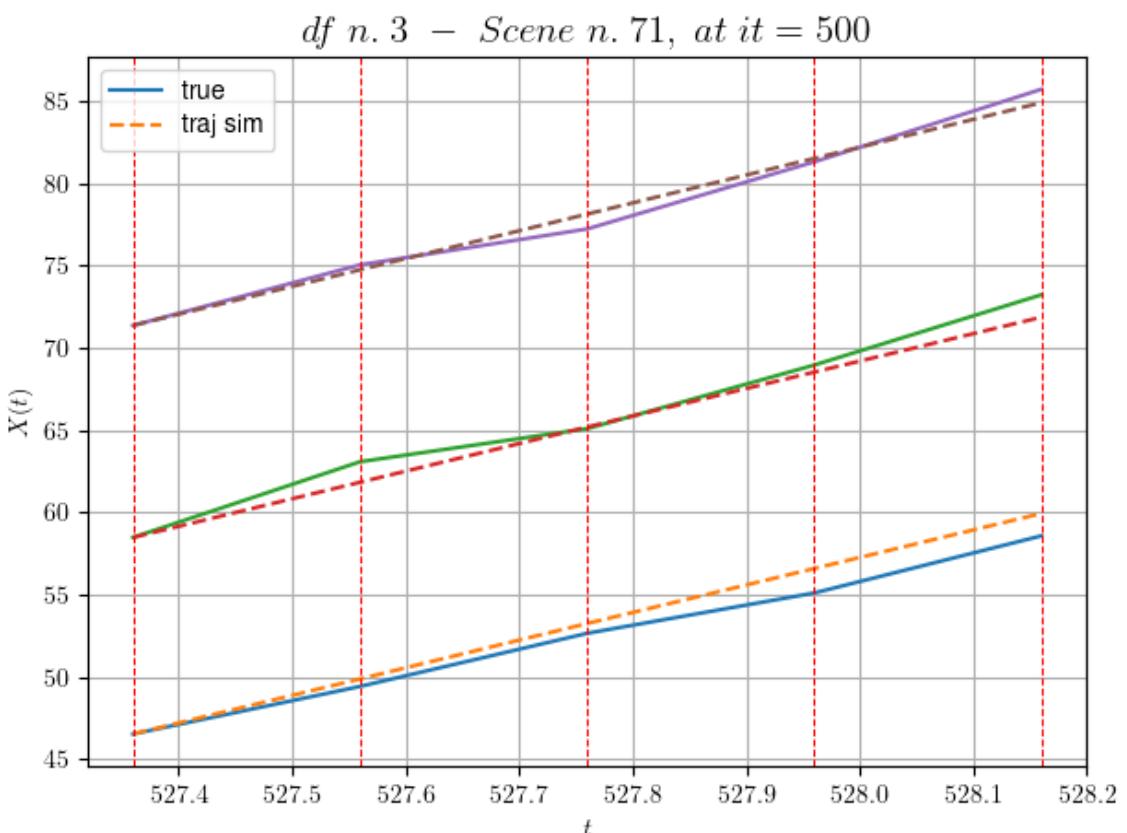
* v_ann: [16.72927474975586, 16.764564514160156, 1
6.920906022776144]

-----
- Time interval n.1: [527.56, 527.76]
* y_true: [16.14079976 10.04077962]
* v_ann: [16.845497131347656, 16.780427932739258, 1
6.920906022776144]

-----
- Time interval n.2: [527.76, 527.96]
* y_true: [12.25068777 19.3317022 ]
* v_ann: [16.702333450317383, 16.691373825073242, 1
6.920906022776144]

-----
- Time interval n.3: [527.96, 528.16]
* y_true: [17.36107311 21.34208771]
* v_ann: [16.730884552001953, 16.676029205322266, 1
6.920906022776144]

* err= 0.6562299951630132
* Learning rate NN = 2.3914839403005317e-05
* diff = 0 00020001062170802208
```



For scene 71/90

- * use LR_NN=5e-05 with err=14.093018286705075 at it=24
- * v0_scn_mean = 17.70565107418634
- * MAE = 0.6545035292347171

df n.3, scene n.72/90

We have 3 time intervals inside [530.36, 530.96]

- Time interval n.0: [530.36, 530.56]

* y_true: [16.07060164 26.13260896]

* v_ann: [21.383676528930664, 21.003820419311523, 1
8.054855152783293]

- Time interval n.1: [530.56, 530.76]

* y_true: [15.14064363 18.85215172]

* v_ann: [21.424606323242188, 20.819087982177734, 1
8.054855152783293]

- Time interval n.2: [530.76, 530.96]

* y_true: [16.69081323 25.36324467]

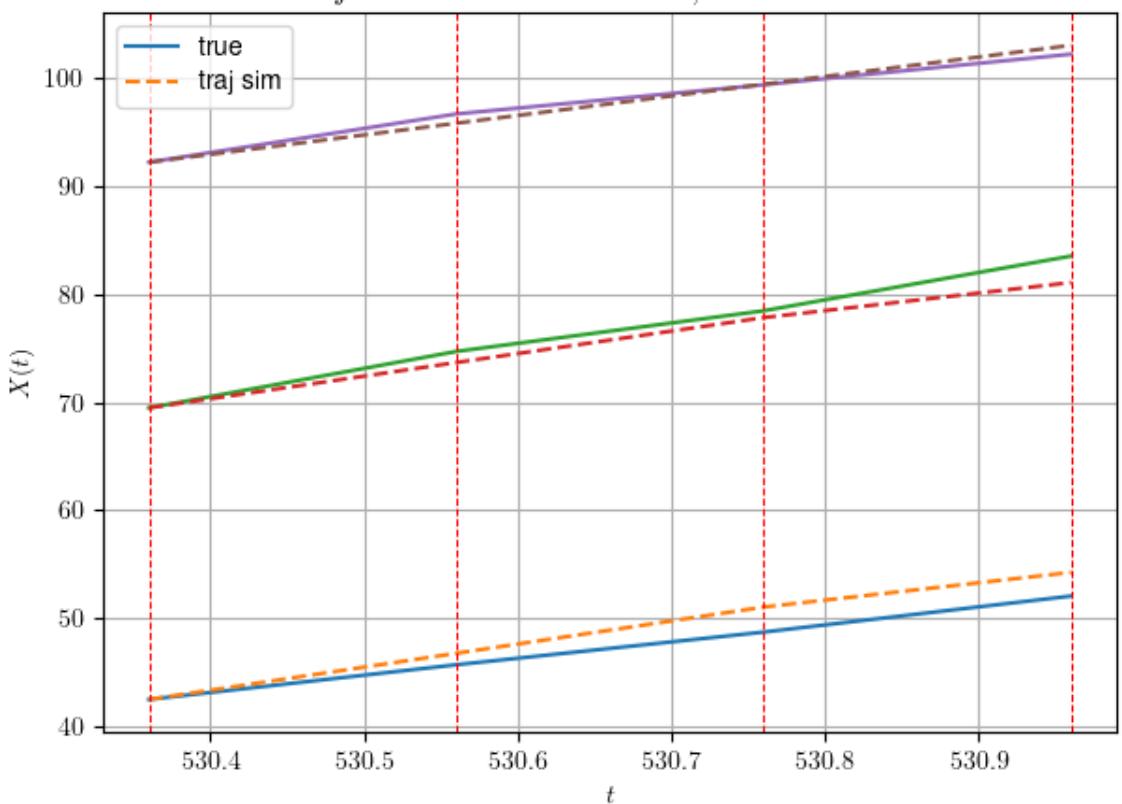
* v_ann: [16.07434844970703, 16.250795364379883, 1
8.054855152783293]

* err= 1.6854636106656073

* Learning rate NN = 0.0005904899444431067

* diff = 0.0022644276954888465

df n. 3 – Scene n. 72, at it = 500



For scene 72/90

```
* use LR_NN=0.001 with err=10.995851237566413 at it=24
* v0_scn_mean = 18.771563307305435
* MAE = 1.6854636106656073
```

```
=====
```

df n.3, scene n.73/90

```
=====
```

```
=====
```

We have 6 time intervals inside [576.56,577.76]

- Time interval n.0: [576.56, 576.76]
 - * y_true: [22.12000755 22.50086521]
 - * v_ann: [23.283422470092773, 22.3505859375, 21.516

```
688146761876]
```

```
-----
```

```
-----
```

- Time interval n.1: [576.76, 576.96]
 - * y_true: [22.90003133 17.69083]
 - * v_ann: [23.280166625976562, 22.41267967224121, 2

```
1.516688146761876]
```

```
-----
```

```
-----
```

- Time interval n.2: [576.96, 577.16]
 - * y_true: [24.57008129 24.8113942]
 - * v_ann: [23.190980911254883, 22.3303165435791, 21.

```
516688146761876]
```

```
-----
```

```
-----
```

- Time interval n.3: [577.16, 577.36]
 - * y_true: [26.44016601 28.10183764]
 - * v_ann: [23.215831756591797, 22.299148559570312, 2

```
1.516688146761876]
```

```
-----
```

```
-----
```

- Time interval n.4: [577.36, 577.56]
 - * y_true: [27.01028631 17.73134123]
 - * v_ann: [23.286943435668945, 22.243959426879883, 2

```
1.516688146761876]
```

```
-----
```

```
-----
```

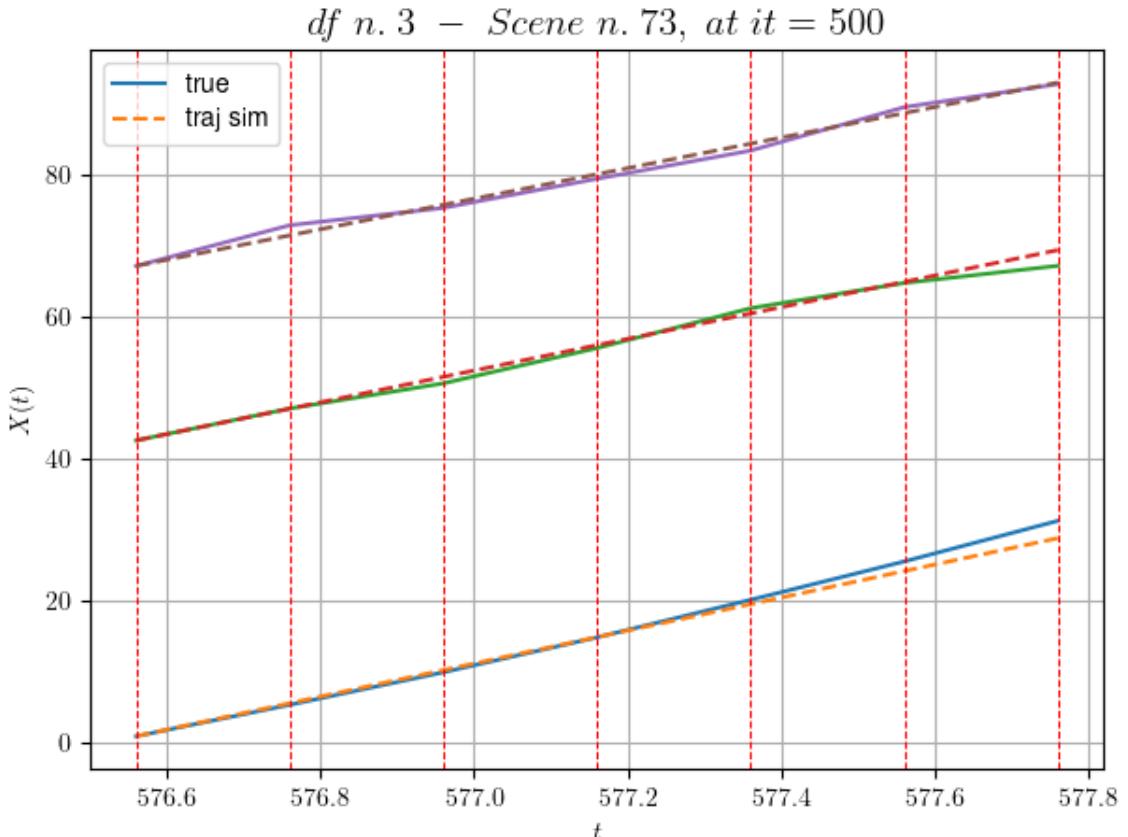
- Time interval n.5: [577.56, 577.76]
 - * y_true: [28.59045436 12.12102827]
 - * v_ann: [23.178510665893555, 22.38196563720703, 2

```
1.516688146761876]
```

```
-----
```

```
-----
```

- * err= 0.9111096325936098
- * Learning rate NN = 3.138104830213706e-06
- * diff = 0.011443570259954905



For scene 73/90

```
* use LR_NN=1e-05 with err=19.692426334067992 at it=24
* v0_scn_mean = 22.025686477073183
* MAE = 0.7762461452543584
```

df n.3, scene n.74/90

We have 5 time intervals inside [579.56, 580.56]

- Time interval n.0: [579.56, 579.76]
 - * y_true: [21.03058275 42.18516565]
 - * v_ann: [26.549152374267578, 25.920574188232422, 2

5.358404463471643]

- Time interval n.1: [579.76, 579.96]
 - * y_true: [19.36065083 36.06520173]
 - * v_ann: [26.928497314453125, 25.821399688720703, 2

5.358404463471643]

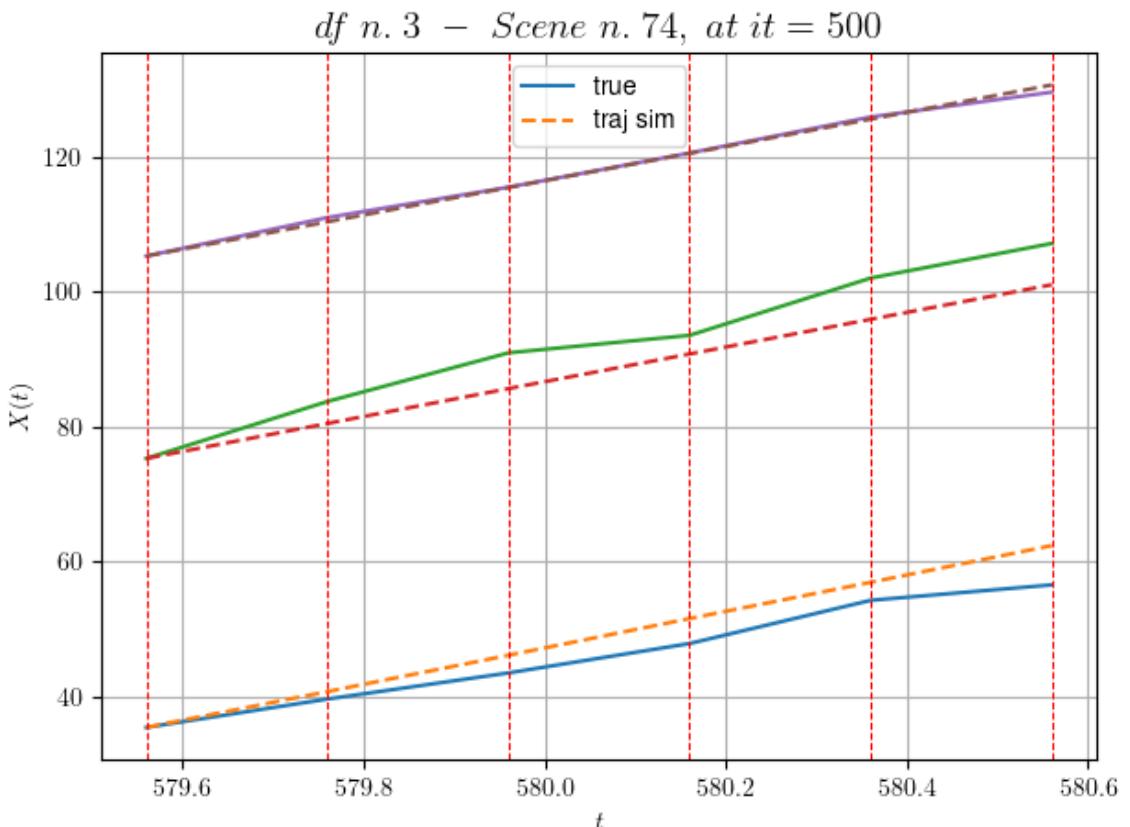
- Time interval n.2: [579.96, 580.16]
 - * y_true: [21.76088956 12.96224398]
 - * v_ann: [27.175668716430664, 25.65941619873047, 2

5.358404463471643]

```
- Time interval n.3: [580.16, 580.36]
  * y_true: [32.02164742 42.42773504]
  * v_ann: [26.857860565185547, 25.6912841796875, 25.
358404463471643]
```

```
- Time interval n.4: [580.36, 580.56]
  * y_true: [11.44064385 25.66536311]
  * v_ann: [27.233917236328125, 25.636220932006836, 2
5.358404463471643]
```

```
* err= 10.306145065887117  
* Learning rate NN = 3.874203684972599e-06  
* diff = 0.07145044486960295
```



For scene 74/90

* use LR_NN=1e-05 with err=38.856094548035465 at it=24
* v0_scn_mean = 25.636899987265146
* MAE = 10.306145065887117

df n.3. scene n.75/90

```
We have 4 time intervals inside [592.16,592.96]
- Time interval n.0: [592.16, 592.36]
  * y_true: [ 4.45046478 21.56401461]
  * v_ann: [16.143770217895508, 15.925732612609863, 2]
```

4.70998074865545]

```
- Time interval n.1: [592.36, 592.56]
  * y_true: [14.40168088 21.61284101]
  * v_ann: [13.614850044250488, 15.253891944885254, 2
```

4.70998074865545]

```
- Time interval n.2: [592.56, 592.76]
  * y_true: [14.40168088 22.933287 ]
  * v_ann: [14.012517929077148, 15.928357124328613, 2
```

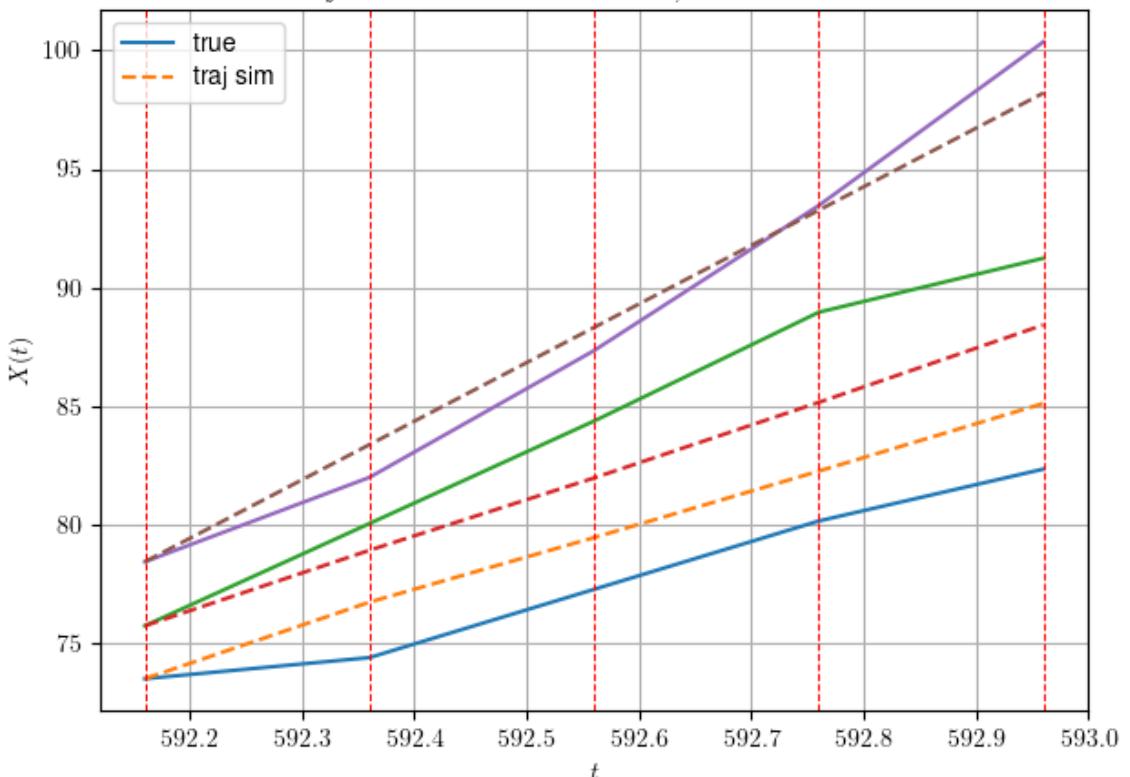
4.70998074865545]

```
- Time interval n.3: [592.76, 592.96]
  * y_true: [10.94538603 11.39186219]
  * v_ann: [14.270174980163574, 16.337139129638672, 2
```

4.70998074865545]

```
* err= 3.950225713456655
* Learning rate NN = 0.000478296831715852
* diff = 0.030396857645918374
```

df n. 3 – Scene n. 75, at it = 500



For scene 75/90

```
* use LR_NN=0.001 with err=14.81840673437415 at it=24
* v0_scn_mean = 25.027381666226187
* MAE = 3.5186203544190895
```

df n.3, scene n.76/90

We have 2 time intervals inside [21.56, 21.96]

- Time interval n.0: [21.56, 21.76]

* y_true: [26.48927836 26.93283237 27.60013316]

* v_ann: [24.627138137817383, 24.42681121826172, 2

4.737247467041016, 29.083658399938844]

- Time interval n.1: [21.76, 21.96]

* y_true: [24.19440937 24.35304119 22.73494812]

* v_ann: [26.058635711669922, 26.315059661865234, 2

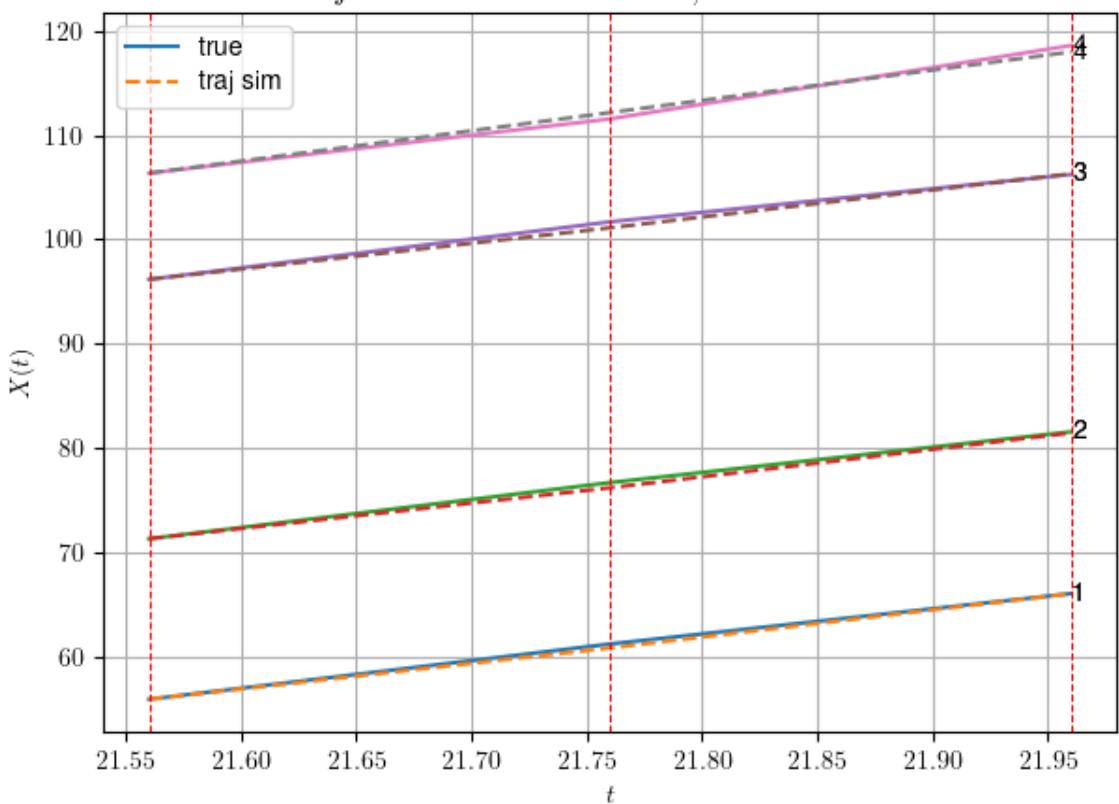
5.907434463500977, 29.083658399938844]

* err= 0.12385524962886743

* Learning rate NN = 0.00036449998151510954

* diff = 5.663286066492912e-07

df n. 3 – Scene n. 76, at it = 500



For scene 76/90

* use LR_NN=0.0005 with err=4.050305882701059 at it=24

* v0_scn_mean = 29.156962746047054

* MAE = 0.12204302552172988

df n.3, scene n.77/90

We have 3 time intervals inside [31.36, 31.96]

- Time interval n.0: [31.36, 31.56]

- * y_true: [24.92105739 19.11766565 26.56610692]

- * v_ann: [20.98798942565918, 22.945165634155273, 1
9.282133102416992, 30.917174059156068]

- Time interval n.1: [31.56, 31.76]

- * y_true: [24.72130541 29.91666352 24.00857353]

- * v_ann: [23.98363494873047, 23.784393310546875, 2
4.24013328552246, 30.917174059156068]

- Time interval n.2: [31.76, 31.96]

- * y_true: [24.58151426 8.80091982 33.80389928]

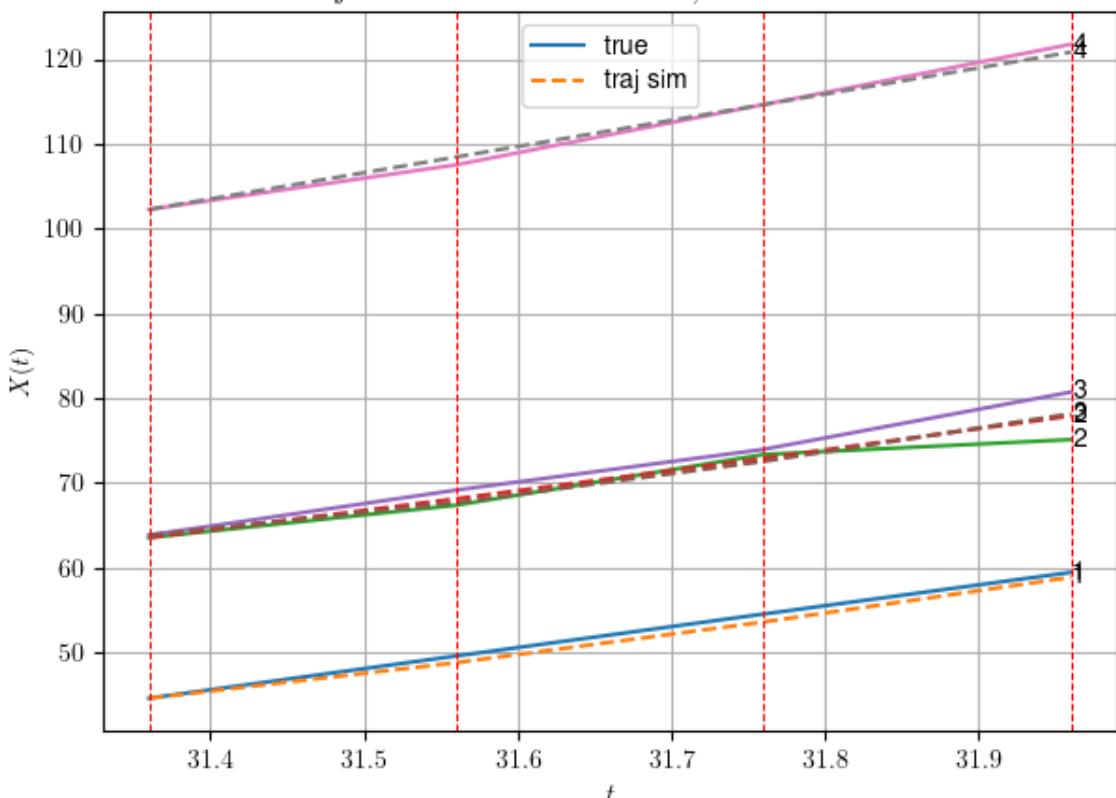
- * v_ann: [26.366479873657227, 25.055522918701172, 2
8.069278717041016, 30.917174059156068]

- * err= 1.4228130086041157

- * Learning rate NN = 0.0005904899444431067

- * diff = 0.004549263724534125

df n. 3 – Scene n. 77, at it = 500



For scene 77/90

- * use LR_NN=0.001 with err=15.361625928940205 at it=24

- * v0_scn_mean = 30.84380311902917

- * MAE = 0.569538287451748

```
=====
=====
```

df n.3, scene n.78/90

```
=====
=====
```

We have 3 time intervals inside [33.76,34.36]

- Time interval n.0: [33.76, 33.96]

- * y_true: [24.27120267 28.75319668 39.53553599]

- * v_ann: [28.626188278198242, 28.730072021484375, 28.627159118652344, 24.315647482967368]

```
=====
=====
```

- Time interval n.1: [33.96, 34.16]

- * y_true: [18.63110748 26.36338094 39.47623422]

- * v_ann: [28.95461654663086, 28.913818359375, 28.942371368408203, 24.315647482967368]

```
=====
=====
```

- Time interval n.2: [34.16, 34.36]

- * y_true: [25.20172426 27.37399424 29.73574355]

- * v_ann: [28.834922790527344, 28.842052459716797, 28.839431762695312, 24.315647482967368]

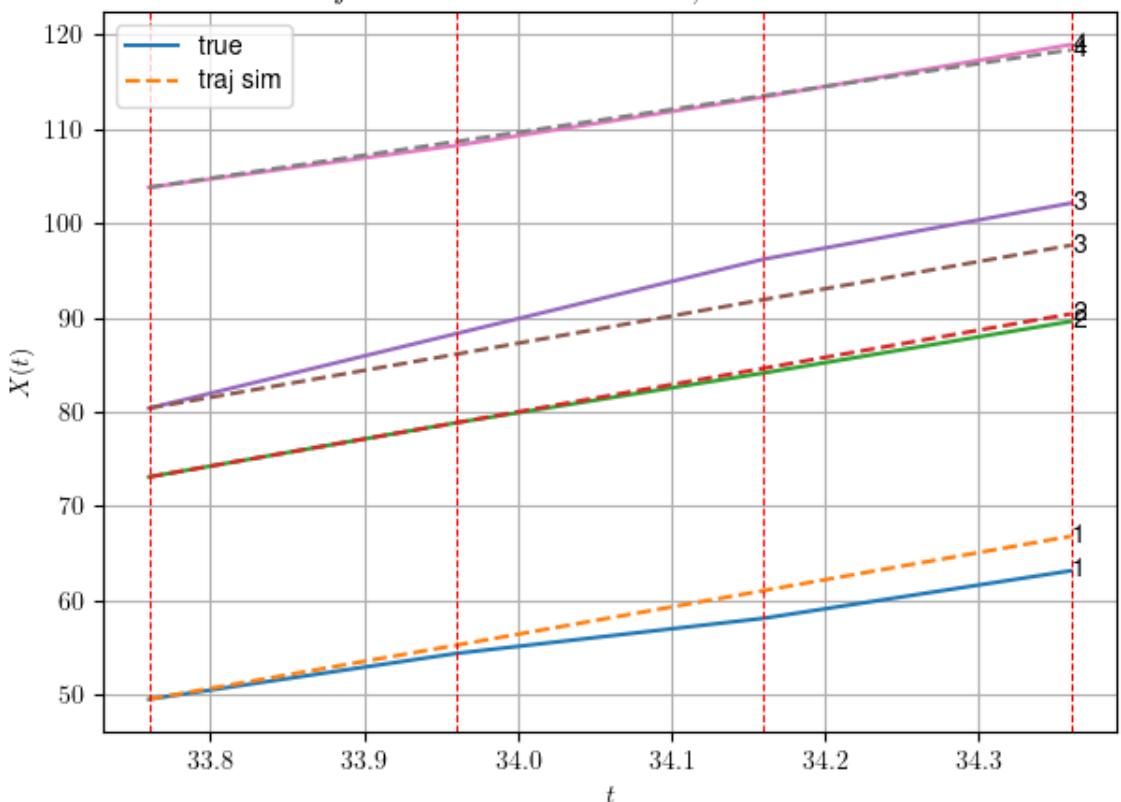
```
=====
=====
```

- * err= 4.206336938009506

- * Learning rate NN = 5.904899080633186e-05

- * diff = 4.616833478277016e-05

df n. 3 – Scene n. 78, at it = 500



For scene 78/90

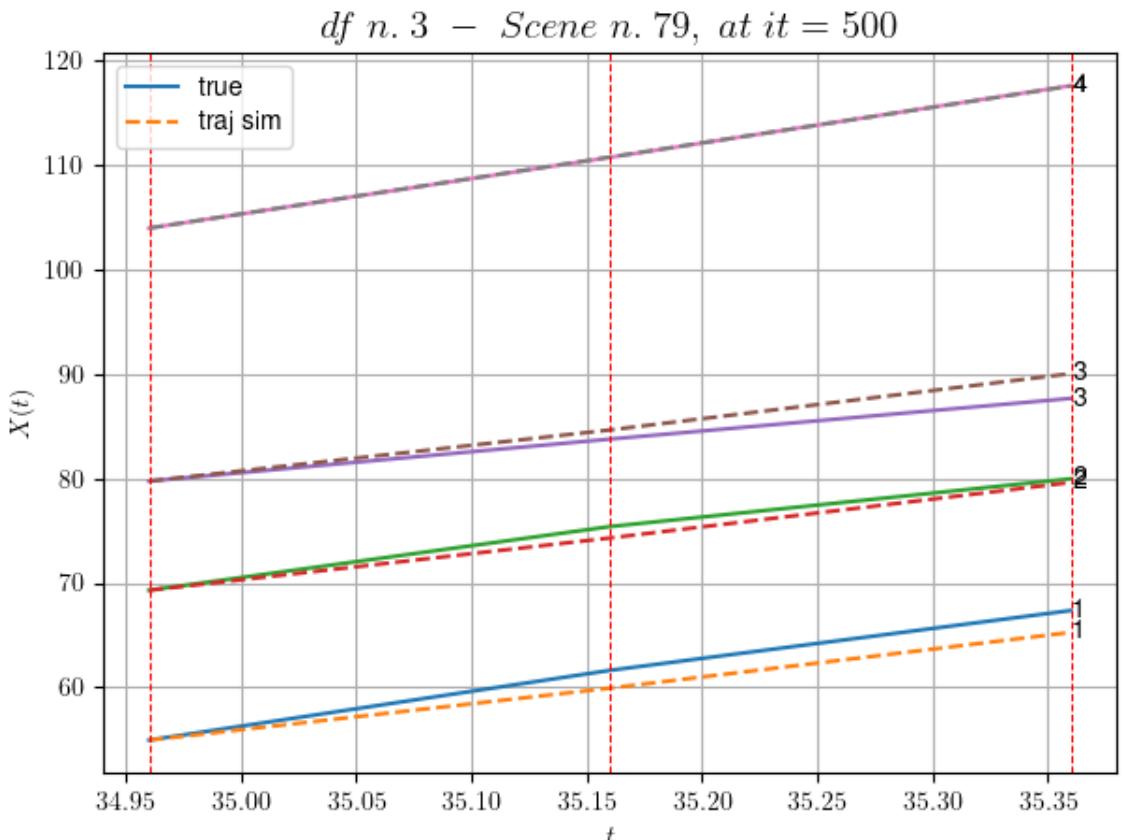
```
* use LR_NN=0.0001 with err=15.645773501030089 at it=24
* v0_scn_mean = 24.77037718669546
* MAE = 4.20563483805325
```

df n.3, scene n.79/90

```
We have 2 time intervals inside [34.96,35.36]
- Time interval n.0: [34.96, 35.16]
  * y_true: [33.40218228 30.49313647 20.11252108]
  * v_ann: [24.888137817382812, 25.040752410888672, 2
4.501440048217773, 34.04452453089859]
```

```
- Time interval n.1: [35.16, 35.36]
  * y_true: [28.66899207 22.90260208 19.5026699 ]
  * v_ann: [26.70884895324707, 26.599538803100586, 2
6.97670555114746, 34.04452453089859]
```

```
* err= 1.2501642829600021
* Learning rate NN = 0.00036449998151510954
* diff = 4 1064123335488034e-05
```



For scene 79/90

```
* use LR_NN=0.0005 with err=10.097750567024327 at it=24
* v0_scn_mean = 33.72097572984419
* MAE = 1.2471936858820503
```

```
=====
df n.3, scene n.80/90
=====

=====
We have 6 time intervals inside [83.36,84.56]
- Time interval n.0: [83.36, 83.56]
    * y_true: [27.1108197 22.97496526 13.79424223]
    * v_ann: [29.185009002685547, 28.578035354614258, 2
8.446157455444336, 26.107724197314475]

-----
- Time interval n.1: [83.56, 83.76]
    * y_true: [28.73111951 35.1785896 26.83859352]
    * v_ann: [27.017471313476562, 27.82497215270996, 2
7.955060958862305, 26.107724197314475]

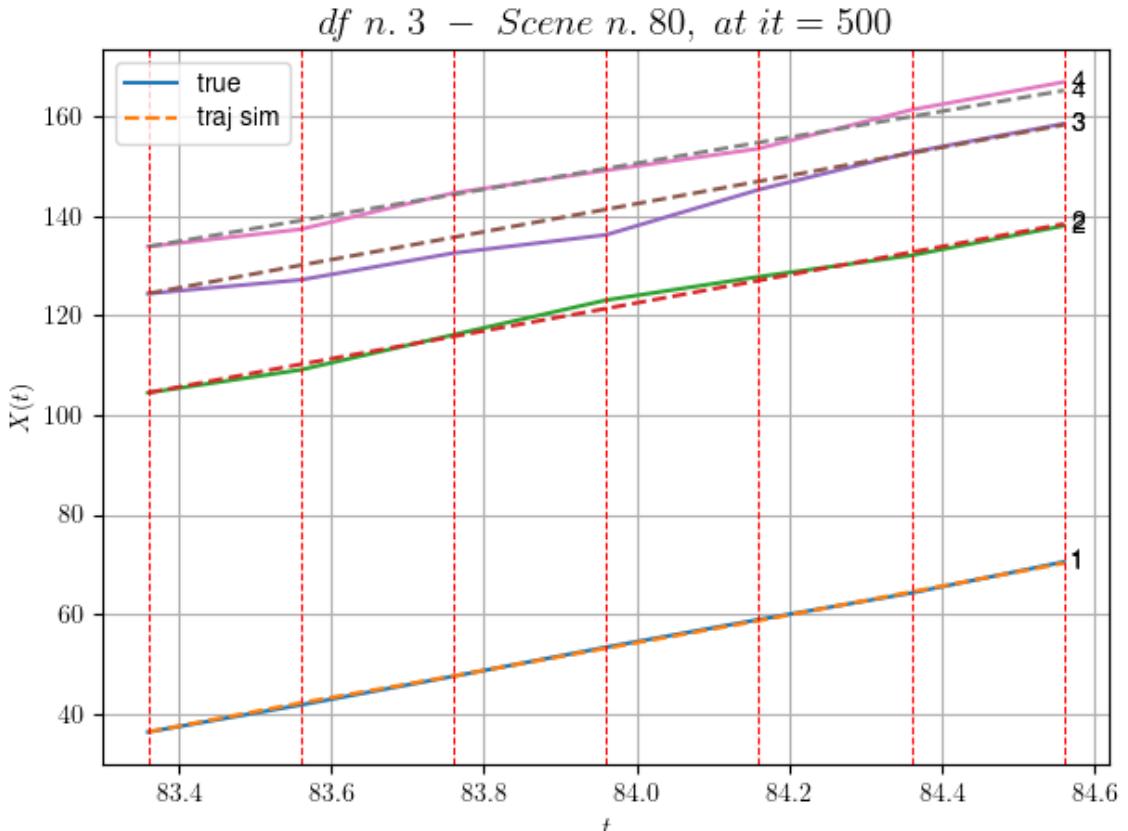
-----
- Time interval n.2: [83.76, 83.96]
    * y_true: [29.25142438 34.77932949 18.27648805]
    * v_ann: [27.81273651123047, 28.101442337036133, 2
8.12545394897461, 26.107724197314475]

-----
- Time interval n.3: [83.96, 84.16]
    * y_true: [27.70171969 23.46694627 45.36715188]
    * v_ann: [27.6704044342041, 28.081382751464844, 28.
082611083984375, 26.107724197314475]

-----
- Time interval n.4: [84.16, 84.36]
    * y_true: [26.72197507 21.43687952 37.53588876]
    * v_ann: [28.90607452392578, 28.447193145751953, 2
8.36458396911621, 26.107724197314475]

-----
- Time interval n.5: [84.36, 84.56]
    * y_true: [31.24277517 29.71036516 28.7233215 ]
    * v_ann: [28.844457626342773, 28.459848403930664, 2
8.360301971435547, 26.107724197314475]

=====
* err= 2.2483716037954
* Learning rate NN = 3.138104875688441e-05
* Diff = 0.0006010711001515206
```



For scene 80/90

```
* use LR_NN=0.0001 with err=110.20139898916226 at it=24
* v0_scn_mean = 26.41909359554937
* MAE = 2.1755032010653617
```

df n.3, scene n.81/90

We have 3 time intervals inside [94.36, 94.96]

- Time interval n.0: [94.36, 94.56]
 - * y_true: [33.70387327 38.57908217 21.70251029]
 - * v_ann: [29.38853645324707, 29.739582061767578, 29.395536422729492, 29.52615606535226]

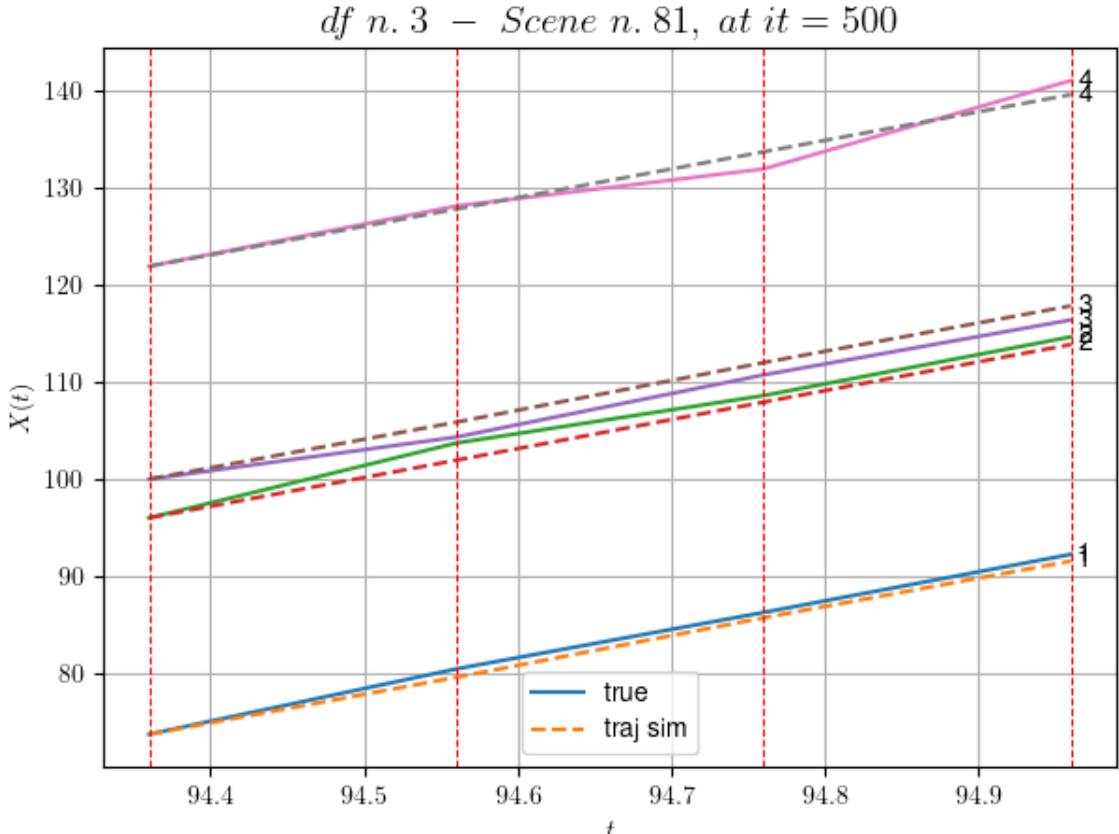
- Time interval n.1: [94.56, 94.76]
 - * y_true: [29.14386677 24.50535727 32.05702124]
 - * v_ann: [30.70615005493164, 29.95240020751953, 30.716060638427734, 29.52615606535226]

- Time interval n.2: [94.76, 94.96]
 - * y_true: [29.96461386 30.28702151 28.36707369]
 - * v_ann: [29.257726669311523, 29.73753547668457, 29.284317016601562, 29.526156065335226]

```

* err= 1.0723468039074655
* Learning rate NN = 0.0002952449722215533
* diff = 0 000295487259551086

```



For scene 81/90

```

* use LR_NN=0.0005 with err=26.061687942493222 at it=24
* v0_scn_mean = 29.564062038157505
* MAE = 1.071824854666575

```

df n.3, scene n.82/90

We have 3 time intervals inside [142.16, 142.76]

- Time interval n.0: [142.16, 142.36]
 - * y_true: [31.90177154 33.47450881 19.84324761]
 - * v_ann: [26.496715545654297, 26.5963134765625, 26.378015518188477, 28.12123774853781]

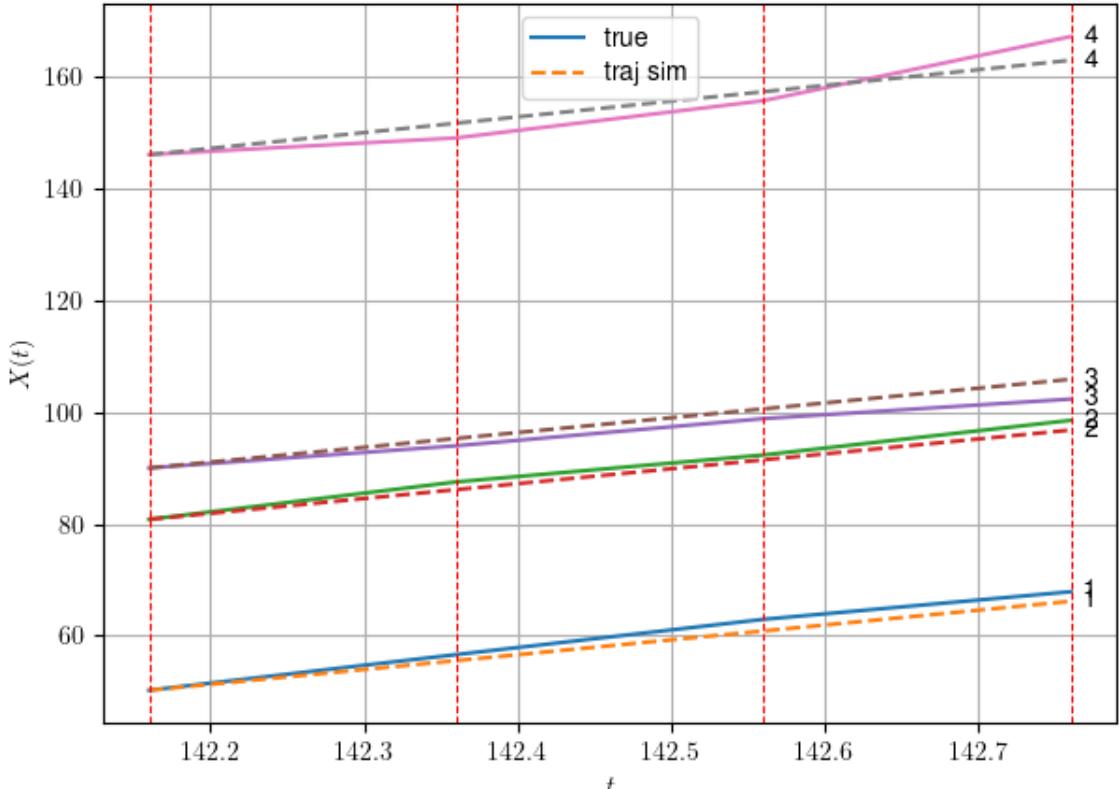
-
-
- Time interval n.1: [142.36, 142.56]
 - * y_true: [31.50218522 24.08376432 24.27420294]
 - * v_ann: [26.542573928833008, 26.62665367126465, 26.45931625366211, 28.12123774853781]

-
-
- Time interval n.2: [142.56, 142.76]
 - * y_true: [24.70204715 30.9853993 17.45337402]

```
* v_ann: [26.550203323364258, 26.62738609313965, 2  
6.457611083984375, 28.12123774853781]
```

```
* err= 3.6790386758667335  
* Learning rate NN = 5.9048988987342454e-06  
* diff = 0.017770705421221714
```

df n. 3 – Scene n. 82, at it = 500



For scene 82/90

```
* use LR_NN=1e-05 with err=32.98291725158633 at it=24  
* v0_scn_mean = 28.271532614914182  
* MAE = 2.8025871635282646
```

df n.3, scene n.83/90

We have 2 time intervals inside [170.36, 170.76]

- Time interval n.0: [170.36, 170.56]
 - * y_true: [24.1106547 30.95205085 31.86307572]
 - * v_ann: [16.467485427856445, 17.788108825683594, 1

5.086095809936523, 32.996539935657275]

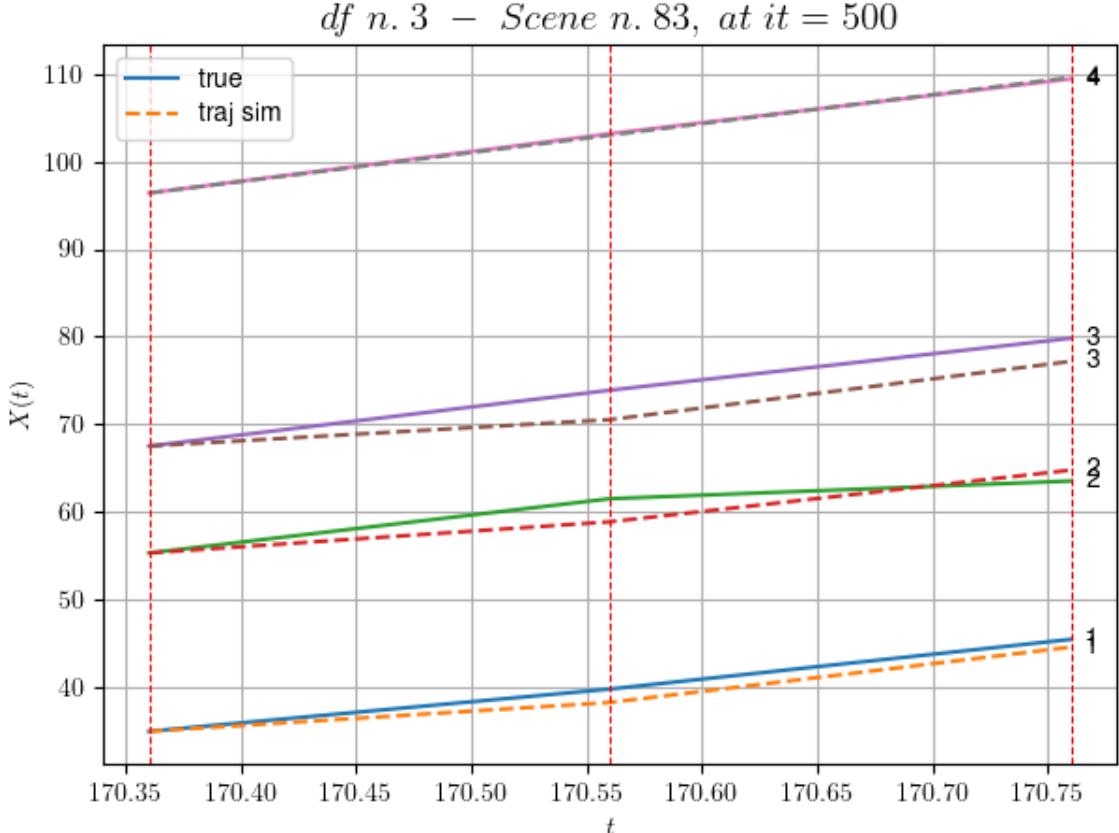
- Time interval n.1: [170.56, 170.76]
 - * y_true: [28.33103197 10.10076519 29.63331411]
 - * v_ann: [31.559476852416992, 29.492515563964844, 3

3.233673095703125, 32.996539935657275]

```

* err= 2.4889764481746157
* Learning rate NN = 0.0007289999630302191
* diff = 0.002397048929766221

```



For scene 83/90

```

* use LR_NN=0.001 with err=2.210736544982592 at it=24
* v0_scn_mean = 32.75682649194207
* MAE = 0.9378181976531087

```

df n.3, scene n.84/90

We have 2 time intervals inside [248.16, 248.56]

- Time interval n.0: [248.16, 248.36]
 - * y_true: [31.21204442 24.6823336 32.34552948]
 - * v_ann: [33.07586669921875, 33.93779754638672, 32.212806701660156, 30.248970609827015]

- Time interval n.1: [248.36, 248.56]

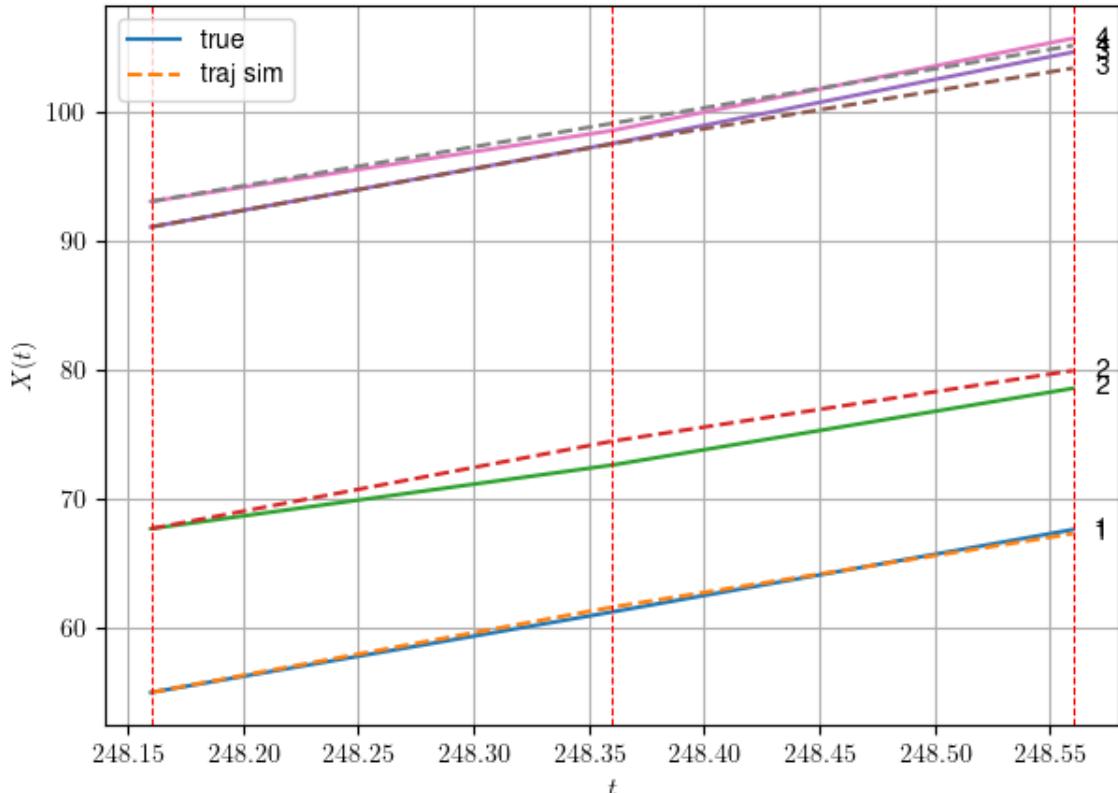
- * y_true: [31.9625999 29.77329807 35.48696999]
 - * v_ann: [28.540491104125977, 27.41370391845703, 29.396556854248047, 30.248970609827015]

* err= 0.6441835515448059

* Learning rate NN = 0.0007289999630302191

* diff = 3.356646480368042e-05

df n. 3 – Scene n. 84, at it = 500



For scene 84/90

* use LR_NN=0.001 with err=17.248939588185543 at it=24
 * v0_scn_mean = 30.229053771224326
 * MAE = 0.6441178989956101

df n.3, scene n.85/90

We have 3 time intervals inside [320.56, 321.16]

- Time interval n.0: [320.56, 320.76]

* y_true: [27.61038846 20.60122903 24.07186814]

* v_ann: [29.184856414794922, 29.027801513671875, 29.171457290649414, 28.130140949142415]

- Time interval n.1: [320.76, 320.96]

* y_true: [30.26064275 26.25184013 33.56317876]

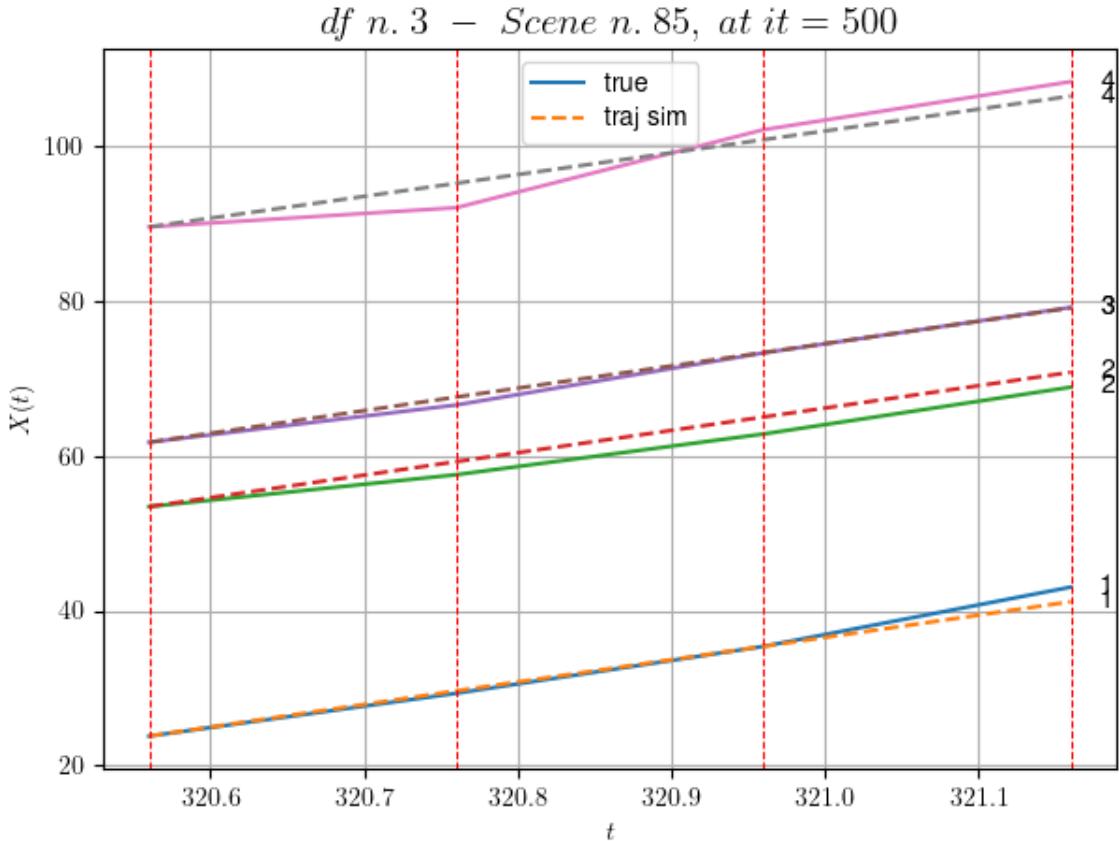
* v_ann: [28.700834274291992, 28.78759765625, 28.71326446533203, 28.130140949142415]

- Time interval n.2: [320.96, 321.16]

* y_true: [38.25114958 30.20253063 29.36323845]

* v_ann: [28.819135665893555, 28.846515655517578, 28.81688117980957, 28.130140949142415]

```
* err= 1.9411443028858768
* Learning rate NN = 2.952449540316593e-05
* diff = 0.00043690756768977046
```



For scene 85/90

```
* use LR_NN=5e-05 with err=8.18033350011004 at it=24
* v0_scn_mean = 28.279723588442298
* MAE = 1.9411002035334737
```

df n.3, scene n.86/90

We have 3 time intervals inside [333.96, 334.56]

- Time interval n.0: [333.96, 334.16]
 - * y_true: [31.40121985 21.58136302 16.05156144]
 - * v_ann: [29.57961082458496, 29.382665634155273, 29.455223083496094, 24.21877536778852]

- Time interval n.1: [334.16, 334.36]

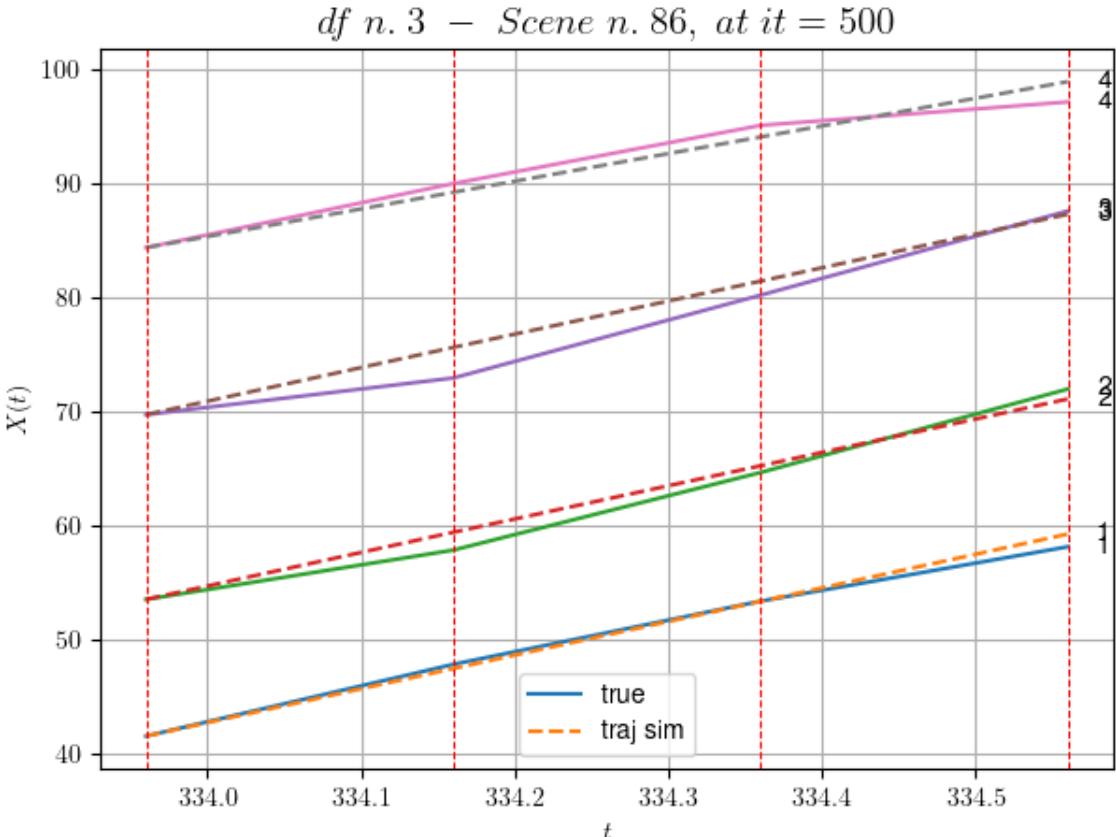
- * y_true: [27.67132891 33.9725354 36.25406589]

- * v_ann: [29.39504623413086, 29.10545539855957, 28.993797302246094, 24.21877536778852]

- Time interval n.2: [334.36, 334.56]

```
* y_true: [23.81145278 36.52334008 36.85496039]
* v_ann: [29.477142333984375, 29.256916046142578, 2
9.2910099029541, 24.21877536778852]
```

```
* err= 1.1530423056335226
* Learning rate NN = 2.952449540316593e-05
* diff = 0 000011602580000215585
```



For scene 86/90

```
* use LR_NN=5e-05 with err=4.371231243113508 at it=24
* v0_scn_mean = 24.681254525496257
* MAE = 1.1491901138619411
```

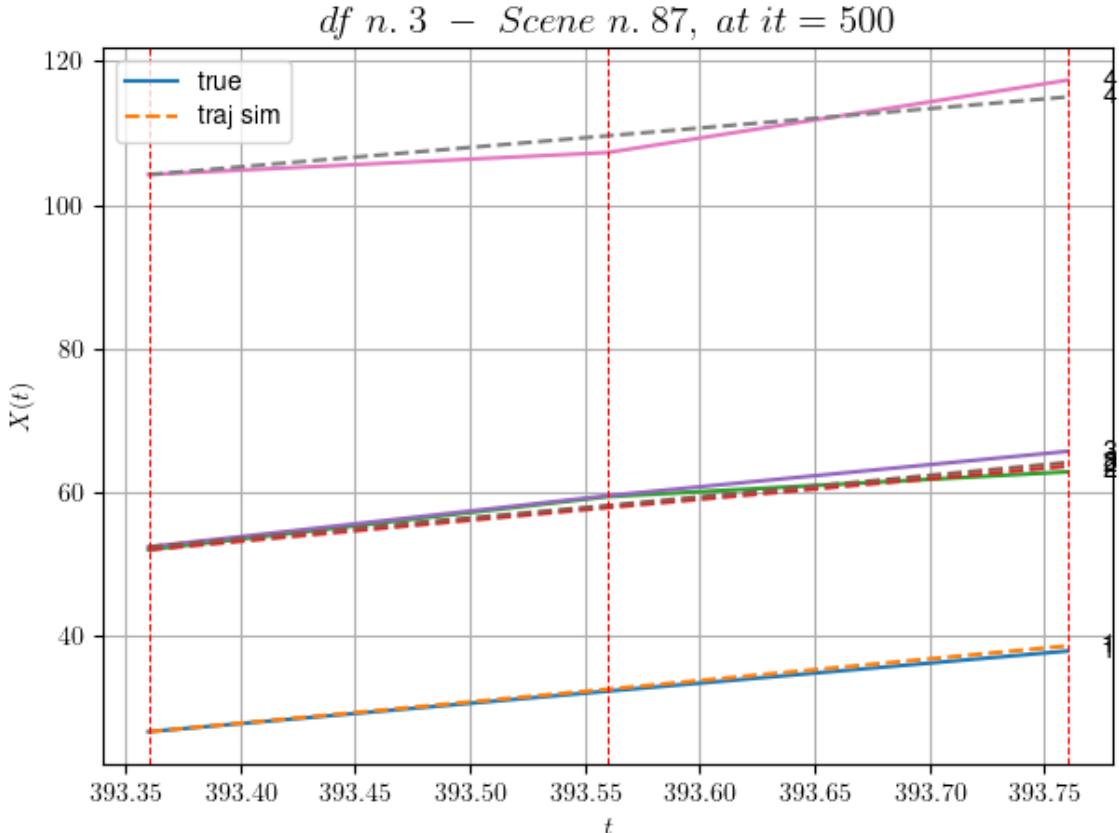
df n.3, scene n.87/90

We have 2 time intervals inside [393.36, 393.76]

- Time interval n.0: [393.36, 393.56]
 - * y_true: [28.21049617 36.91227562 35.66212709]
 - * v_ann: [29.593116760253906, 29.316465377807617, 2
8.816722869873047, 27.00629353640486]

- Time interval n.1: [393.56, 393.76]
 - * y_true: [27.89067116 17.24119841 30.82238865]
 - * v_ann: [30.14341163635254, 28.729740142822266, 2
9.88718605041504, 27.00629353640486]

```
* err= 1.5565266475513113
* Learning rate NN = 3.6449993785936385e-05
* diff = 0.0012268325725492968
```



For scene 87/90

```
* use LR_NN=5e-05 with err=15.751053719743268 at it=24
* v0_scn_mean = 27.24578031157634
* MAE = 1.4773499922060394
```

df n.3, scene n.88/90

We have 5 time intervals inside [521.76, 522.76]

- Time interval n.0: [521.76, 521.96]
 - * y_true: [10.54036018 15.07054541 11.30098461]
 - * v_ann: [16.42688751220703, 15.287731170654297, 1

5.878151893615723, 17.247787667046847]

- Time interval n.1: [521.96, 522.16]
 - * y_true: [20.11080333 12.92054275 19.50185752]
 - * v_ann: [15.245985984802246, 13.831249237060547, 1

4.561457633972168, 17.247787667046847]

- Time interval n.2: [522.16, 522.36]

```

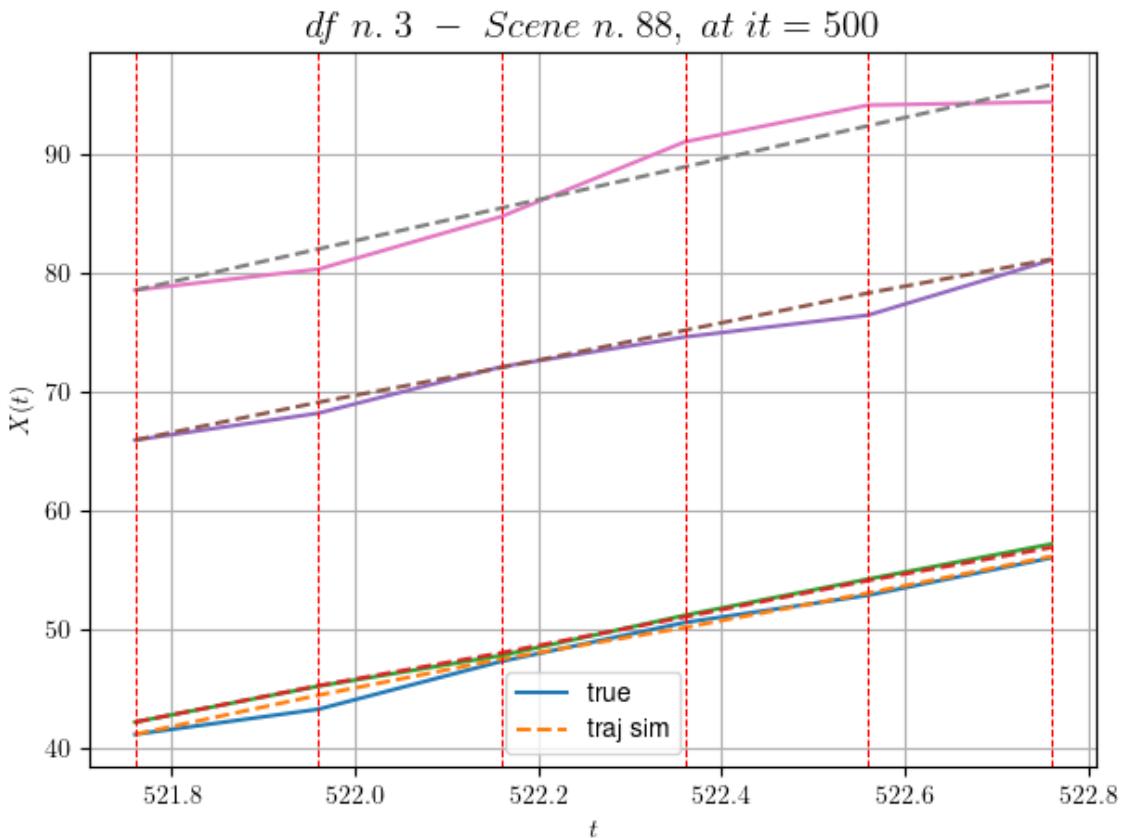
* y_true: [16.31074126 16.85079656 12.50130097]
* v_ann: [13.182609558105469, 15.036750793457031, 1
5.655471801757812, 17.247787667046847]

-----
- Time interval n.3: [522.36, 522.56]
* y_true: [11.43058292 15.20080004 9.15100954]
* v_ann: [14.4776611328125, 15.271160125732422, 15.
647781372070312, 17.247787667046847]

-----
- Time interval n.4: [522.56, 522.76]
* y_true: [15.72089895 14.72089277 23.10276913]
* v_ann: [15.388510704040527, 13.90048599243164, 1
4.224607467651367, 17.247787667046847]

-----
* err= 0.8046601927147142
* Learning rate NN = 0.0003874204121530056
* diff = 0.0066578643736266985

```



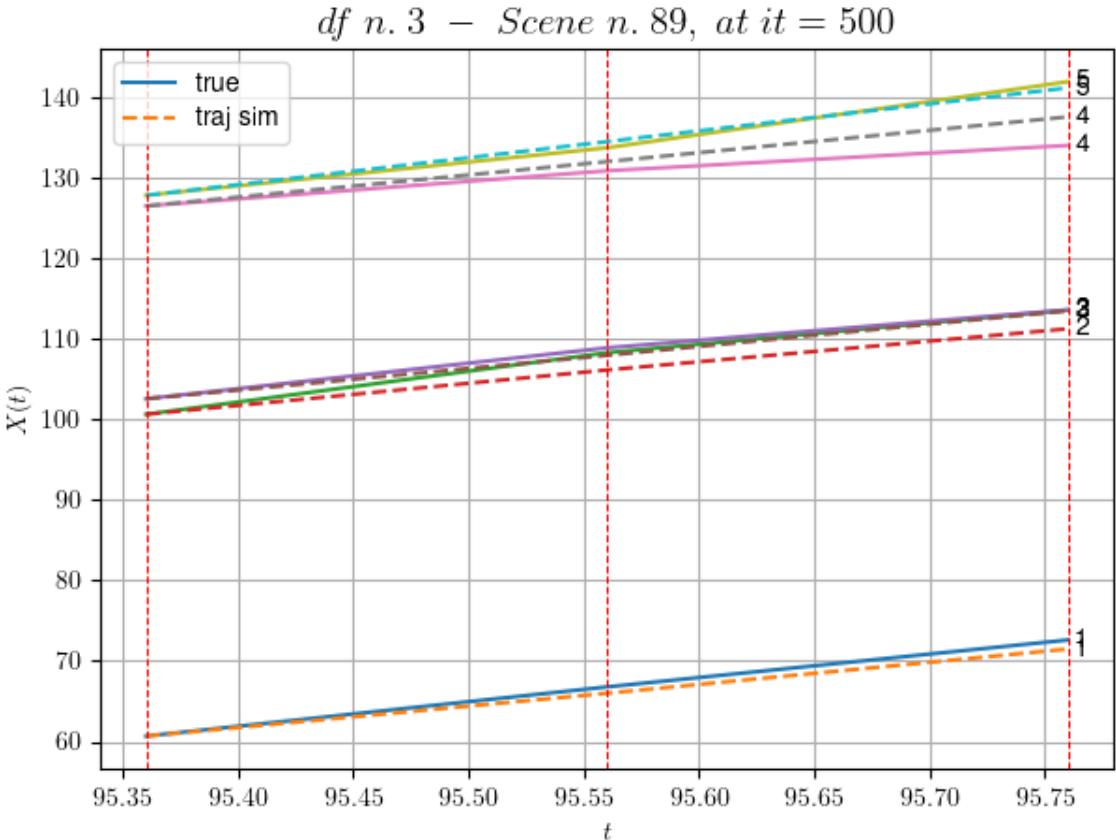
For scene 88/90
* use LR_NN=0.001 with err=28.329530574479723 at it=24
* v0_scn_mean = 18.267923156298465
* MAE = 0.799091825774612

df n.3, scene n.89/90

```
=====
=====
We have 2 time intervals inside [95.36,95.76]
- Time interval n.0: [95.36, 95.56]
  * y_true: [30.52238998 38.21809619 31.62683865 21.8
1676128]
  * v_ann: [26.59065818786621, 27.510997772216797, 2
6.978078842163086, 27.521875381469727, 33.35137428698094]

-----
- Time interval n.1: [95.56, 95.76]
  * y_true: [29.11270185 26.43618159 23.59563306 15.7
3527867]
  * v_ann: [27.424571990966797, 25.54767417907715, 2
7.58860969543457, 27.749406814575195, 33.35137428698094]

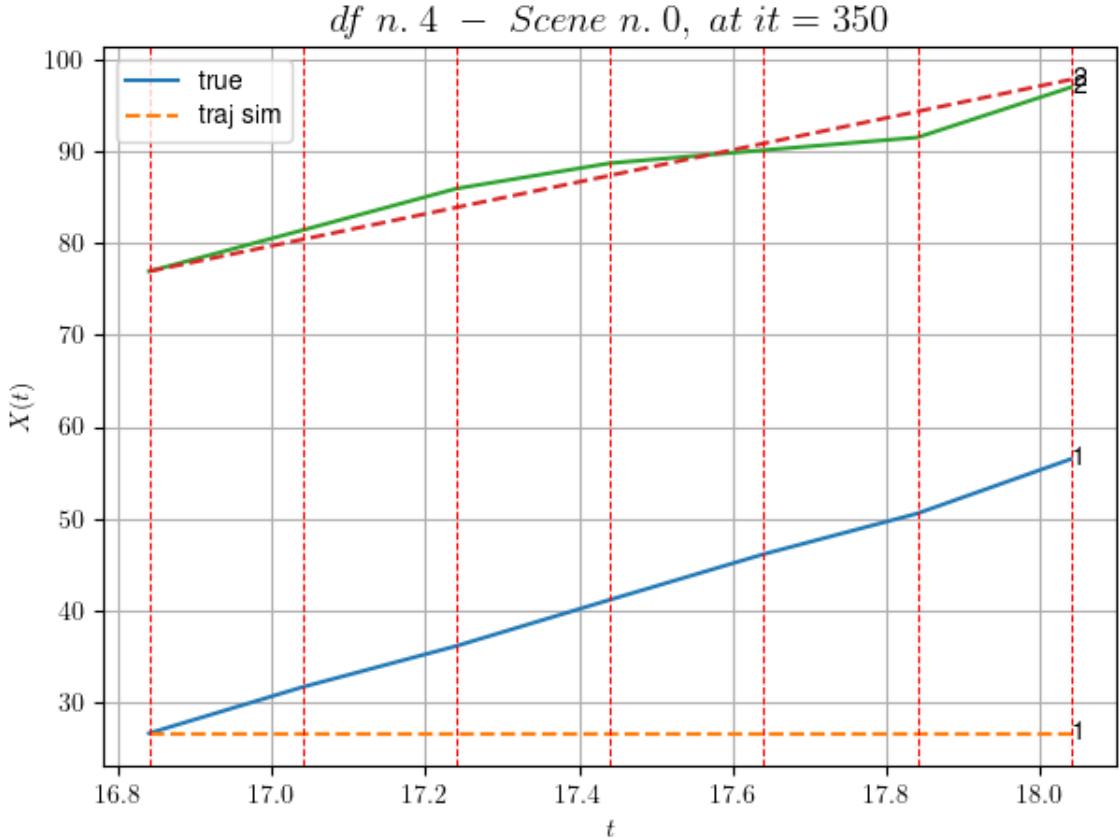
-----
* err= 1.8516644185905065
* Learning rate NN = 7.289998757187277e-05
* diff = 0.001203217017258007
```



For scene 89/90
* use LR_NN=0.0001 with err=18.2144420567042 at it=24
* v0_scn_mean = 33.01637687613956
* MAE = 1.8451502136616273

```
=====
=====
For df=3 with 90 scenes, time taken: 2503.18
*****
```

```
*****
***** In df n.4/10 we have 69 scenes
***** df n.4, scene n.0/69
=====
===== We have 6 time intervals inside [16.84,18.04]
* err= 157.0422926148511
* Learning rate NN = 2.1523355826502666e-05
* 4.44 - 0.0071400577210208 0.7
```



For scene 0/69
* use LR_NN=5e-05 with err=47.31058481049083 at it=24
* v0_scn_mean = 18.170738467250583
* MAE = 157.0422926148511

```
=====
===== df n.4, scene n.1/69
=====
```

```
=====
===== We have 3 time intervals inside [59.84,60.44]
- Time interval n.0: [59.84, 60.04]
* y_true: [11.16089253]
* v_ann: [-0.0007562966202385724, 18.62551827330034
7]

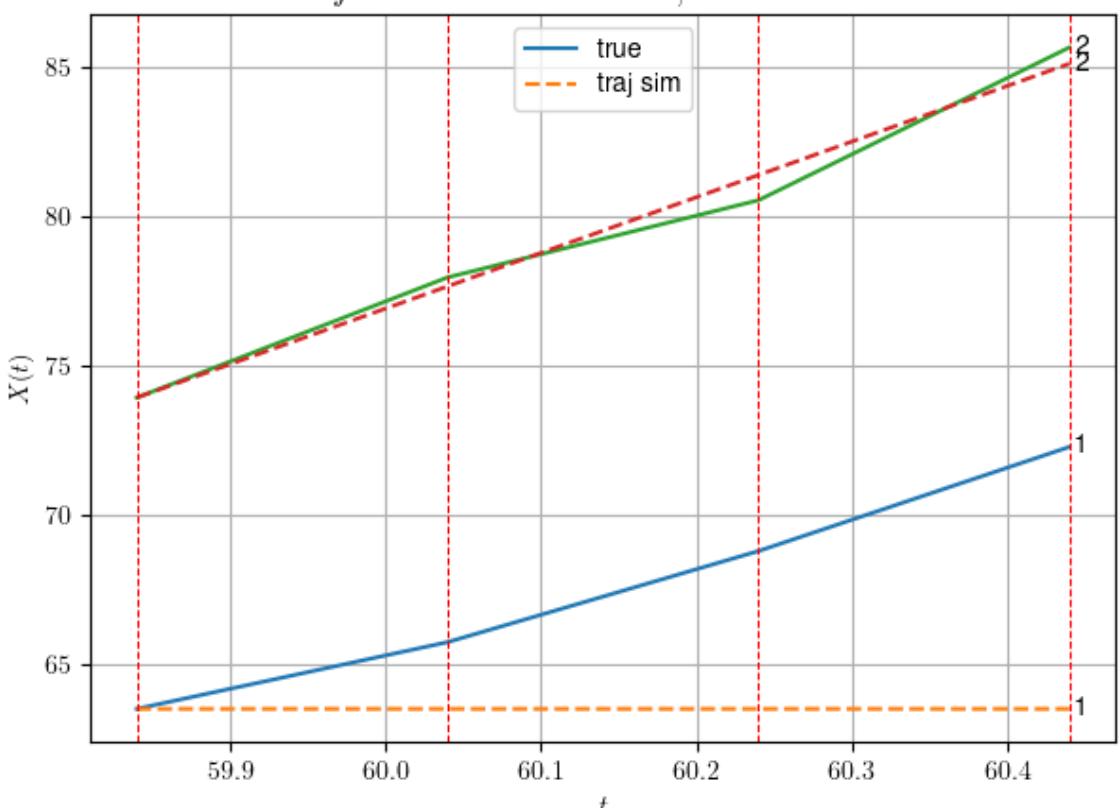
-----
- Time interval n.1: [60.04, 60.24]
* y_true: [15.2413343]
* v_ann: [-0.00018937520508188754, 18.62551827330034
```

47]

```
- Time interval n.2: [60.24, 60.44]
  * y_true: [17.42164177]
  * v_ann: [-0.00027123300242237747, 18.6255182733003
```

47]

```
* err= 13.84887484323518
* Learning rate NN = 0.0005904899444431067
* diff = 5.658668941421752e-05
```

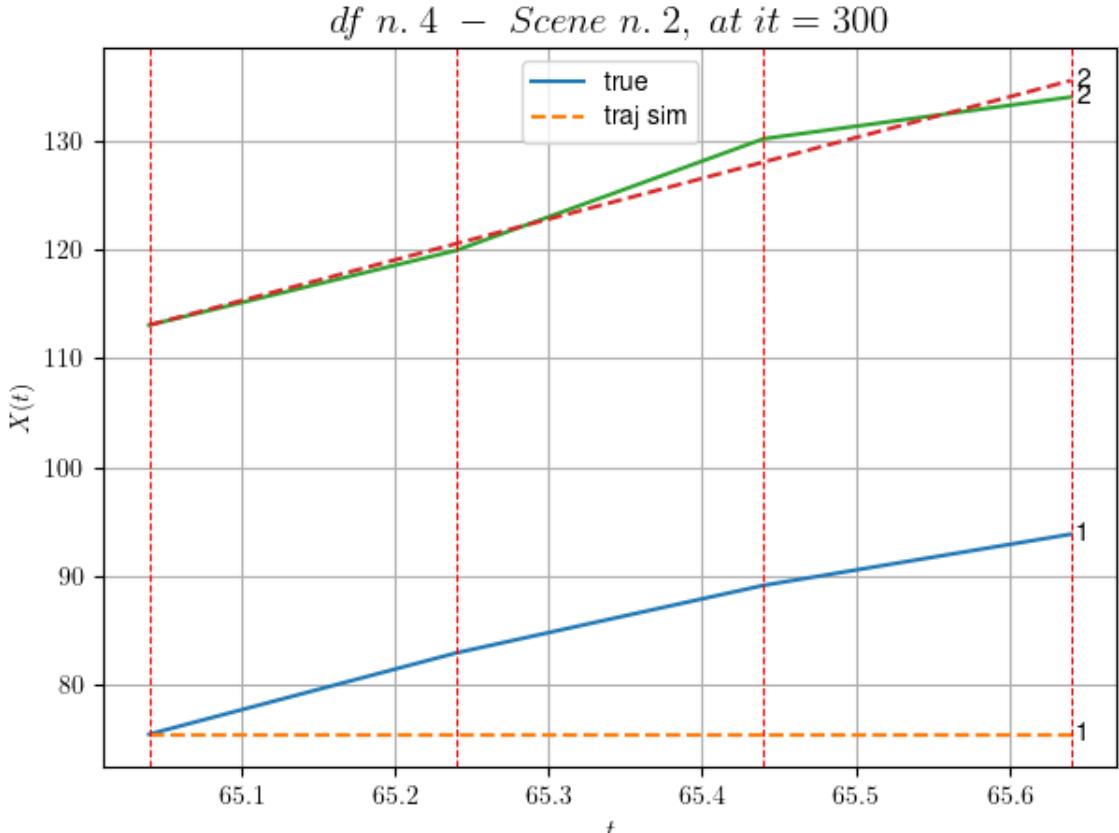
df n. 4 – Scene n. 1, at it = 500

For scene 1/69

```
* use LR_NN=0.001 with err=9.169147932870638 at it=24
* v0_scn_mean = 19.08049754228143
* MAE = 13.84887484323518
```

df n.4, scene n.2/69

```
We have 3 time intervals inside [65.04,65.64]
* err= 73.35854256030814
* Learning rate NN = 7.289998757187277e-05
* diff = 8.212794568862591e-07
```



For scene 2/69

- * use LR_NN=0.0001 with err=5.868701426359866 at it=24
- * v0_scn_mean = 36.92443502941582
- * MAE = 73.35142096438285

df n.4, scene n.3/69

We have 2 time intervals inside [67.64, 68.04]

- Time interval n.0: [67.64, 67.84]
 - * y_true: [20.95295595]
 - * v_ann: [-0.0014677904546260834, 28.4649800077128]

4]

- Time interval n.1: [67.84, 68.04]

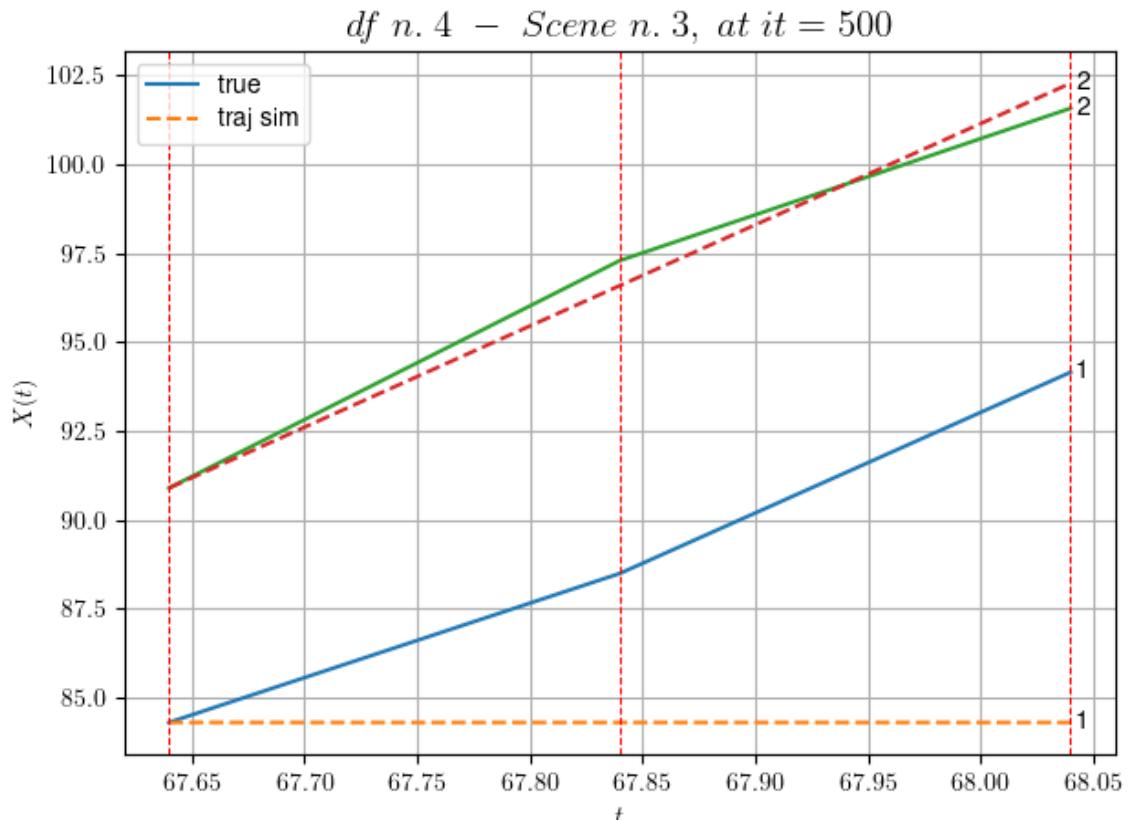
- * y_true: [28.30446421]
 - * v_ann: [-0.00014147516048979014, 28.4649800077128]

4]

- * err= 19.268850601112536

- * Learning rate NN = 0.0007289999630302191

- * diff = 0.00012889752085598616



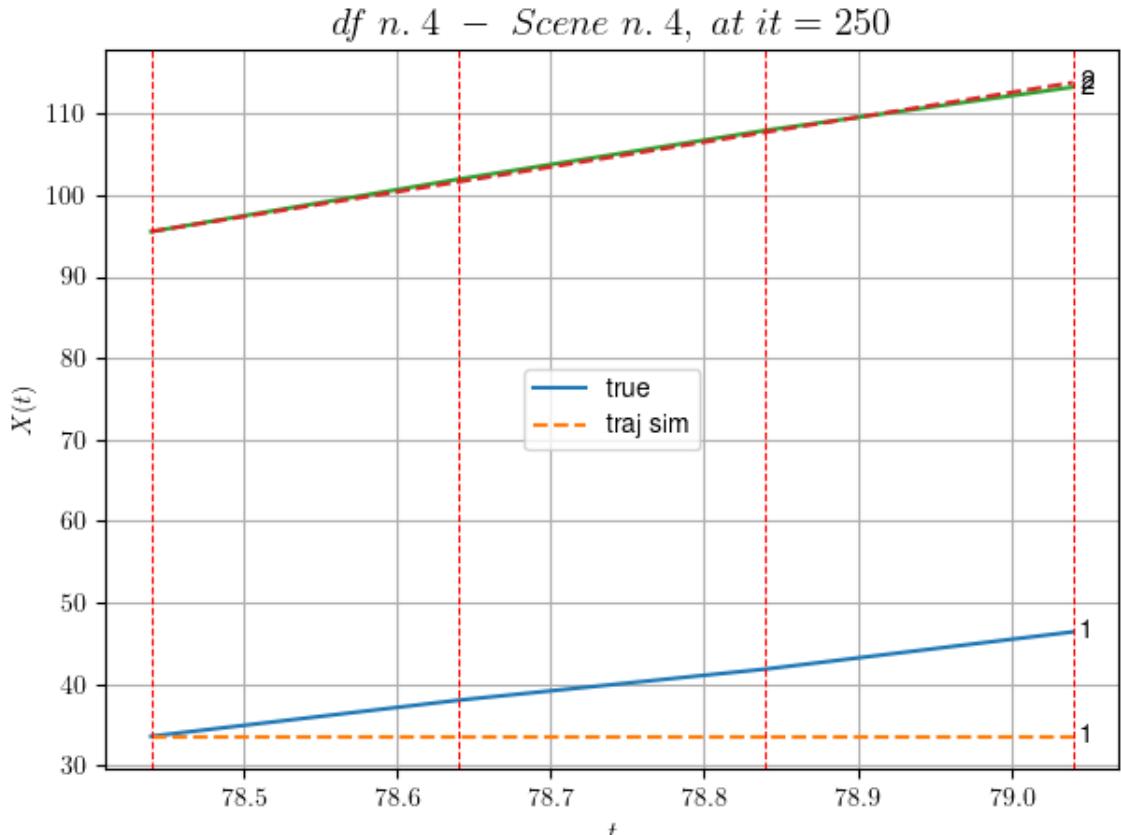
For scene 3/69

- * use LR_NN=0.001 with err=0.3158684147743087 at it=24
 - * v0_scn_mean = 28.52638080739228
 - * MAE = 19.268850601112536
-
-

df n.4, scene n.4/69

We have 3 time intervals inside [78.44, 79.04]

- * err= 31.513273682591446
- * Learning rate NN = 8.099998922261875e-06
- * diff = 7.012865452793449e-07

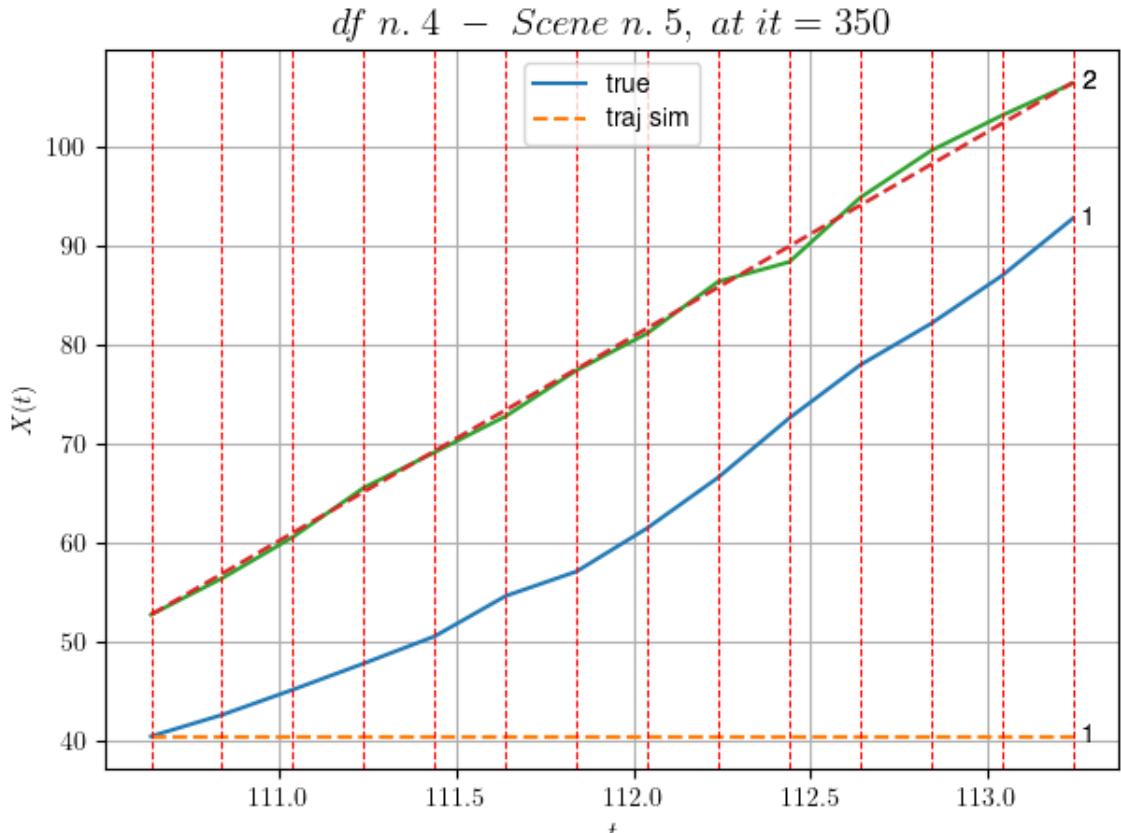


For scene 4/69

* use LR_NN=1e-05 with err=0.07147455441313107 at it=24
* v0_scn_mean = 30.448769923223583
* MAE = 31.506161462472885

df n.4, scene n.5/69

We have 13 time intervals inside [110.64,113.24]
* err= 389.78587303330045
* Learning rate NN = 7.504729001084343e-05
* diff = 3.542096465025679e-07

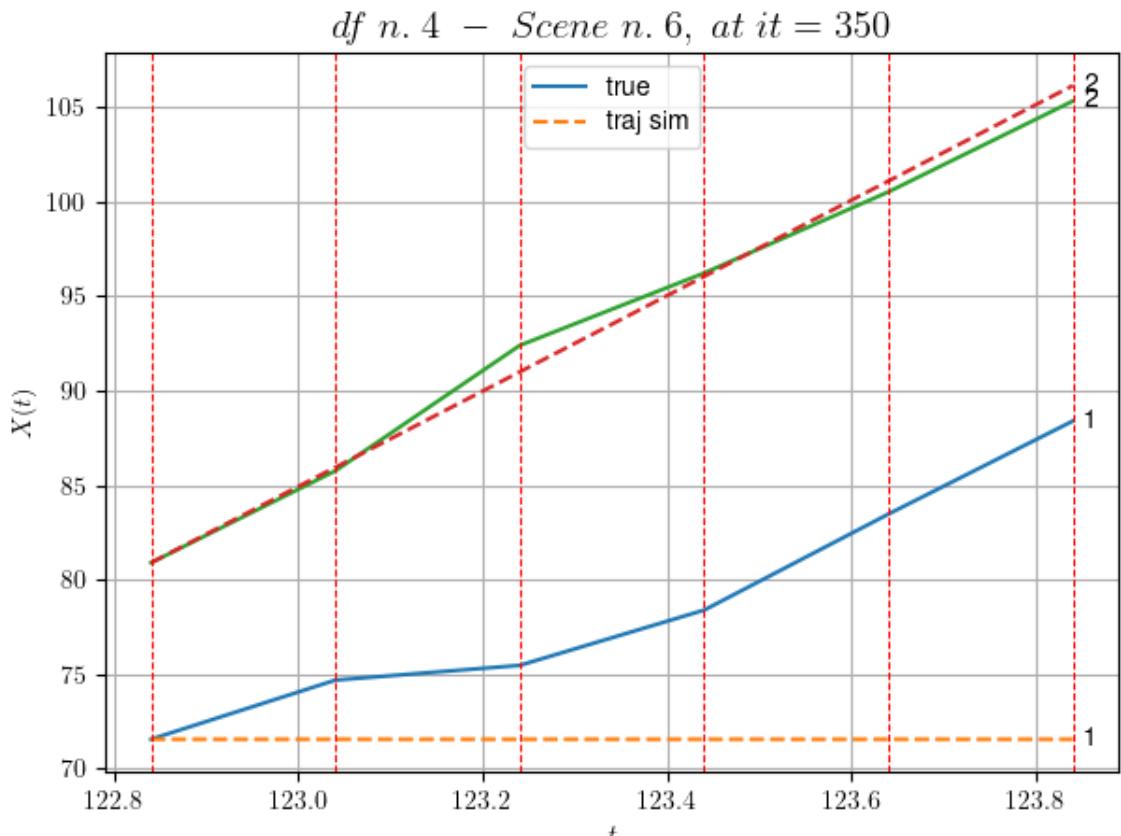


For scene 5/69

* use LR_NN=0.0005 with err=103.49293724696966 at it=24
* v0_scn_mean = 21.246461405635465
* MAE = 389.7772871106722

df n.4, scene n.6/69

We have 5 time intervals inside [122.84,123.84]
* err= 41.718941354897446
* Learning rate NN = 0.000531440949998796
* diff = 5.961658260389413e-07



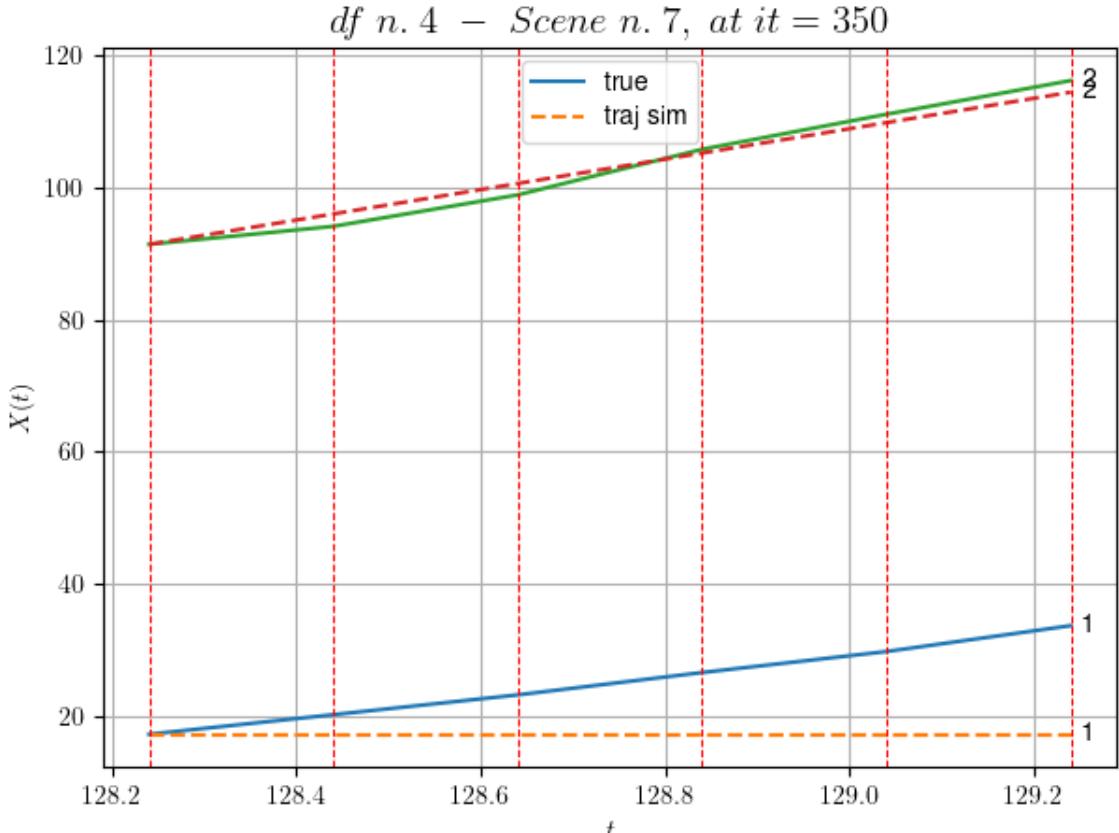
For scene 6/69

- * use LR_NN=0.001 with err=5.4405022904247256 at it=24
- * v0_scn_mean = 25.530216003578182
- * MAE = 41.718941354897446

df n.4, scene n.7/69

We have 5 time intervals inside [128.24,129.24]

- * err= 47.42276901350178
- * Learning rate NN = 5.314409008860821e-06
- * diff = 4.5685616356649916e-07



For scene 7/69

- * use LR_NN=1e-05 with err=7.578127696956348 at it=24
- * v0_scn_mean = 23.40488496350818
- * MAE = 47.262875019614235

df n.4, scene n.8/69

We have 15 time intervals inside [129.84, 132.84]

- Time interval n.0: [129.84, 130.04]
 - * y_true: [24.3308993]
 - * v_ann: [18.44514274597168, 21.068534244852476]

- Time interval n.1: [130.04, 130.24]
 - * y_true: [25.1311264]
 - * v_ann: [20.08710289001465, 21.068534244852476]

- Time interval n.2: [130.24, 130.44]
 - * y_true: [18.02095029]
 - * v_ann: [20.651844024658203, 21.068534244852476]

- Time interval n.3: [130.44, 130.64]
 - * y_true: [24.90548921]

* v_ann: [20.231449127197266, 21.068534244852476]

- Time interval n.4: [130.64, 130.84]
* y_true: [11.38077328]
* v_ann: [19.99290657043457, 21.068534244852476]

- Time interval n.5: [130.84, 131.04]
* y_true: [21.95170349]
* v_ann: [18.709415435791016, 21.068534244852476]

- Time interval n.6: [131.04, 131.24]
* y_true: [17.45149397]
* v_ann: [18.447538375854492, 21.068534244852476]

- Time interval n.7: [131.24, 131.44]
* y_true: [16.55158146]
* v_ann: [18.213768005371094, 21.068534244852476]

- Time interval n.8: [131.44, 131.64]
* y_true: [21.5222925]
* v_ann: [17.64647674560547, 21.068534244852476]

- Time interval n.9: [131.64, 131.84]
* y_true: [15.78182924]
* v_ann: [17.84516143798828, 21.068534244852476]

- Time interval n.10: [131.84, 132.04]
* y_true: [19.13245068]
* v_ann: [17.224275588989258, 21.068534244852476]

- Time interval n.11: [132.04, 132.24]
* y_true: [13.24181102]
* v_ann: [15.23119831085205, 21.068534244852476]

- Time interval n.12: [132.24, 132.44]
* y_true: [6.57094265]
* v_ann: [16.172456741333008, 21.068534244852476]

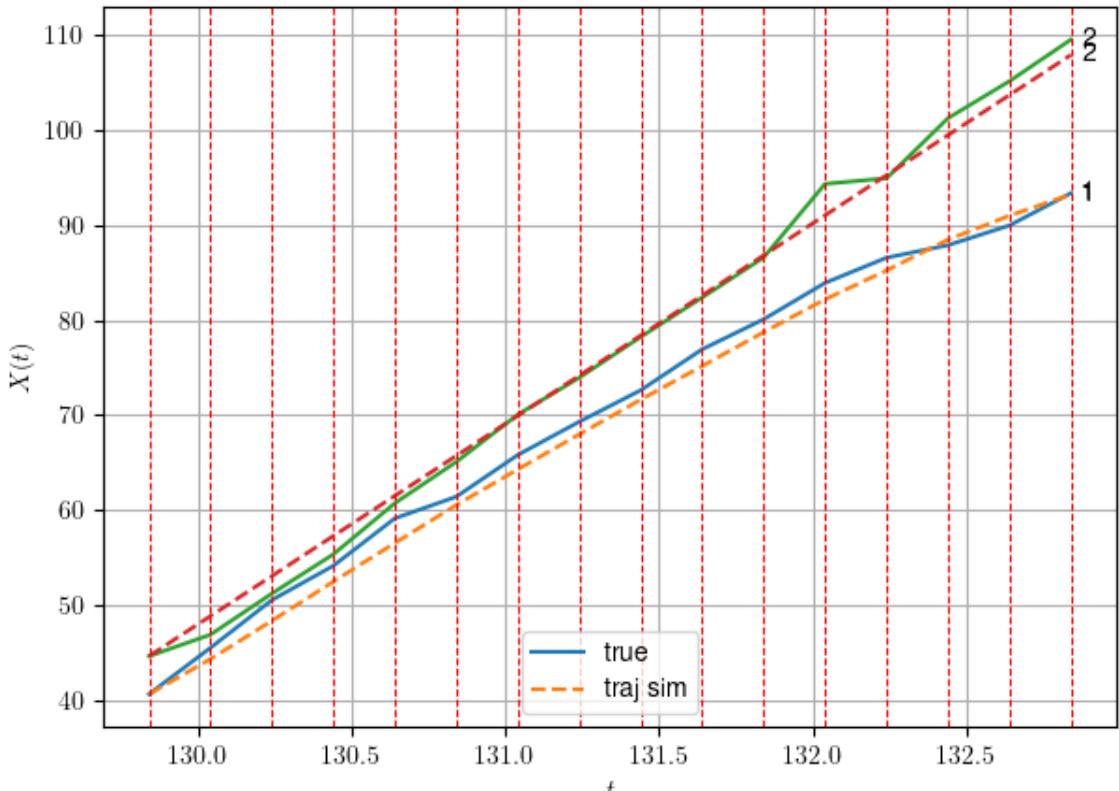
- Time interval n.13: [132.44, 132.64]
* y_true: [10.39156435]

```
* v_ann: [12.595002174377441, 21.068534244852476]
```

- Time interval n.14: [132.64, 132.84]
 - * y_true: [16.97271695]
 - * v_ann: [11.164141654968262, 21.068534244852476]

- * err= 1.9877240035172425
- * Learning rate NN = 4.7101253585424274e-05
- * diff = 0.05076551567777777

df n. 4 – Scene n. 8, at it = 500



For scene 8/69

- * use LR_NN=0.001 with err=120.90642593166136 at it=24
- * v0_scn_mean = 21.425792874990293
- * MAE = 1.9877240035172425

df n.4, scene n.9/69

We have 4 time intervals inside [136.64,137.44]

- Time interval n.0: [136.64, 136.84]
 - * y_true: [17.67050411]
 - * v_ann: [16.78274917602539, 25.54046104511854]

- Time interval n.1: [136.84, 137.04]
 - * y_true: [20.80072476]

* v_ann: [17.334043502807617, 25.54046104511854]

- Time interval n.2: [137.04, 137.24]

* y_true: [22.26092051]

* v_ann: [18.87316131591797, 25.54046104511854]

- Time interval n.3: [137.24, 137.44]

* y_true: [12.60058887]

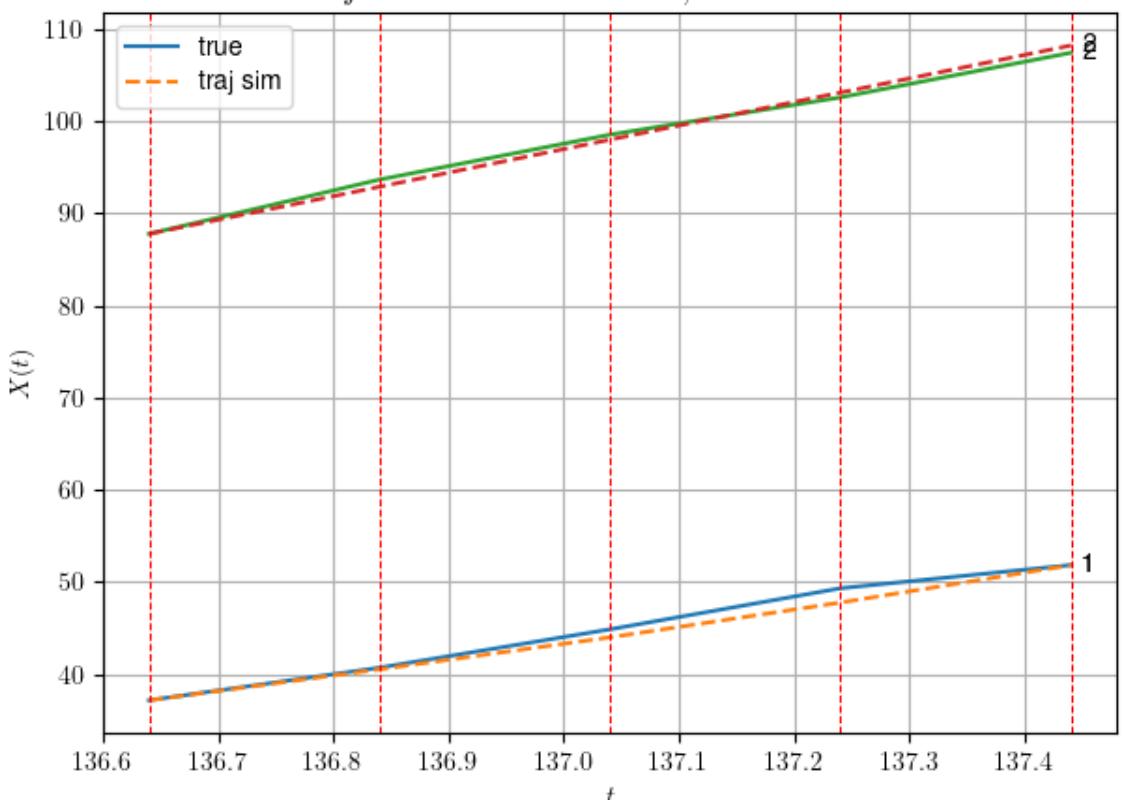
* v_ann: [20.280193328857422, 25.54046104511854]

* err= 0.4989435204780678

* Learning rate NN = 2.3914839403005317e-05

* diff = 0.005904762872145697

df n. 4 – Scene n. 9, at it = 500



For scene 9/69

* use LR_NN=5e-05 with err=3.3257927662233207 at it=24

* v0_scn_mean = 25.718842603279818

* MAE = 0.4989435204780678

=====

=====

=====

df n.4, scene n.10/69

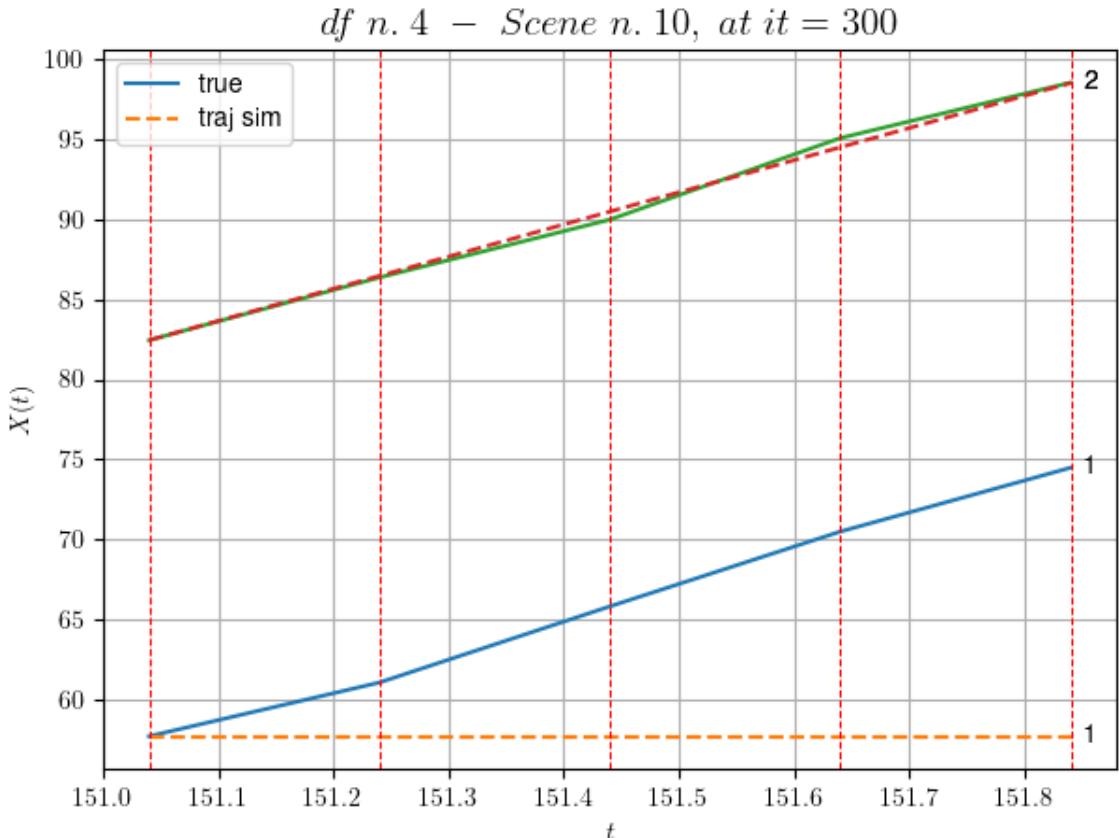
=====

=====

We have 4 time intervals inside [151.04,151.84]

* err= 52.29599981473612

* Learning rate NN = 0.0006560999318026006
 * diff = 7.092692513310794e-07

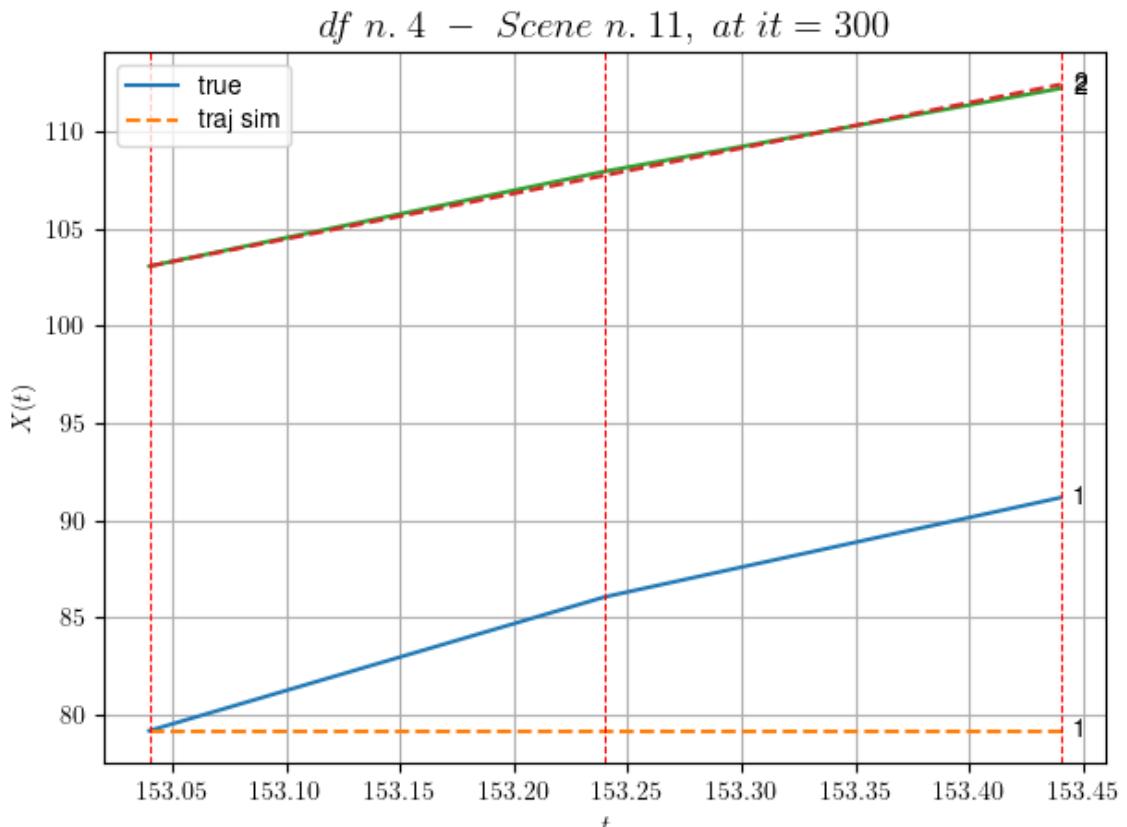


For scene 10/69

* use LR_NN=0.001 with err=11.954404605316356 at it=24
 * v0_scn_mean = 20.756280104806073
 * MAE = 11.59773186537014

df n.4, scene n.11/69

We have 2 time intervals inside [153.04,153.44]
 * err= 31.909373890691192
 * Learning rate NN = 4.049999552080408e-05
 * diff = 2.2301816926528772e-07

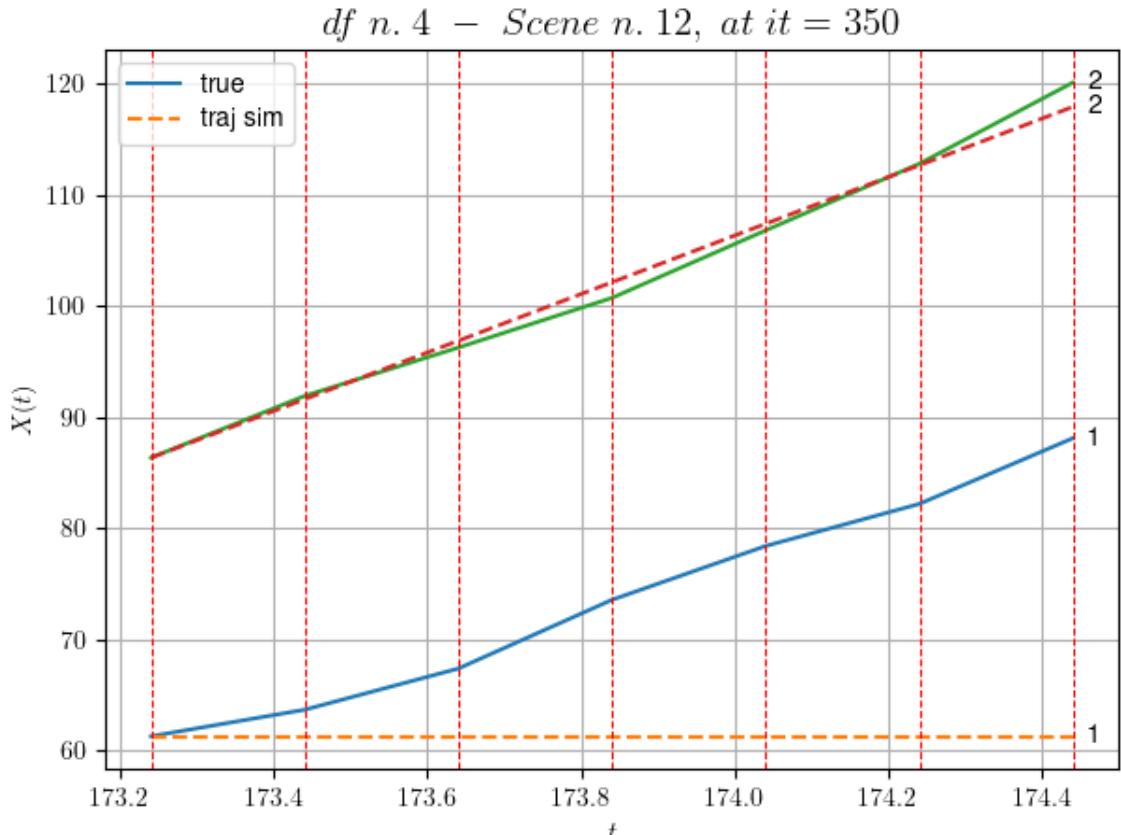


For scene 11/69

* use LR_NN=5e-05 with err=1.6321864794243928 at it=24
* v0_scn_mean = 23.826101687055417
* MAE = 31.909373890691192

df n.4, scene n.12/69

We have 6 time intervals inside [173.24,174.44]
* err= 117.87993070993944
* Learning rate NN = 4.304671165300533e-05
* diff = 1.2561677920075454e-07



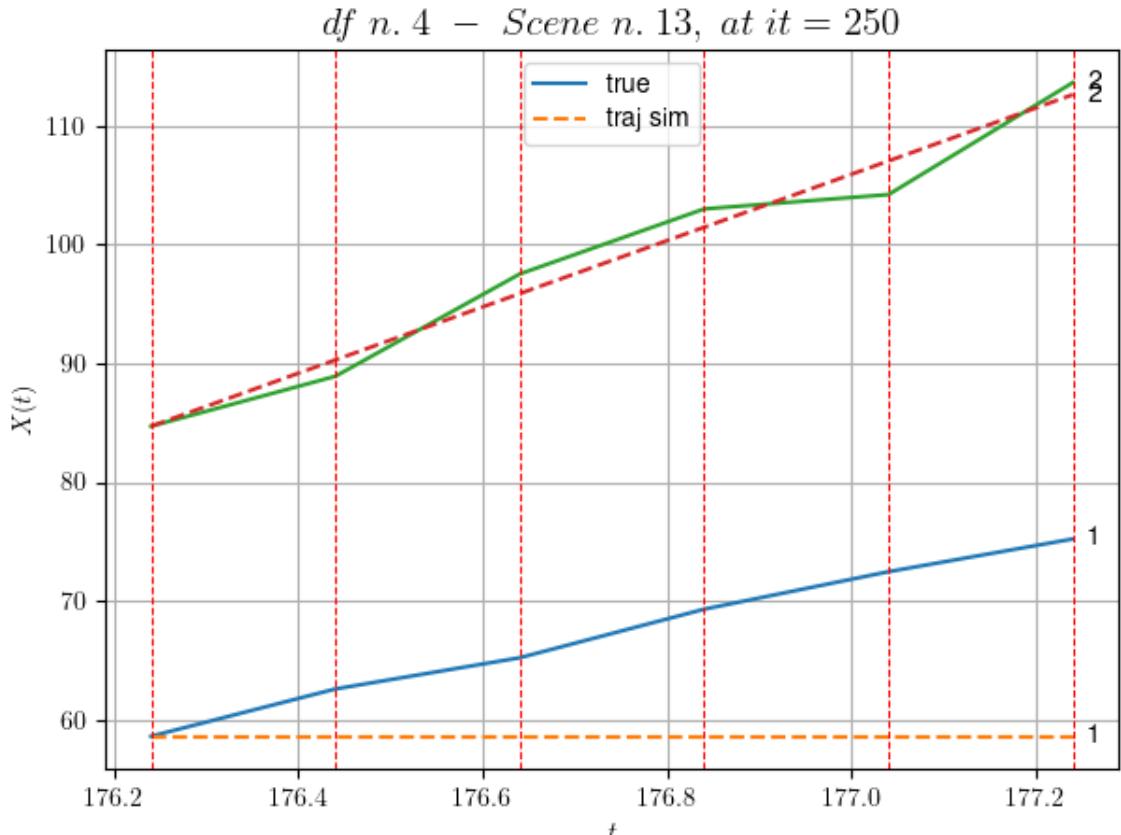
For scene 12/69

- * use LR_NN=0.0001 with err=4.2445851283834 at it=24
- * v0_scn_mean = 26.52320206457652
- * MAE = 117.84926096540987

df n.4, scene n.13/69

We have 5 time intervals inside [176.24,177.24]

- * err= 54.92485386699242
- * Learning rate NN = 6.560998735949397e-05
- * diff = 6.703362060989093e-07

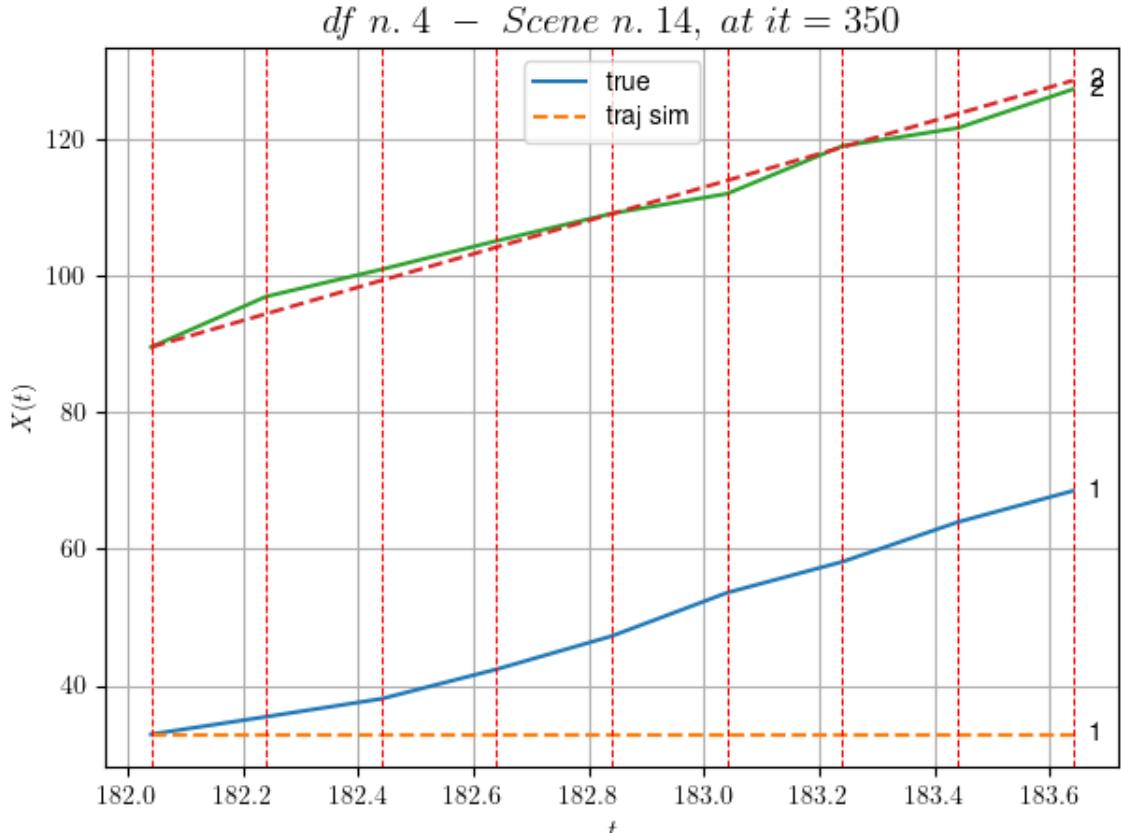


For scene 13/69

* use LR_NN=0.0001 with err=2.5716348786808214 at it=24
* v0_scn_mean = 28.112341506419675
* MAE = 54.924713272985095

df n.4, scene n.14/69

We have 8 time intervals inside [182.04,183.64]
* err= 202.76868337175648
* Learning rate NN = 3.138104875688441e-05
* diff = 5.875300814750517e-07



For scene 14/69

- * use LR_NN=0.0001 with err=19.959265393378967 at it=24
- * v0_scn_mean = 24.7058132274966
- * MAE = 202.76868337175648

df n.4, scene n.15/69

We have 9 time intervals inside [195.44,197.24]

- Time interval n.0: [195.44, 195.64]
 - * y_true: [9.85670669]
 - * v_ann: [6.405875319615006e-05, 16.73844314065949]

- Time interval n.1: [195.64, 195.84]
 - * y_true: [10.16548364]
 - * v_ann: [2.6127740056836046e-05, 16.7384431406594]

9]

- Time interval n.2: [195.84, 196.04]
 - * y_true: [10.16548364]
 - * v_ann: [2.1328569346223958e-06, 16.7384431406594]

9]

```
- Time interval n.3: [196.04, 196.24]
* y_true: [10.16548364]
* v_ann: [4.090061906936171e-07, 16.73844314065949]

-----
- Time interval n.4: [196.24, 196.44]
* y_true: [10.16548364]
* v_ann: [2.4362202566408087e-07, 16.73844314065949]
9]

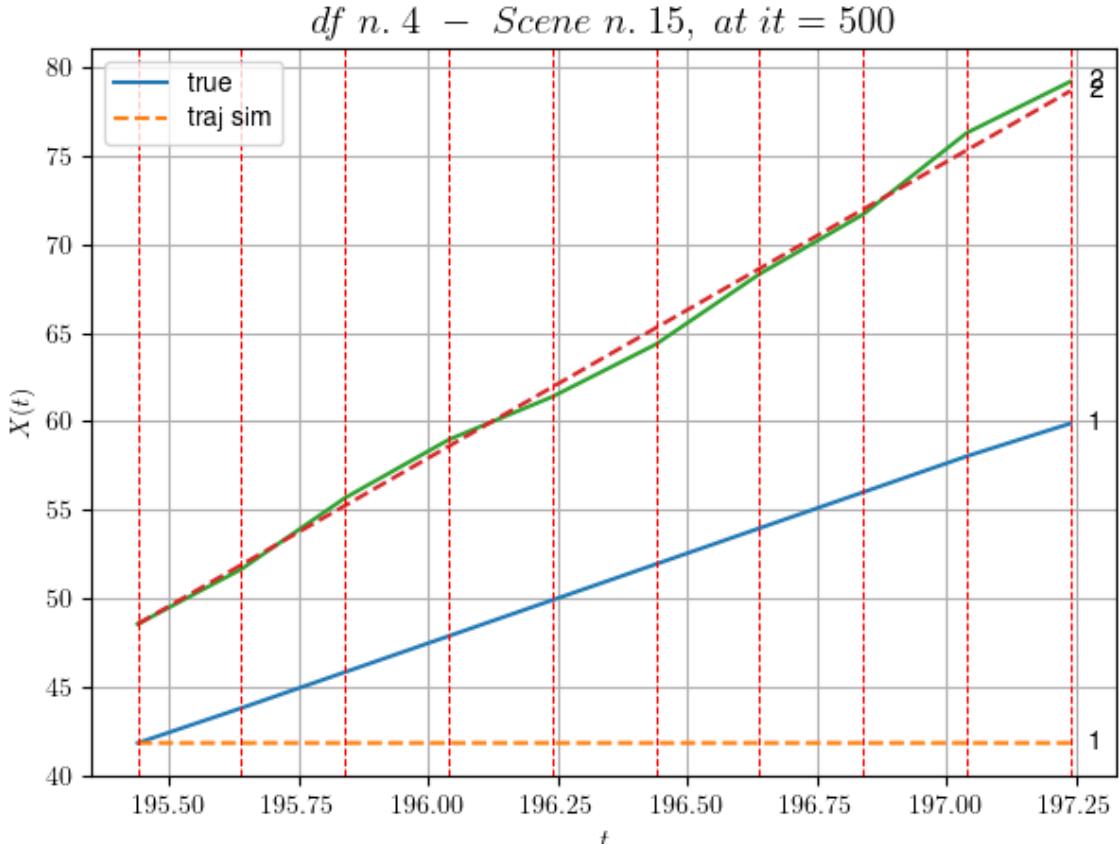
-----
- Time interval n.5: [196.44, 196.64]
* y_true: [10.16548364]
* v_ann: [7.113464306485184e-08, 16.73844314065949]

-----
- Time interval n.6: [196.64, 196.84]
* y_true: [10.16548364]
* v_ann: [5.499900090910614e-09, 16.73844314065949]

-----
- Time interval n.7: [196.84, 197.04]
* y_true: [10.16548364]
* v_ann: [9.411404988668437e-10, 16.73844314065949]

-----
- Time interval n.8: [197.04, 197.24]
* y_true: [9.26246532]
* v_ann: [3.149030688986976e-11, 16.73844314065949]

-----
* err= 58.15876050852262
* Learning rate NN = 0.0008338586776517332
* diff = 2.6015858978212236e-06
```



For scene 15/69

- * use LR_NN=0.005 with err=100.37902345214628 at it=24
- * v0_scn_mean = 17.268905414931606
- * MAE = 58.15644174345829

df n.4, scene n.16/69

We have 3 time intervals inside [199.64, 200.24]

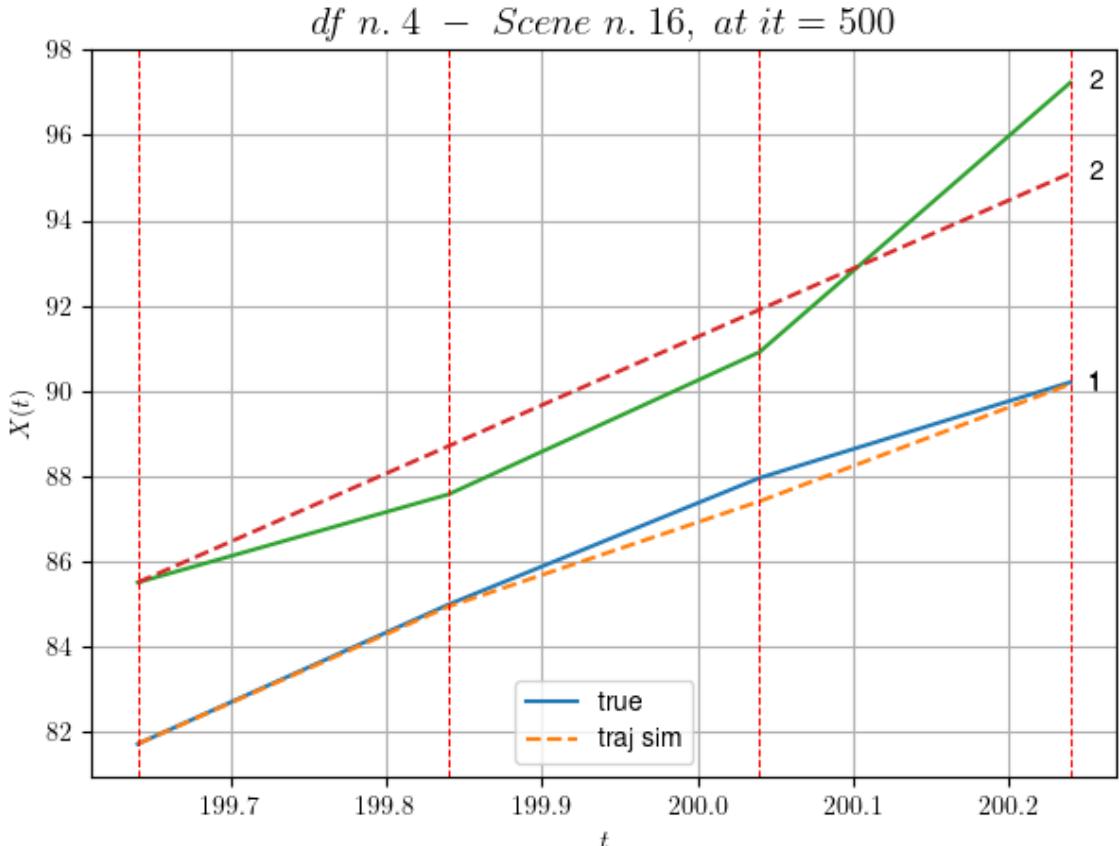
- Time interval n.0: [199.64, 199.84]
 - * y_true: [16.38215778]
 - * v_ann: [16.13957977294922, 16.01915160383672]

- Time interval n.1: [199.84, 200.04]
 - * y_true: [14.86205621]
 - * v_ann: [12.355886459350586, 16.01915160383672]

- Time interval n.2: [200.04, 200.24]
 - * y_true: [11.24167368]
 - * v_ann: [13.76766300201416, 16.01915160383672]

- * err= 0.8904669595316547
- * Learning rate NN = 0.0005904899444431067

* diff = 2.3669771874401668e-05



For scene 16/69

```
* use LR_NN=0.001 with err=12.294732494006182 at it=24
* v0_scn_mean = 16.57838553957618
* MAE = 0.8539602653141709
```

df n.4, scene n.17/69

We have 5 time intervals inside [205.84, 206.84]

- Time interval n.0: [205.84, 206.04]
 - * y_true: [11.12077713]
 - * v_ann: [9.466426849365234, 14.204943221368014]

- Time interval n.1: [206.04, 206.24]
 - * y_true: [13.1509984]
 - * v_ann: [9.814492225646973, 14.204943221368014]

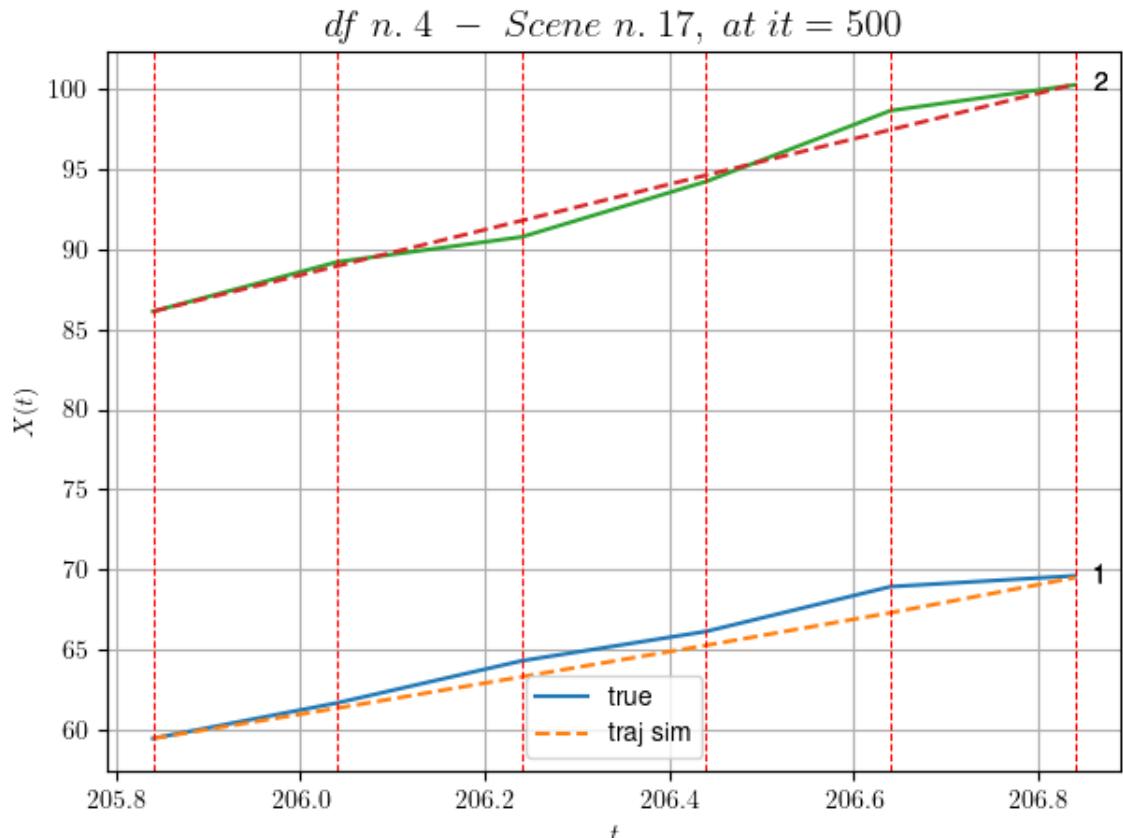
- Time interval n.2: [206.24, 206.44]
 - * y_true: [9.19074148]
 - * v_ann: [9.833761215209961, 14.204943221368014]

- Time interval n.3: [206.44, 206.64]

```
* y_true: [14.011227]
* v_ann: [10.192931175231934, 14.204943221368014]
```

```
- Time interval n.4: [206.64, 206.84]
* y_true: [3.38029975]
* v_ann: [10.972433090209961, 14.204943221368014]
```

```
* err= 0.6033719883414776
* Learning rate NN = 1.9371018424862996e-05
* diff = 0.007299113006420499
```



For scene 17/69

```
* use LR_NN=5e-05 with err=45.50630482640409 at it=24
* v0_scn_mean = 14.836745492392998
* MAE = 0.5905136704947982
```

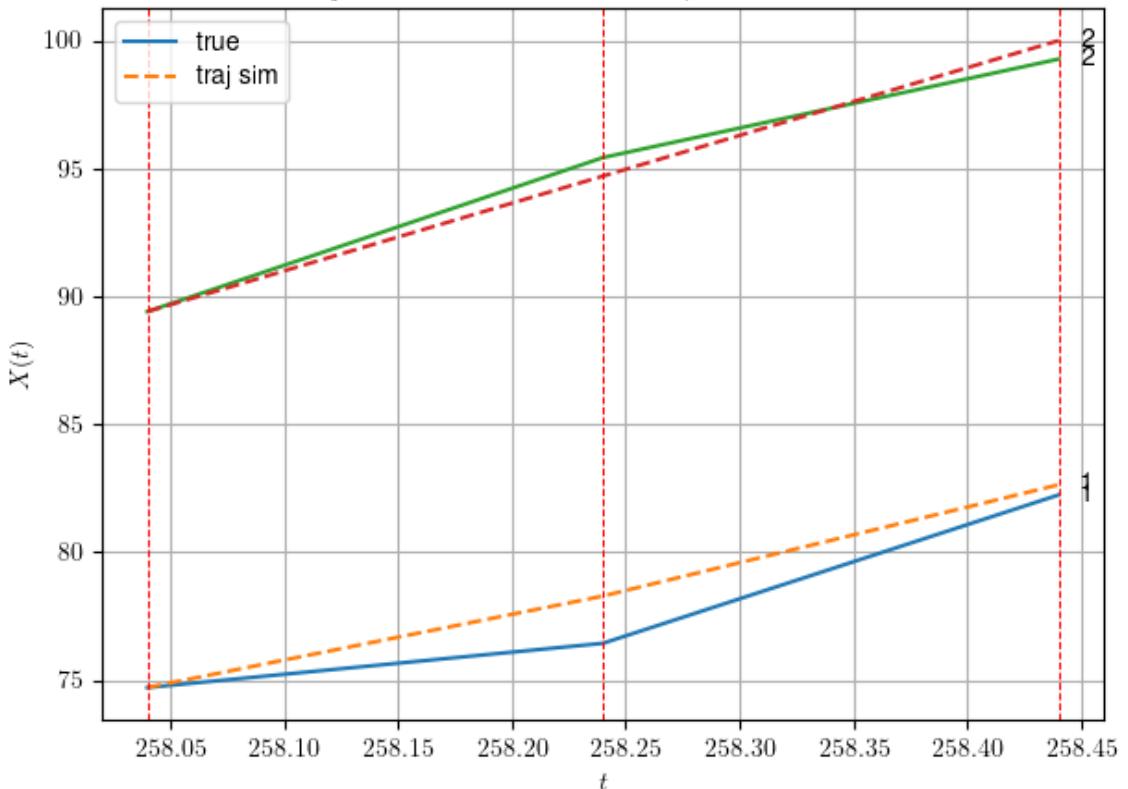
df n.4, scene n.18/69

```
We have 2 time intervals inside [258.04,258.44]
- Time interval n.0: [258.04, 258.24]
* y_true: [8.65094482]
* v_ann: [17.885772705078125, 26.487815883435907]
```

- Time interval n.1: [258.24, 258.44]
 - * y_true: [29.00349395]
 - * v_ann: [21.75186538696289, 26.487815883435907]

- * err= 0.7692176399113639
- * Learning rate NN = 3.6449993785936385e-05
- * diff = 0.0013920303265899658

df n. 4 – Scene n. 18, at it = 500



For scene 18/69

- * use LR_NN=5e-05 with err=1.217460250724387 at it=24
- * v0_scn_mean = 26.628303248070335
- * MAE = 0.7687933425571725

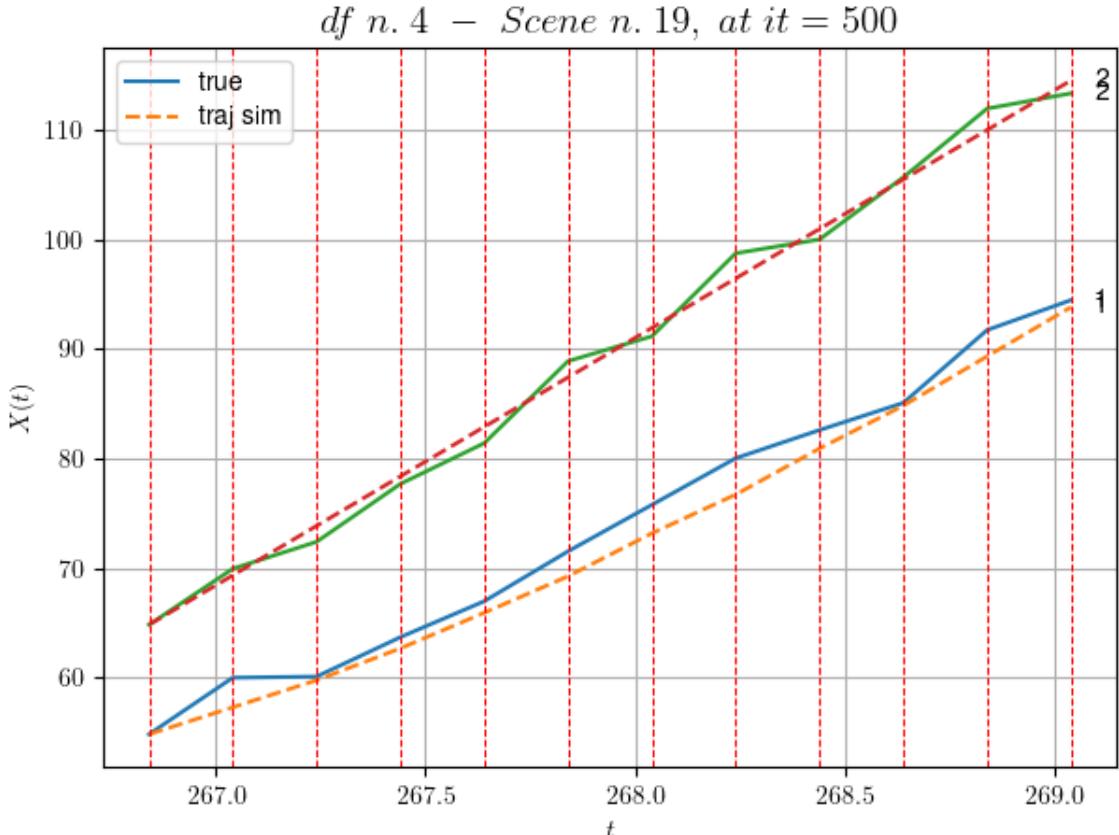
df n.4, scene n.19/69

We have 11 time intervals inside [266.84, 269.04]

- Time interval n.0: [266.84, 267.04]
 - * y_true: [25.85178656]
 - * v_ann: [12.322836875915527, 22.599995584638567]

- Time interval n.1: [267.04, 267.24]
 - * y_true: [0.50003797]
 - * v_ann: [12.356240272521973, 22.599995584638567]

```
-----  
    - Time interval n.2: [267.24, 267.44]  
      * y_true: [18.0014362]  
      * v_ann: [14.57296371459961, 22.599995584638567]  
  
-----  
    - Time interval n.3: [267.44, 267.64]  
      * y_true: [16.41218071]  
      * v_ann: [16.246553421020508, 22.599995584638567]  
  
-----  
    - Time interval n.4: [267.64, 267.84]  
      * y_true: [22.80209]  
      * v_ann: [16.67423439025879, 22.599995584638567]  
  
-----  
    - Time interval n.5: [267.84, 268.04]  
      * y_true: [21.23221002]  
      * v_ann: [19.612163543701172, 22.599995584638567]  
  
-----  
    - Time interval n.6: [268.04, 268.24]  
      * y_true: [21.28245785]  
      * v_ann: [17.706642150878906, 22.599995584638567]  
  
-----  
    - Time interval n.7: [268.24, 268.44]  
      * y_true: [12.86161872]  
      * v_ann: [21.01996612548828, 22.599995584638567]  
  
-----  
    - Time interval n.8: [268.44, 268.64]  
      * y_true: [12.42174873]  
      * v_ann: [19.58829689025879, 22.599995584638567]  
  
-----  
    - Time interval n.9: [268.64, 268.84]  
      * y_true: [33.2749091]  
      * v_ann: [22.542436599731445, 22.599995584638567]  
  
-----  
    - Time interval n.10: [268.84, 269.04]  
      * y_true: [13.66227873]  
      * v_ann: [22.435842514038086, 22.599995584638567]  
  
-----  
* err= 2.54299445536267  
* Learning rate NN = 1.0941892469418235e-05  
* diff = 0.01220600330524E-00
```



For scene 19/69

- * use LR_NN=0.0001 with err=49.08666990369226 at it=24
- * v0_scn_mean = 22.895995761196897
- * MAE = 2.54299445536267

df n.4, scene n.20/69

We have 8 time intervals inside [285.84, 287.44]

- Time interval n.0: [285.84, 286.04]
 - * y_true: [9.53034992]
 - * v_ann: [18.140188217163086, 24.20183084742241]

- Time interval n.1: [286.04, 286.24]
 - * y_true: [14.93061978]
 - * v_ann: [19.73223304748535, 24.20183084742241]

- Time interval n.2: [286.24, 286.44]
 - * y_true: [12.82475396]
 - * v_ann: [20.403650283813477, 24.20183084742241]

- Time interval n.3: [286.44, 286.64]
 - * y_true: [25.90137166]

```
* v_ann: [20.66469383239746, 24.20183084742241]
```

```
- Time interval n.4: [286.64, 286.84]
```

```
* y_true: [29.70192331]
```

```
* v_ann: [21.39412498474121, 24.20183084742241]
```

```
- Time interval n.5: [286.84, 287.04]
```

```
* y_true: [27.3021312]
```

```
* v_ann: [21.52928924560547, 24.20183084742241]
```

```
- Time interval n.6: [287.04, 287.24]
```

```
* y_true: [10.30090033]
```

```
* v_ann: [21.891773223876953, 24.20183084742241]
```

```
- Time interval n.7: [287.24, 287.44]
```

```
* y_true: [33.25329865]
```

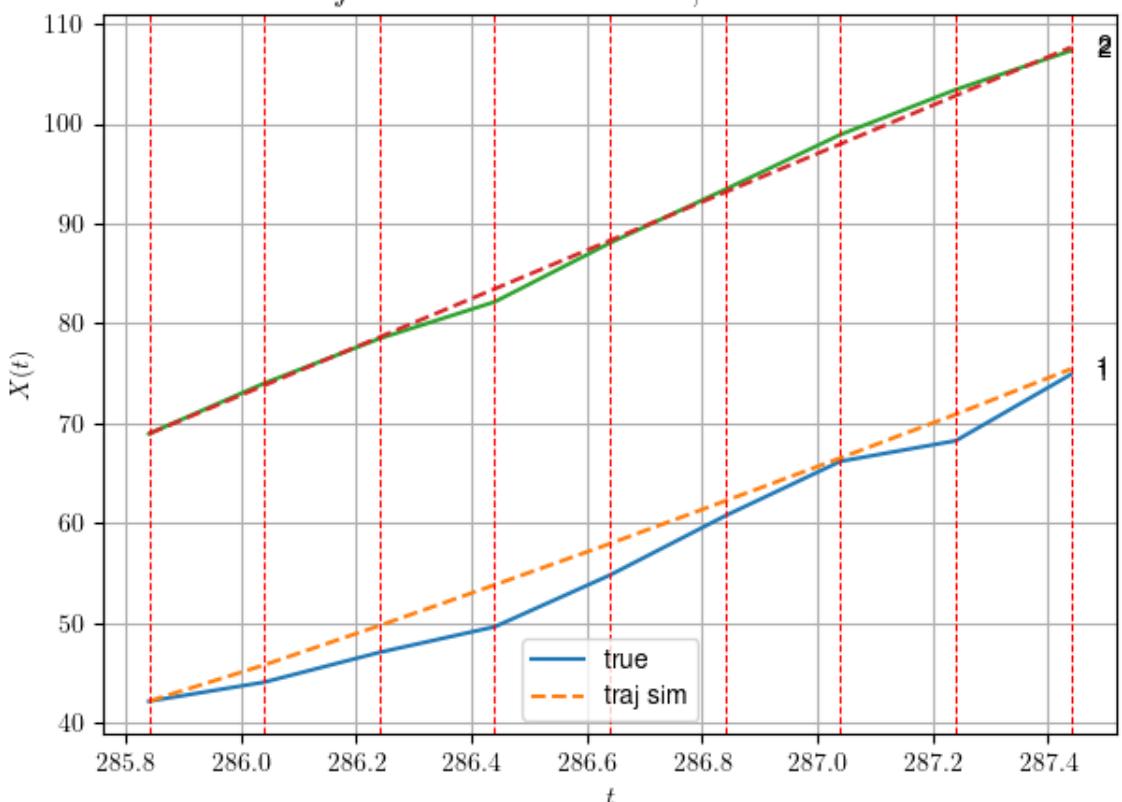
```
* v_ann: [22.694272994995117, 24.20183084742241]
```

```
* err= 2.8128151847132985
```

```
* Learning rate NN = 2.058910467894748e-05
```

```
* diff = 0.0013792145069442263
```

df n. 4 – Scene n. 20, at it = 500



For scene 20/69

* use LR_NN=0.0001 with err=17.349928871950496 at it=24

```
* vθ_scn_mean = 24.433757613481287
* MAE = 2.667883750534835
```

```
=====
```

```
=====
```

```
df n.4, scene n.21/69
```

```
=====
```

```
=====
```

```
We have 5 time intervals inside [288.04,289.04]
```

```
- Time interval n.0: [288.04, 288.24]
  * y_true: [15.93157223]
  * v_ann: [9.802323341369629, 22.24789971530882]
```

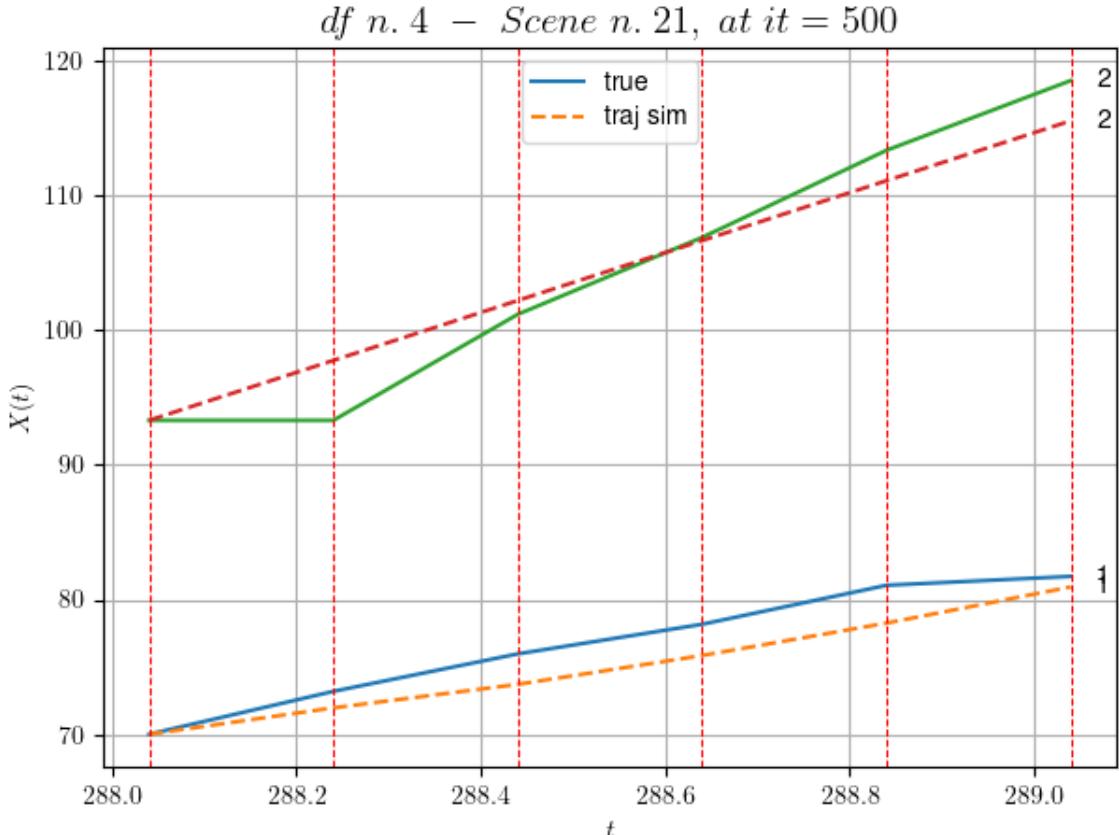
```
- Time interval n.1: [288.24, 288.44]
  * y_true: [13.91151456]
  * v_ann: [8.730705261230469, 22.24789971530882]
```

```
- Time interval n.2: [288.44, 288.64]
  * y_true: [10.99127146]
  * v_ann: [10.70650577545166, 22.24789971530882]
```

```
- Time interval n.3: [288.64, 288.84]
  * y_true: [14.48179938]
  * v_ann: [12.027937889099121, 22.24789971530882]
```

```
- Time interval n.4: [288.84, 289.04]
  * y_true: [3.31041621]
  * v_ann: [13.441384315490723, 22.24789971530882]
```

```
* err= 4.619138936687702
* Learning rate NN = 1.9371018424862996e-05
* diff = 0.000507626662123382
```



For scene 21/69

- * use LR_NN=5e-05 with err=11.252812117908338 at it=24
- * v0_scn_mean = 22.55798372663796
- * MAE = 4.263808915623626

df n.4, scene n.22/69

We have 6 time intervals inside [301.64, 302.84]

- Time interval n.0: [301.64, 301.84]
 - * y_true: [26.55139863]
 - * v_ann: [23.89712142944336, 22.52925263115498]

- Time interval n.1: [301.84, 302.04]
 - * y_true: [20.20126147]
 - * v_ann: [23.831518173217773, 22.52925263115498]

- Time interval n.2: [302.04, 302.24]
 - * y_true: [22.80164674]
 - * v_ann: [23.960859298706055, 22.52925263115498]

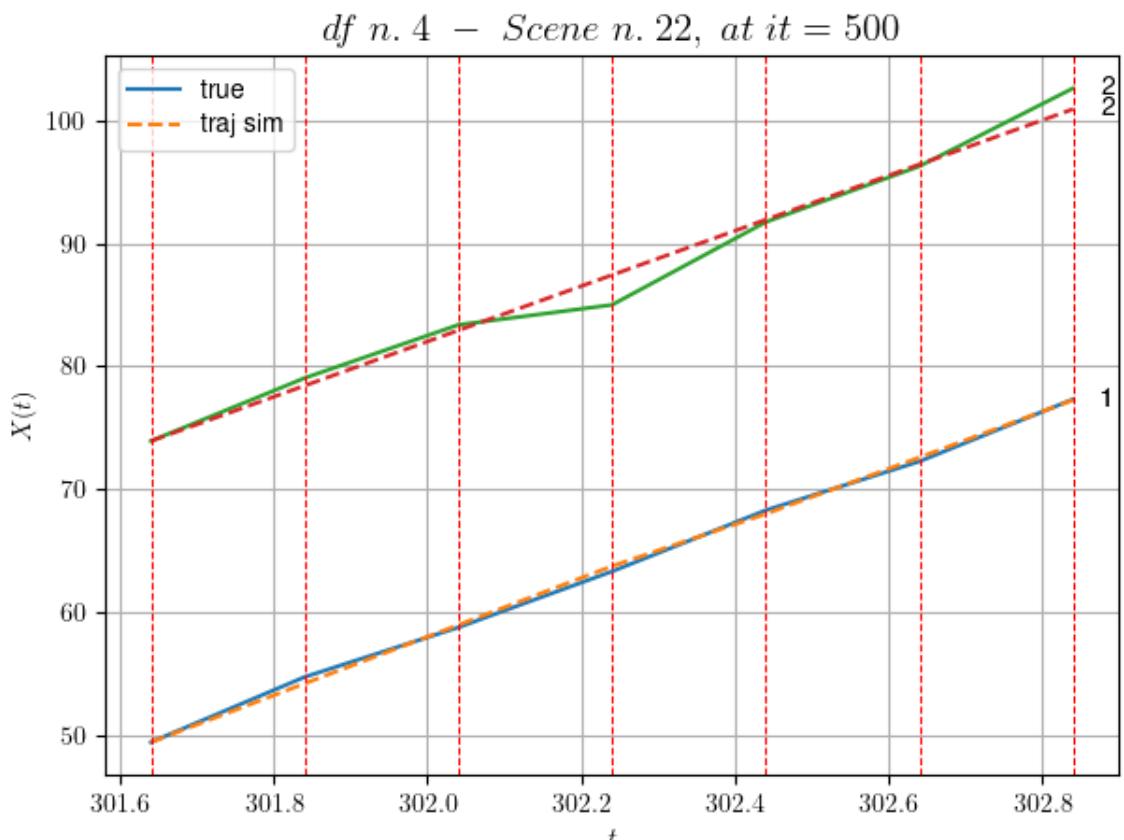
- Time interval n.3: [302.24, 302.44]
 - * y_true: [24.90208832]

* v_ann: [21.295072555541992, 22.52925263115498]

- Time interval n.4: [302.44, 302.64]
 * y_true: [19.90190261]
 * v_ann: [22.985029220581055, 22.52925263115498]

- Time interval n.5: [302.64, 302.84]
 * y_true: [25.30273749]
 * v_ann: [23.387123107910156, 22.52925263115498]

* err= 0.7230064549015245
 * Learning rate NN = 1.5690524378442205e-05
 * diff = 0.00020141062053280478



For scene 22/69

* use LR_NN=5e-05 with err=14.62162835552792 at it=24
 * v0_scn_mean = 22.828082525851794
 * MAE = 0.7199595921580971

df n.4, scene n.23/69

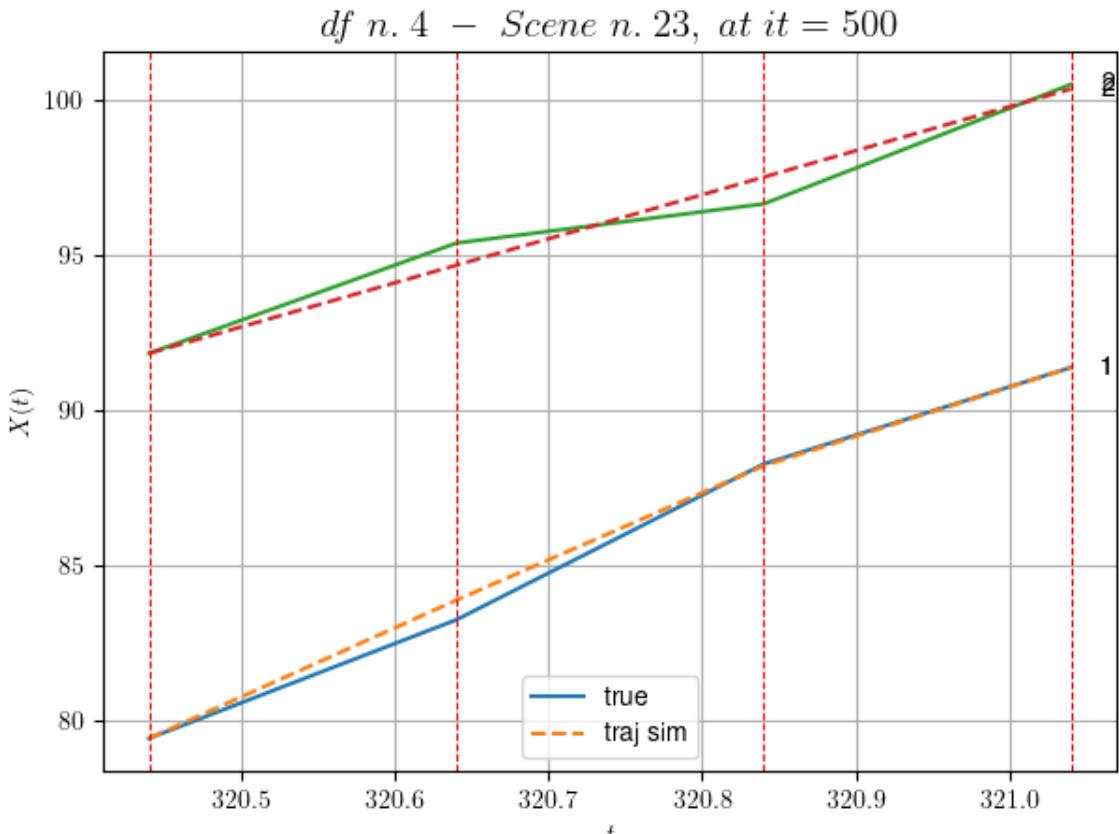
We have 3 time intervals inside [320.44,321.04]
 - Time interval n.0: [320.44, 320.64]

```
* y_true: [19.06248224]
* v_ann: [22.217426300048828, 14.162426648992955]
```

```
- Time interval n.1: [320.64, 320.84]
* y_true: [25.04354334]
* v_ann: [21.589263916015625, 14.162426648992955]
```

```
- Time interval n.2: [320.84, 321.04]
* y_true: [15.51237997]
* v_ann: [15.819453239440918, 14.162426648992955]
```

```
* err= 0.2093334949987985
* Learning rate NN = 5.904899080633186e-05
* diff = 3.7503770461688735e-06
```



For scene 23/69

```
* use LR_NN=0.0001 with err=18.221967313445624 at it=24
* v0_scn_mean = 14.795929582911958
* MAE = 0.20897563752065149
```

df n.4, scene n.24/69

We have 10 time intervals inside [321.84,323.84]
- Time interval n.0: [321.84, 322.04]

```
* y_true: [15.91100184]
* v_ann: [12.550475120544434, 22.810097733517477]

-----
- Time interval n.1: [322.04, 322.24]
* y_true: [21.52151253]
* v_ann: [14.187516212463379, 22.810097733517477]

-----
- Time interval n.2: [322.24, 322.44]
* y_true: [17.33136036]
* v_ann: [14.744061470031738, 22.810097733517477]

-----
- Time interval n.3: [322.44, 322.64]
* y_true: [13.37117584]
* v_ann: [16.09994888305664, 22.810097733517477]

-----
- Time interval n.4: [322.64, 322.84]
* y_true: [20.11196206]
* v_ann: [16.024669647216797, 22.810097733517477]

-----
- Time interval n.5: [322.84, 323.04]
* y_true: [19.00199356]
* v_ann: [16.94450569152832, 22.810097733517477]

-----
- Time interval n.6: [323.04, 323.24]
* y_true: [9.05104347]
* v_ann: [18.647705078125, 22.810097733517477]

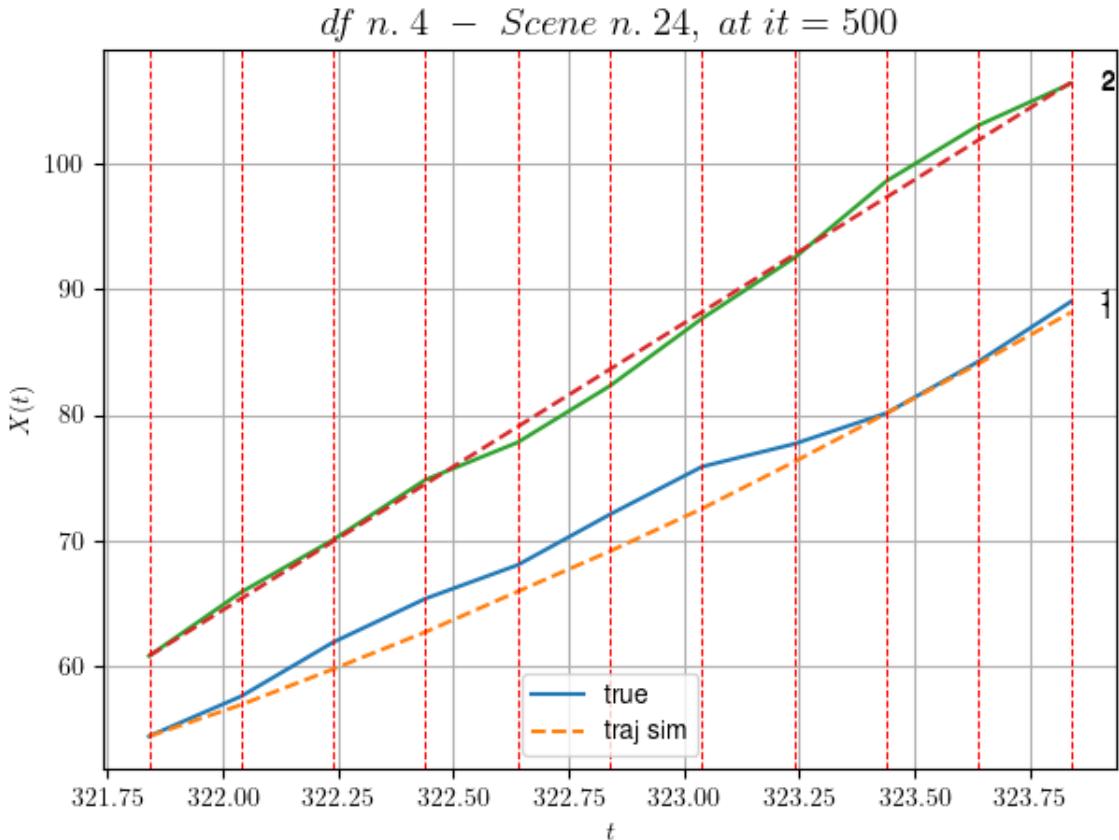
-----
- Time interval n.7: [323.24, 323.44]
* y_true: [12.23150016]
* v_ann: [19.254898071289062, 22.810097733517477]

-----
- Time interval n.8: [323.44, 323.64]
* y_true: [20.60275578]
* v_ann: [19.79314613342285, 22.810097733517477]

-----
- Time interval n.9: [323.64, 323.84]
* y_true: [23.75344402]
* v_ann: [20.32663345336914, 22.810097733517477]

* err= 2.0971070408292913
```

```
* Learning rate NN = 0.00013508510892279446
* diff = 0.18907938840735694
```



For scene 24/69

```
* use LR_NN=0.001 with err=37.463715425242384 at it=24
* v0_scn_mean = 23.097693824122675
* MAE = 1.7870371840367452
```

df n.4, scene n.25/69

We have 4 time intervals inside [374.24, 375.04]

- Time interval n.0: [374.24, 374.44]
 - * y_true: [17.78133038]
 - * v_ann: [18.569129943847656, 20.475722036934513]

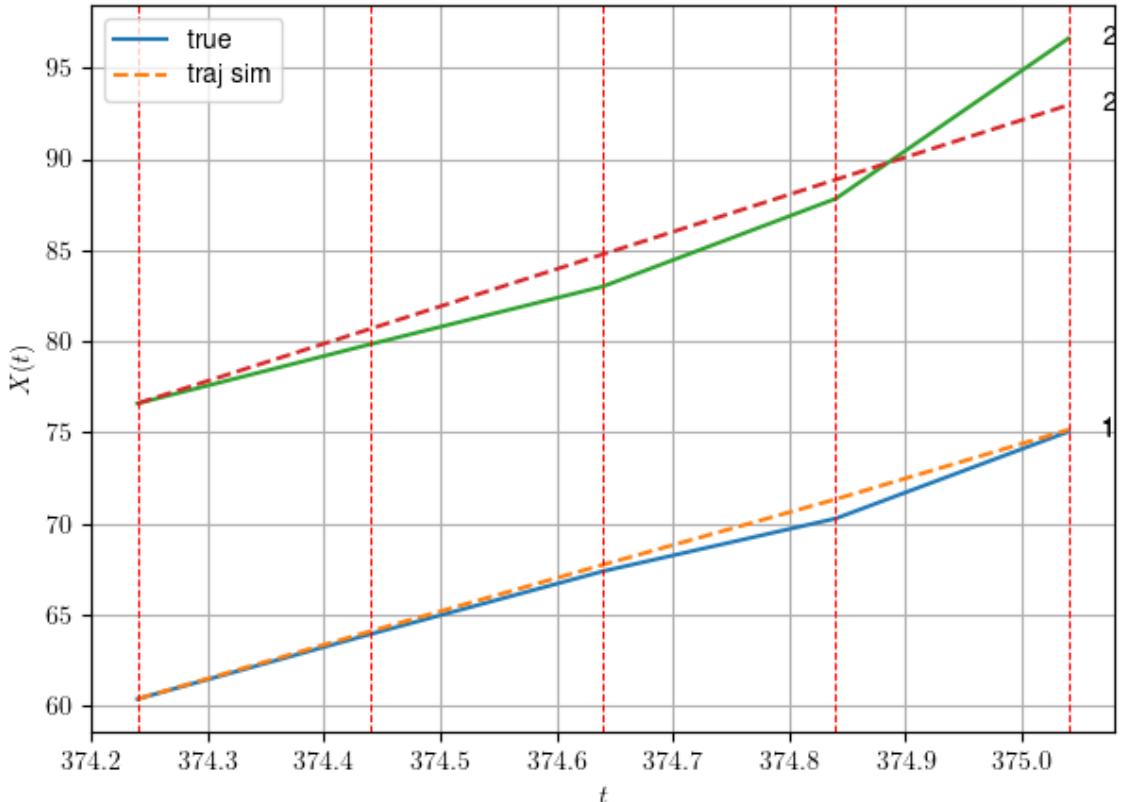
- Time interval n.1: [374.44, 374.64]
 - * y_true: [17.27142996]
 - * v_ann: [18.275728225708008, 20.475722036934513]

- Time interval n.2: [374.64, 374.84]
 - * y_true: [14.48134888]
 - * v_ann: [17.988178253173828, 20.475722036934513]

- Time interval n.3: [374.84, 375.04]
 - * y_true: [23.8524105]
 - * v_ann: [19.050010681152344, 20.475722036934513]

- * err= 1.9600323339720034
- * Learning rate NN = 4.7829678806010634e-05
- * diff = 0.0004883768362506924

df n. 4 – Scene n. 25, at it = 500



For scene 25/69

- * use LR_NN=0.0001 with err=10.111203198451866 at it=24
- * v0_scn_mean = 20.856693155384033
- * MAE = 1.8296563682362033

df n.4, scene n.26/69

We have 3 time intervals inside [378.64, 379.24]

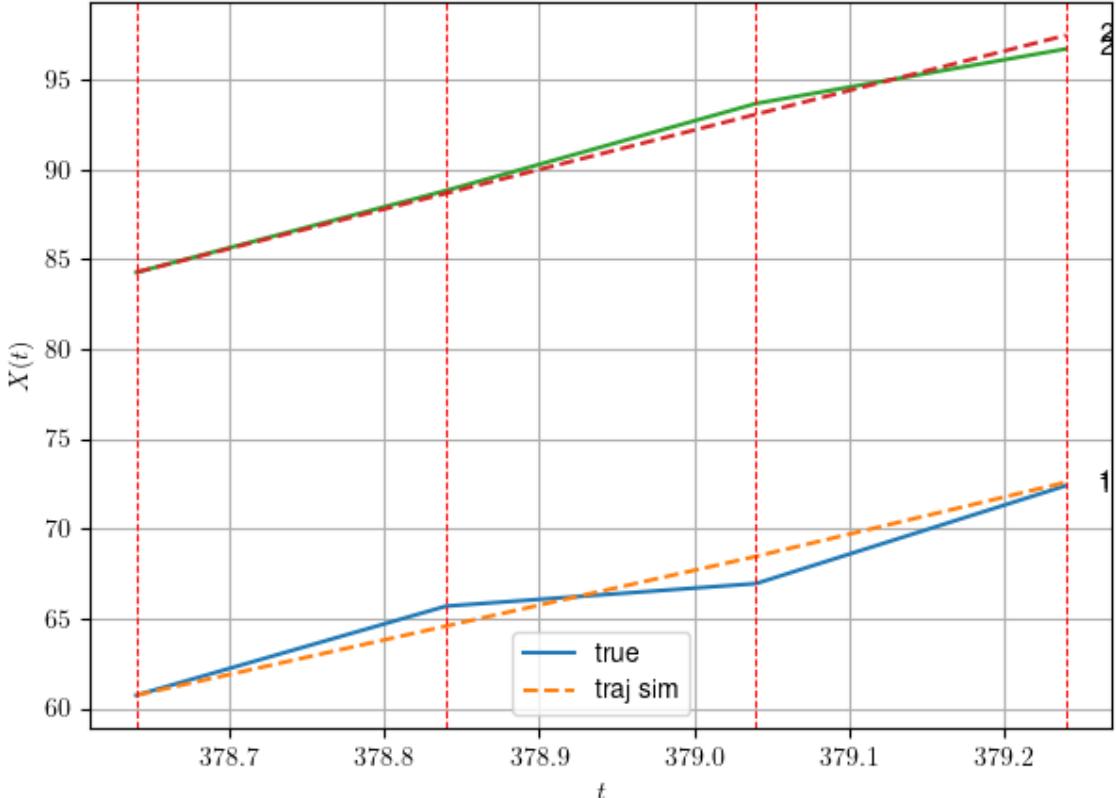
- Time interval n.0: [378.64, 378.84]
 - * y_true: [24.80186931]
 - * v_ann: [19.253515243530273, 21.98668244876492]

- Time interval n.1: [378.84, 379.04]
 - * y_true: [6.27054296]
 - * v_ann: [19.37971305847168, 21.98668244876492]

```
- Time interval n.2: [379.04, 379.24]
* y_true: [27.25270249]
* v_ann: [20.622608184814453, 21.98668244876492]
```

```
* err= 0.5636641478704251
* Learning rate NN = 2.952449540316593e-05
* diff = 0.001348720760090738
```

df n. 4 - Scene n. 26, at it = 500



For scene 26/69

```
* use LR_NN=5e-05 with err=5.397430846358525 at it=24
* v0_scn_mean = 22.307215150753137
* MAE = 0.5636641478704251
```

df n.4, scene n.27/69

We have 4 time intervals inside [387.64,388.44]

```
- Time interval n.0: [387.64, 387.84]
* y_true: [13.24162412]
* v_ann: [16.585172653198242, 23.572406443207264]
```

```
- Time interval n.1: [387.84, 388.04]
* y_true: [25.47337037]
* v_ann: [15.776469230651855, 23.572406443207264]
```

```

-----  

- Time interval n.2: [388.04, 388.24]  

* y_true: [19.81289117]  

* v_ann: [18.10136604309082, 23.572406443207264]
-----
```

```

-----  

- Time interval n.3: [388.24, 388.44]  

* y_true: [8.34132664]  

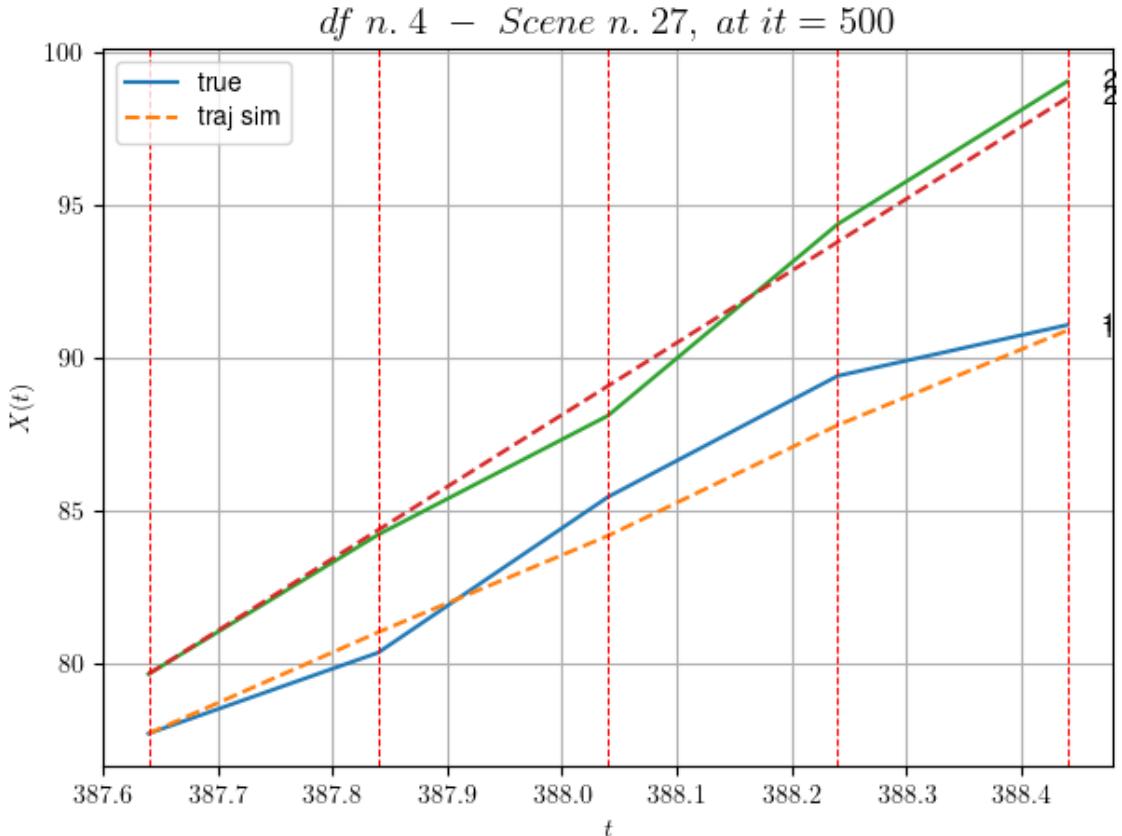
* v_ann: [15.520041465759277, 23.572406443207264]
-----
```

```

* err= 0.629451529611361  

* Learning rate NN = 0.000239148415857926  

* diff = 0.007792513149931679
```



```

For scene 27/69
* use LR_NN=0.0005 with err=8.0603633429307 at it=24
* v0_scn_mean = 23.829510185426344
* MAE = 0.6216424754841376
=====
```

```
df n.4, scene n.28/69
=====
```

```

=====  

We have 3 time intervals inside [399.24,399.84]  

- Time interval n.0: [399.24, 399.44]  

* y_true: [21.7511121]  

* v_ann: [8.703736239112914e-05, 24.51238647530051]
```

```

-----  

- Time interval n.1: [399.44, 399.64]  

* y_true: [18.26102056]  

* v_ann: [4.456001988728531e-05, 24.51238647530051]
-----
```

```

-----  

- Time interval n.2: [399.64, 399.84]  

* y_true: [15.72103462]  

* v_ann: [2.7132860850542784e-05, 24.5123864753005
1]
```

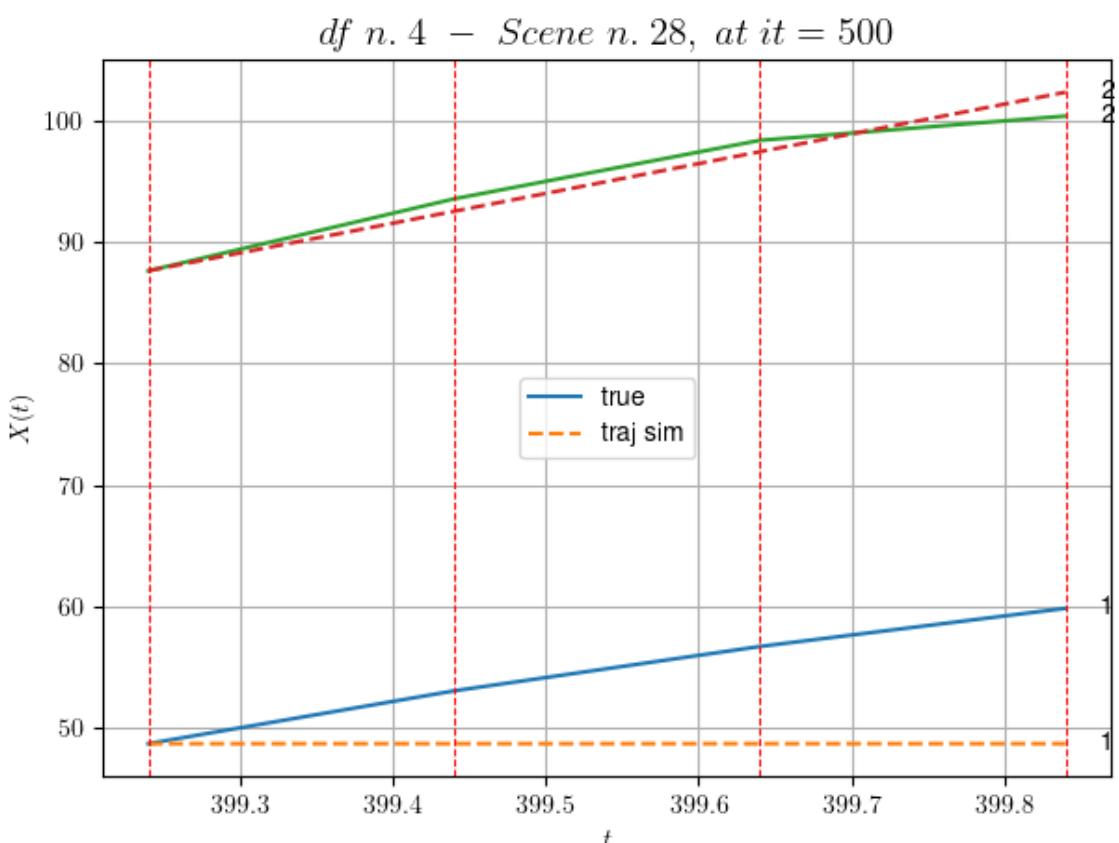
```

-----  

* err= 26.622856504868302  

* Learning rate NN = 5.904899080633186e-05  

* diff = 4.127822863857228e-06
```



For scene 28/69

```

* use LR_NN=0.0001 with err=3.844956639560539 at it=24
* v0_scn_mean = 24.731891016242773
* MAE = 26.622856504868302
=====
```

df n.4, scene n.29/69

```

=====  

We have 2 time intervals inside [406.24,406.64]  

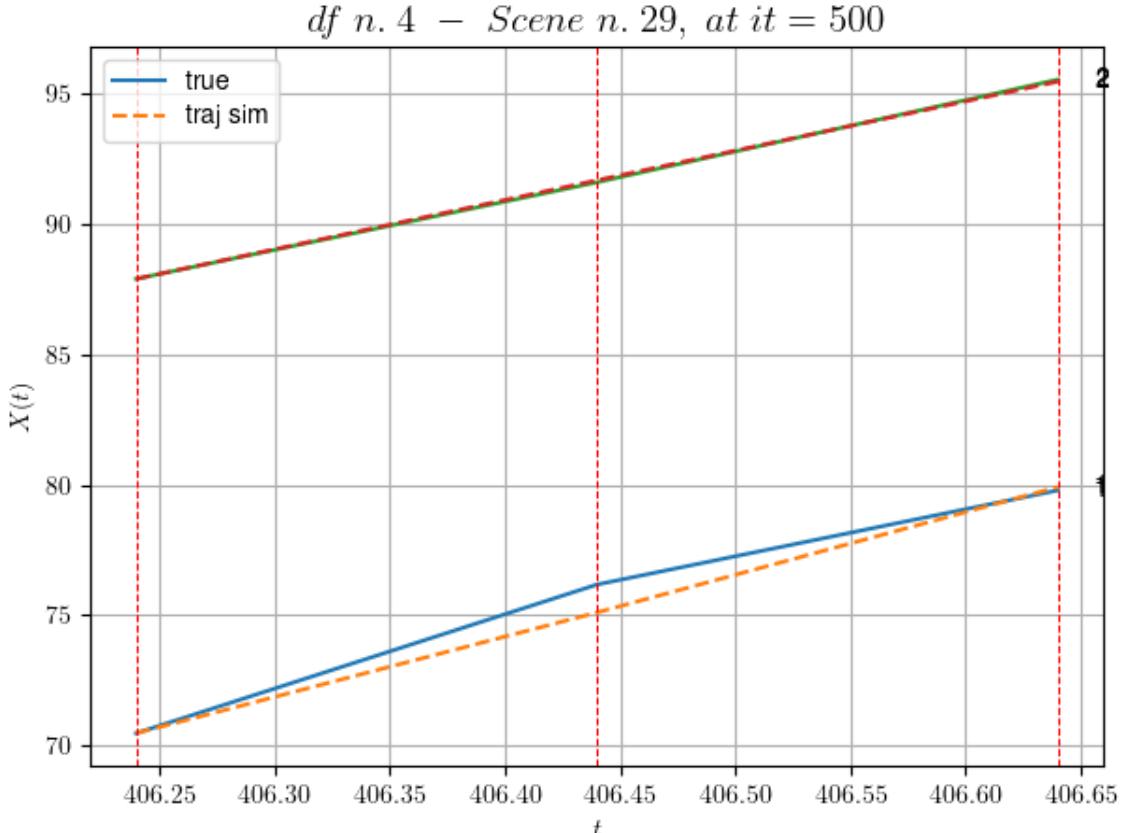
- Time interval n.0: [406.24, 406.44]  

* y_true: [28.52295146]
```

```
* v_ann: [23.163354873657227, 18.92651954143322]
```

- Time interval n.1: [406.44, 406.64]
 - * y_true: [18.07207404]
 - * v_ann: [24.077993392944336, 18.92651954143322]

- * err= 0.19635116762535326
- * Learning rate NN = 7.289998757187277e-05
- * diff = 0.004240313975012788



For scene 29/69

- * use LR_NN=0.0001 with err=4.13636224960446 at it=24
- * v0_scn_mean = 19.369458759691994
- * MAE = 0.19635116762535326

df n.4, scene n.30/69

We have 10 time intervals inside [408.84, 410.84]

- Time interval n.0: [408.84, 409.04]
 - * y_true: [15.25021324]
 - * v_ann: [19.415260314941406, 20.951718350918654]

- Time interval n.1: [409.04, 409.24]

```
* y_true: [19.57034716]
* v_ann: [19.408143997192383, 20.951718350918654]

-----
- Time interval n.2: [409.24, 409.44]
* y_true: [20.90046989]
* v_ann: [19.47748565673828, 20.951718350918654]

-----
- Time interval n.3: [409.44, 409.64]
* y_true: [17.04047168]
* v_ann: [19.56835174560547, 20.951718350918654]

-----
- Time interval n.4: [409.64, 409.84]
* y_true: [19.11067999]
* v_ann: [19.703916549682617, 20.951718350918654]

-----
- Time interval n.5: [409.84, 410.04]
* y_true: [35.07645673]
* v_ann: [19.675052642822266, 20.951718350918654]

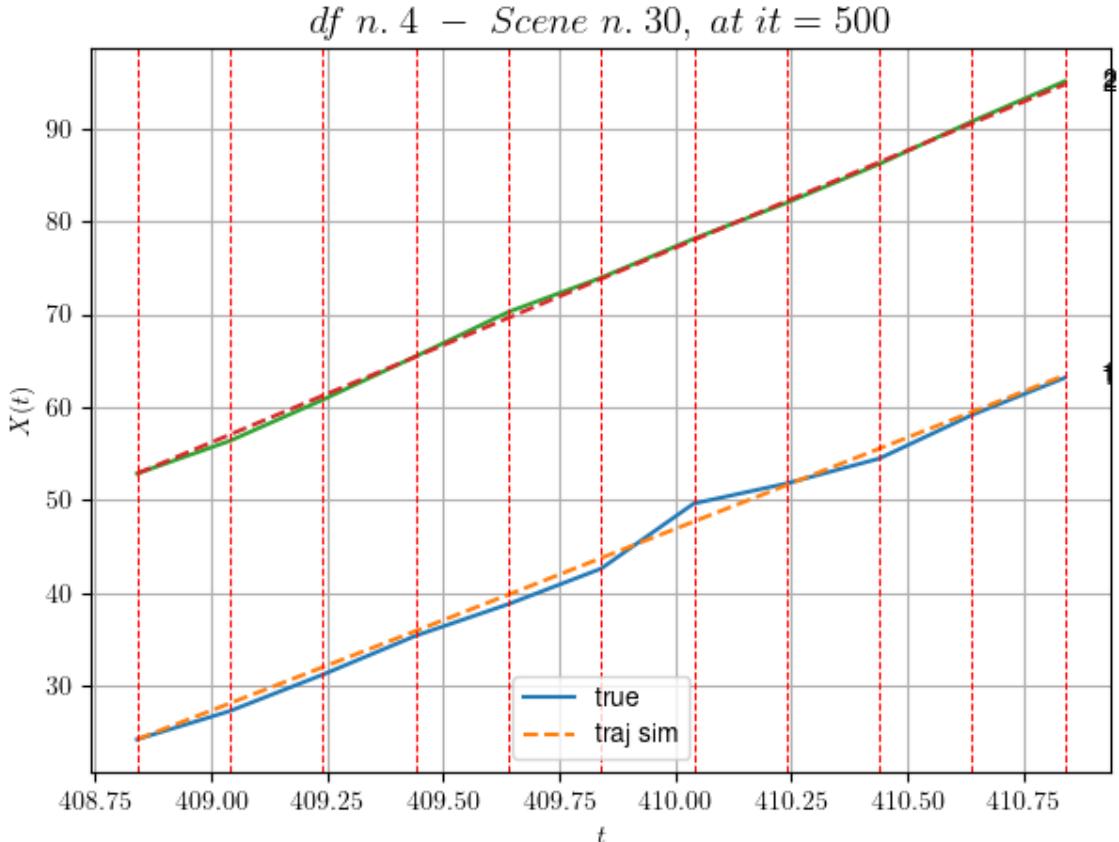
-----
- Time interval n.6: [410.04, 410.24]
* y_true: [10.77556615]
* v_ann: [19.585050582885742, 20.951718350918654]

-----
- Time interval n.7: [410.24, 410.44]
* y_true: [13.46075357]
* v_ann: [19.671321868896484, 20.951718350918654]

-----
- Time interval n.8: [410.44, 410.64]
* y_true: [23.47149956]
* v_ann: [19.754003524780273, 20.951718350918654]

-----
- Time interval n.9: [410.64, 410.84]
* y_true: [20.00147803]
* v_ann: [19.816478729248047, 20.951718350918654]

* err= 0.47116788392064435
* Learning rate NN = 1.350850993731001e-06
* diff = 0.0009521392741468904
```



For scene 30/69

- * use LR_NN=1e-05 with err=56.88102637580789 at it=24
- * v0_scn_mean = 21.31364961681277
- * MAE = 0.470104626866626003

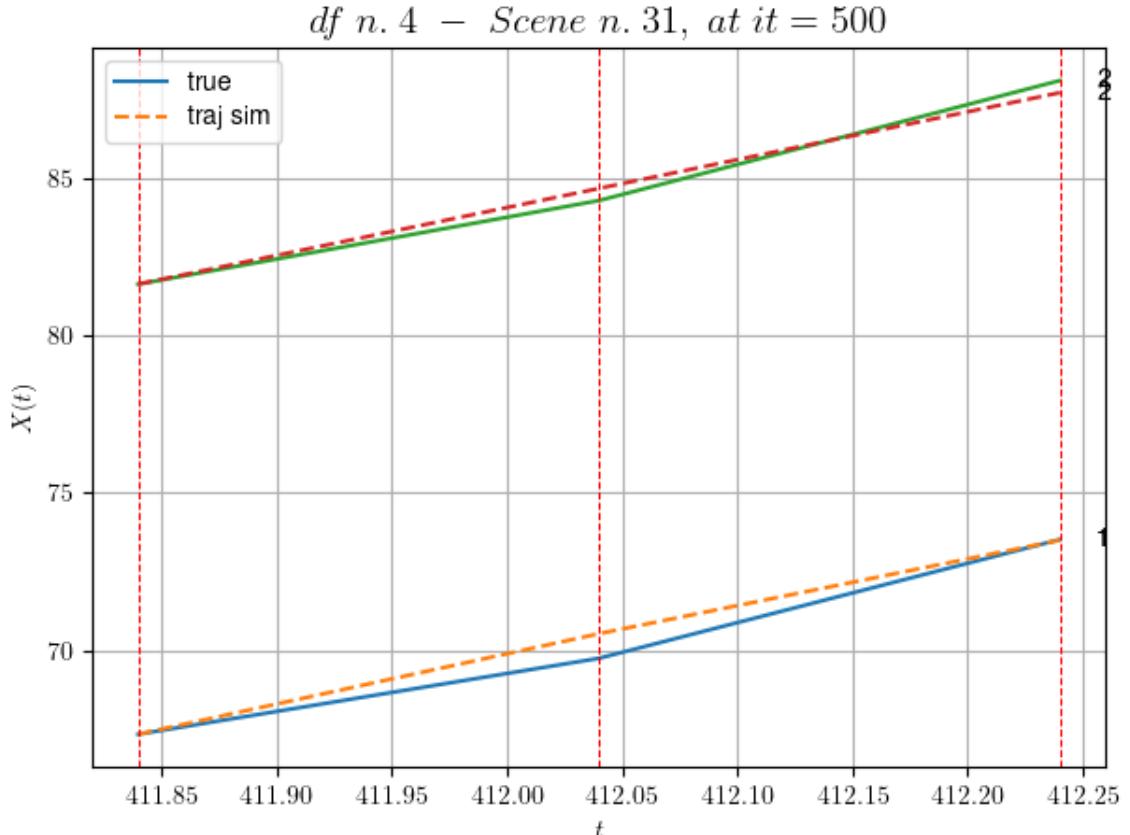
df n.4, scene n.31/69

We have 2 time intervals inside [411.84, 412.24]

- Time interval n.0: [411.84, 412.04]
 - * y_true: [12.04108576]
 - * v_ann: [15.94141674041748, 15.182121050297138]

- Time interval n.1: [412.04, 412.24]
 - * y_true: [18.83181821]
 - * v_ann: [14.821612358093262, 15.182121050297138]

- * err= 0.1506656279604215
- * Learning rate NN = 0.00036449998151510954
- * diff = 8.424257161970816e-05



For scene 31/69

- * use LR_NN=0.0005 with err=7.102272914305548 at it=24
- * v0_scn_mean = 15.774836208171816
- * MAE = 0.14740632727542186

df n.4, scene n.32/69

We have 10 time intervals inside [419.84, 421.84]

- Time interval n.0: [419.84, 420.04]
 - * y_true: [17.73058344]
 - * v_ann: [15.612460136413574, 25.806420226564196]

- Time interval n.1: [420.04, 420.24]
 - * y_true: [26.13095885]
 - * v_ann: [16.894102096557617, 25.806420226564196]

- Time interval n.2: [420.24, 420.44]
 - * y_true: [16.22073507]
 - * v_ann: [15.998559951782227, 25.806420226564196]

- Time interval n.3: [420.44, 420.64]
 - * y_true: [31.54187385]

* v_ann: [18.822208404541016, 25.806420226564196]

- Time interval n.4: [420.64, 420.84]
* y_true: [34.75224249]
* v_ann: [19.357378005981445, 25.806420226564196]

- Time interval n.5: [420.84, 421.04]
* y_true: [6.73053681]
* v_ann: [19.222871780395508, 25.806420226564196]

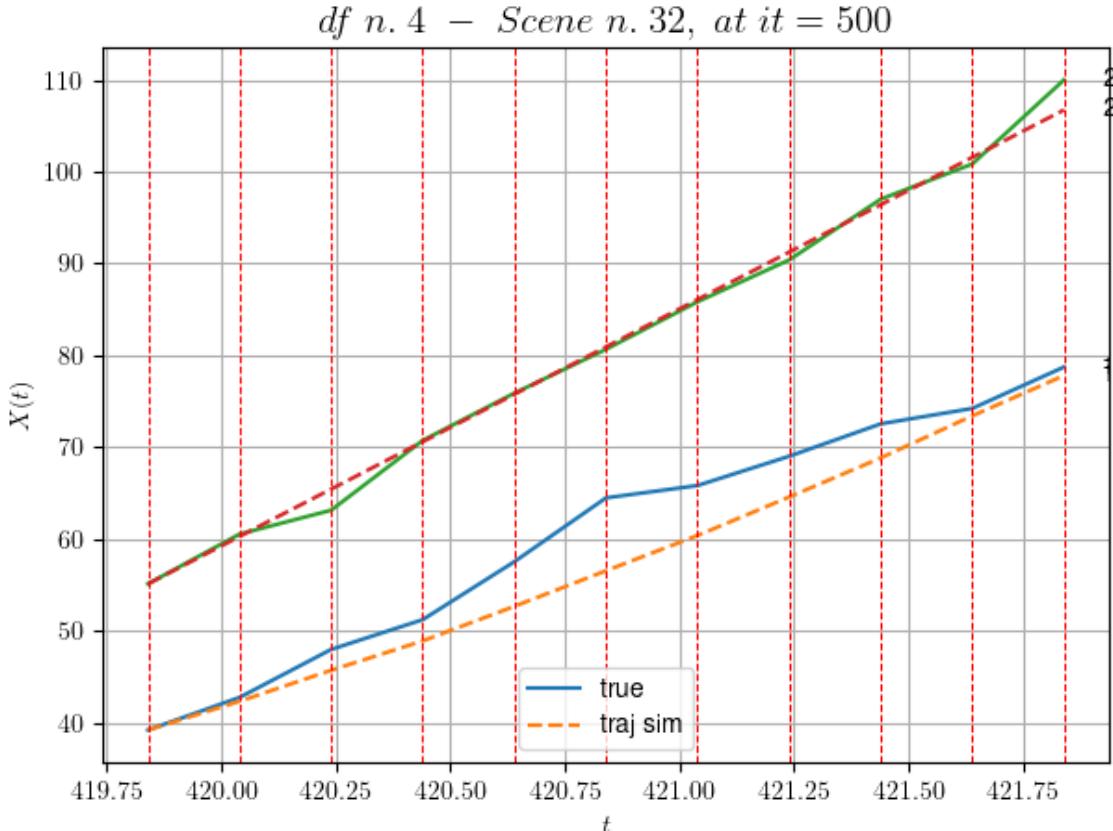
- Time interval n.6: [421.04, 421.24]
* y_true: [15.94137727]
* v_ann: [20.938589096069336, 25.806420226564196]

- Time interval n.7: [421.24, 421.44]
* y_true: [17.65161573]
* v_ann: [21.301250457763672, 25.806420226564196]

- Time interval n.8: [421.44, 421.64]
* y_true: [8.40084391]
* v_ann: [22.926977157592773, 25.806420226564196]

- Time interval n.9: [421.64, 421.84]
* y_true: [22.52258798]
* v_ann: [21.891918182373047, 25.806420226564196]

* err= 8.169776957623036
* Learning rate NN = 6.754255446139723e-05
* diff = 0.1688890744793703



For scene 32/69

```
* use LR_NN=0.0005 with err=15.66552771512275 at it=24
* v0_scn_mean = 25.9741634174697
* MAE = 4.115533843862008
```

df n.4, scene n.33/69

We have 5 time intervals inside [439.24, 440.24]

- Time interval n.0: [439.24, 439.44]
 - * y_true: [15.24141643]
 - * v_ann: [20.694467544555664, 21.563926495541605]

- Time interval n.1: [439.44, 439.64]
 - * y_true: [28.0128448]
 - * v_ann: [20.888477325439453, 21.563926495541605]

- Time interval n.2: [439.64, 439.84]
 - * y_true: [20.81245375]
 - * v_ann: [21.19978141784668, 21.563926495541605]

- Time interval n.3: [439.84, 440.04]
 - * y_true: [26.46342841]

```
* v_ann: [21.689128875732422, 21.563926495541605]
```

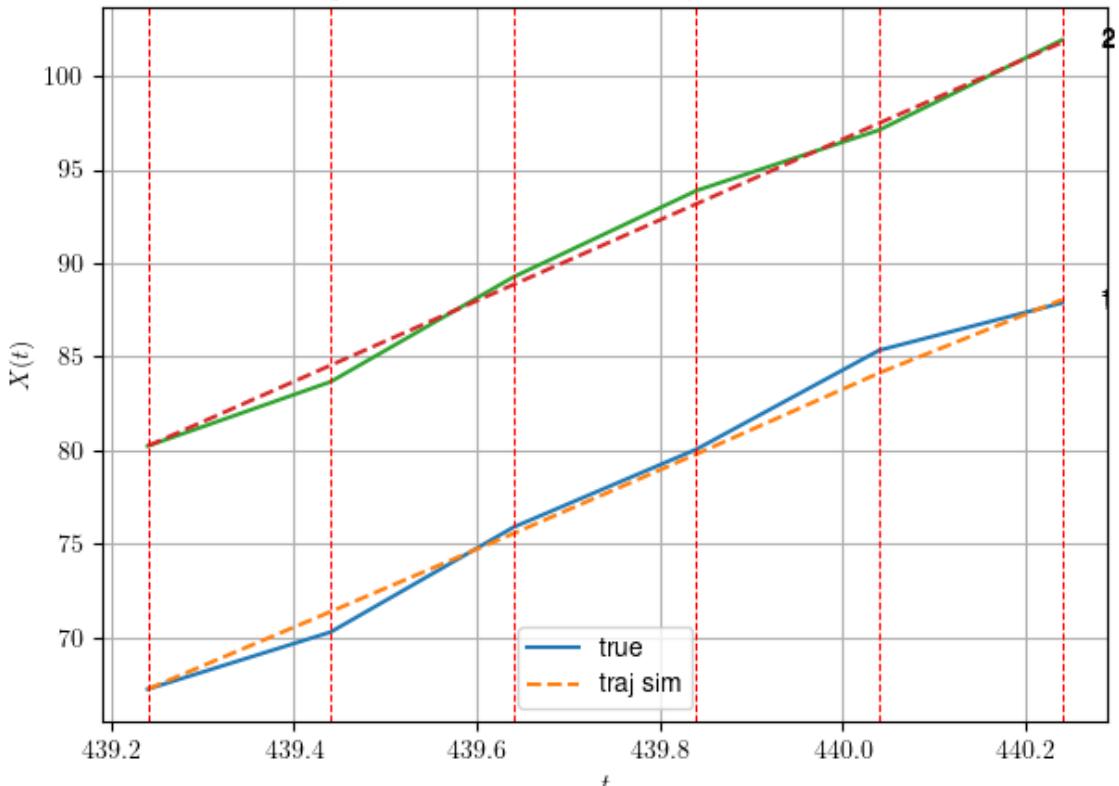
```
- Time interval n.4: [440.04, 440.24]
```

```
* y_true: [12.64182746]
```

```
* v_ann: [19.577960968017578, 21.563926495541605]
```

```
* err= 0.3713582310240523
* Learning rate NN = 3.874203684972599e-05
* diff = 0 0018730000687657844
```

df n. 4 – Scene n. 33, at it = 500



For scene 33/69

```
* use LR_NN=0.0001 with err=13.055860359284921 at it=24
```

```
* v0_scn_mean = 21.901369435655795
```

```
* MAE = 0.36819598948175203
```

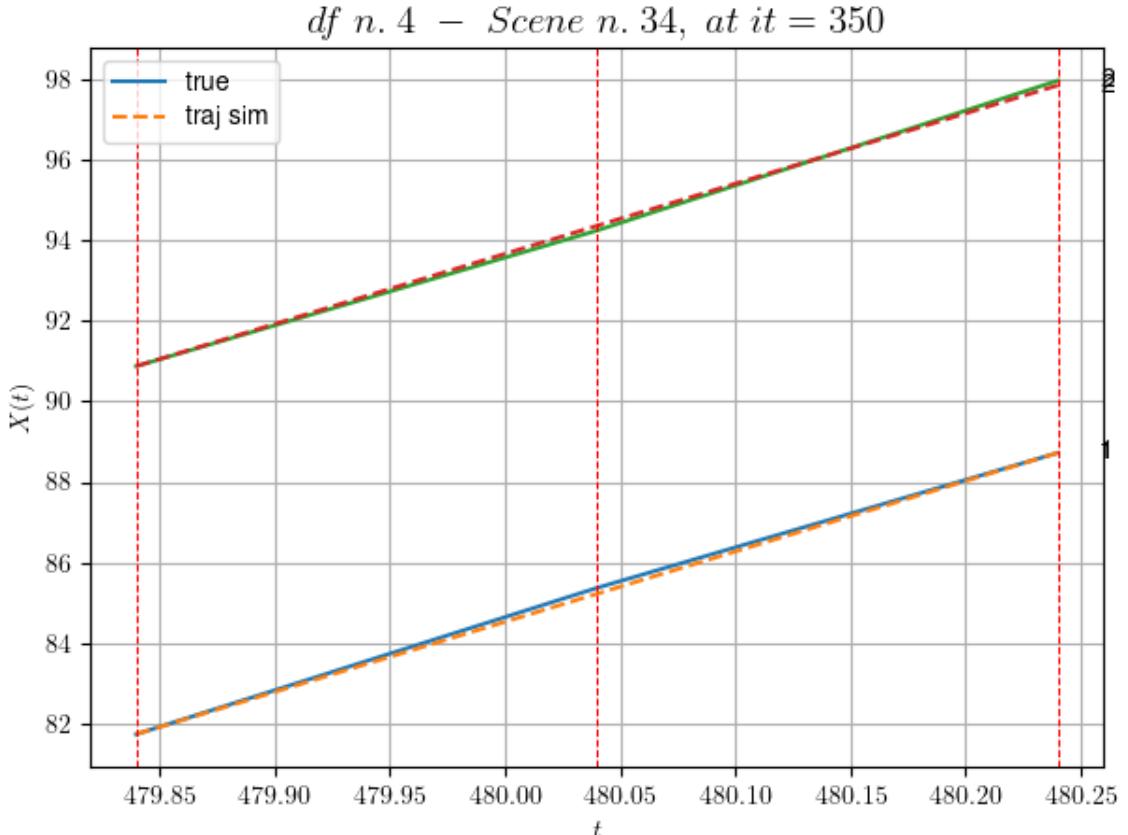
df n.4, scene n.34/69

We have 2 time intervals inside [479.84, 480.24]

```
* err= 0.008195195070373041
```

```
* Learning rate NN = 0.0008099999977275729
```

```
* diff = 1.8462289175756597e-07
```



For scene 34/69

- * use LR_NN=0.001 with err=5.164538083985146 at it=24
- * v0_scn_mean = 18.160527758823385
- * MAE = 0.008195194982950347

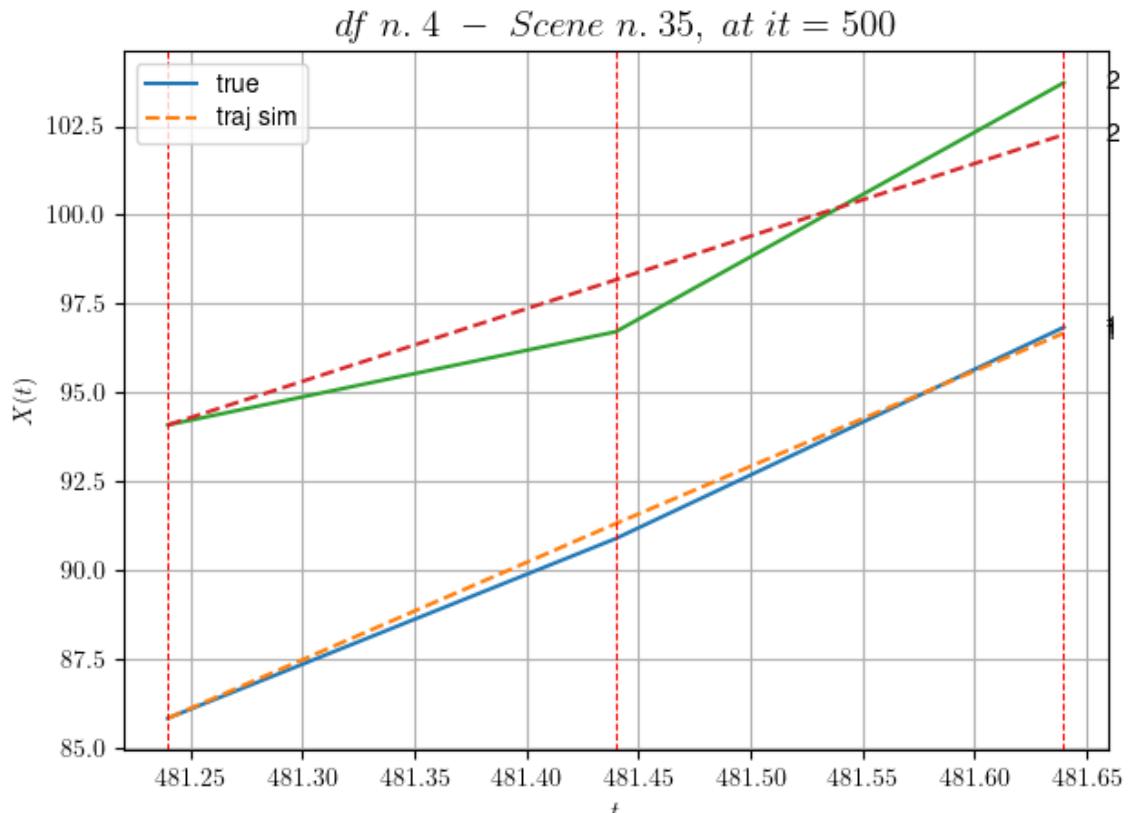
df n.4, scene n.35/69

We have 2 time intervals inside [481.24, 481.64]

- Time interval n.0: [481.24, 481.44]
 - * y_true: [25.25379303]
 - * v_ann: [27.359363555908203, 20.40371725522856]

- Time interval n.1: [481.44, 481.64]
 - * y_true: [29.69507773]
 - * v_ann: [26.764806747436523, 20.40371725522856]

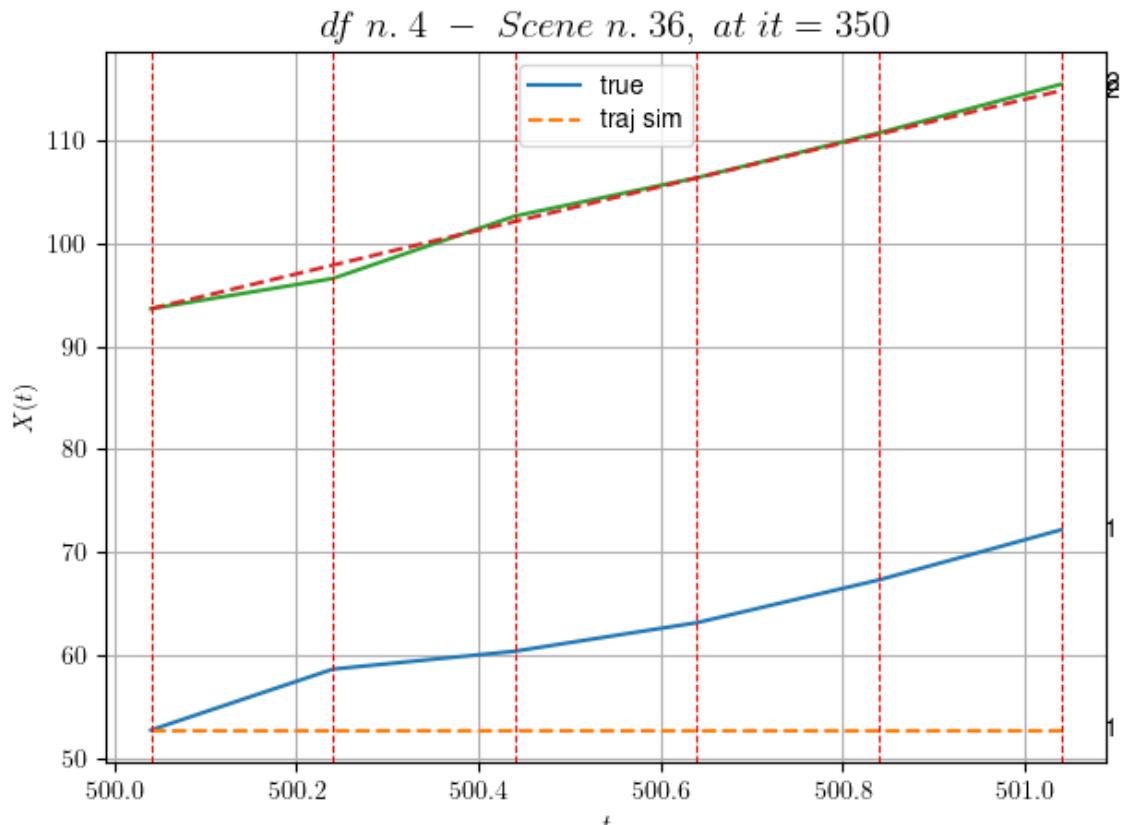
- * err= 0.7449088447900216
- * Learning rate NN = 0.00036449998151510954
- * diff = 0.010159062785185968



df n.4, scene n.36/69

We have 5 time intervals inside [500.04,501.04]

- * err= 66.38551969430182
- * Learning rate NN = 0.000265720474999398
- * diff = 1.9272468421149824e-07

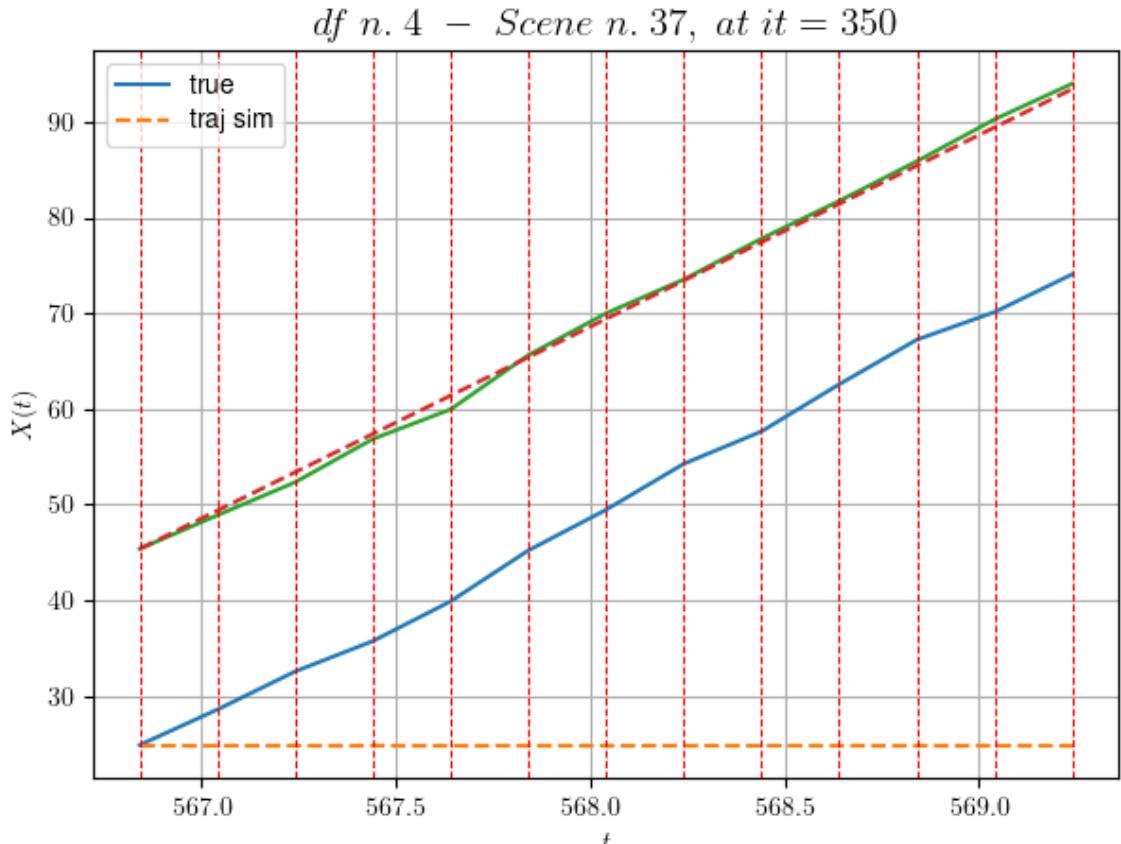


For scene 36/69

```
* use LR_NN=0.0005 with err=20.621744158164105 at it=24
* v0_scn_mean = 21.693025487279666
* MAE = 66.36758159052303
```

df n.4, scene n.37/69

```
We have 12 time intervals inside [566.84,569.24]
* err= 425.4906220933949
* Learning rate NN = 1.853019421105273e-05
* diff = 6.510250614155666e-07
```

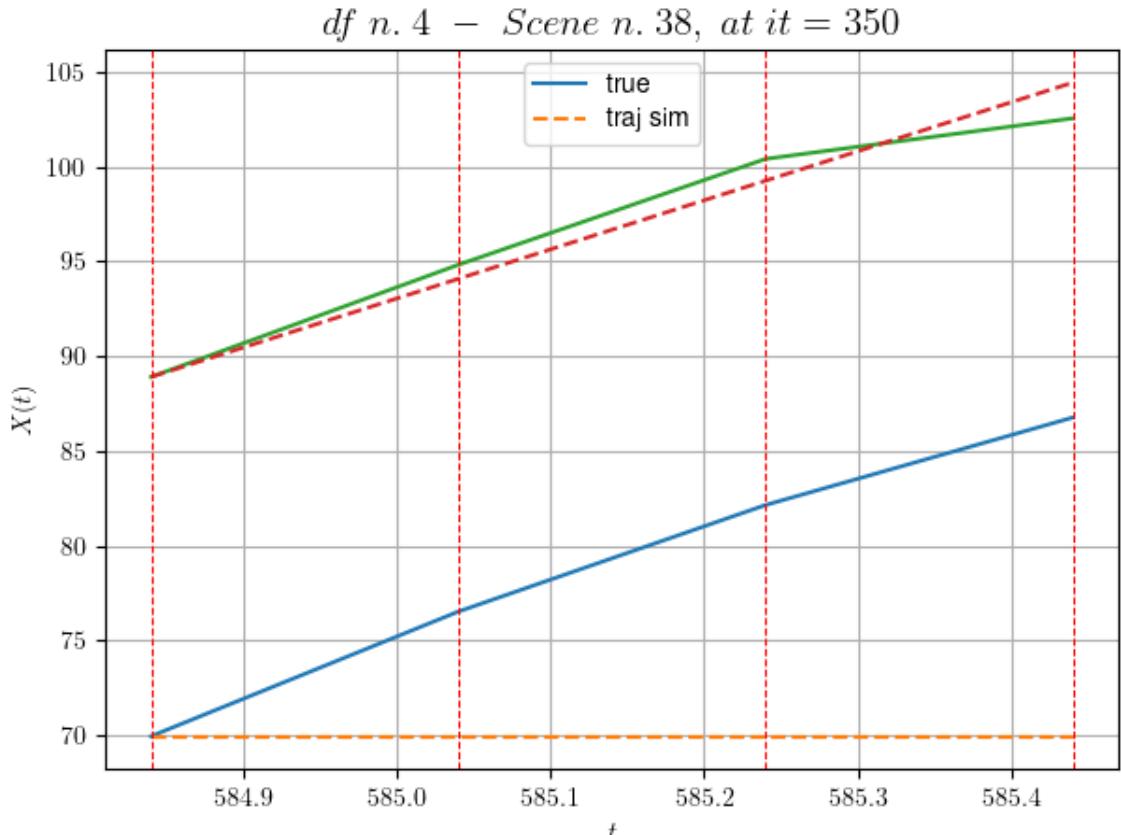


For scene 37/69

* use LR_NN=0.0001 with err=96.51967162571258 at it=24
* v0_scn_mean = 20.598288282615613
* MAE = 425.4613300718906

df n.4, scene n.38/69

We have 3 time intervals inside [584.84, 585.44]
* err= 60.043562018947604
* Learning rate NN = 6.560998735949397e-05
* diff = 1.0294824193124441e-07



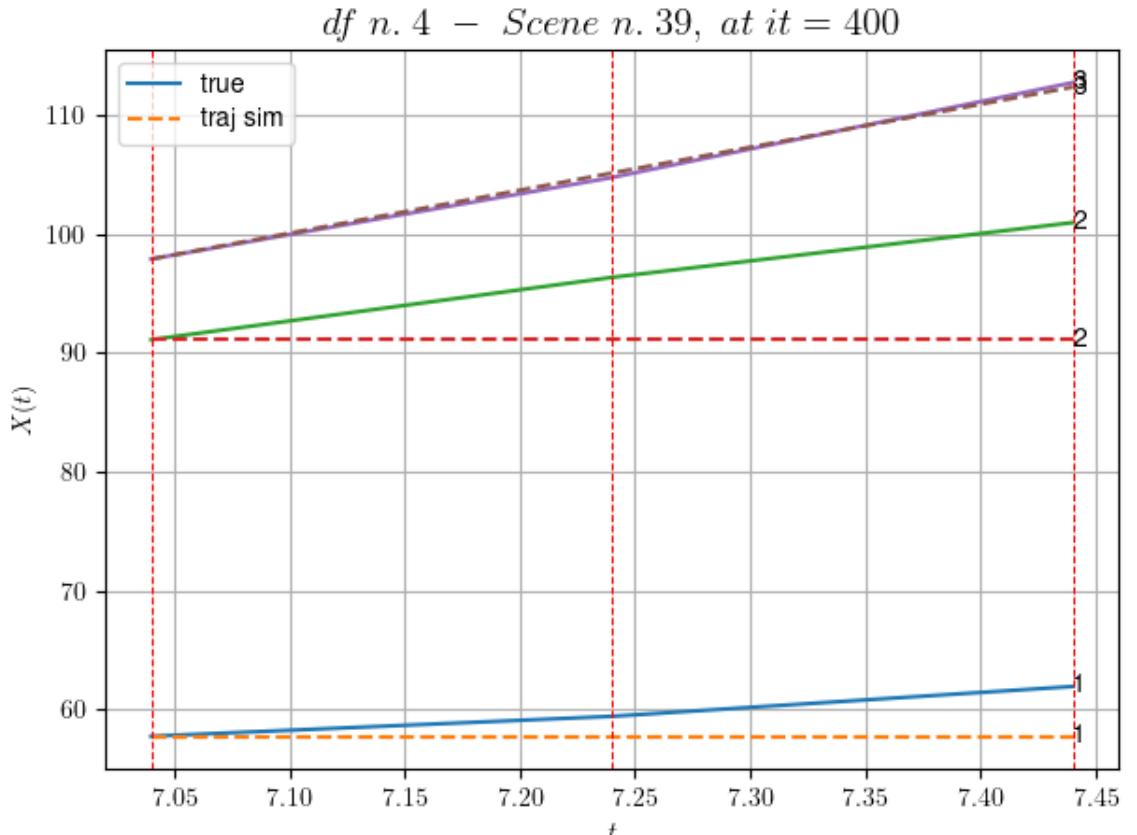
For scene 38/69

- * use LR_NN=0.0001 with err=2.635683386747166 at it=24
- * v0_scn_mean = 26.124329638512602
- * MAE = 60.043562018947604

df n.4, scene n.39/69

We have 2 time intervals inside [7.04, 7.44]

- * err= 16.10166677746437
- * Learning rate NN = 3.6449993785936385e-05
- * diff = 5.878896587319105e-07



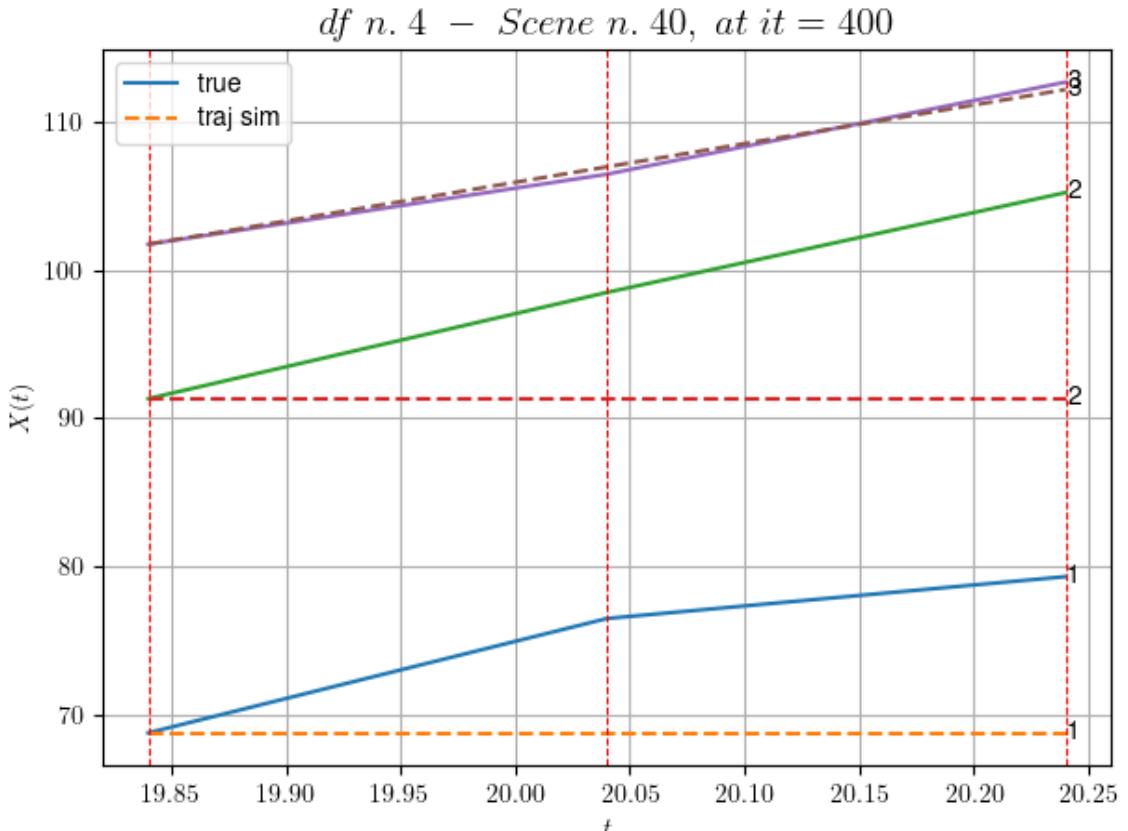
For scene 39/69

- * use LR_NN=5e-05 with err=12.134949121738094 at it=24
- * v0_scn_mean = 35.69266393106432
- * MAE = 16.10166677746437

df n.4, scene n.40/69

We have 2 time intervals inside [19.84,20.24]

- * err= 46.03659208004576
- * Learning rate NN = 7.289998757187277e-05
- * diff = 4.954649881483419e-07



For scene 40/69

- * use LR_NN=0.0001 with err=10.052534266794998 at it=24
- * v0_scn_mean = 26.3545436248869
- * MAE = 46.03110687101961

df n.4, scene n.41/69

We have 5 time intervals inside [23.64, 24.64]

- Time interval n.0: [23.64, 23.84]
 - * y_true: [16.50112189 27.57447859]
 - * v_ann: [16.042356491088867, 17.028274536132812, 2 5.974575559418643]

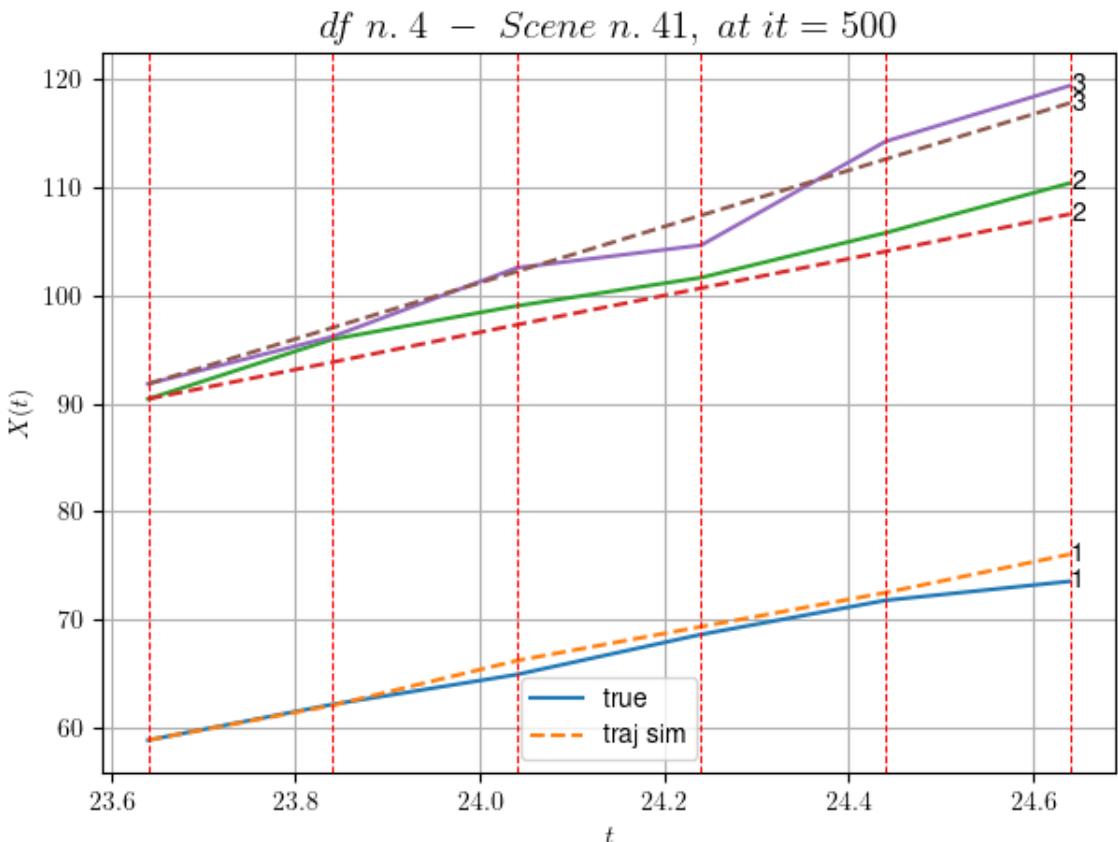
- Time interval n.1: [23.84, 24.04]
 - * y_true: [13.80103575 15.46275359]
 - * v_ann: [20.693511962890625, 17.274587631225586, 2 5.974575559418643]

- Time interval n.2: [24.04, 24.24]
 - * y_true: [18.55153987 13.07248815]
 - * v_ann: [15.709476470947266, 16.944408416748047, 2 5.974575559418643]

```
- Time interval n.3: [24.24, 24.44]
  * y_true: [15.75144675 20.6942352 ]
  * v_ann: [15.726713180541992, 16.947555541992188, 2
5.974575559418643]
```

```
- Time interval n.4: [24.44, 24.64]
  * y_true: [ 8.80086699 23.00509018]
  * v_ann: [17.74277687072754, 17.281896591186523, 2
5.974575559418643]
```

```
* err= 2.348175658709881  
* Learning rate NN = 0.0001937102060765028  
* diff = 0.06931788263958438
```

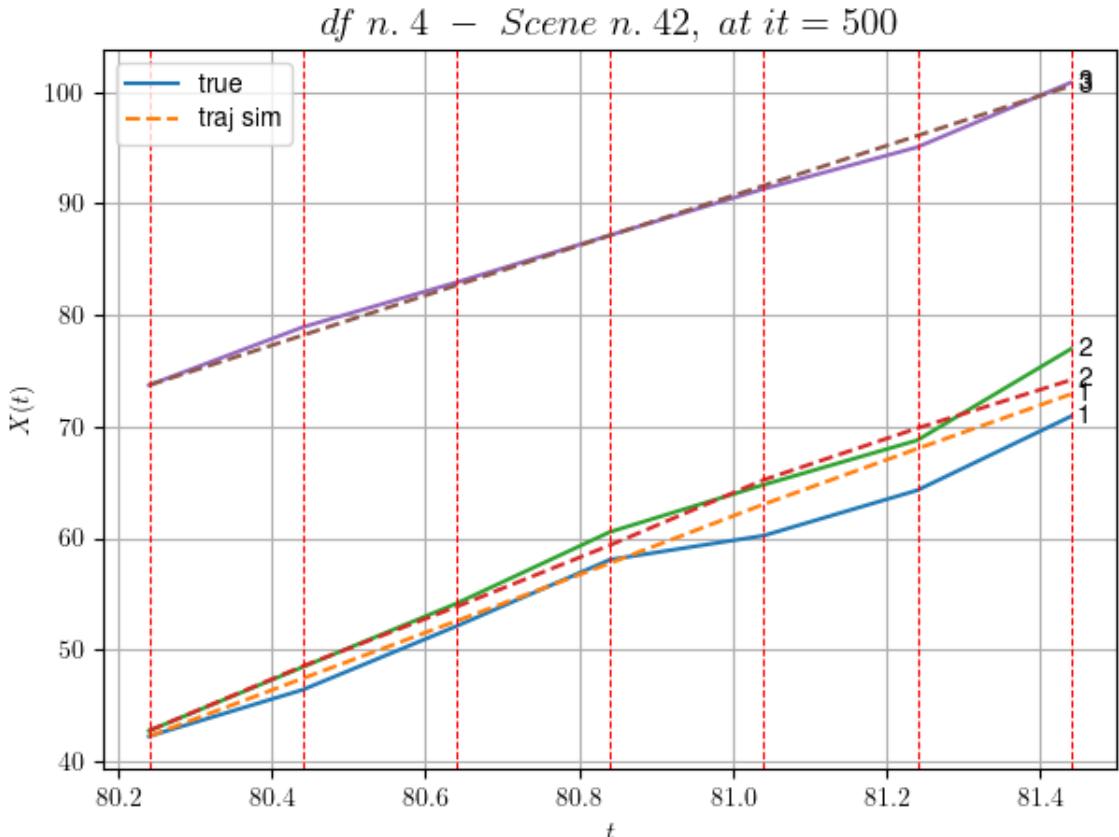


```
For scene 41/69
* use LR_NN=0.0005 with err=36.78755719394049 at it=24
* v0_scn_mean = 26.216100845120653
* MAE = 2.348175658709881
```

df n.4, scene n.42/69

```
We have 6 time intervals inside [80.24,81.44]
- Time interval n.0: [80.24, 80.44]
  * y true: [20.8407888 28.56113721]
```

```
* v_ann: [25.91674041748047, 28.960485458374023, 2  
2.36777427387445]  
-----  
-----  
- Time interval n.1: [80.44, 80.64]  
* y_true: [28.49133895 28.481454 ]  
* v_ann: [25.737730026245117, 26.596628189086914, 2  
2.36777427387445]  
-----  
-----  
- Time interval n.2: [80.64, 80.84]  
* y_true: [29.84173661 32.11200361]  
* v_ann: [25.955469131469727, 27.645427703857422, 2  
2.36777427387445]  
-----  
-----  
- Time interval n.3: [80.84, 81.04]  
* y_true: [10.79069268 21.14157827]  
* v_ann: [26.400598526000977, 29.28911781311035, 2  
2.36777427387445]  
-----  
-----  
- Time interval n.4: [81.04, 81.24]  
* y_true: [20.33152897 19.96178137]  
* v_ann: [24.92088508605957, 23.156051635742188, 2  
2.36777427387445]  
-----  
-----  
- Time interval n.5: [81.24, 81.44]  
* y_true: [33.14293198 40.94411969]  
* v_ann: [24.465707778930664, 21.632930755615234, 2  
2.36777427387445]  
-----  
-----  
* err= 1.8827322740582115  
* Learning rate NN = 0.00015690525469835848  
* diff = 0.015124102017063176
```



For scene 42/69

- * use LR_NN=0.0005 with err=73.12987711377515 at it=24
- * v0_scn_mean = 22.825707474771534
- * MAE = 1.3237811769042294

df n.4, scene n.43/69

We have 4 time intervals inside [89.04, 89.84]

- Time interval n.0: [89.04, 89.24]
 - * y_true: [19.34082001 24.8230577]
 - * v_ann: [19.48430824279785, 19.524566650390625, 3 2.77543163260242]

- Time interval n.1: [89.24, 89.44]
 - * y_true: [14.120693 17.32233598]
 - * v_ann: [20.006067276000977, 19.966964721679688, 3 2.77543163260242]

- Time interval n.2: [89.44, 89.64]
 - * y_true: [18.19104002 31.50485669]
 - * v_ann: [19.093351364135742, 19.157825469970703, 3 2.77543163260242]

```

-----  

- Time interval n.3: [89.64, 89.84]  

* y_true: [22.07139916 11.31182118]  

* v_ann: [20.42330551147461, 20.36648941040039, 32.  

77543163260242]
-----
```

```

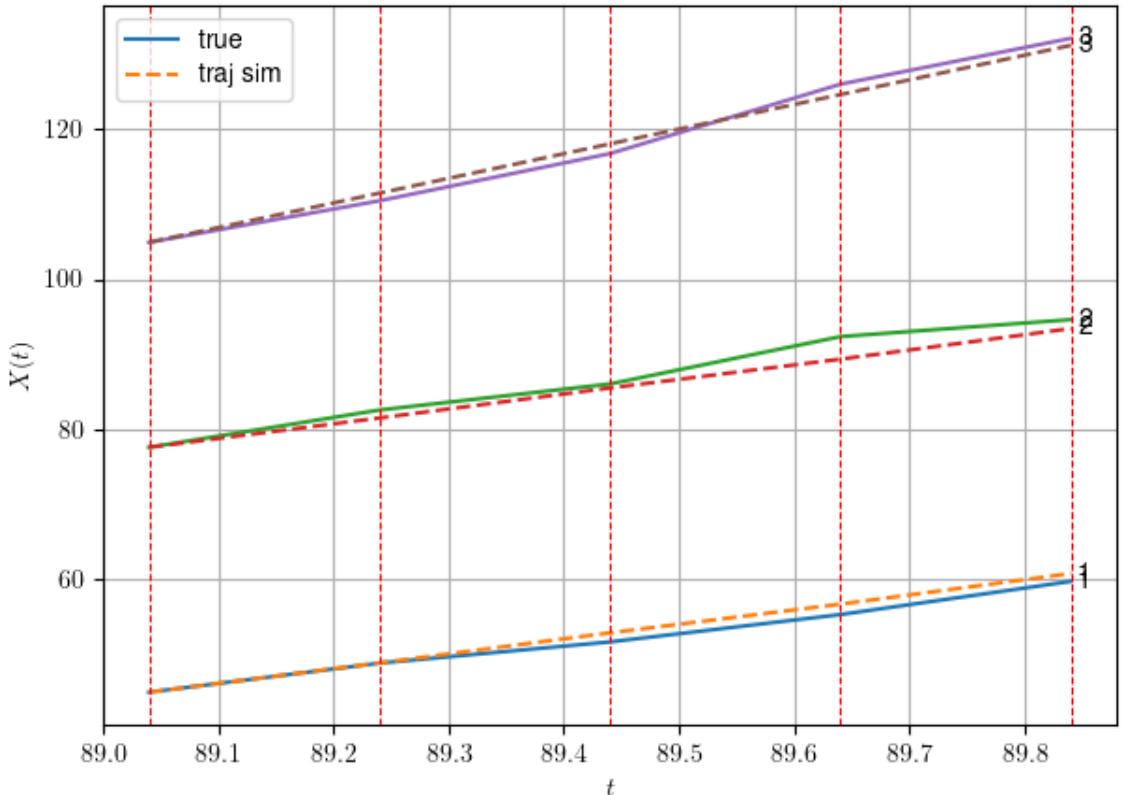
-----  

* err= 1.4541249267479979  

* Learning rate NN = 4.7829678806010634e-05  

* diff = 0.0008865996365723383
-----
```

df n. 4 – Scene n. 43, at it = 500



For scene 43/69

```

* use LR_NN=0.0001 with err=4.048821378096743 at it=24
* v0_scn_mean = 32.60890585925719
* MAE = 1.3897408691443012
=====
```

df n.4, scene n.44/69

```

=====
```

We have 6 time intervals inside [96.44, 97.64]

```

- Time interval n.0: [96.44, 96.64]  

* y_true: [16.86045215 20.08121647]  

* v_ann: [19.08827781677246, 19.46335792541504, 18.  

401280606024518]
=====
```

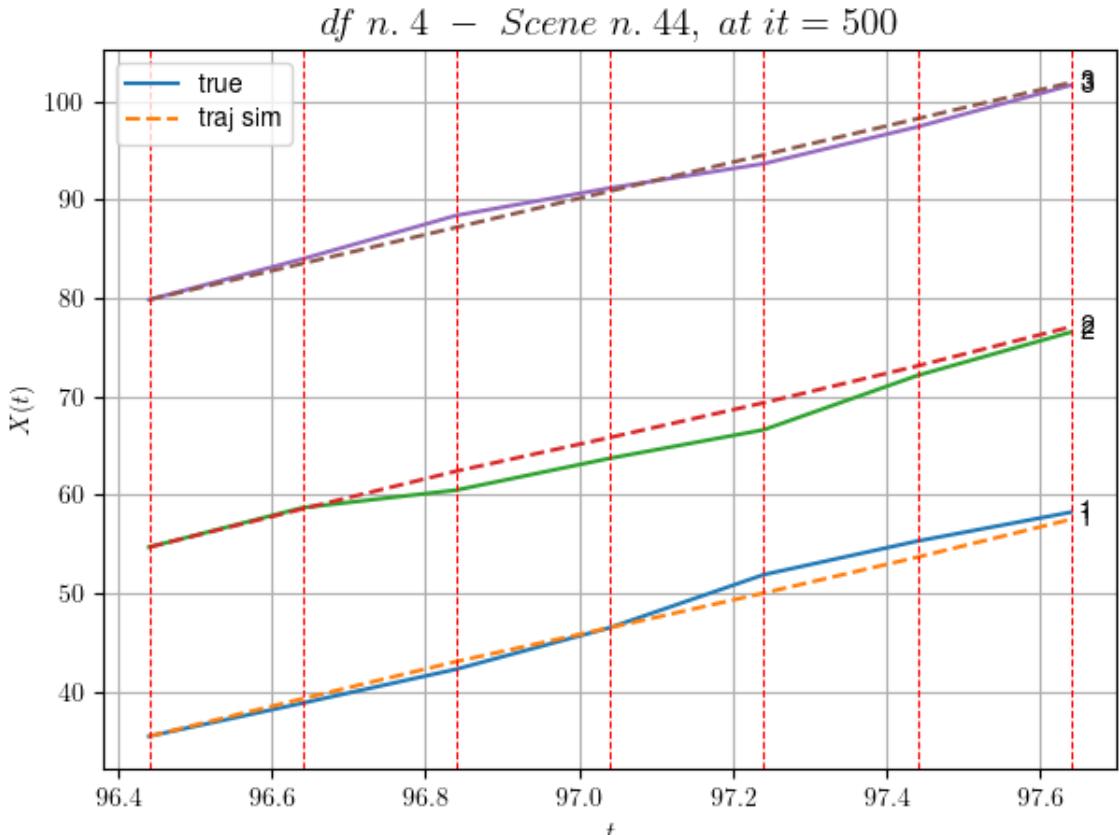
```

-----  

- Time interval n.1: [96.64, 96.84]  

* y_true: [17.24055532 8.93061591]
-----
```

```
* v_ann: [18.891311645507812, 19.184701919555664, 1  
8.401280606024518]  
-----  
-----  
- Time interval n.2: [96.84, 97.04]  
* y_true: [21.11081641 16.18118624]  
* v_ann: [17.208160400390625, 17.10544204711914, 1  
8.401280606024518]  
-----  
-----  
- Time interval n.3: [97.04, 97.24]  
* y_true: [26.9212791 14.46120094]  
* v_ann: [17.588842391967773, 17.643766403198242, 1  
8.401280606024518]  
-----  
-----  
- Time interval n.4: [97.24, 97.44]  
* y_true: [17.07093447 27.60253797]  
* v_ann: [18.25347900390625, 18.717529296875, 18.40  
1280606024518]  
-----  
-----  
- Time interval n.5: [97.44, 97.64]  
* y_true: [14.70092006 22.05229805]  
* v_ann: [19.24661636352539, 19.891315460205078, 1  
8.401280606024518]  
-----  
-----  
* err= 1.3241018409537937  
* Learning rate NN = 0.00015690525469835848  
* diff = 0 026637871138583987
```



For scene 44/69

```
* use LR_NN=0.0005 with err=31.444276746229395 at it=24
* v0_scn_mean = 19.097203248905636
* MAE = 1.3241018409537937
```

df n.4, scene n.45/69

We have 7 time intervals inside [182.24,183.64]

- Time interval n.0: [182.24, 182.44]
 - * y_true: [18.61043577 13.125309]
 - * v_ann: [19.160371780395508, 19.840551376342773, 2

0.773199567272215]

- Time interval n.1: [182.44, 182.64]
 - * y_true: [12.51734154 21.64870909]
 - * v_ann: [18.7614688873291, 19.115854263305664, 20.

773199567272215]

- Time interval n.2: [182.64, 182.84]
 - * y_true: [15.03048681 24.29091592]
 - * v_ann: [19.075849533081055, 18.73789405822754, 2

0.773199567272215]

```

-----  

- Time interval n.3: [182.84, 183.04]  

* y_true: [10.23036632 31.71160501]  

* v_ann: [19.083576202392578, 18.913198471069336, 2  

0.773199567272215]  

-----  

- Time interval n.4: [183.04, 183.24]  

* y_true: [15.12061978 22.63128316]  

* v_ann: [19.140710830688477, 19.294851303100586, 2  

0.773199567272215]  

-----  

- Time interval n.5: [183.24, 183.44]  

* y_true: [17.50081627 28.99215837]  

* v_ann: [19.13018226623535, 19.226268768310547, 2  

0.773199567272215]  

-----  

- Time interval n.6: [183.44, 183.64]  

* y_true: [14.74077551 22.90183379]  

* v_ann: [19.330036163330078, 19.99858856201172, 2  

0.773199567272215]  

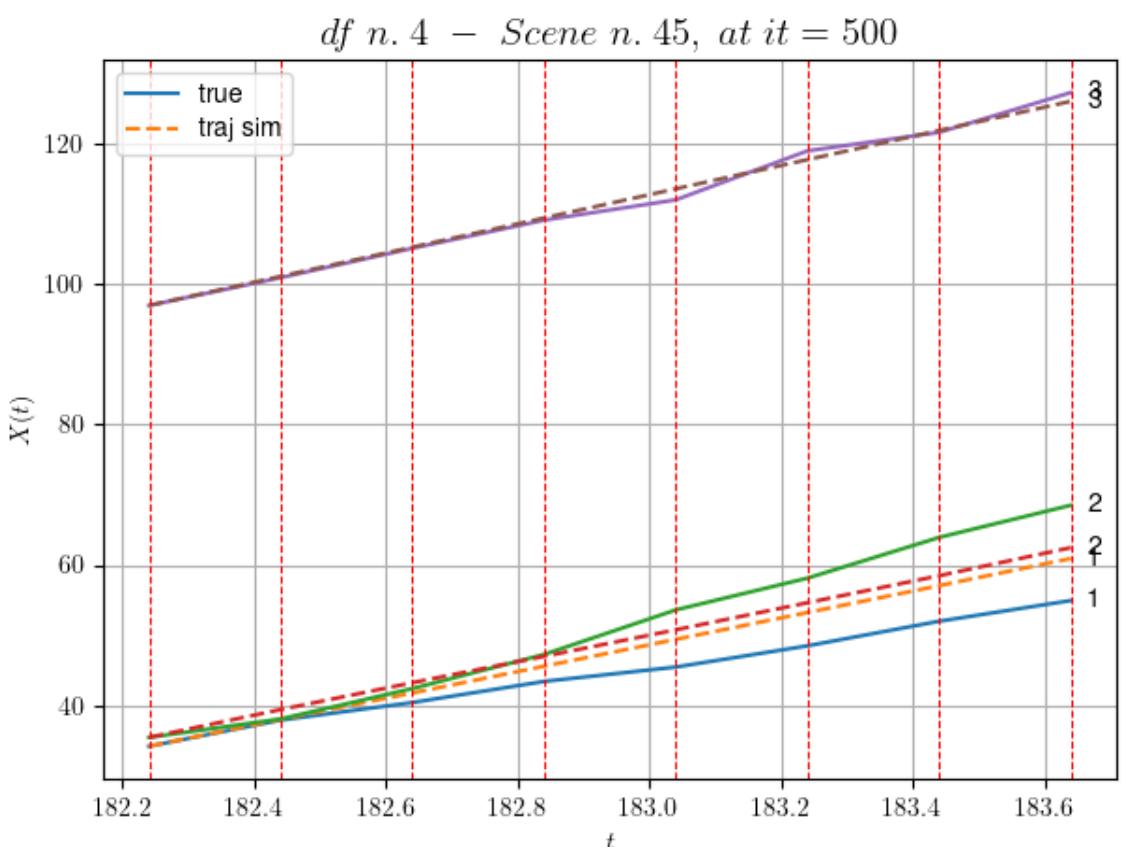
-----  

* err= 8.372122874978638  

* Learning rate NN = 2.5418647055630572e-05  

* diff = 0.0029025493953902526

```



For scene 45/69

```
* use LR_NN=0.0001 with err=60.738285669130676 at it=24
* v0_scn_mean = 21.326807178972565
* MAE = 8.27629417904412
```

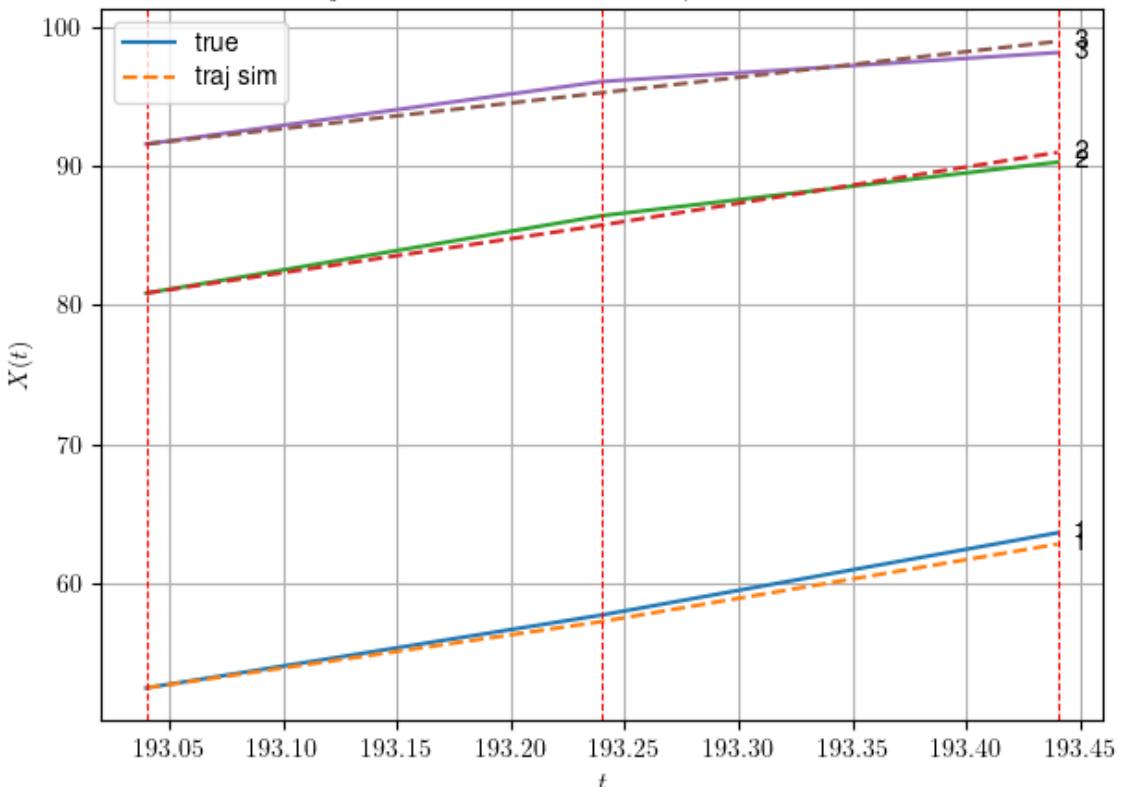
df n.4, scene n.46/69

```
We have 2 time intervals inside [193.04,193.44]
- Time interval n.0: [193.04, 193.24]
  * y_true: [26.28155868 27.90372348]
  * v_ann: [23.92286491394043, 24.52558708190918, 18.
506528748462788]
```

```
- Time interval n.1: [193.24, 193.44]
  * y_true: [29.63205884 19.30286837]
  * v_ann: [27.90478515625, 26.203096389770508, 18.50
6528748462788]
```

```
* err= 0.3496693388018947
* Learning rate NN = 0.00036449998151510954
* diff = 0 00012050471740554514
```

df n. 4 – Scene n. 46, at it = 500



For scene 46/69

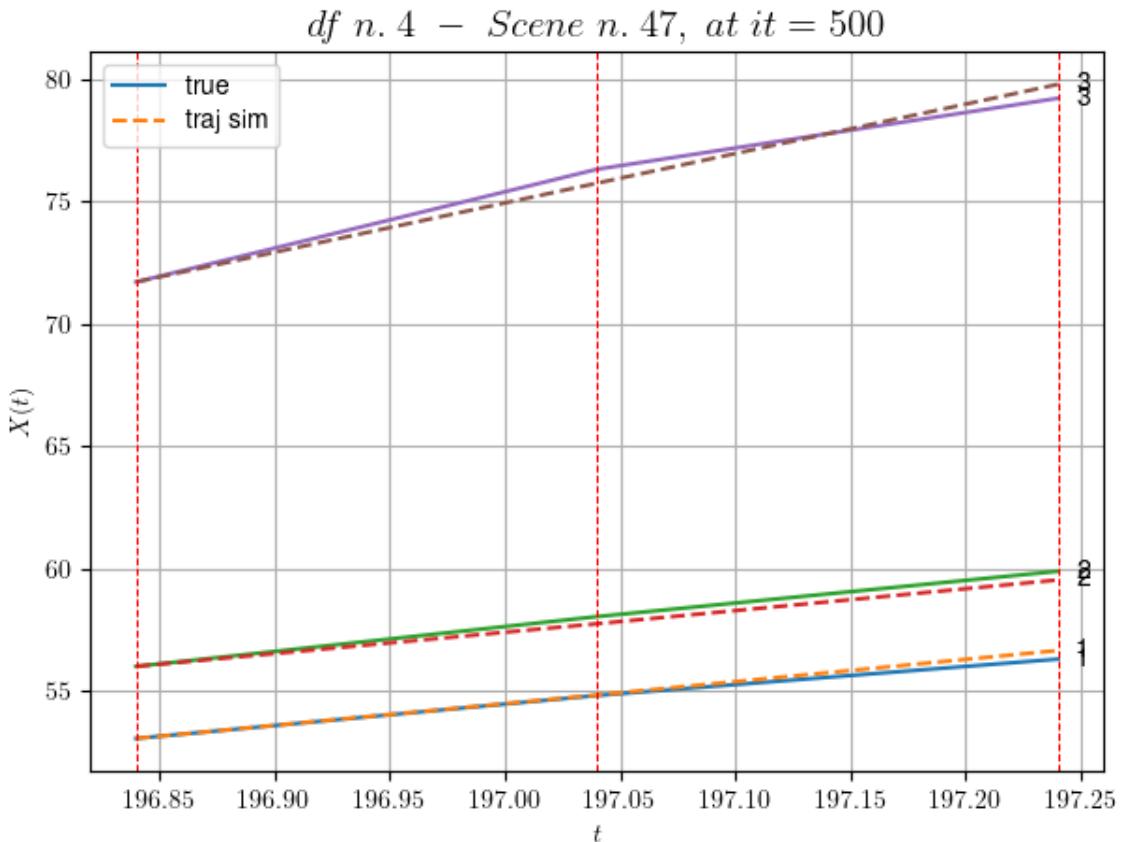
```
* use LR_NN=0.0005 with err=7.387037665436925 at it=24
* v0_scn_mean = 19.196136507522862
* MAE = 0.3383596287272292
```

df n.4, scene n.47/69

We have 2 time intervals inside [196.84,197.24]
 - Time interval n.0: [196.84, 197.04]
 * y_true: [8.77046468 10.16548364]
 * v_ann: [8.875702857971191, 8.707269668579102, 20.
 188773230043527]

- Time interval n.1: [197.04, 197.24]
 * y_true: [7.43042623 9.26246532]
 * v_ann: [9.093324661254883, 8.9464750289917, 20.18
 8773230043527]

* err= 0.10925897103056387
 * Learning rate NN = 0.0007289999630302191
 * diff = 7.021414967722794e-06



For scene 47/69

* use LR_NN=0.001 with err=3.0788398973081006 at it=24
 * v0_scn_mean = 20.777446395737986
 * MAE = 0.10925897103056387

```
df n.4, scene n.48/69
```

We have 3 time intervals inside [222.84, 223.44]

- Time interval n.0: [222.84, 223.04]
 - * y_true: [19.28108097 23.47419597]
 - * v_ann: [16.7547607421875, 17.138668060302734, 30.

107928662730306]

- Time interval n.1: [223.04, 223.24]
 - * y_true: [17.49110618 15.20291758]
 - * v_ann: [17.268657684326172, 17.35150146484375, 3

0.107928662730306]

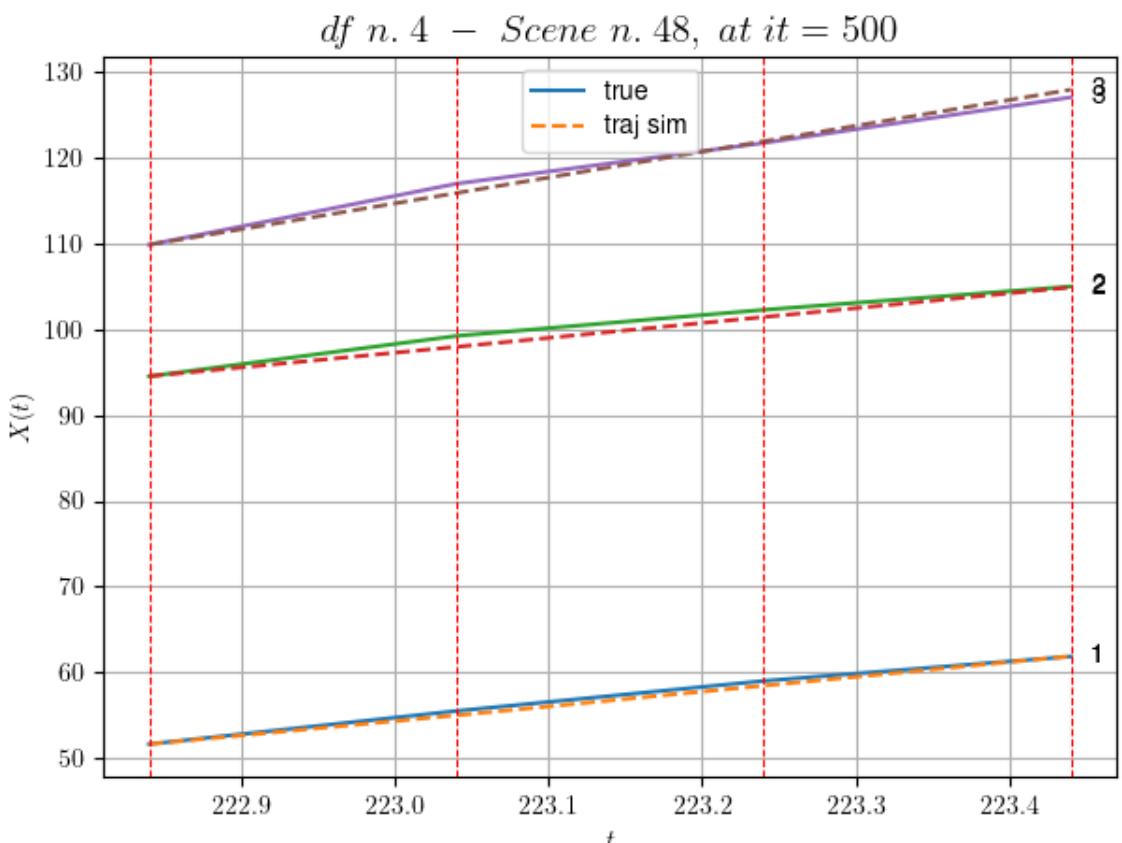
- Time interval n.2: [223.24, 223.44]
 - * y_true: [14.25100604 13.59283886]
 - * v_ann: [17.154531478881836, 17.287294387817383, 3

0.107928662730306]

* err= 0.4075921431444615

* Learning rate NN = 2.952449540316593e-05

* diff = 0.0034488118384290445



For scene 48/69

- * use LR_NN=5e-05 with err=5.524323579234557 at it=24
- * v0_scn_mean = 30.10145294781196
- * MAE = 0.4075921431444615

```
=====
=====
```

df n.4, scene n.49/69

```
=====
=====
```

We have 12 time intervals inside [224.84,227.24]

- Time interval n.0: [224.84, 225.04]
 - * y_true: [17.10046829 25.29311811]
 - * v_ann: [19.31416893005371, 19.347213745117188, 1
5.713677130054815]

```
-----
```

- Time interval n.1: [225.04, 225.24]
 - * y_true: [17.70062553 10.9614656]
 - * v_ann: [19.382970809936523, 19.366779327392578, 1
5.713677130054815]

```
-----
```

- Time interval n.2: [225.24, 225.44]
 - * y_true: [22.57087879 26.33405568]
 - * v_ann: [19.20474624633789, 19.325607299804688, 1
5.713677130054815]

```
-----
```

- Time interval n.3: [225.44, 225.64]
 - * y_true: [16.35079439 22.81365517]
 - * v_ann: [19.38402557373047, 19.366636276245117, 1
5.713677130054815]

```
-----
```

- Time interval n.4: [225.64, 225.84]
 - * y_true: [20.8811317 16.55300892]
 - * v_ann: [19.39168357849121, 19.368154525756836, 1
5.713677130054815]

```
-----
```

- Time interval n.5: [225.84, 226.04]
 - * y_true: [16.52103304 29.98602504]
 - * v_ann: [19.367244720458984, 19.363296508789062, 1
5.713677130054815]

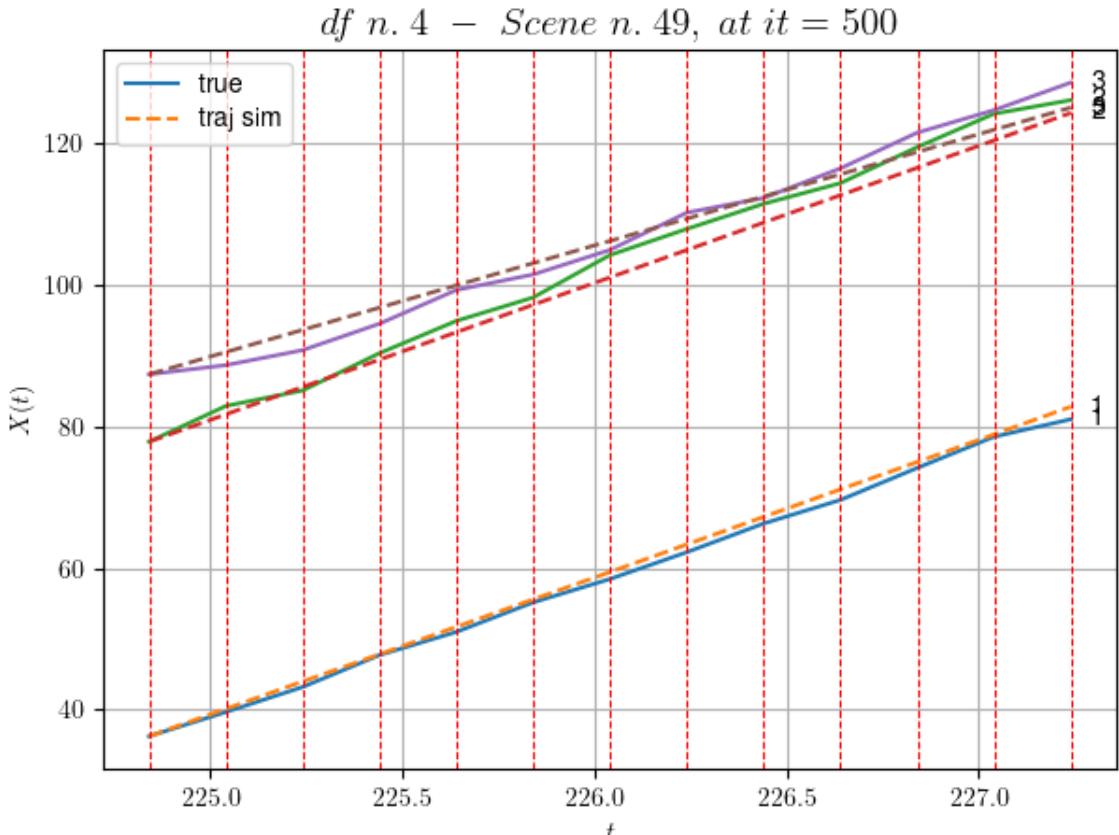
```
-----
```

- Time interval n.6: [226.04, 226.24]
 - * y_true: [18.95135857 18.46388585]
 - * v_ann: [19.50839614868164, 19.380199432373047, 1
5.713677130054815]

```
-----
```

- Time interval n.7: [226.24, 226.44]
 - * y_true: [20.26160248 17.75418412]

```
* v_ann: [19.479324340820312, 19.380504608154297, 1  
5.713677130054815]  
-----  
-----  
- Time interval n.8: [226.44, 226.64]  
* y_true: [16.68150299 14.60353303]  
* v_ann: [19.46108627319336, 19.375207901000977, 1  
5.713677130054815]  
-----  
-----  
- Time interval n.9: [226.64, 226.84]  
* y_true: [22.62228992 25.47686963]  
* v_ann: [19.32563018798828, 19.357297897338867, 1  
5.713677130054815]  
-----  
-----  
- Time interval n.10: [226.84, 227.04]  
* y_true: [22.04244959 23.58655245]  
* v_ann: [19.496458053588867, 19.382564544677734, 1  
5.713677130054815]  
-----  
-----  
- Time interval n.11: [227.04, 227.24]  
* y_true: [12.37151499 9.65291202]  
* v_ann: [19.620283126831055, 19.392961502075195, 1  
5.713677130054815]  
-----  
-----  
* err= 3.1328351425961016  
* Learning rate NN = 8.862932190822903e-06  
-----
```



For scene 49/69

- * use LR_NN=0.0001 with err=325.6366507946577 at it=24
- * v0_scn_mean = 16.570855860826516
- * MAE = 3.0412093921395047

df n.4, scene n.50/69

We have 7 time intervals inside [230.84, 232.24]

- Time interval n.0: [230.84, 231.04]
 - * y_true: [5.64695095 17.97864337]
 - * v_ann: [13.658041000366211, 14.046144485473633, 2

3.32272300258673]

- Time interval n.1: [231.04, 231.24]
 - * y_true: [5.72513489 21.19066695]
 - * v_ann: [13.714726448059082, 13.967601776123047, 2

3.32272300258673]

- Time interval n.2: [231.24, 231.44]
 - * y_true: [6.01015392 28.29114422]
 - * v_ann: [13.729654312133789, 13.955971717834473, 2

3.32272300258673]

```

-----  

    - Time interval n.3: [231.44, 231.64]  

      * y_true: [ 6.20016661 18.85086271]  

      * v_ann: [13.829450607299805, 14.088542938232422, 2  

3.32272300258673]  

-----  

    - Time interval n.4: [231.64, 231.84]  

      * y_true: [ 7.13021091 21.11121983]  

      * v_ann: [13.818363189697266, 14.040571212768555, 2  

3.32272300258673]  

-----  

    - Time interval n.5: [231.84, 232.04]  

      * y_true: [ 7.75024044 18.61116554]  

      * v_ann: [13.846146583557129, 14.044363021850586, 2  

3.32272300258673]  

-----  

    - Time interval n.6: [232.04, 232.24]  

      * y_true: [ 8.87530762 21.24160102]  

      * v_ann: [13.838680267333984, 13.998967170715332, 2  

3.32272300258673]  

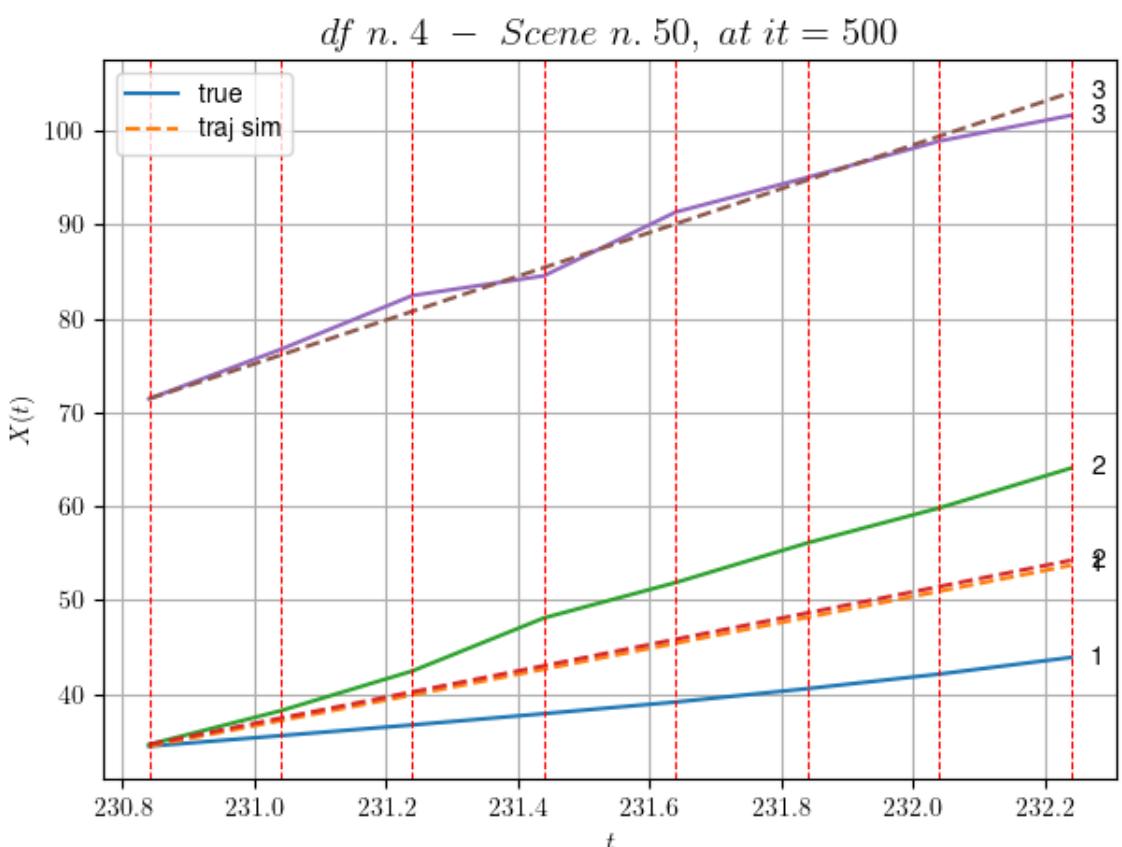
-----  

* err= 25.388333743149627  

* Learning rate NN = 2.5418647055630572e-05  

* diff = 0.0024786718440878985

```



For scene 50/69

```
* use LR_NN=0.0001 with err=20.946234006413064 at it=24
* v0_scn_mean = 23.723359322636174
* MAE = 25.333976685171603
```

```
=====
```

```
=====
```

```
df n.4, scene n.51/69
```

```
=====
```

```
=====
```

```
We have 7 time intervals inside [233.84,235.24]
```

```
- Time interval n.0: [233.84, 234.04]
  * y_true: [14.14101026 12.7012637 ]
  * v_ann: [21.122102737426758, 21.900388717651367, 2
```

```
1.4628064719882]
```

```
-----
```

```
- Time interval n.1: [234.04, 234.24]
```

```
  * y_true: [26.43219185 20.11227439]
  * v_ann: [20.965120315551758, 21.71673011779785, 2
```

```
1.4628064719882]
```

```
-----
```

```
- Time interval n.2: [234.24, 234.44]
```

```
  * y_true: [22.40209801 33.22429882]
  * v_ann: [20.939605712890625, 21.77785301208496, 2
```

```
1.4628064719882]
```

```
-----
```

```
- Time interval n.3: [234.44, 234.64]
```

```
  * y_true: [ 7.15071478 24.83361026]
  * v_ann: [21.1539363861084, 21.95320701599121, 21.4
```

```
628064719882]
```

```
-----
```

```
- Time interval n.4: [234.64, 234.84]
```

```
  * y_true: [26.44301464 23.06377261]
  * v_ann: [21.21064567565918, 21.699844360351562, 2
```

```
1.4628064719882]
```

```
-----
```

```
- Time interval n.5: [234.84, 235.04]
```

```
  * y_true: [27.303494 31.34578132]
  * v_ann: [21.25255584716797, 21.725648880004883, 2
```

```
1.4628064719882]
```

```
-----
```

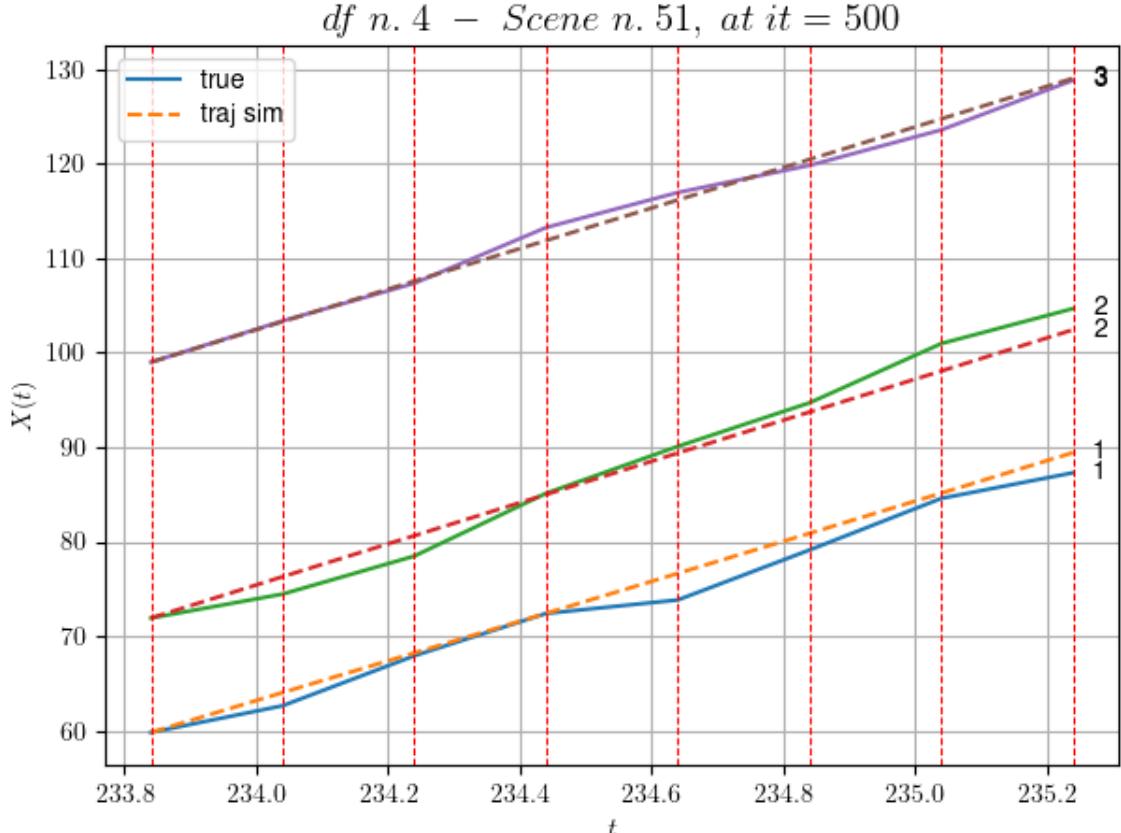
```
- Time interval n.6: [235.04, 235.24]
```

```
  * y_true: [13.58189317 18.51369375]
  * v_ann: [21.46734619140625, 21.824831008911133, 2
```

```
1.4628064719882]
```

```
-----
```

```
* err= 1.8852523657090323
* Learning rate NN = 1.2709323527815286e-05
```



For scene 51/69

```
* use LR_NN=5e-05 with err=32.570348479952095 at it=24
* v0_scn_mean = 21.97503770036764
* MAE = 1.4157379716447025
```

df n.4, scene n.52/69

We have 2 time intervals inside [302.44, 302.84]

- Time interval n.0: [302.44, 302.64]
 - * y_true: [15.00036276 19.90190261]
 - * v_ann: [19.92242431640625, 19.515018463134766, 2

5.744538233029136]

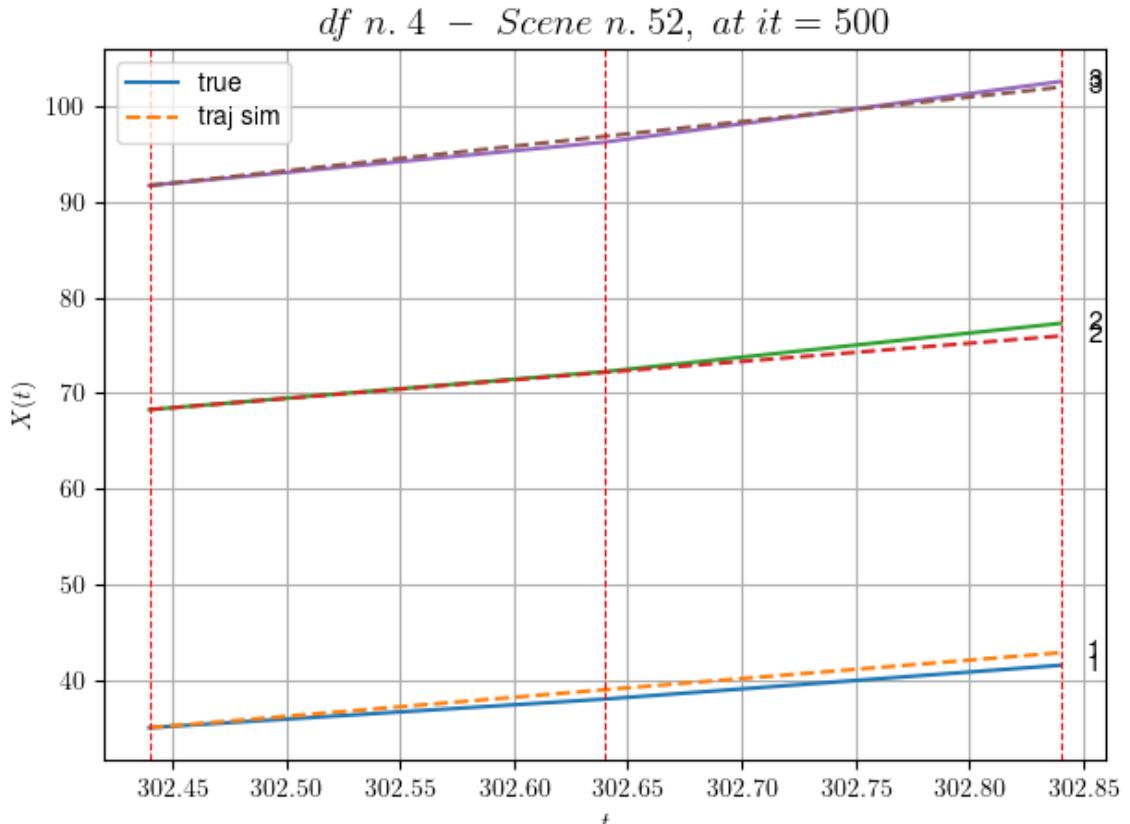
- Time interval n.1: [302.64, 302.84]
 - * y_true: [17.72492583 25.30273749]
 - * v_ann: [19.36731719970703, 19.097686767578125, 2

5.744538233029136]

```
* err= 0.5735619975503307
```

```
* Learning rate NN = 7.289998757187277e-05
```

```
* diff = 0.0028260929983360272
```



For scene 52/69

- * use LR_NN=0.0001 with err=2.1658292858340906 at it=24
 - * v0_scn_mean = 25.999865747986302
 - * MAE = 0.5149298234382226
-
-

df n.4, scene n.53/69

We have 4 time intervals inside [364.64, 365.44]

- Time interval n.0: [364.64, 364.84]
 - * y_true: [23.68175628 20.26218764]
 - * v_ann: [18.47811508178711, 19.01573371887207, 28.

20572489389836]

- Time interval n.1: [364.84, 365.04]
 - * y_true: [20.38169455 13.81168669]
 - * v_ann: [18.759889602661133, 19.098669052124023, 2

8.20572489389836]

- Time interval n.2: [365.04, 365.24]
 - * y_true: [10.17092159 27.1635357]
 - * v_ann: [18.904767990112305, 18.31991195678711, 2

8.20572489389836]

```

-----  

- Time interval n.3: [365.24, 365.44]  

* y_true: [18.57186597 15.36227914]  

* v_ann: [18.305620193481445, 18.249431610107422, 2  

8.20572489389836]

```

```

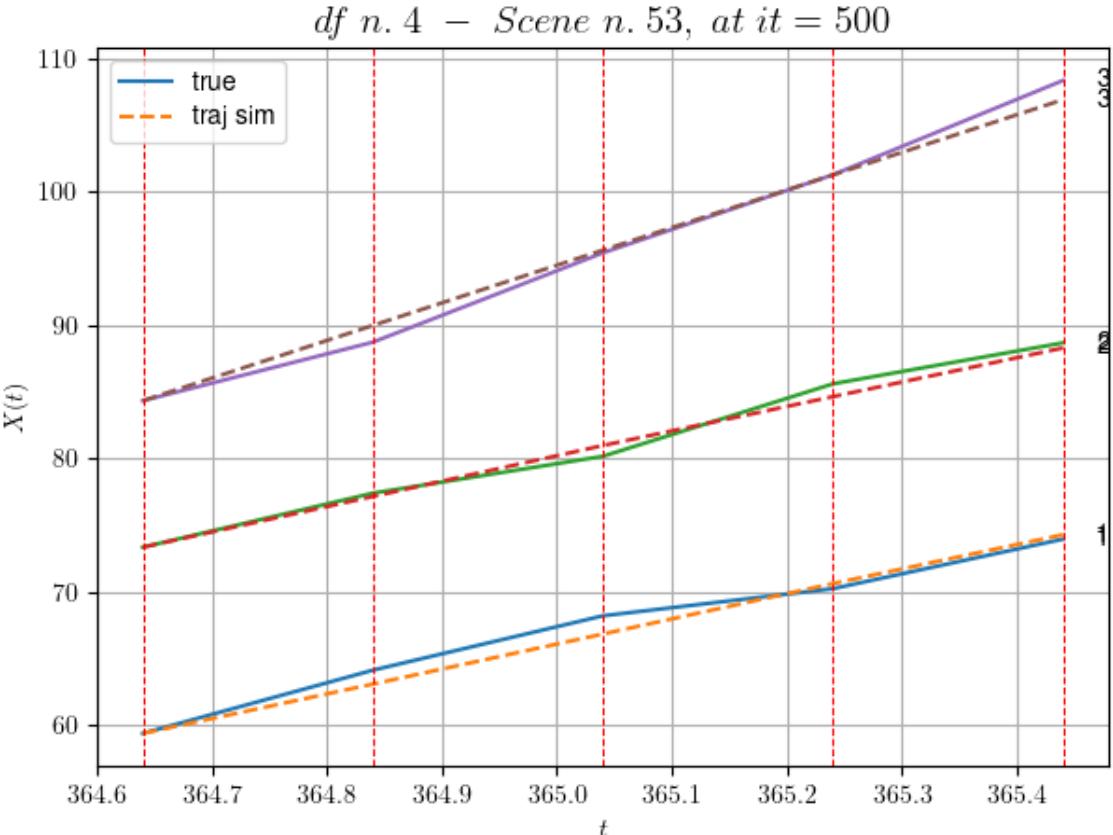
-----  

* err= 0.5777949995215593  

* Learning rate NN = 4.7829678806010634e-05  

* diff = 0.000257727220020121025

```



For scene 53/69

```

* use LR_NN=0.0001 with err=1.0149194921718292 at it=24
* v0_scn_mean = 28.313381319705673
* MAE = 0.5443598490881356

```

df n.4, scene n.54/69

We have 5 time intervals inside [422.64, 423.64]

```

-----  

- Time interval n.0: [422.64, 422.84]  

* y_true: [18.36052369 19.91162557]  

* v_ann: [28.44221305847168, 25.1209716796875, 27.5  

45089607776767]

```

```

-----  

- Time interval n.1: [422.84, 423.04]  

* y_true: [28.40107569 15.51150308]  

* v_ann: [23.853330612182617, 22.281484603881836, 2

```

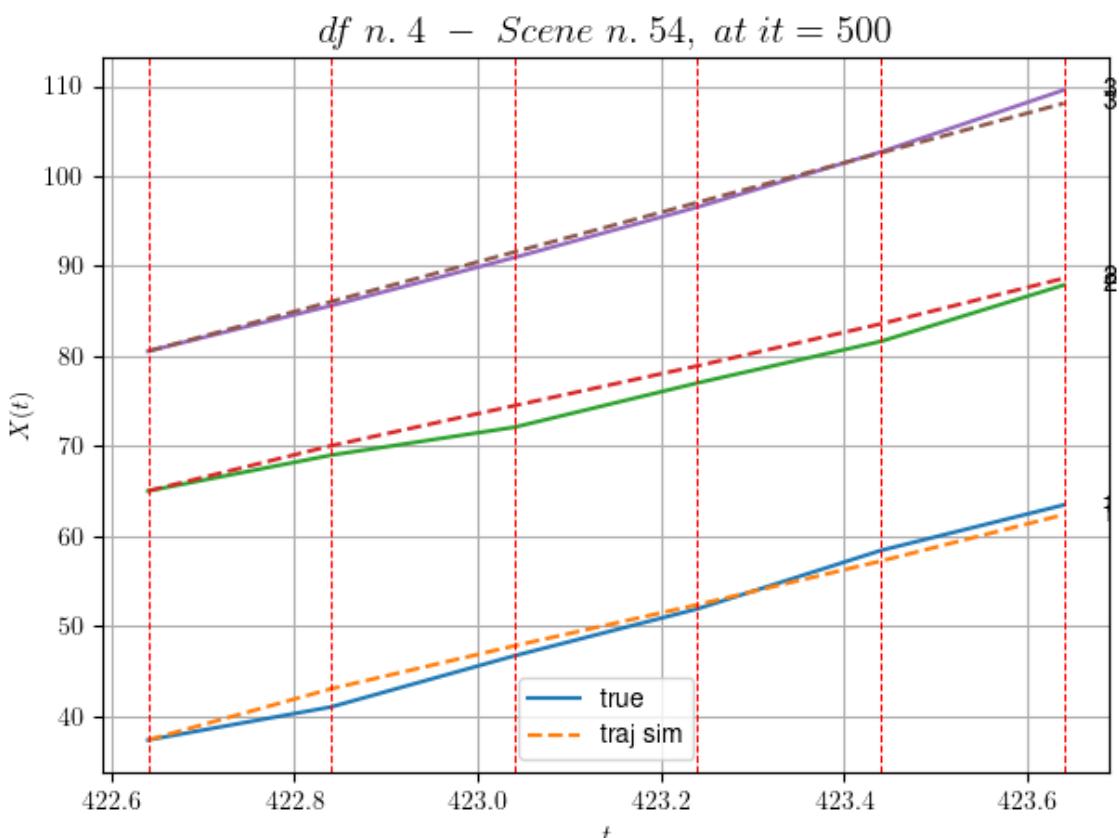
7.545089607776767]

```
- Time interval n.2: [423.04, 423.24]
  * y_true: [26.09121176 24.58263804]
  * v_ann: [22.85964584350586, 22.088417053222656, 2
7.545089607776767]
```

```
- Time interval n.3: [423.24, 423.44]
  * y_true: [32.41191994 23.07275882]
  * v_ann: [24.212112426757812, 23.314207077026367, 2
7.545089607776767]
```

```
- Time interval n.4: [423.44, 423.64]
  * y_true: [25.31178577 31.31439465]
  * v_ann: [25.834035873413086, 25.340017318725586, 2
7.545089607776767]
```

```
* err= 1.4364652498768846
* Learning rate NN = 0.0001937102060765028
* diff = 0.040682617602672444
```



For scene 54/69

```
* use LR_NN=0.0005 with err=2.658935876759305 at it=24
* v0_scn_mean = 27.692384121089773
* MAE = 0.940841542247438
```

```
=====
=====
```

df n.4, scene n.55/69

```
=====
=====
```

We have 2 time intervals inside [440.44, 440.84]

- Time interval n.0: [440.44, 440.64]

- * y_true: [23.50209477 27.05306951]

- * v_ann: [19.624082565307617, 19.760128021240234, 2
1.126994497572408]

```
-----
```

- Time interval n.1: [440.64, 440.84]

- * y_true: [8.15079495 24.70319187]

- * v_ann: [21.30649185180664, 22.14407730102539, 21.
126994497572408]

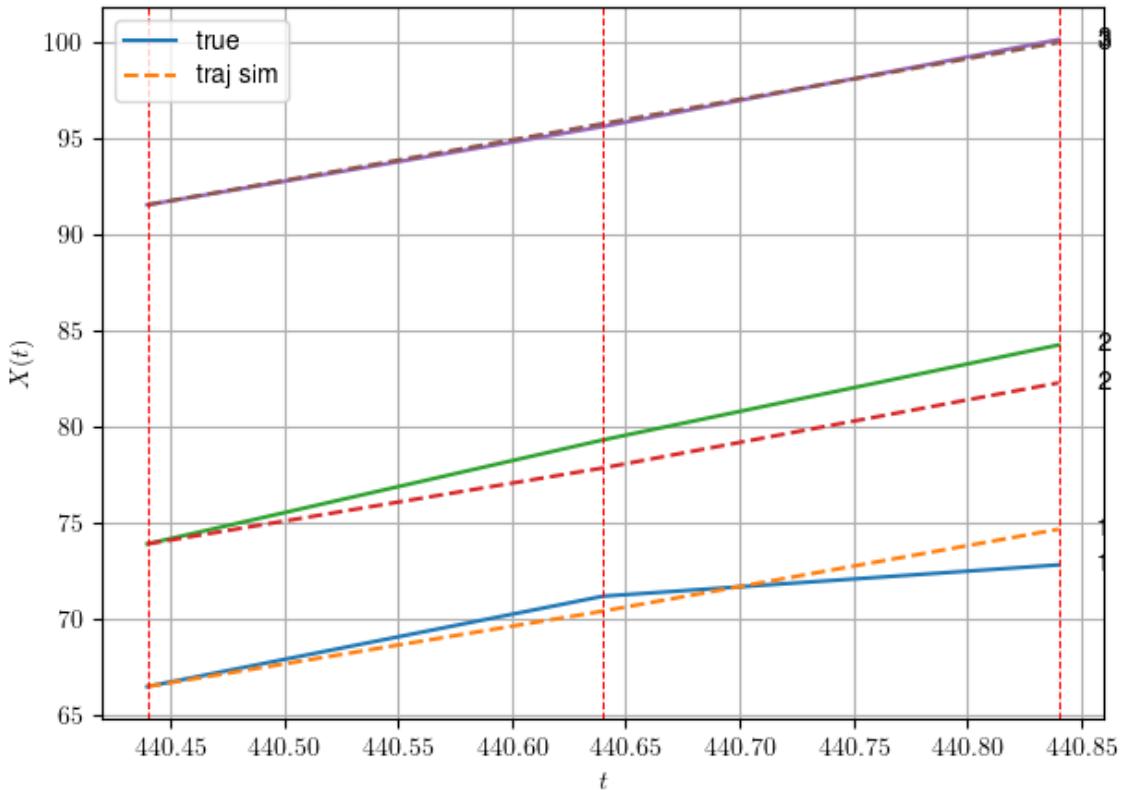
```
-----
```

- * err= 1.122227381346752

- * Learning rate NN = 0.00036449998151510954

- * diff = 0.0006070413476835235

df n. 4 – Scene n. 55, at it = 500



For scene 55/69

- * use LR_NN=0.0005 with err=2.739303022070788 at it=24

- * v0_scn_mean = 21.65937442933974

- * MAE = 1.104965107316673

```
=====
=====
```

```
df n.4, scene n.56/69
```

```
=====
=====
```

We have 5 time intervals inside [459.64, 460.64]

- Time interval n.0: [459.64, 459.84]
 - * y_true: [8.02057991 18.30147717]
 - * v_ann: [16.72153091430664, 20.732677459716797, 21.749477605227977]

```
-----
```

- Time interval n.1: [459.84, 460.04]
 - * y_true: [15.90126261 32.50305135]
 - * v_ann: [16.446868896484375, 19.40016746520996, 21.749477605227977]

```
-----
```

- Time interval n.2: [460.04, 460.24]
 - * y_true: [12.56106954 7.60079575]
 - * v_ann: [19.33245086669922, 19.14164161682129, 21.749477605227977]

```
-----
```

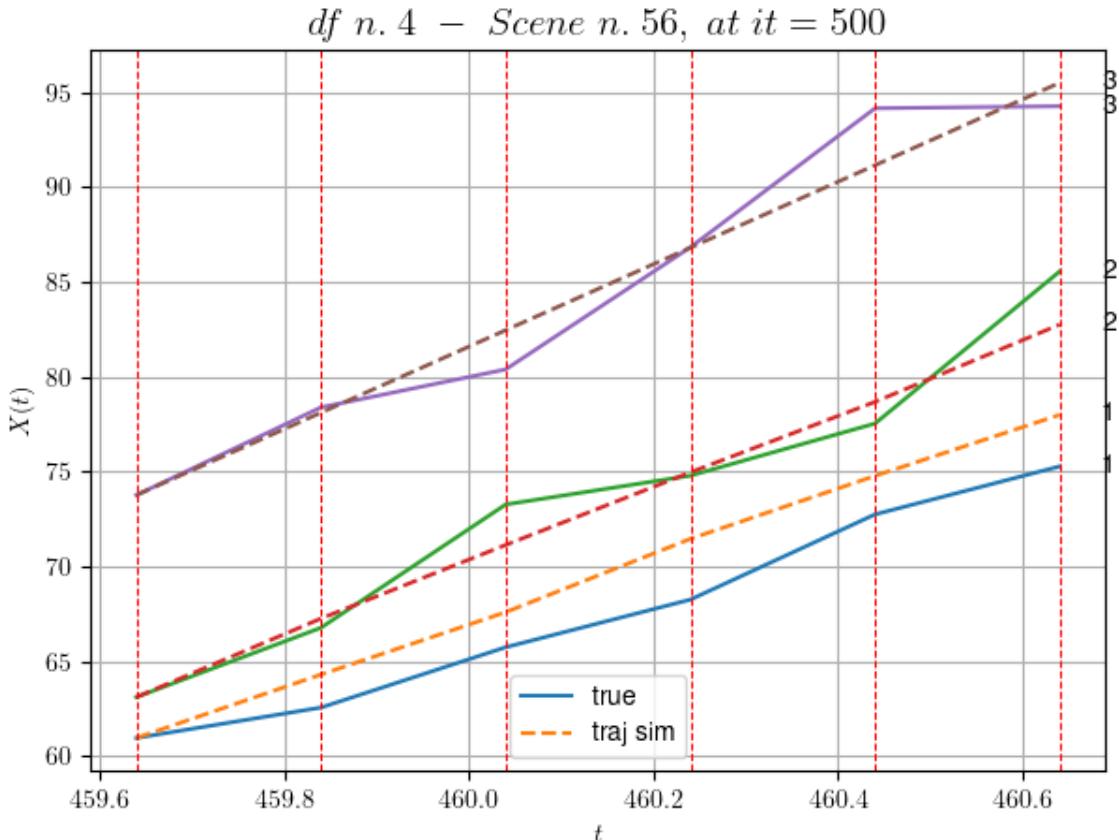
- Time interval n.3: [460.24, 460.44]
 - * y_true: [22.47215871 13.7515264]
 - * v_ann: [16.61695098876953, 18.594520568847656, 21.749477605227977]

```
-----
```

- Time interval n.4: [460.44, 460.64]
 - * y_true: [12.66130245 40.10510628]
 - * v_ann: [16.083749771118164, 20.37590789794922, 21.749477605227977]

```
-----
```

- * err= 3.1733146194832114
- * Learning rate NN = 0.0003874204121530056
- * diff = 0.041746489448726276



For scene 56/69

```
* use LR_NN=0.001 with err=11.524596029788363 at it=24
* v0_scn_mean = 22.244508578483206
* MAE = 3.16599529718857
```

df n.4, scene n.57/69

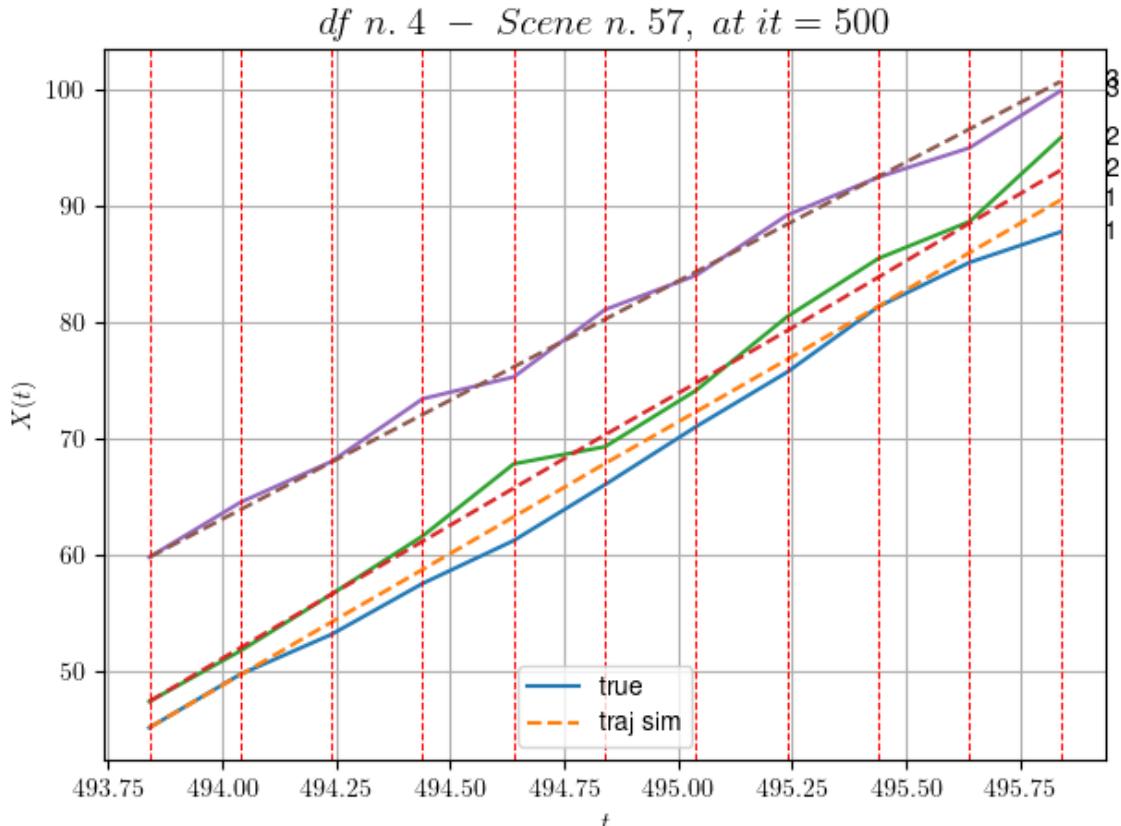
We have 10 time intervals inside [493.84, 495.84]

- Time interval n.0: [493.84, 494.04]
 - * y_true: [22.94003108 21.75102788]
 - * v_ann: [22.715681076049805, 23.093509674072266, 2
 - 0.436941639155613]

- Time interval n.1: [494.04, 494.24]
 - * y_true: [17.14085991 24.35137427]
 - * v_ann: [22.67195701599121, 23.027454376220703, 2
 - 0.436941639155613]

- Time interval n.2: [494.24, 494.44]
 - * y_true: [21.88131212 25.00167951]
 - * v_ann: [22.573657989501953, 22.729528427124023, 2
 - 0.436941639155613]

```
-----  
      - Time interval n.3: [494.44, 494.64]  
        * y_true: [18.45125037 31.00249487]  
        * v_ann: [22.64143180847168, 22.82735824584961, 20.  
436941639155613]  
  
-----  
      - Time interval n.4: [494.64, 494.84]  
        * y_true: [23.98189292 7.35066295]  
        * v_ann: [22.87897300720215, 22.911457061767578, 2  
0.436941639155613]  
  
-----  
      - Time interval n.5: [494.84, 495.04]  
        * y_true: [24.94226236 24.20238954]  
        * v_ann: [22.280376434326172, 22.24169921875, 20.43  
6941639155613]  
  
-----  
      - Time interval n.6: [495.04, 495.24]  
        * y_true: [23.43243252 31.70363737]  
        * v_ann: [22.431947708129883, 22.494844436645508, 2  
0.436941639155613]  
  
-----  
      - Time interval n.7: [495.24, 495.44]  
        * y_true: [28.10335872 24.95329593]  
        * v_ann: [22.814048767089844, 22.956411361694336, 2  
0.436941639155613]  
  
-----  
      - Time interval n.8: [495.44, 495.64]  
        * y_true: [18.99250639 15.85230368]  
        * v_ann: [23.047557830810547, 23.20819664001465, 2  
0.436941639155613]  
  
-----  
      - Time interval n.9: [495.64, 495.84]  
        * y_true: [13.12188353 36.00587838]  
        * v_ann: [22.648019790649414, 22.732070922851562, 2  
0.436941639155613]  
  
-----  
* err= 1.411207597068587  
* Learning rate NN = 0.00013508510892279446  
* diff = 0.005541991169447202
```



For scene 57/69

* use LR_NN=0.001 with err=80.95677995171981 at it=24
 * v0_scn_mean = 21.01072471144574
 * MAE = 1.3201157597756092

df n.4, scene n.58/69

We have 8 time intervals inside [520.04, 521.64]

- Time interval n.0: [520.04, 520.24]
 * y_true: [17.72000935 17.53021327]
 * v_ann: [21.59479331970215, 23.2021427154541, 25.9

62807327177416]

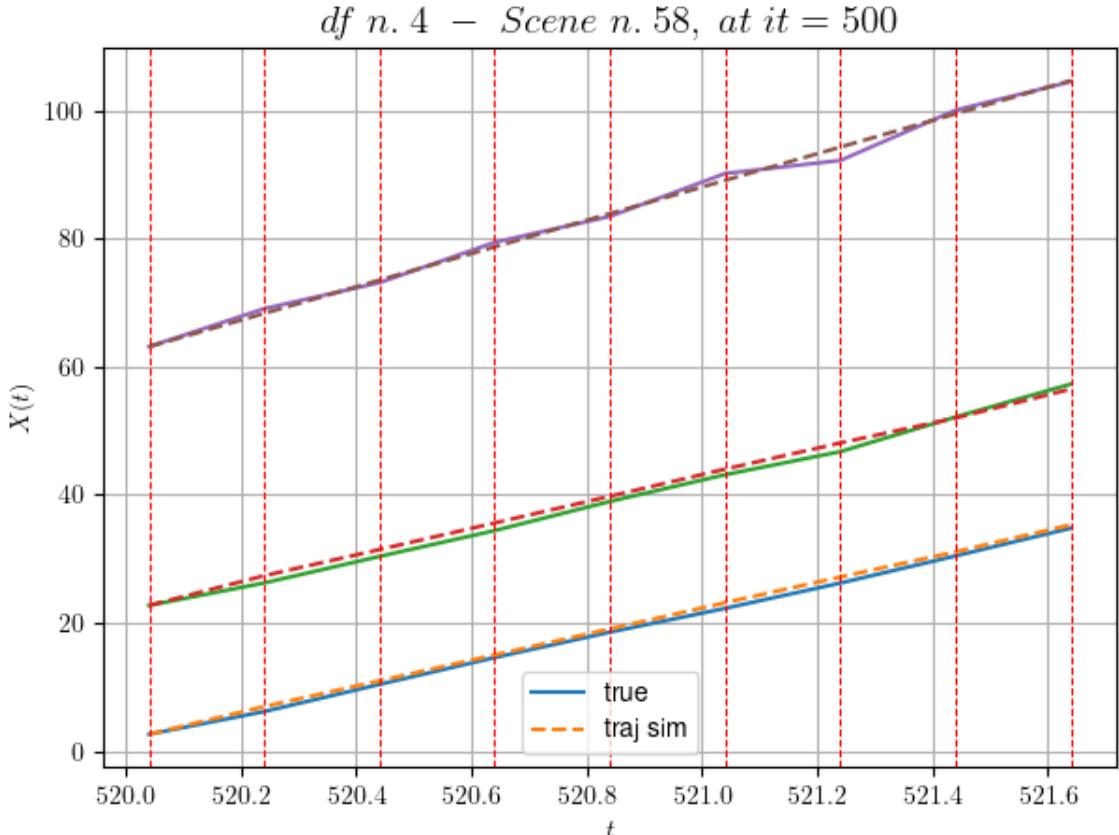
- Time interval n.1: [520.24, 520.44]
 * y_true: [21.19003079 20.68032877]
 * v_ann: [20.0643253326416, 20.380184173583984, 25.

962807327177416]

- Time interval n.2: [520.44, 520.64]
 * y_true: [20.95006602 20.21041565]
 * v_ann: [20.265043258666992, 20.77849769592285, 2

5.962807327177416]

```
-----  
    - Time interval n.3: [520.64, 520.84]  
      * y_true: [19.83010584 22.72061589]  
      * v_ann: [20.254989624023438, 20.81127166748047, 2  
5.962807327177416]  
  
-----  
    - Time interval n.4: [520.84, 521.04]  
      * y_true: [18.57015207 20.87066157]  
      * v_ann: [20.475412368774414, 21.216825485229492, 2  
5.962807327177416]  
  
-----  
    - Time interval n.5: [521.04, 521.24]  
      * y_true: [19.76022757 18.03074501]  
      * v_ann: [20.081180572509766, 20.433792114257812, 2  
5.962807327177416]  
  
-----  
    - Time interval n.6: [521.24, 521.44]  
      * y_true: [21.18033214 27.03127071]  
      * v_ann: [19.60375213623047, 19.433109283447266, 2  
5.962807327177416]  
  
-----  
    - Time interval n.7: [521.44, 521.64]  
      * y_true: [21.65044512 25.69152055]  
      * v_ann: [21.165760040283203, 22.664701461791992, 2  
5.962807327177416]  
  
-----  
* err= 0.6900828508085132  
* Learning rate NN = 0.00010294552339473739  
* diff = 0.010052525671179595
```



For scene 58/69

```
* use LR_NN=0.0005 with err=28.606641642810228 at it=24
* v0_scn_mean = 26.205038706285464
* MAE = 0.4118706827064172
```

df n.4, scene n.59/69

We have 4 time intervals inside [550.44, 551.24]

- Time interval n.0: [550.44, 550.64]
 - * y_true: [23.95217582 22.66294351]
 - * v_ann: [23.814579010009766, 23.534900665283203, 2 0.148397636538828]

- Time interval n.1: [550.64, 550.84]
 - * y_true: [22.2022957 28.49416646]
 - * v_ann: [23.584306716918945, 23.380266189575195, 2 0.148397636538828]

- Time interval n.2: [550.84, 551.04]
 - * y_true: [19.80228834 20.61332089]
 - * v_ann: [24.72306251525879, 23.857664108276367, 2 0.148397636538828]

```

-----  

- Time interval n.3: [551.04, 551.24]  

* y_true: [31.50413614 18.88333685]  

* v_ann: [22.366439819335938, 22.541078567504883, 2  

0.148397636538828]

```

```

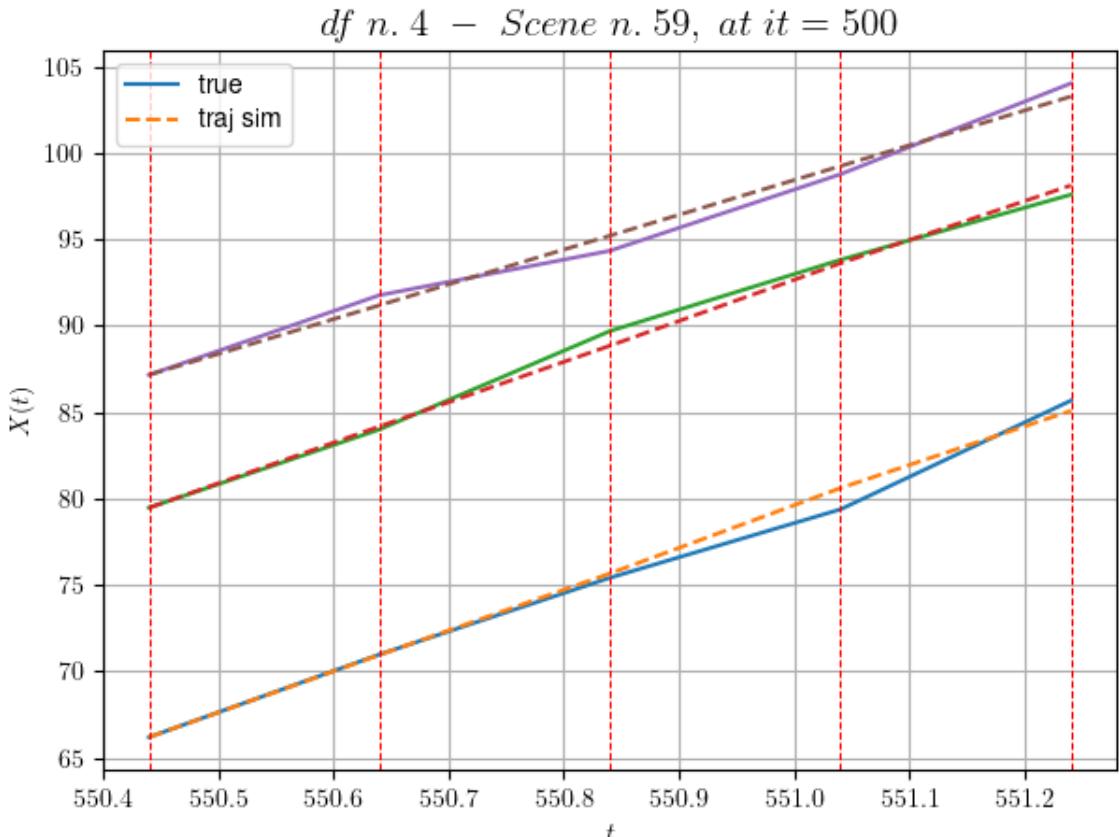
-----  

* err= 0.32767458519104214  

* Learning rate NN = 0.000478296831715852  

* diff = 3.423561526466612e-05

```



For scene 59/69

```

* use LR_NN=0.001 with err=15.460519678877253 at it=24
* v0_scn_mean = 20.73949333603036
* MAE = 0.32767458519104214

```

df n.4, scene n.60/69

We have 2 time intervals inside [554.64, 555.04]

```

- Time interval n.0: [554.64, 554.84]  

* y_true: [16.3871362 34.43556815]  

* v_ann: [23.129335403442383, 22.574007034301758, 2  

0.440727818765414]

```

```

-----  

- Time interval n.1: [554.84, 555.04]  

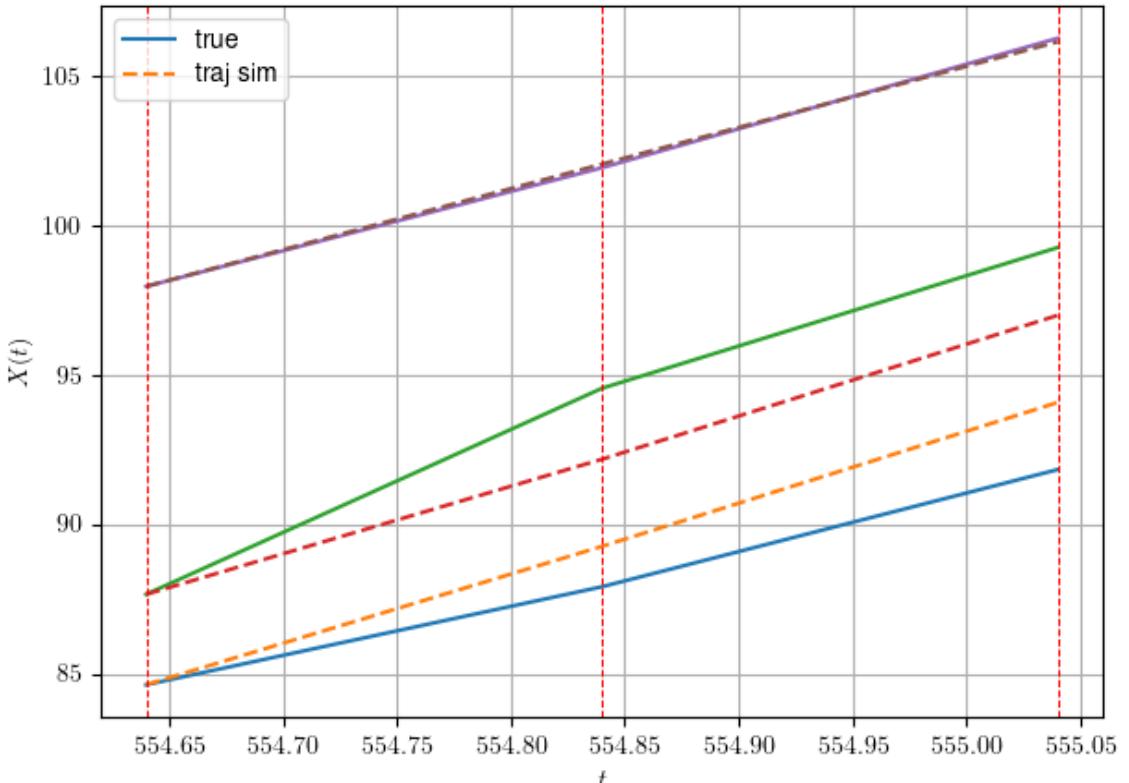
* y_true: [19.58824641 23.53414882]

```

```
* v_ann: [24.063819885253906, 24.061559677124023, 2
0.440727818765414]
```

```
* err= 1.9608530158805209
* Learning rate NN = 0.0007289999630302191
* diff = 6.780061057577200e-05
```

df n. 4 – Scene n. 60, at it = 500



For scene 60/69

```
* use LR_NN=0.001 with err=2.5523047574905173 at it=24
* v0_scn_mean = 21.014283720447974
* MAE = 1.9542106688626226
```

df n.4, scene n.61/69

We have 2 time intervals inside [556.24, 556.64]

- Time interval n.0: [556.24, 556.44]
 - * y_true: [24.75252122 21.70224237]
 - * v_ann: [23.916444778442383, 24.516855239868164, 1

5.086092436634091]

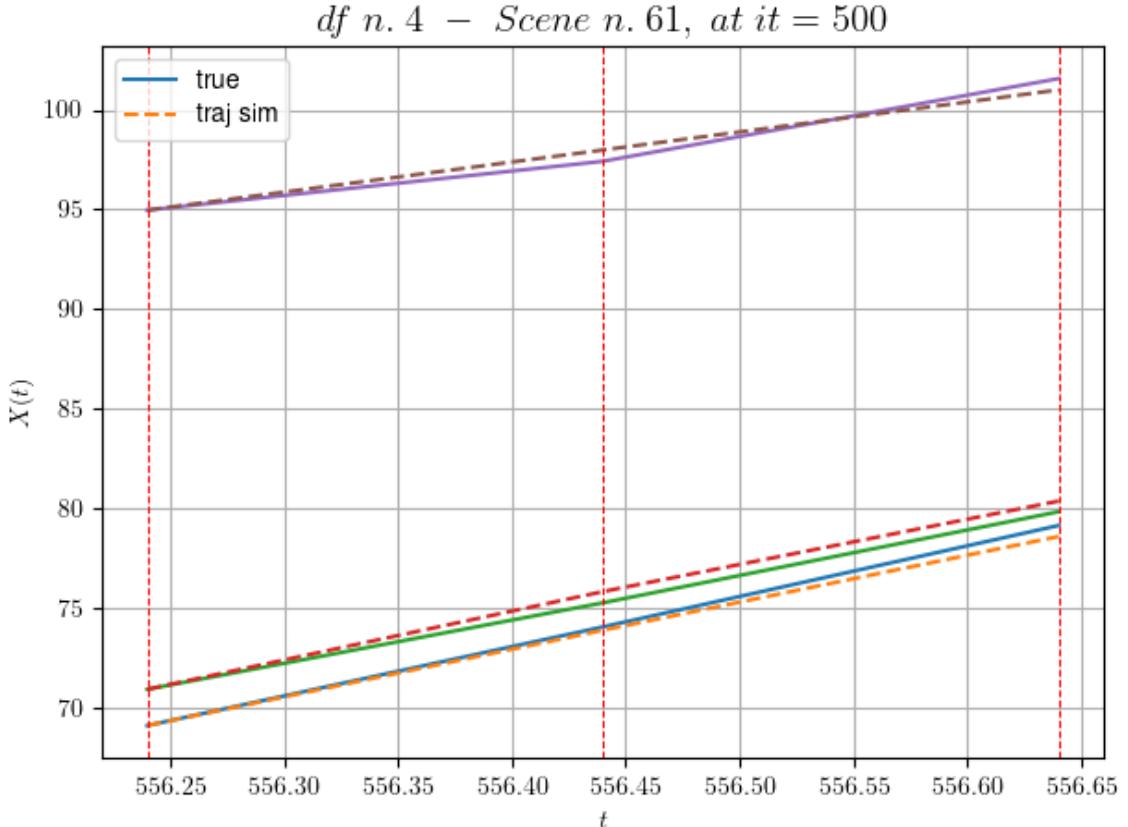
- Time interval n.1: [556.44, 556.64]
 - * y_true: [25.4427559 22.85265518]
 - * v_ann: [23.51959228515625, 22.70758056640625, 15.

086092436634091]

```

* err= 0.17521392191593085
* Learning rate NN = 0.0007289999630302191
* diff = 2.057887239639844e-05

```



For scene 61/69

```

* use LR_NN=0.001 with err=14.021735046166569 at it=24
* v0 scn mean = 15.9809262208327
* MAE = 0.17521392191593085

```

df n.4, scene n.62/69

We have 4 time intervals inside [575.04, 575.84]

- Time interval n.0: [575.04, 575.24]
 - * y_true: [25.50060057 18.90068968]
 - * v_ann: [22.169776916503906, 22.03997039794922, 24.545621507402327]

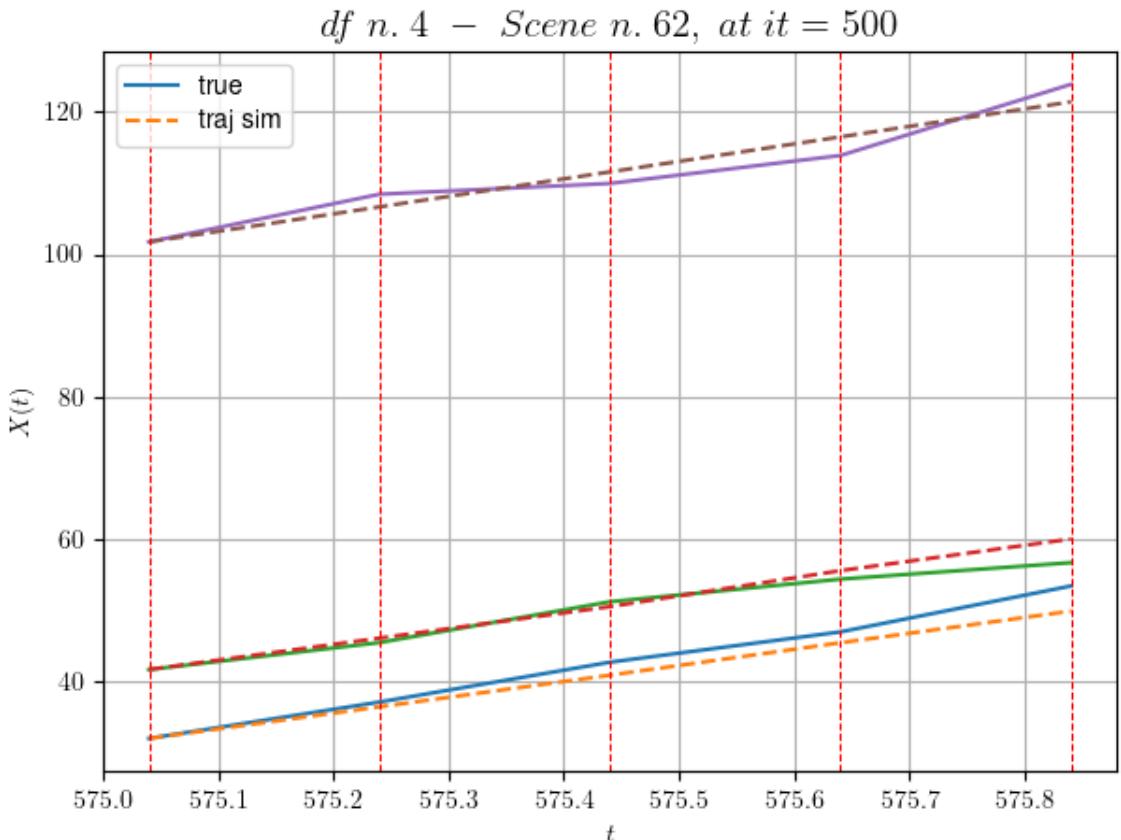
- Time interval n.1: [575.24, 575.44]
 - * y_true: [27.95087423 28.65128625]
 - * v_ann: [22.184600830078125, 22.106252670288086, 24.545621507402327]

- Time interval n.2: [575.44, 575.64]
 - * y_true: [21.25083564 15.85084753]

```
* v_ann: [22.738258361816406, 25.224138259887695, 2
4.545621507402327]
```

```
- Time interval n.3: [575.64, 575.84]
* y_true: [32.20158375 11.5506833 ]
* v_ann: [22.200305938720703, 22.192779541015625, 2
4.545621507402327]
```

```
* err= 3.36153259098347
* Learning rate NN = 4.7829678806010634e-05
* diff = 0.020600725007565502
```



For scene 62/69

```
* use LR_NN=0.0001 with err=44.86708049933168 at it=24
* v0_scn_mean = 24.872883972067825
* MAE = 3.36153259098347
```

```
=====
=====
```

df n.4, scene n.63/69

```
=====
=====
```

We have 3 time intervals inside [313.84,314.44]

```
- Time interval n.0: [313.84, 314.04]
* y_true: [15.70108851 23.28855659 11.30165534]
* v_ann: [24.28120231628418, 25.415603637695312, 2
5.736324310302734, 26.415529524803695]
```

```

-----  

    - Time interval n.1: [314.04, 314.24]  

      * y_true: [25.15198981 24.43240479 30.10483754]  

      * v_ann: [23.823898315429688, 24.033967971801758, 2  

        4.201217651367188, 26.415529524803695]  

-----  

    - Time interval n.2: [314.24, 314.44]  

      * y_true: [27.30252596 23.75264682 40.35752125]  

      * v_ann: [23.982378005981445, 24.423952102661133, 2  

        4.670774459838867, 26.415529524803695]  

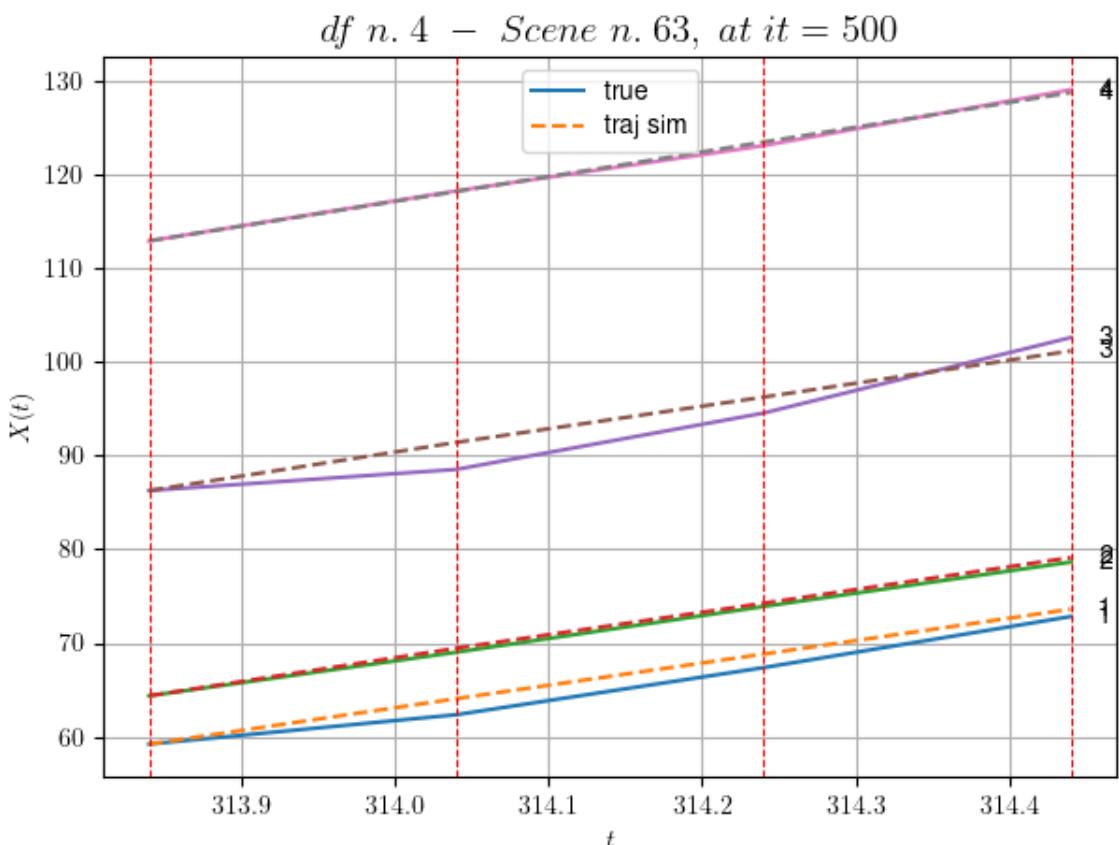
-----  

* err= 1.2343086140989972  

* Learning rate NN = 5.904899080633186e-05  

* diff = 0.002966318236663046

```



For scene 63/69

```

* use LR_NN=0.0001 with err=9.940867995079095 at it=24
* v0_scn_mean = 26.70227549847878
* MAE = 1.2183440919277297

```

df n.4, scene n.64/69

We have 2 time intervals inside [460.84, 461.24]

```

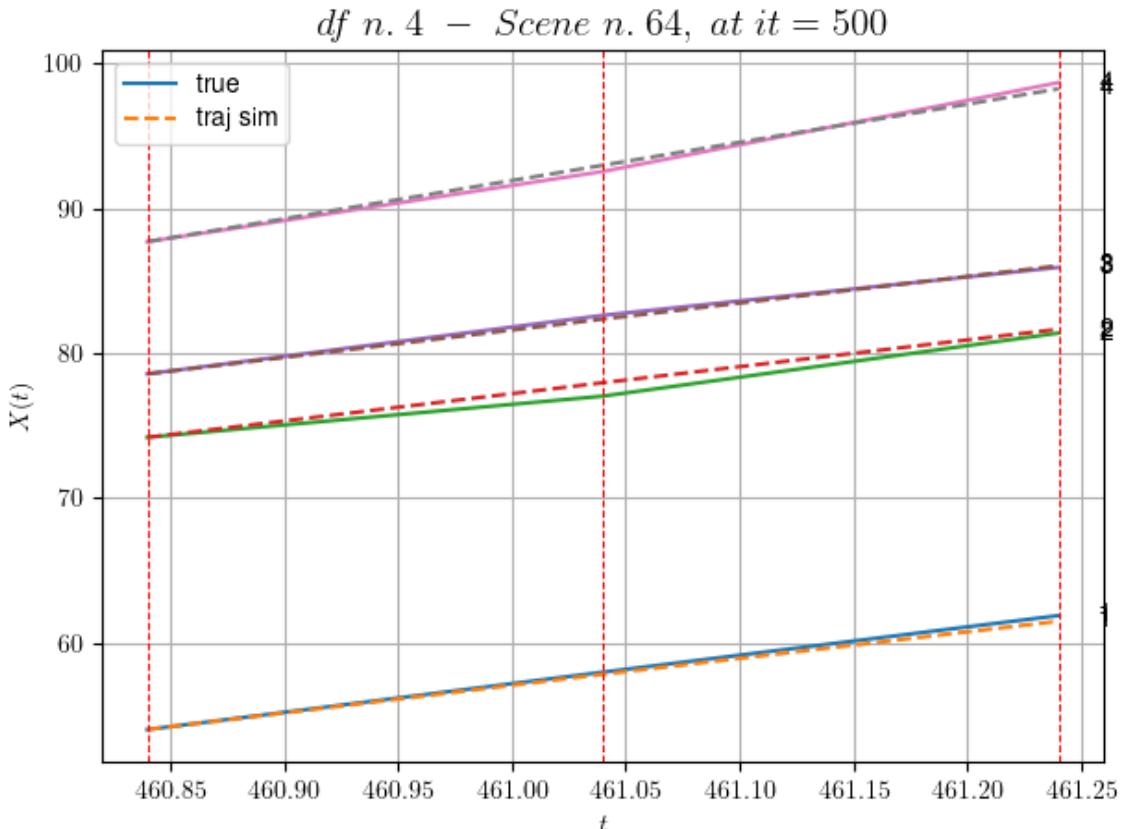
- Time interval n.0: [460.84, 461.04]
  * y_true: [19.8211655 14.23151831 20.23251805]

```

* v_ann: [19.09453010559082, 18.864620208740234, 1
8.93370246887207, 26.404314529226582]

- Time interval n.1: [461.04, 461.24]
* y_true: [19.5413591 21.77263281 16.55223683]
* v_ann: [18.31906509399414, 18.47261619567871, 18.
423051834106445, 26.404314529226582]

* err= 0.12944237374694545
* Learning rate NN = 0.0007289999630302191
* diff = 2.3092734732776954e-07



For scene 64/69

* use LR_NN=0.001 with err=2.967886179385287 at it=24
* v0_scn_mean = 26.69195766605364
* MAE = 0.12775231510047988

df n.4, scene n.65/69

We have 2 time intervals inside [462.64,463.04]

- Time interval n.0: [462.64, 462.84]
* y_true: [21.60177307 15.7113741 22.90372044]
* v_ann: [19.061601638793945, 18.787160873413086, 1
9.04845428466797, 31.352447205664888]

```

-----  

- Time interval n.1: [462.84, 463.04]  

  * y_true: [18.06167929 17.53172974 18.9633766 ]  

  * v_ann: [19.253677368164062, 19.326650619506836, 1  

  9.267080307006836, 31.352447205664888]

```

```

-----  

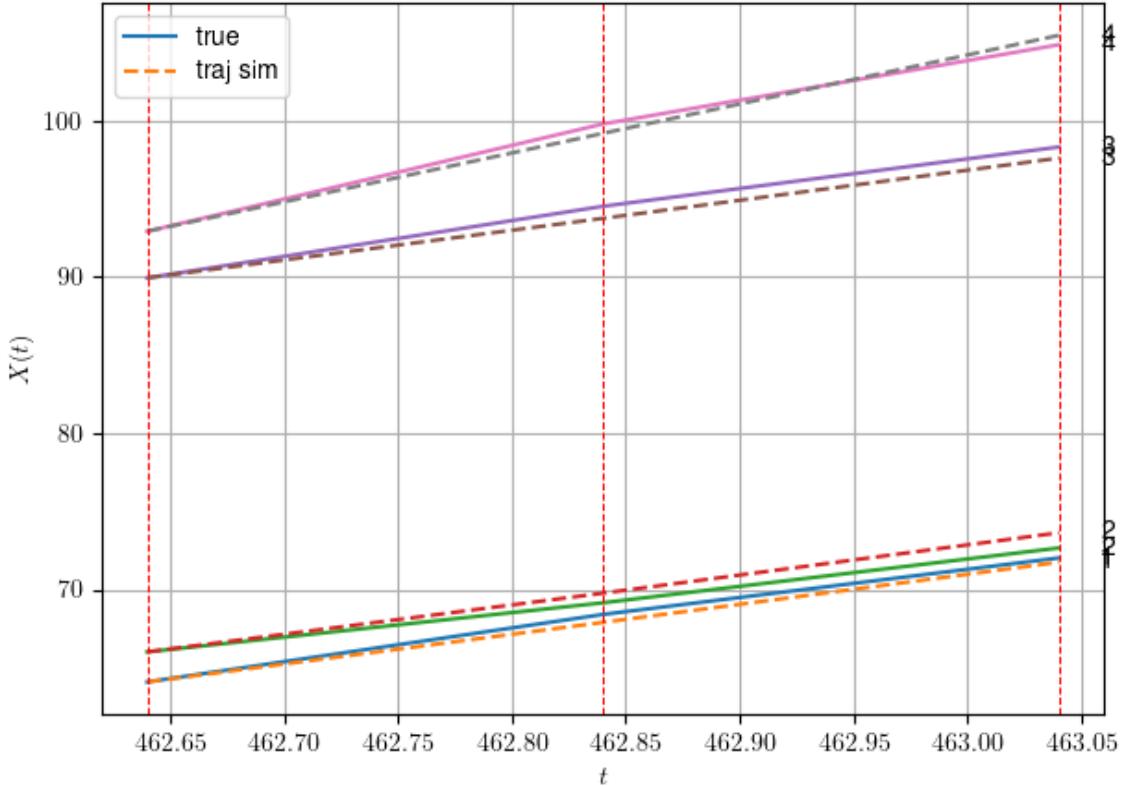
* err= 0.28992001881943175  

* Learning rate NN = 0.00036449998151510954  

* diff = 2.493204085407541e-07

```

df n. 4 – Scene n. 65, at it = 500



For scene 65/69

```

* use LR_NN=0.0005 with err=9.932797235983152 at it=24  

* v0_scn_mean = 31.24425583025306  

* MAE = 0.28259808853607415

```

df n.4, scene n.66/69

We have 3 time intervals inside [495.24, 495.84]

```

- Time interval n.0: [495.24, 495.44]  

  * y_true: [12.91123632 28.10335872 24.95329593]  

  * v_ann: [22.90259552001953, 22.8415470123291, 23.2  

  4437141418457, 16.43780548223635]

```

```

-----  

- Time interval n.1: [495.44, 495.64]  

  * y_true: [ 9.32105302 18.99250639 15.85230368]

```

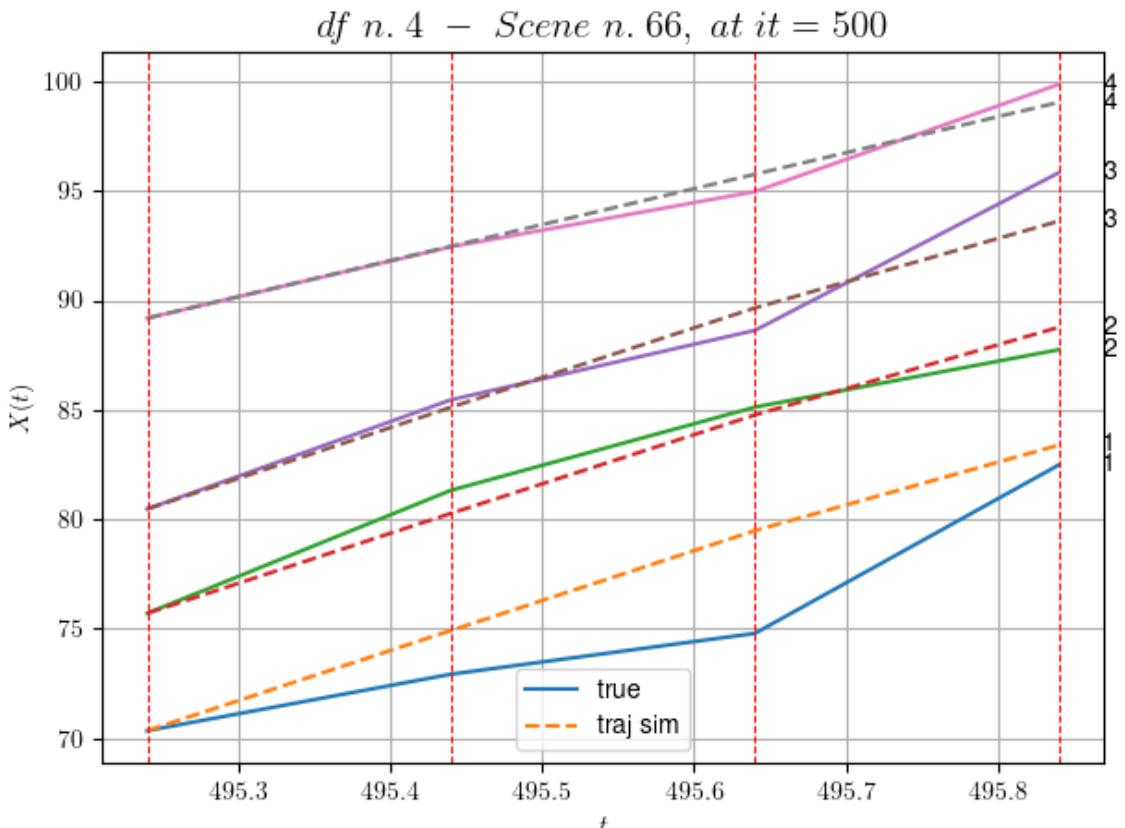
```

* v_ann: [22.796688079833984, 22.45414161682129, 2
2.683143615722656, 16.43780548223635]

-----
- Time interval n.2: [495.64, 495.84]
* y_true: [38.46439916 13.12188353 36.00587838]
* v_ann: [19.548255920410156, 20.042797088623047, 1
9.837520599365234, 16.43780548223635]

-----
* err= 2.2797171847798756
* Learning rate NN = 0.0005904899444431067
* diff = 0.000704841500702269

```



For scene 66/69

```

* use LR_NN=0.001 with err=10.609154700392393 at it=24
* v0_scn_mean = 17.522736910483196
* MAE = 2.262769767660317
=====
```

df n.4, scene n.67/69

```
=====
```

We have 5 time intervals inside [541.84, 542.84]

```

- Time interval n.0: [541.84, 542.04]
* y_true: [15.49040827 18.57067001 15.06113134]
* v_ann: [18.84423065185547, 19.105375289916992, 1
9.100183486938477, 25.311591600962046]
```

```

-----  

    - Time interval n.1: [542.04, 542.24]  

      * y_true: [18.02057424 22.22093452 14.29121645]  

      * v_ann: [18.46664047241211, 18.226009368896484, 1  

8.187149047851562, 25.311591600962046]  

-----  

    - Time interval n.2: [542.24, 542.44]  

      * y_true: [23.32090187 15.10072652 30.16295254]  

      * v_ann: [18.440217971801758, 18.228700637817383, 1  

8.12485122680664, 25.311591600962046]  

-----  

    - Time interval n.3: [542.44, 542.64]  

      * y_true: [17.96079787 19.72113387 17.42186984]  

      * v_ann: [19.103364944458008, 19.830759048461914, 1  

9.980329513549805, 25.311591600962046]  

-----  

    - Time interval n.4: [542.64, 542.84]  

      * y_true: [20.261096 21.55138585 14.58174174]  

      * v_ann: [18.9122371673584, 19.28240394592285, 19.3  

76014709472656, 25.311591600962046]  

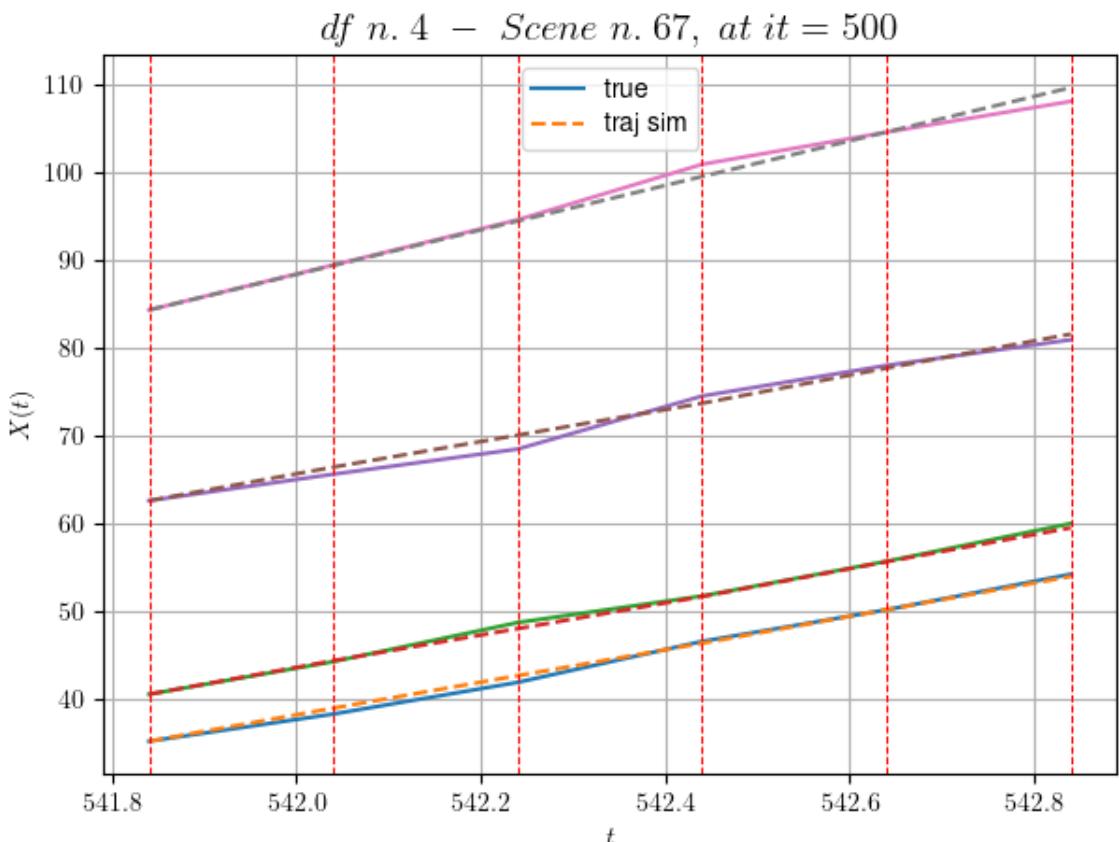
-----  

* err= 0.4444355981592114  

* Learning rate NN = 0.0001937102060765028  

* diff = 0 0010215328441151028

```



For scene 67/69
 * use LR_NN=0.0005 with err=20.245909294065676 at it=24
 * v0_scn_mean = 25.68664901618498
 * MAE = 0.44442972924752233

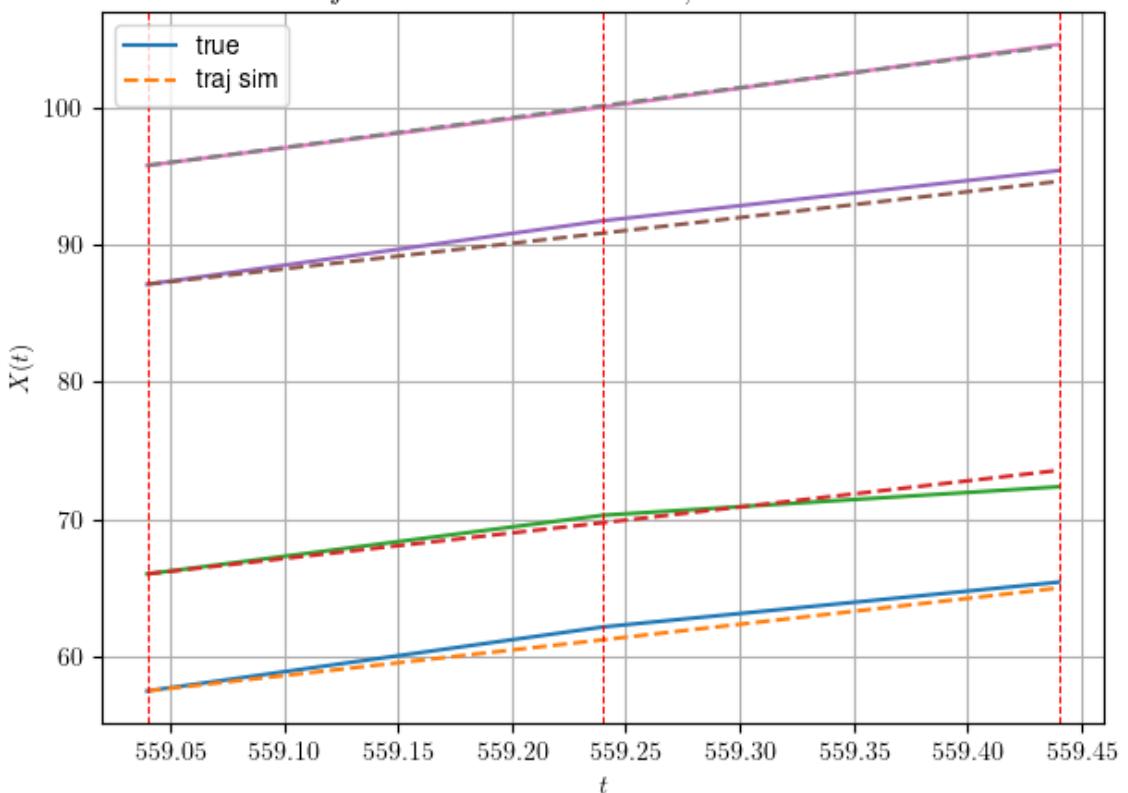
df n.4, scene n.68/69

We have 2 time intervals inside [559.04, 559.44]
 - Time interval n.0: [559.04, 559.24]
 * y_true: [23.32160164 21.40183754 23.15354324]
 * v_ann: [18.647602081298828, 18.67790412902832, 1
 8.64791488647461, 21.82083405246871]

- Time interval n.1: [559.24, 559.44]
 * y_true: [16.34126249 10.38103794 18.30306556]
 * v_ann: [18.868303298950195, 19.07978630065918, 1
 8.870590209960938, 21.82083405246871]

* err= 0.3530589785823629
 * Learning rate NN = 7.289998757187277e-05
 * diff = 8.838087166962438e-05

df n. 4 – Scene n. 68, at it = 500



For scene 68/69
 * use LR_NN=0.0001 with err=5.841536266057466 at it=24
 * v0_scn_mean = 22.475140712183595

* MAE = 0.3530085525399329

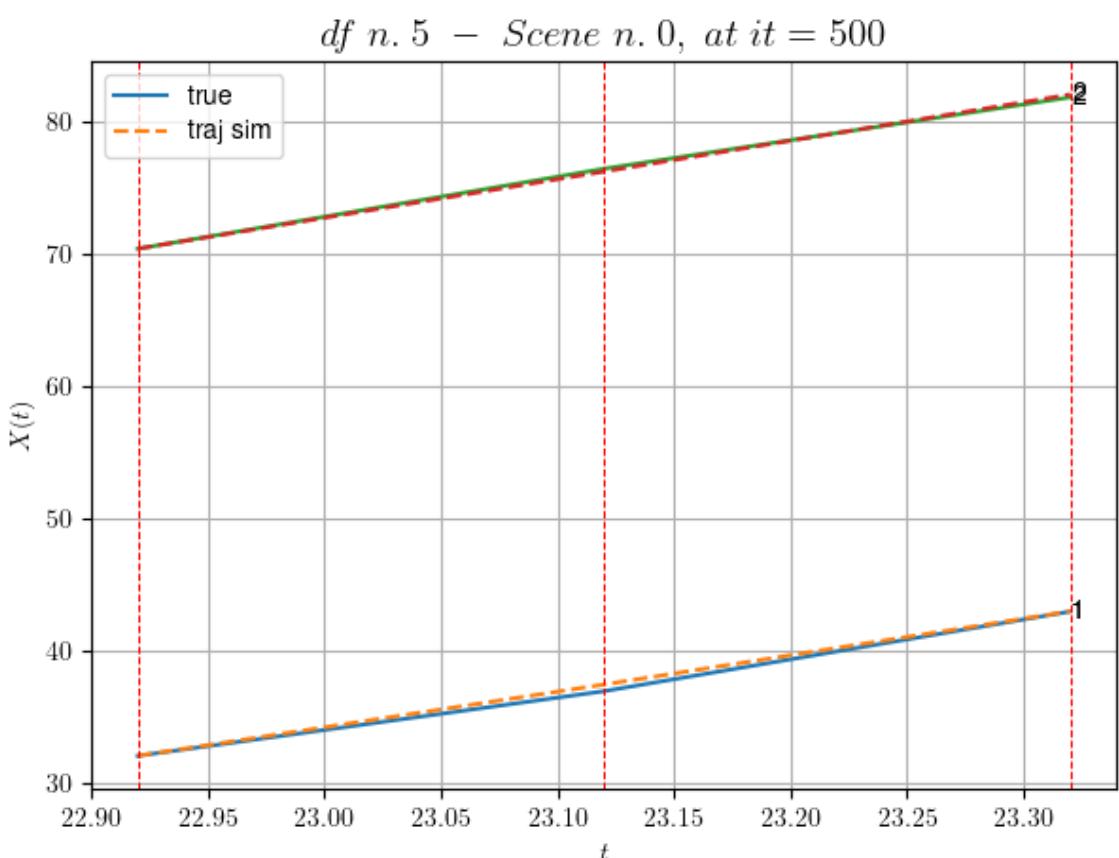
```
For df=4 with 69 scenes, time taken: 1334.17
*****
*****
```

In df n.5/10 we have 66 scenes
df n.5, scene n.0/66

```
We have 2 time intervals inside [22.92,23.32]
- Time interval n.0: [22.92, 23.12]
  * y_true: [24.44058845]
  * v_ann: [26.958038330078125, 29.16329040956977]
```

```
- Time interval n.1: [23.12, 23.32]
  * y_true: [30.12094367]
  * v_ann: [27.67288589477539, 29.16329040956977]
```

```
* err= 0.057833605740341305
* Learning rate NN = 7.289998848136747e-06
* diff = 1.1518659060946734e-06
```



For scene 0/66
* use LR_NN=1e-05 with err=0.08403875060778729 at it=24

```
* v0_scn_mean = 29.196758793180546
* MAE = 0.04877542285507463
```

```
df n.5, scene n.1/66
```

```
We have 2 time intervals inside [38.72,39.12]
```

- Time interval n.0: [38.72, 38.92]

- * y_true: [26.47679167]

- * v_ann: [25.629791259765625, 25.372431967348824]

- Time interval n.1: [38.92, 39.12]

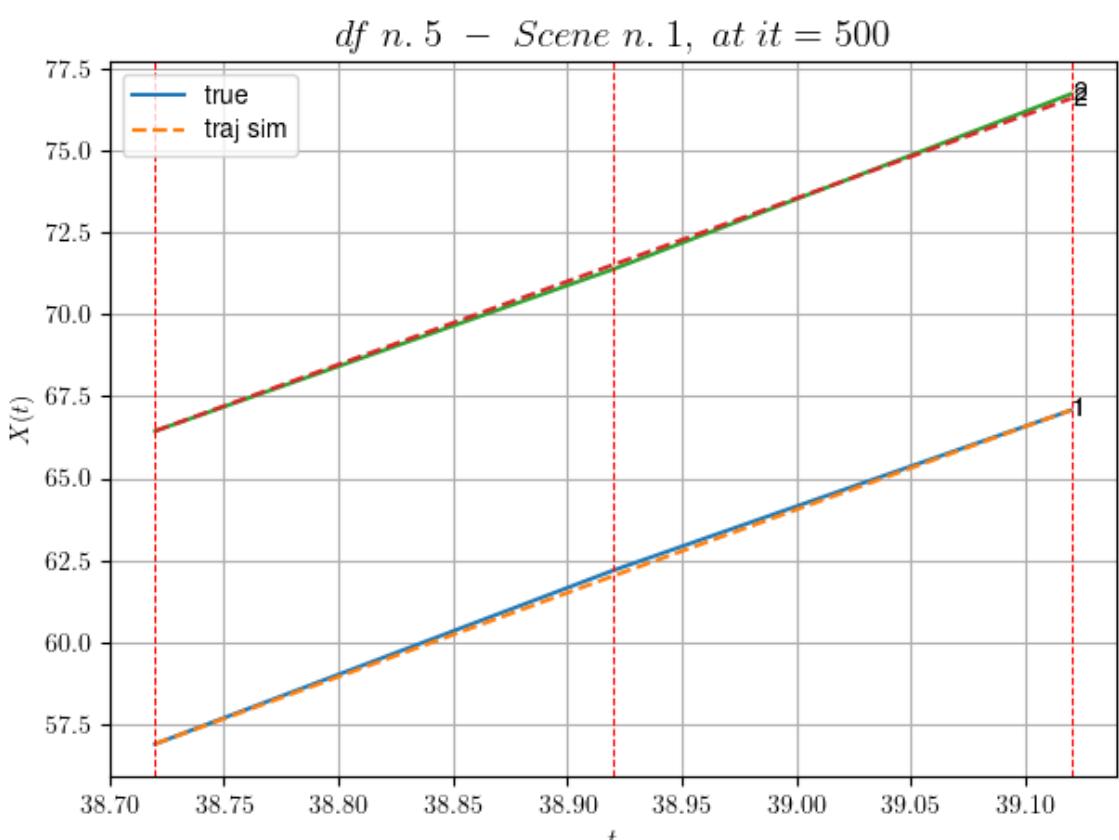
- * y_true: [24.45199247]

- * v_ann: [25.320486068725586, 25.372431967348824]

- * err= 0.011137429111929945

- * Learning rate NN = 0.0007289999630302191

- * diff = 2.7128239022556483e-06



For scene 1/66

* use LR_NN=0.001 with err=0.6843503896793338 at it=24

* v0_scn_mean = 25.557534688619548

* MAE = 0.010963844434053353

df n.5, scene n.2/66

We have 2 time intervals inside [47.12,47.52]

- Time interval n.0: [47.12, 47.32]
 - * y_true: [27.13157074]
 - * v_ann: [29.539295196533203, 18.771821269963404]

- Time interval n.1: [47.32, 47.52]

- * y_true: [29.78215199]

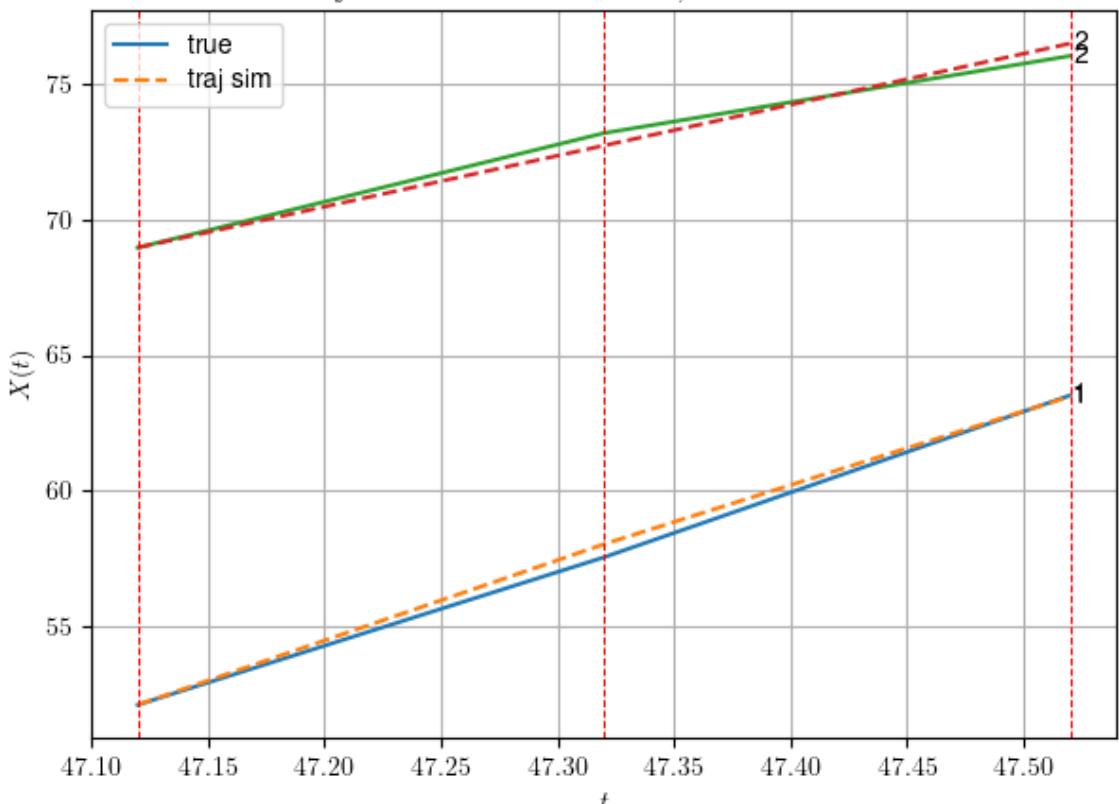
- * v_ann: [27.176362991333008, 18.771821269963404]

* err= 0.1085338333170407

* Learning rate NN = 7.289998757187277e-05

* diff = 4.086756250604173e-06

df n. 5 – Scene n. 2, at it = 500



For scene 2/66

* use LR NN=0.0001 with err=4.6577510727075815 at it=24

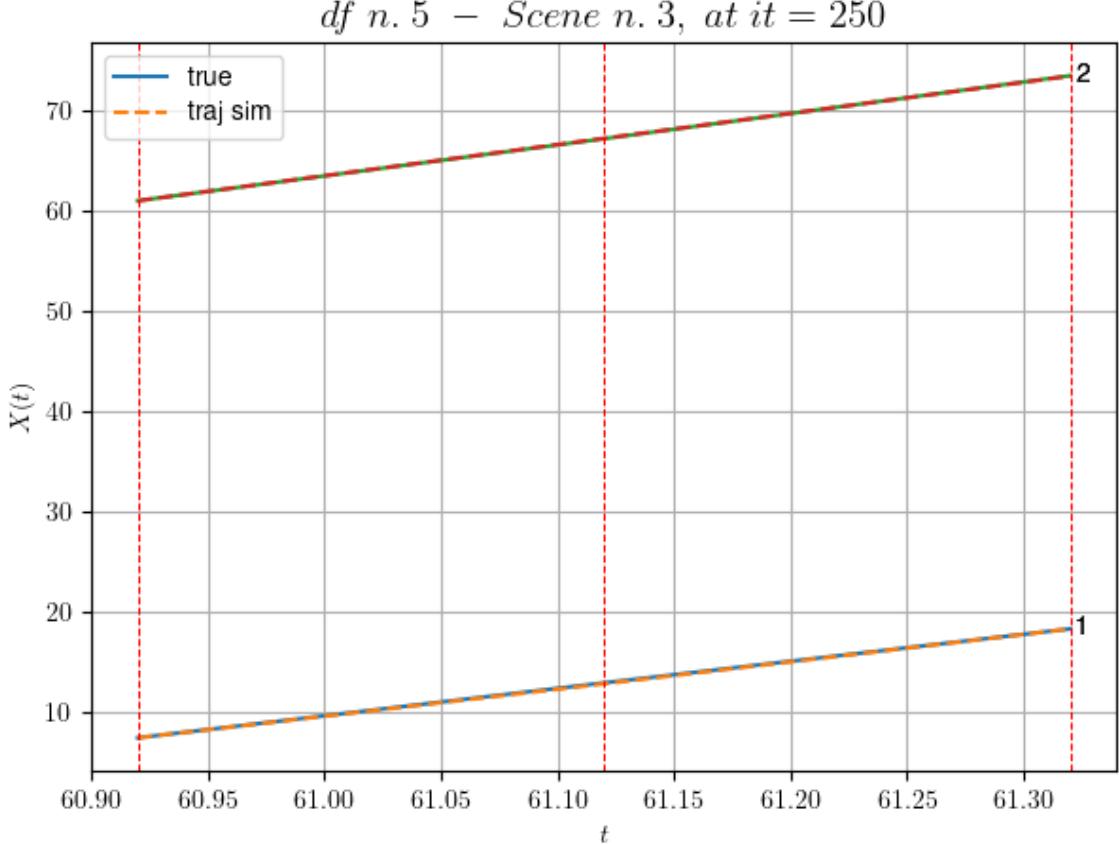
* v0 scn mean = 19.220948419079058

* MAE = 0.10798740137128962

df n 5 scene n 3/66

We have 2 time intervals inside [60.92, 61.32]

- * err= 0.0019757097708611635
- * Learning rate NN = 4.499999704421498e-05
- * diff = 1.0837074911583533e-07



For scene 3/66

- * use LR_NN=5e-05 with err=0.045172297994294355 at it=24
- * v0_scn_mean = 31.014497606033903
- * MAE = 0.0019420431654709424

df n.5, scene n.4/66

We have 5 time intervals inside [64.32, 65.32]

- Time interval n.0: [64.32, 64.52]
 - * y_true: [37.14124909]
 - * v_ann: [35.95401382446289, 32.23387857341361]

- Time interval n.1: [64.52, 64.72]
 - * y_true: [31.68144271]
 - * v_ann: [34.98941421508789, 32.23387857341361]

- Time interval n.2: [64.72, 64.92]
 - * y_true: [30.88182123]
 - * v_ann: [34.75006103515625, 32.23387857341361]

```

-----  

    - Time interval n.3: [64.92, 65.12]  

      * y_true: [37.7230345]  

      * v_ann: [32.807456970214844, 32.23387857341361]
-----
```

```

-----  

    - Time interval n.4: [65.12, 65.32]  

      * y_true: [35.12139112]  

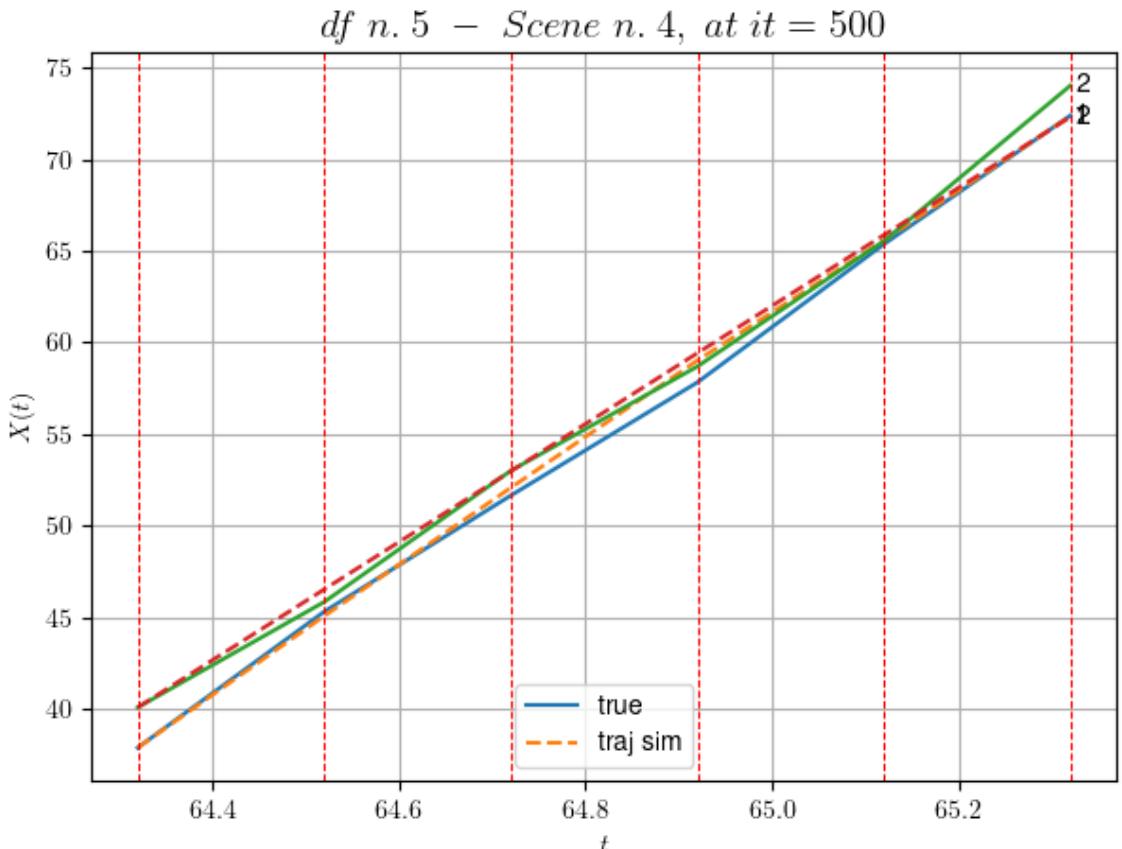
      * v_ann: [33.89554214477539, 32.23387857341361]
-----
```

```

* err= 0.48070307889499003  

* Learning rate NN = 0.0019371019443497062  

* diff = 0.0061810562267262115
```



For scene 4/66

```

* use LR_NN=0.005 with err=1.7539233567139698 at it=24  

* v0_scn_mean = 32.14452343049409  

* MAE = 0.4762535650845393
=====
```

df n.5, scene n.5/66

```

=====
=====
```

We have 4 time intervals inside [73.32, 74.12]

```

    - Time interval n.0: [73.32, 73.52]  

      * y_true: [22.4509602]  

      * v_ann: [25.619277954101562, 30.98385449886047]
=====
```

```

-----  

- Time interval n.1: [73.52, 73.72]  

* y_true: [19.77098046]  

* v_ann: [25.38833999633789, 30.98385449886047]
-----
```

```

-----  

- Time interval n.2: [73.72, 73.92]  

* y_true: [35.00219048]  

* v_ann: [24.795372009277344, 30.98385449886047]
-----
```

```

-----  

- Time interval n.3: [73.92, 74.12]  

* y_true: [22.79172486]  

* v_ann: [26.235734939575195, 30.98385449886047]
-----
```

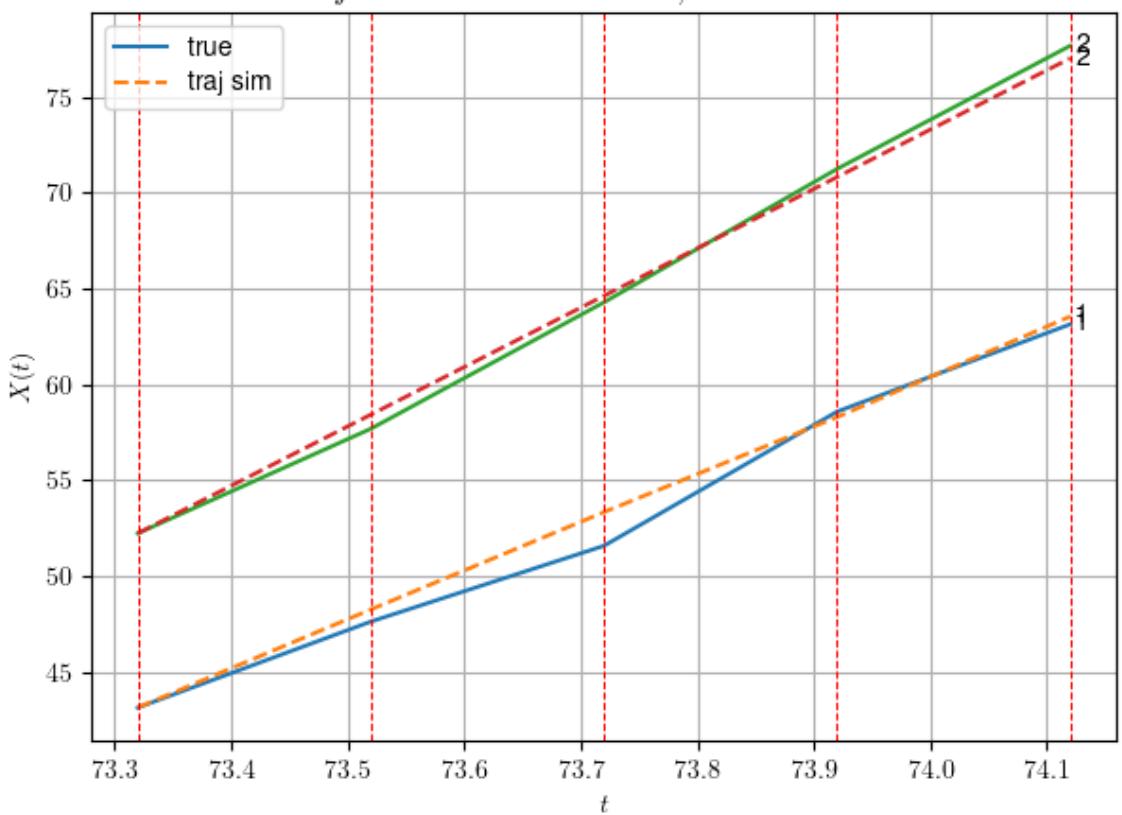
```

* err= 0.4999947911327934  

* Learning rate NN = 2.3914839403005317e-05  

* diff = 0.008321991300368314
```

df n. 5 – Scene n. 5, at it = 500



For scene 5/66

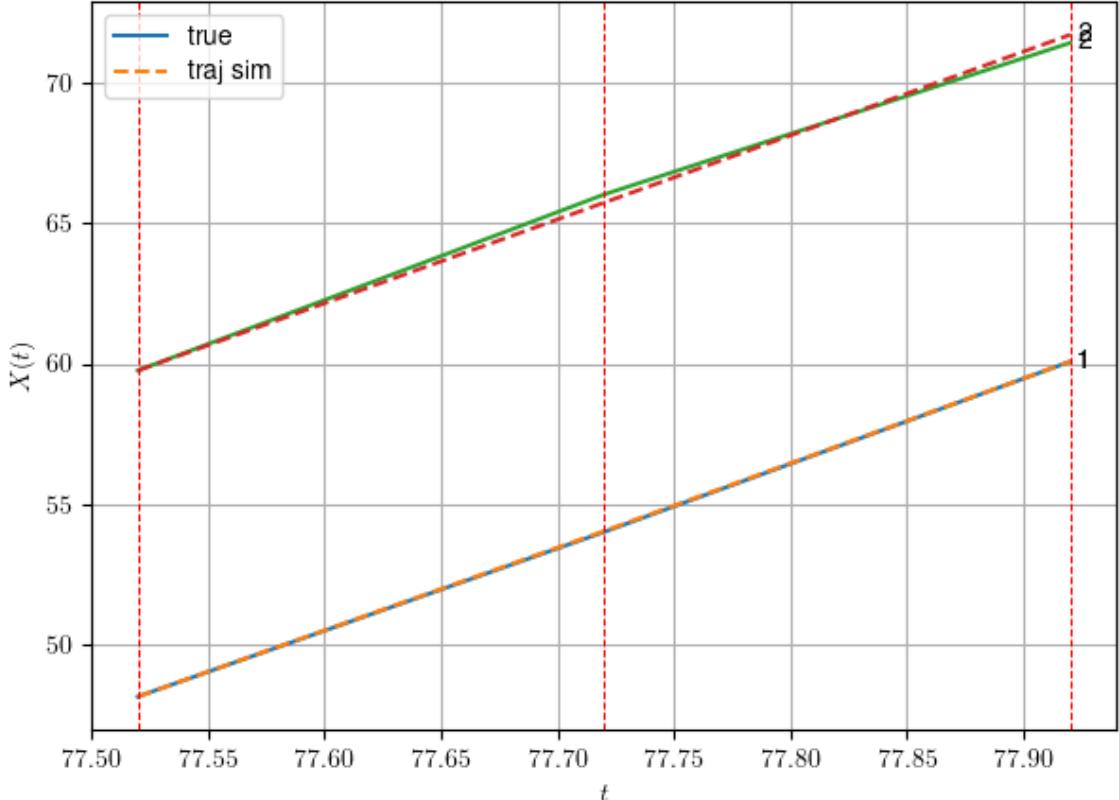
```

* use LR_NN=5e-05 with err=0.6697867518672465 at it=24
* v0_scn_mean = 30.944500318913942
* MAE = 0.4999947911327934
=====
```

df n.5, scene n.6/66

```
We have 2 time intervals inside [77.52,77.92]
* err= 0.02834713696313409
* Learning rate NN = 0.0008099999977275729
* diff = 7.221922134793834e-07
```

df n. 5 – Scene n. 6, at it = 350



For scene 6/66

```
* use LR_NN=0.001 with err=0.028604209807377934 at it=24
* v0_scn_mean = 29.98028994511335
* MAE = 0.02834713696313409
```

df n.5, scene n.7/66

```
We have 3 time intervals inside [78.72,79.32]
```

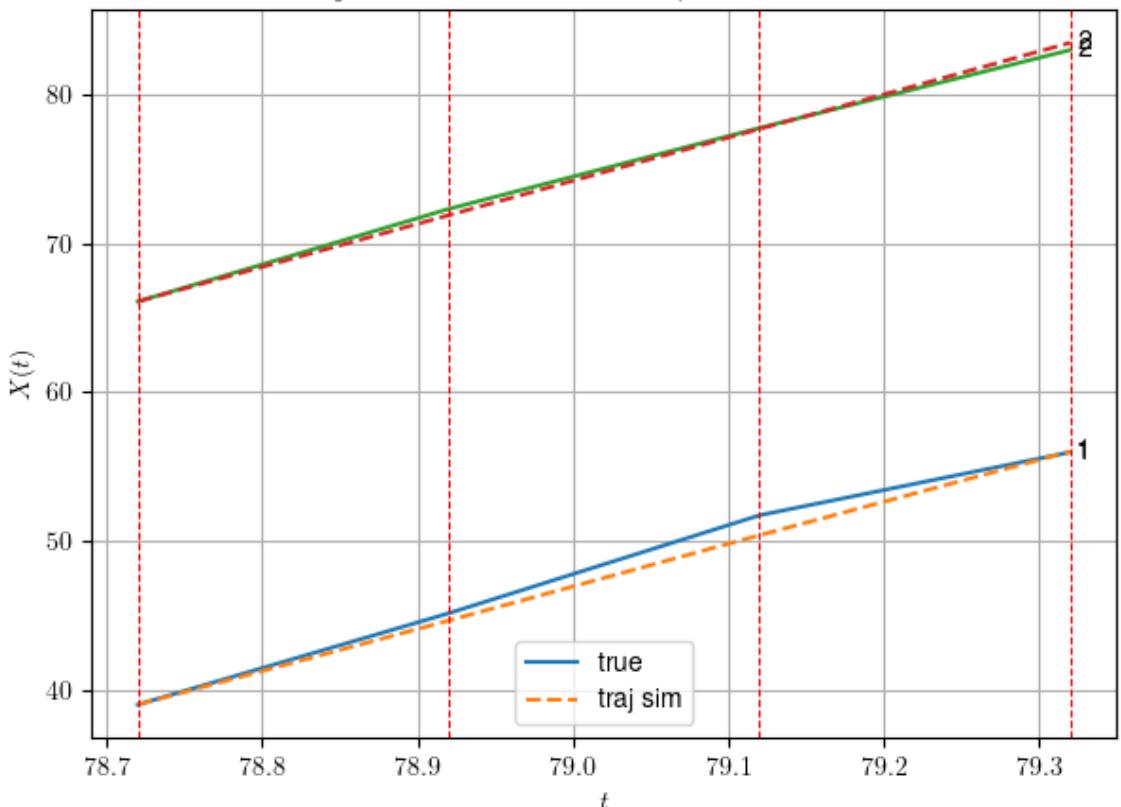
- Time interval n.0: [78.72, 78.92]
 - * y_true: [30.67106023]
 - * v_ann: [28.219356536865234, 28.965407295611328]

- Time interval n.1: [78.92, 79.12]
 - * y_true: [32.90145429]
 - * v_ann: [28.655263900756836, 28.965407295611328]

```
- Time interval n.2: [79.12, 79.32]
* y_true: [21.18125424]
* v_ann: [28.127473831176758, 28.965407295611328]
```

```
* err= 0.30721105516282354
* Learning rate NN = 2.952449540316593e-05
* diff = 0.0002054822442050222
```

df n. 5 – Scene n. 7, at it = 500

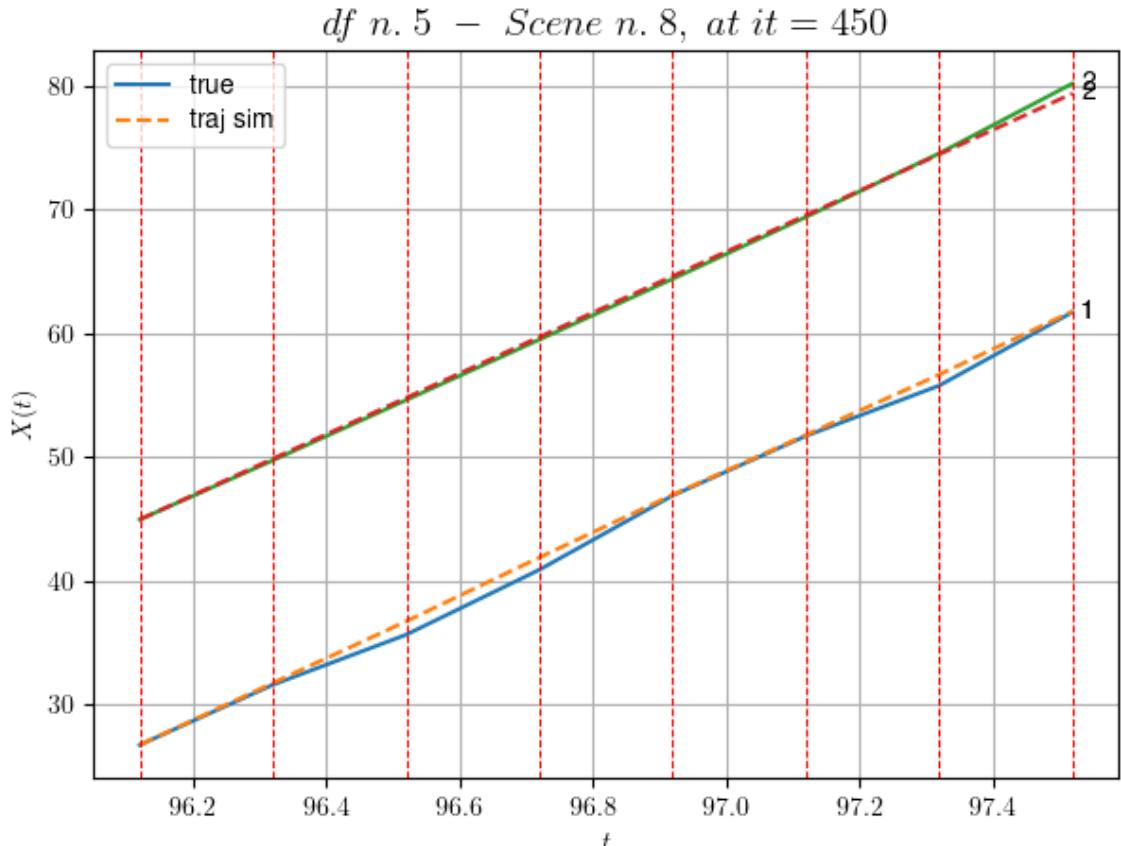


For scene 7/66

```
* use LR_NN=5e-05 with err=0.4336133941661431 at it=24
* v0_scn_mean = 29.006791003779018
* MAE = 0.3055728864604098
```

df n.5, scene n.8/66

We have 7 time intervals inside [96.12,97.52]
* err= 0.23778609921886074
* Learning rate NN = 1.4121472304395866e-05
* diff = 1.8172314736331074e-07



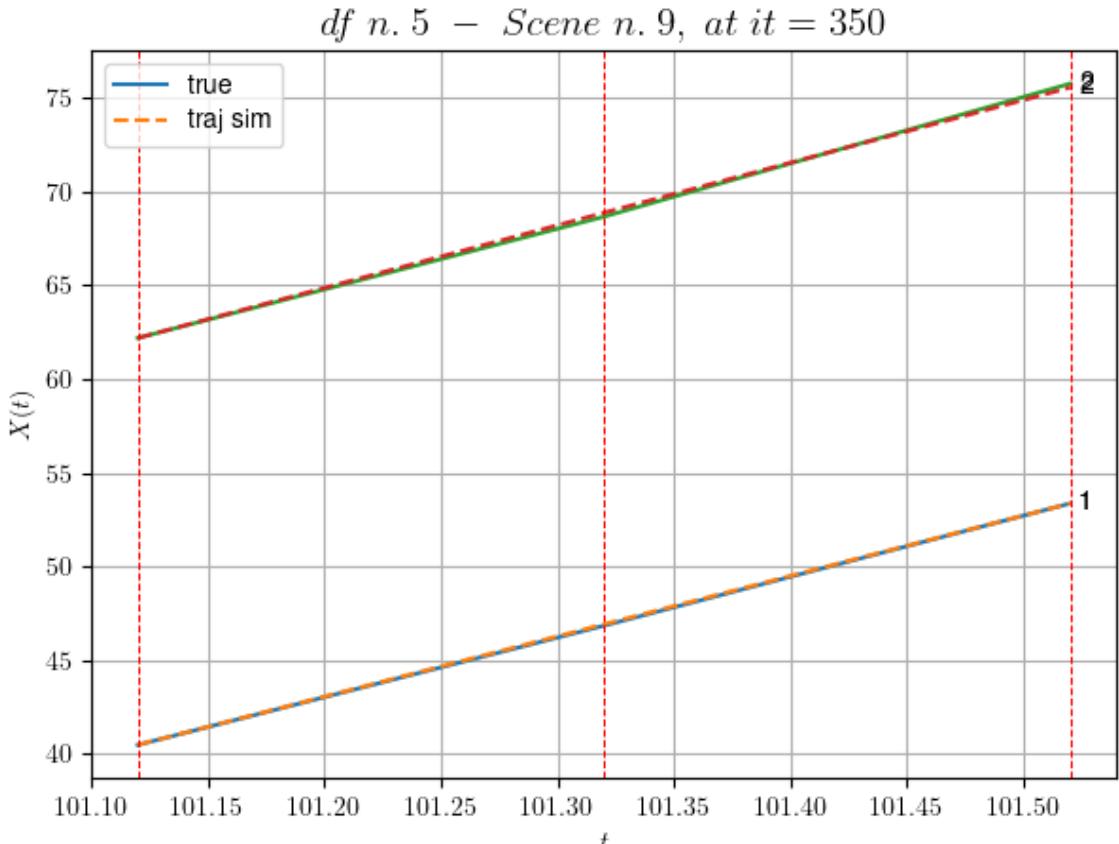
For scene 8/66

* use LR_NN=5e-05 with err=10.052298592889525 at it=24
* v0_scn_mean = 24.82431685004207
* MAE = 0.23497595072305852

df n.5, scene n.9/66

We have 2 time intervals inside [101.12,101.52]

* err= 0.015576999474805852
* Learning rate NN = 8.099999104160815e-05
* diff = 2.8418571433597162e-08



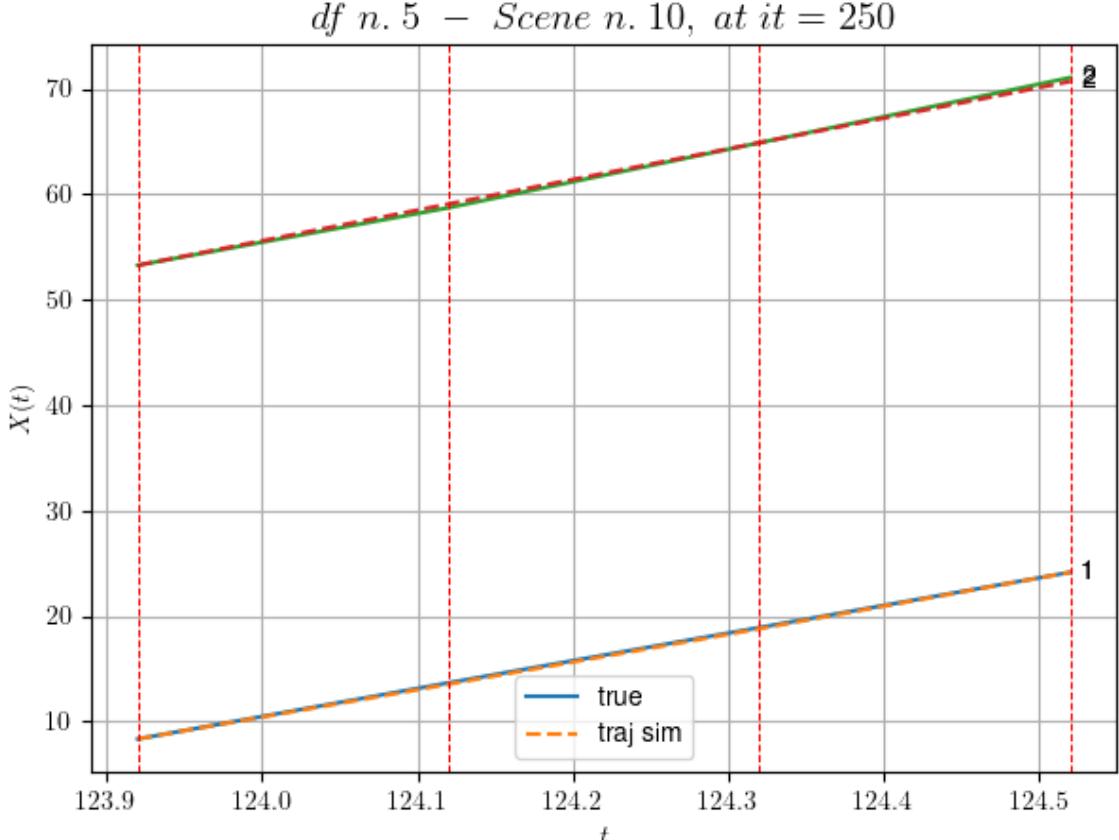
For scene 9/66

* use LR_NN=0.0001 with err=0.45072888432682146 at it=24
* v0_scn_mean = 33.21490567842065
* MAE = 0.015576980291040172

df n.5, scene n.10/66

We have 3 time intervals inside [123.92,124.52]

* err= 0.03681684948733224
* Learning rate NN = 4.049999552080408e-05
* diff = 4.733320158323284e-07



For scene 10/66

- * use LR_NN=5e-05 with err=0.06348172608390794 at it=24
- * v0_scn_mean = 29.141736419425435
- * MAE = 0.032589403829618266

df n.5, scene n.11/66

We have 5 time intervals inside [125.12, 126.12]

- Time interval n.0: [125.12, 125.32]
 - * y_true: [30.50092783]
 - * v_ann: [25.101299285888672, 29.269210394723824]

- Time interval n.1: [125.32, 125.52]
 - * y_true: [27.94108841]
 - * v_ann: [27.95136070251465, 29.269210394723824]

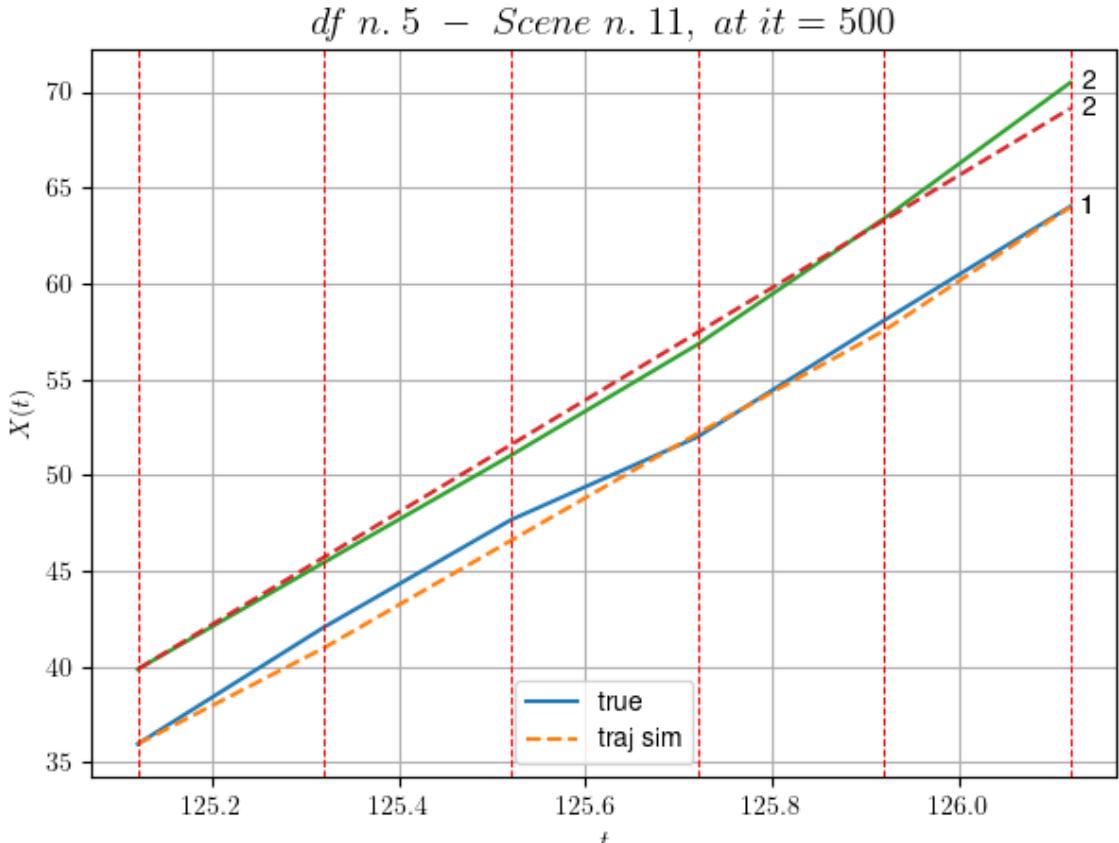
- Time interval n.2: [125.52, 125.72]
 - * y_true: [21.64103704]
 - * v_ann: [27.89876937866211, 29.269210394723824]

- Time interval n.3: [125.72, 125.92]
 - * y_true: [30.40181251]

```
* v_ann: [26.861854553222656, 29.269210394723824]
```

```
- Time interval n.4: [125.92, 126.12]
* y_true: [29.76231357]
* v_ann: [32.26011657714844, 29.269210394723824]
```

```
* err= 0.4361302758422932
* Learning rate NN = 0.0019371019443497062
* diff = 0.011869835931593742
```

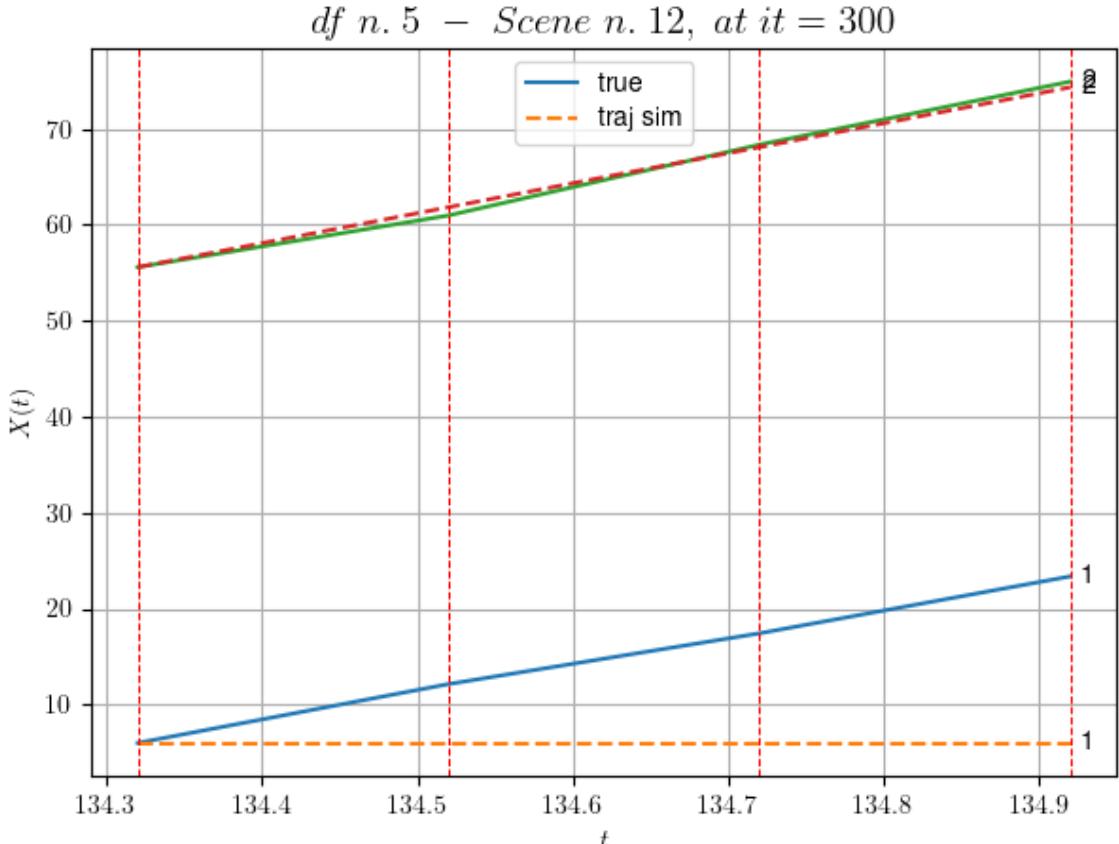


For scene 11/66

```
* use LR_NN=0.005 with err=0.7003252138524159 at it=24
* v0_scn_mean = 29.29844197892889
* MAE = 0.4118644313613874
```

df n.5, scene n.12/66

```
We have 3 time intervals inside [134.32,134.92]
* err= 58.848462076015274
* Learning rate NN = 7.289998757187277e-05
* diff = 2.250156185823471e-07
```



For scene 12/66

- * use LR_NN=0.0001 with err=0.37071367810599104 at it=24
- * v0_scn_mean = 31.16576834552666
- * MAE = 58.848462076015274

df n.5, scene n.13/66

We have 6 time intervals inside [145.92, 147.12]

- Time interval n.0: [145.92, 146.12]
 - * y_true: [20.61022162]
 - * v_ann: [4.125551276956685e-05, 25.99596410586340]

4]

- Time interval n.1: [146.12, 146.32]
 - * y_true: [23.57038291]
 - * v_ann: [2.9822544092894532e-05, 25.99596410586340]

4]

- Time interval n.2: [146.32, 146.52]
 - * y_true: [23.12047758]
 - * v_ann: [5.534218507818878e-05, 25.99596410586340]

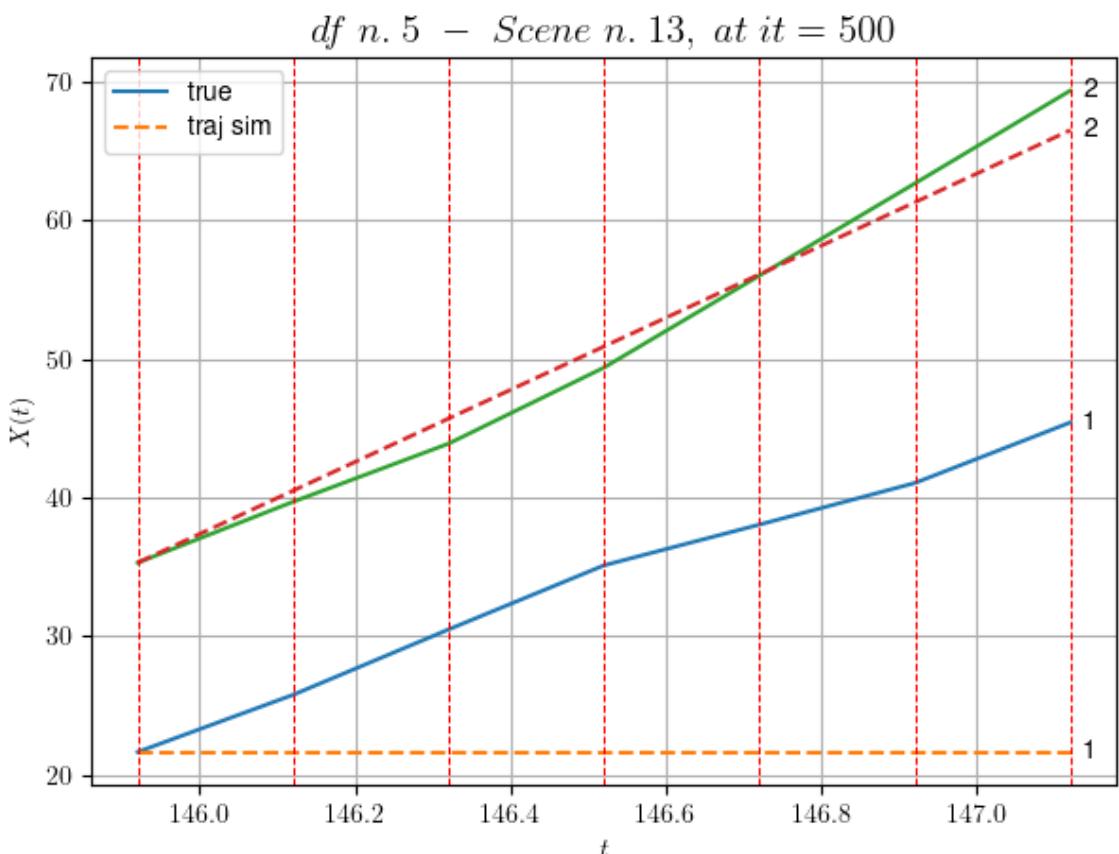
4]

```
- Time interval n.3: [146.52, 146.72]
  * y_true: [14.69037585]
  * v_ann: [1.991275348700583e-05, 25.99596410586340
4]

-----
- Time interval n.4: [146.72, 146.92]
  * y_true: [15.01046474]
  * v_ann: [2.496070408142259e-07, 25.99596410586340
4]

-----
- Time interval n.5: [146.92, 147.12]
  * y_true: [21.83491468]
  * v_ann: [3.3272986588173126e-09, 25.99596410586340
4]

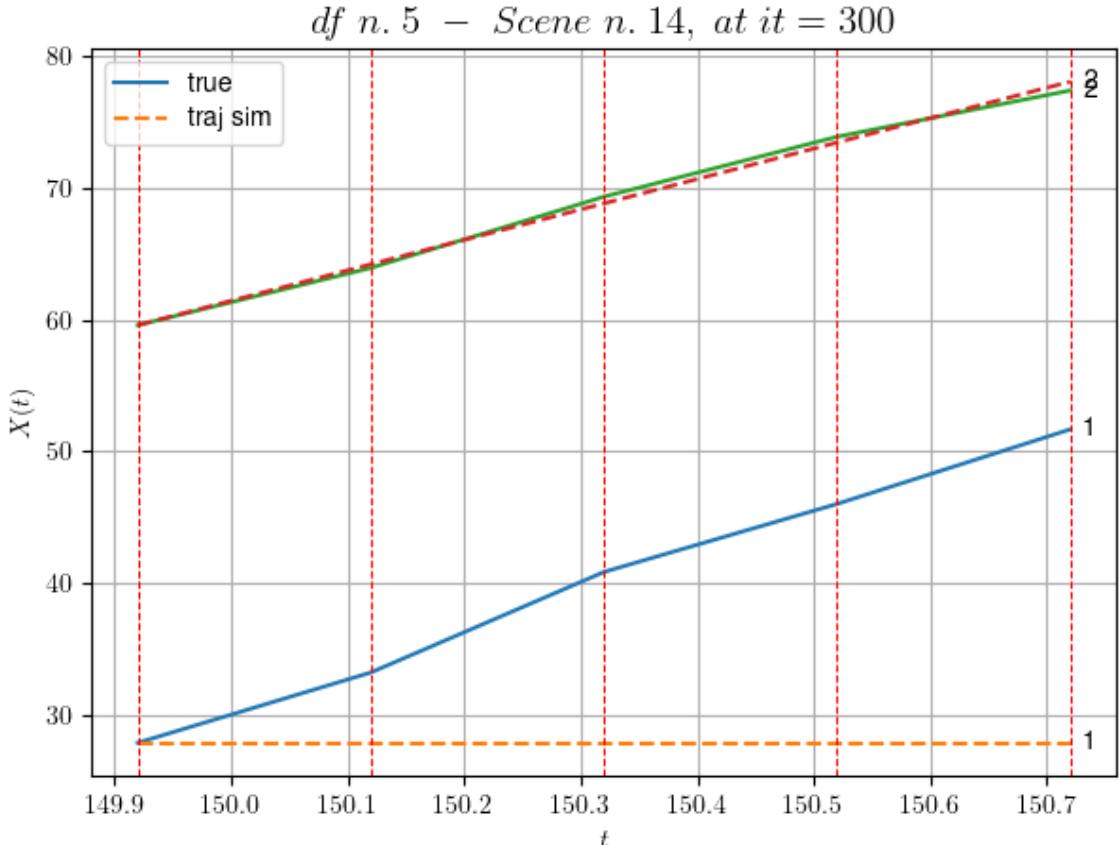
-----
* err= 107.33442839015409
* Learning rate NN = 0.00031381050939671695
* diff = 5.956891854452806e-06
```



For scene 13/66
* use LR_NN=0.001 with err=4.158068856785748 at it=24
* v0_scn_mean = 26.156125541598055
* MAE = 107.16651080157578

```
df n.5, scene n.14/66
```

```
We have 4 time intervals inside [149.92,150.72]
* err= 109.18836754806807
* Learning rate NN = 3.2804993679746985e-05
* diff = 4.307052563490288e-07
```



For scene 14/66

```
* use LR_NN=5e-05 with err=6.126590443898279 at it=24
* v0_scn_mean = 23.562793916599038
* MAE = 109.18836754806807
```

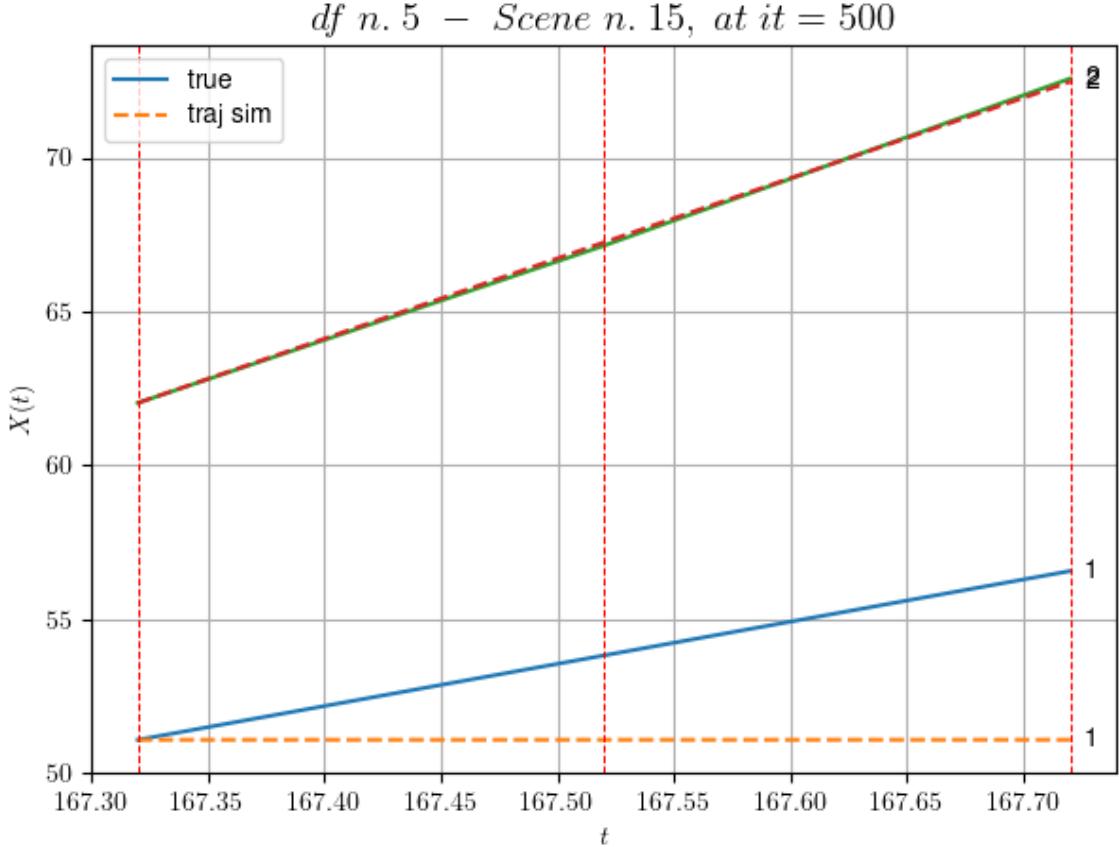
```
df n.5, scene n.15/66
```

```
We have 2 time intervals inside [167.32,167.72]
```

- Time interval n.0: [167.32, 167.52]
 - * y_true: [13.72577148]
 - * v_ann: [0.005058552138507366, 26.10725367471429]

- Time interval n.1: [167.52, 167.72]
 - * y_true: [13.72577148]
 - * v_ann: [0.0004328640934545547, 26.10725367471429]

```
* err= 6.28077694660998
* Learning rate NN = 0.00036449998151510954
* diff = 0.000747027628357877
```



For scene 15/66

```
* use LR_NN=0.0005 with err=0.5037508723341867 at it=24
* v0_scn_mean = 26.262963527696716
* MAE = 6.28077694660998
```

df n.5, scene n.16/66

We have 3 time intervals inside [175.72, 176.32]

- Time interval n.0: [175.72, 175.92]
 - * y_true: [28.75187595]
 - * v_ann: [30.698558807373047, 28.85841806540134]

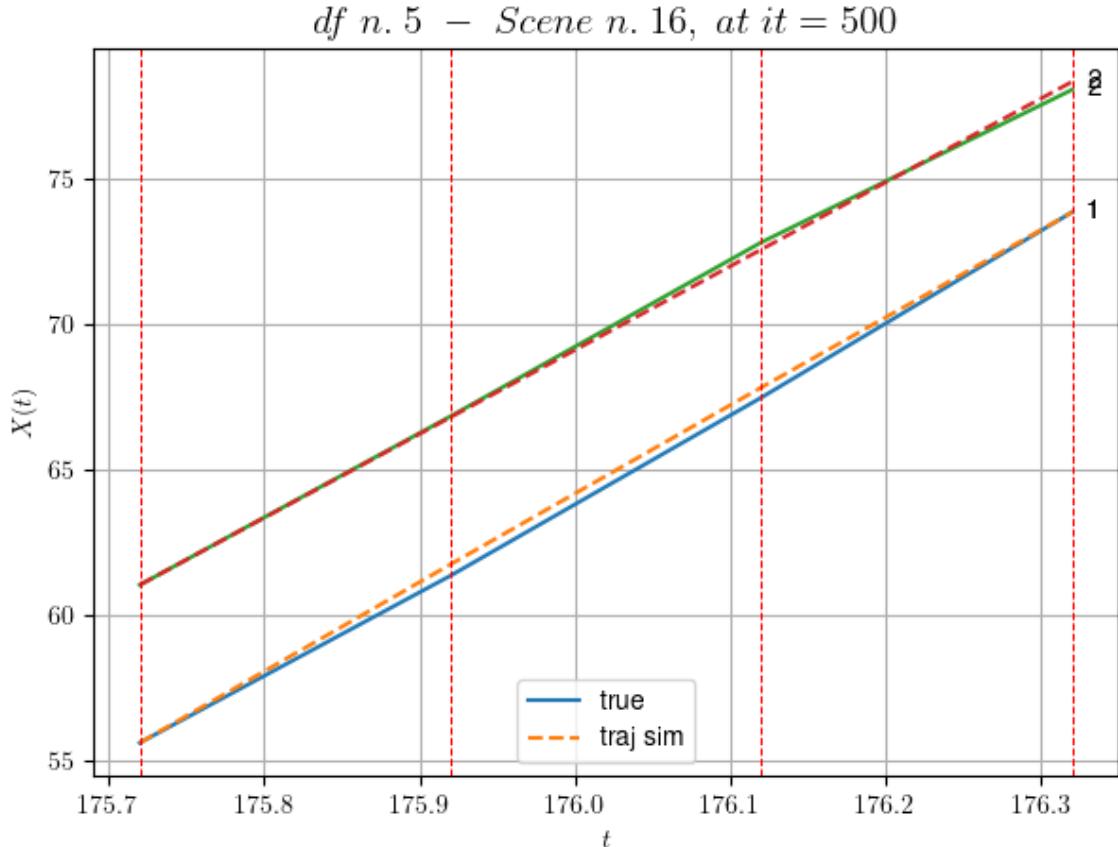
- Time interval n.1: [175.92, 176.12]
 - * y_true: [30.6425727]
 - * v_ann: [30.433673858642578, 28.85841806540134]

- Time interval n.2: [176.12, 176.32]
 - * y_true: [31.90303719]
 - * v_ann: [30.13442611694336, 28.85841806540134]

```

* err= 0.05113938218686786
* Learning rate NN = 0.0002952449722215533
* diff = 7.035177114152191e-06

```



For scene 16/66

```

* use LR_NN=0.0005 with err=0.17181657593798322 at it=24
* v0_scn_mean = 28.90408134277646
* MAE = 0.050499354323357004

```

df n. 5, scene n. 17/66

We have 4 time intervals inside [193.72, 194.52]

- Time interval n.0: [193.72, 193.92]
 - * y_true: [24.05562773]
 - * v_ann: [23.482250213623047, 30.811434876560696]

- Time interval n.1: [193.92, 194.12]
 - * y_true: [26.42578066]
 - * v_ann: [24.18903160095215, 30.811434876560696]

- Time interval n.2: [194.12, 194.32]
 - * y_true: [24.49095616]
 - * v_ann: [24.752593994140625, 30.811434876560696]

```

-----  

- Time interval n.3: [194.32, 194.52]  

* y_true: [23.20107316]  

* v_ann: [25.432430267333984, 30.811434876560696]
-----
```

```

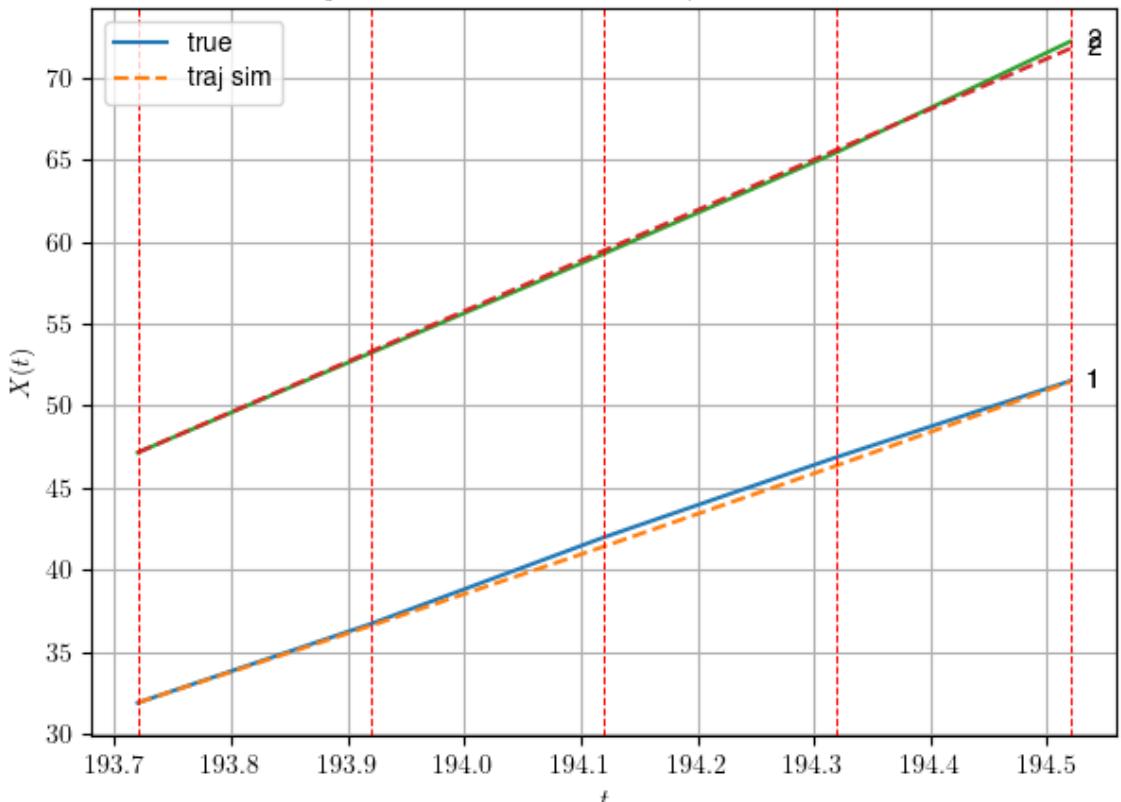
-----  

* err= 0.08461164988253667  

* Learning rate NN = 2.3914839403005317e-05  

* diff = 0.0002102561020204672
-----
```

df n. 5 – Scene n. 17, at it = 500



For scene 17/66

```

* use LR_NN=5e-05 with err=0.37356783094799806 at it=24  

* v0_scn_mean = 30.778977481504416  

* MAE = 0.08461164988253667
=====
```

df n.5, scene n.18/66

```

=====  

We have 3 time intervals inside [214.32,214.92]  

- Time interval n.0: [214.32, 214.52]  

* y_true: [29.49016899]  

* v_ann: [30.071571350097656, 33.416651411340965]
=====
```

```

-----  

- Time interval n.1: [214.52, 214.72]  

* y_true: [32.47033959]
-----
```

```
* v_ann: [30.129005432128906, 33.416651411340965]
```

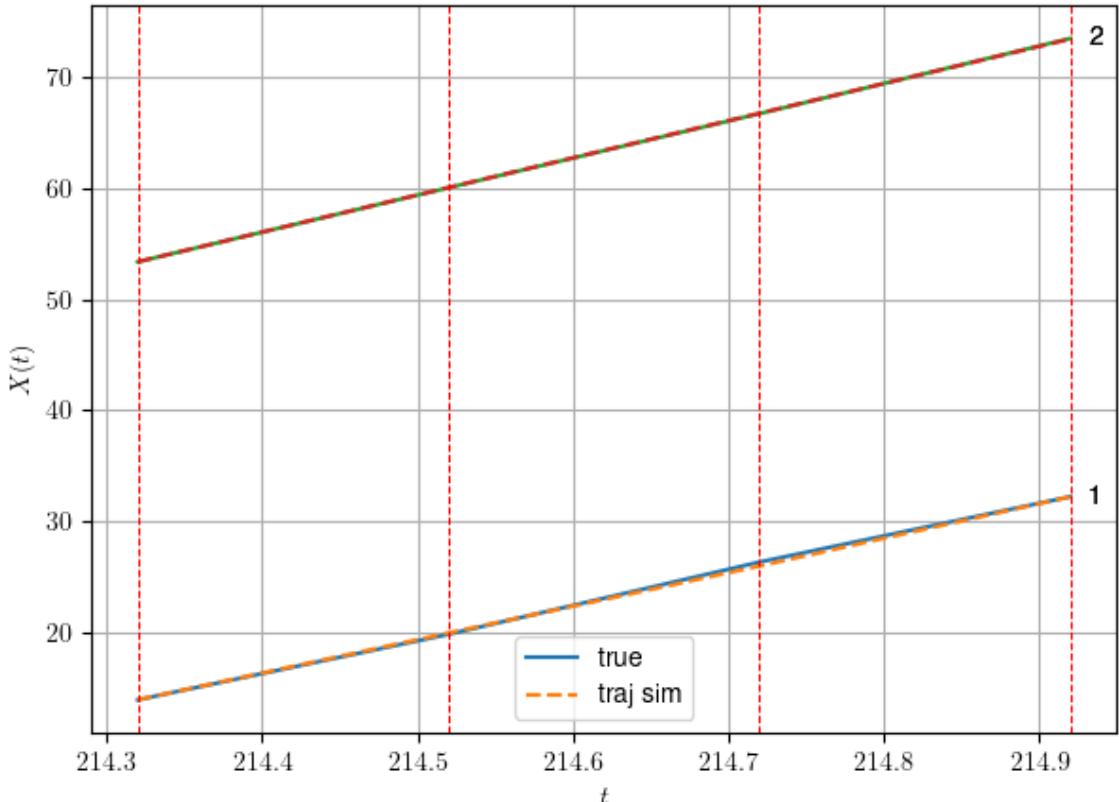
```
- Time interval n.2: [214.72, 214.92]
```

```
* y_true: [29.42048356]
```

```
* v_ann: [31.180376052856445, 33.416651411340965]
```

```
* err= 0.01764177233332501
* Learning rate NN = 2.952449540316593e-05
* diff = 2.1122450007527852e-05
```

df n. 5 – Scene n. 18, at it = 500



For scene 18/66

```
* use LR_NN=5e-05 with err=0.8427789959564074 at it=24
```

```
* v0_scn_mean = 33.279985354913315
```

```
* MAE = 0.01764177233332501
```

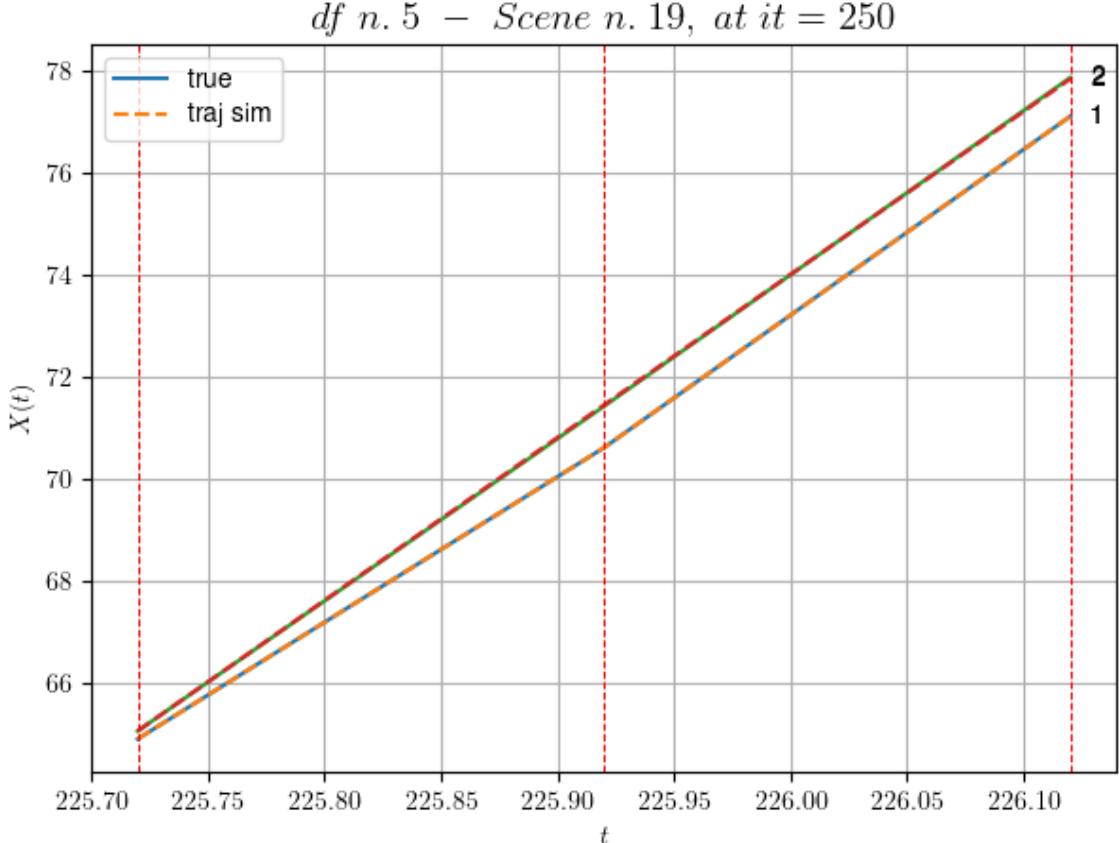
df n.5, scene n.19/66

```
We have 2 time intervals inside [225.72,226.12]
```

```
* err= 0.0002198692094893834
```

```
* Learning rate NN = 0.008999999612569809
```

```
* diff = 1.1166008383412191e-07
```



For scene 19/66

- * use LR_NN=0.01 with err=0.13989430002827796 at it=24
- * v0_scn_mean = 31.859763662747604
- * MAE = 0.0002198692094893834

df n.5, scene n.20/66

We have 6 time intervals inside [226.72, 227.92]

- Time interval n.0: [226.72, 226.92]
 - * y_true: [35.91081855]
 - * v_ann: [36.34804153442383, 32.693664579613554]

- Time interval n.1: [226.92, 227.12]
 - * y_true: [29.63097708]
 - * v_ann: [36.86819839477539, 32.693664579613554]

- Time interval n.2: [227.12, 227.32]
 - * y_true: [32.76145219]
 - * v_ann: [32.78523254394531, 32.693664579613554]

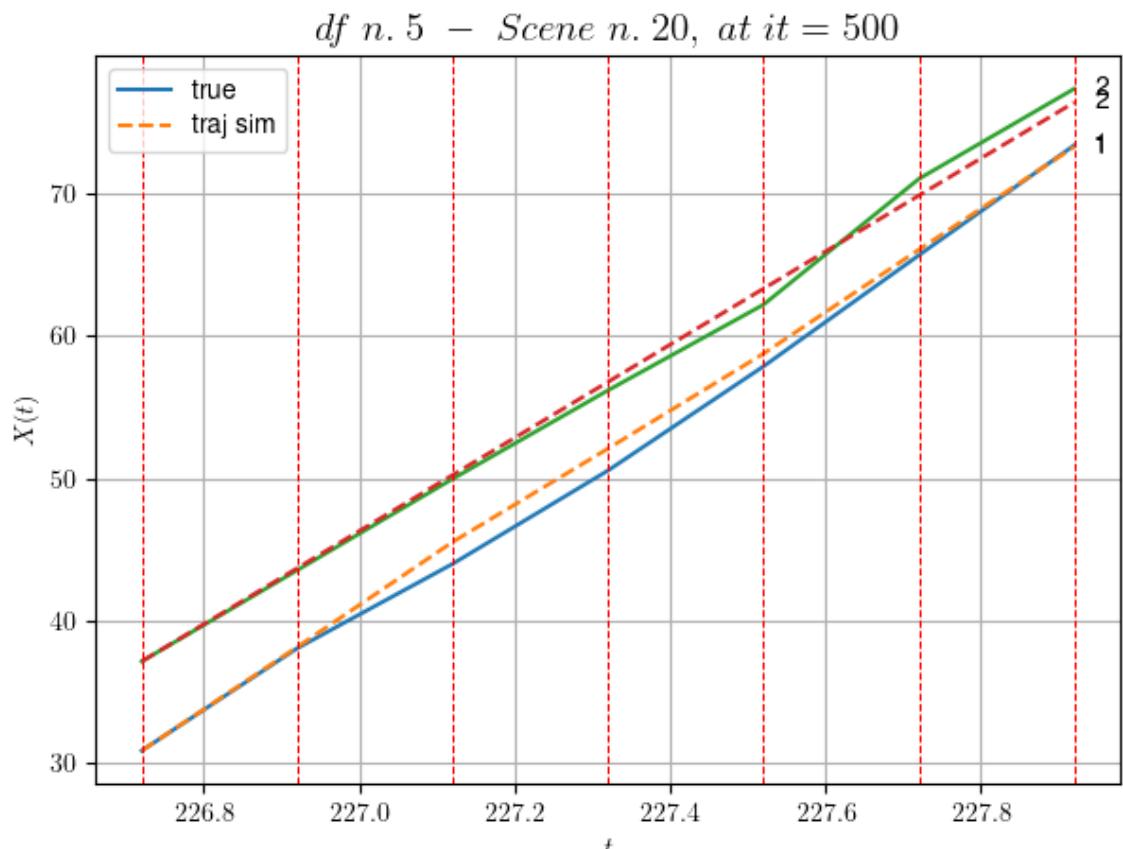
- Time interval n.3: [227.32, 227.52]
 - * y_true: [36.53210553]

```
* v_ann: [33.286231994628906, 32.693664579613554]
```

```
- Time interval n.4: [227.52, 227.72]
* y_true: [39.00291249]
* v_ann: [36.493953704833984, 32.693664579613554]
```

```
- Time interval n.5: [227.72, 227.92]
* y_true: [38.60361644]
* v_ann: [36.097774505615234, 32.693664579613554]
```

```
* err= 0.690651549964679
* Learning rate NN = 0.00031381050939671695
* diff = 0.01750483172536188
```



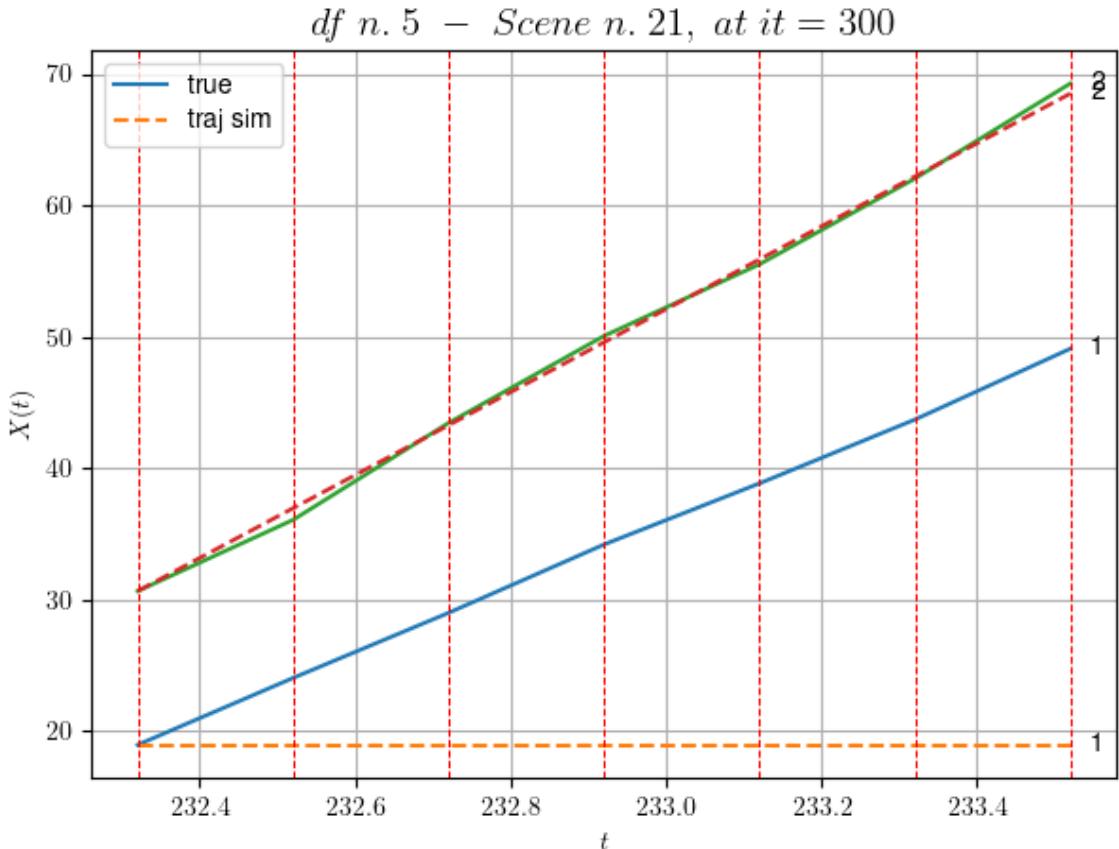
For scene 20/66

```
* use LR_NN=0.001 with err=3.615236826905595 at it=24
* v0_scn_mean = 32.58591799644935
* MAE = 0.690651549964679
```

df n.5, scene n.21/66

We have 6 time intervals inside [232.32,233.52]
* err= 162.603152114928

* Learning rate NN = 0.000478296831715852
 * diff = 3.493091185191588e-07

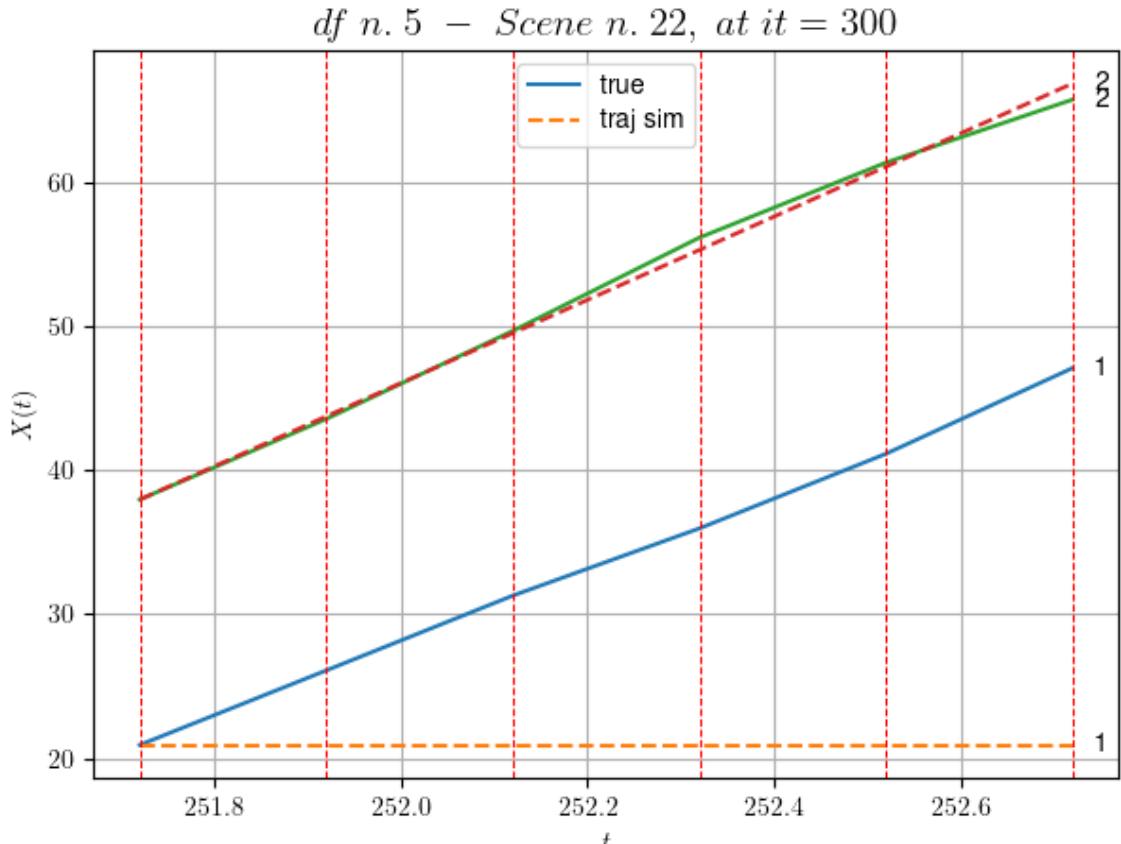


For scene 21/66

* use LR_NN=0.001 with err=1.4260388176268042 at it=24
 * v0_scn_mean = 31.434773955841216
 * MAE = 34.5963277112759

df n.5, scene n.22/66

We have 5 time intervals inside [251.72,252.72]
 * err= 121.49562641761248
 * Learning rate NN = 0.0005904899444431067
 * diff = 1.573587695702372e-07



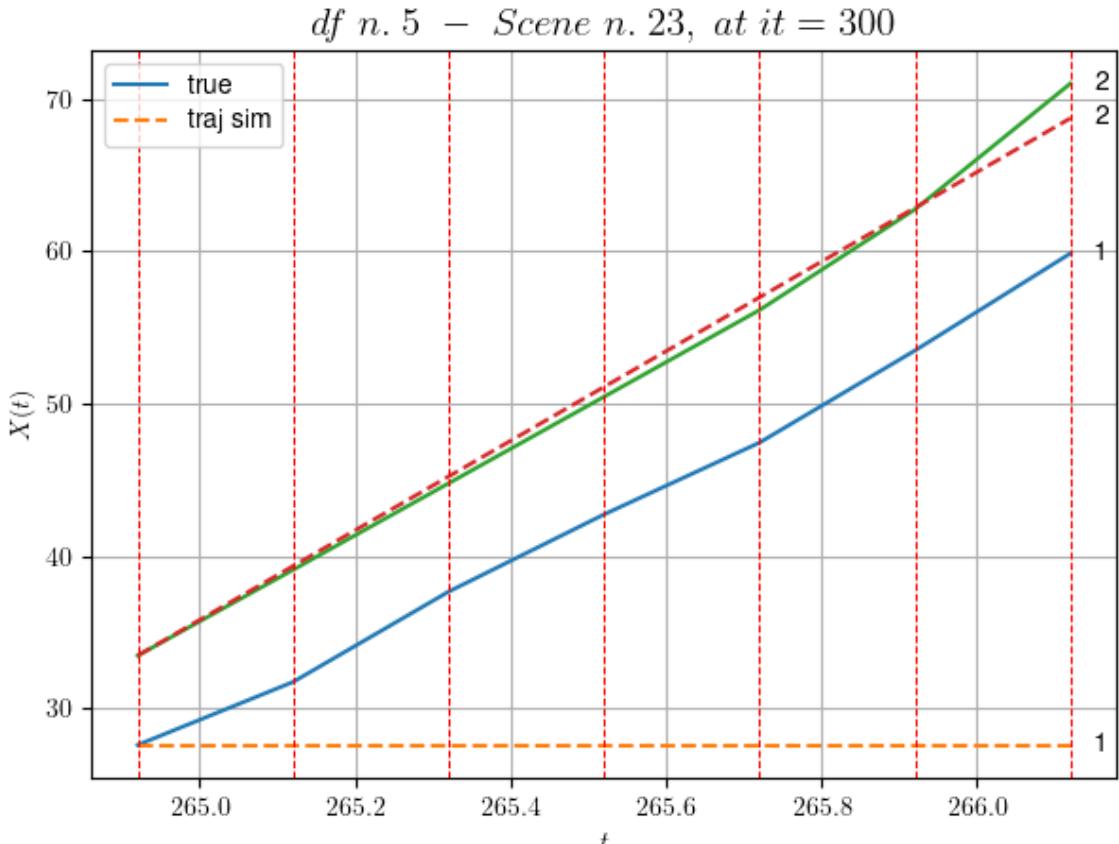
For scene 22/66

- * use LR_NN=0.001 with err=0.509722653544544 at it=24
- * v0_scn_mean = 28.983909809018254
- * MAE = 121.49562641761248

df n.5, scene n.23/66

We have 6 time intervals inside [264.92, 266.12]

- * err= 175.34109425291592
- * Learning rate NN = 4.7829678806010634e-05
- * diff = 3.0162934194777336e-07



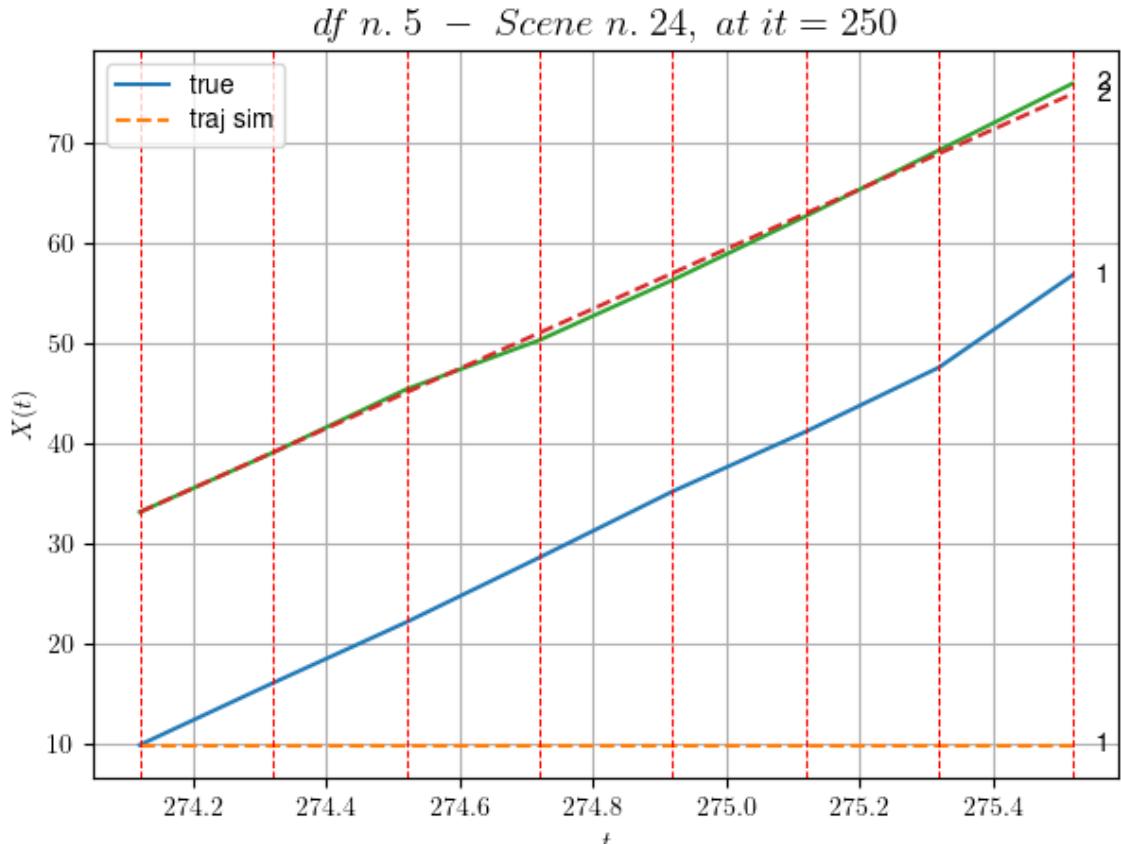
For scene 23/66

- * use LR_NN=0.0001 with err=0.5660703156059943 at it=24
 - * v0_scn_mean = 29.409002473820145
 - * MAE = 175.30560506169454
-
-

df n.5, scene n.24/66

We have 7 time intervals inside [274.12, 275.52]

- * err= 361.4215392323505
- * Learning rate NN = 5.314409008860821e-06
- * diff = 4.915858085041691e-07



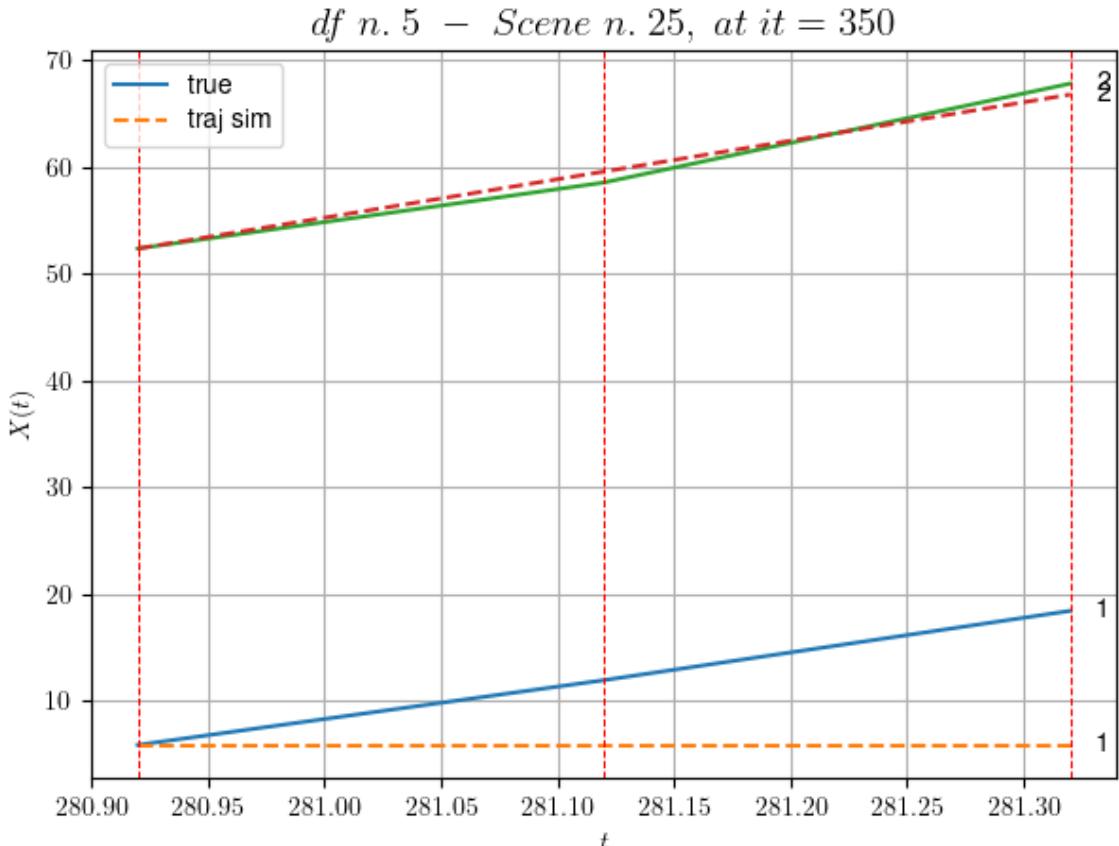
For scene 24/66

- * use LR_NN=1e-05 with err=1.3292304727472344 at it=24
 - * v0_scn_mean = 29.84492131679799
 - * MAE = 361.415685247228
-
-

df n.5, scene n.25/66

We have 2 time intervals inside [280.92, 281.32]

- * err= 32.76080220629665
- * Learning rate NN = 8.099999104160815e-05
- * diff = 7.905707377631188e-08

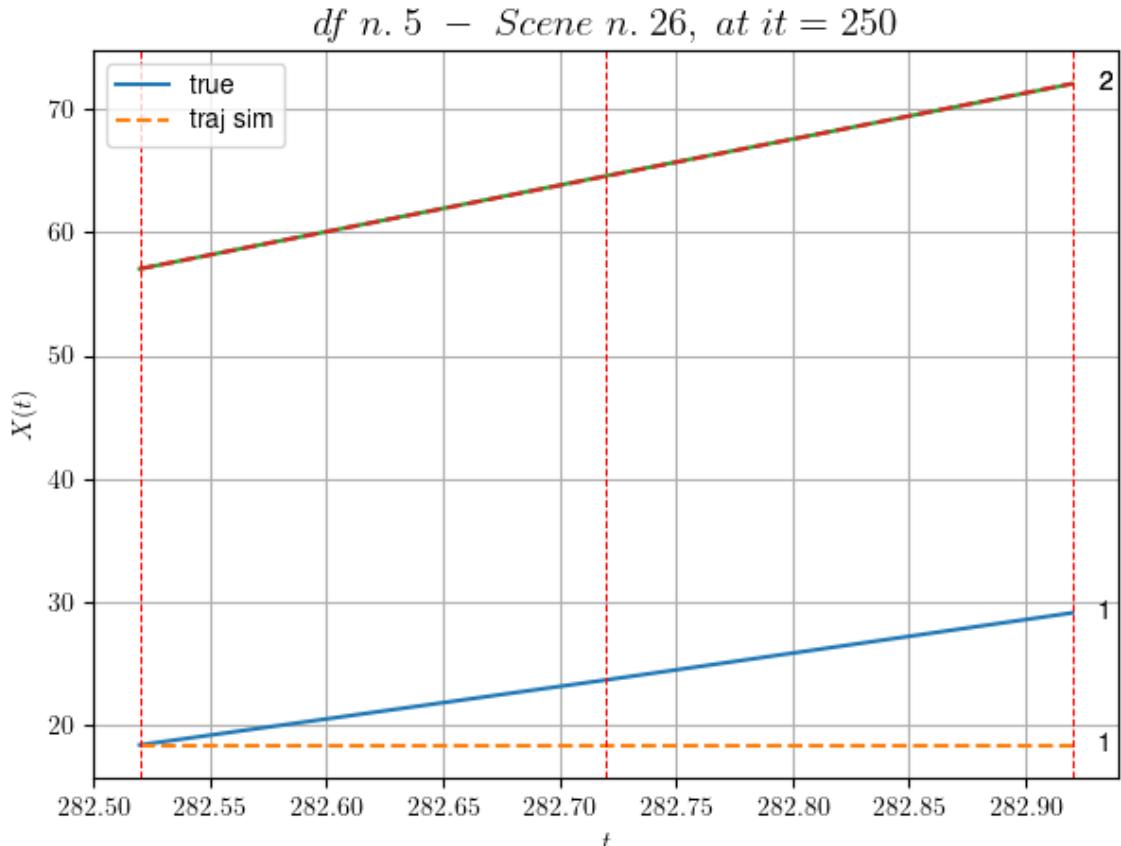


For scene 25/66

* use LR_NN=0.0001 with err=1.9997829048236861 at it=24
* v0_scn_mean = 35.701995822613
* MAE = 32.76080220629665

df n.5, scene n.26/66

We have 2 time intervals inside [282.52,282.92]
* err= 23.72561866664296
* Learning rate NN = 8.999999408842996e-05
* diff = 4.399388906506374e-07

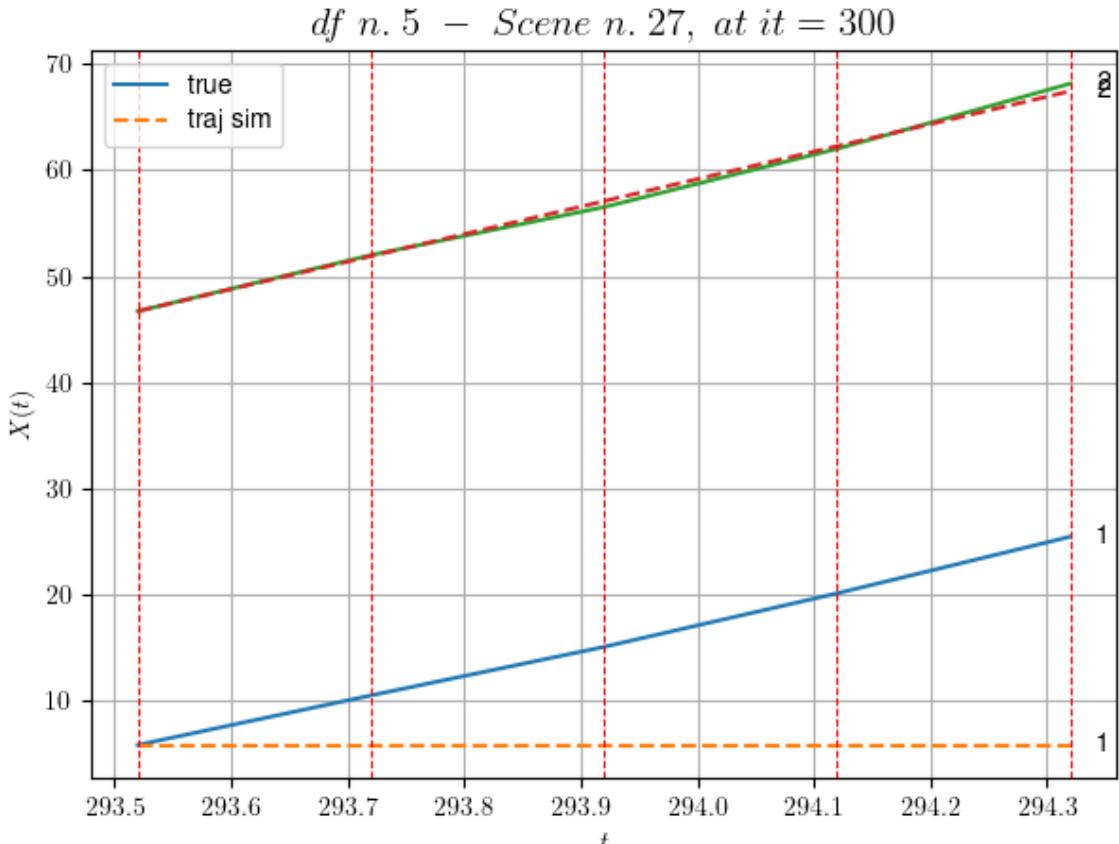


For scene 26/66

* use LR_NN=0.0001 with err=1.8840131784220198 at it=24
* v0_scn_mean = 36.93791175039183
* MAE = 23.725593859978378

df n.5, scene n.27/66

We have 4 time intervals inside [293.52, 294.32]
* err= 69.79000458611645
* Learning rate NN = 6.560998826898867e-06
* diff = 4.326631284357063e-07



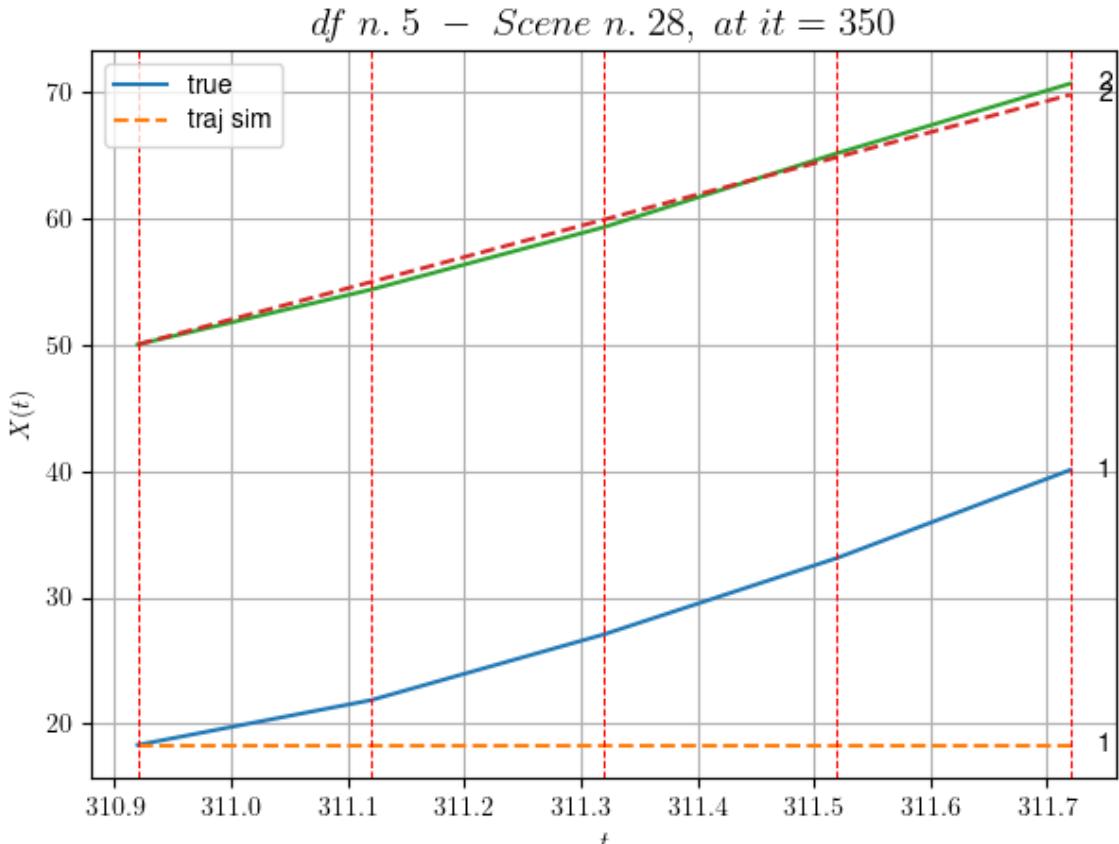
For scene 27/66

- * use LR_NN=1e-05 with err=1.9468366479696966 at it=24
 - * v0_scn_mean = 26.201825593884696
 - * MAE = 69.78617137880131
-
-

df n.5, scene n.28/66

We have 4 time intervals inside [310.92,311.72]

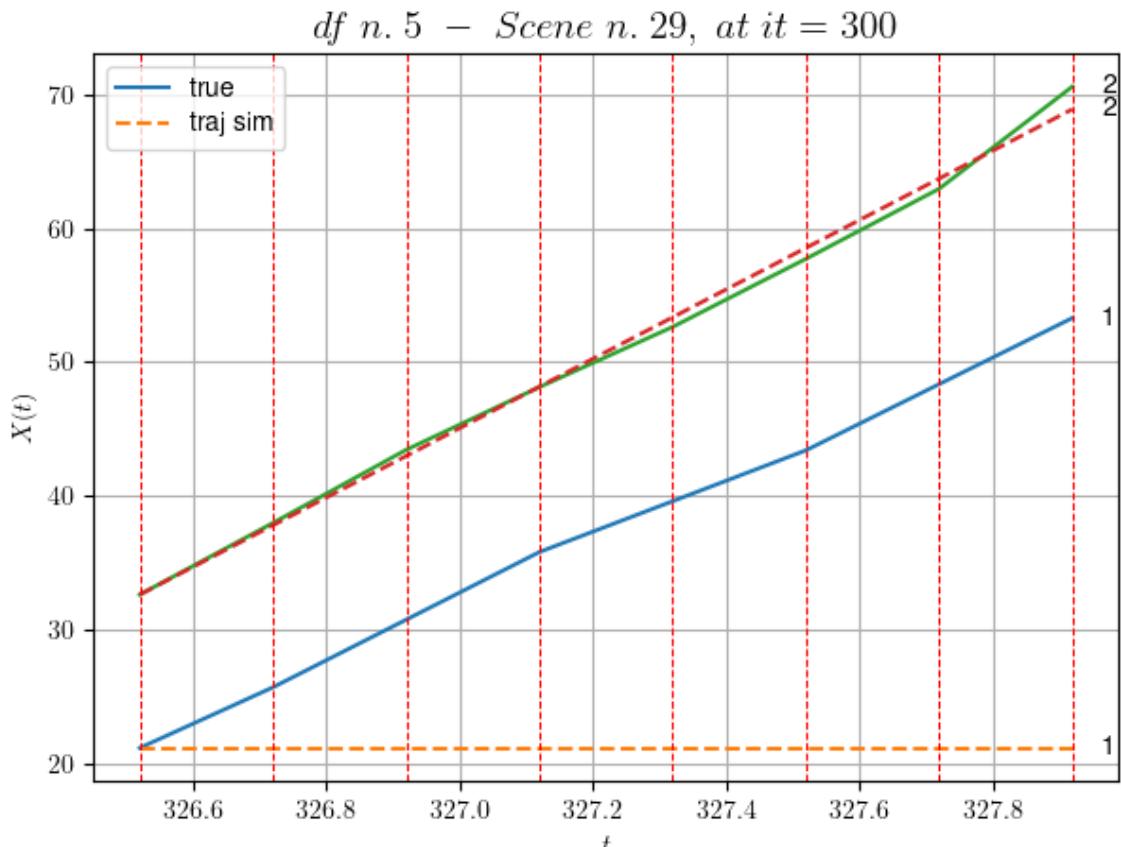
- * err= 78.20532770790004
- * Learning rate NN = 5.9048988987342454e-06
- * diff = 1.0889715440498549e-07



df n.5, scene n.29/66

We have 7 time intervals inside [326.52,327.92]

- * err= 183.60993617836888
- * Learning rate NN = 0.000430467160185799
- * diff = 3.383464388662105e-07



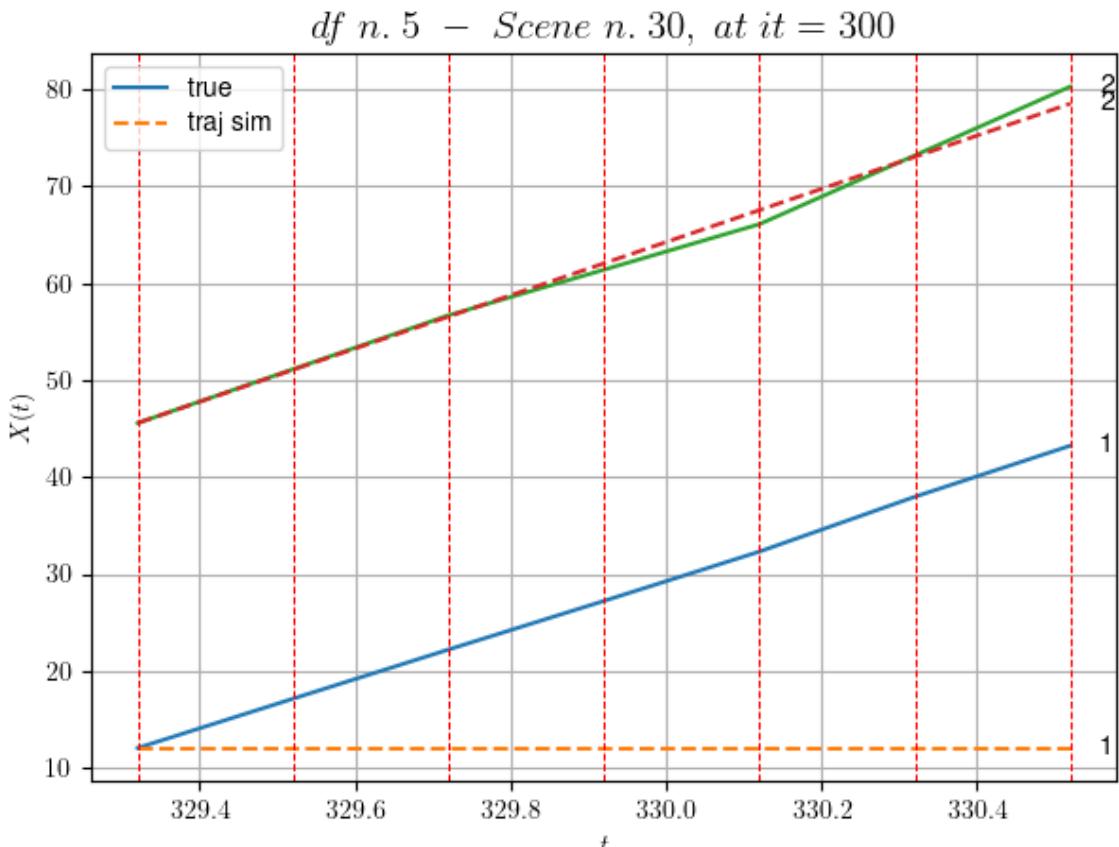
For scene 29/66

- * use LR_NN=0.001 with err=6.203547081204677 at it=24
 - * v0_scn_mean = 26.18286901528348
 - * MAE = 183.6091403922829
-
-

df n.5, scene n.30/66

We have 6 time intervals inside [329.32,330.52]

- * err= 172.72141539624843
- * Learning rate NN = 4.782968062500004e-06
- * diff = 7.005247084634902e-07



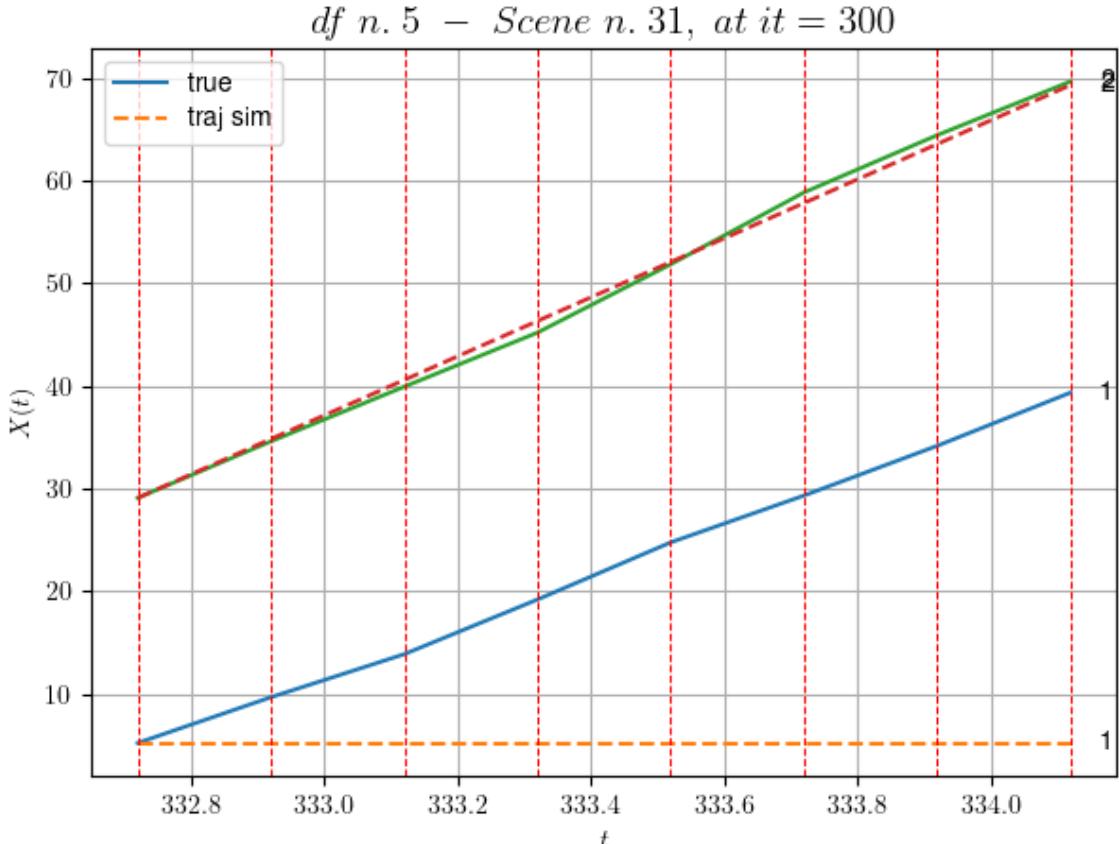
For scene 30/66

- * use LR_NN=1e-05 with err=1.8303107821686222 at it=24
 - * v0_scn_mean = 27.62171734599051
 - * MAE = 172.7095908421322
-
-

df n.5, scene n.31/66

We have 7 time intervals inside [332.72, 334.12]

- * err= 203.5001094632966
- * Learning rate NN = 0.0002152335800928995
- * diff = 5.536041101095179e-07



For scene 31/66

- * use LR_NN=0.0005 with err=0.7071297370228705 at it=24
- * v0_scn_mean = 28.800373411179656
- * MAE = 203.47854115551965

df n.5, scene n.32/66

We have 9 time intervals inside [337.72, 339.52]

- Time interval n.0: [337.72, 337.92]
 - * y_true: [19.16015277]
 - * v_ann: [0.00035493759787641466, 27.0200382190880]

1]

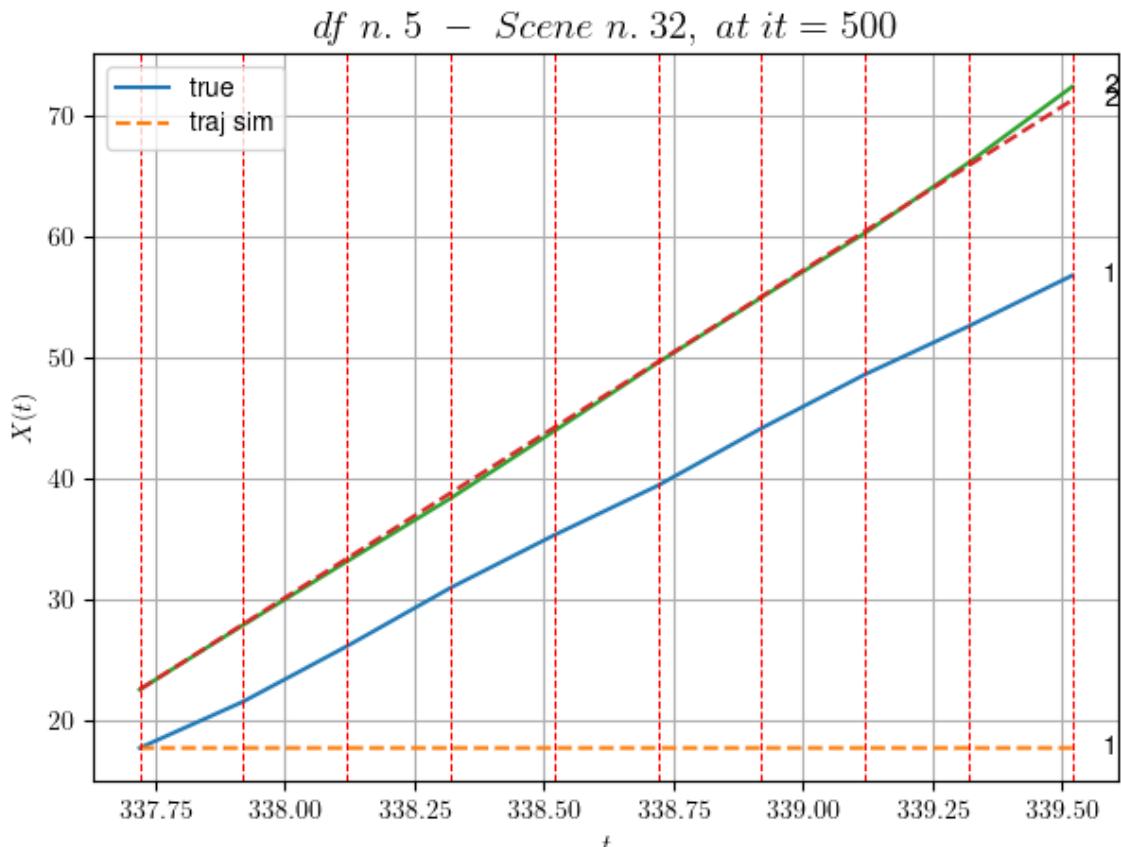
- Time interval n.1: [337.92, 338.12]
 - * y_true: [22.83026231]
 - * v_ann: [1.3068234920865507e-06, 27.0200382190880]

1]

- Time interval n.2: [338.12, 338.32]
 - * y_true: [24.09038948]
 - * v_ann: [1.0273380723901937e-07, 27.0200382190880]

1]

```
-----  
    - Time interval n.3: [338.32, 338.52]  
      * y_true: [21.72046205]  
      * v_ann: [2.406055266135354e-08, 27.02003821908801]  
  
-----  
    - Time interval n.4: [338.52, 338.72]  
      * y_true: [20.44060351]  
      * v_ann: [2.622828065845795e-10, 27.02003821908801]  
  
-----  
    - Time interval n.5: [338.72, 338.92]  
      * y_true: [23.65082523]  
      * v_ann: [7.950156917339857e-13, 27.02003821908801]  
  
-----  
    - Time interval n.6: [338.92, 339.12]  
      * y_true: [22.23087004]  
      * v_ann: [6.882291774239907e-14, 27.02003821908801]  
  
-----  
    - Time interval n.7: [339.12, 339.32]  
      * y_true: [19.88098798]  
      * v_ann: [2.607538200321397e-15, 27.02003821908801]  
  
-----  
    - Time interval n.8: [339.32, 339.52]  
      * y_true: [20.92126982]  
      * v_ann: [2.7589935179507007e-18, 27.0200382190880  
1]  
  
-----  
      * err= 270.77342686418524  
      * Learning rate NN = 0.00016677174426149577  
      * diff = 3.97817962038971e-06
```



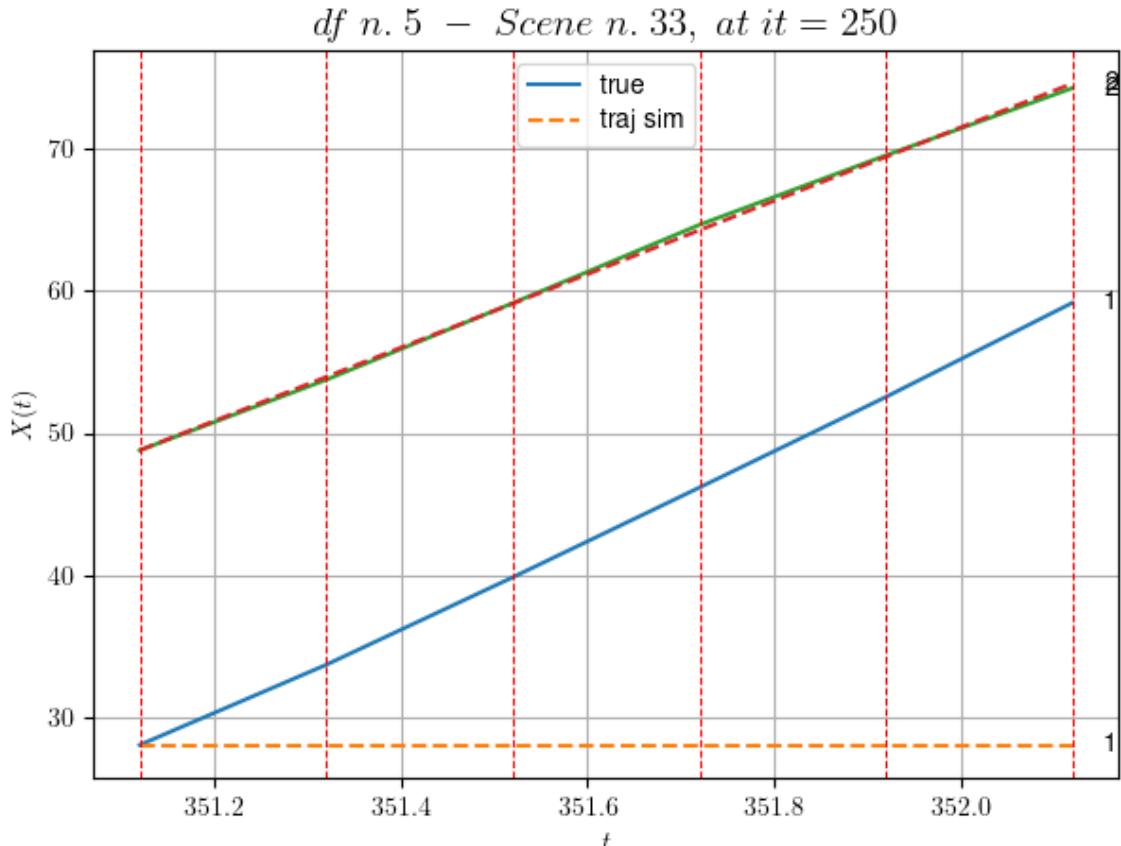
For scene 32/66

- * use LR_NN=0.001 with err=12.373348896583773 at it=24
- * v0_scn_mean = 27.139236690301317
- * MAE = 270.7650569055557

df n.5, scene n.33/66

We have 5 time intervals inside [351.12,352.12]

- * err= 172.47451499468696
- * Learning rate NN = 3.2804993679746985e-05
- * diff = 7.955176783980278e-07

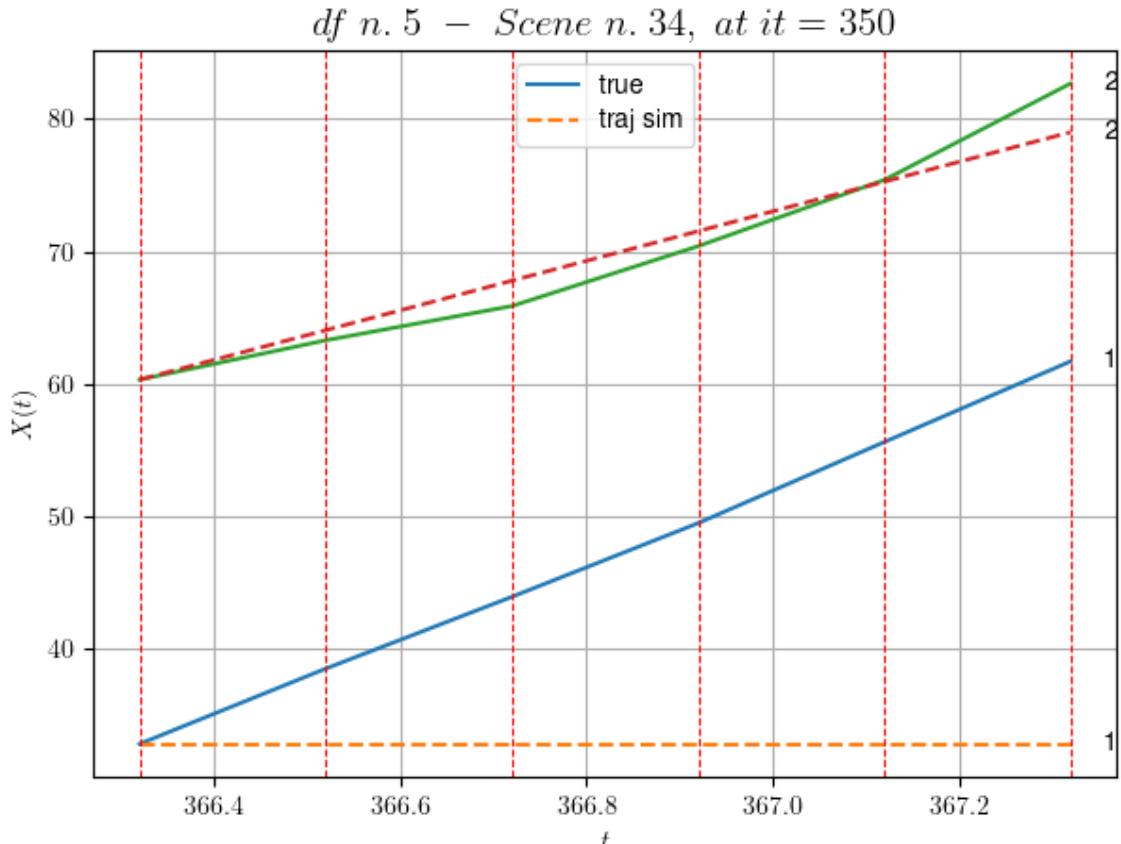


For scene 33/66

* use LR_NN=5e-05 with err=3.7726232335375123 at it=24
* v0_scn_mean = 26.16026820235221
* MAE = 172.47451499468696

df n.5, scene n.34/66

We have 5 time intervals inside [366.32,367.32]
* err= 151.0160162327317
* Learning rate NN = 5.314409008860821e-06
* diff = 7.852143539821554e-07

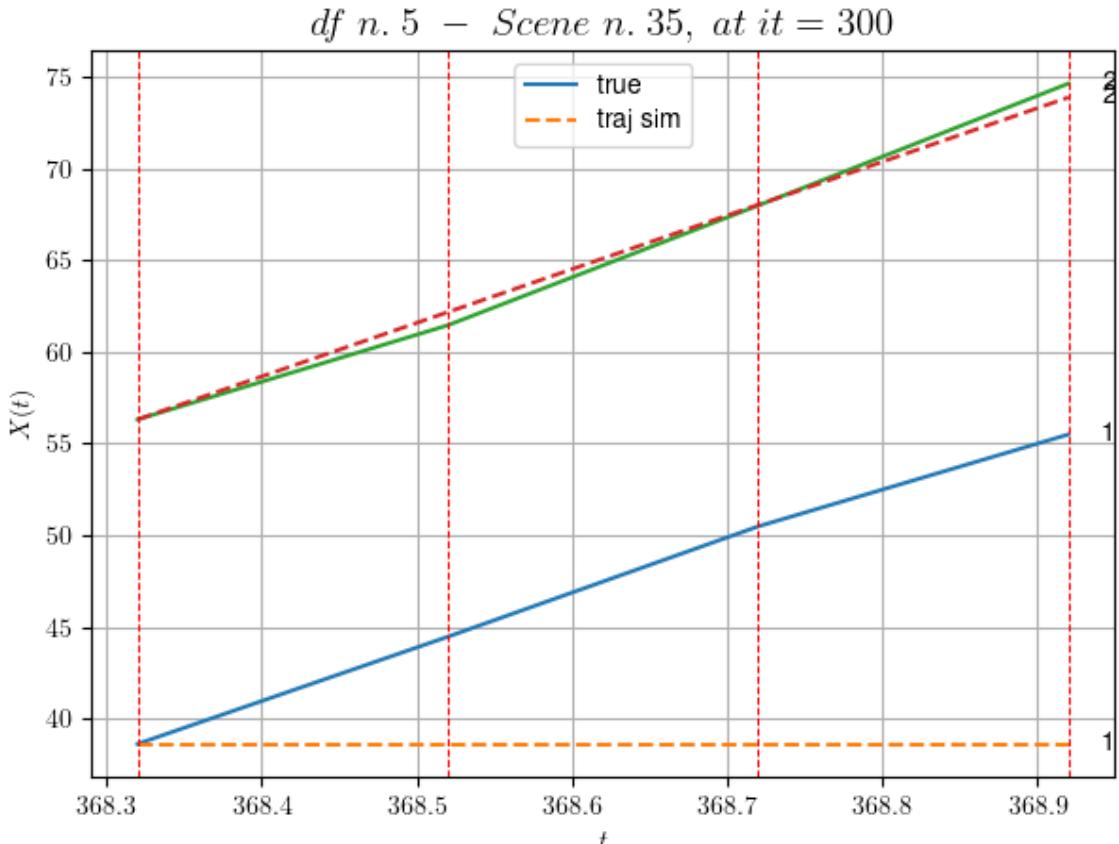


For scene 34/66

* use LR_NN=1e-05 with err=21.322190750315976 at it=24
* v0_scn_mean = 19.359264306635005
* MAE = 150.8345963367792

df n.5, scene n.35/66

We have 3 time intervals inside [368.32, 368.92]
* err= 57.689714974150306
* Learning rate NN = 0.0007289999630302191
* diff = 1.2812109417836837e-07



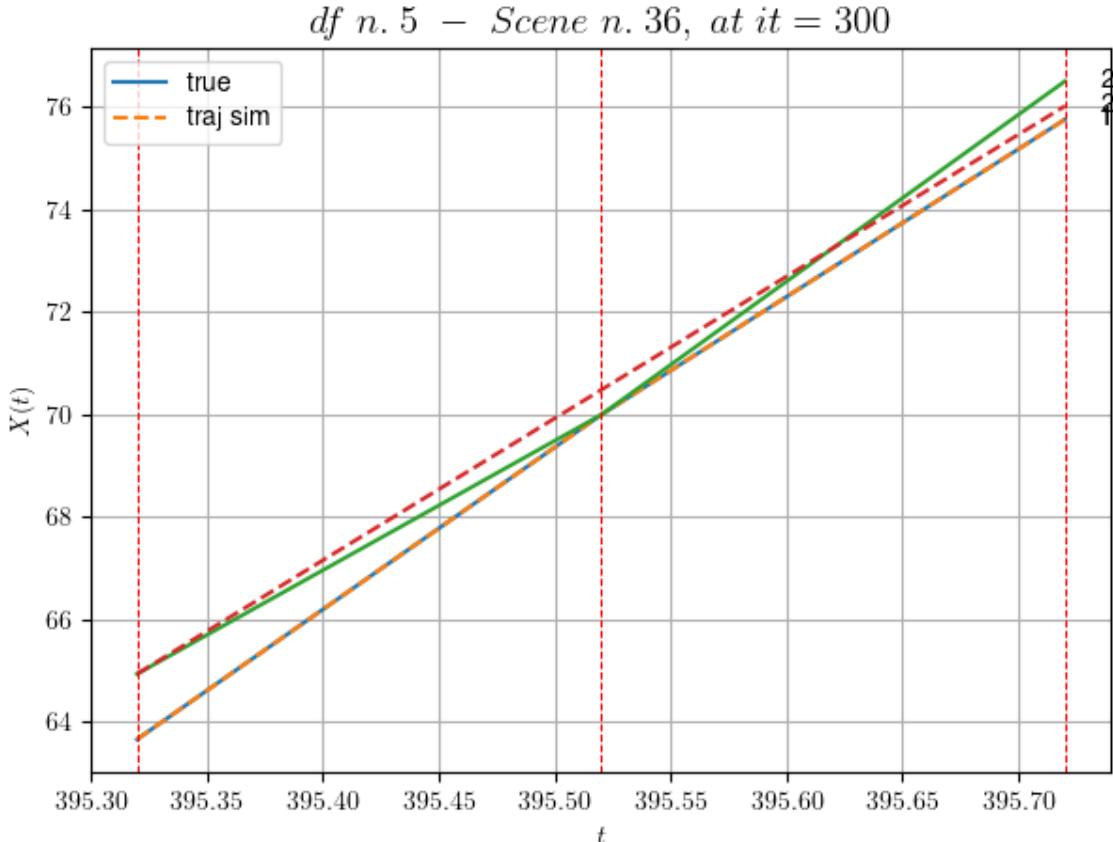
For scene 35/66

- * use LR_NN=0.001 with err=0.3644655193336344 at it=24
 - * v0_scn_mean = 29.34493000186878
 - * MAE = 57.67035159257634
-
-

df n.5, scene n.36/66

We have 2 time intervals inside [395.32,395.72]

- * err= 0.07854192509028614
- * Learning rate NN = 0.008099999278783798
- * diff = 1.8454926987987452e-07



For scene 36/66

- * use LR_NN=0.01 with err=0.1805404669287203 at it=24
- * v0_scn_mean = 27.852599026760995
- * MAE = 0.0766916485765402

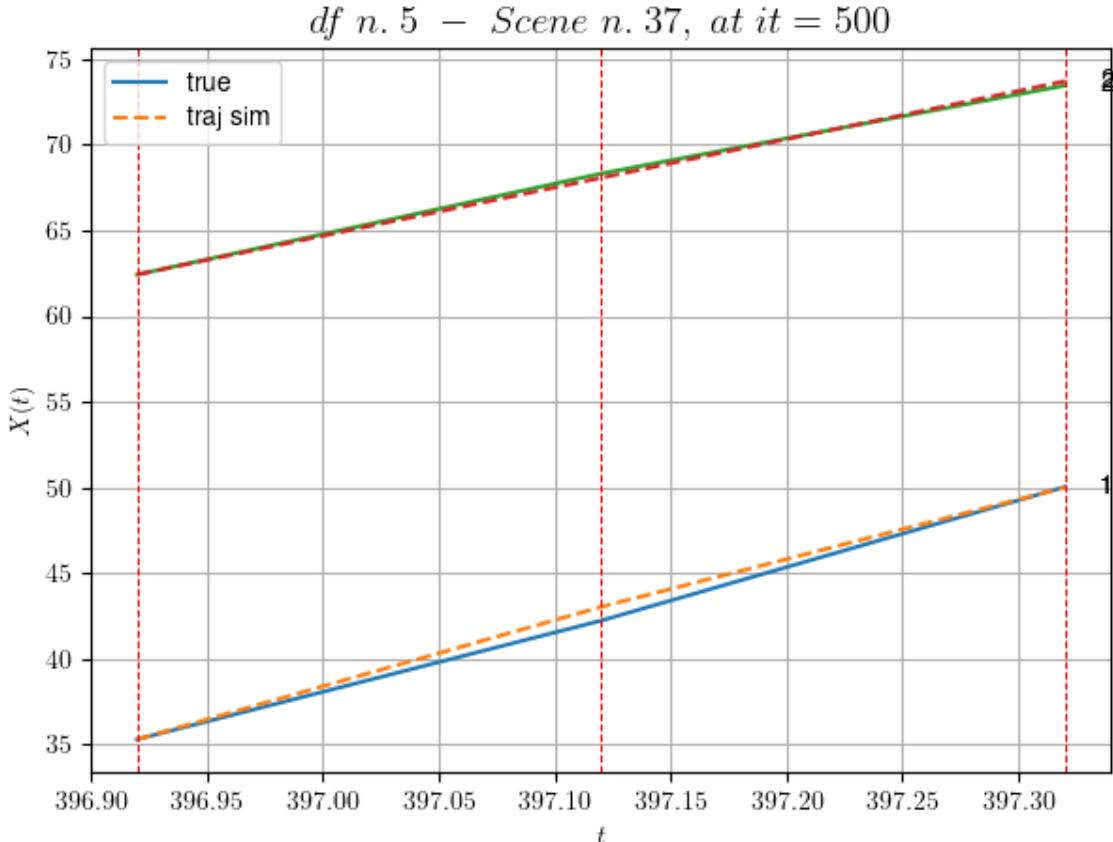
df n.5, scene n.37/66

We have 2 time intervals inside [396.92, 397.32]

- Time interval n.0: [396.92, 397.12]
 - * y_true: [34.6610239]
 - * v_ann: [38.67281723022461, 28.239105392624012]

- Time interval n.1: [397.12, 397.32]
 - * y_true: [39.0616778]
 - * v_ann: [34.88639450073242, 28.239105392624012]

- * err= 0.12841830725952688
- * Learning rate NN = 3.6449993785936385e-05
- * diff = 0.0005675185287259132



For scene 37/66

- * use LR_NN=5e-05 with err=0.21999723829904072 at it=24
- * v0_scn_mean = 28.3095411769056
- * MAE = 0.12667324778099387

df n.5, scene n.38/66

We have 3 time intervals inside [407.92, 408.52]

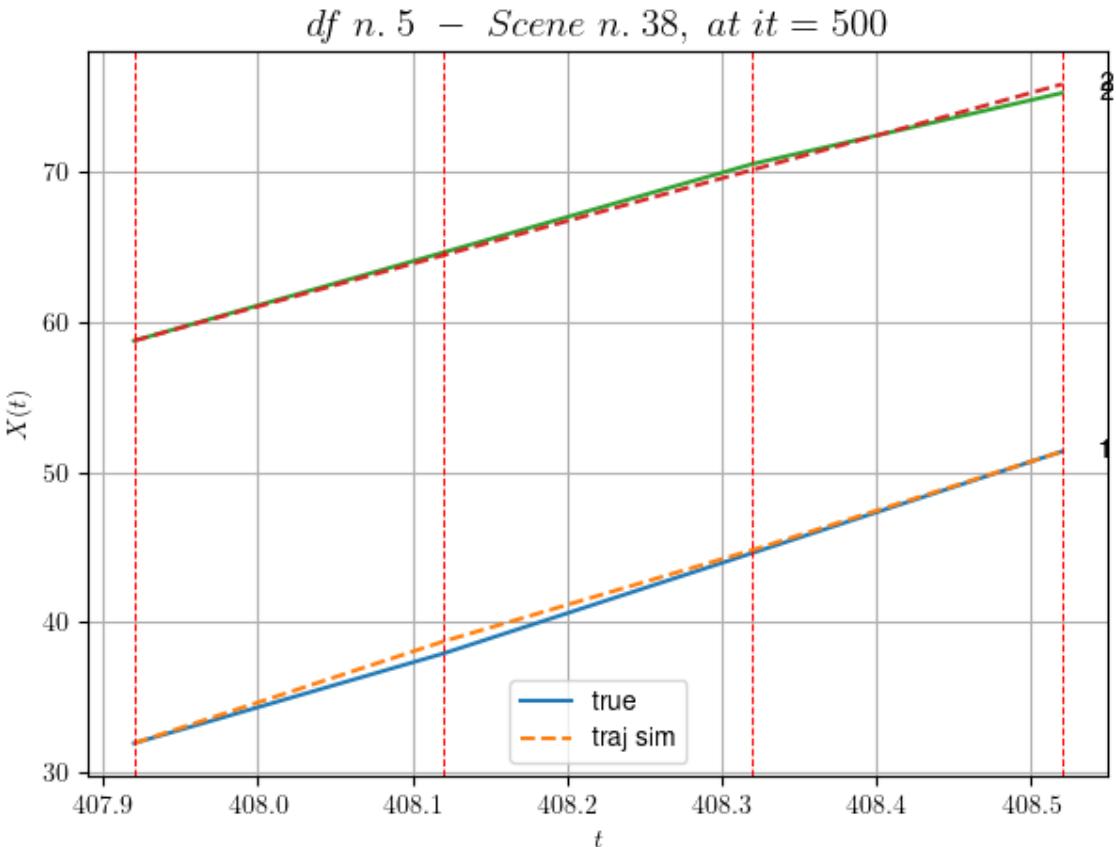
- Time interval n.0: [407.92, 408.12]
 - * y_true: [29.86072395]
 - * v_ann: [33.873226165771484, 28.45068736212315]

- Time interval n.1: [408.12, 408.32]
 - * y_true: [33.47113639]
 - * v_ann: [30.440105438232422, 28.45068736212315]

- Time interval n.2: [408.32, 408.52]
 - * y_true: [33.77149839]
 - * v_ann: [32.73490524291992, 28.45068736212315]

- * err= 0.15074511070879335
- * Learning rate NN = 5.904899080633186e-05

* diff = 0.00015487126588101252



For scene 38/66

- * use LR_NN=0.0001 with err=0.37819669478405943 at it=24
- * v0_scn_mean = 28.51265986762671
- * MAE = 0.1307139494390605

df n.5, scene n.39/66

We have 5 time intervals inside [415.32, 416.32]

- Time interval n.0: [415.32, 415.52]
 - * y_true: [24.30099057]
 - * v_ann: [22.56744384765625, 27.188395316739918]

- Time interval n.1: [415.52, 415.72]
 - * y_true: [3.42217247]
 - * v_ann: [3.9052481651306152, 27.188395316739918]

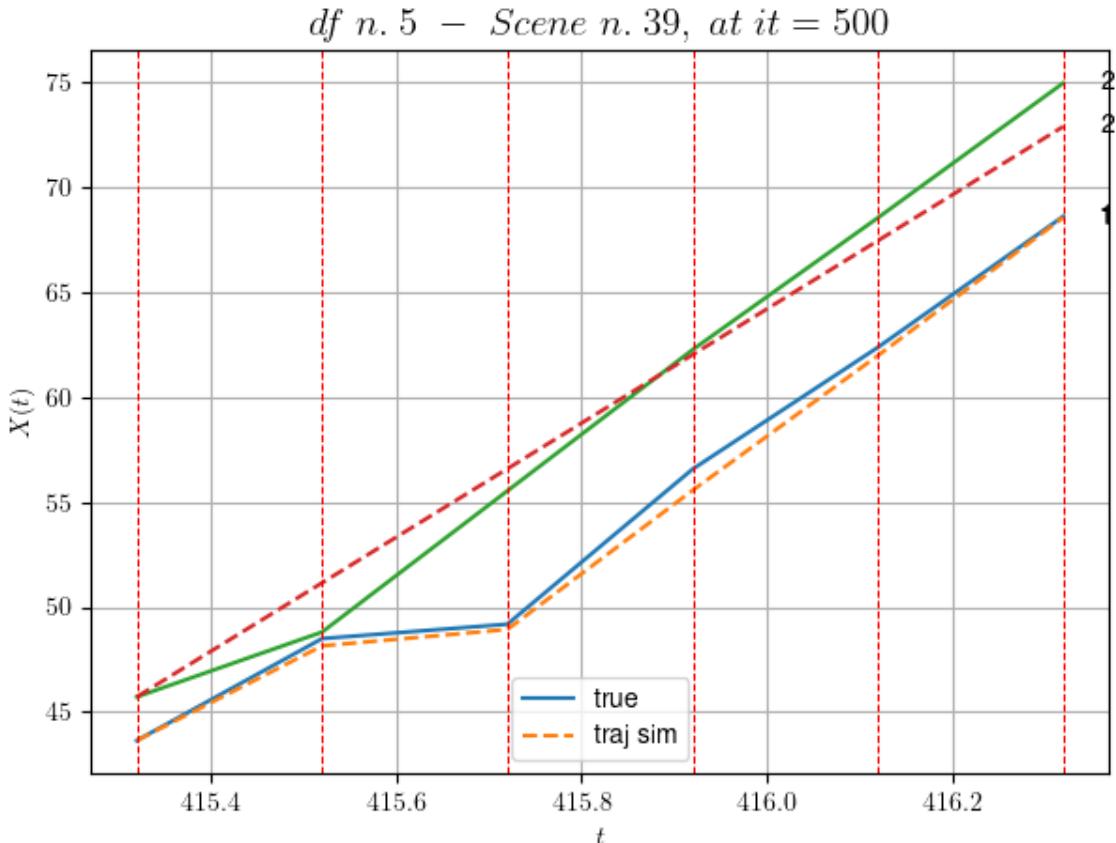
- Time interval n.2: [415.72, 415.92]
 - * y_true: [36.97197175]
 - * v_ann: [33.16167068481445, 27.188395316739918]

- Time interval n.3: [415.92, 416.12]

```
* y_true: [29.03190442]
* v_ann: [32.14057159423828, 27.188395316739918]
```

```
- Time interval n.4: [416.12, 416.32]
* y_true: [31.20253879]
* v_ann: [32.875675201416016, 27.188395316739918]
```

```
* err= 1.1277471149142242
* Learning rate NN = 0.0001937102060765028
* diff = 0.006136833429000399
```



For scene 39/66

```
* use LR_NN=0.0005 with err=2.614877627137894 at it=24
* v0_scn_mean = 27.300859504050052
* MAE = 0.9735930923924436
```

df n.5, scene n.40/66

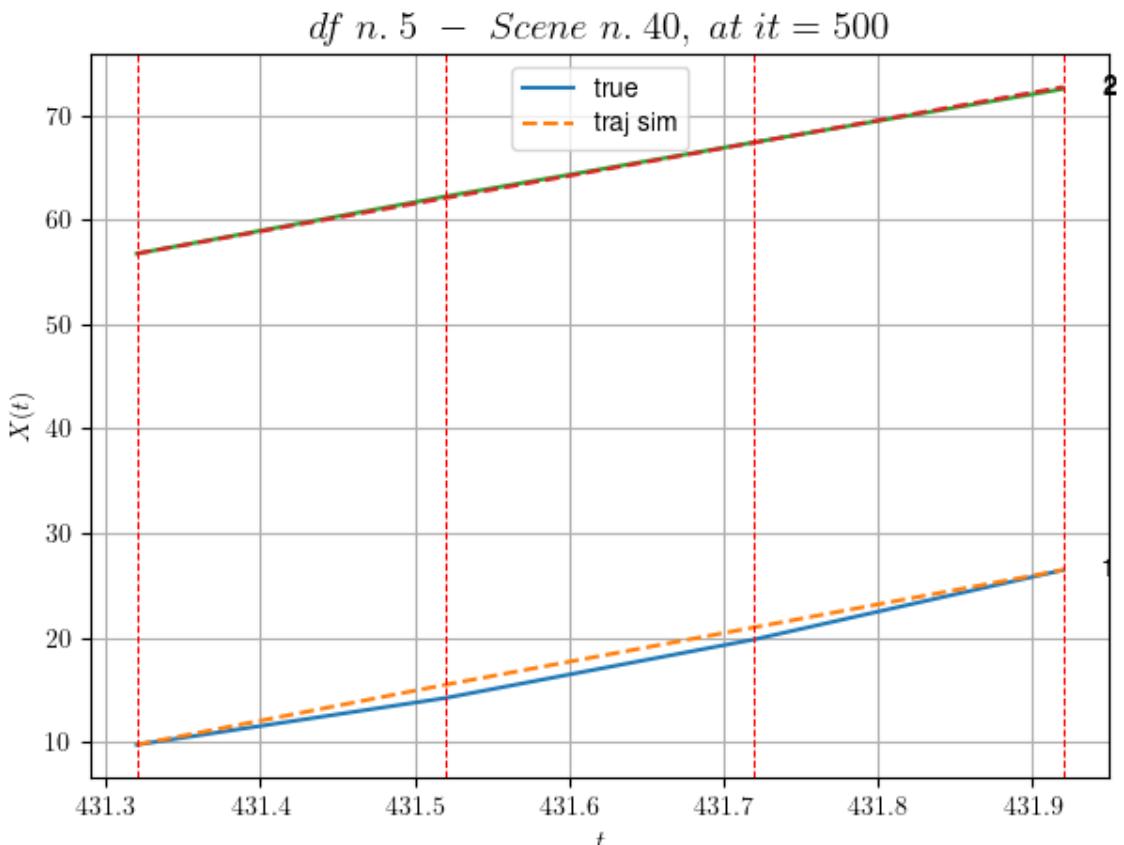
We have 3 time intervals inside [431.32, 431.92]

```
- Time interval n.0: [431.32, 431.52]
* y_true: [22.38028712]
* v_ann: [28.737266540527344, 26.589514796787924]
```

- Time interval n.1: [431.52, 431.72]
 * y_true: [28.04016416]
 * v_ann: [27.4697322845459, 26.589514796787924]

- Time interval n.2: [431.72, 431.92]
 * y_true: [33.23035789]
 * v_ann: [27.46149444580078, 26.589514796787924]

* err= 0.37724717046853906
 * Learning rate NN = 2.952449540316593e-05
 * diff = 0.0022206282811812472



For scene 40/66

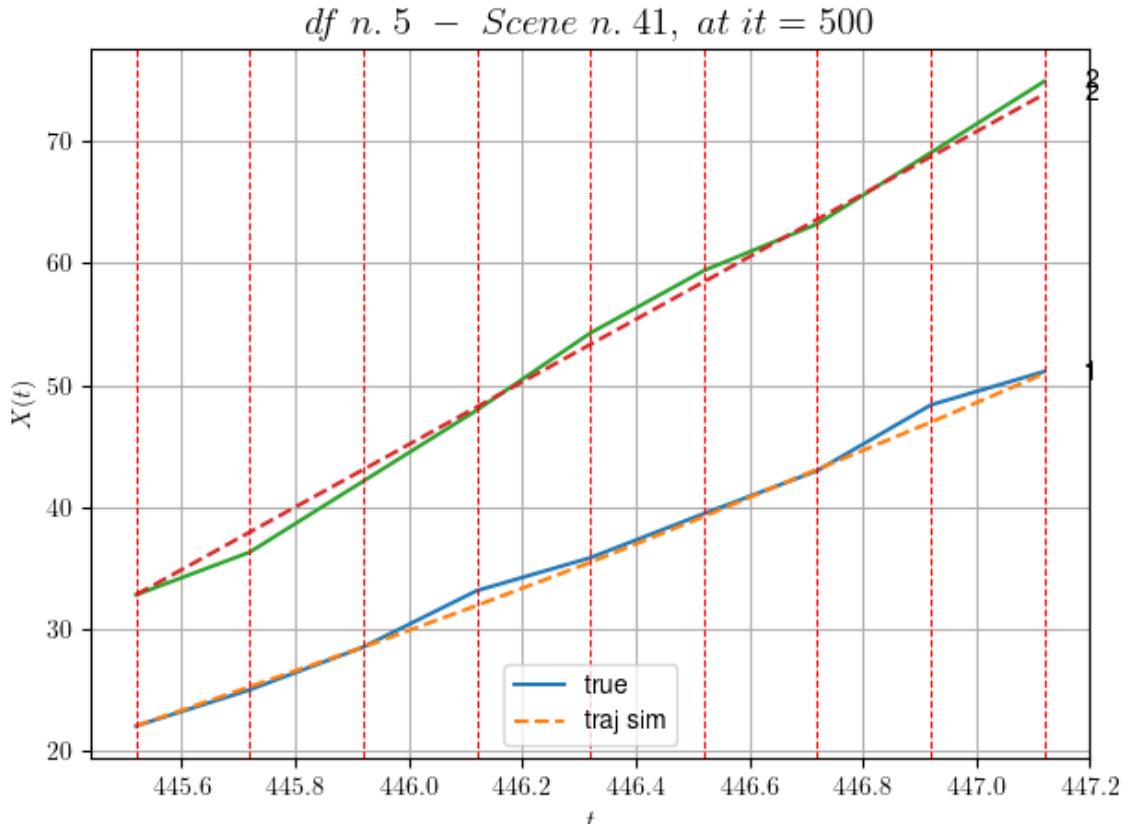
* use LR_NN=5e-05 with err=1.2600060389393573 at it=24
 * v0_scn_mean = 26.725934204890972
 * MAE = 0.37259655615784715

df n.5, scene n.41/66

We have 8 time intervals inside [445.52, 447.12]

- Time interval n.0: [445.52, 445.72]
 * y_true: [14.80016221]
 * v_ann: [16.056747436523438, 25.63869827600255]

```
-----  
    - Time interval n.1: [445.72, 445.92]  
      * y_true: [17.50024709]  
      * v_ann: [16.22194480895996, 25.63869827600255]  
  
-----  
    - Time interval n.2: [445.92, 446.12]  
      * y_true: [23.10043116]  
      * v_ann: [17.062952041625977, 25.63869827600255]  
  
-----  
    - Time interval n.3: [446.12, 446.32]  
      * y_true: [13.50031408]  
      * v_ann: [17.647584915161133, 25.63869827600255]  
  
-----  
    - Time interval n.4: [446.32, 446.52]  
      * y_true: [18.05049958]  
      * v_ann: [18.814680099487305, 25.63869827600255]  
  
-----  
    - Time interval n.5: [446.52, 446.72]  
      * y_true: [17.6505843]  
      * v_ann: [19.31652069091797, 25.63869827600255]  
  
-----  
    - Time interval n.6: [446.72, 446.92]  
      * y_true: [26.90109206]  
      * v_ann: [19.335437774658203, 25.63869827600255]  
  
-----  
    - Time interval n.7: [446.92, 447.12]  
      * y_true: [13.70065797]  
      * v_ann: [19.89265251159668, 25.63869827600255]  
  
-----  
* err= 0.5827404635384508  
* Learning rate NN = 2.058910467894748e-05  
* diff = 0.006123778575321648
```



For scene 41/66

- * use LR_NN=0.0001 with err=10.571600637481163 at it=24
- * v0_scn_mean = 25.813150344929287
- * MAE = 0.5827404635384508

df n.5, scene n.42/66

We have 5 time intervals inside [449.12, 450.12]

- Time interval n.0: [449.12, 449.32]
 - * y_true: [26.30041929]
 - * v_ann: [29.01706314086914, 23.52760427573321]

- Time interval n.1: [449.32, 449.52]
 - * y_true: [26.14058749]
 - * v_ann: [28.47473907470703, 23.52760427573321]

- Time interval n.2: [449.52, 449.72]
 - * y_true: [29.23088983]
 - * v_ann: [27.882003784179688, 23.52760427573321]

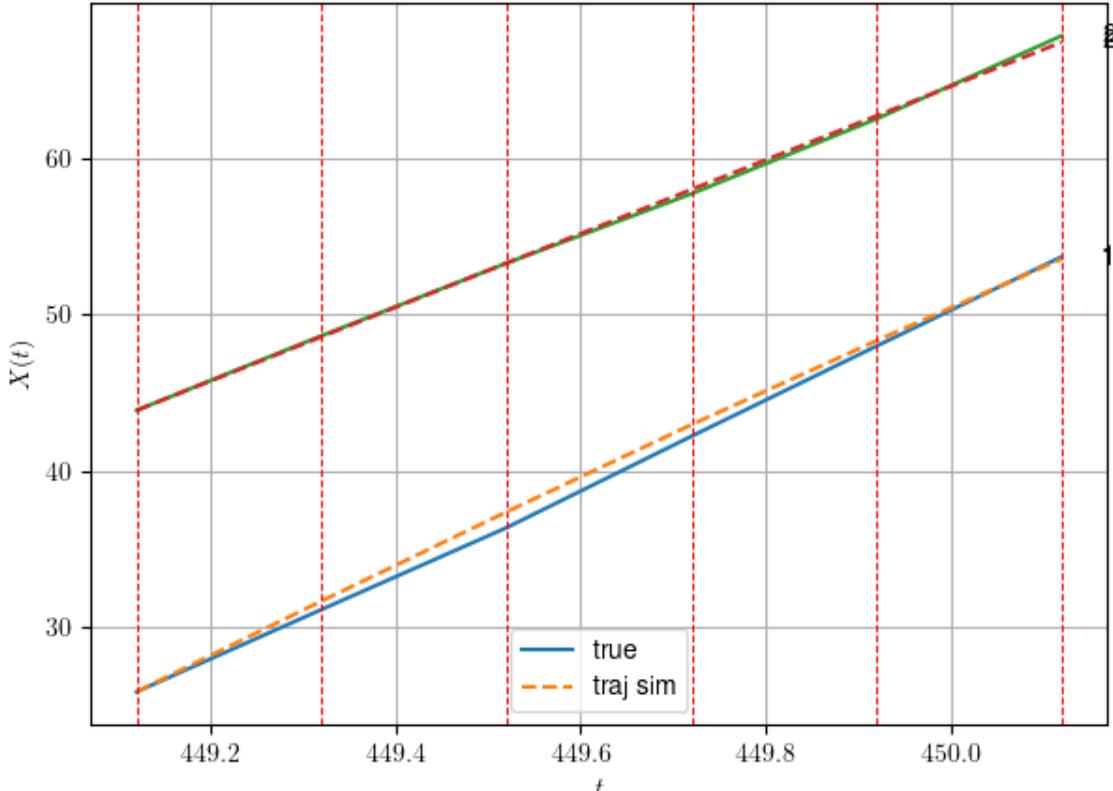
- Time interval n.3: [449.72, 449.92]
 - * y_true: [28.81126637]

```
* v_ann: [26.819923400878906, 23.52760427573321]
```

```
- Time interval n.4: [449.92, 450.12]
* y_true: [28.52634396]
* v_ann: [26.1174259185791, 23.52760427573321]
```

```
* err= 0.19051121109432145
* Learning rate NN = 1.9371018424862996e-05
* diff = 0.001582427014012614
```

df n. 5 – Scene n. 42, at it = 500



For scene 42/66

```
* use LR_NN=5e-05 with err=7.837920061541059 at it=24
* v0_scn_mean = 23.786500104653683
* MAE = 0.19051121109432145
```

df n.5, scene n.43/66

```
We have 3 time intervals inside [450.92, 451.52]
```

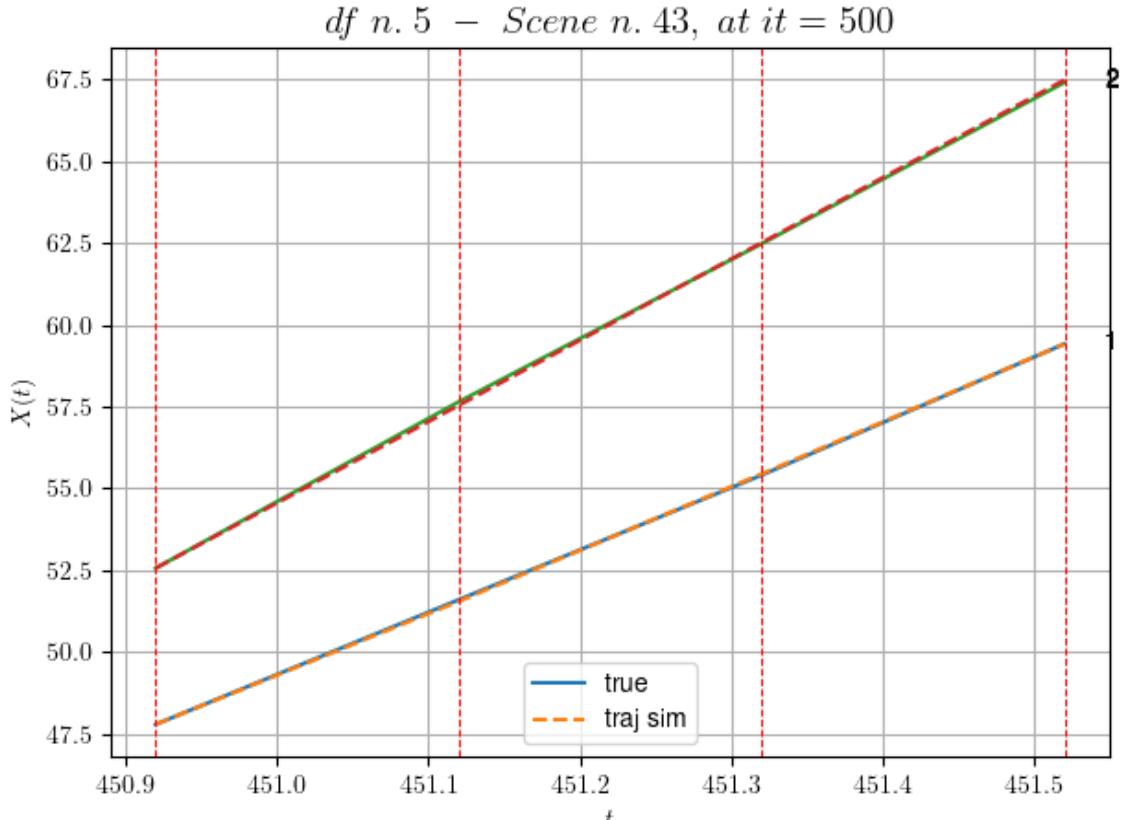
```
- Time interval n.0: [450.92, 451.12]
* y_true: [19.05097543]
* v_ann: [18.800533294677734, 24.877482654595042]
```

```
- Time interval n.1: [451.12, 451.32]
* y_true: [19.05097543]
```

```
* v_ann: [19.50017738342285, 24.877482654595042]
```

- Time interval n.2: [451.32, 451.52]
 - * y_true: [20.07636245]
 - * v_ann: [19.864316940307617, 24.877482654595042]

- * err= 0.0028892453408188093
- * Learning rate NN = 0.0005904899444431067
- * diff = 8.148035419109408e-06



For scene 43/66

- * use LR_NN=0.001 with err=2.062547778586635 at it=24
- * v0_scn_mean = 25.08238334837388
- * MAE = 0.0028892453408188093

df n.5, scene n.44/66

We have 5 time intervals inside [457.32, 458.32]

- Time interval n.0: [457.32, 457.52]
 - * y_true: [11.94945293]
 - * v_ann: [10.232795715332031, 16.493097805853914]

- Time interval n.1: [457.52, 457.72]

```
* y_true: [7.74600753]
* v_ann: [7.803366184234619, 16.493097805853914]
```

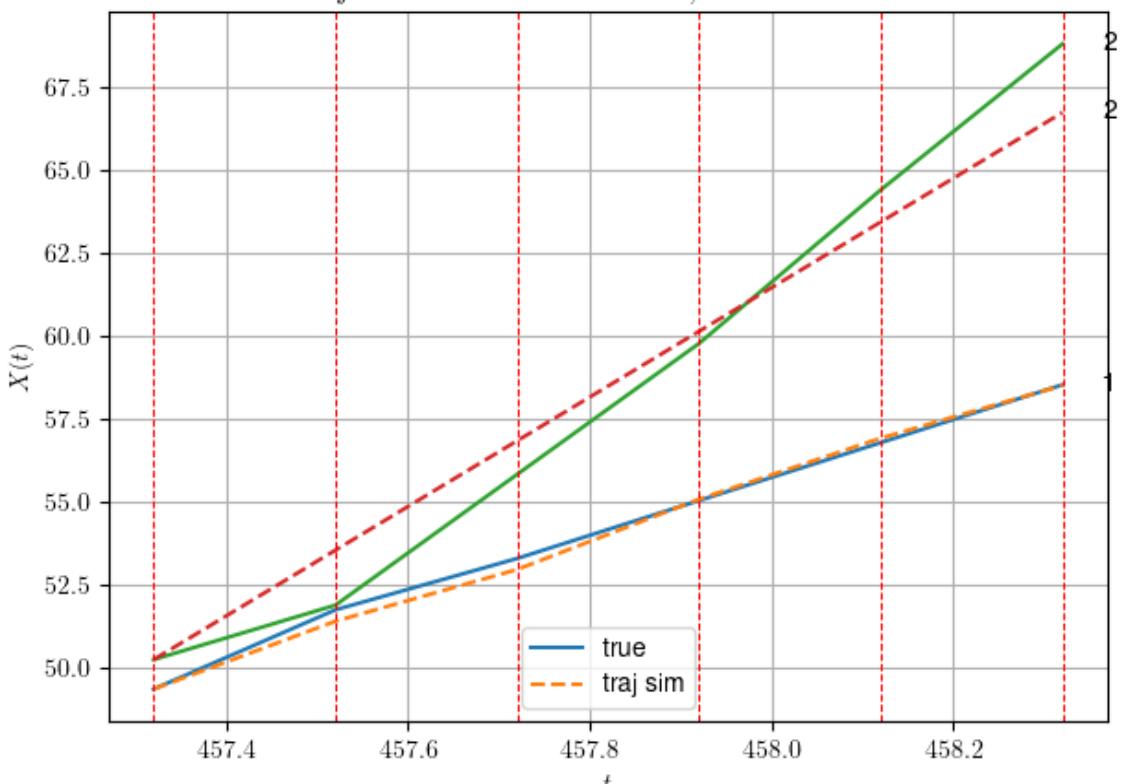
```
- Time interval n.2: [457.72, 457.92]
* y_true: [8.72842902]
* v_ann: [10.577778816223145, 16.493097805853914]
```

```
- Time interval n.3: [457.92, 458.12]
* y_true: [8.72842902]
* v_ann: [9.206178665161133, 16.493097805853914]
```

```
- Time interval n.4: [458.12, 458.32]
* y_true: [8.72842902]
* v_ann: [7.974296569824219, 16.493097805853914]
```

```
* err= 0.7805947233187291
* Learning rate NN = 0.0038742038886994123
* diff = 0.0012143285409838
```

df n. 5 – Scene n. 44, at it = 500



For scene 44/66

```
* use LR_NN=0.01 with err=30.02781317650947 at it=24
* v0_scn_mean = 17.033373893516117
* MAE = 0.6507568852504233
```

```
df n.5, scene n.45/66
```

```
=====
=====
```

We have 5 time intervals inside [472.72, 473.72]

- Time interval n.0: [472.72, 472.92]
 - * y_true: [19.93584545]
 - * v_ann: [22.299880981445312, 19.394739027416332]

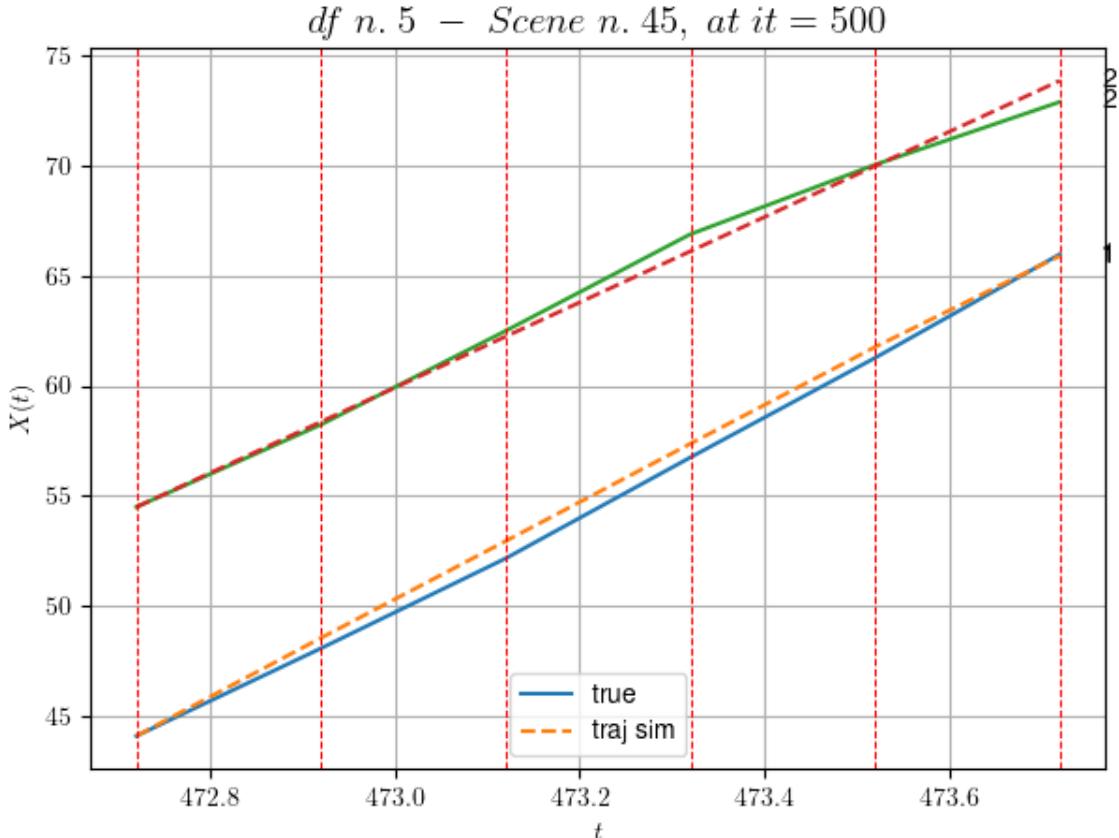
- Time interval n.1: [472.92, 473.12]
 - * y_true: [20.45091523]
 - * v_ann: [22.023603439331055, 19.394739027416332]

- Time interval n.2: [473.12, 473.32]
 - * y_true: [22.97126692]
 - * v_ann: [22.154468536376953, 19.394739027416332]

- Time interval n.3: [473.32, 473.52]
 - * y_true: [22.64147966]
 - * v_ann: [21.98605728149414, 19.394739027416332]

- Time interval n.4: [473.52, 473.72]
 - * y_true: [23.56191271]
 - * v_ann: [20.717451095581055, 19.394739027416332]

- * err= 0.25825750792355723
- * Learning rate NN = 1.9371018424862996e-05
- * diff = 0.0004310655685653697



For scene 45/66

```
* use LR_NN=5e-05 with err=21.568125229238213 at it=24
* v0_scn_mean = 19.818949466238532
* MAE = 0.25825750792355723
```

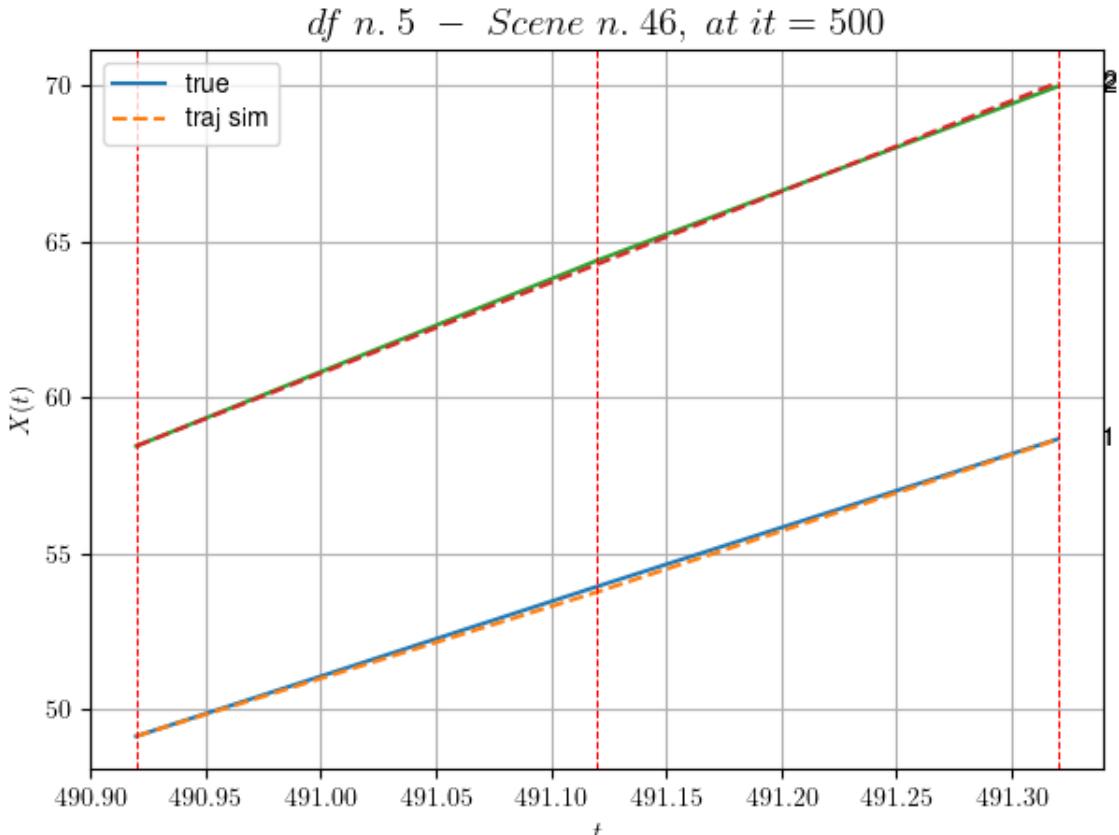
df n.5, scene n.46/66

We have 2 time intervals inside [490.92, 491.32]

- Time interval n.0: [490.92, 491.12]
 - * y_true: [23.97608635]
 - * v_ann: [23.094411849975586, 29.11559475920137]

- Time interval n.1: [491.12, 491.32]
 - * y_true: [23.6265296]
 - * v_ann: [24.42167091369629, 29.11559475920137]

```
* err= 0.010301178015455784
* Learning rate NN = 7.289998757187277e-05
* diff = 1.5756718812359044e-05
```

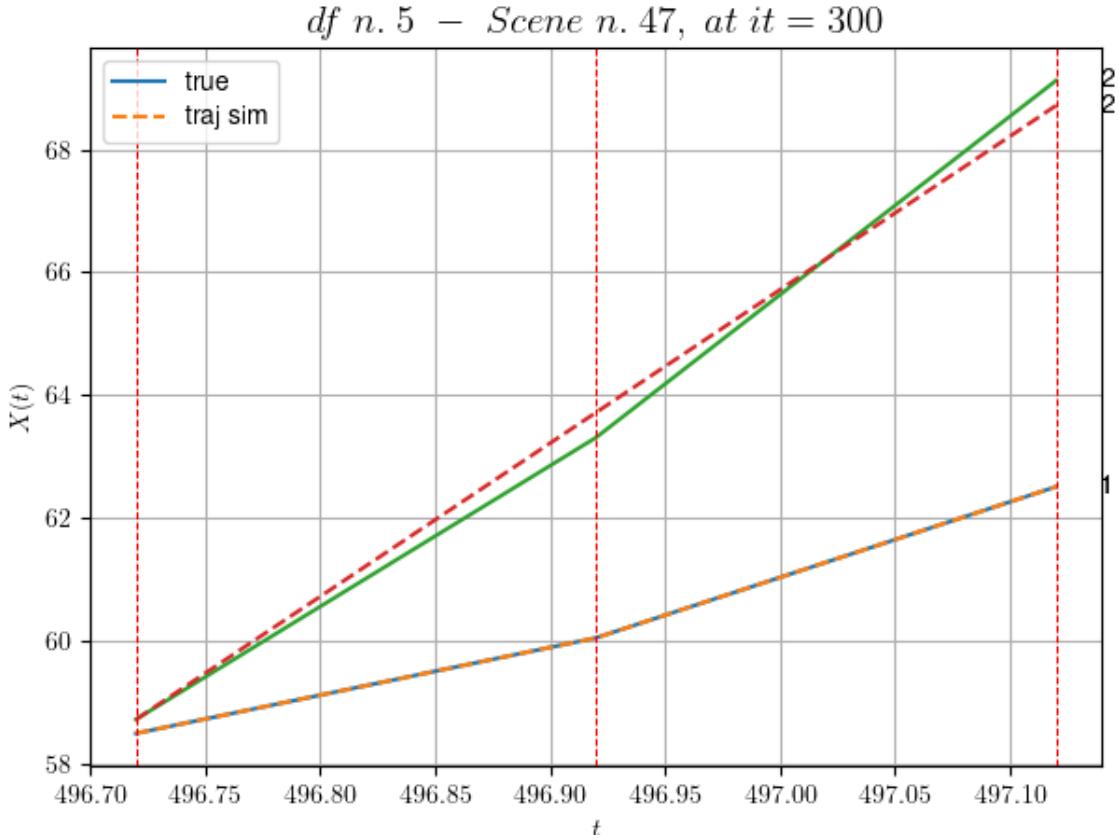


For scene 46/66

* use LR_NN=0.0001 with err=0.3287440437772744 at it=24
* v0_scn_mean = 29.150970968830713
* MAE = 0.01029680437891824

df n.5, scene n.47/66

We have 2 time intervals inside [496.72, 497.12]
* err= 0.055527726552185915
* Learning rate NN = 0.008099999278783798
* diff = 3.364744715211865e-07



For scene 47/66

```
* use LR_NN=0.01 with err=0.7572196012736417 at it=24
* v0_scn_mean = 25.343568444427394
* MAE = 0.04997553025423249
```

df n.5, scene n.48/66

We have 5 time intervals inside [502.72, 503.72]

- Time interval n.0: [502.72, 502.92]
 - * y_true: [19.30098453]
 - * v_ann: [25.662738800048828, 13.651414022049895]

- Time interval n.1: [502.92, 503.12]
 - * y_true: [23.85148399]
 - * v_ann: [23.655441284179688, 13.651414022049895]

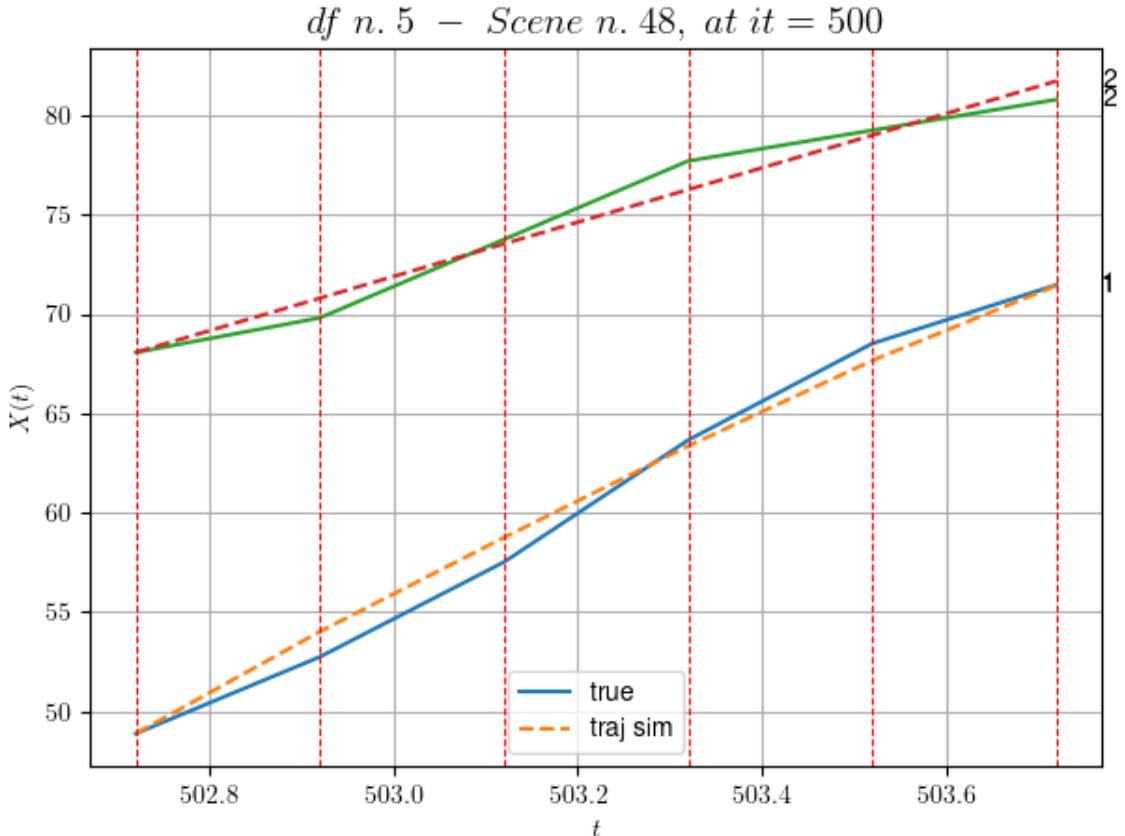
- Time interval n.2: [503.12, 503.32]
 - * y_true: [30.67723317]
 - * v_ann: [23.00679588317871, 13.651414022049895]

- Time interval n.3: [503.32, 503.52]
 - * y_true: [24.29690284]

```
* v_ann: [21.512182235717773, 13.651414022049895]
```

```
- Time interval n.4: [503.52, 503.72]
* y_true: [14.72640734]
* v_ann: [18.884254455566406, 13.651414022049895]
```

```
* err= 0.6668142218629365
* Learning rate NN = 1.9371018424862996e-05
* diff = 0.0008794378964542826
```



For scene 48/66

```
* use LR_NN=5e-05 with err=49.82563072572987 at it=24
* v0_scn_mean = 14.305357461043128
* MAE = 0.666743177396949
```

df n.5, scene n.49/66

We have 3 time intervals inside [525.52, 526.12]

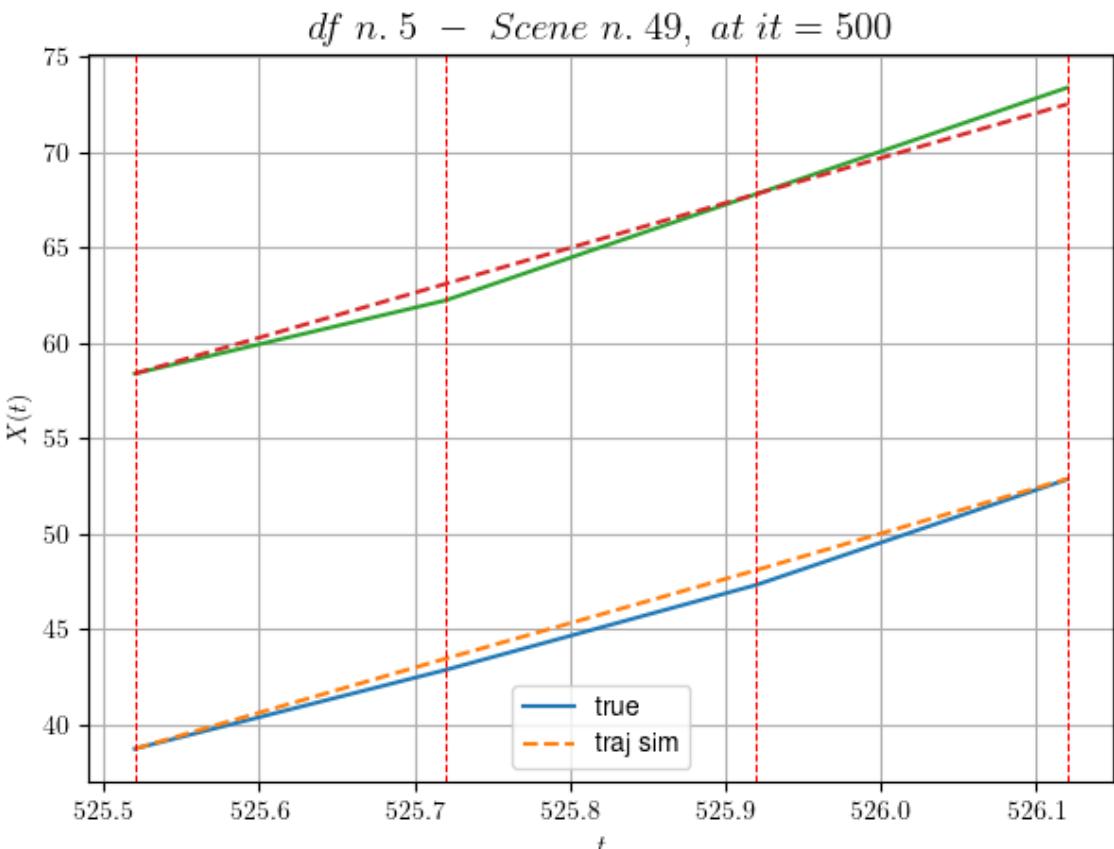
```
- Time interval n.0: [525.52, 525.72]
* y_true: [20.6706729]
* v_ann: [23.630428314208984, 23.539355454248188]
```

```
- Time interval n.1: [525.72, 525.92]
```

```
* y_true: [22.29092446]
* v_ann: [23.20722198486328, 23.539355454248188]
```

```
- Time interval n.2: [525.92, 526.12]
* y_true: [27.65144368]
* v_ann: [23.922679901123047, 23.539355454248188]
```

```
* err= 0.30721941688373783
* Learning rate NN = 2.952449540316593e-05
* diff = 6.37776606210655e-05
```



For scene 49/66

```
* use LR_NN=5e-05 with err=2.641685238860849 at it=24
* v0_scn_mean = 23.797781236029092
* MAE = 0.28846742669756553
```

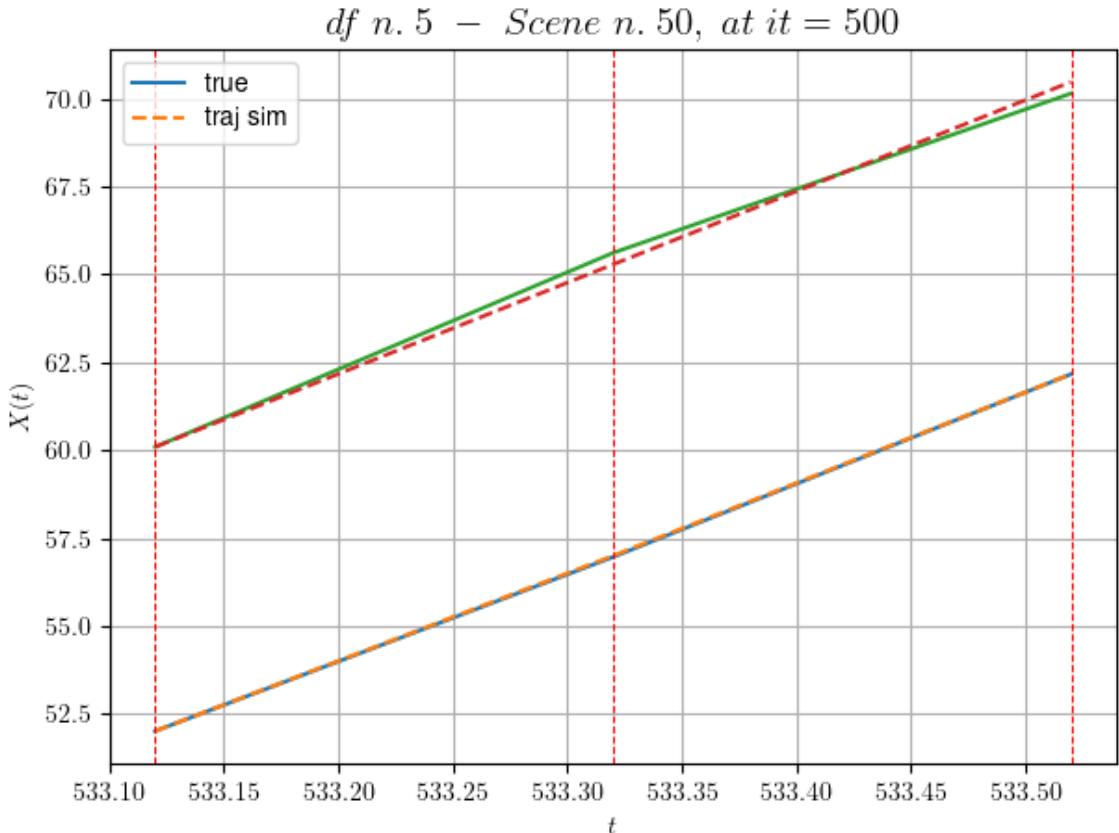
df n.5, scene n.50/66

We have 2 time intervals inside [533.12,533.52]

```
- Time interval n.0: [533.12, 533.32]
* y_true: [24.7513546]
* v_ann: [24.930036544799805, 25.948720292496716]
```

```
- Time interval n.1: [533.32, 533.52]
  * y_true: [25.99190405]
  * v_ann: [25.822643280029297, 25.948720292496716]
```

```
* err= 0.03622125888727378
* Learning rate NN = 0.00036449998151510954
* diff = 1 0265103687370611e-06
```



For scene 50/66

```
* use LR_NN=0.0005 with err=0.6722351794062011 at it=24
* v0_scn_mean = 26.110771480766118
* MAE = 0.03621793280357356
```

df n.5, scene n.51/66

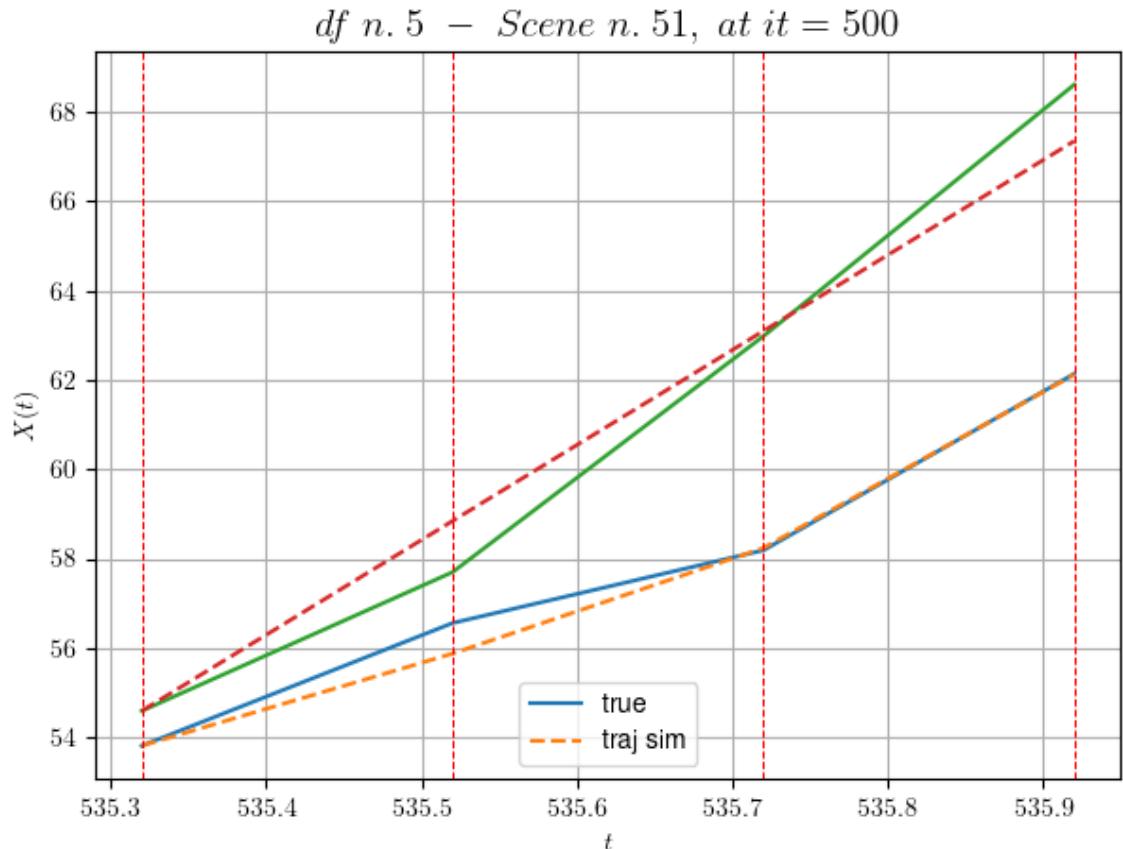
We have 3 time intervals inside [535.32,535.92]

```
- Time interval n.0: [535.32, 535.52]
  * y_true: [13.74931105]
  * v_ann: [10.329849243164062, 21.278077520483933]
```

```
- Time interval n.1: [535.52, 535.72]
  * y_true: [8.15050406]
  * v_ann: [11.829781532287598, 21.278077520483933]
```

- Time interval n.2: [535.72, 535.92]
 * y_true: [19.77148161]
 * v_ann: [19.423484802246094, 21.278077520483933]

* err= 0.42457222260269395
 * Learning rate NN = 0.0029524494893848896
 * diff = 0.00013833070579710727

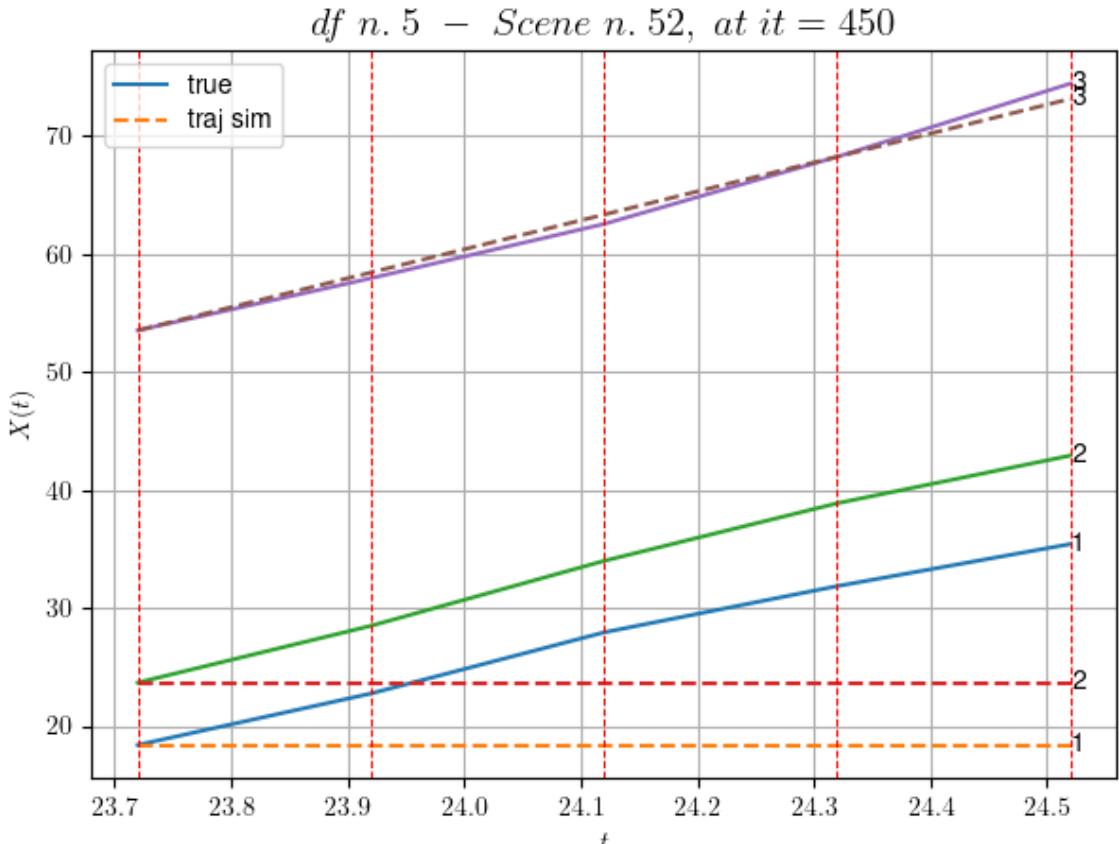


For scene 51/66

* use LR_NN=0.005 with err=4.7144297564882525 at it=24
 * v0_scn_mean = 21.62695441960097
 * MAE = 0.3961472545987089

df n.5, scene n.52/66

We have 4 time intervals inside [23.72,24.52]
 * err= 87.6561111564447
 * Learning rate NN = 0.000478296831715852
 * diff = 4.6666816899687547e-07

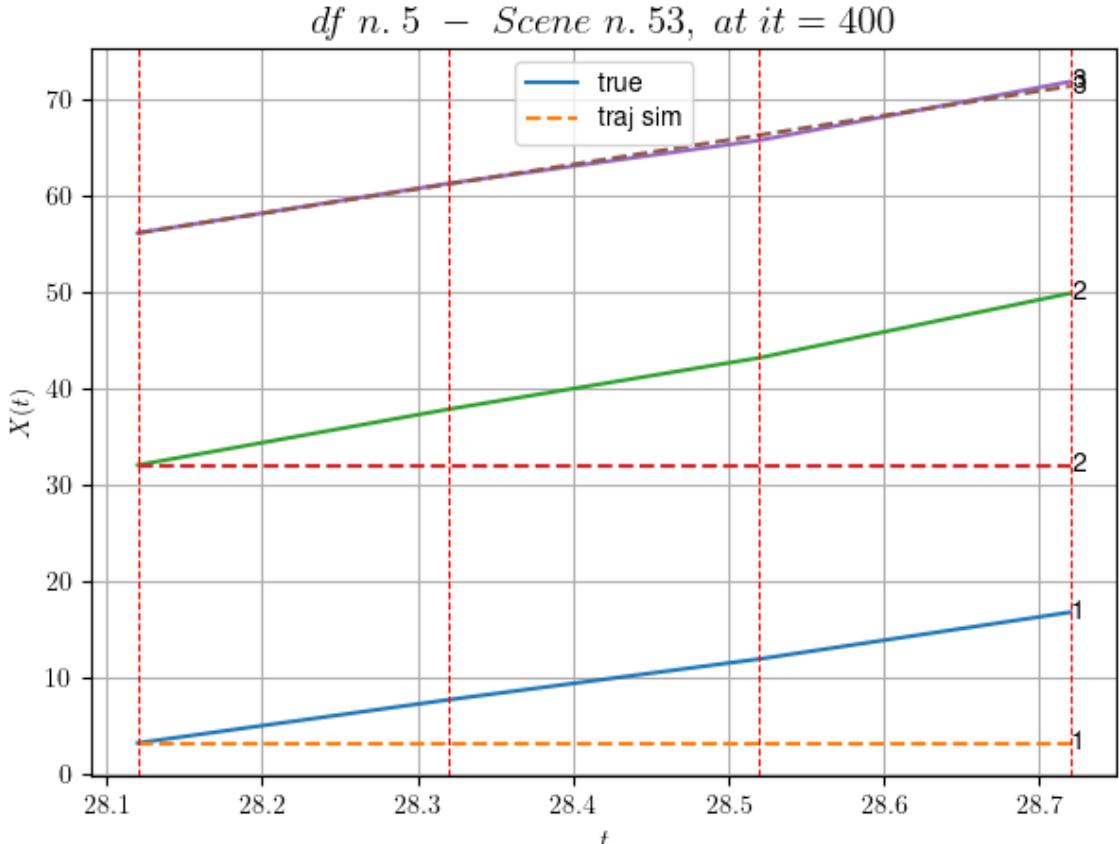


For scene 52/66

* use LR_NN=0.001 with err=20.660803736548303 at it=24
* v0_scn_mean = 24.899149836434454
* MAE = 31.646998659399596

df n.5, scene n.53/66

We have 3 time intervals inside [28.12, 28.72]
* err= 62.86954747336312
* Learning rate NN = 3.2804993679746985e-05
* diff = 3.5787392960173747e-07



For scene 53/66

- * use LR_NN=5e-05 with err=4.764699545185555 at it=24
- * v0_scn_mean = 25.725929368611094
- * MAE = 62.86855598006026

df n.5, scene n.54/66

We have 3 time intervals inside [146.52, 147.12]

- Time interval n.0: [146.52, 146.72]
 - * y_true: [32.70054419 14.69037585]
 - * v_ann: [23.786087036132812, 22.920124053955078, 3.24718527812287]

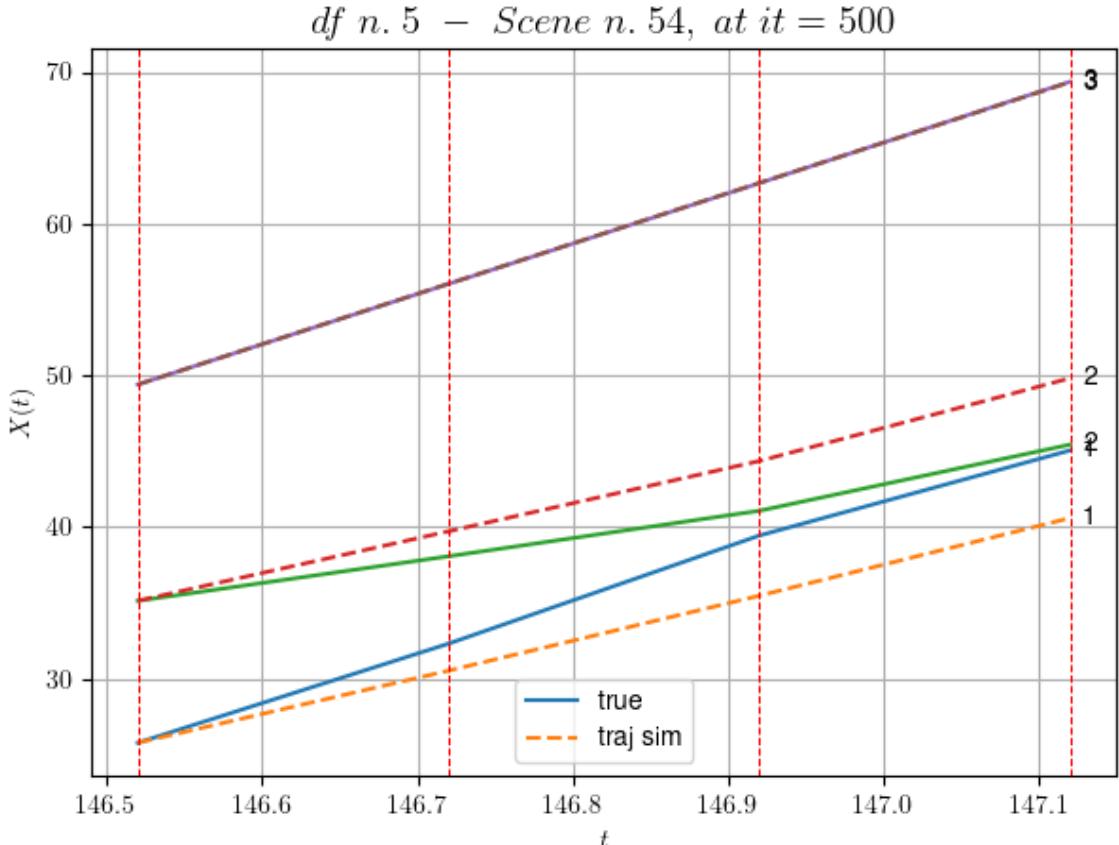
- Time interval n.1: [146.72, 146.92]
 - * y_true: [35.65090038 15.01046474]
 - * v_ann: [24.727689743041992, 23.194311141967773, 3.24718527812287]

- Time interval n.2: [146.92, 147.12]
 - * y_true: [28.09191726 21.83491468]
 - * v_ann: [25.631874084472656, 27.314586639404297, 3.24718527812287]

```

* err= 5.955575100400126
* Learning rate NN = 0.0002952449722215533
* diff = 0.07262793943914936

```



For scene 54/66

```

* use LR_NN=0.0005 with err=29.363263779326445 at it=24
* v0_scn_mean = 33.05235430722707
* MAE = 5.955575100400126

```

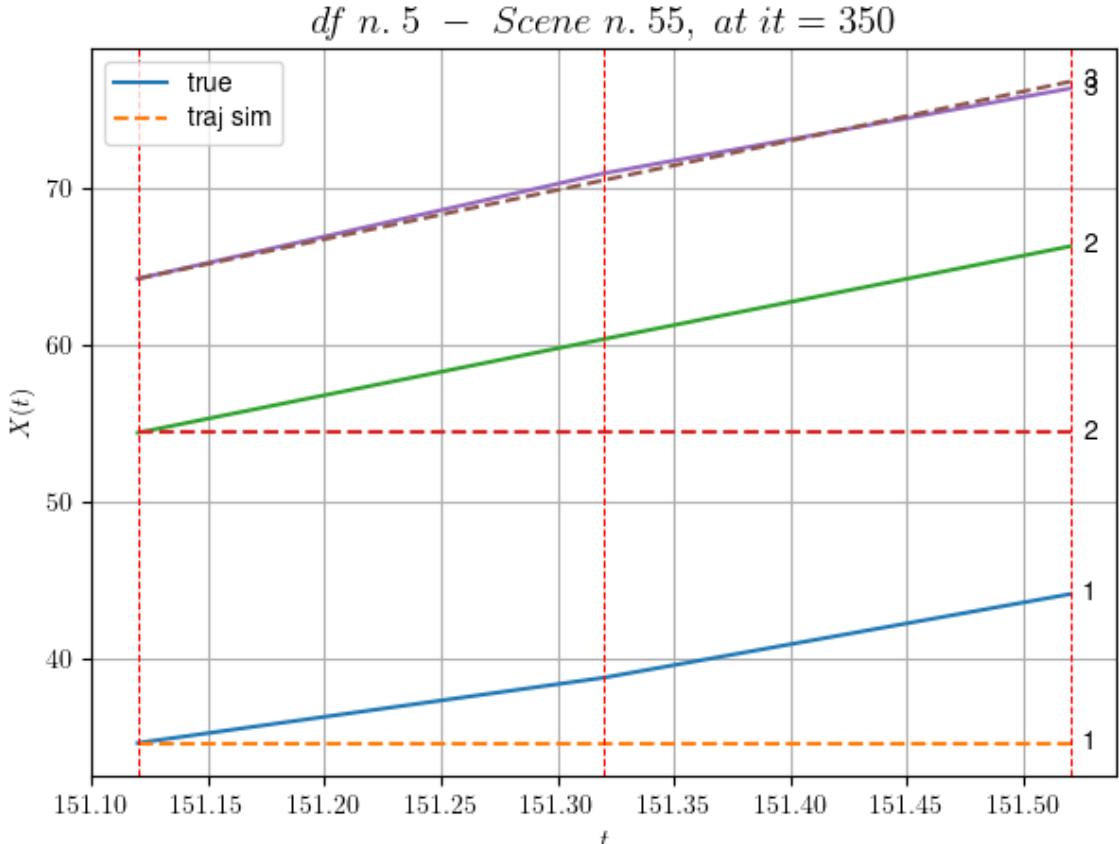
df n.5, scene n.55/66

We have 2 time intervals inside [151.12,151.52]

```

* err= 31.84374061887769
* Learning rate NN = 0.0004049999886378646
* diff = 9.138833867439189e-07

```



For scene 55/66

- * use LR_NN=0.0005 with err=5.803051087116966 at it=24
- * v0_scn_mean = 31.386184964733246
- * MAE = 0.9678147085150224

df n.5, scene n.56/66

We have 6 time intervals inside [177.32, 178.52]

- Time interval n.0: [177.32, 177.52]

- * y_true: [23.78017477 21.57540501]

- * v_ann: [1.284706627302512e-06, 1.8310969060464366

e-11, 26.180378384786355]

- Time interval n.1: [177.52, 177.72]

- * y_true: [28.99044664 21.37044807]

- * v_ann: [3.1300533009925857e-06, 5.471670425777342

e-12, 26.180378384786355]

- Time interval n.2: [177.72, 177.92]

- * y_true: [30.9005134 20.55062028]

- * v_ann: [6.795286026317626e-05, 1.7617674897066338

e-12, 26.180378384786355]

```

-----  

    - Time interval n.3: [177.92, 178.12]  

      * y_true: [25.28069635 21.93575232]  

      * v_ann: [0.004440668970346451, 1.2472081744110963e  

      -13, 26.180378384786355]  

-----  

    - Time interval n.4: [178.12, 178.32]  

      * y_true: [23.87574209 27.4762805 ]  

      * v_ann: [0.017124762758612633, 2.6225935756841318e  

      -15, 26.180378384786355]  

-----  

    - Time interval n.5: [178.32, 178.52]  

      * y_true: [37.1766426 26.34131635]  

      * v_ann: [0.004018182400614023, 2.1722803677376445e  

      -15, 26.180378384786355]  

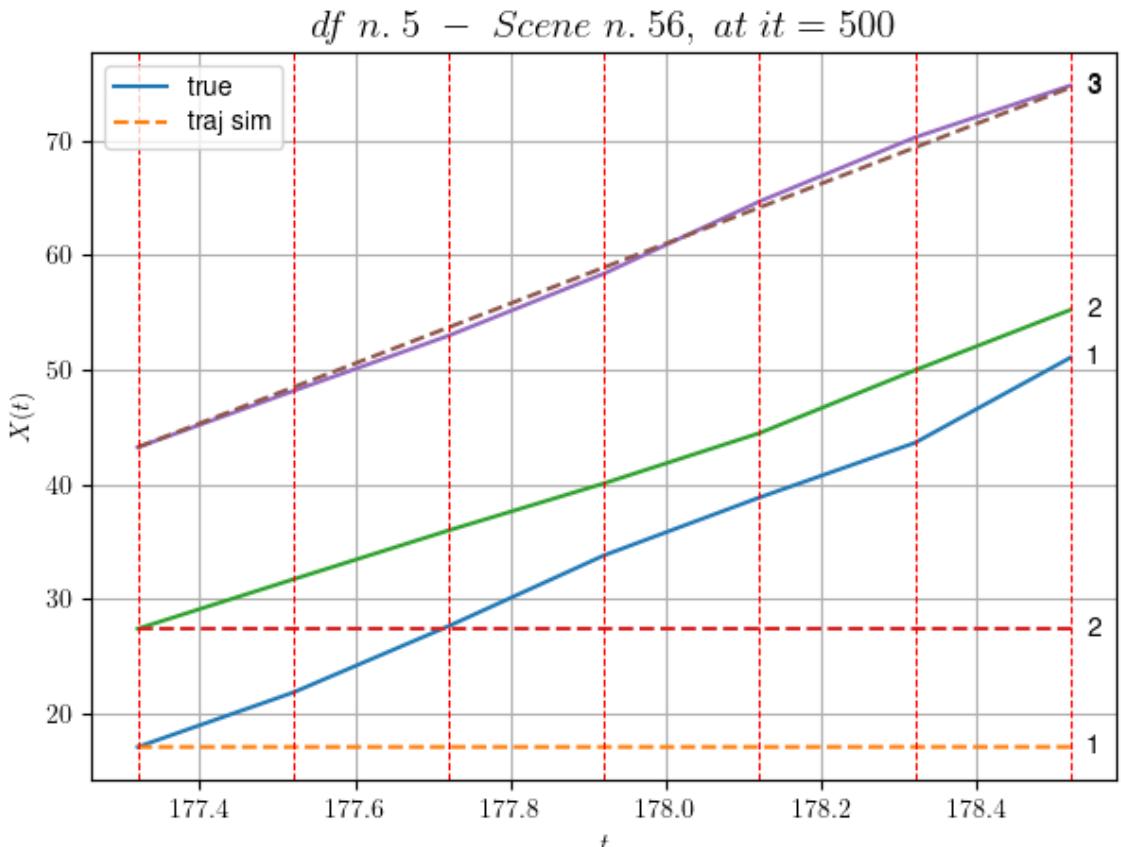
-----  

* err= 218.24760085351758  

* Learning rate NN = 0.00015690525469835848  

* diff = 0.00463272038211926

```

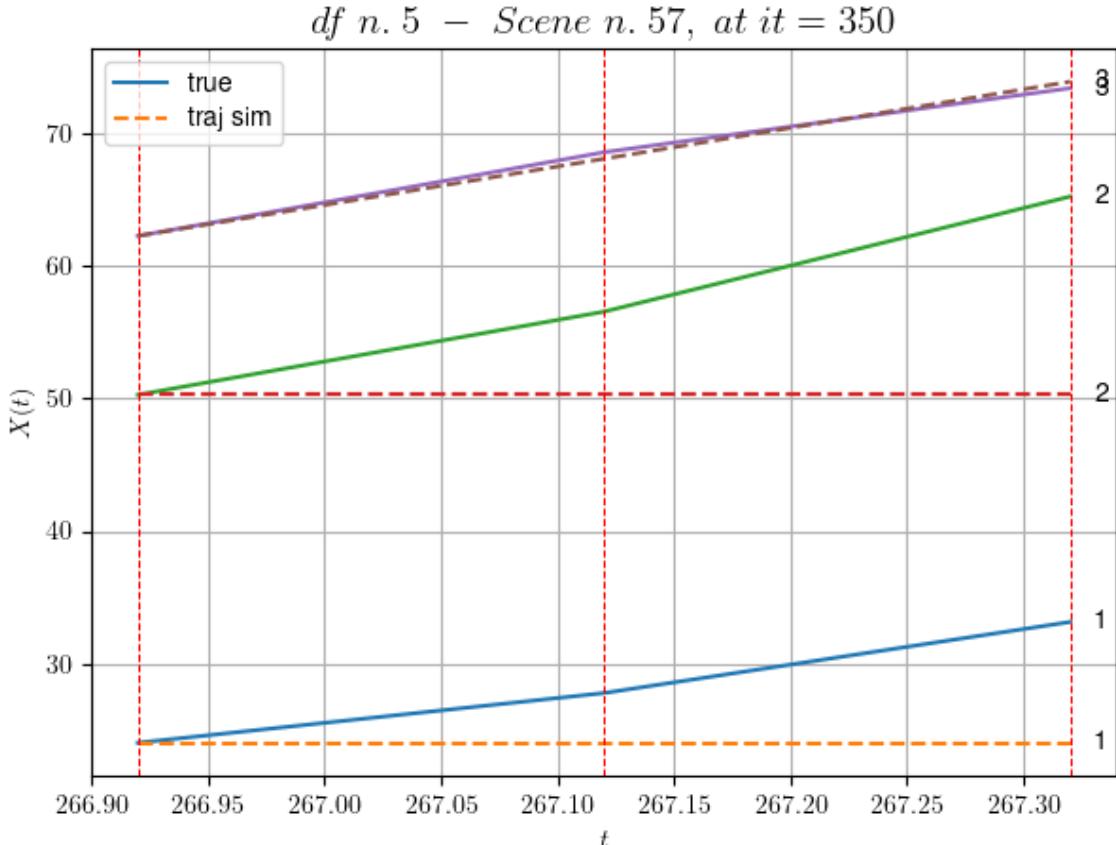


For scene 56/66
* use LR_NN=0.0005 with err=35.68627185689986 at it=24
* v0_scn_mean = 26.40955551020644
* MAE = 218.24760085351758

df n.5, scene n.57/66

```
=====
=====

We have 2 time intervals inside [266.92,267.32]
* err= 40.034341747477676
* Learning rate NN = 0.00040499999886378646
* diff = 6.217544097353311e-07
```



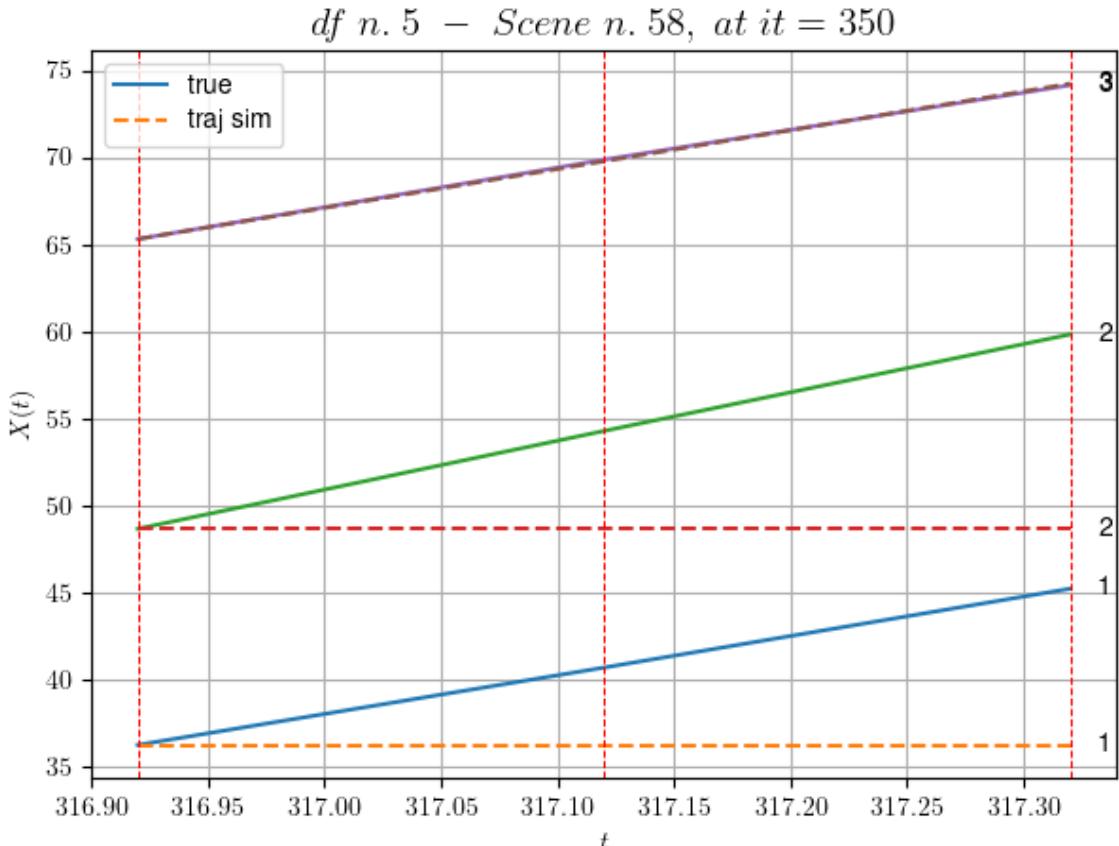
For scene 57/66

```
* use LR_NN=0.0005 with err=13.692093268175206 at it=24
* v0_scn_mean = 29.164069469574002
* MAE = 40.034341747477676
```

df n.5, scene n.58/66

```
=====
=====

We have 2 time intervals inside [316.92,317.32]
* err= 28.554702769195487
* Learning rate NN = 0.00040499999886378646
* diff = 9.940641341188439e-07
```



For scene 58/66

- * use LR_NN=0.0005 with err=1.3457869461710468 at it=24
- * v0_scn_mean = 22.99843700181211
- * MAE = 28.554702769195487

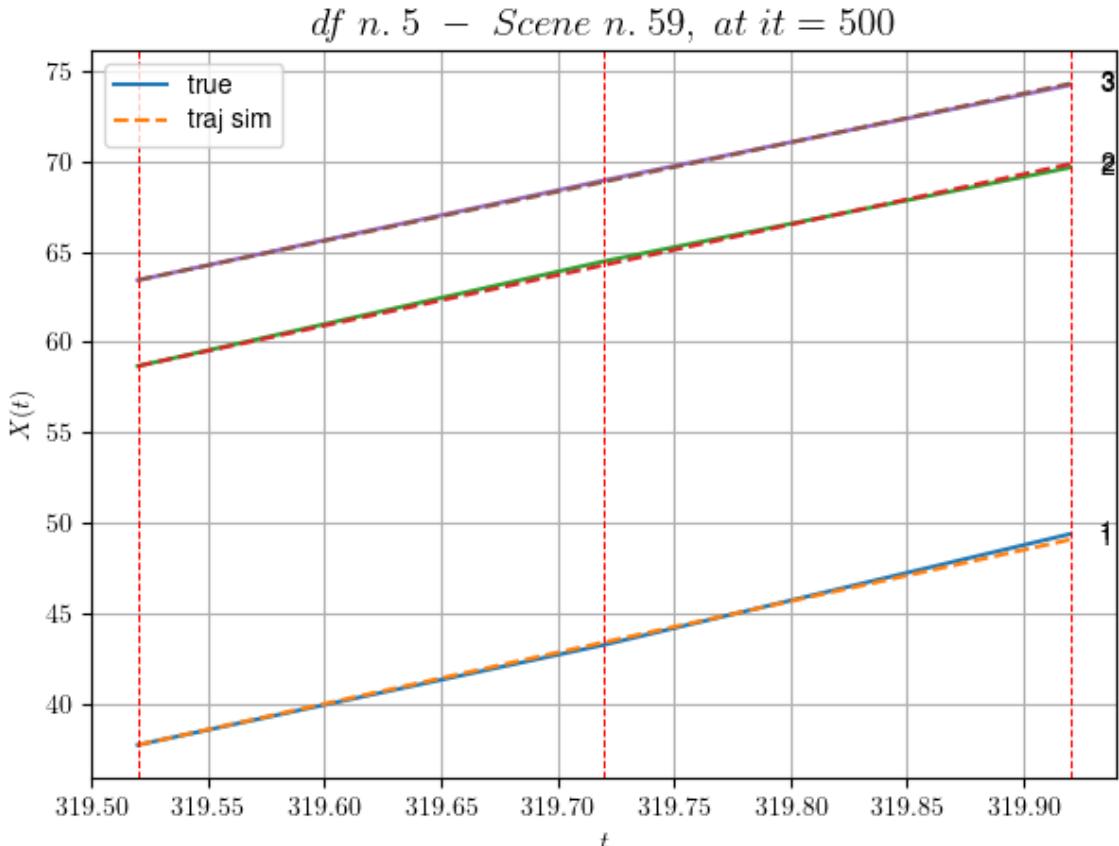
df n.5, scene n.59/66

We have 2 time intervals inside [319.52, 319.92]

- Time interval n.0: [319.52, 319.72]
 - * y_true: [27.72084838 29.03197957]
 - * v_ann: [28.418895721435547, 27.977109909057617, 27.22245994040746]

- Time interval n.1: [319.72, 319.92]
 - * y_true: [30.70139257 25.95234102]
 - * v_ann: [28.453893661499023, 27.976760864257812, 27.22245994040746]

- * err= 0.023602946432173918
- * Learning rate NN = 7.289998757187277e-05
- * diff = 0.001137079996139708



For scene 59/66

- * use LR_NN=0.0001 with err=9.779226604264275 at it=24
- * v0_scn_mean = 27.389112219277493
- * MAE = 0.021826524138937643

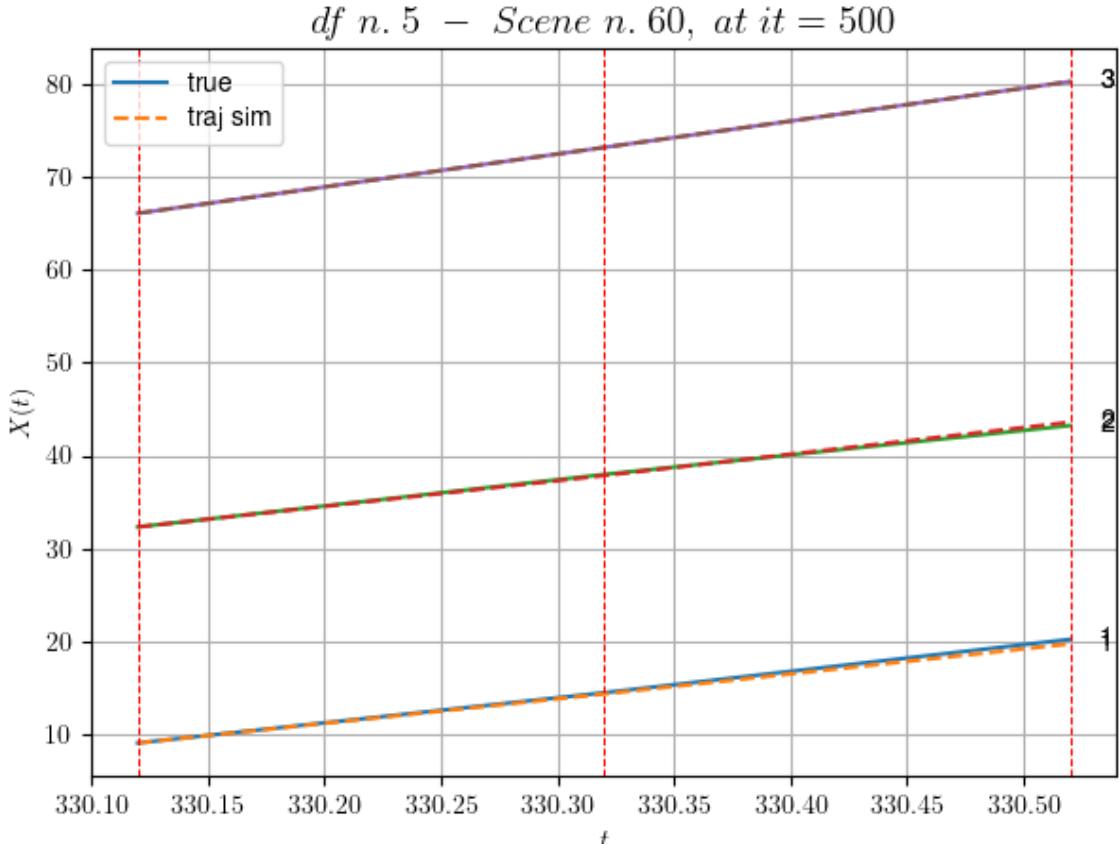
df n.5, scene n.60/66

We have 2 time intervals inside [330.12, 330.52]

- Time interval n.0: [330.12, 330.32]
 - * y_true: [27.05007287 28.28069592]
 - * v_ann: [26.37880516052246, 27.678190231323242, 35.47868326749173]

- Time interval n.1: [330.32, 330.52]
 - * y_true: [28.75016695 26.32589786]
 - * v_ann: [26.999746322631836, 28.73788070678711, 35.47868326749173]

- * err= 0.04423286854728004
- * Learning rate NN = 7.289998757187277e-05
- * diff = 0.00184622871247158



For scene 60/66

- * use LR_NN=0.0001 with err=1.8717861647868794 at it=24
- * v0_scn_mean = 35.14996251742309
- * MAE = 0.04423286854728004

df n.5, scene n.61/66

We have 5 time intervals inside [338.52, 339.52]

- Time interval n.0: [338.52, 338.72]
 - * y_true: [22.83038671 20.44060351]
 - * v_ann: [23.848508834838867, 23.886911392211914, 27.853928426095568]

- Time interval n.1: [338.72, 338.92]
 - * y_true: [25.85061095 23.65082523]
 - * v_ann: [23.694337844848633, 23.788787841796875, 27.853928426095568]

- Time interval n.2: [338.92, 339.12]
 - * y_true: [28.6708889 22.23087004]
 - * v_ann: [23.737899780273438, 23.899608612060547, 27.853928426095568]

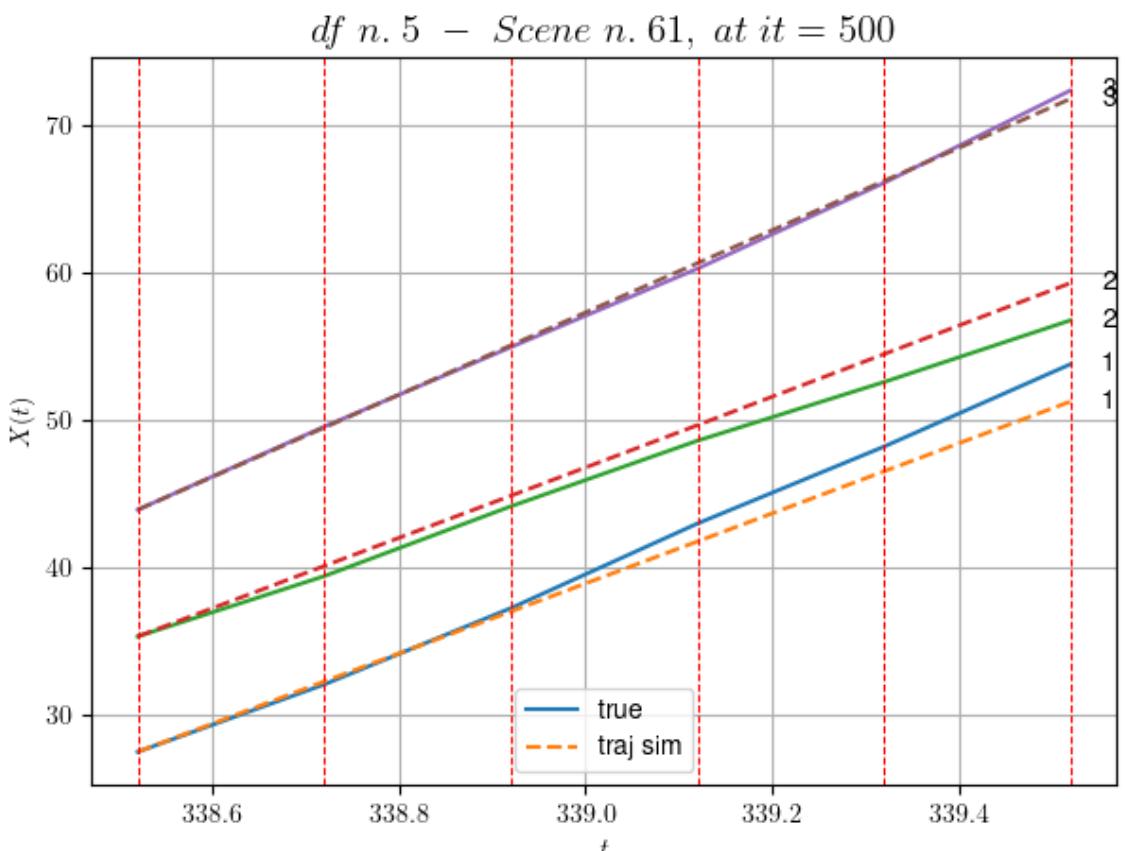
```

-----
- Time interval n.3: [339.12, 339.32]
  * y_true: [26.0610325 19.88098798]
  * v_ann: [23.763254165649414, 24.091894149780273, 2
7.853928426095568]

-----
- Time interval n.4: [339.32, 339.52]
  * y_true: [27.9415295 20.92126982]
  * v_ann: [23.65743637084961, 24.081716537475586, 2
7.853928426095568]

-----
* err= 1.295737983669769
* Learning rate NN = 3.874203684972599e-05
* diff = 0.0002652102207507667

```



For scene 61/66

```

* use LR_NN=0.0001 with err=12.468300268305116 at it=24
* v0_scn_mean = 27.982692624175986
* MAE = 1.2935845147033154

```

df n.5, scene n.62/66

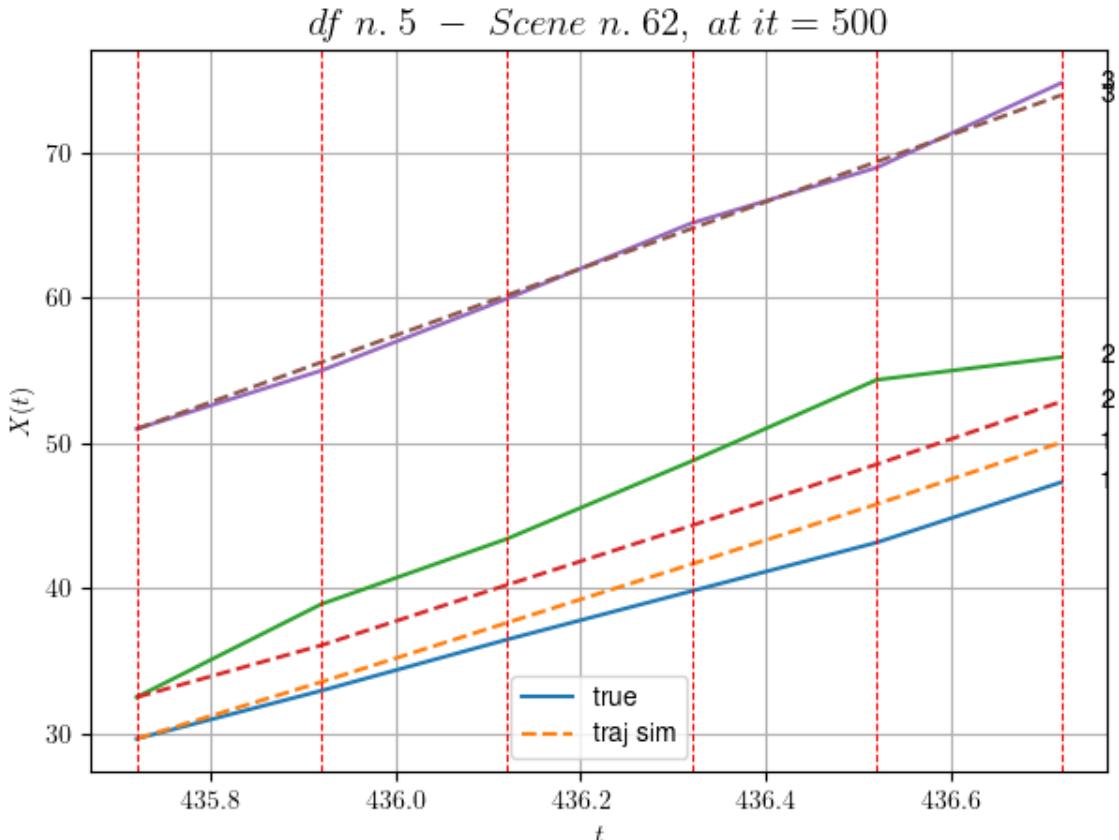
We have 5 time intervals inside [435.72, 436.72]

```

- Time interval n.0: [435.72, 435.92]
  * y_true: [16.6003121 32.10080247]

```

```
* v_ann: [19.613584518432617, 17.90640640258789, 2  
3.002269478052664]  
-----  
-----  
- Time interval n.1: [435.92, 436.12]  
* y_true: [17.55040576 22.4007406 ]  
* v_ann: [20.319944381713867, 20.73128318786621, 2  
3.002269478052664]  
-----  
-----  
- Time interval n.2: [436.12, 436.32]  
* y_true: [16.72550921 26.8011085 ]  
* v_ann: [20.230241775512695, 20.464109420776367, 2  
3.002269478052664]  
-----  
-----  
- Time interval n.3: [436.32, 436.52]  
* y_true: [16.72550921 28.00144696]  
* v_ann: [20.650094985961914, 21.105627059936523, 2  
3.002269478052664]  
-----  
-----  
- Time interval n.4: [436.52, 436.72]  
* y_true: [20.80081615 7.85046318]  
* v_ann: [21.29681968688965, 21.646940231323242, 2  
3.002269478052664]  
-----  
-----  
* err= 5.673201559065369  
* Learning rate NN = 0.0001937102060765028  
* diff = 0.030233485991206344
```



For scene 62/66

```
* use LR_NN=0.0005 with err=15.514565671321597 at it=24
* v0_scn_mean = 23.42213299518613
* MAE = 4.7016545145805955
```

df n.5, scene n.63/66

We have 2 time intervals inside [565.12, 565.52]

- Time interval n.0: [565.12, 565.32]
 - * y_true: [12.82514463 16.9507403]
 - * v_ann: [16.700132369995117, 15.52761173248291, 2

0.75031363427129]

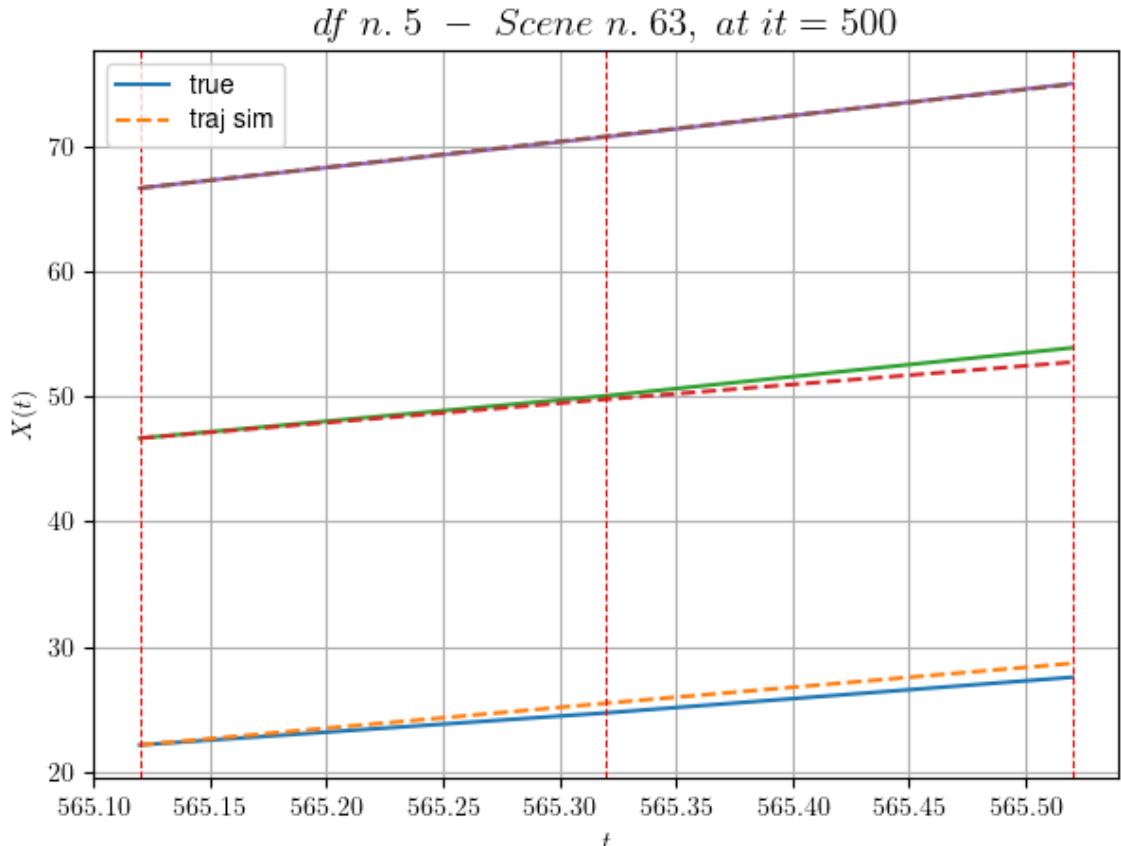
- Time interval n.1: [565.32, 565.52]
 - * y_true: [14.2510345 19.19106683]
 - * v_ann: [15.935102462768555, 14.891265869140625, 2

0.75031363427129]

* err= 0.35952137732103345

* Learning rate NN = 0.00036449998151510954

* diff = 3.460619977013746e-05

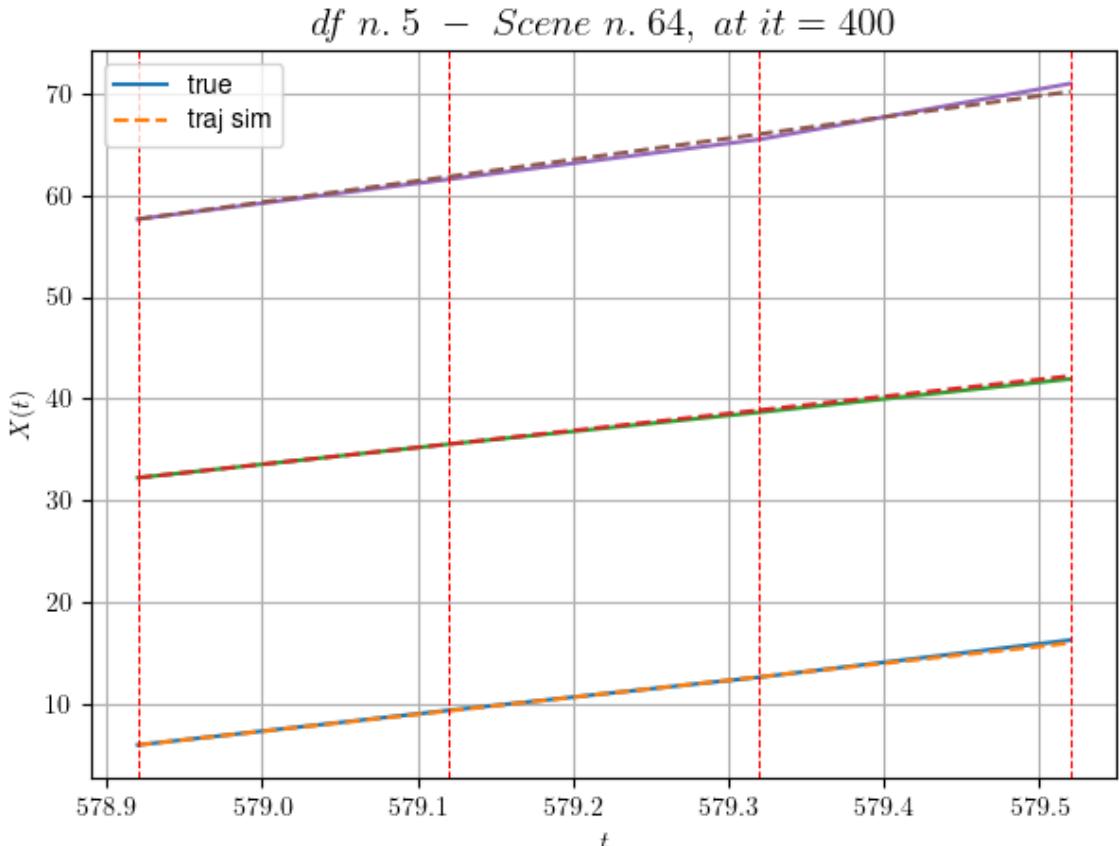


For scene 63/66

* use LR_NN=0.0005 with err=2.5176049997374172 at it=24
* v0_scn_mean = 21.30529440092329
* MAE = 0.3502603425045521

df n.5, scene n.64/66

We have 3 time intervals inside [578.92, 579.52]
* err= 0.09932958198708823
* Learning rate NN = 6.560998735949397e-05
* diff = 6.462653752981051e-07



For scene 64/66

- * use LR_NN=0.0001 with err=3.627647960188949 at it=24
- * v0_scn_mean = 21.597864239642366
- * MAE = 0.09292314348727104

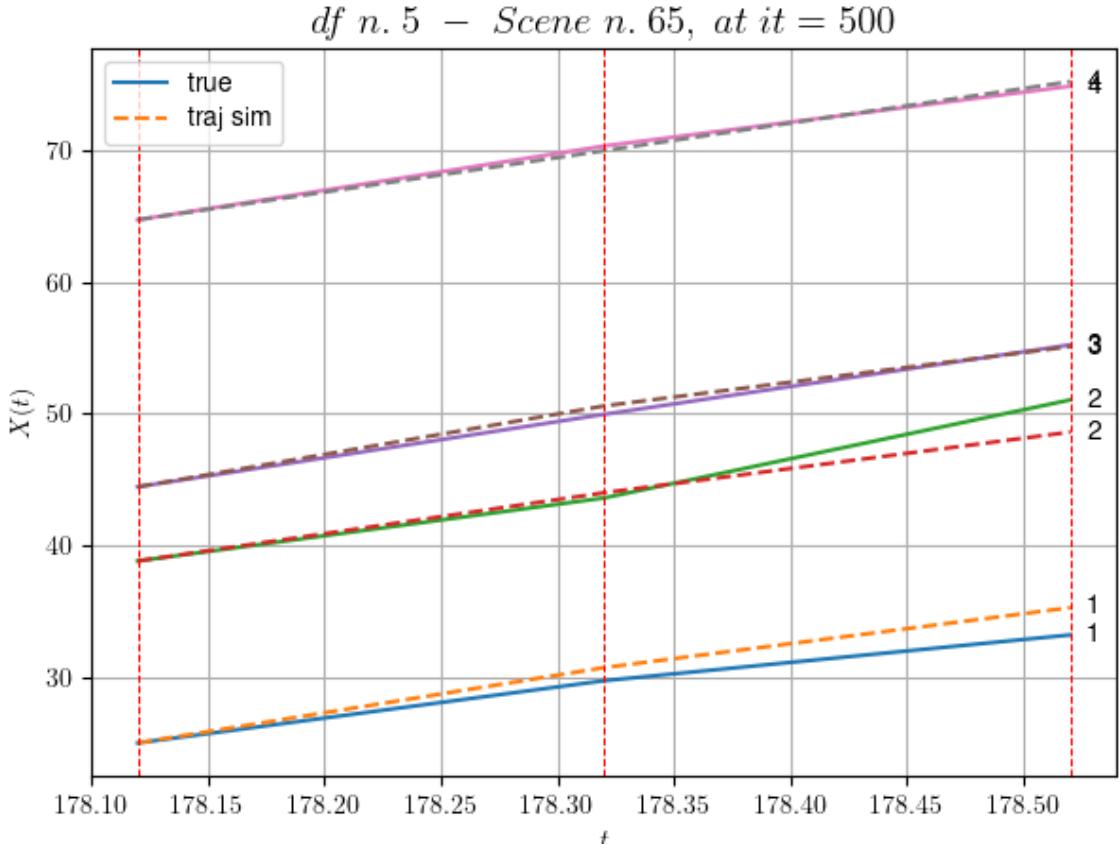
df n.5, scene n.65/66

We have 2 time intervals inside [178.12, 178.52]

- Time interval n.0: [178.12, 178.32]
 - * y_true: [23.59034379 23.87574209 27.4762805]
 - * v_ann: [28.53675079345703, 25.859981536865234, 3
 - 0.65009117126465, 26.192362108395475]

- Time interval n.1: [178.32, 178.52]
 - * y_true: [17.35034213 37.1766426 26.34131635]
 - * v_ann: [22.728147506713867, 22.99139976501465, 2
 - 2.500534057617188, 26.192362108395475]

- * err= 1.00213934745629
- * Learning rate NN = 0.0007289999630302191
- * diff = 0.01531683507551218



For scene 65/66

- * use LR_NN=0.001 with err=7.31035547370992 at it=24
- * v0_scn_mean = 26.49696074916671
- * MAE = 1.00213934745629

For df=5 with 66 scenes, time taken: 1079.10

In df n.6/10 we have 52 scenes

df n.6, scene n.0/52

We have 4 time intervals inside [14.80, 15.60]

- Time interval n.0: [14.80, 15.00]
 - * y_true: [23.20069976]
 - * v_ann: [24.10047721862793, 29.057098132173085]

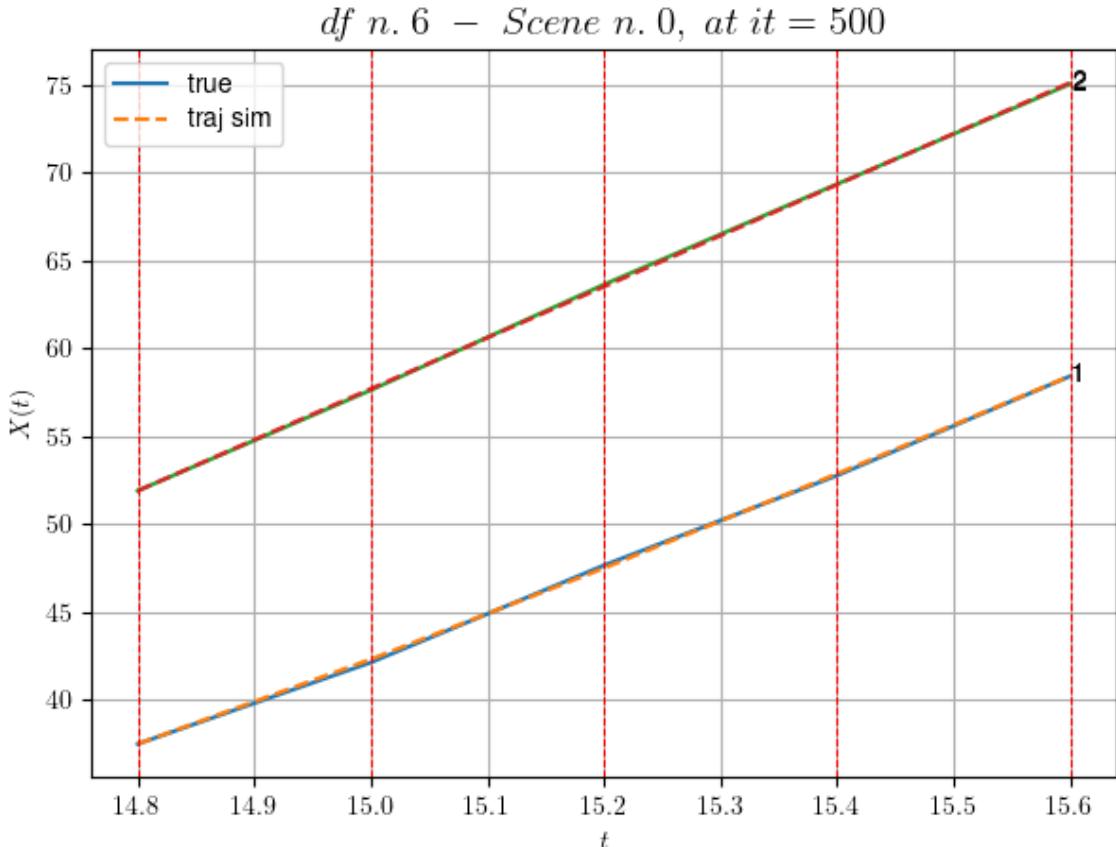
- Time interval n.1: [15.00, 15.20]
 - * y_true: [27.66107981]
 - * v_ann: [25.96145248413086, 29.057098132173085]

- Time interval n.2: [15.20, 15.40]
 - * y_true: [25.57123034]

```
* v_ann: [26.864521026611328, 29.057098132173085]
```

```
- Time interval n.3: [15.40, 15.60]
* y_true: [28.30168647]
* v_ann: [27.860858917236328, 29.057098132173085]
```

```
* err= 0.009658535878465924
* Learning rate NN = 2.3914839403005317e-05
* diff = 4.013775946175996e-06
```



For scene 0/52

```
* use LR_NN=5e-05 with err=0.11839060945183254 at it=24
* v0_scn_mean = 29.094814206878983
* MAE = 0.009638613408578044
```

df n.6, scene n.1/52

We have 9 time intervals inside [24.60, 26.40]

```
- Time interval n.0: [24.60, 24.80]
* y_true: [17.23002109]
* v_ann: [21.28922462463379, 20.072543725791657]
```

```
- Time interval n.1: [24.80, 25.00]
```

```
* y_true: [20.13005018]
* v_ann: [21.24690055847168, 20.072543725791657]

-----
- Time interval n.2: [25.00, 25.20]
* y_true: [20.48009455]
* v_ann: [20.6611328125, 20.072543725791657]

-----
- Time interval n.3: [25.20, 25.40]
* y_true: [20.58014827]
* v_ann: [20.521282196044922, 20.072543725791657]

-----
- Time interval n.4: [25.40, 25.60]
* y_true: [21.06023013]
* v_ann: [20.60822296142578, 20.072543725791657]

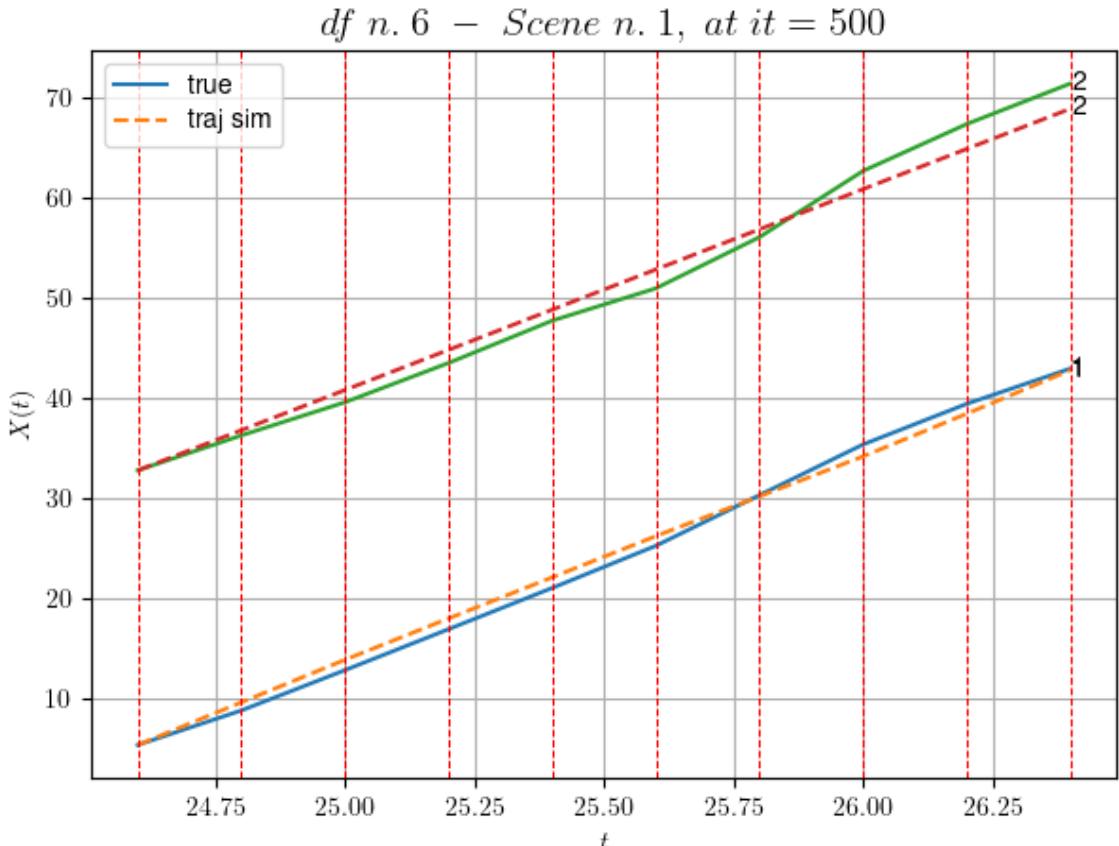
-----
- Time interval n.5: [25.60, 25.80]
* y_true: [25.31039356]
* v_ann: [19.836843490600586, 20.072543725791657]

-----
- Time interval n.6: [25.80, 26.00]
* y_true: [25.32053085]
* v_ann: [19.972063064575195, 20.072543725791657]

-----
- Time interval n.7: [26.00, 26.20]
* y_true: [20.28057024]
* v_ann: [21.310182571411133, 20.072543725791657]

-----
- Time interval n.8: [26.20, 26.40]
* y_true: [17.62559467]
* v_ann: [21.79289436340332, 20.072543725791657]

* err= 1.6021775144790316
* Learning rate NN = 8.338586667377967e-06
* diff = 0.0001473436086776303
```



For scene 1/52

- * use LR_NN=5e-05 with err=51.854806247968575 at it=24
- * v0_scn_mean = 20.46964197668412
- * MAE = 1.4403790779118142

df n.6, scene n.2/52

We have 5 time intervals inside [29.80, 30.80]

- Time interval n.0: [29.80, 30.00]
 - * y_true: [20.15002211]
 - * v_ann: [17.76063346862793, 24.20792904650498]

- Time interval n.1: [30.00, 30.20]
 - * y_true: [22.29006024]
 - * v_ann: [19.97160530090332, 24.20792904650498]

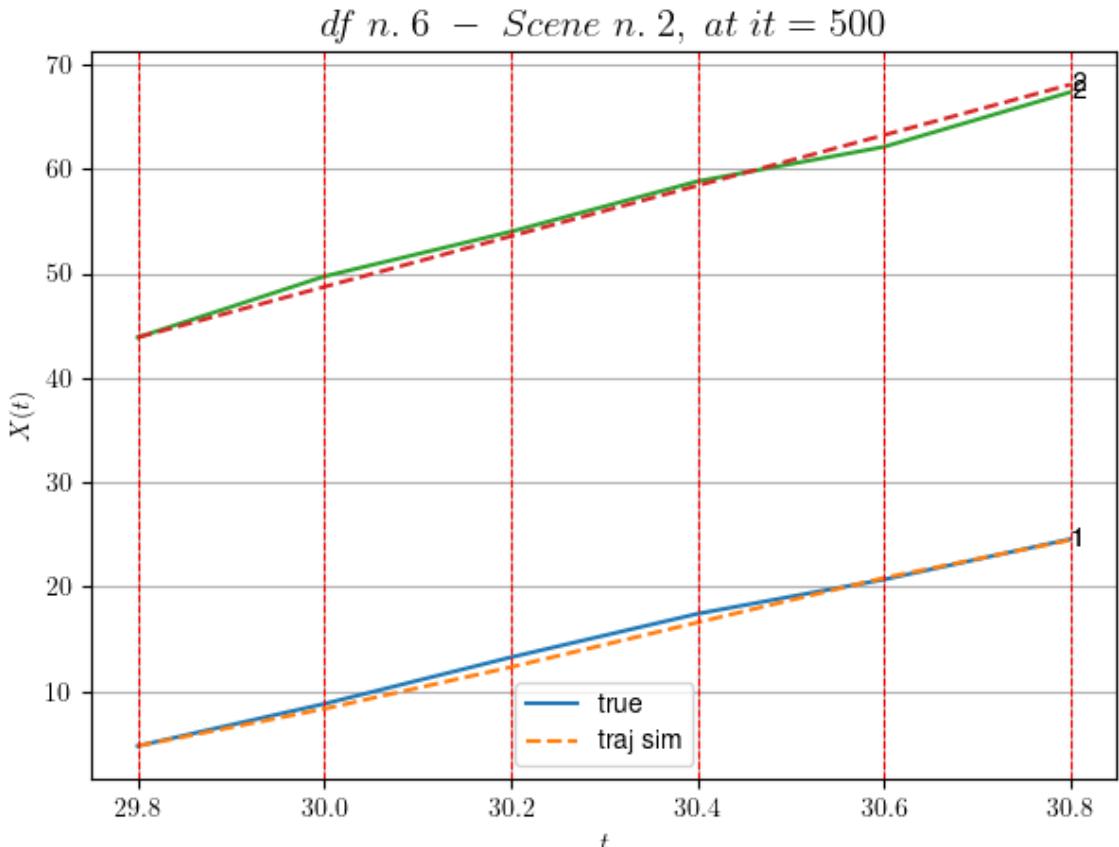
- Time interval n.2: [30.20, 30.40]
 - * y_true: [20.82009504]
 - * v_ann: [21.372169494628906, 24.20792904650498]

- Time interval n.3: [30.40, 30.60]
 - * y_true: [16.41012173]

```
* v_ann: [21.34605598449707, 24.20792904650498]
```

```
- Time interval n.4: [30.60, 30.80]
* y_true: [19.34020007]
* v_ann: [18.107139587402344, 24.20792904650498]
```

```
* err= 0.4161827326199119
* Learning rate NN = 0.0001937102060765028
* diff = 0.00747827404647794
```



For scene 2/52

```
* use LR_NN=0.0005 with err=7.439452839924216 at it=24
* v0_scn_mean = 24.439611884600506
* MAE = 0.32854886217553475
```

df n.6, scene n.3/52

We have 5 time intervals inside [31.80,32.80]

```
- Time interval n.0: [31.80, 32.00]
* y_true: [28.45012265]
* v_ann: [33.64265441894531, 21.080205380799672]
```

```
- Time interval n.1: [32.00, 32.20]
```

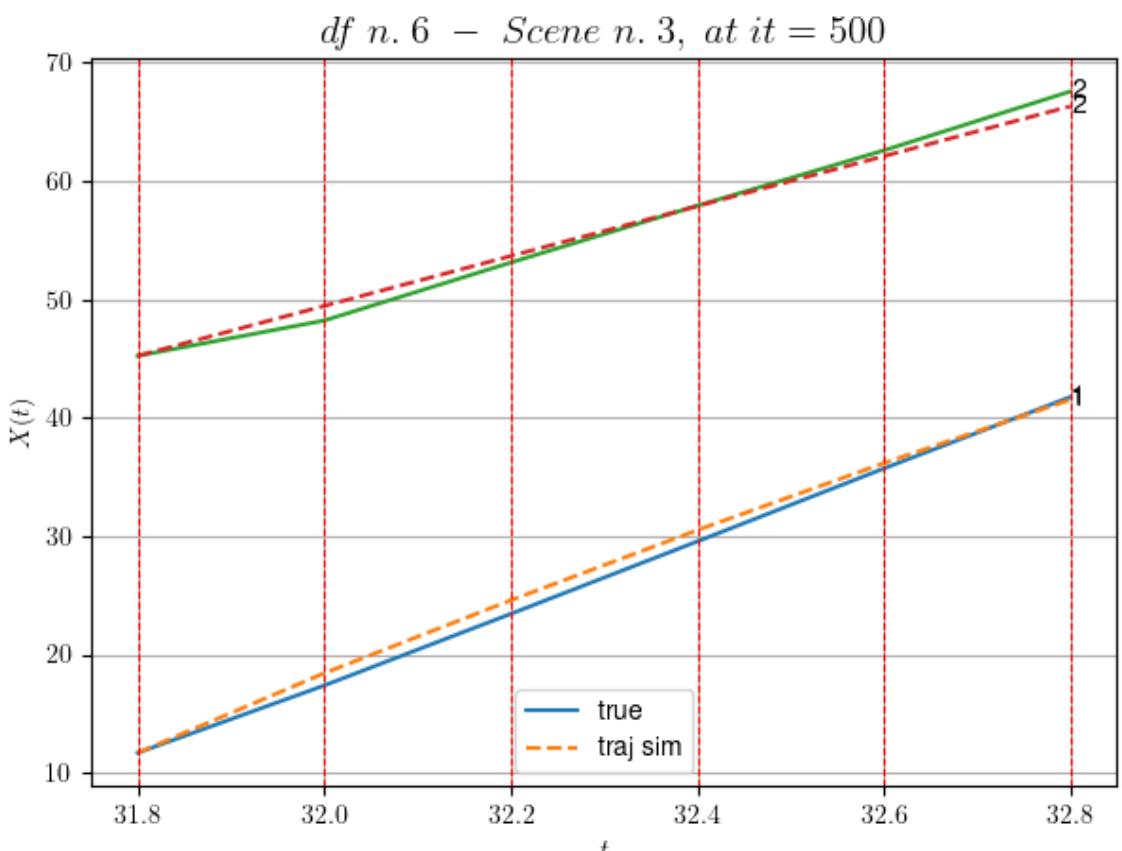
```
* y_true: [30.25025199]
* v_ann: [30.79956817626953, 21.080205380799672]
```

```
- Time interval n.2: [32.20, 32.40]
* y_true: [30.60042484]
* v_ann: [29.61707878112793, 21.080205380799672]
```

```
- Time interval n.3: [32.40, 32.60]
* y_true: [30.80064449]
* v_ann: [28.29267120361328, 21.080205380799672]
```

```
- Time interval n.4: [32.60, 32.80]
* y_true: [30.20103326]
* v_ann: [26.80622673034668, 21.080205380799672]
```

```
* err= 0.600317433455386
* Learning rate NN = 3.874203684972599e-06
* diff = 0.00030195790203779715
```



For scene 3/52

```
* use LR_NN=1e-05 with err=13.390642251261248 at it=24
* v0_scn_mean = 21.43699716549957
* MAE = 0.5479156563147594
```

```
df n.6, scene n.4/52
```

```
=====
=====

We have 5 time intervals inside [66.40,67.40]
- Time interval n.0: [66.40, 66.60]
  * y_true: [31.42032719]
  * v_ann: [31.031274795532227, 29.94601210223976]

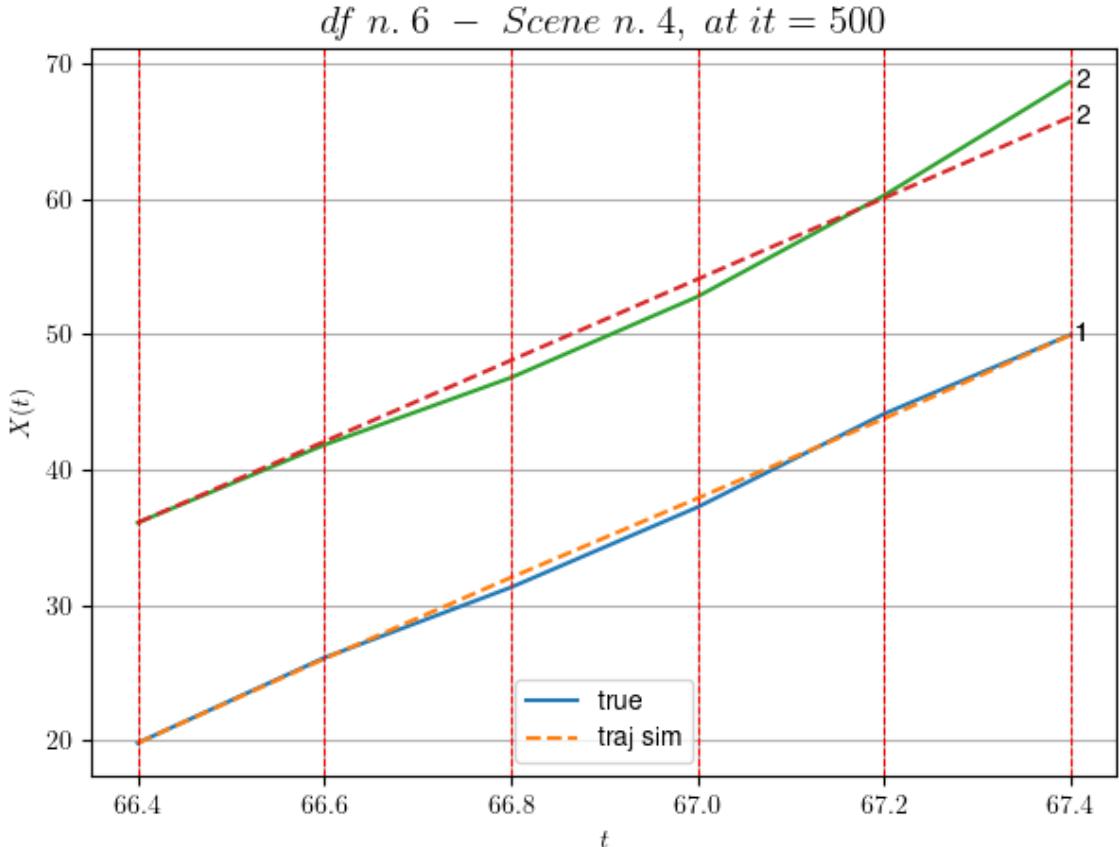
-----
- Time interval n.1: [66.60, 66.80]
  * y_true: [25.99042753]
  * v_ann: [29.99691390991211, 29.94601210223976]

-----
- Time interval n.2: [66.80, 67.00]
  * y_true: [29.58069783]
  * v_ann: [29.250629425048828, 29.94601210223976]

-----
- Time interval n.3: [67.00, 67.20]
  * y_true: [34.44110525]
  * v_ann: [29.386707305908203, 29.94601210223976]

-----
- Time interval n.4: [67.20, 67.40]
  * y_true: [29.24127853]
  * v_ann: [30.889938354492188, 29.94601210223976]

-----
* err= 0.9444973657518977
* Learning rate NN = 3.874203684972599e-05
* diff = 0.0005190360242127712
```



For scene 4/52

- * use LR_NN=0.0001 with err=0.9391979257591216 at it=24
- * v0_scn_mean = 29.94817161814964
- * MAE = 0.9367587761132826

df n.6, scene n.5/52

We have 3 time intervals inside [72.20, 72.80]

- Time interval n.0: [72.20, 72.40]
 - * y_true: [29.25123385]
 - * v_ann: [27.971637725830078, 24.279422082355495]

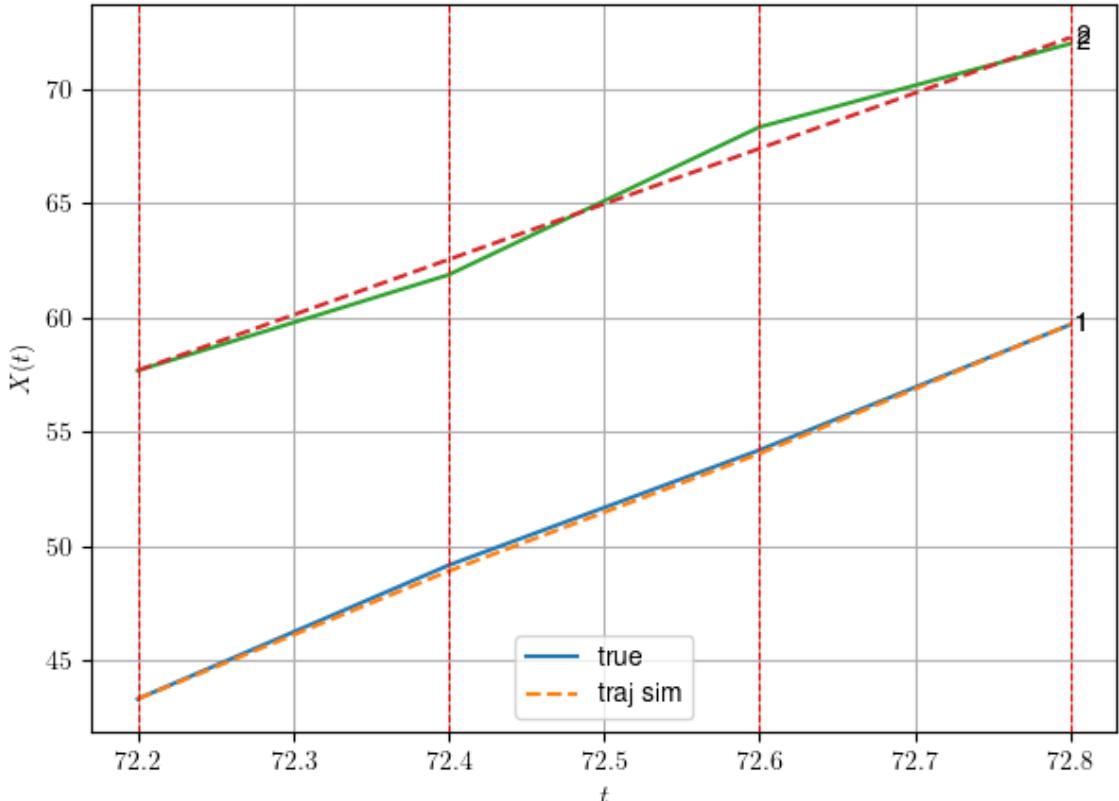
- Time interval n.1: [72.40, 72.60]
 - * y_true: [25.20122983]
 - * v_ann: [25.70220184326172, 24.279422082355495]

- Time interval n.2: [72.60, 72.80]
 - * y_true: [27.44173744]
 - * v_ann: [28.271949768066406, 24.279422082355495]

- * err= 0.18688218074881421
- * Learning rate NN = 0.0005904899444431067

* diff = 6.360974811603359e-06

df n. 6 – Scene n. 5, at it = 500



For scene 5/52

* use LR_NN=0.001 with err=2.3611905678328378 at it=24
 * v0_scn_mean = 24.50824519901767
 * MAE = 0.18455887125644282

df n.6, scene n.6/52

We have 7 time intervals inside [73.80,75.20]

- Time interval n.0: [73.80, 74.00]
 - * y_true: [20.58483588]
 - * v_ann: [19.679311752319336, 22.205548372430883]

- Time interval n.1: [74.00, 74.20]
 - * y_true: [12.25168131]
 - * v_ann: [18.62066078186035, 22.205548372430883]

- Time interval n.2: [74.20, 74.40]
 - * y_true: [25.70645636]
 - * v_ann: [21.50204849243164, 22.205548372430883]

- Time interval n.3: [74.40, 74.60]

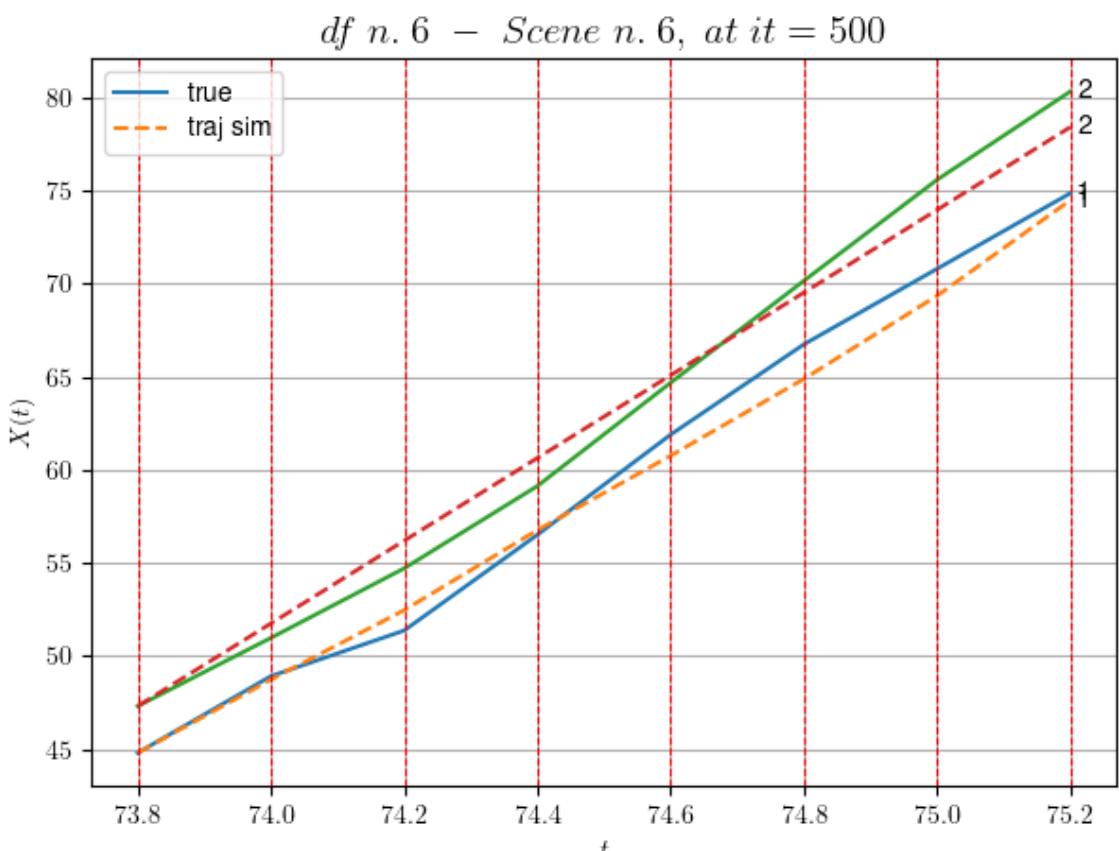
```
* y_true: [26.87686349]
* v_ann: [19.963909149169922, 22.205548372430883]
```

```
- Time interval n.4: [74.60, 74.80]
* y_true: [24.24024871]
* v_ann: [20.617069244384766, 22.205548372430883]
```

```
- Time interval n.5: [74.80, 75.00]
* y_true: [20.28532654]
* v_ann: [22.327369689941406, 22.205548372430883]
```

```
- Time interval n.6: [75.00, 75.20]
* y_true: [20.28532654]
* v_ann: [25.641950607299805, 22.205548372430883]
```

```
* err= 1.2591869824496682
* Learning rate NN = 0.00012709324073512107
* diff = 0.05792576775161251
```



For scene 6/52

```
* use LR_NN=0.0005 with err=21.992491405477608 at it=24
* v0_scn_mean = 22.51732643747375
* MAE = 1.2591869824496682
```

```
df n.6, scene n.7/52
```

```
=====
=====
```

We have 4 time intervals inside [86.60,87.40]

- Time interval n.0: [86.60, 86.80]

- * y_true: [8.95018469]

- * v_ann: [10.706628799438477, 28.176915163685493]

```
=====
=====
```

- Time interval n.1: [86.80, 87.00]

- * y_true: [11.65030459]

- * v_ann: [9.881474494934082, 28.176915163685493]

```
=====
=====
```

- Time interval n.2: [87.00, 87.20]

- * y_true: [11.65030459]

- * v_ann: [9.916430473327637, 28.176915163685493]

```
=====
=====
```

- Time interval n.3: [87.20, 87.40]

- * y_true: [8.51695204]

- * v_ann: [10.376383781433105, 28.176915163685493]

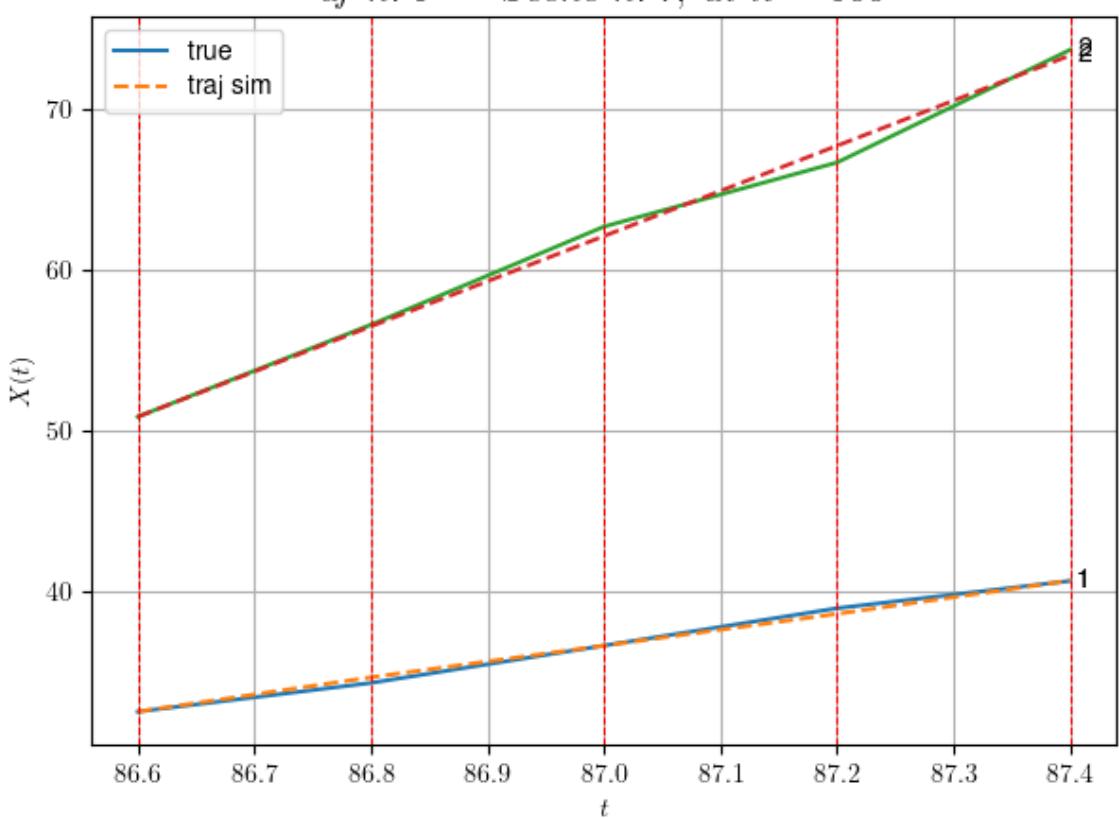
```
=====
=====
```

- * err= 0.18198255477499903

- * Learning rate NN = 2.3914839403005317e-05

- * diff = 1.878003799832273e-05

df n. 6 – Scene n. 7, at it = 500



```
For scene 7/52
* use LR_NN=5e-05 with err=0.7228141277915117 at it=24
* v0_scn_mean = 28.249838557124924
* MAE = 0.18198255477499903
```

```
=====
=====
```

```
df n.6, scene n.8/52
```

```
=====
=====
```

```
We have 7 time intervals inside [99.40,100.80]
```

```
- Time interval n.0: [99.40, 99.60]
  * y_true: [26.75071408]
  * v_ann: [26.929176330566406, 20.17230192739086]
```

```
-----
-----
```

```
- Time interval n.1: [99.60, 99.80]
  * y_true: [25.15087073]
  * v_ann: [25.43405532836914, 20.17230192739086]
```

```
-----
-----
```

```
- Time interval n.2: [99.80, 100.00]
  * y_true: [14.1505841]
  * v_ann: [23.942188262939453, 20.17230192739086]
```

```
-----
-----
```

```
- Time interval n.3: [100.00, 100.20]
  * y_true: [30.25150056]
  * v_ann: [23.436437606811523, 20.17230192739086]
```

```
-----
-----
```

```
- Time interval n.4: [100.20, 100.40]
  * y_true: [23.55142746]
  * v_ann: [22.43511390686035, 20.17230192739086]
```

```
-----
-----
```

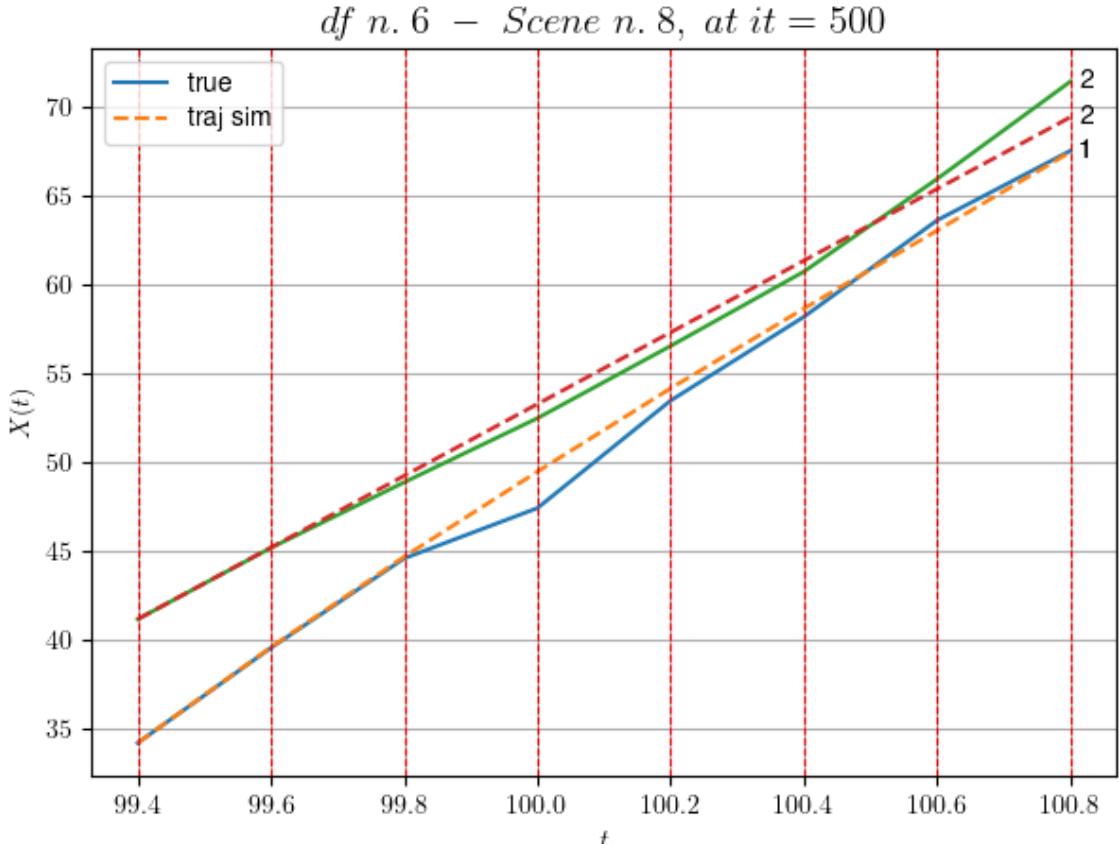
```
- Time interval n.5: [100.40, 100.60]
  * y_true: [27.15195588]
  * v_ann: [21.968997955322266, 20.17230192739086]
```

```
-----
-----
```

```
- Time interval n.6: [100.60, 100.80]
  * y_true: [19.55162977]
  * v_ann: [22.04908561706543, 20.17230192739086]
```

```
-----
-----
```

```
* err= 0.7065398687235553
* Learning rate NN = 0.00025418648147024214
* diff = 0.006191718027140691
```



For scene 8/52

- * use LR_NN=0.001 with err=34.72407945962064 at it=24
- * v0_scn_mean = 20.565409850220085
- * MAE = 0.703110613458436

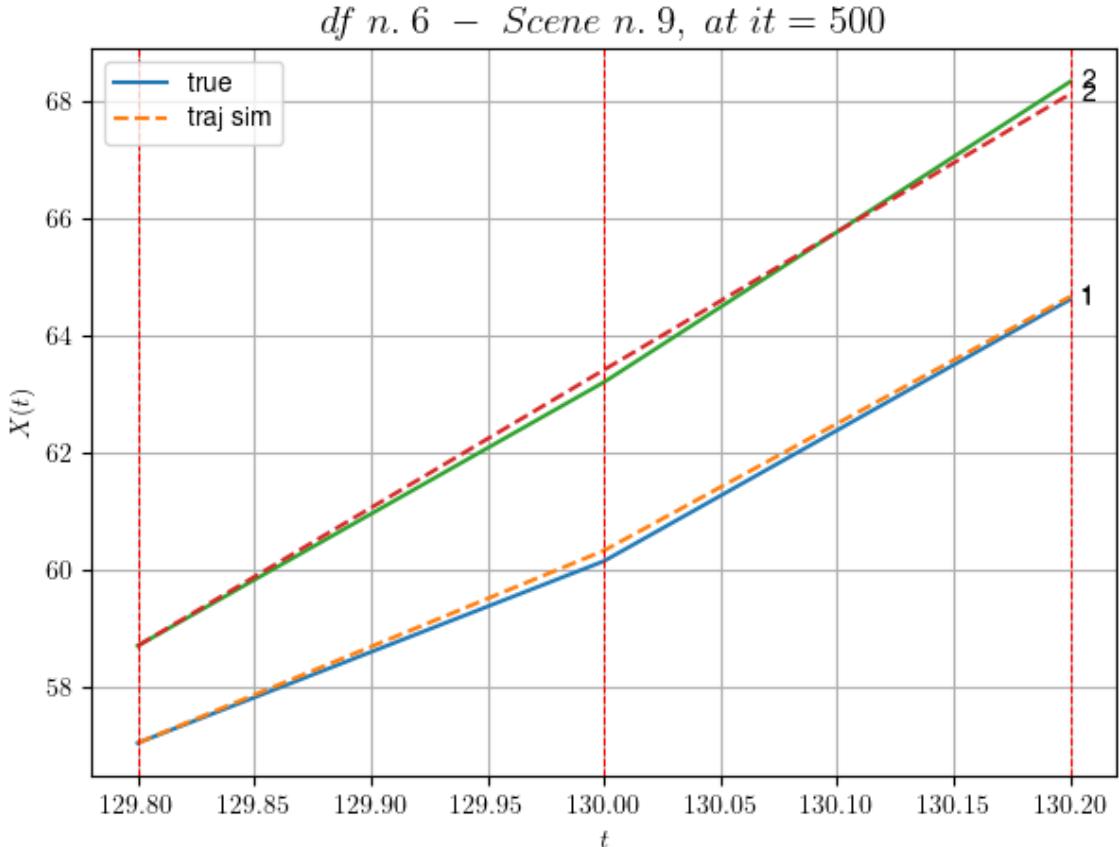
df n.6, scene n.9/52

We have 2 time intervals inside [129.80, 130.20]

- Time interval n.0: [129.80, 130.00]
 - * y_true: [15.55601522]
 - * v_ann: [16.452960968017578, 23.60183293107532]

- Time interval n.1: [130.00, 130.20]
 - * y_true: [22.37672612]
 - * v_ann: [21.729461669921875, 23.60183293107532]

- * err= 0.020484042301922363
- * Learning rate NN = 0.0007289999630302191
- * diff = 0.0008520044229116917



For scene 9/52

- * use LR_NN=0.001 with err=1.2918676675363816 at it=24
- * v0_scn_mean = 23.85775961378429
- * MAE = 0.020484042301922363

df n.6, scene n.10/52

We have 8 time intervals inside [131.80, 133.40]

- Time interval n.0: [131.80, 132.00]
 - * y_true: [0.35723721]
 - * v_ann: [1.9993022680282593, 20.22300032377142]

- Time interval n.1: [132.00, 132.20]
 - * y_true: [0.35723721]
 - * v_ann: [2.4542274475097656, 20.22300032377142]

- Time interval n.2: [132.20, 132.40]
 - * y_true: [0.35723721]
 - * v_ann: [2.9513728618621826, 20.22300032377142]

- Time interval n.3: [132.40, 132.60]
 - * y_true: [0.35723721]

```
* v_ann: [3.4218831062316895, 20.22300032377142]
```

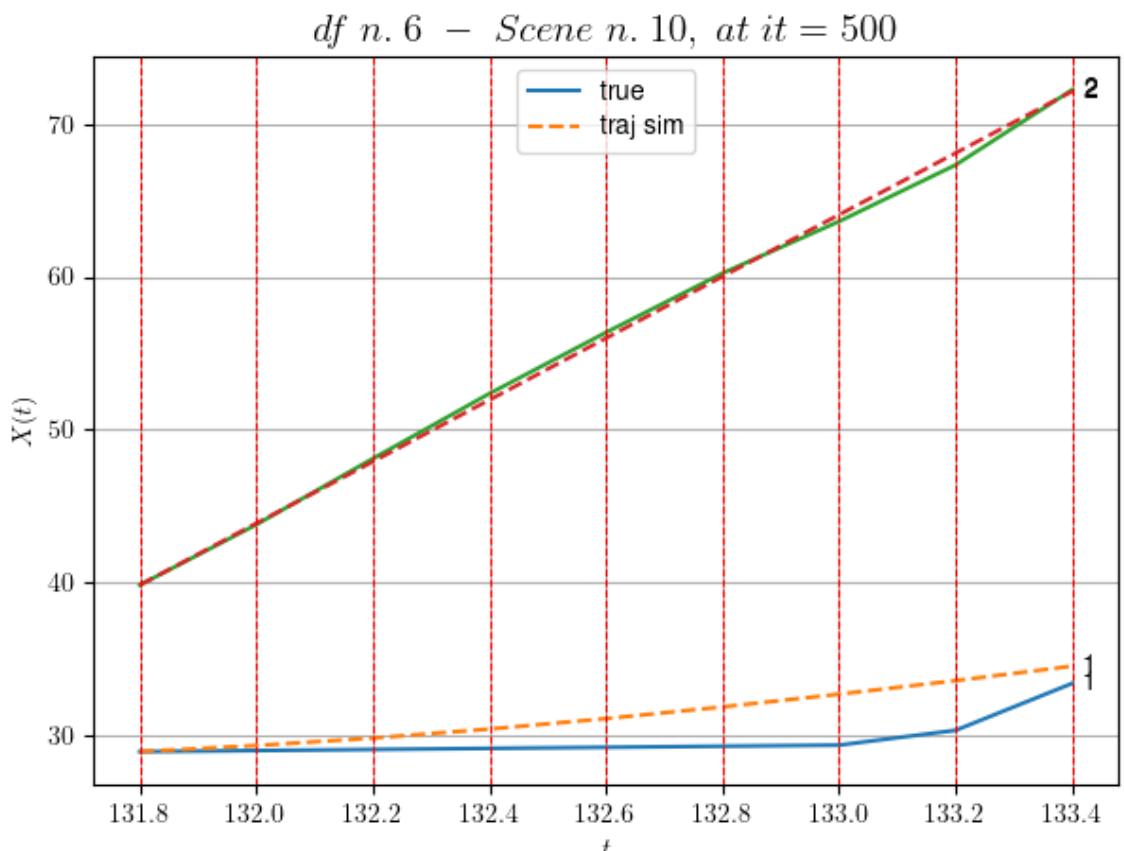
```
- Time interval n.4: [132.60, 132.80]
* y_true: [0.35723721]
* v_ann: [3.8292245864868164, 20.22300032377142]
```

```
- Time interval n.5: [132.80, 133.00]
* y_true: [0.35723721]
* v_ann: [4.180598258972168, 20.22300032377142]
```

```
- Time interval n.6: [133.00, 133.20]
* y_true: [4.8519049]
* v_ann: [4.426398754119873, 20.22300032377142]
```

```
- Time interval n.7: [133.20, 133.40]
* y_true: [15.39029942]
* v_ann: [4.755626678466797, 20.22300032377142]
```

```
* err= 2.035650419440651
* Learning rate NN = 1.029455233947374e-05
* diff = 0.020789437891322926
```



For scene 10/52

* use LR_NN=5e-05 with err=44.68687837765767 at it=24

```
* vθ_scn_mean = 20.61408031074684  
* MAE = 2.0323315366767685
```

```
=====
```

```
=====
```

```
df n.6, scene n.11/52
```

```
=====
```

```
=====
```

```
We have 6 time intervals inside [134.00,135.20]
```

- Time interval n.0: [134.00, 134.20]
 - * y_true: [0.35723721]
 - * v_ann: [-0.002496186178177595, 22.06323233551294]

```
4]
```

```
-----
```

- Time interval n.1: [134.20, 134.40]
 - * y_true: [0.35723721]
 - * v_ann: [-0.00044566558790393174, 22.06323233551294]

```
4]
```

```
-----
```

- Time interval n.2: [134.40, 134.60]
 - * y_true: [0.35723721]
 - * v_ann: [-7.578397344332188e-05, 22.06323233551294]

```
4]
```

```
-----
```

- Time interval n.3: [134.60, 134.80]
 - * y_true: [0.35723721]
 - * v_ann: [-1.3052167560090311e-05, 22.06323233551294]

```
4]
```

```
-----
```

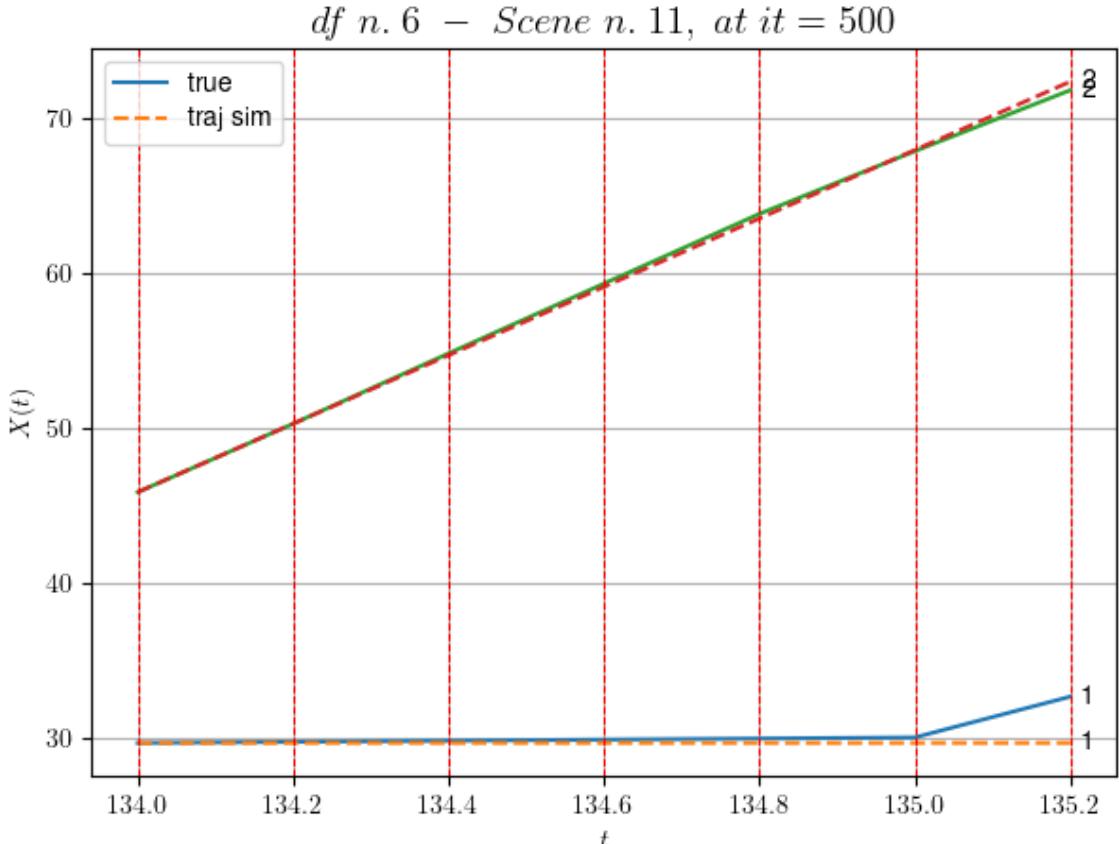
- Time interval n.4: [134.80, 135.00]
 - * y_true: [0.35723721]
 - * v_ann: [-2.2551500933332136e-06, 22.06323233551294]

```
4]
```

```
-----
```

- Time interval n.5: [135.00, 135.20]
 - * y_true: [13.1611551]
 - * v_ann: [-4.6620124294349807e-07, 22.06323233551294]

```
* err= 0.6917729893595348  
* Learning rate NN = 0.0015690524596720934  
* diff = 1.882896085791952e-05
```



For scene 11/52

- * use LR_NN=0.005 with err=17.441726657348177 at it=24
- * v0_scn_mean = 22.380703042032202
- * MAE = 0.6917729893595348

df n.6, scene n.12/52

We have 10 time intervals inside [139.40, 141.40]

- Time interval n.0: [139.40, 139.60]
 - * y_true: [0.35723721]
 - * v_ann: [-0.8033693432807922, 17.7770898385059]

- Time interval n.1: [139.60, 139.80]
 - * y_true: [0.35723721]
 - * v_ann: [-0.29275354743003845, 17.7770898385059]

- Time interval n.2: [139.80, 140.00]
 - * y_true: [0.35723721]
 - * v_ann: [-0.08601629734039307, 17.7770898385059]

- Time interval n.3: [140.00, 140.20]
 - * y_true: [0.35723721]

```
* v_ann: [-0.013562167063355446, 17.7770898385059]
```

```
- Time interval n.4: [140.20, 140.40]
* y_true: [0.35723721]
* v_ann: [-0.002653259551152587, 17.7770898385059]
```

```
- Time interval n.5: [140.40, 140.60]
* y_true: [0.35723721]
* v_ann: [-0.0009211094002239406, 17.7770898385059]
```

```
- Time interval n.6: [140.60, 140.80]
* y_true: [0.35723721]
* v_ann: [-0.00020433949248399585, 17.7770898385059]
```

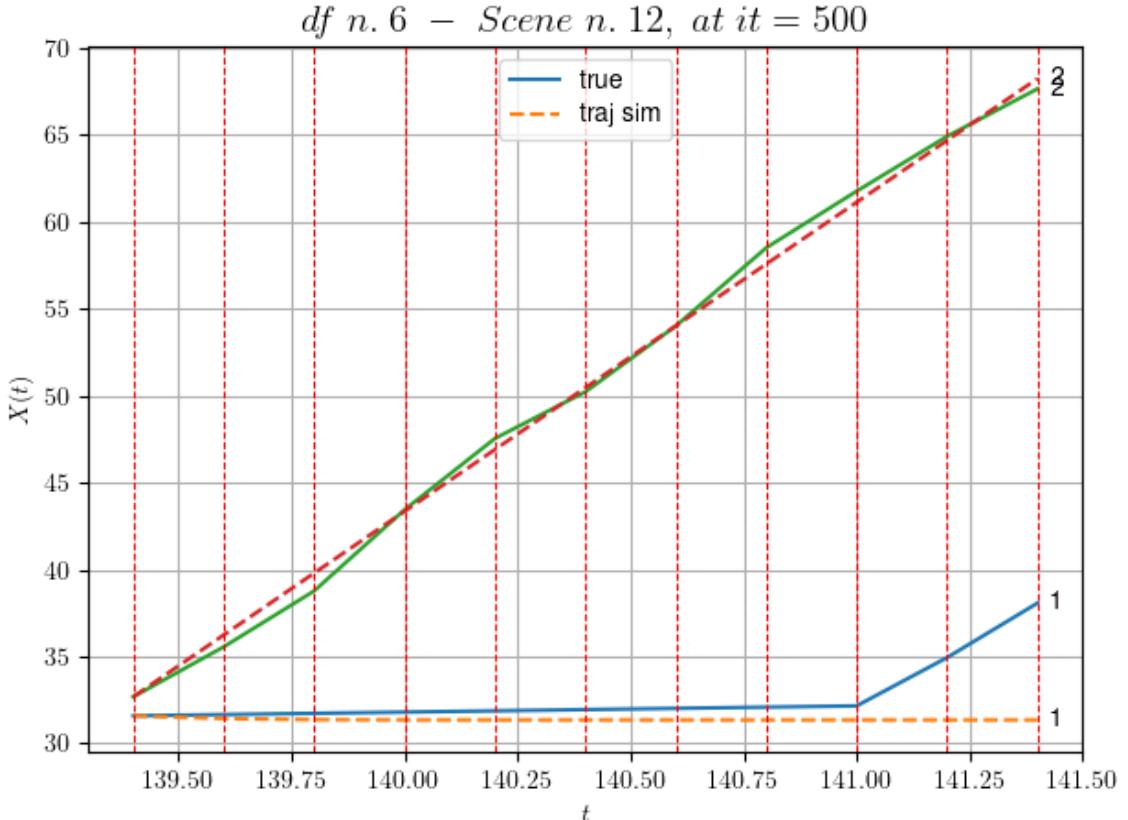
9]

```
- Time interval n.7: [140.80, 141.00]
* y_true: [0.35723721]
* v_ann: [-3.39461985277012e-05, 17.7770898385059]
```

```
- Time interval n.8: [141.00, 141.20]
* y_true: [13.90289768]
* v_ann: [-9.337814844911918e-06, 17.7770898385059]
```

```
- Time interval n.9: [141.20, 141.40]
* y_true: [15.67039873]
* v_ann: [-8.035014616325498e-06, 17.7770898385059]
```

```
* err= 2.931328589631793
* Learning rate NN = 1.350850993731001e-06
* diff = 0.00023198406382274328
```



For scene 12/52

- * use LR_NN=1e-05 with err=104.61670591987772 at it=24
- * v0_scn_mean = 18.266006244872337
- * MAE = 2.9305091869978126

df n.6, scene n.13/52

We have 12 time intervals inside [147.60,150.00]

- Time interval n.0: [147.60, 147.80]

- * y_true: [15.36027953]

- * v_ann: [-8.138796147250105e-06, 11.91404619934145]

6]

- Time interval n.1: [147.80, 148.00]

- * y_true: [13.26997227]

- * v_ann: [-0.005166482646018267, 11.91404619934145]

6]

- Time interval n.2: [148.00, 148.20]

- * y_true: [0.35723721]

- * v_ann: [0.37057799100875854, 11.914046199341456]

- Time interval n.3: [148.20, 148.40]

```
* y_true: [0.35723721]
* v_ann: [-0.001214737305417657, 11.91404619934145
6]

-----
- Time interval n.4: [148.40, 148.60]
* y_true: [0.35723721]
* v_ann: [-1.2614842717084684e-06, 11.9140461993414
56]

-----
- Time interval n.5: [148.60, 148.80]
* y_true: [0.35723721]
* v_ann: [-8.498513559551668e-10, 11.91404619934145
6]

-----
- Time interval n.6: [148.80, 149.00]
* y_true: [0.35723721]
* v_ann: [-4.2913407744850363e-13, 11.9140461993414
56]

-----
- Time interval n.7: [149.00, 149.20]
* y_true: [0.35723721]
* v_ann: [-2.7869652424778347e-16, 11.9140461993414
56]

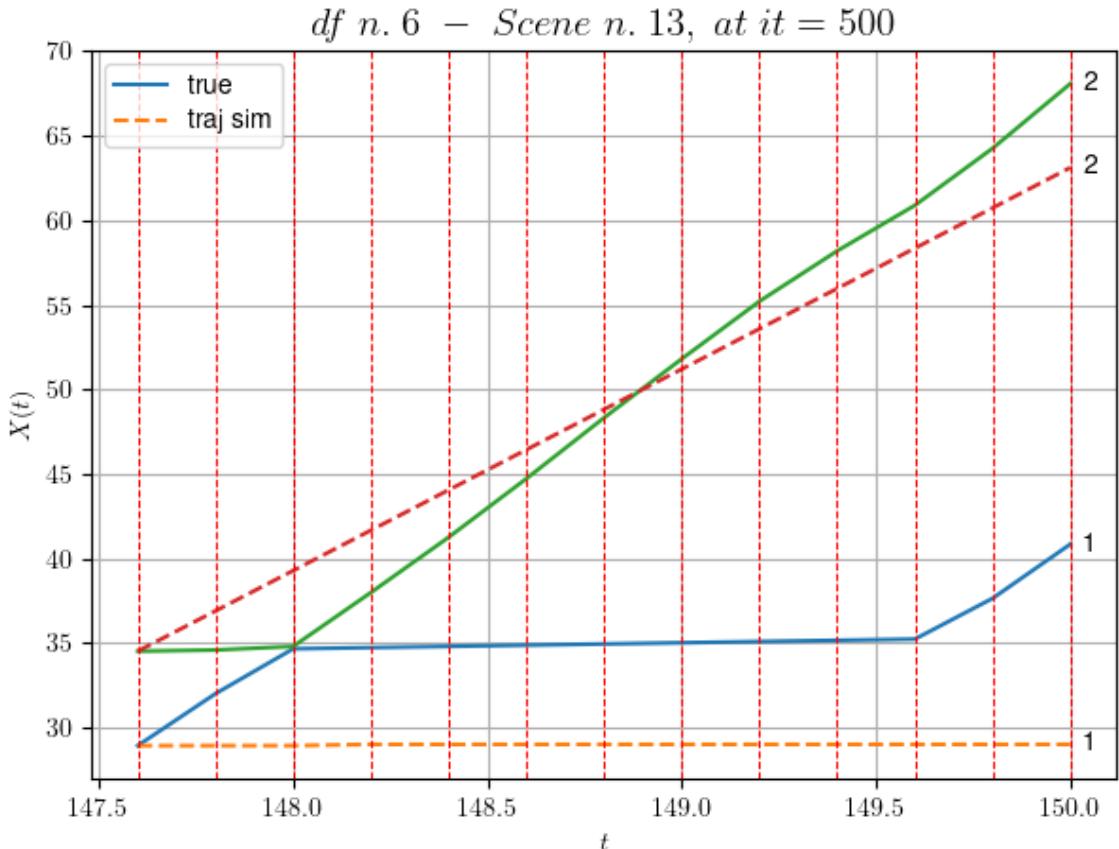
-----
- Time interval n.8: [149.20, 149.40]
* y_true: [0.35723721]
* v_ann: [-2.1405655814555367e-19, 11.9140461993414
56]

-----
- Time interval n.9: [149.40, 149.60]
* y_true: [0.35723721]
* v_ann: [-4.11078674128486e-22, 11.91404619934145
6]

-----
- Time interval n.10: [149.60, 149.80]
* y_true: [12.05341143]
* v_ann: [-1.4542992956166992e-24, 11.9140461993414
56]

-----
- Time interval n.11: [149.80, 150.00]
* y_true: [16.0154952]
* v_ann: [-1.8456292043949438e-25, 11.9140461993414
56]
```

```
* err= 24.774345828899698
* Learning rate NN = 0.000443146622274071
* diff = 0.0002429231614264893
```



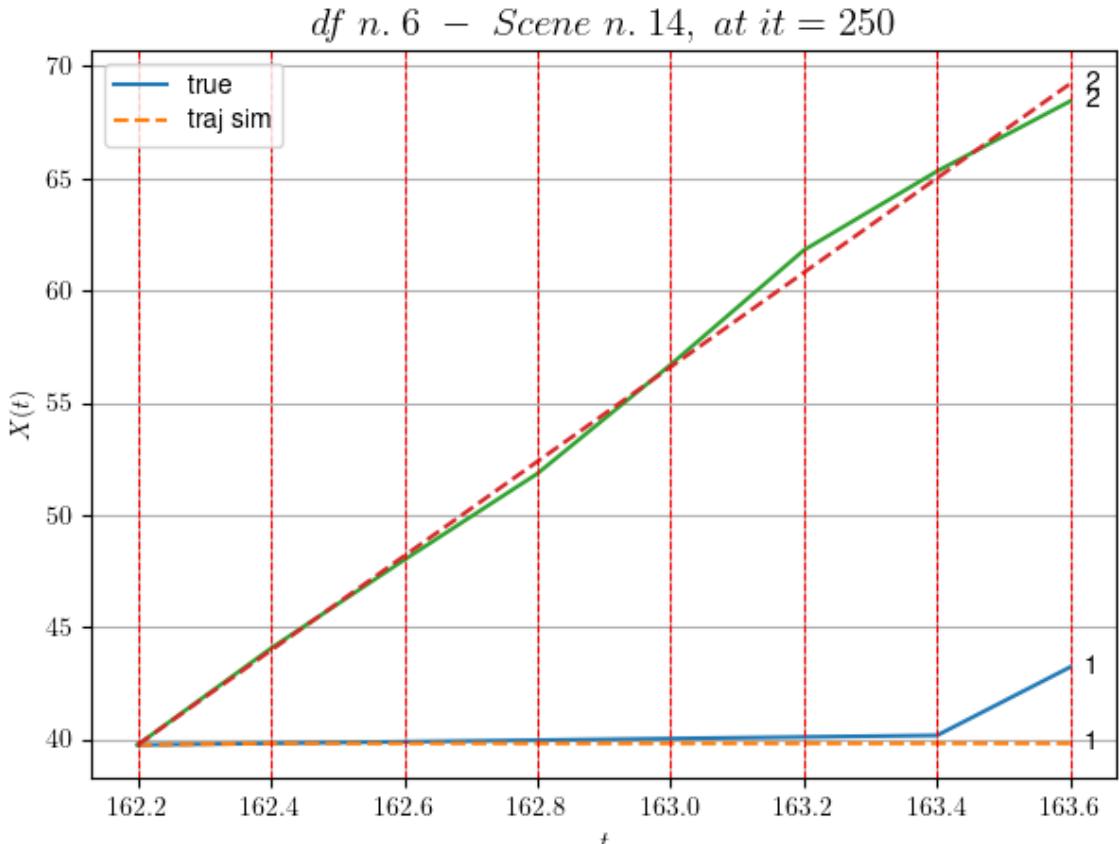
For scene 13/52

```
* use LR_NN=0.005 with err=300.5168827964006 at it=24
* v0_scn_mean = 12.637484351229718
* MAE = 23.87248783727653
```

df n.6, scene n.14/52

We have 7 time intervals inside [162.20,163.60]

```
* err= 0.8700798095010853
* Learning rate NN = 0.005314408801496029
* diff = 8.846401110540469e-07
```



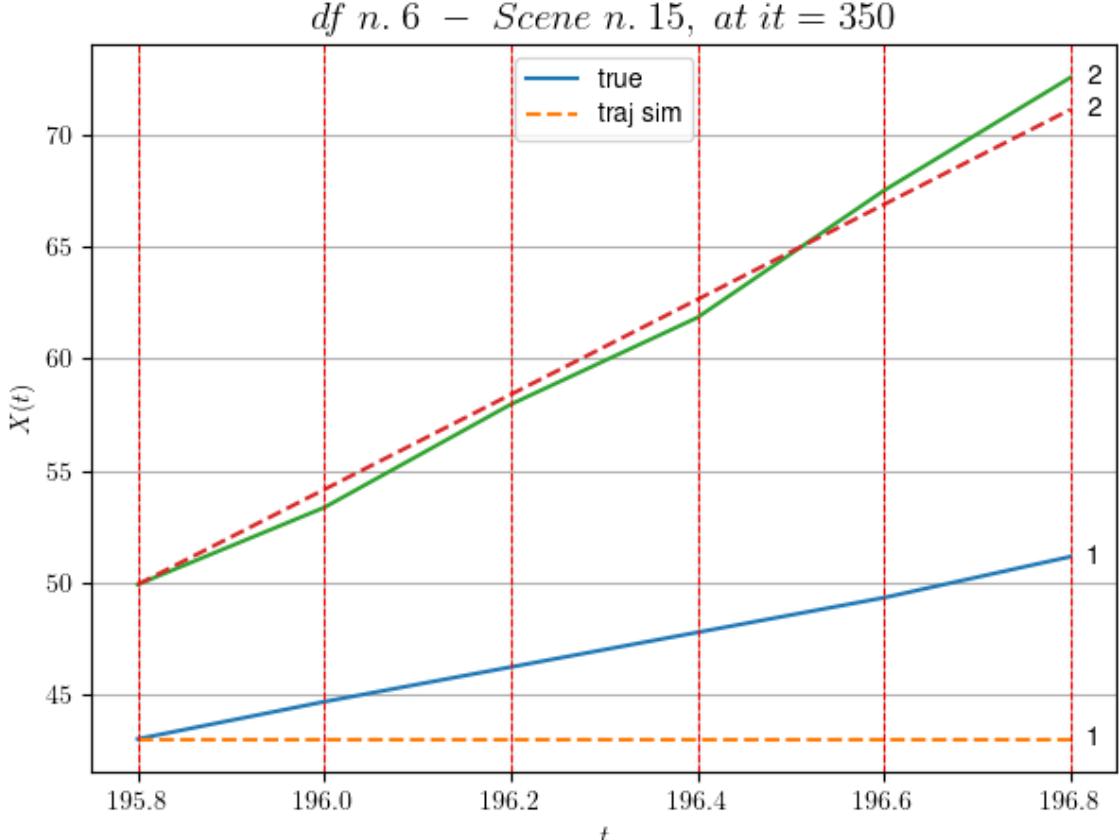
For scene 14/52

- * use LR_NN=0.01 with err=28.83440720233199 at it=24
 - * v0_scn_mean = 21.775002559512696
 - * MAE = 0.8700798037392079
-
-

df n.6, scene n.15/52

We have 5 time intervals inside [195.80,196.80]

- * err= 12.173177355701755
- * Learning rate NN = 5.314409008860821e-06
- * diff = 3.083336963527472e-07



For scene 15/52

- * use LR_NN=1e-05 with err=12.98720372199289 at it=24
- * v0_scn_mean = 21.73807043612383
- * MAE = 12.1267714541621

df n.6, scene n.16/52

We have 9 time intervals inside [204.40, 206.20]

- Time interval n.0: [204.40, 204.60]
 - * y_true: [8.31429106]
 - * v_ann: [-0.10269167274236679, 16.186070594949]

- Time interval n.1: [204.60, 204.80]
 - * y_true: [3.70012482]
 - * v_ann: [-0.01020598690956831, 16.186070594949]

- Time interval n.2: [204.80, 205.00]
 - * y_true: [10.45040224]
 - * v_ann: [-2.9875449399696663e-05, 16.186070594949]

- Time interval n.3: [205.00, 205.20]
 - * y_true: [10.45040224]

```
* v_ann: [-4.360462753538741e-06, 16.186070594949]
```

```
- Time interval n.4: [205.20, 205.40]
* y_true: [9.60043819]
* v_ann: [-6.007708464039752e-08, 16.186070594949]
```

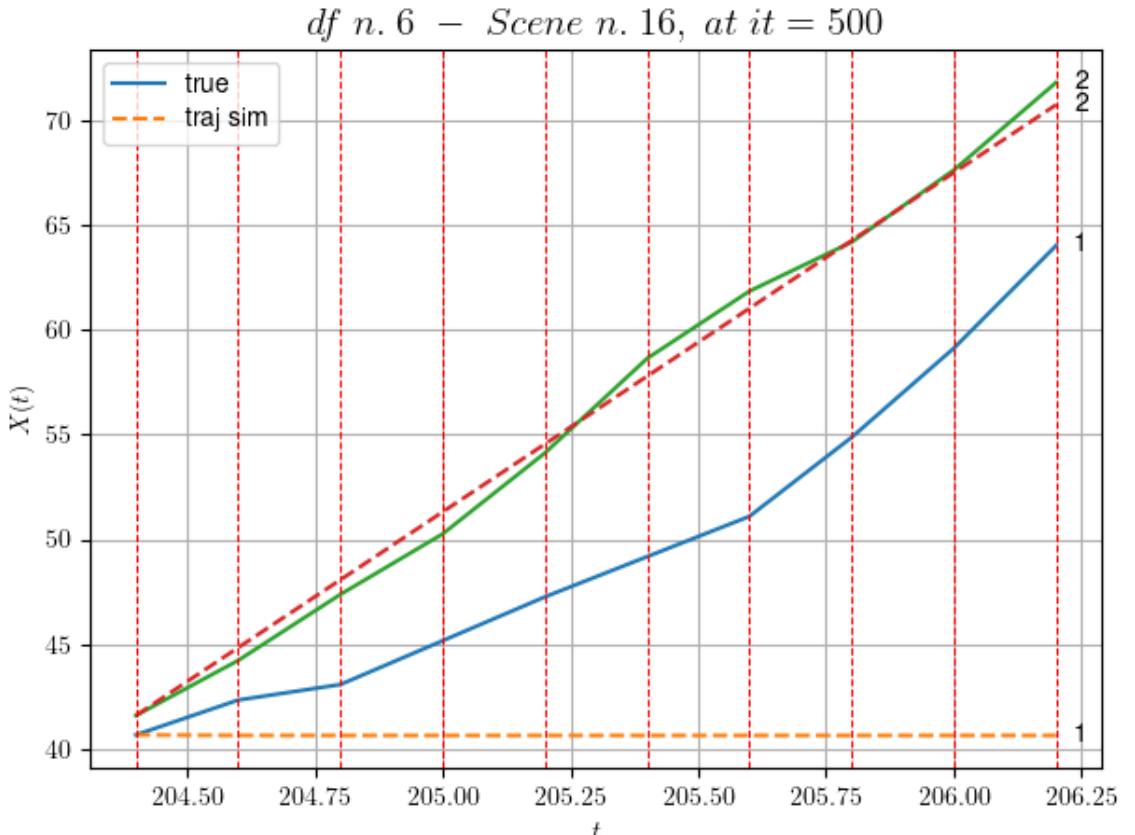
```
- Time interval n.5: [205.40, 205.60]
* y_true: [9.60043819]
* v_ann: [-1.1371639047075277e-10, 16.186070594949]
```

```
- Time interval n.6: [205.60, 205.80]
* y_true: [18.85713018]
* v_ann: [-5.0315233750264365e-12, 16.186070594949]
```

```
- Time interval n.7: [205.80, 206.00]
* y_true: [21.27628484]
* v_ann: [-1.6079522435763494e-10, 16.186070594949]
```

```
- Time interval n.8: [206.00, 206.20]
* y_true: [24.47691723]
* v_ann: [-1.1532560462157448e-09, 16.186070594949]
```

```
* err= 67.43219208140974
* Learning rate NN = 8.338587213074788e-05
* diff = 0.0034530991131020983
```

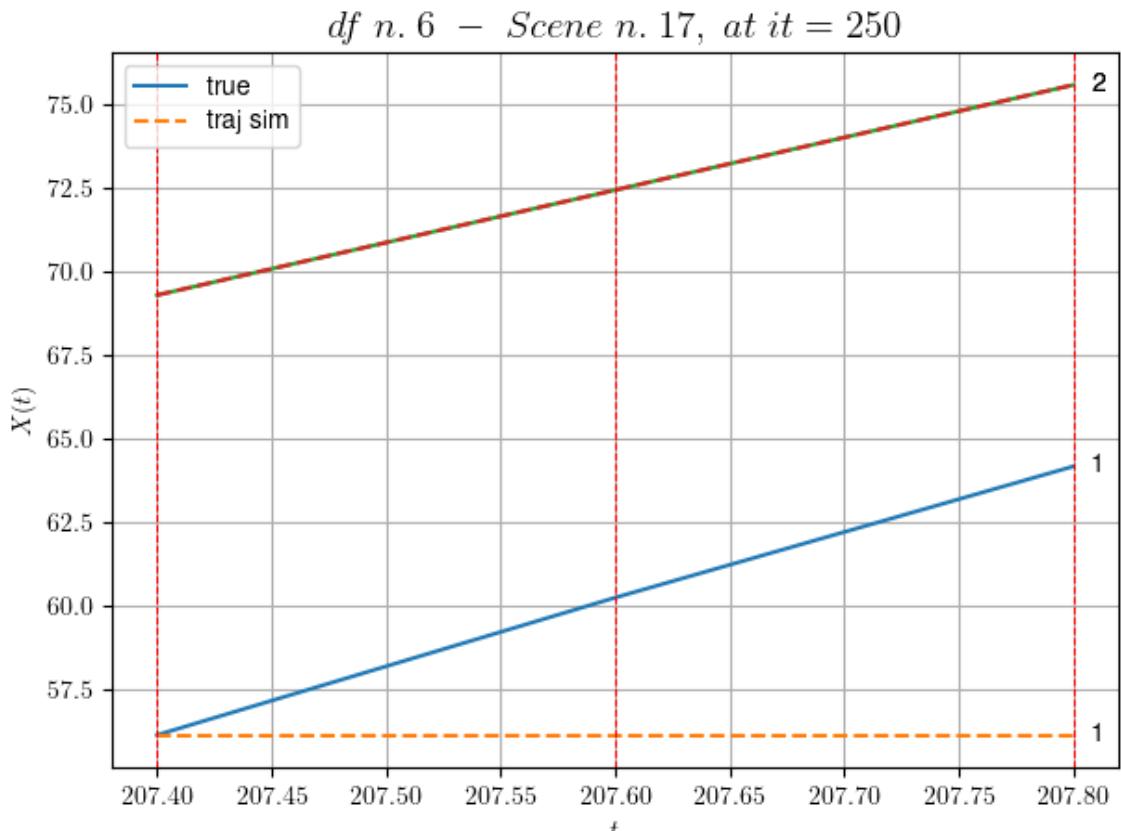


For scene 16/52

* use LR_NN=0.0005 with err=106.2656709412974 at it=24
* v0_scn_mean = 16.738627771044992
* MAE = 67.43219208140974

df n.6, scene n.17/52

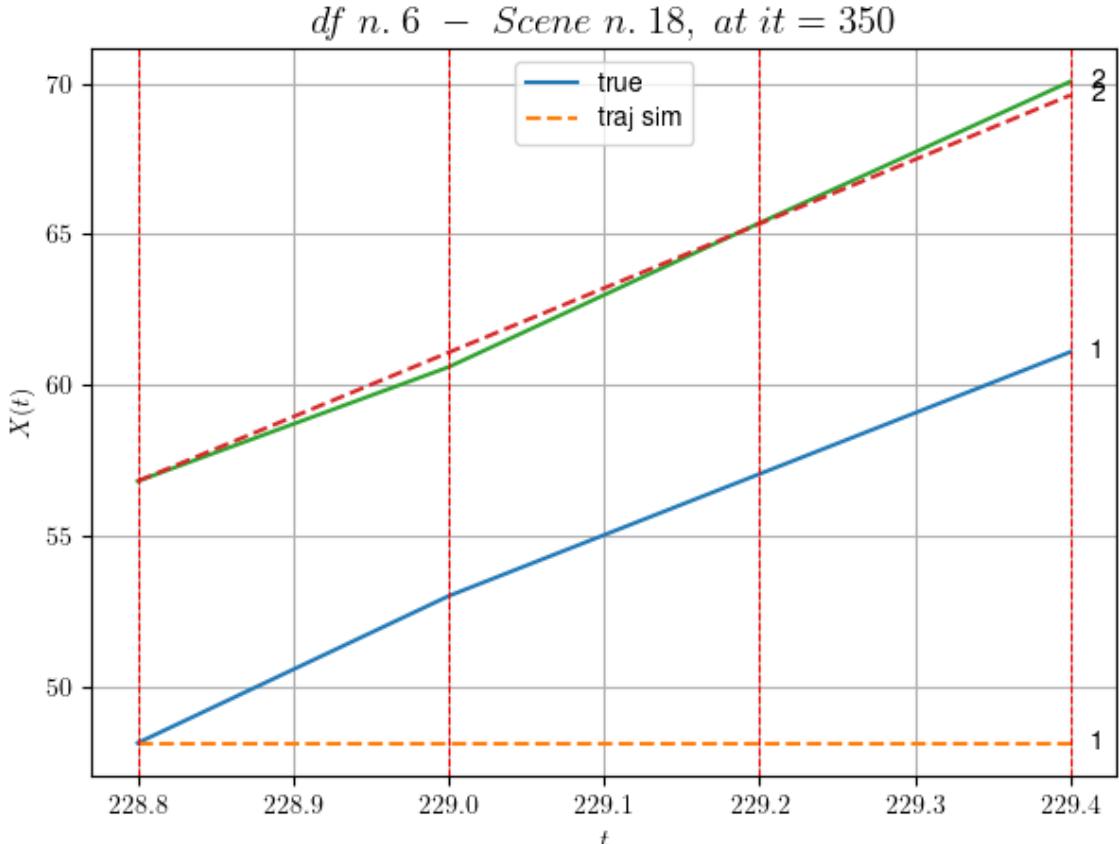
We have 2 time intervals inside [207.40,207.80]
* err= 13.50213728072375
* Learning rate NN = 0.0004500000213738531
* diff = 8.347514679485357e-09



df n.6, scene n.18/52

We have 3 time intervals inside [228.80, 229.40]

- * err= 33.952887876360975
- * Learning rate NN = 0.0003280499659013003
- * diff = 7.737831708709564e-08



For scene 18/52

- * use LR_NN=0.0005 with err=4.9600615043519625 at it=24
- * v0_scn_mean = 21.815910264083904
- * MAE = 33.945090050195866

df n.6, scene n.19/52

We have 4 time intervals inside [231.20, 232.00]

- Time interval n.0: [231.20, 231.40]
 - * y_true: [12.00056725]
 - * v_ann: [-0.0020341717172414064, 21.15537751020868]

4]

- Time interval n.1: [231.40, 231.60]
 - * y_true: [15.22086391]
 - * v_ann: [-5.1302329666214064e-05, 21.15537751020868]

84]

- Time interval n.2: [231.60, 231.80]
 - * y_true: [16.02593808]
 - * v_ann: [-7.756394637681296e-08, 21.15537751020868]

4]

```

-----  

- Time interval n.3: [231.80, 232.00]  

* y_true: [14.7260182]  

* v_ann: [-1.778692393372694e-08, 21.15537751020868  

4]
-----
```

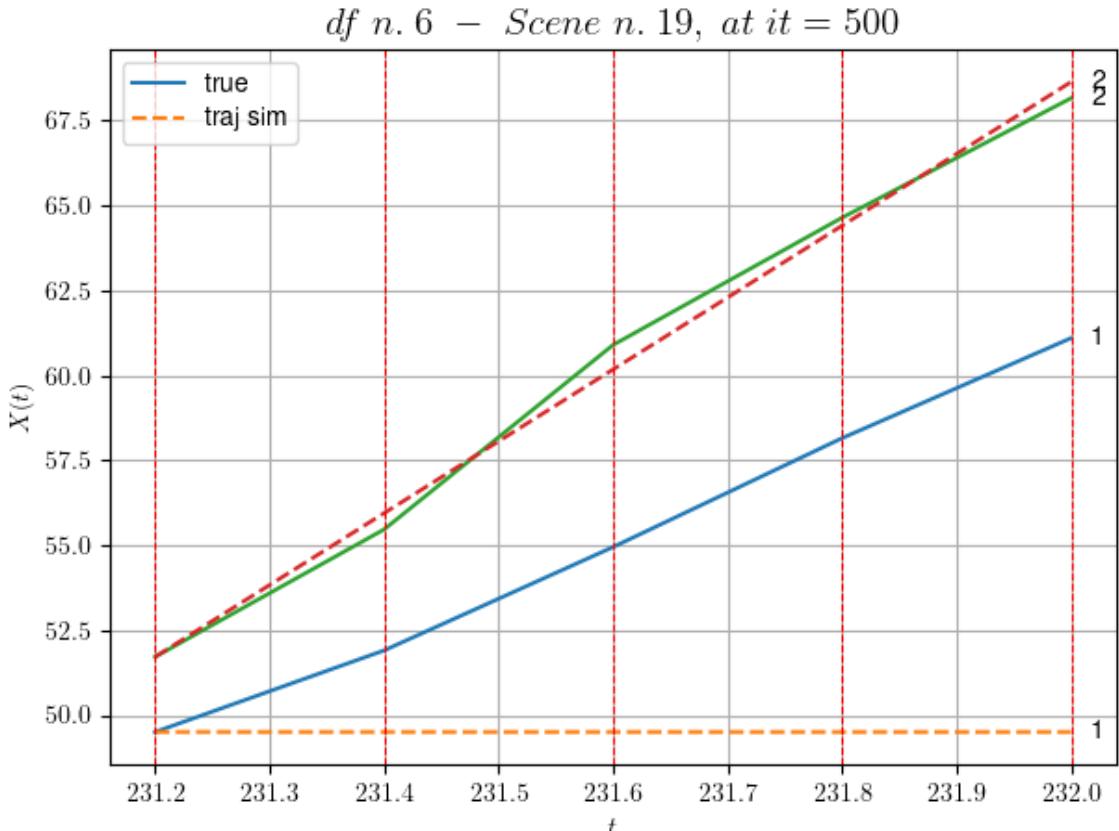
```

-----  

* err= 24.570563367651385  

* Learning rate NN = 0.002391484100371599  

* diff = 9.052891235938887e-05
```



For scene 19/52

```

* use LR_NN=0.005 with err=9.823648449728164 at it=24  

* v0_scn_mean = 21.509162409732685  

* MAE = 24.570563367651385
```

```

=====
=====  

df n.6, scene n.20/52
=====
```

```

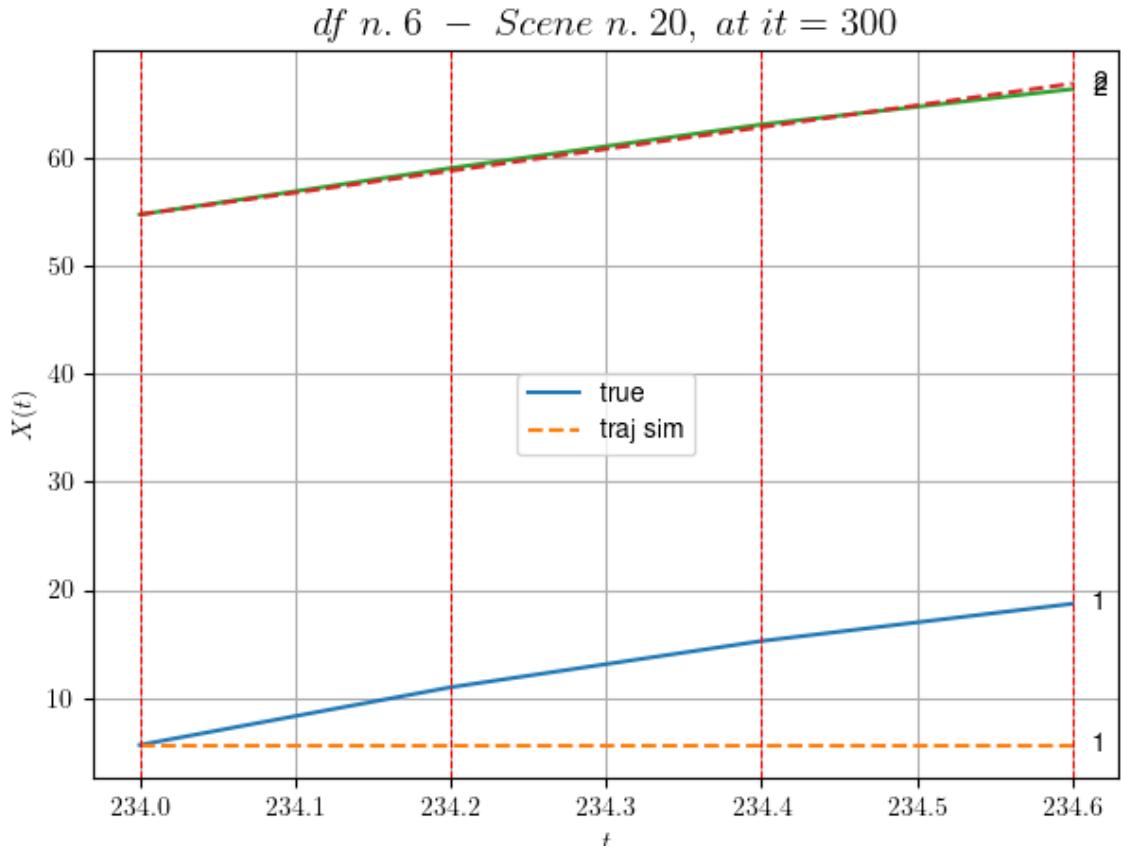
=====  

We have 3 time intervals inside [234.00,234.60]  

* err= 36.510009283372106  

* Learning rate NN = 3.6449993785936385e-05  

* diff = 9.399946492294475e-07
```



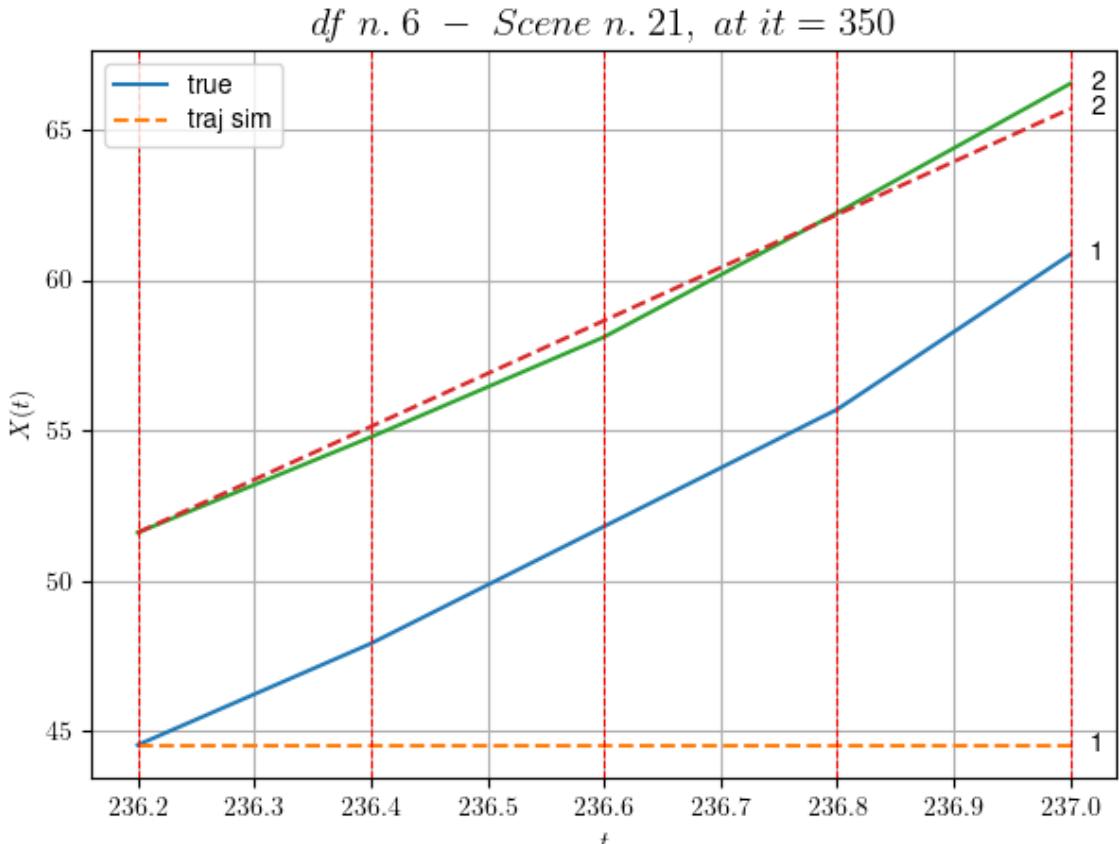
For scene 20/52

- * use LR_NN=5e-05 with err=7.39940979864115 at it=24
 - * v0_scn_mean = 20.85460893115153
 - * MAE = 36.510009283372106
-
-

df n.6, scene n.21/52

We have 4 time intervals inside [236.20, 237.00]

- * err= 45.65713421813105
- * Learning rate NN = 0.0002952449722215533
- * diff = 1.9587194799441932e-07

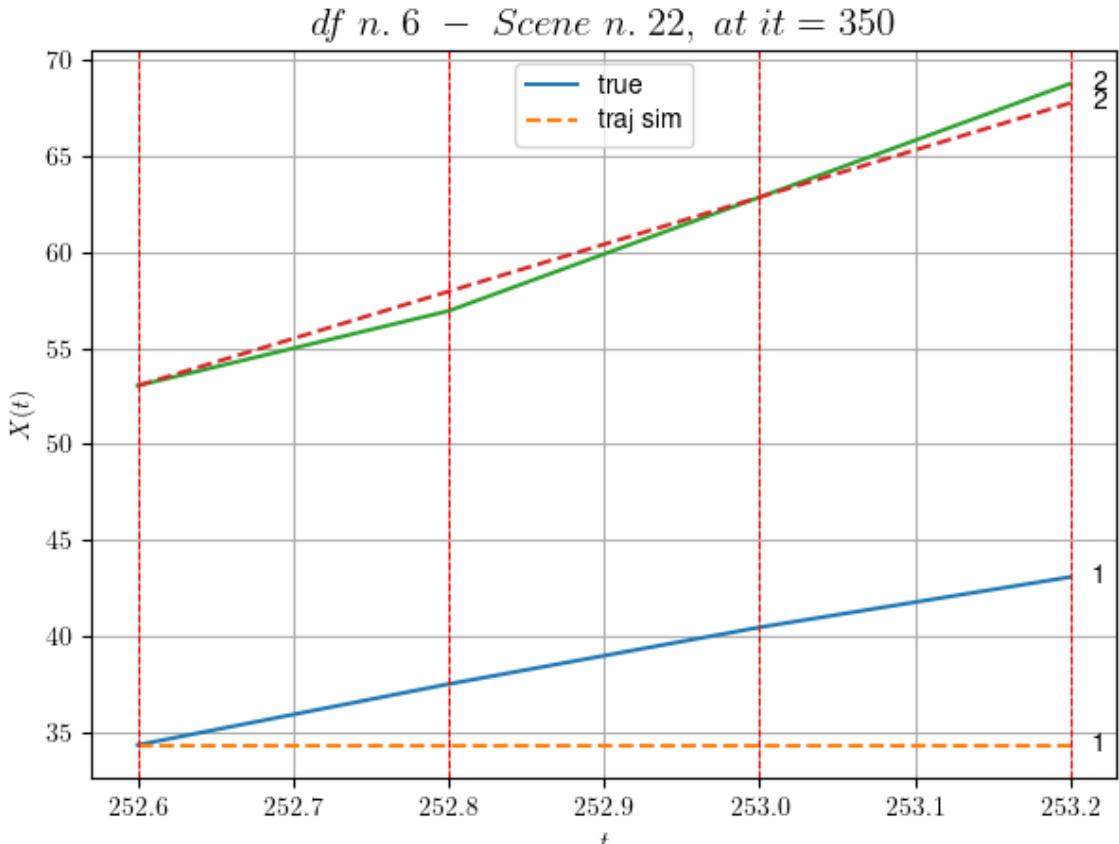


For scene 21/52

* use LR_NN=0.0005 with err=17.867028211627545 at it=24
* v0_scn_mean = 18.340752050381706
* MAE = 45.64276715229043

df n.6, scene n.22/52

We have 3 time intervals inside [252.60,253.20]
* err= 15.743588538508442
* Learning rate NN = 3.2804993679746985e-05
* diff = 1.0594523658369326e-07



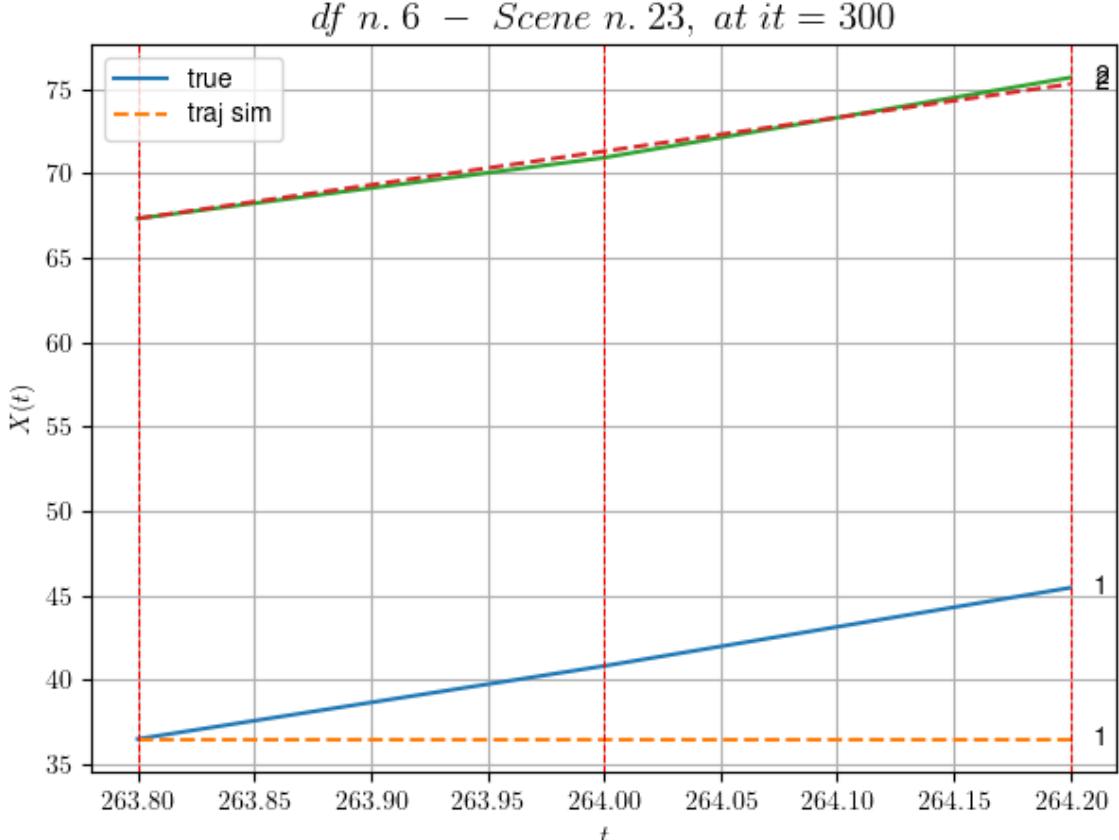
For scene 22/52

- * use LR_NN=5e-05 with err=1.9158272479423148 at it=24
 - * v0_scn_mean = 24.827679417425454
 - * MAE = 15.706991118354887
-
-

df n.6, scene n.23/52

We have 2 time intervals inside [263.80, 264.20]

- * err= 16.55939279289653
- * Learning rate NN = 4.049999552080408e-05
- * diff = 6.340777432001232e-07



For scene 23/52

- * use LR_NN=5e-05 with err=3.17374658835026 at it=24
- * v0_scn_mean = 20.609382316999877
- * MAE = 16.55454463050597

df n.6, scene n.24/52

We have 6 time intervals inside [286.80, 288.00]

- Time interval n.0: [286.80, 287.00]
 - * y_true: [22.82063727]
 - * v_ann: [21.099323272705078, 26.634646976101205]

- Time interval n.1: [287.00, 287.20]
 - * y_true: [25.60093433]
 - * v_ann: [27.604957580566406, 26.634646976101205]

- Time interval n.2: [287.20, 287.40]
 - * y_true: [24.85112481]
 - * v_ann: [25.926576614379883, 26.634646976101205]

- Time interval n.3: [287.40, 287.60]
 - * y_true: [21.10615876]

```
* v_ann: [19.677501678466797, 26.634646976101205]
```

```
- Time interval n.4: [287.60, 287.80]
```

```
* y_true: [17.67608151]
```

```
* v_ann: [0.1669798344373703, 26.634646976101205]
```

```
- Time interval n.5: [287.80, 288.00]
```

```
* y_true: [22.23666518]
```

```
* v_ann: [1.6917734683374874e-05, 26.634646976101205]
```

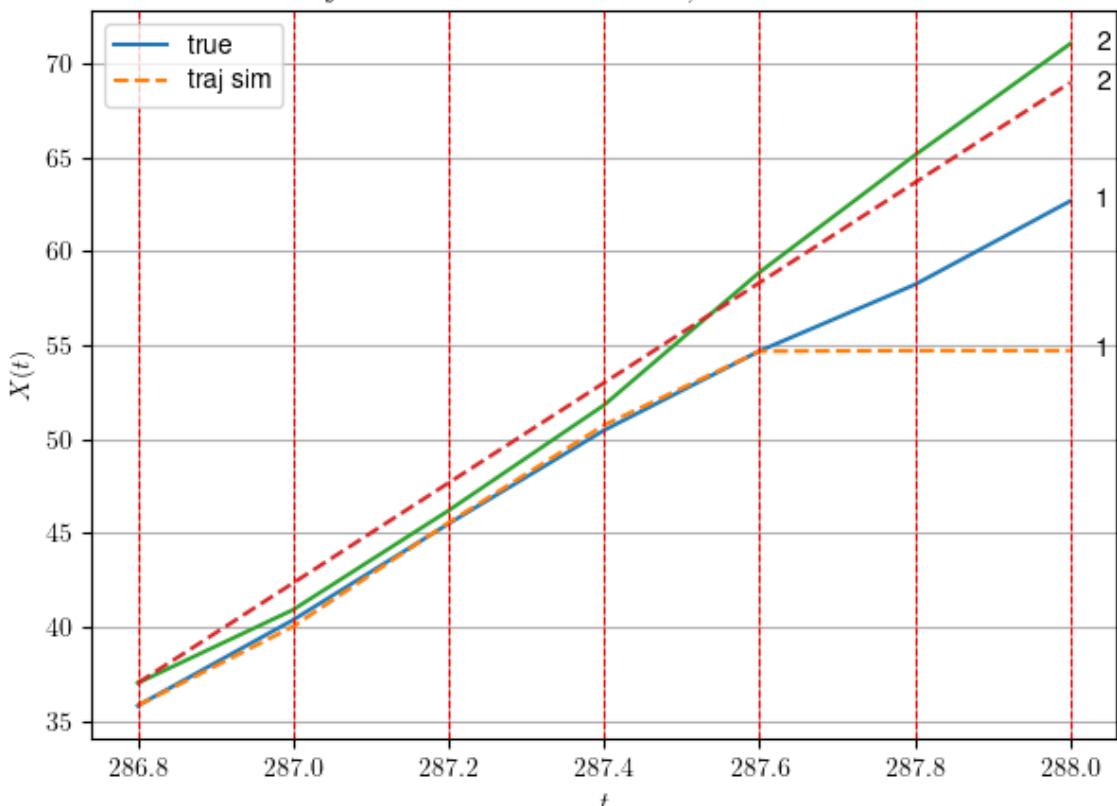
5]

```
* err= 6.3057503791097
```

```
* Learning rate NN = 0.00031381050939671695
```

```
* diff = 0.2873549944608351
```

df n. 6 – Scene n. 24, at it = 500



For scene 24/52

```
* use LR_NN=0.001 with err=2.842082136687575 at it=24
```

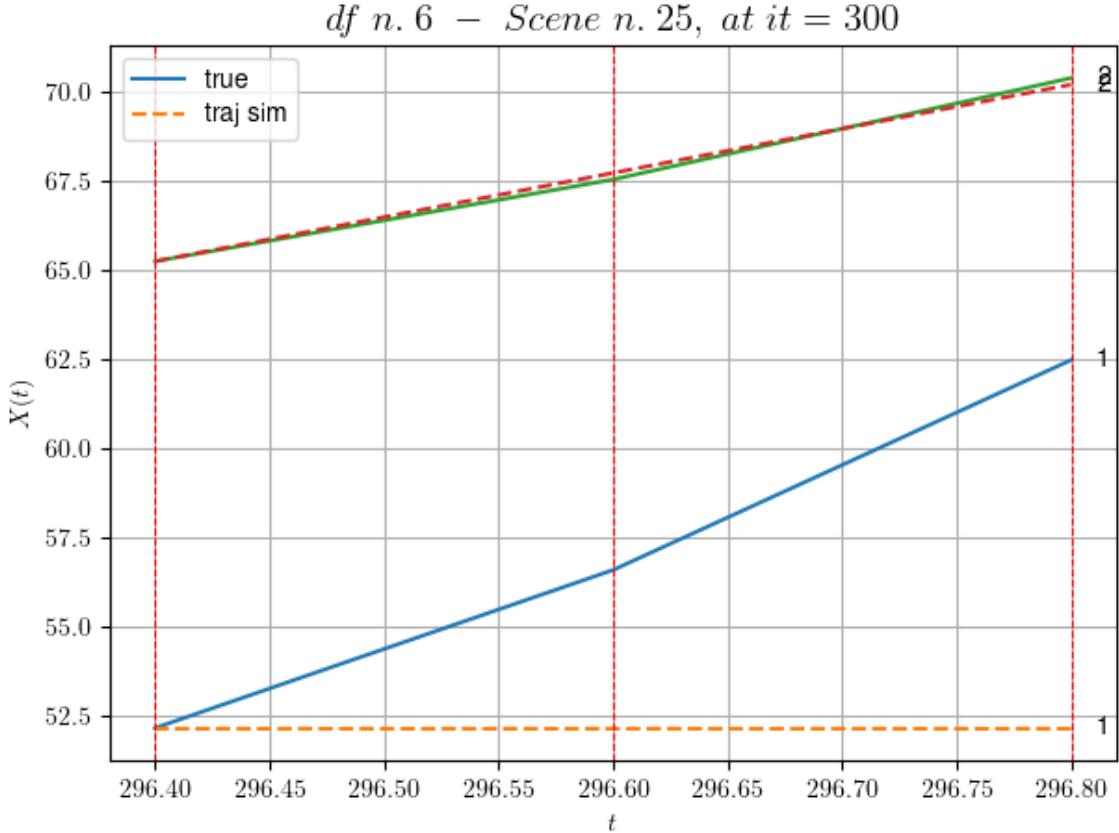
```
* v0_scn_mean = 26.76926109703287
```

```
* MAE = 6.3057503791097
```

df n.6, scene n.25/52

We have 2 time intervals inside [296.40, 296.80]

```
* err= 21.061790482014473
* Learning rate NN = 8.099999104160815e-05
* diff = 5.370723741293659e-07
```



For scene 25/52

```
* use LR_NN=0.0001 with err=10.329705549494808 at it=24
* v0_scn_mean = 13.572784745698089
* MAE = 21.060653618721606
```

df n.6, scene n.26/52

We have 5 time intervals inside [320.20, 321.20]

- Time interval n.0: [320.20, 320.40]
 - * y_true: [22.07575568]
 - * v_ann: [20.99049949645996, 27.667143511899713]

- Time interval n.1: [320.40, 320.60]
 - * y_true: [21.84581177]
 - * v_ann: [21.692346572875977, 27.667143511899713]

- Time interval n.2: [320.60, 320.80]
 - * y_true: [20.9260361]
 - * v_ann: [22.63428497314453, 27.667143511899713]

```

-----  

- Time interval n.3: [320.80, 321.00]  

* y_true: [21.82118046]  

* v_ann: [23.213233947753906, 27.667143511899713]
-----
```

```

-----  

- Time interval n.4: [321.00, 321.20]  

* y_true: [25.40175794]  

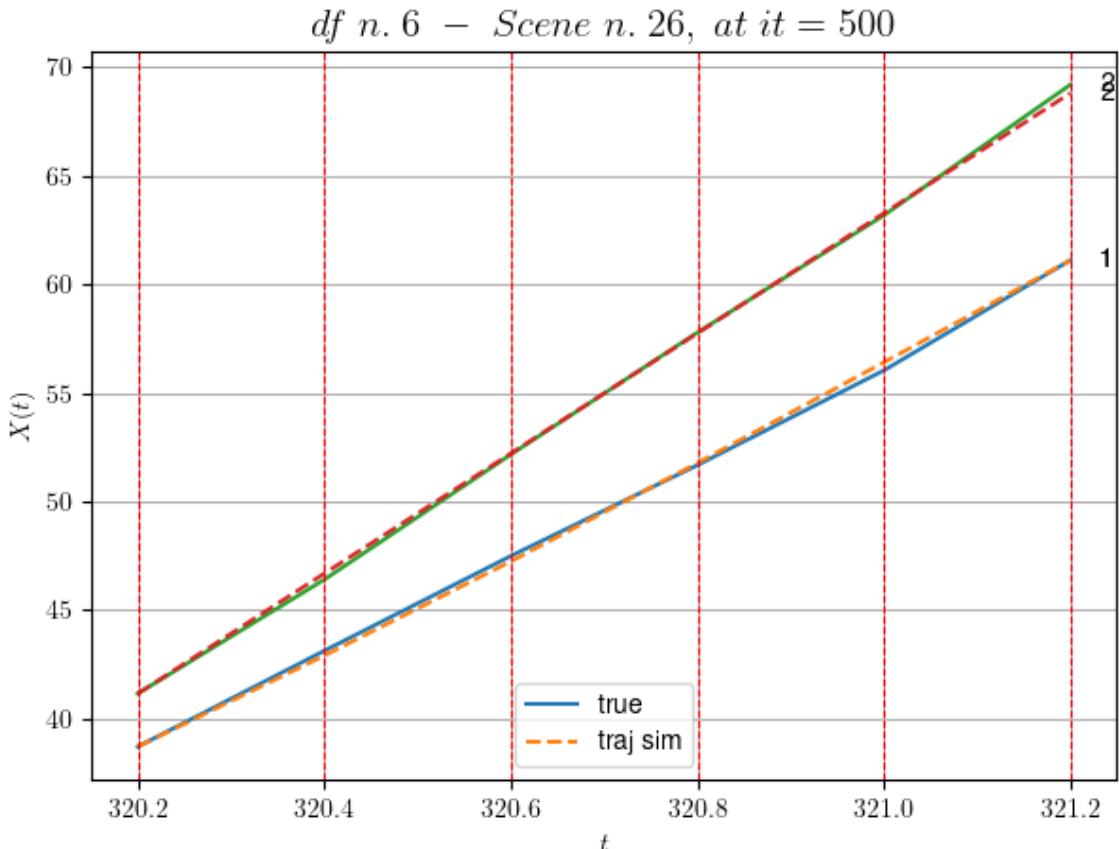
* v_ann: [23.51866340637207, 27.667143511899713]
-----
```

```

* err= 0.04172089170419474  

* Learning rate NN = 0.0003874204121530056  

* diff = 0.0006250142076018317
```



For scene 26/52

```

* use LR_NN=0.001 with err=3.7060305285773367 at it=24
* v0_scn_mean = 27.760457771403736
* MAE = 0.04121595915215574
=====
```

df n.6, scene n.27/52

```

=====
We have 2 time intervals inside [359.20,359.60]
- Time interval n.0: [359.20, 359.40]
* y_true: [23.21100915]
* v_ann: [22.136566162109375, 26.036961814015193]
```

```

-----  

- Time interval n.1: [359.40, 359.60]  

* y_true: [21.45111857]  

* v_ann: [22.521474838256836, 26.036961814015193]
-----
```

```

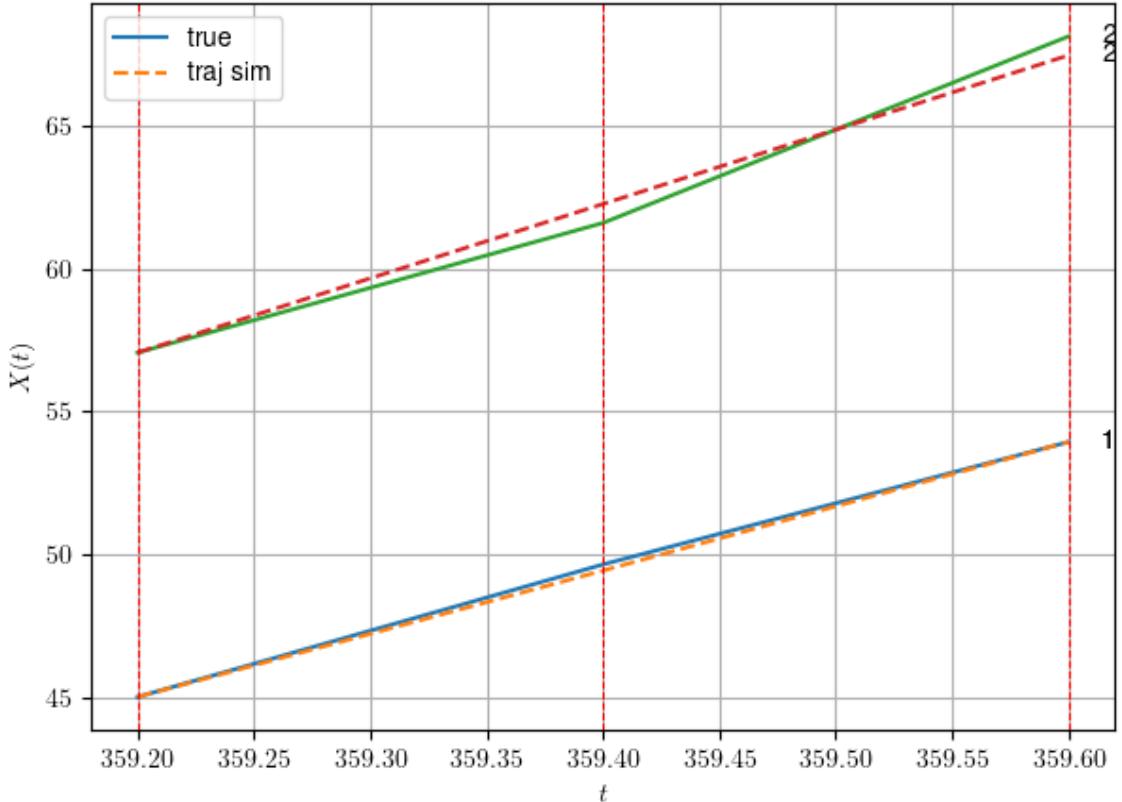
-----  

* err= 0.15469881573720315  

* Learning rate NN = 0.00036449998151510954  

* diff = 5.246767364658345e-06
-----
```

df n. 6 – Scene n. 27, at it = 500



For scene 27/52

```

* use LR_NN=0.0005 with err=0.5029076908470184 at it=24  

* v0_scn_mean = 26.19548334142451  

* MAE = 0.14180282618155632
=====
```

df n.6, scene n.28/52

```
=====
```

We have 5 time intervals inside [368.20, 369.20]

```

-----  

- Time interval n.0: [368.20, 368.40]  

* y_true: [20.48034946]  

* v_ann: [23.700912475585938, 26.269654614173152]
-----
```

```

-----  

- Time interval n.1: [368.40, 368.60]  

* y_true: [26.0305779]  

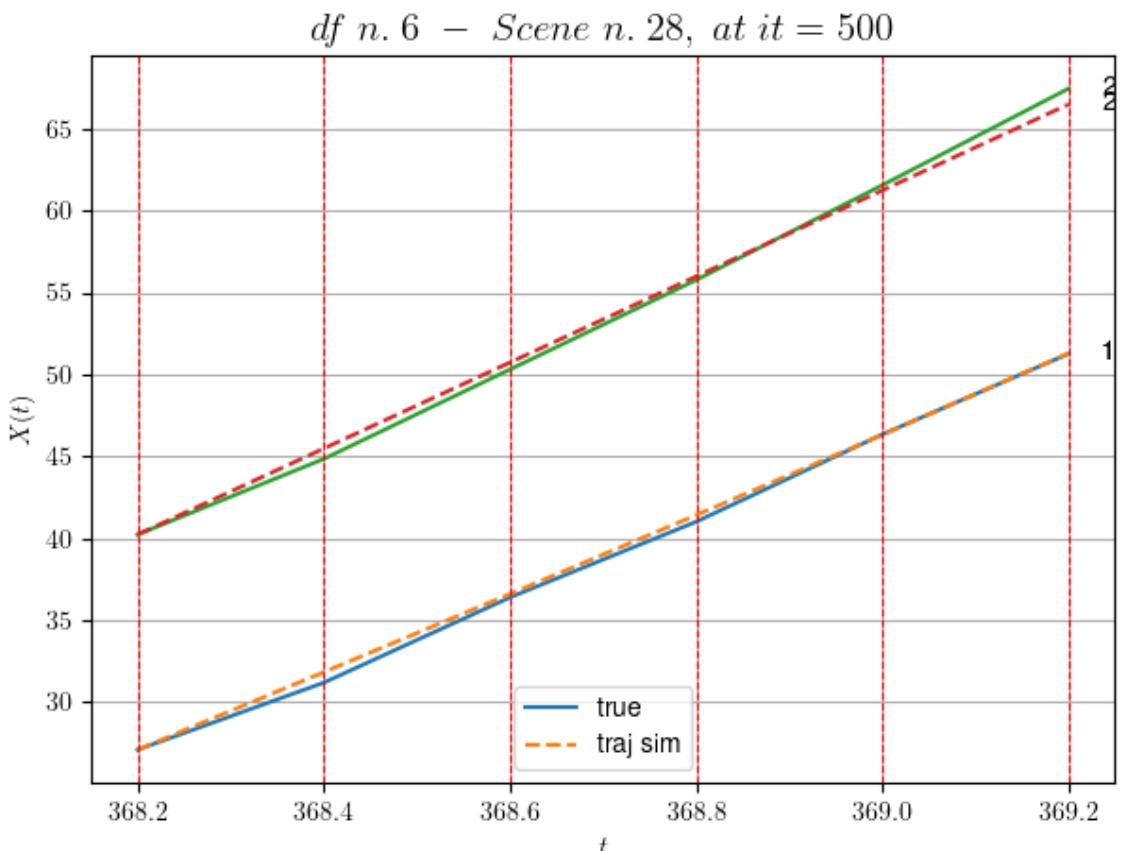
* v_ann: [23.837244033813477, 26.269654614173152]
-----
```

```
- Time interval n.2: [368.60, 368.80]
* y_true: [23.10068181]
* v_ann: [24.094635009765625, 26.269654614173152]
```

```
- Time interval n.3: [368.80, 369.00]
* y_true: [26.67099024]
* v_ann: [24.515363693237305, 26.269654614173152]
```

```
- Time interval n.4: [369.00, 369.20]
* y_true: [24.60614791]
* v_ann: [24.898269653320312, 26.269654614173152]
```

```
* err= 0.19006799145350203
* Learning rate NN = 3.874203684972599e-05
* diff = 0.0003202242728942706
```



For scene 28/52

```
* use LR_NN=0.0001 with err=2.225070400039159 at it=24
* v0_scn_mean = 26.418868429577355
* MAE = 0.1717146901129989
```

```
df n.6, scene n.29/52
=====
=====
    We have 8 time intervals inside [374.40,376.00]
        - Time interval n.0: [374.40, 374.60]
            * y_true: [20.90029714]
            * v_ann: [23.394128799438477, 20.0736968859779]

-----
        - Time interval n.1: [374.60, 374.80]
            * y_true: [24.30046975]
            * v_ann: [23.336450576782227, 20.0736968859779]

-----
        - Time interval n.2: [374.80, 375.00]
            * y_true: [30.15080009]
            * v_ann: [24.46343421936035, 20.0736968859779]

-----
        - Time interval n.3: [375.00, 375.20]
            * y_true: [14.05046583]
            * v_ann: [26.135173797607422, 20.0736968859779]

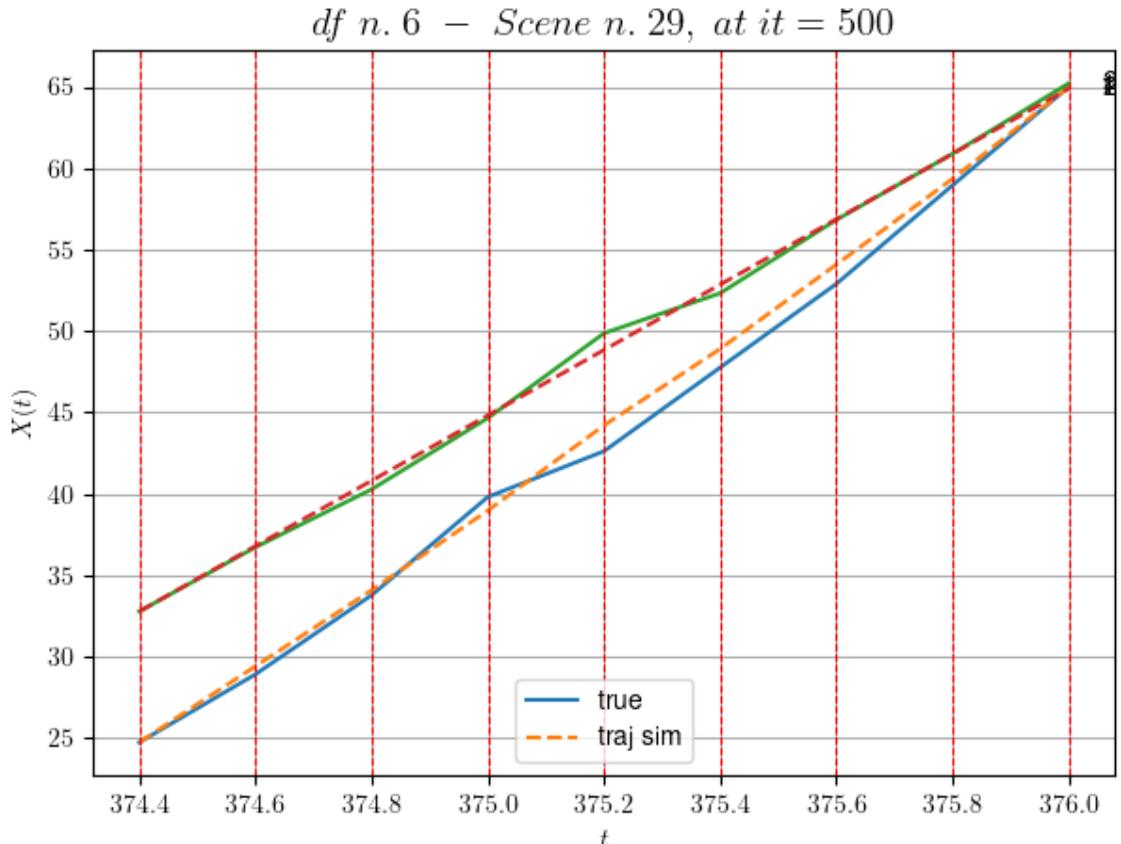
-----
        - Time interval n.4: [375.20, 375.40]
            * y_true: [25.70114537]
            * v_ann: [23.526321411132812, 20.0736968859779]

-----
        - Time interval n.5: [375.40, 375.60]
            * y_true: [25.70114537]
            * v_ann: [25.856348037719727, 20.0736968859779]

-----
        - Time interval n.6: [375.60, 375.80]
            * y_true: [30.25204725]
            * v_ann: [26.355680465698242, 20.0736968859779]

-----
        - Time interval n.7: [375.80, 376.00]
            * y_true: [30.25204725]
            * v_ann: [28.09368896484375, 20.0736968859779]

-----
        * err= 0.4542366461959101
        * Learning rate NN = 0.00010294552339473739
        * diff = 0.003180740462968068
```

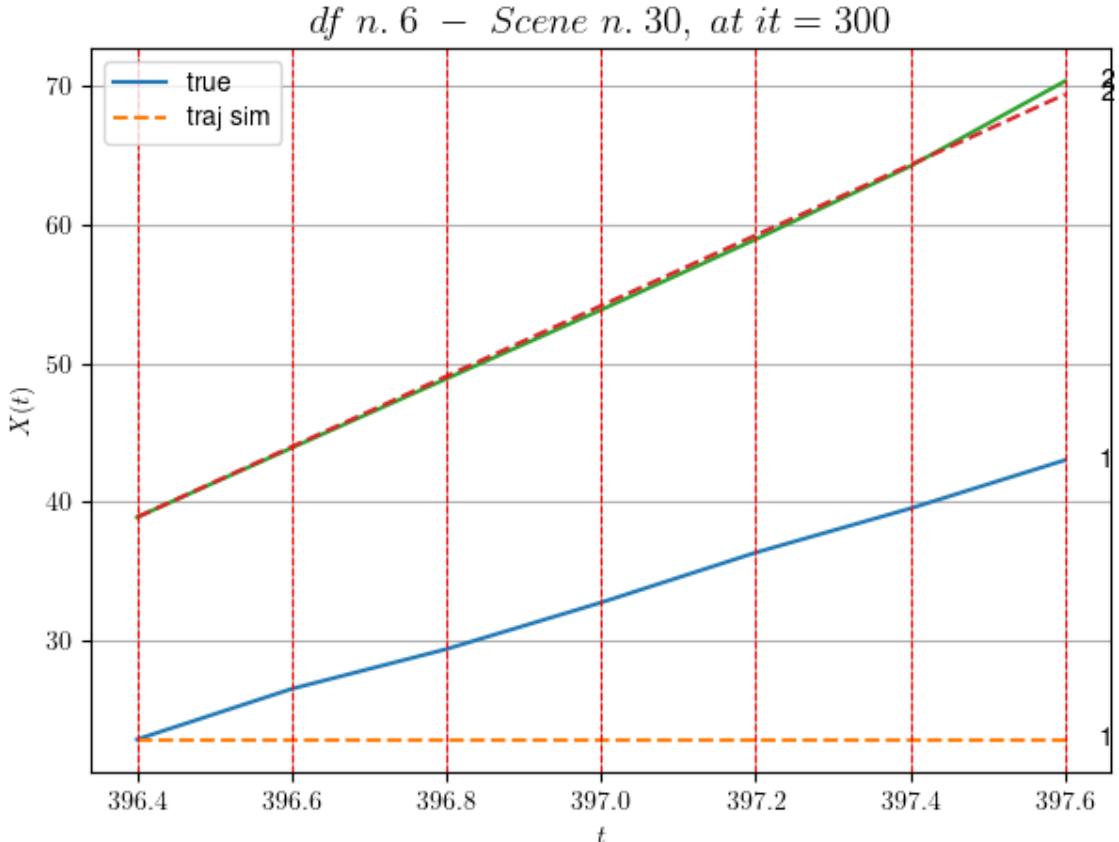


For scene 29/52

* use LR_NN=0.0005 with err=49.18304788922573 at it=24
* v0_scn_mean = 20.470749010463013
* MAE = 0.44944880667826825

df n.6, scene n.30/52

We have 6 time intervals inside [396.40,397.60]
* err= 72.82508793332347
* Learning rate NN = 0.000478296831715852
* diff = 8.716909007944196e-07



For scene 30/52

- * use LR_NN=0.001 with err=5.335457733403811 at it=24
- * v0_scn_mean = 25.73452666789318
- * MAE = 9.397227571320382

df n.6, scene n.31/52

We have 7 time intervals inside [407.80, 409.20]

- Time interval n.0: [407.80, 408.00]
 - * y_true: [21.37567004]
 - * v_ann: [22.915071487426758, 22.36371629852117]

- Time interval n.1: [408.00, 408.20]
 - * y_true: [22.01576805]
 - * v_ann: [21.868282318115234, 22.36371629852117]

- Time interval n.2: [408.20, 408.40]
 - * y_true: [24.57616006]
 - * v_ann: [23.060691833496094, 22.36371629852117]

- Time interval n.3: [408.40, 408.60]
 - * y_true: [23.06614677]

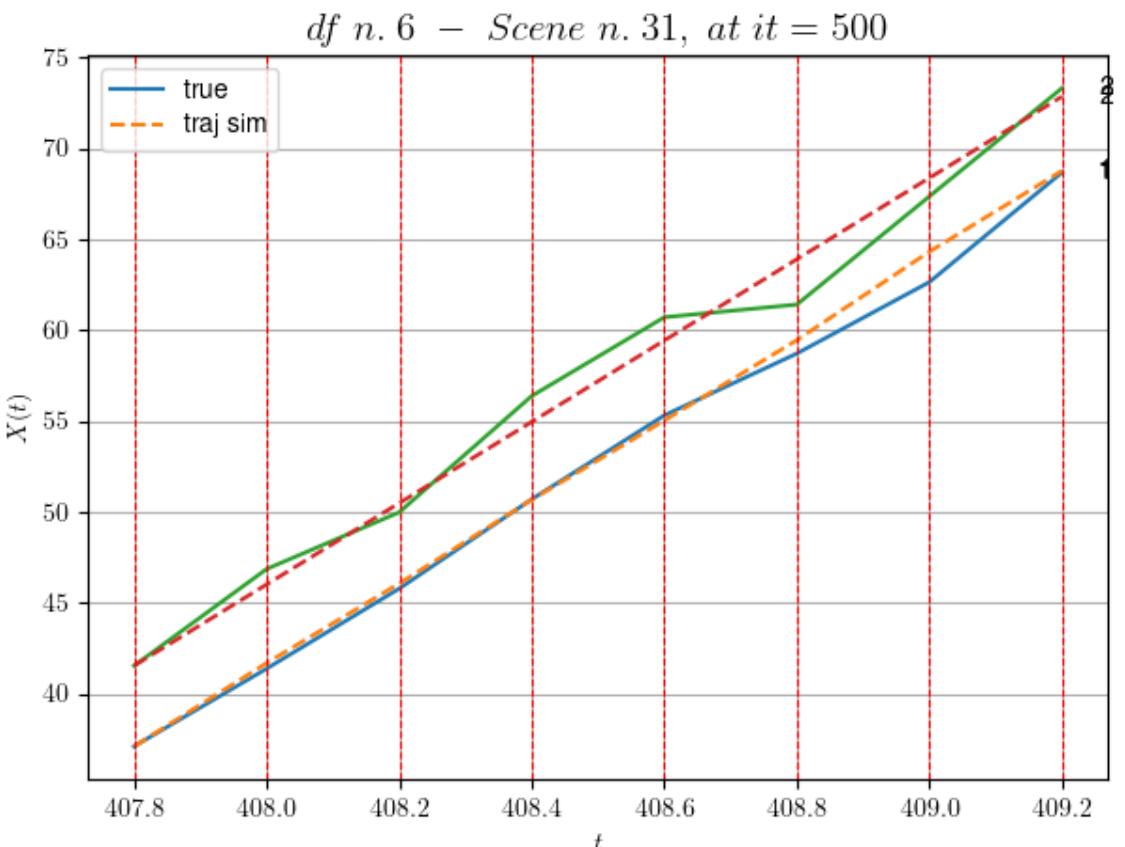
```
* v_ann: [21.7770938873291, 22.36371629852117]
```

```
- Time interval n.4: [408.60, 408.80]
* y_true: [17.02609359]
* v_ann: [22.118005752563477, 22.36371629852117]
```

```
- Time interval n.5: [408.80, 409.00]
* y_true: [19.65139949]
* v_ann: [24.33273696899414, 22.36371629852117]
```

```
- Time interval n.6: [409.00, 409.20]
* y_true: [30.15262306]
* v_ann: [22.223926544189453, 22.36371629852117]
```

```
* err= 0.9806655416481602
* Learning rate NN = 0.00012709324073512107
* diff = 0.00566055800419929
```



For scene 31/52

```
* use LR_NN=0.0005 with err=22.806338514939185 at it=24
* v0_scn_mean = 22.669167646522176
* MAE = 0.930304381512977
```

```
df n.6, scene n.32/52
=====
=====
We have 8 time intervals inside [417.40,419.00]
- Time interval n.0: [417.40, 417.60]
  * y_true: [20.32002692]
  * v_ann: [19.956634521484375, 22.25404761868599]

-----
- Time interval n.1: [417.60, 417.80]
  * y_true: [20.99006293]
  * v_ann: [19.925403594970703, 22.25404761868599]

-----
- Time interval n.2: [417.80, 418.00]
  * y_true: [23.29012782]
  * v_ann: [19.988962173461914, 22.25404761868599]

-----
- Time interval n.3: [418.00, 418.20]
  * y_true: [22.33019176]
  * v_ann: [20.68075180053711, 22.25404761868599]

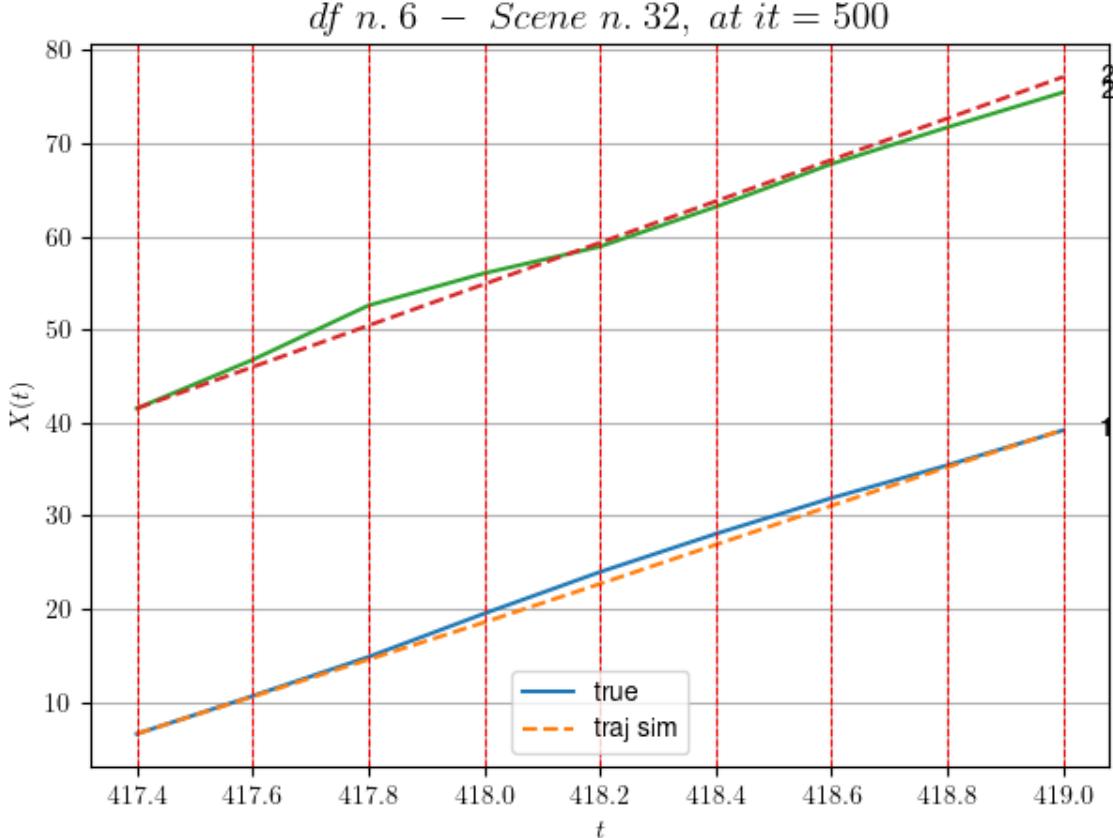
-----
- Time interval n.4: [418.20, 418.40]
  * y_true: [20.48025531]
  * v_ann: [21.05363655090332, 22.25404761868599]

-----
- Time interval n.5: [418.40, 418.60]
  * y_true: [19.23031901]
  * v_ann: [20.951126098632812, 22.25404761868599]

-----
- Time interval n.6: [418.60, 418.80]
  * y_true: [17.60036877]
  * v_ann: [20.62149429321289, 22.25404761868599]

-----
- Time interval n.7: [418.80, 419.00]
  * y_true: [18.79052831]
  * v_ann: [20.073341369628906, 22.25404761868599]

-----
* err= 0.8695791961519257
* Learning rate NN = 2.058910467894748e-05
* diff = 0.005510208536040118
```



For scene 32/52

- * use LR_NN=0.0001 with err=31.213135209346344 at it=24
- * v0_scn_mean = 22.563885713879035
- * MAE = 0.7804653529692614

df n.6, scene n.33/52

We have 5 time intervals inside [446.80, 447.80]

- Time interval n.0: [446.80, 447.00]
 - * y_true: [16.05028889]
 - * v_ann: [19.065860748291016, 22.841482925266206]

- Time interval n.1: [447.00, 447.20]
 - * y_true: [21.20048012]
 - * v_ann: [18.782438278198242, 22.841482925266206]

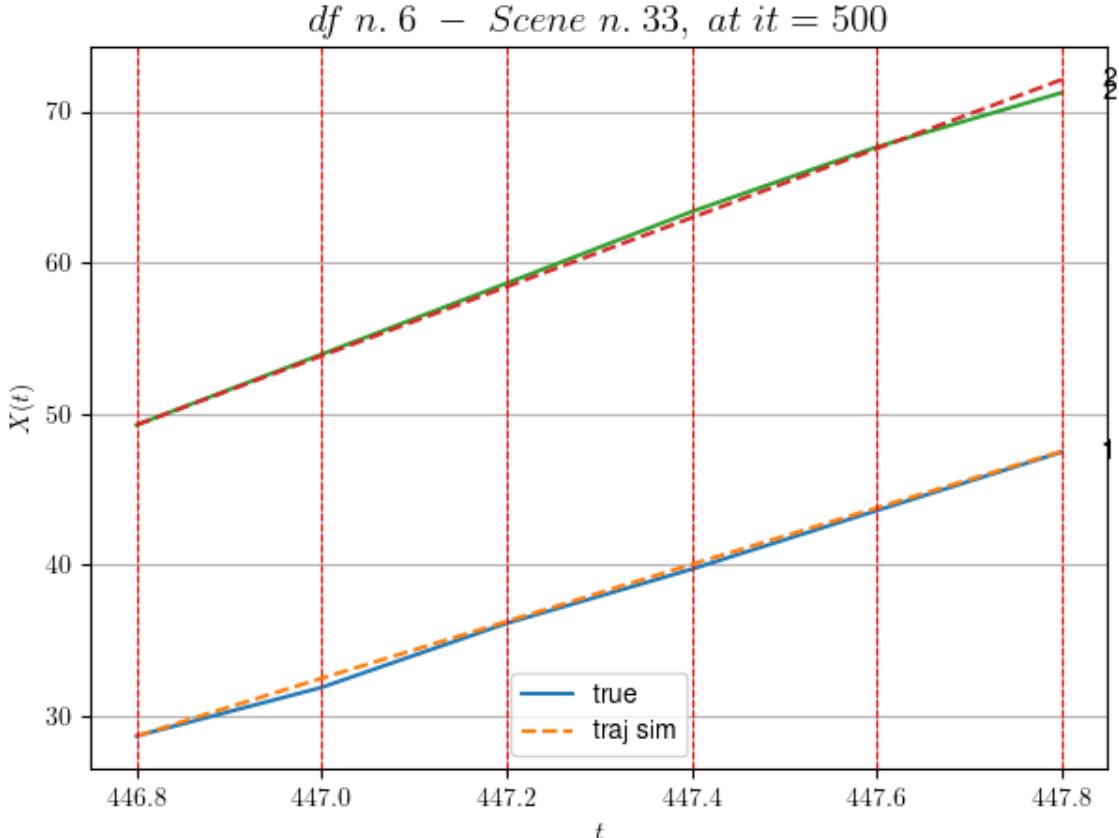
- Time interval n.2: [447.20, 447.40]
 - * y_true: [17.90050244]
 - * v_ann: [18.874361038208008, 22.841482925266206]

- Time interval n.3: [447.40, 447.60]
 - * y_true: [19.37571789]

```
* v_ann: [18.714570999145508, 22.841482925266206]
```

```
- Time interval n.4: [447.60, 447.80]
* y_true: [19.37571789]
* v_ann: [18.720016479492188, 22.841482925266206]
```

```
* err= 0.12533050309164334
* Learning rate NN = 1.9371018424862996e-05
* diff = 0.0004637526619591936
```



For scene 33/52

```
* use LR_NN=5e-05 with err=9.992327177176703 at it=24
* v0_scn_mean = 23.127823608201034
* MAE = 0.12533050309164334
```

df n.6, scene n.34/52

```
We have 3 time intervals inside [448.40,449.00]
```

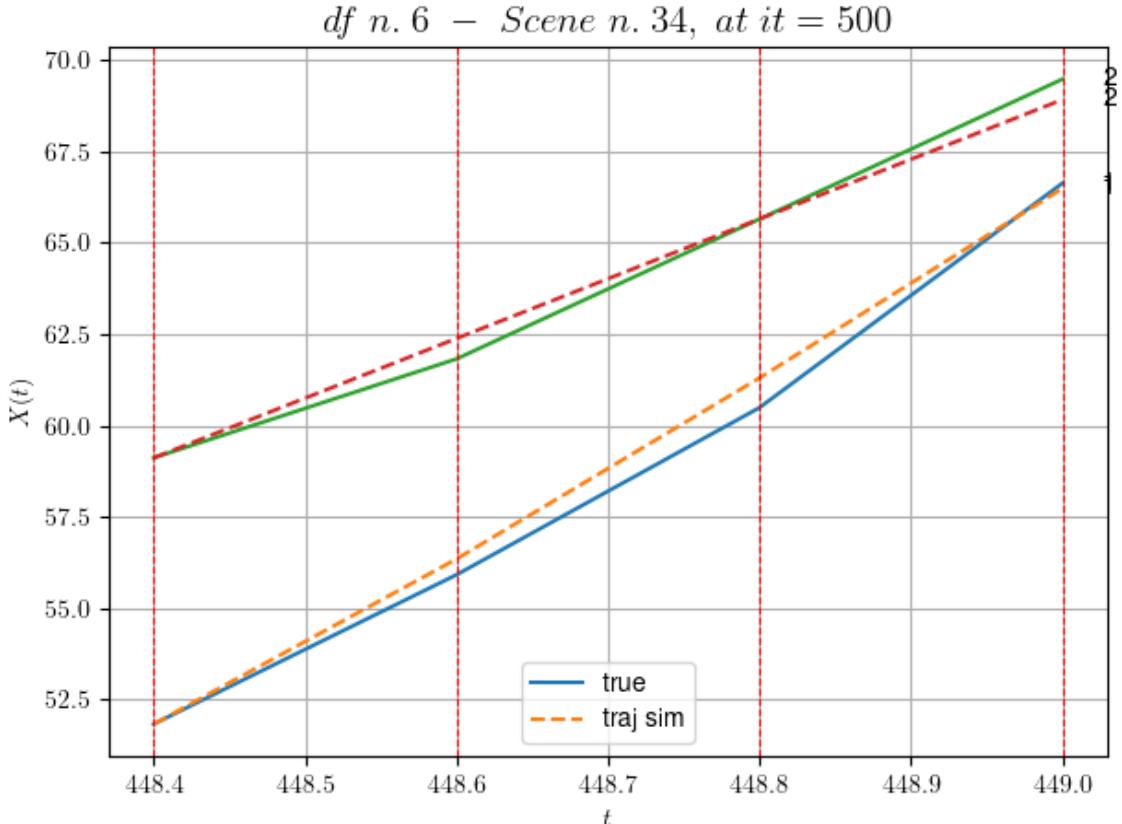
```
- Time interval n.0: [448.40, 448.60]
* y_true: [20.45120743]
* v_ann: [22.611509323120117, 16.35125762707528]
```

```
- Time interval n.1: [448.60, 448.80]
```

```
* y_true: [22.88145923]
* v_ann: [24.785879135131836, 16.35125762707528]
```

```
- Time interval n.2: [448.80, 449.00]
* y_true: [30.73239033]
* v_ann: [25.953454971313477, 16.35125762707528]
```

```
* err= 0.18691390221359455
* Learning rate NN = 5.904899080633186e-05
* diff = 0.008472957350574295
```



For scene 34/52

```
* use LR_NN=0.0001 with err=12.88479050050213 at it=24
* v0_scn_mean = 16.897207321887954
* MAE = 0.18691390221359455
```

df n.6, scene n.35/52

We have 3 time intervals inside [450.60, 451.20]

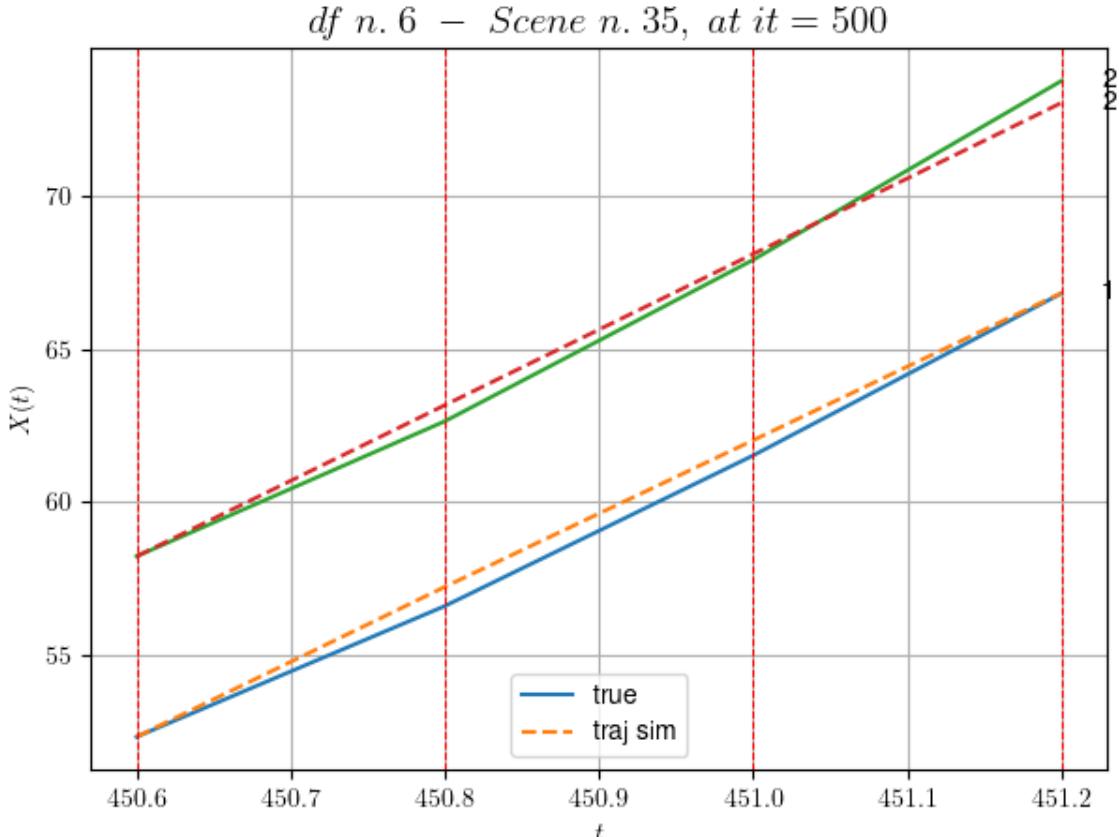
```
- Time interval n.0: [450.60, 450.80]
* y_true: [21.37625172]
* v_ann: [24.508195877075195, 24.70783812699191]
```

```
- Time interval n.1: [450.80, 451.00]
```

```
* y_true: [24.60663191]
* v_ann: [23.960969924926758, 24.70783812699191]
```

```
- Time interval n.2: [451.00, 451.20]
* y_true: [26.4920936]
* v_ann: [24.069978713989258, 24.70783812699191]
```

```
* err= 0.18354352129591628
* Learning rate NN = 0.0002952449722215533
* diff = 0.0011596962597246185
```



For scene 35/52

```
* use LR_NN=0.0005 with err=1.7700985484186893 at it=24
* v0_scn_mean = 24.91952460187176
* MAE = 0.18354352129591628
```

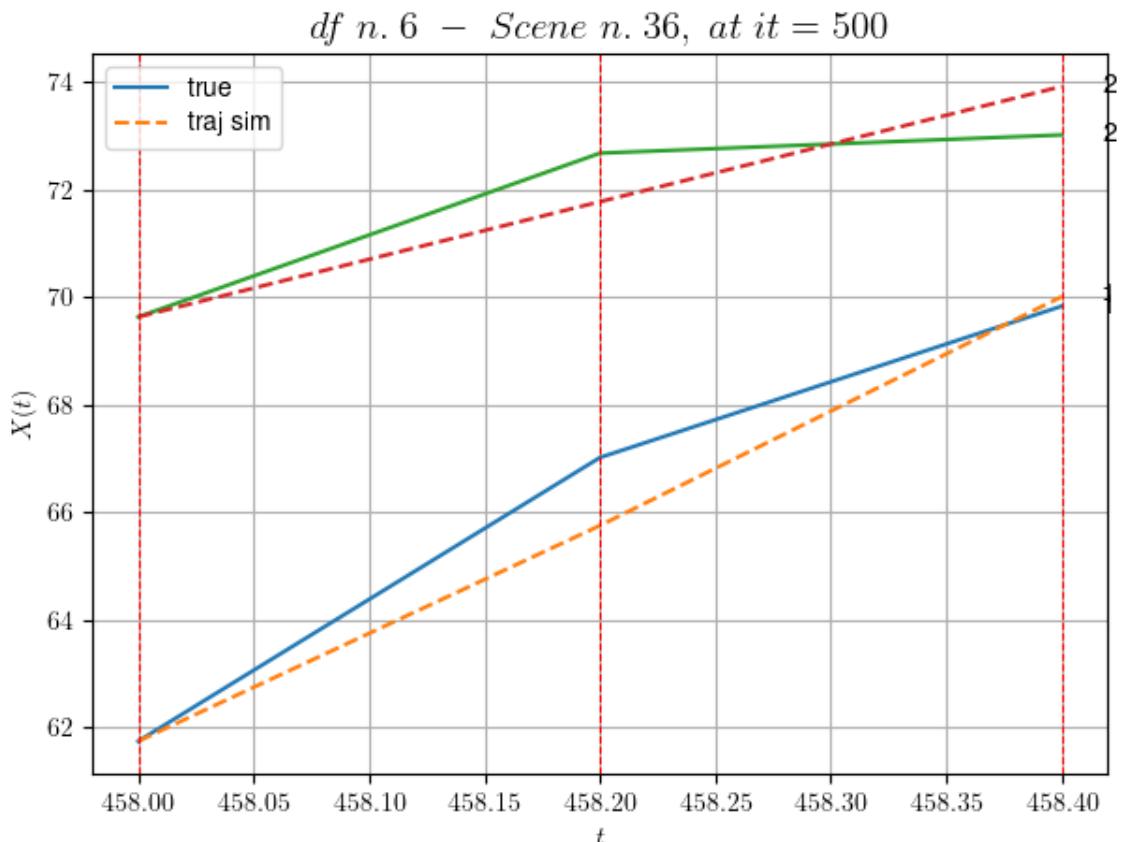
df n.6, scene n.36/52

We have 2 time intervals inside [458.00, 458.40]

```
- Time interval n.0: [458.00, 458.20]
* y_true: [26.37695887]
* v_ann: [20.051862716674805, 10.716650123126554]
```

- Time interval n.1: [458.20, 458.40]
 * y_true: [14.07546308]
 * v_ann: [21.28772735595703, 10.716650123126554]

* err= 0.5431364609393344
 * Learning rate NN = 0.0007289999630302191
 * diff = 0.003037926017600112

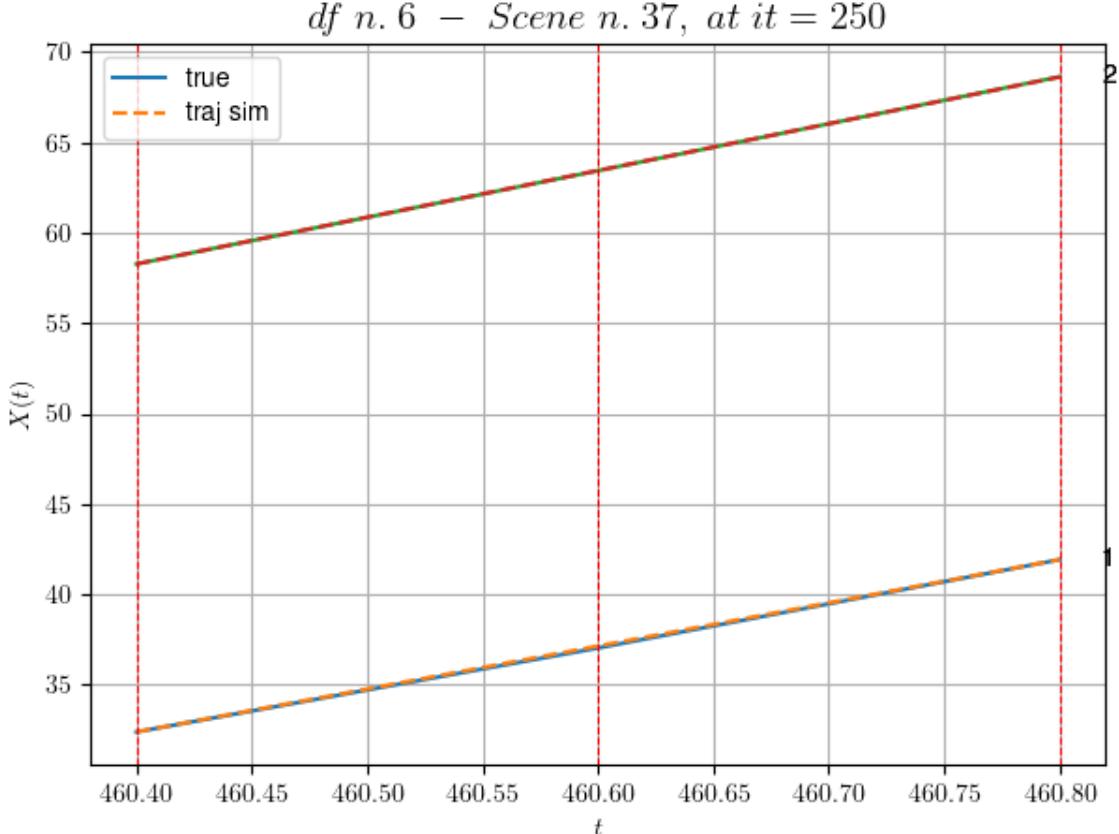


For scene 36/52

* use LR_NN=0.001 with err=13.91106531976315 at it=24
 * v0_scn_mean = 11.487984118054046
 * MAE = 0.5375677555418074

df n.6, scene n.37/52

We have 2 time intervals inside [460.40, 460.80]
 * err= 0.0020311575173118717
 * Learning rate NN = 8.999999408842996e-05
 * diff = 1.0478818043445012e-07



For scene 37/52

- * use LR_NN=0.0001 with err=0.5666949773930069 at it=24
- * v0_scn_mean = 26.199180381794292
- * MAE = 0.0019669005858794926

df n.6, scene n.38/52

We have 6 time intervals inside [465.20, 466.40]

- Time interval n.0: [465.20, 465.40]
 - * y_true: [18.28001138]
 - * v_ann: [18.79267120361328, 23.95696245880194]

- Time interval n.1: [465.40, 465.60]
 - * y_true: [20.650036]
 - * v_ann: [19.075519561767578, 23.95696245880194]

- Time interval n.2: [465.60, 465.80]
 - * y_true: [19.5500669]
 - * v_ann: [19.71055793762207, 23.95696245880194]

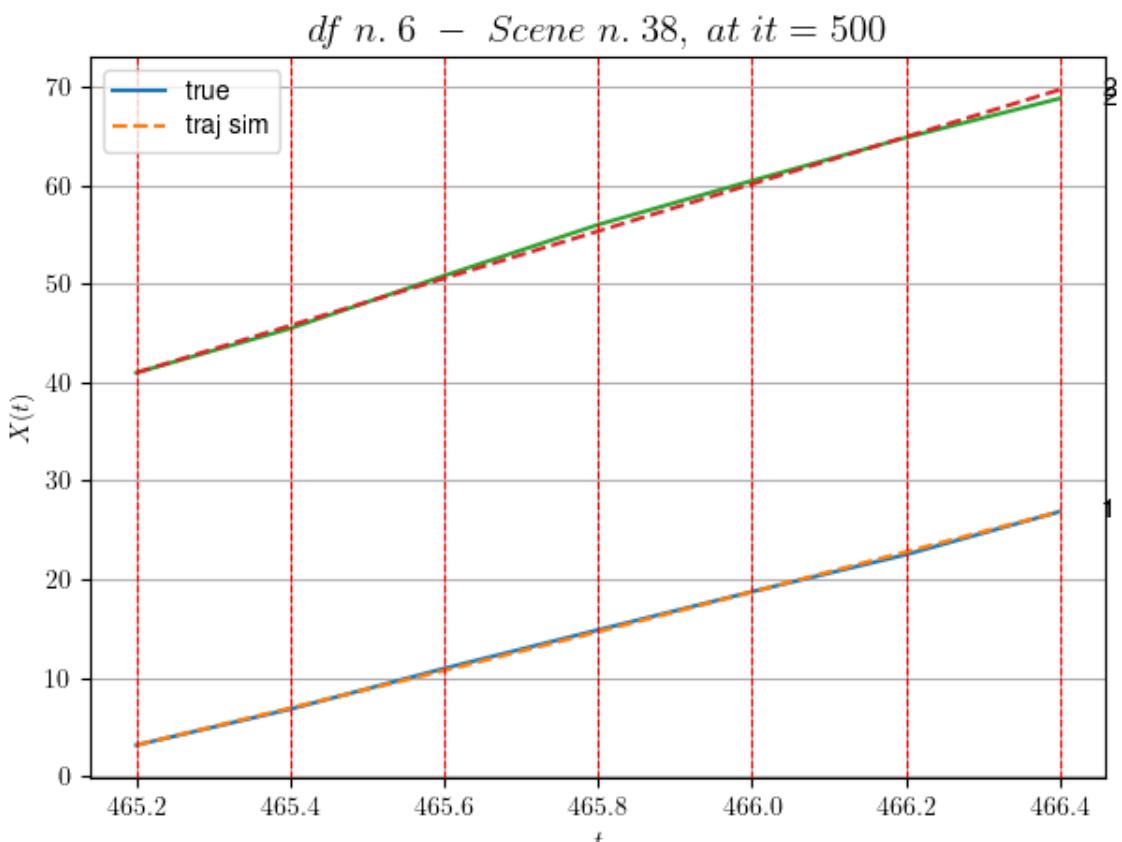
- Time interval n.3: [465.80, 466.00]
 - * y_true: [19.43011129]

```
* v_ann: [20.198972702026367, 23.95696245880194]
```

```
- Time interval n.4: [466.00, 466.20]
* y_true: [18.82015982]
* v_ann: [20.34996795654297, 23.95696245880194]
```

```
- Time interval n.5: [466.20, 466.40]
* y_true: [21.85026714]
* v_ann: [20.42616844177246, 23.95696245880194]
```

```
* err= 0.12002364011897705
* Learning rate NN = 1.5690524378442205e-05
* diff = 0.0001162503128484399
```



For scene 38/52

```
* use LR_NN=5e-05 with err=9.99328701882794 at it=24
* v0_scn_mean = 24.198683960403557
* MAE = 0.11998276370826201
```

df n.6, scene n.39/52

```
We have 6 time intervals inside [467.00,468.20]
- Time interval n.0: [467.00, 467.20]
```

```
* y_true: [18.72012329]
* v_ann: [24.55851936340332, 20.547439201769883]
```

```
-----  
-----  
- Time interval n.1: [467.20, 467.40]  
* y_true: [22.09021781]  
* v_ann: [25.074481964111328, 20.547439201769883]
```

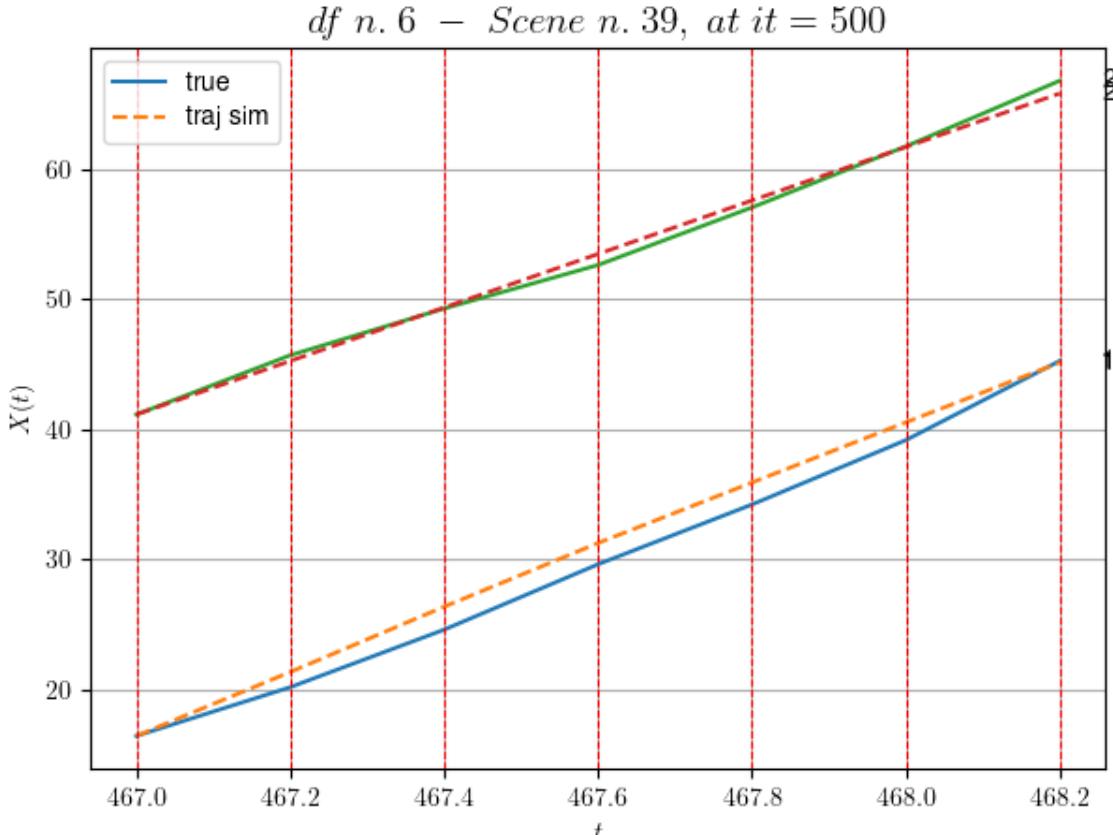
```
-----  
-----  
- Time interval n.2: [467.40, 467.60]  
* y_true: [25.12035484]  
* v_ann: [24.441564559936523, 20.547439201769883]
```

```
-----  
-----  
- Time interval n.3: [467.60, 467.80]  
* y_true: [22.94045018]  
* v_ann: [23.24125862121582, 20.547439201769883]
```

```
-----  
-----  
- Time interval n.4: [467.80, 468.00]  
* y_true: [24.73065482]  
* v_ann: [23.118289947509766, 20.547439201769883]
```

```
-----  
-----  
- Time interval n.5: [468.00, 468.20]  
* y_true: [30.43102618]  
* v_ann: [22.94995880126953, 20.547439201769883]
```

```
-----  
-----  
* err= 1.0022115153730042  
* Learning rate NN = 3.138104830213706e-06  
* diff = 0 0008100418838954404
```



For scene 39/52

* use LR_NN=1e-05 with err=23.841182049129987 at it=24
 * v0_scn_mean = 20.925541633626658
 * MAE = 1.0010449563796795

df n.6, scene n.40/52

We have 10 time intervals inside [477.80, 479.80]

- Time interval n.0: [477.80, 478.00]
 - * y_true: [11.6501536]
 - * v_ann: [11.09592056274414, 21.601430911083135]

- Time interval n.1: [478.00, 478.20]
 - * y_true: [14.75023559]
 - * v_ann: [11.684782028198242, 21.601430911083135]

- Time interval n.2: [478.20, 478.40]
 - * y_true: [11.45023382]
 - * v_ann: [11.996175765991211, 21.601430911083135]

- Time interval n.3: [478.40, 478.60]
 - * y_true: [11.45023382]

* v_ann: [12.671645164489746, 21.601430911083135]

- Time interval n.4: [478.60, 478.80]
* y_true: [13.22535791]
* v_ann: [13.25658893585205, 21.601430911083135]

- Time interval n.5: [478.80, 479.00]
* y_true: [13.22535791]
* v_ann: [13.640653610229492, 21.601430911083135]

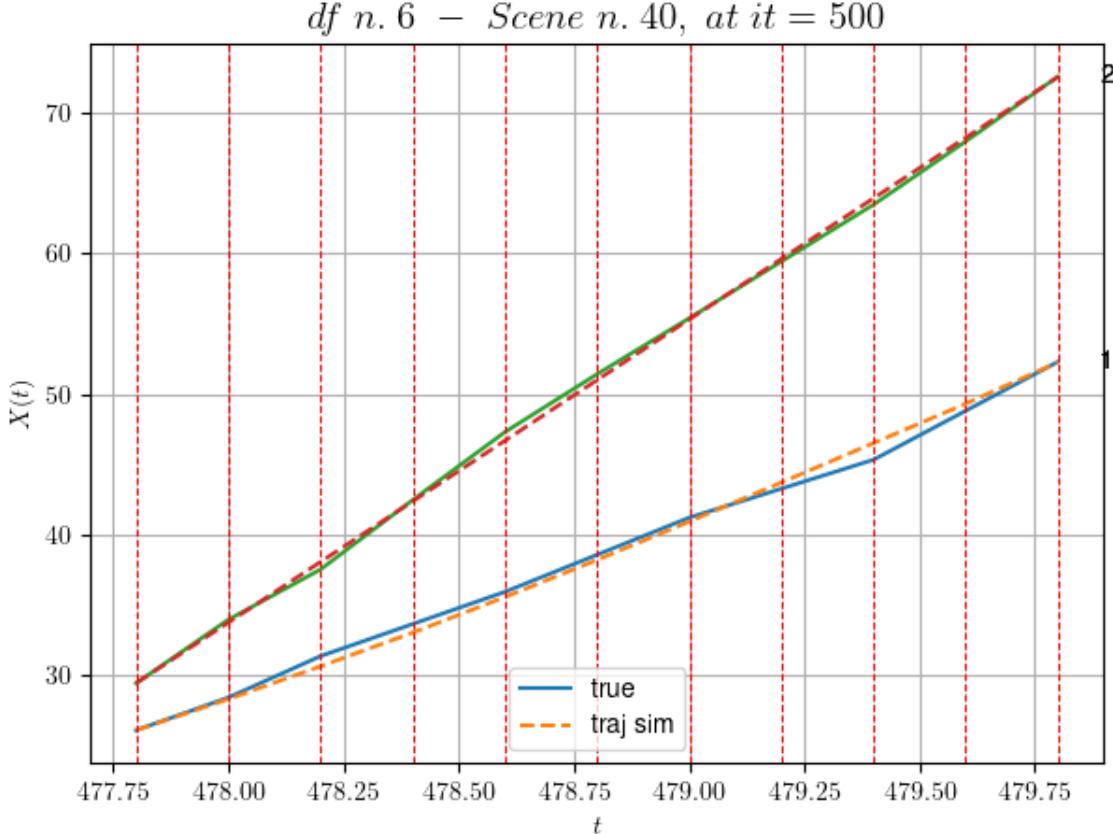
- Time interval n.6: [479.00, 479.20]
* y_true: [10.32535343]
* v_ann: [13.947486877441406, 21.601430911083135]

- Time interval n.7: [479.20, 479.40]
* y_true: [10.32535343]
* v_ann: [14.038920402526855, 21.601430911083135]

- Time interval n.8: [479.40, 479.60]
* y_true: [17.45076528]
* v_ann: [14.028748512268066, 21.601430911083135]

- Time interval n.9: [479.60, 479.80]
* y_true: [17.45076528]
* v_ann: [14.756874084472656, 21.601430911083135]

* err= 0.1971537117384774
* Learning rate NN = 0.00013508510892279446
* diff = 0.004608998866889785



For scene 40/52

```
* use LR_NN=0.001 with err=54.189960521706666 at it=24
* v0_scn_mean = 21.937373674574363
* MAE = 0.19580602639480255
```

df n.6, scene n.41/52

We have 6 time intervals inside [487.00, 488.20]

- Time interval n.0: [487.00, 487.20]
 - * y_true: [14.83016814]
 - * v_ann: [15.771296501159668, 24.54803862755306]

- Time interval n.1: [487.20, 487.40]
 - * y_true: [16.8602423]
 - * v_ann: [16.23410987854004, 24.54803862755306]

- Time interval n.2: [487.40, 487.60]
 - * y_true: [16.46530479]
 - * v_ann: [16.627676010131836, 24.54803862755306]

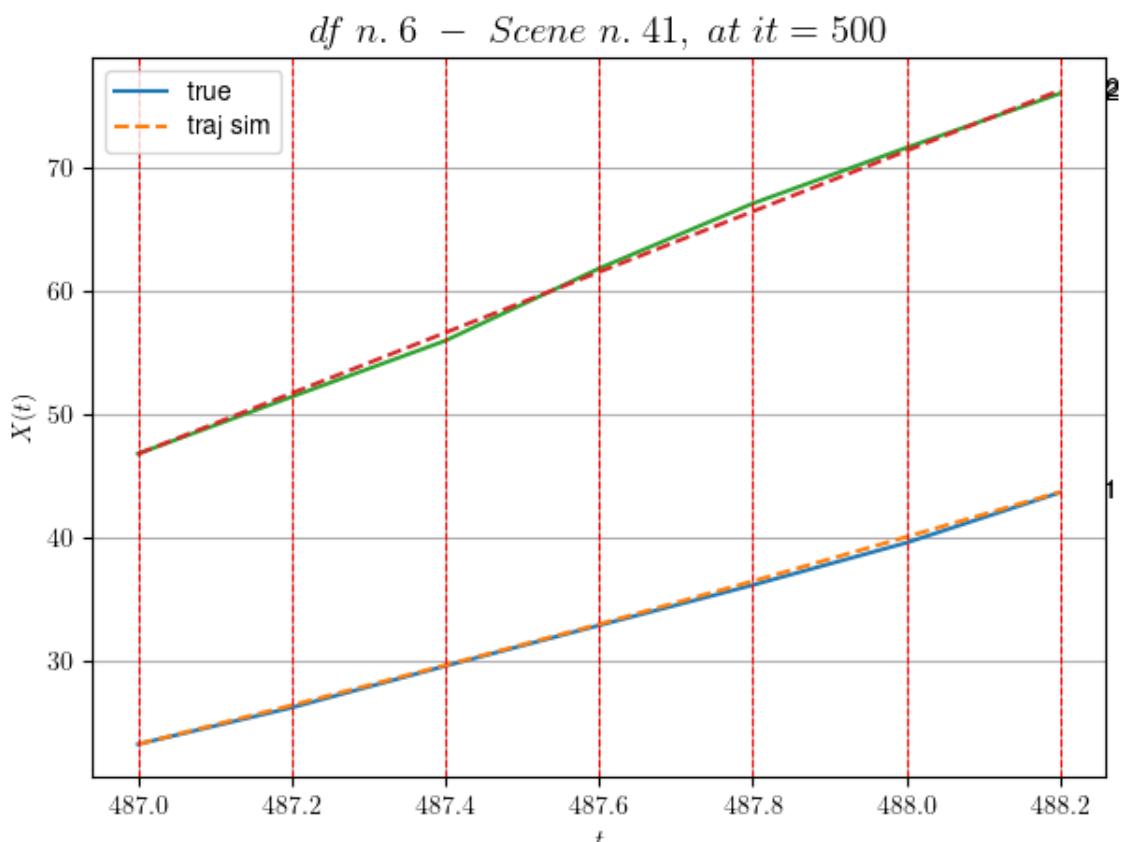
- Time interval n.3: [487.60, 487.80]
 - * y_true: [16.32538291]

* v_ann: [17.4050235748291, 24.54803862755306]

- Time interval n.4: [487.80, 488.00]
 * y_true: [17.13544627]
 * v_ann: [17.94538688659668, 24.54803862755306]

- Time interval n.5: [488.00, 488.20]
 * y_true: [20.37569971]
 * v_ann: [18.22117805480957, 24.54803862755306]

* err= 0.10807788828238674
 * Learning rate NN = 3.138104875688441e-05
 * diff = 0.0008444847218953833



For scene 41/52

* use LR_NN=0.0001 with err=7.589829377220566 at it=24
 * v0_scn_mean = 24.766117082409014
 * MAE = 0.10807788828238674

df n.6, scene n.42/52

We have 3 time intervals inside [493.80,494.40]
 - Time interval n.0: [493.80, 494.00]

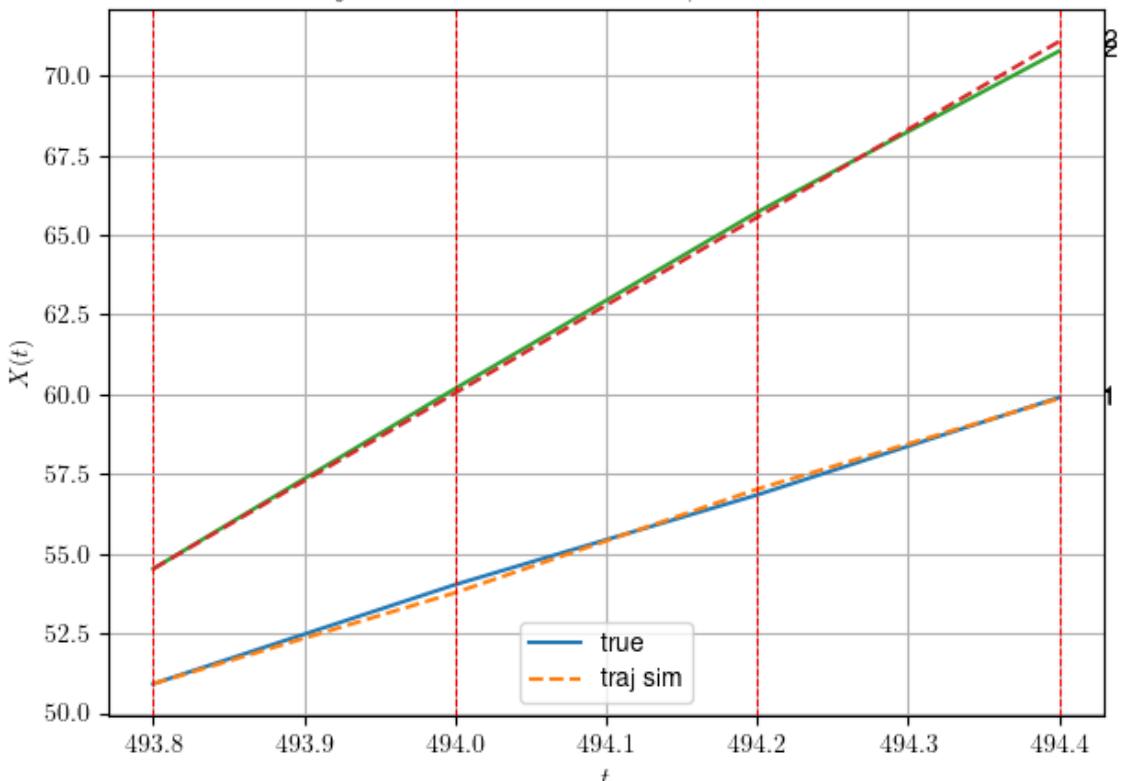
```
* y_true: [15.56081458]
* v_ann: [14.28990364074707, 27.57702754451529]
```

```
- Time interval n.1: [494.00, 494.20]
* y_true: [14.07584833]
* v_ann: [16.250648498535156, 27.57702754451529]
```

```
- Time interval n.2: [494.20, 494.40]
* y_true: [15.28601816]
* v_ann: [14.203851699829102, 27.57702754451529]
```

```
* err= 0.02921480786913647
* Learning rate NN = 0.0029524494893848896
* diff = 8.65688025801106e-05
```

df n. 6 – Scene n. 42, at it = 500



For scene 42/52

```
* use LR_NN=0.005 with err=0.8913368152349164 at it=24
* v0_scn_mean = 27.67394644271906
* MAE = 0.02921480786913647
```

df n.6, scene n.43/52

We have 4 time intervals inside [507.40,508.20]
- Time interval n.0: [507.40, 507.60]

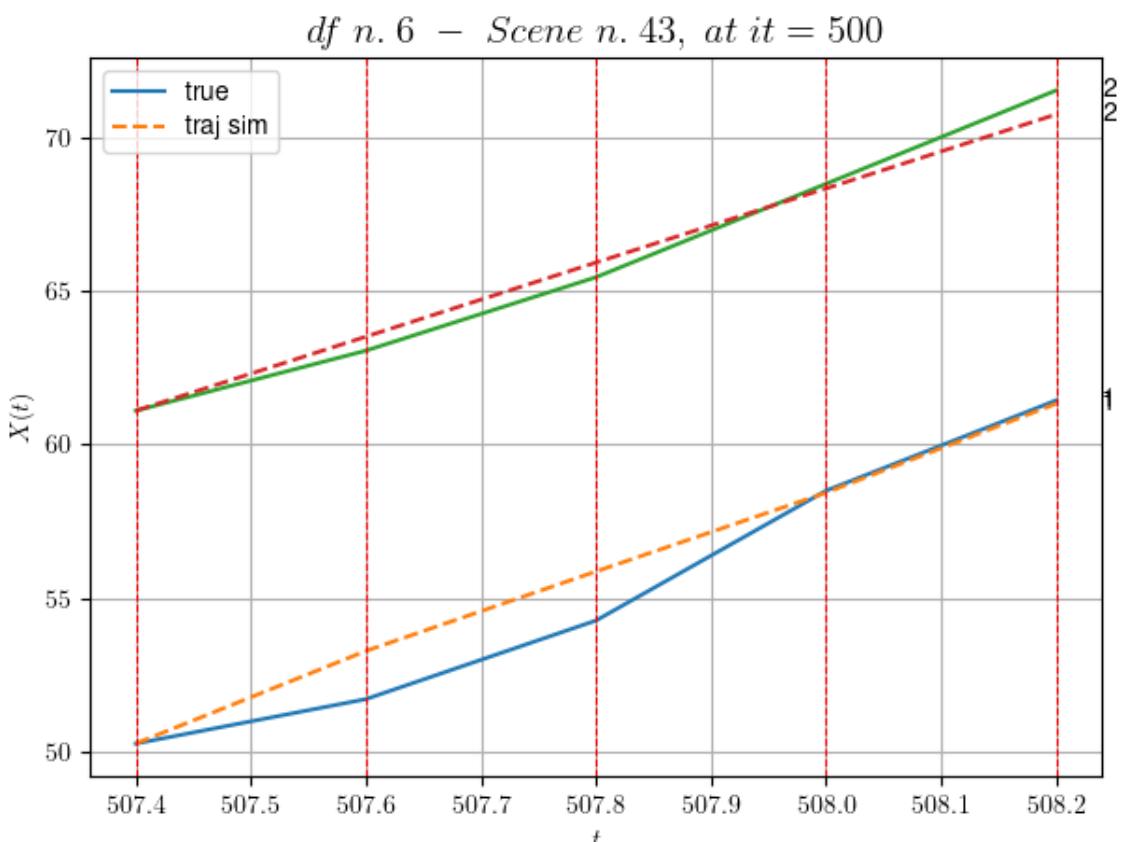
```
* y_true: [7.25036781]
* v_ann: [15.107605934143066, 12.083014257344175]
```

```
- Time interval n.1: [507.60, 507.80]
* y_true: [12.82075121]
* v_ann: [12.96471118927002, 12.083014257344175]
```

```
- Time interval n.2: [507.80, 508.00]
* y_true: [21.1763263]
* v_ann: [12.84415340423584, 12.083014257344175]
```

```
- Time interval n.3: [508.00, 508.20]
* y_true: [14.72594635]
* v_ann: [14.521653175354004, 12.083014257344175]
```

```
* err= 0.6118524327013123
* Learning rate NN = 0.000478296831715852
* diff = 0.0001059301132166901
```



For scene 43/52

```
* use LR_NN=0.001 with err=37.63248063738057 at it=24
* v0_scn_mean = 12.799693686913953
* MAE = 0.5987851021115991
```

df n.6, scene n.44/52

We have 2 time intervals inside [530.40,530.80]

- Time interval n.0: [530

* y_true: [25.58040667]

* v_ann: [23.735145568847656, 22.991928031470103]

Time interval n.1: [530.60, 530.80]

* y_true: [23.26050296]

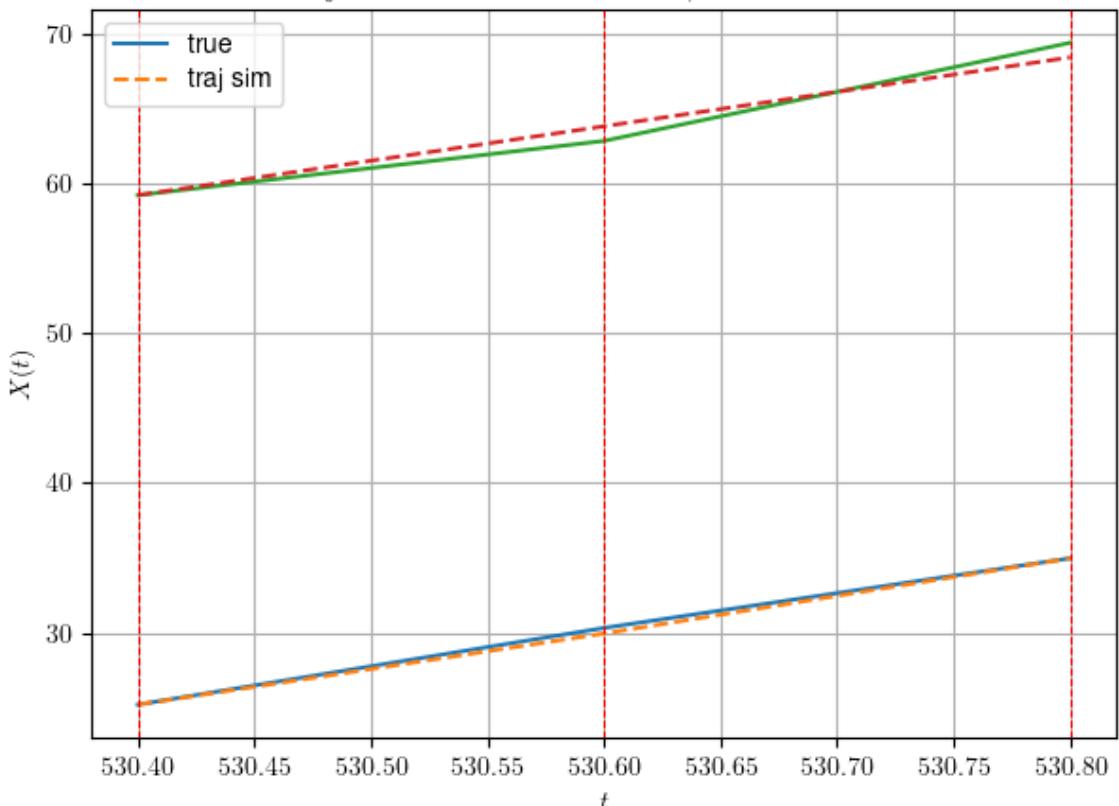
* v_ann: [25.095603942871094, 22.991928031470103]

* err= 0.34028485270846637

* Learning rate NN = 0.00036449998151510954

* diff = 9.384035354387255e-06

df n. 6 – Scene n. 44, at it = 500



For scene 44/52

* use LR NN=0.0005 with err=1.5690734337293295 at it=24

* v0 scn mean = 23.272250910158522

* MAE = 0.34026256790790504

df n.6, scene n.45/52

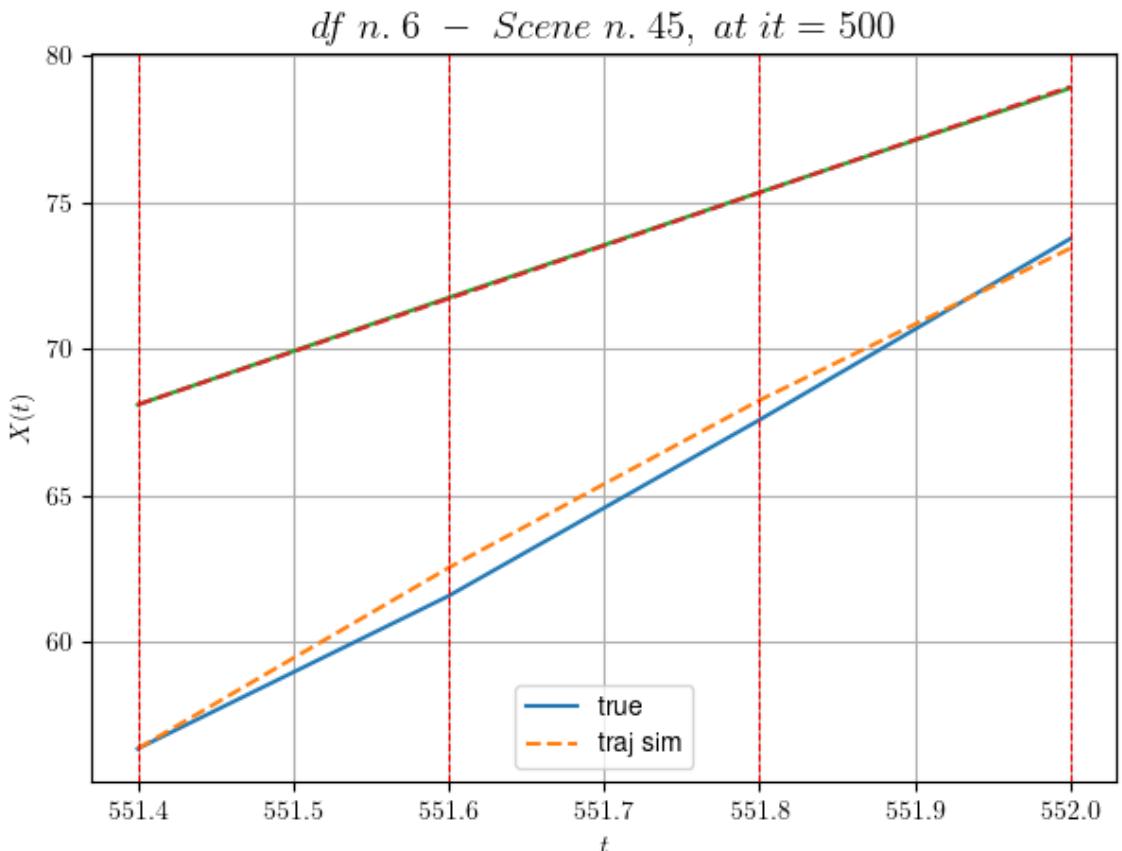
We have 3 time intervals inside [551.40, 552.00]

- Time interval n.0: [551.40, 551.60]
 - * y_true: [26.08674174]
 - * v_ann: [30.89112091064453, 18.10265854947575]
-

- Time interval n.1: [551.60, 551.80]
 - * y_true: [30.06264682]
 - * v_ann: [28.610843658447266, 18.10265854947575]
-

- Time interval n.2: [551.80, 552.00]
 - * y_true: [30.95284603]
 - * v_ann: [25.94957733154297, 18.10265854947575]
-

* err= 0.18568621073093725
 * Learning rate NN = 5.904899080633186e-05
 * diff = 0.0077322459791259734



For scene 45/52

- * use LR_NN=0.0001 with err=10.485914035781011 at it=24
 - * v0_scn_mean = 18.57855220740495
 - * MAE = 0.18568621073093725
-
-

df n.6, scene n.46/52

```
=====
We have 8 time intervals inside [576.00,577.60]
- Time interval n.0: [576.00, 576.20]
  * y_true: [15.84021031]
  * v_ann: [17.859350204467773, 21.301030620241615]

-----
- Time interval n.1: [576.20, 576.40]
  * y_true: [20.27538477]
  * v_ann: [18.38709259033203, 21.301030620241615]

-----
- Time interval n.2: [576.40, 576.60]
  * y_true: [21.925472]
  * v_ann: [19.34160041809082, 21.301030620241615]

-----
- Time interval n.3: [576.60, 576.80]
  * y_true: [20.1105654]
  * v_ann: [19.930782318115234, 21.301030620241615]

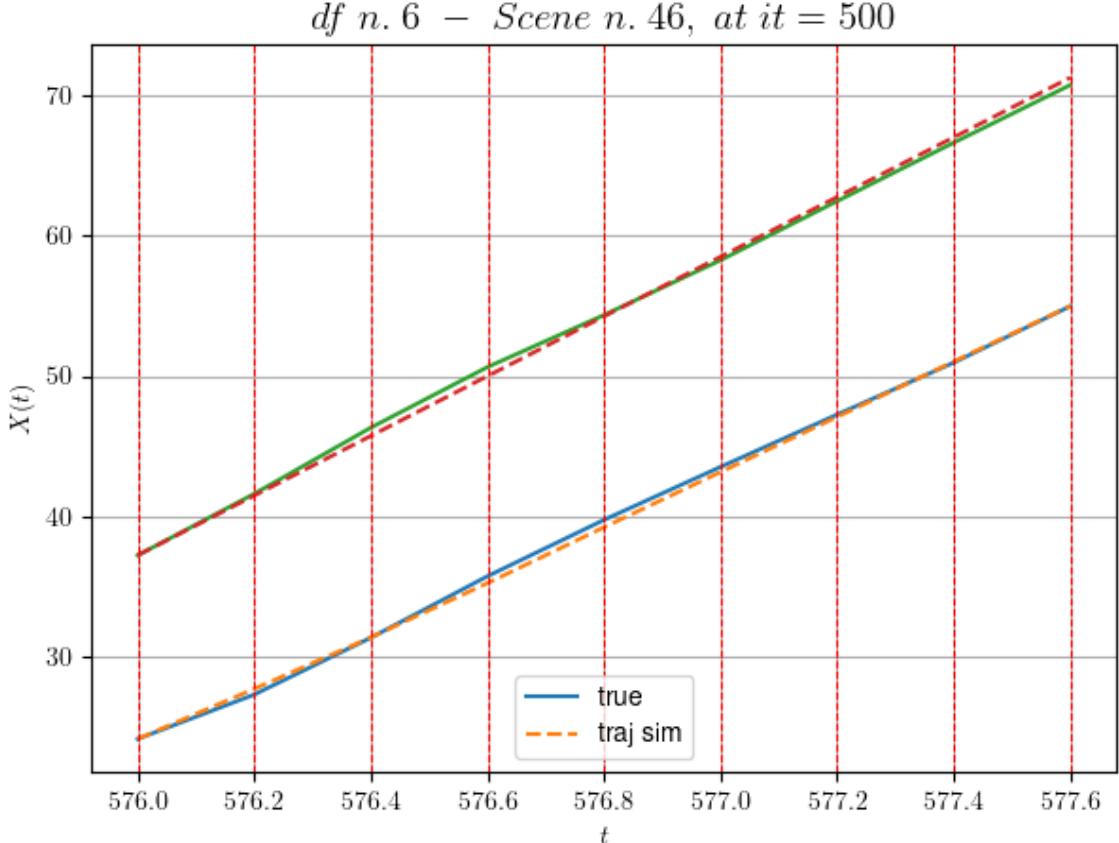
-----
- Time interval n.4: [576.80, 577.00]
  * y_true: [18.90062767]
  * v_ann: [19.723398208618164, 21.301030620241615]

-----
- Time interval n.5: [577.00, 577.20]
  * y_true: [18.67576455]
  * v_ann: [19.6297607421875, 21.301030620241615]

-----
- Time interval n.6: [577.20, 577.40]
  * y_true: [18.5258558]
  * v_ann: [19.775697708129883, 21.301030620241615]

-----
- Time interval n.7: [577.40, 577.60]
  * y_true: [20.11613418]
  * v_ann: [19.823711395263672, 21.301030620241615]

-----
* err= 0.12294726558252267
* Learning rate NN = 0.00020589104678947479
* diff = 0.00039933571945255375
```



For scene 46/52

- * use LR_NN=0.001 with err=35.62389756376335 at it=24
- * v0_scn_mean = 21.648989395365977
- * MAE = 0.11068510186573682

df n.6, scene n.47/52

We have 3 time intervals inside [585.60, 586.20]

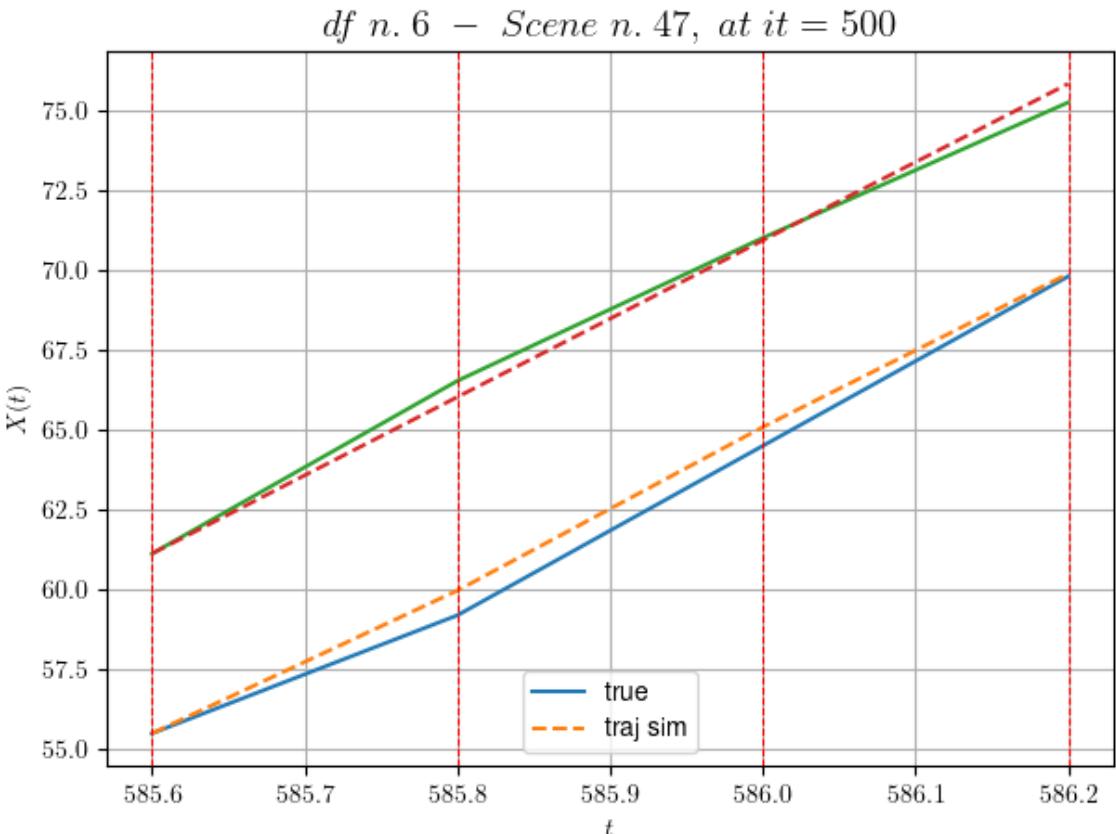
- Time interval n.0: [585.60, 585.80]
 - * y_true: [18.50110458]
 - * v_ann: [22.38099479675293, 24.5420732550904]

- Time interval n.1: [585.80, 586.00]
 - * y_true: [26.55213972]
 - * v_ann: [25.61487579345703, 24.5420732550904]

- Time interval n.2: [586.00, 586.20]
 - * y_true: [26.55213972]
 - * v_ann: [24.02472686767578, 24.5420732550904]

- * err= 0.1950924872502155
- * Learning rate NN = 5.904899080633186e-05

* diff = 0.0003212976699200065



For scene 47/52

* use LR_NN=0.0001 with err=2.5048366812759957 at it=24
 * v0_scn_mean = 24.760390324844863
 * MAE = 0.19500251453815184

df n.6, scene n.48/52

We have 6 time intervals inside [593.40, 594.60]

- Time interval n.0: [593.40, 593.60]
 - * y_true: [20.11067815]
 - * v_ann: [22.65867805480957, 21.28080990831728]

- Time interval n.1: [593.60, 593.80]
 - * y_true: [18.13073933]
 - * v_ann: [22.990177154541016, 21.28080990831728]

- Time interval n.2: [593.80, 594.00]
 - * y_true: [23.23120854]
 - * v_ann: [23.07718849182129, 21.28080990831728]

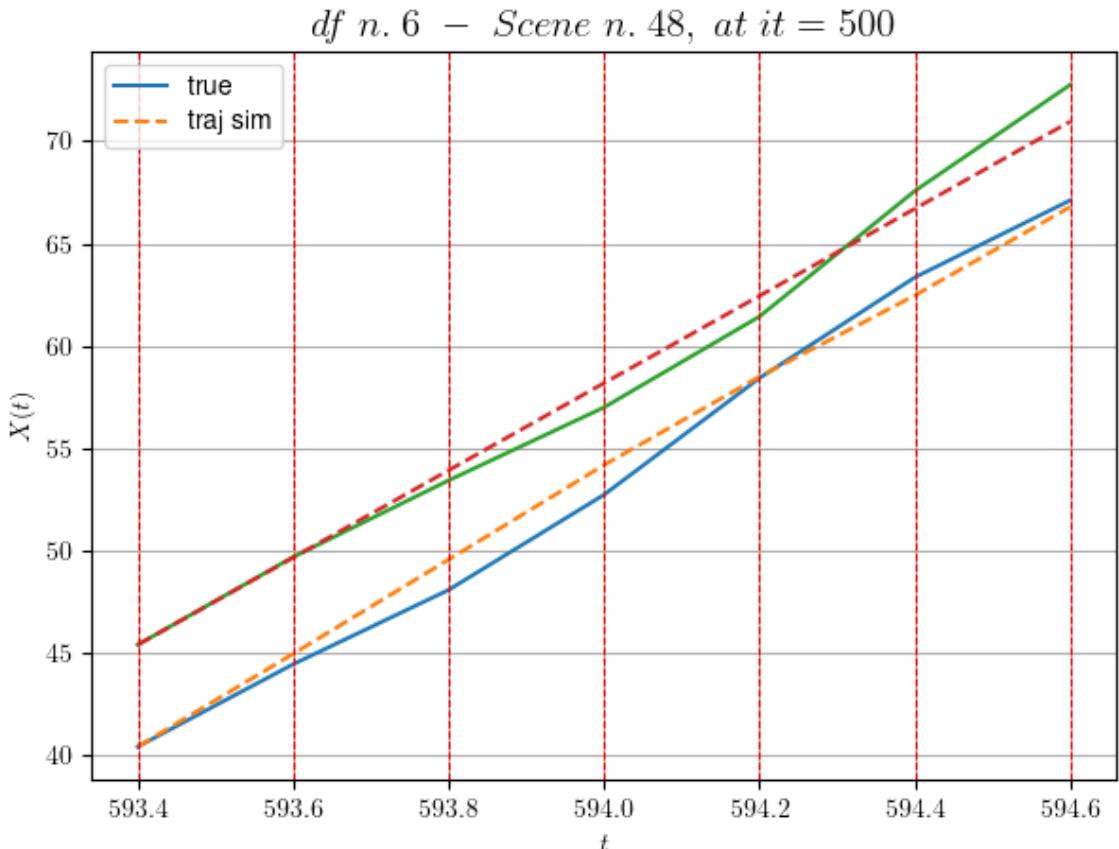
- Time interval n.3: [594.00, 594.20]

```
* y_true: [28.4517039]
* v_ann: [21.544076919555664, 21.28080990831728]
```

```
- Time interval n.4: [594.20, 594.40]
* y_true: [24.59163655]
* v_ann: [19.828907012939453, 21.28080990831728]
```

```
- Time interval n.5: [594.40, 594.60]
* y_true: [18.80153552]
* v_ann: [21.61031723022461, 21.28080990831728]
```

```
* err= 0.8623455432646856
* Learning rate NN = 3.138104875688441e-05
* diff = 0.0070626310000306836
```



For scene 48/52

```
* use LR_NN=0.0001 with err=19.652380134805664 at it=24
* v0_scn_mean = 21.62957751191772
* MAE = 0.8623455432646856
```

df n.6, scene n.49/52

We have 3 time intervals inside [552.20, 552.80]

```

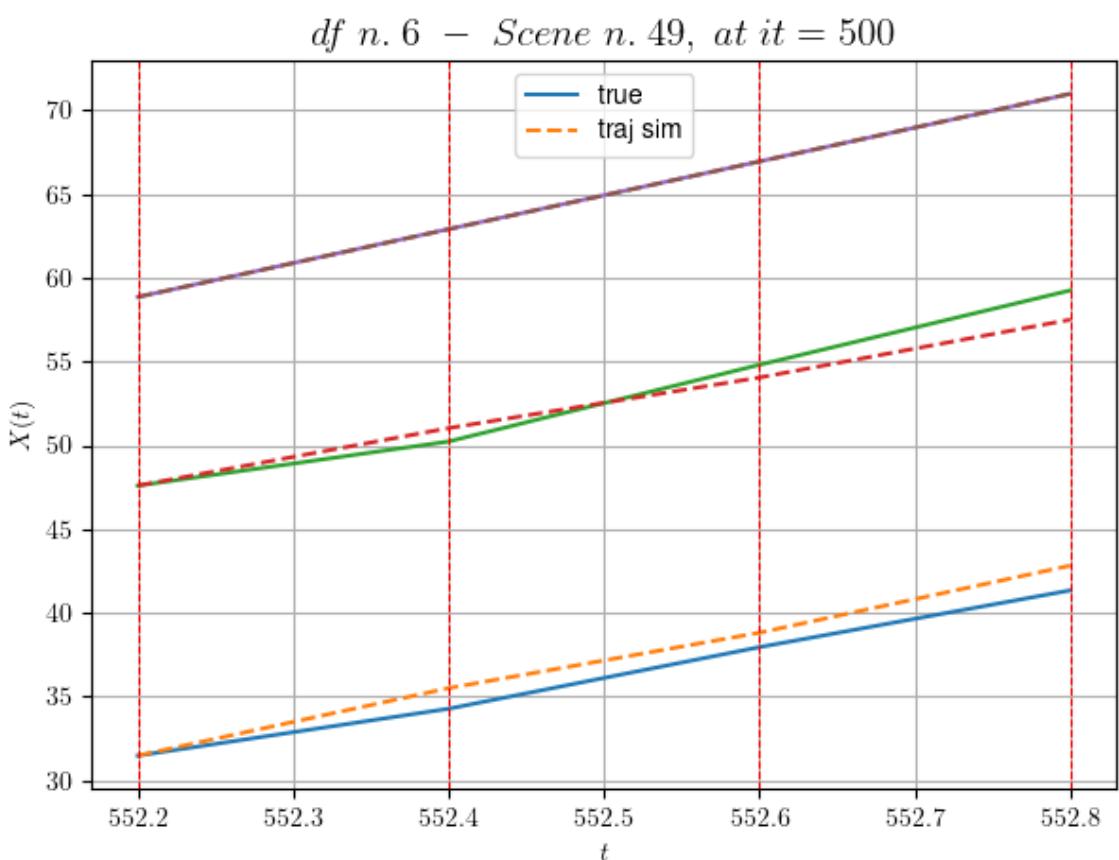
    - Time interval n.0: [552.20, 552.40]
      * y_true: [14.01030513 13.18063102]
      * v_ann: [20.15039825439453, 17.172391891479492, 2
0.23320503955222]

-----
    - Time interval n.1: [552.40, 552.60]
      * y_true: [18.39048446 22.9012939 ]
      * v_ann: [16.554397583007812, 15.114259719848633, 2
0.23320503955222]

-----
    - Time interval n.2: [552.60, 552.80]
      * y_true: [16.95052919 22.22132939]
      * v_ann: [20.049800872802734, 17.280757904052734, 2
0.23320503955222]

-----
* err= 0.7256378798974804
* Learning rate NN = 0.0005904899444431067
* diff = 0.0052165458127710895

```



For scene 49/52

```

* use LR_NN=0.001 with err=6.019883468506495 at it=24
* v0_scn_mean = 20.819212298671275
* MAE = 0.7256378798974804
=====
```

```
df n.6, scene n.50/52
```

We have 2 time intervals inside [553.00,553.40]

- Time interval n.0: [553.00, 553.20]

- * y_true: [23.0804555 19.17546127 18.9008181]

- * v_ ann: [19.38237953186035, 19.239444732666016, 1

9.07296371459961, 23.748812608935403]

- Time interval n.1: [553.20, 553.40]

- * y_true: [22.02058024 17.45053567 16.85079909]

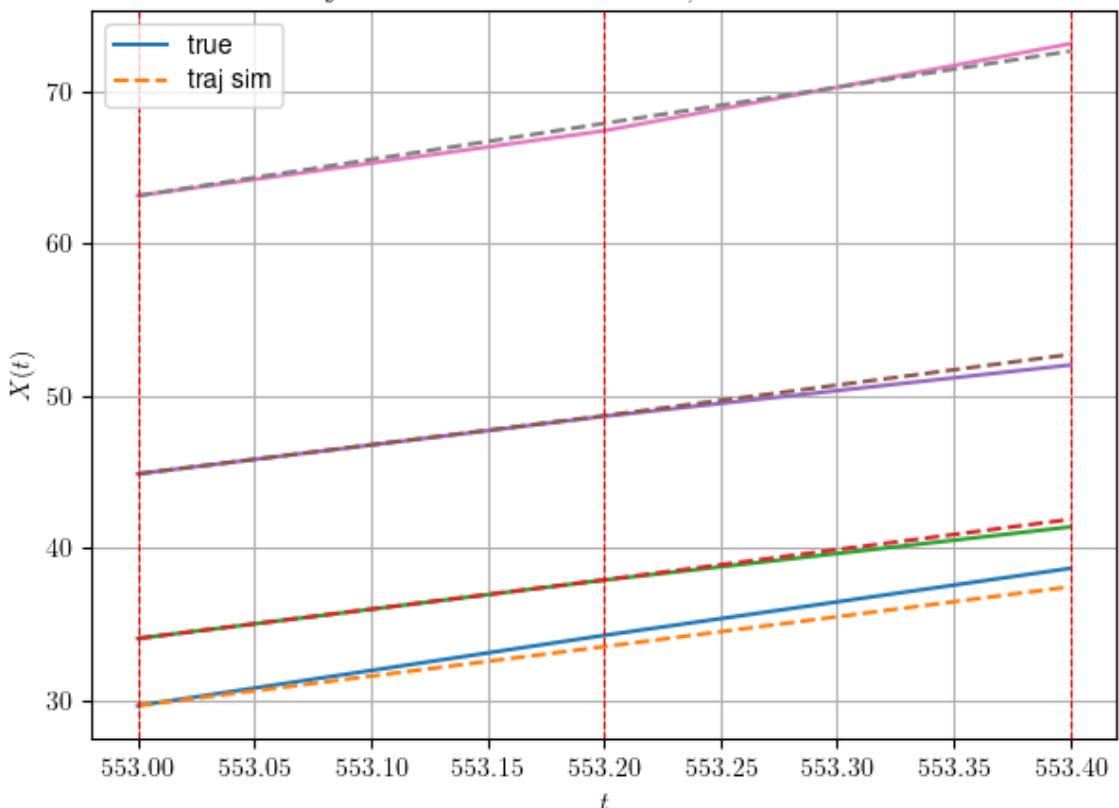
- * v_ ann: [19.658153533935547, 19.883134841918945, 2
0.135513305664062, 23.748812608935403]

- * err= 0.2680098120179349

- * Learning rate NN = 0.00036449998151510954

- * diff = 0.00015919920766749307

df n. 6 – Scene n. 50, at it = 500



For scene 50/52

- * use LR_NN=0.0005 with err=6.066247124833434 at it=24

- * v0_scn_mean = 24.248887258030752

- * MAE = 0.2680098120179349

```
df n.6, scene n.51/52
```

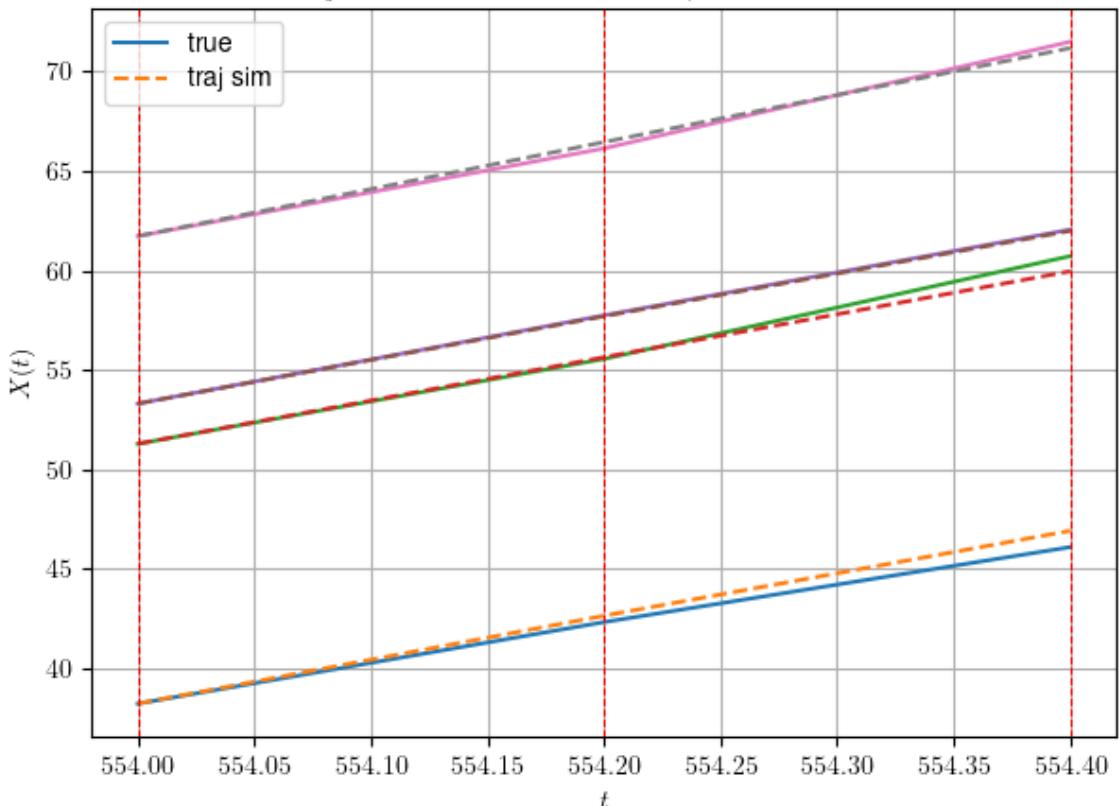
We have 2 time intervals inside [554.00, 554.40]

- Time interval n.0: [554.00, 554.20]
 - * y_true: [20.50061186 21.35116733 22.20133365]
 - * v_ann: [22.09771728515625, 21.782594680786133, 2 1.965322494506836, 23.647050620332152]
-

- Time interval n.1: [554.20, 554.40]
 - * y_true: [18.86075328 25.85180384 21.5614577]
 - * v_ann: [21.366456985473633, 21.608051300048828, 2 1.472393035888672, 23.647050620332152]
-

- * err= 0.1310758061571961
- * Learning rate NN = 0.0007289999630302191
- * diff = 1.2424430694102373e-05

df n. 6 – Scene n. 51, at it = 500



For scene 51/52

- * use LR_NN=0.001 with err=6.341974750822098 at it=24
 - * v0_scn_mean = 24.155265897367727
 - * MAE = 0.13107575862009124
-
-

For df=6 with 52 scenes, time taken: 1299.43

In df n.7/10 we have 30 scenes

```
df n.7, scene n.0/30
```

```
=====
=====
```

We have 8 time intervals inside [37.36,38.96]

- Time interval n.0: [37.36, 37.56]
 - * y_true: [25.35701236]
 - * v_ann: [31.99689483642578, 25.36141805828342]

- Time interval n.1: [37.56, 37.76]
 - * y_true: [25.73989368]
 - * v_ann: [31.00872802734375, 25.36141805828342]

- Time interval n.2: [37.76, 37.96]
 - * y_true: [23.71210977]
 - * v_ann: [29.208650588989258, 25.36141805828342]

- Time interval n.3: [37.96, 38.16]
 - * y_true: [25.66543151]
 - * v_ann: [26.111356735229492, 25.36141805828342]

- Time interval n.4: [38.16, 38.36]
 - * y_true: [28.90912072]
 - * v_ann: [26.353532791137695, 25.36141805828342]

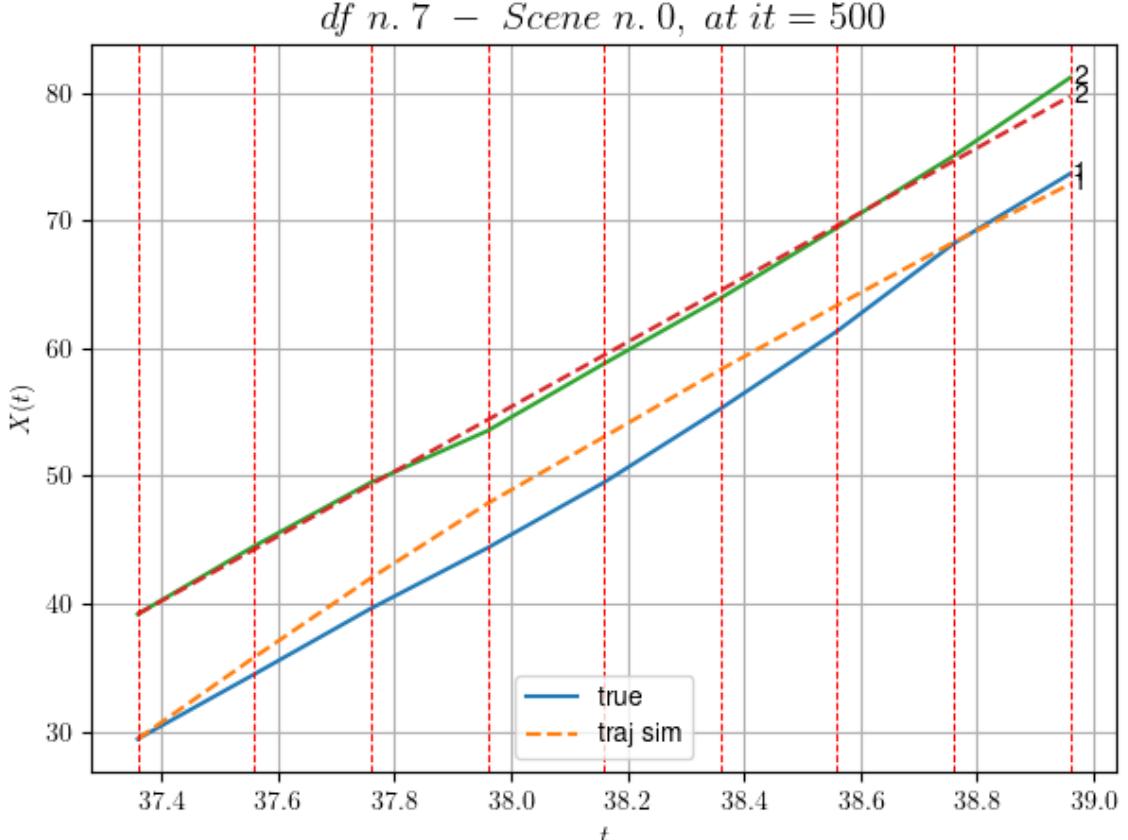
- Time interval n.5: [38.36, 38.56]
 - * y_true: [30.37297243]
 - * v_ann: [25.19853401184082, 25.36141805828342]

- Time interval n.6: [38.56, 38.76]
 - * y_true: [34.29923068]
 - * v_ann: [24.66726303100586, 25.36141805828342]

- Time interval n.7: [38.76, 38.96]
 - * y_true: [27.40980382]
 - * v_ann: [22.777023315429688, 25.36141805828342]


```
=====
=====
```

* err= 2.8002990003273966
* Learning rate NN = 0.00020589104678947479
* diff = 0.05506225854689317



For scene 0/30

- * use LR_NN=0.001 with err=10.426114343685454 at it=24
- * v0_scn_mean = 25.54696133591662
- * MAE = 1.6598953760776105

df n.7, scene n.1/30

We have 3 time intervals inside [43.16, 43.76]

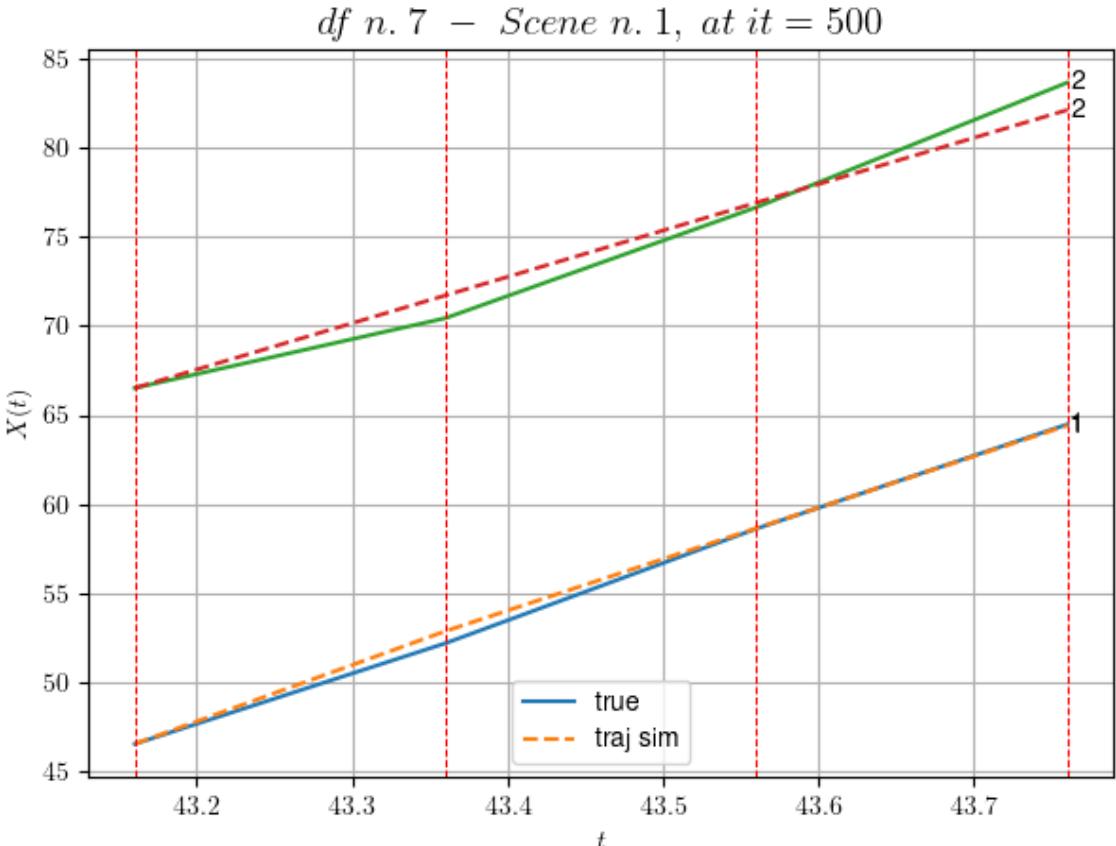
- Time interval n.0: [43.16, 43.36]
 - * y_true: [28.21793458]
 - * v_ann: [31.614118576049805, 25.95946357005826]

- Time interval n.1: [43.36, 43.56]
 - * y_true: [32.07362933]
 - * v_ann: [28.832494735717773, 25.95946357005826]

- Time interval n.2: [43.56, 43.76]
 - * y_true: [29.22963958]
 - * v_ann: [28.74383544921875, 25.95946357005826]

- * err= 0.5643422741687344
- * Learning rate NN = 2.952449540316593e-05

* diff = 5.735649040716773e-06



For scene 1/30

* use LR_NN=5e-05 with err=1.147805101419812 at it=24
 * v0_scn_mean = 26.12108502722509
 * MAE = 0.49619725882047944

df n.7, scene n.2/30

We have 7 time intervals inside [44.96, 46.36]

- Time interval n.0: [44.96, 45.16]
 - * y_true: [26.28719925]
 - * v_ann: [27.91691017150879, 26.657757035933543]

- Time interval n.1: [45.16, 45.36]
 - * y_true: [30.92729896]
 - * v_ann: [26.210664749145508, 26.657757035933543]

- Time interval n.2: [45.36, 45.56]
 - * y_true: [23.73776955]
 - * v_ann: [26.139596939086914, 26.657757035933543]

- Time interval n.3: [45.56, 45.76]

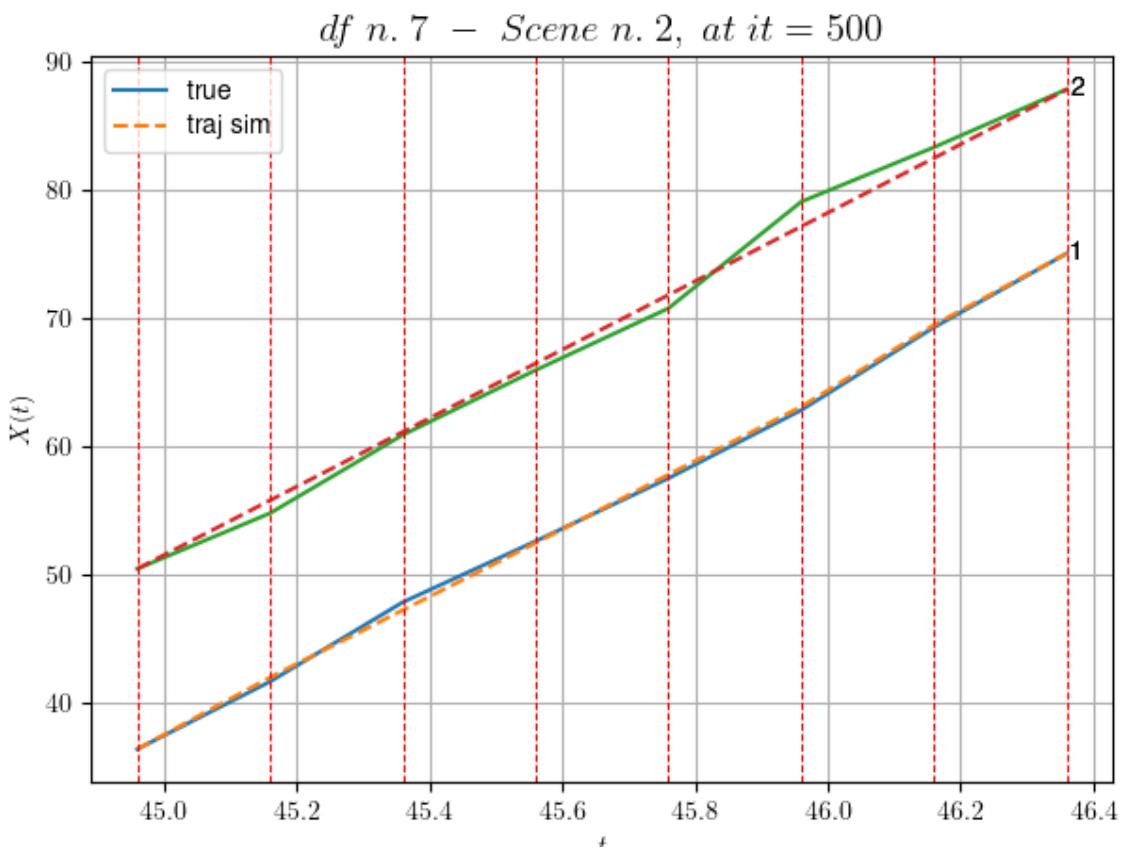
```
* y_true: [24.51414777]
* v_ann: [26.6292781829834, 26.657757035933543]
```

```
- Time interval n.4: [45.76, 45.96]
* y_true: [26.52798583]
* v_ann: [26.43062400817871, 26.657757035933543]
```

```
- Time interval n.5: [45.96, 46.16]
* y_true: [32.24792255]
* v_ann: [31.834985733032227, 26.657757035933543]
```

```
- Time interval n.6: [46.16, 46.36]
* y_true: [28.76269973]
* v_ann: [27.86425018310547, 26.657757035933543]
```

```
* err= 0.4705020058585986
* Learning rate NN = 1.2709323527815286e-05
* diff = 0.00012219591185264056
```



For scene 2/30

```
* use LR_NN=5e-05 with err=3.738801532951511 at it=24
* v0_scn_mean = 26.791446754470666
* MAE = 0.44656943266816485
```

```
df n.7, scene n.3/30
```

```
=====
=====

We have 5 time intervals inside [51.36,52.36]
- Time interval n.0: [51.36, 51.56]
  * y_true: [23.57882573]
  * v_ann: [28.169631958007812, 25.158740607133012]

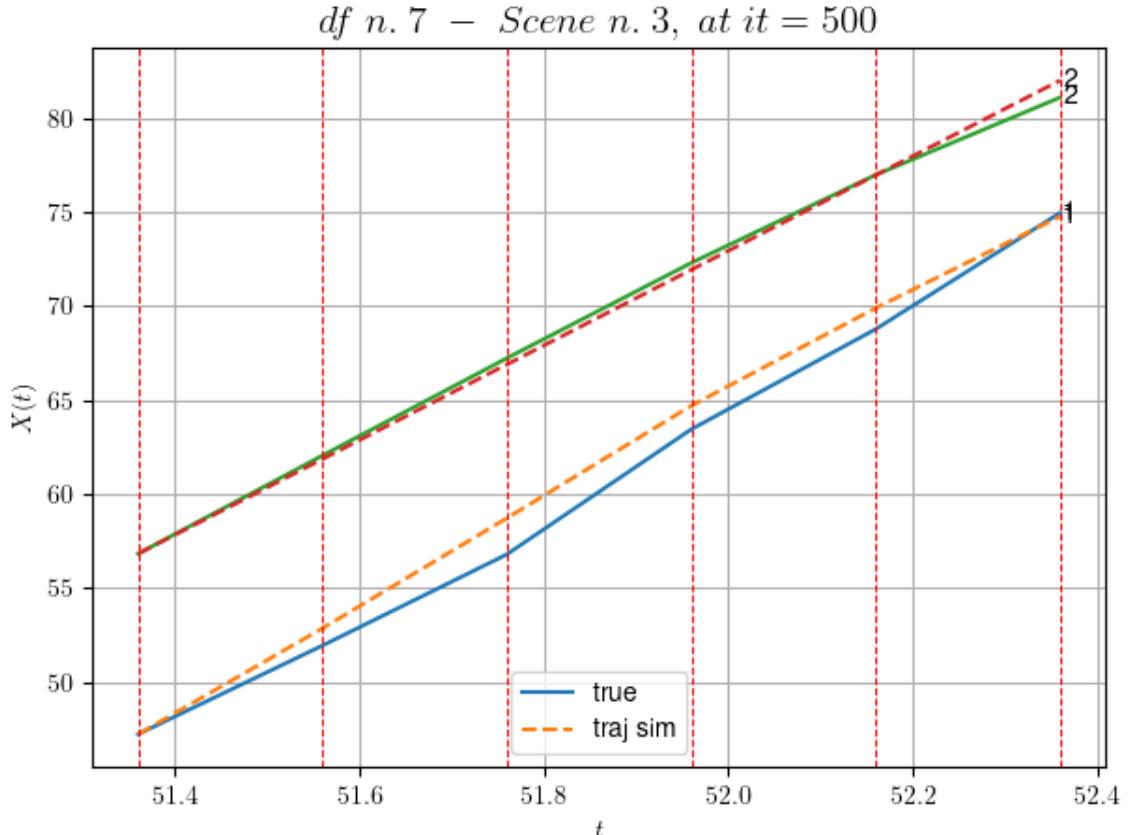
-----
- Time interval n.1: [51.56, 51.76]
  * y_true: [24.23722079]
  * v_ann: [29.273672103881836, 25.158740607133012]

-----
- Time interval n.2: [51.76, 51.96]
  * y_true: [33.24501337]
  * v_ann: [29.872846603393555, 25.158740607133012]

-----
- Time interval n.3: [51.96, 52.16]
  * y_true: [26.6110662]
  * v_ann: [25.97309112548828, 25.158740607133012]

-----
- Time interval n.4: [52.16, 52.36]
  * y_true: [30.92040212]
  * v_ann: [24.34121322631836, 25.158740607133012]

-----
* err= 0.7093906158352097
* Learning rate NN = 3.874203684972599e-05
* diff = 0.0029556058066677604
```



For scene 3/30

- * use LR_NN=0.0001 with err=5.496891821624155 at it=24
- * v0_scn_mean = 25.352390982810554
- * MAE = 0.706134077799973

df n.7, scene n.4/30

We have 5 time intervals inside [60.56, 61.56]

- Time interval n.0: [60.56, 60.76]
 - * y_true: [22.61948097]
 - * v_ann: [27.788440704345703, 25.52722016644276]

- Time interval n.1: [60.76, 60.96]
 - * y_true: [23.0211989]
 - * v_ann: [28.584705352783203, 25.52722016644276]

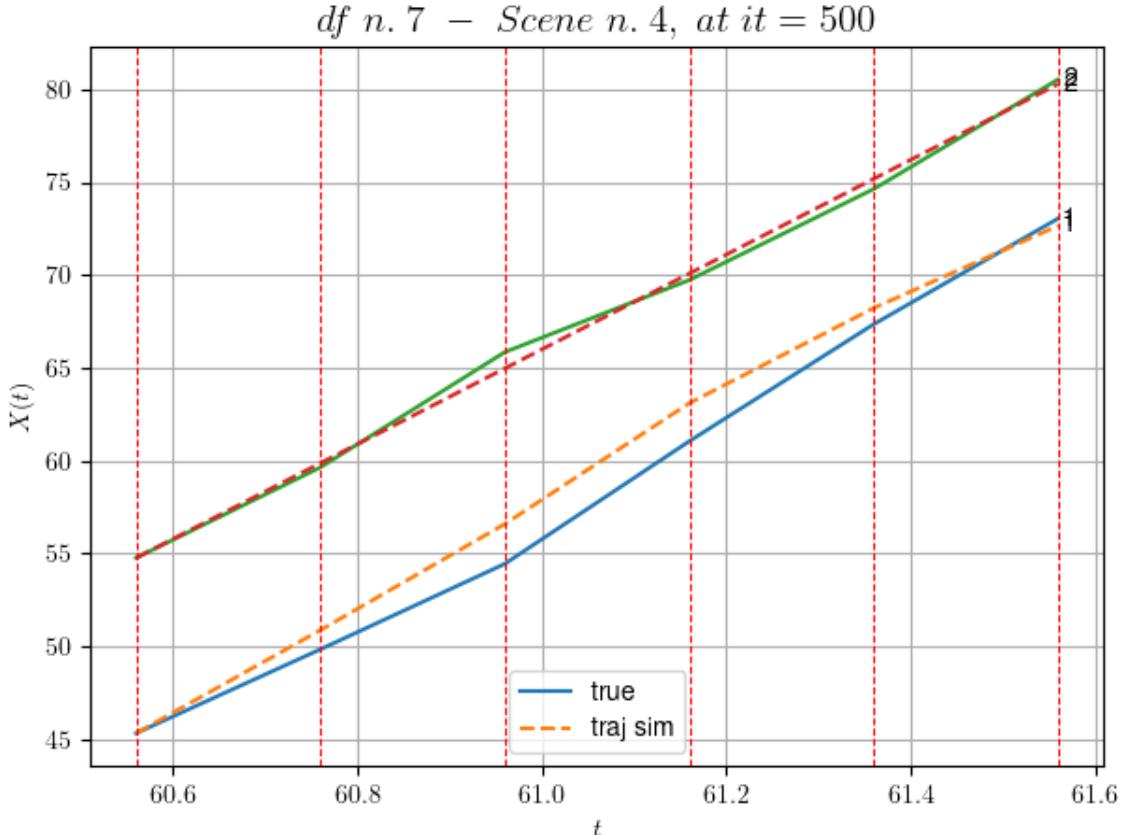
- Time interval n.2: [60.96, 61.16]
 - * y_true: [33.01460981]
 - * v_ann: [32.527252197265625, 25.52722016644276]

- Time interval n.3: [61.16, 61.36]
 - * y_true: [31.5149883]

```
* v_ann: [25.633304595947266, 25.52722016644276]
```

```
- Time interval n.4: [61.36, 61.56]
* y_true: [28.46918699]
* v_ann: [22.168380737304688, 25.52722016644276]
```

```
* err= 1.0076393055092903
* Learning rate NN = 1.9371018424862996e-05
* diff = 0.0025670782551092675
```



For scene 4/30

```
* use LR_NN=5e-05 with err=4.588470996374662 at it=24
* v0_scn_mean = 25.70613135975088
* MAE = 1.0063104186340748
```

df n.7, scene n.5/30

```
We have 4 time intervals inside [76.36, 77.16]
- Time interval n.0: [76.36, 76.56]
* y_true: [22.39037134]
* v_ann: [25.442983627319336, 35.53676782183341]
```

```
- Time interval n.1: [76.56, 76.76]
```

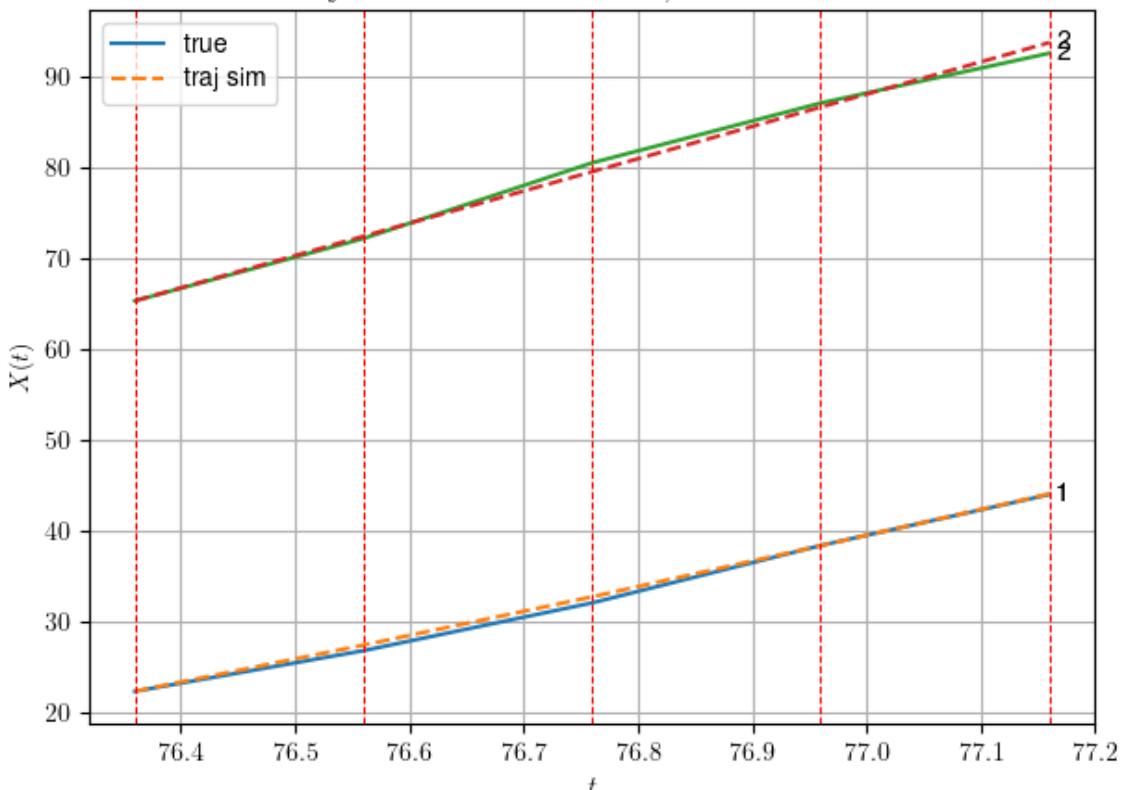
```
* y_true: [26.28445994]
* v_ann: [26.56660270690918, 35.53676782183341]
```

```
- Time interval n.2: [76.76, 76.96]
* y_true: [31.57858085]
* v_ann: [28.170316696166992, 35.53676782183341]
```

```
- Time interval n.3: [76.96, 77.16]
* y_true: [28.06530084]
* v_ann: [28.49362564086914, 35.53676782183341]
```

```
* err= 0.3409454982015738
* Learning rate NN = 4.782968062500004e-06
* diff = 6.916813158007115e-05
```

df n. 7 – Scene n. 5, at it = 500



For scene 5/30

```
* use LR_NN=1e-05 with err=3.6351846894249293 at it=24
* v0_scn_mean = 35.31529710900242
* MAE = 0.3332583399343591
```

df n.7, scene n.6/30

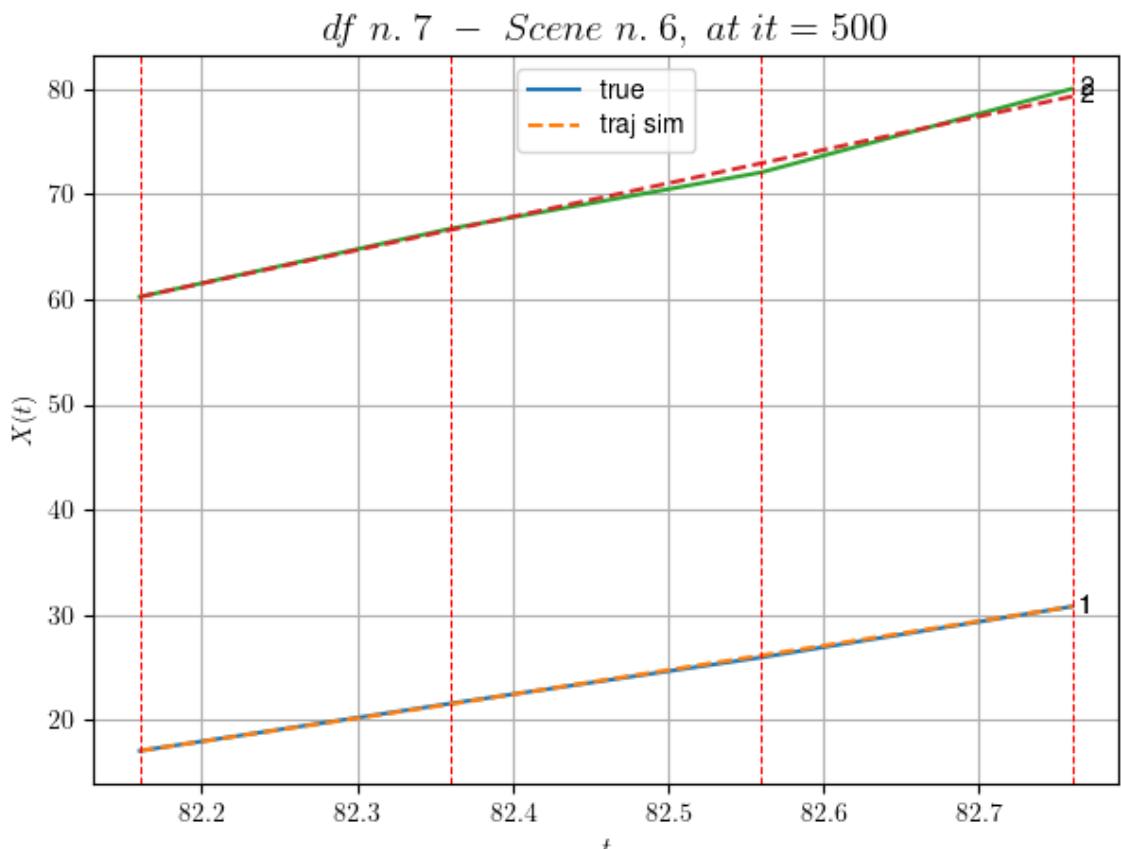
We have 3 time intervals inside [82.16, 82.76]
- Time interval n.0: [82.16, 82.36]

```
* y_true: [22.49086216]
* v_ann: [22.182201385498047, 31.745431023356446]
```

```
- Time interval n.1: [82.36, 82.56]
* y_true: [21.91444074]
* v_ann: [23.16124153137207, 31.745431023356446]
```

```
- Time interval n.2: [82.56, 82.76]
* y_true: [24.18388115]
* v_ann: [23.250635147094727, 31.745431023356446]
```

```
* err= 0.16861788972991018
* Learning rate NN = 2.952449540316593e-05
* diff = 1.7960327206023585e-06
```



For scene 6/30

```
* use LR_NN=5e-05 with err=0.434492324003225 at it=24
* v0_scn_mean = 31.67561378243535
* MAE = 0.1685942846931895
```

df n.7, scene n.7/30

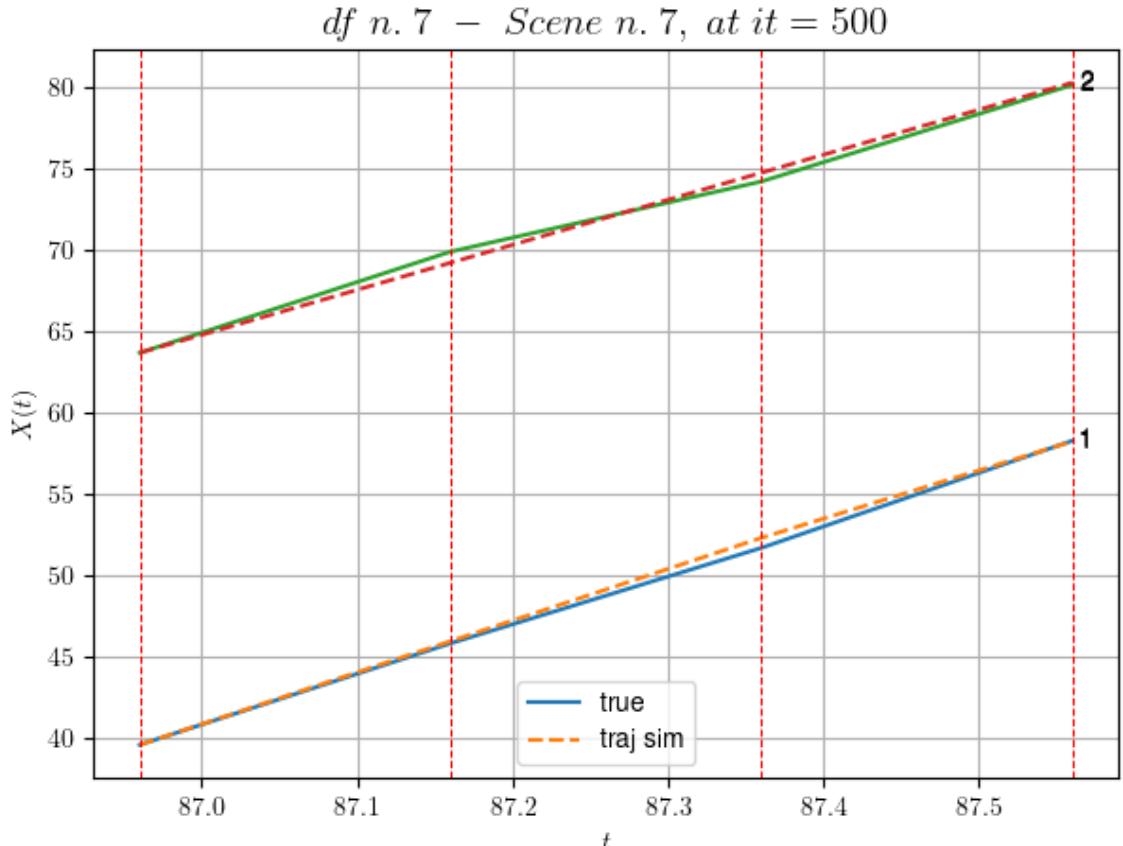
We have 3 time intervals inside [86.96, 87.56]

```
- Time interval n.0: [86.96, 87.16]
* y_true: [31.1433952]
* v_ann: [31.803098678588867, 27.633294787015906]
```

```
- Time interval n.1: [87.16, 87.36]
* y_true: [29.29438457]
* v_ann: [31.703847885131836, 27.633294787015906]
```

```
- Time interval n.2: [87.36, 87.56]
* y_true: [32.87952873]
* v_ann: [29.592798233032227, 27.633294787015906]
```

```
* err= 0.14647091188869643
* Learning rate NN = 2.952449540316593e-05
* diff = 1.7855398357635721e-06
```



For scene 7/30

```
* use LR_NN=5e-05 with err=0.643777068455684 at it=24
* v0_scn_mean = 27.72796299551704
* MAE = 0.1457676959003422
```

df n.7, scene n.8/30

We have 3 time intervals inside [90.56, 91.16]

- Time interval n.0: [90.56, 90.76]
 - * y_true: [33.04453039]
 - * v_ann: [32.69144058227539, 29.535694191255615]
-

- Time interval n.1: [90.76, 90.96]
 - * y_true: [36.18763126]
 - * v_ann: [32.934322357177734, 29.535694191255615]
-

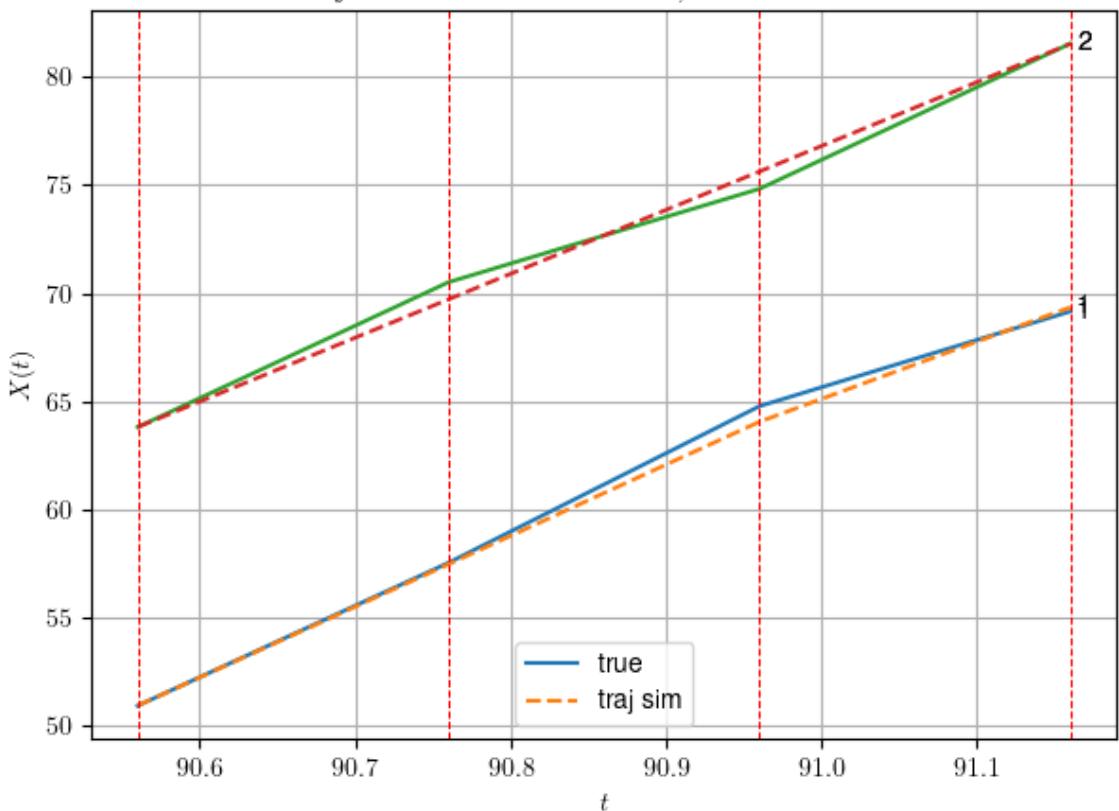
- Time interval n.2: [90.96, 91.16]
 - * y_true: [21.90135867]
 - * v_ann: [26.47846221923828, 29.535694191255615]
-

* err= 0.22876345111578947

* Learning rate NN = 5.904899080633186e-05

* diff = 0.00018315069684640695

df n. 7 – Scene n. 8, at it = 500

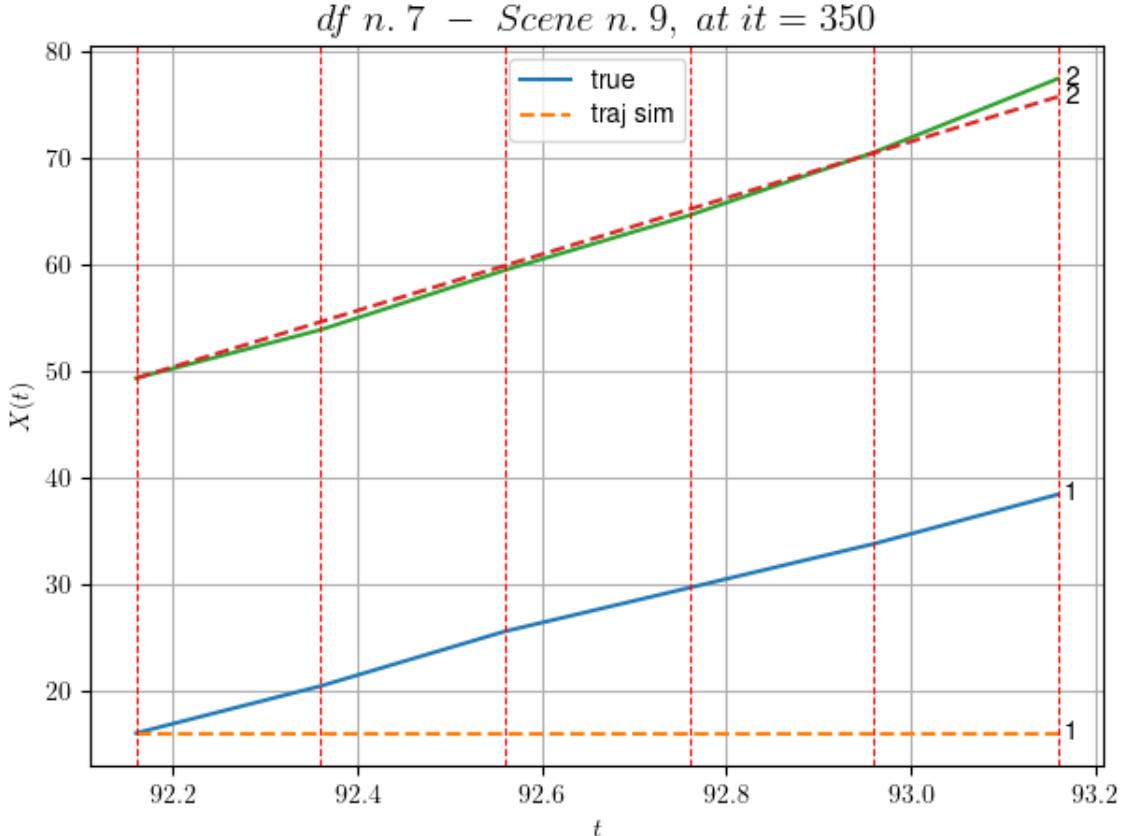


For scene 8/30

- * use LR_NN=0.0001 with err=0.24794264195832155 at it=24
 - * v0_scn_mean = 29.554266423601977
 - * MAE = 0.22876345111578947
-
-

df n.7, scene n.9/30

```
=====
=====
We have 5 time intervals inside [92.16,93.16]
* err= 93.09851992949476
* Learning rate NN = 0.000265720474999398
* diff = 1.220061904915501e-07
```



```
For scene 9/30
* use LR_NN=0.0005 with err=2.1590069709306654 at it=24
* v0_scn_mean = 26.612164146896426
* MAE = 20.686192191661213
```

df n.7, scene n.10/30

```
=====
=====
We have 7 time intervals inside [110.96,112.36]
```

- Time interval n.0: [110.96, 111.16]
 - * y_true: [22.6227995]
 - * v_ann: [-0.000166505720699206, 27.67625680745868]

5]

- Time interval n.1: [111.16, 111.36]
 - * y_true: [23.80055078]
 - * v_ann: [-0.00011524526053108275, 27.67625680745868]

85]

- Time interval n.2: [111.36, 111.56]

```
* y_true: [26.30746114]
* v_ann: [-6.029680298524909e-05, 27.6762568074586
5]

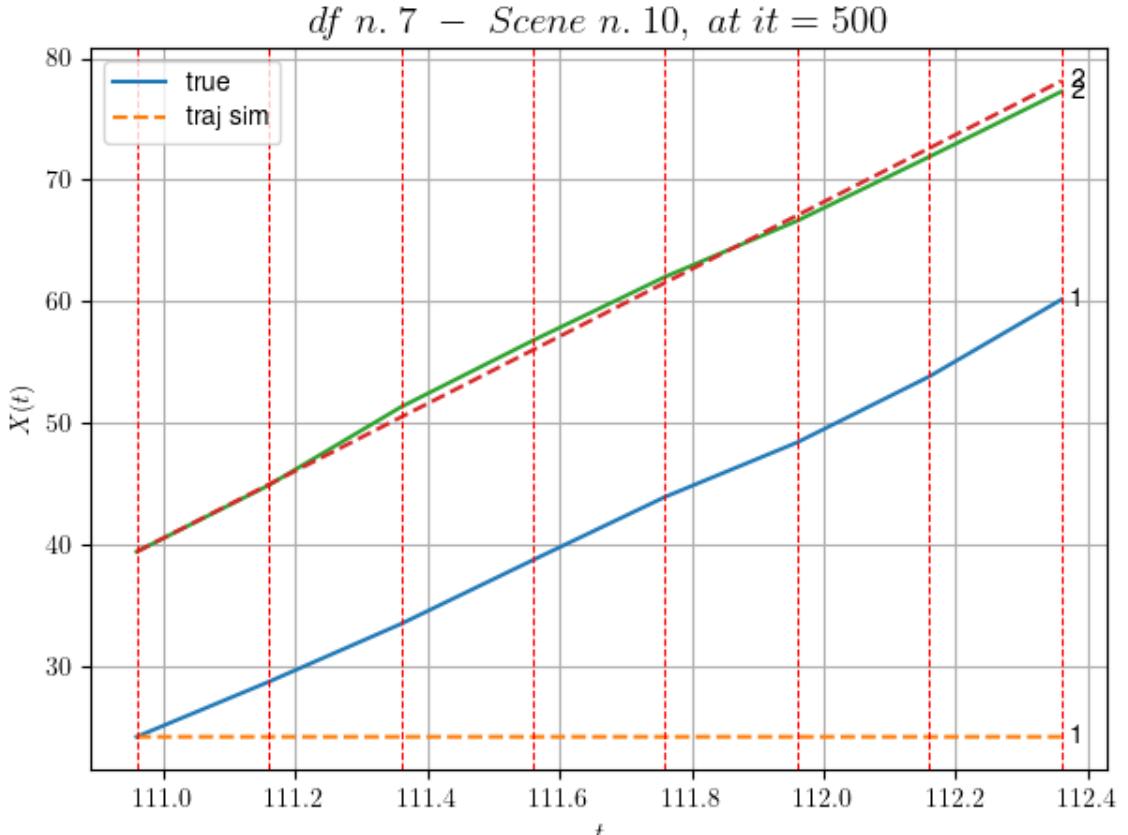
-----
- Time interval n.3: [111.56, 111.76]
* y_true: [25.96075112]
* v_ann: [-5.5376574891852215e-05, 27.6762568074586
85]

-----
- Time interval n.4: [111.76, 111.96]
* y_true: [22.42440713]
* v_ann: [-5.4464118875330314e-05, 27.6762568074586
85]

-----
- Time interval n.5: [111.96, 112.16]
* y_true: [27.11798837]
* v_ann: [-5.187340502743609e-05, 27.6762568074586
5]

-----
- Time interval n.6: [112.16, 112.36]
* y_true: [31.65227574]
* v_ann: [-5.5070227972464636e-05, 27.6762568074586
85]

-----
* err= 216.93516398458672
* Learning rate NN = 2.541864660088322e-06
* diff = 1.7294200631567946e-06
```



For scene 10/30

- * use LR_NN=1e-05 with err=2.556282245927705 at it=24
- * v0_scn_mean = 27.769206535142988
- * MAE = 216.93516398458672

df n.7, scene n.11/30

We have 3 time intervals inside [116.96, 117.56]

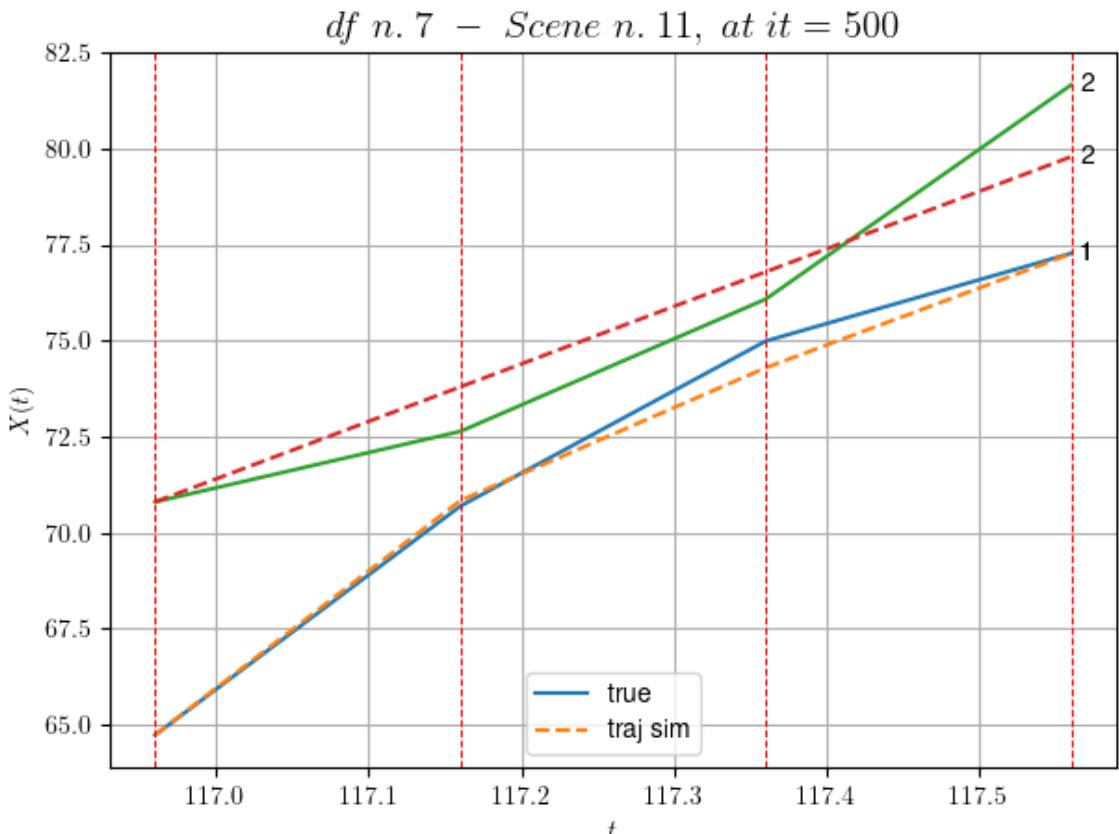
- Time interval n.0: [116.96, 117.16]
 - * y_true: [29.80898437]
 - * v_ann: [30.533279418945312, 14.981640724782267]

- Time interval n.1: [117.16, 117.36]
 - * y_true: [21.49364724]
 - * v_ann: [17.289188385009766, 14.981640724782267]

- Time interval n.2: [117.36, 117.56]
 - * y_true: [11.41585007]
 - * v_ann: [14.84550666809082, 14.981640724782267]

- * err= 0.7317961841589447
- * Learning rate NN = 0.0005904899444431067

* diff = 0.0002045634196660151



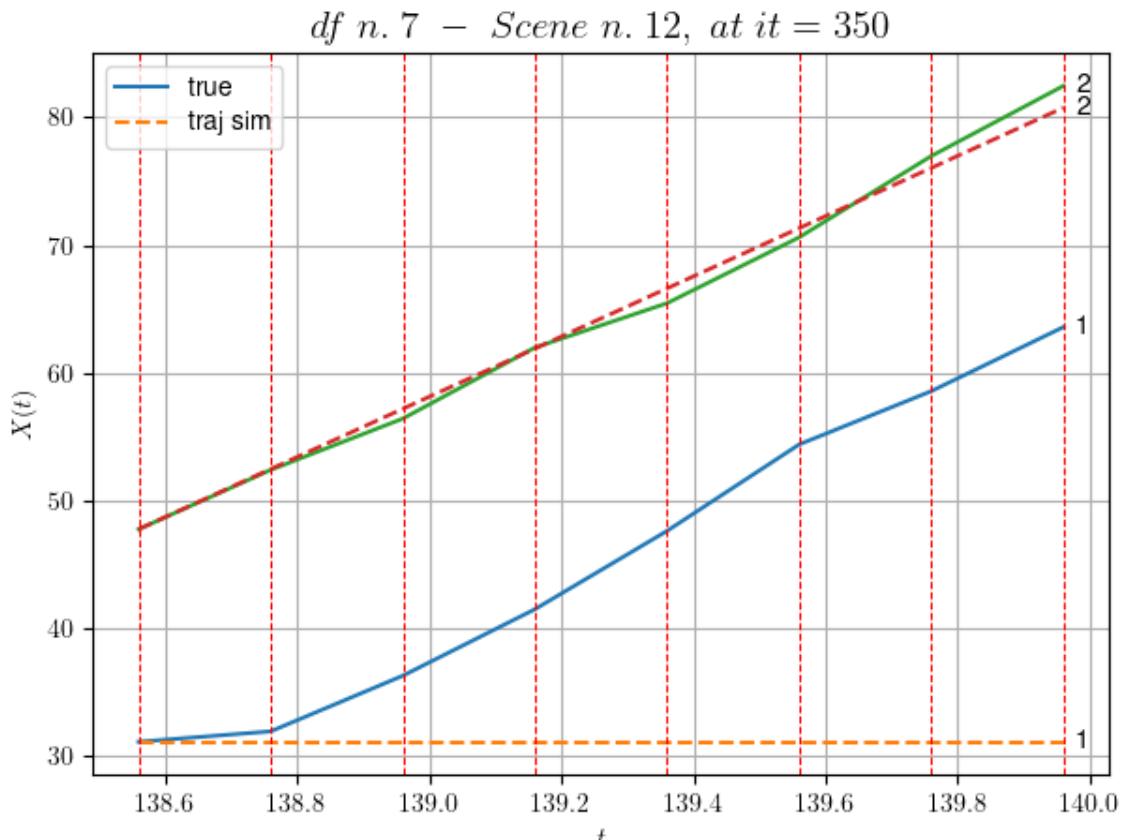
For scene 11/30

* use LR_NN=0.001 with err=14.8635924819682 at it=24
* v0_scn_mean = 15.582375095676255
* MAE = 0.7310874427181628

df n.7, scene n.12/30

We have 7 time intervals inside [138.56,139.96]

* err= 172.73024002610074
* Learning rate NN = 0.0001937102060765028
* diff = 2.4264505782412016e-07

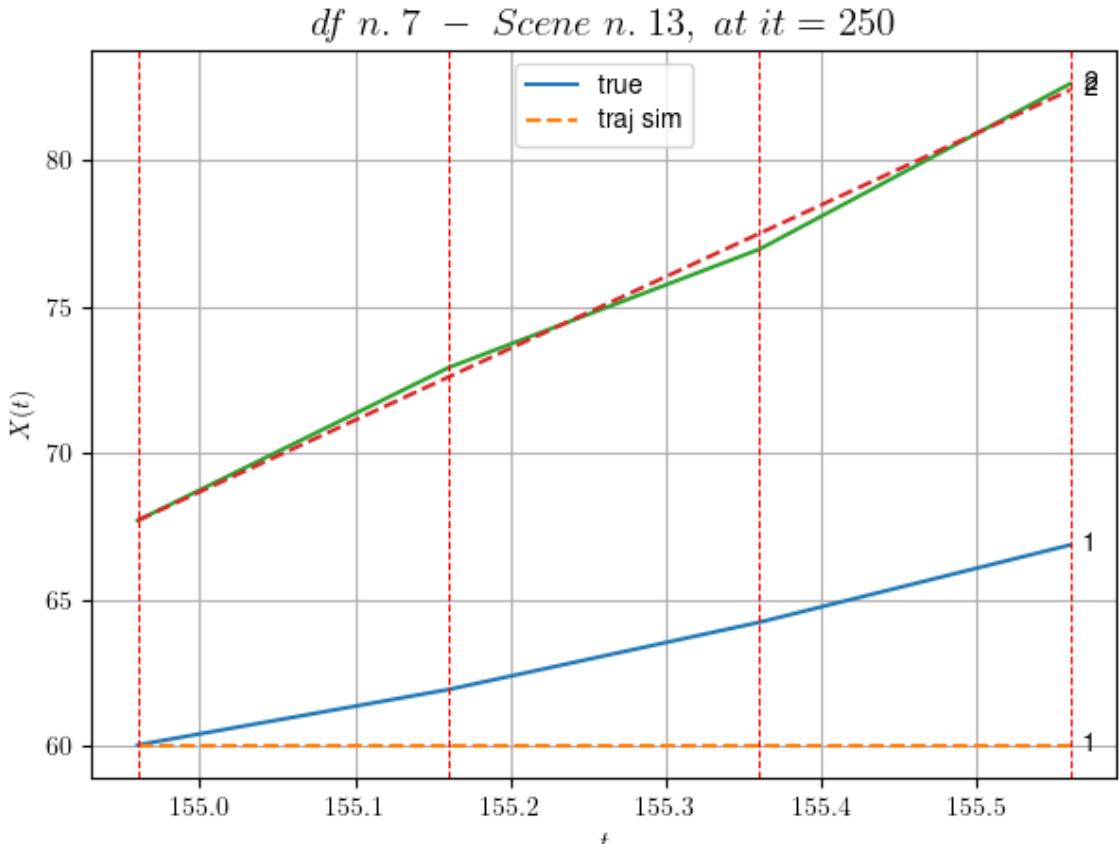


For scene 12/30

- * use LR_NN=0.0005 with err=15.030996004182956 at it=24
 - * v0_scn_mean = 23.940639035435936
 - * MAE = 71.83473323700844
-
-

df n.7, scene n.13/30

We have 3 time intervals inside [154.96,155.56]
* err= 8.547902453887916
* Learning rate NN = 0.00040499999886378646
* diff = 8.945870551002599e-07



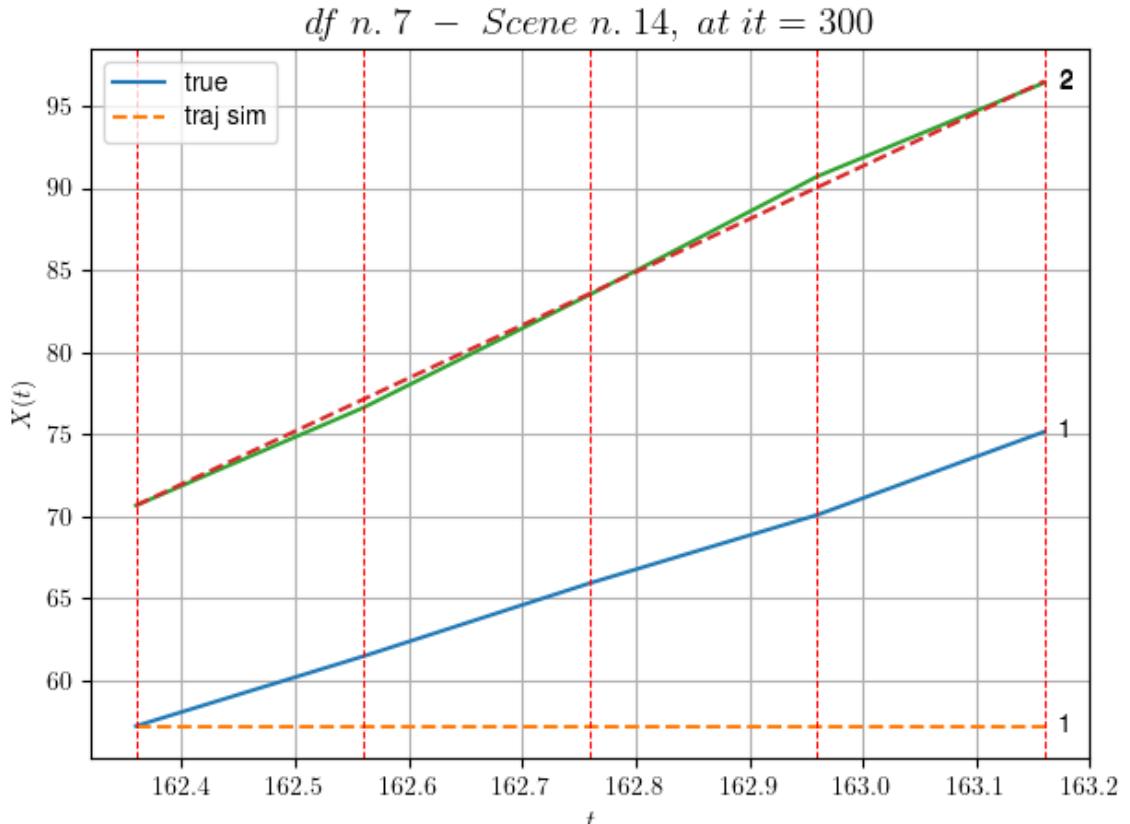
For scene 13/30

- * use LR_NN=0.0005 with err=2.1916516680967346 at it=24
 - * v0_scn_mean = 24.96288720555717
 - * MAE = 8.547902453887916
-
-

df n.7, scene n.14/30

We have 4 time intervals inside [162.36,163.16]

- * err= 58.23120873684399
- * Learning rate NN = 0.0006560999318026006
- * diff = 2.314747860054922e-07

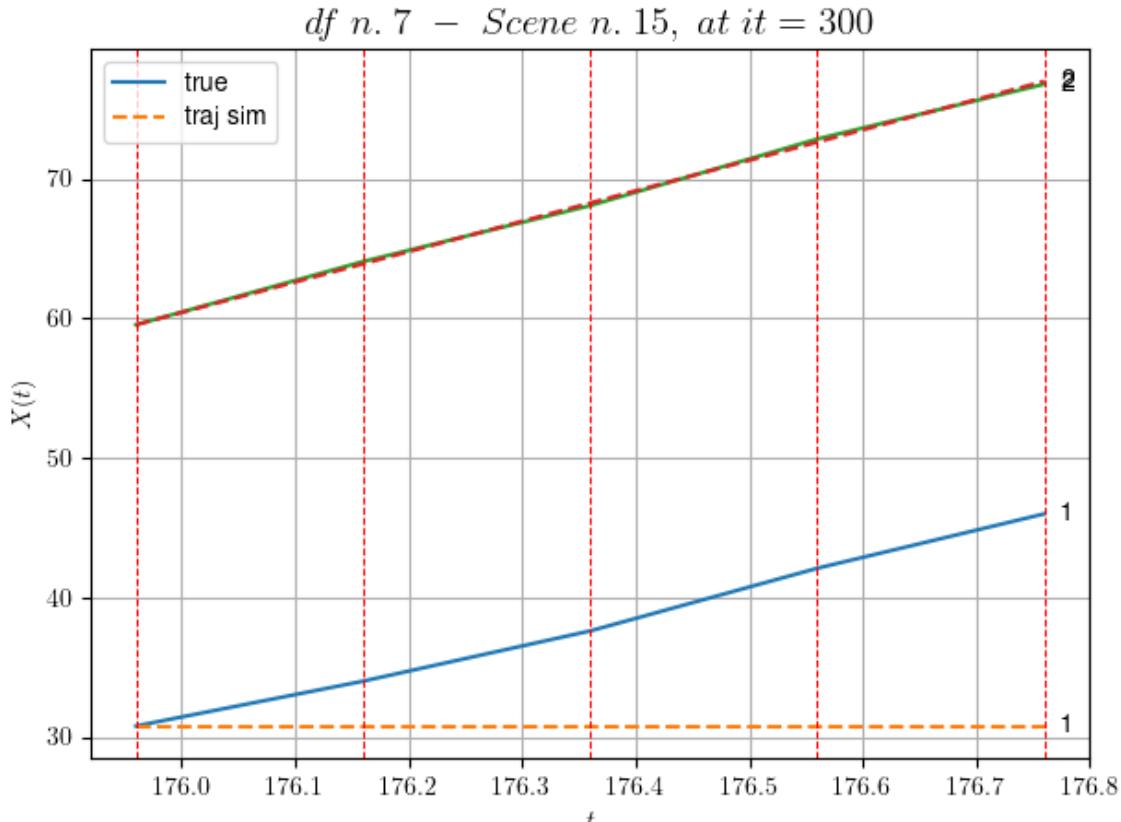


For scene 14/30

* use LR_NN=0.001 with err=0.8915131135383596 at it=24
* v0_scn_mean = 32.168868543640805
* MAE = 58.23120873684399

df n.7, scene n.15/30

We have 4 time intervals inside [175.96,176.76]
* err= 41.598210540864635
* Learning rate NN = 3.2804993679746985e-05
* diff = 2.8769269277972853e-07



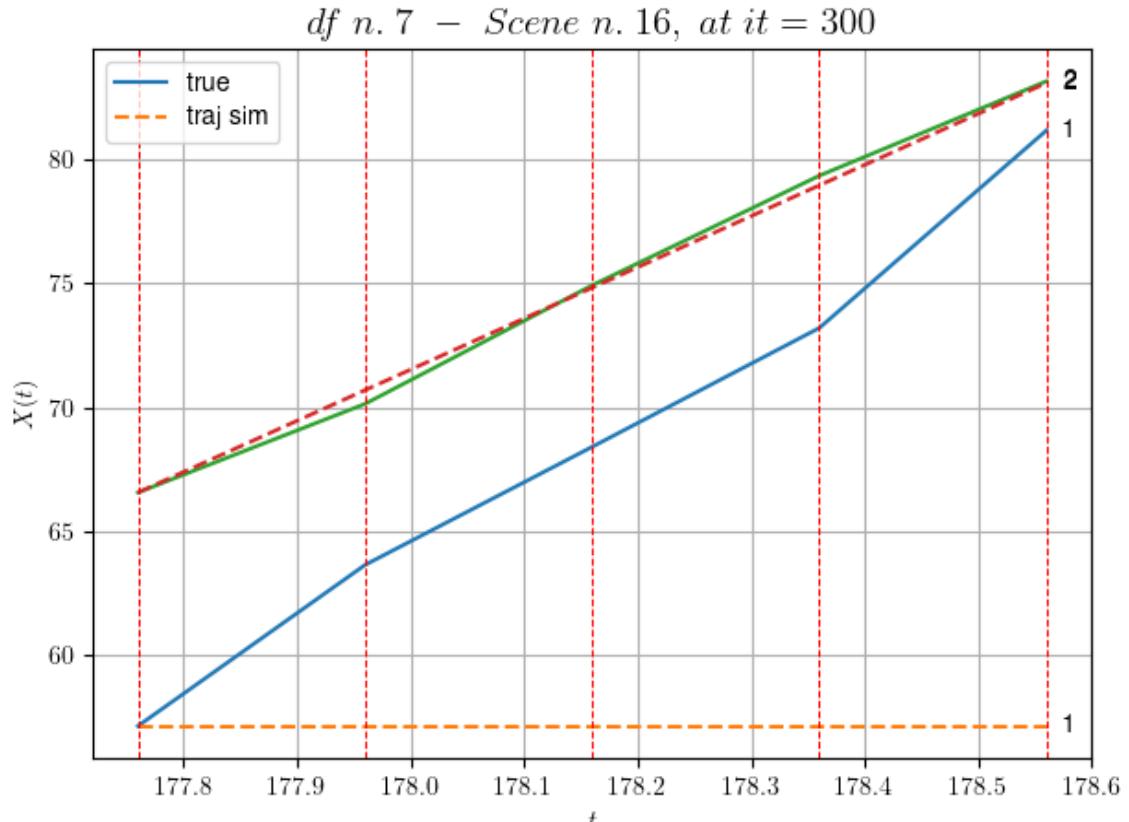
For scene 15/30

- * use LR_NN=5e-05 with err=8.23717605852201 at it=24
- * v0_scn_mean = 22.36032045754697
- * MAE = 41.598210540864635

df n.7, scene n.16/30

We have 4 time intervals inside [177.76,178.56]

- * err= 100.77873460619159
- * Learning rate NN = 6.560998735949397e-05
- * diff = 9.88037129445729e-07

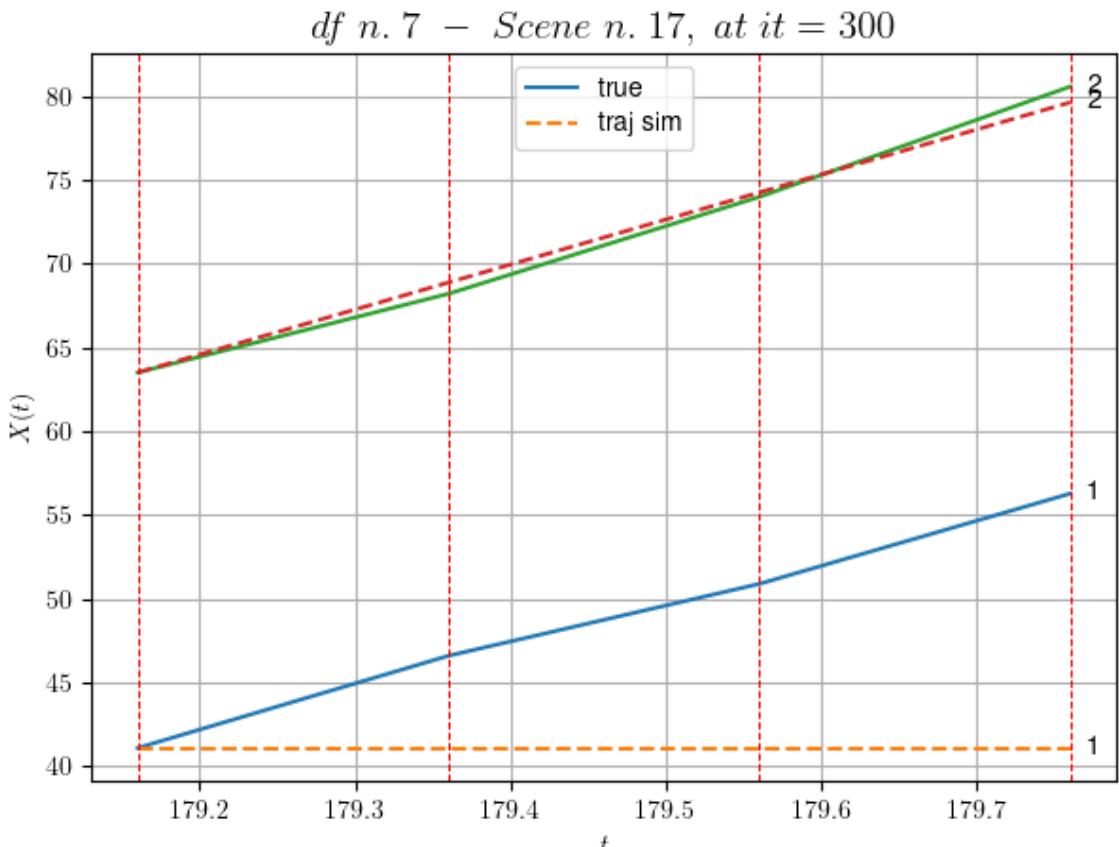


For scene 16/30

* use LR_NN=0.0001 with err=11.115804638296085 at it=24
* v0_scn_mean = 21.304624327829327
* MAE = 100.77482772900413

df n.7, scene n.17/30

We have 3 time intervals inside [179.16,179.76]
* err= 44.806385709512085
* Learning rate NN = 7.289998757187277e-05
* diff = 6.246717347835329e-07



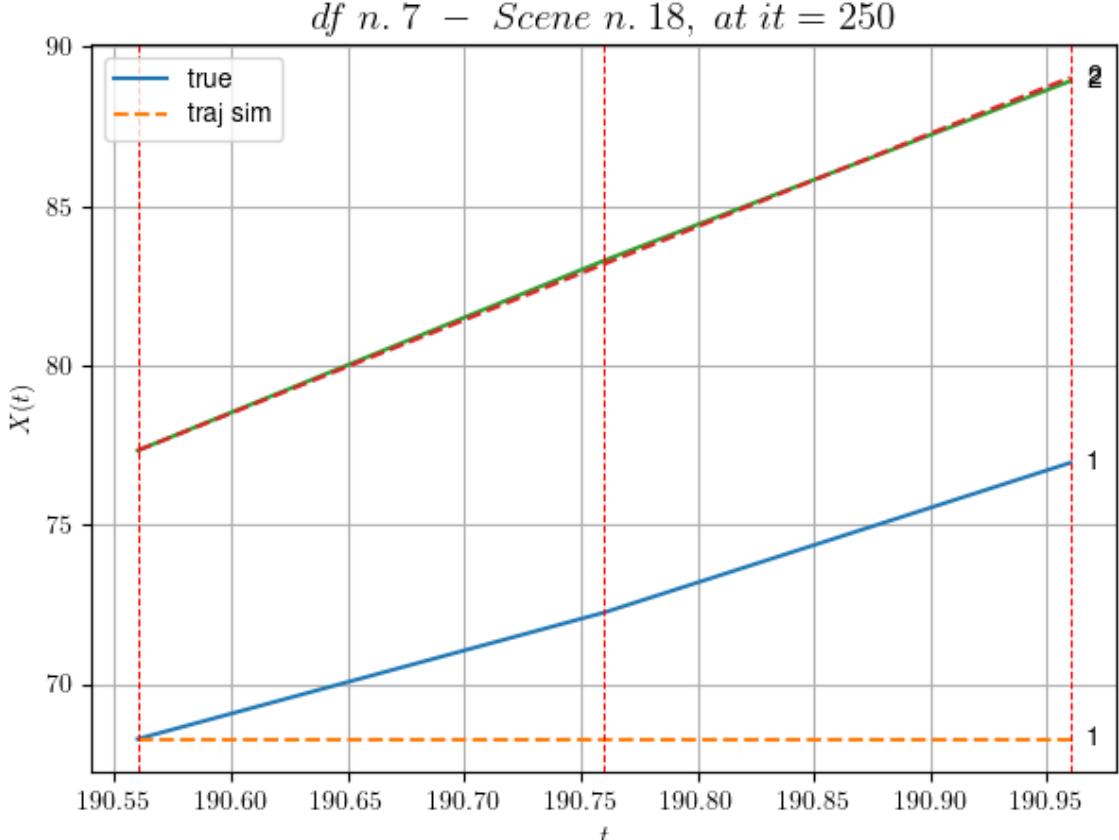
For scene 17/30

- * use LR_NN=0.0001 with err=0.6376637213733771 at it=24
 - * v0_scn_mean = 27.090214455479558
 - * MAE = 44.78304862342164
-
-

df n.7, scene n.18/30

We have 2 time intervals inside [190.56,190.96]

- * err= 15.172852002713537
- * Learning rate NN = 0.0004500000213738531
- * diff = 1.694245970185193e-07



For scene 18/30

- * use LR_NN=0.0005 with err=0.02762135039285992 at it=24
- * v0_scn_mean = 29.34093584942415
- * MAE = 15.172852002713537

df n.7, scene n.19/30

We have 3 time intervals inside [206.96, 207.56]

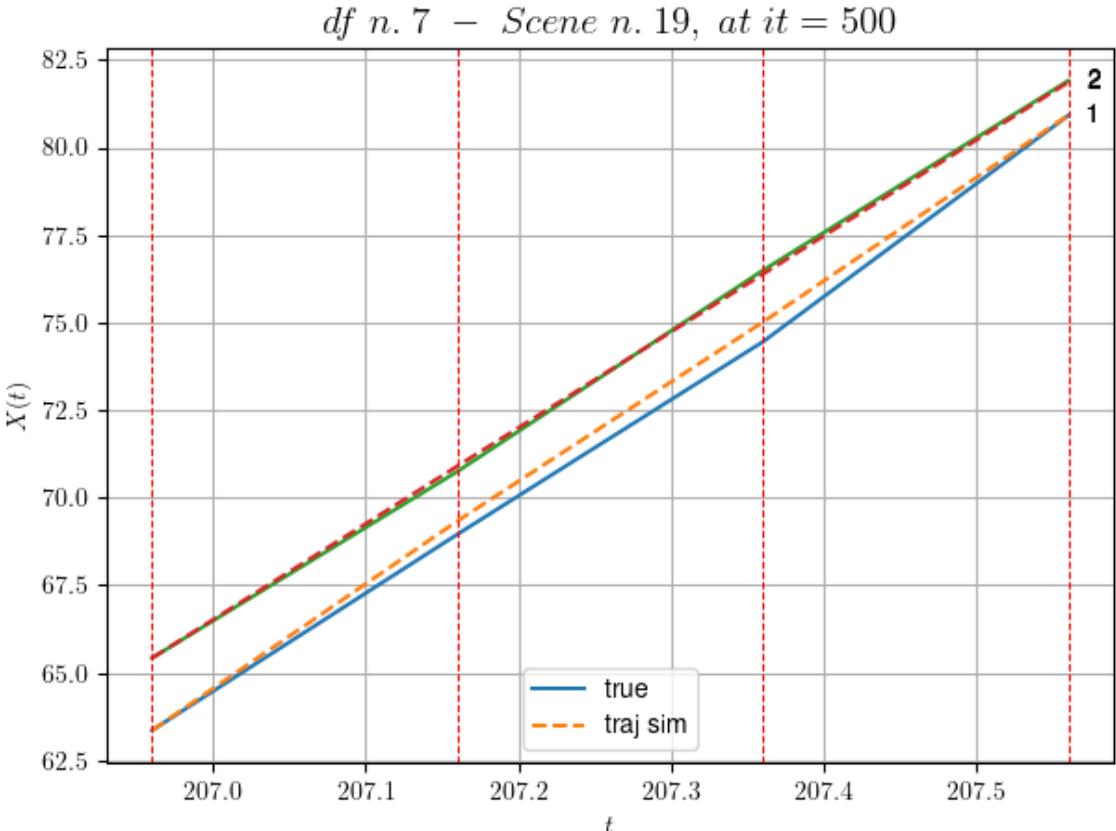
- Time interval n.0: [206.96, 207.16]
 - * y_true: [27.98987794]
 - * v_ann: [29.88715934753418, 27.399256338801134]

- Time interval n.1: [207.16, 207.36]
 - * y_true: [27.47773295]
 - * v_ann: [28.388105392456055, 27.399256338801134]

- Time interval n.2: [207.36, 207.56]
 - * y_true: [32.29931303]
 - * v_ann: [29.537324905395508, 27.399256338801134]

- * err= 0.062077028813240495
- * Learning rate NN = 0.0002952449722215533

* diff = 2.2787449340436194e-05



For scene 19/30

* use LR_NN=0.0005 with err=0.49857206861027964 at it=24
 * v0_scn_mean = 27.503286085228808
 * MAE = 0.061841399794974224

df n.7, scene n.20/30

We have 7 time intervals inside [219.96, 221.36]

- Time interval n.0: [219.96, 220.16]
 - * y_true: [26.85290938]
 - * v_ann: [30.05491828918457, 31.227007582862335]

- Time interval n.1: [220.16, 220.36]
 - * y_true: [28.31792495]
 - * v_ann: [30.377347946166992, 31.227007582862335]

- Time interval n.2: [220.36, 220.56]
 - * y_true: [31.38990118]
 - * v_ann: [30.568771362304688, 31.227007582862335]

- Time interval n.3: [220.56, 220.76]

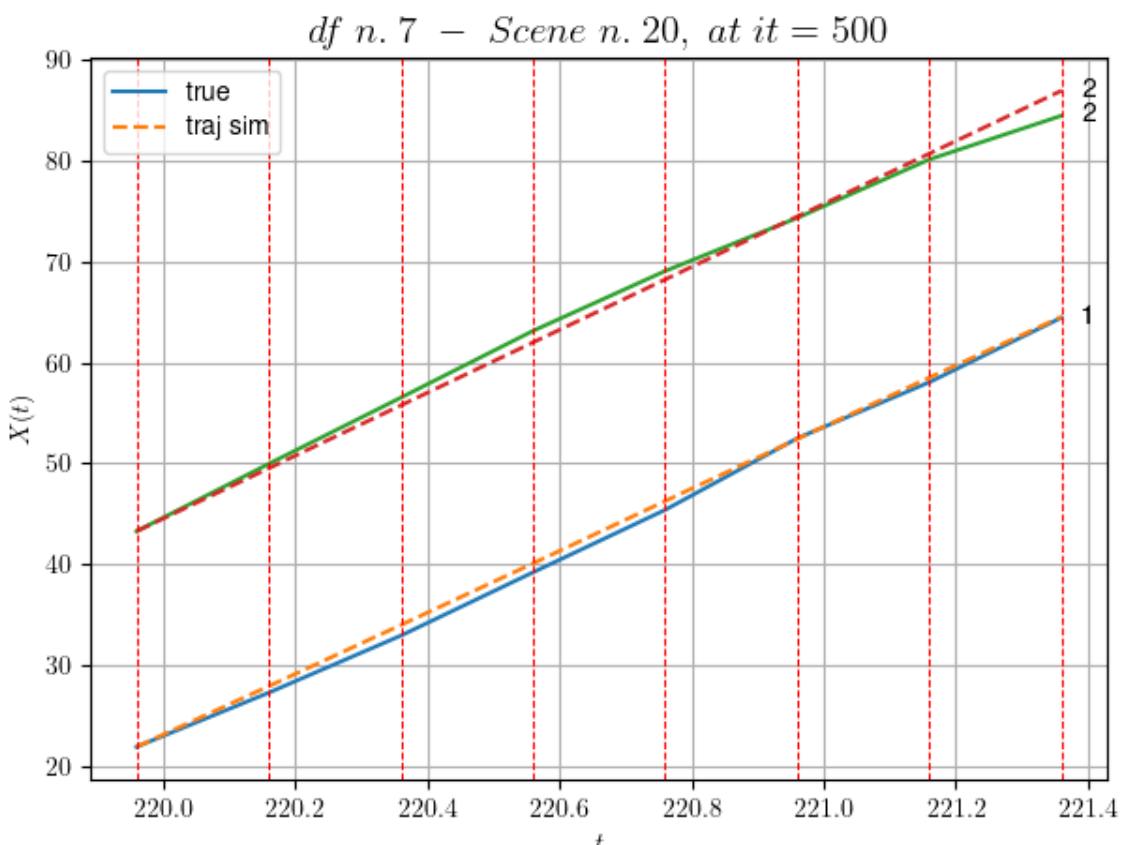
```
* y_true: [30.99769]
* v_ann: [30.92009925842285, 31.227007582862335]
```

```
- Time interval n.4: [220.76, 220.96]
* y_true: [35.50488652]
* v_ann: [30.779062271118164, 31.227007582862335]
```

```
- Time interval n.5: [220.96, 221.16]
* y_true: [27.84910592]
* v_ann: [30.478242874145508, 31.227007582862335]
```

```
- Time interval n.6: [221.16, 221.36]
* y_true: [32.01250046]
* v_ann: [30.21809959411621, 31.227007582862335]
```

```
* err= 0.7872655869253677
* Learning rate NN = 1.2709323527815286e-05
* diff = 0.0004265293068794751
```

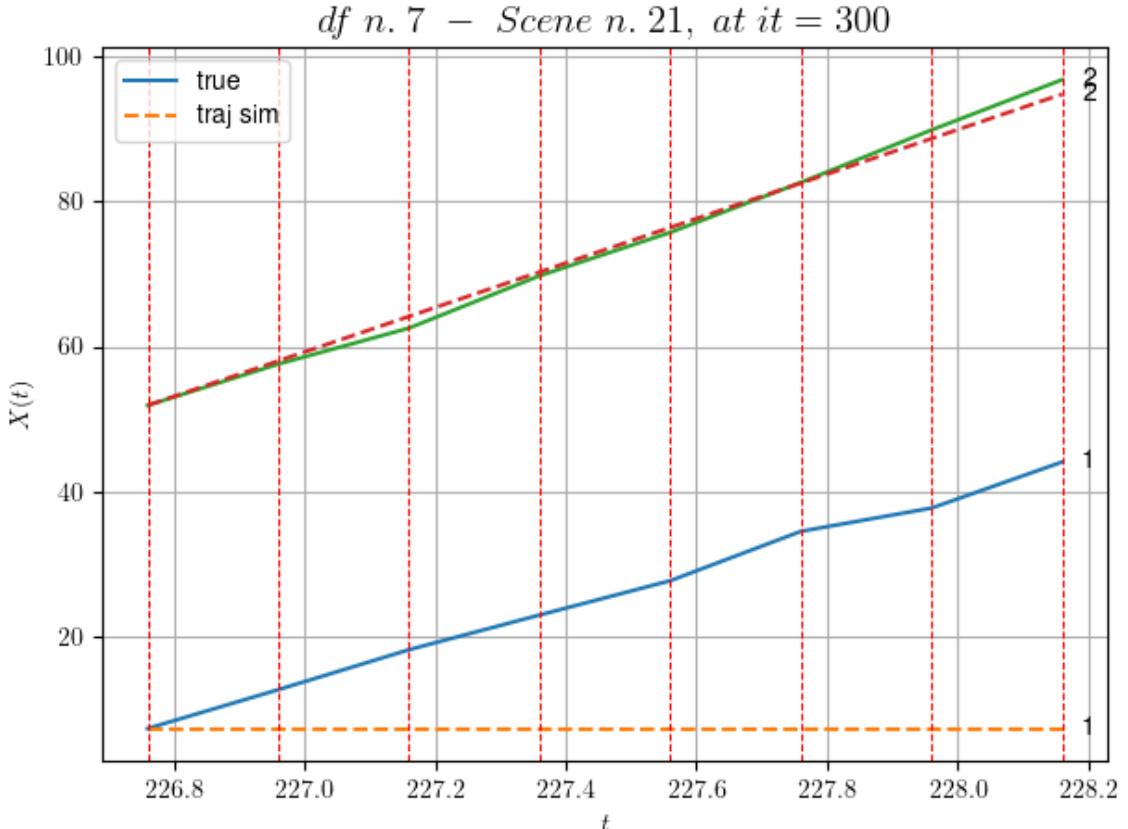


For scene 20/30

```
* use LR_NN=5e-05 with err=0.9063322037633106 at it=24
* v0_scn_mean = 31.17792727955711
* MAE = 0.6643942929938813
```

```
df n.7, scene n.21/30
```

```
We have 7 time intervals inside [226.76,228.16]
* err= 239.9392758548703
* Learning rate NN = 2.1523355826502666e-05
* diff = 5.82800263960371e-07
```



For scene 21/30

- * use LR_NN=5e-05 with err=1.2768129700342215 at it=24
- * v0_scn_mean = 30.65180391256496
- * MAE = 2.684082777606853

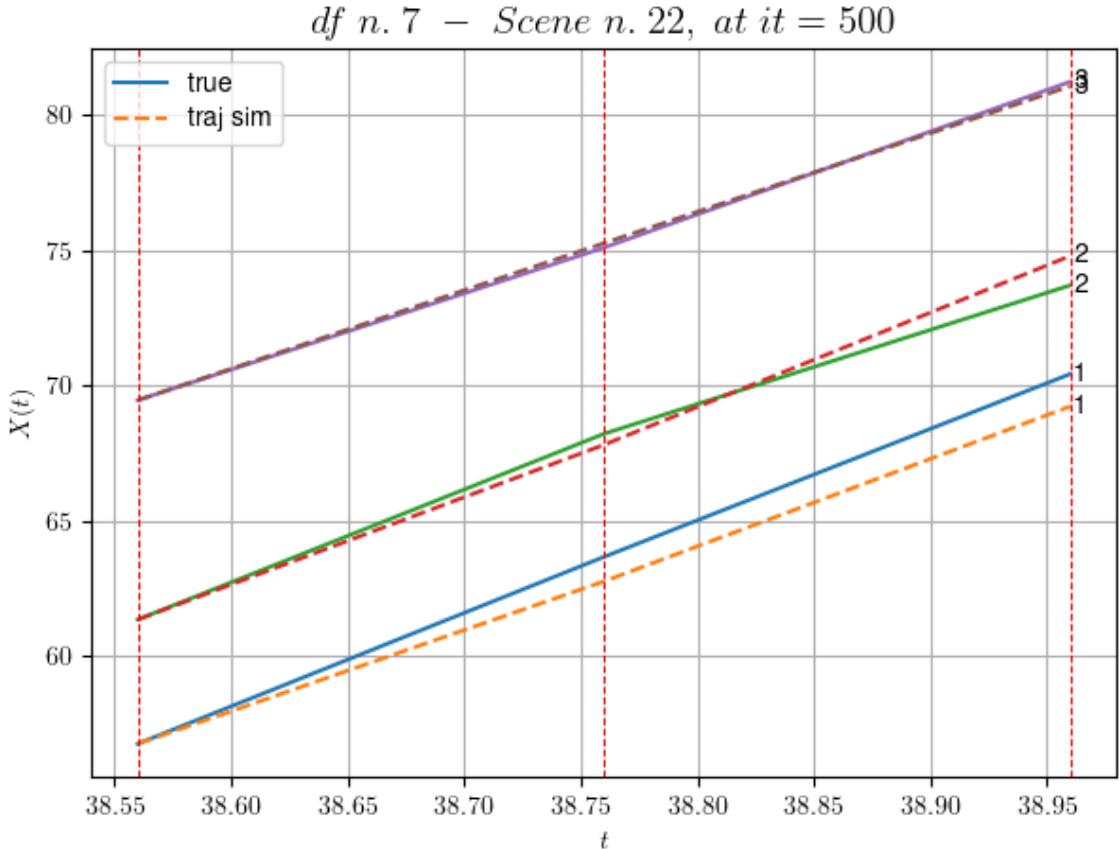
```
df n.7, scene n.22/30
```

```
We have 2 time intervals inside [38.56,38.96]
```

- Time interval n.0: [38.56, 38.76]
 - * y_true: [34.50899027 34.29923068]
 - * v_ann: [29.984832763671875, 32.27121353149414, 2
 - 8.990010590084953]

- Time interval n.1: [38.76, 38.96]
 - * y_true: [33.76780394 27.40980382]
 - * v_ann: [32.31267166137695, 34.867515563964844, 2
 - 8.990010590084953]

```
* err= 0.40526201277831625
* Learning rate NN = 0.0007289999630302191
* diff = 0.012274926831003063
```



For scene 22/30

```
* use LR_NN=0.001 with err=3.461251781836548 at it=24
* v0_scn_mean = 29.05060990933341
* MAE = 0.40526201277831625
```

df n.7, scene n.23/30

We have 3 time intervals inside [39.76, 40.36]

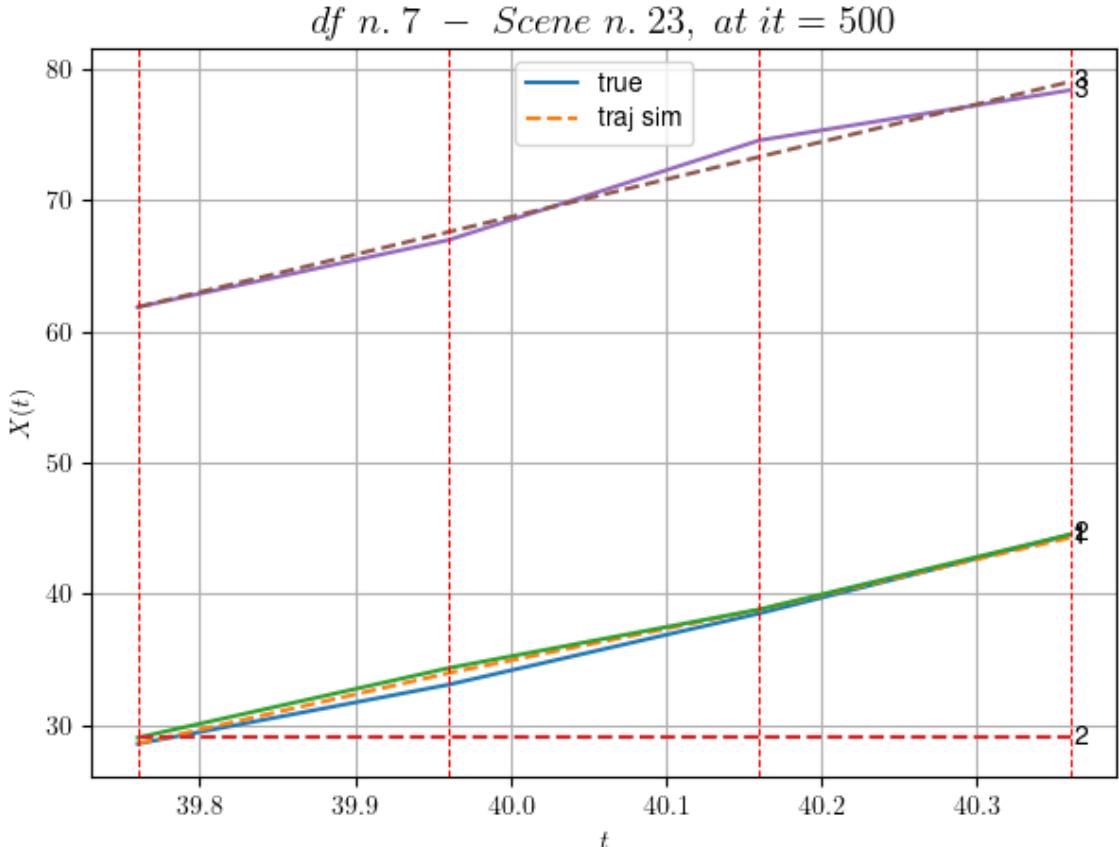
- Time interval n.0: [39.76, 39.96]
 - * y_true: [22.5368218 26.50901133]
 - * v_ann: [26.936185836791992, 7.621059894269422e-1

- Time interval n.1: [39.96, 40.16]
 - * y_true: [27.13488394 22.34107329]
 - * v_ann: [24.1932373046875, 8.566572451407239e-10,

- Time interval n.2: [40.16, 40.36]

```
* y_true: [29.97962766 28.56631616]
* v_ann: [27.415822982788086, 5.347630324670227e-1
1, 28.629752721377052]
```

```
-----  
-----  
* err= 30.547806989797337  
* Learning rate NN = 0.0002952449722215533  
* diff = 9.027191905985887e-05
```



For scene 23/30

```
* use LR_NN=0.0005 with err=22.576557647912058 at it=24
* v0_scn_mean = 28.711967496573365
* MAE = 5.137124017841415
```

```
=====
```

```
=====
```

df n.7, scene n.24/30

```
=====
```

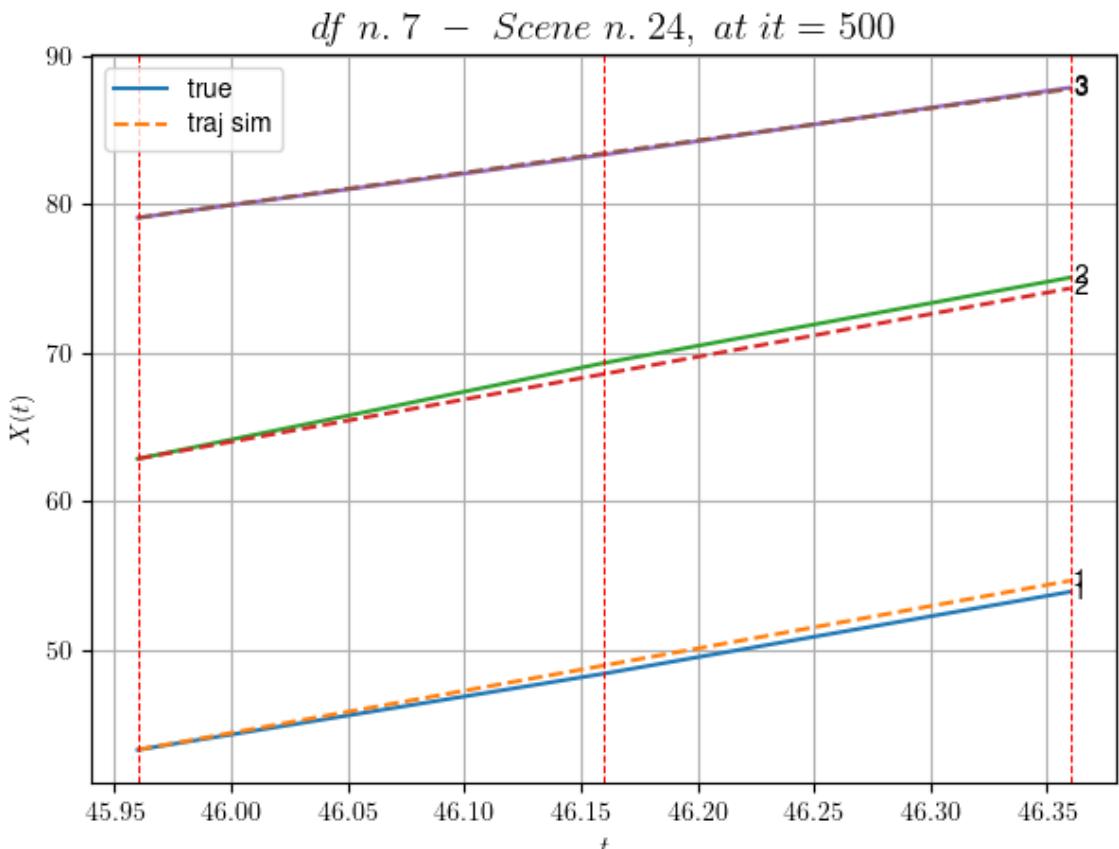
```
=====
```

We have 2 time intervals inside [45.96, 46.36]

- Time interval n.0: [45.96, 46.16]
 - * y_true: [25.63954073 32.24792255]
 - * v_ann: [28.384645462036133, 28.55082130432129, 2
 1.679366296074924]

- Time interval n.1: [46.16, 46.36]
 - * y_true: [27.5623729 28.76269973]
 - * v_ann: [28.551687240600586, 28.816415786743164, 2
 1.679366296074924]

```
* err= 0.2171013368506758
* Learning rate NN = 3.6449993785936385e-05
* diff = 0.00027496556030806585
```



For scene 24/30

```
* use LR_NN=5e-05 with err=3.1336985468411114 at it=24
* v0_scn_mean = 22.178603944732043
* MAE = 0.21487311891780925
```

df n.7, scene n.25/30

We have 2 time intervals inside [162.76,163.16]

- Time interval n.0: [162.76, 162.96]
 - * y_true: [10.08699654 20.77195672]
 - * v_ann: [18.68456268310547, 19.007339477539062, 3

3.51455461644851]

- Time interval n.1: [162.96, 163.16]

- * y_true: [12.77745535 25.37230132]
- * v_ann: [15.987476348876953, 16.145084381103516, 3

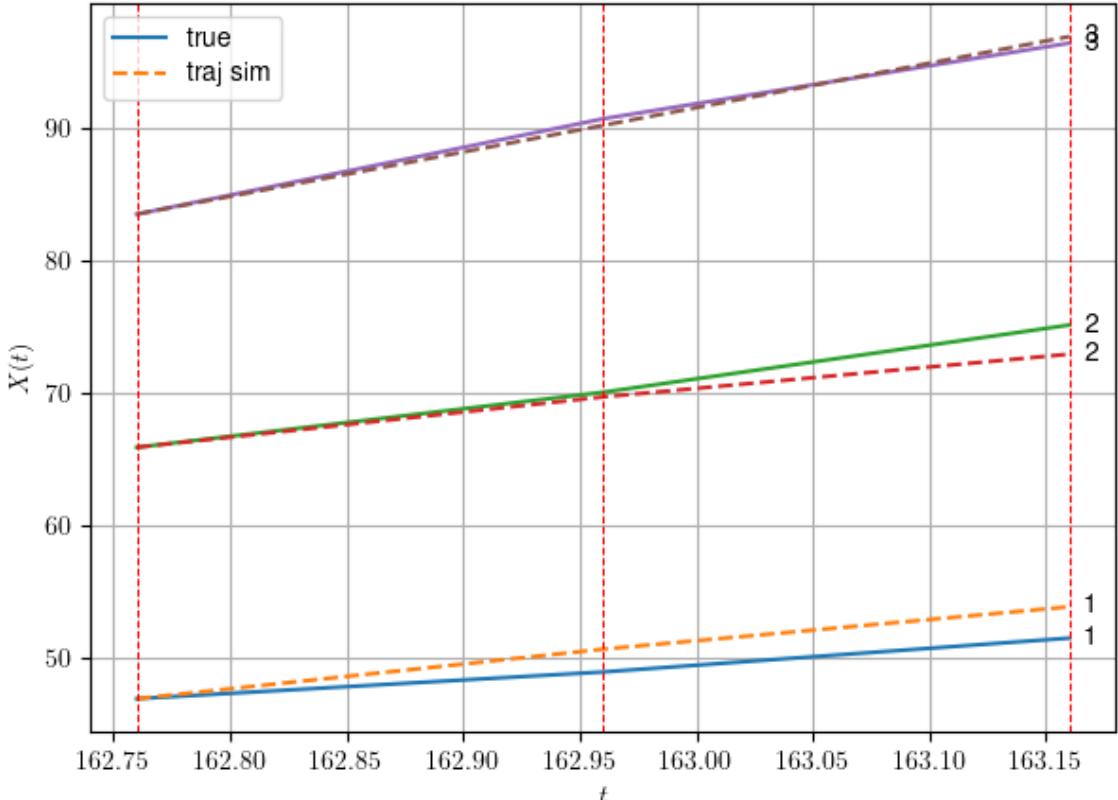
3.51455461644851]

```

* err= 1.5536208627418449
* Learning rate NN = 7.289998757187277e-05
* diff = 0.0005705722171054280

```

df n. 7 – Scene n. 25, at it = 500



For scene 25/30

```

* use LR_NN=0.0001 with err=1.9466261564511804 at it=24
* v0_scn_mean = 33.30368149725749
* MAE = 1.551724451934467

```

df n.7, scene n.26/30

We have 3 time intervals inside [165.76, 166.36]

- Time interval n.0: [165.76, 165.96]
 - * y_true: [14.62535373 14.97522028]
 - * v_ann: [14.62668228149414, 14.122709274291992, 2

7.262209824915317]

- Time interval n.1: [165.96, 166.16]
 - * y_true: [14.90483904 10.97892299]
 - * v_ann: [14.917858123779297, 14.506943702697754, 2

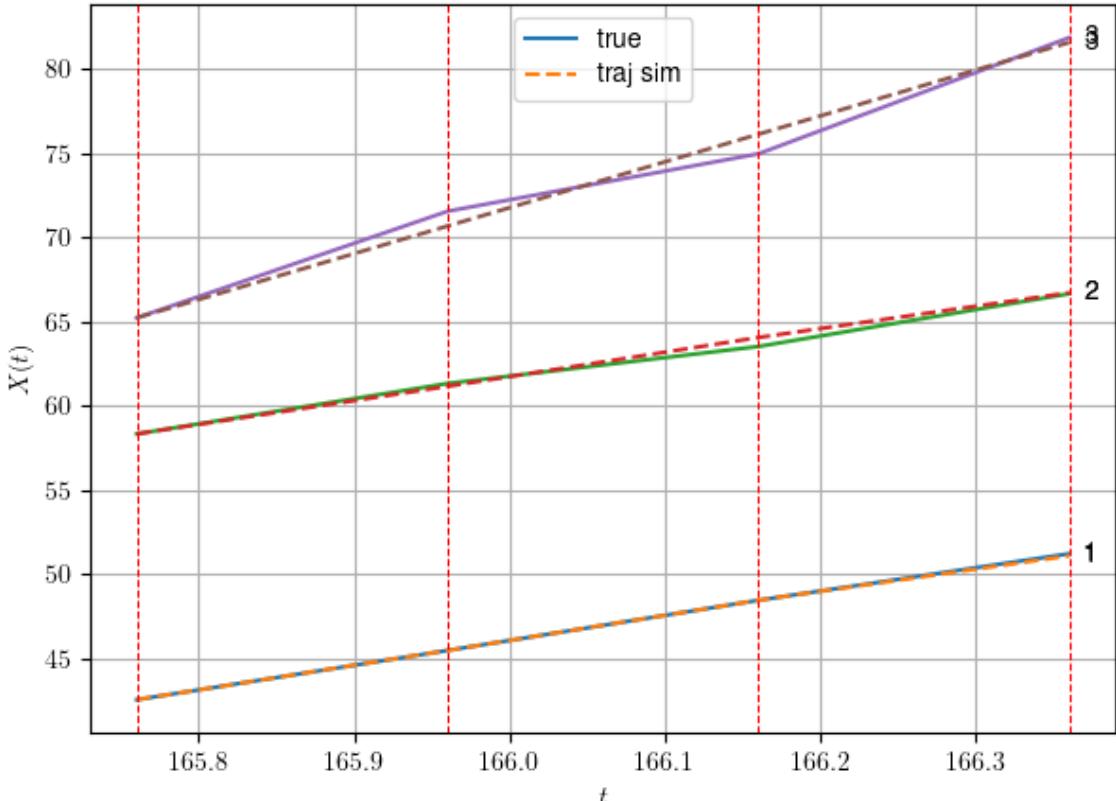
7.262209824915317]

- Time interval n.2: [166.16, 166.36]
 - * y_true: [13.82116599 15.66867879]

```
* v_ann: [13.17902660369873, 13.289602279663086, 2  
7.262209824915317]
```

```
* err= 0.2115253207630837  
* Learning rate NN = 0.0005904899444431067  
* diff = 0.001156922791967951
```

df n. 7 – Scene n. 26, at it = 500



For scene 26/30

```
* use LR_NN=0.001 with err=1.453565591122093 at it=24  
* v0_scn_mean = 27.42647711250021  
* MAE = 0.20828124723327732
```

df n. 7, scene n. 27/30

We have 3 time intervals inside [188.16, 188.76]

- Time interval n.0: [188.16, 188.36]
 - * y_true: [18.26365072 21.2472937]
 - * v_ann: [19.403331756591797, 21.780261993408203, 2
4.898608242941737]

- Time interval n.1: [188.36, 188.56]
 - * y_true: [19.58083161 26.63811802]
 - * v_ann: [19.403335571289062, 21.75059700012207, 2
4.898608242941737]

```

-----  

- Time interval n.2: [188.56, 188.76]  

  * y_true: [19.1135942 21.22632097]  

  * v_ann: [19.982561111450195, 22.168617248535156, 2  

4.898608242941737]

```

```

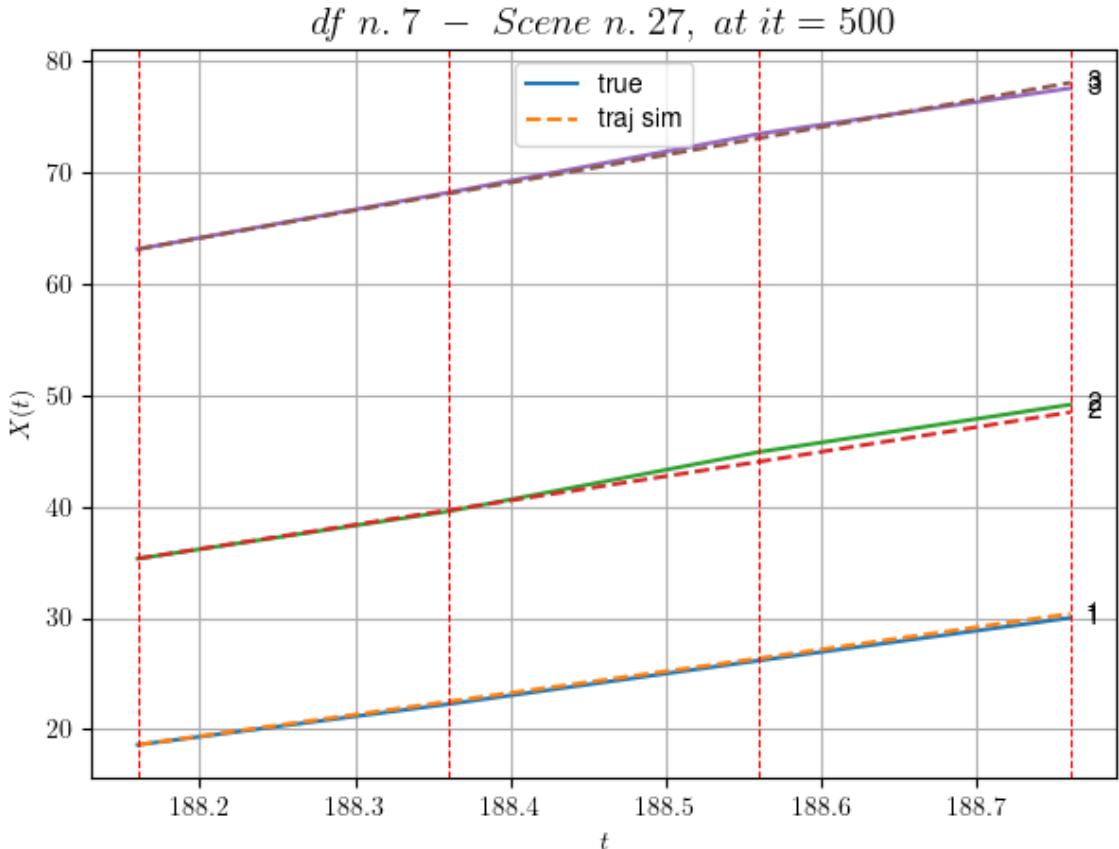
-----  

* err= 0.15596188811486686  

* Learning rate NN = 2.952449540316593e-05  

* diff = 0 0046412302646708293

```



For scene 27/30

```

* use LR_NN=5e-05 with err=2.058422032948144 at it=24
* v0_scn_mean = 25.204691519323852
* MAE = 0.1208230255568312

```

df n.7, scene n.28/30

```

=====  

We have 2 time intervals inside [220.96,221.36]  

- Time interval n.0: [220.96, 221.16]  

  * y_true: [27.25777683 27.84910592]  

  * v_ann: [26.508621215820312, 28.913284301757812, 2  

6.57984540605252]

```

```

- Time interval n.1: [221.16, 221.36]

```

```

* y_true: [24.9447965 32.01250046]
* v_ann: [26.382347106933594, 28.646135330200195, 2
6.57984540605252]

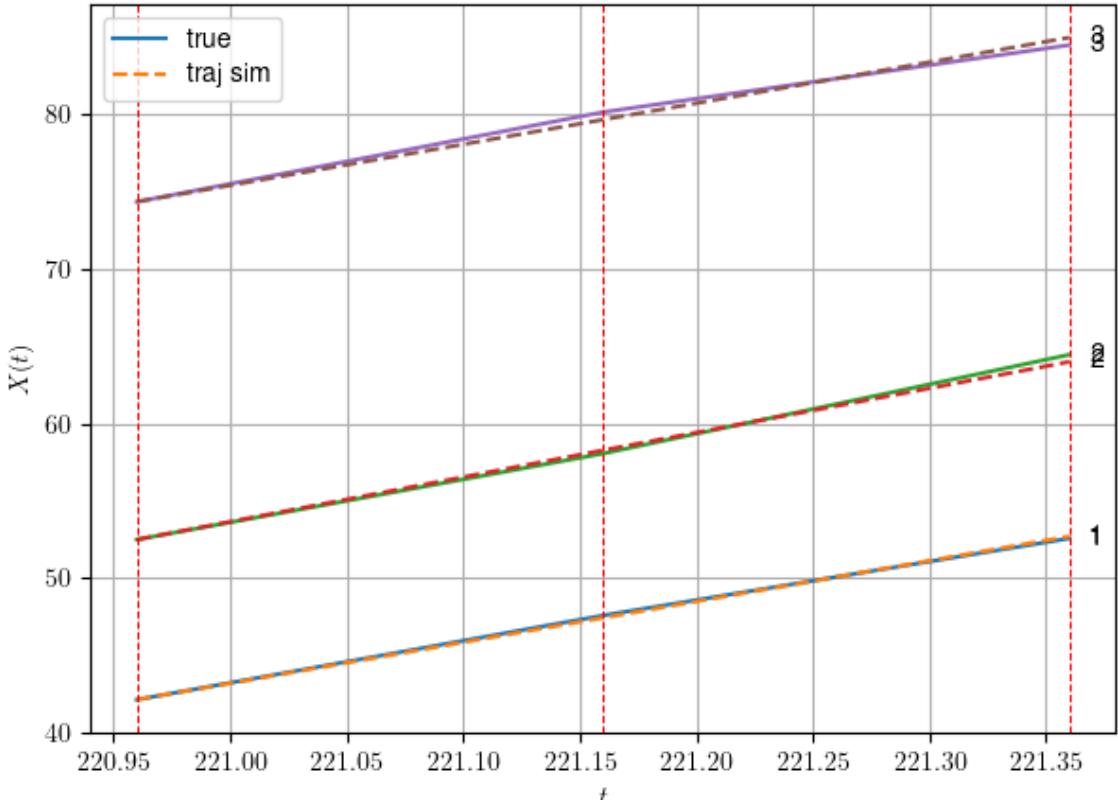
```

```

* err= 0.08600219696512441
* Learning rate NN = 7.289998757187277e-05
* diff = 0.0028584483631404756

```

df n. 7 – Scene n. 28, at it = 500



For scene 28/30

```

* use LR_NN=0.0001 with err=2.9867754781027753 at it=24
* v0_scn_mean = 26.785054528132008
* MAE = 0.08191415768725308

```

df n.7, scene n.29/30

We have 4 time intervals inside [166.56,167.36]

- Time interval n.0: [166.56, 166.76]
 - * y_true: [17.24164345 15.73752306 15.58083022]
 - * v_ann: [17.874277114868164, 17.847322463989258, 1
7.85905647277832, 17.368635969066002]

- Time interval n.1: [166.76, 166.96]
 - * y_true: [18.38470966 27.72552812 9.3330177]
 - * v_ann: [17.414758682250977, 17.71056365966797, 1
7.565059661865234, 17.368635969066002]

```

-----  

- Time interval n.2: [166.96, 167.16]  

* y_true: [16.02323775 24.97208403 13.98221987]  

* v_ann: [17.673202514648438, 17.81024932861328, 1  

7.732311248779297, 17.368635969066002]  

-----  

- Time interval n.3: [167.16, 167.36]  

* y_true: [18.26534189 20.06151439 15.46259314]  

* v_ann: [17.85458755493164, 17.819276809692383, 1  

7.84706687927246, 17.368635969066002]  

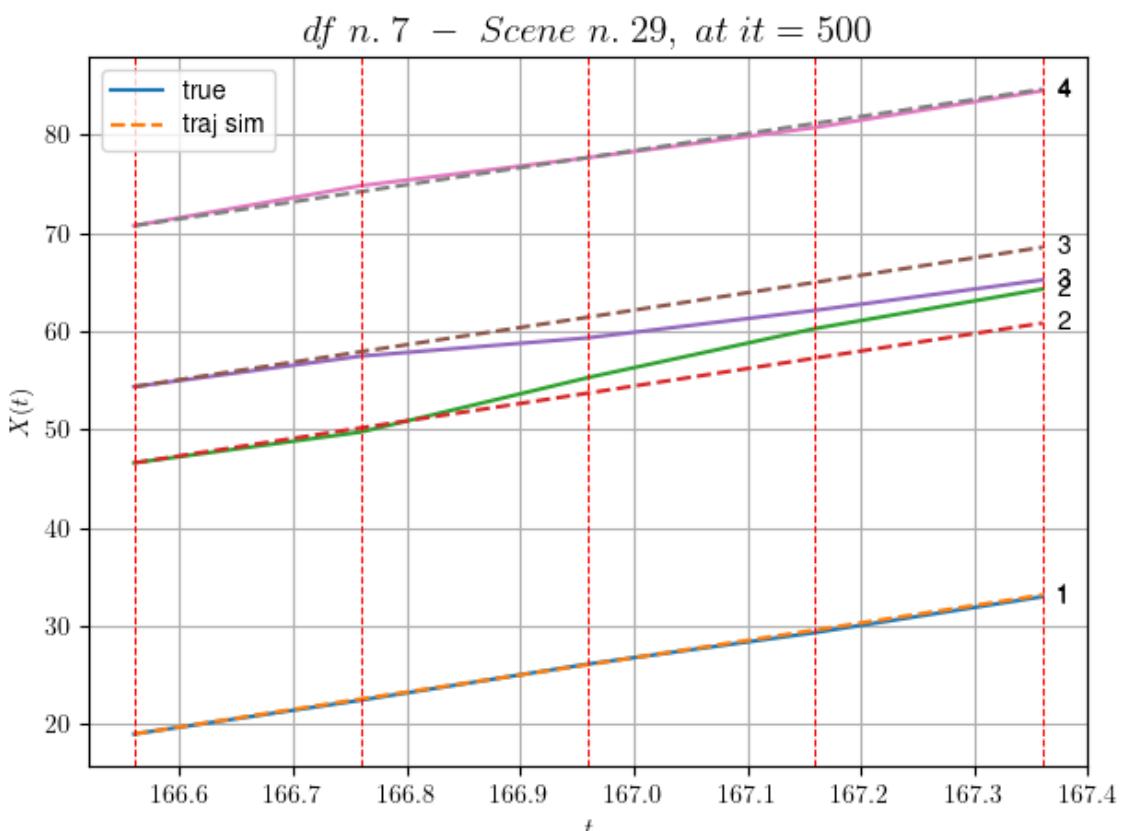
-----  

* err= 2.4136805669235395  

* Learning rate NN = 4.7829678806010634e-05  

* diff = 0.008087667694061551

```



For scene 29/30

```

* use LR_NN=0.0001 with err=27.23066192755273 at it=24
* v0_scn_mean = 18.379103987412606
* MAE = 2.13386990172092

```

For df=7 with 30 scenes, time taken: 594.30

In df n.8/10 we have 79 scenes

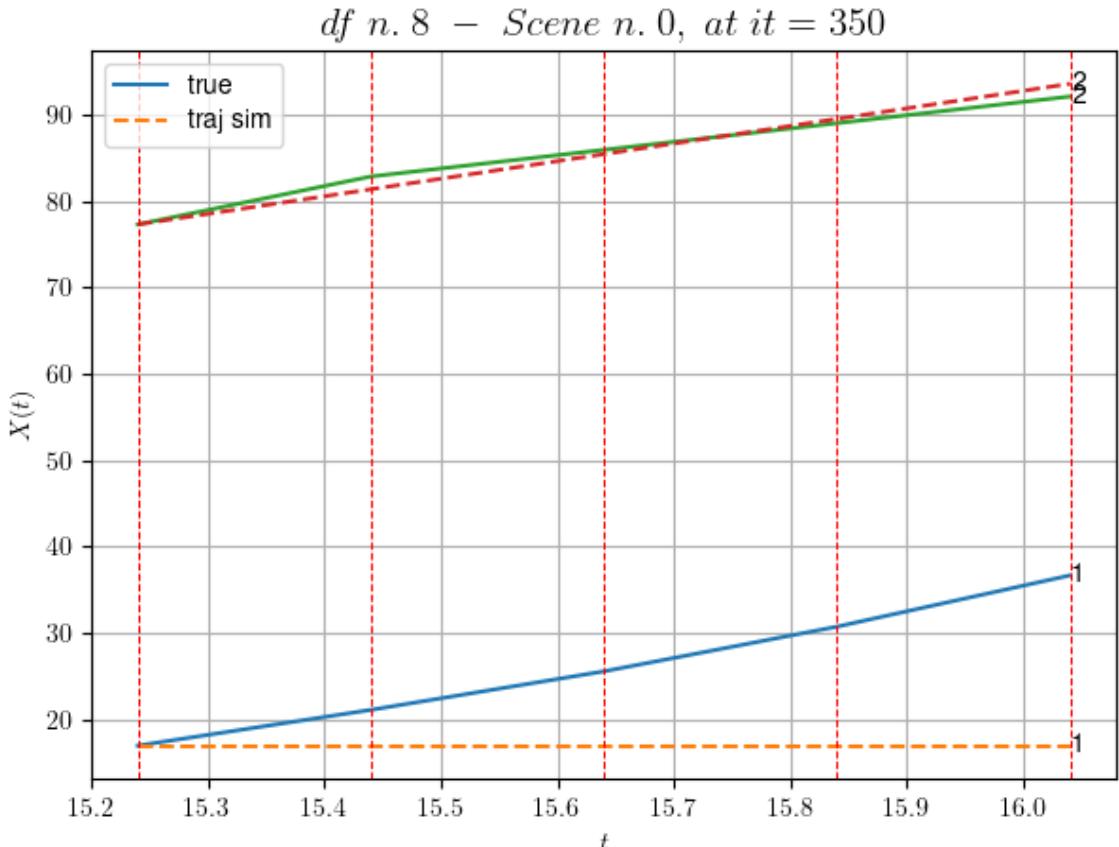
df n.8, scene n.0/79

We have 4 time intervals inside [15.24,16.04]

* err= 67.52331401718536

* Learning rate NN = 5.9048988987342454e-06

* diff = 3.6228151145678567e-07



For scene 0/79

* use LR_NN=1e-05 with err=13.913393396200037 at it=24

* v0_scn_mean = 20.92243570107338

* MAE = 67.52331401718536

df n.8, scene n.1/79

We have 4 time intervals inside [28.44,29.24]

- Time interval n.0: [28.44, 28.64]

* y_true: [8.71284384]

* v_ann: [0.0019892186392098665, 19.37431272805159]

6]

- Time interval n.1: [28.64, 28.84]

* y_true: [8.50235658]

* v_ann: [0.0017159279668703675, 19.37431272805159]

6]

```

-----  

-----  

- Time interval n.2: [28.84, 29.04]  

* y_true: [7.66040755]  

* v_ann: [0.0011850896989926696, 19.37431272805159  

6]  

-----  

-----  

- Time interval n.3: [29.04, 29.24]  

* y_true: [7.66040755]  

* v_ann: [0.0003751625190488994, 19.37431272805159  

6]  

-----  

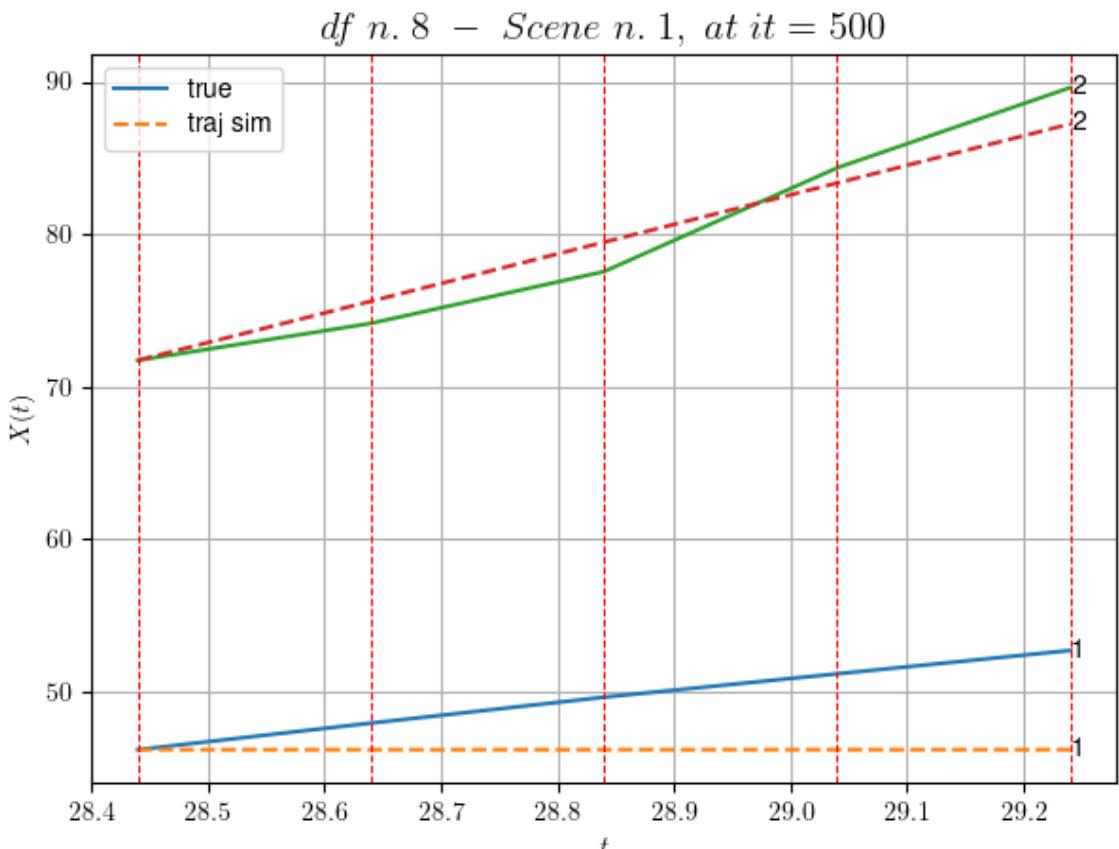
-----  

* err= 9.44693369975192  

* Learning rate NN = 2.3914839403005317e-05  

* diff = 0.00020289934904305085

```



For scene 1/79
* use LR_NN=5e-05 with err=11.792809151417046 at it=24
* v0_scn_mean = 19.799340218848332
* MAE = 9.274788072065627

```
=====
=====
```

df n.8, scene n.2/79

```
=====
=====  

We have 4 time intervals inside [48.04,48.84]  

- Time interval n.0: [48.04, 48.24]
```

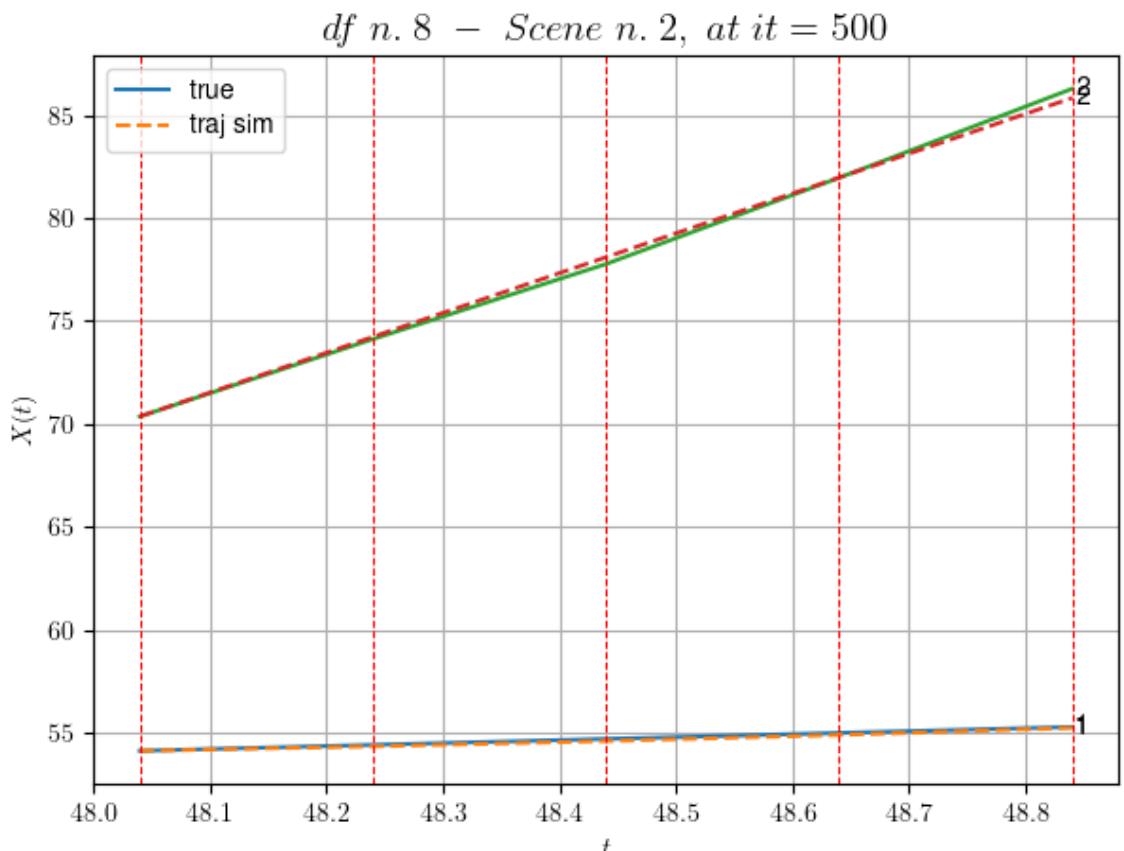
```
* y_true: [1.45008394]
* v_ann: [1.084187388420105, 19.366199251197184]
```

```
- Time interval n.1: [48.24, 48.44]
* y_true: [1.45008394]
* v_ann: [1.283991813659668, 19.366199251197184]
```

```
- Time interval n.2: [48.44, 48.64]
* y_true: [1.45008394]
* v_ann: [1.4877060651779175, 19.366199251197184]
```

```
- Time interval n.3: [48.64, 48.84]
* y_true: [1.45008394]
* v_ann: [1.7148301601409912, 19.366199251197184]
```

```
* err= 0.03502885514614201
* Learning rate NN = 0.000239148415857926
* diff = 1.6172414817584857e-05
```



For scene 2/79

```
* use LR_NN=0.0005 with err=13.181105897528779 at it=24
* v0_scn_mean = 19.791551281068124
* MAE = 0.03225430905285831
```

=====

df n.8, scene n.3/79

=====

We have 7 time intervals inside [58.44, 59.84]
- Time interval n.0: [58.44, 58.64]
 * y_true: [0.49091559]
 * v_ann: [17.2951602935791, 27.35601688655902]

- Time interval n.1: [58.64, 58.84]
 * y_true: [17.39372277]
 * v_ann: [20.927997589111328, 27.35601688655902]

- Time interval n.2: [58.84, 59.04]
 * y_true: [26.31054645]
 * v_ann: [22.7972354888916, 27.35601688655902]

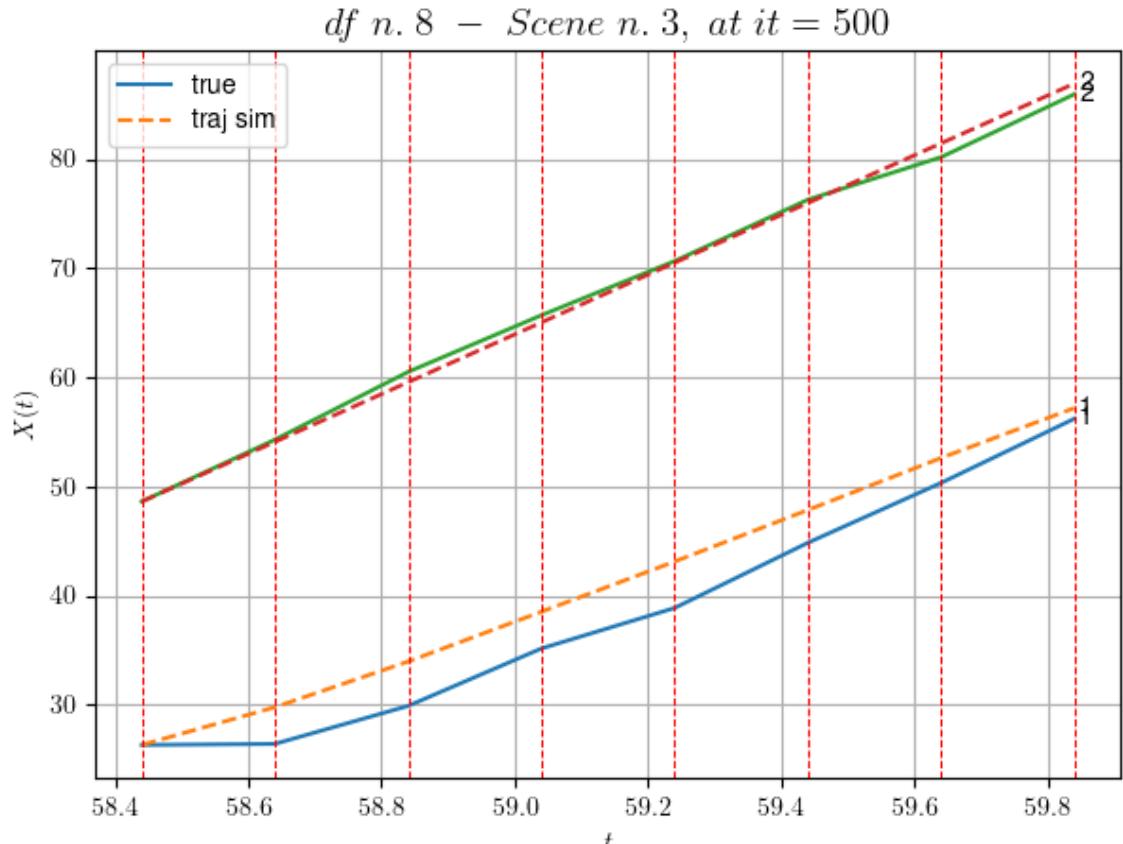
- Time interval n.3: [59.04, 59.24]
 * y_true: [18.56048997]
 * v_ann: [22.991500854492188, 27.35601688655902]

- Time interval n.4: [59.24, 59.44]
 * y_true: [29.87104502]
 * v_ann: [23.624858856201172, 27.35601688655902]

- Time interval n.5: [59.44, 59.64]
 * y_true: [27.43120096]
 * v_ann: [23.839649200439453, 27.35601688655902]

- Time interval n.6: [59.64, 59.84]
 * y_true: [29.40163264]
 * v_ann: [22.868446350097656, 27.35601688655902]

* err= 4.779240143261708
* Learning rate NN = 2.5418647055630572e-05
* diff = 0.0042421878527274416

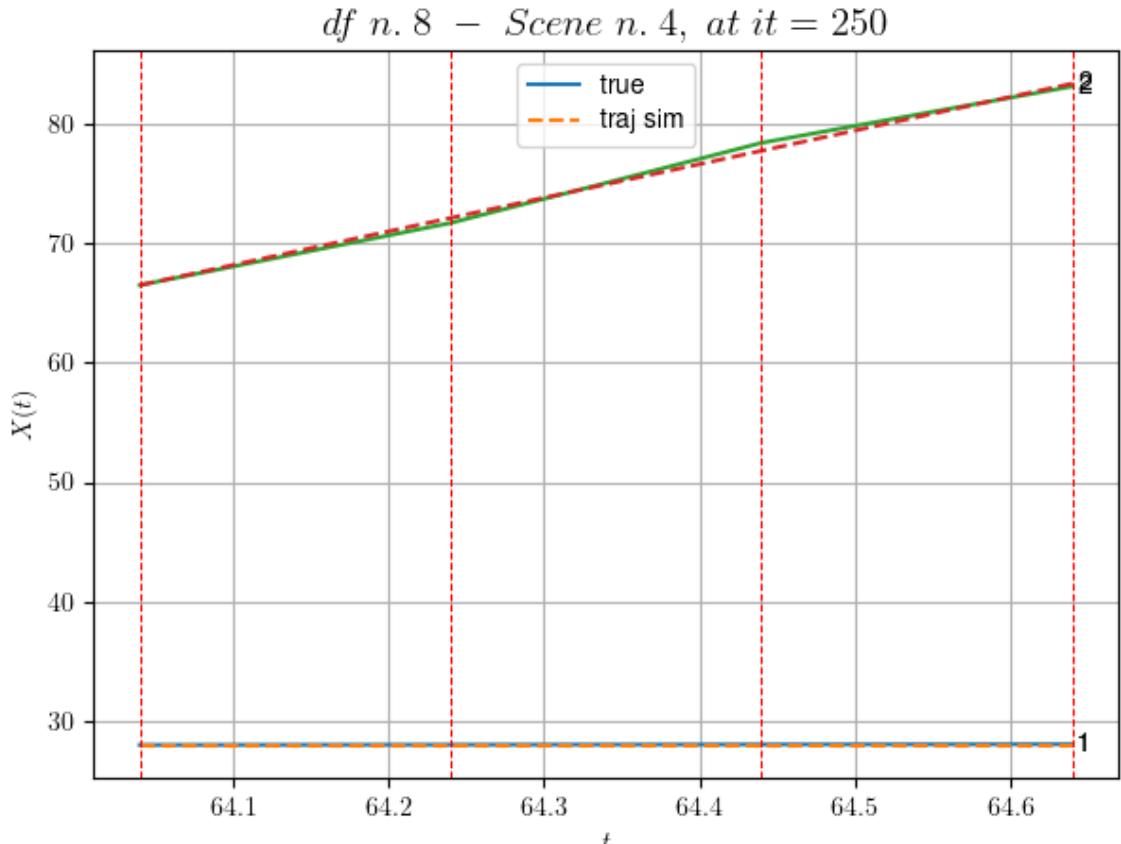


For scene 3/79

* use LR_NN=0.0001 with err=7.6468889278329755 at it=24
* v0_scn_mean = 27.461776211076515
* MAE = 4.692947718567709

df n.8, scene n.4/79

We have 3 time intervals inside [64.04,64.64]
* err= 0.08415301929607456
* Learning rate NN = 0.004049999639391899
* diff = 5.497903711737528e-07



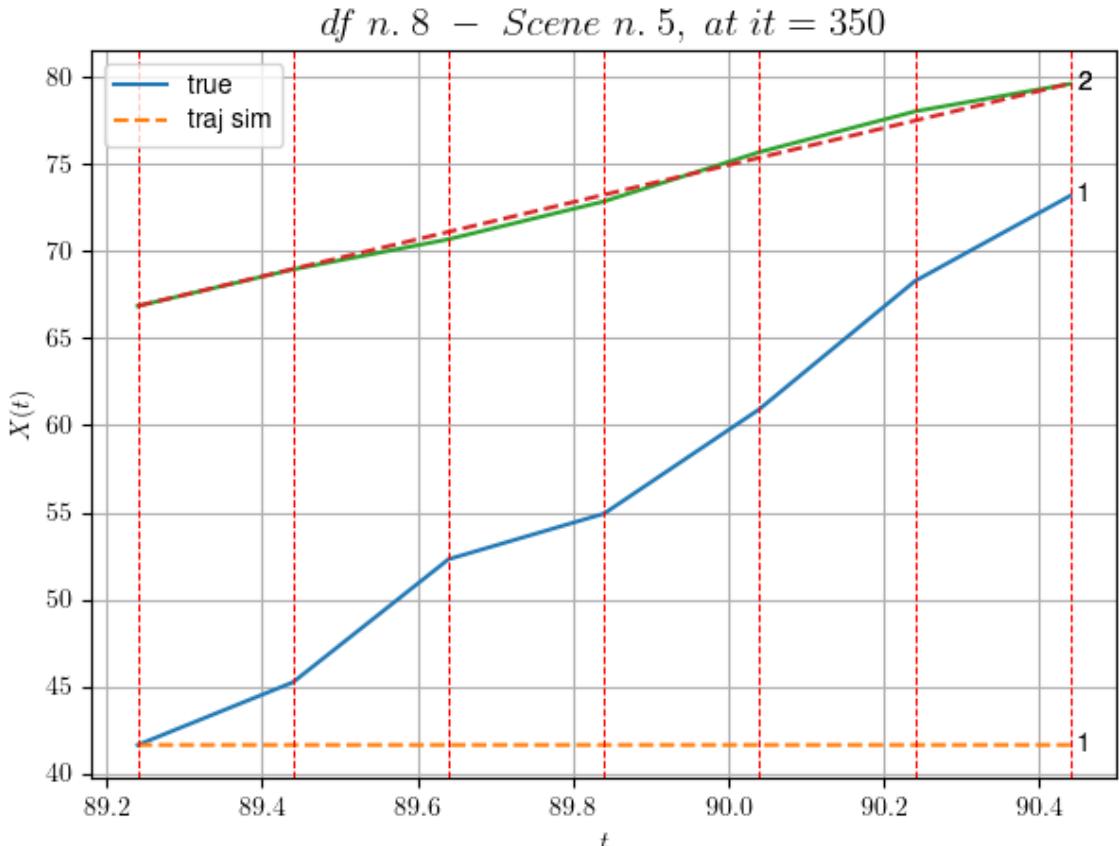
For scene 4/79

- * use LR_NN=0.005 with err=0.3167892526546147 at it=24
 - * v0_scn_mean = 28.262360794334445
 - * MAE = 0.08386115263611489
-
-

df n.8, scene n.5/79

We have 6 time intervals inside [89.24,90.44]

- * err= 170.46005328481164
- * Learning rate NN = 4.304671165300533e-05
- * diff = 7.511516741942614e-08



For scene 5/79

```
* use LR_NN=0.0001 with err=100.34601494509344 at it=24
* v0_scn_mean = 11.763740611250565
* MAE = 170.45747446624628
```

df n.8, scene n.6/79

We have 10 time intervals inside [101.04, 103.04]

- Time interval n.0: [101.04, 101.24]
 - * y_true: [18.44035973]
 - * v_ann: [-0.0020049037411808968, 26.4896954824082]

5]

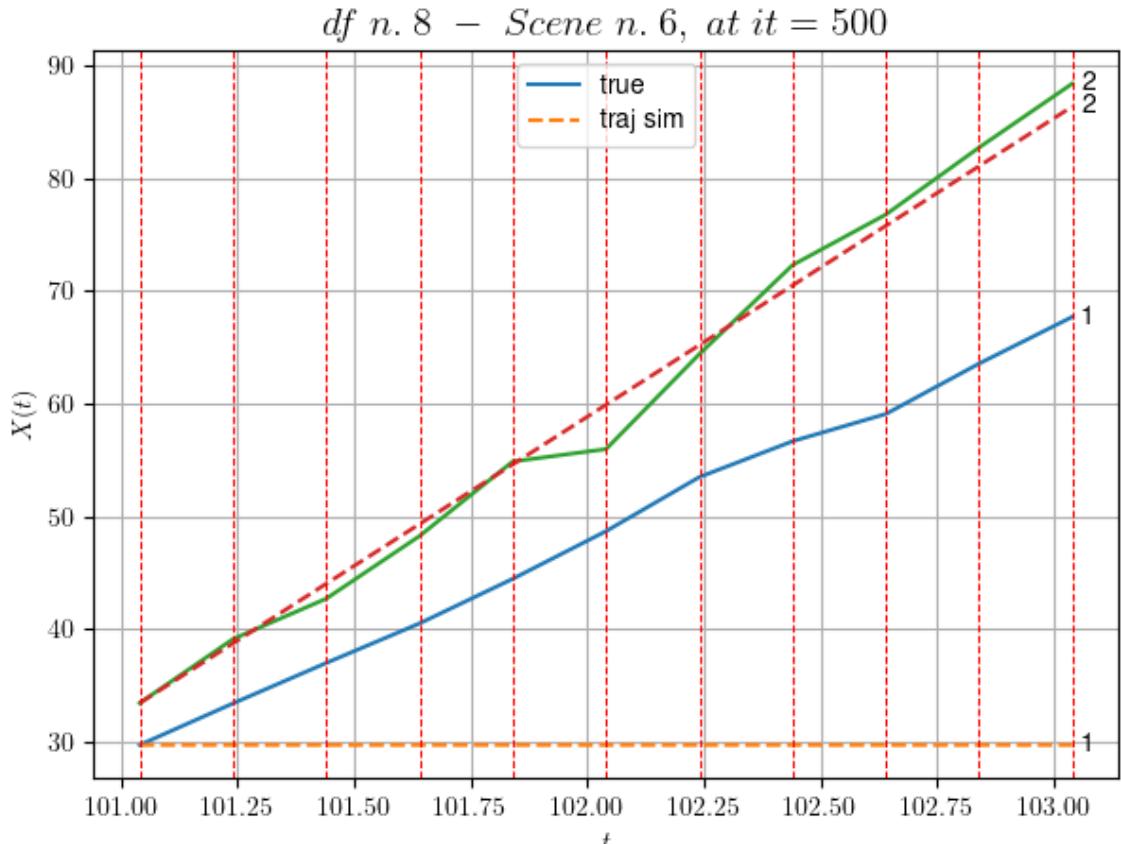
- Time interval n.1: [101.24, 101.44]
 - * y_true: [17.96043382]
 - * v_ann: [-0.00024361904070246965, 26.4896954824082]

5]

- Time interval n.2: [101.44, 101.64]
 - * y_true: [17.55051624]
 - * v_ann: [-0.0002441038959659636, 26.4896954824082]

5]

```
-----  
      - Time interval n.3: [101.64, 101.84]  
      * y_true: [19.81069648]  
      * v_ann: [-2.775258144538384e-05, 26.4896954824082  
5]  
  
-----  
      - Time interval n.4: [101.84, 102.04]  
      * y_true: [21.1609002]  
      * v_ann: [-1.6542807088626432e-06, 26.4896954824082  
5]  
  
-----  
      - Time interval n.5: [102.04, 102.24]  
      * y_true: [24.00120533]  
      * v_ann: [-4.587912917486392e-05, 26.4896954824082  
5]  
  
-----  
      - Time interval n.6: [102.24, 102.44]  
      * y_true: [15.94092959]  
      * v_ann: [-9.750724530022126e-07, 26.4896954824082  
5]  
  
-----  
      - Time interval n.7: [102.44, 102.64]  
      * y_true: [12.10080168]  
      * v_ann: [-6.504267791029861e-09, 26.4896954824082  
5]  
  
-----  
      - Time interval n.8: [102.64, 102.84]  
      * y_true: [22.37162153]  
      * v_ann: [-7.233120769001289e-10, 26.4896954824082  
5]  
  
-----  
      - Time interval n.9: [102.84, 103.04]  
      * y_true: [20.76175162]  
      * v_ann: [-1.5103979178476834e-10, 26.4896954824082  
5]  
  
-----  
* err= 251.88283395391645  
* Learning rate NN = 0.00013508510892279446  
* diff = 0.00044610291570279514
```

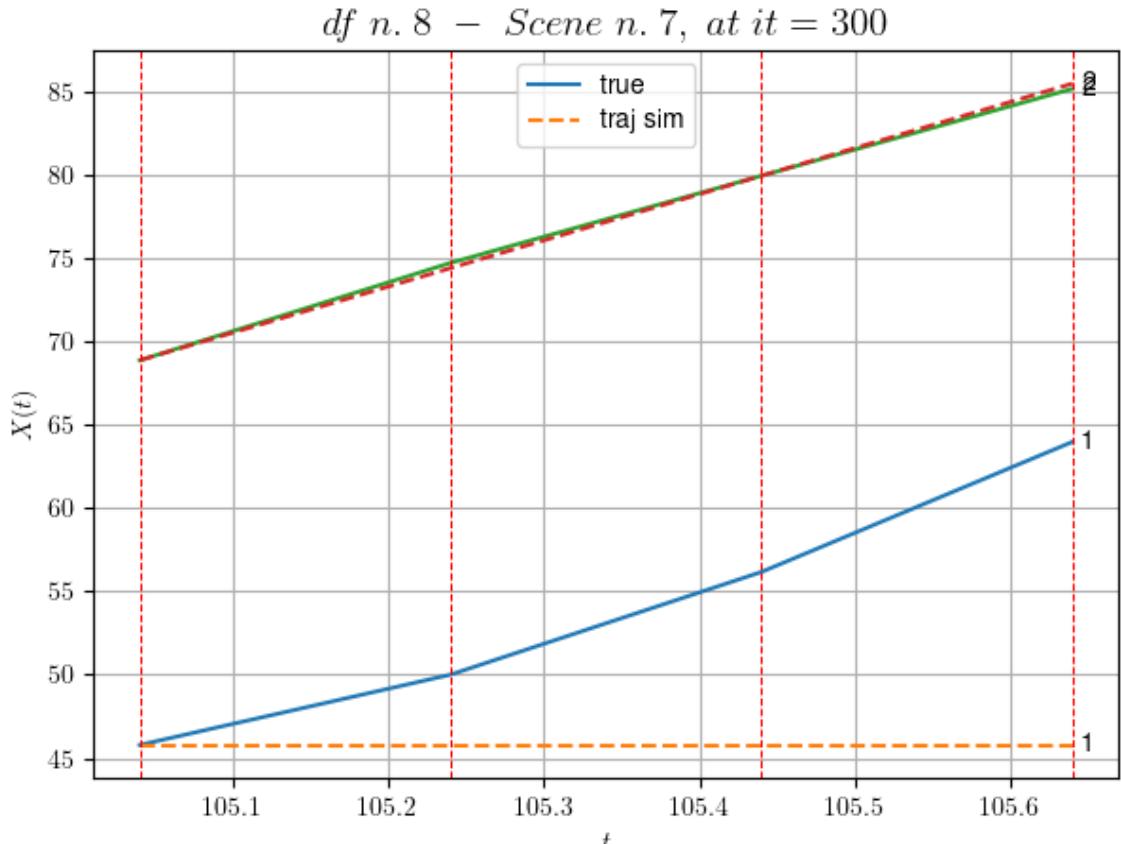


For scene 6/79

* use LR_NN=0.001 with err=21.766802059199073 at it=24
* v0_scn_mean = 26.6301076630848
* MAE = 251.8258595467006

df n.8, scene n.7/79

We have 3 time intervals inside [105.04,105.64]
* err= 57.09512690088219
* Learning rate NN = 7.289998757187277e-05
* diff = 1.7992160650237565e-07

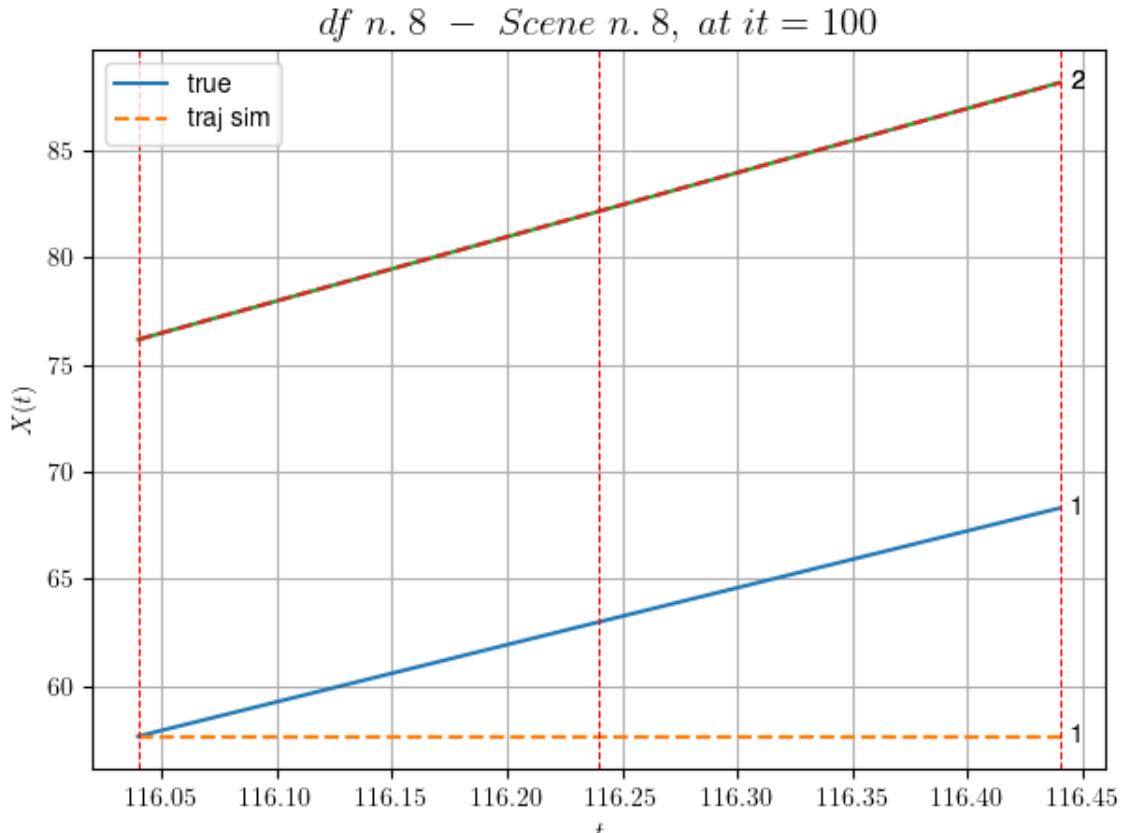


For scene 7/79

* use LR_NN=0.0001 with err=1.4583081741533417 at it=24
* v0_scn_mean = 27.84215628169883
* MAE = 57.09512690088219

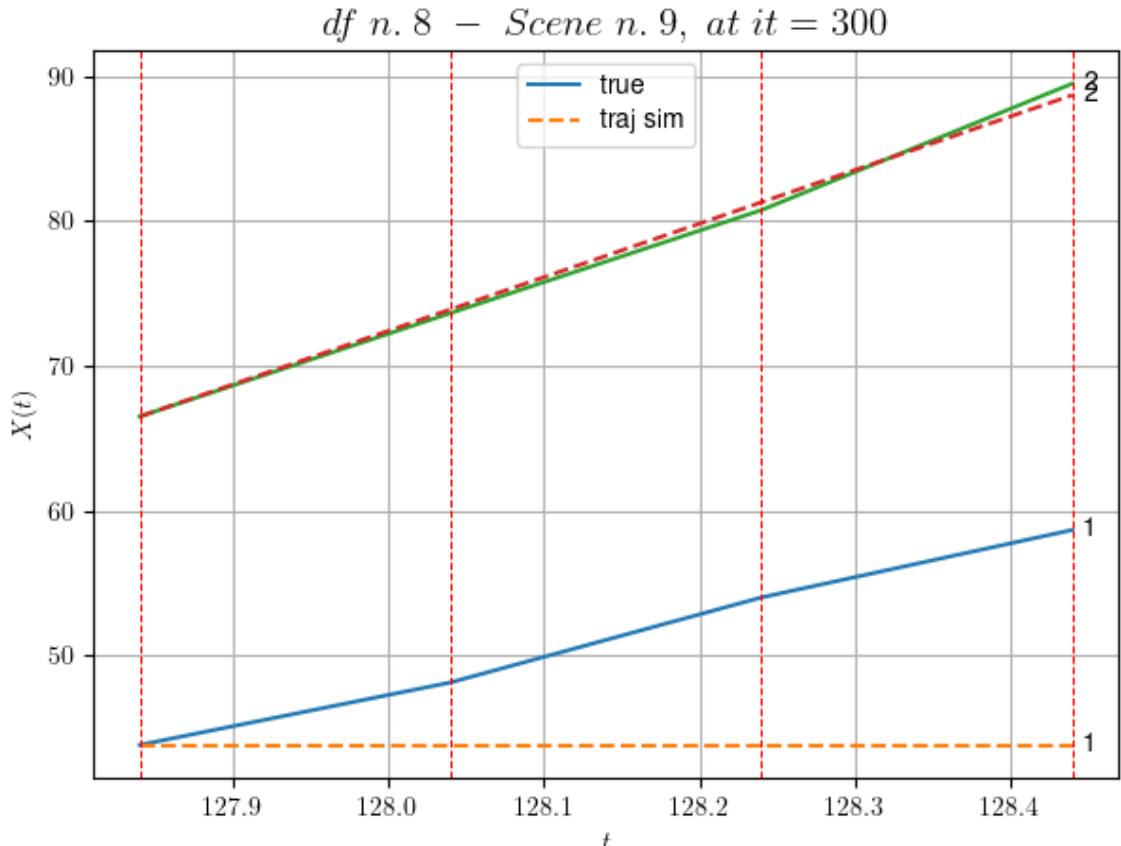
df n.8, scene n.8/79

We have 2 time intervals inside [116.04,116.44]
* err= 23.695480851188545
* Learning rate NN = 9.99999747378752e-05
* diff = 4.016352050939531e-07



df n.8, scene n.9/79

We have 3 time intervals inside [127.84,128.44]
* err= 43.06827474277385
* Learning rate NN = 7.289998757187277e-05
* diff = 9.189308656232242e-07



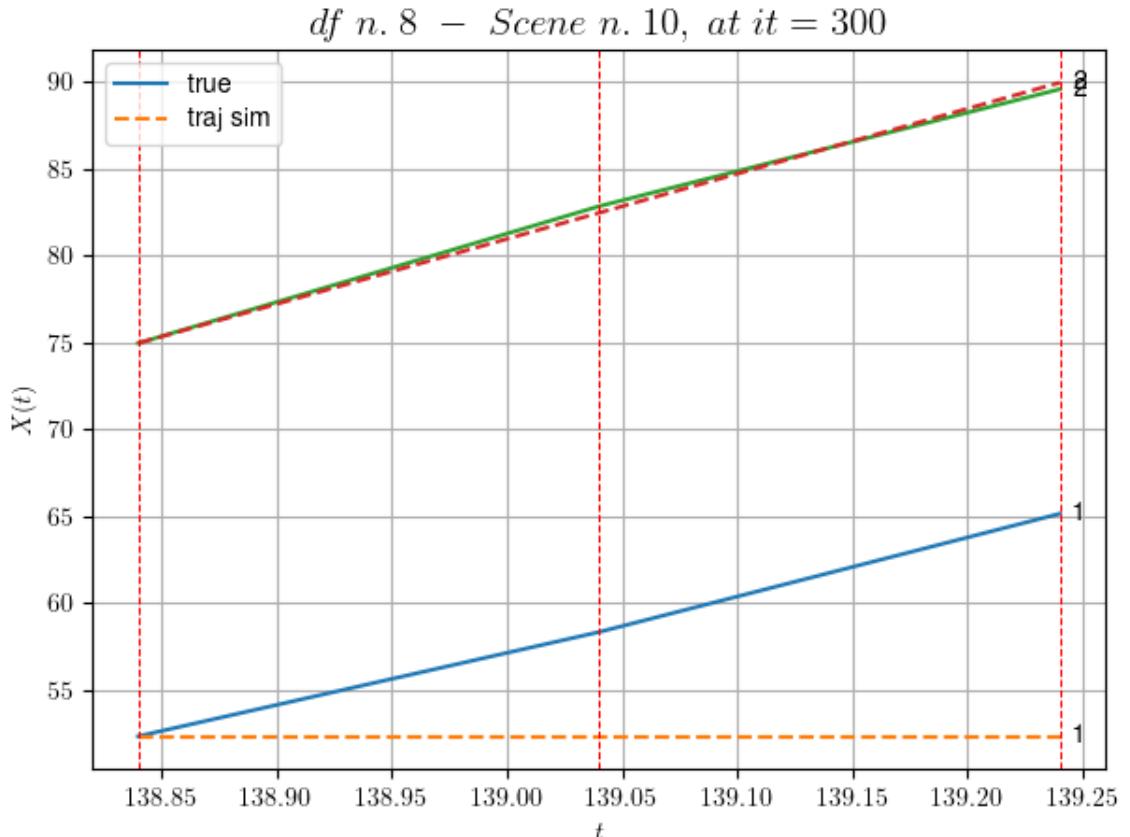
For scene 9/79

- * use LR_NN=0.0001 with err=4.036754631902535 at it=24
 - * v0_scn_mean = 36.55889221646931
 - * MAE = 43.06827474277385
-
-

df n.8, scene n.10/79

We have 2 time intervals inside [138.84,139.24]

- * err= 33.47149883967717
- * Learning rate NN = 0.0004049999886378646
- * diff = 4.743662884720834e-07

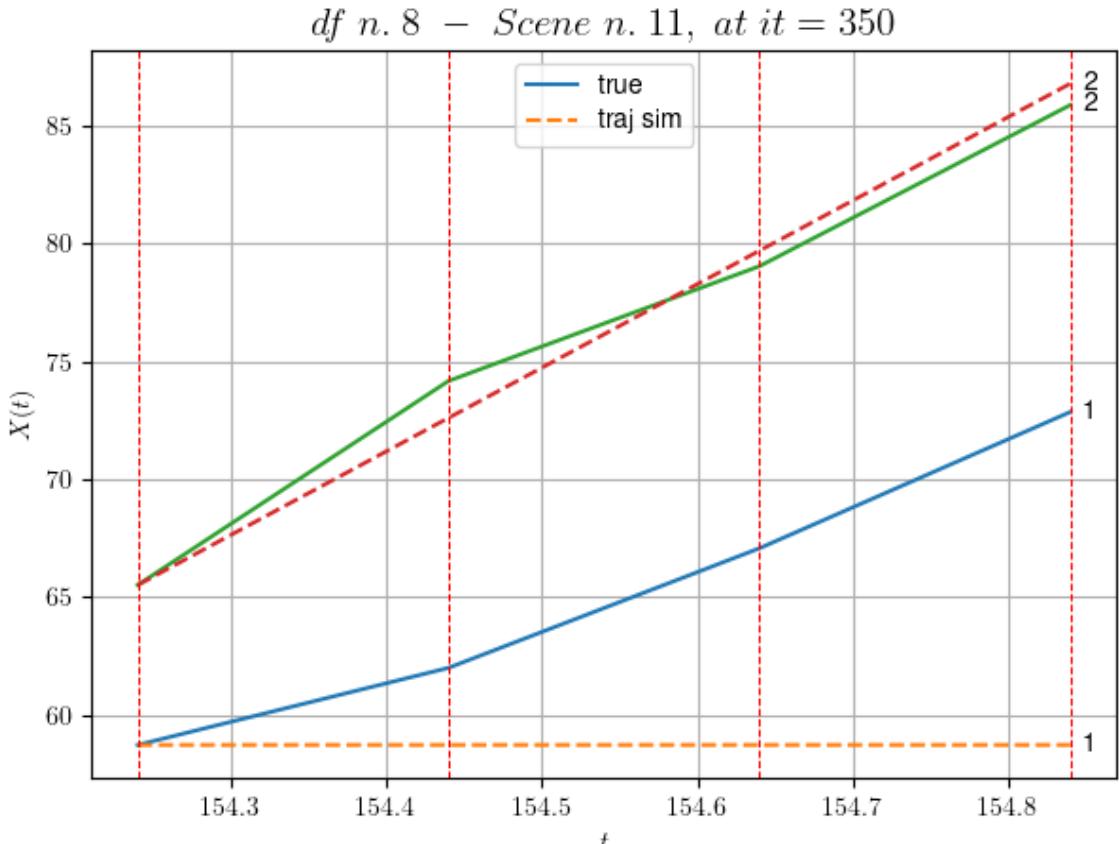


For scene 10/79

```
* use LR_NN=0.0005 with err=1.8177398964478255 at it=24
* v0_scn_mean = 37.0511344241673
* MAE = 33.46668677712924
```

df n.8, scene n.11/79

```
We have 3 time intervals inside [154.24,154.84]
* err= 35.42287661219236
* Learning rate NN = 6.560998735949397e-05
* diff = 3.943330995070937e-08
```



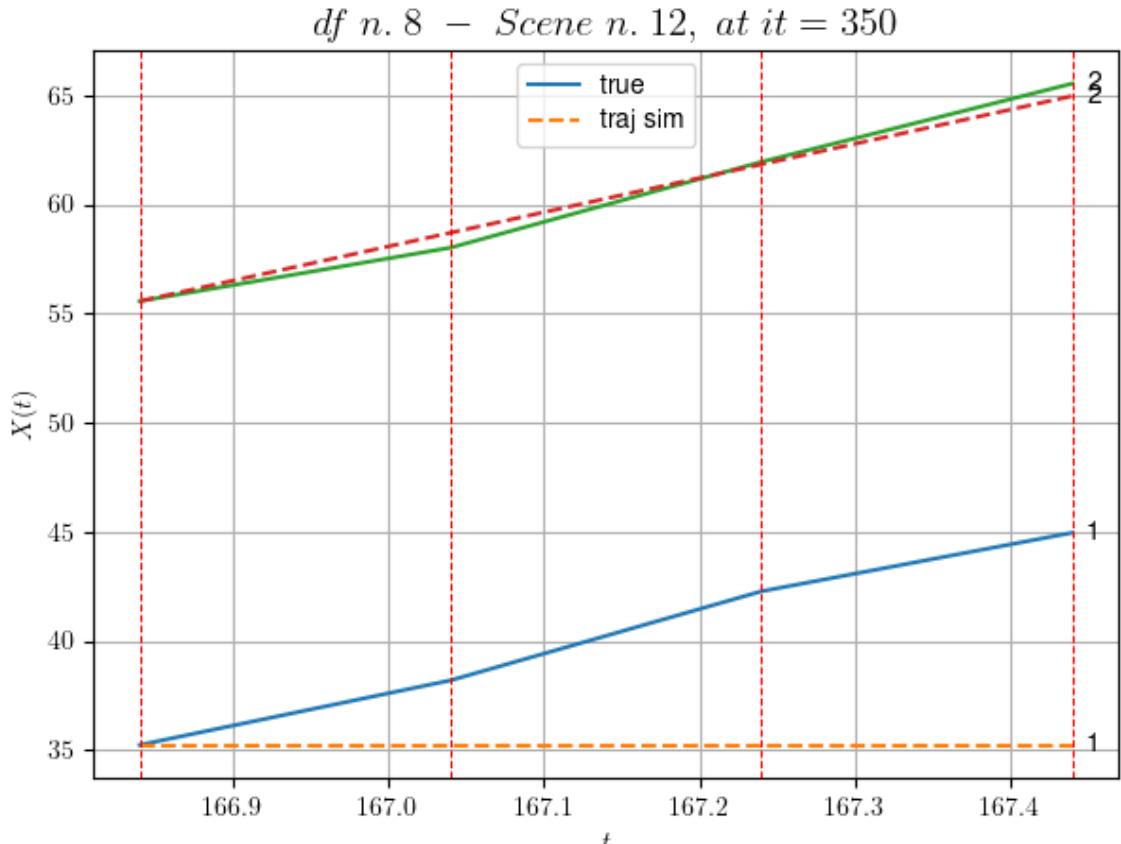
For scene 11/79

- * use LR_NN=0.0001 with err=1.8878697315455515 at it=24
- * v0_scn_mean = 35.129513732209475
- * MAE = 35.3681339075163

df n.8, scene n.12/79

We have 3 time intervals inside [166.84, 167.44]

- * err= 19.21169453977008
- * Learning rate NN = 3.2804993679746985e-05
- * diff = 1.7131399587810847e-07



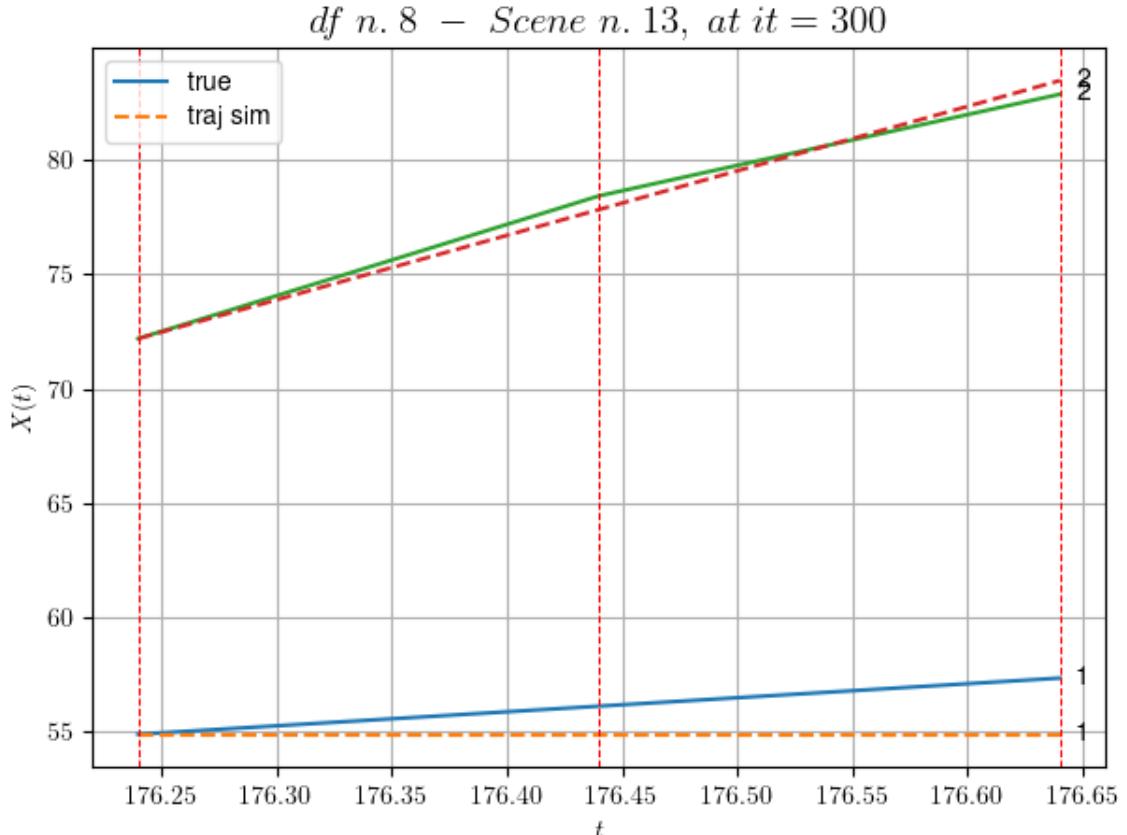
For scene 12/79

- * use LR_NN=5e-05 with err=13.637220022880296 at it=24
 - * v0_scn_mean = 16.486705097862664
 - * MAE = 19.19767285681291
-
-

df n.8, scene n.13/79

We have 2 time intervals inside [176.24, 176.64]

- * err= 1.3762928393098643
- * Learning rate NN = 0.0004049999886378646
- * diff = 1.7711421040900177e-07



For scene 13/79

- * use LR_NN=0.0005 with err=0.305441839657522 at it=24
- * v0_scn_mean = 28.329112939885682
- * MAE = 1.3762928393098643

df n.8, scene n.14/79

We have 4 time intervals inside [178.44, 179.24]

- Time interval n.0: [178.44, 178.64]
 - * y_true: [22.76155551]
 - * v_ann: [-1.232904054404571e-07, 12.30898288993197]

6]

- Time interval n.1: [178.64, 178.84]
 - * y_true: [36.29307367]
 - * v_ann: [-4.222301868139766e-06, 12.30898288993197]

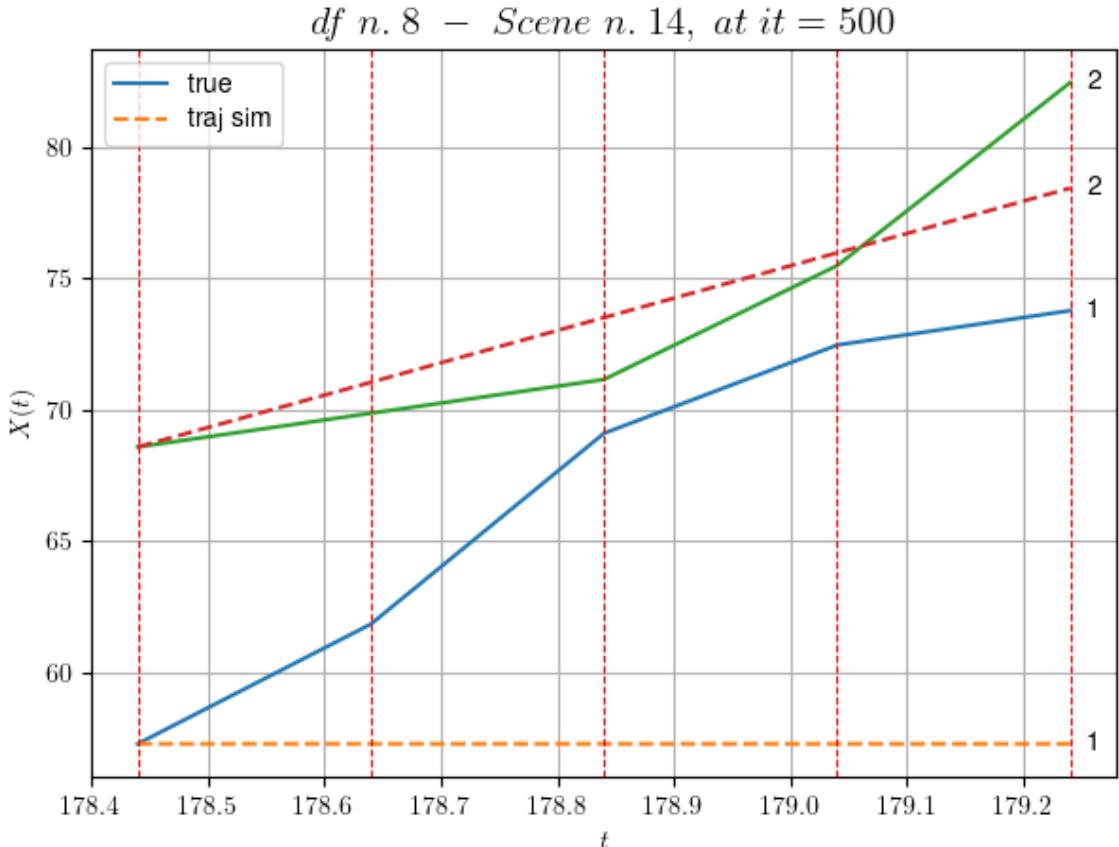
6]

- Time interval n.2: [178.84, 179.04]
 - * y_true: [16.78302591]
 - * v_ann: [-0.002595313359051943, 12.30898288993197]

6]

```
- Time interval n.3: [179.04, 179.24]
  * y_true: [6.55070095]
  * v_ann: [-0.0009232830489054322, 12.30898288993197]
```

```
* err= 68.51427958176124
* Learning rate NN = 4.7829678806010634e-05
* diff = 0.0008091431598273857
```



```
For scene 14/79
* use LR_NN=0.0001 with err=35.4325523032256 at it=24
* v0_scn mean = 13.016623574199443
* MAE = 68.27163106102711
```

df n.8 scene n.15/79

We have 5 time intervals inside [190.84, 191.84]

- Time interval n.0: [190.84, 191.04]

* v true: [30.512464571

* y_true: [30.31246457] * y_nn: [14.883218765258789, 12.068548421445758]

- Time interval n. 1: [191.04 191.24]

* x true: [14.311301771]

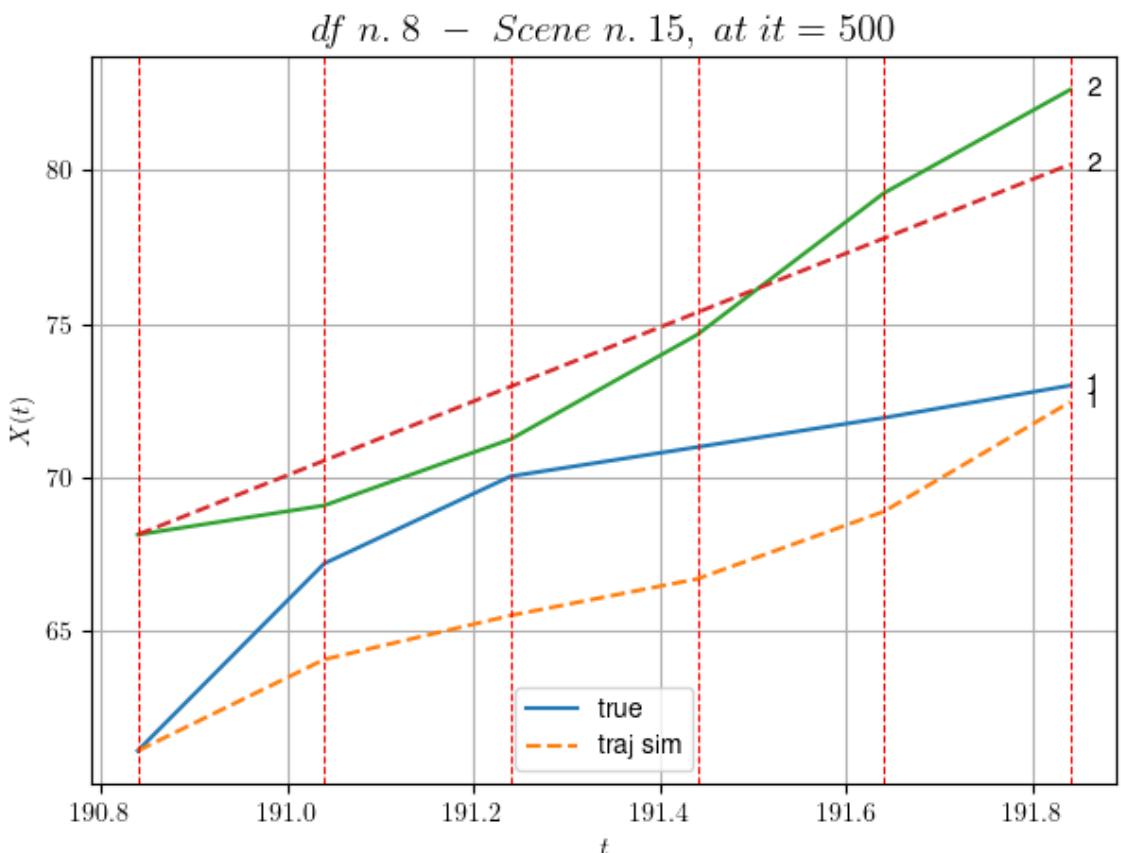
* y_app: [7 171718597412109 12 0685484214457581]

```
- Time interval n.2: [191.24, 191.44]
* y_true: [4.75758557]
* v_ann: [5.9478983879089355, 12.068548421445758]
```

```
- Time interval n.3: [191.44, 191.64]
* y_true: [4.75758557]
* v_ann: [10.975903511047363, 12.068548421445758]
```

```
- Time interval n.4: [191.64, 191.84]
* y_true: [5.27623096]
* v_ann: [17.84910774230957, 12.068548421445758]
```

```
* err= 6.005836226820298
* Learning rate NN = 0.0003874204121530056
* diff = 0.17656318071973587
```



For scene 15/79

```
* use LR_NN=0.001 with err=61.08705353533875 at it=24
* v0_scn_mean = 12.785806484450713
* MAE = 6.005836226820298
```

df n.8, scene n.16/79

We have 2 time intervals inside [194.44, 194.84]

- Time interval n.0: [194.44, 194.64]

- * y_true: [11.75098765]

- * v_ann: [18.542299270629883, 17.648704998178058]

- Time interval n.1: [194.64, 194.84]

- * y_true: [24.50229075]

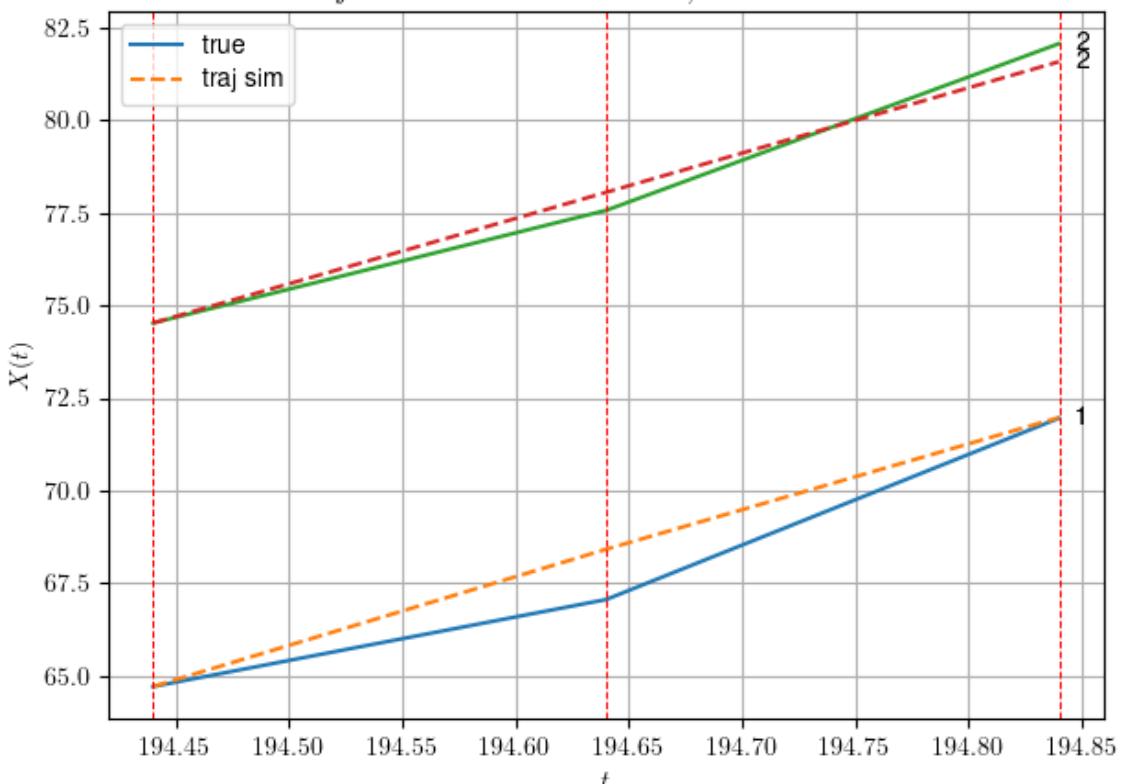
- * v_ann: [17.800519943237305, 17.648704998178058]

- * err= 0.38672124505673205

- * Learning rate NN = 0.00036449998151510954

- * diff = 6.892070780423198e-05

df n. 8 – Scene n. 16, at it = 500



For scene 16/79

- * use LR_NN=0.0005 with err=5.094308718401699 at it=24

- * v0_scn_mean = 18.14275679815642

- * MAE = 0.3771856383546031

df n.8, scene n.17/79

We have 4 time intervals inside [197.84, 198.64]

- Time interval n.0: [197.84, 198.04]

- * y_true: [22.53153444]

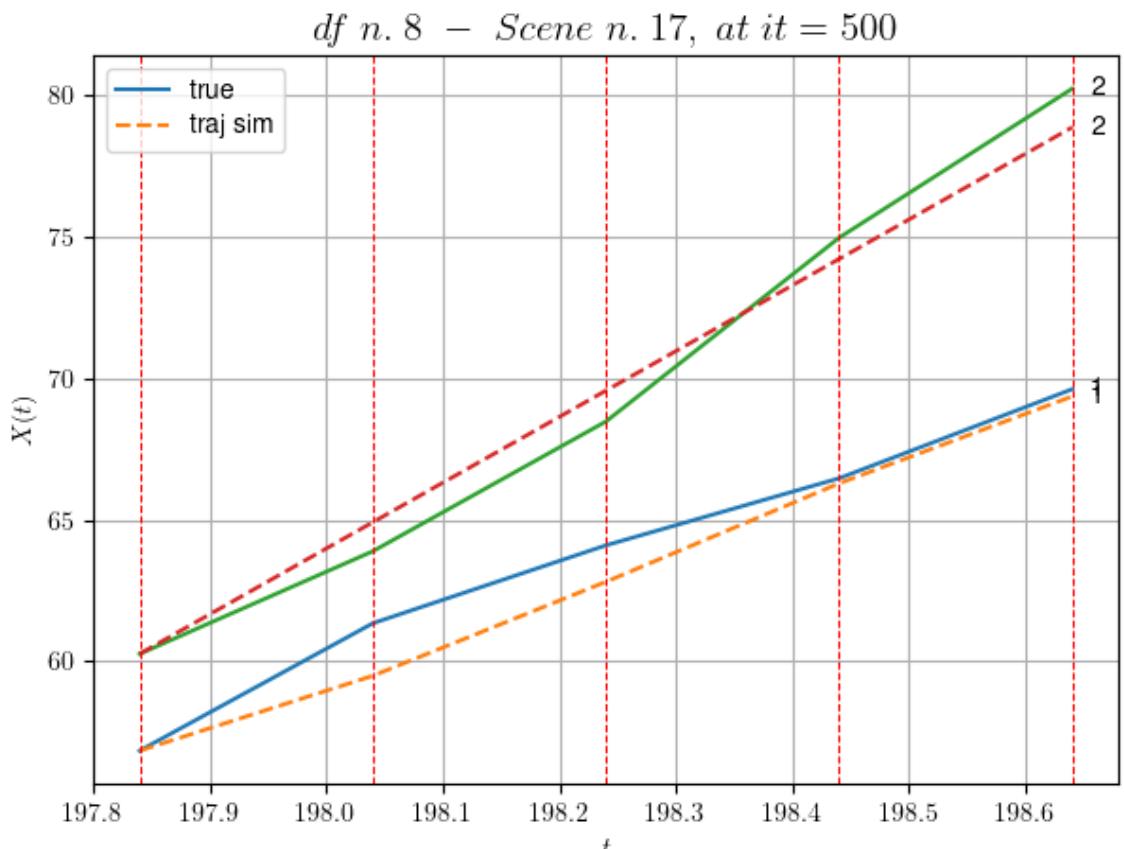
* v_ann: [13.247007369995117, 23.275091763732032]

- Time interval n.1: [198.04, 198.24]
 * y_true: [13.78102172]
 * v_ann: [16.621000289916992, 23.275091763732032]

- Time interval n.2: [198.24, 198.44]
 * y_true: [11.85098834]
 * v_ann: [17.401308059692383, 23.275091763732032]

- Time interval n.3: [198.44, 198.64]
 * y_true: [15.76141547]
 * v_ann: [15.381136894226074, 23.275091763732032]

* err= 0.9885565300676528
 * Learning rate NN = 0.002391484100371599
 * diff = 0.029808991171134003



For scene 17/79

* use LR_NN=0.005 with err=5.898420983525623 at it=24
 * v0_scn_mean = 23.544088093131656
 * MAE = 0.9885565300676528

```
df n.8, scene n.18/79
```

```
=====
=====
```

We have 6 time intervals inside [210.84,212.04]
- Time interval n.0: [210.84, 211.04]
 * y_true: [18.40045523]
 * v_ann: [27.434064865112305, 21.377341632642473]

```
-----
-----
```

- Time interval n.1: [211.04, 211.24]
 * y_true: [21.20064657]
 * v_ann: [24.10753059387207, 21.377341632642473]

```
-----
-----
```

- Time interval n.2: [211.24, 211.44]
 * y_true: [18.20066994]
 * v_ann: [23.269044876098633, 21.377341632642473]

```
-----
-----
```

- Time interval n.3: [211.44, 211.64]
 * y_true: [25.15111829]
 * v_ann: [21.067140579223633, 21.377341632642473]

```
-----
-----
```

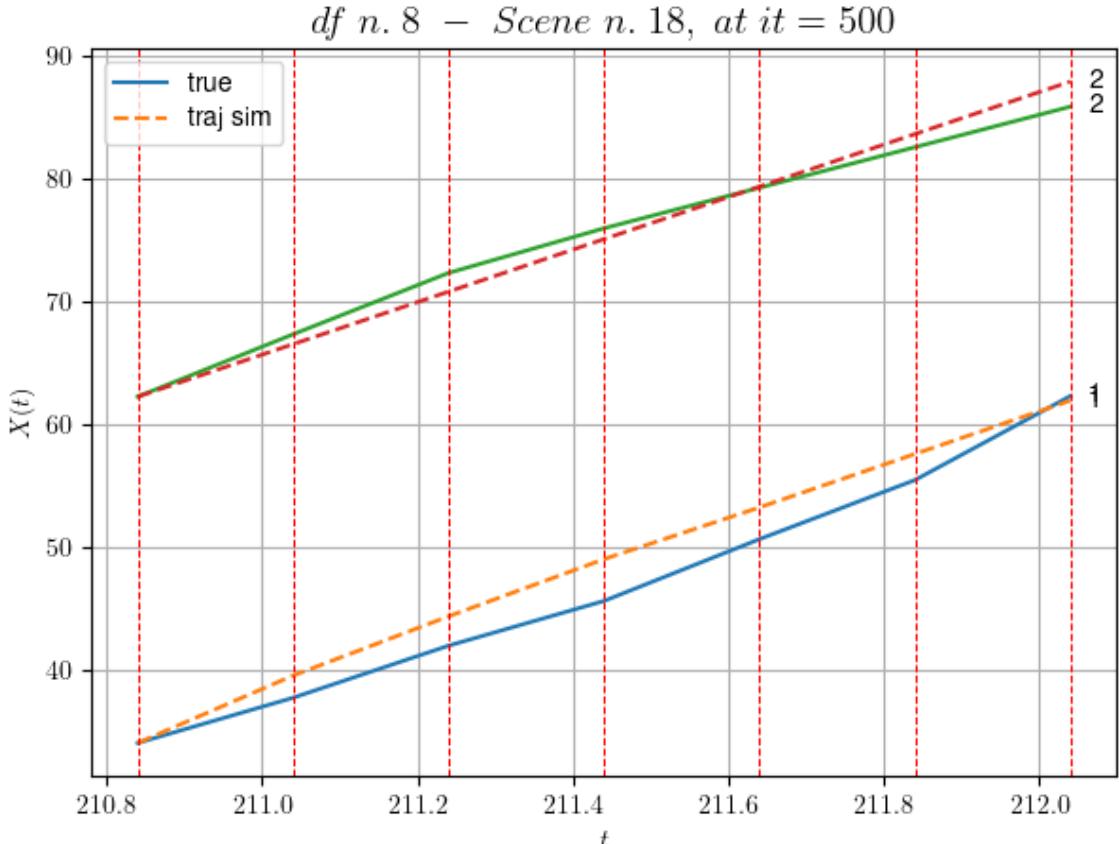
- Time interval n.4: [211.64, 211.84]
 * y_true: [24.05129892]
 * v_ann: [21.738248825073242, 21.377341632642473]

```
-----
-----
```

- Time interval n.5: [211.84, 212.04]
 * y_true: [34.2022758]
 * v_ann: [21.73233413696289, 21.377341632642473]

```
-----
-----
```

* err= 2.9239578600802423
* Learning rate NN = 0.00015690525469835848
* diff = 0.05442911282273144



For scene 18/79

- * use LR_NN=0.0005 with err=25.373339640200435 at it=24
- * v0_scn_mean = 21.72224796727079
- * MAE = 2.4813634916967624

df n.8, scene n.19/79

We have 11 time intervals inside [250.44, 252.64]

- Time interval n.0: [250.44, 250.64]
 - * y_true: [16.04072287]
 - * v_ann: [17.15851402282715, 14.644824448517586]

- Time interval n.1: [250.64, 250.84]
 - * y_true: [15.51077127]
 - * v_ann: [16.370729446411133, 14.644824448517586]

- Time interval n.2: [250.84, 251.04]
 - * y_true: [15.34089466]
 - * v_ann: [15.734936714172363, 14.644824448517586]

- Time interval n.3: [251.04, 251.24]
 - * y_true: [16.53189254]

```
* v_ann: [15.361420631408691, 14.644824448517586]
```

```
- Time interval n.4: [251.24, 251.44]
* y_true: [15.66111032]
* v_ann: [15.849590301513672, 14.644824448517586]
```

```
- Time interval n.5: [251.44, 251.64]
* y_true: [15.55114817]
* v_ann: [16.07423210144043, 14.644824448517586]
```

```
- Time interval n.6: [251.64, 251.84]
* y_true: [17.2315068]
* v_ann: [16.507854461669922, 14.644824448517586]
```

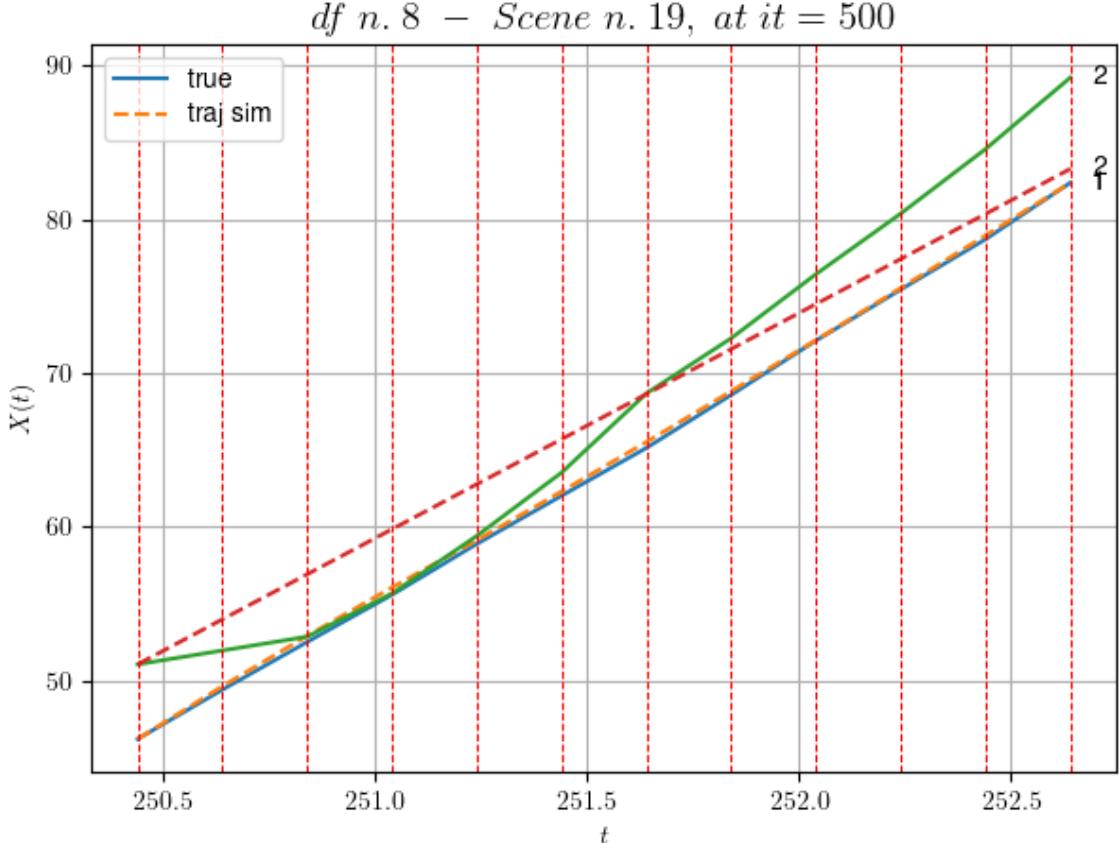
```
- Time interval n.7: [251.84, 252.04]
* y_true: [17.65159646]
* v_ann: [16.63932991027832, 14.644824448517586]
```

```
- Time interval n.8: [252.04, 252.24]
* y_true: [16.61174803]
* v_ann: [16.949539184570312, 14.644824448517586]
```

```
- Time interval n.9: [252.24, 252.44]
* y_true: [16.35178592]
* v_ann: [17.053003311157227, 14.644824448517586]
```

```
- Time interval n.10: [252.44, 252.64]
* y_true: [18.37232882]
* v_ann: [17.140539169311523, 14.644824448517586]
```

```
* err= 5.038802773862548
* Learning rate NN = 0.000547094619832933
* diff = 0.001620147594051602
```



For scene 19/79

- * use LR_NN=0.005 with err=176.3631720133842 at it=24
- * v0_scn_mean = 15.259031470459684
- * MAE = 4.187064293926145

df n.8, scene n.20/79

We have 5 time intervals inside [276.64, 277.64]

- Time interval n.0: [276.64, 276.84]
 - * y_true: [19.91101059]
 - * v_ann: [19.604446411132812, 26.49050884606435]

- Time interval n.1: [276.84, 277.04]
 - * y_true: [24.60145519]
 - * v_ann: [20.962610244750977, 26.49050884606435]

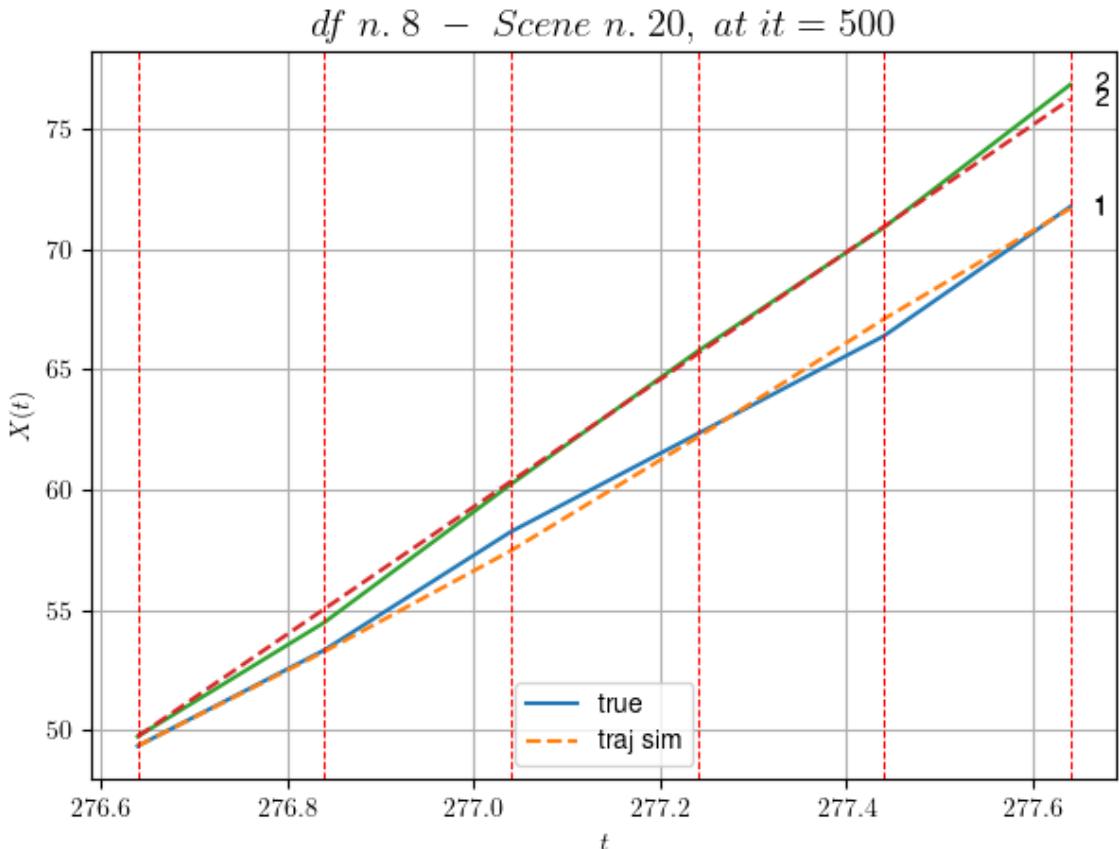
- Time interval n.2: [277.04, 277.24]
 - * y_true: [20.33137939]
 - * v_ann: [23.55185890197754, 26.49050884606435]

- Time interval n.3: [277.24, 277.44]
 - * y_true: [20.36164579]

```
* v_ann: [24.60662269592285, 26.49050884606435]
```

```
- Time interval n.4: [277.44, 277.64]
* y_true: [26.89241196]
* v_ann: [22.963560104370117, 26.49050884606435]
```

```
* err= 0.15498926982398958
* Learning rate NN = 0.0019371019443497062
* diff = 0.010176915853251506
```



For scene 20/79

```
* use LR_NN=0.005 with err=2.5106062924337516 at it=24
* v0_scn_mean = 26.630888492195485
* MAE = 0.15498926982398958
```

df n.8, scene n.21/79

```
We have 5 time intervals inside [278.64, 279.64]
- Time interval n.0: [278.64, 278.84]
* y_true: [25.33138011]
* v_ann: [23.16708755493164, 27.40725931573357]
```

```
- Time interval n.1: [278.84, 279.04]
```

```
* y_true: [26.10168972]
* v_ann: [23.414472579956055, 27.40725931573357]
```

```
- Time interval n.2: [279.04, 279.24]
```

```
* y_true: [28.27219854]
```

```
* v_ann: [23.50905990600586, 27.40725931573357]
```

```
- Time interval n.3: [279.24, 279.44]
```

```
* y_true: [15.3013247]
```

```
* v_ann: [23.98045539855957, 27.40725931573357]
```

```
- Time interval n.4: [279.44, 279.64]
```

```
* y_true: [23.90239058]
```

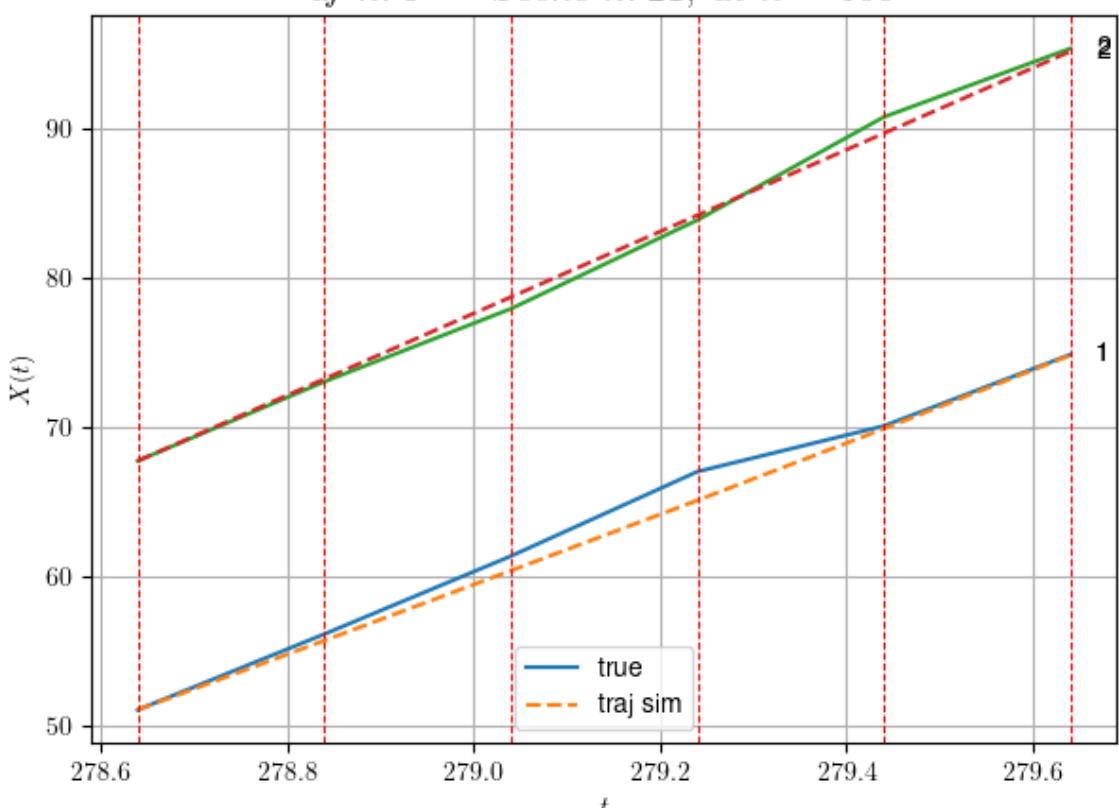
```
* v_ann: [24.58361053466797, 27.40725931573357]
```

```
* err= 0.5709690757267237
```

```
* Learning rate NN = 1.9371018424862996e-05
```

```
* diff = 0.0027905204575506826
```

df n. 8 – Scene n. 21, at it = 500



For scene 21/79

```
* use LR_NN=5e-05 with err=1.985081148605268 at it=24
```

```
* v0_scn_mean = 27.510968943083682
```

```
* MAE = 0.5602318730135786
```

df n.8, scene n.22/79

We have 4 time intervals inside [281.44, 282.24]

- Time interval n.0: [281.44, 281.64]

* y_true: [31.54245626]

* v_ann: [28.43339729309082, 25.060172008752257]

- Time interval n.1: [281.64, 281.84]

* y_true: [26.752427]

* v_ann: [26.73243522644043, 25.060172008752257]

- Time interval n.2: [281.84, 282.04]

* y_true: [30.20476381]

* v_ann: [26.566898345947266, 25.060172008752257]

- Time interval n.3: [282.04, 282.24]

* y_true: [23.94300381]

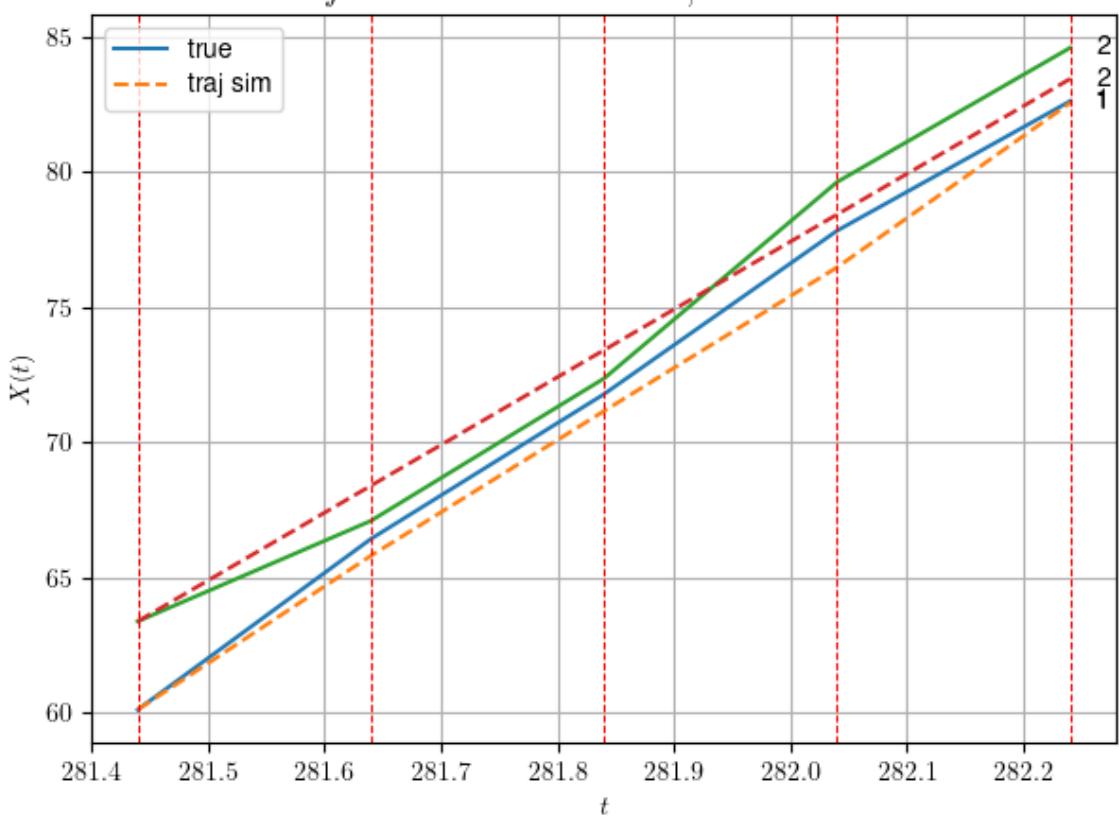
* v_ann: [30.365835189819336, 25.060172008752257]

* err= 0.8155289881990829

* Learning rate NN = 0.002391484100371599

* diff = 0.0009759391736710032

df n. 8 – Scene n. 22, at it = 500



```
For scene 22/79
* use LR_NN=0.005 with err=4.417783119916312 at it=24
* v0_scn_mean = 25.257765128364856
* MAE = 0.8155289881990829
```

```
=====
=====
```

```
df n.8, scene n.23/79
```

```
=====
=====
```

```
We have 6 time intervals inside [283.84,285.04]
```

```
- Time interval n.0: [283.84, 284.04]
  * y_true: [21.50116485]
  * v_ann: [19.728551864624023, 31.024373752742626]
```

```
-----
-----
```

```
- Time interval n.1: [284.04, 284.24]
  * y_true: [21.05133002]
  * v_ann: [20.084735870361328, 31.024373752742626]
```

```
-----
-----
```

```
- Time interval n.2: [284.24, 284.44]
  * y_true: [35.30269143]
  * v_ann: [20.620372772216797, 31.024373752742626]
```

```
-----
-----
```

```
- Time interval n.3: [284.44, 284.64]
  * y_true: [11.75103348]
  * v_ann: [24.068897247314453, 31.024373752742626]
```

```
-----
-----
```

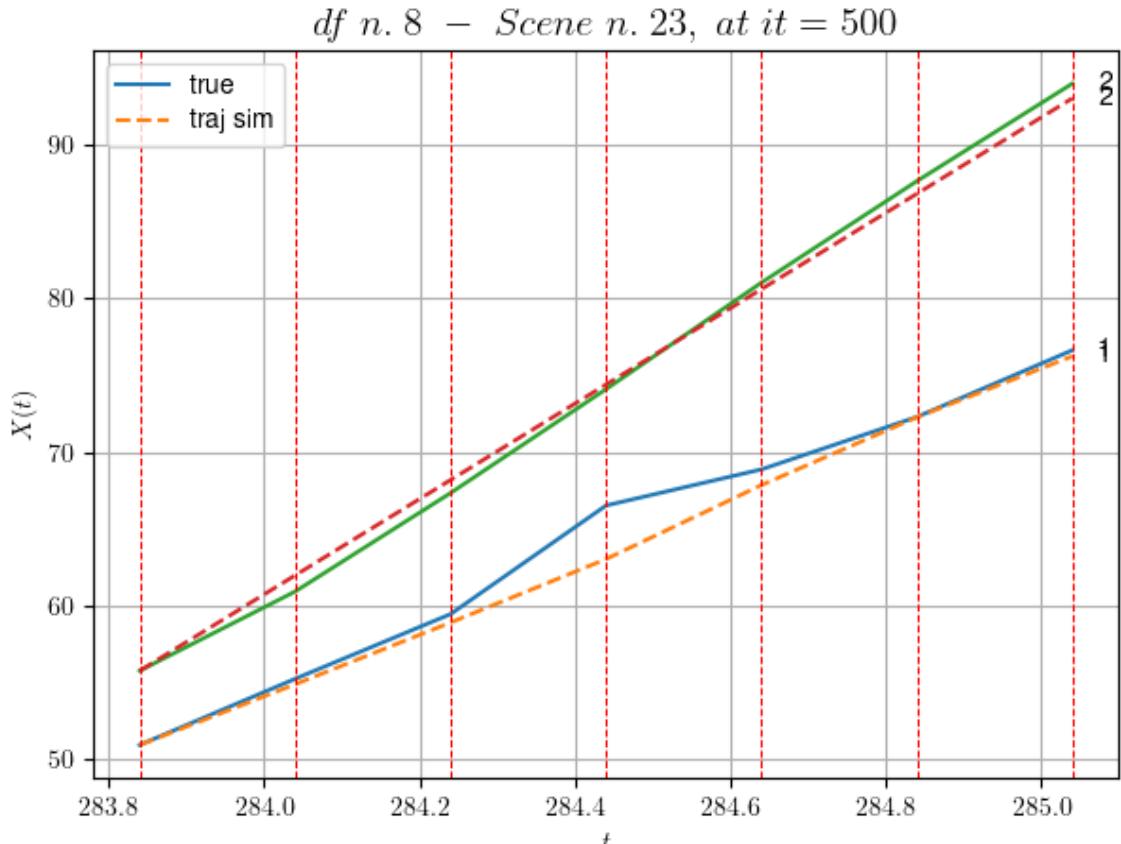
```
- Time interval n.4: [284.64, 284.84]
  * y_true: [17.05163021]
  * v_ann: [22.082111358642578, 31.024373752742626]
```

```
-----
-----
```

```
- Time interval n.5: [284.84, 285.04]
  * y_true: [21.70230716]
  * v_ann: [19.81038475036621, 31.024373752742626]
```

```
-----
-----
```

```
* err= 1.2465006745671334
* Learning rate NN = 0.00031381050939671695
* diff = 0.08852165371295762
```



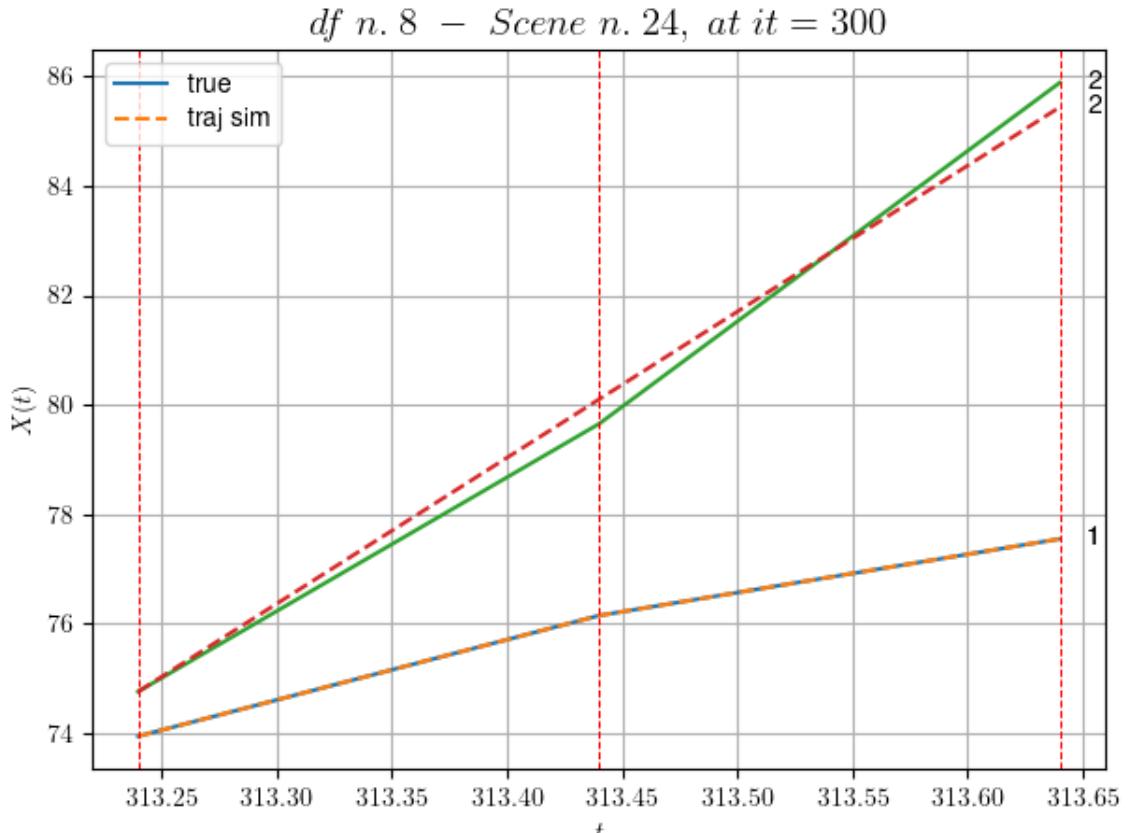
For scene 23/79

- * use LR_NN=0.001 with err=9.893123298653192 at it=24
 - * v0_scn_mean = 30.98339880264089
 - * MAE = 1.2465006745671334
-
-

df n.8, scene n.24/79

We have 2 time intervals inside [313.24, 313.64]

- * err= 0.06676564390545804
- * Learning rate NN = 0.008099999278783798
- * diff = 2.441457904178712e-07

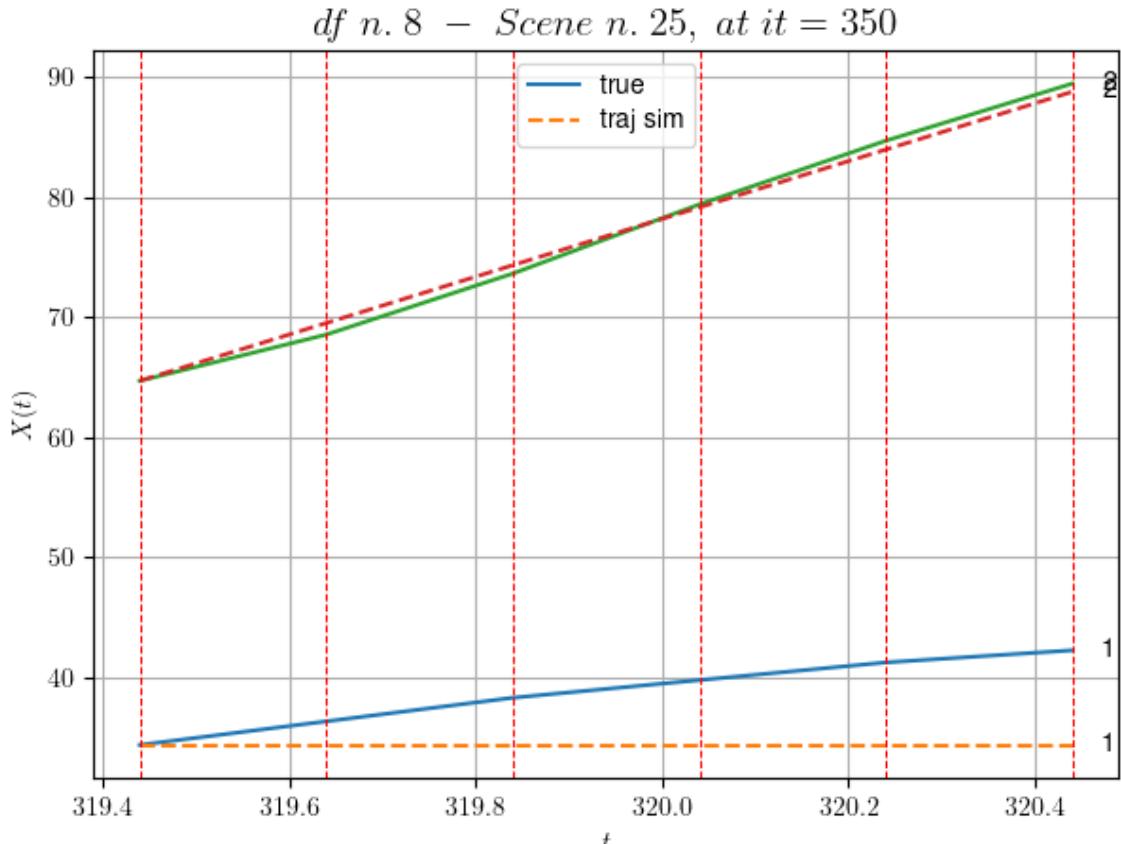


For scene 24/79

* use LR_NN=0.01 with err=0.33170174055768586 at it=24
* v0_scn_mean = 26.918758772440118
* MAE = 0.06008912928062787

df n.8, scene n.25/79

We have 5 time intervals inside [319.44,320.44]
* err= 13.353881675396734
* Learning rate NN = 5.314409008860821e-06
* diff = 1.7791283113410827e-07



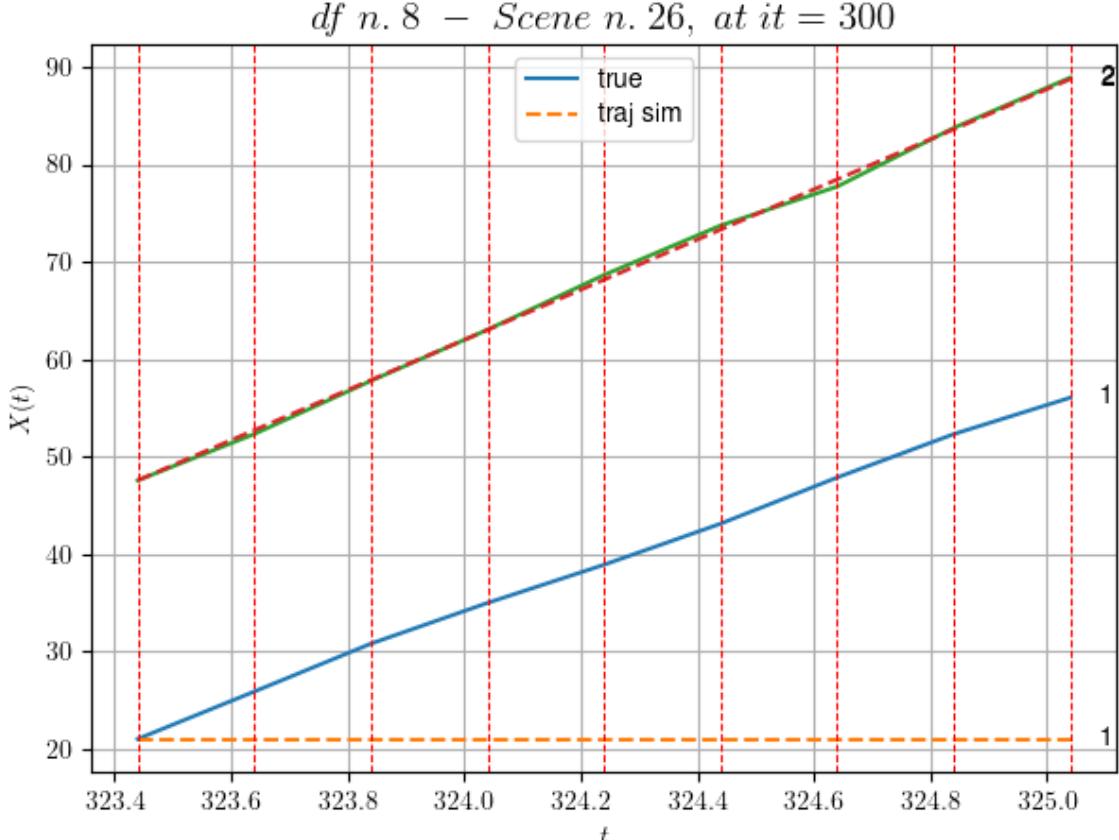
For scene 25/79

- * use LR_NN=1e-05 with err=5.9190607581420975 at it=24
 - * v0_scn_mean = 24.41126881375643
 - * MAE = 13.320111046819708
-
-

df n.8, scene n.26/79

We have 8 time intervals inside [323.44, 325.04]

- * err= 225.20546696539137
- * Learning rate NN = 1.9371018424862996e-05
- * diff = 3.041437253159529e-07



For scene 26/79

- * use LR_NN=5e-05 with err=9.06875327891127 at it=24
 - * v0_scn_mean = 26.041149390488386
 - * MAE = 225.20500544088688
-
-

df n.8, scene n.27/79

We have 9 time intervals inside [327.84, 329.64]

- Time interval n.0: [327.84, 328.04]
 - * y_true: [22.06055829]
 - * v_ann: [28.270933151245117, 23.31808413019477]
-

- Time interval n.1: [328.04, 328.24]
 - * y_true: [23.96078165]
 - * v_ann: [26.474489212036133, 23.31808413019477]
-

- Time interval n.2: [328.24, 328.44]
 - * y_true: [24.43098932]
 - * v_ann: [25.790328979492188, 23.31808413019477]
-

- Time interval n.3: [328.44, 328.64]
 - * y_true: [18.6708951]

```
* v_ann: [25.305736541748047, 23.31808413019477]
```

```
- Time interval n.4: [328.64, 328.84]
* y_true: [31.01184421]
* v_ann: [23.4626407623291, 23.31808413019477]
```

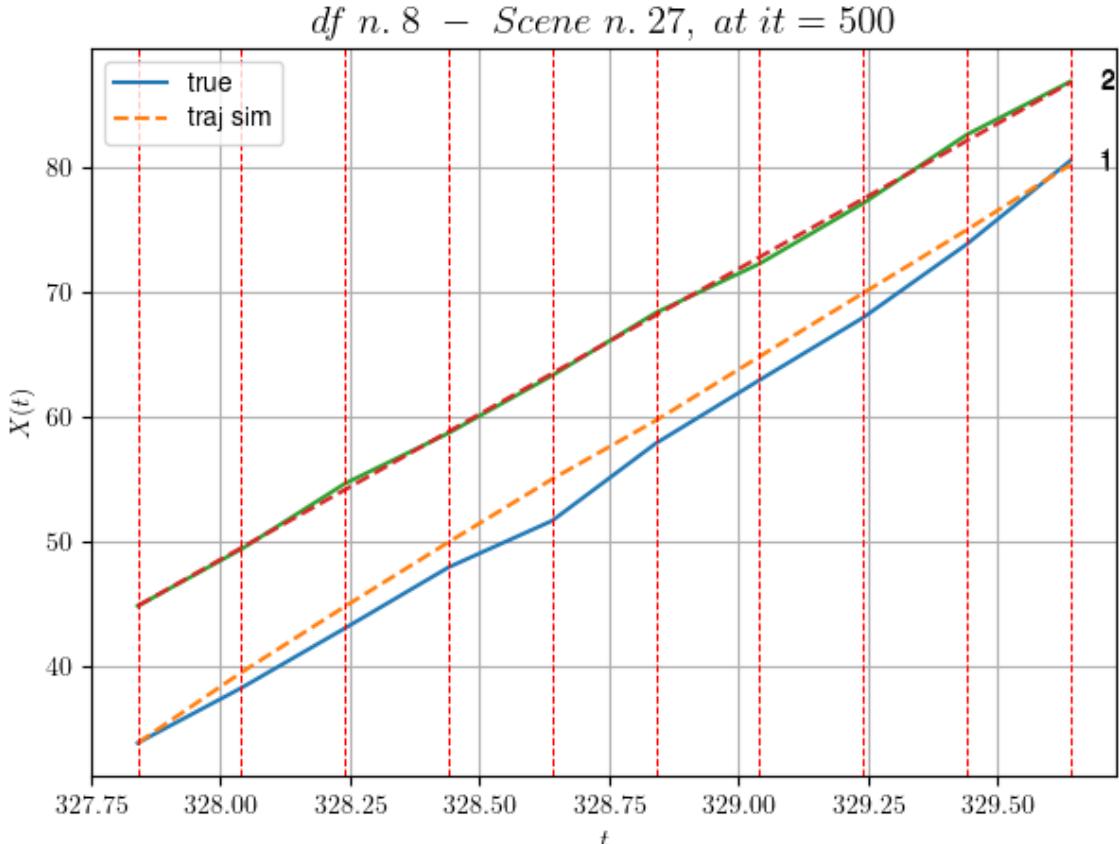
```
- Time interval n.5: [328.84, 329.04]
* y_true: [25.37177893]
* v_ann: [25.632877349853516, 23.31808413019477]
```

```
- Time interval n.6: [329.04, 329.24]
* y_true: [25.06209083]
* v_ann: [25.449304580688477, 23.31808413019477]
```

```
- Time interval n.7: [329.24, 329.44]
* y_true: [29.432885]
* v_ann: [25.35091209411621, 23.31808413019477]
```

```
- Time interval n.8: [329.44, 329.64]
* y_true: [33.52388826]
* v_ann: [26.133792877197266, 23.31808413019477]
```

```
* err= 1.6511170365239736
* Learning rate NN = 0.00016677174426149577
* diff = 0.1094003551449827
```



For scene 27/79

- * use LR_NN=0.001 with err=27.052007983378076 at it=24
- * v0_scn_mean = 23.585360764935963
- * MAE = 1.4357541700461696

df n.8, scene n.28/79

We have 4 time intervals inside [335.04, 335.84]

- Time interval n.0: [335.04, 335.24]
 - * y_true: [24.8512221]
 - * v_ann: [23.02473258972168, 23.06127178093338]

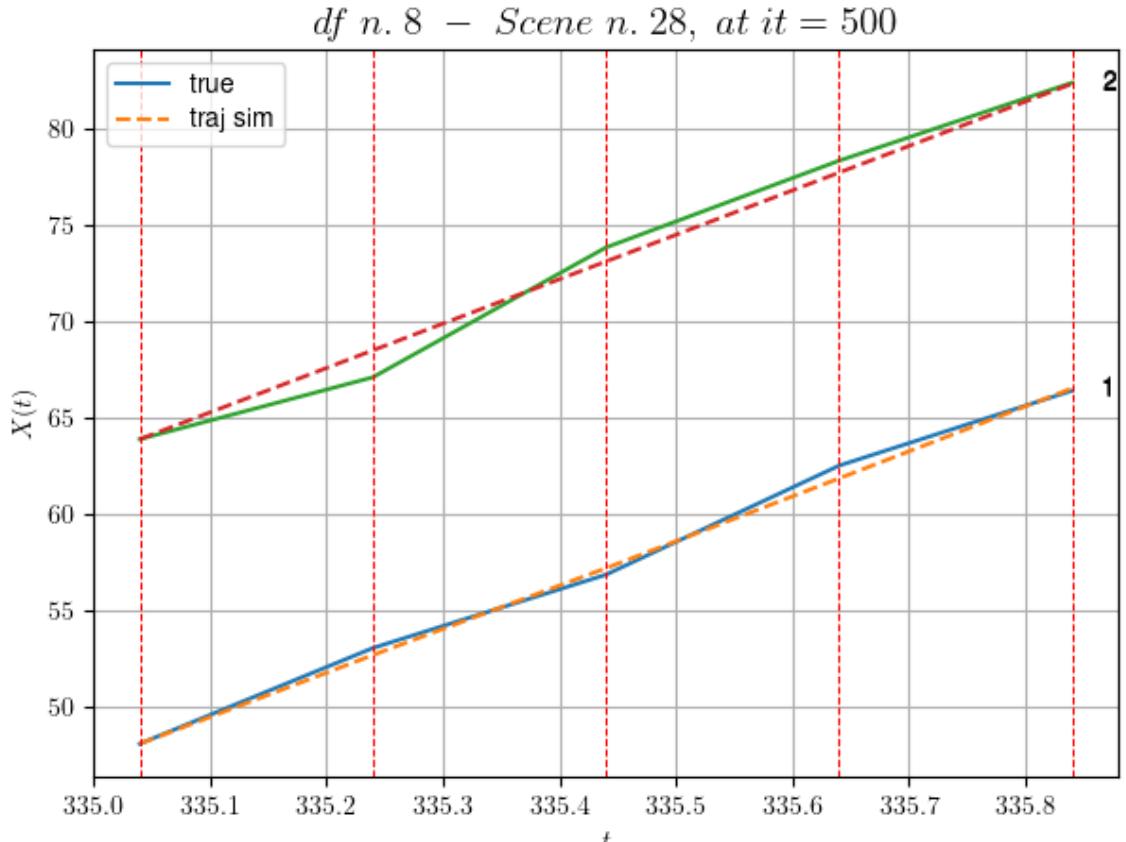
- Time interval n.1: [335.24, 335.44]
 - * y_true: [19.04114233]
 - * v_ann: [22.54057502746582, 23.06127178093338]

- Time interval n.2: [335.44, 335.64]
 - * y_true: [28.30193393]
 - * v_ann: [23.31828498840332, 23.06127178093338]

- Time interval n.3: [335.64, 335.84]
 - * y_true: [19.46158621]

* v_ann: [23.38870620727539, 23.06127178093338]

* err= 0.3570134810527326
 * Learning rate NN = 4.7829678806010634e-05
 * diff = 0.0004742996650236031



For scene 28/79

* use LR_NN=0.0001 with err=5.545841059885858 at it=24
 * v0_scn_mean = 23.338820909642855
 * MAE = 0.3570134810527326

df n.8, scene n.29/79

We have 14 time intervals inside [366.64, 369.44]

- Time interval n.0: [366.64, 366.84]
 - * y_true: [17.86619918]
 - * v_ann: [7.375021934509277, 18.211190440756237]

- Time interval n.1: [366.84, 367.04]
 - * y_true: [7.2501536]
 - * v_ann: [7.265435218811035, 18.211190440756237]

- Time interval n.2: [367.04, 367.24]

```
* y_true: [7.20516912]
* v_ann: [7.547786235809326, 18.211190440756237]
```

```
- Time interval n.3: [367.24, 367.44]
* y_true: [7.17517947]
* v_ann: [7.717156887054443, 18.211190440756237]
```

```
- Time interval n.4: [367.44, 367.64]
* y_true: [5.45014474]
* v_ann: [7.8809943199157715, 18.211190440756237]
```

```
- Time interval n.5: [367.64, 367.84]
* y_true: [4.30012159]
* v_ann: [8.09902572631836, 18.211190440756237]
```

```
- Time interval n.6: [367.84, 368.04]
* y_true: [5.08015369]
* v_ann: [8.168329238891602, 18.211190440756237]
```

```
- Time interval n.7: [368.04, 368.24]
* y_true: [5.6001751]
* v_ann: [8.201346397399902, 18.211190440756237]
```

```
- Time interval n.8: [368.24, 368.44]
* y_true: [6.48521995]
* v_ann: [8.272974014282227, 18.211190440756237]
```

```
- Time interval n.9: [368.44, 368.64]
* y_true: [7.07524984]
* v_ann: [8.386099815368652, 18.211190440756237]
```

```
- Time interval n.10: [368.64, 368.84]
* y_true: [8.15531695]
* v_ann: [8.537613868713379, 18.211190440756237]
```

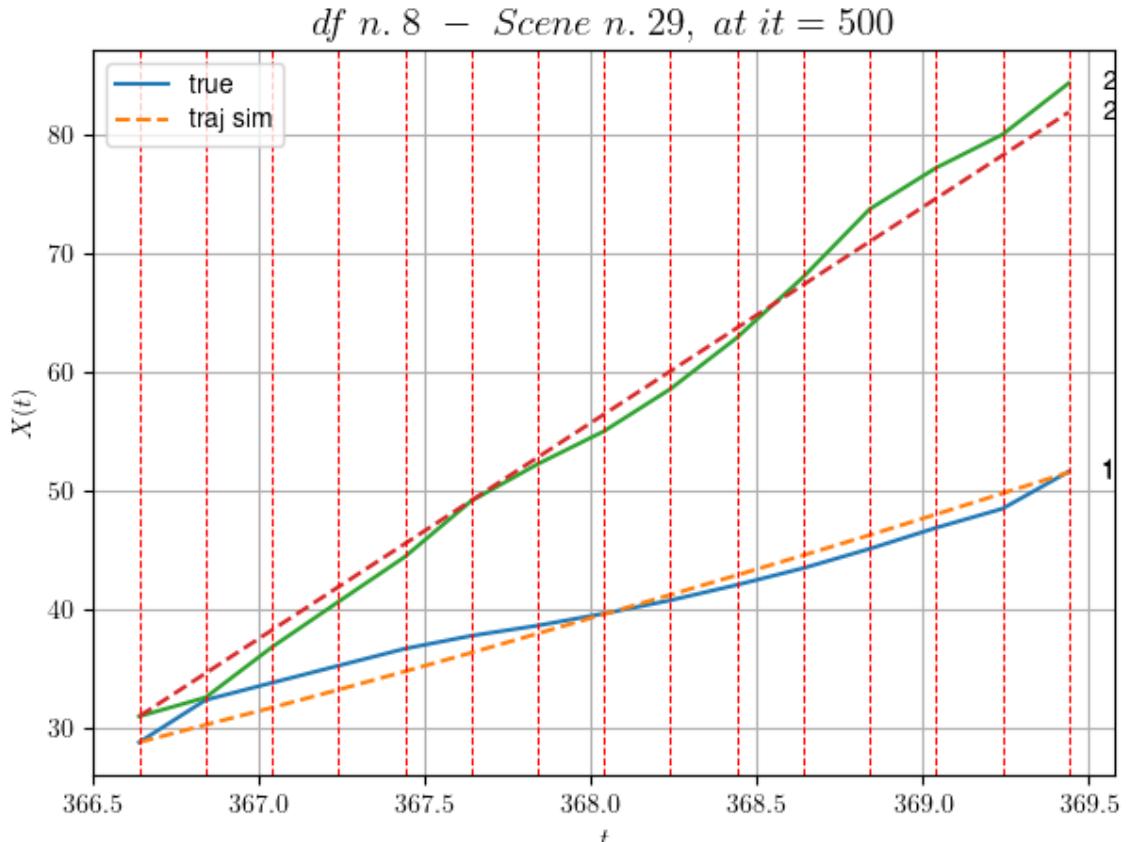
```
- Time interval n.11: [368.84, 369.04]
* y_true: [8.87536169]
* v_ann: [8.744909286499023, 18.211190440756237]
```

```
- Time interval n.12: [369.04, 369.24]
```

```
* y_true: [8.05829994]
* v_ann: [8.84988784790039, 18.211190440756237]
```

```
- Time interval n.13: [369.24, 369.44]
* y_true: [15.69072344]
* v_ann: [8.852323532104492, 18.211190440756237]
```

```
* err= 2.1184424129734305
* Learning rate NN = 5.8149696997134015e-05
* diff = 0.012326637110410488
```



For scene 29/79

```
* use LR_NN=0.001 with err=184.4163227896645 at it=24
* v0_scn_mean = 18.682742823035806
* MAE = 2.0181719934811584
```

df n.8, scene n.30/79

```
We have 9 time intervals inside [389.24,391.04]
```

```
- Time interval n.0: [389.24, 389.44]
* y_true: [8.38525844]
* v_ann: [7.042295932769775, 19.019765770329105]
```

```
- Time interval n.1: [389.44, 389.64]
* y_true: [9.22528905]
* v_ann: [7.209845542907715, 19.019765770329105]
```

```
-----  
- Time interval n.2: [389.64, 389.84]
* y_true: [6.14521269]
* v_ann: [7.380518913269043, 19.019765770329105]
```

```
-----  
- Time interval n.3: [389.84, 390.04]
* y_true: [5.3751936]
* v_ann: [7.401719093322754, 19.019765770329105]
```

```
-----  
- Time interval n.4: [390.04, 390.24]
* y_true: [6.37525125]
* v_ann: [7.395015239715576, 19.019765770329105]
```

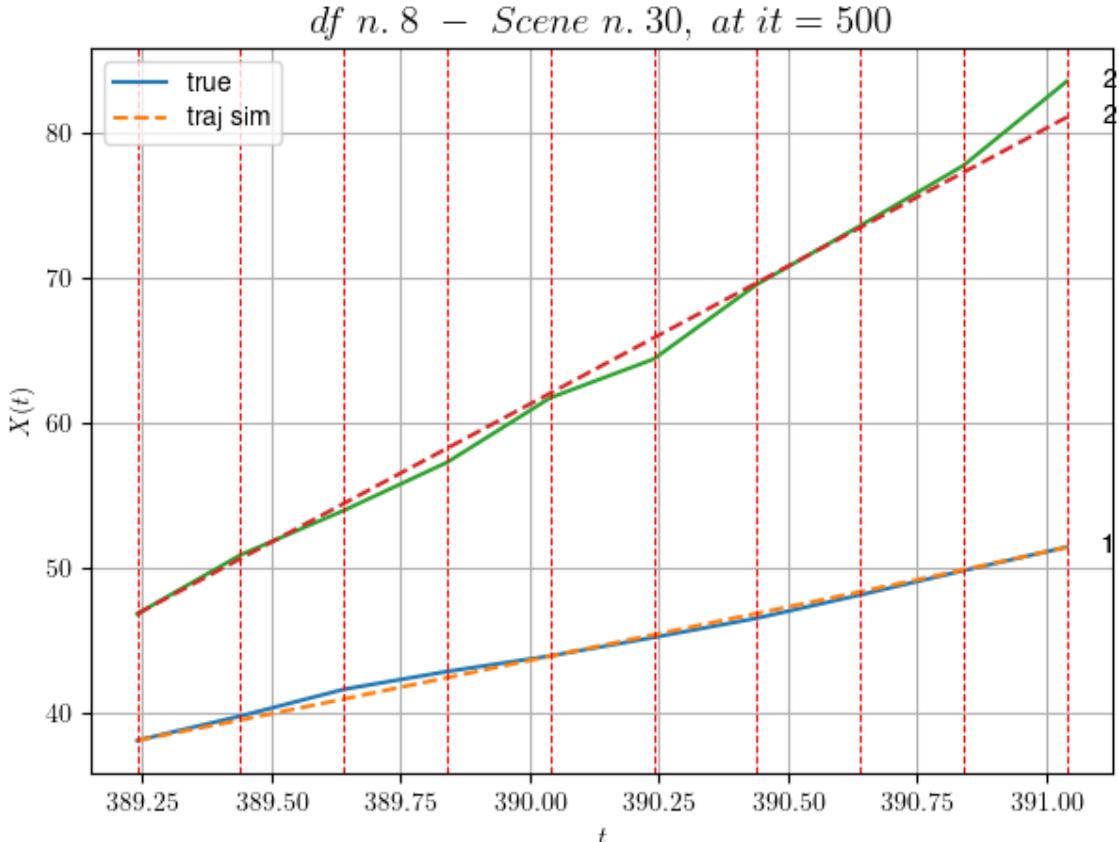
```
-----  
- Time interval n.5: [390.24, 390.44]
* y_true: [6.62526566]
* v_ann: [7.355020523071289, 19.019765770329105]
```

```
-----  
- Time interval n.6: [390.44, 390.64]
* y_true: [8.02535814]
* v_ann: [7.416125297546387, 19.019765770329105]
```

```
-----  
- Time interval n.7: [390.64, 390.84]
* y_true: [8.37538127]
* v_ann: [7.584424018859863, 19.019765770329105]
```

```
-----  
- Time interval n.8: [390.84, 391.04]
* y_true: [8.11541027]
* v_ann: [7.804139137268066, 19.019765770329105]
```

```
-----  
* err= 0.5380856408962955
* Learning rate NN = 0.00016677174426149577
* diff = 0.00024050299319755553
```



For scene 30/79

* use LR_NN=0.001 with err=67.17067604229464 at it=24
 * v0_scn_mean = 19.458975139433267
 * MAE = 0.5000867469869242

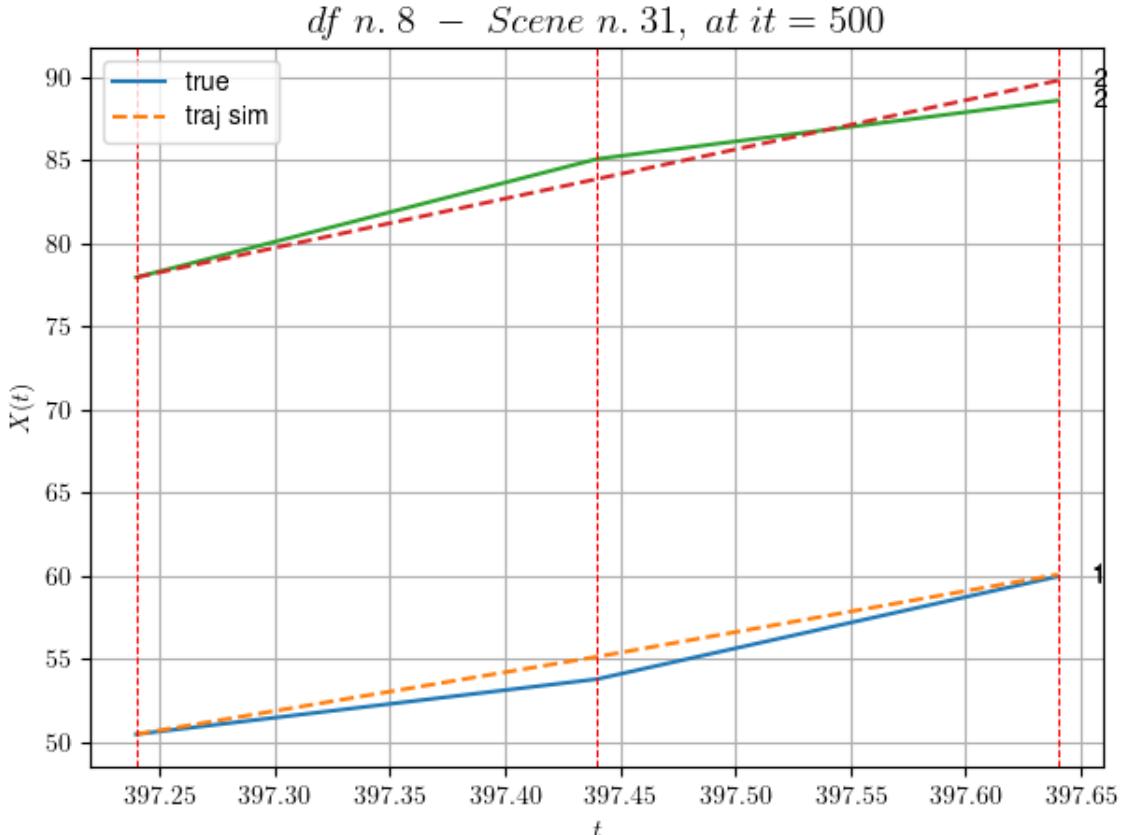
df n.8, scene n.31/79

We have 2 time intervals inside [397.24, 397.64]

- Time interval n.0: [397.24, 397.44]
 - * y_true: [16.60087318]
 - * v_ann: [23.328048706054688, 29.637208516307258]

- Time interval n.1: [397.44, 397.64]
 - * y_true: [30.91194424]
 - * v_ann: [24.77674674987793, 29.637208516307258]

- * err= 0.7868127078191134
- * Learning rate NN = 3.6449993785936385e-05
- * diff = 0.0005785123571995232



For scene 31/79

* use LR_NN=5e-05 with err=0.7894539399900262 at it=24
 * v0_scn_mean = 29.651720175653097
 * MAE = 0.7374521499781667

df n.8, scene n.32/79

We have 3 time intervals inside [404.84, 405.44]

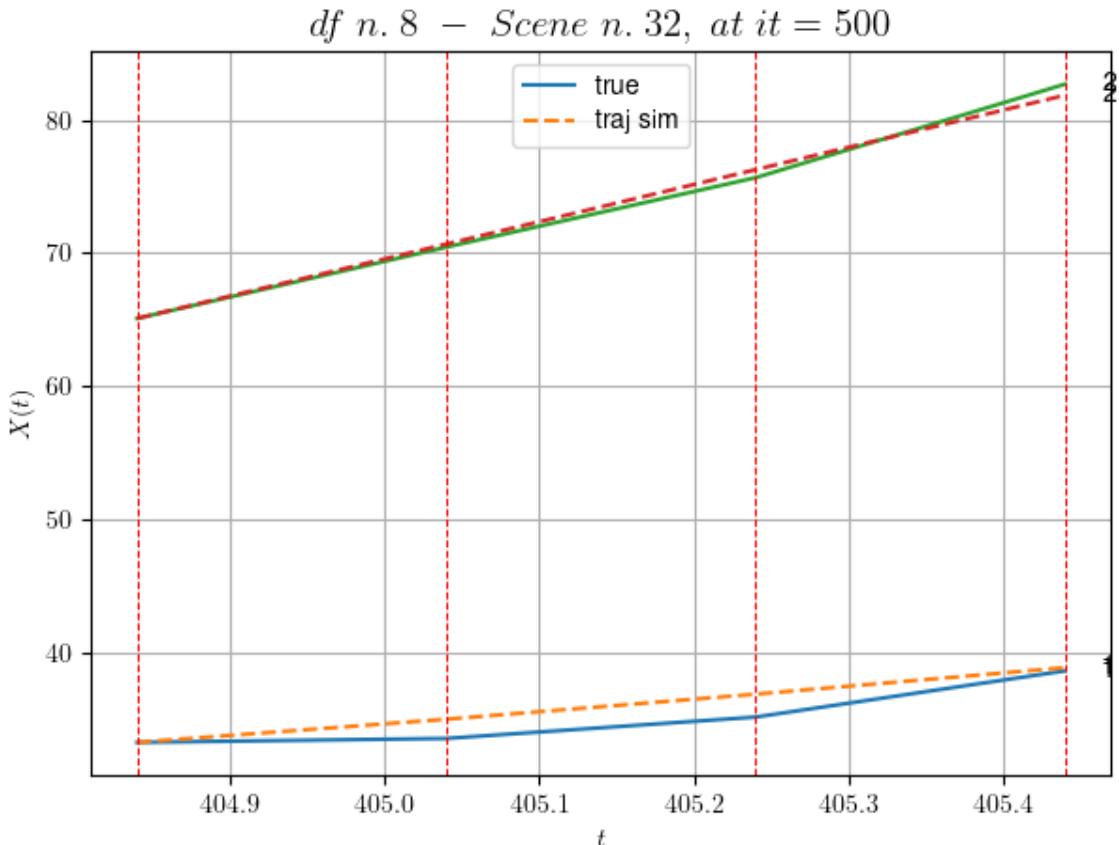
- Time interval n.0: [404.84, 405.04]
 - * y_true: [1.47503232]
 - * v_ann: [8.677071571350098, 27.902766852719747]

- Time interval n.1: [405.04, 405.24]
 - * y_true: [8.01795896]
 - * v_ann: [9.405778884887695, 27.902766852719747]

- Time interval n.2: [405.24, 405.44]
 - * y_true: [17.33045096]
 - * v_ann: [9.950143814086914, 27.902766852719747]

- * err= 0.7733740577012548
- * Learning rate NN = 5.9048988987342454e-06

* diff = 0.000297143392153143



For scene 32/79

* use LR_NN=1e-05 with err=0.6717766155871476 at it=24
 * v0_scn_mean = 27.98665617859237
 * MAE = 0.7733740577012548

df n.8, scene n.33/79

We have 10 time intervals inside [412.04, 414.04]

- Time interval n.0: [412.04, 412.24]
 - * y_true: [24.0804594]
 - * v_ann: [19.9844913482666, 22.87186624520368]

- Time interval n.1: [412.24, 412.44]
 - * y_true: [27.74068623]
 - * v_ann: [21.18587875366211, 22.87186624520368]

- Time interval n.2: [412.44, 412.64]
 - * y_true: [22.39072047]
 - * v_ann: [22.290266036987305, 22.87186624520368]

- Time interval n.3: [412.64, 412.84]

```
* y_true: [22.94091554]
* v_ann: [22.29262351989746, 22.87186624520368]
```

```
- Time interval n.4: [412.84, 413.04]
* y_true: [17.47081843]
* v_ann: [22.216367721557617, 22.87186624520368]
```

```
- Time interval n.5: [413.04, 413.24]
* y_true: [23.28131854]
* v_ann: [21.922929763793945, 22.87186624520368]
```

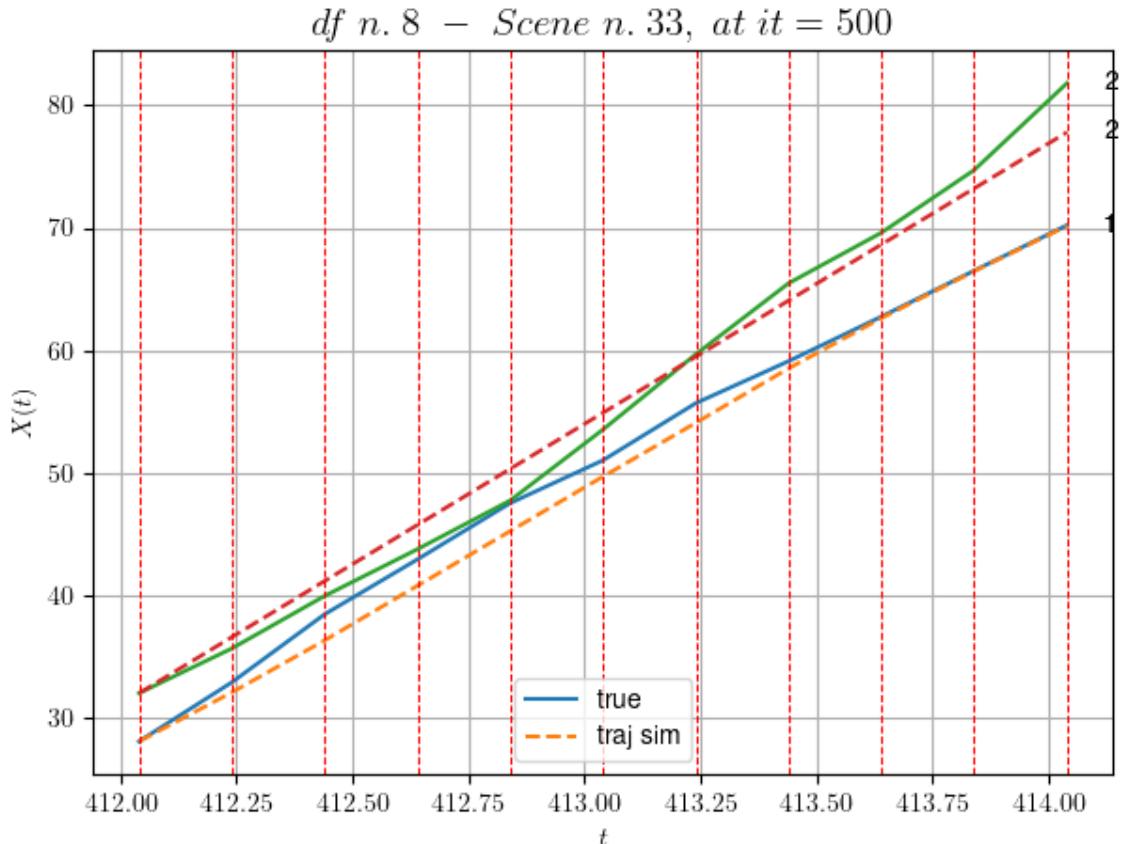
```
- Time interval n.6: [413.24, 413.44]
* y_true: [17.13105881]
* v_ann: [22.207256317138672, 22.87186624520368]
```

```
- Time interval n.7: [413.44, 413.64]
* y_true: [18.16133526]
* v_ann: [20.46590232849121, 22.87186624520368]
```

```
- Time interval n.8: [413.64, 413.84]
* y_true: [18.74149771]
* v_ann: [19.149654388427734, 22.87186624520368]
```

```
- Time interval n.9: [413.84, 414.04]
* y_true: [18.54169049]
* v_ann: [18.44424819946289, 22.87186624520368]
```

```
* err= 2.534703157975364
* Learning rate NN = 0.0006754255155101418
* diff = 0.06202309582117582
```



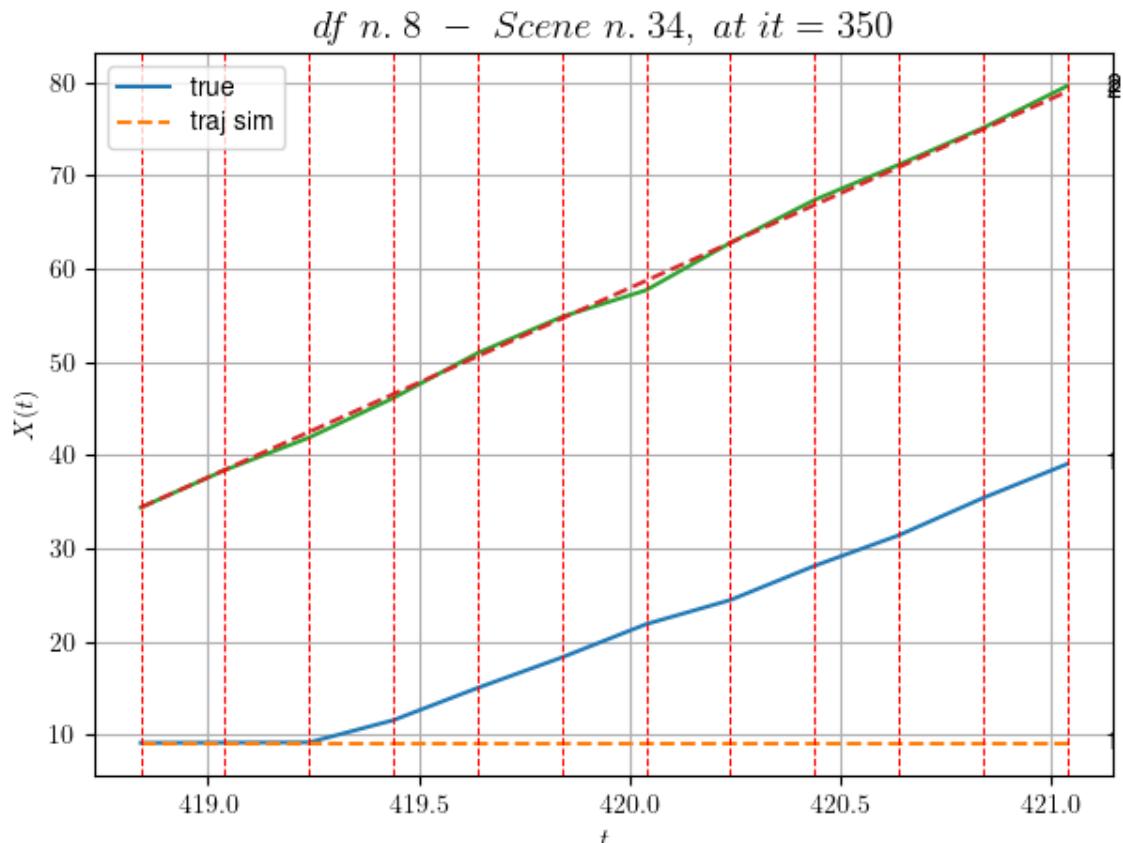
For scene 33/79

- * use LR_NN=0.005 with err=33.22761108827052 at it=24
- * v0_scn_mean = 23.1569915953402
- * MAE = 2.534703157975364

df n.8, scene n.34/79

We have 11 time intervals inside [418.84, 421.04]

- * err= 123.65856149441255
- * Learning rate NN = 0.00010294552339473739
- * diff = 2.6472227432350337e-07



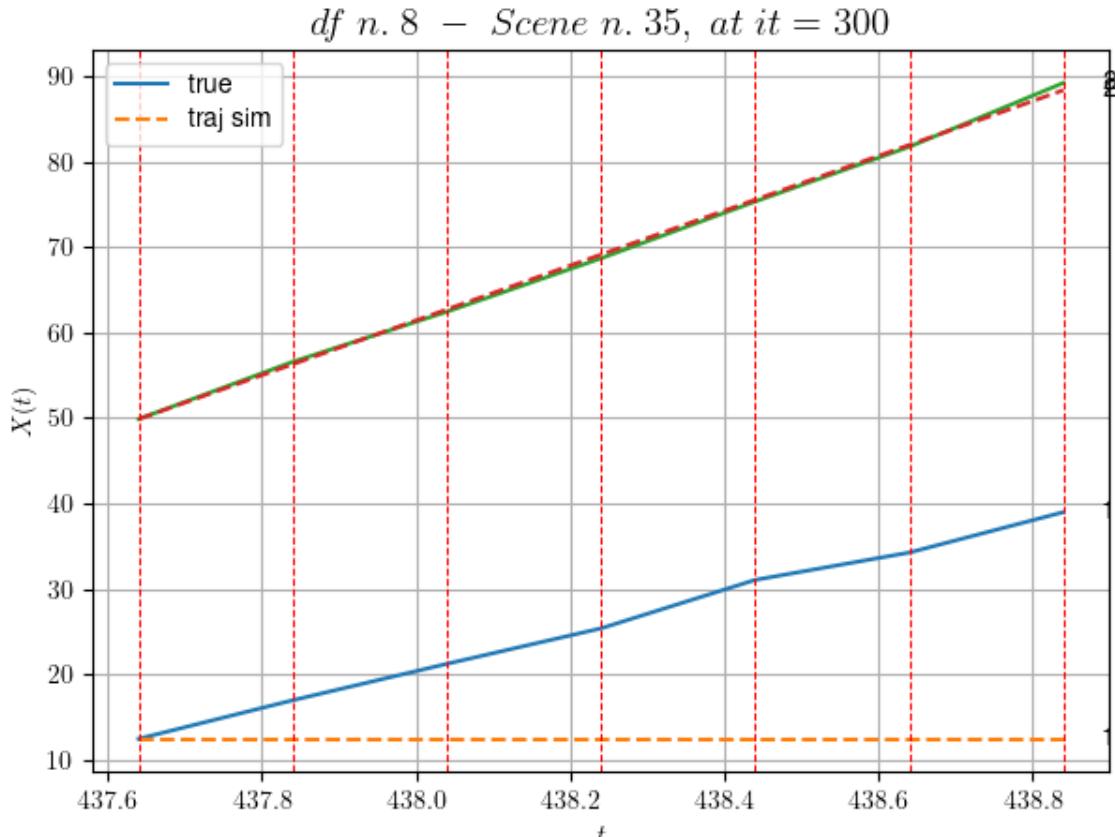
For scene 34/79

- * use LR_NN=0.0005 with err=79.11726834643304 at it=24
 - * v0_scn_mean = 20.844550792459938
 - * MAE = 123.6525074867811
-
-

df n.8, scene n.35/79

We have 6 time intervals inside [437.64, 438.84]

- * err= 127.79138986413277
- * Learning rate NN = 4.782968062500004e-06
- * diff = 2.3517000613537675e-07



For scene 35/79

- * use LR_NN=1e-05 with err=1.6282575649577158 at it=24
- * v0_scn_mean = 31.93531233020835
- * MAE = 127.79138986413277

df n.8, scene n.36/79

We have 14 time intervals inside [445.44, 448.24]

- Time interval n.0: [445.44, 445.64]
 - * y_true: [0.12387653]
 - * v_ann: [0.04565492644906044, 21.04037373587109]

- Time interval n.1: [445.64, 445.84]
 - * y_true: [0.12387653]
 - * v_ann: [0.0009096926660276949, 21.04037373587109]

- Time interval n.2: [445.84, 446.04]
 - * y_true: [12.34322315]
 - * v_ann: [1.2267992133274674e-05, 21.04037373587109]

- Time interval n.3: [446.04, 446.24]

9]

```
* y_true: [20.41012141]
* v_ann: [2.1146183826203924e-06, 21.0403737358710
9]

-----
- Time interval n.4: [446.24, 446.44]
* y_true: [18.79015888]
* v_ann: [2.51510095949925e-06, 21.04037373587109]

-----
- Time interval n.5: [446.44, 446.64]
* y_true: [18.20022789]
* v_ann: [1.4315021417132812e-06, 21.0403737358710
9]

-----
- Time interval n.6: [446.64, 446.84]
* y_true: [23.54038381]
* v_ann: [1.4709546576341381e-06, 21.0403737358710
9]

-----
- Time interval n.7: [446.84, 447.04]
* y_true: [19.83041926]
* v_ann: [8.503171784468577e-07, 21.04037373587109]

-----
- Time interval n.8: [447.04, 447.24]
* y_true: [16.99045407]
* v_ann: [1.08273104615364e-06, 21.04037373587109]

-----
- Time interval n.9: [447.24, 447.44]
* y_true: [22.71075598]
* v_ann: [1.250613763659203e-06, 21.04037373587109]

-----
- Time interval n.10: [447.44, 447.64]
* y_true: [24.90098912]
* v_ann: [3.385832769708941e-07, 21.04037373587109]

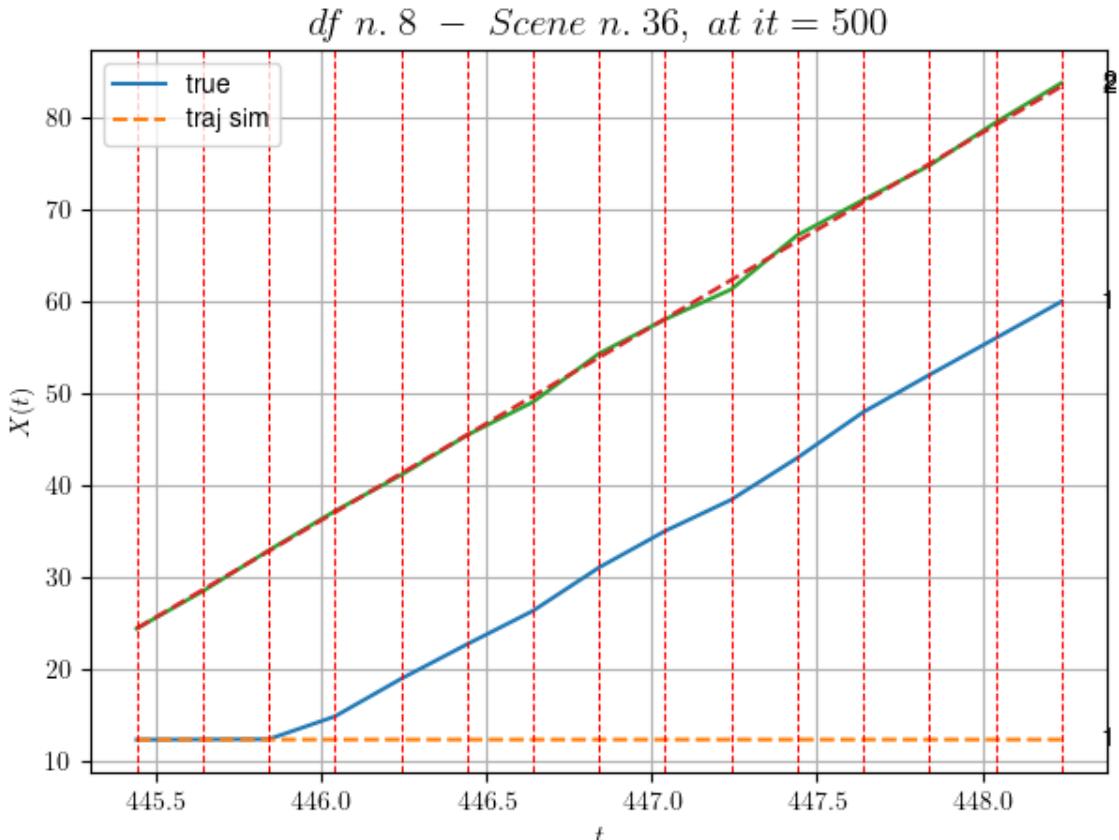
-----
- Time interval n.11: [447.64, 447.84]
* y_true: [20.22098889]
* v_ann: [1.0286130418535322e-06, 21.0403737358710
9]

-----
- Time interval n.12: [447.84, 448.04]
* y_true: [19.88112158]
* v_ann: [1.3885900216337177e-06, 21.0403737358710
```

9]

```
- Time interval n.13: [448.04, 448.24]
* y_true: [19.97131804]
* v_ann: [7.063845828270132e-07, 21.04037373587109]
```

```
* err= 327.91354933479414
* Learning rate NN = 5.814969997134015e-05
* diff = 0.000772005522510520
```

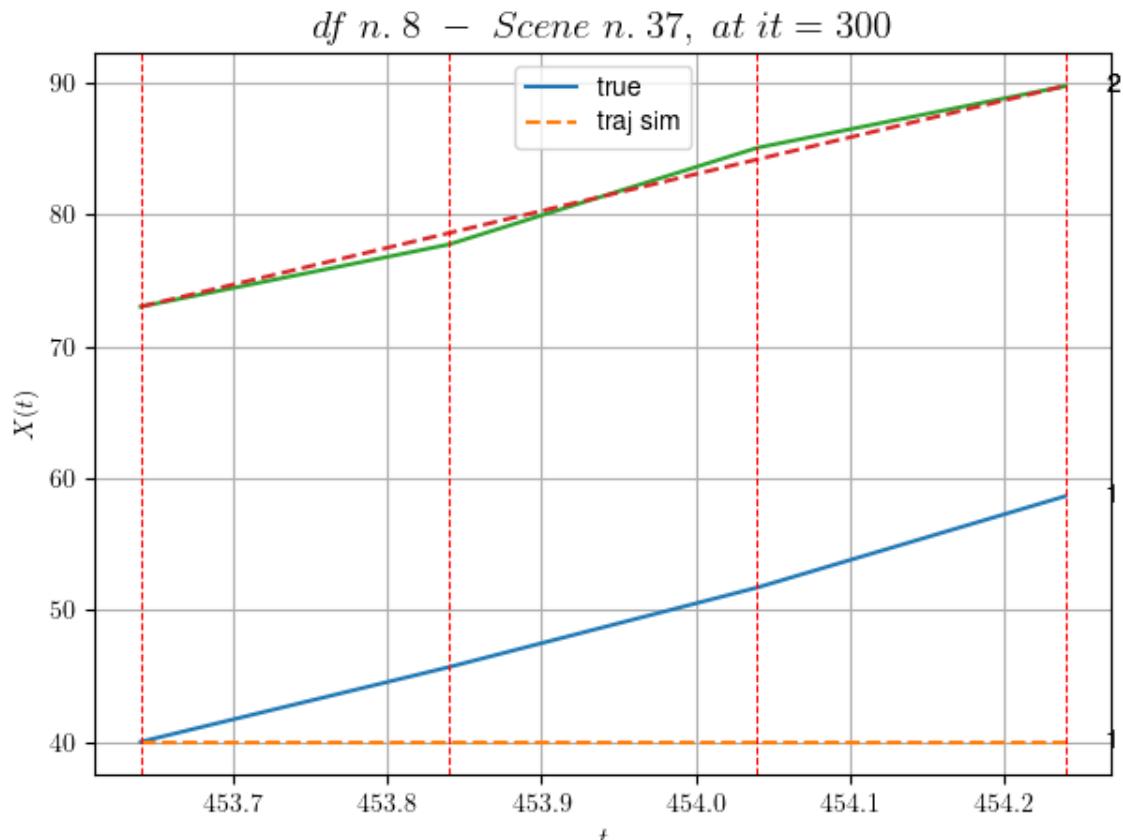


For scene 36/79

```
* use LR_NN=0.001 with err=108.96521739064207 at it=24
* v0_scn_mean = 21.398758786367228
* MAE = 327.91354933479414
```

df n.8, scene n.37/79

```
We have 3 time intervals inside [453.64,454.24]
* err= 64.75152364007072
* Learning rate NN = 0.00036449998151510954
* diff = 2.1744941136603302e-07
```

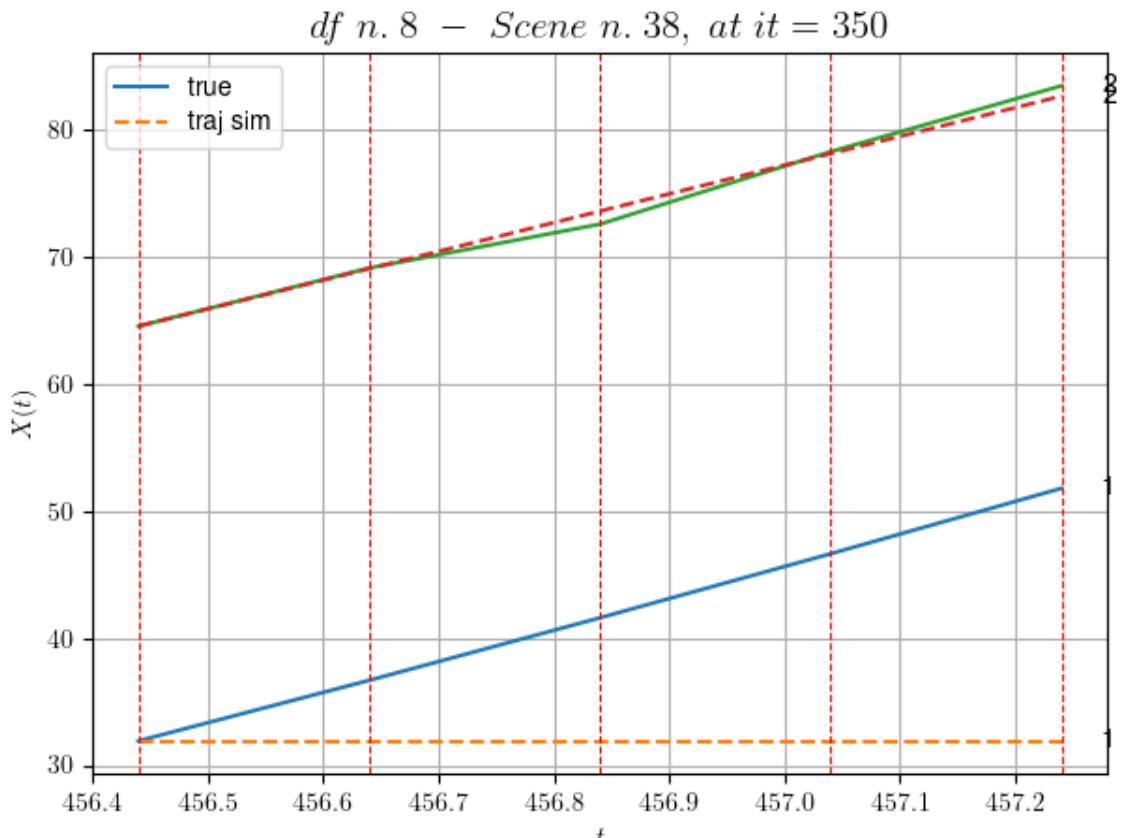


For scene 37/79

* use LR_NN=0.0005 with err=0.529972818463948 at it=24
* v0_scn_mean = 28.058763036674318
* MAE = 64.74517155672915

df n.8, scene n.38/79

We have 4 time intervals inside [456.44, 457.24]
* err= 73.07968396390831
* Learning rate NN = 5.904899080633186e-05
* diff = 9.720075411223661e-08

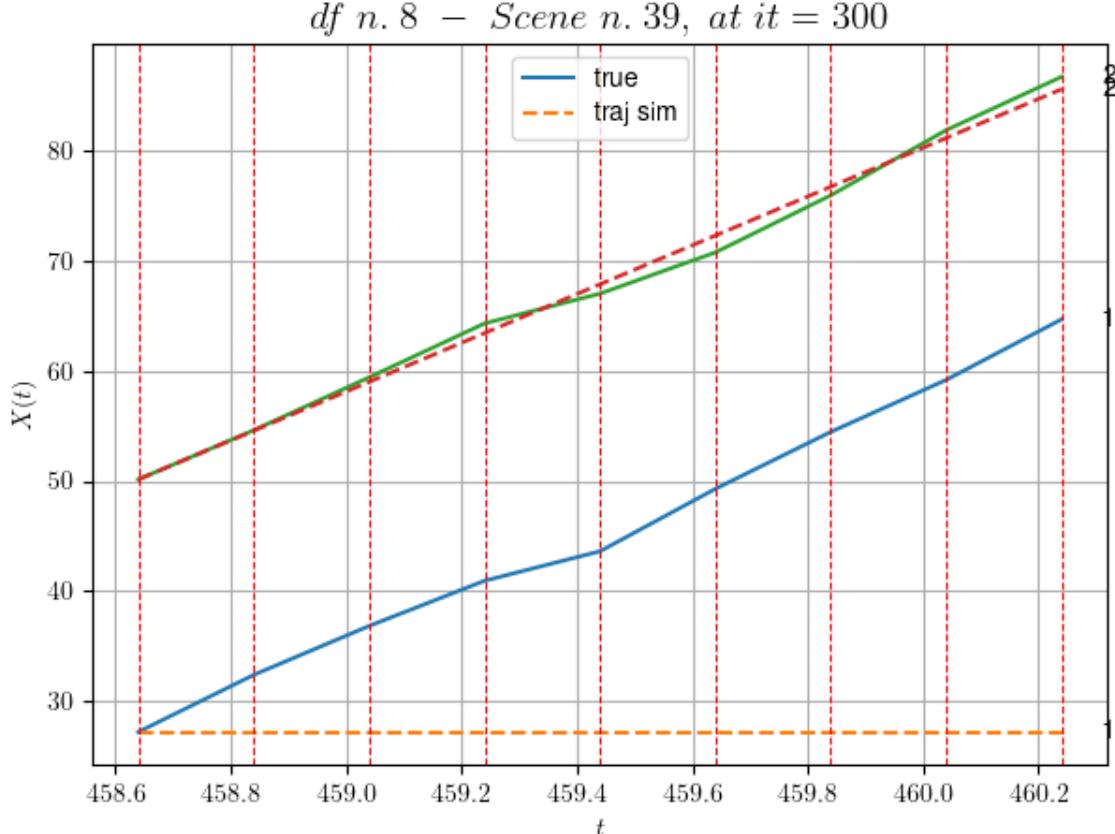


For scene 38/79

* use LR_NN=0.0001 with err=6.210391638505384 at it=24
* v0_scn_mean = 23.057978270799953
* MAE = 73.06970267280401

df n.8, scene n.39/79

We have 8 time intervals inside [458.64, 460.24]
* err= 236.27581092925615
* Learning rate NN = 0.0001937102060765028
* diff = 5.58384385840327e-07



For scene 39/79

```
* use LR_NN=0.0005 with err=28.40105263747853 at it=24
* v0_scn_mean = 22.705799643750062
* MAE = 236.27500706555543
```

df n.8, scene n.40/79

We have 15 time intervals inside [475.84, 478.84]

- Time interval n.0: [475.84, 476.04]
 - * y_true: [0.12387653]
 - * v_ann: [0.09417319297790527, 18.58562797515516]

- Time interval n.1: [476.04, 476.24]
 - * y_true: [0.12387653]
 - * v_ann: [0.004521350376307964, 18.58562797515516]

- Time interval n.2: [476.24, 476.44]
 - * y_true: [0.12387653]
 - * v_ann: [0.00011804237874457613, 18.58562797515511]

6]

- Time interval n.3: [476.44, 476.64]

```
* y_true: [0.35014507]
* v_ann: [3.505040467643994e-06, 18.58562797515516]
```

```
- Time interval n.4: [476.64, 476.84]
* y_true: [15.34010034]
* v_ann: [1.422322810640253e-07, 18.58562797515516]
```

```
- Time interval n.5: [476.84, 477.04]
* y_true: [16.47014538]
* v_ann: [6.182717982028407e-08, 18.58562797515516]
```

```
- Time interval n.6: [477.04, 477.24]
* y_true: [15.29017682]
* v_ann: [2.3610665422779675e-08, 18.5856279751551
```

6]

```
- Time interval n.7: [477.24, 477.44]
* y_true: [14.20020635]
* v_ann: [1.7734777202349505e-08, 18.5856279751551
```

6]

```
- Time interval n.8: [477.44, 477.64]
* y_true: [16.81030766]
* v_ann: [8.911315241277862e-09, 18.58562797515516]
```

```
- Time interval n.9: [477.64, 477.84]
* y_true: [18.60041729]
* v_ann: [7.189496553650088e-09, 18.58562797515516]
```

6]

```
- Time interval n.10: [477.84, 478.04]
* y_true: [15.74042221]
* v_ann: [6.2181113591464054e-09, 18.5856279751551
```

```
- Time interval n.11: [478.04, 478.24]
* y_true: [17.32056356]
* v_ann: [2.615261118776857e-09, 18.58562797515516]
```

```
- Time interval n.12: [478.24, 478.44]
* y_true: [22.3908747]
* v_ann: [2.3922754888161535e-09, 18.58562797515516]
```

6]

```

-----  

- Time interval n.13: [478.44, 478.64]  

* y_true: [17.17076636]  

* v_ann: [9.772610498615109e-10, 18.58562797515516]
-----
```

```

-----  

- Time interval n.14: [478.64, 478.84]  

* y_true: [19.89107551]  

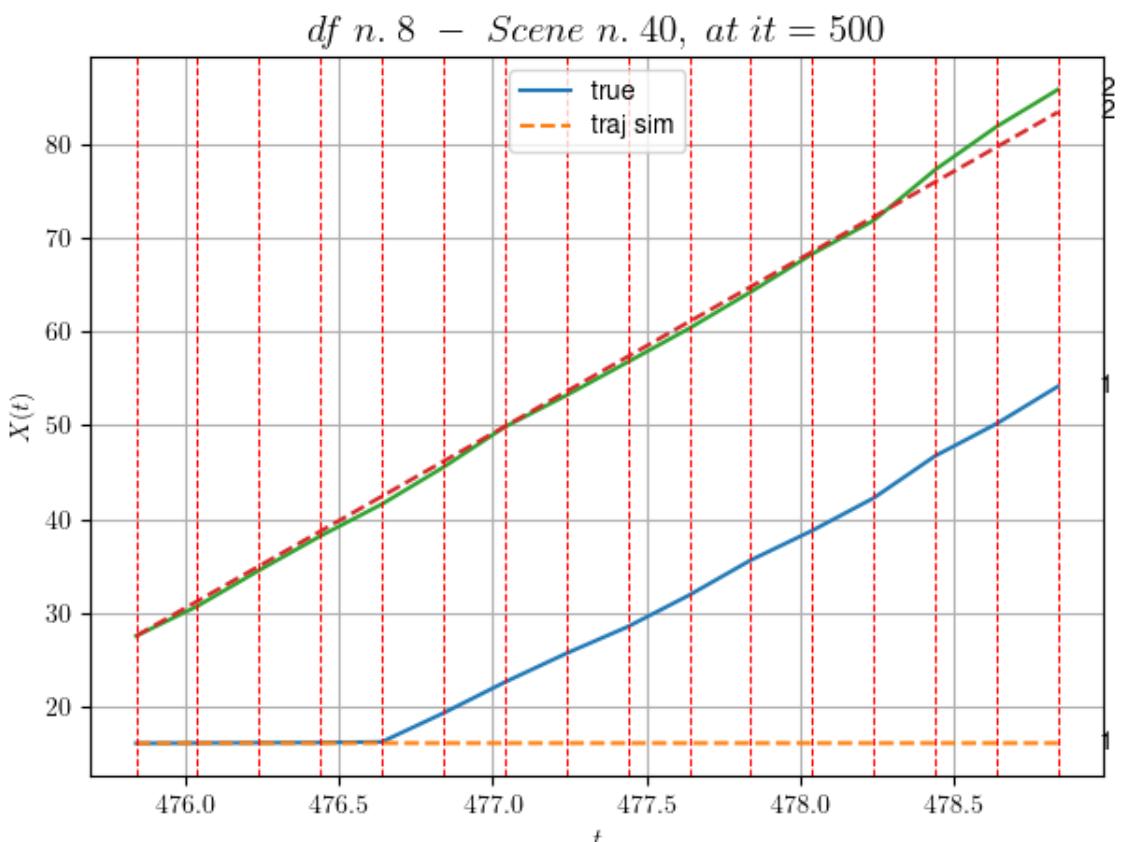
* v_ann: [3.178153018534857e-10, 18.58562797515516]
-----
```

```

* err= 176.92723587860758  

* Learning rate NN = 2.3550626792712137e-05  

* diff = 0.0003101057000321067
-----
```



For scene 40/79

```

* use LR_NN=0.0005 with err=199.37406199902475 at it=24
* v0_scn_mean = 19.042202856062147
* MAE = 176.8831429203891
=====
```

df n.8, scene n.41/79

```

=====
We have 9 time intervals inside [488.24, 490.04]
- Time interval n.0: [488.24, 488.44]
* y_true: [23.74050104]
* v_ann: [25.096092224121094, 18.510799599163814]
```

```
- Time interval n.1: [488.44, 488.64]
* y_true: [16.69043259]
* v_ann: [23.78997230529785, 18.510799599163814]

-----
- Time interval n.2: [488.64, 488.84]
* y_true: [18.92060399]
* v_ann: [22.970504760742188, 18.510799599163814]

-----
- Time interval n.3: [488.84, 489.04]
* y_true: [28.4711413]
* v_ann: [22.19565773010254, 18.510799599163814]

-----
- Time interval n.4: [489.04, 489.24]
* y_true: [20.32096673]
* v_ann: [22.187448501586914, 18.510799599163814]

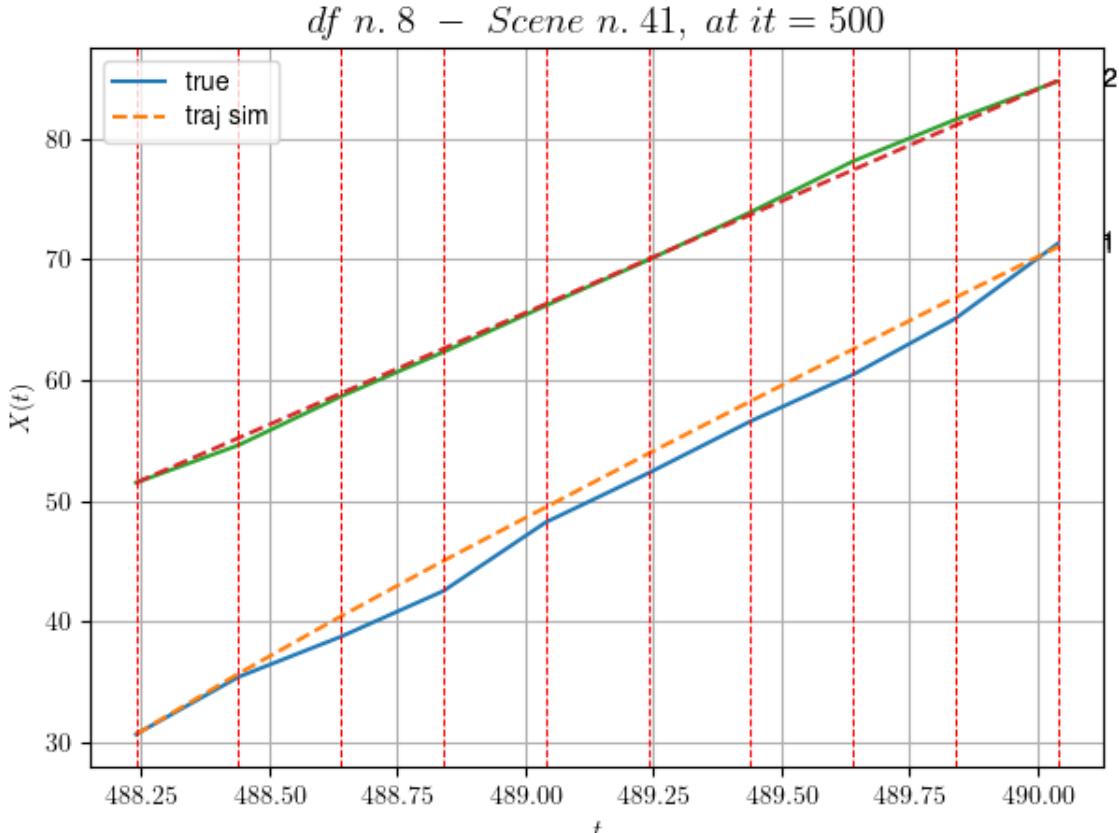
-----
- Time interval n.5: [489.24, 489.44]
* y_true: [21.55123159]
* v_ann: [21.748294830322266, 18.510799599163814]

-----
- Time interval n.6: [489.44, 489.64]
* y_true: [19.30126205]
* v_ann: [21.52246856689453, 18.510799599163814]

-----
- Time interval n.7: [489.64, 489.84]
* y_true: [23.26176809]
* v_ann: [21.411718368530273, 18.510799599163814]

-----
- Time interval n.8: [489.84, 490.04]
* y_true: [31.05279265]
* v_ann: [20.988597869873047, 18.510799599163814]

-----
* err= 1.2462497265242298
* Learning rate NN = 8.338587213074788e-05
* diff = 0.03062891120272715
```



For scene 41/79

- * use LR_NN=0.0005 with err=75.17659690624468 at it=24
- * v0_scn_mean = 18.970367615109417
- * MAE = 0.9832503946875485

df n.8, scene n.42/79

We have 2 time intervals inside [491.84, 492.24]

- Time interval n.0: [491.84, 492.04]
 - * y_true: [24.0518314]
 - * v_ann: [23.487865447998047, 22.552414214617855]

- Time interval n.1: [492.04, 492.24]

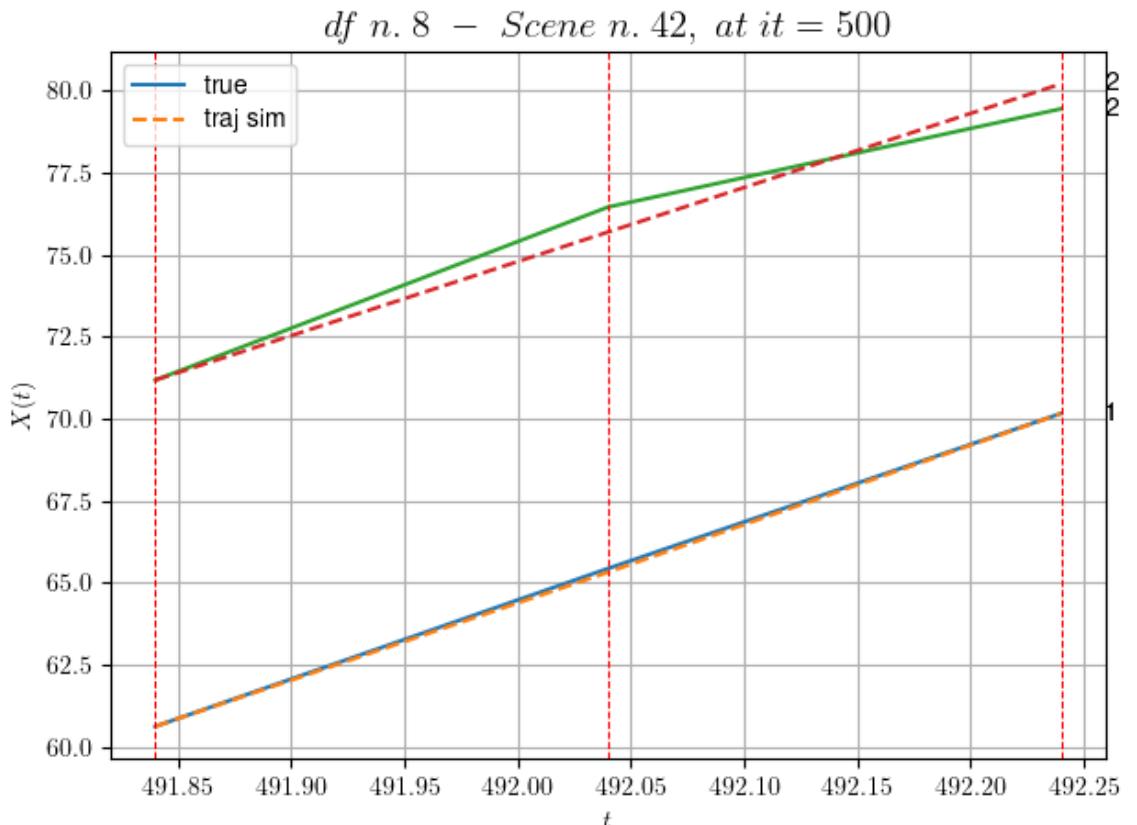
- * y_true: [23.60207937]

- * v_ann: [24.145421981811523, 22.552414214617855]

- * err= 0.19469069268183029

- * Learning rate NN = 0.00036449998151510954

- * diff = 5.57273097667732e-06

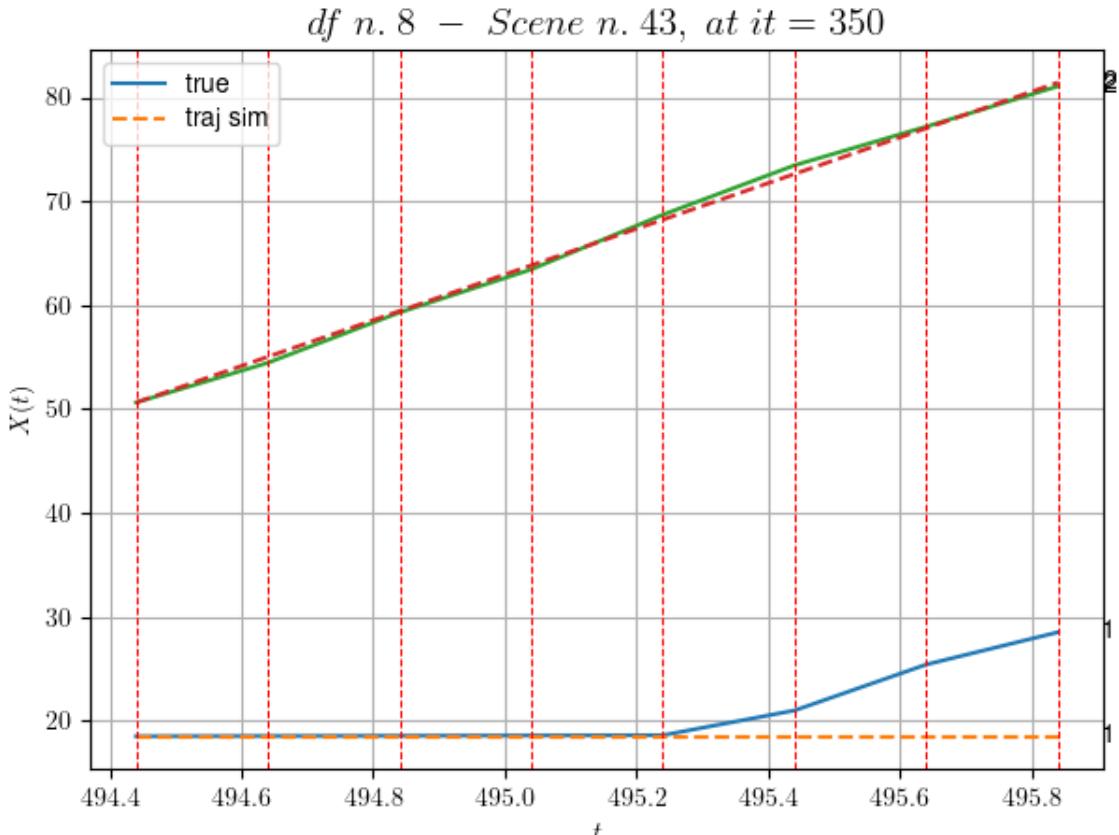


For scene 42/79

```
* use LR_NN=0.0005 with err=2.425720874029467 at it=24
* v0_scn_mean = 22.850317645976666
* MAE = 0.19463928234992947
```

df n.8, scene n.43/79

```
We have 7 time intervals inside [494.44,495.84]
* err= 9.73761252256643
* Learning rate NN = 0.0001937102060765028
* diff = 9.427130365224912e-08
```



For scene 43/79

- * use LR_NN=0.0005 with err=24.282345359349158 at it=24
- * v0_scn_mean = 22.465100556836283
- * MAE = 9.734880139418914

df n.8, scene n.44/79

We have 12 time intervals inside [496.44, 498.84]

- Time interval n.0: [496.44, 496.64]
 - * y_true: [20.50051219]
 - * v_ann: [22.283512115478516, 18.546831523765636]

- Time interval n.1: [496.64, 496.84]
 - * y_true: [21.20065888]
 - * v_ann: [21.673974990844727, 18.546831523765636]

- Time interval n.2: [496.84, 497.04]
 - * y_true: [18.1506795]
 - * v_ann: [21.13555908203125, 18.546831523765636]

- Time interval n.3: [497.04, 497.24]
 - * y_true: [15.75068343]

* v_ann: [21.07132339477539, 18.546831523765636]

- Time interval n.4: [497.24, 497.44]
* y_true: [23.0011677]
* v_ann: [21.28243637084961, 18.546831523765636]

- Time interval n.5: [497.44, 497.64]
* y_true: [22.30133962]
* v_ann: [21.71187973022461, 18.546831523765636]

- Time interval n.6: [497.64, 497.84]
* y_true: [19.25133447]
* v_ann: [21.22398567199707, 18.546831523765636]

- Time interval n.7: [497.84, 498.04]
* y_true: [28.7523245]
* v_ann: [20.891530990600586, 18.546831523765636]

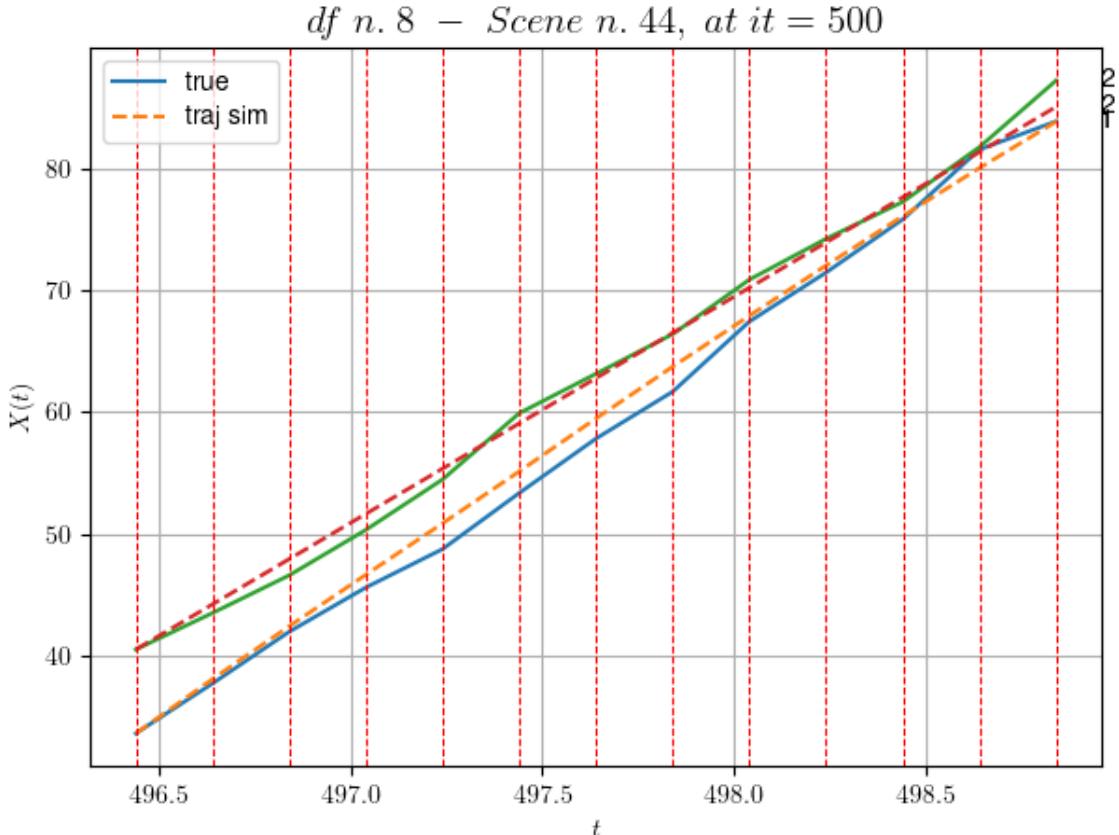
- Time interval n.8: [498.04, 498.24]
* y_true: [20.10187804]
* v_ann: [20.602346420288086, 18.546831523765636]

- Time interval n.9: [498.24, 498.44]
* y_true: [21.80228844]
* v_ann: [20.288631439208984, 18.546831523765636]

- Time interval n.10: [498.44, 498.64]
* y_true: [28.64345627]
* v_ann: [19.717805862426758, 18.546831523765636]

- Time interval n.11: [498.64, 498.84]
* y_true: [11.56150358]
* v_ann: [19.011741638183594, 18.546831523765636]

* err= 1.153513318781501
* Learning rate NN = 8.862933464115486e-05
* diff = 0.011110940266507718



For scene 44/79

```
* use LR_NN=0.001 with err=128.7919622604539 at it=24
* v0_scn_mean = 19.004958262727534
* MAE = 1.153513318781501
```

df n.8, scene n.45/79

We have 7 time intervals inside [503.04, 504.44]

- Time interval n.0: [503.04, 503.24]
 - * y_true: [20.36074323]
 - * v_ann: [22.880268096923828, 19.00958141384801]

- Time interval n.1: [503.24, 503.44]
 - * y_true: [14.7806219]
 - * v_ann: [21.821928024291992, 19.00958141384801]

- Time interval n.2: [503.44, 503.64]
 - * y_true: [20.79103351]
 - * v_ann: [20.251506805419922, 19.00958141384801]

- Time interval n.3: [503.64, 503.84]
 - * y_true: [25.25148503]

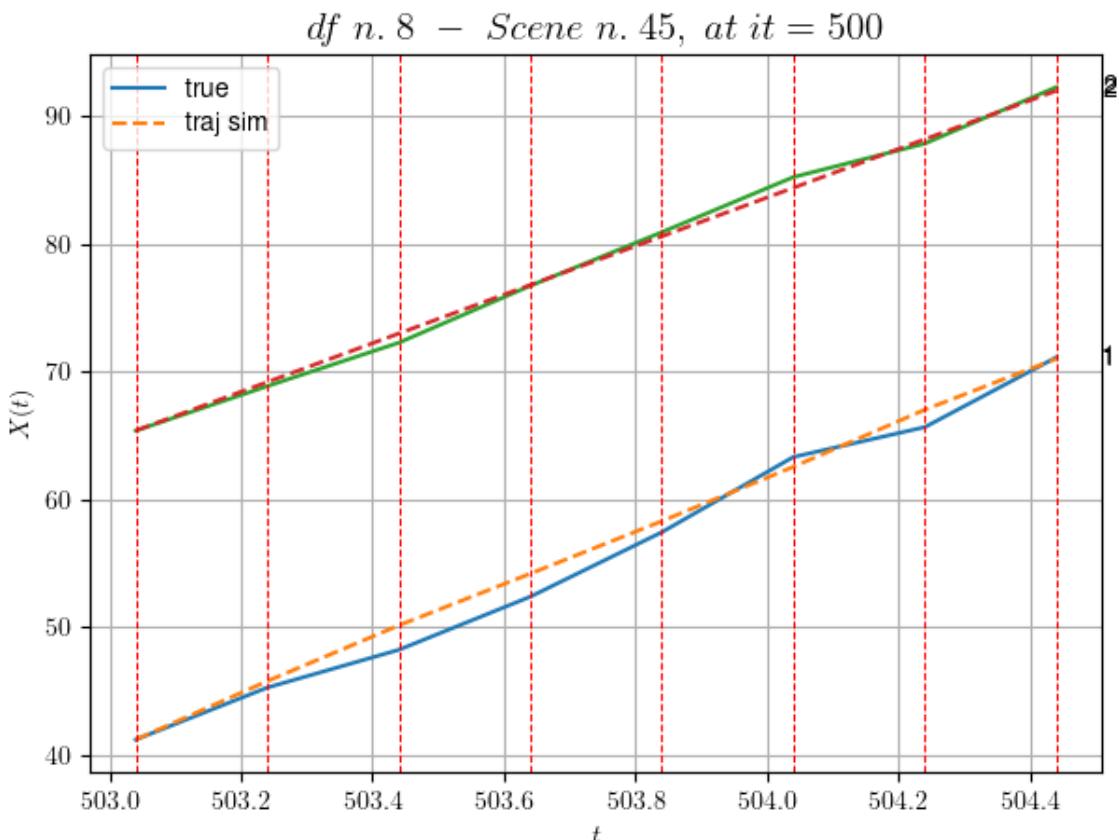
```
* v_ann: [20.547243118286133, 19.00958141384801]
```

```
- Time interval n.4: [503.84, 504.04]
* y_true: [29.42209191]
* v_ann: [21.265987396240234, 19.00958141384801]
```

```
- Time interval n.5: [504.04, 504.24]
* y_true: [11.70090906]
* v_ann: [22.360382080078125, 19.00958141384801]
```

```
- Time interval n.6: [504.24, 504.44]
* y_true: [27.33251869]
* v_ann: [19.933635711669922, 19.00958141384801]
```

```
* err= 0.7502052898066656
* Learning rate NN = 0.00012709324073512107
* diff = 0.0009453547933498951
```



For scene 45/79

```
* use LR_NN=0.0005 with err=42.082698448889325 at it=24
* v0_scn_mean = 19.449198157209967
* MAE = 0.6735718319059988
```

```
df n.8, scene n.46/79
```

We have 4 time intervals inside [516.64, 517.44]

- Time interval n.0: [516.64, 516.84]

- * y_true: [18.26096698]

- * v_ann: [21.173721313476562, 23.019463891834036]

- Time interval n.1: [516.84, 517.04]

- * y_true: [20.81127229]

- * v_ann: [20.574169158935547, 23.019463891834036]

- Time interval n.2: [517.04, 517.24]

- * y_true: [22.54159044]

- * v_ann: [19.66360855102539, 23.019463891834036]

- Time interval n.3: [517.24, 517.44]

- * y_true: [21.87178474]

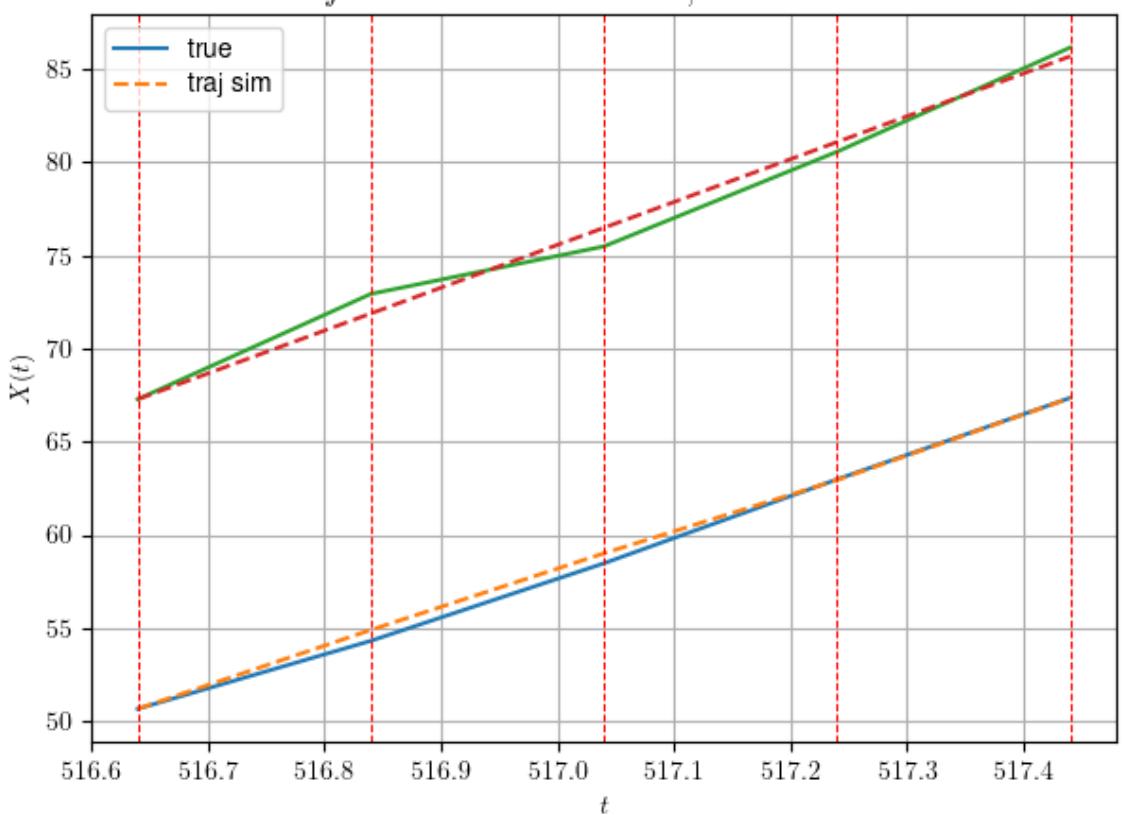
- * v_ann: [22.005809783935547, 23.019463891834036]

- * err= 0.3225510185198275

- * Learning rate NN = 0.000478296831715852

- * diff = 1 22040612006100020 07

df n. 8 – Scene n. 46, at it = 500



For scene 46/79

```
* use LR_NN=0.001 with err=6.326412930334888 at it=24
* v0_scn_mean = 23.298685336107983
* MAE = 0.29314459048312375
```

```
=====
=====
```

```
df n.8, scene n.47/79
```

```
=====
=====
```

```
We have 6 time intervals inside [519.24,520.44]
- Time interval n.0: [519.24, 519.44]
  * y_true: [9.41391239]
  * v_ann: [10.04255485534668, 21.673608825679928]
```

```
-----
-----
```

```
- Time interval n.1: [519.44, 519.64]
  * y_true: [9.38810376]
  * v_ann: [9.474820137023926, 21.673608825679928]
```

```
-----
-----
```

```
- Time interval n.2: [519.64, 519.84]
  * y_true: [9.38810376]
  * v_ann: [8.459683418273926, 21.673608825679928]
```

```
-----
-----
```

```
- Time interval n.3: [519.84, 520.04]
  * y_true: [9.38810376]
  * v_ann: [7.855983257293701, 21.673608825679928]
```

```
-----
-----
```

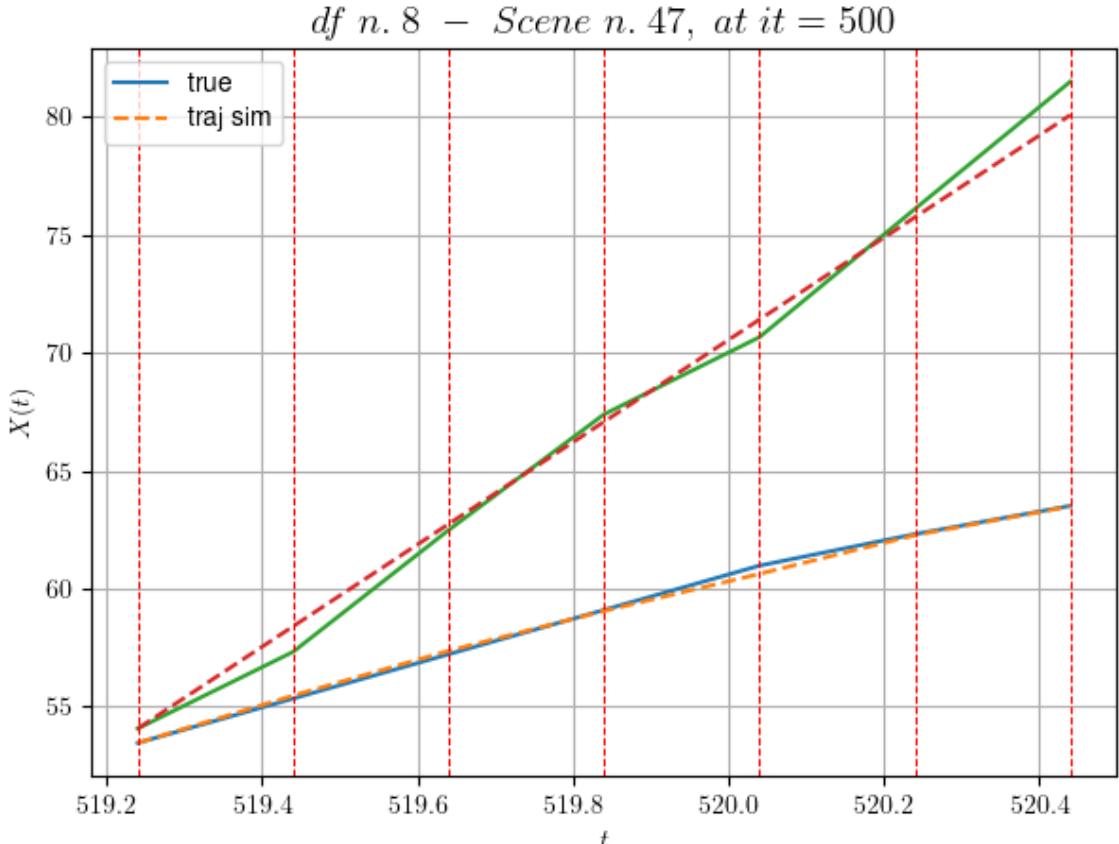
```
- Time interval n.4: [520.04, 520.24]
  * y_true: [6.67799104]
  * v_ann: [8.192414283752441, 21.673608825679928]
```

```
-----
-----
```

```
- Time interval n.5: [520.24, 520.44]
  * y_true: [6.00046286]
  * v_ann: [6.135454177856445, 21.673608825679928]
```

```
-----
-----
```

```
* err= 0.2989041380616305
* Learning rate NN = 0.0015690524596720934
* diff = 0.00022212015020775137
```



For scene 47/79

- * use LR_NN=0.005 with err=20.01091374621828 at it=24
- * v0_scn_mean = 22.006664472584326
- * MAE = 0.27863327389357595

df n.8, scene n.48/79

We have 7 time intervals inside [521.04, 522.44]

- Time interval n.0: [521.04, 521.24]
 - * y_true: [17.76052146]
 - * v_ann: [24.050756454467773, 9.856007983844883]

- Time interval n.1: [521.24, 521.44]
 - * y_true: [21.0507393]
 - * v_ann: [20.814176559448242, 9.856007983844883]

- Time interval n.2: [521.44, 521.64]
 - * y_true: [20.2108584]
 - * v_ann: [19.978857040405273, 9.856007983844883]

- Time interval n.3: [521.64, 521.84]
 - * y_true: [23.71121032]

```
* v_ann: [19.287145614624023, 9.856007983844883]
```

```
- Time interval n.4: [521.84, 522.04]
```

```
* y_true: [26.93162858]
```

```
* v_ann: [19.24480438232422, 9.856007983844883]
```

```
- Time interval n.5: [522.04, 522.24]
```

```
* y_true: [17.80125378]
```

```
* v_ann: [18.874902725219727, 9.856007983844883]
```

```
- Time interval n.6: [522.24, 522.44]
```

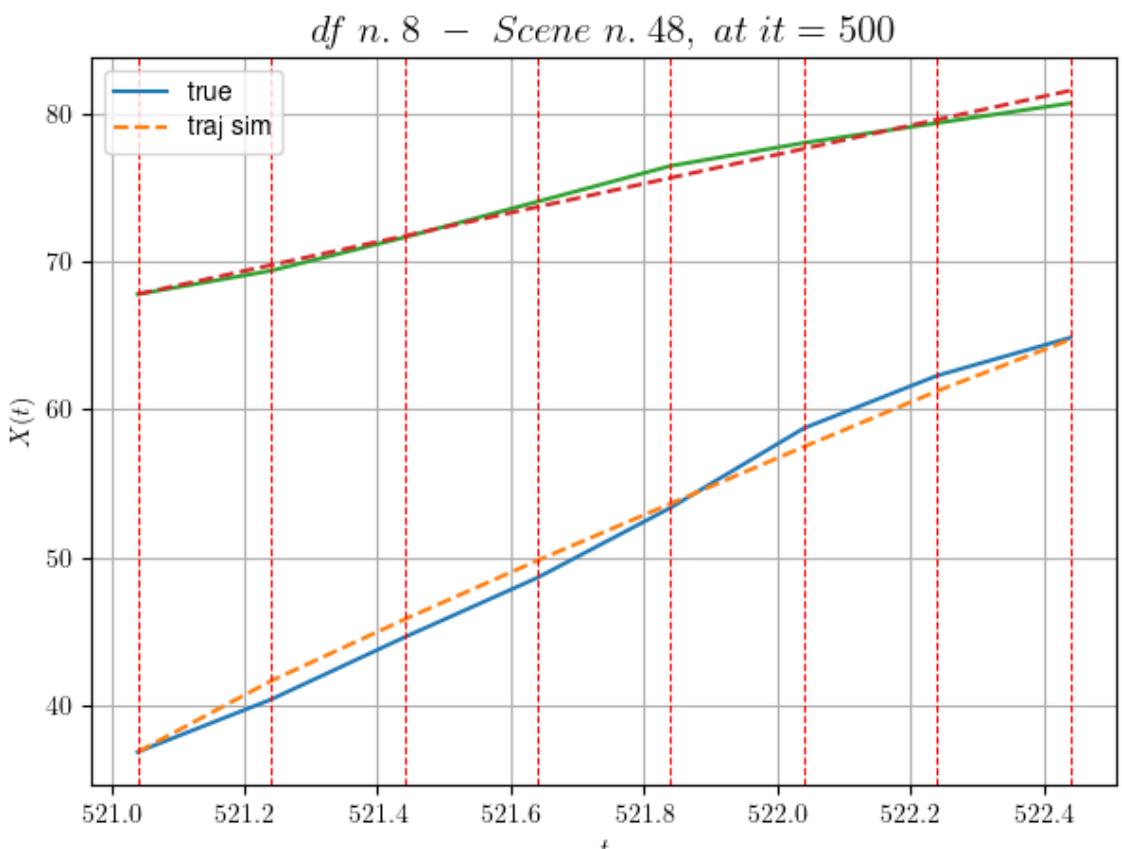
```
* y_true: [12.87102462]
```

```
* v_ann: [17.442676544189453, 9.856007983844883]
```

```
* err= 0.5658015361088442
```

```
* Learning rate NN = 0.00012709324073512107
```

```
* diff = 0.002332032190161204
```



For scene 48/79

```
* use LR_NN=0.0005 with err=143.67297505141306 at it=24
```

```
* v0_scn_mean = 10.661767664337345
```

```
* MAE = 0.5472571610201133
```

```
df n.8, scene n.49/79
```

```
=====
=====
```

We have 9 time intervals inside [529.04, 530.84]
- Time interval n.0: [529.04, 529.24]
 * y_true: [6.80006618]
 * v_ann: [7.249567031860352, 23.147710514459202]

```
-----
-----
```

- Time interval n.1: [529.24, 529.44]
 * y_true: [7.54008988]
 * v_ann: [8.141338348388672, 23.147710514459202]

```
-----
-----
```

- Time interval n.2: [529.44, 529.64]
 * y_true: [7.7250958]
 * v_ann: [8.759737014770508, 23.147710514459202]

```
-----
-----
```

- Time interval n.3: [529.64, 529.84]
 * y_true: [7.70511517]
 * v_ann: [9.535723686218262, 23.147710514459202]

```
-----
-----
```

- Time interval n.4: [529.84, 530.04]
 * y_true: [7.70012001]
 * v_ann: [10.530970573425293, 23.147710514459202]

```
-----
-----
```

- Time interval n.5: [530.04, 530.24]
 * y_true: [8.08014987]
 * v_ann: [11.177523612976074, 23.147710514459202]

```
-----
-----
```

- Time interval n.6: [530.24, 530.44]
 * y_true: [8.17515734]
 * v_ann: [11.955997467041016, 23.147710514459202]

```
-----
-----
```

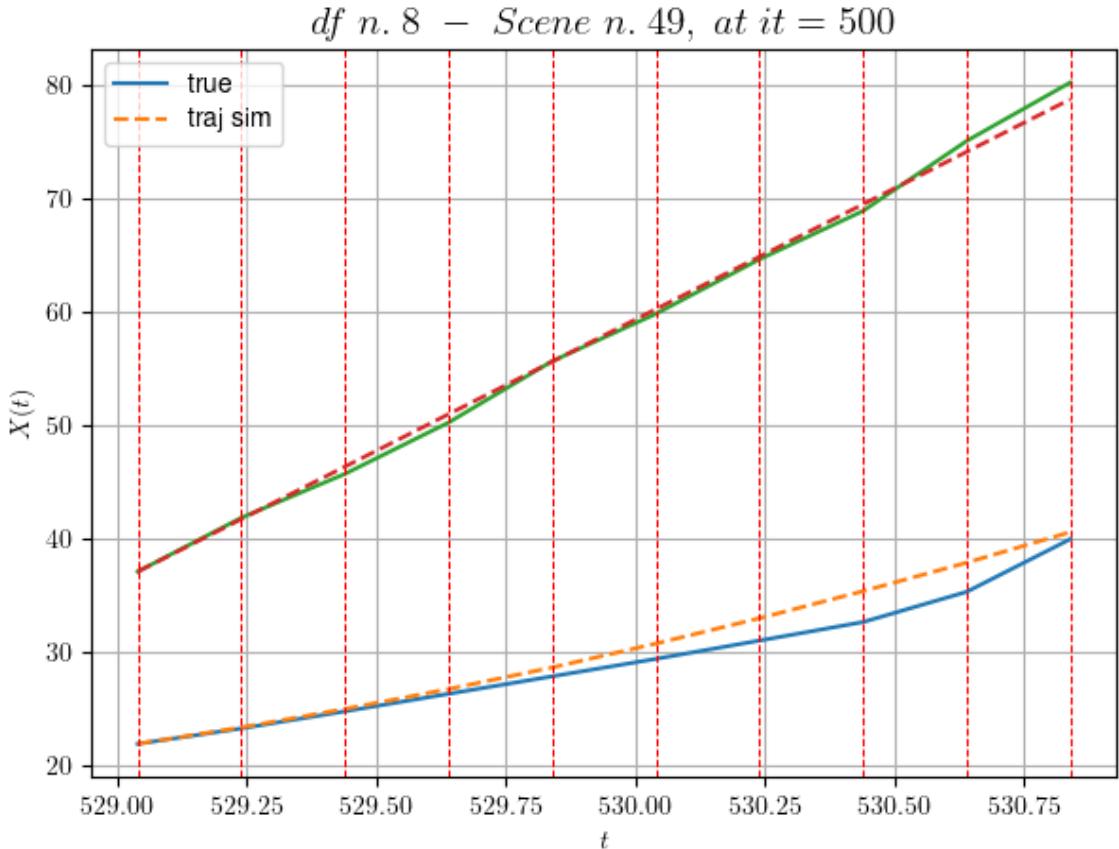
- Time interval n.7: [530.44, 530.64]
 * y_true: [13.33942373]
 * v_ann: [12.562969207763672, 23.147710514459202]

```
-----
-----
```

- Time interval n.8: [530.64, 530.84]
 * y_true: [23.25064431]
 * v_ann: [13.489096641540527, 23.147710514459202]

```
-----  
* err= 1.2798339195027908
```

* Learning rate NN = 8.338586667377967e-06
 * diff = 0.019720142552127617



For scene 49/79

* use LR_NN=5e-05 with err=26.175434321214563 at it=24
 * v0_scn_mean = 23.421802093827864
 * MAE = 1.2798339195027908

df n.8, scene n.50/79

We have 5 time intervals inside [531.84, 532.84]

- Time interval n.0: [531.84, 532.04]
 - * y_true: [10.82542785]
 - * v_ann: [12.269257545471191, 23.472410774645024]

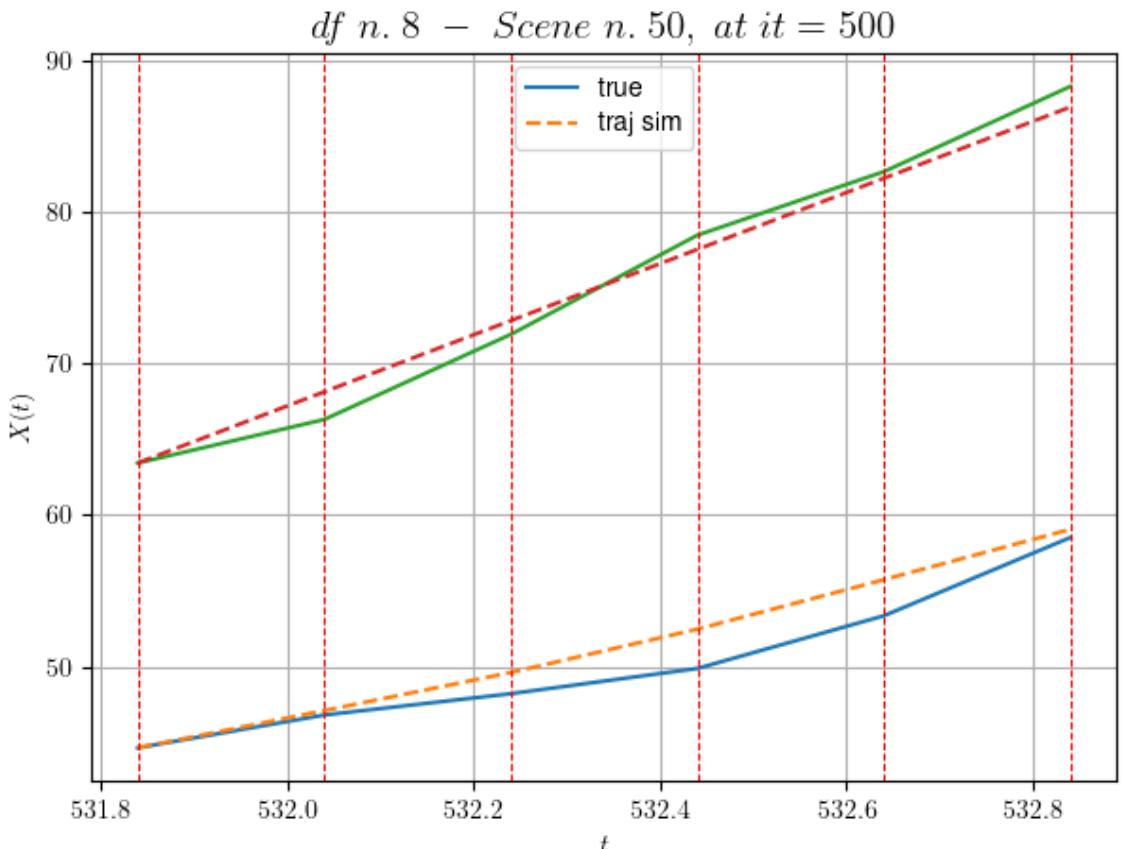
- Time interval n.1: [532.04, 532.24]
 - * y_true: [7.02530718]
 - * v_ann: [12.559805870056152, 23.472410774645024]

- Time interval n.2: [532.24, 532.44]
 - * y_true: [8.3145217]
 - * v_ann: [14.302699089050293, 23.472410774645024]

- Time interval n.3: [532.44, 532.64]
 * y_true: [17.37092059]
 * v_ann: [16.309059143066406, 23.472410774645024]

- Time interval n.4: [532.64, 532.84]
 * y_true: [25.81155064]
 * v_ann: [16.62079429626465, 23.472410774645024]

* err= 1.8159628934997252
 * Learning rate NN = 3.874203684972599e-06
 * diff = 0.002872019764604161

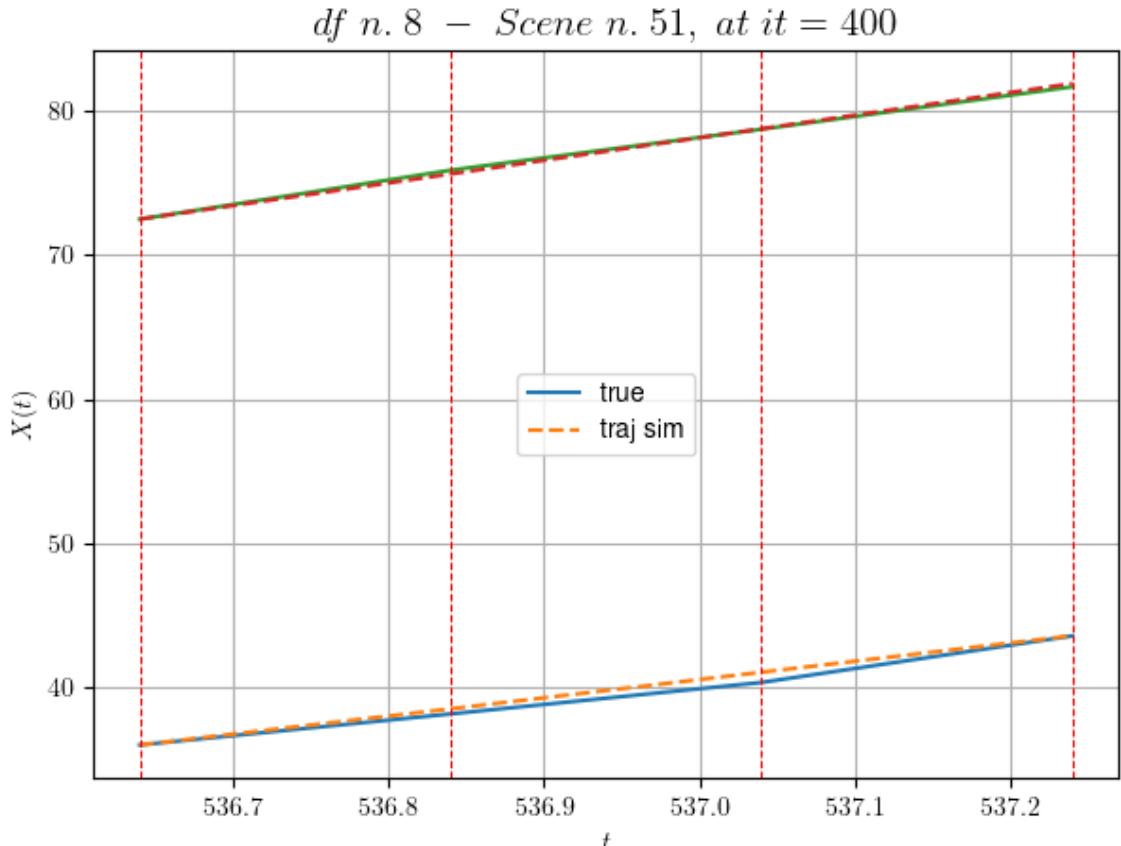


For scene 50/79

* use LR_NN=1e-05 with err=7.191758362866016 at it=24
 * v0_scn_mean = 23.733514343609503
 * MAE = 1.6006552149783315

df n.8, scene n.51/79

We have 3 time intervals inside [536.64,537.24]
 * err= 0.09377381806078595
 * Learning rate NN = 3.2804993679746985e-05
 * diff = 3.1381233180083346e-07

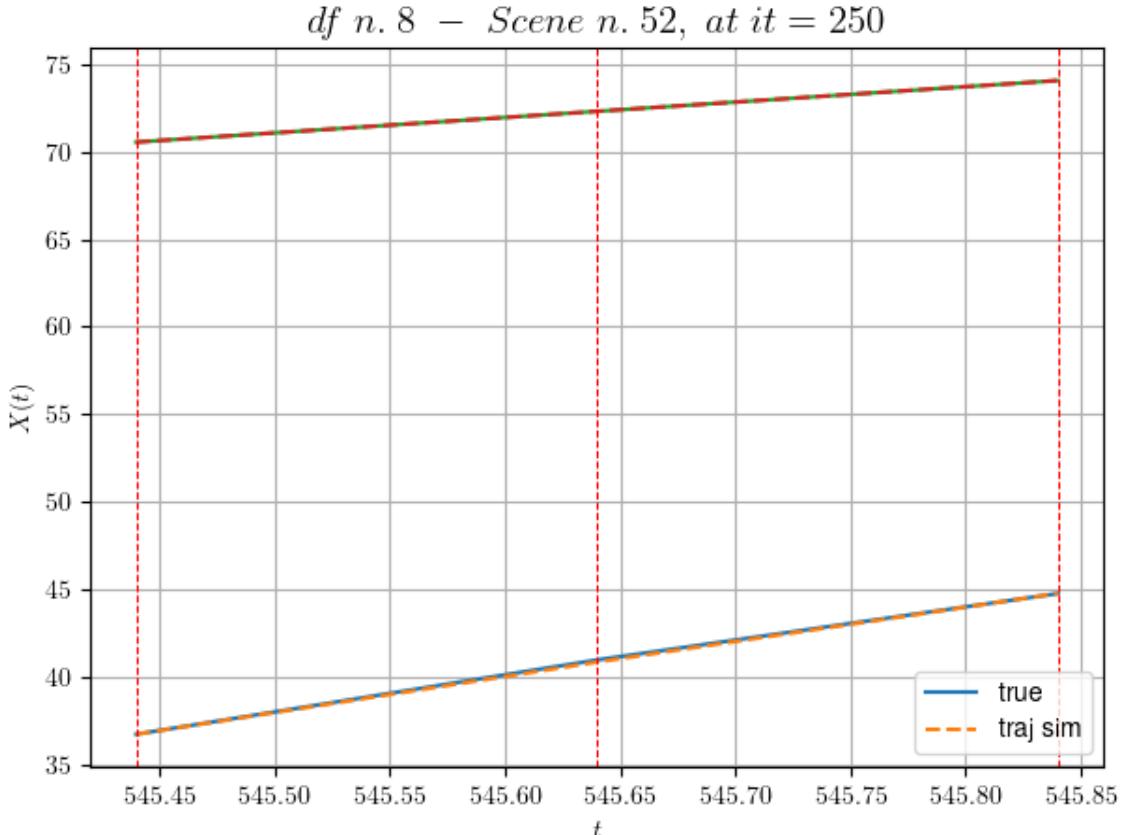


For scene 51/79

- * use LR_NN=5e-05 with err=14.780092945686157 at it=24
 - * v0_scn_mean = 16.399187138262498
 - * MAE = 0.09221687297077316
-
-

df n.8, scene n.52/79

We have 2 time intervals inside [545.44, 545.84]
* err= 0.0025653349277404555
* Learning rate NN = 8.99999408842996e-05
* diff = 6.796895942475477e-07



For scene 52/79

```
* use LR_NN=0.0001 with err=14.981070013424992 at it=24
* v0_scn_mean = 10.496813362264364
* MAE = 0.0025339548610590727
```

df n.8, scene n.53/79

We have 7 time intervals inside [548.04, 549.44]

- Time interval n.0: [548.04, 548.24]
 - * y_true: [10.09033294]
 - * v_ann: [11.267316818237305, 22.28422335728387]

- Time interval n.1: [548.24, 548.44]
 - * y_true: [13.93051874]
 - * v_ann: [11.419297218322754, 22.28422335728387]

- Time interval n.2: [548.44, 548.64]
 - * y_true: [16.31069106]
 - * v_ann: [12.254251480102539, 22.28422335728387]

- Time interval n.3: [548.64, 548.84]
 - * y_true: [11.33053134]

```
* v_ann: [13.815394401550293, 22.28422335728387]
```

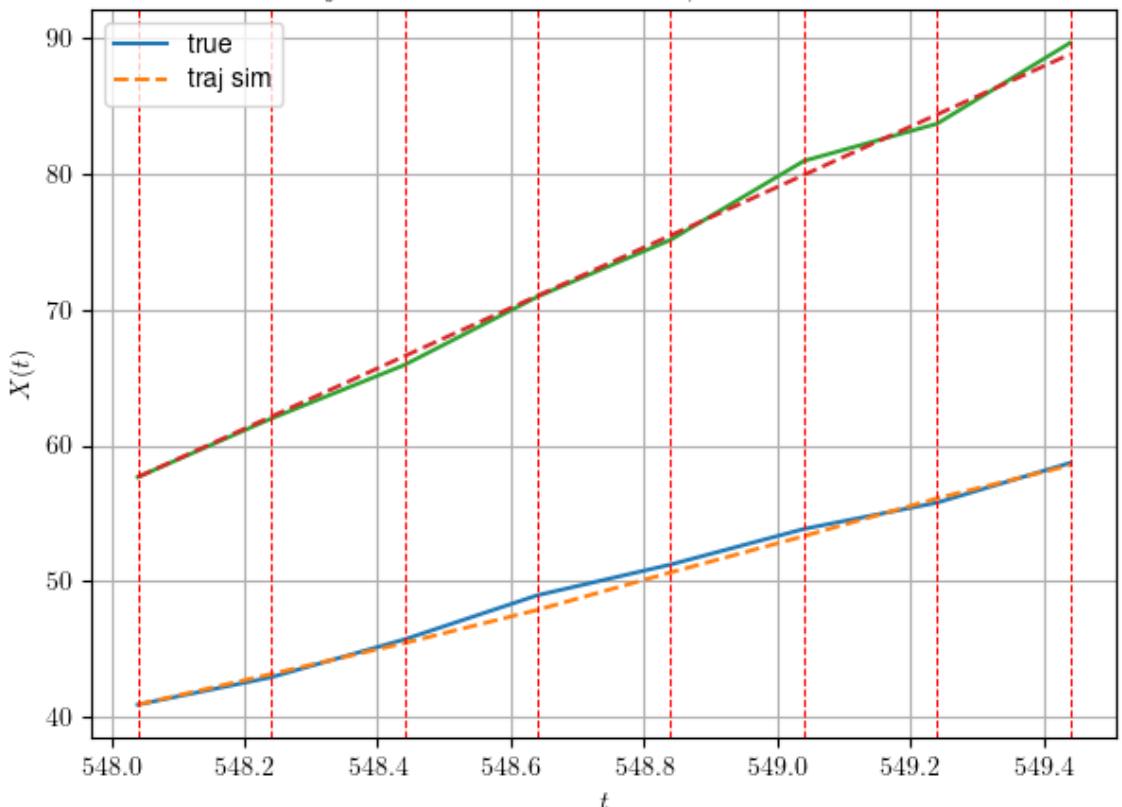
```
- Time interval n.4: [548.84, 549.04]
* y_true: [13.12068702]
* v_ann: [13.383272171020508, 22.28422335728387]
```

```
- Time interval n.5: [549.04, 549.24]
* y_true: [9.70054689]
* v_ann: [13.93901252746582, 22.28422335728387]
```

```
- Time interval n.6: [549.24, 549.44]
* y_true: [14.67096298]
* v_ann: [12.172170639038086, 22.28422335728387]
```

```
* err= 0.3013895760302885
* Learning rate NN = 0.00025418648147024214
* diff = 0.008321976027418243
```

df n. 8 – Scene n. 53, at it = 500



For scene 53/79

```
* use LR_NN=0.001 with err=20.44013915461496 at it=24
* v0_scn_mean = 22.592854422931666
* MAE = 0.2673625382645115
```

df n.8, scene n.54/79

We have 4 time intervals inside [574.24, 575.04]

- Time interval n.0: [574.24, 574.44]
 - * y_true: [18.8213558]
 - * v_ann: [24.62715721130371, 19.07774944355134]

-
- Time interval n.1: [574.44, 574.64]

- * y_true: [30.87266665]
 - * v_ann: [22.552200317382812, 19.07774944355134]

-
- Time interval n.2: [574.64, 574.84]

- * y_true: [28.81373524]
 - * v_ann: [23.011962890625, 19.07774944355134]

-
- Time interval n.3: [574.84, 575.04]

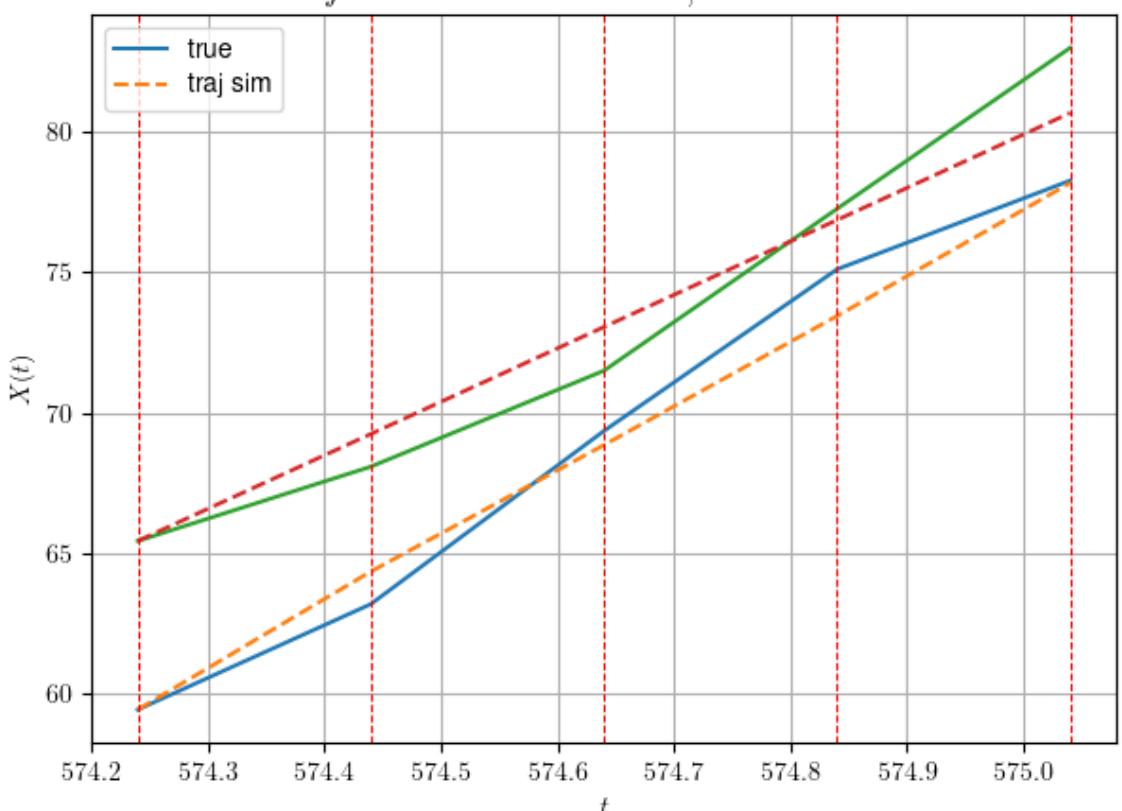
- * y_true: [15.81682936]
 - * v_ann: [23.697267532348633, 19.07774944355134]

* err= 1.3725238332850196

* Learning rate NN = 0.000478296831715852

* diff = 0.0007508754711682553

df n. 8 – Scene n. 54, at it = 500



For scene 54/79

```
* use LR_NN=0.001 with err=14.965484446690848 at it=24
* v0_scn_mean = 19.514639465726162
* MAE = 1.3725238332850196
```

df n.8, scene n.55/79

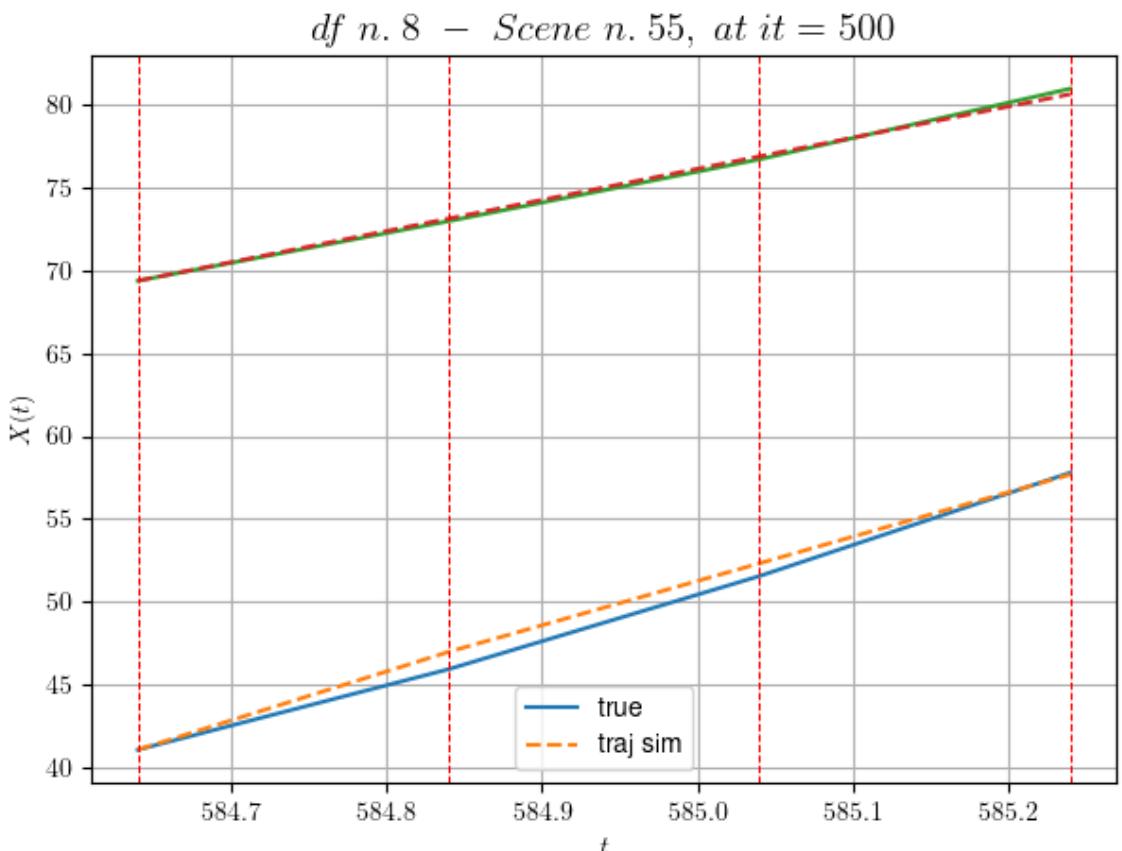
We have 3 time intervals inside [584.64, 585.24]

- Time interval n.0: [584.64, 584.84]
 - * y_true: [24.36091679]
 - * v_ann: [29.596410751342773, 18.80868013480534]

- Time interval n.1: [584.84, 585.04]
 - * y_true: [28.1513048]
 - * v_ann: [26.768314361572266, 18.80868013480534]

- Time interval n.2: [585.04, 585.24]
 - * y_true: [31.25183435]
 - * v_ann: [26.831317901611328, 18.80868013480534]

- * err= 0.23395792796861528
- * Learning rate NN = 5.904899080633186e-05
- * diff = 3.0465072130281268e-05



```
For scene 55/79
* use LR_NN=0.0001 with err=8.811879428646082 at it=24
* v0_scn_mean = 19.25633292932721
* MAE = 0.22733278227009923
```

```
df n.8, scene n.56/79
```

```
We have 2 time intervals inside [587.44,587.84]
```

- Time interval n.0: [587.44, 587.64]
 - * y_true: [23.77240101]
 - * v_ann: [22.875757217407227, 30.037171265454383]

- Time interval n.1: [587.64, 587.84]

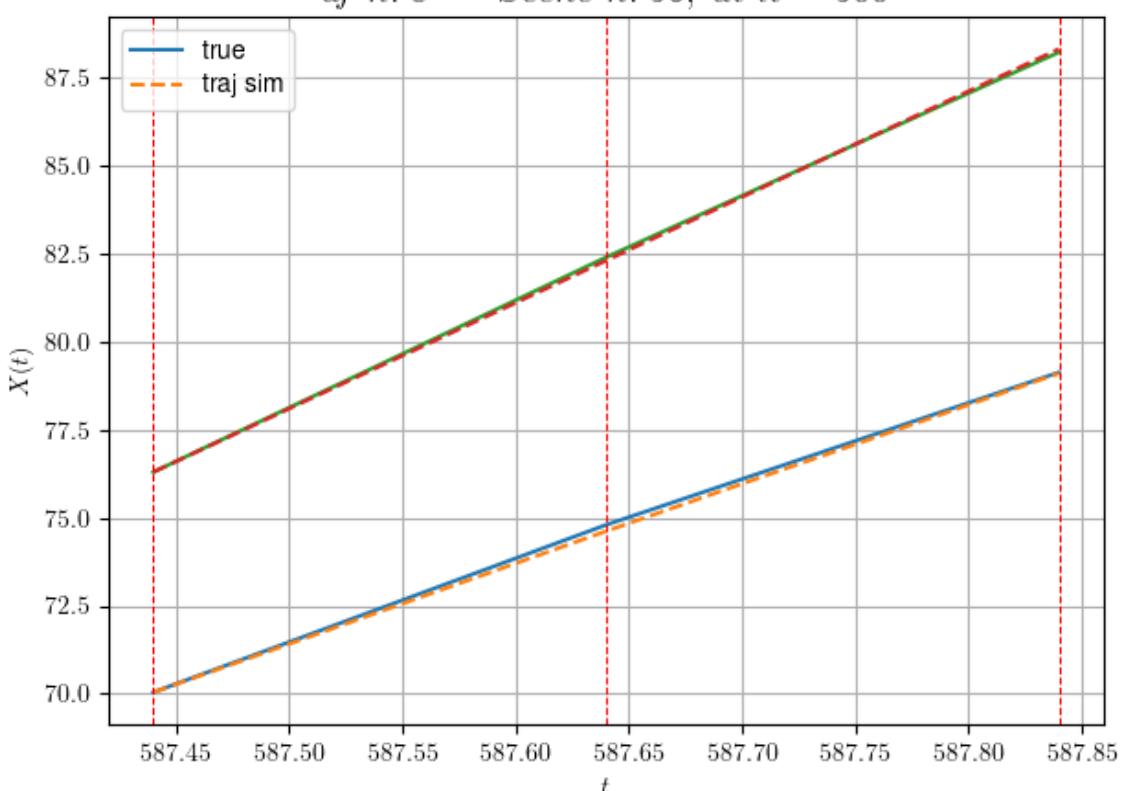
- * y_true: [21.65253003]
 - * v_ann: [22.41307830810547, 30.037171265454383]

- * err= 0.008385411421414057

- * Learning rate NN = 0.00036449998151510954

- * diff = 0.0006473904934206909

df n. 8 – Scene n. 56, at it = 500



```
For scene 56/79
```

```
* use LR_NN=0.0005 with err=0.12917845665933747 at it=24
* v0_scn_mean = 30.03568441482847
* MAE = 0.008385411421414057
```

```
=====
=====

df n.8, scene n.57/79
=====

We have 8 time intervals inside [592.84,594.44]
- Time interval n.0: [592.84, 593.04]
  * y_true: [18.30050522]
  * v_ann: [21.545278549194336, 20.35405742351319]

-----
- Time interval n.1: [593.04, 593.24]
  * y_true: [18.46062677]
  * v_ann: [20.716915130615234, 20.35405742351319]

-----
- Time interval n.2: [593.24, 593.44]
  * y_true: [23.16095213]
  * v_ann: [20.40178871154785, 20.35405742351319]

-----
- Time interval n.3: [593.44, 593.64]
  * y_true: [21.00101152]
  * v_ann: [20.835311889648438, 20.35405742351319]

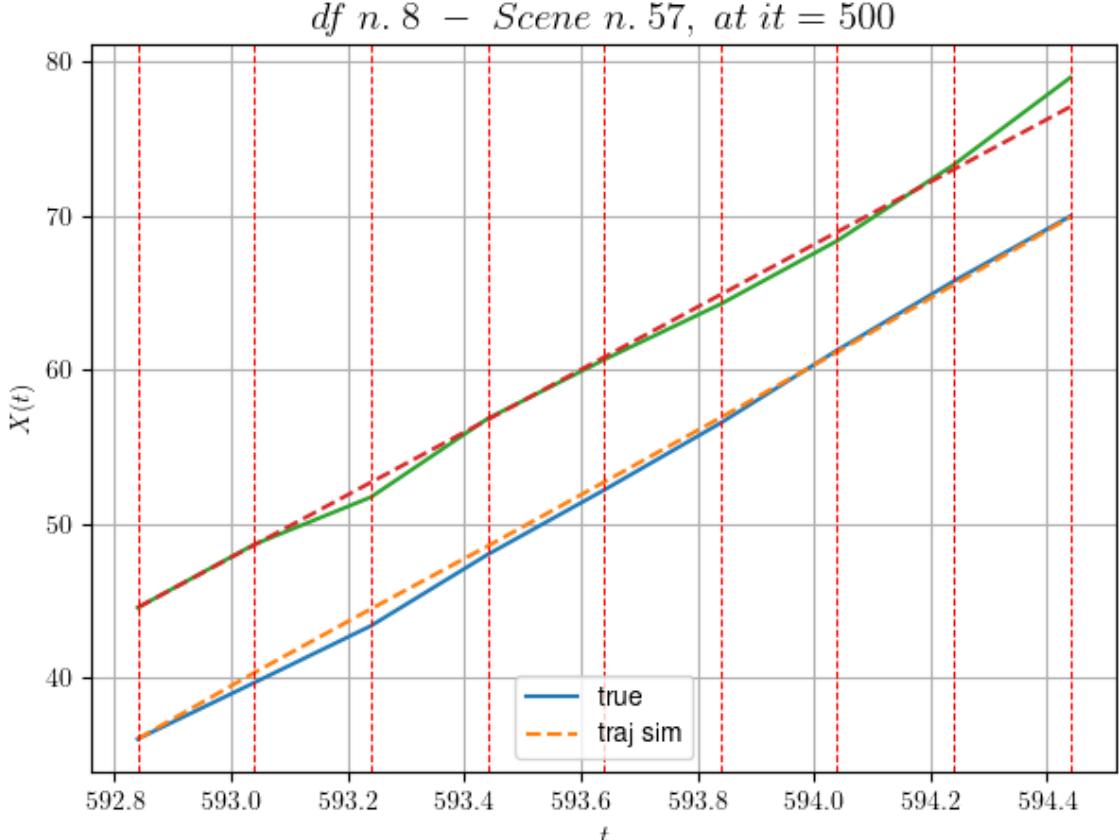
-----
- Time interval n.4: [593.64, 593.84]
  * y_true: [21.80126526]
  * v_ann: [20.972984313964844, 20.35405742351319]

-----
- Time interval n.5: [593.84, 594.04]
  * y_true: [23.66159236]
  * v_ann: [21.339441299438477, 20.35405742351319]

-----
- Time interval n.6: [594.04, 594.24]
  * y_true: [22.4617536]
  * v_ann: [21.89654541015625, 20.35405742351319]

-----
- Time interval n.7: [594.24, 594.44]
  * y_true: [21.12188145]
  * v_ann: [21.894920349121094, 20.35405742351319]

* err= 0.4309256753516097
* Learning rate NN = 0.00020589104678947479
* diff = 0.004233474580975394
```



For scene 57/79

- * use LR_NN=0.001 with err=40.97552138485316 at it=24
- * v0_scn_mean = 20.73989512649952
- * MAE = 0.3655707551314951

df n.8, scene n.58/79

We have 3 time intervals inside [36.44, 37.04]

- Time interval n.0: [36.44, 36.64]
 - * y_true: [16.4303266 8.20020738]
 - * v_ann: [12.237361907958984, 12.002217292785645, 1
7.15679593462082]

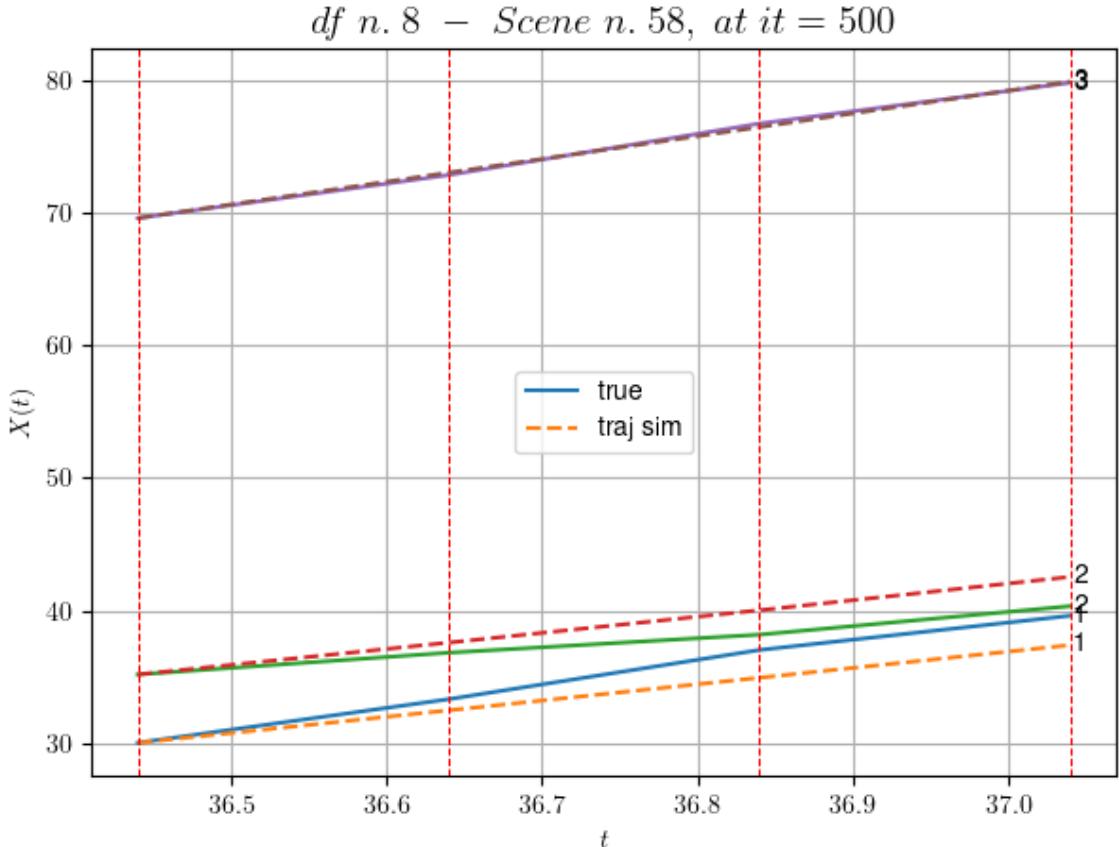
- Time interval n.1: [36.64, 36.84]
 - * y_true: [18.55044671 6.80018642]
 - * v_ann: [12.280778884887695, 12.206974029541016, 1
7.15679593462082]

- Time interval n.2: [36.84, 37.04]
 - * y_true: [12.9262384 10.75446129]
 - * v_ann: [12.319326400756836, 12.587859153747559, 1
7.15679593462082]

```

* err= 1.578612724851381
* Learning rate NN = 0.0002952449722215533
* diff = 9.577501989266324e-05

```



For scene 58/79

```

* use LR_NN=0.0005 with err=17.154262388897923 at it=24
* v0_scn_mean = 17.927387601911466
* MAE = 1.0098865351945476

```

df n.8, scene n.59/79

We have 4 time intervals inside [50.24,51.04]

- Time interval n.0: [50.24, 50.44]
 - * y_true: [14.83043604 14.50055453]
 - * v_ann: [18.725114822387695, 23.486610412597656, 3 0.157660974110815]

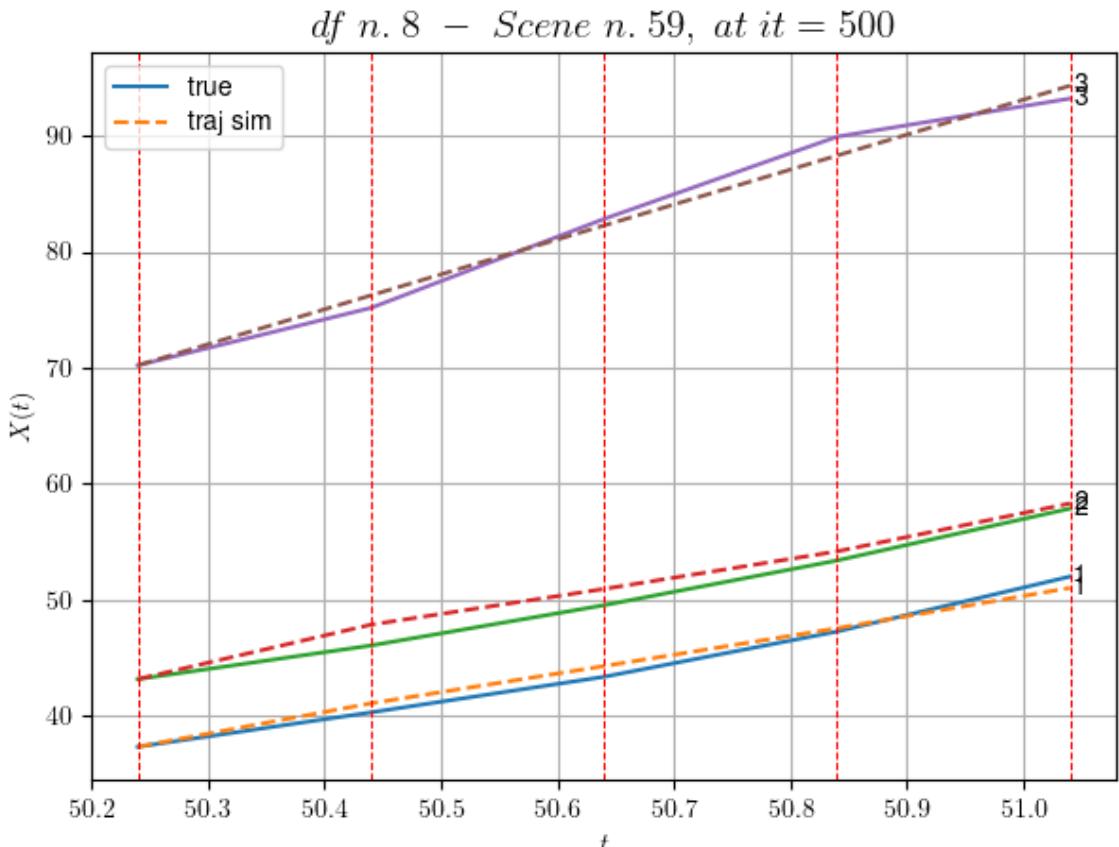
- Time interval n.1: [50.44, 50.64]
 - * y_true: [15.35052738 17.38080918]
 - * v_ann: [16.07844352722168, 15.410857200622559, 3 0.157660974110815]

- Time interval n.2: [50.64, 50.84]
 - * y_true: [19.54078826 19.30097894]

* v_ann: [16.306577682495117, 16.206636428833008, 3
0.157660974110815]

- Time interval n.3: [50.84, 51.04]
* y_true: [23.72114006 22.40641196]
* v_ann: [17.44097137451172, 20.701810836791992, 3
0.157660974110815]

* err= 0.9247933968389394
* Learning rate NN = 0.000478296831715852
* diff = 0.0016467310500749566



For scene 59/79

* use LR_NN=0.001 with err=15.086848552117884 at it=24
* v0_scn_mean = 30.148201322742764
* MAE = 0.824535276514636

df n.8, scene n.60/79

We have 4 time intervals inside [102.24,103.04]
- Time interval n.0: [102.24, 102.44]
* y_true: [22.78095819 15.94092959]
* v_ann: [20.764047622680664, 20.98294448852539, 3
1.34829198332158]

```

-----  

-----  

    - Time interval n.1: [102.44, 102.64]  

      * y_true: [23.36120187 12.10080168]  

      * v_ann: [20.063186645507812, 20.733108520507812, 3  

1.34829198332158]  

-----  

-----  

    - Time interval n.2: [102.64, 102.84]  

      * y_true: [20.51121756 22.37162153]  

      * v_ann: [19.030832290649414, 19.134878158569336, 3  

1.34829198332158]  

-----  

-----  

    - Time interval n.3: [102.84, 103.04]  

      * y_true: [23.62167761 20.76175162]  

      * v_ann: [19.752988815307617, 20.693084716796875, 3  

1.34829198332158]  

-----  

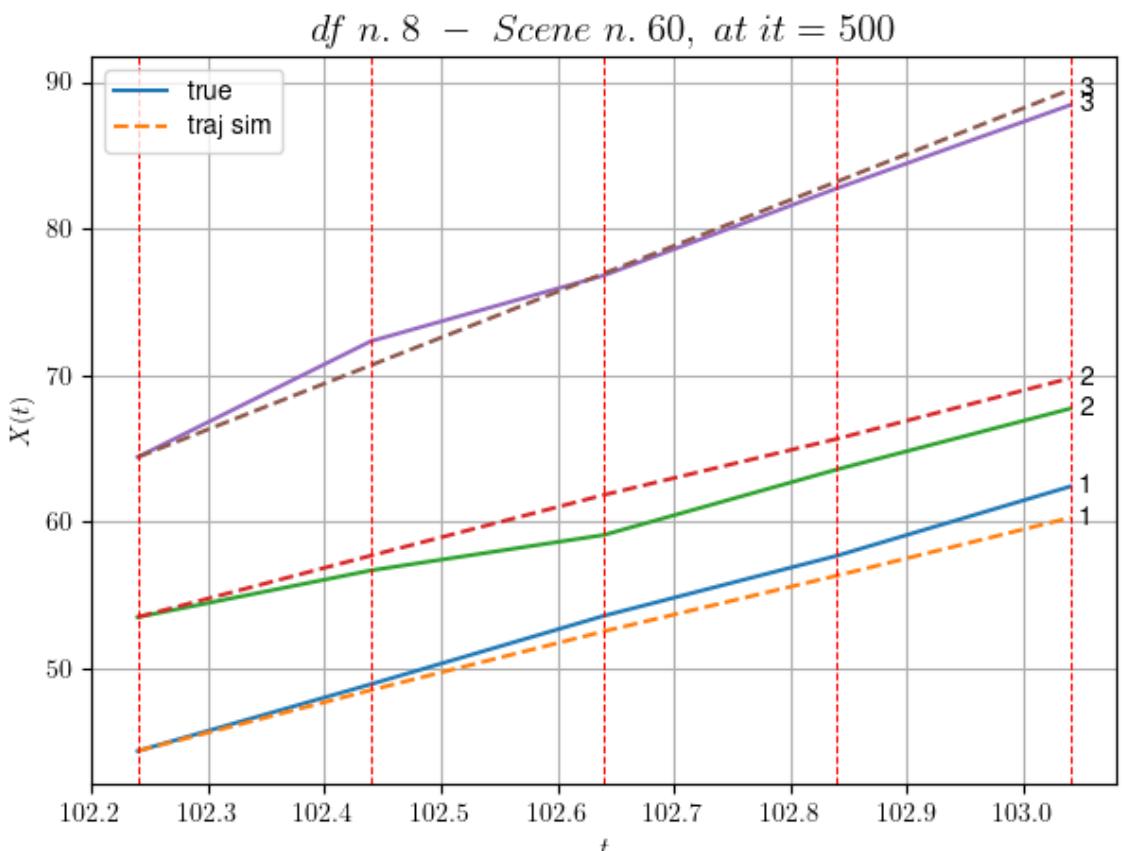
-----  

* err= 1.9238755106946384  

* Learning rate NN = 0.000478296831715852  

* diff = 0.005567270266731095

```



For scene 60/79

```

* use LR_NN=0.001 with err=12.392069225923185 at it=24
* v0_scn_mean = 31.26739452485779
* MAE = 1.8565260110136865

```

```
df n.8, scene n.61/79
```

We have 3 time intervals inside [108.84,109.44]

- Time interval n.0: [108.84, 109.04]

- * y_true: [17.9810803 26.65193678]

- * v_ann: [20.68046760559082, 20.575525283813477, 2

0.549015112613134]

- Time interval n.1: [109.04, 109.24]

- * y_true: [14.30252156 22.9019425]

- * v_ann: [21.242427825927734, 21.511600494384766, 2

0.549015112613134]

- Time interval n.2: [109.24, 109.44]

- * y_true: [21.24158827 21.25204953]

- * v_ann: [20.17862892150879, 19.98460578918457, 20.

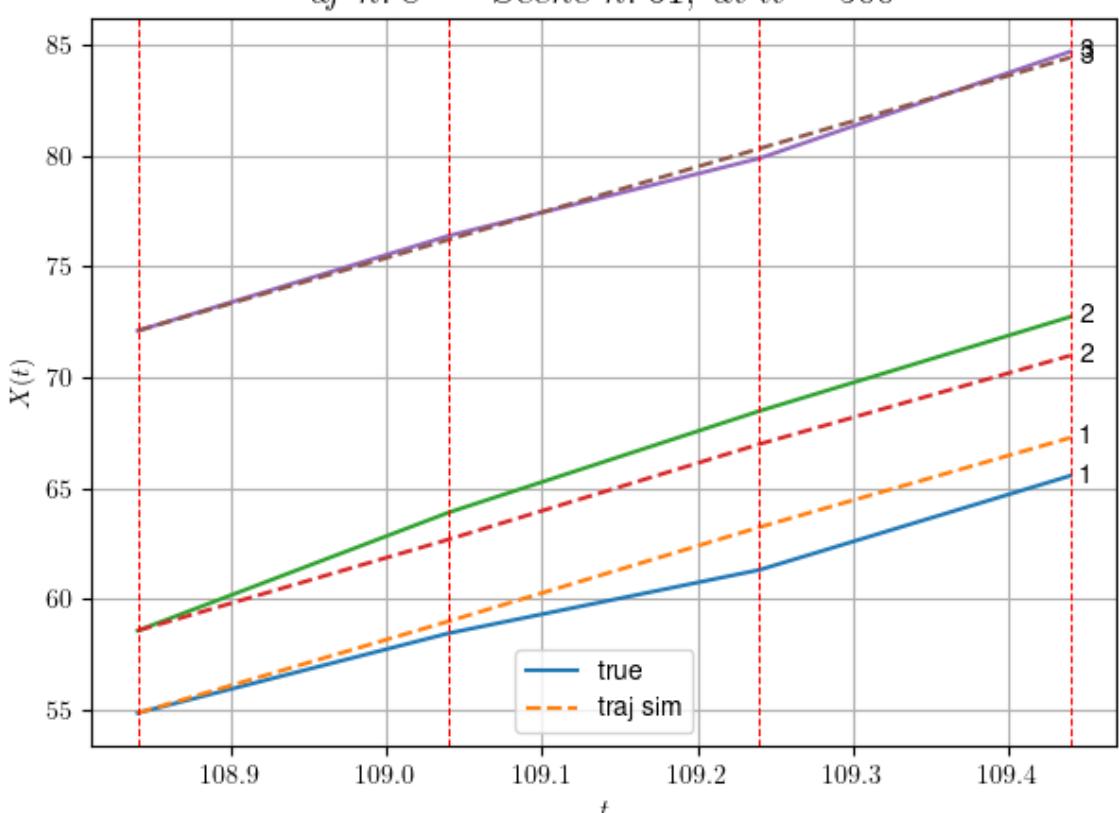
549015112613134]

* err= 1.167052349933751

* Learning rate NN = 0.0005904899444431067

* diff = 0.00020533964485469625

df n. 8 – Scene n. 61, at it = 500



For scene 61/79

* use LR_NN=0.001 with err=5.944510299045068 at it=24

```
* v0_scn_mean = 21.116073781527618
* MAE = 1.1404945088593834
```

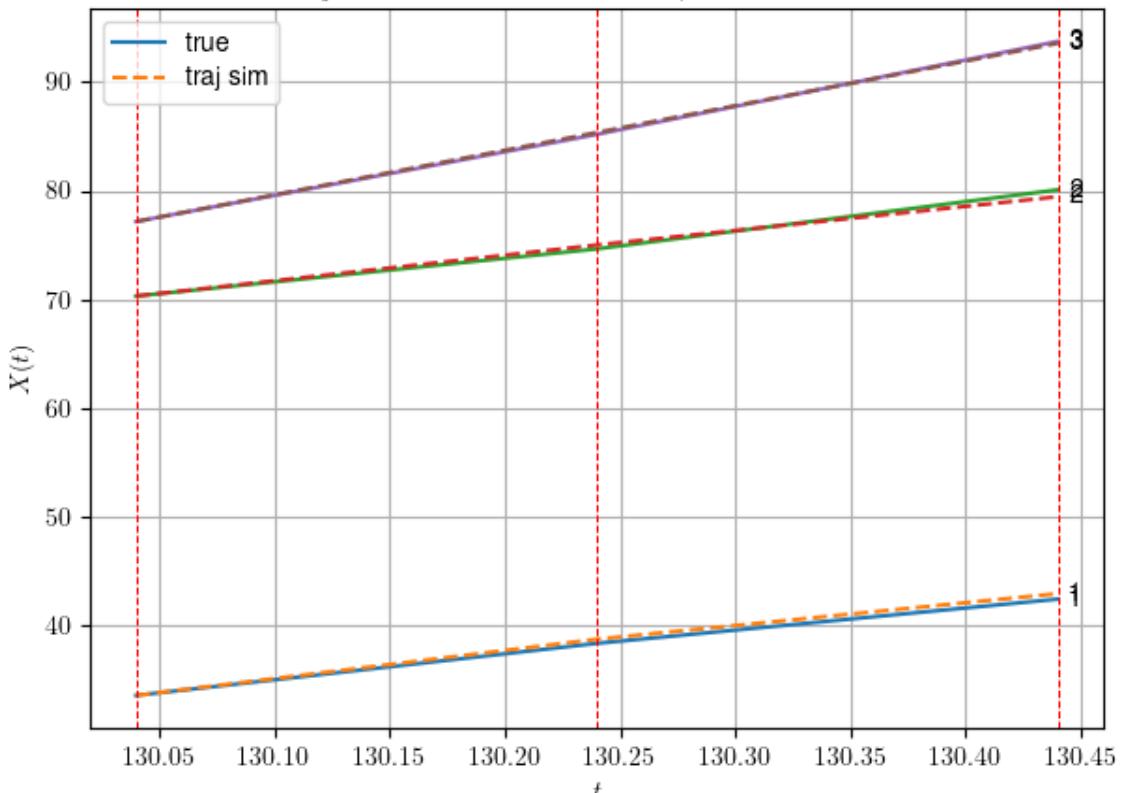
df n.8, scene n.62/79

We have 2 time intervals inside [130.04, 130.44]
- Time interval n.0: [130.04, 130.24]
* y_true: [23.9806113 21.72216875]
* v_ann: [25.889204025268555, 23.536100387573242, 4
1.055622304852655]

- Time interval n.1: [130.24, 130.44]
* y_true: [20.38064152 27.22317612]
* v_ann: [21.016183853149414, 22.22966766357422, 4
1.055622304852655]

* err= 0.11172099997139867
* Learning rate NN = 0.00036449998151510954
* diff = 0.0000001180261840701

df n. 8 – Scene n. 62, at it = 500



For scene 62/79

* use LR_NN=0.0005 with err=10.478709673184413 at it=24
* v0_scn_mean = 40.39228546293499
* MAE = 0.11172099997139867

```
=====
```

```
df n.8, scene n.63/79
```

```
=====
```

```
We have 5 time intervals inside [215.24,216.24]
- Time interval n.0: [215.24, 215.44]
  * y_true: [ 1.34614625 10.42531549]
  * v_ann: [18.378273010253906, 21.326143264770508, 1
5.100689610550392]
```

```
-----
```

```
- Time interval n.1: [215.44, 215.64]
  * y_true: [18.28906766 10.32533879]
  * v_ann: [14.932455062866211, 13.31889533996582, 1
5.100689610550392]
```

```
-----
```

```
- Time interval n.2: [215.64, 215.84]
  * y_true: [29.02100933 15.78058213]
  * v_ann: [15.116448402404785, 13.518718719482422, 1
5.100689610550392]
```

```
-----
```

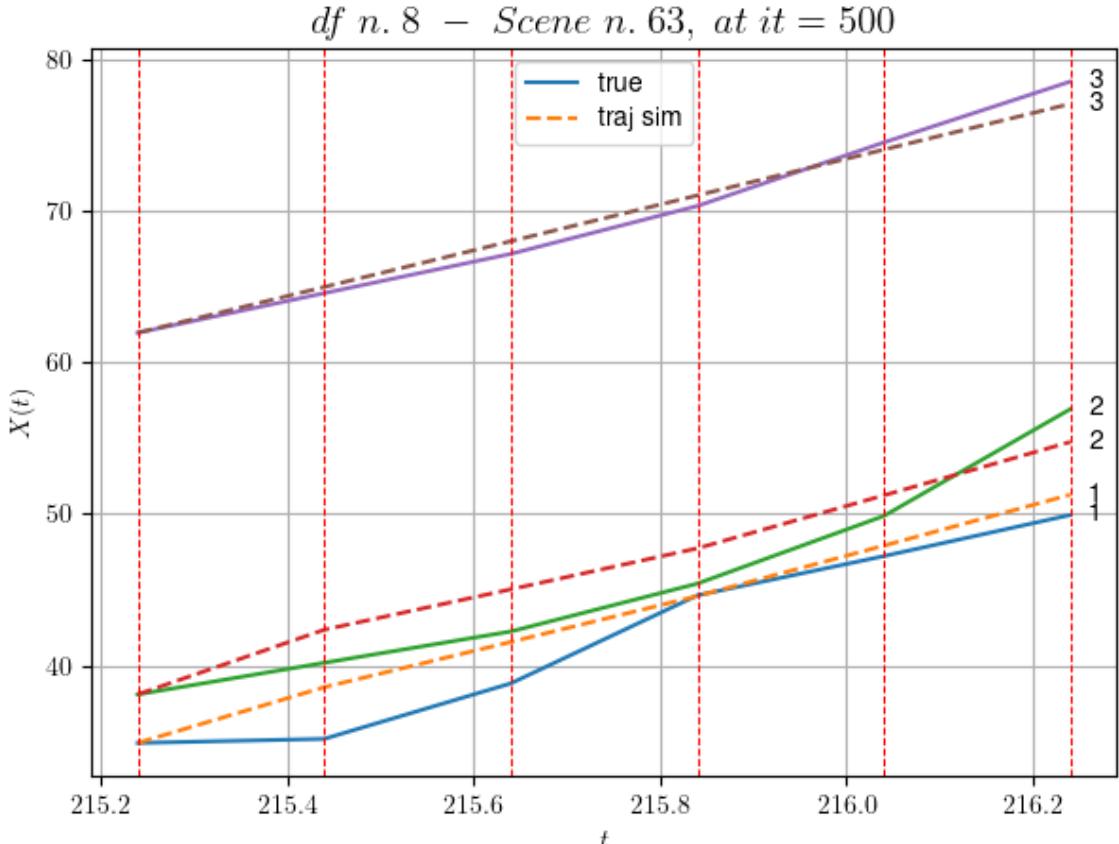
```
- Time interval n.3: [215.84, 216.04]
  * y_true: [12.95052595 22.3009853 ]
  * v_ann: [16.630327224731445, 17.471498489379883, 1
5.100689610550392]
```

```
-----
```

```
- Time interval n.4: [216.04, 216.24]
  * y_true: [13.56563519 35.25195514]
  * v_ann: [16.79859733581543, 17.620220184326172, 1
5.100689610550392]
```

```
-----
```

```
* err= 2.75048512271923
* Learning rate NN = 0.0003874204121530056
* diff = 0.031962372209283885
```



For scene 63/79

- * use LR_NN=0.001 with err=44.187794115984694 at it=24
- * v0_scn_mean = 15.994647564970423
- * MAE = 2.545699984328933

df n.8, scene n.64/79

We have 4 time intervals inside [222.64, 223.44]

- Time interval n.0: [222.64, 222.84]
 - * y_true: [3.4148313 7.54419185]
 - * v_ann: [5.611362457275391, 5.661781311035156, 12.428538122911196]

- Time interval n.1: [222.84, 223.04]
 - * y_true: [1.34614625 9.61287691]
 - * v_ann: [5.6415886878967285, 5.657747745513916, 12.428538122911196]

- Time interval n.2: [223.04, 223.24]
 - * y_true: [1.34614625 10.20300693]
 - * v_ann: [5.638929843902588, 5.653347492218018, 12.428538122911196]

```

-----  

- Time interval n.3: [223.24, 223.44]  

* y_true: [ 1.34614625 10.35053943]  

* v_ann: [5.642539024353027, 5.657256603240967, 12.  

428538122911196]

```

```

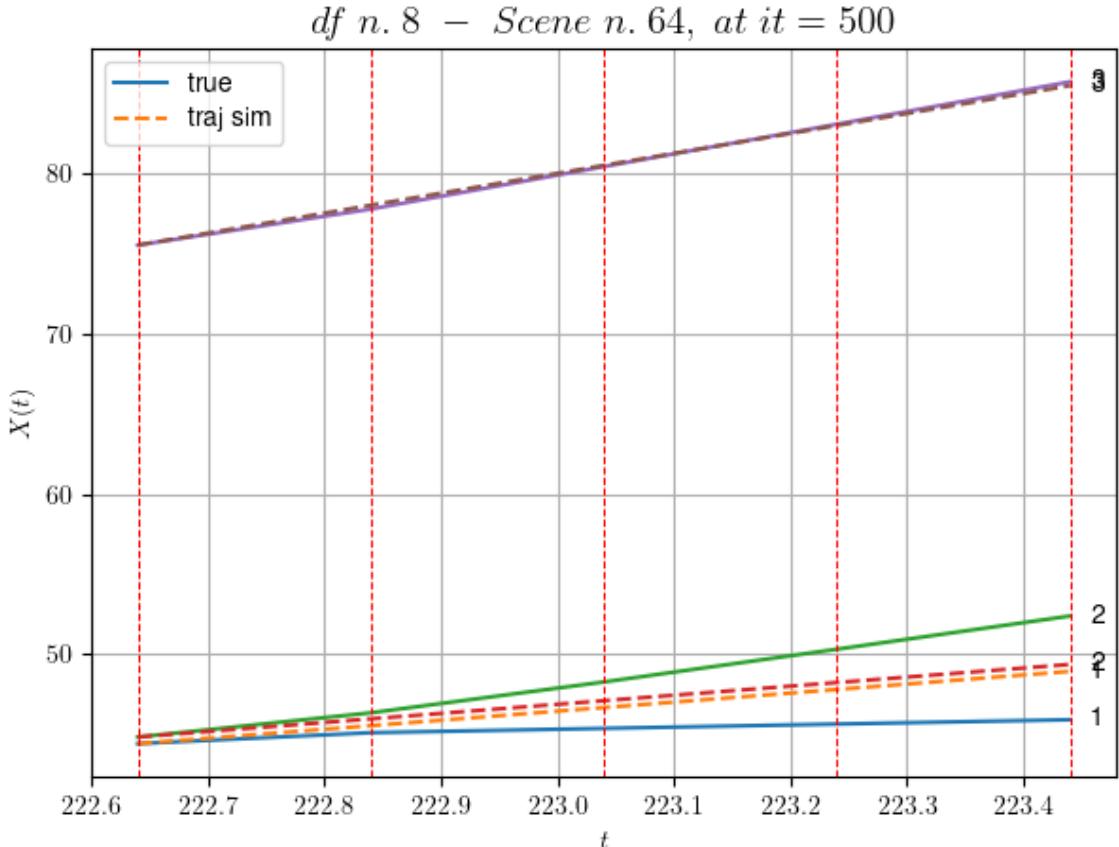
-----  

* err= 2.044915172342357  

* Learning rate NN = 4.7829678806010634e-05  

* diff = 0.0004112540739007464

```



For scene 64/79

```

* use LR_NN=0.0001 with err=25.32268495245656 at it=24  

* v0_scn_mean = 13.482825046615996  

* MAE = 2.044915172342357

```

```

=====  

=====  

df n.8, scene n.65/79
=====  

=====

```

We have 5 time intervals inside [225.24, 226.24]

```

-----  

- Time interval n.0: [225.24, 225.44]  

* y_true: [9.85023046 1.34614625]  

* v_ann: [9.428799629211426, 9.639653205871582, 13.  

14368339870331]

```

```

-----  

- Time interval n.1: [225.44, 225.64]  

* y_true: [11.30531094 1.34614625]

```

```

* v_ann: [8.47827434539795, 8.477640151977539, 13.1
4368339870331]

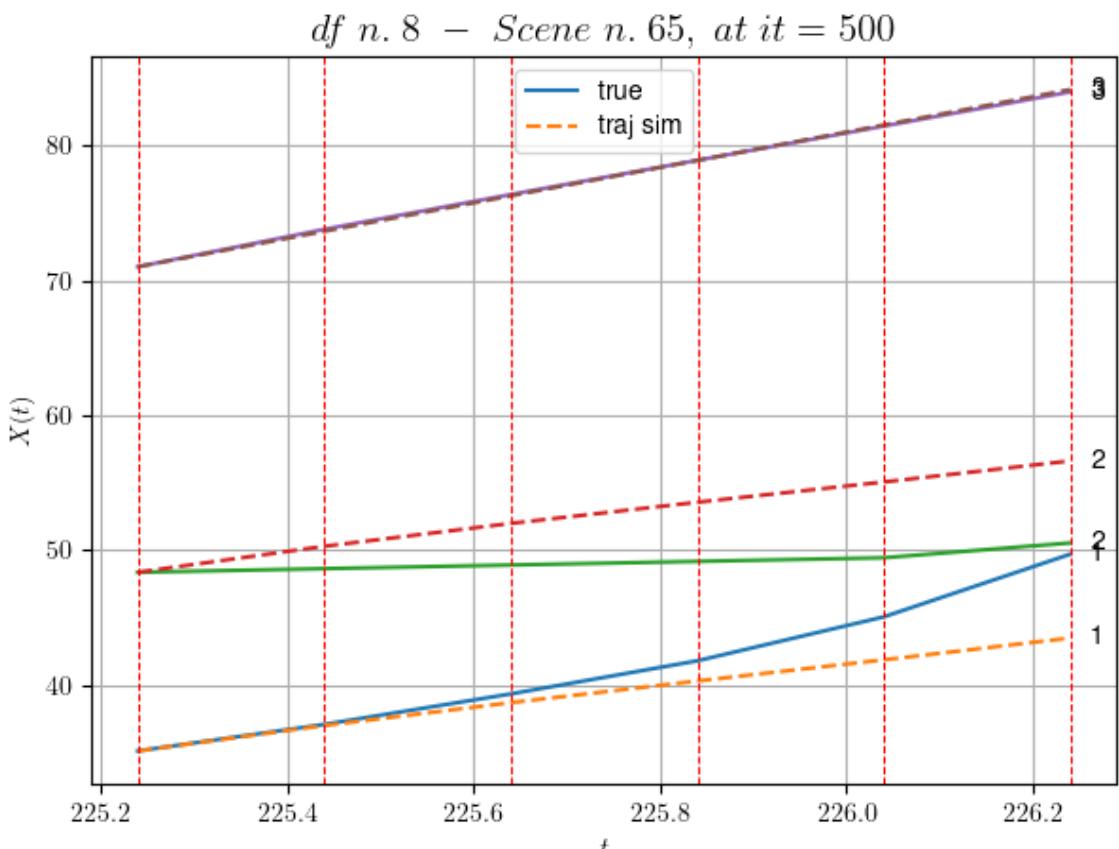
-----
- Time interval n.2: [225.64, 225.84]
* y_true: [12.27536459 1.34614625]
* v_ann: [8.038034439086914, 7.852219581604004, 13.
14368339870331]

-----
- Time interval n.3: [225.84, 226.04]
* y_true: [16.30233516 1.34614625]
* v_ann: [7.849869251251221, 7.5121378898620605, 1
3.14368339870331]

-----
- Time interval n.4: [226.04, 226.24]
* y_true: [23.251759 5.49560672]
* v_ann: [8.092925071716309, 7.823336601257324, 13.
14368339870331]

-----
* err= 8.427556980385813
* Learning rate NN = 0.0003874204121530056
* diff = 0.0015556063494486239

```



For scene 65/79

```

* use LR_NN=0.001 with err=52.499990699285775 at it=24
* v0_scn_mean = 14.15506163796901
* MAE = 8.30596321192693

```

```
=====
=====
```

df n.8, scene n.66/79

```
=====
=====
```

We have 4 time intervals inside [227.04,227.84]

- Time interval n.0: [227.04, 227.24]
 - * y_true: [1.34614625 11.86069537]
 - * v_ann: [6.970726013183594, 7.4420318603515625, 2

6.24315546538644]

```
-----
```

- Time interval n.1: [227.24, 227.44]

- * y_true: [1.34614625 11.90074479]
- * v_ann: [7.042211055755615, 7.496065139770508, 26.

24315546538644]

```
-----
```

- Time interval n.2: [227.44, 227.64]

- * y_true: [1.34614625 14.03099458]
- * v_ann: [7.111701965332031, 7.654114246368408, 26.

24315546538644]

```
-----
```

- Time interval n.3: [227.64, 227.84]

- * y_true: [1.34614625 15.45116111]
- * v_ann: [7.220992565155029, 7.72150182723999, 26.2

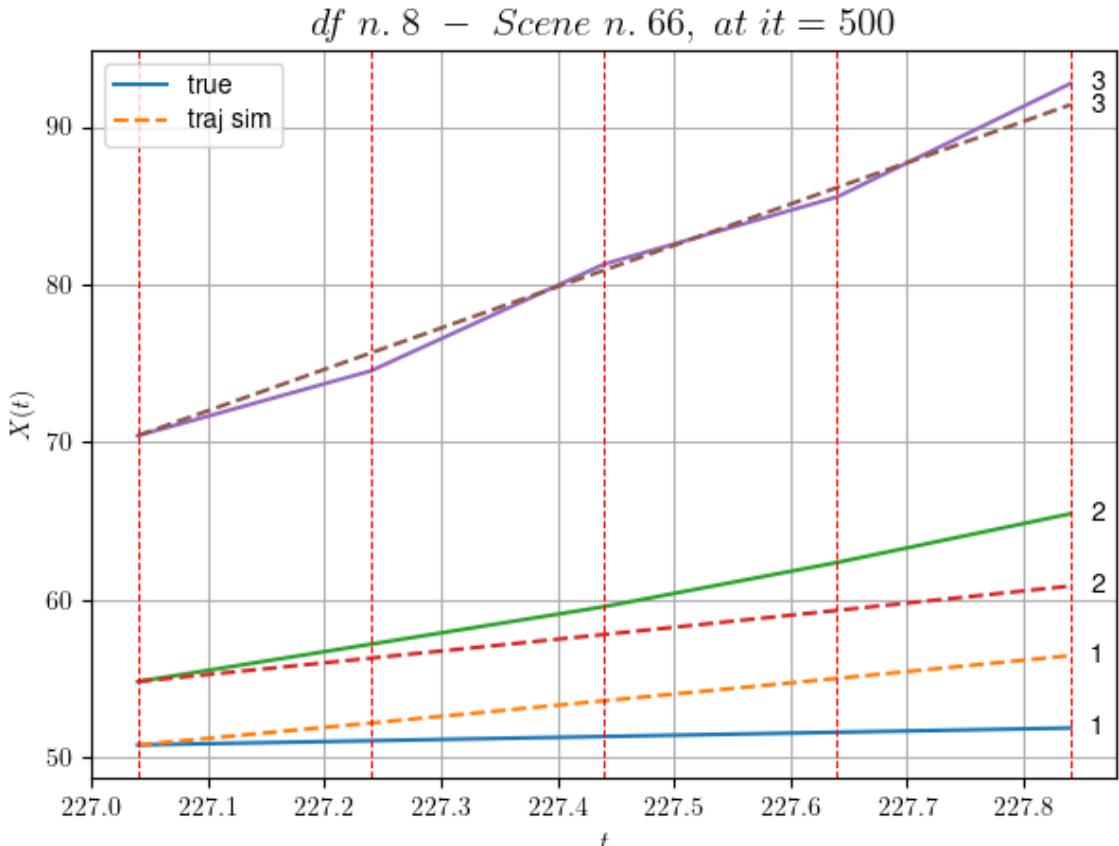
4315546538644]

```
-----
```

* err= 5.129315262218915

* Learning rate NN = 4.7829678806010634e-05

* diff = 0.008878761862551876



For scene 66/79

* use LR_NN=0.0001 with err=2.83159904724899 at it=24
 * v0_scn_mean = 26.468565968789253
 * MAE = 5.129315262218915

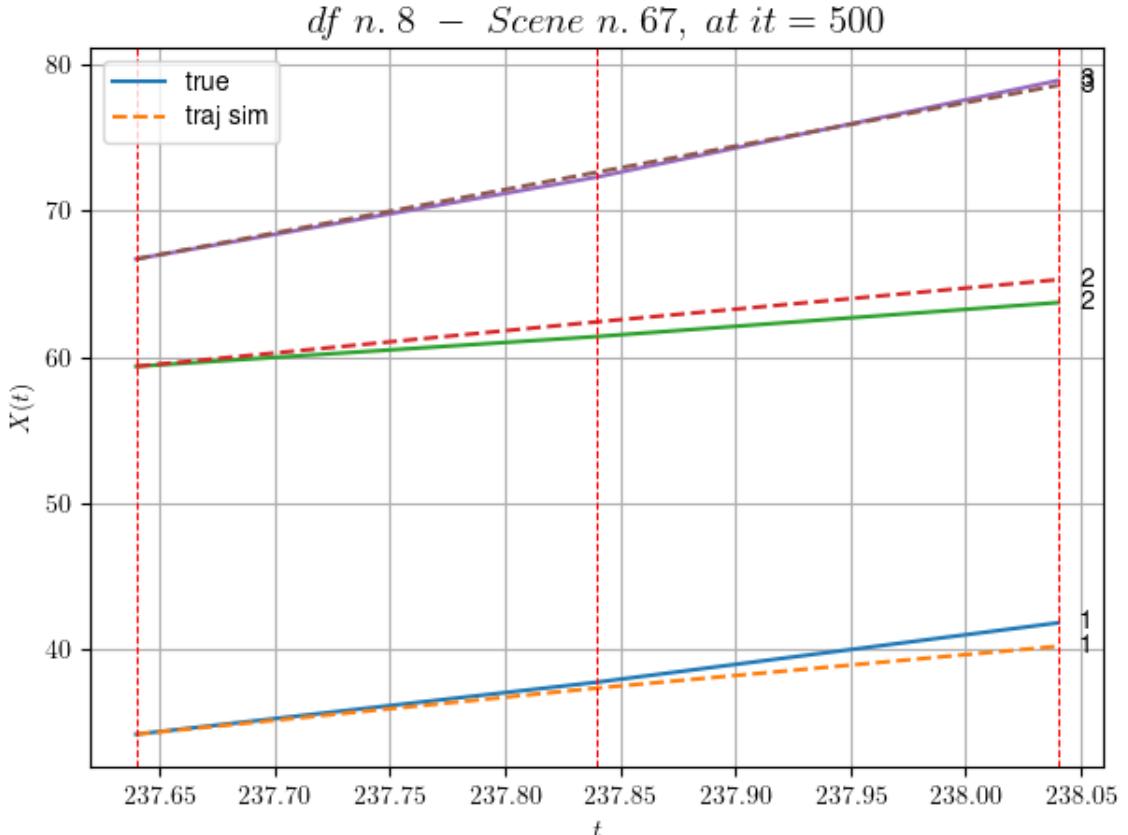
df n.8, scene n.67/79

We have 2 time intervals inside [237.64, 238.04]

- Time interval n.0: [237.64, 237.84]
 - * y_true: [17.80043487 10.22573725]
 - * v_ann: [15.814645767211914, 15.252284049987793, 29.702967492374473]

- Time interval n.1: [237.84, 238.04]
 - * y_true: [20.29063338 11.60088234]
 - * v_ann: [14.273250579833984, 14.418776512145996, 29.702967492374473]

- * err= 0.7121902544672188
- * Learning rate NN = 0.0007289999630302191
- * diff = 2.79835477370316e-05



For scene 67/79

- * use LR_NN=0.001 with err=0.4178542051185515 at it=24
- * v0_scn_mean = 29.720789429496204
- * MAE = 0.3109197807124094

df n.8, scene n.68/79

We have 2 time intervals inside [239.84, 240.24]

- Time interval n.0: [239.84, 240.04]
 - * y_true: [16.30079237 13.85576065]
 - * v_ann: [16.285688400268555, 17.742164611816406, 3

0.131239538599125]

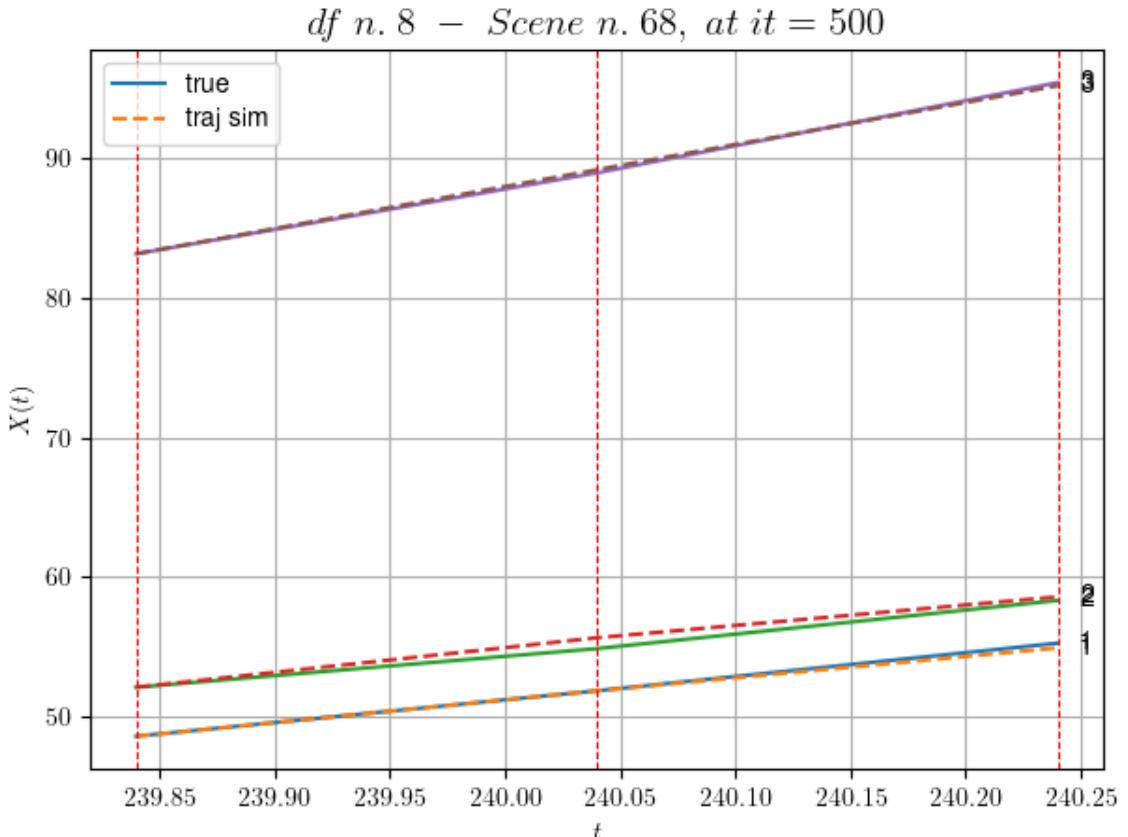
- Time interval n.1: [240.04, 240.24]
 - * y_true: [17.06097057 17.27611431]
 - * v_ann: [15.378056526184082, 14.668475151062012, 3

0.131239538599125]

- * err= 0.09850244081210775

- * Learning rate NN = 0.0007289999630302191

- * diff = 0.00010872572386771973



For scene 68/79

* use LR_NN=0.001 with err=4.904258160615886 at it=24
 * v0_scn_mean = 30.12336517217555
 * MAE = 0.09211398433856849

df n.8, scene n.69/79

We have 4 time intervals inside [243.44, 244.24]

- Time interval n.0: [243.44, 243.64]
 - * y_true: [18.26109982 7.28715228]
 - * v_ann: [13.625770568847656, 13.551097869873047, 1

6.742914270051028]

- Time interval n.1: [243.64, 243.84]
 - * y_true: [23.05153691 9.06731774]
 - * v_ann: [13.461749076843262, 13.272753715515137, 1

6.742914270051028]

- Time interval n.2: [243.84, 244.04]
 - * y_true: [10.52334632 16.05532609]
 - * v_ann: [13.937061309814453, 14.15430736541748, 1

6.742914270051028]

```

-----  

- Time interval n.3: [244.04, 244.24]  

* y_true: [ 8.51398229 17.08146048]  

* v_ann: [13.89659309387207, 13.887648582458496, 1  

6.742914270051028]  

-----
```

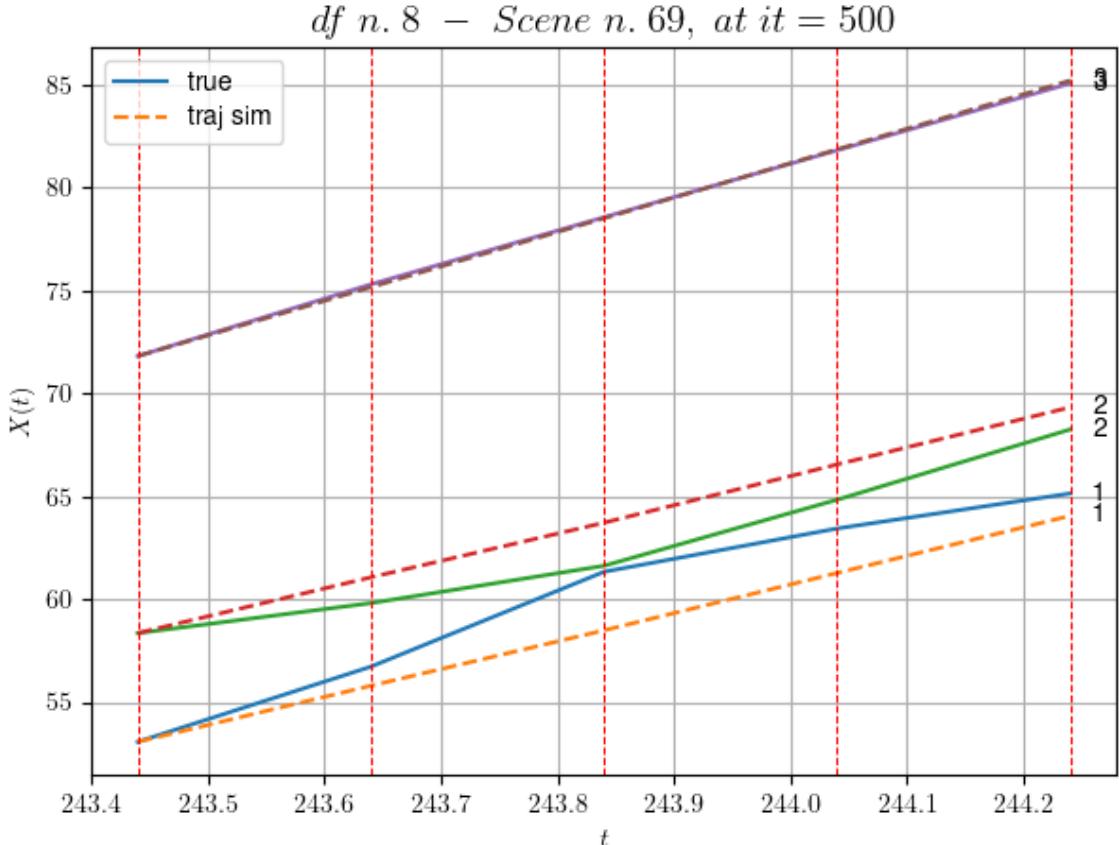
```

-----  

* err= 1.659893699257438  

* Learning rate NN = 0.000478296831715852  

* diff = 0.0005164291706600821
```



```

For scene 69/79  

* use LR_NN=0.001 with err=24.699599373898803 at it=24  

* v0_scn_mean = 17.538338818633477  

* MAE = 1.6438908903072107
```

df n.8, scene n.70/79

```

We have 5 time intervals inside [251.64,252.64]  

- Time interval n.0: [251.64, 251.84]  

* y_true: [14.32016282 17.2315068 ]  

* v_ann: [12.629295349121094, 15.597840309143066, 1  

9.82490608802419]
```

```

-----  

- Time interval n.1: [251.84, 252.04]  

* y_true: [20.34029568 17.65159646]
```

```

* v_ann: [15.072779655456543, 16.043664932250977, 1
9.82490608802419]

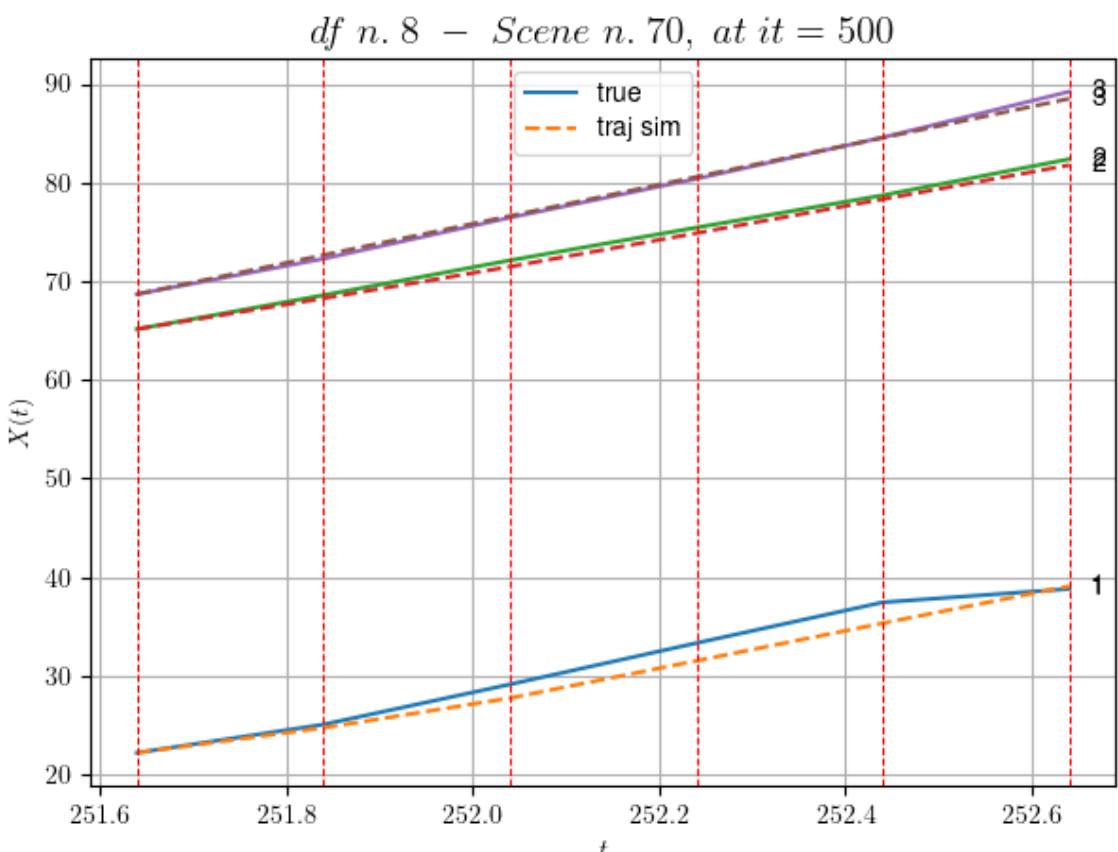
-----
- Time interval n.2: [252.04, 252.24]
* y_true: [20.93040622 16.61174803]
* v_ann: [18.885099411010742, 17.005273818969727, 1
9.82490608802419]

-----
- Time interval n.3: [252.24, 252.44]
* y_true: [20.66049541 16.35178592]
* v_ann: [19.0789852142334, 17.20989418029785, 19.8
2490608802419]

-----
- Time interval n.4: [252.44, 252.64]
* y_true: [6.80019415 18.37232882]
* v_ann: [18.793684005737305, 17.279775619506836, 1
9.82490608802419]

-----
* err= 0.6647920875142956
* Learning rate NN = 0.0003874204121530056
* diff = 0.03531993015063917

```



For scene 70/79

```

* use LR_NN=0.001 with err=34.65916985498288 at it=24
* v0_scn_mean = 20.435411265903237
* MAE = 0.49459582396067003

```

```
=====
=====
```

df n.8, scene n.71/79

```
=====
=====
```

We have 3 time intervals inside [290.84,291.44]

- Time interval n.0: [290.84, 291.04]
 - * y_true: [10.67508652 21.71084933]
 - * v_ann: [15.907548904418945, 15.801106452941895, 2 5.378244279774787]

```
-----
```

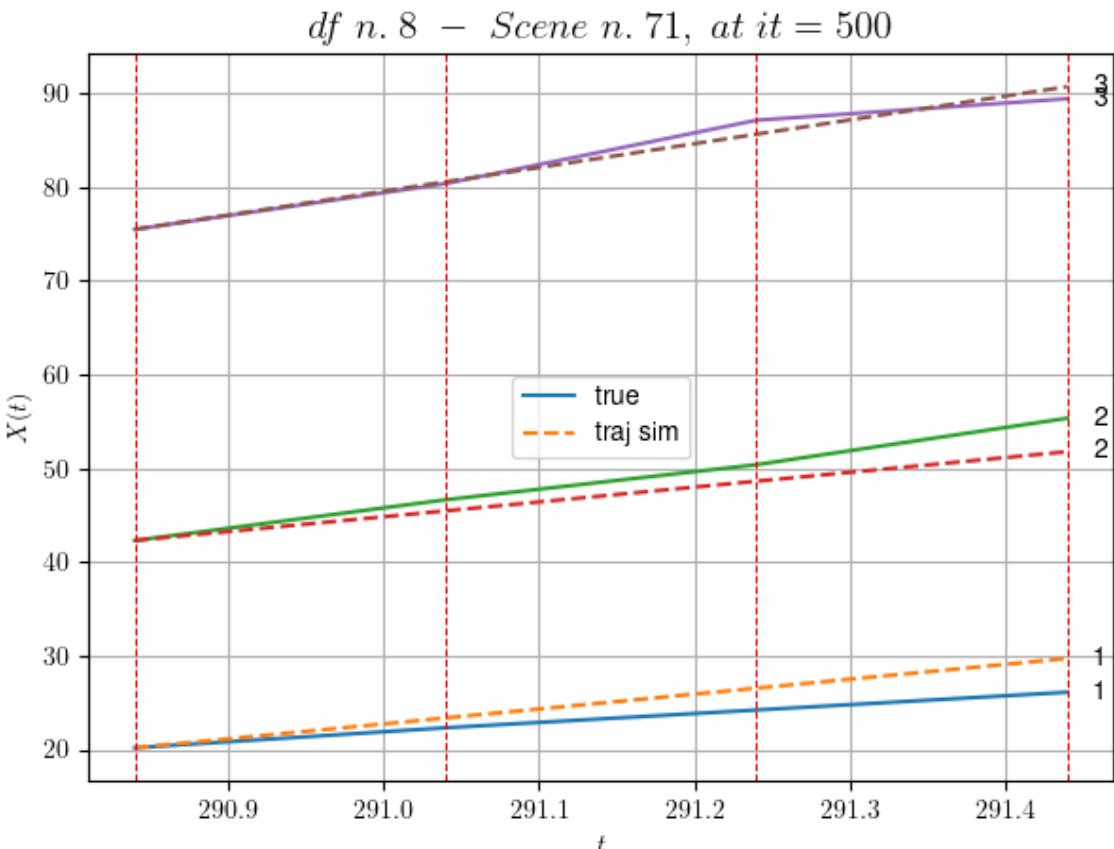
- Time interval n.1: [291.04, 291.24]
 - * y_true: [9.47510968 18.71084105]
 - * v_ann: [15.890116691589355, 15.800800323486328, 2 5.378244279774787]

```
-----
```

- Time interval n.2: [291.24, 291.44]
 - * y_true: [9.47510968 24.76138307]
 - * v_ann: [15.851603507995605, 15.744811058044434, 2 5.378244279774787]

```
-----
```

- * err= 3.390519231206247
- * Learning rate NN = 5.9048988987342454e-06
- * diff = 0.0026461294711754846



```
For scene 71/79
* use LR_NN=1e-05 with err=3.7909174170276834 at it=24
* v0_scn_mean = 25.655549415481435
* MAE = 3.390519231206247
```

```
=====
=====
```

```
df n.8, scene n.72/79
```

```
=====
=====
```

```
We have 5 time intervals inside [350.64,351.64]
```

```
- Time interval n.0: [350.64, 350.84]
  * y_true: [14.24956692 9.34769854]
  * v_ann: [16.365360260009766, 17.830015182495117, 2
4.0175560316586]
```

```
-----
-----
```

```
- Time interval n.1: [350.84, 351.04]
  * y_true: [ 4.06677119 24.77080184]
  * v_ann: [15.113153457641602, 15.204764366149902, 2
4.0175560316586]
```

```
-----
-----
```

```
- Time interval n.2: [351.04, 351.24]
  * y_true: [15.46321179 18.97073364]
  * v_ann: [14.938268661499023, 14.842278480529785, 2
4.0175560316586]
```

```
-----
-----
```

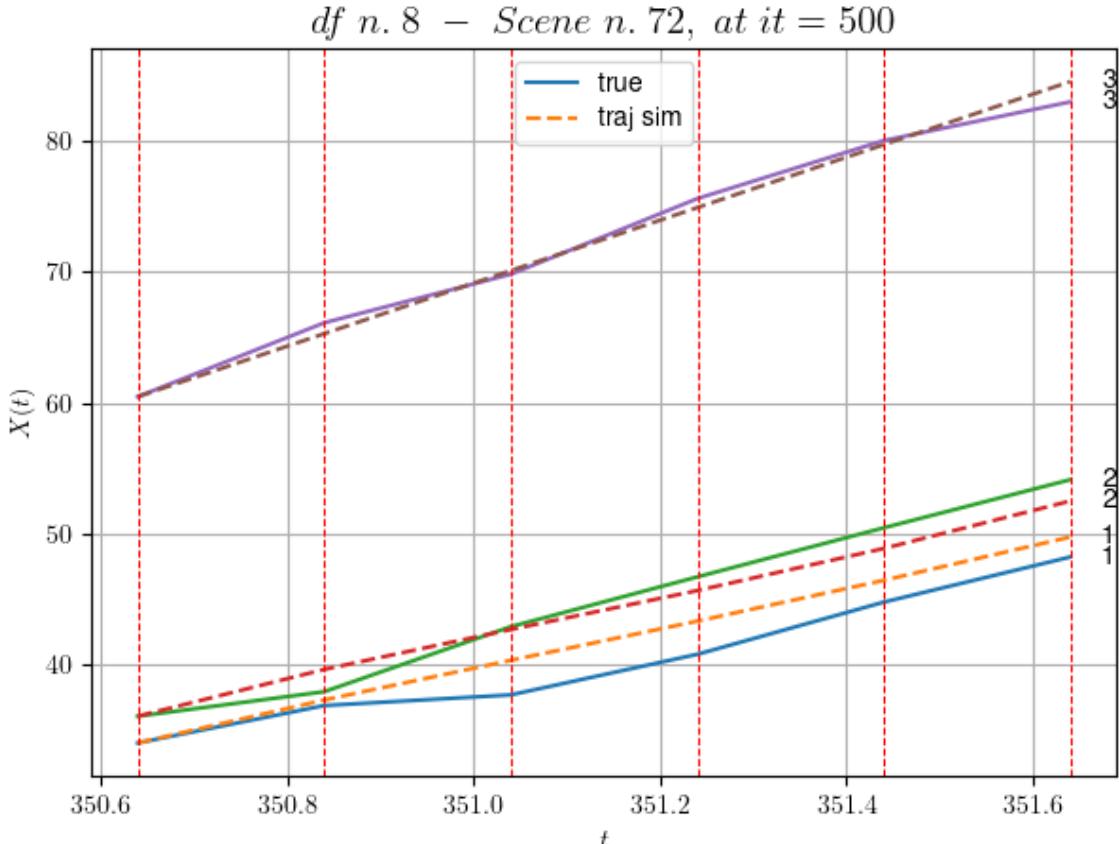
```
- Time interval n.3: [351.24, 351.44]
  * y_true: [19.89069297 18.71086293]
  * v_ann: [15.552030563354492, 16.0506649017334, 24.
0175560316586]
```

```
-----
-----
```

```
- Time interval n.4: [351.44, 351.64]
  * y_true: [17.2007296 18.34097485]
  * v_ann: [16.514177322387695, 18.093042373657227, 2
4.0175560316586]
```

```
-----
-----
```

```
* err= 1.7455031231876053
* Learning rate NN = 0.0003874204121530056
* diff = 0.013653009683611161
```



For scene 72/79

- * use LR_NN=0.001 with err=17.04445752315257 at it=24
- * v0_scn_mean = 24.376502401159907
- * MAE = 1.7455031231876053

df n.8, scene n.73/79

We have 3 time intervals inside [368.84, 369.44]

- Time interval n.0: [368.84, 369.04]
 - * y_true: [17.45059381 8.87536169]
 - * v_ann: [12.921302795410156, 12.16743278503418, 17.012012000820345]

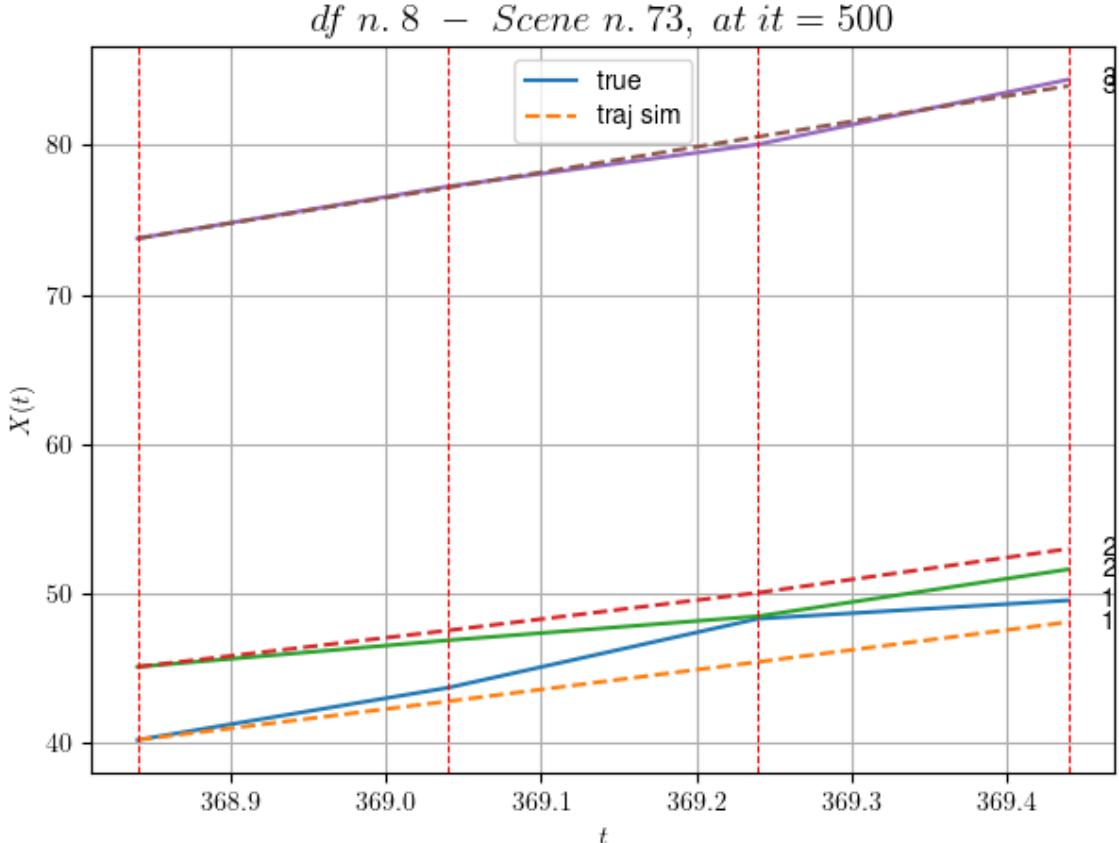
- Time interval n.1: [369.04, 369.24]
 - * y_true: [23.11801305 8.05829994]
 - * v_ann: [13.189300537109375, 12.637055397033691, 17.012012000820345]

- Time interval n.2: [369.24, 369.44]
 - * y_true: [6.12528304 15.69072344]
 - * v_ann: [13.329119682312012, 14.679154396057129, 17.012012000820345]

```

* err= 1.3774613196335928
* Learning rate NN = 0.0005904899444431067
* diff = 0.002761776636719837

```



For scene 73/79

```

* use LR_NN=0.001 with err=18.95125297978987 at it=24
* v0_scn_mean = 17.791290697638374
* MAE = 1.3658311451665686

```

df n.8, scene n.74/79

We have 2 time intervals inside [414.44, 414.84]

- Time interval n.0: [414.44, 414.64]
 - * y_true: [25.58017481 23.93124381]
 - * v_ann: [22.247875213623047, 21.559953689575195, 1
4.740228637605602]

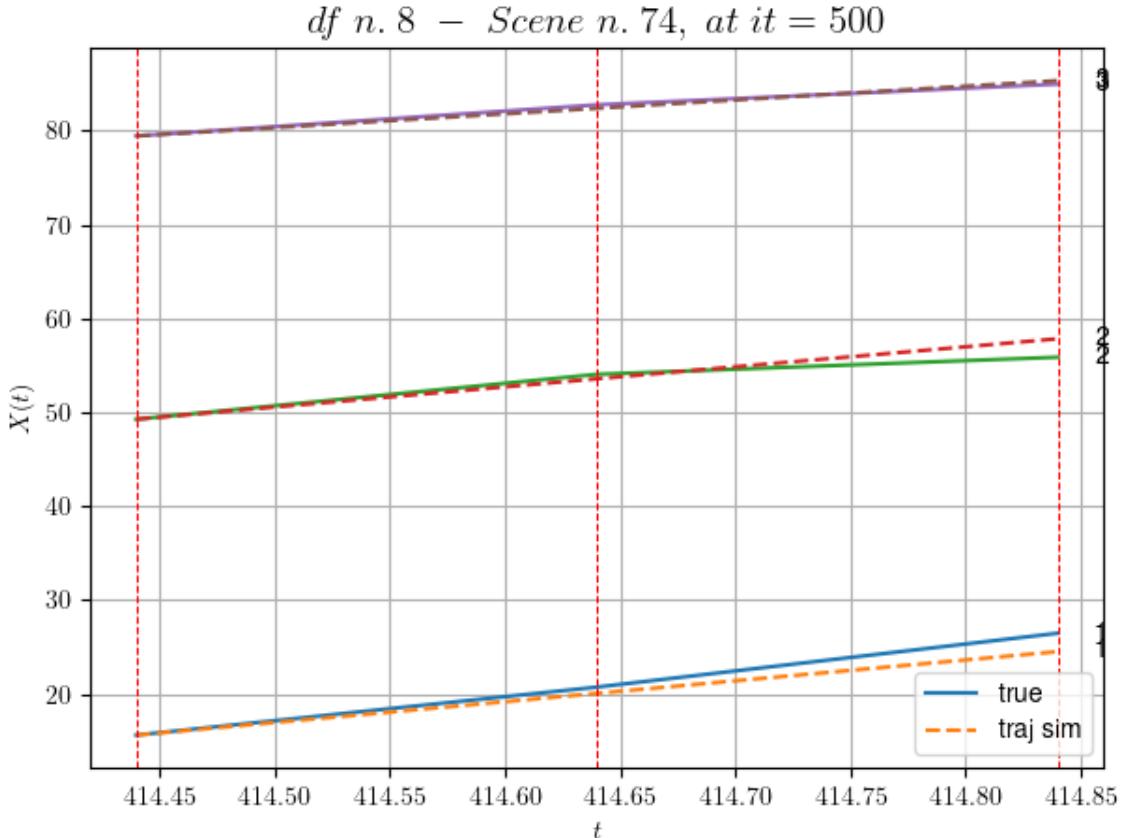
- Time interval n.1: [414.64, 414.84]

- * y_true: [28.7103211 9.12051681]
 - * v_ann: [22.245391845703125, 21.325454711914062, 1
4.740228637605602]

```
* err= 0.9613754900654898
```

```
* Learning rate NN = 7.289998848136747e-06
```

* diff = 8.24260714625824e-05



For scene 74/79

- * use LR_NN=1e-05 with err=6.1953165652930915 at it=24
- * v0_scn_mean = 15.655814234218536
- * MAE = 0.9613754900654898

df n.8, scene n.75/79

We have 5 time intervals inside [477.84, 478.84]

- Time interval n.0: [477.84, 478.04]
 - * y_true: [17.90015387 15.74042221]
 - * v_ann: [18.633005142211914, 18.8310489654541, 21.2681593021773]

- Time interval n.1: [478.04, 478.24]
 - * y_true: [18.02021575 17.32056356]
 - * v_ann: [18.570405960083008, 18.760635375976562, 21.2681593021773]

- Time interval n.2: [478.24, 478.44]
 - * y_true: [20.95033635 22.3908747]
 - * v_ann: [18.539318084716797, 18.716779708862305, 21.2681593021773]

```

-----  

-----  

    - Time interval n.3: [478.44, 478.64]  

      * y_true: [19.80040923 17.17076636]  

      * v_ann: [18.630895614624023, 18.8663330078125, 21.  

2681593021773]

```

```

-----  

-----  

    - Time interval n.4: [478.64, 478.84]  

      * y_true: [18.07046469 19.89107551]  

      * v_ann: [18.61387825012207, 18.87163543701172, 21.  

2681593021773]

```

```

-----  

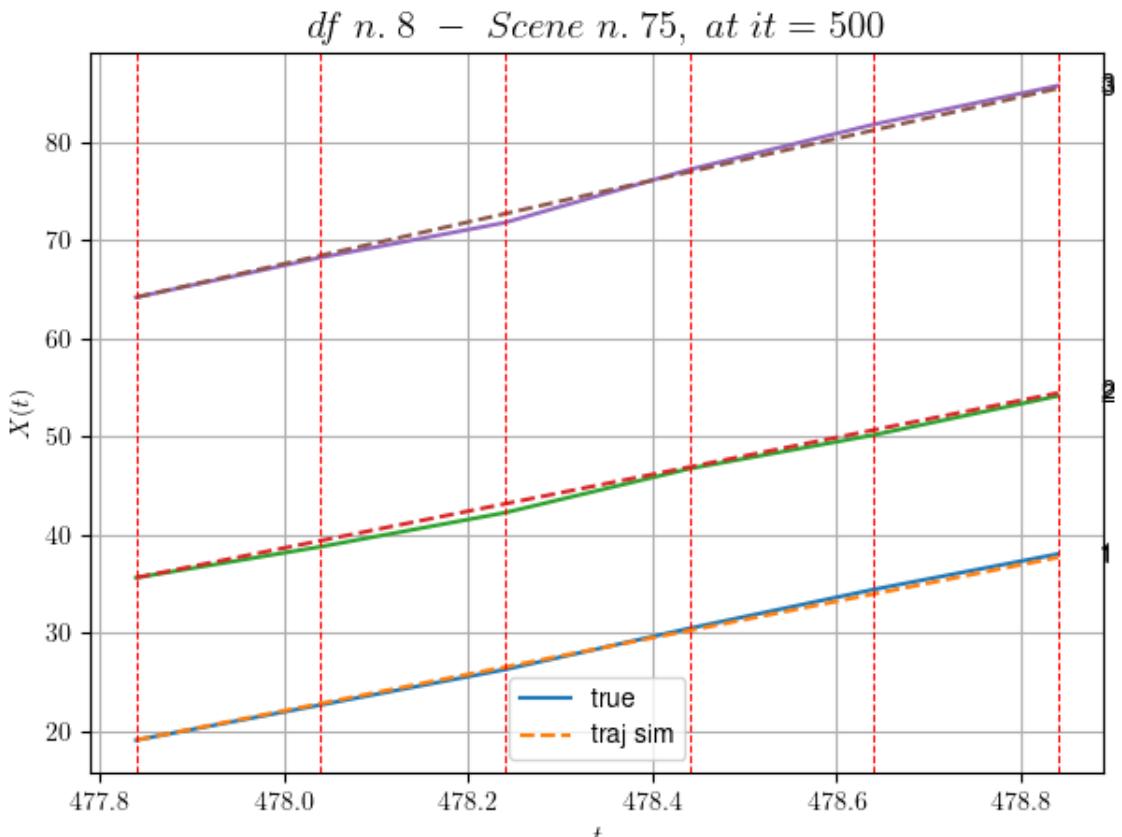
-----  

* err= 0.1894760125628545  

* Learning rate NN = 1.9371018424862996e-05  

* diff = 0.0030618570740853224

```



```

For scene 75/79
* use LR_NN=5e-05 with err=16.234499118096352 at it=24
* v0_scn_mean = 21.79206935200581
* MAE = 0.1894760125628545
=====
```

```
df n.8, scene n.76/79
=====
```

```

=====  

We have 2 time intervals inside [522.64,523.04]  

- Time interval n.0: [522.64, 522.84]

```

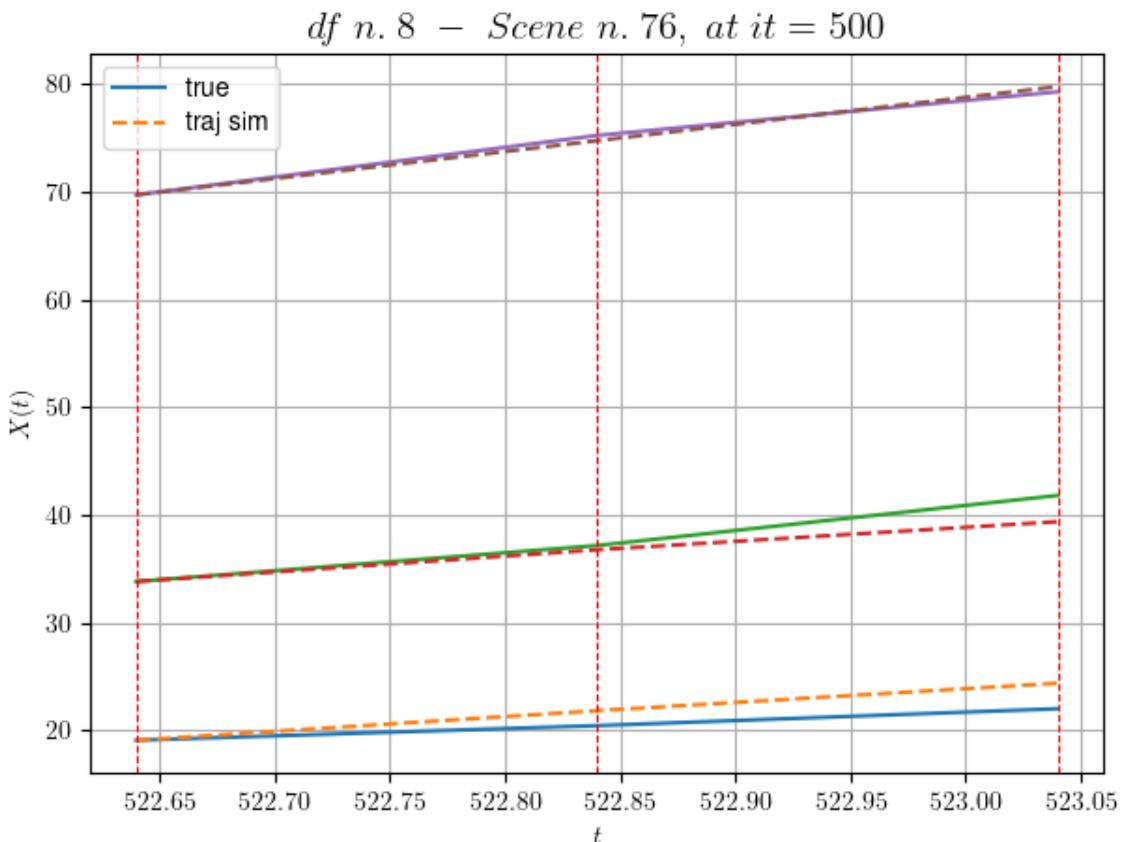
```

* y_true: [ 6.78505349 16.71042372]
* v_ann: [13.732438087463379, 14.743617057800293, 2
5.155972882594952]

-----
- Time interval n.1: [522.84, 523.04]
* y_true: [ 7.85007105 23.28071684]
* v_ann: [12.752168655395508, 13.060017585754395, 2
5.155972882594952]

-----
* err= 1.5686936684516632
* Learning rate NN = 0.00036449998151510954
* diff = 0.0006153275961393589

```



For scene 76/79

```

* use LR_NN=0.0005 with err=0.9141612580740707 at it=24
* v0_scn_mean = 25.44661429215245
* MAE = 1.531596624908599
=====
```

df n.8, scene n.77/79

```

=====
We have 7 time intervals inside [593.04,594.44]
- Time interval n.0: [593.04, 593.24]
* y_true: [18.14041096 18.46062677]
* v_ann: [18.79257583618164, 19.067672729492188, 2
0.297836048725536]
```

```
- Time interval n.1: [593.24, 593.44]
  * y_true: [15.67042287 23.16095213]
  * v_ann: [18.74361228942871, 18.89549446105957, 20.
297836048725536]

-----
- Time interval n.2: [593.44, 593.64]
  * y_true: [13.25043489 21.00101152]
  * v_ann: [19.065486907958984, 19.03627770996094, 2
0.297836048725536]

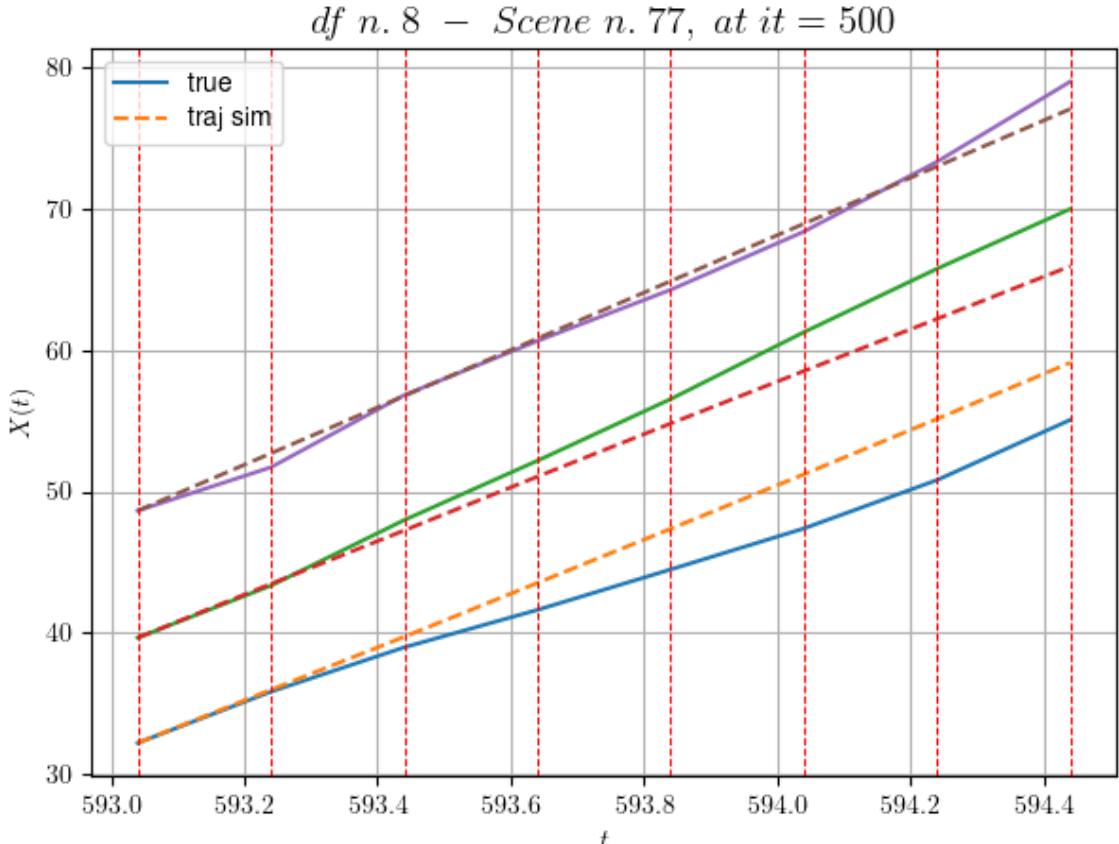
-----
- Time interval n.3: [593.64, 593.84]
  * y_true: [14.30052292 21.80126526]
  * v_ann: [19.133237838745117, 18.77810287475586, 2
0.297836048725536]

-----
- Time interval n.4: [593.84, 594.04]
  * y_true: [14.50059166 23.66159236]
  * v_ann: [19.285234451293945, 18.56101417541504, 2
0.297836048725536]

-----
- Time interval n.5: [594.04, 594.24]
  * y_true: [17.13492662 22.4617536 ]
  * v_ann: [19.60788917541504, 18.470731735229492, 2
0.297836048725536]

-----
- Time interval n.6: [594.24, 594.44]
  * y_true: [21.29116558 21.12188145]
  * v_ann: [19.875144958496094, 18.61867904663086, 2
0.297836048725536]

-----
* err= 4.546583643805624
* Learning rate NN = 0.00012709324073512107
* diff= 0.004612201054941206
```



For scene 77/79

- * use LR_NN=0.0005 with err=30.266930154925337 at it=24
- * v0_scn_mean = 20.87996545019588
- * MAE = 4.546583643805624

df n.8, scene n.78/79

We have 4 time intervals inside [256.44, 257.24]

- Time interval n.0: [256.44, 256.64]
 - * y_true: [7.48303167 10.07767618 21.73093279]
 - * v_ann: [12.786150932312012, 15.349078178405762, 1 5.589630126953125, 17.104258674666465]

- Time interval n.1: [256.64, 256.84]
 - * y_true: [13.09283525 13.17831107 21.42106847]
 - * v_ann: [15.82845401763916, 15.793672561645508, 1 5.244864463806152, 17.104258674666465]

- Time interval n.2: [256.84, 257.04]
 - * y_true: [11.5255681 16.82586504 17.99104223]
 - * v_ann: [15.865718841552734, 15.787614822387695, 1 5.355611801147461, 17.104258674666465]

```

-----  

- Time interval n.3: [257.04, 257.24]  

* y_true: [10.66053629 16.53589178 24.03163218]  

* v_ann: [15.829140663146973, 15.754144668579102, 1  

5.34280014038086, 17.104258674666465]
-----
```

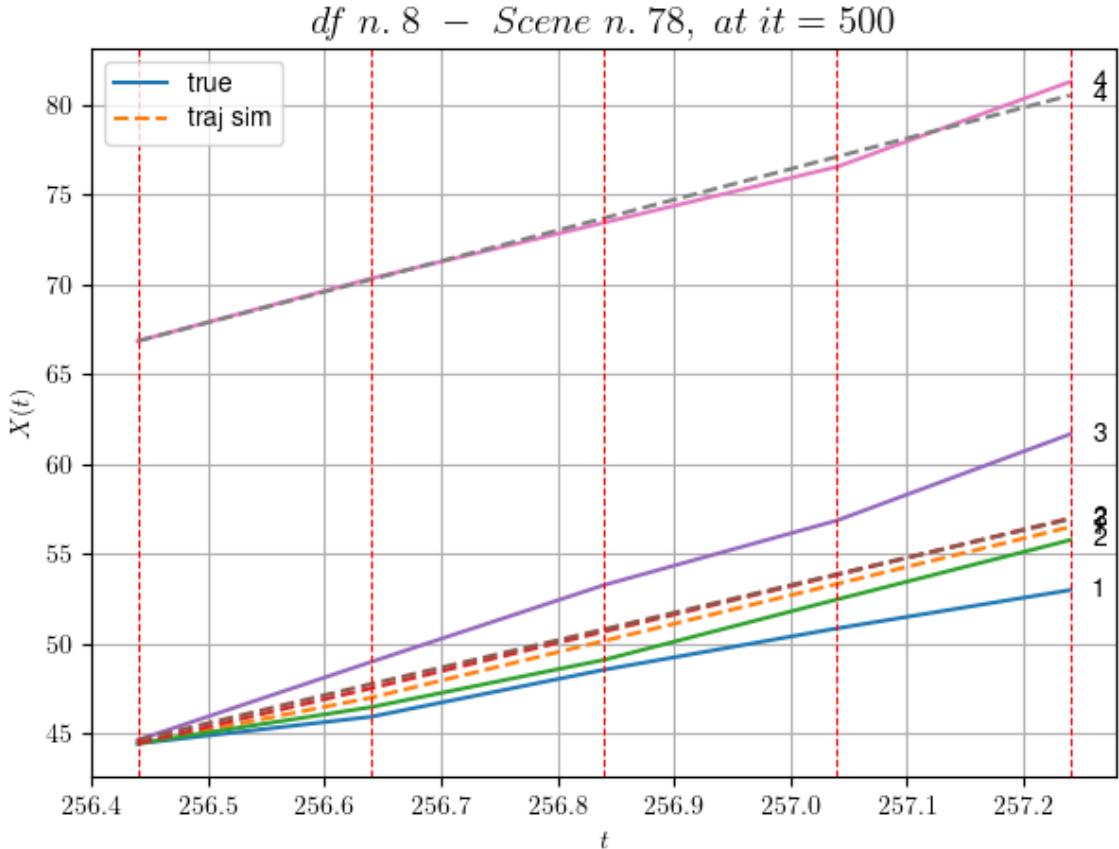
```

-----  

* err= 3.4465652122433936  

* Learning rate NN = 0.000239148415857926  

* diff = 0.0011659145007900662
-----
```



For scene 78/79

```

* use LR_NN=0.0005 with err=21.00164799563384 at it=24
* v0_scn_mean = 18.135876016246133
* MAE = 3.445385121333954
-----
```

For df=8 with 79 scenes, time taken: 1631.59

```
*****
```

```
*****
```

```
*****
```

```
*****
```

In df n.9/10 we have 33 scenes

df n.9, scene n.0/33

```
=====
```

We have 5 time intervals inside [15.40,16.40]

```
- Time interval n.0: [15.40, 15.60]
```

```
* y_true: [30.73739248]
```

```
* v_ann: [32.92782211303711, 28.380185417450583]
```

```

- Time interval n.1: [15.60, 15.80]
  * y_true: [35.33215767]
  * v_ann: [31.7756404876709, 28.380185417450583]

```

```

- Time interval n.2: [15.80, 16.00]
  * y_true: [26.52685309]
  * v_ann: [29.058732986450195, 28.380185417450583]

```

```

- Time interval n.3: [16.00, 16.20]
  * y_true: [31.26795305]
  * v_ann: [30.264673233032227, 28.380185417450583]

```

```

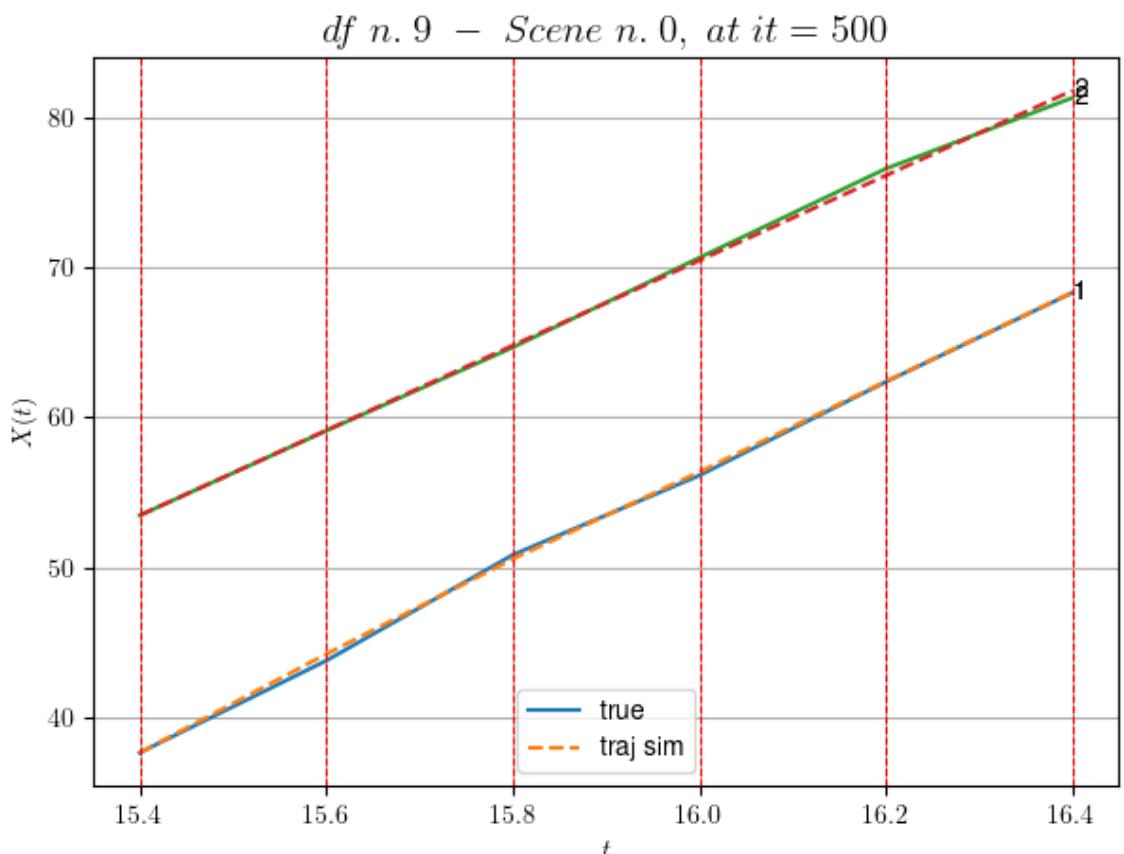
- Time interval n.4: [16.20, 16.40]
  * y_true: [29.78305951]
  * v_ann: [29.722993850708008, 28.380185417450583]

```

```

* err= 0.06831208350294271
* Learning rate NN = 3.874203684972599e-05
* diff = 0.00017213095994722538

```



For scene 0/33

```

* use LR_NN=0.0001 with err=0.5704460787085534 at it=24
* v0_scn_mean = 28.44497800074018

```

* MAE = 0.06831179411703947

df n.9, scene n.1/33

We have 2 time intervals inside [19.80,20.20]

- Time interval n.0: [19.80, 20.00]
 - * y_true: [33.54113565]
 - * v_ann: [30.965473175048828, 39.64570602734416]
-

- Time interval n.1: [20.00, 20.20]

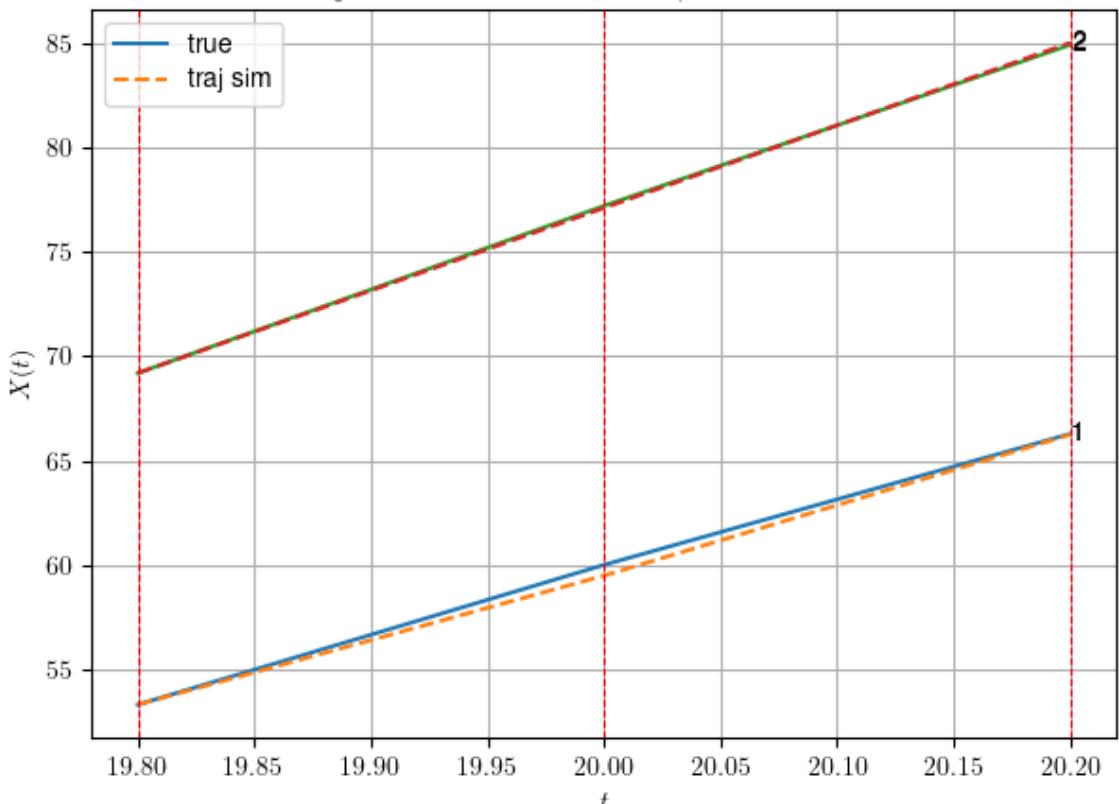
- * y_true: [31.45149299]
 - * v_ann: [33.81980514526367, 39.64570602734416]
-

* err= 0.04790605488070862

* Learning rate NN = 7.289998757187277e-05

* diff = 5.3141777645732136e-06

df n. 9 – Scene n. 1, at it = 500



For scene 1/33

* use LR_NN=0.0001 with err=3.0921123884666173 at it=24

* v0_scn_mean = 39.259877786324026

* MAE = 0.0472793297724604

```
df n.9, scene n.2/33
```

We have 2 time intervals inside [30.80,31.20]

- Time interval n.0: [30.80, 31.00]

- * y_true: [23.38137709]

- * v_ann: [22.06336784362793, 32.53592280355887]

- Time interval n.1: [31.00, 31.20]

- * y_true: [21.99189844]

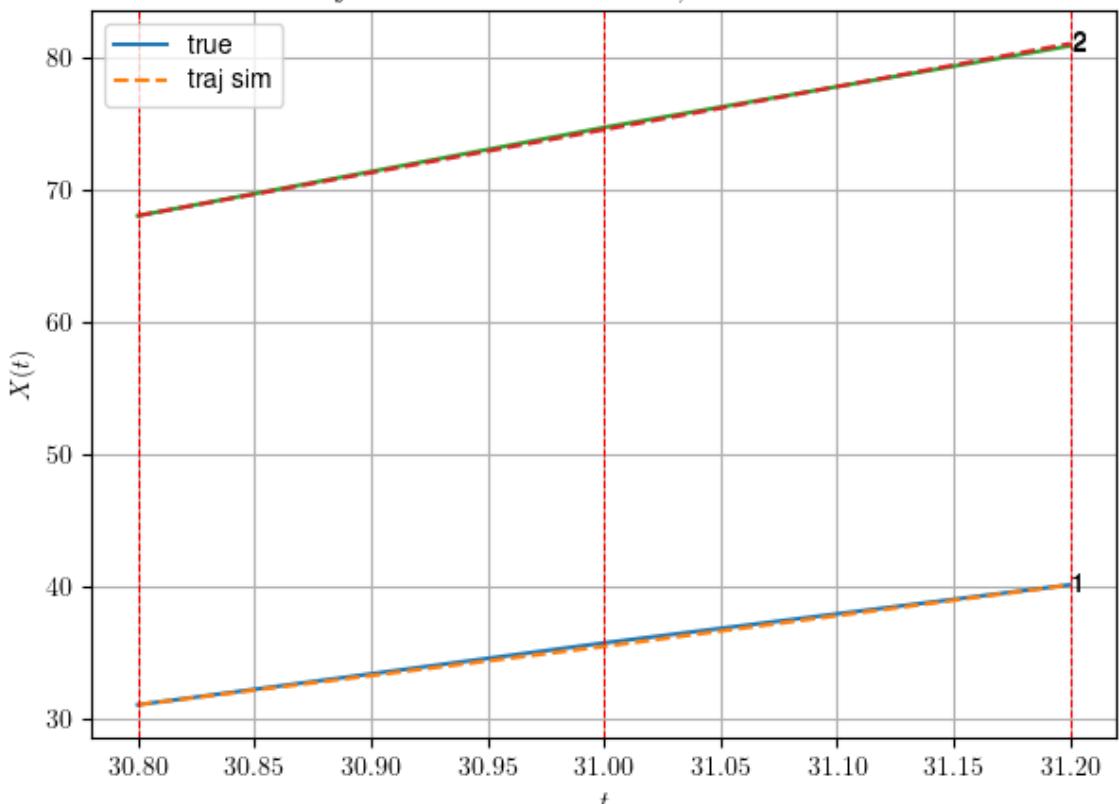
- * v_ann: [23.24247169494629, 32.53592280355887]

- * err= 0.020955385391422873

- * Learning rate NN = 7.289998848136747e-06

- * diff = 2.972983303289878e-07

df n. 9 – Scene n. 2, at it = 500



For scene 2/33

- * use LR_NN=1e-05 with err=1.0506490269182218 at it=24

- * v0_scn_mean = 32.43448589143576

- * MAE = 0.017341178640041942

```
df n.9, scene n.3/33
```

We have 5 time intervals inside [36.60, 37.60]

- Time interval n.0: [36.60, 36.80]
 - * y_true: [22.87949769]
 - * v_ann: [20.703161239624023, 29.98194810711349]
-

- Time interval n.1: [36.80, 37.00]
 - * y_true: [24.659198]
 - * v_ann: [23.215957641601562, 29.98194810711349]
-

- Time interval n.2: [37.00, 37.20]
 - * y_true: [29.18472774]
 - * v_ann: [27.368547439575195, 29.98194810711349]
-

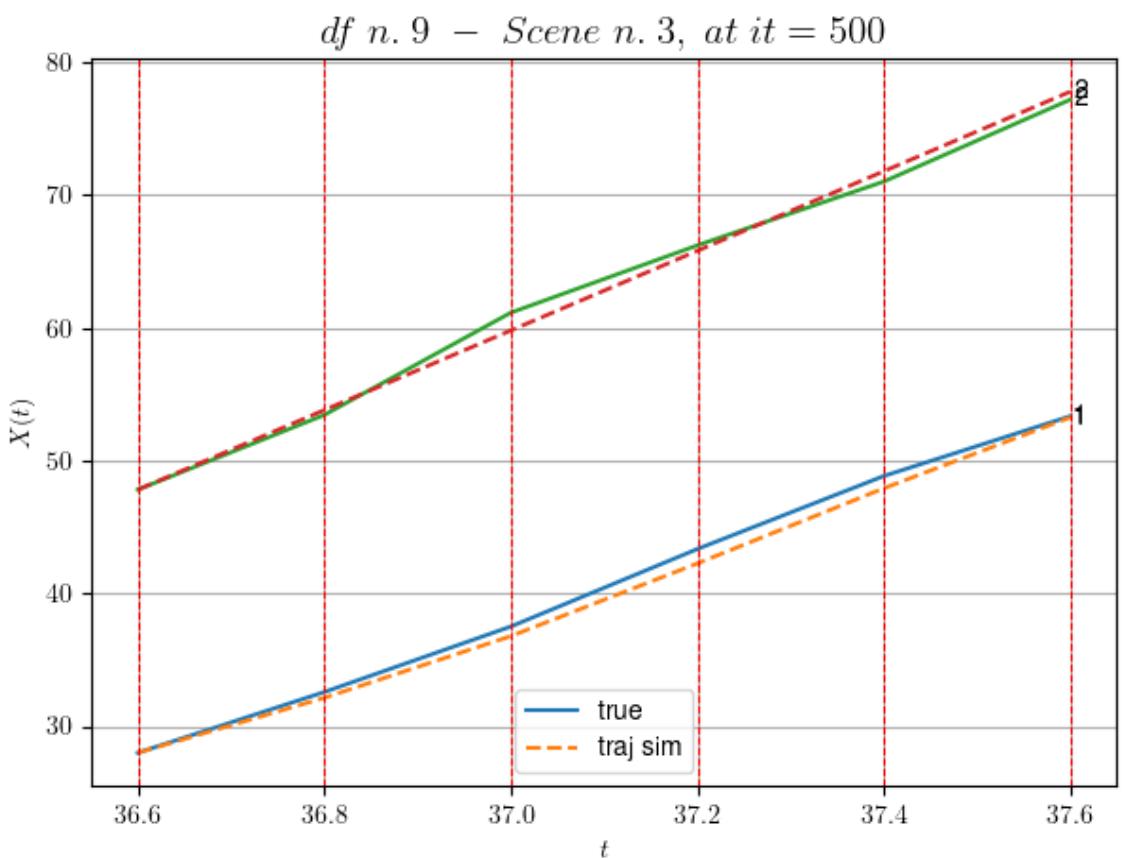
- Time interval n.3: [37.20, 37.40]
 - * y_true: [27.50021757]
 - * v_ann: [28.31732940673828, 29.98194810711349]
-

- Time interval n.4: [37.40, 37.60]
 - * y_true: [22.55082199]
 - * v_ann: [26.71078872680664, 29.98194810711349]
-

* err= 0.48497777253921104

* Learning rate NN = 0.0003874204121530056

* diff = 0.01777802052471050



```
For scene 3/33
* use LR_NN=0.001 with err=0.31126152644652605 at it=24
* v0_scn_mean = 29.982670182828922
* MAE = 0.2786454981721814
```

```
=====
=====
```

```
df n.9, scene n.4/33
```

```
=====
=====
```

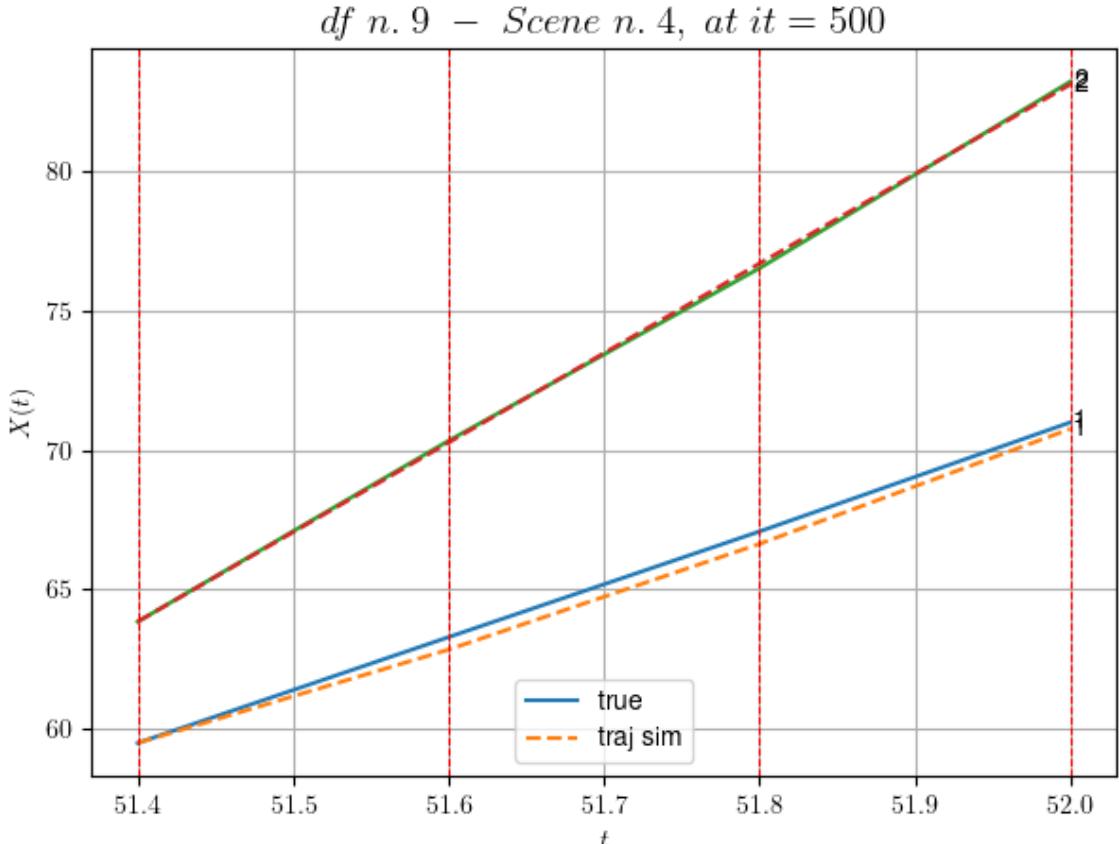
```
We have 3 time intervals inside [51.40,52.00]
```

```
- Time interval n.0: [51.40, 51.60]
  * y_true: [18.9890482]
  * v_ann: [16.74981689453125, 32.13226424153484]
```

```
-----
- Time interval n.1: [51.60, 51.80]
  * y_true: [18.95651223]
  * v_ann: [18.964468002319336, 32.13226424153484]
```

```
-----
- Time interval n.2: [51.80, 52.00]
  * y_true: [19.58186103]
  * v_ann: [20.642366409301758, 32.13226424153484]
```

```
-----
* err= 0.06229923518198409
* Learning rate NN = 0.0002952449722215533
* diff = 0.028613082743850812
```



For scene 4/33

- * use LR_NN=0.0005 with err=1.3995856841815313 at it=24
- * v0_scn_mean = 32.046973671889745
- * MAE = 0.06229923518198409

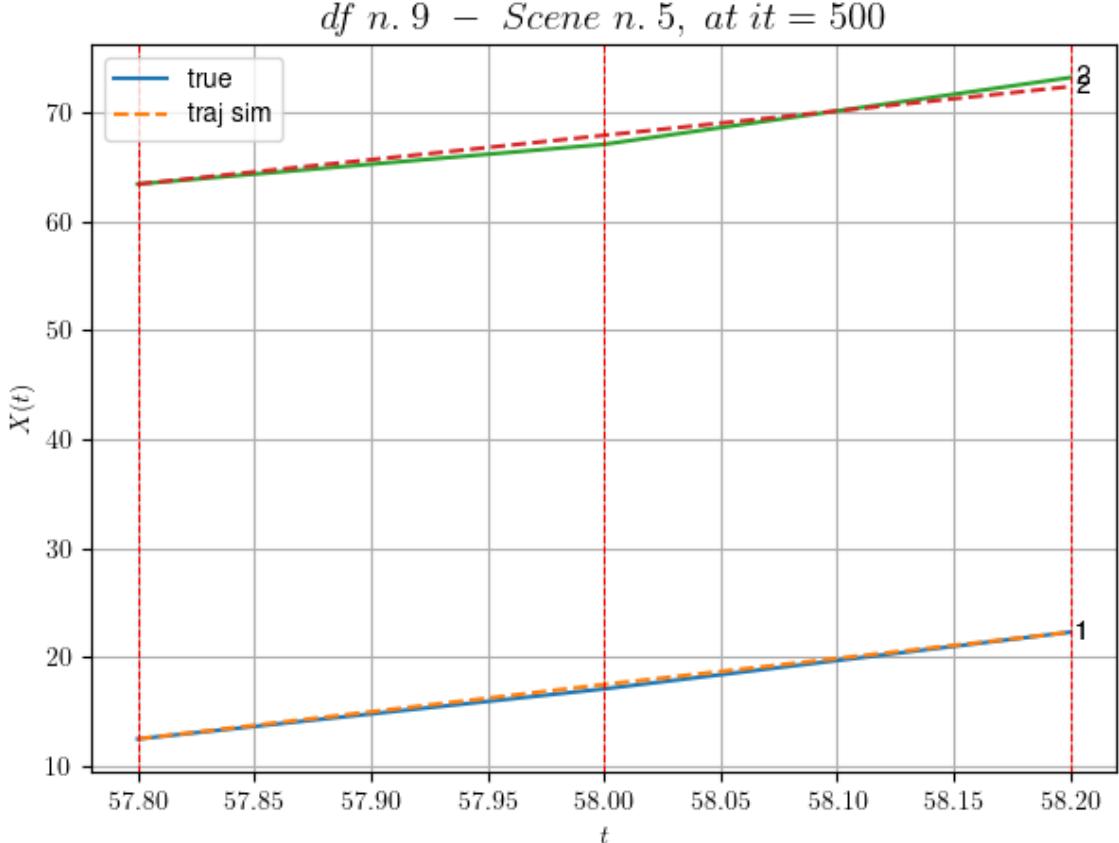
df n.9, scene n.5/33

We have 2 time intervals inside [57.80, 58.20]

- Time interval n.0: [57.80, 58.00]
 - * y_true: [22.99410221]
 - * v_ann: [24.990074157714844, 22.383621655895396]

- Time interval n.1: [58.00, 58.20]
 - * y_true: [26.0452022]
 - * v_ann: [24.001005172729492, 22.383621655895396]

- * err= 0.25561479625611017
- * Learning rate NN = 3.6449993785936385e-05
- * diff = 2.345266965703141e-05



For scene 5/33

- * use LR_NN=5e-05 with err=1.7688483400399464 at it=24
- * v0_scn_mean = 22.688276789601396
- * MAE = 0.23648328949243258

df n.9, scene n.6/33

We have 8 time intervals inside [82.40, 84.00]

- Time interval n.0: [82.40, 82.60]
 - * y_true: [31.06989228]
 - * v_ann: [31.08680534362793, 34.294801544759714]

- Time interval n.1: [82.60, 82.80]
 - * y_true: [29.82804448]
 - * v_ann: [32.185401916503906, 34.294801544759714]

- Time interval n.2: [82.80, 83.00]
 - * y_true: [37.59099484]
 - * v_ann: [33.05358123779297, 34.294801544759714]

- Time interval n.3: [83.00, 83.20]
 - * y_true: [30.55007052]

```
* v_ann: [32.63693618774414, 34.294801544759714]
```

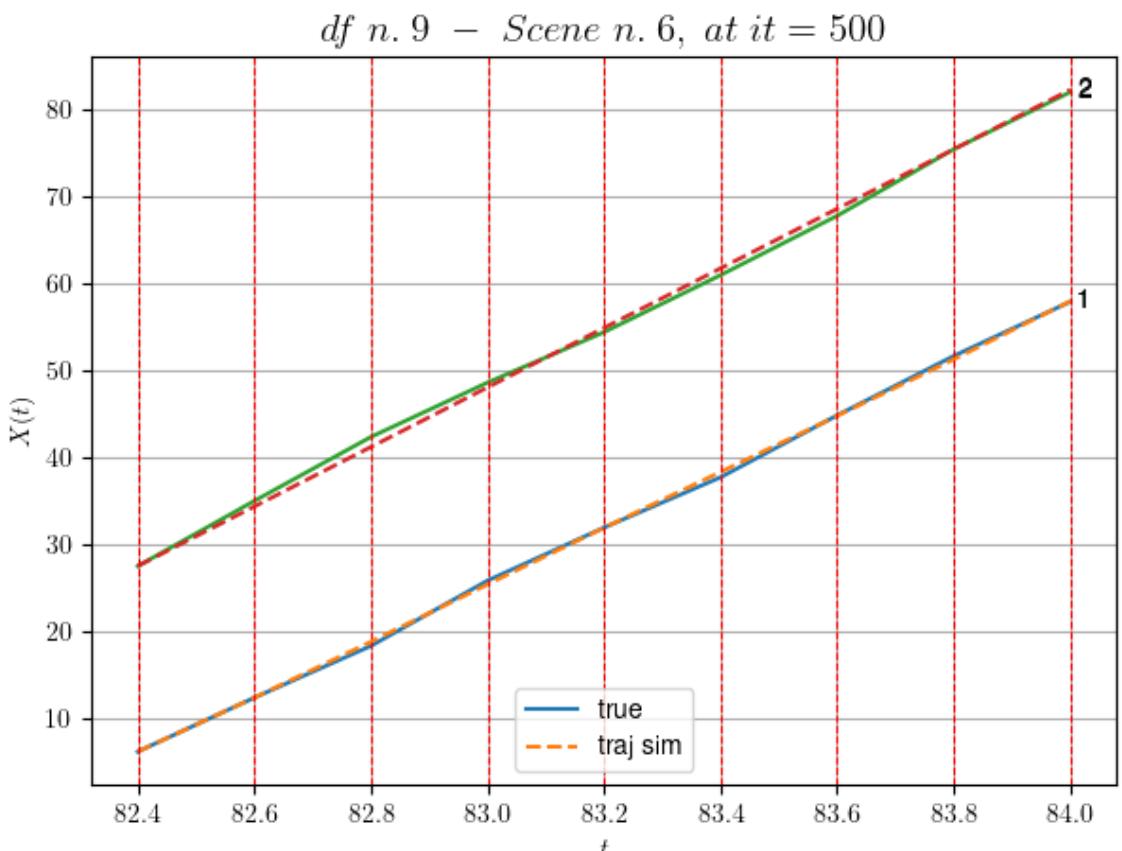
```
- Time interval n.4: [83.20, 83.40]
* y_true: [28.99841295]
* v_ann: [32.1004524230957, 34.294801544759714]
```

```
- Time interval n.5: [83.40, 83.60]
* y_true: [35.67340305]
* v_ann: [32.3486213684082, 34.294801544759714]
```

```
- Time interval n.6: [83.60, 83.80]
* y_true: [34.1936425]
* v_ann: [32.5521240234375, 34.294801544759714]
```

```
- Time interval n.7: [83.80, 84.00]
* y_true: [31.27112278]
* v_ann: [33.490509033203125, 34.294801544759714]
```

```
* err= 0.2526680058328702
* Learning rate NN = 1.029455233947374e-05
* diff = 0.000717591365348158
```



For scene 6/33

* use LR_NN=5e-05 with err=7.824075508018266 at it=24

```
* vθ_scn_mean = 34.123009483002136
* MAE = 0.25266047710040995
```

```
=====
```

df n.9, scene n.7/33

```
=====
```

We have 7 time intervals inside [117.00, 118.40]

- Time interval n.0: [117.00, 117.20]
 - * y_true: [27.10832167]
 - * v_ann: [24.290721893310547, 32.74675131138995]

- Time interval n.1: [117.20, 117.40]
 - * y_true: [29.73749083]
 - * v_ann: [26.002845764160156, 32.74675131138995]

- Time interval n.2: [117.40, 117.60]
 - * y_true: [25.41587293]
 - * v_ann: [25.976512908935547, 32.74675131138995]

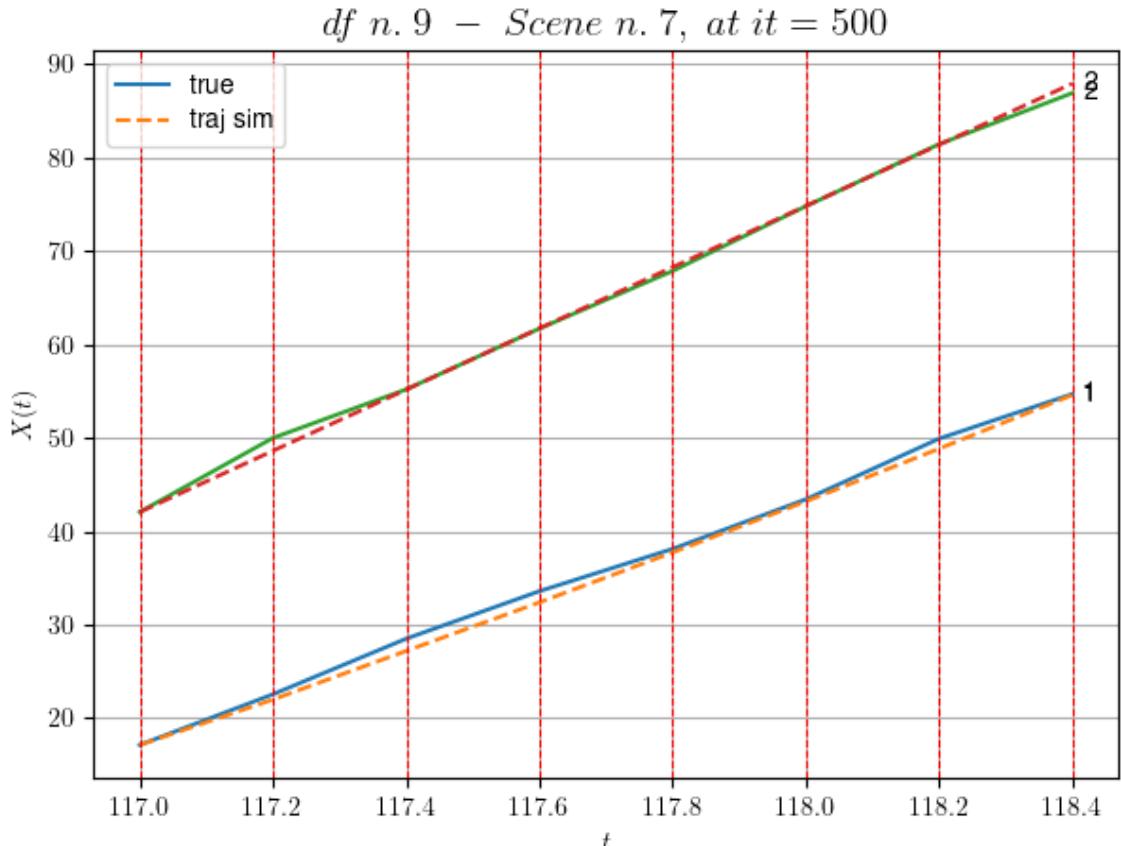
- Time interval n.3: [117.60, 117.80]
 - * y_true: [22.63777311]
 - * v_ann: [26.749576568603516, 32.74675131138995]

- Time interval n.4: [117.80, 118.00]
 - * y_true: [26.51617559]
 - * v_ann: [27.274362564086914, 32.74675131138995]

- Time interval n.5: [118.00, 118.20]
 - * y_true: [32.45579962]
 - * v_ann: [28.215198516845703, 32.74675131138995]

- Time interval n.6: [118.20, 118.40]
 - * y_true: [23.86482679]
 - * v_ann: [28.750032424926758, 32.74675131138995]

```
* err= 0.49405677528292696
* Learning rate NN = 1.2709323527815286e-05
* diff = 0.00754993595139114
```

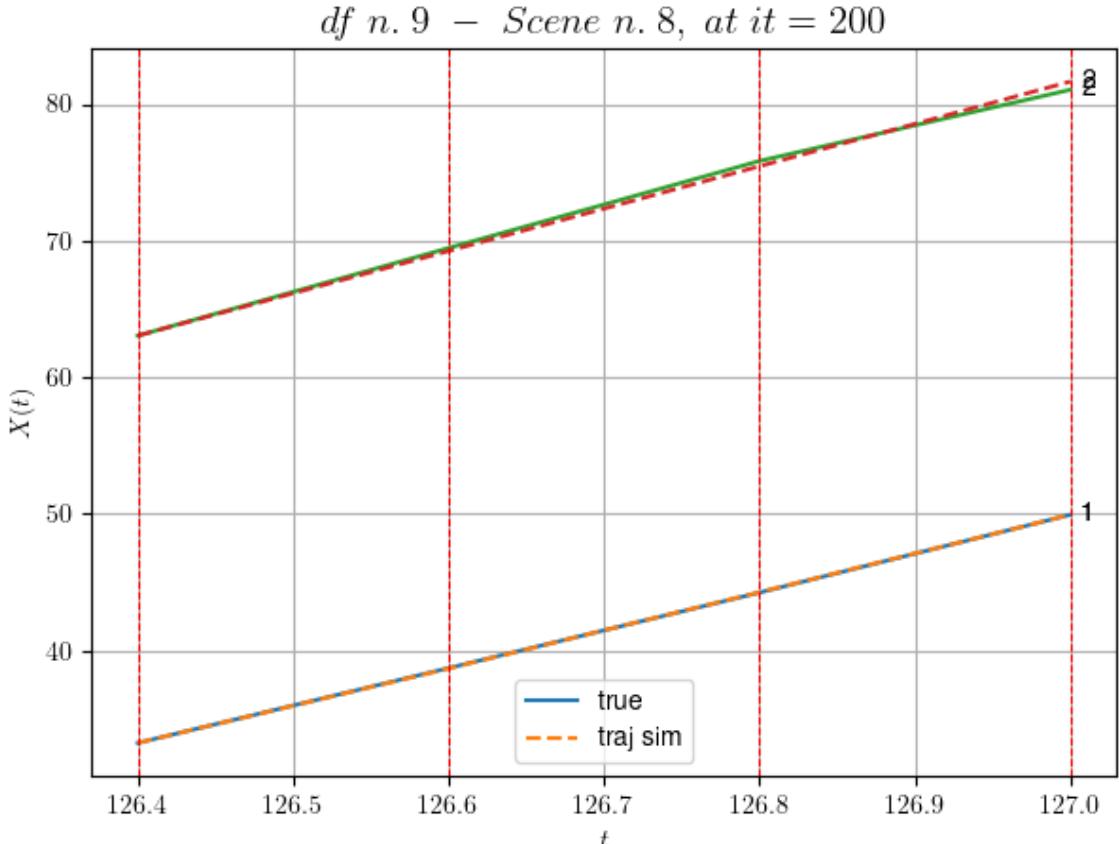


For scene 7/33

* use LR_NN=5e-05 with err=2.999269446518933 at it=24
* v0_scn_mean = 32.63688125895531
* MAE = 0.49405677528292696

df n.9, scene n.8/33

We have 3 time intervals inside [126.40,127.00]
* err= 0.06974960892320071
* Learning rate NN = 8.099999104160815e-05
* diff = 8.873176514101466e-07



For scene 8/33

```
* use LR_NN=0.0001 with err=0.10112352530903951 at it=24
* v0_scn_mean = 30.911499833328193
* MAE = 0.06389724728376396
```

df n.9, scene n.9/33

We have 6 time intervals inside [129.80, 131.00]

- Time interval n.0: [129.80, 130.00]
 - * y_true: [25.09153851]
 - * v_ann: [21.590286254882812, 25.485804967815316]

- Time interval n.1: [130.00, 130.20]
 - * y_true: [21.96260078]
 - * v_ann: [22.04805564880371, 25.485804967815316]

- Time interval n.2: [130.20, 130.40]
 - * y_true: [20.15999275]
 - * v_ann: [23.998064041137695, 25.485804967815316]

- Time interval n.3: [130.40, 130.60]
 - * y_true: [23.27663555]

* v_ann: [24.029626846313477, 25.485804967815316]

- Time interval n.4: [130.60, 130.80]

* y_true: [24.11460384]

* v_ann: [23.84891700744629, 25.485804967815316]

- Time interval n.5: [130.80, 131.00]

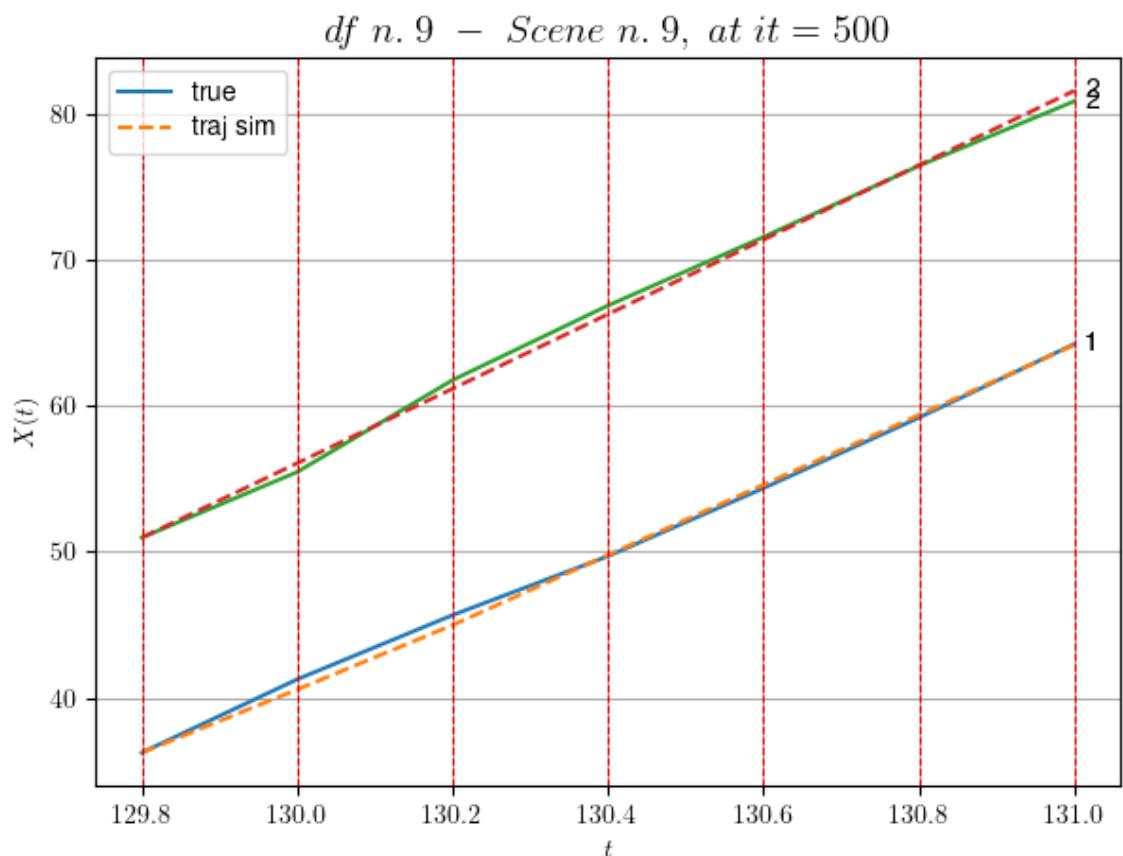
* y_true: [25.18866754]

* v_ann: [23.979673385620117, 25.485804967815316]

* err= 0.19089253255492591

* Learning rate NN = 0.00015690525469835848

* diff = 0.0017769190205903784



For scene 9/33

* use LR_NN=0.0005 with err=5.693283142266812 at it=24

* v0_scn_mean = 25.666372769067998

* MAE = 0.19089253255492591

df n.9, scene n.10/33

We have 2 time intervals inside [140.00,140.40]

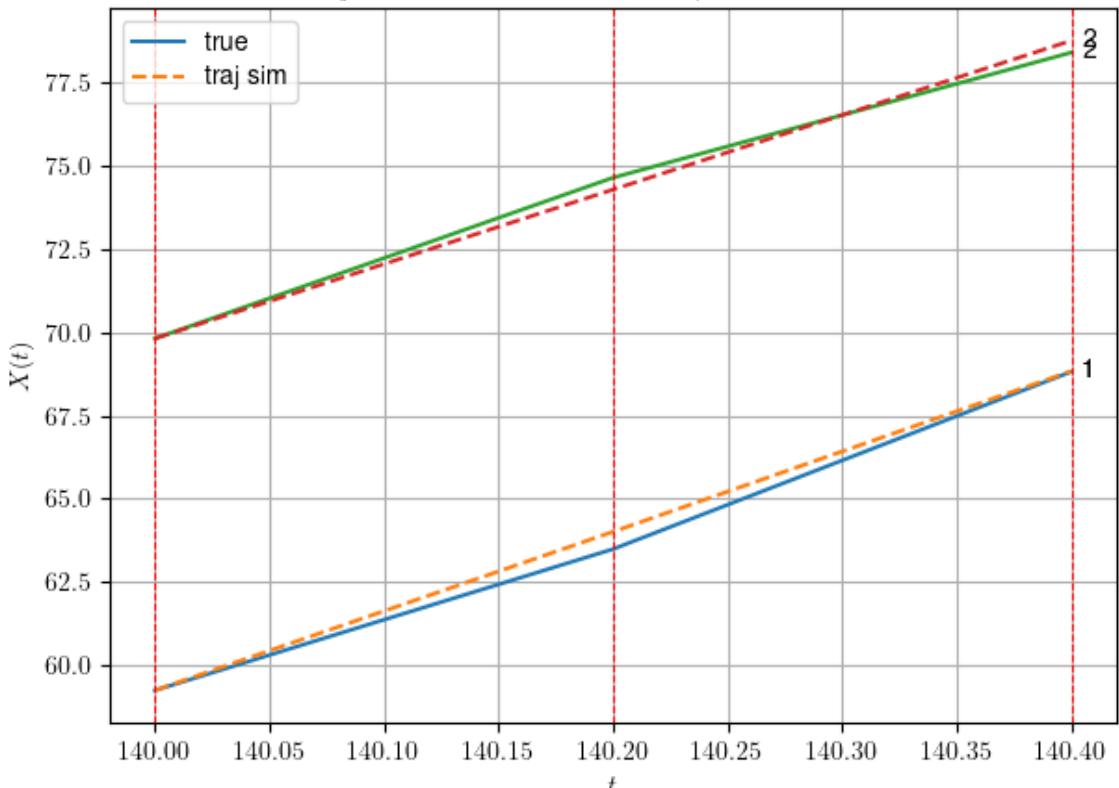
- Time interval n.0: [140.00, 140.20]

```
* y_true: [21.21233893]
* v_ann: [23.822101593017578, 22.365188336411464]
```

```
- Time interval n.1: [140.20, 140.40]
* y_true: [26.63314751]
* v_ann: [24.108049392700195, 22.365188336411464]
```

```
* err= 0.08808799196337197
* Learning rate NN = 0.00036449998151510954
* diff = 2.975754176109957e-05
```

df n. 9 – Scene n. 10, at it = 500



For scene 10/33

```
* use LR_NN=0.0005 with err=2.2208480782181543 at it=24
* v0_scn_mean = 22.670580802896854
* MAE = 0.08661895417630774
```

df n.9, scene n.11/33

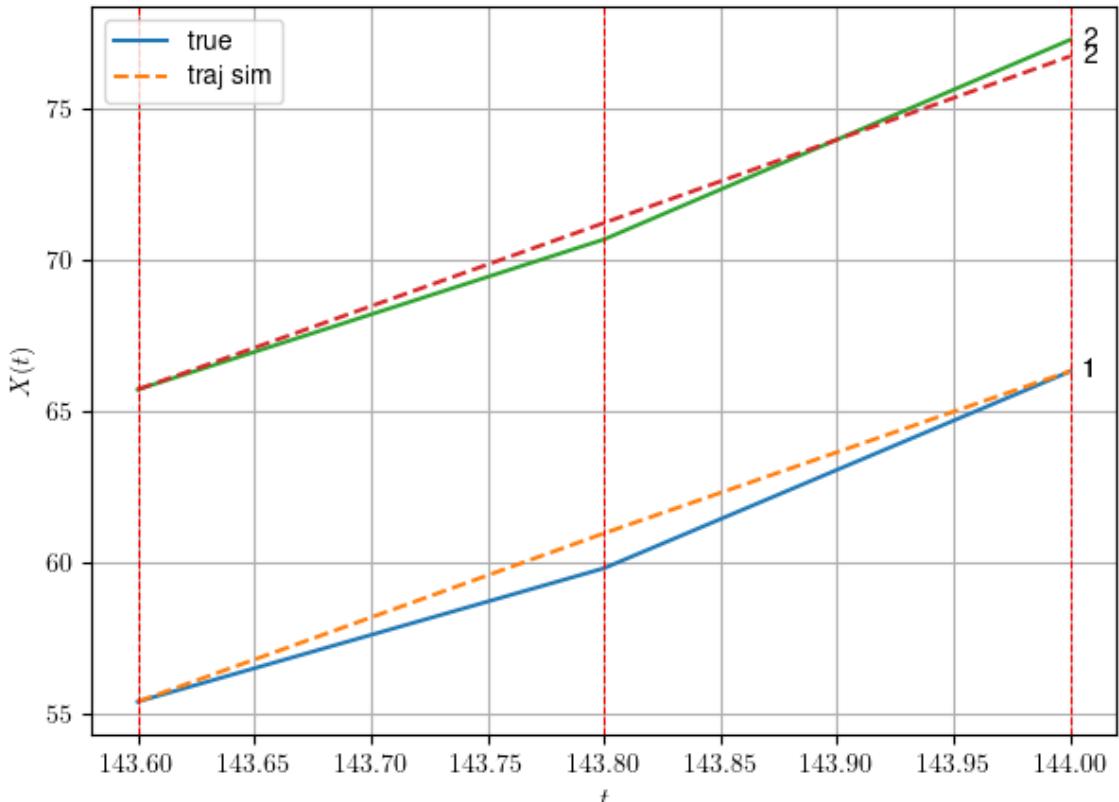
We have 2 time intervals inside [143.60,144.00]

```
- Time interval n.0: [143.60, 143.80]
* y_true: [21.99451945]
* v_ann: [27.760486602783203, 27.476067876170134]
```

```
- Time interval n.1: [143.80, 144.00]
* y_true: [32.47370265]
* v_ann: [26.750198364257812, 27.476067876170134]
```

```
* err= 0.3205039437199837
* Learning rate NN = 0.00036449998151510954
* diff = 7.057864422888027e-05
```

df n. 9 – Scene n. 11, at it = 500

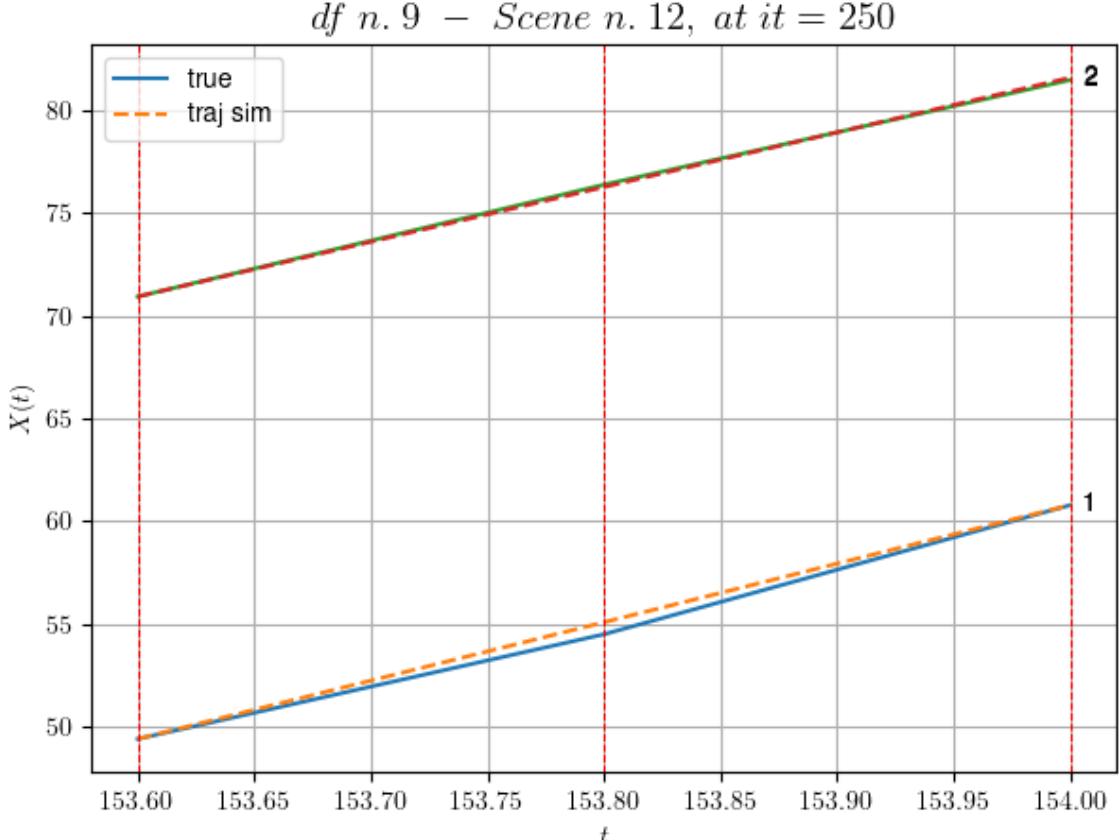


For scene 11/33

```
* use LR_NN=0.0005 with err=0.4901452469499217 at it=24
* v0_scn_mean = 27.577025161103847
* MAE = 0.3116902855098663
```

df n.9, scene n.12/33

```
We have 2 time intervals inside [153.60,154.00]
* err= 0.06178354035382222
* Learning rate NN = 4.499999704421498e-05
* diff = 7.66432393072003e-07
```



For scene 12/33

- * use LR_NN=5e-05 with err=0.44826039522536976 at it=24
- * v0_scn_mean = 26.936729579888482
- * MAE = 0.0611274088146724

df n.9, scene n.13/33

We have 5 time intervals inside [155.40, 156.40]

- Time interval n.0: [155.40, 155.60]
 - * y_true: [29.25651225]
 - * v_ann: [35.583213806152344, 25.423521542135614]

- Time interval n.1: [155.60, 155.80]
 - * y_true: [27.27414917]
 - * v_ann: [30.595550537109375, 25.423521542135614]

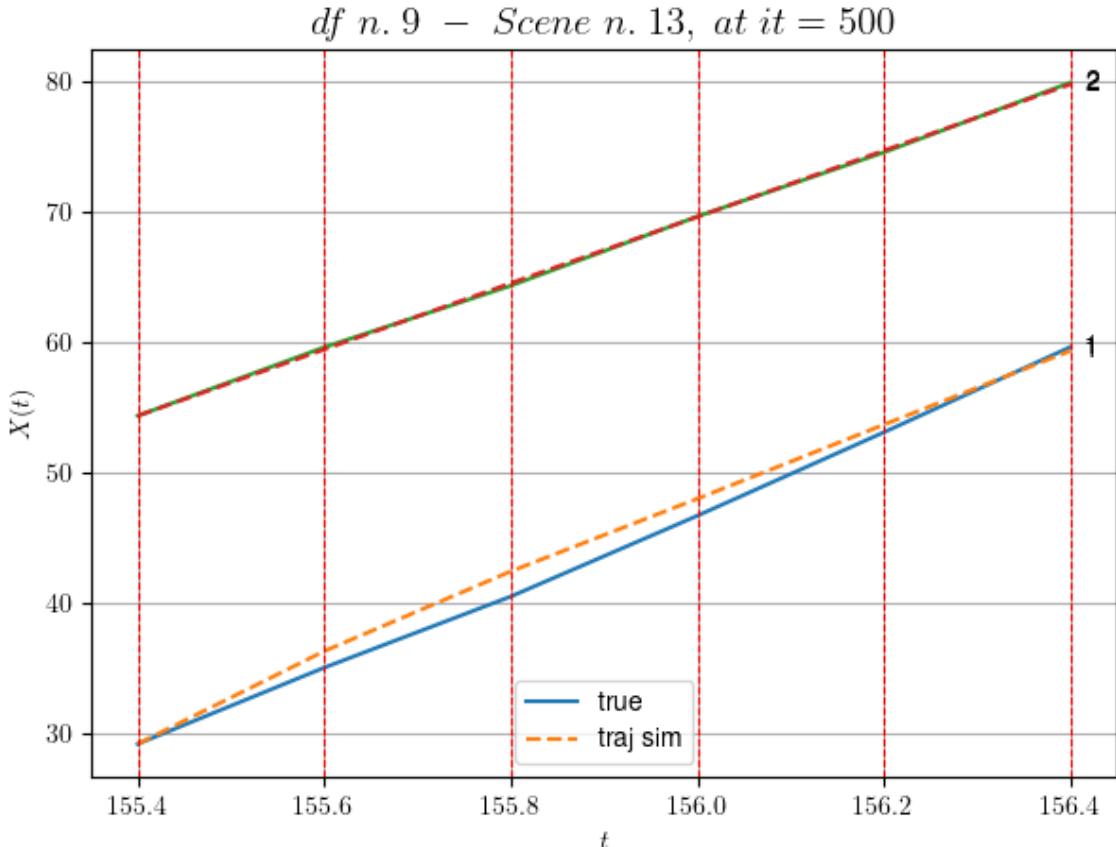
- Time interval n.2: [155.80, 156.00]
 - * y_true: [30.96998359]
 - * v_ann: [27.843090057373047, 25.423521542135614]

- Time interval n.3: [156.00, 156.20]
 - * y_true: [31.99883945]

```
* v_ann: [28.397497177124023, 25.423521542135614]
```

```
- Time interval n.4: [156.20, 156.40]
* y_true: [32.69834345]
* v_ann: [28.32322120666504, 25.423521542135614]
```

```
* err= 0.6297083506195582
* Learning rate NN = 0.0001937102060765028
* diff = 0.0025471592285324363
```



For scene 13/33

```
* use LR_NN=0.0005 with err=4.2676548868259445 at it=24
* v0_scn_mean = 25.606580680415266
* MAE = 0.4444225074700611
```

df n.9, scene n.14/33

We have 6 time intervals inside [161.60, 162.80]

```
- Time interval n.0: [161.60, 161.80]
* y_true: [21.4660985]
* v_ann: [13.102762222290039, 22.16402391369272]
```

- Time interval n.1: [161.80, 162.00]

```
* y_true: [19.14413932]
* v_ann: [20.1279354095459, 22.16402391369272]
```

- Time interval n.2: [162.00, 162.20]

```
* y_true: [15.69105389]
```

```
* v_ann: [18.46907615661621, 22.16402391369272]
```

- Time interval n.3: [162.20, 162.40]

```
* y_true: [8.26260071]
```

```
* v_ann: [15.287041664123535, 22.16402391369272]
```

- Time interval n.4: [162.40, 162.60]

```
* y_true: [14.64714542]
```

```
* v_ann: [14.027286529541016, 22.16402391369272]
```

- Time interval n.5: [162.60, 162.80]

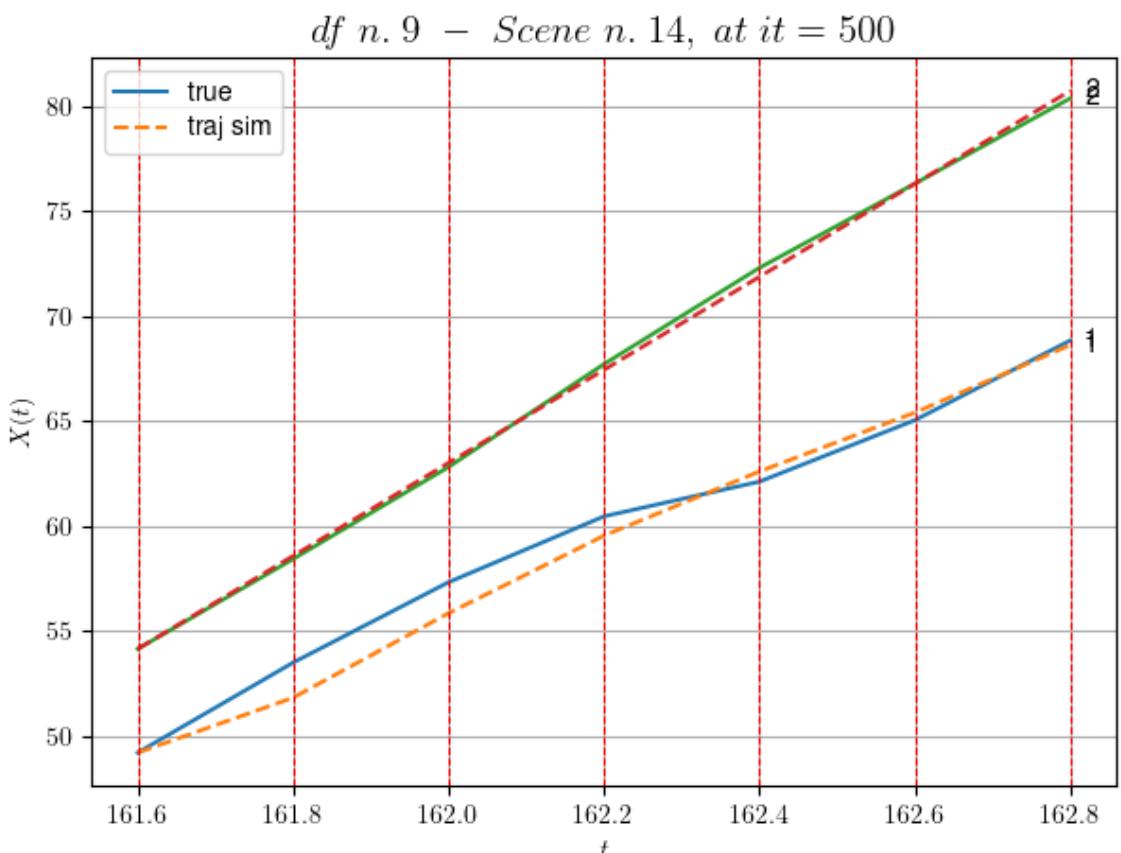
```
* y_true: [18.99114557]
```

```
* v_ann: [16.09299659729004, 22.16402391369272]
```

```
* err= 0.4776127181098866
```

```
* Learning rate NN = 0.0015690524596720934
```

```
* diff = 0.09219290204297814
```

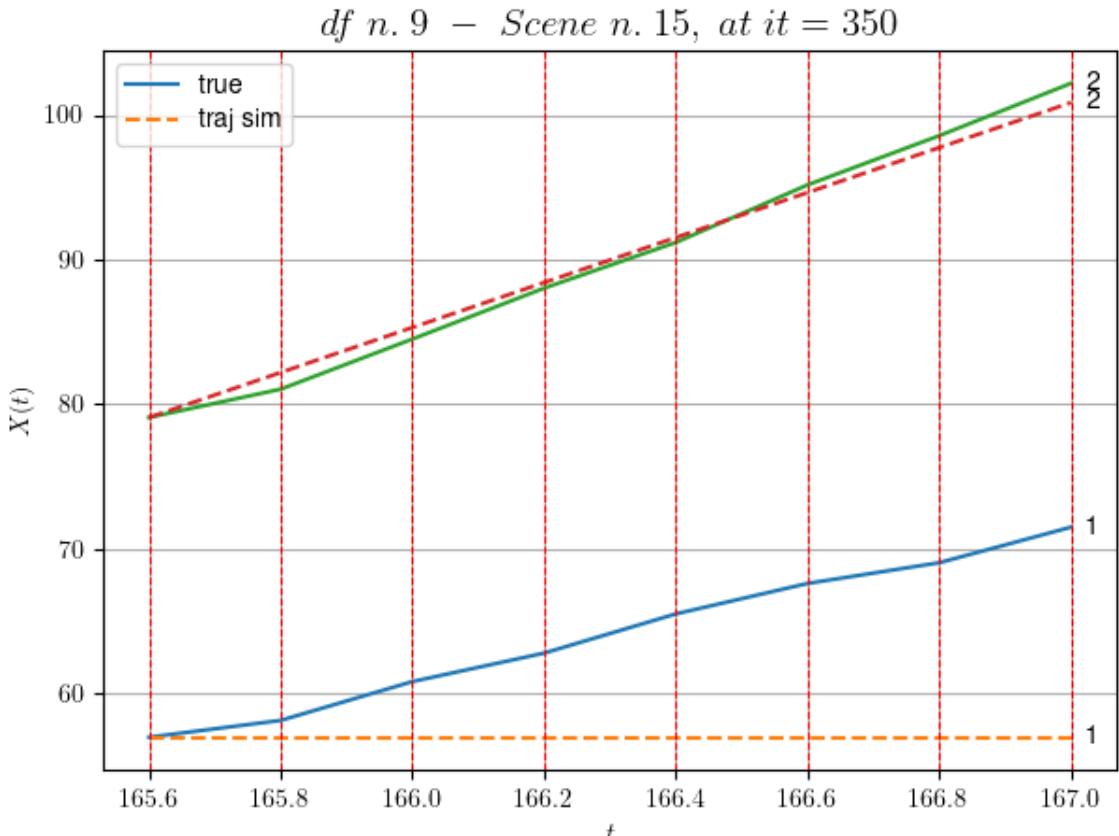


For scene 14/33

```
* use LR_NN=0.005 with err=21.264731474424046 at it=24
* v0_scn_mean = 22.47746295708575
* MAE = 0.4776127181098866
```

df n.9, scene n.15/33

```
We have 7 time intervals inside [165.60,167.00]
* err= 37.30582673387549
* Learning rate NN = 0.0003874204121530056
* diff = 7.977942999559673e-07
```



For scene 15/33

```
* use LR_NN=0.001 with err=69.32782497988721 at it=24
* v0_scn_mean = 16.37498173780508
* MAE = 37.2455992133357
```

df n.9, scene n.16/33

```
We have 18 time intervals inside [172.60,176.20]
- Time interval n.0: [172.60, 172.80]
  * y_true: [7.57017038]
  * v_ann: [11.53442096710205, 7.57960094871899]
```

- ```

- Time interval n.1: [172.80, 173.00]
* y_true: [5.21712635]
* v_ann: [11.323150634765625, 7.57960094871899]

- Time interval n.2: [173.00, 173.20]
* y_true: [10.96479034]
* v_ann: [10.985713958740234, 7.57960094871899]

- Time interval n.3: [173.20, 173.40]
* y_true: [4.35762504]
* v_ann: [10.990584373474121, 7.57960094871899]

- Time interval n.4: [173.40, 173.60]
* y_true: [7.62623256]
* v_ann: [10.621197700500488, 7.57960094871899]

- Time interval n.5: [173.60, 173.80]
* y_true: [6.3217065]
* v_ann: [10.473345756530762, 7.57960094871899]

- Time interval n.6: [173.80, 174.00]
* y_true: [13.07932963]
* v_ann: [10.248316764831543, 7.57960094871899]

- Time interval n.7: [174.00, 174.20]
* y_true: [16.80719294]
* v_ann: [10.447056770324707, 7.57960094871899]

- Time interval n.8: [174.20, 174.40]
* y_true: [18.56108748]
* v_ann: [10.79710865020752, 7.57960094871899]

- Time interval n.9: [174.40, 174.60]
* y_true: [20.74045442]
* v_ann: [11.115177154541016, 7.57960094871899]

- Time interval n.10: [174.60, 174.80]
* y_true: [19.75285314]
* v_ann: [11.353641510009766, 7.57960094871899]
```

```

 - Time interval n.11: [174.80, 175.00]
 * y_true: [15.57181965]
 * v_ann: [11.421623229980469, 7.57960094871899]

 - Time interval n.12: [175.00, 175.20]
 * y_true: [17.64022945]
 * v_ann: [11.353976249694824, 7.57960094871899]

 - Time interval n.13: [175.20, 175.40]
 * y_true: [18.20175175]
 * v_ann: [11.081986427307129, 7.57960094871899]

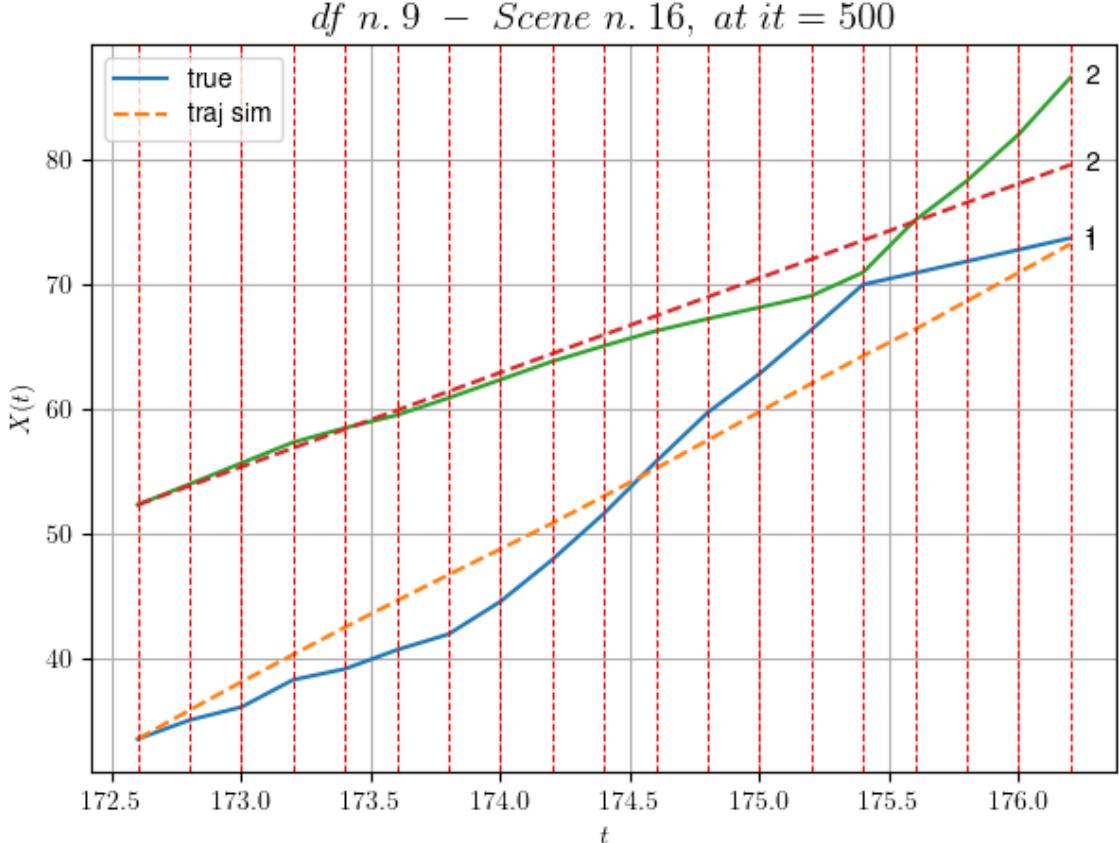
 - Time interval n.14: [175.40, 175.60]
 * y_true: [4.59061013]
 * v_ann: [10.647603988647461, 7.57960094871899]

 - Time interval n.15: [175.60, 175.80]
 * y_true: [4.66662748]
 * v_ann: [11.30860424041748, 7.57960094871899]

 - Time interval n.16: [175.80, 176.00]
 * y_true: [4.68563182]
 * v_ann: [11.43832015991211, 7.57960094871899]

 - Time interval n.17: [176.00, 176.20]
 * y_true: [4.68563182]
 * v_ann: [11.478597640991211, 7.57960094871899]

* err= 7.420896322776352
* Learning rate NN = 2.5031531549757347e-05
* diff = 0.14019657731645818
```



For scene 16/33

\* use LR\_NN=0.001 with err=1109.2111339761707 at it=24  
 \* v0\_scn\_mean = 8.476416910598832  
 \* MAE = 7.406273546550976

---



---

df n.9, scene n.17/33

---



---

We have 16 time intervals inside [186.20, 189.40]

- Time interval n.0: [186.20, 186.40]  
 \* y\_true: [1.63882191]  
 \* v\_ann: [5.16293478012085, 1.6231210654495456]

---

- Time interval n.1: [186.40, 186.60]  
 \* y\_true: [1.63882191]  
 \* v\_ann: [5.178956031799316, 1.6231210654495456]

---

- Time interval n.2: [186.60, 186.80]  
 \* y\_true: [1.63882191]  
 \* v\_ann: [5.19499397277832, 1.6231210654495456]

---

- Time interval n.3: [186.80, 187.00]  
 \* y\_true: [1.63882191]

\* v\_ann: [5.211047649383545, 1.6231210654495456]

- Time interval n.4: [187.00, 187.20]  
\* y\_true: [1.63882191]  
\* v\_ann: [5.227118968963623, 1.6231210654495456]

- Time interval n.5: [187.20, 187.40]  
\* y\_true: [1.63882191]  
\* v\_ann: [5.2432050704956055, 1.6231210654495456]

- Time interval n.6: [187.40, 187.60]  
\* y\_true: [1.63882191]  
\* v\_ann: [5.259308815002441, 1.6231210654495456]

- Time interval n.7: [187.60, 187.80]  
\* y\_true: [1.63882191]  
\* v\_ann: [5.27542781829834, 1.6231210654495456]

- Time interval n.8: [187.80, 188.00]  
\* y\_true: [5.75855569]  
\* v\_ann: [5.291563034057617, 1.6231210654495456]

- Time interval n.9: [188.00, 188.20]  
\* y\_true: [16.01304244]  
\* v\_ann: [5.595381736755371, 1.6231210654495456]

- Time interval n.10: [188.20, 188.40]  
\* y\_true: [19.22001446]  
\* v\_ann: [6.626821994781494, 1.6231210654495456]

- Time interval n.11: [188.40, 188.60]  
\* y\_true: [19.01536942]  
\* v\_ann: [7.894139766693115, 1.6231210654495456]

- Time interval n.12: [188.60, 188.80]  
\* y\_true: [14.56662243]  
\* v\_ann: [9.115599632263184, 1.6231210654495456]

- Time interval n.13: [188.80, 189.00]  
\* y\_true: [14.35212246]

\* v\_ann: [9.892071723937988, 1.6231210654495456]

---

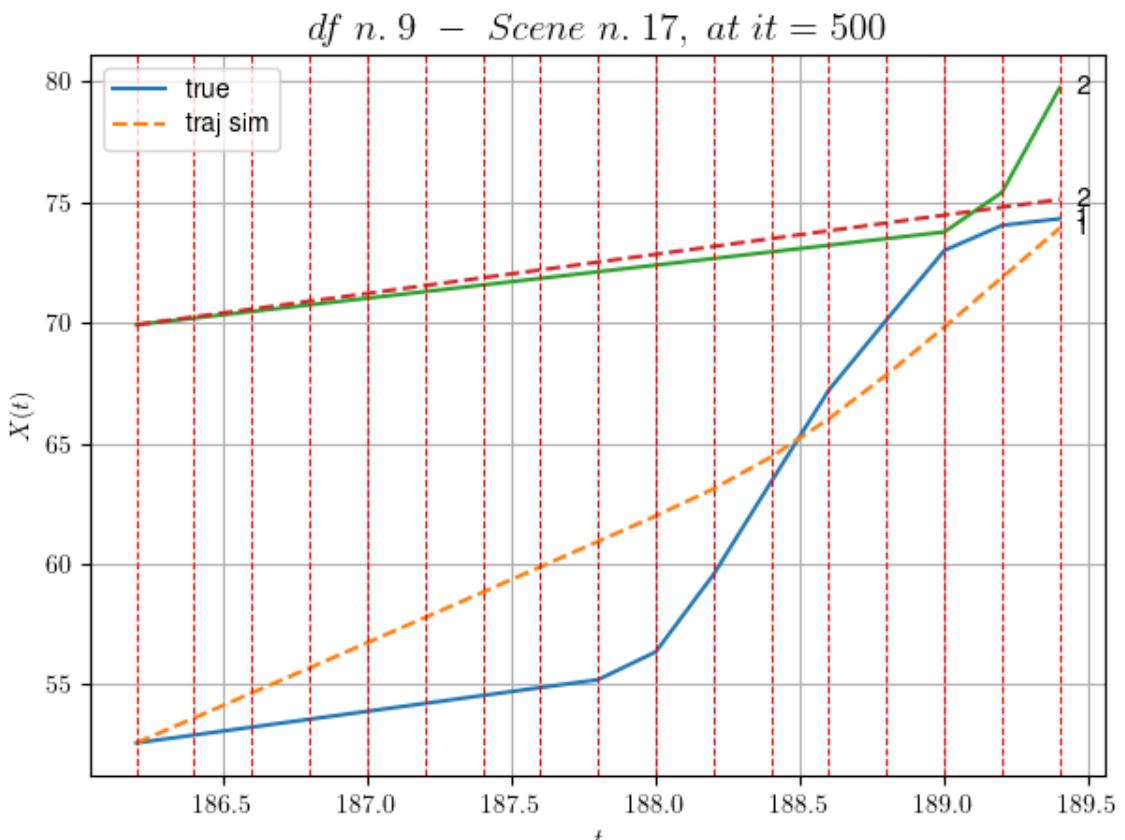
- Time interval n.14: [189.00, 189.20]  
 \* y\_true: [5.21247894]  
 \* v\_ann: [10.264242172241211, 1.6231210654495456]

---

- Time interval n.15: [189.20, 189.40]  
 \* y\_true: [1.37332387]  
 \* v\_ann: [10.229519844055176, 1.6231210654495456]

---

\* err= 5.739222242665561  
 \* Learning rate NN = 3.81520123937662e-07  
 \* diff = 0.003099197442216095



For scene 17/33

\* use LR\_NN=1e-05 with err=1419.6526342410177 at it=24  
 \* v0\_scn\_mean = 2.758196222614705  
 \* MAE = 5.739222242665561

---



---

df n.9, scene n.18/33

---



---



---



---

We have 5 time intervals inside [191.20,192.20]  
 - Time interval n.0: [191.20, 191.40]

```
* y_true: [9.81240437]
* v_ann: [9.460336685180664, 9.117095848783503]
```

```
- Time interval n.1: [191.40, 191.60]
```

```
* y_true: [8.00871891]
```

```
* v_ann: [9.53514289855957, 9.117095848783503]
```

```
- Time interval n.2: [191.60, 191.80]
```

```
* y_true: [8.49713355]
```

```
* v_ann: [9.228874206542969, 9.117095848783503]
```

```
- Time interval n.3: [191.80, 192.00]
```

```
* y_true: [10.45079211]
```

```
* v_ann: [9.082022666931152, 9.117095848783503]
```

```
- Time interval n.4: [192.00, 192.20]
```

```
* y_true: [9.87700033]
```

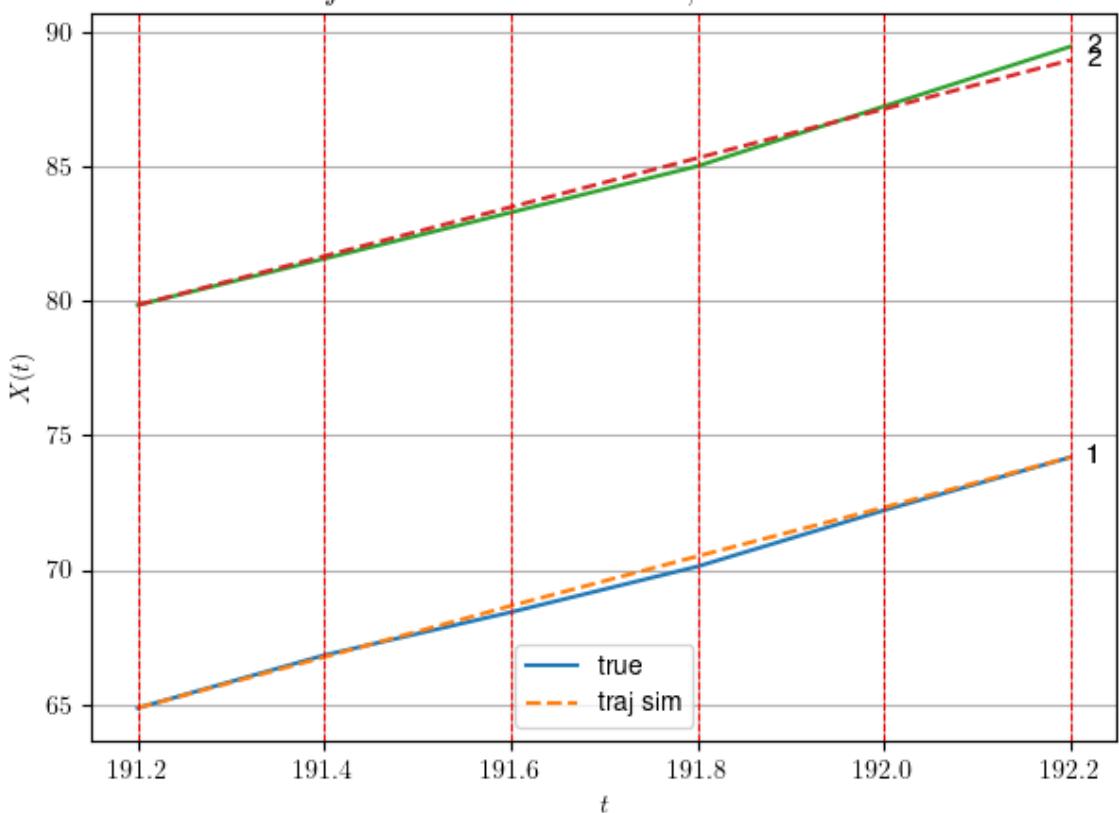
```
* v_ann: [9.352279663085938, 9.117095848783503]
```

```
* err= 0.05192694243457954
```

```
* Learning rate NN = 0.0001937102060765028
```

```
* diff = 0.0005711565205725711
```

*df n. 9 – Scene n. 18, at it = 500*



For scene 18/33

```
* use LR_NN=0.0005 with err=78.95107028672405 at it=24
* v0_scn_mean = 9.952412014672607
* MAE = 0.051529640310766026
```

---



---

df n.9, scene n.19/33

---



---

We have 2 time intervals inside [195.00,195.40]

- Time interval n.0: [195.00, 195.20]

\* y\_true: [15.29426248]

\* v\_ann: [17.809261322021484, 26.77481390978863]

- Time interval n.1: [195.20, 195.40]

\* y\_true: [20.89286113]

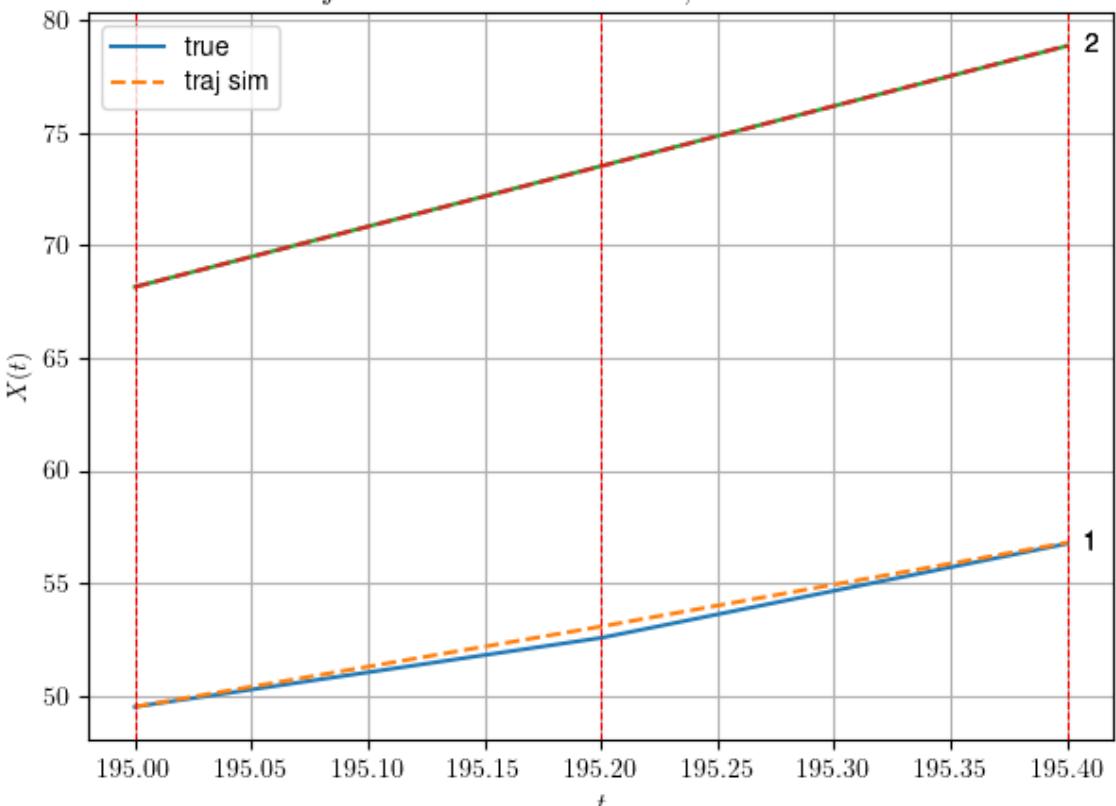
\* v\_ann: [18.62769889831543, 26.77481390978863]

\* err= 0.042640440515987775

\* Learning rate NN = 3.6449993785936385e-05

\* diff = 0 0001152442950754918

*df n. 9 – Scene n. 19, at it = 500*



For scene 19/33

\* use LR\_NN=5e-05 with err=0.3692310241192873 at it=24

\* v0\_scn\_mean = 26.903821353372216

\* MAE = 0.04259488340114532

=====

df n.9, scene n.20/33

=====

We have 6 time intervals inside [197.60, 198.80]

- Time interval n.0: [197.60, 197.80]
  - \* y\_true: [25.64680127]
  - \* v\_ann: [24.911861419677734, 19.310295514409027]
- Time interval n.1: [197.80, 198.00]
  - \* y\_true: [20.34731781]
  - \* v\_ann: [22.67570686340332, 19.310295514409027]
- Time interval n.2: [198.00, 198.20]
  - \* y\_true: [20.0662913]
  - \* v\_ann: [20.66071891784668, 19.310295514409027]
- Time interval n.3: [198.20, 198.40]
  - \* y\_true: [20.76944104]
  - \* v\_ann: [19.88182830810547, 19.310295514409027]
- Time interval n.4: [198.40, 198.60]
  - \* y\_true: [18.04411059]
  - \* v\_ann: [20.603124618530273, 19.310295514409027]
- Time interval n.5: [198.60, 198.80]
  - \* y\_true: [25.21812485]
  - \* v\_ann: [21.4569091796875, 19.310295514409027]

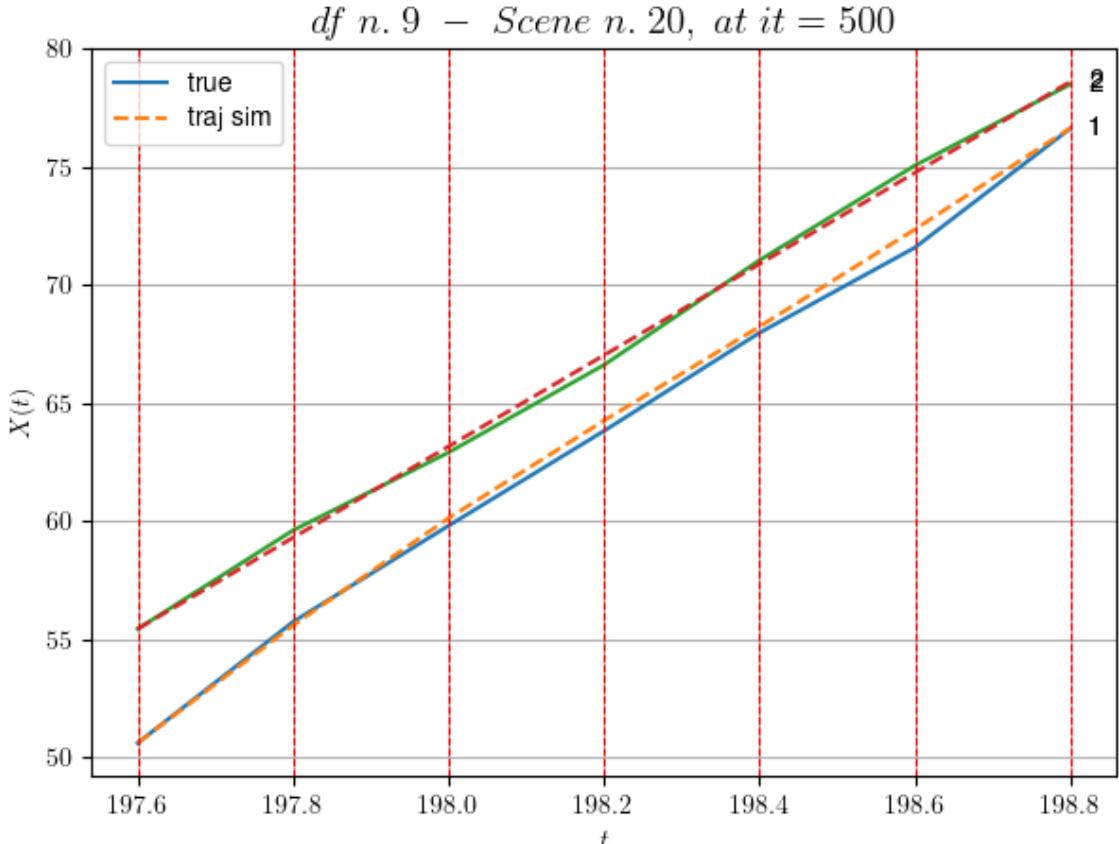
=====

\* err= 0.1031162979222096

\* Learning rate NN = 0.00015690525469835848

\* diff = 0.00048391456661982246

=====



For scene 20/33

- \* use LR\_NN=0.0005 with err=29.957951673079094 at it=24
- \* v0\_scn\_mean = 19.737883693751023
- \* MAE = 0.10146865707183515

---



---

df n.9, scene n.21/33

---



---

We have 12 time intervals inside [203.80, 206.20]

- Time interval n.0: [203.80, 204.00]
  - \* y\_true: [7.9642704]
  - \* v\_ann: [8.245284080505371, 17.40555771714608]

---

- Time interval n.1: [204.00, 204.20]
  - \* y\_true: [10.57855329]
  - \* v\_ann: [8.905770301818848, 17.40555771714608]

---

- Time interval n.2: [204.20, 204.40]
  - \* y\_true: [8.12921025]
  - \* v\_ann: [9.13748550415039, 17.40555771714608]

---

- Time interval n.3: [204.40, 204.60]
  - \* y\_true: [8.4807463]

\* v\_ann: [9.260947227478027, 17.40555771714608]

- Time interval n.4: [204.60, 204.80]  
\* y\_true: [8.87567661]  
\* v\_ann: [9.379706382751465, 17.40555771714608]

- Time interval n.5: [204.80, 205.00]  
\* y\_true: [10.22775467]  
\* v\_ann: [9.43734359741211, 17.40555771714608]

- Time interval n.6: [205.00, 205.20]  
\* y\_true: [9.00303465]  
\* v\_ann: [9.489291191101074, 17.40555771714608]

- Time interval n.7: [205.20, 205.40]  
\* y\_true: [9.60069477]  
\* v\_ann: [9.54207992553711, 17.40555771714608]

- Time interval n.8: [205.40, 205.60]  
\* y\_true: [10.3608587]  
\* v\_ann: [9.597463607788086, 17.40555771714608]

- Time interval n.9: [205.60, 205.80]  
\* y\_true: [10.23429477]  
\* v\_ann: [9.657960891723633, 17.40555771714608]

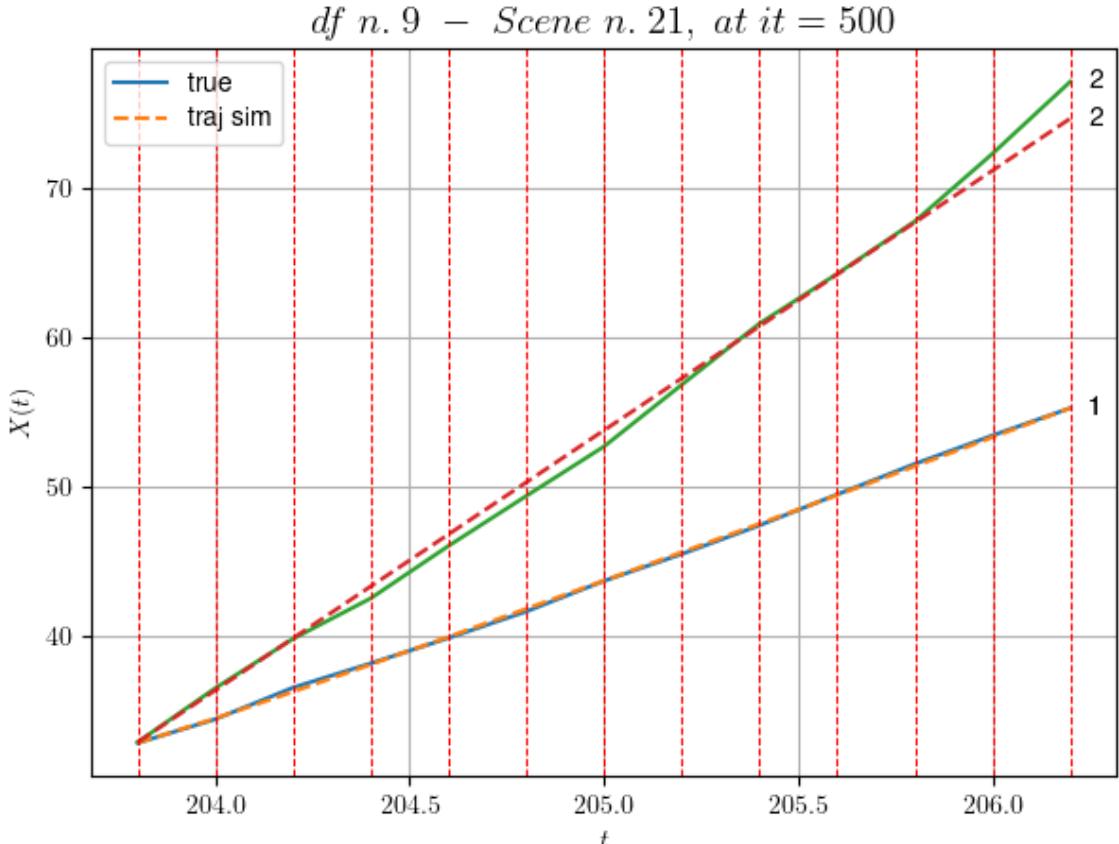
- Time interval n.10: [205.80, 206.00]  
\* y\_true: [9.52209489]  
\* v\_ann: [9.72292423248291, 17.40555771714608]

- Time interval n.11: [206.00, 206.20]  
\* y\_true: [9.1692133]  
\* v\_ann: [9.783294677734375, 17.40555771714608]

\* err= 0.42595812656146154

\* Learning rate NN = 4.431466732057743e-05

\* diff = 4.076523303947477e-05



For scene 21/33

- \* use LR\_NN=0.0005 with err=164.02999979625758 at it=24
- \* v0\_scn\_mean = 17.909335408364317
- \* MAE = 0.39019354491186636

---



---

df n.9, scene n.22/33

---



---

We have 2 time intervals inside [219.80, 220.20]

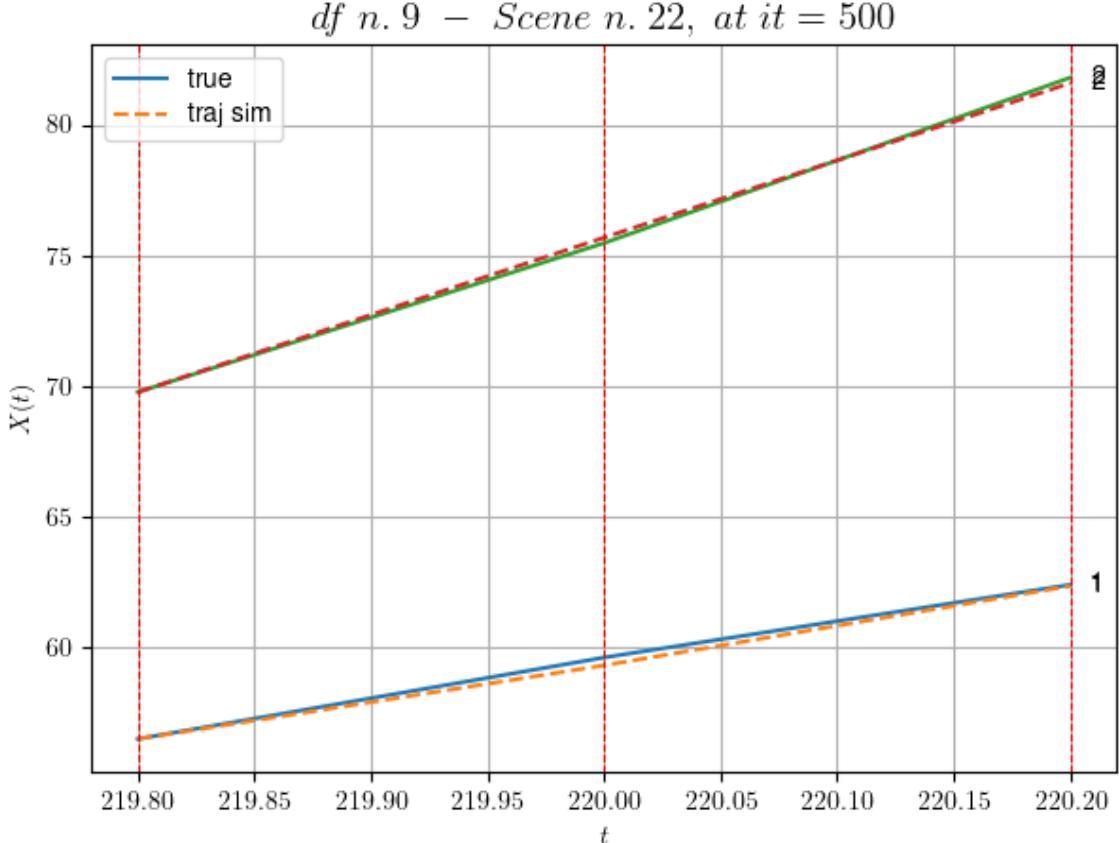
- Time interval n.0: [219.80, 220.00]
  - \* y\_true: [15.58371514]
  - \* v\_ann: [14.076915740966797, 29.573992502784012]

---

- Time interval n.1: [220.00, 220.20]
  - \* y\_true: [13.92467981]
  - \* v\_ann: [15.190299987792969, 29.573992502784012]

---

- \* err= 0.030231469975326074
- \* Learning rate NN = 0.00036449998151510954
- \* diff = 0.0003595076745943719



For scene 22/33

- \* use LR\_NN=0.0005 with err=0.072204511775729 at it=24
- \* v0\_scn\_mean = 29.59103280267158
- \* MAE = 0.030231469975326074

---



---

df n.9, scene n.23/33

---



---

We have 4 time intervals inside [225.20, 226.00]

- Time interval n.0: [225.20, 225.40]
  - \* y\_true: [10.23803701]
  - \* v\_ann: [18.40743064880371, 24.737876605772943]

---

- Time interval n.1: [225.40, 225.60]
  - \* y\_true: [15.18402828]
  - \* v\_ann: [19.675891876220703, 24.737876605772943]

---

- Time interval n.2: [225.60, 225.80]
  - \* y\_true: [24.75572707]
  - \* v\_ann: [20.624465942382812, 24.737876605772943]

---

- Time interval n.3: [225.80, 226.00]
  - \* y\_true: [27.22613969]

```
* v_ann: [20.657543182373047, 24.737876605772943]
```

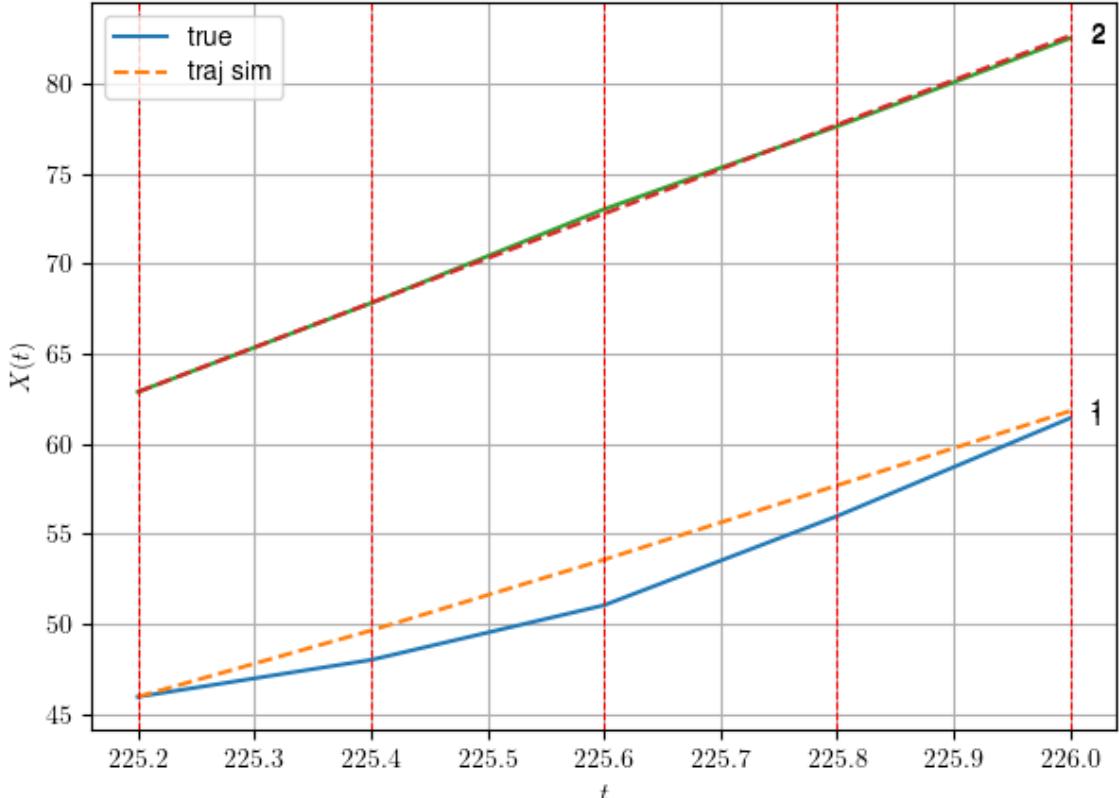
---



---

```
* err= 1.2240337575536162
* Learning rate NN = 2.3914839403005317e-05
* diff = 0.010433565705340264
```

*df n. 9 – Scene n. 23, at it = 500*



For scene 23/33

```
* use LR_NN=5e-05 with err=4.310927157059395 at it=24
* v0_scn_mean = 24.948361541501946
* MAE = 1.2240337575536162
```

---



---

df n.9, scene n.24/33

---



---

We have 3 time intervals inside [5.40, 6.00]

- Time interval n.0: [5.40, 5.60]
  - \* y\_true: [17.46255149 32.38946228]
  - \* v\_ann: [23.60999870300293, 26.57025909423828, 29.08110708015711]

---



---

- Time interval n.1: [5.60, 5.80]

- \* y\_true: [27.89361325 30.52270411]
  - \* v\_ann: [24.96485710144043, 26.716413497924805, 29.08110708015711]

```

- Time interval n.2: [5.80, 6.00]

* y_true: [26.75613901 28.6867411]

* v_ann: [33.09545135498047, 27.242443084716797, 2

9.08110708015711]

```

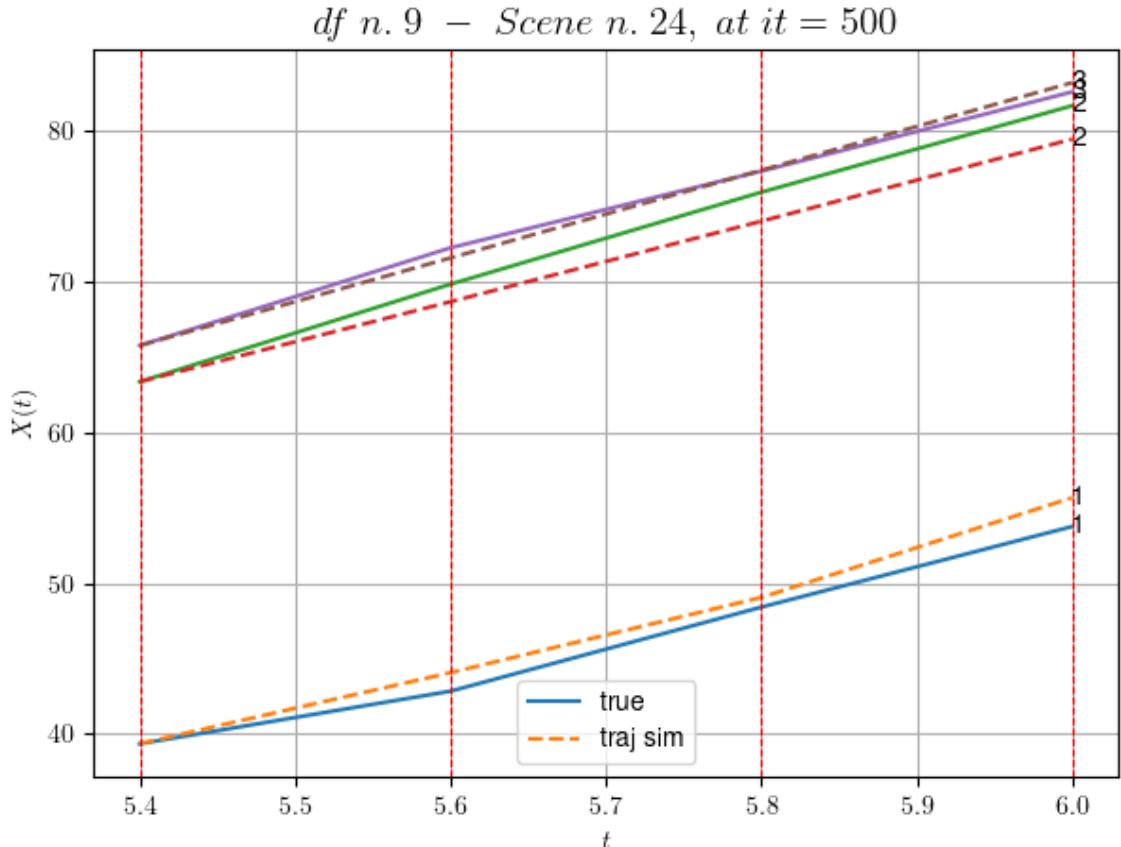
```

* err= 1.3642917711424072

* Learning rate NN = 0.0002952449722215533

* diff = 0.009432269311981711

```



For scene 24/33

```

* use LR_NN=0.0005 with err=31.58259034328027 at it=24

* v0_scn_mean = 29.13624061409139

* MAE = 1.2606839599033675
=====
```

```

df n.9, scene n.25/33
=====
```

We have 2 time intervals inside [20.80, 21.20]

```

- Time interval n.0: [20.80, 21.00]

* y_true: [29.01888251 26.46522664]

* v_ann: [26.287155151367188, -1.2704788122149674e-13, 32.733311571962815]
=====
```

```

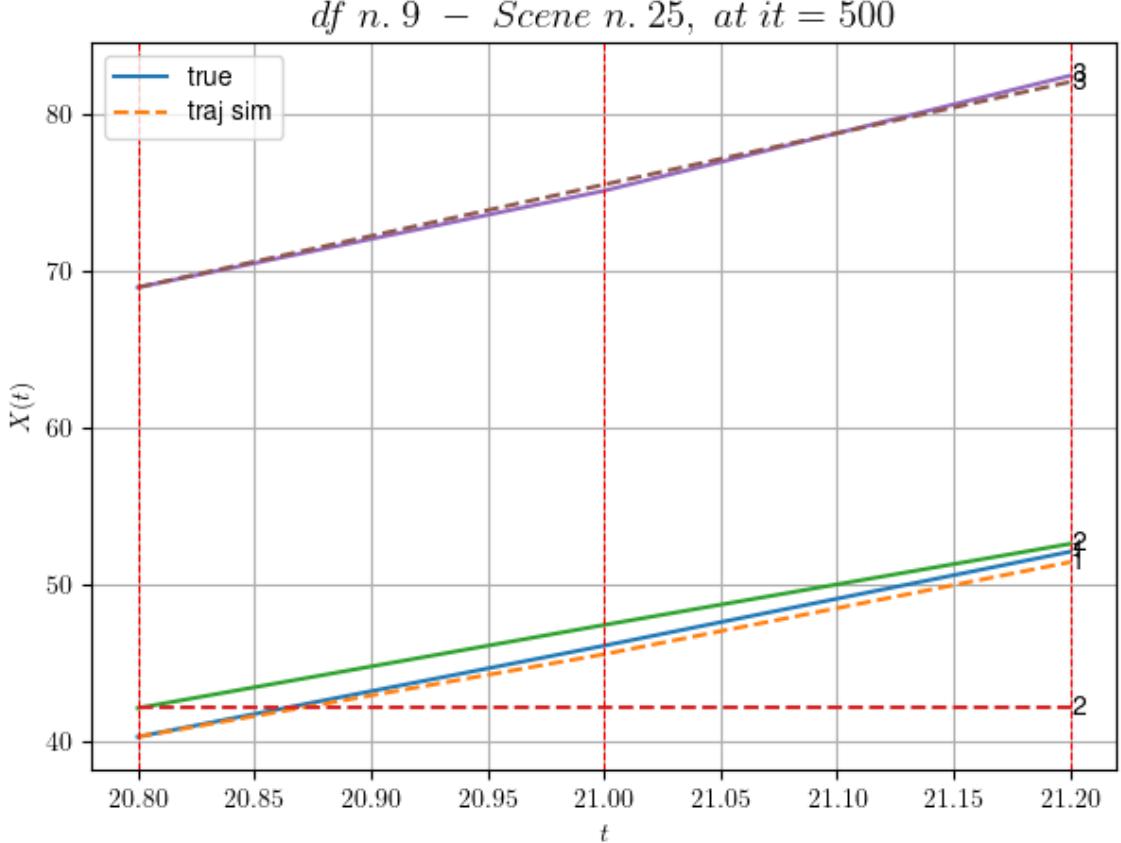
- Time interval n.1: [21.00, 21.20]

* y_true: [29.93697896 25.84808908]
=====
```

```
* v_ann: [29.363183975219727, -4.9274437476229047e-14, 32.733311571962815]
```

---

```
* err= 15.392292207953341
* Learning rate NN = 0.0007289999630302191
* diff = 7.195806414022728
```



For scene 25/33

```
* use LR_NN=0.001 with err=12.863678432623432 at it=24
* v0_scn_mean = 32.56931300036488
* MAE = 1.5562611382729132
```

---



---

df n.9, scene n.26/33

---



---

We have 6 time intervals inside [37.80,39.00]

- Time interval n.0: [37.80, 38.00]
  - \* y\_true: [21.35828745 27.25004814]
  - \* v\_ann: [21.310073852539062, 21.679628372192383, 23.639051069298]

---



---

- Time interval n.1: [38.00, 38.20]
  - \* y\_true: [19.23626153 17.91519282]
  - \* v\_ann: [22.632841110229492, 22.302648544311523, 23.639051069298]

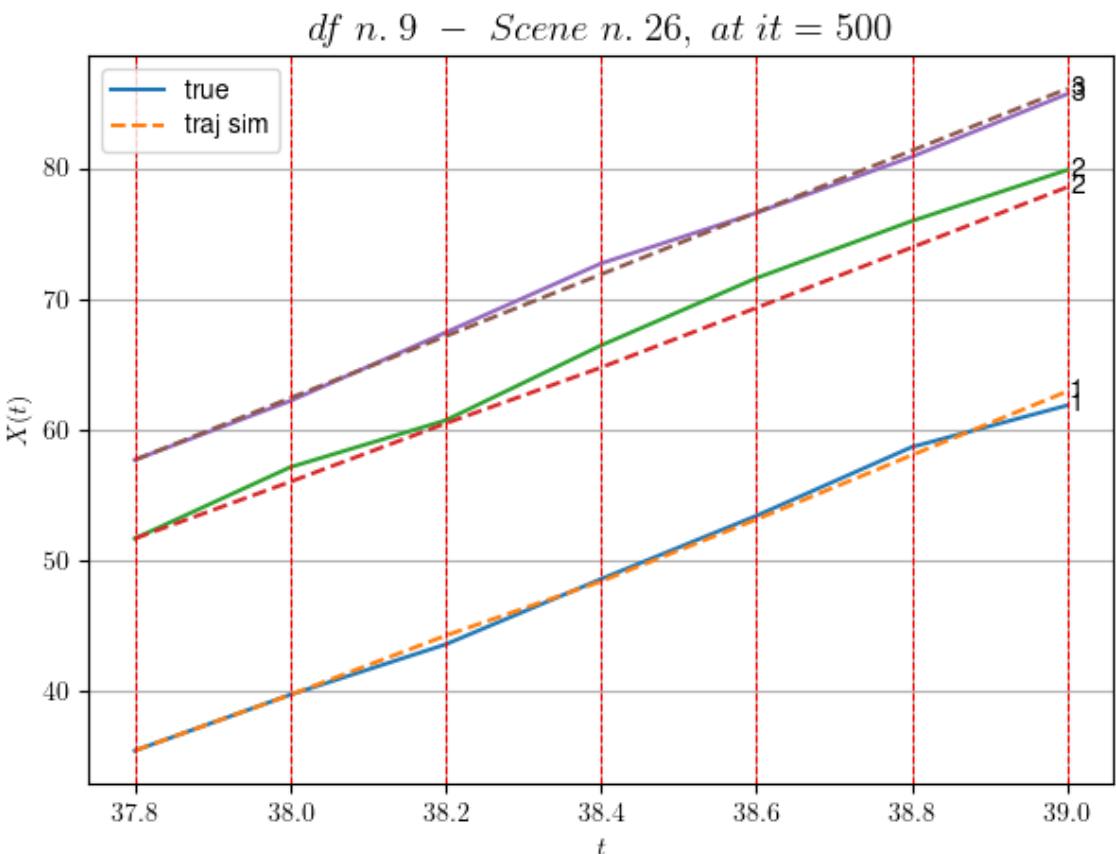
```
- Time interval n.2: [38.20, 38.40]
 * y_true: [24.96063116 28.62771944]
 * v_ann: [20.728099822998047, 21.367918014526367, 2
3.639051069298]

- Time interval n.3: [38.40, 38.60]
 * y_true: [24.1844348 25.71934895]
 * v_ann: [23.675588607788086, 22.801925659179688, 2
3.639051069298]

- Time interval n.4: [38.60, 38.80]
 * y_true: [26.26418379 21.80127307]
 * v_ann: [24.555564880371094, 23.065656661987305, 2
3.639051069298]

- Time interval n.5: [38.80, 39.00]
 * y_true: [15.9216195 19.51476921]
 * v_ann: [24.394739151000977, 23.05437469482422, 2
3.639051069298]

* err= 0.8765728719641835
* Learning rate NN = 0.00031381050939671695
* diff = 0.03943164369819052
```



For scene 26/33  
 \* use LR\_NN=0.001 with err=48.171702177184976 at it=24  
 \* v0\_scn\_mean = 24.020707719547275  
 \* MAE = 0.8765728719641835

---



---

df n.9, scene n.27/33

---

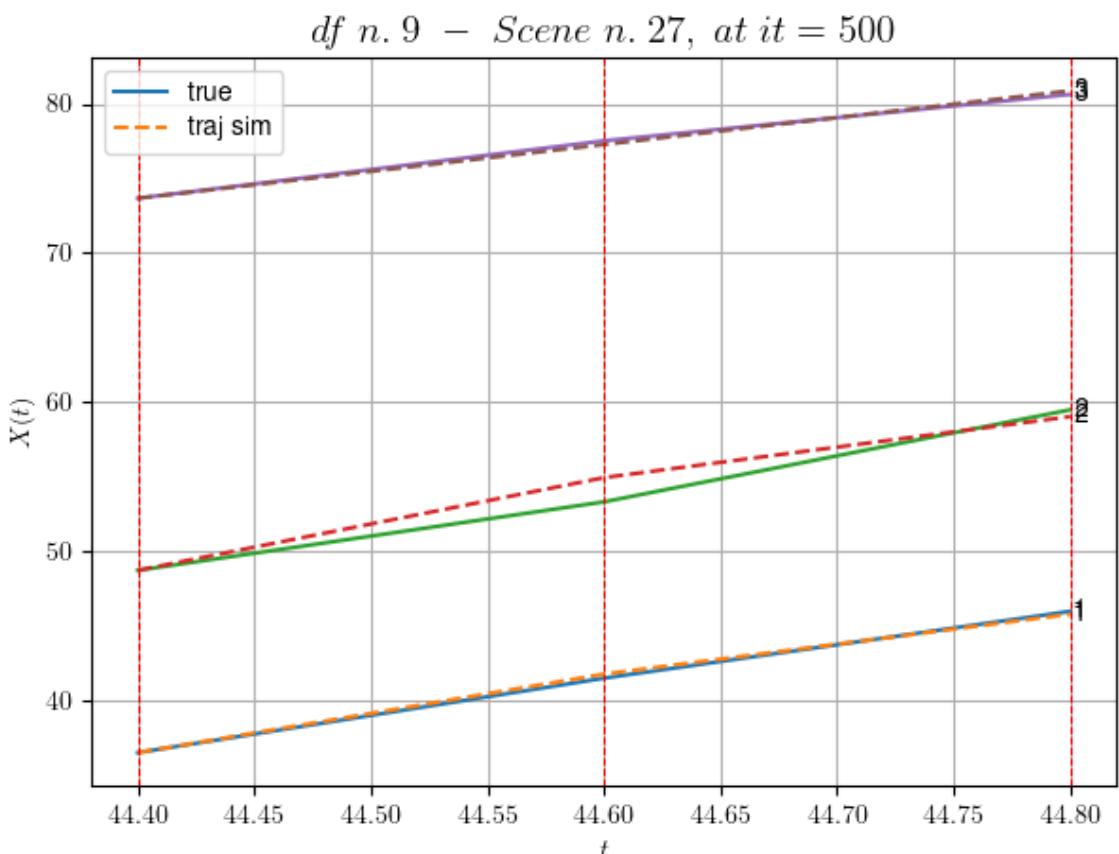


---

We have 2 time intervals inside [44.40, 44.80]  
 - Time interval n.0: [44.40, 44.60]  
   \* y\_true: [24.95803839 22.94664651]  
   \* v\_ann: [26.311058044433594, 31.069561004638672, 1  
 8.01610672050833]

- Time interval n.1: [44.60, 44.80]  
   \* y\_true: [22.38974011 30.85088397]  
   \* v\_ann: [20.09238624572754, 20.439247131347656, 1  
 8.01610672050833]

\* err= 0.3422306569251168  
 \* Learning rate NN = 0.0007289999630302191  
 \* diff = 0.004327781250595464



For scene 27/33  
 \* use LR\_NN=0.001 with err=6.3243847185582425 at it=24

```
* vθ_scn_mean = 18.735139779226913
* MAE = 0.3165642851606881
```

```
=====
```

df n.9, scene n.28/33

```
=====
```

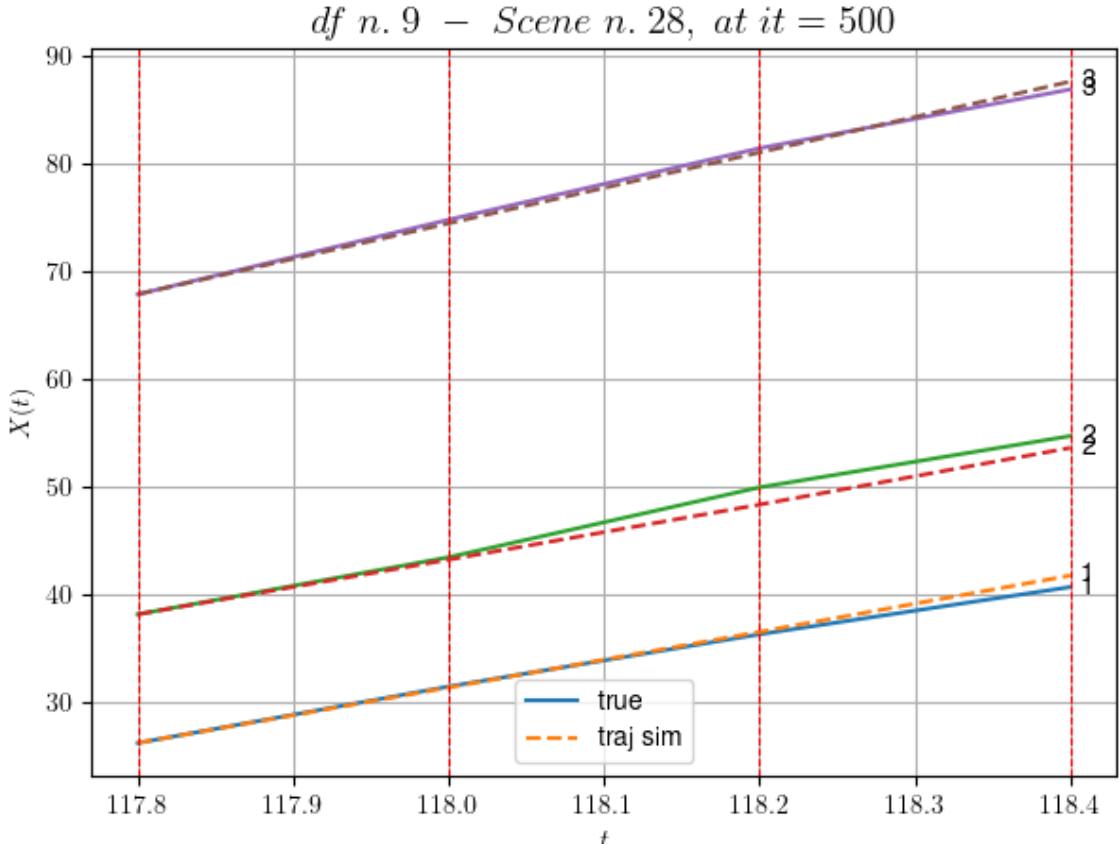
We have 3 time intervals inside [117.80,118.40]

- Time interval n.0: [117.80, 118.00]
  - \* y\_true: [26.21501314 26.51617559]
  - \* v\_ann: [25.748615264892578, 25.381793975830078, 32.947825633501225]

- Time interval n.1: [118.00, 118.20]
  - \* y\_true: [24.27291409 32.45579962]
  - \* v\_ann: [25.85117530822754, 25.587574005126953, 32.947825633501225]

- Time interval n.2: [118.20, 118.40]
  - \* y\_true: [21.96072195 23.86482679]
  - \* v\_ann: [26.20159339904785, 26.36037254333496, 32.947825633501225]

- \* err= 0.4860620293255377
- \* Learning rate NN = 5.904899080633186e-05
- \* diff = 0.001164144998928529



For scene 28/33

- \* use LR\_NN=0.0001 with err=7.304404596560574 at it=24
- \* v0\_scn\_mean = 32.770956227841936
- \* MAE = 0.313734574509622

---



---

df n.9, scene n.29/33

---



---

We have 2 time intervals inside [119.20, 119.60]

- Time interval n.0: [119.20, 119.40]
  - \* y\_true: [23.20444186 22.52067771]
  - \* v\_ann: [25.109909057617188, 25.076915740966797, 26.734589830538507]

---



---

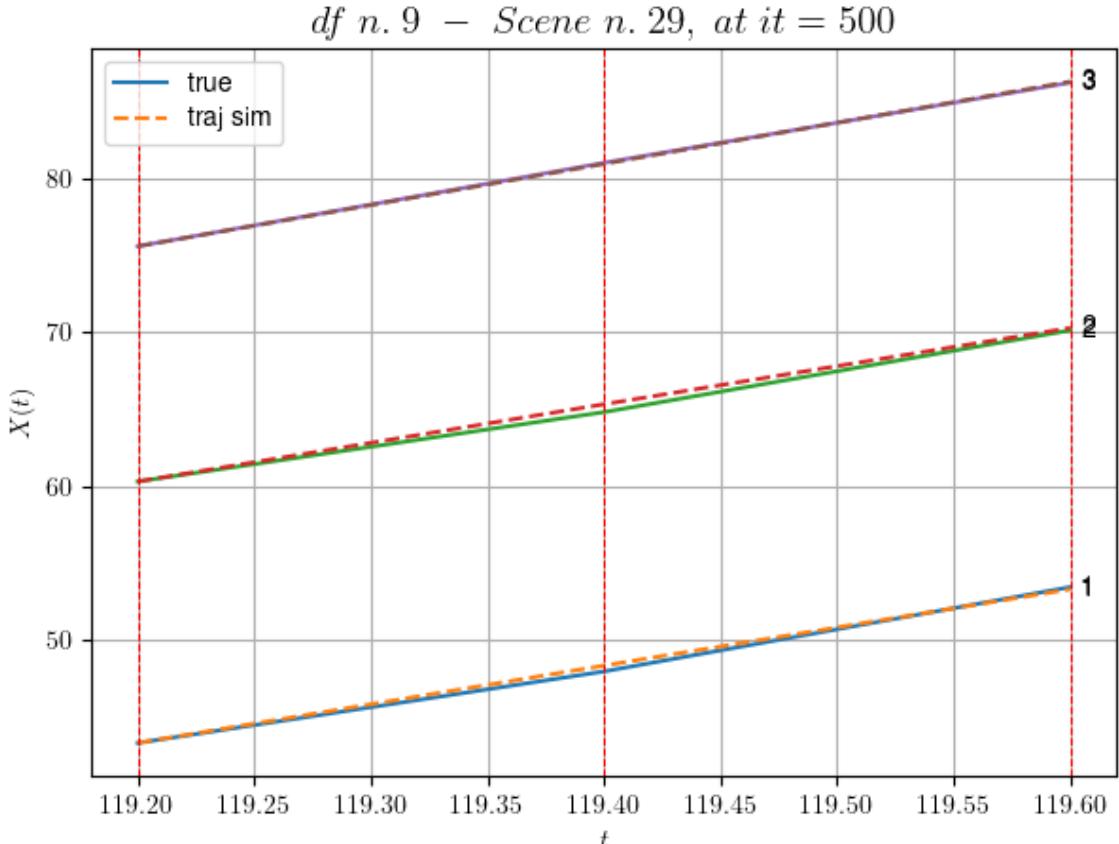
- Time interval n.1: [119.40, 119.60]
  - \* y\_true: [27.39348249 26.5570173 ]
  - \* v\_ann: [24.777084350585938, 24.77455711364746, 26.734589830538507]

---



---

- \* err= 0.05128601260275694
- \* Learning rate NN = 7.289998757187277e-05
- \* diff = 0.00017573248460881624



For scene 29/33

- \* use LR\_NN=0.0001 with err=0.2903032733857898 at it=24
- \* v0\_scn\_mean = 26.93051429409632
- \* MAE = 0.051063818028120635

---



---

df n.9, scene n.30/33

---



---

We have 2 time intervals inside [120.20, 120.60]

- Time interval n.0: [120.20, 120.40]
  - \* y\_true: [30.48045094 26.16776015]
  - \* v\_ann: [23.719890594482422, 25.765888214111328, 27.348987307571274]

---



---

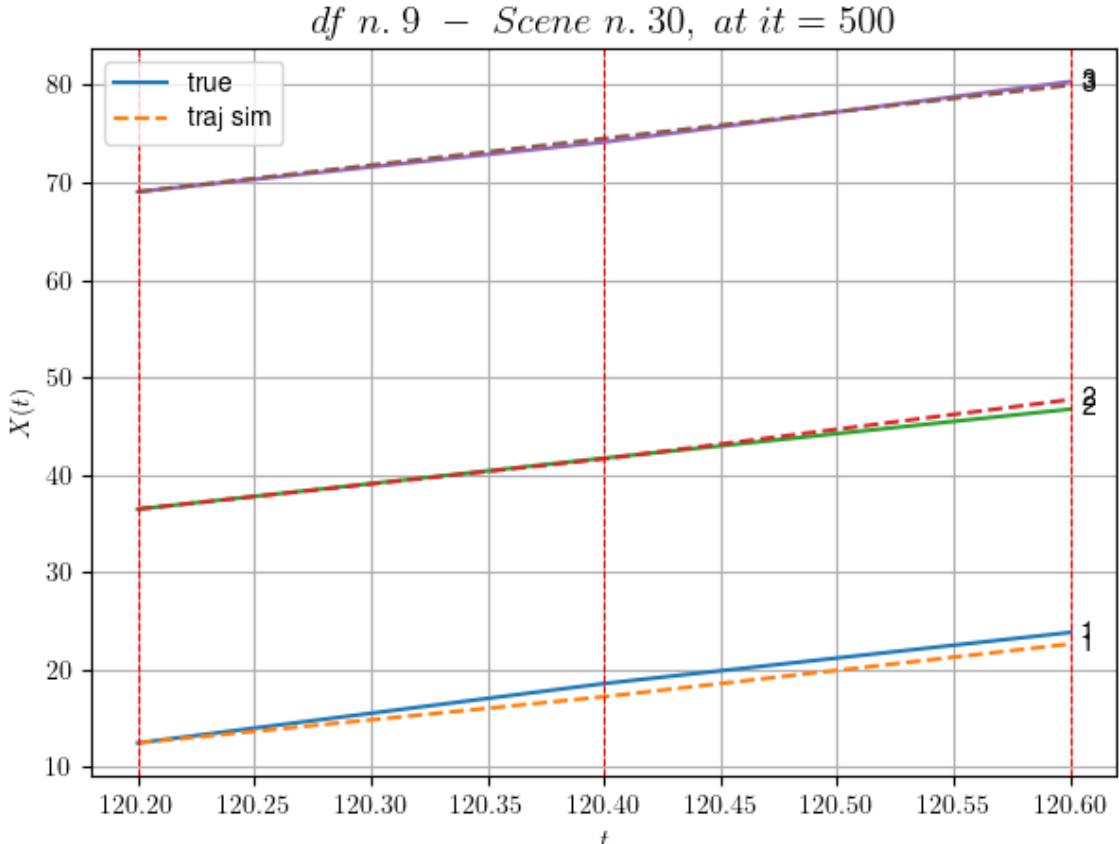
- Time interval n.1: [120.40, 120.60]
  - \* y\_true: [26.23623075 25.12734403]
  - \* v\_ann: [27.080339431762695, 30.423839569091797, 27.348987307571274]

---



---

- \* err= 0.4971461183967125
- \* Learning rate NN = 0.00036449998151510954
- \* diff = 0.00417195165486306



For scene 30/33

```
* use LR_NN=0.0005 with err=1.8340978304899718 at it=24
* v0_scn_mean = 27.508047950092223
* MAE = 0.4971461183967125
```

---



---

df n.9, scene n.31/33

---



---

We have 3 time intervals inside [121.40, 122.00]

- Time interval n.0: [121.40, 121.60]
  - \* y\_true: [23.88369588 31.34452269]
  - \* v\_ann: [25.652843475341797, 25.605798721313477, 28.65752843457776]

---



---

- Time interval n.1: [121.60, 121.80]
  - \* y\_true: [22.66516063 24.1738881 ]
  - \* v\_ann: [25.826854705810547, 25.892784118652344, 28.65752843457776]

---



---

- Time interval n.2: [121.80, 122.00]
  - \* y\_true: [27.39865086 24.79107704]
  - \* v\_ann: [25.727848052978516, 25.524192810058594, 28.65752843457776]

---

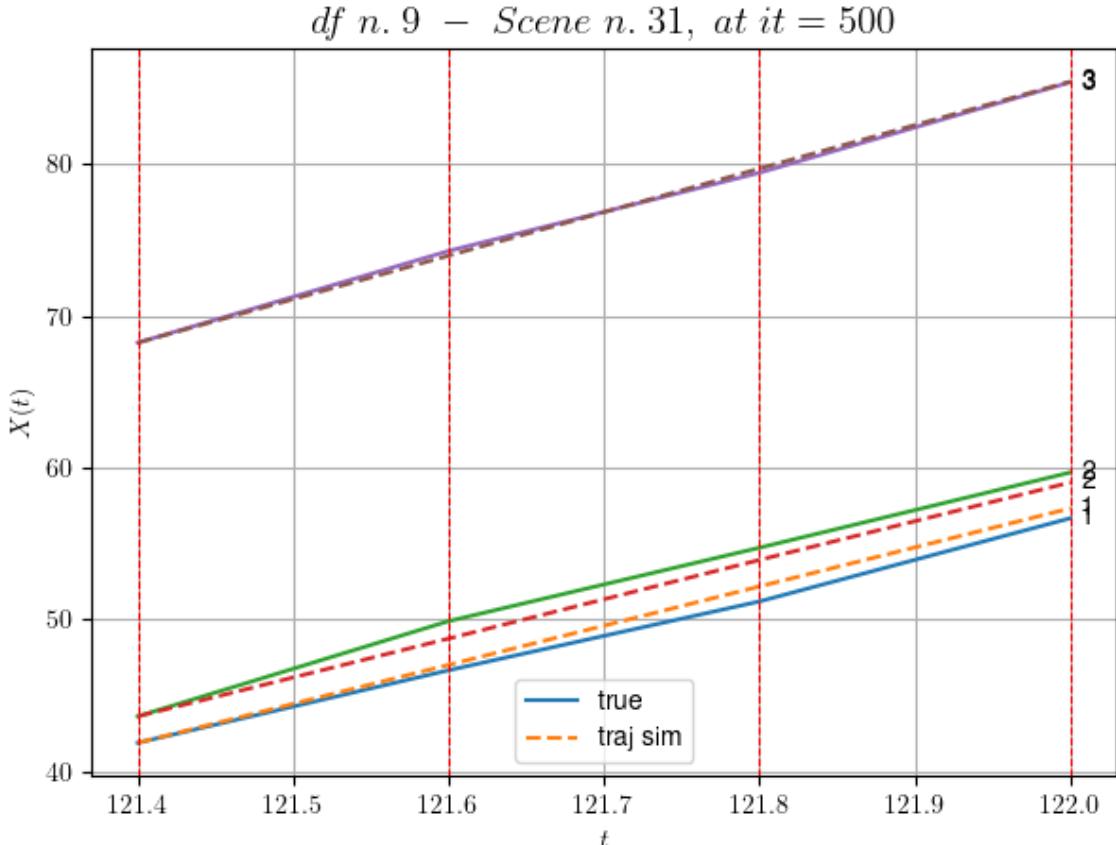


---

```

* err= 0.34086853477603946
* Learning rate NN = 5.904899080633186e-05
* diff = 2.00119667806975e-05

```



For scene 31/33

```

* use LR_NN=0.0001 with err=19.837092251001867 at it=24
* v0_scn_mean = 28.738076668229073
* MAE = 0.1874287919710549

```

df n. 9, scene n. 32/33

We have 2 time intervals inside [205.80, 206.20]

- Time interval n.0: [205.80, 206.00]
  - \* y\_true: [16.81767795 9.52209489]
  - \* v\_ann: [11.544857025146484, 13.320598602294922, 2

3.158651176007183]

- Time interval n.1: [206.00, 206.20]

- \* y\_true: [13.65726133 9.1692133 ]

- \* v\_ann: [12.461078643798828, 11.93943977355957, 2

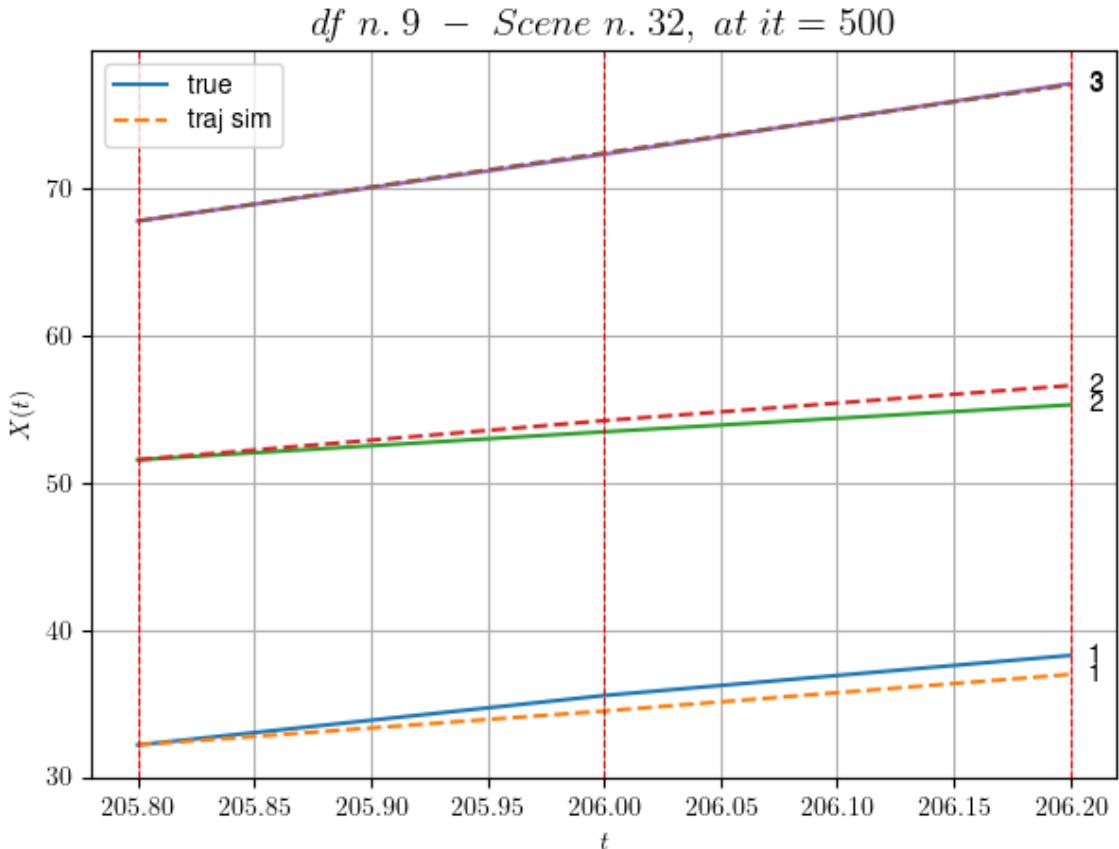
3.158651176007183]

```

* err= 0.5674022124725753
* Learning rate NN = 7.289998757187277e-05

```

\* diff = 0.0012493188418043477



For scene 32/33

\* use LR\_NN=0.0001 with err=1.3258505460450067 at it=24  
 \* v0\_scn\_mean = 23.569131798284854  
 \* MAE = 0.5674022124725753

For df=9 with 33 scenes, time taken: 653.85

In df n.10/10 we have 74 scenes  
 df n.10, scene n.0/74

We have 3 time intervals inside [12.72, 13.32]

- Time interval n.0: [12.72, 12.92]
  - \* y\_true: [11.70075978]
  - \* v\_ann: [10.789812088012695, 23.837684223240988]

- Time interval n.1: [12.92, 13.12]

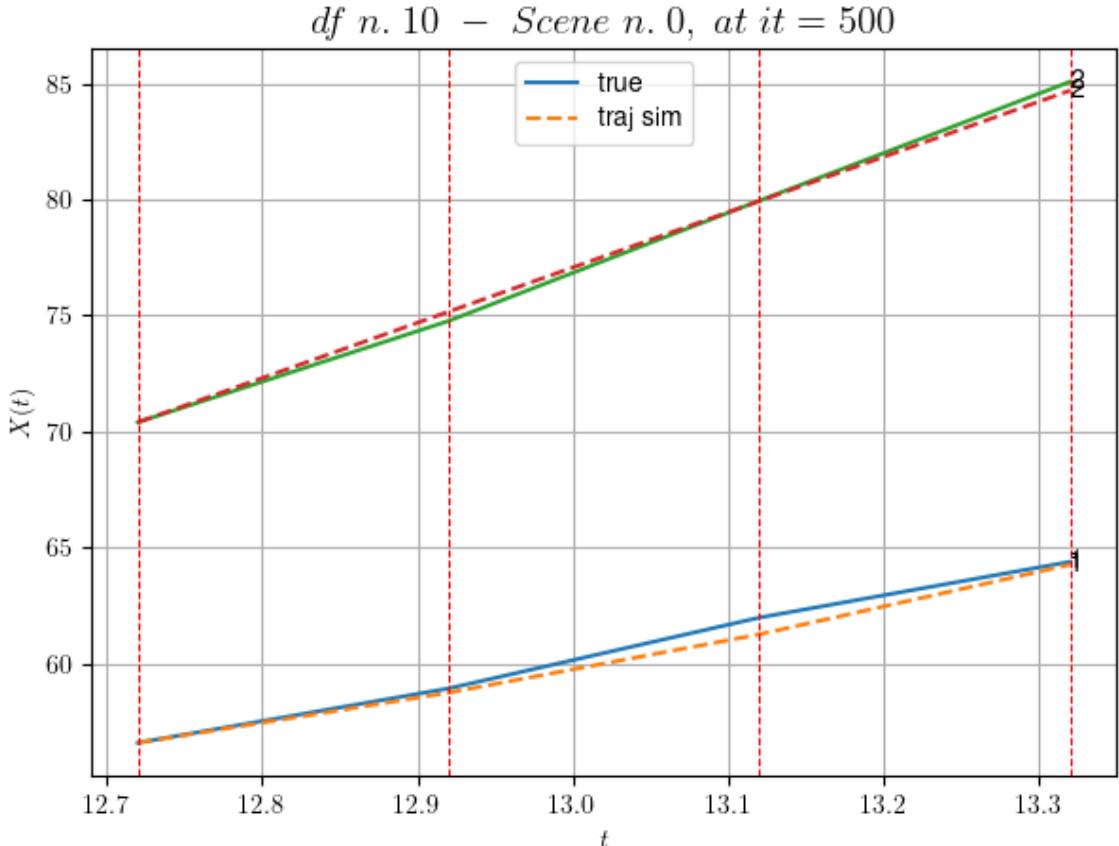
- \* y\_true: [15.28108747]
  - \* v\_ann: [12.58179759979248, 23.837684223240988]

- Time interval n.2: [13.12, 13.32]

```
* y_true: [12.03091739]
* v_ann: [15.029245376586914, 23.837684223240988]
```

---

```
* err= 0.10929547296393806
* Learning rate NN = 0.0002952449722215533
* diff = 11.832072755256208
```



For scene 0/74

```
* use LR_NN=0.0005 with err=2.560905459903811 at it=24
* v0_scn_mean = 24.084176854264243
* MAE = 0.10929547296393806
```

---



---

df n.10, scene n.1/74

---



---

We have 5 time intervals inside [24.52, 25.52]

- Time interval n.0: [24.52, 24.72]
  - \* y\_true: [20.69094088]
  - \* v\_ann: [15.876272201538086, 27.846729228086396]

---

- Time interval n.1: [24.72, 24.92]
  - \* y\_true: [21.00112482]
  - \* v\_ann: [19.194395065307617, 27.846729228086396]

---

```

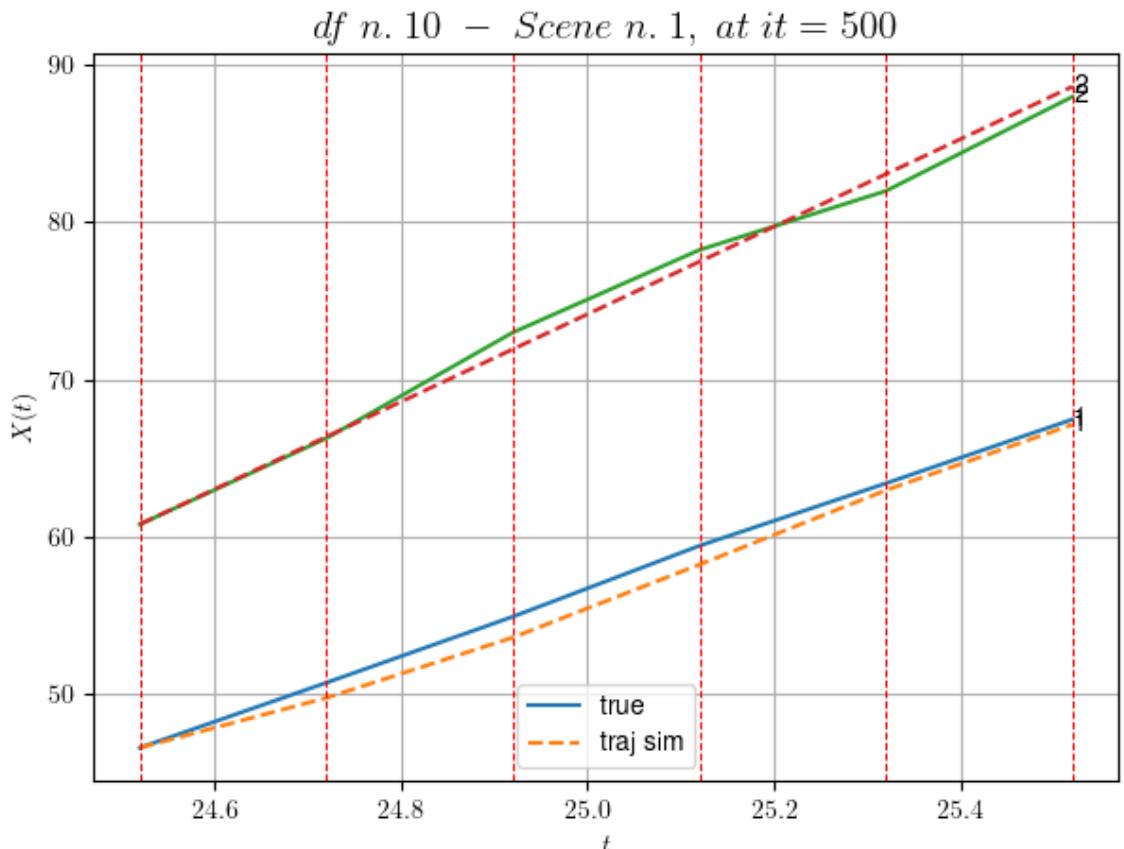
 - Time interval n.2: [24.92, 25.12]
 * y_true: [22.54141935]
 * v_ann: [23.173669815063477, 27.846729228086396]

 - Time interval n.3: [25.12, 25.32]
 * y_true: [19.87142322]
 * v_ann: [23.663217544555664, 27.846729228086396]

 - Time interval n.4: [25.32, 25.52]
 * y_true: [20.33168]
 * v_ann: [20.87004852294922, 27.846729228086396]

* err= 0.6404780638271614
* Learning rate NN = 0.0003874204121530056
* diff = 0.009422370124177126

```



For scene 1/74

```

* use LR_NN=0.001 with err=1.4712919663269568 at it=24
* v0_scn_mean = 27.932860058946424
* MAE = 0.4031749202803558

```

---



---

df n.10, scene n.2/74

---



---

```
=====
We have 7 time intervals inside [34.92,36.32]
- Time interval n.0: [34.92, 35.12]
 * y_true: [23.68551506]
 * v_ann: [19.415672302246094, 25.102289962227687]

- Time interval n.1: [35.12, 35.32]
 * y_true: [19.89940705]
 * v_ann: [20.12601661682129, 25.102289962227687]

- Time interval n.2: [35.32, 35.52]
 * y_true: [19.9226572]
 * v_ann: [23.188735961914062, 25.102289962227687]

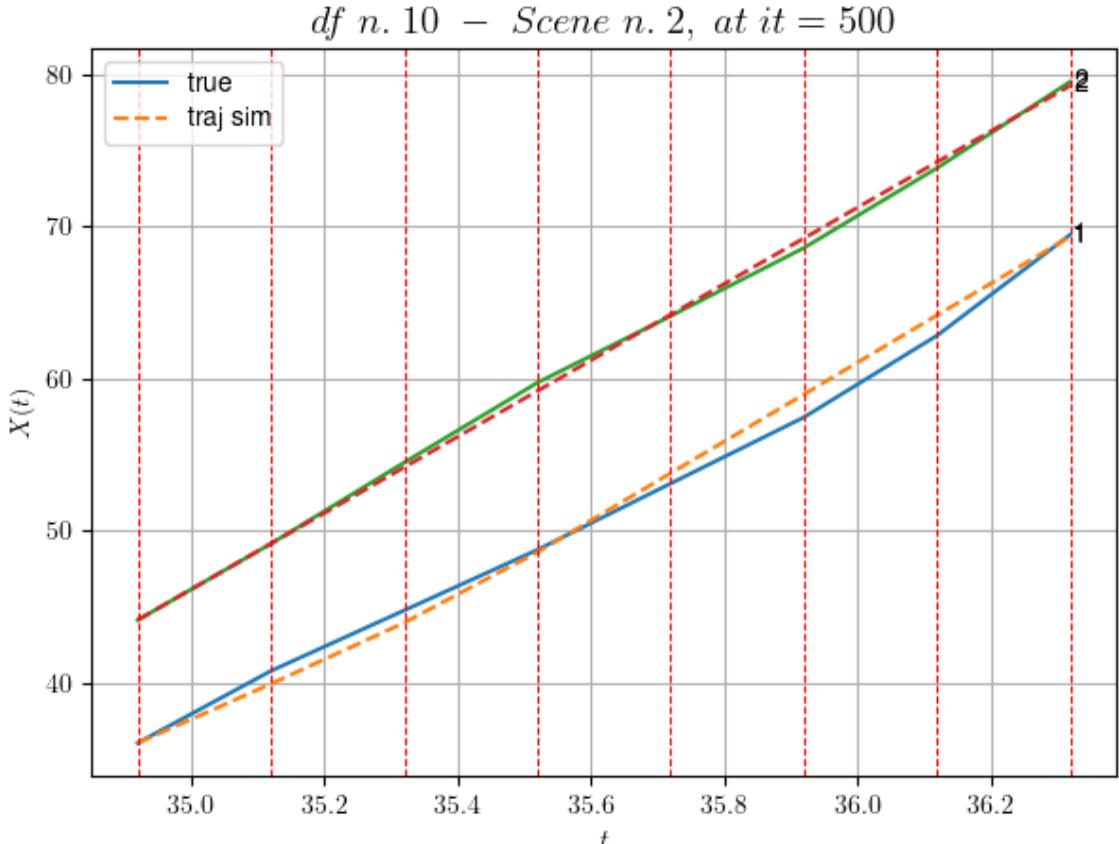
- Time interval n.3: [35.52, 35.72]
 * y_true: [21.80649804]
 * v_ann: [25.974864959716797, 25.102289962227687]

- Time interval n.4: [35.72, 35.92]
 * y_true: [21.75749887]
 * v_ann: [25.899621963500977, 25.102289962227687]

- Time interval n.5: [35.92, 36.12]
 * y_true: [26.91452163]
 * v_ann: [26.062110900878906, 25.102289962227687]

- Time interval n.6: [36.12, 36.32]
 * y_true: [33.17972928]
 * v_ann: [25.80815887451172, 25.102289962227687]

* err= 0.4361134041256169
* Learning rate NN = 2.5418647055630572e-05
* d:fff - 0.000210026000420784
```



For scene 2/74

- \* use LR\_NN=0.0001 with err=9.091958676355407 at it=24
- \* v0\_scn\_mean = 25.298198363701072
- \* MAE = 0.4361134041256169

---



---

df n.10, scene n.3/74

---



---

We have 3 time intervals inside [41.32, 41.92]

- Time interval n.0: [41.32, 41.52]
  - \* y\_true: [27.9207748]
  - \* v\_ann: [29.685688018798828, 23.270817806163706]

---

- Time interval n.1: [41.52, 41.72]
  - \* y\_true: [27.55103886]
  - \* v\_ann: [27.627647399902344, 23.270817806163706]

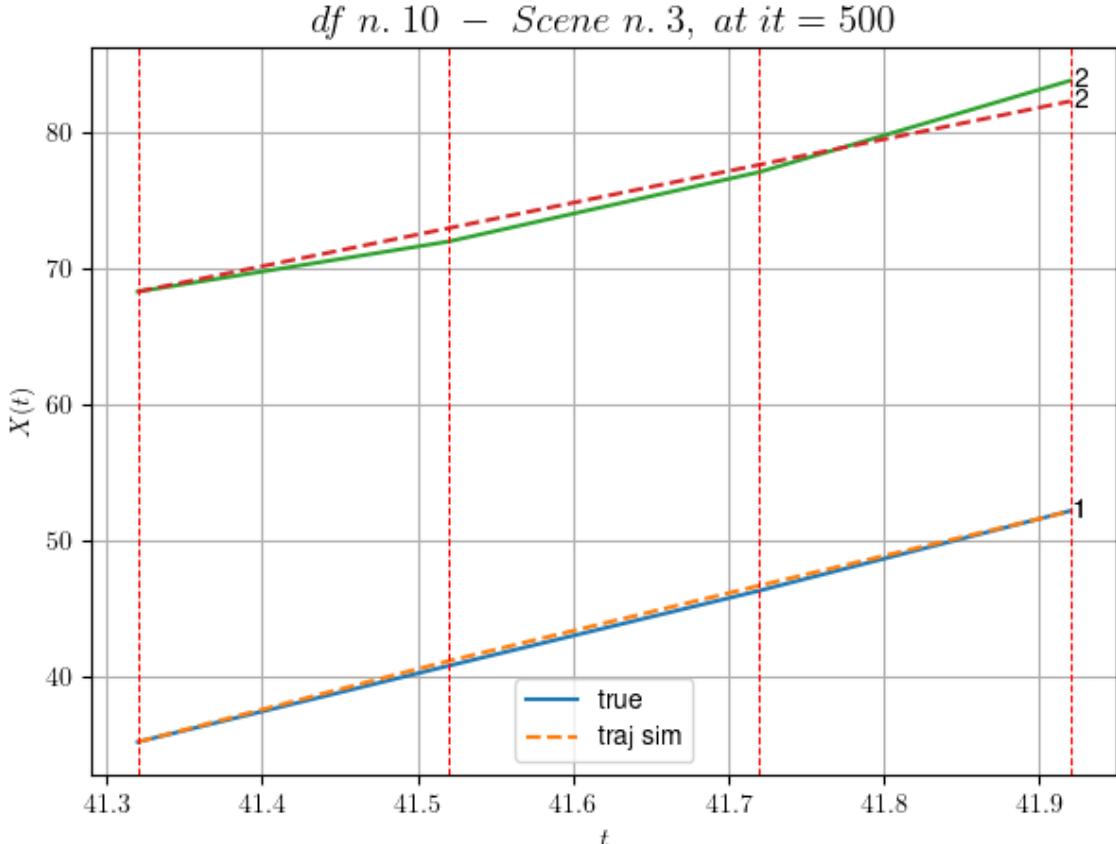
---

- Time interval n.2: [41.72, 41.92]
  - \* y\_true: [29.24138341]
  - \* v\_ann: [27.253374099731445, 23.270817806163706]

---

- \* err= 0.4752524110682253
- \* Learning rate NN = 5.904899080633186e-05

\* diff = 6.802388612947574e-07



For scene 3/74

\* use LR\_NN=0.0001 with err=2.817273110000859 at it=24  
 \* v0\_scn\_mean = 23.539985093865752  
 \* MAE = 0.42544836135450265

---



---

df n.10, scene n.4/74

---



---

We have 3 time intervals inside [56.92,57.52]

- Time interval n.0: [56.92, 57.12]
  - \* y\_true: [9.9463422]
  - \* v\_ann: [9.833536148071289, 28.436234116038488]

---

- Time interval n.1: [57.12, 57.32]
  - \* y\_true: [6.64401388]
  - \* v\_ann: [7.011119842529297, 28.436234116038488]

---

- Time interval n.2: [57.32, 57.52]
  - \* y\_true: [6.7779783]
  - \* v\_ann: [6.532059192657471, 28.436234116038488]

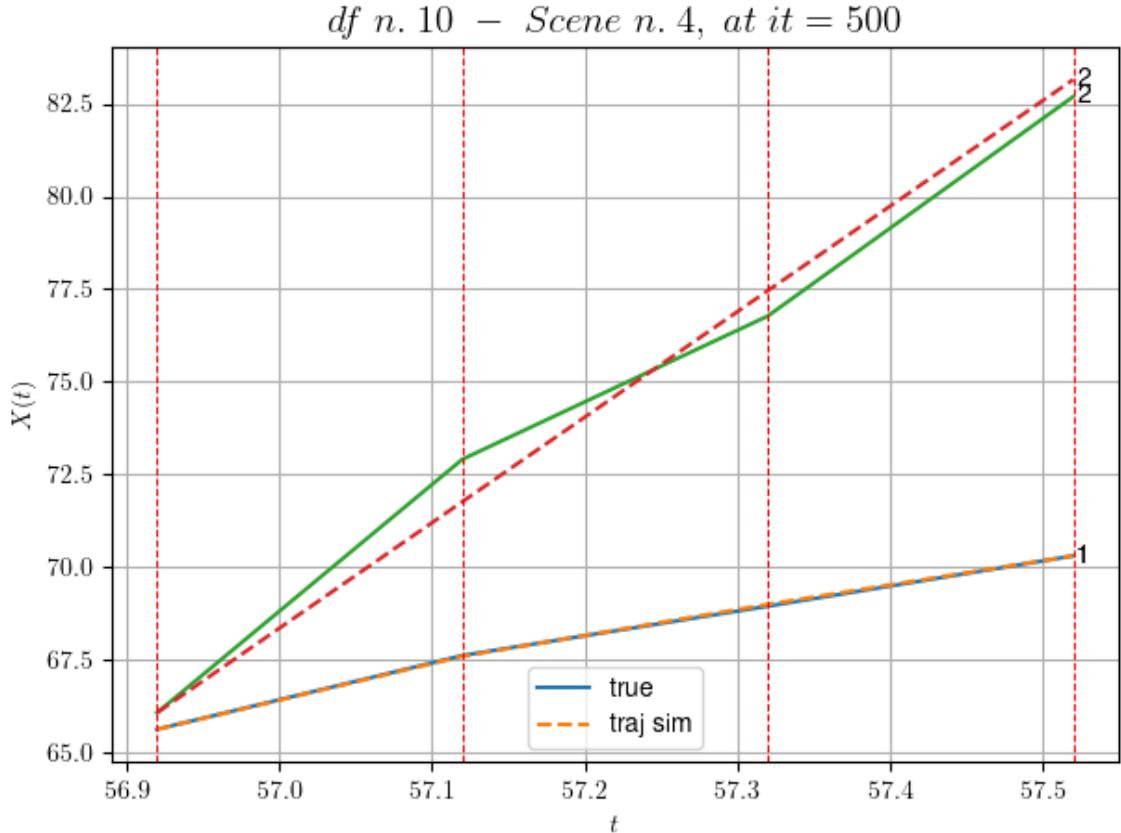
---



---

\* err= 0.24863618672279306

\* Learning rate NN = 0.0029524494893848896  
 \* diff = 8.666618028987938e-05



For scene 4/74

\* use LR\_NN=0.005 with err=0.6223619120274431 at it=24  
 \* v0\_scn\_mean = 28.49878475138538  
 \* MAE = 0.24863618672279306

---



---

df n.10, scene n.5/74

---



---

We have 4 time intervals inside [59.12,59.92]

- Time interval n.0: [59.12, 59.32]
  - \* y\_true: [7.04118507]
  - \* v\_ann: [7.167483806610107, 24.64241489798159]

---

- Time interval n.1: [59.32, 59.52]
  - \* y\_true: [9.13519325]
  - \* v\_ann: [6.988823890686035, 24.64241489798159]

---

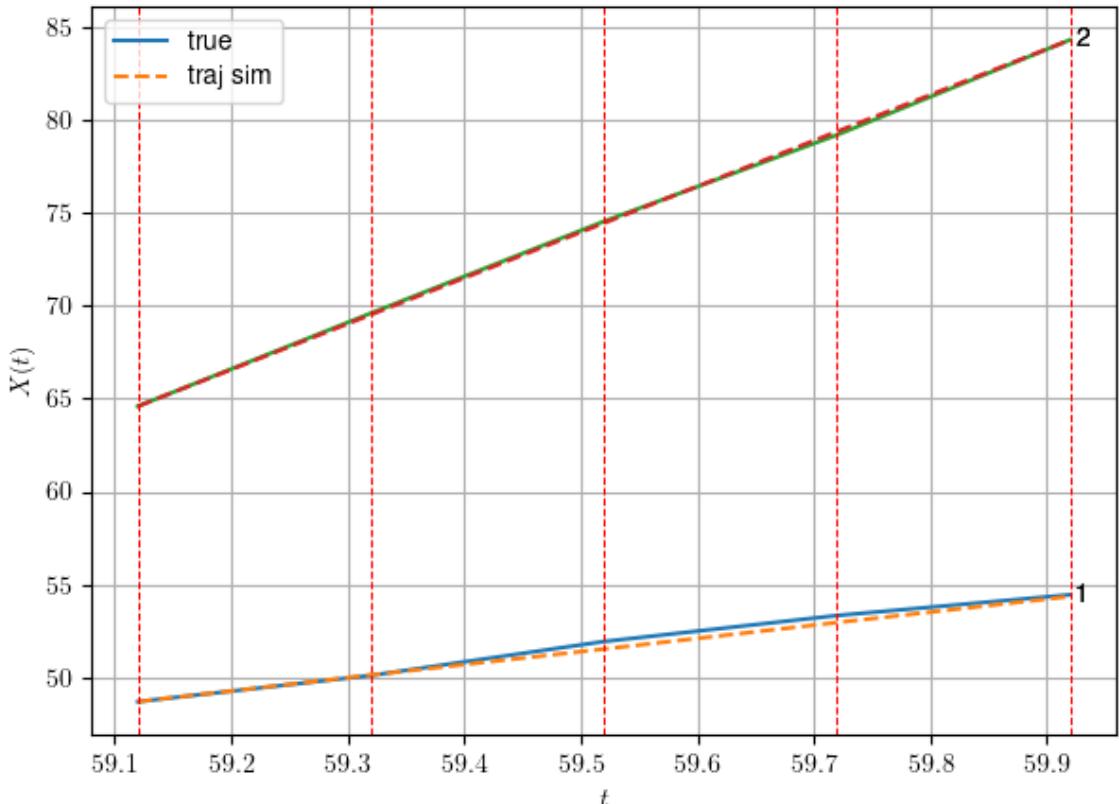
- Time interval n.2: [59.52, 59.72]
  - \* y\_true: [7.00075911]
  - \* v\_ann: [7.1373395919799805, 24.64241489798159]

- Time interval n.3: [59.72, 59.92]
  - \* y\_true: [5.57780303]
  - \* v\_ann: [7.002120018005371, 24.64241489798159]

---

- \* err= 0.036367069397588096
- \* Learning rate NN = 4.7829678806010634e-05
- \* diff = 0.00041852137673741713

df n. 10 – Scene n. 5, at it = 500



For scene 5/74

- \* use LR\_NN=0.0001 with err=4.159355993850696 at it=24
- \* v0\_scn\_mean = 24.856718302021676
- \* MAE = 0.036367069397588096

---



---

df n.10, scene n.6/74

We have 5 time intervals inside [64.92,65.92]

- Time interval n.0: [64.92, 65.12]
  - \* y\_true: [5.04006152]
  - \* v\_ann: [9.780314445495605, 23.262500294243573]

---

- Time interval n.1: [65.12, 65.32]
  - \* y\_true: [3.97005162]
  - \* v\_ann: [9.955778121948242, 23.262500294243573]

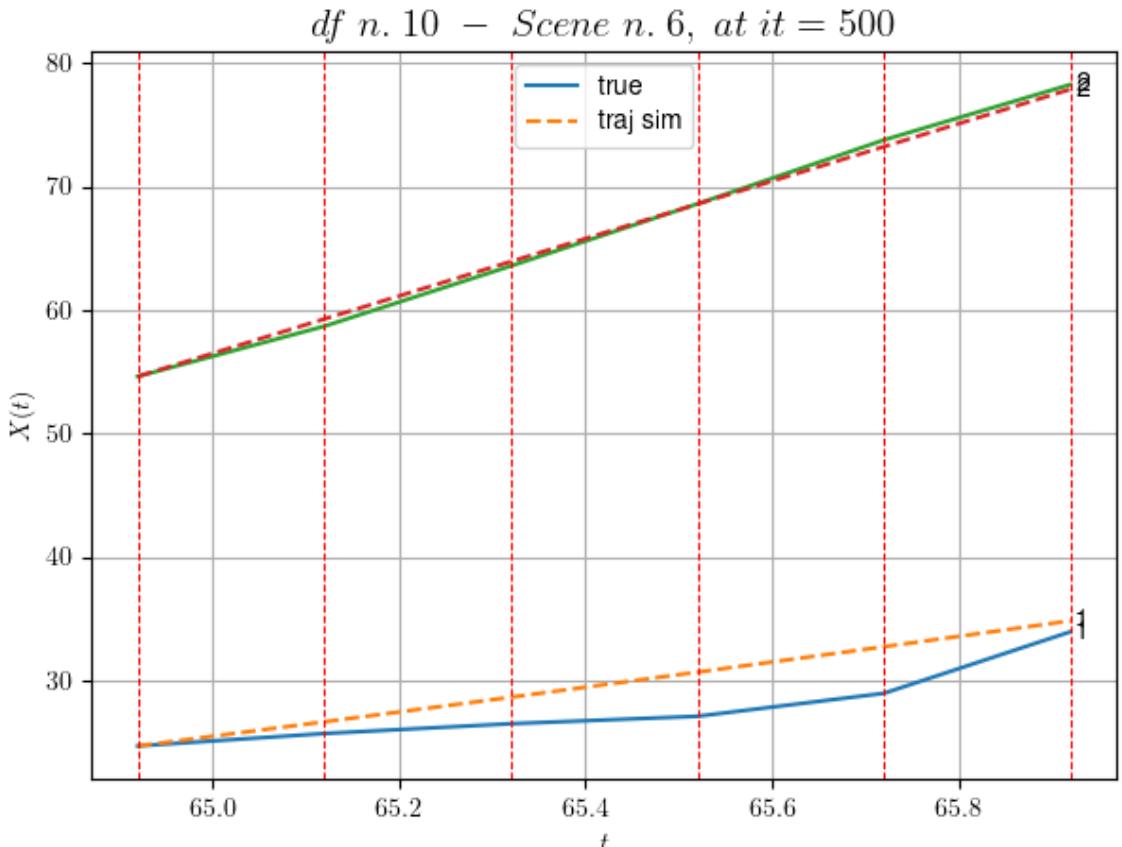
---

```
- Time interval n.2: [65.32, 65.52]
* y_true: [3.01004135]
* v_ann: [10.155508041381836, 23.262500294243573]
```

```
- Time interval n.3: [65.52, 65.72]
* y_true: [9.29806192]
* v_ann: [10.2882719039917, 23.262500294243573]
```

```
- Time interval n.4: [65.72, 65.92]
* y_true: [24.93048749]
* v_ann: [10.50598430633545, 23.262500294243573]
```

```
* err= 2.8510954749833397
* Learning rate NN = 3.874203684972599e-06
* diff = 0.023505221078214067
```



For scene 6/74

```
* use LR_NN=1e-05 with err=10.659966982037075 at it=24
* v0_scn_mean = 23.53200028242216
* MAE = 2.8362157565378294
```

---



---



---

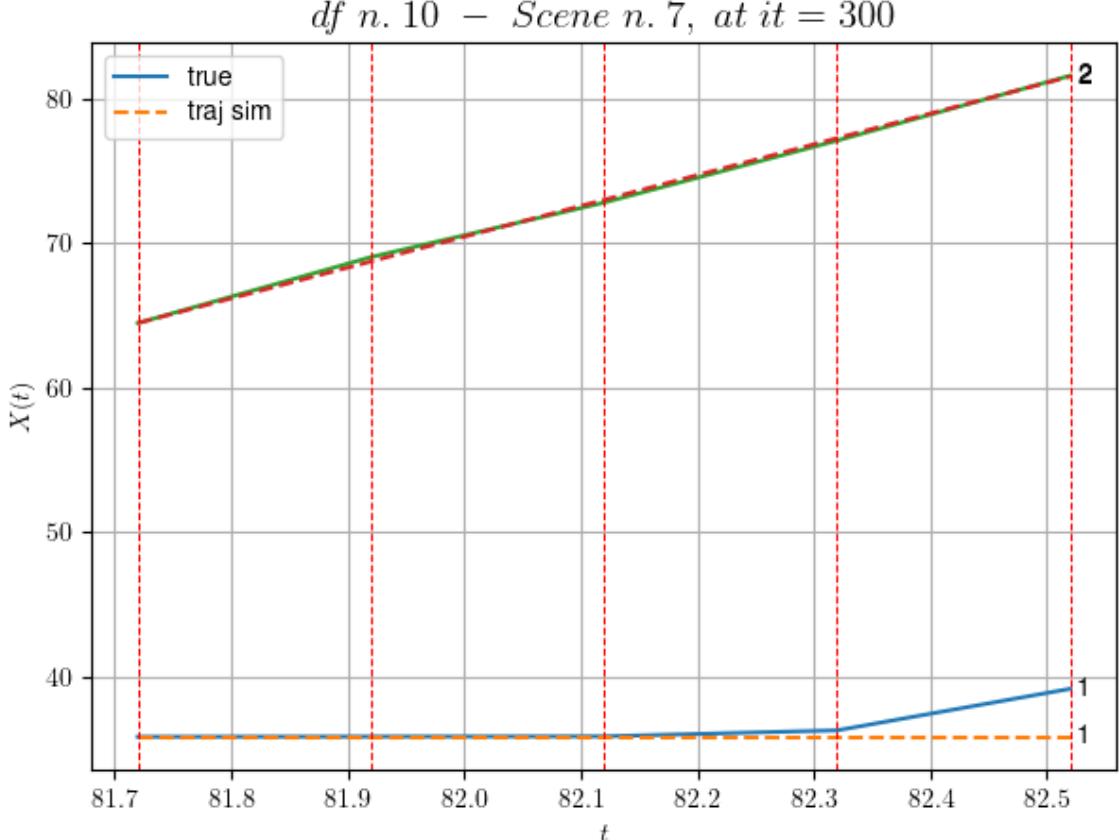
df n.10, scene n.7/74

---



---

```
=====
We have 4 time intervals inside [81.72,82.52]
* err= 1.1433380651367333
* Learning rate NN = 0.0006560999318026006
* diff = 2.9611773366688965e-07
```



```
For scene 7/74
* use LR_NN=0.001 with err=9.988494852118349 at it=24
* v0_scn_mean = 21.93979203872254
* MAE = 1.1433380651367333
```

---



---

df n.10, scene n.8/74

---



---

```
=====
We have 8 time intervals inside [85.72,87.32]
- Time interval n.0: [85.72, 85.92]
 * y_true: [0.07201947]
 * v_ann: [0.42534565925598145, 23.19995130380224]

- Time interval n.1: [85.92, 86.12]
 * y_true: [4.16376399]
 * v_ann: [0.0049714213237166405, 23.19995130380224]

- Time interval n.2: [86.12, 86.32]
 * y_true: [21.51063868]
 * v_ann: [4.299486317904666e-05, 23.19995130380224]
```

```


 - Time interval n.3: [86.32, 86.52]
 * y_true: [18.36066104]
 * v_ann: [3.986129740951583e-05, 23.19995130380224]

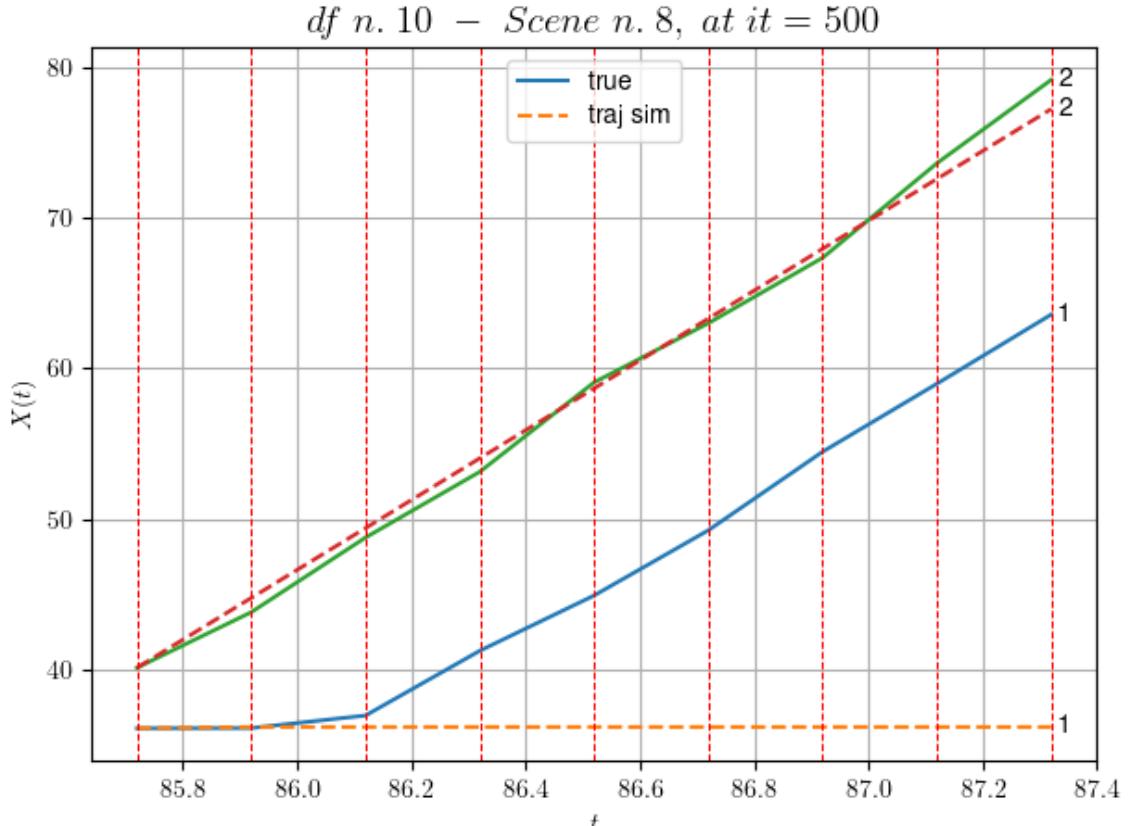
 - Time interval n.4: [86.52, 86.72]
 * y_true: [21.67096239]
 * v_ann: [3.3169396829180187e-06, 23.1999513038022
4]

 - Time interval n.5: [86.72, 86.92]
 * y_true: [26.10134836]
 * v_ann: [5.1415731832094025e-06, 23.1999513038022
4]

 - Time interval n.6: [86.92, 87.12]
 * y_true: [22.59141969]
 * v_ann: [1.3295947610458825e-05, 23.1999513038022
4]

 - Time interval n.7: [87.12, 87.32]
 * y_true: [22.98166651]
 * v_ann: [1.9563162823033053e-06, 23.1999513038022
4]

* err= 104.81381767348002
* Learning rate NN = 0.00020589104678947479
* diff = 0.01986601189936721
```



For scene 8/74

- \* use LR\_NN=0.001 with err=19.695924278425142 at it=24
- \* v0\_scn\_mean = 23.471953251598055
- \* MAE = 103.21877945797516

---



---

df n.10, scene n.9/74

---



---

We have 10 time intervals inside [97.32, 99.32]

- Time interval n.0: [97.32, 97.52]
  - \* y\_true: [11.48366043]
  - \* v\_ann: [6.327845573425293, 19.018016829365084]

---

- Time interval n.1: [97.52, 97.72]
  - \* y\_true: [0.07201947]
  - \* v\_ann: [5.999266624450684, 19.018016829365084]

---

- Time interval n.2: [97.72, 97.92]
  - \* y\_true: [7.07479559]
  - \* v\_ann: [12.31965160369873, 19.018016829365084]

---

- Time interval n.3: [97.92, 98.12]
  - \* y\_true: [20.40065046]

```
* v_ann: [16.191680908203125, 19.018016829365084]
```

```
- Time interval n.4: [98.12, 98.32]
* y_true: [12.25045529]
* v_ann: [14.628151893615723, 19.018016829365084]
```

```
- Time interval n.5: [98.32, 98.52]
* y_true: [19.05081256]
* v_ann: [16.9798583984375, 19.018016829365084]
```

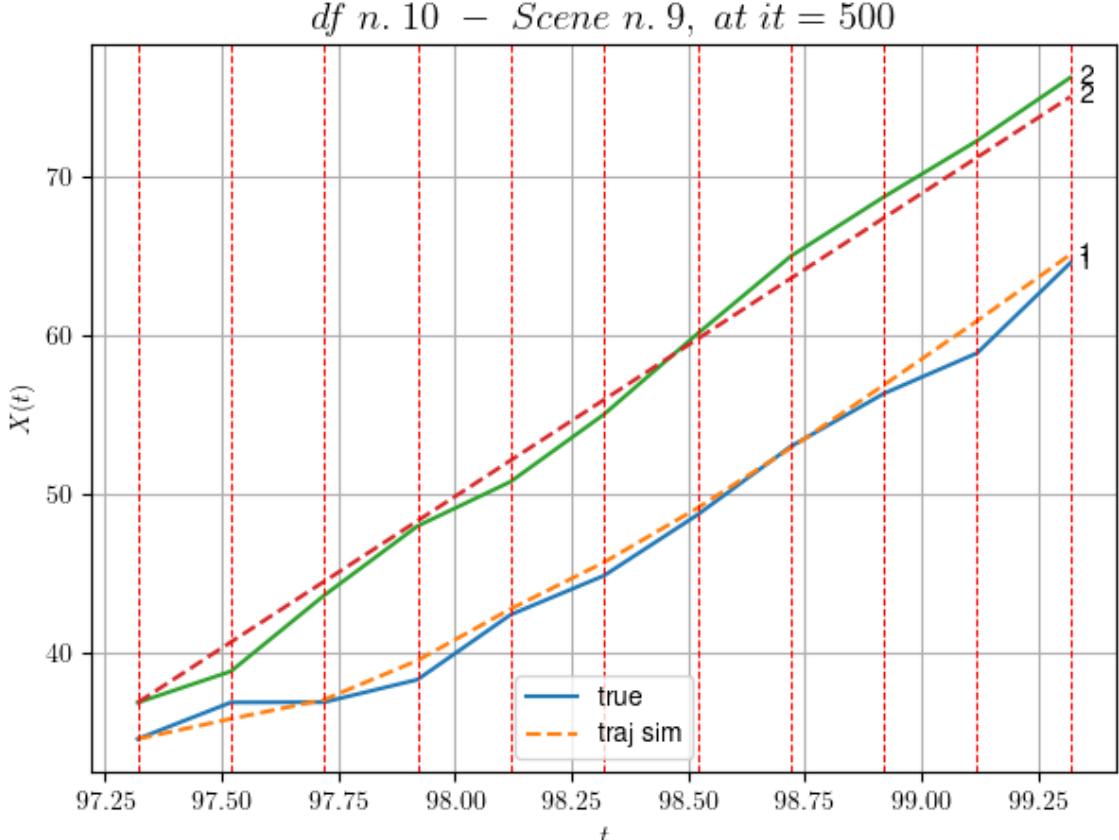
```
- Time interval n.6: [98.52, 98.72]
* y_true: [21.45107875]
* v_ann: [18.83095932006836, 19.018016829365084]
```

```
- Time interval n.7: [98.72, 98.92]
* y_true: [16.6509662]
* v_ann: [19.82898712158203, 19.018016829365084]
```

```
- Time interval n.8: [98.92, 99.12]
* y_true: [12.70081781]
* v_ann: [20.140256881713867, 19.018016829365084]
```

```
- Time interval n.9: [99.12, 99.32]
* y_true: [28.30208991]
* v_ann: [20.85305404663086, 19.018016829365084]
```

```
* err= 0.9735834860144366
* Learning rate NN = 6.754255446139723e-05
* diff = 0 017055961872389114
```



For scene 9/74

- \* use LR\_NN=0.0005 with err=79.63268787901131 at it=24
- \* v0\_scn\_mean = 19.457296156106707
- \* MAE = 0.9541921803904996

---



---

df n.10, scene n.10/74

---



---

We have 5 time intervals inside [100.52,101.52]

- Time interval n.0: [100.52, 100.72]
  - \* y\_true: [15.44102969]
  - \* v\_ann: [21.05229949951172, 19.675993616954546]

---

- Time interval n.1: [100.72, 100.92]
  - \* y\_true: [24.7218456]
  - \* v\_ann: [20.950950622558594, 19.675993616954546]

---

- Time interval n.2: [100.92, 101.12]
  - \* y\_true: [19.48315215]
  - \* v\_ann: [20.96195411682129, 19.675993616954546]

---

- Time interval n.3: [101.12, 101.32]
  - \* y\_true: [21.76213859]

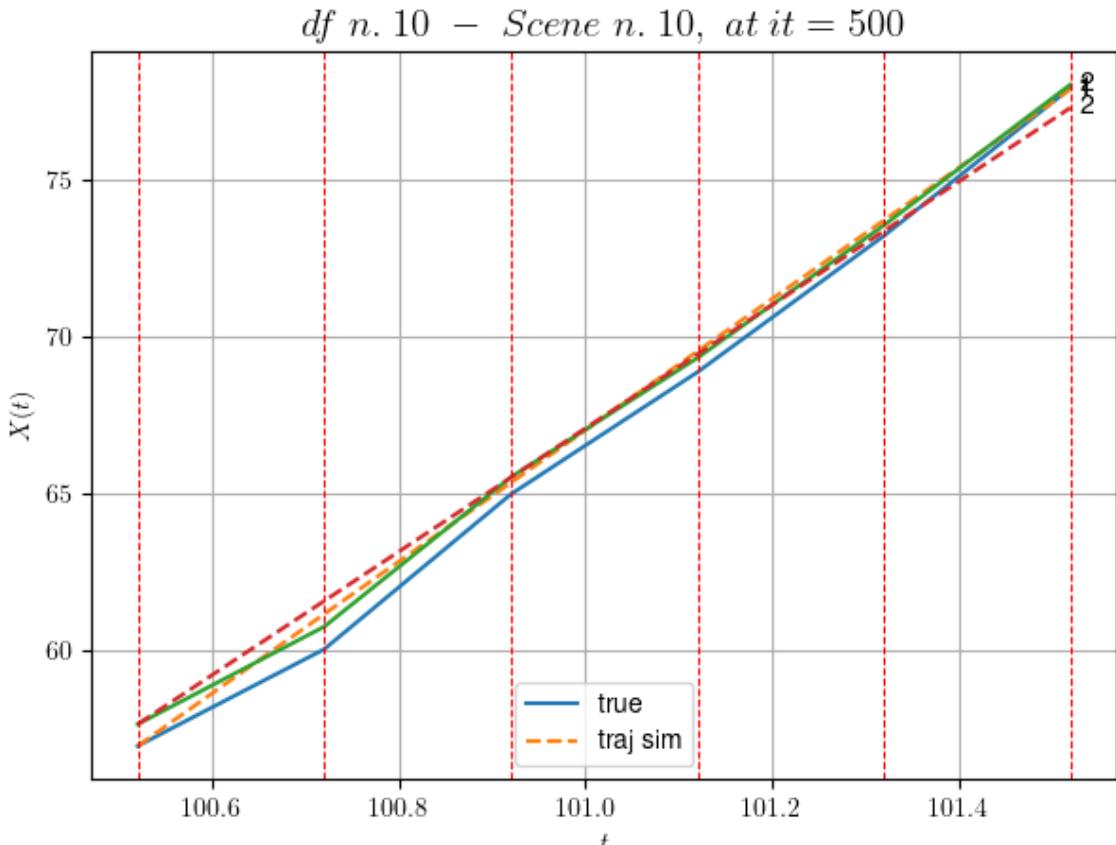
```
* v_ann: [20.91607666015625, 19.675993616954546]
```

---

```
- Time interval n.4: [101.32, 101.52]
* y_true: [23.58257994]
* v_ann: [20.921701431274414, 19.675993616954546]
```

---

```
* err= 0.27944480347615774
* Learning rate NN = 0.0001937102060765028
* diff = 0.004424891074181314
```



For scene 10/74

```
* use LR_NN=0.0005 with err=18.78465403597143 at it=24
* v0_scn_mean = 20.088953872197546
* MAE = 0.27944480347615774
```

---



---

df n.10, scene n.11/74

---



---

We have 4 time intervals inside [103.72, 104.52]

```
- Time interval n.0: [103.72, 103.92]
* y_true: [18.3928945]
* v_ann: [17.535503387451172, 24.24265454583431]
```

---



---

```
- Time interval n.1: [103.92, 104.12]
```

```
* y_true: [16.70145174]
* v_ann: [18.021814346313477, 24.24265454583431]
```

---

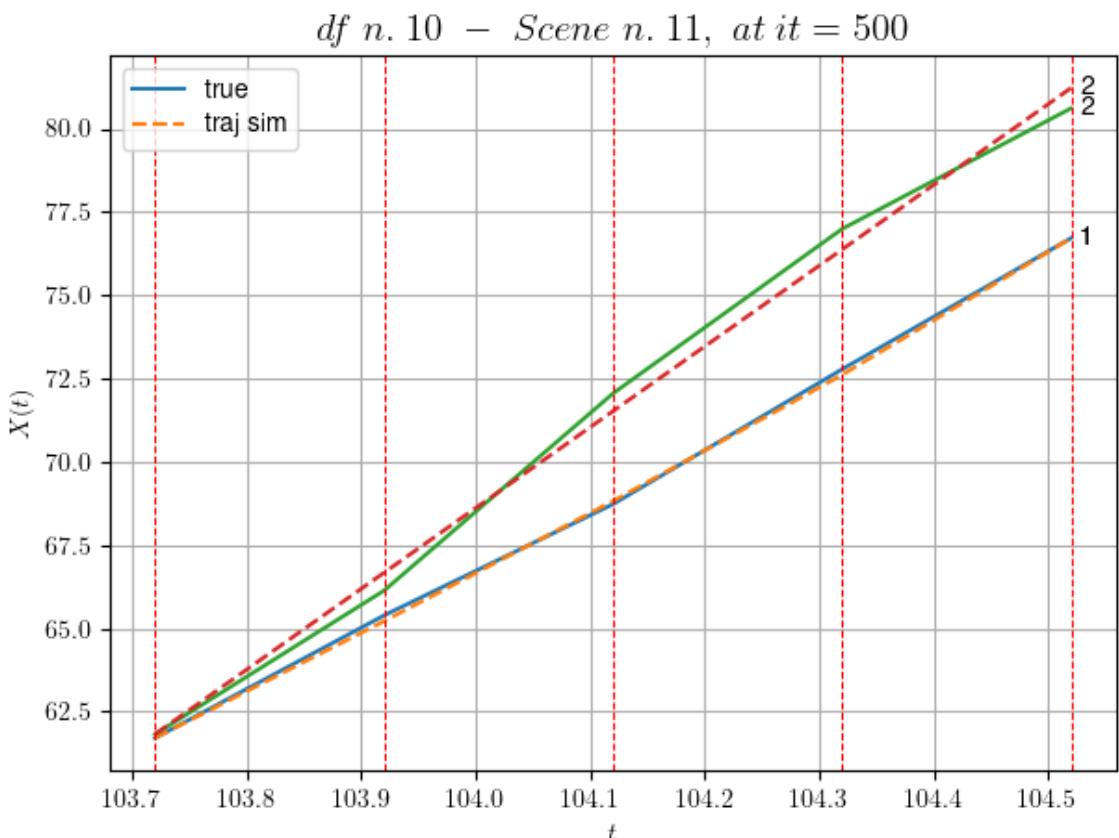
```
- Time interval n.2: [104.12, 104.32]
* y_true: [20.23196797]
* v_ann: [18.943347930908203, 24.24265454583431]
```

---

```
- Time interval n.3: [104.32, 104.52]
* y_true: [19.68212312]
* v_ann: [20.47358512878418, 24.24265454583431]
```

---

```
* err= 0.13919245209728195
* Learning rate NN = 0.002391484100371599
* diff = 4.405215303182608e-05
```



For scene 11/74

```
* use LR_NN=0.005 with err=4.209713949080573 at it=24
* v0_scn_mean = 24.472948363956885
* MAE = 0.13878864103552413
```

---



---

df n.10, scene n.12/74

---



---



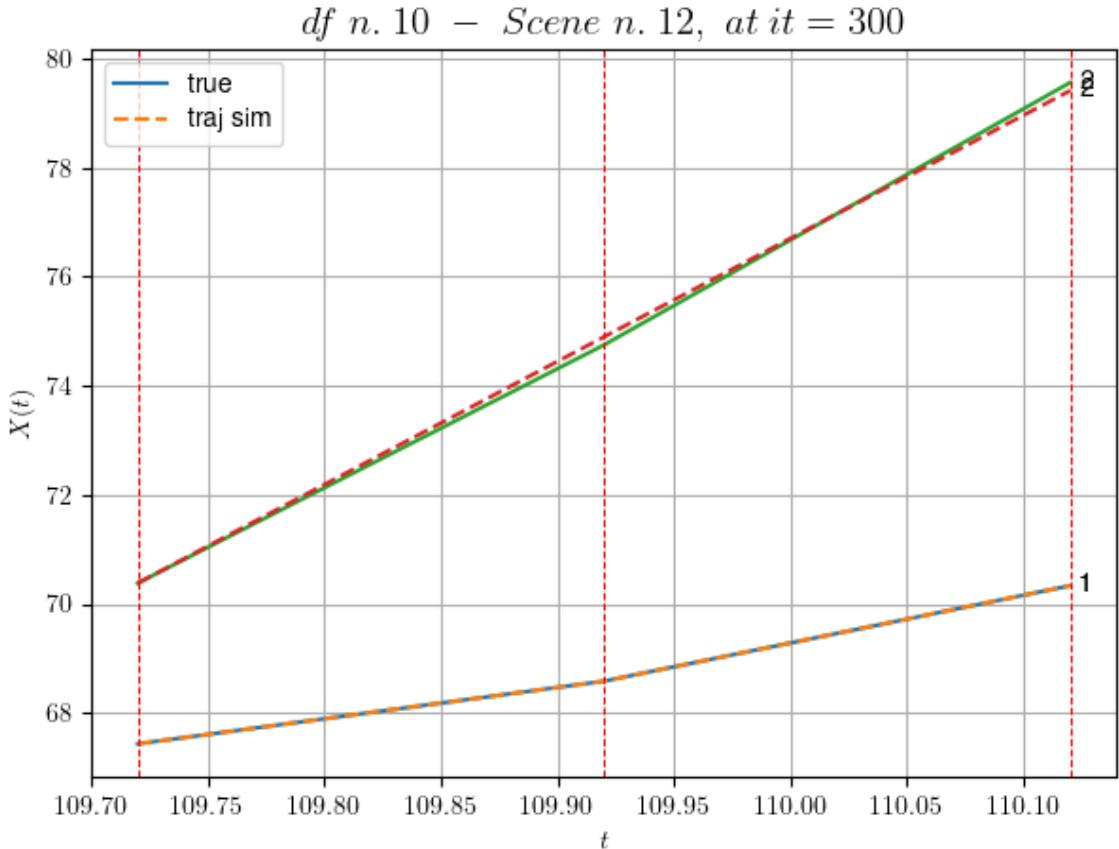
---



---

We have 2 time intervals inside [109.72,110.12]

```
* err= 0.0073049257766313646
* Learning rate NN = 0.008099999278783798
* diff = 1.8119316134729974e-07
```



For scene 12/74

```
* use LR_NN=0.01 with err=1.7723751405078396 at it=24
* v0_scn_mean = 23.086256854775637
* MAE = 0.006588864223415128
```

---



---

df n.10, scene n.13/74

---



---

We have 8 time intervals inside [116.72, 118.32]

- Time interval n.0: [116.72, 116.92]
  - \* y\_true: [1.82657583]
  - \* v\_ann: [3.1154866218566895, 19.612707397568297]

---

- Time interval n.1: [116.92, 117.12]
  - \* y\_true: [1.82657583]
  - \* v\_ann: [4.000528335571289, 19.612707397568297]

---

- Time interval n.2: [117.12, 117.32]
  - \* y\_true: [1.82657583]
  - \* v\_ann: [6.03843355178833, 19.612707397568297]

---

- Time interval n.3: [117.32, 117.52]  
\* y\_true: [1.82657583]  
\* v\_ann: [8.004242897033691, 19.612707397568297]

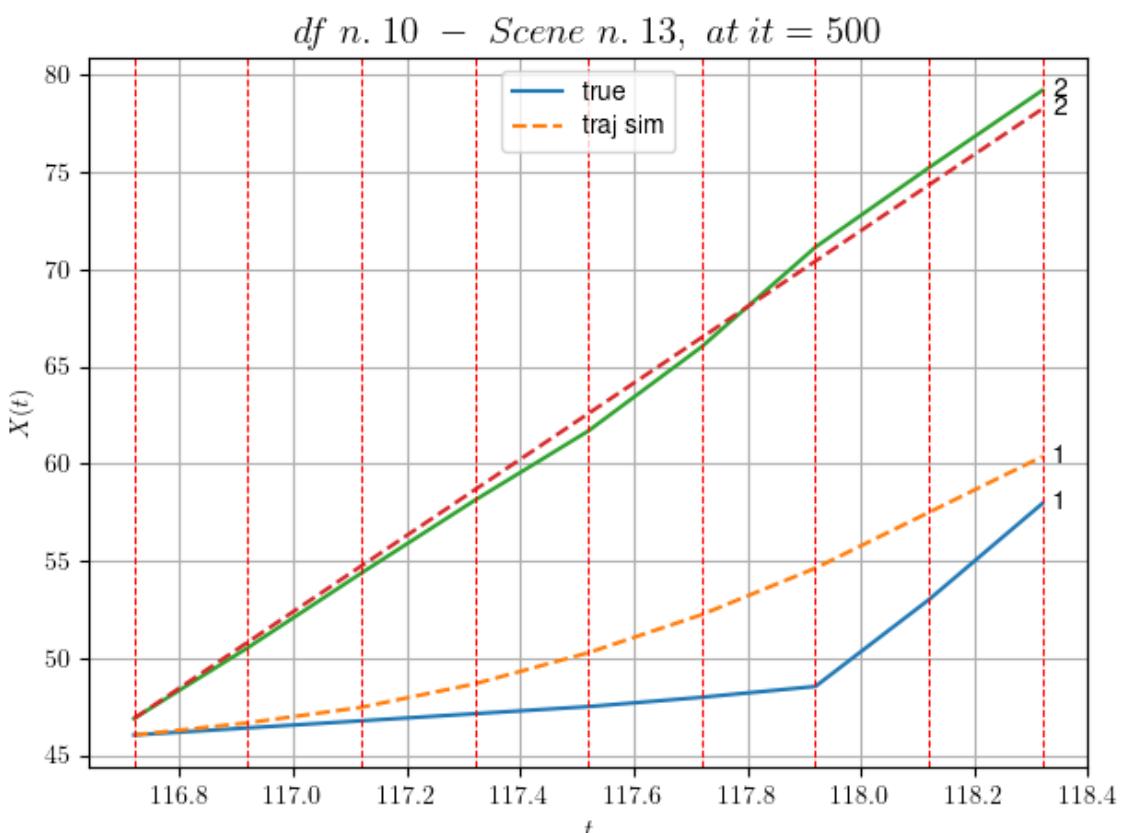
- Time interval n.4: [117.52, 117.72]  
\* y\_true: [2.40008723]  
\* v\_ann: [9.81852912902832, 19.612707397568297]

- Time interval n.5: [117.72, 117.92]  
\* y\_true: [2.78242816]  
\* v\_ann: [11.948737144470215, 19.612707397568297]

- Time interval n.6: [117.92, 118.12]  
\* y\_true: [22.34249066]  
\* v\_ann: [14.362629890441895, 19.612707397568297]

- Time interval n.7: [118.12, 118.32]  
\* y\_true: [24.77146428]  
\* v\_ann: [14.377655029296875, 19.612707397568297]

\* err= 5.304075837924916  
\* Learning rate NN = 1.029455233947374e-05  
\* diff = 0.04103823662062034



For scene 13/74  
 \* use LR\_NN=5e-05 with err=48.603996886709105 at it=24  
 \* v0\_scn\_mean = 20.02819910158607  
 \* MAE = 5.304075837924916

---



---

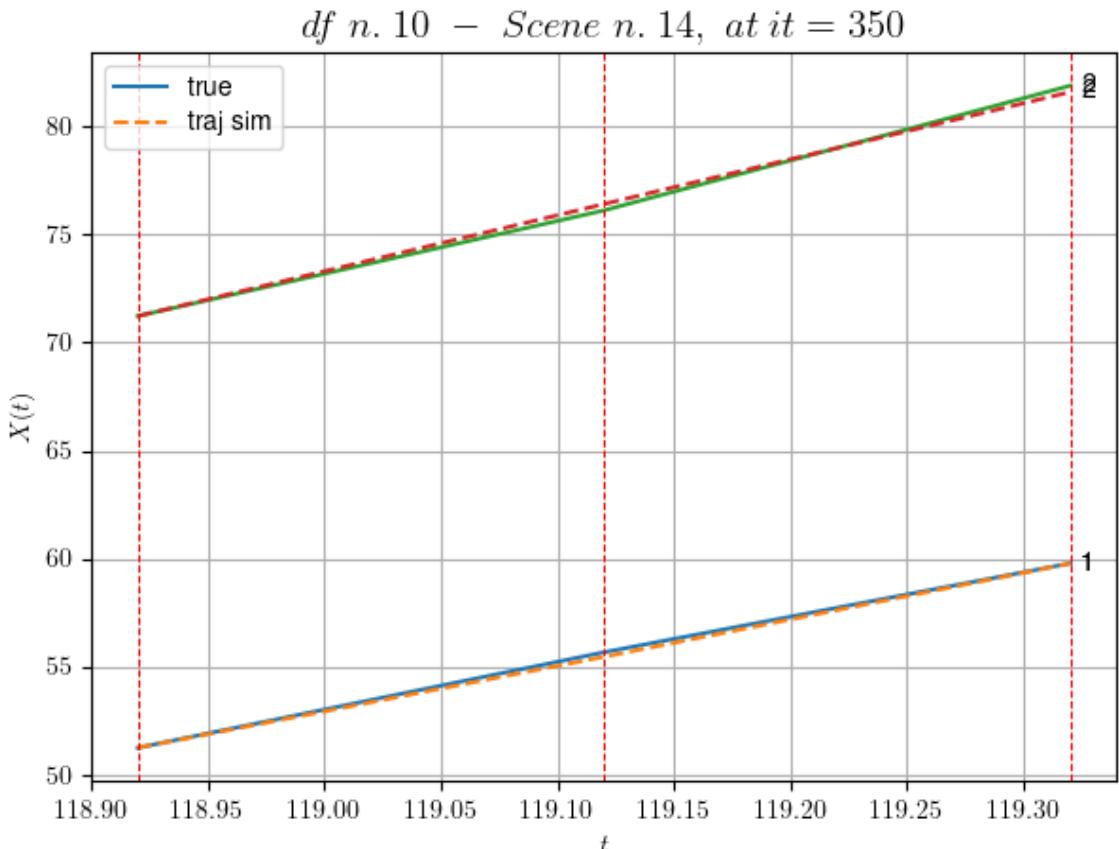
df n.10, scene n.14/74

---



---

We have 2 time intervals inside [118.92,119.32]  
 \* err= 0.03602598918131461  
 \* Learning rate NN = 4.049999552080408e-05  
 \* diff = 2.498681171969608e-07



For scene 14/74  
 \* use LR\_NN=5e-05 with err=0.516084384647796 at it=24  
 \* v0\_scn\_mean = 26.199846729972215  
 \* MAE = 0.03336428666413112

---



---

df n.10, scene n.15/74

---



---

We have 2 time intervals inside [139.92,140.32]  
 - Time interval n.0: [139.92, 140.12]  
 \* y\_true: [28.34197471]  
 \* v\_ann: [31.195362091064453, 27.422660948669197]

```

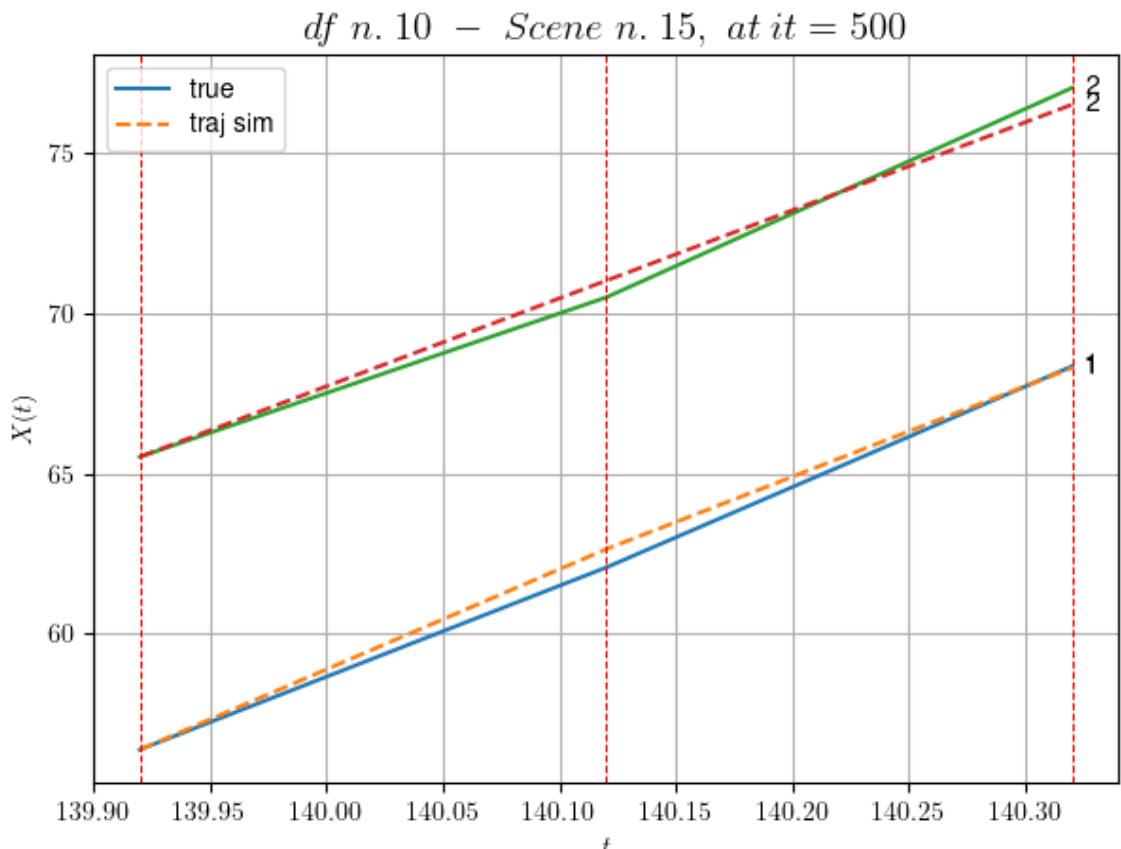
- Time interval n.1: [140.12, 140.32]
 * y_true: [31.34257406]
 * v_ann: [28.224821090698242, 27.422660948669197]

```

```

* err= 0.14559769512678744
* Learning rate NN = 0.00036449998151510954
* diff = 0.00024043040287058393

```



For scene 15/74

```

* use LR_NN=0.0005 with err=0.30286980802035646 at it=24
* v0_scn_mean = 27.52575451070263
* MAE = 0.14418674967373826

```

---



---

df n.10, scene n.16/74

---



---

We have 5 time intervals inside [159.92,160.92]

```

- Time interval n.0: [159.92, 160.12]
 * y_true: [16.1202741]
 * v_ann: [12.86928939819336, 21.42867202329106]

```

```

- Time interval n.1: [160.12, 160.32]
 * y_true: [13.25025986]

```

```
* v_ann: [12.98462200164795, 21.42867202329106]
```

---

```
- Time interval n.2: [160.32, 160.52]
* y_true: [12.66030115]
* v_ann: [13.507454872131348, 21.42867202329106]
```

---

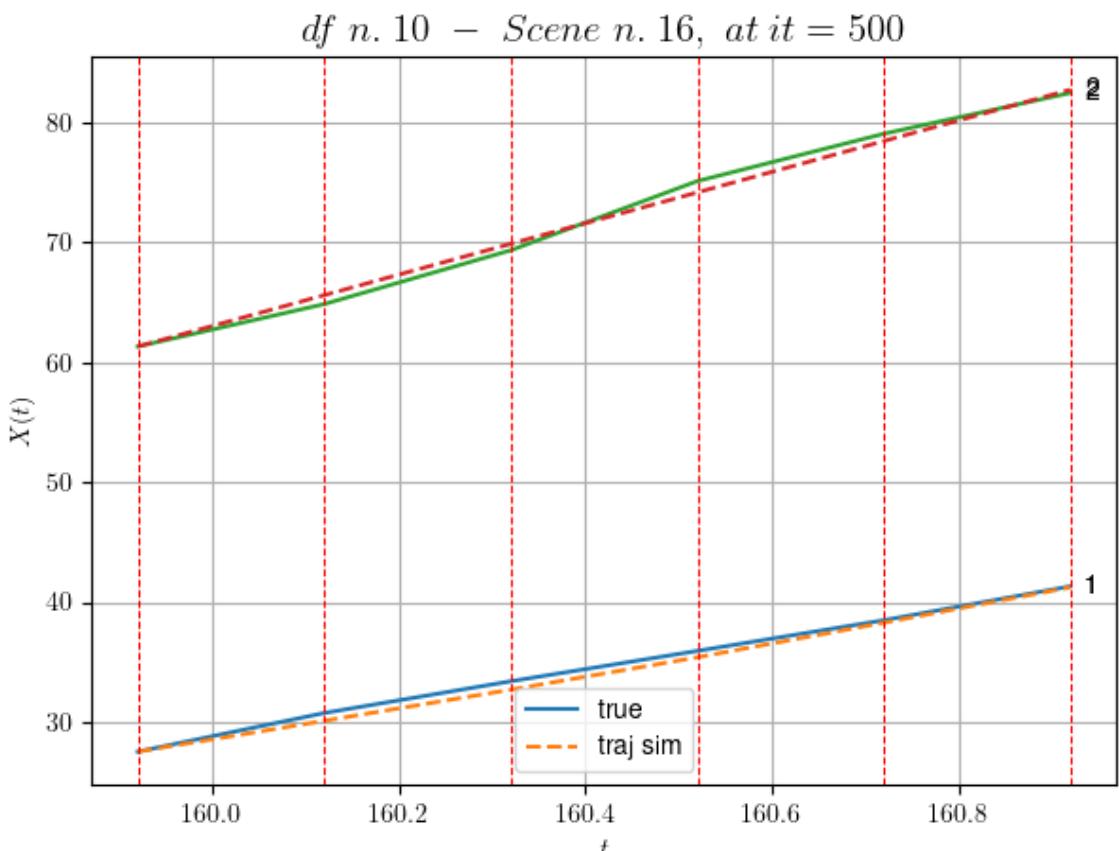
```
- Time interval n.3: [160.52, 160.72]
* y_true: [12.80034325]
* v_ann: [14.415485382080078, 21.42867202329106]
```

---

```
- Time interval n.4: [160.72, 160.92]
* y_true: [14.15044353]
* v_ann: [14.790996551513672, 21.42867202329106]
```

---

```
* err= 0.28623451330959443
* Learning rate NN = 3.874203684972599e-06
* diff = 2.8945070760455494e-05
```



For scene 16/74

```
* use LR_NN=1e-05 with err=13.138971240758242 at it=24
* v0_scn_mean = 21.771525142294006
* MAE = 0.2797335980274579
```

```
df n.10, scene n.17/74
```

---



---

We have 4 time intervals inside [182.72, 183.52]

- Time interval n.0: [182.72, 182.92]

- \* y\_true: [22.96029399]

- \* v\_ann: [26.063358306884766, 22.502260179113883]

---

- Time interval n.1: [182.92, 183.12]

- \* y\_true: [25.95047007]

- \* v\_ann: [25.34502410888672, 22.502260179113883]

---

- Time interval n.2: [183.12, 183.32]

- \* y\_true: [25.46062236]

- \* v\_ann: [24.884824752807617, 22.502260179113883]

---

- Time interval n.3: [183.32, 183.52]

- \* y\_true: [27.55089391]

- \* v\_ann: [25.558971405029297, 22.502260179113883]

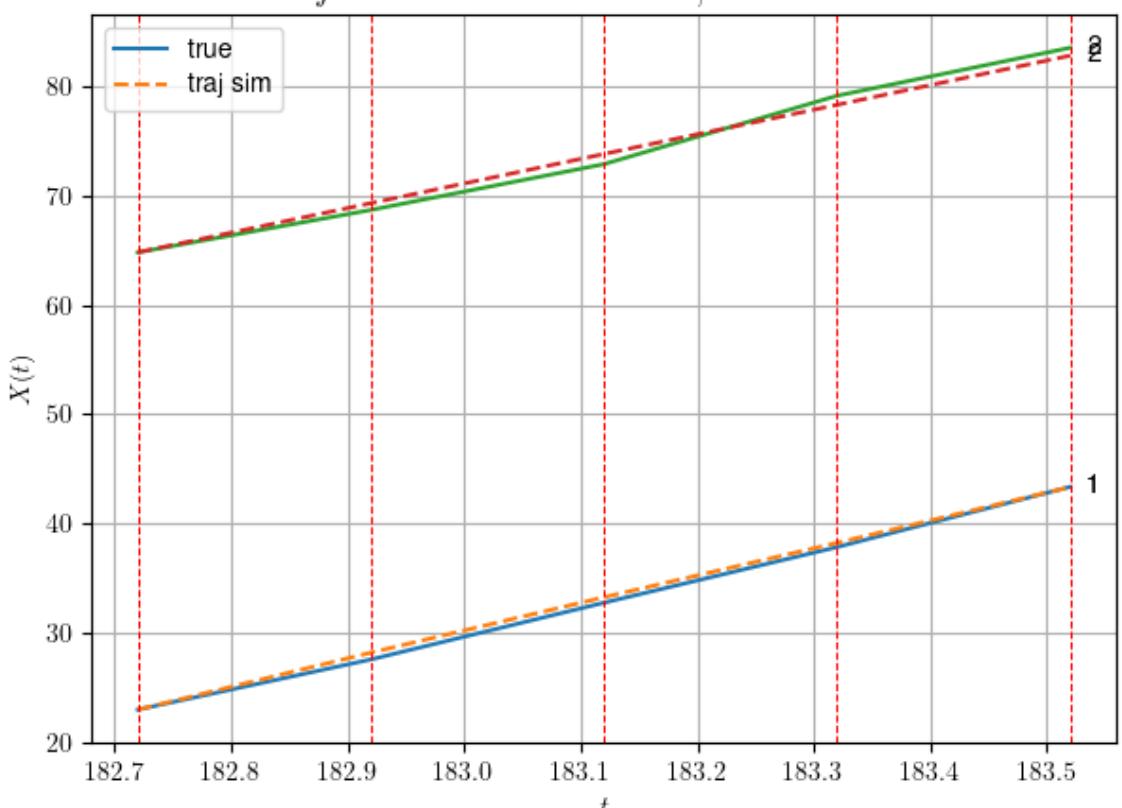
---

- \* err= 0.3240086275520421

- \* Learning rate NN = 2.3914839403005317e-05

- \* diff = 1.371504176944649e-05

*df n. 10 – Scene n. 17, at it = 500*



For scene 17/74

```
* use LR_NN=5e-05 with err=6.211545712514581 at it=24
* v0_scn_mean = 22.80216977189264
* MAE = 0.303055066104684
```

```
=====
```

```
=====
```

```
df n.10, scene n.18/74
```

```
=====
```

```
=====
```

```
We have 6 time intervals inside [188.92,190.12]
```

```
- Time interval n.0: [188.92, 189.12]
 * y_true: [25.11758737]
 * v_ann: [24.30059051513672, 27.06160992268701]
```

```

```

```
- Time interval n.1: [189.12, 189.32]
 * y_true: [24.28121512]
 * v_ann: [24.6539363861084, 27.06160992268701]
```

```

```

```
- Time interval n.2: [189.32, 189.52]
 * y_true: [24.90146436]
 * v_ann: [24.172996520996094, 27.06160992268701]
```

```

```

```
- Time interval n.3: [189.52, 189.72]
 * y_true: [24.10172122]
 * v_ann: [26.63446807861328, 27.06160992268701]
```

```

```

```
- Time interval n.4: [189.72, 189.92]
 * y_true: [29.66248113]
 * v_ann: [29.253759384155273, 27.06160992268701]
```

```

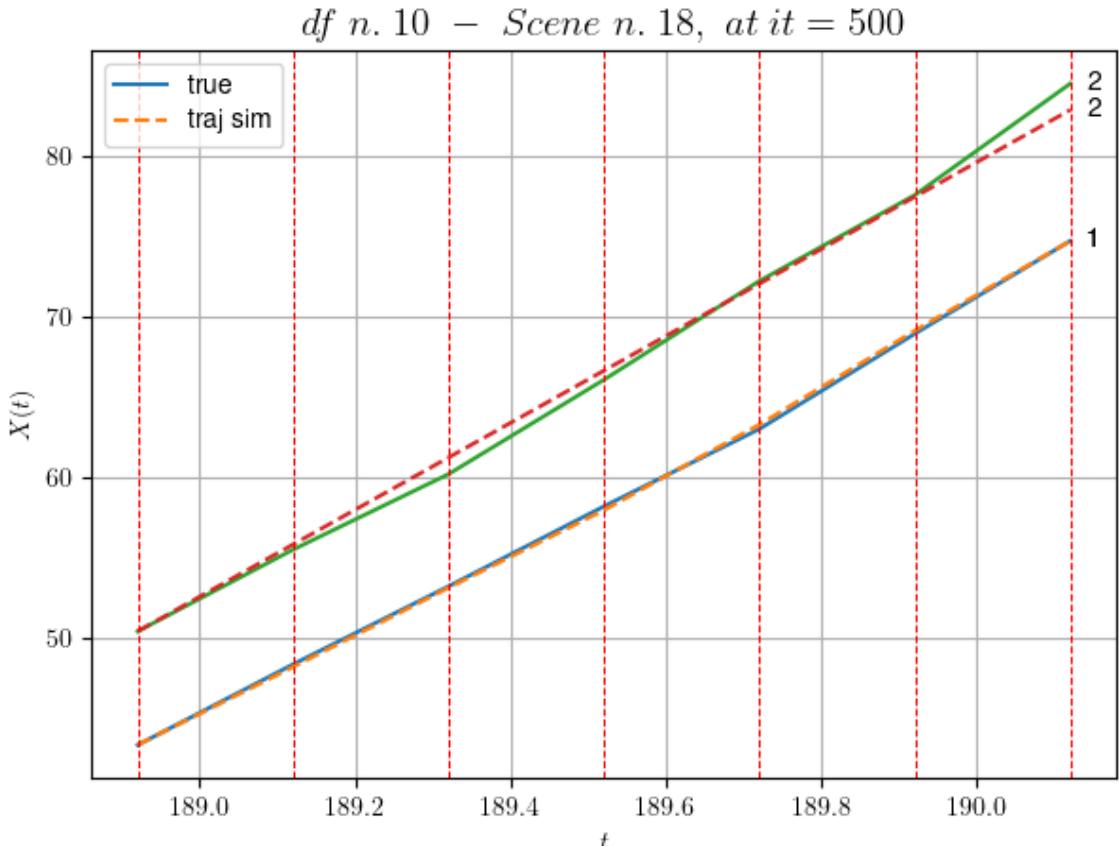
```

```
- Time interval n.5: [189.92, 190.12]
 * y_true: [28.89284396]
 * v_ann: [27.942792892456055, 27.06160992268701]
```

```

```

```
* err= 0.31583954280813115
* Learning rate NN = 0.00031381050939671695
* diff = 0.00035211020723563413
```



For scene 18/74

```
* use LR_NN=0.001 with err=1.9842237779834502 at it=24
* v0_scn_mean = 27.179145525756866
* MAE = 0.29137417380373076
```

---



---

df n.10, scene n.19/74

---



---

We have 9 time intervals inside [201.32, 203.12]

- Time interval n.0: [201.32, 201.52]
  - \* y\_true: [24.52008638]
  - \* v\_ann: [-3.788593312492594e-05, 26.3200981611609]

1]

---



---

- Time interval n.1: [201.52, 201.72]
  - \* y\_true: [25.9301702]
  - \* v\_ann: [-2.567367846495472e-05, 26.3200981611609]

1]

---



---

- Time interval n.2: [201.72, 201.92]
  - \* y\_true: [29.26032799]
  - \* v\_ann: [-2.9174634619266726e-05, 26.3200981611609]

1]

---



---

```

 - Time interval n.3: [201.92, 202.12]
 * y_true: [23.25036083]
 * v_ann: [-2.9698627258767374e-05, 26.3200981611609
1]

 - Time interval n.4: [202.12, 202.32]
 * y_true: [22.87050849]
 * v_ann: [-2.3148824766394682e-05, 26.3200981611609
1]

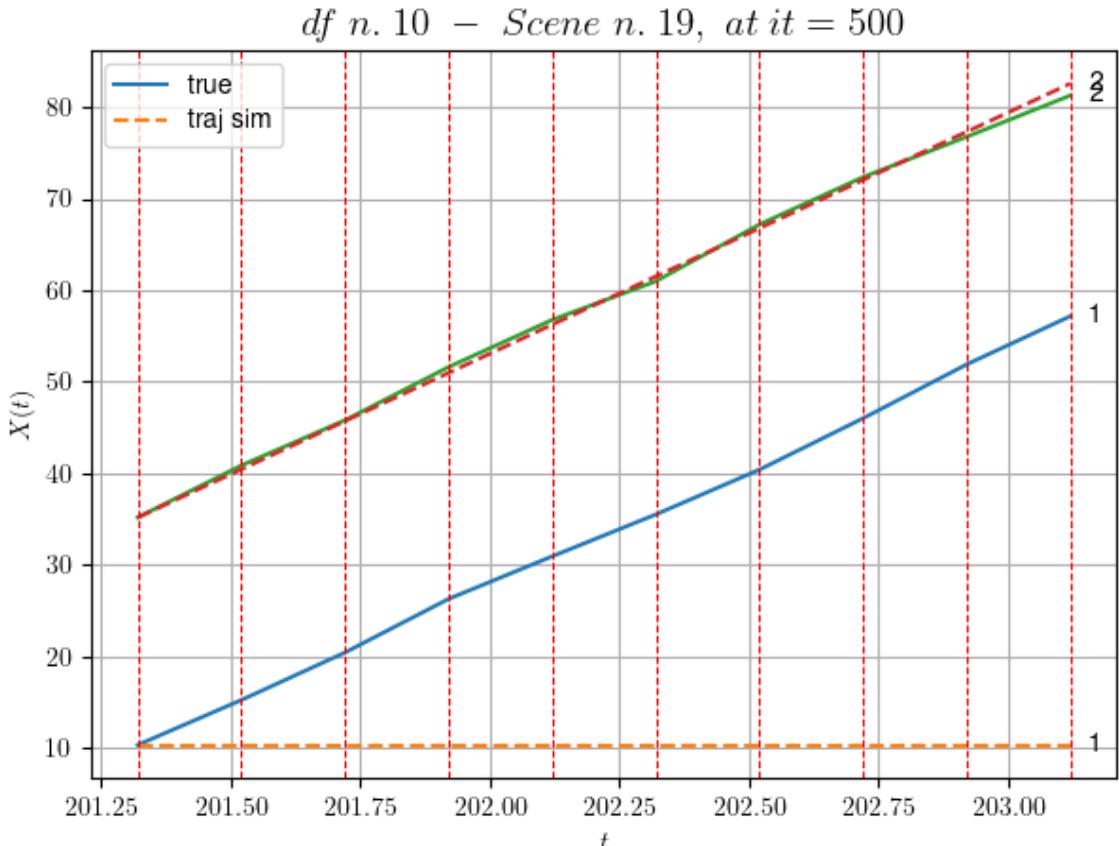
 - Time interval n.5: [202.32, 202.52]
 * y_true: [24.47068757]
 * v_ann: [-2.7737078198697418e-05, 26.3200981611609
1]

 - Time interval n.6: [202.52, 202.72]
 * y_true: [28.03104175]
 * v_ann: [-1.4405016372620594e-05, 26.3200981611609
1]

 - Time interval n.7: [202.72, 202.92]
 * y_true: [29.41136895]
 * v_ann: [-1.792813782230951e-05, 26.3200981611609
1]

 - Time interval n.8: [202.92, 203.12]
 * y_true: [26.3315156]
 * v_ann: [-3.764258144656196e-05, 26.3200981611609
1]

* err= 376.7262023807141
* Learning rate NN = 8.338587213074788e-05
* diff = 3.0383496380181896e-05
```



For scene 19/74

- \* use LR\_NN=0.0005 with err=8.676598967935037 at it=24
- \* v0\_scn\_mean = 26.467294234687355
- \* MAE = 152.13750490531373

---



---

df n.10, scene n.20/74

---



---

We have 6 time intervals inside [209.32, 210.52]

- Time interval n.0: [209.32, 209.52]
  - \* y\_true: [17.92044086]
  - \* v\_ann: [-0.0002946251188404858, 27.5945627471478]

8]

---



---

- Time interval n.1: [209.52, 209.72]
  - \* y\_true: [18.1805462]
  - \* v\_ann: [-0.00012118461745558307, 27.5945627471478]

8]

---



---

- Time interval n.2: [209.72, 209.92]
  - \* y\_true: [20.36072689]
  - \* v\_ann: [-4.013567740912549e-05, 27.5945627471478]

8]

---



---

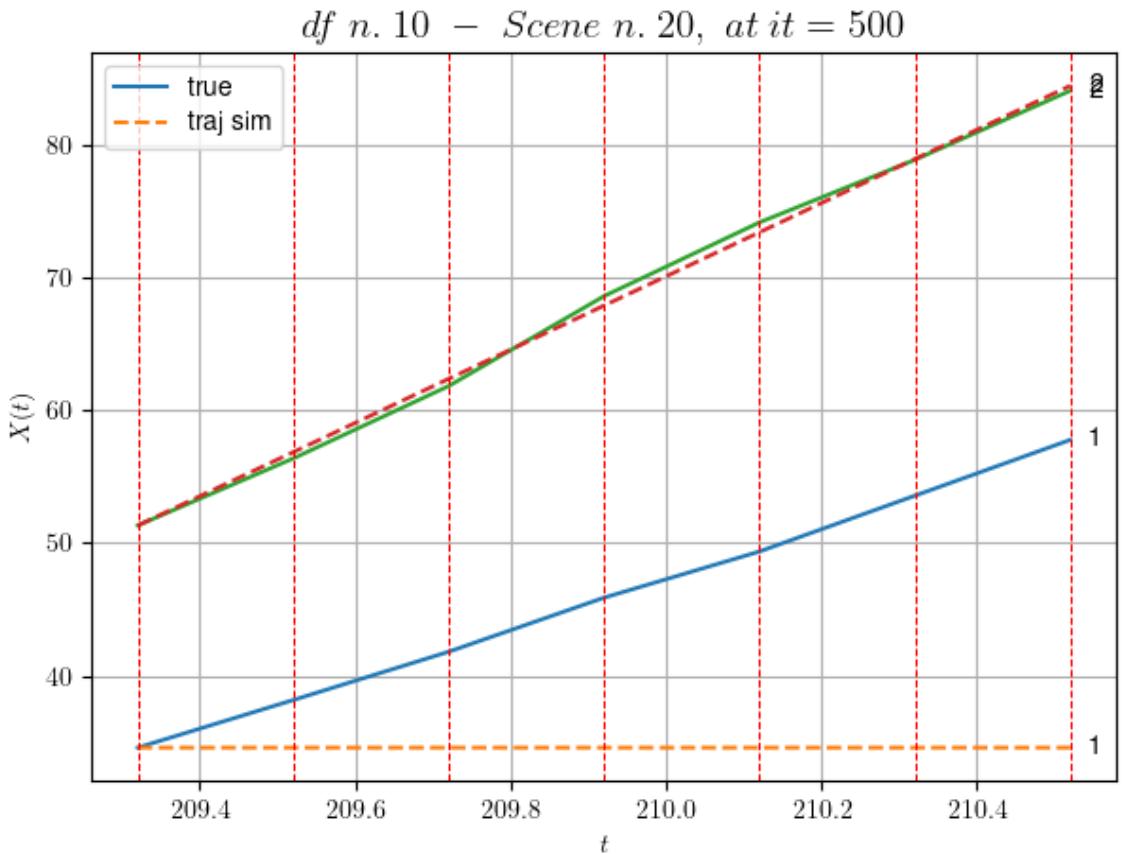
```
- Time interval n.3: [209.92, 210.12]
 * y_true: [17.38074209]
 * v_ann: [-7.77169316279469e-06, 27.59456274714788]
```

8]

```
- Time interval n.4: [210.12, 210.32]
 * y_true: [21.02104774]
 * v_ann: [-2.197167077611084e-06, 27.59456274714788]
```

```
- Time interval n.5: [210.32, 210.52]
 * y_true: [21.02121012]
 * v_ann: [-1.61266143550165e-06, 27.59456274714788]
```

```
* err= 93.53377698281979
* Learning rate NN = 0.00015690525469835848
* diff = 4.921431626314643e-05
```



For scene 20/74

```
* use LR_NN=0.0005 with err=1.8156287965326579 at it=24
* v0_scn_mean = 27.69078023724263
* MAE = 93.53377698281979
```

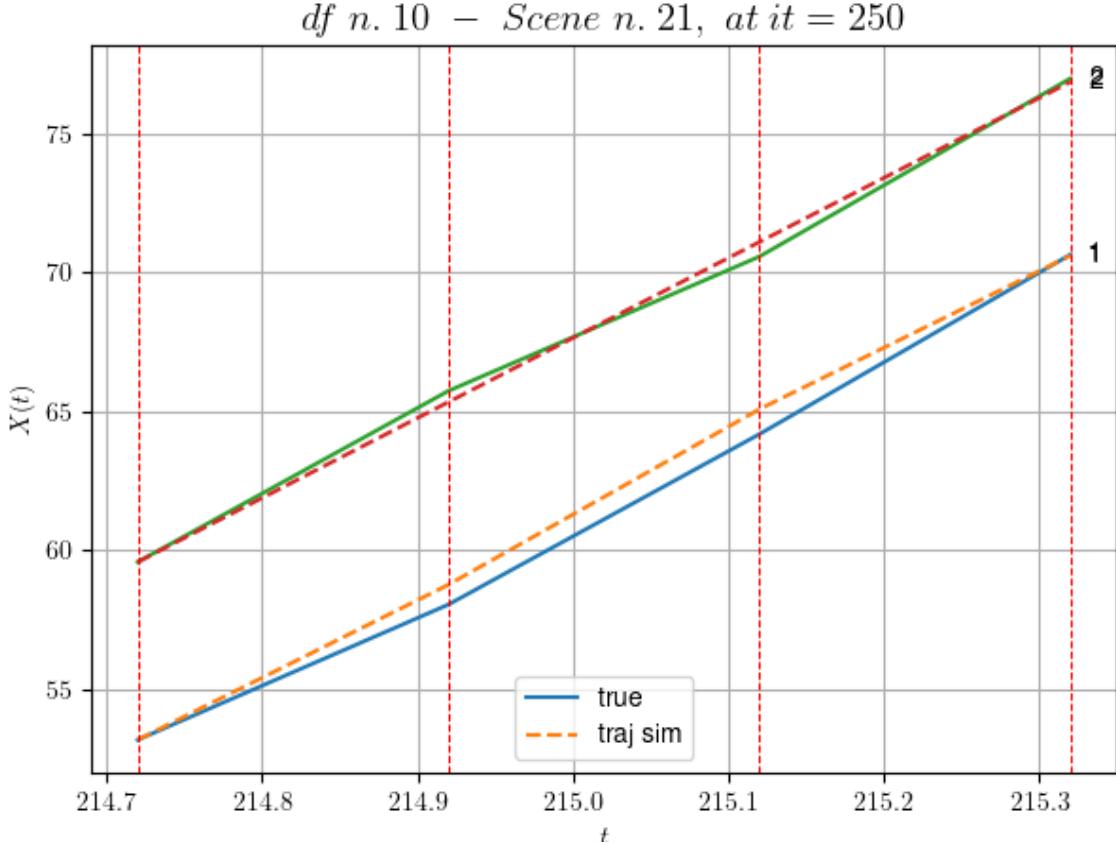
---



---

df n.10, scene n.21/74

```
=====
=====
We have 3 time intervals inside [214.72,215.32]
* err= 0.22203985344901153
* Learning rate NN = 8.099999104160815e-05
* diff = 5.955364132115282e-07
```



For scene 21/74

```
* use LR_NN=0.0001 with err=0.2844406593054043 at it=24
* v0_scn_mean = 28.936587603599
* MAE = 0.16769351277220385
```

---



---

df n.10, scene n.22/74

---



---

```
=====
=====
We have 6 time intervals inside [225.52,226.72]
```

- Time interval n.0: [225.52, 225.72]
  - \* y\_true: [21.78221563]
  - \* v\_ann: [24.42635726928711, 28.699883785023793]

---

- Time interval n.1: [225.72, 225.92]
  - \* y\_true: [26.53150038]
  - \* v\_ann: [23.036958694458008, 28.699883785023793]

---

- Time interval n.2: [225.92, 226.12]
  - \* y\_true: [24.06160729]

```
* v_ann: [22.736984252929688, 28.699883785023793]
```

---

```
- Time interval n.3: [226.12, 226.32]
* y_true: [23.65186694]
* v_ann: [22.955825805664062, 28.699883785023793]
```

---

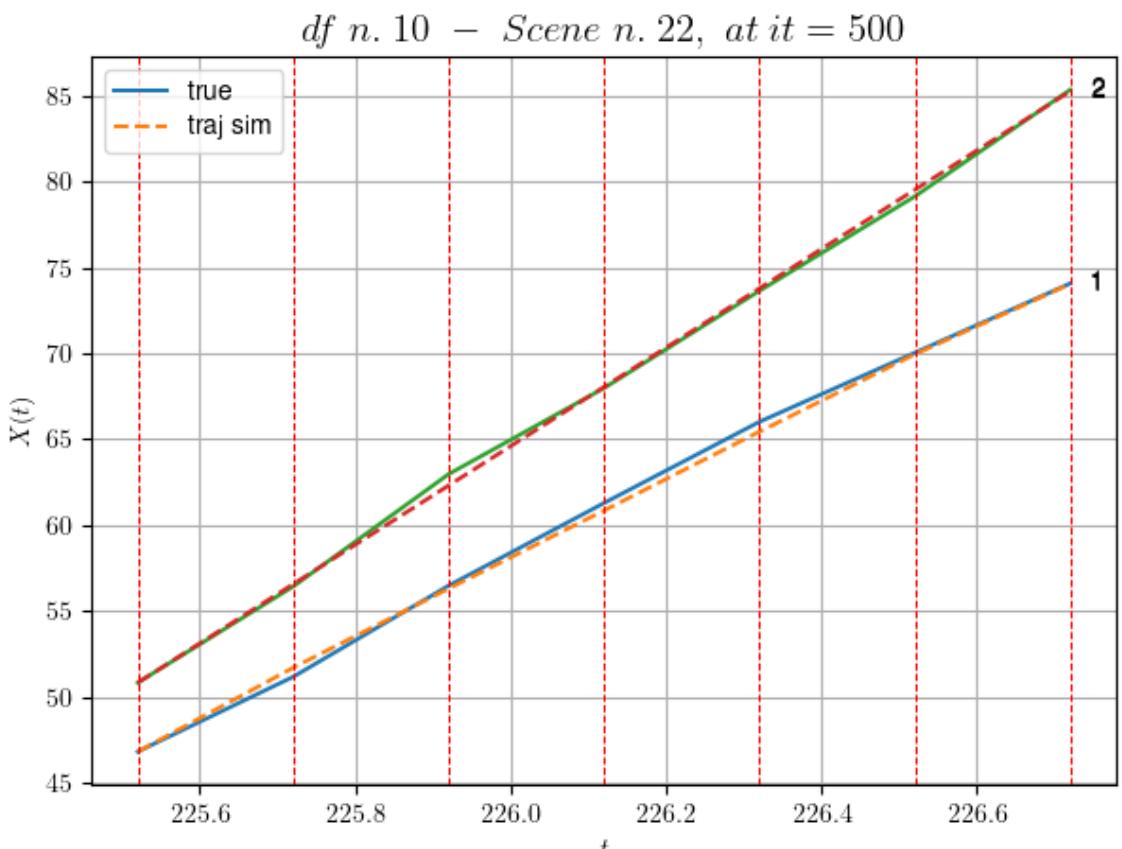
```
- Time interval n.4: [226.32, 226.52]
* y_true: [20.10178236]
* v_ann: [22.52332878112793, 28.699883785023793]
```

---

```
- Time interval n.5: [226.52, 226.72]
* y_true: [20.18204216]
* v_ann: [20.464452743530273, 28.699883785023793]
```

---

```
* err= 0.1054797472126935
* Learning rate NN = 0.00015690525469835848
* diff = 0.0032665005208091374
```



For scene 22/74

```
* use LR_NN=0.0005 with err=6.658831394168805 at it=24
* v0_scn_mean = 28.75188843361279
* MAE = 0.1054797472126935
```

df n.10, scene n.23/74

We have 2 time intervals inside [235.52, 235.92]

- Time interval n.0: [235.52, 235.72]

\* y\_true: [29.10171425]

\* v ann: [22.983686447143555, 26.569531373914916]

- Time interval n.1: [235.72, 235.92]

\* y\_true: [19.25133961]

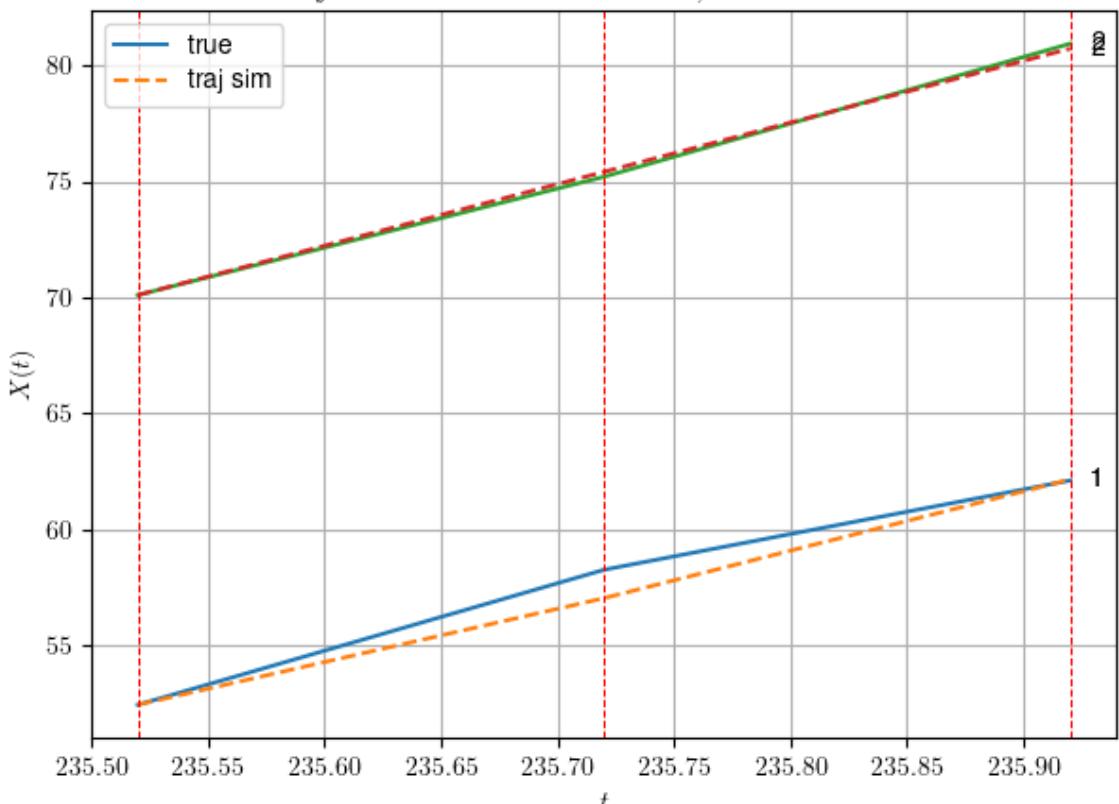
\* v ann: [25.594154357910156, 26.569531373914916]

\* err= 0.2650497022896908

\* Learning rate NN = 7.289998757187277e-05

\* diff = 0.005058106064383283

*df n. 10 – Scene n. 23, at it = 500*



For scene 23/74

\* use LB NN=0.0001 with err=0.510214931283941 at it=24

\* v0 scn mean = 26.7067501189314

\* MAE = 0.2650497022896908

df n 10 scene n 24/74

We have 4 time intervals inside [264.12, 264.92]

- Time interval n.0: [264.12, 264.32]
    - \* y\_true: [13.05791248]
    - \* v\_ann: [20.139705657958984, 23.452291910893027]
- 

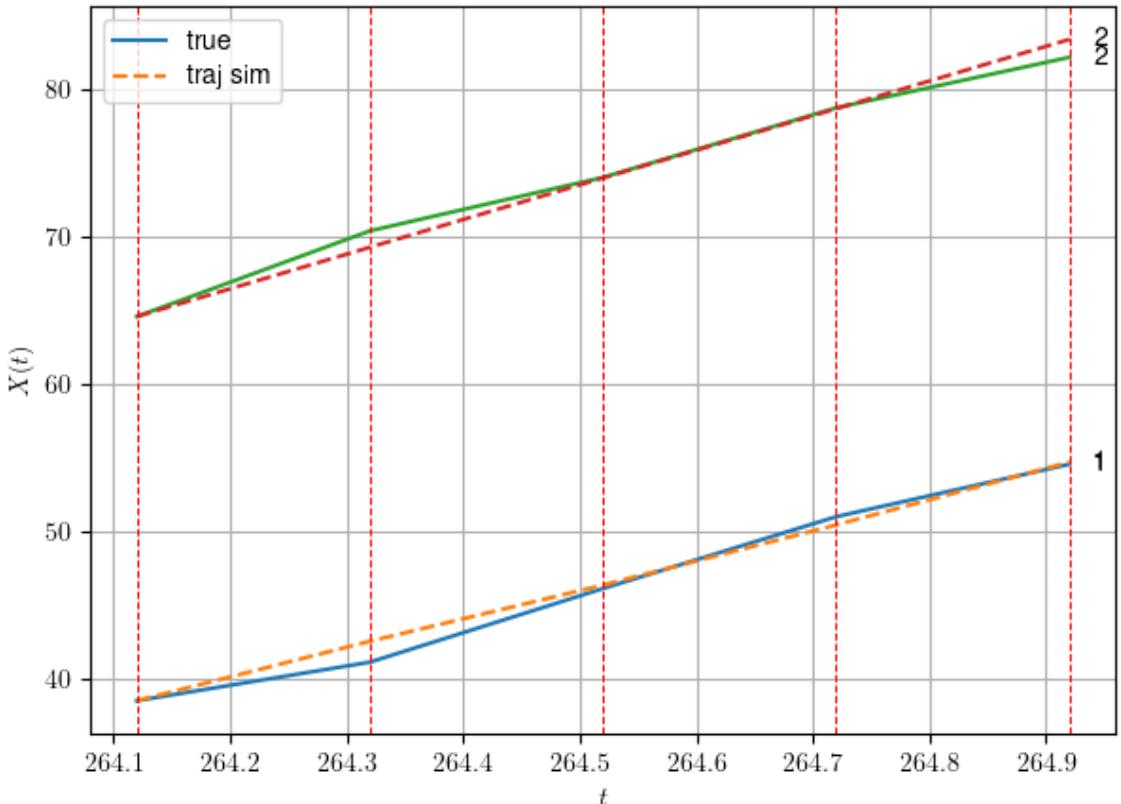
- Time interval n.1: [264.32, 264.52]
    - \* y\_true: [24.93096209]
    - \* v\_ann: [19.014806747436523, 23.452291910893027]
- 

- Time interval n.2: [264.52, 264.72]
    - \* y\_true: [24.31109264]
    - \* v\_ann: [20.359756469726562, 23.452291910893027]
- 

- Time interval n.3: [264.72, 264.92]
    - \* y\_true: [17.76095889]
    - \* v\_ann: [21.29362678527832, 23.452291910893027]
- 

\* err= 0.509468778281644  
 \* Learning rate NN = 2.3914839403005317e-05  
 \* diff = 0.00025264010726252

*df n. 10 – Scene n. 24, at it = 500*



For scene 24/74

- \* use LR\_NN=5e-05 with err=6.500203631913124 at it=24
- \* v0\_scn\_mean = 23.71420023440738
- \* MAE = 0.5084012865343875

```
=====
=====

df n.10, scene n.25/74
=====

We have 6 time intervals inside [275.92,277.12]
- Time interval n.0: [275.92, 276.12]
 * y_true: [3.81567404]
 * v_ann: [16.979936599731445, 19.051410226526585]

- Time interval n.1: [276.12, 276.32]
 * y_true: [18.48916658]
 * v_ann: [16.339170455932617, 19.051410226526585]

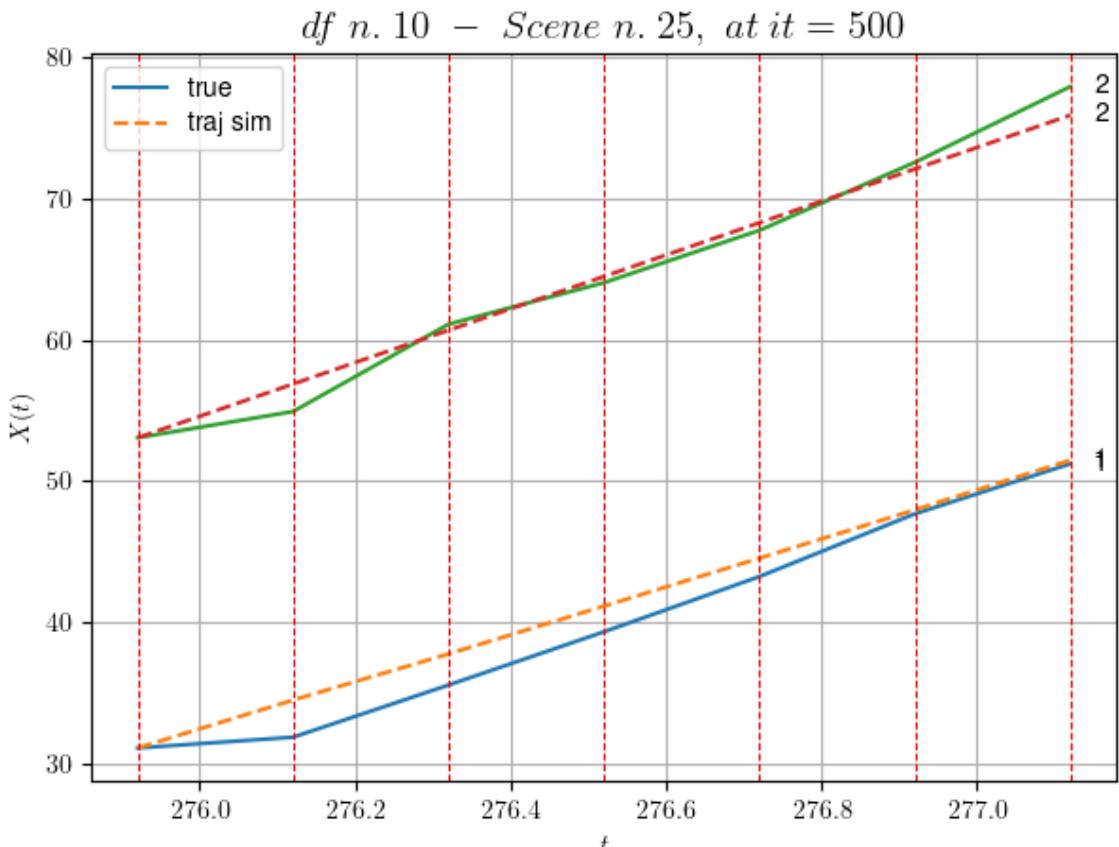
- Time interval n.2: [276.32, 276.52]
 * y_true: [18.87049839]
 * v_ann: [16.9681339263916, 19.051410226526585]

- Time interval n.3: [276.52, 276.72]
 * y_true: [19.57064874]
 * v_ann: [16.96633529663086, 19.051410226526585]

- Time interval n.4: [276.72, 276.92]
 * y_true: [22.23088263]
 * v_ann: [17.13408088684082, 19.051410226526585]

- Time interval n.5: [276.92, 277.12]
 * y_true: [17.74082471]
 * v_ann: [17.622060775756836, 19.051410226526585]

* err= 1.8401958661300375
* Learning rate NN = 1.5690524378442205e-05
* diff = 0.00010138300015006175
```



For scene 25/74

- \* use LR\_NN=5e-05 with err=29.628903554620965 at it=24
  - \* v0\_scn\_mean = 19.489353817381414
  - \* MAE = 1.6690677461330403
- 
- 

df n.10, scene n.26/74

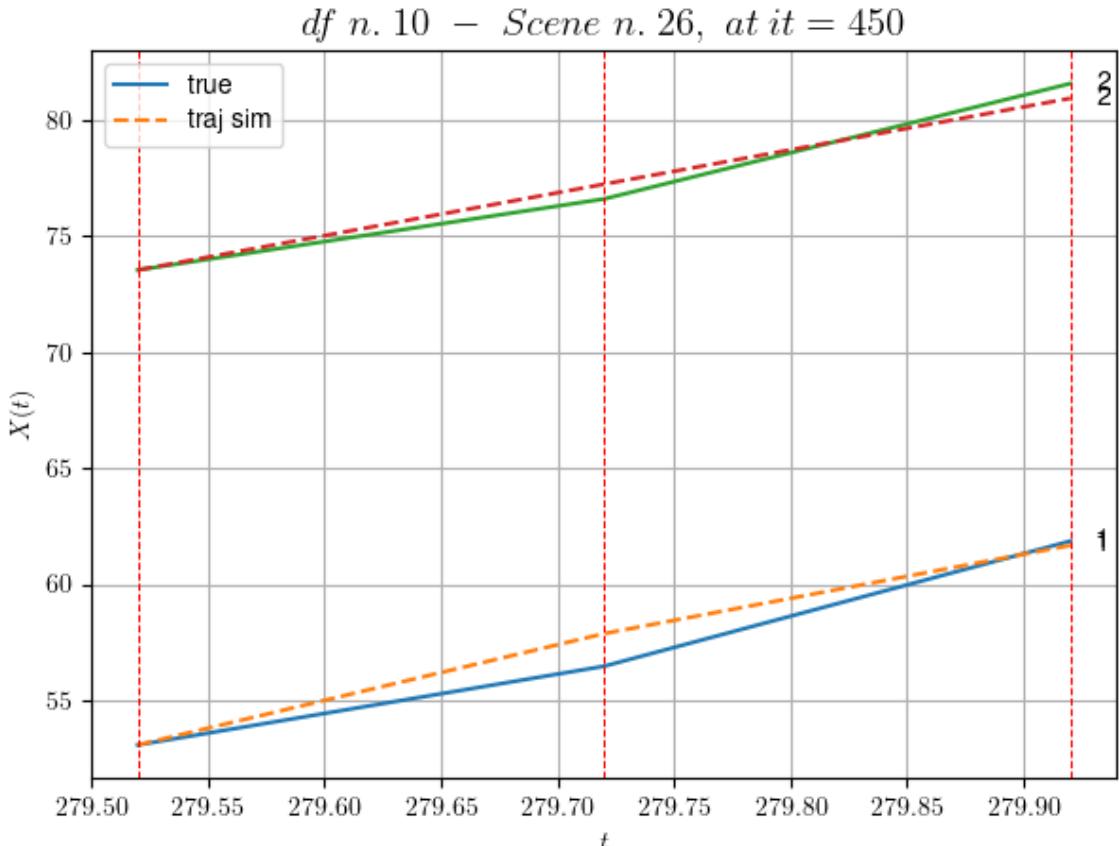
---



---

We have 2 time intervals inside [279.52, 279.92]

- \* err= 0.4698761206051385
- \* Learning rate NN = 0.00036449998151510954
- \* diff = 1.8118087330432076e-07



For scene 26/74

- \* use LR\_NN=0.0005 with err=4.518544169252433 at it=24
- \* v0\_scn\_mean = 18.9972030877838
- \* MAE = 0.447243026721058

---



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df n.10, scene n.27/74

---



---

We have 4 time intervals inside [282.72, 283.52]

- Time interval n.0: [282.72, 282.92]
  - \* y\_true: [12.52227184]
  - \* v\_ann: [12.151496887207031, 23.180355370996622]

---

- Time interval n.1: [282.92, 283.12]
  - \* y\_true: [6.92983149]
  - \* v\_ann: [9.005041122436523, 23.180355370996622]

---

- Time interval n.2: [283.12, 283.32]
  - \* y\_true: [15.03956301]
  - \* v\_ann: [11.60794734954834, 23.180355370996622]

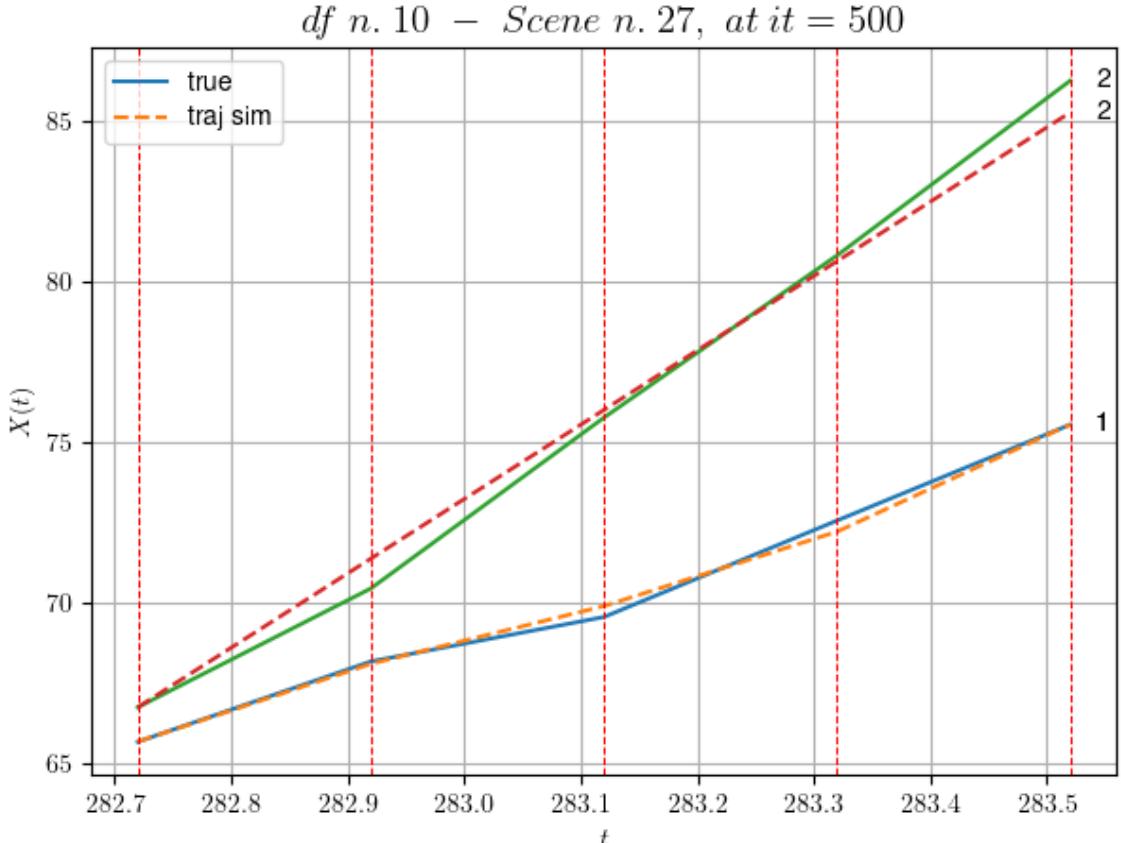
---

- Time interval n.3: [283.32, 283.52]
  - \* y\_true: [14.95156792]

```
* v_ann: [16.70587921142578, 23.180355370996622]
```

---

```
* err= 0.21795057216405875
* Learning rate NN = 0.002391484100371599
* diff = 9.484336375095714e-05
```



For scene 27/74

```
* use LR_NN=0.005 with err=6.156969428823525 at it=24
* v0_scn_mean = 23.453141156105396
* MAE = 0.21795057216405875
```

---



---

df n.10, scene n.28/74

---



---



---



---

We have 10 time intervals inside [298.32, 300.32]

- Time interval n.0: [298.32, 298.52]
  - \* y\_true: [21.88077662]
  - \* v\_ann: [20.888891220092773, 14.578703915530594]

---



---

- Time interval n.1: [298.52, 298.72]
  - \* y\_true: [11.89969318]
  - \* v\_ann: [13.835941314697266, 14.578703915530594]

---



---

- Time interval n.2: [298.72, 298.92]

```
* y_true: [4.14685101]
* v_ann: [13.534466743469238, 14.578703915530594]

- Time interval n.3: [298.92, 299.12]
* y_true: [3.95017947]
* v_ann: [18.988840103149414, 14.578703915530594]

- Time interval n.4: [299.12, 299.32]
* y_true: [26.59410461]
* v_ann: [24.988876342773438, 14.578703915530594]

- Time interval n.5: [299.32, 299.52]
* y_true: [23.13143368]
* v_ann: [22.52397918701172, 14.578703915530594]

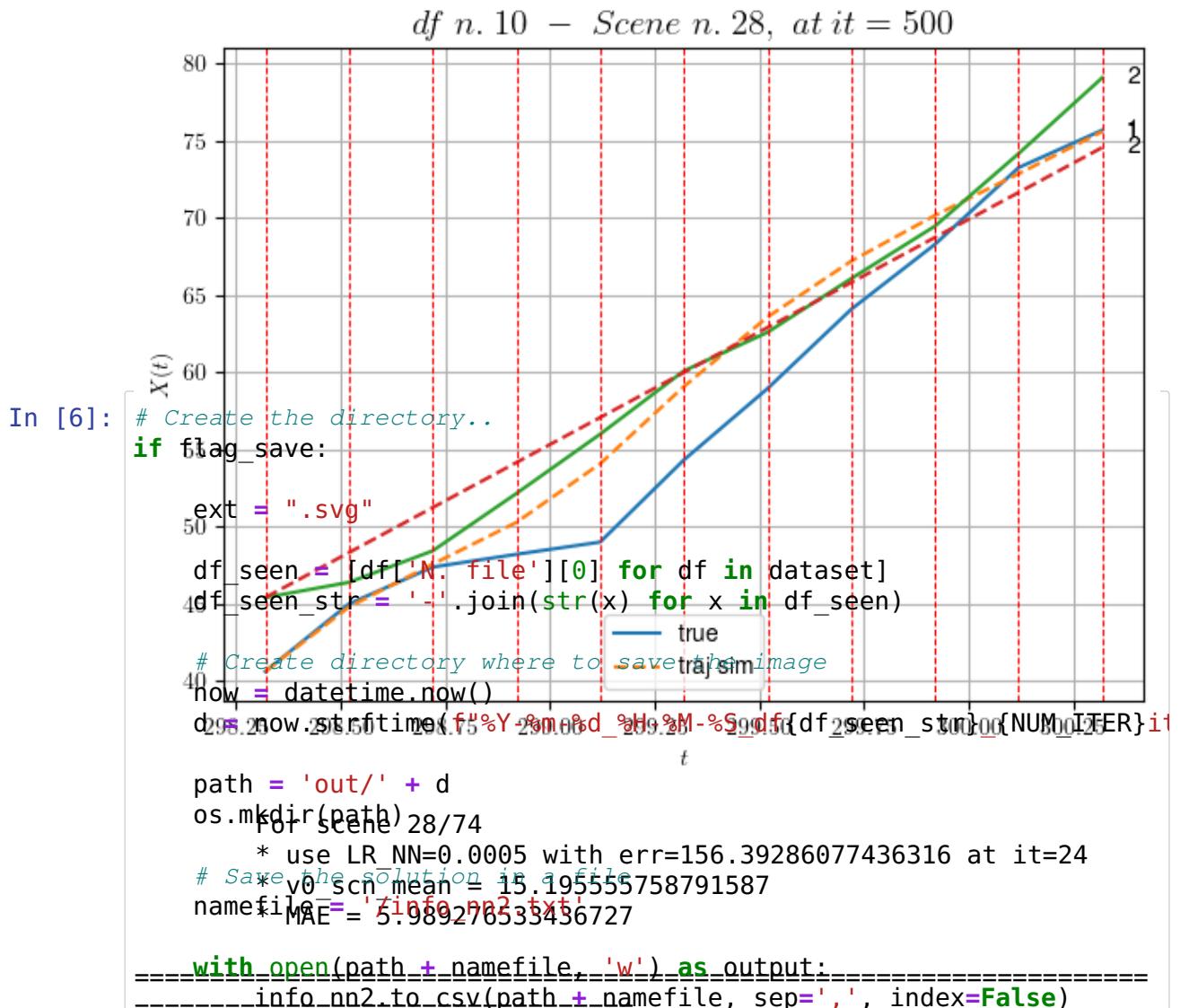
- Time interval n.6: [299.52, 299.72]
* y_true: [25.67184851]
* v_ann: [18.123043060302734, 14.578703915530594]

- Time interval n.7: [299.72, 299.92]
* y_true: [21.03179268]
* v_ann: [14.797891616821289, 14.578703915530594]

- Time interval n.8: [299.92, 300.12]
* y_true: [24.87385504]
* v_ann: [13.511194229125977, 14.578703915530594]

- Time interval n.9: [300.12, 300.32]
* y_true: [12.13130693]
* v_ann: [13.638287544250488, 14.578703915530594]

* err= 5.991615504379471
* Learning rate NN = 6.754255446139723e-05
* diff = 0.02063319792853946
```



df n.10, scene n.29/74

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---

We have 4 time intervals inside [303.52,304.32]  
 - Time interval n.0: [303.52, 303.72]  
 \* .. +-----+-----+-----+-----+













































































































