

```
In [1]: run -i BPL_TEST2_Batch_explore.py
```

Windows - run FMU pre-compiled JModelica 2.14

Model for bioreactor has been setup. Key commands:

- par() - change of parameters and initial values
- init() - change initial values only
- simu() - simulate and plot
- newplot() - make a new plot
- show() - show plot from previous simulation
- disp() - display parameters and initial values from the last simulation
- describe() - describe culture, broth, parameters, variables with values / units

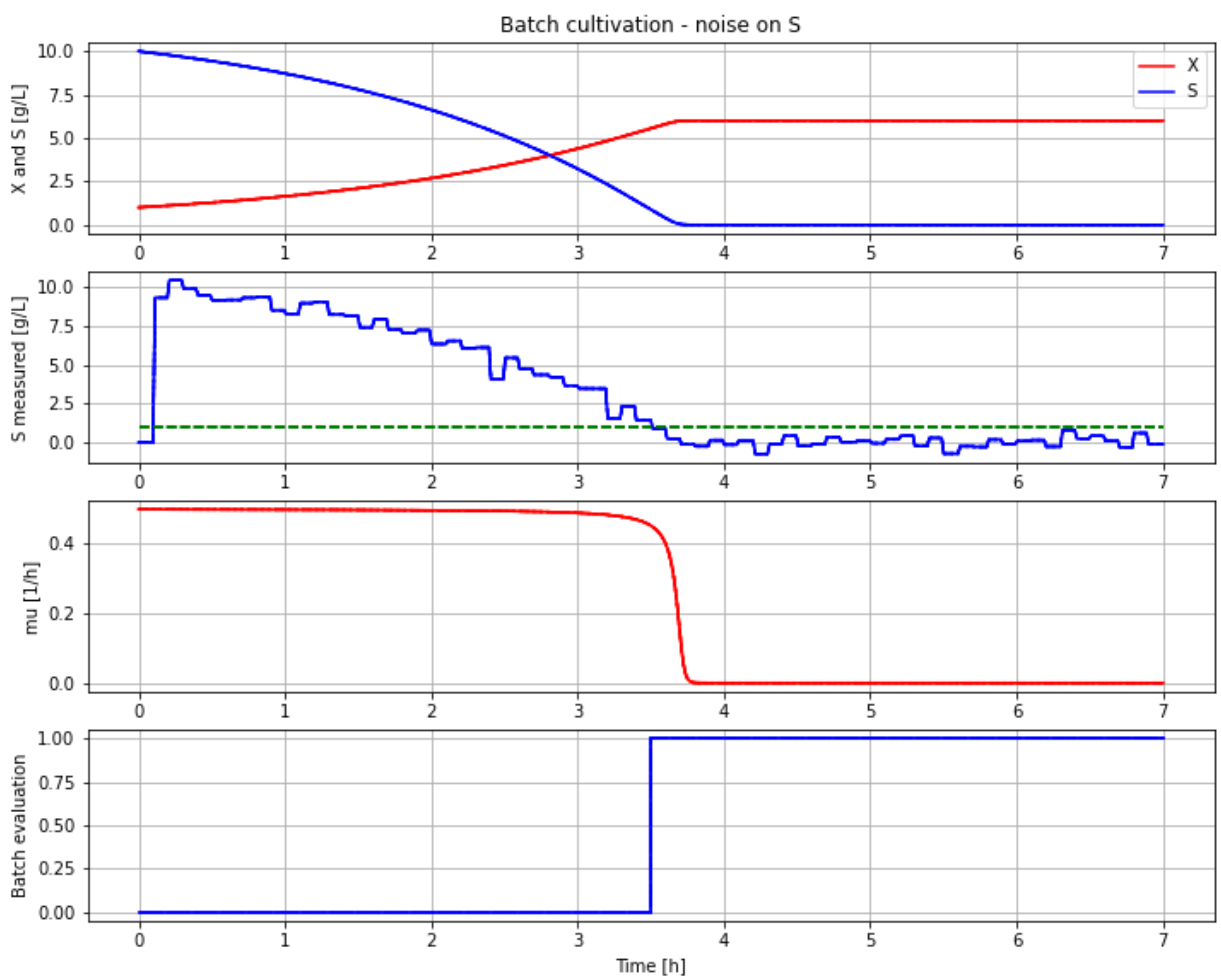
Note that both disp() and describe() takes values from the last simulation

Brief information about a command by help(), eg help(simu)

Key system information is listed with the command system_info()

```
In [2]: plt.rcParams['figure.figsize'] = [30/2.54, 24/2.54]
```

```
In [9]: newplot()
        par(sigma=0.4)
        for k in [1,2,3,4,5]: simu(7)
```



```
In [4]: describe('parts')
```

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['bioreactor', 'bioreactor.culture', 'liquidphase', 'monitor', 'MSL', 'sensor', 'temp_4', 'temp_5', 'temp_6', 'temp_7']
```

In [5]:

```
system_info()
```

System information

- OS: Windows
- Python: 3.9.5
- PyFMI: 2.9.5
- FMU by: JModelica.org
- FMI: 2.0
- Type: FMUModelCS2
- Name: BPL_TEST2.BatchWithNoise
- Generated: 2022-09-03T14:55:44
- MSL: 3.2.2 build 3
- Description: Bioprocess Library version 2.1.0 beta
- Interaction: FMU-explore ver 0.9.2

In []: