fitFilter2Data: Reports from self-test

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Contents

Tests for fitFilter2Data

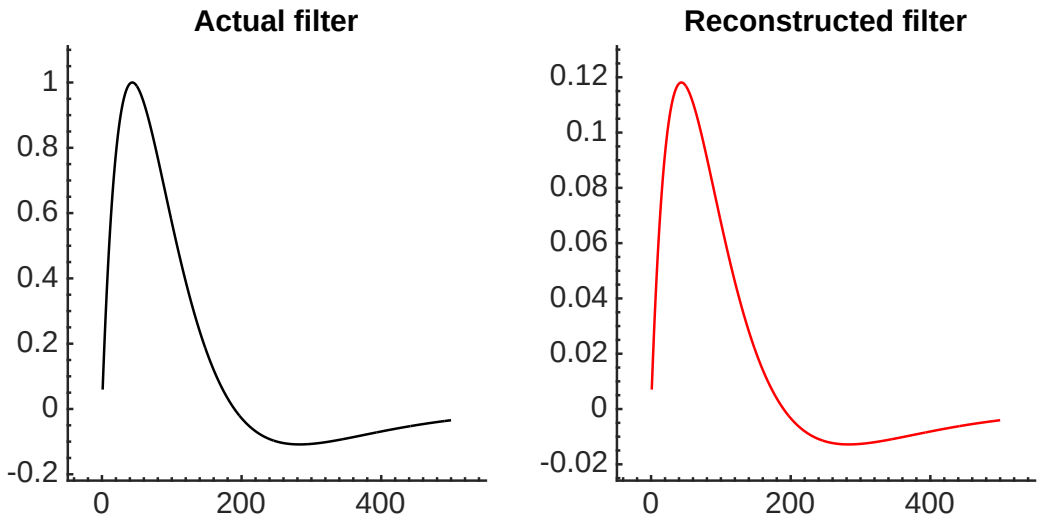
This document runs tests for fitFilter2Data. Run the tests and generate a report using

```
makePDF('tests.m')
```

1. White Noise Inputs, No Noise

In this section, we test the simplest possible case: white noise inputs, no additional noise, with a bilobed filter. This test passes if the backed out filter (red) and the actual filter (black) match perfectly (shapewise).

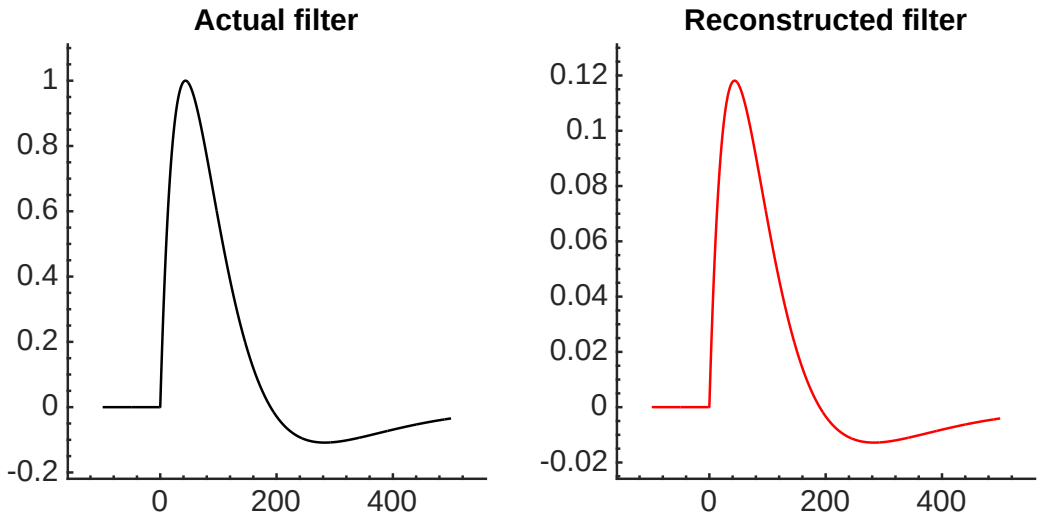
```
test 1 passed
```



2. Offset

We now want to backout a filter allowing for some offset, as we want to mimic a case where there is an unknown lag in the signal we feed to the filter estimation routines.

```
test 2 passed
```

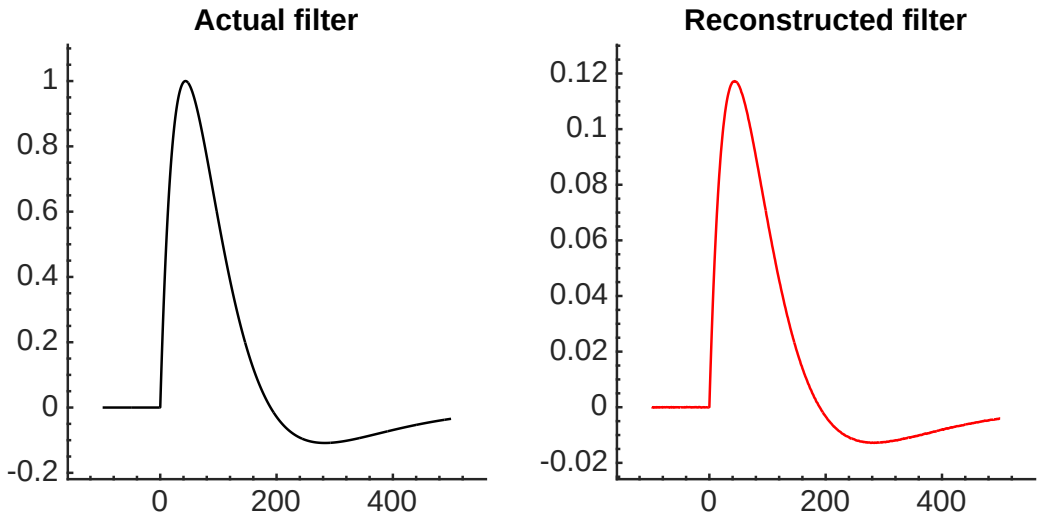


3. Only Some Points

We now want to back out the filter, using only data from only some time points. These time points can be arbitrarily picked from the data, and there is no requirement for continuity of any sort. The purpose of this test is to make sure that filter extraction works when we force it to work only with an arbitrary subset of the data.

To prevent fitFilter2Data from using some points in time, simply set the response at those times to NaN. fitFilter2Data will ignore them.

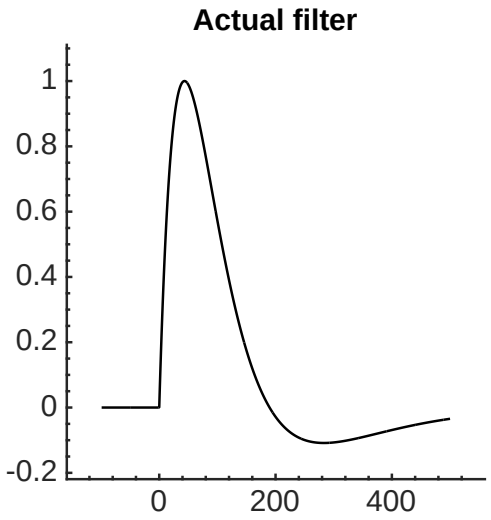
```
test 3 passed
```

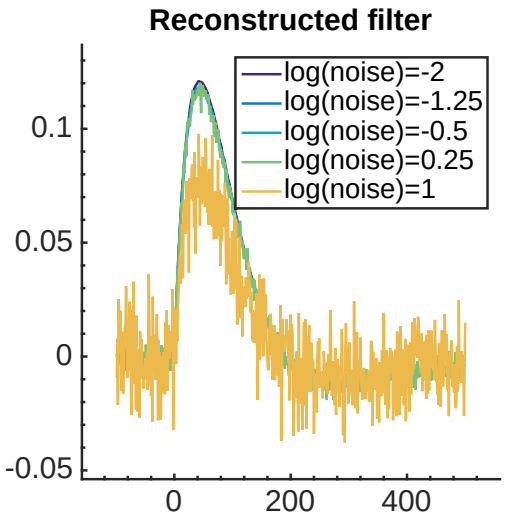


4. Only Some Points, Offset, Additive Noise

Now, we repeat the same test, but add some Gaussian noise to the output before backing out the filter.

```
l =

   21.0024


l =

   21.0024   22.0024


l =

   21.0024   22.0024   23.0024


l =

   21.0024   22.0024   23.0024   24.0024


l =

   21.0024   22.0024   23.0024   24.0024   25.0024

test 4 passed
```





Version Info

The file that generated this document is called:

```
tests
```

and its md5 hash is:

```
e06fcfb1588a3f6a6bb774f7808654e1
```

This file should be in this commit:

```
6ed5ff194921dbaf14a0852ece19796a03e7caa4
```

This document was built in:

```
4.06 seconds.
```