

Matlab Functions for Support of Fly Data

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FLYDATA format I/O

Function **a=readfly(dirname)**

Reads data from FLYDATA.* files obtained from the data collection station.

dirname

Name of the directory where the FLYDATA.* files are located. Use '.' for the current directory.

a

Matrix *a* is output which has one row per FLYDATA file, which means that each column will have a well and each row will have a time frame.

Reading starts with FLYDATA.001 and stops when a file is found which has a different number of wells than the previous ones, so the output is a square matrix.

Processing

Function **b=fly_shuffle(a)**

Uses Matlab's *randperm* function to shuffle the columns of a fly matrix. Note: Every well is shuffled with identical permutation.

a

A fly data matrix (one well per column) to be shuffled

b

Shuffled data matrix, one well per column.

Dusty Dowse Compatibility

Function `a=dusty_read(filename)`

Reads a data matrix from Dusty's "RAW" format

filename

Name of the file to be read.

a

The output is square matrix *a* with a well per column (so column 1 is well 1, etc.).

File Format

Dusty's format looks like

```
Well  1 (%3d)
      x1 (%16.6f)
      x2
      ...
      -5000.0
Well  2
...
END
```

Function `dusty_save(a,filename)`

Writes a data matrix into a file with Dusty's "Raw" format.

a

Data matrix with one column per well.

filename

Name of the new file Matlab will create this file in Dusty's "raw" format.