# Package 'flash'

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**Type** Package

**Title** Title Case

**Version** 0.1

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**Description** More about what it does (maybe more than one line)

**License** GPL

**LazyData** TRUE

**NeedsCompilation** no

## R topics documented:



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`flash_VEM` *Multivariate Adaptive Shrinkage (original version)*

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### Description

mvash provide adaptive shrinkage estimation of effect size for correlated data

### Usage

```
flash_VEM(Y, tol = 1e-06, numtau = 500)
```

### Arguments

| | |
|---|---|
| `Y` | zzz |
| `tol` | zzz |
| `numtau` | zzz |

## Details

mvash provide shrinkage estimation of effect size for correlated data with mixed normal prior of which the grids (standard deviation) are predefined. The proportion for each component in the prior can be initialized as arbitury value. In updating the parameters and hyper parameters, mvash uses Variantional Bayes procedure.

## Value

list of posterior mean, standard deviation, proportion for each mixed component and the estimation of the hyper patameters pi_hat in the prior

- `mu` is a P by K matrix of posterior mean for each gene on each component
- `s` is a P by K matrix of posterior standard deviation for each gene on each component
- `alpha` is a P by K matrix of posterior proportion for each gene on each component
- `pihat` is a estimation for the hyper parameters pi in the prior which the proportion for each fixed grids.

## Examples

```
NULL
```

# Index