Latent Variable Example

This example shows the relationship between the X loadings from the SIMPLS algorithm and the latent variables.

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```
load pnnl_napalm_data
```

Compute the mean-centered X loadings from the mean-centered SIMPLS algorithm.

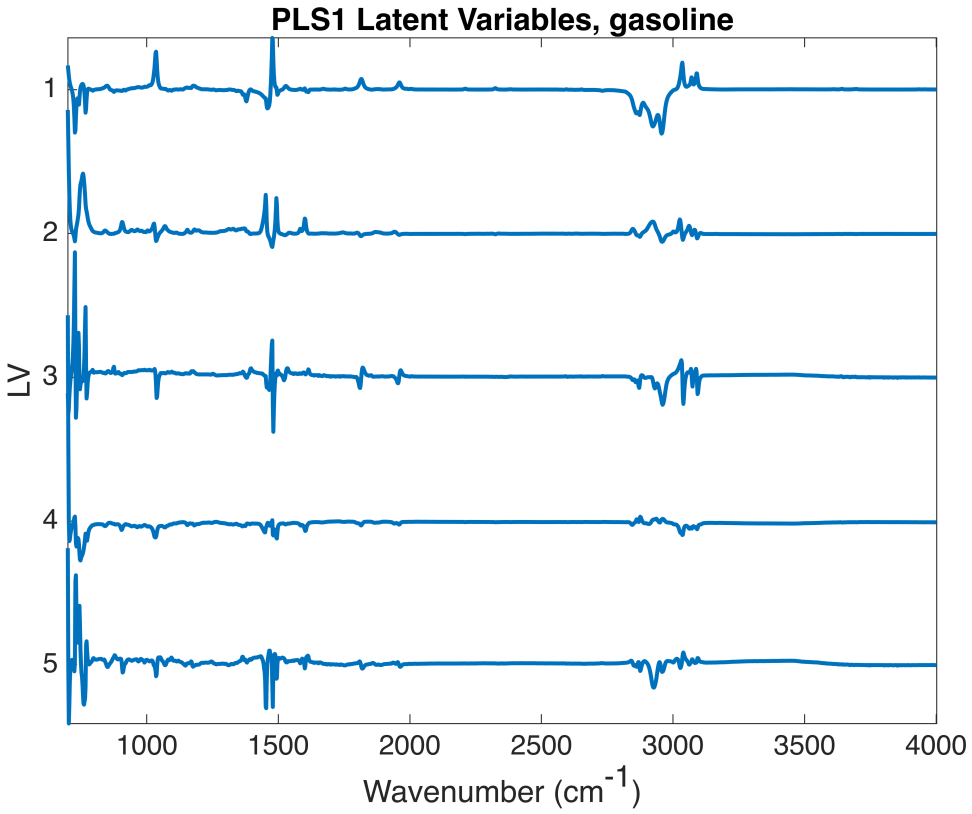
```
nLatentVariables = 10;

X = A_train;
Y = C_train;

X0 = X - mean(X,1);
Y0 = Y - mean(Y,1);

[X_loadings, Y_loadings, X_scores, Y_scores, Weights] = pnnl_simpls(X0, Y0, nLatentVar
```

The latent variables (LV) are the rectified and normalized X loadings from the SIMPLS algorithm. The X loadings are column-oriented, so transpose them so the latent variables will be row-oriented.

```
LV = pnnl_normalize_rows(pnnl_rectify_rows(X_loadings'));
```

Plot the first five loadings

```
pnnl_strip_plot(Wavenumbers,LV(1:5,:),'PLS1 Latent Variables, gasoline',WavenumberLabe
```



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