Alignment Update

- We can add measurements to millepede steering file, which specify a measured value and its uncertainty.
  - I still need to propagate measurement error from survey into error in individual alignment parameters.
  - Helps to "fix" the z-locations of the modules.

```
Measurement    value    sigma
label    factor
...
label    factor
```

- I am going to attempt to recover zero alignment with most parameters free and estimates of the the measurement error.

- Try random shifts/rotations in multiple modules and try to recover those parameters.

Changed local coordinate system

In original local coordinates, small errors in rotational parameters would lead to large systematic errors in the translational parameters.

+v (local)

γ

+u (local)

+v (local)

γ

+u (local)

+v (local)

γ

+u (local)

+v (local)

γ

+u (local)

3