
RTA Update

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AG ALbrecht

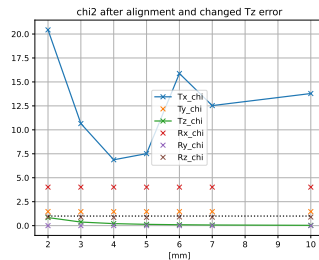
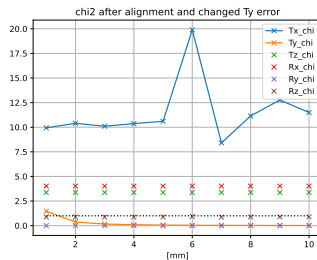
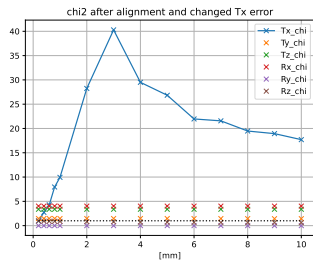
Strategy:

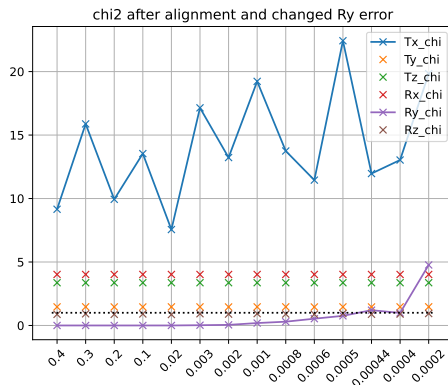
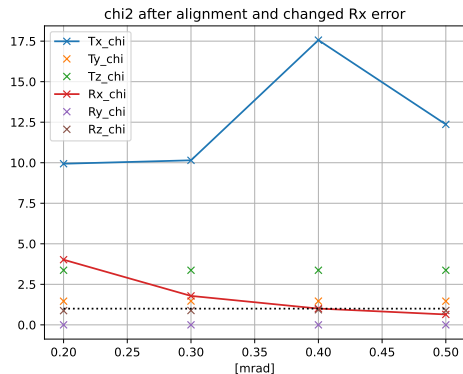
- start with Tx
- change the uncertainty of Tx incrementally for the joint constraint
- run alignment and calculate χ^2/dof

setup to analyze χ^2 values:

uncertainties are filled to diagonal cov matrix

in "AlignChisqConstraintTool.cpp"
calculate χ^2 value for each dof





v3: 0.0002, 0.002, 0.002, 0.0002, 0.0002, 0.0002

v4: 0.00018, 0.0015, 0.0018, 0.0004, 0.00000044, 0.00019

V3:

V4:

```
Total chi2 of joint constraints: 5686.63/768
chi2 values for each degree of freedom:
Tx_chi2: 929.93/768
Ty_chi2: 281.628/768
Tz_chi2: 646.689/768
Rx_chi2: 3086.38/768
Ry_chi2: 0.00367752/768
Rz_chi2: 741.996/768
Number of alignables with insufficient statistics: 1
Number of lagrange constraints: 0
Number of chisq constraints: 1536
Number of active parameters: 510
Time to compute solution [ms]: 291.488
Error2: 1.21187e-07
Alignment delta chisquare/dof: 527.768 / 510
Normalised alignment change chisquare: 1.03484
Alignment delta chisquare/track dof: 0.000399639
Alternative total chisq: 527.768
```

```
Total chi2 of joint constraints: 4455.47/768
chi2 values for each degree of freedom:
Tx_chi2: 808.522/768
Ty_chi2: 500.402/768
Tz_chi2: 798.382/768
Rx_chi2: 771.595/768
Ry_chi2: 757.168/768
Rz_chi2: 819.404/768
Number of alignables with insufficient statistics: 1
Number of lagrange constraints: 0
Number of chisq constraints: 1536
Number of active parameters: 510
Time to compute solution [ms]: 293.011
Error2: 5.66756e-08
Alignment delta chisquare/dof: 331.709 / 510
Normalised alignment change chisquare: 0.65041
Alignment delta chisquare/track dof: 0.000202842
Alternative total chisq: 331.709
```