ICI-4 Fluxgate Data Analysis

# Things to do:

|  |  |  |
| --- | --- | --- |
| Objective | Needs | File Output |
| Release data in sensor coordinates |  |  |
| Release data in rocket coordinates |  |  |
| Releae data in despun coordinates |  |  |
| Calibration coefficients that minimise spin tone |  |  |
| Dynamic spectra with appropriate zoom |  |  |
| Successive welch periodograms looking for kink in PSD |  |  |
| Timeseries of despun data |  |  |
|  |  |  |

# Launch conditions

Launched at: 19.02.2015:22:06:41 UT,

# Attitude solution from Andoya Space Center

Host: [ftp.andoyaspace.no](ftp://ftp.andoyaspace.no)

Username: ici4

Password: "nugatti eller nutella"

Placed in ici4tools/trunk/asc\_attitude

# Result of fitting to IGRF to get calibrations and offsets

Fitting first order function:

FitStatus was 0 after 4 of 50.

YError was 10690764.

XCoeffA = 0

XCoeffB = 0

XCoeffC = -6.1543220e-005

XCoeffD = -1822.0770

YCoeffA = 0

YCoeffB = 0

YCoeffC = -6.0385812e-005

YCoeffD = 1005.4226

ZCoeffA = 0

ZCoeffB = 0

ZCoeffC = -8.3632942e-005

ZCoeffD = -408.56424

Fitting second order function:

FitStatus was 0 after 6 of 50.

YError was 10660260.

XCoeffA = 0

XCoeffB = 5.1781678e-016

XCoeffC = -6.1490307e-005

XCoeffD = -1872.6825

YCoeffA = 0

YCoeffB = 3.0574379e-015

YCoeffC = -6.4699347e-005

YCoeffD = 2525.1808

ZCoeffA = 0

ZCoeffB = 2.2917662e-016

ZCoeffC = -8.3679586e-005

ZCoeffD = -423.49710

Fitting third order function:

FitStatus was 0 after 9 of 50.

YError was 10481157.

XCoeffA = -1.1445452e-024

XCoeffB = 3.5585494e-016

XCoeffC = -6.1107862e-005

XCoeffD = -1839.2975

YCoeffA = -3.2779341e-022

YCoeffB = 6.8683474e-013

YCoeffC = -0.00053869049

YCoeffD = 111655.67

ZCoeffA = -9.3641089e-025

ZCoeffB = 1.8781399e-016

ZCoeffC = -8.3278609e-005

ZCoeffD = -430.94505

Coordinates of the rocket frame



Before the boom is deployed Sensor X looks to be Spacecraft X

After the boom is deployed Sensor -Y looks to be Spacecraft X

Before and after SC Z is Sensor Z