



BQD-006

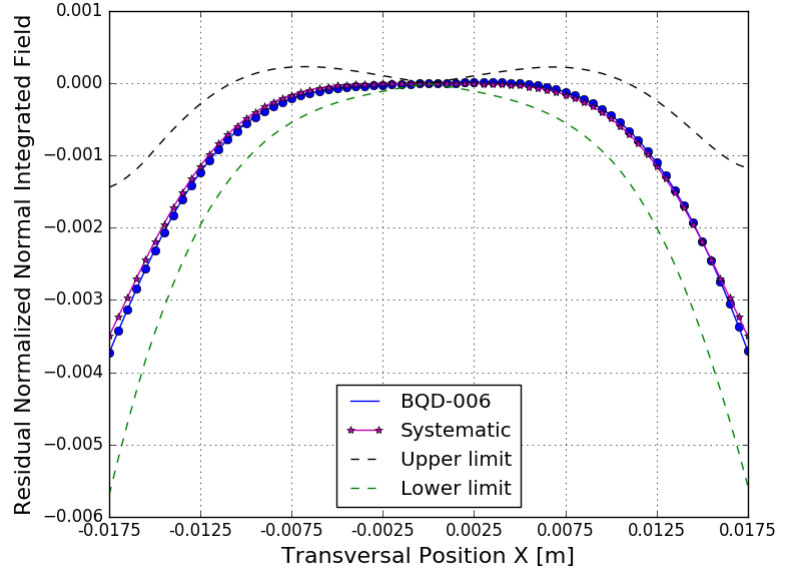
## BOOSTER MAGNET REPORT

### Results

|                                                              |                                         |
|--------------------------------------------------------------|-----------------------------------------|
| Date                                                         | 04/05/2016                              |
| Hour                                                         | 15:44:41                                |
| Temperature [°C]                                             | 23.2                                    |
| Number of Measurements                                       | 17                                      |
| Main Coil Current [A]                                        | $(31.9804 \pm 0.0004)$                  |
| Trim Coil Current [A]                                        | $(0 \pm 0)$                             |
| Integrated Gradient [T]                                      | $(-5.30946 \pm 0.00006) \times 10^{-1}$ |
| Magnet Center Offset X [ $\mu\text{m}$ ] - ( $< \pm 160.0$ ) | $(6.09 \pm 0.08)$                       |
| Magnet Center Offset Y [ $\mu\text{m}$ ] - ( $< \pm 160.0$ ) | $(-25.6 \pm 0.2)$                       |
| Roll [mrad] - ( $< \pm 0.8$ )                                | $(-4.2 \pm 0.2) \times 10^{-1}$         |

### Electric Parameters

|                                 |        |
|---------------------------------|--------|
| Inductance [mH]                 | 3.692  |
| Voltage [V]                     | 0.2762 |
| Resistance [ $\text{m}\Omega$ ] | 27.62  |
| Main Coil Number of Turns       | 27.5   |



| n              | Normalized Normal Multipoles<br>$x=17.5 \text{ mm}$<br>[ $\text{T}\cdot\text{m}^{(2-n)}$ ] | Normalized Skew Multipoles<br>$x=17.5 \text{ mm}$<br>[ $\text{T}\cdot\text{m}^{(2-n)}$ ] |
|----------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 1 (dipole)     | $(3.48 \pm 0.05) \times 10^{-4}$                                                           | $(-1.47 \pm 0.01) \times 10^{-3}$                                                        |
| 2 (quadrupole) | $(1.00000 \pm 0.00001)$                                                                    | $(-8.3 \pm 0.1) \times 10^{-4}$                                                          |
| 3 (sextupole)  | $(1.19 \pm 0.07) \times 10^{-4}$                                                           | $(-1.12 \pm 0.01) \times 10^{-3}$                                                        |
| 4              | $(-3.4 \pm 0.8) \times 10^{-5}$                                                            | $(10 \pm 1) \times 10^{-5}$                                                              |
| 5              | $(-7 \pm 1) \times 10^{-5}$                                                                | $(9 \pm 1) \times 10^{-5}$                                                               |
| 6              | $(-4.67 \pm 0.01) \times 10^{-3}$                                                          | $(-8 \pm 2) \times 10^{-5}$                                                              |
| 7              | $(5 \pm 1) \times 10^{-5}$                                                                 | $(2 \pm 1) \times 10^{-5}$                                                               |
| 8              | $(-5 \pm 1) \times 10^{-5}$                                                                | $(-4 \pm 2) \times 10^{-5}$                                                              |
| 9              | $(-3 \pm 1) \times 10^{-5}$                                                                | $(-7 \pm 2) \times 10^{-5}$                                                              |
| 10             | $(1.18 \pm 0.02) \times 10^{-3}$                                                           | $(-5 \pm 1) \times 10^{-5}$                                                              |
| 11             | $(-3.19 \pm 171.73) \times 10^{-7}$                                                        | $(-5 \pm 1) \times 10^{-5}$                                                              |
| 12             | $(-3 \pm 1) \times 10^{-5}$                                                                | $(-2 \pm 2) \times 10^{-5}$                                                              |
| 13             | $(-4 \pm 2) \times 10^{-5}$                                                                | $(-5 \pm 2) \times 10^{-5}$                                                              |
| 14             | $(-1.2 \pm 0.3) \times 10^{-4}$                                                            | $(-5 \pm 2) \times 10^{-5}$                                                              |
| 15             | $(-1 \pm 2) \times 10^{-5}$                                                                | $(-8 \pm 2) \times 10^{-5}$                                                              |

