

APPENDIX A. PARAMETERS USED FOR 3D INVERSIONS

Table A1. Common parameters performed for all inverse modelings.

Table A2. Common parameters for all Bairro da Cruz inversions.

Table A3. ASVI-TMA inversion for Bairro da Cruz.

Table A4. TMA inversion for Bairro da Cruz.

Table A5. VIAS-TMA inversion for Bairro da Cruz.

Table A6. Common parameters for all José Fernandes inversions.

Table A7. ASVI-TMA inversion for José Fernandes.

Table A8. TMA inversion for José Fernandes.

Table A9. VIAS-TMA inversion for José Fernandes.

Table A10. Common parameters for all Tunas inversions.

Table A11. ASVI-TMA inversion for Tunas.

Table A12. TMA inversion for Tunas.

Table A13. VIAS-TMA inversion for Tunas.

Table A1. Common parameters performed for all inverse modelings.

Sensor Elevation Channel	GPSALT
Data Sampling Optimization	Yes
Samples Per Cell	1
IGRF	Date: 2010-11-14
Cell sizes (m)	X = Y = 220, Z = 50
Constraints: Susceptibility	Starting Model Default Value: Default for system Parameter Reference Model Default Value: 0 Gradient Reference Model Default Value: 0 Upper Bounds Model Default Value: 1e+20 Lower Bounds Model Default Value: -1e+20 Parameter Weighting Model Default Value: 0.0001 EW Gradient Weighting Model Default Value: 1 NS Gradient Weighting Model Default Value: 1 Vertical Gradient Weighting Model Default Value: 1 Reweighting model None Active Model Default Value: 1 IRI Focus None Reweighting Model Default Value: 1
Global Settings	Acceleration Radius of Influence (m): 1000000 Computational Error Tolerance: 0.002 Regularization - Auto-Fit Data fit: 1 Attempts: 20

Table A2. Common parameters for all Bairro da Cruz inversions.

IGRF	Field Strength (nT): 22823
Active Volume	Dimension (cells): X = 23 Y = 18 Z = 28 Mínima (m): X = 714746.5 Y = 7249123.3 Z = -1738.1 Maxima (m): X = 719403.2 Y = 7252827.4 Z = 778.3
Base and Padding	Dimension (cells): Base = 18 Horizontal Padding = 5 Vertical Padding = 5 Cell expansion ratios: Base = 1.08 Horizontal Padding = 1.5 Vertical Padding = 1.5
Top of Model	Value: 778.25
Lin-Log Transition	Value: 279.58

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Table A3. ASVI-TMA inversion for Bairro da Cruz.

Sensor channel of database	ASVI_TMA
Fit Error - Absolute	Value: 6.124
Background Trend - Linear	X Origin: 717088.1 Y Origin: 7250978.4 Intercept: 204.54 X Slope: -0.067616 Y Slope: 0.017413
IGRF	Inclination (degrees): 90 Declination (degrees): 0

Table A4. TMA inversion for Bairro da Cruz.

Sensor channel of database	TMA
Fit Error - Absolute	Value: 8.754
Background Trend - Linear	X Origin: 693590.4 Y Origin: 7240456.9 Intercept: 64.356 X Slope: 0.001767 Y Slope: 0.011024
IGRF	Inclination (degrees): -35 Declination (degrees): -19

Table A5. VIAS-TMA inversion for Bairro da Cruz.

Sensor channel of database	VIAS_TMA
Fit Error - Absolute	Value: 11.66
Background Trend - Linear	X Origin: 717088.1 Y Origin: 7250978.4 Intercept: 39.076 X Slope: -0.051989 Y Slope: -0.04967
IGRF	Inclination (degrees): 90 Declination (degrees): 0

Table A6. Common parameters for all José Fernandes inversions.

IGRF	Field Strength (nT): 22818
Active Volume	Dimension (cells): X = 18 Y = 17 Z = 26 Mínima (m): X = 702791.0 Y = 7261846.4 Z = -1458.9 Maxima (m): X = 706423.0 Y = 7265329.6 Z = 749.5
Base and Padding	Dimension (cells): Base = 17 Horizontal Padding = 5 Vertical Padding = 5 Cell expansion ratios: Base = 1.08 Horizontal Padding = 1.5 Vertical Padding = 1.5
Top of Model	Value: 749.5
Lin-Log Transition	Value: 320.32

Table A7. ASVI-TMA inversion for José Fernandes.

Sensor channel of database	ASVI_TMA
Fit Error - Absolute	Value: 12.04
Background Trend - Linear	X Origin: 704562.2 Y Origin: 7263608.9 Intercept: 383.68 X Slope: -0.053629 Y Slope: 0.034857
IGRF	Inclination (degrees): 90 Declination (degrees): 0

Table A8. TMA inversion for José Fernandes.

Sensor channel of database	TMA
Fit Error - Absolute	Value: 15.03
Background Trend - Linear	X Origin: 704562.2 Y Origin: 7263608.9 Intercept: 162.19 X Slope: -0.05891 Y Slope: 0.21127
IGRF	Inclination (degrees): -34.7 Declination (degrees): -19

Table A9. VIAS-TMA inversion for José Fernandes.

Sensor channel of database	VIAS_TMA
Fit Error - Absolute	Value: 20.84
Background Trend - Linear	X Origin: 704562.2 Y Origin: 7263608.9 Intercept: 236.88 X Slope: -0.054994 Y Slope: -0.024392
IGRF	Inclination (degrees): 90 Declination (degrees): 0

Table A10. Common parameters for all Tunas inversions.

IGRF	Field Strength (nT): 22810
Active Volume	Dimension (cells): X = 49 Y = 39 Z = 31 Mínima (m): X = 688184.7 Y = 7236245.0 Z = -2377.0 Maxima (m): X = 698860.6 Y = 7244698.4 Z = 1065.5
Base and Padding	Dimension (cells): Base = 23 Horizontal Padding = 5 Vertical Padding = 5 Mínima (m): Cell expansion ratios: Base = 1.08 Horizontal Padding = 1.5 Vertical Padding = 1.5
Top of Model	Value: 1065.5
Lin-Log Transition	Value: 675.23

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Table A11. ASVI-TMA inversion for Tunas.

Sensor channel of database	ASVI_TMA
Fit Error - Absolute	Value: 8.224
Background Trend - Linear	X Origin: 693590.4 Y Origin: 7240456.9 Intercept: 192.84 X Slope: 0.001085 Y Slope: -0.014093
IGRF	Inclination (degrees): 90 Declination (degrees): 0

Table A12. TMA inversion for Tunas.

Sensor channel of database	TMA
Fit Error - Absolute	Value: 8.754
Background Trend - Linear	X Origin: 693590.4 Y Origin: 7240456.9 Intercept: 64.356 X Slope: 0.001767 Y Slope: 0.011024
IGRF	Inclination (degrees): -34.9 Declination (degrees): -18.9

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Table A13. VIAS-TMA inversion for Tunas.

Sensor channel of database	VIAS_TMA
Fit Error - Absolute	Value: 21.03
Background Trend - Linear	X Origin: 693590.4 Y Origin: 7240456.9 Intercept: 127.15 X Slope: 0.019917 Y Slope: -0.080778
IGRF	Inclination (degrees): 90 Declination (degrees): 0