**Description of the parameters in the MagneticProfileX.csv files in the “Magnetic profiles” folder:**

ts time

X0 X component (magnetometer data)

Y0 Y component (magnetometer data)

Z0 Z component (magnetometer data)

T temperature

lat latitude from a GPS receiver

lon longitude a GPS receiver

tc date and time

d distance

v bicycle's velocity

H horizontal component of the measured geomagnetic field

Z vertical component of the measured geomagnetic field

deltaF raw magnetic anomaly intensity

deltaF2 processed magnetic anomaly intensity

upF150 upward continued data (altitude of 150 m)

**Explanation of the files in the “GravMag models” folder:**

* ProfileX\_ObservedMagneticData\_for\_modelling

This file can be opened with the GravMag software (<https://cires1.colorado.edu/people/jones.craig/GSSH/002-GravMag/001-Introduction.htm>) and is used the Magnetic Data window.

* model\_ProfileX(Az=X)\_XDir

This file can be opened with the GravMag software (<https://cires1.colorado.edu/people/jones.craig/GSSH/002-GravMag/001-Introduction.htm>) and is used the Model window.

Az Profile Azimuth

ProfileXX Ground magnetic profile XX

BushveldDir magnetization inclination and magnetization declination that follow the Bushveld direction corrected to geographic coordinates according to the bedding attitudes

VredefortDir magnetization inclination and magnetization declination used follow the magnetization direction acting at Vredefort during impact

* ModellingResults.xlsx

Data obtained for 10 magnetic profiles using the GravMag software (<https://cires1.colorado.edu/people/jones.craig/GSSH/002-GravMag/001-Introduction.htm>)