GravityDrift 1.4 User manual

Copyright \bigodot 2012–2016 by STC DEPROIL LTD

November 14, 2016

Contents

1	About GravityDrift	2
	1.1 Program editions	2
	1.2 Program activation	3
	1.3 Main menu	3
	1.4 Toolbar	7
	1.5 Plot panel	8
	1.6 Setting panel	8
	1.7 Histogram	9
	1.8 Results panel	9
	1.9 Additional parameters panel	10 11
	1.10 Raw data visualization panel	11 12
	1.11 Report 1.12 Spreadsheets 1.12 Spreadsheets 1.12 Spreadsheets	12 12
	1.12 Spreadsheets .	12 13
	1.13 Status bar 1.14 Tooltips	$13 \\ 13$
	1.14 100ttps 1.15	14
		14
2	Program installing	15
3	Startup	18
4	Input data	19
	4.1 Headers and ASCII data (TXT)	19
	4.2 Spreadsheets for ASCII data (XYZ)	22
	4.3 Binary data (SGD)	27
	4.4 Simplified data format (DAT)	30
5	Data visualization	34
6	Raw data viewing	41
7	View windows	46
8	Data filtration	49
9	Histogram	50
9	Instogram	50
10	Data analysis results	52
11	Program parameters	53
12	Uninstalling	56
13	Demo version	58

1 About GravityDrift

The GravityDrift program is designed to calculate a zero-drift for SCINTREX CG–5 gravimeter.

1.1 Program editions

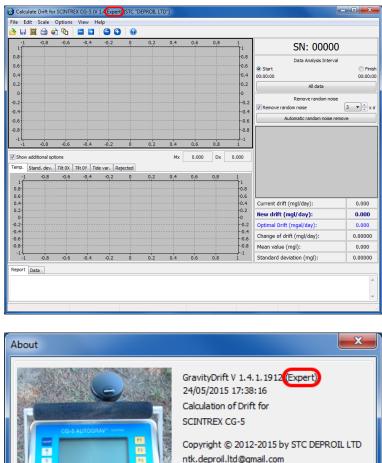
The GravityDrift 1.4 is available in the following editions:

- Demo is designed to review the program's possibilities;
- Standard is recommended in case if the program is used only for express calculations of gravimeter zero-drift;
- Professional allows to use the program for viewing raw data and calculating additional parameters;
- Expert is designed for internal use in Deproil LTD company.

	Demo	Standard	Professional	Expert
The ability to load data from the binary data file Scintrex — Scintrex Geophysical Data Format (*.SGD)	×	~	~	\checkmark
The ability to load raw data from the binary data file Scintrex — Scintrex Geophysical Data Format (*.SGD)	×	×	✓	\checkmark
The ability to load data from the text version of dump (*.TXT)	×	×	×	\checkmark
The ability to load data from the text version of dump without headers (*.XYZ)	×	×	×	\checkmark
The ability to load data from the common text file (*.DAT)	×	×	×	\checkmark
The ability to copy data from the spreadsheets into the clipboard	×	×	\checkmark	\checkmark
The ability to copy non-processed data from the spreadsheet of clipboard	×	×	\checkmark	\checkmark

 Table 1: Functionality of different GravityDrift program editions

Current version of the program can be checked in the main menu header and in the dialog window "About".



GravityDrift V 1.4.1.1912 Expert 24/05/2015 17:38:16 Calculation of Drift for SCINTREX CG-5 Copyright © 2012-2015 by STC DEPROIL LTD ntk.deproil.ltd@gmail.com +38(0342)744909 Registered by: STC "DEPROIL LTD" List of allowed gravimeters:

1.2 Program activation

To work with program GravityDrift v.1.4 you need a USB token and activation file GravityDrift.key. The program works only if the USB token is plugged in. To activate the program go to the main menu "Help \rightarrow Program Activation", select activation file and afterwards restart the program.

1.3 Main menu

Program's main menu contains:

- "File" is used to perform operations with files, including data loading and saving files:
 - "Open" opens data files;
 - "Recent files" opens recently used files;

- "Save" saves the results of data analysis in text format;
- "Save Image..." saves the image of program's display space as a bitmap;
- "Print Image..." sends the image of program's display space to print;
- "Create report" creates the report for the opened data file and saves it as *.pdf file;
- "Close" closes the current opened file;
- "Exit" finishes program's work.

Noper	n	Ctrl+O		00								
Rece	ent files	•	-0.4	-0.2	0	0.2	0.4	0.6	0.8	1		
- Save		Ctrl+S								1	SN: 00000	
-	e Image										Data Analysis Interval	
	t Image									0.6	 Start 	🔘 Fir
	ate report									0.4	00:00:00	00:00
Clos	e	Ctrl+X								0.2	All data	
Exit										-0.2	Remove random noise	
-0.4	j									0.4	Remove random noise	3 🔻 🚖
-0.6											Automatic random noise ren	nove
-0.8												
-1					_					1		
					0	0.2	0.4	0.6	0.8			
-1 Show a Temp. S	stand. dev	. Tilt OX		-0.2 e var. Reje	cted		Mx	0.000	Dx	0.000		
-1 Show ar Temp. S -1	dditional o	ptions				0.2				1		
-1 Show ar Temp. S	idditional o Stand. dev	ptions	Tilt OY Tid	e var. Reje	cted		Mx	0.000	Dx	1		
-1 Show and Temp. S -1 0.8 0.6	idditional o Stand. dev	ptions	Tilt OY Tid	e var. Reje	cted		Mx	0.000	Dx	1 0.8 0.6	Durant diff (molday):	0.000
-1 Show an Temp. S -1 1 0.8	idditional o Stand. dev	ptions	Tilt OY Tid	e var. Reje	cted		Mx	0.000	Dx	1	Current drift (mgl/day):	_
-1 Show and Temp. 5 -1 1 0.8 0.6 0.4 0.2 0	idditional o Stand. dev	ptions	Tilt OY Tid	e var. Reje	cted		Mx	0.000	Dx	1 	New drift (mgl/day):	0.000
-1 V Show av Temp. S -1 0.8 0.6 0.4 0.2	idditional o Stand. dev	ptions	Tilt OY Tid	e var. Reje	cted		Mx	0.000	Dx	1 	New drift (mgl/day): Optimal Drift (mgal/day):	0.000
-1 V Show as Temp. 5 -1 0.8 0.6 0.4 0.2 0 -0.2 -0.4 -0.6 -0.4 -0.6	idditional o Stand. dev	ptions	Tilt OY Tid	e var. Reje	cted		Mx	0.000	Dx	1 1 0.8 0.6 0.4 0.2 0 -0.2 -0.2 -0.4 -0.4 -0.2 -0.4 -0.6	New drift (mgl/day): Optimal Drift (mgal/day): Change of drift (mgl/day):	0.000
-1 Temp. 5 -1 0.8 0.6 0.4 0.2 0 -0.2 -0.4 -0.4	idditional o Stand. dev	ptions	Tilt OY Tid	e var. Reje	cted		Mx	0.000	Dx	1 	New drift (mgl/day): Optimal Drift (mgal/day):	0.000 0.000 0.000 0.0000 0.0000

- "Edit" is used to work with data processing results:
 - "Copy Image to Clipboard" copies the image of display space into the Windows data clipboard;
 - "Copy Data to Clipboard" copies data spreadsheet into the clipboard so it can be inserted into Microsoft Excel;
 - "Copy Results to Clipboard" copies resulting data into the clipboard.

	Copy Data			0.2	0	0.2	0.4	0.6	0.8	1	CNI: 00000	
1 1 6 4 2 0 2 4 6 8	Copy Res	ults to Clip	board							-1 -0.8 -0.6 -0.4 -0.2 -0.2 -0.2 -0.4 -0.6 -0.6 -0.6 -0.8	SN: 00000 Data Analysis Interval 00:00:00 All data Remove random noise Remove random noise Remove random noise	Finis 00:00:0 3 • x
-14 -1	-0.8	-0.6	-0.4	-0.2	0	0.2	0.4 Mx	0.6	0.8	1-1 0.000		
mp. s	Stand. dev.	Tilt OX T	ilt OY Tic -0,4	le var. Rej -0.2	ected Q	0.2	0.4	0,6	0.8	1		
-1 .8 .6						0.2	0.4	0.6		1 		1
-1 1 .8 .6 .4						0.2	0.4	0.6		1	Current drift (mgl/day):	0.000
-1 .8 .6 .4 .2 0						0.2	0.4	0.6		1 	New drift (mgl/day):	0.000
-1 1 .8 .6 .4 .2 .2 .2 .2						0.2	0.4	0.6		1 	New drift (mgl/day): Optimal Drift (mgal/day):	0.000
-1 .8 .6 .4 .2 .2 .2 .4 .2 .2 .2 .4 .6 						0.2	0.4	0.6		1 	New drift (mgl/day): Optimal Drift (mgal/day): Change of drift (mgl/day):	0.000
-1 0.8 0.6 0.4 0.2						0.2	0.4	0.6		1 	New drift (mgl/day): Optimal Drift (mgal/day):	0.000

• "Scale" — is used to set zooming for plot panel.

📔 🔍 auto		60								
0.025 mGal	0.4	-0.2	0	0.2	0.4	0.6	0.8	1	SN: 00000	
0.1 mGal								0.8	Data Analysis Interval	
								0.6	 Start 	
								0.4	00:00:00	
								0.2	All data	
								-0.2	Remove random noise	_
								0.4	Remove random noise	3
									Automatic random noise rem	ove
Stand. dev. Tilt 0X		-0.2		0.2	0.4 Mx [0.6	0.8	0.000		
additional options				0.2				i 0.000		
additional options Stand. dev. Tilt 0X	Tilt OY Tid	le var. Reje	ected		Mx	0.000	Dx	1 0.000		
additional options Stand. dev. Tilt 0X	Tilt OY Tid	le var. Reje	ected		Mx	0.000	Dx	0.000	Current drift (mgl/døy):	
additional options Stand. dev. Tilt 0X	Tilt OY Tid	le var. Reje	ected		Mx	0.000	Dx	1 0.000 1 1 0.8 	Current drift (mgl/day): New drift (mgl/day):	
additional options Stand. dev. Tilt 0X	Tilt OY Tid	le var. Reje	ected		Mx	0.000	Dx	1 0.000 1 1 0.8 0.6 0.4 0.2 0 		
additional options Stand. dev. Tilt 0X	Tilt OY Tid	le var. Reje	ected		Mx	0.000	Dx	1 0.000 1 1 0.8 0.6 0.4 0.2 0	New drift (mgl/day):	
additional options Stand. dev. Tilt 0X	Tilt OY Tid	le var. Reje	ected		Mx	0.000	Dx	1 0.000 1 1 0.8 0.6 0.4 0.2 0 0 0 0 0 0 	New drift (mgl/day): Optimal Drift (mgal/day):	

- "Options" is used to set interface parameters and data visualization parameters:
 - "Increase lines weight" increases the width of red and black lines on the plot;
 - "Decrease lines weight" decreases the width of red and black lines on the plot;
 - "Increase points size" increases the size of points of the red and black lines on the plot;
 - "Decrease points size" decreases the size of points of the red and black lines on the plot;
 - "Language select" sets chosen language for the interface;

- "Options" sets additional program's settings.
- "View" is used to set location of plots and data spreadsheets:
 - "Windows size default" sets standard location of windows;
 - "Align graphics and sheets" sets the same vertical size for all plots and spreadsheets;
 - "Align graphics" sets the same vertical size for all plots;
 - "Show all" displays all available plots;
 - "Show gravity" displays available plots with gravity field only.

		ptions										
	🗐 😂 💽	Ψb	🖅 Wir	ndows size d	lefault							
1	-0.8		u .	gn graphics gn graphics	and she	ets	0.4	0.6	0.8	1	SN: 00000	
8			_			- 1					Data Analysis Interval	
6				IIA we						0.6	Start	0
4			Sho	ow Gravity							00:00:00	00:
2										-0.2	All data	
2										0.2	Remove random noise	
4										-0.2	Remove random noise	3 -
6										-0.6	Automatic random noise rem	ove
8												
ı L												
-1	-0.8	-0.6	-0.4	-0.2	ó	0.2	0.4	0.6	0.8	1		
	idditional optic		it OY Ti	de var. Rej	ected		Mx	0.000	Dx	0.000		
mp. s	stand. dev.	Tilt OX T				0.2				0.000		
mp. s			ilt OY Ti -0.4	de var. Rej -0.2	ected 0	0.2	Mx	0.000	0.8	1		
np. 5	stand. dev.	Tilt OX T				0.2				1 		
np. s	stand. dev.	Tilt OX T				0.2				1 	Current drift (mgl/day):	0.0
np. 5	stand. dev.	Tilt OX T				0.2				1 	Current drift (mgl/day): New drift (mgl/day):	_
mp. s	stand. dev.	Tilt OX T				0.2				1 		0.0
mp. s	stand. dev.	Tilt OX T				0.2				1 	New drift (mgl/day):	0.0
mp. s	stand. dev.	Tilt OX T				0.2				1 	New drift (mgl/day): Optimal Drift (mgal/day):	0.00 0.00 0.00 0.000
mp. s	stand. dev.	Tilt OX T				0.2				1 	New drift (mgl/day): Optimal Drift (mgal/day): Change of drift (mgl/day):	0.0
mp. <u>s</u>	-0.8	Tilt 0X Ti -0.6	-0.4	-0.2	0		0,4	0.6	0.8	1 0.8 0.6 0.4 0.2 0 0.2 0.4 0.4 0.8 0.8	New drift (mgl/day): Optimal Drift (mgal/day): Change of drift (mgl/day): Mean value (mgl):	0.0 0.0 0.00 0.0
np. S	-0.8	Tilt 0X Ti -0.6	-0.4	-0.2	0		0,4	0.6	0.8	1 0.8 0.6 0.4 0.2 0 0.2 0.4 0.4 0.8 0.8	New drift (mgl/day): Optimal Drift (mgal/day): Change of drift (mgl/day): Mean value (mgl):	0.0 0.0 0.00 0.0
mp. <u>s</u>	-0.8	Tilt 0X Ti -0.6	-0.4	-0.2	0		0,4	0.6	0.8	1 0.8 0.6 0.4 0.2 0 0.2 0.4 0.4 0.8 0.8	New drift (mgl/day): Optimal Drift (mgal/day): Change of drift (mgl/day): Mean value (mgl):	0.0

- "Help" contains information about current version of the program and manual on program usage:
 - "Help" provides program description;
 - "Program Activation" provides instruction on program activation with the key file;
 - "About" provides general information about the program.

-1	-0.8 -0			Activation	0.4	0.6	0.8	1		
1			About				· · · · ·	1	SN: 00000	
0.8					_			-0.8	Data Analysis Interval	
0.4								0.4	Start	🔘 Fini
0.2									00:00:00	00:00:
0.2								-0.2	All data	
0.2								-0.2	Remove random noise	
.4								0.4	Remove random noise	3 ▼ 🗘 x
0.6								-0.6	Automatic random noise rem	ove
0.8										
-1								1		
-1	-0.8 -0	6 -0.4	-0.2	ó c	0.2 0.4	0.6	0.8	i		
1	-0,8 -0	6 -0.4	-0.2	<u> </u>	0.2 0.4	0.6	0.8	1		
0.8										
0.6								0.6	Current drift (mgl/day):	0.000
0.41								0.2	New drift (mgl/day):	0.000
0.2										
0.2									Optimal Drift (mgal/day):	0.000
0.2 0 0.2 0.4									Change of drift (mgl/day):	
0.2 0 0.2 0.4 0.6 0.8										0.000
0.4 0.2 0.2 0.4 0.6 0.8 -1 -1	-0.8 -0	.6 -0.4	-0.2	0 0	0.2 0.4	0.6	0.8	0.4	Change of drift (mgl/day):	0.00000

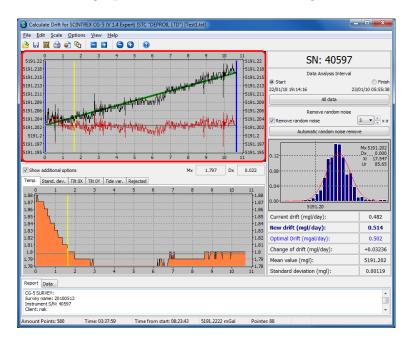
1.4 Toolbar

Toolbar contains the following functioning buttons: (left to right): "Open", "Save", "Save Image", "Print Image", "Create report", "Arbitrary windows", "Decrease lines weight", "Increase lines weight", "Decrease points size", "Increase points size", "Help".

-1	-0.8	-0.6	-0.4	0.2	9	0.2	0.4	0.6	0.8	1	SN: 00000	
0.8										0.8		
0.6										0.6	Data Analysis Interval Start	C Finis
0.4										0.4	00:00:00	00:00:0
0.2										0.2	All data	
0											Remove random noise	
-0.2										-0.2	Remove random noise	3 ▼ 🗘 x
										-0.6	Automatic random noise rem	nove
-0.6										8		
-0.6										-0.8		
-0.6 -0.8 -1 -1 V Show ad	-0.8 dditional op		-0.4	-0.2	0	0.2	0.4 Mx	0.6	0.8			
-0.6 -0.8 -1 -1 V Show ad	dditional op	tions		-0.2 de var. Reje -0.2		0.2				1-1		
-0.6 -0.8 -1 -1 -1 Show ad Temp. St -1	dditional op tand. dev.	tions Tilt OX	Tilt OY Tic	de var. Reje	ected		Mx	0.000	Dx	0.000		
-0.6 -0.8 -1 -1 -1 Z Show ad Temp. St 0.8 0.6 0.4	dditional op tand. dev.	tions Tilt OX	Tilt OY Tic	de var. Reje	ected		Mx	0.000	Dx	1 0.000 1 1 0.8 0.6 0.6 0.4	Current drift (mgl/day):	0.000
-0.6 -0.8 -1 -1 Show ad Temp. St 0.8 0.6	dditional op tand. dev.	tions Tilt OX	Tilt OY Tic	de var. Reje	ected		Mx	0.000	Dx	1 0.000 1 1 0.8 0.6	Current drift (mgl/day): New drift (mgl/day):	0.000
-0.6 -0.8 -1 -1 -1 Show ad Temp. St 0.8 0.6 0.4 0.2 -0.2	dditional op tand. dev.	tions Tilt OX	Tilt OY Tic	de var. Reje	ected		Mx	0.000	Dx			
-0.6 -0.8 -1 -1 -1 Show ad Temp. St -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	dditional op tand. dev.	tions Tilt OX	Tilt OY Tic	de var. Reje	ected		Mx	0.000	Dx	1 0.000 1 0.000 1 0.8 0.6 0.6 0.4 0.2 0	New drift (mgl/day):	0.000
-0.6 -0.8 -1 -1 Show ad Temp. St 0.8 0.6 0.4 0.2 -0.2 -0.2	dditional op tand. dev.	tions Tilt OX	Tilt OY Tic	de var. Reje	ected		Mx	0.000	Dx		New drift (mgl/day): Optimal Drift (mgal/day):	0.000

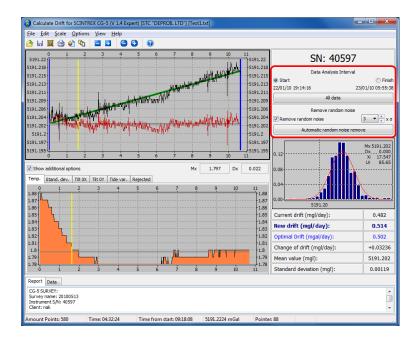
1.5 Plot panel

Plot panel is used to show graphical information concerning zero-drift calculation.



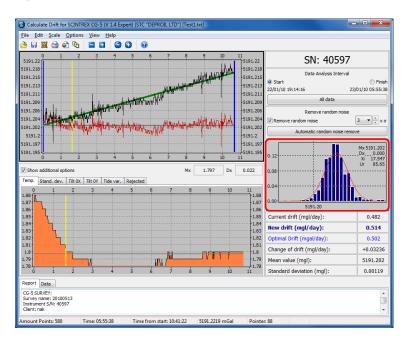
1.6 Setting panel

Setting panel is used to specify parameters of data analysis.



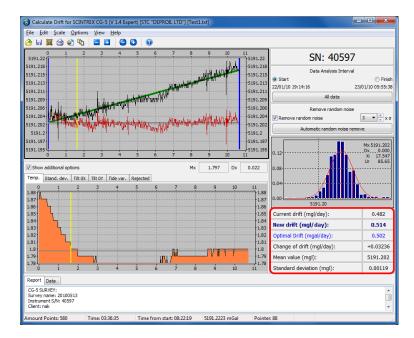
1.7 Histogram

Histogram shows parameters of random noise.



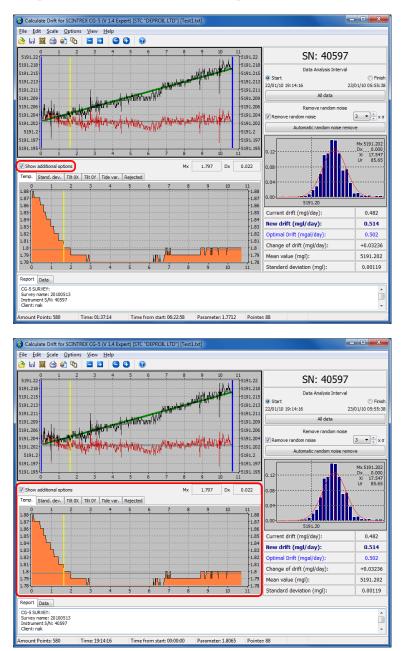
1.8 Results panel

Results panel shows the results of data analysis.



1.9 Additional parameters panel

Panel of additional parameters shows additional plots if there are some.

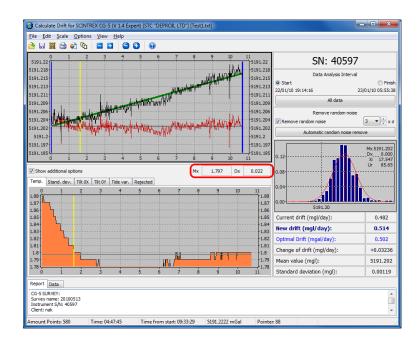


Additional parameters are gravimeter temperature, standard deviation, inclination along axis Ox and Oy, solar and lunar inequality, number of rejected points. All plots are shown in units of the gravimeter internal format.

There is an option of checking statistics (mean value Mx and standard deviation Dx) for each parameter. Statistical parameters are calculated using the following equations:

$$Mx = \frac{1}{N-1} \sum_{i=1}^{N} x_i, \quad Dx = \sqrt{\frac{1}{N-1} \sum_{i=1}^{N} (x_i - Mx)^2}.$$

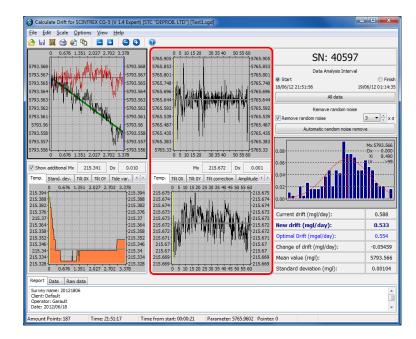
Mx and Dx units match the corresponding measurement units.



Mean line is being plotted for each additional parameter.

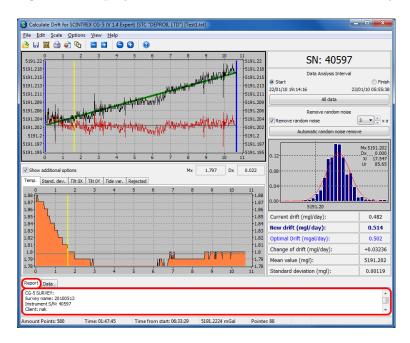
1.10 Raw data visualization panel

In case when binary SGD file contains recorded raw data, it can be loaded into GravityDrift.



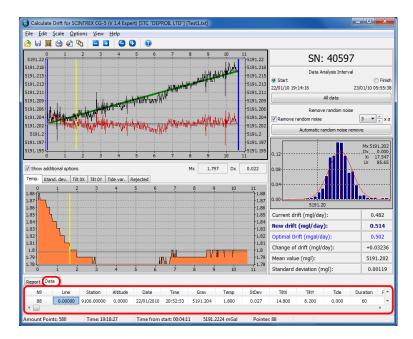
1.11 Report

The report is designed to display information from the headers of analyzed data.



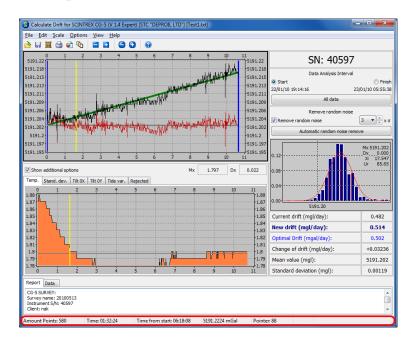
1.12 Spreadsheets

Spreadsheets contain loaded data.



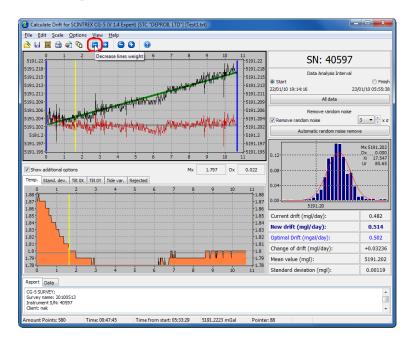
1.13 Status bar

Status bar displays number of loaded data points, which are being analyzed; time, marked by the current position of the cursor over the plot panel (in absolute units and relatively to the measurements start time); the value of measured gravity at that point or values of any other parameter; relative cursor position.



1.14 Tooltips

Tooltips appear when to point the cursor at a function button.



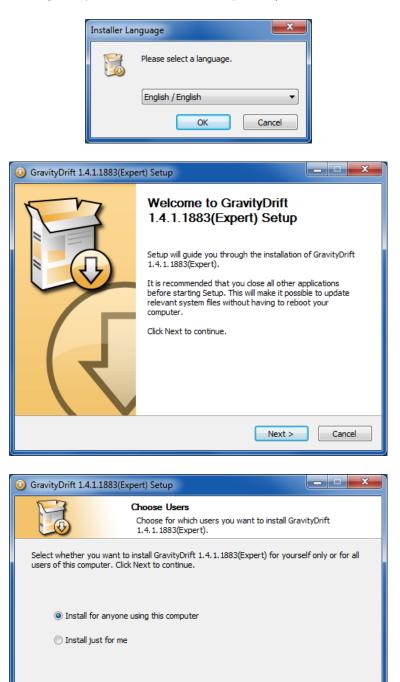
1.15 Shortcuts

Key combination	Operation
Ctrl + O	Open data file
Ctrl + S	Save file with analyzed data
Ctrl + X	Close data file
Ctrl + J	Open the window of program parameters
Ctrl + C	Copy analysis results into the clipboard
F1	Open Help

Shortcuts are used to expedite common operations by

2 Program installing

To install the program user account must have Administrator privileges. To install the program double click on gravitydrift_1.4.1.xxxx_setup.exe (xxxx — build number).



In case when HASP key driver is already installed in your computer, checkbox will be deselected, otherwise it will be selected as required to install.

< Back

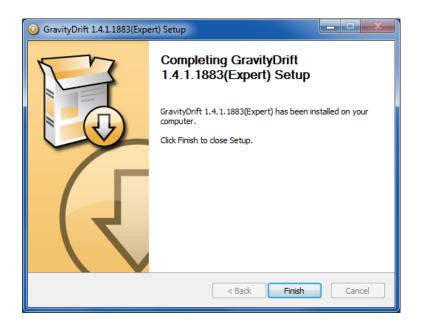
Next >

Cancel

Copyright (C) 2012-1015 by STC Deproil LTD

	pert) Setup
	Choose Components Choose which features of GravityDrift 1.4.1.1883(Expert) you want to install.
Check the components you install. Click Next to continue	want to install and uncheck the components you don't want to e.
Select components to install:	HASP key driver Gravity Drift 1.4.1.1883 Gravity Drift 1.4.1.1883 Gravity Drift 1.4.1.1883 Gravity Brift 1.4.1.1883 Gravity Brift 1.4.1.1883 Gravity Brift 1.4.1.1883 Gravity Brift 1.4.1.1883 Gravity Brift 1.4.1.1883
Space required: 32.6MB	Description Position your mouse over a component to see its description.
Copyright (C) 2012-1015 by ST	C Deproil LTD Cancel
GravityDrift 1.4.1.1883(Exp	pert) Setup
	Choose Install Location Choose the folder in which to install GravityDrift
~	1.4.1.1883(Expert).
different folder, dick Browse	1.4.1.1883(Expert). 1.4.1.1883(Expert) in the following folder. To install in a
different folder, click Browse Destination Folder	1.4.1.1883(Expert). 1.4.1.1883(Expert) in the following folder. To install in a
different folder, click Browse Destination Folder	1.4.1.1883(Expert). 1.4.1.1883(Expert) in the following folder. To install in a and select another folder. Click Install to start the installation.
different folder, dick Browse Destination Folder ogram Files (x86)\Gravi Space required: 32.6MB	1.4.1.1883(Expert). 1.4.1.1883(Expert) in the following folder. To install in a and select another folder. Click Install to start the installation. tyDrift\GravityDrift_1.4.1.1883(Expert) Browse
Destination Folder Destination Folder Destination Files (x86)\Gravit Space required: 32.6MB Space available: 36.5GB	1.4.1.1883(Expert). 1.4.1.1883(Expert) in the following folder. To install in a e and select another folder. Click Install to start the installation. tyDrift\GravityDrift_1.4.1.1883(Expert) Browse C Deproil LTD < Back

() GravityDrift 1.4.1.188	3(Expert) Setup			- 🗆 X
	Installing Please wait wh installed.	ile GravityDrift 1.4.1	l. 1883(Expert)	is being
Extract: GravityDrift.ex	(e 100%			
Show details				
Copyright (C) 2012-1015 b	by STC Deproil LTD —			
		< Back	Next >	Cancel



3 Startup

To start the program use one of the following methods:

- Go to the menu "Start": "Start \rightarrow Programs \rightarrow GravityDrift 1.4 \rightarrow Gravity Drift 1.4".
- Go to shortcut "Gravity Drift 1.4" on your desktop or taskbar in case if corresponding checkbox was selected while program installing.
- Double click with left mouse button on GravityDrift.exe file in the folder which contains the installed program.

The main window will be opened after the program is started.

😮 Calc	ulate	Drift fo	or SCINTRE	EX CG-5 (V	1.4 Expert)	(STC "DI	EPROIL LT	'D'']				l.	- 🗆 🗙
Eile E	dit	Scale	Options	<u>V</u> iew <u>H</u>	elp								
۵ 🖌	A	3	è 🖒	H	00								
-1 11		-0.8	-0.6	-0,4	-0.2	0	0.2	0.4	0,6	0.8	1	SN: 00000	
0.8											0.8		
0.6											0.6	Data Analysis Interval Start	Finish
0.4											0.4	00:00:00	00:00:00
0.2											0.2	All data	
0											0	Remove random noise	
-0.2												Remove random noise	3 τ 🗘 x σ
-0.4												Automatic random noise rem	
-0.6 -0.8											-0.6		
-0.8											-0.8		
-1		-0.8	-0.6	-0.4	-0.2	ó	0.2	0.4	0.6	0.8	i		
Shov	v addi	itional op	otions					Mx	0.000	Dx	0.000		
Temp.	Star	nd. dev.	Tilt OX	Tilt OY Tid	e var. Reje	ected							
-1 1 (*		-0.8	-0.6	-0,4	-0.2	0	0.2	0.4	0.6	0.8	1		
0.8											0.8		
0.6											0.6	Current drift (mgl/day):	0.000
0.2											0.2		_
0											0	New drift (mgl/day):	0.000
-0.2												Optimal Drift (mgal/day):	0.000
-0.6												Change of drift (mgl/day):	0.00000
-0.8											0.8	Mean value (mgl):	0.000
-1		-0.8	-0.6	-0.4	-0.2	ó	0.2	0.4	0.6	0.8	1	Standard deviation (mgl):	0.00000
Report	Dat	ta											
1	_												*
													*

You can check current version of the program in the title bar or by selecting menu item "Help \rightarrow About".

3 Calculate Drift for SCINTREX CG-5	1.4 Expert) (STC "DEPROIL LTD")		- • ×
<u>File Edit Scale Options View H</u>			
👌 🗄 🛄 😂 🌒 🗞 🖬	C C O		
-1 -0.8 -0.6 -0.4 1 0.8 0.6	-0.2 0 0.2 0.4	0.6 0.8 1	SN: 00000 Data Analysis Interval
0.4		-0.4 00:00:0	00:00:00
0.2	About	0.2	All data Remove random noise
-0.4		GravityDrift V 1.4.1.1912 (Expert) 24/05/2015 17:38:16	om noise 3 • x σ tomatic random noise remove
-0.8		Calculation of Drift for SCINTREX CG-5	
-1 -0.8 -0.6 -0.4 ✓ Show additional options Temp. Stand. dev. Tilt 0Y Tilt -1 -0.8 -0.6 -0.4 -0.4 1 0.8 -0.6 -0.4 -0.4 0.8 -0.6 -0.4 -0.4 -0.4	·····	Copyright © 2012-2015 by STC DEPROIL ndt.deprol.ltd@gmal.com +38(0342)4909 Registered by: STC "DEPROIL LTD" List of allowed gravimeters:	
0.4	All and a second of the		_ mgl/day): 0.000
0.2			igl/day): 0.000
-0.2	L	√ ок	(mgal/day): 0.000
-0.4		-0.4 -0.6 Chang	ge of drift (mgl/day): 0.00000
-0.8		0.8 Mean	value (mgl): 0.000
-1 -0.8 -0.6 -0.4	-0.2 0 0.2 0.4	0.6 0.8 i Stand	ard deviation (mgl): 0.00000
Report Data			
			۸ ۲
			di la

4 Input data

Input data for Gravity Drift 1.4 is data observed by SCINTREX CG-5 gravimeter by means of SCTUTIL program using standard port RS-232C or high-speed USB.

Currently, the following data format are available: text format (txt) — headers and ASCII data, binary format (sgd), common file format (dat) — to import data not using SCTUTIL program, text format with no header (xyz) — spreadsheets with data only.

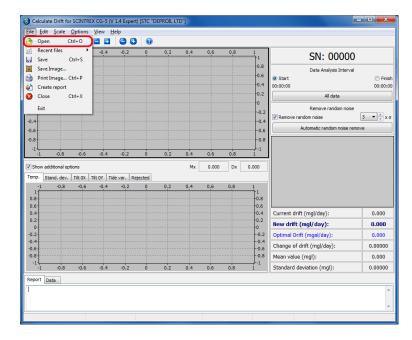
In the program folder there is folder "Samples" which contains examples of different data files. Corresponding shortcut can be found in the menu "Start \rightarrow Programs \rightarrow Gravity-Drift 1.4 \rightarrow Data samples".

4.1 Headers and ASCII data (TXT)

Data in text format (text version of dump file) are text files ASCII with headers. Such files can be opened by any text editor such as Notepad.

The option to load data in text format TXT is available in Expert version of the program. To load text data use one of the following methods:

- Go to the main menu and select "File \rightarrow Open";
- Press button "Open" on the toolbar;
- Drag the file onto the opened window with mouse;
- Use shortcut Ctrl+O;
- Select file from the list "File \rightarrow Recent files".



	8	<u>)</u> 🖞	Ξ.	60								
1	-0.8	-0.6	-0.4	-0.2	0	0.2	0.4	0.6	0.8	1	SN: 00000	
8											Data Analysis Interval	
6										0.6	Start	Finis
4										0.4	00:00:00	00:00:
2											All data	
0											Remove random noise	
2											Remove random noise	3 ▼ ÷ x
4										-0.4	Automatic random noise remo	
6										0.6		
8										-0.8		
14 -1	-0.8	-0.6	-0.4	-0.2	ó	0.2	0.4	0.6	0.8	1		
mp. Star	nd. dev.	Tilt OX	Tilt OY Tic	le var. Rej	ected				Dx	0.000		
-1	nd. dev. -0 <u>.</u> 8	Tilt OX -0.6	Tilt OY Tic -0,4	le var. Rej -0.2	ected Q	0.2	0.4	0.6	0,8	1		
mp. Star						0.2	0.4	0.6		1 1 0.8		
1						0.2	0.4	0.6		1	Current drift (mal/dav):	0.000
-1 1 8 6 4 2						0.2	0.4	0.6		1 	Current drift (mgl/day): New drift (mgl/day):	0.000
1 1 .8 .6 .4						0.2	0.4	0.6		1 		
-1 8 6 .4 2 .2 .2 .2 						0.2	0.4	0.6		1 	New drift (mgl/day):	0.000
-1 1 8 6 4 2 0 2 2 4 6 8						0,2	0,4	0.6		1 	New drift (mgl/day): Optimal Drift (mgal/day):	0.000
-1 1 -1 -1 -1 -1 -1 						0.2	0.4	0.6		1 	New drift (mgl/day): Optimal Drift (mgal/day): Change of drift (mgl/day):	0.000
-1 1 8 6 4 2 0 0 2 2 4 6 6 8 1	-0.8	-0.6	-0.4	-0.2	0				0.8	1 1 0.8 0.6 0.4 0.2 0.4 0.4 0.8 1	New drift (mgl/day): Optimal Drift (mgal/day): Change of drift (mgl/day): Mean value (mgl):	0.000 0.000 0.00000 0.0000
-1 8 6 .4 2 .2 .2 .2 						0.2	0.4	0.6		1 	New drift (mgl/day): Optimal Drift (mgal/day):	

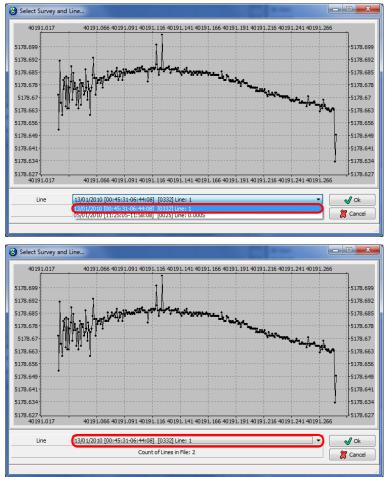
If to open text file using one of two first methods, you need to select file format (TXT) in the drop down list, select file name from the list and press "Open".

3 Open			
😋 💭 🗢 🕌 « Local Disk (D:) 🕨 CompInt 🕨 Bin 🕨 Win32 🕨 Samples	_	🕶 🍫 Search Samp	les
Organize 🔻 New folder			s • 🔟 🤅
★ Favorites	Date modified	Туре	Size
Desktop 🔗 Test1	05.09.2014 18:41	Text Document	50 KB
🙀 Downloads 🛛 👩 Test2	05.09.2014 18:41	Text Document	48 KB
😌 Dropbox 🔗 Test3	05.09.2014 18:41	Text Document	45 KB
💹 Recent Places 🛛 🔊 Test4	05.09.2014 18:41	Text Document	104 KB
Testő	05.09.2014 18:41	Text Document	48 KB
🛜 Libraries 🛛 🔊 Test7	05.09.2014 18:41	Text Document	94 KB
💽 Documents 👘 🔊 Test8	05.09.2014 18:41	Text Document	46 KB
👌 Music 🛛 🔬 Test9	05.09.2014 18:41	Text Document	77 KB
Pictures			
Subversion			
H Videos			
E Computer			
Local Disk (C:)			
👝 Local Disk (D:)			
File name:		 Text files (TXT) 	
		Binary files (SG Text files (TXT)	
		Text files (DAT)
ta		Text files (XYZ) All files	1

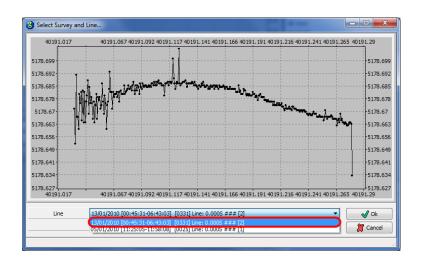
Organize 🔻 New folder			8≣ ▼ 🔳	6
Favorites	Date modified	Туре	Size	
Desktop	05.09,2014 18:41	Text Document	50 KB	
Downloads	05.09.2014 18:41	Text Document	48 KB	۱.
😌 Dropbox 🖉 Test3	05.09.2014 18:41	Text Document	45 KB	'
🖳 Recent Places 📱 🔊 Test4	05.09.2014 18:41	Text Document	104 KB	
Test6	05.09.2014 18:41	Text Document	48 KB	
📜 Libraries 🛛 🖉 Test7	05.09.2014 18:41	Text Document	94 KB	
Documents 🖉 Test8	05.09.2014 18:41	Text Document	46 KB	
🎝 Music 🛛 🖉 Test9	05.09.2014 18:41	Text Document	77 KB	
E Pictures				
Subversion				
🔚 Videos				
Somputer				
🚰 Local Disk (C:)				
👝 Local Disk (D:)				
•				

If data file contains more than one survey or more than one survey line, than the optional window for choosing survey/survey line will open.

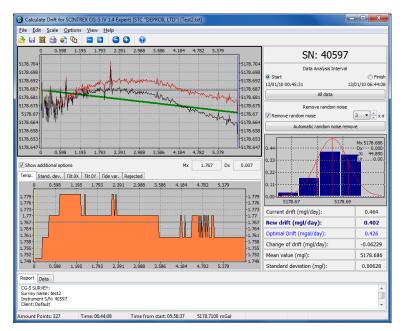
Name for each group of data in the drop down list consists of survey starting date, measurements starting and finish time, number of points along the survey line and name of survey line in the file.



If grouping wasn't based on data file header but instead by taking the maximum time interval between measurements within the group, than the name of each sub-group will contain it's number ###[sub-group_number].



Click "OK" when measurement group is selected. Loaded data will appear in the main window.

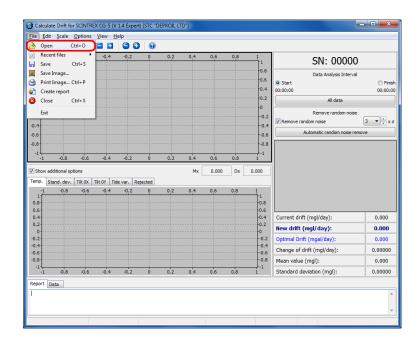


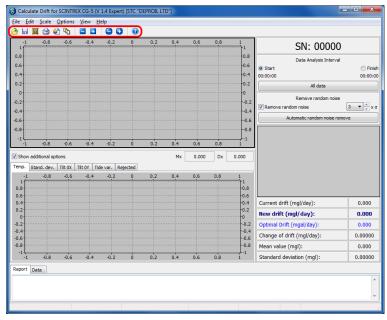
4.2 Spreadsheets for ASCII data (XYZ)

Text file without headers (text version of dump file) contains the same information as ordinary text files; the only difference is that there are no headers.

The option to load data in text format XYZ is available in Expert version of the program. To load text data use one of the following methods:

- Go to the main menu and select "File \rightarrow Open";
- Press button "Open" on the toolbar;
- Drag the file onto the opened window with mouse;
- Use shortcut Ctrl+O;
- Select file from the list "File \rightarrow Recent files".





If to open text file using one of two first methods, you need to select file format (XYZ) in the drop down list, select file name from the list and press "Open".

		0.2 0.4 0.6	<u> </u>		
3 Open					
		t ▶ Bin ▶ Win32 ▶ Sam	nples	• 49 Search Sa	
Organize 🔻 Ne	ew folder				8= 🔹 🛄
🔶 Favorites	^ Name		Date modified	Туре	Size
Desktop	Test1 Test2		05.09.2014 18:41 05.09.2014 18:41	Text Document Text Document	50 KB 48 KB
Stopbox	Test3		05.09.2014 18:41	Text Document	45 KB
🔛 Recent Places			05.09.2014 18:41	Text Document	104 KB
🔚 Libraries	Testő Test7		05.09.2014 18:41 05.09.2014 18:41	Text Document Text Document	48 KB 94 KB
Documents	E 🔬 Test8		05.09.2014 18:41	Text Document	46 KB
J Music	Test9		05.09.2014 18:41	Text Document	77 KB
Pictures Subversion					
Videos					
👰 Computer					
👳 Computer 🐔 Local Disk (C:	:)				
👝 Local Disk (D:					
	File name: \Samples\T	[✓ Text files (1)	
	The name: \\Samples\I	lestz		Binary files	(SGD)
				Text files (T Text files (F	XT) AT
					94 0000
_	:(D:) → CompInt → I	Bin → Win32 → Sampl	es	 ↓ ↓ Search 	Samples
v 🔒 « Local Disk		Bin ▶ Win32 ▶ Sampl	es	▼ 4y Search	Samples ≋≕ ▼
✓ Jack Kocal Disk te ▼ New folder		Bin → Win32 → Sampl	es Date modified	✓ 4 ₂ Search Type	
vorites	r	Bin → Win32 → Sampl			:≡ ▼
vorites Desktop Downloads	r Name	Bin 🕨 Win32 🔸 Sampl	Date modified	Туре	8≡ ▼ Size
vorites tesktop townloads tropbox	r Name	Bin > Win32 > Sampl	Date modified	Туре	8≡ ▼ Size
vorites tesktop townloads tropbox	r Name	Bin ▶ Win32 ▶ Sampl	Date modified	Туре	8≡ ▼ Size
e Vew folder orites esktop ownloads ropbox ecent Places aries	r Name	Bin → Win32 → Sampl	Date modified	Туре	8≡ ▼ Size
e Vew folder orites esktop ownloads ropbox ecent Places aries ocuments	r Name	Bin → Win32 → Sampl	Date modified	Туре	8≡ ▼ Size
e Vew folder orites esktop ownloads ropbox ecent Places aries ocuments lusic	r Name	Bin ▶ Win32 ▶ Sampl	Date modified	Туре	8≡ ▼ Size
e Vew foldee orites esktop ownloads ecent Places aries occuments lusic ictures	r Name	Bin → Win32 → Sampl	Date modified	Туре	8≡ ▼ Size
Cocal Disk C	r Name	Bin ▶ Win32 ▶ Sampl	Date modified	Туре	8≡ ▼ Size
e New folder orites esktop ownloads ropbox ecent Places arries ocuments fusic citures ubversion	r Name	Bin ▶ Win32 ▶ Sampl	Date modified	Туре	8≡ ▼ Size
Cocal Disk C	r Name	Bin ▶ Win32 ▶ Sampl	Date modified	Туре	8≡ ▼ Size
A coal Disk Coal Disk	r Name	Bin → Win32 → Sampl	Date modified	Туре	8≡ ▼ Size
Cocal Disk C	r Name	Bin → Win32 → Sampl	Date modified	Туре	8≡ ▼ Size
New folder	r Name Testayz	Bin → Win32 → Sampl	Date modified	Type XYZ File	B⊞ ♥ Size
e Vew folder orites estkop ownloads ropbox ecent Places arries ocuments lutures lutures lutures ubversion ideos mputer ocal Disk (C:) ocal Disk (D:)	r Name	Bin ▶ Win32 ▶ Sampl	Date modified	Туре	s (XVZ)

When to download data in XYZ format a download selection window will appear (red line on the picture denotes the range of data points).

Absence of headers makes it necessary to select a range of downloaded data manually. In order to facilitate this operation there are plots of main data columns shown in the download window. These plots change rapidly if to move from one data group to another. Corresponding parameter are displayed as a spreadsheet in the left part of the download window.

	Y	х	DATE	TIME	DEC.TIME	GRAV	DUR	REJ	~			0 10	0 150	200	250	300	350	400
0	142.000	1.000	2009/12/25	08:39:26	40141.360	4117.035	57	8		32500 - 30000 -		٦						32
1	24200.000	31300.000	2009/12/25	08:48:32	40141.366	4117.575	56	4		27500								
2	24300.000	31300.000	2009/12/25	08:52:25	40141.369	4118.209	48	25										
3	24400.000	31300.000	2009/12/25	08:56:02	40141.372	4118.918	52	26		25000 -								
4	24500.000	31300.000	2009/12/25	08:59:38	40141.374	4119.528	47	10		22500								
5	24600.000	31300.000	2009/12/25	09:03:13	40141.377	4120.187	48	26		20000 -								
6	24700.000	31300.000	2009/12/25	09:06:53	40141.379	4120.736	50	18		17500 -								
7	24800.000	31300.000	2009/12/25	09:10:22	40141.382	4121.315	50	30		15000 -								-15
8	24900.000	31300.000	2009/12/25	09:14:30	40141.384	4122.026	51	20		12500 -								
9	25000.000	31300.000	2009/12/25	09:19:54	40141.388	4122.834	52	21		10000 -								
10	25100.000	31300.000	2009/12/25	09:24:18	40141.391	4123.710	52	22		7500 -								
11	25200.000	31300.000	2009/12/25	09:28:27	40141.394	4124.708	53	22		5000 -								
12	25300.000	31300.000	2009/12/25	09:32:39	40141.397	4125.849	48	17		2500 -								
13	25300.000	31200.000	2009/12/25	09:36:53	40141.400	4125.682	58	2	-	0.	0 5	0 10	0 150	200	250	300	350	400
ange:	0	39	98	Testing para	meter:	X	•	Drift:	0.	.000		1					_	/ ок
																		Cance

The right part of download window shows the plot for selected parameter.

	Y	х	DATE	TIME	DEC.TIME	GRAV	DUR	REJ	^	35000 1	50	100	150	200 2	50 3	0 350	400
0	142.000	1.000	2009/12/25	08:39:26	40141.360	4117.035	57	8		32500							1
1	24200.000	31300.000	2009/12/25	08:48:32	40141.366	4117.575	56	4		30000							/
2	24300.000	31300.000	2009/12/25	08:52:25	40141.369	4118.209	48	25		27500 -						/	
3	24400.000	31300.000	2009/12/25	08:56:02	40141.372	4118.918	52	26		25000	A					/	
4	24500.000	31300.000	2009/12/25	08:59:38	40141.374	4119.528	47	10		22500	M						
5	24600.000	31300.000	2009/12/25	09:03:13	40141.377	4120.187	48	26		20000 -					1		
6	24700.000	31300.000	2009/12/25	09:06:53	40141.379	4120.736	50	18		17500 -				/	.		
7	24800.000	31300.000	2009/12/25	09:10:22	40141.382	4121.315	50	30		15000				/			
8	24900.000	31300.000	2009/12/25	09:14:30	40141.384	4122.026	51	20		12500				/			
9	25000.000	31300.000	2009/12/25	09:19:54	40141.388	4122.834	52	21		10000 -			1				
10	25100.000	31300.000	2009/12/25	09:24:18	40141.391	4123.710	52	22		7500			1				
11	25200.000	31300.000	2009/12/25	09:28:27	40141.394	4124.708	53	22		5000		1					····-
12	25300.000	31300.000	2009/12/25	09:32:39	40141.397	4125.849	48	17		2500		1					
13	25300.000	31200.000	2009/12/25	09:36:53	40141.400	4125.682	58	2	-	양	50	100	150	200 2	50 3	0 350	400
inge:	0	35	98	Testing para	meter:	Y		Drift:	0.	000							🖌 OK
																	Can

elect range																		
	Y	x	DATE	TIME	DEC.TIME	GRAV	DUR	REJ	*	35000	50	100	150	200 2	50	300 3	350	400
0	142.000	1.000	2009/12/25	08:39:26	40141.360	4117.035	57	8		32500								13
1	24200.000	31300.000	2009/12/25	08:48:32	40141.366	4117.575	56	4		30000							1	
2	24300.000	31300.000	2009/12/25	08:52:25	40141.369	4118.209	48	25		27500							f	2
3	24400.000	31300.000	2009/12/25	08:56:02	40141.372	4118.918	52	26		25000	<u> </u>					1		2
4	24500.000	31300.000	2009/12/25	08:59:38	40141.374	4119.528	47	10		22500	M				į,	/		2
5	24600.000	31300.000	2009/12/25	09:03:13	40141.377	4120.187	48	26		20000					1			2
6	24700.000	31300.000	2009/12/25	09:06:53	40141.379	4120.736	50	18		17500					.			
7	24800.000	31300.000	2009/12/25	09:10:22	40141.382	4121.315	50	30		15000 -				-/-				
8	24900.000	31300.000	2009/12/25	09:14:30	40141.384	4122.026	51	20		12500 -			·	/				1
9	25000.000	31300.000	2009/12/25	09:19:54	40141.388	4122.834	52	21		10000 -			1					
10	25100.000	31300.000	2009/12/25	09:24:18	40141.391	4123.710	52	22		7500 -		····	/					7
11	25200.000	31300.000	2009/12/25	09:28:27	40141.394	4124.708	53	22		5000 -		1						9
12	25300.000	31300.000	2009/12/25	09:32:39	40141.397	4125.849	48	17		2500 -		/						2
13	25300.000	31200.000	2009/12/25	09:36:53	40141.400	4125.682	58	2	-	04	50	100	150	200 2	50	300 3	350	
Range:	0	3	98	Testing para	meter:	Y	-	Drift:	0.	000							4	7 ок
						¥											X	Cano
						DUR REJ					_	_		_	-	-	_	-

Range:	0	3	98	Testing para	meter:	Y		Drift:	0.	000							🖌 ок
13	25300.000	31200.000	2009/12/25	09:36:53	40141.400	4125.682	58	2	-	0.4	50	100	150	200 2	50 3	0 350	400
12	25300.000	31300.000	2009/12/25	09:32:39	40141.397	4125.849	48	17		2500 -		/					
11	25200.000	31300.000	2009/12/25	09:28:27	40141.394	4124.708	53	22		5000 -	····	1					
10	25100.000	31300.000	2009/12/25	09:24:18	40141.391	4123.710	52	22		7500 -			1				
9	25000.000	31300.000	2009/12/25	09:19:54	40141.388	4122.834	52	21		10000 -			1				
8	24900.000	31300.000	2009/12/25	09:14:30	40141.384	4122.026	51	20		12500 -	· · · · · · · · ·			1			
7	24800.000	31300.000	2009/12/25	09:10:22	40141.382	4121.315	50	30		15000 -				/			
6	24700.000	31300.000	2009/12/25	09:06:53	40141.379	4120.736	50	18		17500 -	· · · · · · · ·			/			
5	24600.000	31300.000	2009/12/25	09:03:13	40141.377	4120.187	48	26		20000					1		
4	24500.000	31300.000	2009/12/25	08:59:38	40141.374	4119.528	47	10		22500	M				/		
3	24400.000	31300.000	2009/12/25	08:56:02	40141.372	4118.918	52	26		25000 -	A					1	29
2	24300.000	31300.000	2009/12/25	08:52:25	40141.369	4118.209	48	25		27500						/	27
1	24200.000	31300.000	2009/12/25	08:48:32	40141.366	4117.575	56	4		30000 -							/ 30
0	142.000	1.000	2009/12/25	08:39:26	40141.360	4117.035	57	8		32500							-/-32
	Y	X	DATE	TIME	DEC.TIME	GRAV	DUR	REJ	^	0 35000 f	50	100	150	200 2	50 3	0 350	400

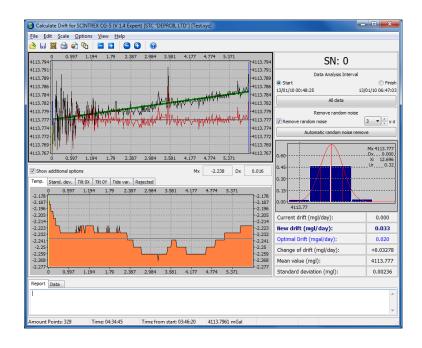
	Y	X	DATE	TIME	DEC.TIME	GRAV	DUR	REJ	*	35000 1	50	100	150	200 2	50 30	0 350	400
0	142.000	1.000	2009/12/25	08:39:26	40141.360	4117.035	57	8		32500 -							/ 32
1	24200.000	31300.000	2009/12/25	08:48:32	40141.366	4117.575	56	4		30000 -							/ 30
2	24300.000	31300.000	2009/12/25	08:52:25	40141.369	4118.209	48	25		27500 -						1	27
3	24400.000	31300.000	2009/12/25	08:56:02	40141.372	4118.918	52	26		25000 -	A .					/	
4	24500.000	31300.000	2009/12/25	08:59:38	40141.374	4119.528	47	10		22500 -	M				/		22
5	24600.000	31300.000	2009/12/25	09:03:13	40141.377	4120.187	48	26		20000	· · · · · .				1		
6	24700.000	31300.000	2009/12/25	09:06:53	40141.379	4120.736	50	18		17500 -				/			
7	24800.000	31300.000	2009/12/25	09:10:22	40141.382	4121.315	50	30		15000 -				/			
8	24900.000	31300.000	2009/12/25	09:14:30	40141.384	4122.026	51	20		12500 -				/			
9	25000.000	31300.000	2009/12/25	09:19:54	40141.388	4122.834	52	21		10000 -			-/				
10	25100.000	31300.000	2009/12/25	09:24:18	40141.391	4123.710	52	22		7500 -			/				75
11	25200.000	31300.000	2009/12/25	09:28:27	40141.394	4124.708	53	22		5000 -	· · · · • • • • •	-/	·				50
12	25300.000	31300.000	2009/12/25	09:32:39	40141.397	4125.849	48	17		2500 -		/					
13	25300.000	31200.000	2009/12/25	09:36:53	40141.400	4125.682	58	2	-	0-	50	100	150	200 2	50 30	0 350	400
tange:	0	3	98	Testing para	ameter:	Y		Drift:	0.	000							🖌 ок

	Y	x	DATE	TIME	DEC.TIME	GRAV	DUR	REJ		45 50 55 60 65 70 75 80 85 90 95 105 115
0	142.000	1.000	2009/12/25	08:39:26	40141.360	4117.035	57	8		3500
1	24200.000	31300.000	2009/12/25	08:48:32	40141.366	4117.575	56	4		5500
2	24300.000	31300.000	2009/12/25	08:52:25	40141.369	4118.209	48	25		3000
3	24400.000	31300.000	2009/12/25	08:56:02	40141.372	4118.918	52	26		2500
4	24500.000	31300.000	2009/12/25	08:59:38	40141.374	4119.528	47	10		2500
5	24600.000	31300.000	2009/12/25	09:03:13	40141.377	4120.187	48	26		2000
6	24700.000	31300.000	2009/12/25	09:06:53	40141.379	4120.736	50	18		
7	24800.000	31300.000	2009/12/25	09:10:22	40141.382	4121.315	50	30		1500
8	24900.000	31300.000	2009/12/25	09:14:30	40141.384	4122.026	51	20		1000
9	25000.000	31300.000	2009/12/25	09:19:54	40141.388	4122.834	52	21		1
10	25100.000	31300.000	2009/12/25	09:24:18	40141.391	4123.710	52	22		500
11	25200.000	31300.000	2009/12/25	09:28:27	40141.394	4124.708	53	22		0 Set start
12	25300.000	31300.000	2009/12/25	09:32:39	40141.397	4125.849	48	17		Set finish
13	25300.000	31200.000	2009/12/25	09:36:53	40141.400	4125.682	58	2	-	-500 45 50 55 60 65 70 75 80 85 90 95 105 115
ange:	0	39		Testing para		Y	•	Drift:		
										X Car
_	_									Car
ect range	-									
	Y	X	DATE	TIME	DEC.TIME	GRAV	DUR	REJ		Q, 45 50 55 60 65 70 75 80 85 90 95 105 115
0	Y 142.000	1.000	2009/12/25	08:39:26	40141.360	4117.035	57	8		
0	Y 142.000 24200.000	1.000 31300.000	2009/12/25 2009/12/25	08:39:26 08:48:32	40141.360 40141.366	4117.035 4117.575	57 56	8		Q 45 50 55 60 65 70 75 80 85 90 95 105 115 3500
0 1 2	Y 142.000 24200.000 24300.000	1.000 31300.000 31300.000	2009/12/25 2009/12/25 2009/12/25	08:39:26 08:48:32 08:52:25	40141.360 40141.366 40141.369	4117.035 4117.575 4118.209	57 56 48	8 4 25		Q, 45 50 55 60 65 70 75 80 85 90 95 105 115
0 1 2 3	Y 142.000 24200.000 24300.000 24400.000	1.000 31300.000 31300.000 31300.000	2009/12/25 2009/12/25 2009/12/25 2009/12/25	08:39:26 08:48:32 08:52:25 08:56:02	40141.360 40141.366 40141.369 40141.372	4117.035 4117.575 4118.209 4118.918	57 56 48 52	8 4 25 26		Q 45 50 55 60 65 70 75 80 85 90 95 105 115 3500
0 1 2 3 4	Y 142.000 24200.000 24300.000 24400.000 24500.000	1.000 31300.000 31300.000 31300.000 31300.000	2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25	08:39:26 08:48:32 08:52:25 08:56:02 08:59:38	40141.360 40141.366 40141.369 40141.372 40141.374	4117.035 4117.575 4118.209 4118.918 4119.528	57 56 48 52 47	8 4 25 26 10		Q 45 50 55 60 65 70 75 80 85 90 95 105 115 3500 3000
0 1 2 3 4 5	Y 142.000 24200.000 24300.000 24400.000 24500.000 24600.000	1.000 31300.000 31300.000 31300.000 31300.000 31300.000	2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25	08:39:26 08:48:32 08:52:25 08:56:02 08:59:38 09:03:13	40141.360 40141.366 40141.369 40141.372 40141.374 40141.377	4117.035 4117.575 4118.209 4118.918 4119.528 4120.187	57 56 48 52 47 48	8 4 25 26 10 26		Q 49 50 55 60 65 70 75 80 85 90 95 105 115 3500 2500 2500 2009
0 1 2 3 4	Y 142.000 24200.000 24300.000 24400.000 24500.000 24600.000 24700.000	1.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000	2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25	08:39:26 08:48:32 08:52:25 08:56:02 08:59:38 09:03:13 09:06:53	40141.360 40141.365 40141.369 40141.372 40141.374 40141.377 40141.379	4117.035 4117.575 4118.209 4118.918 4119.528 4120.187 4120.736	57 56 48 52 47 48 50	8 4 25 26 10 26 18		Q 49 50 55 60 65 70 75 80 85 90 95 125 115 3500 2500
0 1 2 3 4 5 6 7	Y 142.000 24200.000 24300.000 24400.000 24500.000 24500.000 24700.000 24800.000	1.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000	2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25	08:39:26 08:48:32 08:52:25 08:56:02 08:59:38 09:03:13 09:06:53 09:10:22	40141.360 40141.365 40141.369 40141.372 40141.377 40141.377 40141.379 40141.382	4117.035 4117.575 4118.209 4118.918 4119.528 4120.187 4120.736 4121.315	57 56 48 52 47 48 50 50	8 4 25 26 10 26 18 30		Q 45 50 55 60 65 70 75 80 85 90 95 105 115 3500
0 1 2 3 4 5 6 7 8	Y 142.000 24200.000 24300.000 24400.000 24500.000 24600.000 24700.000 24800.000 24900.000	1.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000	2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25	08:39:26 08:48:32 08:52:25 08:56:02 08:59:38 09:03:13 09:06:53 09:10:22 09:14:30	40141.360 40141.365 40141.369 40141.372 40141.377 40141.377 40141.379 40141.382	4117.035 4117.575 4118.209 4118.918 4119.528 4120.187 4120.736 4121.315 4122.026	57 56 48 52 47 48 50 50 51	8 4 25 26 10 26 18 30 20		Q 49 50 55 60 65 70 75 80 85 90 95 105 115 3500 2500 2500 2009
0 1 2 3 4 5 6 7 8 9	Y 142.000 24200.000 24300.000 24400.000 24500.000 24600.000 24800.000 24900.000 25000.000	1.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000	2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25	08:39:26 08:48:32 08:52:25 08:56:02 08:59:38 09:03:13 09:06:53 09:10:22 09:14:30 09:19:54	40141.360 40141.366 40141.367 40141.372 40141.374 40141.377 40141.379 40141.382 40141.384 40141.388	4117.035 4117.575 4118.209 4118.918 4119.528 4120.187 4120.736 4121.315 4122.026 4122.834	57 56 48 52 47 48 50 50 51 52	8 4 25 26 10 26 18 30		Q 45 50 55 60 65 70 75 80 85 90 95 105 115 3500
0 1 2 3 4 5 6 7 8 9 10	Y 142.000 24200.000 24300.000 24400.000 24500.000 24500.000 24900.000 25000.000 25100.000	1.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000	2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25	08:39:26 08:48:32 08:52:25 08:56:02 08:59:38 09:03:13 09:06:53 09:10:22 09:14:30 09:19:54 09:24:18	40141.360 40141.366 40141.369 40141.372 40141.374 40141.377 40141.379 40141.382 40141.384 40141.388 40141.391	4117.035 4117.575 4118.209 4118.918 4119.528 4120.187 4120.736 4121.315 4122.026 4122.834 4123.710	57 56 48 52 47 48 50 50 51 52 52 52	8 4 25 26 10 26 18 30 20 21 21 22		3500 45 50 55 60 65 70 75 80 85 90 95 105 115 3500 3000 3000 105 115 3500 3000 3000 3000 105 115 3500 3000
0 1 2 3 4 5 6 7 8 9 10 11	Y 142.000 24200.000 24300.000 24400.000 24500.000 24500.000 24700.000 24700.000 24900.000 25000.000 25100.000	1.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000	2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25	08:39:26 08:48:32 08:52:25 08:56:02 08:59:38 09:03:13 09:06:53 09:10:22 09:14:30 09:19:54 09:24:18 09:28:27	40141.360 40141.366 40141.379 40141.377 40141.377 40141.377 40141.382 40141.384 40141.388 40141.391	4117.035 4117.575 4118.209 4118.918 4119.528 4120.187 4120.736 4121.315 4122.026 4122.834 4123.710 4124.708	57 56 48 52 47 48 50 50 50 51 52 52 52 53	8 4 25 26 10 26 18 30 20 21 22 22		3500 45 50 55 60 65 70 75 80 85 90 95 105 115 3500 3000 3000 105 115 3500 100 100 100 105
0 1 2 3 4 5 6 7 8 9 10	Y 142.000 24200.000 24300.000 24400.000 24500.000 24500.000 24900.000 25000.000 25100.000	1.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000	2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25	08:39:26 08:48:32 08:52:25 08:56:02 08:59:38 09:03:13 09:06:53 09:10:22 09:14:30 09:19:54 09:24:18	40141.360 40141.366 40141.369 40141.372 40141.374 40141.377 40141.379 40141.382 40141.384 40141.388 40141.391	4117.035 4117.575 4118.209 4118.918 4119.528 4120.187 4120.736 4121.315 4122.026 4122.834 4123.710	57 56 48 52 47 48 50 50 51 52 52 52	8 4 25 26 10 26 18 30 20 21 21 22		Q 45 50 55 60 65 70 75 80 85 90 95 105 115 3500 75 80 85 90 95 105 115 3000 75 80 85 90 95 105 115 3000 75 80 85 90 95 105 105 3000 9 105 105 3000 9 105 105 3000 9 105 105 3000 9 105 105 3000 9 105 105
0 1 2 3 4 5 6 7 8 9 10 11 11 12	Y 142.000 24200.000 24300.000 24400.000 24600.000 24600.000 24600.000 24900.000 25000.000 25100.000 25200.000	1.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000 31300.000	2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25 2009/12/25	08:39:26 08:48:32 08:52:25 08:56:02 08:59:38 09:03:13 09:06:53 09:10:22 09:14:30 09:19:54 09:28:27 09:32:39	40141.360 40141.366 40141.369 40141.372 40141.377 40141.377 40141.379 40141.382 40141.384 40141.391 40141.394 40141.397 40141.400	4117.035 4117.575 4118.209 4118.918 4119.528 4120.187 4120.736 4121.315 4122.026 4122.834 4123.710 4124.708 4125.849	57 56 48 52 47 48 50 50 50 51 52 52 52 53 48	8 4 25 26 10 26 18 30 20 21 22 22 22 17		3500 45 50 55 60 65 70 75 80 85 90 95 105 115 3500 3000 3000 100 115 3500 3000 3000 3000 100 115 3500 3000 3000 3000 100 115 3500 3000 3000 3000 3000 100 1000

Since you can't see the current value of zero-drift while loading data in XYZ format, you need to enter its value manually into the corresponding table space.

1 24200.000 31300.000 2009/12/25 08-481:32 40141.366 4117.575 56 4 3000 2 24300.000 31300.000 2009/12/25 05:52:52 40141.366 4117.575 56 4 3000 3 24400.000 31300.000 2009/12/25 05:52:52 40141.396 418.399 48 25 3000 3 24400.000 31300.000 2009/12/25 06:59:38 40141.374 4119.528 47 10 5 24400.000 31300.000 2009/12/25 06:59:38 40141.374 419.528 47 10 6 2470.000 31300.000 2009/12/25 90:132 40141.374 419.528 47 10 7 24600.000 31300.000 2009/12/25 90:132 40141.384 141.374 48 26 2000 7 24600.000 31300.000 2009/12/25 90:1324 40141.384 121.315 50 30 8 24000.0003	Range:	67	35	98	Testing para	meter:	Y		Drift:	0.	.000	ок
1 24200.000 31300.000 2009/12/25 08-481:2 40141.366 4117.575 56 4 3000 2 24300.000 31300.000 2009/12/25 08522:5 40141.396 418.329 48 25 3000 3 24400.000 31300.000 2009/12/25 08521:4 418.329 48 25 2500 4 24500.000 31300.000 2009/12/25 0851:34 40141.374 4119.528 47 10 5 2460.000 31300.000 2009/12/25 0851:34 40141.374 419.528 47 10 6 24700.000 31300.000 2009/12/25 0851:34 40141.374 419.528 47 10 7 24800.000 31300.000 209/12/25 991:10:22 40141.384 412.026 51 20 8 24900.000 31300.000 209/12/25 991:10:22 40141.384 412.026 51 20 9 2500.0000 31300.000 209/12/25 <th>13</th> <th>25300.000</th> <th>31200.000</th> <th>2009/12/25</th> <th>09:36:53</th> <th>40141.400</th> <th>4125.682</th> <th>58</th> <th>2</th> <th>*</th> <th></th> <th>50</th>	13	25300.000	31200.000	2009/12/25	09:36:53	40141.400	4125.682	58	2	*		50
1 24200.000 31300.000 2009/12/25 08-481:32 40141.366 4117.575 56 4 3000 2 24300.000 31300.000 2009/12/25 05:52:52 40141.366 4117.575 56 4 3000 3 24400.000 31300.000 2009/12/25 05:52:52 40141.372 418.393 42 26 4 24500.000 31300.000 2009/12/25 05:59:38 40141.374 418.938 52 260 4 24500.000 31300.000 2009/12/25 06:59:38 40141.374 418.938 52 260 5 24600.000 31300.000 2009/12/25 06:19:137 410.187 48 260 2000 7 24800.000 31300.000 2009/12/25 90:10:22 40141.384 412.035 50 18 7 24800.000 31300.000 2009/12/25 90:10:22 40141.384 412.0205 51 20 8 24900.000 31300.000 2	12	25300.000	31300.000	2009/12/25	09:32:39	40141.397	4125.849	48	17			
1 24200.000 31300.000 2009/12/25 084-81:2 40141.366 4117.575 56 4 3000 2 24300.000 31300.000 2009/12/25 054:23 40141.366 4117.575 56 4 3000 3 24400.000 31300.000 2009/12/25 054:138 4118.239 48 2.5 3000 4 2500.000 31300.000 2009/12/25 054:518 40141.374 4119.528 47 10 5 24600.000 31300.000 2009/12/25 054:518 40141.374 4119.528 47 10 6 2700.000 31300.000 2009/12/25 054:513 40141.374 4120.266 18 1500 7 24600.000 31300.000 2009/12/25 09:10:22 4014.382 4121.315 50 30 1500 7 24600.000 31300.000 2009/12/25 09:14:30 4121.315 50 30 1500 8 29900.0000 31300.000	11	25200.000	31300.000	2009/12/25	09:28:27	40141.394	4124.708	53	22		0	0
1 24200.000 31300.000 2009/12/25 68-481:2 40141.366 4117.575 56 4 3000 2 24300.000 31300.000 2009/12/25 68522:5 40141.366 4117.575 56 4 3000 3 24400.000 31300.000 2009/12/25 68522:5 40141.396 418.399 48 25 3000 4 24500.000 31300.000 2009/12/25 68521:3 40141.374 419.528 47 10 5 2460.000 31300.000 2009/12/25 6951:31 40141.377 480.176 48 260 2000 6 24700.000 31300.000 2009/12/25 6951:31 40141.374 419.528 47 10 7 24600.000 31300.000 2009/12/25 991:10:22 40141.382 4121.315 50 30 7 24600.000 31300.000 2009/12/25 991:10:22 40141.384 4122.026 51 20 8 24900.0000 <td>10</td> <td>25100.000</td> <td>31300.000</td> <td>2009/12/25</td> <td>09:24:18</td> <td>40141.391</td> <td>4123.710</td> <td>52</td> <td>22</td> <td></td> <td>500</td> <td>50</td>	10	25100.000	31300.000	2009/12/25	09:24:18	40141.391	4123.710	52	22		500	50
1 24200.000 31300.000 2009/12/25 08-481:32 40141.366 4117.575 56 4 3000 2 24300.000 31300.000 2009/12/25 08-582:52 40141.366 4117.575 56 4 3000 3 24400.000 31300.000 2009/12/25 08:52:52 40141.399 418.309 48 256 3000 4 24500.000 31300.000 2009/12/25 08:59:38 40141.374 4119.528 47 10 5 24400.000 31300.000 2009/12/25 96:93:18 40141.377 48 26 2000 6 24700.000 31300.000 2009/12/25 90:12/25 40141.377 410.376 50 18 6 24700.000 31300.000 2009/12/25 90:10:72 40141.382 4121.315 50 30	9	25000.000	31300.000	2009/12/25	09:19:54	40141.388	4122.834	52	21		/	
1 24200.000 31300.000 2009/12/25 084-0612 40141.366 4117.575 56 4 3000 2 24300.000 31300.000 2009/12/25 0552.12 40141.369 418.209 48 25 3000 3 24400.000 31300.000 2009/12/25 0554.139 418.209 48 25 3000 4 24500.000 31300.000 2009/12/25 0594.1374 4119.528 47 10 2500 5 24600.000 31300.000 2009/12/25 0595.13 40141.377 4120.187 48 250 5 24600.000 31300.000 2009/12/25 0595.13 40141.377 4120.187 48 26 2000 5 24600.000 31300.000 2009/12/25 0595.13 40141.377 120.187 48 26 2000 6 24700.000 31300.000 2009/12/25 0594.137 4101.137 410.187 48 26 2000	8	24900.000	31300.000	2009/12/25	09:14:30	40141.384	4122.026	51	20		1000	- 10
1 24200.000 31300.000 2009/12/25 08-48:32 40141.366 4117.575 56 4 3000 2 24300.000 31300.000 2009/12/25 058:52:5 40141.366 4117.575 56 4 3000 3 24400.000 31300.000 2009/12/25 058:52:5 40141.359 418.399 48 25 3000 4 24500.000 31300.000 2009/12/25 061:372 40141.374 418.938 52 2500 5 24400.000 31300.000 2009/12/25 90:31:3 40141.377 4130.387 48 256 2000 31300.000 2009/12/25 90:31:3 40141.377 4120.387 48 26 2400.000 31300.000 2009/12/25 90:31:3 40141.377 4120.376 49 260 2000 31300.000 2009/12/25 90:413:37 4120.376 401 26 2000 31300.000 2009/12/25 10:413:374 4120.376 401	7	24800.000	31300.000	2009/12/25	09:10:22	40141.382	4121.315	50	30		1500	15
1 24200.000 31300.000 2009/12/25 08-481:32 40141.366 4117.575 56 4 2 24300.000 31300.000 2009/12/25 058:52:5 40141.366 4117.575 56 4 3 24400.000 31300.000 2009/12/25 058:52:5 40141.369 418.309 48 25 3 24400.000 31300.000 2009/12/25 90141.372 4018.312 52 250 4 24500.000 31300.000 2009/12/25 60141.374 4119.528 47 10	6	24700.000	31300.000	2009/12/25	09:06:53	40141.379	4120.736	50	18			15
1 24200.000 31300.000 209/12/25 08-88-32 40141.366 4117.575 56 4 2 24300.000 31300.000 209/12/25 08:52:25 40141.369 4118.209 48 25 3 24400.000 31300.000 209/12/25 08:56:02 40141.372 4118.918 52 26 2500	5	24600.000	31300.000	2009/12/25	09:03:13	40141.377	4120.187	48	26		2000	20
1 24200.000 31300.000 2009/12/25 08-08:32 40141.366 4117.575 56 4 2 24300.000 31300.000 2009/12/25 08:52:25 40141.369 418.299 48 25 3000 21300.000 21300 000 2009/12/25 04141.399 418.198 49 25 26	4	24500.000	31300.000	2009/12/25	08:59:38	40141.374	4119.528	47	10		2300	23
1 24200.000 31300.000 2009/12/25 08:48:32 40141.366 4117.575 56 4	3	24400.000	31300.000	2009/12/25	08:56:02	40141.372	4118.918	52	26		2500	25
	2	24300.000	31300.000	2009/12/25	08:52:25	40141.369	4118.209	48	25		3000	
0 142.000 1.000 2009/12/25 08:39:26 40141.360 4117.035 57 8 3500	1	24200.000	31300.000	2009/12/25	08:48:32	40141.366	4117.575	56	4			1
	0	142.000	1.000	2009/12/25	08:39:26	40141.360	4117.035	57	8		3500	35

Data will be loaded after you press "OK".



4.3 Binary data (SGD)

Binary data format, as long as text data format, is used to save the same data from gravimeter but in binary form which expedites downloading operation. In addition, it may contain raw data for each measurement.

To load text data use one of the following methods:

- Go to the main menu and select "File \rightarrow Open";
- Press button "Open" on the toolbar;
- Drag the file onto the opened window with mouse;
- Use shortcut Ctrl+O;
- Select file from the list "File \rightarrow Recent files".

3 Calcula	ate Drift f	for SCINTR	EX CG-5 (V	1.4 Expert) (STC "D	EPROIL LI	[D"]					- D X
Eile Edi	t <u>S</u> cale	Options	<u>V</u> iew <u>H</u>	elp								
👌 Ope		Ctrl+O		Ξ 🕄								
100 A	ent files	•	-0.4	0.2	<u>0</u>	0.2	0.4	0.6	0.8	1	SN: 00000	
Save		Ctrl+S								0.8		
	e Image									0.6	Data Analysis Interval	
	t Image ate report									0.4	Start 00:00:00	Finish 00:00:00
Clos		Ctrl+X									All data	
-	e	CUITA										
Exit											Remove random noise	
-0.4											Remove random noise	3 ▼ ÷ xσ
-0.6											Automatic random noise rem	ve
-0.8												
-14	-0.8	-0.6	-0.4	-0.2	0	0.2	0.4	0.6	0.8			
<u> </u>			011	012		012	-			•		
	Show additional options Mx 0.000 Dx 0.000											
	Stand. dev				jected							
1	-0.8	-0,6	-0,4	-0,2	0	0.2	0,4	0.6	0.8	1		
0.8										0.8		
0.6										0.6	Current drift (mgl/day):	0.000
0.2										0.2	New drift (mgl/day):	0.000
-0.2										0	Optimal Drift (mgal/day):	0.000
-0.4											Change of drift (mgl/day):	0.00000
-0.6											Mean value (mgl):	0.000
-1	-0.8	-0.6	-0.4	-0.2	0	0.2	0.4	0.6	0.8		Standard deviation (mgl):	0.00000
		-0.0	10.1	-0.2		0.2	0.4	0.0	0.0	•	Standard deviation (mgi).	0.00000
Report	Data											
1												^
												-

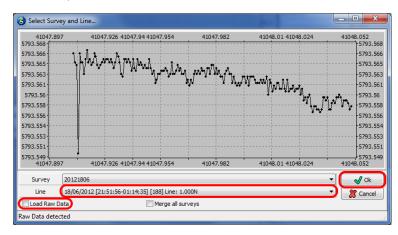
Edit	Scale		<u>V</u> iew <u>H</u>		_							
	1 🖻 (en 🕤	- +	60								
-1	-0.8	-0.6	-0.4	-0.2	0	0.2	0.4	0.6	0.8	1	SN: 00000	
											Data Analysis Interval Start 10:00:00	C
										0.2	All data	00
											Remove random noise	3 •]
4 -1	-0.8	-0.6	-0.4	-0.2	0	0.2	0.4	0.6	0.8	1-1		
0. Sta	nd. dev. -0.8	Tilt OX -0.6	Tilt OY Tic -0.4	e var. Reje -0.2	ected 0	0.2	0.4	0.6	0.8	1		
•										0.8	Current drift (mgl/day):	0.0
ļ											New drift (mgl/day):	0.0
											Optimal Drift (mgal/day):	0.0
										-0.0	Change of drift (mgl/day):	0.00
4											Mean value (mgl):	
-1	-0.8	-0.6	-0.4	-0.2	Ó	0.2	0.4	0.6	0.8	1	Standard deviation (mgl):	0.00
ort Da	ita											

If to open file using one of two first methods, you need to select file format (SGD) in the drop down list, select file name from the list and press "Open".

3 Open			
🕢 🗸 🗸 🕹 🖉 🖉 🖉 🖉 🖉		- 4 Search Samples	
Organize 🔻 New folder		8	- 🗆 (
Favorites	Date modified	Туре	Size
Desktop 🖉 Test1	05.09.2014 18:41	Text Document	50 KB
🐌 Downloads 🛛 🧭 Test2	05.09.2014 18:41	Text Document	48 KB
😌 Dropbox 🛛 🖉 Test3	05.09.2014 18:41	Text Document	45 KB
📃 Recent Places 🛛 🖉 Test4	05.09.2014 18:41	Text Document	104 KB
Test6	05.09.2014 18:41	Text Document	48 KB
🥽 Libraries 🛛 🖉 Test7	05.09.2014 18:41	Text Document	94 KB
🗈 Documents 🗧 🙋 Test8	05.09.2014 18:41	Text Document	46 KB
🎝 Music 🛛 🙇 Test9	05.09.2014 18:41	Text Document	77 KB
Pictures			
Subversion			
H Videos			
r Computer			
🐔 Local Disk (C:)			
👝 Local Disk (D:)			
File name:		 Text files (TXT) 	
		Binary files (SGD) Text files (TXT)	
		Text files (DAT)	
ta		Text files (XYZ) All files	

3 Open			SN.		x
🕞 🕞 – 🕌 « Local Disk (D	:) CompInt Bin Win32 Samples	•	🔸 😽 Search Sampl	es	Q
Organize 🔻 New folder					0
☆ Favorites	Name	Date modified	Туре	Size	
📃 Desktop	Test1.sgd	05.09.2014 18:41	SGD File	1 070 KB	
Downloads ♥ Dropbox ₩ Recent Places	o_ Test2.sgd	05.09.2014 18:41	SGD File	432 KB	
Ibraries Documents Music ■ Pictures Subversion Utdeos					
Computer Local Disk (C:) Local Disk (D:)					
File name	≈ Test1.sgd		Binary files (SG Open	D) Cancel	•

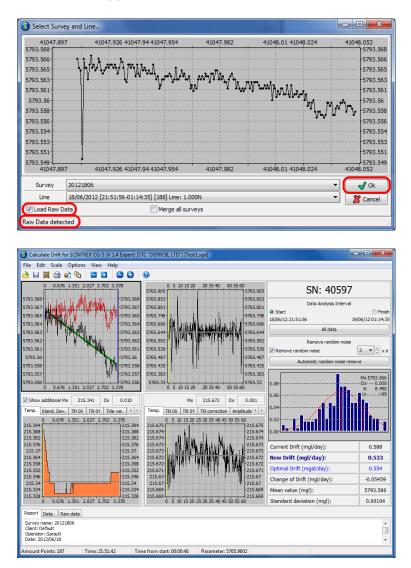
If data file contains more than one survey or more than one survey line, than the optional window for choosing survey/survey line will open.



When survey and survey line are selected press "OK". Loaded data will be displayed in the main window.

Calculate Drift for SCINTREX CG-5 (V 1.4	4 Expert) [STC "DEPROIL LTD"] [Te	st1.sgd]		
File Edit Scale Options View Help)			
🚵 🗟 🔟 😂 🐑 🔁 🖬	🕒 🕒 🛛 🕄			
0 0.338 0.676 1.013	1.351 1.689 2.027 2.364	2.702 3.04 3.378	SN: 40597	
5793.568	1. WMA OINMA	-5793.568	Data Analysis Interval	
5793.565 11 10 may 14	M Lat A Made Ma	M M 5793.567	 Start 	Finish
5793.564	. ₩ .	5793.564	18/06/12 21:51:56 19/	06/12 01:14:35
5793.563	AL WATTIN A	V 5793.563	All data	
5793.562	W YAAAM	11 5793.562	Remove random poise	
5793.561	V VV V	5793.561	Remove random noise	3 • ÷ xσ
5793.56		5793.56	Automatic random noise remov	
5793.558			Automatic random hoise remot	e
5793.557		····· 1.5793.557		Mx 5793.566
5793.556 0 0.338 0.676 1.013	1.351 1.689 2.027 2.364	2.702 3.04 3.378	0.08	-Dx0.000- Xi 8.490
Show additional options Temp. Stand. Dev. Tilt 0X Tilt 0Y Tide v 0 0.338 0.676 1.013 215.3941 1 1 1	M: /ar. Rejected 1.351 1.689 2.027 2.364	x 215.341 Dx 0.010	0.06	Ur>99.
215.388		-215.388 -215.382	0.00-	
215.376		-215.376	Current Drift (mgl/day):	0.588
215.364		-215.364	New Drift (mgl/day):	0.533
215.358		-215.358 -215.352	Optimal Drift (mgal/day):	0.554
215.346		-215.346	Change of Drift (mgl/day):	-0.05459
215.334	¥.	-215.334	Mean value (mgl):	5793.566
0 0.338 0.676 1.013	1.351 1.689 2.027 2.364	2.702 3.04 3.378	Standard deviation (mgl):	0.00104
Report Data				
Survey name: 20121806 Client: Default Operator: Garault Date: 2012/06/18				*
Amount Points: 187 Time: 00:19:18	Time from start: 02:27:22	5793.5701 mGal		

If you use Professional edition of the program and there are raw data in the data file, a message "Raw data detected" will appear in the status bar of the loading window. Also a checkbox "Load raw data" will appear.

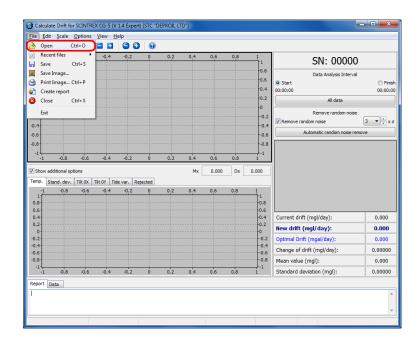


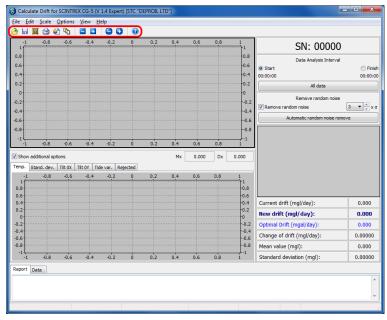
4.4 Simplified data format (DAT)

Simplified data format provides loading and analyzing data which were not observed by SCINTREX CG–5 gravimeters.

To load text data use one of the following methods:

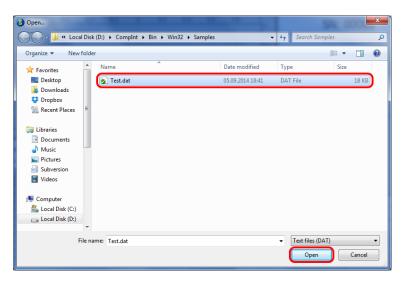
- Go to the main menu and select "File \rightarrow Open";
- Press button "Open" on the toolbar;
- Drag the file onto the opened window with mouse;
- Use shortcut Ctrl+O;
- Select file from the list "File \rightarrow Recent files".

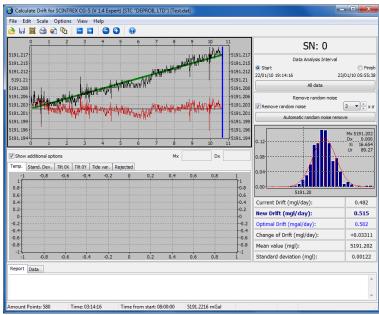




If to open file using one of two first methods, you need to select file format (DAT) in the drop down list, select file name from the list and press "Open".

(😮 o)pen			5		×
	🕞 - 길 « Local Dis	sk (D:) + CompInt + Bin + Win32	Samples	🕶 🍫 Search Sample	25	ρ
	rganize 🔻 New fold	ler				0
	Favorites	Name	Date modified	Туре	Size	
	E Desktop	🖉 Test1	05.09.2014 18:41	Text Document	50 KB	
2	Downloads	Test2	05.09.2014 18:41	Text Document	48 KB	
۰.	💱 Dropbox	Test3	05.09.2014 18:41	Text Document	45 KB	
5	📃 Recent Places	Test4	05.09.2014 18:41	Text Document	104 KB	
3		Test6	05.09.2014 18:41	Text Document	48 KB	
6	Libraries	Test7	05.09.2014 18:41	Text Document	94 KB	_
	Documents	Test8	05.09.2014 18:41	Text Document	46 KB	_
5) 11 86	Music Pictures Subversion Videos	Test9	05.09.2014 18:41	Text Document	77 KB	
4	E Computer					0
	💑 Local Disk (C:)					0
	👝 Local Disk (D:)					
4						
	File r	name:		 Text files (TXT) 		- P.
				Binary files (SGI Text files (TXT)))	0
				Text files (DAT))).(
ort Da				Text files (XYZ) All files		





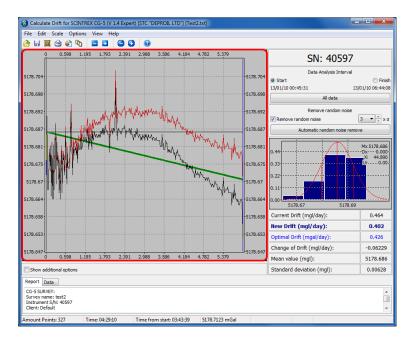
Simplified data format is structured as follows:

0.482		
2010/01/22	19:14:16	5191.204
2010/01/22	19:15:23	5191.205
2010/01/22	19:16:28	5191.206
2010/01/22	19:17:33	5191.204

First row specifies the current zero-drift value, next rows contain data (data, time and gravity correspondingly).

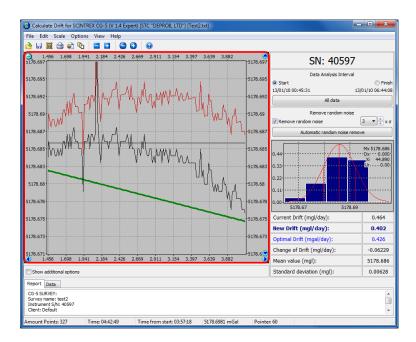
5 Data visualization

Downloaded and analyzed data are shown on plot panel.

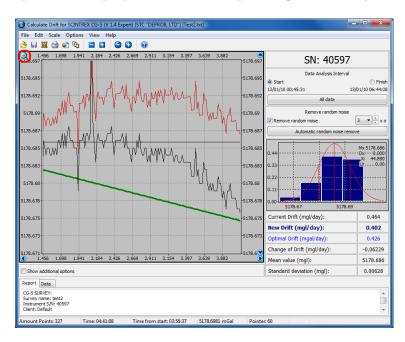


Any zone of display area on the plot panel can be zoomed by selecting it with a mouse. Red line shows motion path of mouse cursor if to hold left mouse button.

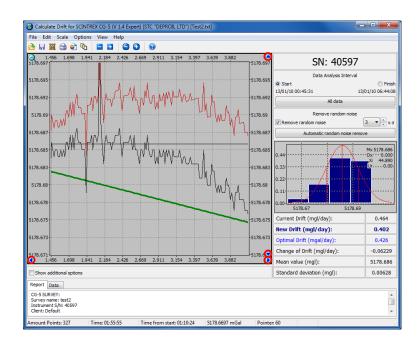




To return to the previous display area use corresponding control key.



Other control keys allow moving the display area.

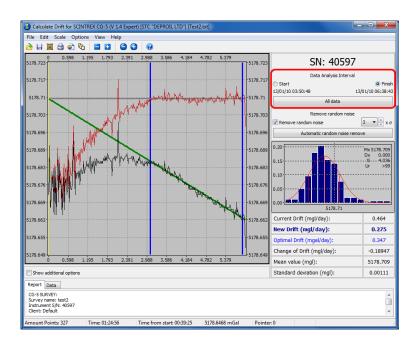


The panel shows:

- Black color marks the plot of input data observed by gravimeter.
- *Red color* marks the plot after zero-drift calculation.
- *Green color* marks input data trend. After the processing data are being calculated by subtracting trend line.
- *Gray color* marks the line of data mean value within the analyzed interval.
- *Blue color* marks two restrictive lines which denote start and end of time interval of analyzed data.
- Yellow color marks the cursor.

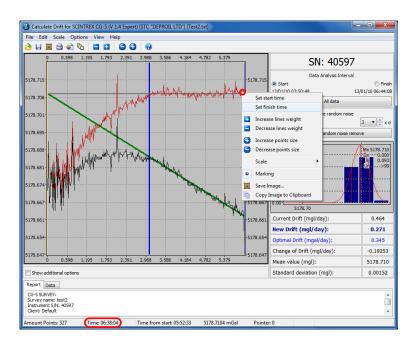
To change the position of restrictive lines (and starting / finish time interval correspondingly) do one of the following:

• Choose "Interval start" in the right part of the window and double click with left mouse button on the required plot area. Blue line which corresponds to the interval start will be replaced into required position. Choose "Interval end" and double click with left mouse button. Line of the interval end will be replaced.



• Click with right mouse button on the required plot area. In the context menu choose which one of three lines for the start/end of the interval should be replaced into selected point.

0 5178.704 5178.698	0.598 1.195	1.793 2.391 2.988	3.596 4.184 4.782 5.379		SN: 40597 Data Analysis Interval © Start 13/01/10 00:45:31 All data Remove random noise) Fini 01/10 06:44:
5178.692	1 shall	Mary Mary	Set start time Set finish time	-5178.692		3 • 🔹 >
5178.681 5178.675 5178.67 5178.67		• • • • •	Increase points size Decrease points size Scale Marking	·5178.681 ·5178.675 ·5178.67 ·5178.67	0.44 0.33 0.22 0.11 0.00 5178.67 5178.69	Mx 5178.68 -Dx0.00 Xi 44.85 Ur0.0
5178.658			Copy Image to Clipboard	-5178.658	Current Drift (mgl/day):	0.464
5178.653				-5178.653	New Drift (mgl/day): Optimal Drift (mgal/day):	0.402
5178.647				5178.647	Change of Drift (mgl/day):	-0.0622
0	0.598 1.195	1.793 2.391 2.988	3.586 4.184 4.782 5.379	51/0.04/	Mean value (mgl):	5178.68
Show ad	ditional options				Standard deviation (mgl):	0.0062
Report De CG-5 SURV Survey nar Instrument Client: Def	/EY: me: test2 t S/N: 40597					

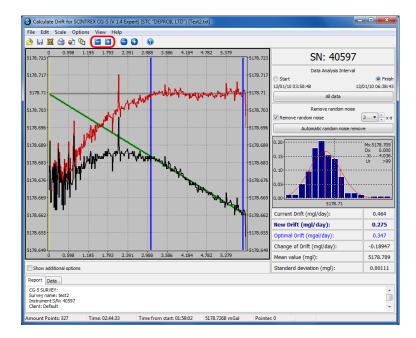


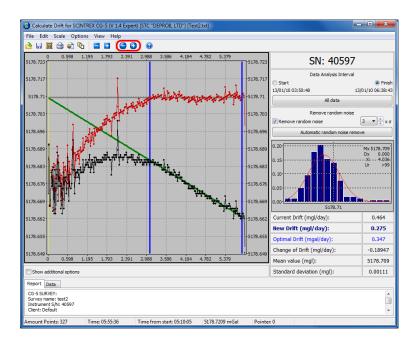
When the interval is selected you can control the time which is displayed in status bar.

When the analyzed interval is selected all calculations will be performed only for the data inside of its interval.

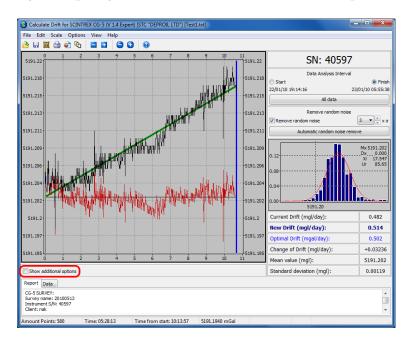
The start and end of the interval should be selected basing on the requirement that data must have a linear trend. Linear interval may be preceded (as in the previous example) by stabilization interval. Start of the analysis interval must be selected after the completion of stabilization interval.

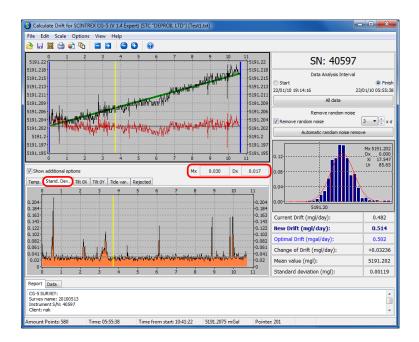
Line width and point size on the red and black plots are variable parameters. To change it go to the main menu ("Increase line width", "Decrease the line width", "Increase the point size", "Decrease the point size"), plot context menu (which is being activated by clicking right mouse button on any point of the plot panel), and click corresponding buttons on the toolbar.



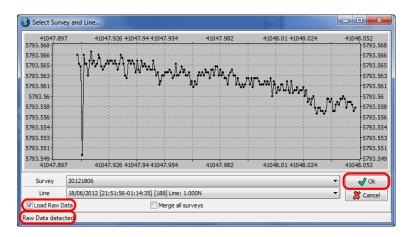


Apart from gravity field plot you can also show other additional plots.





Cursor will appear if to click with mouse on the workspace of any plot or select a cell on the spreadsheet. It will denote the current position of selected point.

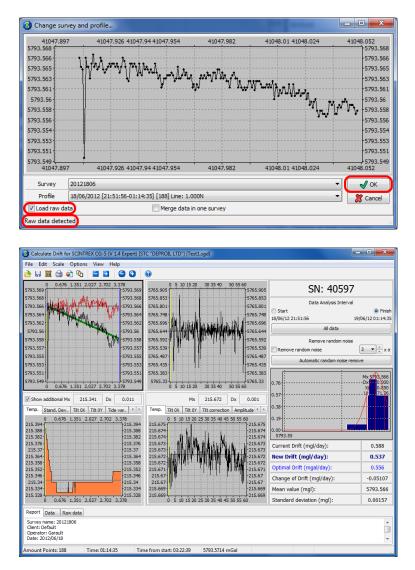


6 Raw data viewing

Viewing and processing raw data is available if you use Professional and Expert program edition.

Raw data can be loaded from files in Scintrex Geophysical Data Format (*.SGD).

If raw data have been detected in file while data loading, special notification will appear in status bar of loading window. Checkbox "Load raw data" also becomes available.



All abscissa axes on the panel of row data are in seconds.

Data which are displayed on the row data panel depend on selected point. Cursor location indicates the current point. Independent cursor is used for row data. This cursor is fixed to spreadsheet "Raw data".

Raw data are digitized with 6 Hz frequency and composed with four columns. The meanings of these data: GravSample (gravity), TiltXSample (inclination of Ox), TiltYSample (inclination of Oy) TempSample (temperature) can be found in *.smp files.

Gravity is calculated from raw data (GravSample) with the following the equation:

$$Gravity = GCAL_1 \cdot \frac{GravSample}{536870912},$$

536870912 — is hexadecimal value 2000000_{16} — total size axis, GCAL_1 — main calibration constant.

Inclination of axes OX and OY can be calculated by the following equations:

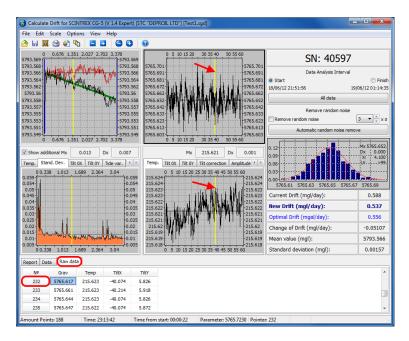
 $TiltX = ((TiltXSample - TiltXOffset) \cdot 0.000076295 - 2.5) \cdot TiltXSensitivity,$

 $\text{TiltY} = -\left(\left((\text{TiltYSample} - \text{TiltYOffset}) \cdot 0.000076295 - 2.5\right) \cdot \text{TiltYSensitivity}\right),$

TiltXOffset, TiltXSensitivity, TiltYOffset, TiltYSensitivity — gravimeter constants. Temperature is calculated by:

 $Temperature = (TempSample \cdot TempSF) - TBIAS - TEOFF,$

 $\rm TBIAS=500$, TempSF = 1000/536870912. TEOFF parameter is unique for each gravimeter and its value in the calculation program is TEOFF = 0.



Changing location of the cursor in the data spreadsheet (also by using arrow buttons on the keyboard) leads to moving current position of corresponding cursor.

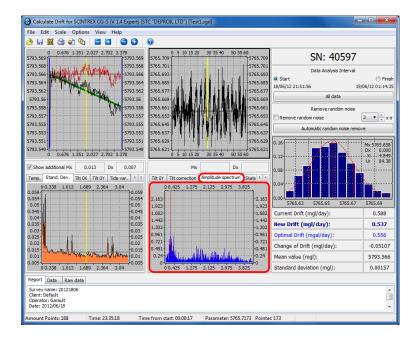
The following plots are available for row data: gravity variations plot (mGal), temperature variations plot (mK), Ox and Oy axis deviation plots (arcsec), gravimeter slope correction (mGal), statistics on the current row data. Each value of displayed statistics can be copied into the clipboard by using context menu in corresponding cell.

Calculate	Diff for SCI	TREV CO. 5	0/145-	A) ISTO POEDRON LTD	1 (Test) and					- X-	
Consider printing compared by the optimizer of Michael											
	File Edit Scale Options View Help										
5793.569	0.676 1.351	2.027 2.702	5793.50		10 15 20 25	SN: 40597					
5793.568 5793.566	INTERNA AN /	Mariaha	-5793.56					5765.701	Data Analysis Interval		
5793.564	MANIN,		-5793.56			- J		5765.681	Start	🔿 Finish	
5793.562		AWY SHE			ini interio da	1 de	<u>tindik n</u>	5765.672	18/06/12 21:51:56 19/	06/12 01:14:35	
5793.56 - 5793.558 -		T	-5793.5		化八连国油 開	AR JUN M	从推行员	5765.662	Al data		
5793.557			-5793.5		DATE NAMES AND A	4 Y W W	11 I V VI	5765.642	Remove random noise		
5793.555						Linger Statistic	n ann an te	5765.633	Remove random noise	3 • 🗘 x σ	
5793.553 · 5793.551 ·			-5793.5				1	5765.623	Automatic random noise remov	e	
5793.549			5793.5					5765.603	· · · · · · · · · ·	<u> </u>	
Ó	0.676 1.351	2.027 2.702	3.378	0 5	10 15 20 25	30 35	40 45 3	50 55 60	0.12	.Mx 5765.652. Dx 0.000	
Show add	Show additio Mx 0.013 Dx 0.007						Mx	Dx	0.09	Xi 4.100	
Temp, Star	Temp, Stand. Dev. Tilt 0X Tilt 0Y Tide var 4 *				Temp. Tilt 0X Tilt OY Tilt correction Amplitude spectrum Statistics						
	0.676 1.351	2.027 2.70									
0.059			0.05	4 Cratha		5765.652	0.015	0.00081	5765.61 5765.63 5765.65 5765.67	5765.69	
0.05			-0.05		Temperature:			0.00005	Current Drift (mgl/day):	0.588	
0.04			0.04	Time	TIDC:			0.00371	New Drift (mgl/day):	0.537	
0.03			-0.03	TitY: 5.857			0.074	0.00392	Optimal Drift (mgal/day):	0.556	
0.025			-0.02						Change of Drift (mgl/day):	-0.05107	
0.015	a marting the	Mound	0.01	5					Mean value (mgl):	5793.566	
0.005	0.676 1.351	2.027 2.70	0.00	5					Standard deviation (mgl):	0.00157	
Report Da	ta Raw data										
N9	Grav	Тетр	TiltX	Tity							
232	5765.617	215.623	-40.074	5.826							
233	5765.661	215.623	-40.214	5.918						_	
234	5765.644	215.623	-40.074	5.826						1	
235	5765.647	215.622	-40.074	5.872						-	
Amount Poir	Amount Points: 188 Time: 23:13:45 1			Time from start: 00:0	0:25 Parameter: 576	5.7215 Point	er: 232				

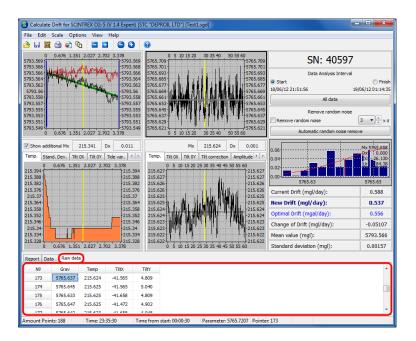
Mean \overline{x} , standard deviation σ and mean error SDOM for x parameter are calculated using following equations:

$$\overline{x} = \frac{1}{N-1} \sum_{i=1}^{N} x_i, \quad \sigma = \sqrt{\frac{1}{N-1} \sum_{i=1}^{N} (x_i - \overline{x})^2}, \quad \text{SDOM} = \frac{\sigma}{\sqrt{N}}$$

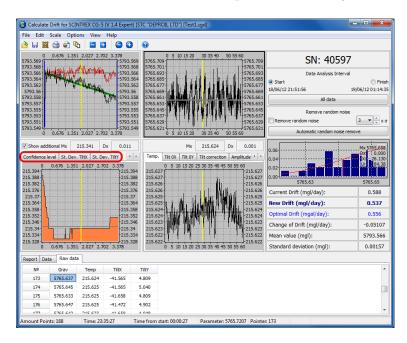
You can also check the amplitude spectrum for row data. Axis Ox is frequency (Hz).



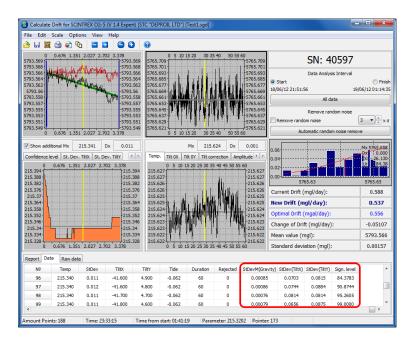
New plots and spreadsheets appear the row data view mode. New spreadsheet with row data will be added.



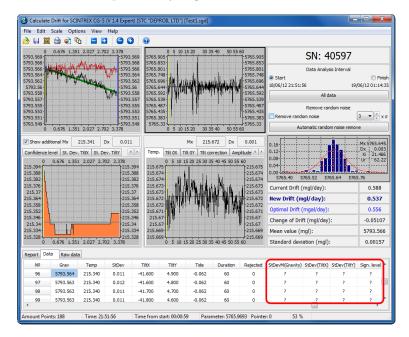
Three new plots will be added: confidence level plot, Ox and Oy axial deviation.



Additional columns appear in the main spreadsheet:

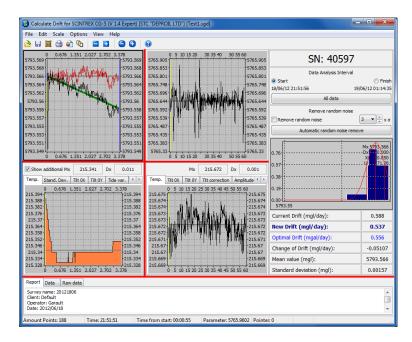


All described parameters are being recalculated and redisplayed if it is necessary. Irrelevant data in the spreadsheet will be replaced by sign "?" while calculations.

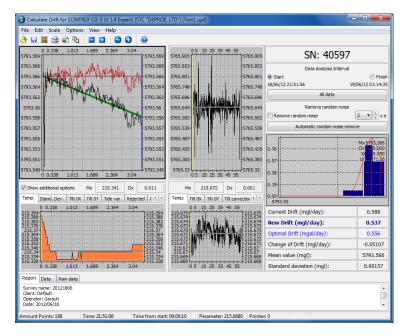


7 View windows

A relative location of different panels can be changed using corresponding delimiters. All possible delimiters are shown in figure with red line. Vertical delimiter is not active in case if non-processed data are not being loaded.



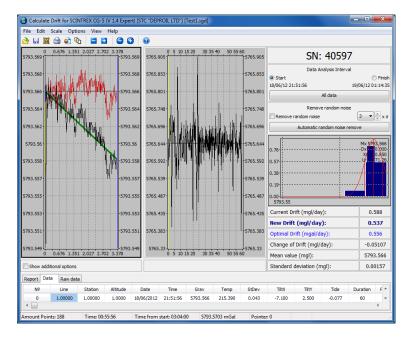
Dragging delimiters leads to changing windows size.



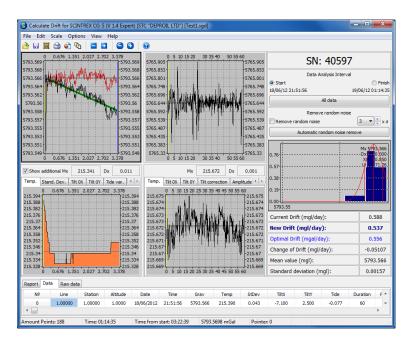
By using the main menu command "View \rightarrow Align" plots on the plot panel will be aligned to the same size. Using the command "View \rightarrow Align graphics and tables" you can align plots and spreadsheets by the size.

ile Edit	Scale Opti	ons View	Help										
) 🖯 🔟	😂 👔 ष्	b 🛛 🖬 🖬	1 🖸 🕻										
793.569	0.676 1.35	1 2.027 2.7	5793			15 20 30 35	40 50 55 6	50 		SN:	4059	7	
5793.568 5793.566 5793.562 5793.564 5793.562 5793.564 5793.564 5793.564				.566 5765.8 .564 5765.7 .562 5765.6 .56 5765.6 .558 5765.5	5765.853 - 5765.853 5765.801 - 5765.801 5765.788 5765.696 5765.696 5765.694				18/06/12 21:51:56 19/06/12 0) Finish 1:14:35	
793.557 793.555 793.553 793.551 793.551 793.549	0.676 1.35	1 2.027 2.7	-5793 -5793 -5793 -5793 -5793 -5793 02 3.378	.555 5765.4 .553 5765.4 .551 5765.3	187 135 183	15 20 30 35	40 50 55 6	-5765.539 -5765.487 -5765.435 -5765.383 -5765.383 -5765.33	Remove r	andom noise	e random noi: andom noise i	3 •) <u>*</u> x (
Show addi		215.341 0X Tilt 0Y	Dx 0.01 Tide var.	1 Temp.	Tilt OX T	Mx 215.0	572 Dx	0.001	0.76				3.565
0	0.676 1.351				0 5 10 15 20 25 30 35 40 45 50 55 60							0.588	
15.394 15.388 15.382 15.376 215.37			215 215 215 215 215 215	.394 215.6 .388 215.6 .382 215.6 .376 215.6 .37 215.6		A MA ALA	u.Man	-215.675 -215.674 -215.674 -215.673 -215.673	New Drift	(mgl/day	r):		537
15.358			-215	.364 215.6 .358 215.6 .352 215.6		ir qith	14 M M	-215.672 -215.672 -215.672 -215.671 -215.67		ift (mgal/d Drift (mgl/			556)5107
15.346 215.34 15.334	1		215	.346 215.0 .34 215.0 .334 215.6 .328 215.6	3 1 60000			215.67	Mean valu	e (mgl):		579	3.566
15.328 -	0.676 1.351	2.027 2.7	02 3.378	.328 215.66	0 5 10 1	5 20 25 30 35	40 45 50 55		Standard o	leviation (n	ngl):	0.0	0157
leport Dat	a Raw data	a											
N9	Line	Station	Altitude	Date	Time	Grav	Temp	StDev	TiltX	TiltY	Tide	Duration	F A
0	1.00000	1.00000	1.0000	18/06/2012	21:51:56	5793.566	215.390	0.043	-7.100	2.500	-0.077	60	
1	1.00000	1.00000	1.0000	18/06/2012	21:53:05	5793.565	215.390	0.033	-9.200	3.000	-0.077	60	
2	1.00000	1.00000	1.0000	18/06/2012	21:54:10	5793.564	215.380	0.019	-10.300	3.400	-0.077	60	
3	1.00000	1.00000	1.0000	18/06/2012	21:55:15	5793.550	215.380	0.050	-18.400	3.500	-0.077	60	
4	1.00000	1.00000	1.0000	18/06/2012	21:56:20	5793.566	215.380	0.016	-19.400	4.100	-0.077	60	
5	1.00000	1.00000	1.0000	18/06/2012	21:57:25	5793.565	215.380	0.020	-20.300	4.600	-0.077	60	
6	1.00000	1.00000	1.0000	18/06/2012	21:58:30	5793.565	215.370	0.052	-21.800	5.400	-0.076	60	

Command "View \rightarrow Show field" is used to display only the plot (plots) of gravity field.



Command "View \rightarrow Show all" is used to all available plots.

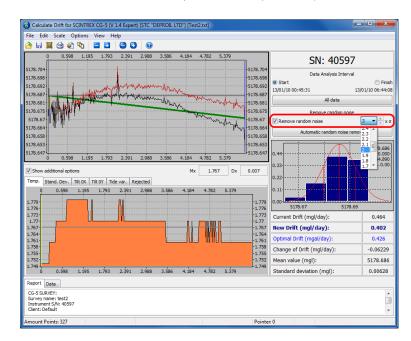


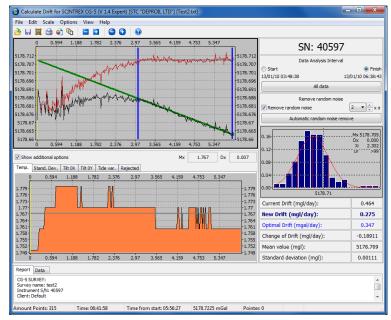
Command "Arbitrary windows" on the toolbar is used to fix the alignment of plots in case of changing the main program window size.

8 Data filtration

Data filtration is used to reject high-amplitude artefacts. To switch on the data filtration option activate the checkbox "Remove random noise" on the Settings panel and select amplitude coefficient in the drop-down menu or by means of buttons "Up" and "Down".

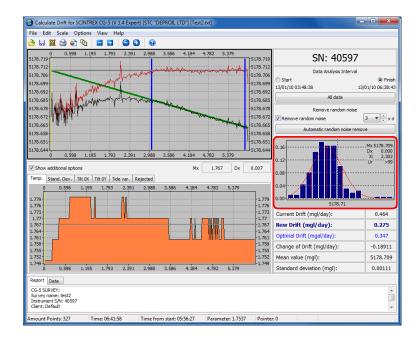
Coefficient α defines the amplitude limits, above which data rejection occurs. The point (x_i, y_i) in the input data is being rejected if $|y_i - kx_i - b| > \alpha \sigma$ (k, b - linear trend coefficients).





9 Histogram

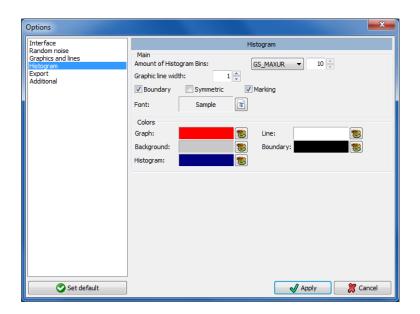
Histogram shows the distribution of random noise which had been received after the removal of high-amplitude artefacts and linear trend from input data.



Histogram plot shows:

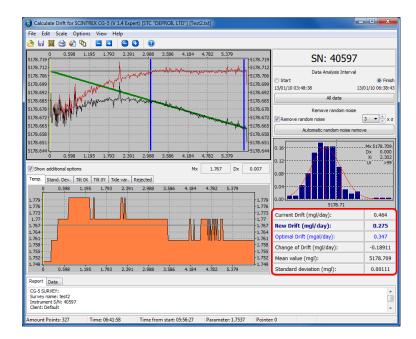
- Histogram itself with the optimal number of columns;
- Gaussian function;
- Mean value (Mx);
- Dispersion (Dx);
- Parameter calculated by the formula $\frac{x_{\text{max}} x_{\text{min}}}{Dx}$, and is used to evaluate a data uniformity (*Re*);
- Parameter χ^2 ;
- Confidence level Ur (percentages).

To configure the histogram go to program settings. To see the data statistics go to context menu.



10 Data analysis results

Data analysis results are shown in **Results** panel.



Analysis results can be copied into the clipboard Windows by key board combination Ctrl+C.

You can also export processed data using the main menu "File \rightarrow Save" or the corresponding button on the toolbar. Data can be exported in formats txt (delimiters —space) and csv (delimiter — semicolon). File format for saving can be selected in the corresponding file selection window. Dataset in csv file format can be opened by Microsoft Excel with the default settings. The following data columns are saved: date (date), time (time), decimal time (dec.time) and gravity field (gravity).

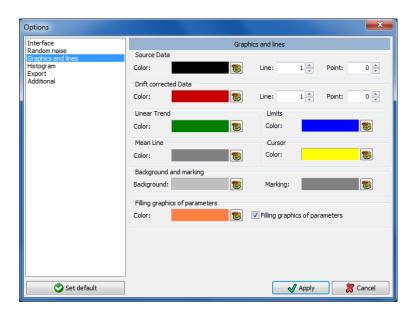
It is also possible to capture the fragment of the screen, which includes plot bar, toolbar, histogram and results panel. It can be saved it as png, bmp, jpg or gif files. To do it go to the context menu and select "Save Image".

You can create a pdf report on the data processing results. To create a report you should select "File \rightarrow Create report" in the main menu or press the corresponding button on the toolbar.

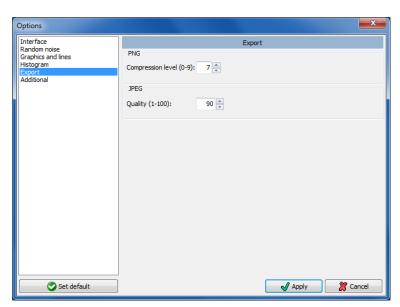
11 Program parameters

All parameters are saved in the configuration file GravityDrift.ini, which is stored in the program folder.

Options			— X
Interface	Interface	:	
Random noise Graphics and lines Histogram Export Additional	Language		
Set default		🖌 Apply	Cancel
Options			X
Interface Random noise	Random no	ise	
Graphics and lines Histogram Export Additional	▼ Remove random noise Tolerance: 3.0 ▼ ×		
Set default		🖌 Apply	Cancel







Options		×			
Interface Random noise	Additional				
Random noise Graphics and lines Histogram Export Additional	 ✓ Use split with tolerance ✓ Recalculate decimal time ✓ Show Trend Line ✓ Open report after creating 	0.200 Hours:			
Set default		Apply 🔭 Cancel			

12 Uninstalling

To uninstall the program follow one of two directions below:

- Go to the menu "Start \rightarrow Programs \rightarrow GravityDrift 1.4_x.x.x.x \rightarrow Uninstall".
- Go to the Control Panel and double click on Add/Remove Programs (in case if Register Entries was activated whine installing the program).
- Run uninstall.exe in the program folder.



GravityDrift 1.4.1.1	883(Expert) Uninstall						
	Uninstall GravityDrift 1.4.1.1883(Expert) Remove GravityDrift 1.4.1.1883(Expert) from your computer.						
GravityDrift 1.4.1.1 start the uninstallati	383(Expert) will be uninstalled from the following folder. Click Uninstall to on.						
Uninstalling from:	C:\Program Files (x86)\GravityDrift\GravityDrift_1.4.1.1883(Expert)\						
Copyright (C) 2012-101	5 by STC Deproil LTD						

👹 GravityDrift 1.4.1.188	33(Expert) Uninstall		
	Uninstalling Please wait while uninstalled.	: GravityDrift 1.4.1.1883	3(Expert) is being
Delete file: C:\Program	n Files (x86)\GravityDrift	t\GravityDrift_1.4.1.188	3(Expert)\Samples\Test
Show details			
Copyright (C) 2012-1015	by STC Deproil LTD ——	< Back Nex	kt > Cancel



13 Demo version

The demo version of the program has been established to demonstrate program's possibilities. It doesn't support the mechanism of data import. If to try to open any file, the predefined dataset will be loaded. You can select any file *.sgd in the folder with text data.