

<b>Issue Date</b>	:	<b>19 March 2013</b>
<b>Issue</b>	:	<b>1.0</b>

**Title** : **GOCE L1b Data Quality Control Report  
February 2013**

**Author** : **GOCE Quality Control Team**

**Distribution** : **GOCE Users Community**



## DOCUMENT CHANGE RECORD

Issue	Date	Reason for Change	Changed Pages/Paragraphs
1.0	19/03/2013	First issue	



## TABLE OF CONTENTS

<b>1. INTRODUCTION .....</b>	<b>4</b>
1.1 Purpose and Scope .....	4
1.2 Glossary.....	4
<b>2. FEBRUARY 2013 OVERVIEW .....</b>	<b>5</b>
<b>3. FEBRUARY 2013 DATA QUALITY ANALYSIS.....</b>	<b>5</b>
3.1 S/C anomaly of 02 <sup>nd</sup> February .....	5
3.2 Instrument calibration .....	5

## 1. INTRODUCTION

### 1.1 Purpose and Scope

This document contains the Quality report for GOCE L1b data for February 2013.

The latest version of this document is available on the GOCE Data Quality portal at:

<http://earth.esa.int/GOCE/> → “Level 1b QC” → “Monthly”

The GOCE Data Quality portal is the principal source for any quality-related information on GOCE products.

<http://earth.esa.int/GOCE/> → “Level 1b QC”.

### 1.2 Glossary

The following acronyms and abbreviations have been used in this report.

ABBREVIATION	MEANING
EGG	Electrostatic Gravity Gradiometer
DFACS	Drag Free and Attitude control system
SST-I	Satellite-to-satellite tracking instrument
CTR	Control Voltages
STR	Star Tracker
Trace SD	Trace Spectral Density
ICM	Inverse Calibration Matrix
GAR	Gradiometer Angular Rates
FPM	Fine Pointing Mode
MBW	Measurement Bandwidth

## 2. FEBRUARY 2013 OVERVIEW

<b>02-Feb</b>	At 09.33.34z a reconfiguration of one of the electrodes of ASH1 took place
<b>04-Feb-13</b>	Autonomous mode transitions from CPM up to FPM
<b>11-Feb-13</b>	DFM_FINE was entered at 09.00 UTC with an acceleration bias of 0.185E-06 m/s <sup>2</sup>
<b>12-Feb to 13-Feb-13</b>	Instrument calibration

## 3. FEBRUARY 2013 DATA QUALITY ANALYSIS

### 3.1 S/C anomaly of 02<sup>nd</sup> February

Science operations continued nominally up to 2nd Feb, when an anomaly on accelerometer head 1 of the Gradiometer occurred. The problem looks similar to the incident in June 2012, only that there was no divergence of attitude control thanks to the tuning applied to the drag free system in July 2012.

A major S/C contingency occurred on 4th Feb in the frame of activities to recover the gradiometer from the 2<sup>nd</sup> February anomaly. Following a transition from DFM\_FINE to DFM\_COARSE, there was a major divergence in S/C attitude control. Ground had to command a fallback to CPM, interrupting drag-free mode and leading to a decay of the orbit. The remainder of the week was spent with various recovery activities.

Nominal operations and drag free mode were resumed on 11<sup>th</sup> February.

### 3.2 Instrument calibration

Special Spacecraft Operations for Instrument Calibration were performed on 12<sup>th</sup> February 2013, from

- 20130212T060348
- to
- 20130213T055311