Experimental Report

Proposal: **TEST-2299** **Council:** 10/2012

Title: Structure of Dolomite

This proposal is a new proposal

Researh Area:

Main proposer: **FERNANDEZ-MARTINEZ Alejandro**

Experimental Team: FERNANDEZ-MARTINEZ Alejandro

Local Contact: CUELLO Gabriel Julio

Samples: dolomite
CaMg(CO3)2

Instrument	Req. Days	All. Days	From	To
D4	1	1	07/07/2013	08/07/2013

Abstract:

ILL EXPERIMENTAL REPORT

Ex N°: TEST-2299

TITLE: Structure of Dolomite

INSTRUMENT: D4

DATES: From: 07/07/2013 To: 08/07/2013

EXPERIMENTAL TEAM:

Alejandro Fernandez-Martinez

Victor Galvan

LOCAL CONTACT: Henry Fischer

Results:

In our group at ISTerre we are working on the characterization of amorphous carbonates that could serve as precursors for the crystallization of dolomite (dolomite formation, known also in Geology as 'the dolomite problem' is still not understood, due to its natural formation in low T environments, that has not been yet reproduced in the laboratory).

During this experiment, one sample of amorphous calcium carbonate (ACC) doped with Mg^{2+} (50 % Ca^{2+} / 50% Mg^{2+}) was measured with the aim of having an idea of the level of coherent scattering. This is critical due to the high water content of these samples (nominal stoichiometry is $CaCO_3$ H_2O, which increases to 1.5 H_2O if Mg^{2+} is present).

The test was successful, the scattering pattern showing an acceptable level of coherent scattering during a reasonable acquisition time (5 hours). This is a good result that will help in the writing of future proposals.