



**UNIVERSITÀ DEGLI STUDI DI PALERMO**  
**Dipartimento di Scienze della Terra e del Mare (DiSTeM)**  
COD. FISC. 80023730825 ~ P.IVA 00605880822

**MEMORANDUM OF UNDERSTANDING**  
**BETWEEN**  
**LAMONT-DOHERTY EARTH OBSERVATORY (LDEO)**  
**COLUMBIA UNIVERSITY**  
**AND**  
**DIPARTIMENTO DI SCIENZE DELLA TERRA E DEL MARE (DiSTeM),**  
**UNIVERSITY OF PALERMO**  
**FOR**  
**SULFUR ISOTOPE ANALYSES OF MARINE SEDIMENTS**

**Premise and Objectives**

With this Memorandum of Understanding (MOU), DiSTeM and LDEO undertake to establish a scientific collaboration in accord with their respective roles and responsibilities as articulated in the NSF(GEO)-NERC Grant: Sulfur Cycling at Subduction Zones (OCE-1933773). In this context, DiSTeM, under the direction of PI's Profs. Alessandro Aiuppa and Salvatrice Vizzni, is committed to providing sulfur concentration and isotopic analyses of 250 marine sediment samples, as described in OCE-1933773. LDEO, under the direction of PI Prof. Terry Plank, will provide appropriately prepared samples and assist in the analyses as possible given current and future travel restrictions from the COVID-19 pandemic.

**Art 1 – Statement of services**

This agreement includes the following services:

- DiSTeM – sulfur concentration and isotopic analyses of 250 marine sediment samples at the Laboratory of Stable Isotopes using a Thermo Elemental Analyzer (Flash 2000) and Thermo Delta V ADVANTAGE Mass Spectrometer, or similar instrumentation, with appropriate standards to assess data quality.



# UNIVERSITÀ DEGLI STUDI DI PALERMO

## Dipartimento di Scienze della Terra e del Mare (DiSTeM)

COD. FISC. 80023730825 ~ P.IVA 00605880822

- LDEO – collect samples from the Ocean Drilling Program Gulf Coast repository, prepare samples by drying and powdering and in some cases chemical extractions, and assist in the analyses to the extent possible given current and future travel restrictions from the COVID-19 pandemic.

### **Art 2 – Data ownership**

All geochemical data obtained as part of this collaboration will be made openly available immediately to all project PI's, disseminated through conferences and publications, and submitted to the openly available databases, as required by the NSF-NERC Grant OCE-1933773.

### **Art 3 – Payment terms**

LDEO agrees to pay to DiSTeM a total amount of \$30,000 USD (all taxes included, if due) for all the services and analysis above mentioned, and as originally budgeted in the NSF-NERC Grant OCE-1933773: calculated from \$120 per sample x 250 samples = \$30,000.

LDEO will pay to DiSTeM the agreed amount upon the concluded activities, after issuing the invoice addressed to:

Prof. Terry Plank, Lamont Doherty Earth Observatory, 61 Rte 9W, Palisades, NY 10960

This invoice will be paid by LDEO via bank transfer to the following account: bank account n. 000300004577 addressed to Università degli Studi di Palermo presso Unicredit Spa, agenzia 100 Via Roma 185 di Palermo - IBAN IT 09 A 02008 04682 000300004577.

### **Art 4 – Referents for the agreement**

The scientific referents of this agreement are:

Referent of LDEO: Prof. Terry Plank

Referents of DiSTeM: Profs Alessandro Aiuppa and Salvatrice Vizzini



# UNIVERSITÀ DEGLI STUDI DI PALERMO

Dipartimento di Scienze della Terra e del Mare (DiSTeM)

COD. FISC. 80023730825 ~ P.IVA 00605880822

## Art 5 – Duration of the agreement

This agreement will expire 3 years after the signing of the contract by the two parties.

PA, 11.10.2021

On behalf of Columbia University

On behalf of DiSTeM

---

Hugh Horowitz, AVP Procurement  
Services

Prof. Valerio Agnesi, Direttore