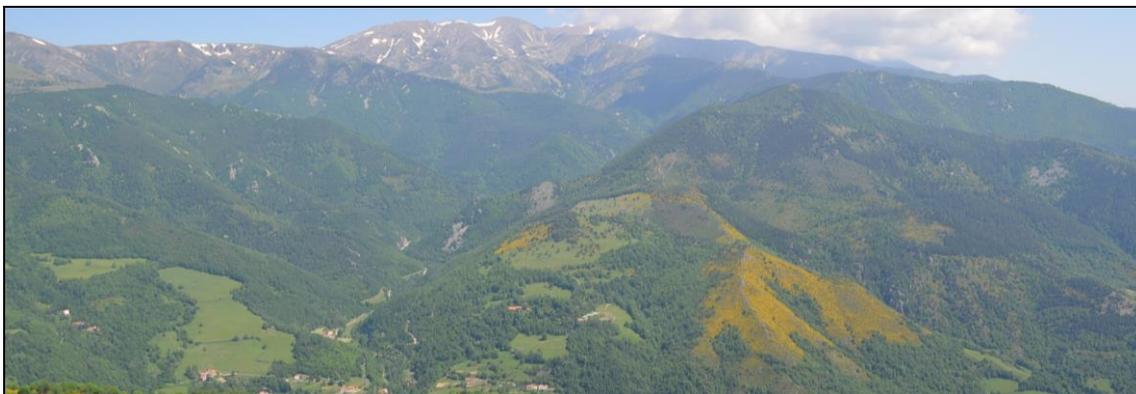


## Second circular

### ORDOVICIAN GEODYNAMICS: The Sardinian Phase in the Pyrenees, Mouthoumet and Montagne Noire massifs

4-9 September 2017, Figueres, Catalonia



#### 1. General Information

The presence of the Sardinian Phase and associated Middle Ordovician stratigraphic gaps has been reported in the Eastern Pyrenees, the Mouthoumet massif and the Cabrières klippen of the southern Montagne Noire. Late Ordovician fault-controlled subsidence and the record of rifting volcanism were coeval, in some areas, with the onset of the Hirnantian glaciation. As a result, the Upper Ordovician of SW Europe offers a complex mixture of erosive unconformities and intrusion of acidic plutons (Pyrenees), followed by the breakdown of platforms in horsts and (half-)grabens and the onset of rifting branches (Mouthoumet and Montagne Noire), overlapping patterns and final sealing of Sardinian palaeotopographies during Silurian and Early Devonian times.

The meeting addresses the dynamics of Lower Palaeozoic (Cambrian-to-Silurian) sedimentary basins and aims to bring together a wide range of studies focusing on geodynamics, tectonics, volcanism, sedimentary geometries, event stratigraphy and chronostratigraphic correlation. We aim to balance the study of geodynamic processes recorded throughout North Gondwana (SW Europe) with worldwide analogues.

We welcome all contributions integrating Lower Palaeozoic geodynamic discussions, including volcanic, structural and (chrono)stratigraphic data.



## **2. Organizing Committee**

J. Javier Álvaro, Geosciences Institute, Madrid  
Josep Maria Casas, University of Barcelona  
Sébastien Clausen, University of Lille I  
Jorge Colmenar, Natural History Museum of Denmark  
Bernard Laumonier, University of Nancy  
Joan Martí, Institute of Earth Sciences “Jaume Almera”, Barcelona  
Enrique Villas, University of Zaragoza

## **3. Sponsors**

Bureau de Recherches Géologiques et Minières (*BRGM*)  
Groupe Français du Paléozoïque (*GFP*)  
IGCP 653: *The onset of the Great Ordovician Biodiversification Event*  
Instituto de Geociencias (*IGEO – CSIC/UCM*)  
Instituto Geológico y Minero de España (*IGME*)  
Sociedad Geológica de España (*SGE*)  
Société Géologique de France (*SGF*)  
Universitat de Barcelona  
Université de Lille I

## **4. Travel and Accommodations**

The *Girona-Costa Brava* (with connections to Bremen, Bristol, Bruxelles, Dublin, Frankfurt, London, Manchester and Paris) and *Perpignan* (with connections to Dublin, Madrid, Nantes, Paris, Lille, Bruxelles, London, Birmingham and Southampton) airports are close to Figueres. There is a direct bus (*Sagales*) from the former to Figueres. From Perpignan, the easiest connection is by train.

Participants will be required to arrange their arrival on their own. After the fieldtrip the bus will bring participants to Perpignan train station and Girona. If necessary, we can book for you a hotel there for the last night.

Figueres (in Spanish, Figueras) is the capital of the Alt Empordà district (Girona) close to the Spanish/French border. It is the birthplace of Salvador Dalí and houses the Teatre-Museu Gala-Salvador Dalí, which holds the largest collection of major surrealist works by Dalí in a single location.

## **5. Registration FEE**

Information for payment will be sent to you after receiving the registration confirmation (see below, between red lines). No manual registration will be available. Registration with payment will be open from mid-February to 1st May 2017.

### ***Meeting in Figueres***

Before 1st May 2017: 200 euros. This includes:

- Attendance at the Welcome Reception
- Meeting attendance
- Delegate bag including the congress material
- Programme, abstract and field-trip access

- Accommodation in Hotel Travé [Balmes 70, Figueres, tel.: (+34)972500612] in double room
- Breakfast and meals
- Coffee/tea breaks
- Registration and icebreaker will take place the 3rd September after 19 h
- A room will be available to mount posters
- Visit to Museum Gala-Salvador Dalí



***Fieldtrip throughout the Eastern Pyrenees and the Mouthoumet and Montagne noire massifs, Catalonia and Occitanie***

Before 1st May 2017: 380 euros. This includes:

- Travel by mini-bus from Figueres to Bellver de Cerdagna (1st night), Estagel (2nd night) and Béziers (3rd night) and return to Figueres with stop at Perpignan train station.
- Visit to geological stops.
- All meals and hotels (double room).

**The maximum number of participants in the fieldtrip is limited to 50 persons**

**6. Fieldtrip stops**

- 6th September – Fieldtrip to eastern Pyrenees, Catalonia.

STOP 6a. Ribes granophyre (458±3 Ma): an undeformed, fine-grained, leucocratic granitic body with a microscopic granophyric texture crops out at the base of the Upper Ordovician along the Sardic unconformity that separates the Upper Ordovician from underlying Ediacaran–Lower Ordovician metasediments. Although it is locally affected by faults along the contact with host rocks, it is possible to observe intrusive to concordant contacts suggesting a laccolithic emplacement for this subvolcanic body.

STOP 6b. Surroundings of Ribes de Freser: Upper Ordovician volcanism. Lithic-rich, partially welded ignimbrite of dacitic composition (Pyroclastic Density Current) is interbedded in the upper part of the Upper Ordovician succession. The deposits are characterized by a high content in lithic clasts of small size (< 1 cm) and lapilli-sized flattened pumices (fiammes) completely devitrified and transformed into

chlorite and clay minerals. The presence of these materials in the Upper Ordovician succession indicates a highly explosive subaerial felsic volcanism coeval with detrital sedimentation.

STOP 6c. Ribes-Bruguera road: Upper Ordovician limestones. The Upper Ordovician limestones attain a maximum thickness along the roads close to Bruguera and El Baell, south of Ribes. Three different thickening-upward limestone levels can be recognized in a 300 m-thick succession made up of limestones and marly-limestones (“schistes troués”).

STOP 6d. Sardinian unconformity at La Molina station (optional, depending on fieldtrip schedule): Upper Ordovician unconformity overlain by the reddish-purple, unfossiliferous, conglomerates of the la Rabassa Formation. A synsedimentary hydrothermal activity is related to development of normal faults giving rise to quartz veins incorporated as quartz pebbles in the Rabassa conglomerates.

- 7th September – Fieldtrip to eastern Pyrenees, Occitanie.

STOP 7a. The Upper Ordovician succession north of Bellver (Tallendre area): five formations can be recognized across the area exhibiting some lithologic variations, which broadly constitute a fining-upward sequence with an interlayered limestone key level and marked thickness variations between 100 and 1000 m related to synsedimentary faulting activity.

STOP 7b. Graus de Canaveilles along the Conflent valley: classical stop with old model involving a “Cadomian” granitic basement (Carança orthogneiss) “overlain” by the Canaveilles Series. This model was ruled out after radiometric ages of Middle-Upper Ordovician (Sardinian) granites.

STOP 7c. The Canigó granitic orthogneiss along the D6 road between Saorra and Pi: the Canigó gneiss derives from an Ordovician intrusive (462-471 Ma) and forms a 2000 m thick body with laccolithic morphology. A porphyritic rapakivi texture is common in the G-2 type gneiss.

- 8th September – Fieldtrip to Mouthoumet massif, Occitanie.

STOP 8a. Surroundings of Montjoi village, Mouthoumet parautochthon: Lower Ordovician Davejean Volcanic Complex (rhyolitic tuffs) embedded in shales of the Davejean Group; Montjoi Formation with shale/limestone interbeds rich in echinoderms and brachiopods of late Katian age, unconformably overlain by the Marmairane Formation (Hirnantian diamictites) displaying unsorted siliciclastic strata.

STOP 8b. Marmairane creek, close to Villerouge-Termenès, Félines-Palairac slice: Villerouge Formation with mafic lava and pyroclastic flows and laharc mudflows of tholeiitic affinity, capped by sandstones of the lower Katian Gascogne Formation and fossiliferous green shales of the Hirnantian Marmairane Formation.

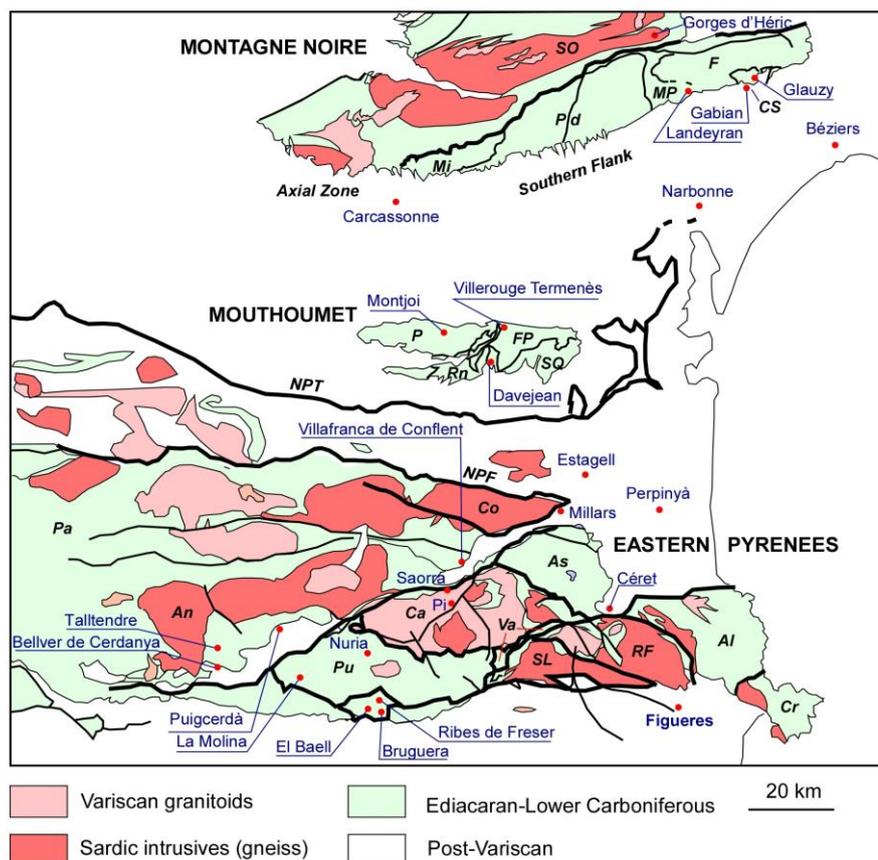
- 9th September – Fieldtrip to Cabrières klippen, Montagne Noire, Occitanie.

STOP 9a. Rioberlou valley, Mont Peyroux nappe, southern flank: stratotype of the Cluse de l’Orb Formation (representative of the “Armorican Quartzite”-style sediments) sandwiched between the underlying La Maurerie Formation and the overlying Setso and Foulon formations, along the D14 road (between Roquebrun and Lugné).

STOP 9b. Landeyran valley, Mont Peyroux nappe, southern flank: fossiliferous shales of the Floian Landeyran Formation and angular discordance with Devonian “mur quartzeux”. Panorama from L’Escougoussou village and fossil sampling along the D-136 road.

STOP 9c. Gorges d'Héric, Caroux Dome, Axial Zone: augen gneiss of the Somail Formation, rich in alkali feldspar and mica porphyroblasts, representative of metamorphic aureoles surrounding Sardinian (Katian in age) granitoids.

STOP 9d. Grand Glauzy hill, Cabrières klippes, southern flank: Roque de Bandies Formation (polymictic and volcanosedimentary breccias capped by basaltic lava flows with tholeiitic affinity), Glauzy Formation (interbedded shales and fossiliferous sandstones forming two shallowing-upward sequences rich in brachiopods and trilobites, early Katian in age) and Gabian Formation (bryozoan and echinoderm-rich limestones and marlstones, late Katian in age), overlain by the Hirnantian erosive unconformity.



Al: Albères, An: Andorra, As: Aspres, Ca: Canigou/Canigó, Co: Conflent, Cr: Creus, CS: Cabrières slices, F: Faugères, FP: Félines-Palairac, Mi: Minervois, MP: Mont Peyroux, NPT: North-Pyrenean Thrust, NPF: North-Pyrenean Fault, P: parautochthon, Pd: Pardailhan, Pa: Pallaresa, Pu: Puigmal, RF: Roc de France/Frausa, Rn: Roc de nitable, SL: St.-Laurent-de-Cerdans, SO: Somail, SQ: Serre de Quintillan, Va: Vallespir

## 7. Publications

1. Abstracts (title, authors, addresses, text and references – less than 500 words).

Deadline 15th June 2017. Please, send them to [jj.alvaro@csic.es](mailto:jj.alvaro@csic.es)

2. Field-Guide and Abstracts will be published in *Géologie de la France*.

3. Proceedings of the meeting will be published in a special volume of *Journal of Iberian Geology* (JCR: 1.8). See instructions for authors in:

<http://revistas.ucm.es/index.php/jige/about/submissions>

Deadline for submission: 01.12.2017.

Official language for the meeting and proceedings: English.

- 8. If you are interested, please, paste the following text into an e-mail, indicate “yes” or “no” after each heading, and send it as soon as possible to [jj.alvaro@csic.es](mailto:jj.alvaro@csic.es). The fieldtrip will have a limited number of participants so early registration is encouraged.**

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Name and complete address (including email)

Attend to scientific sessions in Figueres: YES / NO (Fees: 200 euros)

Attend post-conference fieldtrip: YES / NO (Fees: 380 euros)

Submit Abstract(s) to Abstract Volume: YES / NO

If YES: Preliminary Title(s) and select Talk/Poster

Bring accompanying person: YES / NO

Submit thematic paper to special volume of *Journal of Iberian Geology*: YES / NO

If YES: Preliminary Title and Authors

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## **9. Contact**

- Questions about the meeting or scientific sessions – J. Javier Álvaro ([jj.alvaro@csic.es](mailto:jj.alvaro@csic.es)).
- Questions about fees and VISA or transfer payment – Sébastien Clausen ([Sebastien.Clausen@univ-lille1.fr](mailto:Sebastien.Clausen@univ-lille1.fr)). Information for payment will be sent to you **AFTER** receiving the above registration confirmation (between red lines). Please, note that the number of places for the fieldtrip is limited: the places will be booked in the order of payment date and kept only for those who pay the fees before 1st May 2017.
- Updating news will be available at the official [webpage](#) of the meeting – Jorge Colmenar ([jorgecolmenarlallena@gmail.com](mailto:jorgecolmenarlallena@gmail.com)).

## **10. Important deadlines**

Registration Payment: May 1st, 2017

Abstract Submission: June 15th, 2017

3rd circular with last arrangements: September 1st, 2017

Proceedings submission: December 1st, 2017

*The organizing committee*