

earthquake is far from exhaustive and many very important questions about it are open still. First of all, unlike the 1356 Basel earthquake, the 1348 earthquake occurred in a politically marginal area of 14th century Europe and none of the historical sources that describe were produced in that same area; in fact, some of them very far from it. This poses many interpretative problems to the researcher who tries to use these sources to their full extent to gain knowledge of. First of all, there is the problem of how to recognize which sources are "direct" or "indirect", "primary" or "secondary" and whether we can trust equally a text produced a few days or months after the earthquake and others that were written years later. And again, how to deal with uncertain or ambiguous place-names? How to assess intensities from descriptions that are often vague and concerning buildings that are not considered in macroseismic intensity scales (castles)? How to combine the earthquake sequence and the sources indications of damages? This paper describes how we tried to find answers to these questions and, at the same time, to reassess the whole body of information available for the 1348 earthquake with homogeneous criteria.

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UPDATING THE HISTORICAL SITE EARTHQUAKE CATALOGUE OF THE MALTESE ISLANDS

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In recent years, teams of researchers from several European countries combined their efforts to create a common "European-Mediterranean Earthquake Catalogue". The work, carried out under the coordination of INGV - Milan, was based on the data collected in the Archive of Historical Earthquake Data – AHEAD (Locati et al., 2014) and followed the methodology developed in the frame of the I3, EC project "Network of Research Infrastructures for European Seismology" (NERIES), module NA4. As a result, homogeneously compiled national earthquake catalogues and databases are now available. Despite the effort done, however, there are still wide margins for improvement, filling time gaps in

the catalogues, retrieving information on "forgotten earthquakes" and carrying out joint studies of "transfrontier earthquakes", whose effects were felt in neighbouring countries and that may have been contradictorily or partially represented in different catalogues and databases. For these reasons, all national catalogues and database should be periodically updated. We present the first stage and the earliest results of an Italo-Maltese joint venture, which was started with the objective of compiling a new site catalogue of the Maltese Islands. In keeping with the standard methods of historical earthquake research already well tested in Italy, the starting point of the work was the integration of the Maltese catalogue by Galea (2007), with information retrieved from two main sets of data repositories: the Italian and European descriptive earthquake compilations of the 17th-19th century and the large digital collections of European historical serial sources (newspapers, diaries, chronicles and so on) now made available by many cultural institution through the Internet. The first draft of the new site catalogue includes about 130 earthquake records, with a noticeable increase with respect to the Galea (2007) catalogue, particularly for what concerns the 18th and 19th centuries; for the periods before 1650 and after 1923 there was, on the contrary, little increase in knowledge. At least six of the new earthquakes caused damage in the Maltese Islands. Three of them (1658, 1726, and 1780) appear to be located in the area of the Sicily channel, and the others (1756, 1810, and 1846) are large Greek events. Macroseismic intensities in European Macroseismic Scale 1998 (EMS-98) were assigned to several localities of the Maltese Islands. Particular attention was devoted to collect background information on earthquake-induced natural phenomena (liquefaction, landslides, tsunamis) to be used as a further constraint of the location and magnitude of the associated earthquakes or for paleoseismological studies. An additional bonus of the study was the retrieval of new macroseismic information on already known earthquakes located in Sicily and Greece and the discovery of a few previously unknown Sicilian earthquakes. References

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historical earthquake data. *Seismol. Res. Lett.*, 85(3): 727–734.

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**PUTTING AUGUST SIEBERG'S
"ERDBEBENGEOPHIE" (1932) INTO A FRESH
PERSPECTIVE**

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Beside being known for his contribution to the 12-degree Mercalli-Cancani-Sieberg (MCS) macroseismic scale, August Sieberg (1875-1945) holds a prominent position and a global recognition as compiler of a worldwide descriptive list of earthquakes. His 319-pages chapter "Erdbebengeographie" (earthquake geography), published in 1932, has been largely used and quoted, starting from Gutenberg and Richter in their 1949 "Seismicity of the Earth" and in their wake by catalogue compilers all over the world. Content and method are defined by Sieberg himself in some introductory guidelines. The "Erdbebengeographie" consists of 98 "tables" (lists) of dates with succinct descriptions of the effects of ca 2,300 large earthquakes from 2200 BCE up to 1931 in ten large geographical areas. Each list is preceded and followed by geological and seismological considerations, also illustrated in some 60 maps. Intensity degrees are indicated in about 150 isoseismal maps, while values of intensity at sites are randomly given for a few earthquakes. Epicentral intensity and epicentre's co-ordinates are not supplied anywhere for any earthquake. Structure, background, and data of Sieberg's global list of earthquakes are analysed by means of some case histories from different areas of the world. How this 'big data' set was used by later seismic catalogue's compilers, and likely reasons behind this long-lasting success in macroseismology studies are investigated. Finally, some suggestions are advanced on how to downscale its influence in the compilation of the pre-twentieth century section of today's regional and global catalogues.

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**90TH ANNIVERSARY OF THE 1927 SCHWADORF /
LOWER AUSTRIA EARTHQUAKE**

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The Schwadorf earthquake in the Vienna Basin fault system, which occurred on 8th October 1927, was one of the strongest in this area and therefore of particular interest. In the Austrian Earthquake Catalogue kept by the Zentralanstalt für Meteorologie und Geodynamik (ZAMG), the epicentral intensity of the Schwadorf quake is listed as 8° EMS-98, the magnitude as 5.2 and the depth as 6 km. A critical review was undertaken on the occasion of the Schwadorf earthquake anniversary. In collaboration with the local government and the inhabitants of Schwadorf, it was possible to obtain new information. After an official appeal, several pictures of damaged houses were collected and even one of the last eye-witnesses, a citizen of Schwadorf, could be interviewed. A manuscript by the former district commission of Bruck an der Leitha, giving a detailed description of the damage, was discovered in the municipal office of Schwadorf. The manuscript is of great value in order to reassess the degree of damage. Additionally, several newspapers and the many questionnaires by the Earthquake Survey of the ZAMG were reviewed. The earthquake could not be properly recorded by the Wiechert seismographs at the ZAMG station in Vienna/Austria. Vienna is located only 25 km from the epicentre of the quake, so the needles were jumping off of the delicate seismograph. Fortunately, a seismogram from the Wiechert seismograph at the Observatory of the Alberoni College in Piacenza is available. The goal of the study was to use all the available information in order to reassess one of the strongest Austrian earthquakes. With regards to Citizen Science, a well-attended event was also organized on the occasion of the anniversary in order to inform the population about the earthquake hazard in the area.

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**A REVISION OF THE SOURCE PARAMETERS OF
THE 1755 EARTHQUAKE**

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