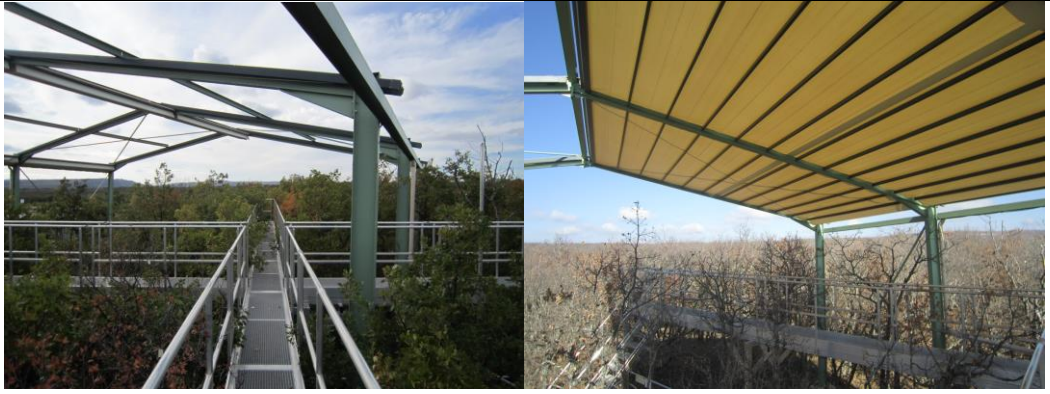


INFORMATION ABOUT THE PERSON FILLING THE FORM	
<b>Name and family name</b>	Thierry GAUQUELIN
<b>Research organization</b>	IMBE Aix Marseille University
<b>Position in the organization</b>	Full Professor and PI O3HP
<b>Country</b>	France
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EXPERIMENTAL SITE <sup>1</sup>	
<b>Name of the site</b>	O3HP : Oak Observatory at the OHP URL address <a href="https://o3hp.obs-hp.fr/index.php/en/">https://o3hp.obs-hp.fr/index.php/en/</a>
<b>Location of the site</b>	Country France : O3HP is situated in the research center of the 'Observatoire de Haute Provence' (OHP, Observatory of the Upper Provence) in the close vicinity of Saint Michel l'Observatoire. Postal address 04870 Saint-Michel l'Observatoire UTM coordinates: Latitude/Longitude (N 43°56.115 E 05°42.642)
<b>Start date</b>	2012
<b>Characteristics of the forest ecosystem where it is located</b>	Most relevant features: <ul style="list-style-type: none"> <li>- Vegetation : The forest, managed as a coppice for centuries is dominated by Downy Oak (<i>Quercus pubescens</i> Willd.) and Montpellier maple, (<i>Acer monspessulanum</i> L.) with undergrowth of Sumac (<i>Cotinus coggygria</i> Scop.) and grasses. The density is 2200 trees (4500 stems) ha<sup>-1</sup> which 75% <i>Quercus pubescens</i>.</li> <li>- Soil characteristics : Soil is Pierric Calcosol (with S horizon between limestone rocks)</li> <li>- Mean annual temperature : 11°9</li> <li>- Mean annual rainfall : 830 mm</li> <li>- Altitude, slope, aspect : 680 m asl</li> <li>- others...</li> </ul>
<b>Keywords</b>	Downy oak; climate change; ecosystem functioning; canopy
<b>Scientific characteristics</b>	Scientific objectives The O3HP is a field site dedicated as to gain fundamental knowledge about the functioning of a Downy Oak forest ecosystem. Special emphasis is put on the investigation of effects related to climate change. Hence, the field site is equipped with a precipitation management system (PMS) to simulate drier climate. Interest for users : researches concerning functioning and biodiversity of the downy oak ecosystem submitted to climate change. Particularities in comparison to others sites : the only one concerning Downy Oak in the Mediterranean basin; particular device for rain exclusion; lot of sensors. Research projects in the frame of which the experimental site is used (include web site address) ANR project SECPRIME2 ANR project CANOPEE, etc

<sup>1</sup> Note: This information could be published in the webpage of FORESTERRA.

<b>Technical characteristics</b>	<p><i>Detailed description (including instrumentation)</i></p> <p>The canopy is accessible through a scaffolding in form of a cross 20 m long and wide, with two levels of access by gangways at 0.5 m and 3.5 m height. A hut some meters from the experimental plot allows to easily stock material and devices, to use the flat roof for additional installations and a place to efficiently evaluate current measurements. Both the scaffolding and the hut are supplied with electricity and access to the local area network (LAN).. A field laboratory has been equipped to (pre)treat samples (sterile bench, autoclave, fume hood, incubators, drying ovens, fridge, freezer -20°C, balances, optical microscope, tools etc.).</p> <p>A device is installed above 300 m<sup>2</sup> of canopy, that dynamically excludes a defined fraction of precipitation (rain &amp; hail) by extending automated covers, and which allows to re-irrigate part of the excluded water. The system manages a reduction in precipitation by 40 % using temperature derived functions based on 50 year records of local meteorological data. This results in a scenario of 500 mm annual precipitation corresponding to about 2°C temperature increase, which is in line with climate predictions for the Mediterranean region (Giorni &amp; Mearns, 2002). The reduction is piloted dynamically between 20% and 60% for year 2100 in relation to year 2000. Therein lays the originality of the system, whilst environmental conditions are hardly affected. During leaf development in spring, exclusion of precipitation events is performed at night-time as not to disturb photomorphogenesis. Intercepted precipitation will be evacuated to a temporary reservoir. An irrigation (sprinkler) system attached to the metal structure will use this water to fine-tune the fraction of excluded precipitation.</p>
	<p>A network of different sensors at different levels of the forest (including soil) allows then to regularly measure and record wind speed and direction, atmospheric pressure, precipitation, heated , global radiation, PAR radiation, soil water content, soil matrix potential, soil temperature, soil conductivity, leaf wetness, sap flow, stem diameter, leaf gas exchange, soil respiration, phenology, leaf area index, etc.</p>
	
<b>SCIENTISTS AND/OR TECHNICIANS IN CHARGE OF THE INFRASTRUCTURE</b>	
<b>Principal investigator</b>	<i>Thierry Gauquelin : <a href="mailto:Thierry.gauquelin@imbe.fr">Thierry.gauquelin@imbe.fr</a></i>
<b>One additional line per person</b>	<i>Research engineer : Ilja Reiter <a href="mailto:ilja.reiter@oamp.fr">ilja.reiter@oamp.fr</a>  Assistant engineer : Jean Philippe Orts: <a href="mailto:jean-philippe.orts@oamp.fr">jean-philippe.orts@oamp.fr</a></i>
<b>ADMINISTRATIVE INFORMATION</b>	
<b>Availability for participating in mutual measurements</b>	<i>Yes Ilja Reiter  Conditions or Policy of use</i>



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<b>Availability for accessing the data collected</b>	<i>Yes Ilja Reiter</i>
	<i>Conditions or Policy of use</i>
<b>Institution that manages the site</b>	<i>Institut Pytheas : IMBE, OHP, ECCOREV</i>
	<i>URL address</i>
<b>Institution that manages the data</b>	<i>Name (Original language and English translation)</i>
	<i>URL address</i>
<b>Is the site participating in a national or international Network?</b>	<i>no</i>
	<i>URL address</i>
<b>Is the site open for transnational collaboration?</b>	<i>Yes</i>

