

Saint Hilaire de Chaléons, Pays-de-la-Loire, France



The available turbine is a commercial 2MW Senvion Turbine operated by VALEMO within a park of 6 identical turbines. In the framework of ANR MOMENTA and ePARADISE French projects, it is equipped with different sensors on the turbine itself (10 minutes Scada data, 1 second Scada data, blade aerodynamic sensors, measure of the blade azimuth, strain gauges for blade flapwise and edgewise moments) and on the atmosphere (Meteorologic mast, nacelle and scanning LIDAR Doppler, radiometer, ceilometer).

General description of turbine/facilities

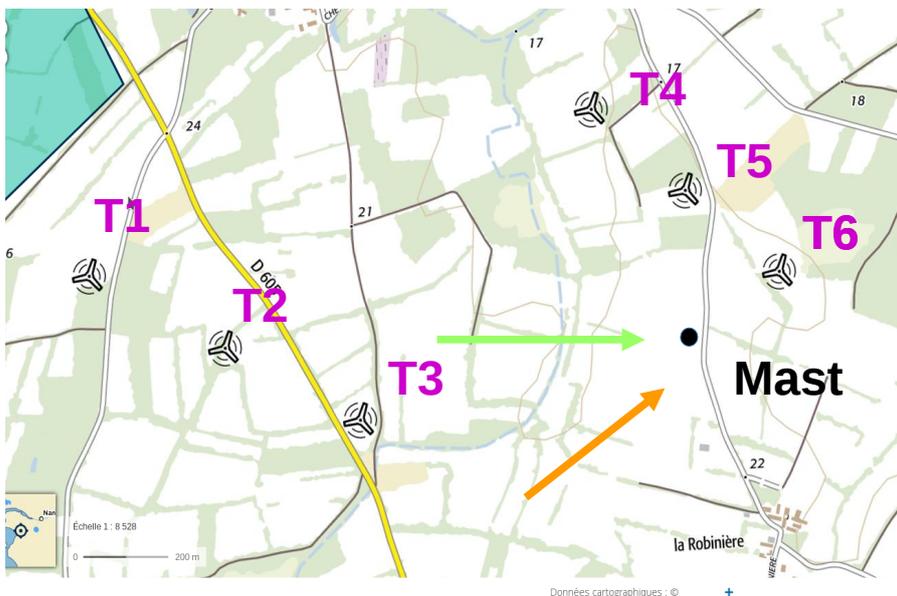
The site is composed of 6 Senvion MM92 wind turbines with RE45.2 Blades. The blade shape is known from scans. The blade structure is unknown, however, the turbine geometry and weight is known

(blades, nacelle, tower, drive train dimensions and weights). The guaranteed power curve is also known.

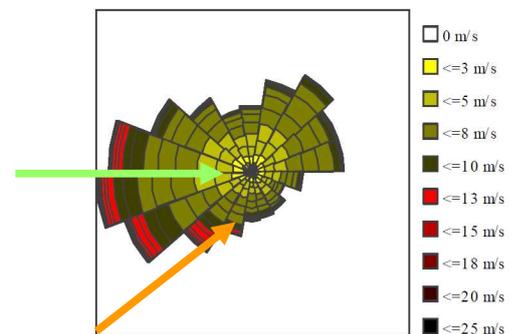
Location of site

The site is located in France, in Pays-de-Loire region at Saint-Hilaire de Chaléons. Only the turbine T6 is equipped with blade aerodynamic sensors, scada data every second and blade azimuth measurements. Scada data of other turbines are stored every 10 minutes.

LONGITUDE	LATITUDE
T1: -1.92424800	47.09108600
T2: -1.92004400	47.08963800
T3: -1.91582700	47.08819000
T4: -1.90899700	47.09459600
T5: -1.90574500	47.09281500
T6: -1.90282100	47.0911930



Prevailing wind directions:



Farm operated by:



30' from Nantes, France



Control and measurement systems and signals.

The operator do not have access to the control system, but they can “order” some turbine yaw and pitch scenario.

Measurements acquired during the two national projects will be detailed on the [AERIS WEBSITE](#) where data are stored and documented using meta data. They will be shared to researchers outside the project after an embargo time (2 years at least after the projects). However, a Non-Disclosure-Agreement can be signed with data owners before that date.

On-going research projects

Objective of the **ANR MOMENTA** project is to improve the estimation of aero-elastic loads in a configuration which appears more and more frequently with the current wind farm layouts, the specific case of a wind turbine subjected to the wake turbulent features from another wind turbine.

The **eParadise project** objective is to bring two types of aerodynamic sensors to maturity for life time extension and noise reduction of today's operating wind turbines, while maintaining (or even increasing) the energy production. A flow separation sensor and 8 wireless pressure sensors are (or will be) installed on T6 blades. These sensors are chosen because they are robust and can be easily added to existing blades.

Exchange of database after a given period.

The database of ANR MOMENTA and ePARADISE project is financially supported by the French state, and the operator already agreed to

share the data of the projects. The projects are however on-going with limited amount of data ready to share for now.

More details on the database that will be available on [AERIS WEBSITE](#).

Contact data and more information

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