



Wanderings of a terracotta in the gardens of the Château de Chantilly (Oise, France)

Bearded Jupiter, after Michel Anguier (1612-1686)

C2RMF

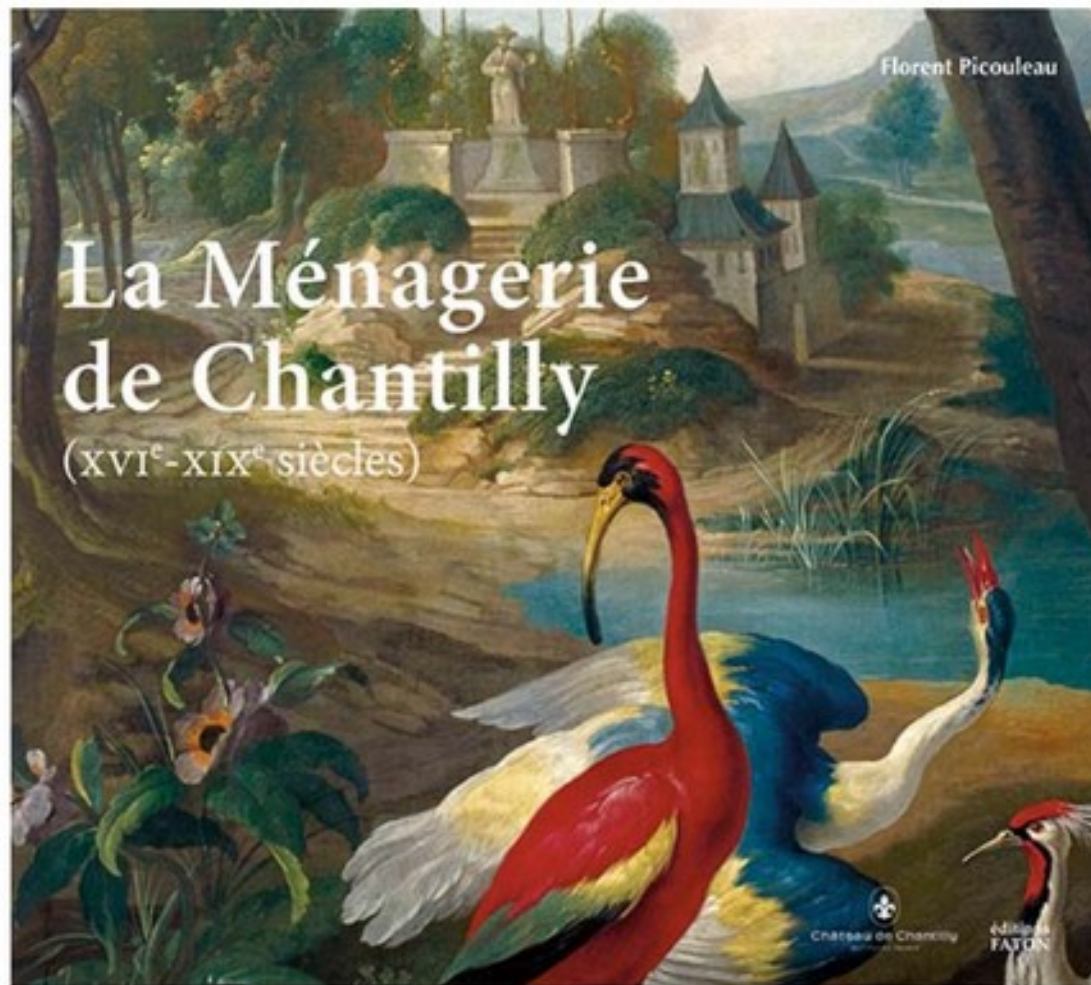
Antoine Zink, Elisa Porto

Intervention requested by
Nicole Garnier, curator
Florent Picouleau, head of the archive

In the framework of the exhibition

La Ménagerie de Chantilly
Château de Chantilly, 8 September 2021 —
3 January 2022

Curated by Florent Picouleau



Park and Castle of Chantilly

ca.1740



Photo (C) RMN-Grand Palais (Château de Versailles) / Gérard Blot

General view of the Castle of Chantilly, its Canals, Fountains and Groves, / Dedicated to His Serene Highness Monseigneur the Prince by Breteuil gardener and draughtman, engraved by A. Aveline .

September 2021



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Jupiter of Smyrna (MA 13)
 Attested in March 1680 by Antoine Galland in Smyrna, in the possession of a Dutch merchant.
 Acquired on behalf of Louis XIV.
 Restored in 1686 by Pierre Granier
 Installed in 1687 on the Allee Royale at Versailles.
 Musée du Louvre

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 Daniel Lebée/Carine Deambrosis

Jupiter from the Giustiniani collection
 Engraving by Bloemaert in the
Galleria Giustiniana, 1640



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After Michel Anguier (1612-1686)
Bearded Jupiter
 Terracotta – H. 220 cm
 Musée Condé

Michel Anguier (1612-1686)
Jupiter
 1659-1661
 Saint-Leu stone - H. 213 cm
 Private collection



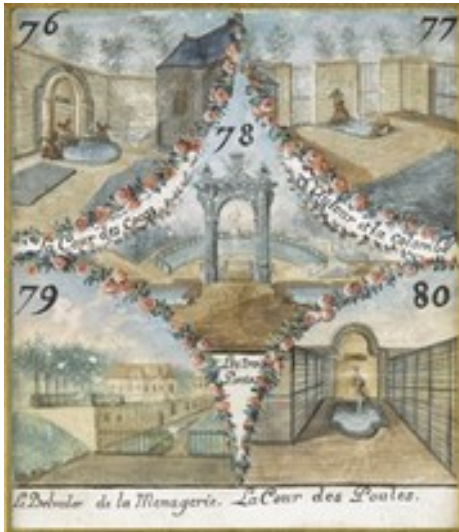
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Michel Anguier (1612-1686)
Jupiter and Juno
 (OA5087 / OA5086)
 1652
 bronze - H. 73,5 cm
 Musée du Louvre

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There were terracotta statues in the gardens of Chantilly in the 18th century, such as the *Neptune* which stood in the *Vertugadin* of the *Menagerie*, in line with the "Three Bridges" on the Grand Canal, as shown on a card of the cavagnole game from around 1770-1780. for, although it appears to be made of white stone, the 1792 inventory mentions "at the *Vertugadin* of the *Menagerie*, a 10-foot terracotta Neptune (AMC, inv. 1792, Ms. 1483).



Musée Condé, DE-1239 no. 78
(reprinted in exp. 2013, Chantilly, Le Nôtre, no. 107 p. 111)

Hist.: in June 1822 "at the entrance to the *Pont du Roi* road, on the castle side, two terracotta statues representing Jupiter and Juno" (AMC, inv. 2-ZR-129; inv. 1822, PA-2021, p. 130);
 inv. of 1897, T. II, p. 246, *Sylvie Park*: "four terracotta statues: Juno, Jupiter, Pan, Diana with a doe";
 preserved in the 20th century in the park of *Sylvie* at the entrance, on the left, on a stone pedestal now empty, along the road that runs along the wall;
 broken around 1973-1974 by the fall of a tree; stored in a room behind the *Jeu de Paume* in 1998; classified as a Historic Monument by decree of 30 December 1988;
 transferred to the château in the *Duban entresol* in 2005;
 restored in January-February 2012 by Alice Wallon-Tariel and Fulbert Dubois



Summary :

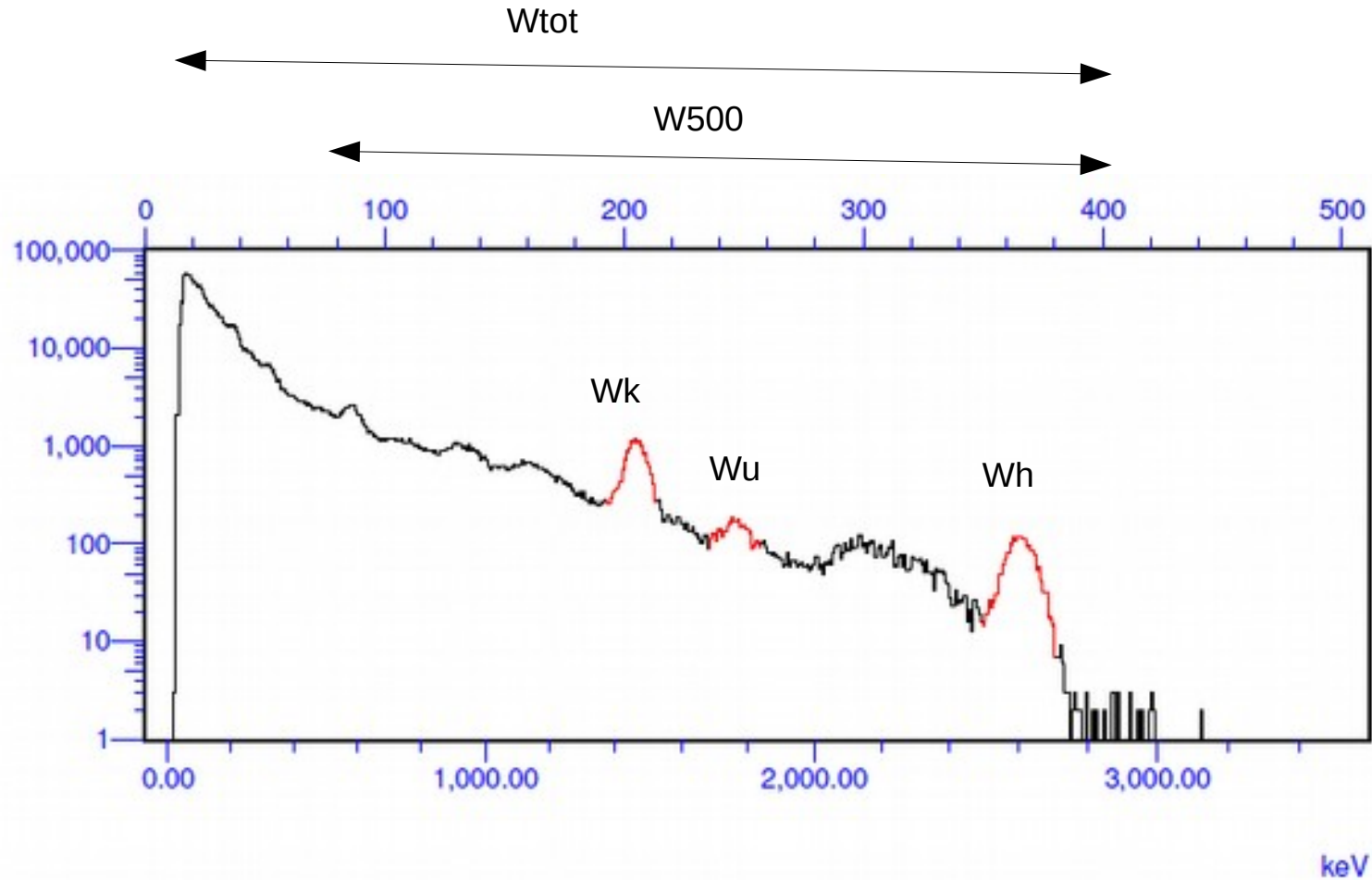
1690 ? - after 1792 : *vertugadin* of the *Menagerie*

before 1822 - before 1897 : terrace of *Enghien*

before 1897 - 1974 : *Sylvie park*

1974 - 2021 : different locations (1998 - *jeu de Paume* ; 2005 – *Duban entresol* ; 2012 - *débotté*)

Gamma Spectrometry using NaI(Tl) probe

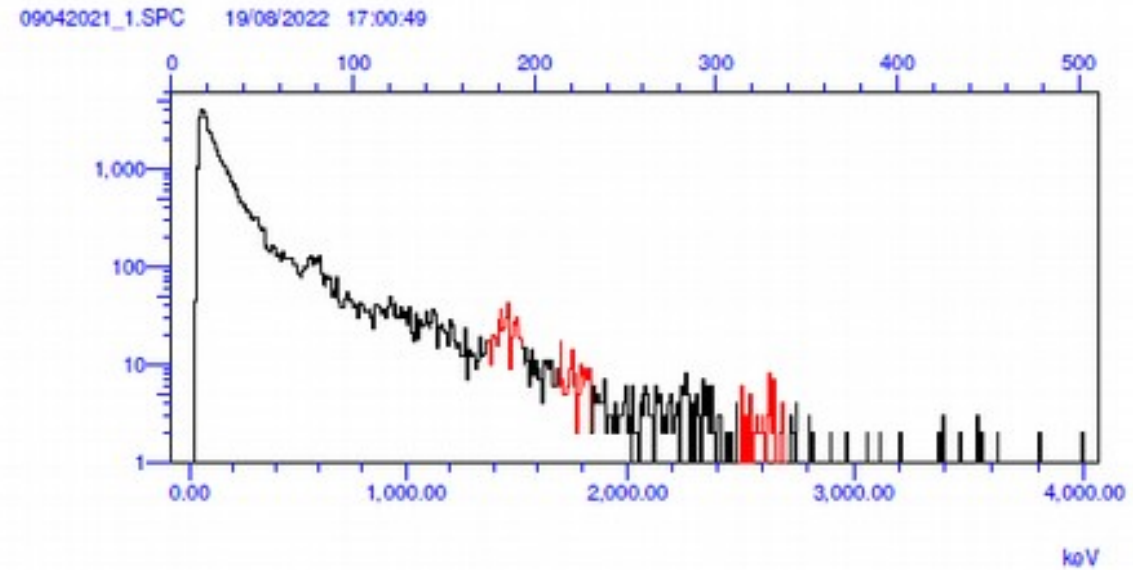


Low threshold
Wtot 50-2780 keV
This region covers the entire spectrum of telluric origin; the cosmic being above 3MeV

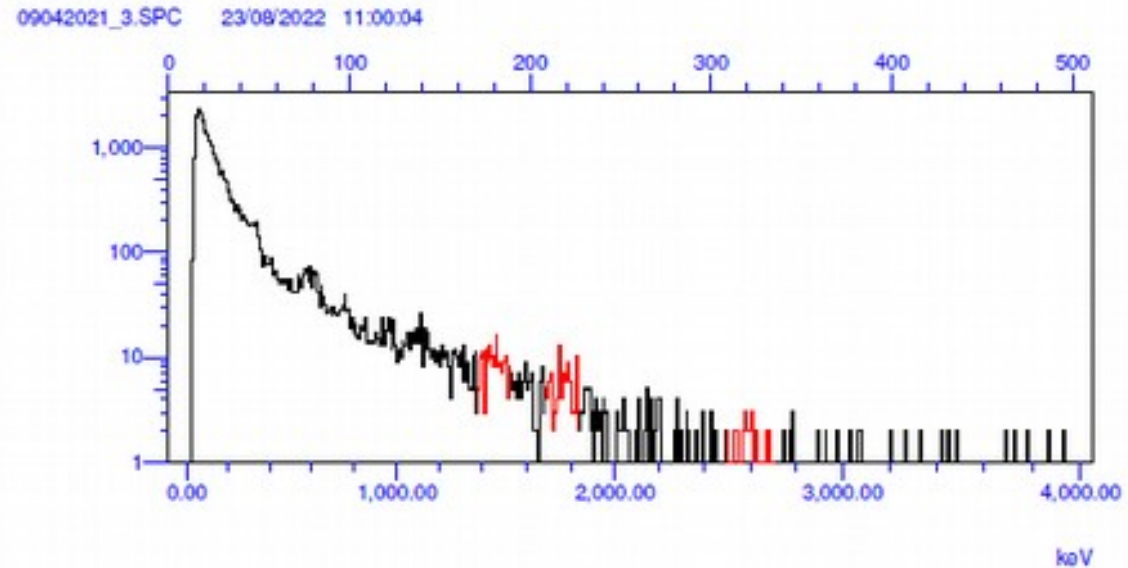
High threshold
W500 500-2780 keV
Since naturally occurring radionuclides are above 500keV, a deviation from the total spectrum indicates the presence of artificial radionuclides

UThK-ROI
Wk 1380-1530 keV - Peak of potassium;
Wu 1690-1840 keV - Peak of uranium;
Wth 2500-2710 keV - Peak of thorium

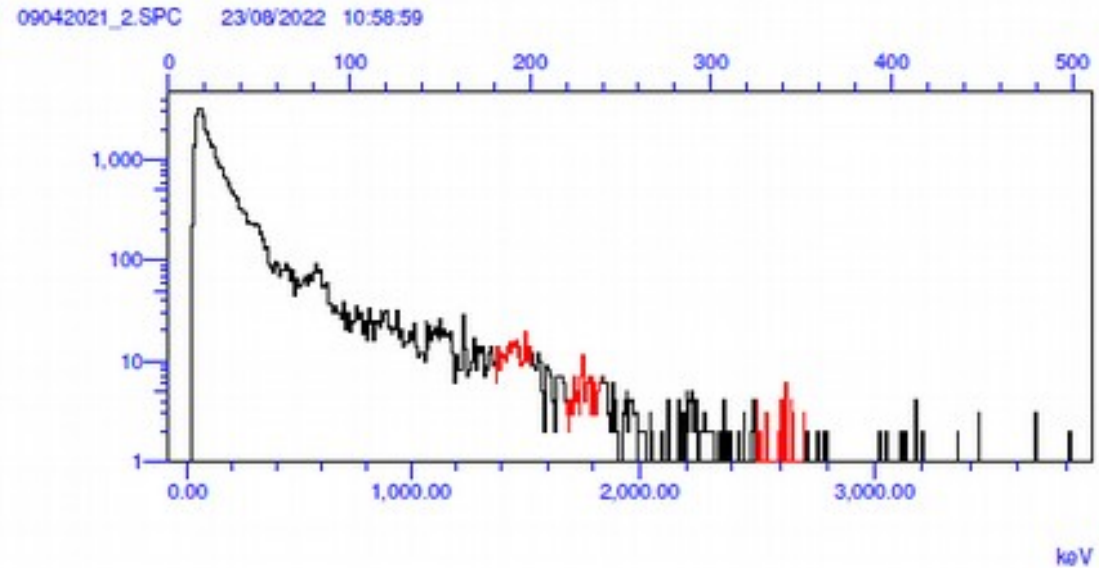
Vertugadin, location before 1792 (?)



Enghein's terrace, between 1822 and 1897



The Sylvie's park, from 1897 to 1974 (fall of a tree)



Gamma spectrometry results

Spectrum	Times (duration)	Wtot (cps)	W500 (cps)	Wk (cps)	Wu (cps)	Wth (cps)	Dtot (mGy/a)	D500 (mGy/a)	Dutk (mGy/a)	
09042021_1.spc	12h10-12h25 (900s)	51467	5508	423	141	67	211	173	170	Vertugadin
09042021_2.spc	12h58-13h13 (900s)	40062	3644	243	110	41	164	114	115	Sylvie park
09042021_3.spc	13h25-13h40 (900s)	28261	2913	169	101	32	116	91	96	Enghien terrace

Table 1: Dose rates established for the different measurement points. In bold, the raw measurements in number of shots. In blue, the deduced dose rates in miliGray per year (Dtot total spectrum, D500 'natural' spectrum, Dutk spectrum based on the individual contribution of radionuclides). Calibration made from the LSCE reference blocks, Gif s/Yvette on 25 June 2015 (Zink, 2015).

Dosimetry

Summary of terrestrial dose rates

location	period	Dose rate μGy/a	observations
vertugadin	1690 – 1792 (102 years)	173(2)	
vertugadin – Enghein terrace ?	1792 – 1822 (30 years)	132(57)	average between the measurements of the two sites
Enghein terrace	1822 – 1897 (75 years)	91(2)	
Sylvie park	1897 – 1974 (77 years)	114(2)	
Various	1974 – 2021 (47 years)	126(42)	averages of the three measurements
Accumulated dose	331 years	43 072 μGy	
Mean dose rate		130 (13) μGy/a	

cosmic radiation at the surface is ca. 0,21 mGy/a (Prescott et Hutton, 1994)

Internal radionuclides content

N°TL	Ca (cp/ks)	Ca corr (cp/ks)	U (ppm)	Th (ppm)	K ₂ O (%)
994	1.29 ± 0.03	1.28 ± 0.13	4.5	14.2	0.53 ± 0.02

	a-value
TL	0,130 ± 0,030
BL-OSL	0,055 ± 0,020

sampling



before



after

Drilling (ca. 2 x 100 mg)

Chemical preparation

10% HCl, water, ethanol, acetone

4-13 μm TL 16 discs; OSL 4 discs

chemical analysis:

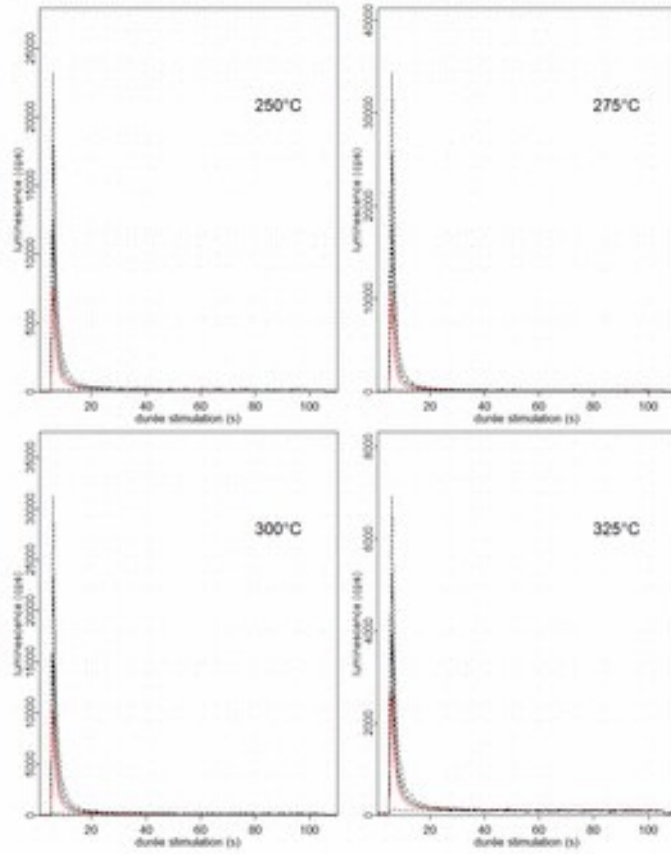
alpha counting ZnS cell dia.12.4mm

SEM-EDS pellets dia. 5 mm

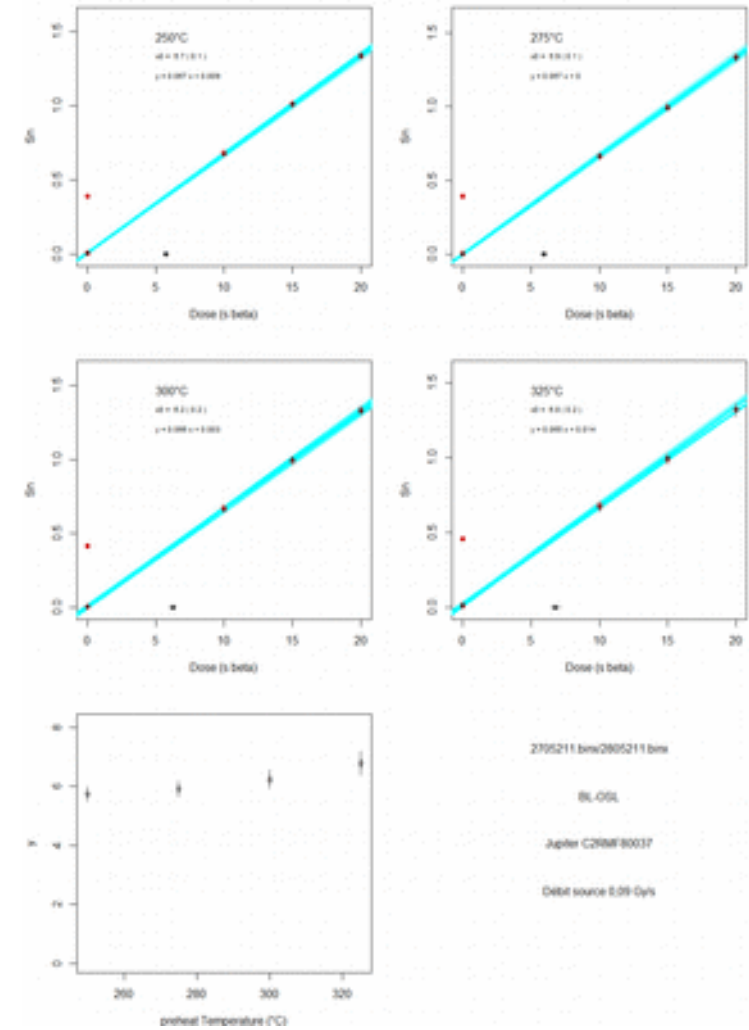
Courbes de BL- OSL Jupiter C2RMF80037

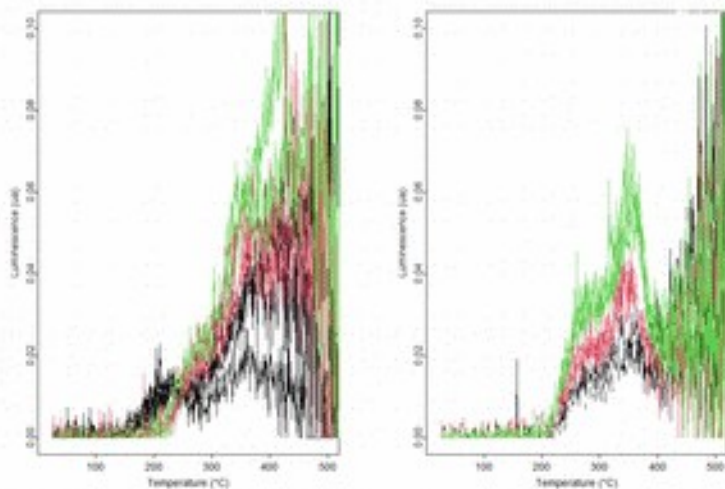
en rouge, la courbe correspondant au signal archéologique

la mesure dure 110s, la stimulation optique démarre au bout de 5s et dure 100s



De $0,75 \pm 0,01$ Gy





n. inv. OA1830

Thermoluminescence

1re chauffe : fichier 1806212 binx

beta : Nat Nat=0.84Gy Nat=1.68Gy

2nde chauffe : fichier 0907211 binx

supra 0.84Gy 1.68Gy 2.52Gy

Q (Gy)	I (Gy)	De (Gy)
1.61±0.06	-0.27±0.07	1.34±0.09

Conclusions

The date of the last heating is (with a confidence level of 67%) between :

OSL AD 1640 and AD 1750

TL AD 1530 and AD 1680 *

The results obtained by thermoluminescence and optically stimulated luminescence are consistent with each other. We have therefore combined the two results.

The date of the last heating is (with a confidence level of 67%) between :
AD 1630 and AD 1720.

This date is consistent with a 17th century production.

Although the result does not explicitly confirm the identification with the Neptune reported in the park during the 18th century, it is therefore one of the few sculptures from the *Ancien Régime* that has survived.