

GODOT (Graph of Dated Objects and Texts) A Calendar Gazetteer for Linked Open Data Applications

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THE
ANDREW W.

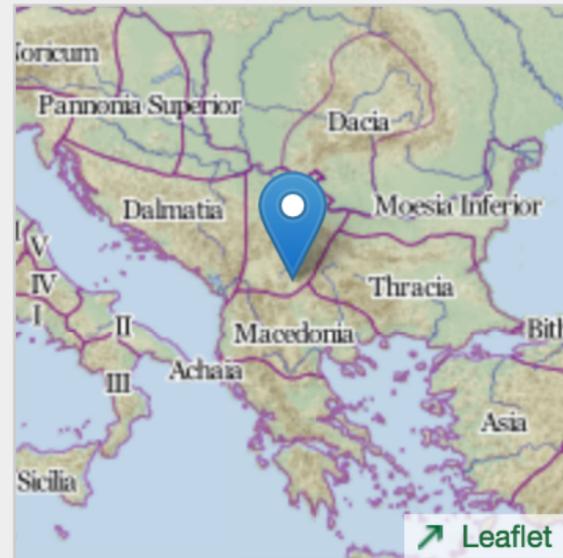
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**HEIDELBERGER AKADEMIE
DER WISSENSCHAFTEN**

Akademie der Wissenschaften
des Landes Baden-Württemberg

Number 1: [↗ HD018571 – open detailed view...](#)



Transcription: [I(ovi)] O(ptimo) M(aximo) D(olicheno) // pro salute / Imp(eratoris) M(arci) Aureli / Antonini Pii / Aug(usti) et Iuliae / Aug(ustae) matri(s) kast(rorum) / Achilles eorum/dem servus pos(uit) / Kal(endis) Novembri[bus] / Sabino II et Anu/lino co(n)s(ulibus)

Find spot: [↗ Kumanovo?](#)

Province: [↗ Moesia superior \(Macedonia\)](#)

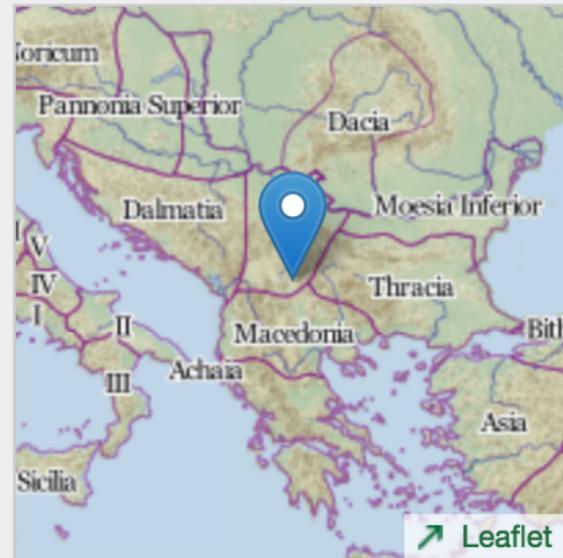
Chronological data: 1. November 216 AD

Literature [?](#): IMS 6, 208; Foto und Zeichnung.
CIL 03, 01697.
CIL 03, 08243.
CCID 116; Taf. 27, 116.
PIR (2. Aufl.) C 1323.
PIR (2. Aufl.) C 571.

External images: [↗ http://www.lupa.at/28403](http://www.lupa.at/28403)

Kal(endis) Novembri[bus] / Sabino II et Anu/lino co(n)s(ulibus)

Number 1: [↗ HD018571 – open detailed view...](#)



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Kal(endis) Novembri[bus] / Sabino II et Anu/lino co(n)s(ulibus)

=

1. November 216 AD



- GODOT: “**G**raph of **D**ated **O**bjects and **T**exts”
- Collaboration between
 - Prof. M. Depauw / Dr. H. Verreth (KU Leuven, Trismegistos Project)
 - Dr. F. Grieshaber (Heidelberg Academy of Sciences & Humanities)
 - Prof. C. Roueché (King’s College London)
- 6 months prototype phase (July – December 2018)
- supported by Andrew W. Mellon Foundation



GODOT – Overview (Features)

- is both a chronological gazetteer and a research infrastructure (searching & browsing / tools) aiming at scholars with focus on ancient chronology
- provides stable, citable URIs for instances of dates in major ancient calendar systems for Linked Open Data applications
- starting with sample data taken from:
 - Inscriptions of Roman Cyrenaica (C. Roueché)
 - papyri & ostraca in Berlin Collection (BGU, Trismegistos)
- testing of different data import options: manual data entry and bulk imports
- tools on GODOT website:
 - date conversions into Julian & Gregorian calendar
 - identifier tools for Roman Emperors, Roman Consulates
 - OpenRefine Reconciliation Services (Roman Consulates)
 - API for reusing GODOT data



GODOT: “**Graph** of Dated Objects and Texts”

Graph: set of objects that are related

- **nodes** (entities like person, place, event, ...)
- **edges** (relationship between nodes)

<http://epigraphy.packhum.org/text/227955>

Ἀρτεμίδωρος Πτολεμαίου, βασιλικὸς γραμματεὺς Ἐρμωνθείτου καὶ Λατοπολείτου, ἦκουσα Μέμνονος τοῦ θειοτάτου, μετὰ καὶ τῆς συνβίου Ἀρσινόης καὶ τῶν τέκνων Αἰλουρίωνος τοῦ καὶ Κοδράτου καὶ Πτολεμαίου, ἔτει ιε' Ἀδριανοῦ Καίσαρος τοῦ κυρίου, ια' Χοίακ.

GODOT Date Information ✕

Egyptian Calendar Date (Roman Period):

Year 15 of Hadrian, Choiak, day 11 (7. Dec 130 AD)

[Click here](#) for all 7 attestations of this date in GODOT.

Data provided by <https://www.godot.date>



Emperor Hadrian, year 15, month Choiak, day 11

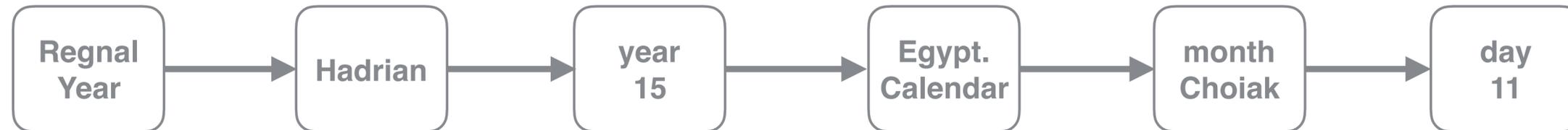


Emperor Hadrian, year 15, month Choiak, day 11





Emperor Hadrian, year 15, month Choiak, day 11



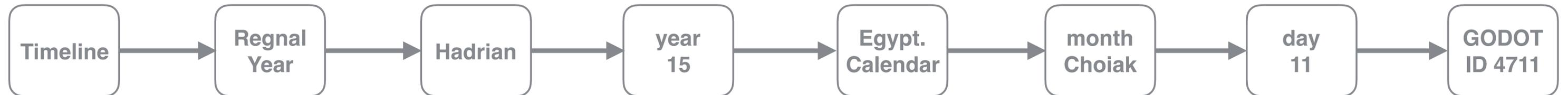


Emperor Hadrian, year 15, month Choiak, day 11



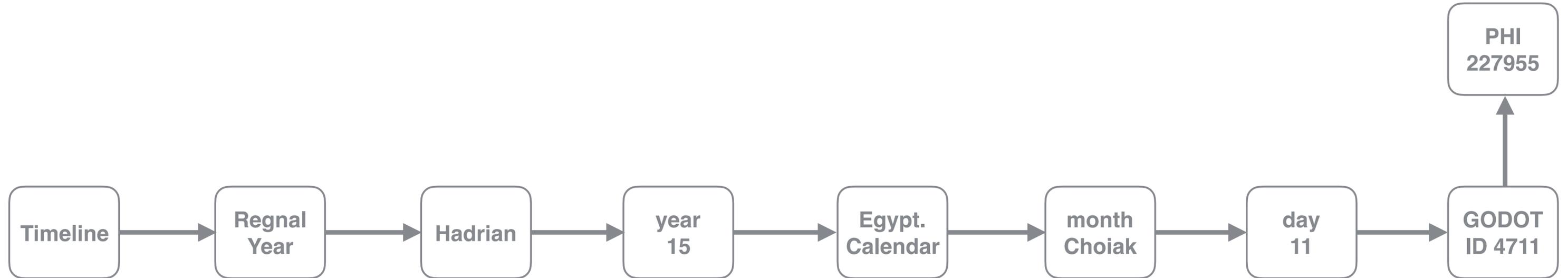


Emperor Hadrian, year 15, month Choiak, day 11





Emperor Hadrian, year 15, month Choiak, day 11





GODOT – Data Model (Importing Data)

Manual data entry:

- for “Inscriptions of Roman Cyrenaica” (IRCyr, Prof. C. Roueché)
- project-specific data entry masks on GODOT website
 - single year dates (regnal years of Roman emperors, Actian era, ...)
 - Titulature of Roman emperors (Trib. Pot; Cos.; Imp.; victory titles)
 - Eponymous Officials
- allow for create/read/update/(delete) of data

Bulk import:

1. Data Export by Content Provider

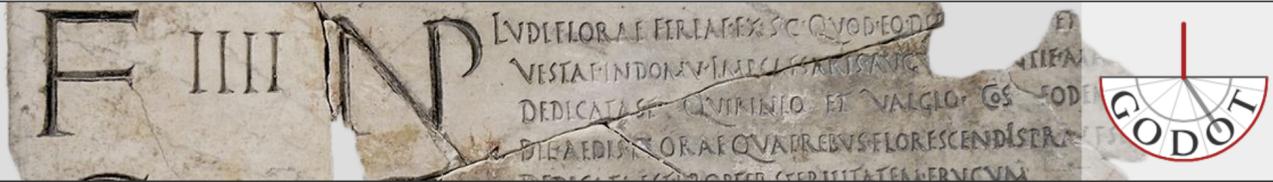
- for Trismegistos (BGU Greek Papyri, Prof. M. Depauw & Dr. H. Verreth)
 - preprocessing of data (NER workflow)
 - export in CSV
 - import into GODOT graph

2. Access via API of Content Provider

- for Epigraphic Database Heidelberg (Roman Consulates; Tribunicia Potestas)
- for Online Coins of the Roman Empire OCRE (Tribunicia Potestas)



GODOT – Website (Browse Data by Drill-Down)



GODOT About... Browse Convert Date... Tools... Cyrenaica... Logout (grieshaber)

Browse Data

Filter by Year Reference System:

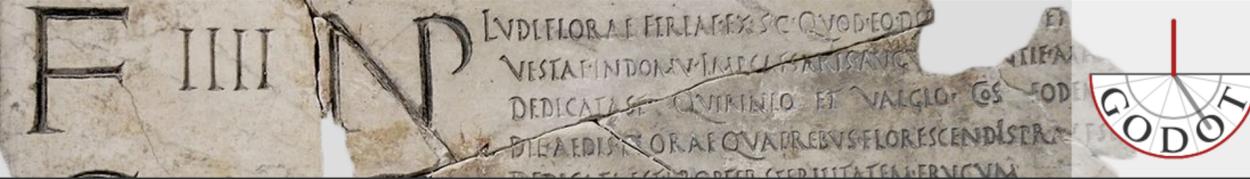
- All
- Cycles - Indiction Cycle
- Eponymous officials
- Era - Actian
- None
- Regnal Years - Ptolemies
- ✓ Regnal Years - Roman Emperors
- Roman Consulships
- Titulature of Roman Emperors
- Unknown

Roman Emperors (alphabetically)

Aemilius Aemilianus Antoninus Pius Augustus Aurelian Balbinus Caligula Caracalla Carinus Carus
 Claudius Claudius II Gothicus ✓ Commodus Decius Didius Iulianus Diocletian Domitian Elagabal Galba
 Gallienus Geta Gordian I Gordian II Gordian III Hadrian Hostilianus Macrianus Macrinus Marc Aurel
 Maximinus Thrax Nero Nerva Numerianus Otho Pertinax Pescennius Niger Philippus Arabs Probus
 Pupienus Quietus Quintillus Septimius Severus Severus Alexander Tacitus Tiberius Titus Trajan
 Trebonianus Gallus Valerian Vespasian Vitellius Volusianus

Regnal Years

- Year 18
- Year 20
- Year 21
- Year 22
- Year 23
- Year 24
- Year 25
- Year 26
- Year 27
- Year 28
- Year 29
- Year 30
- Year 31

GODOT About... Browse Convert Date... Tools... Cyrenaica... Logout (grieshaber)

GODOT Detail View

<https://godot.date/id/VAENENY6MC2KW2JwN9dnUm>
 Copy URI to clipboard

Calendar Date Information

- Regnal Years
- Roman Emperors
 - name: Commodus
 - year: 29

GODOT Information:

- GODOT URI: <https://godot.date/id/VAENENY6MC2KW2JwN9dnUm>
- Not Before: 188 AD
- Not After: 189 AD

Attestations

BGU wilck 203 1, l. 26 [edit](#) [delete](#)

[(ἔτους)] [κθ] Αύρηλίου Κομμόδου Αντω[νίνου] [Καίσαρος] [του] [κυρίου]
 Contributor: Trismegistos (Depauw/Verreth) (last update: 2018-12-10)

Attested Dates in this Period

Mesore (BGU 7 1686, l. 1-3)
 (ἔτους) κθ Μάρκου Αύρηλίου Κομμόδου Αντωνείνου Καίσαρος του κυρίου Μεσορή

Mesore (BGU 1 116 2, l. 24-26)
 (ἔτους) κθ Αύρηλίου Κομμόδου Αντω[νίνου] Καίσαρος του κυρίου Μεσο(ρή) ἐπ[αγομενών] [Ε]

Mesore (BGU 1 116 1, l. 15-16)
 (ἔτους?) κθ Αύρηλίου Κομμόδου [Αντ(ωνείνο)]υ Καίσαρος <του> κυρίου Μεσορή ἐπ(αγομενών) ε

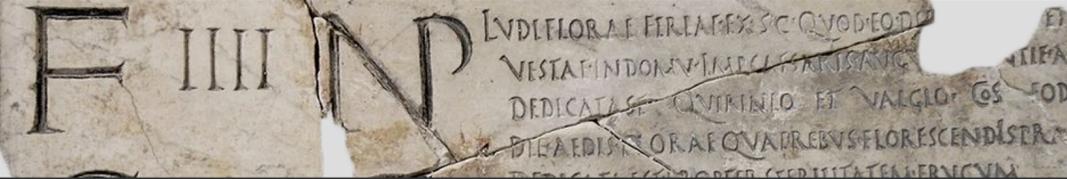
Mesore (BGU 1 116 1, l. 15-16)
 (ἔτους?) κθ Αύρηλίου Κομμόδου [Αντ(ωνείνο)]υ Καίσαρος <του> κυρίου Μεσορή ἐπ(αγομενών) ε

Mesore (BGU 1 116 2, l. 24-26)
 (ἔτους) κθ [gar=unknown] Αύρηλίου Κομμόδου Αντω[νίνου] Καίσαρος του κυρίου Μεσο(ρή) ἐπ[αγομενών] [Ε]

Mesore (BGU 1 116 1, l. 15-16)
 (ἔτους?) κθ Αύρηλίου Κομμόδου [Αντ(ωνείνο)]υ Καίσαρος <του> κυρίου Μεσορή ἐπ(αγομενών) ε



GODOT – Website (Browse Data by Drill-Down)



GODOT About... Browse Convert Date... Tools... Cyrenaica... Logout (grieshaber)

GODOT Detail View

<https://godot.date/id/eubQn4M7gRQ57pxLnnAq3c>
[Copy URI to clipboard](#)

Calendar Date Information

- Regnal Years
- Roman Emperors
name: Commodus
year: 29
- type: Egyptian Calendar
month: Mesore

Attestations

BGU 7 1686, l. 1-3 [edit](#) [delete](#)
 (ἔτους) κθ Μάρκου Αύρηλίου Κομμόδου Αντωνείνου Καίσαρος τοῦ κυρίου Μεσορή
 Contributor: Trismegistos (Depauw/Verreth) (last update: 2018-12-10)

BGU 1 116 2, l. 24-26 [edit](#) [delete](#)
 (ἔτους) κθ Αύρηλίου Κομμόδου Αντ[ώνου] Καίσαρος τοῦ κυρίου Μεσο(ρή) ἐπ[αγομενών] [ε]
 Contributor: Trismegistos (Depauw/Verreth) (last update: 2018-12-10)

BGU 1 116 1, l. 15-16 [edit](#) [delete](#)
 (ἔτους?) κθ Αύρηλίου Κομμόδου [Αντ(ωνεῖνο)]υ Καίσαρος <τοῦ> κυρίου Μεσορή ἐπ[αγομενών] ε
 Contributor: Trismegistos (Depauw/Verreth) (last update: 2018-12-10)

Attested Dates in this Period

28 (BGU 1 120, l. 13-15)
 (ἔτους) κθ Αύρηλίου Κομμόδου Αντωνείνου Καίσαρος τοῦ κυρίου Μεσορή κη

20 (BGU 1 71, l. 24-25)
 ἔτους κθ [Α]ύρηλίου Κομμόδου Αντωνείνου Καίσαρος τοῦ κυρίου Μεσορή κ

27 (BGU 1 117, l. 21-22)
 [(ἔτους)] [κθ] Μάρκου Αύρηλίου Κομμόδου Α[ντωνείνου] [Καίσαρος] [τοῦ] κυρίου Μεσορή κζ



The screenshot shows the GODOT website interface. At the top, there is a header with the GODOT logo and navigation links: GODOT, About..., Browse, Convert Date..., Tools..., and Cyrenaica... On the right side of the header, there is a user profile link: Logout (grieshaber). Below the header, the main content area is titled "GODOT Detail View". It displays the URL: <https://godot.date/id/uXBfr4rU9gaccyUJRzkhZD>. Below the URL, there is a button labeled "Copy URI to clipboard". Underneath, there is a section titled "Calendar Date Information" with a bulleted list:

- Regnal Years
- Roman Emperors
name: Commodus
year: 29
- type: Egyptian Calendar
month: Mesore
day: 28

 Below this, there is a section titled "Attestations" with the text: "BGU 1 120, l. 13-15" followed by "edit" and "delete" buttons. Below the text, there is a description in Greek: "(ἔτους) κθ Αύρηλίου Κομμόδου Αντωνίνου Καίσαρος τοῦ κυρίου Μεσορῆ κη" and the contributor information: "Contributor: Trismegistos (Depauw/Verreth) (last update: 2018-12-10)". At the bottom of the page, there is a footer link: "Graph of Dated Objects and Texts".



F IIII NP

INVDITLORAE FERIAE: SC QVODEODD
VESTAFINDONAVIMEDICAFANSANG
DEDICATA SE QVIRINIO ET VALGIO: GS FODE
DIEAEDIST ORAEQVATREBUSFLORESCENDISTR
TERGAELEKORORER CERHITATEAERNICVM

GODOT About... Browse Convert Date... Tools... Cyrenaica... Logout (grieshaber)

Roman Calendar Conversion – Consular Dating

(30 BC - 534 AD)

Consulship:
121 AD: M. Annius Verus II (January–February) / Cr

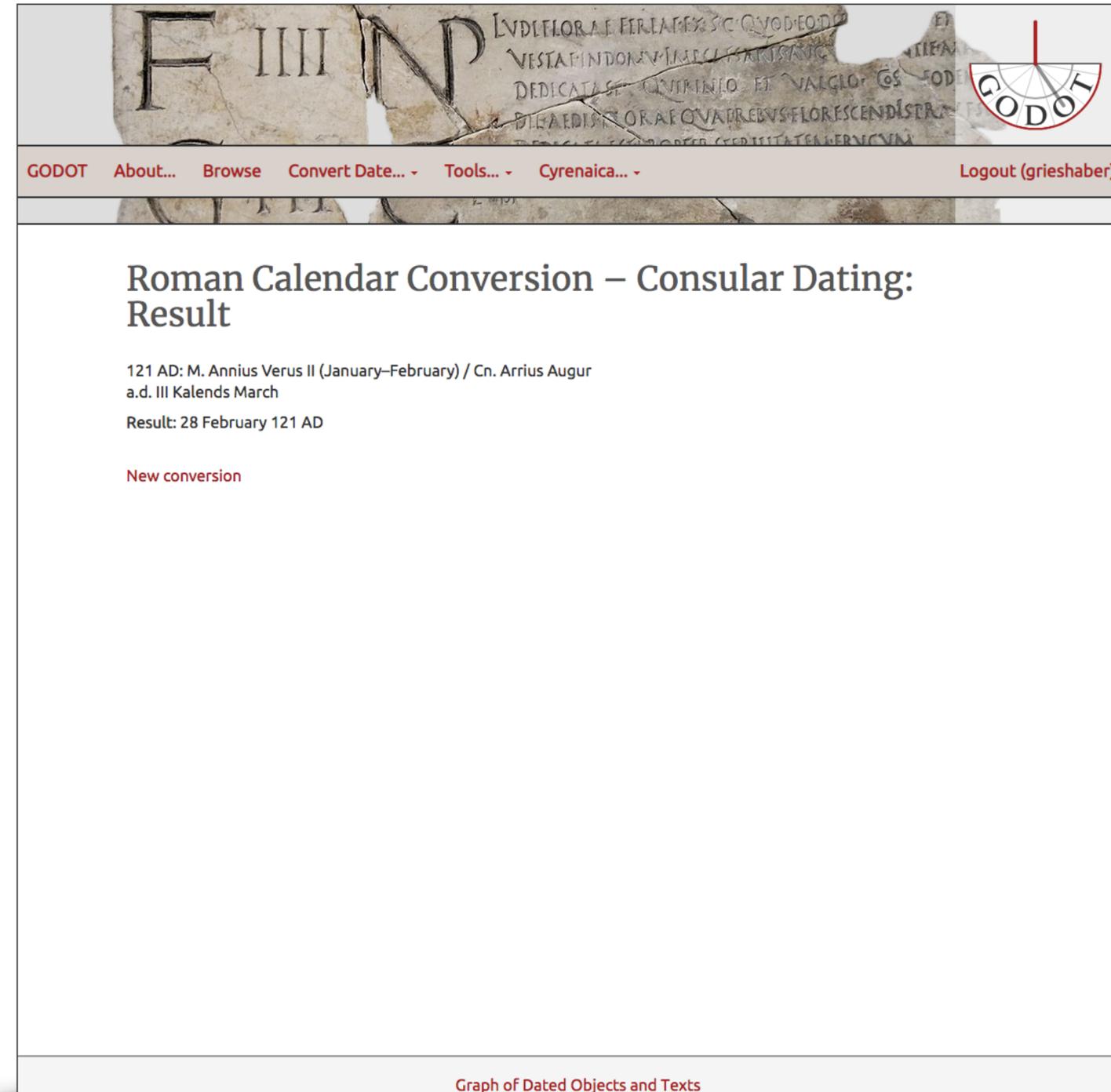
Day:
a.d. III

Kalends/Nones/Ides:
Kalends

Month:
March

Convert... Reset...

Graph of Dated Objects and Texts



The screenshot shows the GODOT website interface. At the top, there is a header with the GODOT logo on the left and a navigation menu with links: "GODOT", "About...", "Browse", "Convert Date...", "Tools...", and "Cyrenaica...". On the right side of the header, there is a "Logout (grieshaber)" link. Below the header, the main content area displays the title "Roman Calendar Conversion – Consular Dating: Result". Underneath the title, the input date is shown as "121 AD: M. Annius Verus II (January–February) / Cn. Arrius Augur a.d. III Kalends March". The result is "Result: 28 February 121 AD". A red link labeled "New conversion" is positioned below the result. At the bottom of the page, there is a footer with the text "Graph of Dated Objects and Texts".



GODOT About... Browse Convert Date... Tools... Cyrenaica... Logout (grieshaber)

Identify Roman Emperor by Titulature

Trib Pot Number:

Imperator Number:

Consul Number:
 consul designatus

Victory Titles:
Adiabenicus
Adiabenicus max.
Aegyptiacus max.
Alamannicus max.
Arabicus
Arabicus max.
Armeniacus
Armeniacus max.
Britannicus
Britannicus max.

Graph of Dated Objects and Texts




GODOT About... Browse Convert Date... Tools... Cyrenaica... Logout (grieshaber)

Identify Roman Emperor by Titulature – Results

Search for:

- Consul Number: 6
- Tribunicia Potestas Number: 18
- Imperial Acclamation Number: 7

Potential Roman Emperors:

Numbers in parenthesis provide information about the number of temporal overlaps in given titulature data, e. g. (2/3) = two out of three titulature partials show a temporal overlap. The list of emperors is sorted by this ratio with those emperors with highest ratio first.

Trajan (3/3) Augustus (1/3) Commodus (1/3) Constantin I (1/3) Maximian (1/3) Diocletian (0/3)

Trajan (3/3)

Temporal Overlap: 0114-09-01 – 0114-10-31

Consulate 0112-01-01 – 0112-01-13 (0117-08-07)

- date is uncertain
- Part of Consulate(s): <https://godot.date/id/e5jdHY46XWJeEpgYdGvRq8>

Tribunicia Potestas 0113-12-10 – 0114-12-09

Imperial Acclamation 0114-09 – (0114-10)

Augustus (1/3)

Partial Temporal Overlap(s):

- -0028-01-01 – -0027-01-01

Consulate -0028-01-01 – -0028-12-31 (-0027-01-01)

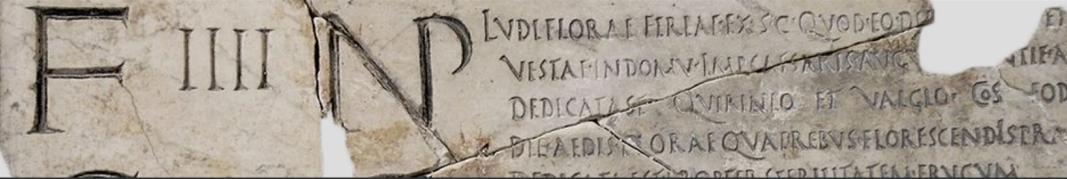
- Part of Consulate(s): <https://godot.date/id/chtkaFi4FhR5hhQGmjKF7f>

Tribunicia Potestas -0006-06-26 – -0005-06-25

Imperial Acclamation -0029 – (-0025)



GODOT – Website (Tools: OpenRefine Reconciliation Service)



GODOT About... Browse Convert Date... Tools... Cyrenaica... Logout (grieshaber)

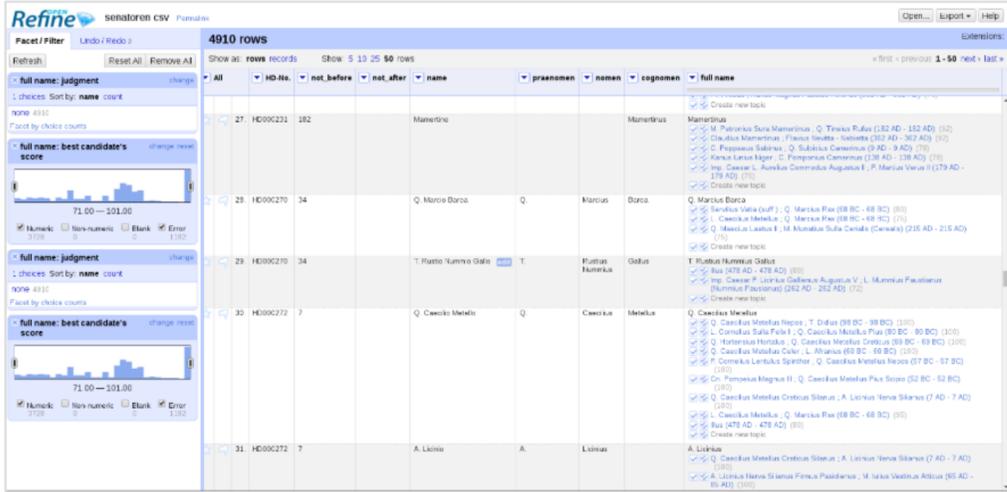
GODOT – Tools

OpenRefine Reconciliation Services:

OpenRefine (formerly Google Refine) is a powerful tool for working with messy data: cleaning it; transforming it from one format into another; and extending it with web services and external data.

Roman Consulships

For matching your data against ancient Roman consulates in the GODOT graph you can use the GODOT OpenRefine Reconciliation Service, the URL for this API is: <https://godot.date/api/openrefine/reconcile>. Results (GODOT URIs) are ordered by score.



row	id	name	praenomen	nomen	cognomen	full name
27	HE00C231	Mamertus		Mamertus		<ul style="list-style-type: none"> Q: Mamertus Q: M. Paternus Sura Mamertinus - Q: Titus Rufus (182 AD - 182 AD) (32) Q: Claudius Mamertinus - Flavius Suetonius - Sabella (302 AD - 302 AD) (32) Q: Pompeius Sabellus - Q: Subulcius Censorius (9 AD - 9 AD) (76) Q: Marcus Linius Niger - C. Pomponius Censorius (138 AD - 138 AD) (76) Q: Imp. Caesar L. Aurelius Cottaurelius Augustus F. P. Marcus Verus II (179 AD - 179 AD) (76)
28	HE00C270	Q: Marcus Borca	Q:	Marcus	Borca	<ul style="list-style-type: none"> Q: Marcus Borca Q: Seneca Velle (Juff) - Q: Marcus Pae (68 BC - 68 BC) (80) Q: L. Caecilius Metellus - Q: Marcus Pae (68 BC - 68 BC) (76) Q: Marcus Lantius - M. Munatius Sulla Cerealis (Cerealis) (215 AD - 215 AD) (76)
29	HE00C270	T. Plautius Lunna Galus	T.	Plautius Lunna	Galus	<ul style="list-style-type: none"> T. Plautius Lunna Galus Q: Imp. Caesar P. Licinius Gallianus Augustus V. L. Munatius Paullianus (Munatius Paullianus) (262 AD - 262 AD) (72)
30	HE00C272	Q: Caecilius Metellus	Q:	Caecilius	Metellus	<ul style="list-style-type: none"> Q: Caecilius Metellus Q: Q: Caecilius Metellus Nereus - T. Didius (88 BC - 88 BC) (100) Q: L. Cornelius Sulla Felix I - Q: Caecilius Metellus Pae (80 BC - 80 BC) (100) Q: Hortensius Metellus - Q: Caecilius Metellus Creticus (89 BC - 89 BC) (100) Q: Caecilius Metellus Celer - L. Mutius (89 BC - 89 BC) (100) Q: P. Cornelius Lentulus Sura - Q: Caecilius Metellus Nereus (87 BC - 87 BC) (100) Q: Dr. Pompeius Magnus II - Q: Caecilius Metellus Pae Scaevola (82 BC - 82 BC) (100) Q: Caecilius Metellus Creticus Sitanus - A. Licinius Nervus Sitanus (7 AD - 7 AD) (100) Q: L. Caecilius Metellus - Q: Marcus Pae (68 BC - 68 BC) (95) Q: Raa (478 AD - 478 AD) (80)
31	HE00C272	A. Licinius	A.	Licinius		<ul style="list-style-type: none"> A. Licinius Q: Caecilius Metellus Creticus Sitanus - A. Licinius Nervus Sitanus (7 AD - 7 AD) (100) Q: A. Licinius Nervus Sitanus Firmus Paullianus - M. Julia Velleius Abilius (85 AD - 85 AD) (100)

Graph of Dated Objects and Texts



GODOT Summary

- Gazetteer: stable & citable URIs for chronological data
- GODOT URIs for :
 - reuse in Linked Open Data applications, TEI/EpiDoc XML or database projects
 - defining start/end point of periods (PeriodO, Chronontology) or events
- detail view/description of each date and all its attestations
- browse through chronological data on GODOT website & find contemporaneous texts from various projects
- visualize dates on a timeline to see contemporary dates/texts even if in a different calendar system
- increased visibility of project and its data (by links from GODOT website back to project website)
- tools related to dating texts (conversions, openRefine, identifier, API):
 - Javascript widget

<http://epigraphy.packhum.org/text/227955>

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Egyptian Calendar Date (Roman Period):

Year 15 of Hadrian, Choiak, day 11 (7. Dec 130 AD)

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