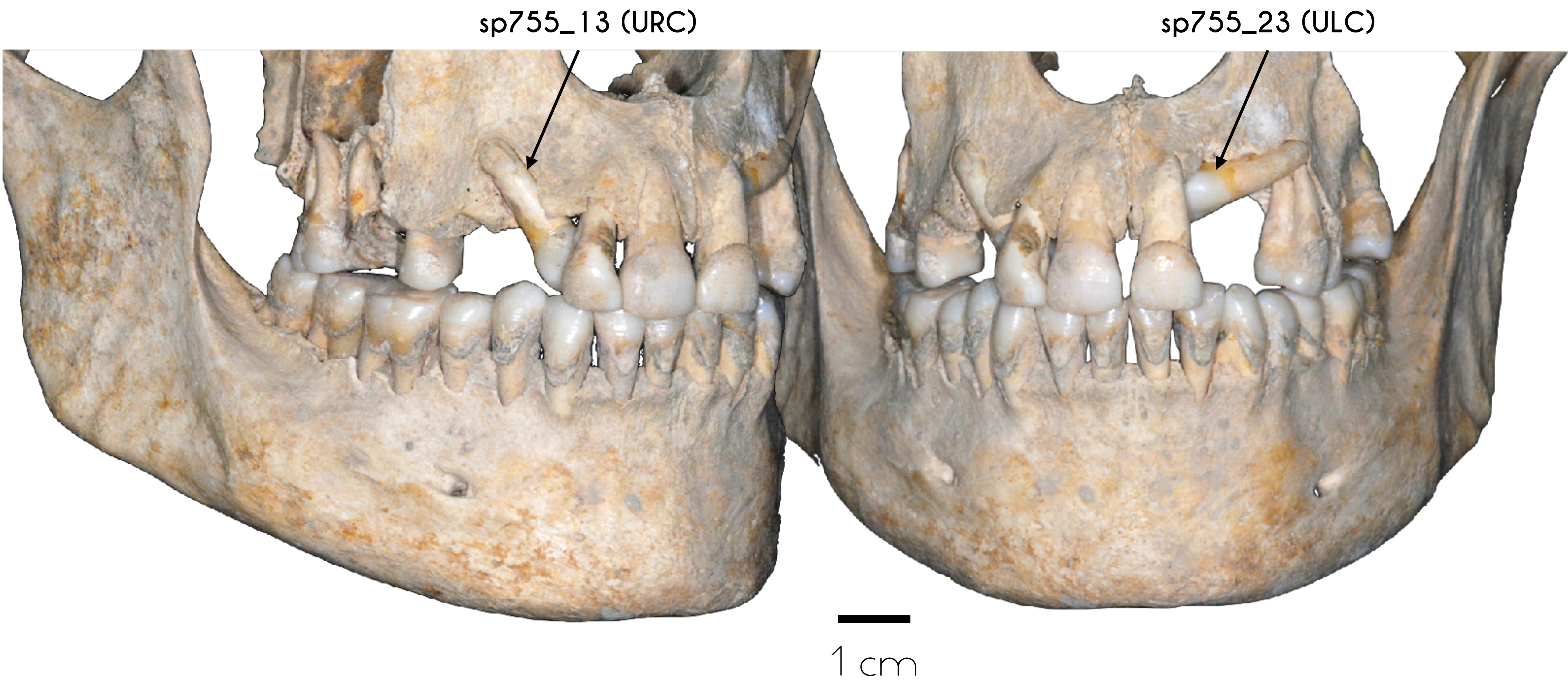
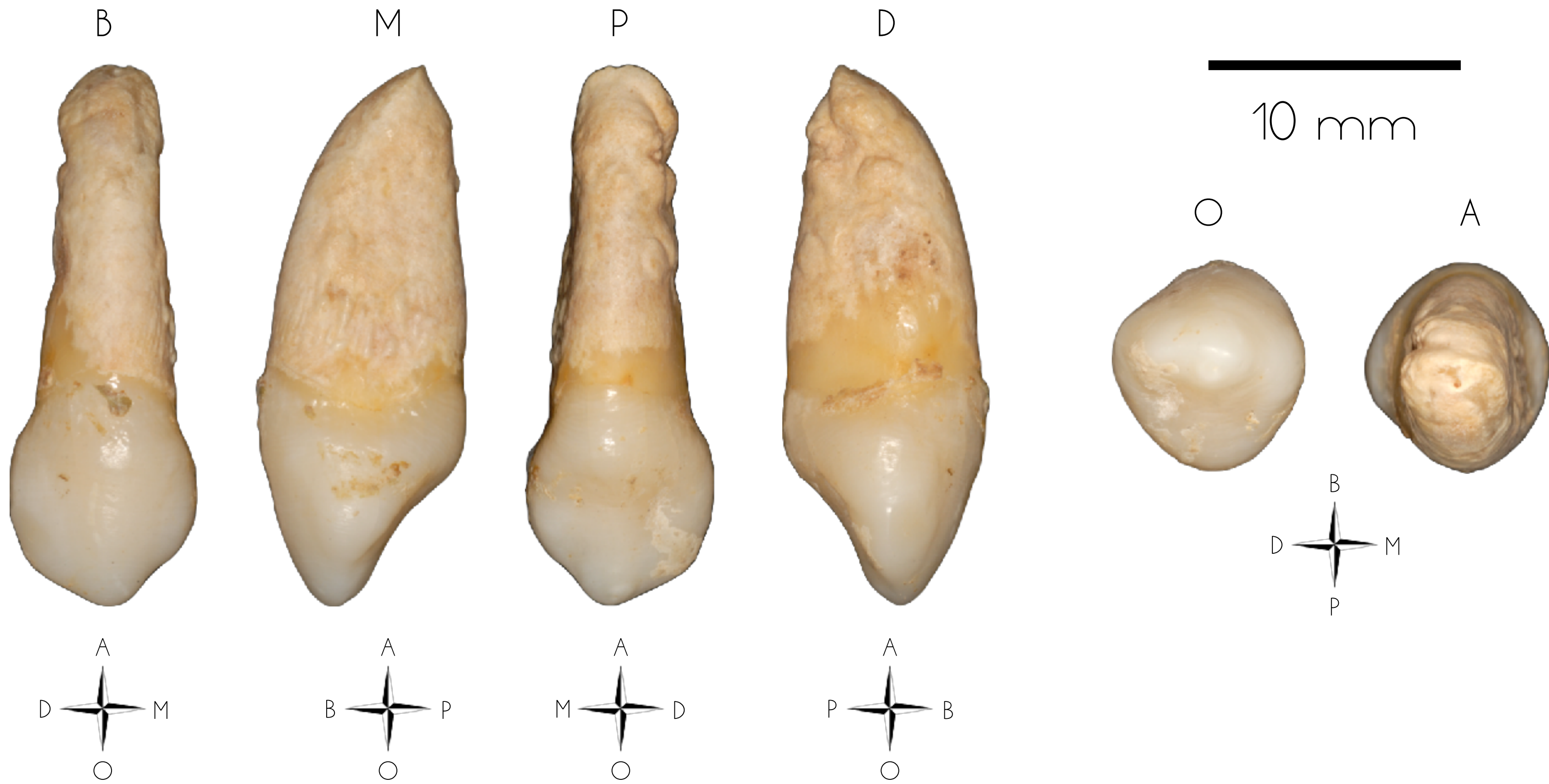


Sp755\_13

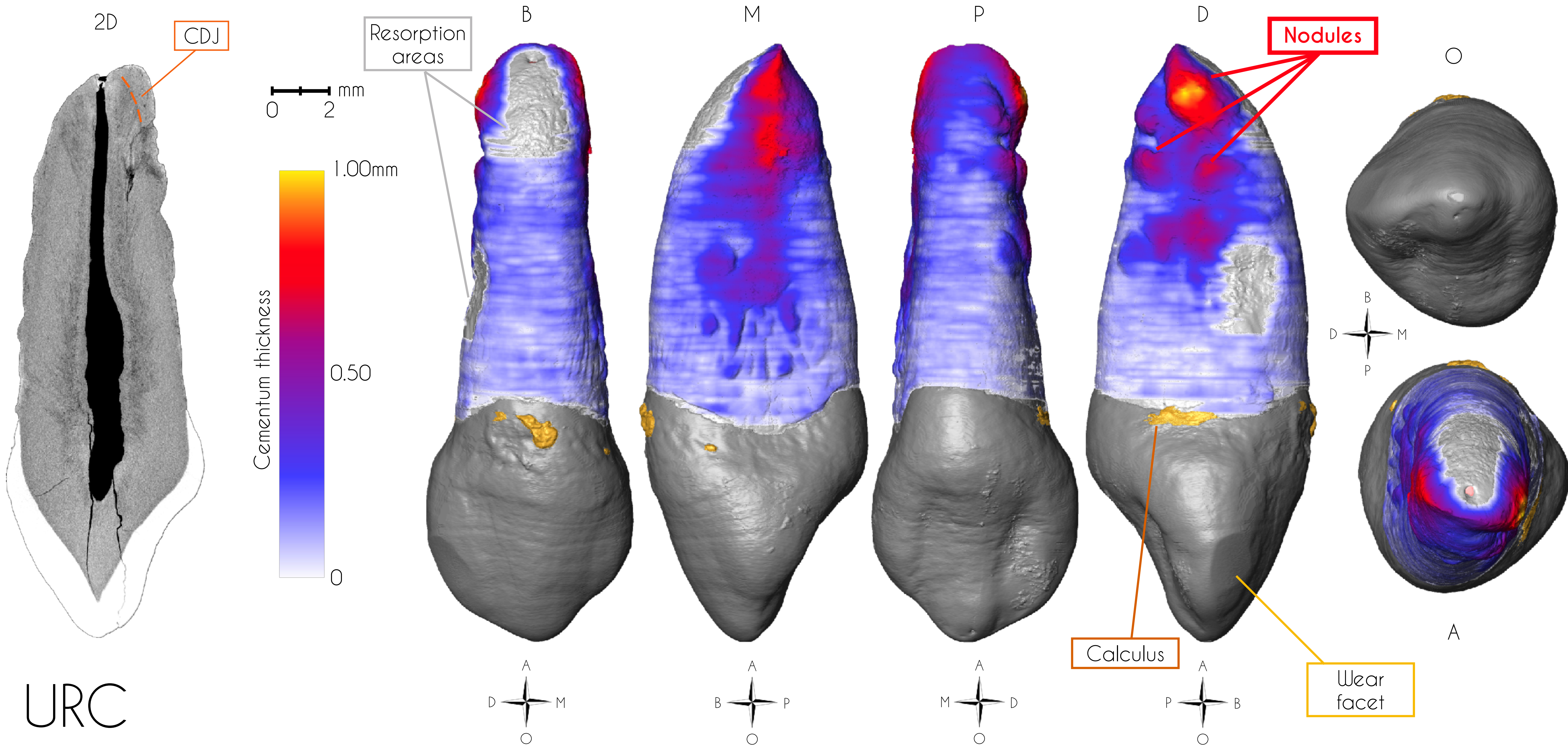
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
URC	1	1	1	-	0	1	3.3.m	0	0	-	-

URC



**DEG:** degree; **DIR:** direction; **FOR:** form - **CAR:** carious lesion - **Pulp EXP:** pulp exposure - **IMP:** impaction - **FEN:** fenestration; **CAL:** calculus; **NT:** tooth loss in neighbouring teeth; **ANTA:** antagonist





Sp755\_13

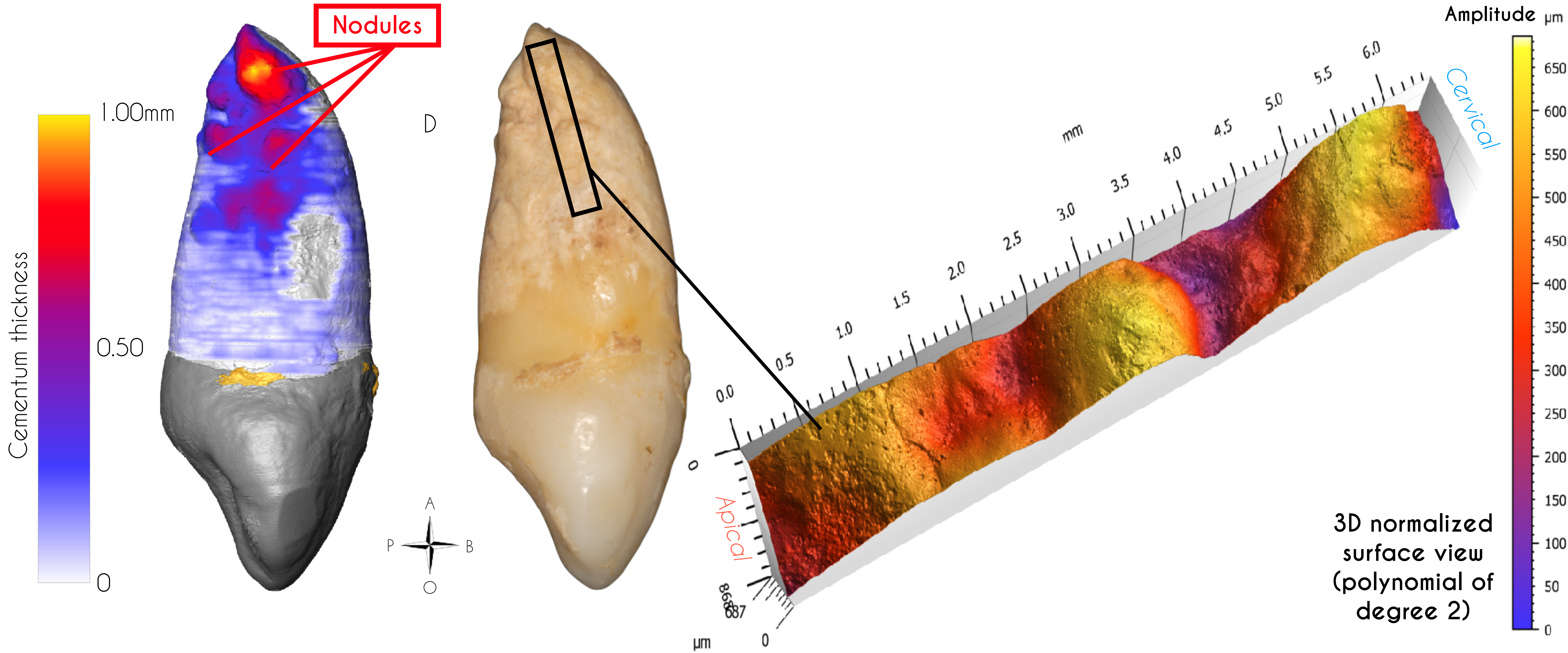
Microtomography - Thickness 3D maps				
MAX THI (μm)	LOC MAX	LOC MIN	PREF LOC	Note
1000	2d	<	Yes	Nds (d)

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)  
**PREF LOC:** preferential location;  
**Nds:** nodules (m: mesial; d: distal; <: buccal; >: lingual)

Impacted



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
D	747	5.24%	0.88mm	6.60mm	1/11	2	Blue	1.5	1.8	10 %



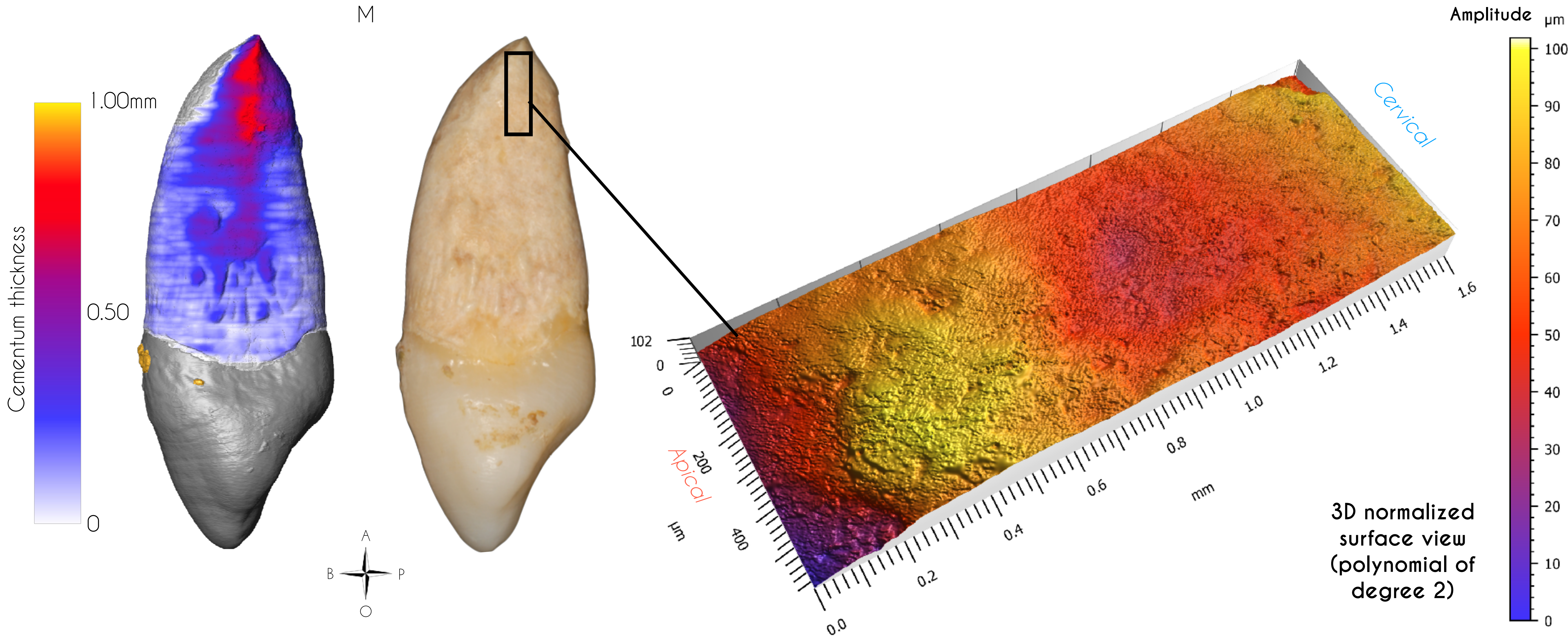
Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
2d	690	+S2	Nds

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
**Nds:** Nodules

Impacted



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
M	1029	5.00%	0.88mm	3.04mm	1/5	2	Blue	1.5	1.8	10 %



Confocal microscopy - Topography 3D maps			
OF	MAX VE (μm)	ST	Note
2m	100	-R2	-

**OF:** other face (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.

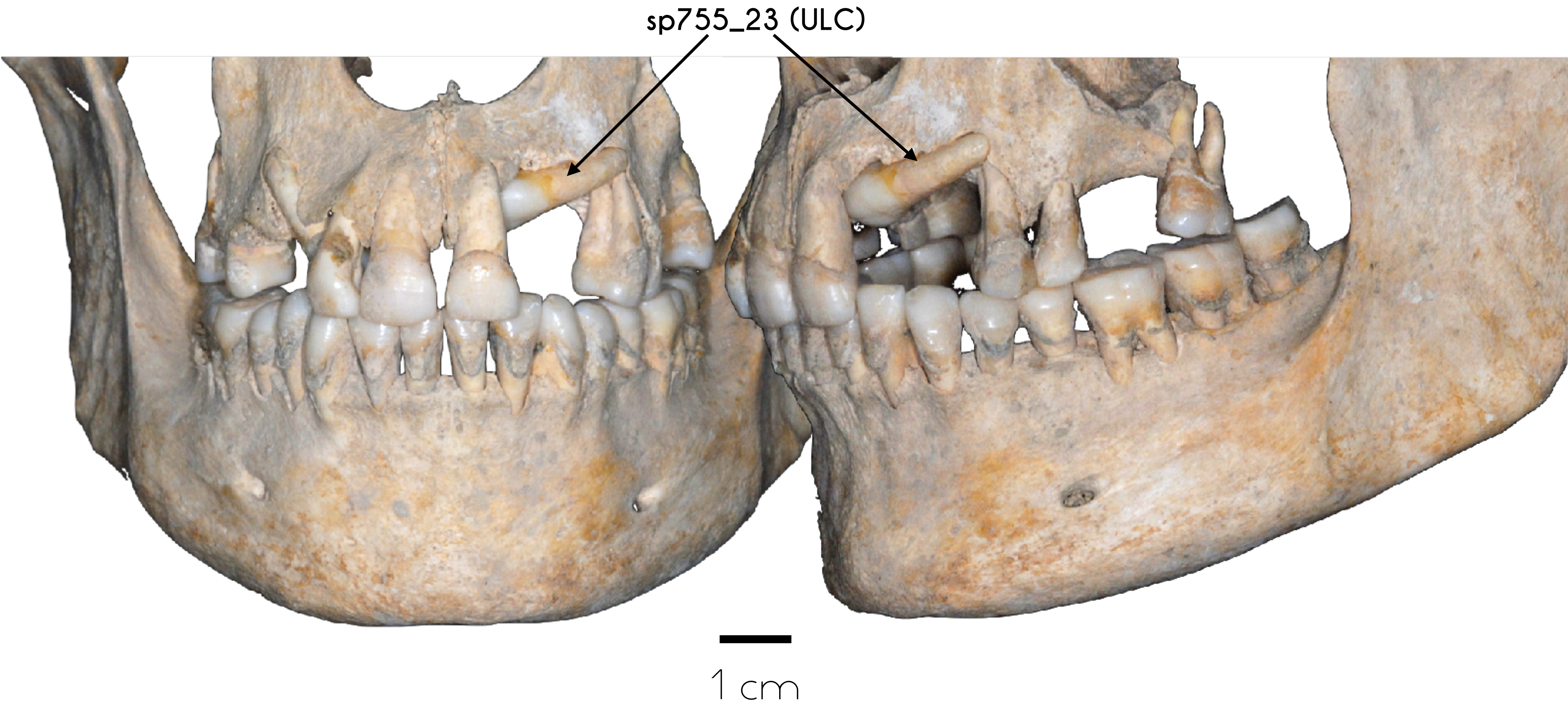
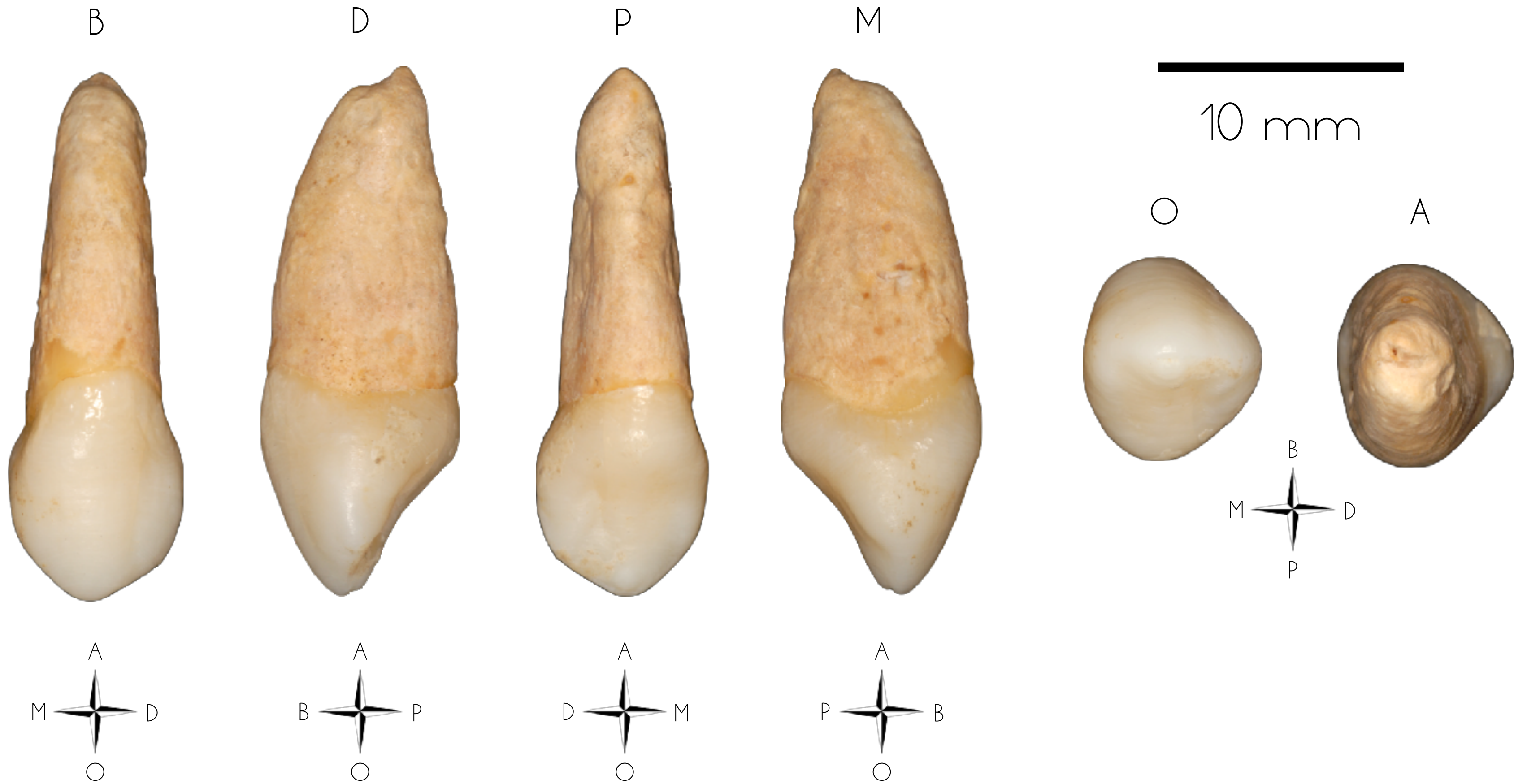
Impacted



Sp755\_23

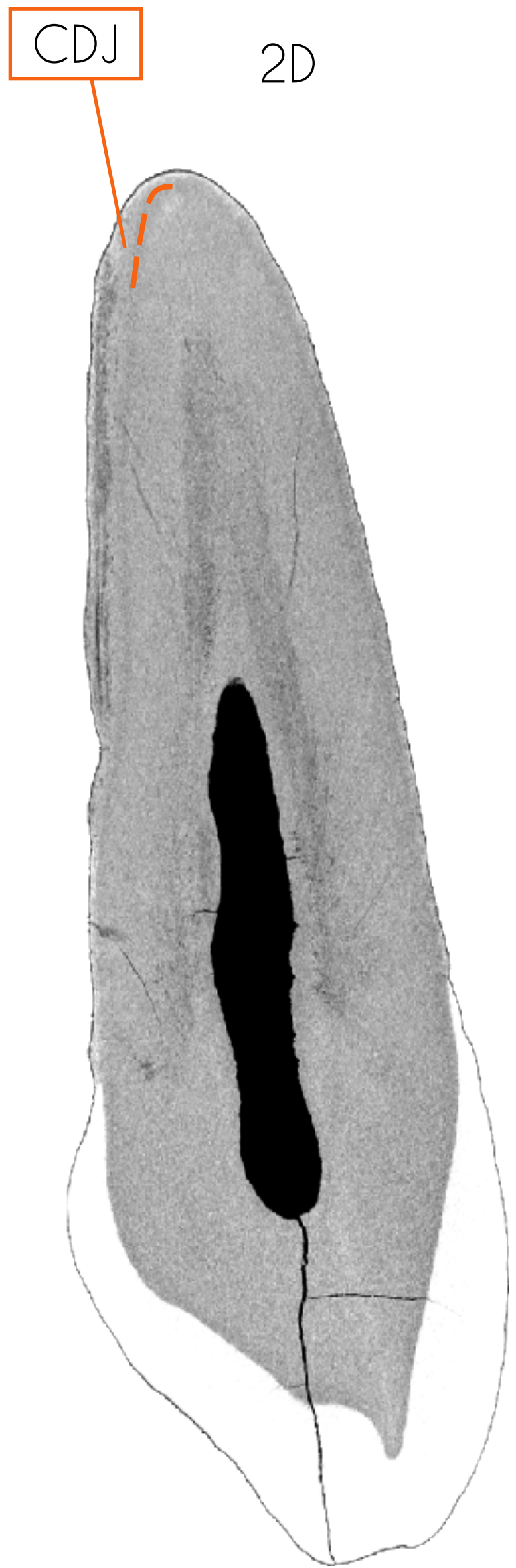
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
ULC	1	1	1	-	0	1	3.3.m	0	0	-	-

ULC

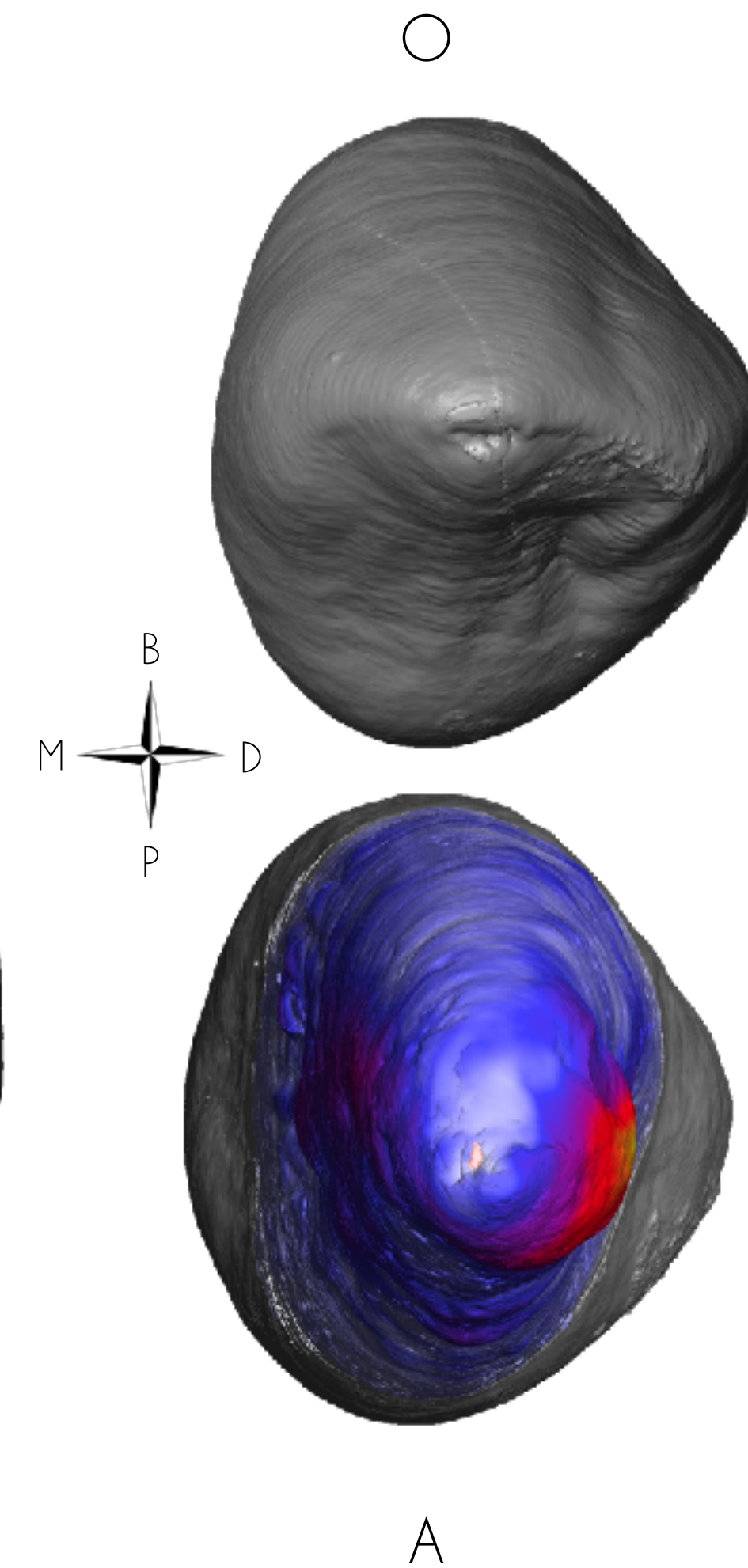
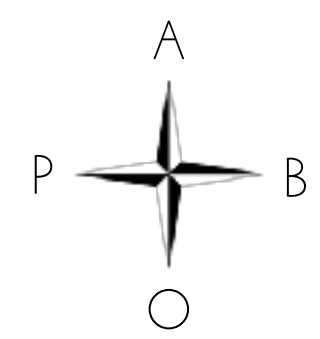
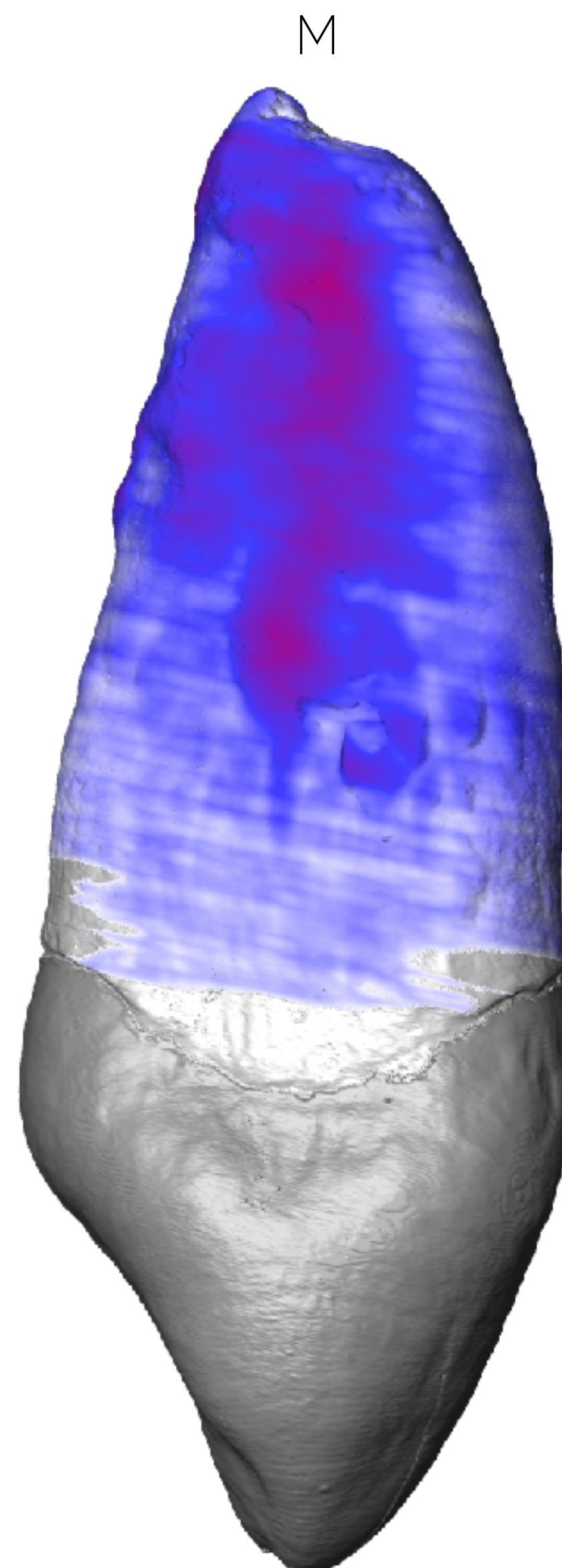
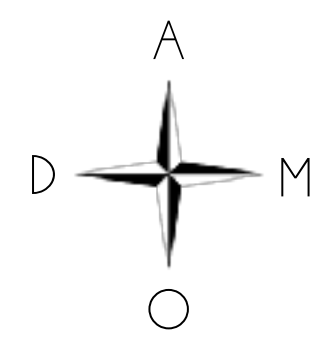
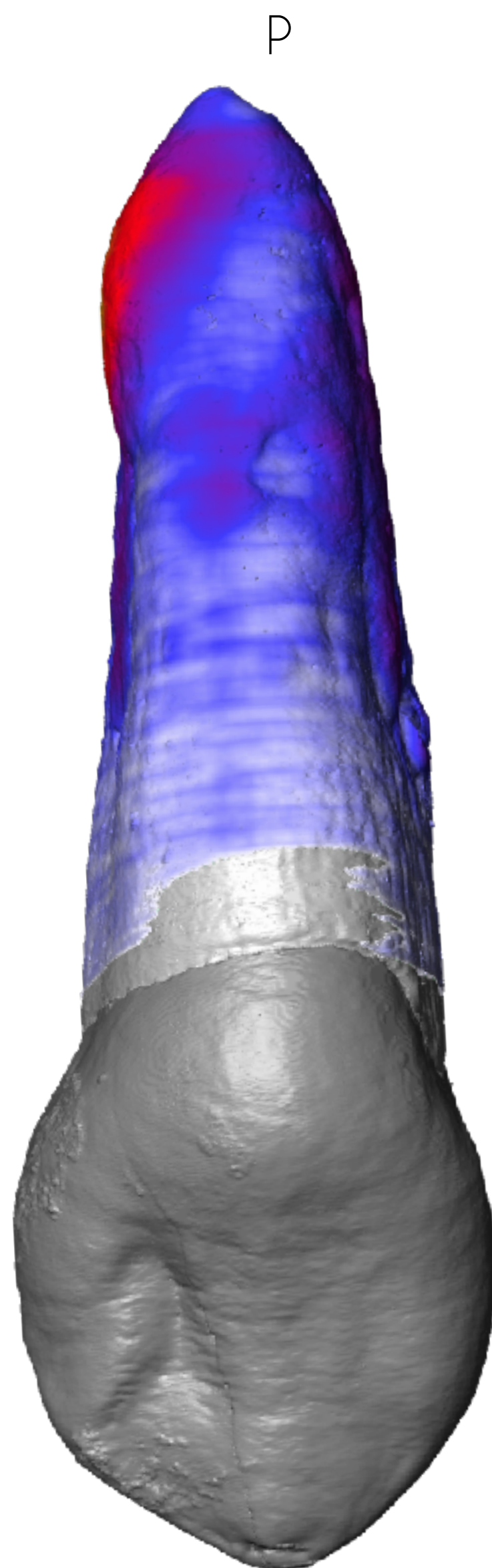
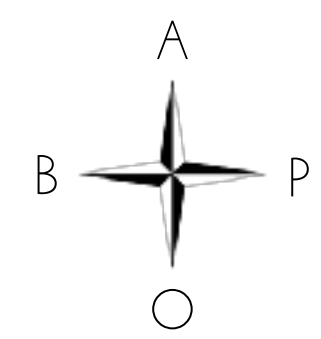
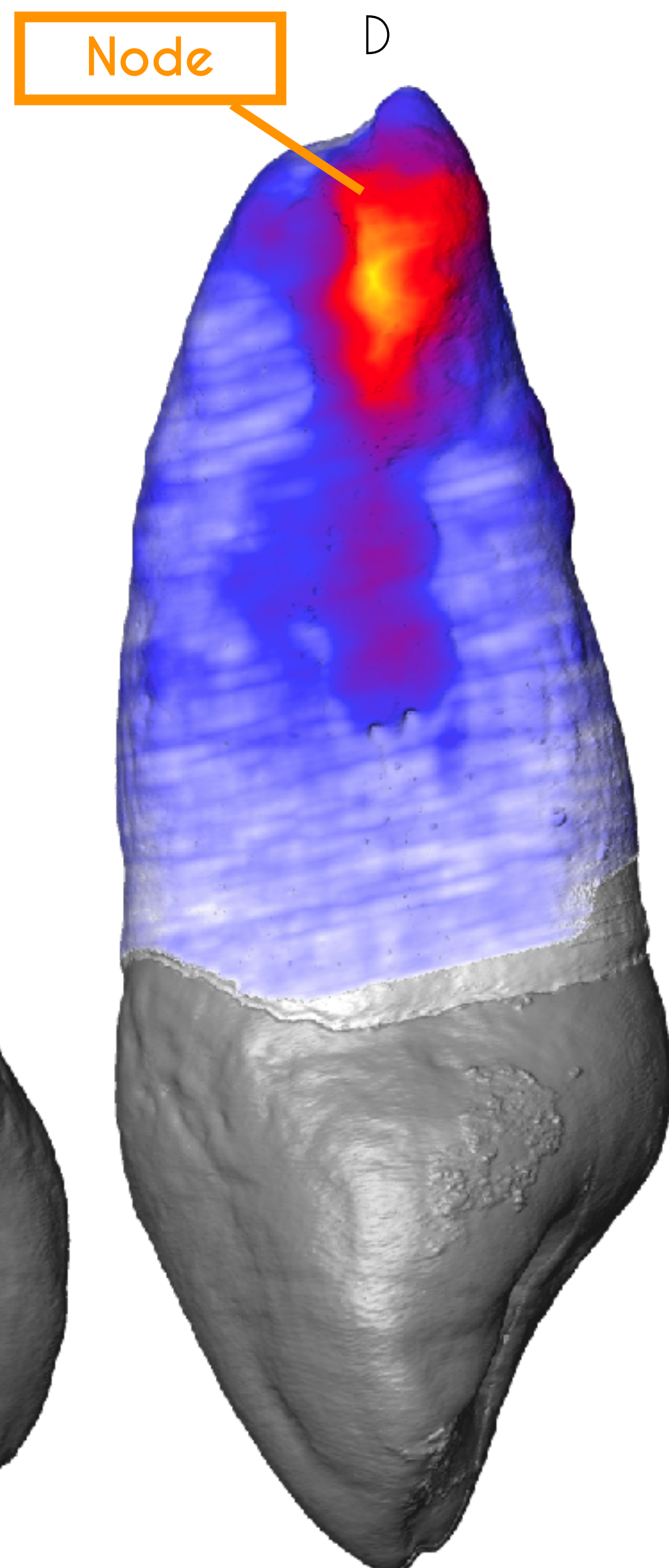
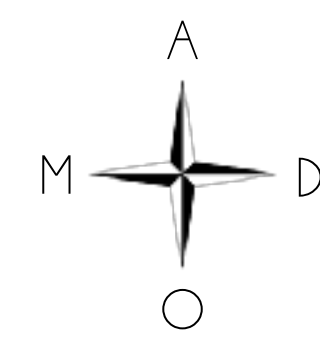
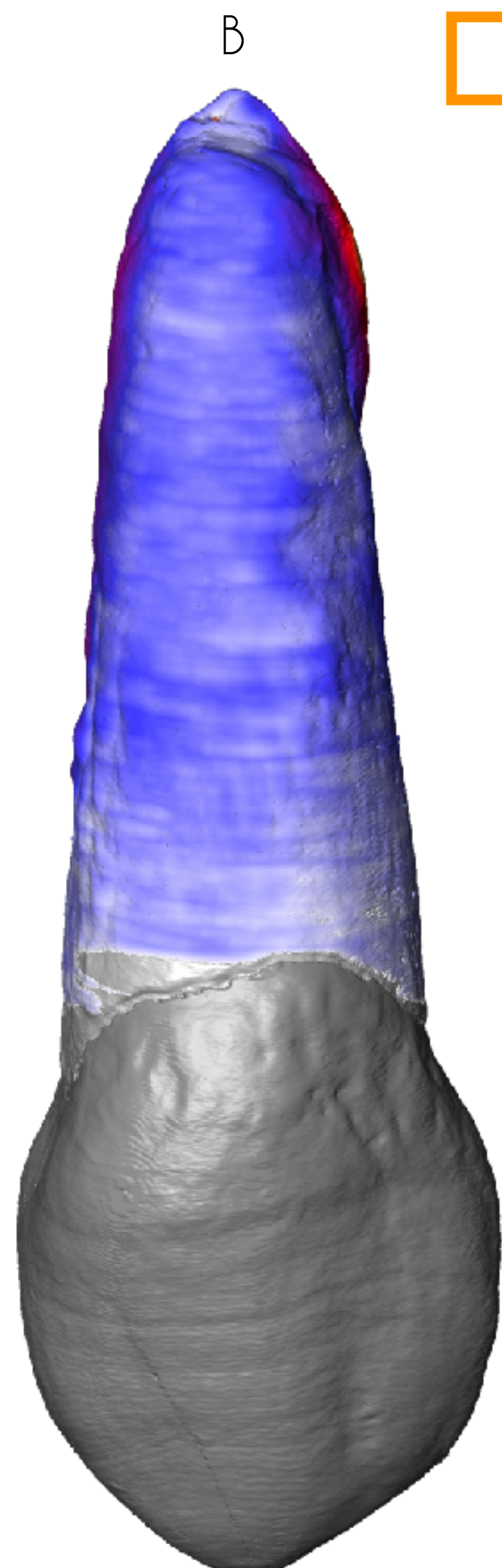
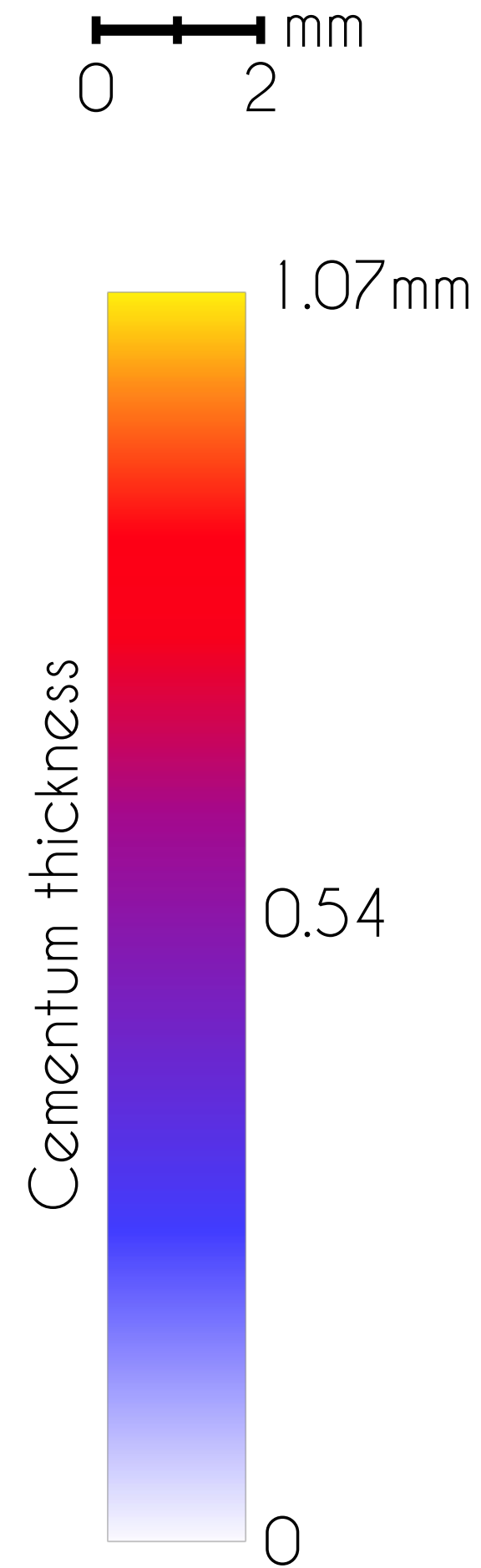


DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





ULC



Sp755\_23

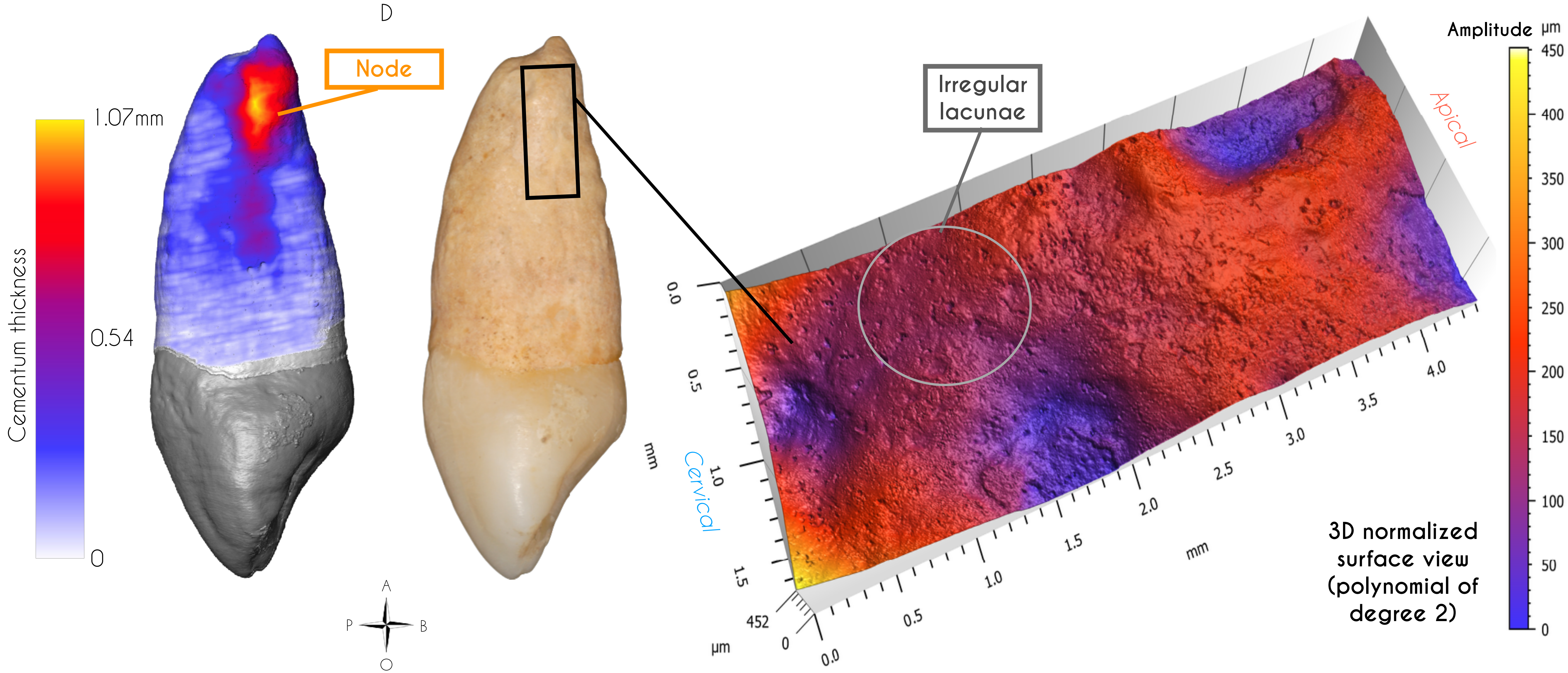
Microtomography - Thickness 3D maps				
MAX THI (μm)	LOC MAX	LOC MIN	PREF LOC	Note
1070	2d	<	Yes	NOD (d)

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)  
**PREF LOC:** preferential location;  
**NOD:** node (m: mesial; d: distal; <: buccal; >: lingual)

Impacted



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
D	1014	4.97%	1.67mm	4.82mm	2/8	2	Blue	1.5	1.8	10 %



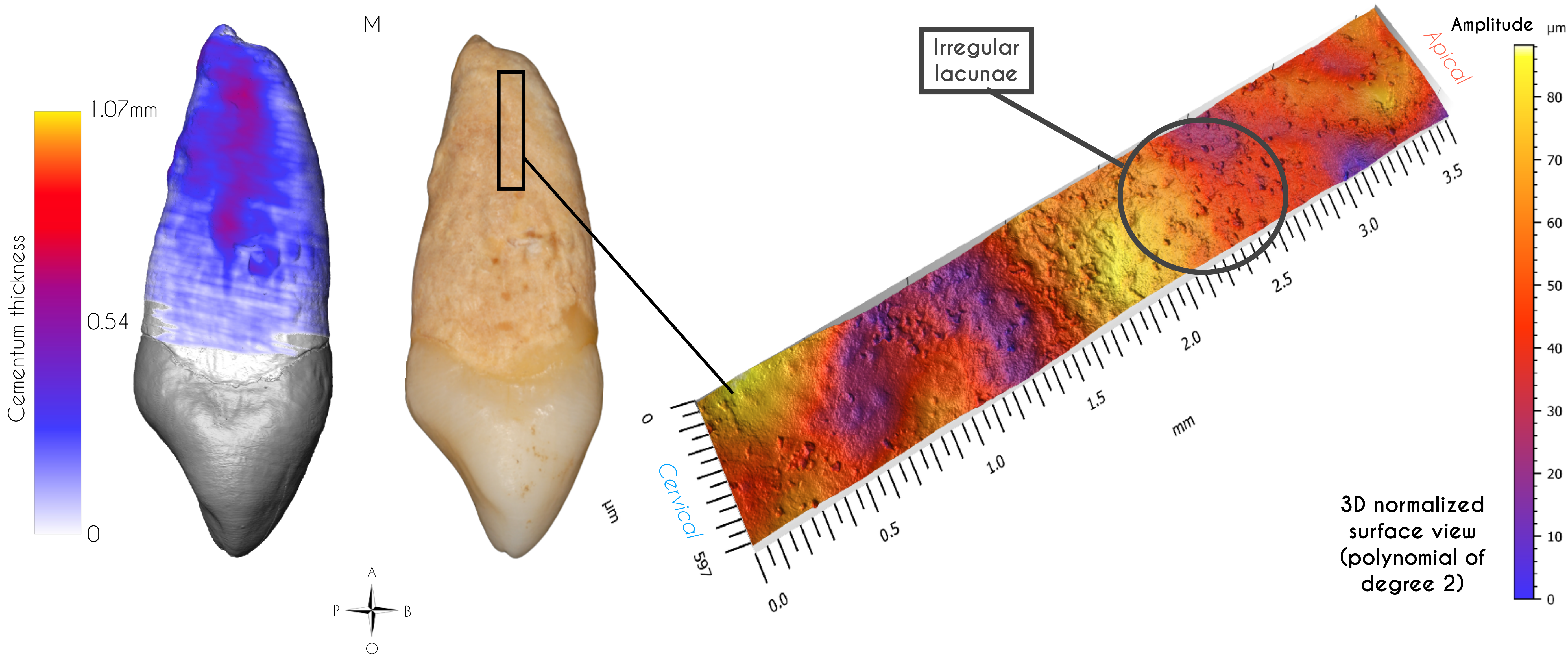
Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
2d	450	+S2	IL

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
**IL:** irregular lacunae

Impacted



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
M	751	5.50%	0.88mm	4.23mm	1/7	2	Blue	1.47	1.61	10 %



Confocal microscopy - Topography 3D maps			
OF	MAX VE (μm)	ST	Note
2m	90	-R2	IL

OF: other face;  
MAX VE: maximum vertical elevation;  
ST: surface texture; : scored (+) if it is high, (-) if it is low; S: smooth or R: rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
IL: irregular lacunae

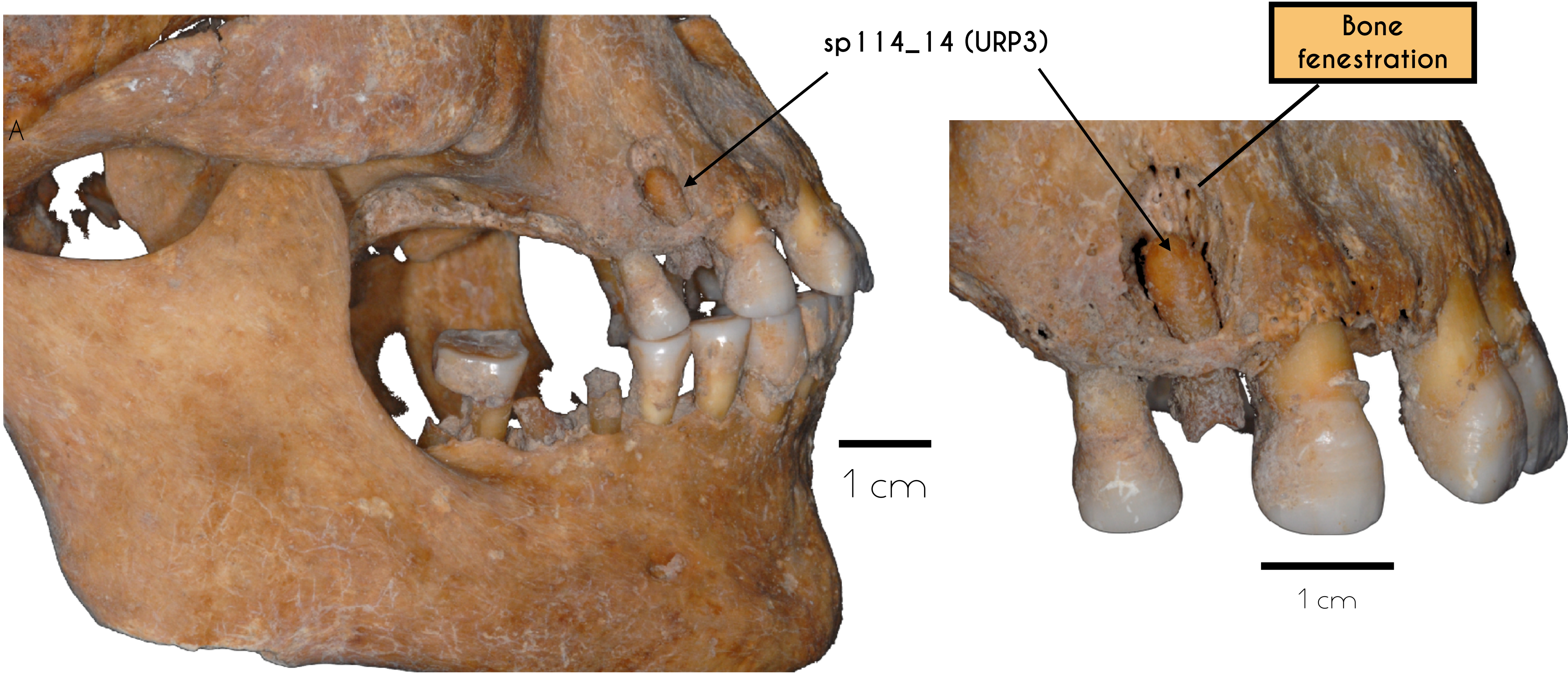
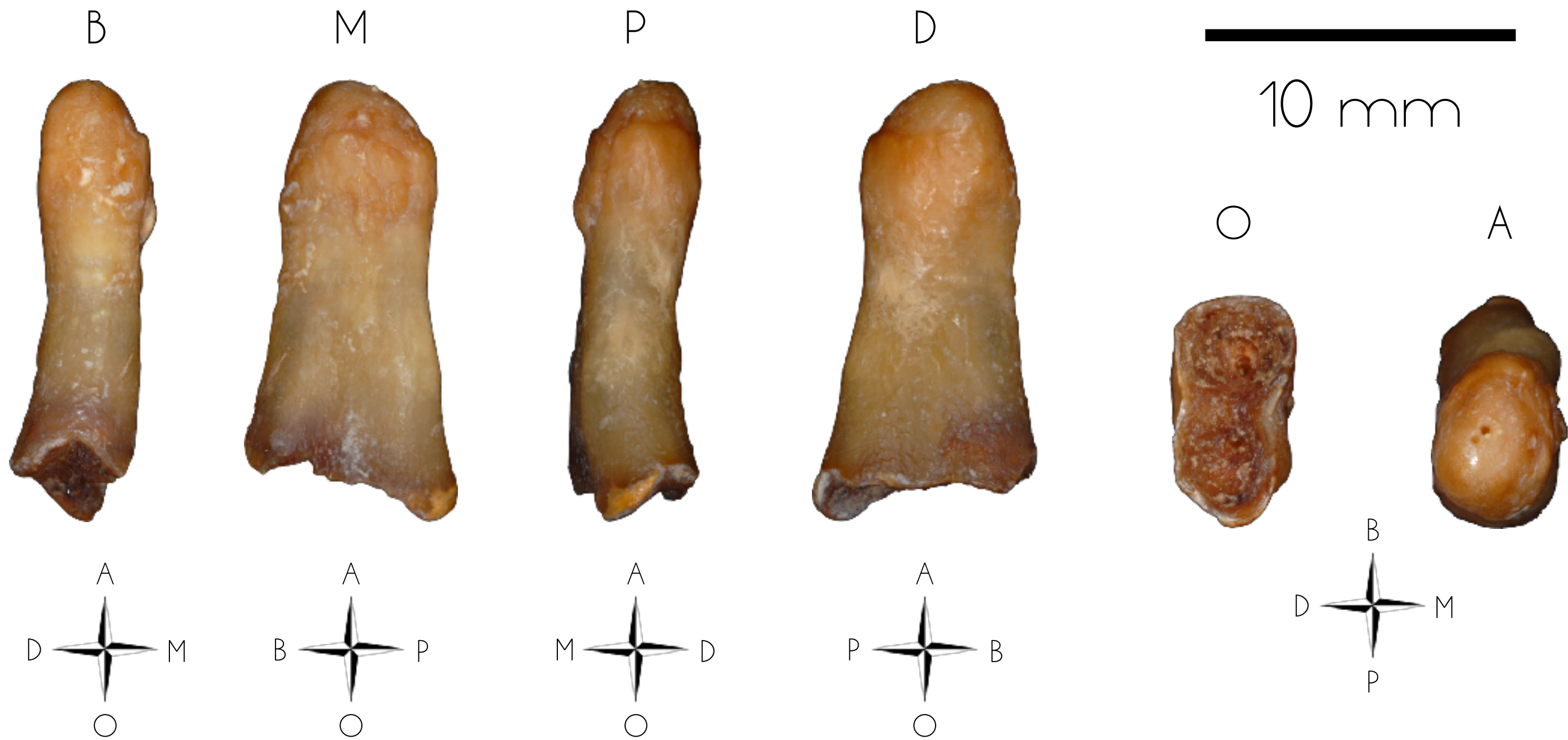
Impacted



Sp114\_14

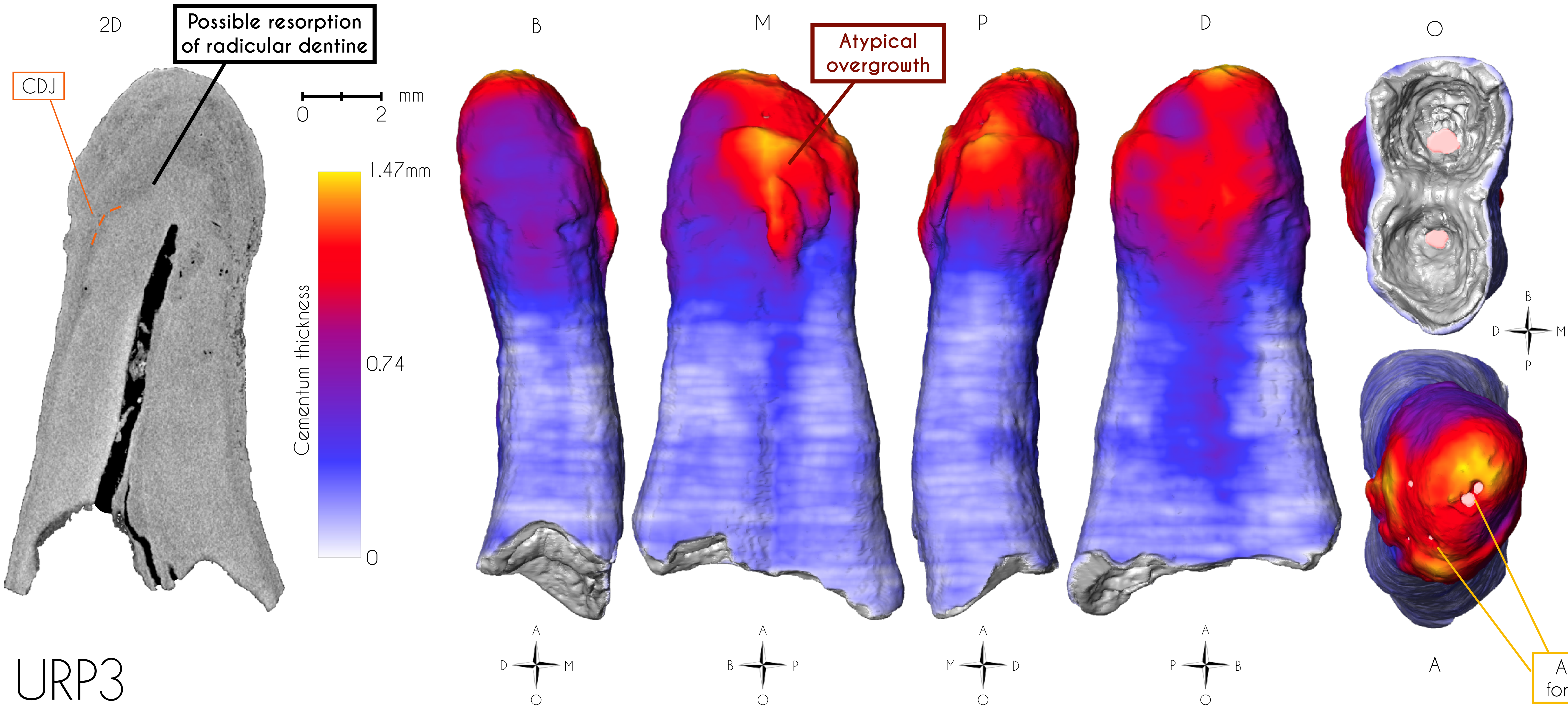
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
URP3	NA	NA	NA	1/4	M	0	3.4.M	1	0	0	1

URP3



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





URP3

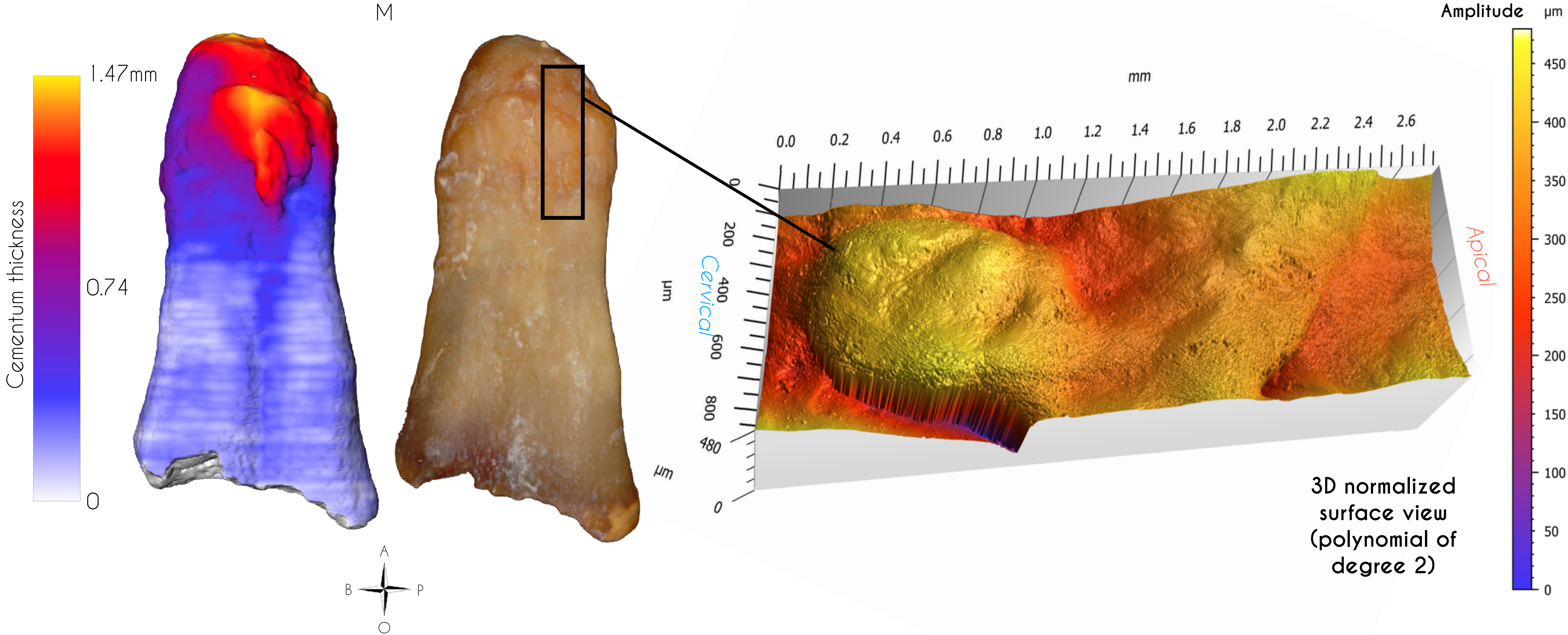
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1470	m	<	No	OG

MAX THI: maximum thickness of cementum;  
LOC MAX: location of maximum thickness;  
LOC MIN: location of minimum thickness;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)  
PREF LOC: preferential location;  
OG: atypical overgrowth

Infected



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
MP	1032	7.00%	0.88mm	3.63mm	1/6	2	Blue	1.5	1.8	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
m	475	+S2	-

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.

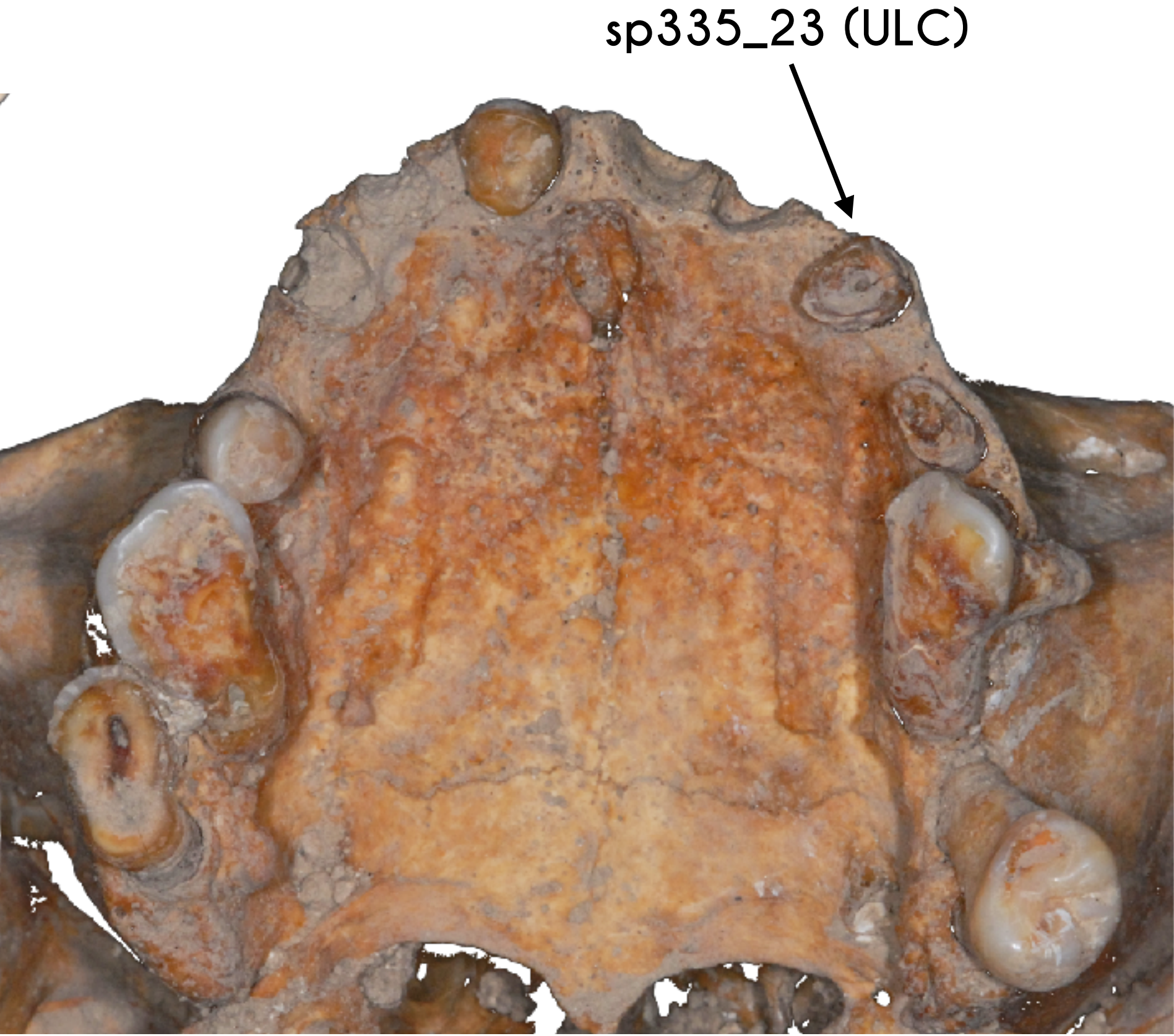
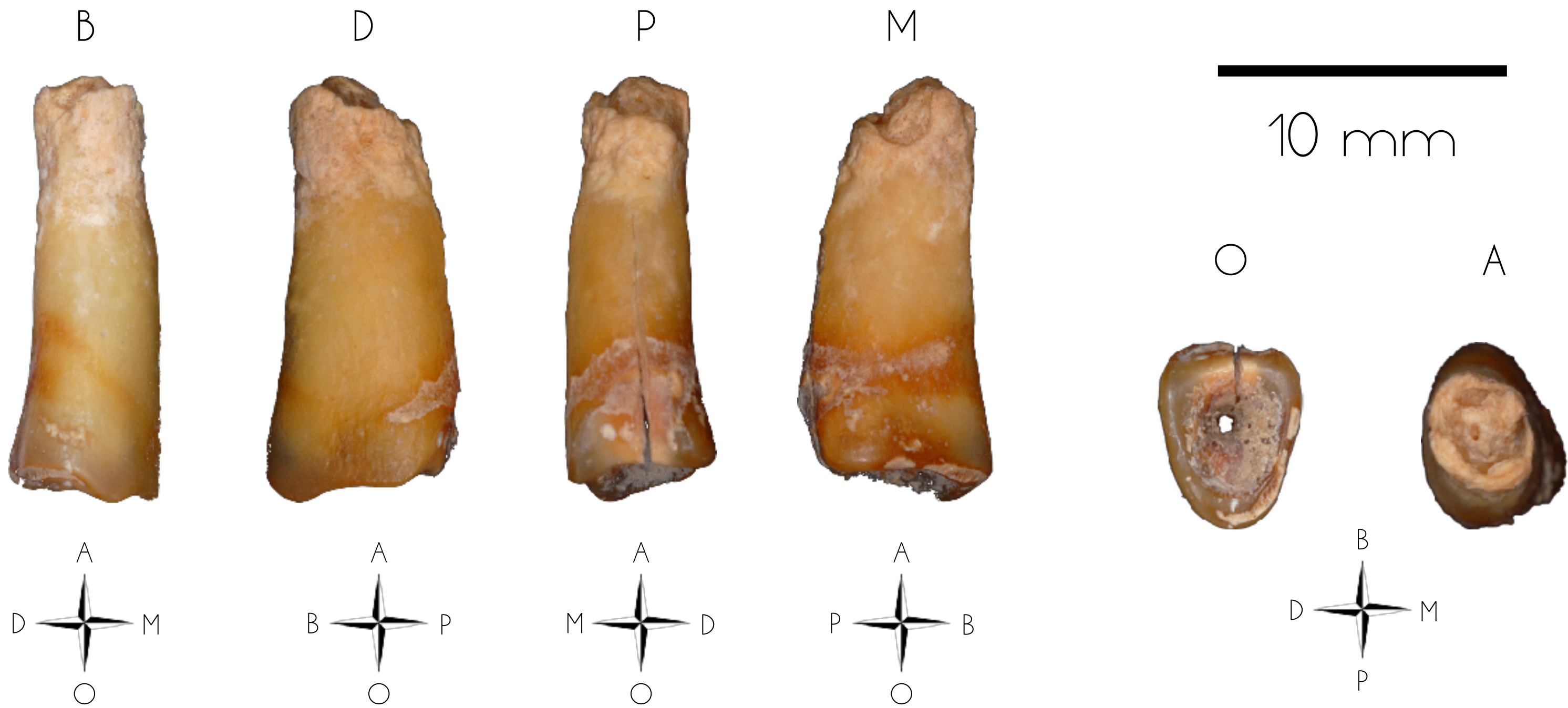
Infected



Sp335\_23

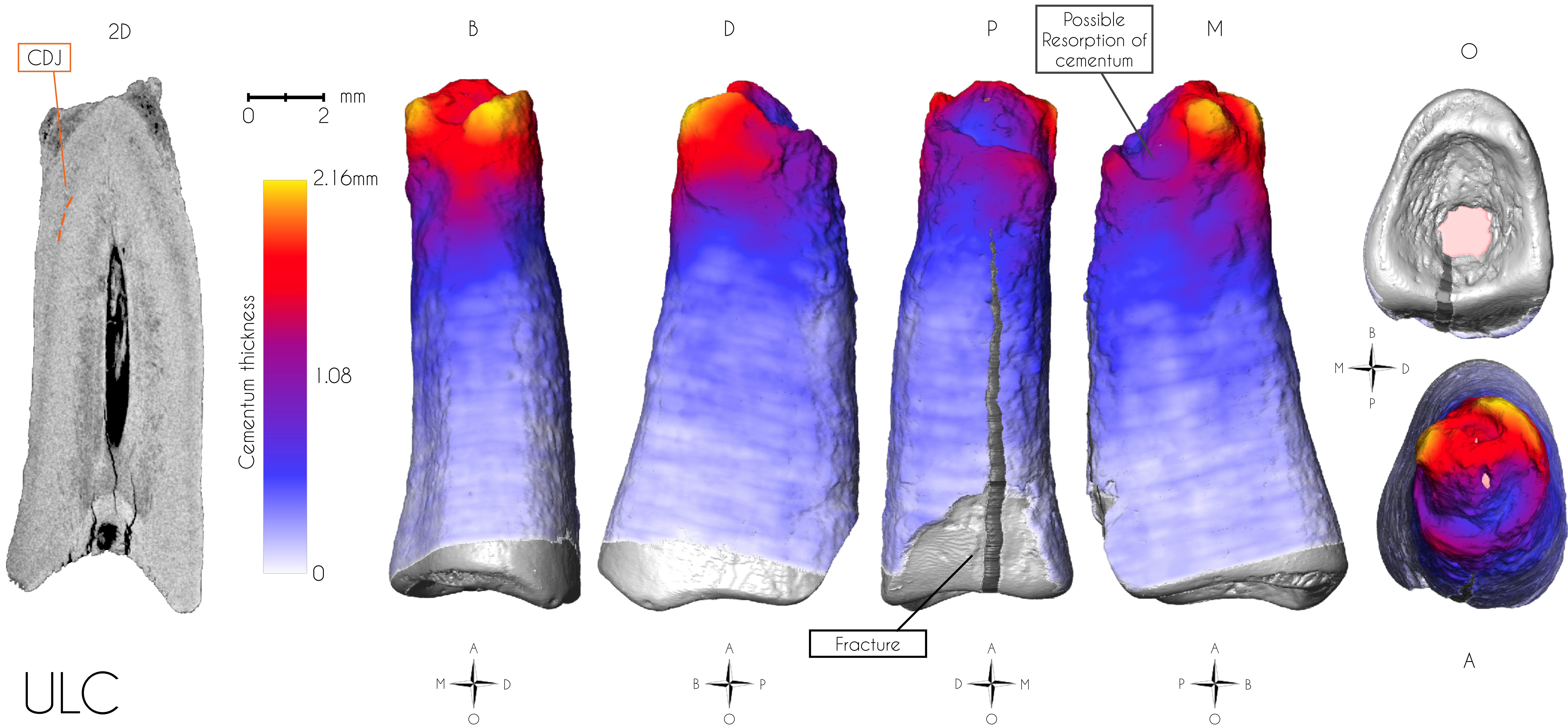
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
ULC	NA	NA	NA	1/4	M	0	1.4.M	1	0	2	1

ULC



**DEG:** degree; **DIR:** direction; **FOR:** form - **CAR:** carious lesion - **Pulp EXP:** pulp exposure - **IMP:** impaction - **FEN:** fenestration; **CAL:** calculus; **NT:** tooth loss in neighbouring teeth; **ANTA:** antagonist





Sp335\_23

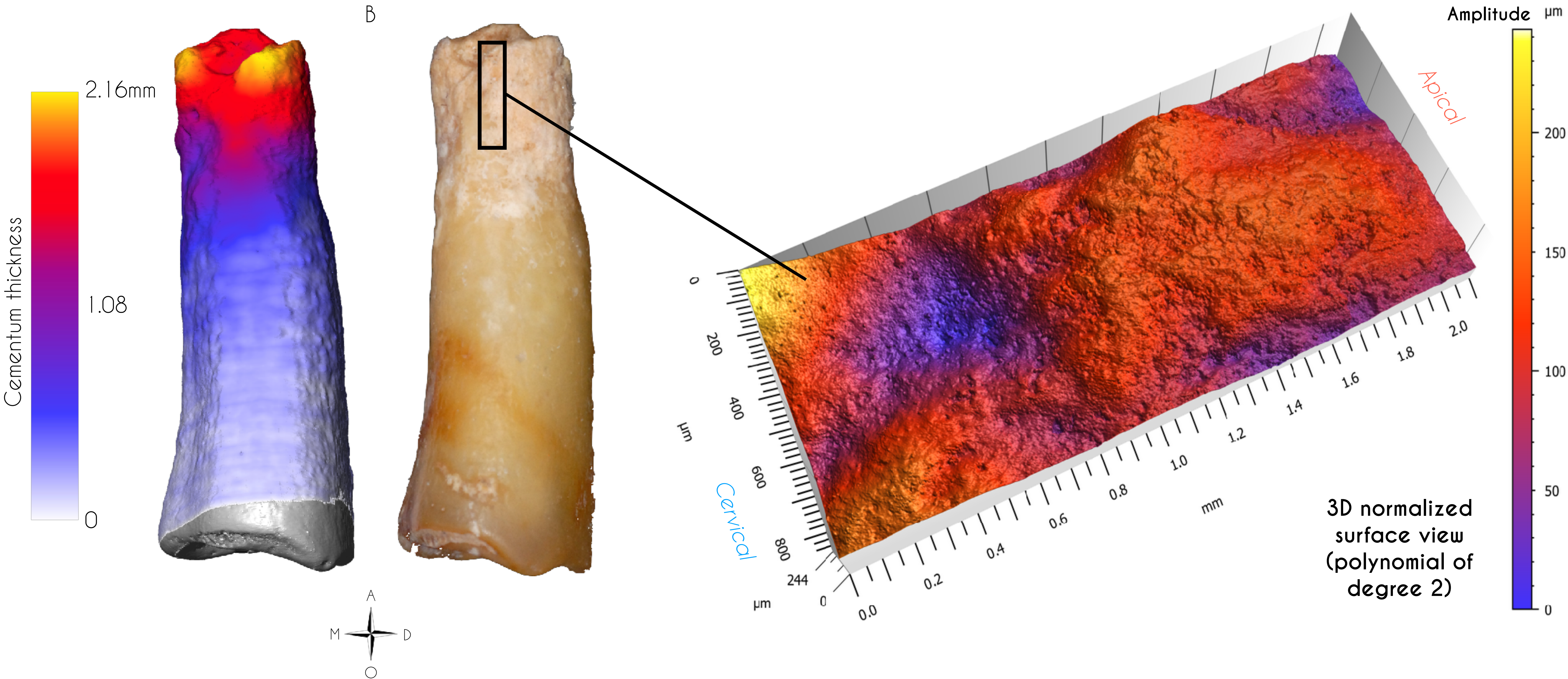
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
2160	<	>	No	RES (>)

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
**PREF LOC:** preferential location;  
**RES:** resorption;  
(<: buccal; >: lingual)

Infected



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
BD	1206	4.71%	0.88mm	2.44mm	1/4	2	Blue	1.5	1.8	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
<	250	+R2	-

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.

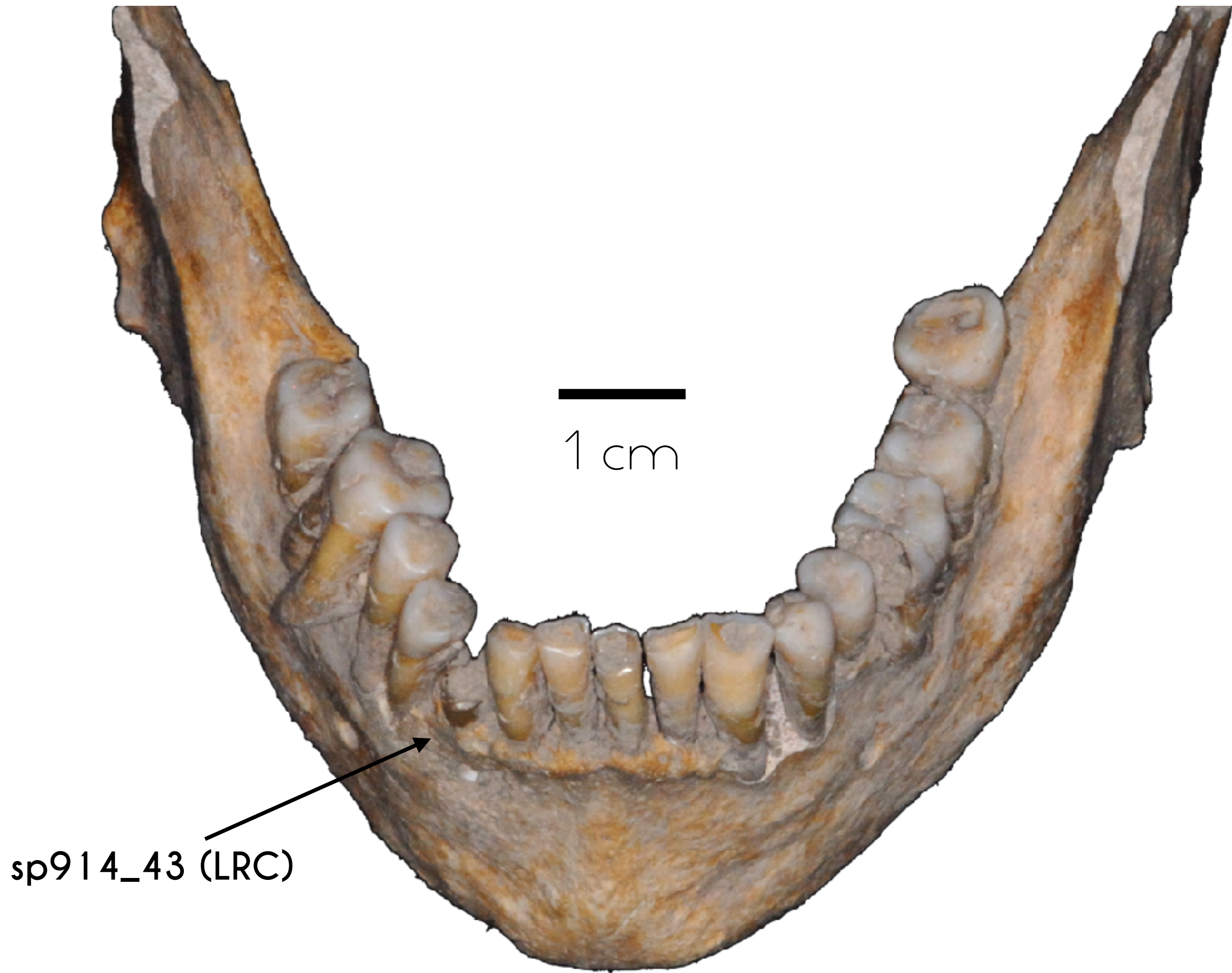
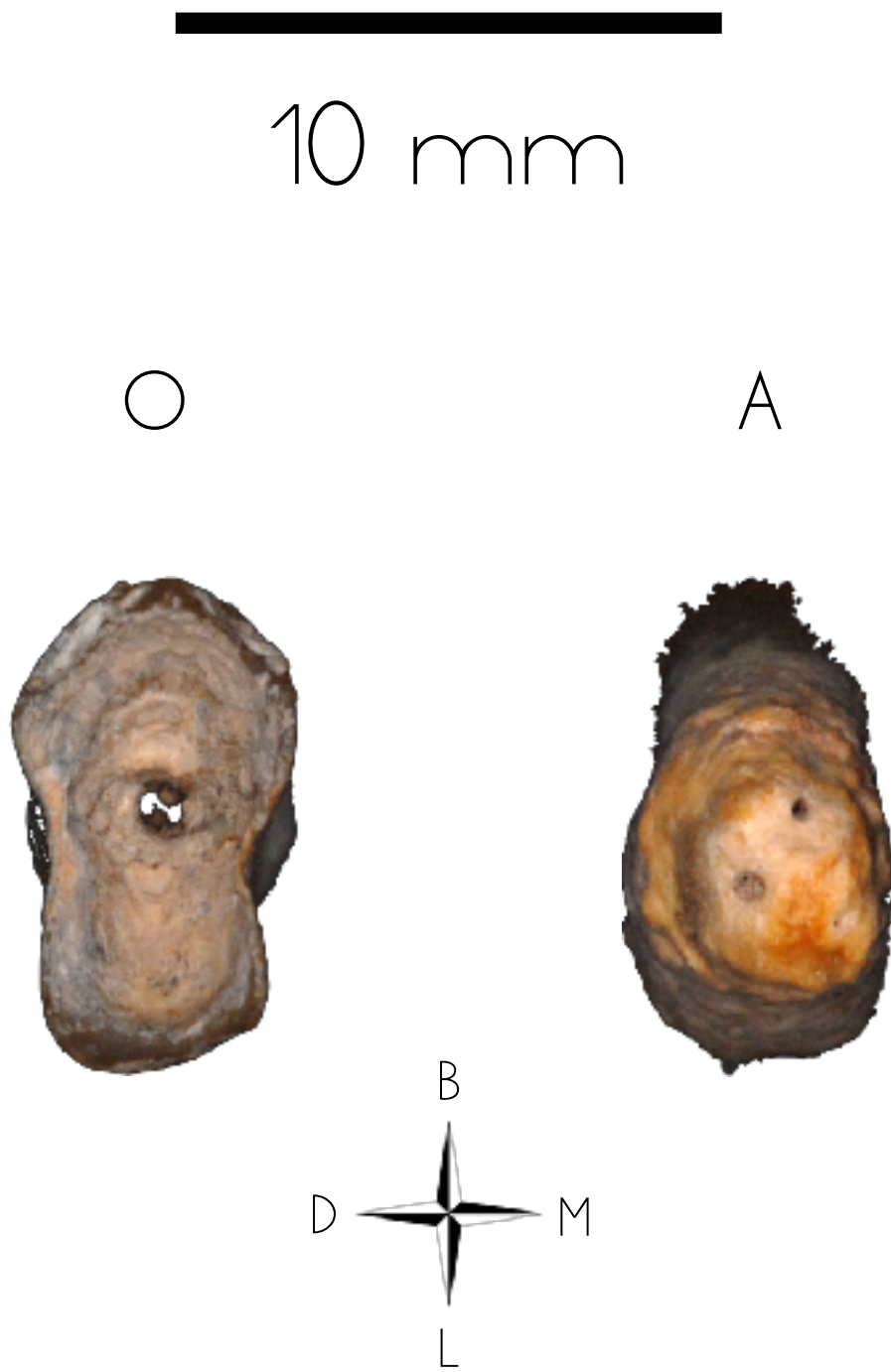
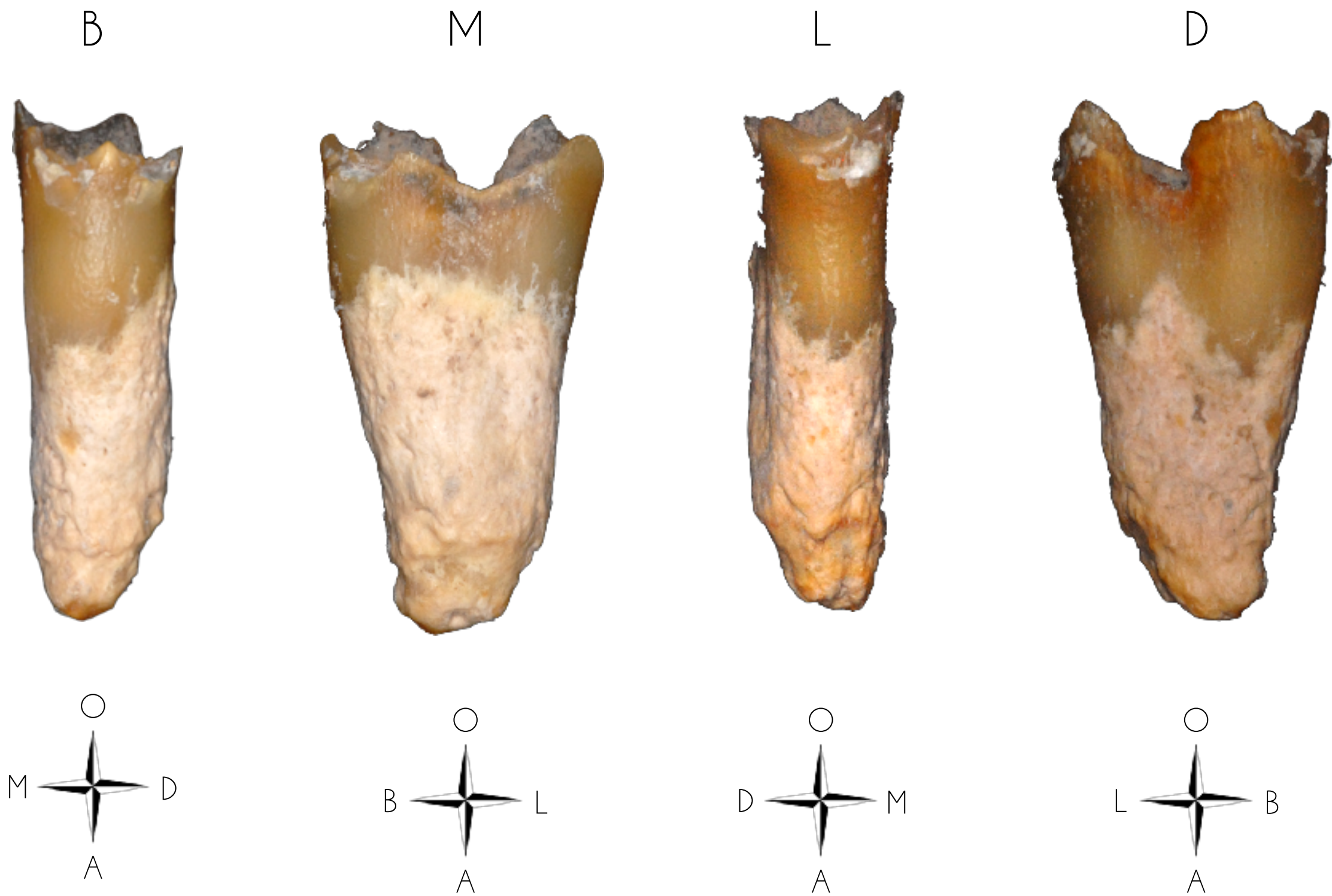
Infected



Sp914\_43

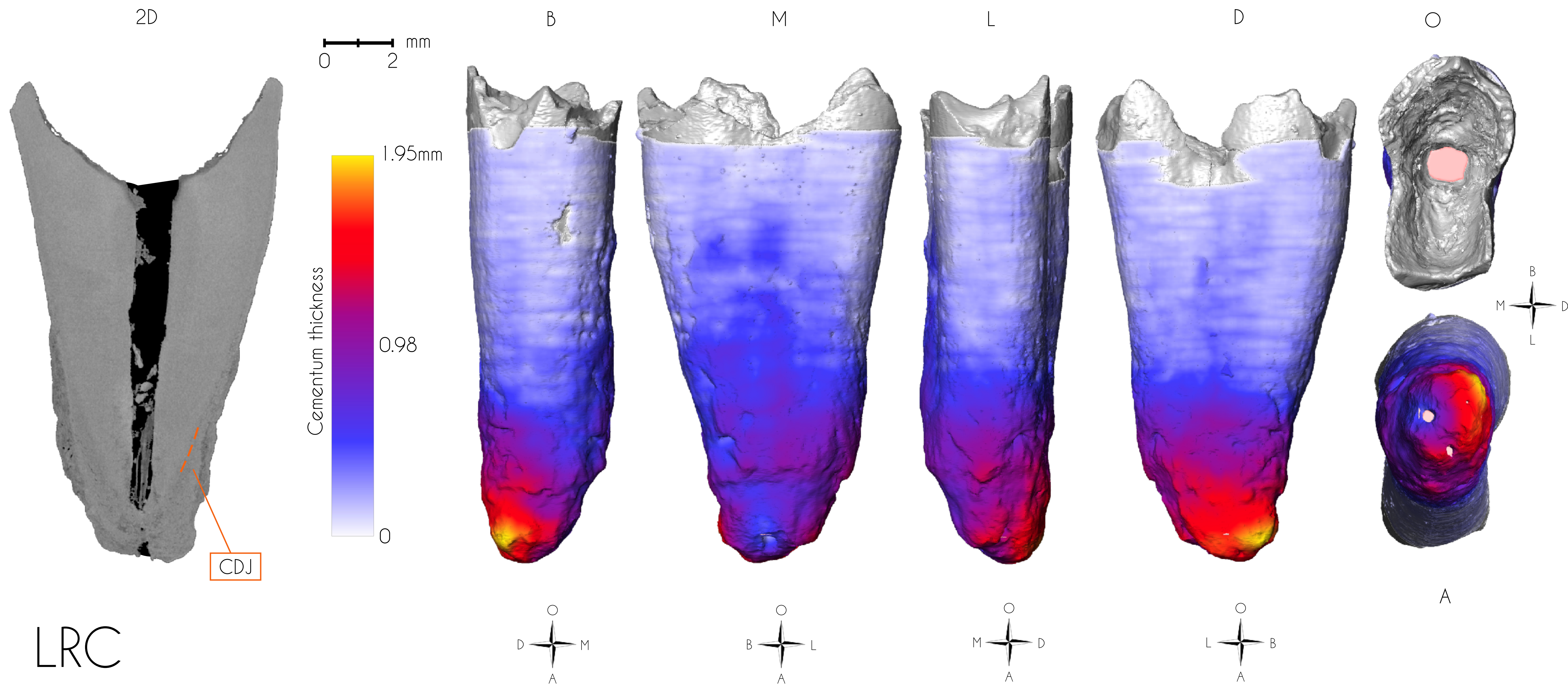
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LRC	NA	NA	NA	1/4	M	0	1.4.m	0	0	0	NA

LRC



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





Sp914\_43

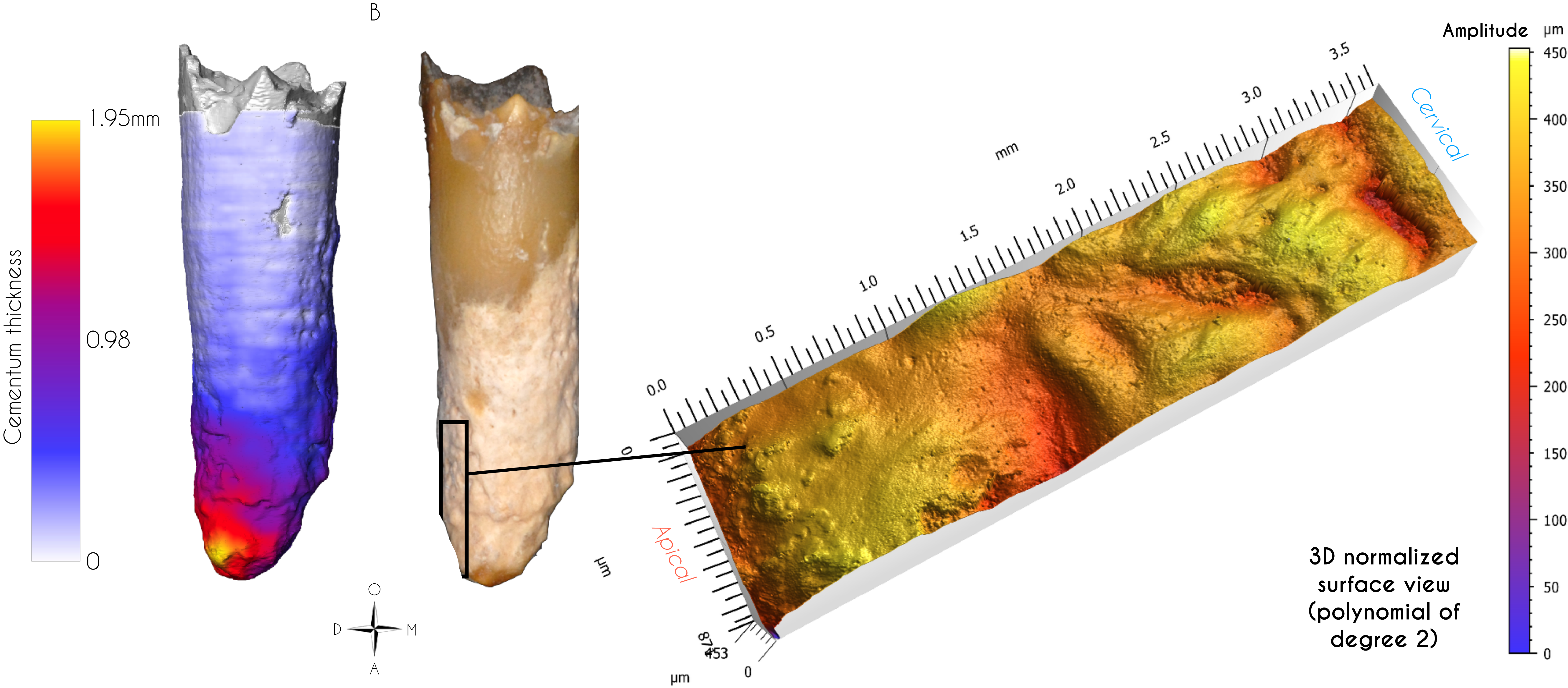
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1950	d	m	No	-

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
(m: mesial; d: distal)  
**PREF LOC:** preferential location;

Infected



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
BD	652	6.28%	0.88mm	3.63mm	1/6	2	Blue	1.47	1.61	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
D	450	+S2	-

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.

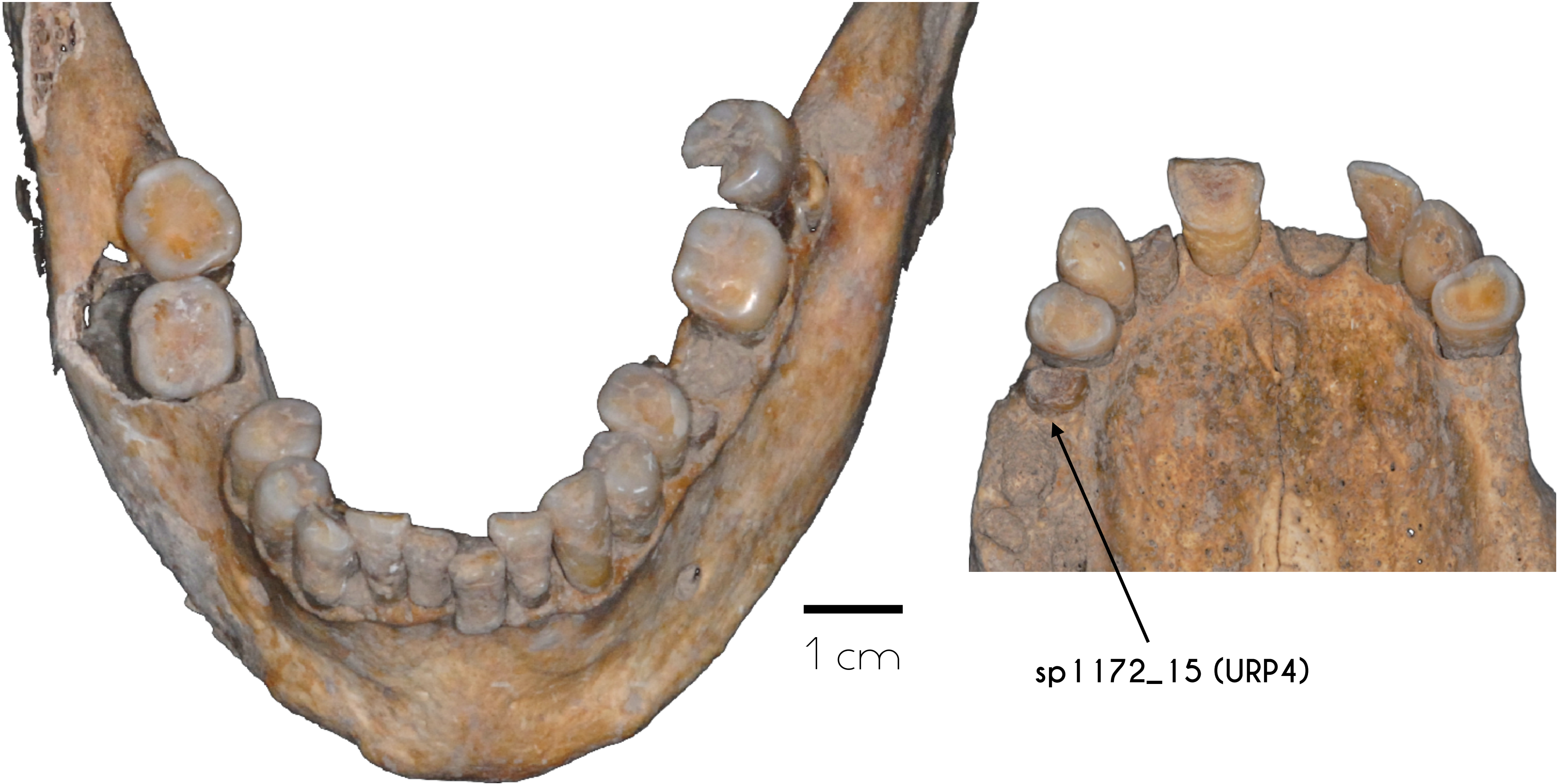
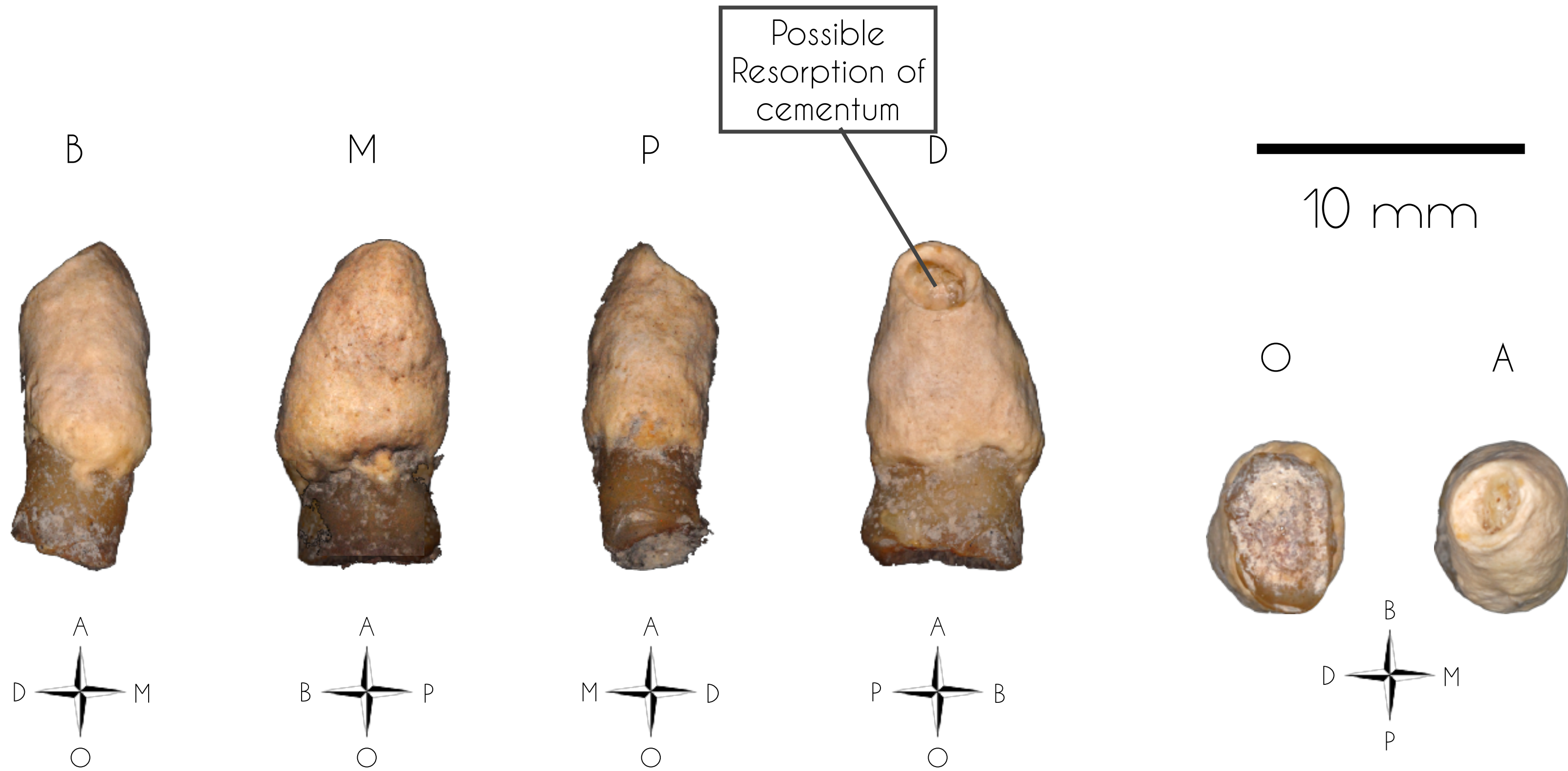
Infected



Sp1172\_15

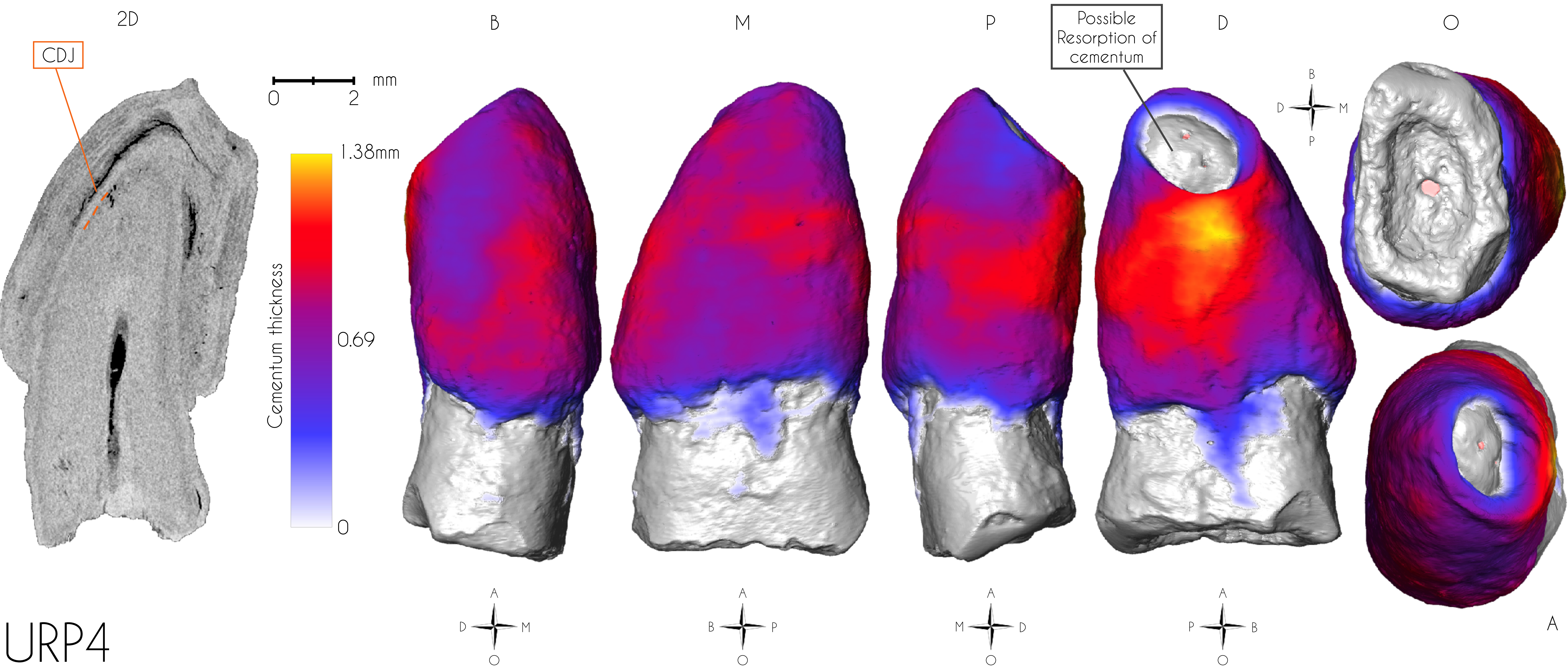
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
URP4	NA	NA	NA	1/4	M	0	1.4.M	0	0	1d	1

URP4



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





URP4

Sp1172\_15

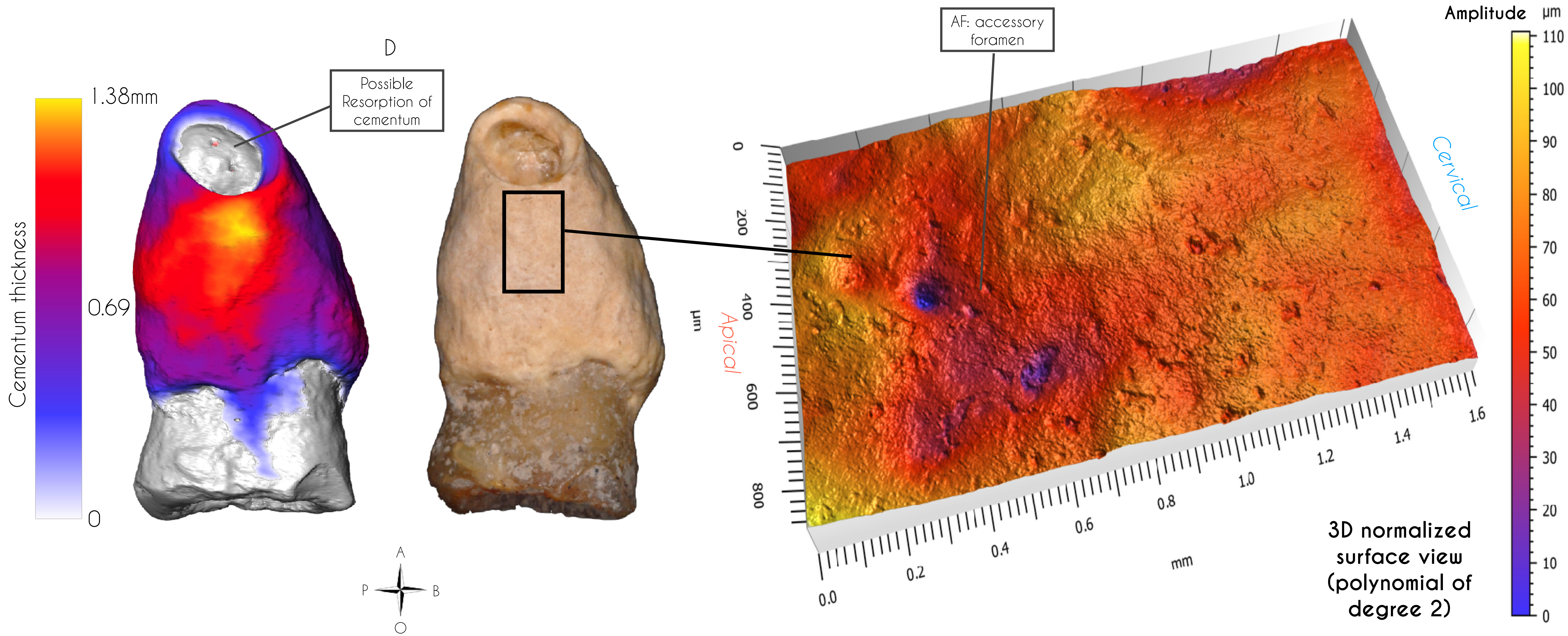
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1380	d	No	No	RES (d)

MAX THI: maximum thickness of cementum;  
LOC MAX: location of maximum thickness;  
LOC MIN: location of minimum thickness;  
PREF LOC: preferential location;  
RES: resorption;  
(d: distal)

Infected



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
D	523	5.50%	1.67mm	2.44mm	2/4	2	Blue	1.47	1.61	10 %



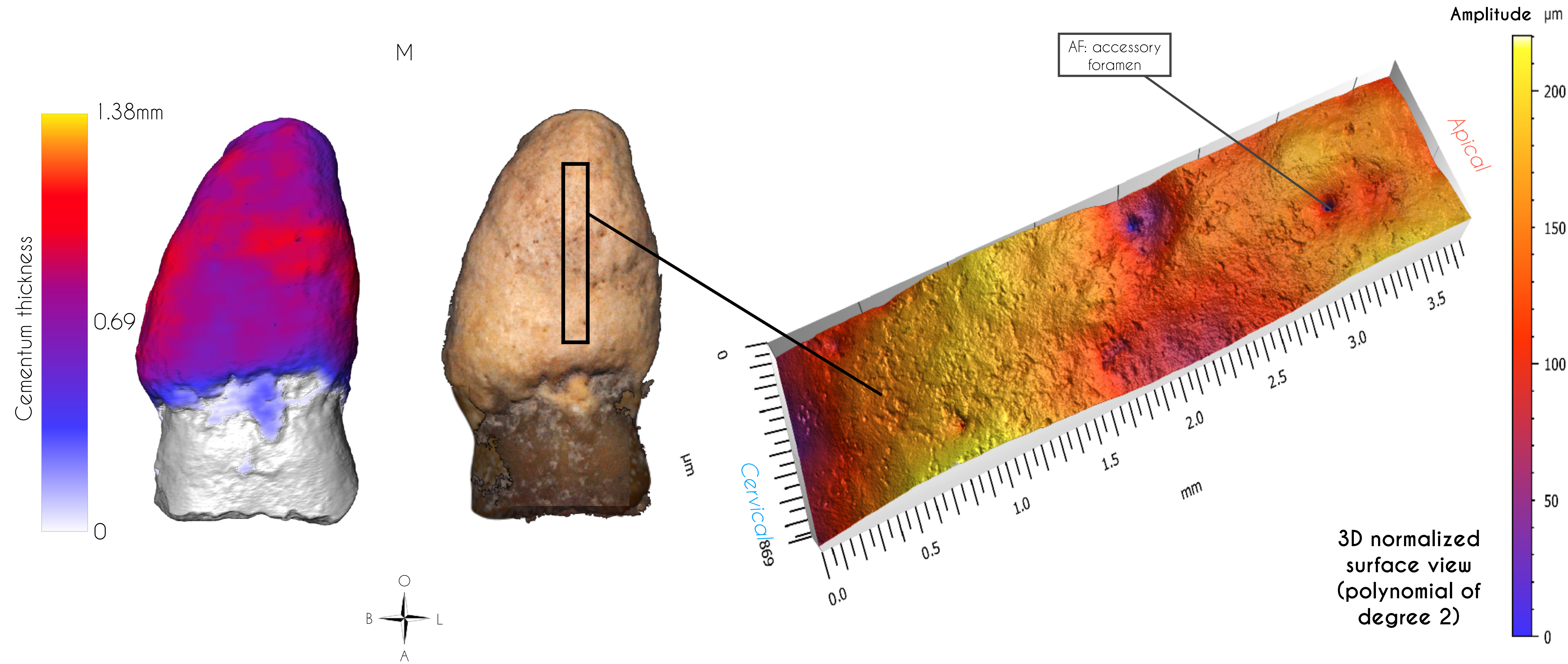
Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
D	110	-S2	AF

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
**AF:** accessory foramen

Infected



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
M	435	5.50%	0.88mm	4.82mm	1/5	2	Blue	1.47	1.61	10 %



Confocal microscopy - Topography 3D maps			
OF	MAX VE (μm)	ST	Note
M	220	-S2	AF

OF: other face;  
MAX VE: maximum vertical elevation;  
ST: surface texture; : scored (+) if it is high, (-) if it is low; S: smooth or R: rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
AF: accessory foramen

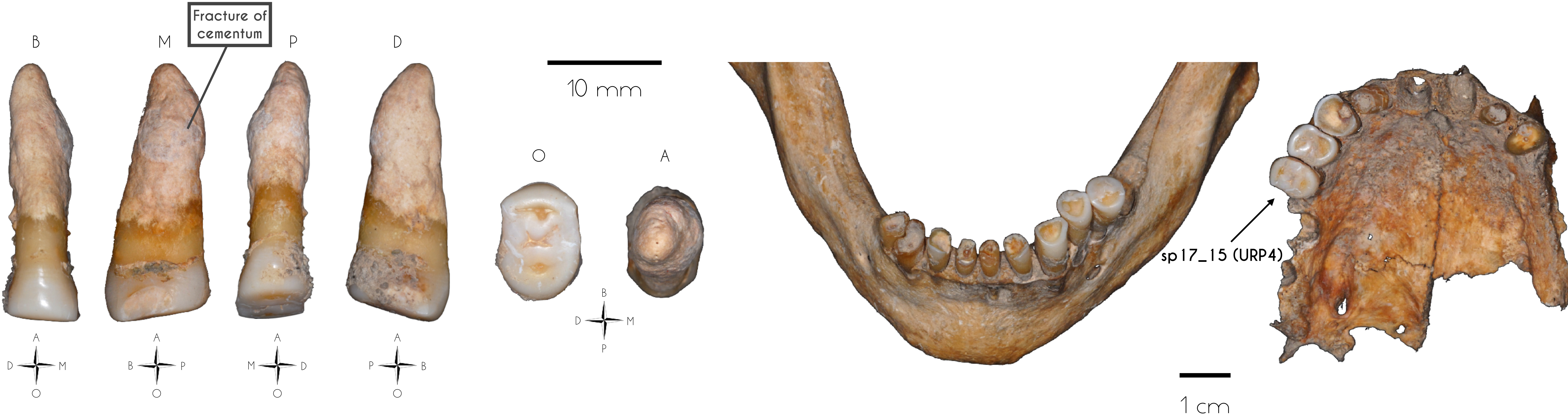
Infected



Sp17\_15

Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
URP4	3	4	2	-	0	0	1.2.m	0	0	1d	1

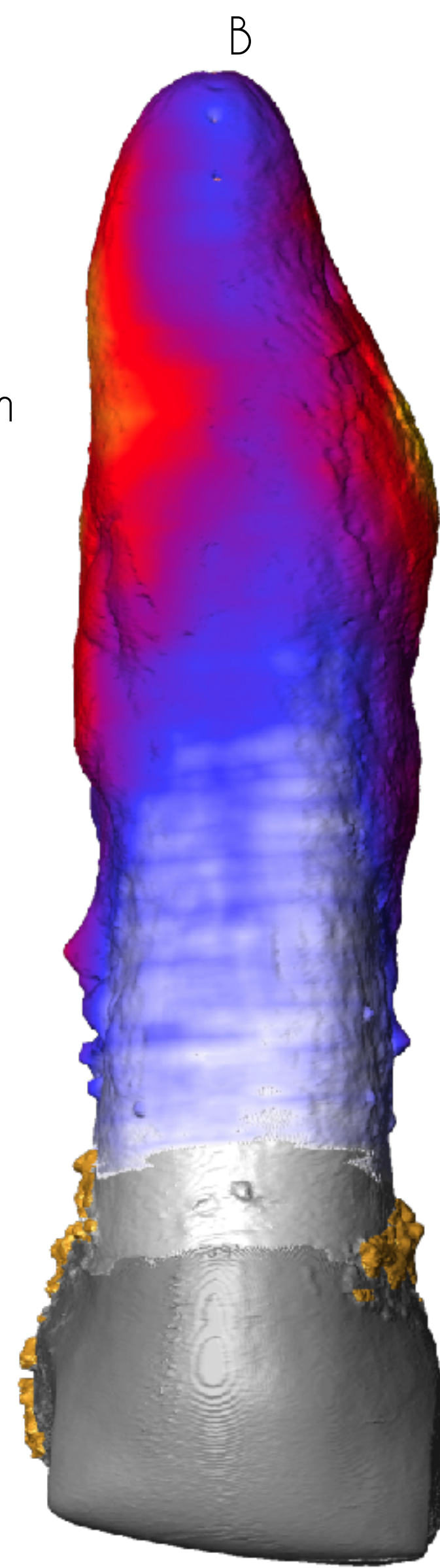
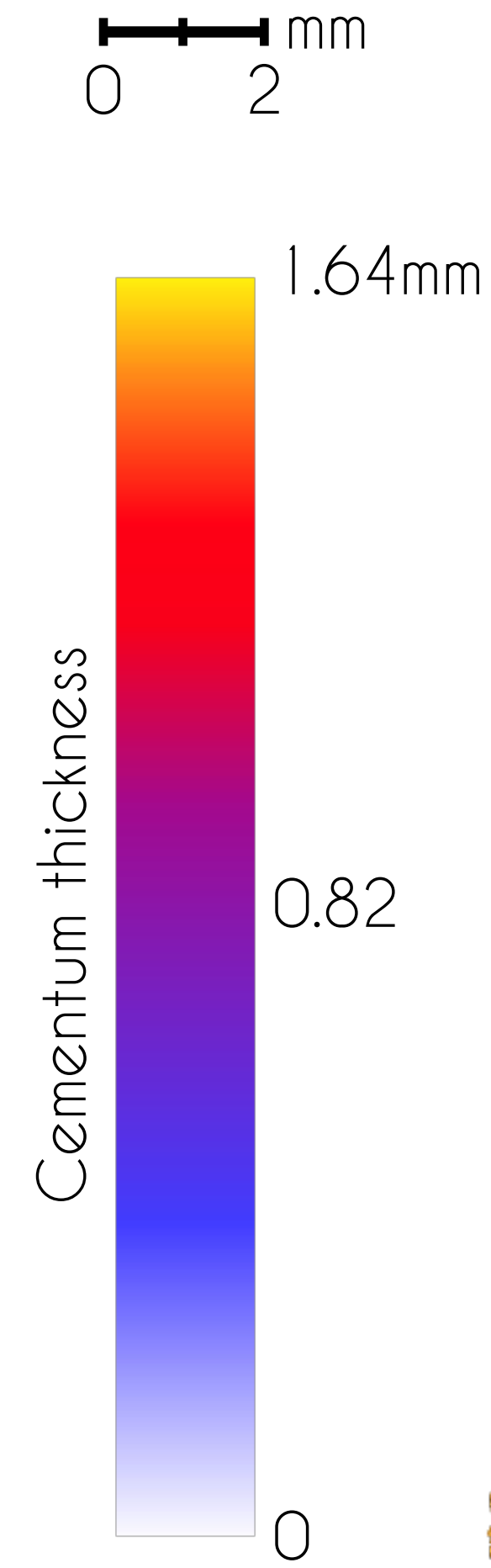
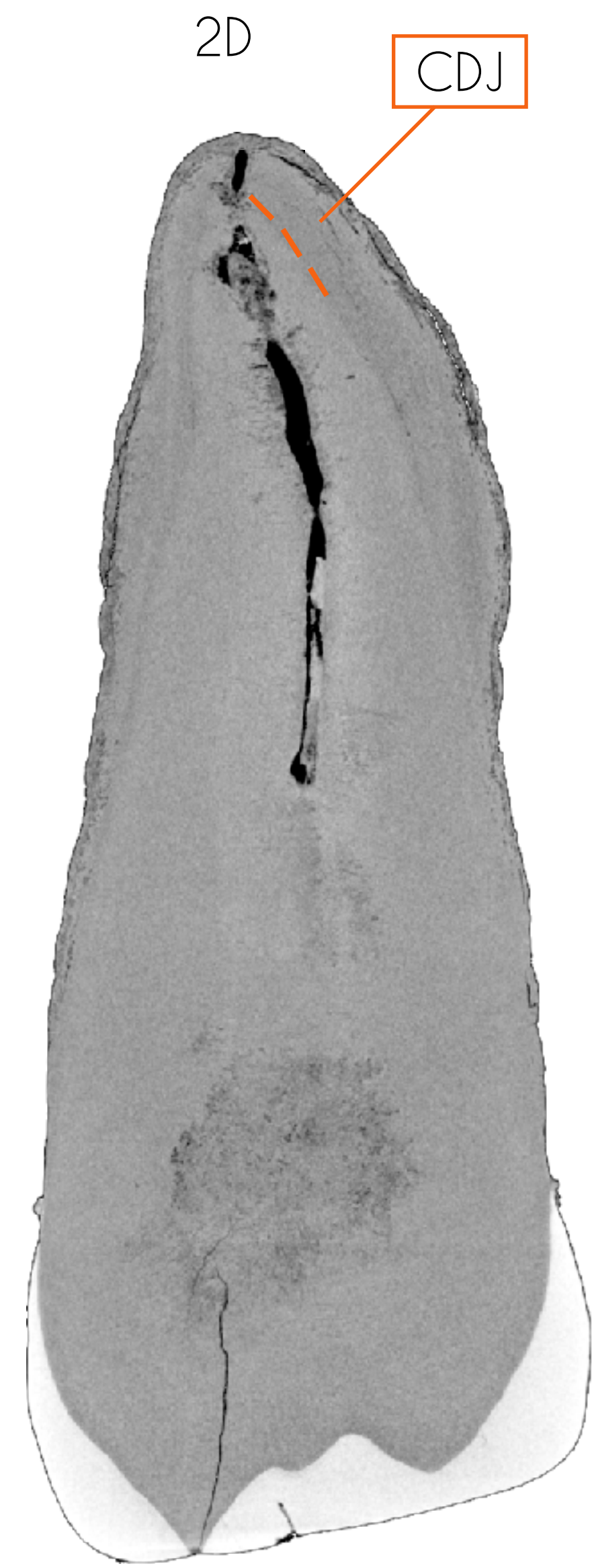
URP4



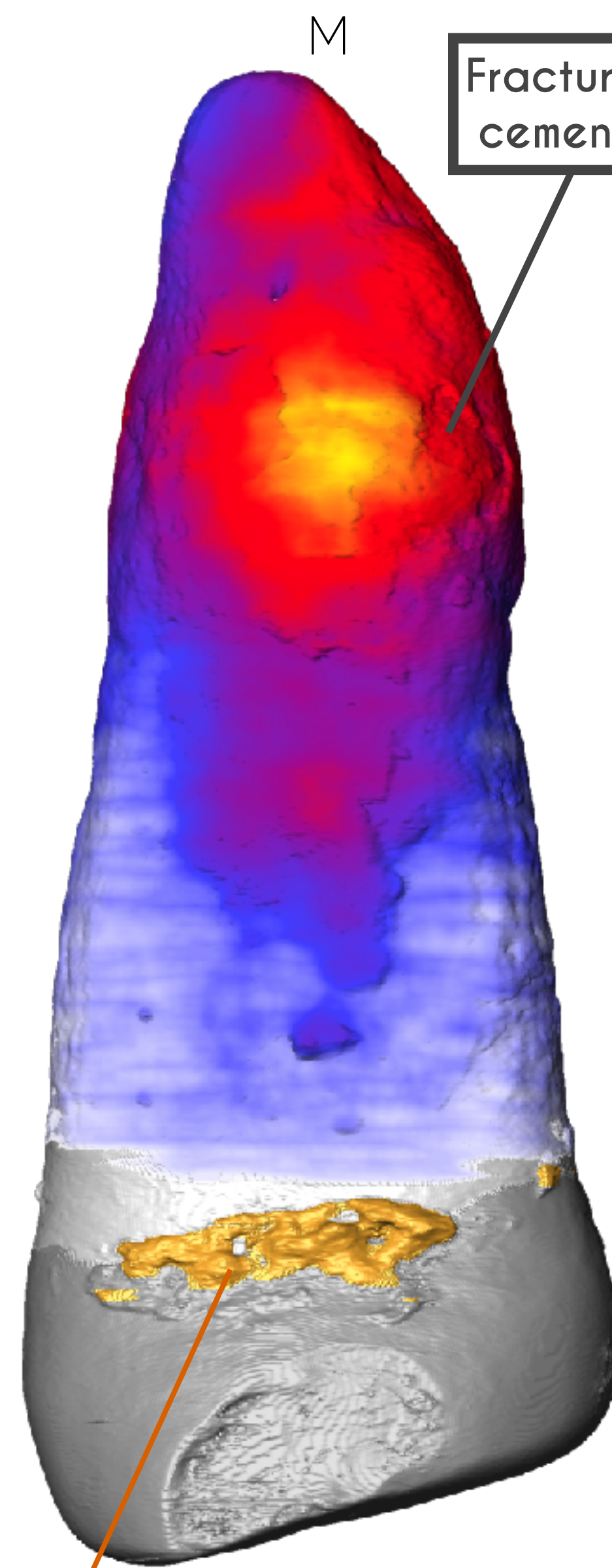
DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist



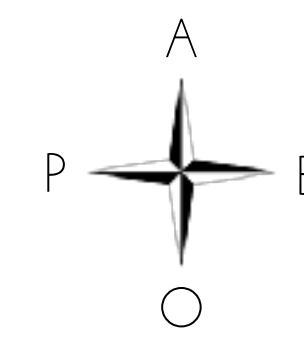
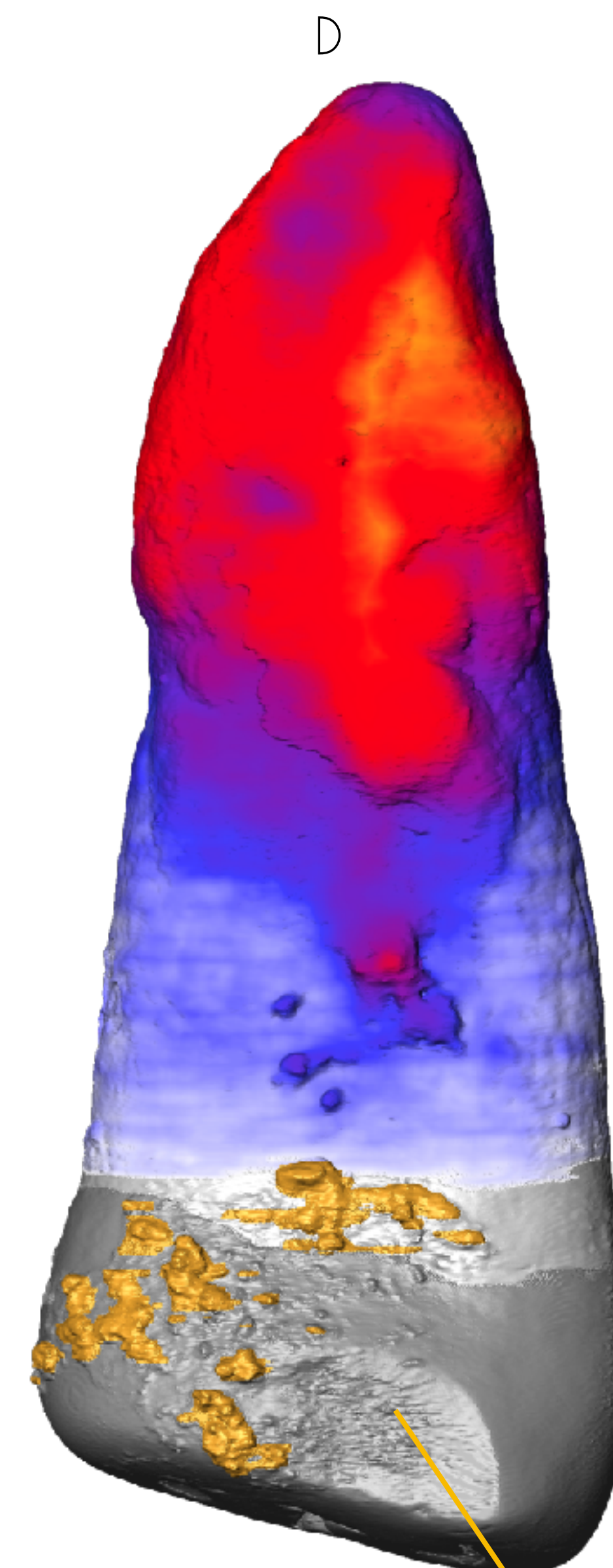
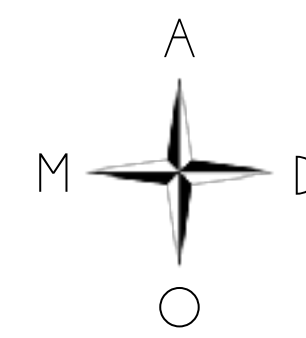
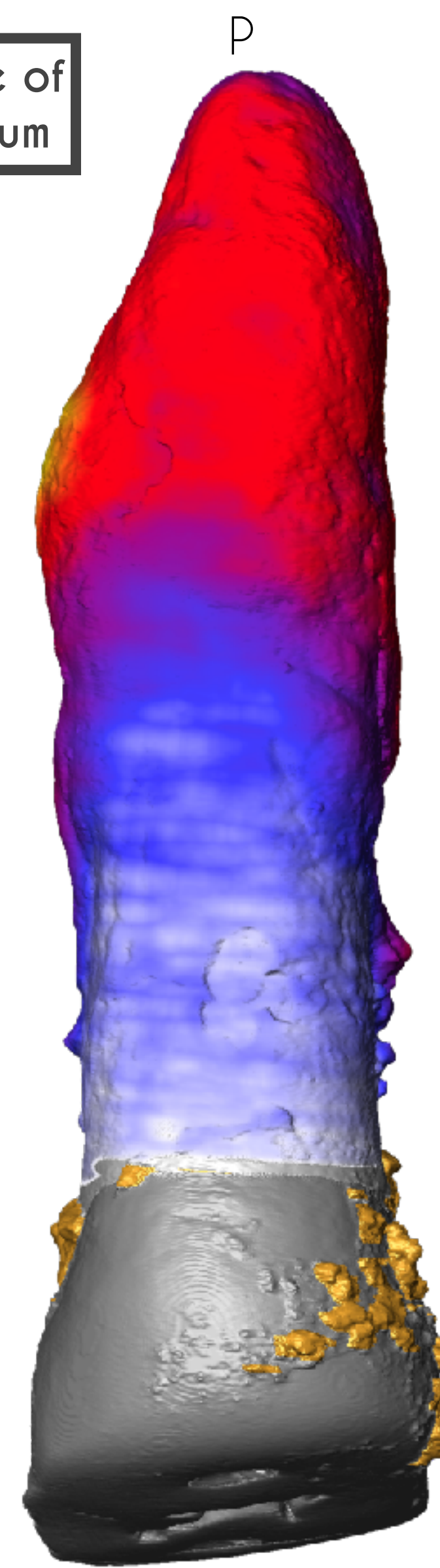
URP4



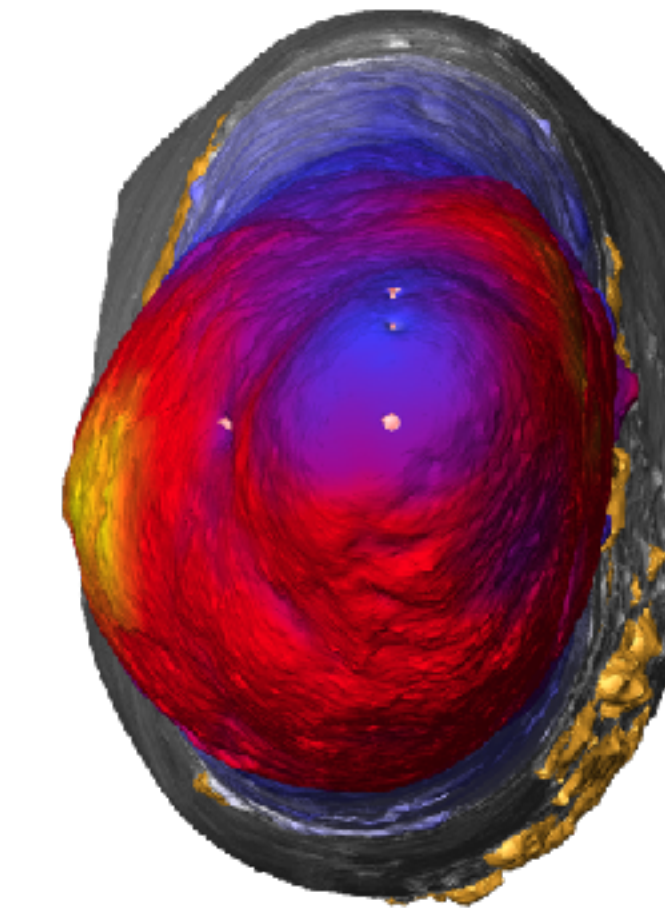
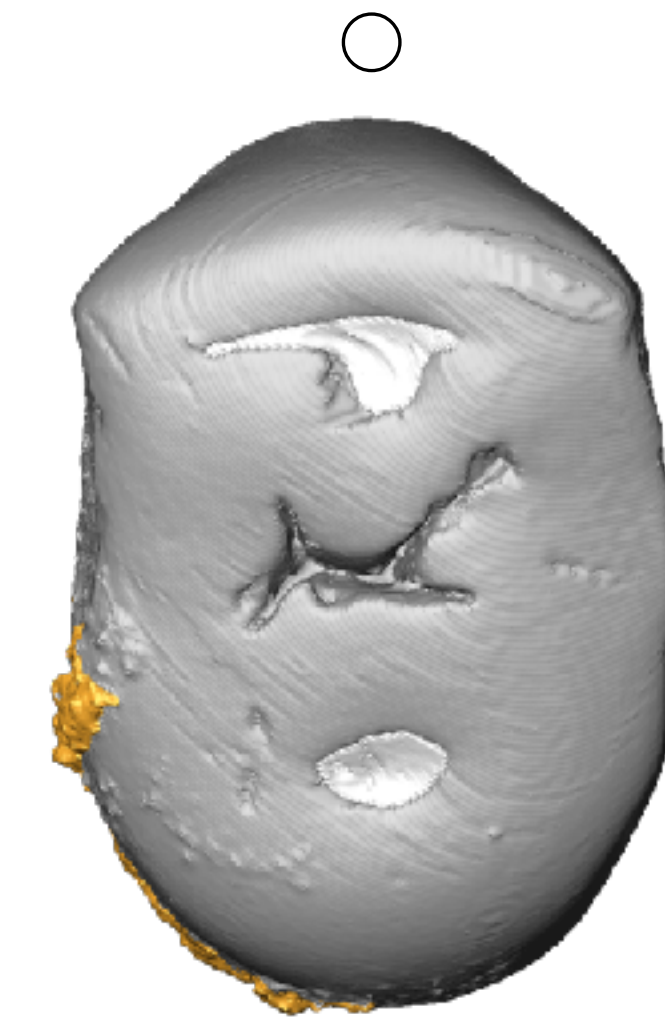
Calculus



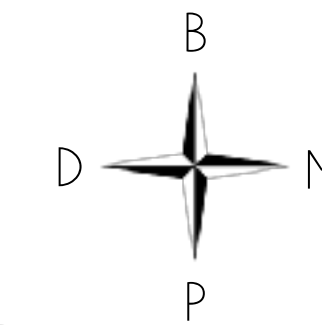
Fracture of  
cementum



Wear  
Facet



A



## Microtomography - Thickness 3D maps

MAX THI ( $\mu\text{m}$ )	LOC MAX	LOC MIN	PREF LOC	Note
1640	2m	<	No	FR (2m)

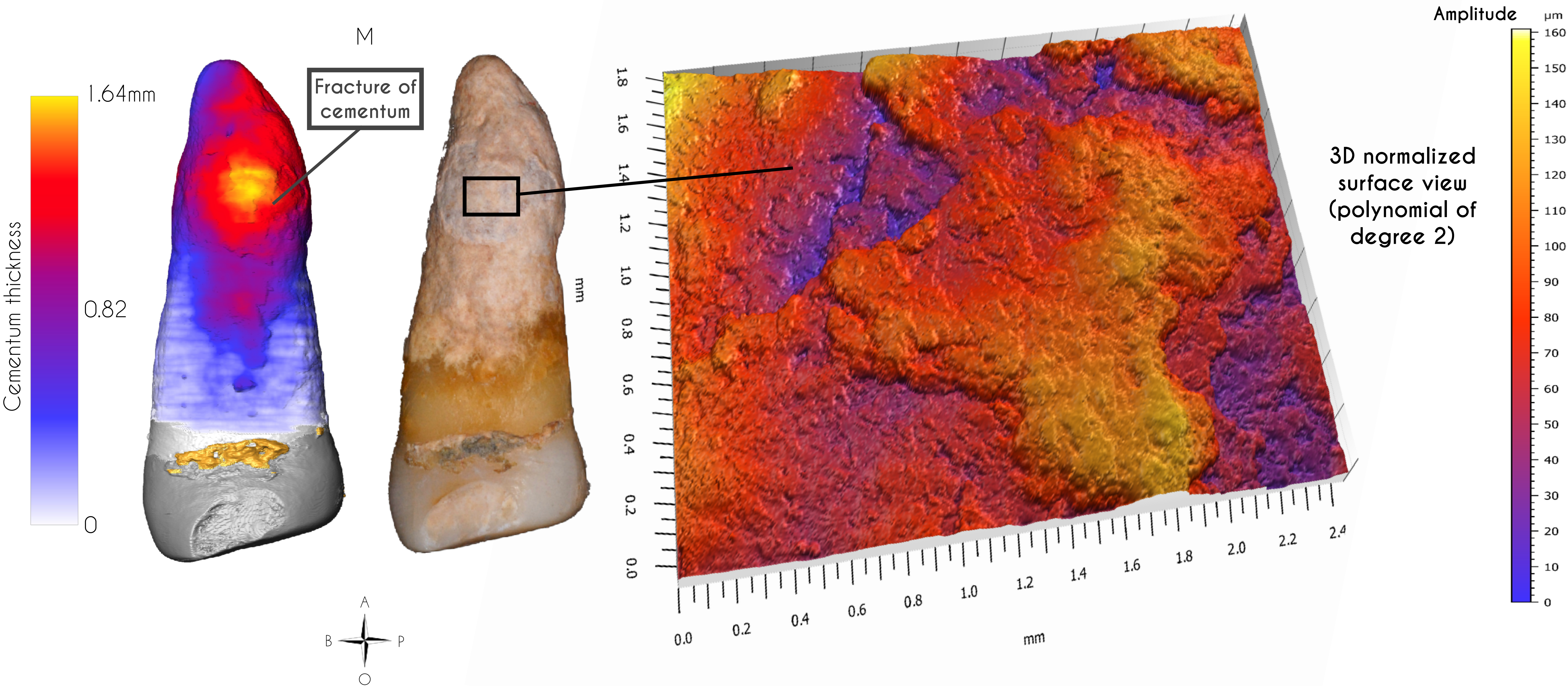
**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
**PREF LOC:** preferential location;  
**FR:** fracture of cementum  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)

Hypofunctional

Sp17\_15



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
M	781	5.50%	2.46mm	1.85mm	3/3	2	Blue	1.47	1.61	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
2m	160	-R2	FR

Atypical ST: fracture of cementum

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
**FR:** fracture of cementum

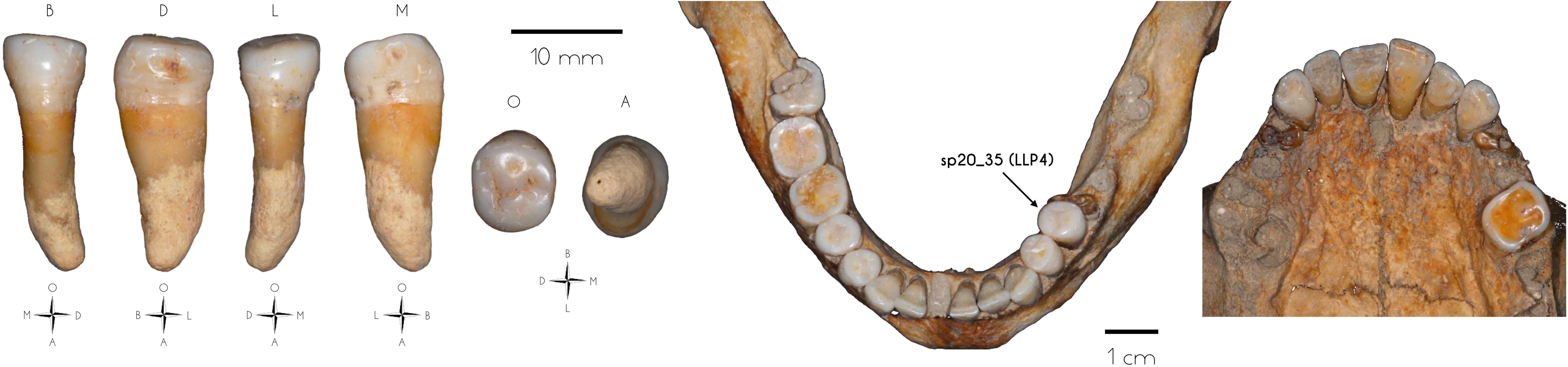
Hypofunctional



Sp20\_35

Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LLP4	2	6	2	-	0	0	1.2.m	0	0	0	1

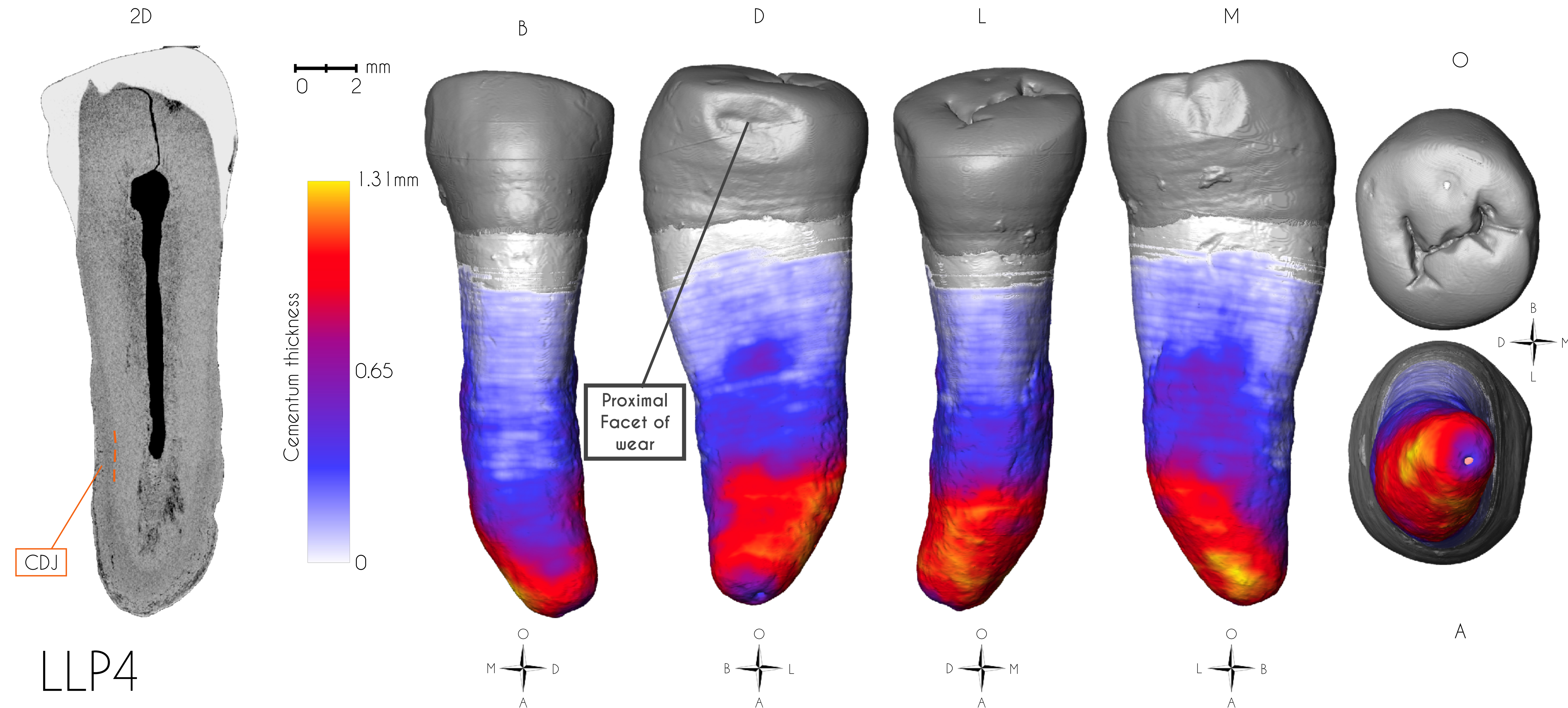
LLP4



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist



Sp20\_35



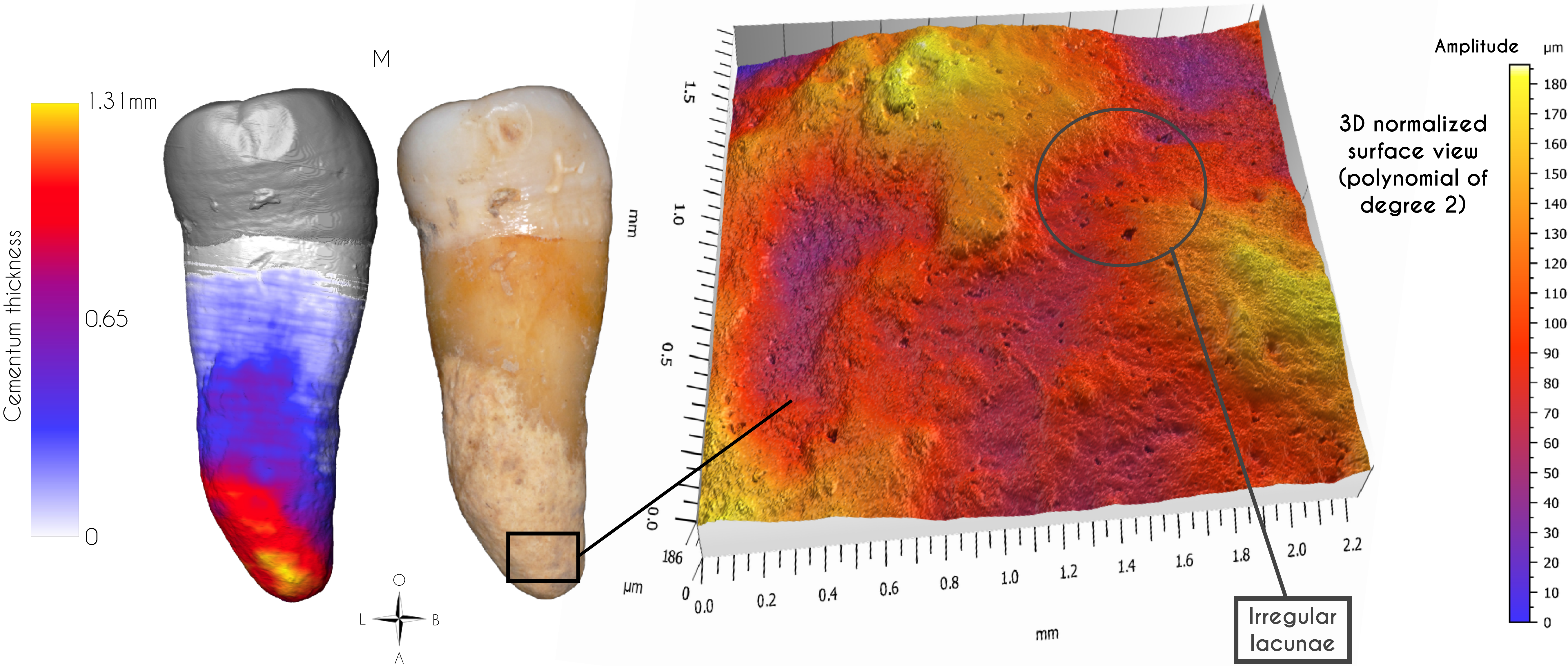
Microtomography - Thickness 3D maps				
MAX THI (μm)	LOC MAX	LOC MIN	PREF LOC	Note
1310	1m	<	No	-

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
 (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)  
**PREF LOC:** preferential location;

# Hypofunctional



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
M	1582	6.28%	2.46mm	1.85mm	3/3	2	Blue	1.47	1.61	10 %



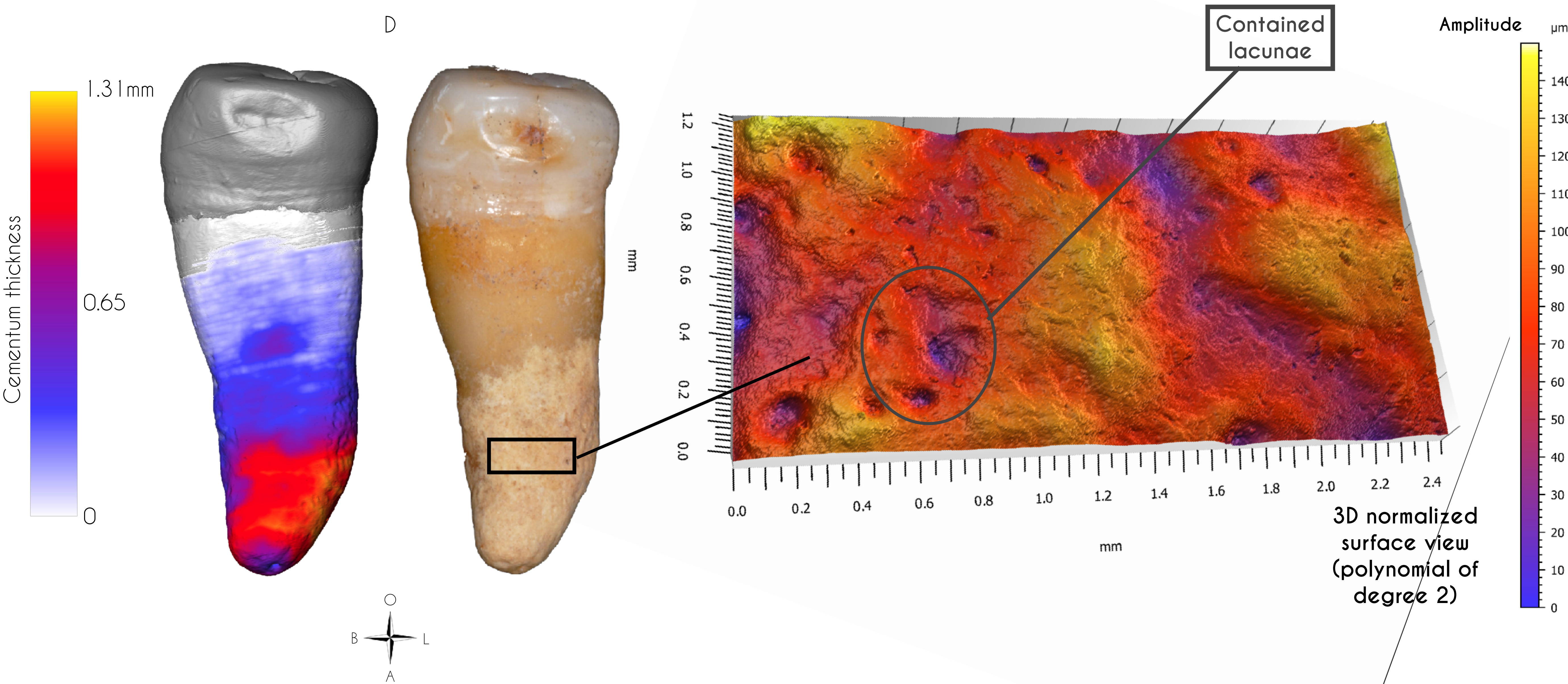
Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
1 m	180	-S2	IL

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
**IL:** irregular lacunae

Hypofunctional



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
D	688	4.97%	2.46mm	1.25mm	3/2	2	Blue	1.49	1.79	10 %



Confocal microscopy - Topography 3D maps			
OF	MAX VE (µm)	ST	Note
2d	150	+S2	CL

OF: other face;  
MAX VE: maximum vertical elevation;  
ST: surface texture; : scored (+) if it is high, (-) if it is low; S: smooth or R: rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
CL: contained lacunae

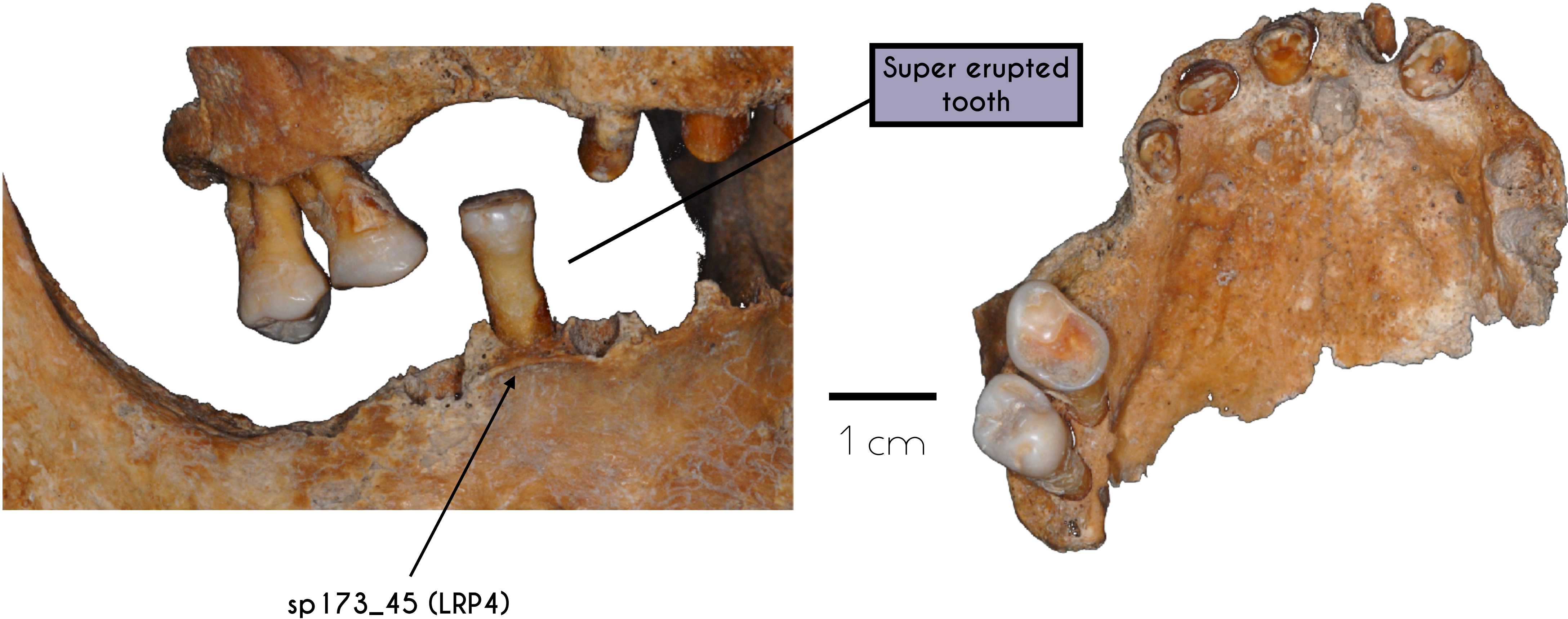
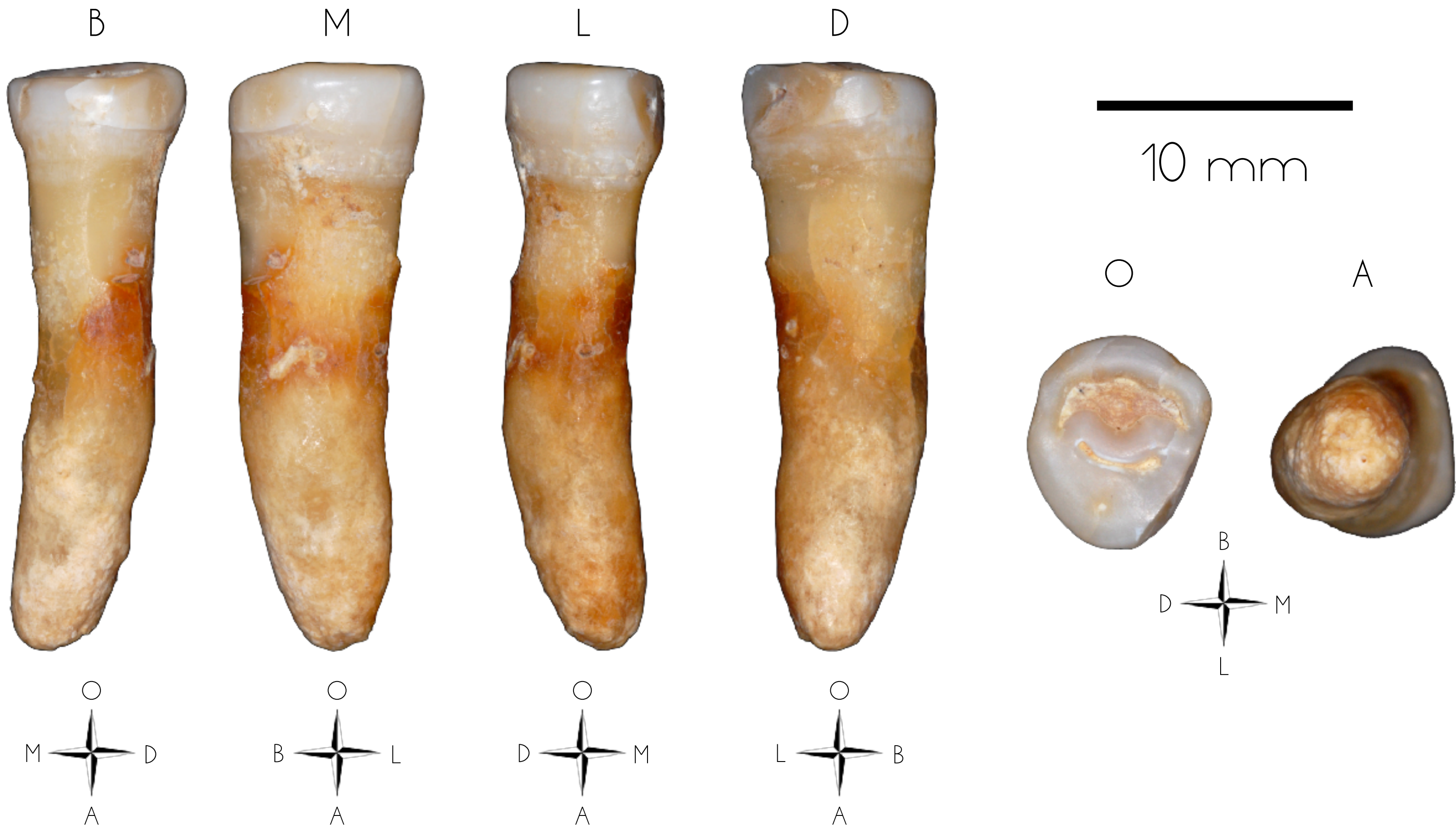
Hypofunctional



Sp173\_45

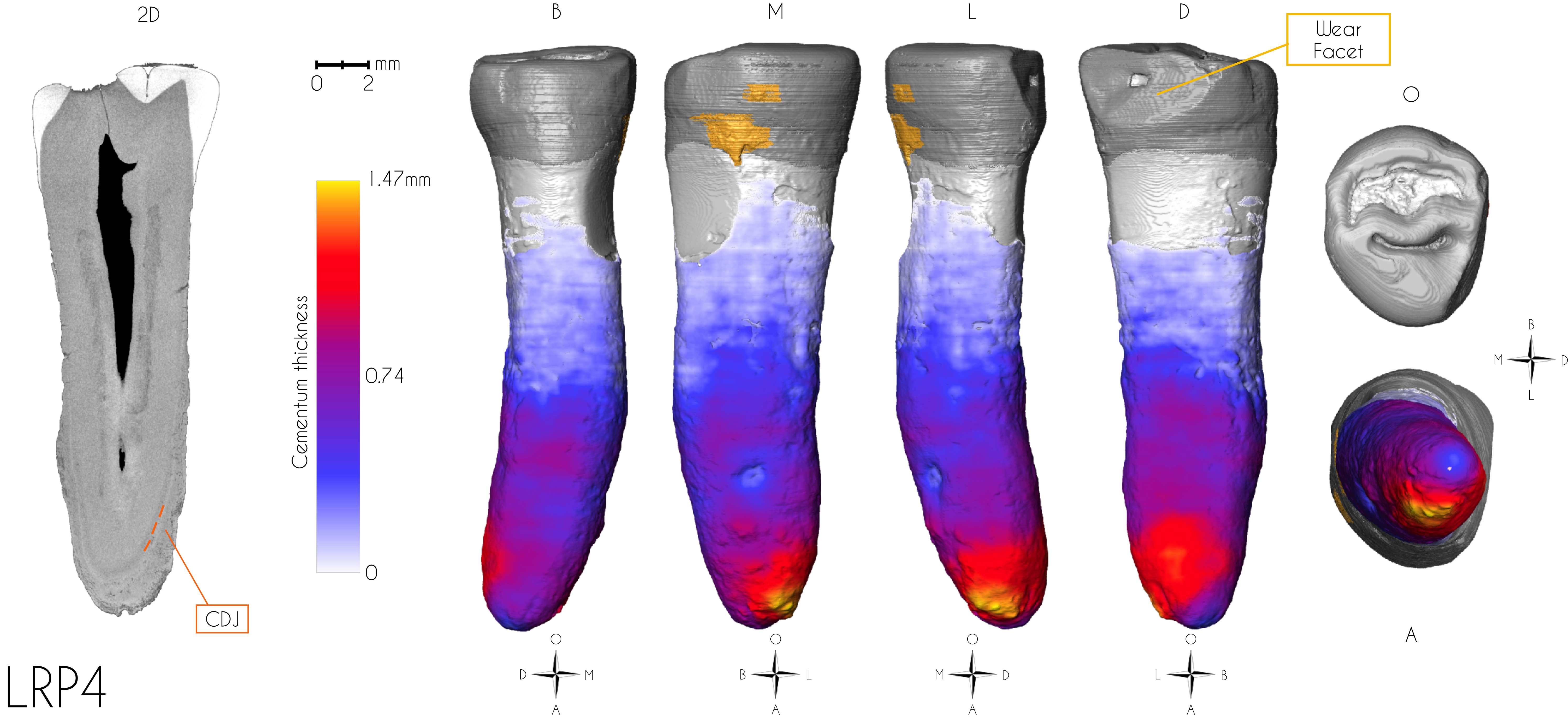
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LRP4	3	6	3	-	0	0	1.2.m	0	0	0	2

LRP4



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





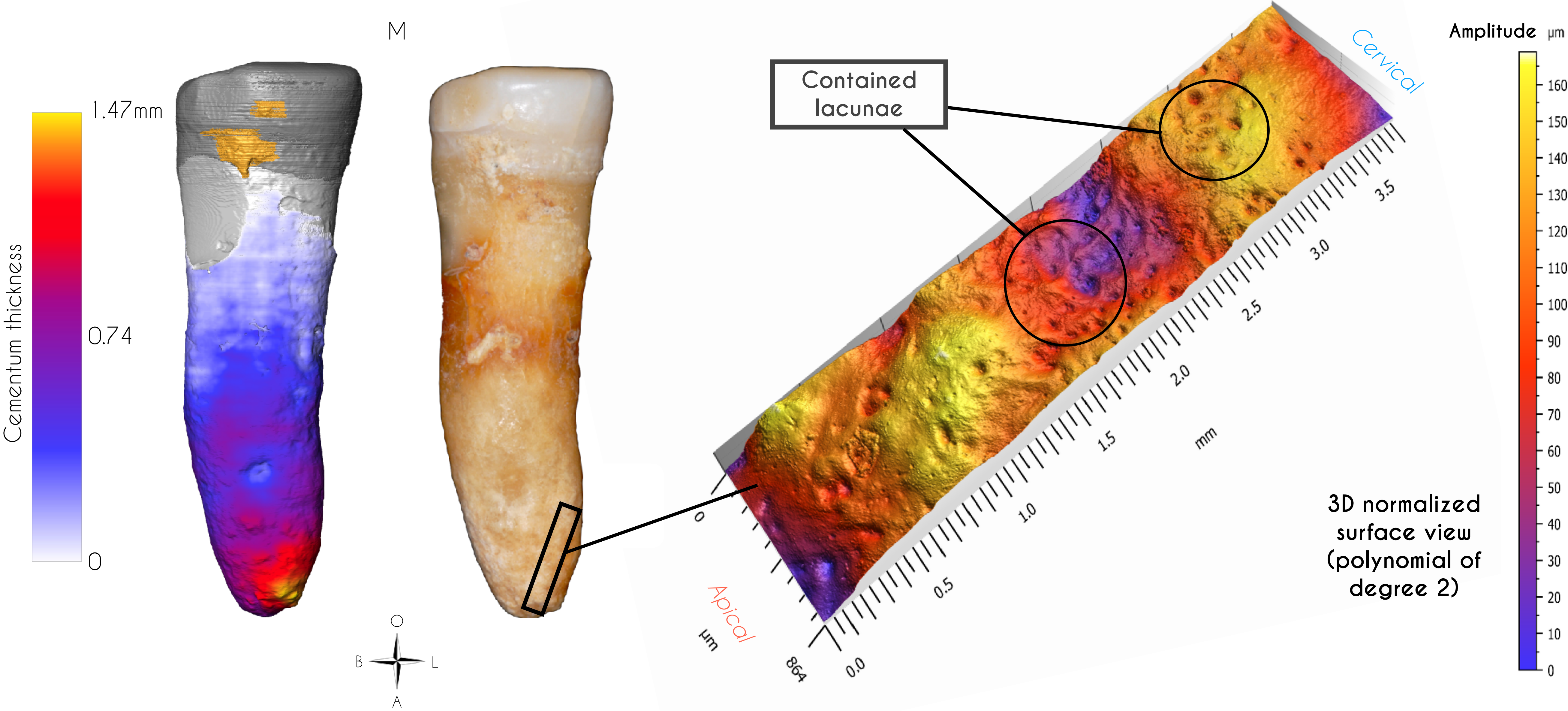
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1470	1>	<	No	SE

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)  
**PREF LOC:** preferential location;  
**SE:** super-erupted tooth

Hypofunctional



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
LM	1251	6.54%	0.88mm	4.82mm	1/8	2	Blue	1.5	1.8	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE ( $\mu\text{m}$ )	ST	Note
1>	170	+S1	CL

Sharpeys Fibers (super erupted tooth)

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
**CL:** contained lacunae

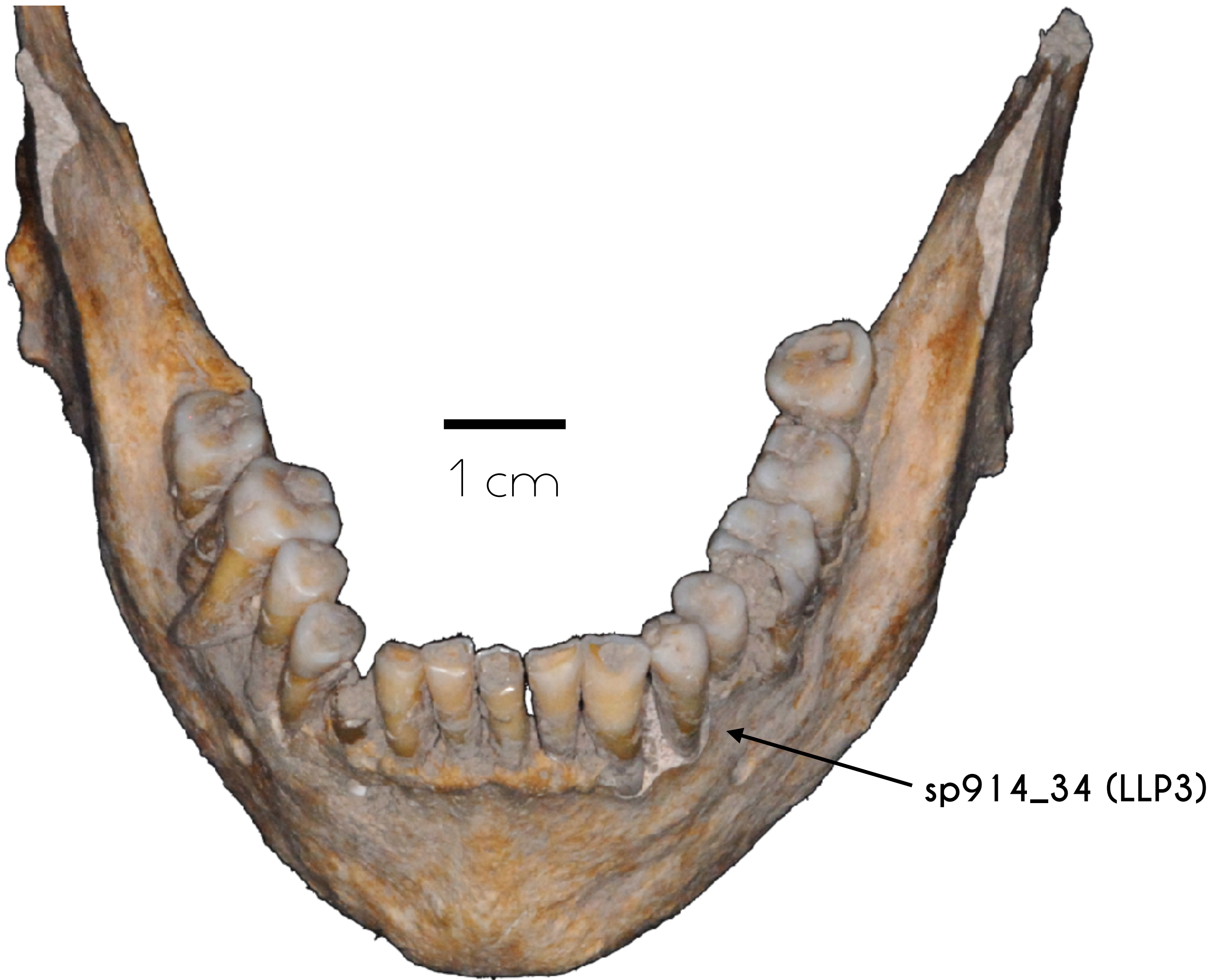
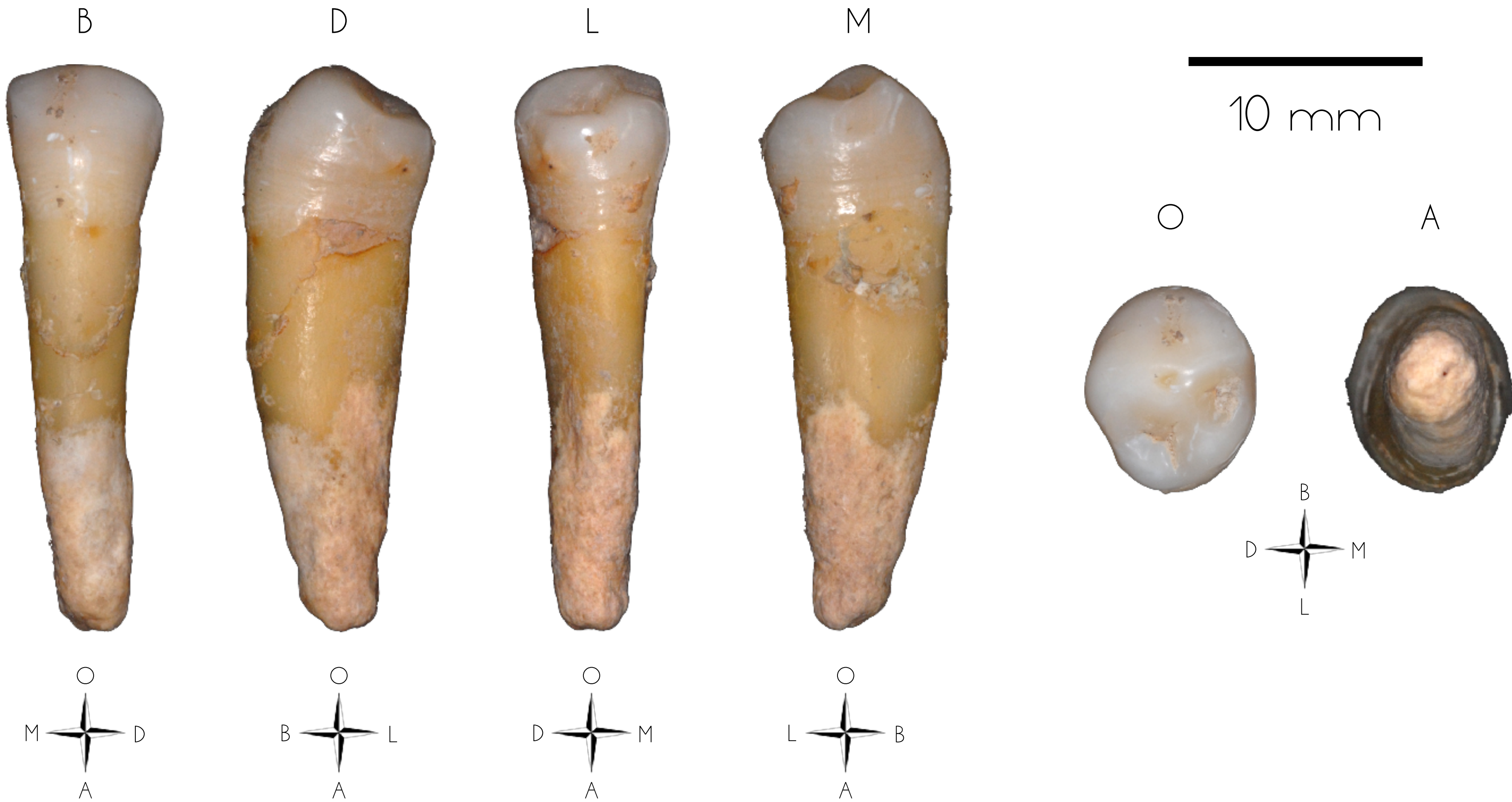
Hypofunctional



Sp914\_34

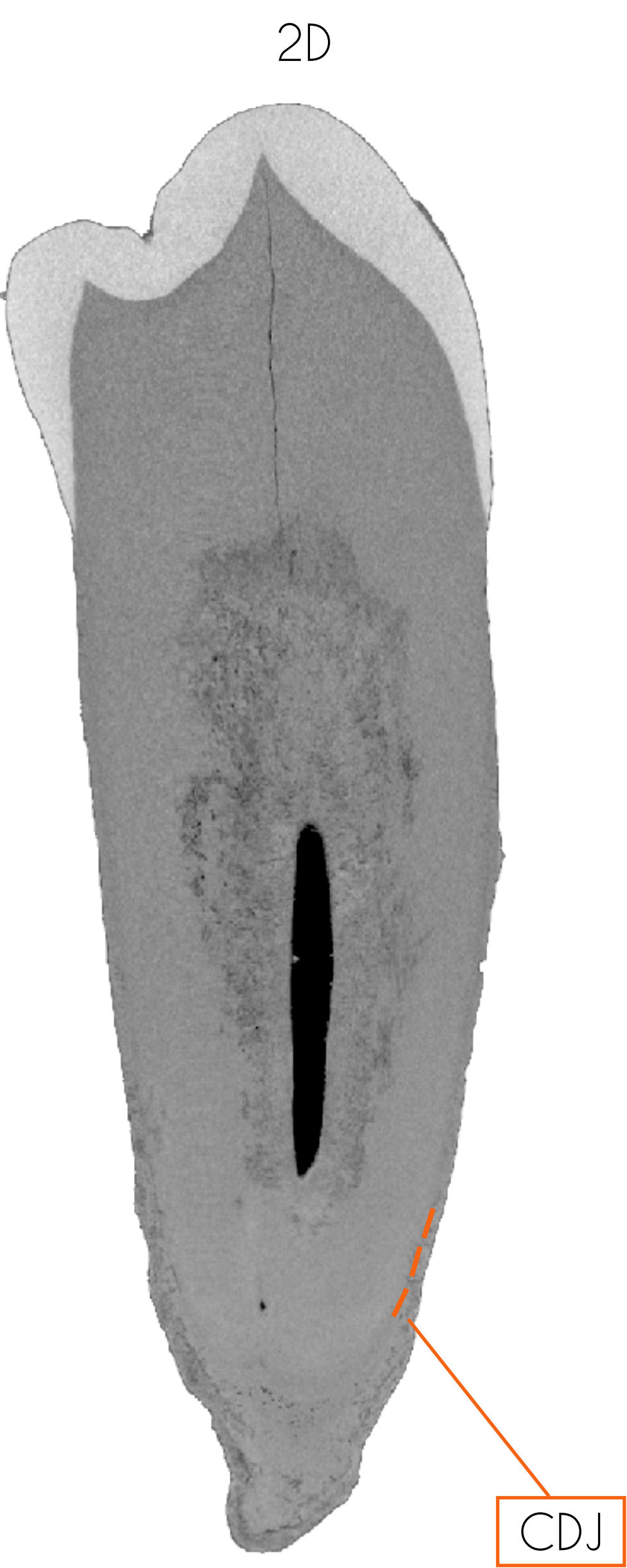
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LLP3	2	1	1	-	0	0	1.2.m	0	0	0	NA

LLP3

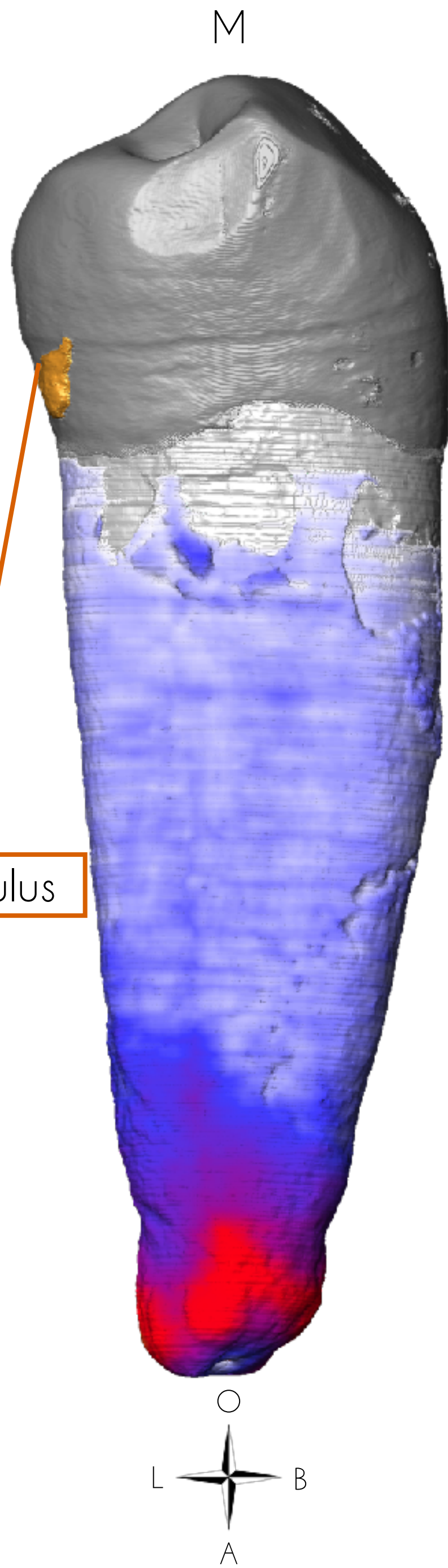
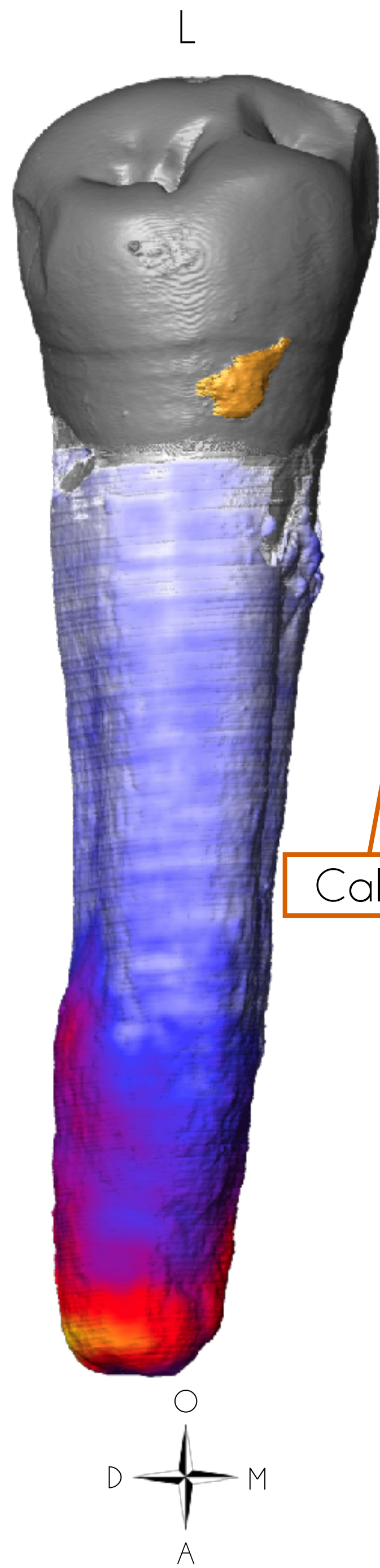
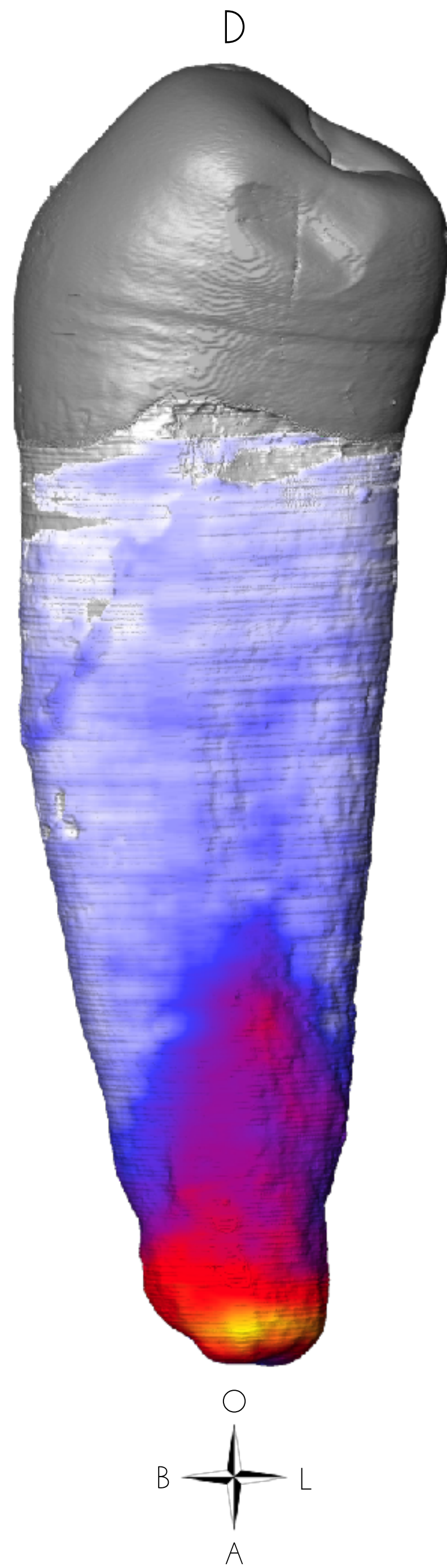
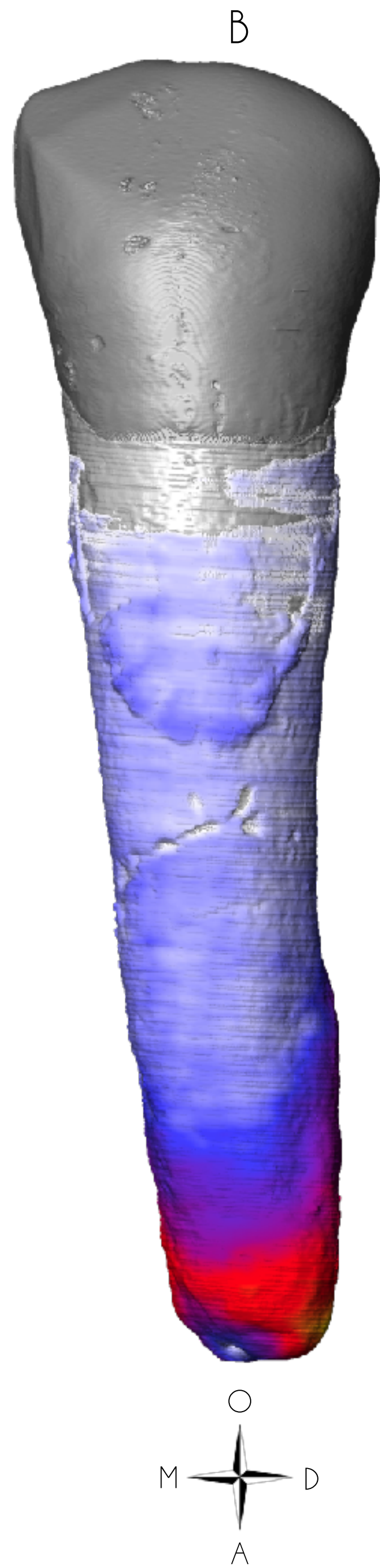
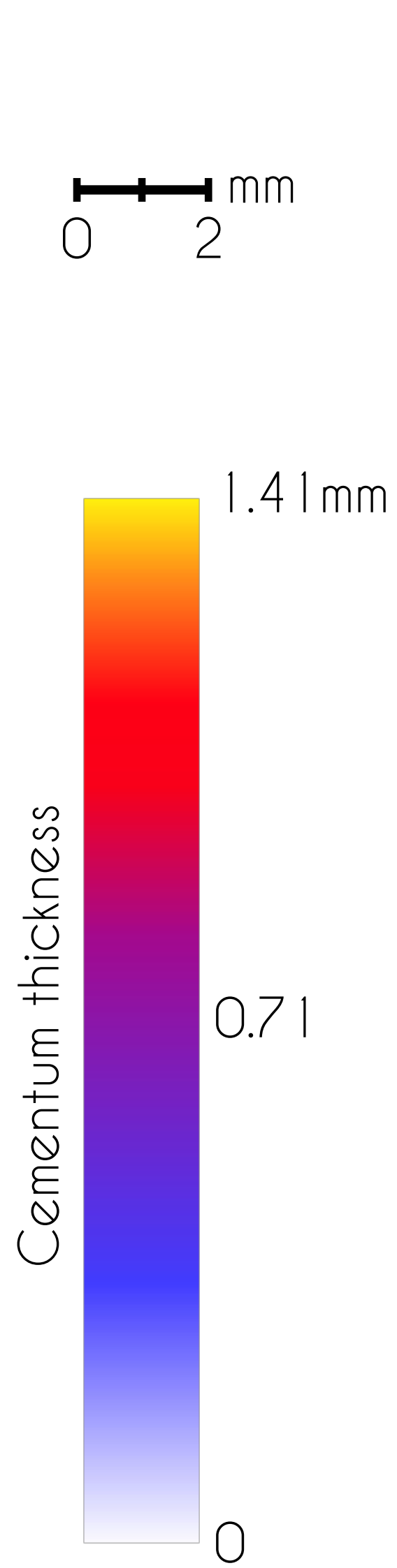


DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist

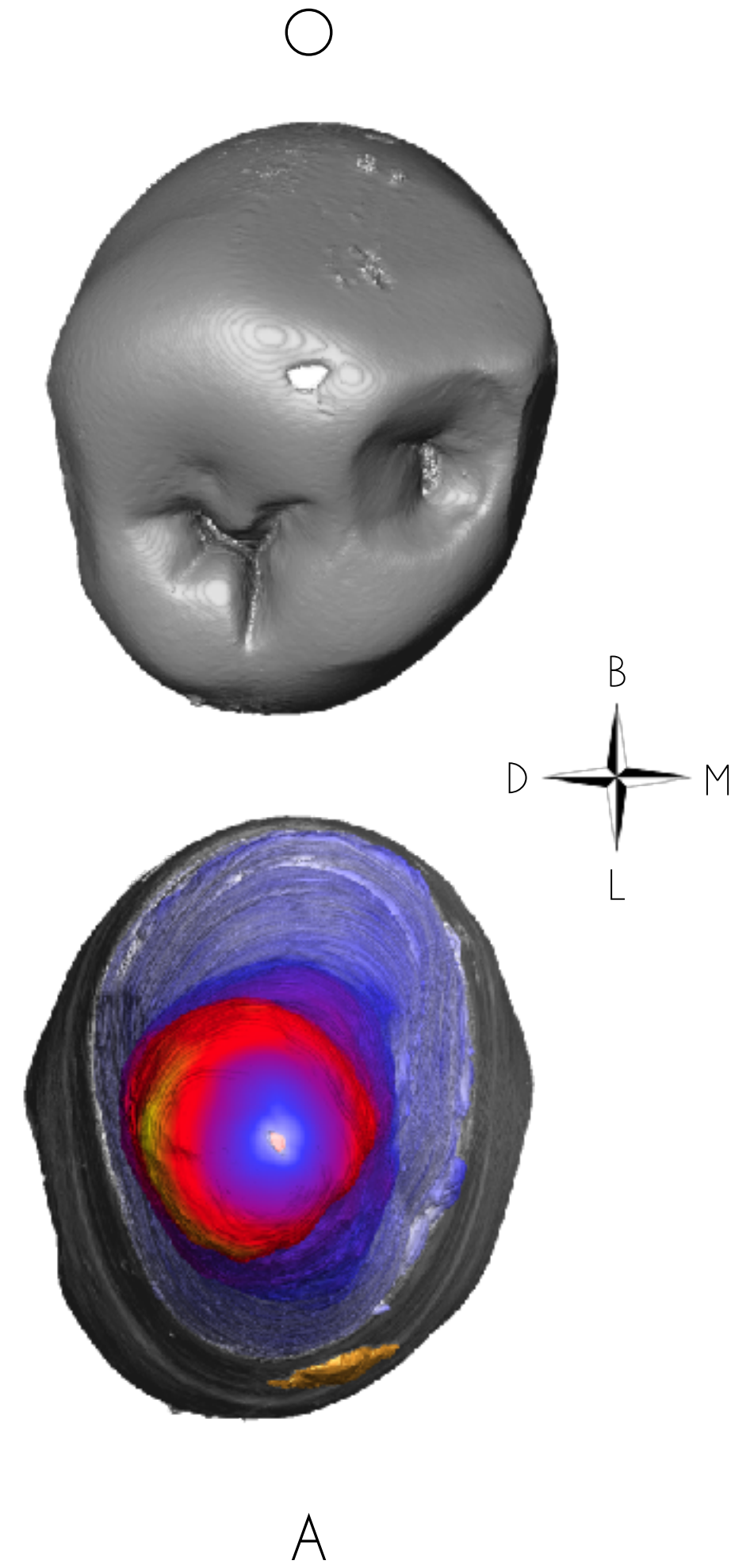




LLP3



Calculus



Sp914\_34

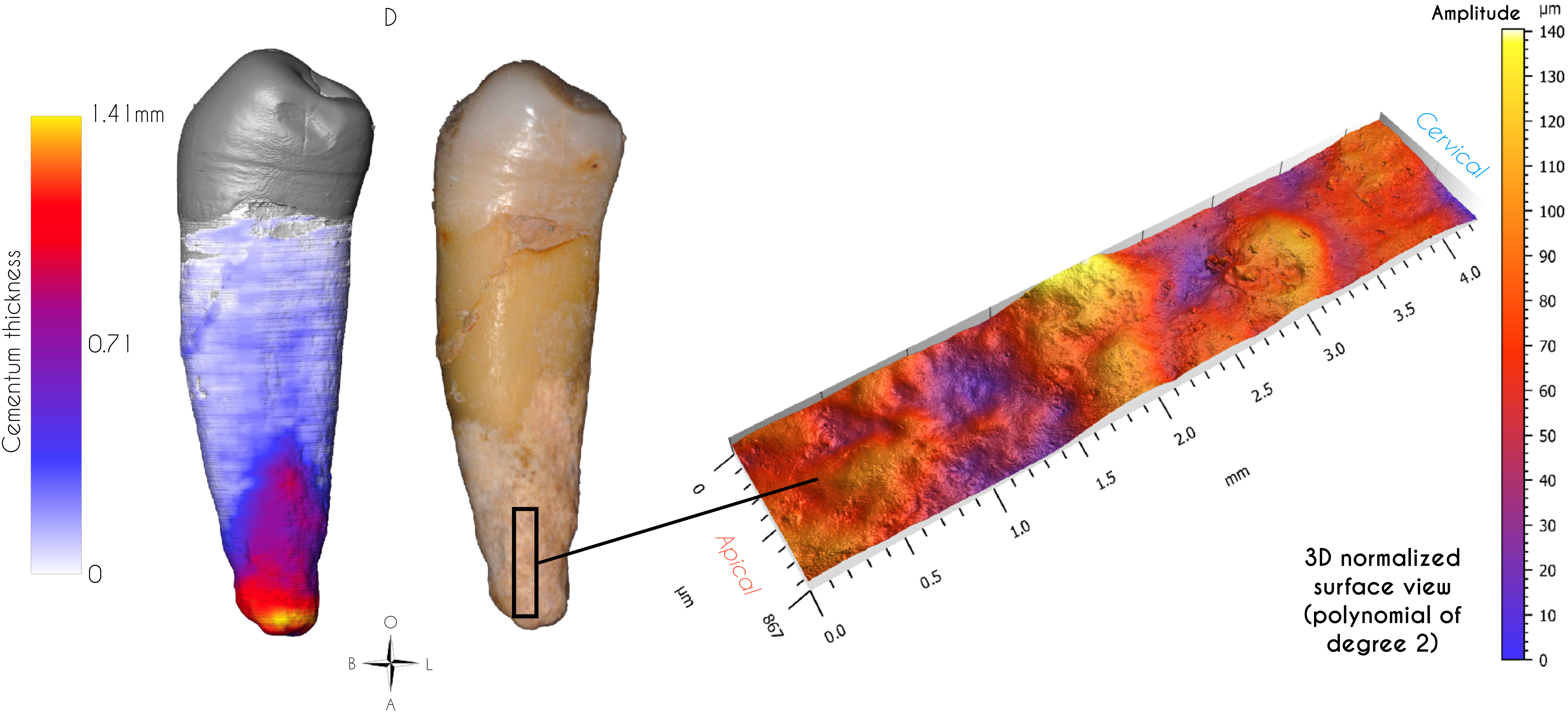
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1410	1d	No	No	-

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)  
**PREF LOC:** preferential location;

Hypofunctional



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
D	454	4.71%	0.88mm	4.82mm	1/8	2	Blue	1.5	1.8	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
1d	140	-S2	-

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.

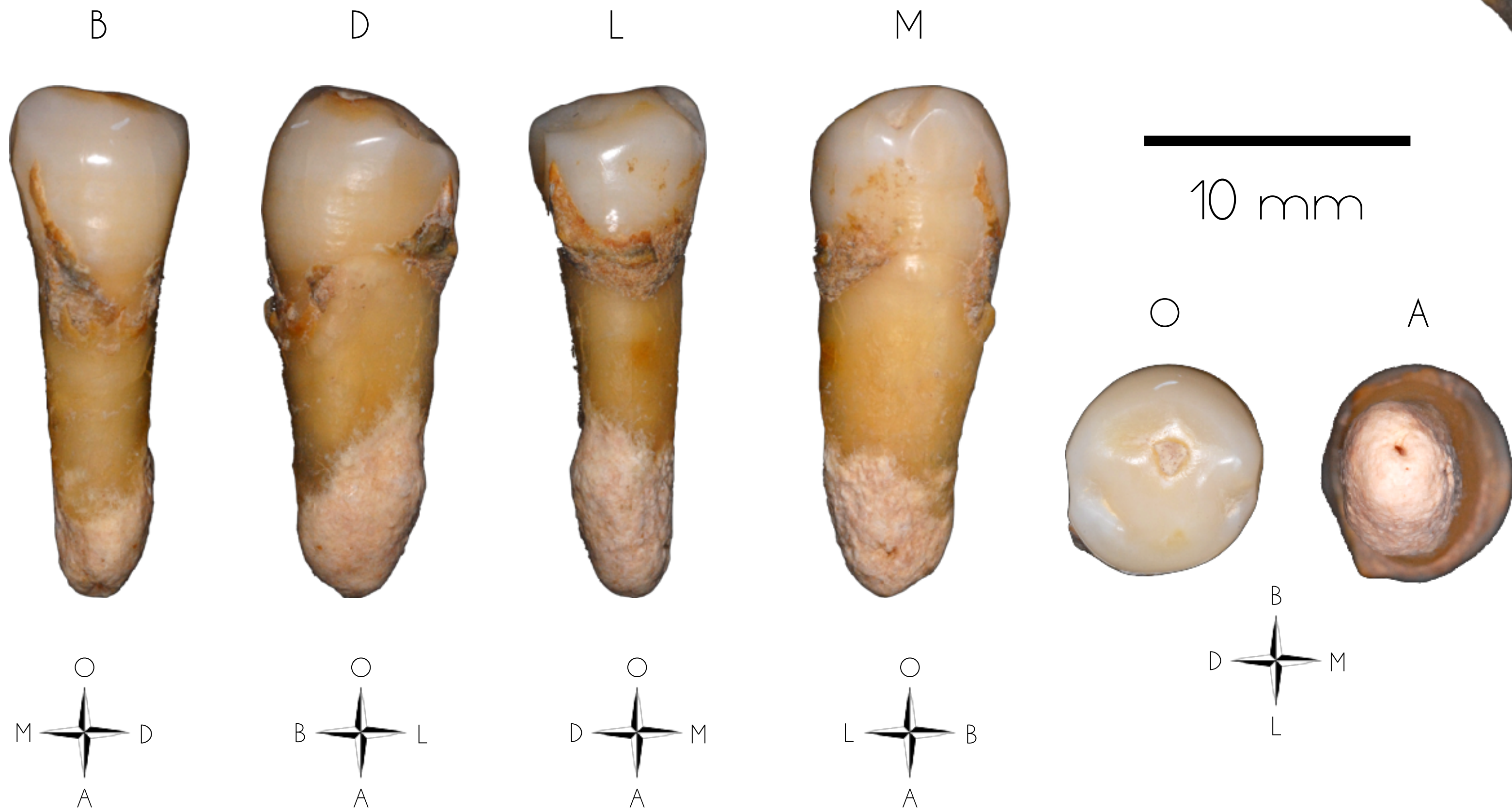
Hypofunctional



Sp1230\_34

Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LLP3	3	1	1	-	0	0	1.2.m	0	1	0	1

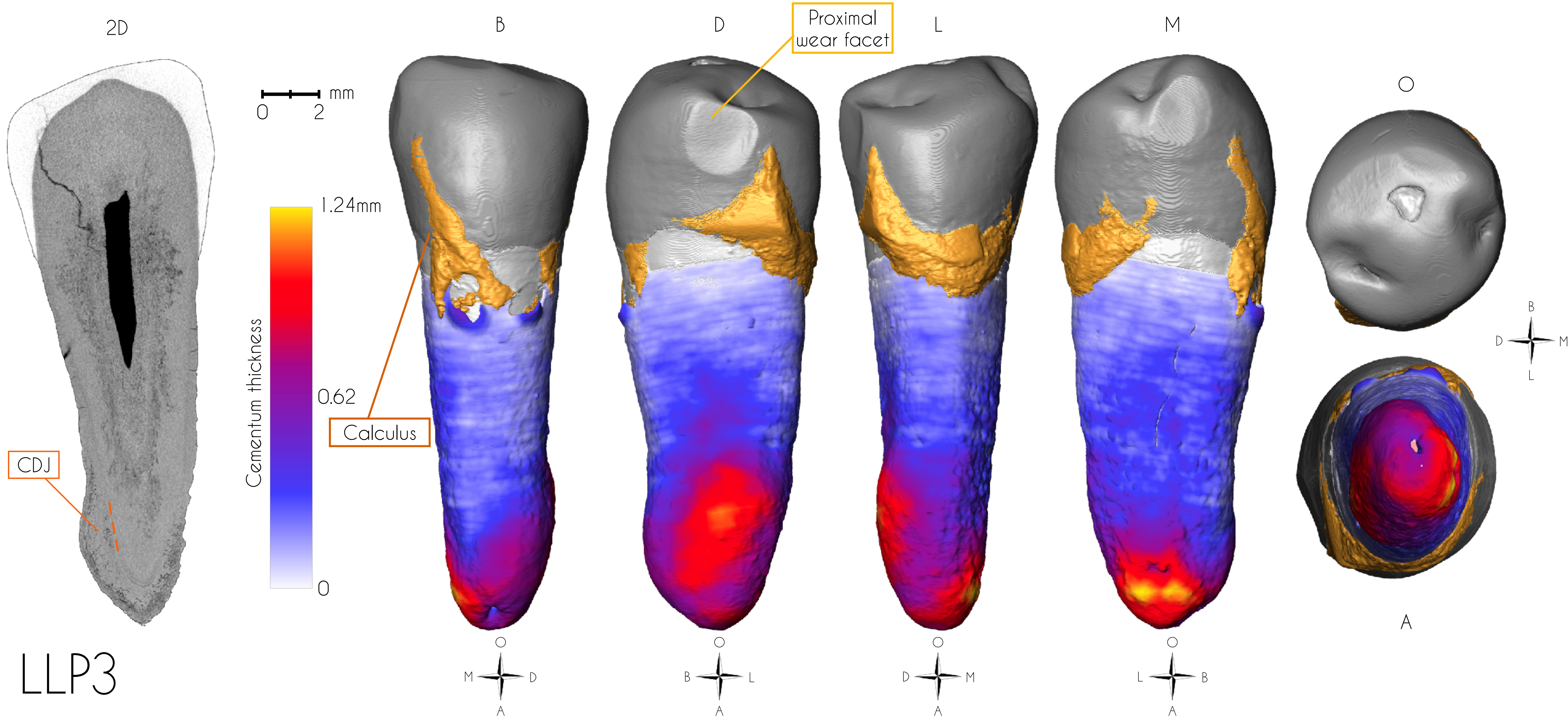
LLP3



1 cm

DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





Sp1230\_34

Microtomography - Thickness  
3D maps

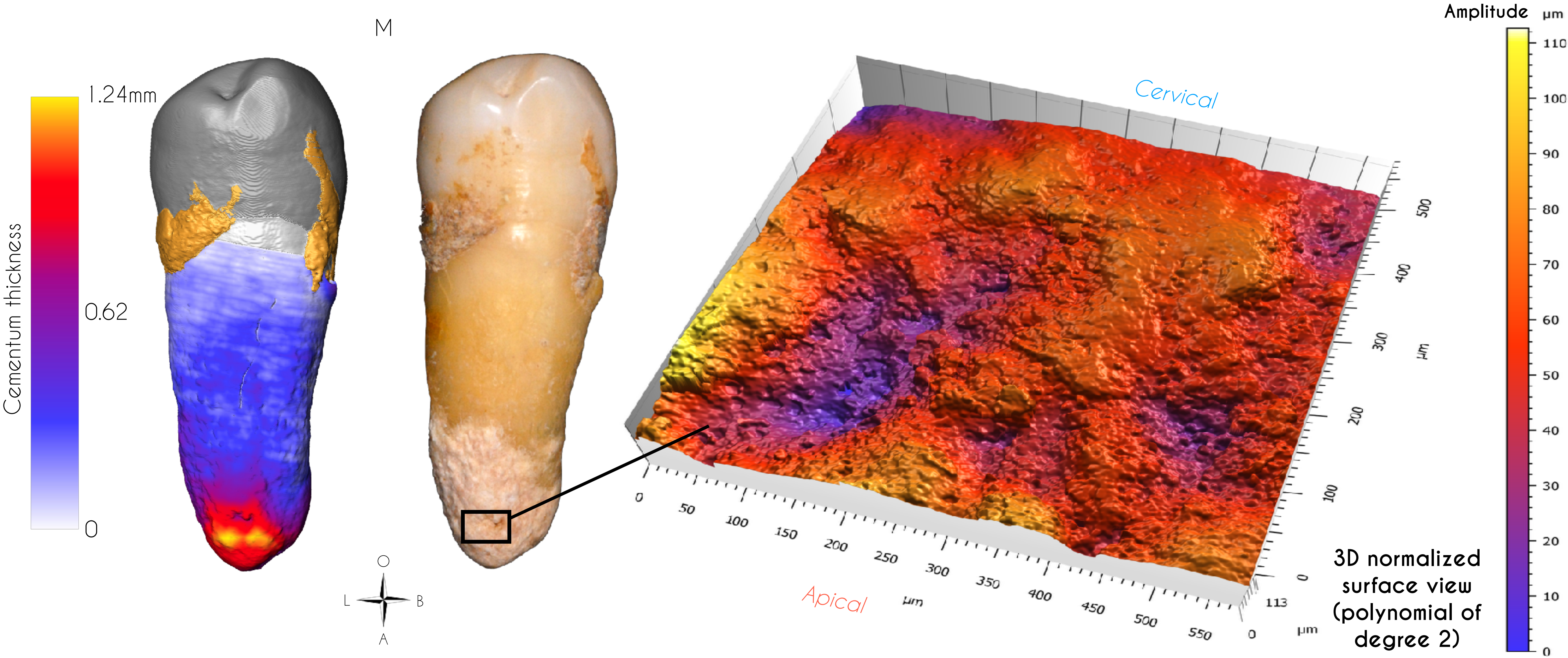
MAX THI ( $\mu$ m)	LOC MAX	LOC MIN	PREF LOC	Note
1240	1m	No	No	-

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)  
**PREF LOC:** preferential location;

Hypofunctional



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
LM	241	4.00%	1.67mm	1.25mm	2/2	2	Blue	1.47	1.61	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (µm)	ST	Note
1 m	1 10	-R2	-

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.

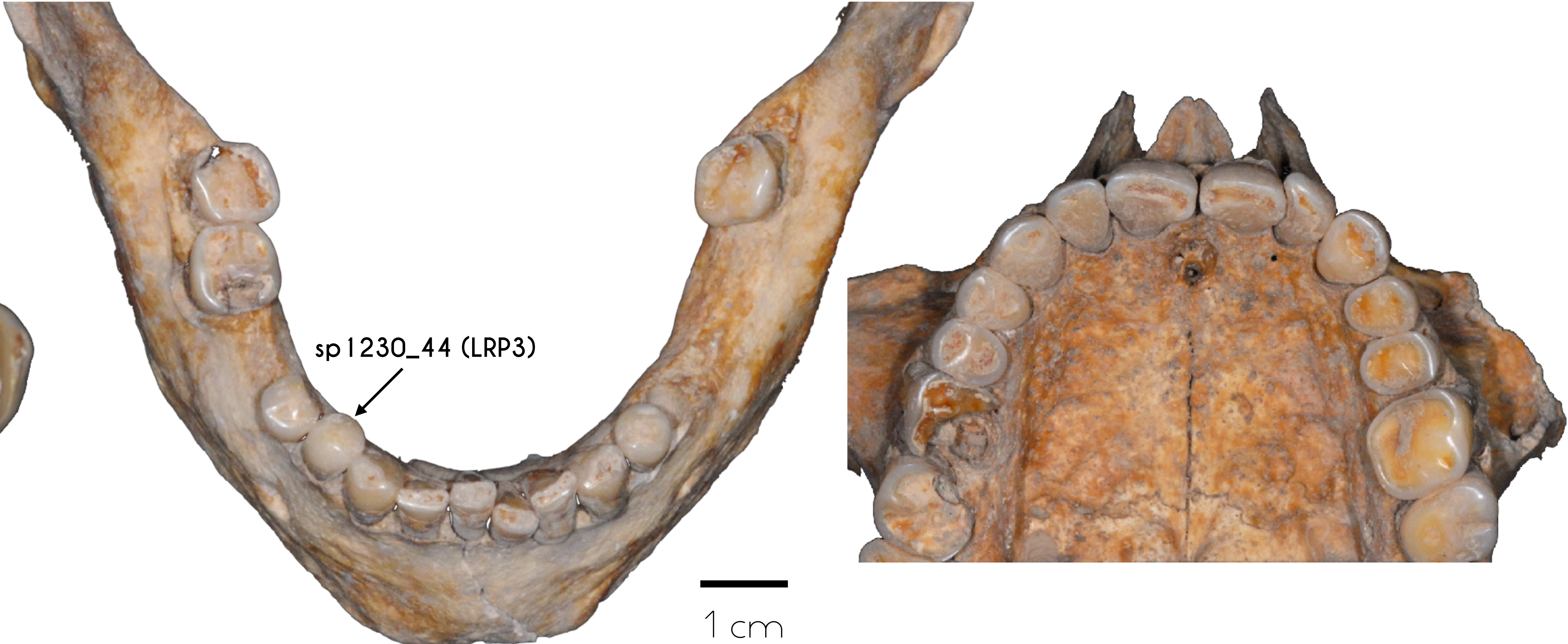
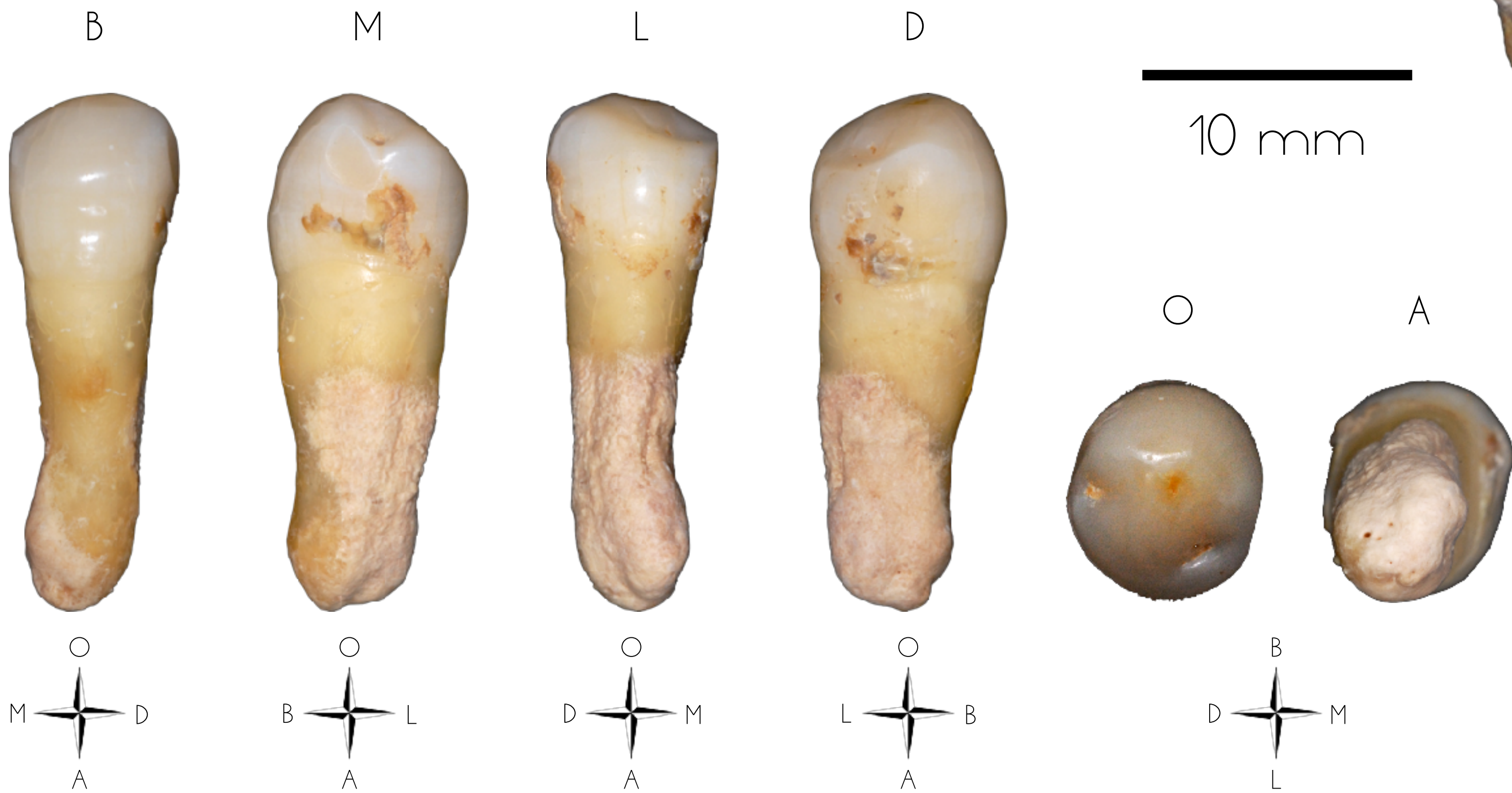
Hypofunctional



Sp1230\_44

Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LRP3	3	1	1		0	0	1.2.M	0	0	0	1

LRP3



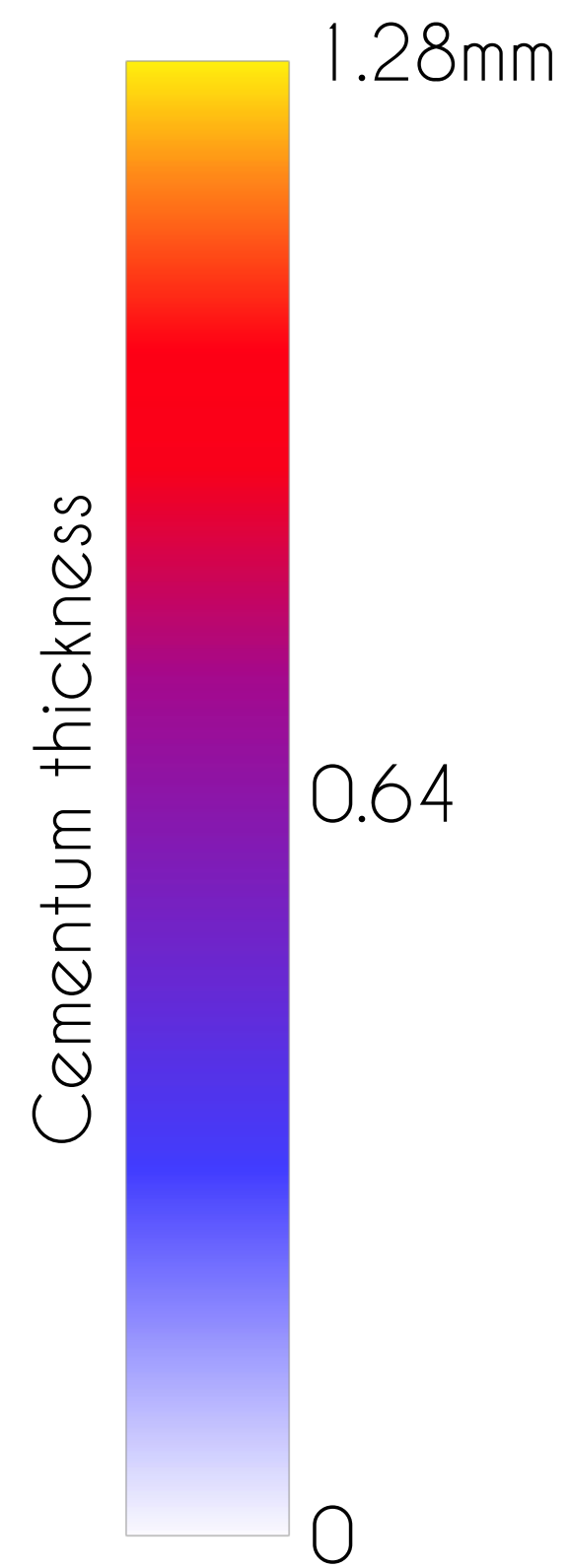
**DEG:** degree; **DIR:** direction; **FOR:** form - **CAR:** carious lesion - **Pulp EXP:** pulp exposure - **IMP:** impaction - **FEN:** fenestration; **CAL:** calculus; **NT:** tooth loss in neighbouring teeth; **ANTA:** antagonist



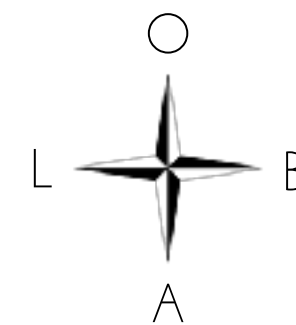
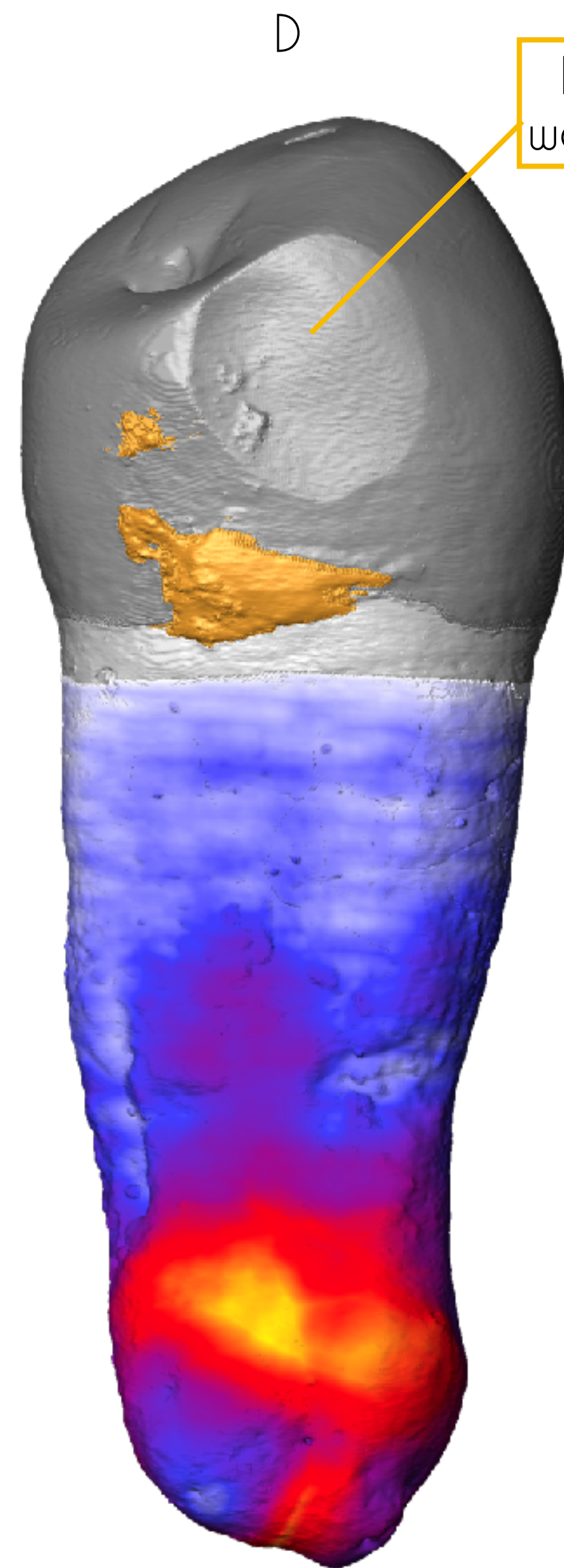
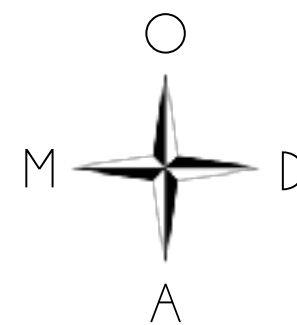
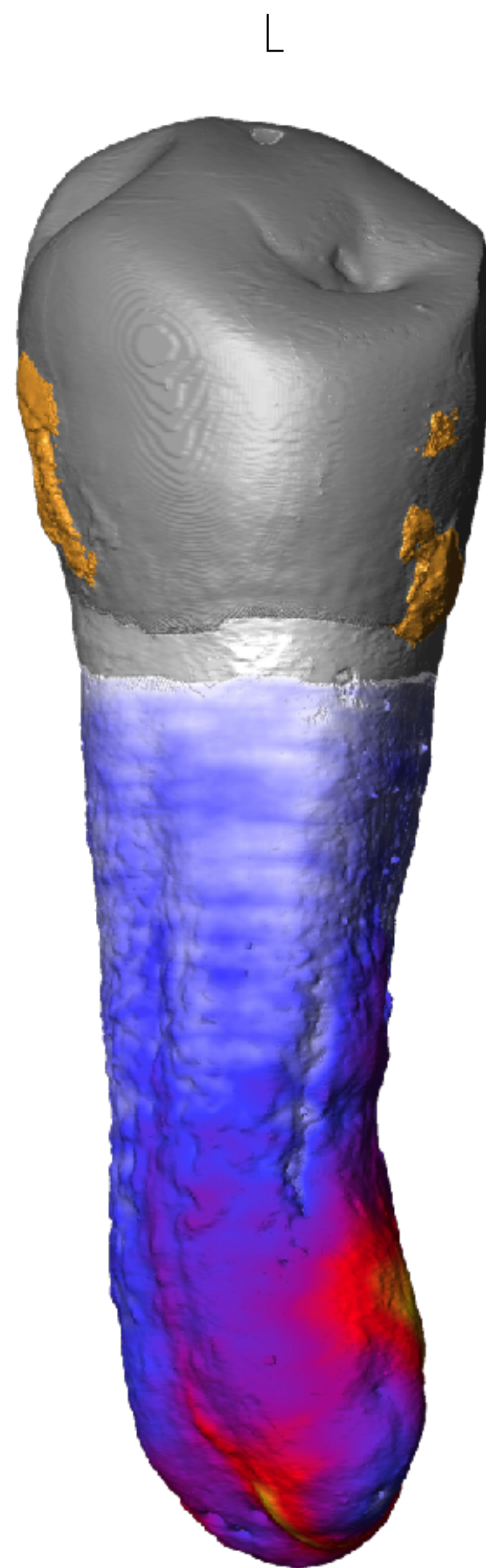
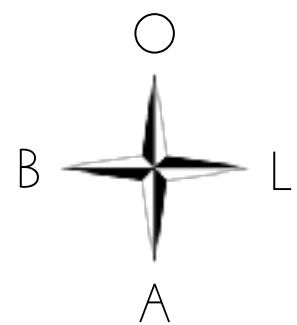
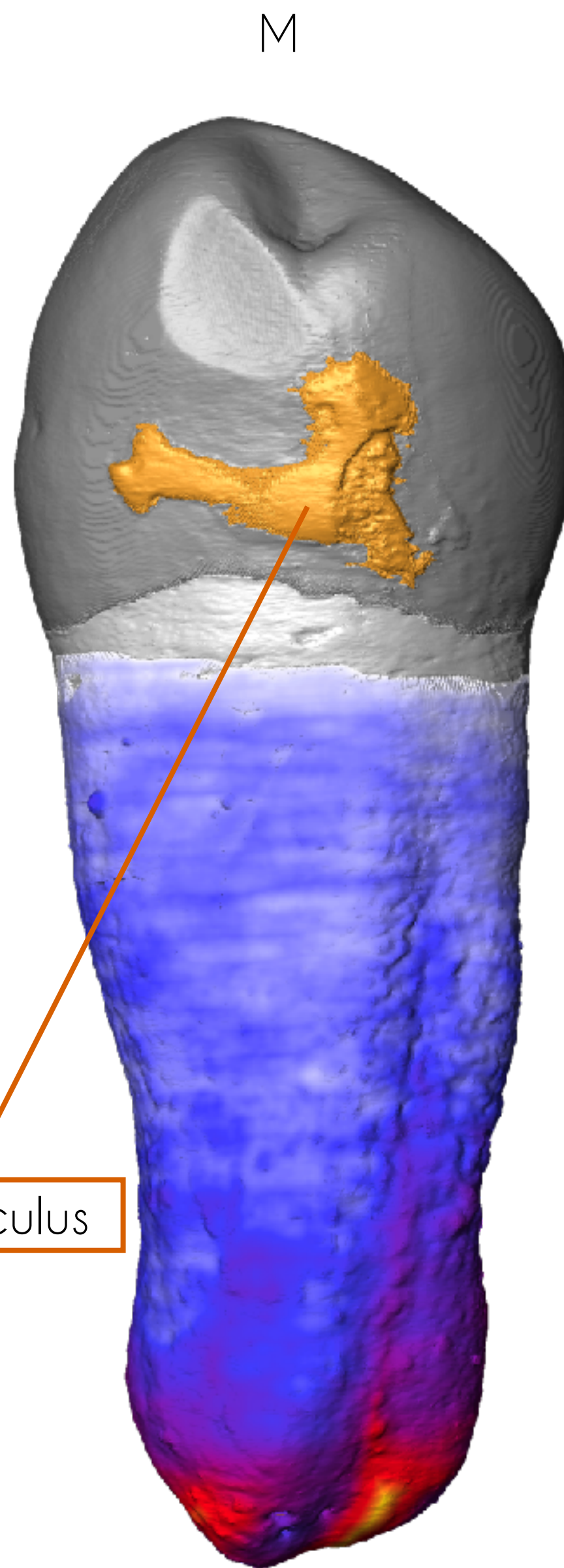
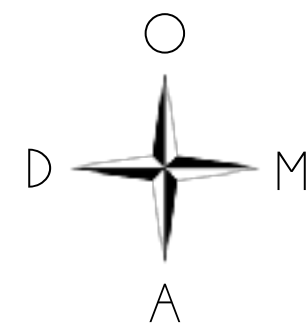
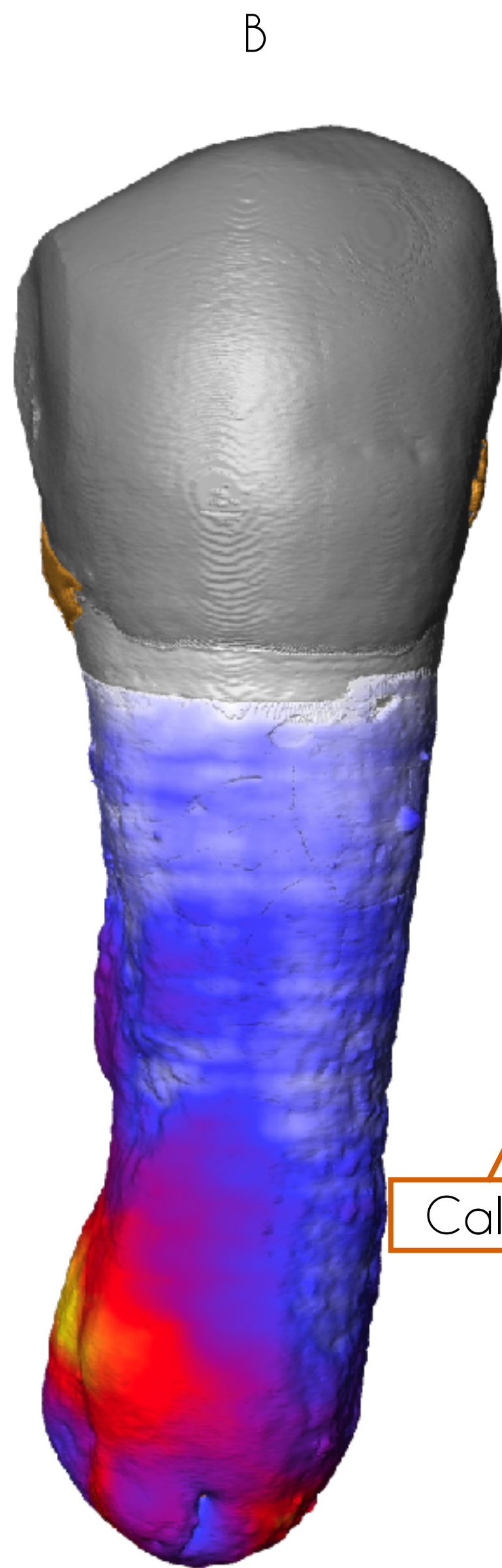


LRP3

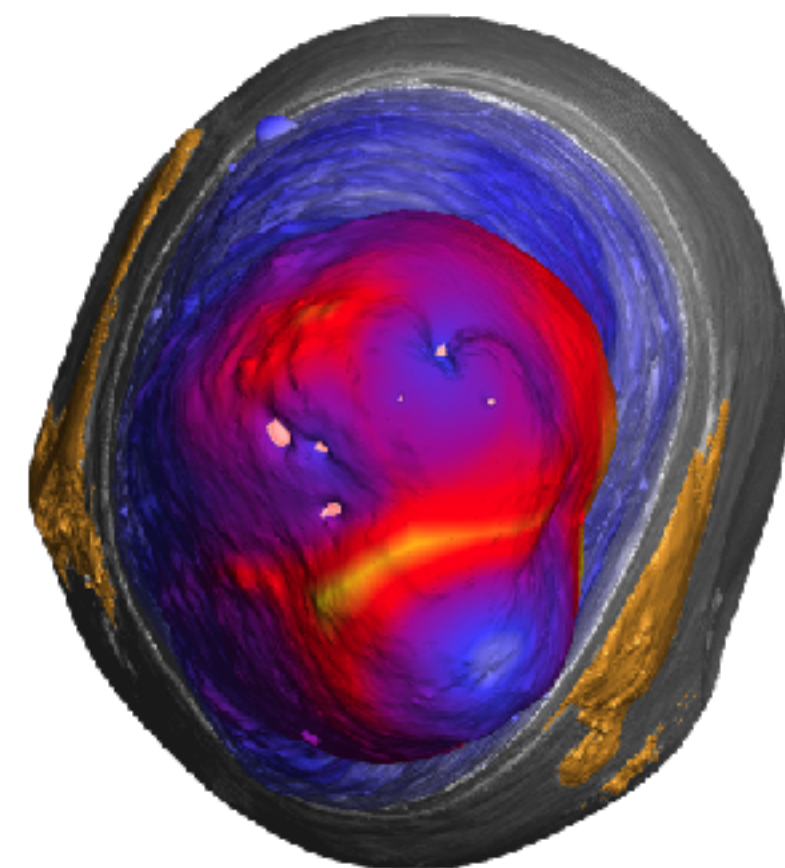
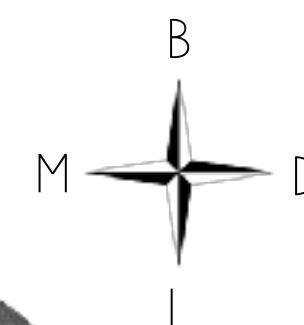
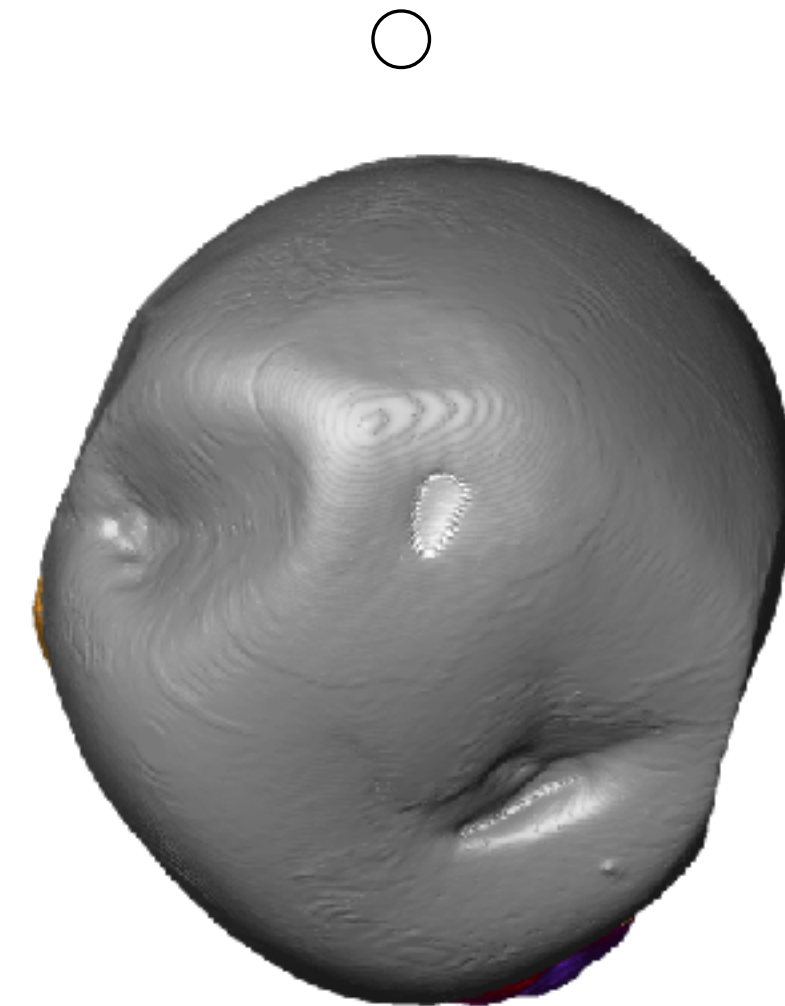
0 2 mm



2 Roots



Proximal wear facet



A

Sp1230\_44

Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1280	1 d	m	No	2 roots

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)  
**PREF LOC:** preferential location;

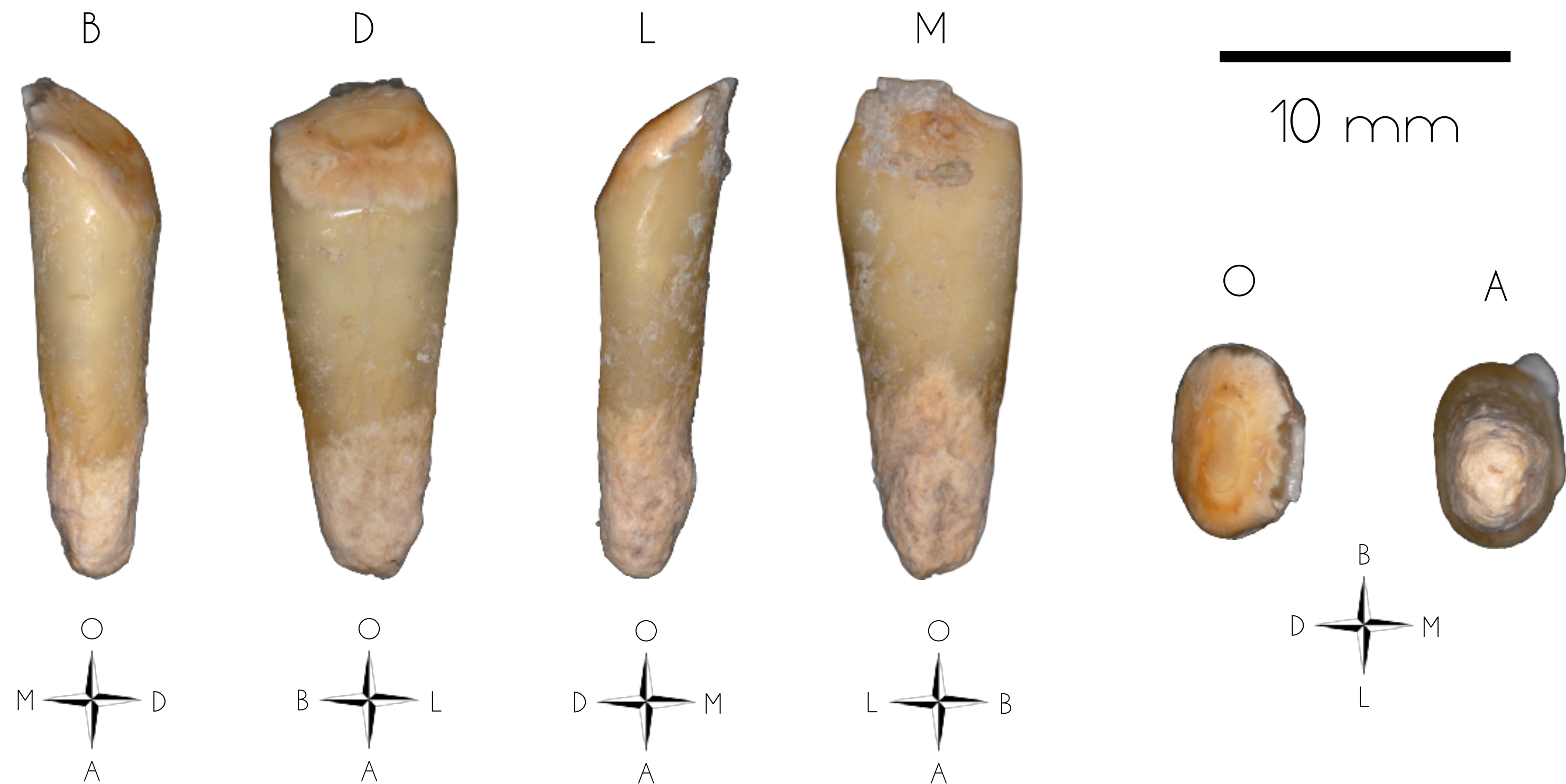
Excluded



Sp39\_35

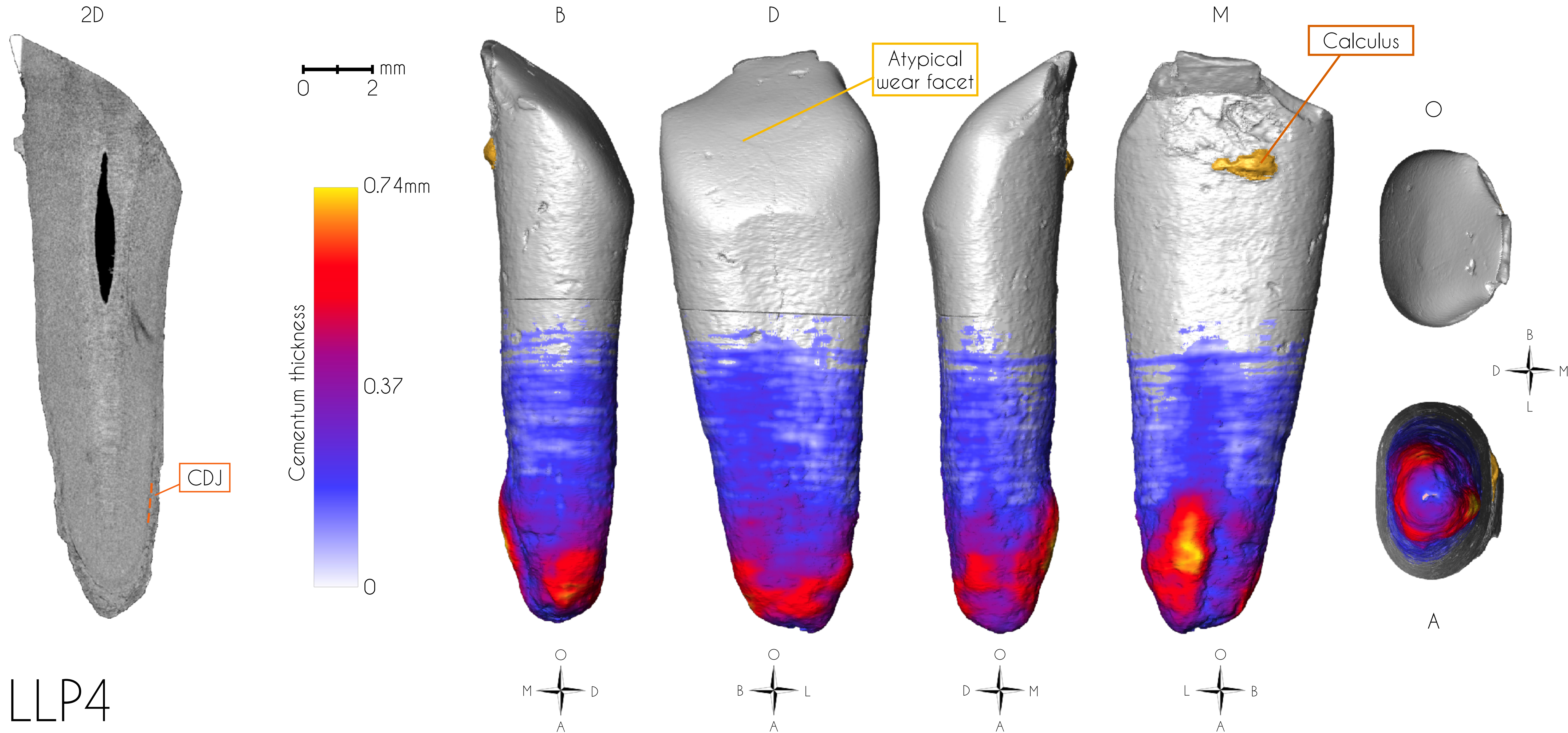
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LLP4	8	4	2	-	0	0	1.2.m	0	0	2	1

LLP4



**DEG:** degree; **DIR:** direction; **FOR:** form - **CAR:** carious lesion - **Pulp EXP:** pulp exposure - **IMP:** impaction - **FEN:** fenestration; **CAL:** calculus; **NT:** tooth loss in neighbouring teeth; **ANTA:** antagonist





Sp39\_35

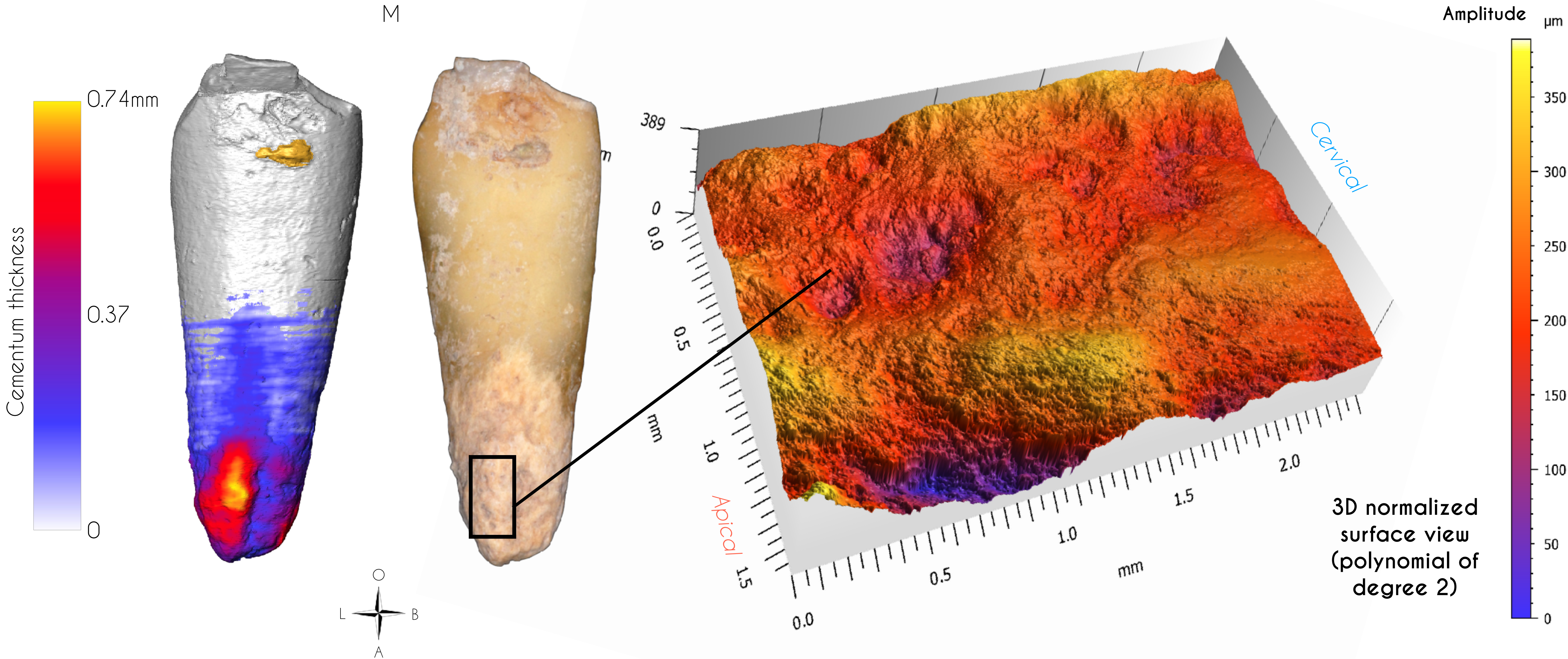
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
740	1 m	No	Yes	-

MAX THI: maximum thickness of cementum;  
LOC MAX: location of maximum thickness;  
LOC MIN: location of minimum thickness;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)  
PREF LOC: preferential location;

Hyperfunctional



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
M	1310	5.24%	1.67mm	3.04mm	2/5	2	Blue	1.47	1.61	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (µm)	ST	Note
1 m	400	+R2	-

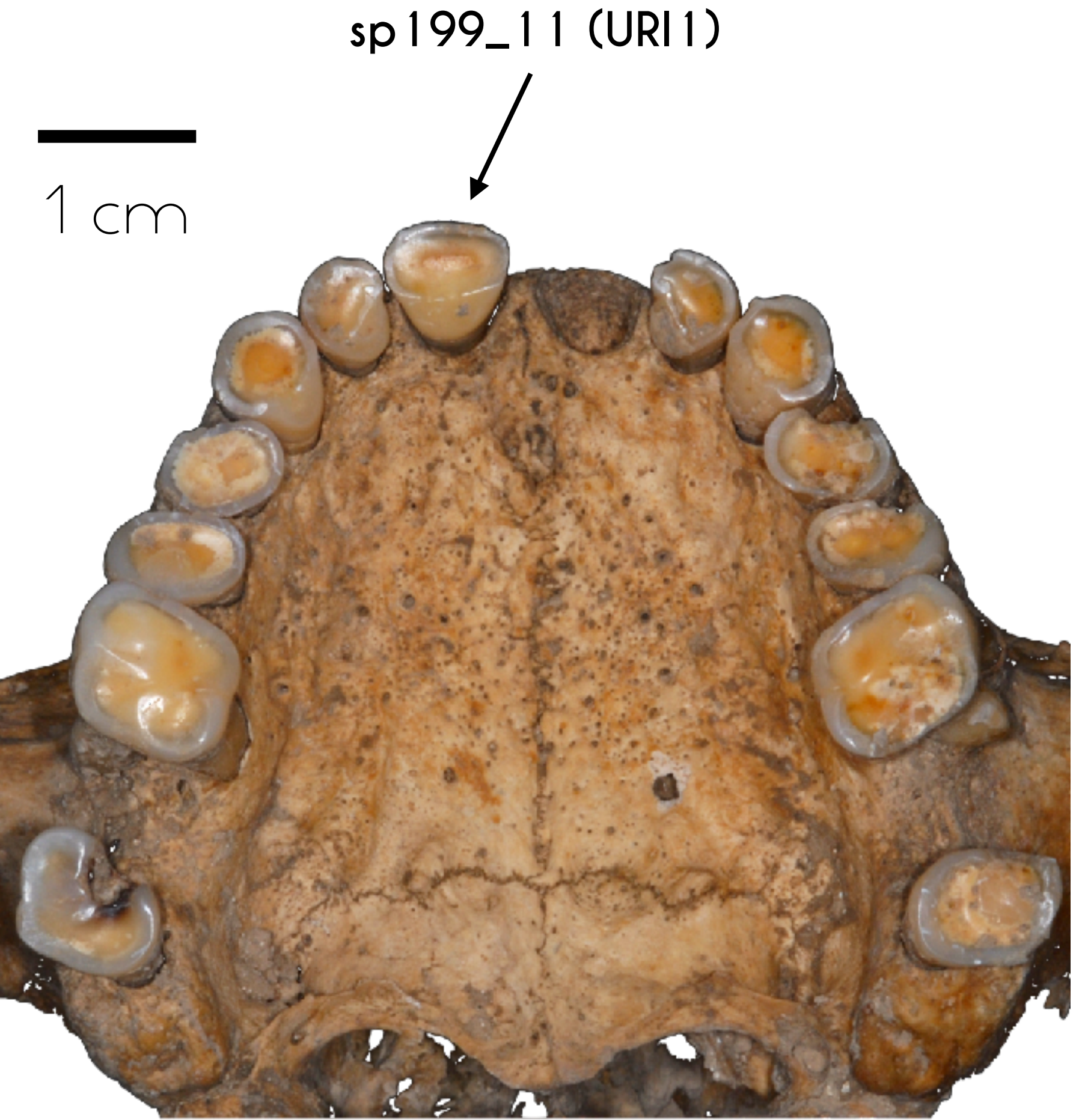
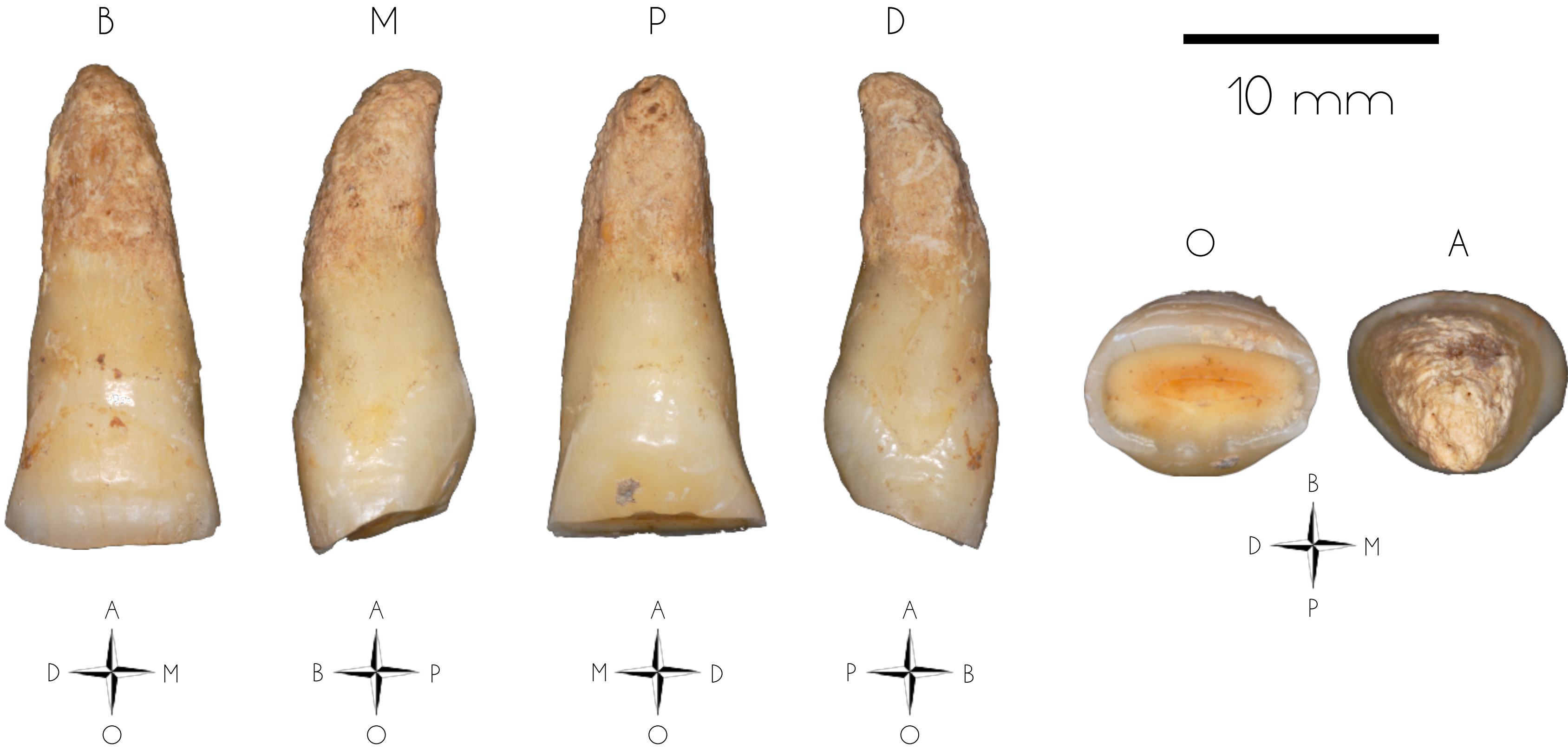
**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.



Sp199\_11

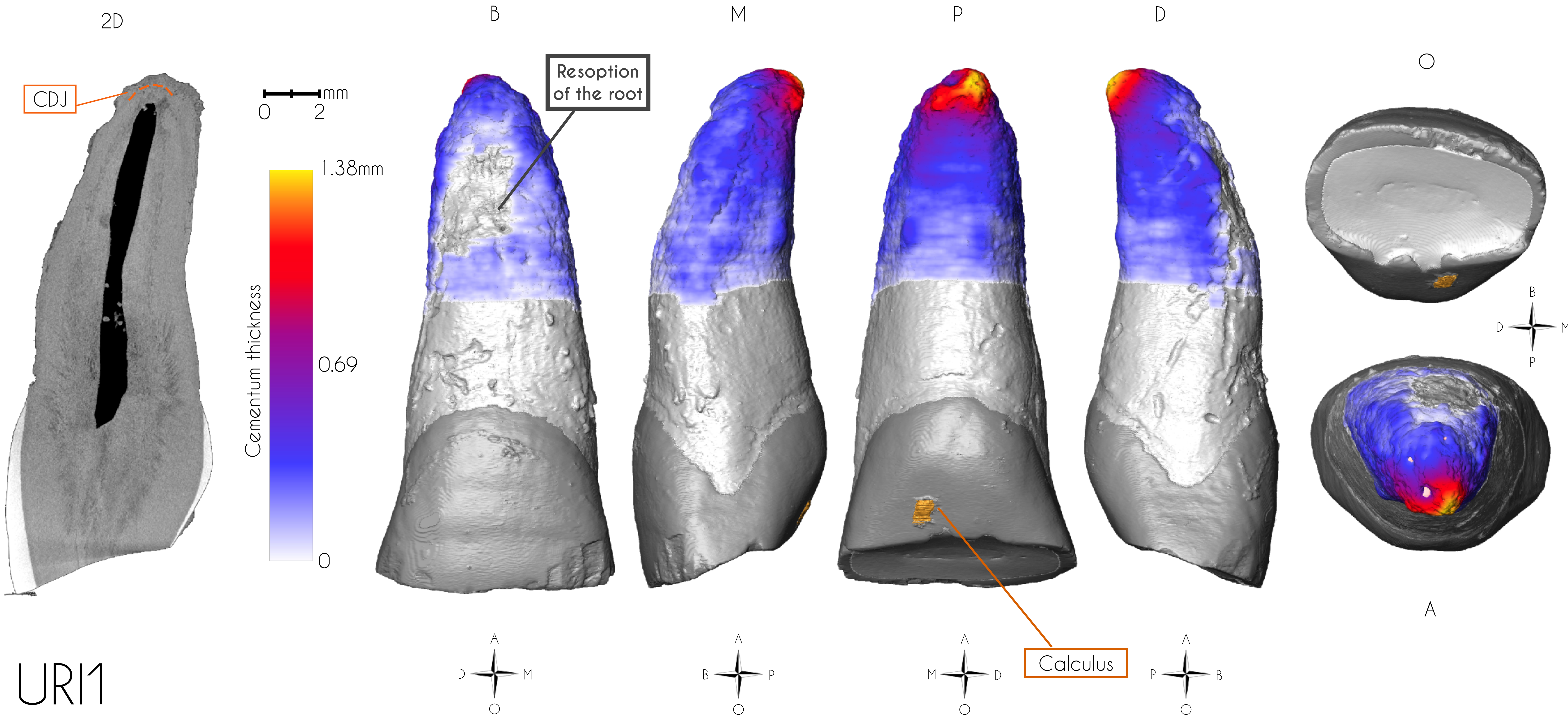
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
URI 1	6	6	4	-	0	0	1.2.m	0	0	0	1

URI1



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





Microtomography - Thickness 3D maps				
MAX THI (μm)	LOC MAX	LOC MIN	PREF LOC	Note
1380	1>	<	Yes	RES (1<)

MAX THI: maximum thickness of cementum;  
LOC MAX: location of maximum thickness;  
LOC MIN: location of minimum thickness;  
PREF LOC: preferential location;  
RES: resorption of the root;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)

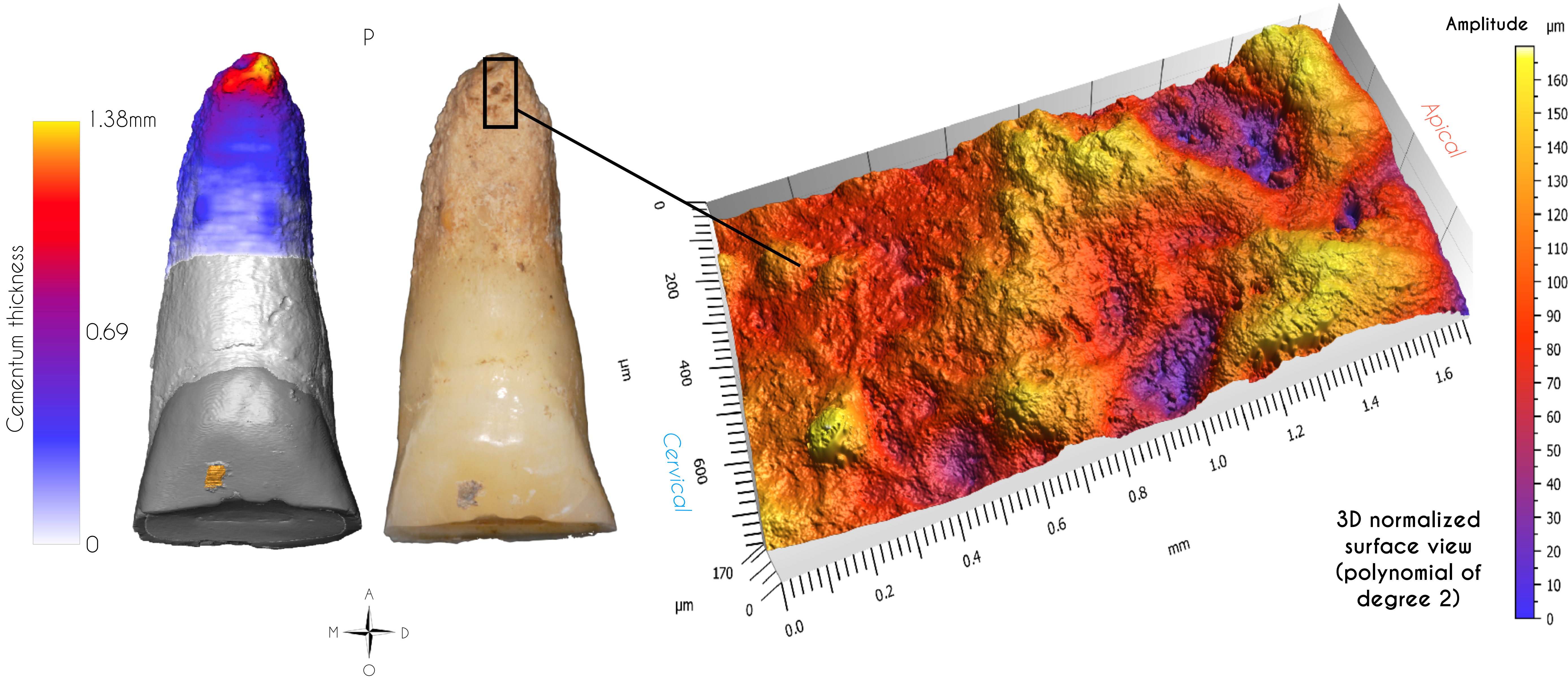
Hyperfunctional



URI1

Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
P	577	4.00%	0.88mm	1.85mm	1/3	2	Blue	1.49	1.79	10 %

Sp199\_11



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
1>	170	+R 1	-

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.

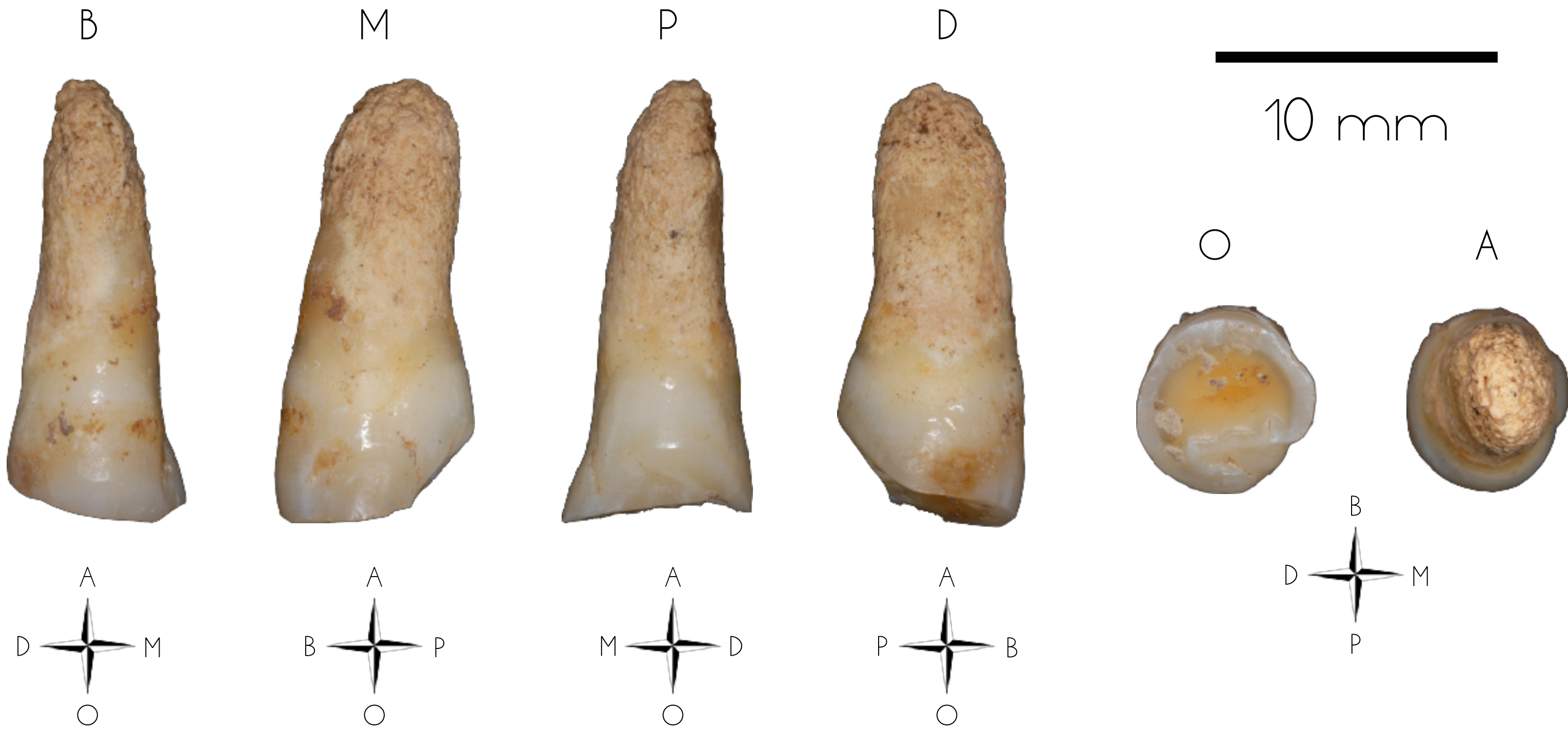
Hyperfunctional



Sp199\_12

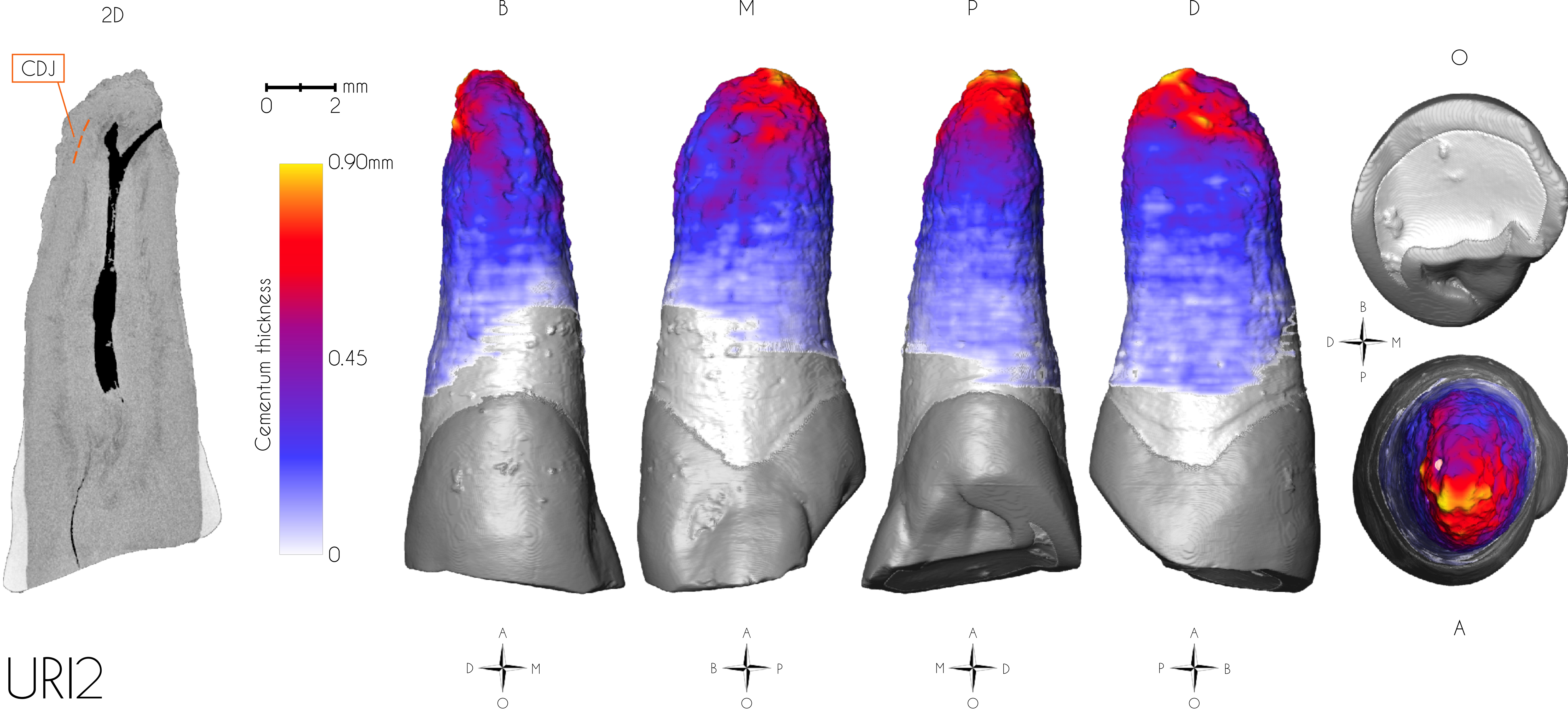
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
URI2	6	4	4	-	0	0	1.3.m	0	0	0	1

URI2



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





URI2

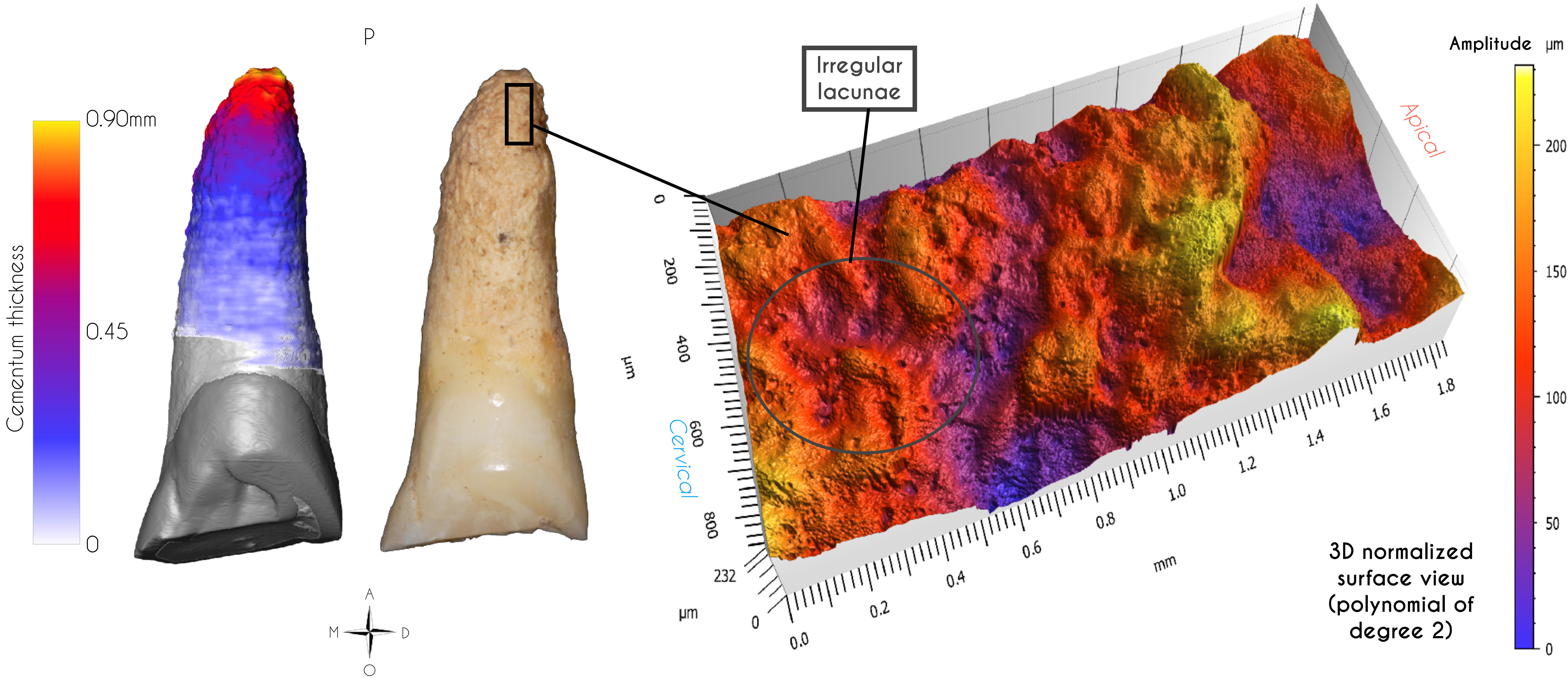
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
900	1>	<	Yes	-

MAX THI: maximum thickness of cementum;  
LOC MAX: location of maximum thickness;  
LOC MIN: location of minimum thickness;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)  
PREF LOC: preferential location;

Hyperfunctional



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
P	949	6.91%	0.88mm	1.85mm	1/3	2	Blue	1.49	1.79	10 %



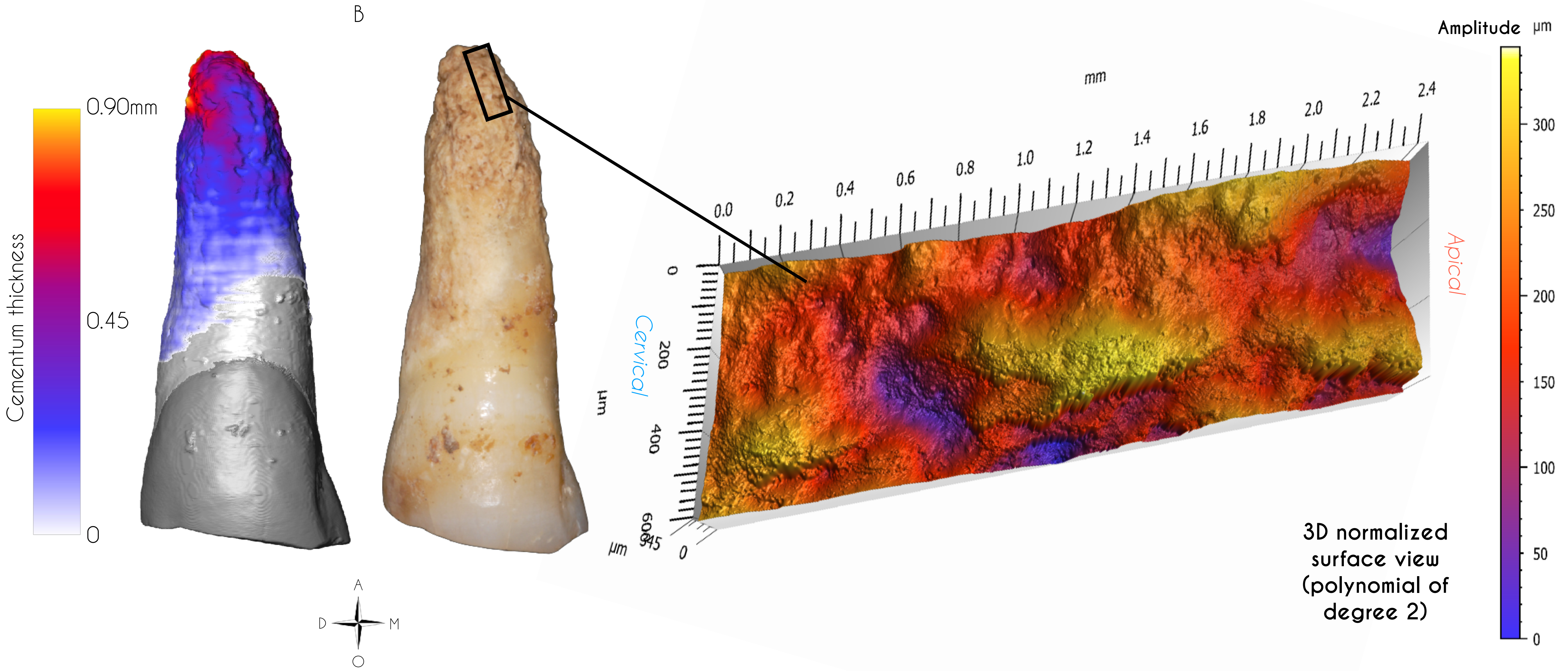
Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
1>	230	+R 1	IL

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
**IL:** irregular lacunae

Hyperfunctional



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
BM	882	5.76%	0.88mm	2.44mm	1/4	2	Blue	1.49	1.79	10 %



Confocal microscopy - Topography 3D maps			
OF	MAX VE ( $\mu\text{m}$ )	ST	Note
1<	350	+R 1	-

OF: other face;  
MAX VE: maximum vertical elevation;  
ST: surface texture; : scored (+) if it is high, (-) if it is low; S: smooth or R: rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.

Hyperfunctional



Sp335\_13

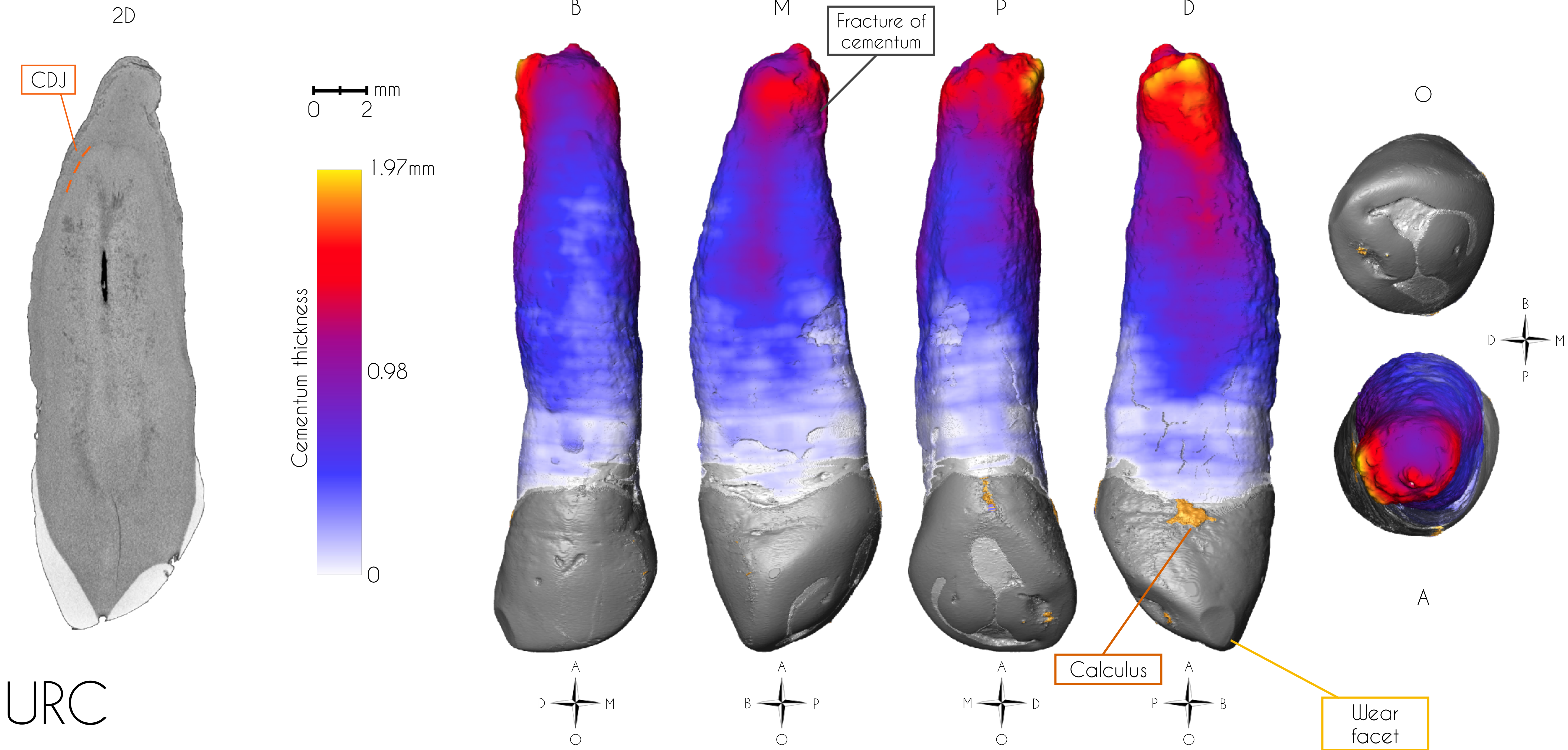
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
URC	4	2	2	-	0	0	1.2.m	0	0	2	1

URC



**DEG:** degree; **DIR:** direction; **FOR:** form - **CAR:** carious lesion - **Pulp EXP:** pulp exposure - **IMP:** impaction - **FEN:** fenestration; **CAL:** calculus; **NT:** tooth loss in neighbouring teeth; **ANTA:** antagonist





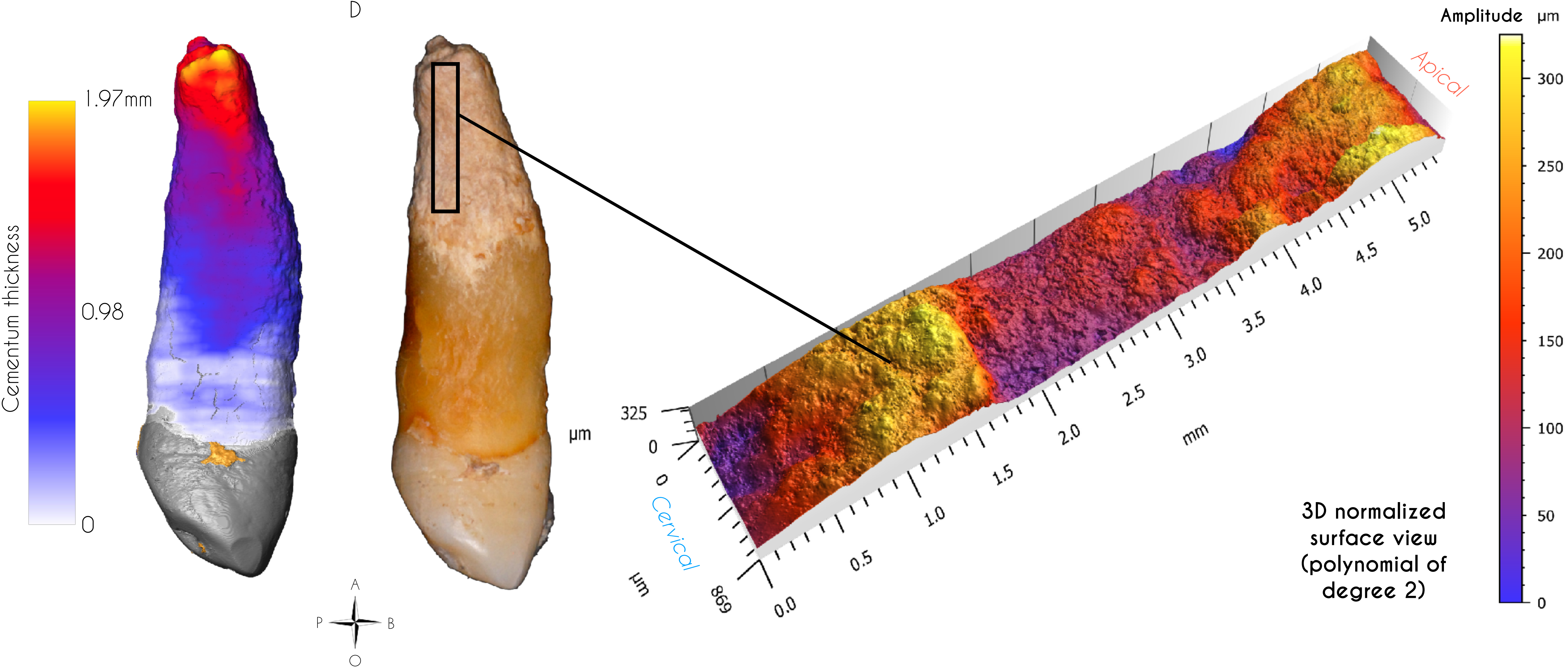
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1970	1d	<	Yes	FR (1>m)

MAX THI: maximum thickness of cementum;  
LOC MAX: location of maximum thickness;  
LOC MIN: location of minimum thickness;  
PREF LOC: preferential location;  
FR: fracture of cementum;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)

Hyperfunctional



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
D	960	6 %	0.88mm	6.01mm	1/10	2	Blue	1.5	1.8	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (µm)	ST	Note
1d	325	+R 1	-

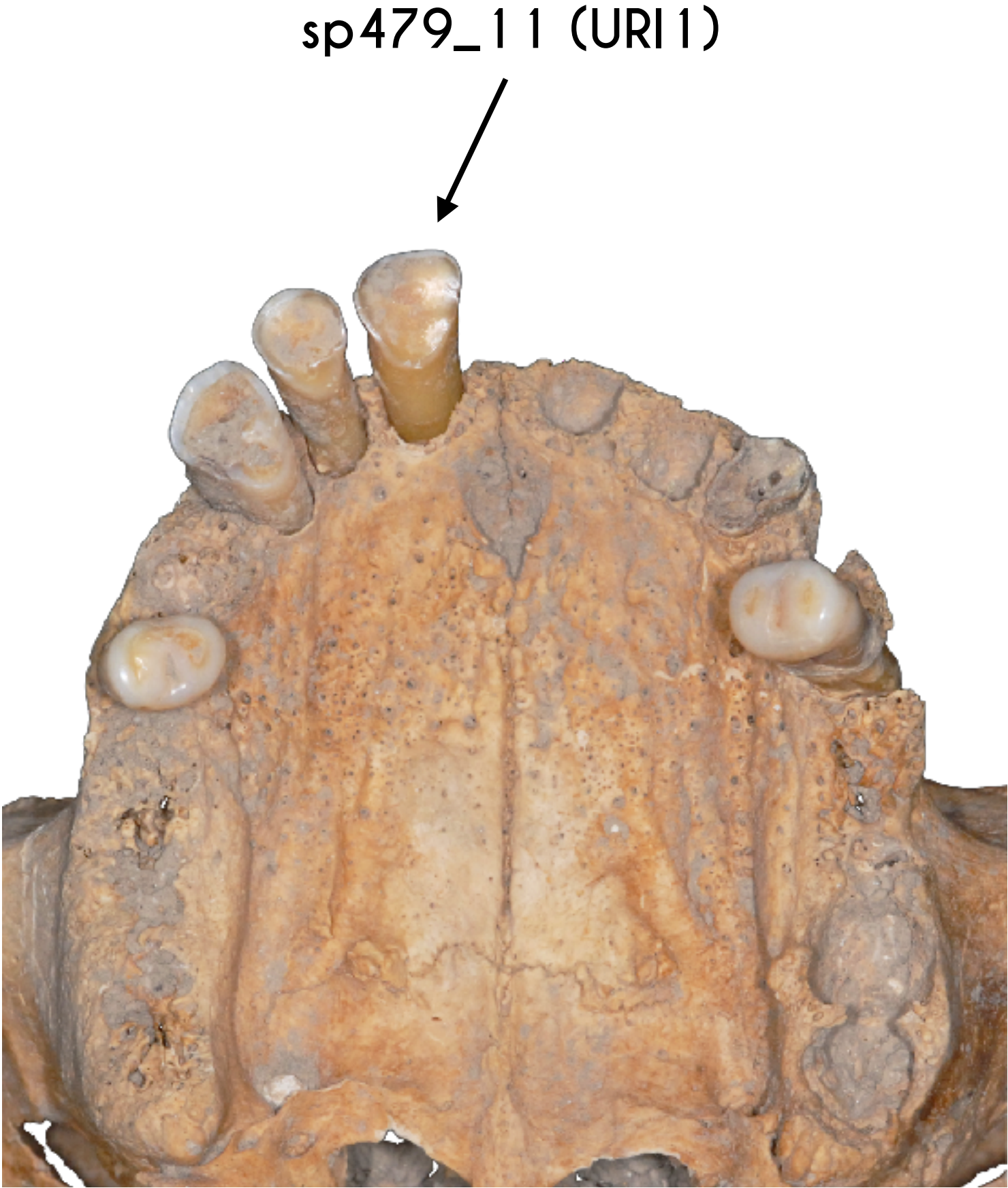
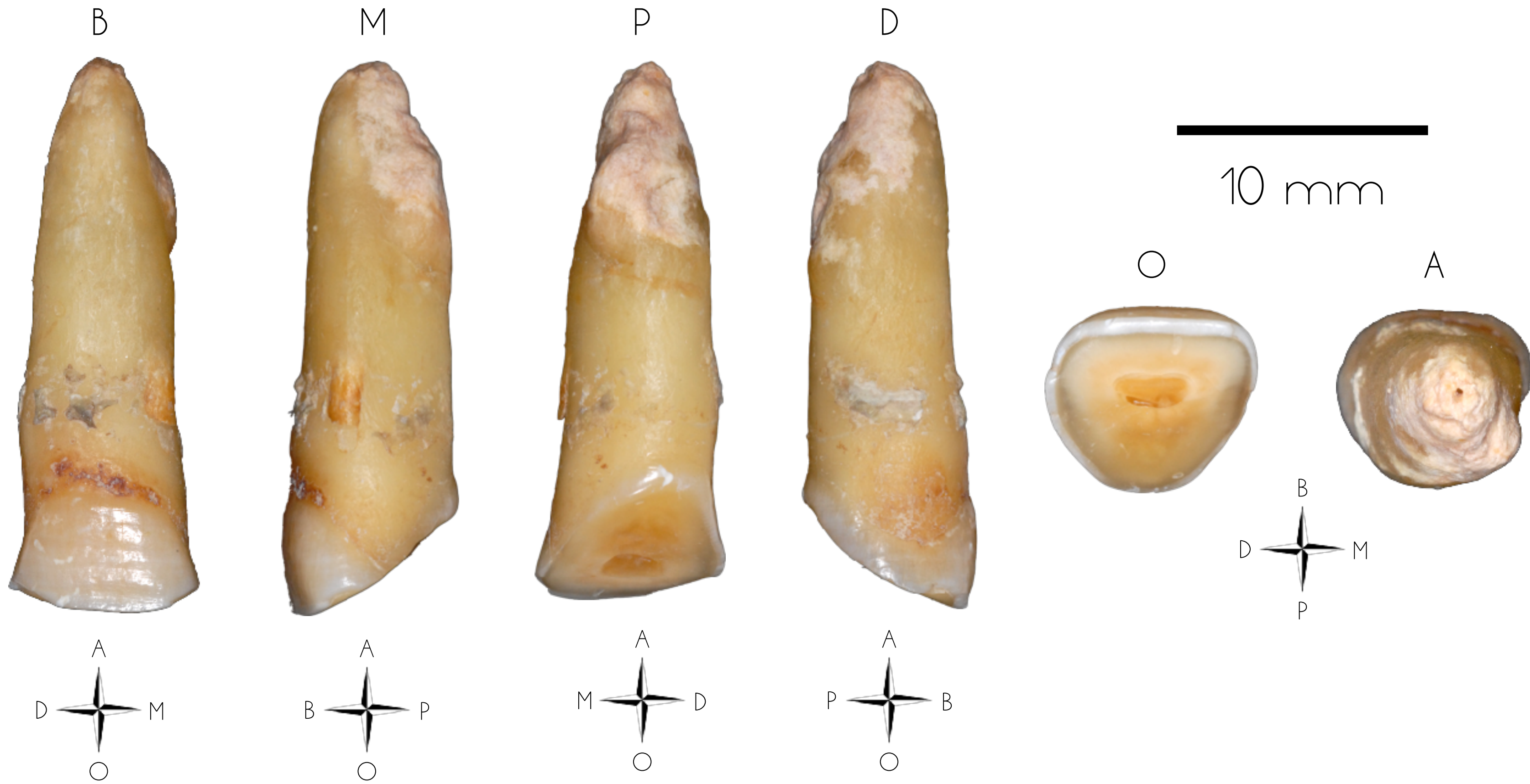
**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.



Sp479\_11

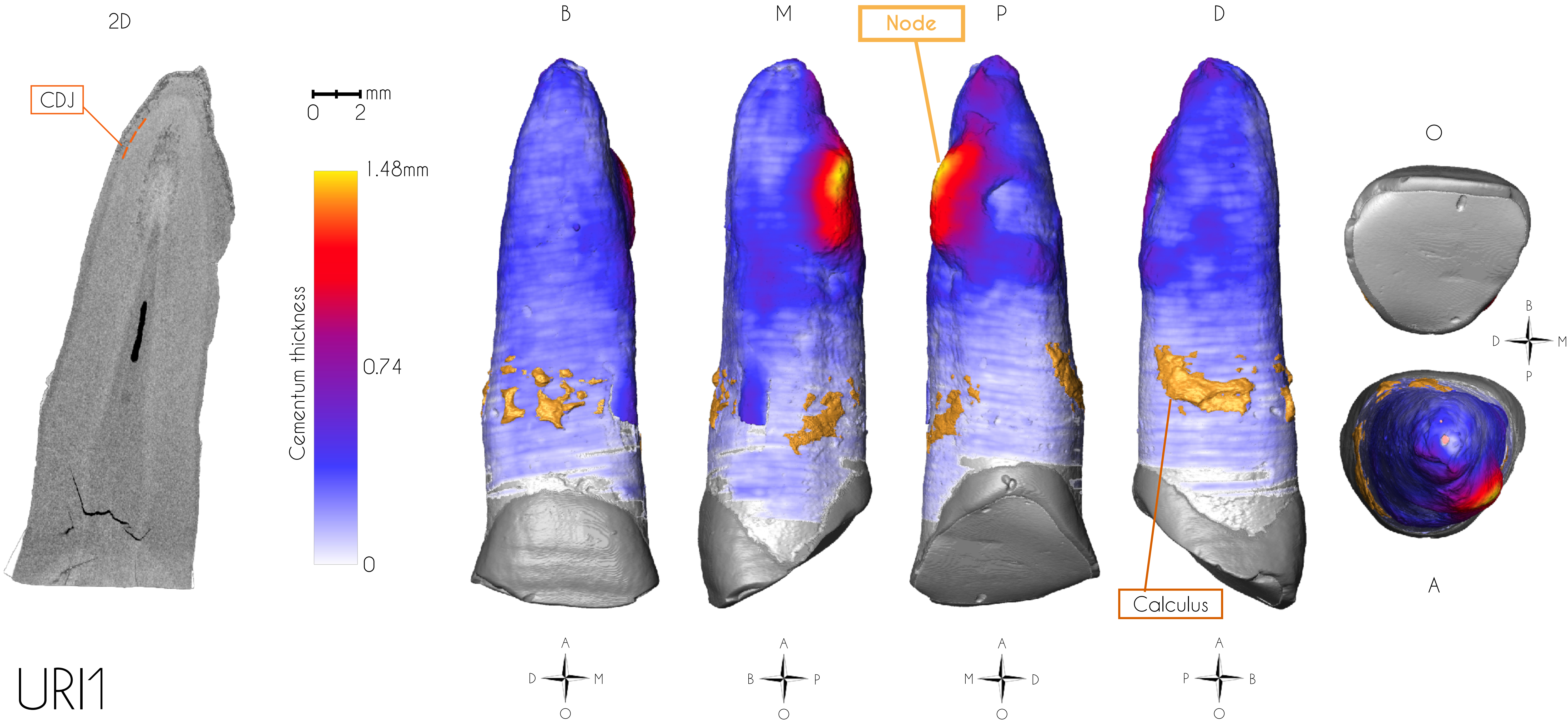
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
URI 1	7	2	2	-	0	0	3.2.M	0	0	0	1

URI1



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





Sp479\_11

Microtomography - Thickness 3D maps				
MAX THI (μm)	LOC MAX	LOC MIN	PREF LOC	Note
1480	1>	<	Yes	NOD (m>)

MAX THI: maximum thickness of cementum;  
LOC MAX: location of maximum thickness;  
LOC MIN: location of minimum thickness;  
PREF LOC: preferential location;  
NOD: node;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)

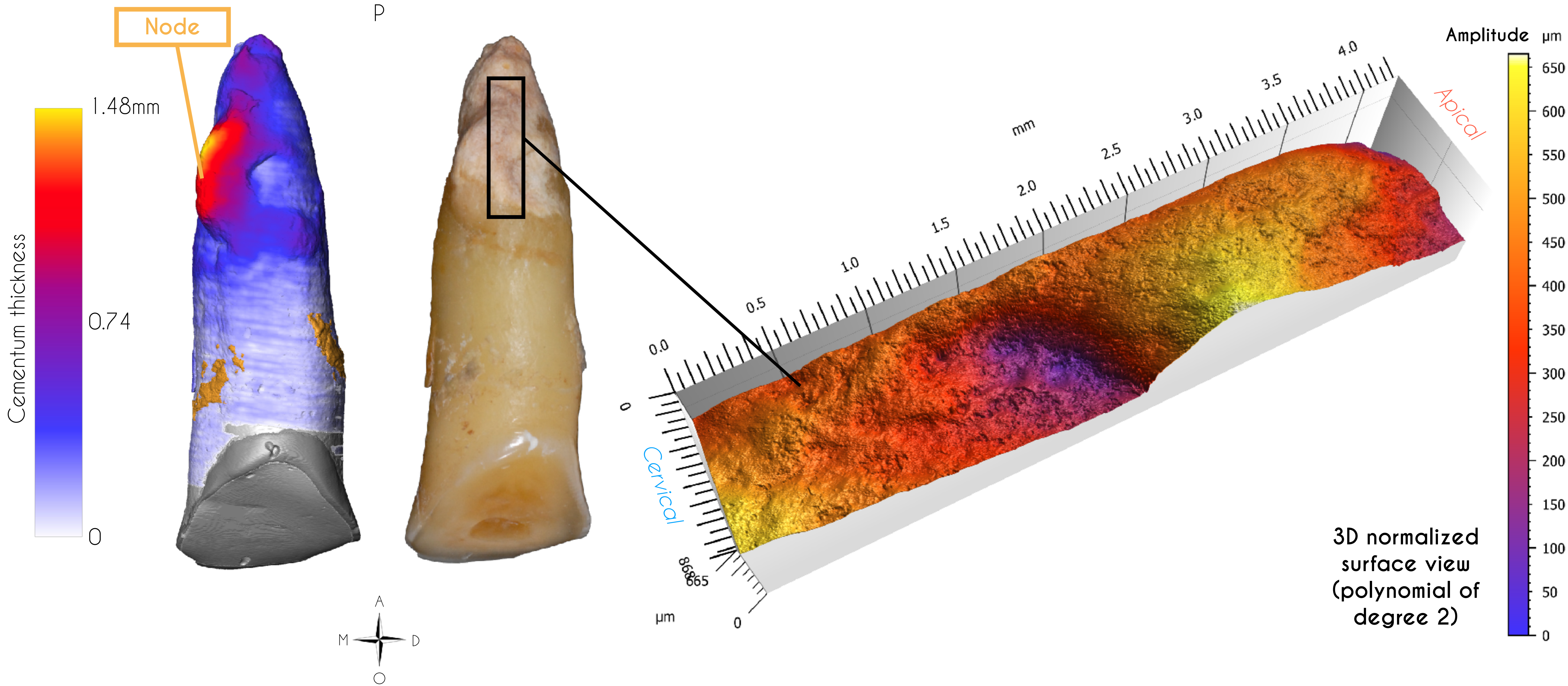
Hyperfunctional



URI1

Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
M	1310	5.24%	1.67mm	3.04mm	2/5	2	Blue	1.47	1.61	10 %

Sp479\_11



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
1 m>	665	+S2	NOD

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
**NOD:** node

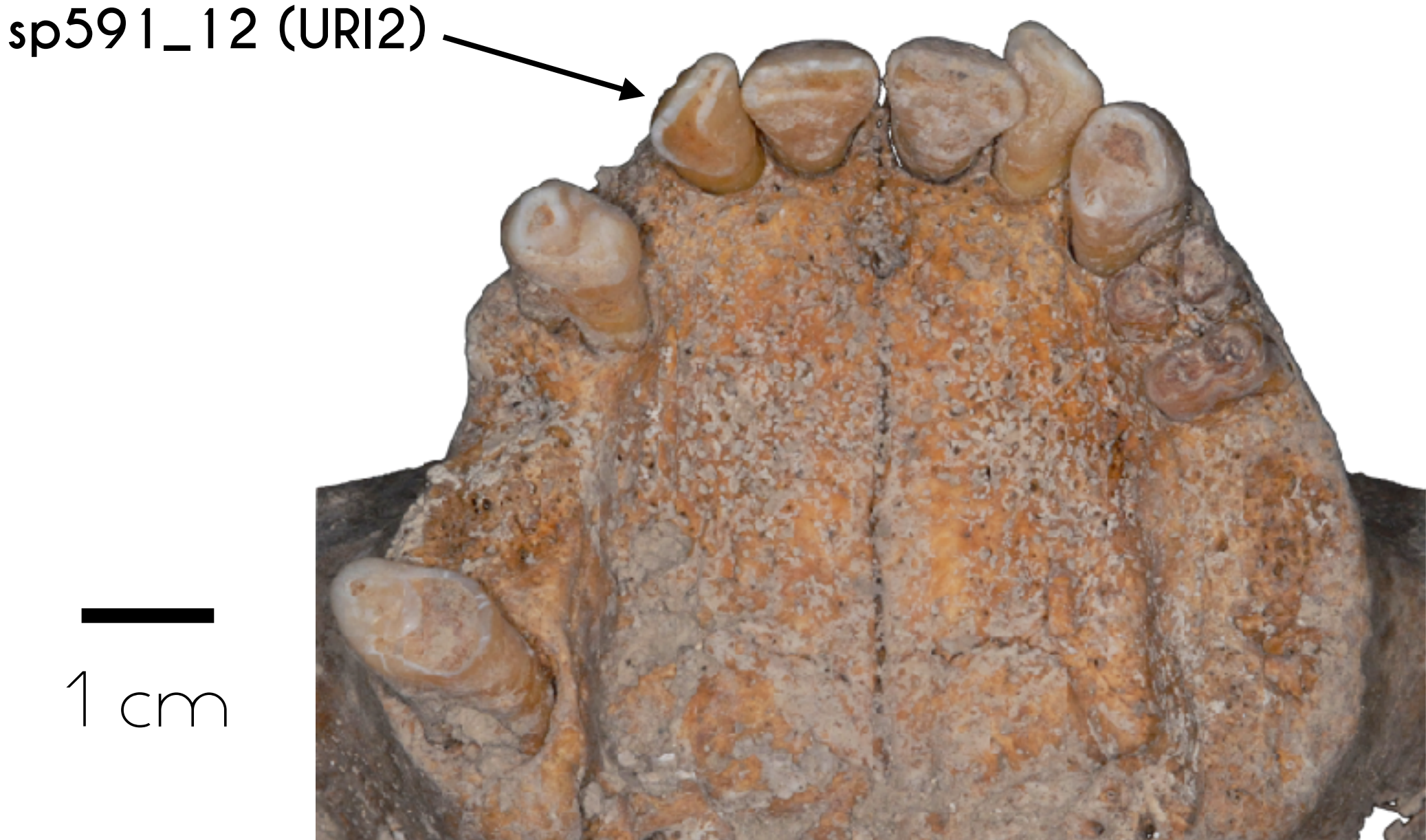
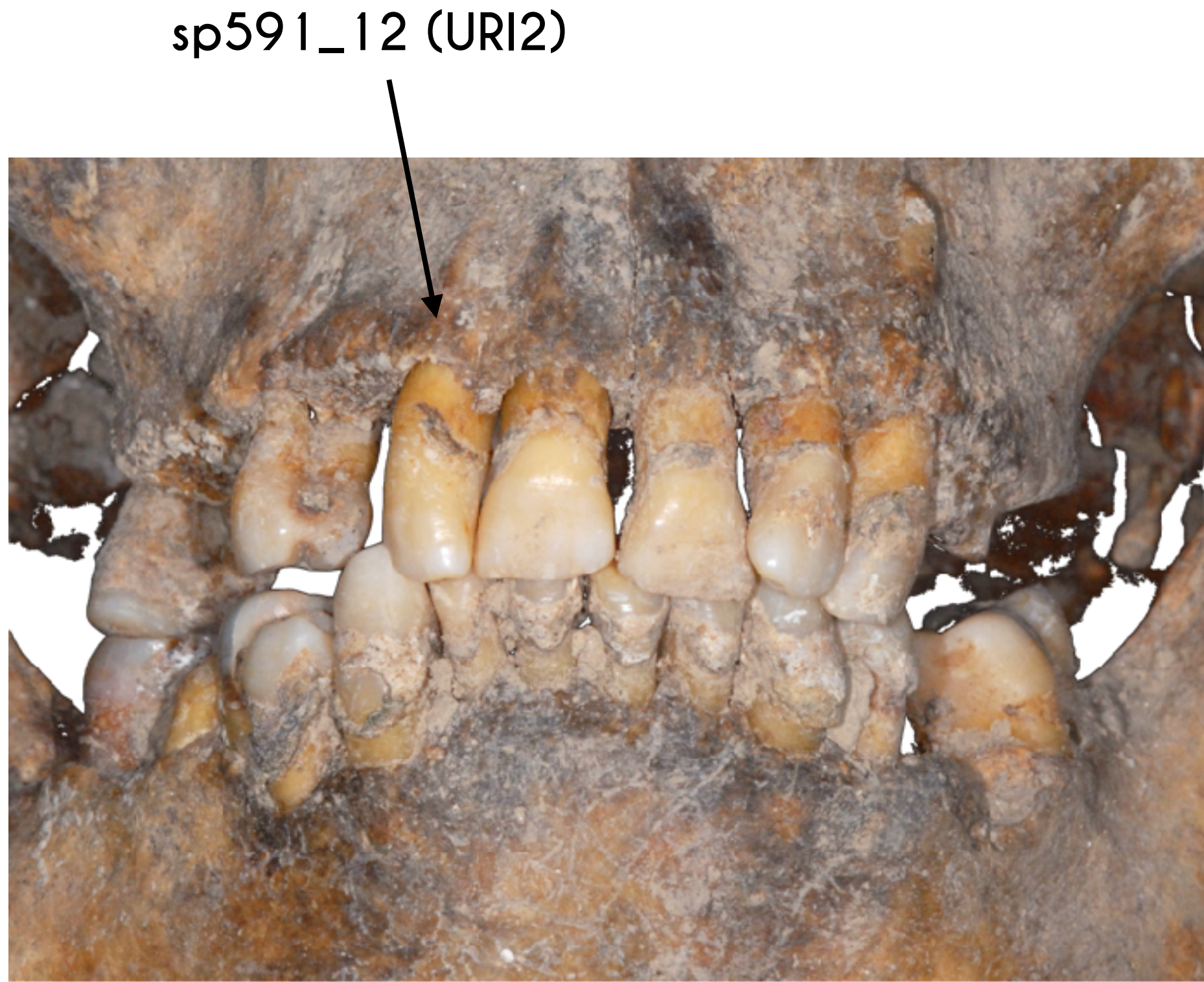
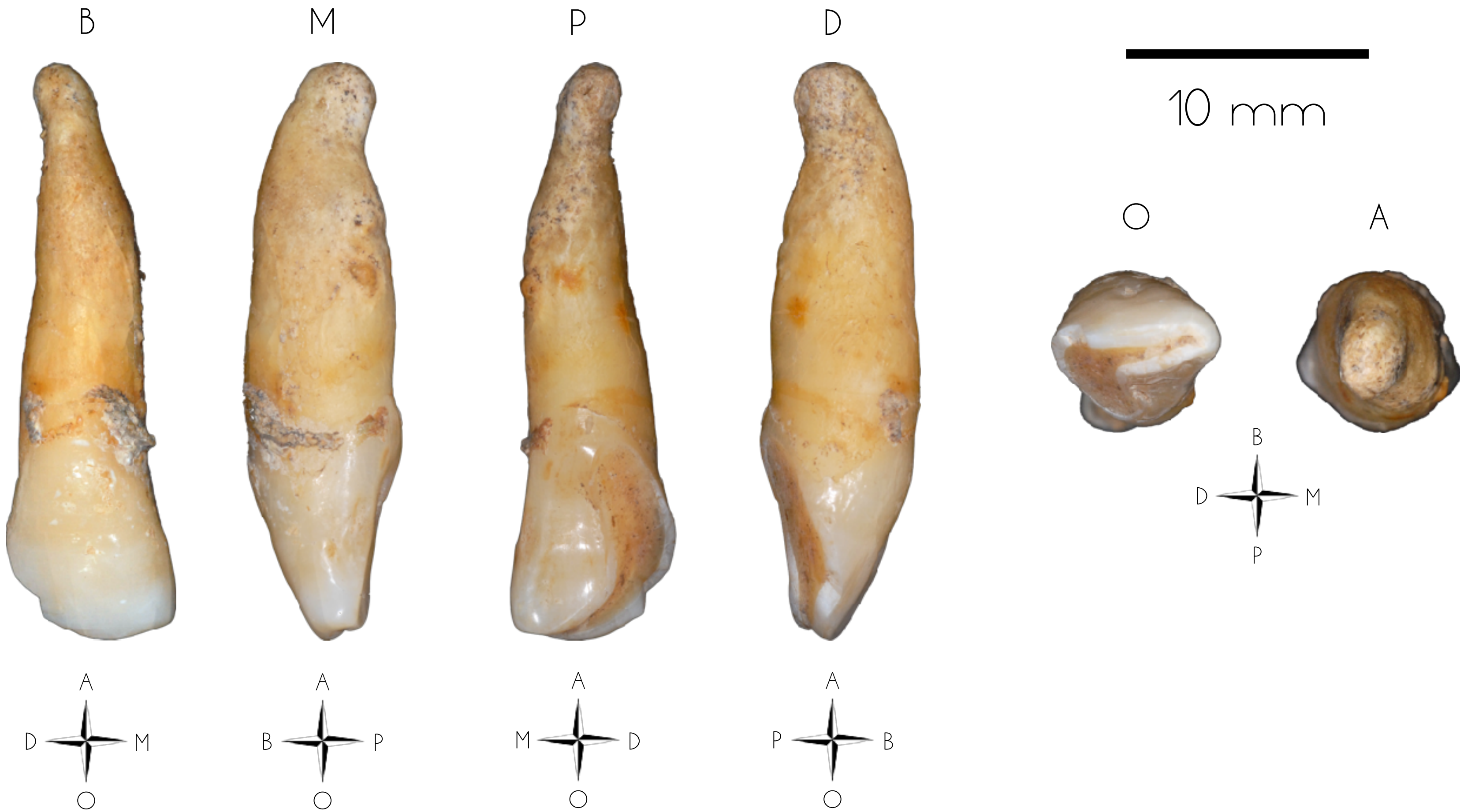
Hyperfunctional



Sp591\_12

Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
URI2	5	4	6	-	0	0	1.1.m	0	0	1d	1

URI2



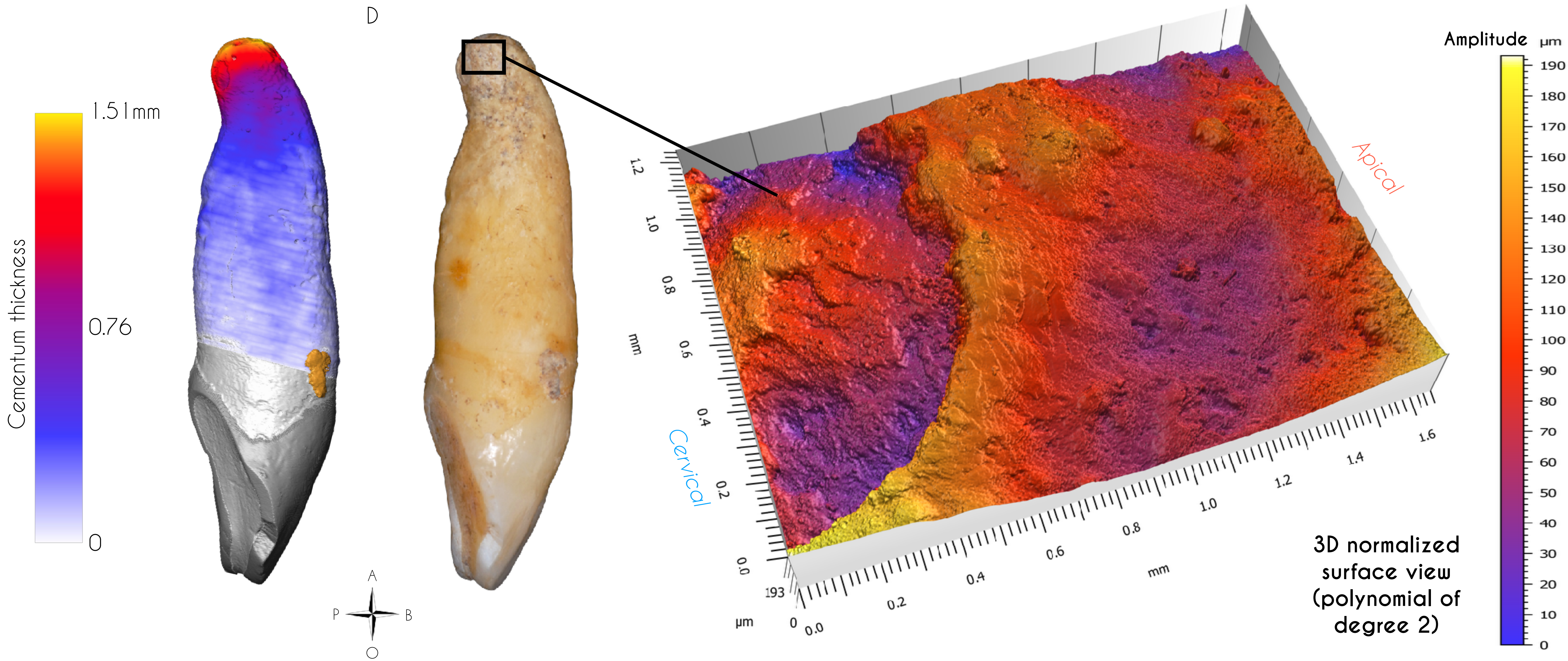
**DEG:** degree; **DIR:** direction; **FOR:** form - **CAR:** carious lesion - **Pulp EXP:** pulp exposure - **IMP:** impaction - **FEN:** fenestration; **CAL:** calculus; **NT:** tooth loss in neighbouring teeth; **ANTA:** antagonist







Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
PD	804	6.02%	1.67mm	1.25mm	2/2	2	Blue	1.47	1.61	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
1d	192	-R2	FR

Atypical SA: fracture of cementum

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
**FR:** fracture of cementum

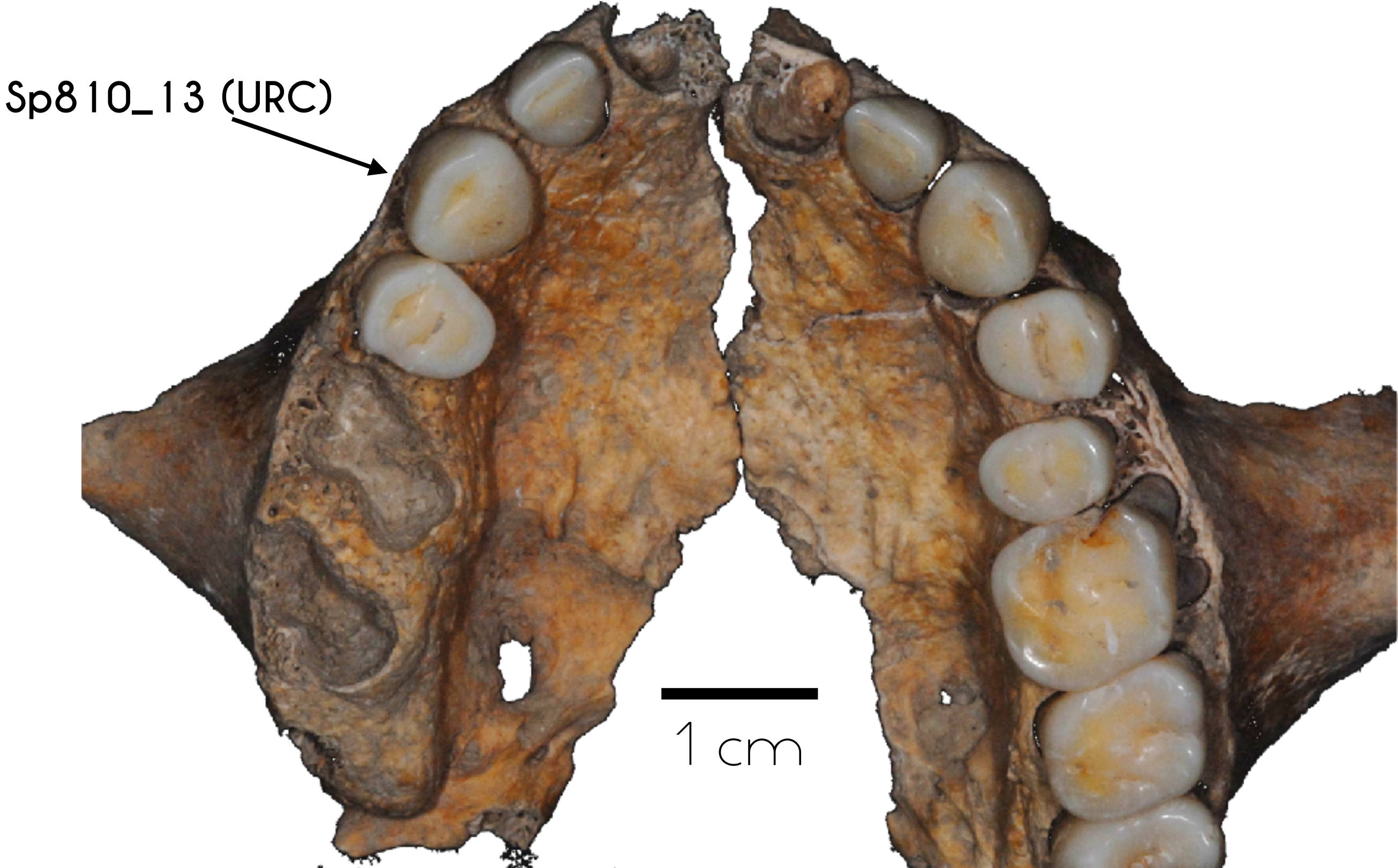
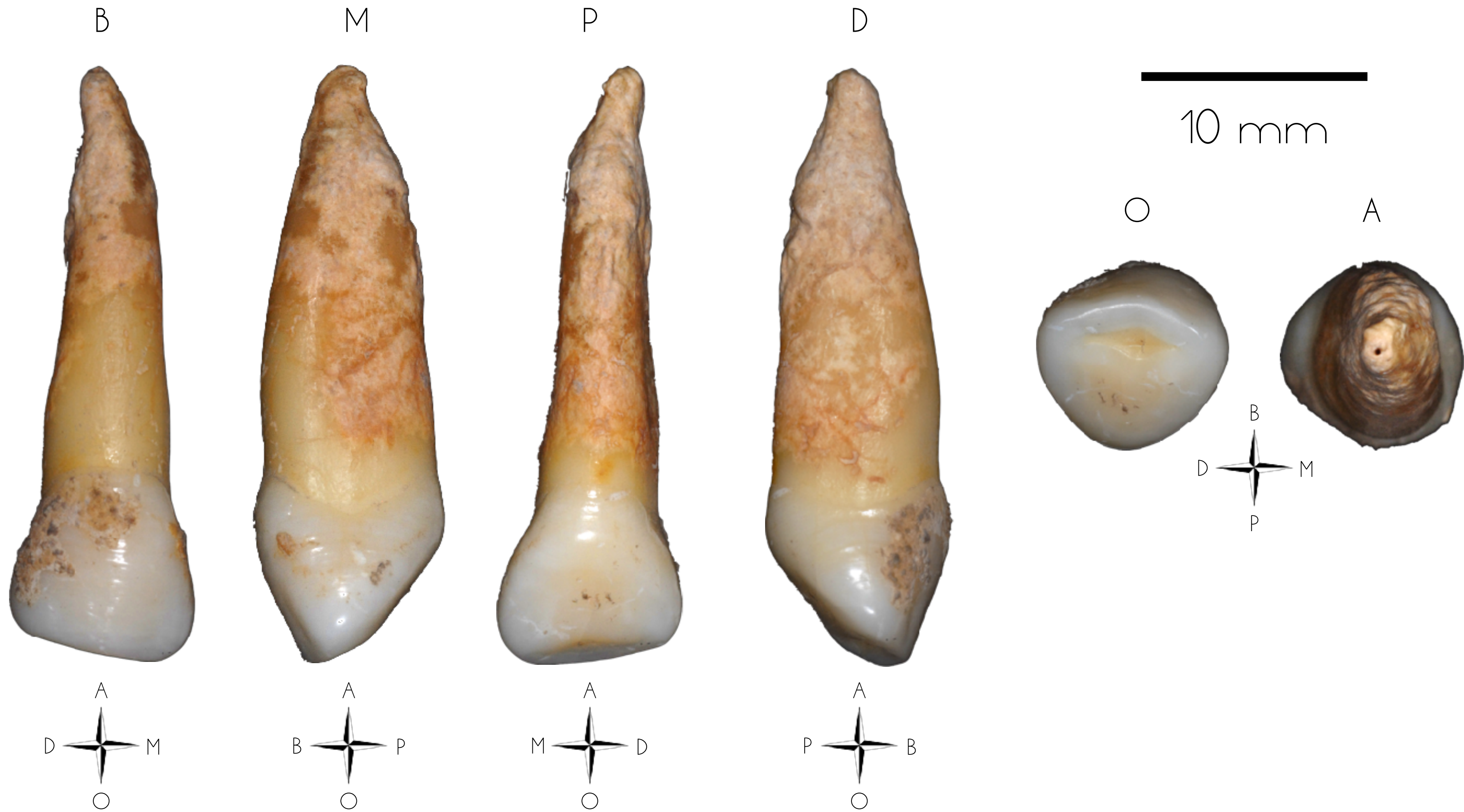
Hyperfunctional



Sp810\_13

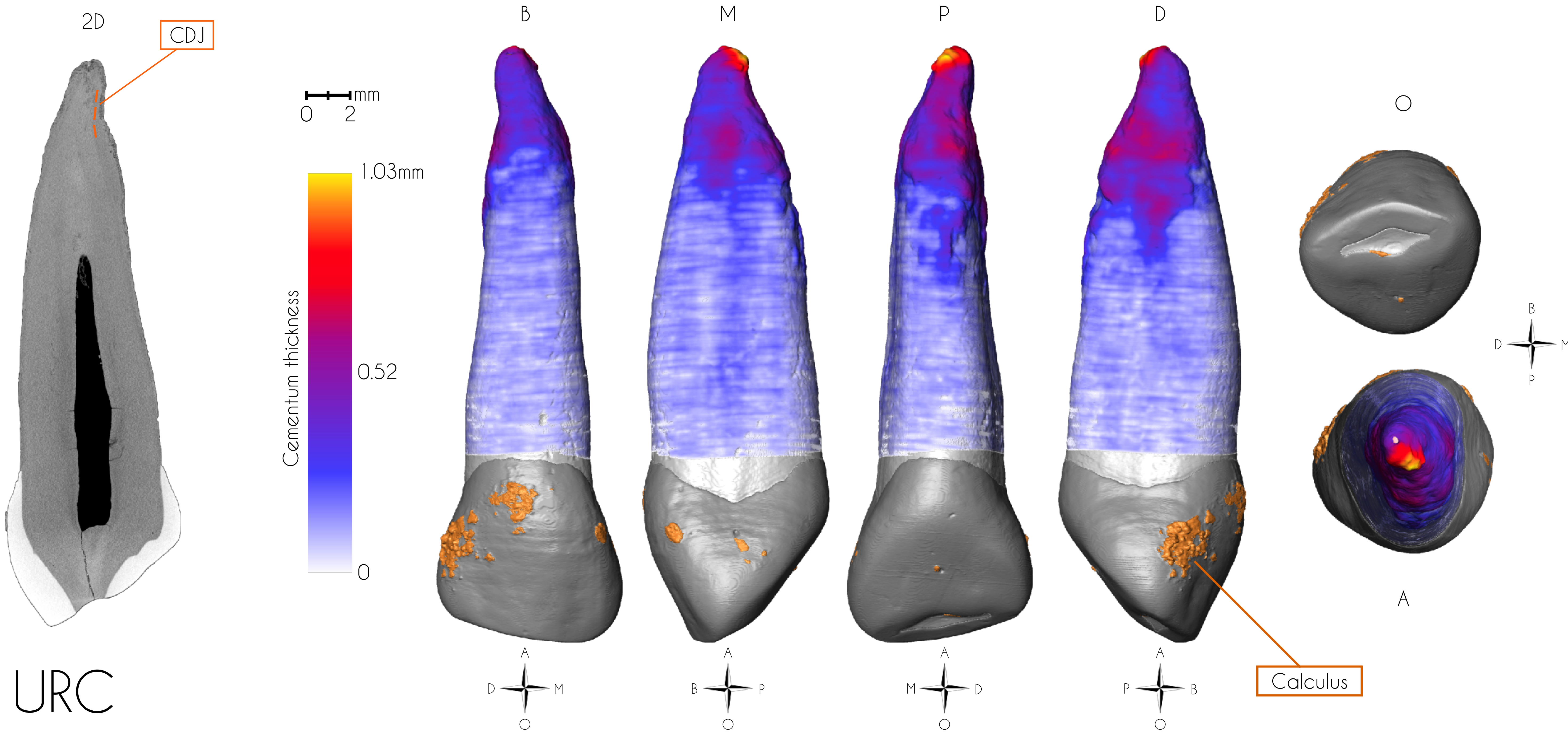
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
URC	3	2	2	-	0	0	1.3.m	0	0	0	NA

URC



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





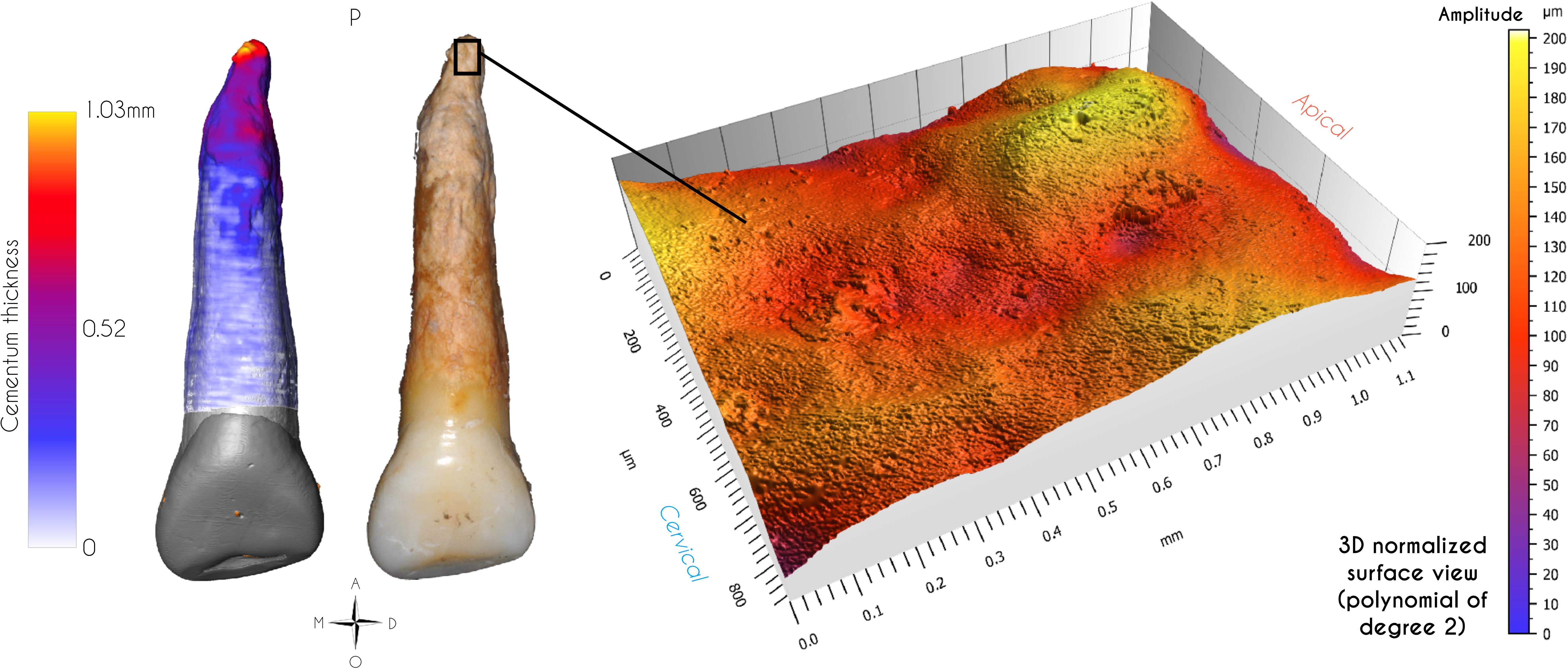
Microtomography - Thickness 3D maps				
MAX THI (μm)	LOC MAX	LOC MIN	PREF LOC	Note
1030	1>	<	Yes	-

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)  
**PREF LOC:** preferential location;

Hyperfunctional



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
<i>P</i>	<i>721</i>	<i>6.02%</i>	<i>0.88mm</i>	<i>1.25mm</i>	<i>1/2</i>	<i>2</i>	<i>Blue</i>	<i>1.5</i>	<i>1.8</i>	<i>10 %</i>



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
1>	200	-R1	-

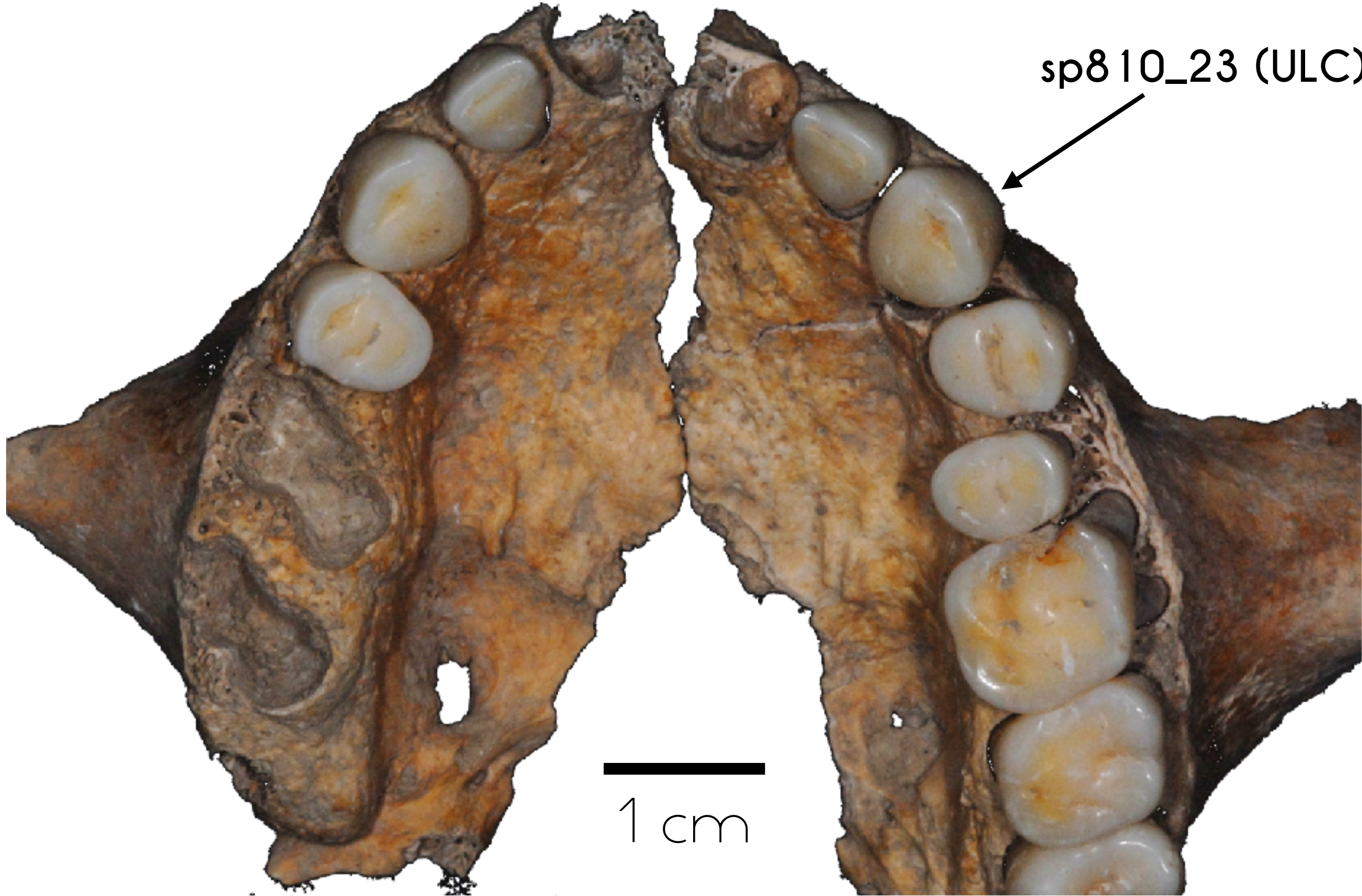
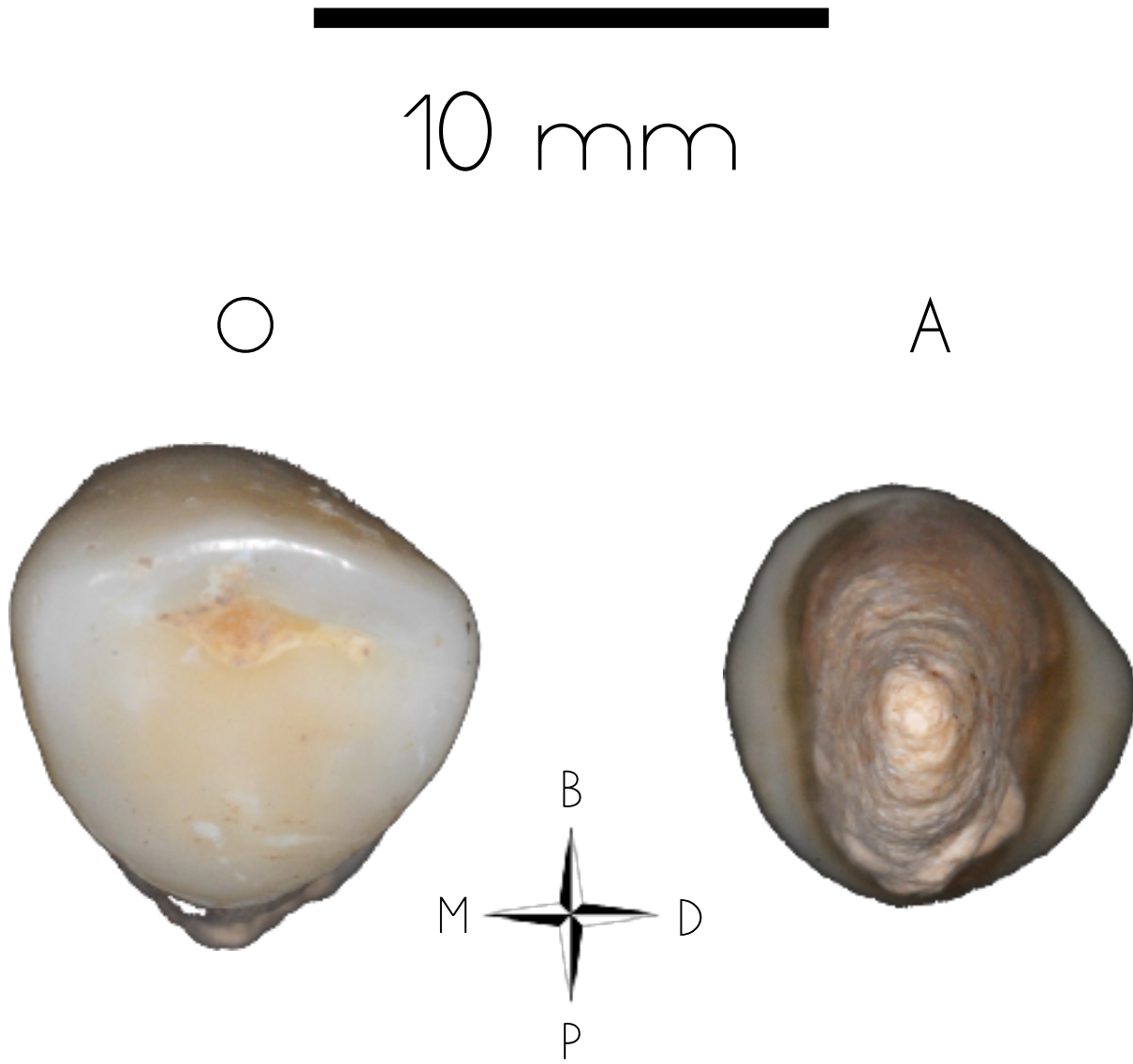
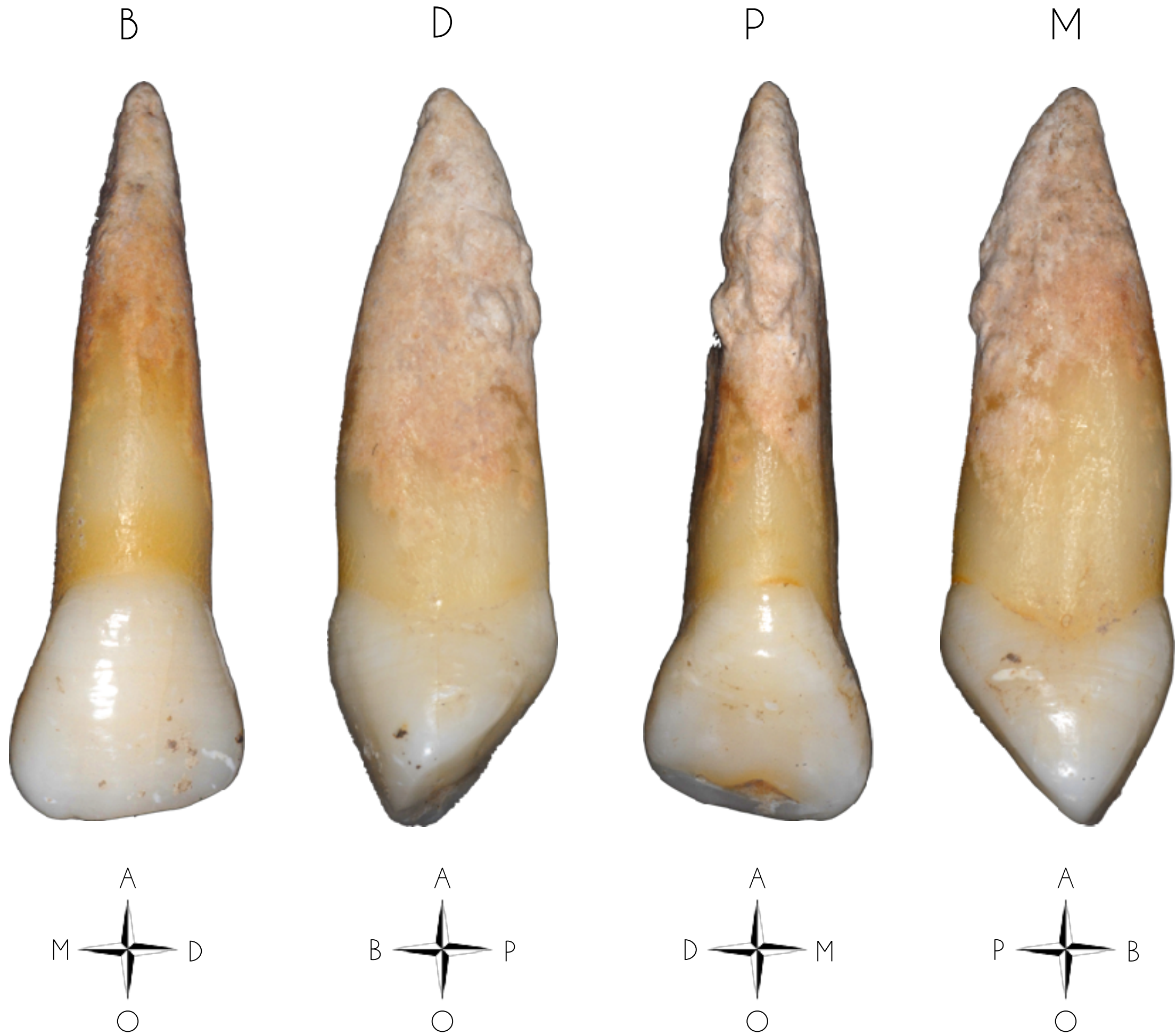
**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.



Sp810\_23

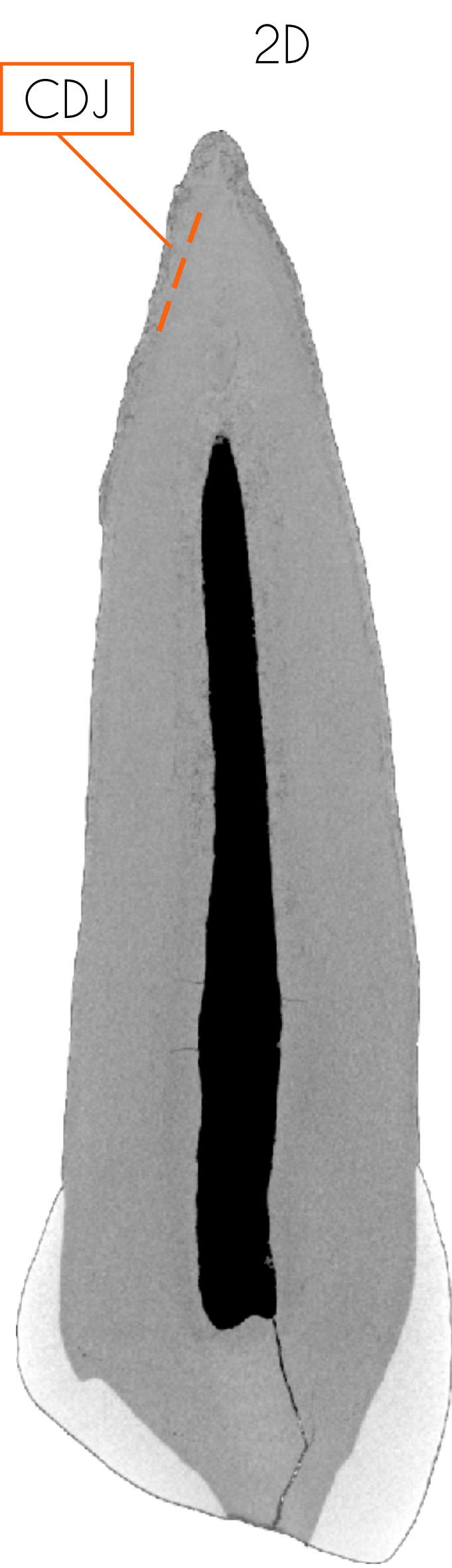
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
ULC	3	2	2	-	0	0	3.2.m	0	0	0	NA

ULC

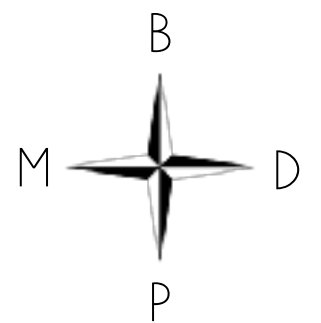
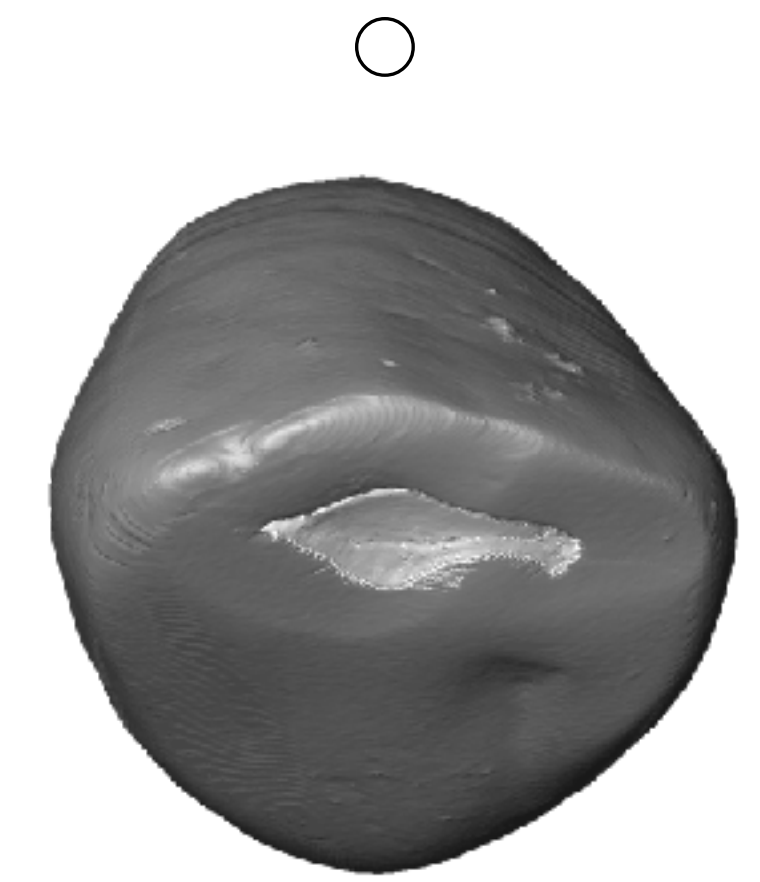
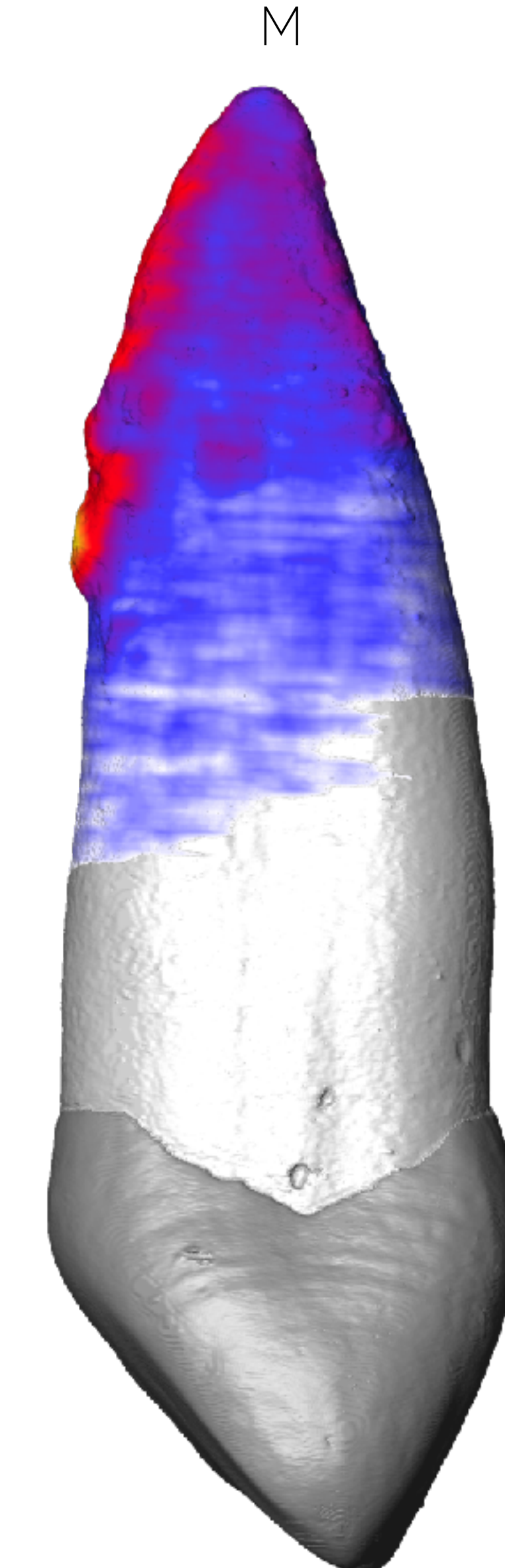
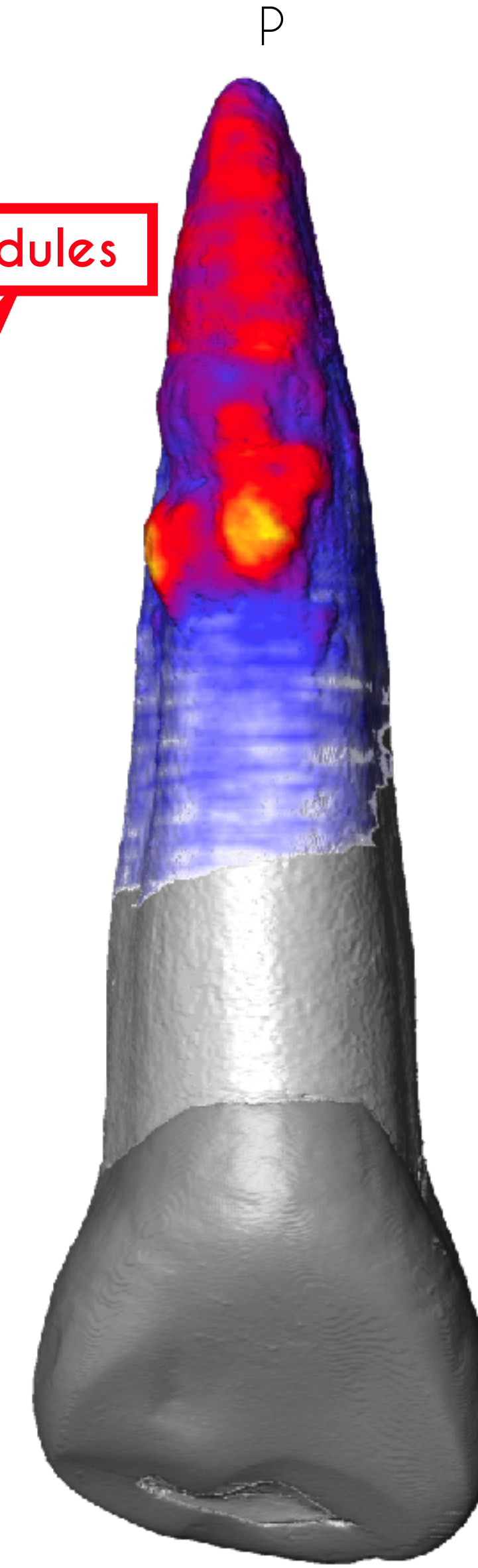
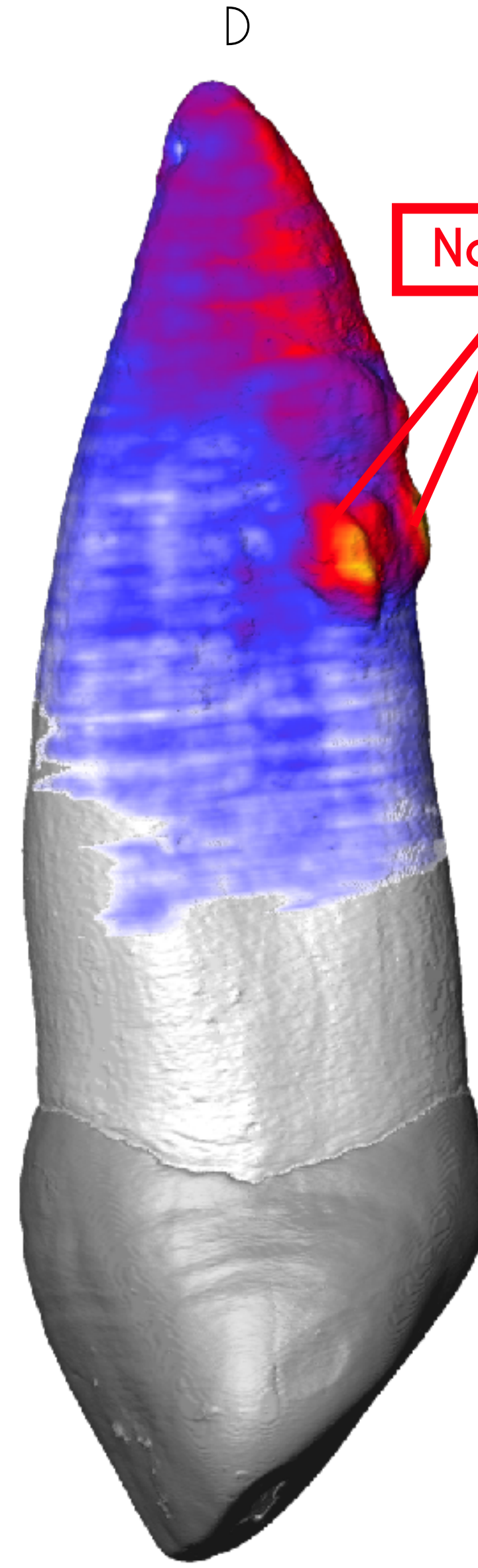
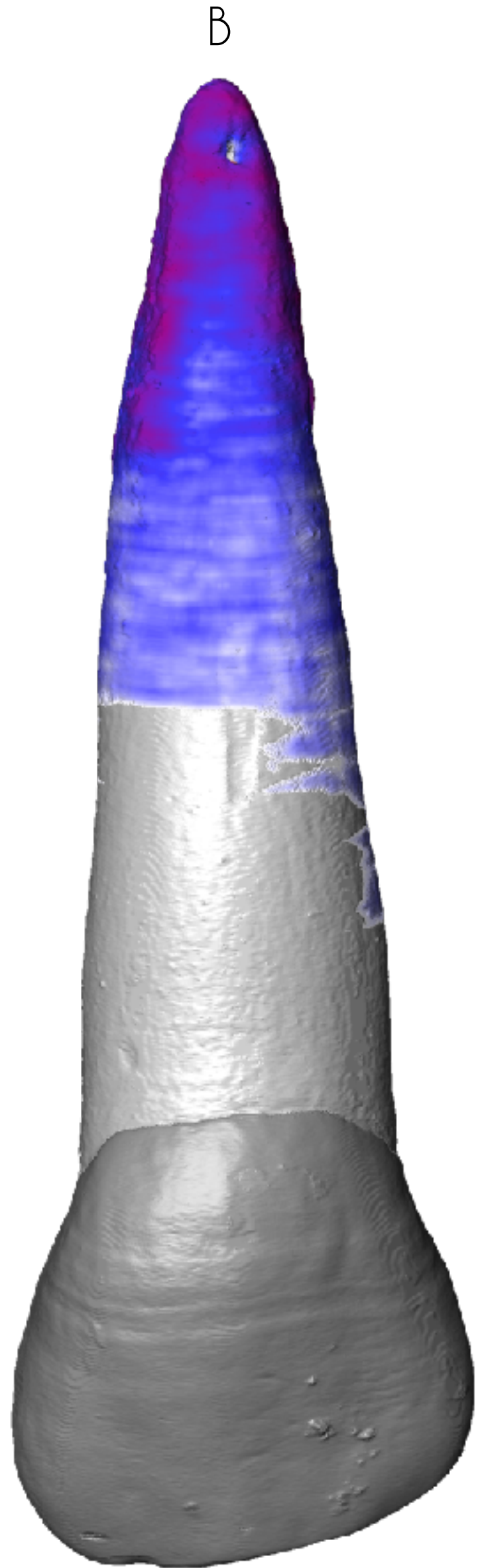
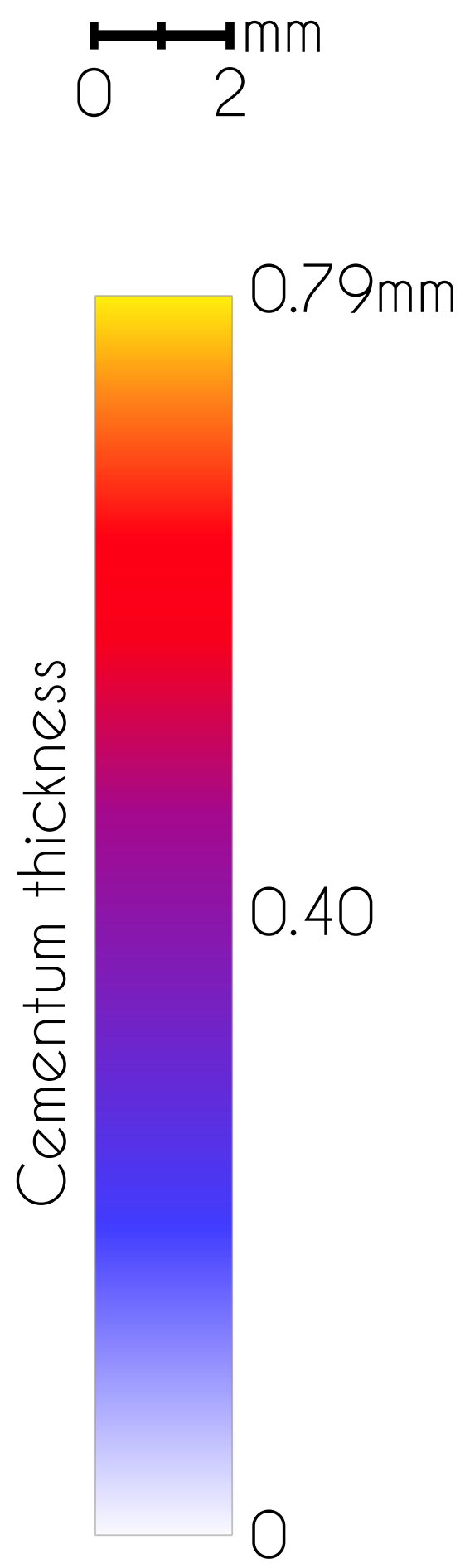


DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





ULC



A

Sp810\_23

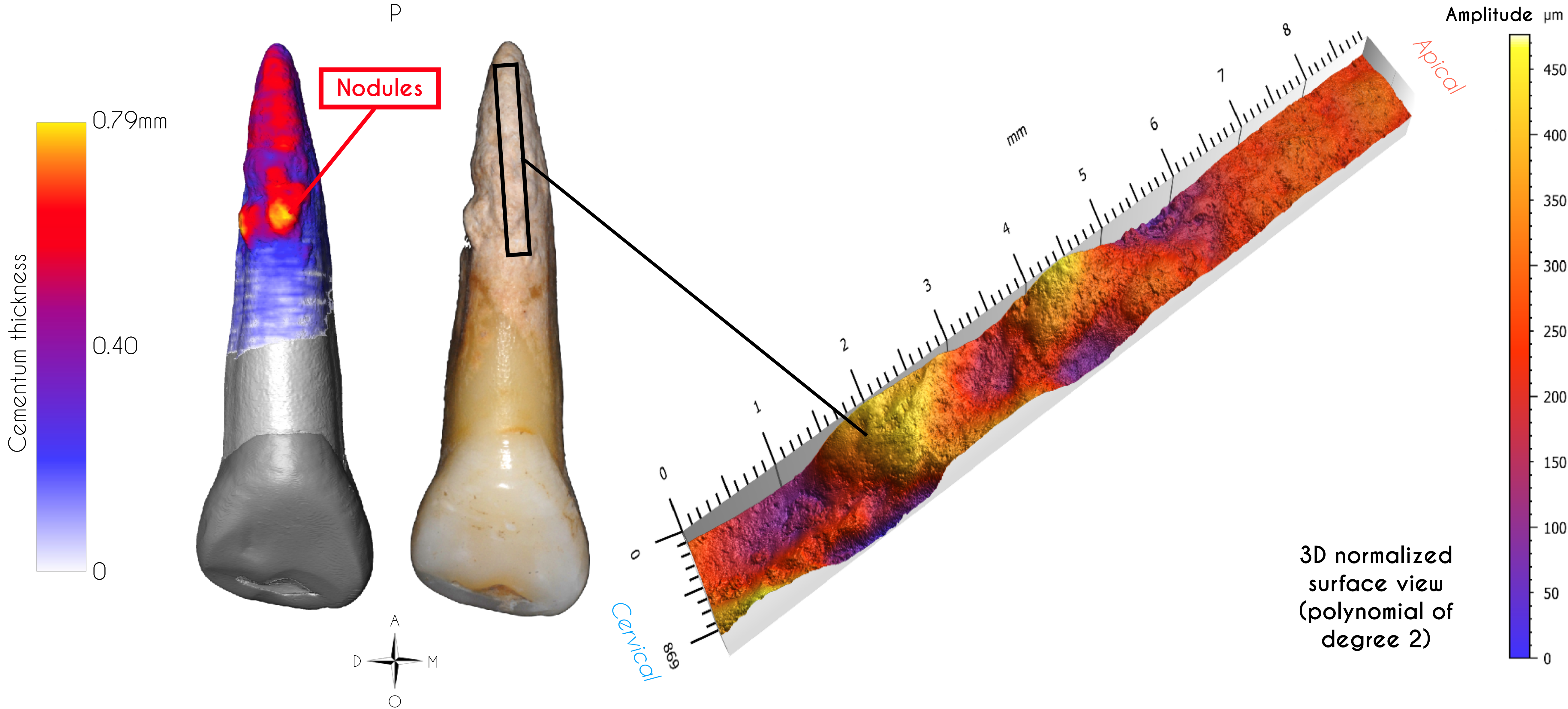
Microtomography - Thickness 3D maps				
MAX THI ( $\mu\text{m}$ )	LOC MAX	LOC MIN	PREF LOC	Note
790	2>	<	Yes	Nds (>)

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
**PREF LOC:** preferential location;  
**Nds:** nodules;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)

Hyperfunctional



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
<i>P</i>	<i>1788</i>	<i>5.50%</i>	<i>0.88mm</i>	<i>8.98mm</i>	<i>1/15</i>	<i>2</i>	<i>Blue</i>	<i>1.5</i>	<i>1.8</i>	<i>10 %</i>



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
<b>2&gt;</b>	<b>475</b>	<b>+S2</b>	<b>Nds</b>

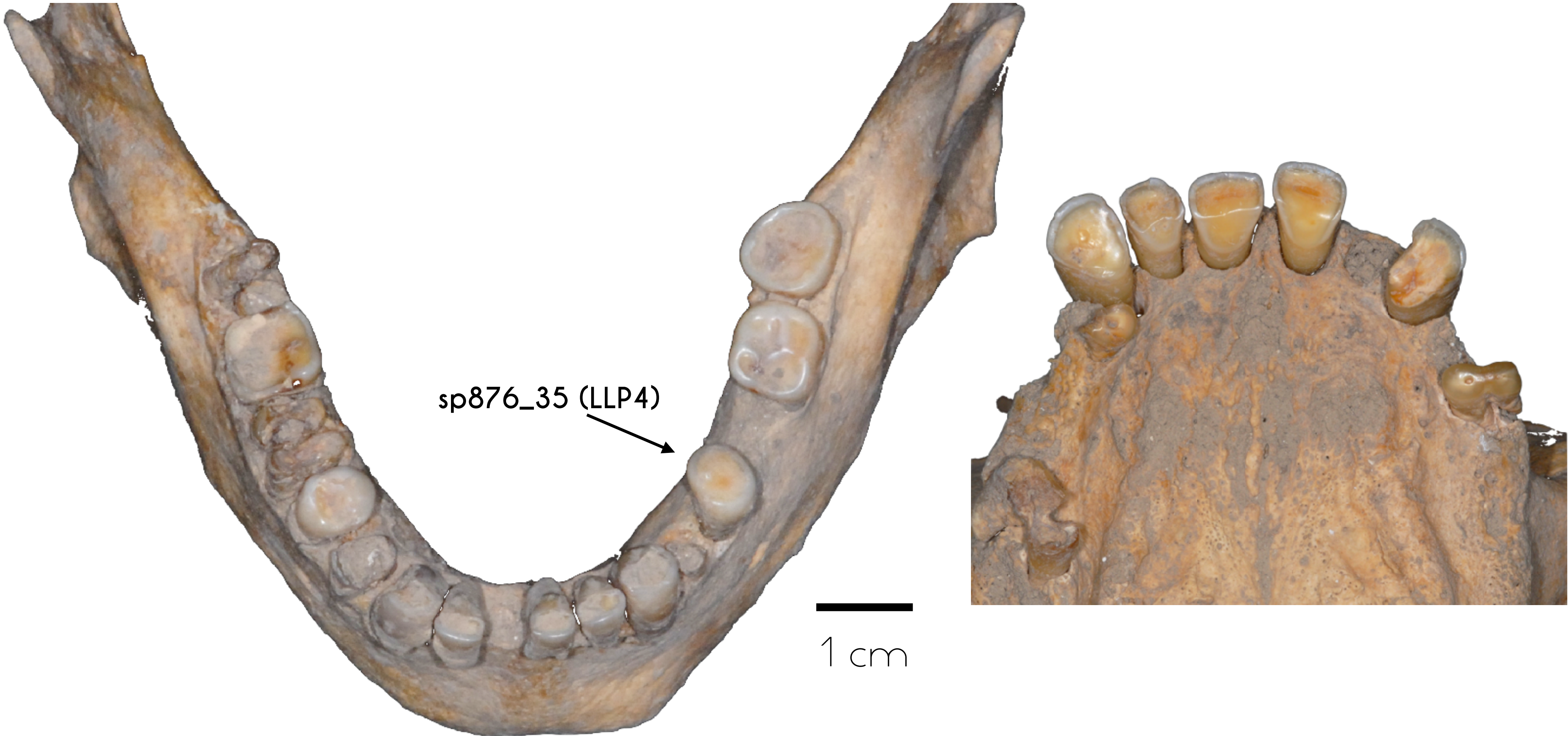
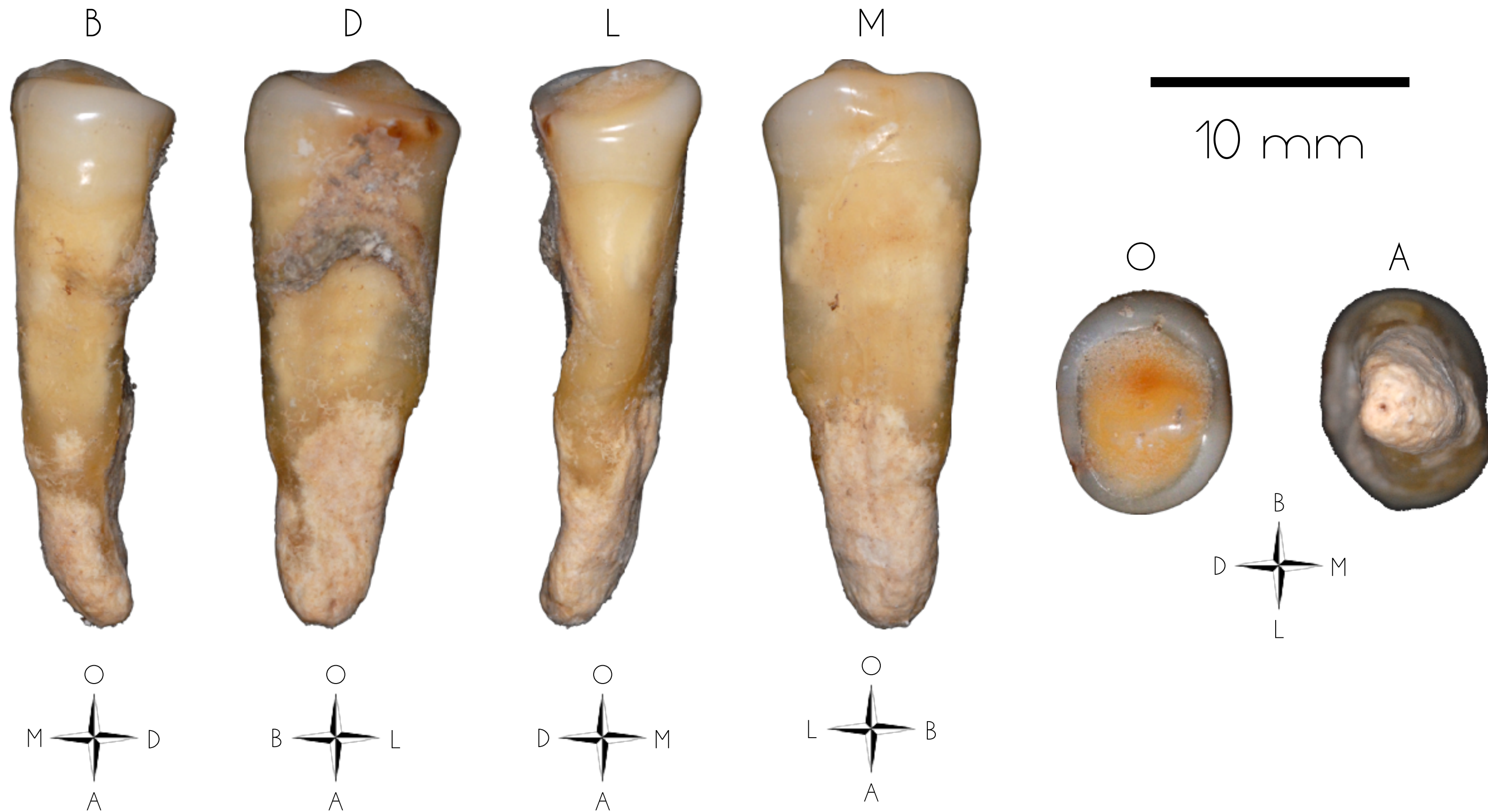
**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
**Nds:** nodules



Sp876\_35

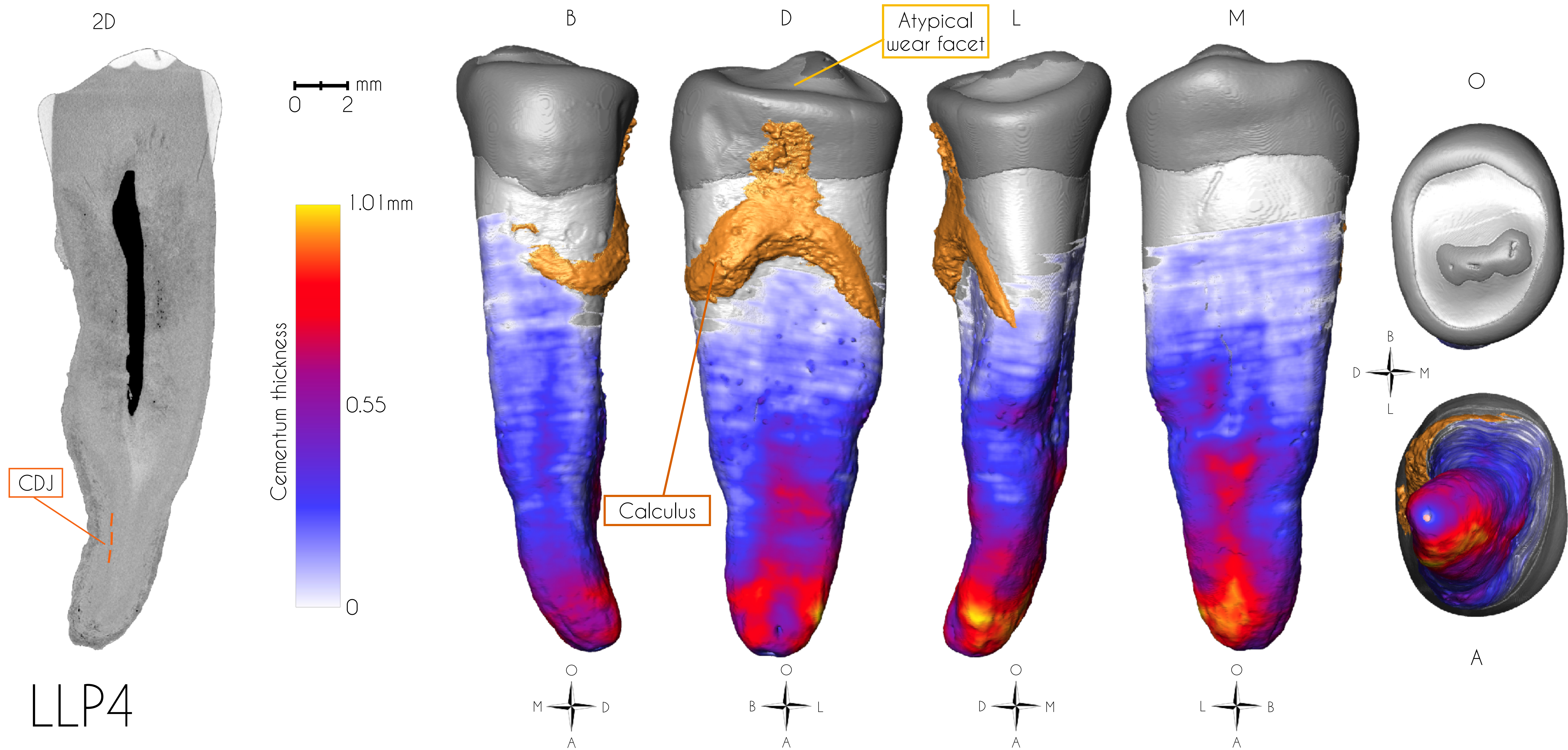
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LLP4	6	2	6	-	0	0	1.2.m	0	1	2	2

LLP4



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





Sp876\_35

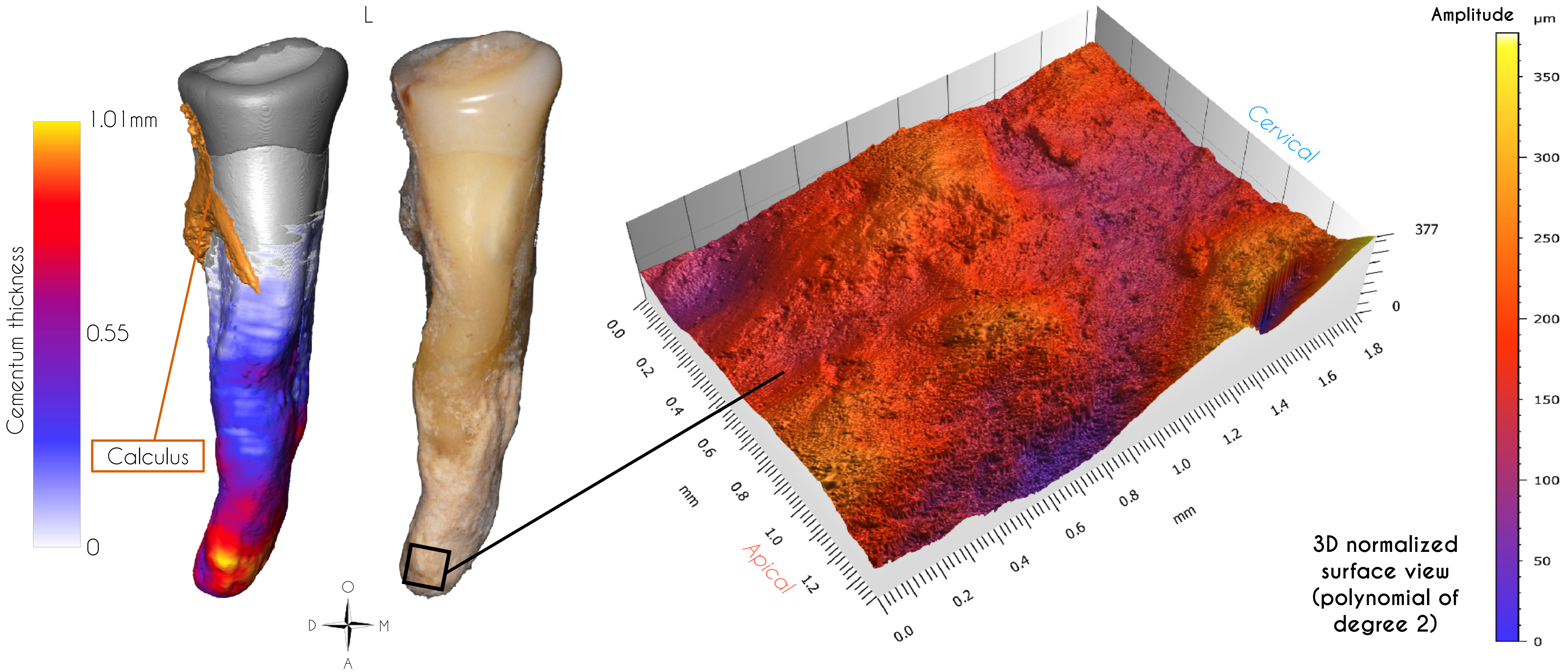
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1010	1>	<	Yes	-

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)  
**PREF LOC:** preferential location;

Hyperfunctional



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
LM	1304	5.76%	1.67mm	1.85mm	2/3	2	Blue	1.47	1.61	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
1>	250	+R2	-

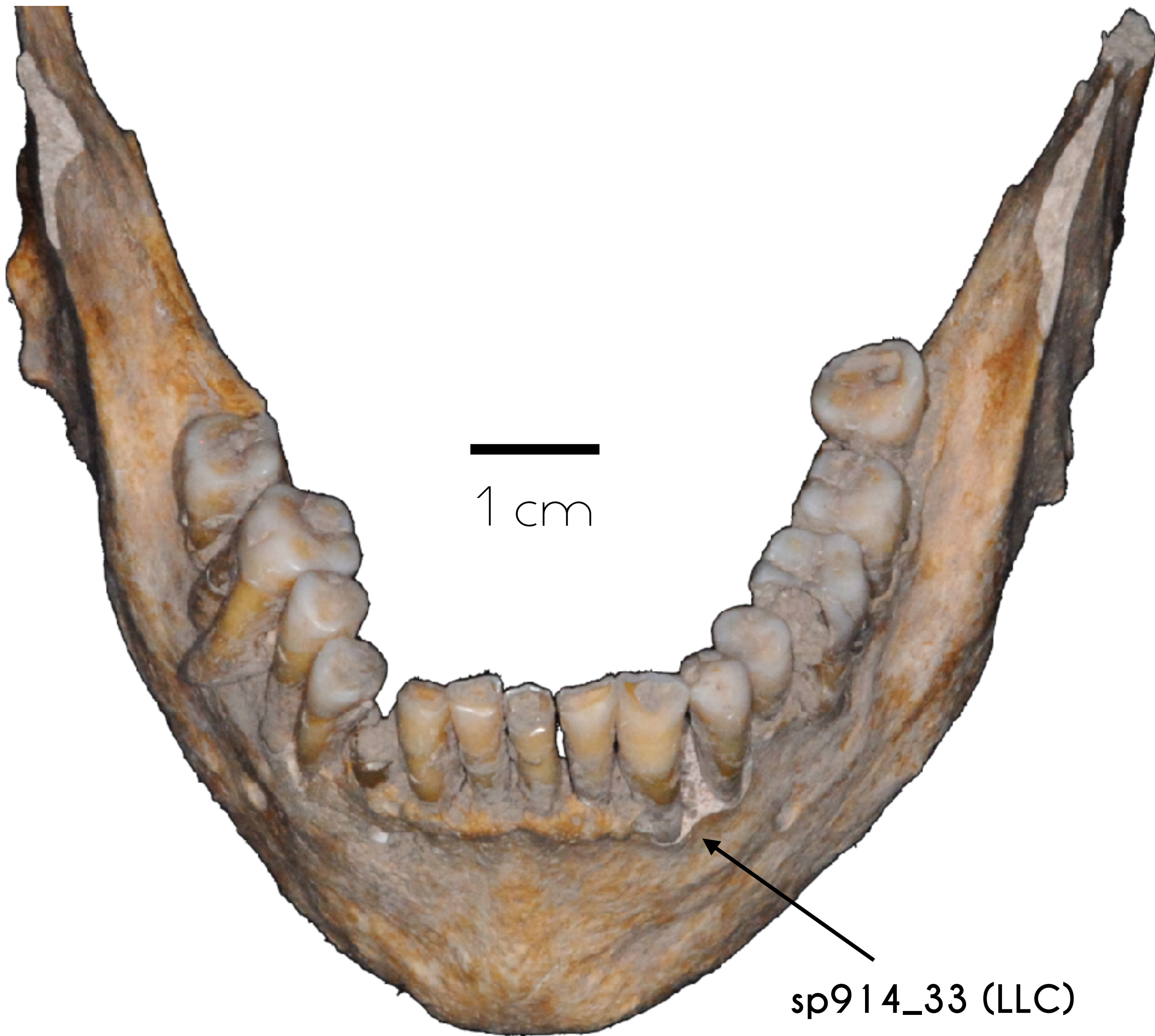
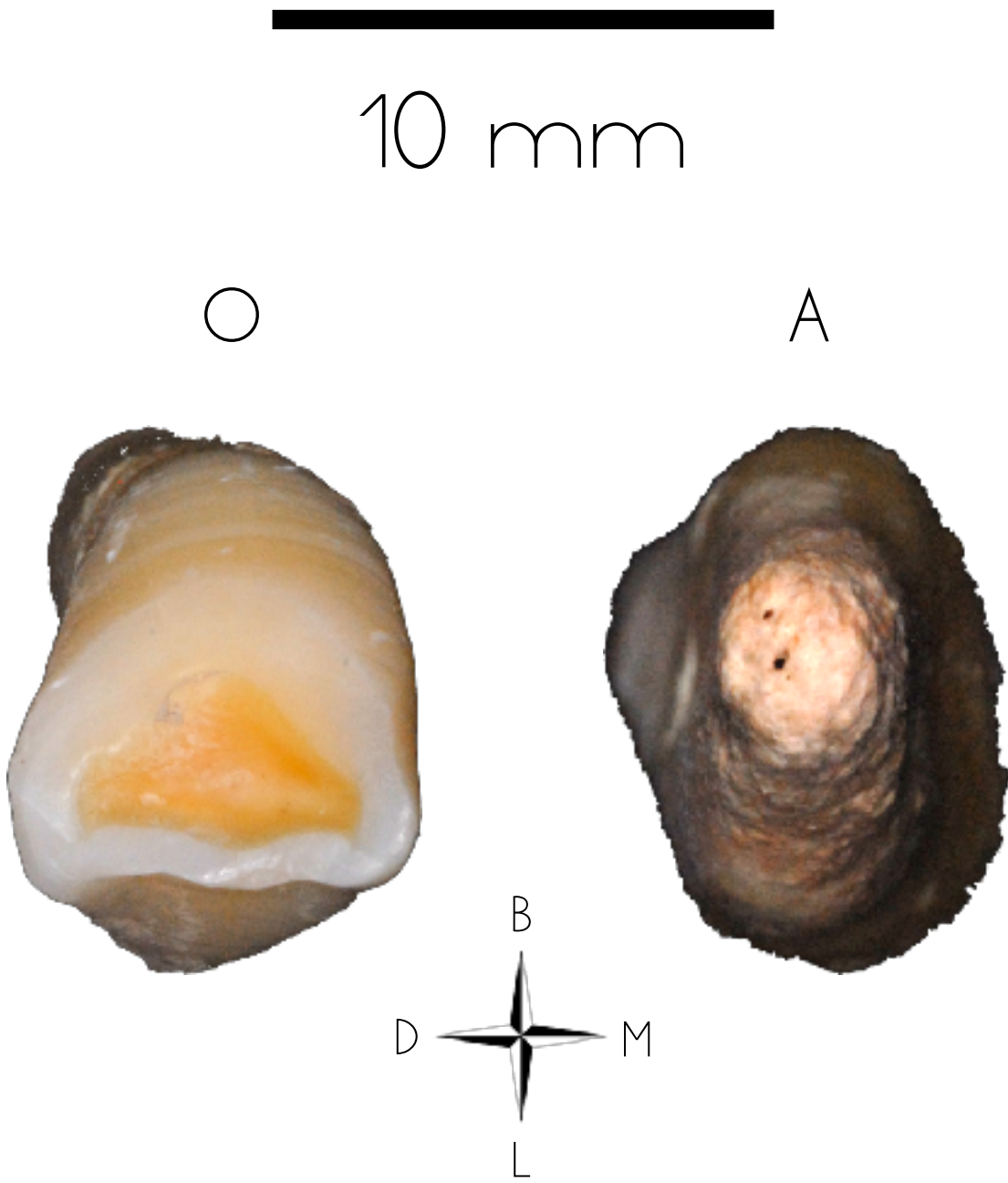
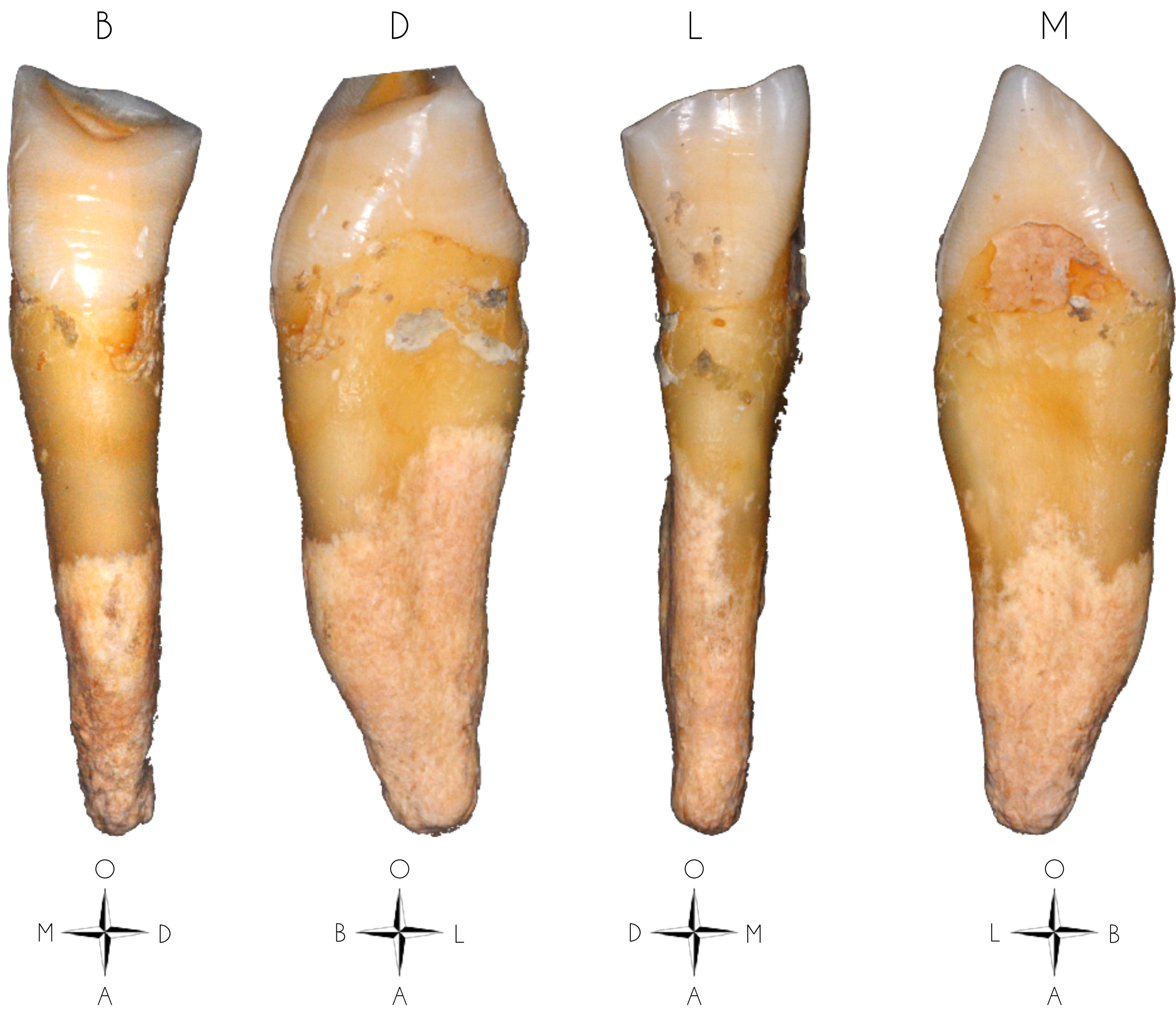
**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.



Sp914\_33

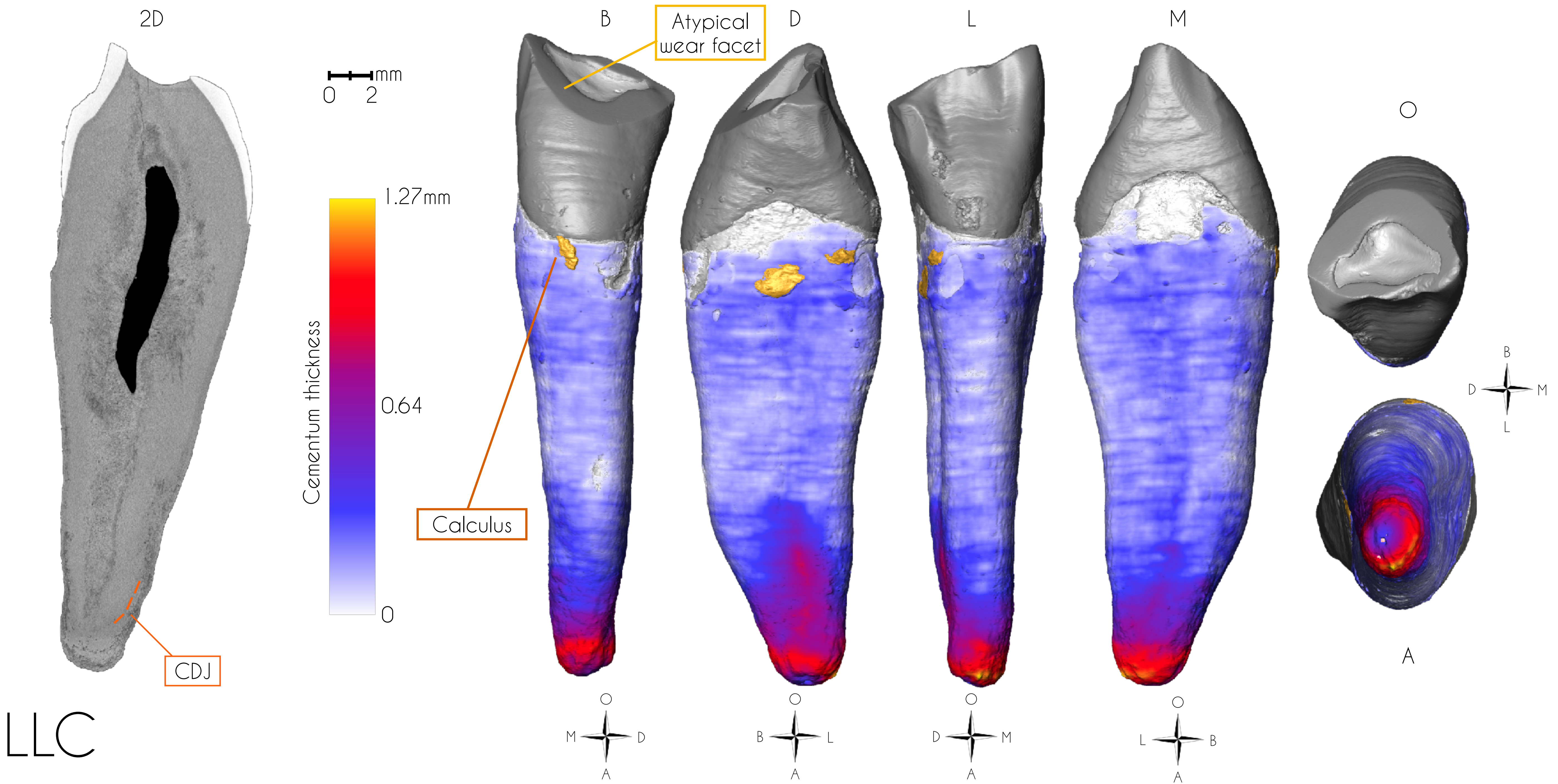
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LLC	4	4	4	-	0	0	1.2.m	0	0	0	NA

LLC



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





Sp914\_33

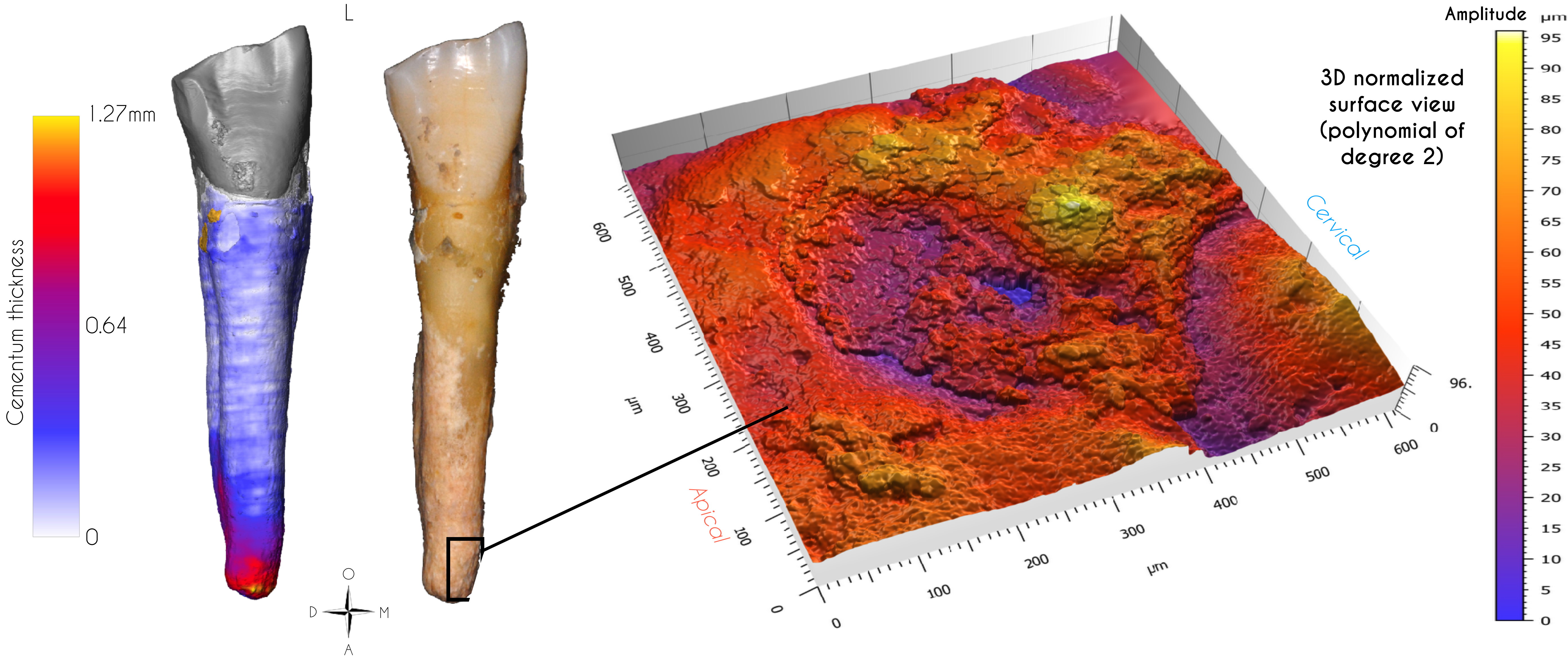
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1270	1>	No	Yes	-

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)  
**PREF LOC:** preferential location;

Hyperfunctional



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
LM	241	4.91%	1.67mm	1.85mm	2/3	2	Blue	1.47	1.61	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
1>	95	+R 1	-

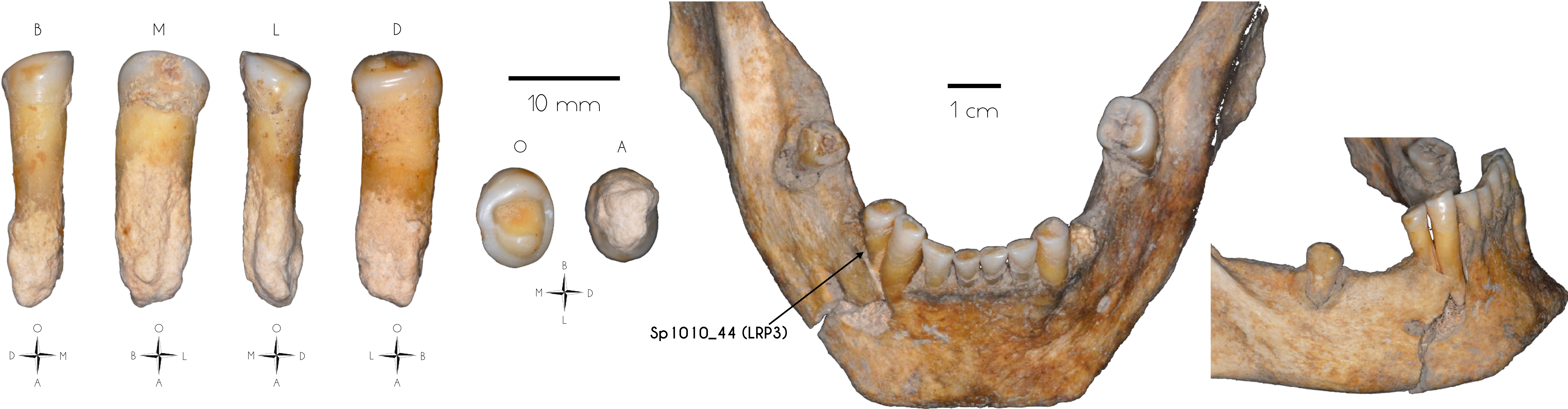
**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.



Sp1010\_44

Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LRP3	5	4	6	-	0	0	3.2.M	0	0	1d	NA

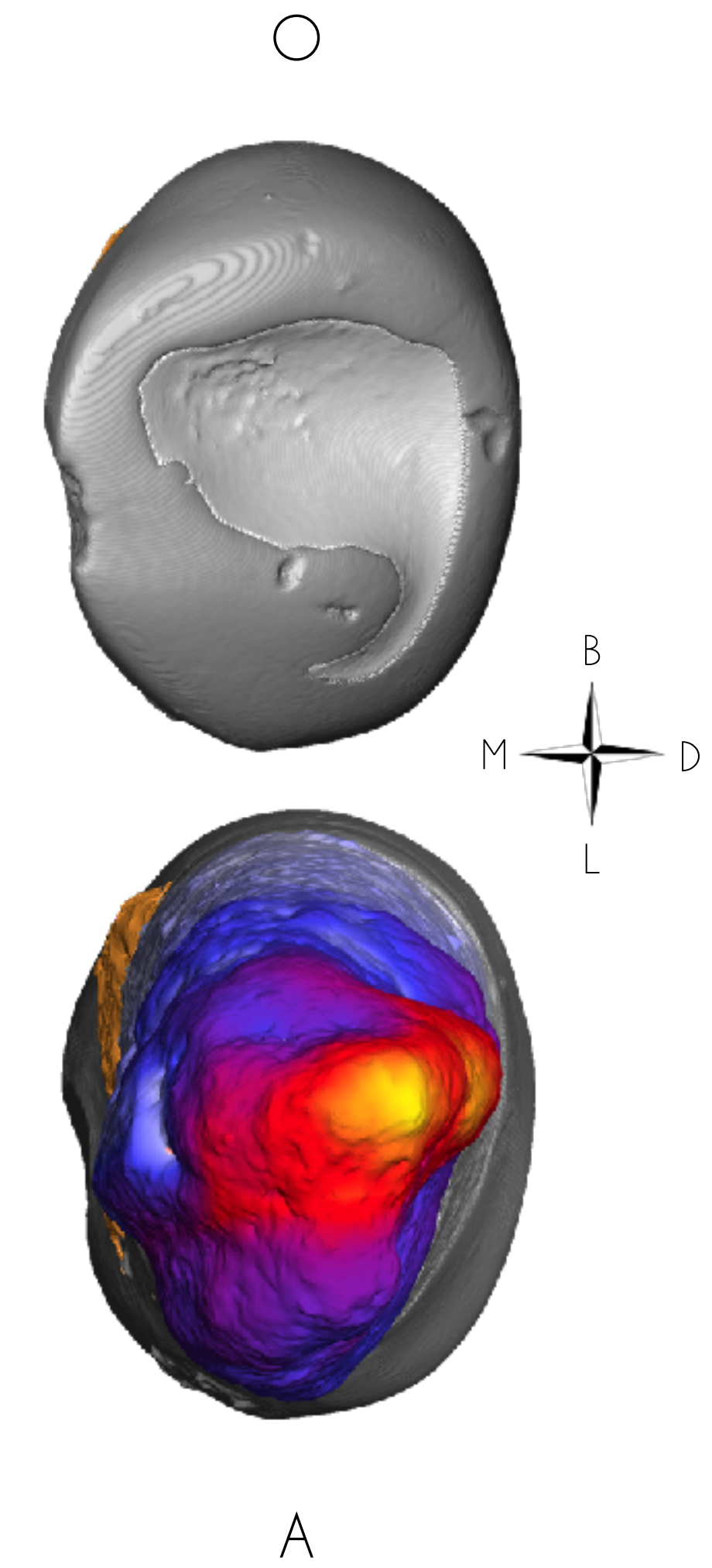
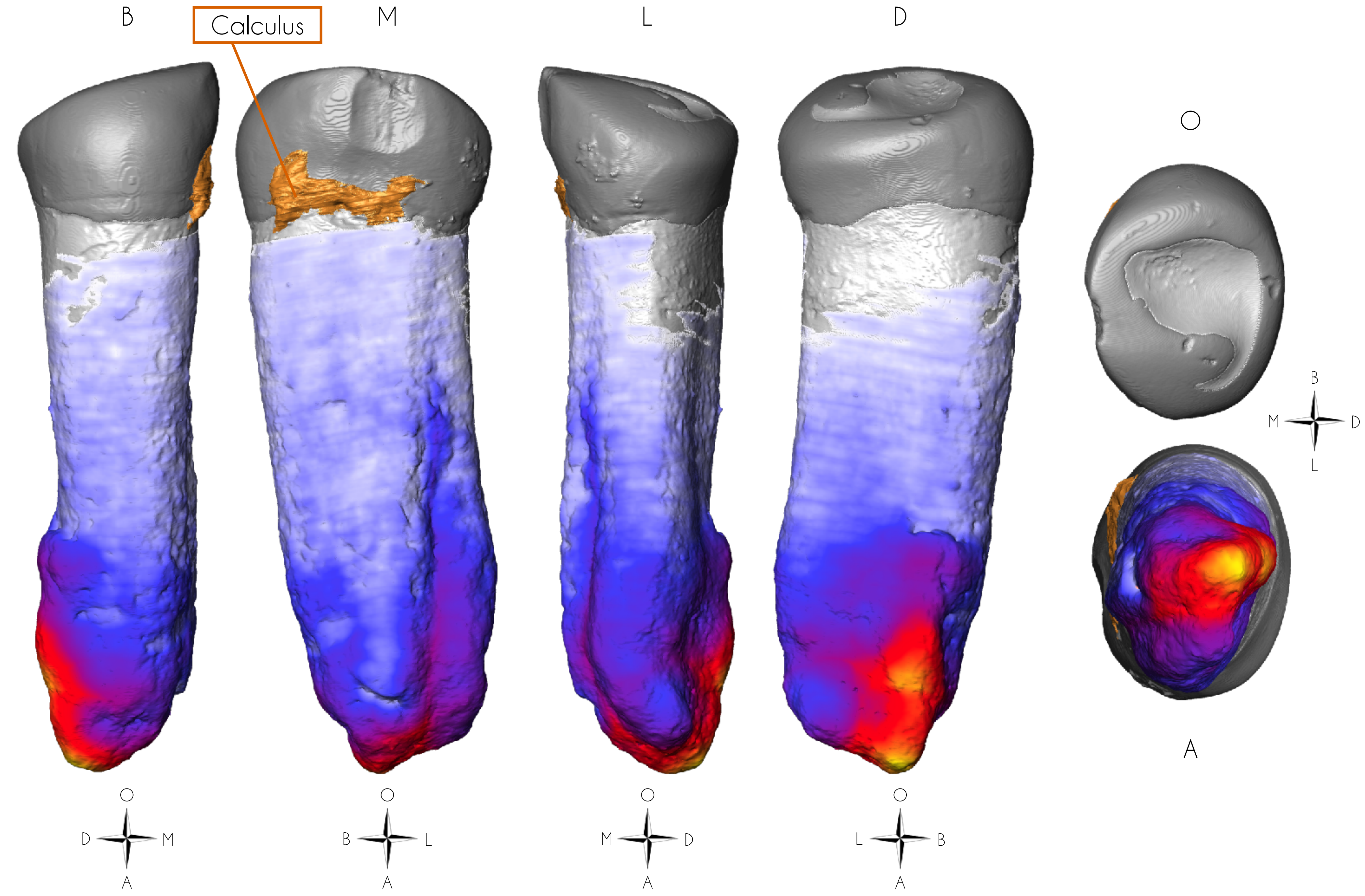
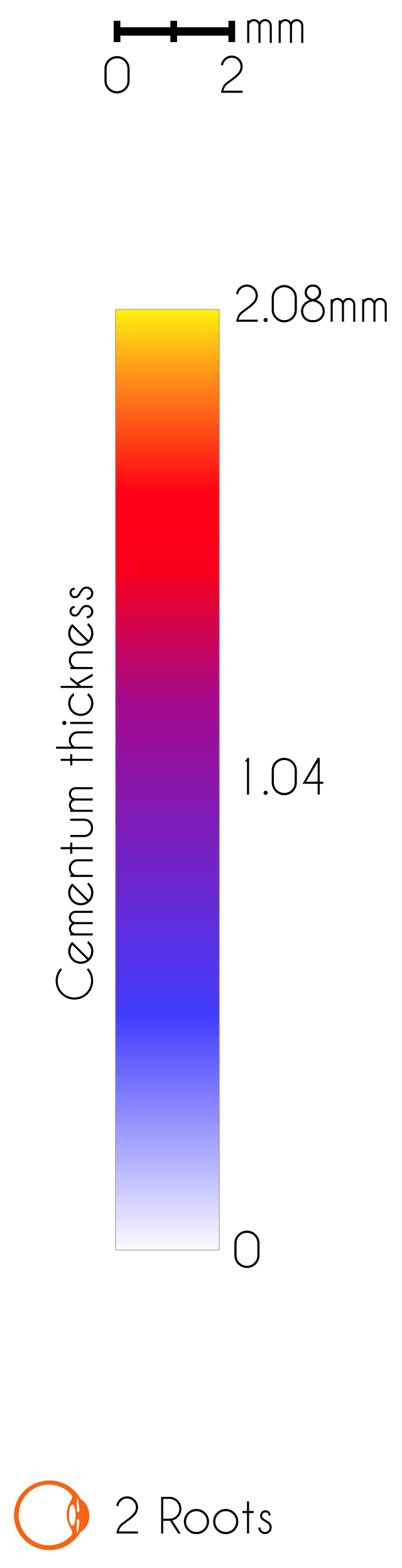
LRP3



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist



LRP3



Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
2080	1 d	m	Yes	2 roots

MAX THI: maximum thickness of cementum;  
LOC MAX: location of maximum thickness;  
LOC MIN: location of minimum thickness;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)  
PREF LOC: preferential location;

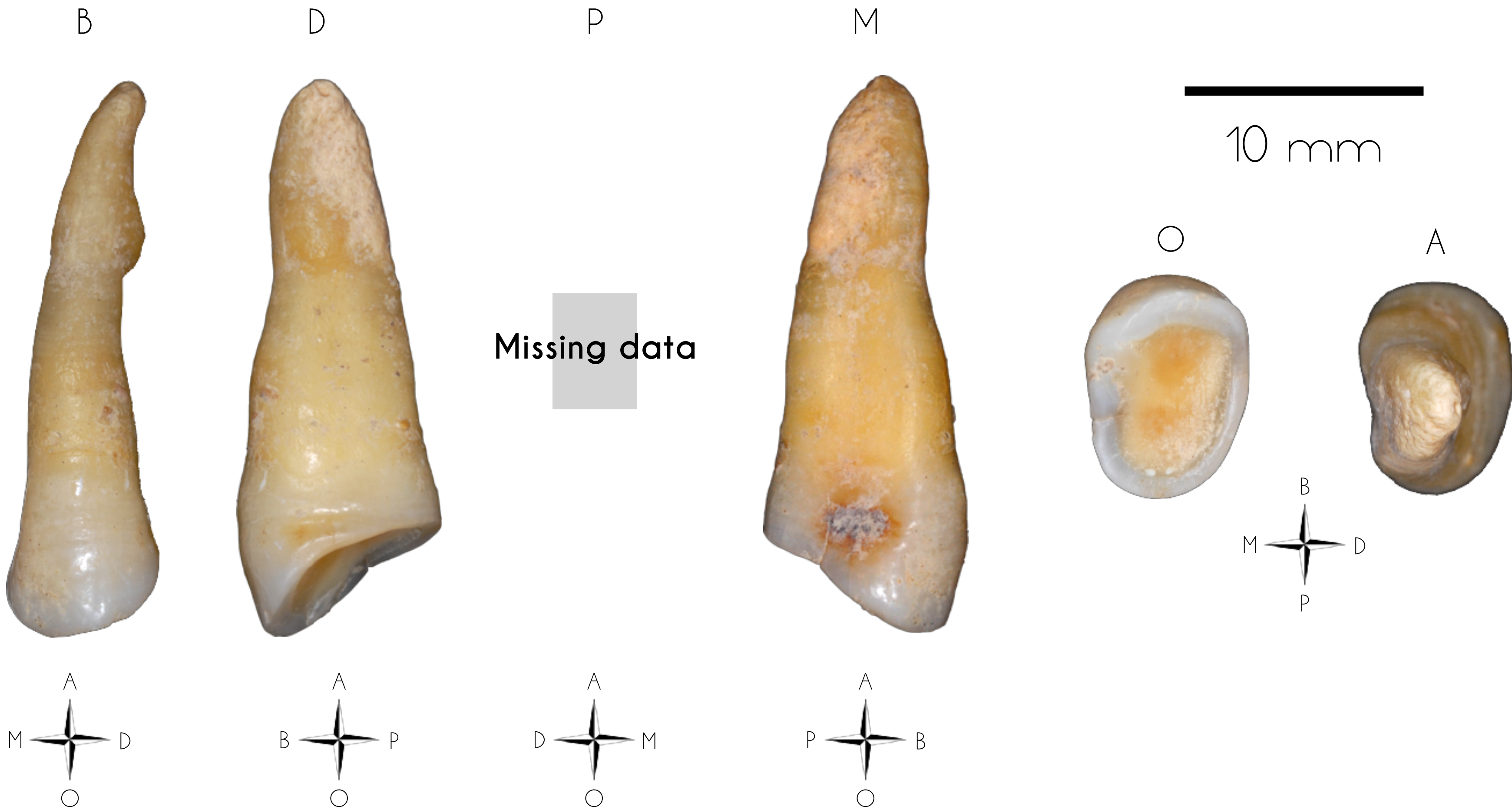
Excluded



Sp1172\_24

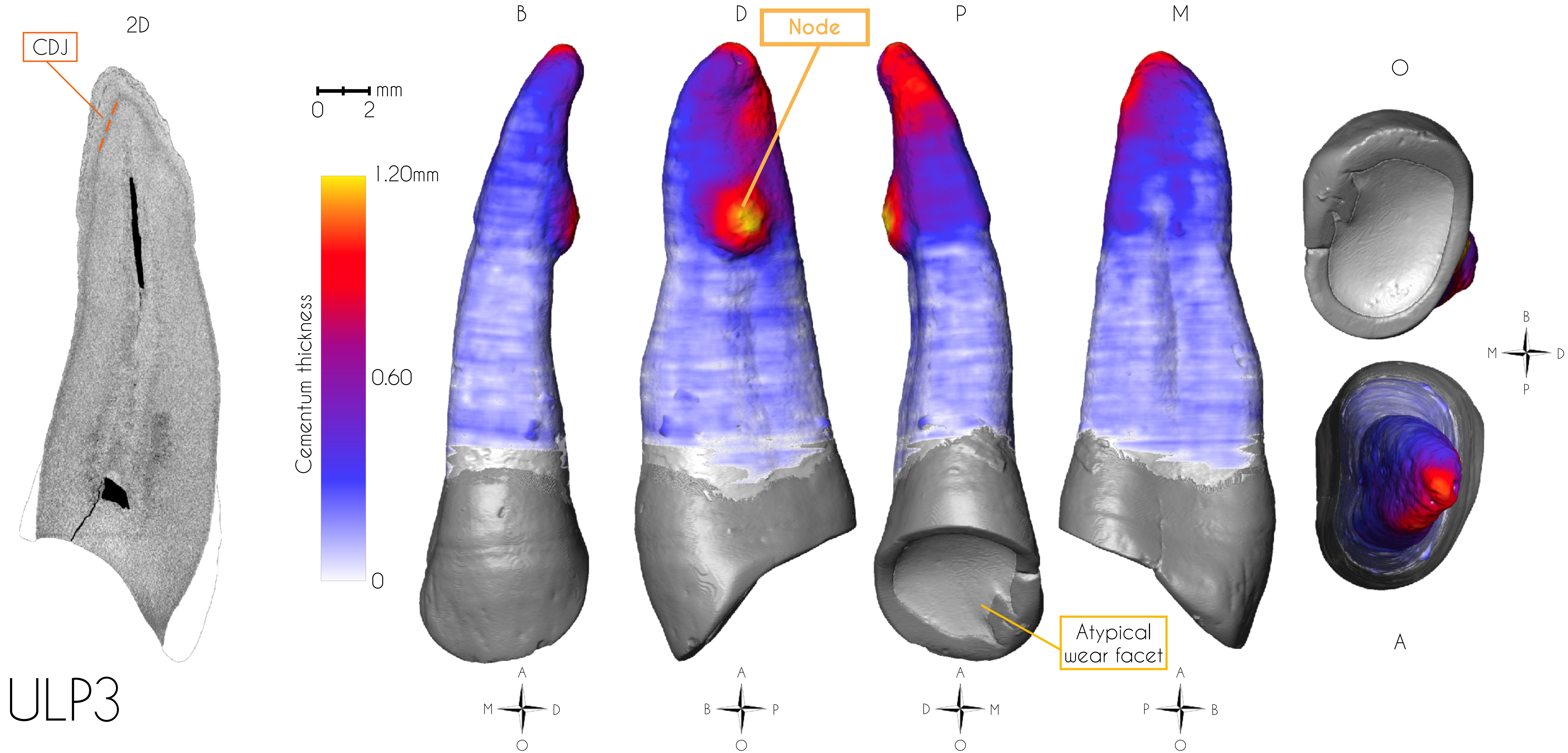
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
ULP3	6	2	4	-	0	0	3.2.M	0	0	1d	1

ULP3



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





Microtomography - Thickness 3D maps				
MAX THI (μm)	LOC MAX	LOC MIN	PREF LOC	Note
1200	2d	<	Yes	NOD (d)

MAX THI: maximum thickness of cementum;  
LOC MAX: location of maximum thickness;  
LOC MIN: location of minimum thickness;  
PREF LOC: preferential location;  
NOD: node;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)

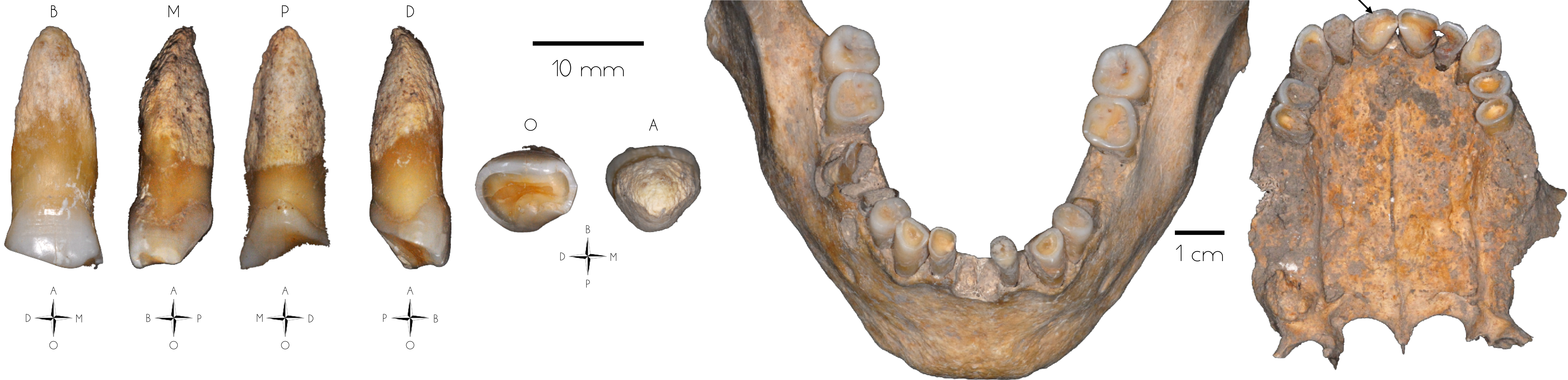
Hyperfunctional



Sp1135\_11

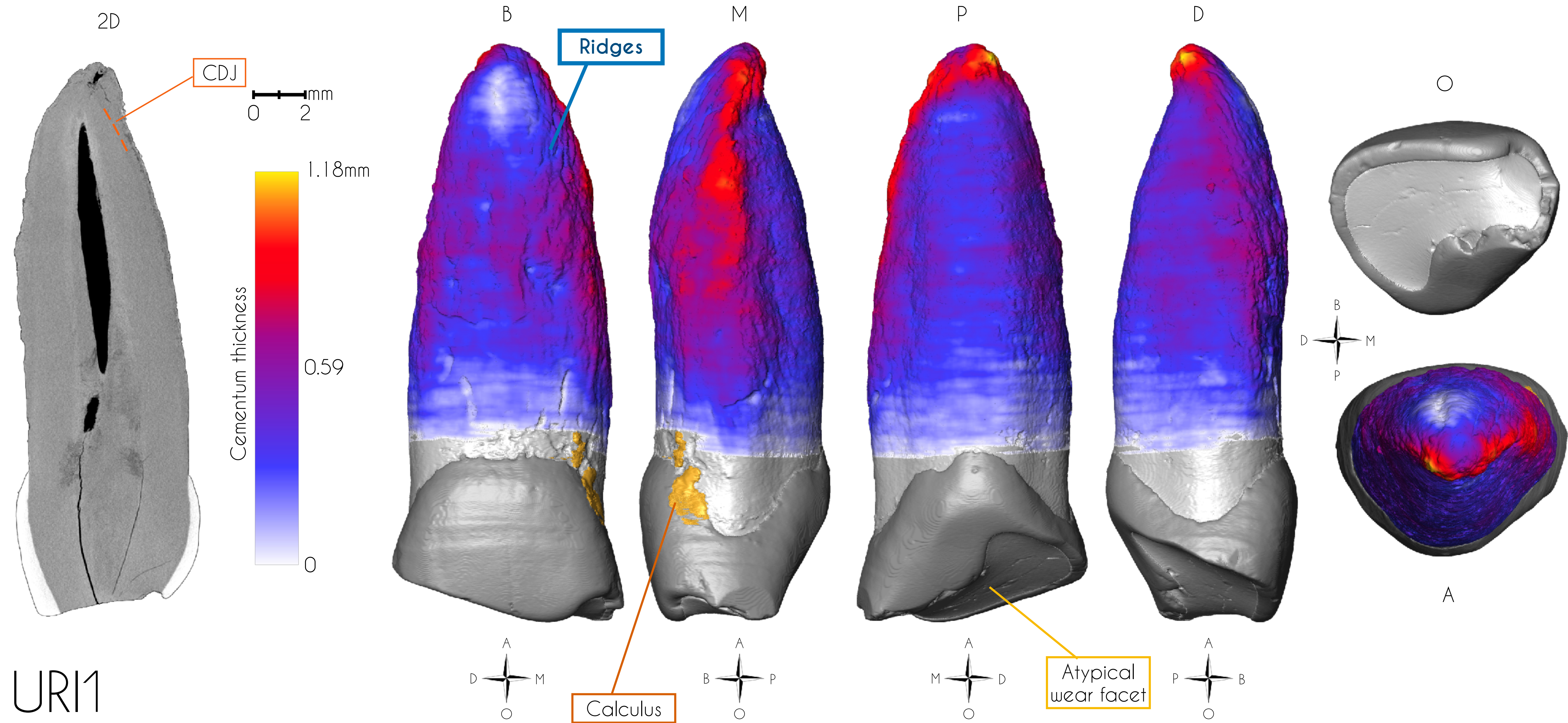
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
URI 1	6	4	5	-	0	0	1.3.m	0	0	0	1

URI1



**DEG:** degree; **DIR:** direction; **FOR:** form - **CAR:** carious lesion - **Pulp EXP:** pulp exposure - **IMP:** impaction - **FEN:** fenestration; **CAL:** calculus; **NT:** tooth loss in neighbouring teeth; **ANTA:** antagonist





Sp1135\_11

Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1180	1>d +2m	1<	Yes	RID (<)

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
**PREF LOC:** preferential location;  
**RID:** ridges;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)

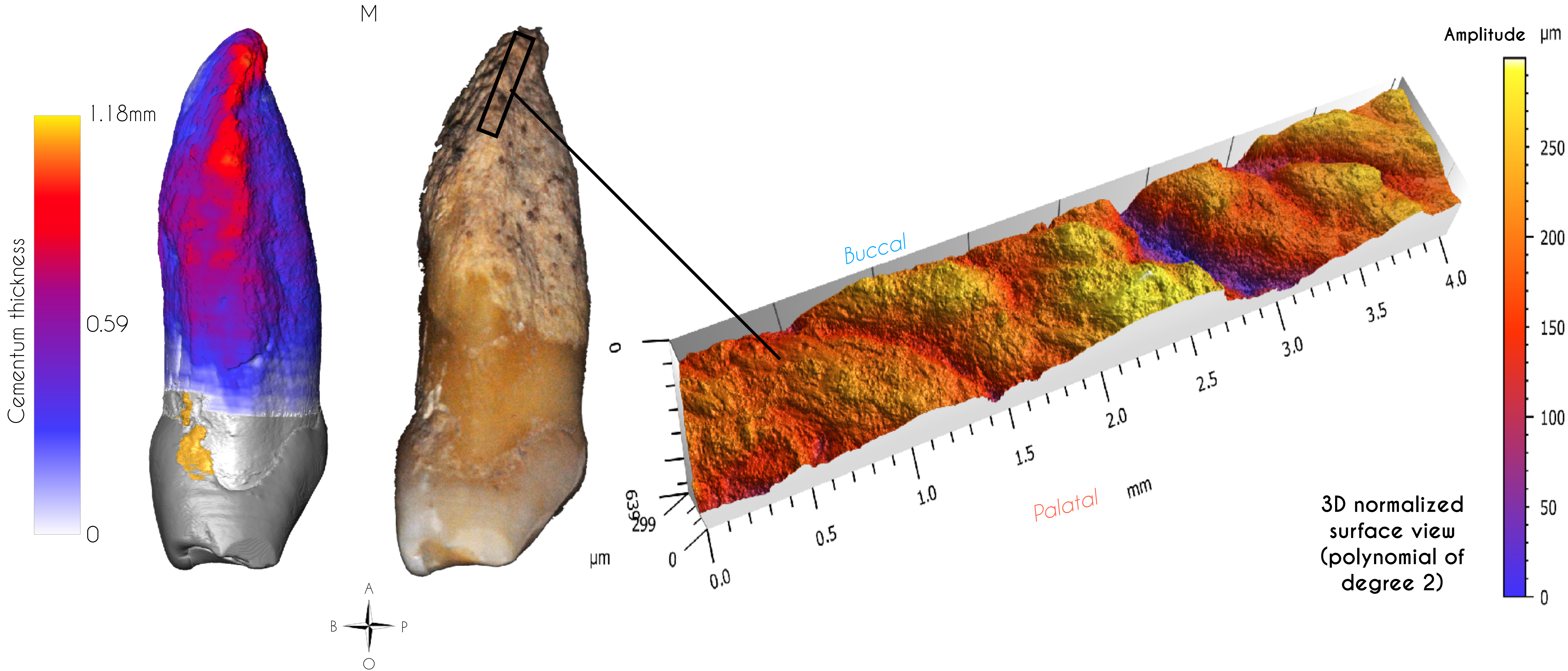
Hyperfunctional



URI1

Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
M	1143	5.90%	0.88mm	4.23mm	1/7	2	Blue	1.49	1.79	10 %

Sp1135\_11



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE ( $\mu\text{m}$ )	ST	Note
1 m	300	+R 1	-

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);

**MAX VE:** maximum vertical elevation;

**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.

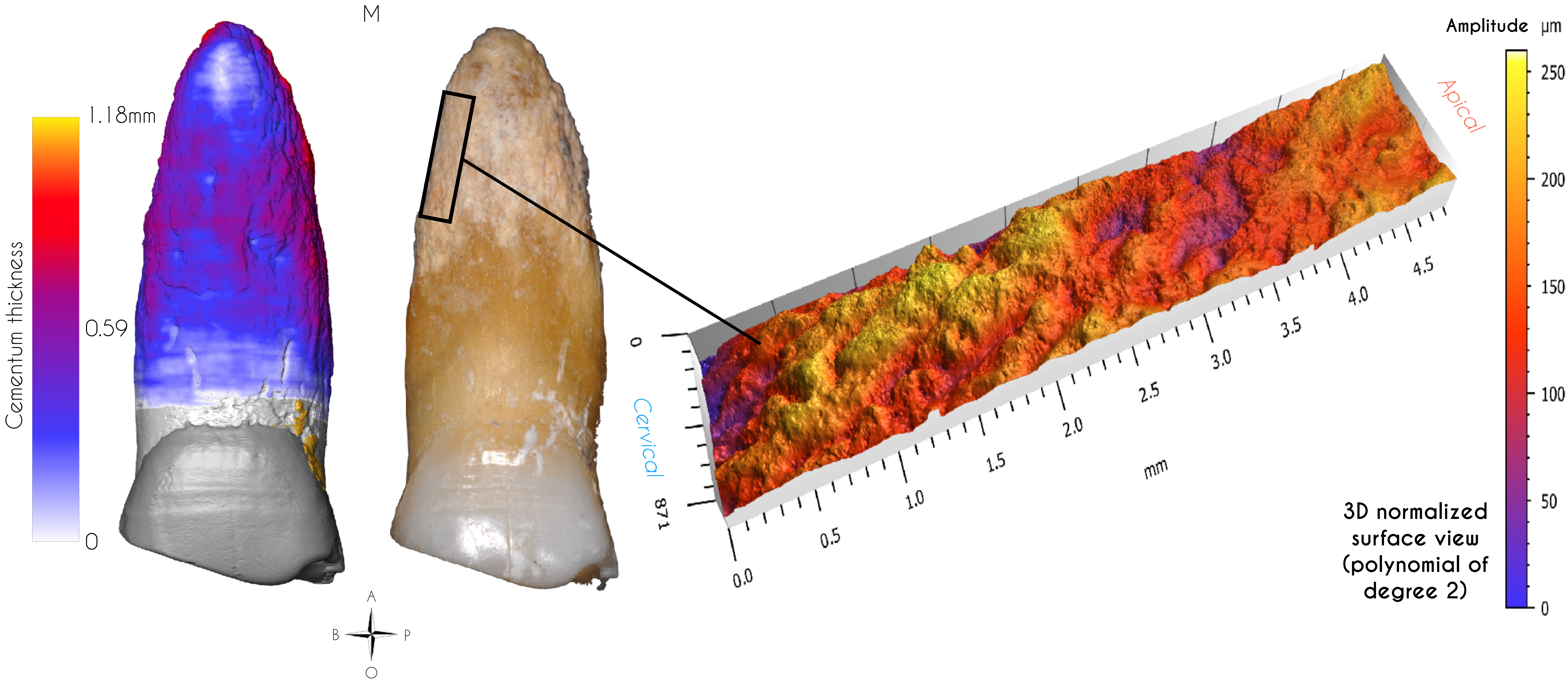
Hyperfunctional



URI1

Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
BD	759	5.22%	0.88mm	4.82mm	1/8	2	Blue	1.5	1.8	10 %

Sp1135\_11



Confocal microscopy - Topography 3D maps			
OF	MAX VE (μm)	SA	Note
2<d	260	+R 1	RID

OF: other face (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
MAX VE: maximum vertical elevation;  
ST: surface texture; : scored (+) if it is high, (-) if it is low; S: smooth or R: rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
RID: ridges

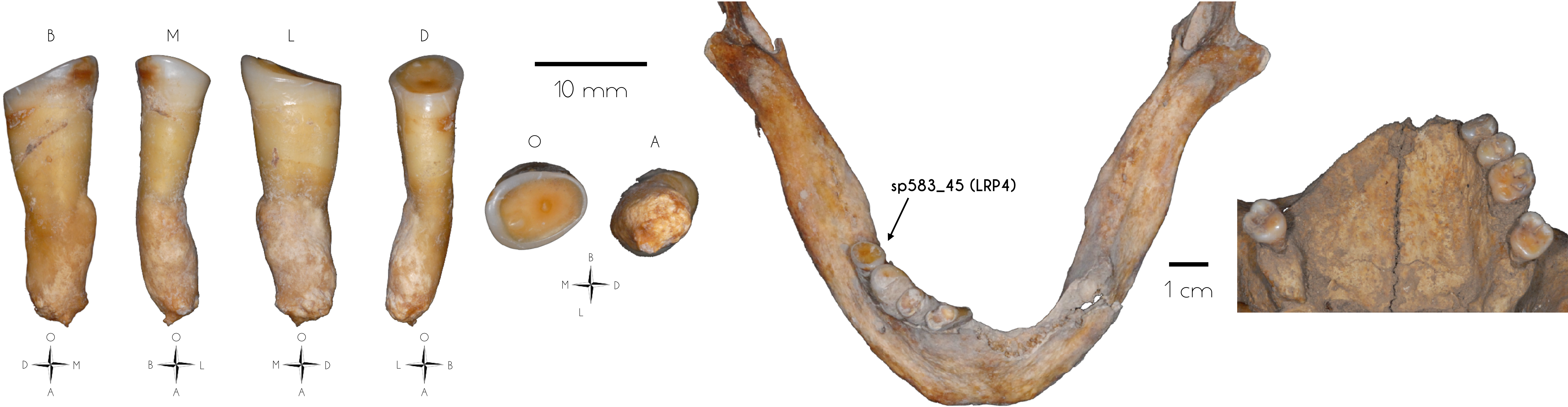
Hyperfunctional



Sp583\_45

Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LRP4	6	4	2	-	0	0	3.2.M	0	1	1d	2

LRP4

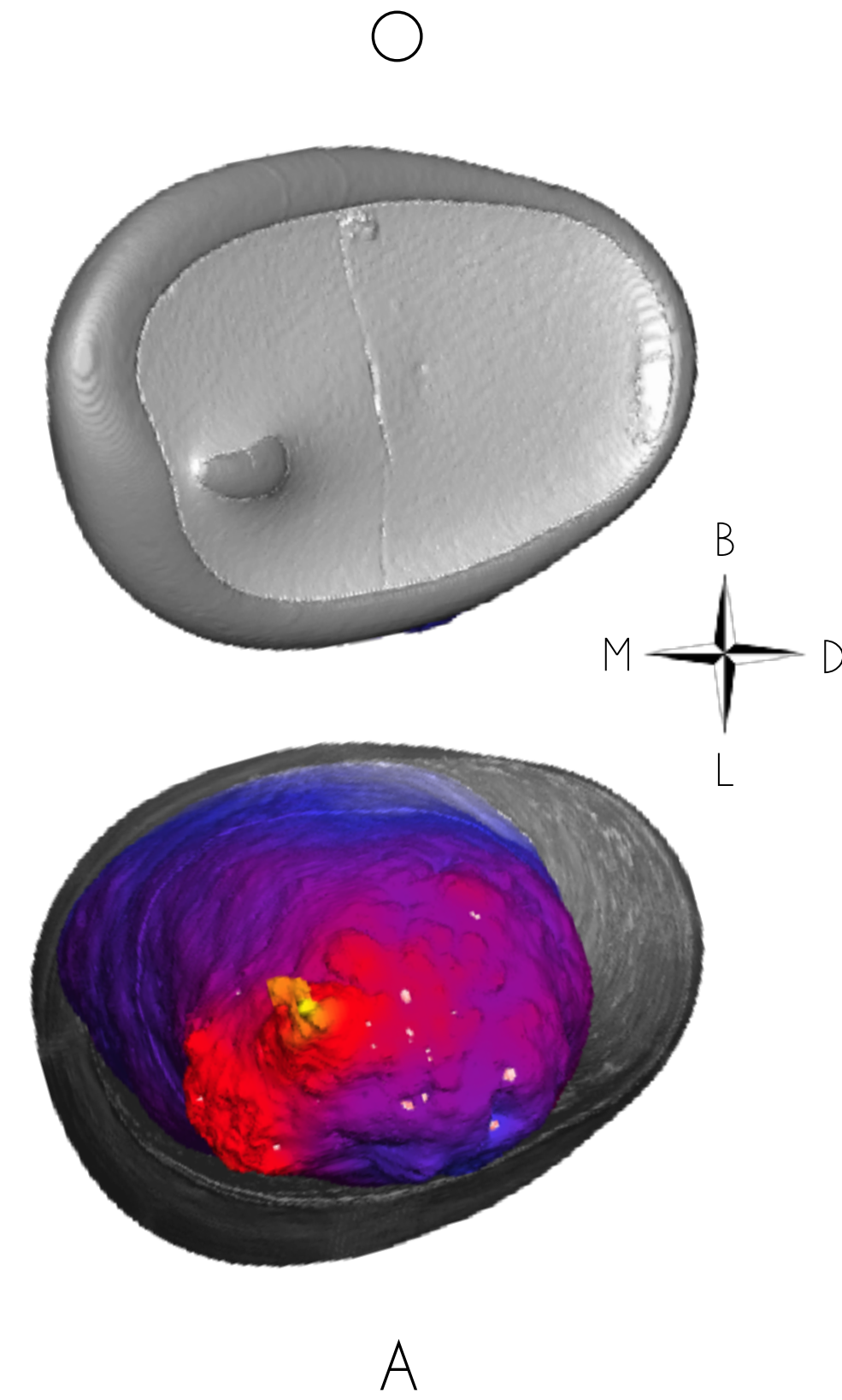
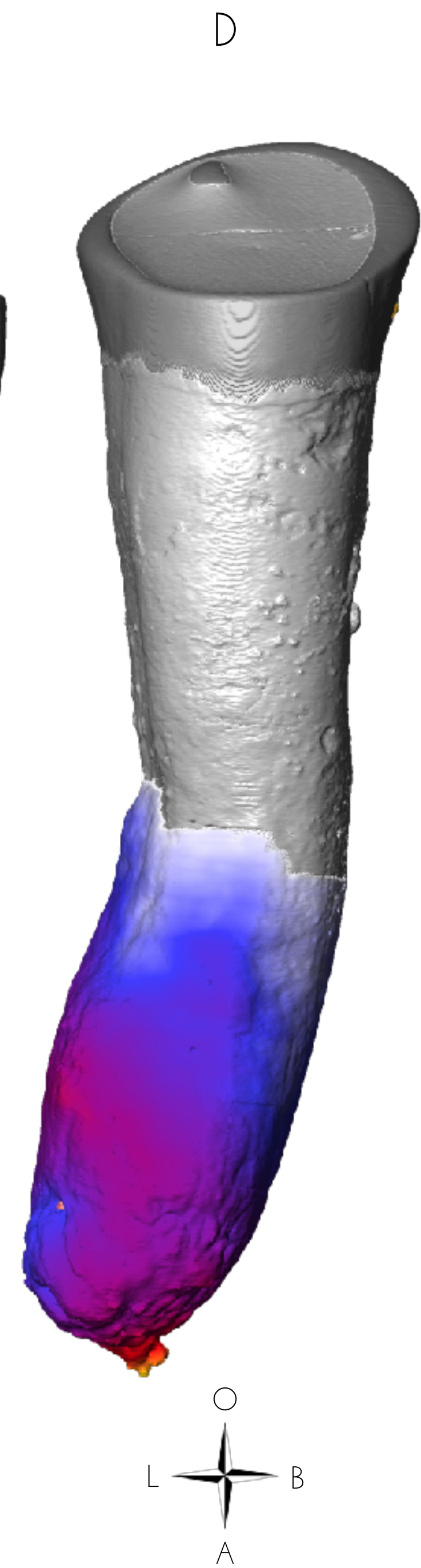
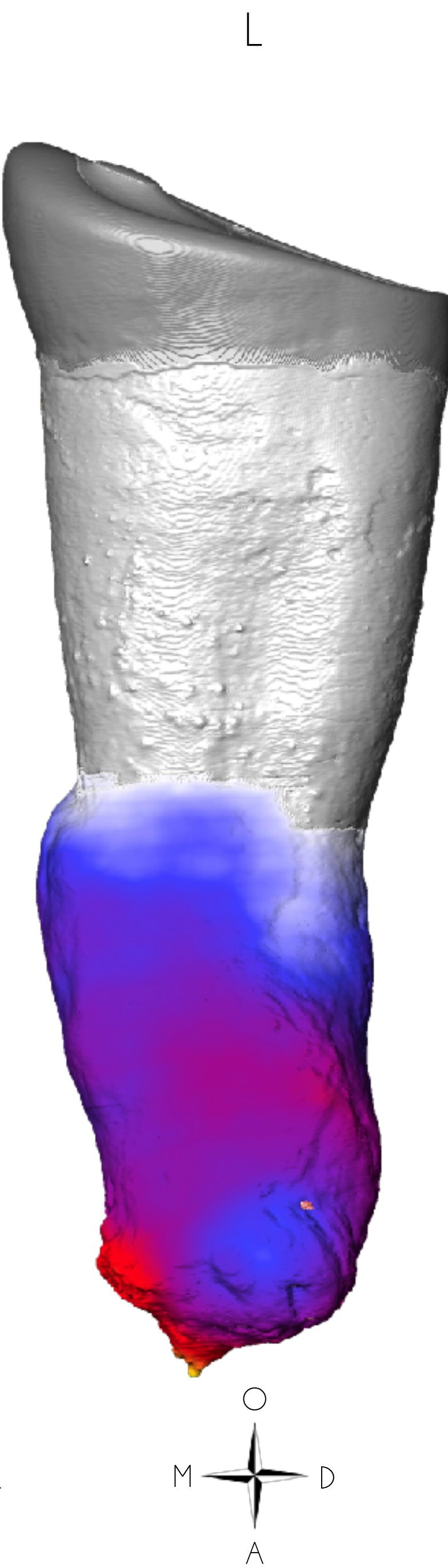
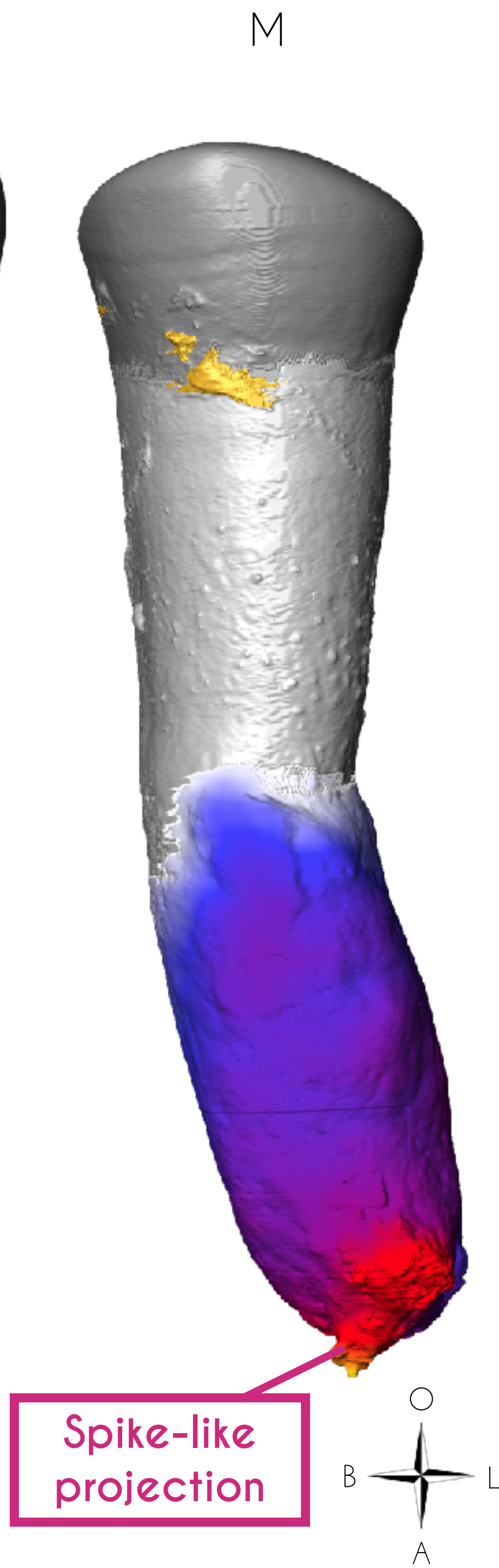
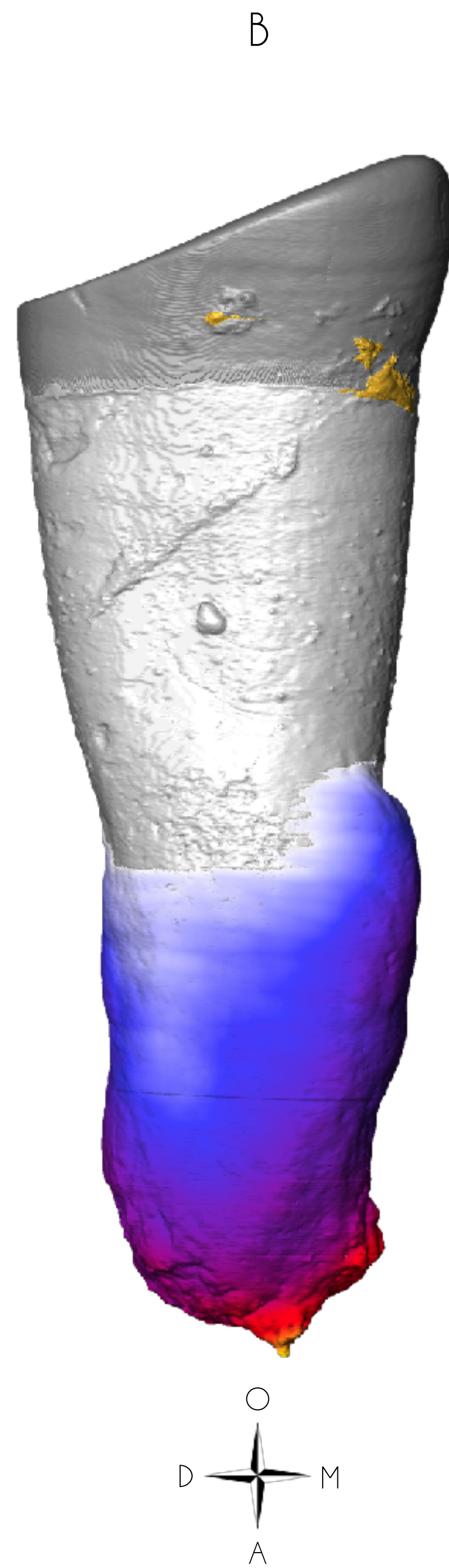
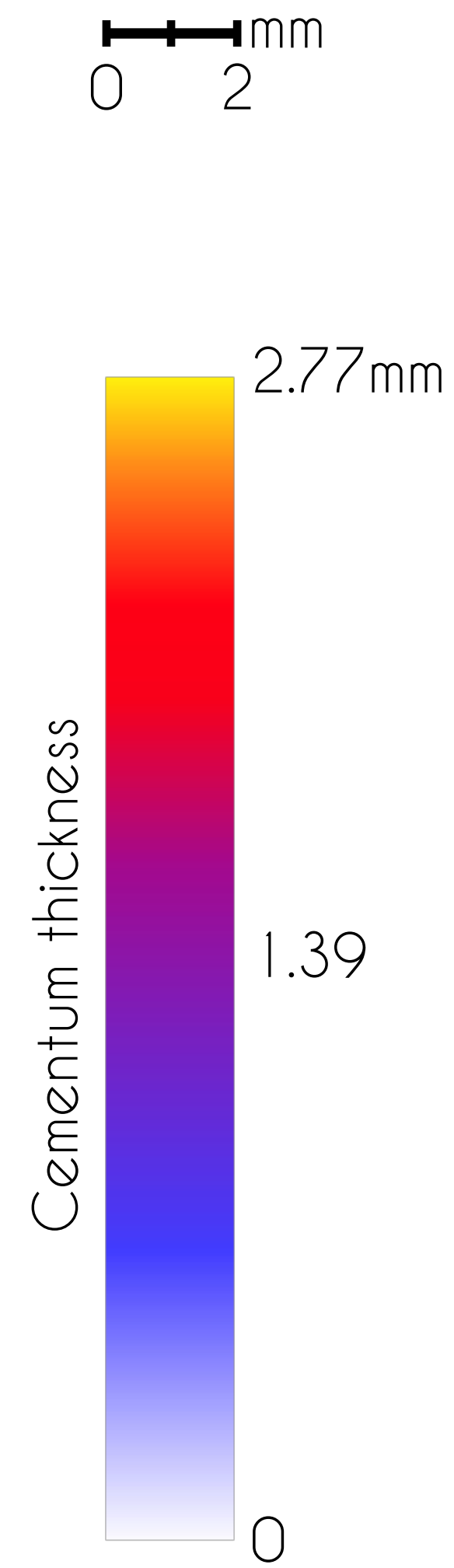


DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





LRP4



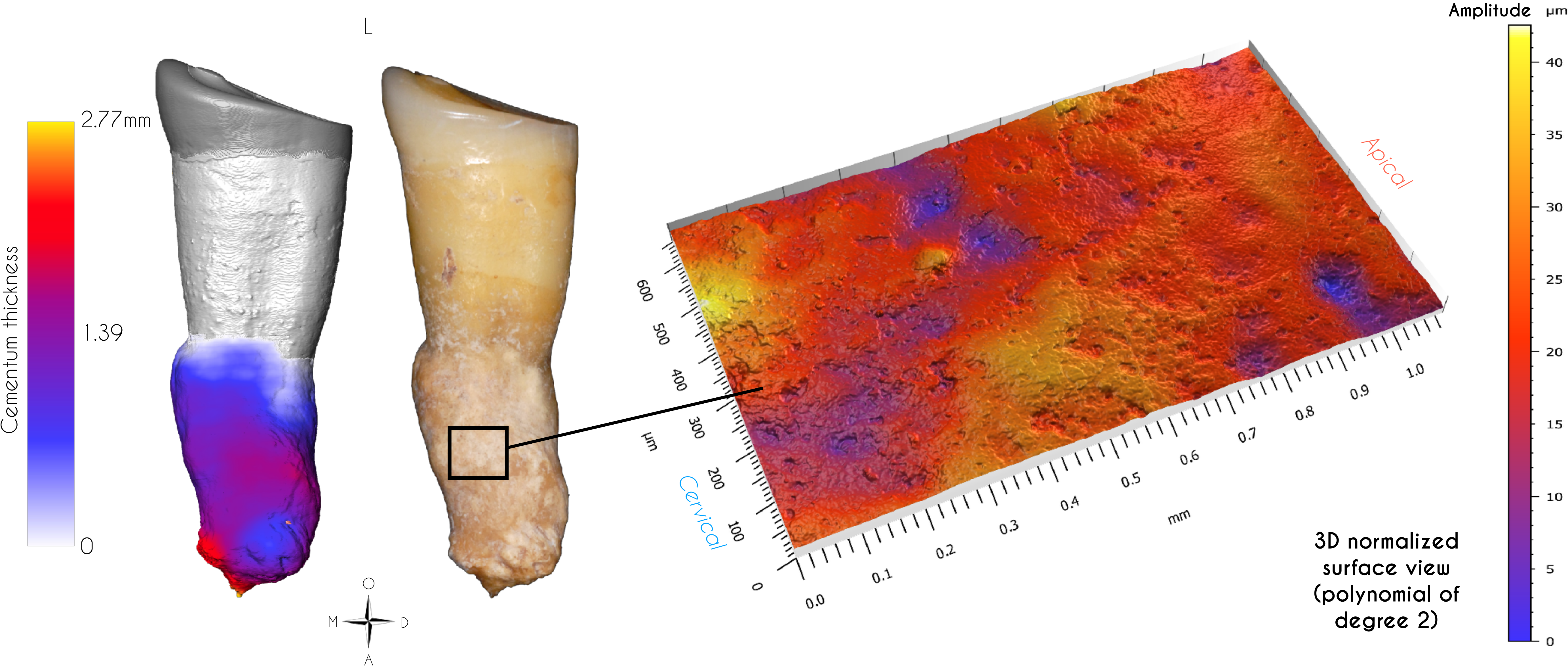
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
2770	1	<	Yes	LSP (1)

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
**PREF LOC:** preferential location;  
**LSP:** localised spike-like projection;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)

Mixed



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
L	417	4.97%	2.46mm	1.85mm	3/3	2	Blue	1.47	1.61	10 %



Confocal microscopy - Topography 3D maps			
OF	MAX VE (µm)	ST	Note
2>	43	-S2	-

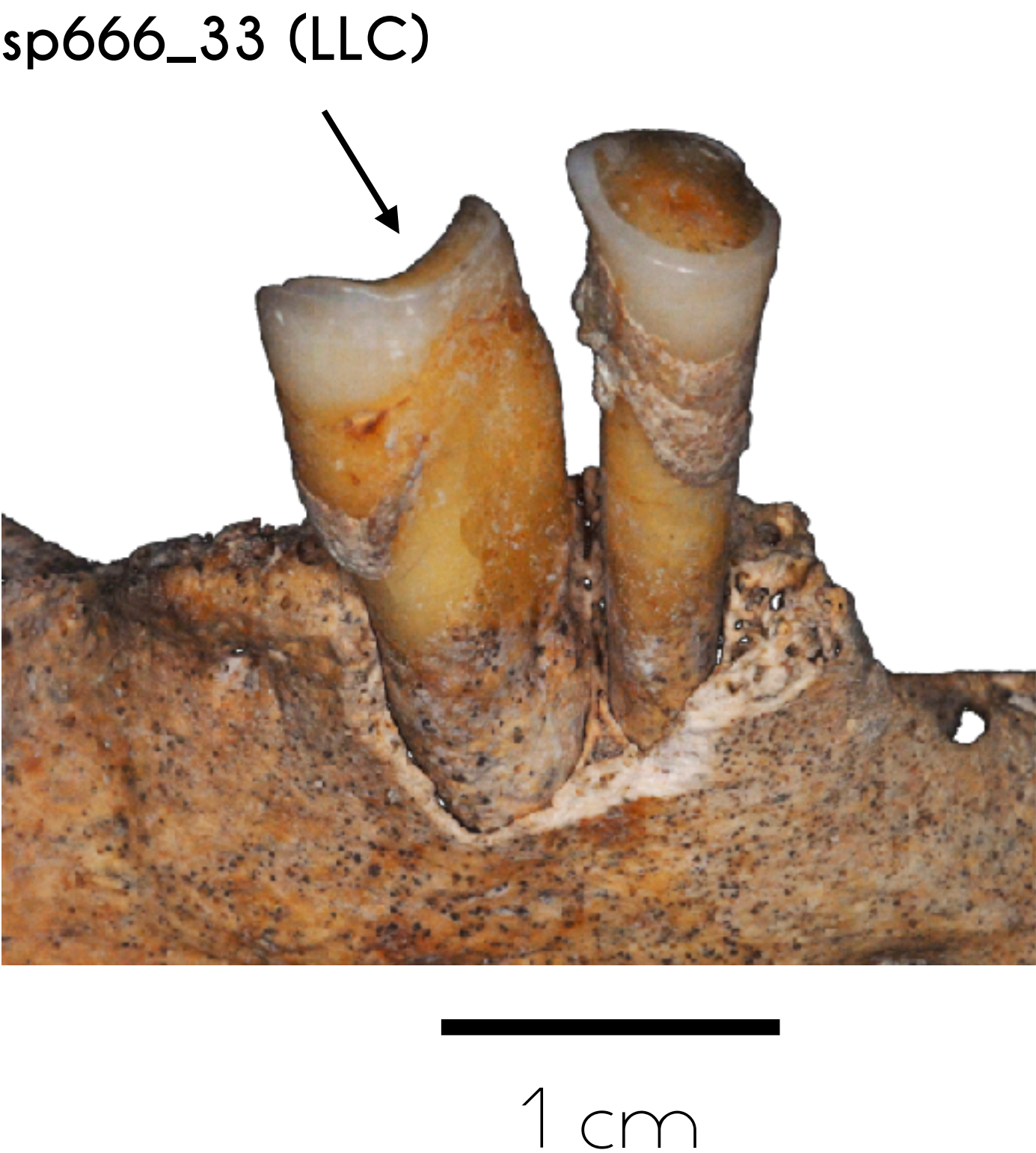
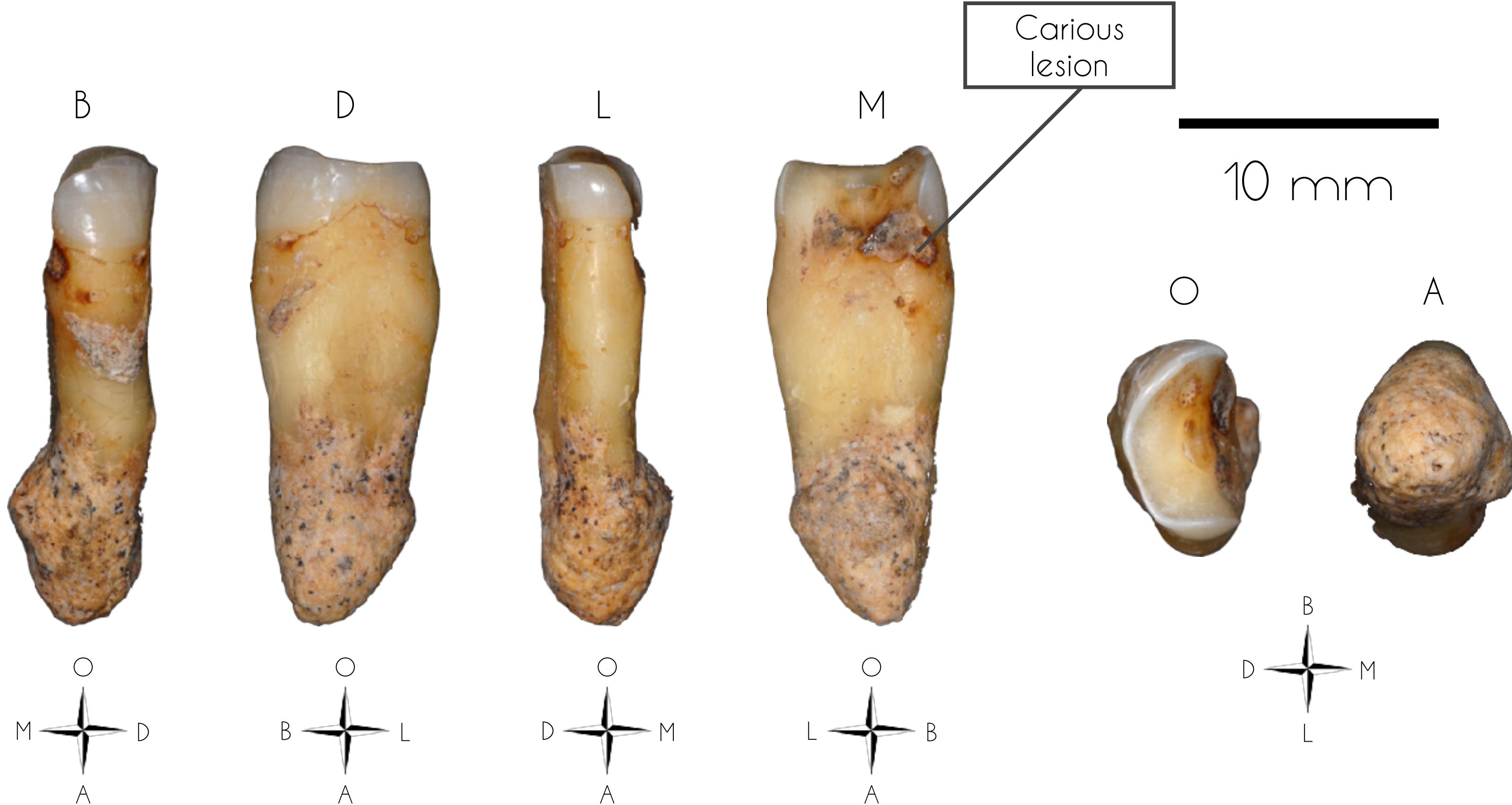
**OF:** other face (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.



Sp666\_33

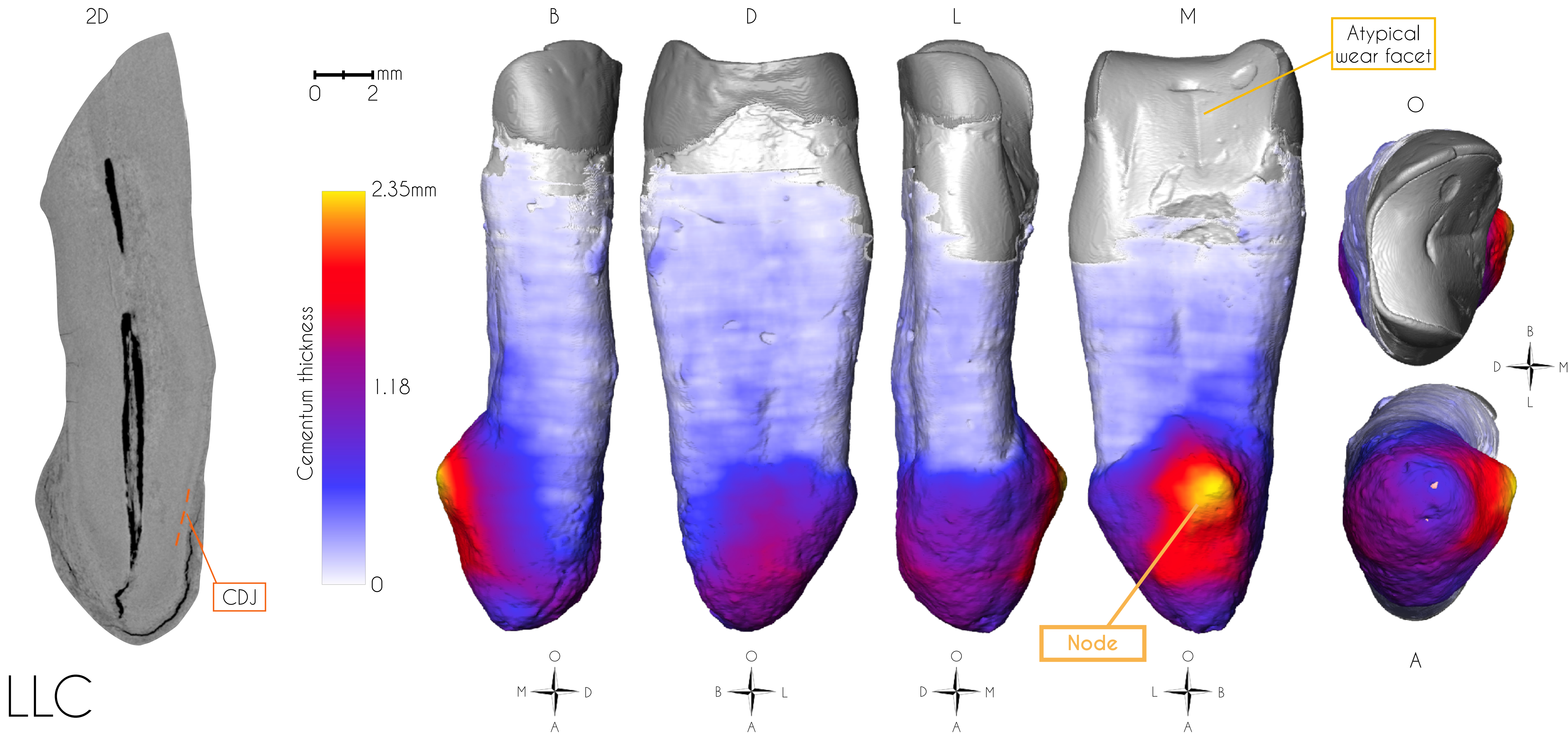
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LLC	7	5	6	2/2	0	0	3.2.M	0	1	1m	NA

LLC



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





Sp666\_33

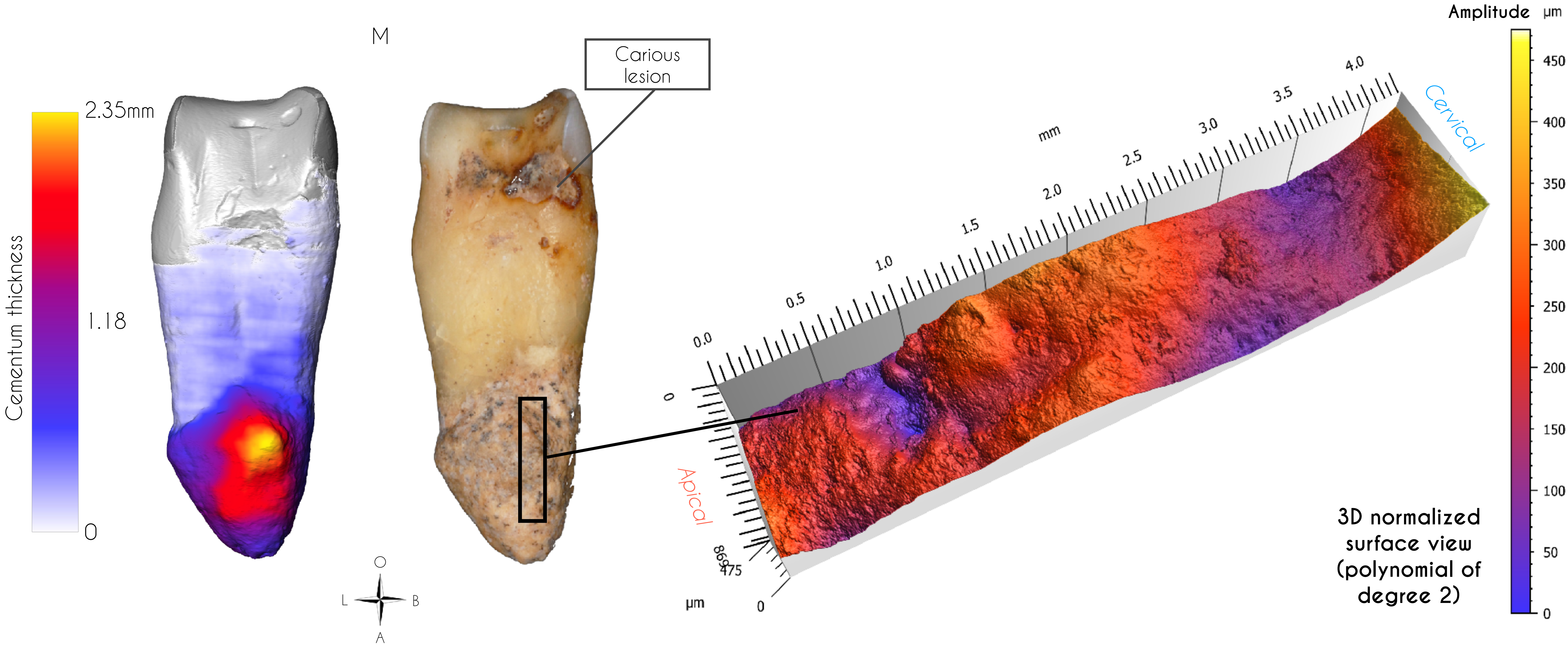
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
2350	1m	<	Yes	NOD + CAR (m)

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
**PREF LOC:** preferential location;  
**NOD:** node;  
**CAR:** carious lesion  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)

Mixed



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
M	1731	6.02%	0.88mm	4.23	1/7	2	Blue	1.5	1.8	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (µm)	ST	Note
1m	475	+S2	NOD

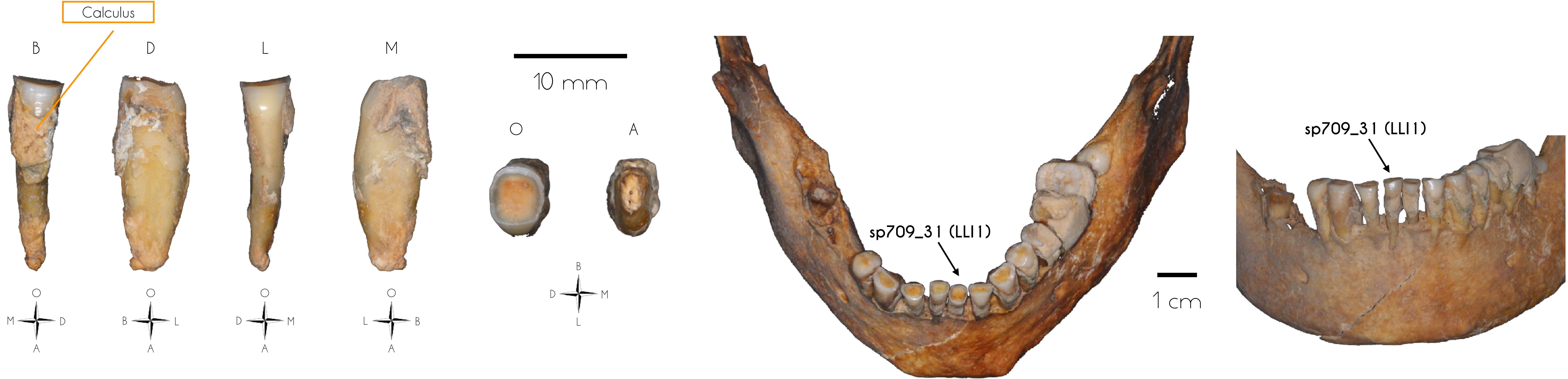
**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
**NOD:** nodes



Sp709\_31

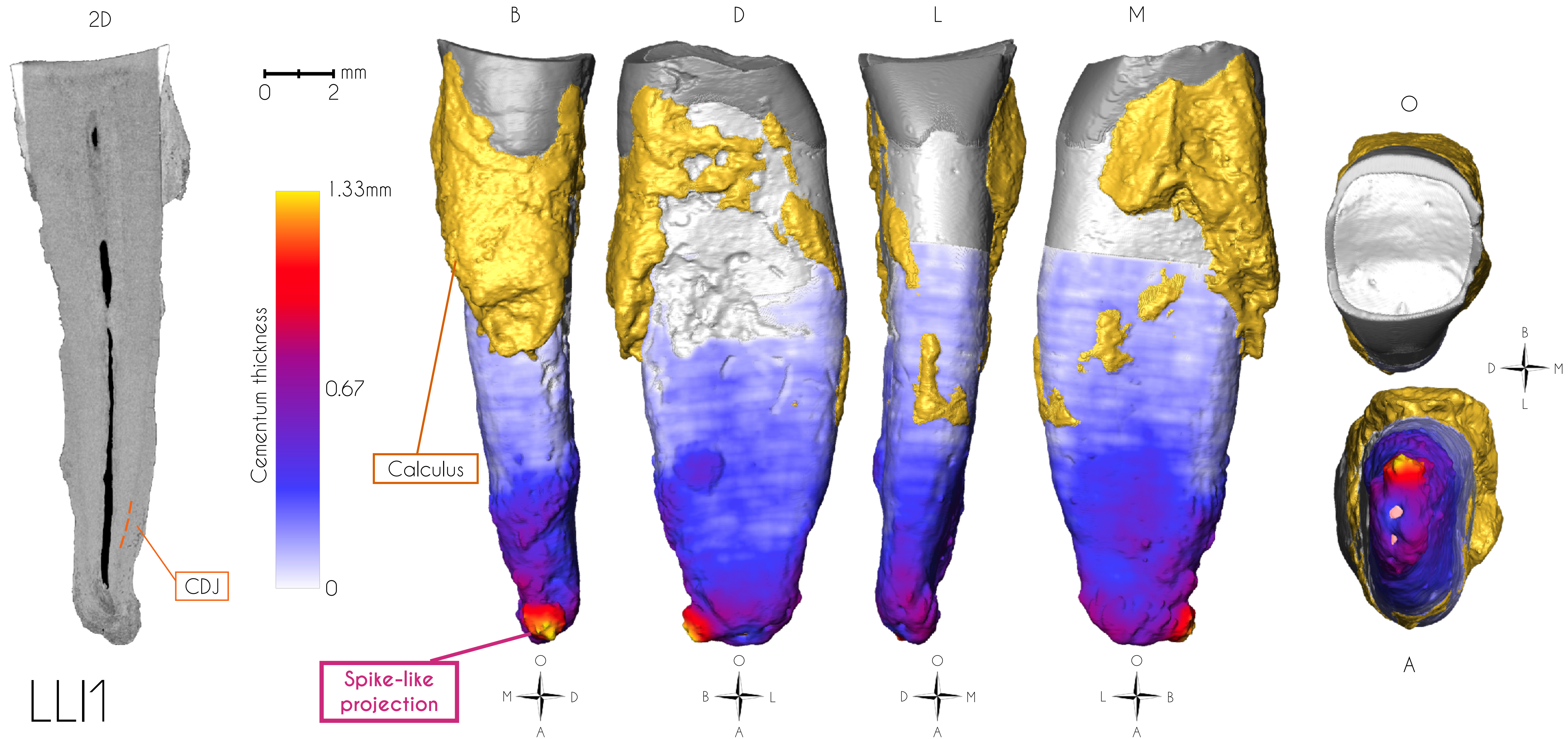
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LLI1	6	6	4	-	0	0	3.1.m	0	1	0	NA

LLI1



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





Sp709\_31

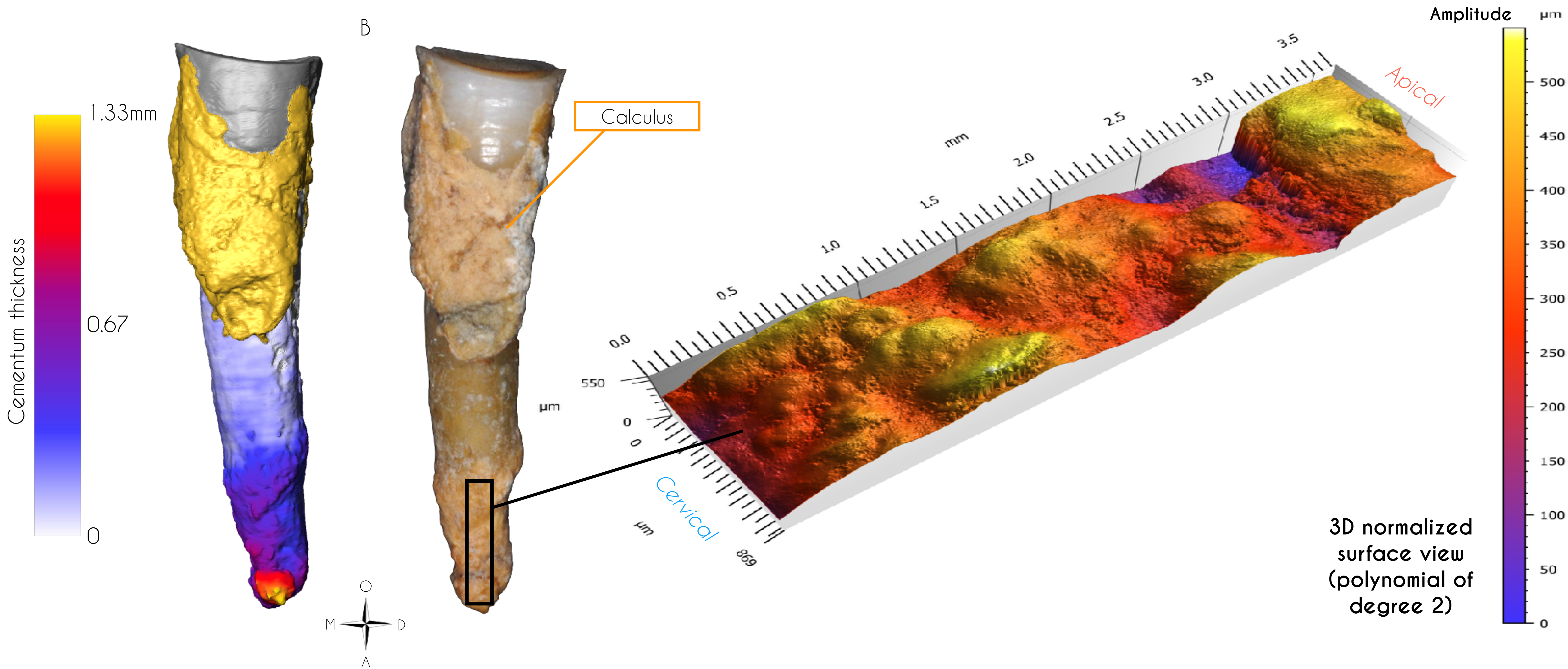
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1330	1<	No	Yes	LSP (<)

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
**PREF LOC:** preferential location;  
**LSP:** localised spike-like projection;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)

Mixed



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
B	808	7.07%	0.88mm	2.44mm	1/4	2	Blue	1.5	1.8	10 %



Confocal microscopy - Topography 3D maps

LOC MAX	MAX VE (µm)	ST	Note
<	550	+R 1	LSP

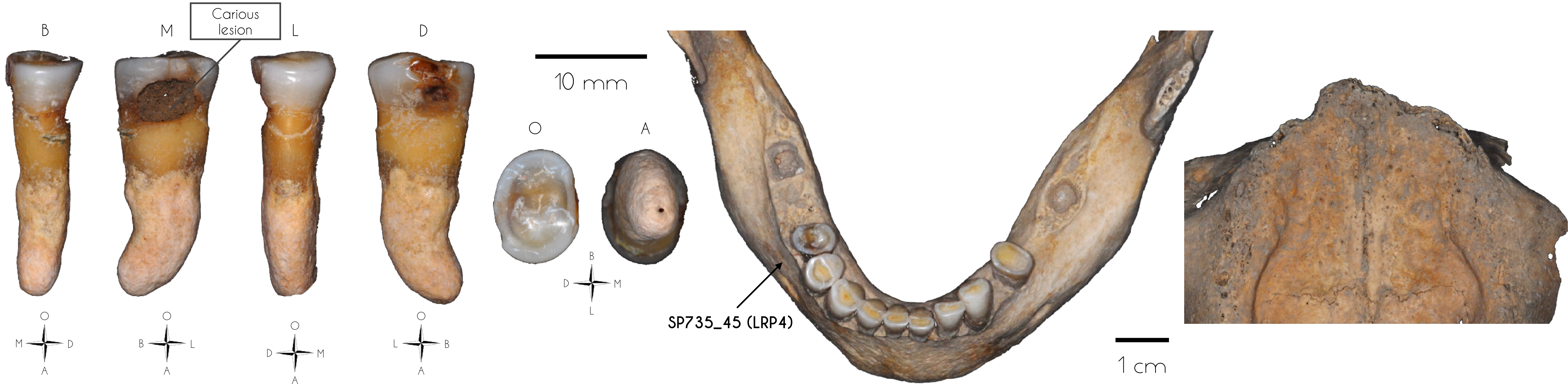
**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
**LSP:** localised spike-like projection



Sp735\_45

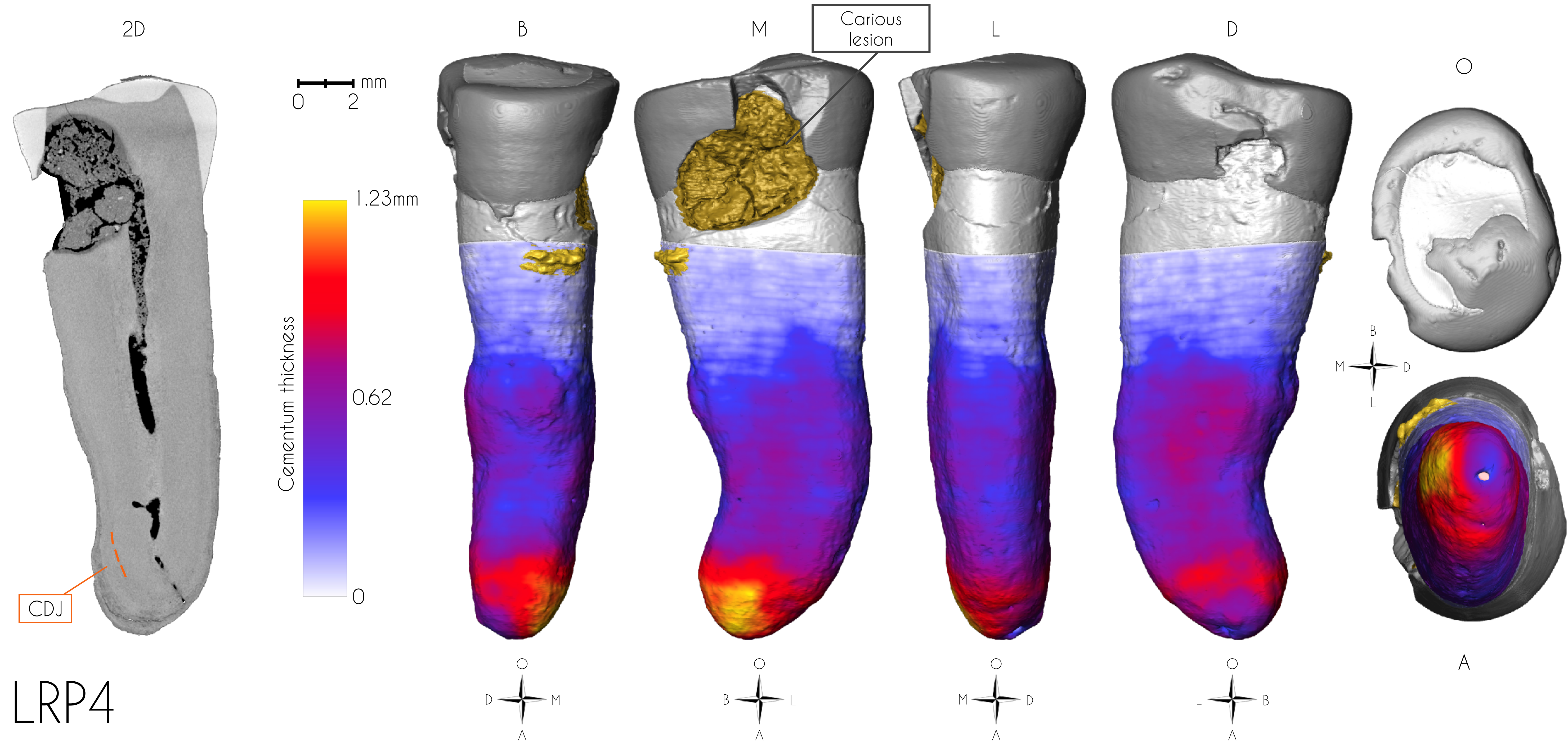
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LRP4	4	6	3	2/4	C	0	1.2.M	0	0	1d	2

LRP4



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





Sp735\_45

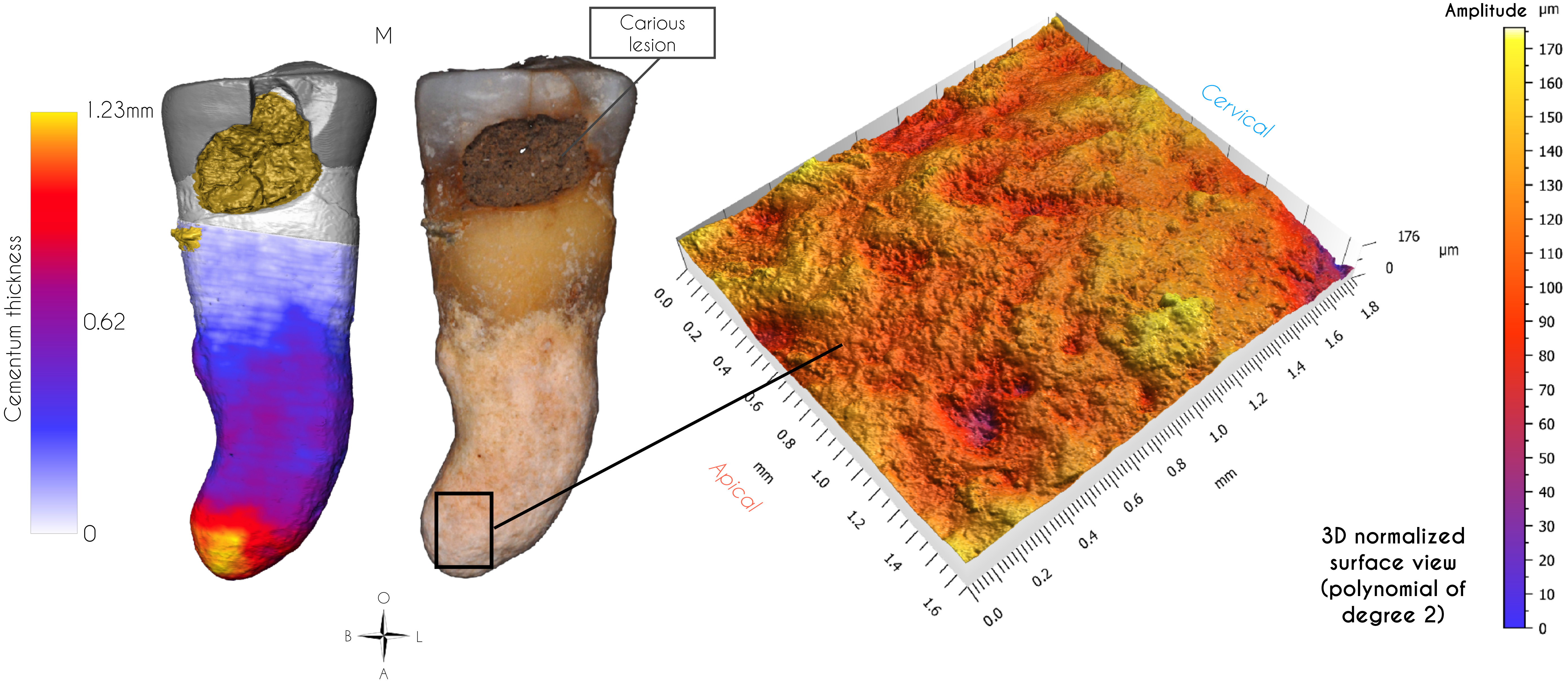
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1230	1 m	No	Yes	CAR (m)

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
**PREF LOC:** preferential location;  
**CAR:** carious lesion;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)

Mixed



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
M	1038	5.15%	1.67mm	1.85mm	2/3	2	Blue	1.5	1.8	10 %

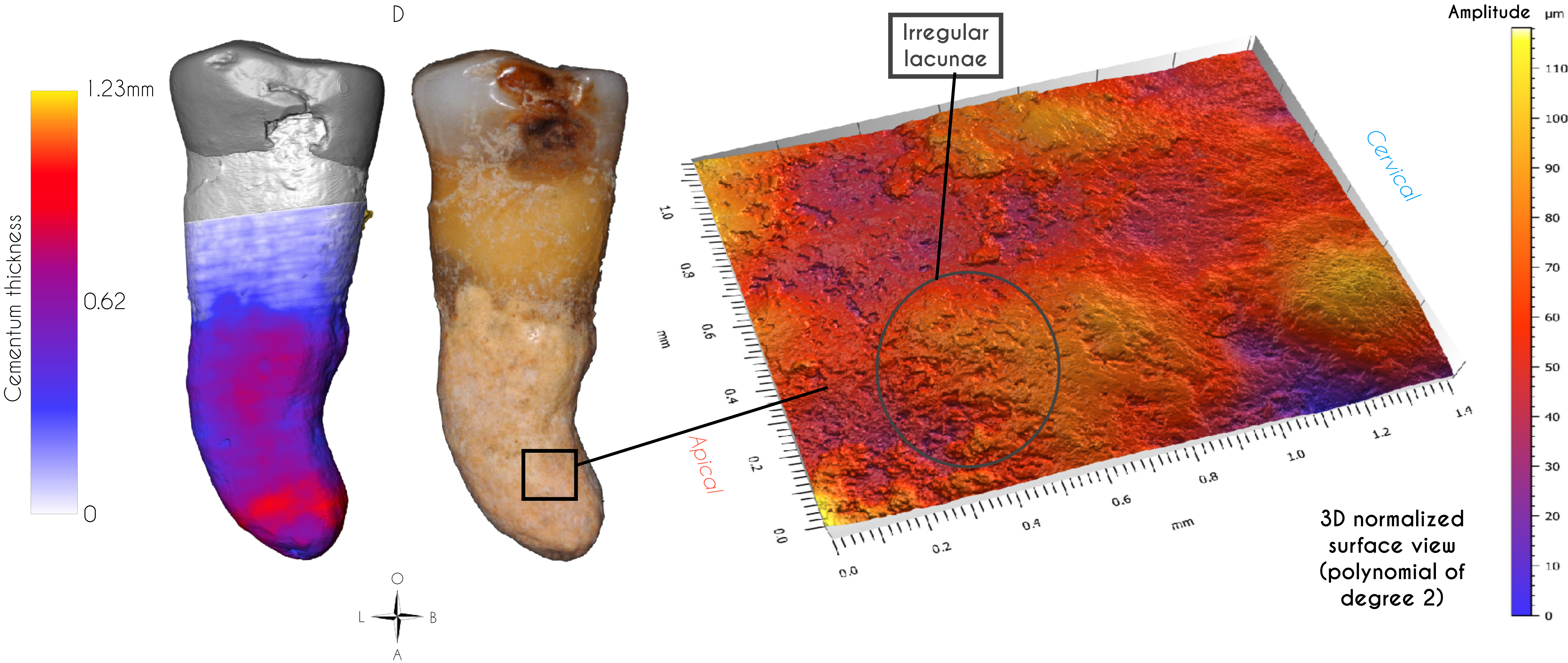


Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
1 m	175	-R1	-

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
D	715	4.19%	1.67mm	1.25mm	2/2	2	Blue	1.5	1.8	10 %



Confocal microscopy - Topography 3D maps			
OF	MAX VE (μm)	ST	Note
D	118	-S2	IL

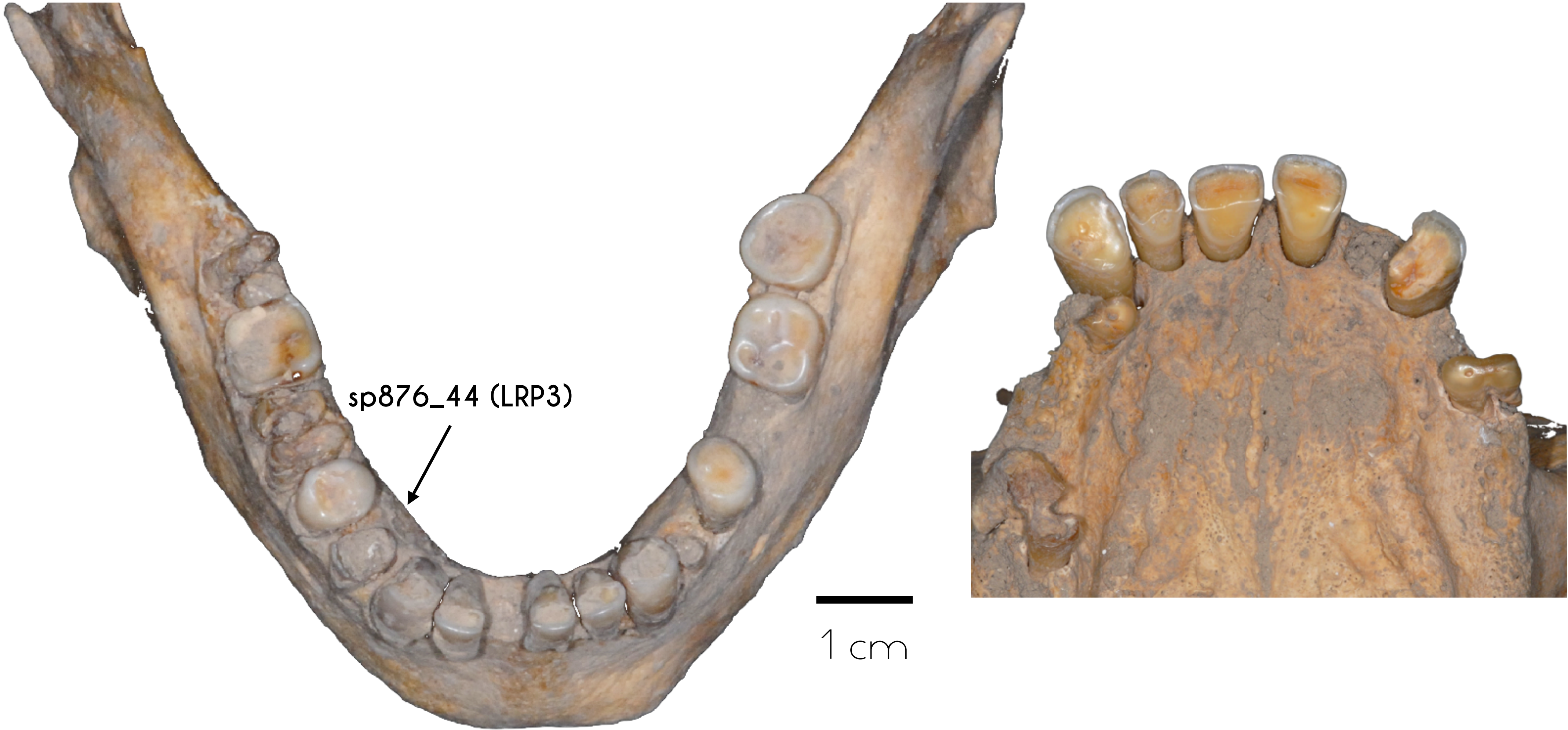
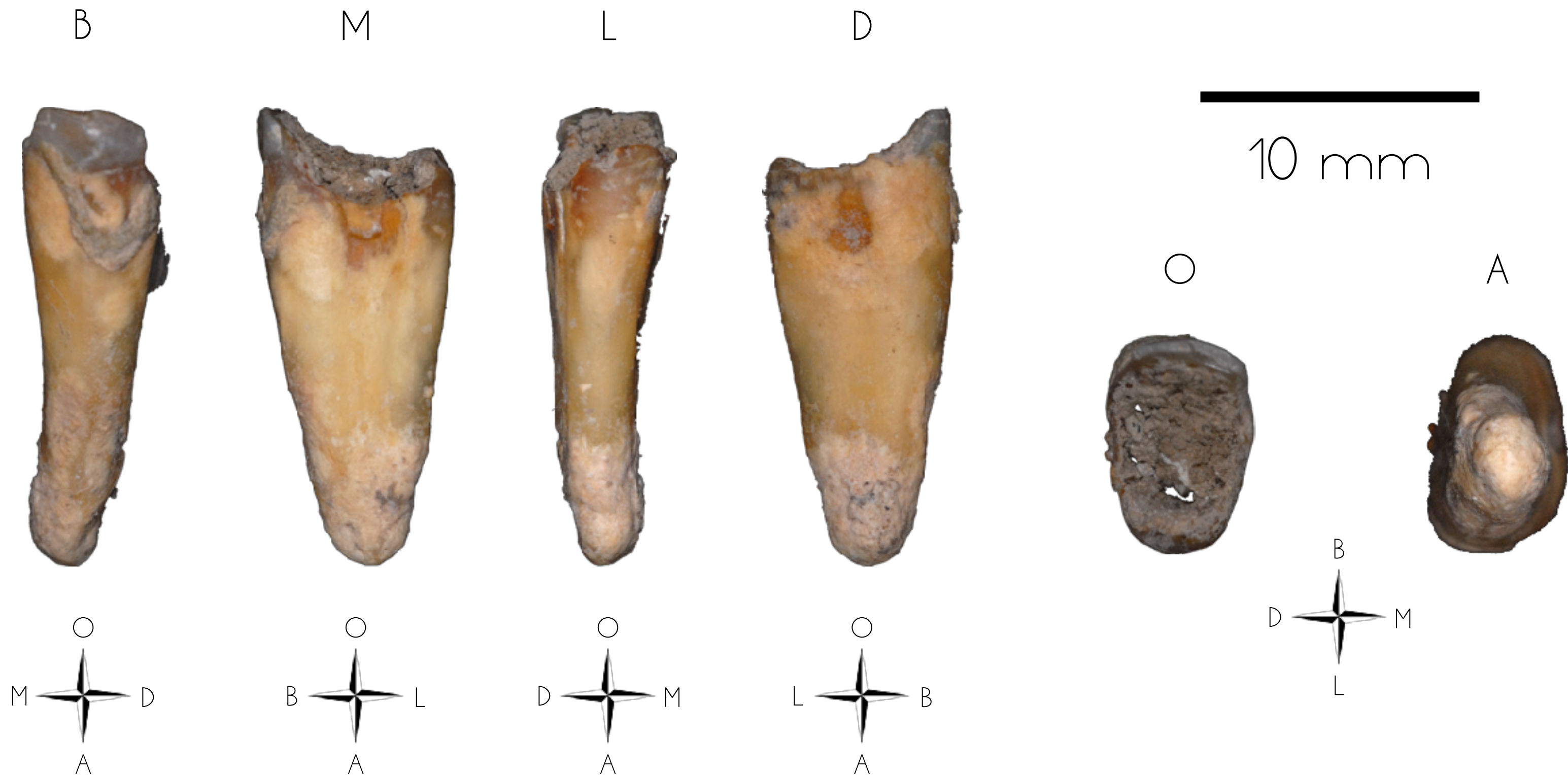
**OF:** other face (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.  
**IL:** irregular lacunae



Sp876\_44

Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LRP3	NA	NA	NA	1/4	M	0	1.4.m	0	1	0	2

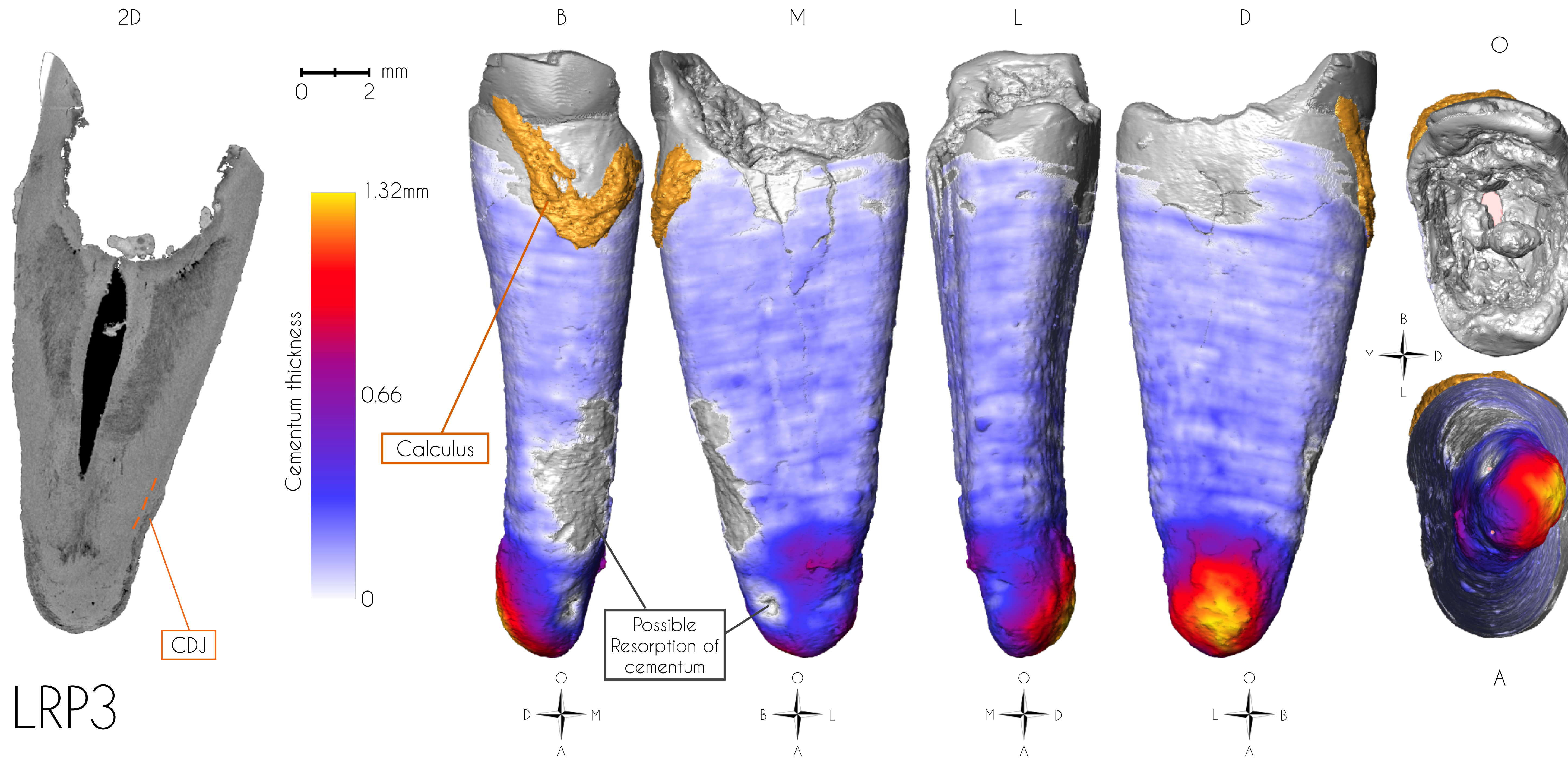
LRP3



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist



Sp876\_44



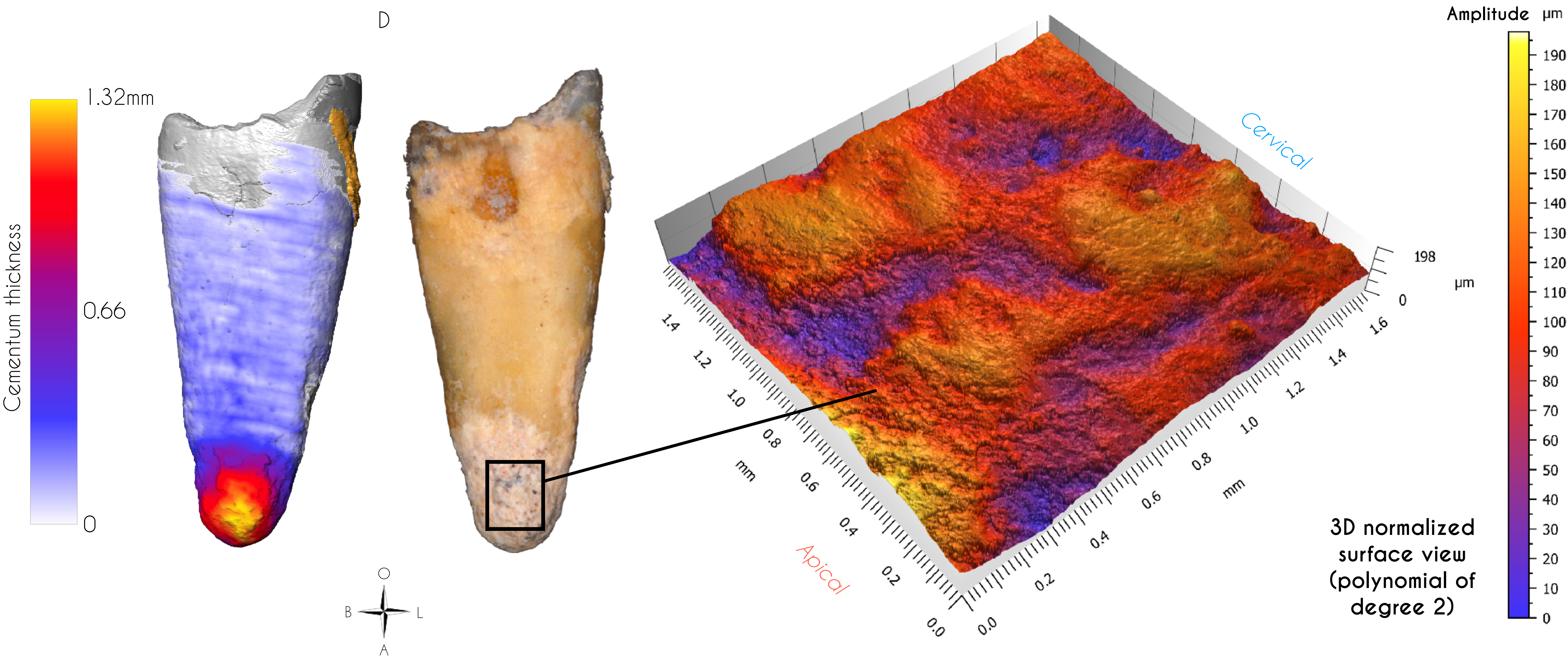
Microtomography - Thickness 3D maps				
MAX THI (μm)	LOC MAX	LOC MIN	PREF LOC	Note
1320	1d	No	Yes	RES (m<

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
**PREF LOC:** preferential location;  
**RES:** resorption of cementum;  
 (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)

Mixed



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
D	945	5.48%	1.67mm	1.85mm	2/3	2	Blue	1.47	1.61	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
1d	200	+R2	-

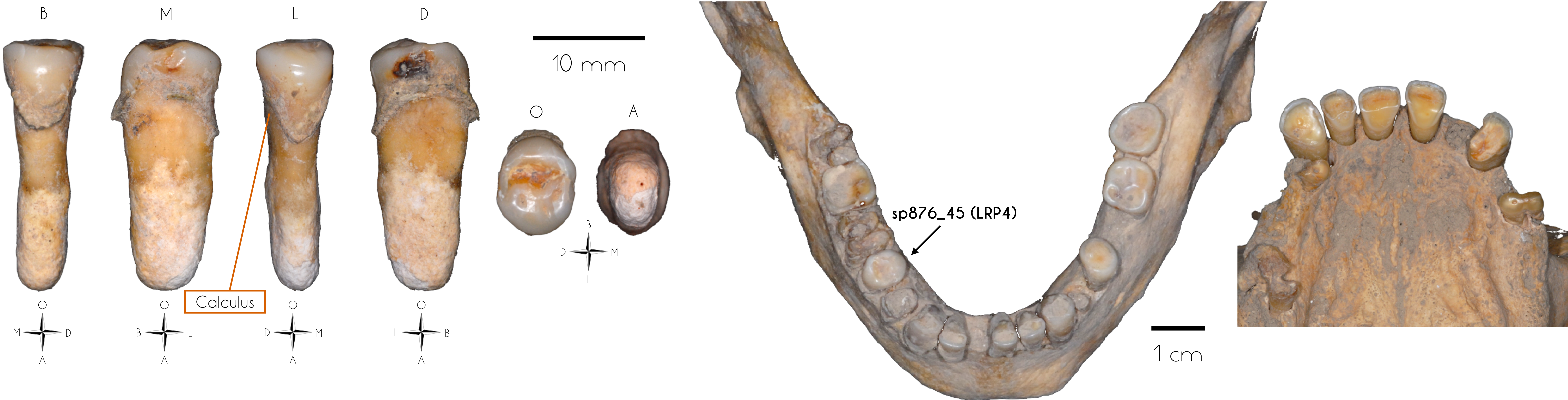
**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.



Sp876\_45

Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
4	6	3	2/2	0	0	0	1.2.M	0	1	0	2

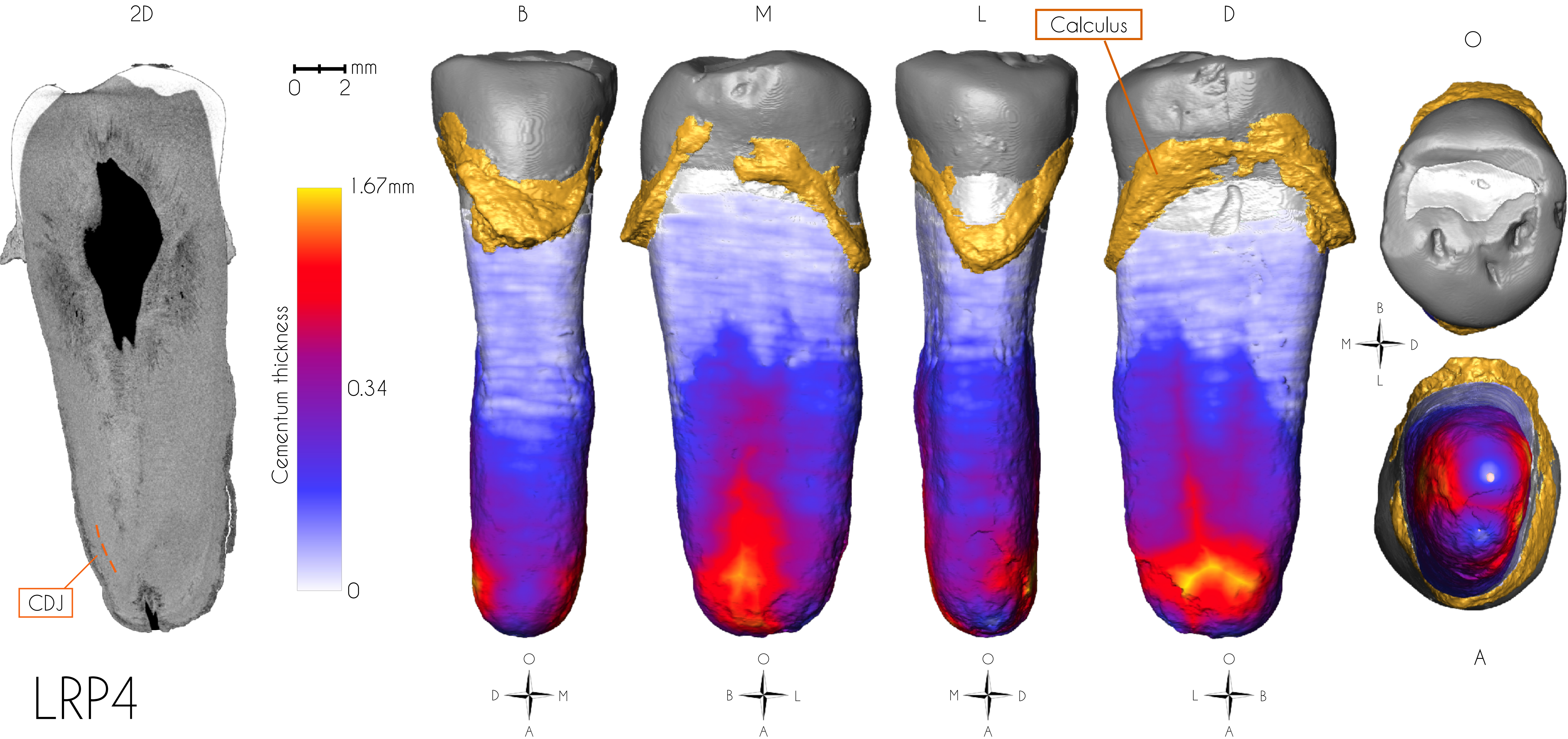
LRP4



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist



Sp876\_45



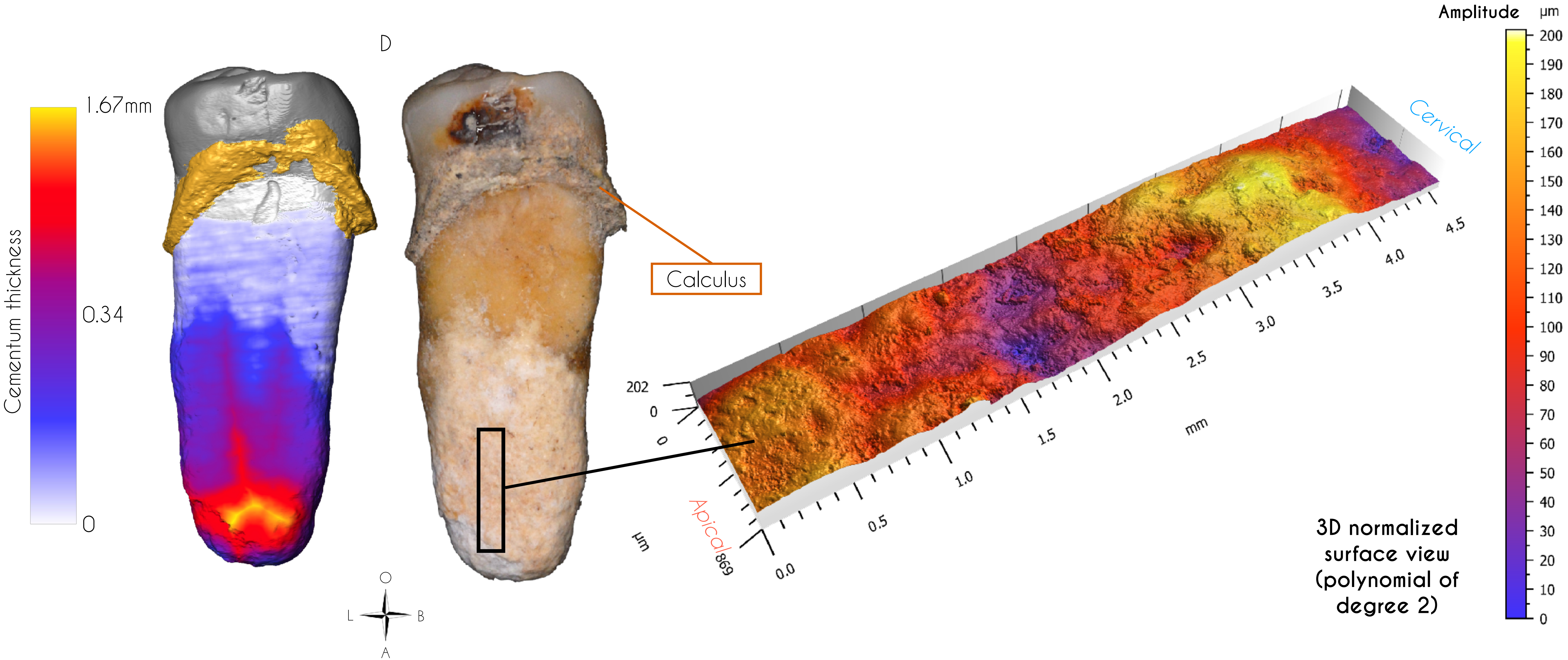
Microtomography - Thickness 3D maps				
MAX THI (μm)	LOC MAX	LOC MIN	PREF LOC	Note
1670	1d	<	No	FR (1>)

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
**PREF LOC:** preferential location;  
**FR:** fracture of cementum;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)

Mixed



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
D	511	4.9%	0.88mm	4.82mm	1/8	2	Blue	1.5	1.8	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
2d	200	+R2	-

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.

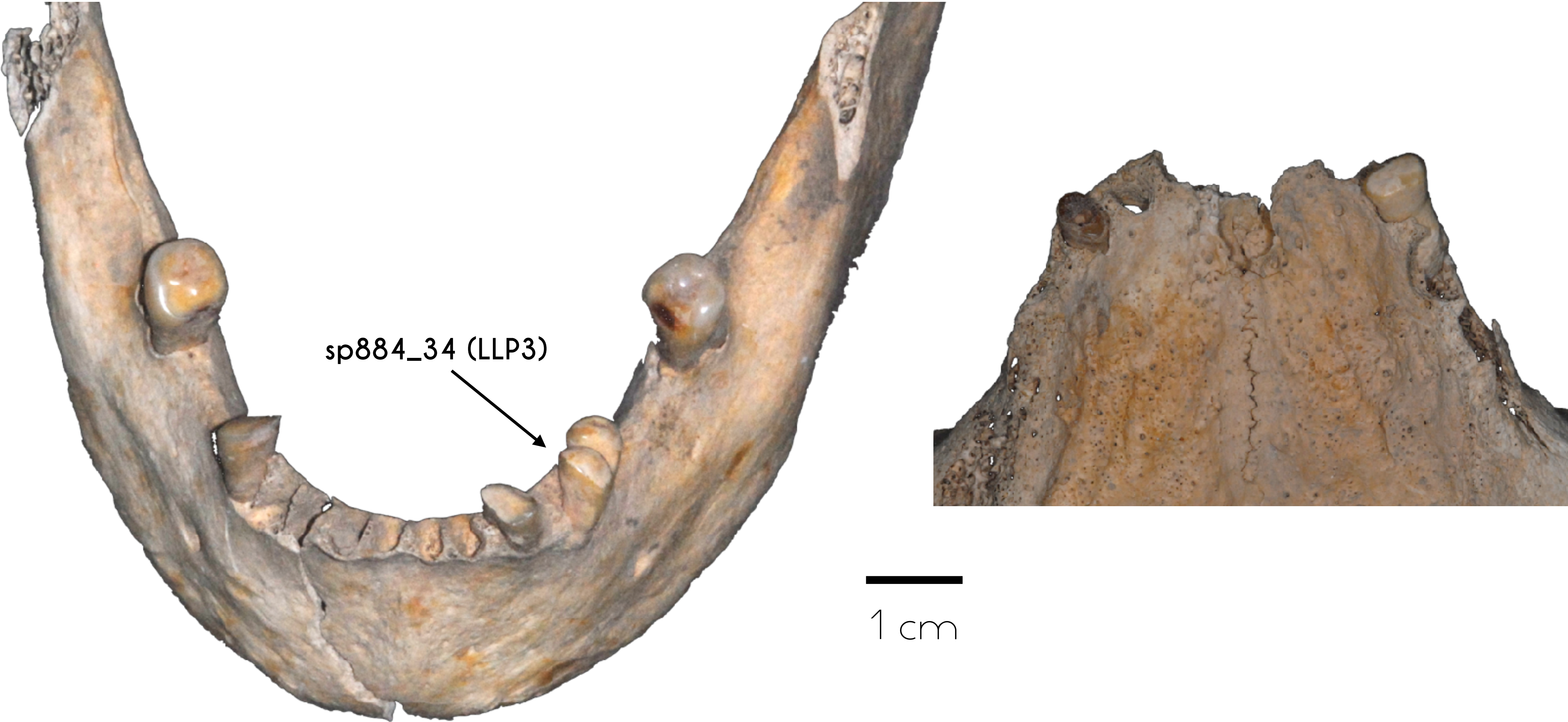
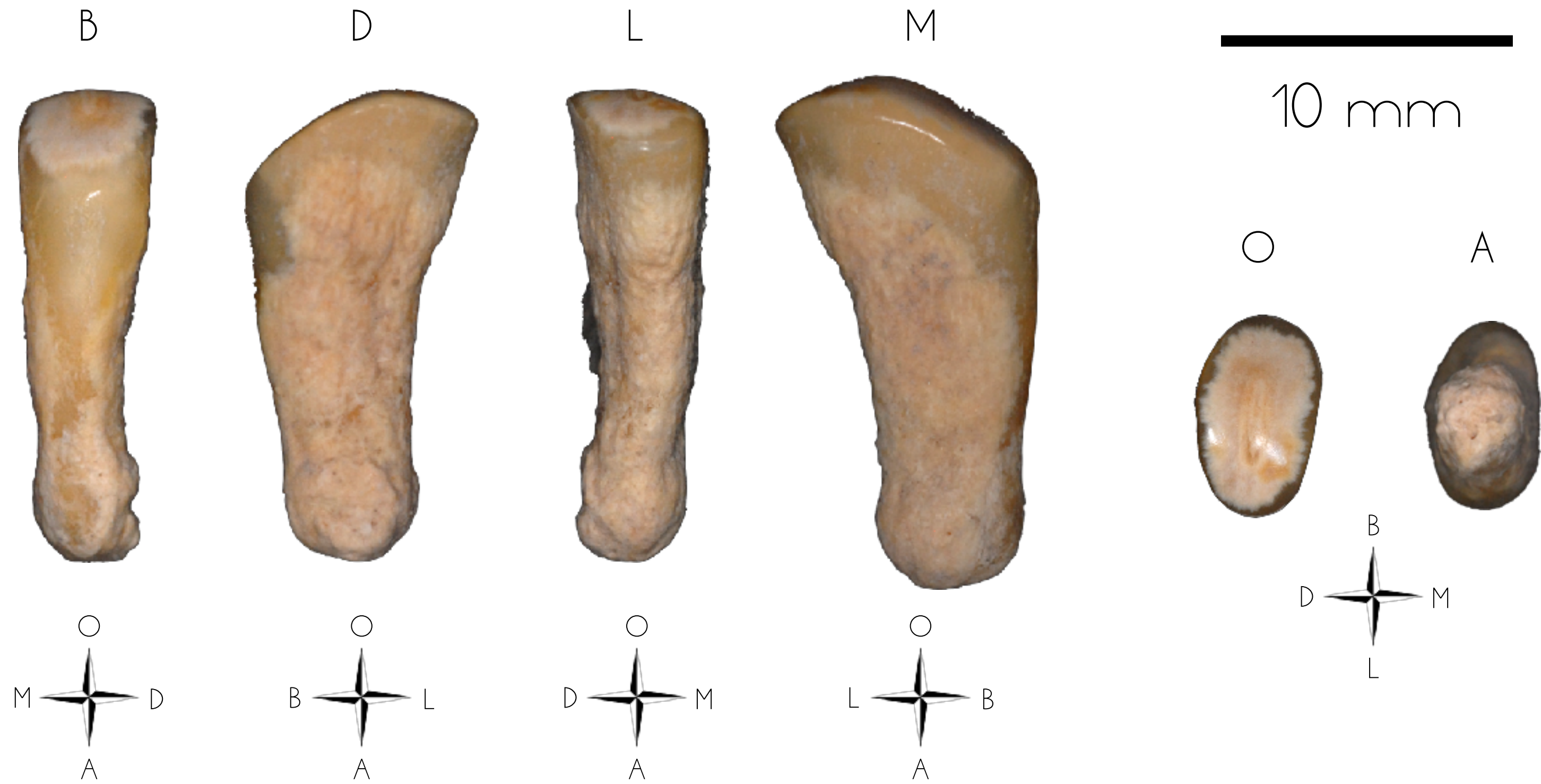
Mixed



Sp884\_34

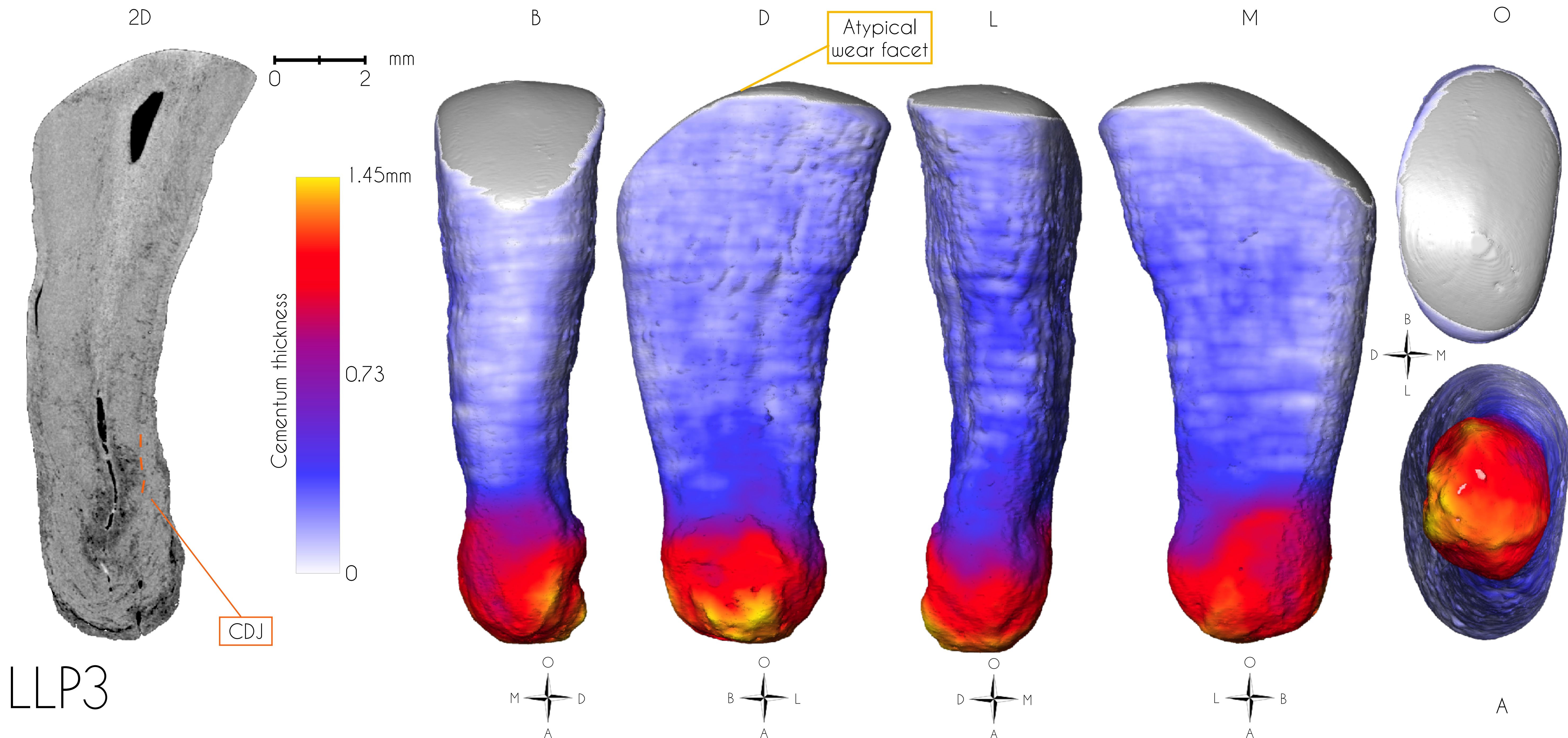
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LLP3	8	3	6	-	0	0	3.4.M	0	0	1m	1

LLP3



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





Sp884\_34

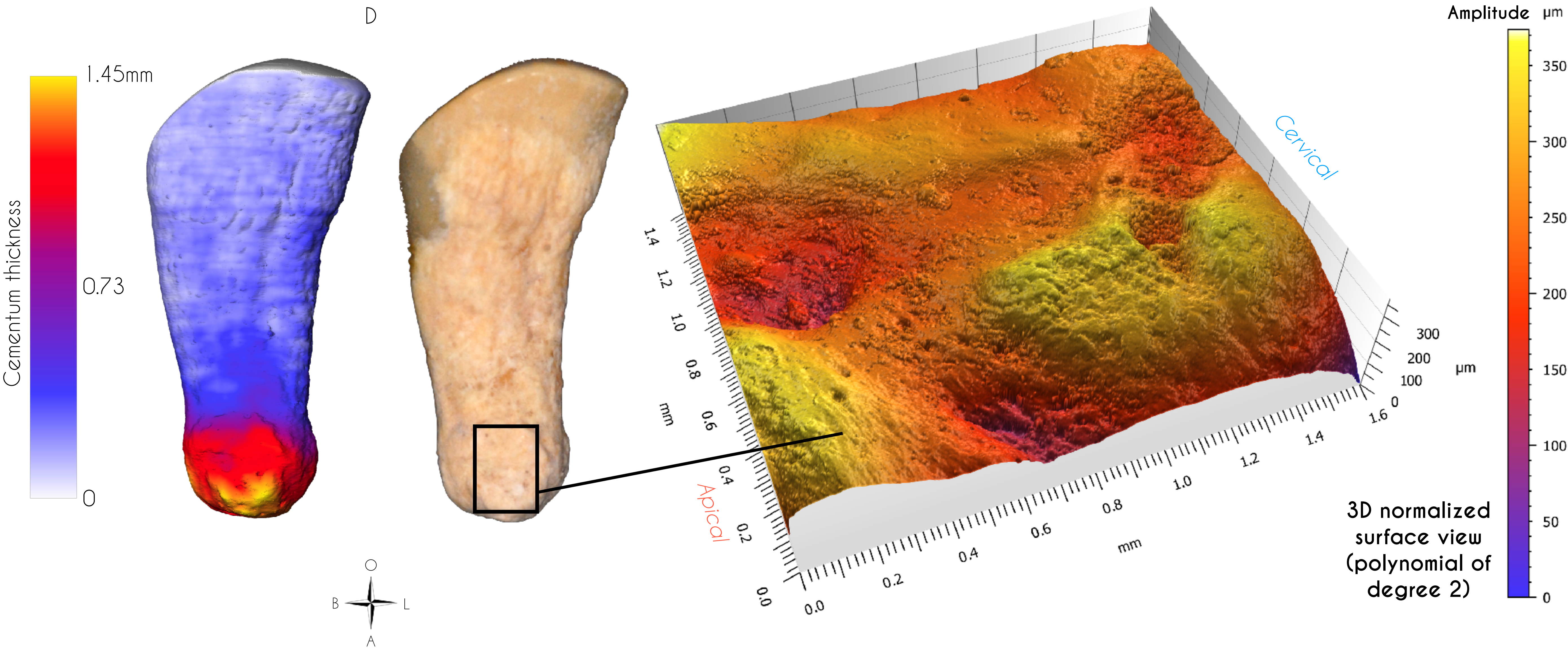
Microtomography - Thickness 3D maps				
MAX THI (μm)	LOC MAX	LOC MIN	PREF LOC	Note
1450	d	No	No	W

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
**PREF LOC:** preferential location;  
**W:** atypical wear facet;  
(m: mesial; d: distal)

Mixed



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
D	1188	5.50%	1.67mm	1.85mm	2/3	2	Blue	1.47	1.61	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
1d	370	+R2	-

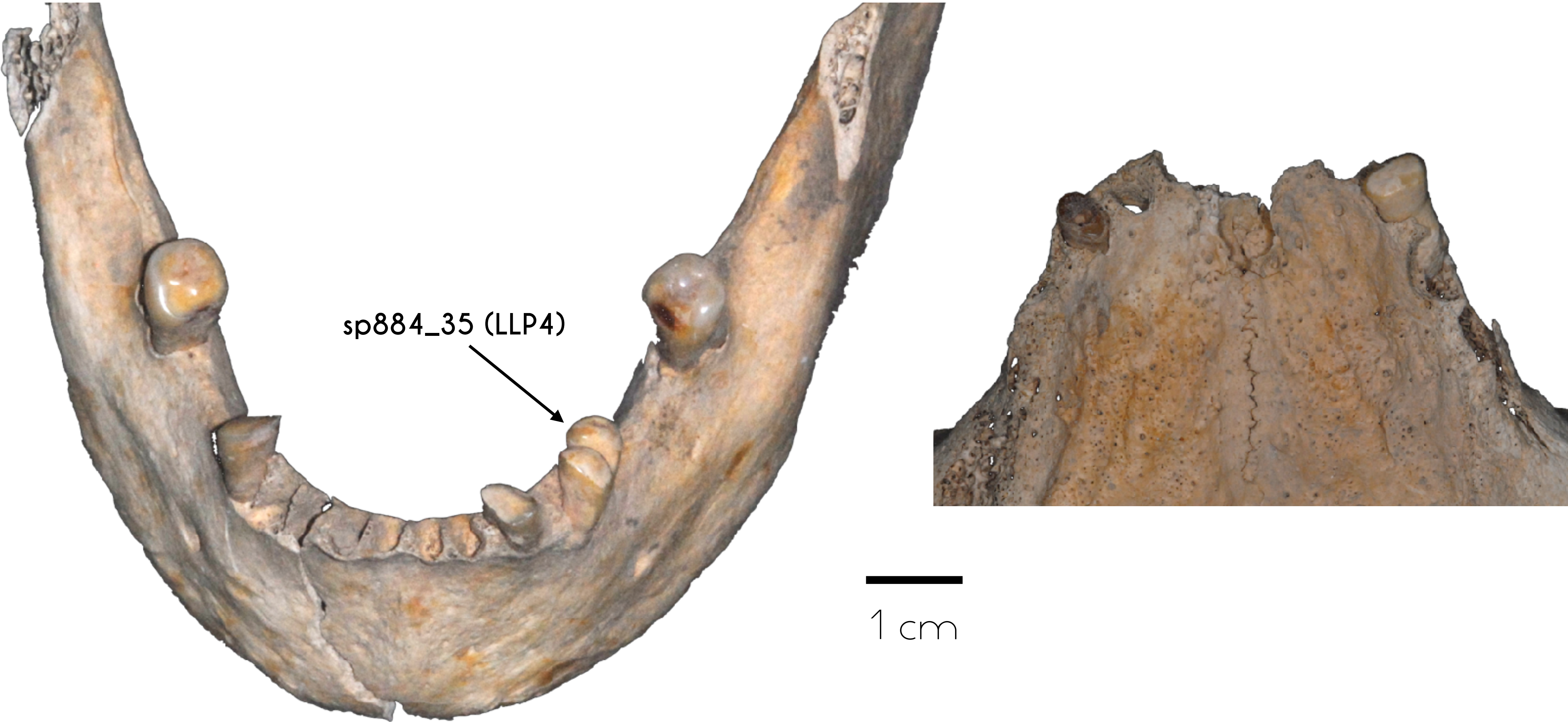
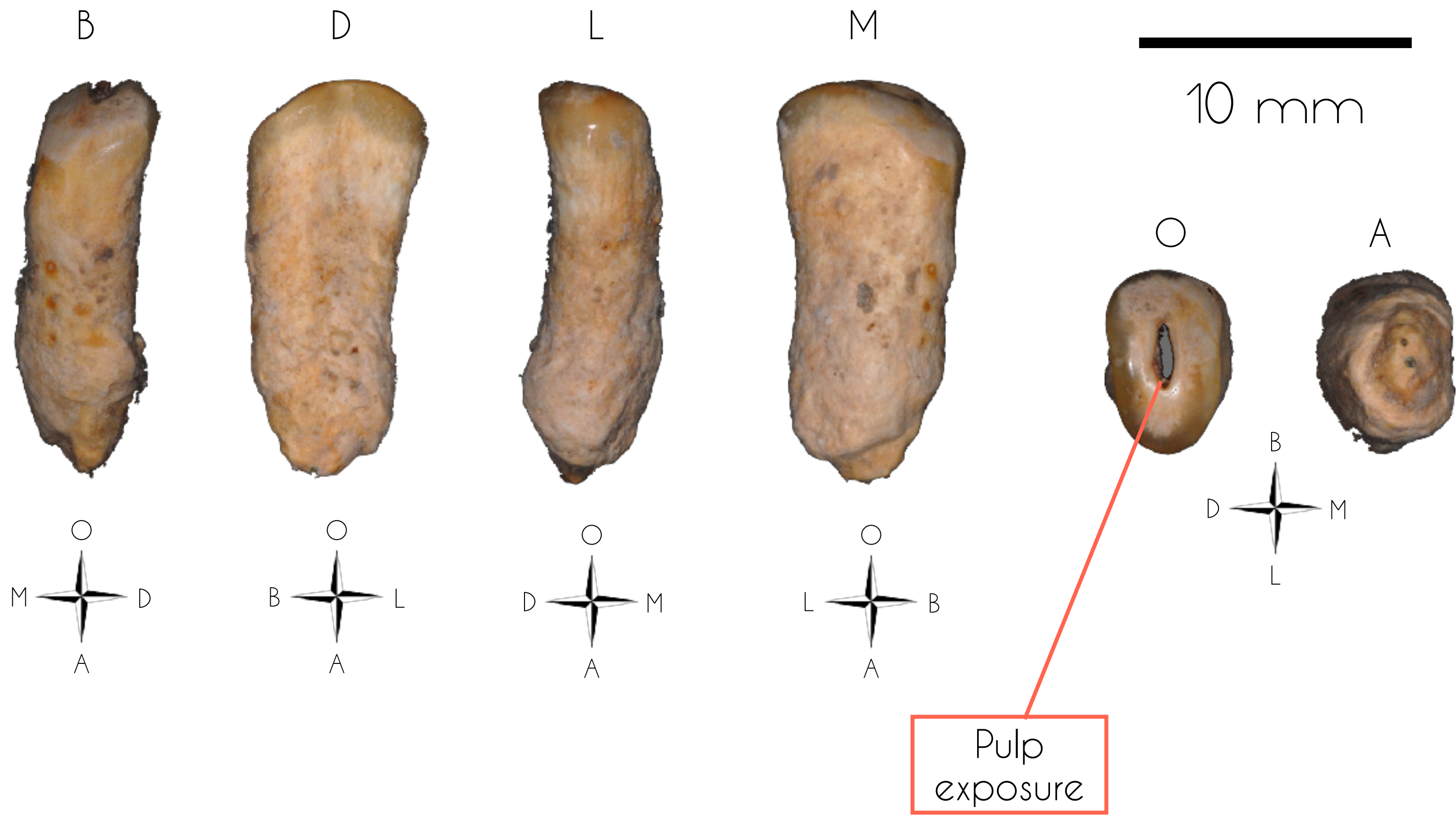
**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.



Sp884\_35

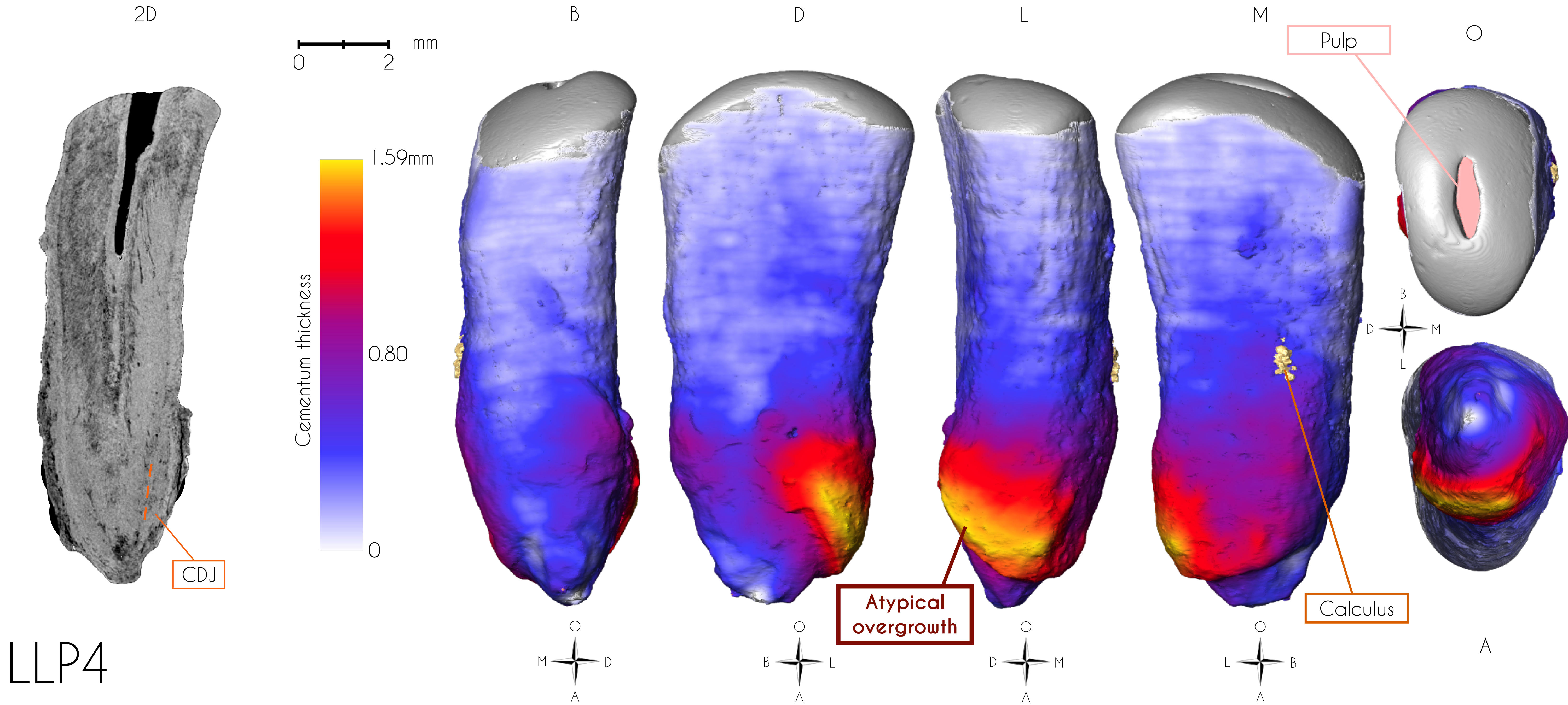
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LLP4	8	7	6	-	W	0	3.4.M	0	0	1d	2

LLP4



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure (W: wear) - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





Sp884\_35

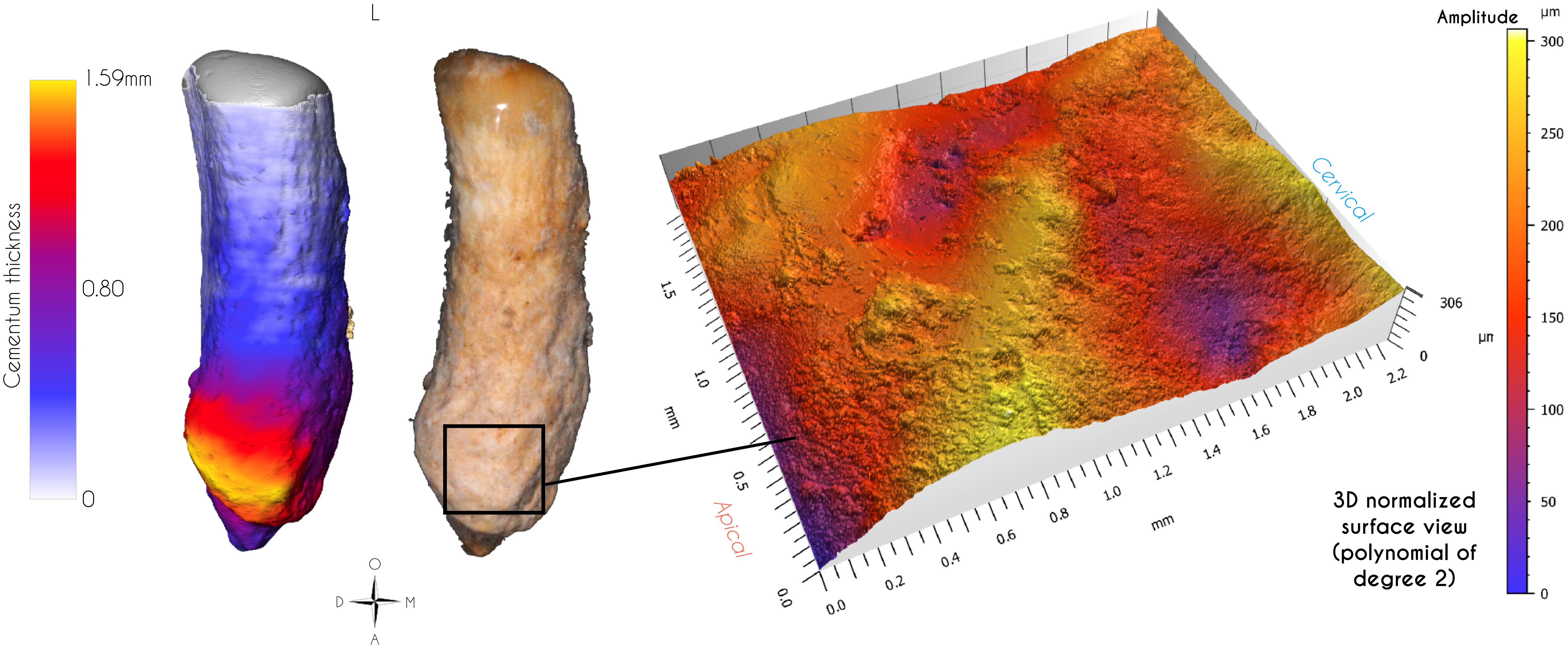
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1590	d>	<	Yes	OG (>)

MAX THI: maximum thickness of cementum;  
LOC MAX: location of maximum thickness;  
LOC MIN: location of minimum thickness;  
PREF LOC: preferential location;  
OG: atypical overgrowth;  
(m: mesial; d: distal; <: buccal; >: lingual)

Mixed



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
L	1201	6.02%	2.45mm	1.85mm	3/3	2	Blue	1.47	1.61	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (μm)	ST	Note
>	310	-R2	-

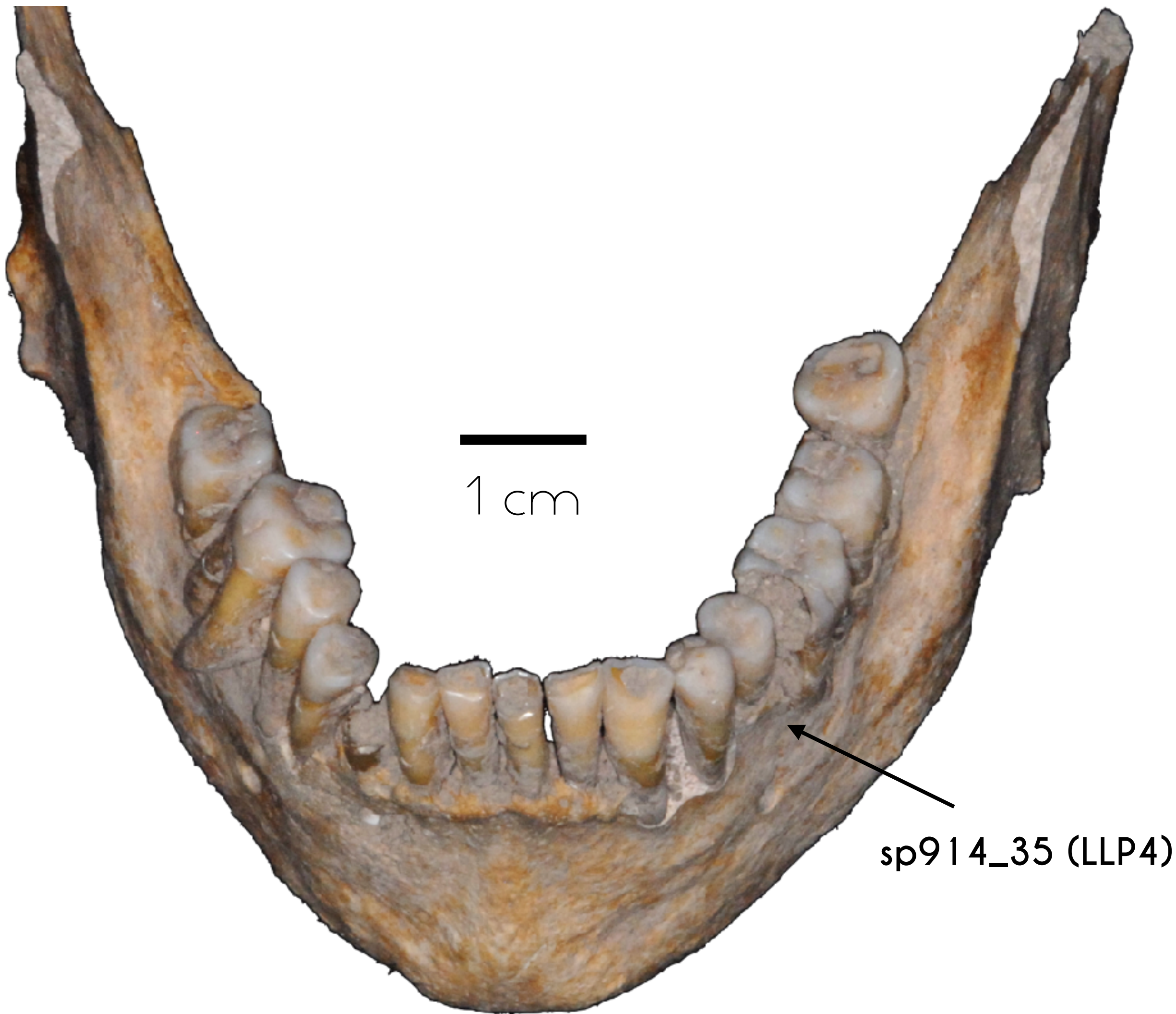
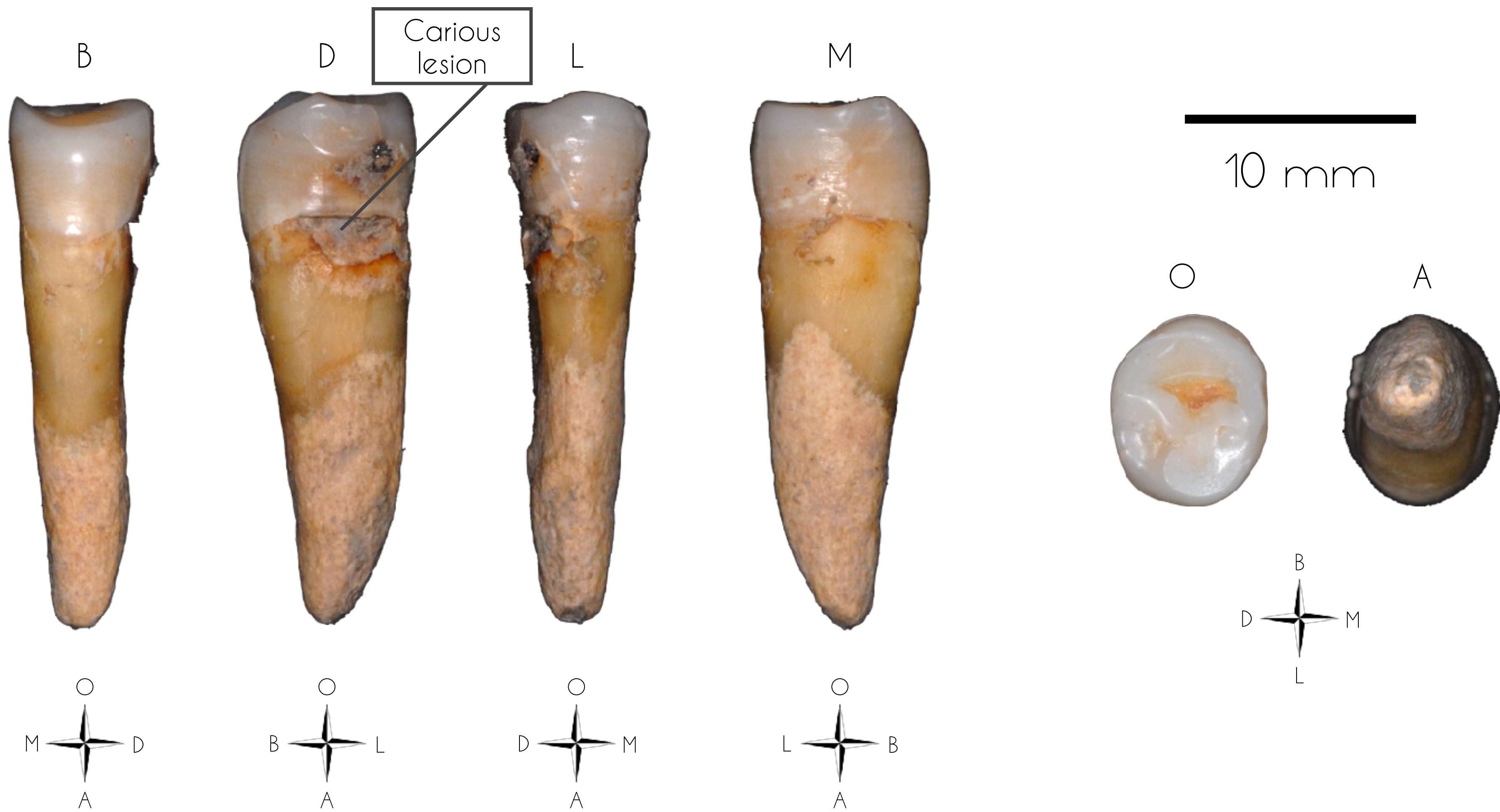
**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.



Sp914\_35

Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
LLP4	3	3	3	2/3	0	0	1.2.m	0	0	0	NA

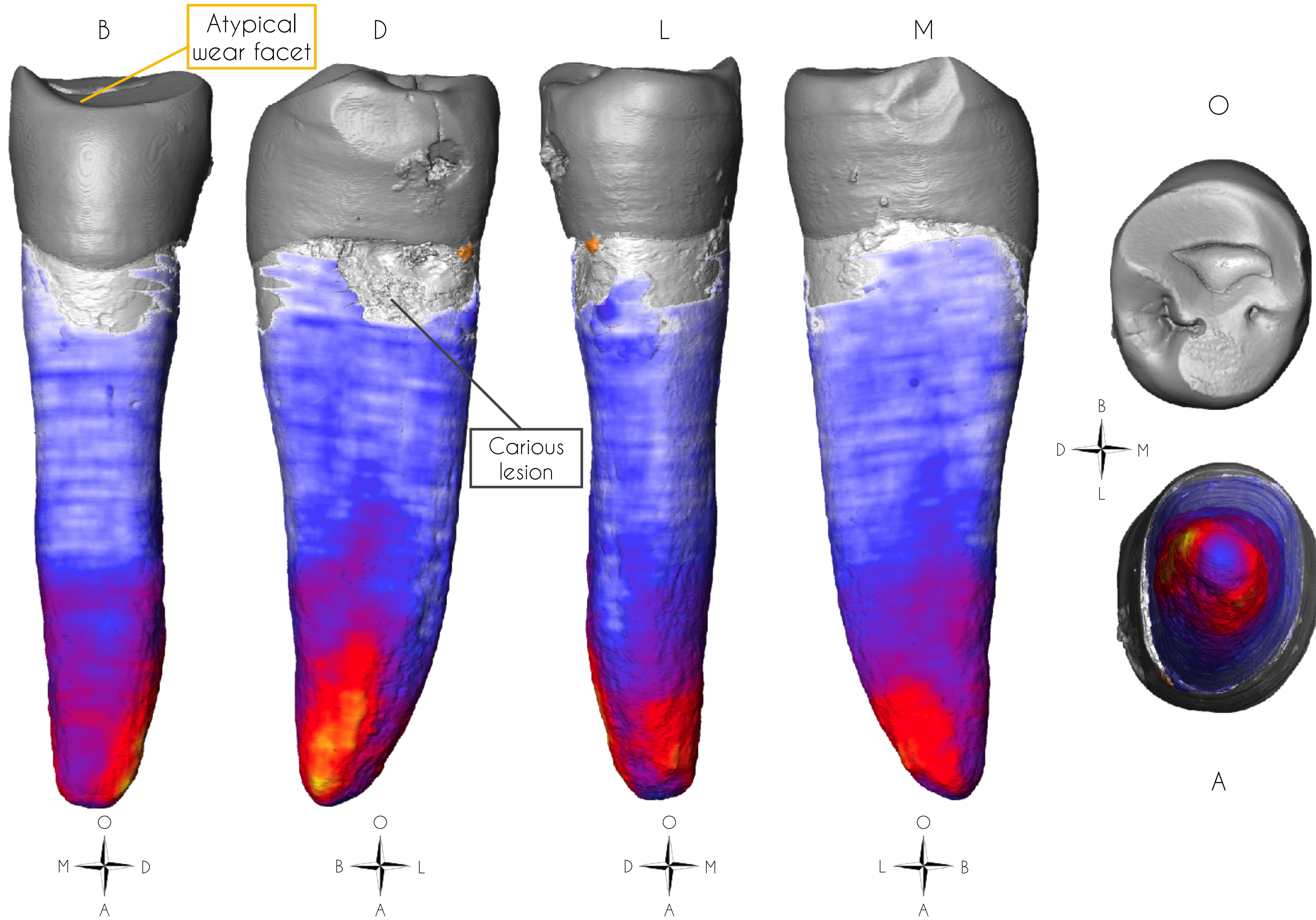
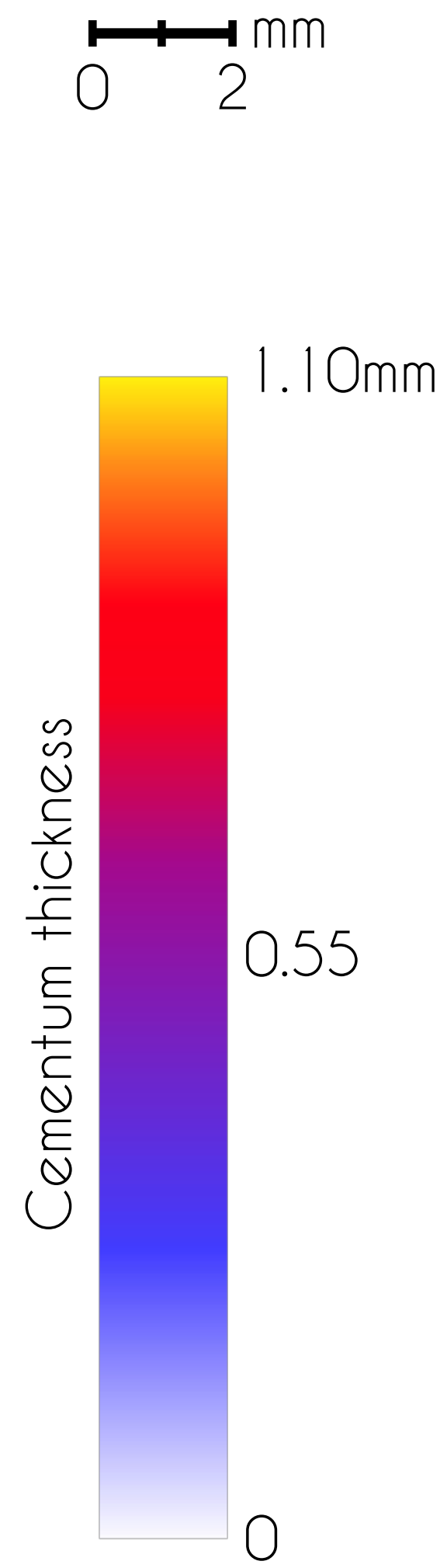
LLP4



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist



LLP4



Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1 100	1 d	No	No	CAR (d)

**MAX THI:** maximum thickness of cementum;  
**LOC MAX:** location of maximum thickness;  
**LOC MIN:** location of minimum thickness;  
**PREF LOC:** preferential location;  
**CAR:** carious lesion;  
(m: mesial; d: distal)

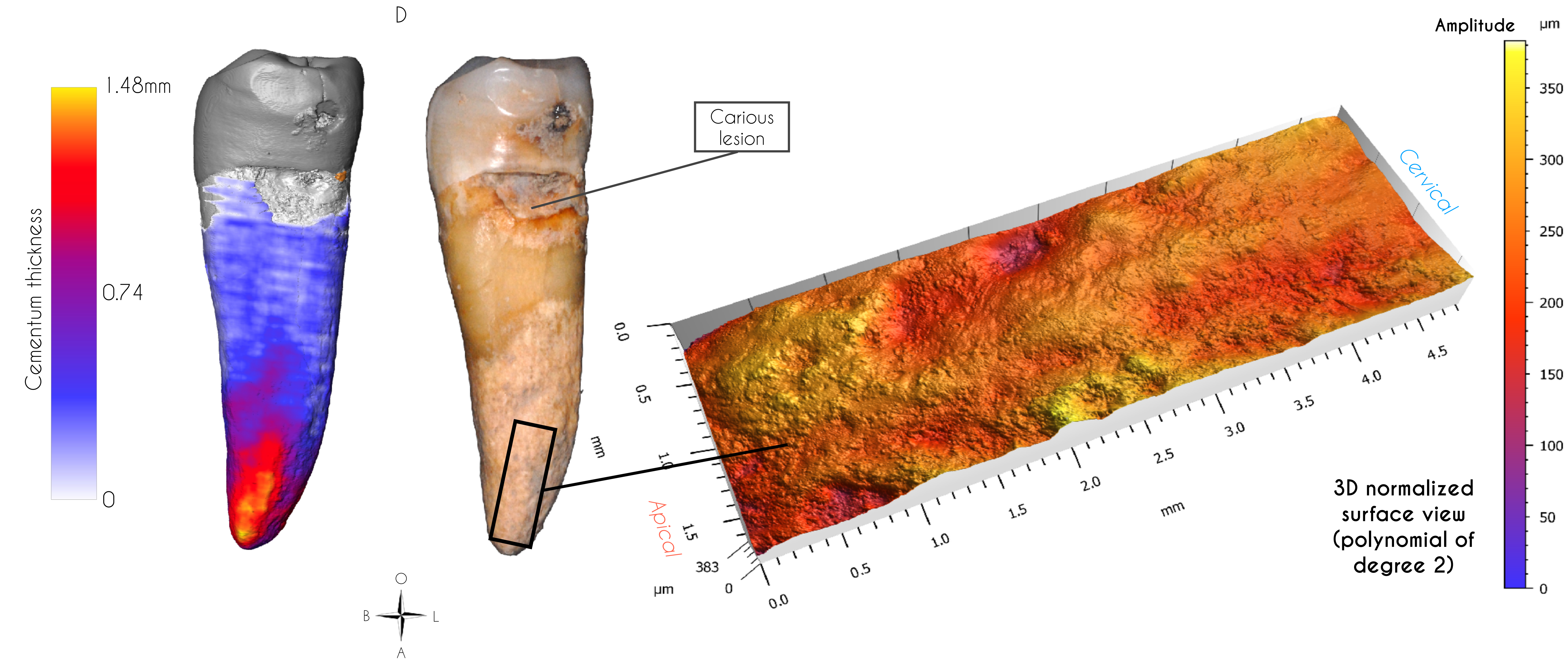
Mixed



LLP4

Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
<i>D</i>	<i>1788</i>	<i>5.42%</i>	<i>1.67mm</i>	<i>4.82mm</i>	<i>2/8</i>	<i>2</i>	<i>Blue</i>	<i>1.47</i>	<i>1.61</i>	<i>10 %</i>

Sp914\_35



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE ( $\mu\text{m}$ )	ST	Note
1d	375	-R2	-

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);

**MAX VE:** maximum vertical elevation;

**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.

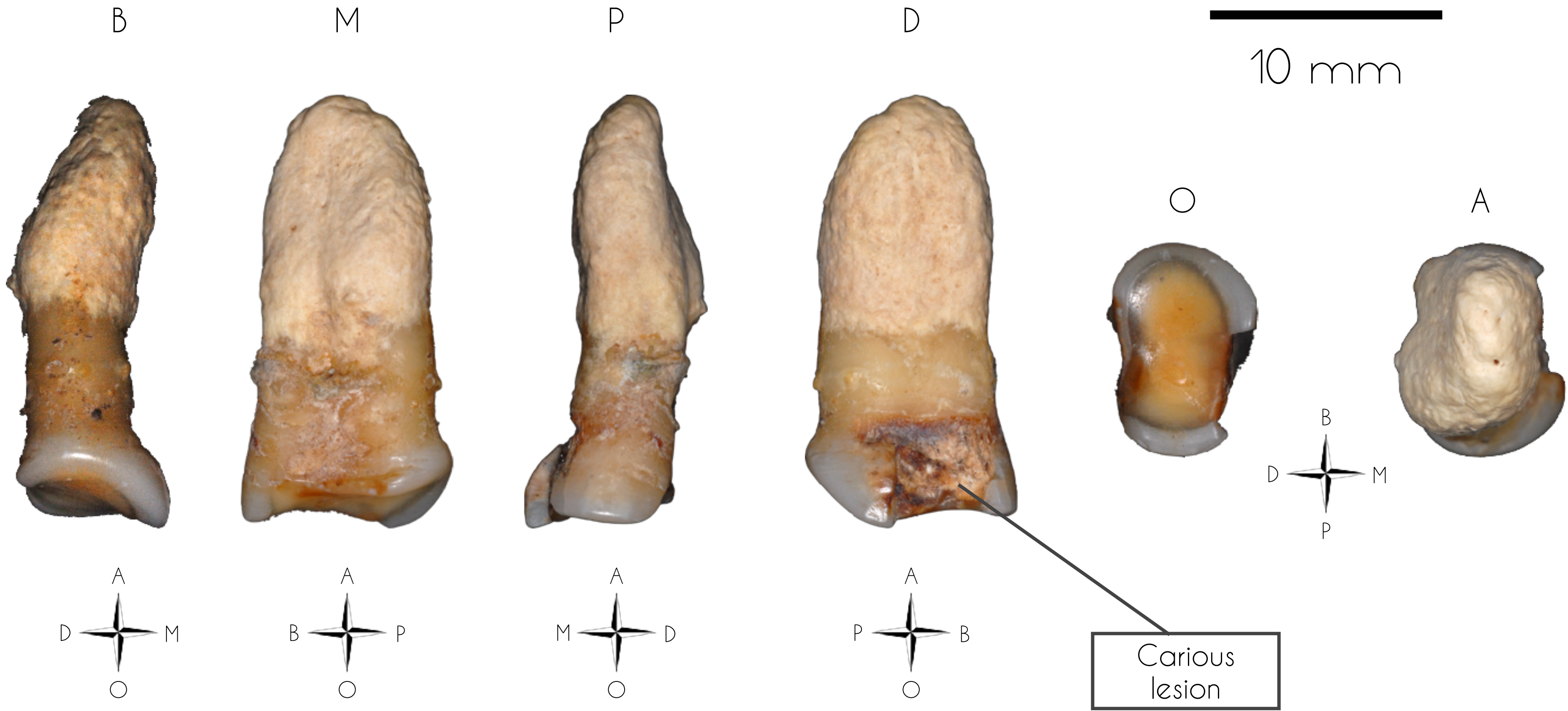
Mixed



Sp1300\_14

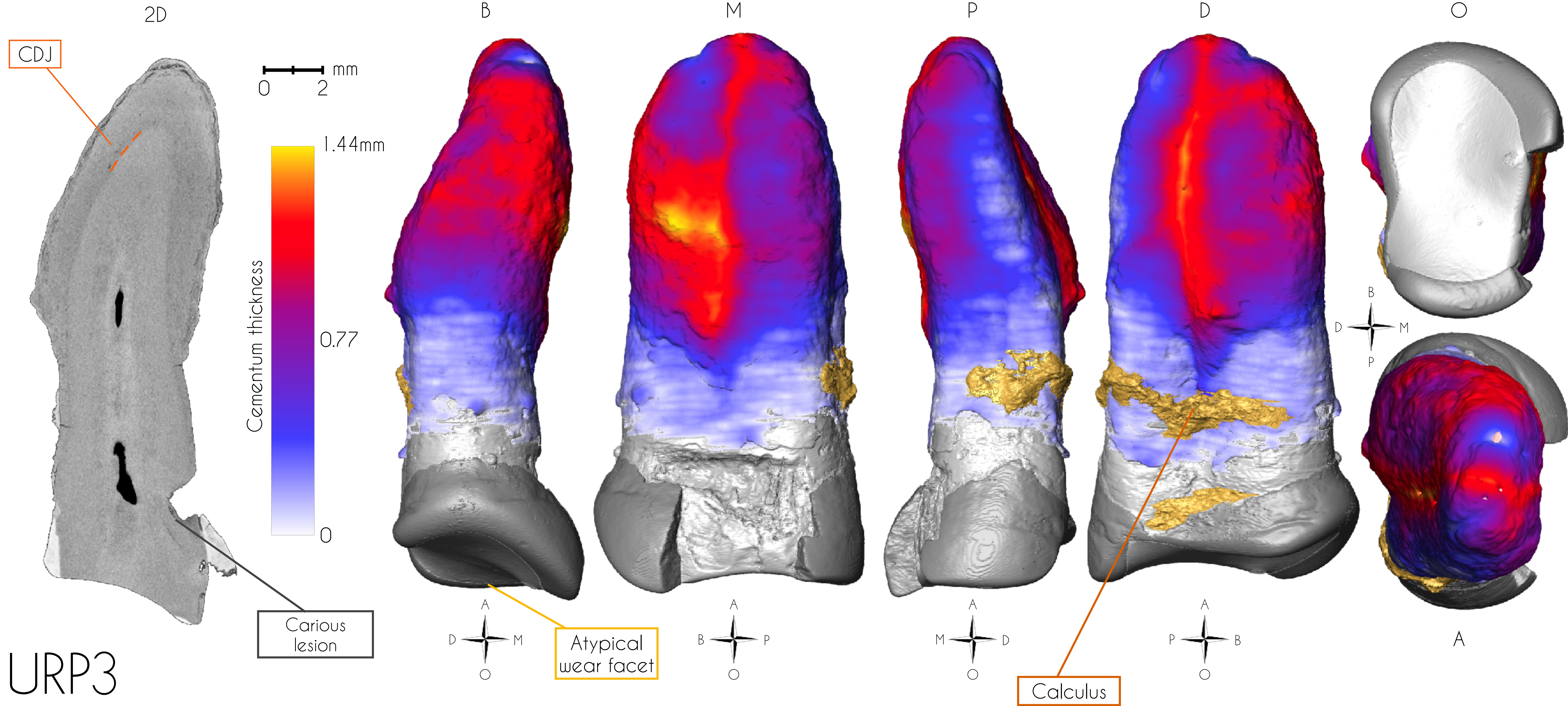
Tooth	Occlusal Wear			CAR Si/Sta	Pulp EXP	IMP	Hypercementosis	Bone Context			
	DEG	DIR	FOR					FEN	CAL	NT	ANTA
URP3	7	4	4	2/2	0	0	1.2.M	0	0	NA	2

URP3



DEG: degree; DIR: direction; FOR: form - CAR: carious lesion - Pulp EXP: pulp exposure - IMP: impaction - FEN: fenestration; CAL: calculus; NT: tooth loss in neighbouring teeth; ANTA: antagonist





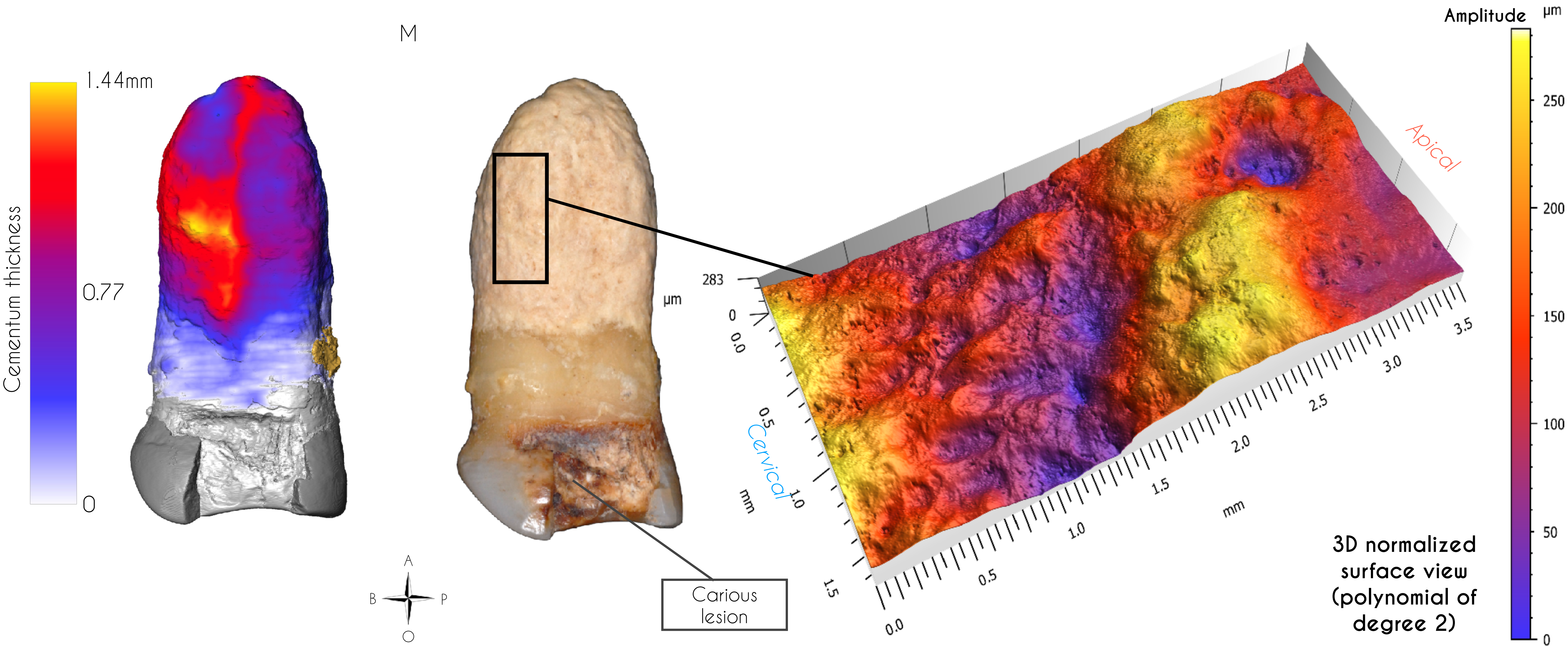
Microtomography - Thickness 3D maps				
MAX THI (µm)	LOC MAX	LOC MIN	PREF LOC	Note
1440	1 m	>	No	CAR (m)

MAX THI: maximum thickness of cementum;  
LOC MAX: location of maximum thickness;  
LOC MIN: location of minimum thickness;  
PREF LOC: preferential location;  
CAR: carious lesion;  
(1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual)

Mixed



Face	Range	Light	Width	Height	Columns/Rows	Factor	Led Color	Gain	Gamma	Overlapping
M	1158	6.42%	1.67mm	4.23mm	2/7	2	Blue	1.47	1.61	10 %



Confocal microscopy - Topography 3D maps			
LOC MAX	MAX VE (µm)	SA	Note
2m	280	+R 1	-

**LOC MAX:** location of maximum thickness (1: apical root third; 2: middle root third; 3: cervical root third; m: mesial; d: distal; <: buccal; >: lingual);  
**MAX VE:** maximum vertical elevation;  
**ST:** surface texture; : scored (+) if it is high, (-) if it is low; **S:** smooth or **R:** rough; the frequency of occurrence of the elevations scored (1) if the frequency is high, (2) if the frequency is low.