

Pridobivanje podatkov za BIM

knjižnico o **FUNKCIONALNI**

in *estetski* življenjski dobi

lesa izpostavljenega na prostem

Davor Kržišnik

UL, Biotehniška fakulteta

Funkcionalnost



Estetika

<https://www.pinterest.com/Jessykosis/cybergoth-and-cyberpunk/?p=true>

<http://www.sierratradingpost.com/fila-ascente-15-trail-running-shoes-for-men-p-147jf/>



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DRAGI,
KDAJ BOŠ
PREPLESKAL
OGRAJO?



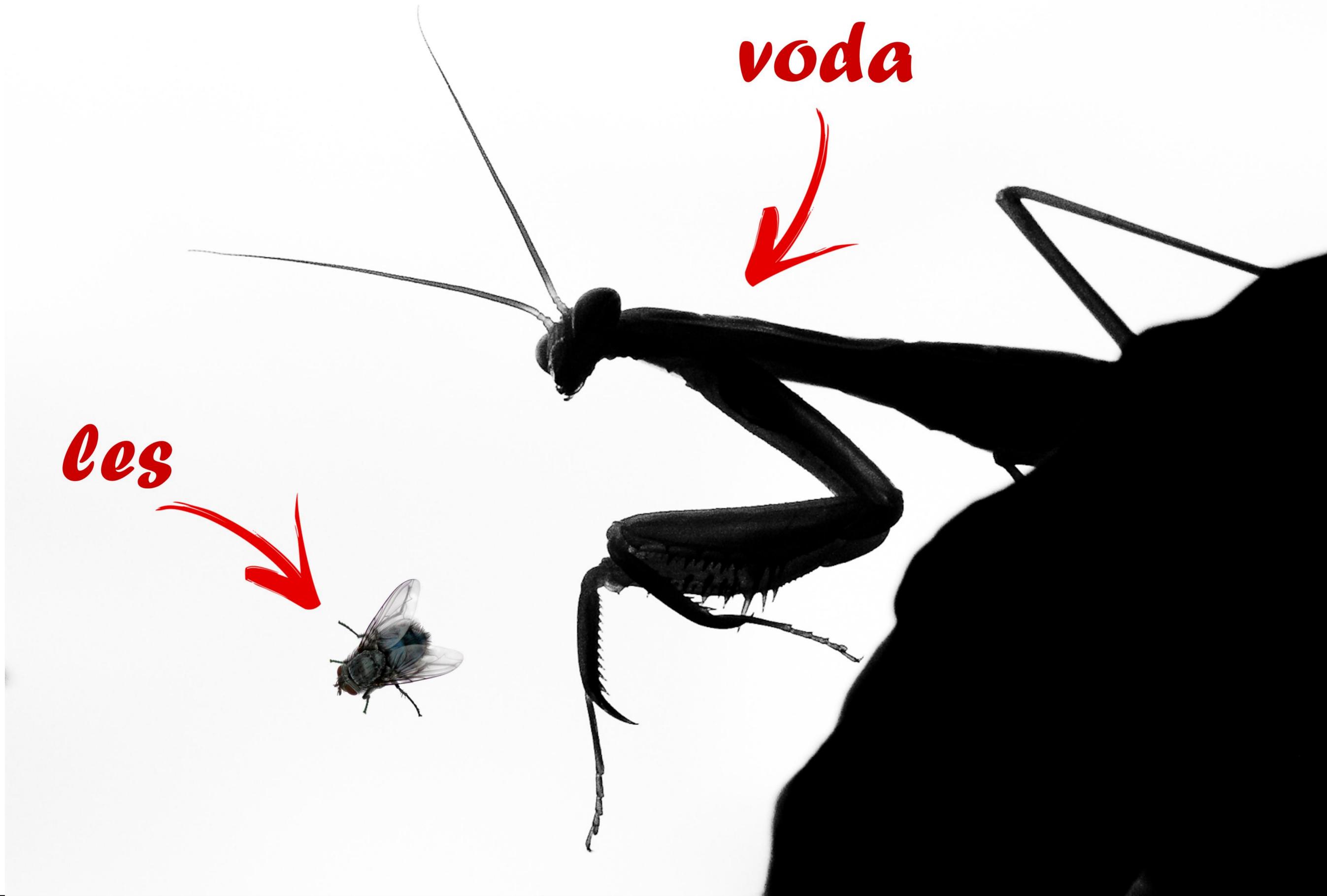
http://opacity.us/image1268_broken_chair.htm



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Funkcionalna življenjska doba



voda

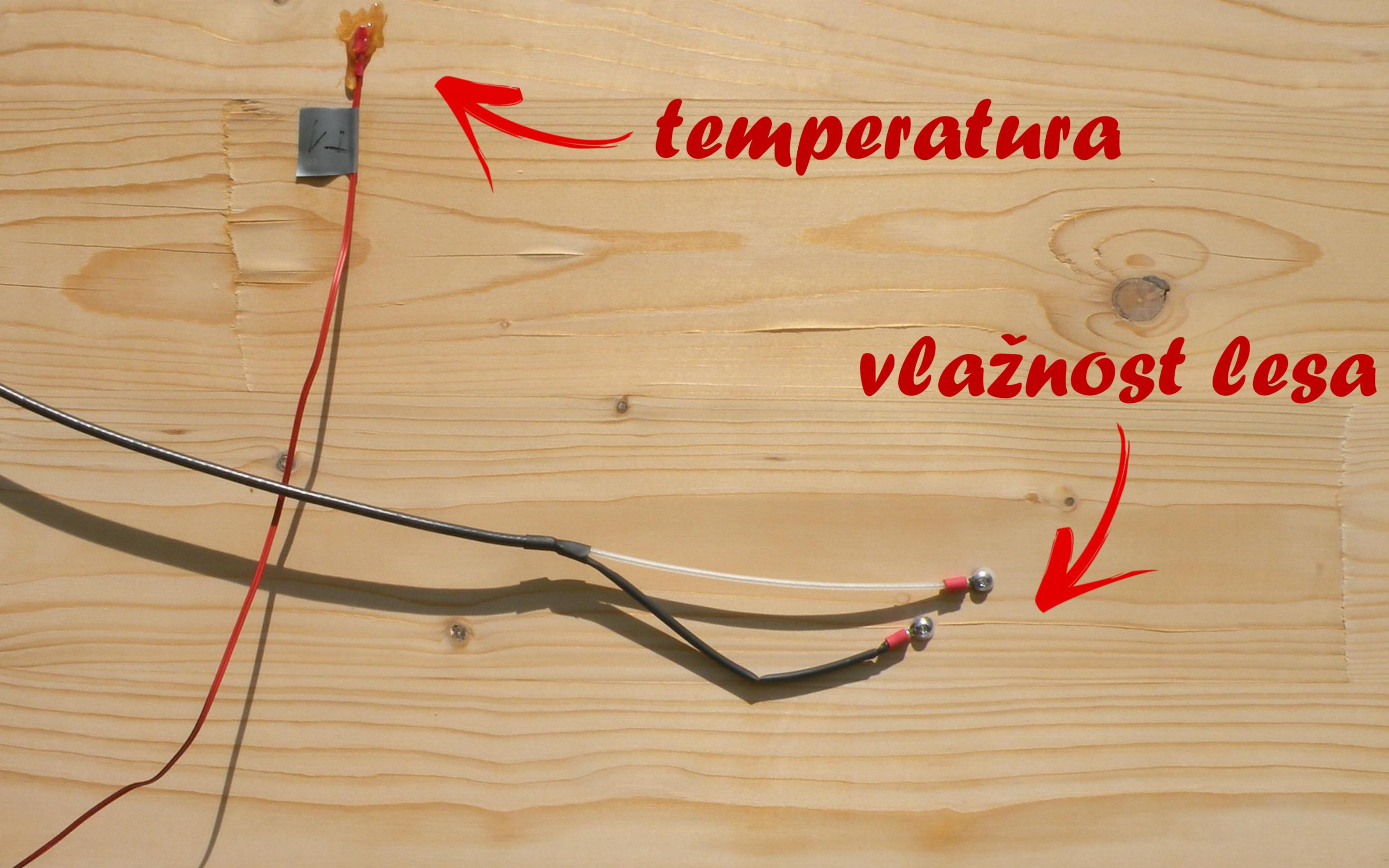
les



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Pridobivanje podatkov



Oktober
2017



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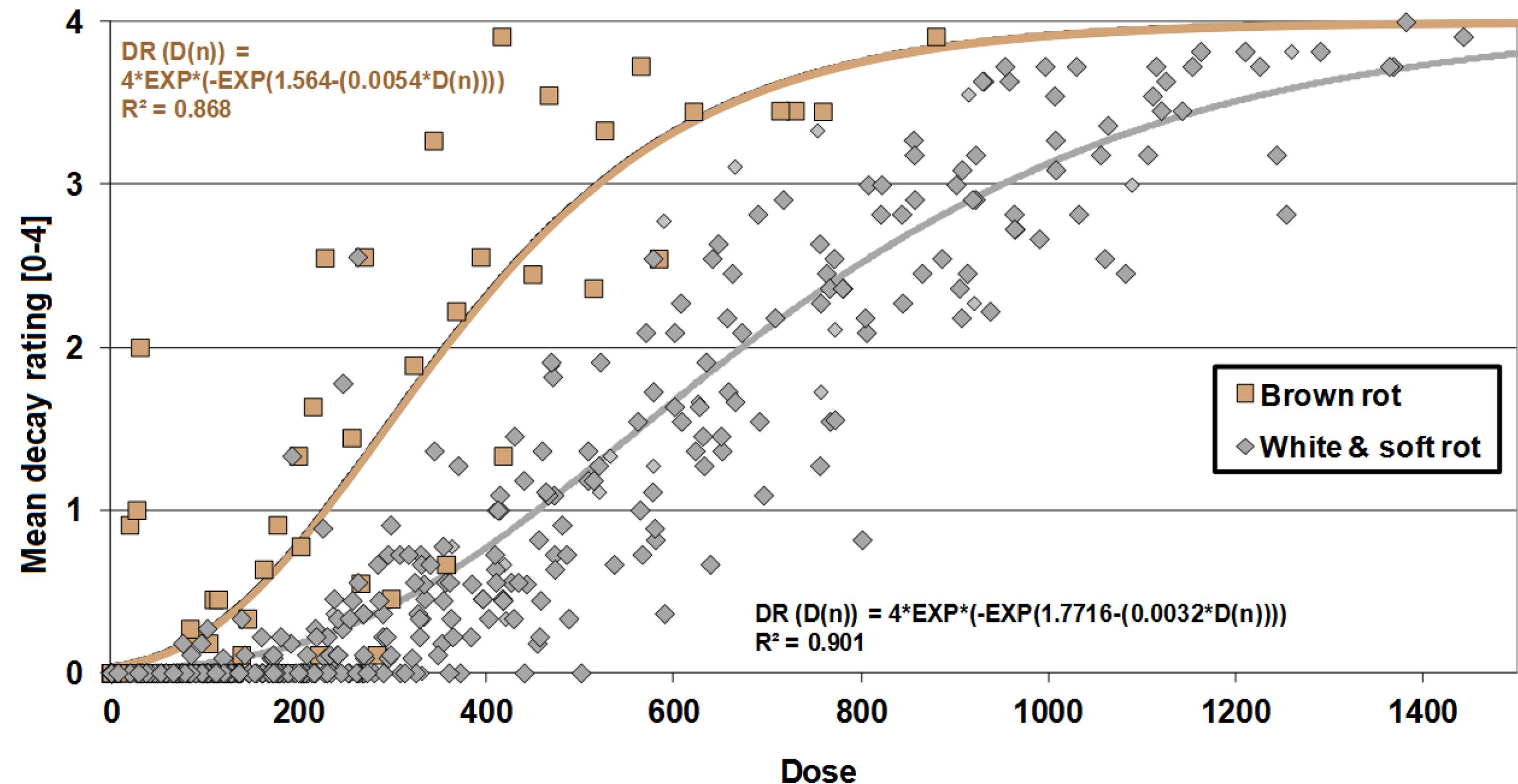
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MODELIRANJE

I. del



REZULTAT



Estetska
življenjska
doba



Oktober 2013



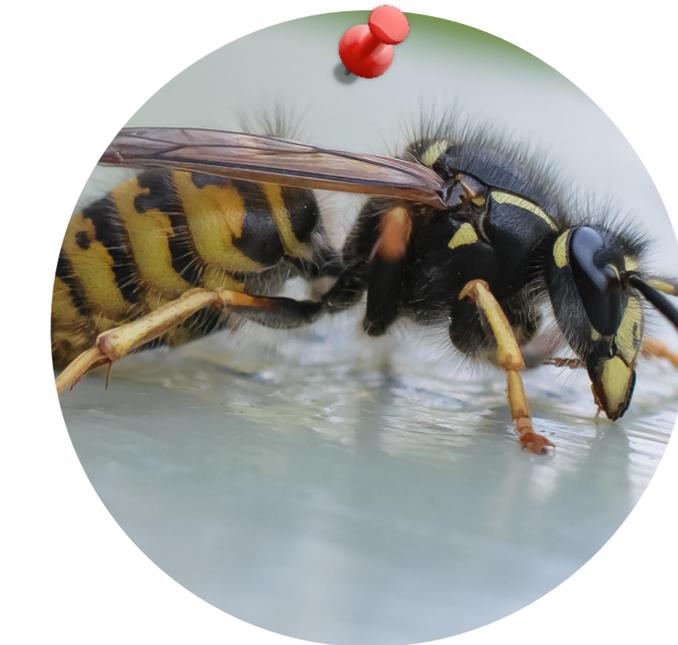
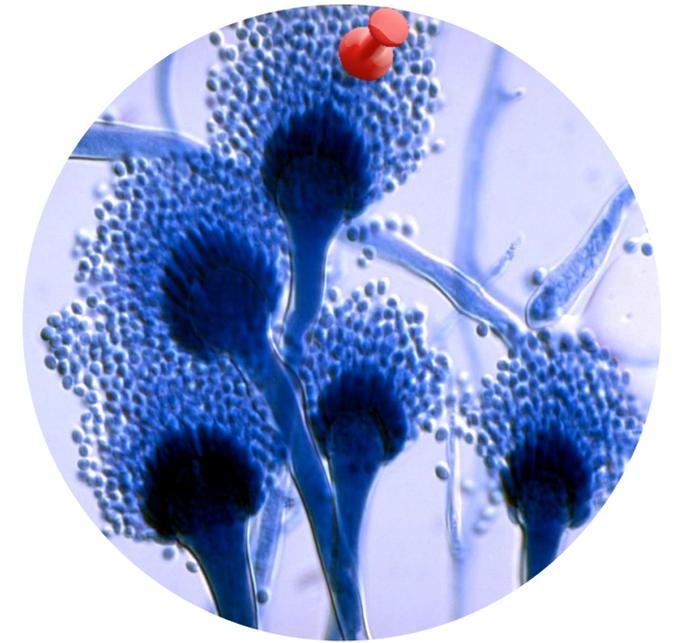
Oktober 2016



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Zakaj se barva lesa spreminja?



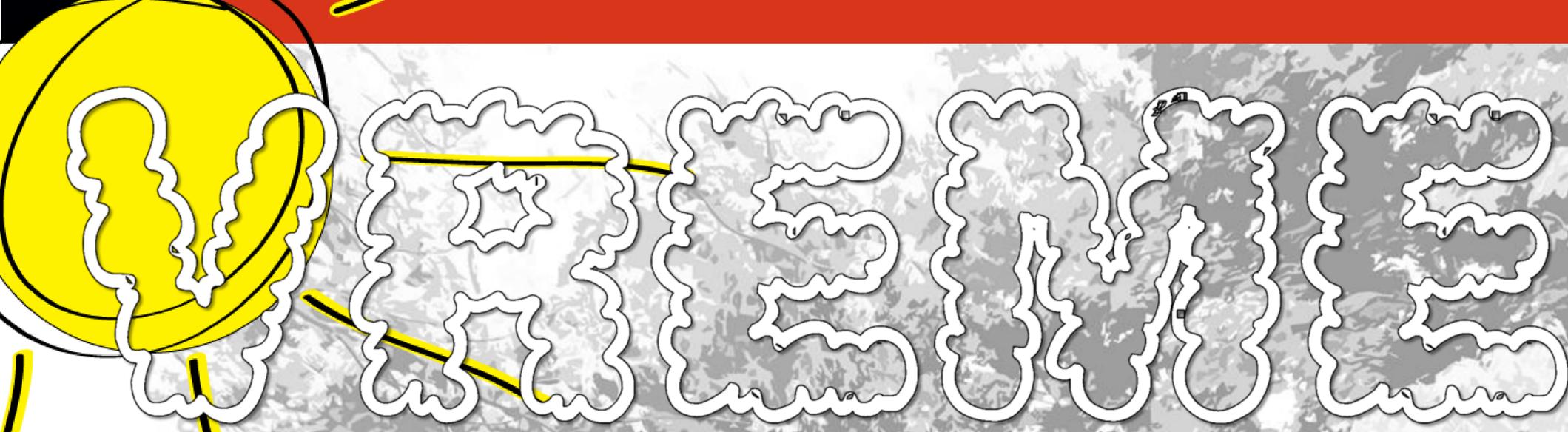
Pridobivanje podatkov



Probe	L	a	b	Farbwert A	Far
Probe7	67,95	9,47	28,64		
Probe8	68,20	10,01	29,79		
Probe9	68,38	9,64	28,39		
Probe10	46,66	9,65	22,18		
Probe11	45,35	9,92	22,37		
Probe12	47,02	9,50	21,92		
Probe13	45,84	9,69	22,69		
Probe14	46,35	6,28	12,93		
Probe15	41,87	6,98	14,42		
Probe16	46,15	5,59	11,92		
Probe17	42,23	6,10	11,65		
Probe18	68,82	9,65	31,66		
Probe19	69,27	9,83	32,05		
Probe20	69,77	9,77	31,79		
Probe21	65,00	10,85	31,47		
Probe22	65,00	10,85	31,47		
Probe23	61,94	11,91	30,58		
Probe24	59,58	12,83	31,88		
Probe25	61,74	12,38	29,73		
Probe26	53,14	16,37	35,26		
Probe27	53,86	15,44	33,13		
Probe28	54,98	14,73	31,98		
Probe29	48,66	6,58	29,82		
Probe30	48,66	6,58	29,82		

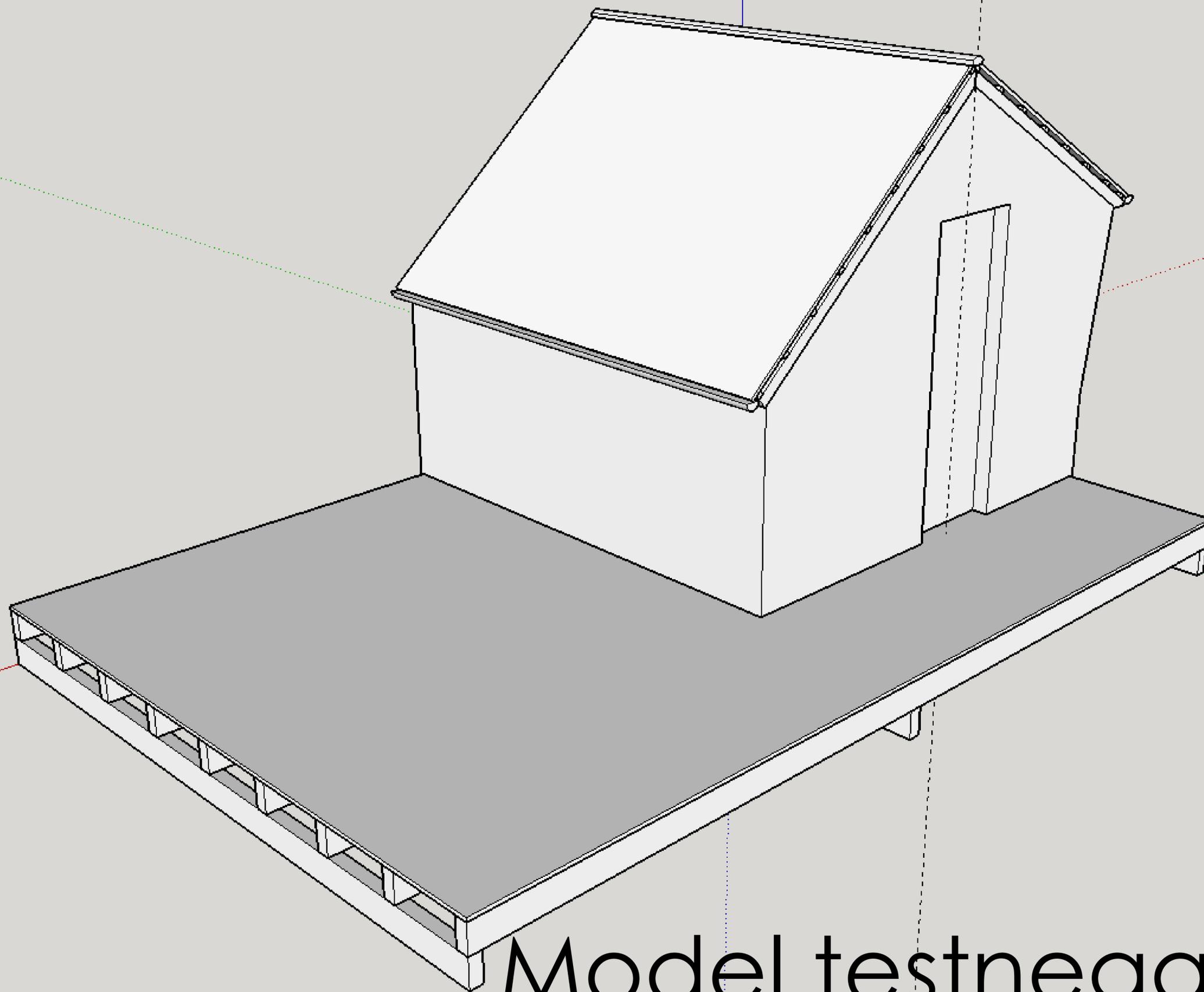
BARVA





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Model testnega objekta



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Simulacija
sončnega
obsevanja



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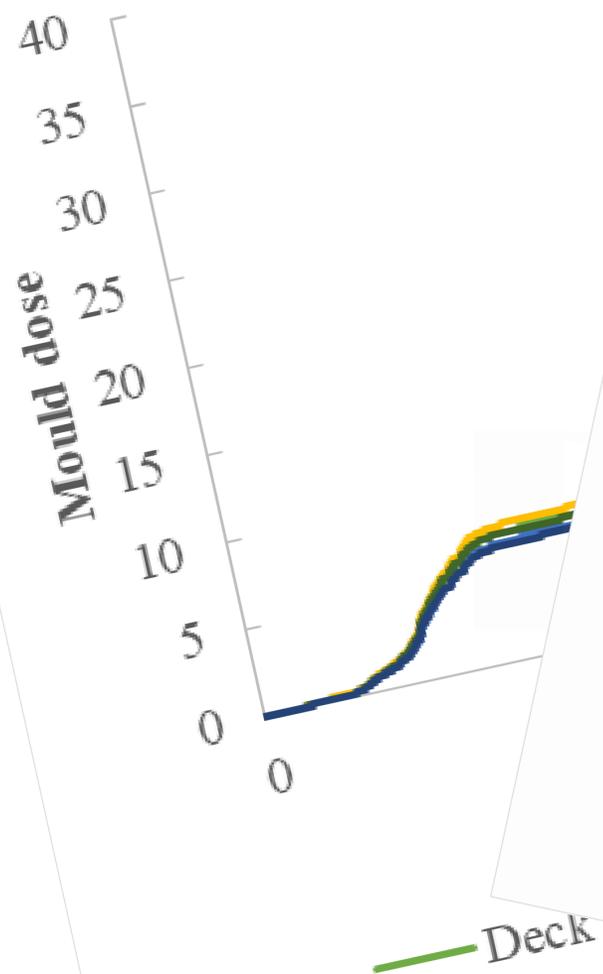
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MODELIRANJE

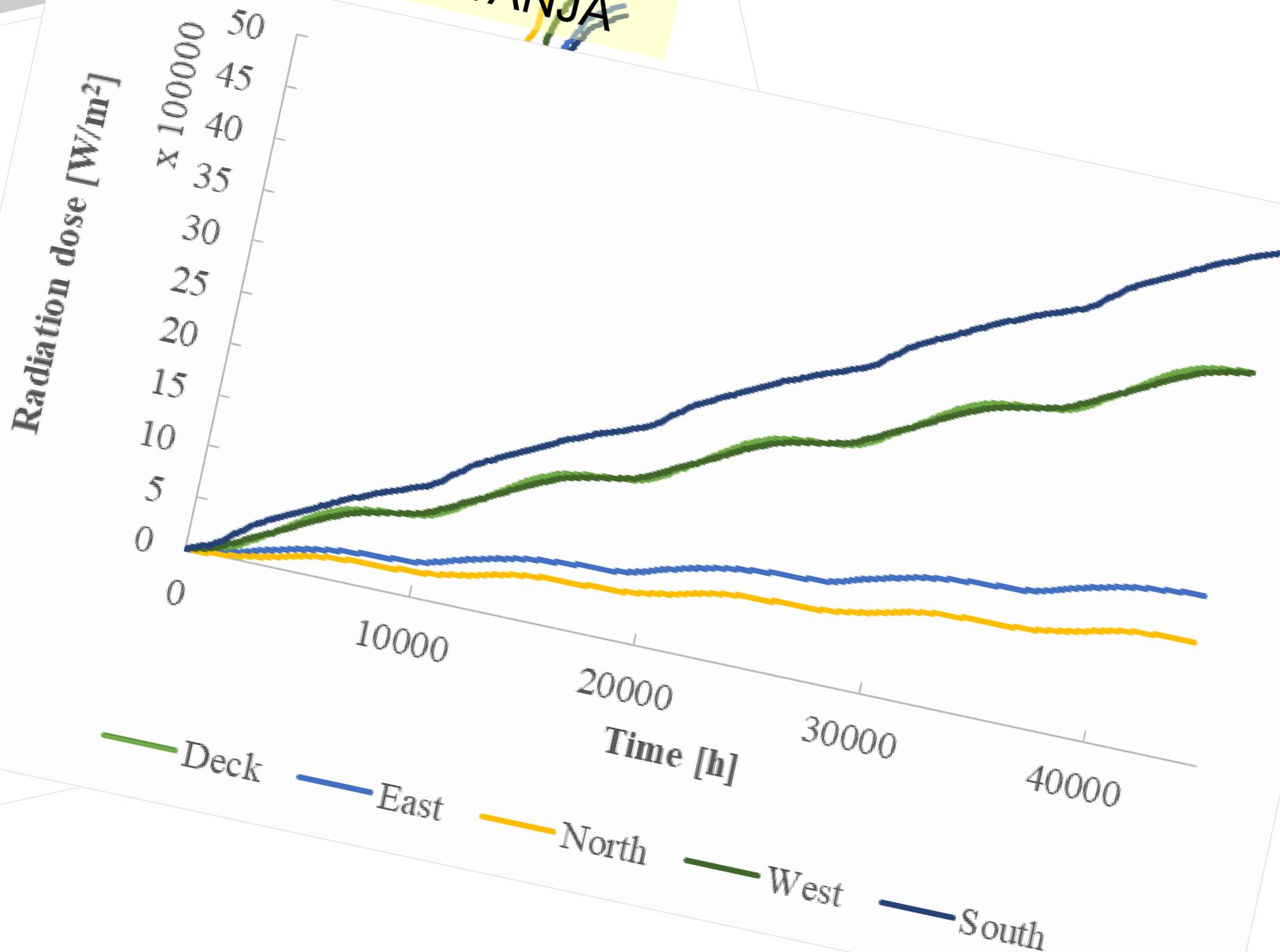
II. del



DOZA PLESNENJA



DOZA UV OBSEVANJA



MODELIRANJE

III. del

$$\mathbf{L}^* = \mathbf{x}_{L^*} \times \mathbf{D}_{mould} + \mathbf{y}_{L^*} \times \mathbf{D}_{radiation} + \mathbf{z}_{L^*} \times \mathbf{L}_{t-1}^*$$

$$\mathbf{a}^* = \mathbf{x}_{a^*} \times \mathbf{D}_{mould} + \mathbf{y}_{a^*} \times \mathbf{D}_{radiation} + \mathbf{z}_{a^*} \times \mathbf{a}_{t-1}^*$$

$$\mathbf{b}^* = \mathbf{x}_{b^*} \times \mathbf{D}_{mould} + \mathbf{y}_{b^*} \times \mathbf{D}_{radiation} + \mathbf{z}_{b^*} \times \mathbf{b}_{t-1}^*$$



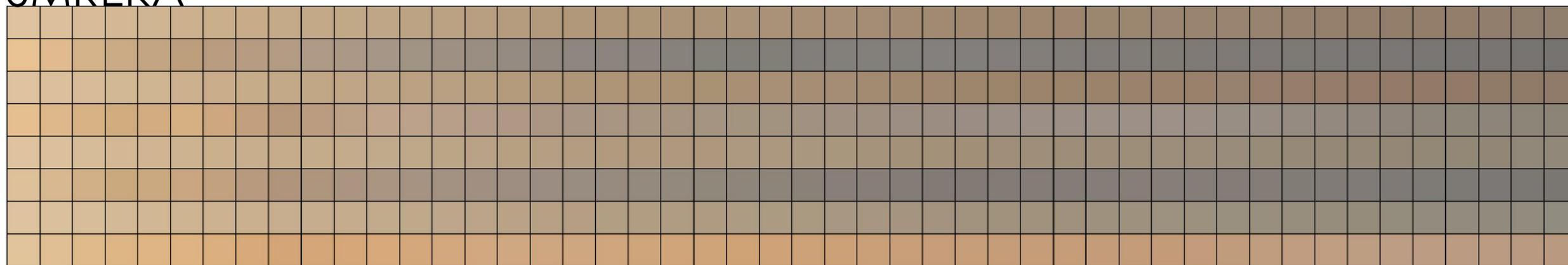
MACESEN – SEVERNA FASADA TESTNEGA OBJEKTA

MODELIRANA BARVA

IZMERJENA BARVA

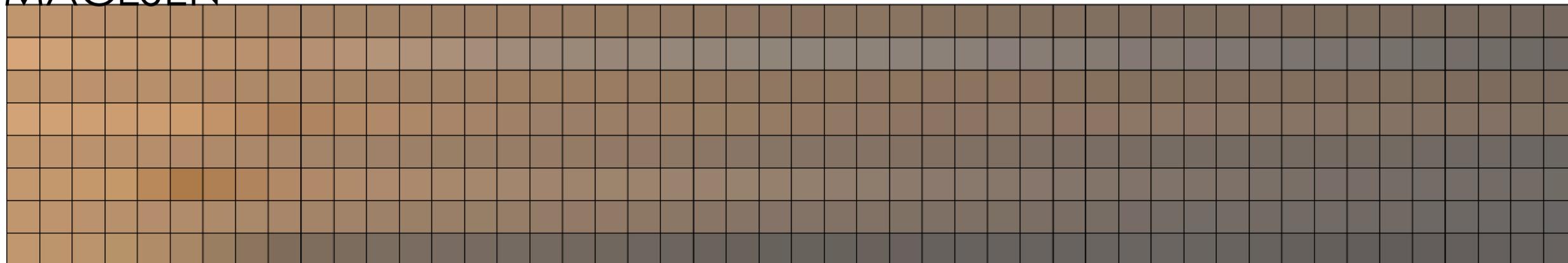
SMREKA

- Pred. East (validation)
- Real East (validation)
- Pred. North (train)
- Real North (train)
- Pred. West (train)
- Real West (train)
- Pred. South (train)
- Real South (train)



MACESEN

- Pred. East (validation)
- Real East (validation)
- Pred. North (train)
- Real North (train)
- Pred. West (train)
- Real West (train)
- Pred. South (train)
- Real South (train)





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Zahvala

COST FP1303 – Performance of bio-based building materials



Javna agencija za raziskovalno dejavnost RS



Tigr4smart



TIGR4smart