

# Amaterska radioastronomija

## 12 – Lov na B0329+54



Laboratorij za sevanje in optiko

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&

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**PSR B0329+54****other query modes :**

Identifier query

Coordinate query

Criteria query

Reference query

Basic query

Script submission

TAP

Output options

[Help](#)

Query : PSR B0329+54

C.D.S. - SIMBAD4 rel 1.5.11 - 2017.05.14CEST07:20:35

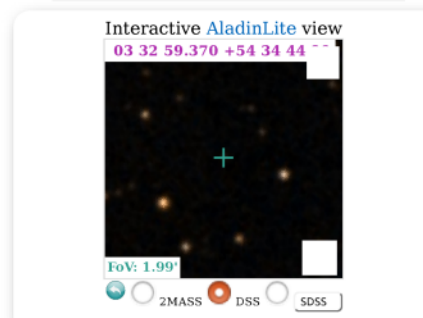
**Available data :** [Basic data](#) • [Identifiers](#) • [Plot & images](#) • [Bibliography](#) • [Measurements](#) • [External archives](#) • [Notes](#) • [Annotations](#)**Basic data :****PSR B0329+54 -- Pulsar**

Other object types:

Rad (GB6,MY,...), Psr (PSR,PULS), IR (2MASS)

ICRS coord. (*ep=J2000*) :03 32 59.37 +54 34 44.9 (Infrared) [ 290 270 7 ] B [2003yCat.2246....0C](#)FK5 coord. (*ep=J2000 eq=2000*) : 03 32 59.37 +54 34 44.9 [ 290 270 7 ]FK4 coord. (*ep=B1950 eq=1950*) : 03 29 11.06 +54 24 38.7 [ 290 270 7 ]Gal coord. (*ep=J2000*) : 144.9950 -01.2203 [ 290 270 7 ]

Fluxes (3) :

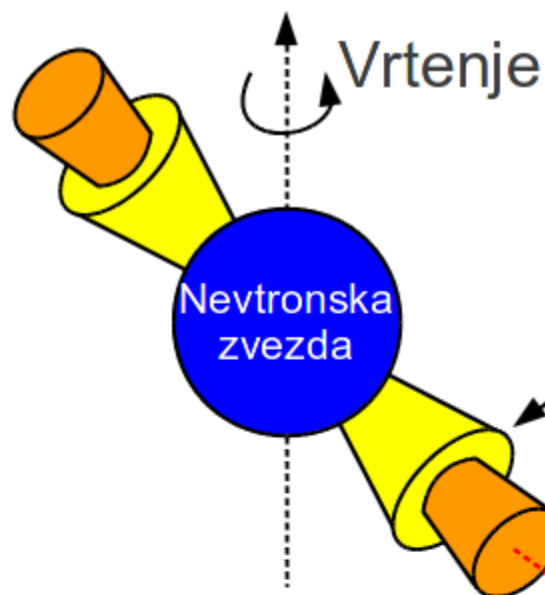
J 17.093 [0.193] D [2003yCat.2246....0C](#)H 16.183 [0.203] D [2003yCat.2246....0C](#)K 15.556 [0.172] D [2003yCat.2246....0C](#)SIMBAD  with radius  arcmin

VizieR [photometry viewer](#) ?

within radius  arcsec

notes:

- See also [Specfind radio flux densities](#).



Dva vgnezdna stožca sevanja!

Pulsar B0329+54  
 v ozvezdju Žirafe  
 Starost: ~5 milijonov let  
 Oddaljenost: 3460 sv.let  
 Gostota moči:  $S \sim 0.2 \text{ Jy}$   
 @  $f_0 = 1.4 \text{ GHz}$   
 Perioda:  $t_0 = 0.71452 \text{ s}$   
 Pulz(50%):  $t_p = 6.6 \text{ ms}$

$1 \text{ Jy} = 10^{-26} \text{ W}/(\text{m}^2 \text{ Hz})$

$k_B \approx 1.38 \cdot 10^{-23} \text{ J/K}$

Medzvezdna snov  
 ~30000 elektronov/ $\text{m}^3$   
 Migotanje (scintillation):  $t_m \sim 6 \text{ ur}$   
 Disperzija:  $\Delta t \sim 1.5 \text{ ms}$  @  $f_0$  & B

Sprejemnik  
 $A_{\text{eff}} \sim 6 \text{ m}^2$   
 $T \sim 70 \text{ K}$   
 $f_0 = 1.4 \text{ GHz}$   
 $B \sim 20 \text{ MHz}$

$$\frac{P_S}{P_N} = \frac{t_0 \cdot S \cdot A_{\text{eff}}}{t_p \cdot 2 \cdot k_B \cdot T}$$

$\frac{P_S}{P_N} \approx 6.7 \cdot 10^{-4}$

Ena polarizacija!

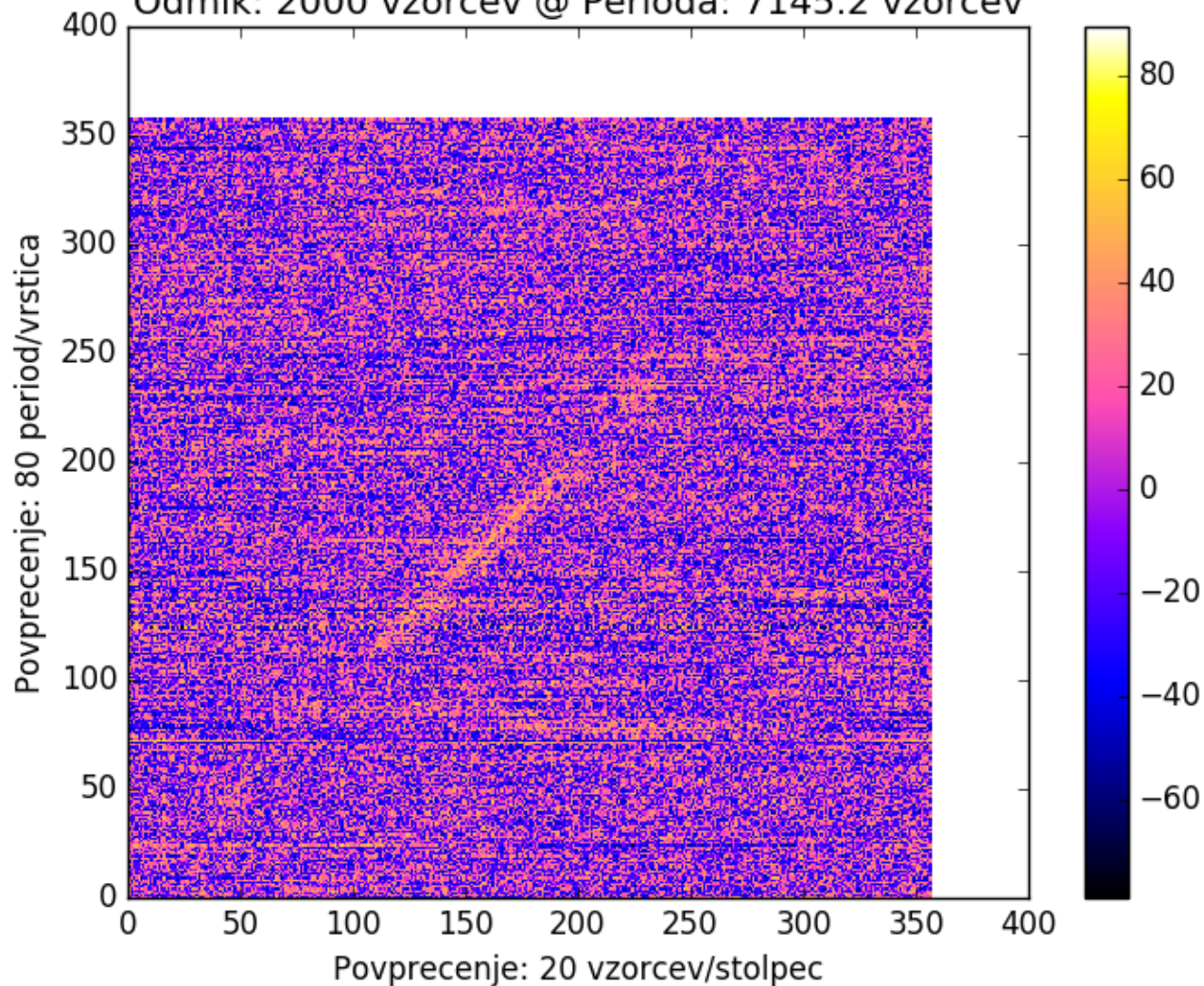
$$N_{3\sigma} = 3^2 \left( \frac{P_S}{P_N} \right)^{-2} \approx 2 \cdot 10^7 \quad (\text{Dicke})$$

$$t_{3\sigma} = \frac{N_{3\sigma} \cdot t_0}{B \cdot t_p} \approx 108 \text{ s}$$



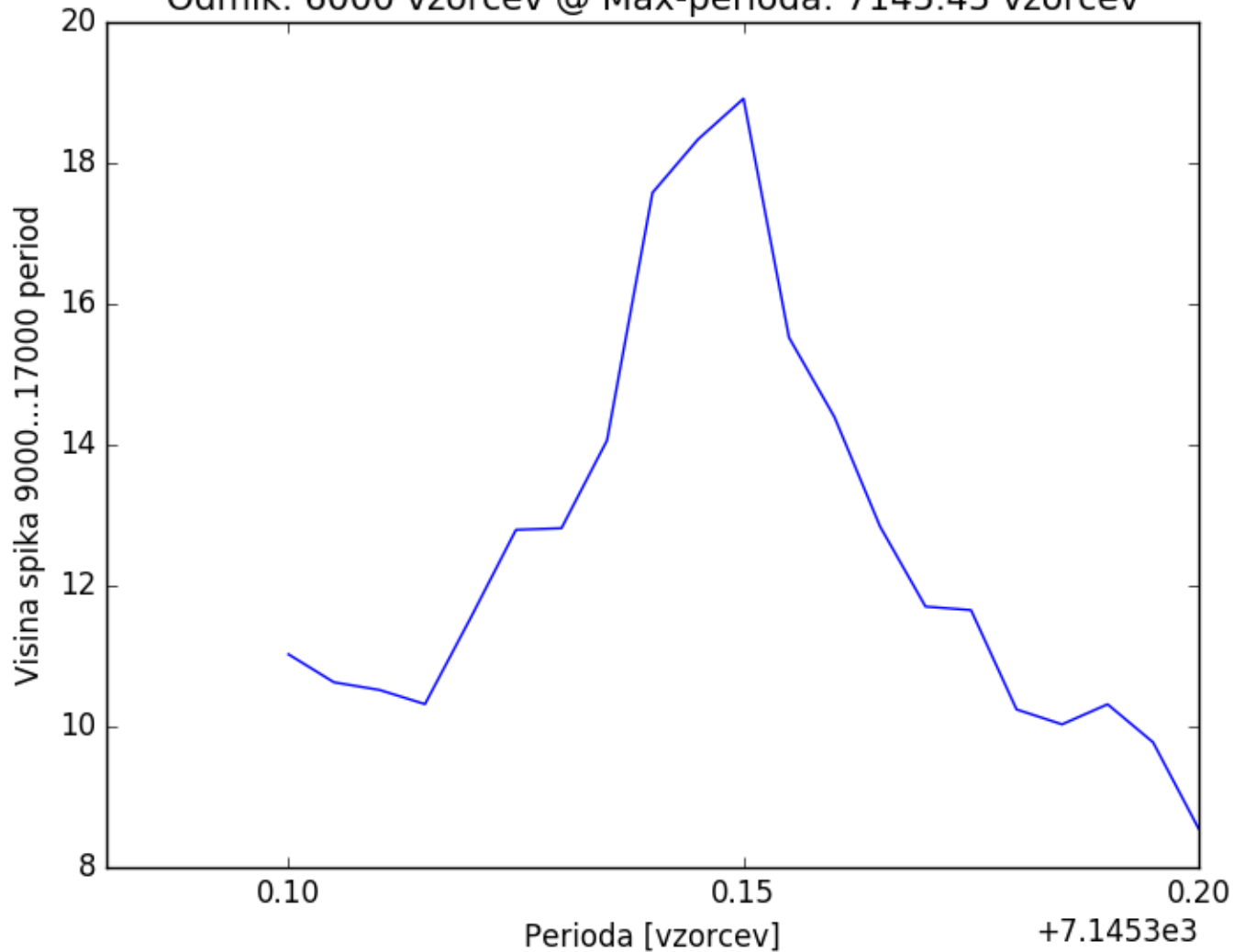
Izvor: 2017Apr30104347

Odmik: 2000 vzorcev @ Perioda: 7145.2 vzorcev



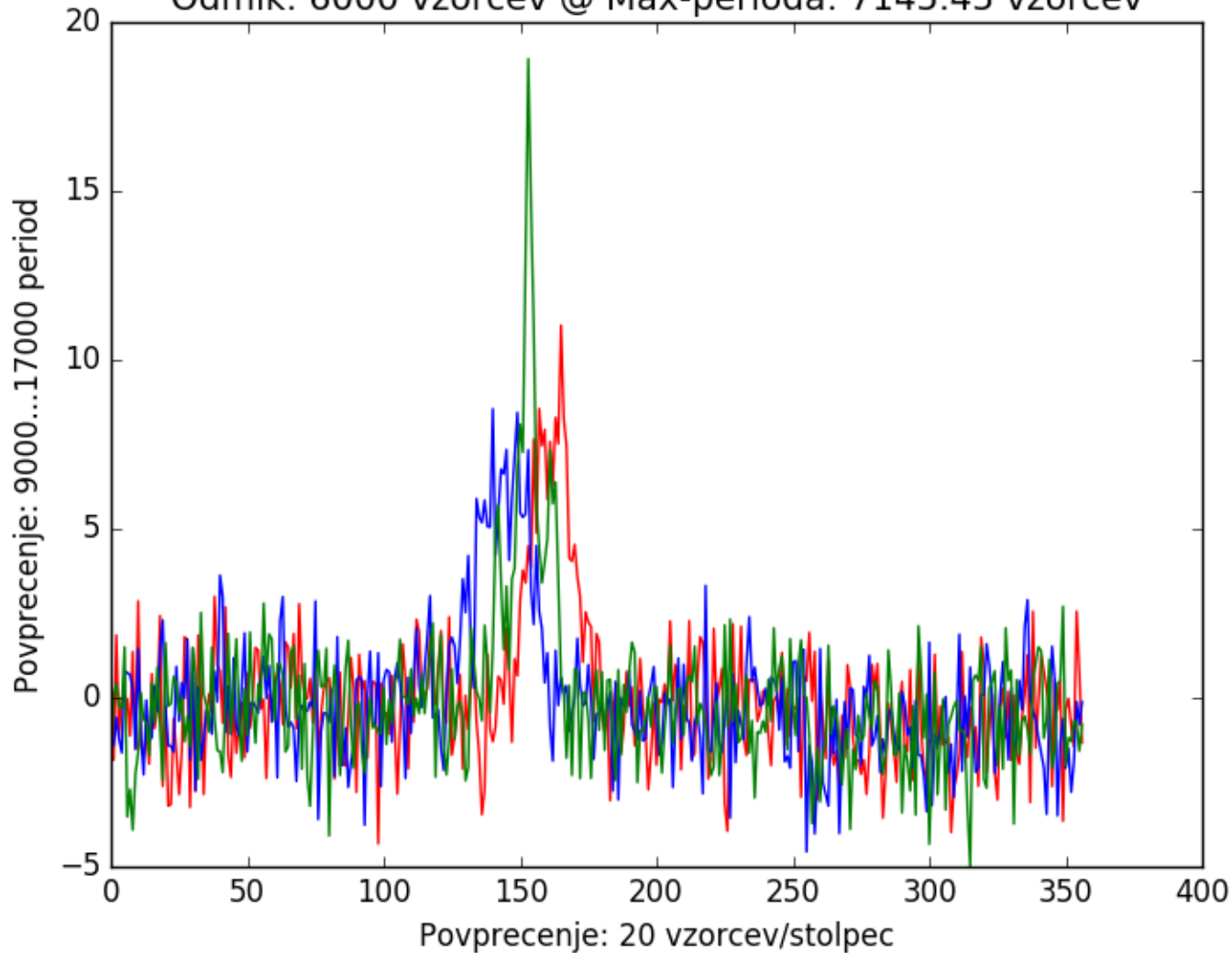
Izvor: 2017Apr30104347

Odmik: 6000 vzorcev @ Max-perioda: 7145.45 vzorcev



Izvor: 2017Apr30104347

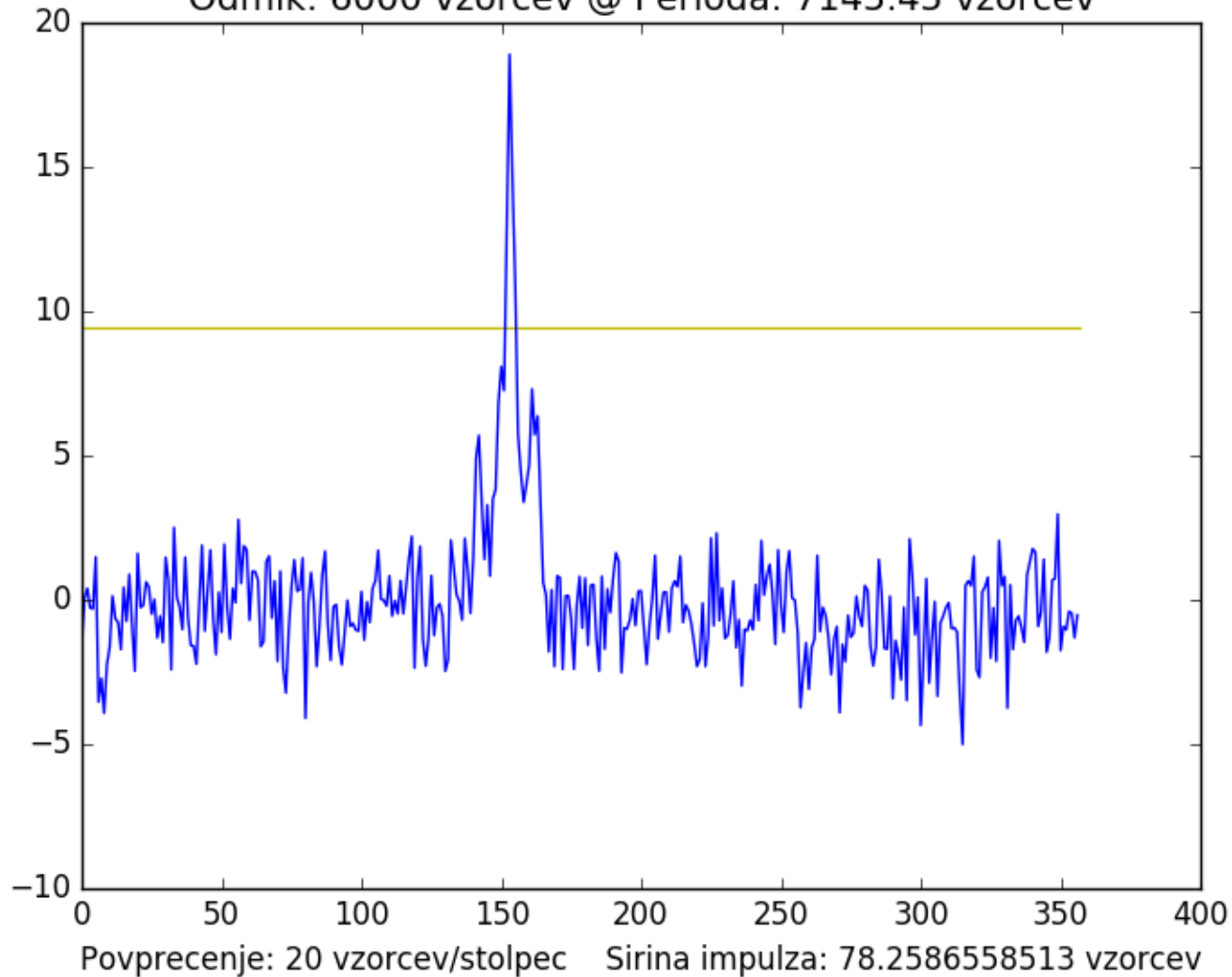
Odmik: 6000 vzorcev @ Max-perioda: 7145.45 vzorcev



Izvor: 2017Apr30104347

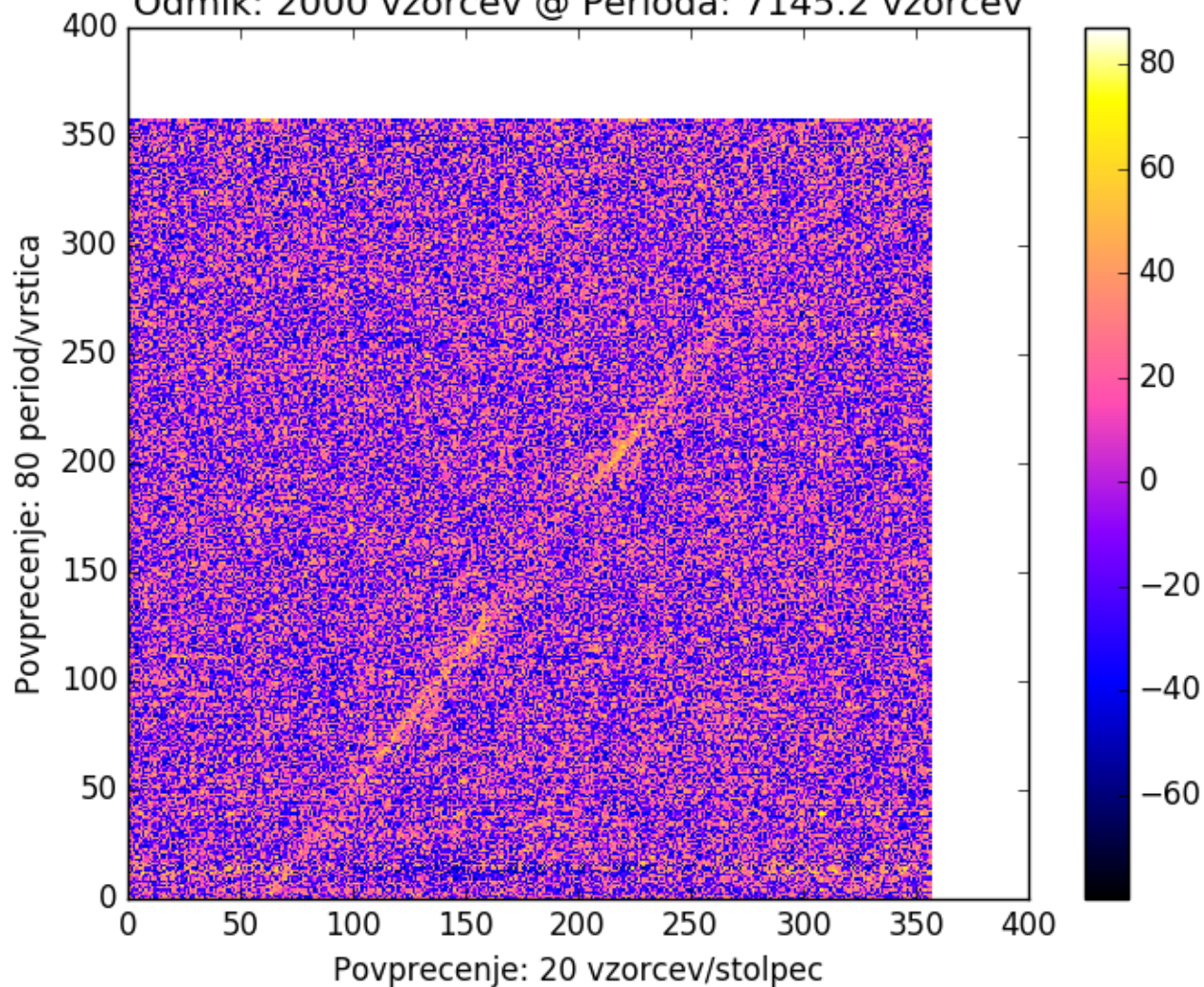
Odmik: 6000 vzorcev @ Perioda: 7145.45 vzorcev

Povprečenje: 9000...17000 period



Izvor: 2017May06103749

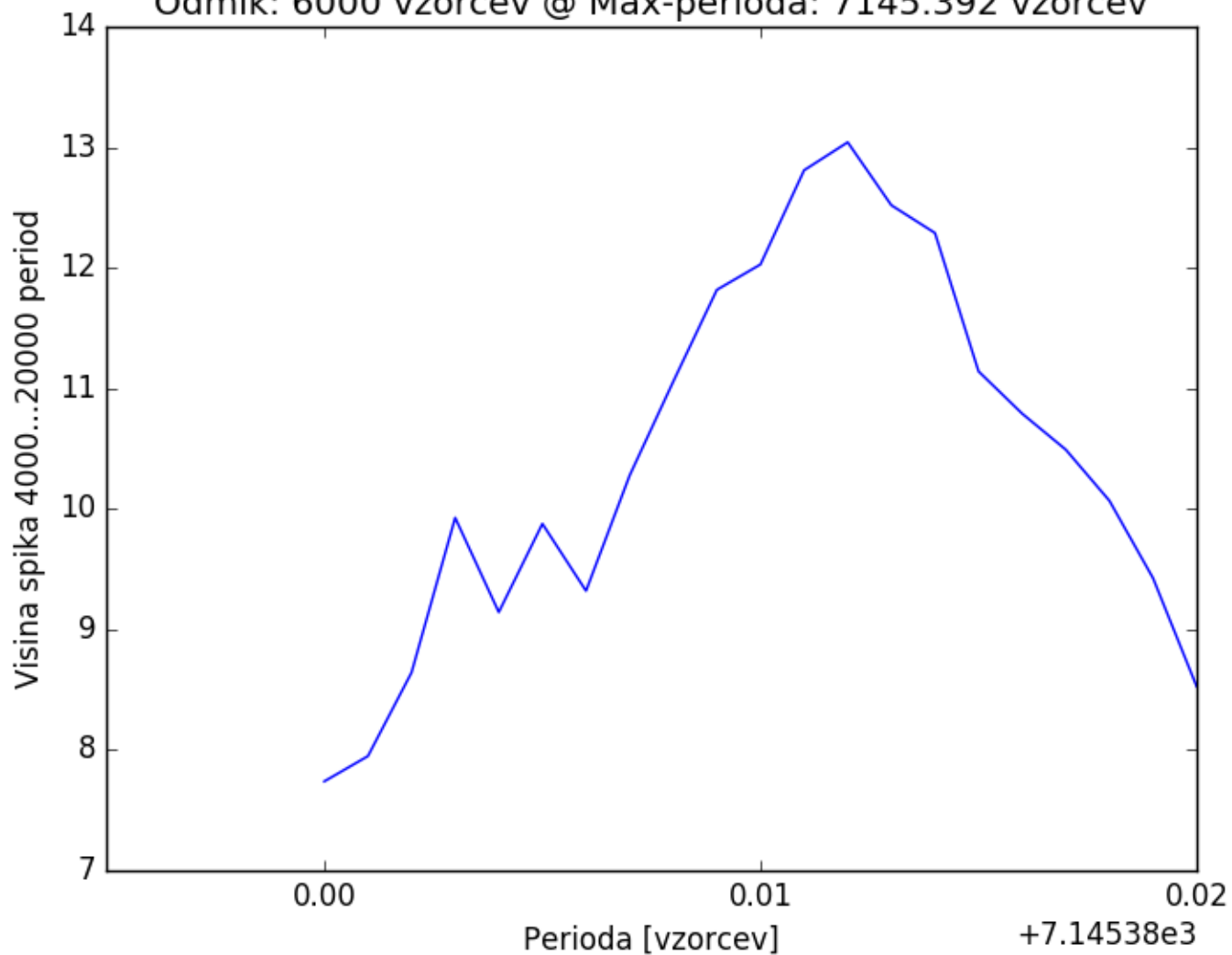
Odmik: 2000 vzorcev @ Perioda: 7145.2 vzorcev





Izvor: 2017May06103749

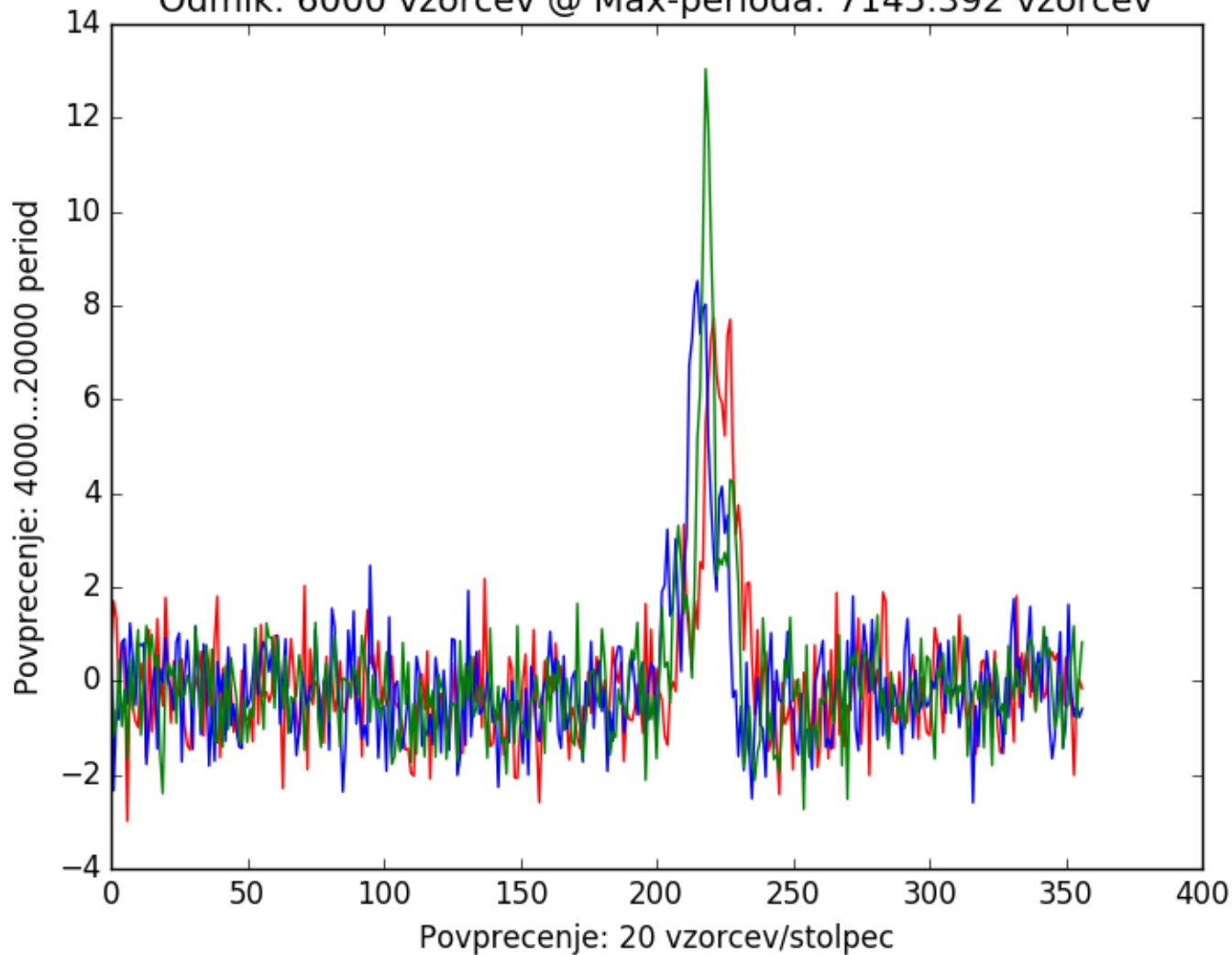
Odmik: 6000 vzorcev @ Max-perioda: 7145.392 vzorcev



+7.14538e3

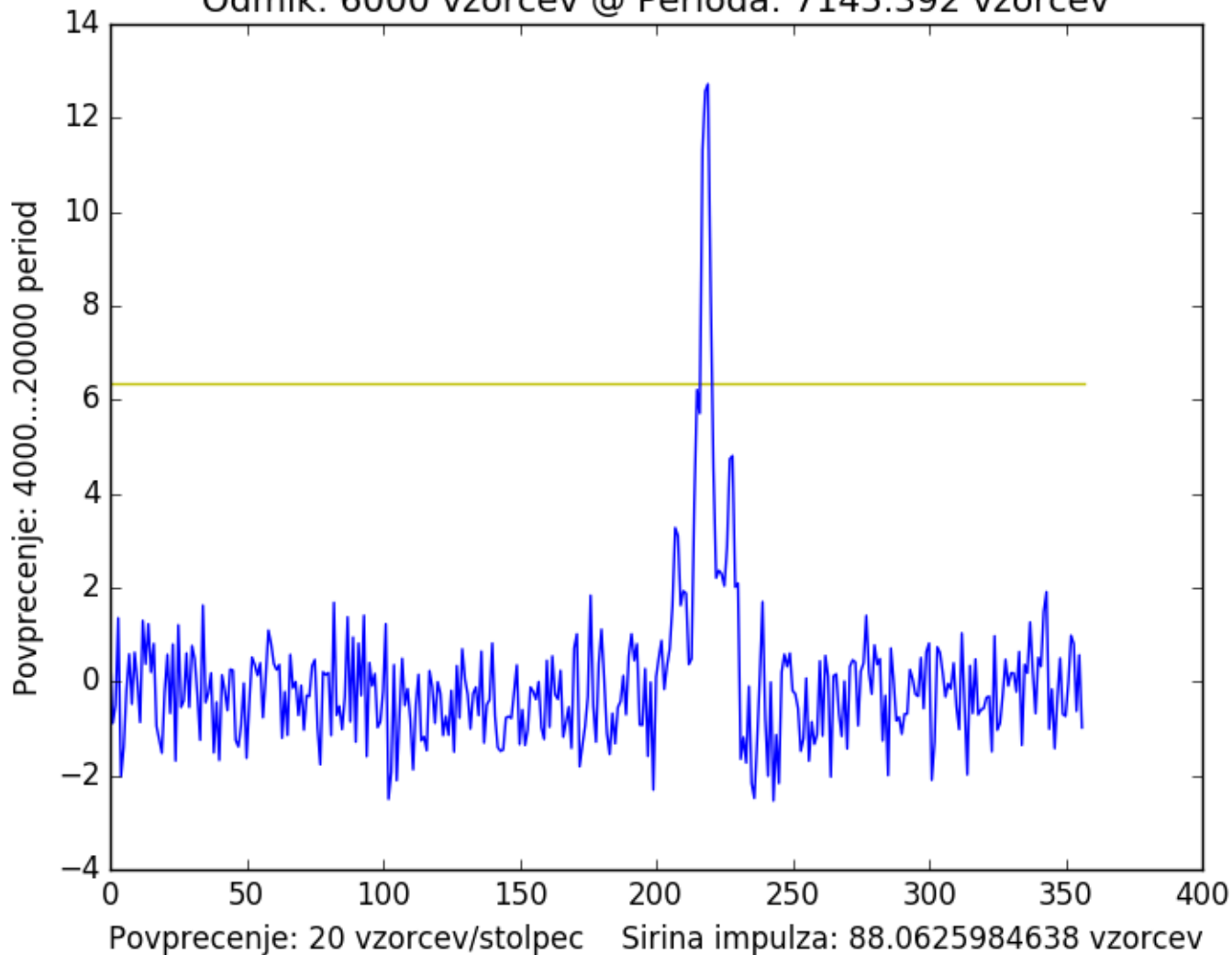
Izvor: 2017May06103749

Odmik: 6000 vzorcev @ Max-perioda: 7145.392 vzorcev



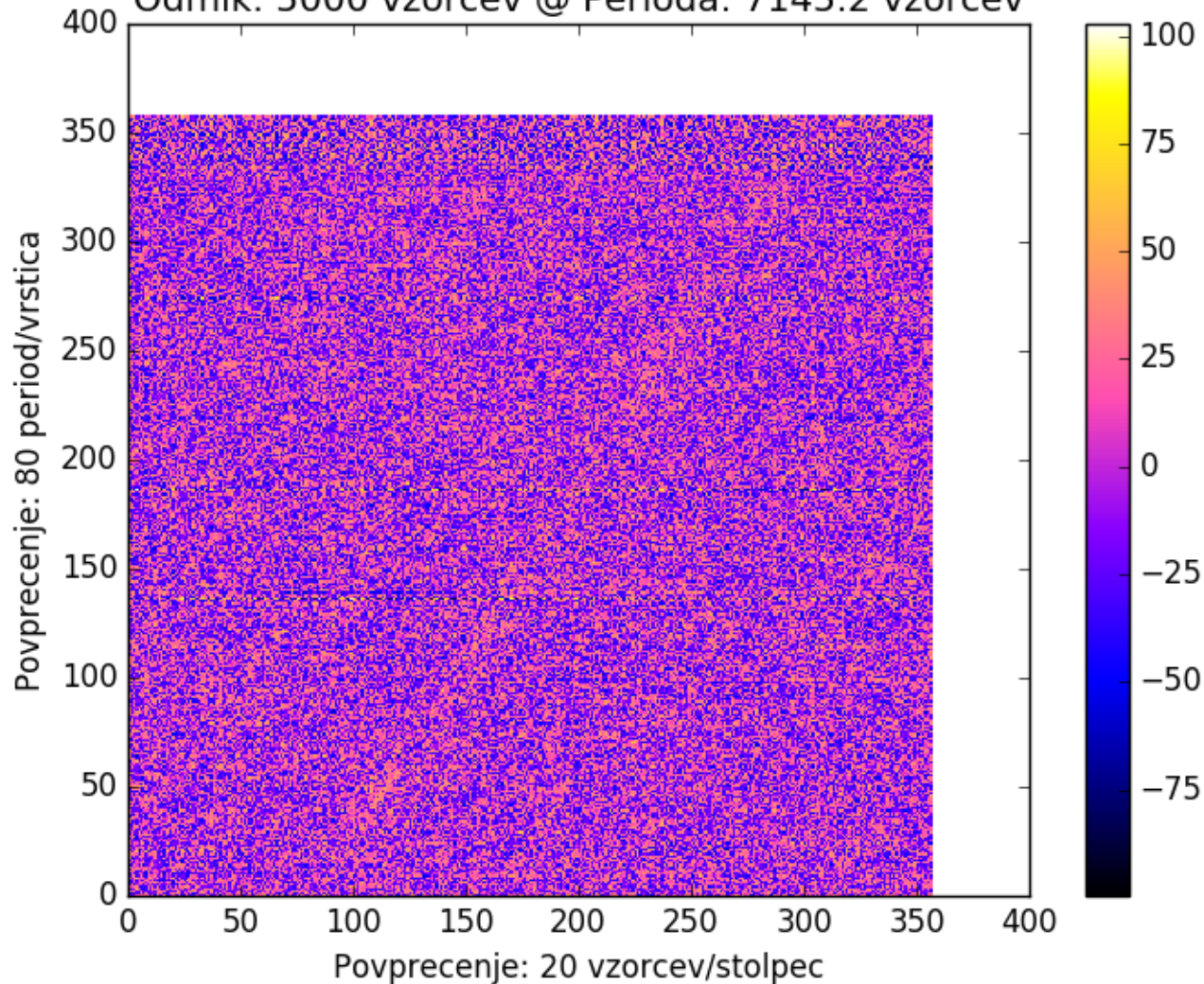
Izvor: 2017May06103749

Odmik: 6000 vzorcev @ Perioda: 7145.392 vzorcev



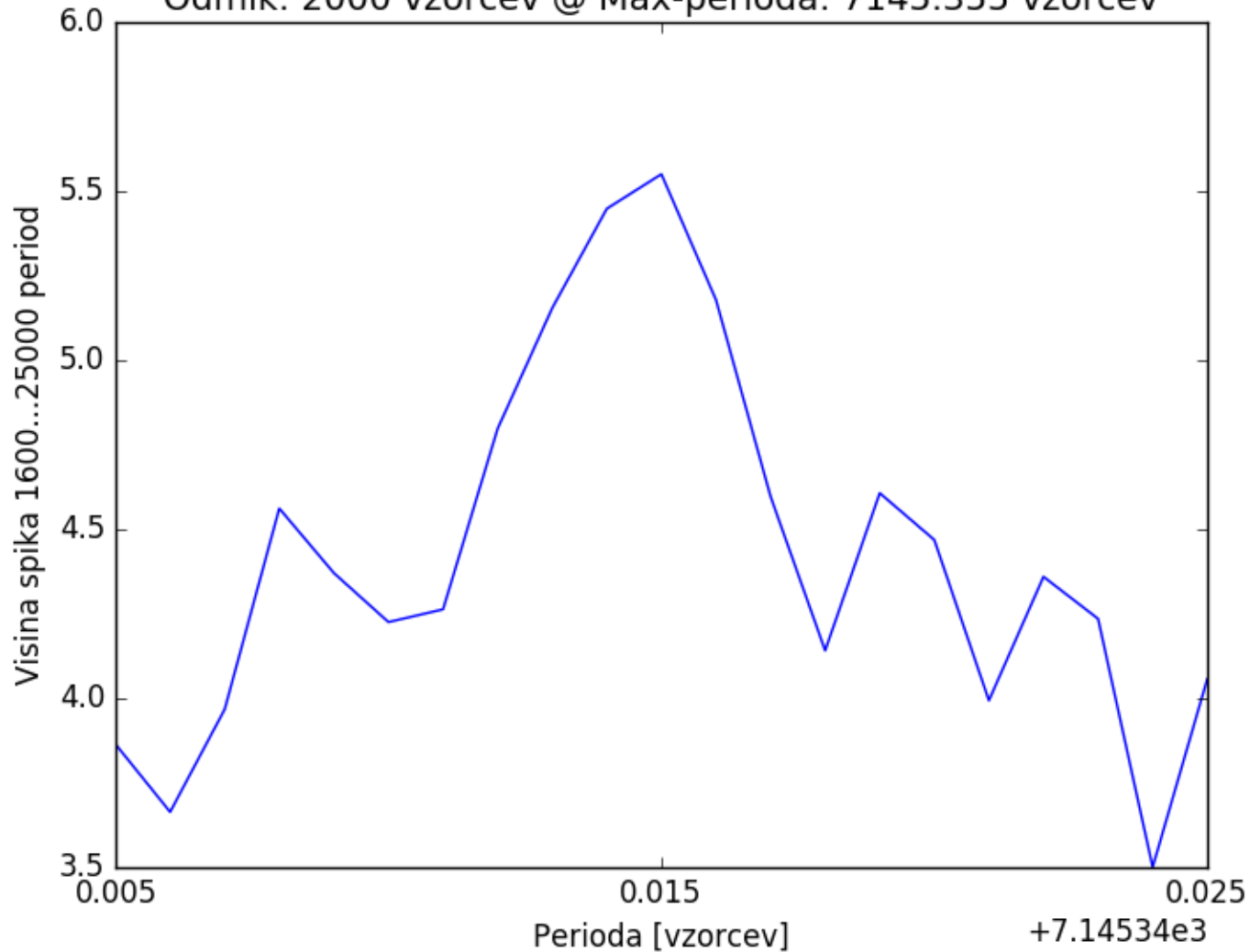
Izvor: 2017May10091130

Odmik: 5000 vzorcev @ Perioda: 7145.2 vzorcev



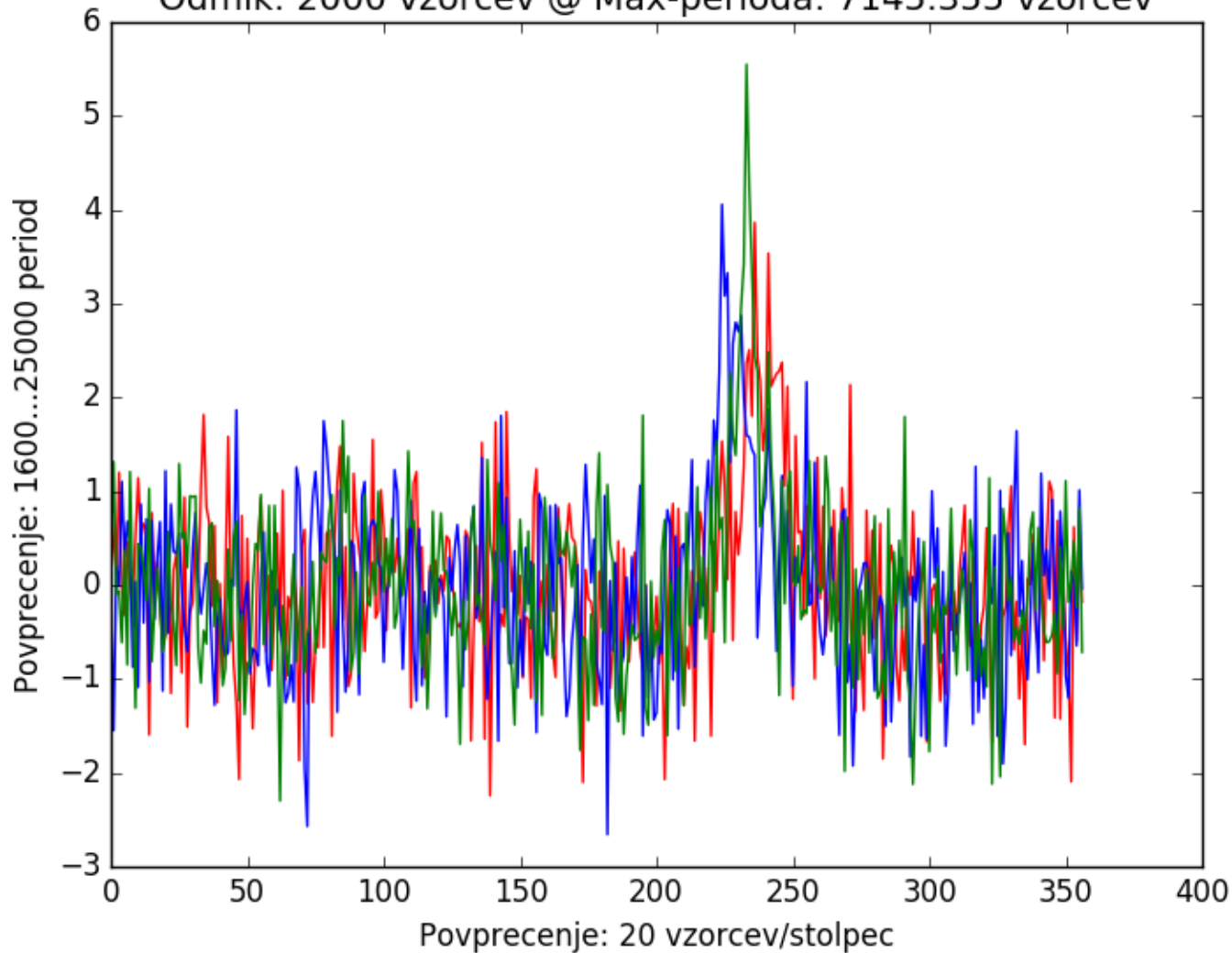
Izvor: 2017May10091130

Odmik: 2000 vzorcev @ Max-perioda: 7145.355 vzorcev



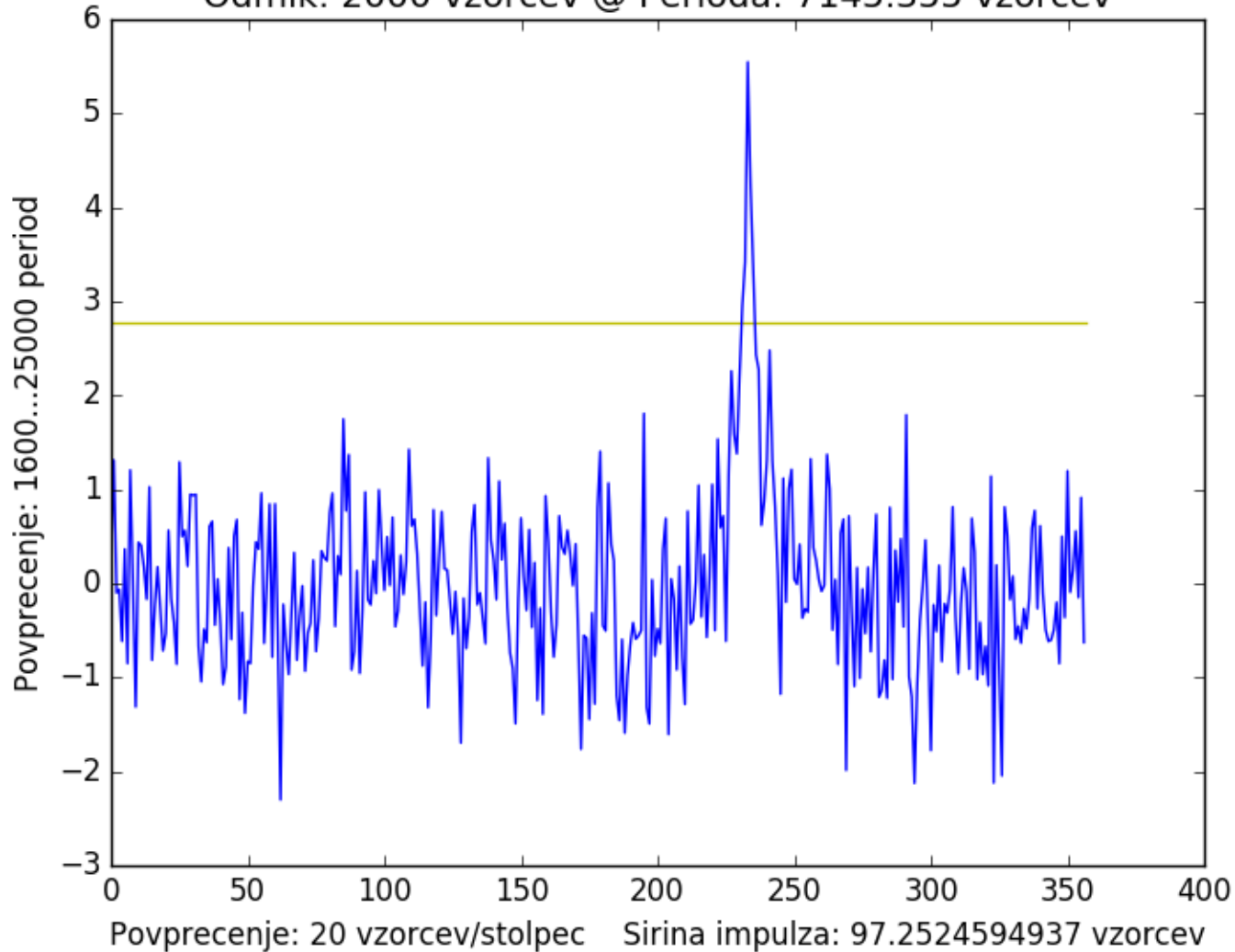
Izvor: 2017May10091130

Odmik: 2000 vzorcev @ Max-perioda: 7145.355 vzorcev



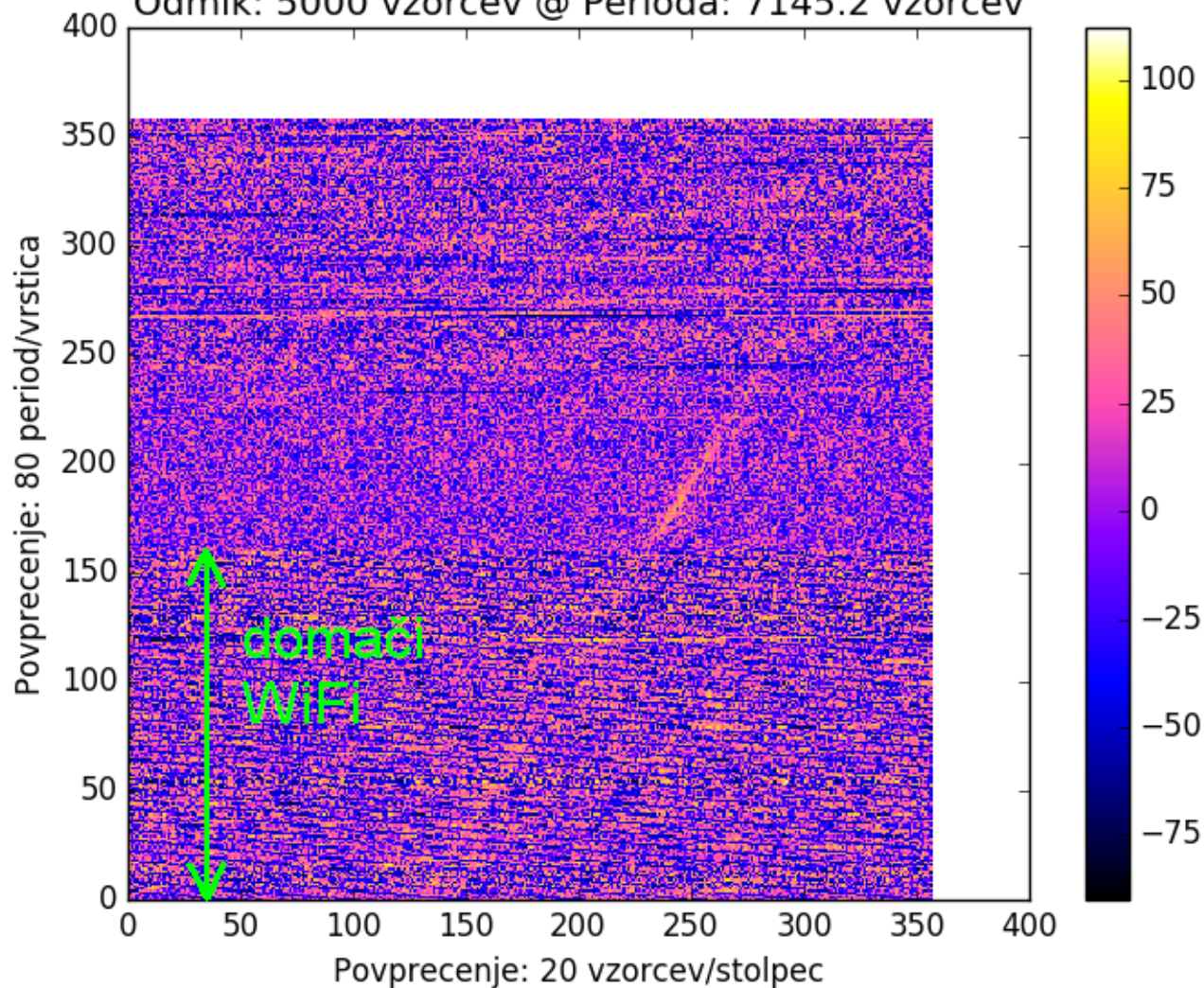
Izvor: 2017May10091130

Odmik: 2000 vzorcev @ Perioda: 7145.355 vzorcev



Izvor: 2017May10171909

Odmik: 5000 vzorcev @ Perioda: 7145.2 vzorcev





# Opazovanje pulzarjev

+7.1453e-1

