

# Periodicity of the Covid -19 Infection

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## Abstract

In the paper we study the periodicity of the Covid-19 infection. With the Polar Plot we obtain pictures of the Covid -19 for different times

## 1 Overview of the research

The well accepted model of the Covid 19 propagation is the the dolfashioned process of infections through of human being I am personally in quite opposed opinion.

The first objection

In all countries the virus is acting simultaneously in all regions of administrative border and in other states...In “parallel model” it means that the velocity of the propagation is infinite .And this can not be true due to special relativity

The second objection

In a few cases ( including military units) for example USA airplane carriers located in an empty part of Atlantic ocean the whole personal was infected at once

The answer to these objections is that viruses propagate perpendicularly to the Earth surface, like a rains droplet

In that case current of the viruses to the Earth surface is proportional to  $t^2$ ( we remember formula  $h=gt^2/2$ , We have

$$N(t) = A_1 t^2 \quad (1)$$

Virus infected the human body decays exponentially

$$N(t)=A_2 e^{[-t/T]}. \quad (2)$$

Where T is average decay time of the virus in human body  
Considering formulae (1) and (2)

$$N(t)=A t^2 e^{[-t/T]} \quad (3)$$

The formula (3) is in fact the formula for Maxwell-Juttner distribution

In this paper we present new calculation for the Covid Pandemia. We figure out the structure of Pandemia cases distribution in the form of the polar plot which have better “resolution” that linear plt

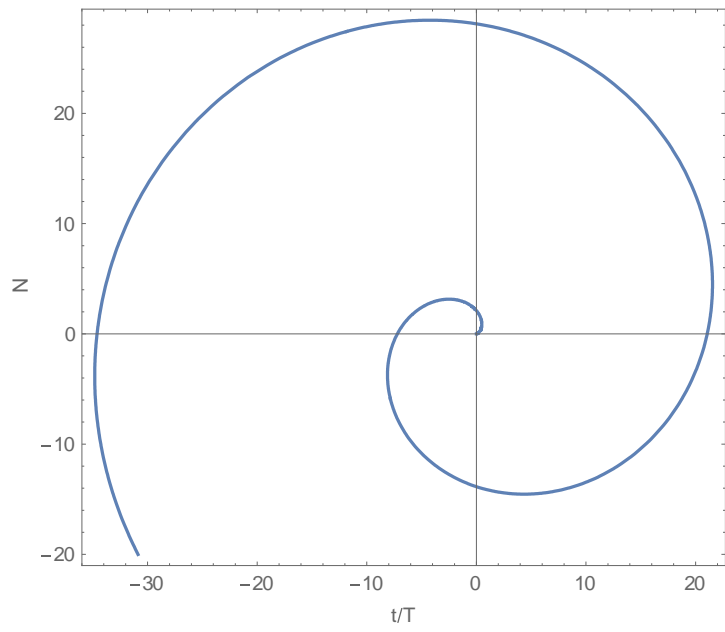


Fig.1 Structure of Pandemia  $N[t/T]$  for infection time  $T=10$ . For first  $t= 10$  days

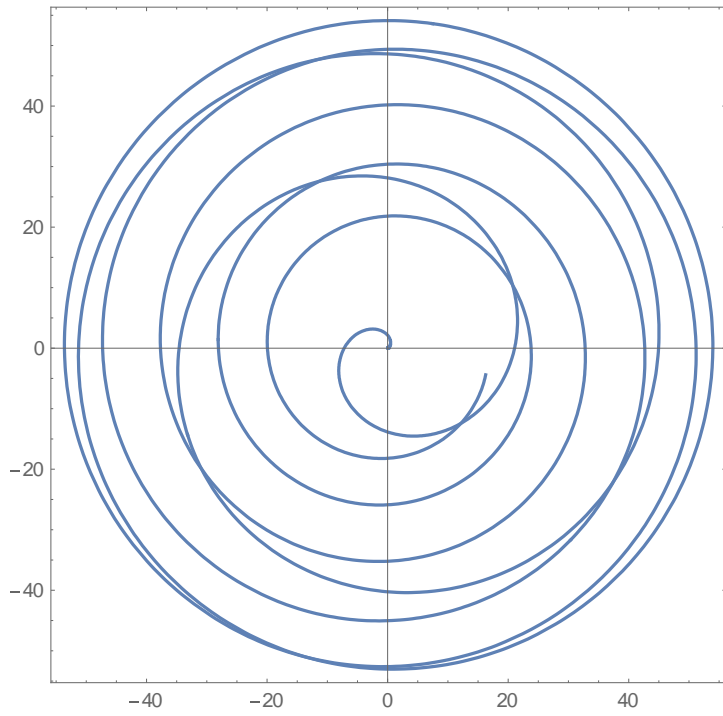


Fig.2 Structure of Pandemia for infection time  $T=10$ . For first  $t= 50$  days

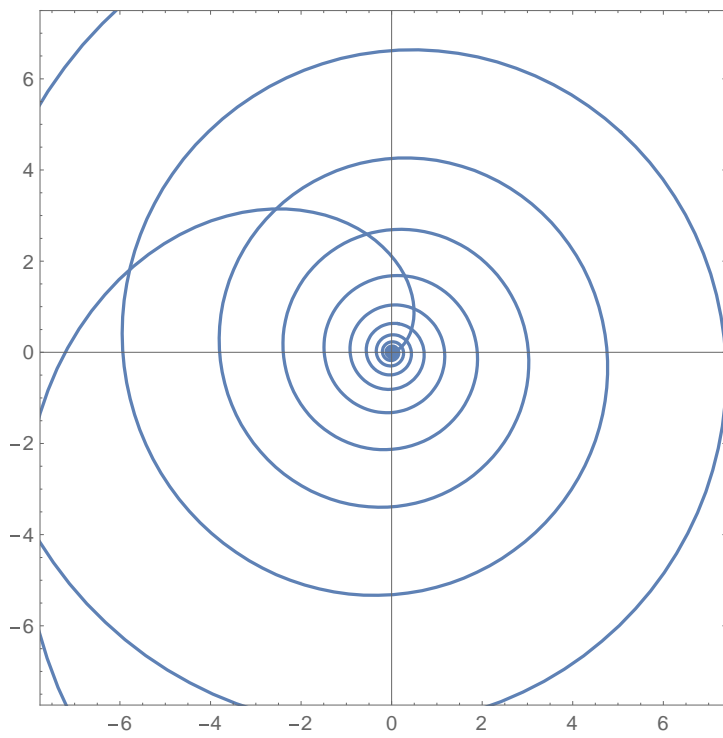


Fig.3 Structure of Pandemia for infection time  $T=10$ . For first= 300 days

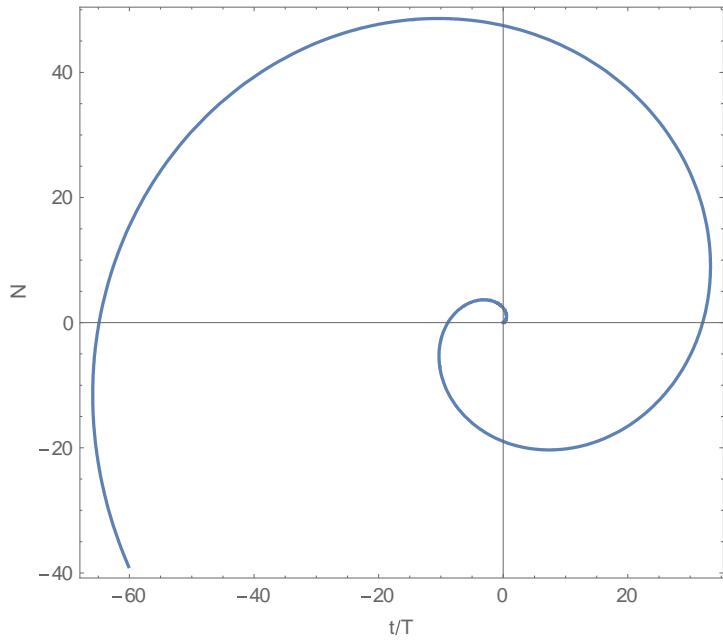


Fig.4 Fig.1 Structure of Pandemia for infection time  $T=30$ . For first  $t= 10$  days

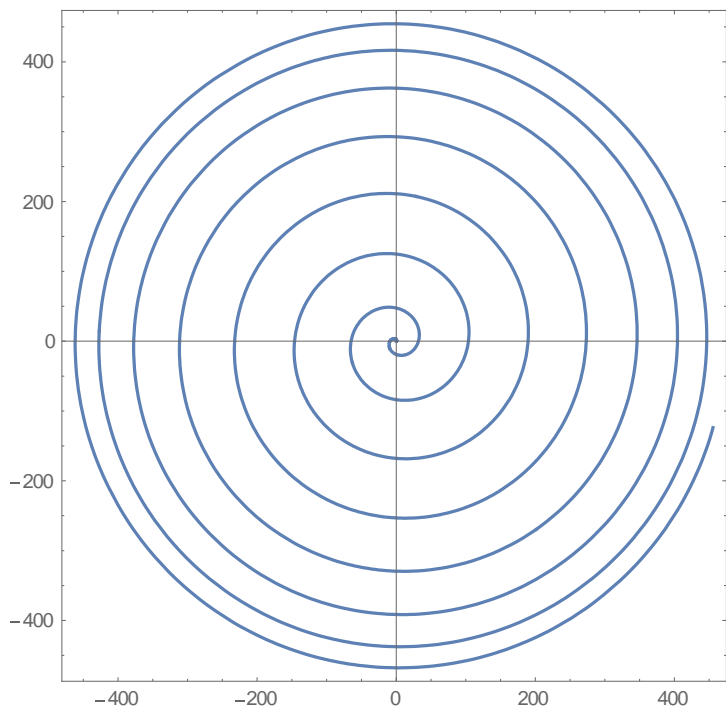


Fig.5 Structure of Pandemia for infection time  $T=30$ . For first  $t= 30$  days

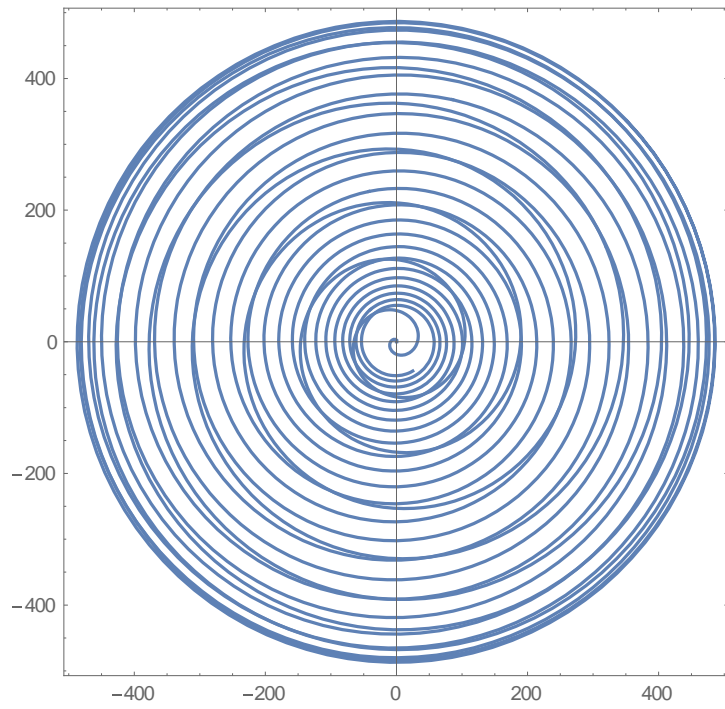
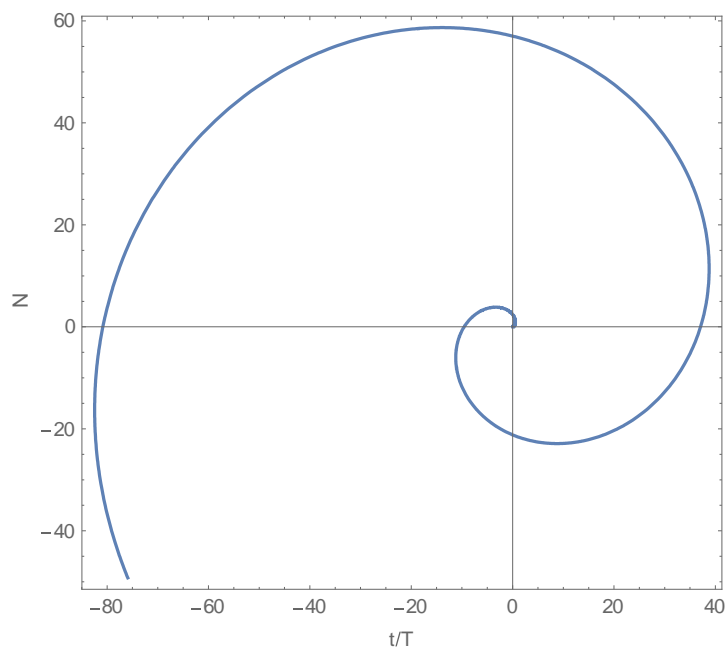


Fig.6 Structure of Pandemia for infection time  $T=30$ . For  $t=t$  300 days



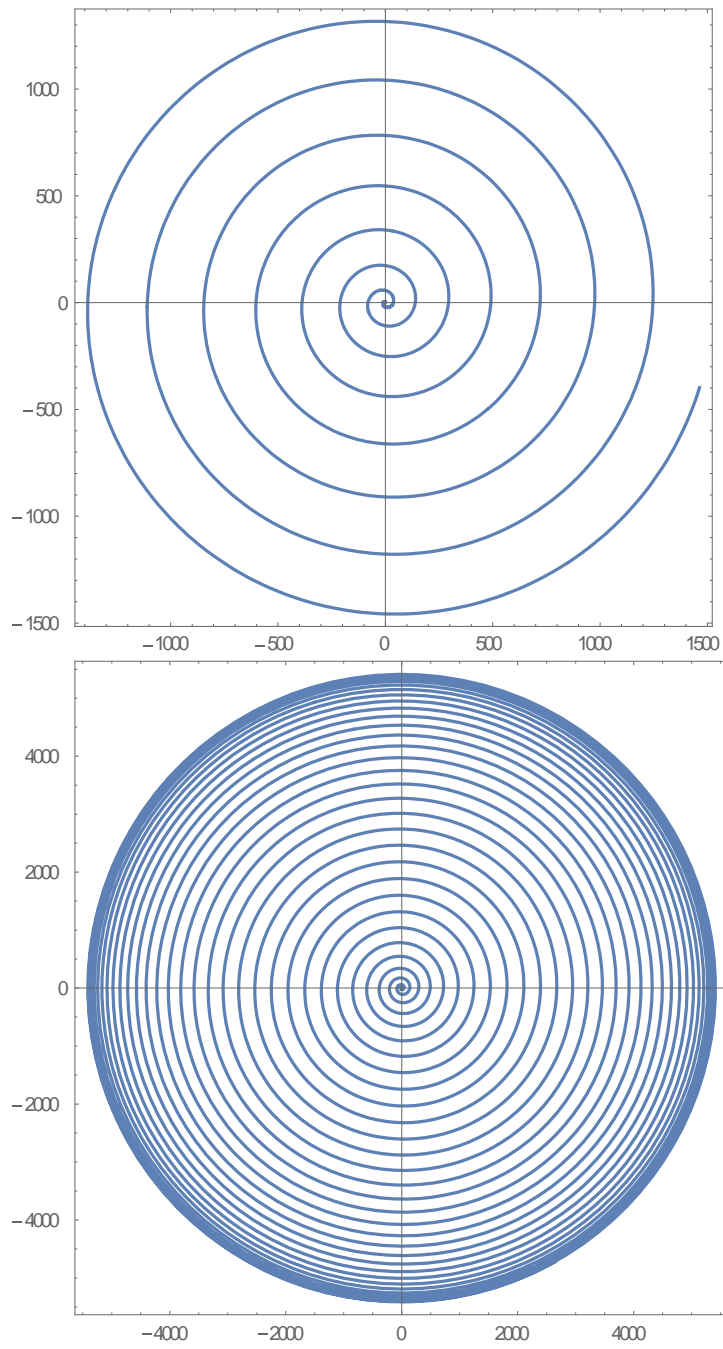
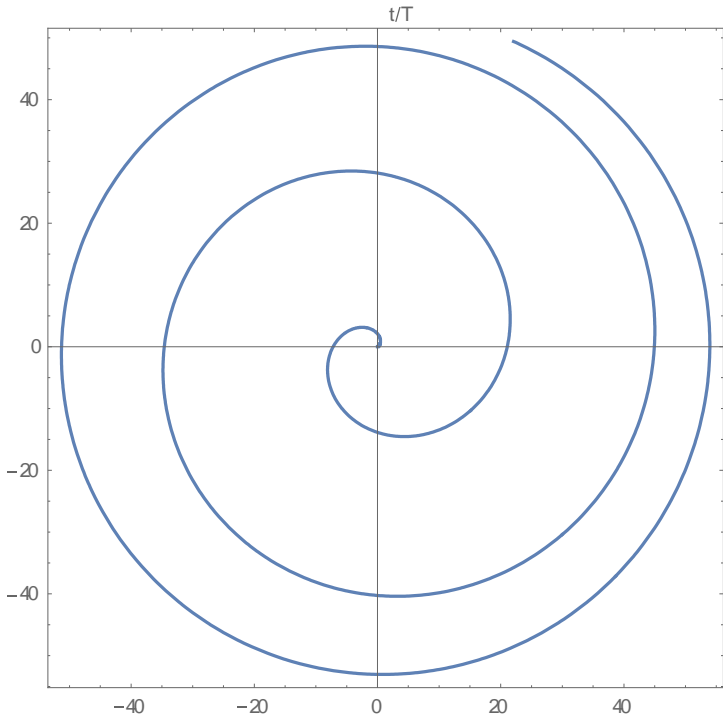
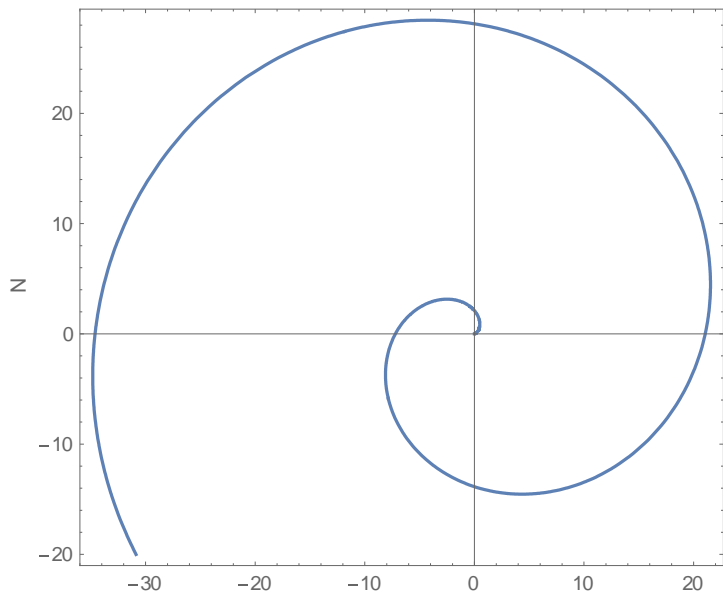


Fig 7. The same as in Fig 1-6 , but for  $t=100$  days





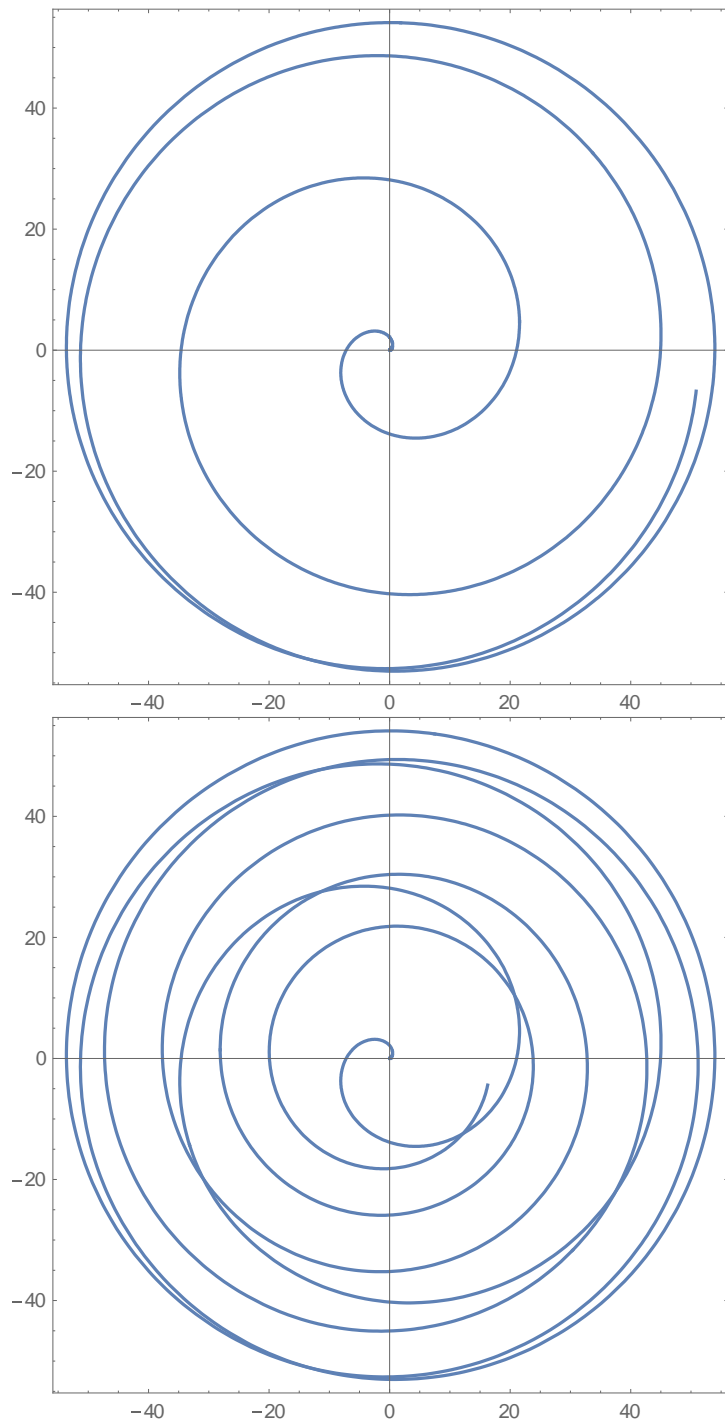


Fig.\* Dependence of Pandemia structure on the number of days,  $T-10$ , for  $t=,10,20,25,50$  days