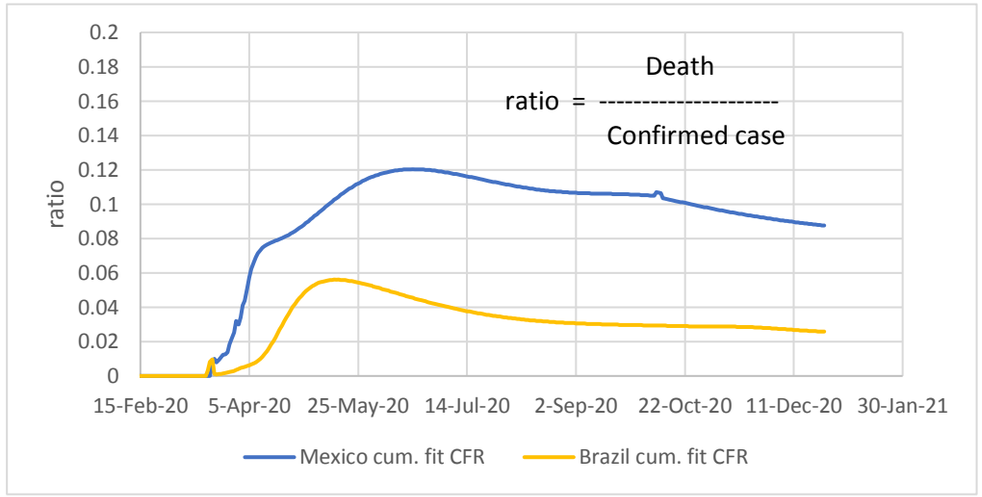
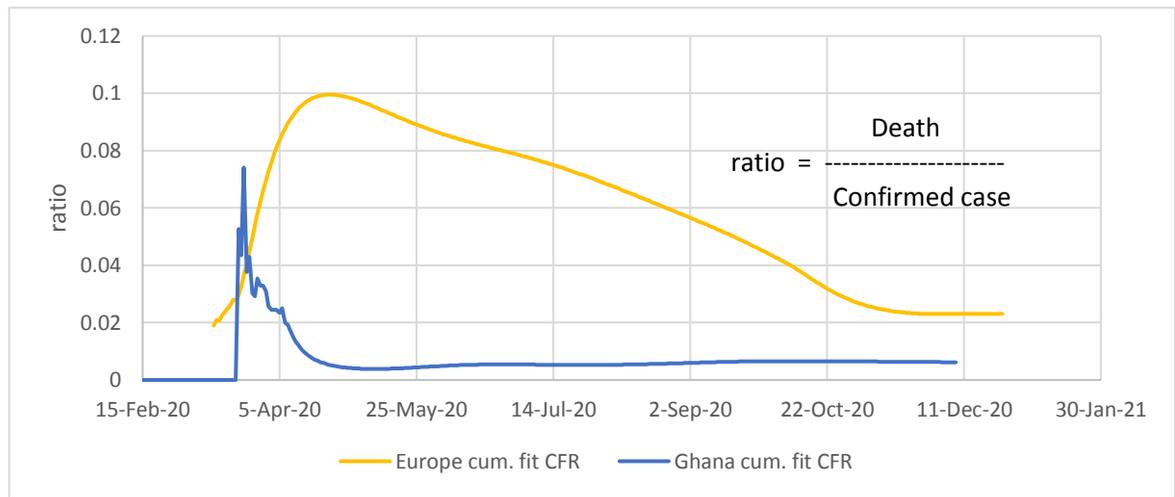
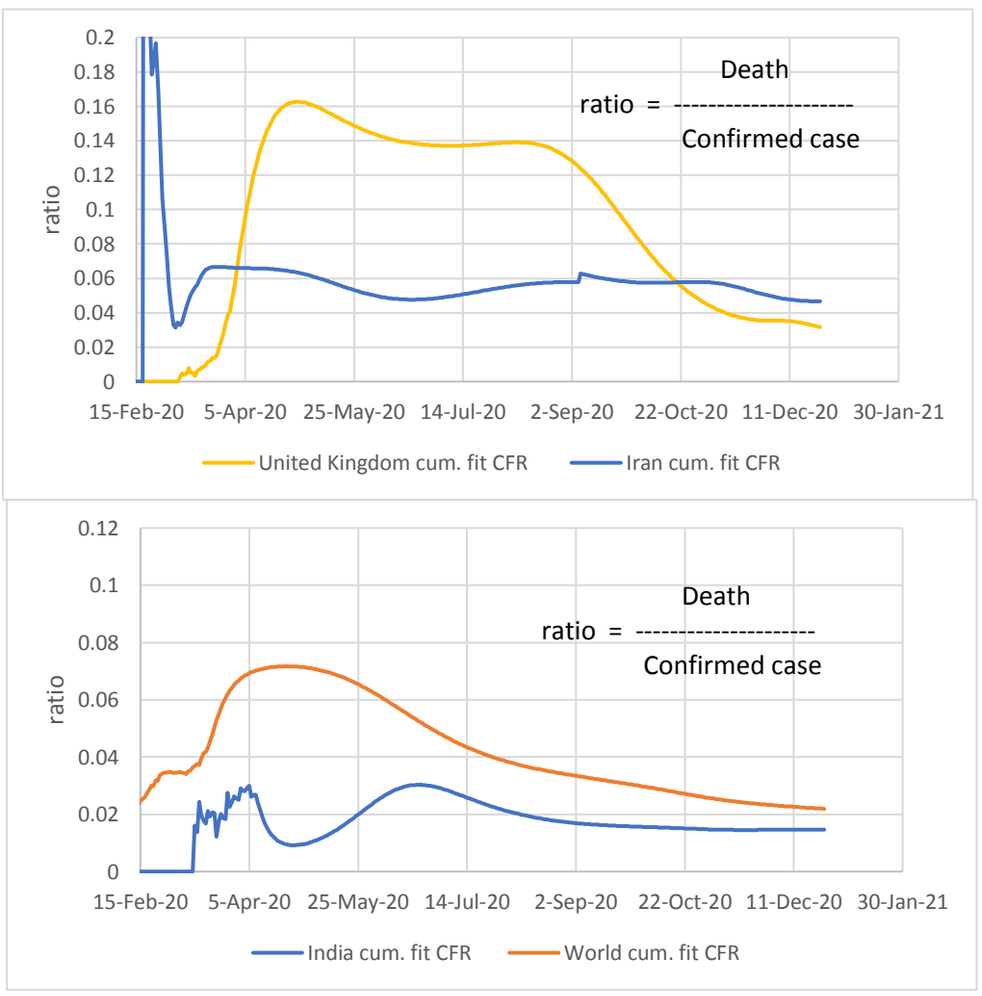
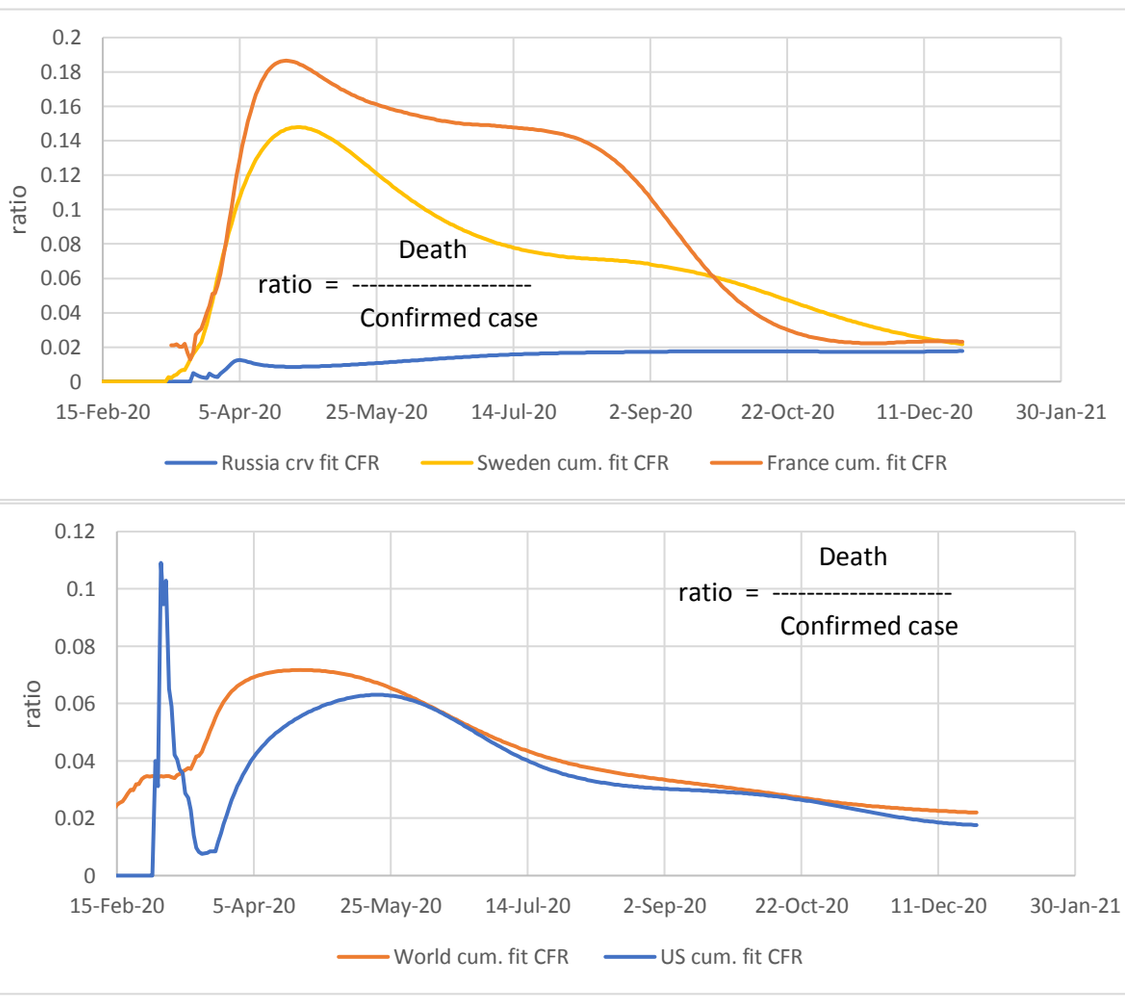
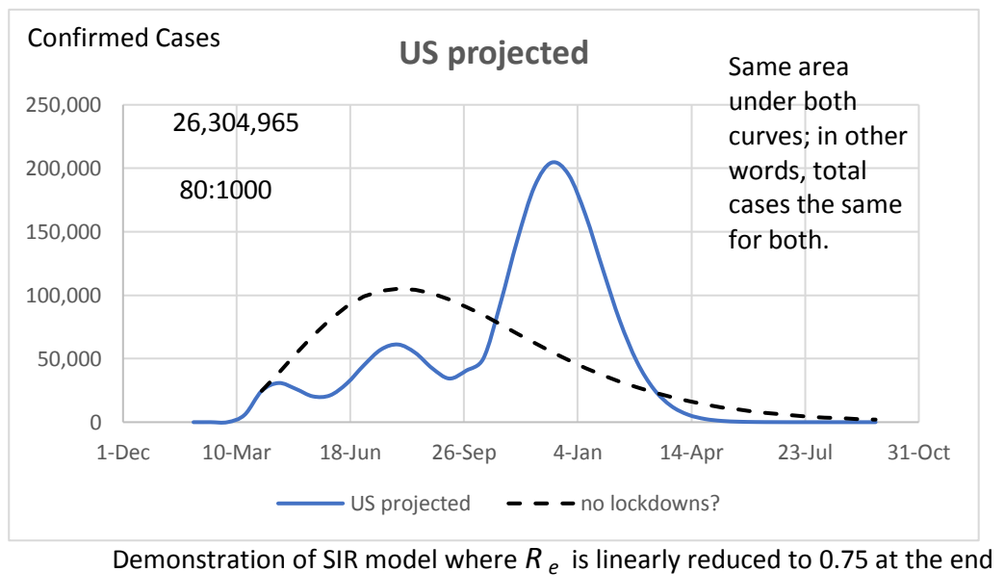
Experimental page : ratios of curve fit deaths to curve fit confirmed cases (CFR)

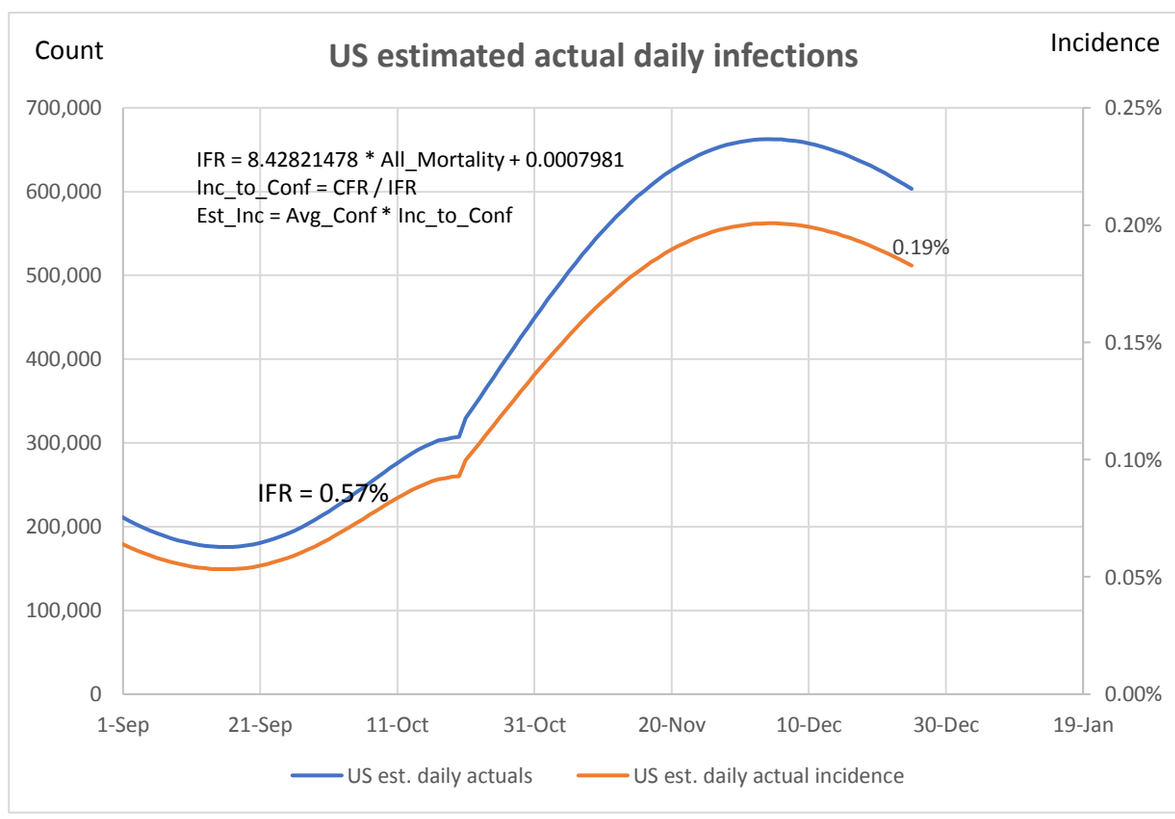




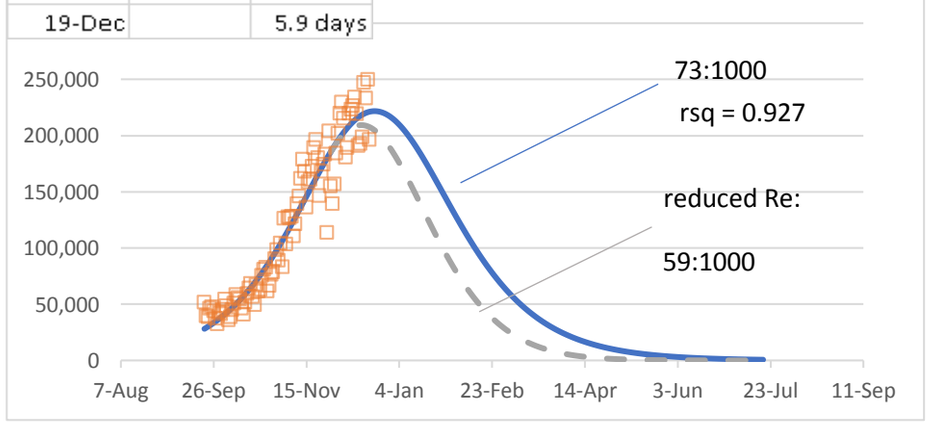








Demonstration of SIR model where R_e is linearly reduced to 0.75 at the end of the sequence:



Reducing the R_e while keeping gamma constant is the same as reducing contact rate. Contact rate is reduced through isolation, lockdowns, and vaccinations. This case about 14:1000 benefit (19%).

<u>False Positives Demonstration</u>

Use 0.19% from US est. incidence above as estimated daily incidence

Prevalence estimated as avg. infected period of 2 weeks X incidence

0.19% X 14 = 2.660%

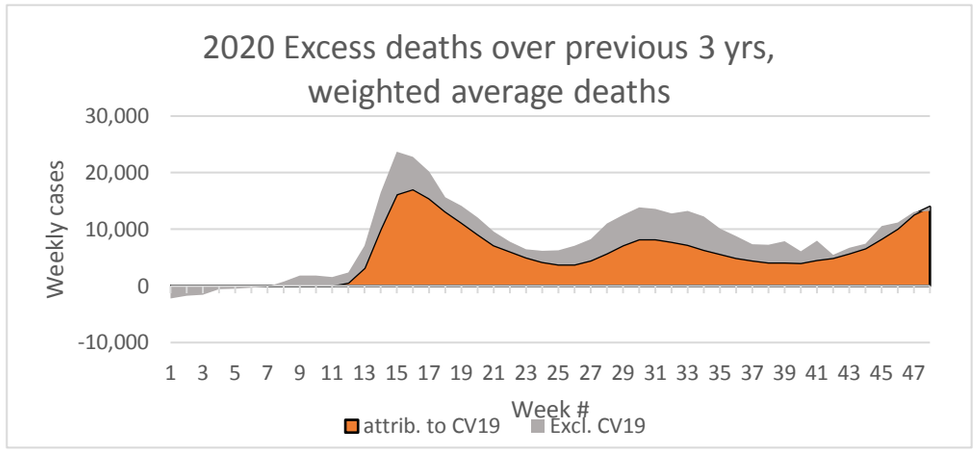
99% accuracy of test

	Positive	Negative	
test pos	2.633%	0.973%	3.61%
test neg	0.027%	96.367%	<u>96.39%</u>
	2.660%	97.340%	100.00%

False pos. is a bit over 1/4 of total positives!

TRUE +	2.633%/3.61%	73.0%
FALSE +	0.973%/3.61%	<u>27.0%</u>
Total	----------	100.00%

Counter-act this tendency by increasing test sensitivity. However this may increase false negatives, the recipients of which may be positive, think they're negative, and go spread it around some more.



USA Excess Deaths (from CDC data):

Annualized on 49 weeks

	All Cause	All Cause, excl. CV19	CV19
3 yr average before 2020	856:100,000	856:100,000	-
2020	988:100,000	894:100,000	-
Diff.	132:100,000	39:100,000	93:100,000
Diff.	+15.4%	+4.5%	+10.9%

3 yr average weighted

859:100,000

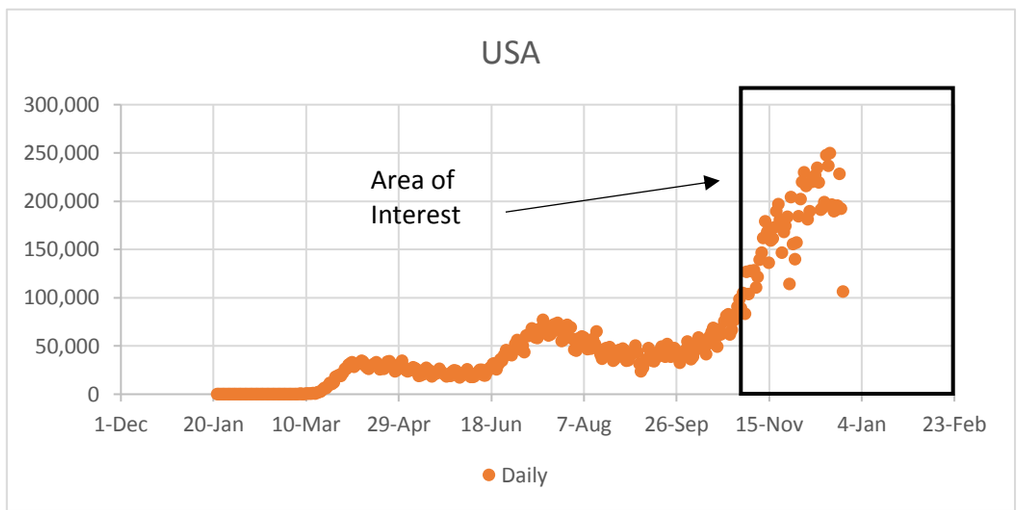
29% of All-Cause excess deaths are non-CV19

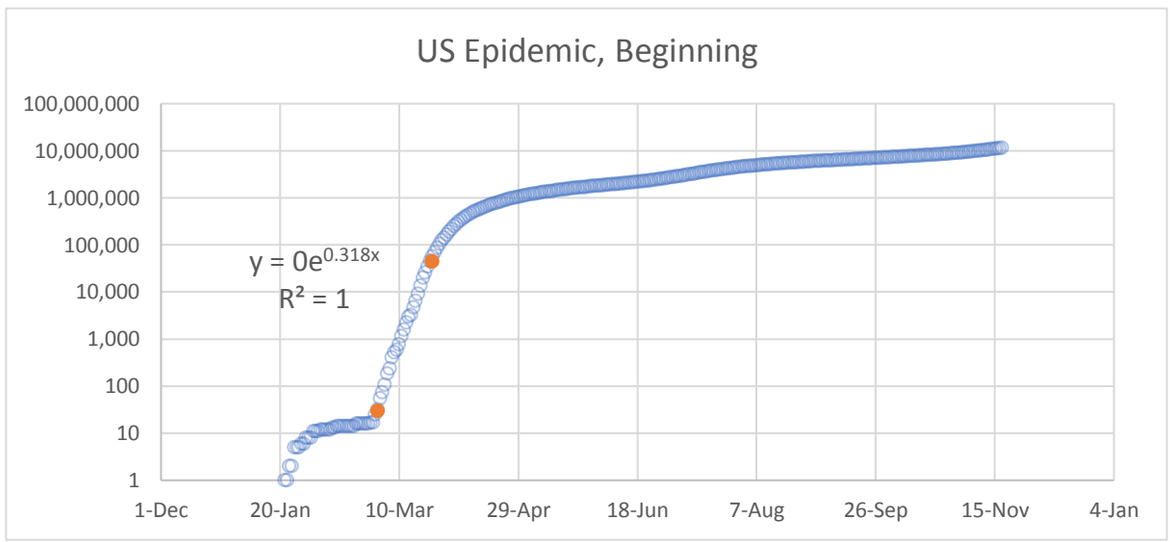
Here are some demonstrations of SIR model, using R_e, gamma, and beta

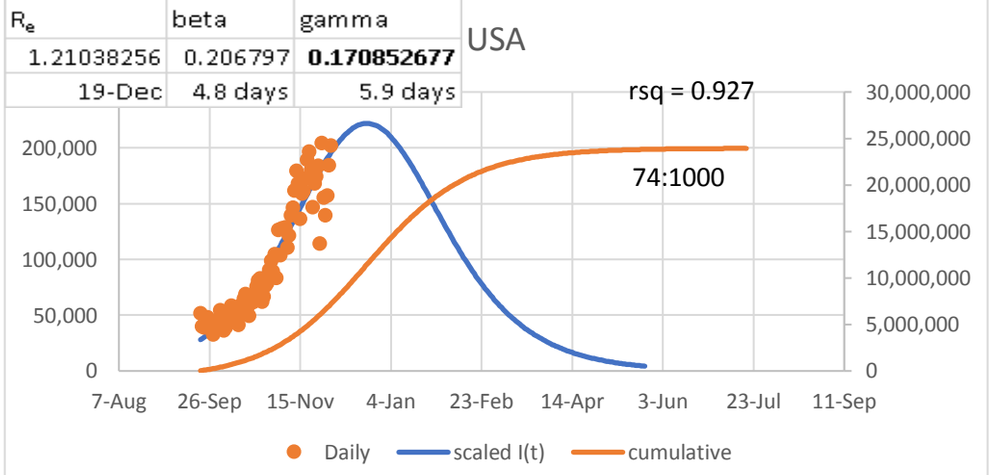
gamma = 0.171 K = 0.318 gamma=0.286

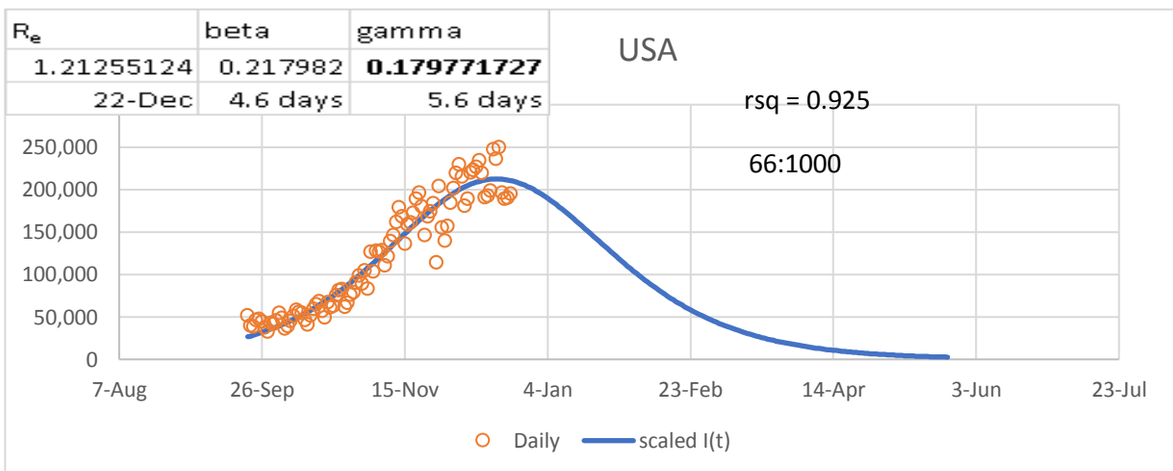
R_o = exp(K/gamma) = 6.421 221,571,317

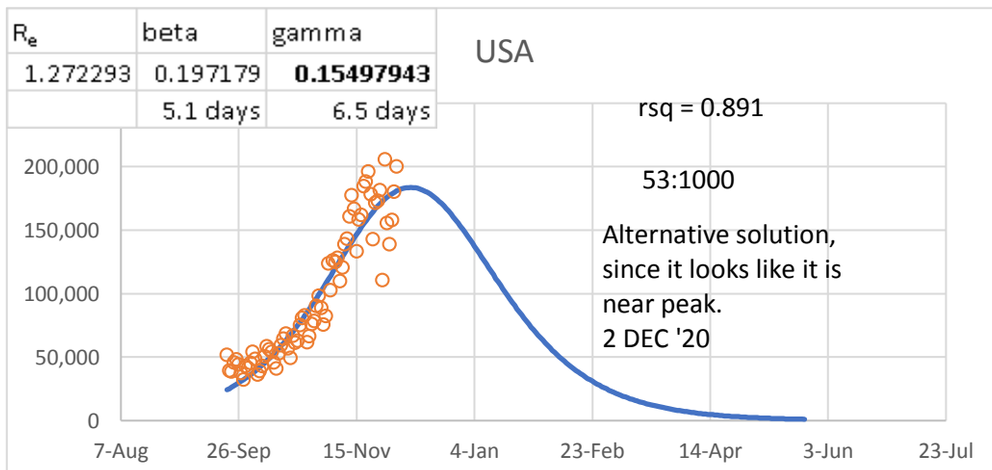
$R > [1 - 1/R_0]/N$ $R >$ 278,610,004 <=Herd immunity

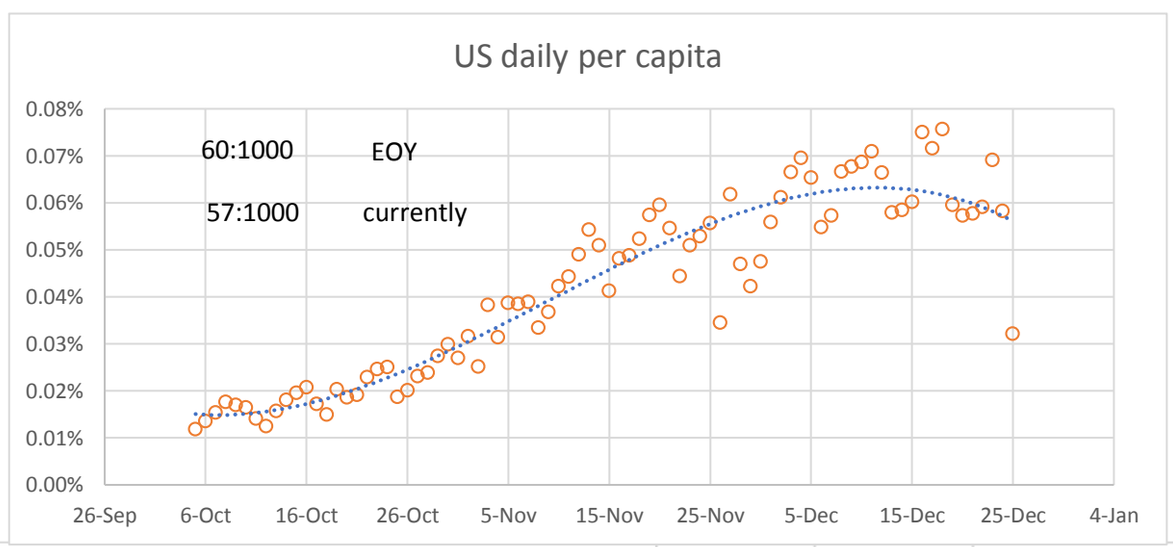


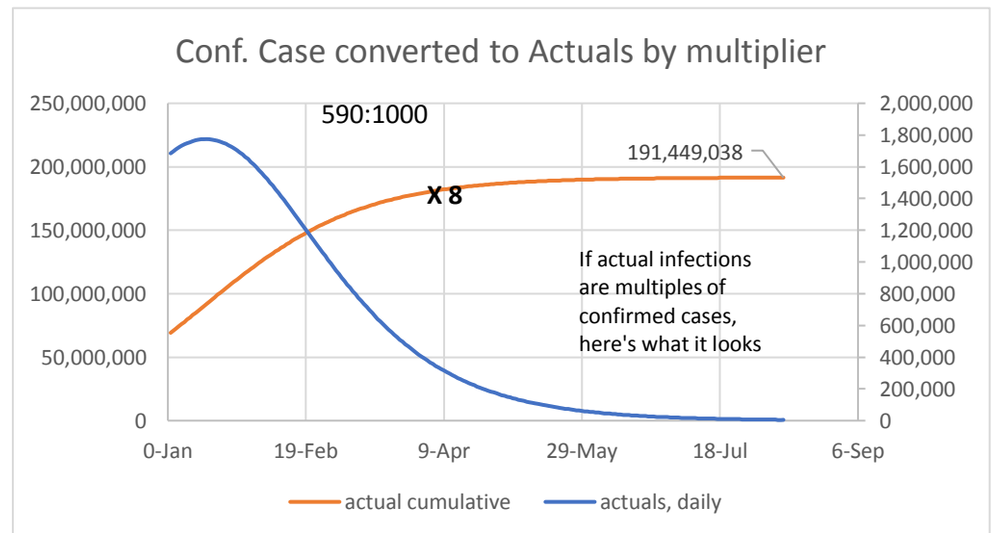


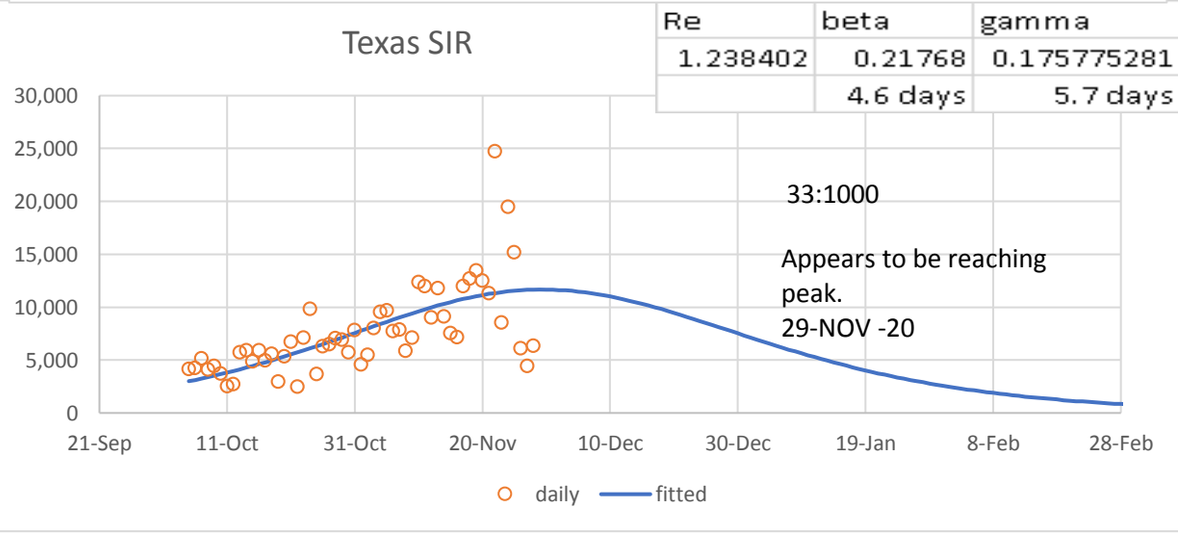


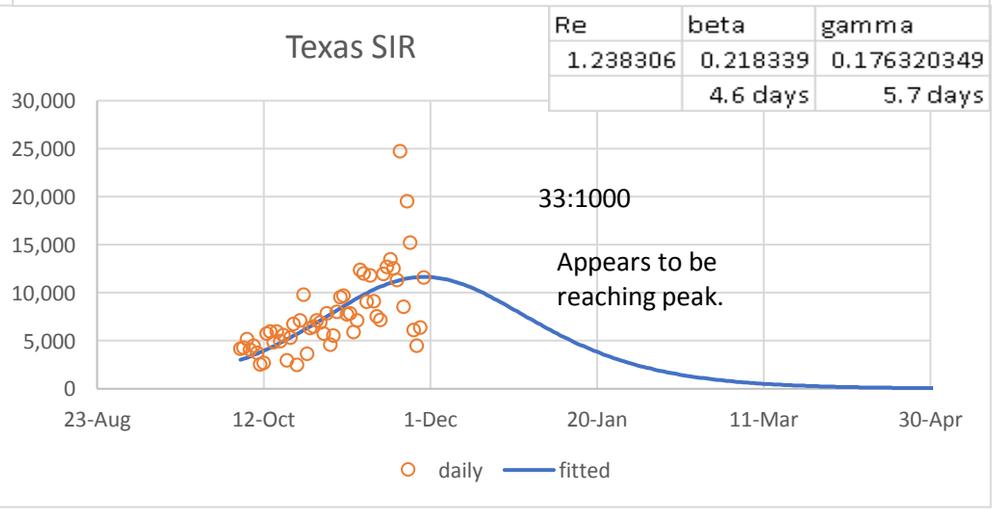


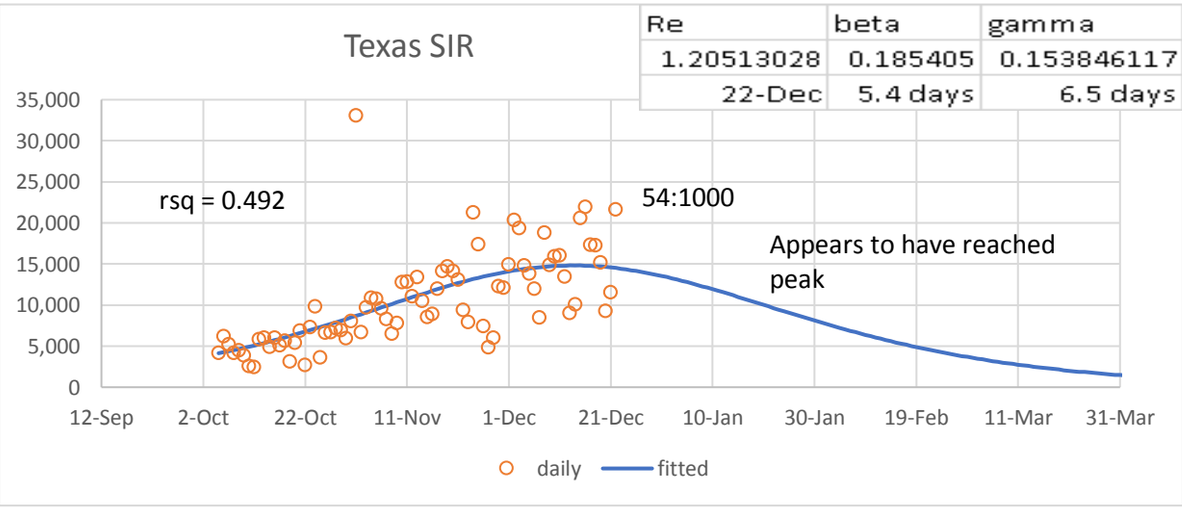






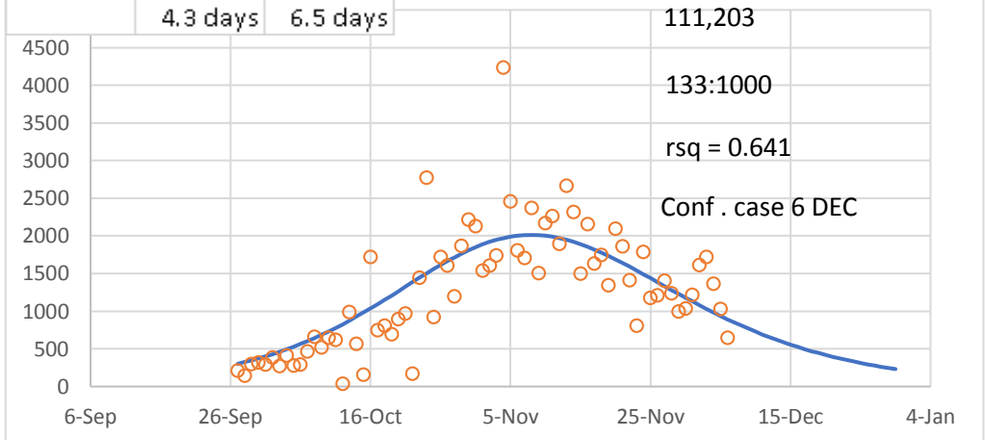






R_e	beta	gamma
1.50356	0.231317	**0.153846**
	4.3 days	6.5 days

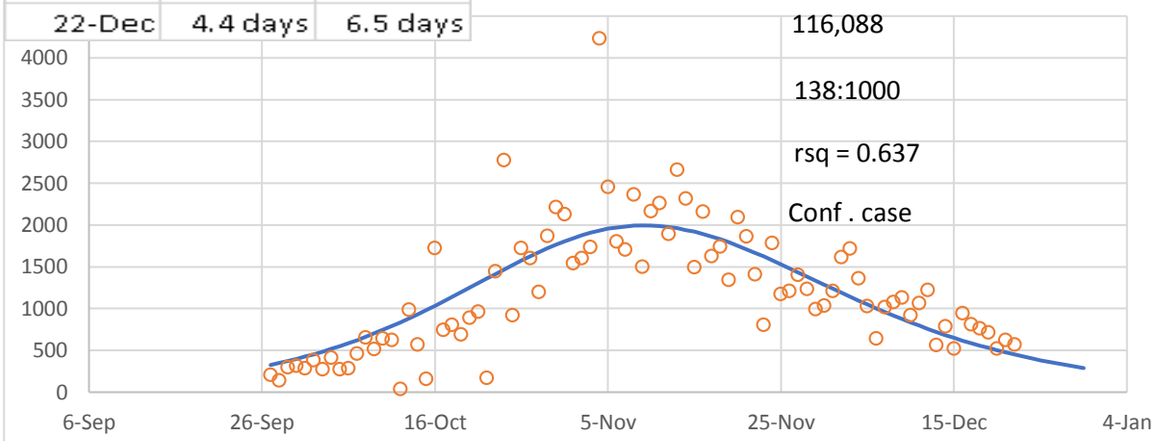
El Paso



R_e	beta	gamma
1.470284	0.226197	**0.153846**
22-Dec	4.4 days	6.5 days

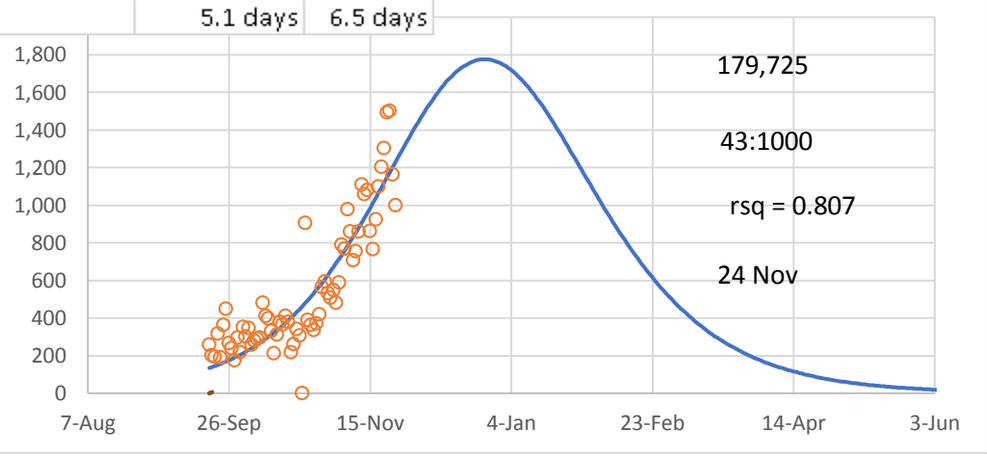
El Paso

Conf. Cases



Re	beta	gamma
Ro = 1.263	0.194372482	**0.153846**
	5.1 days	6.5 days

Oregon



Re	beta	gamma
Ro = 1.240	0.29999693	**0.24184**
12/22/2020	3.3 days	4.1 days

Oregon