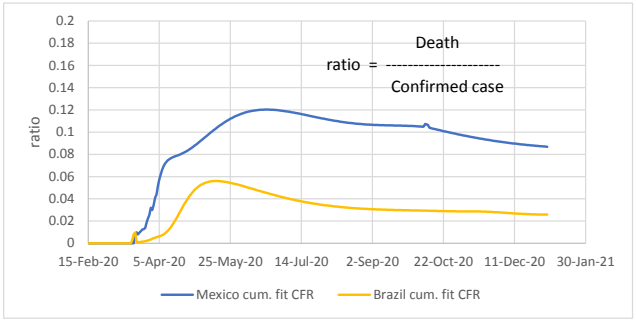
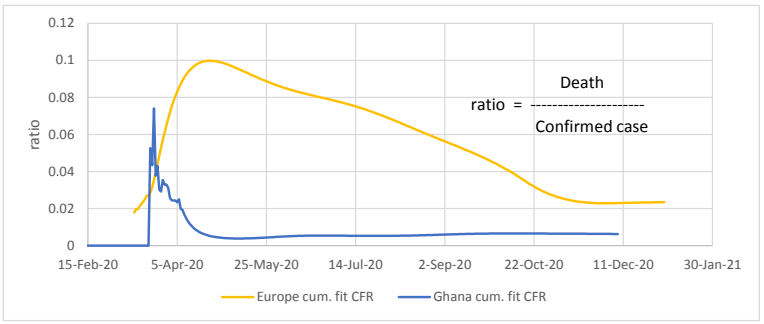
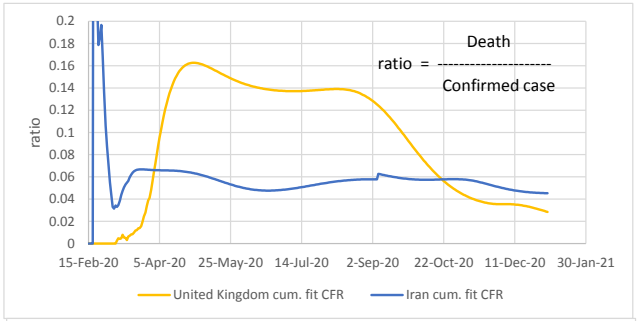
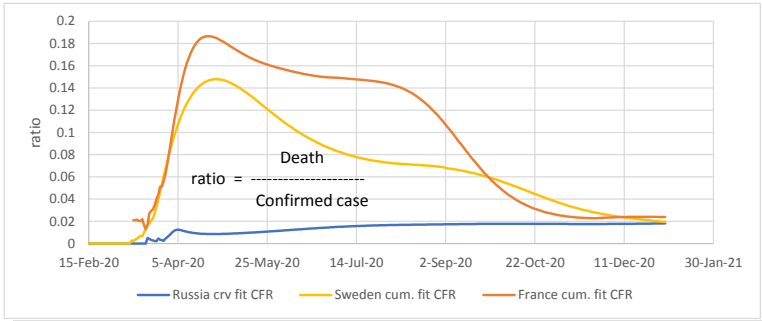
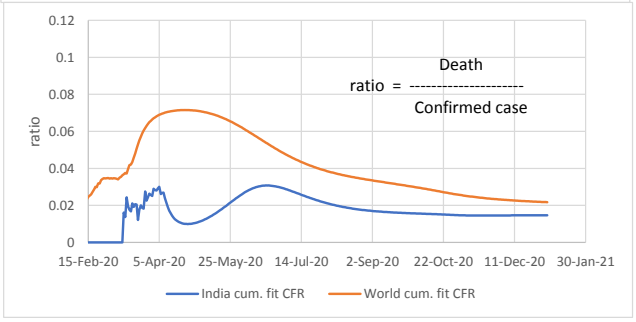
Experimental page : ratios of curve fit deaths to curve fit confirmed cases (CFR)

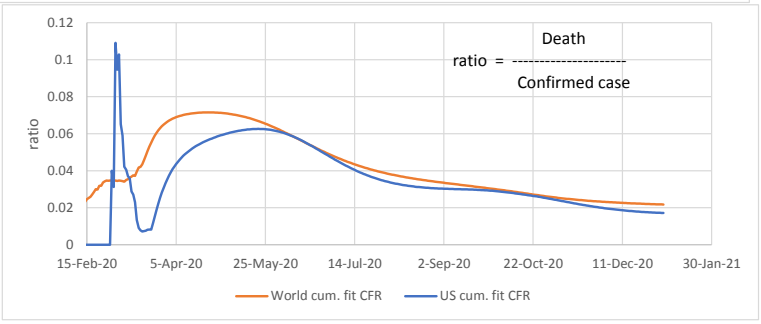


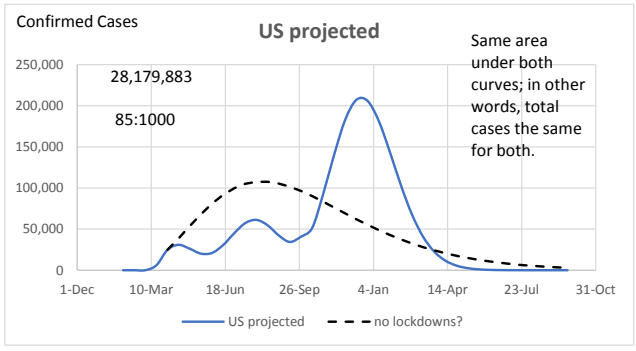




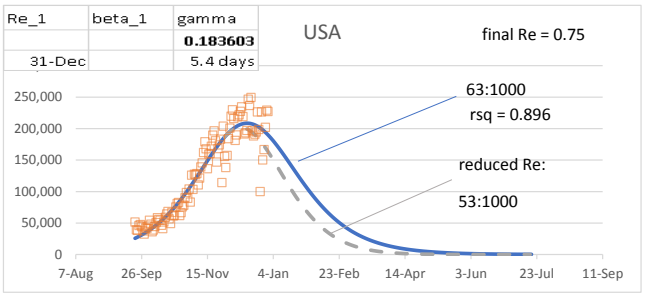




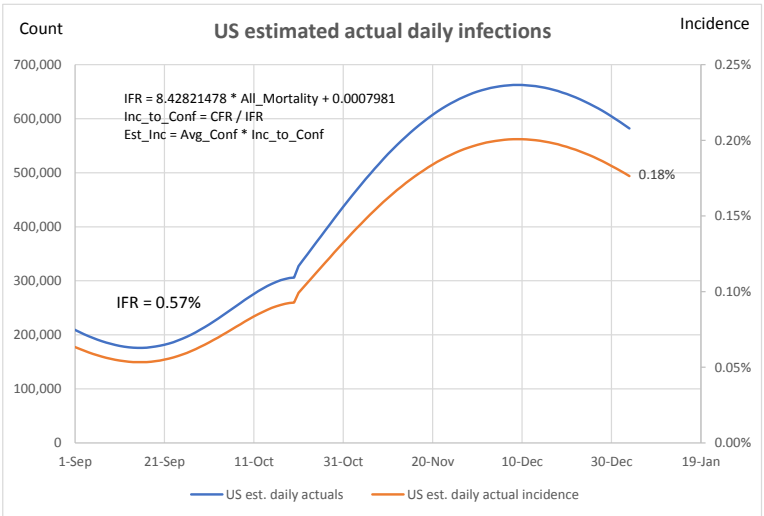




Demonstration of SIR model where R_e is linearly reduced to 0.75 at the end of the sequence:



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 10:1000 benefit (16%).



<u>False Positives Demonstration</u>

Use 0.18% from US est. incidence above as estimated daily incidence

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

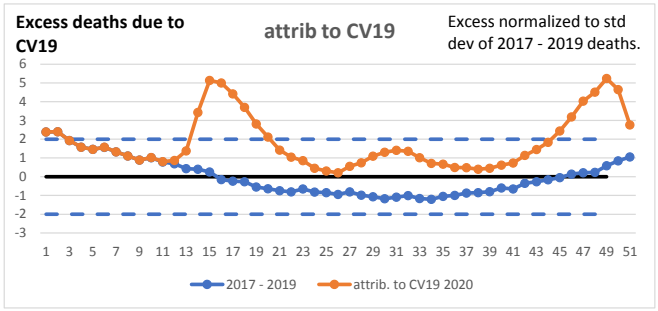
99% accuracy of test 0.18% X 14 = 2.520%

	Positive	Negative	
test pos	2.495%	0.975%	3.47%
test neg	0.025%	96.505%	<u>96.53%</u>
	2.520%	97.480%	100.00%

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

TRUE +	2.495%/3.47%	71.9%
FALSE +	0.975%/3.47%	<u>28.1%</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 51 weeks

	All Cause	All Cause, excl. CV19	CV19
3 yr average before 2020	858:100,000	858:100,000	-
2020	988:100,000	892:100,000	-
Diff.	130:100,000	34:100,000	96:100,000

3 yr average
859:100,000

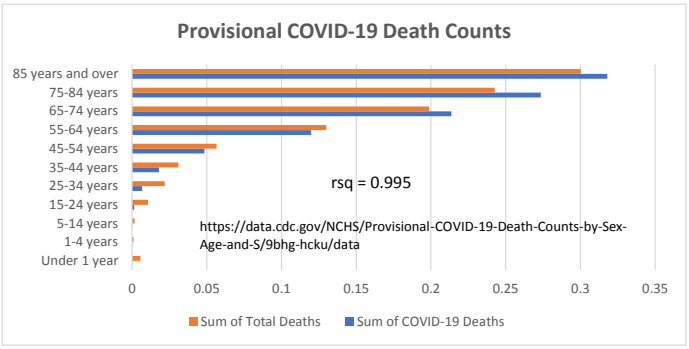
26% of All-Cause excess de

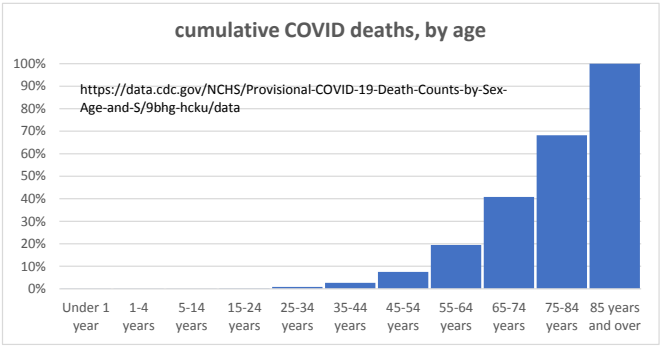
https://data.cdc.gov/NCHS/Excess-Deaths-Associated-with-COVID-19/xkkf-xrst/data

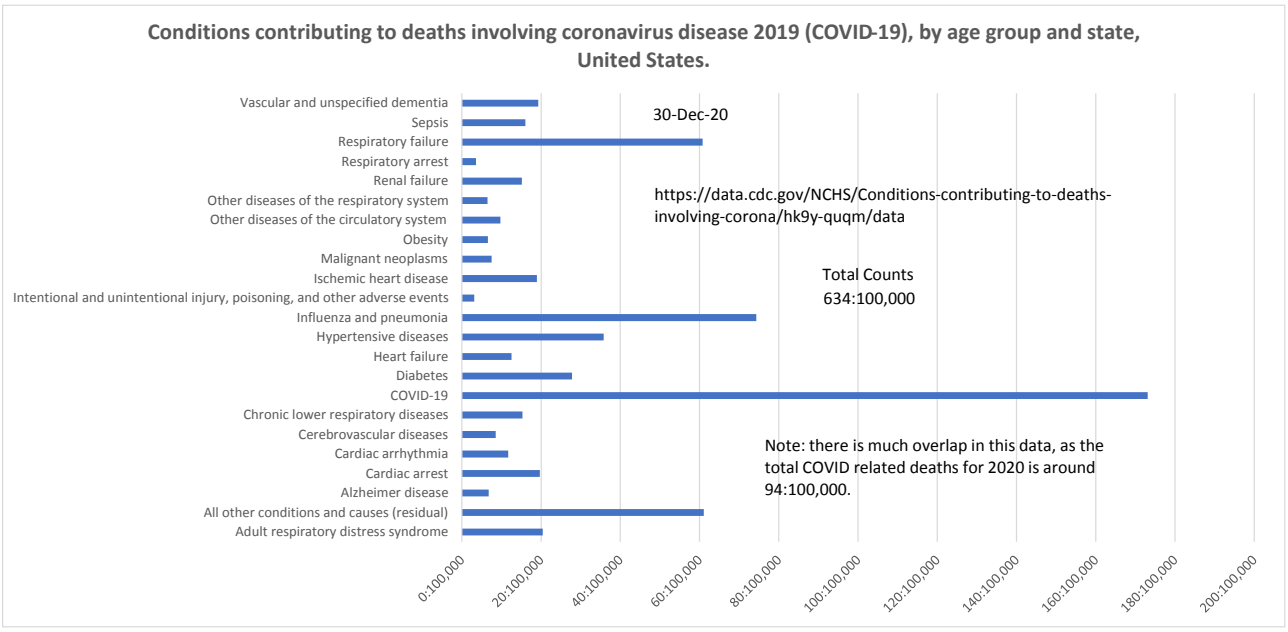
gamma = 0.171 K = 0.318 gamma=0.286

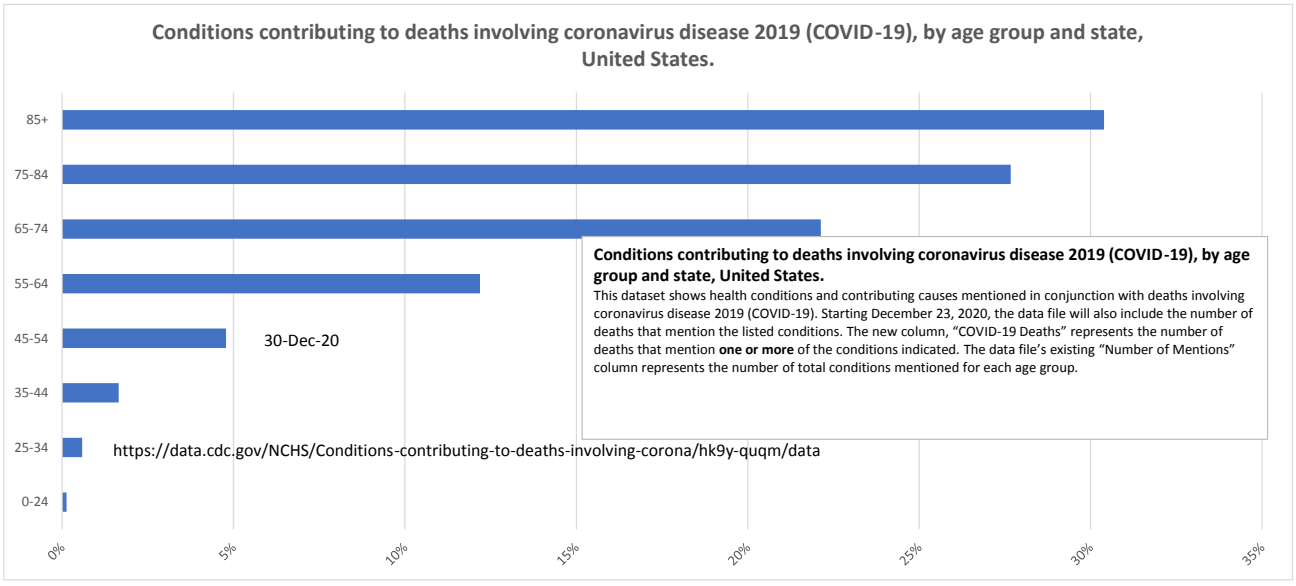
R_o = exp(K /gamma) = 6.421 221,571,317 <=Herd immunity

$R > [1 - 1/R_0]/N$ $R >$ 278,610,004

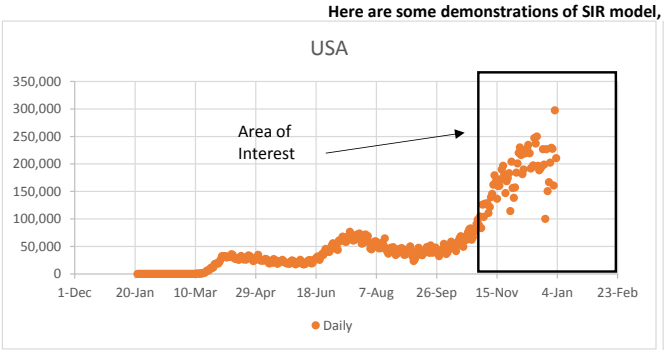


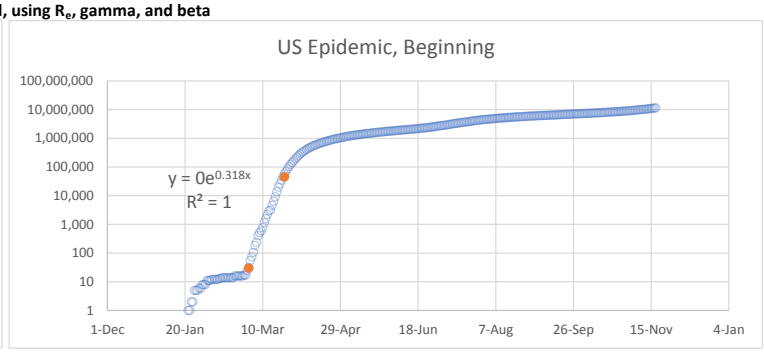




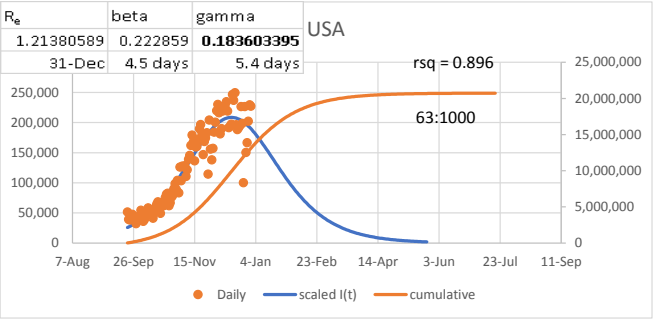


Here are some demonstrations of SIR model, using R_e, gamma, and beta

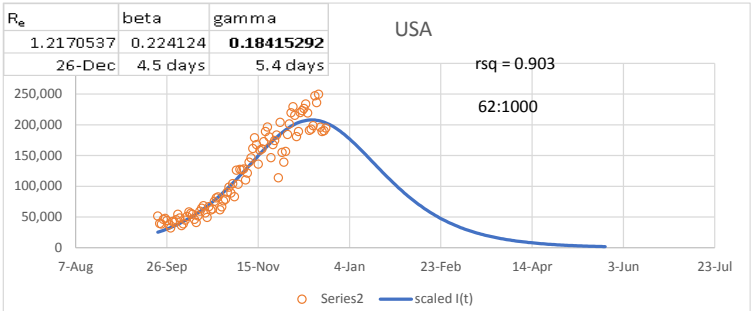




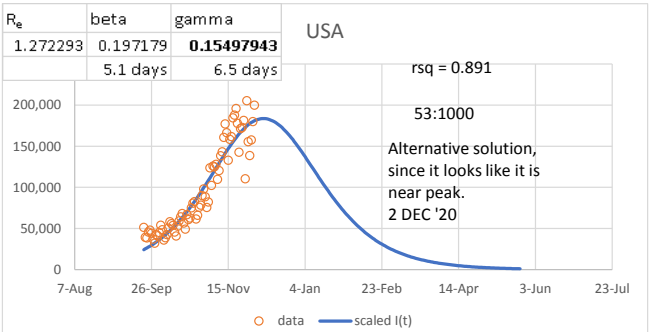
R_e	beta	gamma
1.21380589	0.222859	**0.183603395**
31-Dec	4.5 days	5.4 days

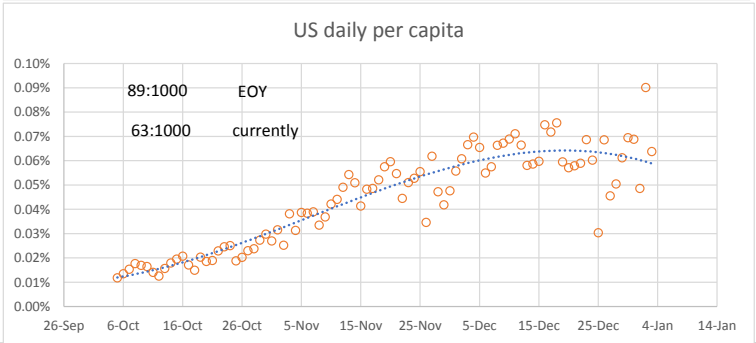


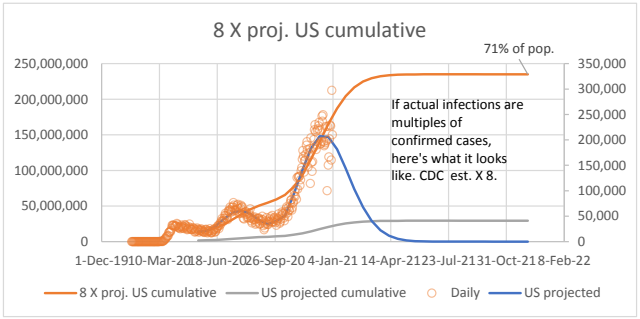
R_e	beta	gamma
1.2170537	0.224124	**0.18415292**
26-Dec	4.5 days	5.4 days



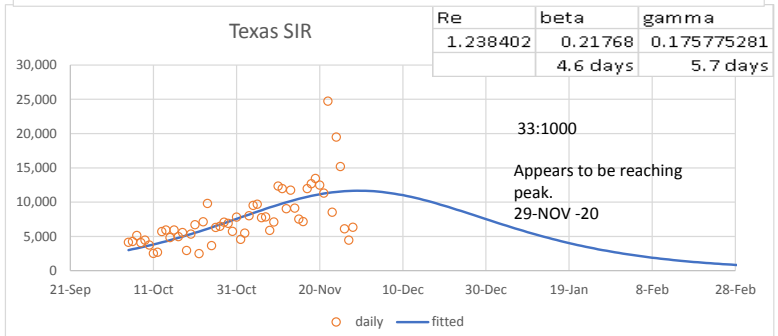
R_e	beta	gamma
1.272293	0.197179	**0.15497943**
	5.1 days	6.5 days



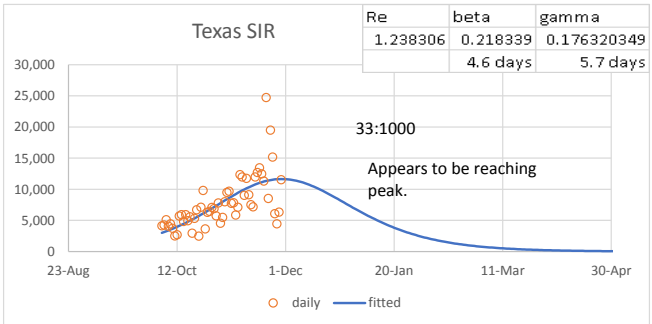




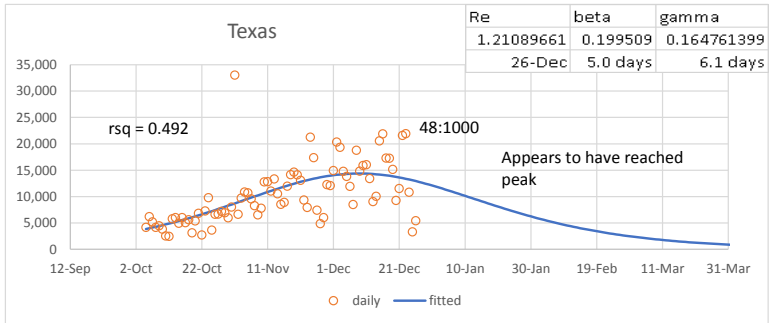
Re	beta	gamma
1.238402	0.21768	0.175775281
	4.6 days	5.7 days



Re	beta	gamma
1.238306	0.218339	0.176320349
	4.6 days	5.7 days

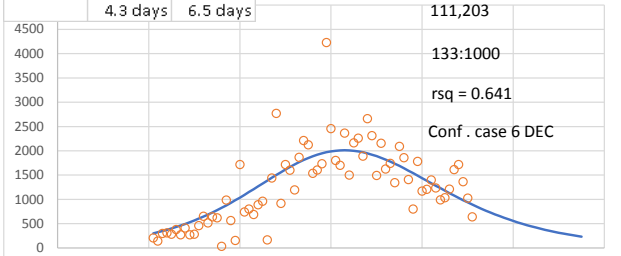


Re	beta	gamma
1.21089661	0.199509	0.164761399
26-Dec	5.0 days	6.1 days



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

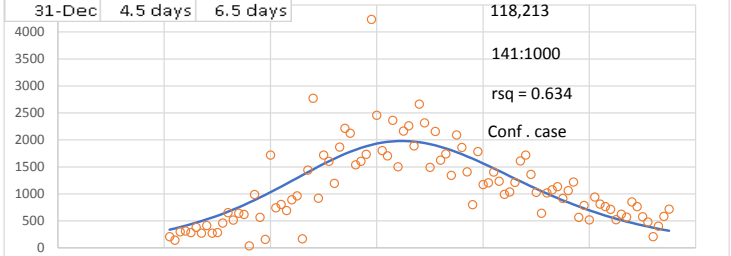
El Paso



R_e	beta	gamma
1.454657	0.223793	**0.153846**
31-Dec	4.5 days	6.5 days

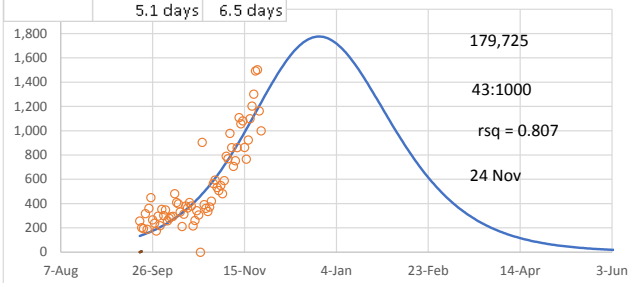
El Paso

Conf. Cases



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

Oregon



Re	beta	gamma
Ro = 1.234	0.300271143	**0.243428**
12/31/2020	3.3 days	4.1 days

Oregon