

Conditional predictions daily new cases I_{new} for Germany, data until Nov. 25, 2020

A comparison with the conditional prediction of Nov. 10, shows that the present situation is close to the most pessimistic variant foreseen in our last outlook (top left). The measures decided Nov. 25 by the German authorities are minor and will be put into place on Dec. 1. We do not expect noticeable effects from them; we therefore show here only what can be expected from extrapolating the last calculable reproduction rate into the near future.

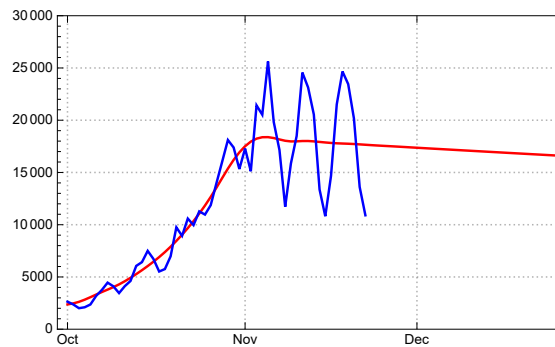


FIGURE 1. Conditional prediction for the number of new infections I_{new} , (3-day centred sliding averages) based on JHU data available at Nov 26, 2020, last SEPIR reproduction rate $R = 0.99$; JHU data blue, model values red.

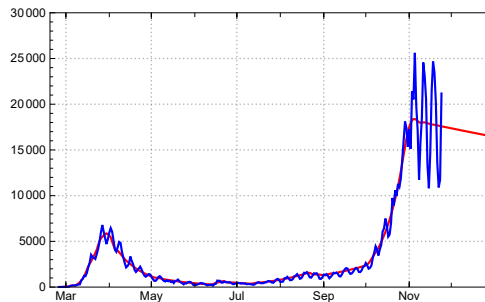


FIGURE 2. Left: SEPIR model for the number of daily new infections I_{new} , (3-day centred sliding averages) based on JHU data 2020; JHU data blue, model values red.

Conditional predictions daily new cases I_{new} for Germany, data until Nov. 10, 2020

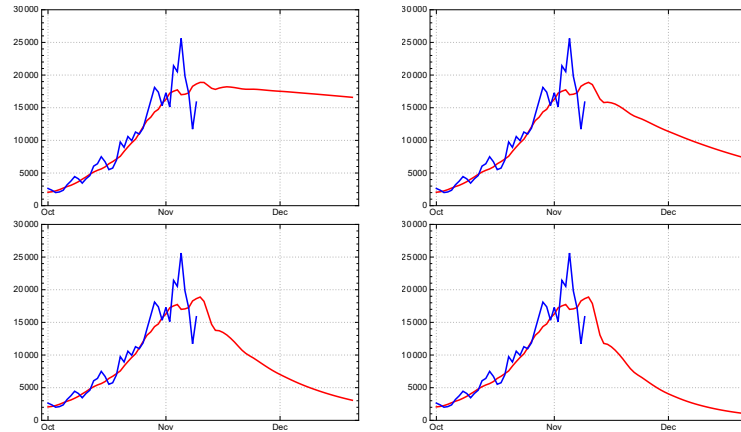


FIGURE 1. Conditional prediction for the number of daily new infections I_{new} based on JHU data (3-day sliding averages) available at Nov 11, 2020 (data until Nov 10, last SEPIR reproduction rate $R = 1.11$).[†] Blue JHU data, solid red line model values. Assumptions: Top left, government measures enacted Nov. 2 reduce reproduction rate by 10% to $R=0.999$. Top right: reduction by 20 % to $R=0.89$. Bottom left: reduction by 30 % to $R=0.78$. Bottom right: reduction by 40 % to $R=0.67$.

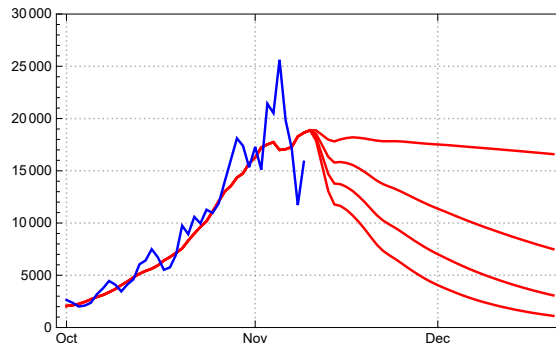


FIGURE 2. Results of all 4 assumed conditions in one (see above figure). With our parameter values the predicted date for the peak of number of daily new infections (7 day sliding centered average) for the second to last scenario is to be expected about Nov. 11.

[†] The date of the last available reproduction rate R is Oct, 28, i.e. 11 days later than the one of the following page but not yet influenced by the measurements enacted Nov. 2. The reduction of R in this time interval may be due to a *change of behaviour* under strong public announcement, added by a *beginning overload of test capacities*.

Conditional predictions daily new cases I_{new} for Germany, Oct. 31, 2020

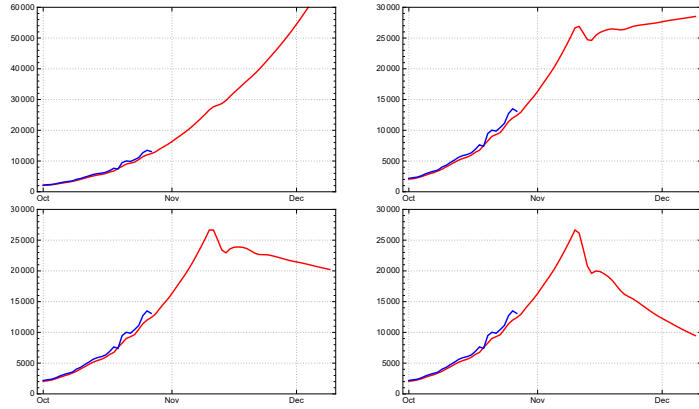


FIGURE 1. Conditional prediction for the number of daily new infections I_{new} based on data (JHU) available at Oct 31, 2020 (last SEPIR reproduction rate $R = 1.39$). Blue JHU data, solid red line model values. Assumptions: Top left, government measures enacted Nov. 2 reduce reproduction rate by 10 % to $R=1.25$. Top right: reduction by 25 % to $R=1.04$. Bottom left: reduction by 30 % to $R=0.97$. Bottom right (very unlikely): reduction by 40 % to $R=0.83$.

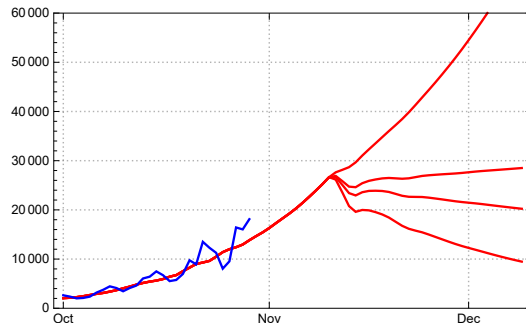


FIGURE 2. Results of all 4 assumed conditions in one (see above figure). With our parameter values the predicted date for the peak of number of daily new infections for the second to last scenario is to be expected about Nov. 11.

Conditional predictions daily new cases I_{new} for Germany Oct. 22, 2020

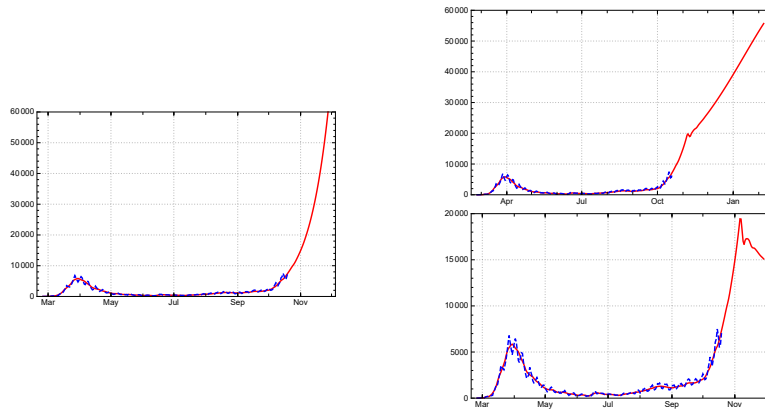


FIGURE 3. Conditional prediction for the number of daily new infections I_{new} based on data (JHU) available at Oct 21, 2020. Dashed blue JHU data, solid red line model values. Left: 1st reduction of reproduction rate $R=1.4$ by 5 % to $R=1.38$ at Oct 16. Top right: 2nd reduction by 20 % to $R=1.10$ at Oct 30. Bottom right: 2nd reduction by 30 % to $R=0.94$ at Oct 30.

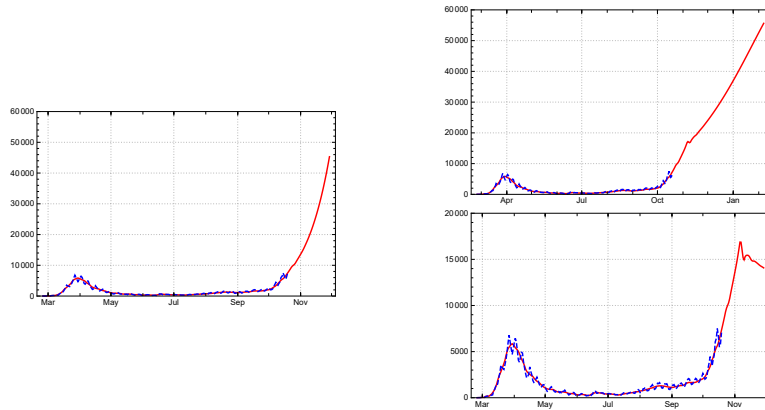


FIGURE 4. Conditional prediction for the number of daily new infections I_{new} based on data (JHU) available at Oct 21, 2020. Dashed blue JHU data, solid red line model values. Left: 1st reduction of reproduction rate $R=1.4$ by 10 % to $R=1.30$ at Oct 16. Top right: 2nd reduction by 15 % to $R=1.11$ at Oct 30. Bottom right: 2nd reduction by 25 % to $R=0.98$ at Oct 30.