

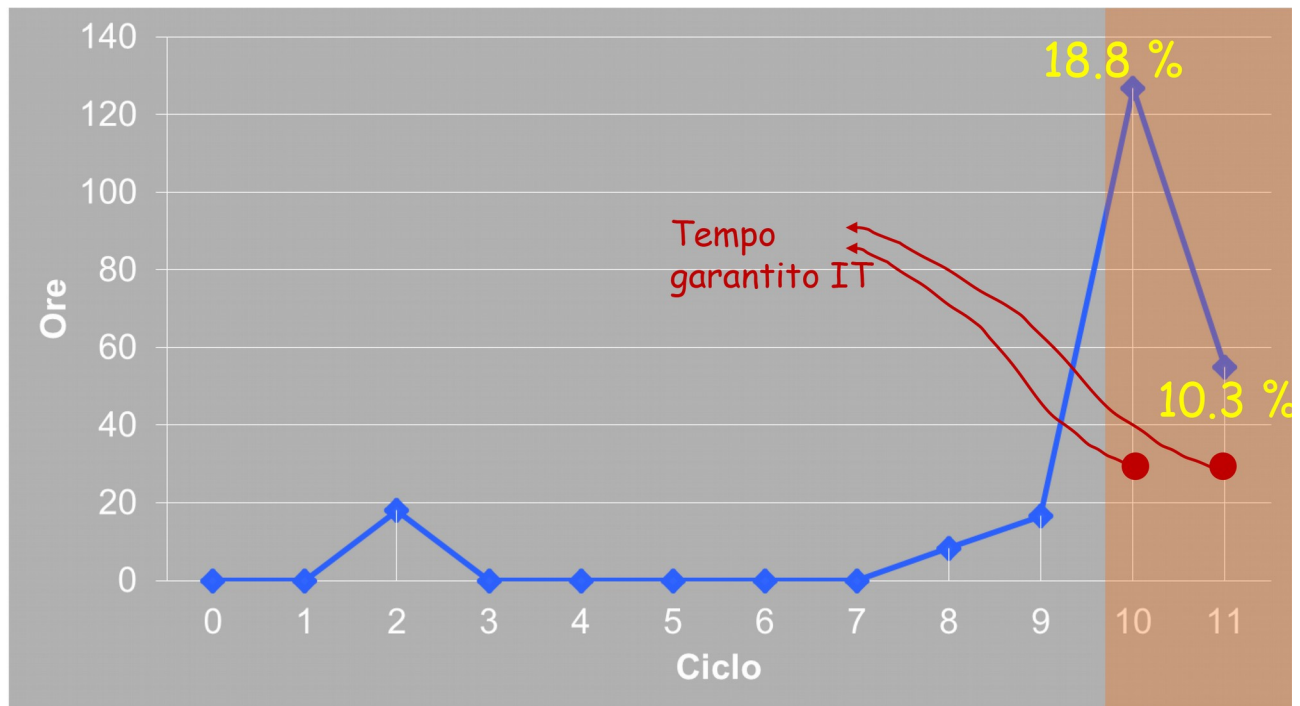
## Recovery exercises for 3<sup>rd</sup> python lesson

### Exercise 1

Given the file data\_python3.txt file available in the lessons repository  
read the file,  
write a function to fit y\_data as function of x\_data  
(suggestion: use a sigmoid function and `scipy.optimize.curve_fit` with  
`bounds=([0., 600.],[0.01, 1200.])`)  
plot the data and the fit function with different colors

### Exercise 2

Given the figure below



representing the observation time reserved to an italian Project Investigator (PI) in the context of an international Telescope, write the python code to reproduce the figure, not necessarily identical, but similar as much as possible and containing the same information. Change all labels in english language and add a legend indicating: red-italian time, blu-total time