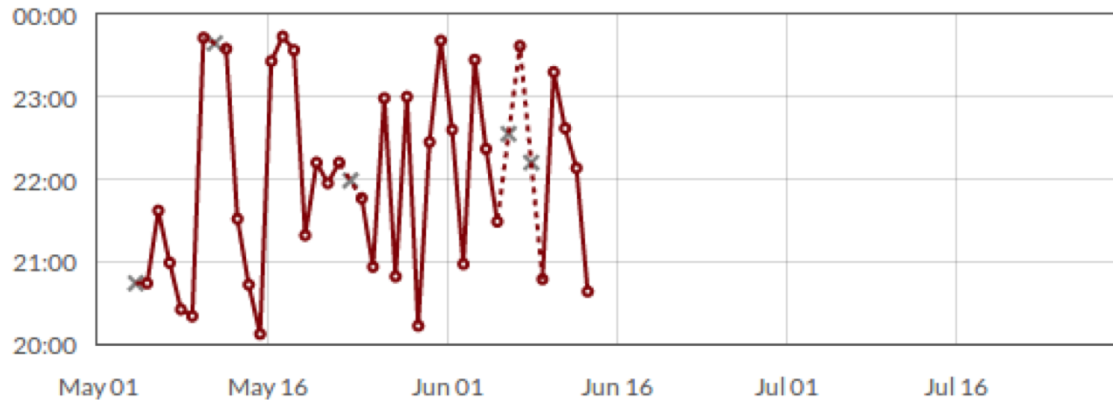# Coding Exercise.

Every day our participants send us a string in the format "hh:mm" which represents the time they went to bed the previous night. Using this data we plot an individual graph for each participant, so their clinician can see it. We mark a grey cross when the participant forgets to send us a response.

Bed time

Question 1: Using CoffeeScript[1] create a function which takes an array of strings in the format mentioned above, and returns their circular mean[2]

Question 2: Demonstrate how you would show your function to be correct.

Question 3: Why is the circular mean useful in this context, why is it more useful than the arithmetic mean?

Question 4: In broad terms, explain how your function would be useful within the code responsible for plotting the graph above.

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1   http://coffeescript.org/
2   http://en.wikipedia.org/wiki/Mean_of_circular_quantities