We thank both reviewers for their positive opinions and constructive comments that led us to improve the paper. Our responses to the individual points raised by the reviewers follow.

R1: I reviewed the paper titled "Photometric observations of the binary near-Earth asteroid (65803) Didymos in 2015-2021 prior to DART impact". This paper is summarizing the photometric observations of Didymos taken place by 11 telescopes over the world during 2015-2021. They tried to obtain the secondary lightcurve by Dimorphos and estimate its aspect ratio. However, the estimation of estimation of aspect ratio was not successful and they arise the possible acquisition in 2022. This information will be very critical for the DART mission by NASA. They acquired numerous data for the binary small body system by large telescopes and the data are very precious. The method is well described and clear. Thus, even though they could not derive a firm conclusion, this paper may be worth publishing.
A: Please note that, as we mention in the 3rd paragraph of Section 1 and in the 1st paragraph of Section 4, our primary task with the photometric observations of Didymos was to detect mutual events between the components of the binary system that have been critical data for achieving the DART mission-critical task of determining the orbit of Dimorphos around the Didymos primary. So, the observational strategy was optimized for that. Describing the primary and secondary rotational lightcurves was a secondary goal (largely a by-product, in certain sense), in fact. As we present in Section 4, we attempted to estimate the secondary's elongation, but we were not successful to obtain a trustworthy estimate from the data that were not optimized for that task. Nevertheless, the fact that we didn't obtain a conclusive result for the secondary goal doesn't diminish the fact that we succeeded to obtain great data for the primary task. (And, the secondary elongation analysis presented in Section 4 provides us a guidence on how to plan further observations in July-September this year so that to reach that goal finally.)

R1: 1. This text may be written by multiple people part by part. For example, in Section 2 observation information are not equivalent for all telescopes. I suggest to make this part more equivalent and consistent each other. I mean that detailed analyses for MMT, Keck, and LBT are missing. And the evaluation of error is missing for most telescopes.
A: We made the individual subsections of Section 2 more consistent mutually. It mostly required to add certain information to some individual subsections where it was missing in the original submission. We also added more details on the observations and reductions to the subsections on the MMT, Keck and LBT data.

R1: 2. I am not a specialist of lightcurve analysis. Has it been already done to estimate the aspect ratio for object as small as Dimorphos? If so, please provide the reference and conditions therein to support the idea to make this possible in 2022 observations. I mean not binary but just a small object of 19-20 mag with a/b~1.5. I, of course, think the secondary object is much more difficult to obtain the lightcurve than just one object, but could be a good reference to take into account the error in observations.
A: We added a footnote to the 1st paragraph of Section 4 with a reference as required.

R1: 3. How can you optimize the order of Fourier series fits? I am concerning the over fitting of this method, which can eliminate the signal from the secondary lightcurve. I understand this procedure is the most established way but I also think it may be better to simulate the primary lightcurve from shape model which should be made by all info from the primary lightcurve through 2003-2021.
A: The maximum significant orders of the fitted Fourier series are determined from the significance F-test. The problem is well-determined for Didymos lightcurves with P_1 and P_2 differing by a factor of ~5 (and not commensurate). We added two sentences on that to the end of the 2nd paragraph of Section 3. The problem that caused that we have not obtained a conclusive result on Dimorphos' equatorial elongation appears to be in the amount and/or quality of the data obtained for the secondary lightcurve as we present in Section 4, not in a possible overfitting. As for possibly simulating the primary lightcurve from a shape model that might be constructed from the primary

lightcurve data taken from 2003 to 2021, we note that (1) the lightcurve inversion methods usually reproduce asteroid photometry data with a poorer precision (typical residuals around 0.02 mag) than what we need for Didymos and (2) a lightcurve shape inversion of the Didymos data taken at near-equatorial aspects is unlikely to provide a unique shape model solution (also considering the complex topography suggested by the observations on some aspects as presented in Section 3). We anticipate that a joint modeling of complete radar plus lightcurve data will provide a good refined primary shape model in future, but it is outside the scope of this paper. And, after all, there will be images of the Didymos primary and Dimorphos taken by DART and LICIACube in September; a much better shape modeling should be done with that data then.

R1: Minor comments:
- Introduction
Review the basic knowledge on Didymos and Dymorphos. E.g., size (primary and binary), albedo, rotation pole direction, etc.
A: We added the current best estimates for several parameters of the binary to the Introduction section.

R1: Make sure that filter names are italic through the text.
A: Done.

R1: Be consistent with date format.
A: Done.

R1: L326: What is "PS1 catalogue"?
A: We introduced the abbreviation and added the reference for the Pan-STARRS PS1 catalogue in Section 2.2 where it first appeared, and used it thoughout the rest of the paper.

R1: L339: Provide the reference for Gemini IRAF package.
A: Reference (URL) added there as a footnote.

R1: L345: Why "A median lightcurve using all 9 reference stars was noisier?"
A: Explanation added to the sentence.

R1: L413: Which SDSS catalog was used?
A: The reference added there.

R1: Fig. 1,2,5-13
Please provide SNR or error bars.
A: We added the error bars to Figs. 1 and 2. We do not plot error bars for the high-quality data points in Figs. 5-13 as they are comparable to the sizes of the data point symbols. We added a note on it to the caption of Fig. 5.

R1: Fig. 6
The name of telescope is missing.
A: We added the name of the telescope (GTC) to the figure‘s legend.

R1: L703-707: Please quantify the value of mutual events. (depth and width)
A: We mention the event depths there now. Their durations are modeled in the submitted paper Scheirich and Pravec (2022) to which we give reference there.

R1: L651: How did you decide the m1 order?
A: From the F-test; it is written in the 2nd paragraph of Section 3 now.

R1: L716: As we have found in Scheirich and Pravec (in prep.) -> As Scheirich and Pravec (in prep.) has found
A: Done.

R1: L727: Provide the reference for D2/D1 value. Or is it derived from this paper?
A: Reference added there.

R1: L769: Why do you expect the Dimorphos is in the 1:1 synchronous spin state?
A: A note and reference added there.

R1: L773: What can support this value of 0.01 mag (or better)? Please provide the reasoning for this value.
A: We added two sentences on it there.

R1: L 860: How much brightness Didymos will be in 2022? How you can expect to obtain better data in 2022?
A: We added the predicted V magnitudes of Didymos during July-September 2022 there. At such bright magnitudes, obtaining photometry with statistical errors of 0.005 mag will be easy with good telescopes.

R2: This paper is clearly relevant to the ongoing DART mission and should be published. I see no major problems with the contents, but would like to recommend some changes.

First and foremost, the abstract really should be limited to a discussion of the contents of this paper. Reviewers, including me, often base a decision on whether to review a paper or not on the contents of just the abstract, but after reading the entire manuscript, I was disappointed not to see some discussion about things I expected to see based on a reading of the abstract. Specifically, "The data... provide a basis for modeling the Dimorphos orbit around the Didymos primary" led me to believe that the orbit of Dimorphos would be discussed in this paper, but it wasn't. Yes, it could be argued that the inclusion of "by Scheirich and Pravec (in preparation) and Neidu et al. (in preparation)" should have caused me to expect otherwise, but it didn't initially. Still, I don't think the abstract should be telling us about what readers should expect to see in future papers; focus on the contents of this paper instead. Similarly, "The...data will be useful...for improving the Didymos primary shape model" might give the reader the impression that the Didymos shape model will be discussed in this paper, but that doesn't happen either.
A: We modified the abstract so that it more clearly gives what is presented in this paper. We want to keep connections to the related papers there.

After reading Section 2 "Observations", my initial reaction was "that was tedious". I am struggling to come up with specific recommendations, however. On the one hand, a table showing, in a uniform manner, all the relevant details could be more succinct. On the other hand, there appears to be significant differences in the descriptions of the various observations, which could complicate such a table. It's almost as if each subsection's description was written by a different person (presumably one of the people involved in those observations), and thrown together in one massive Observations section. Very heterogeneous. Were the data reductions themselves also performed heterogeneously? Basically, I'm hoping the

authors can find a way to improve the homogeneity of the information in this section. To the extent that uniformity can be achieved, those details could be condensed into a table (Table 1 is a start), while important differences could be highlighted in the various subsections. I think there are ways to tighten up this section. For example, does the reader really need to be told that bias subtraction and flat fielding was performed in every subsection? Put that information in an introductory paragraph that applies to all telescope's datasets and use the subsections to highlight the differences.
A: We added an introductory paragraph as the 5th paragraph of Section 2 (just before the Section 2.1) where we mentioned common points of the observations with all the telescopes (such as the standard bias subtraction and flatfield corrections applied) and explained that we present the specifics of the individual observational and reduction procedures used at the different telescopes or by the different observers in the following subsections. As there were so many differences between the individual observing techniques and reduction procedures, we felt that it would not be useful to present the (relatively) few common points in a table. We also added certain details on the procedures used in several subsections where they were missing in the original submission, to improve the homogeneity of the provided information. And we removed sentences mentioning the application of the standard bias and flatfield corrections from the individual subsections (as it is mentioned in the introductory paragraph now).

The real meat of this paper is in Section 3 "Lightcurve decompositions", where all the lightcurves are shown. In addition to the individual data points, solid curves are shown in panels "a" and "c" of each figure. I assumed that these curves represent the model fitted to the data using equations 1-3, but such an assumption doesn't explain the double solid curves present in some, but not all, of the figures (Fig. 6a is one example). The fitting of the data to the model was done, but nowhere are the values of the coefficients shown.
A: Yes, the solid curves are the model fitted to the data. We added a note on it to the 9th paragraph of Section 3. The reason for why there are plotted „double“ solid curves in panels a of some figures is that there are shown data from two or more nights folded with the orbital period, but the primary rotation is not in phase (or commensurate) with the orbital period and so the fitted curves for different nights are shifted in phase in the panels a. As for the values of the Fourier coefficients, we will publish them in a DART database together with the data from the upcoming 2022-2023 apparition before the end of the DART mission in Summer 2023.

R2: lines 26-27: Tense was correct at the time of writing, but is now incorrect. Please update to note that DART was launched.
A: Updated.

R2: lines 30-31: One would think that NASA would not have chosen to do this mission without assurances that the mutual events would be visible from Earth after the impact event so that a change in the orbit of Dimorphos could be detected, thus the use of the word "assuming" raises eyebrows. If NASA is confident that mutual events will be detected post-impact, then this paragraph should be written to reflect that confidence. Even better would be a table of predicted mutual events in the post-impact observational window, but I gather that's the subject of one of the "in preparation" papers mentioned in the abstract.
A: We added there a sentence stating that we know that mutual events in the Didymos system can be seen from Earth. As for the ephemeris of mutual events in the post-impact observational window, it is indeed presented in Scheirich and Pravec (2022, submitted).

R2: Observations: Observations affected by background sources were removed from the analysis. Did anyone attempt to recover those data points by performing image differencing to suppress the contamination from the background sources?
A: No, we didn't attempt that. Suppressing the contamination from background sources by image differencing was not expected to bring photometry accurate to 0.01 mag for the faint target.

R2: lines 357-358: The percentiles are ambiguous. Is a completely clear sky 100 percentile cloud cover or 0 percentile cloud cover? Even the numbers won't mean much to readers unfamiliar with the frequency of various conditions. How good (or bad) is the seeing 85 percent of the time?
A: We added there a foonote with explanation of the use of percentiles for the Gemini weather conditions.

R2: line 595: I assume "Fouries" is meant to be "Fourier"
A: The typo fixed.