

Response to reviewers

Our response to reviewers comments are given in red below each comment.

Review 1

Files

- [CCP20162.pdf](#) (Uploaded on 10 Nov 2016 11:34)
- [CCP20162Revised.pdf](#) (Uploaded on 10 Nov 2016 11:34)
- [Supervisor_agreement-CCP2016-v6.docx](#) (Uploaded on 10 Nov 2016 11:34)

Assessments

Referee: **To be corrected**

submitted on *Thu 10 Nov 2016 at 11:34*

Answers

Does this paper contain notable scientific rigour, accuracy and correctness?: Neutral

Does this paper present clarity of expressions; communication of ideas; readability and discussion of concepts?: Neutral

Is there sufficient discussion of the context of the work; and suitable referencing?: Neutral

Originality: Is the work relevant and novel?: Neutral

Motivation: Does the problem considered have a sound motivation?: Neutral

Repetition: Have significant parts of the paper already been published?: Neutral

Length: Is the content of the work of sufficient scientific interest to justify its length?: Neutral

Title: Is it adequate and appropriate for the content of the article?: Neutral

Abstract: Does it contain the essential information of the article and is it complete?: Neutral

Diagrams, Figures, Tables and Captions: Are they essential and clear?: Neutral

Text and Mathematics: Are they brief but still clear?: Neutral

Conclusion: Does the paper contain a carefully written conclusion, summarizing what has been learned and why it is interesting and useful?: Neutral

Layout: **ACCEPTED**

submitted on *Fri 16 Sep 2016 at 10:17*

Content: **To be corrected**

submitted on *Mon 31 Oct 2016 at 01:46*

Comments

The Paper falls within the scope of J.Phys.:Conf.Ser. and the motivation and relevance of the research are important. The authors theoretically studied the two and multi-level atoms interacting with multiple laser beams. The effects of laser modulation on the dynamics of the atom (atomic populations and coherence) are examined by solving the optical Bloch equations. Plots of the density matrix elements as a function of time are presented for various parameters such as laser intensity, detuning, modulation etc. The paper is interesting and adds to results that are already published.

RECOMMENDATION: the manuscript can be accepted and published in the CCP2016 Proceedings (J.Phys.Conf.Ser.) after taking into account for a number of the points (look below).

Re-review is not required!

I. Perhaps, the next title of the article “On the non-linear spectroscopy including saturated absorption and four-wave mixing in two and multi-level atoms: a computational study” will be better sounding, however, this item at the discretion of the authors

Title has been changed as recommended by reviewer.

II. The authors should carefully proof-read the manuscript

i) to minimize typographical, or bibliographical misprints. For example:

- Page 2, line 14: “by the Liouville-Von Neumann equation” should be replaced by “by the Liouville-von Neumann equation,” etc.

Manuscript has been proofread and corrected.

- the numbers of equations in the manuscript are usually given in parentheses; for example, “Equation 8” should be replaced by “Equation (8)”.

Reference to equations have been corrected as suggested.

ii). to check all formulas; For example, correctness of the signs in the equations (3)-(6).

Equations 3-6 are correct and other equations have also been checked.

iii). to make sure that all symbols (in formulas, figures etc) are defined.

All symbols that are not standard have been defined.

iv). To check a correctness of the citation of the known results such as the Bloch equations etc.

Citation of the Bloch equation and Liouville-von Neumann equation has been corrected.

II. May be, it would be appropriate to add some additional references related to the atom-laser interaction, etc, e.g.:

- Allen L and Eberly J H 1987 Optical Resonance and Two-Level Atoms (New York, Dover Pub) p 1

- Glushkov A V, Khetselius O Yu, Svinarenko A A, Prepelitsa G P 2011 Coherence and Ultrashort Pulsed Emission, ed F J Duarte (Intech) p 159.

- Jakowski J and Morokuma K 2009 J. Chem. Phys. 130, 224106

- Glushkov A V 2014 Journ. of Phys.: Conf. Ser. 548, 012020.
 - Vianna S S, Nussenzveig P, Magno W C and Tabosa J W, 1998 Phys. Rev. A 58, 3000
- Besides, the list of references should be issued in the strict compliance with the rules of the IOP journal. Please, correct it.

We have added some of the above references and some additional ones to the paper.

Criteria Evaluation

Does this paper contain notable scientific rigour, accuracy and correctness?: Weakly Agree

Does this paper present clarity of expressions; communication of ideas; readability and discussion of concepts?: Agree

Is there sufficient discussion of the context of the work; and suitable referencing?: Weakly Disagree

Originality: Is the work relevant and novel?: Weakly Agree

Motivation: Does the problem considered have a sound motivation?: Agree

Repetition: Have significant parts of the paper already been published?: Neutral

Length: Is the content of the work of sufficient scientific interest to justify its length?: Weakly Agree

Title: Is it adequate and appropriate for the content of the article?: Neutral

Abstract: Does it contain the essential information of the article and is it complete?: Agree

Diagrams, Figures, Tables and Captions: Are they essential and clear?: Agree

Text and Mathematics: Are they brief but still clear?: Neutral

Conclusion: Does the paper contain a carefully written conclusion, summarizing what has been learned and why it is interesting and useful?: Neutral

Review 0

Files

- [CCP20162.pdf](#) (Uploaded on 09 Sep 2016 15:09)
- [Supervisor_agreement-CCP2016-v6.docx](#) (Uploaded on 09 Sep 2016 15:09)

Assessments

Referee: To be corrected

submitted on *Fri 09 Sep 2016 at 15:09*

Comments

Your paper contained one or a few small errors in terms of the layout only!. We are offering you one last chance to correct your manuscript (instead of Rejecting it as indicated beforehand and as the IOP Review Policy states).

Please refer to the Layout Reviewer's comments and re-submit your revised paper by 08:00am SAST on 14 September 2016. Your manuscript will ONLY be reviewed for

content if:

- it has been re-submitted by the indicated deadline
- the layout is 100% in agreement with the template and the comments of the layout reviewer else IT WILL BE REJECTED.

Layout and template documentation can be found at:

- <http://events.saip.org.za/internalPage.py?pageId=4&confId=72>
- <http://conferenceseries.iop.org/content/authors>

If you have not already done so, we'll appreciate it if you can provide two reviewer suggestions (Title, Name, Surname, e-mail and Tel) for your paper by replying to this email

Answers

Does this paper contain notable scientific rigour, accuracy and correctness?: Neutral

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Is there sufficient discussion of the context of the work; and suitable referencing?: Neutral

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Text and Mathematics: Are they brief but still clear?: Neutral

Conclusion: Does the paper contain a carefully written conclusion, summarizing what has been learned and why it is interesting and useful?: Neutral

Layout: **To be corrected**

submitted on *Wed 07 Sep 2016 at 11:58*

Comments

1. Corresponding Author emails: are all the listed emails that of the corresponding authors (To whom the correspondence should be addressed?) usually there should only be one.

Corectted.

2. Figure captions must not be italics it should be normal text style and justified.

Figure captions corrected.

3. On page 7: the last paragraph on the page is not indented the same as all the other

indented paragraphs. It must be indented by 5mm.

Indentation corrected.

4. References do not match the template specification and are not in the correct font size. Correct the font size.

References corrected.

Close