# Article information:

Absolute phase retrieval for colored objects based on three phase-shifting amount codes
[https://opg.optica.org/oe/fulltext.cfm?uri=oe-28-26-38491=444251](https://opg.optica.org/oe/fulltext.cfm?uri=oe-28-26-38491&id=444251)

# Article summary:

1. This article proposes an absolute phase retrieval method based on three phase-shifting amount codes (3-PSA-codes) to measure colored objects with one additional pattern.

2. 3-PSA-codes embed the code element into the PSA domain and retrieve it from the phase difference, which reduces the influence of surface color on absolute phase retrieval.

3. Experimental results demonstrate that the proposed 3-PSA-codes have strong robustness in measuring colored objects.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy, as it provides a detailed description of the proposed method and its advantages over existing methods, as well as experimental results to support its claims. The authors also provide a thorough review of related work in this field, which helps to contextualize their research and demonstrate its novelty.

However, there are some potential biases in the article that should be noted. For example, while the authors do mention some limitations of their proposed method (e.g., that it requires at least one additional pattern), they do not explore any possible counterarguments or alternative solutions to these limitations. Additionally, while they do discuss some potential risks associated with their method (e.g., fringe order misjudgment caused by missing periods), they do not provide any evidence for how these risks can be mitigated or avoided.

In addition, there is a lack of discussion about other applications of this method beyond measuring colored objects; while this may be outside the scope of this particular article, it would be useful to consider how this method could be applied more broadly in other contexts or scenarios. Finally, there is no mention of any ethical considerations associated with this research; while this may not necessarily be relevant to all readers, it would still be beneficial for readers to know if any ethical issues were taken into account during the development and testing process of this method.

# Topics for further research:

* Alternative solutions to limitations of proposed method
* Mitigating risks associated with proposed method
* Applications of proposed method beyond measuring colored objects
* Ethical considerations of proposed method
* Further research on proposed method
* Impact of proposed method on existing methods

# Report location:

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