
COMMUNICATIONS

Comment

Comment on the paper "New diode laser light source for absolute ranging two-wavelength interferometry"

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Gerstner and Tschudi,¹ in their paper on two-wavelength interferometry, claim they first demonstrated stabilization of two semiconductor lasers by locking them to a common Fabry-Pérot resonator. They are probably unaware of the work of deGroot and Kushner² in which we used this technique to achieve relative stabilization of two semiconductor laser diodes, operating at wavelengths of 785 and 835 nm, to <0.014 ppm. Our application, like that of Gerstner and Tschudi, was two-wavelength interferometry.

References

1. K. Gerstner and T. Tschudi, "New diode laser light source for absolute ranging two-wavelength interferometry," *Opt. Eng.* **33**(8), 2692-2696 (1994).
2. P. deGroot and S. Kushner, "Synthetic wavelength stabilization for two-color laser diode interferometry," *Appl. Opt.* **30**(28), 4026-4033 (1991).

Response

Response to "Comment on the paper 'New diode laser light source for absolute ranging two-wavelength interferometry'"

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We agree that the central part of our work, which is the Fabry-Pérot etalon, is used in the paper of deGroot and Kushner with the title "Synthetic wavelength stabilization for two-color laser-diode interferometry" for the same purpose as in our work. Unfortunately we had no knowledge of deGroot and Kushner's contribution.

One difference between the work of deGroot and Kushner and our work, however, is that our light source shows a number of features that were only proposed in the above-mentioned paper. We use an absolute stabilization for one laser (a rubidium absorption line or another Fabry-Pérot etalon), and the resonator for the stabilization of the synthetic wavelength is sufficiently short to preserve the unambiguity of the synthetic wavelength. Consequently, we still consider it a "new light source."

Letter

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The special section on micro-optics in the November 1994 issue of *Optical Engineering* was put together with the help of the following guest editorial board members:

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It is my deep regret that due to my oversight these names did not get printed in the guest editorial. I personally apologize to all of the above members and the readers for my mistake.

I wish all of you a happy new year.