

Re: Mirror position in bended optical path

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- *From:* sam@xxxxxxxxxxxxxx (Samuel M. Goldwasser)
 - *Date:* 31 Mar 2009 08:54:58 -0500
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dudi24 <sven.dudeck@xxxxxx> writes:

Hello,

I am trying to build a magnifying lens system consisting of an infinity-corrected objective (L1) and a focussing lens (L2) ($f=200\text{mm}$). Between the objective and the lens is a beamsplitter (BS) to include an illumination. I think in principle this is pretty much a standard setup.

| O \ O |

O L1 BS L2 I

The problem I have: The overall length of the system is much to long. Therefore I would like to bend the optical path one or two times but I am not sure where to put the mirrors to do that.

There is the option to put them within the (quasi) parallel part of the optical path, somewhere between L1 and L2, or within the focussing part behind L2.

Option 1:

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\ / O |

O L1 M1
M2 BS L2 I

Option 2:

| O \ O \

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Re: Mirror position in bended optical path

O L1 BS L2 M1
M2 I

I suppose that the position of the bending–mirrors will affect my optical imaging, but I am not sure in what way. Therefore my question is, What will be the better choice of mirror–position.

Thank you very much,
Sven Dudeck

Doesn't really matter if there is space for the mirrors. A planar turning mirror doesn't affect the optical behavior.

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sam | Sci.Electronics.Repair FAQ: <http://www.repairfaq.org/>
Repair | Main Table of Contents: <http://www.repairfaq.org/REPAIR/>
+Lasers | Sam's Laser FAQ: <http://www.repairfaq.org/sam/lasersam.htm>
| Mirror Sites: http://www.repairfaq.org/REPAIR/F_mirror.html

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