

Re: Compact connected Hausdorff

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- *From:* quasi <quasi@xxxxxxxx>
 - *Date:* Mon, 05 Dec 2005 23:53:42 -0500
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On Mon, 05 Dec 2005 08:55:44 +0100, Jannick Asmus
<jannick.news@xxxxxx> wrote:

>On 05.12.2005 00:17, quasi wrote:

>> On Sun, 04 Dec 2005 23:59:04 +0100, Jannick Asmus

>> <jannick.news@xxxxxx> wrote:

>>

>>

>>>On 04.12.2005 20:11, quasi wrote:

>>>

>

>>>>

>>>>The components of U must be open in U , hence open in X .

>>>

>>>Why that? Is that really true?

>>>

>>>J.

>>

>>

>> A component of U must be open in U (a component of any space is both
>> open and closed in that space).

>

>First, let me say that in this context 'component' means 'connected
>component' to me. Just to avoid confusion.

>

>Could you prove that a component is open *without* any additional
>assumption on U (e.g., U has only finitely many components or U is
>locally connected)?

No, I can't -- your question is right on target, making me aware my
misconception. Thanks.

>>

>> But since U was specified as open in X , it follows that the components
>> of U are also open in X (a relatively open subset of an open set is
>> open).

>>

>> What am I missing?

>>

I see that I was missing something basic --- components are always closed, but not always open.

quasi

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• **References:**

- ◆ **Compact connected Hausdorff**
◇ *From:* William Elliot
 - ◆ **Re: Compact connected Hausdorff**
◇ *From:* quasi
 - ◆ **Re: Compact connected Hausdorff**
◇ *From:* Jannick Asmus
 - ◆ **Re: Compact connected Hausdorff**
◇ *From:* quasi
 - ◆ **Re: Compact connected Hausdorff**
◇ *From:* Jannick Asmus
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 - Next by Date: **Re: computing geodesics, geodesic distance algorithms**
 - Previous by thread: **Re: Compact connected Hausdorff**
 - Next by thread: **Re: Compact connected Hausdorff**
 - Index(es):
 - ◆ **Date**
 - ◆ **Thread**