

# Re: How would you connect two space stations?

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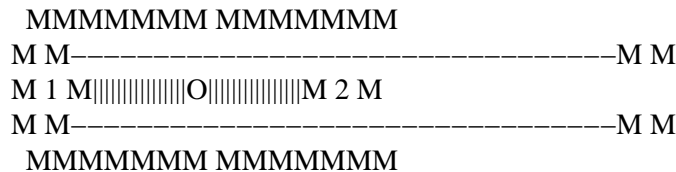
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Mike Rhino schrieb:

- > *Suppose you wanted two space stations, one with zero g and one with .5 g*
- > *with regular traffic going between them. Should they be connected together*
- > *and how?*

Interesting question. Of course len is right that you want to avoid rotating connections if possible. But sooner or later you will need a connection between a fixed and a rotating part.

What about the following approach. You start with two modules (M) that are maybe 100m apart and are connected by a flexible tunnel with perhaps 2m diameter (|) and two tethers (-). Between the two tethers there is a flexible tunnel that connects the modules to a hub (O). In the hub there is a rotating bearing that connects to the nonrotating part of the station.



- M=Module (e.g. Nautilus)
- Tether
- |=Flexible tube
- O=Hub

Note that the tether is not connected to the hub. The only connection from the modules to the hub is the flexible tunnel. Since the tethers keep the total length of the flexible tunnel and hence the volume more or less constant, the modules could move quite a bit relative to the hub. So you could move mass from one rotating module to the other without pumping ballast mass in the opposite direction, e.g. if all the crew want to watch a DVD in module 2.

The hub would consist of a rotating hull with two docking ports for attaching the tunnels and a non-rotating center with two docking ports on each end to connect to the non-rotating parts. It would contain a small electric motor to make up for bearing friction.