

## Review of: "A Case for Nature in Long-Haul Space Exploration"

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Potential competing interests: No potential competing interests to declare.

While I found this article interesting, it is not clear if the authors are well versed in long duration spaceflight. Sending humans into space is not only complex but very expensive. The resources, measured in weight, volume, crew time, etc. limit what we are able to take. Requirements are driven in part by mission parameters and acceptable risk. As an editor and contributing author in this field, I am not sure what the value this brings other than to make us think. This will undoubtedly evolve over the coming decades.

Page 1, Para 1, Sent 2 - NASA is partnering with a wide variety of nations - not just Canada and Europe. Change to read '....European partners plan to follow....'

Page 1, Para 1, Sent 5 - '...assuming optimal planetary alignment[2].' This is dependent upon planetary alignment and propulsion technology.

Page 2, Benefits of Nature, Para 1, Sent 1 - Perhaps we should consider a 'new nature'. The construct we are most familiar does not exist elsewhere. Although virtual and immersive environments may play a role.

Page 2, Para 2. I would used a different word that 'notoriously' when referring to astronaut training. Perhaps 'demanding' might be a better adjective.

Page 2, Para 2 - at the very end. You might add 'This is due primarily to mission architecture constraints, resources, utilities, weight, volume, mass, planetary protection, less medical capability than on ISS today. Think submariners!

Page 2, Biophilc Design, Para 1 - This must be distilled or tracked to requirements and standards. Those BTW have been developed over 60+ years of human spaceflight experience primarily form US and USSR/Russia.

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