

EGU22-6977

<https://doi.org/10.5194/egusphere-egu22-6977>

EGU General Assembly 2022

© Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



An unambiguous global map projection for the Kuiper belt object Arrokoth by fitting a Quincuncial Adaptive Closed Kohonen (QuACK) map

Björn Grieger

Aurora Technology B.V. for the European Space Agency, ESAC, Madrid, Spain (bjoern.grieger@sciops.esa.int)

On the 1st of January 2019, the New Horizons space probe flew by the Kuiper belt object Arrokoth. Images revealed a bilobate shape that would not allow any common map projection to display the complete surface, because multiple points have the same longitude and latitude. Arrokoth shares this feature with 67P/Churyumov-Gerasimenko, the target comet of the Rosetta mission. In order to map the complete surface of the comet, a Quincuncial Adaptive Closed Kohonen (QuACK) map has been fitted to 67P by Grieger (2019). Here, we fit a QuACK map similarly to the shape model of Arrokoth by Stern et al. (2019) and project some of the closest images acquired by the LORRI instrument onto it.