Maximizing Scientific Output through Data FAIRness

Max Novelli

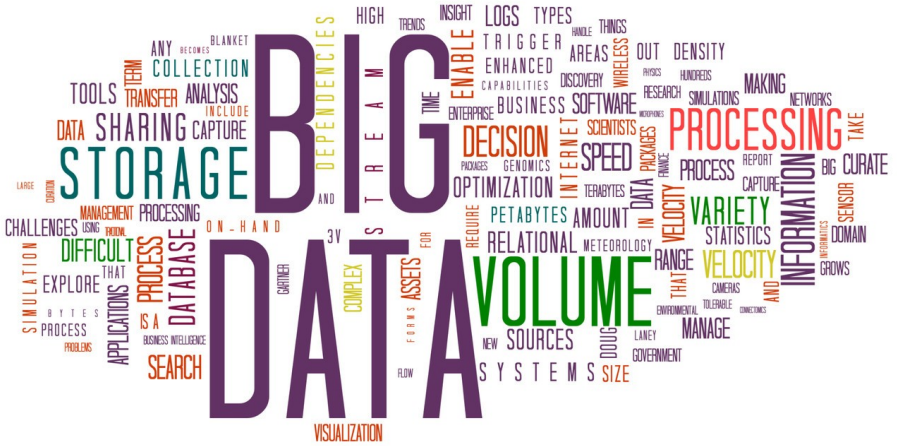
senior data curation scientist

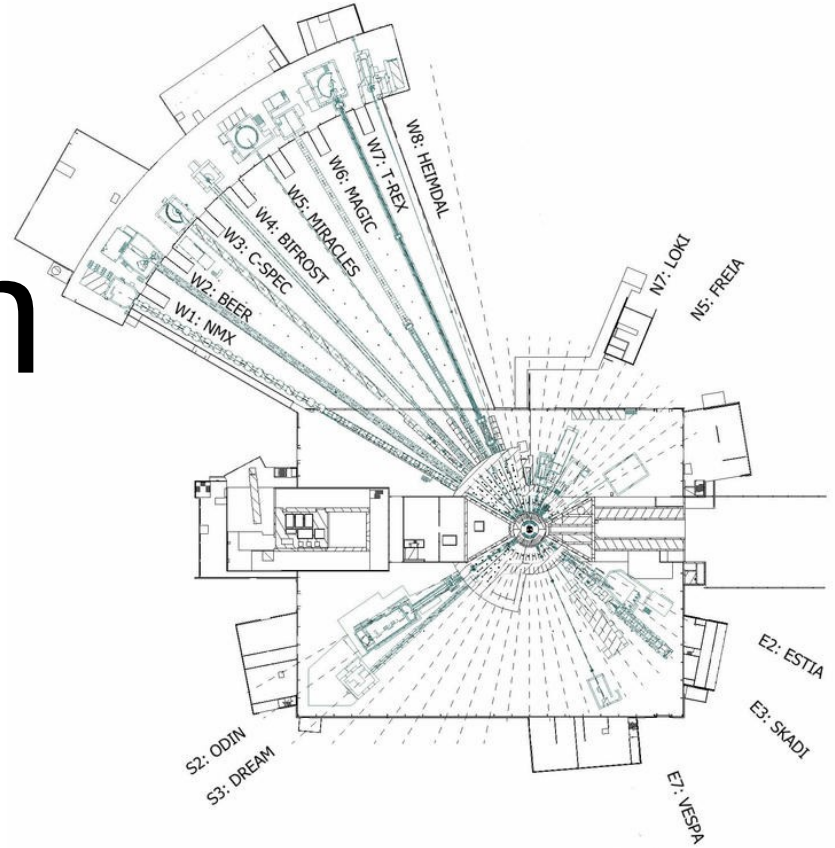
SIMS team (Scientific Information Management Systems)

ESS

LU Open Science Data 2024 - 2024/11/19

ESS and Data

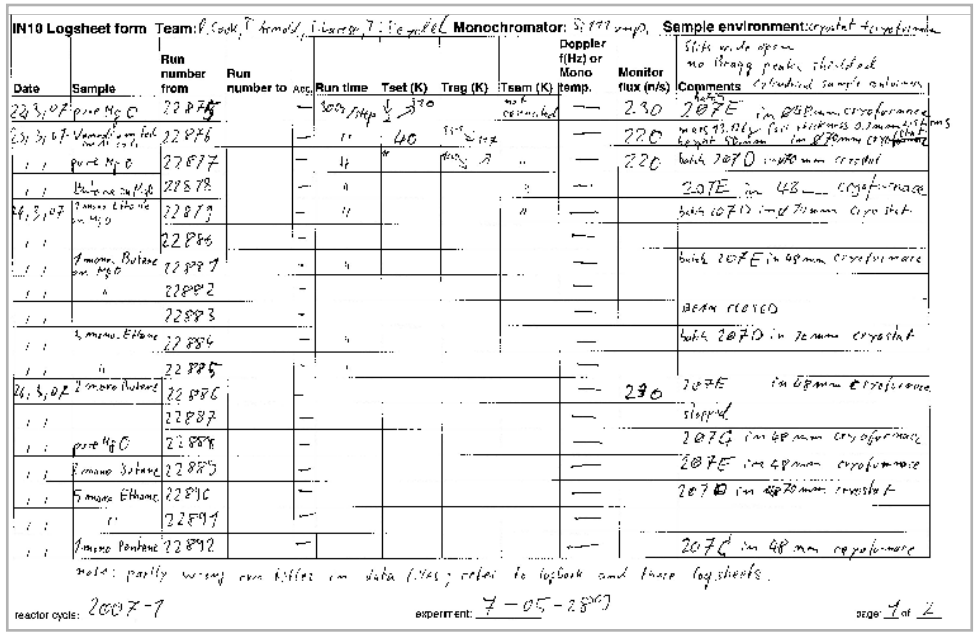




Committed to open and FAIR Data

3 years embargo.

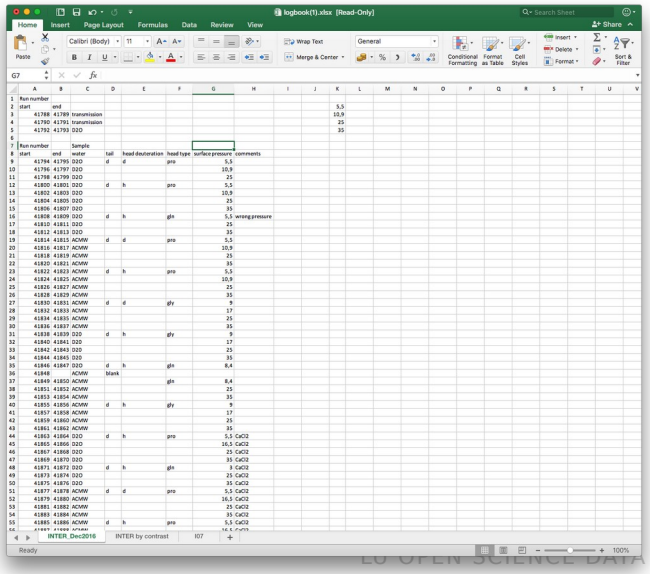
Interesting Solutions

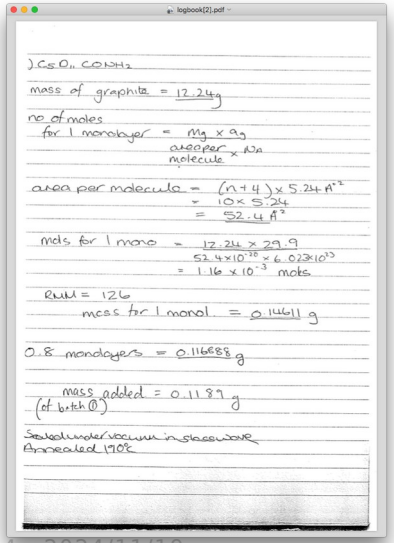

IN10 Logsheet form Team: P. Cook, T. Arnold, J. Lang, T. Keyfield Monochromator: Si 111 vup, Sample environment: cryostat + cryofurnace

Date	Sample	Run number from	Run number to	Acq.	Run time	Tset (K)	Trag (K)	Tsam (K)	Doppler f(Hz) or Mono temp.	Monitor flux (n/s)	Comments
22/3/07	pure MgO	22875			300s/step	↓ 290		not connected		230	207E in 68mm cryofurnace
23/3/07	Vanadium foil	22876			"	40	5.5			220	mon 93.4Hz, foil thickness 0.3mm, diameter 6mm, height 50mm, in 68mm cryofurnace
"	pure MgO	22877			"					220	back 207D in 68mm crystal
"	Butane on MgO	22878			"						207E in 48mm cryofurnace
26/3/07	2 mono Ethane on MgO	22879			"						back 207D in 72mm cryostat
"	"	22880									
"	1 mono. Butane on MgO	22881			"						back 207E in 68mm cryofurnace
"	"	22882									
"	"	22883									BEAM CLOSED
"	3 mono. Ethane	22884			"						back 207D in 72mm crystal
"	"	22885			"						
26/3/07	2 more Butane	22886								230	207E in 68mm cryofurnace
"	"	22887									stopped
"	pure MgO	22888									207C in 68mm cryofurnace
"	2 more butane	22889									207E in 48mm cryofurnace
"	5 more Ethane	22890									207D in 72mm crystal
"	"	22891									
"	4 more Pentane	22892									207C in 48mm cryofurnace

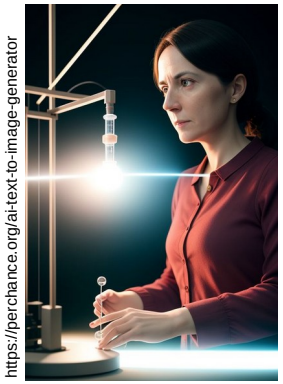
note: partly wrong run titles in data files; refer to logbook and these log sheets.

reactor cycle: 2007-7 experiment: 7-05-2867 page: 1 of 2





Tools



https://perchance.org/ai-text-to-image-generator

Findable Accessible Interoperable Reusable

Data Catalog

Metadata Catalog

SciCat

PAUL SCHERRER INSTITUT PSI

MAX IV

The Rosalind Franklin Institute

MLZ Heinz Maier-Leibnitz Zentrum

ALS ADVANCED LIGHT SOURCE

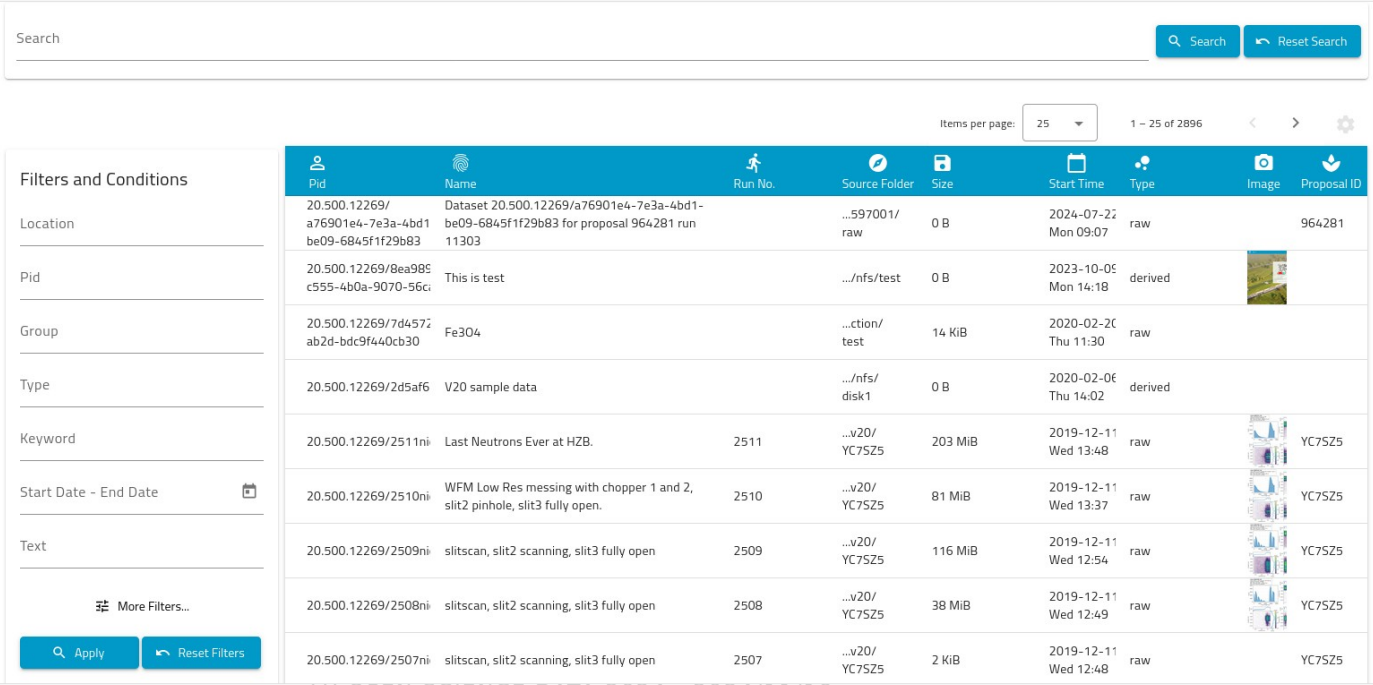
DESY.

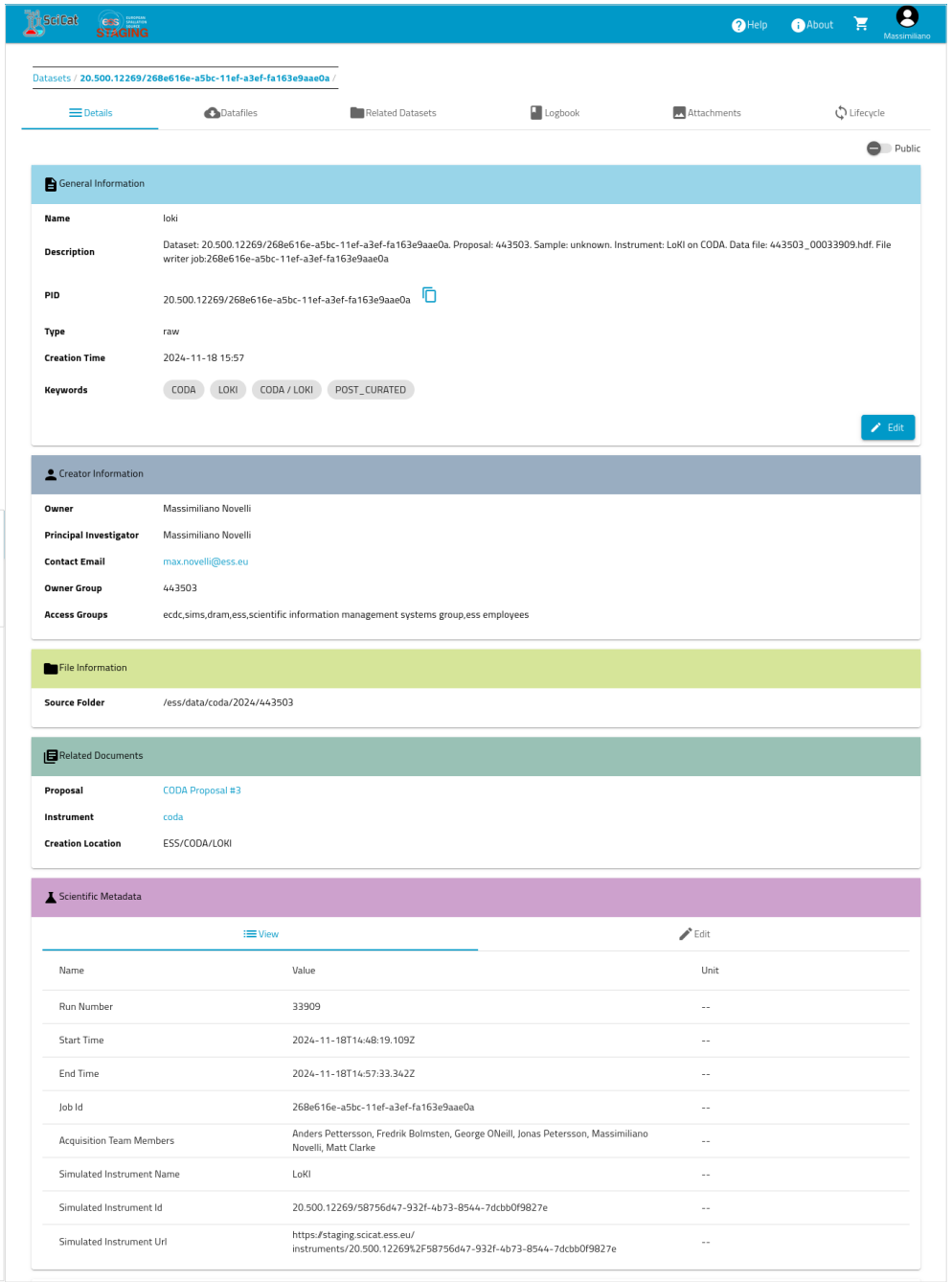
SOLEIL SYNCHROTRON

DAPHNE 4NFDI

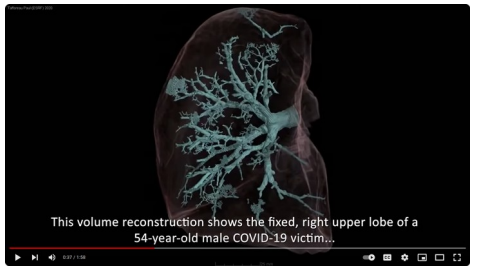
ess EUROPEAN SPALLATION SOURCE

International collaboration





Open Data Benefits: Story One



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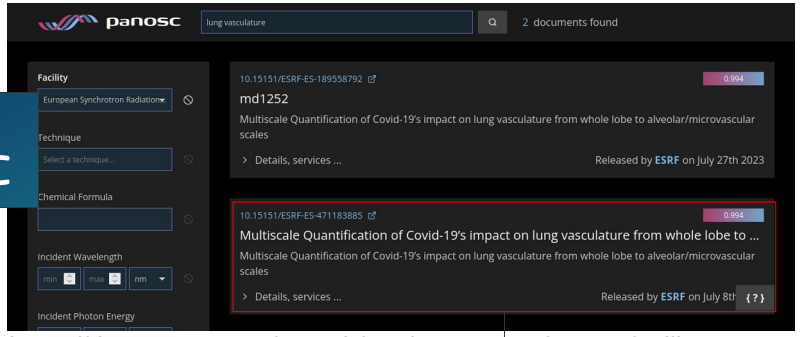
https://clipart-library.com/clipart/Xyik5xbcE.htm

Covid-19 (whole) lung vasculature

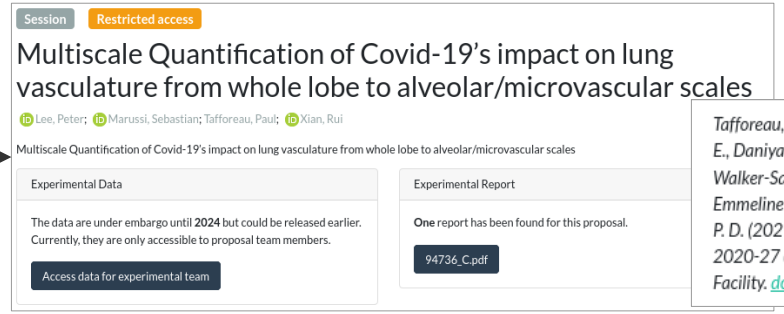
https://www.panosc.eu/



https://data.panosc.eu/search/?q=lung+vasculature&facility=ESRF

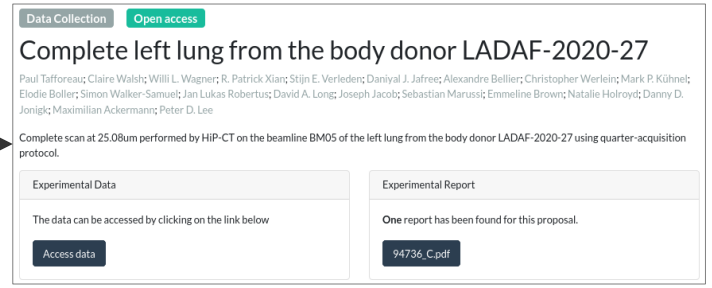
ESRF
The European Synchrotron

https://www.esrf.fr



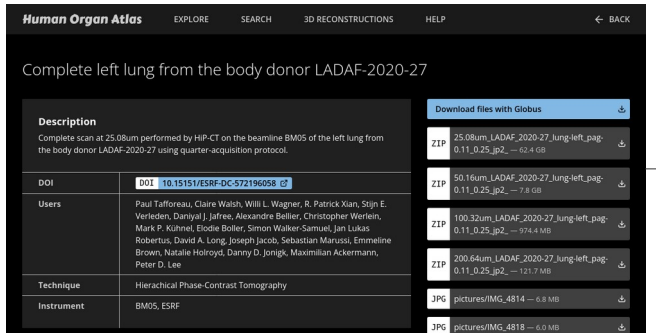
Tafforeau, P., Walsh, C., Wagner, W. L., R. Patrick Xian, Verleden, S. E., Daniyal J. Jafree, Bellier, A., Werlein, C., Kühnel, M. P., Boller, E., Walker-Samuel, S., Robertus, J. L., Long, D. A., Jacob, J., Marussi, S., Emmeline Brown, Holroyd, N., Jonigk, D. D., Ackermann, M., & Lee, P. D. (2021). Complete left lung from the body donor LADAF-2020-27 (Version 1) [dataset]. European Synchrotron Radiation Facility. doi.org/10.15151/ESRF-DC-572196058

https://data.esrf.fr/doi/10.15151/ESRF-ES-471183885

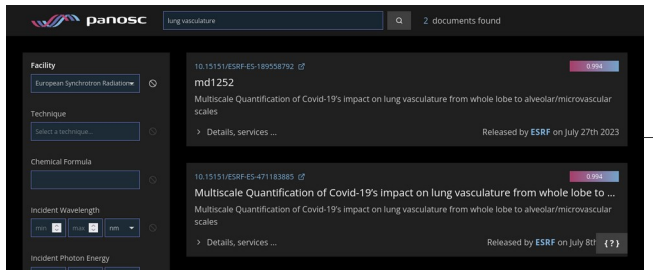


https://data.esrf.fr/doi/10.15151/ESRF-DC-572196058

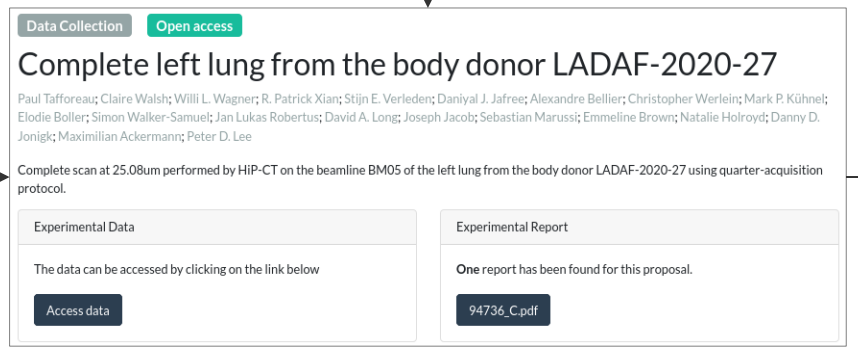
Open Data Benefits: Story two



https://human-organ-atlas.esrf.eu/datasets/572195982



https://data.panosc.eu/search/?q=lung+vasculature&facility=ESRF



https://data.esrf.fr/doi/10.15151/ESRF-DC-572196058

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UK,DE - 2023

https://doi.org/10.1016/j.ebiom.2022.104296
DE, UK, BE, CH, US - 2022

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US, EU, JP, CL, ... - 2022

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CN - 2022

https://doi.org/10.48550/arXiv.2209.15180
CN - 2022

https://doi.org/10.1101/2022.12.03.518948
CN - 2022

- Data Preparation
- Disease Analysis
- Data Compression Techniques

Thank you

Questions? Feedback? ...Suggestions?

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