SOLAR NEON RELEASED FROM GENESIS ALUMINUM COLLECTOR DURING STEPPED UV-LASER EXTRACTION AND STEP-WISE PYROLYSIS.

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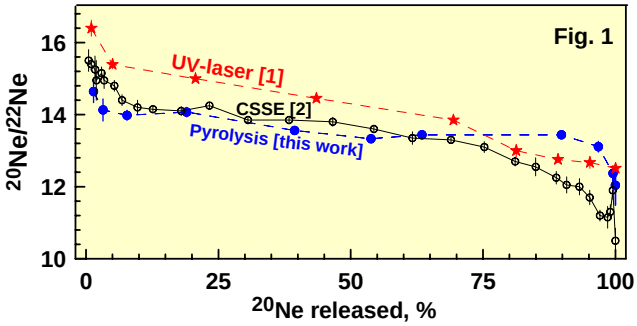
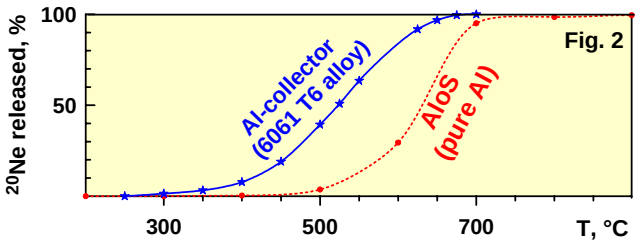
Earlier this year we reported results of UV-laser stepped raster extractions of Ne and He from Genesis Al-collector [1]. Since then, using pyrolysis of a 0.005 cm^2 fragment of this material left from the earlier study, we have estimated the efficiency of the UV-laser extraction to be at least 95%. We also analyzed Ne released from the Al-collector by means of stepped pyrolysis. Here we compare these new data with stepped UV-laser extraction and the CSSE results [2]. Fig. 1 shows $^{20}Ne/^{22}Ne$ ratio extracted from Genesis collectors using these three techniques.



The common feature in these different extraction methods is the profile of the $^{20}Ne/^{22}Ne$ ratios. In the beginning the ratios are elevated, then relatively flat in the middle, and lowest at the end of the extractions. This pattern seems to be due to the different implantation depths for ^{20}Ne and ^{22}Ne and agrees with isotopic fractionation expected from SRIM calculations [3].



Comparison of Ne release profiles from Al-collector and pure Al-coated sapphire (AloS, [4]) reveals significant differences between these materials (Fig. 2), suggesting that AloS may retain noble gases better than the Al-collector. This may explain slightly higher Ne and He fluxes observed in bulk AloS collector [5] relative to those measured in Al-collector [1].

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[1] Meshik A. P. et al. 2006. Abstract #2233, 37th LPSC. [2] Grimberg A. et al. 2006. Abstract #1782, 37th LPSC. [3] *http://www.srim.org* [4] Meshik A. P. et al. 2000. *Meteoritics & Planetary Science* 35, No.5 Supplement: A109. [5] Hohenberg C. M. et al. 2006. Abstract #2439, 37th LPSC.