Complementary explanations on HerMES data release 2 (DR2) nested field

Yannick Roehlly

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The last version of this document can be found on the Herschel Database in Marseille (HeDaM) web site[1]*. It complements the HerMES DR2 readme files available on the same site, please, read them.*

On fields where a shallow map overlaps one or more deeper ones, nested maps combining the shallow and deep data where created to achieve maximum depth. These maps are named *NE-FIELD_nested-image_SMAPnnn* (where nnn is 250, 350 or 500).The deep catalogues were extracted on these nested maps. This document describes these nested fields and shows the extents of the deep fields compared to the shallow ones.

1 ECDFS nested fields

The `NE-CDFS-SWIRE_nested-image_SMAPnnn` maps combine the observations on *GOODS-South* (AOR set 13[2]), *ECDFS* (AOR set 15) and *CDFS-SWIRE* (AOR sets 27 and 33). The figure 1 compares the footprint of the nested map to those of the *ECDFS* and *GOODS-South* fields.

The *L1-ECDFS* catalogues were extracted on the heterogeneous deep part corresponding to the extent of *ECDFS*. The sources extracted on the deepest part (*GOODS-South* extent) – thus benefiting from the longest exposure time – are tagged with *goods-s* in the Flag field.

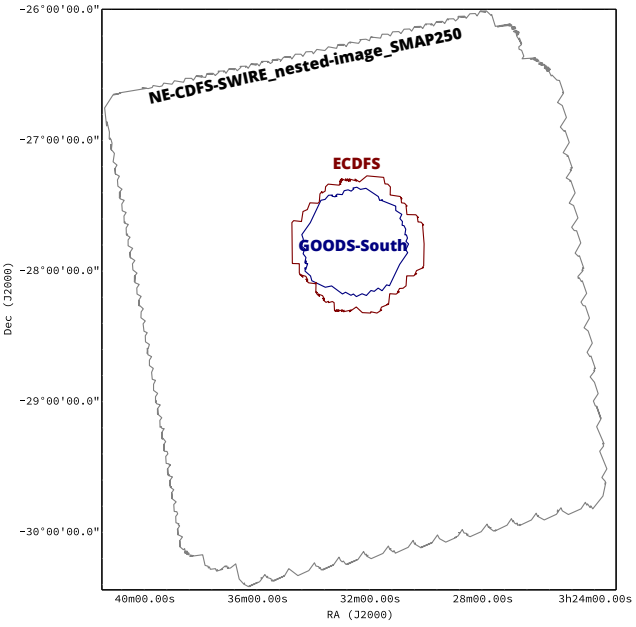

Figure 1: Comparison of the GOODS-South, ECDFS and CDFS-SWIRE extents.

[1] `http://hedam.lam.fr`

[2] See Oliver *et al.*, 2012 MNRAS, 424.1614.

2 Groth-Strip nested field

The NE-EGS-HerMES_nested-image_SMAPnnn maps combine the observations on *Groth-Strip* (AOR set 17) and *EGS-HerMES* (AOR set 29) as presented in figure 2.

The *L3-Groth-Strip* catalogues were extracted only on the extent of the deep field.

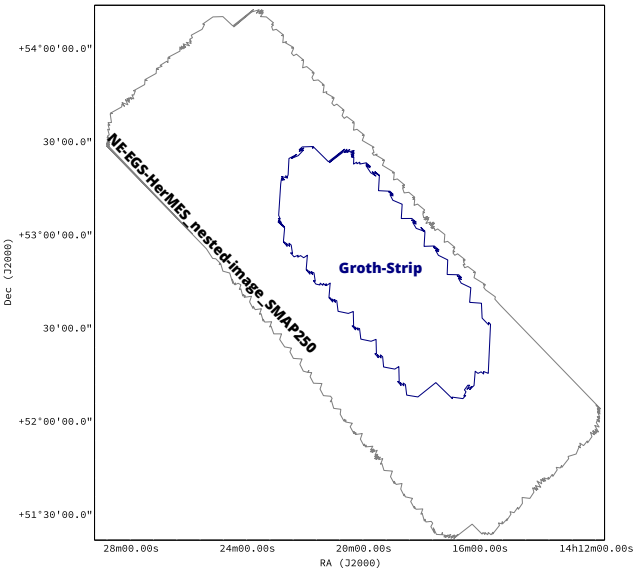

Figure 2: Comparison of the Groth-Strip and EGS-HerMES extents.

3 Lockman nested fields

The NE-Lockman-SWIRE_nested-image_SMAPnn maps combine the observations on *Lockman-East ROSAT* (AOR set 18), *Lockman-East Spitzer* (AOR set 18B), *Lockman-North* (AOR set 19) and *Lockman SWIRE* (AOR set 28B). Two sets of deep catalogues were produced on *L3-Lockman-North* and *L3-Lockman-East-ROSAT* as shown in figure 3.

A second set of nested maps is provided on the Lockman field, named NE-Lockman-SWIRE_nested-image-full_SMAPnn. They were made using the *Lockman SWIRE* AOR set 28 in addition to the AOR sets listed above. They were not used for source extraction. The figure 4 compare the nested-image-full to the footprint of the nested-image.

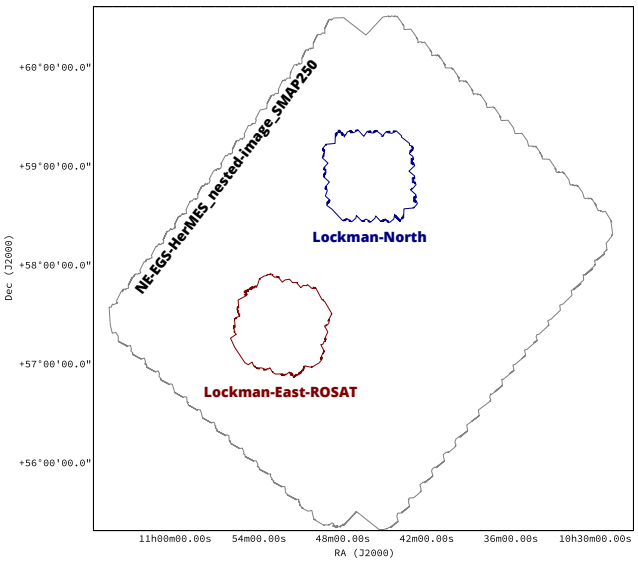

Figure 3: Comparison of the Lockman fields extents.

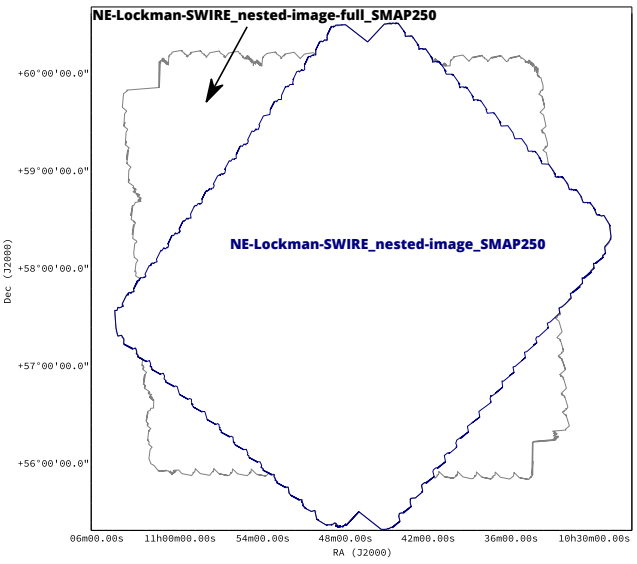

Figure 4: Comparison of the extents of the two types of nested maps on Lockman fields.

4 The UDS-VVDS nested fields

The NE-XMM-LSS-SWIRE_nested-image_SMAPnn maps combine the observations on *UDS* (AOR set 23), *VVDS* (AOR set 24) and *XMM-LSS-SWIRE* (AOR set 36). Two sets of deep catalogues were produced on *L4-UDS* and *L4-VVDS* as shown in figure 5.

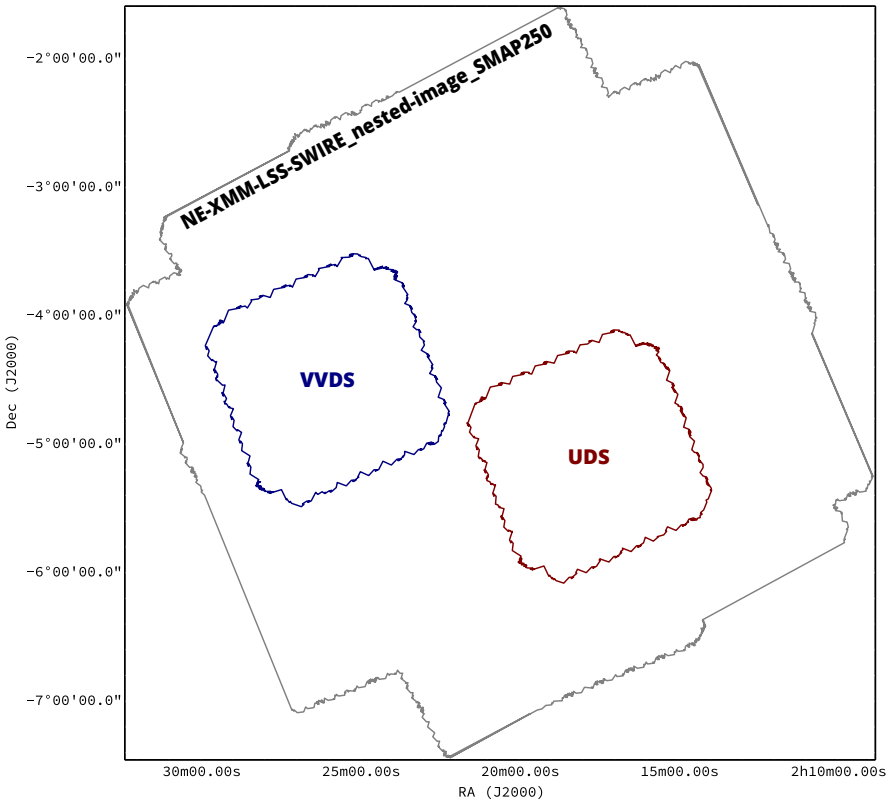

Figure 5: Comparison of the UDS, VVDS and XMM-LSS-SWIRE extents.