

Manual SMART PET – DRO Modifier Tool

The DRO Modifier tool is written in IDL (version 8.3, 64 bit; Harris Geospatial solutions, Broomfield, CO, USA).

The user can load the DROs (one DRO for the PET, one for the CT image) he wants to adapt via a Graphical User Interface. The following parameter can be adapted/changed:

The screenshot shows the 'IQ DRO Generator by R.Boellaard' window. It features several input fields and buttons. Callouts in green boxes point to the following elements:

- Load PET image (1x1x1mm)** and **Load CT image (1x1x1mm)** buttons.
- PET filename** and **CT Filename** text labels.
- Load PET-DRO** and **Load CT-DRO** buttons.
- New act.conc.spheres (Bq/mL)** input field with value 20000 and callout: **Change activity concentration in spheres (in Bq/ml)**.
- New act.conc. BG (Bq/mL)** input field with value 2000 and callout: **Change activity concentration in background (in Bq/ml)**.
- Rebin Settings** dropdown menu with value 512x512x100 (org) and callout: **Change image and voxel size**.
- OUTPUT_LABEL** input field and callout: **Set label of output image**.
- Generate new DROs** button.

The following options of image and voxel size (in brackets) are available:

- 512 x 512 x 100 (1 x 1 x 1 mm)
- 256 x 256 x 50 (2 x 2 x 2 mm)
- 128 x 128 x 25 (2 x 2 x 4 mm)
- 256 x 256 x 100 (2 x 2 x 1 mm)
- 128 x 128 x 50 (4 x 4 x 2 mm)
- 512 x 512 x 50 (1 x 1 x 2 mm)
- 512 x 512 x 25 (1 x 1 x 4 mm)

