IMDB

1. API

Create IMDB

qcore.imdb_create.py (MPI/PHDF5/PY3)

- runs_dir (runs_dir/*/IM_calc/*/*.csv)
- station_file (can be subset)
- db_file (output, imdb.h5)

Read IMDB

qcore.imdb.py

- **ims**: list of IMs (can provide different formats)

- **station_ims**: IM table or column (single IM) for given station. Labeled PANDAS dataframe or series.

- **closest_station**: given lon, lat, return np record
.name, .lat, .lon, .dist (km from given lon, lat)

- **station_details**: one (by name) or all stations as np.recarray
.name, .lat, .lon
may need work on consistency between py2/3 string vs bytes

IMDB

2. Layout

HDF5 Layout

group   **/**
   attrs: np.array(ims, dtype=np.string_)

dataset   **/simulations**
   dtype: "|S<max-simname-len>", np.uint16 *(or np.uint32)*
   shape: nsim

dataset   **/stations**
   dtype: name: "|S7", lon: "f4", lat: "f4"
   shape: nstat

dataset   **/station_data/{station_name}**
   dtype: "f4"
   shape: nsim[stat], n_im

dataset   **/station_index/{station_name}**
   dtype: np.uint16 *(or np.uint32)*
   shape: nsim[stat]