Convolutional Neural Network to classify artifacts and stars

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In [4]:

```python
import json
import tensorflow as tf
from tensorflow import keras
import numpy as np
import matplotlib
import os
import random
import imageio
import cv2
```

First we define the paths to the different directories containing the training and testing images.

In [5]:

```python
#Define the path to the directories containing training images and testing images

json_file=open('input_param.json')
data = json.load(json_file) #load the json file data

train_stars_dir=data['cnn'][1] #load the path of directory containing stars training data

train_reflections_dir=data['cnn'][0] #load the path of directory containing reflections training d
ata

test_dir=data['cnn'][2] #load the path where testing data is to be kept

arti_test=data['cnn'][3] #load the path where artifact testing data is kept

star_test=data['cnn'][4] #load the path where star testing data is kept
```

We load all the training and testing images as lists so that it is easier to access them.

In [10]:

```python
#Load all the training data and testing data into lists
train_stars=['./cutout/star_training/{}' .format(i) for i in os.listdir(train_stars_dir) if '.png'
in i]
train_reflections=['./cutout/reflection_training/{}' .format(i) for i in os.listdir(train_reflectio
ns_dir) if '.png' in i]

test_images=['./cutout/test/{}'.format(i) for i in os.listdir(test_dir) if '.png' in i]

arti_test_image=['./cutout/test/artifacts/{}'.format(i) for i in os.listdir(arti_test) if '.png' in
i]

star_test_image=['./cutout/test/stars/{}'.format(i) for i in os.listdir(star_test) if '.png' in i]


train_images=train_stars+train_reflections #combine training data of stars and reflections
random.shuffle(train_images) #shuffle the training data randomly
```

In [11]:

```python
len(train_images) #Check the total number of training images
```
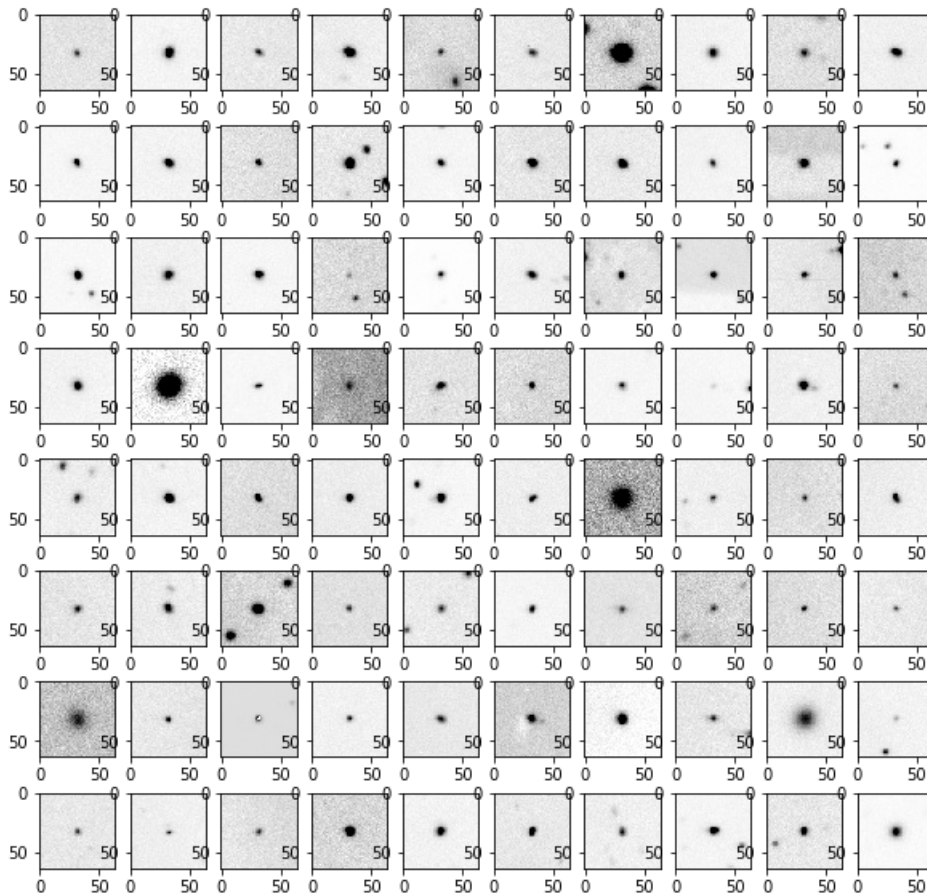
Out[11]:

893

```python
import matplotlib.image as mpimg

import matplotlib.pyplot as plt
plt.figure(figsize=(10,10))
for i in range(80):
    plt.subplot(8,10,i+1)
    plt.grid(False)
    im=mpimg.imread(train_stars[i])
    plt.imshow(im,cmap=plt.cm.binary)

plt.show()

#view some of the training data
```


We make 2 lists - one which will have all images and the other which will hold the labels for each image. If an image is an artifact we give it the label 1 else 0. We then convert these lists to numpy arrays and hence tensors.

We also view the distribution of the training images. We roughly want a 50-50 distribution of artifact and star training images.

In [13]:

```python
nx,ny,channels=64,64,3 #shape of input data. It is 64x64 pixels and 1 channel


images=[] #empty list which will be populated with images
labels=[] #empty list which will have labels.

#Labels are either 1 or 0. 1 for artifacts, 0 for stars

def read_images(list_images): #function to generate lists of data and labels
    for img in list_images:
        images.append(cv2.resize(cv2.imread(img, cv2.IMREAD_COLOR), (nx,ny), interpolation=cv2.INTE
R_CUBIC))
        if 'cut_arti' in img: #if filename contains this string then append 1 to the labels list e
lse 0
            labels.append(1)
        elif 'cut_star' in img:
            labels.append(0)
    return images,labels
```

```
images,labels=read_images(train_images)#call function

images=np.array(images) # convert lists to numpy arrays.
labels=np.array(labels) # convert lists to numpy arrays.
e=images[2]

#Thus we now have a tensor images and labels.

print("Shape of Tensor 'images'",e.shape) #print(images.shape,labels.shape) #shape of images and l
abels

import seaborn as sns


sns.countplot(labels) #view distribution of training data. Labels with 0 are stars, labels with 1
are artifacts
```
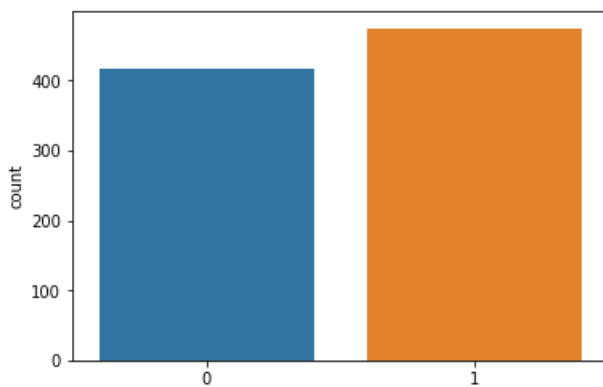
```
Shape of Tensor 'images' (64, 64, 3)
```

Out[13]:

```
<matplotlib.axes._subplots.AxesSubplot at 0x12c4f1208>
```


To avoid overfitting, we split the training data into training and validation sets using the train_test_split method from the sklearn library. We choose the validation data size to be 20% of the total training data.

In [14]:

```
#split data into training and validation data
from sklearn.model_selection import train_test_split
images_train, images_val,
labels_train,labels_val=train_test_split(images,labels,test_size=0.2,random_state=2)
#random state = 2 is the seed number for generating a random number.

ntrain=len(images_train) #length of training data
nval=len(images_val) #length of validation data


batch_size=4 # Set Batch size as 4.

print("Length of Training Data",ntrain)
print("Length of Validation Data",nval)
print("Batch Size ", batch_size)
```

```
Length of Training Data 714
Length of Validation Data 179
Batch Size  4
```

Architecture

We have followed the commonly used Image Classification Architecture of VGG 16 for our purpose. We use a ReLU activation (Rectified Linear Unit) in each layer to ensure positive values for the pixels. A detailed description of the filter size, total filters and their types is given in the Model Summary and visualization below.

In [17]:

```python
from keras import layers
from keras import models
from keras import optimizers
from keras.preprocessing.image import ImageDataGenerator
from keras.preprocessing.image import img_to_array, load_img


model = models.Sequential() #Creates a sequential model
model.add(layers.Conv2D(32, (3, 3), activation='relu',input_shape=(64, 64,3)))
model.add(layers.MaxPooling2D((2, 2)))
model.add(layers.Conv2D(64, (3, 3), activation='relu'))
model.add(layers.MaxPooling2D((2, 2)))
model.add(layers.Conv2D(128, (3, 3), activation='relu'))
model.add(layers.MaxPooling2D((2, 2)))
model.add(layers.Conv2D(128, (3, 3), activation='relu'))
model.add(layers.MaxPooling2D((2, 2)))
model.add(layers.Flatten())
model.add(layers.Dropout(0.5))   #Dropout for regularization
model.add(layers.Dense(512, activation='relu'))
model.add(layers.Dense(1, activation='sigmoid'))   #Sigmoid function at the end because we have
just two classes

model.summary()
model.compile(loss='binary_crossentropy', optimizer=optimizers.RMSprop(lr=1e-4), metrics=['acc'])
import pydot
import graphviz
from keras.utils import plot_model
plot_model(model, to_file='model.png')
```

```
_____
Layer (type)                 Output Shape              Param #
================================================================
conv2d_5 (Conv2D)            (None, 62, 62, 32)        896
_____
max_pooling2d_5 (MaxPooling2 (None, 31, 31, 32)        0
_____
conv2d_6 (Conv2D)            (None, 29, 29, 64)        18496
_____
max_pooling2d_6 (MaxPooling2 (None, 14, 14, 64)        0
_____
conv2d_7 (Conv2D)            (None, 12, 12, 128)       73856
_____
max_pooling2d_7 (MaxPooling2 (None, 6, 6, 128)         0
_____
conv2d_8 (Conv2D)            (None, 4, 4, 128)         147584
_____
max_pooling2d_8 (MaxPooling2 (None, 2, 2, 128)         0
_____
flatten_2 (Flatten)          (None, 512)               0
_____
dropout_2 (Dropout)          (None, 512)               0
_____
dense_3 (Dense)              (None, 512)               262656
_____
dense_4 (Dense)              (None, 1)                 513
================================================================
Total params: 504,001
Trainable params: 504,001
Non-trainable params: 0
_____
```

In [18]:

```python
from IPython.display import Image
Image('architecture.png')
```

Out[18]:
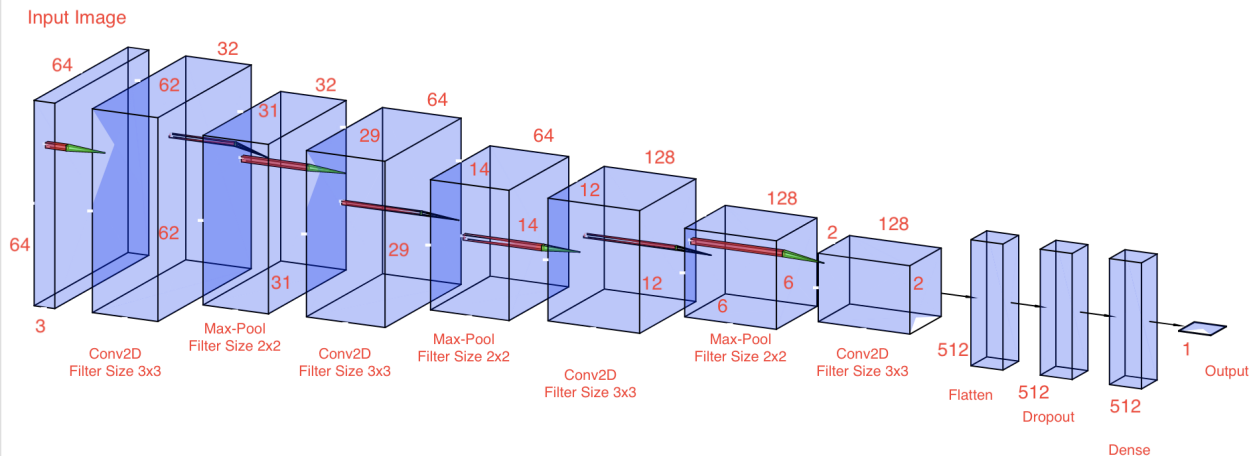
Visualization of the Architecture we have used. Note that it is missing a Max Pool layer before the Flatten layer. The visualization has been made using the tool available at the following address:

http://alexlenail.me/NN-SVG/AlexNet.html

Loss Function

The final activation is a sigmoid function. For clarity, a sigmoid function is used to scale inputs to between 0 or 1. This value is often the probability of the input belonging to a particular class. Why do so?

For any linear model, we use the following assumption:

Residuals are independent, normally distributed, have 0 mean and have constant variance.

However, in case of classfication or categorical models, these assumptions do not hold. Therefore, we transform the discrete outputs using a linear function in order to find the categorical loss.

In our case, we have 2 possible outputs.

The sigmoid scores (output value) are found using the formula :

$$scores = \frac{1}{1+e^{-x}}$$

where x is the input to the sigmoid function

The Binary Cross Entropy Loss for N images is calculated using the formula :

$$loss = \sum_{i=1}^{N} -y[i] * log(scores[i]) - (1 - y[i]) * log(1 - scores[i])$$

where i is the image number, y[i] is the label for the ith image and scores[i] is the sigmoid score for the ith image

Data Augmentation

Note that although the total number of our training images is about 900 that is low for training any CNN. Therefore we want to augment the size of our dataset. To do so, we use the ImageDataGenerator class which helps us to perform scaling, rotate, flip and other image operations on our images to augment the dataset.

Note that we normalize the images by 255 so that all pixels have a value between 0 and 1.

We also perform random rotations and shifts of the images so that we can consider the possibility of the artifact or star not being at the exact center of the 64 x 64 pixel box. This better helps us to have a robust dataset. Furthermore, we also perform horizontal and vertical flips to augment the data. The purpose of data augmentation is to reduce the number of random correlations that exist between the images and increase the data set size. This helps in reducing overfitting problems.

Note that data augmentation is not done for validation/testing data. We only normalize the pixels in testing/validation images.

In [19]:

```
train_datagen = ImageDataGenerator(rescale=1./255,    #Scale the image between 0 and 1
                                    rotation_range=3,
                                    width_shift_range=0.2,
                                    height_shift_range=0.2,
                                    shear_range=0.2,
                                    zoom_range=0.2,
                                    horizontal_flip=True, vertical_flip=True)

val_datagen = ImageDataGenerator(rescale=1./255)  #We do not augment validation data. we only perfo
rm rescale
```

In [20]:

```
train_generator = train_datagen.flow(images_train, labels_train, batch_size=batch_size)
val_generator = val_datagen.flow(images_val, labels_val, batch_size=batch_size)
```

Training

We will train the model on these training images. We choose the number of epochs as 64. The model is saved and we plot the results of the training and validationn accuracy per epoch below.

We are predicting 2 classes - artifacts or stars. The output of our network gives the probability of the input image being an artifact.

In [21]:

```
history = model.fit_generator(train_generator,
                              steps_per_epoch=ntrain // batch_size,
                              epochs=64,
                              validation_data=val_generator,
                              validation_steps=nval // batch_size)
```

```
WARNING:tensorflow:From /Users/dhruv/anaconda3/lib/python3.7/site-
packages/tensorflow/python/ops/math_ops.py:3066: to_int32 (from tensorflow.python.ops.math_ops) is
deprecated and will be removed in a future version.
Instructions for updating:
Use tf.cast instead.
Epoch 1/64
178/178 [==============================] - 5s 28ms/step - loss: 0.6867 - acc: 0.5435 - val_loss: 0
.6312 - val_acc: 0.7216
Epoch 2/64
178/178 [==============================] - 5s 30ms/step - loss: 0.6508 - acc: 0.6601 - val_loss: 0
.5577 - val_acc: 0.7029
Epoch 3/64
178/178 [==============================] - 5s 26ms/step - loss: 0.6314 - acc: 0.6587 - val_loss: 0
.4742 - val_acc: 0.7543
Epoch 4/64
178/178 [==============================] - 5s 28ms/step - loss: 0.5767 - acc: 0.7135 - val_loss: 0
.5321 - val_acc: 0.7314
Epoch 5/64
178/178 [==============================] - 8s 43ms/step - loss: 0.5702 - acc: 0.7177 - val_loss: 0
.4270 - val_acc: 0.7829
Epoch 6/64
178/178 [==============================] - 5s 31ms/step - loss: 0.5400 - acc: 0.7528 - val_loss: 0
.4211 - val_acc: 0.7829
Epoch 7/64
178/178 [==============================] - 6s 32ms/step - loss: 0.5192 - acc: 0.7655 - val_loss: 0
.3556 - val_acc: 0.8457
Epoch 8/64
178/178 [==============================] - 5s 28ms/step - loss: 0.5090 - acc: 0.7640 - val_loss: 0
.3433 - val_acc: 0.8514
Epoch 9/64
178/178 [==============================] - 4s 25ms/step - loss: 0.4845 - acc: 0.7809 - val_loss: 0
```

```
.4337 - val_acc: 0.8229
Epoch 10/64
178/178 [==============================] - 4s 25ms/step - loss: 0.4689 - acc: 0.7781 - val_loss: 0
.2994 - val_acc: 0.8914
Epoch 11/64
178/178 [==============================] - 4s 25ms/step - loss: 0.4253 - acc: 0.8258 - val_loss: 0
.4065 - val_acc: 0.8229
Epoch 12/64
178/178 [==============================] - 7s 37ms/step - loss: 0.4238 - acc: 0.8090 - val_loss: 0
.3136 - val_acc: 0.8571
Epoch 13/64
178/178 [==============================] - 7s 38ms/step - loss: 0.4075 - acc: 0.8258 - val_loss: 0
.2436 - val_acc: 0.8857
Epoch 14/64
178/178 [==============================] - 6s 35ms/step - loss: 0.4069 - acc: 0.8315 - val_loss: 0
.2760 - val_acc: 0.8857
Epoch 15/64
178/178 [==============================] - 5s 31ms/step - loss: 0.3978 - acc: 0.8315 - val_loss: 0
.2557 - val_acc: 0.9029
Epoch 16/64
178/178 [==============================] - 6s 34ms/step - loss: 0.3653 - acc: 0.8441 - val_loss: 0
.3439 - val_acc: 0.8800
Epoch 17/64
178/178 [==============================] - 5s 28ms/step - loss: 0.3854 - acc: 0.8427 - val_loss: 0
.2226 - val_acc: 0.9257
Epoch 18/64
178/178 [==============================] - 5s 27ms/step - loss: 0.3598 - acc: 0.8469 - val_loss: 0
.3913 - val_acc: 0.8857
Epoch 19/64
178/178 [==============================] - 5s 29ms/step - loss: 0.3706 - acc: 0.8427 - val_loss: 0
.2140 - val_acc: 0.9257
Epoch 20/64
178/178 [==============================] - 5s 30ms/step - loss: 0.3535 - acc: 0.8722 - val_loss: 0
.1710 - val_acc: 0.9371
Epoch 21/64
178/178 [==============================] - 5s 27ms/step - loss: 0.3266 - acc: 0.8652 - val_loss: 0
.5625 - val_acc: 0.7086
Epoch 22/64
178/178 [==============================] - 6s 32ms/step - loss: 0.3352 - acc: 0.8427 - val_loss: 0
.2182 - val_acc: 0.8857
Epoch 23/64
178/178 [==============================] - 6s 31ms/step - loss: 0.3572 - acc: 0.8483 - val_loss: 0
.1769 - val_acc: 0.9257
Epoch 24/64
178/178 [==============================] - 5s 30ms/step - loss: 0.3762 - acc: 0.8511 - val_loss: 0
.2394 - val_acc: 0.9257
Epoch 25/64
178/178 [==============================] - 5s 29ms/step - loss: 0.2959 - acc: 0.8750 - val_loss: 0
.3126 - val_acc: 0.9257
Epoch 26/64
178/178 [==============================] - 5s 26ms/step - loss: 0.3069 - acc: 0.8736 - val_loss: 0
.1902 - val_acc: 0.9200
Epoch 27/64
178/178 [==============================] - 5s 27ms/step - loss: 0.3000 - acc: 0.8820 - val_loss: 0
.1888 - val_acc: 0.9143
Epoch 28/64
178/178 [==============================] - 6s 32ms/step - loss: 0.2898 - acc: 0.8919 - val_loss: 0
.2390 - val_acc: 0.8800
Epoch 29/64
178/178 [==============================] - 6s 35ms/step - loss: 0.3001 - acc: 0.8792 - val_loss: 0
.3652 - val_acc: 0.9143
Epoch 30/64
178/178 [==============================] - 6s 33ms/step - loss: 0.3119 - acc: 0.8806 - val_loss: 0
.2199 - val_acc: 0.9257
Epoch 31/64
178/178 [==============================] - 6s 31ms/step - loss: 0.3277 - acc: 0.8736 - val_loss: 0
.1755 - val_acc: 0.9486
Epoch 32/64
178/178 [==============================] - 5s 28ms/step - loss: 0.2871 - acc: 0.8933 - val_loss: 0
.1810 - val_acc: 0.9257
Epoch 33/64
178/178 [==============================] - 5s 27ms/step - loss: 0.3108 - acc: 0.8919 - val_loss: 0
.1468 - val_acc: 0.9600
Epoch 34/64
178/178 [==============================] - 5s 26ms/step - loss: 0.2247 - acc: 0.9031 - val_loss: 0
.1647 - val_acc: 0.9486
Epoch 35/64
```

```
178/178 [==============================] - 7s 39ms/step - loss: 0.2881 - acc: 0.8989 - val_loss: 0
.2602 - val_acc: 0.8857
Epoch 36/64
178/178 [==============================] - 8s 44ms/step - loss: 0.2978 - acc: 0.8961 - val_loss: 0
.1337 - val_acc: 0.9543
Epoch 37/64
178/178 [==============================] - 8s 43ms/step - loss: 0.2943 - acc: 0.8890 - val_loss: 0
.1641 - val_acc: 0.9429
Epoch 38/64
178/178 [==============================] - 6s 32ms/step - loss: 0.2832 - acc: 0.9031 - val_loss: 0
.2844 - val_acc: 0.8743
Epoch 39/64
178/178 [==============================] - 6s 32ms/step - loss: 0.2797 - acc: 0.8890 - val_loss: 0
.1392 - val_acc: 0.9486
Epoch 40/64
178/178 [==============================] - 5s 31ms/step - loss: 0.2804 - acc: 0.9073 - val_loss: 0
.1503 - val_acc: 0.9486
Epoch 41/64
178/178 [==============================] - 5s 27ms/step - loss: 0.2374 - acc: 0.9129 - val_loss: 0
.1239 - val_acc: 0.9600
Epoch 42/64
178/178 [==============================] - 5s 26ms/step - loss: 0.2566 - acc: 0.9073 - val_loss: 0
.1821 - val_acc: 0.9371
Epoch 43/64
178/178 [==============================] - 5s 26ms/step - loss: 0.2359 - acc: 0.9157 - val_loss: 0
.1862 - val_acc: 0.9257
Epoch 44/64
178/178 [==============================] - 5s 28ms/step - loss: 0.2804 - acc: 0.8975 - val_loss: 0
.1536 - val_acc: 0.9543
Epoch 45/64
178/178 [==============================] - 5s 30ms/step - loss: 0.2638 - acc: 0.9003 - val_loss: 0
.1432 - val_acc: 0.9486
Epoch 46/64
178/178 [==============================] - 5s 27ms/step - loss: 0.2360 - acc: 0.9073 - val_loss: 0
.1744 - val_acc: 0.9375
Epoch 47/64
178/178 [==============================] - 5s 25ms/step - loss: 0.2353 - acc: 0.9143 - val_loss: 0
.1282 - val_acc: 0.9600
Epoch 48/64
178/178 [==============================] - 4s 23ms/step - loss: 0.2234 - acc: 0.9171 - val_loss: 0
.2186 - val_acc: 0.9371
Epoch 49/64
178/178 [==============================] - 4s 23ms/step - loss: 0.2728 - acc: 0.9017 - val_loss: 0
.1346 - val_acc: 0.9543
Epoch 50/64
178/178 [==============================] - 4s 23ms/step - loss: 0.2232 - acc: 0.9059 - val_loss: 0
.1368 - val_acc: 0.9600
Epoch 51/64
178/178 [==============================] - 6s 36ms/step - loss: 0.2263 - acc: 0.9242 - val_loss: 0
.1244 - val_acc: 0.9543
Epoch 52/64
178/178 [==============================] - 8s 46ms/step - loss: 0.2467 - acc: 0.9031 - val_loss: 0
.1234 - val_acc: 0.9657
Epoch 53/64
178/178 [==============================] - 6s 36ms/step - loss: 0.2429 - acc: 0.9031 - val_loss: 0
.1033 - val_acc: 0.9657
Epoch 54/64
178/178 [==============================] - 6s 32ms/step - loss: 0.1706 - acc: 0.9312 - val_loss: 0
.1468 - val_acc: 0.9600
Epoch 55/64
178/178 [==============================] - 5s 29ms/step - loss: 0.2230 - acc: 0.9171 - val_loss: 0
.1244 - val_acc: 0.9543
Epoch 56/64
178/178 [==============================] - 6s 36ms/step - loss: 0.1811 - acc: 0.9354 - val_loss: 0
.1213 - val_acc: 0.9486
Epoch 57/64
178/178 [==============================] - 6s 33ms/step - loss: 0.2173 - acc: 0.9157 - val_loss: 0
.0942 - val_acc: 0.9771
Epoch 58/64
178/178 [==============================] - 5s 29ms/step - loss: 0.1985 - acc: 0.9382 - val_loss: 0
.1697 - val_acc: 0.9486
Epoch 59/64
178/178 [==============================] - 5s 30ms/step - loss: 0.2441 - acc: 0.9270 - val_loss: 0
.1104 - val_acc: 0.9600
Epoch 60/64
178/178 [==============================] - 5s 29ms/step - loss: 0.2108 - acc: 0.9157 - val_loss: 0
.0856 - val_acc: 0.9771
```

```
Epoch 61/64
178/178 [==============================] - 5s 28ms/step - loss: 0.2182 - acc: 0.9059 - val_loss: 0
.0938 - val_acc: 0.9543
Epoch 62/64
178/178 [==============================] - 5s 28ms/step - loss: 0.1767 - acc: 0.9494 - val_loss: 0
.2108 - val_acc: 0.9143
Epoch 63/64
178/178 [==============================] - 5s 28ms/step - loss: 0.2874 - acc: 0.9031 - val_loss: 0
.1562 - val_acc: 0.9314
Epoch 64/64
178/178 [==============================] - 5s 28ms/step - loss: 0.2171 - acc: 0.9228 - val_loss: 0
.1398 - val_acc: 0.9486
```

In [24]:

```python
import pickle
with open('trainHistoryDict.txt', 'wb') as file_pi:
    pickle.dump(history.history, file_pi)
```

In [26]:

```python
with open('train_history.json', 'w') as f:
    json.dump(history.history, f)
```

In [27]:

```python
model.save_weights('model_wieghts.h5') #save the weights of the model
model.save('model_keras.h5') #save the model
```

In [28]:

```python
from keras.models import load_model
model = load_model('model_keras.h5')
model.load_weights('model_wieghts.h5')
```

In [30]:

```python
acc = history.history['acc'] #accuracy history
val_acc = history.history['val_acc']
loss = history.history['loss']
val_loss = history.history['val_loss']


epochs = range(1, len(acc) + 1)

#Train and validation accuracy
plt.plot(epochs, acc, 'b', label='Training accuracy')
plt.plot(epochs, val_acc, 'r', label='Validation accuracy')
plt.title('Training and Validation accuracy')
plt.xlabel('Epochs')
plt.legend()


plt.figure()
#Train and validation loss
plt.plot(epochs, loss, 'b', label='Training loss')
plt.plot(epochs, val_loss, 'r', label='Validation loss')
plt.title('Training and Validation loss')
plt.xlabel('Epochs')
plt.ylabel('Binary Cross Entropy Loss')
plt.legend()

plt.show()
```


Training and Validation accuracy

Training and Validation loss
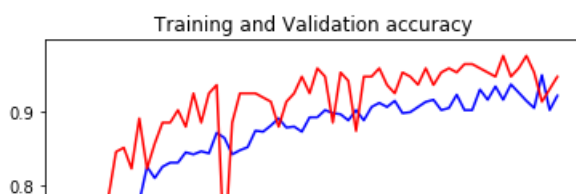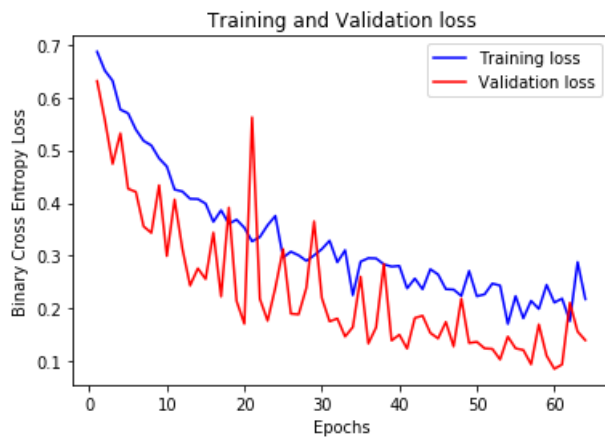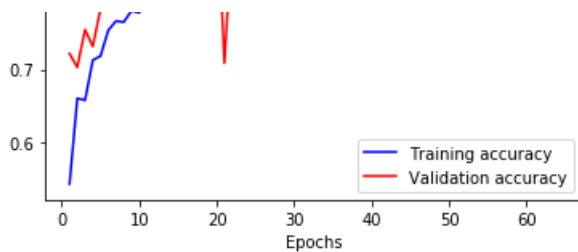
```python
layer_outputs = [layer.output for layer in model.layers[0:8]]

activation_model = models.Model(inputs=model.input, outputs=layer_outputs)
# Creates a model that will return these outputs, given the model input
activations = activation_model.predict(images_train)
# Returns a list of Numpy arrays: one array per layer activation
print((activations[0].shape))
first_layer_activation = activations[0]
print(first_layer_activation.shape)
#plt.matshow(first_layer_activation[2, :, :, 0],cmap=plt.cm.binary)
```

```
(714, 62, 62, 32)
(714, 62, 62, 32)
```

```python
np.seterr(divide='ignore', invalid='ignore')

layer_names = []
for layer in model.layers:
    layer_names.append(layer.name) # Names of the layers, so you can have them as part of your
plot

images_per_row = 16

for layer_name, layer_activation in zip(layer_names, activations): # Displays the feature maps
    n_features = layer_activation.shape[-1] # Number of features in the feature map
    size = layer_activation.shape[1] #The feature map has shape (1, size, size, n_features).
    n_cols = n_features // images_per_row # Tiles the activation channels in this matrix
    display_grid = np.zeros((size * n_cols, images_per_row * size))
    for col in range(n_cols): # Tiles each filter into a big horizontal grid
        for row in range(images_per_row):
            cir=col * images_per_row + row
            channel_image = layer_activation[0,:, :,cir]
            channel_image -= channel_image.mean() # Post-processes the feature to make it visually
palatable
            channel_image /= channel_image.std()
            channel_image *= 64
            channel_image += 128
            channel_image = np.clip(channel_image, 0, 255).astype('uint8')
            display_grid[col * size : (col + 1) * size, # Displays the grid
                        row * size : (row + 1) * size] = channel_image
    scale = 1. / size
    plt.figure(figsize=(scale * display_grid.shape[1],
```
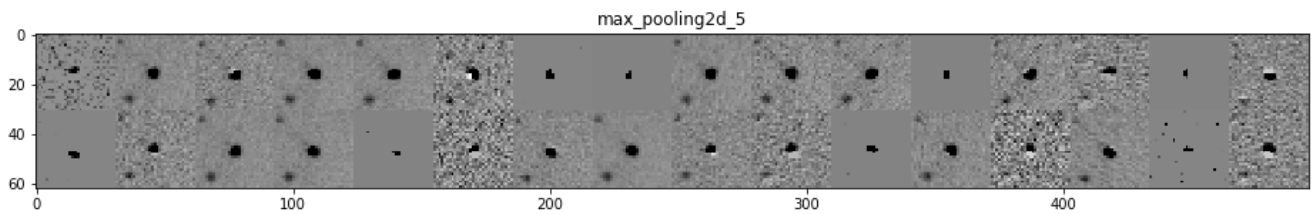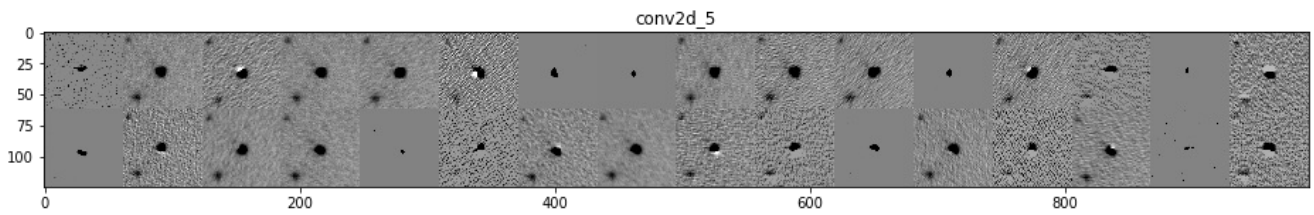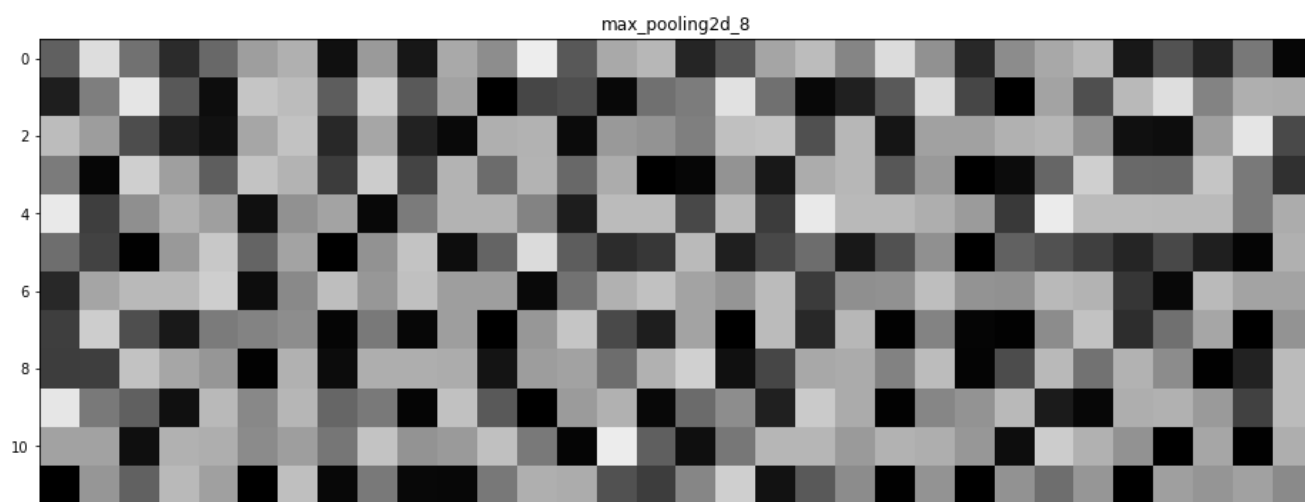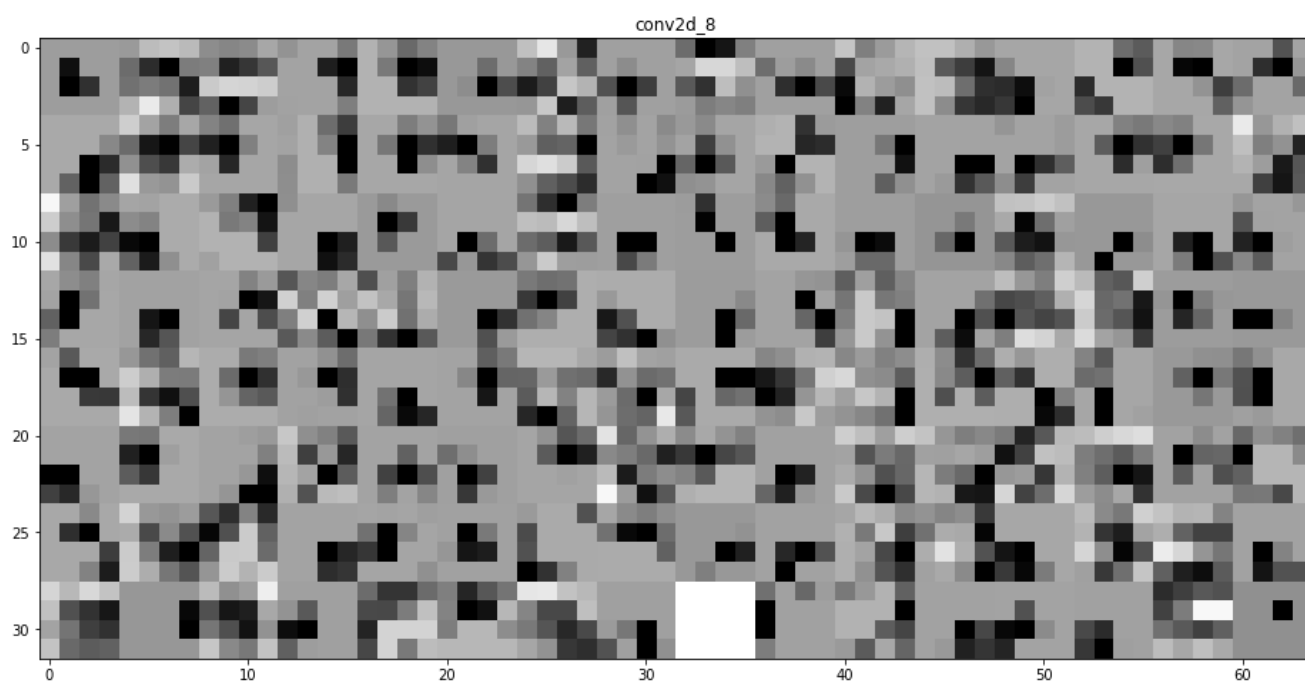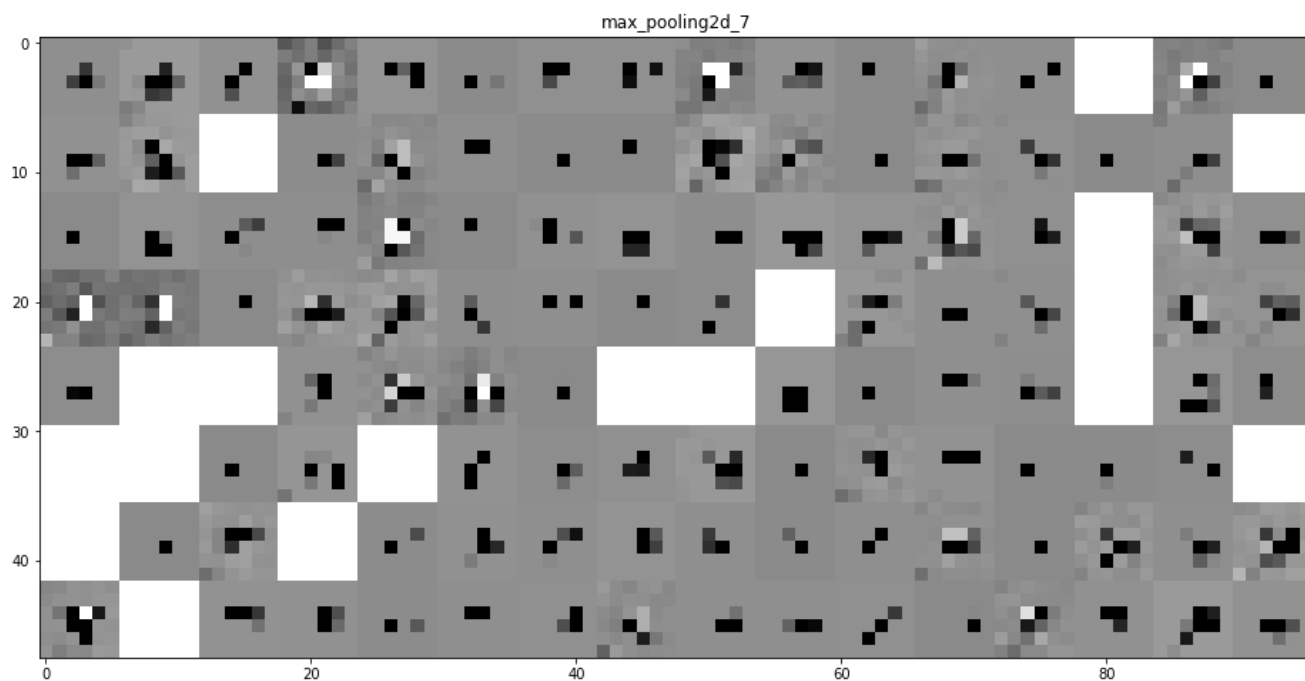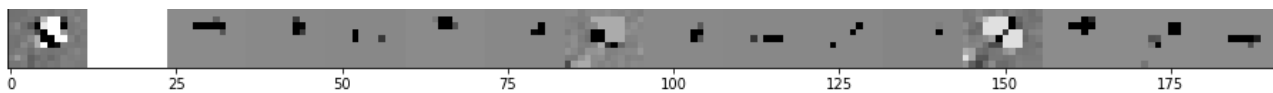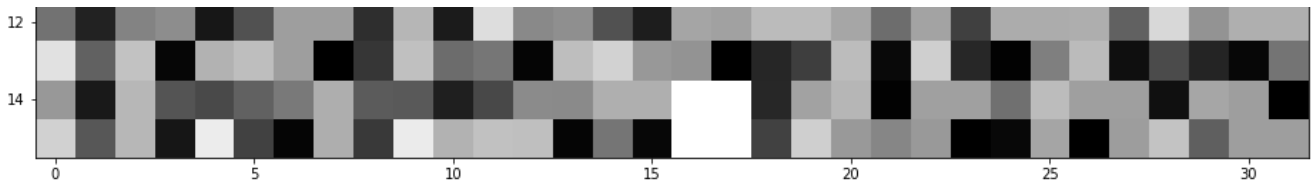
```
                              scale * display_grid.shape[0]))
    plt.title(layer_name)
    plt.grid(False)
    plt.imshow(display_grid, aspect='auto', cmap=plt.cm.binary)
```

conv2d_5

max_pooling2d_5

conv2d_6

max_pooling2d_6

conv2d_7

max_pooling2d_7

conv2d_8

max_pooling2d_8
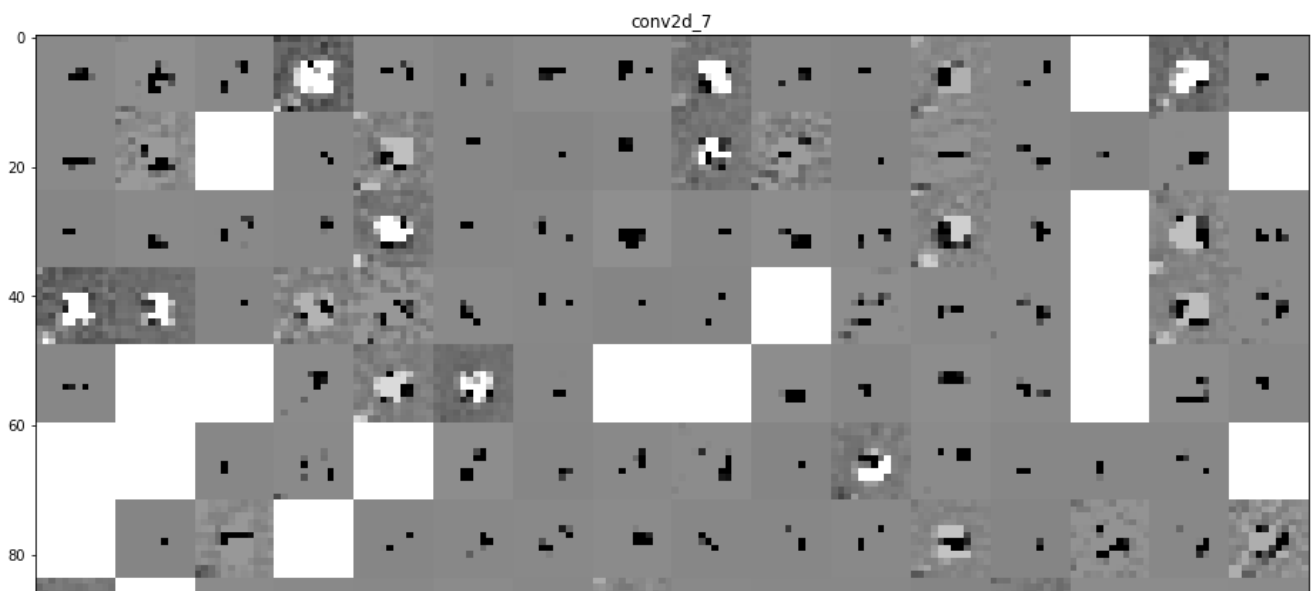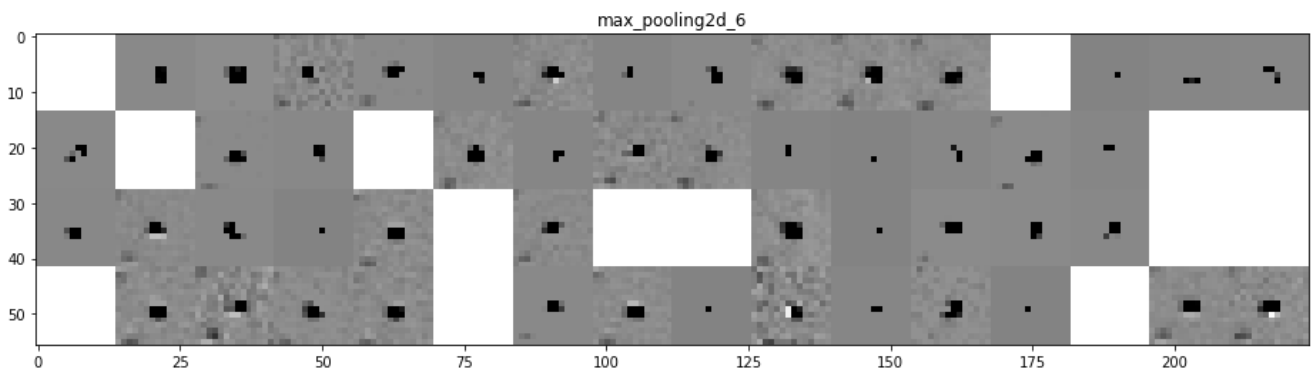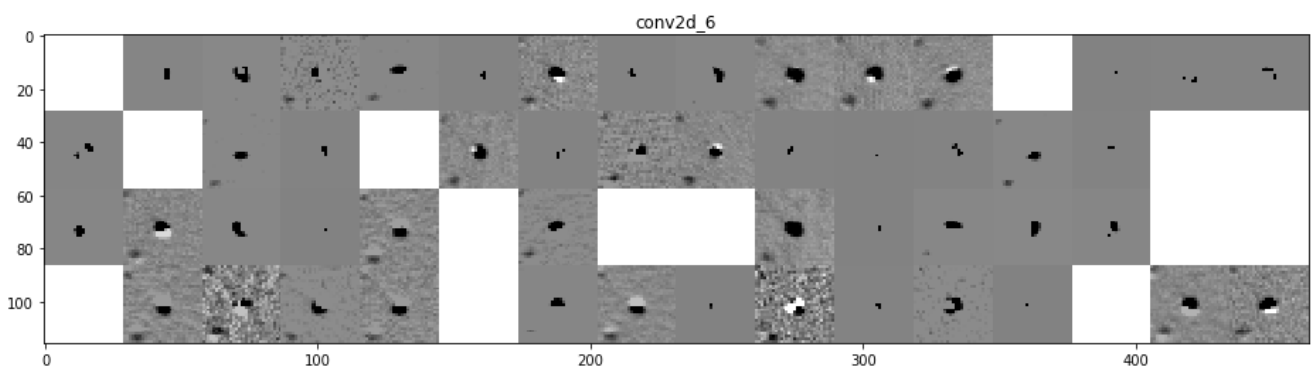
Testing

To test our model, we chose a random image from the RoboPol dataset that was not used in training of the CNN and passed it through the first phase of the software pipeline and made cutouts for stars and artifacts. We know priorly whether the images were artifacts or stars. Hence, we segregate them into different folders and test our model on each class separately.

In [38]:

```python
nrows=64
ncolumns=64
def read_and_process_image(list_of_images):
    """
    Returns 3 arrays:
        X is an array of resized images
        y is an array of labels
        real_name is an array of the names of the images
    """
    X = [] # images
    real_name=[] #names of images
    y = [] # labels
    for image in list_of_images:
        X.append(cv2.resize(cv2.imread(image, cv2.IMREAD_COLOR), (nrows,ncolumns), interpolation=cv
2.INTER_CUBIC))   #Read the image
        real_name.append(image)#get the names of images
        if 'arti' in image:
            y.append(1) #get the labels
        elif 'star' in image:
            y.append(0)

    return X, y,real_name
```

Testing for Artifacts

We have images of artifacts that haven't been labeled and we want the CNN to label it for us. We will see how good is the accuracy for this data. We purposely chose faint artifacts. We label an image to be an artifact is the prediction from the model returns a probability of greater than 0.5 else we label it as a star.

In [43]:

```python
X_test, y_test,real_name = read_and_process_image(arti_test_image) #Y_test in this case will be
empty.
x = np.array(X_test) #convert X_test to numpy array
test_datagen = ImageDataGenerator(rescale=1./255)
#print("Length of testing data is ",len(x))
```

In [44]:

```python
i = 0
text_labels = []
plt.figure(figsize=(30,20))

for batch in test_datagen.flow(x, batch_size=1,shuffle=False):
    pred = model.predict(batch)

    if pred > 0.5:
        text_labels.append('artifact')

    else:
        text_labels.append('star')


    plt.subplot(4, 4, i + 1)
```
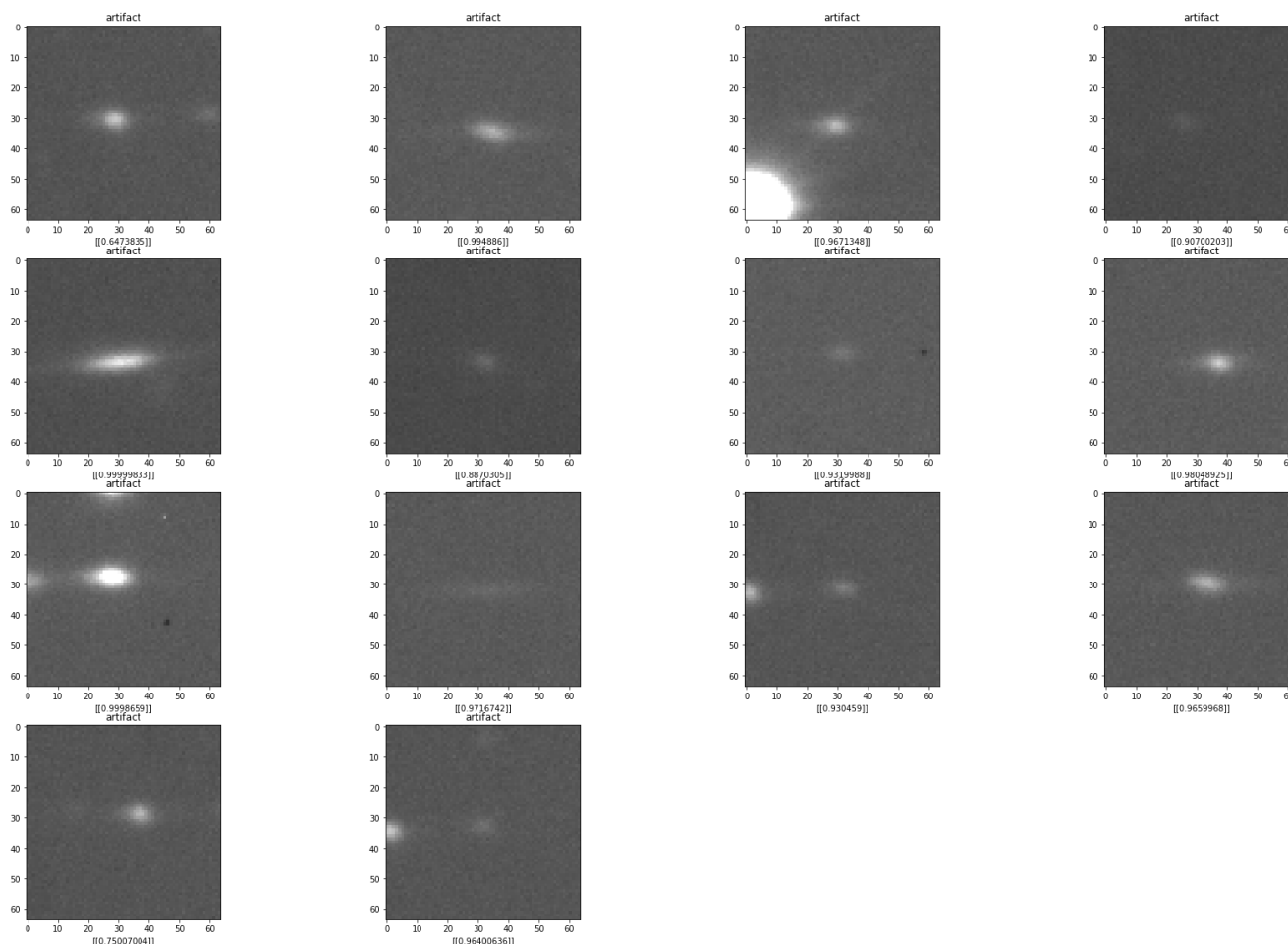
```
        plt.title(text_labels[i])
        plt.xlabel(pred)


        imgplot = plt.imshow(batch[0])
        i += 1
        if i % 14== 0:
            break
plt.show()
```


Discussion

We see that for the bright and obvious artifacts the prediction probability is close to 0.9 while for fainter artifacts this probability is close to 0.5. Only 2 of the artifacts were misclassifed as stars and their prediciton probability was close to 0.35. If you observe closely, both these artifacts didn't have a noticable trail to them which is definitely a possible feature. Furthermore, the brighter artifacts clearly have a noticeable trail. Therefore, even for a faint streak as seen in column 2 of row 3 has a prediction probability close to 0.7.

Testing for Stars

We have images for stars also loaded into a separate testing directory.

```
X_test, y_test,real_name = read_and_process_image(star_test_image) #Y_test in this case will be
empty.
x = np.array(X_test) #convert X_test to numpy array
test_datagen = ImageDataGenerator(rescale=1./255)
print("Length of testing data is ",len(x))
```

```
Length of testing data is  17
```

```
i = 0
text_labels = []
plt.figure(figsize=(30,20))

for batch in test_datagen.flow(x, batch_size=1,shuffle=False):
    pred = model.predict(batch)

    if pred > 0.5:
        text_labels.append('artifact')

    else:
        text_labels.append('star')


    plt.subplot(4, 4, i + 1)
    plt.title(text_labels[i])
    plt.xlabel(pred)


    imgplot = plt.imshow(batch[0])
    i += 1
    if i % 16== 0:
        break
plt.show()
```
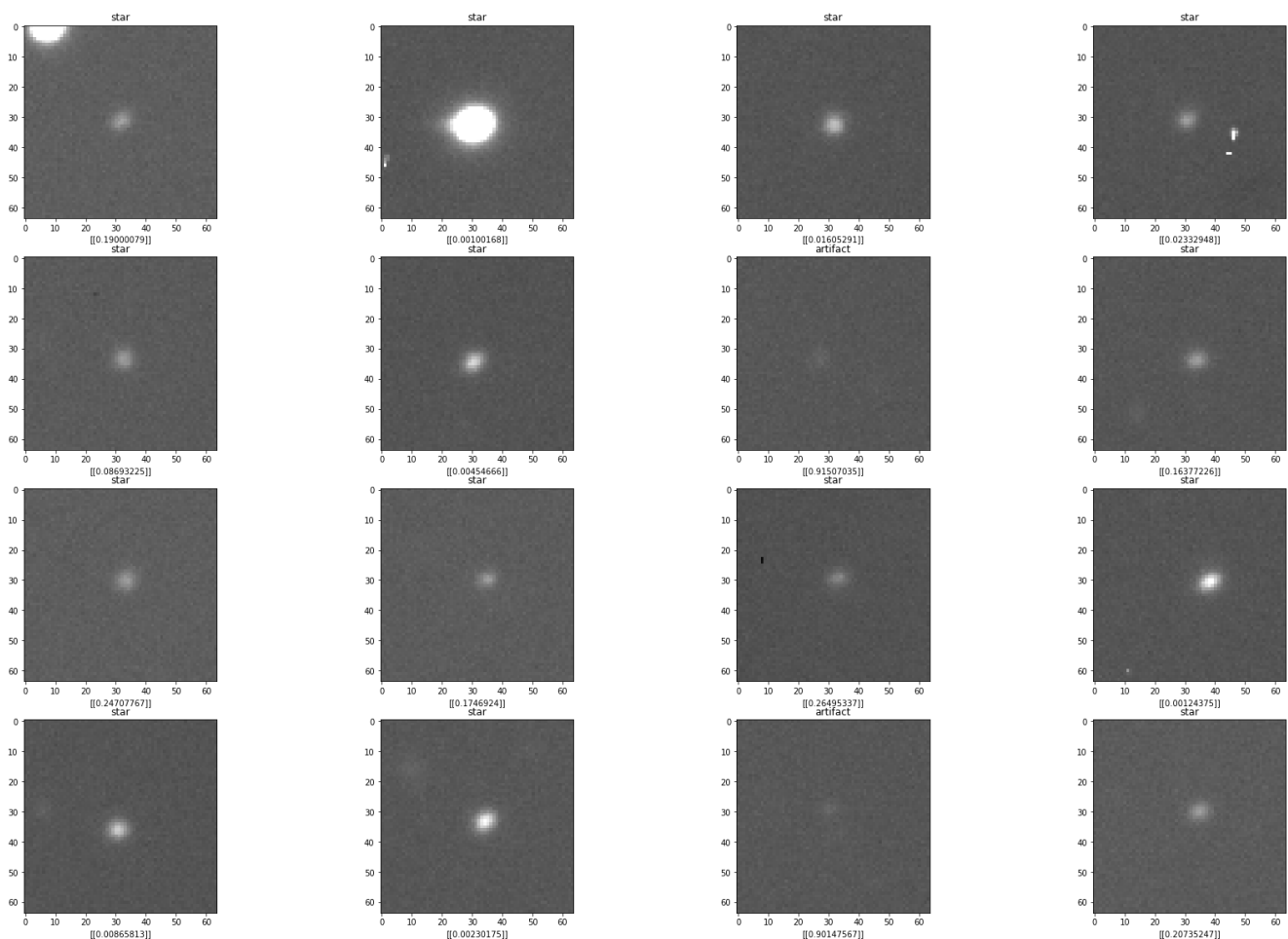

Discussion

Interestingly, all the stars here have been correctly classifed with most of them having a prediction probability less than 1 percent. There are 2 faint stars (and they were almost 5 magnitudes lower than the brightest star in the image) that have a prediction probability close to 0.4 and were classified as stars. We see that in both artifacts and stars, only if they are very faint that their prediction probability is closer to the boundary of the decision region.

Visualization

The following is an implementation of Saliency Maps to find out the saliency of an output class (in our case 'artifact' class). A saliency map is an image that gives us a representation of which pixels in the image have most information regarding the output class.

A primer on the same can be found at the following link:

https://raghakot.github.io/keras-vis/visualizations/saliency/

In [85]:

```python
layer_dict = dict([(layer.name, layer) for layer in model.layers[0:12]])
#we make a dictionary of the layers in the model
```

In [86]:

```python
layer_dict
```

Out[86]:

```
{'conv2d_5': <keras.layers.convolutional.Conv2D at 0x1a4866a278>,
 'max_pooling2d_5': <keras.layers.pooling.MaxPooling2D at 0x1a4866a550>,
 'conv2d_6': <keras.layers.convolutional.Conv2D at 0x1a48684da0>,
 'max_pooling2d_6': <keras.layers.pooling.MaxPooling2D at 0x1a48645748>,
 'conv2d_7': <keras.layers.convolutional.Conv2D at 0x1a48684f60>,
 'max_pooling2d_7': <keras.layers.pooling.MaxPooling2D at 0x1a486dceb8>,
 'conv2d_8': <keras.layers.convolutional.Conv2D at 0x1a486c8080>,
 'max_pooling2d_8': <keras.layers.pooling.MaxPooling2D at 0x1a48dc1978>,
 'flatten_2': <keras.layers.core.Flatten at 0x1a486dcb38>,
 'dropout_2': <keras.layers.core.Dropout at 0x1a48ddbe80>,
 'dense_3': <keras.layers.core.Dense at 0x1a48ddb630>,
 'dense_4': <keras.layers.core.Dense at 0x1a48dfdc50>}
```

In [87]:

```python
from vis.utils import utils #utility to find layers
from keras import activations #import activations package from keras
```

In [88]:

```python
layer_idx = utils.find_layer_idx(model, 'dense_4') #We want to visualize the final dense layer.
```

In [89]:

```python
model.layers[layer_idx].activation = activations.linear
#change activation of final layer from sigmoid to linear
model = utils.apply_modifications(model) #apply that modification to the model
```
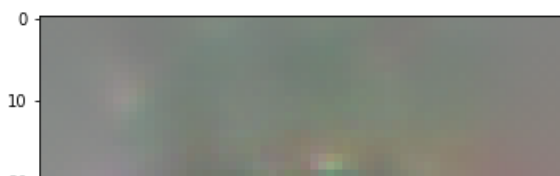
In [90]:

```python
from vis.visualization import visualize_activation
```
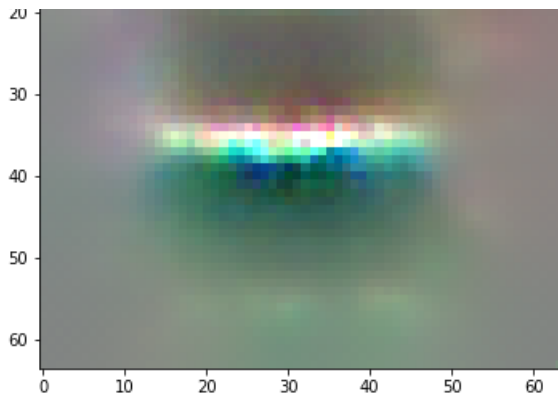
In [91]:

```python
%matplotlib inline
plt.rcParams['figure.figsize'] = (18, 6)

# 0 is the category for 'artifacts'
img = visualize_activation(model, layer_idx, filter_indices=0)
plt.imshow(img,cmap=plt.cm.binary)
```

Out[91]:

```
<matplotlib.image.AxesImage at 0x1a4a4445f8>
```

```
img = visualize_activation(model, layer_idx, filter_indices=0, max_iter=1000, verbose=True)
plt.imshow(img)
```

```
Iteration: 1, named_losses: [('ActivationMax Loss', 916.74207),
 ('L-6.0 Norm Loss', 0.5103862),
 ('TV(2.0) Loss', 6260.2427)], overall loss: 7177.4951171875
Iteration: 2, named_losses: [('ActivationMax Loss', 618.4854),
 ('L-6.0 Norm Loss', 0.50569147),
 ('TV(2.0) Loss', 3193.7046)], overall loss: 3812.69580078125
Iteration: 3, named_losses: [('ActivationMax Loss', 476.28128),
 ('L-6.0 Norm Loss', 0.50317353),
 ('TV(2.0) Loss', 1814.063)], overall loss: 2290.847412109375
Iteration: 4, named_losses: [('ActivationMax Loss', 384.65298),
 ('L-6.0 Norm Loss', 0.50193584),
 ('TV(2.0) Loss', 1115.9799)], overall loss: 1501.134765625
Iteration: 5, named_losses: [('ActivationMax Loss', 281.42795),
 ('L-6.0 Norm Loss', 0.501258),
 ('TV(2.0) Loss', 727.23645)], overall loss: 1009.1656494140625
Iteration: 6, named_losses: [('ActivationMax Loss', 214.33603),
 ('L-6.0 Norm Loss', 0.50089973),
 ('TV(2.0) Loss', 503.5832)], overall loss: 718.4201049804688
Iteration: 7, named_losses: [('ActivationMax Loss', 147.94955),
 ('L-6.0 Norm Loss', 0.5006532),
 ('TV(2.0) Loss', 353.8933)], overall loss: 502.343505859375
Iteration: 8, named_losses: [('ActivationMax Loss', 101.768265),
 ('L-6.0 Norm Loss', 0.5005312),
 ('TV(2.0) Loss', 267.96112)], overall loss: 370.22991943359375
Iteration: 9, named_losses: [('ActivationMax Loss', 60.393913),
 ('L-6.0 Norm Loss', 0.50051373),
 ('TV(2.0) Loss', 216.79819)], overall loss: 277.692626953125
Iteration: 10, named_losses: [('ActivationMax Loss', 17.779203),
 ('L-6.0 Norm Loss', 0.5005417),
 ('TV(2.0) Loss', 187.66524)], overall loss: 205.94497680664062
Iteration: 11, named_losses: [('ActivationMax Loss', -18.921354),
 ('L-6.0 Norm Loss', 0.5006402),
 ('TV(2.0) Loss', 174.11363)], overall loss: 155.6929168701172
Iteration: 12, named_losses: [('ActivationMax Loss', -54.491104),
 ('L-6.0 Norm Loss', 0.5007235),
 ('TV(2.0) Loss', 162.74313)], overall loss: 108.75275421142578
Iteration: 13, named_losses: [('ActivationMax Loss', -89.34053),
 ('L-6.0 Norm Loss', 0.50081056),
 ('TV(2.0) Loss', 157.6487)], overall loss: 68.80897521972656
Iteration: 14, named_losses: [('ActivationMax Loss', -126.2025),
 ('L-6.0 Norm Loss', 0.500926),
 ('TV(2.0) Loss', 157.66685)], overall loss: 31.96527862548828
Iteration: 15, named_losses: [('ActivationMax Loss', -156.6157),
 ('L-6.0 Norm Loss', 0.5010385),
 ('TV(2.0) Loss', 157.0877)], overall loss: 0.9730377197265625
Iteration: 16, named_losses: [('ActivationMax Loss', -184.82195),
 ('L-6.0 Norm Loss', 0.50114405),
 ('TV(2.0) Loss', 158.5234)], overall loss: -25.797393798828125
Iteration: 17, named_losses: [('ActivationMax Loss', -218.14366),
 ('L-6.0 Norm Loss', 0.5012642),
 ('TV(2.0) Loss', 156.9083)], overall loss: -60.734100341796875
Iteration: 18, named_losses: [('ActivationMax Loss', -248.69992),
 ('L-6.0 Norm Loss', 0.5014041),
 ('TV(2.0) Loss', 166.04494)], overall loss: -82.15357971191406
Iteration: 19, named_losses: [('ActivationMax Loss', -277.0285),
```

```
('L-6.0 Norm Loss', 0.50154054),
('TV(2.0) Loss', 166.62729)], overall loss: -109.89968872070312
Iteration: 20, named_losses: [('ActivationMax Loss', -321.51508),
('L-6.0 Norm Loss', 0.50169975),
('TV(2.0) Loss', 175.24402)], overall loss: -145.76934814453125
Iteration: 21, named_losses: [('ActivationMax Loss', -359.09528),
('L-6.0 Norm Loss', 0.5018183),
('TV(2.0) Loss', 179.58363)], overall loss: -179.0098114013672
Iteration: 22, named_losses: [('ActivationMax Loss', -388.5363),
('L-6.0 Norm Loss', 0.5019575),
('TV(2.0) Loss', 185.71565)], overall loss: -202.3186798095703
Iteration: 23, named_losses: [('ActivationMax Loss', -429.7546),
('L-6.0 Norm Loss', 0.5021052),
('TV(2.0) Loss', 194.40797)], overall loss: -234.8445281982422
Iteration: 24, named_losses: [('ActivationMax Loss', -467.9497),
('L-6.0 Norm Loss', 0.50222456),
('TV(2.0) Loss', 200.41899)], overall loss: -267.02850341796875
Iteration: 25, named_losses: [('ActivationMax Loss', -523.2767),
('L-6.0 Norm Loss', 0.5023745),
('TV(2.0) Loss', 212.94453)], overall loss: -309.82977294921875
Iteration: 26, named_losses: [('ActivationMax Loss', -563.2884),
('L-6.0 Norm Loss', 0.5025064),
('TV(2.0) Loss', 220.62357)], overall loss: -342.1623229980469
Iteration: 27, named_losses: [('ActivationMax Loss', -612.6609),
('L-6.0 Norm Loss', 0.50267005),
('TV(2.0) Loss', 231.86)], overall loss: -380.2982177734375
Iteration: 28, named_losses: [('ActivationMax Loss', -662.5147),
('L-6.0 Norm Loss', 0.50281405),
('TV(2.0) Loss', 243.28578)], overall loss: -418.72613525390625
Iteration: 29, named_losses: [('ActivationMax Loss', -719.9773),
('L-6.0 Norm Loss', 0.5029753),
('TV(2.0) Loss', 256.12415)], overall loss: -463.35015869140625
Iteration: 30, named_losses: [('ActivationMax Loss', -766.2986),
('L-6.0 Norm Loss', 0.50312907),
('TV(2.0) Loss', 264.148)], overall loss: -501.6474609375
Iteration: 31, named_losses: [('ActivationMax Loss', -818.83527),
('L-6.0 Norm Loss', 0.50328726),
('TV(2.0) Loss', 276.30508)], overall loss: -542.02685546875
Iteration: 32, named_losses: [('ActivationMax Loss', -872.3999),
('L-6.0 Norm Loss', 0.50344557),
('TV(2.0) Loss', 290.69348)], overall loss: -581.2030029296875
Iteration: 33, named_losses: [('ActivationMax Loss', -924.8976),
('L-6.0 Norm Loss', 0.50360215),
('TV(2.0) Loss', 299.37958)], overall loss: -625.014404296875
Iteration: 34, named_losses: [('ActivationMax Loss', -975.78723),
('L-6.0 Norm Loss', 0.5037909),
('TV(2.0) Loss', 314.52045)], overall loss: -660.7630004882812
Iteration: 35, named_losses: [('ActivationMax Loss', -1031.576),
('L-6.0 Norm Loss', 0.5039511),
('TV(2.0) Loss', 324.09)], overall loss: -706.982177734375
Iteration: 36, named_losses: [('ActivationMax Loss', -1082.166),
('L-6.0 Norm Loss', 0.5041454),
('TV(2.0) Loss', 341.54465)], overall loss: -740.1171875
Iteration: 37, named_losses: [('ActivationMax Loss', -1140.7583),
('L-6.0 Norm Loss', 0.5043285),
('TV(2.0) Loss', 353.36505)], overall loss: -786.8889770507812
Iteration: 38, named_losses: [('ActivationMax Loss', -1196.2128),
('L-6.0 Norm Loss', 0.50450796),
('TV(2.0) Loss', 365.69922)], overall loss: -830.009033203125
Iteration: 39, named_losses: [('ActivationMax Loss', -1246.9028),
('L-6.0 Norm Loss', 0.50468564),
('TV(2.0) Loss', 376.75858)], overall loss: -869.6396484375
Iteration: 40, named_losses: [('ActivationMax Loss', -1311.5981),
('L-6.0 Norm Loss', 0.5048929),
('TV(2.0) Loss', 389.802)], overall loss: -921.291259765625
Iteration: 41, named_losses: [('ActivationMax Loss', -1378.4883),
('L-6.0 Norm Loss', 0.50508565),
('TV(2.0) Loss', 406.4838)], overall loss: -971.4993896484375
Iteration: 42, named_losses: [('ActivationMax Loss', -1454.4309),
('L-6.0 Norm Loss', 0.50528103),
('TV(2.0) Loss', 418.7762)], overall loss: -1035.1494140625
Iteration: 43, named_losses: [('ActivationMax Loss', -1539.2947),
('L-6.0 Norm Loss', 0.5054845),
('TV(2.0) Loss', 439.44754)], overall loss: -1099.3416748046875
Iteration: 44, named_losses: [('ActivationMax Loss', -1625.8378),
('L-6.0 Norm Loss', 0.50567085),
('TV(2.0) Loss', 453.2816)], overall loss: -1172.050537109375
```

```
Iteration: 45, named_losses: [('ActivationMax Loss', -1701.0801),
 ('L-6.0 Norm Loss', 0.5058985),
 ('TV(2.0) Loss', 475.28134)], overall loss: -1225.2928466796875
Iteration: 46, named_losses: [('ActivationMax Loss', -1785.0398),
 ('L-6.0 Norm Loss', 0.50609696),
 ('TV(2.0) Loss', 488.1356)], overall loss: -1296.3980712890625
Iteration: 47, named_losses: [('ActivationMax Loss', -1886.4999),
 ('L-6.0 Norm Loss', 0.50631404),
 ('TV(2.0) Loss', 510.18674)], overall loss: -1375.8067626953125
Iteration: 48, named_losses: [('ActivationMax Loss', -1979.3898),
 ('L-6.0 Norm Loss', 0.5065199),
 ('TV(2.0) Loss', 528.8492)], overall loss: -1450.0341796875
Iteration: 49, named_losses: [('ActivationMax Loss', -2077.6758),
 ('L-6.0 Norm Loss', 0.50673354),
 ('TV(2.0) Loss', 549.74634)], overall loss: -1527.422607421875
Iteration: 50, named_losses: [('ActivationMax Loss', -2170.3745),
 ('L-6.0 Norm Loss', 0.50695693),
 ('TV(2.0) Loss', 573.0105)], overall loss: -1596.857177734375
Iteration: 51, named_losses: [('ActivationMax Loss', -2265.0847),
 ('L-6.0 Norm Loss', 0.50718606),
 ('TV(2.0) Loss', 591.88776)], overall loss: -1672.68994140625
Iteration: 52, named_losses: [('ActivationMax Loss', -2350.5232),
 ('L-6.0 Norm Loss', 0.50744146),
 ('TV(2.0) Loss', 614.34717)], overall loss: -1735.668701171875
Iteration: 53, named_losses: [('ActivationMax Loss', -2444.5176),
 ('L-6.0 Norm Loss', 0.5076754),
 ('TV(2.0) Loss', 634.65)], overall loss: -1809.3599853515625
Iteration: 54, named_losses: [('ActivationMax Loss', -2530.195),
 ('L-6.0 Norm Loss', 0.50792485),
 ('TV(2.0) Loss', 654.63275)], overall loss: -1875.054443359375
Iteration: 55, named_losses: [('ActivationMax Loss', -2611.4246),
 ('L-6.0 Norm Loss', 0.5081871),
 ('TV(2.0) Loss', 673.6441)], overall loss: -1937.272216796875
Iteration: 56, named_losses: [('ActivationMax Loss', -2700.2883),
 ('L-6.0 Norm Loss', 0.5084437),
 ('TV(2.0) Loss', 692.8474)], overall loss: -2006.932373046875
Iteration: 57, named_losses: [('ActivationMax Loss', -2788.4148),
 ('L-6.0 Norm Loss', 0.50872487),
 ('TV(2.0) Loss', 714.5908)], overall loss: -2073.315185546875
Iteration: 58, named_losses: [('ActivationMax Loss', -2868.282),
 ('L-6.0 Norm Loss', 0.509001),
 ('TV(2.0) Loss', 729.4524)], overall loss: -2138.320556640625
Iteration: 59, named_losses: [('ActivationMax Loss', -2958.2493),
 ('L-6.0 Norm Loss', 0.50929576),
 ('TV(2.0) Loss', 753.44965)], overall loss: -2204.290283203125
Iteration: 60, named_losses: [('ActivationMax Loss', -3039.0022),
 ('L-6.0 Norm Loss', 0.50957793),
 ('TV(2.0) Loss', 769.7282)], overall loss: -2268.764404296875
Iteration: 61, named_losses: [('ActivationMax Loss', -3121.5803),
 ('L-6.0 Norm Loss', 0.50985885),
 ('TV(2.0) Loss', 786.3287)], overall loss: -2334.741943359375
Iteration: 62, named_losses: [('ActivationMax Loss', -3206.4978),
 ('L-6.0 Norm Loss', 0.51014334),
 ('TV(2.0) Loss', 804.6742)], overall loss: -2401.3134765625
Iteration: 63, named_losses: [('ActivationMax Loss', -3292.5598),
 ('L-6.0 Norm Loss', 0.5104557),
 ('TV(2.0) Loss', 827.8937)], overall loss: -2464.15576171875
Iteration: 64, named_losses: [('ActivationMax Loss', -3376.6248),
 ('L-6.0 Norm Loss', 0.51076204),
 ('TV(2.0) Loss', 845.2565)], overall loss: -2530.857421875
Iteration: 65, named_losses: [('ActivationMax Loss', -3462.1633),
 ('L-6.0 Norm Loss', 0.51107997),
 ('TV(2.0) Loss', 868.4304)], overall loss: -2593.221923828125
Iteration: 66, named_losses: [('ActivationMax Loss', -3548.9937),
 ('L-6.0 Norm Loss', 0.5113956),
 ('TV(2.0) Loss', 884.7221)], overall loss: -2663.760009765625
Iteration: 67, named_losses: [('ActivationMax Loss', -3632.983),
 ('L-6.0 Norm Loss', 0.5117345),
 ('TV(2.0) Loss', 905.58606)], overall loss: -2726.88525390625
Iteration: 68, named_losses: [('ActivationMax Loss', -3722.8557),
 ('L-6.0 Norm Loss', 0.51206297),
 ('TV(2.0) Loss', 925.8933)], overall loss: -2796.450439453125
Iteration: 69, named_losses: [('ActivationMax Loss', -3814.0562),
 ('L-6.0 Norm Loss', 0.512398),
 ('TV(2.0) Loss', 946.91766)], overall loss: -2866.6259765625
Iteration: 70, named_losses: [('ActivationMax Loss', -3904.3213),
 ('L-6.0 Norm Loss', 0.5127482),
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 ('L 6.0 Norm Loss', 0.0124102)),
 ('TV(2.0) Loss', 966.85803)], overall loss: -2936.95068359375
Iteration: 71, named_losses: [('ActivationMax Loss', -3996.6091),
 ('L-6.0 Norm Loss', 0.5131103),
 ('TV(2.0) Loss', 987.0019)], overall loss: -3009.093994140625
Iteration: 72, named_losses: [('ActivationMax Loss', -4092.2197),
 ('L-6.0 Norm Loss', 0.51347715),
 ('TV(2.0) Loss', 1006.09656)], overall loss: -3085.60986328125
Iteration: 73, named_losses: [('ActivationMax Loss', -4182.1763),
 ('L-6.0 Norm Loss', 0.5138649),
 ('TV(2.0) Loss', 1027.1315)], overall loss: -3154.53125
Iteration: 74, named_losses: [('ActivationMax Loss', -4277.513),
 ('L-6.0 Norm Loss', 0.5142499),
 ('TV(2.0) Loss', 1045.9662)], overall loss: -3231.03271484375
Iteration: 75, named_losses: [('ActivationMax Loss', -4372.6646),
 ('L-6.0 Norm Loss', 0.51465094),
 ('TV(2.0) Loss', 1070.2344)], overall loss: -3301.91552734375
Iteration: 76, named_losses: [('ActivationMax Loss', -4464.6206),
 ('L-6.0 Norm Loss', 0.51505655),
 ('TV(2.0) Loss', 1089.5416)], overall loss: -3374.56396484375
Iteration: 77, named_losses: [('ActivationMax Loss', -4560.1704),
 ('L-6.0 Norm Loss', 0.5154634),
 ('TV(2.0) Loss', 1112.5366)], overall loss: -3447.1181640625
Iteration: 78, named_losses: [('ActivationMax Loss', -4646.7173),
 ('L-6.0 Norm Loss', 0.51587373),
 ('TV(2.0) Loss', 1133.1201)], overall loss: -3513.0810546875
Iteration: 79, named_losses: [('ActivationMax Loss', -4741.526),
 ('L-6.0 Norm Loss', 0.5163037),
 ('TV(2.0) Loss', 1155.5203)], overall loss: -3585.489501953125
Iteration: 80, named_losses: [('ActivationMax Loss', -4828.3765),
 ('L-6.0 Norm Loss', 0.51672447),
 ('TV(2.0) Loss', 1178.1172)], overall loss: -3649.74267578125
Iteration: 81, named_losses: [('ActivationMax Loss', -4922.4507),
 ('L-6.0 Norm Loss', 0.5171635),
 ('TV(2.0) Loss', 1201.1014)], overall loss: -3720.83203125
Iteration: 82, named_losses: [('ActivationMax Loss', -5013.9707),
 ('L-6.0 Norm Loss', 0.51761717),
 ('TV(2.0) Loss', 1225.4445)], overall loss: -3788.0087890625
Iteration: 83, named_losses: [('ActivationMax Loss', -5101.5557),
 ('L-6.0 Norm Loss', 0.5180768),
 ('TV(2.0) Loss', 1247.0984)], overall loss: -3853.939208984375
Iteration: 84, named_losses: [('ActivationMax Loss', -5188.68),
 ('L-6.0 Norm Loss', 0.5185306),
 ('TV(2.0) Loss', 1268.368)], overall loss: -3919.79345703125
Iteration: 85, named_losses: [('ActivationMax Loss', -5276.4004),
 ('L-6.0 Norm Loss', 0.5189857),
 ('TV(2.0) Loss', 1292.9786)], overall loss: -3982.90283203125
Iteration: 86, named_losses: [('ActivationMax Loss', -5361.2637),
 ('L-6.0 Norm Loss', 0.5194684),
 ('TV(2.0) Loss', 1316.1803)], overall loss: -4044.56396484375
Iteration: 87, named_losses: [('ActivationMax Loss', -5444.9253),
 ('L-6.0 Norm Loss', 0.5199463),
 ('TV(2.0) Loss', 1338.1514)], overall loss: -4106.25390625
Iteration: 88, named_losses: [('ActivationMax Loss', -5535.1313),
 ('L-6.0 Norm Loss', 0.52044123),
 ('TV(2.0) Loss', 1361.2153)], overall loss: -4173.3955078125
Iteration: 89, named_losses: [('ActivationMax Loss', -5614.727),
 ('L-6.0 Norm Loss', 0.5209336),
 ('TV(2.0) Loss', 1383.5359)], overall loss: -4230.669921875
Iteration: 90, named_losses: [('ActivationMax Loss', -5698.2),
 ('L-6.0 Norm Loss', 0.521428),
 ('TV(2.0) Loss', 1404.262)], overall loss: -4293.4169921875
Iteration: 91, named_losses: [('ActivationMax Loss', -5787.2163),
 ('L-6.0 Norm Loss', 0.52194035),
 ('TV(2.0) Loss', 1427.8099)], overall loss: -4358.88427734375
Iteration: 92, named_losses: [('ActivationMax Loss', -5867.0835),
 ('L-6.0 Norm Loss', 0.5224494),
 ('TV(2.0) Loss', 1451.3319)], overall loss: -4415.22900390625
Iteration: 93, named_losses: [('ActivationMax Loss', -5951.8037),
 ('L-6.0 Norm Loss', 0.522965),
 ('TV(2.0) Loss', 1475.8605)], overall loss: -4475.42041015625
Iteration: 94, named_losses: [('ActivationMax Loss', -6037.8857),
 ('L-6.0 Norm Loss', 0.5235282),
 ('TV(2.0) Loss', 1500.4182)], overall loss: -4536.9443359375
Iteration: 95, named_losses: [('ActivationMax Loss', -6122.5386),
 ('L-6.0 Norm Loss', 0.5240667),
 ('TV(2.0) Loss', 1522.7626)], overall loss: -4599.251953125
Iteration: 96, named_losses: [('ActivationMax Loss', -6209.7373),
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Iteration: 96, named_losses: [('ActivationMax Loss', -6209.7575),
 ('L-6.0 Norm Loss', 0.5246285),
 ('TV(2.0) Loss', 1546.681)], overall loss: -4662.53173828125
Iteration: 97, named_losses: [('ActivationMax Loss', -6300.0166),
 ('L-6.0 Norm Loss', 0.5251953),
 ('TV(2.0) Loss', 1573.719)], overall loss: -4725.7724609375
Iteration: 98, named_losses: [('ActivationMax Loss', -6382.673),
 ('L-6.0 Norm Loss', 0.5257367),
 ('TV(2.0) Loss', 1595.9537)], overall loss: -4786.193359375
Iteration: 99, named_losses: [('ActivationMax Loss', -6465.6045),
 ('L-6.0 Norm Loss', 0.5263289),
 ('TV(2.0) Loss', 1616.8475)], overall loss: -4848.23046875
Iteration: 100, named_losses: [('ActivationMax Loss', -6552.3306),
 ('L-6.0 Norm Loss', 0.52689886),
 ('TV(2.0) Loss', 1637.8884)], overall loss: -4913.9150390625
Iteration: 101, named_losses: [('ActivationMax Loss', -6632.8867),
 ('L-6.0 Norm Loss', 0.52751),
 ('TV(2.0) Loss', 1662.2635)], overall loss: -4970.095703125
Iteration: 102, named_losses: [('ActivationMax Loss', -6722.6665),
 ('L-6.0 Norm Loss', 0.5281156),
 ('TV(2.0) Loss', 1690.2068)], overall loss: -5031.931640625
Iteration: 103, named_losses: [('ActivationMax Loss', -6804.0117),
 ('L-6.0 Norm Loss', 0.5287491),
 ('TV(2.0) Loss', 1713.5387)], overall loss: -5089.9443359375
Iteration: 104, named_losses: [('ActivationMax Loss', -6887.945),
 ('L-6.0 Norm Loss', 0.529377),
 ('TV(2.0) Loss', 1735.8035)], overall loss: -5151.6123046875
Iteration: 105, named_losses: [('ActivationMax Loss', -6969.235),
 ('L-6.0 Norm Loss', 0.53002584),
 ('TV(2.0) Loss', 1759.382)], overall loss: -5209.3232421875
Iteration: 106, named_losses: [('ActivationMax Loss', -7055.774),
 ('L-6.0 Norm Loss', 0.5306822),
 ('TV(2.0) Loss', 1784.5503)], overall loss: -5270.69287109375
Iteration: 107, named_losses: [('ActivationMax Loss', -7134.9634),
 ('L-6.0 Norm Loss', 0.5313449),
 ('TV(2.0) Loss', 1807.3079)], overall loss: -5327.1240234375
Iteration: 108, named_losses: [('ActivationMax Loss', -7216.2065),
 ('L-6.0 Norm Loss', 0.5320106),
 ('TV(2.0) Loss', 1831.7201)], overall loss: -5383.9541015625
Iteration: 109, named_losses: [('ActivationMax Loss', -7297.114),
 ('L-6.0 Norm Loss', 0.5326804),
 ('TV(2.0) Loss', 1852.543)], overall loss: -5444.0380859375
Iteration: 110, named_losses: [('ActivationMax Loss', -7381.6104),
 ('L-6.0 Norm Loss', 0.53337395),
 ('TV(2.0) Loss', 1877.3696)], overall loss: -5503.70751953125
Iteration: 111, named_losses: [('ActivationMax Loss', -7464.6606),
 ('L-6.0 Norm Loss', 0.53409433),
 ('TV(2.0) Loss', 1903.2203)], overall loss: -5560.90625
Iteration: 112, named_losses: [('ActivationMax Loss', -7547.4834),
 ('L-6.0 Norm Loss', 0.5348262),
 ('TV(2.0) Loss', 1927.6606)], overall loss: -5619.2880859375
Iteration: 113, named_losses: [('ActivationMax Loss', -7628.112),
 ('L-6.0 Norm Loss', 0.53553176),
 ('TV(2.0) Loss', 1947.6232)], overall loss: -5679.953125
Iteration: 114, named_losses: [('ActivationMax Loss', -7709.8228),
 ('L-6.0 Norm Loss', 0.5362555),
 ('TV(2.0) Loss', 1972.2057)], overall loss: -5737.0810546875
Iteration: 115, named_losses: [('ActivationMax Loss', -7792.247),
 ('L-6.0 Norm Loss', 0.53698355),
 ('TV(2.0) Loss', 1993.5592)], overall loss: -5798.15087890625
Iteration: 116, named_losses: [('ActivationMax Loss', -7870.4067),
 ('L-6.0 Norm Loss', 0.53771704),
 ('TV(2.0) Loss', 2017.9802)], overall loss: -5851.888671875
Iteration: 117, named_losses: [('ActivationMax Loss', -7955.24),
 ('L-6.0 Norm Loss', 0.538468),
 ('TV(2.0) Loss', 2041.3625)], overall loss: -5913.3388671875
Iteration: 118, named_losses: [('ActivationMax Loss', -8035.7485),
 ('L-6.0 Norm Loss', 0.53922325),
 ('TV(2.0) Loss', 2070.0884)], overall loss: -5965.12109375
Iteration: 119, named_losses: [('ActivationMax Loss', -8119.9395),
 ('L-6.0 Norm Loss', 0.53995216),
 ('TV(2.0) Loss', 2090.9448)], overall loss: -6028.45458984375
Iteration: 120, named_losses: [('ActivationMax Loss', -8203.724),
 ('L-6.0 Norm Loss', 0.5407461),
 ('TV(2.0) Loss', 2119.946)], overall loss: -6083.236328125
Iteration: 121, named_losses: [('ActivationMax Loss', -8279.263),
 ('L-6.0 Norm Loss', 0.5415024),
 ('TV(2.0) Loss', 2139.795)], overall loss: -6138.9267578125
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(TV(2.0) Loss , 2155.795)], overall loss: -6150.9207570125
Iteration: 122, named_losses: [('ActivationMax Loss', -8358.709),
 ('L-6.0 Norm Loss', 0.5422477),
 ('TV(2.0) Loss', 2164.9932)], overall loss: -6193.173828125
Iteration: 123, named_losses: [('ActivationMax Loss', -8437.026),
 ('L-6.0 Norm Loss', 0.5430275),
 ('TV(2.0) Loss', 2191.6846)], overall loss: -6244.798828125
Iteration: 124, named_losses: [('ActivationMax Loss', -8516.697),
 ('L-6.0 Norm Loss', 0.54379666),
 ('TV(2.0) Loss', 2215.6711)], overall loss: -6300.482421875
Iteration: 125, named_losses: [('ActivationMax Loss', -8590.273),
 ('L-6.0 Norm Loss', 0.54457414),
 ('TV(2.0) Loss', 2238.1792)], overall loss: -6351.54931640625
Iteration: 126, named_losses: [('ActivationMax Loss', -8665.086),
 ('L-6.0 Norm Loss', 0.54537505),
 ('TV(2.0) Loss', 2262.118)], overall loss: -6402.4228515625
Iteration: 127, named_losses: [('ActivationMax Loss', -8741.213),
 ('L-6.0 Norm Loss', 0.54618204),
 ('TV(2.0) Loss', 2285.3882)], overall loss: -6455.27880859375
Iteration: 128, named_losses: [('ActivationMax Loss', -8816.093),
 ('L-6.0 Norm Loss', 0.5469855),
 ('TV(2.0) Loss', 2309.7366)], overall loss: -6505.8095703125
Iteration: 129, named_losses: [('ActivationMax Loss', -8896.085),
 ('L-6.0 Norm Loss', 0.54779863),
 ('TV(2.0) Loss', 2336.7524)], overall loss: -6558.78466796875
Iteration: 130, named_losses: [('ActivationMax Loss', -8964.878),
 ('L-6.0 Norm Loss', 0.54860336),
 ('TV(2.0) Loss', 2358.4631)], overall loss: -6605.8662109375
Iteration: 131, named_losses: [('ActivationMax Loss', -9040.323),
 ('L-6.0 Norm Loss', 0.5494249),
 ('TV(2.0) Loss', 2379.8892)], overall loss: -6659.88427734375
Iteration: 132, named_losses: [('ActivationMax Loss', -9123.818),
 ('L-6.0 Norm Loss', 0.55027395),
 ('TV(2.0) Loss', 2408.1907)], overall loss: -6715.078125
Iteration: 133, named_losses: [('ActivationMax Loss', -9194.941),
 ('L-6.0 Norm Loss', 0.5511423),
 ('TV(2.0) Loss', 2437.6526)], overall loss: -6756.73828125
Iteration: 134, named_losses: [('ActivationMax Loss', -9268.16),
 ('L-6.0 Norm Loss', 0.5519799),
 ('TV(2.0) Loss', 2453.11)], overall loss: -6814.498046875
Iteration: 135, named_losses: [('ActivationMax Loss', -9351.155),
 ('L-6.0 Norm Loss', 0.5528512),
 ('TV(2.0) Loss', 2485.6448)], overall loss: -6864.9580078125
Iteration: 136, named_losses: [('ActivationMax Loss', -9418.123),
 ('L-6.0 Norm Loss', 0.5536961),
 ('TV(2.0) Loss', 2503.3816)], overall loss: -6914.1875
Iteration: 137, named_losses: [('ActivationMax Loss', -9499.199),
 ('L-6.0 Norm Loss', 0.55452746),
 ('TV(2.0) Loss', 2532.9014)], overall loss: -6965.7431640625
Iteration: 138, named_losses: [('ActivationMax Loss', -9569.476),
 ('L-6.0 Norm Loss', 0.5553872),
 ('TV(2.0) Loss', 2552.1553)], overall loss: -7016.7646484375
Iteration: 139, named_losses: [('ActivationMax Loss', -9638.943),
 ('L-6.0 Norm Loss', 0.5562516),
 ('TV(2.0) Loss', 2576.1636)], overall loss: -7062.22314453125
Iteration: 140, named_losses: [('ActivationMax Loss', -9719.683),
 ('L-6.0 Norm Loss', 0.5571274),
 ('TV(2.0) Loss', 2601.3738)], overall loss: -7117.751953125
Iteration: 141, named_losses: [('ActivationMax Loss', -9789.451),
 ('L-6.0 Norm Loss', 0.5580053),
 ('TV(2.0) Loss', 2627.6855)], overall loss: -7161.2080078125
Iteration: 142, named_losses: [('ActivationMax Loss', -9866.204),
 ('L-6.0 Norm Loss', 0.55890715),
 ('TV(2.0) Loss', 2654.767)], overall loss: -7210.87841796875
Iteration: 143, named_losses: [('ActivationMax Loss', -9937.324),
 ('L-6.0 Norm Loss', 0.5597647),
 ('TV(2.0) Loss', 2675.3872)], overall loss: -7261.37744140625
Iteration: 144, named_losses: [('ActivationMax Loss', -10006.034),
 ('L-6.0 Norm Loss', 0.5606167),
 ('TV(2.0) Loss', 2694.3875)], overall loss: -7311.0859375
Iteration: 145, named_losses: [('ActivationMax Loss', -10079.161),
 ('L-6.0 Norm Loss', 0.56155974),
 ('TV(2.0) Loss', 2725.6938)], overall loss: -7352.90576171875
Iteration: 146, named_losses: [('ActivationMax Loss', -10146.596),
 ('L-6.0 Norm Loss', 0.56243396),
 ('TV(2.0) Loss', 2742.9082)], overall loss: -7403.125
Iteration: 147, named_losses: [('ActivationMax Loss', -10223.55),
 ('L-6.0 Norm Loss', 0.5633346)

('L-6.0 Norm Loss' , 0.3633346)],
 ('TV(2.0) Loss', 2767.4868)], overall loss: -7455.49951171875
Iteration: 148, named_losses: [('ActivationMax Loss', -10290.7295),
 ('L-6.0 Norm Loss', 0.56423616),
 ('TV(2.0) Loss', 2791.6829)], overall loss: -7498.482421875
Iteration: 149, named_losses: [('ActivationMax Loss', -10363.796),
 ('L-6.0 Norm Loss', 0.56516117),
 ('TV(2.0) Loss', 2815.068)], overall loss: -7548.162109375
Iteration: 150, named_losses: [('ActivationMax Loss', -10429.85),
 ('L-6.0 Norm Loss', 0.5660811),
 ('TV(2.0) Loss', 2837.343)], overall loss: -7591.9404296875
Iteration: 151, named_losses: [('ActivationMax Loss', -10502.535),
 ('L-6.0 Norm Loss', 0.56697387),
 ('TV(2.0) Loss', 2859.5132)], overall loss: -7642.45458984375
Iteration: 152, named_losses: [('ActivationMax Loss', -10571.292),
 ('L-6.0 Norm Loss', 0.56784195),
 ('TV(2.0) Loss', 2883.0352)], overall loss: -7687.689453125
Iteration: 153, named_losses: [('ActivationMax Loss', -10641.029),
 ('L-6.0 Norm Loss', 0.56879526),
 ('TV(2.0) Loss', 2908.906)], overall loss: -7731.5546875
Iteration: 154, named_losses: [('ActivationMax Loss', -10711.909),
 ('L-6.0 Norm Loss', 0.56966066),
 ('TV(2.0) Loss', 2927.9766)], overall loss: -7783.36328125
Iteration: 155, named_losses: [('ActivationMax Loss', -10780.664),
 ('L-6.0 Norm Loss', 0.57060343),
 ('TV(2.0) Loss', 2956.2798)], overall loss: -7823.81396484375
Iteration: 156, named_losses: [('ActivationMax Loss', -10845.965),
 ('L-6.0 Norm Loss', 0.5715107),
 ('TV(2.0) Loss', 2974.3643)], overall loss: -7871.029296875
Iteration: 157, named_losses: [('ActivationMax Loss', -10915.215),
 ('L-6.0 Norm Loss', 0.5724542),
 ('TV(2.0) Loss', 3002.488)], overall loss: -7912.154296875
Iteration: 158, named_losses: [('ActivationMax Loss', -10979.675),
 ('L-6.0 Norm Loss', 0.57332784),
 ('TV(2.0) Loss', 3019.6714)], overall loss: -7959.43017578125
Iteration: 159, named_losses: [('ActivationMax Loss', -11052.754),
 ('L-6.0 Norm Loss', 0.5743271),
 ('TV(2.0) Loss', 3049.568)], overall loss: -8002.611328125
Iteration: 160, named_losses: [('ActivationMax Loss', -11122.717),
 ('L-6.0 Norm Loss', 0.57523817),
 ('TV(2.0) Loss', 3069.4568)], overall loss: -8052.6845703125
Iteration: 161, named_losses: [('ActivationMax Loss', -11184.996),
 ('L-6.0 Norm Loss', 0.57612735),
 ('TV(2.0) Loss', 3089.861)], overall loss: -8094.55859375
Iteration: 162, named_losses: [('ActivationMax Loss', -11251.251),
 ('L-6.0 Norm Loss', 0.5770941),
 ('TV(2.0) Loss', 3117.194)], overall loss: -8133.4794921875
Iteration: 163, named_losses: [('ActivationMax Loss', -11313.241),
 ('L-6.0 Norm Loss', 0.5779796),
 ('TV(2.0) Loss', 3137.025)], overall loss: -8175.63818359375
Iteration: 164, named_losses: [('ActivationMax Loss', -11383.943),
 ('L-6.0 Norm Loss', 0.578926),
 ('TV(2.0) Loss', 3159.2441)], overall loss: -8224.1201171875
Iteration: 165, named_losses: [('ActivationMax Loss', -11448.527),
 ('L-6.0 Norm Loss', 0.5798335),
 ('TV(2.0) Loss', 3181.4058)], overall loss: -8266.541015625
Iteration: 166, named_losses: [('ActivationMax Loss', -11518.155),
 ('L-6.0 Norm Loss', 0.5807869),
 ('TV(2.0) Loss', 3205.8105)], overall loss: -8311.763671875
Iteration: 167, named_losses: [('ActivationMax Loss', -11582.593),
 ('L-6.0 Norm Loss', 0.5817161),
 ('TV(2.0) Loss', 3226.6118)], overall loss: -8355.3984375
Iteration: 168, named_losses: [('ActivationMax Loss', -11647.932),
 ('L-6.0 Norm Loss', 0.5826732),
 ('TV(2.0) Loss', 3249.0815)], overall loss: -8398.267578125
Iteration: 169, named_losses: [('ActivationMax Loss', -11708.572),
 ('L-6.0 Norm Loss', 0.58358157),
 ('TV(2.0) Loss', 3269.1152)], overall loss: -8438.873046875
Iteration: 170, named_losses: [('ActivationMax Loss', -11780.1045),
 ('L-6.0 Norm Loss', 0.5845695),
 ('TV(2.0) Loss', 3292.1238)], overall loss: -8487.3955078125
Iteration: 171, named_losses: [('ActivationMax Loss', -11838.593),
 ('L-6.0 Norm Loss', 0.58546853),
 ('TV(2.0) Loss', 3314.6724)], overall loss: -8523.333984375
Iteration: 172, named_losses: [('ActivationMax Loss', -11909.761),
 ('L-6.0 Norm Loss', 0.58645934),
 ('TV(2.0) Loss', 3340.8967)], overall loss: -8568.27734375
Iteration: 173, named_losses: [('ActivationMax Loss', -11968.884)

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Iteration: 173, named_losses: [('ActivationMax Loss', -11968.884),
 ('L-6.0 Norm Loss', 0.58739144),
 ('TV(2.0) Loss', 3362.0403)], overall loss: -8606.2568359375
Iteration: 174, named_losses: [('ActivationMax Loss', -12036.221),
 ('L-6.0 Norm Loss', 0.58837473),
 ('TV(2.0) Loss', 3386.34)], overall loss: -8649.29296875
Iteration: 175, named_losses: [('ActivationMax Loss', -12101.355),
 ('L-6.0 Norm Loss', 0.5893576),
 ('TV(2.0) Loss', 3408.918)], overall loss: -8691.84765625
Iteration: 176, named_losses: [('ActivationMax Loss', -12160.758),
 ('L-6.0 Norm Loss', 0.5903173),
 ('TV(2.0) Loss', 3430.2603)], overall loss: -8729.908203125
Iteration: 177, named_losses: [('ActivationMax Loss', -12222.718),
 ('L-6.0 Norm Loss', 0.59126395),
 ('TV(2.0) Loss', 3451.7832)], overall loss: -8770.34375
Iteration: 178, named_losses: [('ActivationMax Loss', -12285.701),
 ('L-6.0 Norm Loss', 0.59225047),
 ('TV(2.0) Loss', 3476.9033)], overall loss: -8808.2060546875
Iteration: 179, named_losses: [('ActivationMax Loss', -12352.634),
 ('L-6.0 Norm Loss', 0.5932037),
 ('TV(2.0) Loss', 3498.195)], overall loss: -8853.845703125
Iteration: 180, named_losses: [('ActivationMax Loss', -12419.9),
 ('L-6.0 Norm Loss', 0.5942285),
 ('TV(2.0) Loss', 3526.9993)], overall loss: -8892.3076171875
Iteration: 181, named_losses: [('ActivationMax Loss', -12475.734),
 ('L-6.0 Norm Loss', 0.5951893),
 ('TV(2.0) Loss', 3547.0115)], overall loss: -8928.1279296875
Iteration: 182, named_losses: [('ActivationMax Loss', -12550.436),
 ('L-6.0 Norm Loss', 0.59623885),
 ('TV(2.0) Loss', 3574.874)], overall loss: -8974.96484375
Iteration: 183, named_losses: [('ActivationMax Loss', -12607.66),
 ('L-6.0 Norm Loss', 0.59720343),
 ('TV(2.0) Loss', 3594.7905)], overall loss: -9012.271484375
Iteration: 184, named_losses: [('ActivationMax Loss', -12673.126),
 ('L-6.0 Norm Loss', 0.5982284),
 ('TV(2.0) Loss', 3621.2412)], overall loss: -9051.2861328125
Iteration: 185, named_losses: [('ActivationMax Loss', -12734.508),
 ('L-6.0 Norm Loss', 0.59922785),
 ('TV(2.0) Loss', 3645.1797)], overall loss: -9088.728515625
Iteration: 186, named_losses: [('ActivationMax Loss', -12798.14),
 ('L-6.0 Norm Loss', 0.6002555),
 ('TV(2.0) Loss', 3664.5928)], overall loss: -9132.9462890625
Iteration: 187, named_losses: [('ActivationMax Loss', -12864.05),
 ('L-6.0 Norm Loss', 0.6012655),
 ('TV(2.0) Loss', 3690.9075)], overall loss: -9172.541015625
Iteration: 188, named_losses: [('ActivationMax Loss', -12920.959),
 ('L-6.0 Norm Loss', 0.60230905),
 ('TV(2.0) Loss', 3715.4458)], overall loss: -9204.91015625
Iteration: 189, named_losses: [('ActivationMax Loss', -12987.139),
 ('L-6.0 Norm Loss', 0.6033275),
 ('TV(2.0) Loss', 3736.4263)], overall loss: -9250.109375
Iteration: 190, named_losses: [('ActivationMax Loss', -13046.622),
 ('L-6.0 Norm Loss', 0.604376),
 ('TV(2.0) Loss', 3764.732)], overall loss: -9281.28515625
Iteration: 191, named_losses: [('ActivationMax Loss', -13109.858),
 ('L-6.0 Norm Loss', 0.605372),
 ('TV(2.0) Loss', 3785.4429)], overall loss: -9323.810546875
Iteration: 192, named_losses: [('ActivationMax Loss', -13171.445),
 ('L-6.0 Norm Loss', 0.6063914),
 ('TV(2.0) Loss', 3809.9407)], overall loss: -9360.8984375
Iteration: 193, named_losses: [('ActivationMax Loss', -13234.793),
 ('L-6.0 Norm Loss', 0.60742646),
 ('TV(2.0) Loss', 3833.3206)], overall loss: -9400.865234375
Iteration: 194, named_losses: [('ActivationMax Loss', -13295.261),
 ('L-6.0 Norm Loss', 0.60847926),
 ('TV(2.0) Loss', 3855.429)], overall loss: -9439.2236328125
Iteration: 195, named_losses: [('ActivationMax Loss', -13359.0625),
 ('L-6.0 Norm Loss', 0.6095305),
 ('TV(2.0) Loss', 3883.5923)], overall loss: -9474.861328125
Iteration: 196, named_losses: [('ActivationMax Loss', -13420.096),
 ('L-6.0 Norm Loss', 0.61059225),
 ('TV(2.0) Loss', 3904.6123)], overall loss: -9514.873046875
Iteration: 197, named_losses: [('ActivationMax Loss', -13479.61),
 ('L-6.0 Norm Loss', 0.6117176),
 ('TV(2.0) Loss', 3934.717)], overall loss: -9544.2822265625
Iteration: 198, named_losses: [('ActivationMax Loss', -13534.044),
 ('L-6.0 Norm Loss', 0.6127044),
 ('TV(2.0) Loss', 3949.7627)], overall loss: -9584.6689453125
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('TV(2.0) Loss', 3948.7627)], overall loss: -9584.6689453125
Iteration: 199, named_losses: [('ActivationMax Loss', -13594.797),
 ('L-6.0 Norm Loss', 0.61378115),
 ('TV(2.0) Loss', 3978.3665)], overall loss: -9615.81640625
Iteration: 200, named_losses: [('ActivationMax Loss', -13653.3125),
 ('L-6.0 Norm Loss', 0.6148122),
 ('TV(2.0) Loss', 3998.187)], overall loss: -9654.509765625
Iteration: 201, named_losses: [('ActivationMax Loss', -13718.005),
 ('L-6.0 Norm Loss', 0.6158771),
 ('TV(2.0) Loss', 4030.3953)], overall loss: -9686.9931640625
Iteration: 202, named_losses: [('ActivationMax Loss', -13775.186),
 ('L-6.0 Norm Loss', 0.6169181),
 ('TV(2.0) Loss', 4051.478)], overall loss: -9723.08984375
Iteration: 203, named_losses: [('ActivationMax Loss', -13832.716),
 ('L-6.0 Norm Loss', 0.6179921),
 ('TV(2.0) Loss', 4074.5364)], overall loss: -9757.5615234375
Iteration: 204, named_losses: [('ActivationMax Loss', -13889.185),
 ('L-6.0 Norm Loss', 0.61903685),
 ('TV(2.0) Loss', 4097.592)], overall loss: -9790.9736328125
Iteration: 205, named_losses: [('ActivationMax Loss', -13948.263),
 ('L-6.0 Norm Loss', 0.62006205),
 ('TV(2.0) Loss', 4121.3755)], overall loss: -9826.267578125
Iteration: 206, named_losses: [('ActivationMax Loss', -14007.12),
 ('L-6.0 Norm Loss', 0.621145),
 ('TV(2.0) Loss', 4141.374)], overall loss: -9865.125
Iteration: 207, named_losses: [('ActivationMax Loss', -14073.784),
 ('L-6.0 Norm Loss', 0.6222075),
 ('TV(2.0) Loss', 4168.2144)], overall loss: -9904.947265625
Iteration: 208, named_losses: [('ActivationMax Loss', -14127.111),
 ('L-6.0 Norm Loss', 0.62319076),
 ('TV(2.0) Loss', 4183.723)], overall loss: -9942.765625
Iteration: 209, named_losses: [('ActivationMax Loss', -14185.061),
 ('L-6.0 Norm Loss', 0.62426066),
 ('TV(2.0) Loss', 4210.232)], overall loss: -9974.205078125
Iteration: 210, named_losses: [('ActivationMax Loss', -14247.408),
 ('L-6.0 Norm Loss', 0.625272),
 ('TV(2.0) Loss', 4233.575)], overall loss: -10013.2080078125
Iteration: 211, named_losses: [('ActivationMax Loss', -14305.878),
 ('L-6.0 Norm Loss', 0.62632954),
 ('TV(2.0) Loss', 4255.644)], overall loss: -10049.607421875
Iteration: 212, named_losses: [('ActivationMax Loss', -14359.393),
 ('L-6.0 Norm Loss', 0.62737155),
 ('TV(2.0) Loss', 4277.905)], overall loss: -10080.861328125
Iteration: 213, named_losses: [('ActivationMax Loss', -14420.151),
 ('L-6.0 Norm Loss', 0.6284509),
 ('TV(2.0) Loss', 4306.788)], overall loss: -10112.734375
Iteration: 214, named_losses: [('ActivationMax Loss', -14478.201),
 ('L-6.0 Norm Loss', 0.62950766),
 ('TV(2.0) Loss', 4327.5073)], overall loss: -10150.064453125
Iteration: 215, named_losses: [('ActivationMax Loss', -14533.4795),
 ('L-6.0 Norm Loss', 0.63057953),
 ('TV(2.0) Loss', 4354.7603)], overall loss: -10178.087890625
Iteration: 216, named_losses: [('ActivationMax Loss', -14591.409),
 ('L-6.0 Norm Loss', 0.631616),
 ('TV(2.0) Loss', 4374.1133)], overall loss: -10216.6640625
Iteration: 217, named_losses: [('ActivationMax Loss', -14642.213),
 ('L-6.0 Norm Loss', 0.6327487),
 ('TV(2.0) Loss', 4399.549)], overall loss: -10242.03125
Iteration: 218, named_losses: [('ActivationMax Loss', -14704.638),
 ('L-6.0 Norm Loss', 0.6338253),
 ('TV(2.0) Loss', 4425.2075)], overall loss: -10278.796875
Iteration: 219, named_losses: [('ActivationMax Loss', -14756.972),
 ('L-6.0 Norm Loss', 0.63485765),
 ('TV(2.0) Loss', 4447.4854)], overall loss: -10308.8515625
Iteration: 220, named_losses: [('ActivationMax Loss', -14811.647),
 ('L-6.0 Norm Loss', 0.6359144),
 ('TV(2.0) Loss', 4466.7944)], overall loss: -10344.216796875
Iteration: 221, named_losses: [('ActivationMax Loss', -14865.585),
 ('L-6.0 Norm Loss', 0.63701445),
 ('TV(2.0) Loss', 4497.4316)], overall loss: -10367.5166015625
Iteration: 222, named_losses: [('ActivationMax Loss', -14920.985),
 ('L-6.0 Norm Loss', 0.63813174),
 ('TV(2.0) Loss', 4520.0513)], overall loss: -10400.296875
Iteration: 223, named_losses: [('ActivationMax Loss', -14975.57),
 ('L-6.0 Norm Loss', 0.6392058),
 ('TV(2.0) Loss', 4543.5415)], overall loss: -10431.388671875
Iteration: 224, named_losses: [('ActivationMax Loss', -15039.357),
 ('L-6.0 Norm Loss', 0.64035517),

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('L-6.0 Norm Loss', 0.64035517),
 ('TV(2.0) Loss', 4577.1426)], overall loss: -10461.57421875
Iteration: 225, named_losses: [('ActivationMax Loss', -15089.632),
 ('L-6.0 Norm Loss', 0.64147377),
 ('TV(2.0) Loss', 4598.457)], overall loss: -10490.533203125
Iteration: 226, named_losses: [('ActivationMax Loss', -15143.867),
 ('L-6.0 Norm Loss', 0.64259565),
 ('TV(2.0) Loss', 4623.3506)], overall loss: -10519.8740234375
Iteration: 227, named_losses: [('ActivationMax Loss', -15203.059),
 ('L-6.0 Norm Loss', 0.6436672),
 ('TV(2.0) Loss', 4646.8813)], overall loss: -10555.533203125
Iteration: 228, named_losses: [('ActivationMax Loss', -15253.898),
 ('L-6.0 Norm Loss', 0.64474964),
 ('TV(2.0) Loss', 4669.1455)], overall loss: -10584.1083984375
Iteration: 229, named_losses: [('ActivationMax Loss', -15308.438),
 ('L-6.0 Norm Loss', 0.6458533),
 ('TV(2.0) Loss', 4692.947)], overall loss: -10614.845703125
Iteration: 230, named_losses: [('ActivationMax Loss', -15363.604),
 ('L-6.0 Norm Loss', 0.6470023),
 ('TV(2.0) Loss', 4723.809)], overall loss: -10639.146484375
Iteration: 231, named_losses: [('ActivationMax Loss', -15422.226),
 ('L-6.0 Norm Loss', 0.64814097),
 ('TV(2.0) Loss', 4744.9536)], overall loss: -10676.623046875
Iteration: 232, named_losses: [('ActivationMax Loss', -15474.995),
 ('L-6.0 Norm Loss', 0.64935434),
 ('TV(2.0) Loss', 4779.1685)], overall loss: -10695.177734375
Iteration: 233, named_losses: [('ActivationMax Loss', -15530.114),
 ('L-6.0 Norm Loss', 0.65043324),
 ('TV(2.0) Loss', 4795.244)], overall loss: -10734.2197265625
Iteration: 234, named_losses: [('ActivationMax Loss', -15581.3955),
 ('L-6.0 Norm Loss', 0.6514985),
 ('TV(2.0) Loss', 4822.4375)], overall loss: -10758.306640625
Iteration: 235, named_losses: [('ActivationMax Loss', -15641.487),
 ('L-6.0 Norm Loss', 0.65265983),
 ('TV(2.0) Loss', 4845.4478)], overall loss: -10795.38671875
Iteration: 236, named_losses: [('ActivationMax Loss', -15695.809),
 ('L-6.0 Norm Loss', 0.65382725),
 ('TV(2.0) Loss', 4877.828)], overall loss: -10817.326171875
Iteration: 237, named_losses: [('ActivationMax Loss', -15753.364),
 ('L-6.0 Norm Loss', 0.6549936),
 ('TV(2.0) Loss', 4898.2964)], overall loss: -10854.412109375
Iteration: 238, named_losses: [('ActivationMax Loss', -15810.834),
 ('L-6.0 Norm Loss', 0.65613586),
 ('TV(2.0) Loss', 4933.011)], overall loss: -10877.166015625
Iteration: 239, named_losses: [('ActivationMax Loss', -15865.707),
 ('L-6.0 Norm Loss', 0.6573256),
 ('TV(2.0) Loss', 4958.7295)], overall loss: -10906.3203125
Iteration: 240, named_losses: [('ActivationMax Loss', -15913.83),
 ('L-6.0 Norm Loss', 0.65846235),
 ('TV(2.0) Loss', 4974.94)], overall loss: -10938.232421875
Iteration: 241, named_losses: [('ActivationMax Loss', -15966.674),
 ('L-6.0 Norm Loss', 0.65962577),
 ('TV(2.0) Loss', 5005.3833)], overall loss: -10960.630859375
Iteration: 242, named_losses: [('ActivationMax Loss', -16026.407),
 ('L-6.0 Norm Loss', 0.66077787),
 ('TV(2.0) Loss', 5028.7305)], overall loss: -10997.015625
Iteration: 243, named_losses: [('ActivationMax Loss', -16084.419),
 ('L-6.0 Norm Loss', 0.6619764),
 ('TV(2.0) Loss', 5064.0234)], overall loss: -11019.7333984375
Iteration: 244, named_losses: [('ActivationMax Loss', -16133.693),
 ('L-6.0 Norm Loss', 0.66312826),
 ('TV(2.0) Loss', 5082.1904)], overall loss: -11050.83984375
Iteration: 245, named_losses: [('ActivationMax Loss', -16185.722),
 ('L-6.0 Norm Loss', 0.66429627),
 ('TV(2.0) Loss', 5107.1045)], overall loss: -11077.953125
Iteration: 246, named_losses: [('ActivationMax Loss', -16229.87),
 ('L-6.0 Norm Loss', 0.6654425),
 ('TV(2.0) Loss', 5131.94)], overall loss: -11097.265625
Iteration: 247, named_losses: [('ActivationMax Loss', -16292.284),
 ('L-6.0 Norm Loss', 0.6665106),
 ('TV(2.0) Loss', 5153.301)], overall loss: -11138.31640625
Iteration: 248, named_losses: [('ActivationMax Loss', -16340.201),
 ('L-6.0 Norm Loss', 0.66772157),
 ('TV(2.0) Loss', 5184.851)], overall loss: -11154.681640625
Iteration: 249, named_losses: [('ActivationMax Loss', -16391.148),
 ('L-6.0 Norm Loss', 0.6687658),
 ('TV(2.0) Loss', 5203.6147)], overall loss: -11186.865234375
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Iteration: 250, named_losses: [('ActivationMax Loss', -16447.334),
 ('L-6.0 Norm Loss', 0.6699029),
 ('TV(2.0) Loss', 5231.1245)], overall loss: -11215.5390625
Iteration: 251, named_losses: [('ActivationMax Loss', -16495.777),
 ('L-6.0 Norm Loss', 0.6710478),
 ('TV(2.0) Loss', 5253.0503)], overall loss: -11242.0546875
Iteration: 252, named_losses: [('ActivationMax Loss', -16546.355),
 ('L-6.0 Norm Loss', 0.6721023),
 ('TV(2.0) Loss', 5277.0537)], overall loss: -11268.6298828125
Iteration: 253, named_losses: [('ActivationMax Loss', -16594.875),
 ('L-6.0 Norm Loss', 0.6732408),
 ('TV(2.0) Loss', 5301.0303)], overall loss: -11293.1708984375
Iteration: 254, named_losses: [('ActivationMax Loss', -16653.186),
 ('L-6.0 Norm Loss', 0.67437756),
 ('TV(2.0) Loss', 5326.201)], overall loss: -11326.310546875
Iteration: 255, named_losses: [('ActivationMax Loss', -16696.275),
 ('L-6.0 Norm Loss', 0.6754948),
 ('TV(2.0) Loss', 5346.5312)], overall loss: -11349.068359375
Iteration: 256, named_losses: [('ActivationMax Loss', -16749.303),
 ('L-6.0 Norm Loss', 0.6766043),
 ('TV(2.0) Loss', 5372.373)], overall loss: -11376.25390625
Iteration: 257, named_losses: [('ActivationMax Loss', -16797.775),
 ('L-6.0 Norm Loss', 0.67775375),
 ('TV(2.0) Loss', 5392.1836)], overall loss: -11404.9140625
Iteration: 258, named_losses: [('ActivationMax Loss', -16841.48),
 ('L-6.0 Norm Loss', 0.67891693),
 ('TV(2.0) Loss', 5418.072)], overall loss: -11422.728515625
Iteration: 259, named_losses: [('ActivationMax Loss', -16891.73),
 ('L-6.0 Norm Loss', 0.6800074),
 ('TV(2.0) Loss', 5440.489)], overall loss: -11450.5625
Iteration: 260, named_losses: [('ActivationMax Loss', -16940.697),
 ('L-6.0 Norm Loss', 0.681129),
 ('TV(2.0) Loss', 5463.4385)], overall loss: -11476.5771484375
Iteration: 261, named_losses: [('ActivationMax Loss', -16990.812),
 ('L-6.0 Norm Loss', 0.682214),
 ('TV(2.0) Loss', 5481.8174)], overall loss: -11508.3134765625
Iteration: 262, named_losses: [('ActivationMax Loss', -17038.996),
 ('L-6.0 Norm Loss', 0.683403),
 ('TV(2.0) Loss', 5511.3286)], overall loss: -11526.984375
Iteration: 263, named_losses: [('ActivationMax Loss', -17086.957),
 ('L-6.0 Norm Loss', 0.6844724),
 ('TV(2.0) Loss', 5525.7407)], overall loss: -11560.533203125
Iteration: 264, named_losses: [('ActivationMax Loss', -17143.07),
 ('L-6.0 Norm Loss', 0.6855848),
 ('TV(2.0) Loss', 5552.6885)], overall loss: -11589.6962890625
Iteration: 265, named_losses: [('ActivationMax Loss', -17185.441),
 ('L-6.0 Norm Loss', 0.68671733),
 ('TV(2.0) Loss', 5569.4087)], overall loss: -11615.345703125
Iteration: 266, named_losses: [('ActivationMax Loss', -17237.7),
 ('L-6.0 Norm Loss', 0.68782634),
 ('TV(2.0) Loss', 5590.769)], overall loss: -11646.2421875
Iteration: 267, named_losses: [('ActivationMax Loss', -17281.217),
 ('L-6.0 Norm Loss', 0.68892604),
 ('TV(2.0) Loss', 5618.0283)], overall loss: -11662.4990234375
Iteration: 268, named_losses: [('ActivationMax Loss', -17335.43),
 ('L-6.0 Norm Loss', 0.6900612),
 ('TV(2.0) Loss', 5638.091)], overall loss: -11696.6494140625
Iteration: 269, named_losses: [('ActivationMax Loss', -17385.443),
 ('L-6.0 Norm Loss', 0.69119376),
 ('TV(2.0) Loss', 5660.0747)], overall loss: -11724.677734375
Iteration: 270, named_losses: [('ActivationMax Loss', -17435.824),
 ('L-6.0 Norm Loss', 0.69225967),
 ('TV(2.0) Loss', 5682.4375)], overall loss: -11752.6953125
Iteration: 271, named_losses: [('ActivationMax Loss', -17481.025),
 ('L-6.0 Norm Loss', 0.6933925),
 ('TV(2.0) Loss', 5703.939)], overall loss: -11776.392578125
Iteration: 272, named_losses: [('ActivationMax Loss', -17525.947),
 ('L-6.0 Norm Loss', 0.6945965),
 ('TV(2.0) Loss', 5727.5884)], overall loss: -11797.6640625
Iteration: 273, named_losses: [('ActivationMax Loss', -17583.197),
 ('L-6.0 Norm Loss', 0.69572055),
 ('TV(2.0) Loss', 5751.927)], overall loss: -11830.5751953125
Iteration: 274, named_losses: [('ActivationMax Loss', -17626.57),
 ('L-6.0 Norm Loss', 0.69689643),
 ('TV(2.0) Loss', 5773.5503)], overall loss: -11852.322265625
Iteration: 275, named_losses: [('ActivationMax Loss', -17677.682),
 ('L-6.0 Norm Loss', 0.6980866),
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('TV(2.0) Loss', 5802.4663)], overall loss: -11874.517578125
Iteration: 276, named_losses: [('ActivationMax Loss', -17725.318),
 ('L-6.0 Norm Loss', 0.69919896),
 ('TV(2.0) Loss', 5818.2905)], overall loss: -11906.328125
Iteration: 277, named_losses: [('ActivationMax Loss', -17771.953),
 ('L-6.0 Norm Loss', 0.7003858),
 ('TV(2.0) Loss', 5844.212)], overall loss: -11927.0400390625
Iteration: 278, named_losses: [('ActivationMax Loss', -17825.227),
 ('L-6.0 Norm Loss', 0.7015501),
 ('TV(2.0) Loss', 5869.589)], overall loss: -11954.9365234375
Iteration: 279, named_losses: [('ActivationMax Loss', -17863.225),
 ('L-6.0 Norm Loss', 0.70274574),
 ('TV(2.0) Loss', 5890.374)], overall loss: -11972.1474609375
Iteration: 280, named_losses: [('ActivationMax Loss', -17916.85),
 ('L-6.0 Norm Loss', 0.70388186),
 ('TV(2.0) Loss', 5911.304)], overall loss: -12004.841796875
Iteration: 281, named_losses: [('ActivationMax Loss', -17954.625),
 ('L-6.0 Norm Loss', 0.70501184),
 ('TV(2.0) Loss', 5933.1475)], overall loss: -12020.7724609375
Iteration: 282, named_losses: [('ActivationMax Loss', -18004.27),
 ('L-6.0 Norm Loss', 0.70624864),
 ('TV(2.0) Loss', 5958.231)], overall loss: -12045.33203125
Iteration: 283, named_losses: [('ActivationMax Loss', -18039.822),
 ('L-6.0 Norm Loss', 0.707356),
 ('TV(2.0) Loss', 5972.96)], overall loss: -12066.1552734375
Iteration: 284, named_losses: [('ActivationMax Loss', -18098.12),
 ('L-6.0 Norm Loss', 0.708545),
 ('TV(2.0) Loss', 6003.8887)], overall loss: -12093.521484375
Iteration: 285, named_losses: [('ActivationMax Loss', -18140.322),
 ('L-6.0 Norm Loss', 0.70971096),
 ('TV(2.0) Loss', 6023.7983)], overall loss: -12115.814453125
Iteration: 286, named_losses: [('ActivationMax Loss', -18181.56),
 ('L-6.0 Norm Loss', 0.71085227),
 ('TV(2.0) Loss', 6043.9375)], overall loss: -12136.912109375
Iteration: 287, named_losses: [('ActivationMax Loss', -18231.176),
 ('L-6.0 Norm Loss', 0.7120189),
 ('TV(2.0) Loss', 6069.51)], overall loss: -12160.953125
Iteration: 288, named_losses: [('ActivationMax Loss', -18266.12),
 ('L-6.0 Norm Loss', 0.7131536),
 ('TV(2.0) Loss', 6079.386)], overall loss: -12186.01953125
Iteration: 289, named_losses: [('ActivationMax Loss', -18319.61),
 ('L-6.0 Norm Loss', 0.71429676),
 ('TV(2.0) Loss', 6108.3594)], overall loss: -12210.53515625
Iteration: 290, named_losses: [('ActivationMax Loss', -18362.254),
 ('L-6.0 Norm Loss', 0.7154562),
 ('TV(2.0) Loss', 6125.31)], overall loss: -12236.228515625
Iteration: 291, named_losses: [('ActivationMax Loss', -18410.363),
 ('L-6.0 Norm Loss', 0.71661365),
 ('TV(2.0) Loss', 6154.368)], overall loss: -12255.2783203125
Iteration: 292, named_losses: [('ActivationMax Loss', -18446.965),
 ('L-6.0 Norm Loss', 0.7178179),
 ('TV(2.0) Loss', 6168.9224)], overall loss: -12277.32421875
Iteration: 293, named_losses: [('ActivationMax Loss', -18506.064),
 ('L-6.0 Norm Loss', 0.71902746),
 ('TV(2.0) Loss', 6199.1294)], overall loss: -12306.216796875
Iteration: 294, named_losses: [('ActivationMax Loss', -18545.383),
 ('L-6.0 Norm Loss', 0.72019786),
 ('TV(2.0) Loss', 6218.537)], overall loss: -12326.125
Iteration: 295, named_losses: [('ActivationMax Loss', -18593.48),
 ('L-6.0 Norm Loss', 0.72137505),
 ('TV(2.0) Loss', 6244.727)], overall loss: -12348.033203125
Iteration: 296, named_losses: [('ActivationMax Loss', -18634.402),
 ('L-6.0 Norm Loss', 0.7224879),
 ('TV(2.0) Loss', 6263.4795)], overall loss: -12370.2001953125
Iteration: 297, named_losses: [('ActivationMax Loss', -18686.152),
 ('L-6.0 Norm Loss', 0.723676),
 ('TV(2.0) Loss', 6289.322)], overall loss: -12396.10546875
Iteration: 298, named_losses: [('ActivationMax Loss', -18729.89),
 ('L-6.0 Norm Loss', 0.7248362),
 ('TV(2.0) Loss', 6309.7236)], overall loss: -12419.4423828125
Iteration: 299, named_losses: [('ActivationMax Loss', -18770.957),
 ('L-6.0 Norm Loss', 0.72597927),
 ('TV(2.0) Loss', 6333.529)], overall loss: -12436.701171875
Iteration: 300, named_losses: [('ActivationMax Loss', -18812.828),
 ('L-6.0 Norm Loss', 0.72713935),
 ('TV(2.0) Loss', 6353.0474)], overall loss: -12459.0546875
Iteration: 301, named_losses: [('ActivationMax Loss', -18857.03),

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('L-6.0 Norm Loss', 0.72827524),
 ('TV(2.0) Loss', 6374.317)], overall loss: -12481.984375
Iteration: 302, named_losses: [('ActivationMax Loss', -18900.59),
 ('L-6.0 Norm Loss', 0.7294137),
 ('TV(2.0) Loss', 6395.606)], overall loss: -12504.255859375
Iteration: 303, named_losses: [('ActivationMax Loss', -18945.217),
 ('L-6.0 Norm Loss', 0.7306063),
 ('TV(2.0) Loss', 6420.5464)], overall loss: -12523.939453125
Iteration: 304, named_losses: [('ActivationMax Loss', -18989.432),
 ('L-6.0 Norm Loss', 0.73171616),
 ('TV(2.0) Loss', 6440.2124)], overall loss: -12548.486328125
Iteration: 305, named_losses: [('ActivationMax Loss', -19036.06),
 ('L-6.0 Norm Loss', 0.7328979),
 ('TV(2.0) Loss', 6470.7246)], overall loss: -12564.603515625
Iteration: 306, named_losses: [('ActivationMax Loss', -19082.533),
 ('L-6.0 Norm Loss', 0.7340662),
 ('TV(2.0) Loss', 6490.864)], overall loss: -12590.935546875
Iteration: 307, named_losses: [('ActivationMax Loss', -19134.707),
 ('L-6.0 Norm Loss', 0.73522943),
 ('TV(2.0) Loss', 6516.5684)], overall loss: -12617.404296875
Iteration: 308, named_losses: [('ActivationMax Loss', -19176.021),
 ('L-6.0 Norm Loss', 0.7364259),
 ('TV(2.0) Loss', 6544.218)], overall loss: -12631.0673828125
Iteration: 309, named_losses: [('ActivationMax Loss', -19224.777),
 ('L-6.0 Norm Loss', 0.7375629),
 ('TV(2.0) Loss', 6564.63)], overall loss: -12659.4091796875
Iteration: 310, named_losses: [('ActivationMax Loss', -19274.604),
 ('L-6.0 Norm Loss', 0.73873603),
 ('TV(2.0) Loss', 6592.3003)], overall loss: -12681.564453125
Iteration: 311, named_losses: [('ActivationMax Loss', -19316.34),
 ('L-6.0 Norm Loss', 0.73991513),
 ('TV(2.0) Loss', 6616.3394)], overall loss: -12699.259765625
Iteration: 312, named_losses: [('ActivationMax Loss', -19363.71),
 ('L-6.0 Norm Loss', 0.74107563),
 ('TV(2.0) Loss', 6639.7456)], overall loss: -12723.224609375
Iteration: 313, named_losses: [('ActivationMax Loss', -19408.875),
 ('L-6.0 Norm Loss', 0.7422997),
 ('TV(2.0) Loss', 6664.429)], overall loss: -12743.703125
Iteration: 314, named_losses: [('ActivationMax Loss', -19453.805),
 ('L-6.0 Norm Loss', 0.7434992),
 ('TV(2.0) Loss', 6693.247)], overall loss: -12759.8134765625
Iteration: 315, named_losses: [('ActivationMax Loss', -19503.05),
 ('L-6.0 Norm Loss', 0.7447233),
 ('TV(2.0) Loss', 6716.175)], overall loss: -12786.1318359375
Iteration: 316, named_losses: [('ActivationMax Loss', -19552.455),
 ('L-6.0 Norm Loss', 0.7458688),
 ('TV(2.0) Loss', 6739.521)], overall loss: -12812.1875
Iteration: 317, named_losses: [('ActivationMax Loss', -19590.68),
 ('L-6.0 Norm Loss', 0.7470262),
 ('TV(2.0) Loss', 6758.3135)], overall loss: -12831.6201171875
Iteration: 318, named_losses: [('ActivationMax Loss', -19639.967),
 ('L-6.0 Norm Loss', 0.74817955),
 ('TV(2.0) Loss', 6789.9785)], overall loss: -12849.240234375
Iteration: 319, named_losses: [('ActivationMax Loss', -19679.014),
 ('L-6.0 Norm Loss', 0.7494438),
 ('TV(2.0) Loss', 6809.654)], overall loss: -12868.609375
Iteration: 320, named_losses: [('ActivationMax Loss', -19730.049),
 ('L-6.0 Norm Loss', 0.7506014),
 ('TV(2.0) Loss', 6833.114)], overall loss: -12896.185546875
Iteration: 321, named_losses: [('ActivationMax Loss', -19767.152),
 ('L-6.0 Norm Loss', 0.75177747),
 ('TV(2.0) Loss', 6856.932)], overall loss: -12909.46875
Iteration: 322, named_losses: [('ActivationMax Loss', -19815.59),
 ('L-6.0 Norm Loss', 0.75286055),
 ('TV(2.0) Loss', 6876.2056)], overall loss: -12938.6328125
Iteration: 323, named_losses: [('ActivationMax Loss', -19857.98),
 ('L-6.0 Norm Loss', 0.7540435),
 ('TV(2.0) Loss', 6902.1846)], overall loss: -12955.0419921875
Iteration: 324, named_losses: [('ActivationMax Loss', -19905.295),
 ('L-6.0 Norm Loss', 0.7552261),
 ('TV(2.0) Loss', 6923.1357)], overall loss: -12981.4033203125
Iteration: 325, named_losses: [('ActivationMax Loss', -19945.676),
 ('L-6.0 Norm Loss', 0.75640565),
 ('TV(2.0) Loss', 6950.2666)], overall loss: -12994.6533203125
Iteration: 326, named_losses: [('ActivationMax Loss', -19991.387),
 ('L-6.0 Norm Loss', 0.75757253),
 ('TV(2.0) Loss', 6972.0513)], overall loss: -13018.578125
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Iteration: 327, named_losses: [('ActivationMax Loss', -20031.566),
 ('L-6.0 Norm Loss', 0.7588199),
 ('TV(2.0) Loss', 6998.586)], overall loss: -13032.220703125
Iteration: 328, named_losses: [('ActivationMax Loss', -20081.39),
 ('L-6.0 Norm Loss', 0.7599516),
 ('TV(2.0) Loss', 7020.5234)], overall loss: -13060.107421875
Iteration: 329, named_losses: [('ActivationMax Loss', -20124.998),
 ('L-6.0 Norm Loss', 0.7610805),
 ('TV(2.0) Loss', 7044.284)], overall loss: -13079.9521484375
Iteration: 330, named_losses: [('ActivationMax Loss', -20167.06),
 ('L-6.0 Norm Loss', 0.76226074),
 ('TV(2.0) Loss', 7071.0703)], overall loss: -13095.228515625
Iteration: 331, named_losses: [('ActivationMax Loss', -20210.521),
 ('L-6.0 Norm Loss', 0.7634346),
 ('TV(2.0) Loss', 7096.263)], overall loss: -13113.494140625
Iteration: 332, named_losses: [('ActivationMax Loss', -20262.242),
 ('L-6.0 Norm Loss', 0.7646528),
 ('TV(2.0) Loss', 7123.24)], overall loss: -13138.236328125
Iteration: 333, named_losses: [('ActivationMax Loss', -20307.328),
 ('L-6.0 Norm Loss', 0.7658149),
 ('TV(2.0) Loss', 7150.793)], overall loss: -13155.76953125
Iteration: 334, named_losses: [('ActivationMax Loss', -20350.572),
 ('L-6.0 Norm Loss', 0.7670277),
 ('TV(2.0) Loss', 7171.558)], overall loss: -13178.24609375
Iteration: 335, named_losses: [('ActivationMax Loss', -20402.504),
 ('L-6.0 Norm Loss', 0.76822084),
 ('TV(2.0) Loss', 7203.726)], overall loss: -13198.009765625
Iteration: 336, named_losses: [('ActivationMax Loss', -20445.043),
 ('L-6.0 Norm Loss', 0.76944745),
 ('TV(2.0) Loss', 7226.7783)], overall loss: -13217.4951171875
Iteration: 337, named_losses: [('ActivationMax Loss', -20484.01),
 ('L-6.0 Norm Loss', 0.7706085),
 ('TV(2.0) Loss', 7247.47)], overall loss: -13235.767578125
Iteration: 338, named_losses: [('ActivationMax Loss', -20532.49),
 ('L-6.0 Norm Loss', 0.77173954),
 ('TV(2.0) Loss', 7273.99)], overall loss: -13257.728515625
Iteration: 339, named_losses: [('ActivationMax Loss', -20573.16),
 ('L-6.0 Norm Loss', 0.7729397),
 ('TV(2.0) Loss', 7296.601)], overall loss: -13275.78515625
Iteration: 340, named_losses: [('ActivationMax Loss', -20618.781),
 ('L-6.0 Norm Loss', 0.77408844),
 ('TV(2.0) Loss', 7320.5356)], overall loss: -13297.47265625
Iteration: 341, named_losses: [('ActivationMax Loss', -20660.994),
 ('L-6.0 Norm Loss', 0.775295),
 ('TV(2.0) Loss', 7349.5186)], overall loss: -13310.7001953125
Iteration: 342, named_losses: [('ActivationMax Loss', -20696.219),
 ('L-6.0 Norm Loss', 0.7763807),
 ('TV(2.0) Loss', 7364.1216)], overall loss: -13331.3203125
Iteration: 343, named_losses: [('ActivationMax Loss', -20740.314),
 ('L-6.0 Norm Loss', 0.77758676),
 ('TV(2.0) Loss', 7384.8057)], overall loss: -13354.7314453125
Iteration: 344, named_losses: [('ActivationMax Loss', -20783.873),
 ('L-6.0 Norm Loss', 0.7787697),
 ('TV(2.0) Loss', 7409.3193)], overall loss: -13373.7744140625
Iteration: 345, named_losses: [('ActivationMax Loss', -20817.604),
 ('L-6.0 Norm Loss', 0.77995294),
 ('TV(2.0) Loss', 7432.8228)], overall loss: -13384.001953125
Iteration: 346, named_losses: [('ActivationMax Loss', -20867.785),
 ('L-6.0 Norm Loss', 0.7810817),
 ('TV(2.0) Loss', 7451.491)], overall loss: -13415.5126953125
Iteration: 347, named_losses: [('ActivationMax Loss', -20909.816),
 ('L-6.0 Norm Loss', 0.78228444),
 ('TV(2.0) Loss', 7478.6826)], overall loss: -13430.3505859375
Iteration: 348, named_losses: [('ActivationMax Loss', -20947.361),
 ('L-6.0 Norm Loss', 0.7834764),
 ('TV(2.0) Loss', 7500.4453)], overall loss: -13446.1328125
Iteration: 349, named_losses: [('ActivationMax Loss', -20986.982),
 ('L-6.0 Norm Loss', 0.78462446),
 ('TV(2.0) Loss', 7517.4614)], overall loss: -13468.736328125
Iteration: 350, named_losses: [('ActivationMax Loss', -21037.562),
 ('L-6.0 Norm Loss', 0.7858025),
 ('TV(2.0) Loss', 7544.3047)], overall loss: -13492.47265625
Iteration: 351, named_losses: [('ActivationMax Loss', -21068.861),
 ('L-6.0 Norm Loss', 0.78696316),
 ('TV(2.0) Loss', 7563.148)], overall loss: -13504.92578125
Iteration: 352, named_losses: [('ActivationMax Loss', -21110.521),
 ('L-6.0 Norm Loss', 0.7881658),
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('TV(2.0) Loss', 7586.9463)], overall loss: -13522.7861328125
Iteration: 353, named_losses: [('ActivationMax Loss', -21152.084),
 ('L-6.0 Norm Loss', 0.78930265),
 ('TV(2.0) Loss', 7608.5044)], overall loss: -13542.791015625
Iteration: 354, named_losses: [('ActivationMax Loss', -21195.54),
 ('L-6.0 Norm Loss', 0.79049045),
 ('TV(2.0) Loss', 7631.5586)], overall loss: -13563.189453125
Iteration: 355, named_losses: [('ActivationMax Loss', -21232.152),
 ('L-6.0 Norm Loss', 0.79165876),
 ('TV(2.0) Loss', 7653.3477)], overall loss: -13578.013671875
Iteration: 356, named_losses: [('ActivationMax Loss', -21281.393),
 ('L-6.0 Norm Loss', 0.7928248),
 ('TV(2.0) Loss', 7680.6797)], overall loss: -13599.919921875
Iteration: 357, named_losses: [('ActivationMax Loss', -21318.285),
 ('L-6.0 Norm Loss', 0.7940213),
 ('TV(2.0) Loss', 7699.5586)], overall loss: -13617.931640625
Iteration: 358, named_losses: [('ActivationMax Loss', -21362.691),
 ('L-6.0 Norm Loss', 0.7951621),
 ('TV(2.0) Loss', 7724.765)], overall loss: -13637.130859375
Iteration: 359, named_losses: [('ActivationMax Loss', -21402.957),
 ('L-6.0 Norm Loss', 0.7963491),
 ('TV(2.0) Loss', 7747.2075)], overall loss: -13654.953125
Iteration: 360, named_losses: [('ActivationMax Loss', -21444.443),
 ('L-6.0 Norm Loss', 0.797421),
 ('TV(2.0) Loss', 7766.9463)], overall loss: -13676.7001953125
Iteration: 361, named_losses: [('ActivationMax Loss', -21479.154),
 ('L-6.0 Norm Loss', 0.79865015),
 ('TV(2.0) Loss', 7793.5835)], overall loss: -13684.771484375
Iteration: 362, named_losses: [('ActivationMax Loss', -21530.3),
 ('L-6.0 Norm Loss', 0.79979604),
 ('TV(2.0) Loss', 7820.3447)], overall loss: -13709.1572265625
Iteration: 363, named_losses: [('ActivationMax Loss', -21558.684),
 ('L-6.0 Norm Loss', 0.8010023),
 ('TV(2.0) Loss', 7840.8696)], overall loss: -13717.013671875
Iteration: 364, named_losses: [('ActivationMax Loss', -21608.346),
 ('L-6.0 Norm Loss', 0.8021998),
 ('TV(2.0) Loss', 7866.6255)], overall loss: -13740.91796875
Iteration: 365, named_losses: [('ActivationMax Loss', -21646.186),
 ('L-6.0 Norm Loss', 0.80336267),
 ('TV(2.0) Loss', 7890.6367)], overall loss: -13754.74609375
Iteration: 366, named_losses: [('ActivationMax Loss', -21687.938),
 ('L-6.0 Norm Loss', 0.80454665),
 ('TV(2.0) Loss', 7910.772)], overall loss: -13776.361328125
Iteration: 367, named_losses: [('ActivationMax Loss', -21723.26),
 ('L-6.0 Norm Loss', 0.8057335),
 ('TV(2.0) Loss', 7933.1416)], overall loss: -13789.3115234375
Iteration: 368, named_losses: [('ActivationMax Loss', -21768.85),
 ('L-6.0 Norm Loss', 0.806902),
 ('TV(2.0) Loss', 7962.1943)], overall loss: -13805.8486328125
Iteration: 369, named_losses: [('ActivationMax Loss', -21795.932),
 ('L-6.0 Norm Loss', 0.8080337),
 ('TV(2.0) Loss', 7971.821)], overall loss: -13823.302734375
Iteration: 370, named_losses: [('ActivationMax Loss', -21832.854),
 ('L-6.0 Norm Loss', 0.8091799),
 ('TV(2.0) Loss', 7994.764)], overall loss: -13837.28125
Iteration: 371, named_losses: [('ActivationMax Loss', -21870.836),
 ('L-6.0 Norm Loss', 0.8103451),
 ('TV(2.0) Loss', 8018.575)], overall loss: -13851.4501953125
Iteration: 372, named_losses: [('ActivationMax Loss', -21911.557),
 ('L-6.0 Norm Loss', 0.8115569),
 ('TV(2.0) Loss', 8041.815)], overall loss: -13868.9296875
Iteration: 373, named_losses: [('ActivationMax Loss', -21948.65),
 ('L-6.0 Norm Loss', 0.81269836),
 ('TV(2.0) Loss', 8061.7583)], overall loss: -13886.080078125
Iteration: 374, named_losses: [('ActivationMax Loss', -21987.852),
 ('L-6.0 Norm Loss', 0.8138892),
 ('TV(2.0) Loss', 8082.315)], overall loss: -13904.72265625
Iteration: 375, named_losses: [('ActivationMax Loss', -22021.834),
 ('L-6.0 Norm Loss', 0.81507194),
 ('TV(2.0) Loss', 8112.74)], overall loss: -13908.279296875
Iteration: 376, named_losses: [('ActivationMax Loss', -22064.938),
 ('L-6.0 Norm Loss', 0.8162428),
 ('TV(2.0) Loss', 8129.471)], overall loss: -13934.650390625
Iteration: 377, named_losses: [('ActivationMax Loss', -22109.104),
 ('L-6.0 Norm Loss', 0.8174448),
 ('TV(2.0) Loss', 8158.658)], overall loss: -13949.626953125
Iteration: 378, named_losses: [('ActivationMax Loss', -22152.98),

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  ('L-6.0 Norm Loss', 0.8185962),
  ('TV(2.0) Loss', 8185.531)], overall loss: -13966.630859375
Iteration: 379, named_losses: [('ActivationMax Loss', -22188.979),
  ('L-6.0 Norm Loss', 0.8197803),
  ('TV(2.0) Loss', 8208.762)], overall loss: -13979.396484375
Iteration: 380, named_losses: [('ActivationMax Loss', -22234.402),
  ('L-6.0 Norm Loss', 0.82092124),
  ('TV(2.0) Loss', 8233.667)], overall loss: -13999.9150390625
Iteration: 381, named_losses: [('ActivationMax Loss', -22277.29),
  ('L-6.0 Norm Loss', 0.8220922),
  ('TV(2.0) Loss', 8257.152)], overall loss: -14019.314453125
Iteration: 382, named_losses: [('ActivationMax Loss', -22319.658),
  ('L-6.0 Norm Loss', 0.82326865),
  ('TV(2.0) Loss', 8287.305)], overall loss: -14031.529296875
Iteration: 383, named_losses: [('ActivationMax Loss', -22355.35),
  ('L-6.0 Norm Loss', 0.8244089),
  ('TV(2.0) Loss', 8304.656)], overall loss: -14049.869140625
Iteration: 384, named_losses: [('ActivationMax Loss', -22393.41),
  ('L-6.0 Norm Loss', 0.82548416),
  ('TV(2.0) Loss', 8324.875)], overall loss: -14067.708984375
Iteration: 385, named_losses: [('ActivationMax Loss', -22433.68),
  ('L-6.0 Norm Loss', 0.82663566),
  ('TV(2.0) Loss', 8346.855)], overall loss: -14085.998046875
Iteration: 386, named_losses: [('ActivationMax Loss', -22469.77),
  ('L-6.0 Norm Loss', 0.8278515),
  ('TV(2.0) Loss', 8373.589)], overall loss: -14095.3525390625
Iteration: 387, named_losses: [('ActivationMax Loss', -22514.717),
  ('L-6.0 Norm Loss', 0.82890666),
  ('TV(2.0) Loss', 8394.984)], overall loss: -14118.904296875
Iteration: 388, named_losses: [('ActivationMax Loss', -22551.443),
  ('L-6.0 Norm Loss', 0.83006567),
  ('TV(2.0) Loss', 8419.544)], overall loss: -14131.0693359375
Iteration: 389, named_losses: [('ActivationMax Loss', -22592.984),
  ('L-6.0 Norm Loss', 0.831226),
  ('TV(2.0) Loss', 8451.3955)], overall loss: -14140.7568359375
Iteration: 390, named_losses: [('ActivationMax Loss', -22624.498),
  ('L-6.0 Norm Loss', 0.8323919),
  ('TV(2.0) Loss', 8461.44)], overall loss: -14162.2255859375
Iteration: 391, named_losses: [('ActivationMax Loss', -22666.719),
  ('L-6.0 Norm Loss', 0.8335702),
  ('TV(2.0) Loss', 8492.759)], overall loss: -14173.1259765625
Iteration: 392, named_losses: [('ActivationMax Loss', -22699.291),
  ('L-6.0 Norm Loss', 0.8347342),
  ('TV(2.0) Loss', 8510.415)], overall loss: -14188.0419921875
Iteration: 393, named_losses: [('ActivationMax Loss', -22744.99),
  ('L-6.0 Norm Loss', 0.83584464),
  ('TV(2.0) Loss', 8538.784)], overall loss: -14205.3701171875
Iteration: 394, named_losses: [('ActivationMax Loss', -22776.709),
  ('L-6.0 Norm Loss', 0.8369942),
  ('TV(2.0) Loss', 8555.663)], overall loss: -14220.2080078125
Iteration: 395, named_losses: [('ActivationMax Loss', -22822.117),
  ('L-6.0 Norm Loss', 0.8381475),
  ('TV(2.0) Loss', 8585.785)], overall loss: -14235.494140625
Iteration: 396, named_losses: [('ActivationMax Loss', -22854.008),
  ('L-6.0 Norm Loss', 0.83932185),
  ('TV(2.0) Loss', 8604.758)], overall loss: -14248.41015625
Iteration: 397, named_losses: [('ActivationMax Loss', -22895.316),
  ('L-6.0 Norm Loss', 0.8404941),
  ('TV(2.0) Loss', 8629.365)], overall loss: -14265.111328125
Iteration: 398, named_losses: [('ActivationMax Loss', -22941.938),
  ('L-6.0 Norm Loss', 0.8416096),
  ('TV(2.0) Loss', 8658.615)], overall loss: -14282.48046875
Iteration: 399, named_losses: [('ActivationMax Loss', -22991.16),
  ('L-6.0 Norm Loss', 0.8427034),
  ('TV(2.0) Loss', 8689.415)], overall loss: -14300.9033203125
Iteration: 400, named_losses: [('ActivationMax Loss', -23032.803),
  ('L-6.0 Norm Loss', 0.84380996),
  ('TV(2.0) Loss', 8710.432)], overall loss: -14321.52734375
Iteration: 401, named_losses: [('ActivationMax Loss', -23084.076),
  ('L-6.0 Norm Loss', 0.8449196),
  ('TV(2.0) Loss', 8740.782)], overall loss: -14342.4482421875
Iteration: 402, named_losses: [('ActivationMax Loss', -23123.379),
  ('L-6.0 Norm Loss', 0.8460782),
  ('TV(2.0) Loss', 8768.805)], overall loss: -14353.728515625
Iteration: 403, named_losses: [('ActivationMax Loss', -23169.049),
  ('L-6.0 Norm Loss', 0.8471406),
  ('TV(2.0) Loss', 8793.568)], overall loss: -14374.6328125
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Iteration: 404, named_losses: [('ActivationMax Loss', -23207.256),
 ('L-6.0 Norm Loss', 0.84822154),
 ('TV(2.0) Loss', 8815.562)], overall loss: -14390.8466796875
Iteration: 405, named_losses: [('ActivationMax Loss', -23260.78),
 ('L-6.0 Norm Loss', 0.8493863),
 ('TV(2.0) Loss', 8850.9375)], overall loss: -14408.9921875
Iteration: 406, named_losses: [('ActivationMax Loss', -23303.068),
 ('L-6.0 Norm Loss', 0.8504949),
 ('TV(2.0) Loss', 8874.839)], overall loss: -14427.3798828125
Iteration: 407, named_losses: [('ActivationMax Loss', -23347.92),
 ('L-6.0 Norm Loss', 0.8517357),
 ('TV(2.0) Loss', 8910.919)], overall loss: -14436.1494140625
Iteration: 408, named_losses: [('ActivationMax Loss', -23382.734),
 ('L-6.0 Norm Loss', 0.8527807),
 ('TV(2.0) Loss', 8918.651)], overall loss: -14463.2294921875
Iteration: 409, named_losses: [('ActivationMax Loss', -23435.656),
 ('L-6.0 Norm Loss', 0.8538153),
 ('TV(2.0) Loss', 8945.815)], overall loss: -14488.9873046875
Iteration: 410, named_losses: [('ActivationMax Loss', -23463.162),
 ('L-6.0 Norm Loss', 0.85498804),
 ('TV(2.0) Loss', 8966.793)], overall loss: -14495.513671875
Iteration: 411, named_losses: [('ActivationMax Loss', -23512.7),
 ('L-6.0 Norm Loss', 0.8560336),
 ('TV(2.0) Loss', 8985.835)], overall loss: -14526.0087890625
Iteration: 412, named_losses: [('ActivationMax Loss', -23552.744),
 ('L-6.0 Norm Loss', 0.85712147),
 ('TV(2.0) Loss', 9011.452)], overall loss: -14540.4345703125
Iteration: 413, named_losses: [('ActivationMax Loss', -23595.748),
 ('L-6.0 Norm Loss', 0.85836005),
 ('TV(2.0) Loss', 9043.778)], overall loss: -14551.1123046875
Iteration: 414, named_losses: [('ActivationMax Loss', -23629.766),
 ('L-6.0 Norm Loss', 0.85946566),
 ('TV(2.0) Loss', 9064.439)], overall loss: -14564.466796875
Iteration: 415, named_losses: [('ActivationMax Loss', -23672.707),
 ('L-6.0 Norm Loss', 0.8605915),
 ('TV(2.0) Loss', 9082.217)], overall loss: -14589.62890625
Iteration: 416, named_losses: [('ActivationMax Loss', -23710.613),
 ('L-6.0 Norm Loss', 0.8616402),
 ('TV(2.0) Loss', 9103.999)], overall loss: -14605.7529296875
Iteration: 417, named_losses: [('ActivationMax Loss', -23752.445),
 ('L-6.0 Norm Loss', 0.86267036),
 ('TV(2.0) Loss', 9124.94)], overall loss: -14626.6416015625
Iteration: 418, named_losses: [('ActivationMax Loss', -23790.475),
 ('L-6.0 Norm Loss', 0.86377186),
 ('TV(2.0) Loss', 9146.946)], overall loss: -14642.6650390625
Iteration: 419, named_losses: [('ActivationMax Loss', -23832.367),
 ('L-6.0 Norm Loss', 0.86476815),
 ('TV(2.0) Loss', 9167.722)], overall loss: -14663.7802734375
Iteration: 420, named_losses: [('ActivationMax Loss', -23864.914),
 ('L-6.0 Norm Loss', 0.8658029),
 ('TV(2.0) Loss', 9184.161)], overall loss: -14679.8876953125
Iteration: 421, named_losses: [('ActivationMax Loss', -23910.861),
 ('L-6.0 Norm Loss', 0.86681986),
 ('TV(2.0) Loss', 9207.138)], overall loss: -14702.8564453125
Iteration: 422, named_losses: [('ActivationMax Loss', -23939.28),
 ('L-6.0 Norm Loss', 0.86792177),
 ('TV(2.0) Loss', 9230.752)], overall loss: -14707.66015625
Iteration: 423, named_losses: [('ActivationMax Loss', -23979.87),
 ('L-6.0 Norm Loss', 0.8689521),
 ('TV(2.0) Loss', 9250.993)], overall loss: -14728.0068359375
Iteration: 424, named_losses: [('ActivationMax Loss', -24018.2),
 ('L-6.0 Norm Loss', 0.8700759),
 ('TV(2.0) Loss', 9274.243)], overall loss: -14743.0869140625
Iteration: 425, named_losses: [('ActivationMax Loss', -24054.809),
 ('L-6.0 Norm Loss', 0.8710461),
 ('TV(2.0) Loss', 9293.823)], overall loss: -14760.1142578125
Iteration: 426, named_losses: [('ActivationMax Loss', -24092.79),
 ('L-6.0 Norm Loss', 0.8721691),
 ('TV(2.0) Loss', 9322.175)], overall loss: -14769.7412109375
Iteration: 427, named_losses: [('ActivationMax Loss', -24130.25),
 ('L-6.0 Norm Loss', 0.87321514),
 ('TV(2.0) Loss', 9334.99)], overall loss: -14794.38671875
Iteration: 428, named_losses: [('ActivationMax Loss', -24168.498),
 ('L-6.0 Norm Loss', 0.87439096),
 ('TV(2.0) Loss', 9365.077)], overall loss: -14802.5458984375
Iteration: 429, named_losses: [('ActivationMax Loss', -24204.988),
 ('L-6.0 Norm Loss', 0.87532514),
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                                      ('TV(2.0) Loss', 9380.647)], overall loss: -14823.4658203125
Iteration: 430, named_losses: [('ActivationMax Loss', -24233.63),
 ('L-6.0 Norm Loss', 0.87640023),
 ('TV(2.0) Loss', 9401.2295)], overall loss: -14831.5244140625
Iteration: 431, named_losses: [('ActivationMax Loss', -24273.344),
 ('L-6.0 Norm Loss', 0.8775134),
 ('TV(2.0) Loss', 9426.403)], overall loss: -14846.0634765625
Iteration: 432, named_losses: [('ActivationMax Loss', -24306.994),
 ('L-6.0 Norm Loss', 0.87857884),
 ('TV(2.0) Loss', 9449.5)], overall loss: -14856.615234375
Iteration: 433, named_losses: [('ActivationMax Loss', -24344.854),
 ('L-6.0 Norm Loss', 0.87959164),
 ('TV(2.0) Loss', 9463.744)], overall loss: -14880.23046875
Iteration: 434, named_losses: [('ActivationMax Loss', -24368.465),
 ('L-6.0 Norm Loss', 0.8806978),
 ('TV(2.0) Loss', 9480.85)], overall loss: -14886.734375
Iteration: 435, named_losses: [('ActivationMax Loss', -24413.713),
 ('L-6.0 Norm Loss', 0.88182235),
 ('TV(2.0) Loss', 9506.846)], overall loss: -14905.986328125
Iteration: 436, named_losses: [('ActivationMax Loss', -24446.408),
 ('L-6.0 Norm Loss', 0.8828691),
 ('TV(2.0) Loss', 9532.909)], overall loss: -14912.6162109375
Iteration: 437, named_losses: [('ActivationMax Loss', -24482.268),
 ('L-6.0 Norm Loss', 0.8839276),
 ('TV(2.0) Loss', 9556.789)], overall loss: -14924.59375
Iteration: 438, named_losses: [('ActivationMax Loss', -24522.348),
 ('L-6.0 Norm Loss', 0.8850042),
 ('TV(2.0) Loss', 9577.463)], overall loss: -14944.0
Iteration: 439, named_losses: [('ActivationMax Loss', -24548.637),
 ('L-6.0 Norm Loss', 0.8860354),
 ('TV(2.0) Loss', 9594.287)], overall loss: -14953.462890625
Iteration: 440, named_losses: [('ActivationMax Loss', -24590.777),
 ('L-6.0 Norm Loss', 0.8871537),
 ('TV(2.0) Loss', 9620.518)], overall loss: -14969.373046875
Iteration: 441, named_losses: [('ActivationMax Loss', -24622.768),
 ('L-6.0 Norm Loss', 0.88825625),
 ('TV(2.0) Loss', 9647.032)], overall loss: -14974.8466796875
Iteration: 442, named_losses: [('ActivationMax Loss', -24667.652),
 ('L-6.0 Norm Loss', 0.8893099),
 ('TV(2.0) Loss', 9670.814)], overall loss: -14995.94921875
Iteration: 443, named_losses: [('ActivationMax Loss', -24711.49),
 ('L-6.0 Norm Loss', 0.8903769),
 ('TV(2.0) Loss', 9700.209)], overall loss: -15010.390625
Iteration: 444, named_losses: [('ActivationMax Loss', -24754.408),
 ('L-6.0 Norm Loss', 0.891467),
 ('TV(2.0) Loss', 9726.509)], overall loss: -15027.0087890625
Iteration: 445, named_losses: [('ActivationMax Loss', -24789.846),
 ('L-6.0 Norm Loss', 0.8924464),
 ('TV(2.0) Loss', 9750.764)], overall loss: -15038.189453125
Iteration: 446, named_losses: [('ActivationMax Loss', -24829.65),
 ('L-6.0 Norm Loss', 0.8934828),
 ('TV(2.0) Loss', 9770.709)], overall loss: -15058.048828125
Iteration: 447, named_losses: [('ActivationMax Loss', -24868.047),
 ('L-6.0 Norm Loss', 0.8945128),
 ('TV(2.0) Loss', 9793.78)], overall loss: -15073.3720703125
Iteration: 448, named_losses: [('ActivationMax Loss', -24910.53),
 ('L-6.0 Norm Loss', 0.8956073),
 ('TV(2.0) Loss', 9827.307)], overall loss: -15082.326171875
Iteration: 449, named_losses: [('ActivationMax Loss', -24938.105),
 ('L-6.0 Norm Loss', 0.8966156),
 ('TV(2.0) Loss', 9841.323)], overall loss: -15095.8857421875
Iteration: 450, named_losses: [('ActivationMax Loss', -24980.084),
 ('L-6.0 Norm Loss', 0.89760983),
 ('TV(2.0) Loss', 9866.019)], overall loss: -15113.1669921875
Iteration: 451, named_losses: [('ActivationMax Loss', -25017.492),
 ('L-6.0 Norm Loss', 0.8986428),
 ('TV(2.0) Loss', 9892.393)], overall loss: -15124.201171875
Iteration: 452, named_losses: [('ActivationMax Loss', -25051.693),
 ('L-6.0 Norm Loss', 0.8997194),
 ('TV(2.0) Loss', 9915.945)], overall loss: -15134.84765625
Iteration: 453, named_losses: [('ActivationMax Loss', -25093.898),
 ('L-6.0 Norm Loss', 0.9006594),
 ('TV(2.0) Loss', 9934.456)], overall loss: -15158.5419921875
Iteration: 454, named_losses: [('ActivationMax Loss', -25133.865),
 ('L-6.0 Norm Loss', 0.9017145),
 ('TV(2.0) Loss', 9965.547)], overall loss: -15167.416015625
Iteration: 455, named_losses: [('ActivationMax Loss', -25172.074),
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('L-6.0 Norm Loss', 0.90267605),
('TV(2.0) Loss', 9984.585)], overall loss: -15186.5869140625
Iteration: 456, named_losses: [('ActivationMax Loss', -25204.803),
('L-6.0 Norm Loss', 0.90363365),
('TV(2.0) Loss', 10003.805)], overall loss: -15200.09375
Iteration: 457, named_losses: [('ActivationMax Loss', -25240.057),
('L-6.0 Norm Loss', 0.90460634),
('TV(2.0) Loss', 10025.103)], overall loss: -15214.0498046875
Iteration: 458, named_losses: [('ActivationMax Loss', -25278.234),
('L-6.0 Norm Loss', 0.9056679),
('TV(2.0) Loss', 10049.958)], overall loss: -15227.3701171875
Iteration: 459, named_losses: [('ActivationMax Loss', -25313.486),
('L-6.0 Norm Loss', 0.9066249),
('TV(2.0) Loss', 10072.922)], overall loss: -15239.658203125
Iteration: 460, named_losses: [('ActivationMax Loss', -25348.664),
('L-6.0 Norm Loss', 0.907594),
('TV(2.0) Loss', 10093.137)], overall loss: -15254.619140625
Iteration: 461, named_losses: [('ActivationMax Loss', -25381.768),
('L-6.0 Norm Loss', 0.90864635),
('TV(2.0) Loss', 10114.696)], overall loss: -15266.1630859375
Iteration: 462, named_losses: [('ActivationMax Loss', -25414.92),
('L-6.0 Norm Loss', 0.9096921),
('TV(2.0) Loss', 10137.64)], overall loss: -15276.3701171875
Iteration: 463, named_losses: [('ActivationMax Loss', -25442.713),
('L-6.0 Norm Loss', 0.91059846),
('TV(2.0) Loss', 10148.976)], overall loss: -15292.8271484375
Iteration: 464, named_losses: [('ActivationMax Loss', -25482.734),
('L-6.0 Norm Loss', 0.91160303),
('TV(2.0) Loss', 10176.166)], overall loss: -15305.65625
Iteration: 465, named_losses: [('ActivationMax Loss', -25520.602),
('L-6.0 Norm Loss', 0.9126773),
('TV(2.0) Loss', 10198.945)], overall loss: -15320.744140625
Iteration: 466, named_losses: [('ActivationMax Loss', -25547.846),
('L-6.0 Norm Loss', 0.9137608),
('TV(2.0) Loss', 10224.44)], overall loss: -15322.4912109375
Iteration: 467, named_losses: [('ActivationMax Loss', -25583.959),
('L-6.0 Norm Loss', 0.91472787),
('TV(2.0) Loss', 10238.384)], overall loss: -15344.6611328125
Iteration: 468, named_losses: [('ActivationMax Loss', -25614.791),
('L-6.0 Norm Loss', 0.91574097),
('TV(2.0) Loss', 10261.656)], overall loss: -15352.21875
Iteration: 469, named_losses: [('ActivationMax Loss', -25646.412),
('L-6.0 Norm Loss', 0.91671443),
('TV(2.0) Loss', 10277.862)], overall loss: -15367.6337890625
Iteration: 470, named_losses: [('ActivationMax Loss', -25687.047),
('L-6.0 Norm Loss', 0.9176654),
('TV(2.0) Loss', 10305.38)], overall loss: -15380.7490234375
Iteration: 471, named_losses: [('ActivationMax Loss', -25715.492),
('L-6.0 Norm Loss', 0.91865396),
('TV(2.0) Loss', 10319.093)], overall loss: -15395.4814453125
Iteration: 472, named_losses: [('ActivationMax Loss', -25750.793),
('L-6.0 Norm Loss', 0.9197029),
('TV(2.0) Loss', 10346.046)], overall loss: -15403.8271484375
Iteration: 473, named_losses: [('ActivationMax Loss', -25785.129),
('L-6.0 Norm Loss', 0.9207047),
('TV(2.0) Loss', 10370.465)], overall loss: -15413.744140625
Iteration: 474, named_losses: [('ActivationMax Loss', -25815.412),
('L-6.0 Norm Loss', 0.92169863),
('TV(2.0) Loss', 10391.273)], overall loss: -15423.216796875
Iteration: 475, named_losses: [('ActivationMax Loss', -25856.09),
('L-6.0 Norm Loss', 0.92269605),
('TV(2.0) Loss', 10411.027)], overall loss: -15444.140625
Iteration: 476, named_losses: [('ActivationMax Loss', -25884.533),
('L-6.0 Norm Loss', 0.9236909),
('TV(2.0) Loss', 10434.374)], overall loss: -15449.2353515625
Iteration: 477, named_losses: [('ActivationMax Loss', -25921.21),
('L-6.0 Norm Loss', 0.92471236),
('TV(2.0) Loss', 10456.413)], overall loss: -15463.8740234375
Iteration: 478, named_losses: [('ActivationMax Loss', -25954.758),
('L-6.0 Norm Loss', 0.9257258),
('TV(2.0) Loss', 10476.257)], overall loss: -15477.5751953125
Iteration: 479, named_losses: [('ActivationMax Loss', -25985.062),
('L-6.0 Norm Loss', 0.9267268),
('TV(2.0) Loss', 10505.853)], overall loss: -15478.2841796875
Iteration: 480, named_losses: [('ActivationMax Loss', -26023.535),
('L-6.0 Norm Loss', 0.927782),
('TV(2.0) Loss', 10527.096)], overall loss: -15495.51171875
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Iteration: 481, named_losses: [('ActivationMax Loss', -26052.572),
 ('L-6.0 Norm Loss', 0.92875606),
 ('TV(2.0) Loss', 10544.363)], overall loss: -15507.279296875
Iteration: 482, named_losses: [('ActivationMax Loss', -26090.068),
 ('L-6.0 Norm Loss', 0.929823),
 ('TV(2.0) Loss', 10566.04)], overall loss: -15523.0986328125
Iteration: 483, named_losses: [('ActivationMax Loss', -26121.135),
 ('L-6.0 Norm Loss', 0.93087655),
 ('TV(2.0) Loss', 10588.361)], overall loss: -15531.841796875
Iteration: 484, named_losses: [('ActivationMax Loss', -26154.525),
 ('L-6.0 Norm Loss', 0.9319574),
 ('TV(2.0) Loss', 10612.385)], overall loss: -15541.208984375
Iteration: 485, named_losses: [('ActivationMax Loss', -26186.625),
 ('L-6.0 Norm Loss', 0.9328907),
 ('TV(2.0) Loss', 10625.788)], overall loss: -15559.9033203125
Iteration: 486, named_losses: [('ActivationMax Loss', -26224.568),
 ('L-6.0 Norm Loss', 0.9339001),
 ('TV(2.0) Loss', 10643.165)], overall loss: -15580.4697265625
Iteration: 487, named_losses: [('ActivationMax Loss', -26248.752),
 ('L-6.0 Norm Loss', 0.9349436),
 ('TV(2.0) Loss', 10668.076)], overall loss: -15579.740234375
Iteration: 488, named_losses: [('ActivationMax Loss', -26283.01),
 ('L-6.0 Norm Loss', 0.93597245),
 ('TV(2.0) Loss', 10684.475)], overall loss: -15597.599609375
Iteration: 489, named_losses: [('ActivationMax Loss', -26313.59),
 ('L-6.0 Norm Loss', 0.937058),
 ('TV(2.0) Loss', 10711.274)], overall loss: -15601.3779296875
Iteration: 490, named_losses: [('ActivationMax Loss', -26350.662),
 ('L-6.0 Norm Loss', 0.93805677),
 ('TV(2.0) Loss', 10730.138)], overall loss: -15619.5869140625
Iteration: 491, named_losses: [('ActivationMax Loss', -26376.352),
 ('L-6.0 Norm Loss', 0.9390547),
 ('TV(2.0) Loss', 10749.501)], overall loss: -15625.9111328125
Iteration: 492, named_losses: [('ActivationMax Loss', -26415.555),
 ('L-6.0 Norm Loss', 0.94013625),
 ('TV(2.0) Loss', 10771.884)], overall loss: -15642.7314453125
Iteration: 493, named_losses: [('ActivationMax Loss', -26444.426),
 ('L-6.0 Norm Loss', 0.9411552),
 ('TV(2.0) Loss', 10792.392)], overall loss: -15651.0927734375
Iteration: 494, named_losses: [('ActivationMax Loss', -26476.082),
 ('L-6.0 Norm Loss', 0.94210845),
 ('TV(2.0) Loss', 10802.999)], overall loss: -15672.1416015625
Iteration: 495, named_losses: [('ActivationMax Loss', -26499.506),
 ('L-6.0 Norm Loss', 0.9430323),
 ('TV(2.0) Loss', 10818.093)], overall loss: -15680.4697265625
Iteration: 496, named_losses: [('ActivationMax Loss', -26527.32),
 ('L-6.0 Norm Loss', 0.9439924),
 ('TV(2.0) Loss', 10842.792)], overall loss: -15683.5849609375
Iteration: 497, named_losses: [('ActivationMax Loss', -26566.102),
 ('L-6.0 Norm Loss', 0.9450061),
 ('TV(2.0) Loss', 10870.448)], overall loss: -15694.7080078125
Iteration: 498, named_losses: [('ActivationMax Loss', -26595.71),
 ('L-6.0 Norm Loss', 0.9459335),
 ('TV(2.0) Loss', 10879.655)], overall loss: -15715.1103515625
Iteration: 499, named_losses: [('ActivationMax Loss', -26628.58),
 ('L-6.0 Norm Loss', 0.94690436),
 ('TV(2.0) Loss', 10906.683)], overall loss: -15720.9501953125
Iteration: 500, named_losses: [('ActivationMax Loss', -26651.725),
 ('L-6.0 Norm Loss', 0.94781107),
 ('TV(2.0) Loss', 10917.345)], overall loss: -15733.4326171875
Iteration: 501, named_losses: [('ActivationMax Loss', -26678.309),
 ('L-6.0 Norm Loss', 0.9488265),
 ('TV(2.0) Loss', 10939.243)], overall loss: -15738.1162109375
Iteration: 502, named_losses: [('ActivationMax Loss', -26717.277),
 ('L-6.0 Norm Loss', 0.94974333),
 ('TV(2.0) Loss', 10960.031)], overall loss: -15756.296875
Iteration: 503, named_losses: [('ActivationMax Loss', -26739.535),
 ('L-6.0 Norm Loss', 0.95073384),
 ('TV(2.0) Loss', 10974.084)], overall loss: -15764.5
Iteration: 504, named_losses: [('ActivationMax Loss', -26769.184),
 ('L-6.0 Norm Loss', 0.9517697),
 ('TV(2.0) Loss', 10997.752)], overall loss: -15770.48046875
Iteration: 505, named_losses: [('ActivationMax Loss', -26795.688),
 ('L-6.0 Norm Loss', 0.952707),
 ('TV(2.0) Loss', 11019.127)], overall loss: -15775.607421875
Iteration: 506, named_losses: [('ActivationMax Loss', -26833.732),
 ('L-6.0 Norm Loss', 0.9537361),
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('L-6.0 Norm Loss', 0.9557001),
('TV(2.0) Loss', 11038.636)], overall loss: -15794.1435546875
Iteration: 507, named_losses: [('ActivationMax Loss', -26853.975),
 ('L-6.0 Norm Loss', 0.9547005),
 ('TV(2.0) Loss', 11055.194)], overall loss: -15797.8251953125
Iteration: 508, named_losses: [('ActivationMax Loss', -26894.598),
 ('L-6.0 Norm Loss', 0.9557031),
 ('TV(2.0) Loss', 11081.729)], overall loss: -15811.9140625
Iteration: 509, named_losses: [('ActivationMax Loss', -26917.697),
 ('L-6.0 Norm Loss', 0.95658576),
 ('TV(2.0) Loss', 11093.231)], overall loss: -15823.5087890625
Iteration: 510, named_losses: [('ActivationMax Loss', -26950.363),
 ('L-6.0 Norm Loss', 0.9575946),
 ('TV(2.0) Loss', 11118.212)], overall loss: -15831.1943359375
Iteration: 511, named_losses: [('ActivationMax Loss', -26979.104),
 ('L-6.0 Norm Loss', 0.9585365),
 ('TV(2.0) Loss', 11137.679)], overall loss: -15840.4658203125
Iteration: 512, named_losses: [('ActivationMax Loss', -27003.223),
 ('L-6.0 Norm Loss', 0.9595735),
 ('TV(2.0) Loss', 11153.549)], overall loss: -15848.71484375
Iteration: 513, named_losses: [('ActivationMax Loss', -27031.682),
 ('L-6.0 Norm Loss', 0.9604416),
 ('TV(2.0) Loss', 11166.253)], overall loss: -15864.4677734375
Iteration: 514, named_losses: [('ActivationMax Loss', -27066.748),
 ('L-6.0 Norm Loss', 0.96145403),
 ('TV(2.0) Loss', 11190.675)], overall loss: -15875.1123046875
Iteration: 515, named_losses: [('ActivationMax Loss', -27087.256),
 ('L-6.0 Norm Loss', 0.9624452),
 ('TV(2.0) Loss', 11206.673)], overall loss: -15879.6201171875
Iteration: 516, named_losses: [('ActivationMax Loss', -27119.07),
 ('L-6.0 Norm Loss', 0.9633925),
 ('TV(2.0) Loss', 11227.188)], overall loss: -15890.9189453125
Iteration: 517, named_losses: [('ActivationMax Loss', -27144.76),
 ('L-6.0 Norm Loss', 0.96439505),
 ('TV(2.0) Loss', 11247.084)], overall loss: -15896.7109375
Iteration: 518, named_losses: [('ActivationMax Loss', -27171.365),
 ('L-6.0 Norm Loss', 0.9653426),
 ('TV(2.0) Loss', 11269.804)], overall loss: -15900.5966796875
Iteration: 519, named_losses: [('ActivationMax Loss', -27199.777),
 ('L-6.0 Norm Loss', 0.96638006),
 ('TV(2.0) Loss', 11283.6)], overall loss: -15915.2109375
Iteration: 520, named_losses: [('ActivationMax Loss', -27230.613),
 ('L-6.0 Norm Loss', 0.96730363),
 ('TV(2.0) Loss', 11304.07)], overall loss: -15925.576171875
Iteration: 521, named_losses: [('ActivationMax Loss', -27261.14),
 ('L-6.0 Norm Loss', 0.9683288),
 ('TV(2.0) Loss', 11326.319)], overall loss: -15933.8525390625
Iteration: 522, named_losses: [('ActivationMax Loss', -27290.33),
 ('L-6.0 Norm Loss', 0.96933526),
 ('TV(2.0) Loss', 11349.146)], overall loss: -15940.21484375
Iteration: 523, named_losses: [('ActivationMax Loss', -27317.604),
 ('L-6.0 Norm Loss', 0.9702782),
 ('TV(2.0) Loss', 11364.68)], overall loss: -15951.953125
Iteration: 524, named_losses: [('ActivationMax Loss', -27343.842),
 ('L-6.0 Norm Loss', 0.97133946),
 ('TV(2.0) Loss', 11386.295)], overall loss: -15956.576171875
Iteration: 525, named_losses: [('ActivationMax Loss', -27373.154),
 ('L-6.0 Norm Loss', 0.97229266),
 ('TV(2.0) Loss', 11405.619)], overall loss: -15966.5625
Iteration: 526, named_losses: [('ActivationMax Loss', -27404.252),
 ('L-6.0 Norm Loss', 0.9731899),
 ('TV(2.0) Loss', 11425.306)], overall loss: -15977.9736328125
Iteration: 527, named_losses: [('ActivationMax Loss', -27435.158),
 ('L-6.0 Norm Loss', 0.9742647),
 ('TV(2.0) Loss', 11445.658)], overall loss: -15988.525390625
Iteration: 528, named_losses: [('ActivationMax Loss', -27447.043),
 ('L-6.0 Norm Loss', 0.9751391),
 ('TV(2.0) Loss', 11455.949)], overall loss: -15990.119140625
Iteration: 529, named_losses: [('ActivationMax Loss', -27486.072),
 ('L-6.0 Norm Loss', 0.9761212),
 ('TV(2.0) Loss', 11481.558)], overall loss: -16003.5380859375
Iteration: 530, named_losses: [('ActivationMax Loss', -27513.125),
 ('L-6.0 Norm Loss', 0.9770828),
 ('TV(2.0) Loss', 11501.669)], overall loss: -16010.4794921875
Iteration: 531, named_losses: [('ActivationMax Loss', -27524.867),
 ('L-6.0 Norm Loss', 0.9780767),
 ('TV(2.0) Loss', 11517.357)], overall loss: -16006.53125
Iteration: 532, named_losses: [('ActivationMax Loss', -27572.59),
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Iteration: 532, named_losses: [('ActivationMax Loss', -27572.09),
 ('L-6.0 Norm Loss', 0.9790931),
 ('TV(2.0) Loss', 11545.998)], overall loss: -16025.61328125
Iteration: 533, named_losses: [('ActivationMax Loss', -27588.703),
 ('L-6.0 Norm Loss', 0.9800979),
 ('TV(2.0) Loss', 11554.405)], overall loss: -16033.3173828125
Iteration: 534, named_losses: [('ActivationMax Loss', -27609.125),
 ('L-6.0 Norm Loss', 0.98107946),
 ('TV(2.0) Loss', 11574.801)], overall loss: -16033.34375
Iteration: 535, named_losses: [('ActivationMax Loss', -27637.885),
 ('L-6.0 Norm Loss', 0.98202926),
 ('TV(2.0) Loss', 11590.242)], overall loss: -16046.66015625
Iteration: 536, named_losses: [('ActivationMax Loss', -27672.084),
 ('L-6.0 Norm Loss', 0.982906),
 ('TV(2.0) Loss', 11610.224)], overall loss: -16060.8779296875
Iteration: 537, named_losses: [('ActivationMax Loss', -27684.895),
 ('L-6.0 Norm Loss', 0.98393214),
 ('TV(2.0) Loss', 11629.686)], overall loss: -16054.224609375
Iteration: 538, named_losses: [('ActivationMax Loss', -27723.818),
 ('L-6.0 Norm Loss', 0.9848897),
 ('TV(2.0) Loss', 11656.494)], overall loss: -16066.33984375
Iteration: 539, named_losses: [('ActivationMax Loss', -27744.504),
 ('L-6.0 Norm Loss', 0.98571813),
 ('TV(2.0) Loss', 11674.25)], overall loss: -16069.267578125
Iteration: 540, named_losses: [('ActivationMax Loss', -27774.69),
 ('L-6.0 Norm Loss', 0.98661906),
 ('TV(2.0) Loss', 11690.557)], overall loss: -16083.146484375
Iteration: 541, named_losses: [('ActivationMax Loss', -27799.412),
 ('L-6.0 Norm Loss', 0.9876538),
 ('TV(2.0) Loss', 11711.905)], overall loss: -16086.5185546875
Iteration: 542, named_losses: [('ActivationMax Loss', -27832.074),
 ('L-6.0 Norm Loss', 0.98856175),
 ('TV(2.0) Loss', 11737.956)], overall loss: -16093.1298828125
Iteration: 543, named_losses: [('ActivationMax Loss', -27851.268),
 ('L-6.0 Norm Loss', 0.98958975),
 ('TV(2.0) Loss', 11750.834)], overall loss: -16099.443359375
Iteration: 544, named_losses: [('ActivationMax Loss', -27891.6),
 ('L-6.0 Norm Loss', 0.9904537),
 ('TV(2.0) Loss', 11775.19)], overall loss: -16115.4189453125
Iteration: 545, named_losses: [('ActivationMax Loss', -27908.693),
 ('L-6.0 Norm Loss', 0.99143994),
 ('TV(2.0) Loss', 11791.339)], overall loss: -16116.3623046875
Iteration: 546, named_losses: [('ActivationMax Loss', -27935.404),
 ('L-6.0 Norm Loss', 0.9924595),
 ('TV(2.0) Loss', 11810.993)], overall loss: -16123.4189453125
Iteration: 547, named_losses: [('ActivationMax Loss', -27964.273),
 ('L-6.0 Norm Loss', 0.9932892),
 ('TV(2.0) Loss', 11821.432)], overall loss: -16141.84765625
Iteration: 548, named_losses: [('ActivationMax Loss', -27982.74),
 ('L-6.0 Norm Loss', 0.99427336),
 ('TV(2.0) Loss', 11845.308)], overall loss: -16136.4384765625
Iteration: 549, named_losses: [('ActivationMax Loss', -28009.434),
 ('L-6.0 Norm Loss', 0.9951466),
 ('TV(2.0) Loss', 11860.307)], overall loss: -16148.130859375
Iteration: 550, named_losses: [('ActivationMax Loss', -28035.672),
 ('L-6.0 Norm Loss', 0.9962023),
 ('TV(2.0) Loss', 11883.971)], overall loss: -16150.705078125
Iteration: 551, named_losses: [('ActivationMax Loss', -28061.068),
 ('L-6.0 Norm Loss', 0.9971186),
 ('TV(2.0) Loss', 11902.26)], overall loss: -16157.810546875
Iteration: 552, named_losses: [('ActivationMax Loss', -28092.152),
 ('L-6.0 Norm Loss', 0.9979008),
 ('TV(2.0) Loss', 11920.056)], overall loss: -16171.0986328125
Iteration: 553, named_losses: [('ActivationMax Loss', -28112.938),
 ('L-6.0 Norm Loss', 0.99894357),
 ('TV(2.0) Loss', 11934.143)], overall loss: -16177.796875
Iteration: 554, named_losses: [('ActivationMax Loss', -28135.441),
 ('L-6.0 Norm Loss', 0.9997315),
 ('TV(2.0) Loss', 11949.727)], overall loss: -16184.71484375
Iteration: 555, named_losses: [('ActivationMax Loss', -28166.258),
 ('L-6.0 Norm Loss', 1.0004733),
 ('TV(2.0) Loss', 11959.771)], overall loss: -16205.486328125
Iteration: 556, named_losses: [('ActivationMax Loss', -28190.463),
 ('L-6.0 Norm Loss', 1.001438),
 ('TV(2.0) Loss', 11982.962)], overall loss: -16206.4990234375
Iteration: 557, named_losses: [('ActivationMax Loss', -28206.945),
 ('L-6.0 Norm Loss', 1.0024693),
 ('TV(2.0) Loss', 12000.08)], overall loss: -16205.86328125
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( 'TV(2.0) Loss', 12000.00)], overall loss:  16209.00520125
Iteration: 558, named_losses: [('ActivationMax Loss', -28233.771),
 ('L-6.0 Norm Loss', 1.0033098),
 ('TV(2.0) Loss', 12020.121)], overall loss: -16212.646484375
Iteration: 559, named_losses: [('ActivationMax Loss', -28253.047),
 ('L-6.0 Norm Loss', 1.004209),
 ('TV(2.0) Loss', 12023.474)], overall loss: -16228.5693359375
Iteration: 560, named_losses: [('ActivationMax Loss', -28278.809),
 ('L-6.0 Norm Loss', 1.0051106),
 ('TV(2.0) Loss', 12044.905)], overall loss: -16232.8974609375
Iteration: 561, named_losses: [('ActivationMax Loss', -28305.92),
 ('L-6.0 Norm Loss', 1.0060561),
 ('TV(2.0) Loss', 12063.708)], overall loss: -16241.2060546875
Iteration: 562, named_losses: [('ActivationMax Loss', -28317.793),
 ('L-6.0 Norm Loss', 1.0068657),
 ('TV(2.0) Loss', 12068.397)], overall loss: -16248.3876953125
Iteration: 563, named_losses: [('ActivationMax Loss', -28350.45),
 ('L-6.0 Norm Loss', 1.0077803),
 ('TV(2.0) Loss', 12093.974)], overall loss: -16255.4677734375
Iteration: 564, named_losses: [('ActivationMax Loss', -28380.418),
 ('L-6.0 Norm Loss', 1.0086819),
 ('TV(2.0) Loss', 12119.869)], overall loss: -16259.541015625
Iteration: 565, named_losses: [('ActivationMax Loss', -28402.783),
 ('L-6.0 Norm Loss', 1.0096111),
 ('TV(2.0) Loss', 12129.88)], overall loss: -16271.8935546875
Iteration: 566, named_losses: [('ActivationMax Loss', -28426.822),
 ('L-6.0 Norm Loss', 1.0104567),
 ('TV(2.0) Loss', 12148.764)], overall loss: -16277.048828125
Iteration: 567, named_losses: [('ActivationMax Loss', -28450.434),
 ('L-6.0 Norm Loss', 1.0113188),
 ('TV(2.0) Loss', 12163.683)], overall loss: -16285.7392578125
Iteration: 568, named_losses: [('ActivationMax Loss', -28470.777),
 ('L-6.0 Norm Loss', 1.0122315),
 ('TV(2.0) Loss', 12183.314)], overall loss: -16286.451171875
Iteration: 569, named_losses: [('ActivationMax Loss', -28504.816),
 ('L-6.0 Norm Loss', 1.0130552),
 ('TV(2.0) Loss', 12202.548)], overall loss: -16301.2548828125
Iteration: 570, named_losses: [('ActivationMax Loss', -28522.436),
 ('L-6.0 Norm Loss', 1.0139725),
 ('TV(2.0) Loss', 12218.894)], overall loss: -16302.5283203125
Iteration: 571, named_losses: [('ActivationMax Loss', -28544.012),
 ('L-6.0 Norm Loss', 1.0148746),
 ('TV(2.0) Loss', 12237.424)], overall loss: -16305.572265625
Iteration: 572, named_losses: [('ActivationMax Loss', -28565.463),
 ('L-6.0 Norm Loss', 1.0158374),
 ('TV(2.0) Loss', 12252.247)], overall loss: -16312.2001953125
Iteration: 573, named_losses: [('ActivationMax Loss', -28592.2),
 ('L-6.0 Norm Loss', 1.0168262),
 ('TV(2.0) Loss', 12277.278)], overall loss: -16313.9033203125
Iteration: 574, named_losses: [('ActivationMax Loss', -28615.3),
 ('L-6.0 Norm Loss', 1.0176009),
 ('TV(2.0) Loss', 12293.187)], overall loss: -16321.0966796875
Iteration: 575, named_losses: [('ActivationMax Loss', -28638.883),
 ('L-6.0 Norm Loss', 1.0185009),
 ('TV(2.0) Loss', 12314.239)], overall loss: -16323.6259765625
Iteration: 576, named_losses: [('ActivationMax Loss', -28656.545),
 ('L-6.0 Norm Loss', 1.0194302),
 ('TV(2.0) Loss', 12317.838)], overall loss: -16337.6875
Iteration: 577, named_losses: [('ActivationMax Loss', -28688.658),
 ('L-6.0 Norm Loss', 1.0202734),
 ('TV(2.0) Loss', 12344.145)], overall loss: -16343.494140625
Iteration: 578, named_losses: [('ActivationMax Loss', -28706.787),
 ('L-6.0 Norm Loss', 1.0211926),
 ('TV(2.0) Loss', 12360.465)], overall loss: -16345.30078125
Iteration: 579, named_losses: [('ActivationMax Loss', -28741.158),
 ('L-6.0 Norm Loss', 1.0219508),
 ('TV(2.0) Loss', 12383.387)], overall loss: -16356.75
Iteration: 580, named_losses: [('ActivationMax Loss', -28756.555),
 ('L-6.0 Norm Loss', 1.0229408),
 ('TV(2.0) Loss', 12398.453)], overall loss: -16357.078125
Iteration: 581, named_losses: [('ActivationMax Loss', -28779.816),
 ('L-6.0 Norm Loss', 1.0237256),
 ('TV(2.0) Loss', 12412.864)], overall loss: -16365.9287109375
Iteration: 582, named_losses: [('ActivationMax Loss', -28802.043),
 ('L-6.0 Norm Loss', 1.0247481),
 ('TV(2.0) Loss', 12436.813)], overall loss: -16364.2041015625
Iteration: 583, named_losses: [('ActivationMax Loss', -28828.064),
 ('L-6.0 Norm Loss', 1.0255884)
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( 'L-6.0 Norm Loss', 1.0233804),
 ('TV(2.0) Loss', 12453.978)], overall loss: -16373.0615234375
Iteration: 584, named_losses: [('ActivationMax Loss', -28853.164),
 ('L-6.0 Norm Loss', 1.0265309),
 ('TV(2.0) Loss', 12467.982)], overall loss: -16384.154296875
Iteration: 585, named_losses: [('ActivationMax Loss', -28870.533),
 ('L-6.0 Norm Loss', 1.0273993),
 ('TV(2.0) Loss', 12480.089)], overall loss: -16389.41796875
Iteration: 586, named_losses: [('ActivationMax Loss', -28897.156),
 ('L-6.0 Norm Loss', 1.0282241),
 ('TV(2.0) Loss', 12497.188)], overall loss: -16398.94140625
Iteration: 587, named_losses: [('ActivationMax Loss', -28916.26),
 ('L-6.0 Norm Loss', 1.0291165),
 ('TV(2.0) Loss', 12511.213)], overall loss: -16404.017578125
Iteration: 588, named_losses: [('ActivationMax Loss', -28948.572),
 ('L-6.0 Norm Loss', 1.029959),
 ('TV(2.0) Loss', 12528.966)], overall loss: -16418.578125
Iteration: 589, named_losses: [('ActivationMax Loss', -28956.205),
 ('L-6.0 Norm Loss', 1.0308003),
 ('TV(2.0) Loss', 12540.855)], overall loss: -16414.318359375
Iteration: 590, named_losses: [('ActivationMax Loss', -28991.309),
 ('L-6.0 Norm Loss', 1.0317051),
 ('TV(2.0) Loss', 12556.576)], overall loss: -16433.701171875
Iteration: 591, named_losses: [('ActivationMax Loss', -29008.584),
 ('L-6.0 Norm Loss', 1.0324647),
 ('TV(2.0) Loss', 12565.014)], overall loss: -16442.537109375
Iteration: 592, named_losses: [('ActivationMax Loss', -29031.379),
 ('L-6.0 Norm Loss', 1.0333259),
 ('TV(2.0) Loss', 12579.553)], overall loss: -16450.79296875
Iteration: 593, named_losses: [('ActivationMax Loss', -29048.572),
 ('L-6.0 Norm Loss', 1.0342294),
 ('TV(2.0) Loss', 12595.819)], overall loss: -16451.71875
Iteration: 594, named_losses: [('ActivationMax Loss', -29063.357),
 ('L-6.0 Norm Loss', 1.0349548),
 ('TV(2.0) Loss', 12608.098)], overall loss: -16454.224609375
Iteration: 595, named_losses: [('ActivationMax Loss', -29089.047),
 ('L-6.0 Norm Loss', 1.0358125),
 ('TV(2.0) Loss', 12624.608)], overall loss: -16463.40234375
Iteration: 596, named_losses: [('ActivationMax Loss', -29110.918),
 ('L-6.0 Norm Loss', 1.0367855),
 ('TV(2.0) Loss', 12641.1)], overall loss: -16468.78125
Iteration: 597, named_losses: [('ActivationMax Loss', -29136.055),
 ('L-6.0 Norm Loss', 1.037573),
 ('TV(2.0) Loss', 12659.93)], overall loss: -16475.087890625
Iteration: 598, named_losses: [('ActivationMax Loss', -29148.412),
 ('L-6.0 Norm Loss', 1.0384684),
 ('TV(2.0) Loss', 12666.626)], overall loss: -16480.74609375
Iteration: 599, named_losses: [('ActivationMax Loss', -29179.299),
 ('L-6.0 Norm Loss', 1.0393709),
 ('TV(2.0) Loss', 12693.273)], overall loss: -16484.986328125
Iteration: 600, named_losses: [('ActivationMax Loss', -29199.742),
 ('L-6.0 Norm Loss', 1.0401976),
 ('TV(2.0) Loss', 12704.411)], overall loss: -16494.2890625
Iteration: 601, named_losses: [('ActivationMax Loss', -29215.67),
 ('L-6.0 Norm Loss', 1.0409901),
 ('TV(2.0) Loss', 12716.139)], overall loss: -16498.490234375
Iteration: 602, named_losses: [('ActivationMax Loss', -29239.867),
 ('L-6.0 Norm Loss', 1.0418522),
 ('TV(2.0) Loss', 12738.45)], overall loss: -16500.375
Iteration: 603, named_losses: [('ActivationMax Loss', -29264.629),
 ('L-6.0 Norm Loss', 1.0426707),
 ('TV(2.0) Loss', 12748.888)], overall loss: -16514.69921875
Iteration: 604, named_losses: [('ActivationMax Loss', -29281.803),
 ('L-6.0 Norm Loss', 1.0435698),
 ('TV(2.0) Loss', 12763.425)], overall loss: -16517.3359375
Iteration: 605, named_losses: [('ActivationMax Loss', -29305.621),
 ('L-6.0 Norm Loss', 1.0444231),
 ('TV(2.0) Loss', 12780.37)], overall loss: -16524.20703125
Iteration: 606, named_losses: [('ActivationMax Loss', -29312.957),
 ('L-6.0 Norm Loss', 1.0453546),
 ('TV(2.0) Loss', 12787.429)], overall loss: -16524.484375
Iteration: 607, named_losses: [('ActivationMax Loss', -29338.383),
 ('L-6.0 Norm Loss', 1.0461199),
 ('TV(2.0) Loss', 12802.118)], overall loss: -16535.21875
Iteration: 608, named_losses: [('ActivationMax Loss', -29362.236),
 ('L-6.0 Norm Loss', 1.0471328),
 ('TV(2.0) Loss', 12816.81)], overall loss: -16544.37890625
Iteration: 609, named_losses: [('ActivationMax Loss', -29382.09),
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Iteration: 609, named_losses: [('ActivationMax Loss', -29382.09),
 ('L-6.0 Norm Loss', 1.0478318),
 ('TV(2.0) Loss', 12825.66)], overall loss: -16555.3828125
Iteration: 610, named_losses: [('ActivationMax Loss', -29401.041),
 ('L-6.0 Norm Loss', 1.0487217),
 ('TV(2.0) Loss', 12841.364)], overall loss: -16558.62890625
Iteration: 611, named_losses: [('ActivationMax Loss', -29427.559),
 ('L-6.0 Norm Loss', 1.0496817),
 ('TV(2.0) Loss', 12862.836)], overall loss: -16563.673828125
Iteration: 612, named_losses: [('ActivationMax Loss', -29448.248),
 ('L-6.0 Norm Loss', 1.0505483),
 ('TV(2.0) Loss', 12871.515)], overall loss: -16575.68359375
Iteration: 613, named_losses: [('ActivationMax Loss', -29467.332),
 ('L-6.0 Norm Loss', 1.0514534),
 ('TV(2.0) Loss', 12889.6455)], overall loss: -16576.63671875
Iteration: 614, named_losses: [('ActivationMax Loss', -29491.178),
 ('L-6.0 Norm Loss', 1.0521613),
 ('TV(2.0) Loss', 12891.054)], overall loss: -16599.0703125
Iteration: 615, named_losses: [('ActivationMax Loss', -29506.855),
 ('L-6.0 Norm Loss', 1.0531569),
 ('TV(2.0) Loss', 12917.506)], overall loss: -16588.296875
Iteration: 616, named_losses: [('ActivationMax Loss', -29528.418),
 ('L-6.0 Norm Loss', 1.0539764),
 ('TV(2.0) Loss', 12926.146)], overall loss: -16601.216796875
Iteration: 617, named_losses: [('ActivationMax Loss', -29553.22),
 ('L-6.0 Norm Loss', 1.0548784),
 ('TV(2.0) Loss', 12948.146)], overall loss: -16604.01953125
Iteration: 618, named_losses: [('ActivationMax Loss', -29566.225),
 ('L-6.0 Norm Loss', 1.0557023),
 ('TV(2.0) Loss', 12956.822)], overall loss: -16608.345703125
Iteration: 619, named_losses: [('ActivationMax Loss', -29600.557),
 ('L-6.0 Norm Loss', 1.0565643),
 ('TV(2.0) Loss', 12974.439)], overall loss: -16625.060546875
Iteration: 620, named_losses: [('ActivationMax Loss', -29606.264),
 ('L-6.0 Norm Loss', 1.0574771),
 ('TV(2.0) Loss', 12986.165)], overall loss: -16619.04296875
Iteration: 621, named_losses: [('ActivationMax Loss', -29630.6),
 ('L-6.0 Norm Loss', 1.0583255),
 ('TV(2.0) Loss', 12999.225)], overall loss: -16630.31640625
Iteration: 622, named_losses: [('ActivationMax Loss', -29644.588),
 ('L-6.0 Norm Loss', 1.0590684),
 ('TV(2.0) Loss', 13011.3955)], overall loss: -16632.1328125
Iteration: 623, named_losses: [('ActivationMax Loss', -29665.537),
 ('L-6.0 Norm Loss', 1.059851),
 ('TV(2.0) Loss', 13024.576)], overall loss: -16639.900390625
Iteration: 624, named_losses: [('ActivationMax Loss', -29679.965),
 ('L-6.0 Norm Loss', 1.0607783),
 ('TV(2.0) Loss', 13039.337)], overall loss: -16639.56640625
Iteration: 625, named_losses: [('ActivationMax Loss', -29708.365),
 ('L-6.0 Norm Loss', 1.0616369),
 ('TV(2.0) Loss', 13057.852)], overall loss: -16649.451171875
Iteration: 626, named_losses: [('ActivationMax Loss', -29724.035),
 ('L-6.0 Norm Loss', 1.0624279),
 ('TV(2.0) Loss', 13066.842)], overall loss: -16656.130859375
Iteration: 627, named_losses: [('ActivationMax Loss', -29740.344),
 ('L-6.0 Norm Loss', 1.0632479),
 ('TV(2.0) Loss', 13083.706)], overall loss: -16655.57421875
Iteration: 628, named_losses: [('ActivationMax Loss', -29753.25),
 ('L-6.0 Norm Loss', 1.0641425),
 ('TV(2.0) Loss', 13091.057)], overall loss: -16661.12890625
Iteration: 629, named_losses: [('ActivationMax Loss', -29792.232),
 ('L-6.0 Norm Loss', 1.0650234),
 ('TV(2.0) Loss', 13119.908)], overall loss: -16671.259765625
Iteration: 630, named_losses: [('ActivationMax Loss', -29796.87),
 ('L-6.0 Norm Loss', 1.0657728),
 ('TV(2.0) Loss', 13127.829)], overall loss: -16667.97265625
Iteration: 631, named_losses: [('ActivationMax Loss', -29816.604),
 ('L-6.0 Norm Loss', 1.0665895),
 ('TV(2.0) Loss', 13135.267)], overall loss: -16680.26953125
Iteration: 632, named_losses: [('ActivationMax Loss', -29833.576),
 ('L-6.0 Norm Loss', 1.0674412),
 ('TV(2.0) Loss', 13149.307)], overall loss: -16683.201171875
Iteration: 633, named_losses: [('ActivationMax Loss', -29842.23),
 ('L-6.0 Norm Loss', 1.0683024),
 ('TV(2.0) Loss', 13161.951)], overall loss: -16679.2109375
Iteration: 634, named_losses: [('ActivationMax Loss', -29874.006),
 ('L-6.0 Norm Loss', 1.0690823),
 ('TV(2.0) Loss', 13180.374)], overall loss: -16693.5625

('TV(2.0) Loss', 13180.374)], overall loss: -16692.5625
Iteration: 635, named_losses: [('ActivationMax Loss', -29879.97),
 ('L-6.0 Norm Loss', 1.0699031),
 ('TV(2.0) Loss', 13190.948)], overall loss: -16687.953125
Iteration: 636, named_losses: [('ActivationMax Loss', -29902.973),
 ('L-6.0 Norm Loss', 1.07068),
 ('TV(2.0) Loss', 13200.533)], overall loss: -16701.369140625
Iteration: 637, named_losses: [('ActivationMax Loss', -29917.418),
 ('L-6.0 Norm Loss', 1.0714848),
 ('TV(2.0) Loss', 13220.419)], overall loss: -16695.92578125
Iteration: 638, named_losses: [('ActivationMax Loss', -29935.719),
 ('L-6.0 Norm Loss', 1.0722651),
 ('TV(2.0) Loss', 13226.617)], overall loss: -16708.029296875
Iteration: 639, named_losses: [('ActivationMax Loss', -29961.086),
 ('L-6.0 Norm Loss', 1.0730834),
 ('TV(2.0) Loss', 13253.076)], overall loss: -16706.9375
Iteration: 640, named_losses: [('ActivationMax Loss', -29975.652),
 ('L-6.0 Norm Loss', 1.0739329),
 ('TV(2.0) Loss', 13260.162)], overall loss: -16714.416015625
Iteration: 641, named_losses: [('ActivationMax Loss', -29985.375),
 ('L-6.0 Norm Loss', 1.0748497),
 ('TV(2.0) Loss', 13272.426)], overall loss: -16711.875
Iteration: 642, named_losses: [('ActivationMax Loss', -30010.004),
 ('L-6.0 Norm Loss', 1.075586),
 ('TV(2.0) Loss', 13284.821)], overall loss: -16724.10546875
Iteration: 643, named_losses: [('ActivationMax Loss', -30024.14),
 ('L-6.0 Norm Loss', 1.0764604),
 ('TV(2.0) Loss', 13303.83)], overall loss: -16719.234375
Iteration: 644, named_losses: [('ActivationMax Loss', -30041.117),
 ('L-6.0 Norm Loss', 1.0772288),
 ('TV(2.0) Loss', 13310.208)], overall loss: -16729.83203125
Iteration: 645, named_losses: [('ActivationMax Loss', -30064.152),
 ('L-6.0 Norm Loss', 1.078066),
 ('TV(2.0) Loss', 13331.917)], overall loss: -16731.15625
Iteration: 646, named_losses: [('ActivationMax Loss', -30080.648),
 ('L-6.0 Norm Loss', 1.078843),
 ('TV(2.0) Loss', 13330.67)], overall loss: -16748.900390625
Iteration: 647, named_losses: [('ActivationMax Loss', -30092.22),
 ('L-6.0 Norm Loss', 1.0796515),
 ('TV(2.0) Loss', 13343.287)], overall loss: -16747.853515625
Iteration: 648, named_losses: [('ActivationMax Loss', -30117.543),
 ('L-6.0 Norm Loss', 1.0804781),
 ('TV(2.0) Loss', 13355.936)], overall loss: -16760.52734375
Iteration: 649, named_losses: [('ActivationMax Loss', -30126.375),
 ('L-6.0 Norm Loss', 1.0813923),
 ('TV(2.0) Loss', 13375.187)], overall loss: -16750.10546875
Iteration: 650, named_losses: [('ActivationMax Loss', -30151.613),
 ('L-6.0 Norm Loss', 1.0822159),
 ('TV(2.0) Loss', 13385.904)], overall loss: -16764.626953125
Iteration: 651, named_losses: [('ActivationMax Loss', -30156.533),
 ('L-6.0 Norm Loss', 1.0829545),
 ('TV(2.0) Loss', 13389.986)], overall loss: -16765.46484375
Iteration: 652, named_losses: [('ActivationMax Loss', -30183.842),
 ('L-6.0 Norm Loss', 1.0836011),
 ('TV(2.0) Loss', 13400.378)], overall loss: -16782.37890625
Iteration: 653, named_losses: [('ActivationMax Loss', -30198.541),
 ('L-6.0 Norm Loss', 1.0844983),
 ('TV(2.0) Loss', 13419.112)], overall loss: -16778.34375
Iteration: 654, named_losses: [('ActivationMax Loss', -30222.129),
 ('L-6.0 Norm Loss', 1.0853553),
 ('TV(2.0) Loss', 13428.422)], overall loss: -16792.62109375
Iteration: 655, named_losses: [('ActivationMax Loss', -30226.975),
 ('L-6.0 Norm Loss', 1.0861734),
 ('TV(2.0) Loss', 13437.289)], overall loss: -16788.599609375
Iteration: 656, named_losses: [('ActivationMax Loss', -30256.99),
 ('L-6.0 Norm Loss', 1.0869459),
 ('TV(2.0) Loss', 13449.275)], overall loss: -16806.626953125
Iteration: 657, named_losses: [('ActivationMax Loss', -30259.074),
 ('L-6.0 Norm Loss', 1.0877573),
 ('TV(2.0) Loss', 13461.705)], overall loss: -16796.28125
Iteration: 658, named_losses: [('ActivationMax Loss', -30283.207),
 ('L-6.0 Norm Loss', 1.0884985),
 ('TV(2.0) Loss', 13470.851)], overall loss: -16811.26953125
Iteration: 659, named_losses: [('ActivationMax Loss', -30293.207),
 ('L-6.0 Norm Loss', 1.0891804),
 ('TV(2.0) Loss', 13481.847)], overall loss: -16810.26953125
Iteration: 660, named_losses: [('ActivationMax Loss', -30307.816),

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('L-6.0 Norm Loss', 1.0901423),
 ('TV(2.0) Loss', 13494.956)], overall loss: -16811.76953125
Iteration: 661, named_losses: [('ActivationMax Loss', -30328.572),
 ('L-6.0 Norm Loss', 1.0908622),
 ('TV(2.0) Loss', 13508.873)], overall loss: -16818.607421875
Iteration: 662, named_losses: [('ActivationMax Loss', -30339.93),
 ('L-6.0 Norm Loss', 1.0916263),
 ('TV(2.0) Loss', 13518.538)], overall loss: -16820.30078125
Iteration: 663, named_losses: [('ActivationMax Loss', -30360.84),
 ('L-6.0 Norm Loss', 1.0924413),
 ('TV(2.0) Loss', 13531.861)], overall loss: -16827.88671875
Iteration: 664, named_losses: [('ActivationMax Loss', -30378.639),
 ('L-6.0 Norm Loss', 1.0932735),
 ('TV(2.0) Loss', 13547.342)], overall loss: -16830.203125
Iteration: 665, named_losses: [('ActivationMax Loss', -30394.318),
 ('L-6.0 Norm Loss', 1.0938739),
 ('TV(2.0) Loss', 13560.814)], overall loss: -16832.41015625
Iteration: 666, named_losses: [('ActivationMax Loss', -30407.13),
 ('L-6.0 Norm Loss', 1.0947517),
 ('TV(2.0) Loss', 13566.303)], overall loss: -16839.732421875
Iteration: 667, named_losses: [('ActivationMax Loss', -30428.723),
 ('L-6.0 Norm Loss', 1.0955027),
 ('TV(2.0) Loss', 13581.37)], overall loss: -16846.2578125
Iteration: 668, named_losses: [('ActivationMax Loss', -30445.096),
 ('L-6.0 Norm Loss', 1.0963945),
 ('TV(2.0) Loss', 13595.683)], overall loss: -16848.31640625
Iteration: 669, named_losses: [('ActivationMax Loss', -30454.19),
 ('L-6.0 Norm Loss', 1.0970728),
 ('TV(2.0) Loss', 13598.4)], overall loss: -16854.69140625
Iteration: 670, named_losses: [('ActivationMax Loss', -30478.64),
 ('L-6.0 Norm Loss', 1.0976567),
 ('TV(2.0) Loss', 13606.396)], overall loss: -16871.146484375
Iteration: 671, named_losses: [('ActivationMax Loss', -30488.285),
 ('L-6.0 Norm Loss', 1.0986469),
 ('TV(2.0) Loss', 13627.824)], overall loss: -16859.361328125
Iteration: 672, named_losses: [('ActivationMax Loss', -30509.66),
 ('L-6.0 Norm Loss', 1.0993308),
 ('TV(2.0) Loss', 13629.899)], overall loss: -16878.66015625
Iteration: 673, named_losses: [('ActivationMax Loss', -30522.123),
 ('L-6.0 Norm Loss', 1.1000134),
 ('TV(2.0) Loss', 13645.7295)], overall loss: -16875.29296875
Iteration: 674, named_losses: [('ActivationMax Loss', -30534.328),
 ('L-6.0 Norm Loss', 1.1007814),
 ('TV(2.0) Loss', 13649.4)], overall loss: -16883.826171875
Iteration: 675, named_losses: [('ActivationMax Loss', -30556.156),
 ('L-6.0 Norm Loss', 1.1015754),
 ('TV(2.0) Loss', 13663.161)], overall loss: -16891.89453125
Iteration: 676, named_losses: [('ActivationMax Loss', -30559.898),
 ('L-6.0 Norm Loss', 1.1021724),
 ('TV(2.0) Loss', 13670.427)], overall loss: -16888.37109375
Iteration: 677, named_losses: [('ActivationMax Loss', -30585.371),
 ('L-6.0 Norm Loss', 1.1029238),
 ('TV(2.0) Loss', 13682.56)], overall loss: -16901.70703125
Iteration: 678, named_losses: [('ActivationMax Loss', -30594.402),
 ('L-6.0 Norm Loss', 1.1037835),
 ('TV(2.0) Loss', 13692.229)], overall loss: -16901.0703125
Iteration: 679, named_losses: [('ActivationMax Loss', -30620.54),
 ('L-6.0 Norm Loss', 1.1045462),
 ('TV(2.0) Loss', 13716.718)], overall loss: -16902.71484375
Iteration: 680, named_losses: [('ActivationMax Loss', -30632.072),
 ('L-6.0 Norm Loss', 1.1052277),
 ('TV(2.0) Loss', 13713.79)], overall loss: -16917.17578125
Iteration: 681, named_losses: [('ActivationMax Loss', -30647.113),
 ('L-6.0 Norm Loss', 1.1059821),
 ('TV(2.0) Loss', 13732.074)], overall loss: -16913.93359375
Iteration: 682, named_losses: [('ActivationMax Loss', -30668.34),
 ('L-6.0 Norm Loss', 1.1067092),
 ('TV(2.0) Loss', 13742.326)], overall loss: -16924.90625
Iteration: 683, named_losses: [('ActivationMax Loss', -30684.176),
 ('L-6.0 Norm Loss', 1.1074558),
 ('TV(2.0) Loss', 13756.936)], overall loss: -16926.1328125
Iteration: 684, named_losses: [('ActivationMax Loss', -30694.4),
 ('L-6.0 Norm Loss', 1.108189),
 ('TV(2.0) Loss', 13762.78)], overall loss: -16930.51171875
Iteration: 685, named_losses: [('ActivationMax Loss', -30709.213),
 ('L-6.0 Norm Loss', 1.108879),
 ('TV(2.0) Loss', 13774.767)], overall loss: -16933.3359375
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Iteration: 686, named_losses: [('ActivationMax Loss', -30720.816),
 ('L-6.0 Norm Loss', 1.1095815),
 ('TV(2.0) Loss', 13785.58)], overall loss: -16934.126953125
Iteration: 687, named_losses: [('ActivationMax Loss', -30738.604),
 ('L-6.0 Norm Loss', 1.1102917),
 ('TV(2.0) Loss', 13797.784)], overall loss: -16939.7109375
Iteration: 688, named_losses: [('ActivationMax Loss', -30758.014),
 ('L-6.0 Norm Loss', 1.1107976),
 ('TV(2.0) Loss', 13805.388)], overall loss: -16951.515625
Iteration: 689, named_losses: [('ActivationMax Loss', -30763.654),
 ('L-6.0 Norm Loss', 1.1117245),
 ('TV(2.0) Loss', 13814.737)], overall loss: -16947.8046875
Iteration: 690, named_losses: [('ActivationMax Loss', -30783.926),
 ('L-6.0 Norm Loss', 1.1124623),
 ('TV(2.0) Loss', 13831.144)], overall loss: -16951.66796875
Iteration: 691, named_losses: [('ActivationMax Loss', -30803.271),
 ('L-6.0 Norm Loss', 1.1132175),
 ('TV(2.0) Loss', 13839.838)], overall loss: -16962.3203125
Iteration: 692, named_losses: [('ActivationMax Loss', -30821.96),
 ('L-6.0 Norm Loss', 1.1138799),
 ('TV(2.0) Loss', 13853.546)], overall loss: -16967.30078125
Iteration: 693, named_losses: [('ActivationMax Loss', -30831.986),
 ('L-6.0 Norm Loss', 1.1146215),
 ('TV(2.0) Loss', 13865.6875)], overall loss: -16965.18359375
Iteration: 694, named_losses: [('ActivationMax Loss', -30848.58),
 ('L-6.0 Norm Loss', 1.1153573),
 ('TV(2.0) Loss', 13876.408)], overall loss: -16971.056640625
Iteration: 695, named_losses: [('ActivationMax Loss', -30868.602),
 ('L-6.0 Norm Loss', 1.116124),
 ('TV(2.0) Loss', 13897.672)], overall loss: -16969.814453125
Iteration: 696, named_losses: [('ActivationMax Loss', -30880.305),
 ('L-6.0 Norm Loss', 1.1167514),
 ('TV(2.0) Loss', 13893.663)], overall loss: -16985.5234375
Iteration: 697, named_losses: [('ActivationMax Loss', -30900.84),
 ('L-6.0 Norm Loss', 1.1175652),
 ('TV(2.0) Loss', 13916.608)], overall loss: -16983.11328125
Iteration: 698, named_losses: [('ActivationMax Loss', -30913.217),
 ('L-6.0 Norm Loss', 1.1182394),
 ('TV(2.0) Loss', 13921.5205)], overall loss: -16990.578125
Iteration: 699, named_losses: [('ActivationMax Loss', -30934.451),
 ('L-6.0 Norm Loss', 1.118934),
 ('TV(2.0) Loss', 13931.939)], overall loss: -17001.392578125
Iteration: 700, named_losses: [('ActivationMax Loss', -30943.133),
 ('L-6.0 Norm Loss', 1.119569),
 ('TV(2.0) Loss', 13941.563)], overall loss: -17000.44921875
Iteration: 701, named_losses: [('ActivationMax Loss', -30964.182),
 ('L-6.0 Norm Loss', 1.120328),
 ('TV(2.0) Loss', 13954.488)], overall loss: -17008.572265625
Iteration: 702, named_losses: [('ActivationMax Loss', -30971.27),
 ('L-6.0 Norm Loss', 1.1210223),
 ('TV(2.0) Loss', 13967.655)], overall loss: -17002.4921875
Iteration: 703, named_losses: [('ActivationMax Loss', -30996.35),
 ('L-6.0 Norm Loss', 1.1218786),
 ('TV(2.0) Loss', 13986.864)], overall loss: -17008.36328125
Iteration: 704, named_losses: [('ActivationMax Loss', -31006.799),
 ('L-6.0 Norm Loss', 1.1225367),
 ('TV(2.0) Loss', 13992.831)], overall loss: -17012.84375
Iteration: 705, named_losses: [('ActivationMax Loss', -31021.266),
 ('L-6.0 Norm Loss', 1.123229),
 ('TV(2.0) Loss', 14006.728)], overall loss: -17013.4140625
Iteration: 706, named_losses: [('ActivationMax Loss', -31034.133),
 ('L-6.0 Norm Loss', 1.1238152),
 ('TV(2.0) Loss', 14013.959)], overall loss: -17019.05078125
Iteration: 707, named_losses: [('ActivationMax Loss', -31055.361),
 ('L-6.0 Norm Loss', 1.1247332),
 ('TV(2.0) Loss', 14033.342)], overall loss: -17020.89453125
Iteration: 708, named_losses: [('ActivationMax Loss', -31065.367),
 ('L-6.0 Norm Loss', 1.1252593),
 ('TV(2.0) Loss', 14040.141)], overall loss: -17024.1015625
Iteration: 709, named_losses: [('ActivationMax Loss', -31088.385),
 ('L-6.0 Norm Loss', 1.1260383),
 ('TV(2.0) Loss', 14055.231)], overall loss: -17032.02734375
Iteration: 710, named_losses: [('ActivationMax Loss', -31092.715),
 ('L-6.0 Norm Loss', 1.1267444),
 ('TV(2.0) Loss', 14065.102)], overall loss: -17026.486328125
Iteration: 711, named_losses: [('ActivationMax Loss', -31112.682),
 ('L-6.0 Norm Loss', 1.1274005),
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('TV(2.0) Loss', 14078.8955)], overall loss: -17032.66015625
Iteration: 712, named_losses: [('ActivationMax Loss', -31129.852),
 ('L-6.0 Norm Loss', 1.1281298),
 ('TV(2.0) Loss', 14084.68)], overall loss: -17044.04296875
Iteration: 713, named_losses: [('ActivationMax Loss', -31137.758),
 ('L-6.0 Norm Loss', 1.1288846),
 ('TV(2.0) Loss', 14098.91)], overall loss: -17037.71875
Iteration: 714, named_losses: [('ActivationMax Loss', -31155.225),
 ('L-6.0 Norm Loss', 1.1296548),
 ('TV(2.0) Loss', 14108.824)], overall loss: -17045.271484375
Iteration: 715, named_losses: [('ActivationMax Loss', -31175.29),
 ('L-6.0 Norm Loss', 1.130317),
 ('TV(2.0) Loss', 14122.16)], overall loss: -17051.998046875
Iteration: 716, named_losses: [('ActivationMax Loss', -31179.916),
 ('L-6.0 Norm Loss', 1.13098),
 ('TV(2.0) Loss', 14129.174)], overall loss: -17049.611328125
Iteration: 717, named_losses: [('ActivationMax Loss', -31202.42),
 ('L-6.0 Norm Loss', 1.131656),
 ('TV(2.0) Loss', 14142.321)], overall loss: -17058.96875
Iteration: 718, named_losses: [('ActivationMax Loss', -31211.027),
 ('L-6.0 Norm Loss', 1.1323138),
 ('TV(2.0) Loss', 14157.499)], overall loss: -17052.39453125
Iteration: 719, named_losses: [('ActivationMax Loss', -31223.312),
 ('L-6.0 Norm Loss', 1.1329998),
 ('TV(2.0) Loss', 14160.378)], overall loss: -17061.80078125
Iteration: 720, named_losses: [('ActivationMax Loss', -31238.123),
 ('L-6.0 Norm Loss', 1.133663),
 ('TV(2.0) Loss', 14171.501)], overall loss: -17065.48828125
Iteration: 721, named_losses: [('ActivationMax Loss', -31256.895),
 ('L-6.0 Norm Loss', 1.1345254),
 ('TV(2.0) Loss', 14194.532)], overall loss: -17061.2265625
Iteration: 722, named_losses: [('ActivationMax Loss', -31266.99),
 ('L-6.0 Norm Loss', 1.1352407),
 ('TV(2.0) Loss', 14194.405)], overall loss: -17071.44921875
Iteration: 723, named_losses: [('ActivationMax Loss', -31281.406),
 ('L-6.0 Norm Loss', 1.1358129),
 ('TV(2.0) Loss', 14209.431)], overall loss: -17070.83984375
Iteration: 724, named_losses: [('ActivationMax Loss', -31294.947),
 ('L-6.0 Norm Loss', 1.1363993),
 ('TV(2.0) Loss', 14213.527)], overall loss: -17080.283203125
Iteration: 725, named_losses: [('ActivationMax Loss', -31310.121),
 ('L-6.0 Norm Loss', 1.1370599),
 ('TV(2.0) Loss', 14228.974)], overall loss: -17080.01171875
Iteration: 726, named_losses: [('ActivationMax Loss', -31317.77),
 ('L-6.0 Norm Loss', 1.1377466),
 ('TV(2.0) Loss', 14237.216)], overall loss: -17079.4140625
Iteration: 727, named_losses: [('ActivationMax Loss', -31329.85),
 ('L-6.0 Norm Loss', 1.1383498),
 ('TV(2.0) Loss', 14250.539)], overall loss: -17078.171875
Iteration: 728, named_losses: [('ActivationMax Loss', -31346.666),
 ('L-6.0 Norm Loss', 1.139096),
 ('TV(2.0) Loss', 14252.038)], overall loss: -17093.48828125
Iteration: 729, named_losses: [('ActivationMax Loss', -31352.203),
 ('L-6.0 Norm Loss', 1.13967),
 ('TV(2.0) Loss', 14263.461)], overall loss: -17087.6015625
Iteration: 730, named_losses: [('ActivationMax Loss', -31364.627),
 ('L-6.0 Norm Loss', 1.1403376),
 ('TV(2.0) Loss', 14271.698)], overall loss: -17091.7890625
Iteration: 731, named_losses: [('ActivationMax Loss', -31385.244),
 ('L-6.0 Norm Loss', 1.1410654),
 ('TV(2.0) Loss', 14285.392)], overall loss: -17098.7109375
Iteration: 732, named_losses: [('ActivationMax Loss', -31396.51),
 ('L-6.0 Norm Loss', 1.1417131),
 ('TV(2.0) Loss', 14289.718)], overall loss: -17105.6484375
Iteration: 733, named_losses: [('ActivationMax Loss', -31416.518),
 ('L-6.0 Norm Loss', 1.1424228),
 ('TV(2.0) Loss', 14303.746)], overall loss: -17111.62890625
Iteration: 734, named_losses: [('ActivationMax Loss', -31415.363),
 ('L-6.0 Norm Loss', 1.1430091),
 ('TV(2.0) Loss', 14310.507)], overall loss: -17103.71484375
Iteration: 735, named_losses: [('ActivationMax Loss', -31432.963),
 ('L-6.0 Norm Loss', 1.1435516),
 ('TV(2.0) Loss', 14315.993)], overall loss: -17115.828125
Iteration: 736, named_losses: [('ActivationMax Loss', -31440.543),
 ('L-6.0 Norm Loss', 1.1441827),
 ('TV(2.0) Loss', 14327.394)], overall loss: -17112.00390625
Iteration: 737, named_losses: [('ActivationMax Loss', -31462.402),
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('L-6.0 Norm Loss', 1.1446663),
 ('TV(2.0) Loss', 14331.662)], overall loss: -17129.595703125
Iteration: 738, named_losses: [('ActivationMax Loss', -31461.96),
 ('L-6.0 Norm Loss', 1.1453993),
 ('TV(2.0) Loss', 14344.921)], overall loss: -17115.89453125
Iteration: 739, named_losses: [('ActivationMax Loss', -31482.033),
 ('L-6.0 Norm Loss', 1.145923),
 ('TV(2.0) Loss', 14354.421)], overall loss: -17126.46484375
Iteration: 740, named_losses: [('ActivationMax Loss', -31485.32),
 ('L-6.0 Norm Loss', 1.1466628),
 ('TV(2.0) Loss', 14362.536)], overall loss: -17121.63671875
Iteration: 741, named_losses: [('ActivationMax Loss', -31508.816),
 ('L-6.0 Norm Loss', 1.1471994),
 ('TV(2.0) Loss', 14370.021)], overall loss: -17137.6484375
Iteration: 742, named_losses: [('ActivationMax Loss', -31517.652),
 ('L-6.0 Norm Loss', 1.147955),
 ('TV(2.0) Loss', 14387.906)], overall loss: -17128.59765625
Iteration: 743, named_losses: [('ActivationMax Loss', -31535.48),
 ('L-6.0 Norm Loss', 1.148433),
 ('TV(2.0) Loss', 14393.551)], overall loss: -17140.78125
Iteration: 744, named_losses: [('ActivationMax Loss', -31536.133),
 ('L-6.0 Norm Loss', 1.1490849),
 ('TV(2.0) Loss', 14404.186)], overall loss: -17130.798828125
Iteration: 745, named_losses: [('ActivationMax Loss', -31553.797),
 ('L-6.0 Norm Loss', 1.1496848),
 ('TV(2.0) Loss', 14414.558)], overall loss: -17138.08984375
Iteration: 746, named_losses: [('ActivationMax Loss', -31565.725),
 ('L-6.0 Norm Loss', 1.1502743),
 ('TV(2.0) Loss', 14422.465)], overall loss: -17142.109375
Iteration: 747, named_losses: [('ActivationMax Loss', -31576.494),
 ('L-6.0 Norm Loss', 1.1509796),
 ('TV(2.0) Loss', 14434.042)], overall loss: -17141.30078125
Iteration: 748, named_losses: [('ActivationMax Loss', -31597.865),
 ('L-6.0 Norm Loss', 1.1515715),
 ('TV(2.0) Loss', 14447.555)], overall loss: -17149.158203125
Iteration: 749, named_losses: [('ActivationMax Loss', -31604.746),
 ('L-6.0 Norm Loss', 1.1520267),
 ('TV(2.0) Loss', 14455.885)], overall loss: -17147.708984375
Iteration: 750, named_losses: [('ActivationMax Loss', -31616.746),
 ('L-6.0 Norm Loss', 1.1527663),
 ('TV(2.0) Loss', 14458.522)], overall loss: -17157.0703125
Iteration: 751, named_losses: [('ActivationMax Loss', -31625.643),
 ('L-6.0 Norm Loss', 1.153287),
 ('TV(2.0) Loss', 14471.1045)], overall loss: -17153.38671875
Iteration: 752, named_losses: [('ActivationMax Loss', -31633.07),
 ('L-6.0 Norm Loss', 1.1539332),
 ('TV(2.0) Loss', 14476.149)], overall loss: -17155.765625
Iteration: 753, named_losses: [('ActivationMax Loss', -31649.824),
 ('L-6.0 Norm Loss', 1.1545296),
 ('TV(2.0) Loss', 14488.015)], overall loss: -17160.65625
Iteration: 754, named_losses: [('ActivationMax Loss', -31661.898),
 ('L-6.0 Norm Loss', 1.1550971),
 ('TV(2.0) Loss', 14500.1455)], overall loss: -17160.59765625
Iteration: 755, named_losses: [('ActivationMax Loss', -31682.248),
 ('L-6.0 Norm Loss', 1.1558281),
 ('TV(2.0) Loss', 14510.964)], overall loss: -17170.12890625
Iteration: 756, named_losses: [('ActivationMax Loss', -31681.781),
 ('L-6.0 Norm Loss', 1.1564504),
 ('TV(2.0) Loss', 14519.034)], overall loss: -17161.58984375
Iteration: 757, named_losses: [('ActivationMax Loss', -31702.648),
 ('L-6.0 Norm Loss', 1.1569754),
 ('TV(2.0) Loss', 14527.4375)], overall loss: -17174.0546875
Iteration: 758, named_losses: [('ActivationMax Loss', -31705.918),
 ('L-6.0 Norm Loss', 1.1576647),
 ('TV(2.0) Loss', 14533.327)], overall loss: -17171.43359375
Iteration: 759, named_losses: [('ActivationMax Loss', -31716.402),
 ('L-6.0 Norm Loss', 1.1581764),
 ('TV(2.0) Loss', 14537.506)], overall loss: -17177.73828125
Iteration: 760, named_losses: [('ActivationMax Loss', -31737.89),
 ('L-6.0 Norm Loss', 1.1589757),
 ('TV(2.0) Loss', 14557.623)], overall loss: -17179.109375
Iteration: 761, named_losses: [('ActivationMax Loss', -31741.639),
 ('L-6.0 Norm Loss', 1.159547),
 ('TV(2.0) Loss', 14557.897)], overall loss: -17182.58203125
Iteration: 762, named_losses: [('ActivationMax Loss', -31751.996),
 ('L-6.0 Norm Loss', 1.1600684),
 ('TV(2.0) Loss', 14573.552)], overall loss: -17177.28515625
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Iteration: 763, named_losses: [('ActivationMax Loss', -31764.795),
 ('L-6.0 Norm Loss', 1.1605394),
 ('TV(2.0) Loss', 14579.518)], overall loss: -17184.1171875
Iteration: 764, named_losses: [('ActivationMax Loss', -31780.24),
 ('L-6.0 Norm Loss', 1.1613027),
 ('TV(2.0) Loss', 14586.4375)], overall loss: -17192.640625
Iteration: 765, named_losses: [('ActivationMax Loss', -31779.715),
 ('L-6.0 Norm Loss', 1.1617177),
 ('TV(2.0) Loss', 14592.558)], overall loss: -17185.99609375
Iteration: 766, named_losses: [('ActivationMax Loss', -31797.047),
 ('L-6.0 Norm Loss', 1.1624117),
 ('TV(2.0) Loss', 14600.287)], overall loss: -17195.59765625
Iteration: 767, named_losses: [('ActivationMax Loss', -31815.355),
 ('L-6.0 Norm Loss', 1.1630012),
 ('TV(2.0) Loss', 14609.851)], overall loss: -17204.34375
Iteration: 768, named_losses: [('ActivationMax Loss', -31817.74),
 ('L-6.0 Norm Loss', 1.1637003),
 ('TV(2.0) Loss', 14625.536)], overall loss: -17191.0390625
Iteration: 769, named_losses: [('ActivationMax Loss', -31821.55),
 ('L-6.0 Norm Loss', 1.1640534),
 ('TV(2.0) Loss', 14619.431)], overall loss: -17200.95703125
Iteration: 770, named_losses: [('ActivationMax Loss', -31845.383),
 ('L-6.0 Norm Loss', 1.1647964),
 ('TV(2.0) Loss', 14639.589)], overall loss: -17204.62890625
Iteration: 771, named_losses: [('ActivationMax Loss', -31841.74),
 ('L-6.0 Norm Loss', 1.1653898),
 ('TV(2.0) Loss', 14644.68)], overall loss: -17195.89453125
Iteration: 772, named_losses: [('ActivationMax Loss', -31876.49),
 ('L-6.0 Norm Loss', 1.1660123),
 ('TV(2.0) Loss', 14666.716)], overall loss: -17208.609375
Iteration: 773, named_losses: [('ActivationMax Loss', -31874.873),
 ('L-6.0 Norm Loss', 1.1665229),
 ('TV(2.0) Loss', 14665.312)], overall loss: -17208.39453125
Iteration: 774, named_losses: [('ActivationMax Loss', -31892.656),
 ('L-6.0 Norm Loss', 1.1670842),
 ('TV(2.0) Loss', 14670.817)], overall loss: -17220.671875
Iteration: 775, named_losses: [('ActivationMax Loss', -31886.232),
 ('L-6.0 Norm Loss', 1.1675131),
 ('TV(2.0) Loss', 14672.055)], overall loss: -17213.009765625
Iteration: 776, named_losses: [('ActivationMax Loss', -31911.59),
 ('L-6.0 Norm Loss', 1.168248),
 ('TV(2.0) Loss', 14688.651)], overall loss: -17221.76953125
Iteration: 777, named_losses: [('ActivationMax Loss', -31908.412),
 ('L-6.0 Norm Loss', 1.1687583),
 ('TV(2.0) Loss', 14696.993)], overall loss: -17210.25
Iteration: 778, named_losses: [('ActivationMax Loss', -31933.594),
 ('L-6.0 Norm Loss', 1.1692721),
 ('TV(2.0) Loss', 14704.271)], overall loss: -17228.15234375
Iteration: 779, named_losses: [('ActivationMax Loss', -31920.465),
 ('L-6.0 Norm Loss', 1.1698645),
 ('TV(2.0) Loss', 14707.257)], overall loss: -17212.0390625
Iteration: 780, named_losses: [('ActivationMax Loss', -31952.781),
 ('L-6.0 Norm Loss', 1.1704577),
 ('TV(2.0) Loss', 14723.427)], overall loss: -17228.18359375
Iteration: 781, named_losses: [('ActivationMax Loss', -31953.871),
 ('L-6.0 Norm Loss', 1.1709971),
 ('TV(2.0) Loss', 14728.649)], overall loss: -17224.05078125
Iteration: 782, named_losses: [('ActivationMax Loss', -31974.701),
 ('L-6.0 Norm Loss', 1.1717031),
 ('TV(2.0) Loss', 14747.478)], overall loss: -17226.05078125
Iteration: 783, named_losses: [('ActivationMax Loss', -31983.328),
 ('L-6.0 Norm Loss', 1.1723166),
 ('TV(2.0) Loss', 14756.188)], overall loss: -17225.96875
Iteration: 784, named_losses: [('ActivationMax Loss', -31989.854),
 ('L-6.0 Norm Loss', 1.1725849),
 ('TV(2.0) Loss', 14760.846)], overall loss: -17227.8359375
Iteration: 785, named_losses: [('ActivationMax Loss', -32006.434),
 ('L-6.0 Norm Loss', 1.173048),
 ('TV(2.0) Loss', 14769.558)], overall loss: -17235.703125
Iteration: 786, named_losses: [('ActivationMax Loss', -32005.508),
 ('L-6.0 Norm Loss', 1.1736156),
 ('TV(2.0) Loss', 14777.406)], overall loss: -17226.927734375
Iteration: 787, named_losses: [('ActivationMax Loss', -32028.367),
 ('L-6.0 Norm Loss', 1.1743551),
 ('TV(2.0) Loss', 14784.252)], overall loss: -17242.94140625
Iteration: 788, named_losses: [('ActivationMax Loss', -32034.303),
 ('L-6.0 Norm Loss', 1.17487),
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('TV(2.0) Loss', 14791.327)], overall loss: -17241.80078125
Iteration: 789, named_losses: [('ActivationMax Loss', -32043.857),
 ('L-6.0 Norm Loss', 1.175469),
 ('TV(2.0) Loss', 14804.193)], overall loss: -17238.48828125
Iteration: 790, named_losses: [('ActivationMax Loss', -32058.867),
 ('L-6.0 Norm Loss', 1.1760545),
 ('TV(2.0) Loss', 14809.464)], overall loss: -17248.2265625
Iteration: 791, named_losses: [('ActivationMax Loss', -32067.78),
 ('L-6.0 Norm Loss', 1.1765462),
 ('TV(2.0) Loss', 14817.375)], overall loss: -17249.228515625
Iteration: 792, named_losses: [('ActivationMax Loss', -32081.873),
 ('L-6.0 Norm Loss', 1.177207),
 ('TV(2.0) Loss', 14833.864)], overall loss: -17246.83203125
Iteration: 793, named_losses: [('ActivationMax Loss', -32089.094),
 ('L-6.0 Norm Loss', 1.1776513),
 ('TV(2.0) Loss', 14835.671)], overall loss: -17252.24609375
Iteration: 794, named_losses: [('ActivationMax Loss', -32100.992),
 ('L-6.0 Norm Loss', 1.1785337),
 ('TV(2.0) Loss', 14847.003)], overall loss: -17252.8125
Iteration: 795, named_losses: [('ActivationMax Loss', -32116.422),
 ('L-6.0 Norm Loss', 1.1787603),
 ('TV(2.0) Loss', 14857.027)], overall loss: -17258.21484375
Iteration: 796, named_losses: [('ActivationMax Loss', -32124.629),
 ('L-6.0 Norm Loss', 1.179525),
 ('TV(2.0) Loss', 14866.479)], overall loss: -17256.970703125
Iteration: 797, named_losses: [('ActivationMax Loss', -32137.418),
 ('L-6.0 Norm Loss', 1.1799297),
 ('TV(2.0) Loss', 14873.005)], overall loss: -17263.234375
Iteration: 798, named_losses: [('ActivationMax Loss', -32156.16),
 ('L-6.0 Norm Loss', 1.1805903),
 ('TV(2.0) Loss', 14886.979)], overall loss: -17268.001953125
Iteration: 799, named_losses: [('ActivationMax Loss', -32145.1),
 ('L-6.0 Norm Loss', 1.1811124),
 ('TV(2.0) Loss', 14891.7)], overall loss: -17252.21875
Iteration: 800, named_losses: [('ActivationMax Loss', -32170.594),
 ('L-6.0 Norm Loss', 1.1817976),
 ('TV(2.0) Loss', 14899.289)], overall loss: -17270.123046875
Iteration: 801, named_losses: [('ActivationMax Loss', -32173.547),
 ('L-6.0 Norm Loss', 1.1820276),
 ('TV(2.0) Loss', 14904.257)], overall loss: -17268.109375
Iteration: 802, named_losses: [('ActivationMax Loss', -32182.777),
 ('L-6.0 Norm Loss', 1.1826944),
 ('TV(2.0) Loss', 14911.944)], overall loss: -17269.6484375
Iteration: 803, named_losses: [('ActivationMax Loss', -32202.441),
 ('L-6.0 Norm Loss', 1.1832529),
 ('TV(2.0) Loss', 14925.492)], overall loss: -17275.765625
Iteration: 804, named_losses: [('ActivationMax Loss', -32210.13),
 ('L-6.0 Norm Loss', 1.1838553),
 ('TV(2.0) Loss', 14931.535)], overall loss: -17277.412109375
Iteration: 805, named_losses: [('ActivationMax Loss', -32223.535),
 ('L-6.0 Norm Loss', 1.184274),
 ('TV(2.0) Loss', 14942.917)], overall loss: -17279.43359375
Iteration: 806, named_losses: [('ActivationMax Loss', -32218.445),
 ('L-6.0 Norm Loss', 1.1849666),
 ('TV(2.0) Loss', 14939.024)], overall loss: -17278.234375
Iteration: 807, named_losses: [('ActivationMax Loss', -32239.676),
 ('L-6.0 Norm Loss', 1.185406),
 ('TV(2.0) Loss', 14954.0)], overall loss: -17284.490234375
Iteration: 808, named_losses: [('ActivationMax Loss', -32237.158),
 ('L-6.0 Norm Loss', 1.1859697),
 ('TV(2.0) Loss', 14958.837)], overall loss: -17277.13671875
Iteration: 809, named_losses: [('ActivationMax Loss', -32258.32),
 ('L-6.0 Norm Loss', 1.1863973),
 ('TV(2.0) Loss', 14967.958)], overall loss: -17289.17578125
Iteration: 810, named_losses: [('ActivationMax Loss', -32256.893),
 ('L-6.0 Norm Loss', 1.1870263),
 ('TV(2.0) Loss', 14970.17)], overall loss: -17285.53515625
Iteration: 811, named_losses: [('ActivationMax Loss', -32283.895),
 ('L-6.0 Norm Loss', 1.1876491),
 ('TV(2.0) Loss', 14988.17)], overall loss: -17294.537109375
Iteration: 812, named_losses: [('ActivationMax Loss', -32279.38),
 ('L-6.0 Norm Loss', 1.1882521),
 ('TV(2.0) Loss', 14993.849)], overall loss: -17284.34375
Iteration: 813, named_losses: [('ActivationMax Loss', -32298.055),
 ('L-6.0 Norm Loss', 1.1886955),
 ('TV(2.0) Loss', 14995.236)], overall loss: -17301.62890625
Iteration: 814, named_losses: [('ActivationMax Loss', -32303.555),
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('L-6.0 Norm Loss', 1.1890512),
 ('TV(2.0) Loss', 15004.187)], overall loss: -17298.1796875
Iteration: 815, named_losses: [('ActivationMax Loss', -32307.984),
 ('L-6.0 Norm Loss', 1.1895783),
 ('TV(2.0) Loss', 15010.321)], overall loss: -17296.47265625
Iteration: 816, named_losses: [('ActivationMax Loss', -32326.695),
 ('L-6.0 Norm Loss', 1.1902982),
 ('TV(2.0) Loss', 15019.338)], overall loss: -17306.16796875
Iteration: 817, named_losses: [('ActivationMax Loss', -32325.988),
 ('L-6.0 Norm Loss', 1.1905885),
 ('TV(2.0) Loss', 15015.912)], overall loss: -17308.884765625
Iteration: 818, named_losses: [('ActivationMax Loss', -32333.135),
 ('L-6.0 Norm Loss', 1.1911091),
 ('TV(2.0) Loss', 15027.931)], overall loss: -17304.01171875
Iteration: 819, named_losses: [('ActivationMax Loss', -32344.775),
 ('L-6.0 Norm Loss', 1.1915079),
 ('TV(2.0) Loss', 15029.06)], overall loss: -17314.5234375
Iteration: 820, named_losses: [('ActivationMax Loss', -32345.111),
 ('L-6.0 Norm Loss', 1.1919426),
 ('TV(2.0) Loss', 15028.146)], overall loss: -17315.7734375
Iteration: 821, named_losses: [('ActivationMax Loss', -32352.443),
 ('L-6.0 Norm Loss', 1.1924233),
 ('TV(2.0) Loss', 15024.396)], overall loss: -17326.853515625
Iteration: 822, named_losses: [('ActivationMax Loss', -32362.465),
 ('L-6.0 Norm Loss', 1.1928202),
 ('TV(2.0) Loss', 15036.428)], overall loss: -17324.84375
Iteration: 823, named_losses: [('ActivationMax Loss', -32369.51),
 ('L-6.0 Norm Loss', 1.1933252),
 ('TV(2.0) Loss', 15036.666)], overall loss: -17331.650390625
Iteration: 824, named_losses: [('ActivationMax Loss', -32375.895),
 ('L-6.0 Norm Loss', 1.1937315),
 ('TV(2.0) Loss', 15043.5)], overall loss: -17331.201171875
Iteration: 825, named_losses: [('ActivationMax Loss', -32383.178),
 ('L-6.0 Norm Loss', 1.194123),
 ('TV(2.0) Loss', 15052.799)], overall loss: -17329.185546875
Iteration: 826, named_losses: [('ActivationMax Loss', -32389.316),
 ('L-6.0 Norm Loss', 1.1945337),
 ('TV(2.0) Loss', 15054.447)], overall loss: -17333.673828125
Iteration: 827, named_losses: [('ActivationMax Loss', -32399.309),
 ('L-6.0 Norm Loss', 1.1951513),
 ('TV(2.0) Loss', 15057.25)], overall loss: -17340.86328125
Iteration: 828, named_losses: [('ActivationMax Loss', -32411.213),
 ('L-6.0 Norm Loss', 1.1956931),
 ('TV(2.0) Loss', 15066.798)], overall loss: -17343.21875
Iteration: 829, named_losses: [('ActivationMax Loss', -32415.078),
 ('L-6.0 Norm Loss', 1.1961169),
 ('TV(2.0) Loss', 15070.363)], overall loss: -17343.51953125
Iteration: 830, named_losses: [('ActivationMax Loss', -32426.969),
 ('L-6.0 Norm Loss', 1.1965991),
 ('TV(2.0) Loss', 15076.566)], overall loss: -17349.205078125
Iteration: 831, named_losses: [('ActivationMax Loss', -32432.023),
 ('L-6.0 Norm Loss', 1.1970297),
 ('TV(2.0) Loss', 15086.649)], overall loss: -17344.17578125
Iteration: 832, named_losses: [('ActivationMax Loss', -32443.969),
 ('L-6.0 Norm Loss', 1.1973999),
 ('TV(2.0) Loss', 15093.488)], overall loss: -17349.283203125
Iteration: 833, named_losses: [('ActivationMax Loss', -32444.744),
 ('L-6.0 Norm Loss', 1.1979579),
 ('TV(2.0) Loss', 15092.551)], overall loss: -17350.99609375
Iteration: 834, named_losses: [('ActivationMax Loss', -32459.53),
 ('L-6.0 Norm Loss', 1.19833),
 ('TV(2.0) Loss', 15101.198)], overall loss: -17357.1328125
Iteration: 835, named_losses: [('ActivationMax Loss', -32452.623),
 ('L-6.0 Norm Loss', 1.1987853),
 ('TV(2.0) Loss', 15104.076)], overall loss: -17347.34765625
Iteration: 836, named_losses: [('ActivationMax Loss', -32474.805),
 ('L-6.0 Norm Loss', 1.1992226),
 ('TV(2.0) Loss', 15110.0205)], overall loss: -17363.5859375
Iteration: 837, named_losses: [('ActivationMax Loss', -32482.348),
 ('L-6.0 Norm Loss', 1.19998),
 ('TV(2.0) Loss', 15123.354)], overall loss: -17357.794921875
Iteration: 838, named_losses: [('ActivationMax Loss', -32483.969),
 ('L-6.0 Norm Loss', 1.2002946),
 ('TV(2.0) Loss', 15121.728)], overall loss: -17361.0390625
Iteration: 839, named_losses: [('ActivationMax Loss', -32496.6),
 ('L-6.0 Norm Loss', 1.2006855),
 ('TV(2.0) Loss', 15120.08)], overall loss: -17375.318359375
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Iteration: 840, named_losses: [('ActivationMax Loss', -32495.85),
 ('L-6.0 Norm Loss', 1.2012041),
 ('TV(2.0) Loss', 15130.568)], overall loss: -17364.080078125
Iteration: 841, named_losses: [('ActivationMax Loss', -32507.85),
 ('L-6.0 Norm Loss', 1.2015646),
 ('TV(2.0) Loss', 15127.56)], overall loss: -17379.08984375
Iteration: 842, named_losses: [('ActivationMax Loss', -32510.953),
 ('L-6.0 Norm Loss', 1.2020808),
 ('TV(2.0) Loss', 15137.311)], overall loss: -17372.44140625
Iteration: 843, named_losses: [('ActivationMax Loss', -32522.025),
 ('L-6.0 Norm Loss', 1.2026196),
 ('TV(2.0) Loss', 15138.065)], overall loss: -17382.7578125
Iteration: 844, named_losses: [('ActivationMax Loss', -32533.695),
 ('L-6.0 Norm Loss', 1.2030705),
 ('TV(2.0) Loss', 15149.552)], overall loss: -17382.94140625
Iteration: 845, named_losses: [('ActivationMax Loss', -32540.959),
 ('L-6.0 Norm Loss', 1.2037246),
 ('TV(2.0) Loss', 15152.15)], overall loss: -17387.60546875
Iteration: 846, named_losses: [('ActivationMax Loss', -32549.953),
 ('L-6.0 Norm Loss', 1.2038213),
 ('TV(2.0) Loss', 15158.376)], overall loss: -17390.375
Iteration: 847, named_losses: [('ActivationMax Loss', -32559.264),
 ('L-6.0 Norm Loss', 1.2045721),
 ('TV(2.0) Loss', 15168.0625)], overall loss: -17389.99609375
Iteration: 848, named_losses: [('ActivationMax Loss', -32564.812),
 ('L-6.0 Norm Loss', 1.2051028),
 ('TV(2.0) Loss', 15173.312)], overall loss: -17390.296875
Iteration: 849, named_losses: [('ActivationMax Loss', -32576.357),
 ('L-6.0 Norm Loss', 1.2056547),
 ('TV(2.0) Loss', 15176.71)], overall loss: -17398.44140625
Iteration: 850, named_losses: [('ActivationMax Loss', -32570.268),
 ('L-6.0 Norm Loss', 1.206065),
 ('TV(2.0) Loss', 15178.718)], overall loss: -17390.34375
Iteration: 851, named_losses: [('ActivationMax Loss', -32581.867),
 ('L-6.0 Norm Loss', 1.2065417),
 ('TV(2.0) Loss', 15180.397)], overall loss: -17400.26171875
Iteration: 852, named_losses: [('ActivationMax Loss', -32592.877),
 ('L-6.0 Norm Loss', 1.2069124),
 ('TV(2.0) Loss', 15194.815)], overall loss: -17396.85546875
Iteration: 853, named_losses: [('ActivationMax Loss', -32597.559),
 ('L-6.0 Norm Loss', 1.2075895),
 ('TV(2.0) Loss', 15196.925)], overall loss: -17399.42578125
Iteration: 854, named_losses: [('ActivationMax Loss', -32616.678),
 ('L-6.0 Norm Loss', 1.2080773),
 ('TV(2.0) Loss', 15208.971)], overall loss: -17406.498046875
Iteration: 855, named_losses: [('ActivationMax Loss', -32612.178),
 ('L-6.0 Norm Loss', 1.2087798),
 ('TV(2.0) Loss', 15216.911)], overall loss: -17394.05859375
Iteration: 856, named_losses: [('ActivationMax Loss', -32631.414),
 ('L-6.0 Norm Loss', 1.2092108),
 ('TV(2.0) Loss', 15219.643)], overall loss: -17410.5625
Iteration: 857, named_losses: [('ActivationMax Loss', -32622.387),
 ('L-6.0 Norm Loss', 1.2098048),
 ('TV(2.0) Loss', 15222.675)], overall loss: -17398.50390625
Iteration: 858, named_losses: [('ActivationMax Loss', -32652.754),
 ('L-6.0 Norm Loss', 1.2101946),
 ('TV(2.0) Loss', 15239.413)], overall loss: -17412.12890625
Iteration: 859, named_losses: [('ActivationMax Loss', -32653.184),
 ('L-6.0 Norm Loss', 1.2106599),
 ('TV(2.0) Loss', 15239.186)], overall loss: -17412.787109375
Iteration: 860, named_losses: [('ActivationMax Loss', -32659.064),
 ('L-6.0 Norm Loss', 1.2112129),
 ('TV(2.0) Loss', 15247.95)], overall loss: -17409.90234375
Iteration: 861, named_losses: [('ActivationMax Loss', -32665.484),
 ('L-6.0 Norm Loss', 1.2117599),
 ('TV(2.0) Loss', 15244.781)], overall loss: -17419.4921875
Iteration: 862, named_losses: [('ActivationMax Loss', -32671.178),
 ('L-6.0 Norm Loss', 1.2121917),
 ('TV(2.0) Loss', 15253.864)], overall loss: -17416.1015625
Iteration: 863, named_losses: [('ActivationMax Loss', -32683.482),
 ('L-6.0 Norm Loss', 1.2126437),
 ('TV(2.0) Loss', 15251.649)], overall loss: -17430.62109375
Iteration: 864, named_losses: [('ActivationMax Loss', -32682.152),
 ('L-6.0 Norm Loss', 1.2131582),
 ('TV(2.0) Loss', 15262.453)], overall loss: -17418.486328125
Iteration: 865, named_losses: [('ActivationMax Loss', -32692.64),
 ('L-6.0 Norm Loss', 1.2135503),
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 ('TV(2.0) Loss', 15267.214)], overall loss: -17424.21484375
Iteration: 866, named_losses: [('ActivationMax Loss', -32705.473),
 ('L-6.0 Norm Loss', 1.2140132),
 ('TV(2.0) Loss', 15274.533)], overall loss: -17429.724609375
Iteration: 867, named_losses: [('ActivationMax Loss', -32708.723),
 ('L-6.0 Norm Loss', 1.2145734),
 ('TV(2.0) Loss', 15275.959)], overall loss: -17431.548828125
Iteration: 868, named_losses: [('ActivationMax Loss', -32714.41),
 ('L-6.0 Norm Loss', 1.2149668),
 ('TV(2.0) Loss', 15278.234)], overall loss: -17434.9609375
Iteration: 869, named_losses: [('ActivationMax Loss', -32723.326),
 ('L-6.0 Norm Loss', 1.2156769),
 ('TV(2.0) Loss', 15286.379)], overall loss: -17435.732421875
Iteration: 870, named_losses: [('ActivationMax Loss', -32739.395),
 ('L-6.0 Norm Loss', 1.2162724),
 ('TV(2.0) Loss', 15299.167)], overall loss: -17439.01171875
Iteration: 871, named_losses: [('ActivationMax Loss', -32732.768),
 ('L-6.0 Norm Loss', 1.2165749),
 ('TV(2.0) Loss', 15296.784)], overall loss: -17434.765625
Iteration: 872, named_losses: [('ActivationMax Loss', -32748.436),
 ('L-6.0 Norm Loss', 1.2169678),
 ('TV(2.0) Loss', 15306.552)], overall loss: -17440.66796875
Iteration: 873, named_losses: [('ActivationMax Loss', -32745.816),
 ('L-6.0 Norm Loss', 1.2174219),
 ('TV(2.0) Loss', 15308.263)], overall loss: -17436.3359375
Iteration: 874, named_losses: [('ActivationMax Loss', -32758.324),
 ('L-6.0 Norm Loss', 1.2180593),
 ('TV(2.0) Loss', 15313.355)], overall loss: -17443.75
Iteration: 875, named_losses: [('ActivationMax Loss', -32769.758),
 ('L-6.0 Norm Loss', 1.2184438),
 ('TV(2.0) Loss', 15323.029)], overall loss: -17445.509765625
Iteration: 876, named_losses: [('ActivationMax Loss', -32778.45),
 ('L-6.0 Norm Loss', 1.2190343),
 ('TV(2.0) Loss', 15331.784)], overall loss: -17445.4453125
Iteration: 877, named_losses: [('ActivationMax Loss', -32786.703),
 ('L-6.0 Norm Loss', 1.2193621),
 ('TV(2.0) Loss', 15331.666)], overall loss: -17453.818359375
Iteration: 878, named_losses: [('ActivationMax Loss', -32798.12),
 ('L-6.0 Norm Loss', 1.2200291),
 ('TV(2.0) Loss', 15353.9)], overall loss: -17443.001953125
Iteration: 879, named_losses: [('ActivationMax Loss', -32795.953),
 ('L-6.0 Norm Loss', 1.2202352),
 ('TV(2.0) Loss', 15340.676)], overall loss: -17454.05859375
Iteration: 880, named_losses: [('ActivationMax Loss', -32800.215),
 ('L-6.0 Norm Loss', 1.220734),
 ('TV(2.0) Loss', 15352.868)], overall loss: -17446.125
Iteration: 881, named_losses: [('ActivationMax Loss', -32806.426),
 ('L-6.0 Norm Loss', 1.2211392),
 ('TV(2.0) Loss', 15345.095)], overall loss: -17460.109375
Iteration: 882, named_losses: [('ActivationMax Loss', -32822.027),
 ('L-6.0 Norm Loss', 1.22197),
 ('TV(2.0) Loss', 15373.91)], overall loss: -17446.89453125
Iteration: 883, named_losses: [('ActivationMax Loss', -32824.266),
 ('L-6.0 Norm Loss', 1.2223498),
 ('TV(2.0) Loss', 15365.865)], overall loss: -17457.177734375
Iteration: 884, named_losses: [('ActivationMax Loss', -32843.16),
 ('L-6.0 Norm Loss', 1.2229581),
 ('TV(2.0) Loss', 15383.917)], overall loss: -17458.01953125
Iteration: 885, named_losses: [('ActivationMax Loss', -32845.74),
 ('L-6.0 Norm Loss', 1.2232594),
 ('TV(2.0) Loss', 15378.474)], overall loss: -17466.04296875
Iteration: 886, named_losses: [('ActivationMax Loss', -32857.68),
 ('L-6.0 Norm Loss', 1.223737),
 ('TV(2.0) Loss', 15396.466)], overall loss: -17459.9921875
Iteration: 887, named_losses: [('ActivationMax Loss', -32863.094),
 ('L-6.0 Norm Loss', 1.2241054),
 ('TV(2.0) Loss', 15393.64)], overall loss: -17468.23046875
Iteration: 888, named_losses: [('ActivationMax Loss', -32863.242),
 ('L-6.0 Norm Loss', 1.2245791),
 ('TV(2.0) Loss', 15400.554)], overall loss: -17461.46484375
Iteration: 889, named_losses: [('ActivationMax Loss', -32867.2),
 ('L-6.0 Norm Loss', 1.2250881),
 ('TV(2.0) Loss', 15397.714)], overall loss: -17468.2578125
Iteration: 890, named_losses: [('ActivationMax Loss', -32871.5),
 ('L-6.0 Norm Loss', 1.2255048),
 ('TV(2.0) Loss', 15404.693)], overall loss: -17465.580078125
Iteration: 891, named_losses: [('ActivationMax Loss', -32885.504),
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('L-6.0 Norm Loss', 1.2260635),
('TV(2.0) Loss', 15407.78)], overall loss: -17476.49609375
Iteration: 892, named_losses: [('ActivationMax Loss', -32891.09),
('L-6.0 Norm Loss', 1.2263961),
('TV(2.0) Loss', 15414.562)], overall loss: -17475.30078125
Iteration: 893, named_losses: [('ActivationMax Loss', -32904.863),
('L-6.0 Norm Loss', 1.2271342),
('TV(2.0) Loss', 15420.051)], overall loss: -17483.5859375
Iteration: 894, named_losses: [('ActivationMax Loss', -32909.203),
('L-6.0 Norm Loss', 1.2274345),
('TV(2.0) Loss', 15433.259)], overall loss: -17474.71875
Iteration: 895, named_losses: [('ActivationMax Loss', -32914.438),
('L-6.0 Norm Loss', 1.2277808),
('TV(2.0) Loss', 15426.962)], overall loss: -17486.25
Iteration: 896, named_losses: [('ActivationMax Loss', -32918.547),
('L-6.0 Norm Loss', 1.2281388),
('TV(2.0) Loss', 15432.875)], overall loss: -17484.4453125
Iteration: 897, named_losses: [('ActivationMax Loss', -32921.82),
('L-6.0 Norm Loss', 1.2287103),
('TV(2.0) Loss', 15437.6455)], overall loss: -17482.9453125
Iteration: 898, named_losses: [('ActivationMax Loss', -32931.65),
('L-6.0 Norm Loss', 1.2292556),
('TV(2.0) Loss', 15446.813)], overall loss: -17483.60546875
Iteration: 899, named_losses: [('ActivationMax Loss', -32942.58),
('L-6.0 Norm Loss', 1.2298529),
('TV(2.0) Loss', 15458.285)], overall loss: -17483.0625
Iteration: 900, named_losses: [('ActivationMax Loss', -32940.613),
('L-6.0 Norm Loss', 1.2301077),
('TV(2.0) Loss', 15447.445)], overall loss: -17491.9375
Iteration: 901, named_losses: [('ActivationMax Loss', -32956.42),
('L-6.0 Norm Loss', 1.2307037),
('TV(2.0) Loss', 15466.651)], overall loss: -17488.5390625
Iteration: 902, named_losses: [('ActivationMax Loss', -32960.973),
('L-6.0 Norm Loss', 1.2311697),
('TV(2.0) Loss', 15463.762)], overall loss: -17495.98046875
Iteration: 903, named_losses: [('ActivationMax Loss', -32970.05),
('L-6.0 Norm Loss', 1.231722),
('TV(2.0) Loss', 15469.906)], overall loss: -17498.9140625
Iteration: 904, named_losses: [('ActivationMax Loss', -32972.176),
('L-6.0 Norm Loss', 1.2320479),
('TV(2.0) Loss', 15467.978)], overall loss: -17502.96875
Iteration: 905, named_losses: [('ActivationMax Loss', -32981.508),
('L-6.0 Norm Loss', 1.2325711),
('TV(2.0) Loss', 15475.92)], overall loss: -17504.353515625
Iteration: 906, named_losses: [('ActivationMax Loss', -32977.902),
('L-6.0 Norm Loss', 1.2331109),
('TV(2.0) Loss', 15476.457)], overall loss: -17500.2109375
Iteration: 907, named_losses: [('ActivationMax Loss', -33000.723),
('L-6.0 Norm Loss', 1.2338197),
('TV(2.0) Loss', 15484.611)], overall loss: -17514.876953125
Iteration: 908, named_losses: [('ActivationMax Loss', -32997.668),
('L-6.0 Norm Loss', 1.2341906),
('TV(2.0) Loss', 15481.737)], overall loss: -17514.6953125
Iteration: 909, named_losses: [('ActivationMax Loss', -33012.066),
('L-6.0 Norm Loss', 1.2348775),
('TV(2.0) Loss', 15503.405)], overall loss: -17507.42578125
Iteration: 910, named_losses: [('ActivationMax Loss', -33011.184),
('L-6.0 Norm Loss', 1.2350092),
('TV(2.0) Loss', 15493.356)], overall loss: -17516.59375
Iteration: 911, named_losses: [('ActivationMax Loss', -33025.043),
('L-6.0 Norm Loss', 1.23569),
('TV(2.0) Loss', 15505.478)], overall loss: -17518.33203125
Iteration: 912, named_losses: [('ActivationMax Loss', -33036.562),
('L-6.0 Norm Loss', 1.2361237),
('TV(2.0) Loss', 15506.026)], overall loss: -17529.30078125
Iteration: 913, named_losses: [('ActivationMax Loss', -33043.31),
('L-6.0 Norm Loss', 1.236854),
('TV(2.0) Loss', 15522.396)], overall loss: -17519.673828125
Iteration: 914, named_losses: [('ActivationMax Loss', -33049.258),
('L-6.0 Norm Loss', 1.237377),
('TV(2.0) Loss', 15521.677)], overall loss: -17526.34375
Iteration: 915, named_losses: [('ActivationMax Loss', -33072.56),
('L-6.0 Norm Loss', 1.2379111),
('TV(2.0) Loss', 15533.939)], overall loss: -17537.380859375
Iteration: 916, named_losses: [('ActivationMax Loss', -33066.52),
('L-6.0 Norm Loss', 1.2383758),
('TV(2.0) Loss', 15539.311)], overall loss: -17525.970703125
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Iteration: 917, named_losses: [('ActivationMax Loss', -33097.906),
 ('L-6.0 Norm Loss', 1.2390369),
 ('TV(2.0) Loss', 15550.948)], overall loss: -17545.71875
Iteration: 918, named_losses: [('ActivationMax Loss', -33090.418),
 ('L-6.0 Norm Loss', 1.2394481),
 ('TV(2.0) Loss', 15550.689)], overall loss: -17538.490234375
Iteration: 919, named_losses: [('ActivationMax Loss', -33106.547),
 ('L-6.0 Norm Loss', 1.2401778),
 ('TV(2.0) Loss', 15564.352)], overall loss: -17540.95703125
Iteration: 920, named_losses: [('ActivationMax Loss', -33111.047),
 ('L-6.0 Norm Loss', 1.2404841),
 ('TV(2.0) Loss', 15570.803)], overall loss: -17539.001953125
Iteration: 921, named_losses: [('ActivationMax Loss', -33125.375),
 ('L-6.0 Norm Loss', 1.2411597),
 ('TV(2.0) Loss', 15581.2295)], overall loss: -17542.90234375
Iteration: 922, named_losses: [('ActivationMax Loss', -33133.28),
 ('L-6.0 Norm Loss', 1.2415438),
 ('TV(2.0) Loss', 15583.37)], overall loss: -17548.66796875
Iteration: 923, named_losses: [('ActivationMax Loss', -33137.176),
 ('L-6.0 Norm Loss', 1.2422425),
 ('TV(2.0) Loss', 15595.3)], overall loss: -17540.6328125
Iteration: 924, named_losses: [('ActivationMax Loss', -33154.008),
 ('L-6.0 Norm Loss', 1.2425553),
 ('TV(2.0) Loss', 15598.207)], overall loss: -17554.55859375
Iteration: 925, named_losses: [('ActivationMax Loss', -33167.05),
 ('L-6.0 Norm Loss', 1.2432032),
 ('TV(2.0) Loss', 15613.355)], overall loss: -17552.453125
Iteration: 926, named_losses: [('ActivationMax Loss', -33164.953),
 ('L-6.0 Norm Loss', 1.2433902),
 ('TV(2.0) Loss', 15601.664)], overall loss: -17562.046875
Iteration: 927, named_losses: [('ActivationMax Loss', -33174.3),
 ('L-6.0 Norm Loss', 1.2439295),
 ('TV(2.0) Loss', 15619.942)], overall loss: -17553.1171875
Iteration: 928, named_losses: [('ActivationMax Loss', -33178.535),
 ('L-6.0 Norm Loss', 1.2445164),
 ('TV(2.0) Loss', 15617.398)], overall loss: -17559.890625
Iteration: 929, named_losses: [('ActivationMax Loss', -33200.754),
 ('L-6.0 Norm Loss', 1.2450998),
 ('TV(2.0) Loss', 15638.856)], overall loss: -17560.65234375
Iteration: 930, named_losses: [('ActivationMax Loss', -33203.895),
 ('L-6.0 Norm Loss', 1.2454482),
 ('TV(2.0) Loss', 15638.438)], overall loss: -17564.2109375
Iteration: 931, named_losses: [('ActivationMax Loss', -33219.863),
 ('L-6.0 Norm Loss', 1.2462574),
 ('TV(2.0) Loss', 15649.401)], overall loss: -17569.21484375
Iteration: 932, named_losses: [('ActivationMax Loss', -33213.25),
 ('L-6.0 Norm Loss', 1.2465279),
 ('TV(2.0) Loss', 15651.398)], overall loss: -17560.60546875
Iteration: 933, named_losses: [('ActivationMax Loss', -33236.383),
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 ('TV(2.0) Loss', 15668.375)], overall loss: -17566.76171875
Iteration: 934, named_losses: [('ActivationMax Loss', -33233.332),
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 ('TV(2.0) Loss', 15661.527)], overall loss: -17570.55859375
Iteration: 935, named_losses: [('ActivationMax Loss', -33248.195),
 ('L-6.0 Norm Loss', 1.2481272),
 ('TV(2.0) Loss', 15671.993)], overall loss: -17574.953125
Iteration: 936, named_losses: [('ActivationMax Loss', -33245.35),
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 ('TV(2.0) Loss', 15671.005)], overall loss: -17573.09765625
Iteration: 937, named_losses: [('ActivationMax Loss', -33264.977),
 ('L-6.0 Norm Loss', 1.2488263),
 ('TV(2.0) Loss', 15693.219)], overall loss: -17570.5078125
Iteration: 938, named_losses: [('ActivationMax Loss', -33255.47),
 ('L-6.0 Norm Loss', 1.2493168),
 ('TV(2.0) Loss', 15688.883)], overall loss: -17565.3359375
Iteration: 939, named_losses: [('ActivationMax Loss', -33273.062),
 ('L-6.0 Norm Loss', 1.2497892),
 ('TV(2.0) Loss', 15696.8545)], overall loss: -17574.95703125
Iteration: 940, named_losses: [('ActivationMax Loss', -33282.605),
 ('L-6.0 Norm Loss', 1.2502469),
 ('TV(2.0) Loss', 15702.478)], overall loss: -17578.87890625
Iteration: 941, named_losses: [('ActivationMax Loss', -33290.133),
 ('L-6.0 Norm Loss', 1.2508156),
 ('TV(2.0) Loss', 15706.144)], overall loss: -17582.73828125
Iteration: 942, named_losses: [('ActivationMax Loss', -33306.66),
 ('L-6.0 Norm Loss', 1.2512333),

('TV(2.0) Loss', 15717.091)], overall loss: -17588.3203125
Iteration: 943, named_losses: [('ActivationMax Loss', -33301.203),
 ('L-6.0 Norm Loss', 1.251746),
 ('TV(2.0) Loss', 15720.629)], overall loss: -17579.32421875
Iteration: 944, named_losses: [('ActivationMax Loss', -33327.07),
 ('L-6.0 Norm Loss', 1.2521356),
 ('TV(2.0) Loss', 15728.321)], overall loss: -17597.49609375
Iteration: 945, named_losses: [('ActivationMax Loss', -33312.047),
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 ('TV(2.0) Loss', 15725.079)], overall loss: -17585.71484375
Iteration: 946, named_losses: [('ActivationMax Loss', -33322.094),
 ('L-6.0 Norm Loss', 1.2525854),
 ('TV(2.0) Loss', 15725.175)], overall loss: -17595.6640625
Iteration: 947, named_losses: [('ActivationMax Loss', -33330.363),
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 ('TV(2.0) Loss', 15732.224)], overall loss: -17596.88671875
Iteration: 948, named_losses: [('ActivationMax Loss', -33340.36),
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 ('TV(2.0) Loss', 15737.468)], overall loss: -17601.63671875
Iteration: 949, named_losses: [('ActivationMax Loss', -33341.793),
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 ('TV(2.0) Loss', 15746.711)], overall loss: -17593.828125
Iteration: 950, named_losses: [('ActivationMax Loss', -33350.62),
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 ('TV(2.0) Loss', 15742.274)], overall loss: -17607.09375
Iteration: 951, named_losses: [('ActivationMax Loss', -33361.895),
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 ('TV(2.0) Loss', 15755.611)], overall loss: -17605.029296875
Iteration: 952, named_losses: [('ActivationMax Loss', -33369.586),
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 ('TV(2.0) Loss', 15760.68)], overall loss: -17607.65234375
Iteration: 953, named_losses: [('ActivationMax Loss', -33370.53),
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 ('TV(2.0) Loss', 15765.147)], overall loss: -17604.12890625
Iteration: 954, named_losses: [('ActivationMax Loss', -33380.867),
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 ('TV(2.0) Loss', 15778.84)], overall loss: -17600.76953125
Iteration: 955, named_losses: [('ActivationMax Loss', -33396.02),
 ('L-6.0 Norm Loss', 1.2565485),
 ('TV(2.0) Loss', 15780.746)], overall loss: -17614.015625
Iteration: 956, named_losses: [('ActivationMax Loss', -33397.227),
 ('L-6.0 Norm Loss', 1.2572325),
 ('TV(2.0) Loss', 15789.304)], overall loss: -17606.6640625
Iteration: 957, named_losses: [('ActivationMax Loss', -33399.508),
 ('L-6.0 Norm Loss', 1.2573867),
 ('TV(2.0) Loss', 15787.019)], overall loss: -17611.23046875
Iteration: 958, named_losses: [('ActivationMax Loss', -33405.836),
 ('L-6.0 Norm Loss', 1.257766),
 ('TV(2.0) Loss', 15796.215)], overall loss: -17608.36328125
Iteration: 959, named_losses: [('ActivationMax Loss', -33409.914),
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Iteration: 960, named_losses: [('ActivationMax Loss', -33428.188),
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 ('TV(2.0) Loss', 15802.57)], overall loss: -17624.359375
Iteration: 961, named_losses: [('ActivationMax Loss', -33427.48),
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 ('TV(2.0) Loss', 15808.434)], overall loss: -17617.7890625
Iteration: 962, named_losses: [('ActivationMax Loss', -33434.14),
 ('L-6.0 Norm Loss', 1.2591717),
 ('TV(2.0) Loss', 15818.197)], overall loss: -17614.685546875
Iteration: 963, named_losses: [('ActivationMax Loss', -33438.676),
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 ('TV(2.0) Loss', 15817.411)], overall loss: -17620.00390625
Iteration: 964, named_losses: [('ActivationMax Loss', -33452.645),
 ('L-6.0 Norm Loss', 1.260334),
 ('TV(2.0) Loss', 15829.791)], overall loss: -17621.591796875
Iteration: 965, named_losses: [('ActivationMax Loss', -33458.72),
 ('L-6.0 Norm Loss', 1.2607108),
 ('TV(2.0) Loss', 15833.483)], overall loss: -17623.97265625
Iteration: 966, named_losses: [('ActivationMax Loss', -33469.117),
 ('L-6.0 Norm Loss', 1.2611324),
 ('TV(2.0) Loss', 15844.145)], overall loss: -17623.7109375
Iteration: 967, named_losses: [('ActivationMax Loss', -33477.21),
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 ('TV(2.0) Loss', 15843.342)], overall loss: -17632.607421875
Iteration: 968, named_losses: [('ActivationMax Loss', -33480.25),

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Iteration: 968, named_losses: [('ActivationMax Loss', -33486.25),
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 ('TV(2.0) Loss', 15856.388)], overall loss: -17622.6015625
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 ('TV(2.0) Loss', 15858.63)], overall loss: -17630.8359375
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 ('TV(2.0) Loss', 15891.002)], overall loss: -17645.103515625
Iteration: 977, named_losses: [('ActivationMax Loss', -33547.004),
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 ('TV(2.0) Loss', 15909.265)], overall loss: -17636.47265625
Iteration: 978, named_losses: [('ActivationMax Loss', -33535.54),
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 ('TV(2.0) Loss', 15905.177)], overall loss: -17629.09765625
Iteration: 979, named_losses: [('ActivationMax Loss', -33550.99),
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 ('TV(2.0) Loss', 15910.328)], overall loss: -17639.39453125
Iteration: 980, named_losses: [('ActivationMax Loss', -33549.58),
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Iteration: 981, named_losses: [('ActivationMax Loss', -33559.223),
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Iteration: 983, named_losses: [('ActivationMax Loss', -33568.61),
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Iteration: 984, named_losses: [('ActivationMax Loss', -33580.637),
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Iteration: 985, named_losses: [('ActivationMax Loss', -33592.027),
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Iteration: 986, named_losses: [('ActivationMax Loss', -33593.71),
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 ('TV(2.0) Loss', 15947.73)], overall loss: -17644.7109375
Iteration: 987, named_losses: [('ActivationMax Loss', -33602.258),
 ('L-6.0 Norm Loss', 1.2689117),
 ('TV(2.0) Loss', 15944.122)], overall loss: -17656.8671875
Iteration: 988, named_losses: [('ActivationMax Loss', -33606.926),
 ('L-6.0 Norm Loss', 1.2695448),
 ('TV(2.0) Loss', 15963.6)], overall loss: -17642.056640625
Iteration: 989, named_losses: [('ActivationMax Loss', -33628.484),
 ('L-6.0 Norm Loss', 1.2699226),
 ('TV(2.0) Loss', 15972.092)], overall loss: -17655.123046875
Iteration: 990, named_losses: [('ActivationMax Loss', -33629.723),
 ('L-6.0 Norm Loss', 1.2703098),
 ('TV(2.0) Loss', 15973.715)], overall loss: -17654.73828125
Iteration: 991, named_losses: [('ActivationMax Loss', -33631.54),
 ('L-6.0 Norm Loss', 1.2706478),
 ('TV(2.0) Loss', 15970.305)], overall loss: -17659.96484375
Iteration: 992, named_losses: [('ActivationMax Loss', -33632.883),
 ('L-6.0 Norm Loss', 1.2708117),
 ('TV(2.0) Loss', 15977.199)], overall loss: -17654.4140625
Iteration: 993, named_losses: [('ActivationMax Loss', -33639.188),
 ('L-6.0 Norm Loss', 1.271164),
 ('TV(2.0) Loss', 15980.075)], overall loss: -17657.84375
```

```
( IV(2.0) Loss , 15900.075)], Overall Loss: -17057.04375
Iteration: 994, named_losses: [('ActivationMax Loss', -33644.88),
 ('L-6.0 Norm Loss', 1.2716122),
 ('TV(2.0) Loss', 15988.734)], overall loss: -17654.87109375
Iteration: 995, named_losses: [('ActivationMax Loss', -33653.86),
 ('L-6.0 Norm Loss', 1.2719448),
 ('TV(2.0) Loss', 15988.058)], overall loss: -17664.52734375
Iteration: 996, named_losses: [('ActivationMax Loss', -33657.453),
 ('L-6.0 Norm Loss', 1.2722307),
 ('TV(2.0) Loss', 16001.923)], overall loss: -17654.2578125
Iteration: 997, named_losses: [('ActivationMax Loss', -33664.113),
 ('L-6.0 Norm Loss', 1.2726202),
 ('TV(2.0) Loss', 15995.378)], overall loss: -17667.4609375
Iteration: 998, named_losses: [('ActivationMax Loss', -33678.316),
 ('L-6.0 Norm Loss', 1.272855),
 ('TV(2.0) Loss', 16004.44)], overall loss: -17672.6015625
Iteration: 999, named_losses: [('ActivationMax Loss', -33676.895),
 ('L-6.0 Norm Loss', 1.272851),
 ('TV(2.0) Loss', 16002.433)], overall loss: -17673.1875
Iteration: 1000, named_losses: [('ActivationMax Loss', -33675.285),
 ('L-6.0 Norm Loss', 1.2733008),
 ('TV(2.0) Loss', 16009.398)], overall loss: -17664.61328125
```

Out[92]:

`<matplotlib.image.AxesImage at 0x1a4cf25908>`
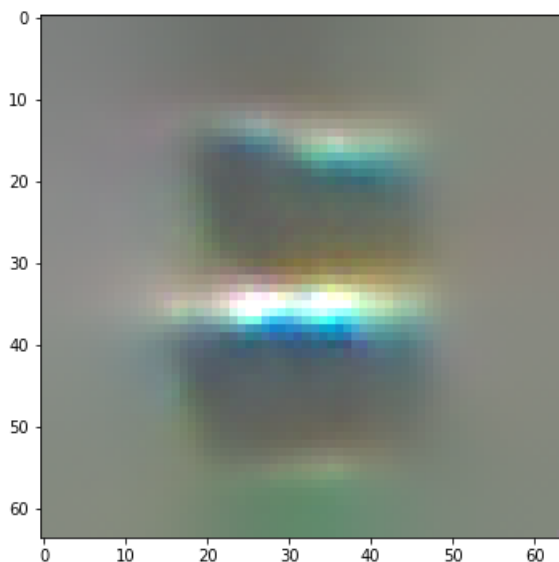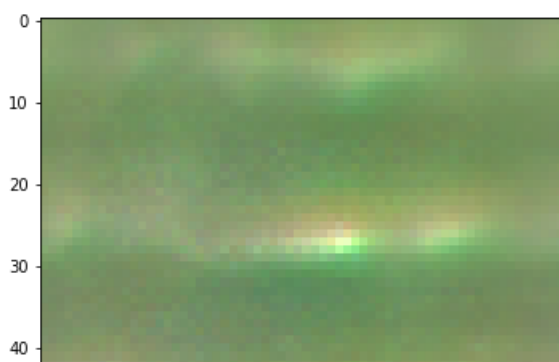

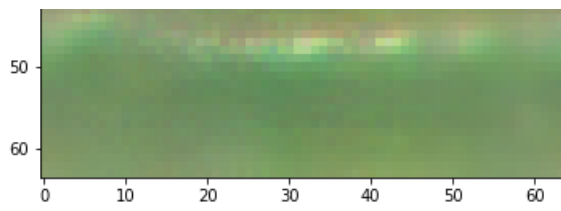In [84]:

```python
from vis.input_modifiers import Jitter

img = visualize_activation(model, layer_idx, filter_indices=0, max_iter=500, input_modifiers=[Jitter(16)])
plt.imshow(img,cmap=plt.cm.binary)
```

Out[84]:

`<matplotlib.image.AxesImage at 0x1a4b5630b8>`