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1 C:\Users\intel\PycharmProjects\SHS_GAN_PROJECT\.venv\Scripts\python.exe C:\Users\intel\PycharmProjects\SHS_GAN_PROJECT\SHS_GAN.py
2 config: torch.xpu.is_available(): True
3 [DATA] Loading RGB dataset...
4 [INFO] Found 1183 RGB files (example: ./datasets/rgb\07H_0335.ppm)
5 [DATA] Loading and preloading HS dataset...
6 [INFO] Found 197 .mat files in ./datasets/hs
7 [STAGE 1] Usable cube: 4cam_0411-1640-1.mat shape=(31, 1392, 1300)
8 [STAGE 1] Usable cube: 4cam_0411-1648.mat shape=(31, 1392, 1300)
9 [STAGE 1] Usable cube: BGU_0403-1419-1.mat shape=(31, 1392, 1300)
10 [STAGE 1] Usable cube: BGU_0522-1113-1.mat shape=(31, 1392, 1300)
11 [STAGE 1] Usable cube: BGU_0522-1127.mat shape=(31, 1392, 1300)
12 [STAGE 1] Usable cube: BGU_0522-1136.mat shape=(31, 1392, 1300)
13 [STAGE 1] Usable cube: BGU_0522-1201.mat shape=(31, 1392, 1300)
14 [STAGE 1] Usable cube: BGU_0522-1203.mat shape=(31, 1392, 1300)
15 [STAGE 1] Usable cube: BGU_0522-1211.mat shape=(31, 1392, 1300)
16 [STAGE 1] Usable cube: BGU_0522-1216.mat shape=(31, 1392, 1300)
17 [STAGE 1] Usable cube: BGU_0522-1217.mat shape=(31, 1392, 1300)
18 [STAGE 1] Usable cube: CC_40D_2_1103-0917.mat shape=(31, 1392, 1082)
19 [STAGE 1] Usable cube: Flower_0325-1336.mat shape=(31, 1392, 1300)
20 [STAGE 1] Usable cube: IDS_COLORCHECK_1020-1215-1.mat shape=(31, 1392, 1083)
21 [STAGE 1] Usable cube: IDS_COLORCHECK_1020-1223.mat shape=(31, 1392, 1083)
22 [STAGE 1] Usable cube: Labtest_0910-1502.mat shape=(31, 1392, 1300)
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23 [STAGE 1] Usable cube: Labtest_0910-1504.mat shape=(  
    31, 1392, 1300)  
24 [STAGE 1] Usable cube: Labtest_0910-1506.mat shape=(  
    31, 1392, 1300)  
25 [STAGE 1] Usable cube: Labtest_0910-1509.mat shape=(  
    31, 1392, 1300)  
26 [STAGE 1] Usable cube: Labtest_0910-1511.mat shape=(  
    31, 1392, 1300)  
27 [STAGE 1] Usable cube: Lehavim_0910-1626.mat shape=(  
    31, 1392, 1300)  
28 [STAGE 1] Usable cube: Lehavim_0910-1627.mat shape=(  
    31, 1392, 1300)  
29 [STAGE 1] Usable cube: Lehavim_0910-1629.mat shape=(  
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30 [STAGE 1] Usable cube: Lehavim_0910-1630.mat shape=(  
    31, 1392, 1300)  
31 [STAGE 1] Usable cube: Lehavim_0910-1633.mat shape=(  
    31, 1392, 1300)  
32 [STAGE 1] Usable cube: Lehavim_0910-1635.mat shape=(  
    31, 1392, 1300)  
33 [STAGE 1] Usable cube: Lehavim_0910-1636.mat shape=(  
    31, 1392, 1300)  
34 [STAGE 1] Usable cube: Lehavim_0910-1640.mat shape=(  
    31, 1392, 1300)  
35 [STAGE 1] Usable cube: Lehavim_0910-1708.mat shape=(  
    31, 1392, 1300)  
36 [STAGE 1] Usable cube: Lehavim_0910-1716.mat shape=(  
    31, 1392, 1300)  
37 [STAGE 1] Usable cube: Lehavim_0910-1717.mat shape=(  
    31, 1392, 1300)  
38 [STAGE 1] Usable cube: Lehavim_0910-1718.mat shape=(  
    31, 1392, 1300)  
39 [STAGE 1] Usable cube: Lehavim_0910-1725.mat shape=(  
    31, 1392, 1300)  
40 [STAGE 1] Usable cube: Master20150112_f2_colorchecker  
.mat shape=(31, 1392, 1300)  
41 [STAGE 1] Usable cube: Master2900k (1).mat shape=(31  
, 1392, 1083)  
42 [STAGE 1] Usable cube: Master2900k.mat shape=(31,  
1392, 1083)  
43 [STAGE 1] Usable cube: Master5000K.mat shape=(31,
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43 1392, 1083)
44 [STAGE 1] Usable cube: Master5000K_2900K.mat shape=(31, 1392, 1084)
45 [STAGE 1] Usable cube: Maz0326-1038.mat shape=(31, 1392, 1300)
46 [STAGE 1] Usable cube: Ramot0325-1364.mat shape=(31, 1392, 1300)
47 [STAGE 1] Usable cube: bguCAMP_0514-1659.mat shape=(31, 1392, 1300)
48 [STAGE 1] Usable cube: bguCAMP_0514-1711.mat shape=(31, 1392, 1300)
49 [STAGE 1] Usable cube: bguCAMP_0514-1712.mat shape=(31, 1392, 1300)
50 [STAGE 1] Usable cube: bguCAMP_0514-1718.mat shape=(31, 1392, 1300)
51 [STAGE 1] Usable cube: bguCAMP_0514-1723.mat shape=(31, 1392, 1300)
52 [STAGE 1] Usable cube: bguCAMP_0514-1724.mat shape=(31, 1392, 1300)
53 [STAGE 1] Usable cube: bgu_0403-1439.mat shape=(31, 1392, 1300)
54 [STAGE 1] Usable cube: bgu_0403-1444.mat shape=(31, 1392, 1300)
55 [STAGE 1] Usable cube: bgu_0403-1459.mat shape=(31, 1392, 1300)
56 [STAGE 1] Usable cube: bgu_0403-1511.mat shape=(31, 1392, 1300)
57 [STAGE 1] Usable cube: bgu_0403-1523.mat shape=(31, 1392, 1300)
58 [STAGE 1] Usable cube: bgu_0403-1525.mat shape=(31, 1392, 1300)
59 [STAGE 1] Usable cube: bulb_0822-0903.mat shape=(31, 1392, 1083)
60 [STAGE 1] Usable cube: bulb_0822-0909.mat shape=(31, 1392, 1300)
61 [STAGE 1] Usable cube: eve_0331-1549.mat shape=(31, 1392, 1300)
62 [STAGE 1] Usable cube: eve_0331-1551.mat shape=(31, 1392, 1300)
63 [STAGE 1] Usable cube: eve_0331-1601.mat shape=(31, 1392, 1300)
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64 [STAGE 1] Usable cube: eve_0331-1602.mat shape=(31,
1392, 1300)
65 [STAGE 1] Usable cube: eve_0331-1606.mat shape=(31,
1392, 1300)
66 [STAGE 1] Usable cube: eve_0331-1618.mat shape=(31,
1392, 1300)
67 [STAGE 1] Usable cube: eve_0331-1632.mat shape=(31,
1392, 1300)
68 [STAGE 1] Usable cube: eve_0331-1633.mat shape=(31,
1392, 1300)
69 [STAGE 1] Usable cube: eve_0331-1646 (1).mat shape=(
31, 1392, 1300)
70 [STAGE 1] Usable cube: eve_0331-1646.mat shape=(31,
1392, 1300)
71 [STAGE 1] Usable cube: eve_0331-1647.mat shape=(31,
1392, 1300)
72 [STAGE 1] Usable cube: eve_0331-1656.mat shape=(31,
1392, 1300)
73 [STAGE 1] Usable cube: eve_0331-1657.mat shape=(31,
1392, 1300)
74 [STAGE 1] Usable cube: eve_0331-1702.mat shape=(31,
1392, 1300)
75 [STAGE 1] Usable cube: eve_0331-1705.mat shape=(31,
1392, 1300)
76 [STAGE 1] Usable cube: gavyam_0823-0930.mat shape=(
31, 1392, 1300)
77 [STAGE 1] Usable cube: gavyam_0823-0933.mat shape=(
31, 1392, 1300)
78 [STAGE 1] Usable cube: gavyam_0823-0944.mat shape=(
31, 1392, 1300)
79 [STAGE 1] Usable cube: gavyam_0823-0945.mat shape=(
31, 1392, 1300)
80 [STAGE 1] Usable cube: gavyam_0823-0950-1.mat shape
=(31, 1392, 1300)
81 [STAGE 1] Usable cube: grf_0328-0949.mat shape=(31,
1392, 1300)
82 [STAGE 1] Usable cube: hill_0325-1219.mat shape=(31
, 1392, 1202)
83 [STAGE 1] Usable cube: hill_0325-1228.mat shape=(31
, 1392, 1196)
84 [STAGE 1] Usable cube: hill_0325-1235.mat shape=(31
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84 , 1392, 1194)
85 [STAGE 1] Usable cube: hill_0325-1242.mat shape=(31
, 1392, 1191)
86 [STAGE 1] Usable cube: lehavim_0910-1600.mat shape=(
31, 1392, 1300)
87 [STAGE 1] Usable cube: lehavim_0910-1602.mat shape=(
31, 1392, 1300)
88 [STAGE 1] Usable cube: lehavim_0910-1605.mat shape=(
31, 1392, 1300)
89 [STAGE 1] Usable cube: lehavim_0910-1607.mat shape=(
31, 1392, 1300)
90 [STAGE 1] Usable cube: lehavim_0910-1610.mat shape=(
31, 1392, 1300)
91 [STAGE 1] Usable cube: lst_0408-0950.mat shape=(31,
1392, 1300)
92 [STAGE 1] Usable cube: lst_0408-1004.mat shape=(31,
1392, 1300)
93 [STAGE 1] Usable cube: lst_0408-1012.mat shape=(31,
1392, 1300)
94 [STAGE 1] Usable cube: maz_0326-1048.mat shape=(31,
1392, 1300)
95 [STAGE 1] Usable cube: mor_0328-1209-2.mat shape=(31
, 1392, 1027)
96 [STAGE 1] Usable cube: nachal_0823-1038.mat shape=(
31, 1392, 1300)
97 [STAGE 1] Usable cube: nachal_0823-1040.mat shape=(
31, 1392, 1300)
98 [STAGE 1] Usable cube: nachal_0823-1047.mat shape=(
31, 1392, 1300)
99 [STAGE 1] Usable cube: nachal_0823-1110.mat shape=(
31, 1392, 1300)
100 [STAGE 1] Usable cube: nachal_0823-1117.mat shape=(
31, 1392, 1300)
101 [STAGE 1] Usable cube: nachal_0823-1118.mat shape=(
31, 1392, 1300)
102 [STAGE 1] Usable cube: nachal_0823-1121.mat shape=(
31, 1392, 1300)
103 [STAGE 1] Usable cube: nachal_0823-1127.mat shape=(
31, 1392, 1300)
104 [STAGE 1] Usable cube: nachal_0823-1132.mat shape=(
31, 1392, 1300)
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105 [STAGE 1] Usable cube: nachal_0823-1144.mat shape=(  
    31, 1392, 1300)  
106 [STAGE 1] Usable cube: nachal_0823-1145.mat shape=(  
    31, 1392, 1300)  
107 [STAGE 1] Usable cube: nachal_0823-1147.mat shape=(  
    31, 1392, 1300)  
108 [STAGE 1] Usable cube: nachal_0823-1149.mat shape=(  
    31, 1392, 1300)  
109 [STAGE 1] Usable cube: nachal_0823-1152.mat shape=(  
    31, 1392, 1300)  
110 [STAGE 1] Usable cube: nachal_0823-1210-4.mat shape=  
    =(31, 1392, 1300)  
111 [STAGE 1] Usable cube: nachal_0823-1213.mat shape=(  
    31, 1392, 1300)  
112 [STAGE 1] Usable cube: nachal_0823-1214.mat shape=(  
    31, 1392, 1300)  
113 [STAGE 1] Usable cube: nachal_0823-1217.mat shape=(  
    31, 1392, 1300)  
114 [STAGE 1] Usable cube: nachal_0823-1220.mat shape=(  
    31, 1392, 1300)  
115 [STAGE 1] Usable cube: nachal_0823-1222.mat shape=(  
    31, 1392, 1300)  
116 [STAGE 1] Usable cube: nachal_0823-1223.mat shape=(  
    31, 1392, 1300)  
117 [STAGE 1] Usable cube: negev_0823-1003.mat shape=(31  
    , 1392, 1300)  
118 [STAGE 1] Usable cube: negev_0823-1005.mat shape=(31  
    , 1392, 1300)  
119 [STAGE 1] Usable cube: objects_0924-1550.mat shape=(  
    31, 1392, 1300)  
120 [STAGE 1] Usable cube: objects_0924-1557.mat shape=(  
    31, 1392, 1300)  
121 [STAGE 1] Usable cube: objects_0924-1558.mat shape=(  
    31, 1392, 1300)  
122 [STAGE 1] Usable cube: objects_0924-1600.mat shape=(  
    31, 1392, 1300)  
123 [STAGE 1] Usable cube: objects_0924-1601.mat shape=(  
    31, 1392, 1300)  
124 [STAGE 1] Usable cube: objects_0924-1602.mat shape=(  
    31, 1392, 1300)  
125 [STAGE 1] Usable cube: objects_0924-1605.mat shape=(
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125 31, 1392, 1300)
126 [WARN] Could not open objects_0924-1607.mat: Unable
    to synchronously open file (truncated file: eof =
    125562035, sblock->base_addr = 512, stored_eof =
    137312009)
127 [WARN] Could not open objects_0924-1610.mat: Unable
    to synchronously open file (truncated file: eof =
    110530313, sblock->base_addr = 512, stored_eof =
    137738340)
128 [WARN] Could not open objects_0924-1611.mat: Unable
    to synchronously open file (truncated file: eof =
    98660420, sblock->base_addr = 512, stored_eof =
    137190862)
129 [WARN] Could not open objects_0924-1612.mat: Unable
    to synchronously open file (truncated file: eof =
    87423596, sblock->base_addr = 512, stored_eof =
    137580080)
130 [WARN] Could not open objects_0924-1614.mat: Unable
    to synchronously open file (truncated file: eof =
    80132997, sblock->base_addr = 512, stored_eof =
    136678703)
131 [WARN] Could not open objects_0924-1617.mat: Unable
    to synchronously open file (truncated file: eof =
    54339506, sblock->base_addr = 512, stored_eof =
    136613636)
132 [WARN] Could not open objects_0924-1619.mat: Unable
    to synchronously open file (truncated file: eof =
    19411056, sblock->base_addr = 512, stored_eof =
    136564214)
133 [WARN] Could not open objects_0924-1620.mat: Unable
    to synchronously open file (truncated file: eof =
    14186546, sblock->base_addr = 512, stored_eof =
    136492213)
134 [WARN] Could not open objects_0924-1622.mat: Unable
    to synchronously open file (truncated file: eof =
    10462458, sblock->base_addr = 512, stored_eof =
    136603430)
135 [STAGE 1] Usable cube: objects_0924-1623.mat shape=(
    31, 1392, 1300)
136 [STAGE 1] Usable cube: objects_0924-1624.mat shape=(
    31, 1392, 1300)
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137 [STAGE 1] Usable cube: objects_0924-1625.mat shape=(  
    31, 1392, 1300)  
138 [STAGE 1] Usable cube: objects_0924-1627.mat shape=(  
    31, 1392, 1300)  
139 [STAGE 1] Usable cube: objects_0924-1628.mat shape=(  
    31, 1392, 1300)  
140 [STAGE 1] Usable cube: objects_0924-1629.mat shape=(  
    31, 1392, 1300)  
141 [STAGE 1] Usable cube: objects_0924-1631.mat shape=(  
    31, 1392, 1300)  
142 [STAGE 1] Usable cube: objects_0924-1632.mat shape=(  
    31, 1392, 1300)  
143 [STAGE 1] Usable cube: objects_0924-1633.mat shape=(  
    31, 1392, 1300)  
144 [STAGE 1] Usable cube: objects_0924-1634.mat shape=(  
    31, 1392, 1300)  
145 [STAGE 1] Usable cube: objects_0924-1636.mat shape=(  
    31, 1392, 1300)  
146 [STAGE 1] Usable cube: objects_0924-1637.mat shape=(  
    31, 1392, 1300)  
147 [STAGE 1] Usable cube: objects_0924-1638.mat shape=(  
    31, 1392, 1300)  
148 [STAGE 1] Usable cube: objects_0924-1639.mat shape=(  
    31, 1392, 1300)  
149 [STAGE 1] Usable cube: objects_0924-1641.mat shape=(  
    31, 1392, 1300)  
150 [STAGE 1] Usable cube: objects_0924-1645.mat shape=(  
    31, 1392, 1300)  
151 [STAGE 1] Usable cube: objects_0924-1650.mat shape=(  
    31, 1392, 1300)  
152 [STAGE 1] Usable cube: objects_0924-1652.mat shape=(  
    31, 1392, 1300)  
153 [STAGE 1] Usable cube: omer_0331-1055.mat shape=(31  
    , 1392, 1300)  
154 [STAGE 1] Usable cube: omer_0331-1102.mat shape=(31  
    , 1392, 1300)  
155 [STAGE 1] Usable cube: omer_0331-1104.mat shape=(31  
    , 1392, 1300)  
156 [STAGE 1] Usable cube: omer_0331-1118.mat shape=(31  
    , 1392, 1300)  
157 [STAGE 1] Usable cube: omer_0331-1119.mat shape=(31
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157 , 1392, 1300)
158 [STAGE 1] Usable cube: omer_0331-1130.mat shape=(31
, 1392, 1300)
159 [STAGE 1] Usable cube: omer_0331-1131.mat shape=(31
, 1392, 1300)
160 [STAGE 1] Usable cube: omer_0331-1135.mat shape=(31
, 1392, 1300)
161 [STAGE 1] Usable cube: omer_0331-1150.mat shape=(31
, 1392, 1300)
162 [STAGE 1] Usable cube: omer_0331-1159.mat shape=(31
, 1392, 1300)
163 [STAGE 1] Usable cube: pepper_0503-1228.mat shape=(
31, 1392, 1300)
164 [STAGE 1] Usable cube: pepper_0503-1229.mat shape=(
31, 1392, 1300)
165 [STAGE 1] Usable cube: pepper_0503-1236.mat shape=(
31, 1392, 1300)
166 [STAGE 1] Usable cube: peppers_0503-1308.mat shape=(
31, 1392, 1300)
167 [STAGE 1] Usable cube: peppers_0503-1311.mat shape=(
31, 1392, 1300)
168 [STAGE 1] Usable cube: peppers_0503-1315.mat shape=(
31, 1392, 1300)
169 [STAGE 1] Usable cube: peppers_0503-1330.mat shape=(
31, 1392, 1300)
170 [STAGE 1] Usable cube: peppers_0503-1332.mat shape=(
31, 1392, 1300)
171 [STAGE 1] Usable cube: plt_0411-1037.mat shape=(31,
1392, 1300)
172 [STAGE 1] Usable cube: plt_0411-1046.mat shape=(31,
1392, 1300)
173 [STAGE 1] Usable cube: plt_0411-1116.mat shape=(31,
1392, 1300)
174 [STAGE 1] Usable cube: plt_0411-1155.mat shape=(31,
1392, 1300)
175 [STAGE 1] Usable cube: plt_0411-1200-1.mat shape=(31
, 1392, 1300)
176 [STAGE 1] Usable cube: plt_0411-1207.mat shape=(31,
1392, 1300)
177 [STAGE 1] Usable cube: plt_0411-1210.mat shape=(31,
1392, 1300)
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178 [STAGE 1] Usable cube: plt_0411-1211.mat shape=(31,
1392, 1300)
179 [STAGE 1] Usable cube: plt_0411-1232-1.mat shape=(31
, 1392, 1300)
180 [STAGE 1] Usable cube: prk_0328-0945.mat shape=(31,
1392, 1300)
181 [STAGE 1] Usable cube: prk_0328-1025.mat shape=(31,
1392, 1300)
182 [STAGE 1] Usable cube: prk_0328-1031.mat shape=(31,
1392, 1300)
183 [STAGE 1] Usable cube: prk_0328-1034.mat shape=(31,
1392, 1300)
184 [STAGE 1] Usable cube: prk_0328-1037.mat shape=(31,
1392, 1300)
185 [STAGE 1] Usable cube: prk_0328-1045.mat shape=(31,
1392, 1300)
186 [STAGE 1] Usable cube: ramot_0325-1322.mat shape=(31
, 1392, 1300)
187 [STAGE 1] Usable cube: rmt_0328-1241-1.mat shape=(31
, 1392, 1023)
188 [STAGE 1] Usable cube: rsh2_0406-1505.mat shape=(31
, 1392, 1300)
189 [STAGE 1] Usable cube: rsh_0406-1343.mat shape=(31,
1392, 1300)
190 [STAGE 1] Usable cube: rsh_0406-1356.mat shape=(31,
1392, 1300)
191 [STAGE 1] Usable cube: rsh_0406-1413.mat shape=(31,
1392, 1300)
192 [STAGE 1] Usable cube: rsh_0406-1427.mat shape=(31,
1392, 1300)
193 [STAGE 1] Usable cube: rsh_0406-1441-1.mat shape=(31
, 1392, 1300)
194 [STAGE 1] Usable cube: rsh_0406-1443.mat shape=(31,
1392, 1300)
195 [STAGE 1] Usable cube: sami_0331-1019.mat shape=(31
, 1392, 1300)
196 [STAGE 1] Usable cube: sat_0406-1107.mat shape=(31,
1392, 1300)
197 [STAGE 1] Usable cube: sat_0406-1129.mat shape=(31,
1392, 1300)
198 [STAGE 1] Usable cube: sat_0406-1130.mat shape=(31,
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198 1392, 1300)
199 [STAGE 1] Usable cube: sat_0406-1157-1.mat shape=(31
, 1392, 1300)
200 [STAGE 1] Usable cube: selfie_0822-0906.mat shape=(
31, 1392, 1300)
201 [STAGE 1] Usable cube: strt_0331-1027.mat shape=(31
, 1392, 1300)
202 [STAGE 1] Usable cube: tree_0822-0853.mat shape=(31
, 1392, 1084)
203 [STAGE 1] Usable cube: ulm_0328-1118.mat shape=(31,
1392, 1021)
204 [INFO] 188 usable HS cubes will be preloaded
205 [STAGE 2] Loading 1/188: 4cam_0411-1640-1.mat
206 [STAGE 2] Done: torch.Size([31, 128, 128])
207 [STAGE 2] Loading 2/188: 4cam_0411-1648.mat
208 [STAGE 2] Done: torch.Size([31, 128, 128])
209 [STAGE 2] Loading 3/188: BGU_0403-1419-1.mat
210 [STAGE 2] Done: torch.Size([31, 128, 128])
211 [STAGE 2] Loading 4/188: BGU_0522-1113-1.mat
212 [STAGE 2] Done: torch.Size([31, 128, 128])
213 [STAGE 2] Loading 5/188: BGU_0522-1127.mat
214 [STAGE 2] Done: torch.Size([31, 128, 128])
215 [STAGE 2] Loading 6/188: BGU_0522-1136.mat
216 [STAGE 2] Done: torch.Size([31, 128, 128])
217 [STAGE 2] Loading 7/188: BGU_0522-1201.mat
218 [STAGE 2] Done: torch.Size([31, 128, 128])
219 [STAGE 2] Loading 8/188: BGU_0522-1203.mat
220 [STAGE 2] Done: torch.Size([31, 128, 128])
221 [STAGE 2] Loading 9/188: BGU_0522-1211.mat
222 [STAGE 2] Done: torch.Size([31, 128, 128])
223 [STAGE 2] Loading 10/188: BGU_0522-1216.mat
224 [STAGE 2] Done: torch.Size([31, 128, 128])
225 [STAGE 2] Loading 11/188: BGU_0522-1217.mat
226 [STAGE 2] Done: torch.Size([31, 128, 128])
227 [STAGE 2] Loading 12/188: CC_40D_2_1103-0917.mat
228 [STAGE 2] Done: torch.Size([31, 128, 128])
229 [STAGE 2] Loading 13/188: Flower_0325-1336.mat
230 [STAGE 2] Done: torch.Size([31, 128, 128])
231 [STAGE 2] Loading 14/188: IDS_COLORCHECK_1020-1215-1
.mat
232 [STAGE 2] Done: torch.Size([31, 128, 128])
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233 [STAGE 2] Loading 15/188: IDS_COLORCHECK_1020-1223.  
mat  
234 [STAGE 2] Done: torch.Size([31, 128, 128])  
235 [STAGE 2] Loading 16/188: Labtest_0910-1502.mat  
236 [STAGE 2] Done: torch.Size([31, 128, 128])  
237 [STAGE 2] Loading 17/188: Labtest_0910-1504.mat  
238 [STAGE 2] Done: torch.Size([31, 128, 128])  
239 [STAGE 2] Loading 18/188: Labtest_0910-1506.mat  
240 [STAGE 2] Done: torch.Size([31, 128, 128])  
241 [STAGE 2] Loading 19/188: Labtest_0910-1509.mat  
242 [STAGE 2] Done: torch.Size([31, 128, 128])  
243 [STAGE 2] Loading 20/188: Labtest_0910-1511.mat  
244 [STAGE 2] Done: torch.Size([31, 128, 128])  
245 [STAGE 2] Loading 21/188: Lehavim_0910-1626.mat  
246 [STAGE 2] Done: torch.Size([31, 128, 128])  
247 [STAGE 2] Loading 22/188: Lehavim_0910-1627.mat  
248 [STAGE 2] Done: torch.Size([31, 128, 128])  
249 [STAGE 2] Loading 23/188: Lehavim_0910-1629.mat  
250 [STAGE 2] Done: torch.Size([31, 128, 128])  
251 [STAGE 2] Loading 24/188: Lehavim_0910-1630.mat  
252 [STAGE 2] Done: torch.Size([31, 128, 128])  
253 [STAGE 2] Loading 25/188: Lehavim_0910-1633.mat  
254 [STAGE 2] Done: torch.Size([31, 128, 128])  
255 [STAGE 2] Loading 26/188: Lehavim_0910-1635.mat  
256 [STAGE 2] Done: torch.Size([31, 128, 128])  
257 [STAGE 2] Loading 27/188: Lehavim_0910-1636.mat  
258 [STAGE 2] Done: torch.Size([31, 128, 128])  
259 [STAGE 2] Loading 28/188: Lehavim_0910-1640.mat  
260 [STAGE 2] Done: torch.Size([31, 128, 128])  
261 [STAGE 2] Loading 29/188: Lehavim_0910-1708.mat  
262 [STAGE 2] Done: torch.Size([31, 128, 128])  
263 [STAGE 2] Loading 30/188: Lehavim_0910-1716.mat  
264 [STAGE 2] Done: torch.Size([31, 128, 128])  
265 [STAGE 2] Loading 31/188: Lehavim_0910-1717.mat  
266 [STAGE 2] Done: torch.Size([31, 128, 128])  
267 [STAGE 2] Loading 32/188: Lehavim_0910-1718.mat  
268 [STAGE 2] Done: torch.Size([31, 128, 128])  
269 [STAGE 2] Loading 33/188: Lehavim_0910-1725.mat  
270 [STAGE 2] Done: torch.Size([31, 128, 128])  
271 [STAGE 2] Loading 34/188:  
Master20150112_f2_colorchecker.mat
```

```
272 [STAGE 2] Done: torch.Size([31, 128, 128])
273 [STAGE 2] Loading 35/188: Master2900k (1).mat
274 [STAGE 2] Done: torch.Size([31, 128, 128])
275 [STAGE 2] Loading 36/188: Master2900k.mat
276 [STAGE 2] Done: torch.Size([31, 128, 128])
277 [STAGE 2] Loading 37/188: Master5000K.mat
278 [STAGE 2] Done: torch.Size([31, 128, 128])
279 [STAGE 2] Loading 38/188: Master5000K_2900K.mat
280 [STAGE 2] Done: torch.Size([31, 128, 128])
281 [STAGE 2] Loading 39/188: Maz0326-1038.mat
282 [STAGE 2] Done: torch.Size([31, 128, 128])
283 [STAGE 2] Loading 40/188: Ramot0325-1364.mat
284 [STAGE 2] Done: torch.Size([31, 128, 128])
285 [STAGE 2] Loading 41/188: bguCAMP_0514-1659.mat
286 [STAGE 2] Done: torch.Size([31, 128, 128])
287 [STAGE 2] Loading 42/188: bguCAMP_0514-1711.mat
288 [STAGE 2] Done: torch.Size([31, 128, 128])
289 [STAGE 2] Loading 43/188: bguCAMP_0514-1712.mat
290 [STAGE 2] Done: torch.Size([31, 128, 128])
291 [STAGE 2] Loading 44/188: bguCAMP_0514-1718.mat
292 [STAGE 2] Done: torch.Size([31, 128, 128])
293 [STAGE 2] Loading 45/188: bguCAMP_0514-1723.mat
294 [STAGE 2] Done: torch.Size([31, 128, 128])
295 [STAGE 2] Loading 46/188: bguCAMP_0514-1724.mat
296 [STAGE 2] Done: torch.Size([31, 128, 128])
297 [STAGE 2] Loading 47/188: bgu_0403-1439.mat
298 [STAGE 2] Done: torch.Size([31, 128, 128])
299 [STAGE 2] Loading 48/188: bgu_0403-1444.mat
300 [STAGE 2] Done: torch.Size([31, 128, 128])
301 [STAGE 2] Loading 49/188: bgu_0403-1459.mat
302 [STAGE 2] Done: torch.Size([31, 128, 128])
303 [STAGE 2] Loading 50/188: bgu_0403-1511.mat
304 [STAGE 2] Done: torch.Size([31, 128, 128])
305 [STAGE 2] Loading 51/188: bgu_0403-1523.mat
306 [STAGE 2] Done: torch.Size([31, 128, 128])
307 [STAGE 2] Loading 52/188: bgu_0403-1525.mat
308 [STAGE 2] Done: torch.Size([31, 128, 128])
309 [STAGE 2] Loading 53/188: bulb_0822-0903.mat
310 [STAGE 2] Done: torch.Size([31, 128, 128])
311 [STAGE 2] Loading 54/188: bulb_0822-0909.mat
312 [STAGE 2] Done: torch.Size([31, 128, 128])
```

```
313 [STAGE 2] Loading 55/188: eve_0331-1549.mat
314 [STAGE 2] Done: torch.Size([31, 128, 128])
315 [STAGE 2] Loading 56/188: eve_0331-1551.mat
316 [STAGE 2] Done: torch.Size([31, 128, 128])
317 [STAGE 2] Loading 57/188: eve_0331-1601.mat
318 [STAGE 2] Done: torch.Size([31, 128, 128])
319 [STAGE 2] Loading 58/188: eve_0331-1602.mat
320 [STAGE 2] Done: torch.Size([31, 128, 128])
321 [STAGE 2] Loading 59/188: eve_0331-1606.mat
322 [STAGE 2] Done: torch.Size([31, 128, 128])
323 [STAGE 2] Loading 60/188: eve_0331-1618.mat
324 [STAGE 2] Done: torch.Size([31, 128, 128])
325 [STAGE 2] Loading 61/188: eve_0331-1632.mat
326 [STAGE 2] Done: torch.Size([31, 128, 128])
327 [STAGE 2] Loading 62/188: eve_0331-1633.mat
328 [STAGE 2] Done: torch.Size([31, 128, 128])
329 [STAGE 2] Loading 63/188: eve_0331-1646 (1).mat
330 [STAGE 2] Done: torch.Size([31, 128, 128])
331 [STAGE 2] Loading 64/188: eve_0331-1646.mat
332 [STAGE 2] Done: torch.Size([31, 128, 128])
333 [STAGE 2] Loading 65/188: eve_0331-1647.mat
334 [STAGE 2] Done: torch.Size([31, 128, 128])
335 [STAGE 2] Loading 66/188: eve_0331-1656.mat
336 [STAGE 2] Done: torch.Size([31, 128, 128])
337 [STAGE 2] Loading 67/188: eve_0331-1657.mat
338 [STAGE 2] Done: torch.Size([31, 128, 128])
339 [STAGE 2] Loading 68/188: eve_0331-1702.mat
340 [STAGE 2] Done: torch.Size([31, 128, 128])
341 [STAGE 2] Loading 69/188: eve_0331-1705.mat
342 [STAGE 2] Done: torch.Size([31, 128, 128])
343 [STAGE 2] Loading 70/188: gavyam_0823-0930.mat
344 [STAGE 2] Done: torch.Size([31, 128, 128])
345 [STAGE 2] Loading 71/188: gavyam_0823-0933.mat
346 [STAGE 2] Done: torch.Size([31, 128, 128])
347 [STAGE 2] Loading 72/188: gavyam_0823-0944.mat
348 [STAGE 2] Done: torch.Size([31, 128, 128])
349 [STAGE 2] Loading 73/188: gavyam_0823-0945.mat
350 [STAGE 2] Done: torch.Size([31, 128, 128])
351 [STAGE 2] Loading 74/188: gavyam_0823-0950-1.mat
352 [STAGE 2] Done: torch.Size([31, 128, 128])
353 [STAGE 2] Loading 75/188: grf_0328-0949.mat
```

```
354 [STAGE 2] Done: torch.Size([31, 128, 128])
355 [STAGE 2] Loading 76/188: hill_0325-1219.mat
356 [STAGE 2] Done: torch.Size([31, 128, 128])
357 [STAGE 2] Loading 77/188: hill_0325-1228.mat
358 [STAGE 2] Done: torch.Size([31, 128, 128])
359 [STAGE 2] Loading 78/188: hill_0325-1235.mat
360 [STAGE 2] Done: torch.Size([31, 128, 128])
361 [STAGE 2] Loading 79/188: hill_0325-1242.mat
362 [STAGE 2] Done: torch.Size([31, 128, 128])
363 [STAGE 2] Loading 80/188: lehavim_0910-1600.mat
364 [STAGE 2] Done: torch.Size([31, 128, 128])
365 [STAGE 2] Loading 81/188: lehavim_0910-1602.mat
366 [STAGE 2] Done: torch.Size([31, 128, 128])
367 [STAGE 2] Loading 82/188: lehavim_0910-1605.mat
368 [STAGE 2] Done: torch.Size([31, 128, 128])
369 [STAGE 2] Loading 83/188: lehavim_0910-1607.mat
370 [STAGE 2] Done: torch.Size([31, 128, 128])
371 [STAGE 2] Loading 84/188: lehavim_0910-1610.mat
372 [STAGE 2] Done: torch.Size([31, 128, 128])
373 [STAGE 2] Loading 85/188: lst_0408-0950.mat
374 [STAGE 2] Done: torch.Size([31, 128, 128])
375 [STAGE 2] Loading 86/188: lst_0408-1004.mat
376 [STAGE 2] Done: torch.Size([31, 128, 128])
377 [STAGE 2] Loading 87/188: lst_0408-1012.mat
378 [STAGE 2] Done: torch.Size([31, 128, 128])
379 [STAGE 2] Loading 88/188: maz_0326-1048.mat
380 [STAGE 2] Done: torch.Size([31, 128, 128])
381 [STAGE 2] Loading 89/188: mor_0328-1209-2.mat
382 [STAGE 2] Done: torch.Size([31, 128, 128])
383 [STAGE 2] Loading 90/188: nachal_0823-1038.mat
384 [STAGE 2] Done: torch.Size([31, 128, 128])
385 [STAGE 2] Loading 91/188: nachal_0823-1040.mat
386 [STAGE 2] Done: torch.Size([31, 128, 128])
387 [STAGE 2] Loading 92/188: nachal_0823-1047.mat
388 [STAGE 2] Done: torch.Size([31, 128, 128])
389 [STAGE 2] Loading 93/188: nachal_0823-1110.mat
390 [STAGE 2] Done: torch.Size([31, 128, 128])
391 [STAGE 2] Loading 94/188: nachal_0823-1117.mat
392 [STAGE 2] Done: torch.Size([31, 128, 128])
393 [STAGE 2] Loading 95/188: nachal_0823-1118.mat
394 [STAGE 2] Done: torch.Size([31, 128, 128])
```

```
395 [STAGE 2] Loading 96/188: nachal_0823-1121.mat
396 [STAGE 2] Done: torch.Size([31, 128, 128])
397 [STAGE 2] Loading 97/188: nachal_0823-1127.mat
398 [STAGE 2] Done: torch.Size([31, 128, 128])
399 [STAGE 2] Loading 98/188: nachal_0823-1132.mat
400 [STAGE 2] Done: torch.Size([31, 128, 128])
401 [STAGE 2] Loading 99/188: nachal_0823-1144.mat
402 [STAGE 2] Done: torch.Size([31, 128, 128])
403 [STAGE 2] Loading 100/188: nachal_0823-1145.mat
404 [STAGE 2] Done: torch.Size([31, 128, 128])
405 [STAGE 2] Loading 101/188: nachal_0823-1147.mat
406 [STAGE 2] Done: torch.Size([31, 128, 128])
407 [STAGE 2] Loading 102/188: nachal_0823-1149.mat
408 [STAGE 2] Done: torch.Size([31, 128, 128])
409 [STAGE 2] Loading 103/188: nachal_0823-1152.mat
410 [STAGE 2] Done: torch.Size([31, 128, 128])
411 [STAGE 2] Loading 104/188: nachal_0823-1210-4.mat
412 [STAGE 2] Done: torch.Size([31, 128, 128])
413 [STAGE 2] Loading 105/188: nachal_0823-1213.mat
414 [STAGE 2] Done: torch.Size([31, 128, 128])
415 [STAGE 2] Loading 106/188: nachal_0823-1214.mat
416 [STAGE 2] Done: torch.Size([31, 128, 128])
417 [STAGE 2] Loading 107/188: nachal_0823-1217.mat
418 [STAGE 2] Done: torch.Size([31, 128, 128])
419 [STAGE 2] Loading 108/188: nachal_0823-1220.mat
420 [STAGE 2] Done: torch.Size([31, 128, 128])
421 [STAGE 2] Loading 109/188: nachal_0823-1222.mat
422 [STAGE 2] Done: torch.Size([31, 128, 128])
423 [STAGE 2] Loading 110/188: nachal_0823-1223.mat
424 [STAGE 2] Done: torch.Size([31, 128, 128])
425 [STAGE 2] Loading 111/188: negev_0823-1003.mat
426 [STAGE 2] Done: torch.Size([31, 128, 128])
427 [STAGE 2] Loading 112/188: negev_0823-1005.mat
428 [STAGE 2] Done: torch.Size([31, 128, 128])
429 [STAGE 2] Loading 113/188: objects_0924-1550.mat
430 [STAGE 2] Done: torch.Size([31, 128, 128])
431 [STAGE 2] Loading 114/188: objects_0924-1557.mat
432 [STAGE 2] Done: torch.Size([31, 128, 128])
433 [STAGE 2] Loading 115/188: objects_0924-1558.mat
434 [STAGE 2] Done: torch.Size([31, 128, 128])
435 [STAGE 2] Loading 116/188: objects_0924-1600.mat
```

```
436 [STAGE 2] Done: torch.Size([31, 128, 128])
437 [STAGE 2] Loading 117/188: objects_0924-1601.mat
438 [STAGE 2] Done: torch.Size([31, 128, 128])
439 [STAGE 2] Loading 118/188: objects_0924-1602.mat
440 [STAGE 2] Done: torch.Size([31, 128, 128])
441 [STAGE 2] Loading 119/188: objects_0924-1605.mat
442 [STAGE 2] Done: torch.Size([31, 128, 128])
443 [STAGE 2] Loading 120/188: objects_0924-1623.mat
444 [STAGE 2] Done: torch.Size([31, 128, 128])
445 [STAGE 2] Loading 121/188: objects_0924-1624.mat
446 [STAGE 2] Done: torch.Size([31, 128, 128])
447 [STAGE 2] Loading 122/188: objects_0924-1625.mat
448 [STAGE 2] Done: torch.Size([31, 128, 128])
449 [STAGE 2] Loading 123/188: objects_0924-1627.mat
450 [STAGE 2] Done: torch.Size([31, 128, 128])
451 [STAGE 2] Loading 124/188: objects_0924-1628.mat
452 [STAGE 2] Done: torch.Size([31, 128, 128])
453 [STAGE 2] Loading 125/188: objects_0924-1629.mat
454 [STAGE 2] Done: torch.Size([31, 128, 128])
455 [STAGE 2] Loading 126/188: objects_0924-1631.mat
456 [STAGE 2] Done: torch.Size([31, 128, 128])
457 [STAGE 2] Loading 127/188: objects_0924-1632.mat
458 [STAGE 2] Done: torch.Size([31, 128, 128])
459 [STAGE 2] Loading 128/188: objects_0924-1633.mat
460 [STAGE 2] Done: torch.Size([31, 128, 128])
461 [STAGE 2] Loading 129/188: objects_0924-1634.mat
462 [STAGE 2] Done: torch.Size([31, 128, 128])
463 [STAGE 2] Loading 130/188: objects_0924-1636.mat
464 [STAGE 2] Done: torch.Size([31, 128, 128])
465 [STAGE 2] Loading 131/188: objects_0924-1637.mat
466 [STAGE 2] Done: torch.Size([31, 128, 128])
467 [STAGE 2] Loading 132/188: objects_0924-1638.mat
468 [STAGE 2] Done: torch.Size([31, 128, 128])
469 [STAGE 2] Loading 133/188: objects_0924-1639.mat
470 [STAGE 2] Done: torch.Size([31, 128, 128])
471 [STAGE 2] Loading 134/188: objects_0924-1641.mat
472 [STAGE 2] Done: torch.Size([31, 128, 128])
473 [STAGE 2] Loading 135/188: objects_0924-1645.mat
474 [STAGE 2] Done: torch.Size([31, 128, 128])
475 [STAGE 2] Loading 136/188: objects_0924-1650.mat
476 [STAGE 2] Done: torch.Size([31, 128, 128])
```

```
477 [STAGE 2] Loading 137/188: objects_0924-1652.mat
478 [STAGE 2] Done: torch.Size([31, 128, 128])
479 [STAGE 2] Loading 138/188: omer_0331-1055.mat
480 [STAGE 2] Done: torch.Size([31, 128, 128])
481 [STAGE 2] Loading 139/188: omer_0331-1102.mat
482 [STAGE 2] Done: torch.Size([31, 128, 128])
483 [STAGE 2] Loading 140/188: omer_0331-1104.mat
484 [STAGE 2] Done: torch.Size([31, 128, 128])
485 [STAGE 2] Loading 141/188: omer_0331-1118.mat
486 [STAGE 2] Done: torch.Size([31, 128, 128])
487 [STAGE 2] Loading 142/188: omer_0331-1119.mat
488 [STAGE 2] Done: torch.Size([31, 128, 128])
489 [STAGE 2] Loading 143/188: omer_0331-1130.mat
490 [STAGE 2] Done: torch.Size([31, 128, 128])
491 [STAGE 2] Loading 144/188: omer_0331-1131.mat
492 [STAGE 2] Done: torch.Size([31, 128, 128])
493 [STAGE 2] Loading 145/188: omer_0331-1135.mat
494 [STAGE 2] Done: torch.Size([31, 128, 128])
495 [STAGE 2] Loading 146/188: omer_0331-1150.mat
496 [STAGE 2] Done: torch.Size([31, 128, 128])
497 [STAGE 2] Loading 147/188: omer_0331-1159.mat
498 [STAGE 2] Done: torch.Size([31, 128, 128])
499 [STAGE 2] Loading 148/188: pepper_0503-1228.mat
500 [STAGE 2] Done: torch.Size([31, 128, 128])
501 [STAGE 2] Loading 149/188: pepper_0503-1229.mat
502 [STAGE 2] Done: torch.Size([31, 128, 128])
503 [STAGE 2] Loading 150/188: pepper_0503-1236.mat
504 [STAGE 2] Done: torch.Size([31, 128, 128])
505 [STAGE 2] Loading 151/188: peppers_0503-1308.mat
506 [STAGE 2] Done: torch.Size([31, 128, 128])
507 [STAGE 2] Loading 152/188: peppers_0503-1311.mat
508 [STAGE 2] Done: torch.Size([31, 128, 128])
509 [STAGE 2] Loading 153/188: peppers_0503-1315.mat
510 [STAGE 2] Done: torch.Size([31, 128, 128])
511 [STAGE 2] Loading 154/188: peppers_0503-1330.mat
512 [STAGE 2] Done: torch.Size([31, 128, 128])
513 [STAGE 2] Loading 155/188: peppers_0503-1332.mat
514 [STAGE 2] Done: torch.Size([31, 128, 128])
515 [STAGE 2] Loading 156/188: plt_0411-1037.mat
516 [STAGE 2] Done: torch.Size([31, 128, 128])
517 [STAGE 2] Loading 157/188: plt_0411-1046.mat
```

```
518 [STAGE 2] Done: torch.Size([31, 128, 128])
519 [STAGE 2] Loading 158/188: plt_0411-1116.mat
520 [STAGE 2] Done: torch.Size([31, 128, 128])
521 [STAGE 2] Loading 159/188: plt_0411-1155.mat
522 [STAGE 2] Done: torch.Size([31, 128, 128])
523 [STAGE 2] Loading 160/188: plt_0411-1200-1.mat
524 [STAGE 2] Done: torch.Size([31, 128, 128])
525 [STAGE 2] Loading 161/188: plt_0411-1207.mat
526 [STAGE 2] Done: torch.Size([31, 128, 128])
527 [STAGE 2] Loading 162/188: plt_0411-1210.mat
528 [STAGE 2] Done: torch.Size([31, 128, 128])
529 [STAGE 2] Loading 163/188: plt_0411-1211.mat
530 [STAGE 2] Done: torch.Size([31, 128, 128])
531 [STAGE 2] Loading 164/188: plt_0411-1232-1.mat
532 [STAGE 2] Done: torch.Size([31, 128, 128])
533 [STAGE 2] Loading 165/188: prk_0328-0945.mat
534 [STAGE 2] Done: torch.Size([31, 128, 128])
535 [STAGE 2] Loading 166/188: prk_0328-1025.mat
536 [STAGE 2] Done: torch.Size([31, 128, 128])
537 [STAGE 2] Loading 167/188: prk_0328-1031.mat
538 [STAGE 2] Done: torch.Size([31, 128, 128])
539 [STAGE 2] Loading 168/188: prk_0328-1034.mat
540 [STAGE 2] Done: torch.Size([31, 128, 128])
541 [STAGE 2] Loading 169/188: prk_0328-1037.mat
542 [STAGE 2] Done: torch.Size([31, 128, 128])
543 [STAGE 2] Loading 170/188: prk_0328-1045.mat
544 [STAGE 2] Done: torch.Size([31, 128, 128])
545 [STAGE 2] Loading 171/188: ramot_0325-1322.mat
546 [STAGE 2] Done: torch.Size([31, 128, 128])
547 [STAGE 2] Loading 172/188: rmt_0328-1241-1.mat
548 [STAGE 2] Done: torch.Size([31, 128, 128])
549 [STAGE 2] Loading 173/188: rsh2_0406-1505.mat
550 [STAGE 2] Done: torch.Size([31, 128, 128])
551 [STAGE 2] Loading 174/188: rsh_0406-1343.mat
552 [STAGE 2] Done: torch.Size([31, 128, 128])
553 [STAGE 2] Loading 175/188: rsh_0406-1356.mat
554 [STAGE 2] Done: torch.Size([31, 128, 128])
555 [STAGE 2] Loading 176/188: rsh_0406-1413.mat
556 [STAGE 2] Done: torch.Size([31, 128, 128])
557 [STAGE 2] Loading 177/188: rsh_0406-1427.mat
558 [STAGE 2] Done: torch.Size([31, 128, 128])
```

```
559 [STAGE 2] Loading 178/188: rsh_0406-1441-1.mat
560 [STAGE 2] Done: torch.Size([31, 128, 128])
561 [STAGE 2] Loading 179/188: rsh_0406-1443.mat
562 [STAGE 2] Done: torch.Size([31, 128, 128])
563 [STAGE 2] Loading 180/188: sami_0331-1019.mat
564 [STAGE 2] Done: torch.Size([31, 128, 128])
565 [STAGE 2] Loading 181/188: sat_0406-1107.mat
566 [STAGE 2] Done: torch.Size([31, 128, 128])
567 [STAGE 2] Loading 182/188: sat_0406-1129.mat
568 [STAGE 2] Done: torch.Size([31, 128, 128])
569 [STAGE 2] Loading 183/188: sat_0406-1130.mat
570 [STAGE 2] Done: torch.Size([31, 128, 128])
571 [STAGE 2] Loading 184/188: sat_0406-1157-1.mat
572 [STAGE 2] Done: torch.Size([31, 128, 128])
573 [STAGE 2] Loading 185/188: selfie_0822-0906.mat
574 [STAGE 2] Done: torch.Size([31, 128, 128])
575 [STAGE 2] Loading 186/188: strt_0331-1027.mat
576 [STAGE 2] Done: torch.Size([31, 128, 128])
577 [STAGE 2] Loading 187/188: tree_0822-0853.mat
578 [STAGE 2] Done: torch.Size([31, 128, 128])
579 [STAGE 2] Loading 188/188: ulm_0328-1118.mat
580 [STAGE 2] Done: torch.Size([31, 128, 128])
581 [INFO] Finished preloading 188 HS cubes
582 [DATA] RGB samples: 1183 | HS samples: 188
583 torch.xpu.is_available(): True
584 [INFO] Using device: xpu
585
586 [TRAIN] Starting epoch 1/10
587 config: torch.xpu.is_available(): True
588 config: torch.xpu.is_available(): True
589 config: torch.xpu.is_available(): True
590 config: torch.xpu.is_available(): True
591 [INFO] notice: Using device: xpu
592 [STEP] Epoch 1 | Step 0/295 | D: 9.8509 | G: 3.4647
593 [INFO] notice: Using device: xpu
594 [STEP] Epoch 1 | Step 10/295 | D: -32.3541 | G: 10.
      0443
595 config: torch.xpu.is_available(): True
596 config: torch.xpu.is_available(): True
597 [INFO] notice: Using device: xpu
598 [STEP] Epoch 1 | Step 20/295 | D: -185.2437 | G: 33.
```

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598 6416
599 [INFO] notice: Using device: xpu
600 [STEP] Epoch 1 | Step 30/295 | D: -252.3980 | G: 64.
9111
601 config: torch.xpu.is_available(): True
602 config: torch.xpu.is_available(): True
603 [INFO] notice: Using device: xpu
604 [STEP] Epoch 1 | Step 40/295 | D: -271.8520 | G: 79.
0969
605 config: torch.xpu.is_available(): True
606 config: torch.xpu.is_available(): True
607 [INFO] notice: Using device: xpu
608 [STEP] Epoch 1 | Step 50/295 | D: 80.4732 | G: 42.
9111
609 [INFO] Reached max_steps_per_epoch=50, breaking
early
610 [EPOCH] 1/10 finished in 1461.4s
611 [INFO] Saved checkpoint: ./checkpoints\
shs_gan_epoch1.pth
612
613 [TRAIN] Starting epoch 2/10
614 config: torch.xpu.is_available(): True
615 config: torch.xpu.is_available(): True
616 config: torch.xpu.is_available(): True
617 config: torch.xpu.is_available(): True
618 [INFO] notice: Using device: xpu
619 [STEP] Epoch 2 | Step 0/295 | D: 24.3362 | G: 36.
5739
620 [INFO] notice: Using device: xpu
621 [STEP] Epoch 2 | Step 10/295 | D: 153.7623 | G: 8.
5039
622 config: torch.xpu.is_available(): True
623 config: torch.xpu.is_available(): True
624 [INFO] notice: Using device: xpu
625 [STEP] Epoch 2 | Step 20/295 | D: 70.7771 | G: 1.
6461
626 [INFO] notice: Using device: xpu
627 [STEP] Epoch 2 | Step 30/295 | D: 6.8019 | G: 0.1019
628 config: torch.xpu.is_available(): True
629 config: torch.xpu.is_available(): True
630 [INFO] notice: Using device: xpu
```

```
631 [STEP] Epoch 2 | Step 40/295 | D: -13.3490 | G: -0.  
5788  
632 config: torch.xpu.is_available(): True  
633 config: torch.xpu.is_available(): True  
634 [INFO] notice: Using device: xpu  
635 [STEP] Epoch 2 | Step 50/295 | D: -46.2566 | G: -2.  
1217  
636 [INFO] Reached max_steps_per_epoch=50, breaking  
early  
637 [EPOCH] 2/10 finished in 1545.8s  
638 [INFO] Saved checkpoint: ./checkpoints\  
shs_gan_epoch2.pth  
639  
640 [TRAIN] Starting epoch 3/10  
641 config: torch.xpu.is_available(): True  
642 config: torch.xpu.is_available(): True  
643 config: torch.xpu.is_available(): True  
644 config: torch.xpu.is_available(): True  
645 [INFO] notice: Using device: xpu  
646 [STEP] Epoch 3 | Step 0/295 | D: -36.5049 | G: -2.  
2088  
647 [INFO] notice: Using device: xpu  
648 [STEP] Epoch 3 | Step 10/295 | D: -86.8659 | G: -4.  
1624  
649 config: torch.xpu.is_available(): True  
650 config: torch.xpu.is_available(): True  
651 [INFO] notice: Using device: xpu  
652 [STEP] Epoch 3 | Step 20/295 | D: -82.2696 | G: -8.  
6583  
653 [INFO] notice: Using device: xpu  
654 [STEP] Epoch 3 | Step 30/295 | D: -55.4212 | G: -16.  
4841  
655 config: torch.xpu.is_available(): True  
656 config: torch.xpu.is_available(): True  
657 [INFO] notice: Using device: xpu  
658 [STEP] Epoch 3 | Step 40/295 | D: -71.4061 | G: -32.  
0098  
659 config: torch.xpu.is_available(): True  
660 config: torch.xpu.is_available(): True  
661 [INFO] notice: Using device: xpu  
662 [STEP] Epoch 3 | Step 50/295 | D: 118.6705 | G: -30.
```

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662 4731
663 [INFO] Reached max_steps_per_epoch=50, breaking
early
664 [EPOCH] 3/10 finished in 1479.4s
665 [INFO] Saved checkpoint: ./checkpoints\
shs_gan_epoch3.pth
666
667 [TRAIN] Starting epoch 4/10
668 config: torch.xpu.is_available(): True
669 config: torch.xpu.is_available(): True
670 config: torch.xpu.is_available(): True
671 config: torch.xpu.is_available(): True
672 [INFO] notice: Using device: xpu
673 [STEP] Epoch 4 | Step 0/295 | D: 153.7642 | G: -27.
9494
674 [INFO] notice: Using device: xpu
675 [STEP] Epoch 4 | Step 10/295 | D: 92.6708 | G: -21.
1668
676 config: torch.xpu.is_available(): True
677 config: torch.xpu.is_available(): True
678 [INFO] notice: Using device: xpu
679 [STEP] Epoch 4 | Step 20/295 | D: 32.2988 | G: -14.
5940
680 [INFO] notice: Using device: xpu
681 [STEP] Epoch 4 | Step 30/295 | D: 9.7766 | G: -7.
7502
682 config: torch.xpu.is_available(): True
683 config: torch.xpu.is_available(): True
684 [INFO] notice: Using device: xpu
685 [STEP] Epoch 4 | Step 40/295 | D: -124.7643 | G: 28.
4846
686 config: torch.xpu.is_available(): True
687 config: torch.xpu.is_available(): True
688 [INFO] notice: Using device: xpu
689 [STEP] Epoch 4 | Step 50/295 | D: -148.8495 | G: 42.
4387
690 [INFO] Reached max_steps_per_epoch=50, breaking
early
691 [EPOCH] 4/10 finished in 1650.4s
692 [INFO] Saved checkpoint: ./checkpoints\
shs_gan_epoch4.pth
```

```
693
694 [TRAIN] Starting epoch 5/10
695 config: torch.xpu.is_available(): True
696 config: torch.xpu.is_available(): True
697 config: torch.xpu.is_available(): True
698 config: torch.xpu.is_available(): True
699 [INFO] notice: Using device: xpu
700 [STEP] Epoch 5 | Step 0/295 | D: -103.6067 | G: 41.
5116
701 [INFO] notice: Using device: xpu
702 [STEP] Epoch 5 | Step 10/295 | D: 97.2758 | G: 10.
7281
703 config: torch.xpu.is_available(): True
704 config: torch.xpu.is_available(): True
705 [INFO] notice: Using device: xpu
706 [STEP] Epoch 5 | Step 20/295 | D: 24.7429 | G: -1.
8009
707 [INFO] notice: Using device: xpu
708 [STEP] Epoch 5 | Step 30/295 | D: -6.9572 | G: -4.
5666
709 config: torch.xpu.is_available(): True
710 config: torch.xpu.is_available(): True
711 [INFO] notice: Using device: xpu
712 [STEP] Epoch 5 | Step 40/295 | D: -32.4312 | G: -8.
3177
713 config: torch.xpu.is_available(): True
714 config: torch.xpu.is_available(): True
715 [INFO] notice: Using device: xpu
716 [STEP] Epoch 5 | Step 50/295 | D: -95.0741 | G: -13.
9216
717 [INFO] Reached max_steps_per_epoch=50, breaking
early
718 [EPOCH] 5/10 finished in 2108.2s
719 [INFO] Saved checkpoint: ./checkpoints\
shs_gan_epoch5.pth
720
721 [TRAIN] Starting epoch 6/10
722 config: torch.xpu.is_available(): True
723 config: torch.xpu.is_available(): True
724 config: torch.xpu.is_available(): True
725 config: torch.xpu.is_available(): True
```

```
726 [INFO] notice: Using device: xpu
727 [STEP] Epoch 6 | Step 0/295 | D: 11.6805 | G: -14.
    7753
728 [INFO] notice: Using device: xpu
729 [STEP] Epoch 6 | Step 10/295 | D: 31.0920 | G: -20.
    6248
730 config: torch.xpu.is_available(): True
731 config: torch.xpu.is_available(): True
732 [INFO] notice: Using device: xpu
733 [STEP] Epoch 6 | Step 20/295 | D: 64.0832 | G: -17.
    4079
734 [INFO] notice: Using device: xpu
735 [STEP] Epoch 6 | Step 30/295 | D: 9.9151 | G: -7.
    1807
736 config: torch.xpu.is_available(): True
737 config: torch.xpu.is_available(): True
738 [INFO] notice: Using device: xpu
739 [STEP] Epoch 6 | Step 40/295 | D: -8.9991 | G: 2.
    3852
740 config: torch.xpu.is_available(): True
741 config: torch.xpu.is_available(): True
742 [INFO] notice: Using device: xpu
743 [STEP] Epoch 6 | Step 50/295 | D: -21.7084 | G: 12.
    6832
744 [INFO] Reached max_steps_per_epoch=50, breaking
    early
745 [EPOCH] 6/10 finished in 2688.9s
746 [INFO] Saved checkpoint: ./checkpoints\
    shs_gan_epoch6.pth
747
748 [TRAIN] Starting epoch 7/10
749 config: torch.xpu.is_available(): True
750 config: torch.xpu.is_available(): True
751 config: torch.xpu.is_available(): True
752 config: torch.xpu.is_available(): True
753 [INFO] notice: Using device: xpu
754 [STEP] Epoch 7 | Step 0/295 | D: -11.7738 | G: 11.
    7579
755 [INFO] notice: Using device: xpu
756 [STEP] Epoch 7 | Step 10/295 | D: 79.7806 | G: 3.
    0894
```

```
757 config: torch.xpu.is_available(): True
758 config: torch.xpu.is_available(): True
759 [INFO] notice: Using device: xpu
760 [STEP] Epoch 7 | Step 20/295 | D: -11.5916 | G: -8.
8282
761 [INFO] notice: Using device: xpu
762 [STEP] Epoch 7 | Step 30/295 | D: 23.0711 | G: -17.
2930
763 config: torch.xpu.is_available(): True
764 config: torch.xpu.is_available(): True
765 [INFO] notice: Using device: xpu
766 [STEP] Epoch 7 | Step 40/295 | D: 28.2757 | G: -17.
7989
767 config: torch.xpu.is_available(): True
768 config: torch.xpu.is_available(): True
769 [INFO] notice: Using device: xpu
770 [STEP] Epoch 7 | Step 50/295 | D: 39.6232 | G: -13.
3391
771 [INFO] Reached max_steps_per_epoch=50, breaking
early
772 [EPOCH] 7/10 finished in 1904.7s
773 [INFO] Saved checkpoint: ./checkpoints\
shs_gan_epoch7.pth
774
775 [TRAIN] Starting epoch 8/10
776 config: torch.xpu.is_available(): True
777 config: torch.xpu.is_available(): True
778 config: torch.xpu.is_available(): True
779 config: torch.xpu.is_available(): True
780 [INFO] notice: Using device: xpu
781 [STEP] Epoch 8 | Step 0/295 | D: 31.8056 | G: -12.
8136
782 [INFO] notice: Using device: xpu
783 [STEP] Epoch 8 | Step 10/295 | D: -8.8149 | G: 6.
6224
784 config: torch.xpu.is_available(): True
785 config: torch.xpu.is_available(): True
786 [INFO] notice: Using device: xpu
787 [STEP] Epoch 8 | Step 20/295 | D: -21.6210 | G: 6.
8237
788 [INFO] notice: Using device: xpu
```

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789 [STEP] Epoch 8 | Step 30/295 | D: 58.0184 | G: 0.  
0710  
790 config: torch.xpu.is_available(): True  
791 config: torch.xpu.is_available(): True  
792 [INFO] notice: Using device: xpu  
793 [STEP] Epoch 8 | Step 40/295 | D: -13.9796 | G: -7.  
5564  
794 config: torch.xpu.is_available(): True  
795 config: torch.xpu.is_available(): True  
796 [INFO] notice: Using device: xpu  
797 [STEP] Epoch 8 | Step 50/295 | D: -0.9766 | G: -13.  
4889  
798 [INFO] Reached max_steps_per_epoch=50, breaking  
early  
799 [EPOCH] 8/10 finished in 1592.8s  
800 [INFO] Saved checkpoint: ./checkpoints\  
shs_gan_epoch8.pth  
801  
802 [TRAIN] Starting epoch 9/10  
803 config: torch.xpu.is_available(): True  
804 config: torch.xpu.is_available(): True  
805 config: torch.xpu.is_available(): True  
806 config: torch.xpu.is_available(): True  
807 [INFO] notice: Using device: xpu  
808 [STEP] Epoch 9 | Step 0/295 | D: -22.5295 | G: -14.  
1238  
809 [INFO] notice: Using device: xpu  
810 [STEP] Epoch 9 | Step 10/295 | D: -55.6730 | G: -17.  
4405  
811 config: torch.xpu.is_available(): True  
812 config: torch.xpu.is_available(): True  
813 [INFO] notice: Using device: xpu  
814 [STEP] Epoch 9 | Step 20/295 | D: 54.2114 | G: -13.  
3971  
815 [INFO] notice: Using device: xpu  
816 [STEP] Epoch 9 | Step 30/295 | D: -5.3236 | G: 3.  
1735  
817 config: torch.xpu.is_available(): True  
818 config: torch.xpu.is_available(): True  
819 [INFO] notice: Using device: xpu  
820 [STEP] Epoch 9 | Step 40/295 | D: -2.2953 | G: 7.
```

```
820 4024
821 config: torch.xpu.is_available(): True
822 config: torch.xpu.is_available(): True
823 [INFO] notice: Using device: xpu
824 [STEP] Epoch 9 | Step 50/295 | D: 46.1934 | G: 3.
     6176
825 [INFO] Reached max_steps_per_epoch=50, breaking
     early
826 [EPOCH] 9/10 finished in 1762.8s
827 [INFO] Saved checkpoint: ./checkpoints\
     shs_gan_epoch9.pth
828
829 [TRAIN] Starting epoch 10/10
830 config: torch.xpu.is_available(): True
831 config: torch.xpu.is_available(): True
832 config: torch.xpu.is_available(): True
833 config: torch.xpu.is_available(): True
834 [INFO] notice: Using device: xpu
835 [STEP] Epoch 10 | Step 0/295 | D: 26.2526 | G: 2.
     0749
836 [INFO] notice: Using device: xpu
837 [STEP] Epoch 10 | Step 10/295 | D: -17.3608 | G: -6.
     4998
838 config: torch.xpu.is_available(): True
839 config: torch.xpu.is_available(): True
840 [INFO] notice: Using device: xpu
841 [STEP] Epoch 10 | Step 20/295 | D: -45.3311 | G: -14
     .3755
842 [INFO] notice: Using device: xpu
843 [STEP] Epoch 10 | Step 30/295 | D: 25.7576 | G: -21.
     1951
844 config: torch.xpu.is_available(): True
845 config: torch.xpu.is_available(): True
846 [INFO] notice: Using device: xpu
847 [STEP] Epoch 10 | Step 40/295 | D: 18.9109 | G: -15.
     2046
848 config: torch.xpu.is_available(): True
849 config: torch.xpu.is_available(): True
850 [INFO] notice: Using device: xpu
851 [STEP] Epoch 10 | Step 50/295 | D: -43.9256 | G: 4.
     7440
```

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852 [INFO] Reached max_steps_per_epoch=50, breaking
early
853 [EPOCH] 10/10 finished in 1688.8s
854 [INFO] Saved checkpoint: ./checkpoints\
shs_gan_epoch10.pth
855 Traceback (most recent call last):
856     File "C:\Users\intel\PycharmProjects\
SHS_GAN_PROJECT\SHS_GAN.py", line 452, in <module>
857         trainer.fit(rgb_ds, hs_ds)
858         ~~~~~~^^^^^^^^^^^^^^^^^
859     File "C:\Users\intel\PycharmProjects\
SHS_GAN_PROJECT\SHS_GAN.py", line 400, in fit
860         plt.show()
861         ~~~~~~^^
862     File "C:\Users\intel\PycharmProjects\
SHS_GAN_PROJECT\.venv\Lib\site-packages\matplotlib\
pyplot.py", line 614, in show
863         return _get_backend_mod().show(*args, **kwargs)
864         ~~~~~~^^^^^^^^^^^^^^^^^
865     File "C:\Users\intel\PycharmProjects\
SHS_GAN_PROJECT\.venv\Lib\site-packages\matplotlib\
backend_bases.py", line 3550, in show
866         cls.mainloop()
867         ~~~~~~^^
868     File "C:\Users\intel\PycharmProjects\
SHS_GAN_PROJECT\.venv\Lib\site-packages\matplotlib\
backends\_backend_tk.py", line 572, in
start_main_loop
869         first_manager.window.mainloop()
870         ~~~~~~^^
871     File "C:\Users\intel\AppData\Local\Programs\Python
\Python313\Lib\tkinter\__init__.py", line 1599, in
mainloop
872         self.tk.mainloop(n)
873         ~~~~~~^^
874 KeyboardInterrupt
875
876 Process finished with exit code -1073741510 (
0xC000013A: interrupted by Ctrl+C)
877
```