Non-Local Haze Propagation with an Iso-Depth Prior

Supplemental Material

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Korea Advanced Institute of Science and Technology (KAIST)

Comparison

Effect of Combining NNFs with Other Methods

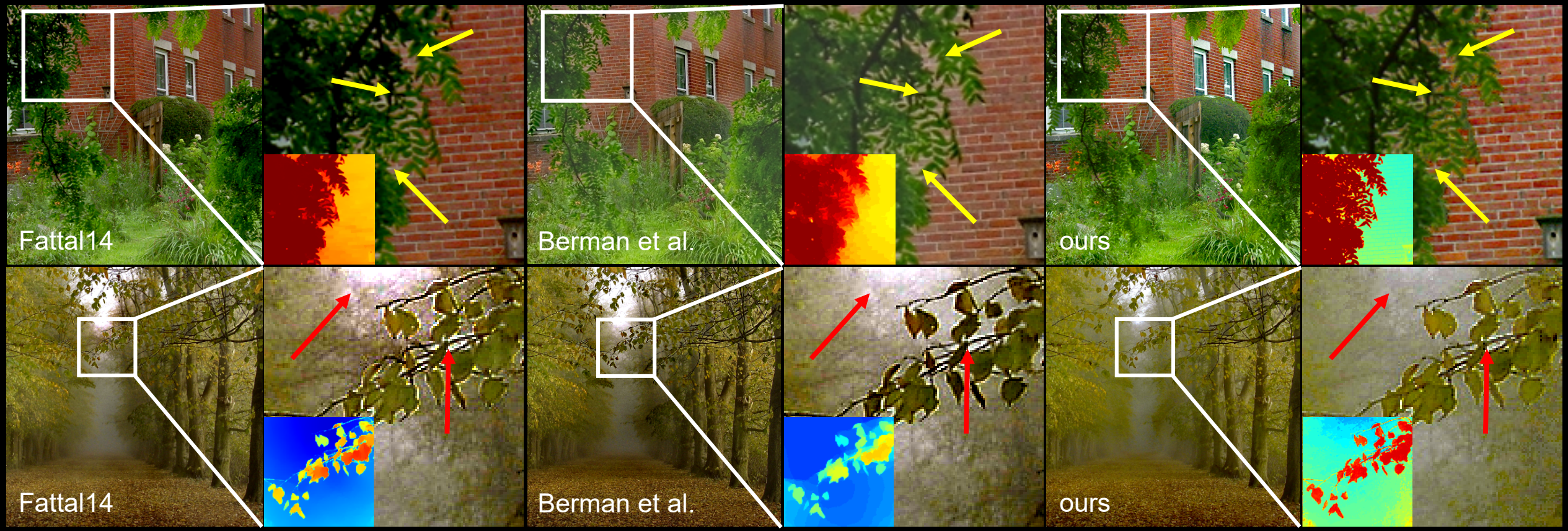

Figure 7 in the paper

Internal Comparison

Effect of Combining NNFs

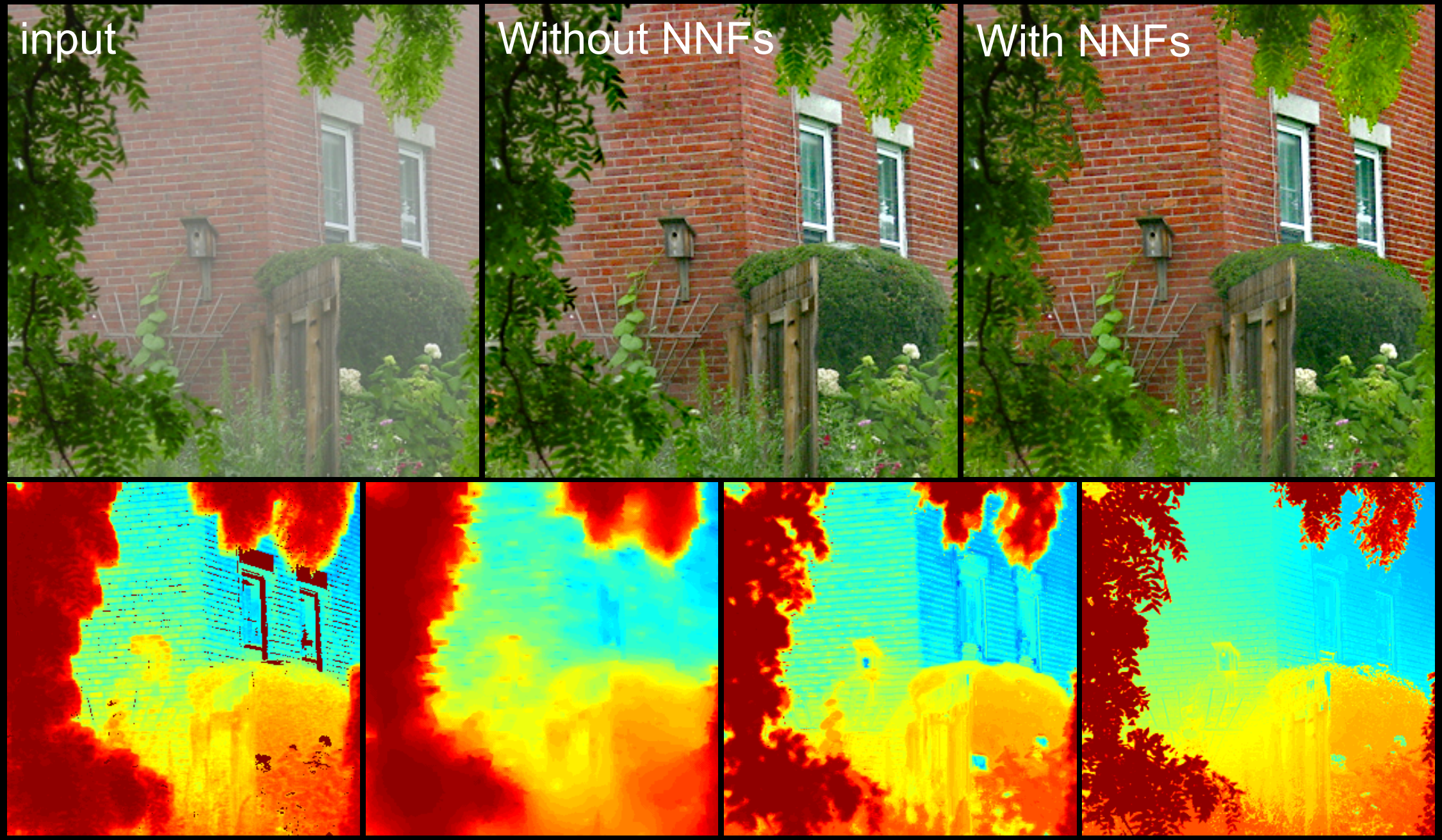

Figure 8 in the paper

Comparison

Regularization

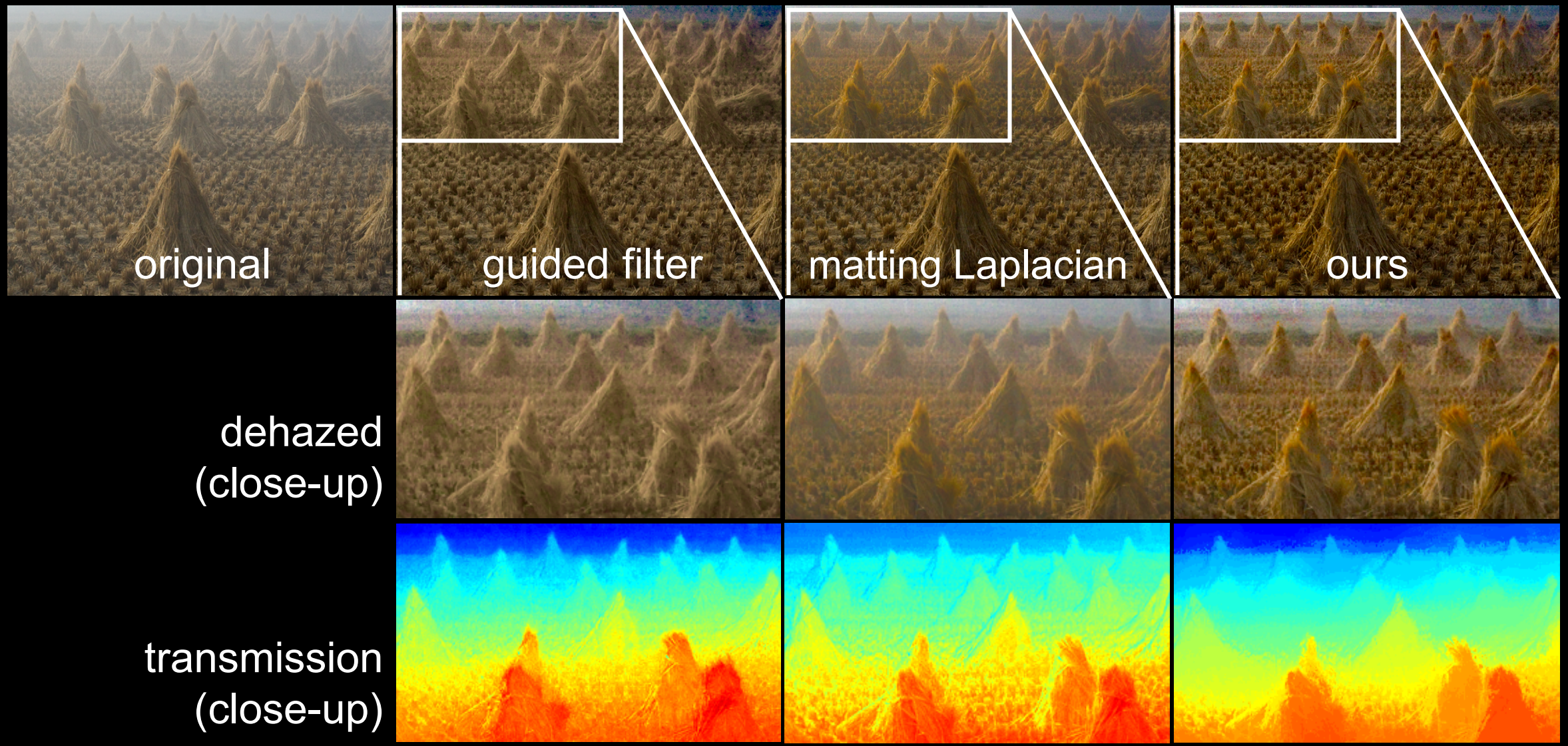

Figure 9 in the paper

Qualitative Comparison

Single Image Dehazing

Figure 10 (extended) in the paper


input
He et al.
Fattal14
Berman et al.
ours
our transmission
close-up
close-up
close-up
close-up
close-up
close-up


input
He et al.
Fattal14
Berman et al.
ours
our transmission
close-up
close-up
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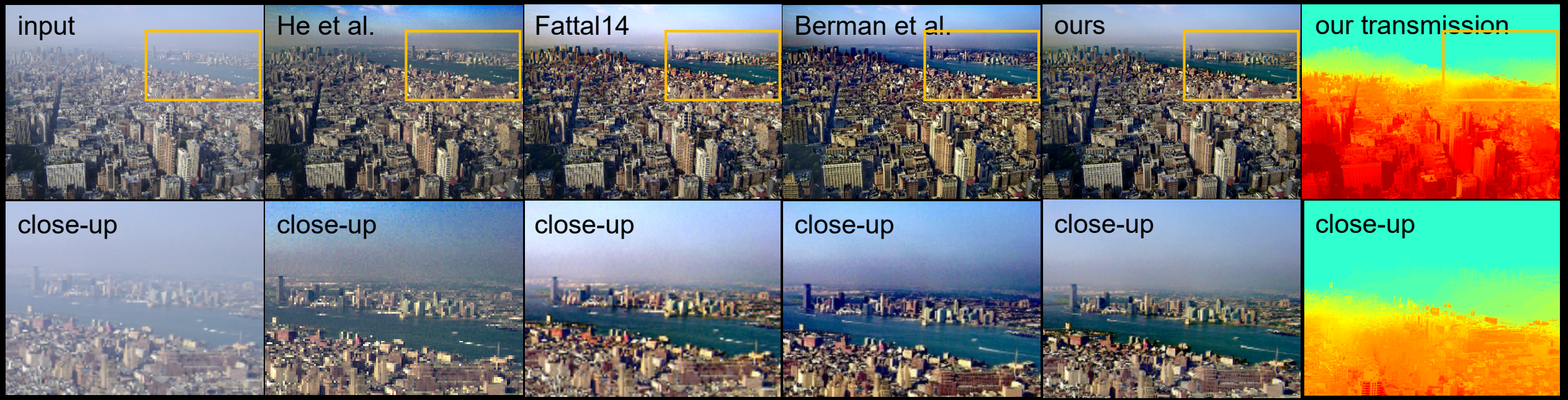
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He et al.
Fattal14
Berman et al.
ours
our transmission
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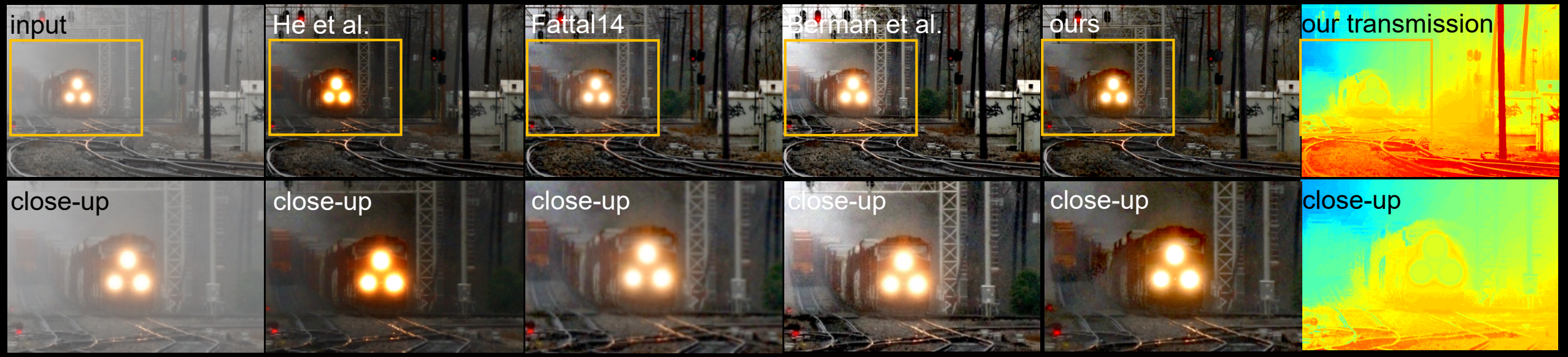
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He et al.
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Berman et al.
ours
our transmission
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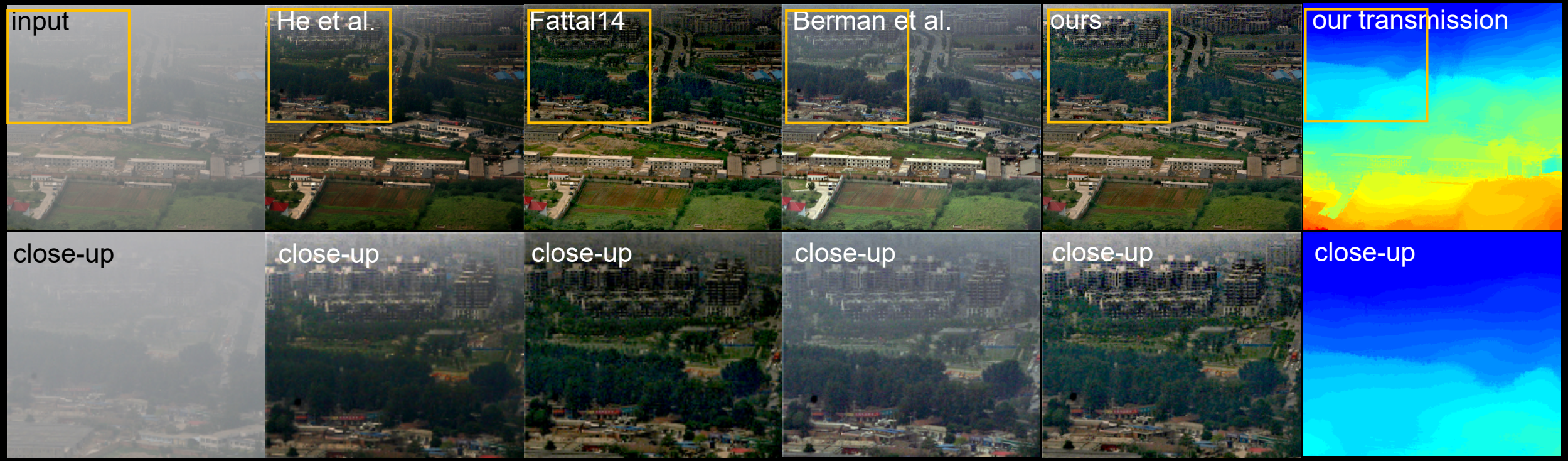
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He et al.
Fattal14
Berman et al.
ours
our transmission
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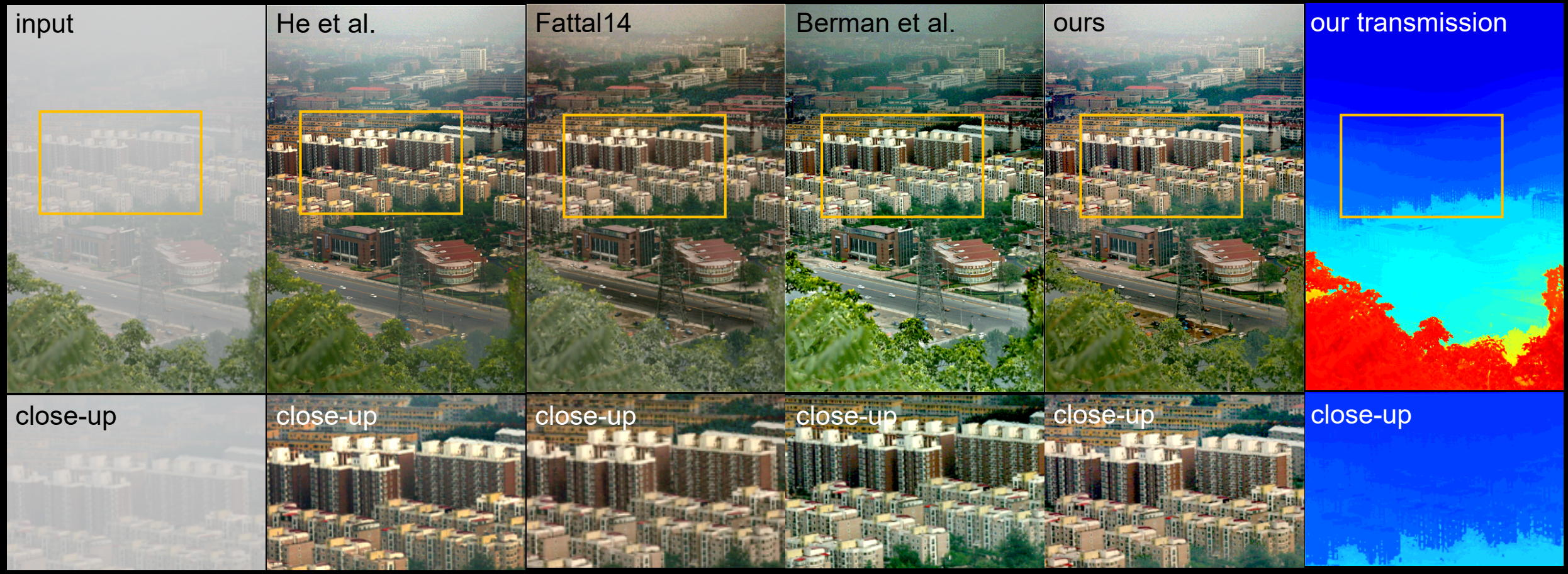
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He et al.
Fattal14
Berman et al.
ours
our transmission
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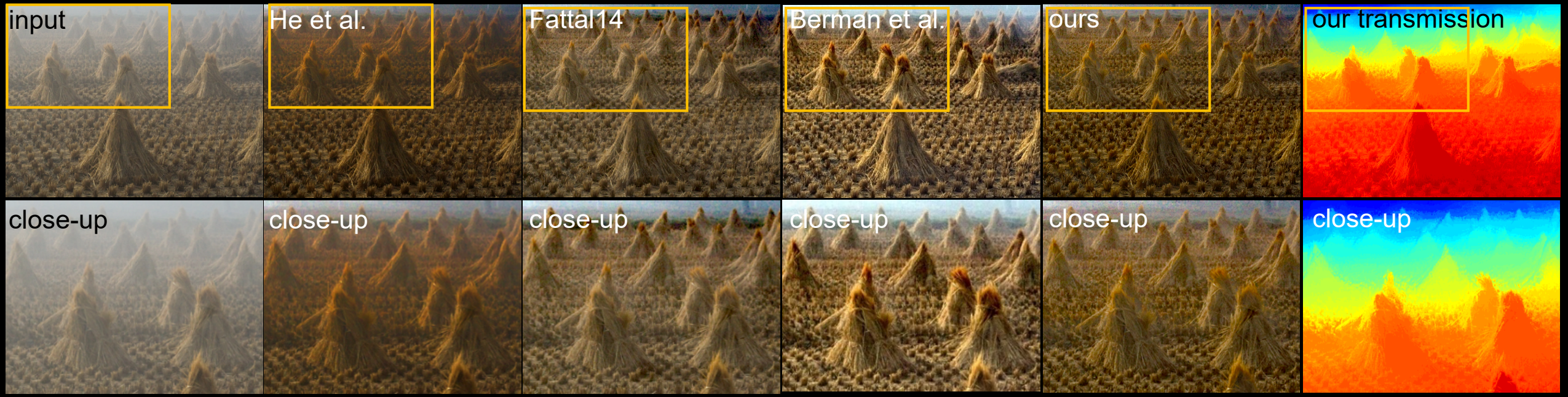
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He et al.
Fattal14
Berman et al.
ours
our transmission
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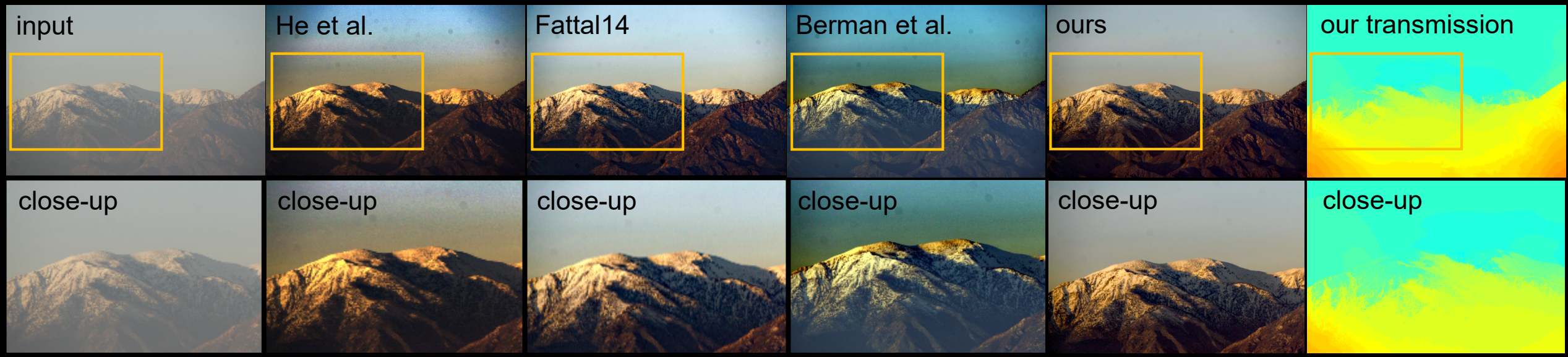
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Fattal14
Berman et al.
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our transmission
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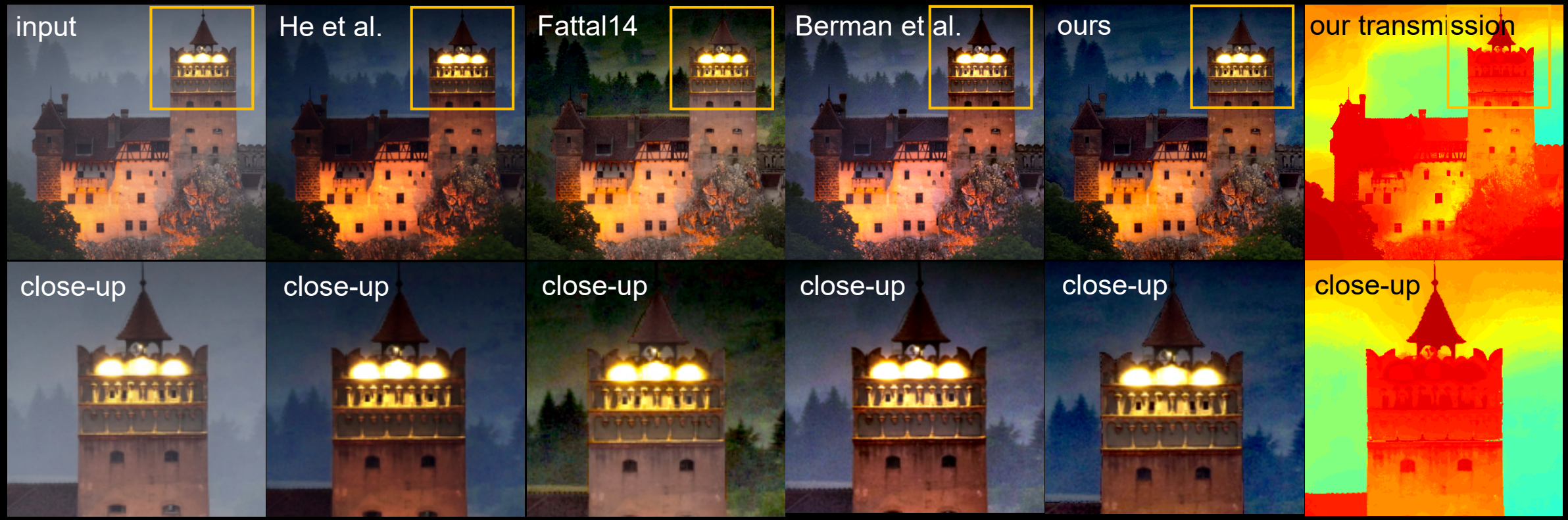
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He et al.
Fattal14
Berman et al.
ours
our transmission
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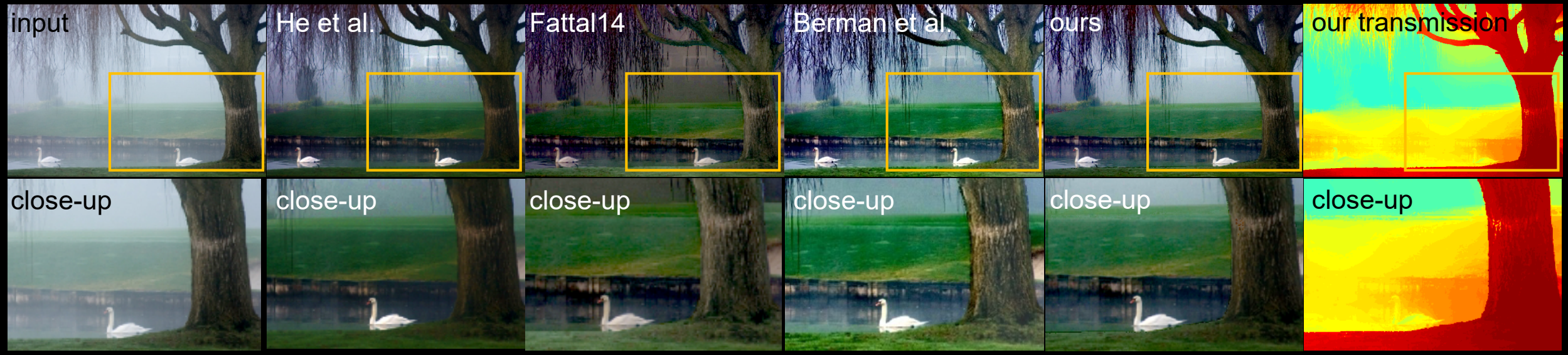
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Fattal14
Berman et al
ours
our transmission
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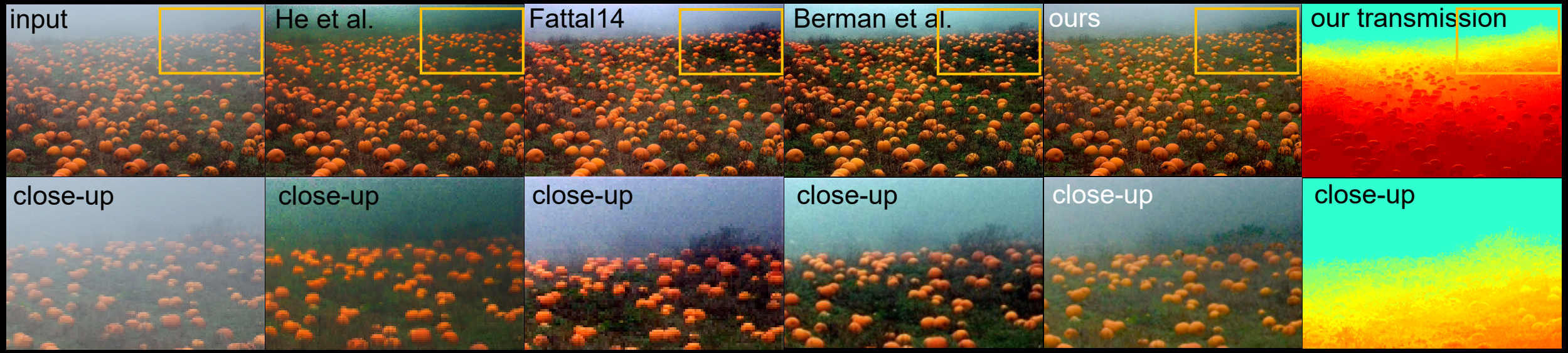
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He et al.
Fattal14
Berman et al.
ours
our transmission
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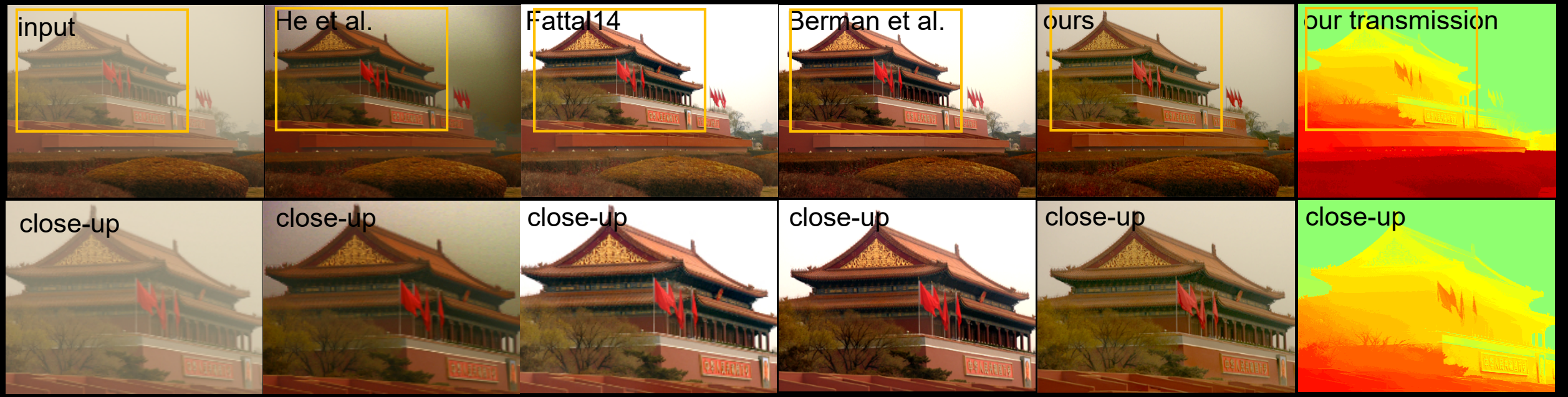
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He et al.
Fattal14
Berman et al.
ours
our transmission
close-up
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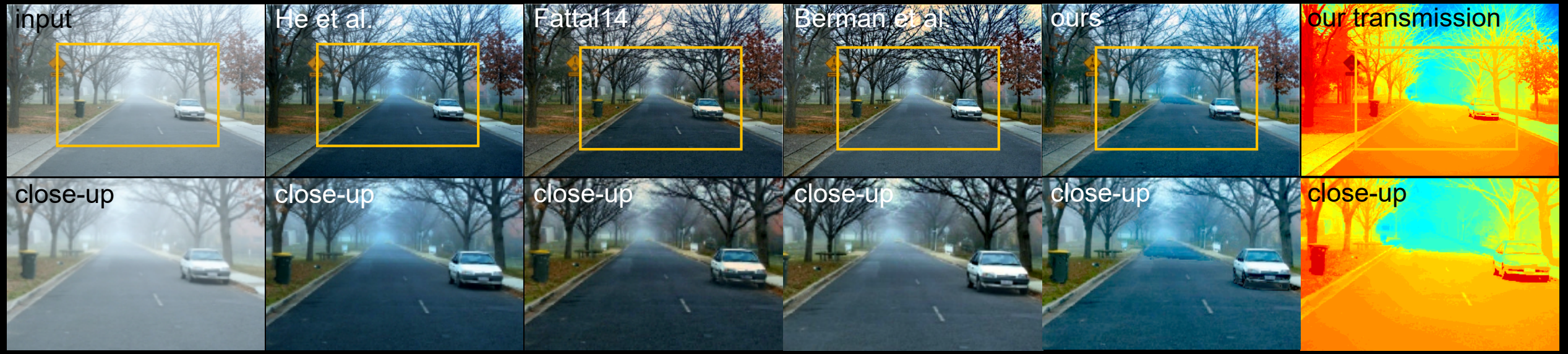
input
He et al.
Fattal14
Berman et al.
ours
our transmission
close-up
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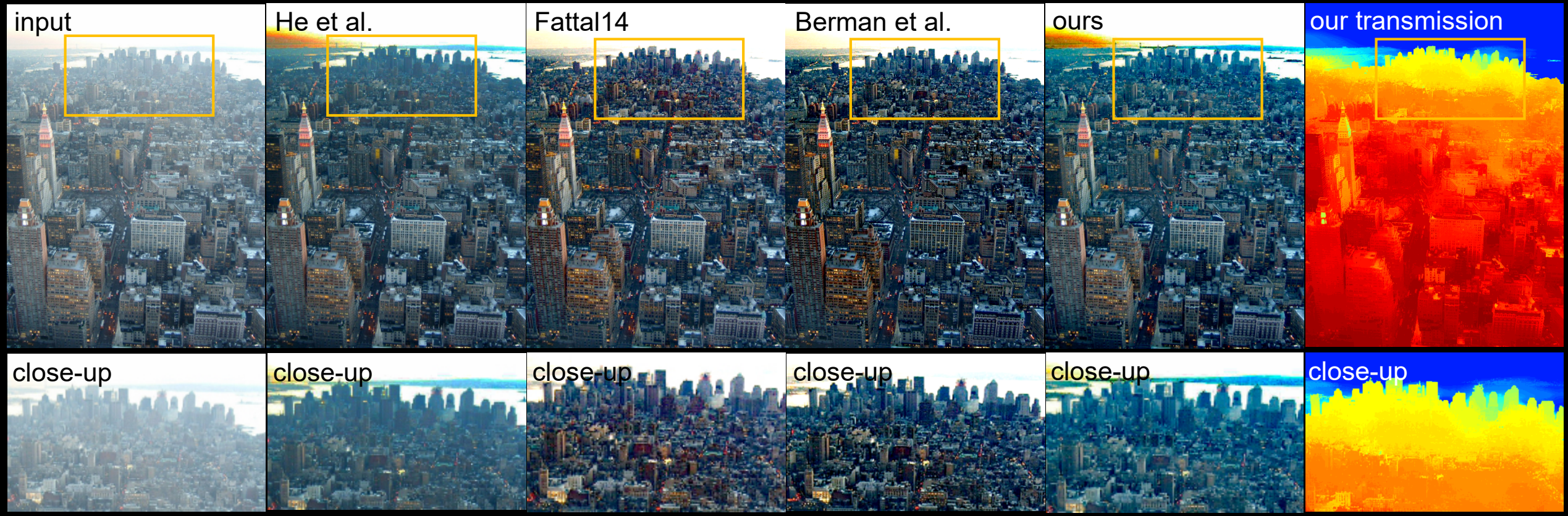
input
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Fattal14
Berman et al.
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our transmission
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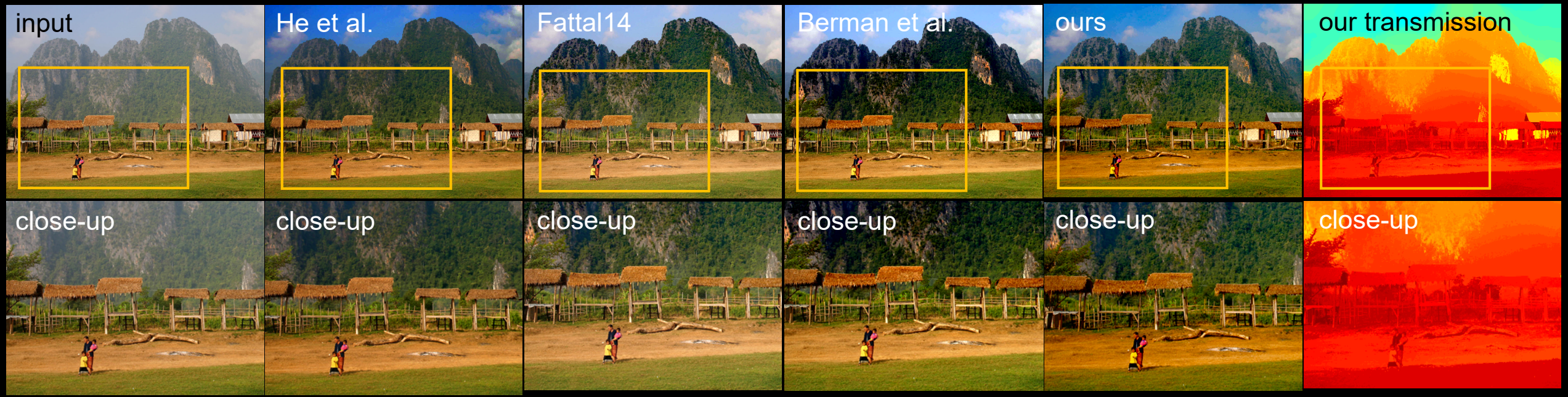
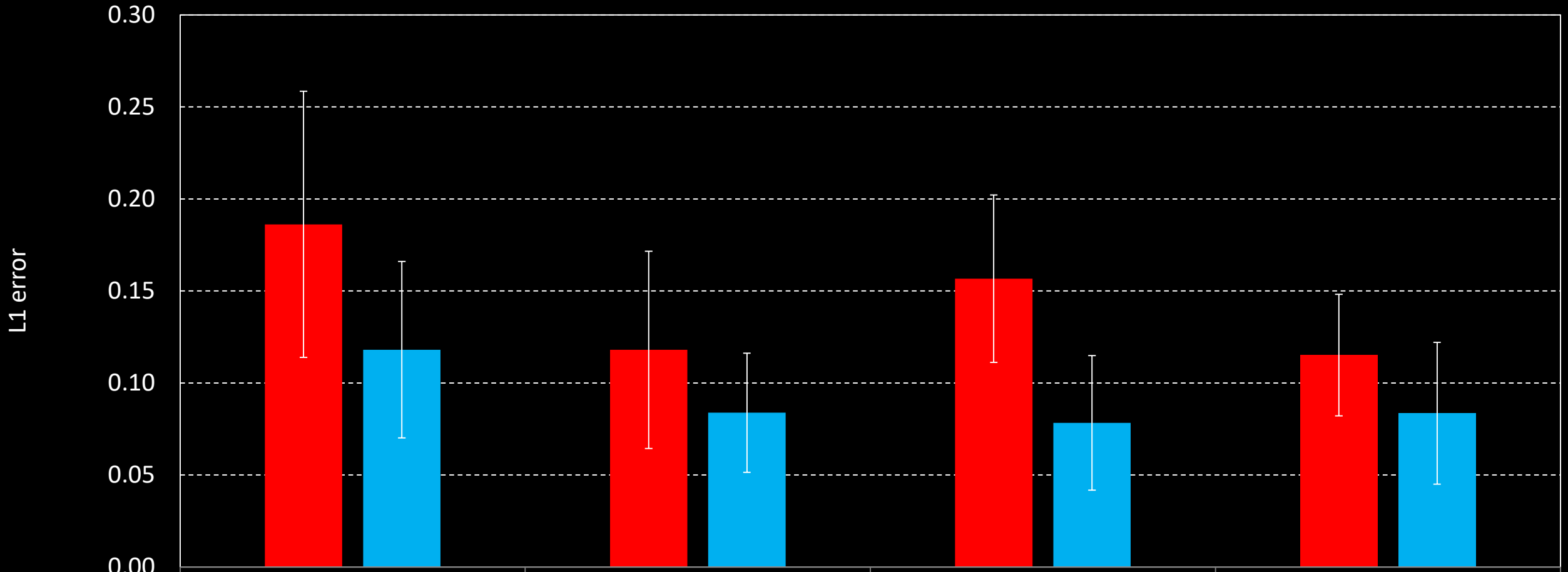

input
He et al.
Fattal14
Berman et al.
ours
our transmission
close-up
close-up
close-up
close-up
close-up
close-up

Quantitative Comparison

Single Image Dehazing

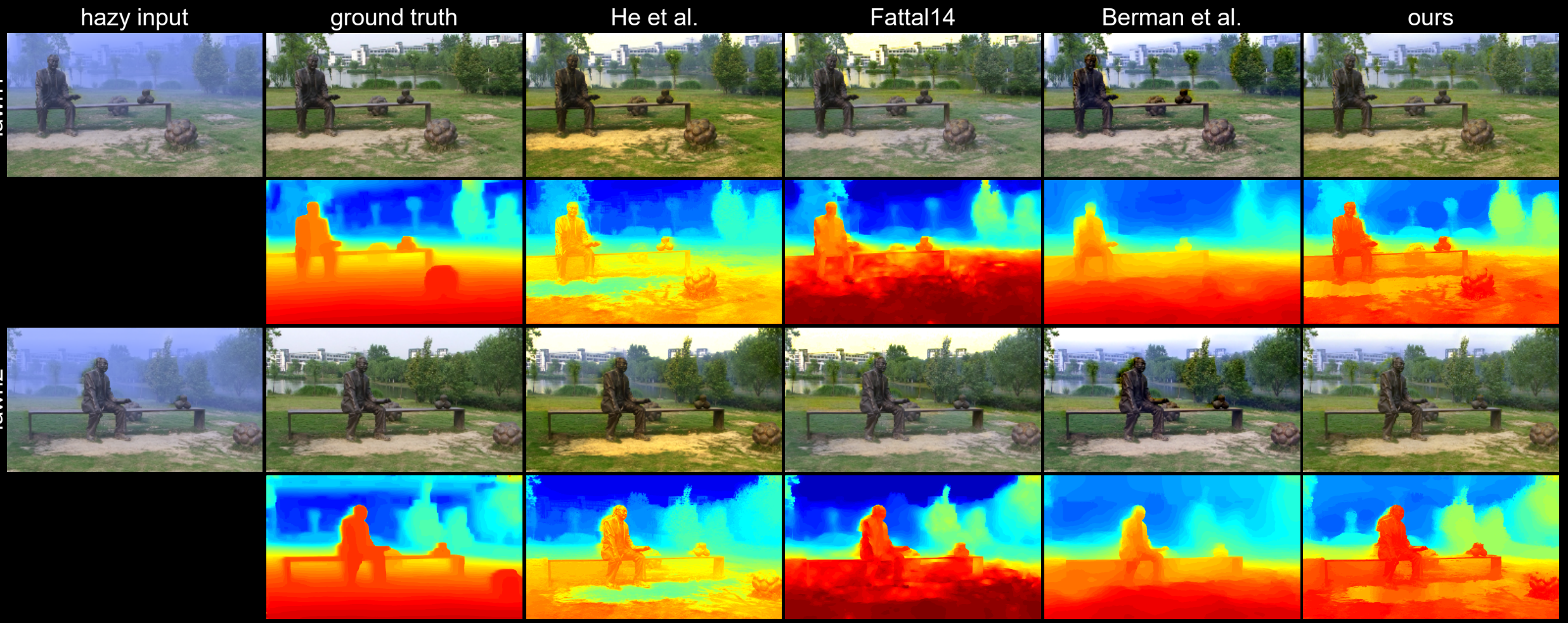
Figures 11, 12 (extended), and Table 2 in the paper

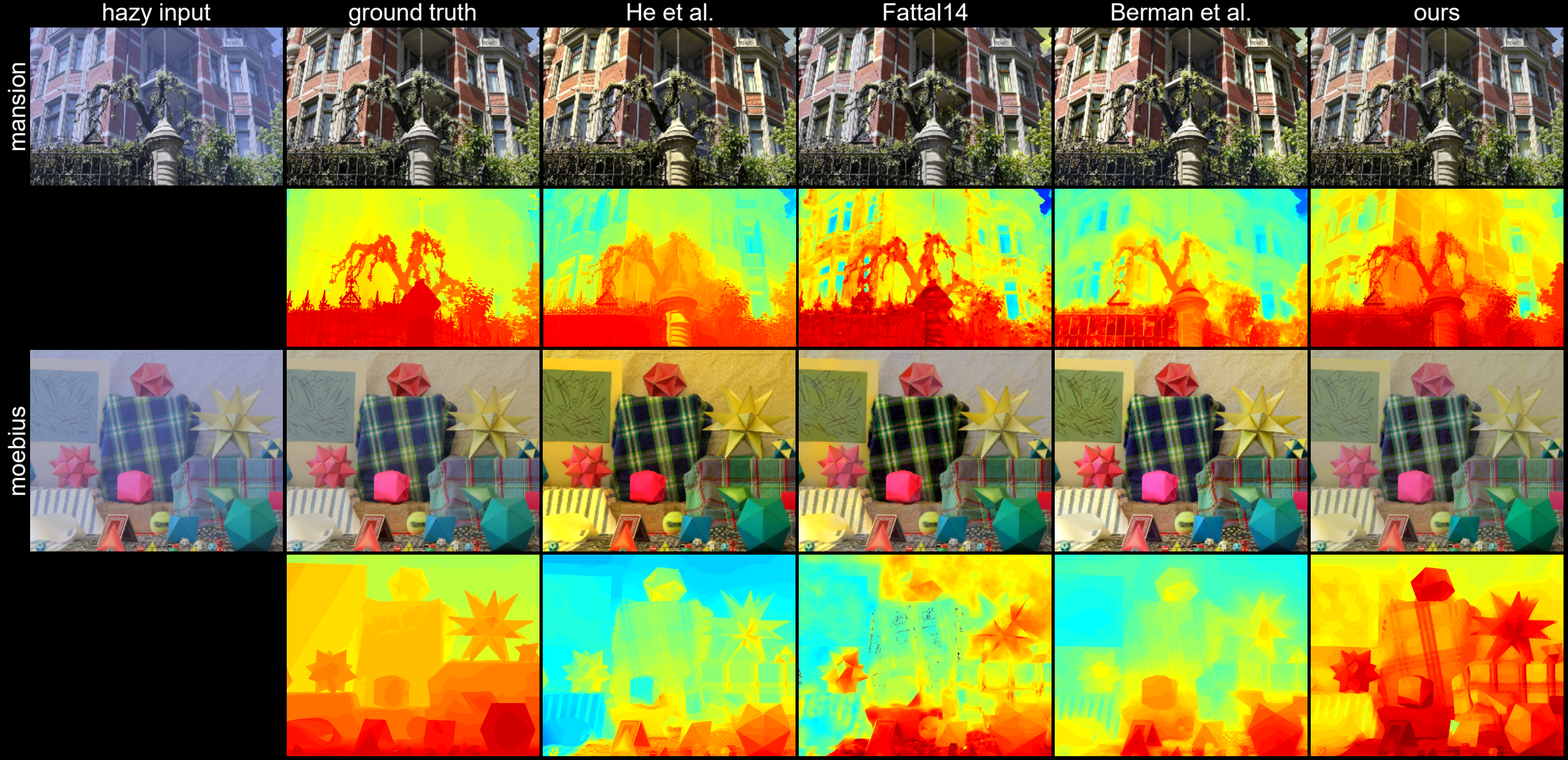
L1 error plot

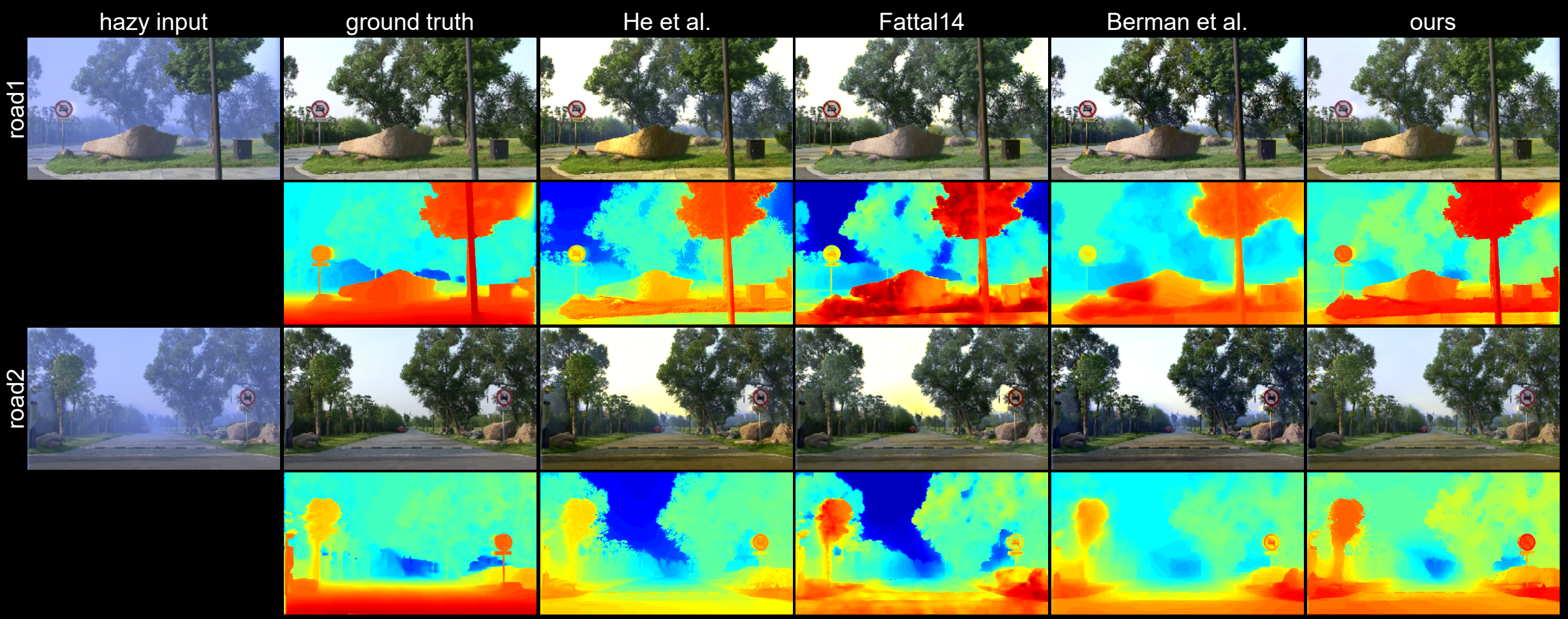


	He [2009]	Fattal [2014]	Berman [2016]	ours
dehazed	0.1862	0.1180	0.1567	0.1152
transmission	0.1181	0.0839	0.0783	0.0836

dehazed transmission


hazy input
ground truth
He et al.
Fattal14
Berman et al.
ours
lawn1
lawn2


hazy input
ground truth
He et al.
Fattal14
Berman et al.
ours
mansion
moebius


hazy input
ground truth
He et al.
Fattal14
Berman et al.
ours
road1
road2

L1 error

	He et al.	Fattal14	Berman et al.	ours
church	0.0711/0.1765	0.1144/0.1726	0.1152/0.2100	0.1901/0.1854
couch	0.0631/0.1146	0.0895/0.1596	0.0512/0.1249	0.0942/0.1463
flower1	0.1639/0.2334	0.0472/0.0562	0.0607/0.1309	0.0626/0.0967
flower2	0.1808/0.2387	0.0418/0.0452	0.1154/0.1413	0.0570/0.0839
lawn1	0.1003/0.1636	0.0803/0.1189	0.0340/0.1289	0.0604/0.1052
lawn2	0.1111/0.1715	0.0851/0.1168	0.0431/0.1378	0.0618/0.1054
mansion	0.0616/0.1005	0.0457/0.0719	0.0825/0.1234	0.0614/0.0693
moebius	0.2079/0.3636	0.1460/0.2270	0.1525/0.2005	0.0823/0.1138
reindeer	0.1152/0.1821	0.0662/0.1005	0.0887/0.2549	0.1038/0.1459
road1	0.1127/0.1422	0.1028/0.0980	0.0582/0.1107	0.0676/0.0945
road2	0.1110/0.1615	0.1034/0.1317	0.0602/0.1602	0.0781/0.1206
average	0.1181/0.1862	0.0839/0.1180	0.0783/0.1567	0.0836/0.1152

(l1 error of estimated transmission/l1 error of estimated dehazed image)

Internal Comparison

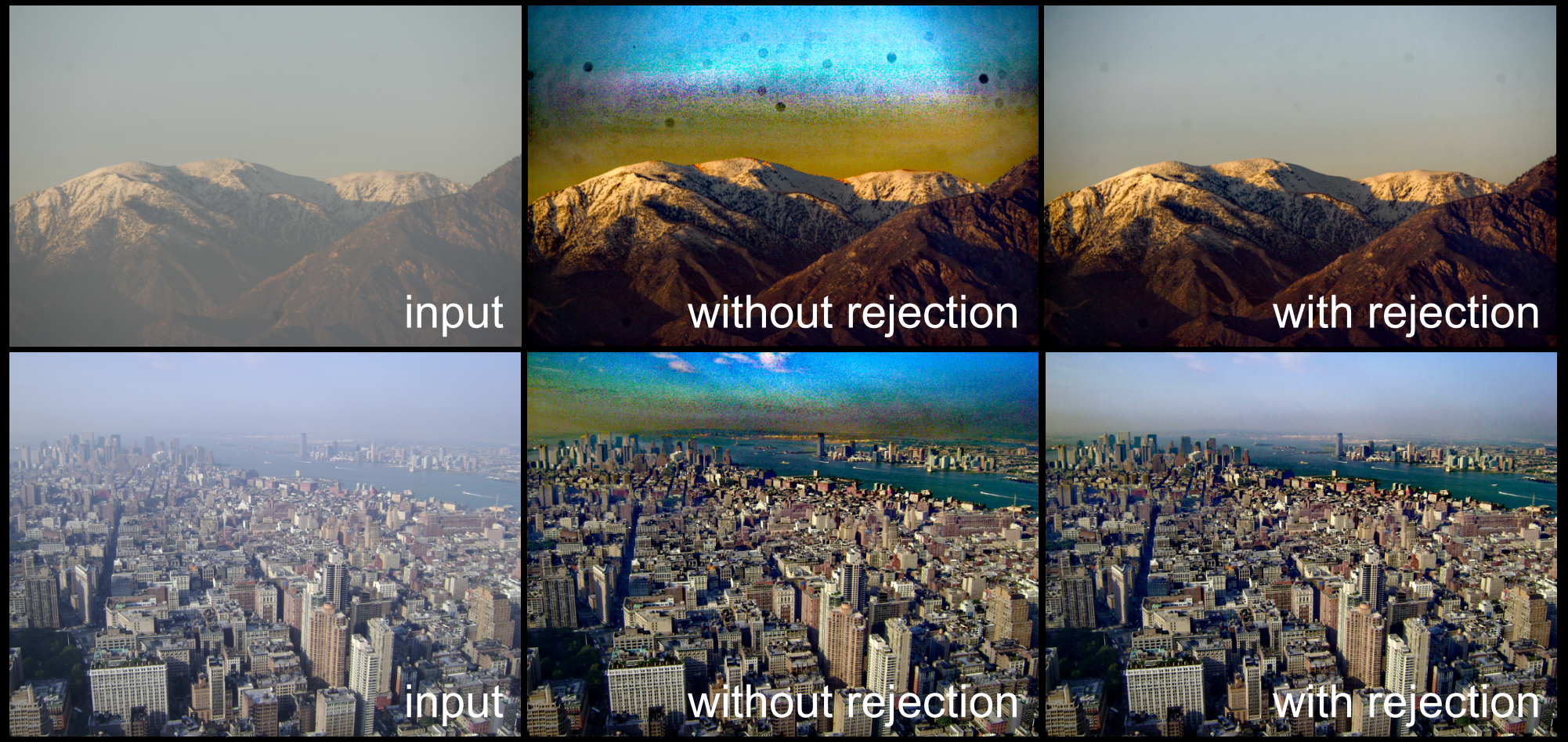
Various Patch Sizes

Our choice

Figure 13 in the paper

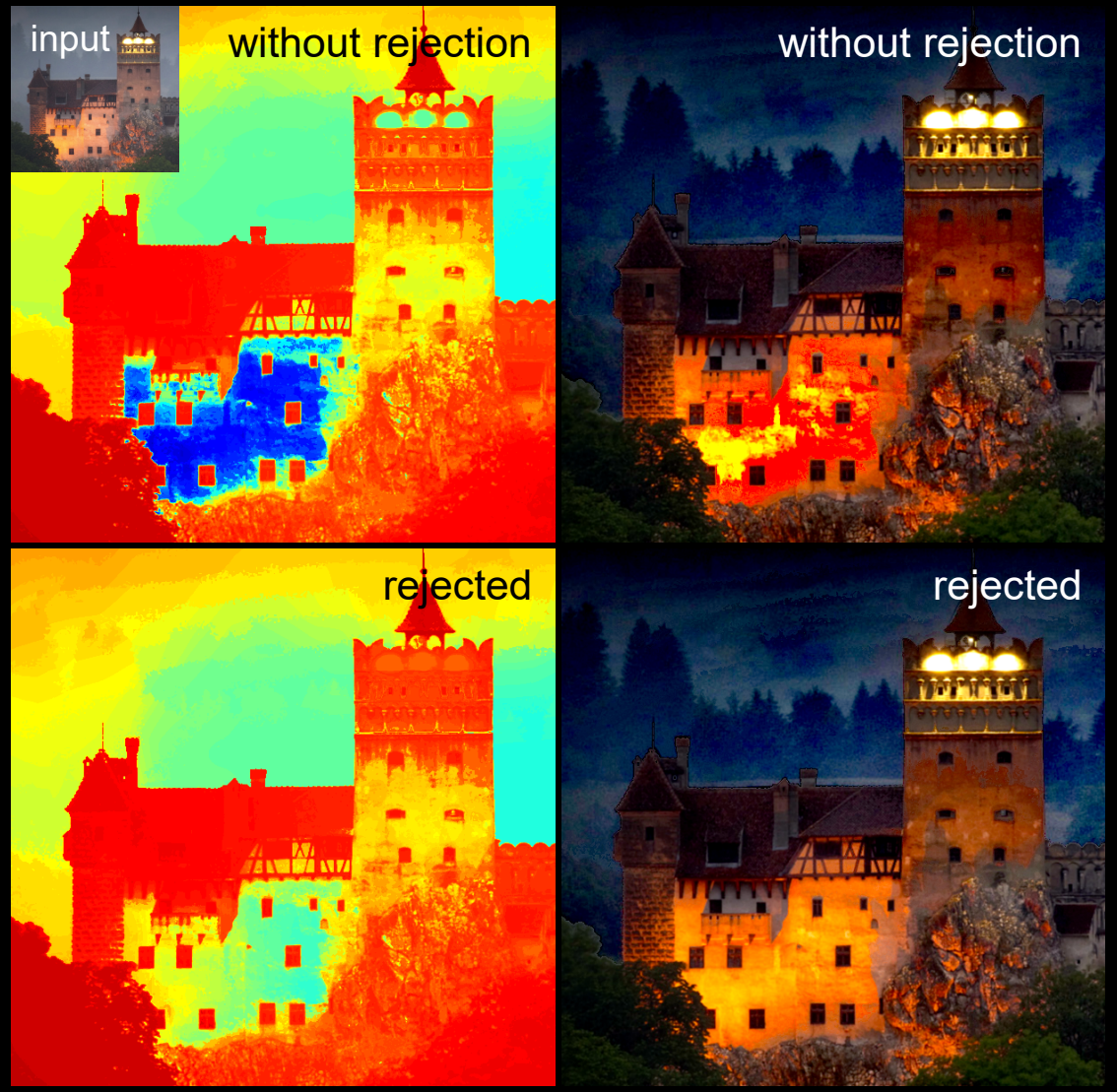
Internal Comparison

Impact of Outlier Rejection



Narrow angle outlier rejection

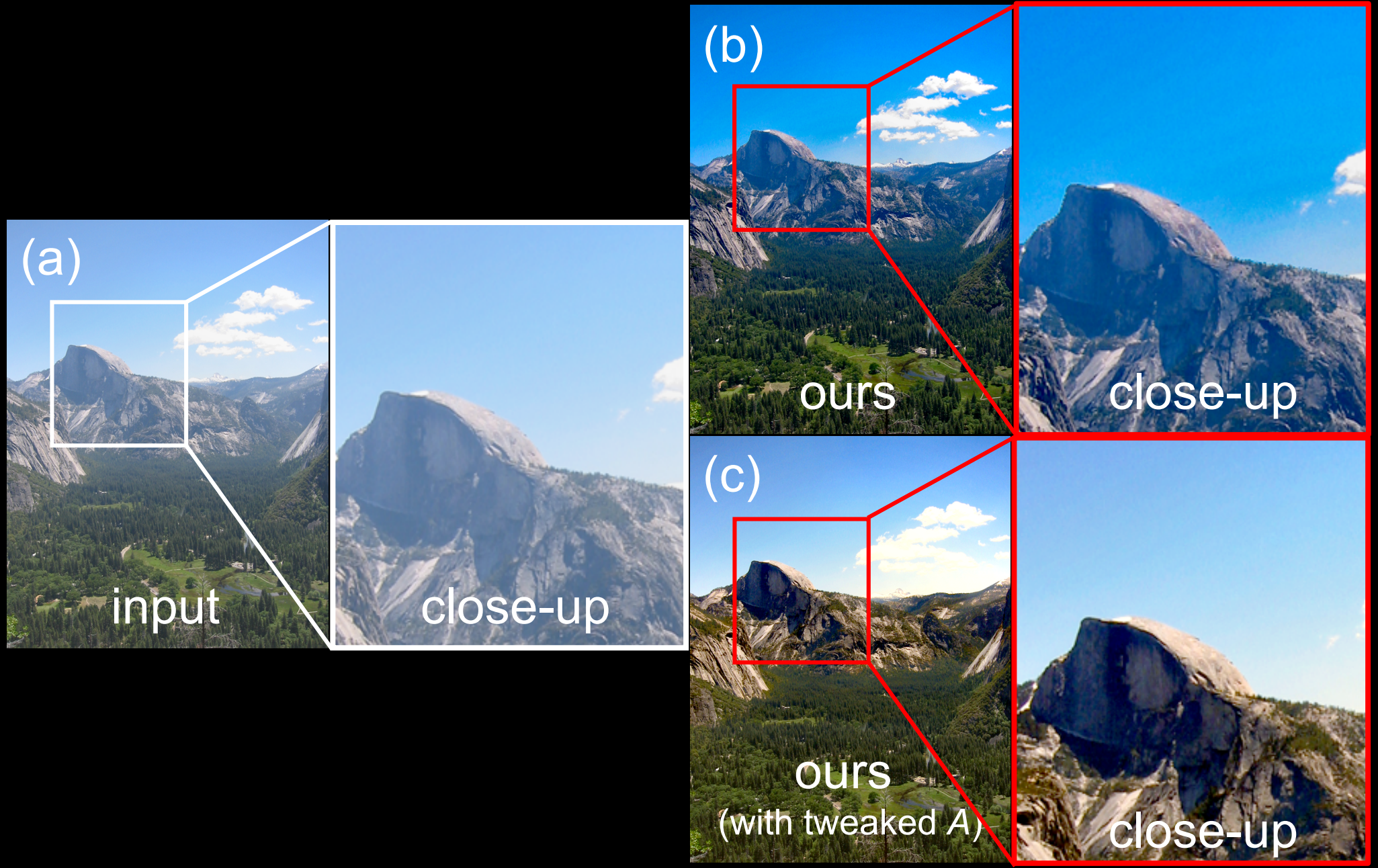
Figure 11 in the paper



Saturated outlier rejection

Limitations

Figure 16 in the paper


(a)
input
close-up
(b)
ours
close-up
(c)
ours
(with tweaked A)
close-up

Non-Local Haze Propagation with an Iso-Depth Prior

Supplemental Material

Incheol Kim Min H. Kim

Korea Advanced Institute of Science and Technology (KAIST)