Satellite altimeter to estimate discharge of the Ganga River

Atul Kumar Rai Dr. Kumar Gaurav

Earth and Environmental Science
Indian Institute of Science Education and Research Bhopal

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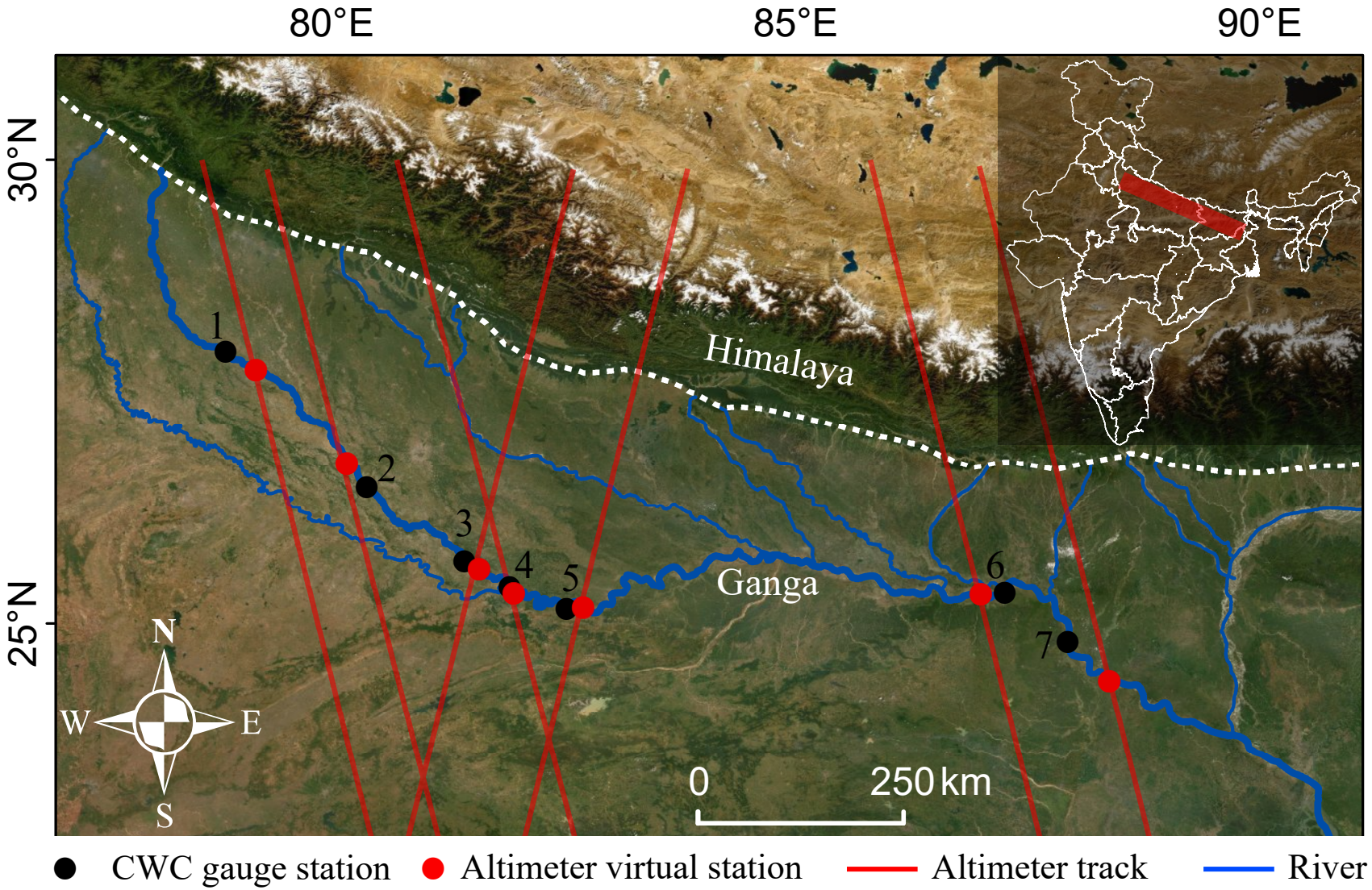
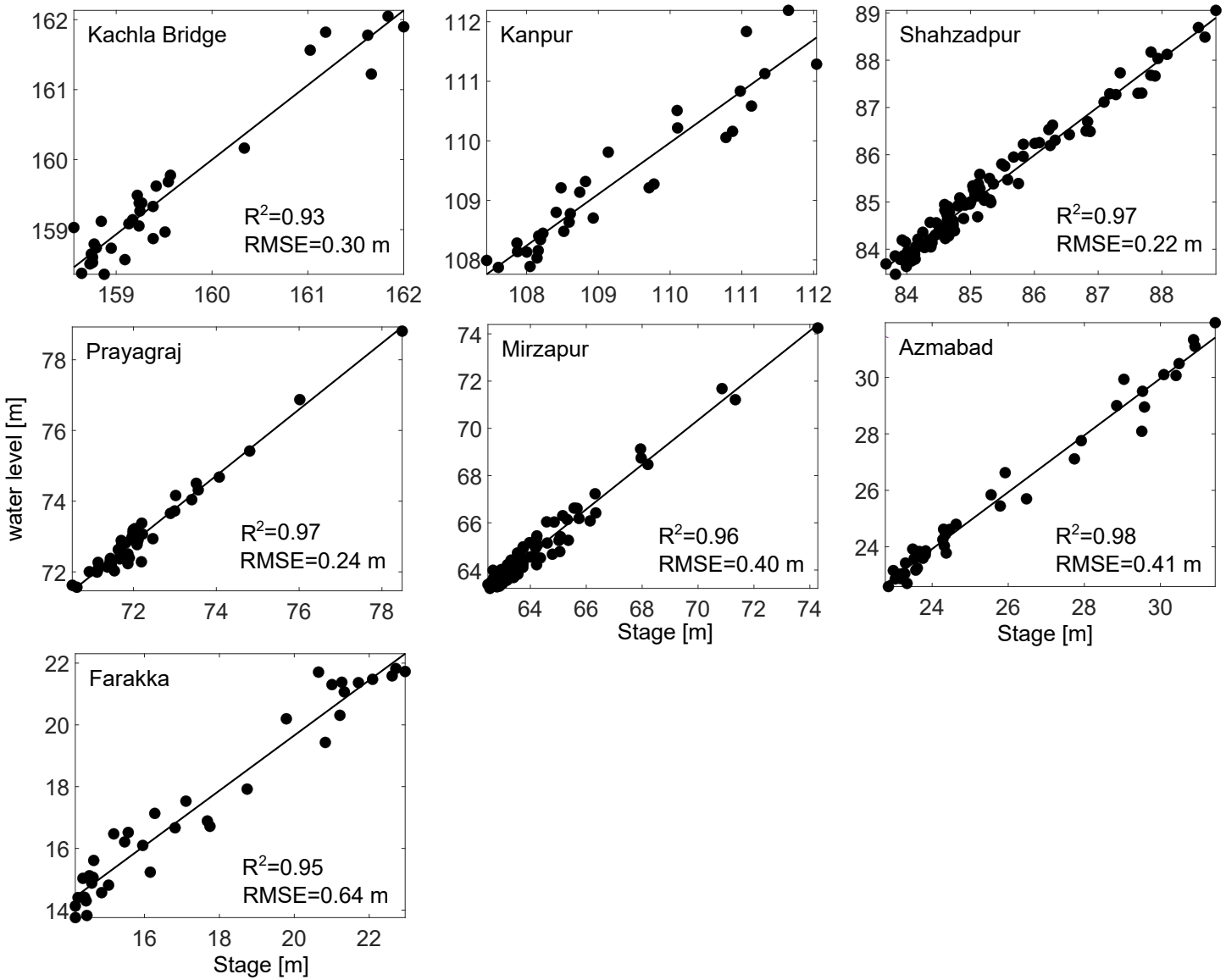
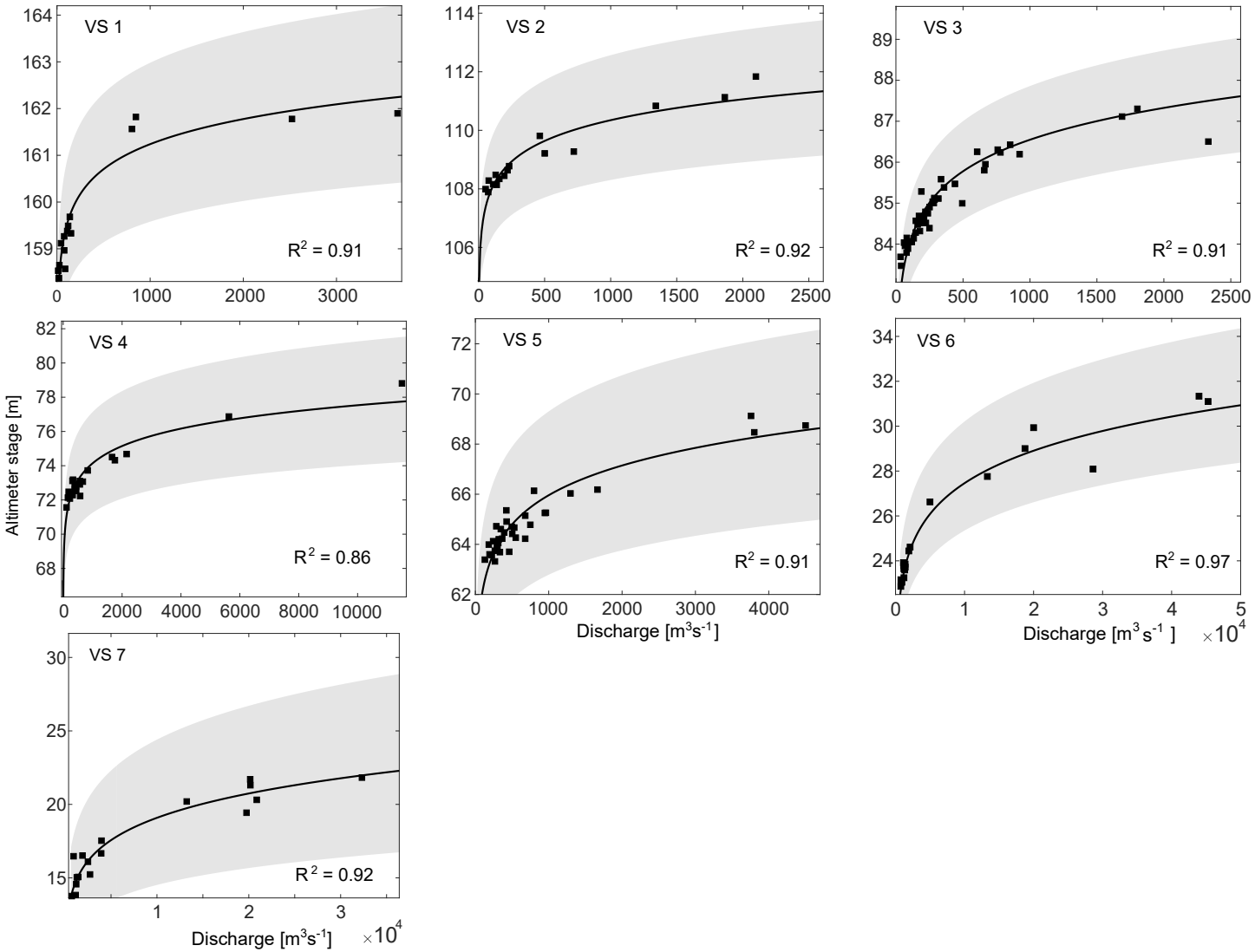
Study area


80°E
85°E
90°E
30°N
25°N
Himalaya
Ganga
1
2
3
4
5
6
7
N
W
E
S
0
250 km
CWC gauge station
Altimeter virtual station
Altimeter track
River

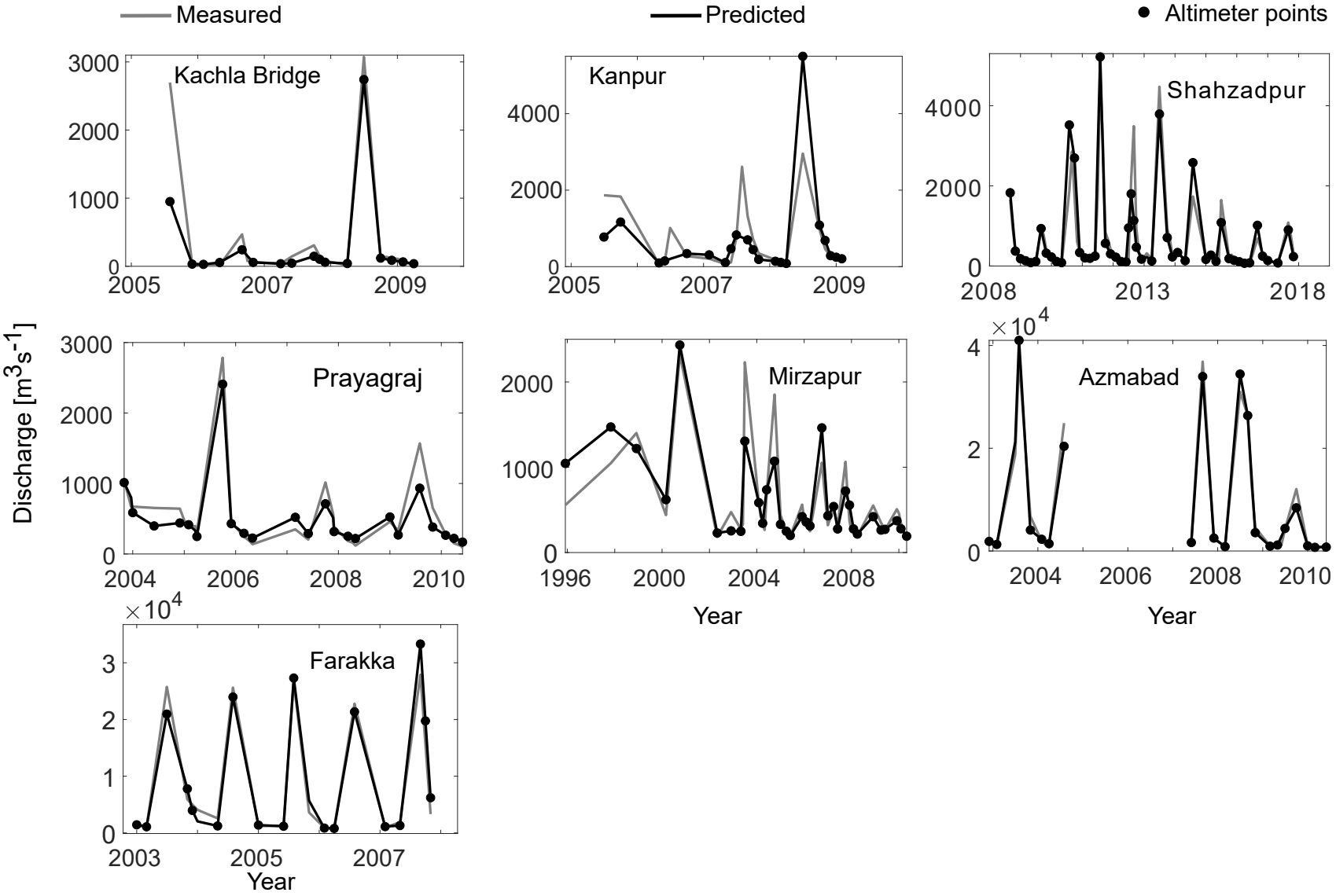
Accuracy of altimetry data



Stage - discharge rating curve



Result


Measured
Predicted
Altimeter points
Kachla Bridge
Kanpur
Shahzadpur
Prayagraj
Mirzapur
Azmabad
Farakka
Discharge [m3s-1]
Year
×10^4

Conclusion

- Azmabad and Farakka provide an accurate estimate of discharge due to high flow discharge, deeper flow and wider channel.
- Other stations exhibit high uncertainty due to shallow depth of channel.
- Atleast one gauge station in the river in the proximity of altimetry track to establish stage - discharge rating curve.

Thank You