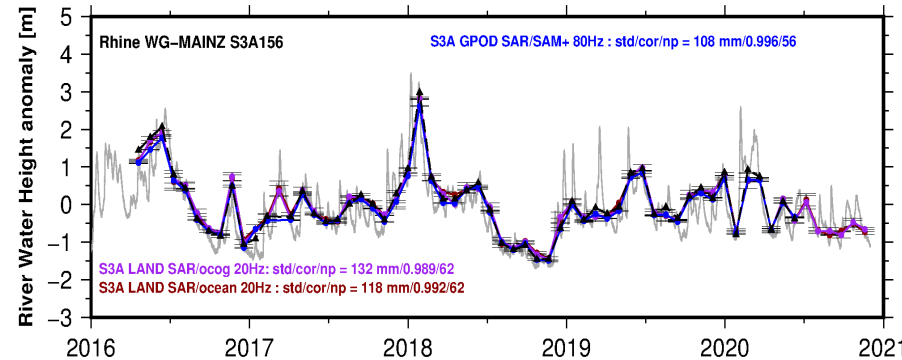
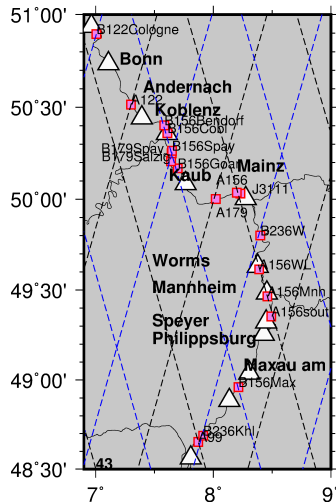


Discharge Q_{alti} from empirical method/statistical relation (RC) and physical Bjerklie method compared to the Q_{sobek} hydrodynamic model output



RC ($S3A H_{\text{alti}}$, Q_{insitu})

Rating curve

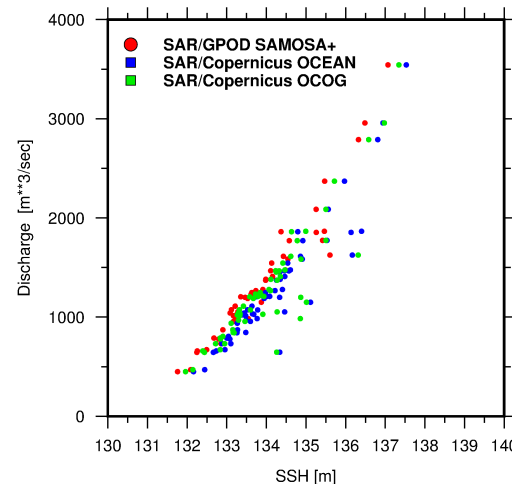
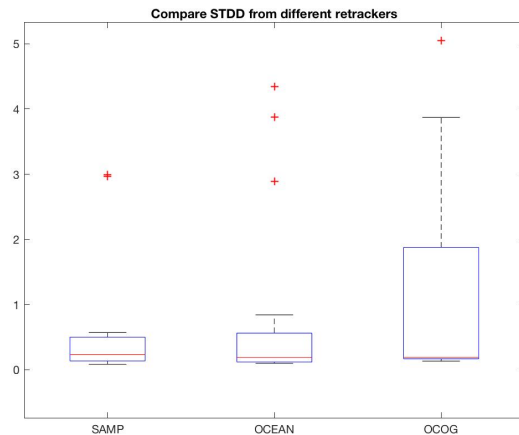
$$Q = a \cdot (H - b)^c$$

Bjerklie method:

$$Q = k_2 \cdot W \cdot Y^{1.67} \cdot S^{0.33}$$

1

where $Q = f(Y, W_{\text{optic}}, S_{\text{alti}})$ and $Y = f(H_{\text{alti}})$



Q from	Accuracy of Q in Mainz
Sobek Model	6%
RC Samosa+	3%
RC Ocean	7%
RC Ocog	7%
Bjerklie Samosa+	23%
Bjerklie Ocean	22%
Bjerklie Ocog	23%

RMSEN = RMSE / mean($Q_{\text{in-situ}}$)

accuracy of H_{alti} :

up to 10 cm with SAR/SAMOSA+

accuracy of discharge from H_{alti} : best accuracy 3-7% (RC method), 22-23% (Bjerklie method)