

SWATH comparison with Monohull

Feature	SWATH Pros	SWATH Cons
Over the side handling arrangements need to be more carefully thought out, geared toward SWATH design		Adapting after the fact may be more difficult
Deeper draft	Stability, Performance of acoustic systems	Access to shallow ports, location of intact for surface water. Loss of upper five meters or so in sampling with ADCP and other systems.
Motion is different, but generally much less	Much more stable for lab work, reduces fatigue	Unnatural motion for some, unexpected movements
Ship does not move relative to sea surface	Stable platform	Affects the retrieval and deployment of equipment on the sea surface
High Freeboard affects deployment and recovery of moorings, drifters and other equipment.		Makes deployment and recovery of equipment from sea surface more difficult.
Working deck space limited (KM Design)	Extra beam allows for a lot more deck-space	Due to stability not all deck space can be used for heavy weights. Tradeoff between enclosed space and deck space. No provision for deck space admidships on KM
Variable Deck load constraints	KM Science Load is within Ocean Class parameters. Ballast system allows for flexibility in changing trim, draft and load capacity.	More sensitive to weight changes. Open deck spaced is not necessarily useable, due to weight limitations.
Larger Sail Area		Affects ability to hold station and position relative to the wind
Sea conditions between the hulls and ability to deploy/recover equipment between the hulls		