

JCOMM Marine Services

"Requirement"	"Hor Res"	"HR BT"	"HR Min"
Significant Wave Height (global)	5 km	10 km	60 km
Dominant Wave Period (global)	5 km	10 km	60 km
Wave Period (global)	5 km	10 km	60 km
1D frequency spectral wave energy density (global)	25 km	50 km	300 km
2D frequency spectral wave energy density (global)	25 km	50 km	300 km
Significant Wave Height (regional)	0.1 km	5 km	20 km
Dominant Wave Period (regional)	0.1 km	5 km	20 km
Wave Period (regional)	0.1 km	5 km	20 km
1D frequency spectral wave energy density (regional)	1 km	20 km	100 km
2D frequency spectral wave energy density (regional)	1 km	20 km	100 km
Significant Wave Height (global)	50 km	300 km	1000 km
Dominant Wave Period (global)	50 km	300 km	1000 km
Wave Period (global)	50 km	300 km	1000 km
1D frequency spectral wave energy density (global)	50 km	300 km	1000 km
2D frequency spectral wave energy density (global)	50 km	300 km	1000 km
Significant Wave Height (global)	10 km	200 km	1000 km
Dominant Wave Period (global)	10 km	200 km	1000 km
Wave Period (global)	10 km	200 km	1000 km
1D frequency spectral wave energy density (global)	100 km	500 km	1000 km
2D frequency spectral wave energy density (global)	100 km	500 km	1000 km
Significant Wave Height (global)	100 km	500 km	1000 km
Dominant Wave Period (global)	100 km	500 km	1000 km
Wave Period (global)	100 km	500 km	1000 km
1D frequency spectral wave energy density (global)	100 km	500 km	1000 km
2D frequency spectral wave energy density (global)	100 km	500 km	1000 km
Significant Wave Height (global)	10 km	200 km	1000 km
Dominant Wave Period (global)	10 km	200 km	1000 km
Wave Period (global)	10 km	200 km	1000 km
1D frequency spectral wave energy density (global)	10 km	200 km	1000 km
2D frequency spectral wave energy density (global)	10 km	200 km	1000 km
Sea Surface Winds: Direction	1 km	5 km	25 km
Sea Surface Winds: Direction	5 km	10 km	60 km
Sea Surface Winds: Direction	0.1 km	5 km	20 km
Sea Surface Winds: Speed	1 km	5 km	25 km
Sea Surface Winds: Speed	5 km	10 km	60 km
Sea Surface Winds: Speed	0.1 km	5 km	20 km
Wind Speed: Profiles	10 km	50 km	200 km
Sea Surface Temperature	10 km	25 km	100 km
Sea Surface Temperature	1 km	10 km	25 km
Sea Surface Temperature	10 km	50 km	100 km
Ocean Temperature: Profiles	10 km	20 km	100 km
Ocean Temperature: Profiles	50 km	100 km	500 km
Ocean Temperature: Profiles	2 km	10 km	50 km
Ocean color	5 km	10 km	60 km
Sea Level	0.1 km	0.5 km	10 km
Sea Level	10 km	20 km	50 km
Salinity: Surface	1 km	5 km	30 km
Salinity: Surface	1 km	5 km	30 km
Salinity: Sub-surface, Profiles	1 km	5 km	30 km
Salinity: Sub-surface, Profiles	50 km	100 km	1000 km
Ocean Currents: Direction (surface)	1 km	5 km	20 km
Ocean Currents: Direction (surface)	50 km	100 km	1000 km
Ocean Currents: Direction (surface)	50 km	100 km	1000 km
Ocean Currents: Speed (surface)	1 km	5 km	20 km

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Ocean Currents: Speed (surface)	50 km	100 km	1000 km
Ocean Currents: Speed (surface)	50 km	100 km	1000 km
Ocean Currents: Direction (profiles)	1 km	5 km	20 km
Ocean Currents: Direction (profiles)	1 km	5 km	20 km
Ocean Currents: Speed (profiles)	1 km	5 km	20 km
Ocean Currents: Speed (profiles)	1 km	5 km	20 km
Sea-ice extent/edge	1-5 km	10 km	15 km
Sea-ice concentration	10 km	15 km	15 km
Sea-ice leads/polynyas	10 km	13 km	15 km
Sea-ice stage of development (ice age)	10 km	15 km	15 km
Sea-ice motion	1 km	25 km	25 km
Sea-ice thickness	25 km	5 km	0.5 km
Snow depth on Sea-ice	5 km	10 km	15 km
Sea-ice melt onset, duration of melt	10 km	15 km	15 km
Sea-ice surface characteristics (albedo, meltpond, dust, sn	0.5 km	1 km	1 km
Sea-ice volume/mass flux	100 km	50 km	25 km
Sea-ice extent/edge	0.1 km	0.1 km	0.1 km
Sea-ice concentration	10 km	15 km	15 km
Sea-ice leads/polynyas	0.1 km	0.3 km	0.5 km
Sea-ice stage of development (ice age)	10 km	15 km	15 km
Sea-ice motion	0.1 km	0.5 km	1 km
Sea-ice thickness	0.5 km	0.5 km	0.5 km
Bathymetry	1 m	10 m	100 m
Air Temperature at surface	0.5 km	1 km	10 km
Air pressure over sea surface	10 km	25 km	100 km
Imagery: cloud	0.5 km	1 km	5 km
Precipitation rate (liquid) at the surface	1 km	5 km	25 km
Sea Surface Temperature	0.5 km	1 km	10 km
Air specific humidity at surface	1 km	5 km	25 km

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"Vert Res"	"VR BT"	"VR Min"	"Obs Cycl"	"OC BT"	"OC Min"	"Delay of ϵ "	"DA BT"	"DA Min"
			0.1 h	3 h	24 h	0.08 h	1 h	6 h
			0.1 h	3 h	24 h	0.08 h	1 h	6 h
			0.1 h	3 h	24 h	0.08 h	1 h	6 h
			0.1 h	3 h	24 h	0.08 h	1 h	6 h
			0.1 h	3 h	24 h	0.08 h	1 h	6 h
			0.1 h	1 h	24 h	0.08 h	1 h	6 h
			0.1 h	1 h	24 h	0.08 h	1 h	6 h
			0.1 h	1 h	24 h	0.08 h	1 h	6 h
			0.1 h	1 h	24 h	0.08 h	1 h	6 h
			0.1 h	1 h	24 h	0.08 h	1 h	6 h
			6 h	24 h	240 h	24 h	72 h	720 h
			6 h	24 h	240 h	24 h	72 h	720 h
			6 h	24 h	240 h	24 h	72 h	720 h
			6 h	24 h	240 h	24 h	72 h	720 h
			6 h	24 h	240 h	24 h	72 h	720 h
			1 h	3 h	24 h	24 h	72 h	720 h
			1 h	3 h	24 h	24 h	72 h	720 h
			1 h	3 h	24 h	24 h	72 h	720 h
			1 h	3 h	24 h	24 h	72 h	720 h
			1 h	3 h	24 h	24 h	72 h	720 h
			6 h	3 h	24 h	24 h	72 h	720 h
			6 h	3 h	24 h	24 h	72 h	720 h
			6 h	3 h	24 h	24 h	72 h	720 h
			6 h	3 h	24 h	24 h	72 h	720 h
			6 h	3 h	24 h	24 h	72 h	720 h
			0.5 h	1 h	6 h	24 h	72 h	720 h
			0.5 h	1 h	6 h	24 h	72 h	720 h
			0.5 h	1 h	6 h	24 h	72 h	720 h
			0.5 h	1 h	6 h	24 h	72 h	720 h
			0.5 h	1 h	6 h	24 h	72 h	720 h
10 m			0.1 h	3 h	24 h	0.08 h	1 h	6 h
10 m			0.1 h	3 h	24 h	0.08 h	1 h	6 h
10 m			0.1 h	3 h	24 h	0.08 h	1 h	6 h
10 m			0.1 h	3 h	24 h	0.08 h	1 h	6 h
10 m			0.1 h	3 h	24 h	0.08 h	1 h	6 h
10 m			0.1 h	3 h	24 h	0.08 h	1 h	6 h
0.01 hPa			0.1 h	3 h	24 h	0.08 h	1 h	6 h
0 m			1 h	3 h	24 h	0.08 h	1 h	6 h
0.5 m			1 h	3 h	24 h	0.08 h	1 h	6 h
			1 h	3 h	24 h	12 h	24 h	72 h
5 m			1 h	3 h	24 h	12 h	24 h	72 h
1 m			1 h	3 h	24 h	24 h	72 h	720 h
1 m			1 h	3 h	24 h	12 h	24 h	72 h
0 m			1 wk	2 wks	1 month	5 d	10 d	20 d
			0.01 h	0.1 h	1 h	0.08 h	0.1 h	1 h
			0.01 h	0.1 h	1 h	1 d	2 d	7 d
			0.5 h	1 h	6 h	1 h	6 h	24 h
			0.5 h	1 h	6 h	24 h	72 h	720 h
1 m	10 m	100 m	1 h	3 h	12 h	3 h	6 h	24 h
1 m	10 m	100 m	1 h	3 h	12 h	24 h	72 h	720 h
1 m			0.5 h	1 h	3 h	0.25 h	1 h	6 h
0 m			1 h	3 h	6 h	24 h	72 h	720 h
1 m			1 h	3 h	6 h	24 h	72 h	720 h
1 m			0.5 h	1 h	3 h	0.25 h	1 h	6 h

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0 m			1 h	3 h	6 h	24 h	72 h	720 h
1 m			1 h	3 h	6 h	24 h	72 h	720 h
1 m	10 m	100 m	0.5 h	1 h	3 h	0.25 h	1 h	6 h
1 m	10 m	100 m	1 h	3 h	6 h	24 h	72 h	720 h
1 m	10 m	100 m	0.5 h	1 h	3 h	0.25 h	1 h	6 h
1 m	10 m	100 m	1 h	3 h	6 h	24 h	72 h	720 h
			1 d	1 d	1 d	3 d	4 d	7 d
			1 d	1 d	1 d	3 d	4 d	7 d
			1 d	1 d	1 d	3 d	4 d	7 d
			1 d	1 d	1 d	3 d	4 d	7 d
			1 d	1 d	1 d	3 d	4 d	7 d
			1 month	3 months	6 months	15 d	30 d	90 d
			1 d	1 d	1 d	3 d	4 d	7 d
			1 d	1 d	1 d	3 d	4 d	7 d
			1 d	1 d	1 d	3 d	4 d	7 d
			1 d	1 d	1 d	3 d	4 d	7 d
			1 d	1 d	1 d	3 d	4 d	7 d
			1 d	1 d	3 d	1 d	1 d	3 d
			1 d	1 d	1 d	1 d	1 d	3 d
			1 d	1 d	1 wk	1 d	1 d	3 d
			1 d	1 d	1 d	1 d	1 d	3 d
			1 d	1 d	3 d	1 d	1 d	3 d
			1 d	1 d	1 wk	1 d	1 d	3 d
			1 year	1.5 year	2 year	1 week	2 weeks	4 weeks
			0.5 h	1 h	3 h	0.08 h	1 h	6 h
			0.5 h	2 h	12 h	0.5 h	1 h	2 h
			0.05 h	0.11 h	0.5 h	0.25 h	0.4 h	1 h
			0.08 h	0.20 h	1 h	0.08 h	0.15 h	0.5 h
0.5 m			0.5 h	1 h	3 h	0.5 h	1 h	6 h
			0.5 h	1 h	3 h	0.5 h	1 h	6 h

"Acc - RMS"	"AC BT"	"AC Min"	CF_NAME
2%/0.1m	5%/0.25m	10%/0.25m	
5 degrees	10 degrees	22.5 degrees	
0.1s	0.5s	1s	
	10%	15%	20%
	10%	15%	20%
2%/0.1m	5%/0.25m	10%/0.25m	
5 degrees	10 degrees	22.5 degrees	
0.1s	0.5s	1s	
	10%	15%	20%
	10%	15%	20%
1%/0.05m	5%/0.25m	10%/0.25m	
1 degree	10 degrees	22.5 degrees	
0.1s	0.5s	1s	
	10%	15%	20%
	10%	15%	20%
1%/0.05m	5%/0.25m	10%/0.25m	
1 degree	2 degrees	5 degrees	
0.1s	0.5s	1s	
	10%	15%	20%
	10%	15%	20%
1%/0.05m	5%/0.25m	10%/0.25m	
1 degree	10 degrees	22.5 degrees	
0.1s	0.5s	1s	
	10%	15%	20%
	10%	15%	20%
1%/0.05m	5%/0.25m	10%/0.25m	
1 degree	10 degrees	22.5 degrees	
0.1s	0.5s	1s	
	10%	15%	20%
	10%	15%	20%
1 degree	10 degrees	22.5 degrees	
1 degree	10 degrees	22.5 degrees	
1 degree	10 degrees	22.5 degrees	
0.5 m/s	2 m/s	5 m/s	
0.5 m/s	2 m/s	5 m/s	
0.5 m/s	2 m/s	5 m/s	
0.1 m/s	1 m/s	5 m/s	
0.1 K	0.5 K	1 K	
0.1 K	0.5 K	1 K	
0.1 K	0.2 K	0.5 K	
0.1 K	0.5 K	1 K	
0.1 K	0.5 K	1 K	
0.1 K	0.5 K	1 K	
0.01 m	0.03 m	0.1 m	
0.01 m	0.03 m	0.1 m	
0.05 ppt	0.07 ppt	0.1 ppt	
0.05 ppt	0.07 ppt	0.1 ppt	
0.05 ppt	0.07 ppt	0.1 ppt	
0.05 ppt	0.07 ppt	0.1 ppt	
1 degrees	5 degrees	22.5 degrees	
5 degrees	10 degrees	22.5 degrees	
5 degrees	10 degrees	22.5 degrees	
0.05 m/s	0.1 m/s	0.2 m/s	

0.1 m/s	0.2 m/s	0.5 m/s
0.1 m/s	0.2 m/s	0.5 m/s
1 degrees	5 degrees	22.5 degrees
5 degrees	10 degrees	22.5 degrees
0.05 m/s	0.1 m/s	0.2 m/s
0.1 m/s	0.2 m/s	0.5 m/s
5 km	10 km	15 km
	5%	10%
	5%	10%
	5%	10%
1 km day ⁻¹	3 km day ⁻¹	5 km day ⁻¹
0.1 m	0.3 m	0.5 m
2 cm	5 cm	20 cm
1 d	2 d	4 d
	1%	10%
		10%
1 km ³ day ⁻¹	1 km ³ day ⁻¹	1 km ³ day ⁻¹
0.1 km	0.1 km	0.1 km
	5%	10%
		20%
0.1 km ²	0.1 km ²	0.1 km ²
	5%	10%
		20%
0.5 km day ⁻¹	0.5 km day ⁻¹	0.5 km day ⁻¹
	10%	10%
		10%
1 m	5 m	10 m
0.1 K	0.5 K	1 K
0.5 hPa	1 hPa	1 hPa
0.1 mm/h	0.5 mm/h	1 mm/h
0.1 K	0.5 K	1 K
0.5 K	1 K	3 K

Use

Assimilation into/real-time validation of global wave forecast models and Maritime Safety Se
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Assimilation into/real-time validation of global wave forecast models
Assimilation into/real-time validation of global wave forecast models
Assimilation into/real-time validation of regional wave forecast models and Maritime Safety :
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Assimilation into/real-time validation of regional wave forecast models
Assimilation into/real-time validation of regional wave forecast models
Delayed mode validation of wave forcast models
Delayed mode validation of wave forcast models
Delayed mode validation of wave forcast models
Delayed mode validation of wave forcast models
Delayed mode validation of wave forcast models
Calibration/validation of satellite wave sensors
Calibration/validation of satellite wave sensors
Calibration/validation of satellite wave sensors
Calibration/validation of satellite wave sensors
Calibration/validation of satellite wave sensors
Ocean wave climate and variability
Ocean wave climate and variability
Ocean wave climate and variability
Ocean wave climate and variability
Ocean wave climate and variability
Role of waves in coupling
Role of waves in coupling
Role of waves in coupling
Role of waves in coupling
Role of waves in coupling
Atmosferic Modeling (Coastal)
Marine Modeling
Maritime Safety Services
Atmospheric Modeling (Coastal)
Marine Modeling
Maritime Safety Services
Atmospheric and Marine Modeling (Global)
Atmospheric Modeling (Global)
Marine Modeling
Climate Modeling
Atmospheric Modeling (Global)
Climate Modeling (Offshore)
Marine Modeling
Marine Modeling
Storm Surge and tsunami forecasting
Climate Modeling (Offshore)
Marine Modeling
Climate Modeling (Offshore)
Marine Modeling
Climate Modeling (Offshore)
Coastal applications
Climate Modeling (Offshore)
Open Ocean Applications
Coastal applications

Climate Modeling (Offshore)
Open Ocean Applications
Coastal applications
Offshore applications
Coastal applications
Offshore applications
Marine climatology
Marine climatology
Marine climatology
Marine climatology
Marine climatology
Marine climatology
Marine climatology
Marine climatology
Marine climatology
Marine climatology
Sea-ice services
Sea-ice services
Sea-ice services
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Maritime Safety Services
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Remarks Af_srce

Data with spatial coverage would be advantageous. Collocated surface wind data advantageous for real-time services
services

Directional accuracy requirements for 2D spectra as for wave direction data
Strong requirement for data with spatial coverage. Collocated surface wind data advantageous for real-time services
Services

Priority is increased
coverage of high
quality spectral
observations.
Additional

Collocation with
satellite ground
tracks advantageous
Wave climate
applications may rely
on nearshore wave
modeling. Hence
validation data for
Additional collocated
measurements
required. Process
studies likely to
require dedicated

» validation

validation

