



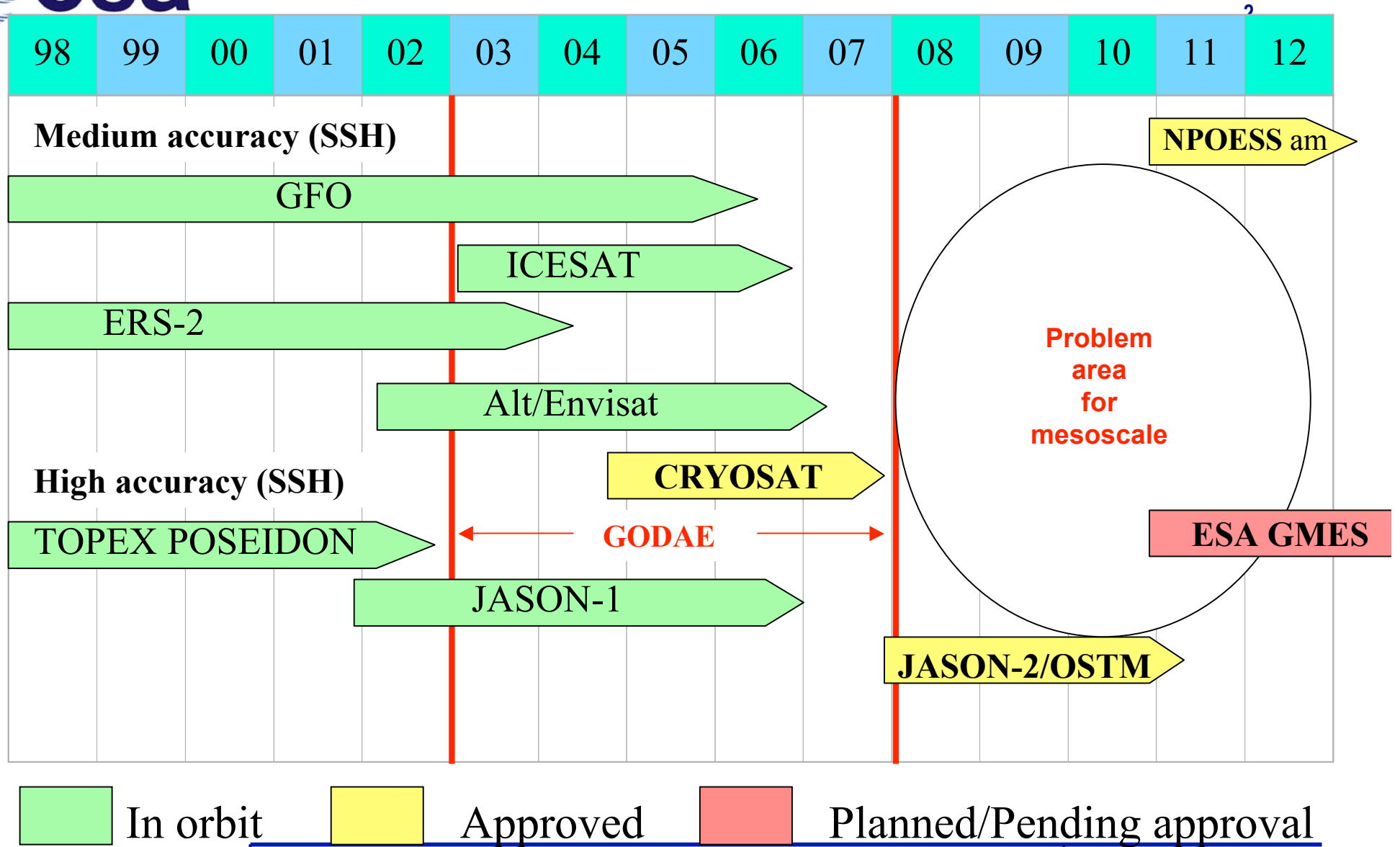
Future Satellite Mission Timelines

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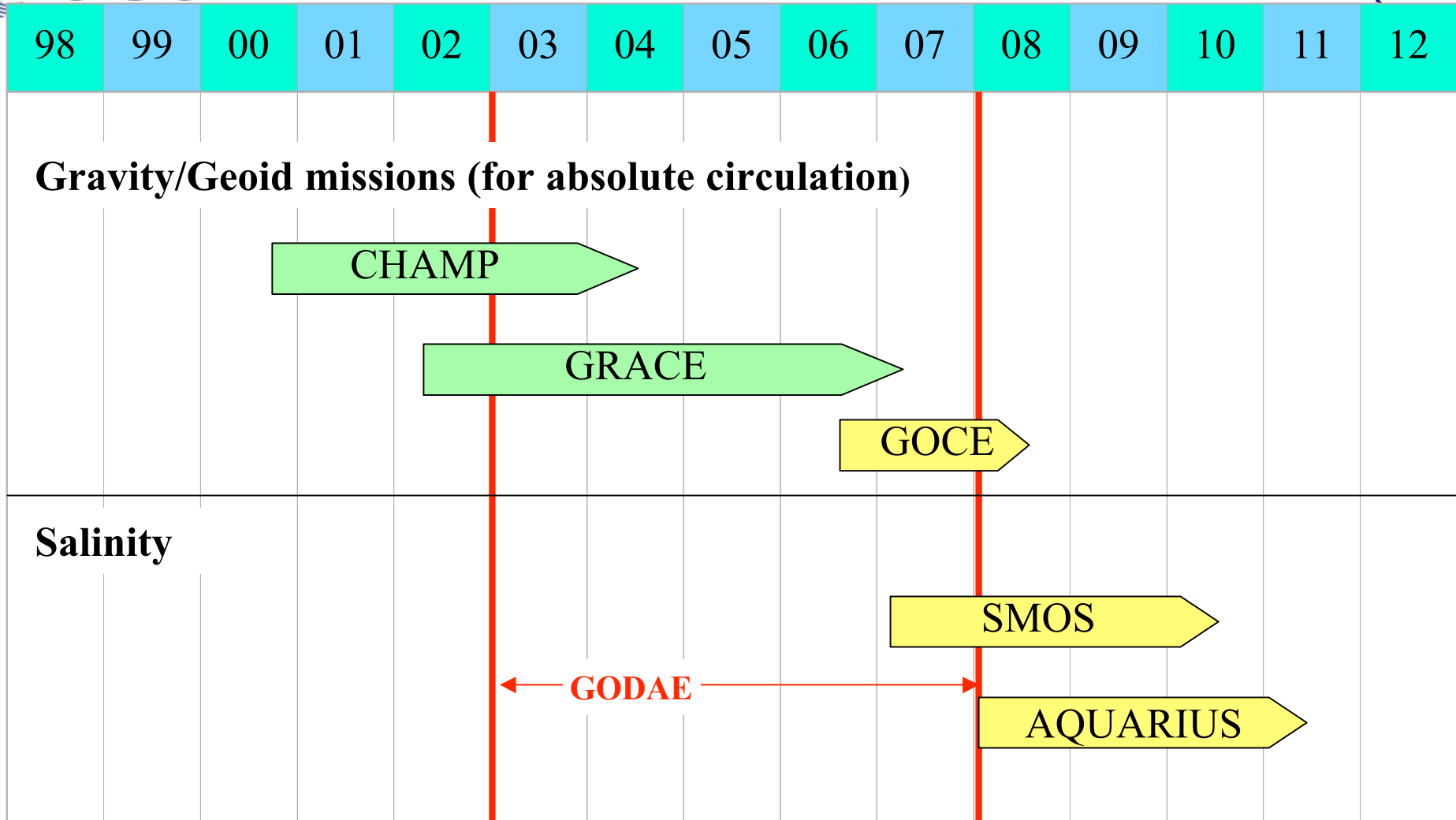
Ocean Surface Topography





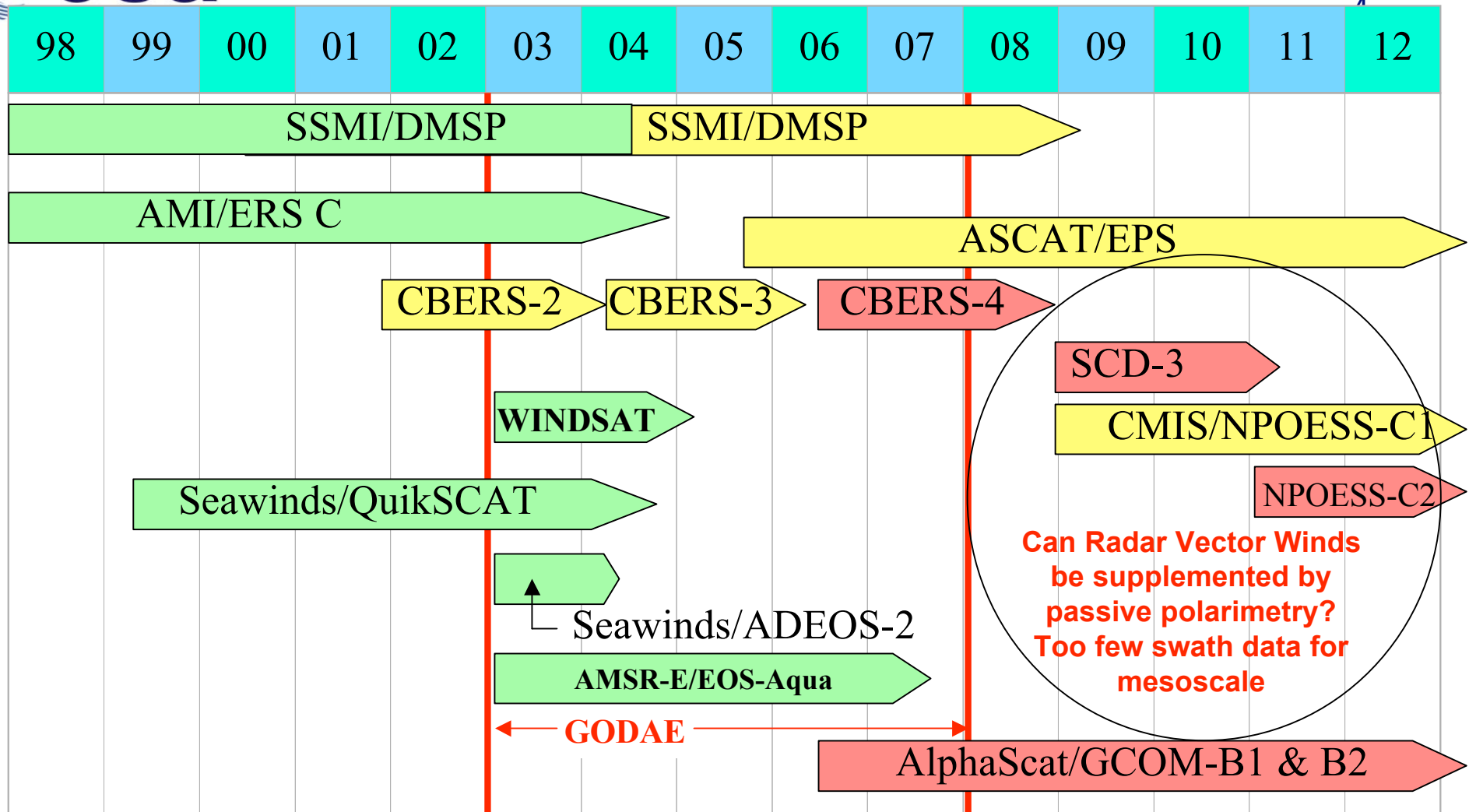
Geoid and Salinity Missions

3



In orbit Approved Planned/Pending approval

Ocean Vector Winds

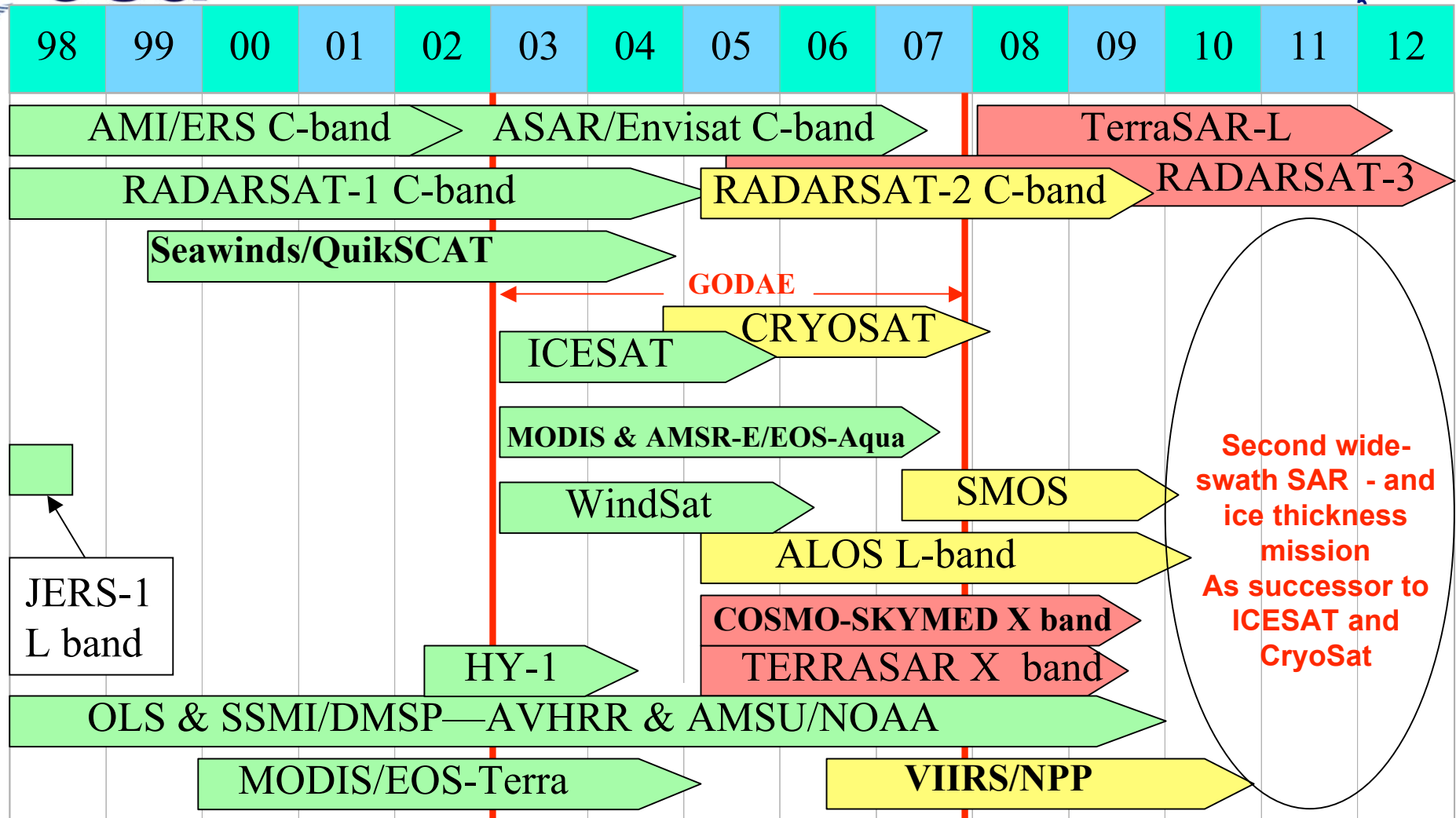


Can Radar Vector Winds be supplemented by passive polarimetry? Too few swath data for mesoscale

In orbit
 Approved
 Planned/Pending approval



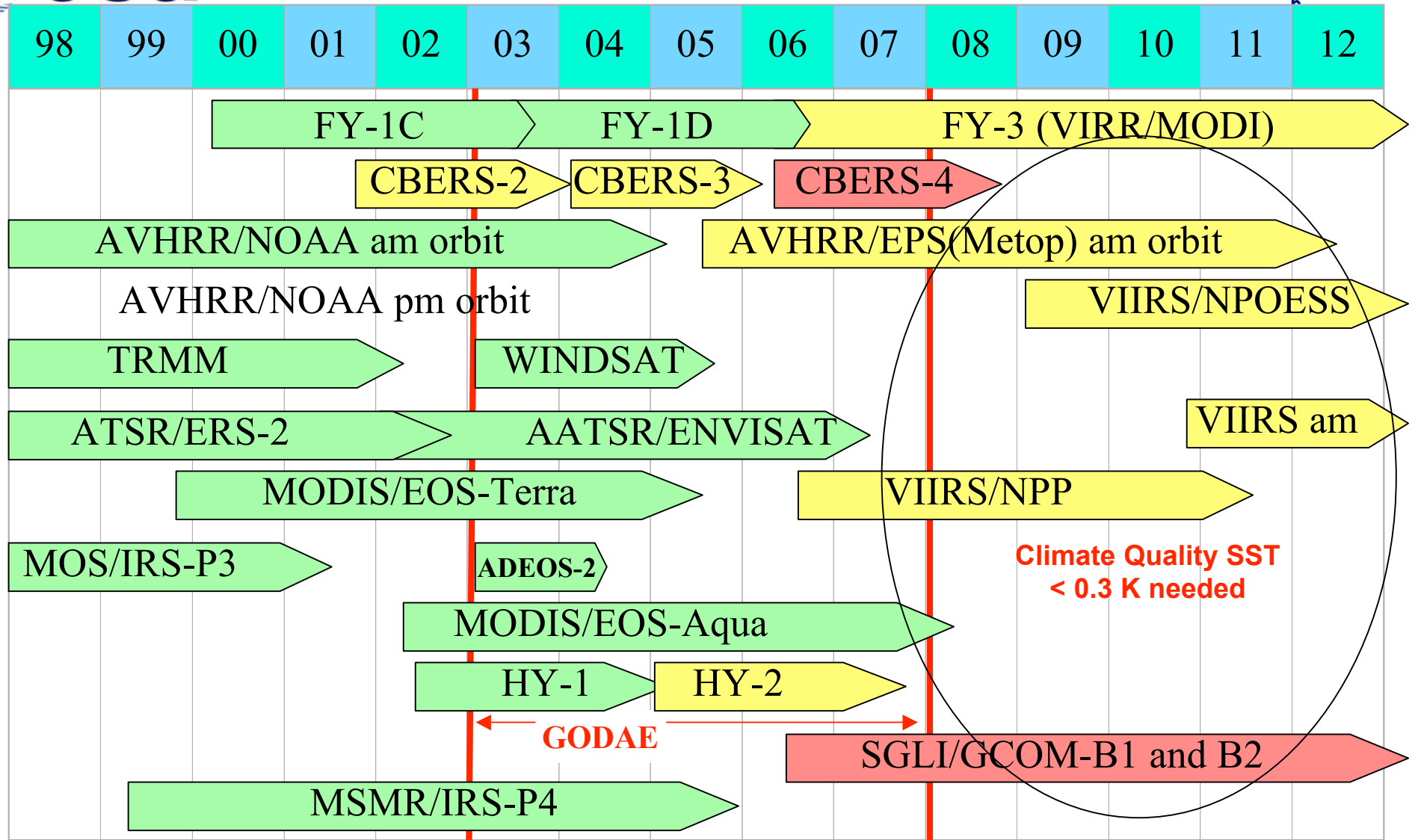
Sea Ice (Concentration, Drift, Thickness)



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Sea Surface Temperature

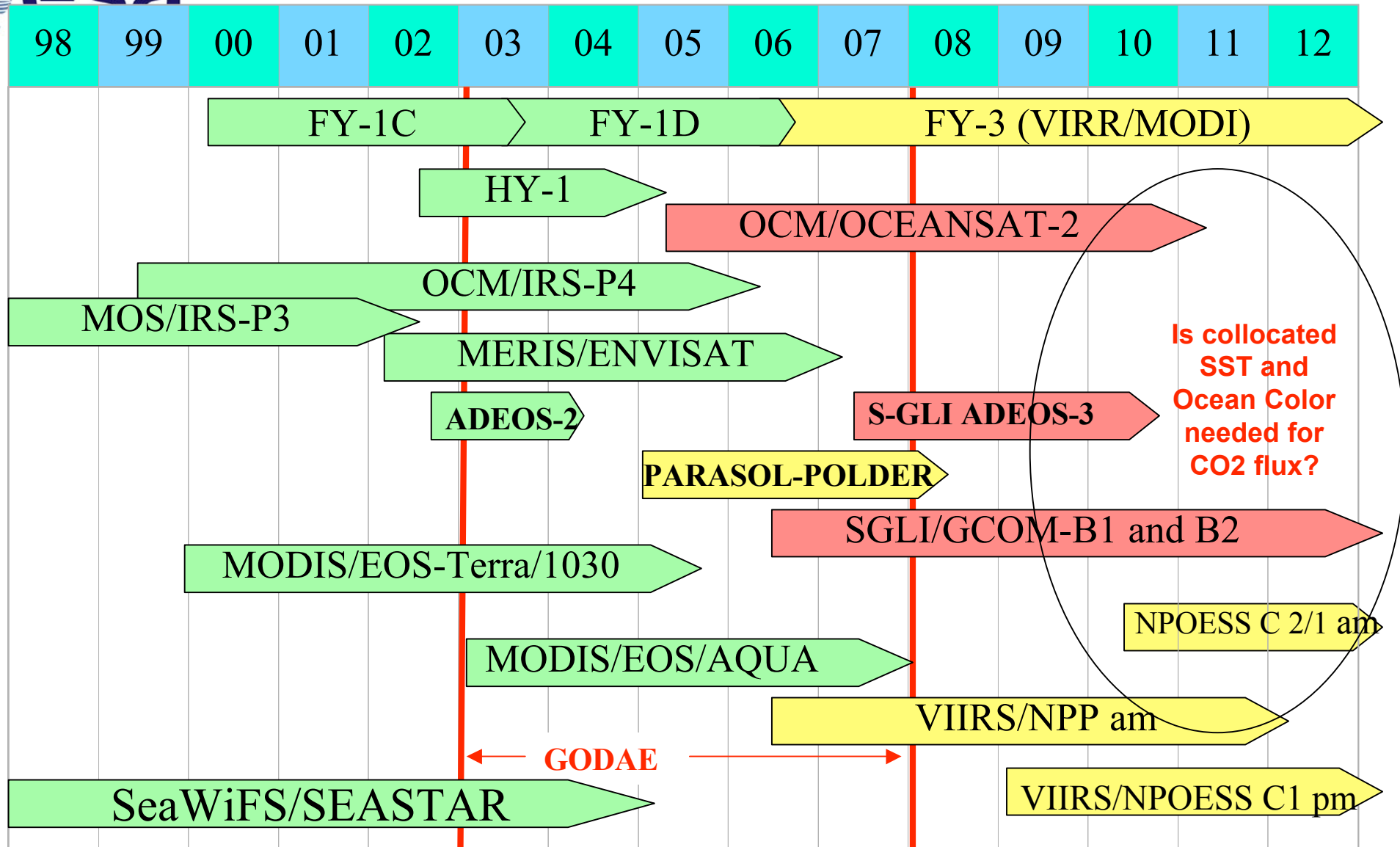


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22 juillet 04



Ocean Colour



Is collocated SST and Ocean Color needed for CO2 flux?

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SATELLITE DATA

Altimeters. Ok to 2007. Then a mesoscale altimeter mission is at least needed to complement Jason-2 and to constrain the mesoscale variability and open ocean currents.

Infrared radiometers. Ok to 2007. Then high quality and high resolution SST measurements from combined use of passive microwave and infrared radiometers are needed.

Spectrometers. Ok to 2007. Then high-resolution measurements of chlorophyll served in near-real time are needed for validation or assimilation into marine biogeochemical models.

SAR. Ok to 2007. Then new SAR missions are highly needed as a source of information for detection of oil spills both from illicit vessel discharges and major accidents.

IN SITU DATA

Argo, VOS and Ferry-boxes: The utilization of VOS and ferry boxes along the European coastal and shelf seas should significantly increase and complement Argo data, all need to be sustained.

Observatories: Integrated observatories including HF radars at selected “tie-points” along European coastal and regional seas are needed for routine and sustained in-situ monitoring.

Biogeochemical sensor development: There is a developing need to be able to measure pigments, nutrients, dissolved gases and other biogeochemical properties in the sea.

River discharges: There is an urgent requirement for a routine monitoring system of river discharges (volume and nutrients) into coastal seas.

MODELS

Marine GMES: The ocean monitoring and modelling system will not be adequate for several major applications without a high-inclination altimeter to complement Jason-2 beyond 2007.

Downscaling: The regional high resolution forecasting systems improves with systematic and reliable information on the open boundaries from global and basin scale systems.

Coastal Models: Coastal models are far from being developed and operated at the adequate resolution for applications to pollution monitoring from land sources.

Ecosystem modelling: There is a strong need to develop and advance the maturity of ecosystem modelling.

- Future Precipitation mission – to complement SMOS and Aquarius for E-P (GPM on hold for two years and EGPM not approved)
- High latitude solid precip. capability