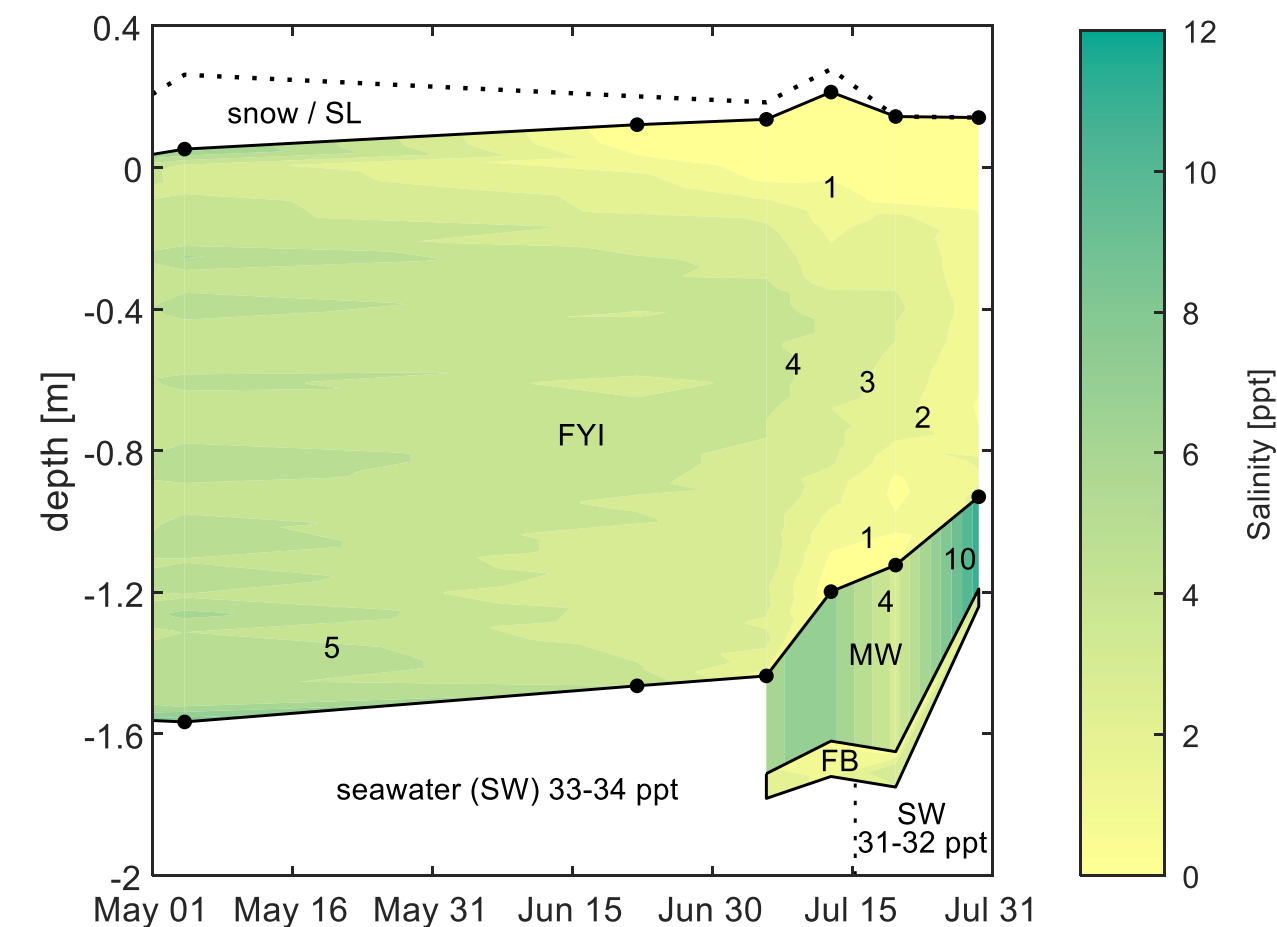


Temporal evolution of under-ice meltwater and false bottoms

Salt balance of first-year ice (FYI)

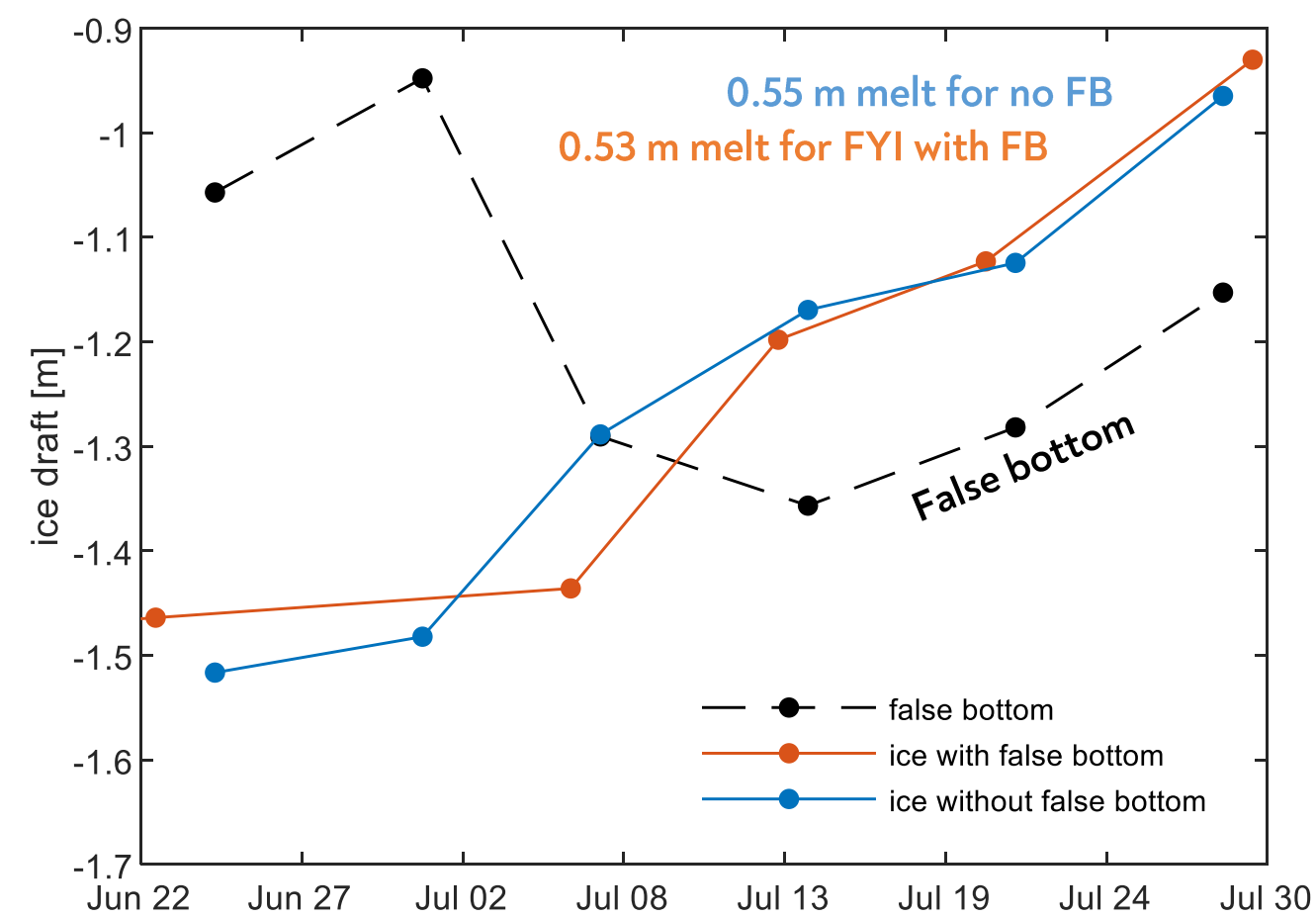
Salinity of FYI, under-ice meltwater (MW), and false bottom (FB)



- Ice salinity decreased from 5.3 to 1.1
- Meltwater doubled FYI desalinization
- Ice lost 55 cm of ice and 21 cm of snow
- Meltwater appeared instantly
- Meltwater mean thickness was 47 cm

How false bottoms affect ice melt?

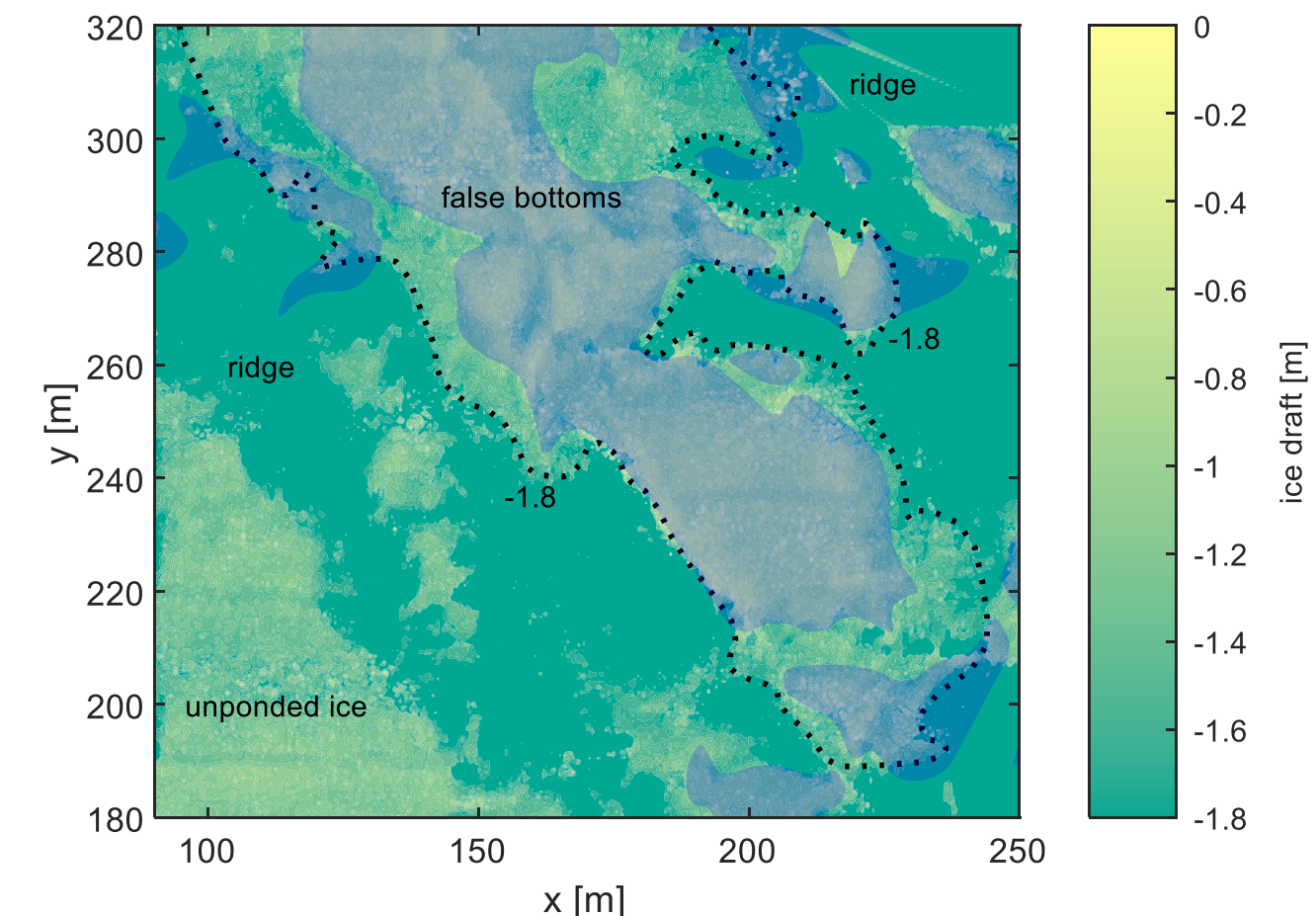
Melt rate of ice with/without false bottom



- Ice with FB melts 3 % slower than ice without FB
- FB final thickness of 5 cm is 5 % addition to mass balance

How many false bottoms do we have?

False bottom areal coverage



- False bottoms covers 21 % of ice area (0.4 x 0.2 km)
- False bottoms appear in areas surrounded by ridges