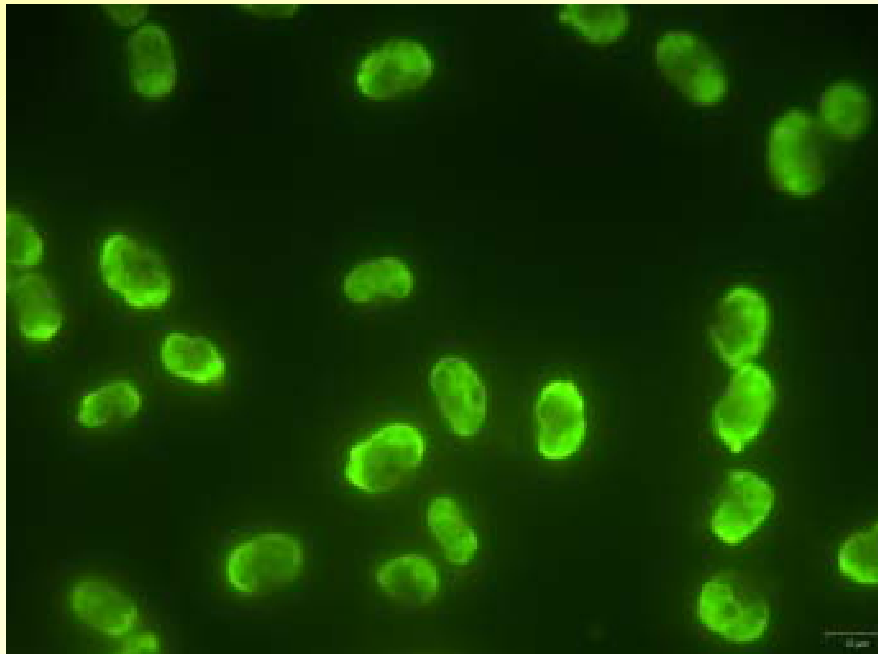


PICODIV meeting

8-10 July 2002, Roscoff

**Seasonal variation of major picoplankton groups
off Roscoff
determined by FISH-TSA**



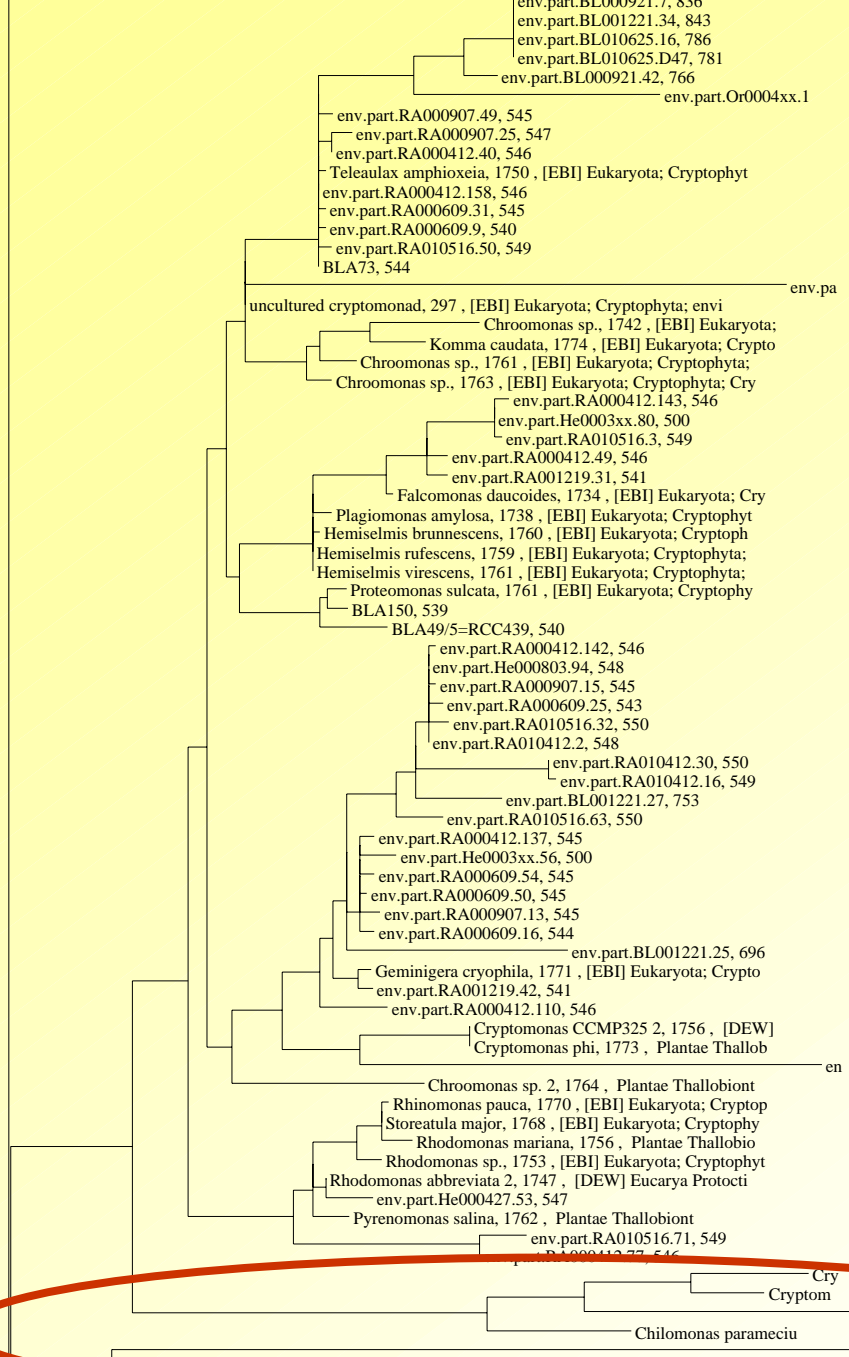
Delphine Doussal, Fabrice Not, Nathalie Simon, Daniel Vaultot

Oceanic Phytoplankton team

Introduction

- A new oligonucleotide probe tested : CRYPTO13
- Application on natural samples :
 - PELA01 (Pelagophyceae)
 - BOLI02 (Bolidophyceae) → from literature
 - PRYM02 (Prymnesiophyceae)
 - CRYPTO13 (Cryptophyceae) → new probe

Probe targeting Cryptophyceae : CRYPTO13

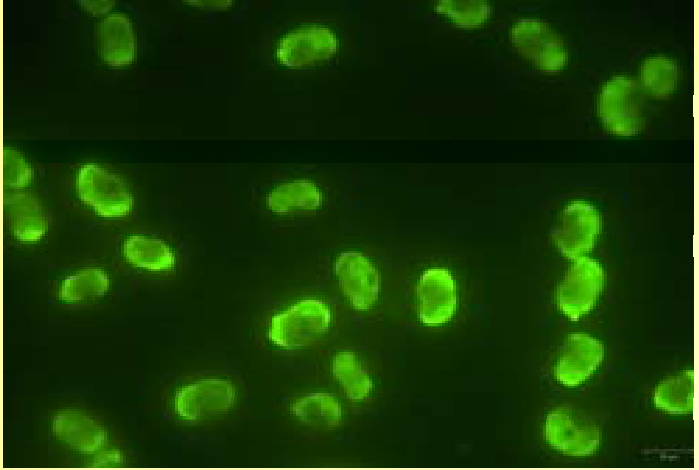


Specificity tests : CRYPTO13

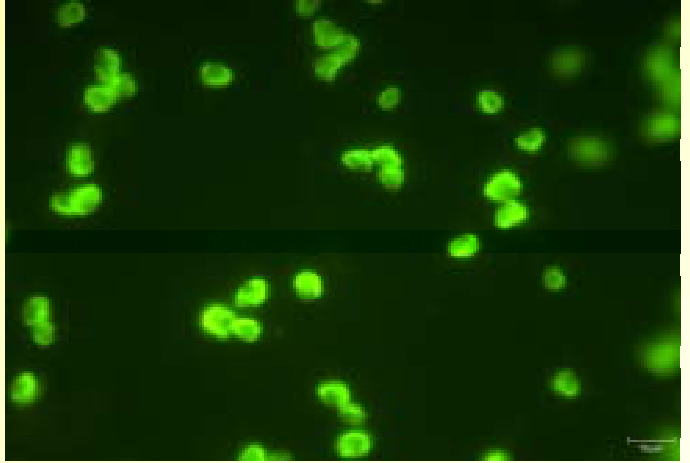
Prasinophyceae (green algae)			Bolidophyceae	Cryptophyceae	
<i>M.pusilla</i> (RCC 114)	<i>O.tauri</i> (RCC 116)	<i>P.marina</i> (RCC 261)	<i>B.pacifica</i> (RCC 205)	<i>R.baltica</i> (RCC 350)	<i>C.flagellate</i> (RCC 439)
-	-	-	-	+	+

➤ CRYPTO13 : specific of Cryptophyceae

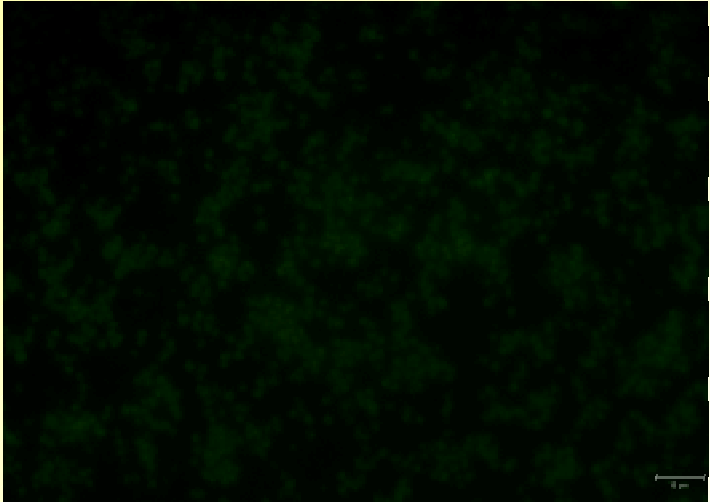
Specificity tests : CRYPTO13



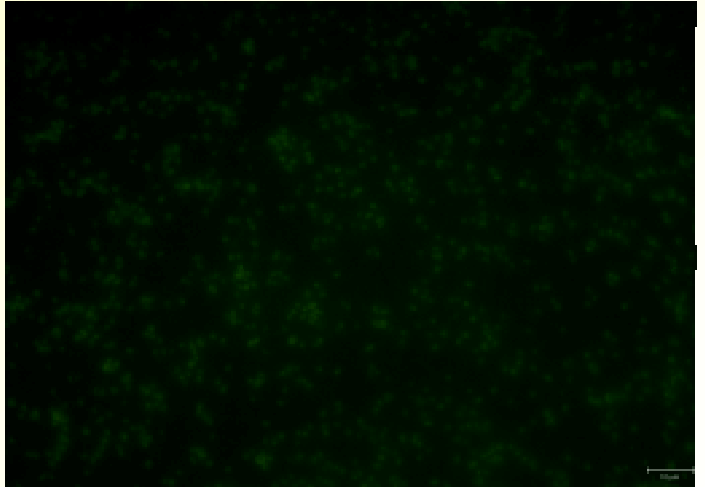
R.baltica (RCC 350)



C.flagellate (RCC 439)

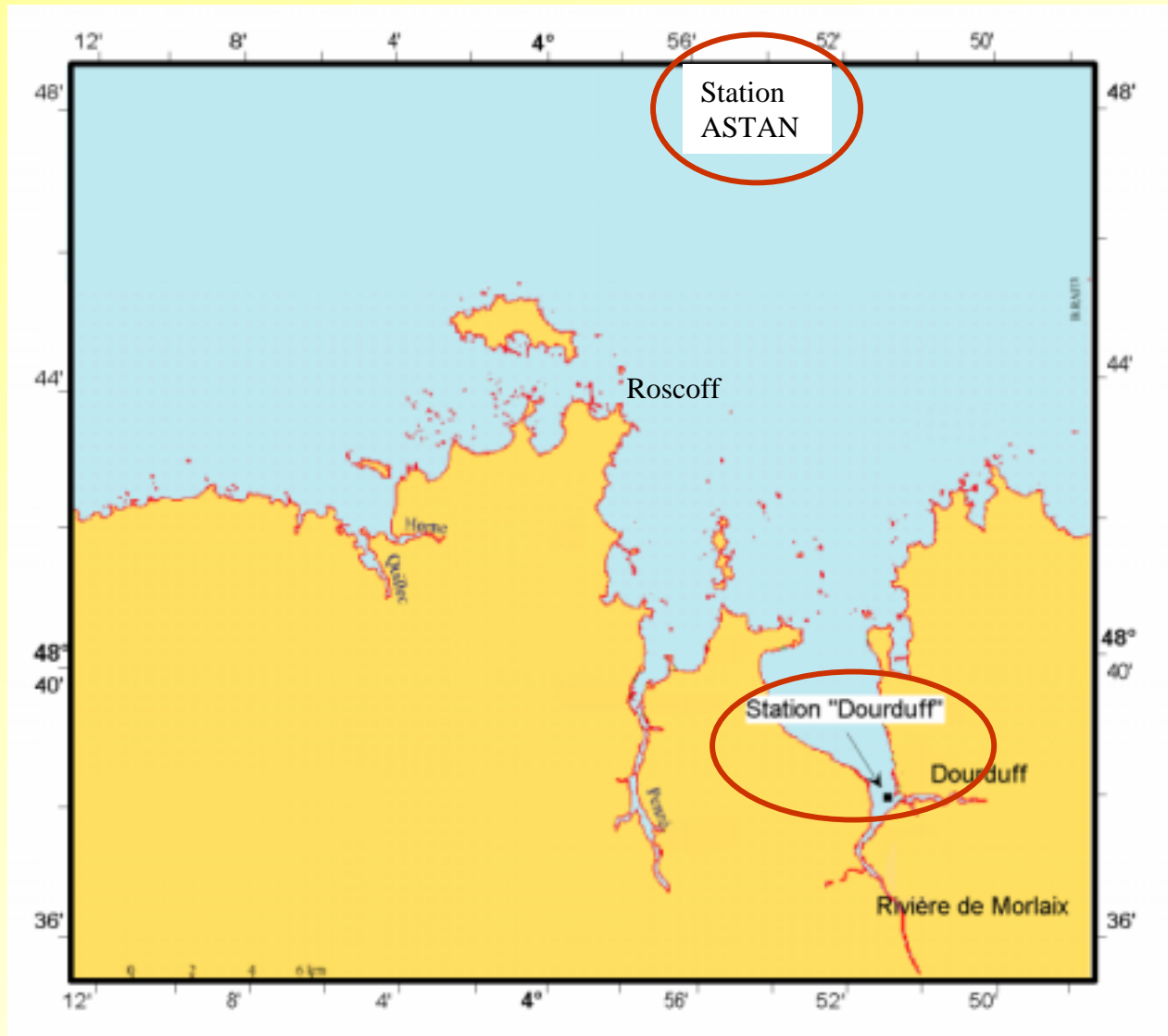


M.pusilla (RCC 114)

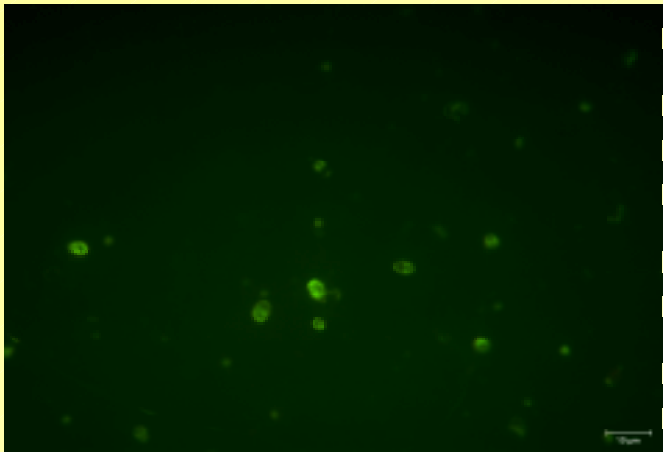


O.tauri (RCC 116)

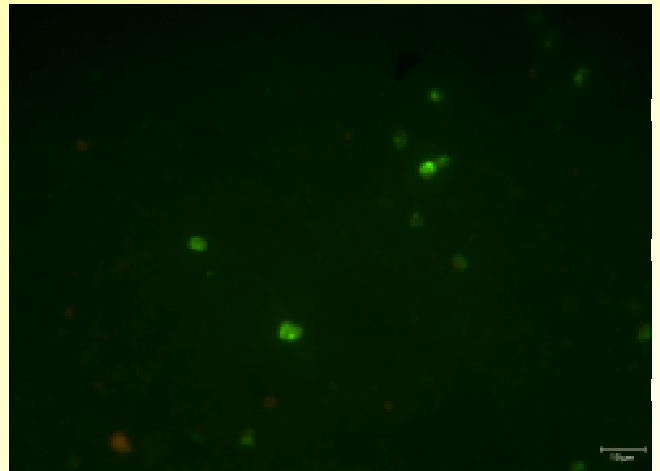
Natural samples



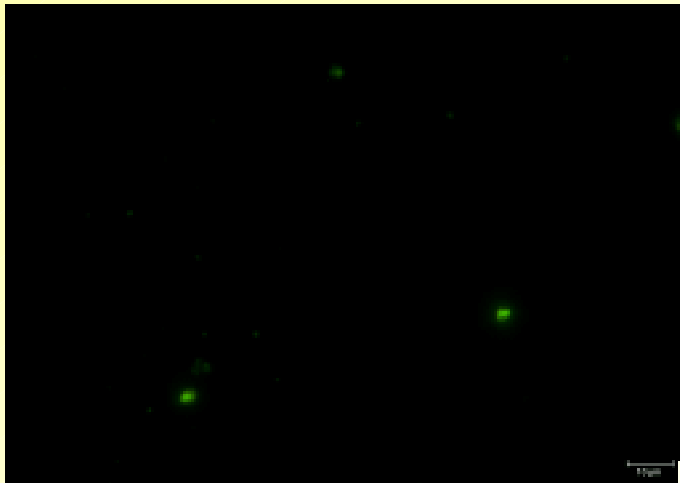
Application on natural samples



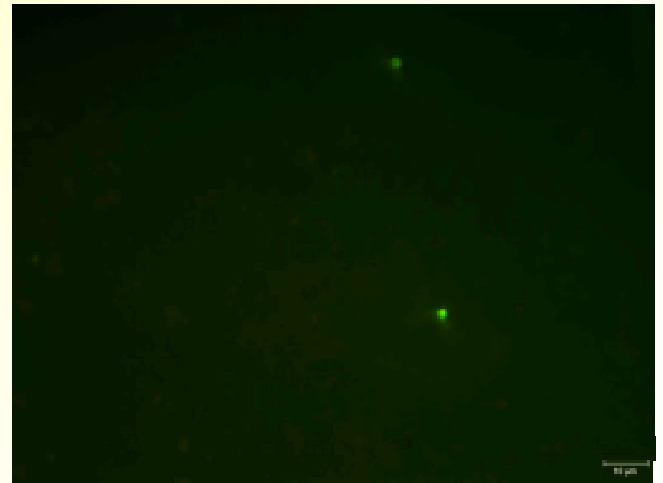
PELA01



CRYPTO13



PRYM02



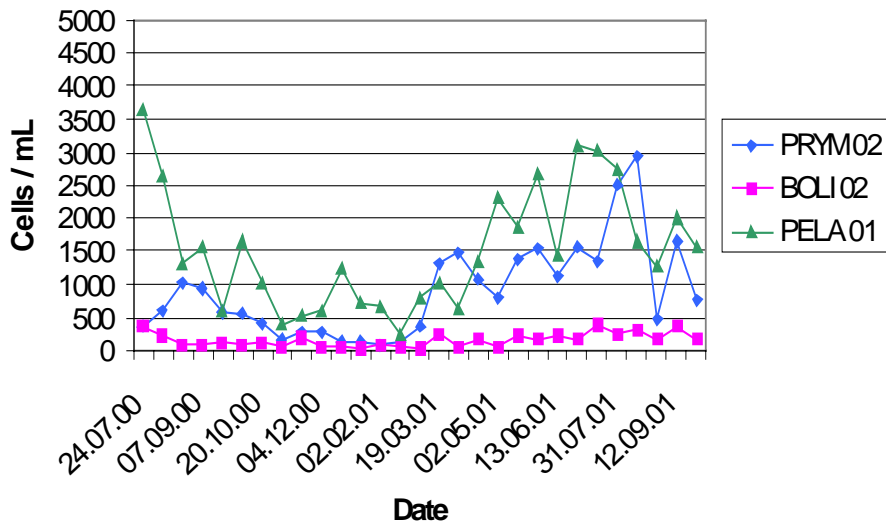
BOLI02

PRYM02, PELA01, BOLI02 : results

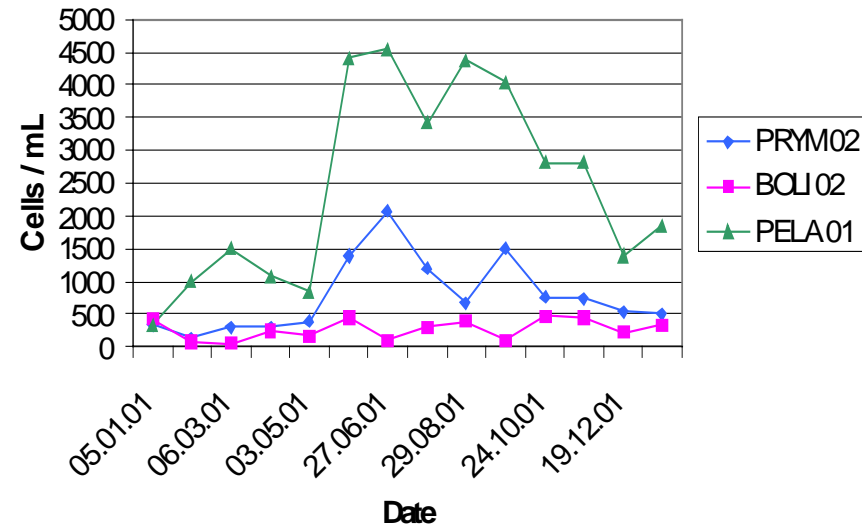
July 2000-September 2001

January 2001-January 2002

ASTAN



DOURDUFF

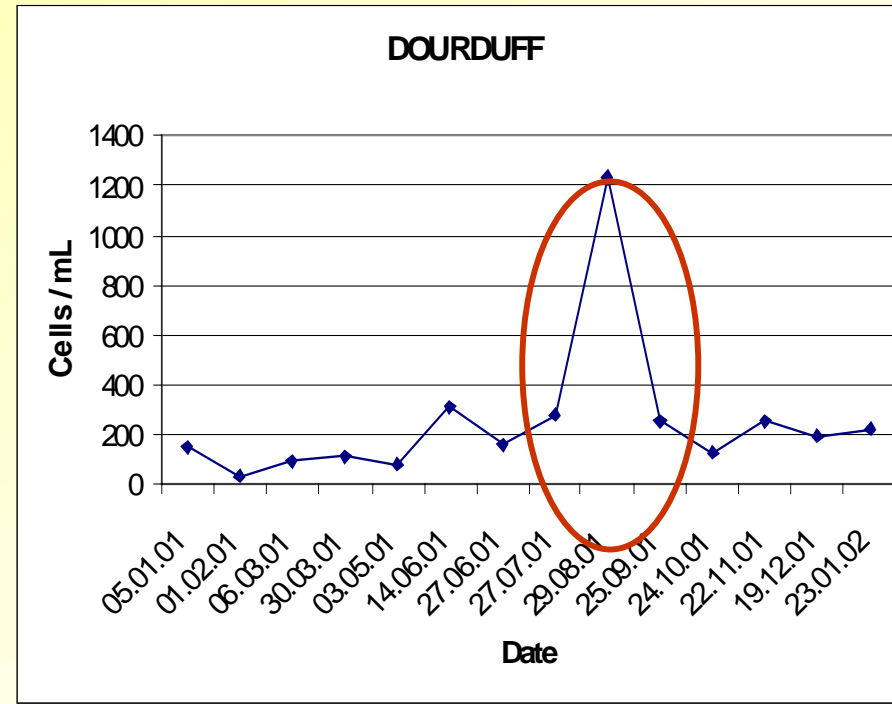
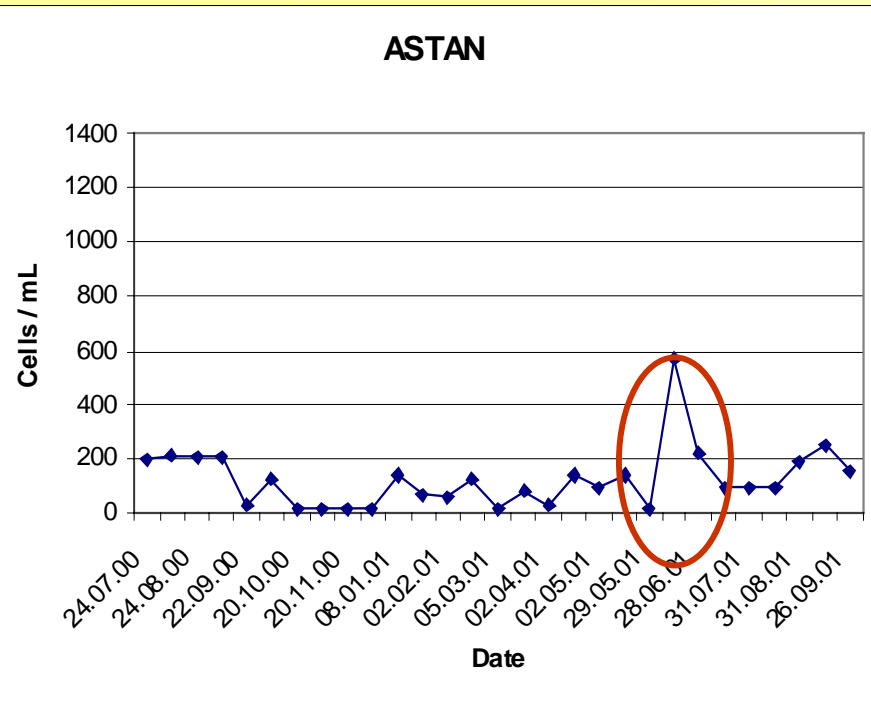


- few cells of Bolidophyceae compared to Pelagophyceae and Prymnesiophyceae
- more Pelagophyceae and Prymnesiophyceae in summer

CRYPTO13 : results

July 2000-September 2001

January 2001-January 2002



➤ few cells all the year except one peak during summer

Conclusion

- Natural samples
 - most important peak in summer for Pelagophyceae, Prymnesiophyceae, Cryptophyceae
 - few cells of Bolidophyceae

 - more Pelagophyceae and Prymnesiophyceae in Dourduff than in Astan

- New results on natural samples
 - need to be analysed to explain seasonal variations in function of hydrological parameters
 - opposite results for Pelagophyceae compared to those found in clones libraries

Acknowledgements

- PICODIV
- PICOMANCHE
- The whole Oceanic Phytoplankton Team and the Mysis Crew