

Visual Quality Control of XBT Data at AOML

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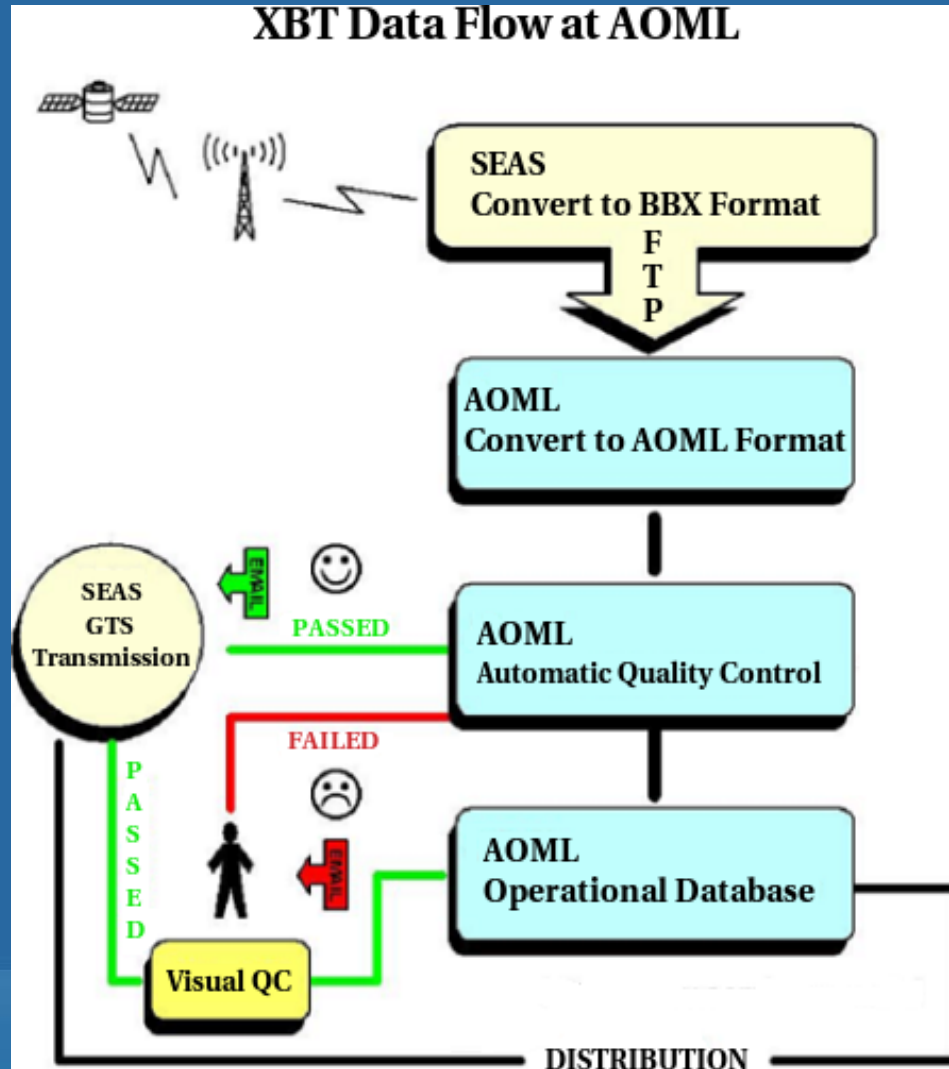
Fifth Meeting of the JCOMM Ship Observations Team (SOT)

18 - 22 May 2009, Geneva





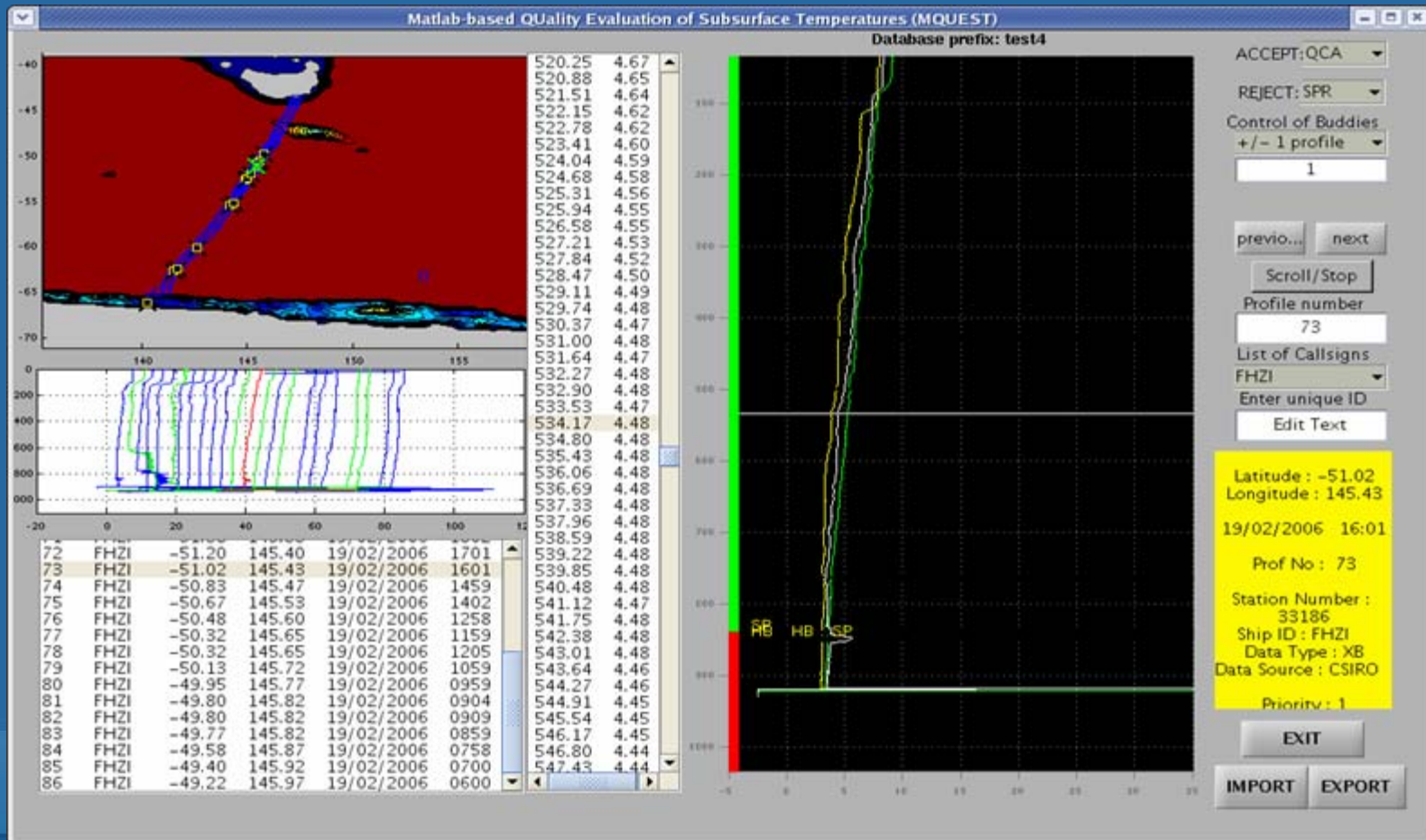
XBT Data Flow





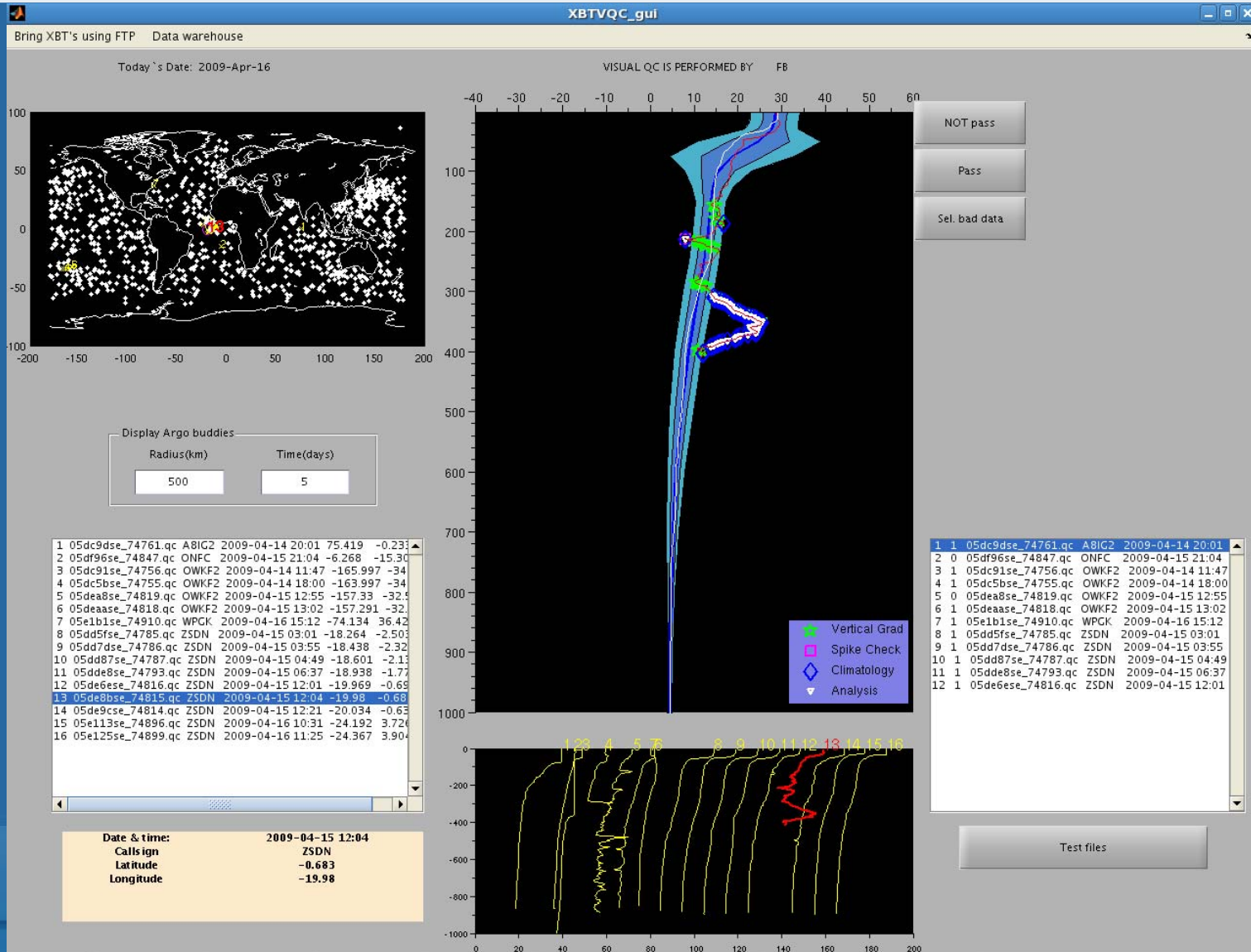
Visual Quality Control software

SCIRO VQC software: MQUEST
courtesy of Ann Thresher





Visual Quality Control software





Visual Quality Control software

Bring XBT's using FTP Data warehouse

Today's Date: 2009-Apr-19

VISUAL QC IS PERFORMED BY: FB

Display Argo buddies

Radius(km) Time(days)

1	05e6c7se_75062.qc	A8IG2	2009-04-18 15:53	97.015	-17.9
2	05e71bse_75067.qc	ONFC	2009-04-18 18:12	-19.893	-1.7
3	05e34cse_74962.qc	OWKF2	2009-04-17 06:42	-142.497	-28
4	05e6c0se_75056.qc	OWKF2	2009-04-18 15:22	-132.498	-23
5	05e350se_74960.qc	WDD6042	2009-04-17 05:57	143.446	31
6	05e21ese_74926.qc	WPGK	2009-04-16 19:04	-73.987	37.2
7	05e60fse_75039.qc	WPGK	2009-04-18 10:04	-73.136	39.34
8	05e715se_75068.qc	WPGK	2009-04-18 18:10	-72.215	36.8
9	05e7e3se_75098.qc	WPGK	2009-04-19 02:22	-71.344	34.4
10	05e87bse_75111.qc	WPGK	2009-04-19 06:11	-70.932	33.2
11	05e76fse_75087.qc	ZSDN	2009-04-18 23:22	-36.466	16.0

Date & time: 2009-04-16 19:04
 Callsign: WPGK
 Latitude: 37.283
 Longitude: -73.987

NOT pass

Pass

Sel. bad data

Vertical Grad

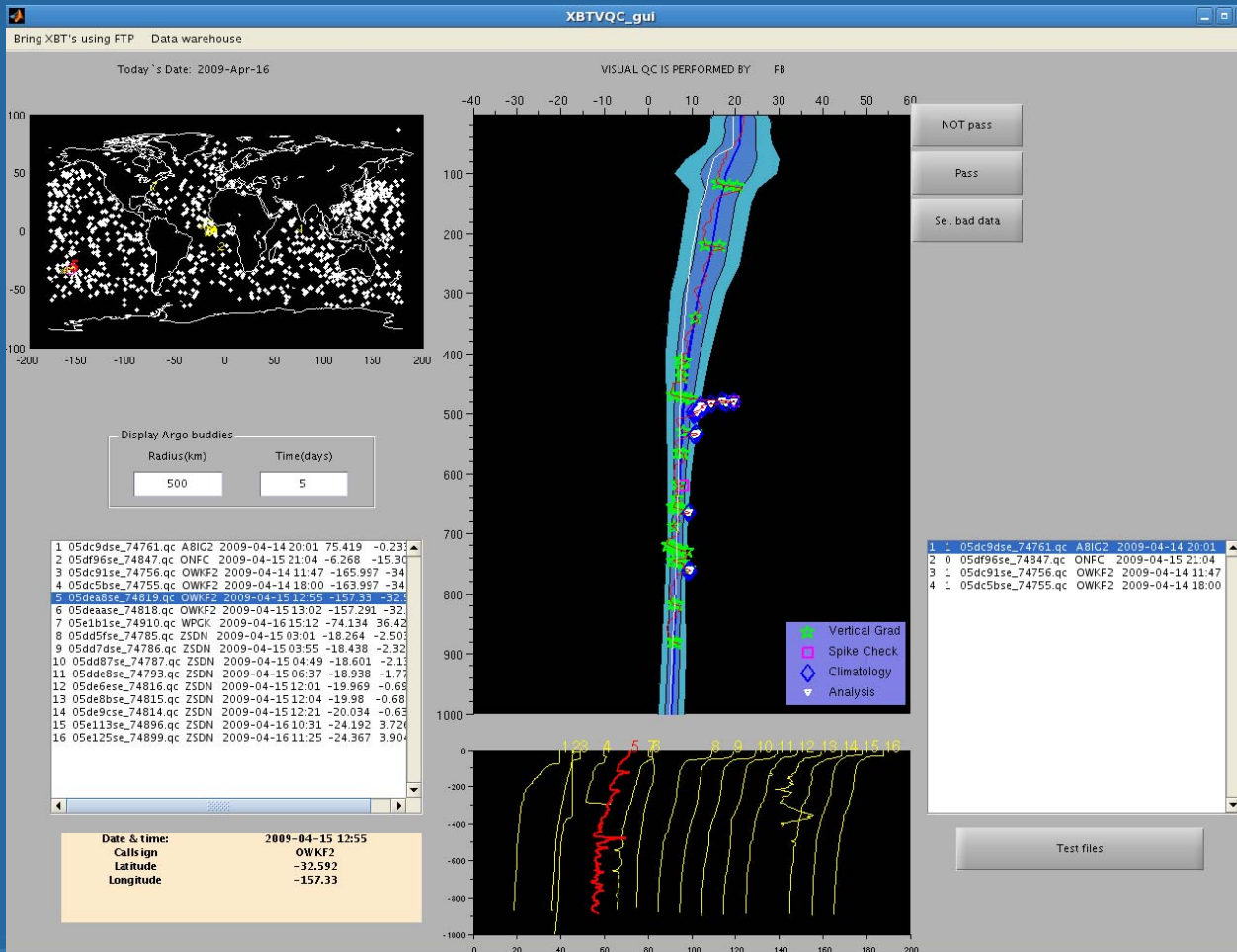
Test files



Visual Quality Control software

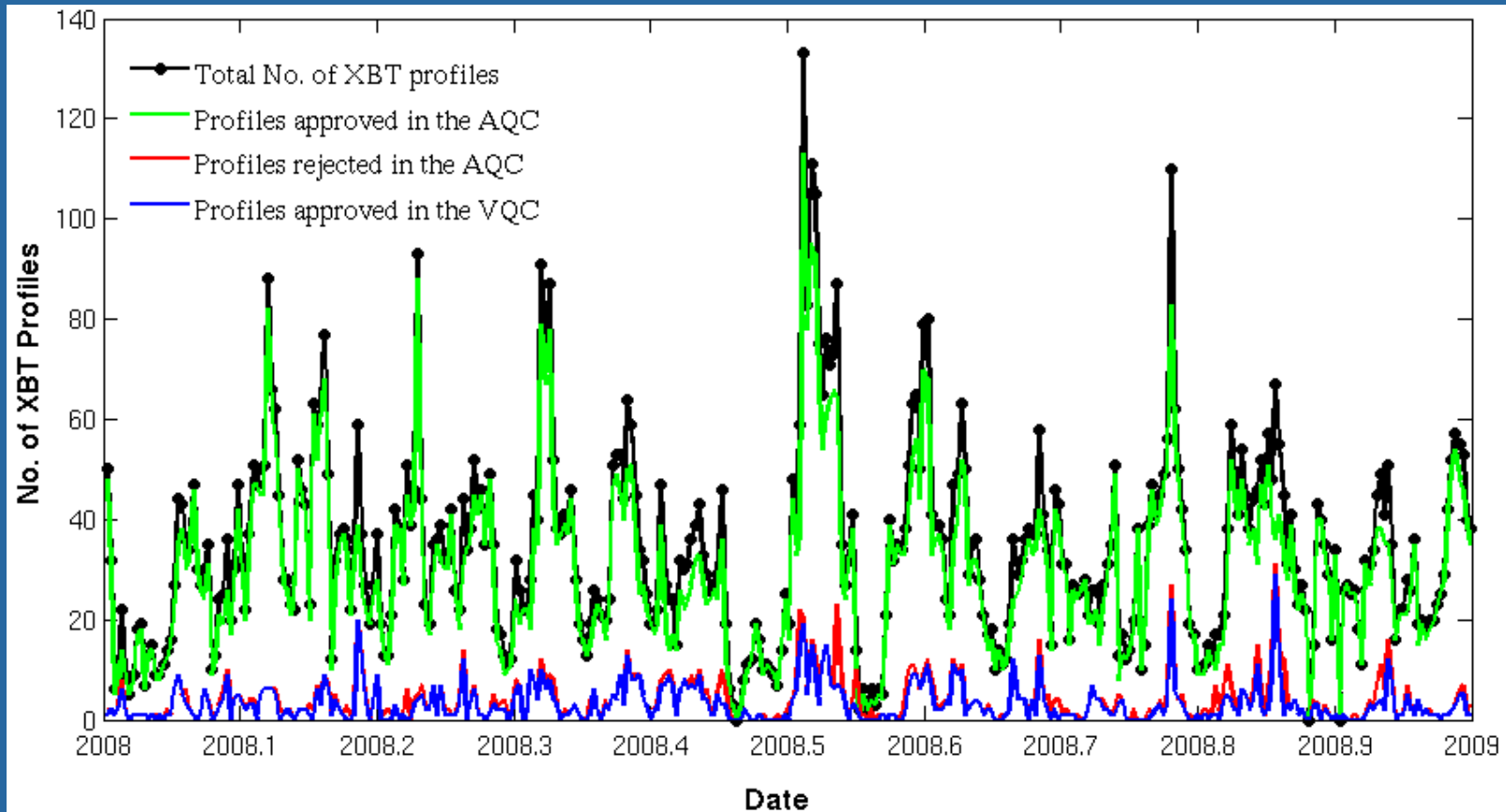
Check for:

- Spikes
- Gradients
- Buddies
- Location
- Climatology + Standard deviation





XBT Quality Control Statistics





XBT Quality Control Statistics

Statistics of XBT profiles during 2008

	max/day	mean	sum	percentage
Total No. of profiles	133	33.6	12258	
Profiles Approved in the AQC	113	29.6	10801	(88.1%)*
Profiles rejected in the AQC	31	4.0	1456	(11.9%)*
Profiles approved in the VQC	29	3.1	1136	(77.5%)**
Total No. of profiles to the GTS			11937	(97.4%)*

* relative to the total no. of profiles received

** relative to the no. of profiles rejected in the Auto QC



Future Plans

- Continue the collaboration and share expertise with other institutions.
- Modify this software to be used for the QC of XBT profiles for scientific purposes.
- Flag points in the profiles before submission to the GTS once BUFR transmissions are implemented.



Future Plans

