

**ICCAT GBYP SHORT-TERM CONTRACT FOR THE
BIOLOGICAL STUDIES OF THE ATLANTIC-WIDE
RESEARCH PROGRAMME FOR BLUEFIN TUNA
(ICCAT GBYP 06b/2015-1 – Phase 5)**



**Responsible:
Antonio Celona**

31/01/2016

ICCAT GBYP SHORT-TERM CONTRACT FOR THE BIOLOGICAL STUDIES OF THE ATLANTIC-WIDE RESEARCH PROGRAMME FOR BLUEFIN TUNA (ICCAT GBYP 06b/2015-1 – Phase 5)

The short-term contract provided by ICCAT GBYP (ICCAT GBYP 06b/2015-1) was signed on August 5, 2015. It included the collection of 300 specimens of bluefin tuna (*Thunnus thynnus*), for a total of 900 biological samples (otoliths, dorsal spine, muscle or fin), to be sampled as follows (always including weight and length):

SI: South of Sicily and Ionian Sea (Medium-Large): Italian PS and LL

- Medium: > 25 & <= 100 Kg : n° **100 fish** Large: >100 Kg: n° **50 fish**

TY: Tyrrhenian (Medium-Large): Italian PS and (small): Italian handline

- Medium: > 25 & <= 100 Kg : n° **50 fish** Large: >100 Kg: n° **50 fish**
- Age 0: <= 3 Kg: n° **25 fish** Juveniles > 3 & <= 25 Kg: n° **25 fish**

Sampling was carried out from catches provided by local Sicilian fleets (Catania, Marsala, Palermo and Messina), with vessels ranging from 6 to 25 m TL, which were fishing in the above mentioned areas. The fishery for age 0 fish was carried out directly by an inflatable vessel owned by Necton, which used hand lines for catching all necessary specimens.

The large specimens were sampled thanks to the kind cooperation of the Italian Capitaneria di Porto, on specimens confiscated at landings to some fishermen, because they were fished outside the quota or anyway illegally. The Capitaneria had informed us almost in real time, in order to carry out the sampling of the various specimens, but always without affecting their external shape; this prevented the collection of otoliths.

The details concerning the different types of samples that have been collected, depending on the opportunities we had in reality, are reported in the following table, with the number of fish used for sampling in the various strata.

	southern Tyrrhenian Sea				East Sicily and Ionian Sea		Total
	Size class 0	Size class J	Size class M	Size class L	Size class M	Size class L	
n° of fish	25	19	50	30	50	50	224
Otoliths	25	19	-	-	-	-	44
Spines	25	19	50	30	50	50	224
Gonads	25	-	43	-	38	-	106
Fin/muscle	25	19	50	30	50	50	224
Sex M	-	-	32	-	24	-	
Sex F	-	-	18	-	13	-	
Sex NA	25	19	-	30	13	50	

In total, **224** specimens were sampled, over a maximum total of 300 BFT of various sizes, collecting 492 samples, while gonads were collected even if they were not included in the contract.

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- **Class 0 (TY):** All necessary specimens (25) were duly collected. It was necessary to immediately freeze the small specimens, because it was impossible collecting the individual samples on board of the inflatable boat. At the beginning we tried to extract the samples directly on board but it was logistically impossible, both for the high external temperatures and the clear difficulty to extract otoliths in open sea on a small moving platform, so some specimens were destroyed without any benefit. All specimens were frozen entire, wrapped in aluminum, then inside a plastic bag along with the identification label (NECT-TY-0-1 to NECT-TY-0-25). Therefore, being the full fish available in the laboratory, all samples can be collected.
- **Juveniles (TY).** In total, only 19 specimens over 25 were collected, due to the fact that most of the specimens had a size lower than 3 kg, with an average of about 2.6 kg. Therefore, besides many small individuals were available at sea, only these 19 had the right size. In this case, instead of extracting the otoliths with many risks, we decided to ship the full head to the laboratory in AZTI. The rays from the dorsal fin were collected from all specimens and preserved in test tubes, for preventing any possible damage, then labeled with their ID code and frozen. Pectoral fins (often partly) were preserved in 96% ethanol in small bottles, all duly labeled. Gonads were impossible to sample in these individuals, because of the high temperatures and the small vessel.
- **Class M (TY):** all individuals (50) were duly collected, sampling 50 dorsal spines, preserved in aluminum, then in a plastic bag and duly labeled, 50 parts of pectoral fins. All preserved in 96% ethanol and duly labeled and packed. Furthermore, it was possible to sample 43 gonads, preserving them in 4% Formaldehyde (even if the sampling protocol was not including any specification for preserving them).
- **Class L (TY):** we sampled 30 individuals over the 50 planned by the contract in this area, because when the contract was signed, almost all fishing vessels had already reached their quota. Only thanks to the strict cooperation of the Italian Capitaneria di Porto it was possible to get some samples, coming from bluefin tunas confiscated to vessels which fished them without having any quota. Therefore, we collected 30 dorsal spines and 30 pectoral fins and, for both types of samples, they were labeled and preserved according to the protocol. No gonads were collected, because all fish were already gutted when they have been confiscated.
- **Class M (SI):** it was possible to sample only 50 over 100 fish, because when the contract was signed, almost all fishing vessels had already reached their quota. We collected 50 dorsal spines, all individually packed in aluminum and then in a plastic bag, including the individual ID code, and 50 parts of pectoral fins, all preserved in 96% Ethanol, duly packed and labeled as detailed by the protocol. Gonads were sampled from 38 individuals and then individually preserved, labeled and packed in bottles as described for the same size class in the Tyrrhenian Sea.
- **Class L (SI):** it was possible to sample all 50 specimens from this area, even if it was impossible to get them from the fisheries, because all BFT fisheries were not active when the contract was signed. Only thanks to the cooperation with the Italian Capitaneria di Porto it was possible to have access to bluefin tuna specimens confiscated to illegal fishing vessels, sampling 50 dorsal spines and 50 parts of pectoral fins, preserving and labeling them according to the protocol. Gonads were not sampled because all specimens were already gutted, while it was not possible to sample any otolith, because it was not allowed to make damages to the heads.

All specimens were duly included in RMA forms, all submitted to ICCAT and all duly registered (n. RMA015-021 to RMA15-055 and RMA 016-001 to RMA16-009).

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All samples were shipped by international courier (packed with dry ice) on 27/01/2016 to the laboratory indicated by ICCAT GBYP:

Dr. Haritz Arrizabalaga

Fundación AZTI – AZTI Fundazioa

Itsas Ikerketa Saila, Herrera Kaia Portualde z/g,

20110 Pasaia Gipuzkoa, Spain

All data concerning the various samples were duly registered on an Excel file, according to the format requested by ICCAT GBYP. The cross-checking between the data on RMA forms and the data on the Excel file was done in strict cooperation with ICCAT GBYP.

A copy of the Excel file is here attached.

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general ID	PARTNER CODE	AREA	Gr AREA	GrArea2	FISHING GEAR	INDIVIDUAL ID NUMBER	SIZE CLASS CODE	TISSUE otoliths	N° oto	TISSUE Spine	TISSUE gonads	TISSUE Muscle/ Fin	Harvest Date	Catch Date	Sampling date	YEAR	GBYP Phase	Latitude	Longitude	Mean Depth (m)	Lenght (cm)	Type of lenght	Weight (kg)	Type of weight	Notes for lenght and weight	Sex	Reproductive stage	Collector	Other notes
NECT-TY-0-1	NECT	TY		SouthTY	HL	1	0	0	2	S	G	F+M		23/08/2015	23/08/2015	2015	Phase5	38,65	14,87		23	FL	0,184	RW		NA		Antonio Celona	
NECT-TY-0-2	NECT	TY		SouthTY	HL	2	0	0	2	S	G	F+M		23/08/2015	23/08/2015	2015	Phase5	38,65	14,87		23	FL	0,182	RW		NA		Antonio Celona	
NECT-TY-0-3	NECT	TY		SouthTY	HL	3	0	0	2	S	G	F+M		23/08/2015	23/08/2015	2015	Phase5	38,65	14,87		22	FL	0,170	RW		NA		Antonio Celona	
NECT-TY-0-4	NECT	TY		SouthTY	HL	4	0	0	2	S	G	F+M		23/08/2015	23/08/2015	2015	Phase5	38,65	14,87		23	FL	0,205	RW		NA		Antonio Celona	
NECT-TY-0-5	NECT	TY		SouthTY	HL	5	0	0	2	S	G	F+M		23/08/2015	23/08/2015	2015	Phase5	38,65	14,87		22,5	FL	0,180	RW		NA		Antonio Celona	
NECT-TY-0-6	NECT	TY		SouthTY	HL	6	0	0	2	S	G	F+M		23/08/2015	23/08/2015	2015	Phase5	38,65	14,87		22	FL	0,160	RW		NA		Antonio Celona	
NECT-TY-0-7	NECT	TY		SouthTY	HL	7	0	0	2	S	G	F+M		23/08/2015	23/08/2015	2015	Phase5	38,65	14,87		25	FL	0,275	RW		NA		Antonio Celona	
NECT-TY-0-8	NECT	TY		SouthTY	HL	8	0	0	2	S	G	F+M		23/08/2015	23/08/2015	2015	Phase5	38,65	14,87		22	FL	0,167	RW		NA		Antonio Celona	
NECT-TY-0-9	NECT	TY		SouthTY	HL	9	0	0	2	S	G	F+M		23/08/2015	23/08/2015	2015	Phase5	38,65	14,87		23	FL	0,179	RW		NA		Antonio Celona	
NECT-TY-0-10	NECT	TY		SouthTY	HL	10	0	0	2	S	G	F+M		23/08/2015	23/08/2015	2015	Phase5	38,65	14,87		23	FL	0,175	RW		NA		Antonio Celona	
NECT-TY-0-11	NECT	TY		SouthTY	HL	11	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		21	FL	0,138	RW		NA		Antonio Celona	
NECT-TY-0-12	NECT	TY		SouthTY	HL	12	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		22	FL	0,168	RW		NA		Antonio Celona	
NECT-TY-0-13	NECT	TY		SouthTY	HL	13	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		22,5	FL	0,195	RW		NA		Antonio Celona	
NECT-TY-0-14	NECT	TY		SouthTY	HL	14	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		23	FL	0,177	RW		NA		Antonio Celona	
NECT-TY-0-15	NECT	TY		SouthTY	HL	15	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		21,5	FL	0,134	RW		NA		Antonio Celona	
NECT-TY-0-16	NECT	TY		SouthTY	HL	16	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		22	FL	0,150	RW		NA		Antonio Celona	
NECT-TY-0-17	NECT	TY		SouthTY	HL	17	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		23	FL	0,174	RW		NA		Antonio Celona	
NECT-TY-0-18	NECT	TY		SouthTY	HL	18	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		24	FL	0,187	RW		NA		Antonio Celona	
NECT-TY-0-19	NECT	TY		SouthTY	HL	19	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		23	FL	0,168	RW		NA		Antonio Celona	
NECT-TY-0-20	NECT	TY		SouthTY	HL	20	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		22	FL	0,165	RW		NA		Antonio Celona	
NECT-TY-0-21	NECT	TY		SouthTY	HL	21	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		25	FL	0,214	RW		NA		Antonio Celona	
NECT-TY-0-22	NECT	TY		SouthTY	HL	22	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		21	FL	0,147	RW		NA		Antonio Celona	
NECT-TY-0-23	NECT	TY		SouthTY	HL	23	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		23	FL	0,176	RW		NA		Antonio Celona	
NECT-TY-0-24	NECT	TY		SouthTY	HL	24	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		22	FL	0,158	RW		NA		Antonio Celona	
NECT-TY-0-25	NECT	TY		SouthTY	HL	25	0	0	2	S	G	F+M		24/08/2015	24/08/2015	2015	Phase5	38,67	14,90		22,5	FL	0,163	RW		NA		Antonio Celona	
NECT-TY-J-1	NECT	TY		SouthTY	HL	1	J	0	2	S	NA	F		18/12/2015	18/12/2015	2015	Phase5	38,71	14,88		53	FL	3,100	RW		NA		Antonio Celona	
NECT-TY-J-2	NECT	TY		SouthTY	HL	2	J	0	2	S	NA	F		18/12/2015	18/12/2015	2015	Phase5	38,71	14,88		53	FL	3,000	RW		NA		Antonio Celona	
NECT-TY-J-3	NECT	TY		SouthTY	HL	3	J	0	2	S	NA	F		18/12/2015	18/12/2015	2015	Phase5	38,71	14,88		52	FL	3,000	RW		NA		Antonio Celona	
NECT-TY-J-4	NECT	TY		SouthTY	HL	4	J	0	2	S	NA	F		18/12/2015	18/12/2015	2015	Phase5	38,71	14,88		58	FL	3,200	RW		NA		Antonio Celona	
NECT-TY-J-5	NECT	TY		SouthTY	HL	5	J	0	2	S	NA	F		18/12/2015	18/12/2015	2015	Phase5	38,71	14,88		54	FL	3,050	RW		NA		Antonio Celona	
NECT-TY-J-6	NECT	TY		SouthTY	HL	6	J	0	2	S	NA	F		18/12/2015	18/12/2015	2015	Phase5	38,71	14,88		54	FL	3,250	RW		NA		Antonio Celona	
NECT-TY-J-7	NECT	TY		SouthTY	HL	7	J	0	2	S	NA	F		18/12/2015	18/12/2015	2015	Phase5	38,71	14,88		56	FL	3,100	RW		NA		Antonio Celona	
NECT-TY-J-8	NECT	TY		SouthTY	HL	8	J	0	2	S	NA	F		18/12/2015	18/12/2015	2015	Phase5	38,71	14,88		56	FL	3,150	RW		NA		Antonio Celona	
NECT-TY-J-9	NECT	TY		SouthTY	HL	9	J	0	2	S	NA	F		18/12/2015	18/12/2015	2015	Phase5	38,71	14,88		54	FL	3,100	RW		NA		Antonio Celona	
NECT-TY-J-10	NECT	TY		SouthTY	HL	10	J	0	2	S	NA	F		18/12/2015	18/12/2015	2015	Phase5	38,71	14,88		57	FL	3,300	RW		NA		Antonio Celona	
NECT-TY-J-11	NECT	TY		SouthTY	HL	11	J	0	2	S	NA	F		18/12/2015	18/12/2015	2015	Phase5	38,71	14,88		57	FL	3,300	RW		NA		Antonio Celona	
NECT-TY-J-12	NECT	TY		SouthTY	HL	12	J	0	2	S	NA	F		18/12/2015	18/12/2015	2015	Phase5	38,71	14,88		58	FL	3,500	RW		NA		Antonio Celona	
NECT-TY-J-13	NECT	TY		SouthTY	HL	13	J	0	2	S	NA	F		18/12/2015	18/12/2015	2015	Phase5	38,71	14,88		57	FL	3,400	RW		NA		Antonio Celona	
NECT-TY-J-14	NECT	TY		SouthTY	HL	14	J	0	2	S	NA	F		22/01/2016	22/01/2016	2016	Phase5	38,40	15,67		51	FL	3,000	RW		NA		Antonio Celona	
NECT-TY-J-15	NECT	TY		SouthTY	HL	15	J	0	2	S	NA	F		22/01/2016	22/01/2016	2016	Phase5	38,40	15,67		56	FL	3,200	RW		NA		Antonio Celona	
NECT-TY-J-16	NECT	TY		SouthTY	HL	16	J	0	2	S	NA	F		22/01/2016	22/01/2016	2016	Phase5	38,40	15,67		53	FL	3,150	RW		NA		Antonio Celona	
NECT-TY-J-17	NECT	TY		SouthTY	HL	17	J	0	2	S	NA	F		22/01/2016	22/01/2016	2016	Phase5	38,40	15,67		57	FL	3,200	RW		NA		Antonio Celona	
NECT-TY-J-18	NECT	TY		SouthTY	HL	18	J	0	2	S	NA	F		22/01/2016	22/01/2016	2016	Phase5	38,40	15,67		56	FL	3,300	RW		NA		Antonio Celona	
NECT-TY-J-19	NECT	TY		SouthTY	HL	19	J	0	2	S	NA	F		22/01/2016	22/01/2016	2016	Phase5	38,40	15,67		52	FL	3,000	RW		NA		Antonio Celona	

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NECT-TY-M-1	NECT	TY	SouthTY	HL	1	M	NA	-	S	G	F		21/11/2015	21/11/2015	2015	Phase5	38,47	15,34		129	FL	30	GG	F	Antonio Celona
NECT-TY-M-2	NECT	TY	SouthTY	HL	2	M	NA	-	S	G	F		21/11/2015	21/11/2015	2015	Phase5	38,47	15,34		140	FL	37	GG	F	Antonio Celona
NECT-TY-M-3	NECT	TY	SouthTY	HL	3	M	NA	-	S	G	F		21/11/2015	21/11/2015	2015	Phase5	38,47	15,34		126	FL	27	GG	M	Antonio Celona
NECT-TY-M-4	NECT	TY	SouthTY	HL	4	M	NA	-	S	G	F		22/11/2015	22/11/2015	2015	Phase5	38,56	15,66		136	FL	35	GG	M	Antonio Celona
NECT-TY-M-5	NECT	TY	SouthTY	HL	5	M	NA	-	S	G	F		22/11/2015	22/11/2015	2015	Phase5	38,56	15,66		140	FL	44	GG	M	Antonio Celona
NECT-TY-M-6	NECT	TY	SouthTY	HL	6	M	NA	-	S	G	F		22/11/2015	22/11/2015	2015	Phase5	38,56	15,66		132	FL	32	GG	F	Antonio Celona
NECT-TY-M-7	NECT	TY	SouthTY	HL	7	M	NA	-	S	G	F		22/11/2015	22/11/2015	2015	Phase5	38,56	15,66		131	FL	34	GG	F	Antonio Celona
NECT-TY-M-8	NECT	TY	SouthTY	HL	8	M	NA	-	S	G	F		22/11/2015	22/11/2015	2015	Phase5	38,56	15,66		130	FL	31	GG	F	Antonio Celona
NECT-TY-M-9	NECT	TY	SouthTY	HL	9	M	NA	-	S	G	F		23/11/2015	23/11/2015	2015	Phase5	38,58	15,55		132	FL	33	GG	F	Antonio Celona
NECT-TY-M-10	NECT	TY	SouthTY	HL	10	M	NA	-	S	G	F		23/11/2015	23/11/2015	2015	Phase5	38,58	15,55		130	FL	33	GG	M	Antonio Celona
NECT-TY-M-11	NECT	TY	SouthTY	HL	11	M	NA	-	S	G	F		23/11/2015	23/11/2015	2015	Phase5	38,58	15,55		135	FL	44	GG	F	Antonio Celona
NECT-TY-M-12	NECT	TY	SouthTY	HL	12	M	NA	-	S	NA	F		23/11/2015	23/11/2015	2015	Phase5	38,58	15,55		126	FL	30	GG	M	Antonio Celona
NECT-TY-M-13	NECT	TY	SouthTY	HL	13	M	NA	-	S	G	F		24/11/2015	24/11/2015	2015	Phase5	38,38	15,39		126	FL	32	GG	M	Antonio Celona
NECT-TY-M-14	NECT	TY	SouthTY	HL	14	M	NA	-	S	G	F		24/11/2015	24/11/2015	2015	Phase5	38,38	15,39		133	FL	34	GG	M	Antonio Celona
NECT-TY-M-15	NECT	TY	SouthTY	HL	15	M	NA	-	S	G	F		30/11/2015	30/11/2015	2015	Phase5	38,31	15,72		125	FL	26	GG	F	Antonio Celona
NECT-TY-M-16	NECT	TY	SouthTY	HL	16	M	NA	-	S	G	F		01/12/2015	01/12/2015	2015	Phase5	38,57	15,39		123	FL	27	GG	M	Antonio Celona
NECT-TY-M-17	NECT	TY	SouthTY	HL	17	M	NA	-	S	G	F		01/12/2015	01/12/2015	2015	Phase5	38,57	15,39		128	FL	28	GG	F	Antonio Celona
NECT-TY-M-18	NECT	TY	SouthTY	HL	18	M	NA	-	S	G	F		01/12/2015	01/12/2015	2015	Phase5	38,57	15,39		134	FL	42	GG	M	Antonio Celona
NECT-TY-M-19	NECT	TY	SouthTY	HL	19	M	NA	-	S	G	F		02/12/2015	02/12/2015	2015	Phase5	38,55	15,45		141	FL	41	GG	M	Antonio Celona
NECT-TY-M-20	NECT	TY	SouthTY	HL	20	M	NA	-	S	G	F		02/12/2015	02/12/2015	2015	Phase5	38,55	15,45		140	FL	40	GG	M	Antonio Celona
NECT-TY-M-21	NECT	TY	SouthTY	HL	21	M	NA	-	S	G	F		02/12/2015	02/12/2015	2015	Phase5	38,55	15,45		143	FL	44	GG	F	Antonio Celona
NECT-TY-M-22	NECT	TY	SouthTY	HL	22	M	NA	-	S	G	F		02/12/2015	02/12/2015	2015	Phase5	38,55	15,45		124	FL	26	GG	F	Antonio Celona
NECT-TY-M-23	NECT	TY	SouthTY	HL	23	M	NA	-	S	NA	F		03/12/2015	03/12/2015	2015	Phase5	38,45	15,61		136	FL	40	GG	M	Antonio Celona
NECT-TY-M-24	NECT	TY	SouthTY	HL	24	M	NA	-	S	G	F		03/12/2015	03/12/2015	2015	Phase5	38,45	15,61		134	FL	39	GG	M	Antonio Celona
NECT-TY-M-25	NECT	TY	SouthTY	HL	25	M	NA	-	S	G	F		03/12/2015	03/12/2015	2015	Phase5	38,45	15,61		178	FL	84	GG	F	Antonio Celona
NECT-TY-M-26	NECT	TY	SouthTY	HL	26	M	NA	-	S	G	F		03/12/2015	03/12/2015	2015	Phase5	38,45	15,61		136	FL	35	GG	F	Antonio Celona
NECT-TY-M-27	NECT	TY	SouthTY	HL	27	M	NA	-	S	G	F		04/12/2015	04/12/2015	2015	Phase5	38,55	15,45		127	FL	29	GG	F	Antonio Celona
NECT-TY-M-28	NECT	TY	SouthTY	HL	28	M	NA	-	S	G	F		04/12/2015	04/12/2015	2015	Phase5	38,55	15,45		124	FL	27	GG	M	Antonio Celona
NECT-TY-M-29	NECT	TY	SouthTY	HL	29	M	NA	-	S	G	F		04/12/2015	04/12/2015	2015	Phase5	38,55	15,45		123	FL	25	GG	F	Antonio Celona
NECT-TY-M-30	NECT	TY	SouthTY	HL	30	M	NA	-	S	NA	F		04/12/2015	04/12/2015	2015	Phase5	38,55	15,45		124	FL	26	GG	F	Antonio Celona
NECT-TY-M-31	NECT	TY	SouthTY	HL	31	M	NA	-	S	G	F		04/12/2015	04/12/2015	2015	Phase5	38,55	15,45		124	FL	29	GG	M	Antonio Celona
NECT-TY-M-32	NECT	TY	SouthTY	HL	32	M	NA	-	S	G	F		04/12/2015	04/12/2015	2015	Phase5	38,55	15,45		149	FL	41	GG	M	Antonio Celona
NECT-TY-M-33	NECT	TY	SouthTY	HL	33	M	NA	-	S	NA	F		05/12/2015	05/12/2015	2015	Phase5	38,46	15,36		119	FL	26	GG	M	Antonio Celona
NECT-TY-M-34	NECT	TY	SouthTY	HL	34	M	NA	-	S	G	F		05/12/2015	05/12/2015	2015	Phase5	38,46	15,36		133	FL	33	GG	M	Antonio Celona
NECT-TY-M-35	NECT	TY	SouthTY	HL	35	M	NA	-	S	G	F		06/12/2015	06/12/2015	2015	Phase5	38,49	15,44		131	FL	31	GG	M	Antonio Celona
NECT-TY-M-36	NECT	TY	SouthTY	HL	36	M	NA	-	S	G	F		06/12/2015	06/12/2015	2015	Phase5	38,49	15,44		128	FL	29	GG	M	Antonio Celona
NECT-TY-M-37	NECT	TY	SouthTY	HL	37	M	NA	-	S	NA	F		10/12/2015	10/12/2015	2015	Phase5	38,57	15,39		144	FL	47	GG	F	Antonio Celona
NECT-TY-M-38	NECT	TY	SouthTY	HL	38	M	NA	-	S	G	F		10/12/2015	10/12/2015	2015	Phase5	38,57	15,39		148	FL	52	GG	M	Antonio Celona
NECT-TY-M-39	NECT	TY	SouthTY	HL	39	M	NA	-	S	G	F		11/12/2015	11/12/2015	2015	Phase5	38,49	15,49		118	FL	25	GG	F	Antonio Celona
NECT-TY-M-40	NECT	TY	SouthTY	HL	40	M	NA	-	S	G	F		14/12/2015	14/12/2015	2015	Phase5	38,50	15,62		133	FL	35	GG	M	Antonio Celona
NECT-TY-M-41	NECT	TY	SouthTY	HL	41	M	NA	-	S	G	F		14/12/2015	14/12/2015	2015	Phase5	38,50	15,62		126	FL	27	GG	M	Antonio Celona
NECT-TY-M-42	NECT	TY	SouthTY	HL	42	M	NA	-	S	G	F		14/12/2015	14/12/2015	2015	Phase5	38,50	15,62		115	FL	26	GG	M	Antonio Celona
NECT-TY-M-43	NECT	TY	SouthTY	HL	43	M	NA	-	S	G	F		15/12/2015	15/12/2015	2015	Phase5	38,60	15,52		155	FL	68	GG	M	Antonio Celona
NECT-TY-M-44	NECT	TY	SouthTY	HL	44	M	NA	-	S	G	F		17/12/2015	17/12/2015	2015	Phase5	38,43	15,27		133	FL	31	GG	M	Antonio Celona

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NECT-TY-M-45	NECT	TY	SouthTY	HL	45	M	NA	-	S	G	F		18/12/2015	18/12/2015	2015	Phase5	38,44	15,37		151	FL	50	GG		M	Antonio Celona	
NECT-TY-M-46	NECT	TY	SouthTY	HL	46	M	NA	-	S	NA	F		18/12/2015	18/12/2015	2015	Phase5	38,44	15,37		126	FL	28	GG		M	Antonio Celona	
NECT-TY-M-47	NECT	TY	SouthTY	HL	47	M	NA	-	S	G	F		19/12/2015	19/12/2015	2015	Phase5	38,54	15,68		146	FL	36	GG		M	Antonio Celona	
NECT-TY-M-48	NECT	TY	SouthTY	HL	48	M	NA	-	S	G	F		19/12/2015	19/12/2015	2015	Phase5	38,54	15,68		145	FL	37	GG		M	Antonio Celona	
NECT-TY-M-49	NECT	TY	SouthTY	HL	49	M	NA	-	S	NA	F		19/12/2015	19/12/2015	2015	Phase5	38,54	15,68		125	FL	27	GG		M	Antonio Celona	
NECT-TY-M-50	NECT	TY	SouthTY	HL	50	M	NA	-	S	G	F		20/12/2015	20/12/2015	2015	Phase5	38,43	15,66		137	FL	34	GG		M	Antonio Celona	
NECT-TY-L-1	NECT	TY	SouthTY	PS	1	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	230	FL	176	GG		NA	Antonio Celona	
NECT-TY-L-2	NECT	TY	SouthTY	PS	2	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	205	FL	131	GG		NA	Antonio Celona	
NECT-TY-L-3	NECT	TY	SouthTY	PS	3	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	210	FL	127	GG		NA	Antonio Celona	
NECT-TY-L-4	NECT	TY	SouthTY	PS	4	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	230	FL	160	GG		NA	Antonio Celona	
NECT-TY-L-5	NECT	TY	SouthTY	PS	5	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	246	FL	224	GG		NA	Antonio Celona	
NECT-TY-L-6	NECT	TY	SouthTY	PS	6	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	241	FL	194	GG		NA	Antonio Celona	
NECT-TY-L-7	NECT	TY	SouthTY	PS	7	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	209	FL	130	GG		NA	Antonio Celona	
NECT-TY-L-8	NECT	TY	SouthTY	PS	8	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	225	FL	210	GG		NA	Antonio Celona	
NECT-TY-L-9	NECT	TY	SouthTY	PS	9	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	207	FL	128	GG		NA	Antonio Celona	
NECT-TY-L-10	NECT	TY	SouthTY	PS	10	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	220	FL	175	GG		NA	Antonio Celona	
NECT-TY-L-11	NECT	TY	SouthTY	PS	11	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	216	FL	133	GG		NA	Antonio Celona	
NECT-TY-L-12	NECT	TY	SouthTY	PS	12	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	219	FL	157	GG		NA	Antonio Celona	
NECT-TY-L-13	NECT	TY	SouthTY	PS	13	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	229	FL	166	GG		NA	Antonio Celona	
NECT-TY-L-14	NECT	TY	SouthTY	PS	14	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	208	FL	123	GG		NA	Antonio Celona	
NECT-TY-L-15	NECT	TY	SouthTY	PS	15	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	224	FL	164	GG		NA	Antonio Celona	
NECT-TY-L-16	NECT	TY	SouthTY	PS	16	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	204	FL	122	GG		NA	Antonio Celona	
NECT-TY-L-17	NECT	TY	SouthTY	PS	17	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	216	FL	151	GG		NA	Antonio Celona	
NECT-TY-L-18	NECT	TY	SouthTY	PS	18	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	211	FL	148	GG		NA	Antonio Celona	
NECT-TY-L-19	NECT	TY	SouthTY	PS	19	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	209	FL	125	GG		NA	Antonio Celona	
NECT-TY-L-20	NECT	TY	SouthTY	PS	20	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	214	FL	132	GG		NA	Antonio Celona	
NECT-TY-L-21	NECT	TY	SouthTY	PS	21	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	223	FL	171	GG		NA	Antonio Celona	
NECT-TY-L-22	NECT	TY	SouthTY	PS	22	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	264	FL	265	GG		NA	Antonio Celona	
NECT-TY-L-23	NECT	TY	SouthTY	PS	23	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	238	FL	215	GG		NA	Antonio Celona	
NECT-TY-L-24	NECT	TY	SouthTY	PS	24	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	216	FL	200	GG		NA	Antonio Celona	
NECT-TY-L-25	NECT	TY	SouthTY	PS	25	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	219	FL	181	GG		NA	Antonio Celona	
NECT-TY-L-26	NECT	TY	SouthTY	PS	26	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	201	FL	121	GG		NA	Antonio Celona	
NECT-TY-L-27	NECT	TY	SouthTY	PS	27	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	205	FL	122	GG		NA	Antonio Celona	
NECT-TY-L-28	NECT	TY	SouthTY	PS	28	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	207	FL	130	GG		NA	Antonio Celona	
NECT-TY-L-29	NECT	TY	SouthTY	PS	29	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	202	FL	113	GG		NA	Antonio Celona	
NECT-TY-L-30	NECT	TY	SouthTY	PS	30	L	NA	-	S	NA	F		27/06/2015	27/06/2015	2015	Phase5	38,74	14,21	Surface	240	FL	192	GG		NA	Antonio Celona	
NECT-SI-M-1	NECT	SI	SIE	LL	1	M	NA	-	S	G	F		20/12/2015	20/12/2015	2015	Phase5	37,92	15,48		141	FL	36	GG		M	Antonio Celona	
NECT-SI-M-2	NECT	SI	SIE	LL	2	M	NA	-	S	G	F		20/12/2015	20/12/2015	2015	Phase5	37,92	15,48		132	FL	31	GG		M	Antonio Celona	
NECT-SI-M-3	NECT	SI	SIE	LL	3	M	NA	-	S	NA	F		21/12/2015	21/12/2015	2015	Phase5	37,89	15,60		128	FL	26	GG		M	Antonio Celona	
NECT-SI-M-4	NECT	SI	SIE	LL	4	M	NA	-	S	NA	F		21/12/2015	21/12/2015	2015	Phase5	37,89	15,60		136	FL	33	GG		NA	Antonio Celona	
NECT-SI-M-5	NECT	SI	SIE	LL	5	M	NA	-	S	NA	F		21/12/2015	21/12/2015	2015	Phase5	37,89	15,60		132	FL	30	GG		M	Antonio Celona	
NECT-SI-M-6	NECT	SI	SIE	LL	6	M	NA	-	S	G	F		21/12/2015	21/12/2015	2015	Phase5	37,89	15,60		139	FL	34	GG		M	Antonio Celona	
NECT-SI-M-7	NECT	SI	SIE	LL	7	M	NA	-	S	G	F		27/12/2015	27/12/2015	2015	Phase5	37,96	15,50		134	FL	33	GG		M	Antonio Celona	
NECT-SI-M-8	NECT	SI	SIE	LL	8	M	NA	-	S	G	F		27/12/2015	27/12/2015	2015	Phase5	37,96	15,50		125	FL	26	GG		M	Antonio Celona	

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NECT-SI-M-9	NECT	SI		SIE	LL	9	M	NA	-	S	G	F		28/12/2015	28/12/2015	2015	Phase5	37,90	15,52		142	FL	37	GG		M		Antonio Celona	
NECT-SI-M-10	NECT	SI		SIE	LL	10	M	NA	-	S	G	F		28/12/2015	28/12/2015	2015	Phase5	37,90	15,52		125	FL	27	GG		M		Antonio Celona	
NECT-SI-M-11	NECT	SI		SIE	LL	11	M	NA	-	S	G	F		28/12/2015	28/12/2015	2015	Phase5	37,90	15,52		124	FL	28	GG		M		Antonio Celona	
NECT-SI-M-12	NECT	SI		SIE	LL	12	M	NA	-	S	NA	F		28/12/2015	28/12/2015	2015	Phase5	37,90	15,52		119	FL	26	GG		M		Antonio Celona	
NECT-SI-M-13	NECT	SI		SIE	LL	13	M	NA	-	S	G	F		28/12/2015	28/12/2015	2015	Phase5	37,90	15,52		130	FL	30	GG		F		Antonio Celona	
NECT-SI-M-14	NECT	SI		SIE	LL	14	M	NA	-	S	G	F		28/12/2015	28/12/2015	2015	Phase5	37,90	15,52		134	FL	36	GG		F		Antonio Celona	
NECT-SI-M-15	NECT	SI		SIE	LL	15	M	NA	-	S	G	F		28/12/2015	28/12/2015	2015	Phase5	37,90	15,52		138	FL	39	GG		F		Antonio Celona	
NECT-SI-M-16	NECT	SI		SIE	LL	16	M	NA	-	S	G	F		29/12/2015	29/12/2015	2015	Phase5	37,89	15,73		132	FL	34	GG		M		Antonio Celona	
NECT-SI-M-17	NECT	SI		SIE	LL	17	M	NA	-	S	G	F		29/12/2015	29/12/2015	2015	Phase5	37,89	15,73		152	FL	61	GG		NA		Antonio Celona	
NECT-SI-M-18	NECT	SI		SIE	LL	18	M	NA	-	S	G	F		29/12/2015	29/12/2015	2015	Phase5	37,89	15,73		125	FL	27	GG		NA		Antonio Celona	
NECT-SI-M-19	NECT	SI		SIE	LL	19	M	NA	-	S	G	F		29/12/2015	29/12/2015	2015	Phase5	37,89	15,73		122	FL	23	GG		NA		Antonio Celona	
NECT-SI-M-20	NECT	SI		SIE	LL	20	M	NA	-	S	G	F		29/12/2015	29/12/2015	2015	Phase5	37,89	15,73		128	FL	27	GG		NA		Antonio Celona	
NECT-SI-M-21	NECT	SI		SIE	LL	21	M	NA	-	S	G	F		29/12/2015	29/12/2015	2015	Phase5	37,89	15,73		124	FL	25	GG		NA		Antonio Celona	
NECT-SI-M-22	NECT	SI		SIE	HL	22	M	NA	-	S	G	F		30/12/2015	30/12/2015	2015	Phase5	37,15	16,57		139	FL	37	GG		M		Antonio Celona	
NECT-SI-M-23	NECT	SI		SIE	HL	23	M	NA	-	S	G	F		30/12/2015	30/12/2015	2015	Phase5	37,15	16,57		126	FL	25	GG		F		Antonio Celona	
NECT-SI-M-24	NECT	SI		SIE	HL	24	M	NA	-	S	G	F		30/12/2015	30/12/2015	2015	Phase5	37,15	16,57		123	FL	26	GG		M		Antonio Celona	
NECT-SI-M-25	NECT	SI		SIE	HL	25	M	NA	-	S	G	F		31/12/2015	31/12/2015	2015	Phase5	37,12	16,57		125	FL	32	GG		M		Antonio Celona	
NECT-SI-M-26	NECT	SI		SIE	HL	26	M	NA	-	S	NA	F		31/12/2015	31/12/2015	2015	Phase5	37,12	16,57		125	FL	27	GG		NA		Antonio Celona	
NECT-SI-M-27	NECT	SI		SIE	HL	27	M	NA	-	S	NA	F		31/12/2015	31/12/2015	2015	Phase5	37,12	16,57		133	FL	29	GG		NA		Antonio Celona	
NECT-SI-M-28	NECT	SI		SIE	HL	28	M	NA	-	S	G	F		31/12/2015	31/12/2015	2015	Phase5	37,12	16,57		123	FL	25	GG		F		Antonio Celona	
NECT-SI-M-29	NECT	SI		SIE	HL	29	M	NA	-	S	G	F		31/12/2015	31/12/2015	2015	Phase5	37,12	16,57		131	FL	33	GG		F		Antonio Celona	
NECT-SI-M-30	NECT	SI		SIE	HL	30	M	NA	-	S	NA	F		31/12/2015	31/12/2015	2015	Phase5	37,12	16,57		127	FL	25	GG		M		Antonio Celona	
NECT-SI-M-31	NECT	SI		SIE	HL	31	M	NA	-	S	G	F		01/01/2016	01/01/2016	2016	Phase5	36,93	16,51		131	FL	32	GG		F		Antonio Celona	
NECT-SI-M-32	NECT	SI		SIE	HL	32	M	NA	-	S	G	F		01/01/2016	01/01/2016	2016	Phase5	36,93	16,51		127	FL	28	GG		M		Antonio Celona	
NECT-SI-M-33	NECT	SI		SIE	HL	33	M	NA	-	S	G	F		03/01/2016	03/01/2016	2016	Phase5	36,95	16,54		121	FL	25	GG		M		Antonio Celona	
NECT-SI-M-34	NECT	SI		SIE	HL	34	M	NA	-	S	G	F		04/01/2016	04/01/2016	2016	Phase5	37,94	15,46		121	FL	29	GG		F		Antonio Celona	
NECT-SI-M-35	NECT	SI		SIE	HL	35	M	NA	-	S	G	F		04/01/2016	04/01/2016	2016	Phase5	37,94	15,46		123	FL	25	GG		M		Antonio Celona	
NECT-SI-M-36	NECT	SI		SIE	HL	36	M	NA	-	S	NA	F		05/01/2016	05/01/2016	2016	Phase5	37,98	15,50		125	FL	28	GG		NA		Antonio Celona	
NECT-SI-M-37	NECT	SI		SIE	HL	37	M	NA	-	S	NA	F		05/01/2016	05/01/2016	2016	Phase5	37,98	15,50		133	FL	31	GG		NA		Antonio Celona	
NECT-SI-M-38	NECT	SI		SIE	HL	38	M	NA	-	S	NA	F		05/01/2016	05/01/2016	2016	Phase5	37,98	15,50		124	FL	25	GG		NA		Antonio Celona	
NECT-SI-M-39	NECT	SI		SIE	HL	39	M	NA	-	S	G	F		05/01/2016	05/01/2016	2016	Phase5	37,98	15,50		139	FL	38	GG		F		Antonio Celona	
NECT-SI-M-40	NECT	SI		SIE	HL	40	M	NA	-	S	G	F		05/01/2016	05/01/2016	2016	Phase5	37,98	15,50		122	FL	26	GG		F		Antonio Celona	
NECT-SI-M-41	NECT	SI		SIE	HL	41	M	NA	-	S	G	F		05/01/2016	05/01/2016	2016	Phase5	37,98	15,50		123	FL	25	GG		M		Antonio Celona	
NECT-SI-M-42	NECT	SI		SIE	HL	42	M	NA	-	S	G	F		06/01/2016	06/01/2016	2016	Phase5	36,13	16,55		119	FL	25	GG		M		Antonio Celona	
NECT-SI-M-43	NECT	SI		SIE	HL	43	M	NA	-	S	G	F		06/01/2016	06/01/2016	2016	Phase5	36,13	16,55		114	FL	25	GG		M		Antonio Celona	
NECT-SI-M-44	NECT	SI		SIE	HL	44	M	NA	-	S	G	F		06/01/2016	06/01/2016	2016	Phase5	36,13	16,55		143	FL	41	GG		F		Antonio Celona	
NECT-SI-M-45	NECT	SI		SIE	HL	45	M	NA	-	S	G	F		09/01/2016	09/01/2016	2016	Phase5	36,14	16,57		125	FL	27	GG		F		Antonio Celona	
NECT-SI-M-46	NECT	SI		SIE	HL	46	M	NA	-	S	G	F		09/01/2016	09/01/2016	2016	Phase5	36,14	16,57		118	FL	25	GG		M		Antonio Celona	
NECT-SI-M-47	NECT	SI		SIE	HL	47	M	NA	-	S	G	F		09/01/2016	09/01/2016	2016	Phase5	36,14	16,57		123	FL	26	GG		F		Antonio Celona	
NECT-SI-M-48	NECT	SI		SIE	HL	48	M	NA	-	S	NA	F		23/01/2016	23/01/2016	2016	Phase5	37,20	16,59		126	FL	24	GG		NA		Antonio Celona	
NECT-SI-M-49	NECT	SI		SIE	HL	49	M	NA	-	S	G	F		24/01/2016	24/01/2016	2016	Phase5	38,17	15,60		128	FL	27	GG		M		Antonio Celona	
NECT-SI-M-50	NECT	SI		SIE	HL	50	M	NA	-	S	NA	F		24/01/2016	24/01/2016	2016	Phase5	38,17	15,60		125	FL	25	GG		NA		Antonio Celona	
NECT-SI-L-1	NECT	SI		SIE	PS	1	L	NA	-	S	NA	F		21/06/2015	21/06/2015	2015	Phase5	36,44	16,64	Surface	227	FL	208	GG		NA		Antonio Celona	
NECT-SI-L-2	NECT	SI		SIE	PS	2	L	NA	-	S	NA	F		21/06/2015	21/06/2015	2015	Phase5	36,44	16,64	Surface	228	FL	202	GG		NA		Antonio Celona	
NECT-SI-L-3	NECT	SI		SIE	PS	3	L	NA	-	S	NA	F		21/06/2015	21/06/2015	2015	Phase5	36,44	16,64	Surface	231	FL	229	GG		NA		Antonio Celona	

