

April 6, 2018

Pops and hisses and heavy, mechanical whirring from the cranes punctuate the focused conversation of astronauts and technicians. Everything is filled with acronyms and jargons. The smell of chlorine permeates the air. Everyone seems happy to be here, even so early in the morning. A woman does laps in the pool, swimming above the giant mock ISS. The blue water ripples with her passage.

As the room fills with people in NBL black polo shirts, they keep finding the dark chocolate caramel bon-bons. The words stand out amid the technical conversations. Monitors and paperwork. Conversation and coffee. Cables snarl in ungainly swirls around the outside of the mock ISS. The big cylinders are punctured with even round holes to allow water to flow through.

Mesh body suit with tubing. Shoulder pads and knee pads are tied on.

“Handrail 1175 and it’s going to be sandwiched between two WIFs”

Stanchion,

“We’re sitting on top of the JEF here so that’s a no starter.”(JEM Exposed Facility?)

“Stay totally nadir on the JPM.”

“I did a completely nadir translation”

“Maintain a keep-out zone”

“I’ve got good [evm], no red-band, no FOD.”

Note: the astronaut can talk to the divers, but they can’t talk back to him.

“The answer is definitely APFR. I can pitch back. I can grab the door. Close it. I can maneuver my body and not have to pitch or roll the handrail.”

“The settings are 11 poppa poppa julia 3”

As they fly him over to a different part of the NBL someone is managing the umbilical and hauling it with big, full arm tugs to get under the station.

“May I have the loop to do a com check for EV2?”

“Keep that on your BRT for the entire R&R.”

“If you’re heads down we’ll do a check at 5 and pull you at 10.”

“I would need a little GCA to get to that.”

“With that config, you have a Go to open the cover and egress.”

“Tether to the forward, starboard stanchion of the airlock rail.”

“EV1s anchor tether hook is on forward starboard stantion. Slider locked, black on black.”

“Bag is still rhettet to the airlock.”

When they come out of the airlock, they talk to each other to confirm that everything is where it should be. Each astronaut describes the config of the other.

“Are you ready for us to translate?”

“For optimal translation here, should I be going nadir under the lab?”

Numbers are said out completely.

“Is that more nadir or more zenith.”

“Installed with a good pull test.”

J106alpha <—Why is the alpha said rather than A?

T-handle tool.

“Mated” not “plugged in.”

“I’m passing 6 o’clock on the face of the lab here.”

“Dzus fastener” sounds like Zeus

“You can demate Papa14 from Juliet 14”

“Follow the gap-spanner nadir forward below the Columbus.”

“So just temp-stow the remaining stuff.”

When EV1 ran out of wire ties, a support diver brought him more. I assume this means that they’ll send more out with the EVA team?

The sound of breath gives a solid indication of how difficult something is for an astronaut. I think, but I’m not sure, that it relates to if they are upside down in the NBL.

“Past the grapple fixture, down the gap-spanner, to handle 0362” “Over the river and through the woods.”

“You can use the cams on the grapple feature, just not the pins.”

Support diver literally supports some things in order to counter gravity. “1G effect”
“NBLisms”

With the arm coming off the MWS, sometimes have to reach up and around in slightly awkward way to reach the rest of the MWS.

Contingency plans for every piece of equipment that goes outside. Long-duration tie-down tether

“This is EV1. Can you take my cooling down 20.”

“Starting motion body right. I’ll start slow and stop on your mark.”

Knock on glass of helmet to try to rouse the astronaut. “Simulated medical emergency. Quarantine all the dive gear for a possible bad gas situation. Float divers, I need facial shots. I need facial shots.” “Top side, verify area around donning stand is clear.”

They haul them to the donning stand, and latch them into place. Squeezing of astronaut's hand. (Was that a signal or was she checking something? Or just a thing that looked intentional but wasn't?) It took less than five minutes to get them out of the water.

“No anomalies to report.” Astronaut as being hauled out of water.

It looks like there are two layers of gloves under the suit gloves. I notice the support divers remain by the side of the pool while you're getting out. Conversations by poolside. Hugging partner upon finishing. Lots of shaking of hands.

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Debrief

Gigormous shoulder ice packs. Snoopy hat imprints on the skin around the ears. Cooling line imprints on the forearms. Eating during debrief.

Start with divers/suits

“It was great?” “Nominal.” (see NBL run summary scoring criteria)

Large group first, and then narrows down to astronauts. GroundIV, GC, and EVA lead director.

Cables suck. They are really hard to deal with in space. Flight cables tend to have more memory. They tend to splay out more. Microgravity. On orbit use my BRT to stabilize myself a lot. I didn't here. Used the BRT almost like a spool.

“The tethers were well deconflicted all day.”

“You set yourself up for success or failure. So if you do a good job of managing it, you’re set. Otherwise, you’re hurting yourself.”

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Part of training is to see all the number of things you might have to do if there’s an emergency. All up to the program managers about what kind of risk that you want to accept. “deman station”

In shuttle era, the crews would practise every spacewalk seven to ten times. Very task oriented training. The shuttle was going up with the tools and everything that they were going to do. But on the ISS you get up there and your equipment may not get there so if you train for something specific you may not ever do it. Long duration training switched from task based to skill based.

[Good conflict point about the change in philosophy in the culture]

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