Initial Alignment Checklist

No need to wait between steps, unless stated

JCD, 15 Sept 2015

Setup

- ☐ **ISC_LOCK** to **DOWN**
- ☐ **ALS_YARM** to "Auto" mode
- ☐ **ALS_XARM** to "Auto" mode
- ☐ **ALIGN_IFO** to "Auto" mode
- ☐ Open 4 StripTools:
  - ➥ XARM_GREEN_WFS.stp
  - ➥ YARM_GREEN_WFS.stp
  - ➥ PITCH_ASC_CONTROL_SIGNALS.stp
  - ➥ YAW_ASC_CONTROL_SIGNALS.stp

Align arms to green

- ☐ **ALIGN_IFO** to **SET_SUS_FOR_ALS**
- ☐ **ALS_XARM** to **LOCKED_W_SLOW_FEEDBACK**
  - ➥ Adjust ETMX to achieve TEM00 mode
- ☐ **ALS_YARM** to **LOCKED_W_SLOW_FEEDBACK**
  - ➥ Adjust ETMY to achieve TEM00 mode
- ☐ Wait for ASC convergence (signals moving around zero, magnitude roughly constant)
  - ➥ Watch XARM_GREEN_WFS.stp & YARM_GREEN_WFS.stp
- ☐ **ALS_XARM** to **GREEN_WFS_OFFLOADED**
- ☐ **ALS_YARM** to **GREEN_WFS_OFFLOADED**
- ☐ Check COMM beatnote larger than 4 dBm (+\- 0.5ish is fine)
  - ➥ If not, align PR3 until it is

Align input laser pointing to Xarm

- ☐ **ALIGN_IFO** to **INPUT_ALIGN**
- ☐ **ALS_XARM** to **UNLOCKED**
- ☐ **ALS_YARM** to **UNLOCKED**
- ☐ Wait for ASC convergence (signals moving around zero, magnitude roughly constant)
  - ➥ Watch PITCH_ASC_CONTROL_SIGNALS.stp & YAW_ASC_CONTROL_SIGNALS.stp
- ☐ **ALIGN_IFO** to **INPUT_ALIGN_OFFLOADED**

Align PRM

- ☐ **ALIGN_IFO** to **PRM_ALIGN**
- ☐ Wait for ASC convergence (signals moving around zero, magnitude roughly constant)
  - ➥ Watch PITCH_ASC_CONTROL_SIGNALS.stp & YAW_ASC_CONTROL_SIGNALS.stp
- ☐ **ALIGN_IFO** to **PRM_ALIGN_OFFLOADED**

Align BS

- ☐ **ALIGN_IFO** to **MICH_DARK_LOCKED**
- ☐ Align BS by hand
  - ➥ Make ASAIR camera dark

Align SRM

- ☐ **ALIGN_IFO** to **SRC_ALIGN**
- ☐ Wait for ASC convergence (signals moving around zero, magnitude roughly constant)
  - ➥ Watch PITCH_ASC_CONTROL_SIGNALS.stp & YAW_ASC_CONTROL_SIGNALS.stp
- ☐ **ALIGN_IFO** to **SRC_ALIGN_OFFLOADED**

Prepare for full IFO locking

- ☐ **ISC_LOCK** to **INIT**