Appendix C

SXPS288 Labcast 3 (ALs)- Planetary Science Project Storyboard/Script

3rd March 2020

18:00 - INTRODUCTION   [MT2 & MT3 to camera]

   - Welcome to the Open Science Lab SXPS288

   - Introduce the team

   - Please fill in Map WIDGET (#1) [including studio + lab locations?]

   - Purpose of labcast - had briefing about the project, now let's talk about the Gas Cell experiment

   - Please ask questions in the chat - few minutes at the end to look at your questions

   - Review Map WIDGET (#1)

18:03 - GAS CELL ACTIVITIES   [MT2 & MT3 - Q&A]

   - Calibration - pressure gauge (Activity 3.5 - WEEK 3)

   - Characterisation of thermal valve (Activity 3.5 - WEEK 3)

   - IR spectroscopy of carbon dioxide (practice) (Activity 3.6 - WEEK 3)

   - IR spectroscopy of unknown gas mixtures (Activity 5.6 - WEEK 5)

   - Health and safety considerations

   - Please fill in Risks WIDGET (#2)

18:07 - GAS CELL HARDWARE & INTERFACE   [MT2 – MT3 monitor chat]

   - Walk through the experimental kit

   - Walk through interface

   - Demonstrate experiment - spectrum of air... IR Invisible component!

   - Introduce WIDGET (#3)

18:20 - THINGS TO WATCH OUT FOR   [MT2 & MT3 Q&A]

   - Review Risk WIDGET (#2)

   - Make sure to follow instructions

   - Make sure to work through activities on the module website

   - List of quirks...

- Data analysis - Python notebooks (three)

- Review WIDGET (#3) - link to unknown gas mixtures, calculations of abundances...

- New experiment designed for you - help us improve it

18:25 - CLOSE   [MT2 & MT3 to camera]

- Please fill in feedback WIDGETS (?) (#3)

- Field questions – MT3 look at chat...

- Post Labcast discussion on forum

- Book experimental slots and have a go - your feedback is valuable

- Module forum support from topic specialist

- Review Feedback WIDGETS (#4)

- Thanks for joining in & good luck

18:30 FINISH

WIDGETS

#1 - Map

#2 - Risk: What are the hazards and safety consideration in the gas cell laboratory?

   Wordle

#3 - Which gas component(s) can we not detect in the infrared spectrum of air?

   Options: Methane, Oxygen, Nitrogen...

#4 – Feedback widget