

Department of Electrical & Computer Engineering

Airborne Sampling/Sensing of Distal Volcanic Ash

Project Group Meeting #22

Minutes

**Minutes of the weekly meeting 23th September 2016**

**Present:**

Adrian Weller, Ryan Taylor, Jake Campbell, Mike Shanaher and Jamie Van de Laar

**1. Apologies:**

* Parth Thakur and Maan Alkaisi

**2. Minutes from last meeting**

* (refer to Minutes, August 9th 2016)

**3. Matters arising**

* **NIL**

**4. Correspondence**

* All are CC’d in emails

**5. Progress Reports:**

* Mike Shanaher
  + Telemetry testing
  + Haven’t analysed data yet
  + Using Yagi-dipole and diploe-dipole
  + Connection was unfortunately lost multiple times
  + At least have noise/SNR measurements at at least a few points.
  + Linear relationship between power and range
  + Distance measurement wasn’t working, will try to get it working and possibly do another test
* Ryan Taylor
  + Thinking about designing rotary sampler that locks each chamber in place when changing chambers
  + Leaking through cracks is a problem
  + Inlet valve would be ideal – only open when known to be going through an ash cloud
  + Currently rotary design cannot fit in airframe – could be designed with less chambers (<6) so that it could fit.
* Jake Campbell
  + Funnel and lid have been printed and mounted in plane.
  + Will be testing today, dependent on weather
  + Also asked about DTA Logo to use in PowerPoint presentations and poster, Adrian to send high resolution Logo.
* Jamie Van de Laar
  + To do wind tunnel testing with different inlet configs today.
  + Will try funnel inlet with and without lid, and at different angles of attack.
  + Will also try isokinetic inlet at different angles (maybe 0°-90°), and at higher speed, maintaining 10 mg/m^3 ash concentration.
  + Not really worth testing IK inlet facing backwards, not designed for this.
  + Would be good to get graph of attack angle vs. captured ash (for both inlets).

6. **Other business:**

* Adrian:
  + Gets in at 11am next Thursday
  + Wants to collect all code, designs, etc.
  + Team could practise oral presentations in front of Adrian on Thursday.

**Meeting ACTION LIST**

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| --- | --- | --- |
| **ACTION** | **ASSIGNED TO** | **DUE DATE** |
| Wind tunnel testing | Jake and Jamie | Friday 23/9 (today) |
| Prepare all designs for hand-over | All | Thursday 29/9 |
|  |  |  |

**Next meeting date: Adrian will be down for design hand-overs on Thursday 29th Sept**