Two additional questions about prototyping:
- Is there a physical prototype already available (how you read it out, etc. Or when is it planned)
Not yet, working on that (Sept first tests)
- Do you already have a waveform from the SiPM output available (picture or data):
Not yet, soon from individual SiPM's and also from the readout shaper. Need to put it together

SiPM information/requirements (not exactly ASIC-related, but good information to have):
- manufacturer: Hamamatsu
- size [mm] (individual chip): 1.3mm or 3mm
- bias range (min & max that need to be set) [V]: 50-53V
- operating overvoltage (planned) [V]: 3-4V
- stability required [mV]: 10mV
- bias voltage accuracy (IF NEEDED, for using pre-calibration voltages) [%]: will be real-time monitored, but set within <1% of the gain
- bias voltage current (max, after lifetime irradiation) [uA]: 1mA
- bias voltage temperature compensation (or will SiPM temperature be controlled instead)?:
SiPM not cooled, bias can be set for individual channels. Temp will monitored (both FEB and SiPM)
- array of SiPM/channel [how many; series/parallel scheme]: 5 and 10
- capacitance/channel: 5-10x320pF or 1280pF
- #pixel/channel: 5-10x 2600 or 14400
- dynamic range required/channel [pC]: 0.1pC to 320 pC (needs to be studied)
(minimum signal important to detect is discussed below (Hit requirements))

FEB signal processing requirements:
(Preamp information)
- linearity requirement [max nonlinearity % over full range, or a more detailed spec]: < 1%
- gain stability (w.r.t. time/drift, internal noises of the FEB, FEB temperature, external interferences) [%]: < 1%
- peak time (or max peak time to avoid pile-up) [ns]: <25ns
- charge resolution [% of full scale or a more detailed spec, e.g. % of signal at various signal sizes]: two ranges, very good for small signals, more coarse for large signals, exact numbers will be studied
- Time-of-hit resolution [ns]: 15-35ps so far
- double-pulse resolving time [ns] (i.e. readout of two pulses separated by less than this **may have pileup errors or may be seen as one pulse**):
Plan to have 50ns

Hit processing / streaming readout requirements:
- Hit threshold [pC] (OR a more detailed spec over detector geometry if appropriate)
- Hits defined by something more than each channel independently? (Default answer "no"):
Maybe sum of some channels, staying still sensitive to single MIPs
- Hit rate (physics+background) per channel maximum [kHz] (OR a more detailed spec over detector geometry if appropriate):

TBD
- Does the hit rate requirement apply independently to all channels or has to be understood with some correlation in mind?
TBD, Need to study background events

Slow control:
- SiPM bias current monitoring [Yes / combined / none]: Yes
- temperature monitoring [Yes/No]: Yes

Accessibility of the FEB and RDO:
- FEB on detector [Yes/No]: Yes
- FEB accessibility [During run/between runs] (Radiation tolerance): No, all components rad. tolerant
- FEB-RDO minimum distance [m]: 5+m
- RDO on detector [Yes/No] (default No): No
- RDO accessibility/location (Radiation tolerance): Accessible, non-radiation environment