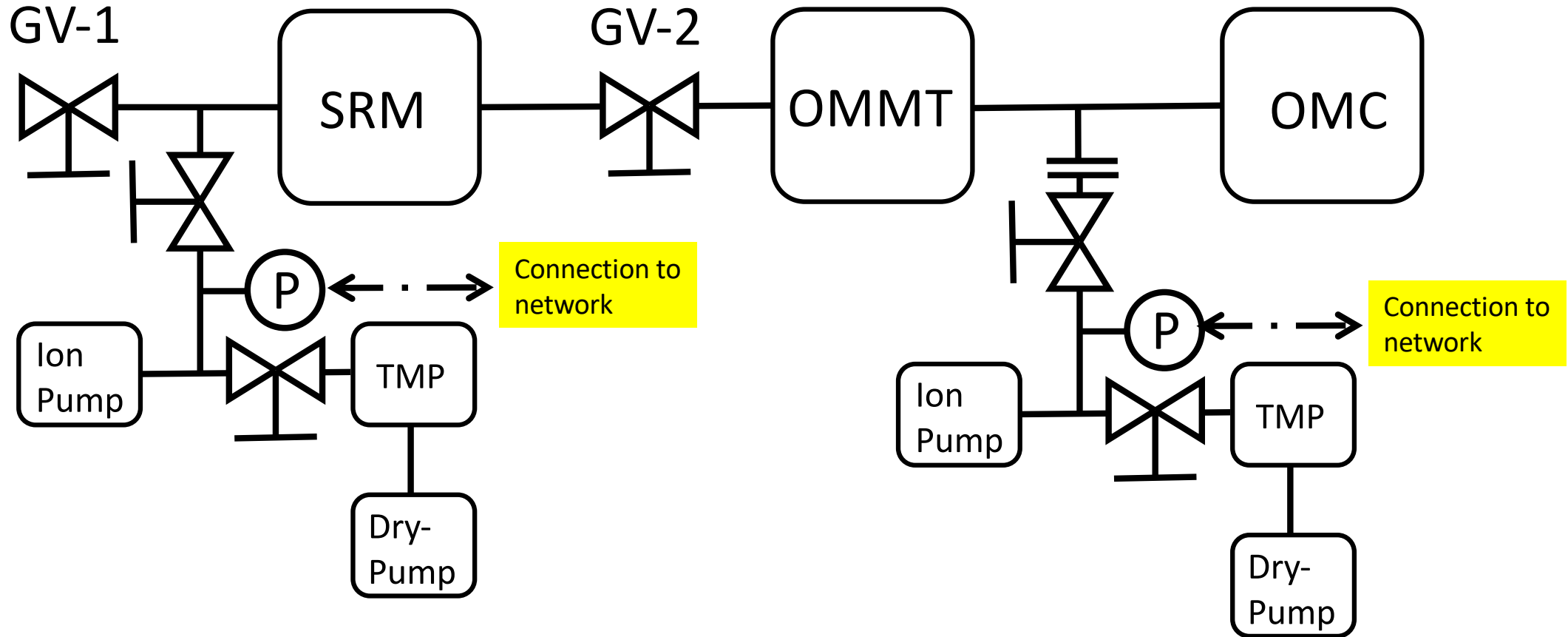


Proposal for modification of pumping unit
between OMMT and OMC
– prevention of vibration from vacuum
pumping unit –

N. Kimura (ICRR)

2024/June/7

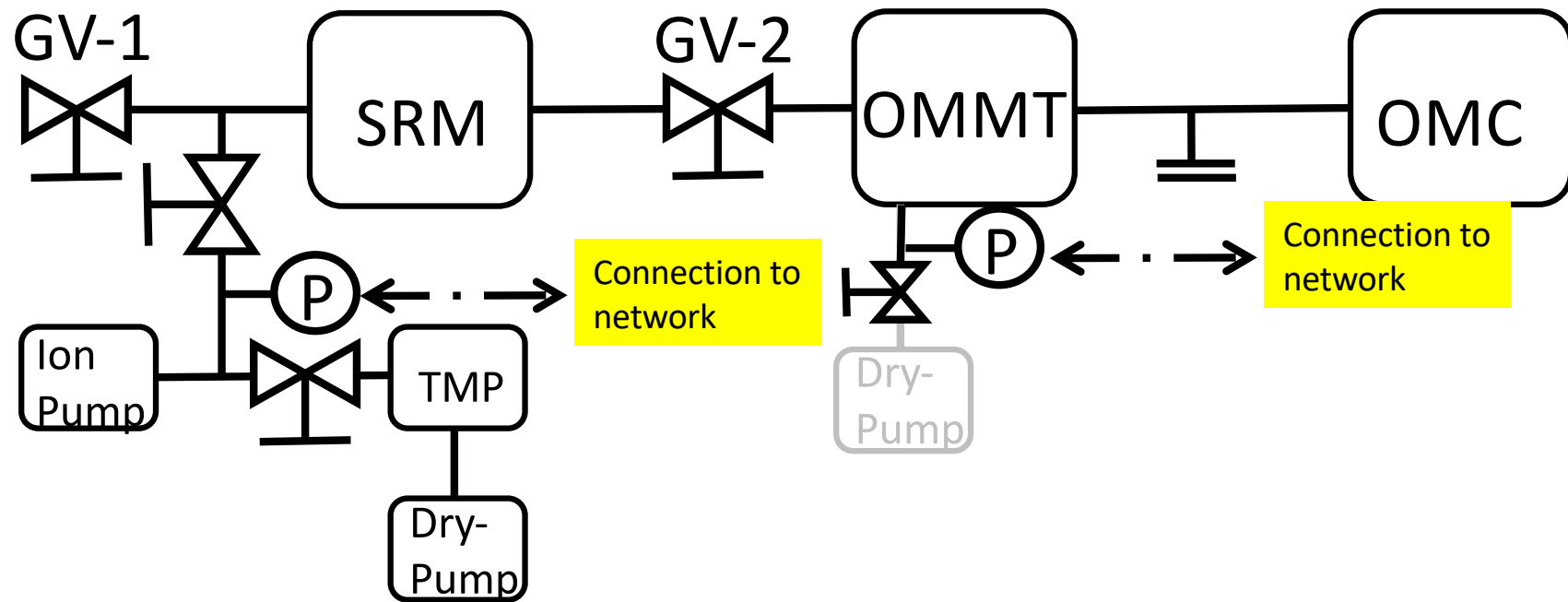
Current setup of pumping units between SRM and OMMT-OMC



Feature:

1. Separate pumping units between SRM and OMMT-OMC
2. Capable of returning the pressure between OMMT and OMC to atmospheric pressure (GV-2 closed, with optical window)

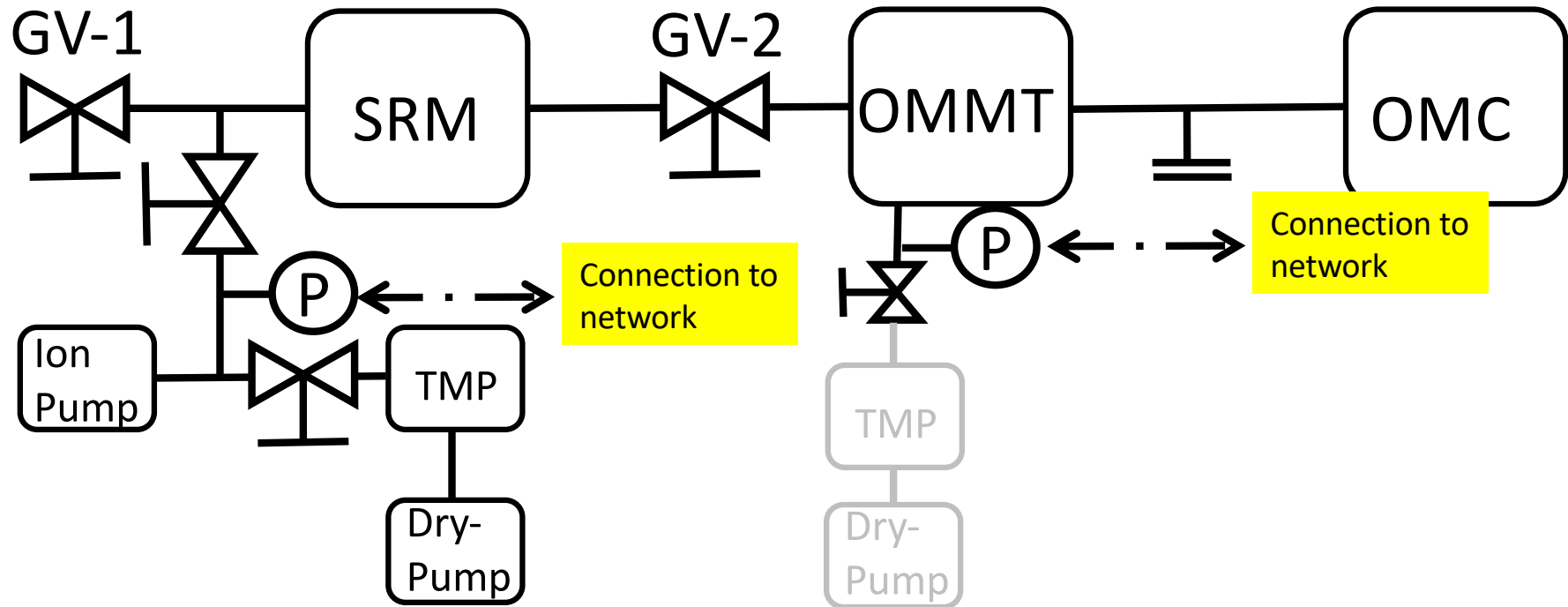
Plan A: Modification of the pumping unit between SRM and OMMT-OMC



Features:

1. Rough pumping between OMMT and OMC with a dry pump. Achievable pressure $0.1 \sim 1 \text{ Pa}$
2. Possible to return the pressure between OMMT and OMC to atmospheric pressure (GV-2 closed, with optical window)
3. Pumping of the high vacuum region between OMMT and OMC is done by SRM's pumping unit. The pressure achieved is expected to be $\sim 1 \times 10^{-4} \text{ Pa}$
4. Time required to switch from dry pump to TMP for pumping between OMMT and OMC: $1 \sim 2$ days?
5. Remove the dry pump after switching the pumping between OMMT and OMC to TMP.

Plan B: Modification of the pumping unit between SRM and OMMT-OMC



Features.

1. Pumping OMMT and OMC with TMP. Achievable pressure $\sim 1 \times 10^{-2}$ Pa and expected
2. Possible to return to atmospheric pressure between OMMT and OMC.
(GV-2 sealed, with optical window)
3. Pumping of the high vacuum region between OMMT and OMC is done by SRM's pumping unit. The pressure achieved is expected to be $\sim 1 \times 10^{-4}$ Pa
4. Time required to switch pumping between OMMT and OMC to SRM's TMP: ~ 1 day?
5. After switching pumping between OMMT-OMC to TMP, isolate TMP
6. Need to obtain a TMP with pumping capacity of about 600 l/min.