

CONTENTS

1. Introduction	1
Part I. Weight filtration on the log crystalline cohomology of a simplicial family of open smooth varieties in characteristic $p > 0$	23
2. Preliminaries on filtered derived categories	23
3. Review on (pre)weight-filtered vanishing cycle (restricted) crystalline and zariskian complexes	29
4. Generalized descriptions of preweight-filtered vanishing cycle (restricted) crystalline and zariskian complexes	43
5. p -adic weight spectral sequence	66
6. Explicit description of the truncated cosimplicial preweight-filtered vanishing cycle zariskian complex	76
7. Cosimplicial filtered log de Rham-Witt complex	95
8. Complements	104
Part II. Weight filtration and slope filtration on the rigid cohomology of a separated scheme of finite type over a perfect field of characteristic $p > 0$	107
9. Proper hypercoverings	107
10. Truncated cosimplicial rigid cohomological complex	116
11. Comparison theorem between rigid cohomology and log crystalline cohomology	138
12. Weight filtration on rigid cohomology	165
13. Slope filtration on rigid cohomology	174
Part III. Weight filtrations and slope filtrations on rigid cohomologies with closed support and with compact support	183

14. Mapping fiber and mapping cone in log crystalline cohomology ...	183
15. Mapping fiber and mapping cone in rigid cohomology	200
16. Rigid cohomology with closed support	203
17. Rigid cohomology with compact support	222
Bibliography	243