

Summary of integrative structure determination of Integrative model of the nuclear pore complex from *Schizosaccharomyces pombe* (PDB ID: 9A1M, PDB-Dev ID: PDBDEV_00000094)

1. Model Composition	
	<ul style="list-style-type: none"> - Nup45: Chain I (425 residues) - Nsp1: Chain J22 (598 residues) - Nup186: Chain C7 (1647 residues) - Nup44: Chain H21 (403 residues) - Seh1: Chain O12 (339 residues) - Nup44: Chain H7 (403 residues) - Seh1: Chain O11 (339 residues) - Sec13: Chain N20 (297 residues) - Nup189c: Chain M2 (844 residues) - Nup45: Chain I3 (425 residues) - Nsp1: Chain J25 (598 residues) - Nup189c: Chain M21 (844 residues) - Nup37: Chain S10 (391 residues) - Nup97: Chain Y21 (851 residues) - Nup132: Chain Q14 (1162 residues) - Nup155: Chain D25 (1315 residues) - Nup120: Chain R6 (1136 residues) - Nup155: Chain D11 (1315 residues) - Nup44: Chain H15 (403 residues) - Nsp1: Chain J4 (598 residues) - Nup189c: Chain M12 (844 residues) - Sec13: Chain N10 (297 residues) - Nup44: Chain H2 (403 residues) - Nup186: Chain C15 (1647 residues) - Ely5: Chain T10 (298 residues) - Nsp1: Chain J1 (598 residues) - Sec13: Chain N17 (297 residues) - Nup37: Chain S20 (391 residues) - Nup132: Chain Q9 (1162 residues) - Nup97: Chain Y13 (851 residues) - Nup45: Chain I2 (425 residues) - Nup97: Chain Y7 (851 residues) - Nup155: Chain D1 (1315 residues) - Nup45: Chain I4 (425 residues) - Nup184: Chain B15 (1564 residues) - Nup107: Chain L7 (813 residues) - Nup37: Chain S8 (391 residues) - Ely5: Chain T15 (298 residues) - Nup155: Chain D7 (1315 residues) - Nup189c: Chain M6 (844 residues) - Nup155: Chain D18 (1315 residues) - Nup155: Chain D19 (1315 residues) - Nup85: Chain P3 (675 residues) - Nup85: Chain P5 (675 residues) - Seh1: Chain O15 (339 residues) - Nup44: Chain H20 (403 residues) - Nup120: Chain R8 (1136 residues) - Nup155: Chain D24 (1315 residues) - Nup189c: Chain M7 (844 residues) - Nup186: Chain C3 (1647 residues) - Nup97: Chain Y (851 residues) - Ely5: Chain T8 (298 residues) - Seh1: Chain O2 (339 residues) - Nup184: Chain B11 (1564 residues) - Nup97: Chain Y18 (851 residues)

- Seh1: Chain O16 (339 residues)
- Nup85: Chain P18 (675 residues)
- Nsp1: Chain J13 (598 residues)
- Nup120: Chain R23 (1136 residues)
- Nup107: Chain L6 (813 residues)
- Nup85: Chain P1 (675 residues)
- Nup132: Chain Q1 (1162 residues)
- Nup97: Chain Y4 (851 residues)
- Nup44: Chain H1 (403 residues)
- Nup107: Chain L8 (813 residues)
- Seh1: Chain O10 (339 residues)
- Nup97: Chain Y31 (851 residues)
- Nup97: Chain Y2 (851 residues)
- Nup85: Chain P11 (675 residues)
- Nup45: Chain I30 (425 residues)
- Nup44: Chain H25 (403 residues)
- Nup85: Chain P6 (675 residues)
- Nup184: Chain B4 (1564 residues)
- Nup45: Chain I20 (425 residues)
- Nup155: Chain D30 (1315 residues)
- Nup85: Chain P23 (675 residues)
- Sec13: Chain N14 (297 residues)
- Nup155: Chain D3 (1315 residues)
- Nup45: Chain I14 (425 residues)
- Nup186: Chain C6 (1647 residues)
- Nup155: Chain D21 (1315 residues)
- Nup97: Chain Y5 (851 residues)
- Sec13: Chain N9 (297 residues)
- Nup44: Chain H6 (403 residues)
- Nup186: Chain C9 (1647 residues)
- Ely5: Chain T14 (298 residues)
- Sec13: Chain N13 (297 residues)
- Nup186: Chain C8 (1647 residues)
- Nup37: Chain S2 (391 residues)
- Nup155: Chain D10 (1315 residues)
- Nup155: Chain D26 (1315 residues)
- Ely5: Chain T16 (298 residues)
- Nup97: Chain Y17 (851 residues)
- Nup107: Chain L5 (813 residues)
- Nup189c: Chain M5 (844 residues)
- Nup44: Chain H12 (403 residues)
- Nup37: Chain S18 (391 residues)
- Sec13: Chain N16 (297 residues)
- Nsp1: Chain J3 (598 residues)
- Nup45: Chain I12 (425 residues)
- Nup184: Chain B13 (1564 residues)
- Nup120: Chain R22 (1136 residues)
- Sec13: Chain N2 (297 residues)
- Nup155: Chain D29 (1315 residues)
- Seh1: Chain O9 (339 residues)
- Nup189c: Chain M16 (844 residues)
- Nup120: Chain R4 (1136 residues)
- Nup37: Chain S15 (391 residues)
- Ely5: Chain T23 (298 residues)
- Nup186: Chain C14 (1647 residues)
- Nup107: Chain L12 (813 residues)
- Nup189c: Chain M13 (844 residues)
- Seh1: Chain O22 (339 residues)
- Nup85: Chain P21 (675 residues)
- Seh1: Chain O13 (339 residues)
- Nup37: Chain S7 (391 residues)
- Sec13: Chain N21 (297 residues)
- Seh1: Chain O3 (339 residues)
- Nup97: Chain Y20 (851 residues)

- Nup155: Chain D6 (1315 residues)
- Nup37: Chain S3 (391 residues)
- Nsp1: Chain J10 (598 residues)
- Nsp1: Chain J14 (598 residues)
- Nup45: Chain I22 (425 residues)
- Nup85: Chain P7 (675 residues)
- Nup189c: Chain M11 (844 residues)
- Nup155: Chain D23 (1315 residues)
- Ely5: Chain T17 (298 residues)
- Nup45: Chain I10 (425 residues)
- Nup44: Chain H9 (403 residues)
- Sec13: Chain N15 (297 residues)
- Nup155: Chain D4 (1315 residues)
- Nup107: Chain L9 (813 residues)
- Seh1: Chain O (339 residues)
- Nup45: Chain I6 (425 residues)
- Nup37: Chain S9 (391 residues)
- Nup120: Chain R19 (1136 residues)
- Nup45: Chain I18 (425 residues)
- Nsp1: Chain J20 (598 residues)
- Nup155: Chain D27 (1315 residues)
- Nup44: Chain H27 (403 residues)
- Nup45: Chain I28 (425 residues)
- Nup120: Chain R10 (1136 residues)
- Sec13: Chain N6 (297 residues)
- Nup189c: Chain M1 (844 residues)
- Nup97: Chain Y27 (851 residues)
- Nup184: Chain B3 (1564 residues)
- Nup44: Chain H24 (403 residues)
- Nup45: Chain I13 (425 residues)
- Nsp1: Chain J23 (598 residues)
- Nup37: Chain S13 (391 residues)
- Nup186: Chain C12 (1647 residues)
- Nup44: Chain H22 (403 residues)
- Nup45: Chain I31 (425 residues)
- Nup132: Chain Q10 (1162 residues)
- Ely5: Chain T18 (298 residues)
- Nup120: Chain R16 (1136 residues)
- Nup120: Chain R3 (1136 residues)
- Sec13: Chain N7 (297 residues)
- Nup97: Chain Y25 (851 residues)
- Nup85: Chain P19 (675 residues)
- Nup85: Chain P10 (675 residues)
- Nup37: Chain S22 (391 residues)
- Nup184: Chain B10 (1564 residues)
- Sec13: Chain N5 (297 residues)
- Nup85: Chain P20 (675 residues)
- Sec13: Chain N11 (297 residues)
- Nup120: Chain R11 (1136 residues)
- Nup155: Chain D13 (1315 residues)
- Nup97: Chain Y26 (851 residues)
- Nup120: Chain R9 (1136 residues)
- Nup107: Chain L1 (813 residues)
- Nup37: Chain S4 (391 residues)
- Nup44: Chain H17 (403 residues)
- Nup189c: Chain M4 (844 residues)
- Nup85: Chain P15 (675 residues)
- Nup97: Chain Y19 (851 residues)
- Nup85: Chain P14 (675 residues)
- Nup44: Chain H26 (403 residues)
- Nup97: Chain Y1 (851 residues)
- Nup155: Chain D2 (1315 residues)
- Nup44: Chain H30 (403 residues)
- Nup186: Chain C10 (1647 residues)

[Entry composition](#)

- Seh1: Chain O23 (339 residues)
- Nup189c: Chain M23 (844 residues)
- Nup97: Chain Y29 (851 residues)
- Nup44: Chain H11 (403 residues)
- Nup44: Chain H28 (403 residues)
- Nup44: Chain H23 (403 residues)
- Nup44: Chain H8 (403 residues)
- Ely5: Chain T1 (298 residues)
- Nup107: Chain L2 (813 residues)
- Nup184: Chain B6 (1564 residues)
- Nup132: Chain Q6 (1162 residues)
- Nup45: Chain I15 (425 residues)
- Nup45: Chain I11 (425 residues)
- Nsp1: Chain J6 (598 residues)
- Nup186: Chain C5 (1647 residues)
- Nup44: Chain H3 (403 residues)
- Nup37: Chain S6 (391 residues)
- Nup120: Chain R20 (1136 residues)
- Nup189c: Chain M3 (844 residues)
- Seh1: Chain O20 (339 residues)
- Nup132: Chain Q3 (1162 residues)
- Nup45: Chain I25 (425 residues)
- Nup120: Chain R21 (1136 residues)
- Sec13: Chain N8 (297 residues)
- Ely5: Chain T7 (298 residues)
- Sec13: Chain N (297 residues)
- Ely5: Chain T19 (298 residues)
- Nup97: Chain Y8 (851 residues)
- Ely5: Chain T6 (298 residues)
- Ely5: Chain T22 (298 residues)
- Nsp1: Chain J5 (598 residues)
- Nup97: Chain Y14 (851 residues)
- Seh1: Chain O5 (339 residues)
- Nup120: Chain R2 (1136 residues)
- Nsp1: Chain J7 (598 residues)
- Nup155: Chain D9 (1315 residues)
- Nup120: Chain R13 (1136 residues)
- Nup45: Chain I7 (425 residues)
- Nup97: Chain Y24 (851 residues)
- Sec13: Chain N4 (297 residues)
- Nup120: Chain R12 (1136 residues)
- Nsp1: Chain J26 (598 residues)
- Nsp1: Chain J12 (598 residues)
- Nup120: Chain R15 (1136 residues)
- Nup45: Chain I9 (425 residues)
- Nup155: Chain D5 (1315 residues)
- Nsp1: Chain J8 (598 residues)
- Nup186: Chain C1 (1647 residues)
- Seh1: Chain O6 (339 residues)
- Nup85: Chain P9 (675 residues)
- Nsp1: Chain J17 (598 residues)
- Nup85: Chain P (675 residues)
- Nup184: Chain B14 (1564 residues)
- Nup45: Chain I26 (425 residues)
- Nup97: Chain Y23 (851 residues)
- Nsp1: Chain J16 (598 residues)
- Nup120: Chain R5 (1136 residues)
- Ely5: Chain T11 (298 residues)
- Ely5: Chain T12 (298 residues)
- Nup155: Chain D12 (1315 residues)
- Nup85: Chain P12 (675 residues)
- Ely5: Chain T20 (298 residues)
- Nup186: Chain C13 (1647 residues)
- Seh1: Chain O7 (339 residues)

- Nup45: Chain I8 (425 residues)
- Ely5: Chain T13 (298 residues)
- Nup184: Chain B (1564 residues)
- Nup132: Chain Q (1162 residues)
- Nsp1: Chain J2 (598 residues)
- Nup132: Chain Q13 (1162 residues)
- Nup44: Chain H13 (403 residues)
- Nup120: Chain R (1136 residues)
- Nup44: Chain H29 (403 residues)
- Nup45: Chain I5 (425 residues)
- Nup189c: Chain M14 (844 residues)
- Nup44: Chain H14 (403 residues)
- Nsp1: Chain J18 (598 residues)
- Nup107: Chain L4 (813 residues)
- Ely5: Chain T9 (298 residues)
- Nup132: Chain Q5 (1162 residues)
- Nup189c: Chain M15 (844 residues)
- Nup132: Chain Q7 (1162 residues)
- Nup37: Chain S16 (391 residues)
- Nup155: Chain D31 (1315 residues)
- Seh1: Chain O19 (339 residues)
- Nup97: Chain Y10 (851 residues)
- Ely5: Chain T3 (298 residues)
- Sec13: Chain N1 (297 residues)
- Sec13: Chain N12 (297 residues)
- Sec13: Chain N3 (297 residues)
- Nup97: Chain Y9 (851 residues)
- Nup184: Chain B2 (1564 residues)
- Nup85: Chain P2 (675 residues)
- Ely5: Chain T5 (298 residues)
- Nup45: Chain I23 (425 residues)
- Nup85: Chain P17 (675 residues)
- Nup85: Chain P4 (675 residues)
- Seh1: Chain O14 (339 residues)
- Ely5: Chain T4 (298 residues)
- Nup184: Chain B8 (1564 residues)
- Nsp1: Chain J31 (598 residues)
- Nup107: Chain L11 (813 residues)
- Seh1: Chain O8 (339 residues)
- Nsp1: Chain J11 (598 residues)
- Nup155: Chain D (1315 residues)
- Nup120: Chain R7 (1136 residues)
- Nup189c: Chain M20 (844 residues)
- Nup45: Chain I17 (425 residues)
- Ely5: Chain T (298 residues)
- Nup155: Chain D20 (1315 residues)
- Nup120: Chain R17 (1136 residues)
- Ely5: Chain T21 (298 residues)
- Nup155: Chain D14 (1315 residues)
- Nup97: Chain Y3 (851 residues)
- Sec13: Chain N23 (297 residues)
- Nup97: Chain Y30 (851 residues)
- Nup184: Chain B9 (1564 residues)
- Nup97: Chain Y28 (851 residues)
- Nup155: Chain D17 (1315 residues)
- Nup44: Chain H16 (403 residues)
- Nup189c: Chain M10 (844 residues)
- Nup189c: Chain M8 (844 residues)
- Nsp1: Chain J9 (598 residues)
- Nup97: Chain Y11 (851 residues)
- Nup184: Chain B5 (1564 residues)
- Nup37: Chain S17 (391 residues)
- Seh1: Chain O21 (339 residues)
- Nup155: Chain D28 (1315 residues)

- Nup189c: Chain M9 (844 residues)
- Nup45: Chain I24 (425 residues)
- Nup44: Chain H10 (403 residues)
- Seh1: Chain O1 (339 residues)
- Nup45: Chain I1 (425 residues)
- Nup85: Chain P13 (675 residues)
- Nsp1: Chain J21 (598 residues)
- Nup97: Chain Y12 (851 residues)
- Nup44: Chain H19 (403 residues)
- Nup155: Chain D8 (1315 residues)
- Nup132: Chain Q15 (1162 residues)
- Nup44: Chain H4 (403 residues)
- Nup37: Chain S1 (391 residues)
- Nup37: Chain S12 (391 residues)
- Nup44: Chain H (403 residues)
- Nup107: Chain L3 (813 residues)
- Nup132: Chain Q11 (1162 residues)
- Nup189c: Chain M19 (844 residues)
- Nup37: Chain S11 (391 residues)
- Nup45: Chain I16 (425 residues)
- Nup45: Chain I29 (425 residues)
- Nup132: Chain Q4 (1162 residues)
- Nup37: Chain S23 (391 residues)
- Nup155: Chain D15 (1315 residues)
- Seh1: Chain O18 (339 residues)
- Nup44: Chain H31 (403 residues)
- Nup85: Chain P16 (675 residues)
- Nsp1: Chain J15 (598 residues)
- Nsp1: Chain J19 (598 residues)
- Nsp1: Chain J24 (598 residues)
- Nup184: Chain B12 (1564 residues)
- Nup37: Chain S19 (391 residues)
- Nup120: Chain R1 (1136 residues)
- Nup85: Chain P8 (675 residues)
- Nup186: Chain C2 (1647 residues)
- Nup189c: Chain M17 (844 residues)
- Nup186: Chain C4 (1647 residues)
- Nup107: Chain L (813 residues)
- Seh1: Chain O4 (339 residues)
- Nup107: Chain L13 (813 residues)
- Seh1: Chain O17 (339 residues)
- Nup186: Chain C (1647 residues)
- Nup97: Chain Y16 (851 residues)
- Nup107: Chain L15 (813 residues)
- Nup155: Chain D16 (1315 residues)
- Nup44: Chain H18 (403 residues)
- Nup37: Chain S21 (391 residues)
- Nup45: Chain I27 (425 residues)
- Nup132: Chain Q2 (1162 residues)
- Nup189c: Chain M22 (844 residues)
- Nup189c: Chain M (844 residues)
- Nsp1: Chain J30 (598 residues)
- Sec13: Chain N18 (297 residues)
- Nup85: Chain P22 (675 residues)
- Nup97: Chain Y22 (851 residues)
- Nsp1: Chain J28 (598 residues)
- Nup120: Chain R18 (1136 residues)
- Nup132: Chain Q8 (1162 residues)
- Nup37: Chain S (391 residues)
- Nup45: Chain I21 (425 residues)
- Nup45: Chain I19 (425 residues)
- Sec13: Chain N19 (297 residues)
- Nsp1: Chain J (598 residues)
- Nup186: Chain C11 (1647 residues)

- O2: -
- O3: -
- O4: -
- O5: -
- O6: -
- O7: -
- O8: 1-3391-3391-3391-3391-3391-3391-3391-
3391-3391-3391-3391-3391-3391-3391-3391-3391-
3391-3391-3391-3391-3391-3391-3391-339
- O9: -
- O10: -
- O11: -
- O12: -
- O13: -
- O14: -
- O15: -
- O16: -
- O17: -
- O18: -
- O19: -
- O20: -
- O21: -
- O22: -
- O23: -
- N: 1-2971-2971-2971-2971-2971-2971-2971-2971-
2971-2971-2971-2971-2971-2971-2971-2971-2971-
2971-2971-2971-2971-2971-297
- N1: -
- N2: -
- N3: -
- N4: -
- N5: -
- N6: -
- N7: -
- N8: 1-2971-2971-2971-2971-2971-2971-2971-
2971-2971-2971-2971-2971-2971-2971-2971-2971-
2971-2971-2971-2971-2971-2971-297
- N9: -
- N10: -
- N11: -
- N12: -
- N13: -
- N14: -
- N15: -
- N16: -
- N17: -
- N18: -
- N19: -
- N20: -
- N21: -
- N22: -
- N23: -
- T: 1-2981-2981-2981-2981-2981-2981-2981-2981-
2981-2981-2981-2981-2981-2981-2981-2981-2981-
2981-2981-2981-2981-2981-2981-298
- T1: -
- T2: -
- T3: -
- T4: -
- T5: -
- T6: -
- T7: -
- T8: -
- T9: -

- Y30: -
- Y31: -
- J: 1-5981-5981-5981-5981-5981-5981-598
- J1: -
- J2: -
- J3: -
- J4: -
- J5: -
- J6: -
- J7: -
- J8: 1-5981-5981-5981-5981-5981-5981-598
- J9: -
- J10: -
- J11: -
- J12: -
- J13: -
- J14: -
- J15: -
- J16: 1-5981-5981-5981-5981-5981-5981-598
- J17: -
- J18: -
- J19: -
- J20: -
- J21: -
- J22: -
- J23: -
- J24: 1-5981-5981-5981-5981-5981-5981-598
- J25: -
- J26: -
- J27: -
- J28: -
- J29: -
- J30: -
- J31: -
- H: 1-4031-4031-4031-4031-4031-4031-403
- H1: -
- H2: -
- H3: -
- H4: -
- H5: -
- H6: -
- H7: -
- H8: 1-4031-4031-4031-4031-4031-4031-403
- H9: -
- H10: -
- H11: -
- H12: -
- H13: -
- H14: -
- H15: -
- H16: 1-4031-4031-4031-4031-4031-4031-403
- H17: -
- H18: -
- H19: -
- H20: -
- H21: -
- H22: -
- H23: -
- H24: 1-4031-4031-4031-4031-4031-4031-403
- H25: -

	<ul style="list-style-type: none"> - H26: - - H27: - - H28: - - H29: - - H30: - - H31: - - I: 1-4251-4251-4251-4251-4251-4251-4251-425 - I1: - - I2: - - I3: - - I4: - - I5: - - I6: - - I7: - - I8: 1-4251-4251-4251-4251-4251-4251-425 - I9: - - I10: - - I11: - - I12: - - I13: - - I14: - - I15: - - I16: 1-4251-4251-4251-4251-4251-4251-425 - I17: - - I18: - - I19: - - I20: - - I21: - - I22: - - I23: - - I24: 1-4251-4251-4251-4251-4251-4251-425 - I25: - - I26: - - I27: - - I28: - - I29: - - I30: - - I31: -
<i>Structural coverage (rigid bodies)</i>	100%
3. Restraints	
<i>Physical principles</i>	Information about physical principles was not provided
<i>Experimental data</i>	
4. Validation	
<i>Number of ensembles</i>	0
<i>Number of models in ensembles</i>	Not applicable
<i>Number of deposited models</i>	1
<i>Model precision (uncertainty of models)</i>	Model precision can not be calculated with one structure
<i>Data quality</i>	Data quality has not been assessed

Model quality: assessment of atomic segments	Model-1: Clashscore = 0.0, Number of Ramachandran outliers = 4824, Number of sidechain outliers = 12784
Model quality: assessment of excluded volume	Not applicable
Fit to data used for modeling	Fit of model to information used to compute it has not been determined
Fit to data used for validation	Fit of model to information not used to compute it has not been determined
5. Methodology and Software	
1. Method	Systematic fitting to EM maps with Global search from UCSF Chimera as implemented in Assembliner
Name	Systematic fitting of CR and NR subunits and IR asymmetric unit using Assembliner and UCSF Chimera
2. Method	Modeling the cytoplasmic side
Name	Global optimization with Assembliner starting from systematic fitting results
3. Method	Modeling the nuclear ring
Name	Global optimization with Assembliner starting from systematic fitting results
4. Method	Modeling the inner ring
Name	Refinement optimization with Assembliner starting from the fitted comparative model
5. Method	Modeling the full nuclear pore complex from models of the individual rings
Name	Refinement optimization with Assembliner
Software	<ul style="list-style-type: none"> - Assembliner (version 0.99beta) - Integrative Modeling Platform (IMP) (version 2.15.0) - UCSF Chimera (version 1.14)