Methods	aeroplane	bicycle	boat	bottle	bus	car	chair	diningtable	motorbike	sofa	train	tvmonitor	Average
Object Detection (AP)													
DPM	42.2	49.6	6.0	20.0	54.1	38.3	15.0	9.0	33.1	18.9	36.4	33.2	29.6
R-CNN	72.4	68.7	34.0	–	73.0	62.3	33.0	35.2	70.7	49.6	70.1	57.2	56.9
Ours w/o Extra	76.3	73.4	**43.4**	44.7	**74.5**	63.3	35.4	32.4	74.9	51.9	74.1	60.9	58.8
Ours Full	**76.5**	**74.0**	42.4	**47.0**	**74.5**	**64.7**	**38.5**	**38.6**	**76.7**	**55.1**	**74.8**	**65.3**	**60.7**
Joint Object Detection and Pose Estimation (4 Views AVP)													
VDPM	34.6	41.7	1.5	–	26.1	20.2	6.8	3.1	30.4	5.1	10.7	34.7	19.5
DPM-VOC+VP	39.4	43.9	0.3	–	49.1	37.6	6.1	3.0	32.2	11.8	12.5	33.2	24.5
Ours w/o Extra	**62.3**	56.6	18.0	–	62.0	40.9	19.3	14.9	**62.3**	44.1	**58.1**	58.5	45.2
Ours Full	61.4	**60.4**	**21.1**	–	**63.0**	**48.7**	**23.8**	**17.4**	60.7	**47.8**	55.9	**62.3**	**47.5**
Joint Object Detection and Pose Estimation (8 Views AVP)													
VDPM	23.4	36.5	1.0	–	35.5	23.5	5.8	3.6	25.1	12.5	10.9	27.4	18.7
DPM-VOC+VP	29.7	**42.6**	0.4	–	39.5	36.8	9.4	2.6	32.9	11.0	10.3	**28.6**	22.2
Ours w/o Extra	45.9	25.5	11.1	–	37.7	34.6	15.2	7.4	**37.1**	**33.0**	42.5	24.3	28.6
Ours Full	**48.8**	36.3	**16.4**	–	**39.8**	37.2	19.1	13.2	37.0	32.1	**44.4**	26.9	**31.9**
Joint Object Detection and Pose Estimation (16 Views AVP)													
VDPM	15.4	18.4	0.5	–	46.9	18.1	6.0	2.2	16.1	10.0	22.1	16.3	15.6
DPM-VOC+VP	17.0	**24.7**	1.0	–	49.0	30.1	6.6	3.0	17.2	7.7	20.4	20.2	17.9
Ours w/o Extra	23.3	19.2	8.4	–	**52.6**	27.0	9.9	5.1	**23.6**	**20.9**	27.4	**27.9**	22.3
Ours Full	**28.0**	23.7	**10.7**	–	50.8	**31.4**	**14.3**	**9.4**	23.4	19.5	**30.7**	27.8	**24.5**
Joint Object Detection and Pose Estimation (24 Views AVP)													
VDPM	8.0	14.3	0.3	–	39.2	13.7	4.4	3.6	10.1	8.2	20.0	11.2	12.1
DPM-VOC+VP	10.6	**16.7**	2.2	–	**43.5**	**25.4**	4.4	2.3	11.3	4.9	22.4	14.4	14.4
Ours w/o Extra	18.9	10.5	6.7	–	34.3	23.3	8.3	6.5	**20.6**	17.5	**33.8**	17.0	17.9
Ours Full	**20.7**	16.4	**7.9**	–	34.6	24.6	**9.4**	**7.6**	19.9	**20.0**	32.7	**18.2**	**19.3**