Status: July 2015

ATLAS Preliminary

 \sqrt{s} = 7, 8 TeV

 $\int \mathcal{L} \, dt = (4.7 - 20.3) \text{ fb}^{-1}$

Emiss $\int \mathcal{L} dt [fb^{-1}]$ ℓ , γ Model Jets Limit Reference ADD $G_{KK} + g/q$ ≥ 1 j Yes 20.3 1502.01518 5.25 TeV n = 2 $2e, \mu$ 20.3 n = 3 HLZ1407.2410 ADD non-resonant $\ell\ell$ 4.7 TeV ADD QBH $\rightarrow \ell q$ 1 j 20.3 $1e, \mu$ 5.2 TeV 1311.2006 n = 6ADD QBH 2 j 20.3 5.82 TeV Extra dimensions n = 61407.1376 ADD BH high N_{trk} 2 μ (SS) 20.3 4.7 TeV n = 6, $M_D = 3$ TeV, non-rot BH 1308.4075 ADD BH high $\sum p_T$ $\geq 1 e, \mu$ $\geq 2j$ 20.3 n=6, $M_D=3$ TeV, non-rot BH 1405.4254 5.8 TeV ADD BH high multijet ≥ 2 j n=6, $M_D=3$ TeV, non-rot BH 20.3 5.8 TeV 1503.08988 $2e, \mu$ RS1 $G_{KK} \rightarrow \ell\ell$ 20.3 G_{KK} n $k/\overline{M}_{Pl} = 0.1$ 1405.4123 RS1 $G_{KK} \rightarrow \gamma \gamma$ 2γ 20.3 G_{KK} m 2.66 TeV $k/\overline{M}_{Pl} = 0.1$ 1504.05511 Bulk RS $G_{KK} \rightarrow ZZ \rightarrow gg\ell\ell$ $2e, \mu$ 2j/1J20.3 $k/\overline{M}_{Pl} = 1.0$ 1409.6190 G_{KK} mas 740 GeV Bulk RS $G_{KK} \rightarrow WW \rightarrow gg\ell v$ 2j/1JYes 20.3 $k/\overline{M}_{Pl} = 1.0$ $1e, \mu$ W' mas 760 GeV 1503.04677 Bulk RS $G_{KK} \rightarrow HH \rightarrow b\bar{b}b\bar{b}$ $k/\overline{M}_{Pl} = 1.0$ 19.5 **G**_{KK} mass 500-720 GeV 4 b 1506.00285 BR = 0.925 Bulk RS $g_{KK} \rightarrow t\overline{t}$ $1e, \mu$ $\geq 1 \text{ b}, \geq 1 \text{J/2j Yes}$ 20.3 2.2 TeV 1505.07018 2UED / RPP $2 e, \mu (SS) \ge 1 b, \ge 1 j$ Yes 20.3 960 GeV 1504.04605 K mass SSM $Z' \rightarrow \ell \ell$ $2e, \mu$ 20.3 Z' mass 2.9 TeV 1405.4123 19.5 2.02 TeV SSM $Z' \rightarrow \tau \tau$ 2 τ Z' mass 1502.07177 $1e, \mu$ 20.3 SSM $W' \rightarrow \ell \nu$ Yes 3.24 TeV 1407.7494 $3e, \mu$ 20.3 EGM $W' \rightarrow WZ \rightarrow \ell \nu \, \ell' \ell'$ Yes W' mass 1.52 TeV 1406.4456 EGM $W' \rightarrow WZ \rightarrow qq\ell\ell$ $2e, \mu$ 2j/1J20.3 W' mass 1.59 TeV 1409.6190 EGM $W' \rightarrow WZ \rightarrow qqqq$ 2 J 20.3 W' mass 1.3-1.5 TeV 1506.00962 HVT $W' \rightarrow WH \rightarrow \ell \nu bb$ $1e, \mu$ Yes 20.3 $g_V = 1$ 1503.08089 2 b 1.47 TeV LRSM $W'_{R} \rightarrow t\overline{b}$ $1e, \mu$ 2 b, 0-1 j Yes 20.3 1.92 TeV W' mass 1410.4103 LRSM $W'_R \to t\overline{b}$ $0e, \mu$ \geq 1 b, 1 J 20.3 W' mass 1.76 TeV 1408.0886 2 j 17.3 **12.0 TeV** $\eta_{LL} = -1$ CI qqqq 1504.00357 C $CI qq\ell\ell$ $2e, \mu$ 20.3 **21.6 TeV** $\eta_{LL} = -1$ 1407.2410 Cl uutt $2 e, \mu (SS) \ge 1 b, \ge 1 j$ Yes 20.3 4.3 TeV $|C_{LL}| = 1$ 1504.04605 EFT D5 operator (Dirac) $0e, \mu$ ≥ 1 j Yes 20.3 974 GeV at 90% CL for $m(\chi) < 100 \text{ GeV}$ 1502.01518 EFT D9 operator (Dirac) $0e, \mu$ 1 J, \leq 1 j Yes 20.3 2.4 TeV at 90% CL for $m(\chi) < 100$ GeV 1309.4017 Scalar LQ 1st gen 2 e ≥ 2 j 20.3 $\beta = 1$ Preliminary 1.05 TeV $\geq 2j$ $\beta = 1$ Scalar LQ 2nd gen 2μ 1.0 TeV Preliminary 20.3 Scalar LQ 3rd gen $1e, \mu$ ≥1 b, ≥3 j Yes 20.3 Q mas 640 GeV $\beta = 0$ Preliminary ≥ 2 b, ≥ 3 j Yes VLQ $TT \rightarrow Ht + X$ $1e, \mu$ 20.3 855 GeV T in (T,B) doublet 1505.04306 $VLQ YY \rightarrow Wb + X$ $1e, \mu$ $\geq 1 \text{ b}, \geq 3 \text{ j}$ Yes 20.3 Y mass 770 GeV Y in (B,Y) doublet 1505.04306 $VLQ BB \rightarrow Hb + X$ $1e, \mu$ $\geq 2 \text{ b}, \geq 3 \text{ j}$ Yes 20.3 735 GeV isospin singlet 1505.04306 B mass $VLQ BB \rightarrow Zb + X$ 2/≥3 e, μ ≥2/≥1 b 20.3 **B** mass 755 GeV B in (B,Y) doublet 1409.5500 $T_{5/3} \rightarrow Wt$ $1e, \mu$ ≥ 1 b, ≥ 5 j Yes 20.3 840 GeV 1503.05425 1 i Excited quark $q^* \rightarrow q\gamma$ 1γ 20.3 q* mass 3.5 TeV only u^* and d^* , $\Lambda = m(q^*)$ 1309.3230 Excited quark $q^* \rightarrow qg$ 2 j 20.3 only u^* and d^* , $\Lambda = m(q^*)$ 4.09 TeV 1407.1376 1 or 2 e, μ 1 b, 2 j or 1 j Yes Excited quark $b^* \rightarrow Wt$ 4.7 870 GeV left-handed coupling 1301.1583 b* mass Excited lepton $\ell^* \to \ell \gamma$ $2e, \mu, 1\gamma$ 13.0 2.2 TeV $\Lambda=2.2\,\text{TeV}$ 1308.1364 * mass Excited lepton $v^* \to \ell W, \nu Z$ $3e, \mu, \tau$ 20.3 1.6 TeV $\Lambda = 1.6 \text{ TeV}$ 1411.2921 * mass LSTC $a_T \rightarrow W \gamma$ $1e, \mu, 1\gamma$ Yes 20.3 960 GeV 1407.8150 LRSM Majorana v 2 j $2e, \mu$ 20.3 2.0 TeV $m(W_R) = 2.4$ TeV, no mixing 1506.06020 Higgs triplet $H^{\pm\pm} \rightarrow \ell\ell$ 2 e, μ (SS) 551 GeV DY production, BR($H_{\iota}^{\pm\pm} \rightarrow \ell \ell$)=1 20.3 1412.0237 Higgs triplet $H^{\pm\pm} \rightarrow \ell \tau$ 20.3 400 GeV DY production, BR($H_{l}^{\pm\pm} \rightarrow \ell \tau$)=1 $3e, \mu, \tau$ 1411.2921 Monotop (non-res prod) $1e, \mu$ 1 b Yes 20.3 657 GeV $a_{\text{non-res}} = 0.2$ 1410.5404 785 GeV Multi-charged particles 20.3 DY production, |q| = 5e1504.04188 Magnetic monopoles 7.0 1.34 TeV DY production, $|g| = 1g_D$, spin 1/2 Preliminary $\sqrt{s} = 7 \text{ TeV}$ $\sqrt{s} = 8 \text{ TeV}$ 10^{-1} Mass scale [TeV]

^{*}Only a selection of the available mass limits on new states or phenomena is shown.