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January 12, 2009

**Via U.S. Mail and Electronic Filing**

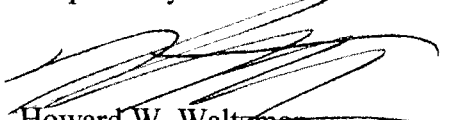
Marlene H. Dortch  
Office of the Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

Re: **EX PARTE PRESENTATION**  
**DIRECTV Enterprises LLC**  
FCC File Nos. SAT-AMD-20080321-00077; SAT-AMD-20080114-00014;  
SAT-LOA-2006-0908-00100 (Call Sign S2712)  
**Spectrum Five LLC**  
FCC File No. SAT-LOI-20081113-00216 (Call Sign S2777)  
FCC File No. SAT-LOI-20081119-00217 (Call Sign S2778)

Dear Ms. Dortch:

This is to inform you that David Wilson and Tom Sharon of Spectrum Five, LLC (“Spectrum Five”), and undersigned counsel representing Spectrum Five, met on January 9, 2009, with Helen Domenici, Robert Nelson, and Cassandra Thomas of the Commission’s International Bureau to discuss the above-referenced 17/24 GHz Broadcasting Satellite Service (“BSS”) application of DIRECTV Enterprises LLC (“DIRECTV”). The content of Spectrum Five’s presentation is set forth in the attached materials, of which two copies are hereby submitted for each referenced file number. Spectrum Five’s representatives also inquired as to the status of Spectrum Five’s petition for a declaratory ruling that it be permitted to provide service to the U.S. market from the 118.8° W.L. orbital location using the 17/24 GHz BSS band.<sup>1</sup>

Respectfully submitted,



Howard W. Waltzman  
Counsel to Spectrum Five LLC

<sup>1</sup> Petition for Declaratory Ruling To Serve the U.S. Market from the 118.8° W.L. Orbital Location in the 17/24 Broadcasting Satellite Service Band, *In re Spectrum Five LLC*, FCC File No. SAT-LOI-20081113-00216 (Nov. 13, 2008).

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cc: Helen Domenici  
Robert Nelson  
Cassandra Thomas

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On January 14, 2008, DIRECTV submitted an amended application to operate a 17/24 GHz BSS space station at the nominal 103° W.L. orbital location.<sup>2</sup> The amendment specified that “[b]ecause DIRECTV RB-2 will be placed at 102.825° W.L. rather than the Appendix F slot at 103° W.L., there will be 0.175° less spacing between DIRECTV RB-2 and the next closest on-grid location.”<sup>3</sup> This offset “results in 0.5 dB less discrimination from this adjacent location.”<sup>4</sup> Commission rules thus require that the maximum power flux density (“PFD”) created by this space station on the Earth’s surface not exceed -115.5 dBW/m<sup>2</sup>/MHz (the maximum PFD limit for RB-2).<sup>5</sup>

DIRECTV’s amended application was fatally defective under the Commission’s rules, which require that the application “demonstrate that its proposed operations will not cause more interference to any current or future 17/24 GHz BSS satellite networks operating in compliance with the technical requirements of this part, than if the applicant were located at the precise Appendix F orbital location from which it seeks to offset.”<sup>6</sup> In fact, DIRECTV’s amended application exceeds the maximum PFD limit by more than 0.3 dB a significant fraction of the time, and certainly does not meet the maximum PFD limit *for all conditions* as required by Commission rules.<sup>7</sup>

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<sup>2</sup> *Application of DIRECTV Enterprises, LLC To Amend Its Application for Authorization To Launch and Operate DIRECTV RB-2, a Satellite in the 17/24 GHz Broadcasting Satellite Service at 103° W.L.*, FCC File No. SAT-AMD-20080114-00014 (Jan. 14, 2008) (“DIRECTV 103° W.L. Amendment”), *accepted for filing*, Public Notice, *Satellite Space Applications Accepted for Filing*, Rpt. No. SAT-00535, 2008 WL 2627669, at \*3 (rel. July 2, 2008).

<sup>3</sup> *Id.* Ex. B, at 12 (emphasis added).

<sup>4</sup> *Id.* Ex. B, at 13 (emphasis added).

<sup>5</sup> See 47 C.F.R. §§ 25.140(b)(4)(iii), 25.208(w); DIRECTV 103° W.L. Amendment Ex. B, at 12-13. Spectrum Five agrees with DIRECTV that the maximum PFD limit for RB-2 is -115.5 dBW/m<sup>2</sup>/MHz for RB-2. We also agree that the maximum PFD would be -115.67 dBW/m<sup>2</sup>/MHz *if the atmospheric losses were 0.74 dB 100% the time*. However, DIRECTV’s use of 0.74 dB as the atmospheric loss value for the maximum PFD determination “for all conditions” is inappropriate. Using the same ITU-R P.618-9 procedures as DIRECTV, Spectrum Five calculates that the actual value can be less than 0.25 dB, which would cause the PFD to exceed -115.13 dBW/m<sup>2</sup>/MHz and produce excessive interference of 0.37 dB (~7.5%). *Cf.* Int’l Telecomm. Union, Recommendation ITU-R P.618-9, Propagation Data and Prediction Methods Required for the Design of Earth-Space Telecommunications Systems (2007) (“ITU-R P.618-9”).

<sup>6</sup> § 25.140(b)(4)(iii).

<sup>7</sup> “[A]ll conditions, including clear sky”—as described in § 25.208(w)—must include the lowest-temperature, lowest-humidity conditions which could be experienced. For example, on Dec. 2, 2008, the National Weather Service reported that humidity in Miami reached a low of 42%, and temperatures ranged between 55° and 67° F. See Nat’l Weather Serv. Forecast Office, Miami—South Florida, <http://www.nws.noaa.gov/climate/index.php?wfo=mfl> (Archived Data / Dec. 2) (last viewed Jan. 12, 2009). In these conditions, the ITU-R P.618-9 procedures indicate that the atmospheric loss would have varied between 0.21 and 0.25 dB, far less than DIRECTV’s link budget value of 0.74 dB, and also lower than the minimum level which DIRECTV recognizes as necessary for compliance. See ITU-R P.618-9; see also *infra* note 26 and accompanying text. DIRECTV’s space station would produce excessive interference at that location and at that humidity and temperature, and thus would not comply with § 25.208(w) “for all conditions.”

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In an ex parte submission dated December 8, 2008,<sup>8</sup> presented after Spectrum Five first reported this fatal defect,<sup>9</sup> DIRECTV concedes that its amended application employed a flawed methodology to demonstrate compliance. This flawed methodology rendered the application defective under the Commission's rules, which now mandate its dismissal. Moreover, the modified calculations DIRECTV offers in the hopes of salvaging its application continue to use *link budget* limit values for atmospheric losses to determine maximum PFD limits, an “apples to oranges” comparison not consistent with the Commission's rules. DIRECTV's link budget calculations, even with its recent modifications, do not—because they cannot—demonstrate compliance with the PFD limits “for all conditions,” as required by Commission rules.

Because the Commission's rules are “unambiguous” and “directly address the issue” presented here, the Commission is bound to follow the “clear meaning” of “its own regulations.”<sup>10</sup> Where a “rule's meaning is clear on its face,” that meaning controls;<sup>11</sup> courts will not accept an agency's interpretation that is “plainly . . . inconsistent with the regulation.”<sup>12</sup> The regulations cited here require DIRECTV to demonstrate compliance “for all conditions,” and as numerous courts have stated, “‘all’ means all.”<sup>13</sup> If any atmospheric conditions would leave DIRECTV's signal too strong, its proposed space station would violate the rule. Because DIRECTV's amended application failed to demonstrate compliance under the meaning “compelled by the regulation's plain language,”<sup>14</sup> the application was defective when submitted and must be dismissed.

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<sup>8</sup> Letter from William M. Wiltshire, Counsel for DIRECTV Enters., LLC, to Marlene H. Dortch, Sec'y of the FCC, FCC File No. SAT-AMD-20080114-00014 (Dec. 8, 2008) (“DIRECTV Ex Parte Letter”).

<sup>9</sup> See Petition for Declaratory Ruling To Serve the U.S. Market from the 103.15° W.L. Orbital Location in the 17/24 Broadcasting Satellite Service Band, *In re Spectrum Five LLC*, FCC File No. SAT-LOI-20081119-00217, at 6-11 (Nov. 19, 2008) (“Spectrum Five 103.15° W.L. Petition”); see also Letter from Howard W. Waltzman, Counsel for Spectrum Five, LLC, to Marlene H. Dortch, Sec'y of the FCC, FCC File No. SAT-AMD-20080114-00014 (Dec. 19, 2008) (“Spectrum Five Letter”).

<sup>10</sup> *In re Sealed Case*, 237 F.3d 657, 667 (D.C. Cir. 2001).

<sup>11</sup> *Nat'l Family Planning & Reprod. Health Ass'n v. Sullivan*, 979 F.2d 227 (D.C. Cir. 1992); accord *CSX Transp., Inc. v. Surface Transp. Bd.*, 75 F.3d 696, 702 (D.C. Cir. 1996); *Am. Train Dispatchers Ass'n v. ICC*, 54 F.3d 842, 848 (D.C. Cir. 1995); *Exportal Ltda v. United States*, 902 F.2d 45, 50 (D.C. Cir. 1990); *Pfizer, Inc. v. Heckler*, 735 F.2d 1502, 1509 (D.C. Cir. 1984).

<sup>12</sup> *Devon Energy Corp. v. Kempthorne*, --- F.3d ---, 2008 WL 5335583, at \*5 (D.C. Cir. Dec. 23, 2008) (quoting *Thomas Jefferson Univ. v. Shalala*, 512 U.S. 504, 512 (1994)); accord *Long Island Care at Home, Ltd. v. Coke*, 127 S. Ct. 2339, 2349 (2007); *Sierra Club v. EPA*, 536 F.3d 673, 679 (D.C. Cir. 2008); *PPL Mont., LLC v. Surface Transp. Bd.*, 437 F.3d 1240, 1245 (D.C. Cir. 2006); *High Plains Wireless, L.P. v. FCC*, 276 F.3d 599, 606 (D.C. Cir. 2002); *Office of Communication, Inc., of the United Church of Christ v. FCC*, 327 F.3d 1222 (D.C. Cir. 2003); *Env't'l Def. Fund v. EPA*, 210 F.3d 396 (D.C. Cir. 2000).

<sup>13</sup> *Sander v. Alexander Richardson Invs.*, 334 F.3d 712 (8th Cir. 2003); see also *Knott v. McDonald's Corp.*, 147 F.3d 1065, 1067 (9th Cir. 1998); *Appalachian States Low-Level Radioactive Waste Comm'n v. O'Leary*, 93 F.3d 103, 109 n.6 (3d Cir. 1996); *Trs. of Iron Workers Local 473 Pension Trust v. Allied Prods. Corp.*, 872 F.2d 208, 210, 213 (7th Cir. 1989); *Morison v. Gen. Motors Corp.*, 428 F.2d 952, 953 (5th Cir. 1970).

<sup>14</sup> *Gardebring v. Jenkins*, 485 U.S. 415, 429 (1988).

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**I. Commission rules require DIRECTV to demonstrate compliance with maximum PFD limits under all atmospheric conditions.**

As Spectrum Five has previously described, the Commission has established a careful first-come, first-served procedure for 17/24 GHz BSS licensing.<sup>15</sup> This procedure is designed “to attract all competitive applications for a particular license within a fixed and reasonably short time frame,”<sup>16</sup> and to serve important public interests in “finality and prompt issuance of licenses.”<sup>17</sup> To assist the Commission in its review, 47 C.F.R. § 25.114(d)(15) requires each applicant to “provide a demonstration that the proposed space station will comply with the power flux density limits set forth in § 25.208(w) of this part.”<sup>18</sup> Section 25.208(w), in turn, restricts each space station’s signal strength to avoid excessive interference, requiring that “power flux density at the Earth’s surface” not exceed certain levels “*for all conditions, including clear sky*, and for all methods of modulation,”<sup>19</sup> and § 25.140(b)(4)(iii) requires that DIRECTV’s space station not produce more interference to neighboring satellites than if it were located at an Appendix F grid location. These requirements serve an important protective function, ensuring that regardless of atmospheric conditions, proposed space stations will not provide interference to other satellite systems in excess of the values specified by Commission rules. DIRECTV was required, therefore, to demonstrate in its application that the proposed RB-2 space station at 102.825° W.L. would not produce PFD levels in excess of the maximum (-115.5 dBW/m<sup>2</sup>/MHz) *for all conditions*.

DIRECTV, however, chose to push the PFD envelope beyond defensible maximums by relying on atmospheric losses (which, in its amended application, consisted of three terms representing “gaseous [absorption], cloud [effects], and scintillation [fading]”)<sup>20</sup> to cause further reduction of the resulting PFD on the Earth’s surface. DIRECTV made a fundamental technical flaw in assuming that, by using the atmospheric loss values that were calculated in its link budget, it could accurately predict the resulting PFD “for all conditions.” As such, DIRECTV accordingly shouldered a greater burden of determining what the appropriate values for these losses should be “for all conditions, including clear sky.” However, DIRECTV failed to carry this burden, instead inserting the same values it had used in the link budget calculation.

DIRECTV now concedes that its amended application improperly adjusted for clouds in determining the interference in “clear sky” conditions, but continues to insist that its methodology “still provides 0.18 dB of margin” based on the remaining two atmospheric loss

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<sup>15</sup> See Spectrum Five Letter at 2-4.

<sup>16</sup> *Northpoint Tech., Ltd. v. FCC*, 414 F.3d 61, 74 (D.C. Cir. 2005) (quoting *Oregon v. FCC*, 102 F.3d 583, 584 (D.C. Cir. 1996)).

<sup>17</sup> *McElroy Elecs. Corp. v. FCC*, 86 F.3d 248, 257 (D.C. Cir. 1996).

<sup>18</sup> § 25.114(d)(15).

<sup>19</sup> § 25.208(w) (emphasis added).

<sup>20</sup> See DIRECTV Ex Parte Letter 2.

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terms.<sup>21</sup> This demonstration, however, is limited to the conditions that are described by the link budget calculations. In its link budget calculations, DIRECTV uses the *same values* for the atmospheric loss terms under conditions of both “Clear Sky” and “Rain.”<sup>22</sup> As described in the International Telecommunications Union (“ITU”) documents referenced by DIRECTV that provide the methodology for these calculations,<sup>23</sup> both gaseous and scintillation losses are highly dependent on humidity and temperature. As explained below, these terms were calculated for high humidity and high temperature conditions (such as those in late summer in Miami, where the link budget is calculated).<sup>24</sup> During the winter, temperatures and humidity levels can be much lower, creating total atmospheric loss as low as ~ 0.2 dB instead of the 0.74 dB used by DIRECTV in its maximum PFD calculations.<sup>25</sup> In fact, as DIRECTV admits, if the total atmospheric loss drops below 0.56 dB, then the maximum PFD limit will be exceeded.<sup>26</sup> To determine the *maximum* PFD levels, the calculation must be done when atmospheric losses are at their lowest (low humidity and temperature conditions). Instead, DIRECTV’s link budget calculation shows only that, assuming the highest atmospheric losses (high temperature and humidity), the received signal at the earth’s surface will attain certain *minimum* PFD levels. Having sought to reap the benefits of a riskier strategy, DIRECTV must also suffer the losses, including dismissal of an application based on this erroneous methodology.<sup>27</sup>

## **II. Because it adjusted “clear sky” calculations for the effect of clouds, DIRECTV’s application is fatally defective.**

DIRECTV’s estimates of signal strength in its amended application incorporated three components of “atmospheric attenuation”: clouds, gaseous loss (caused by atmospheric oxygen and water vapor), and scintillation fading (caused by rapid fluctuations in the atmosphere’s refractive index). In its ex parte letter, DIRECTV belatedly conceded the obvious, that cloud interference “would not be appropriate for use in a calculation based on ‘clear sky’ conditions.”<sup>28</sup> This concession dooms its application. In the first-come, first-served licensing system, DIRECTV must get it right the first time or not at all. A calculation of signal strength that is only accurate during cloudy weather does not “provide a demonstration” of compliance “for all conditions, including clear sky.”

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<sup>21</sup> See *id.* at 2-3.

<sup>22</sup> See DIRECTV 103° W.L. Amendment, Ex. B, app. A, at A-1.

<sup>23</sup> See DIRECTV Ex Parte Letter 2 & n.10 (citing ITU-R P.618-9).

<sup>24</sup> See DIRECTV 103° W.L. Amendment, Ex. B, app. A, at A-1 (“Downlink to Miami”).

<sup>25</sup> See notes 40-41 and accompanying text; DIRECTV Ex Parte Letter 3.

<sup>26</sup> See DIRECTV Ex Parte Letter 3 (claiming that a 0.74 dB atmospheric loss leaves a margin of 0.18 dB, implying that 0.56 dB is the minimum loss required).

<sup>27</sup> DIRECTV’s extended argument that “clear sky” means something different from “free space” is thus a red herring, since it cannot show in any case that it complies with § 25.208(w) “for all conditions, including clear sky.” See DIRECTV Ex Parte Letter 1-2.

<sup>28</sup> DIRECTV Ex Parte Letter 2.

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DIRECTV now attempts to rescue its application with a paragraph of new and detailed calculations, based on estimates presented in the appendix to its amended application.<sup>29</sup> These calculations are also inappropriate to determine PFD levels, as discussed below. But even if this methodology were accepted, DIRECTV's amended application of January 14, 2008 still would not have "demonstrat[ed]" compliance with maximum PFD levels. The Commission has no obligation to do DIRECTV's own work, hunting through a haystack of appendices for needles of data which might, once laboriously analyzed, support DIRECTV's proposal.<sup>30</sup> Instead, the Commission placed the burden on DIRECTV to show its compliance from the outset, so that review could be completed as quickly as possible. If DIRECTV's amended application rested on a fundamentally flawed methodology (the inclusion of clouds) as well as inappropriate numbers for atmospheric losses, then DIRECTV did not meet the burden imposed by § 25.114(d)(15), and the application cannot be salvaged by new calculations offered eleven months later. Not only is the International Bureau bound to reject applications that are not substantially complete,<sup>31</sup> the Commission has no reason to set a new precedent favoring applications with visible defects and hard-to-find cures.

The entire purpose of the "first-come, first-served" system is to enable rapid and accurate Commission review of license applications. That purpose was frustrated by DIRECTV's initial submission of a defective application, and is further frustrated by its current attempt to cure the defect almost a year too late. As Spectrum Five noted in its previous letter on this topic, Commission rules do not allow defective applications to be cured by formal amendment,<sup>32</sup> let alone informal letters and ex parte contacts. DIRECTV's application was defective when submitted and must be dismissed.

### **III. DIRECTV's new calculations fail to demonstrate compliance with Commission rules.**

DIRECTV now claims that, even without the losses due to clouds, its maximum PFD limits fall within Commission rules as a result of two other atmospheric factors, gaseous loss and scintillation fading. Yet DIRECTV supports this claim only by comparing "apples to oranges,"

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<sup>29</sup> DIRECTV Ex Parte Letter 3 & n.13.

<sup>30</sup> Cf. *New Eng. Pub. Commc'ns Council, Inc. v. FCC*, 334 F.3d 69, 79 (D.C. Cir. 2003) ("[T]he Commission need not sift pleadings and documents to identify arguments that are not stated with clarity by a petitioner." (internal quotation marks omitted) (quoting *Bartholdi Cable Co. v. FCC*, 114 F.3d 274, 279 (D.C. Cir. 1997))).

<sup>31</sup> See Order on Reconsideration, *The Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the 17.7-17.8 GHz Frequency Band Internationally, and at the 24.75-25.25 GHz Frequency Band for Fixed Satellite Services Providing Feeder Links to the Broadcasting-Satellite Service and for the Satellite Services Operating Bi-directionally in the 17.3-17.8 GHz Frequency Band*, IB Dkt. No. 06-123, FCC 07-174, 22 F.C.C.R. 17,951, para. 37 (rel. Sept. 28, 2007) ("Reconsideration Order") ("The Bureau will dismiss as defective any amended applications that are not substantially complete." (emphasis added)); see also Spectrum Five Letter 6-8.

<sup>32</sup> See Spectrum Five Letter 2-3, 6-7; see also § 25.116(b)(5) ("Amendments to 'defective' space station applications . . . will not be considered.").

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citing loss estimates drawn from its link budgets.<sup>33</sup> This is a fundamental logical error. Link budgets establish a *floor* for signal strength rather than a ceiling: they show that under conditions of greatest losses, the signal will still be strong enough for adequate reception at the earth's surface. The maximum PFD limits, however, establish a *ceiling* on signal strength rather than a floor; the Commission's rules require that, under conditions of *lowest* losses (i.e. weakest interference), the signal will not be so strong as to exceed the maximum PFD allowed. In addition, the maximum PFD limits must be met for *all* conditions, especially when losses are at their minimum values. These latter conditions will produce the maximum interference to adjacent satellites and are the conditions against which the PFD limits are designed to protect. DIRECTV's calculations, however, reflect only a best-case scenario of high losses, which are present only a small percentage of the time. For example, under conditions of low temperature and low humidity in Miami (typical during the winter season), its proposed space station would exceed the PFD limits and violate Commission rules.

**A.** When satellite signals pass through the atmosphere, they are weakened by gaseous loss, especially when temperatures and humidity levels are high. DIRECTV's link budgets establish that its signal is strong enough to remain available 99.6% of the time—i.e., for all but 35 hours of the year—by estimating the gaseous loss during the small time period (~0.4% of the year) with the hottest and most humid conditions.<sup>34</sup> Having introduced this estimate in its link budget to argue that the signal would not be too weak, DIRECTV now incorrectly invokes the same number to claim that the signal would not be too strong.<sup>35</sup> But to demonstrate compliance, DIRECTV cannot assume that the 0.4% of highest loss conditions will last 100% of the year. Instead, it was also required to show that under conditions of minimum atmospheric losses, the PFD levels would remain below the limits (“for *all* conditions,” hot or cold, wet or dry). Showing that its space station would meet PFD limits under the friendliest possible circumstances for compliance does not even hint, much less “provide a demonstration,” that it would do so “for all conditions.”

**B.** Scintillation fading results from rapid fluctuations in the earth's atmosphere (like the twinkling of a star). Because link budgets are designed to ensure the availability of a strong signal over time, they calculate scintillation fading on the basis of long-term averages, for “periods of a month or longer.”<sup>36</sup> On a shorter time-scale, however, these fluctuations are naturally greater or lesser, and may even for short periods produce an “enhancement” or increased signal level.<sup>37</sup> Thus, DIRECTV's calculations do not guarantee that its space station would meet those limits at *all* times and “for all conditions.” The ITU calculation methodology used by DIRECTV is also based on the size and efficiency of the DIRECTV earth-based antenna

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<sup>33</sup> DIRECTV Ex Parte Letter 2-3.

<sup>34</sup> See ITU-R P.618-9 § 2.1 ; see also DIRECTV Ex Parte Letter at 2 & n.10, 3 (employing the ITU-R P.618-9 methodology).

<sup>35</sup> See DIRECTV Ex Parte Letter 3 & n.14.

<sup>36</sup> ITU-R P.618-9 § 2.4.

<sup>37</sup> See P. Garcia del Pino et al., Tropospheric Scintillation Measurements on a Ka-Band Satellite Link in Madrid, 29 URSI Gen. Assembly (URSI2008/paper, Aug. 2008).



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receiving the signal.<sup>38</sup> This factor is obviously irrelevant in calculating the actual signal strength from a space station at the earth's surface that may interfere with *another* satellite system's ground terminals, as § 25.208(w) requires. DIRECTV's methodology suggests that it could, by changing the size of its *own* ground antenna, reduce the interference to the ground stations of *other* providers—an absurd conclusion.<sup>39</sup> Given that DIRECTV has offered no viable technical means of calculating scintillation fading appropriately, its estimates of scintillation fading lack any rational basis and should be excluded from the analysis. With this factor excluded, DIRECTV's proposed space station would violate the relevant PFD limits 100% of the time.

C. Both gaseous loss and scintillation fading are at their height when the air is warm and humid. When the air is cool and dry, however, both factors are reduced, and the signal is correspondingly stronger. As a result, even on DIRECTV's own calculation method, its proposed space station would routinely violate the PFD limits under perfectly normal weather conditions in the winter (December-February). For example, in Miami, where DIRECTV's satellite signal would be strongest, a 90° September day with 99% humidity would produce the large degree of loss DIRECTV expects. But on a cool, dry February day, with humidity routinely below 60%,<sup>40</sup> the atmospheric losses would always be low enough (at any temperature less than 100° F) to cause the maximum PFD to exceed the limit. Spectrum Five estimates that during these three months, the atmospheric loss would be low enough to create a PFD excess at least 50% of the time.<sup>41</sup> Because DIRECTV's proposed space station would violate Commission rules in cool, dry weather, it clearly does not obey them "for all conditions, including clear sky," as § 25.208(w) requires. Nor do the estimates in DIRECTV's amended application, even when re-analyzed, "provide a demonstration" of compliance under § 25.114(d)(15).

#### IV. Conclusion

The Commission has directed the International Bureau to dismiss as defective under § 25.112(a)(2) any amended 17/24 GHz BSS application that is not substantially complete,<sup>42</sup> even if such an application has already been accepted for filing.<sup>43</sup> This category includes applications missing *any* of the information required by § 25.114(d).<sup>44</sup> To comply with that rule,

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<sup>38</sup> See ITU-R P.618-9 § 2.4.1.

<sup>39</sup> More fundamentally, the ITU-R P.618-9 methodology is mathematically incapable of calculating a ceiling on signal strength (i.e., a floor on loss due to scintillation). It can help determine the PFD for the weakest-signal 0.4% of conditions, or even the weakest-signal 50% of conditions, but it cannot identify the maximum signal strength that would apply 100% of the time (i.e., "for all conditions"). See ITU-R P.618-9 § 2.4.1.

<sup>40</sup> See CityRating.com, Miami Relative Humidity (2002), <http://www.cityrating.com/cityhumidity.asp?City=Miami>.

<sup>41</sup> Calculations based on ITU-R P.618-9 § 2.5.

<sup>42</sup> See Reconsideration Order para. 37.

<sup>43</sup> Reconsideration Order para. 37 n.69; see also Public Notice, International Bureau Establishes Deadline for Amendments to Pending 17/24 GHz BSS Applications, DA 07-4895, 22 F.C.C.R. 20,991, 20,992 n.11 (rel. Dec. 5, 2007).

<sup>44</sup> See Report and Order and Further Notice of Proposed Rulemaking, *The Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the 17.7-17.8 GHz Frequency Band Internationally, and at the 24.75-25.25 GHz Frequency Band for Fixed Satellite Services Providing* (cont'd)

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DIRECTV was obliged to “provide a demonstration” that its proposed space station would meet the PFD limits “for all conditions.” Instead, the analysis in its application relied on prohibited factors (such as clouds) and misapplied gaseous and scintillation effects, thereby assuming only those conditions most favorable to compliance. “All conditions,” however, means all conditions, not just some.

These specific flaws in DIRECTV’s application could not have been detected until recently. DIRECTV’s amended application of January 14, 2008 adjusted its maximum PFD estimates for “atmospheric attenuation” but did not explain the methodology by which that figure was calculated.<sup>45</sup> On September 26, 2008, Pegasus Development DBS Corporation questioned the size of the attenuation figure in a letter regarding a separate DIRECTV license application,<sup>46</sup> but Pegasus did not discuss (as DIRECTV had not yet revealed) the error of using link budget values to determine maximum PFD. DIRECTV responded to this letter in an ex parte submission that explained its general reliance on the ITU calculation methodology without providing precise details.<sup>47</sup>

After Spectrum Five further criticized DIRECTV’s calculations in its November 19, 2008 petition to offer service from the 103.15° W.L orbital location,<sup>48</sup> DIRECTV submitted its December ex parte letter, conceding its error in incorporating cloud effects and for the first time explaining the exact composition of its “atmospheric attenuation” adjustment.<sup>49</sup> The subtle and concealed nature of the technical flaws in the original application, and the lack of openness on DIRECTV’s part in providing the details of its methodology, have made an adequate response more difficult. Now that the true nature of the procedure has been fully exposed, however, it is clear that DIRECTV used a fundamentally inappropriate methodology to determine maximum PFD levels.

The Commission’s decision whether to grant DIRECTV’s application must be judged in light of “the whole record.”<sup>50</sup> The Commission routinely considers arguments submitted informally—like those submitted ex parte—“in the interest of having a full and complete

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(... cont’d)

*Feeder Links to the Broadcasting-Satellite Service and for the Satellite Services Operating Bi-directionally in the 17.3-17.8 GHz Frequency Band*, IB Dkt. No. 06-123, FCC 07-76, 22 F.C.C.R. 8842, para. 16 & n.63 (rel. May 4, 2007); Order on Reconsideration, *In re Applications of PanAmSat Licensee Corp. for Authority To Construct, Launch, and Operate a Hybrid Satellite in its Separate International Communications Satellite System*, DA 03-3633, 18 F.C.C.R. 23,916, para. 6 n.12 (rel. Nov. 13, 2003).

<sup>45</sup> See DIRECTV 103° W.L. Amendment, Ex. B, at 12.

<sup>46</sup> Letter from Bruce D. Jacobs, Counsel to Pegasus Development DBS Corp., to Marlene H. Dortch, Sec’y of the FCC, at 3 n.10, FCC File Nos. SAT-AMD-20080908-00166 et al. (Sept. 26, 2008).

<sup>47</sup> Letter from William M. Wiltshire, Counsel to DIRECTV Enters. LLC, to Marlene H. Dortch, Sec’y of the FCC, at 3, FCC File No. SAT-AMD-20080908-00166 (Oct. 6, 2008) (generally indicating a reliance on ITU-R P.618-9, without indicating the particular steps taken).

<sup>48</sup> See Spectrum Five 103.15° W.L. Petition at 6-7.

<sup>49</sup> See DIRECTV Ex Parte Letter.

<sup>50</sup> *AT&T Info. Sys., Inc. v. GSA*, 810 F.2d 1233, 1236 (D.C. Cir. 1987) (internal quotation marks omitted).

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record.”<sup>51</sup> The D.C. Circuit has explicitly approved of this practice,<sup>52</sup> for “[i]t is neither arbitrary nor capricious for the Commission to consider any evidence that is properly before it for any purpose as to which it is probative;”<sup>53</sup> the court has even remanded decisions to the Commission for failure to address arguments raised in informal ex parte submissions.<sup>54</sup>

DIRECTV’s submission violated the plain language of the Commission’s rules. The Commission should reject DIRECTV’s application and expeditiously approve Spectrum Five’s petition to provide service from the 103.15° W.L. orbital location.<sup>55</sup>

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<sup>51</sup> Memorandum Opinion and Order, *In re Application for Consent to Assignment of PCS Licenses KNLH651 and KNLH653 from Northstar Tech., LLC to Banana Commc’ns, LLC*, 23 F.C.C.R. 9122, 9124 n.19 (2008); cf. §§ 1.41, 25.154(b); Memorandum Opinion and Order and Report and Order, *In re Applications for Consent to the Transfer of Control of Licenses XM Satellite Radio Holdings Inc., Transferor to Sirius Satellite Radio Inc., Transferee*, 23 F.C.C.R. 12,348, 12,379 & n.199 (2008).

<sup>52</sup> See *Sprint Commc’ns Co. L.P. v. FCC*, 274 F.3d 549, 562 (D.C. Cir. 2001) (approving the Commission’s reliance on ex parte materials as “additional support” for its position); see also *Cal. Ass’n of the Physically Handicapped, Inc. v. FCC*, 840 F.2d 88, 95 n.13 (D.C. Cir. 1988); *Wash. Ass’n for Television & Children v. FCC*, 665 F.2d 1264, 1266 (D.C. Cir. 1981); *Cnty. Coal. for Media Change v. FCC*, 646 F.2d 613, 614 (1980).

<sup>53</sup> *Z-Tel Commc’ns, Inc. v. FCC*, 333 F.3d 262, 267 (D.C. Cir. 2003)

<sup>54</sup> See *AT&T Corp. v. FCC*, 86 F.3d 242, 247 (remanding to the Commission on the ground that it had “completely failed to address” an argument raised in an ex parte letter); see also *Iowa v. FCC*, 218 F.3d 756, 759 (D.C. Cir. 2000); cf. *Frizelle v. Slater*, 111 F.3d 172, 177 (D.C. Cir. 1997) (reasoning that because an agency “did not respond to two of [the appellant’s] arguments, which do not appear frivolous on their face and could affect the [agency’s] ultimate disposition, we conclude that the Board’s decision was arbitrary”).

<sup>55</sup> See Spectrum Five 103.15° W.L. Petition.

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**CERTIFICATE OF SERVICE**

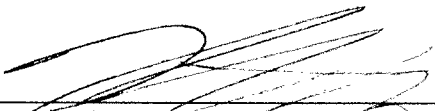
I, Howard W. Waltzman, hereby certify that on this 12th day of January, 2009, I caused to be delivered a true copy of the foregoing by first-class United States mail, postage prepaid, upon the following:

Helen Domenici  
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