David Finckel and Wu Han staged their own mini-marathon here Tuesday night -- a miles-long musical dash, or really a journey, through all five Beethoven sonatas for cello and piano. They are works that span the philosopher-king’s career, beginning playfully, in youthful days, and then taking it to the end, when Beethoven was deaf, sick, lonely, heeding the call of his wild and peaceful heart.

It was a terrific concert, one of the Music@Menlo chamber music festival’s “carte blanche” events, where the performers get to design their dream programs. In truth, Finckel and Wu Han -- cellist and pianist; husband and wife; co-artistic directors of the festival -- have been playing the cycle of cello sonatas for 15 or so years around the world. Nonetheless, Tuesday’s concert at Menlo-Atherton High School’s Center for Performing Arts was a big-buzz festival event -- sold-out, and then some, with dozens of listeners seated in folding chairs onstage, surrounding the two performers.

Beethoven composed the first two cello sonatas in 1796 for a virtuoso named Jean-Pierre Duport, director of chamber music for King Friedrich Wilhelm II, who was himself an amateur cellist. They are playful works, in part, but also gorgeously lyrical and streaming with technical challenges -- and Tuesday’s performance of Sonata No. 1 in F major, Op. 5, no. 1, wasn’t especially focused. Some of Wu Han’s passagework was sloppy, and Finckel, really digging down into the strings, seemed to be fighting the new concert hall’s dry acoustic, or maybe just figuring out a way to be heard over the booming piano.

Still, the two were playing with gusto and considerable charm, their synchronicity pointing toward Sonata No. 2 in G minor, Op. 5, no. 2. Suddenly, the performance clicked into focus: sharp, clean and in balance, with richer sonorities feeding the piece, which begins with storm-chords and portentous pauses. The duo moved into Beethoven’s deep quiets and brooding turbulence, and there were moments in the concluding rondo when Finckel’s tone was as earthy and pungent as a good strong glass of retsina.

After intermission came the night’s highlight, Sonata No. 3 in A major, Op. 69, a masterpiece from Beethoven’s midlife “heroic” period, when he was churning out one mind-boggling work after the next: the “Eroica” symphony, the Triple Concerto, the “Appassionata” piano sonata, the “Razumovsky” string quartets, the violin concerto, his fifth and sixth symphonies, “Fidelio.”

Composed in 1807-08, the A-major cello sonata was groundbreaking in that it sets the cello and piano on equal footing. Lines begin with one instrument to be completed by the other, and the heroic themes are beyond memorable. Finckel, after brief intonation struggles in up-leaping passages, burnished them across all his instrument’s registers. Best on Tuesday was the Scherzo, filled with dramatic hesitations and parrying thrusts, and performed by the duo with rhythmic strength and melodic grandeur. And then, later, came the Allegro vivace with Wu Han’s steel-coiled bass lines and big splayed, staccato chords, popping light as popcorn.

After a short pause, the marathon moved into its final phase with the two cello sonatas that Beethoven composed in 1815, on the cusp of his late period. Finckel and Wu Han explored Sonata No. 4 in C major, Op. 102, no. 1 -- Beethoven dubbed it “a free sonata” -- as if it were a dream, rhapsodic, at times slow-spinning, with celestial themes groaning down into the cello’s bottom. Sonata No. 5 in D major, Op. 102, no. 2, was radiant and rugged and very interior in its feeling; Charles Ives comes out of this world. The slow second movement, riding on the cello, was a cosmic hymn of peace.

Now the Center for Performing Arts was stone silent as Finckel and Wu Han launched the concluding fugue, which can seem thick and discordant when the wrong players are in charge. This performance was the opposite: You could “see” the fugue, its profusion of lines, its play of light and shadow, as the duo crossed the finish line.